Prevailing Wind Park Project

Sound Level Compliance Report

August 2020

sPower

Acknowledgements

The completion of this Prevailing Wind Park Project Sound Level Compliance Report would not have been possible without the assistance of the Pazour, Fuerniss, Jenkins, and Schoenfelder families. We are thankful for their time and flexibility during the field study.

Executive Summary

This report documents the sound level measurements conducted at sPower's Prevailing Wind Park Project (Project) in accordance with the South Dakota Public Utilities Commission's *Final Decision and Order Granting Permit to Construct Facilities and Notice Entry for the Prevailing Wind Park Project – EL 18-026* (November 28, 2018) (Final Decision); *Order Granting Extension of Time Due to COVID-19* (May 5, 2020); and *Order Confirming Requirements of Permit Condition 42* (July 9, 2020). The Project is located in Hutchinson County, Bon Homme County, and Charles Mix County, South Dakota. Condition 42 of the Final Decision, as modified by the May 5, 2020, and July 9, 2020, orders, requires verification of the Final Decision's sound level requirement at four residences of Intervenors (specific nonparticipating residences). Monitoring was conducted for a period exceeding two weeks consistent with the Commission's Final Decision and direction from Commission Staff's sound consultant, Mr. David Hessler. This analysis found that the sound attributable solely to the Project did not exceed 40 dBA long-term L_{10} at the four residences.

The evaluation of Project-only sound levels during periods of high ambient sound levels (nonProject sounds) presents challenges. Several analytical techniques were employed to assure a robust study, including the establishment of two control monitoring locations (near Turbine 8 and Turbine 56), implementation of more than 50 curtailments (also referred to as turbine shutdowns or on/off tests) where the entire 219.6-megawatt facility was rapidly brought offline and back online in coordination with the grid operator, and enactment of an analytical method to remove insect noise. For many of the curtailments, a substantial reduction in sound level was realized close to the turbine at a control location while no meaningful change was measured at the residence. Insect noise was surprisingly dominant at most residential locations between the hours of 9:00 p.m. and 5:00 a.m., a range when typical ambient sounds (for example, traffic and household noise) are minimal. Thus, the ideal time periods typically used to evaluate curtailments were often masked by high sound levels from insects.

A small set of curtailments occurred when insect noise, wind gusts, rain, or other ambient sources were minimal, and the turbines were within the target wind speed. These findings were confirmed by the subsequent reanalysis and reprocessing of more than 7 million data points to calculate the $L_{ai,}$ an insect free A-weighted sound level.

Relevant to note is that compliance with this or any other regulatory limit does not mean the regulated source is inaudible or indiscernible from other sounds in the environment. One can hear a bird chirp next to the highway even though in this example the chirping does not alter the overall measured sound level as it did here. Hearing is a complex mechanism and the term "background dominant" or findings that the background sound level is higher than the turbine sound level should not be interpreted to imply inaudibility. Assessing audibility depends on many individual and situational factors that are difficult if not impossible to predict, control, or evaluate. Accordingly, audibility is not an established regulatory criterion for commercial, transportation, or industrial sources of noise.

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Acronyms and Abbreviations

Ambient noise	Composite of noise from all sources near and far; normal or existing level of environmental noise at a given location
ANSI	American National Standards Institute
Commission	South Dakota Public Utilities Commission
dBA	decibels on an A-weighted scale
Final Decision	South Dakota Public Utilities Commission's *Final Decision and Order Granting Permit to Construct Facilities and Notice Entry for the Prevailing Wind Park Project – EL 18-026* (November 28, 2018)
GPS	Global Positioning System
Hz	hertz
Jacobs	Jacobs Engineering Group Inc.
kW	kilowatt
L_{10}	sound level exceeded for 10 percent of the measurement interval
L_{50}	sound level exceeded for 50 percent of the measurement interval
L_{90}	sound level exceeded for 90 percent of the measurement interval
L_{ai}	A-weighted sound level low pass filtered at 2,000 hertz to minimize high-frequency insect noise
L_{eq}	equivalent sound level
m/s	meter(s) per second
N/A	not applicable
Project	Prevailing Wind Park Project
SCADA	supervisory control and data acquisition

1. Introduction

This report documents the sound level measurements conducted at sPower's Prevailing Wind Park Project (Project) in accordance with the South Dakota Public Utilities Commission's (Commission) *Final Decision and Order Granting Permit to Construct Facilities and Notice Entry for the Prevailing Wind Park Project – EL 18-026* (November 28, 2018) (Final Decision); *Order Granting Extension of Time Due to COVID-19* (May 5, 2020); and *Order Confirming Requirements of Permit Condition 42* (July 9, 2020). The Project is located in Hutchinson County, Bon Homme County, and Charles Mix County, South Dakota.

1.1 Regulatory Requirements

Condition 42 of the Final Decision, as modified by the Commission's July 9, 2020 order, requires verification of the Final Decision's sound level requirement at four residences of Intervenors (specific nonparticipating residences) within 60 days of the date the Project commences full operation. This deadline was extended to 60 days after July 1, 2020, in the Commission's Order Granting Extension of Time Due to COVID-19 (May 5, 2020). Condition 27 establishes the sound level criteria as follows:

> 27. *The Project, exclusive of all unrelated background noise, shall not generate a long-term sound pressure level (L10), as measured over a period of at least two weeks, defined by Commission staff, that includes all integer wind speeds from cut in to full power, of more than 40 dBA within 25 feet of any non-participating residence unless the owner of the residence has signed a waiver, and 45 dBA of any participating residence unless the owner of the residence has signed a waiver. Applicant shall, upon Commission formal request, conduct field surveys or provide post-construction monitoring data verifying compliance with specified noise level limits using applicable American National Standards Institute (ANSI) methods. If the long-term average level exceeds 40 dBA at any non-participating residence, or 45 dBA at any participating residence where the owner of the residence has not signed a waiver, then the Applicant shall take whatever steps are necessary in accordance with prudent operating standards to rectify the situation. Sound monitoring will not be repeated in a representative area during any five-year period unless operational or maintenance changes result in a reasonable assumption of higher turbine sound levels.*

The L_{10} is the sound level exceeded for 10 percent of the evaluation or measurement period. For a long-term evaluation, this would equate to an average of 2.4 hours per day over the 2-week measurement period. Excluding unrelated background noise appropriately narrows the focus to the sound level solely attributable to the Project (Project-only contribution) as opposed to what one directly measures, which is the total overall sound level (background or ambient sounds plus Project sounds). Project operators are unable to control background sound sources. ANSI S12.18 establishes a subtraction method to determine Project-only sound levels that identifies the source level as masked when the difference between the sound level measured with and without an operating sound source is less than 4 decibels (dB). Achieving a difference of 4 dB or more is challenging when projects are designed to attain a sound level similar to the background level.

1.2 Background

sPower has retained Jacobs Engineering Group Inc. (Jacobs) to conduct this sound level monitoring study. Before beginning the sound monitoring, Jacobs coordinated with multiple parties, including the owners of the residences and the Commission Staff's sound consultant, Mr. David Hessler. Monitoring locations were identified in consultation with residences and subsequently revised after Mr. Hessler was retained by the Commission. Mr. Hessler was concerned that measurements within 25 feet of the dwelling would result in elevated background levels, complicating the determination of Project-only sound levels. The revised monitoring locations were selected in consultation with both the residences and Mr. Hessler. These locations were further removed from areas of residential activity and vegetation to minimize background noise. Additionally, the sound measurement protocol was reviewed and revised to target

curtailments (also referred to as turbine shutdowns or on/off testing) during hub height wind speed in the 7- to 11-meter-per-second (m/s) range. At these wind speeds, the sound emissions of the turbine are at or very near their rated maximum output and the wind-induced background sounds are often less than at higher wind speeds. Mr. Hessler stated concerns that if curtailments focused on higher wind speeds, there would be little likelihood of capturing useful sound data because background levels would be high. Overall, these changes were implemented to address the anticipated challenges of measuring Project-specific sound levels of less than 40 dBA during the windy conditions necessary to support operations.

2. Methodology

This section describes the methodology followed to conduct the sound level monitoring study. Monitoring locations, equipment, and protocol are described.

2.1 Monitoring Locations

Sound level monitoring stations were established at six measurement locations depicted on Figure 1 and summarized in Table 2-1. To indicate the distance between turbines and residences, 1-, 1.5-, and 2-mile buffers are shown around each residence on Figure 1. Turbine sound levels decrease with distance and only a few turbines are operating within 1 mile of each residence. Four monitoring station locations were selected to monitor sound levels proximate to the required residential locations and two locations were selected substantially closer to a turbine to serve as control locations (refer to Appendix A). The monitoring locations were selected in consultation with the residents to minimize measurement errors from reflections and other anthropogenic noise (e.g., roads, air conditioning or vegetation, and human-induced noise near farmsteads and outbuildings) as feasible. Appendix B contains photographs of the locations and equipment deployed at each monitoring location.

Table 2-1. Monitoring Locations

Location ID	Landowner Name	GPS Coordinates
REC-024	Pazour	43*5'13.3"N 98*8'46.5"W
REC-068	Fuerniss	43*7'57.3"N 98*8'6.8"W
REC-121	Jenkins	43*11'44.6"N 97*59'17.0"W
REC-139	Schoenfelder	43*5'57.6"N 98*8'32.9”W
Turbine 8 (Control)	N/A	43*07'48.5”N 98*07'5"W
Turbine 56 (Control)	N/A	43*11'5.3"N 98*0'37.4"W

Notes: GPS = Global Positioning System; N/A = not applicable

The distance and direction of the four closest turbines to each sound monitor is presented in Table 2-2.

Table 2-2. Turbines Closest to Monitoring Locations

Location	Turbine	Distance (ft)	Direction
REC-024 (Pazour)	T49	3330	E
	T58	4505	NE
	T39	6400	NE
	T41	8404	SE
REC-068 (Fuerniss)	T08	3985	E

Table 2-2. Turbines Closest to Monitoring Locations

Location	Turbine	Distance (ft)	Direction
	T16	3375	SE
	T32	4060	W
	T40	5340	W
REC-121 (Jenkins)	T55	5465	SW
	T56	6625	SW
	T30	8690	SW
	T51	9640	S
REC-139 (Schoenfelder)	T48	6000	NW
	T23	4085	N
	T39	5000	E
	T58	4350	SE
T8 (Turbine 8)	T8	590	W
	T16	4040	SW
	T09	3225	SE
	T15	4515	SW
T56 (Turbine 56)	T56	605	E
	T30	1680	SW
	T55	1840	NE
	T51	4970	SE

The monitoring equipment setup began on July 15, 2020, and removal from the last location occurred by August 4, 2020. Fields were planted and leaves were on the trees, resulting in the potential for some additional ambient noise from rustling vegetation. Insect noise and birds also presented another source of ambient noise. Residents were provided with a form to note any observations. Sherman Fuerniss was the only resident to return the form and it is included in Appendix C.

2.2 Monitoring Equipment

Larson Davis 831C, ANSI S1.4 Type 1, precision, sound level meters were used, the serial numbers of which are summarized in Table 2-3. Microphones were field calibrated at the beginning and end of the study with a Larson Davis CAL200 calibrator. No substantial calibration drift occurred. The microphones were outfitted with oversized windscreens (ACO Model WS7-80T) to reduce self-induced wind noise across the microphone. The sound level meters were housed in outdoor enclosures and the microphones were mounted at an approximate height of 6 feet within a Larson Davis environmental protection shroud.

Wind speed at the microphone location was monitored with a Larson Davis' NMS045 ultrasonic weather sensor (a Vaisala weather sensor that has been configured to integrate with the LD831C) data loggers at all locations. Periods of precipitation were excluded from the analysis. Thunder was reported within the

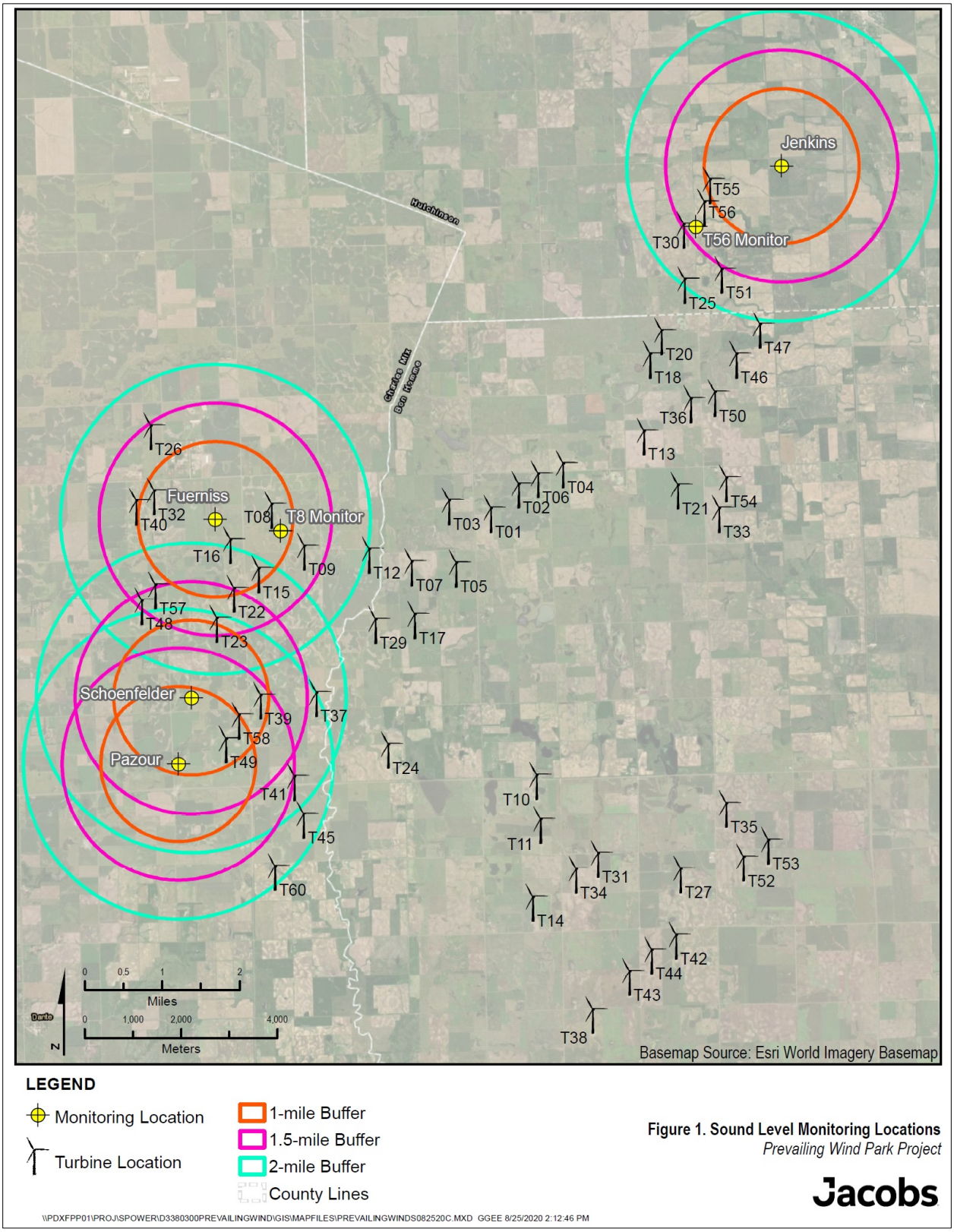

Figure 1. Sound Level Monitoring Locations

Project area and any periods of thunder that coincided with precipitation events were excluded from the analysis. It is important to note that some distant or isolated thunder events may not have been screened from the sound level data set if they were not accompanied by precipitation. While the Larson Davis 831C sound level meter utilized is the most recent offering from a United States-based manufacturer and had the most recent firmware, some intermittent recording lapses occurred. These instances were limited (Appendix D), occurred primarily after the meter had written a file to storage, and resulted in no overall impact on the analysis. Hub height meteorological conditions were monitored and provided by sPower.

Table 2-3. Equipment Serial Numbers

Location	LD831C	Microphone	Preamplifier	Weather Station
Pazour	10727	303634	19221	H4720003
Fuerniss	10743	305562	58472	R1630316
Jenkins	10746	303552	58560	P1950561
Schoenfelder	10466	307744	19136	G040008
Turbine 8	10775	305636	58561	P4450651
Turbine 56	10815	311788	46415	P4450648

2.3 Monitoring Protocol

The sound level meters were programmed to log broadband A-weighted (dBA) sound level measurement parameters including the L_{eq}, L_{10}, and L_{90}, and one-third octave band sound levels in 15-minute intervals, consistent with sPower's supervisory control and data acquisition (SCADA) system data collection interval. A-weighted sound levels were also logged in 1-second intervals. The measurement of sound from wind facilities is often complicated by natural or other nonproject sounds. The curtailments focused on periods when the closet turbine to each monitoring location was experiencing hub height winds in the 9 m/s range (roughly 7 m/s to 11 m/s, the target wind speed) and all turbines were being curtailed.

The objective of the curtailment was to obtain at least one full 15-minute interval where all turbines were shut down during the entire synchronized 15-minute period (for example, 3:15 to 3:30). The overall duration of the curtailment event is approximately 1 hour to allow for the ramping down and ramping up of the turbines, and to confirm that at least one fully off interval is collected. sPower operational staff monitored wind forecasts for turbine operations and implemented the shutdowns. The shutdown protocol consisted of the following:

1) When the identified four turbines have experienced target wind speeds for at least one 15-minute synchronized period (for example, 3:15 to 3:30), a shutdown would be instituted for all turbines. This shutdown was to consist of at least one full time-synchronized, 15-minute interval (for example, 3:45 to 4:00 or for two intervals, 3:45 to 4:15) before the turbines start back up. In the event of sustained winds in the 9-m/s range, the on/off cycling would continue in a manner that confirms at least one full time-synchronized, fully on and fully off 15-minute interval. Periods where the facility was ramping up or ramping down were would be discarded from the analysis.
2) If a target wind speed event was not forecast or was not realized, a scheduled shutdown would occur at 5:00 a.m. and 5:00 p.m. On a calm day, the goal was to achieve one nighttime and one daytime shutdown.
3) Curtailments were not required during rain events.
4) Curtailments were not required under high wind events (hub height winds greater than 11 m/s).

This protocol was successfully implemented by sPower and resulted in approximately 50 curtailment events as delineated in Table 2-4.

Table 2-4. Curtailment Events

Curtailment Start	Curtailment End	Clean 15-minute Period Start	T16	T23	T49	T55	T16	T23	T49	T55
			Avg Wind Speed | Clean Period (m/s)	Avg Wind Speed | Clean Period (m/s)	Avg Wind Speed | Clean Period (m/s)	Avg Wind Speed | Clean Period (m/s)	Target Wind Speed?	Target Wind Speed?	Target Wind Speed?	Target Wind Speed?
7/19/2020 5:16	7/19/2020 5:32	7/19/2020 5:15	5.4	5.6	5.6	3.9	No	No	No	No
7/20/2020 5:00	7/20/2020 5:20	7/20/2020 5:00	5.8	5.9	5.3	5.1	No	No	No	No
7/20/2020 17:03	7/20/2020 17:33	7/20/2020 17:15	7.3	7.9	6.8	7.4	Yes	Yes	No	Yes
7/21/2020 4:54	7/21/2020 5:16	7/21/2020 5:00	4.1	3.7	3.4	3.9	No	No	No	No
7/21/2020 17:14	7/21/2020 17:33	7/21/2020 17:15	4.8	4.9	5.1	5.7	No	No	No	No
7/22/2020 4:55	7/22/2020 5:19	7/22/2020 5:00	5.5	4.5	4.8	5.2	No	No	No	No
7/22/2020 15:44	7/22/2020 16:01	7/22/2020 15:46	6.7	8.0	7.6	6.6	No	Yes	Yes	No
7/22/2020 17:16	7/22/2020 17:48	7/22/2020 17:31	7.8	7.6	8.0	8.7	Yes	Yes	Yes	Yes
7/22/2020 20:12	7/22/2020 20:33	7/22/2020 20:16	7.4	8.7	7.8	13.0	Yes	Yes	Yes	No
7/22/2020 23:03	7/22/2020 23:33	7/22/2020 23:16	12.4	13.3	12.1	8.9	No	No	No	Yes
7/23/2020 2:10	7/23/2020 2:31	7/23/2020 2:16	9.5	10.2	10.2	8.2	Yes	Yes	Yes	Yes
7/23/2020 5:13	7/23/2020 5:48	7/23/2020 5:16	10.7	11.7	10.1	7.4	Yes	No	Yes	Yes
7/23/2020 5:13	7/23/2020 5:48	7/23/2020 5:31	10.9	12.0	11.5	7.6	Yes	No	No	Yes
7/23/2020 9:45	7/23/2020 10:12	7/23/2020 9:46	10.3	12.3	11.7	8.2	Yes	No	No	Yes
7/23/2020 15:43	7/23/2020 16:00	7/23/2020 15:46	12.6	14.5	13.8	11.3	No	No	No	No
7/24/2020 4:58	7/24/2020 5:18	7/24/2020 5:01	10.6	10.9	10.7	11.9	Yes	Yes	Yes	No
7/24/2020 5:55	7/24/2020 6:19	7/24/2020 6:01	10.4	12.3	12.1	10.0	Yes	No	No	Yes

Table 2-4. Curtailment Events

Curtailment Start	Curtailment End	Clean 15-minute Period Start	T16	T23	T49	T55	T16	T23	T49	T55
			Avg Wind Speed | Clean Period (m/s)	Avg Wind Speed | Clean Period (m/s)	Avg Wind Speed | Clean Period (m/s)	Avg Wind Speed | Clean Period (m/s)	Target Wind Speed?	Target Wind Speed?	Target Wind Speed?	Target Wind Speed?
7/24/2020 8:49	7/24/2020 9:22	7/24/2020 9:01	9.7	10.3	9.1	7.5	Yes	Yes	Yes	Yes
7/24/2020 10:55	7/24/2020 11:19	7/24/2020 11:01	9.9	9.6	10.5	10.5	Yes	Yes	Yes	Yes
7/24/2020 14:25	7/24/2020 14:53	7/24/2020 14:31	9.0	9.5	9.1	7.8	Yes	Yes	Yes	Yes
7/24/2020 23:42	7/25/2020 0:02	7/24/2020 23:46	9.4	6.8	6.4	5.6	Yes	No	No	No
7/25/2020 1:12	7/25/2020 1:34	7/25/2020 1:16	6.3	5.6	5.2	9.0	No	No	No	Yes
7/25/2020 3:16	7/25/2020 3:33	7/25/2020 3:16	N/A	5.8	9.9	5.7	No	No	Yes	No
7/25/2020 6:15	7/25/2020 6:33	7/25/2020 6:16	N/A	10.5	9.7	10.2	No	Yes	Yes	Yes
7/25/2020 16:25	7/25/2020 16:49	7/25/2020 16:31	7.0	7.5	6.8	6.2	No	Yes	No	No
7/25/2020 20:16	7/25/2020 20:36	7/25/2020 20:16	7.9	8.6	7.6	7.8	Yes	Yes	Yes	Yes
7/25/2020 22:18	7/25/2020 22:50	7/25/2020 22:31	10.4	12.4	12.2	9.6	Yes	No	No	Yes
7/26/2020 1:55	7/26/2020 2:23	7/26/2020 2:01	8.6	7.5	8.9	8.2	Yes	Yes	Yes	Yes
7/26/2020 4:57	7/26/2020 5:21	7/26/2020 5:01	6.8	10.2	8.1	6.4	No	Yes	Yes	No
7/26/2020 16:58	7/26/2020 17:17	7/26/2020 17:01	5.4	5.5	5.6	4.7	No	No	No	No
7/26/2020 23:58	7/27/2020 0:20	7/27/2020 0:01	5.5	6.6	6.0	6.8	No	No	No	No
7/27/2020 16:52	7/27/2020 17:17	7/27/2020 17:01	4.0	4.0	3.4	2.9	No	No	No	No
7/28/2020 5:25	7/28/2020 5:48	7/28/2020 5:31	11.8	12.0	7.7	15.3	No	No	Yes	No
7/28/2020 8:28	7/28/2020 8:48	7/28/2020 8:31	7.2	7.2	7.8	12.6	Yes	Yes	Yes	No
7/28/2020 22:35	7/28/2020 23:04	7/28/2020 22:46	8.8	7.9	7.4	3.9	Yes	Yes	Yes	No

Table 2-4. Curtailment Events

Curtailment Start	Curtailment End	Clean 15-minute Period Start	T16	T23	T49	T55	T16	T23	T49	T55
			Avg Wind Speed | Clean Period (m/s)	Avg Wind Speed | Clean Period (m/s)	Avg Wind Speed | Clean Period (m/s)	Avg Wind Speed | Clean Period (m/s)	Target Wind Speed?	Target Wind Speed?	Target Wind Speed?	Target Wind Speed?
7/29/2020 1:13	7/29/2020 1:40	7/29/2020 1:16	7.7	8.4	6.6	6.9	Yes	Yes	No	No
7/29/2020 16:51	7/29/2020 17:17	7/29/2020 17:01	4.9	4.1	4.7	4.3	No	No	No	No
7/29/2020 20:12	7/29/2020 20:30	7/29/2020 20:16	10.9	10.9	10.4	6.8	Yes	Yes	Yes	No
7/29/2020 21:55	7/29/2020 22:18	7/29/2020 22:01	9.0	9.0	8.8	6.5	Yes	Yes	Yes	No
7/30/2020 17:27	7/30/2020 17:51	7/30/2020 17:31	3.7	3.9	4.0	0.0	No	No	No	No
7/31/2020 5:24	7/31/2020 5:45	7/31/2020 5:31	4.0	3.6	3.9	0.0	No	No	No	No
8/1/2020 14:02	8/1/2020 15:13	8/1/2020 14:16	12.3	11.7	10.3	10.4	No	No	Yes	Yes
8/1/2020 14:02	8/1/2020 15:13	8/1/2020 14:31	10.7	10.4	10.9	10.8	Yes	Yes	Yes	Yes
8/1/2020 14:02	8/1/2020 15:13	8/1/2020 14:46	11.7	10.3	10.8	10.0	No	Yes	Yes	Yes
8/1/2020 17:28	8/1/2020 17:49	8/1/2020 17:31	8.9	10.5	10.7	10.0	Yes	Yes	Yes	Yes
8/1/2020 20:42	8/1/2020 21:02	8/1/2020 20:46	8.6	9.6	9.0	7.3	Yes	Yes	Yes	Yes
8/2/2020 2:28	8/2/2020 2:46	8/2/2020 2:31	9.7	10.9	9.9	8.9	Yes	Yes	Yes	Yes
8/2/2020 17:11	8/2/2020 17:33	8/2/2020 17:16	4.6	4.6	5.4	4.7	No	No	No	No
8/2/2020 23:27	8/2/2020 23:50	8/2/2020 23:31	7.9	8.4	7.7	6.3	Yes	Yes	Yes	No
8/4/2020 2:16	8/4/2020 2:36	8/4/2020 2:16	N/A	9.3	8.8	5.8	No	Yes	Yes	No
8/4/2020 5:21	8/4/2020 5:51	8/4/2020 5:31	8.4	7.8	7.8	5.9	Yes	Yes	Yes	No
8/4/2020 11:56	8/4/2020 12:17	8/4/2020 12:01	7.3	7.6	8.0	8.0	Yes	Yes	Yes	Yes
8/4/2020 14:51	8/4/2020 15:24	8/4/2020 15:01	7.3	7.7	7.3	7.3	Yes	Yes	Yes	Yes

3. Evaluation of Sound Levels

This analysis section is organized into three discrete topics: accounting for ambient sounds and their influence on monitoring results; establishing Project-only sound levels; and evaluating results by individual monitoring location.

3.1 Accounting for Ambient Sounds

Determining the sound level attributable to a given project, also referred to as the project-only sound level, presents challenges for those working in the field of wind turbine acoustics. Other constant or intermittent extraneous sounds (often referred to as “ambient” sounds) routinely interfere with monitoring and contaminate the measurements. For example, natural or nonturbine sounds such as high winds, vegetative rustling, animal sounds and vehicle traffic can periodically exceed the standard established for a wind project. The challenge of isolating project sounds from ambient sounds may be particularly acute when the ambient sound levels without the project are similar in level or exceed those expected from the project.

Beyond selecting appropriate monitoring locations that are generally free of extraneous noise, several data analysis techniques are available to isolate to the extent possible the Project-only sound level from the measured overall sound level. Some or all of these techniques may be necessary to adjust the measured overall level so that it more accurately reflects the noise levels directly attributable to a project before determining compliance at any particular location. These techniques include but are not limited to the following:

- Focusing on periods when the closest and therefore dominant turbines were operational
- Eliminating periods of precipitation from the analysis
- Identifying potential outliers or spikes that may not be attributable to project operations by focusing on periods where the L_{10} minus the L_{90} is less than 4 dBA.
- Evaluating measured sound levels when winds were not sufficient for turbine operations or other periods when the turbines were not operating or were purposely curtailed (on/off testing)
- Evaluating measured residual (L_{90}) sound levels which filters out intermittent sounds
- Evaluating the potential contribution of vegetative rustling or other background sounds by assessing the Project under low to moderate microphone height winds
- Assessing the potential for wind-induced or “self-noise” on the microphone, the noise resulting from wind blowing across the microphone (wind noise is reduced when large 7-inch windscreens, such as those used in this study, are used, but is still possible when ground-level winds are high)
- Removing high frequencies (those greater than 2,000 Hertz [Hz], referred to as L_{ai}) as these are dominated by insects while turbines are not sources of high-frequency sounds at typical residential setback distances.

Section 3.3 (Evaluating Results at Individual Monitoring Locations) expands on the techniques listed above as they apply to the Project. One or more steps may be appropriate for each location or data set.

3.2 Establishing Project-Only Sound Levels

As discussed above, the presence of ambient background sounds not associated with the Project, such as wind-induced vegetative rustling, insects, birds or traffic, complicates the isolation of sound levels attributable to the Project (Project-only sound levels). The L_{90} metric filters out intermittent sounds such as sporadic vehicle traffic, barking dogs, intermittent birds or insects, short duration thunder, and brief wind gusts. In contrast to the L_{90} metric, the L_{10} measurement may be dominated by short-duration intermittent sounds such as birds, passing traffic, and aircraft. The L_{10} metric, the sound level exceeded 10 percent of

the measurement duration or sampling interval, represents the near maximum measured sound level, that is present for 10 percent of the interval, a comparatively brief period of time. Direct measurement of the L_{10} at residential locations therefore does not reflect Project-only sound levels from a wind energy facility. Given the nature of the L_{10} and L_{90}, the difference between the two metrics may be used as a screening criterion to identify periods where potential contamination by ambient sources is minimized. When the L_{10} minus L_{90} was greater than 4 dBA, that time period is shaded in the graphs indicating periods of high variability typical of ambient-dominated environments (for example, wind gusts, animals, and vehicle pass-by).The nonshaded time periods of the graph are generally the focus of the analysis. Measurements at the control locations validate this approach given that during periods of sufficient winds to support substantial turbine operations, the control location sound level was dominated by the turbine and there was very little difference between the L_{10} and L_{90}, on the order of 2 dBA.

The presence of other near-constant ambient sounds, such as wind-induced vegetative rustling or persistent insects, complicates the isolation of Project-only sound levels from measured levels regardless of the metrics evaluated. No metric will isolate a Project-only level when the constant or baseline ambient sound levels without the Project are similar in level or exceed those expected from the Project. That is, when the sound level of interest (Project-only) is approximately the same as the background level, the Project-only level cannot reliably be isolated from the measured overall level regardless of the statistical metric (e.g., L_{eq}, L_{10}, L_{50}, L_{90}) evaluated. For example, a Project-only level of 40 dBA is difficult to assess in an acoustical environment that is also 40 dBA or exceeds 40 dBA.

It is possible in some situations to estimate a source or Project-only sound level by subtracting the measured ambient or background sound level when the source is turned off from the measured overall operating sound level. Such subtraction techniques are generally reserved for the L_{eq}, the energy-average. This is more appropriately determined when measured levels (Project plus ambient or background level) exceed the ambient or background level by at least 4 dB, often referred to as a signal-to-noise ratio. The reason at least a 4 dB difference is needed is due to the logarithmic nature of decibels and acoustical math. In acoustics, 50 + 50 does not equal 100, but rather equals 53 dB and 50 + 40 = 50 dB. Given the nuances of decibel addition and subtraction, ANSI S12.18 indicates that a drop in sound level of at least 4 dB when the source is turned off is required to reliably estimate the sound level of the source; otherwise, the source or Project-only sound level is considered masked by the background sound. Achieving a 4 dB difference during the approximately 50 curtailments proved limited.

Insects and birds were sources of ambient sounds during the measurement period. The insect noise, likely cicadas, was found to have a substantial influence on the overall A-weighted sound level between approximately 9:00 p.m. and 4:00 a.m. at several residences. The insect noise was so prominent that the A-weighted sound levels are solely reflective of the insect noise at the measurement location. Turbines are not strong sources of high-frequency noise and high-frequency noise attenuates rapidly with distance. Consequently, potential high-frequency noise from the turbine would be reduced by atmospheric absorption over the 3,000 feet traveled. To remove the high-frequency insect or bird noise, the A-weighted sound levels were recalculated excluding frequencies above 2,000 Hz, referred to as L_{ai}. An example of the peaks seen from bird and insect noise is shown in Figure 2. All sounds were recorded in the morning of the same day at the same location when the turbines were at or near full power and ground- level wind speeds were not substantial. The A-weighting is dominated by the dramatic peaks shown in these graphs; thus, the 41 dB peak from the insects or the 49 dB peak from the birds is what would be reflected in the overall A-weighted sound level. Bird calls during the curtailment period are depicted in the curtailment spectrum, which crosses the three operating spectra at 2,000 Hz. The spectra of the three operating time periods exhibit a similar pattern below 2,000 Hz and peak around 400 to 500 Hz. The contamination from the insects and some bird calls can be removed by filtering out the frequencies above 2,000 Hz.[1]

[1] The approach of limiting high frequencies to minimize the contamination from insect noise, an L_{ai} metric, was suggested 10 years ago, if not earlier, by a number of authors, including Hessler and Schomer (for example, Schomer et al. 2010).

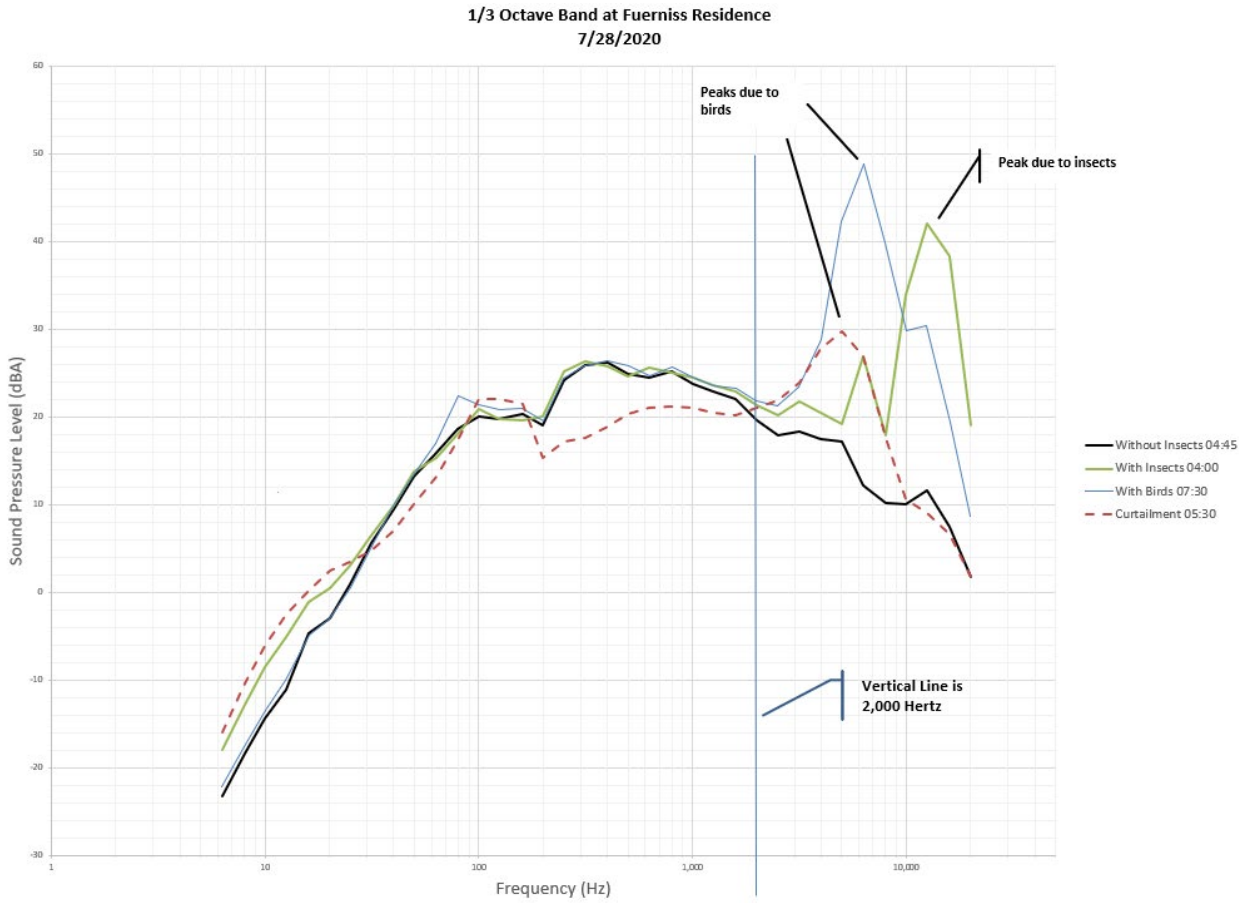

Figure 2. Spectral Peaks Resulting from Bird and Insect Noise

When standard 3-inch windscreens are used, the wind-induced self-noise may be substantial. This is the noise one may hear when a television weatherperson reports during a storm or home videos are recorded under windy conditions. The use of oversized windscreens, such as the 7-inch windscreen employed in this study, effectively limits the creation of wind-induced self-noise. High ground-level winds can also result in excessive noise from rustling vegetation.

3.3 Evaluating Results at Individual Monitoring Locations

Appendix E contains plots of the measured data for each of the six monitoring locations. Time-series charts were prepared for the measured L_{10}, L_{eq}, L_{90}, precipitation, hub height, and ground-level wind speeds at each location. Additionally, the overall electrical Project power and individual power of the closest turbines is included. Shading was applied to the sound level periods where the ground-level winds exceeded 5 m/s or wind gust exceed 7 m/s, rain, or the difference between the L_{10} and L_{90} exceeded 4 dBA. Additional shading was applied to the power plot when the Project was at zero power or during a curtailment for which the shading extends down into the sound level portion of the plot. Periods of measured rain were indicated with an R and site visits with a V. Data are plotted at the start of the 15-minute interval and represented by a point (not visible). The points are connected by lines.

For each of the curtailment periods, detailed plots of the hour before and after are presented in Appendix F. These plots utilize the measured 1-second sound levels and 1-minute SCADA data overlaid on the 15-minute interval statistics.

The following sections summarize the noise analysis results by monitoring location. Each time-series and curtailment was reviewed.

3.3.1 REC-024 (Kelli Pazour)

Monitoring equipment was set in an open area and a box wire fence was erected to protect the equipment from baby goats (refer to the monitoring location photographs in Appendix B). The sound level was influenced by traffic and unusual spikes in sound level were found to be attributable to birds very close to the microphone, perhaps on the box wire fence, as well as to dogs barking, baby goats, and insects. Turbine sounds were not observed during site visits. The measured sound level was not found to correlate with turbine operations. There were multiple instances where the Project was at zero power and sound levels exceeded 40 dBA. Late on July 19 and into the early morning of July 20, the sound level was above 40 dBA while the turbines were generally within the target wind speeds. The wind speeds dropped substantially when the Project was at zero power and the measured sound levels at this location area remained unchanged.

Further investigation revealed that the sound level was dominated by high-frequency insects with insect noise resulting in an overall measured level of 46 dBA at midnight, while the sound level without the insects resulted in an L_{ai} of 33 dBA. Thus, not only is the exceedance the result of insects, the overall (ambient + Project) L_{ai} is less than 40 dBA. By extension, the sound level attributable to the Project would also be less than 40 dBA.

At the control location, an approximate 10 dBA drop in sound levels occurred. Accordingly, the conclusion can be made that the exceedance is not the result of the Project. Similarly, late on July 22, the Project was near full power and sound levels were above 40 dBA. Microphone height winds were mild with no indication of wind-induced microphone noise dominating the measurement. The Project curtailed and a 10 dBA drop was observed at the control location while there was no change in sound level at this location. Accordingly, the conclusion can be made that the sound level is not the result of the Project.

Further investigation also identified insect noise as dominant. At 23:15, the Project was fully curtailed for 15 minutes, the overall sound level was 46 dBA, while the L_{ai} was 39 dBA. At midnight, turbines were near full power while the L_{ai} remained 39 dBA or less for the next several hours through to 5:30 a.m., when other sources become dominant. Hence, not only are these periods greater than 40 dBA the result of insects, but the overall (ambient + Project) L_{ai} is less than 40 dBA. By extension, the sound level attributable to the Project would also be less than 40 dBA. Additionally, on August 1 from approximately 3:00 a.m. to 10:00 a.m. and starting again at 9:00 p.m., the Project had varying power levels and the overall L_{ai} was less than 40 dBA.

At approximately 2:00 a.m. on August 2, the sound level was less than 40 dBA while the turbines were within the target wind speed and microphone height winds were low. There was no substantial drop in sound level when the Project curtailed at this location while clear reduction was observed at the control location. The winds remained steady and within the target wind speed for several hours while the sound levels here also remained less than 40 dBA, with the exception of a period around 5:00 a.m. punctuated by a dog barking. While these overall results were less than 40 dBA, insect noise was found to play a role here, as well. At 2:00 a.m., the turbines were between 2,600 kilowatts (kW) and 3,000 kW and the overall sound level was 39 dBA. During the curtailment at 2:30 a.m. when all turbines were at zero power, the overall sound level was reduced by only 2 decibels to 37 dBA (therefore masked, preventing the assessment of Project-only sound level). The L_{ai} was 32 dBA prior to the curtailment and was reduced by 6 decibels to 26 dBA during the curtailment. This more substantial reduction in the L_{ai} allows for the Project-only sound level to be determined. When two sound levels are 6 dB apart and the lower sound level is subtracted from the larger sound level, the result is a 1 dBA reduction (i.e., 32 dBA – 26 dBA = 31 dBA). The more substantial reduction in the L_{ai}, which discounts the high-frequency contamination associated with insect noise, yields a sound level of 31 dBA attributable to the turbines.

Table 3-1 summarizes additional observations primarily made prior to implementing the L_{ai} analysis approach. Based on this data review and the subsequent Lai analysis, there is no indication that the sound level solely attributable to the Project results in a long-term L_{10} exceedance of 40 dBA.

Table 3-1. Annotated Overview of Measurements at REC-024 (Kelli Pazour)

Date	Time	Notes
19th July 2020	Overall	Background noise dominated; however, periods of potential turbine audibility before curtailment. Period of high peaks attributable to animals passing near noise monitor. Meter memory issue resulted in lack of readings for about 6 hours. Project at zero power for large portion of the day while measured levels often exceed 40 dBA. Steady nighttime sound levels include traffic, radio, distant talking, with levels steadily decreasing as T8 sound level exhibit pattern of increasing and decreasing with hub height winds. Continuing to the early morning on July 20, the Project is at zero power while sound levels remain approximately the same and above 40 dBA.
	Curtailment #1 (5.15 am)	Potential Project sound identified along with birdsong and vehicle noise prior to curtailment. Background noise dominates audio during and after curtailment, including music from nearby stereo, birdsong, dog barking, farm animals. Nothing attributable to Project after curtailment. No drop in sound level observed during curtailment. T8 control exhibits clear reduction during curtailment indicating Project sound below 40 dBA.
20th July 2020	Overall	Background sounds dominant throughout day. Overall measured noise level above 40 dBA attributable to background. Project is at zero power for several time periods while the sound levels exceeds 40 dBA. Early morning sound levels (midnight to 4 am) steady and above 40 dBA while Project power decreases to zero at 2 am and sound levels at T8 control decrease to just below 40 dBA. Distant music also audible.
	Curtailment #1 (5.00 am)	Background dominant noise environment during and after curtailment, including birdsong and dogs barking. Overall measured noise level exceedance of 40 dBA attributable to background. No turbine noise contribution during curtailment or after indicated.
	Curtailment #2 (5.00 pm)	Curtailment occurred during site visit to maintain equipment. Turbine sounds not audible.
21st July 2020	Overall	Background dominant noise environment throughout day. Turbine output below 1000 kW the majority of the day. Similar early morning pattern as on the 20th and similar sounding audio with periodic dog barks, though no music observed. Night-time sound levels exceed 40 dBA while Project at near zero power and control sound levels less than 40 dBA.
	Curtailment #1 (4.45 am)	Low turbine winds and low turbine power. Control location less than 40 dBA prior to curtailment. Measured noise levels before, during, and after curtailment dominated by background artefacts.
	Curtailment #2 (17.15 pm)	Low turbine winds and low turbine power. No substantial change in sound level during the curtailment. Birdsong and other animal noise background artefacts present.
22nd July 2020	Overall	Background dominant noise environment throughout day. Overall measured noise level exceedance of 40 dBA attributable to background. Project at near zero power and control at less than 40 dBA during early-morning hours. Levels above 40 dBA not attributable to the Project. Multiple curtailments during target wind speeds do not result in substantial change in sound levels. No turbines audible during the site visit.
	Curtailment #1 (5.00 am)	Low turbine wind speed, control location under 40 dBA. Overall measured noise level during and after curtailment attributable to background noise, including birdsong, dog barking, farm animals. No marked change in overall measured noise levels across curtailment period.

Table 3-1. Annotated Overview of Measurements at REC-024 (Kelli Pazour)

Date	Time	Notes
	Curtailment #2 (15.45 pm)	Target wind speeds achieved. No marked change in overall measured noise levels across curtailment period. Background noise includes birdsong, dog barking, farm animals.
	Curtailment #3 (17.15 pm)	Target wind speeds achieved. No marked change in overall measured noise levels across curtailment period. Background noise includes birdsong, dog barking, farm animals.
	Curtailment #4 (20.15 pm)	Target wind speeds achieved. No marked change in overall measured noise levels across this 30-minute curtailment period. Background noise includes birdsong, dog barking, farm animals.
	Curtailment #5 (23:15)	Windspeeds slightly above target, but microphone height wind speeds remained low. Project near full power. T8 control exhibits approximately 10 dBA drop during the curtailment while no change in sound level is observed at this location. Therefore, background is dominant.
23rd July 2020	Overall	Overall measured noise level during and after curtailment attributable to background noise, including birdsong, dog barking, farm animals. Turbine output near or at maximum throughout the day. No marked change in overall measured noise levels across curtailment periods. Windspeeds at microphone high in the afternoon.
	Curtailment #1 (2.00 am)	No marked change in overall measured noise levels across curtailment period. In comparisons, over 10 dBA reduction at the control location.
	Curtailment #2 (5.00 am)	No marked change in overall measured noise levels across curtailment period. In comparison, over 10 dBA reduction at the control location.
	Curtailment #3 (9.45 am)	No marked change in overall measured noise levels across curtailment period. Windspeeds at microphone exceed 5 m/s at control location, resulting in only a minor reduction during the curtailment at T8.
	Curtailment #4 (15.30 pm)	No marked change in overall measured noise levels across curtailment period. Windspeeds at microphone exceed 5 m/s here and at the control location. Therefore, microphone wind noise dominating measurement period.
24th July 2020	Overall	Background dominant noise environment throughout day. Overall measured noise level exceedance of 40 dB L10 attributable to background. Insect noise, birdsong and animal noise background artefacts. Turbine output near or at maximum throughout the day.
	Curtailment #1 (5.00 am)	No marked change in overall measured noise levels across curtailment period. Winds slightly above target range but microphone winds less than 5 m/s. Drop in sound level exhibited at T8 during curtailment but not here.
	Curtailment #2 (5.45 am)	No marked change in overall measured noise levels across curtailment period. Winds slightly above target range but microphone winds less than 5 m/s. Drop in sound level exhibited at T8 during curtailment but not here.
	Curtailment #3 (8.45 am)	No marked change in overall measured noise levels across curtailment period. Minor reduction in sound level exhibited at control given high microphone height winds. High microphone wind gusts at this location.
	Curtailment #4 (10.45 am)	No marked change in overall measured noise levels across curtailment period. Minor reduction in sound level exhibited at control given high microphone height winds. High microphone wind gusts at this location.

Table 3-1. Annotated Overview of Measurements at REC-024 (Kelli Pazour)

Date	Time	Notes
	Curtailment #5 (14.15 pm)	No marked change in overall measured noise levels across curtailment period. No material reduction in sound level exhibited at control given high microphone height winds. High microphone wind gusts at this location.
	Curtailment #6 (23:45 pm)	Rain invalidates curtailment period.
25th July 2020	Overall	Rain dominated measured noise level until 4 am. Overall measured noise level remaining above 40 dB limit through day, background dominant. No indication of turbine noise contribution.
	Curtailment #1 (1.00 am)	Rain affected measurement period.
	Curtailment #2 (3.15 am)	Rain affected measurement period.
	Curtailment #3 (6.15 am)	No marked change in overall measured noise levels across curtailment period. Winds slightly above target range but microphone winds less than 5 m/s. Drop in sound level exhibited at T8 during curtailment but not here.
	Curtailment #4 (16.15 pm)	No marked change in overall measured noise levels across curtailment period. Minor reduction in sound level exhibited at control which had borderline high microphone height winds.
	Curtailment #5 (20.15 pm)	No marked change in overall measured noise levels across curtailment period while reduction observed at T8.
	Curtailment #6 (22.15 pm)	No marked change in overall measured noise levels across curtailment period. Rain occurred during curtailment event and persisted for a few hours afterwards.
26th July 2020	Overall	Rain for a portion of the early morning and variable winds. Local ambient noise sources during curtailments.
	Curtailment #1 (1.45 am)	Rain invalidates curtailment period.
	Curtailment #2 (4.45 am)	No marked change in overall measured noise levels across curtailment period while substantial reduction observed at control location. Dramatic increase in wind speed after curtailment results in increased sound levels at the control which just happens to coincide with bird chirping very close to the microphone at this location.
	Curtailment #3 (16.45 pm)	No marked change in overall measured noise levels across the curtailment period. Control exhibited a substantial drop that did not occur here. Goats/animal noises occurred during the curtailment and no noticeable change in the L90.
27th July 2020	Overall	Variable noise level throughout day above 40 dBA with low to no turbine power output till late at night.
	Curtailment #1 Midnight	No marked change in overall measured noise levels across curtailment period while over 10 dBA reduction at control location.
	Curtailment #2 (17:00 pm)	Low hub height winds. No marked change in overall measured noise levels across curtailment period. Sound level at control influenced by construction equipment just prior to the curtailment.
28th July 2020	Overall	Overall measured noise level greater than 40 dBA throughout most of the day during both near full power and no power conditions, thus attributable to background.

Table 3-1. Annotated Overview of Measurements at REC-024 (Kelli Pazour)

Date	Time	Notes
	Curtailment #1 (5.15 am)	Insignificant fluctuation in noise level over curtailment indicates while control location exhibits approximately 10 dBA drop.
	Curtailment #2 (8.15 am)	Insignificant fluctuation in noise level over curtailment indicates while control location exhibits approximately 10 dBA drop.
	Curtailment #3 (22.30 pm)	Background noise dominated before and after curtailment. Control location at 40 dBA after curtailment while sound level above 40 dBA throughout here.
29th July 2020	Overall	Background dominated noise environment throughout day. Overall measured noise level exceedance of 40 dB during low and no power periods, thus attributable to background.
	Curtailment #1 (1.15 am)	No marked change in overall measured noise levels across curtailment period. Control location exhibits over 10 dBA reduction.
	Curtailment #2 (16.45 pm)	Rain affected measurement period.
	Curtailment #3 (20.00 pm)	No marked change in overall measured noise levels across curtailment period. Target wind speed before, during, and after curtailment. Control location exhibits over 10 dBA reduction.
	Curtailment #4 (21.45 pm)	Rain before and after curtailment. No marked change in overall measured noise levels across curtailment period. Control location exhibits over 10 dBA reduction.
30th July 2020	Overall	Background dominant noise environment throughout day. Overall measured noise level exceedance of 40 dB attributable to background.
	Curtailment #1 (17.15 pm)	Curtailment not within target wind speeds with low turbine output either side of curtailment period. No change in measured locations across curtailment period. Control location exhibits 10 dB reduction and is under 40 dBA before, during, and after curtailment.
31st July 2020	Overall	Low to no power throughout the day with sound levels above 40 dBA.
	Curtailment #1 (5.15 am)	Overall measured noise level unattributable to Project during curtailment. Control location exhibits 10 dB reduction and is under 40 dBA before, during, and after curtailment.
1st August 2020	Overall	Background dominant noise environment throughout day. Overall measured noise level exceedance of 40 dB L10 attributable to background.
	Curtailment #1 (14.00 pm)	No marked change in overall measured noise levels across curtailment period. No turbine contribution indicated. Gusty winds at microphone and high winds at control microphone.
	Curtailment #2 (17.15 pm)	No marked change in overall measured noise levels across curtailment period. No turbine contribution indicated. Gusty winds at microphone and high winds at control microphone.
	Curtailment #3 (20.30 pm)	No marked change in overall measured noise levels across curtailment period. No turbine contribution indicated. Sound level less than 40 dBA before and during curtailment. Sound level increase after curtailment resulting from insects. Control exhibits steady sound level before and after curtailment and at least 10 dB drop during curtailment.
2nd August 2020	Overall	Background dominant noise environment throughout day. Overall measured noise level exceedance of 40 dB attributable to background.

Table 3-1. Annotated Overview of Measurements at REC-024 (Kelli Pazour)

Date	Time	Notes
	Curtailment #1 (2.30 am)	No marked change in overall measured noise levels across curtailment period. Background dominant. Control exhibits steady sound level before and after curtailment and at least 10 dB drop during curtailment. Target wind speeds realized and all metrics below 40 dBA and remain so for several hours – spike at 5 am is dog barking. Insect noise also audible.
	Curtailment #2 (17.00 pm)	Low hub height winds and low power, background dominant. No reduction during curtailment while control exhibits over 10 dB drop.
	Curtailment #3 23:30 pm	No marked change over the curtailment period. Low hub height winds, background dominant. Windspeed increases sharply after the curtailment period and control exhibits increase immediately after curtailment while this location does not.
3rd August 2020	Overall	Low wind speeds throughout the day. Project at near zero power and sound level at control less than 40 dBA while background noise here exceeds 40 dBA. No curtailments.
4th August 2020	Overall	Background dominant noise environment throughout day
	Curtailment #1 (2.15 am)	Dog barking reflected in L10/Leq metrics. L90 filters out the dog barking and remained less than 40 dBA. Over a 15 dB reduction during the curtailment at the control location.
	Curtailment #2 (5.15 am)	Dog barking reflected in L10/Leq metrics. L90 filters out the dog barking and remained less than 40 dBA. Intermittent traffic also audible and contributing to L10/Leq. Approximately a 15 dB reduction during the curtailment at the control location.

3.3.2 REC-068 (Sherman Fuerniss)

The microphone for the Fuerniss residence was situated in the open pasture south of the residence and is closer to the turbines than the dwelling but was selected to minimize the influence of ambient sounds. The recordings showed the background noise levels regularly exceeded the 40 dBA requirement, making measurement of the Project-only noise difficult. Regular noise sources included birds, insects, planes, traffic, weather, and self-noise from wind. During the 2-week period, there were relatively few periods with high wind shear conditions (periods of low ground-level winds but high hub height winds) and minimal background noise to facilitate the evaluation of Project-only. The most optimal condition for analysis occurred on August 2 between 3:00 and 6:00 a.m., with a shutdown for background reference that occurred at 2:30 a.m. During this period, the wind speed at the microphone was consistently low, and the noise levels were between 36 and 39 dBA. During the shutdown, noise levels at the microphone dropped to 35 dBA, yielding a marginal signal to noise ratio. Several other events showed similar results with turbine-attributable noise levels ranging from 36 to 39 dBA.

Based on this data review and the subsequent L_{ai} analysis, there is no indication that the sound level solely attributable to the Project results in a long-term L_{10} exceedance of 40 dBA.

Table 3-2 provides an annotated overview of the measurements focusing on days with curtailment events.

Table 3-2. Annotated Overview of Measurements at REC-068 (Sherman Fuerniss)

Date	Time	Notes
19th July 2020	Overall	Power output was low today, so noise levels were not representative of a max output condition. Low ground wind speeds yielded very low L10 values in the early-morning hours. Other typical background noises were still apparent including birds, insects and traffic. Lower self-noise from the lower wind speed does make the turbine potentially more apparent though the L10 rarely exceeds 40 dBA while the turbines are operating. Tractor noise and rain were dominant in the afternoon.
	Curtailment #1 (5.15)	Prior to the curtailment Turbine noise is potentially audible with relatively low levels of birdsong mixed in. L10 levels ranged from 30-34 dBA prior to shut down. Noise levels increased during and after the curtailment due to increased noise from birdsong and cows.
20th July 2020	Overall	For most of the day, the turbine power output was below 25% yielding little useful information. Early in the morning power levels were near 50% and L10 values ranged from 35-37 dBA. Typical noises filled the daytime hours with birds and traffic making up a majority of the background noise. In the afternoon the wind speed at the microphone picked up yielding higher measured values that are contaminated with wind noise.
	Curtailment #1 (5.00)	Noise prior to the curtailment was potentially dominated by turbine noise despite a low power output of approximately 25%. L10 levels peaked at 33.5 dBA. During the curtailment noise levels dropped to 27.7 dBA. Following the curtailment turbine noise was masked by birdsong and insect noise but was still potentially audible. The LA 10 peaked at 39.1 dBA before the Turbines shut off due to low wind conditions.
	Curtailment #2 (17:00)	Turbines noise was not apparent before or after the shutdown. Noise levels increased during the curtailment due to an increase in the microphone height wind speed.
21st July 2020	Overall	Turbine power levels ranged from 10-25% for most of the day so a majority of the results were not particularly interesting. In the hour from midnight to 1 am the power level was about 50% with nearby turbines exceeding 75% at peak output. During this period, L10 values ranged from 34 to 36 dBA.
	Curtailment #1 (4.45 am)	Power level prior to this curtailment was already below 10%, but turbines were potentially audible. L10 values were around 25 dBA. Noise levels increased during and after the curtailment due to a rooster and birds.
	Curtailment #2 (17.00 pm)	Power level prior to the shutdown was about 10%. Turbine noise was potentially audible but mixed with birdsong and wind gusts. Noise levels increased just prior to shutdown due to a tractor. Noise levels during shutdown were not significantly lower than preceding periods but following the shutdown. tractor noise dominated the measurement.
22nd July 2020	Overall	Background noises were typical for much of the day with birds, tractors, and traffic present. The early-morning hours had too little wind to operate the turbines and noise levels were below 30 dBA. Afternoon curtailments were masked by background noise, but the evening curtailment has some useful results.
	Curtailment #1 (4.45 am)	Hub height wind speeds were too low to generate much power before this shutdown, and there was little change in the noise levels due to this. After the shutdown noise levels picked up due to birds.
	Curtailment #2 (15.30 pm)	The noise before during and after the shutdown were dominated by self-noise due to high microphone wind speeds. No change in noise levels was registered during the shutdown.

Table 3-2. Annotated Overview of Measurements at REC-068 (Sherman Fuerniss)

Date	Time	Notes
	Curtailment #3 (17.15 pm)	Tractor noise dominated this curtailment, also indicated on Sherman Feurniss's notes that they were mowing the fields this afternoon.
	Curtailment #4 (20.00 pm)	Tractor noise was still present and dominating the spectrum prior to this shutdown. This noise ended just before the curtailment. During the curtailment there was some birdsong mixed with self-noise due to wind gusts. The L10 during curtailment was 37.1 dBA. After the Turbines ramped back up power level was in excess of 75% power, and turbine noise was potentially audible. The overall L10 levels ranged from 37.1 to 40.7 dBA, while still containing a significant amount of noise from wind gusts, and birds. This indicates that the Project-only noise was below the 40 dBA threshold.
23rd July 2020	Overall	This is one of the more useful data sets of the measurement period. For most of the day total power output exceeded 75% of the potential output with nearby turbines reaching 100%. Unfortunately, the wind speed at the microphone exceeded 5 m/s for most of the daytime period.
	Curtailment #1 (2.00 am)	In the 2 hours prior to this shutdown the average wind speed at the mic remained around 3 m/s, and the L10 levels varied between 39.6 to 41.1 dBA. During the shutdown L10 levels dropped to 35.4 dBA, but the wind speed also dropped to approximately 2.5 m/s. After the shutdown ended the levels increased again. For the following 2 hours the wind speed picked back up to around 3.5 m/s. This makes the first curtailment somewhat difficult to use because the drop in wind speed during the shutdown masks the actual noise level of the turbines. Not accounting for the variability in the wind speeds over these event or potential influence of insects, adding a presumed turbine sound level of 40 dBA to the 35.4 dBA yields 41.3 dBA which aligns with the overall measured sound levels indicating that a Project-only sound level did not exceed 40 dBA.
	Curtailment #2 (5.00 am)	The 2 hours between this and the previous shutdown had a max wind speed of 3.6 m/s and an L10 of 41.4 dBA. During the shutdown the wind speed remained consistent with this value and the noise level dropped to 40.1 dBA. Power level addition suggests that the Turbine attributable noise level was 38.7 dBA prior to this shutdown. The L_{ai} remained less than 40 dBA before during and after this curtailment. After the shutdown the wind speed at the microphone picked up and some rain generated additional noise.
	Curtailment #3 (9.45 am)	This shutdown was masked by background noise from high wind speeds.
	Curtailment #4 (15.30 pm)	This shutdown was masked by background noise from high wind speeds.
24th July 2020	Overall	On this day the Turbine power level was near max all day, but this was due to very high wind speeds (above 10 m/s at hub height, and above 5 m/s at mic height for most of the day. This obscured the effects of the turbines.
	Curtailment #1 (5.00 am)	Noise levels dropped during this shutdown, but that was primarily due to a drop in wind speed.
	Curtailment #2 (5.45 am)	The wind speed also dropped during this shutdown making the comparison difficult.
	Curtailment #3 (8.45 am)	This shutdown was masked by background noise from high wind speeds.

Table 3-2. Annotated Overview of Measurements at REC-068 (Sherman Fuerniss)

Date	Time	Notes
	Curtailment #4 (10.45 am)	This shutdown was masked by background noise from high wind speeds.
	Curtailment #5 (14.15 pm)	This shutdown was masked by background noise from high wind speeds.
25th July 2020	Overall	A thunderstorm masked a majority of the noise in the early and evening hours of this day, with daytime hours masked by insect and bird noise. There was also a low power output during the afternoon shutdown allowing it to be masked by moderate wind speed at the microphone.
	Curtailment #1 (1.00 am)	Masked by Thunderstorm
	Curtailment #2 (3.15 am)	Masked by Thunderstorm
	Curtailment #3 (6.15 am)	Insect noise dominated the spectrum during the shutdown, resulting in increased levels during the curtailment period. limiting the practical usage of this event.
	Curtailment #4 (16.15 pm)	Turbine noise was not apparent before or after the shutdown, and noise levels did not change significantly during this shutdown. Likely masked by gusty ground-level wind speeds.
	Curtailment #5 (20.15 pm)	Turbine noise was potentially audible during this shutdown with minimal background noise from other sources. L10 values varied from 34.3 to 35.7 dBA in the period leading up to the shutdown with about 50% power output. The L10 level dropped to 33 dBA during the shutdown. The L_{ai} also remained less than 40 dBA before during and after this curtailment.
	Curtailment #6 (22.15 pm)	Masked by high wind gusts at the microphone with speeds exceeding 6 m/s and followed by a period of rain, although the L_{ai} remained less than 40 dBA until the rain intensified.
26th July 2020	Overall	The data from this day was not very useful due to rain in the early morning and very low wind speeds through most of the day. Two of shutdowns did yield some valid measurement results though that is described below. Besides the rain, background noise included typical sources like the birds and wind.
	Curtailment #1 (1.45 am)	Masked by high local wind speed and rain.
	Curtailment #2 (4.45 am)	This curtailment is inconclusive. Prior to the curtailment there is minimal wind and other noise, but noise seems to be a mix of wind and turbine noise. Rain did occur earlier in the day obscuring the results. After the shutdown power production returned to near maximum and the L10 increased from 33.1 dBA to 40.5 dBA which was accompanied with gusty winds at the microphone.
	Curtailment #3 (16.45 pm)	Just prior to this shutdown, there was a valid period of minimal background noise and turbine power output of 50%. During this time period wind speed at the microphone was consistent near 2.5 m/s, and noise levels fluctuated between 36.3 to 37.2 dBA. During the shutdown noise levels dropped to 34.4 dBA. After the shutdown there was a period of gusty microphone winds.
27th July 2020	Overall	On this day the wind speed was mostly too low to generate any power. The turbines were only operating in the early morning and the late evening. In the morning the turbine noise was masked by a thunderstorm. In the evening there were high local wind speeds, and noise from a tractor or truck.

Table 3-2. Annotated Overview of Measurements at REC-068 (Sherman Fuerniss)

Date	Time	Notes
	Curtailment #1 (16:45)	The power level before and after this shut down were very low, and during the shutdown a tapping noise was disrupting the measurement driving up the sound level. It was possibly rain or a bird. Later in the night the winds picked up and near full power was achieved during which time the L_{ai} remained less than 40 dBA.
28th July 2020	Overall	This day shows some useful results from an early morning curtailment, but the wind steadily decreased over the day, and included a long afternoon/evening period with minimal turbine output. Background noise was mostly dominated by wind in the early hours of the day with the typical birds and planes from morning to afternoon.
	Curtailment #1 (5.15 am)	This curtailment provided useful results. The earlier hours of the day had turbine noise masked by insect noise, but just before the shut down the insect noise died down, while turbine power remained high. During this period the L10 varied from 36 to 37.2 dBA, including during the curtailment. (Slightly higher levels were recorded as the turbines were in the forced process of shutting down for this curtailment). In addition, the L_{ai} yielded noise levels between 34 to 37 dBA for the period from midnight to shutdown, and dropped to 32.1 dBA during shutdown. This indicates that noise levels were well below 40 dBA throughout the night when power levels were at or near 100% and the Project-only sound level is less than 35 dBA.
	Curtailment #2 (8.15 am)	This shutdown was mostly masked by birds making analysis difficult.
	Curtailment #3 (22.30 pm)	Gusty microphone wind speeds partially masked the shutdown, and the noise levels didn't significantly change during the shutdown though the L_{ai} remained less than 40 dBA throughout this event.
29th July 2020	Overall	The power output was very low for most of the day, and rain obscured the afternoon shutdown. Typical background noise with a bird chirping during the evening shutdown.
	Curtailment #1 (1.15 am)	This curtailment shows a drop in sound levels during the shutdown, but this was due to a drop in wind speed that occurred during the curtailment.
	Curtailment #2 (16.45 pm)	This curtailment occurred during a low power level scenario and was masked by rain.
	Curtailment #3 (20.00 pm)	A bird was perched near the mic and masked the effect of the shutdown. Noise levels decreased after the shutdown ended when the bird left.
	Curtailment #4 (21.45 pm)	Noise levels were dominated by gusty microphone winds. Rain was also recorded shortly after the shutdown ended.
30th July 2020	Overall	Power levels did not exceed 25% on this day, so noise levels were dominated by other sources. During max power output for the day, between 5 and 6 am, noise levels fluctuated between 36.3 and 38.8 with nearby turbines reaching 50% power output, and wind speeds around 2.5 m/s. the rest of the day had a significant amount of bird noise.
	Curtailment #1 (17.15 pm)	Noise levels appeared to drop during this shutdown, but it was due to birdsong just before and just after the shutdown. Power output before and after the shutdown remained low at less than 10%.
31st July 2020	Overall	Turbines operated at zero or near zero output for a majority of the day. Background noise was typical with birds and apparent construction noise. Wind speed began to pick up in the late evening, but other background noise sources were still dominant.
	Curtailment #1 (5.15 am)	Noise levels appeared to increase during this shutdown, but it was the normal early morning birdsong.

Table 3-2. Annotated Overview of Measurements at REC-068 (Sherman Fuerniss)

Date	Time	Notes
1st August 2020	Overall	Power levels remained too low in the early hours of the morning, and was masked by noise from a thunderstorm. The wind picked up around 3 am and optimal conditions were met until 6 am with sparse bits of rain. During this period, the spread between the L10 and L90 remained tight and overall L10 values fluctuated from 37.2 to 40.7 dBA while turbine power was around 75%. The L_{ai} remained less than 40 dBA through the morning. Birdsong picked up around 6:30 and masked curtailments for the rest of the day.
	Curtailment #1 (14.00 pm)	This curtailment shows an increase in noise level to a bird.
	Curtailment #2 (17.15 pm)	This curtailment appears to show a significant drop in noise levels, but it is due to bird noise before and after the shutdown.
	Curtailment #3 (20.30 pm)	Background noise masked the turbines in the hours leading up to the curtailment, but these noise sources died out during the curtailment and led to an L10 level of 37.6 dBA with a microphone wind speed of 0.9 m/s. it took some time for the turbines to ramp up, but in the late-night hours the turbines were mixed with insect noise. The L_{ai} remained in the 35 dBA range during this period.
2nd August 2020	Overall	This day represents the most conclusive data set for the entire measurement period. There are several hours with a high wind shear condition yielding in excess of 75% power output with low wind speed near the ground. During the day winds died down and turbine power level was low with background noise dominated by birds.
	Curtailment #1 (2.30 am)	In the earliest hours of the day the turbine power level was high, but insect noise was still contaminating the data as it was late on the 1st. in the 30 min prior to the curtailment the L10 level fluctuated from 38.6 to 39.4 dBA. During the shutdown the L10 dropped to 34.6 dBA. During the 3 hours following the shutdown power output picked back up to 75% quickly and wind speed at the mic was consistently low. The L10 fluctuated from 36.3 to 38.6 dBA during this period. The L_{ai} was very consistent at 35 to 36 dBA preshutdown, dropped to 29.6 dBA during the curtailment, and then increased back to 35-36 dBA after the shutdown ended. This shows the noise level from the turbines is not exceeding the 40 dBA threshold and the Project-only level is in the 34 to 35 dBA range.
	Curtailment #2 (17.00 pm)	This curtailment was masked by an increase in noise from 16:00 to 18:30 due to noise from birds and traffic.
3rd August 2020	Overall	In general power levels on this day remained at or near zero. In the early morning the nearby turbines reach 75% power output. With some insect, owls, and moderate winds of 3.4 m/s the L10 was measured as 39.9 to 40.1 dBA. This shows the turbines are not in exceedance.
	No Curtailment	N/A
4th August 2020	Overall	The last day of testing showed some useful results in the early morning with moderate wind conditions at hub height and low wind speeds at ground level. Birds dominated the spectrum during the day. Elevated wind speeds at ground level masked the afternoon curtailment.
	Curtailment #1 (2.15 am)	In the hours before and after this curtailment the nearest turbines were at or above 50% output and dominated the noise at the microphone. In the 2 hours leading up to the shutdown the L10 fluctuated between 36.2 to 38.7 dBA with wind speeds at or below 1.6 m/s. During the shutdown, the L10 dropped to 34.9 dBA with a wind speed of 1.3 m/s. After power was ramped back up the L10 levels fluctuated between 36.3

Table 3-2. Annotated Overview of Measurements at REC-068 (Sherman Fuerniss)

Date	Time	Notes
		and 37.9 dBA with nearby turbines reaching a peak output of 75% and local wind speed below 1.9 m/s. The L_{ai} remained less than 40 dBA throughout this period.
	Curtailment #2 (5.15 am)	Between 2:30 and 4:30 the overall L10 varied between 36.3 and 37.9 dBA and dropped to 29.2 during the shutdown with wind speeds of 0.9 m/s. The L_{ai} remained less than 40 dBA throughout this period. Following the test, birdsong dominated the recorded noise.

3.3.3 REC-121 (Karen Jenkins)

The Jenkins residence is approximately 1 mile from the closest turbine. There were numerous sources of ambient sound that complicated the assessment of Project-only sound levels. The most striking ambient source was insect noise, which dominated at the monitoring location but not at the control location, Turbine 56. The insect noise was dominant at night, when road traffic is typically minimal, therefore contaminating the time period one would generally focus on to assess Project-only sound levels. The plots of the 1-second sound data during the curtailment periods resulted in striking patterns indicating high-frequency insect noise during the night-time hours. On the night of July 22 extending into the morning of July 23, there were three curtailments. The overall L_{ai} was in the 35 dBA range and the Project-only contribution was compliant with the 40 dBA threshold. Similarly, the night of July 23 extending into the morning of July 24, the L_{ai} was consistently less than 40 dBA while the Project was steadily operating near full power. A similar pattern occurred the night of July 27 through the early morning of July 28, inclusive of a curtailment that occurred at 5:00 a.m. on July 28, where no substantial drop in sound occurred during the curtailment and the increase after the curtailment was marked by gusty winds at the microphone (understandable with hub height wind speed in the 18-m/s [40-mph] range). By 8:00 a.m., the wind gusts at the microphone were in the 11-m/s range (25 mph). The night of August 1, winds at the microphone were moderate and within the target range at the hub height and the L_{ai} was generally less than 35 dBA. By 3:00 a.m. on August 2, all metrics were less than approximately 35 dBA and the L_{ai} was less than 30 dBA.[2]

Table 3-3 summarizes additional observations made primarily before developing the L_{ai} analysis approach. Based on this data review and the subsequent L_{ai} analysis, there is no indication that the sound level solely attributable to the Project results in a long-term L_{10} exceedance of 40 dBA.

Table 3-3. Annotated Overview of Measurements at REC-121 (Karen Jenkins)

Date	Time	Notes
19th July 2020	Overall	Background dominant noise environment throughout day and primarily less than 40 dBA. Low to zero turbine power output throughout much of the day. Period of rain in the afternoon. Near midnight, sound level increase is due to high-frequency source (12,500 Hz, likely an insect) which is not present at the control location, T56. For example, at 23:15, the 12,500 Hz band is 49 dB at here while it is 25 dB at T56.
	Curtailment #1 (5.15 am)	Background dominated before, during, and after curtailment period. Decreasing wind speeds and curtailment period dominated by birds and traffic noise.
20th July 2020	Overall	Background dominant noise environment throughout day. At 22:00 sound levels appear attributable to firecracker/bottle rockets.

[2] Turbine 30 was offline starting July 26. Given that this turbine is more than 8,500 feet away and over the margin to compliance, its operational status would not alter the analysis conclusions.

Table 3-3. Annotated Overview of Measurements at REC-121 (Karen Jenkins)

Date	Time	Notes
	Curtailment #1 (5.00 am)	Background dominated before, during, and after curtailment period. Low turbine wind speed and power, control location also less than 40 dBA. Increase in L10 and Leq due to traffic, L90 remains less than 40 dBA.
	Curtailment 17:15	No marked change across the curtailment here or at the control location which is offline. Periodic high microphone wind gusts, traffic and at the control location birds.
21st July 2020	Overall	Background dominant across day period. Low wind speeds and low turbine power output.
	Curtailment #1 (4.45 am)	Background dominated before, during, and after curtailment period. Control turbine offline.
	Curtailment #2 (17.15 pm)	Background dominated before, during, and after curtailment period. Low wind speeds.
22nd July 2020	Overall	Background dominant across day period. Control location exhibits drop in sound level during curtailments while no substantial reduction realized here.
	Curtailment #1 (4.45 am)	Background dominated before, during, and after curtailment period. Low to zero turbine output.
	Curtailment #2 (15.30 pm)	Background dominated before, during, and after curtailment period.
	Curtailment #3 (17.15 pm)	Background dominated before, during, and after curtailment period.
	Curtailment #4 (20.00 pm)	Background dominated before, during, and after curtailment period.
	Curtailment (23:15)	High-frequency noise source yields sound levels above 40 dBA, when frequencies above 2,000 Hz are discounted, and sound levels are less than 35 dBA during target wind speed and near full load conditions.
23rd July 2020	Overall	High-frequency noise source persists throughout the night. When removed, sound levels are less than 35 dBA until approximately 8 a.m. The high-frequency source returns at approximately 21:00 and is also less than 40 dBA when removed.
	Curtailment #1 (2.00 am)	Background dominant, insect noise. Though when removed, sound levels less than 35 dBA while Project is in target wind speed.
	Curtailment #2 (5.00 am)	Background dominant, insect noise. Though when removed, sound levels less than 35 dBA while Project is in target wind speed.
	Curtailment #3 (9.45 am)	Background dominant. Control exhibits reduction during curtailment that is not seen here.
	Curtailment #4 (15.30 pm)	Background dominates. Traffic noise and gusty winds.
24th July 2020	Overall	Wind-dominated background noise, including insects and birds.
	Curtailment #1 (4.45 am)	Wind-dominated background noise insects and birds
	Curtailment #2 (5.45 am)	Overall measured sound levels at 6:30 and 6:45 at or below 40 dBA while target windspeeds realized, thus Project-only contribution is less than 40 dBA.
	Curtailment #3 (8.45 am)	Background noise dominates, no marked reductions during curtailment. Overall measured levels before and after curtailment close to 40 dBA, thus Project contribution is less than 40 dBA.

Table 3-3. Annotated Overview of Measurements at REC-121 (Karen Jenkins)

Date	Time	Notes
	Curtailment #4 (10.45 am)	Wind gust and background noise dominant.
	Curtailment #5 (14.15 pm)	Wind gust and background noise dominant.
	Curtailment 23:45	Rain invalidates curtailment period.
25th July 2020	Overall	Rain affected measurements through early morning and late evening. Background noise dominated in between rain affected periods, including periods of vehicle noise and insect dominated noise.
	Curtailment #1 (1.00 am)	Rain affected measurement period.
	Curtailment #2 (3.15 am)	Rain affected measurement period.
	Curtailment #3 (6.15 am)	Background noise dominant. Approximately 10 dBA reduction realized at control location while no reduction here.
	Curtailment #4 (16.15 pm)	Background noise dominant. Reduction realized at control location while no reduction here. Vehicle and machinery noise during and after curtailment.
	Curtailment #5 (20.15 pm)	Background noise dominates. Reduction realized at control location while no reduction here.
	Curtailment #6 (22.15 pm)	High-frequency insect noise, when removed all sound levels after 21:00 less than 33 dBA while turbines within target wind speed and Project near full power.
26th July 2020	Overall	Background noise dominant through most of day, including firecrackers events, insect noise and birdsong.
	Curtailment #1 (1.45 am)	Rain affected measurement period.
	Curtailment #2 (4.45 am)	Background dominates. Train horn after curtailment coincides with rise in turbine power.
	Curtailment #3 (16.45 pm)	Background noise dominates. No marked reduction during curtailment.
	Curtailment 23:45	High-frequency insects.
27th July 2020	Overall	Road noise from the nearby highway was dominant for much of the day, including a significant amount in the early hours of the morning. Turbines were not operating for much of the day, but power production picked up in the evening. Noise level increases is primarily attributable to insect noise, and no turbine noise is audible.
	Curtailment #1 (4.45 am)	Turbine output was below 10% before and after this shutdown, and turbine noise was imperceptible. During shutdown a wave of traffic passed by on the highway raising noise levels.
	Curtailment 16:45	Low winds overall sound levels generally less than 40 dBA before and after curtailment.
28th July 2020	Overall	Background noise dominant throughout day.

Table 3-3. Annotated Overview of Measurements at REC-121 (Karen Jenkins)

Date	Time	Notes
	Curtailment #1 (5.15 am)	Background noise dominant. 10 dBA reduction at control location and similar reduction not realized here.
	Curtailment #2 (8.15 am)	Background noise dominant. Gusty microphone height winds. No reduction realized during curtailment.
	Curtailment #3 (22.30 pm)	High-frequency insects and potentially rain affected.
29th July 2020	Overall	Turbine output was again below 10% for much of the day, with some periods of up to 50% near curtailments. Noise was dominated by traffic once again, with significant insect noise at night.
	Curtailment #1 (1.15 am)	Background noise was dominant across curtailment period. Mostly included insect noise with occasional passing traffic.
	Curtailment #2 (16.45 pm)	Low winds. Following the curtailment turbine power increased to 50% with no significant change in noise levels. Background noise dominated by traffic and birds.
	Curtailment #3 (20.00 pm)	Noise levels dropped slightly during this event, but this was primarily due to a reduction in traffic noise. Overall sound levels generally less than 40 dBA.
	Curtailment #4 (21.45 pm)	There was a significant amount of traffic leading up to this event and event coincides with the onset of high-frequency insect noise.
30th July 2020	Overall	Generally low winds and low power. Background includes insect and birds.
	Curtailment #1 (17.15 pm)	Low winds and low power though the marked reduction at the control location is not realized here. It is generally less than 40 dBA at both the control and here.
31st July 2020	Overall	Turbine power production was near zero for most of the day. Insect noise was the primary noise source during night hours with sparse traffic. During the day birdsong and more frequency traffic elevated noise levels. In the afternoon hours traffic became less frequent creating periods with lower noise levels.
	Curtailment #1 (5.15 am)	Turbine output was near zero before and after this shutdown. Levels generally less than 40 dBA here and at the control location. Leading up to the shutdown, traffic was sparse and insect noise had ceased leading to low levels. During the shutdown noise levels began to increase due to birds and increased traffic.
1st August 2020	Overall	Background noise dominant throughout the day, wind induced noise, insect noise with occasional firecracker events.
	Curtailment #1 (14.00 pm)	Background noise dominant across curtailment period. High microphone height winds and wind gusts.
	Curtailment #2 (17.15 pm)	Background noise dominant across curtailment period. High microphone height winds and wind gusts.
	Curtailment #3 (20.30 pm)	Background noise dominant across curtailment period. Insect noise increases at 21:00, although even with the insects, sound level was approximately 40 dBA
2nd August 2020	Overall	Background noise dominant throughout the day.
	Curtailment #1 (2.30 am)	Background noise dominant across curtailment period. Marked reduction at control location during curtailment not realized here.
	Curtailment #2 (17.00 pm)	Background noise dominant across curtailment period. Turbine imperceptible around curtailment event.
	Curtailment 23:30	High-frequency insect noise.

Table 3-3. Annotated Overview of Measurements at REC-121 (Karen Jenkins)

Date	Time	Notes
3rd August 2020	Overall	Generally low wind speed day and no curtailments.
4th August 2020	Overall	Background noise dominant during before and after curtailment period.
	Curtailment #1 (2.15 am)	Background noise dominant during before and after curtailment period
	Curtailment #2 (5.15 am)	Background noise dominant during before and after curtailment period.

3.3.4 REC-139 (Paul and Lisa Schoenfelder)

The recordings at the Schoenfelder residence show no evidence of exceedance of the 40 dBA requirement. For much of the period, the turbine noise was not audible as other background noise sources masked any potential noise from the turbines. However, during multiple periods, the background noise died down and a high wind shear condition occurred, presenting opportunities for analysis using higher signal-to-noise ratios. During these brief periods, turbine power production was near maximum, but turbine noise was not distinctly audible among wind and insect noise. The overall L_{10} in these periods typically ranged between 35 to 37 dBA, and still included other background noise sources. For the rest of the period, other noises were dominant and typically easy to identify. One of these sources was high-frequency insect noise that typically lasted from sundown to sunrise, and regularly reached 50 dBA. By removing this high-frequency noise during periods around a curtailment with the L_{ai} analysis, findings in the carefully selected periods with minimal background noise were confirmed and could be extended to numerous other time periods.

Two curtailments with high wind shear condition and insect dominated background noise showed a consistent L_{ai} of 33 to 35 dBA while turbines were operating and a measurable drop during shutdown to 29 and 18 dBA for each of the two events, yielding a Project-only sound level in the 33 to 35 dBA range. During the day, bird noise was typically dominant with some occasional noise from planes, vehicles, construction, and a mower. During the two-week period, 51 curtailments were performed to determine if any of the measured noise was directly attributable to the turbines. None of these shutdowns showed a substantial decrease in the L_{10} at the residence despite reductions of approximately 10 dBA at the control location near Turbine 8.

The L_{ai} was consistently less than 40 dBA during the early morning and late night when sources other than insects were minimal. The L_{ai} was also observed to correlate with the turbine shutdowns and the control location, indicating that a localized, high-frequency noise source was dominant at the measurement location.

Table 3-4 provides an annotated overview of the measurements. Based on this data review and the subsequent L_{ai} analysis, there is no indication that the sound level solely attributable to the Project results in a long-term L_{10} exceedance of 40 dBA.

Table 3-4. Annotated Overview of Measurements at REC-139 (Paul and Lisa Schoenfelder)

Date	Time	Notes
18th July 2020	Overall	Turbine power output was 75-90% in the early hours of the morning and in the afternoon. During the earl- morning hours, there were relatively low wind speeds near the microphone with periodic gusts which created noise that masked the turbines. During periods with minimal wind gusts the L10 levels fluctuated from 34.7 to 37.8 dBA while power levels above 75%. Following this period, the wind died down and

Table 3-4. Annotated Overview of Measurements at REC-139 (Paul and Lisa Schoenfelder)

Date	Time	Notes
		power production ranged from 25-50% with minimal background noise. During this period L10 levels ranged from 33.7 to 35.7 dBA. Following this noise levels picked up with noise dominated by birds, with noise from occasional vehicles and dogs obscuring the turbine noise in the afternoon. In the evening power output dropped to zero, and crickets were the primary source of noise.
	No Curtailment	N/A
19th July 2020	Overall	Power level at or near zero for most of the day. In the early morning hours power level approached 25% but measured sound had a large amount of fluctuations with L10 levels bouncing in the range 23.9 to 36.9 dBA. L90 was consistent around 24 dBA for this period. The periods with peaks in the L10 levels correspond to noise that sounds similar to the turbines, but also occurs earlier in the night when the turbines were not running. It could be general wind noise but the wind speed at the mic was consistently low at 0.6 m/s with gusts up to 1.4 m/s. Perhaps some local noise source. For the rest of the day the recordings were dominated by birds with some noise from voices and vehicles mixed in on occasion.
	Curtailment #1 (5.15)	The entire curtailment was masked by bird noise.
20th July 2020	Overall	Turbine power levels were low for most of the day. Recordings were dominated by birds for most of the daytime period with occasional traffic noise. In the early morning hours, the noise was dominated by wind and animals like coyotes. When the noise died down so did the turbine power levels; however, there were brief periods of moderate power output of around 25% with minimal noise from identifiable sources just before the shutdown. In the late evening wind near the microphone picked up and masked most other noise. In this period Turbine power level increased steadily from 10% to 75% with no apparent change in the L10 indicating minimal impact from the turbines.
	Curtailment #1 (5.00)	This curtailment followed an hour of low noise levels with turbine power level of 25%. During this hour the L10 fluctuated from 30.3 to 31.5 dBA. During the shutdown the L10 remained in that range with a value of 30.8 dBA. The L90 dropped from 27.5 to 24.3 dBA indicating the actual impact of the turbines at this power output is below 30 dBA.
	Curtailment #2 (17:00)	Completely masked by birds and wind. L10 and L90 showed no notable change.
21st July 2020	Overall	Turbine power production was low, with most of the day below 25% capacity. Noise was dominated by sources other than turbines including birds, planes, dogs, and vehicles. In the early-morning hours, the power production peaked at 75% for some of the nearby turbines, but L10 values were 10 dB greater than the L90 suggesting the noise from local intermittent sources were dominating the measurement. The L_{ai} during this period coincides with the L90 and is generally less than 35 dBA.
	Curtailment #1 (4.45 am)	This shut down occurred as birdsong picked up in the hour around sunrise and during period of low hub height winds. Prior to the shutdown power production was below 10% and there were brief periods with minimal masking which recorded L10 values of 24 to 25 dBA. During these periods local wind speeds where below 0.5 m/s and the apparent noise may be attributable to Turbines though the noise is indistinguishable from wind. Following the shutdown, power ramped back up, but any turbine noise was masked by birdsong.

Table 3-4. Annotated Overview of Measurements at REC-139 (Paul and Lisa Schoenfelder)

Date	Time	Notes
	Curtailment #2 (17.00 pm)	This shutdown was masked by birds, a vehicle, and people talking. Turbines were only potentially faintly audible just prior to the shutdown which may be indicative of a slight increase in noise output as the turbines are forced into the shutdown.
22nd July 2020	Overall	Several curtailments were orchestrated this day during periods with various wind conditions. Production was near zero for most of the early morning with L10 levels exceeding 40 dBA during the entire period, the noise source is not obvious, but is likely due to wind rustling nearby trees. Throughout the rest of the day the L10 levels were in the 40 to 50 dBA range and dominated by birdsong, vehicles, and some minor construction noise. The L_{ai} remained less than 40 dBA throughout the majority of the day.
	Curtailment #1 (4.45 am)	Prior to this shutdown noise levels were steady for about an hour at about 25 dBA, though the facility power output was below 5% in this period. During the shutdown birdsong began for the morning obscuring any potential turbine.
	Curtailment #2 (15.30 pm)	Birds, wind noise, and some talking were the primary noise source before during and after this shutdown. No turbine noise was audible before or after shutdown.
	Curtailment #3 (17.15 pm)	High wind speeds and birdsong persisted through this shutdown making any turbine noise inaudible.
	Curtailment #4 (20.00 pm)	Local wind speeds dropped slightly during this curtailment, but noise was still dominated by birds with a vehicle passing immediately following the curtailment period. Turbine noise was never distinguishable.
	Curtailment #5 (23:00)	This curtailment seems to be dominated by wind noise or tree rustling, there is some sound that sounds similar to potential turbine noise, but it persists through the shutdown indicating minimal turbine attributable noise under these conditions.
23rd July 2020	Overall	On the 23rd the microphone height wind speed was at or near 5 m/s for most of the day, and lead to the dominant noise source being wind noise. During the day the Turbines were operating at max capacity and the 4 curtailments were performed. Other noise sources that occurred during the day included birds, insects, and construction noise.
	Curtailment #1 (2.00 am)	There was no noticeable change in the sound recorded by the microphone during this curtailment. The recording was dominated by insect and wind and the L10 remained constant throughout. The L_{ai} remained below 40 dBA and did exhibit a reduction along with the L90 during the curtailment.
	Curtailment #2 (5.00 am)	During this curtailment the L10 dropped about 5 dBA, but was due to a brief period without insect noise which becomes more sparse as the sun rises. Following the shutdown birdsong began and dominated the noise. No potential turbine noise was audible before during or after the shutdown. During a brief period in the evening, the L10 level drops from 46+ dBA to 41 dBA due to a drop in birdsong and local wind speed; however, the recording is still dominated by wind noise with no obvious sound from turbines. The L_{ai} remained less than 40 dBA during this curtailment event.
	Curtailment #3 (9.45 am)	This curtailment showed no indication of turbine noise with L10 increasing during shutdown due to an increase in local wind speed.
	Curtailment #4 (15.30 pm)	During this curtailment noise was dominated by wind noise with no change in noise levels during shutdown. Later in the night as microphone height winds decrease slightly, the Project is at near full power and the L_{ai} remains less than 40 dBA.
24th July 2020	Overall	The power output remained near max for most of the day, and local wind speed was lower in the morning than the previous day. Despite this Turbine noise was not

Table 3-4. Annotated Overview of Measurements at REC-139 (Paul and Lisa Schoenfelder)

Date	Time	Notes
		distinguishable from other background noises which were still dominated by wind gusts, insects, birds, construction, and a lawnmower. For a brief period at 13:30 other noise sources died down, and wind became the primary source. During this period Turbine noise wasn't obviously present, but power levels were near max and L10 levels were 39.5 dBA. Early in the morning, the Project was at near full power and the L_{ai} remained less than 40 dBA.
	Curtailment #1 (5.00 am)	During this curtailment noise levels dropped by more than 10 dBA, but this occurrence was again do to a coincidental decrease in the insect noise during the period. Immediately following the curtailment birdsong began for the day increasing the background noise above the pre-shutdown condition. The L_{ai} was 33 to 35 dBA for most of the morning leading up to the shutdown, and noise level dropped to 28.9 dBA during curtailment. Following shutdown noise levels returned to 35 dBA, but this is less reliable since birdsong may not have been fully filtered out. The Project-only contribution is calculated to be in the 31 to 34 dBA range.
	Curtailment #2 (5.45 am)	Noise levels slightly decreased during shutdown do to a drop, in birdsong, from the previous time period.
	Curtailment #3 (8.45 am)	During this shutdown it sounds like a lawnmower or other small engine was running nearby periodically obscuring any other noise.
	Curtailment #4 (10.45 am)	During this shutdown, construction noise was dominant with saws and grinders running periodically, again obscuring any other noises.
	Curtailment #5 (14.15 pm)	Microphone height wind speeds were increasing leading up to and through this shutdown, so wind noise was dominant through the period. Other background noises included a plane and birds, but no turbine noise was audible.
	Curtailment #6 (23:20)	Rainfall elevated the noise levels during this curtailment masking all other noise sources.
25th July 2020	Overall	This day had periods with high power levels and several curtailments. In the early morning rain and thunder dominated the noise, while more typical noises like birds, and a tractor were present for the rest of the day. A few brief periods with minimal noise from these sources occurred with one period in the evening occurring during a max power condition immediately following a shutdown.
	Curtailment #1 (1.00 am)	This curtailment occurred during the thunderstorm masking any other noise.
	Curtailment #2 (3.15 am)	This curtailment occurred during the thunderstorm masking any other noise.
	Curtailment #3 (6.15 am)	Prior to this curtailment power level was near max, but bird noise was dominant as is typical in the hour around sunrise. During the shutdown noise levels dropped as the birdsong frequency and volume decreased.
	Curtailment #4 (16.15 pm)	Prior to this shut down a period with minimal background noise occurred with L10 values ranging from 35.8 to 37.6 dBA for an hour. Turbine output was between 25% to 50% in this period, and some of the noise sounds like it may be turbine noise though birdsong, and wind gusts still sound dominant. During the shutdown a vehicle and some talking obscured other noises. Following the shutdown there was another hour with minimal background noise with L10 levels ranging from 35.9 to 39.2 dBA. There was still some occasional talking in this period along with minor bird and insect noise, so the sound isn't necessarily attributable to the Turbines while the turbine power level was at 50%.

Table 3-4. Annotated Overview of Measurements at REC-139 (Paul and Lisa Schoenfelder)

Date	Time	Notes
	Curtailment #5 (20.15 pm)	Bird noise was dominant before this shutdown and steadily decreased during and following the shutdown. About 45 minutes after shutdown at 21:00 the background noises were relatively quiet and the L10 was 34.9 dBA. During this 15 min window some bird, insect, and wind noise persisted, but Turbine noise was potentially audible. Turbine power level was greater than 90% during this period. The L_{ai} remained less than 40 dBA throughout this event.
	Curtailment #6 (22.15 pm)	Insect and wind noise were dominant leading up to this shutdown with high local wind speeds persisting for the rest of the evening. Rain began to fall after the shutdown. No turbine noise was audible before or after shutdown. The L_{ai} remained less than 40 dBA throughout this event.
26th July 2020	Overall	This day had no periods of optimal conditions for observing turbine noise. Rain persisted from the previous day into the morning. Insect noise continued to be a primary part of the spectrum in the morning and evening hours with birds and vehicles during the day.
	Curtailment #1 (1.45 am)	This curtailment was masked by rain.
	Curtailment #2 (4.45 am)	Prior to this curtailment, insect noise dominated the recording, but began to die down as the shutdown occurred. Following shutdown birdsong began, making any comparison between background noise and turbine noise impossible.
	Curtailment #3 (16.45 pm)	Rain was detected in this period, but not immediately obvious in the recording. Birdsong and wind dominated the noise, and there was no appreciable difference in the sound before during or after the curtailment.
	Curtailment #4 (23:45)	Insects and an increase in wind during the shutdown obscured any other noise.
27th July 2020	Overall	For most of the day turbine power levels were near zero. In the early morning noise was dominated by insects with turbines operating around 25%. During the day the turbines never reached 25%, and noise was dominated by typical sources including birds, insects, and vehicles. In the evening Power production ramped up to 100%, but insect noise still dominated the recordings.
	Curtailment #1 (16:45)	Prior to this curtailment power production was below 10% and noise levels were consistently low with some background noise still present. L10 levels fluctuated from 35.1 to 36.3 dBA and remained consistent during shutdown at 36.1 dBA. Following shutdown bird and vehicle noise were present and elevated the noise levels as turbines ramped up. About an hour after shutdown, power production reached 25% and L10 levels fluctuated between 36.7 and 38.7 dBA with some bird and insect noise present.
28th July 2020	Overall	This day had periods that would be good conditions, but noise levels were overwhelmed by insect noise. Turbines were never obviously audible in the recordings. Several planes passed over this day with other noise sources being birds, rain, and insects.
	Curtailment #1 (5.15 am)	Insect noise started to die down prior to the shutdown. Turbine power output was near 100% and local wind speeds where relatively low. During shutdown L10 levels increased 20 dB due to birdsong. The L_{ai} remained less than approximately 35 dBA while the Project was at near full power.
	Curtailment #2 (8.15 am)	Prior to this shutdown, a plane and some rain were dominating the noise. During the shutdown a vehicle was increasing noise levels. Turbines weren't audible.

Table 3-4. Annotated Overview of Measurements at REC-139 (Paul and Lisa Schoenfelder)

Date	Time	Notes
	Curtailment #3 (22.30 pm)	Insect noise and wind dominated the noise during this shutdown with turbine levels between 25 to 50%. No turbine noise was audible, and no significant change in L10 occurred. The L_{ai} remained less than 40 dBA throughout this event.
29th July 2020	Overall	Turbine power was near zero for much of the day, but the L10 remained well above 40 dBA for nearly the entire day. In the early morning insect noise was dominant, masking any turbine noise. Turbine power ramped up in the afternoon, but noise levels remained consistent. Noise sources were typical with insect, birds, construction, thunder, and vehicles present.
	Curtailment #1 (1.15 am)	No turbine noise was audible with power levels below 50%. Insect noise was the primary noise source with some wind present too. The L_{ai} was generally less than 30 dBA during this period.
	Curtailment #2 (16.45 pm)	Prior to this curtailment the recordings were dominated by other sources. Most notably was construction noise, but there was some thunder and vehicles present too. This died down during the curtailment and birdsong picked up following shutdown.
	Curtailment #3 (20.00 pm)	Local wind speed picked up during this event, and no turbine noise was detectable. Birdsong was also present throughout.
	Curtailment #4 (21.45 pm)	Insect noise began in the hour preceding the shutdown and persisted through the rest of the evening. The L_{ai} remained less than 40 dBA through this event and the rest of the night.
30th July 2020	Overall	In the early morning insect noise dominated the spectrum as usual. After the insects died down around 5:15 there was a brief period with minimal other noises, and the recording mostly sounded like wind noise. From 5:15 to 5:45 the L10 fluctuated from 38.7 to 39.3 dBA while the turbines operated above 25%. For the rest of the day typical noise sources were present including a mower, some construction noise, and birds. Insect noise picked back up around 21:15, and drowned out most other noise. The L_{ai} indicates sound levels of less the 35 dBA during the early-morning and late-night hours.
	Curtailment #1 (17.15 pm)	Prior to and immediately following this curtailment power production was below 10% decreasing the likelihood of detecting turbine noise. During the curtailment L10 levels remained consistent with the recording being dominated by wind with some birds, a truck, and distant talking. The levels varied from 38.5 to 40.3 dBA in the hour around and including the shutdown.
31st July 2020	Overall	Turbine power production was near zero for most of the day. Only one curtailment occurred, and noise sources were typical with birdsong, insects, and vehicle noise present. The L_{ai} remained less than 40 dBA throughout most of the day.
	Curtailment #1 (5.15 am)	This curtailment occurred at less than 5% power, and noise was dominated by birds and insects
1st August 2020	Overall	On this day turbine power production was high at around 75%, but a variety of other noise sources were dominant. Insect noise in the morning and night, with birds, planes, vehicles, rain, and cows present during the day.
	Curtailment #1 (14.00 pm)	In the hour before the shutdown a bird and then a truck made a significant amount of noise and no turbine noise was audible despite power levels near 100%. After the shutdown ended noise levels decreased as the turbines ramped back up. This trend matches the local airspeed, with microphone wind gusts at 10 m/s (21 mph)

Table 3-4. Annotated Overview of Measurements at REC-139 (Paul and Lisa Schoenfelder)

Date	Time	Notes
	Curtailment #2 (17.30 pm)	This shutdown showed no substantial change with noise levels before or after, and the recording was dominated by wind and birds with gusts at the microphone at 8 m/s (18 mph).
	Curtailment #3 (20.30 pm)	This shutdown occurred during a rainstorm, and noise levels increased as the turbines shut off.
2nd August 2020	Overall	There are some useful periods in this day's data set. In the early morning noise was dominated by insects as usual, but in the narrow gap between insect and bird noise there is a good data set with minimal background noise. From 5:30 to 5:45, there was minimal insect and bird noise, and the recording mostly sounded like wind. In this period the L10 was 36.1 dB and the turbines were operating above 75% of the max output. The day also had lower noise levels overall, but turbine power production was below 25% for the rest of the day. Insect noise picked back up around 21:00 as usual.
	Curtailment #1 (2.30 am)	No noticeable change in noise was observed, with insect and wind being dominant sources before, after, and during shutdown. The L_{ai} results in sound levels in the range of 33 to 35 dBA before and after the shutdown. During the shutdown, the L_{ai} drops to 18 dBA yielding a Project-only sound level in the 33 to 35 dBA range.
	Curtailment #2 (17.00 pm)	Power output was low before and after shutdown, so despite lower than normal background noise, no change in sound level was observed.
	Curtailment #3 (23:30)	Noise levels remained constant through this shutdown and ramp back up. Noise was dominated by insects and wind. The L_{ai} remained less than 40 dBA throughout this period.
3rd August 2020	Overall	Power production was low for most of the day, as hub height wind speeds were below 4 m/s. The L10 was also lower than normal during the day suggesting that the wind noise has driven up noise levels on other days. As usual insect noise was dominant before 5:00 and after 21:00. Noise sources during the day included birds, planes, construction, and a vehicle. A missing 30 minutes of data was due to recorder maintenance.
	No Curtailment	N/A
4th August 2020	Overall	During the final day of testing there was some useful information gathered. Turbines were operating at around 50% and many of the usual noise sources were quieter than before.
	Curtailment #1 (2.15 am)	Insect noise was still present during this period and dominated the noise. No change in L10 sound level was detected during shutdown while the L_{ai} exhibited a clear drop and remained less than 40 dBA throughout this curtailment.
	Curtailment #2 (5.15 am)	The insect noise started to die down earlier than usual this morning leaving about an hour of data prior to shutdown with minimal background noise. L10 levels were between 34.9 and 38.5 dBA with turbines near 50% and still some insect and wind audible. The wind speed near the microphone dropped during shutdown and noise levels remained at 34.7 dBA with Turbines near zero at the first part of the curtailment. During the zero-power sample the birds and a vehicle created noise elevating the sound level. Following the curtailment noise levels remained elevated due to bird noise, and other sources like a plane.

4. Conclusion

Sound monitoring was conducted consistent with the Commission's Final Decision and modifying orders and direction from the Commission Staff's sound consultant, Mr. David Hessler, for a period exceeding two weeks. The implementation of more than 50 curtailments resulted in many instances where the sound level at the control location close to the turbine dropped substantially but no such reduction was seen at the residential monitoring locations, even when ground level winds were minimal. Insect noise was found to be dominant at most locations between the hours of 9:00 p.m. and 5:00 a.m., a range when typical ambient sounds (for example, traffic and household noise) are minimal and curtailment evaluations yield useful data. Thus, the typical ideal time periods were often masked by high levels of insect noise. The morning chorus of birds often occurred with daybreak, just as the insect noise had subsided. A few curtailments occurred when birds, insect noise, wind gusts, rain, or other ambient sources were minimal, and the turbines were within the target wind speed. These findings were confirmed by the subsequent reanalysis and reprocessing of more than 7 million data points to calculate the $L_{ai,}$ an insect free A-weighted sound level. As discussed for each residential monitoring location, this analysis found that the sound attributable solely to the Project did not exceed 40 dBA long-term L_{10}.

5. References

Schomer, P. D., I. M. Slauch, and G. F. Hessler. 2010. “Proposed ‘Ai’-Weighting; a weighting to remove insect noise from A-weighted field measurements.” Paper 594. *Internoise*. 13-16 June, Lisbon, Portugal.

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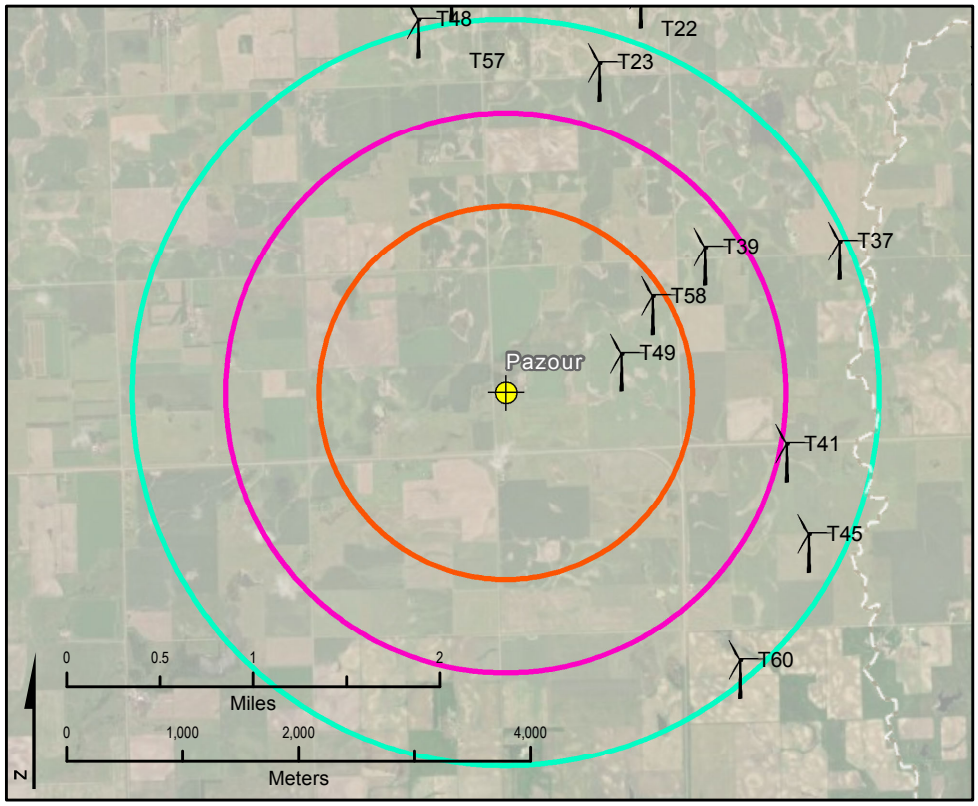
South Dakota Public Utilities Commission. 2020. *Order Confirming Requirements of Permit Condition 42*. July 9, 2020.

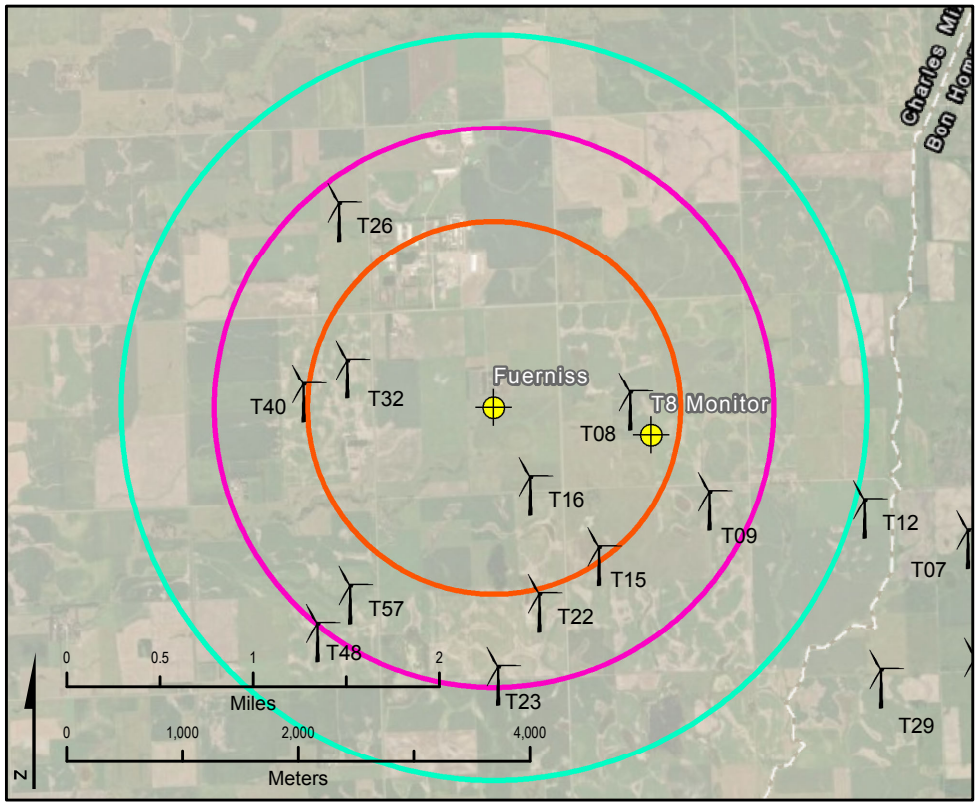
Appendix A
Monitoring Locations



LEGEND

- Monitoring Location
- Residence
- Turbine Location
- 1-mile Buffer
- 1.5-mile Buffer
- 2-mile Buffer
- County Lines

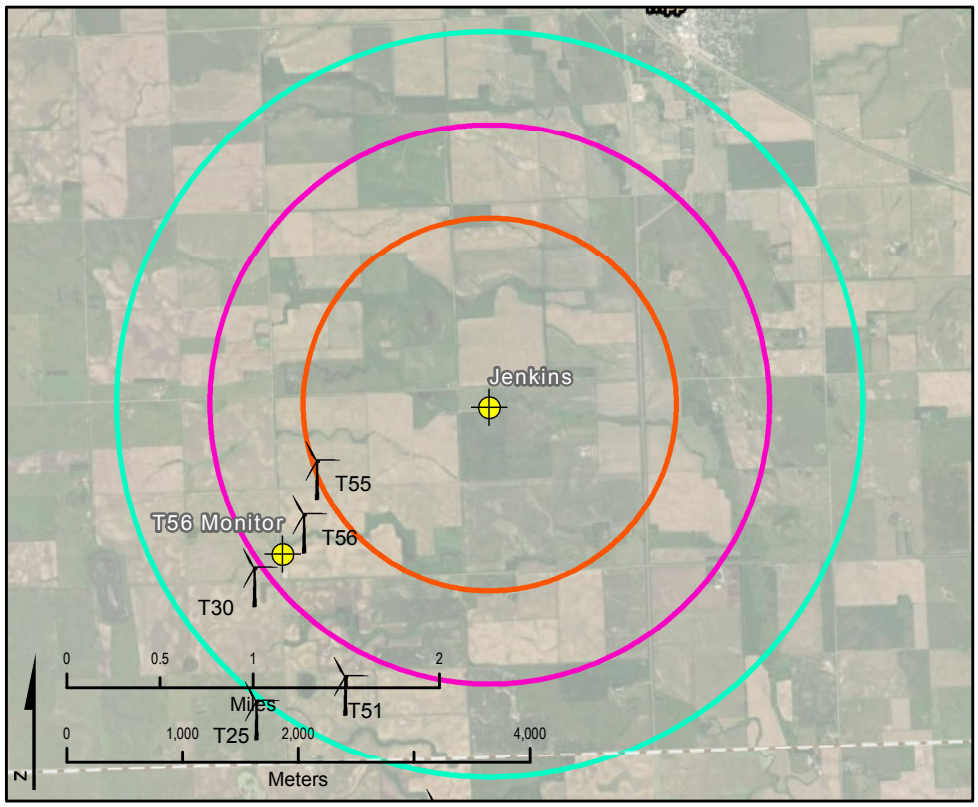
Basemap Source: Esri World Imagery Basemap



LEGEND

- Monitoring Location
- Residence
- Turbine Location
- 1-mile Buffer
- 1.5-mile Buffer
- 2-mile Buffer
- County Lines

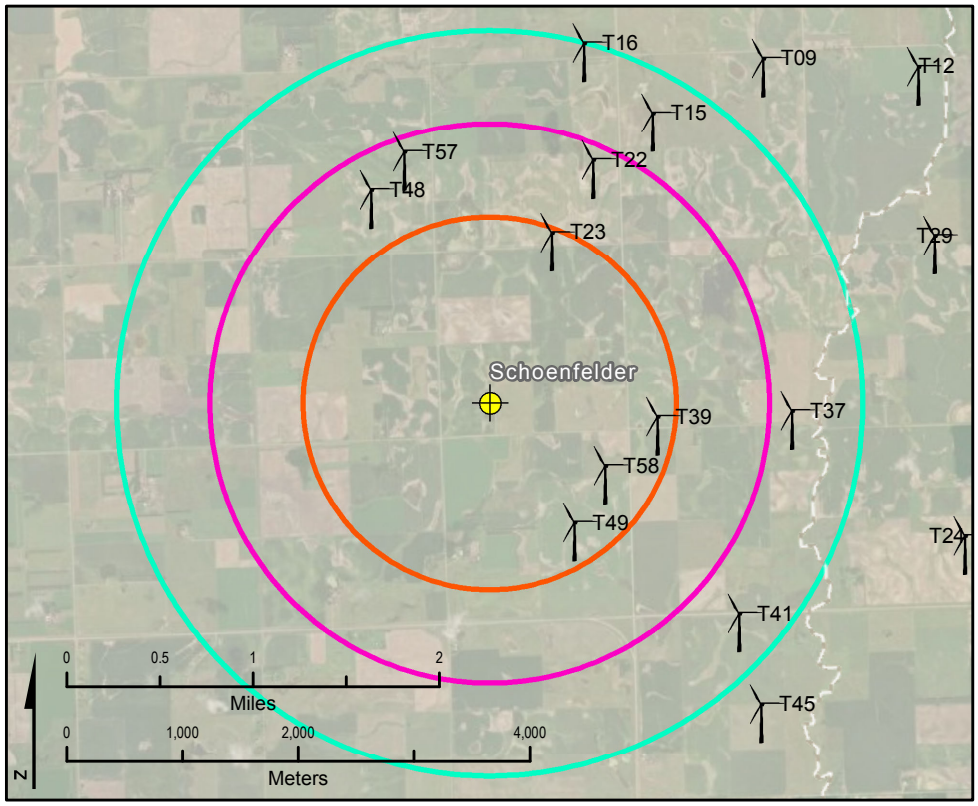
Basemap Source: Esri World Imagery Basemap



LEGEND

- Monitoring Location
- Residence
- Turbine Location
- 1-mile Buffer
- 1.5-mile Buffer
- 2-mile Buffer
- County Lines

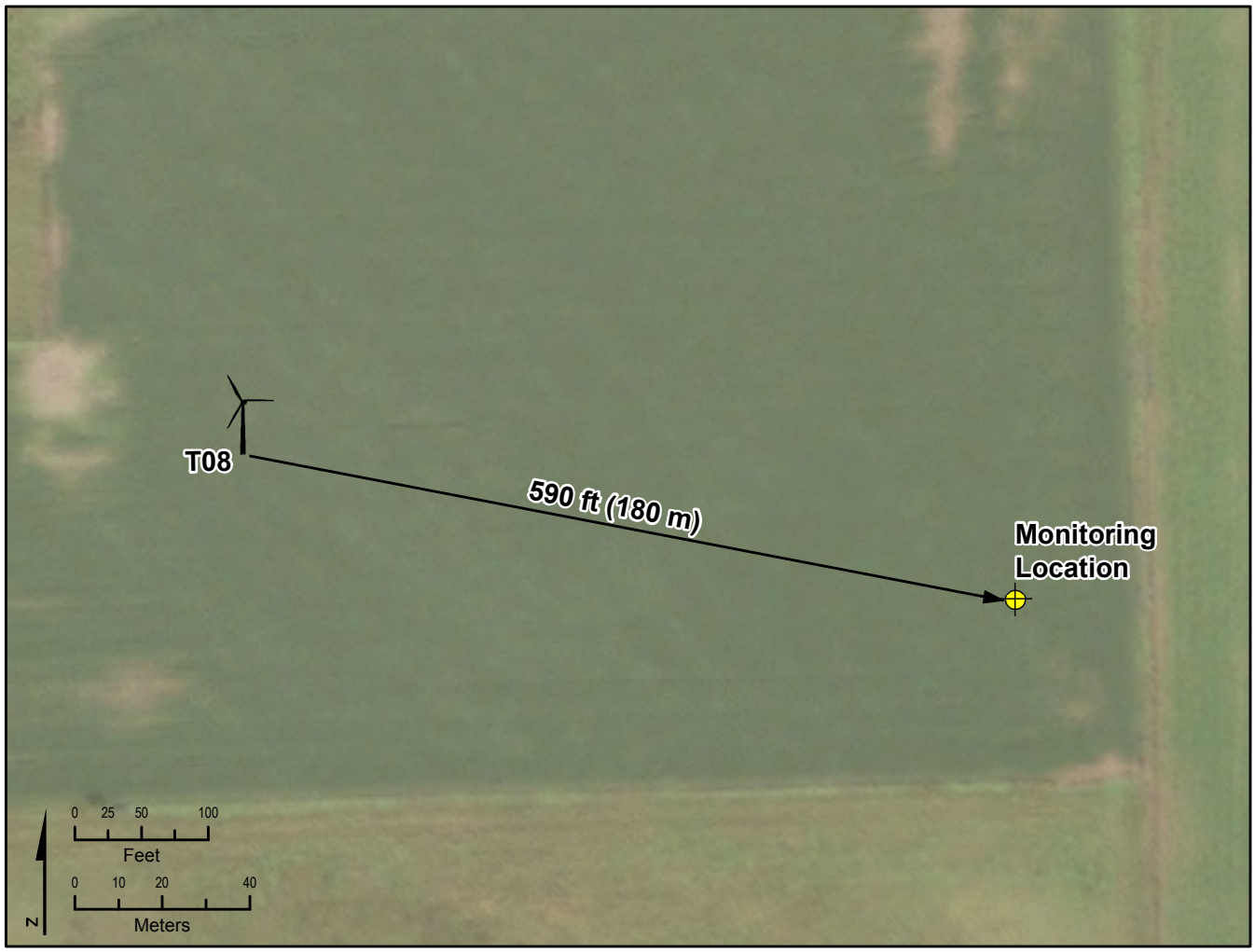
Basemap Source: Esri World Imagery Basemap

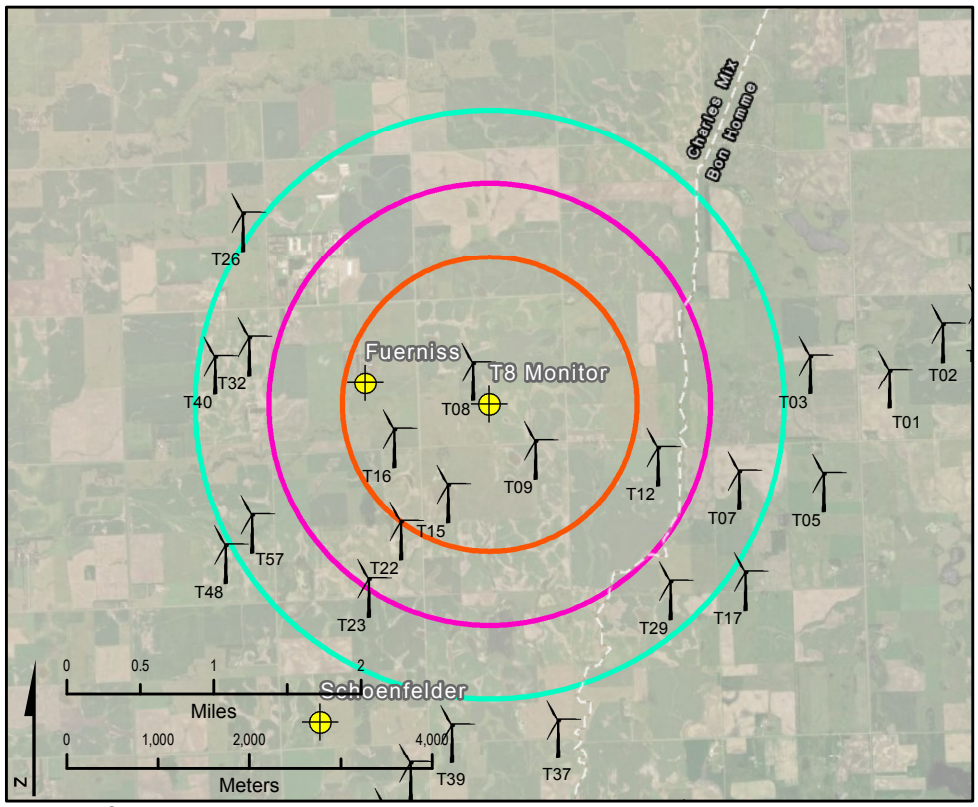


LEGEND

- Monitoring Location
- Residence
- Turbine Location
- 1-mile Buffer
- 1.5-mile Buffer
- 2-mile Buffer
- County Lines

Basemap Source: Esri World Imagery Basemap

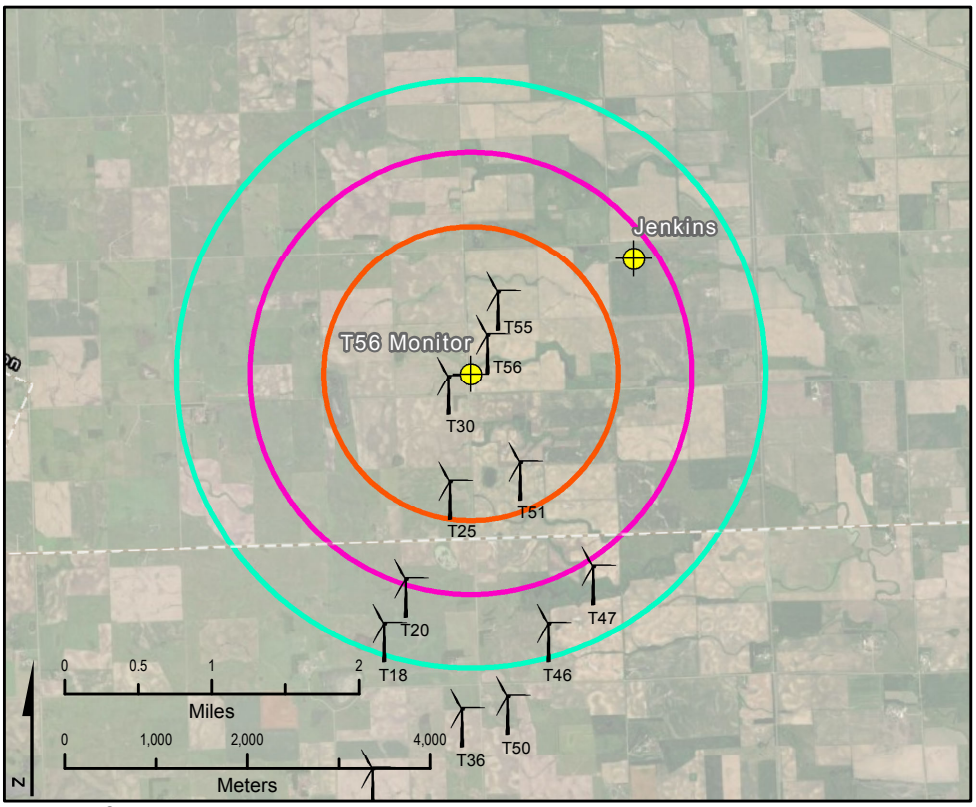




LEGEND

- Turbine Location
- Monitoring Location
- 1-mile Buffer
- 1.5-mile Buffer
- 2-mile Buffer
- County Lines

Basemap Source: Esri World Imagery Basemap



LEGEND

- Turbine Location
- Monitoring Location
- 1-mile Buffer
- 1.5-mile Buffer
- 2-mile Buffer
- County Lines

Basemap Source: Esri World Imagery Basemap

Appendix B
Monitoring Location Photographs

Photo Log

Project Title	**Prevailing Wind Park Project**
Location	Hutchinson County, Bon Homme County, and Charles Mix County, South Dakota
Date	August 2020

Kelli Pazour_REC-024

Photograph 1: View to East of Meter

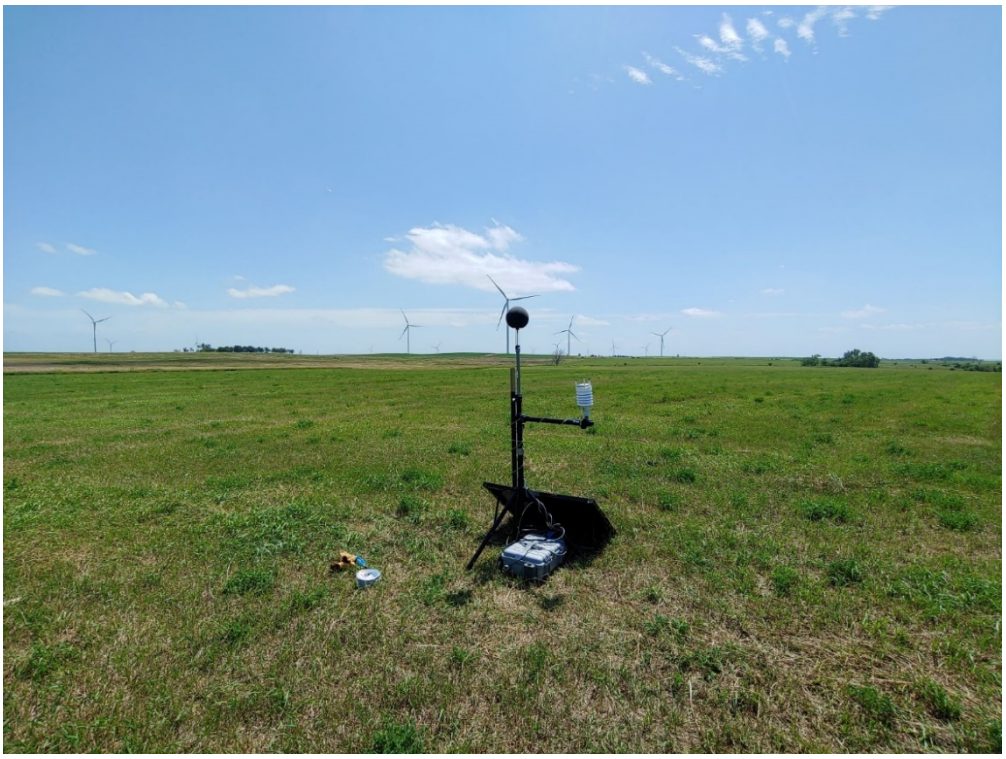
Photograph 2: Additional view to the East

Photograph 3: View to the South

Photograph 4: View to the West

Photograph 5: View of the residence, North of meter

Fuerniss_REC-068



Photograph 6: View to the South of the meter at the Fuerniss residence

Photograph 7: View of the residence, North of the meter

Photograph 8: View to the West of the meter

Photograph 9: View to the East of meter

Jenkins_REC-121

Photograph 10: View of the residence to the East of the meter

Photograph 11: Additional view of residence

Photograph 12: View to the South of the meter

Photograph 13: View of the Turbines to the Southwest of the meter

Schoenfelder_REC-139

Photograph 14: View northwest of the meter

Photograph 15: Additional view to the Northwest

Photograph 16: View to the North of the meter

Photograph 17: View to the East of the meter

Photograph 18: View of brewery and turbines to the Southeast of meter

Photograph 19: View to the West of the meter

Turbine 8

Photograph 20: View of Turbine 8 from the nearby meter

Photograph 21: Additional view of Turbine 8

Photograph 22: Turbine 8 135746

Photograph 23: Turbine 8 West of the meter

Photograph 24: View to the North of the meter

Photograph 25: Additional view to the North of the meter

Photograph 26: additional view to the west of meter

Photograph 27: Additional view to the west of the meter

T56

Photograph 28: View of turbine 30 from the mic near turbine 56

Photograph 29: View South from meter near turbine 56

Photograph 30: View East of the meter, Turbine 56

Photograph 31: View of turbine 55 from the meter (Northeast)

Appendix C
Sound Observation Log from Sherman Fuerniss

Sound Observation Log

Residence Name: Sherman Fuerniss July 2020

Date/Time		Comment/Observation
7-17	8PM	Clearly Audible South wind
7-18	12:45 AM	Loud South wind
7-18	7:30 AM	Clearly Audible South wind
7-18	9:30 AM	Loud - South Audible West & Southwest South wind
7-18	3:00 PM	Audible - West NW wind
7-18	9:30 PM	#8 Audible Nearly Calm Cicadas tonight TI
7-19	7:30 AM	Very Light NW wind
7-19	6:30 PM	Very Light NW wind
7-20	4:45 AM	Quite Loud Southerly wind TI
7-20	10:00 PM	Loud South wind TI
7-21	7:30 AM	Loud from the east North wind light TI
7-22	1:00 AM	Very Loud from east & south South wind TI
7-22	7:30 AM	Loud from south light South wind
7-22	4:00 PM	All turbines still Mowed hay adjacent afternoon
7-22	10:00 PM	Loud South Wind
7-23	7:30 AM	Windy Audible South wind
7-23	11:45 PM	Light South wind Clearly Audible Noise
7-24	7:00 AM	Loud South wind
7-24	12:00 noon	Raked hay adjacent
7-24	10:00 PM	Baled hay in evening, turbines loud, Wagner speedway noise
7-25	1 AM	Audible South wind preceding thunderstorms
7-26	7:30 AM	Audible
7-26	6:00 PM	Loud Northeast wind Loud from south & east
7-27	AM	Very Light wind
7-27	6 PM	Light South West wind
7-28	11 PM	Some Noise
7-28	8 PM	Audible East wind
7-29	12:00 AM	Loud light southerly wind
7-29	7:00 PM	Easterly wind - Loud
7-30	Late afternoon, evening	East Northeast light wind Loud machine noise from the North east - unknown source but not mower
7-31	AM	Loud squawking, creaking, & groaning from east & South Southwest breeze - very Light
7-31	Late Afternoon	Mowed hay adjacent - briefly
8-1	4:30 AM	Easterly wind Loud from east
8-1	7:30 AM	Northwest wind Loud from west
8-1	Late Afternoon	Northwind Loud from east
8-1	Evening to 8:30 PM	North wind Loud from east and south
8-2	2:00 AM	Light North wind Loud from east
8-2	7:30 AM	Light North wind Very Loud from east & south

over

Sound Observation Log

Residence Name: _____

Date/Time	Comment/Observation
8-2 5:30 PM	Still
8-3 9:00PM	Audible Noise South & East East wind
8-3 11:30 PM	South South East wind Audible
8-4 7:30 AM	Southerly wind Loud from south
8-4 9:00 AM	Real loud from the South

Cattle bellowing many mornings and evenings as we move them.
Coyotes howling most evenings.
All times approximate.

Appendix D
Summary of Missing Sound Data

Appendix D. Summary of Missing Sound Data

15-Minute Intervals

Serial No.	From Time (CDT)	To Time (CDT)	# Missing Time Stamps	Field Comments
10727	7/16/2020 18:45	7/16/2020 18:45	1	Instrument hiccup
10727	7/16/2020 23:00	7/16/2020 23:00	1	Instrument hiccup
10727	7/17/2020 11:00	7/17/2020 11:00	1	Instrument hiccup
10727	7/17/2020 23:00	7/17/2020 23:00	1	Instrument hiccup
10727	7/18/2020 6:30	7/18/2020 6:30	1	Instrument hiccup
10727	7/19/2020 13:15	7/19/2020 20:00	28	Meter storage full after usb
10727	7/20/2020 7:45	7/20/2020 8:30	4	Accessing meter.
10727	7/20/2020 17:00	7/20/2020 17:30	3	Site visit to meter.
10727	7/21/2020 22:30	7/21/2020 22:30	1	Instrument hiccup
10727	7/22/2020 8:30	7/22/2020 8:45	2	Instrument hiccup
10727	7/23/2020 12:30	7/23/2020 12:45	2	Instrument hiccup
10727	7/28/2020 9:00	7/28/2020 9:00	1	Instrument hiccup
10727	8/1/2020 9:30	8/1/2020 9:30	1	Instrument hiccup
10727	8/3/2020 18:30	8/3/2020 18:30	1	Instrument hiccup
10727	8/3/2020 22:00	8/3/2020 22:00	1	Instrument hiccup
10746	7/20/2020 14:15	7/20/2020 14:15	1	Instrument hiccup
10746	7/22/2020 11:00	7/22/2020 11:15	2	Instrument hiccup
10746	7/28/2020 23:00	7/28/2020 23:00	1	Instrument hiccup
10746	7/31/2020 23:00	7/31/2020 23:00	1	Instrument hiccup
10746	8/1/2020 11:00	8/1/2020 11:00	1	Instrument hiccup
10466	7/16/2020 14:00	7/16/2020 18:45	20	USB full/failure.
10466	7/21/2020 13:45	7/21/2020 14:00	2	Instrument hiccup
10466	7/29/2020 11:00	7/29/2020 11:00	1	Instrument hiccup
10466	8/3/2020 14:15	8/3/2020 14:15	1	Instrument hiccup
10743	7/25/2020 2:00	7/25/2020 2:00	1	Instrument hiccup
10743	7/31/2020 11:15	7/31/2020 11:15	1	Instrument hiccup
10743	8/3/2020 13:15	8/3/2020 13:15	1	Instrument hiccup
10743	8/3/2020 23:00	8/4/2020 0:00	5	Not found, appears to be usb
10775	7/15/2020 23:00	7/15/2020 23:00	1	Instrument hiccup
10775	7/16/2020 11:00	7/16/2020 11:00	1	Instrument hiccup
10775	7/16/2020 15:00	7/16/2020 15:00	1	Instrument hiccup
10775	7/16/2020 23:00	7/16/2020 23:00	1	Instrument hiccup
10775	7/17/2020 11:00	7/17/2020 11:00	1	Instrument hiccup
10775	7/17/2020 14:00	7/17/2020 14:00	1	Instrument hiccup
10775	7/28/2020 11:15	7/28/2020 11:15	1	Instrument hiccup
10775	7/28/2020 23:00	7/28/2020 23:00	1	Instrument hiccup
10775	7/31/2020 23:00	7/31/2020 23:00	1	Instrument hiccup
10775	8/3/2020 11:00	8/3/2020 11:00	1	Instrument hiccup
10815	7/22/2020 9:45	7/22/2020 11:00	6	Site visit to meter.
10815	7/28/2020 23:30	7/28/2020 23:45	2	Instrument hiccup
10815	7/29/2020 11:00	7/29/2020 11:00	1	Instrument hiccup
10815	7/29/2020 21:30	7/29/2020 21:30	1	Instrument hiccup
10815	8/3/2020 0:00	8/3/2020 0:00	1	Instrument hiccup
10815	8/3/2020 9:45	8/3/2020 9:45	1	Instrument hiccup
10815	8/4/2020 11:45	8/4/2020 12:00	2	Instrument hiccup
10815	8/4/2020 12:30	8/4/2020 12:45	2	Instrument hiccup

Note: All times in Central Daylight Time.

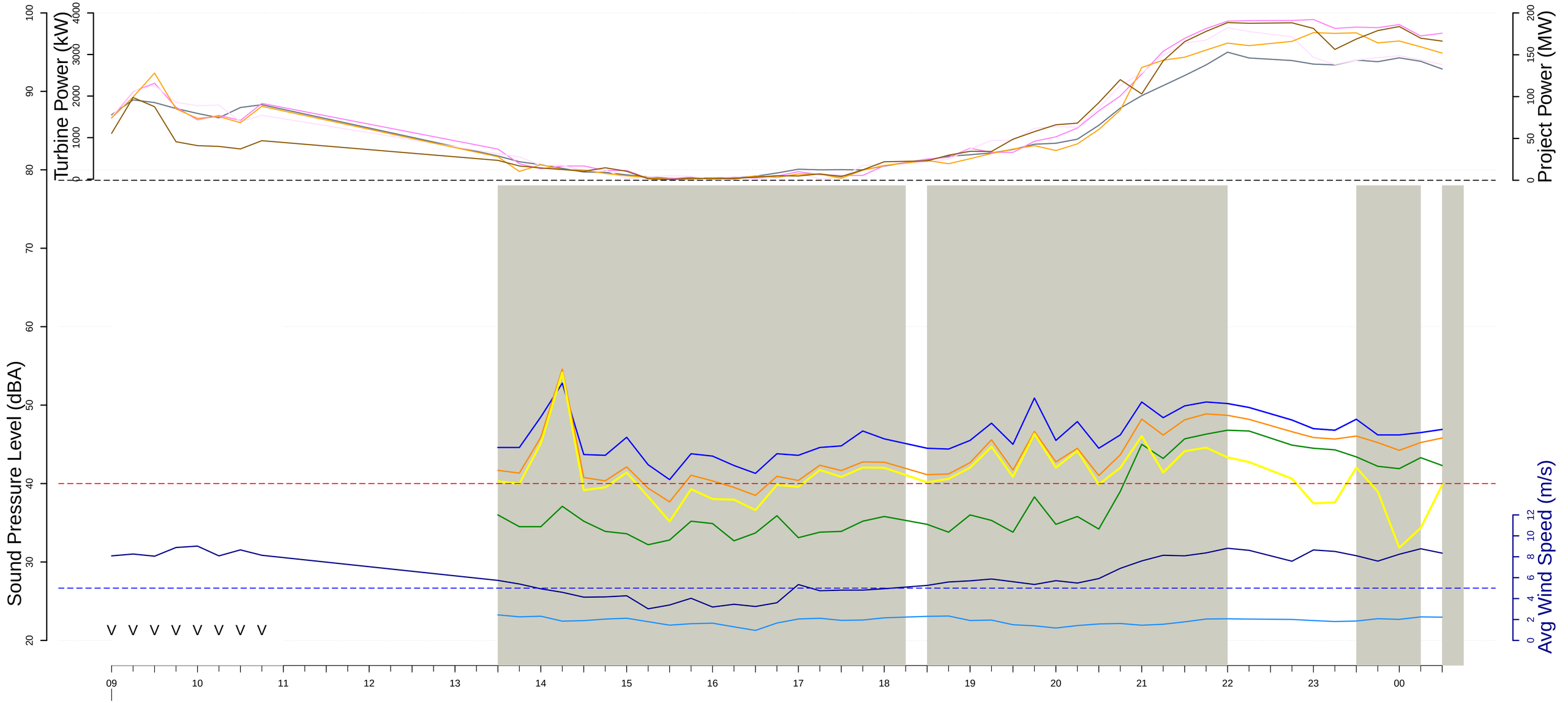
Appendix E
Time-Series Plots

Appendix E-1
Screened Plots

Note: Light purple shading is added to indicate the start of a curtailment event. A potential delay occurs between the start of the curtailment interval and when zero power is achieved. This is the result of the ramping-down process of the turbines in coordination with the grid operator and those data are reported in 15-minute intervals. Thus, the light purple shading was drawn at the start of the 15-minute interval associated with the start of the curtailment event and may or may not include the period where power production was zero. To clarify where the zero power interval starts, a gray shading bar has been added at the start of the 15-minute interval where power production was zero.

REC-024 (Pazour Residence)

REC−024 (Pazour Residence)
Thursday, 7 16, 2020

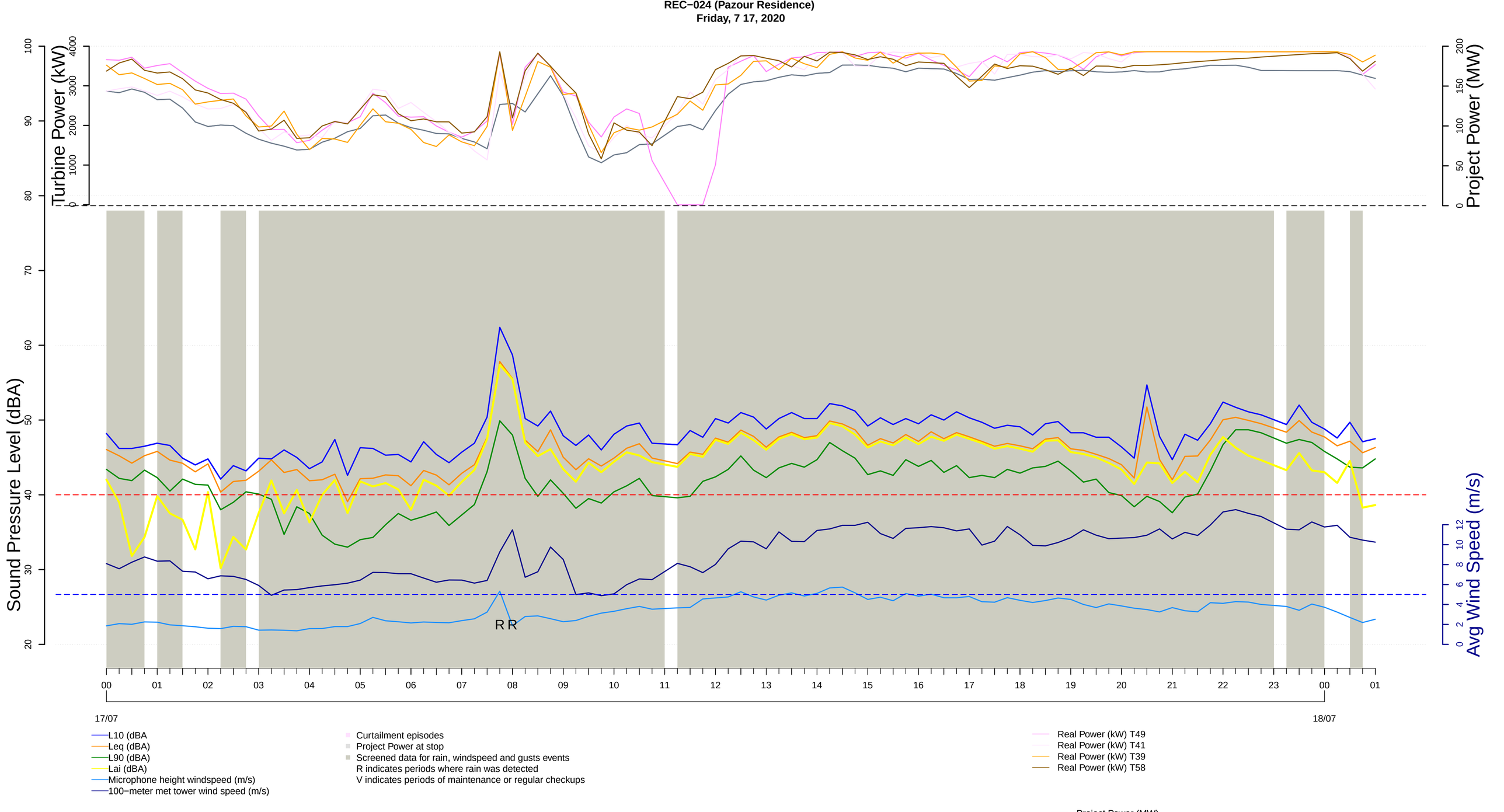


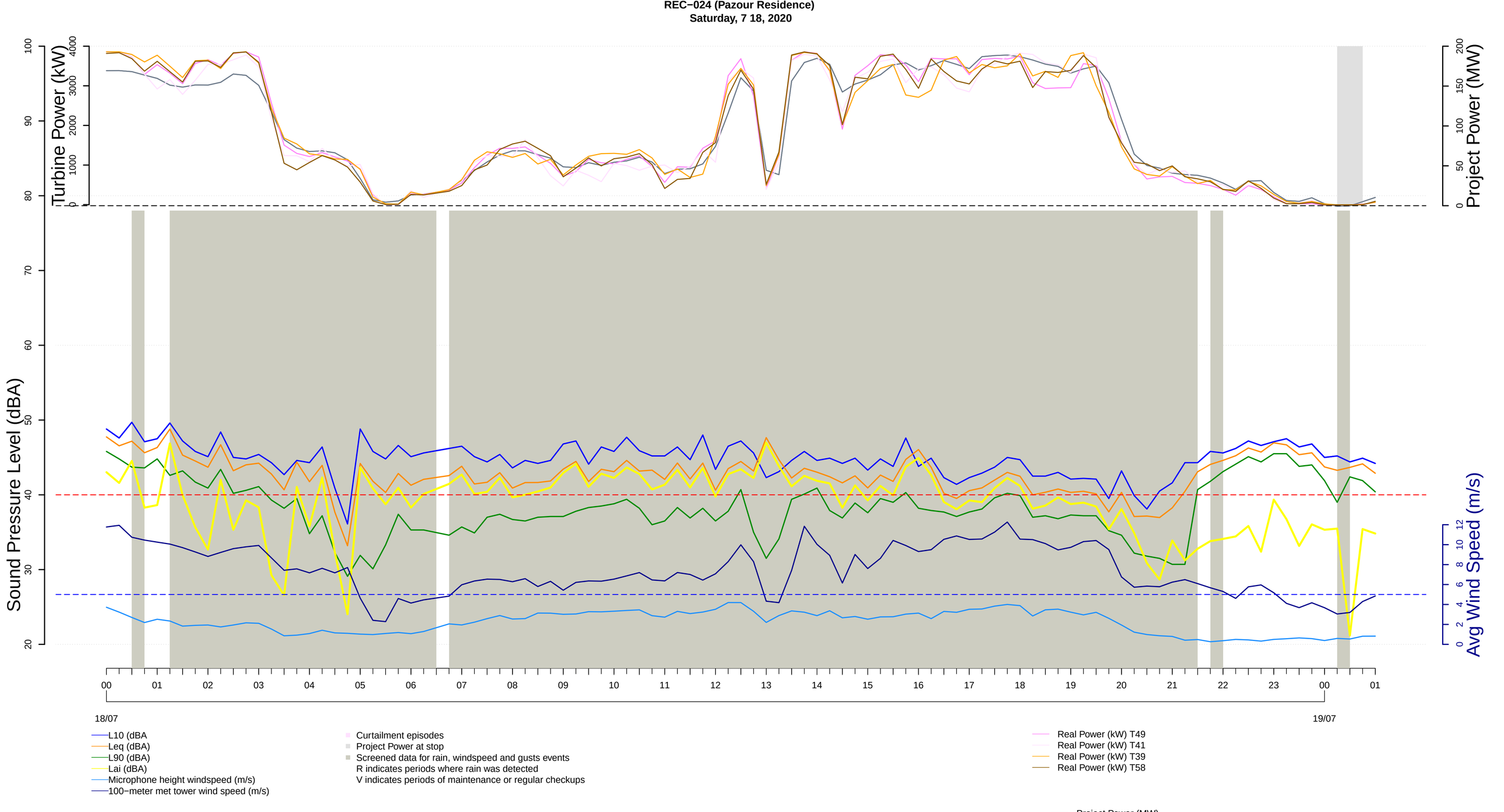
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

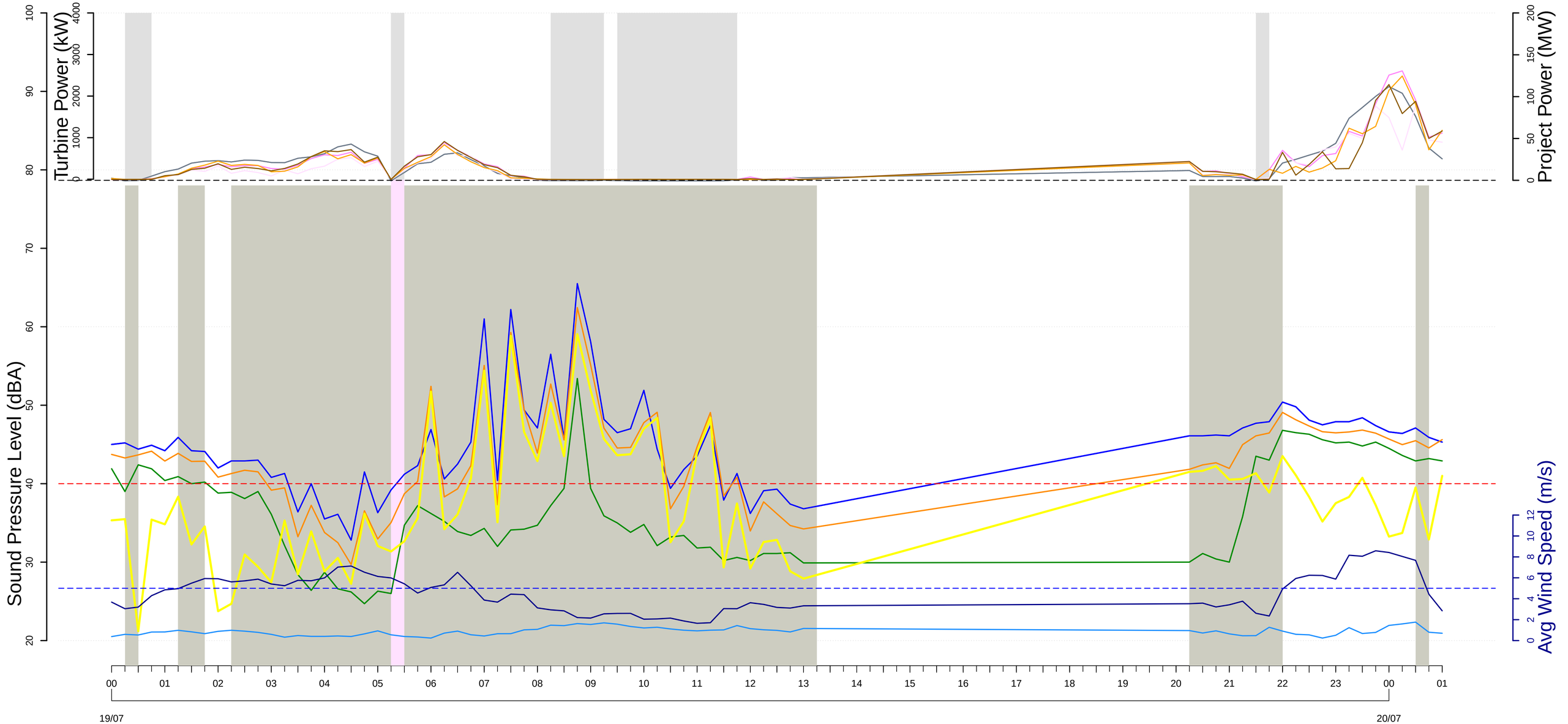
Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58

Project Power (MW)


REC−024 (Pazour Residence)
Friday, 7 17, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
R R
17/07
18/07
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups
Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58
Project Power (MW)


REC−024 (Pazour Residence)
Saturday, 7 18, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
18/07
19/07
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups
Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58
Project Power (MW)

REC−024 (Pazour Residence)
Sunday, 7 19, 2020



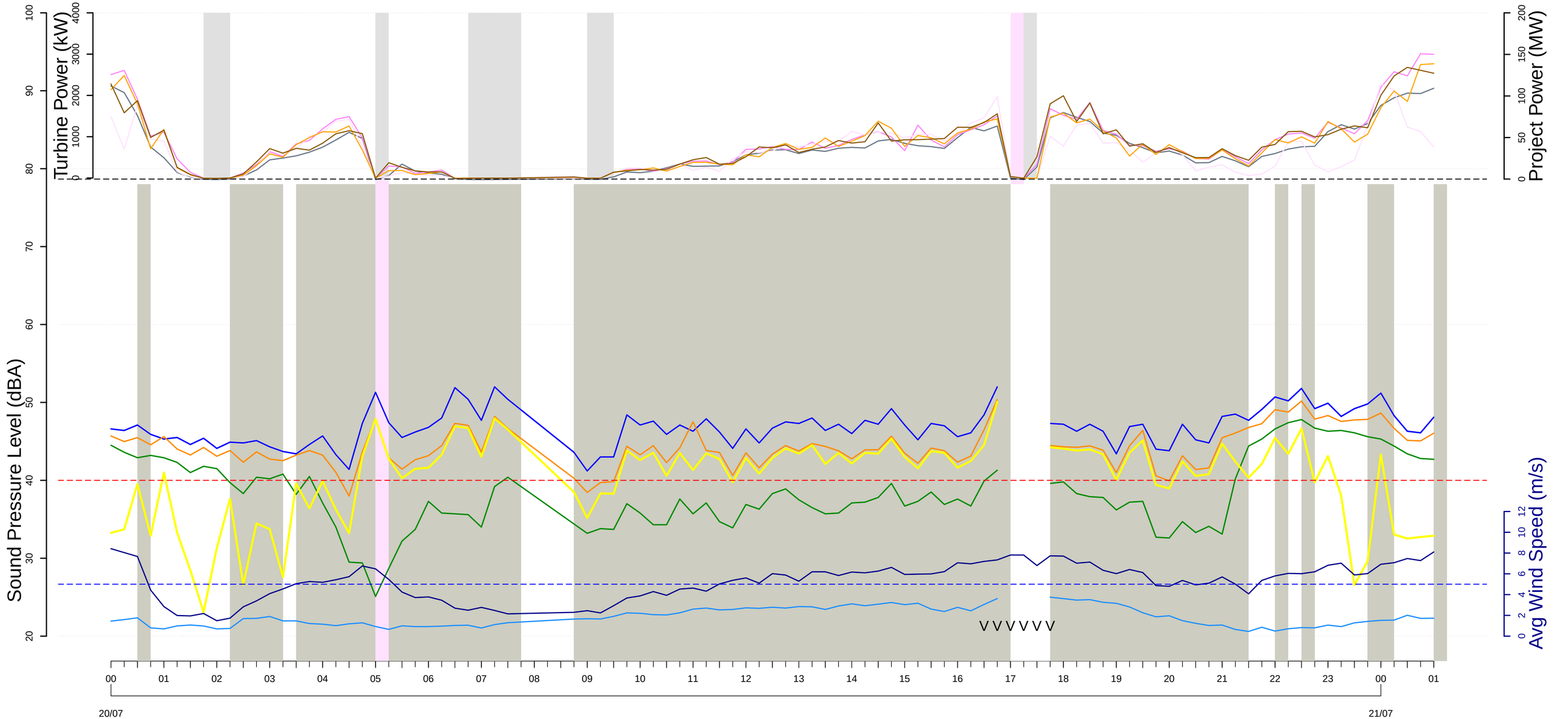
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58

Project Power (MW)

REC−024 (Pazour Residence)
Monday, 7 20, 2020

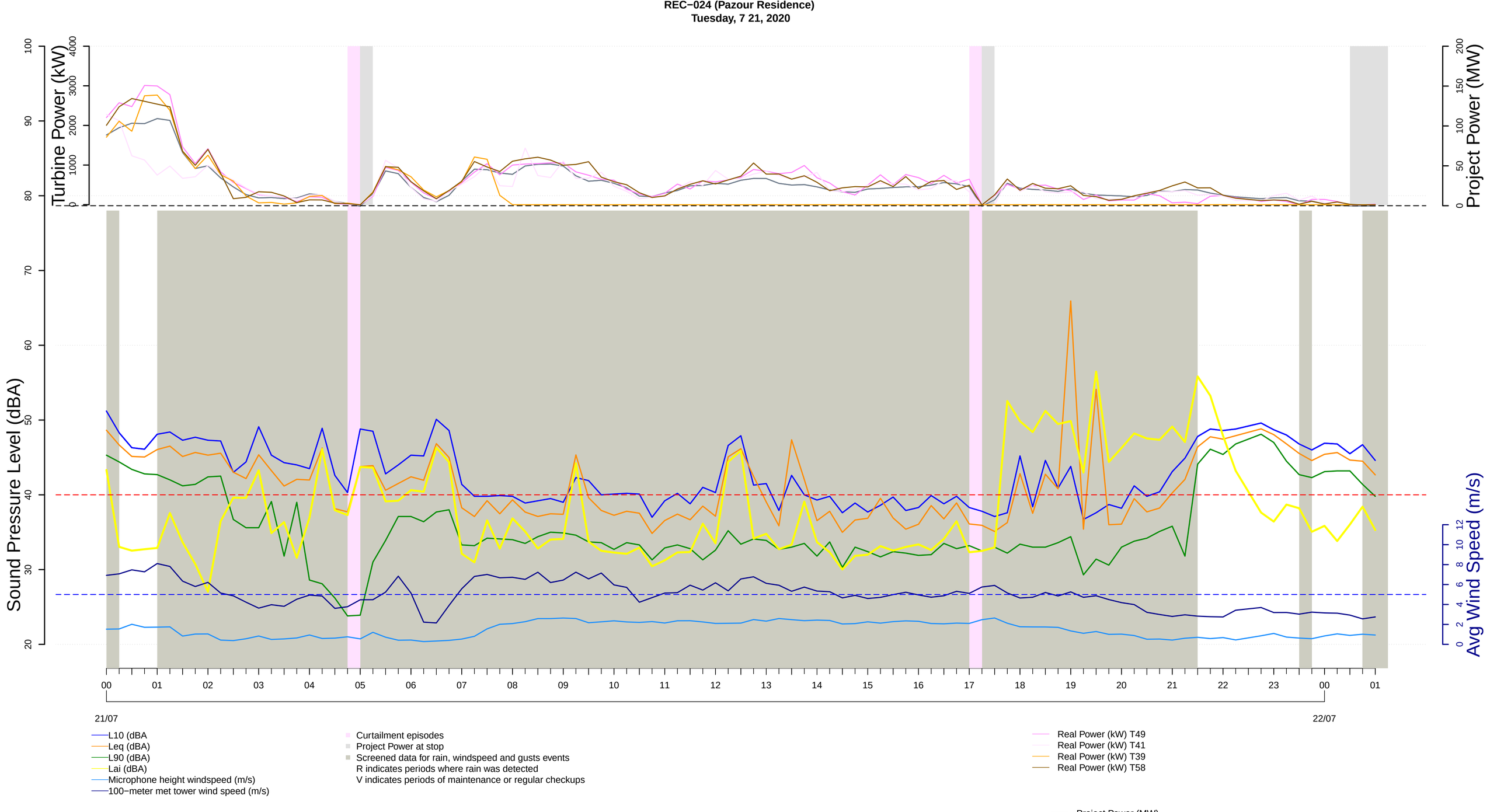


L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

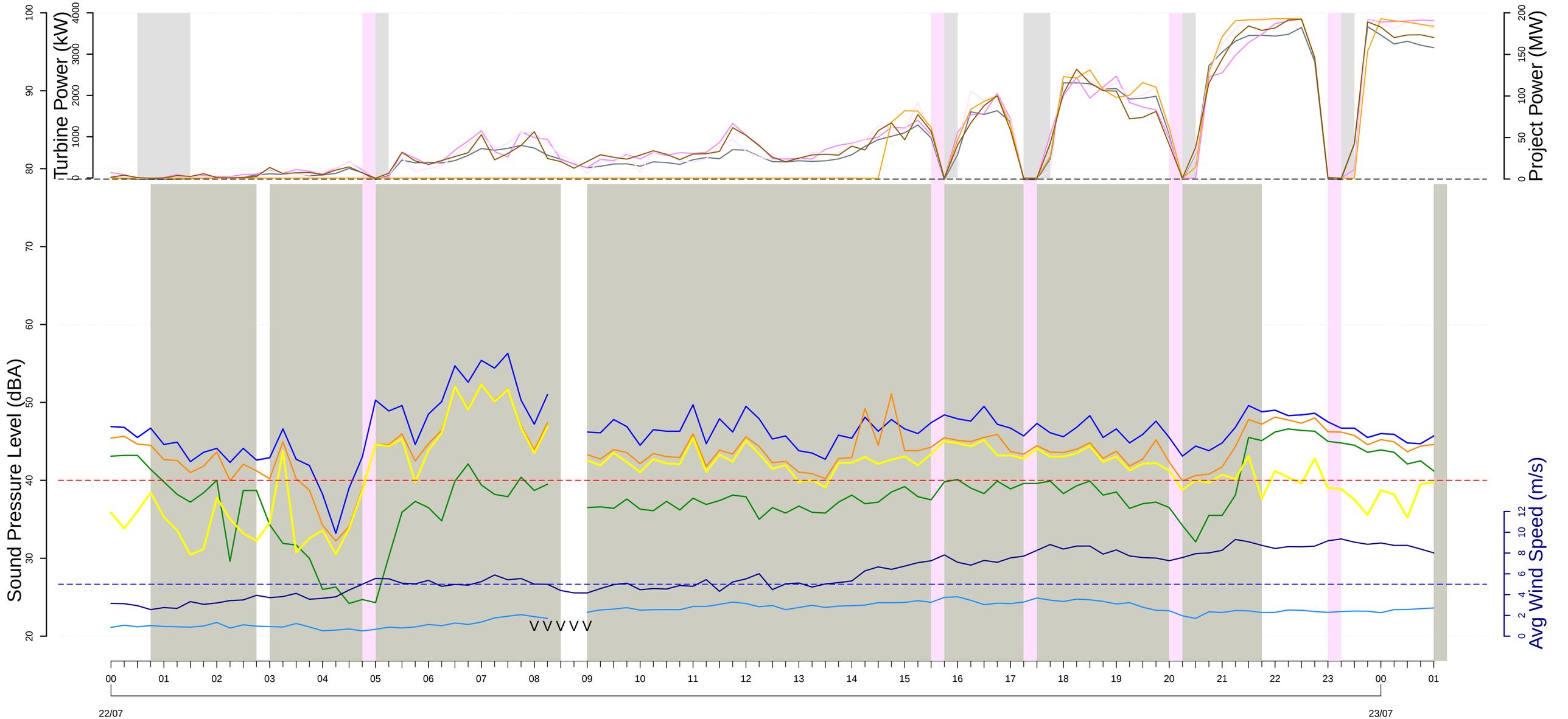
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58

Project Power (MW)


REC−024 (Pazour Residence)
Tuesday, 7 21, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
21/07
22/07
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups
Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58
Project Power (MW)

REC−024 (Pazour Residence)
Wednesday, 7 22, 2020



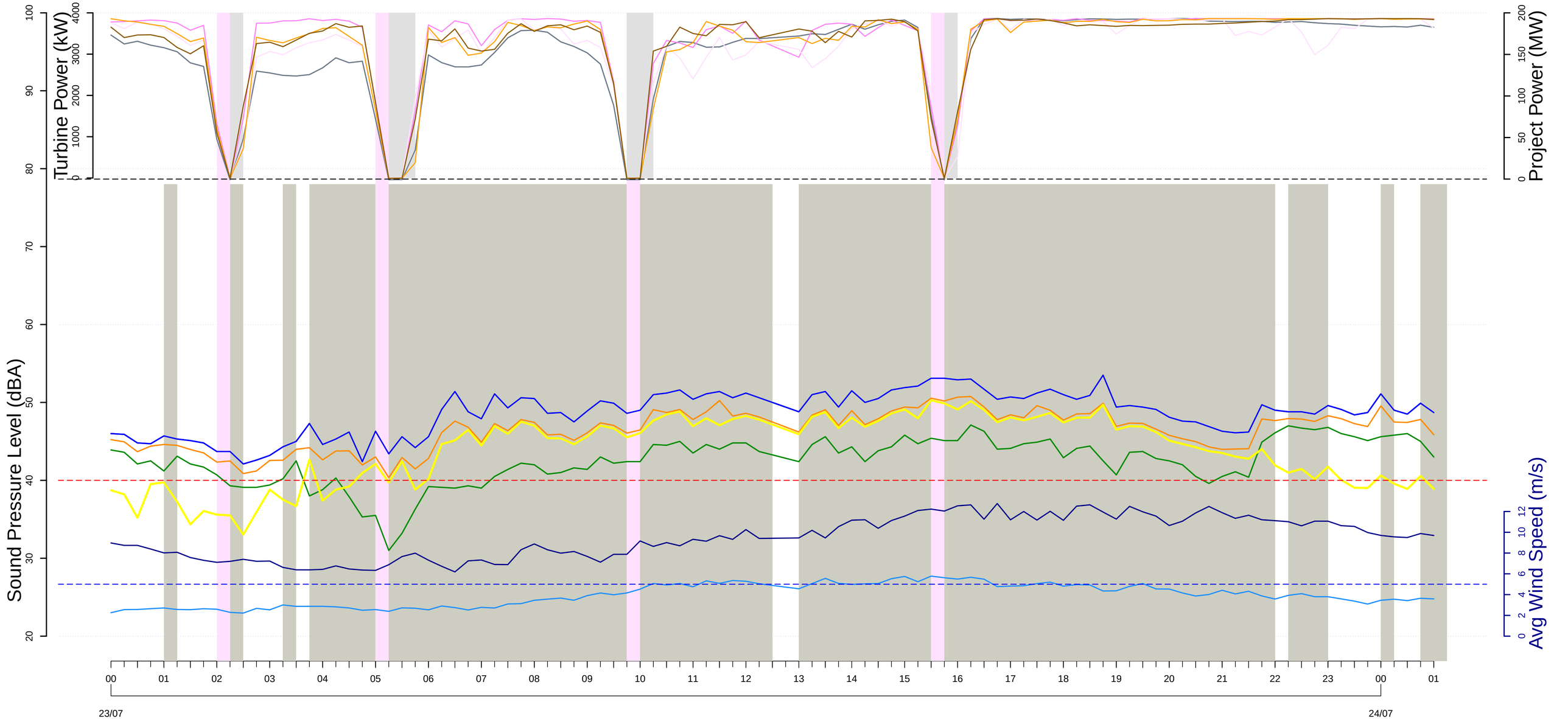
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58

Project Power (MW)

REC−024 (Pazour Residence)
Thursday, 7 23, 2020

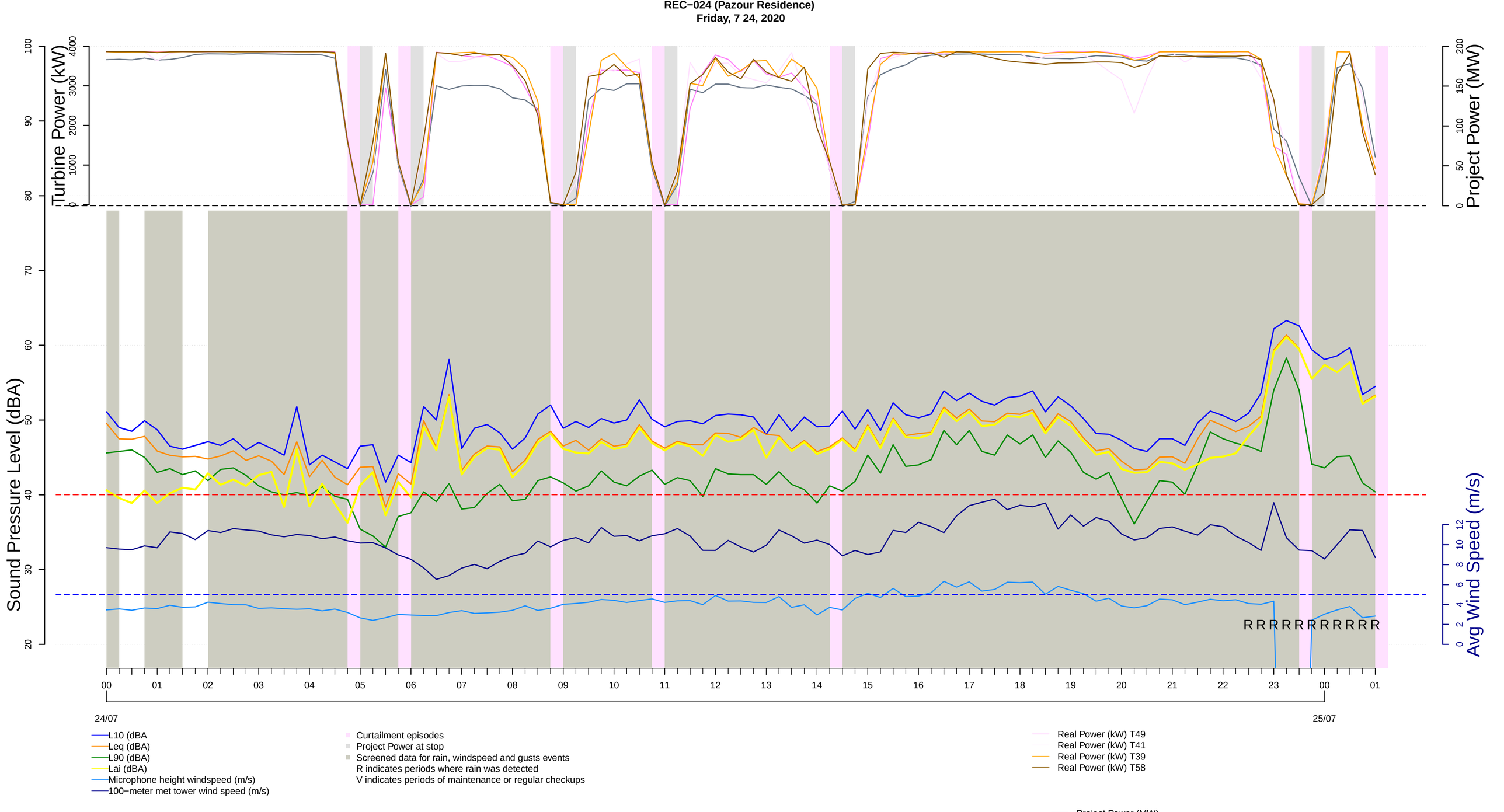


L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

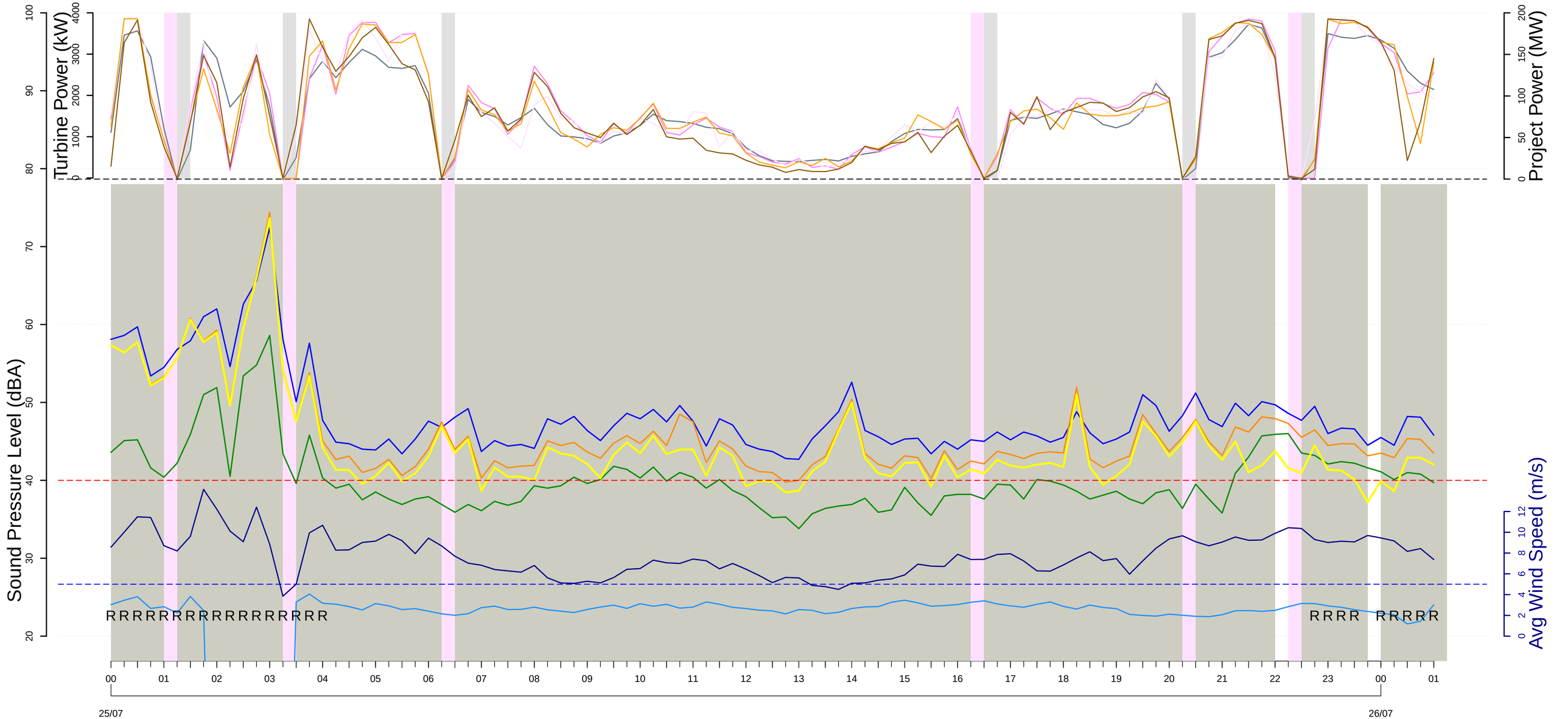
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58

Project Power (MW)


REC−024 (Pazour Residence)
Friday, 7 24, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
RRRRRRRRRRRR
24/07
25/07
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups
Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58
Project Power (MW)

REC−024 (Pazour Residence)
Saturday, 7 25, 2020

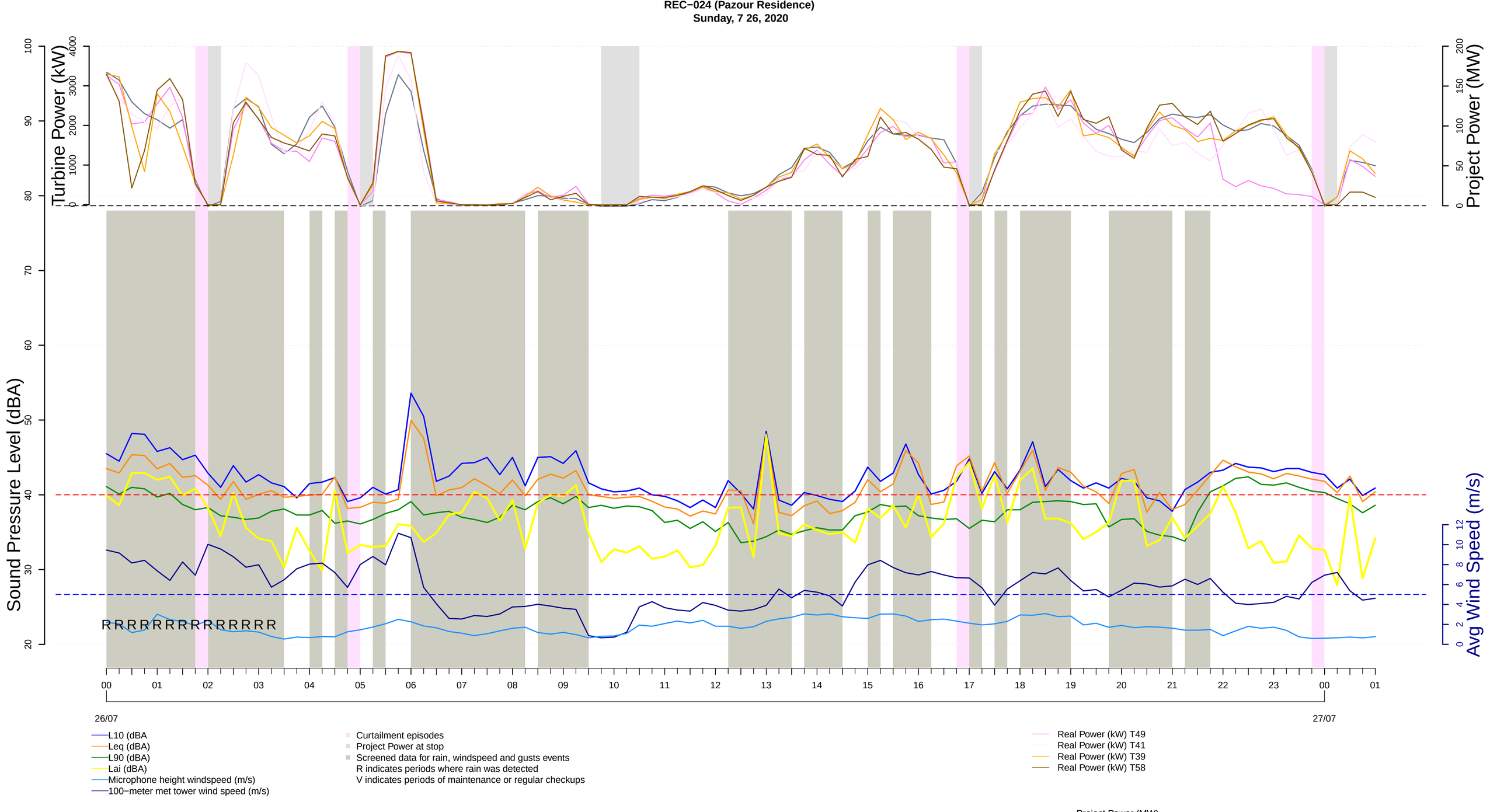


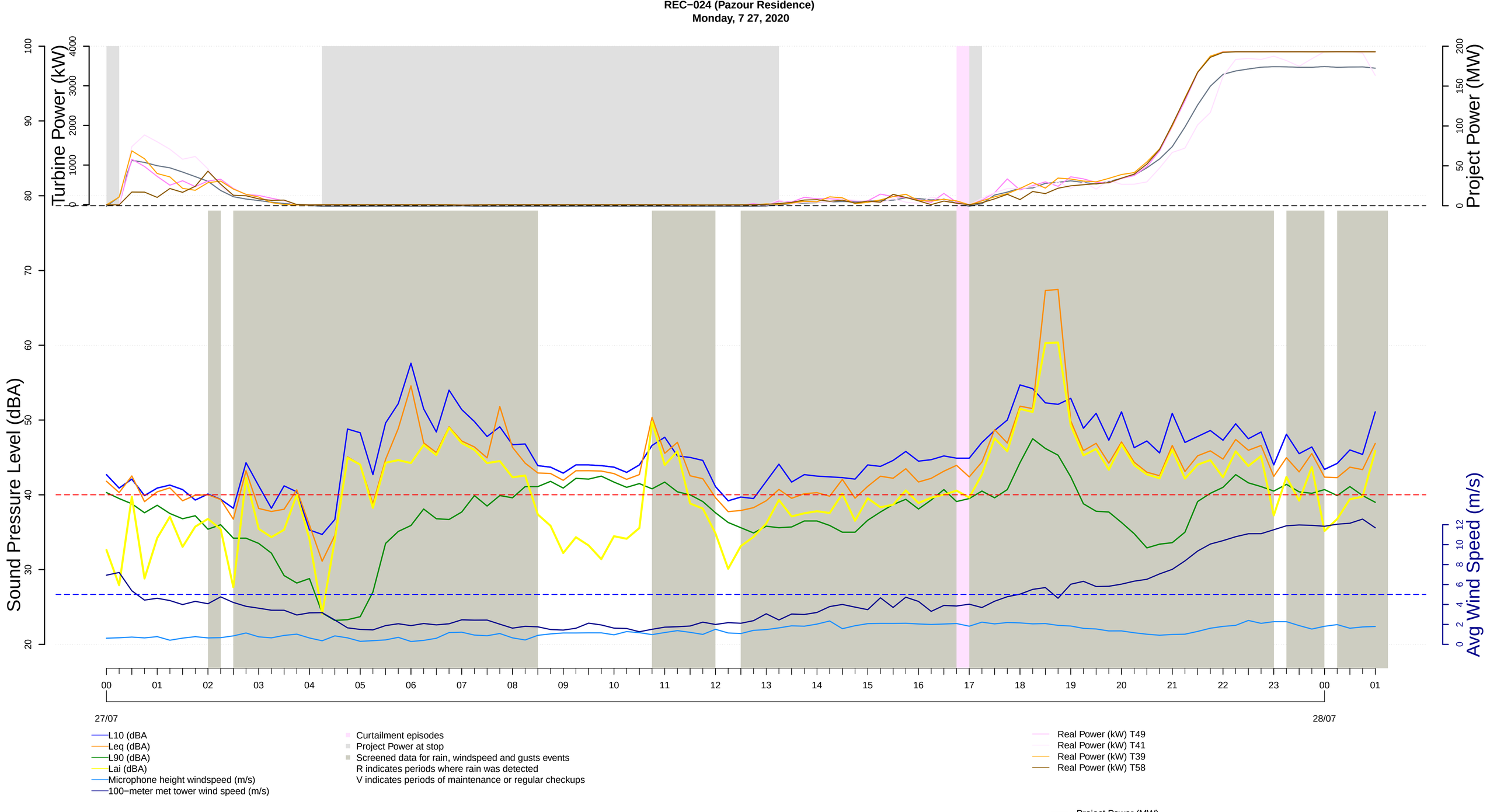
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

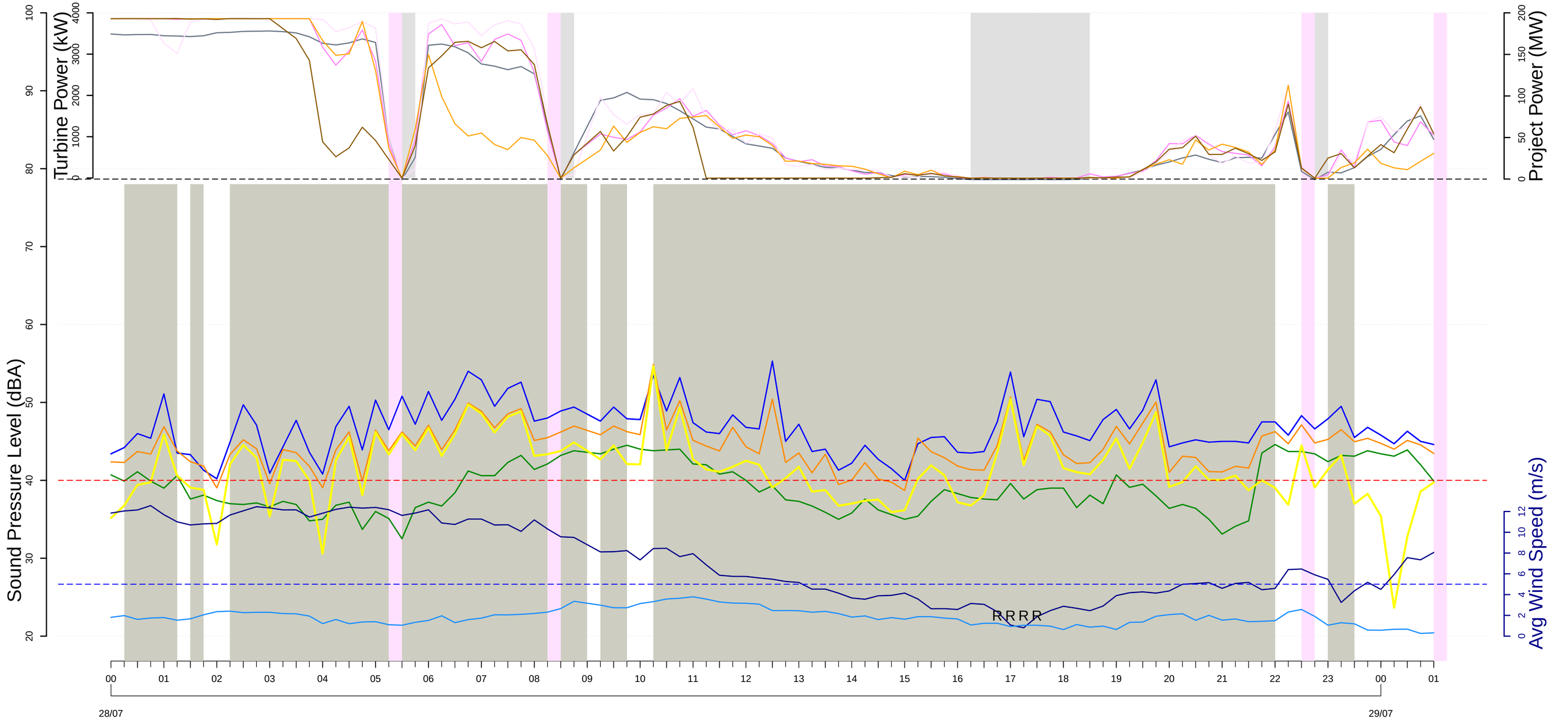
Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58

Project Power (MW)


REC−024 (Pazour Residence)
Sunday, 7 26, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
RRRRRRRRRRRRRR
26/07
27/07
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups
Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58
Project Power (MW)


REC−024 (Pazour Residence)
Monday, 7 27, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
27/07
28/07
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups
Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58
Project Power (MW)

REC−024 (Pazour Residence)
Tuesday, 7 28, 2020



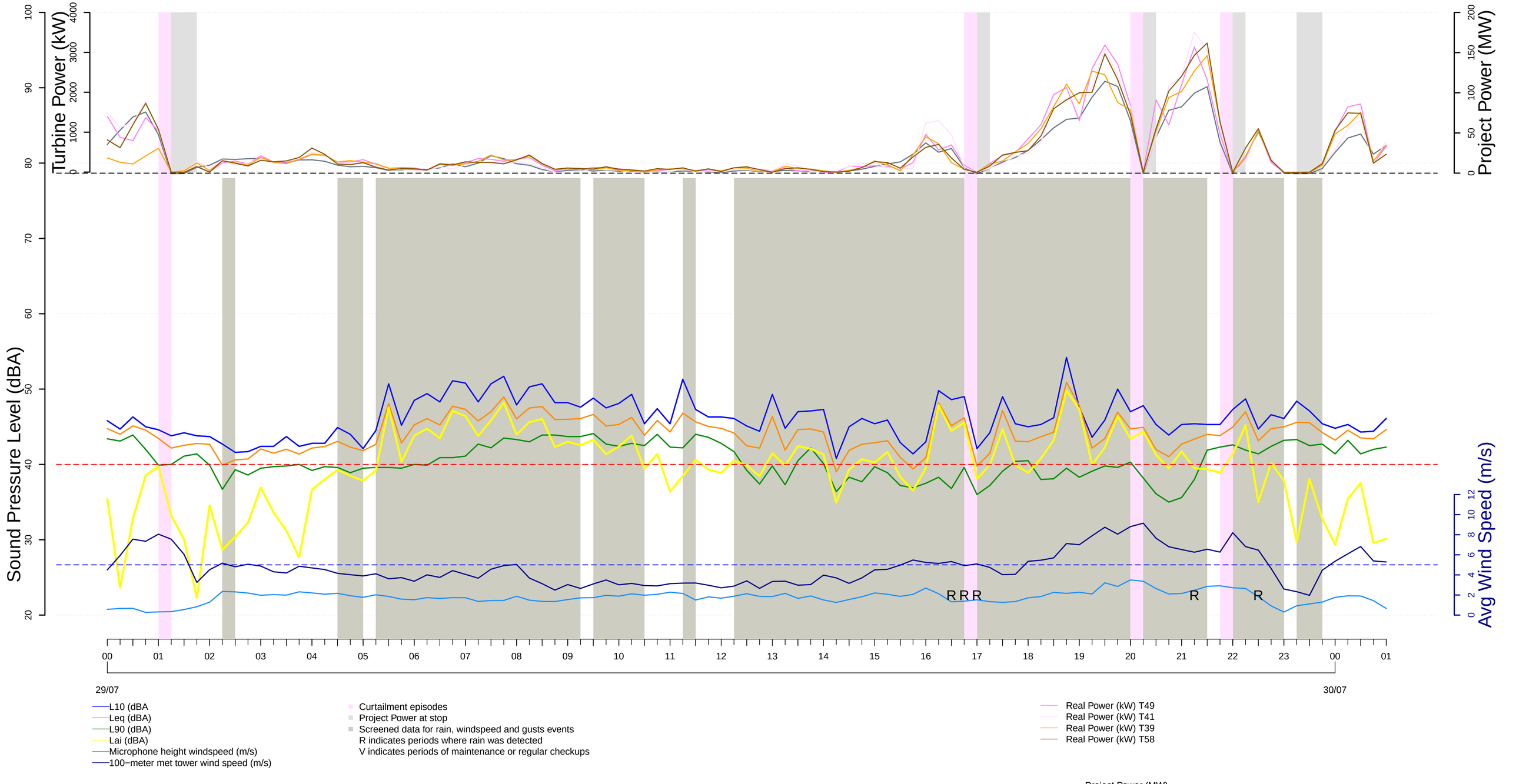
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

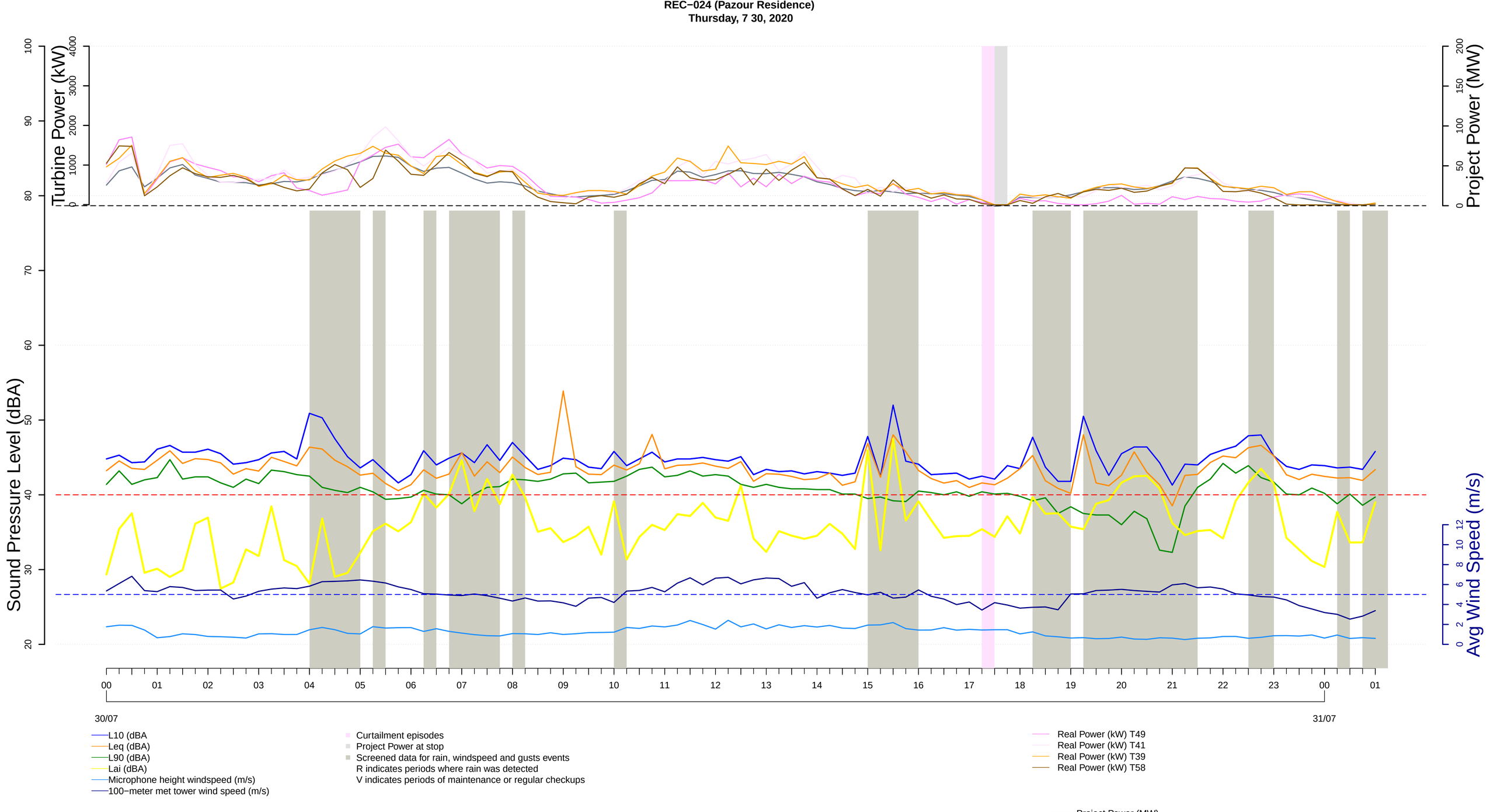
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58

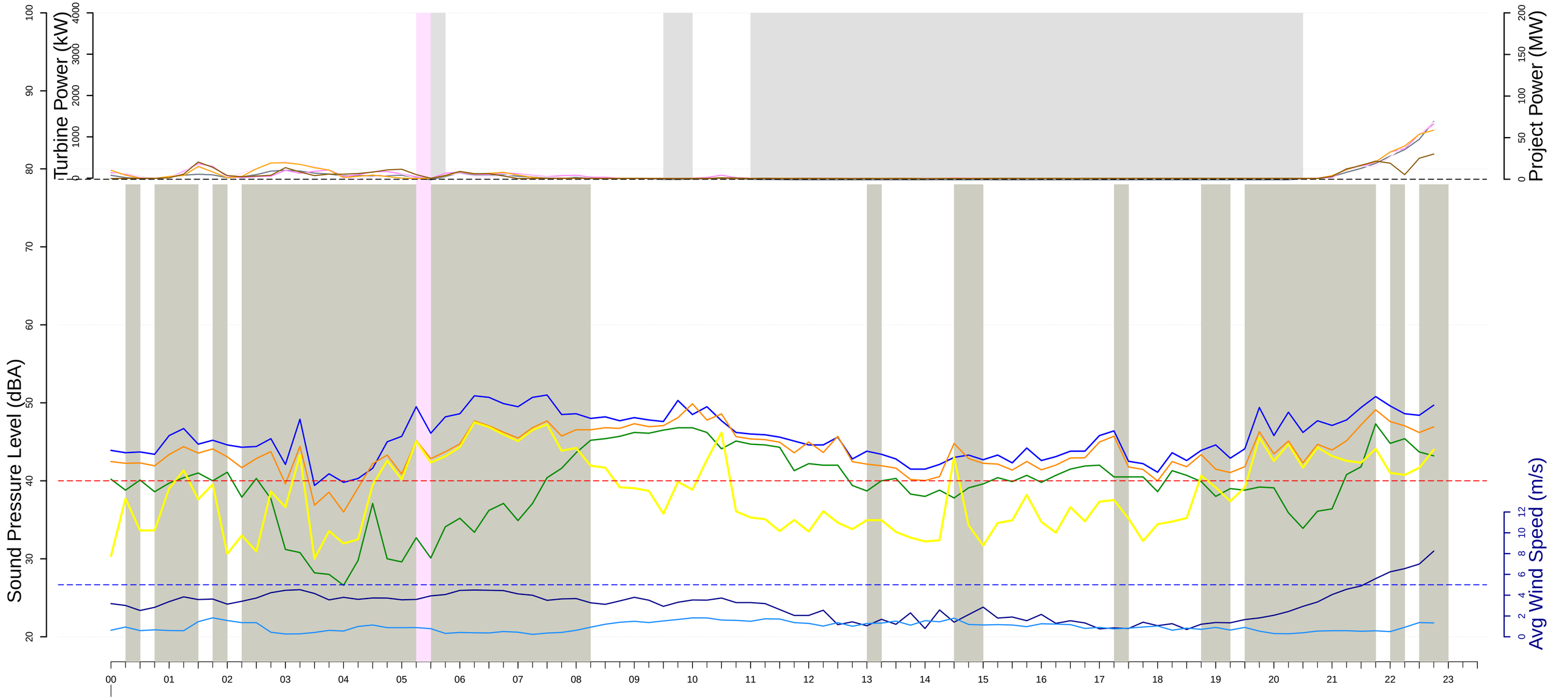
Project Power (MW)

REC−024 (Pazour Residence)
Wednesday, 7 29, 2020

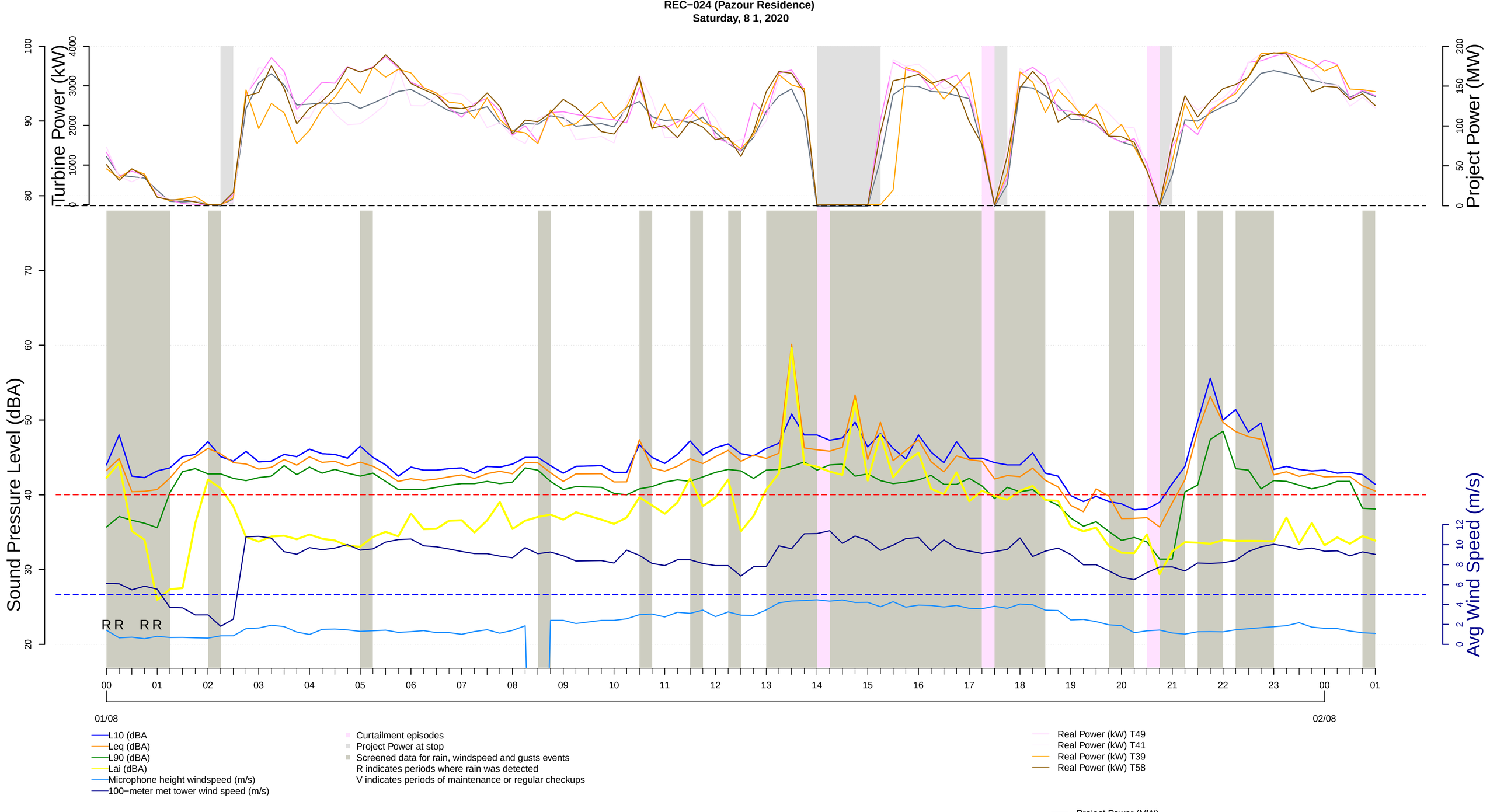



REC−024 (Pazour Residence)
Thursday, 7 30, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
30/07
31/07
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups
Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58
Project Power (MW)

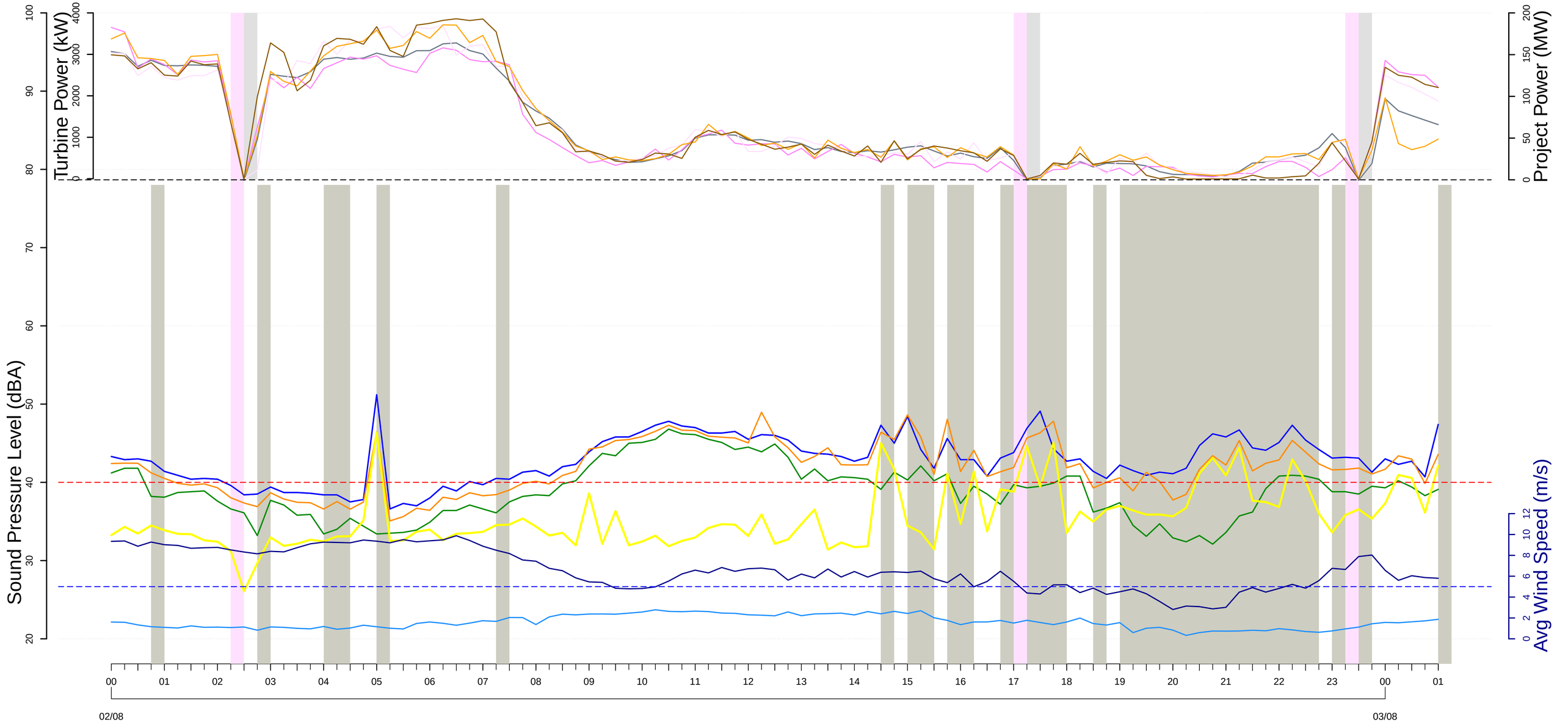
REC−024 (Pazour Residence)
Friday, 7 31, 2020



- L10 (dBA
- Leq (dBA)
- L90 (dBA)
- Lai (dBA)
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
  V indicates periods of maintenance or regular checkups
- Real Power (kW) T49
- Real Power (kW) T41
- Real Power (kW) T39
- Real Power (kW) T58
- Project Power (MW)


REC−024 (Pazour Residence)
Saturday, 8 1, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
R R R R
01/08
02/08
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups
Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58
Project Power (MW)

REC−024 (Pazour Residence)
Sunday, 8 2, 2020



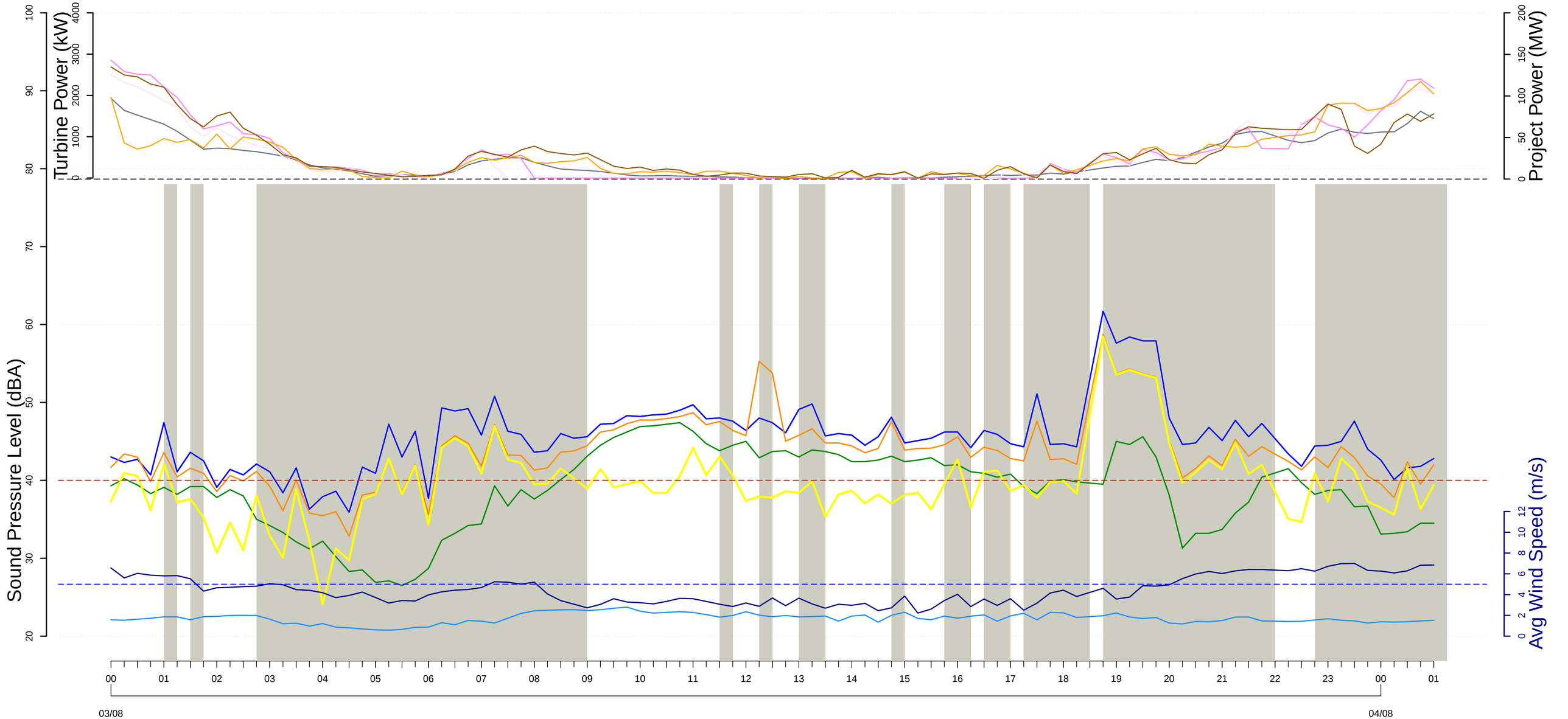
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

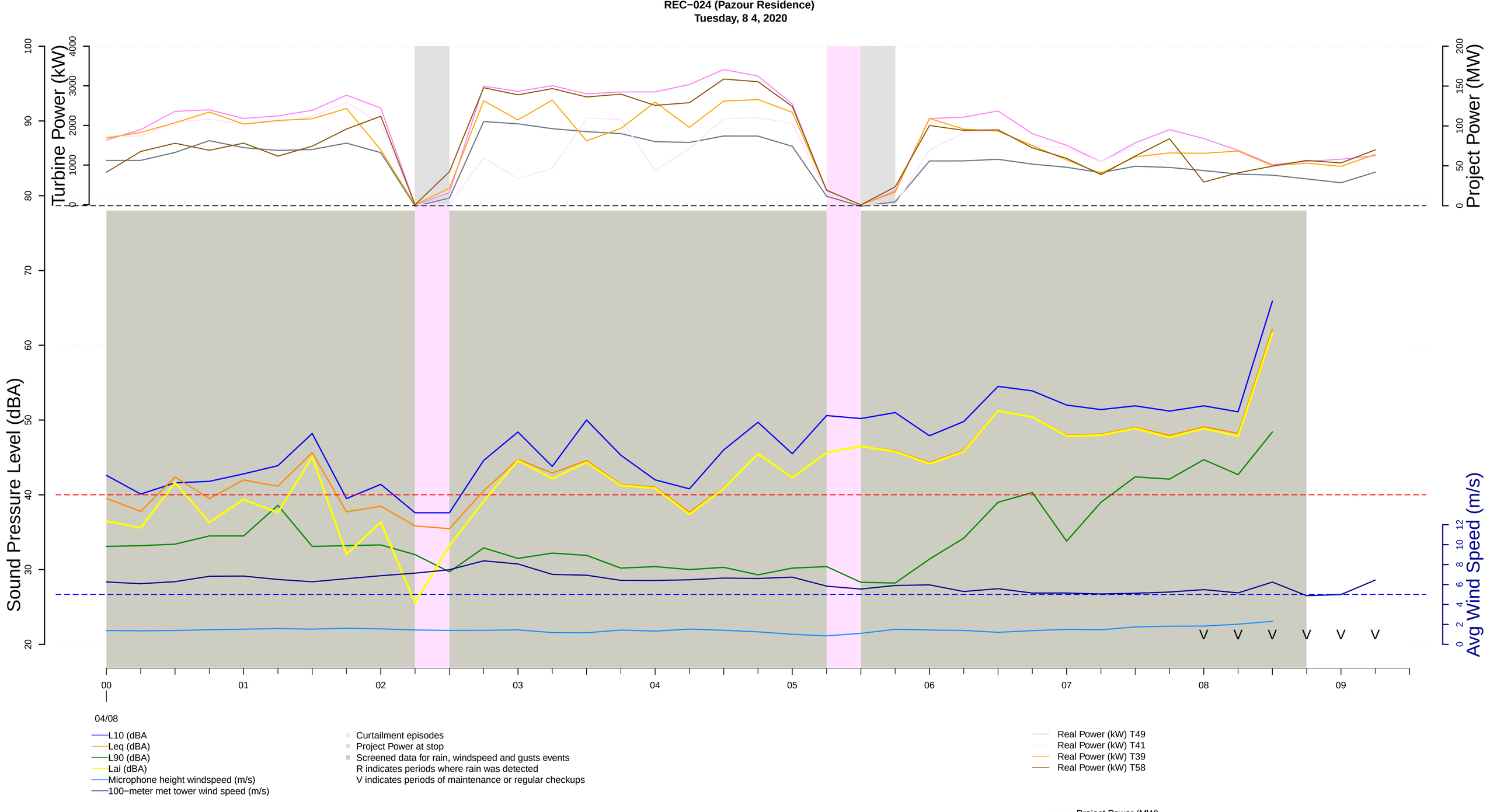
Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58

Project Power (MW)

REC−024 (Pazour Residence)
Monday, 8 3, 2020

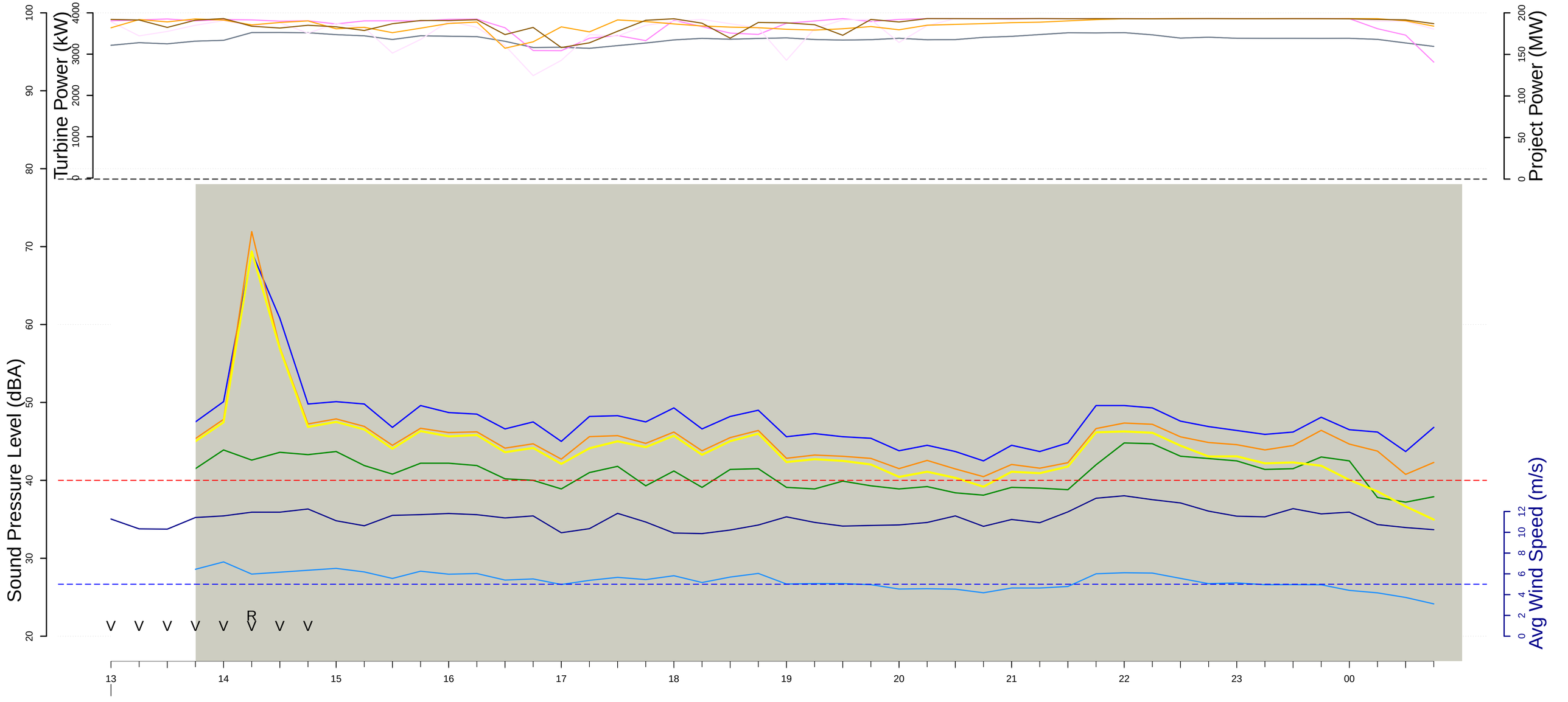


- L10 (dBA
- Leq (dBA)
- L90 (dBA)
- Lai (dBA)
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
  V indicates periods of maintenance or regular checkups
- Real Power (kW) T49
- Real Power (kW) T41
- Real Power (kW) T39
- Real Power (kW) T58
- Project Power (MW)


REC−024 (Pazour Residence)
Tuesday, 8 4, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
V V V V V V
00 01 02 03 04 05 06 07 08 09
04/08
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups
Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58
Project Power (MW)

REC-068 (Fuerniss Residence)

REC−068 (Fuerniss Residence)
Friday, 7 17, 2020



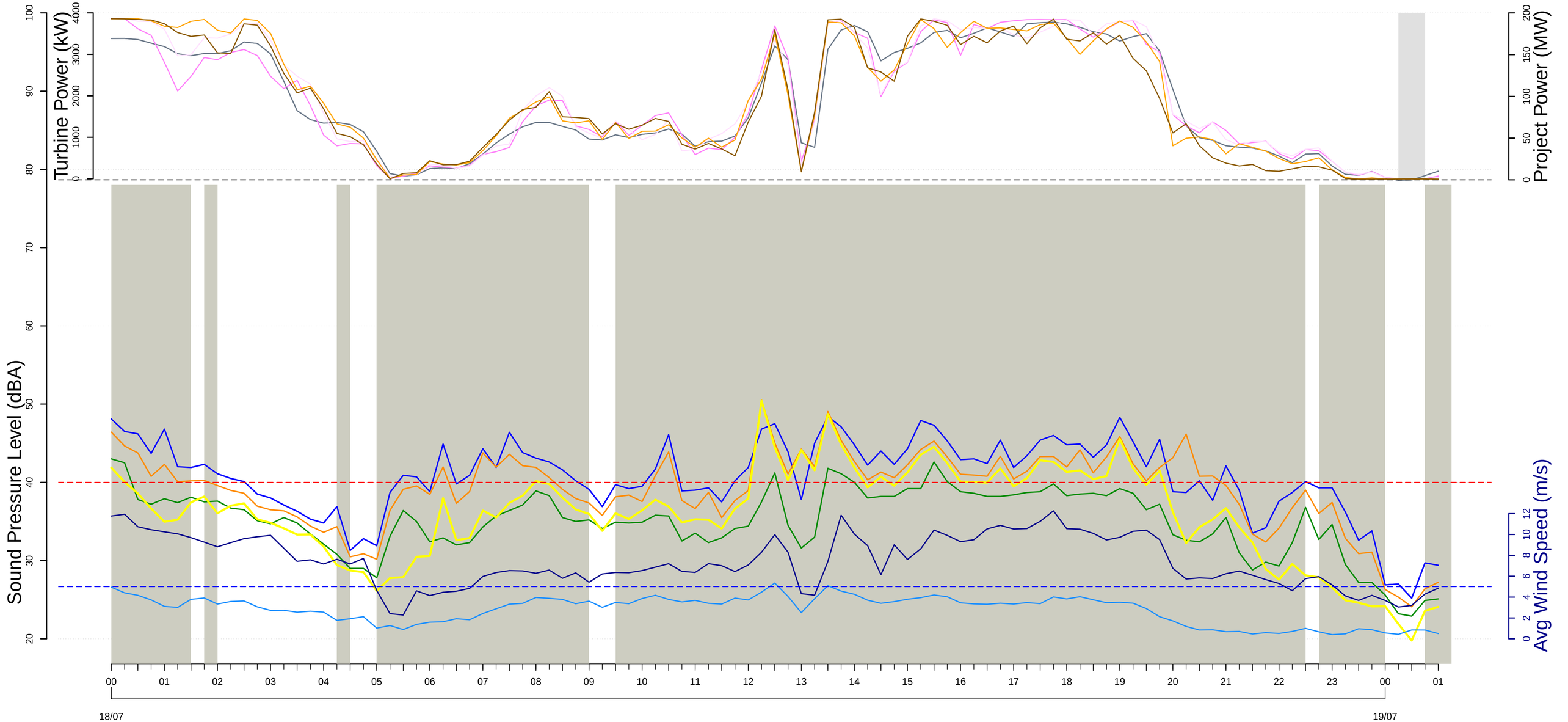
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32

Project Power (MW)

REC−068 (Fuerniss Residence)
Saturday, 7 18, 2020



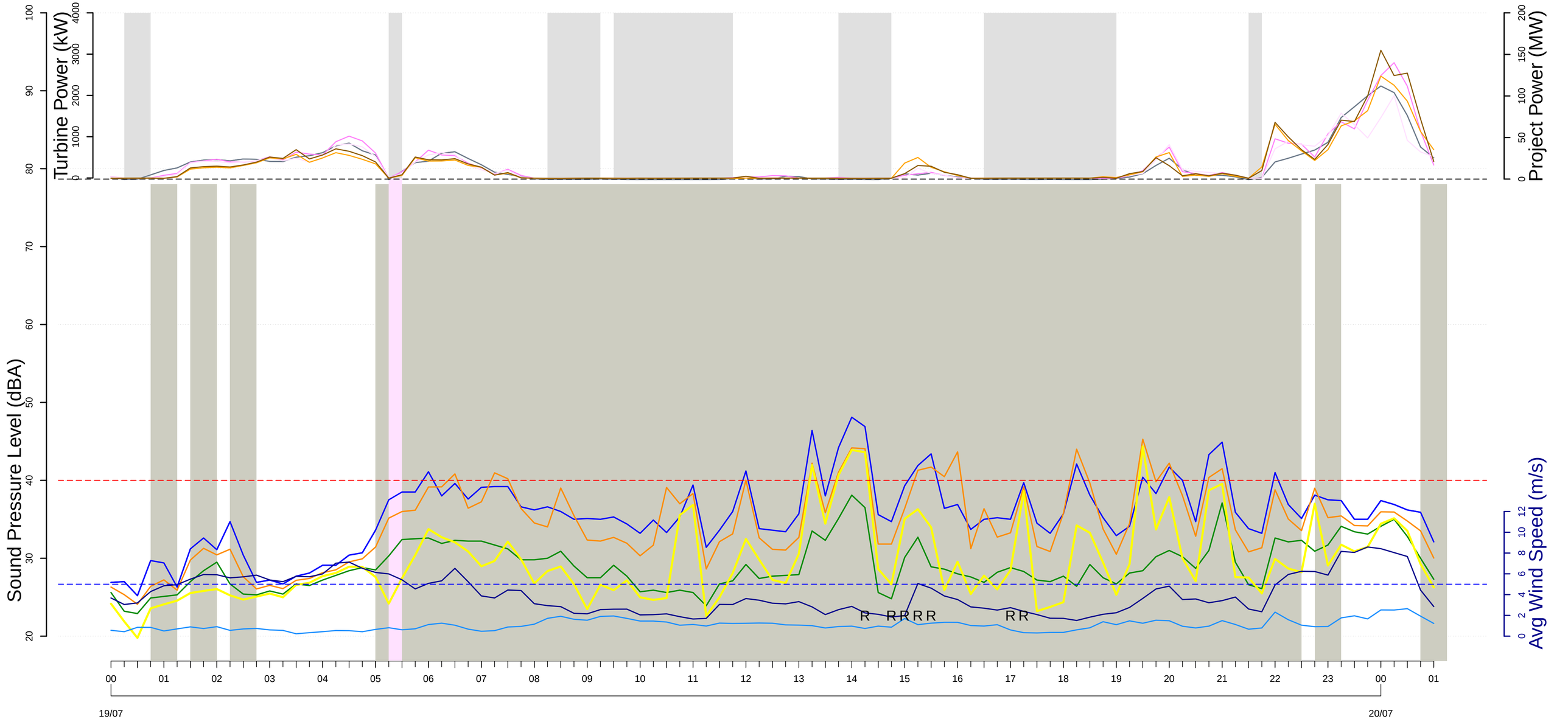
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32

Project Power (MW)

REC−068 (Fuerniss Residence)
Sunday, 7 19, 2020



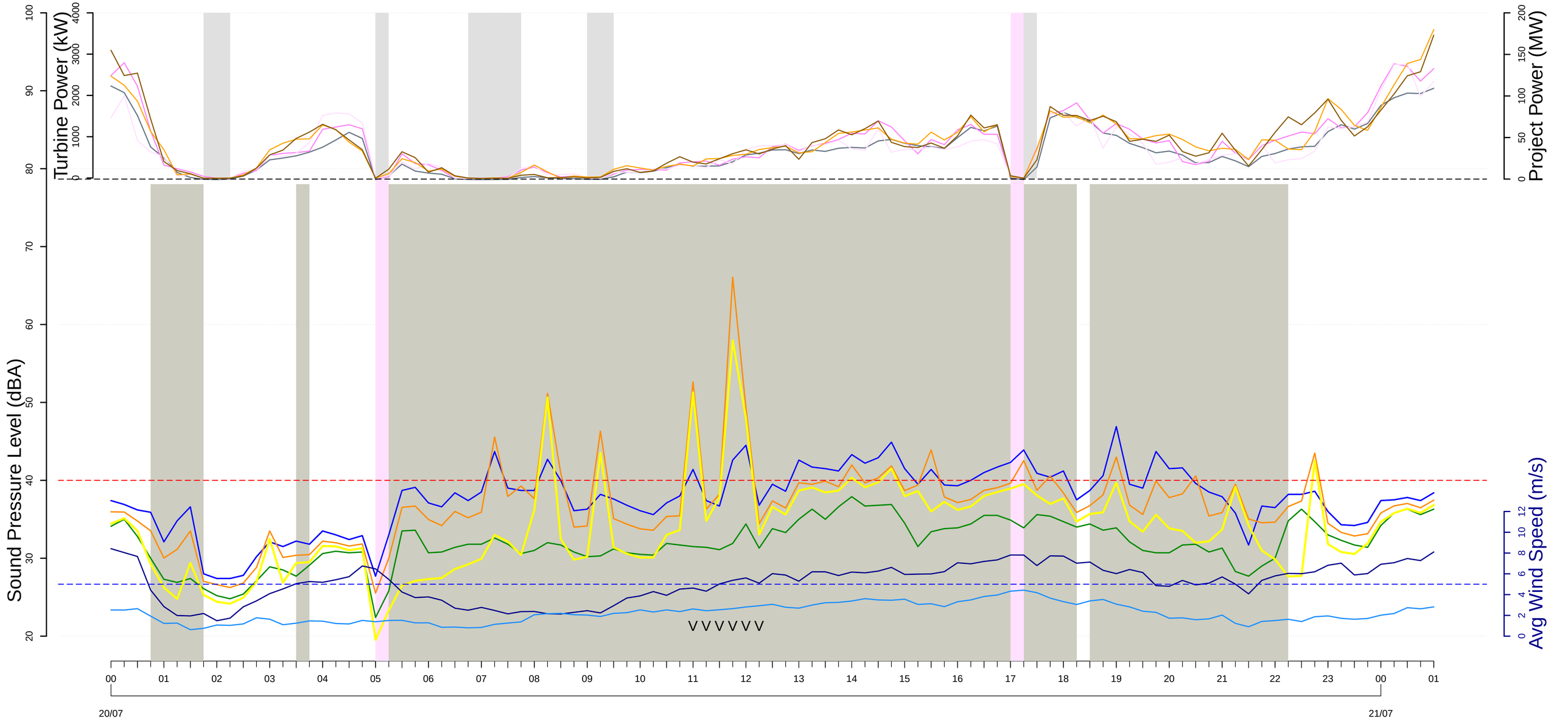
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32

Project Power (MW)

REC−068 (Fuerniss Residence)
Monday, 7 20, 2020

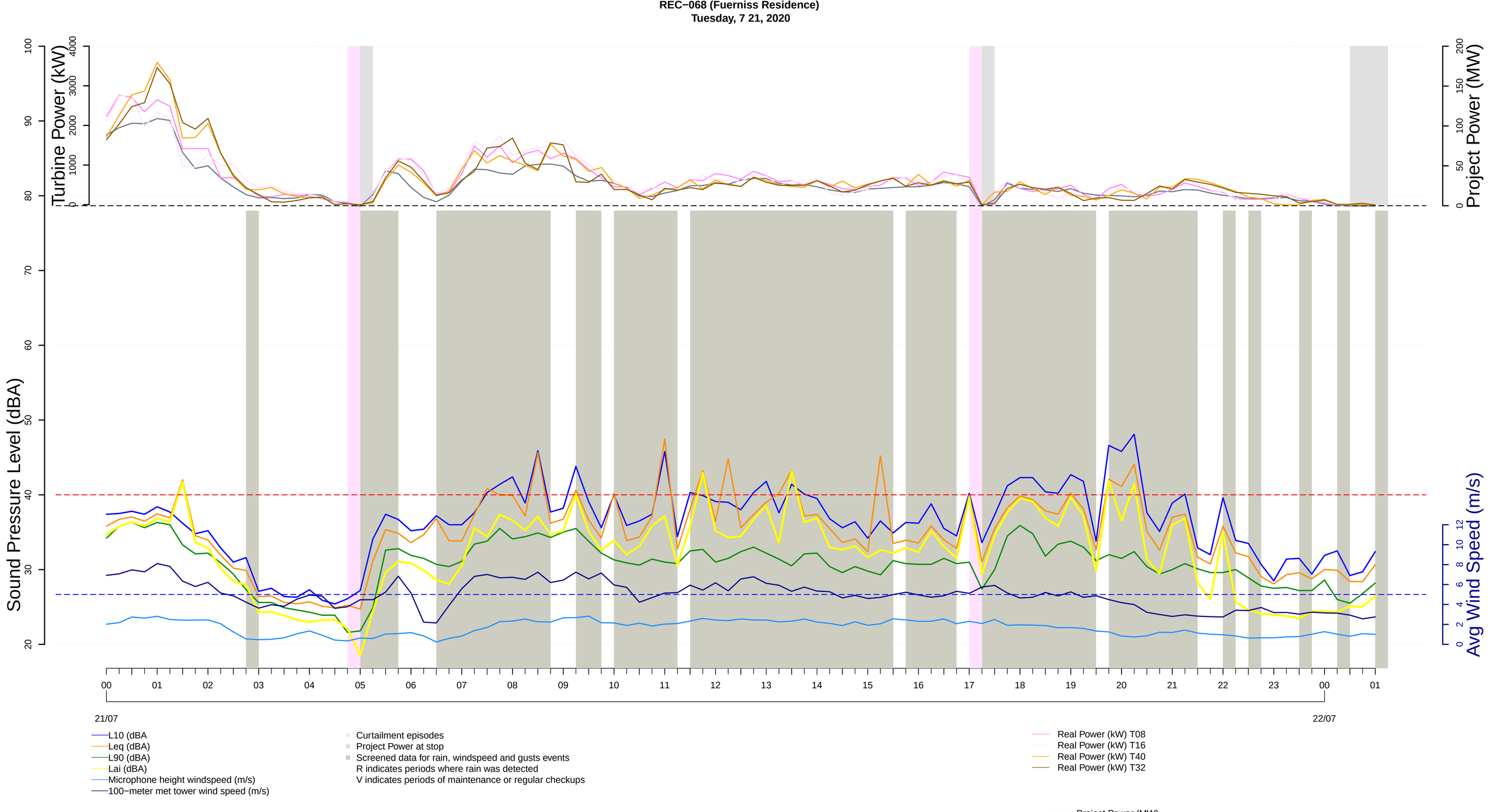


L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

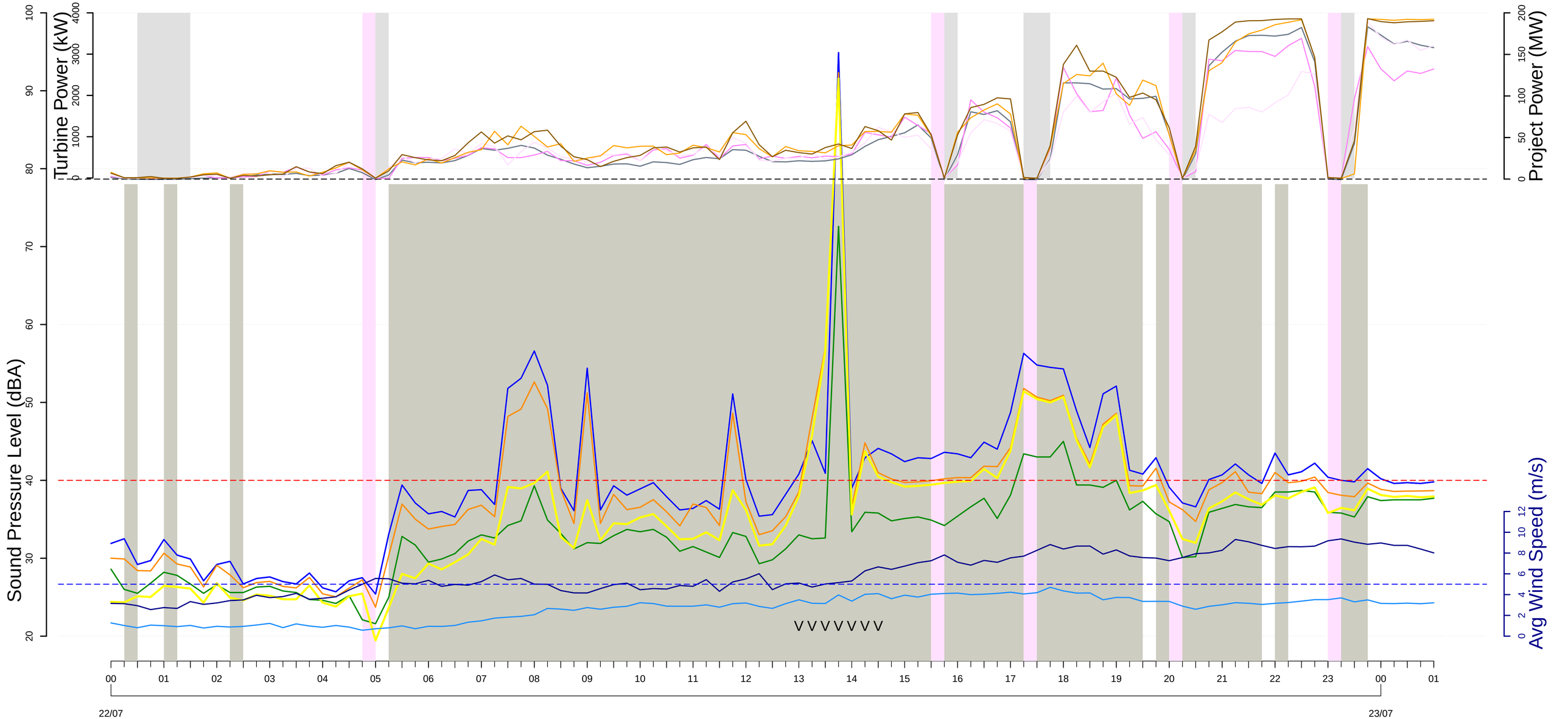
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32

Project Power (MW)


REC−068 (Fuerniss Residence)
Tuesday, 7 21, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
21/07
22/07
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups
Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32
Project Power (MW)

REC−068 (Fuerniss Residence)
Wednesday, 7 22, 2020

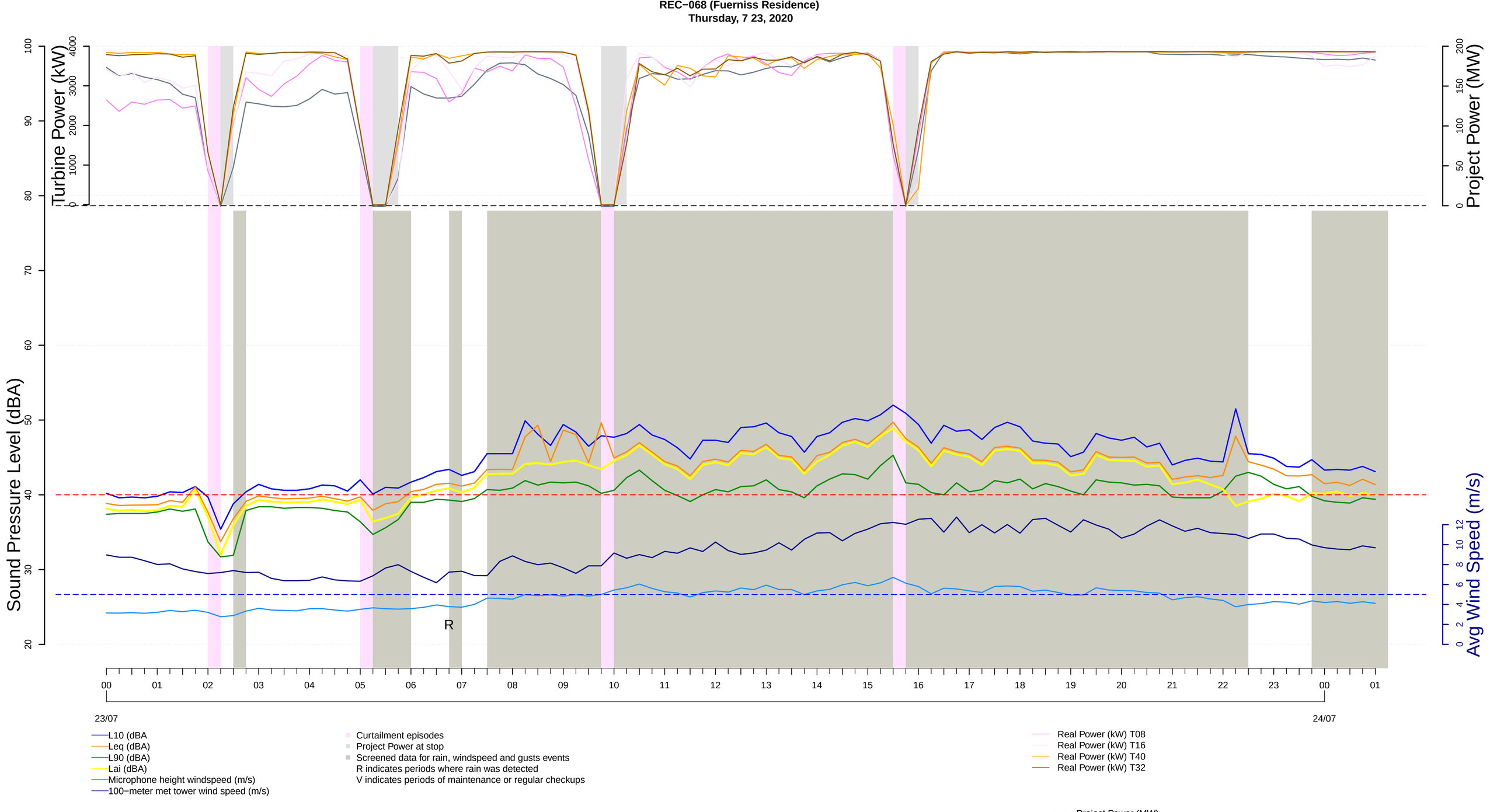


L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

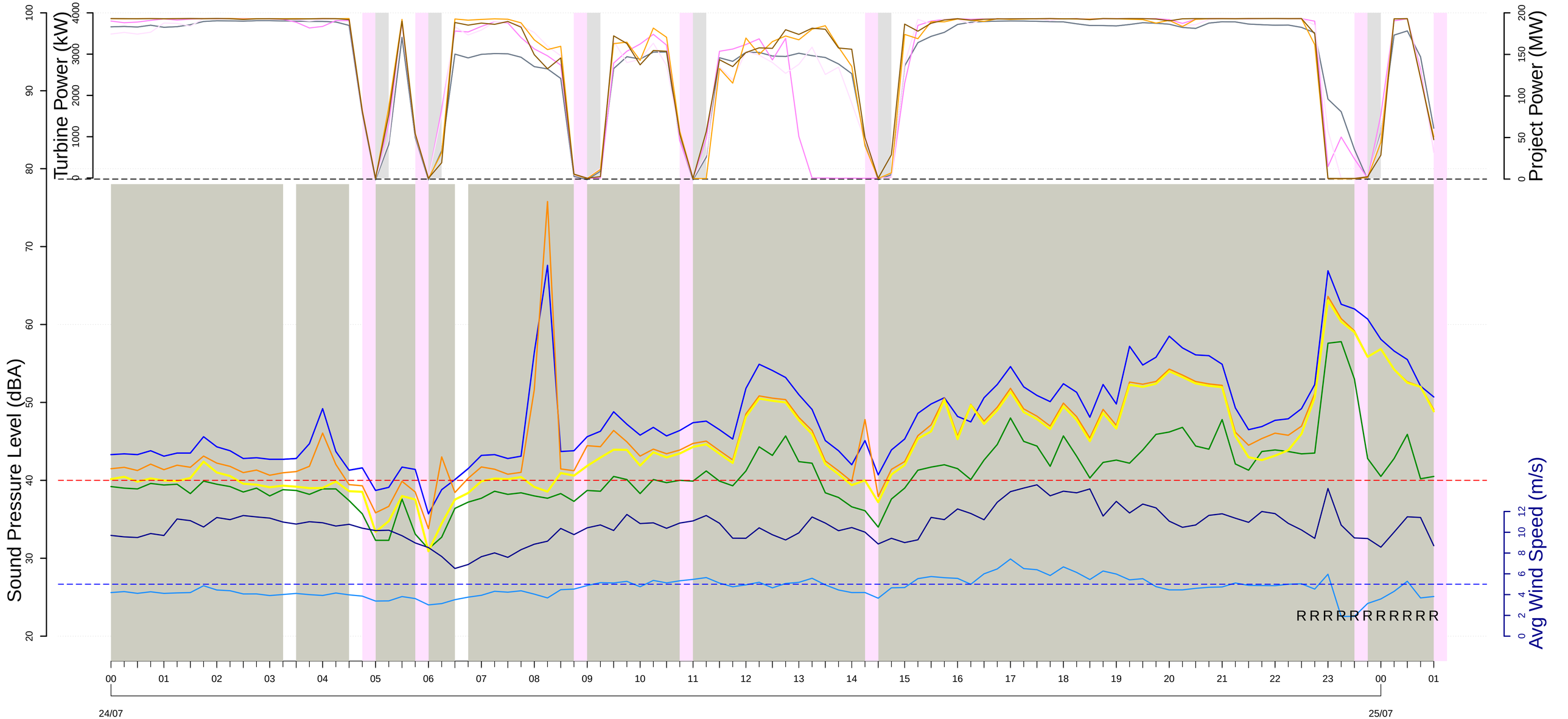
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32

Project Power (MW)


REC−068 (Fuerniss Residence)
Thursday, 7 23, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
R
23/07
24/07
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups
Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32
Project Power (MW)

REC−068 (Fuerniss Residence)
Friday, 7 24, 2020

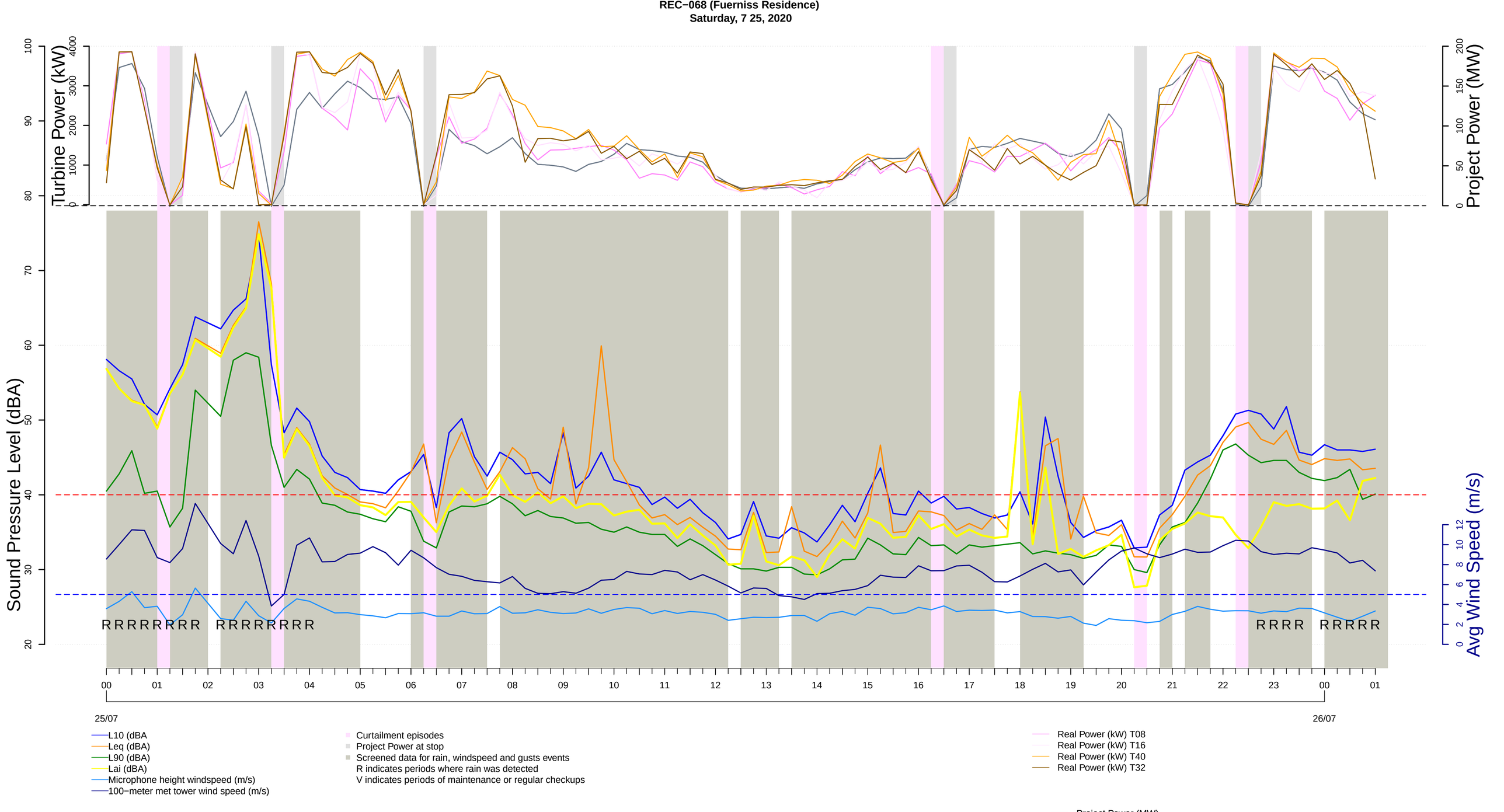


L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

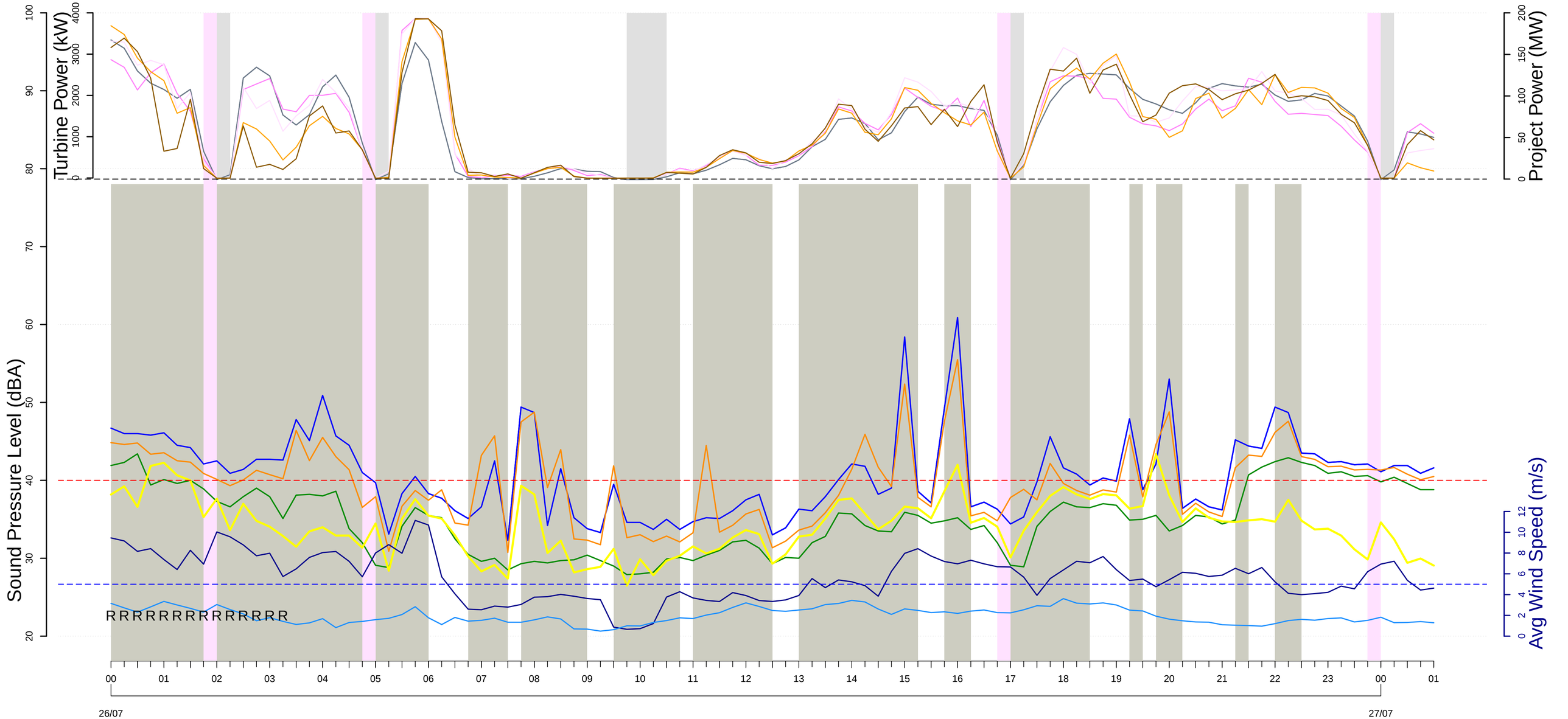
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32

Project Power (MW)


REC−068 (Fuerniss Residence)
Saturday, 7 25, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
RRRRRRRR RRRRRRRR
RRRR RRRRR
25/07
26/07
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups
Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32
Project Power (MW)

REC−068 (Fuerniss Residence)
Sunday, 7 26, 2020



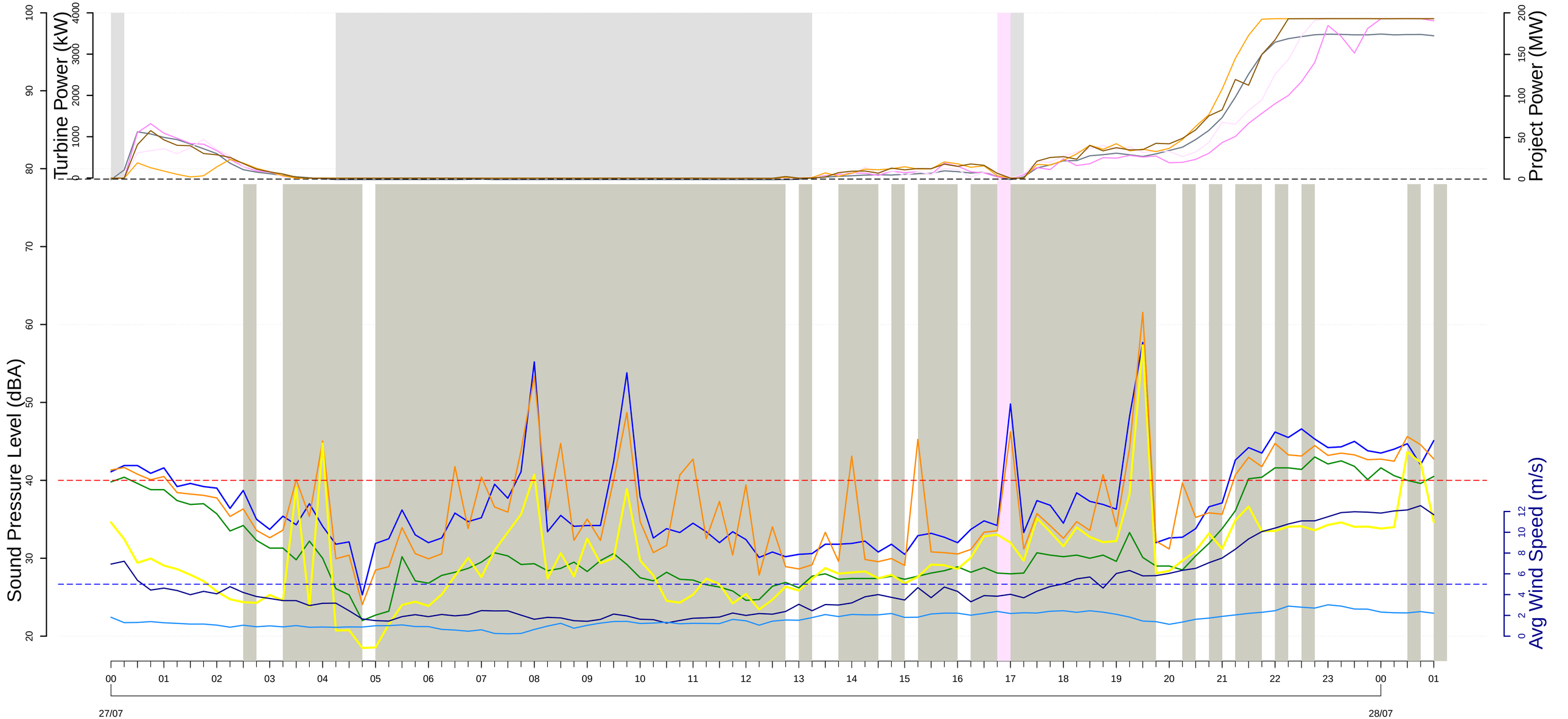
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32

Project Power (MW)

REC−068 (Fuerniss Residence)
Monday, 7 27, 2020



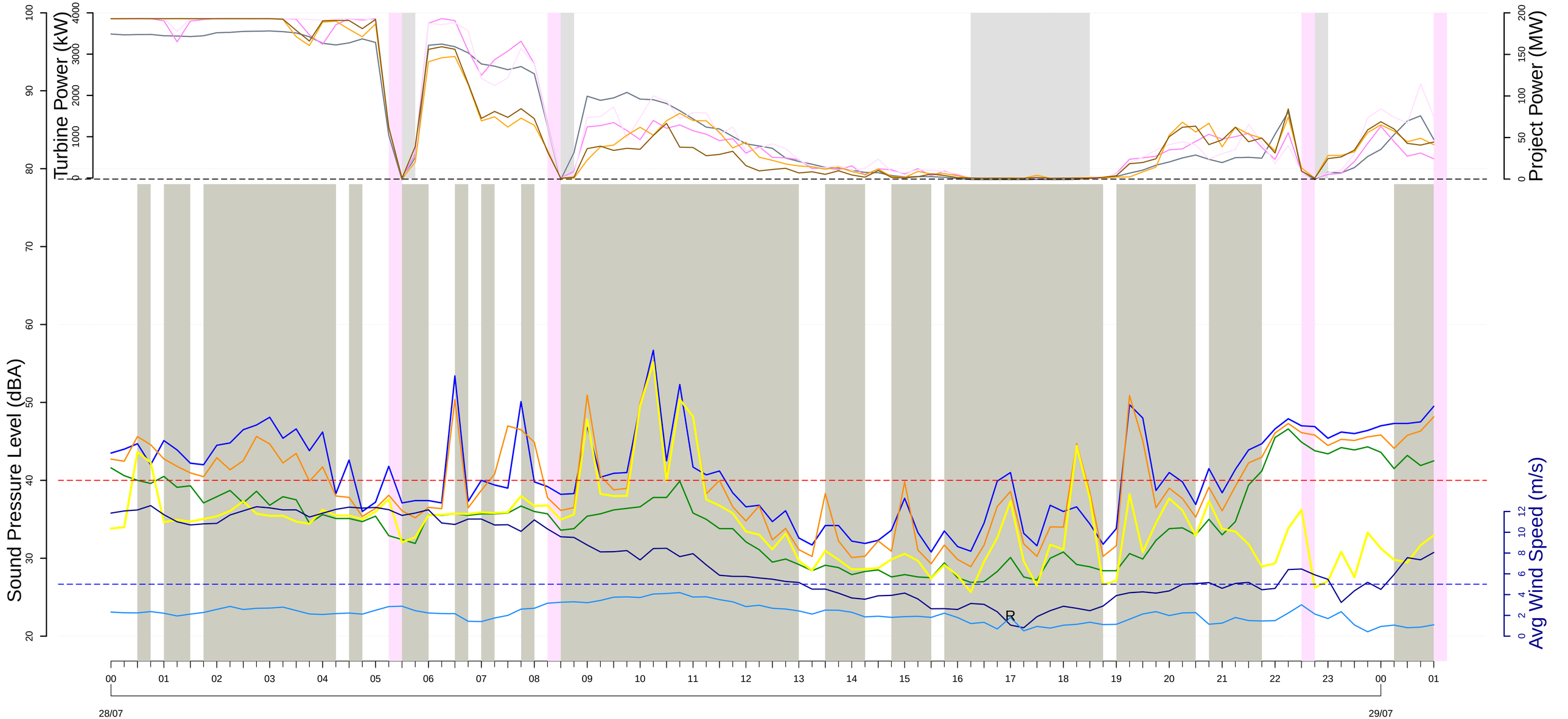
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32

Project Power (MW)

REC−068 (Fuerniss Residence)
Tuesday, 7 28, 2020



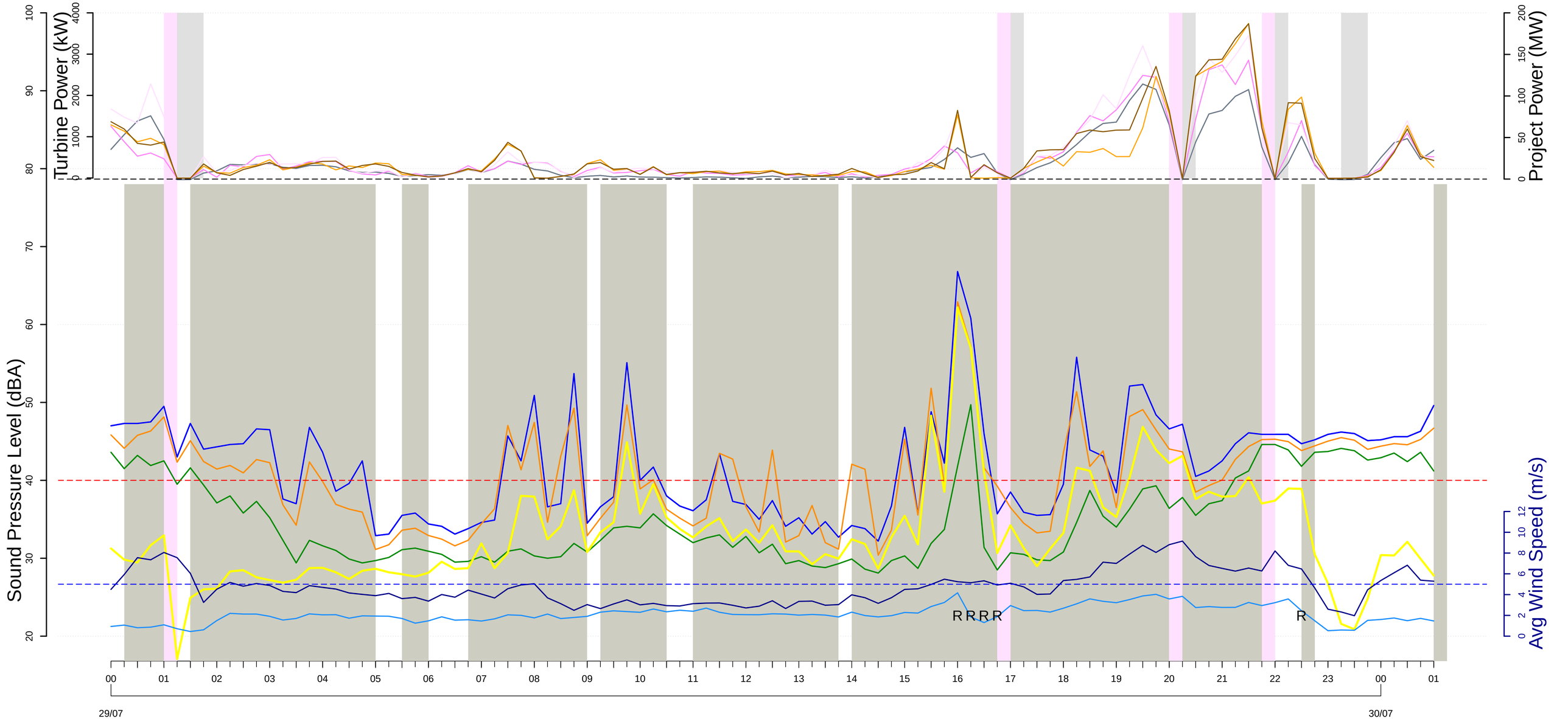
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32

Project Power (MW)

REC−068 (Fuerniss Residence)
Wednesday, 7 29, 2020



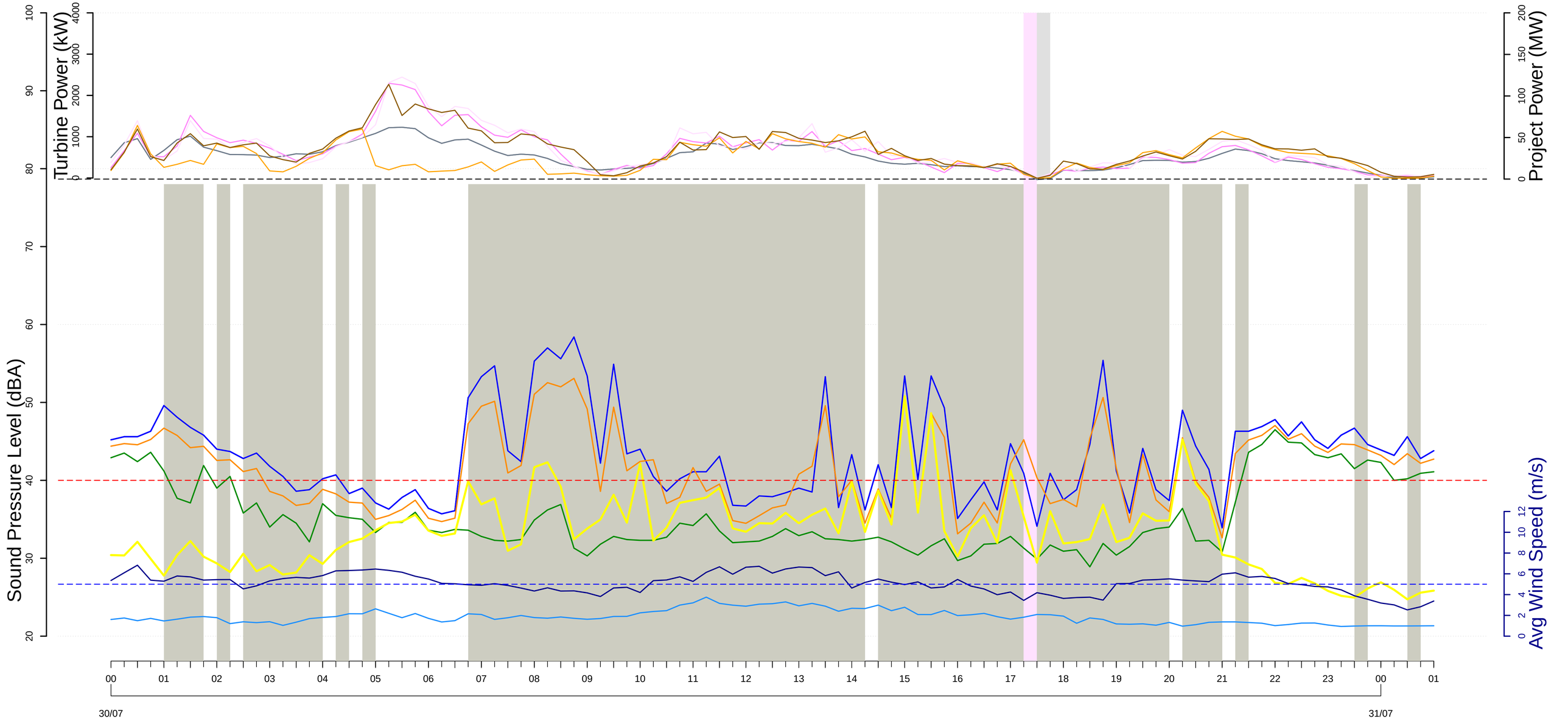
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32

Project Power (MW)

REC−068 (Fuerniss Residence)
Thursday, 7 30, 2020



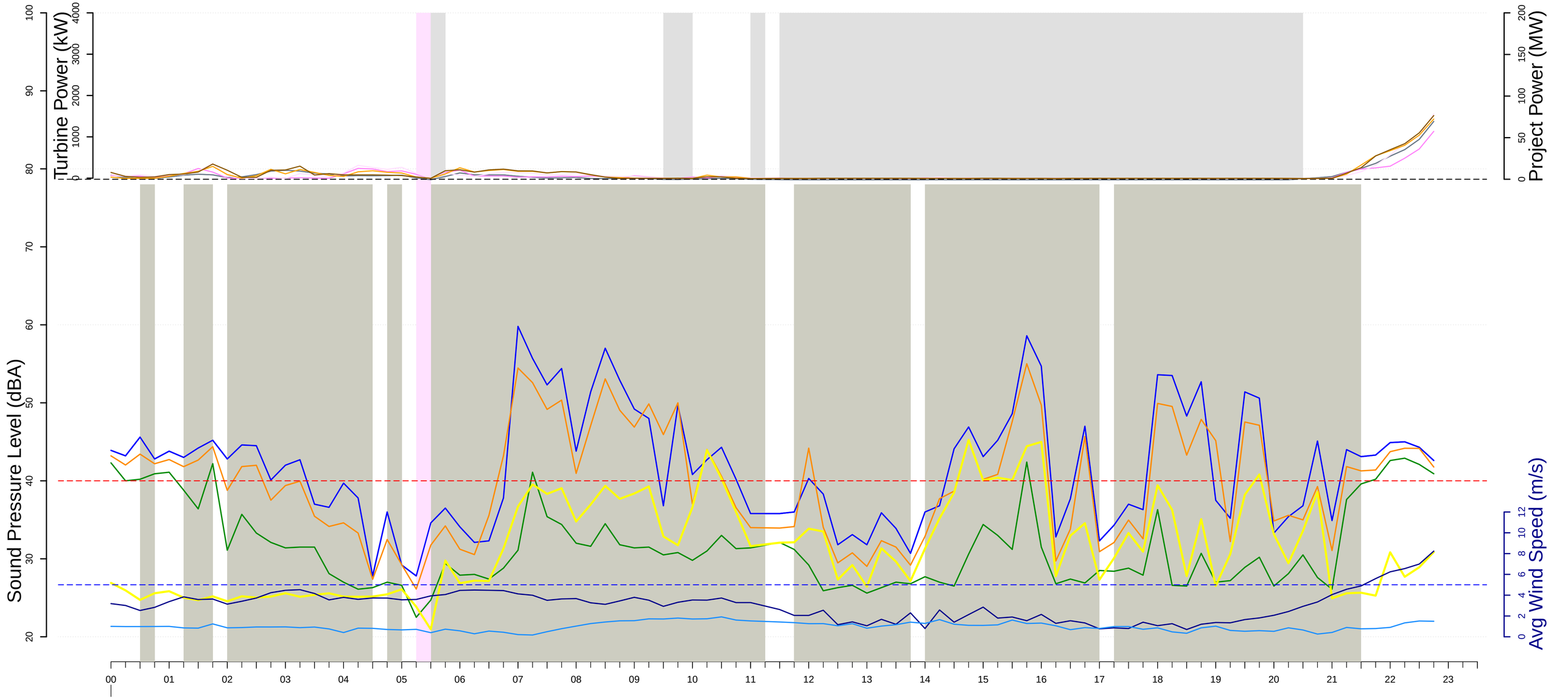
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32

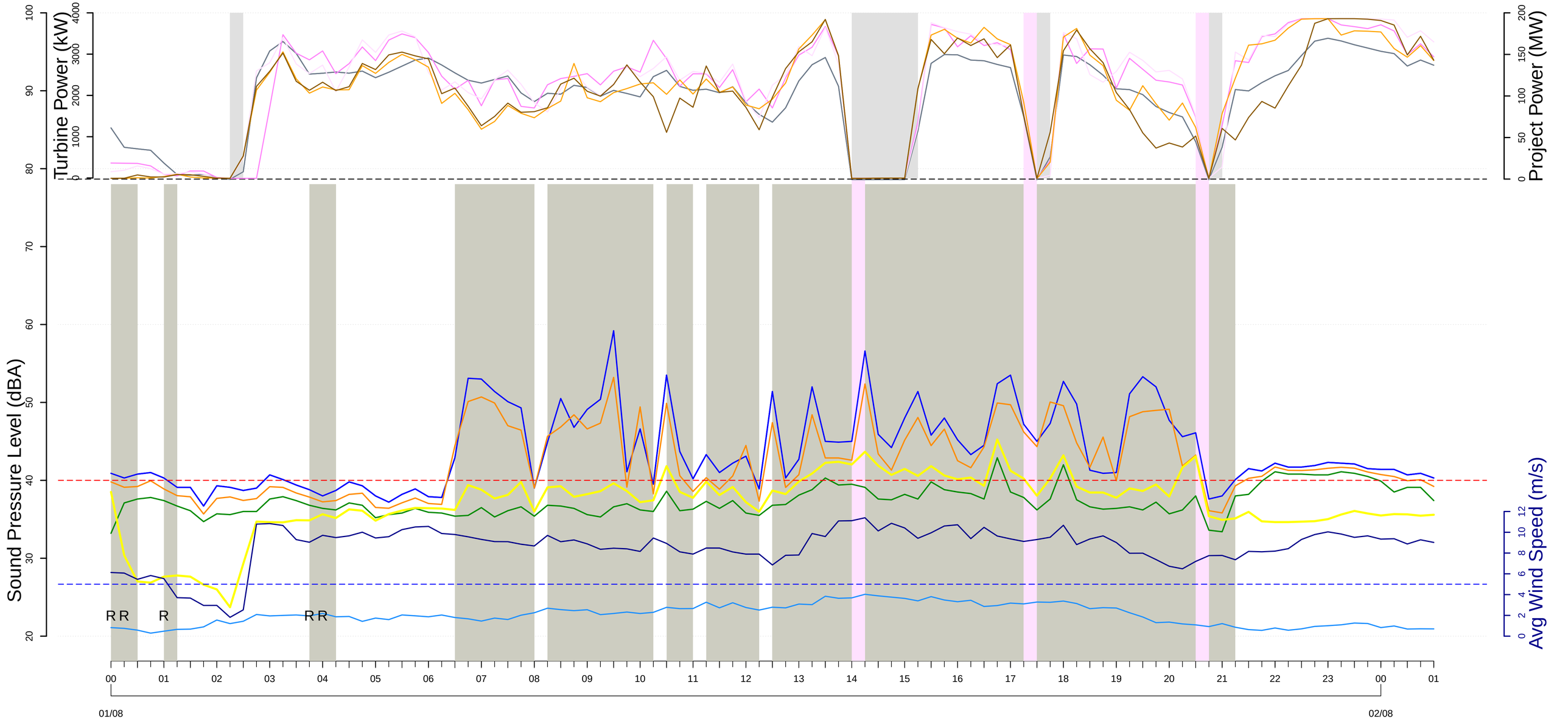
Project Power (MW)

REC−068 (Fuerniss Residence)
Friday, 7 31, 2020



- L10 (dBA
- Leq (dBA)
- L90 (dBA)
- Lai (dBA)
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
  V indicates periods of maintenance or regular checkups
- Real Power (kW) T08
- Real Power (kW) T16
- Real Power (kW) T40
- Real Power (kW) T32
- Project Power (MW)

REC−068 (Fuerniss Residence)
Saturday, 8 1, 2020

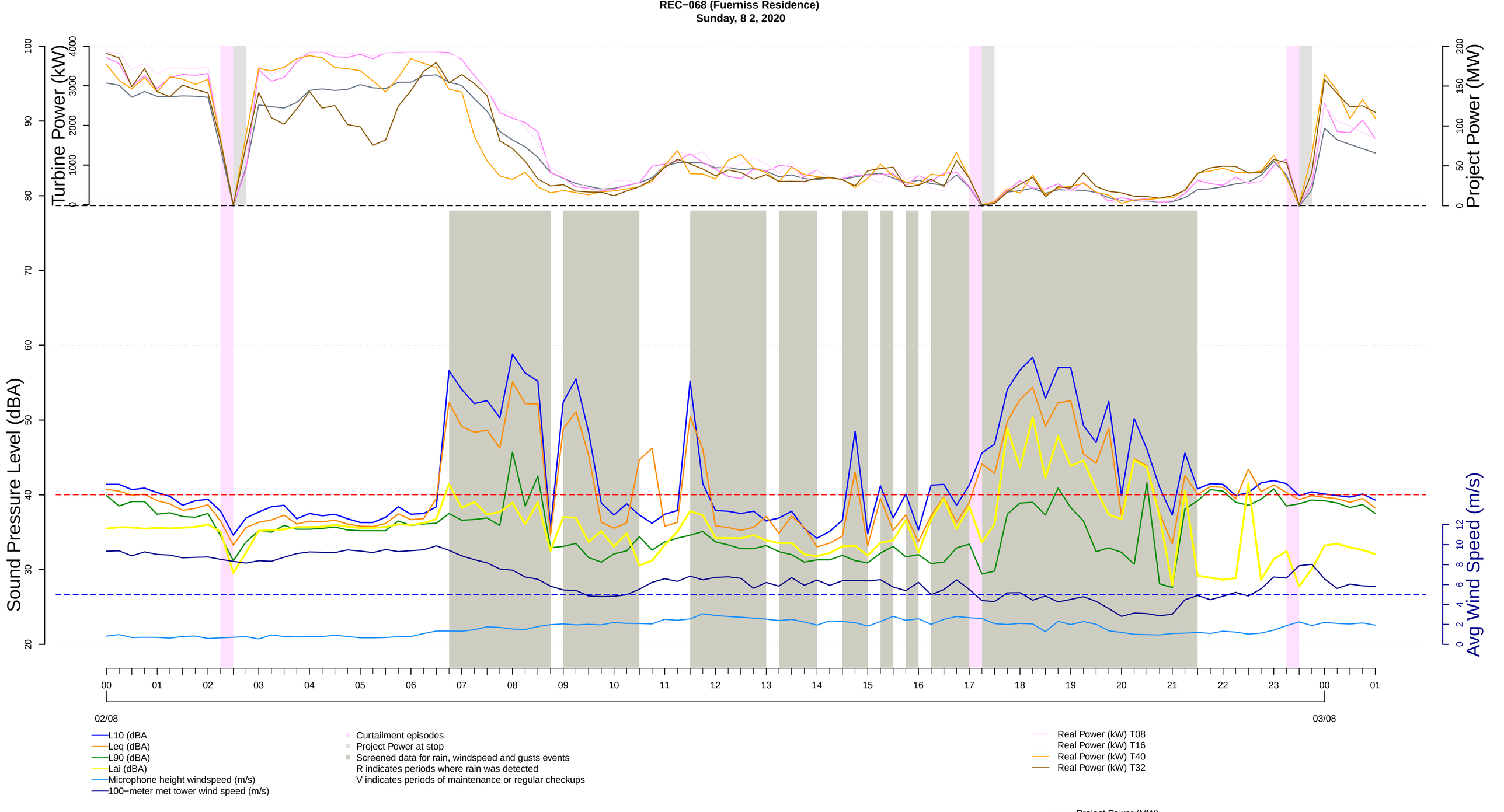


L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

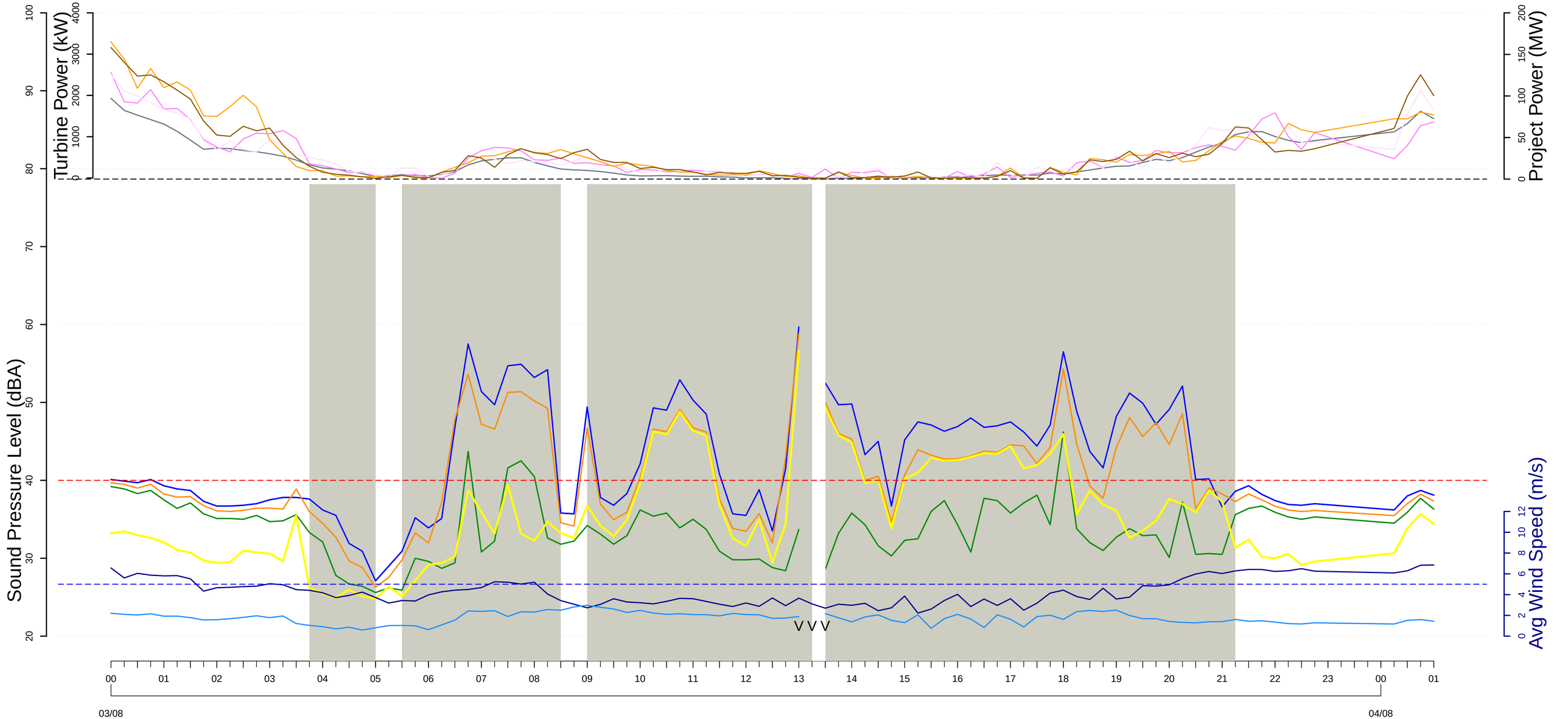
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32

Project Power (MW)


REC−068 (Fuerniss Residence)
Sunday, 8 2, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
02/08
03/08
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups
Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32
Project Power (MW)

REC−068 (Fuerniss Residence)
Monday, 8 3, 2020

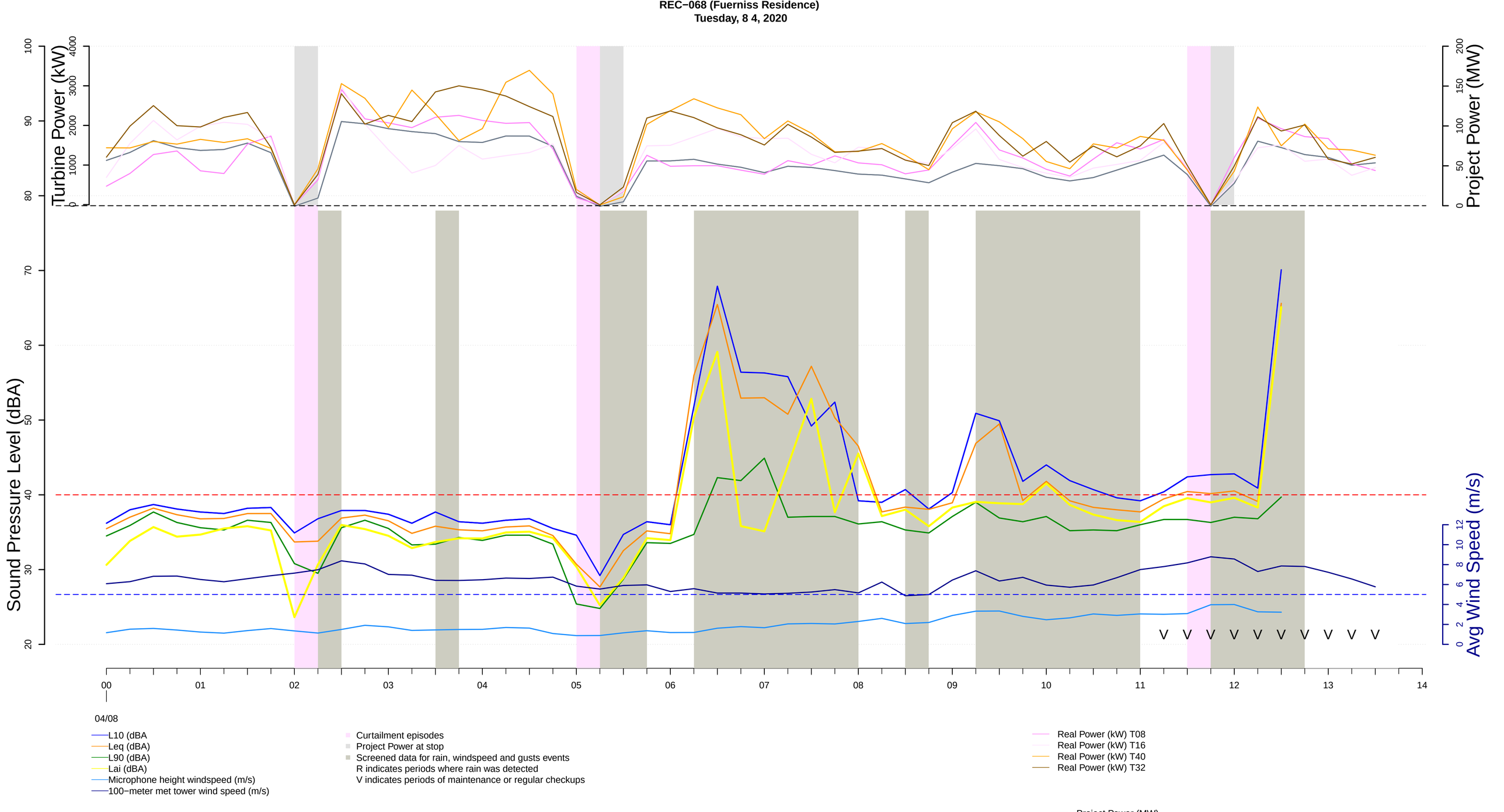


L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

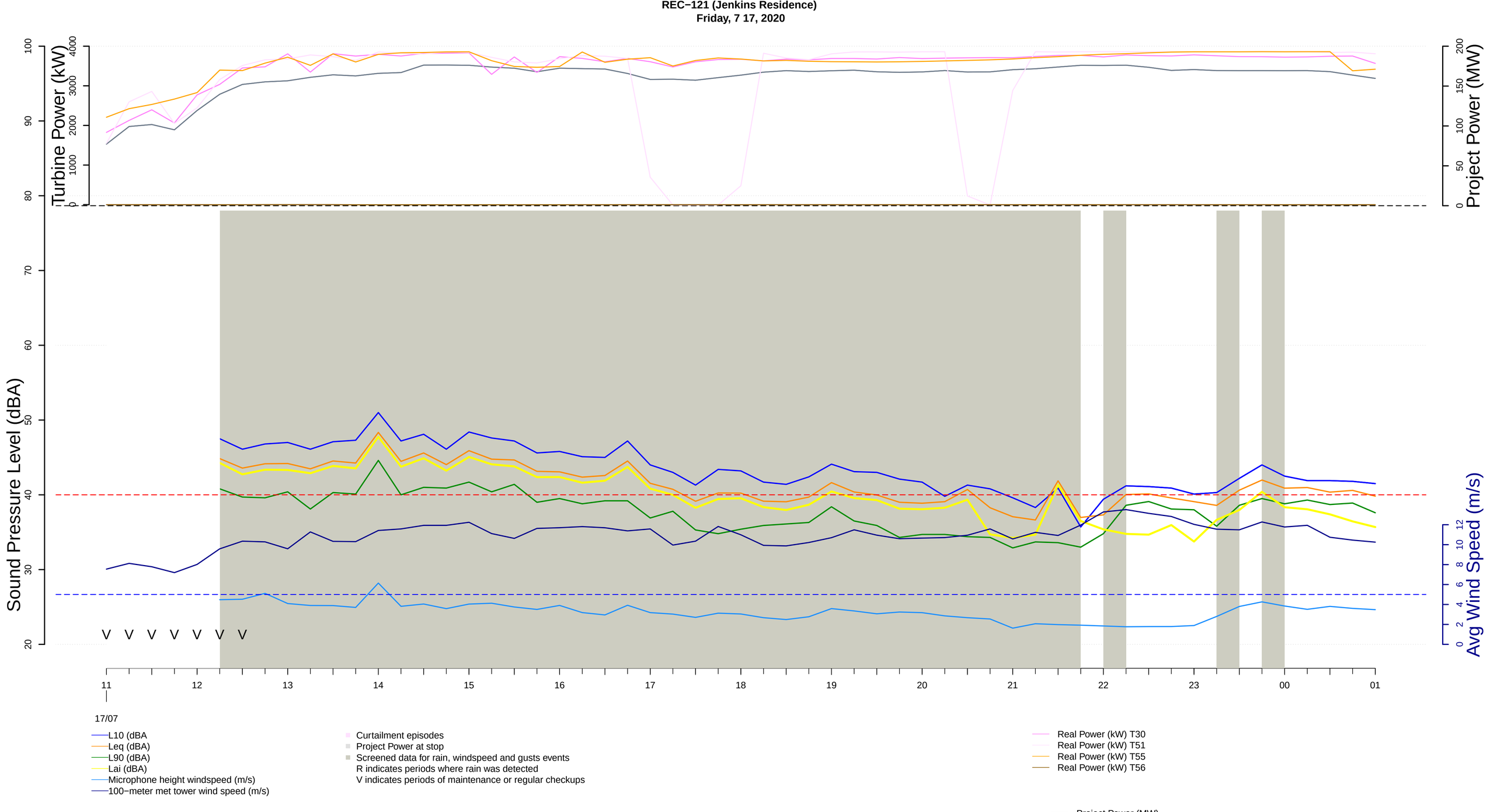
Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32

Project Power (MW)

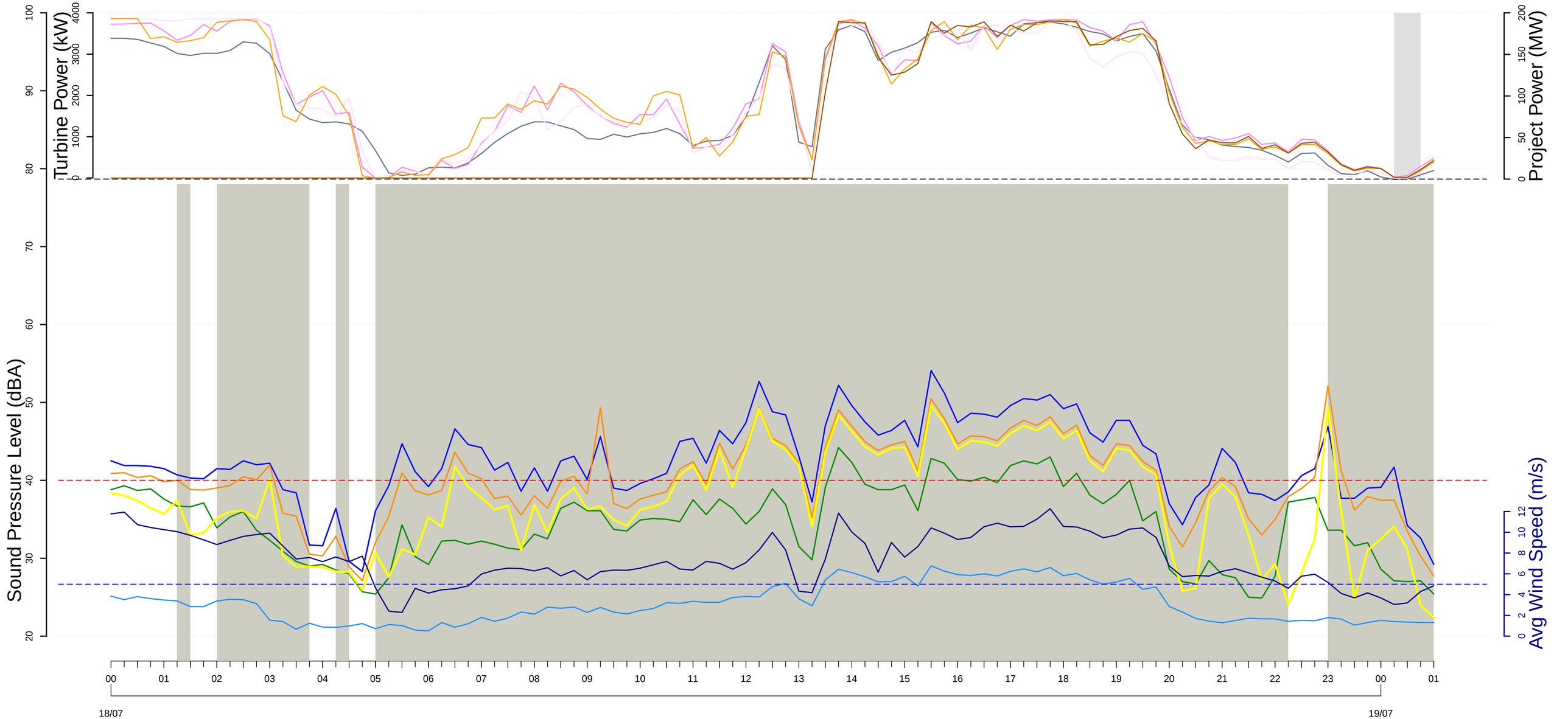


REC−068 (Fuerniss Residence)
Tuesday, 8 4, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
04/08
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups
Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32
Project Power (MW)

REC-121 (Jenkins Residence)


REC−121 (Jenkins Residence)
Friday, 7 17, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
V V V V V V V
11
12
13
14
15
16
17
18
19
20
21
22
23
00
01
17/07
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups
Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56
Project Power (MW)

REC−121 (Jenkins Residence)
Saturday, 7 18, 2020



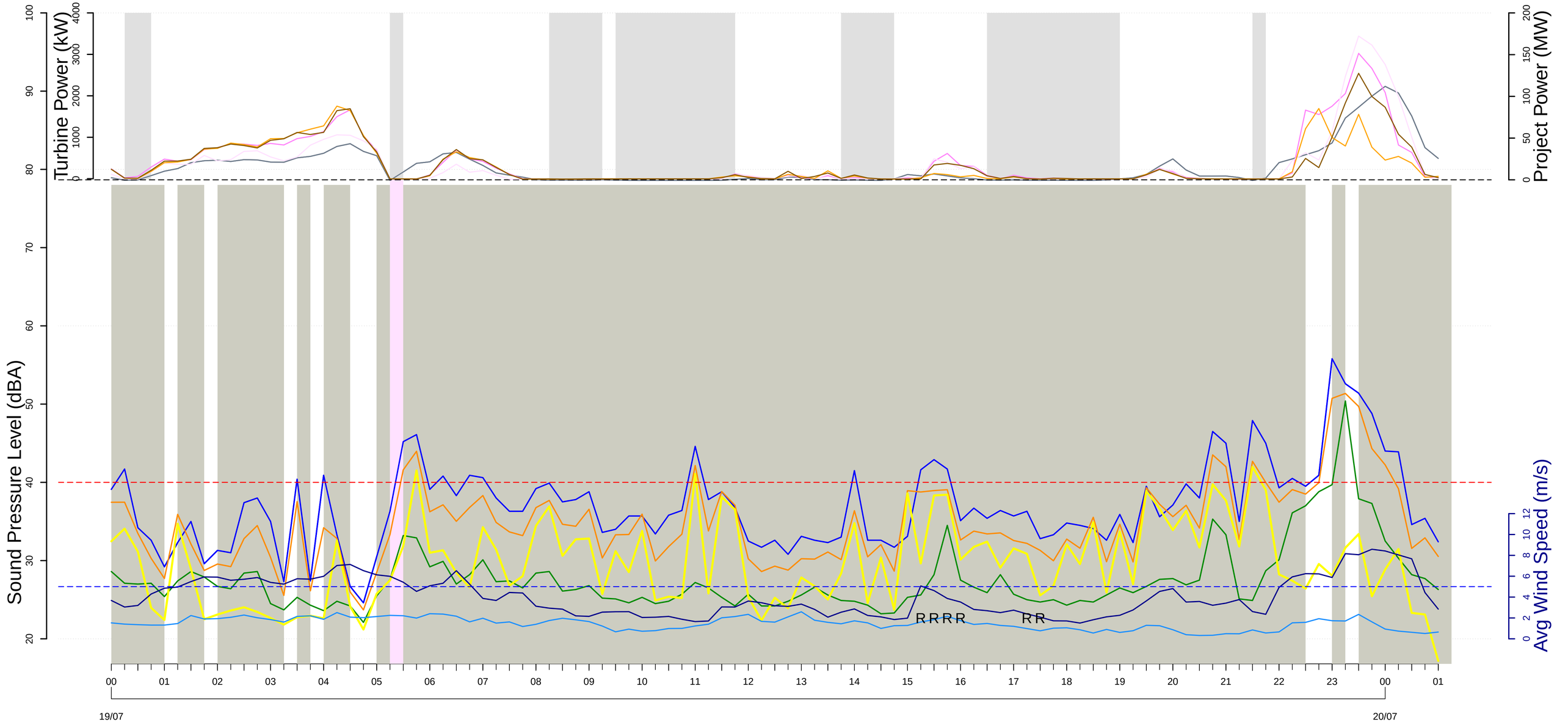
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

Project Power (MW)

REC−121 (Jenkins Residence)
Sunday, 7 19, 2020



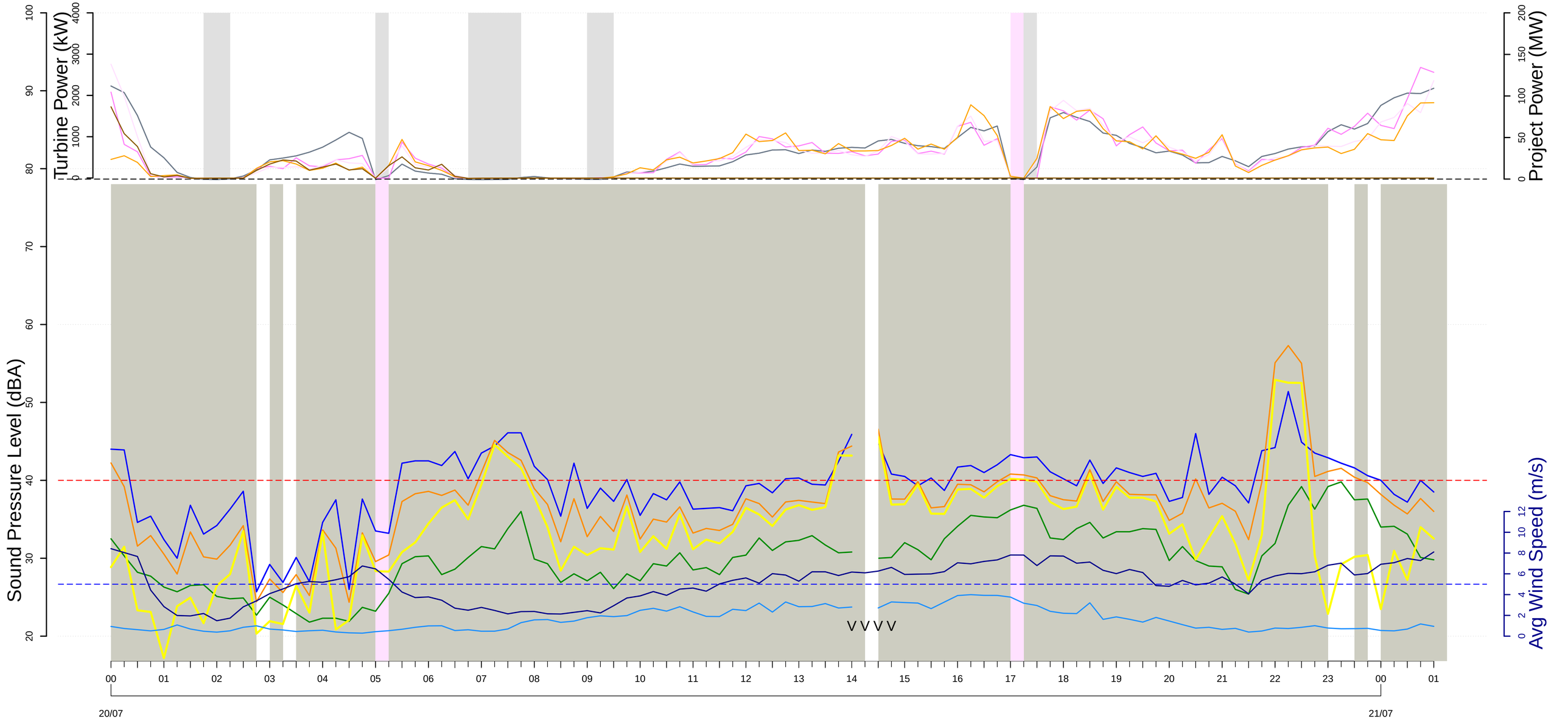
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

Project Power (MW)

REC−121 (Jenkins Residence)
Monday, 7 20, 2020



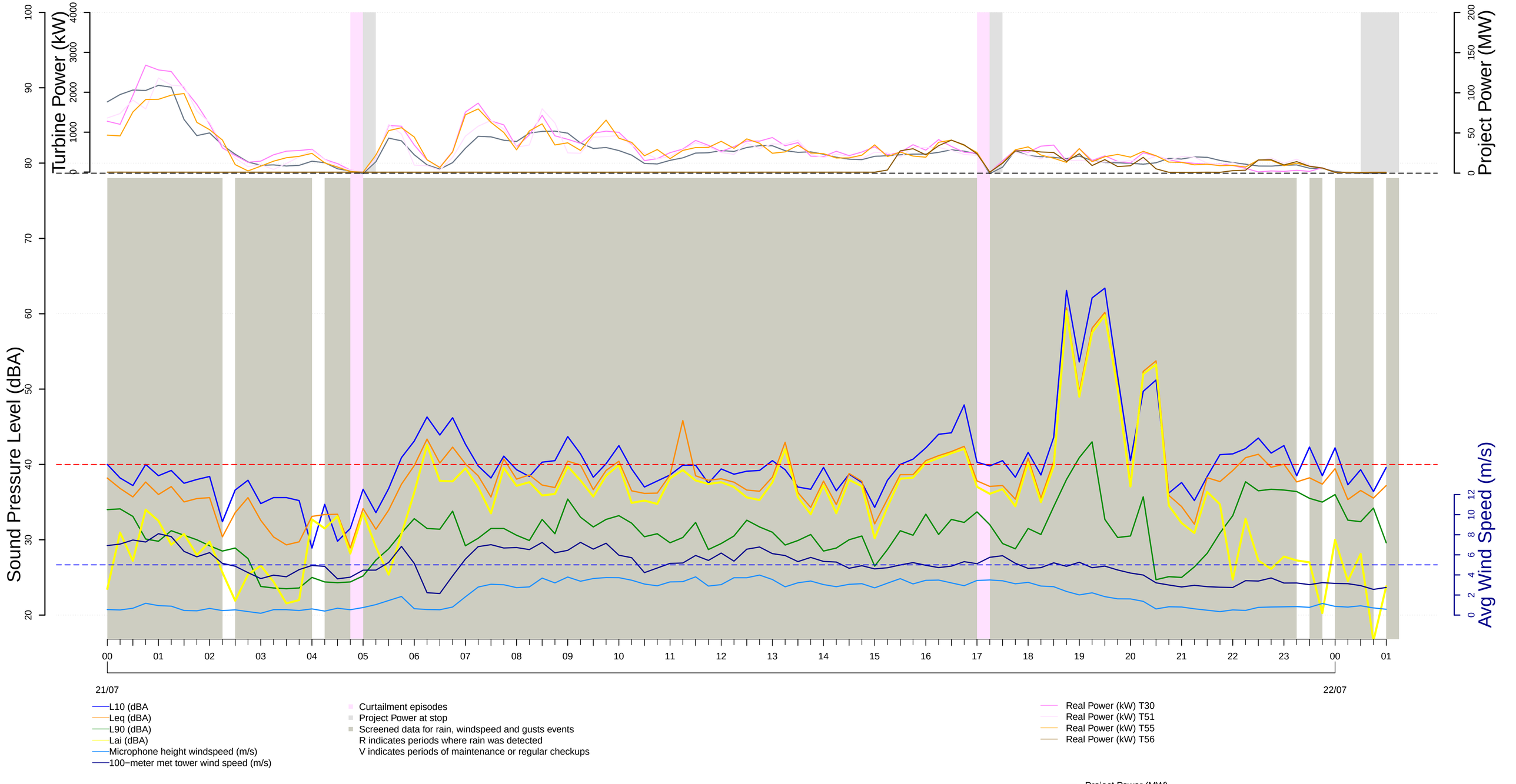
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

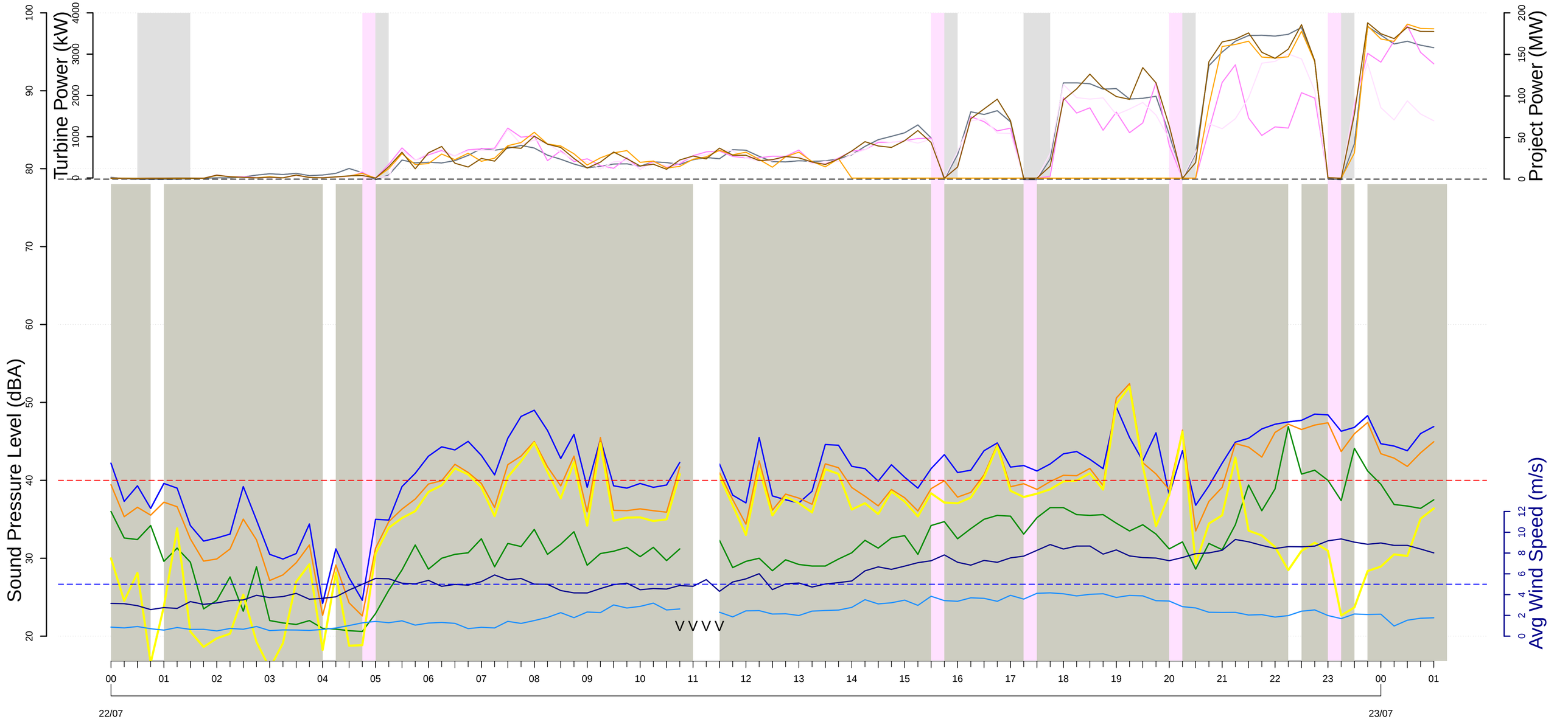
Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

Project Power (MW)

REC−121 (Jenkins Residence)
Tuesday, 7 21, 2020



REC−121 (Jenkins Residence)
Wednesday, 7 22, 2020

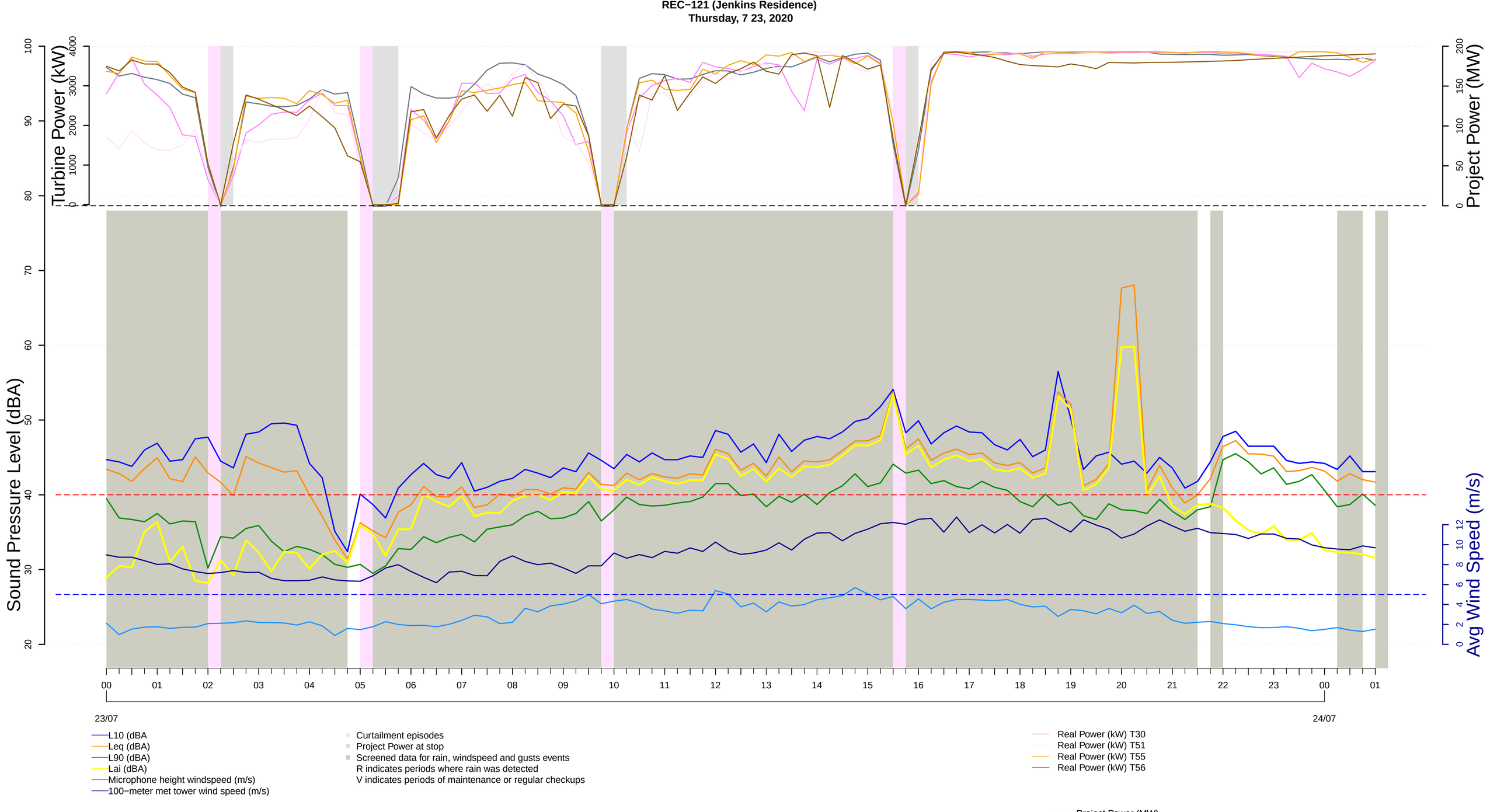


L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

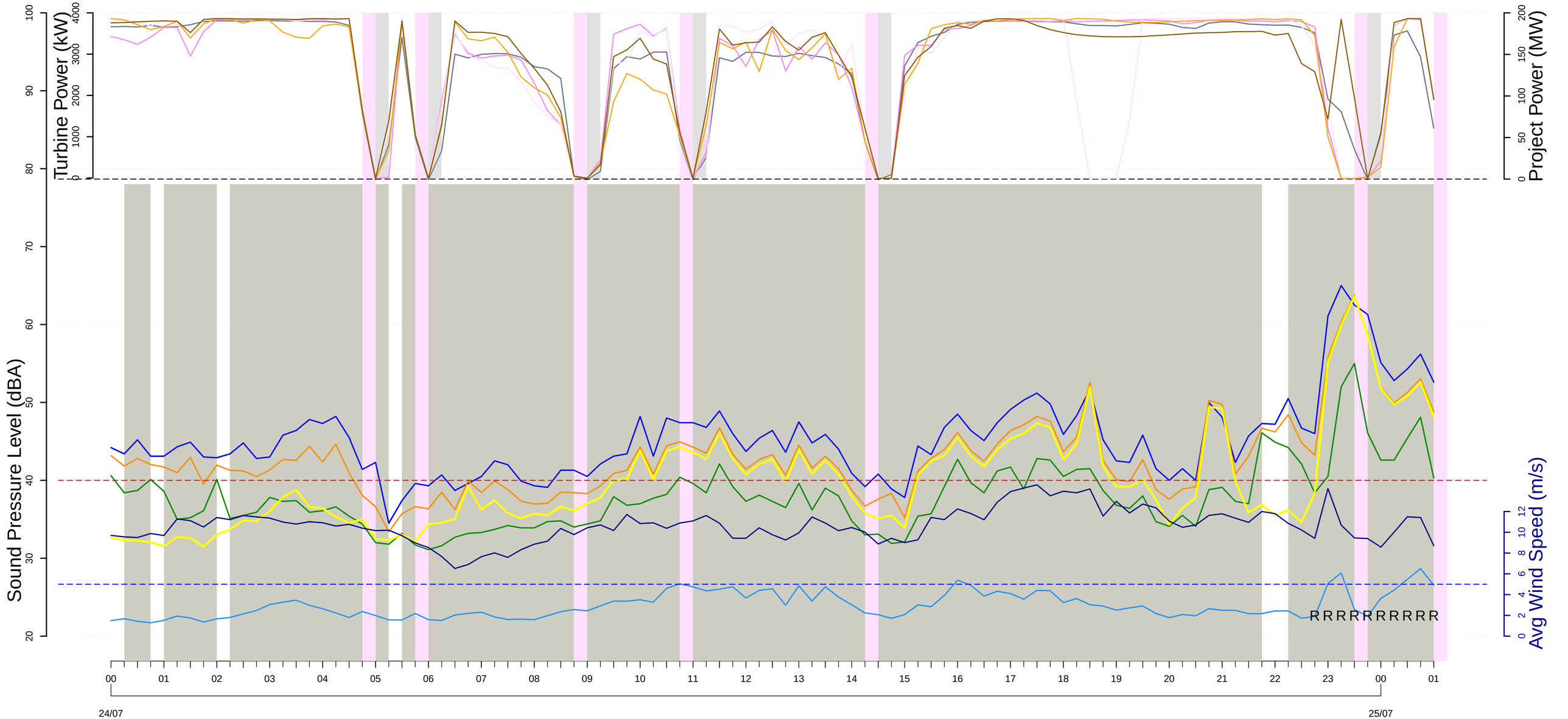
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

Project Power (MW)


REC−121 (Jenkins Residence)
Thursday, 7 23, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
23/07
24/07
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups
Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56
Project Power (MW)

REC−121 (Jenkins Residence)
Friday, 7 24, 2020



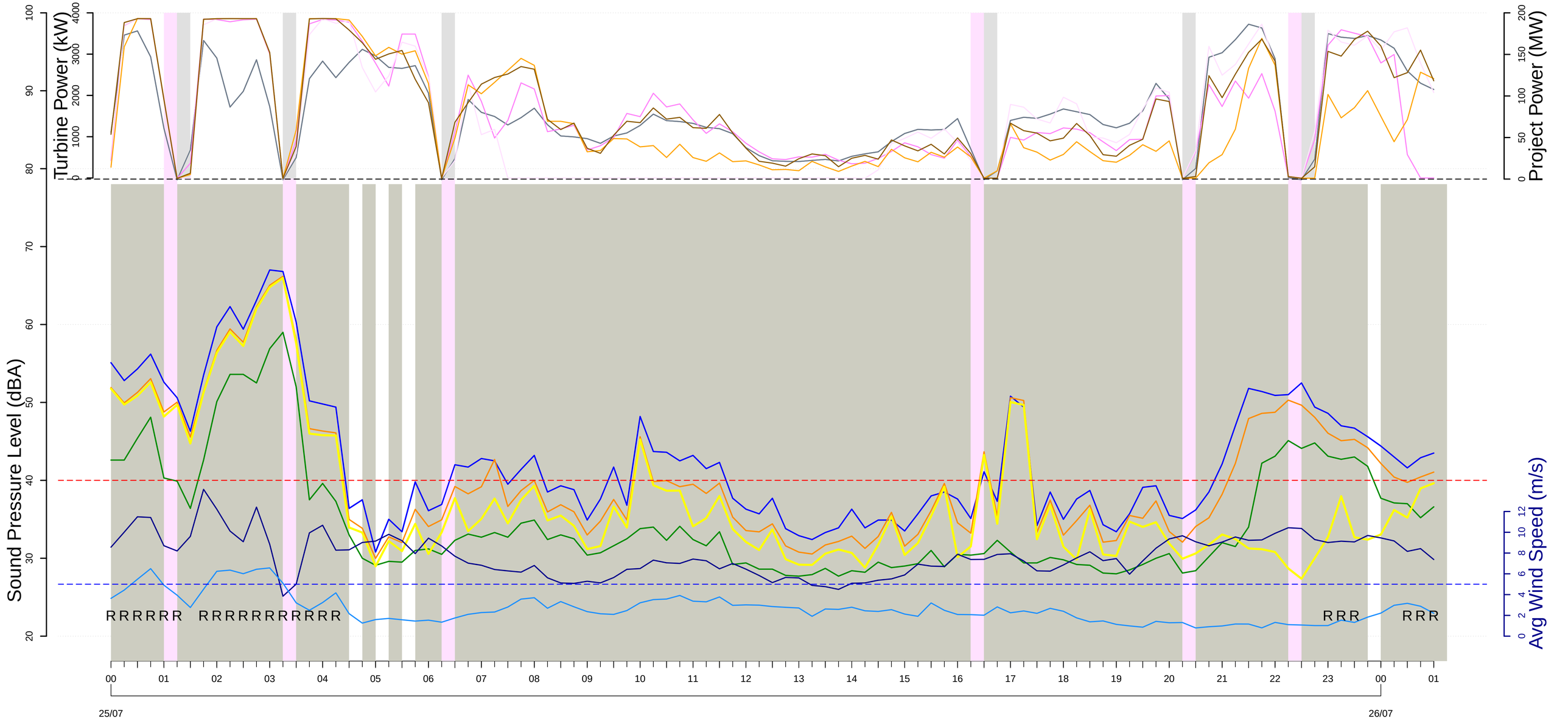
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

Project Power (MW)

REC−121 (Jenkins Residence)
Saturday, 7 25, 2020



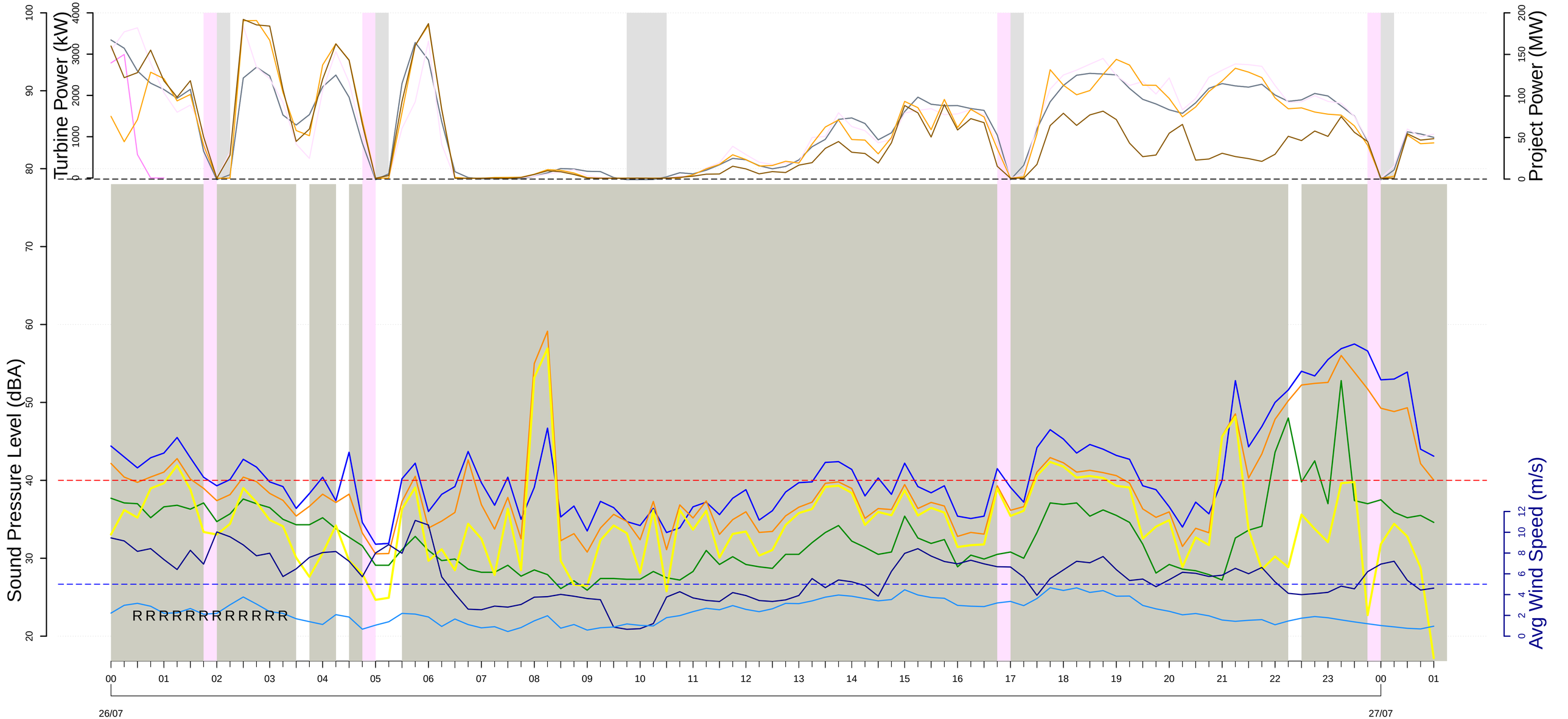
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

Project Power (MW)

REC−121 (Jenkins Residence)
Sunday, 7 26, 2020



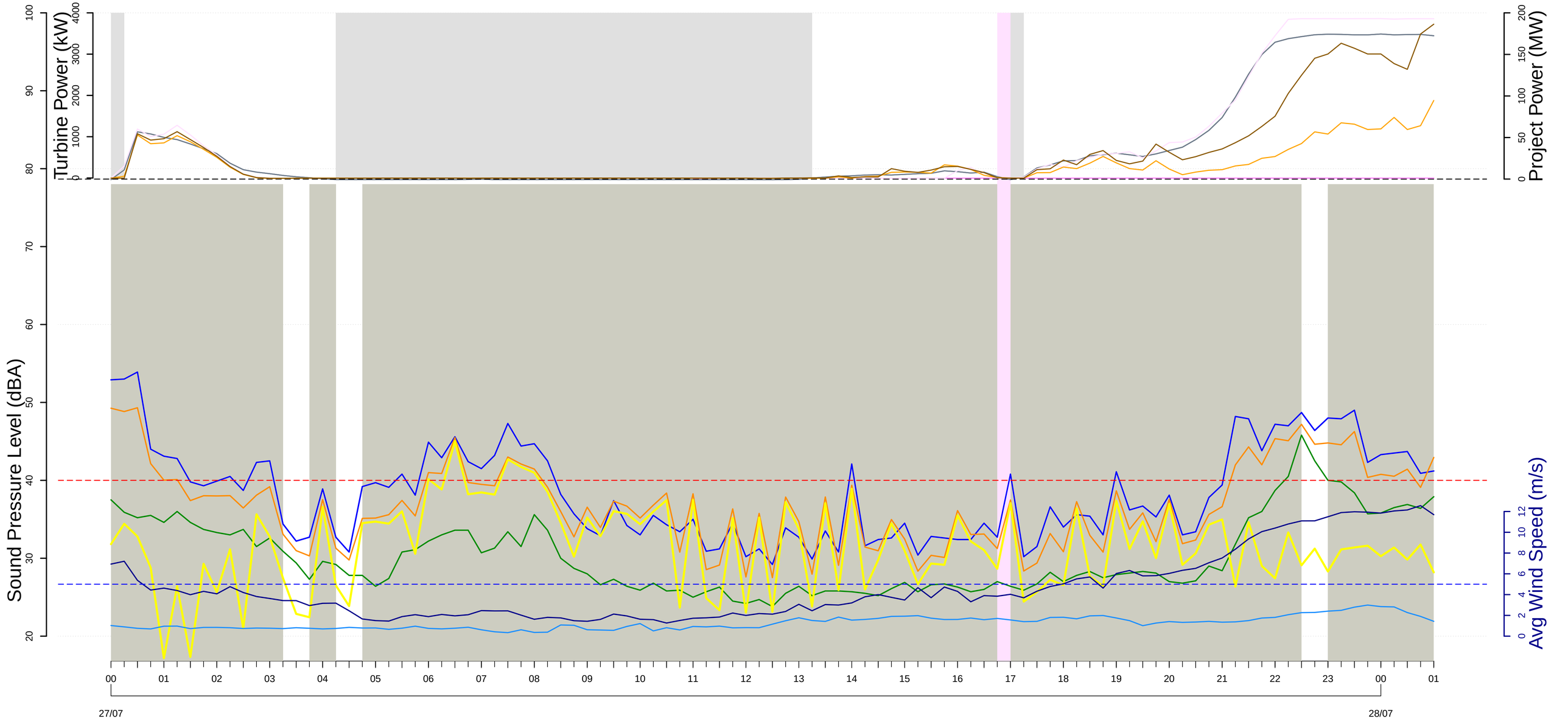
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

Project Power (MW)

REC−121 (Jenkins Residence)
Monday, 7 27, 2020



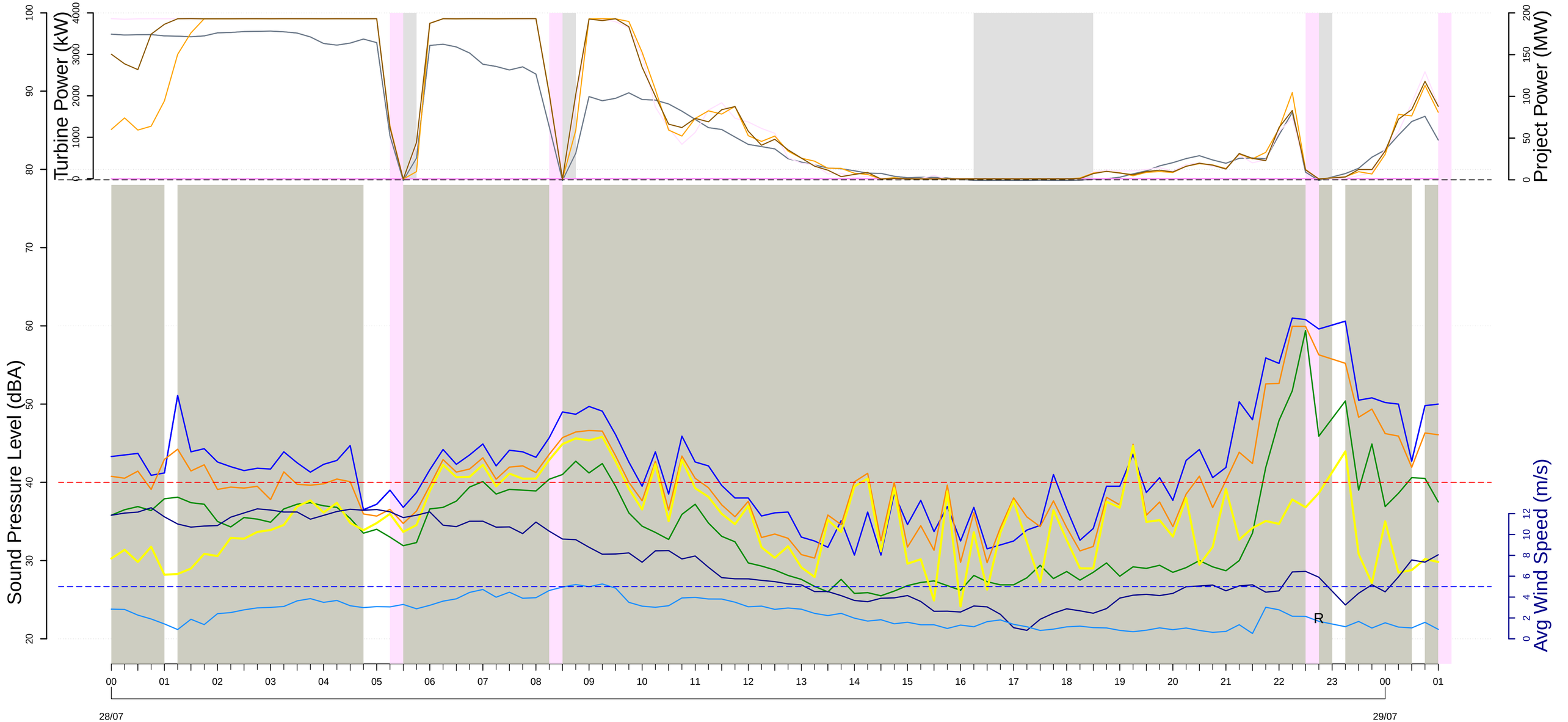
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

Project Power (MW)

REC−121 (Jenkins Residence)
Tuesday, 7 28, 2020



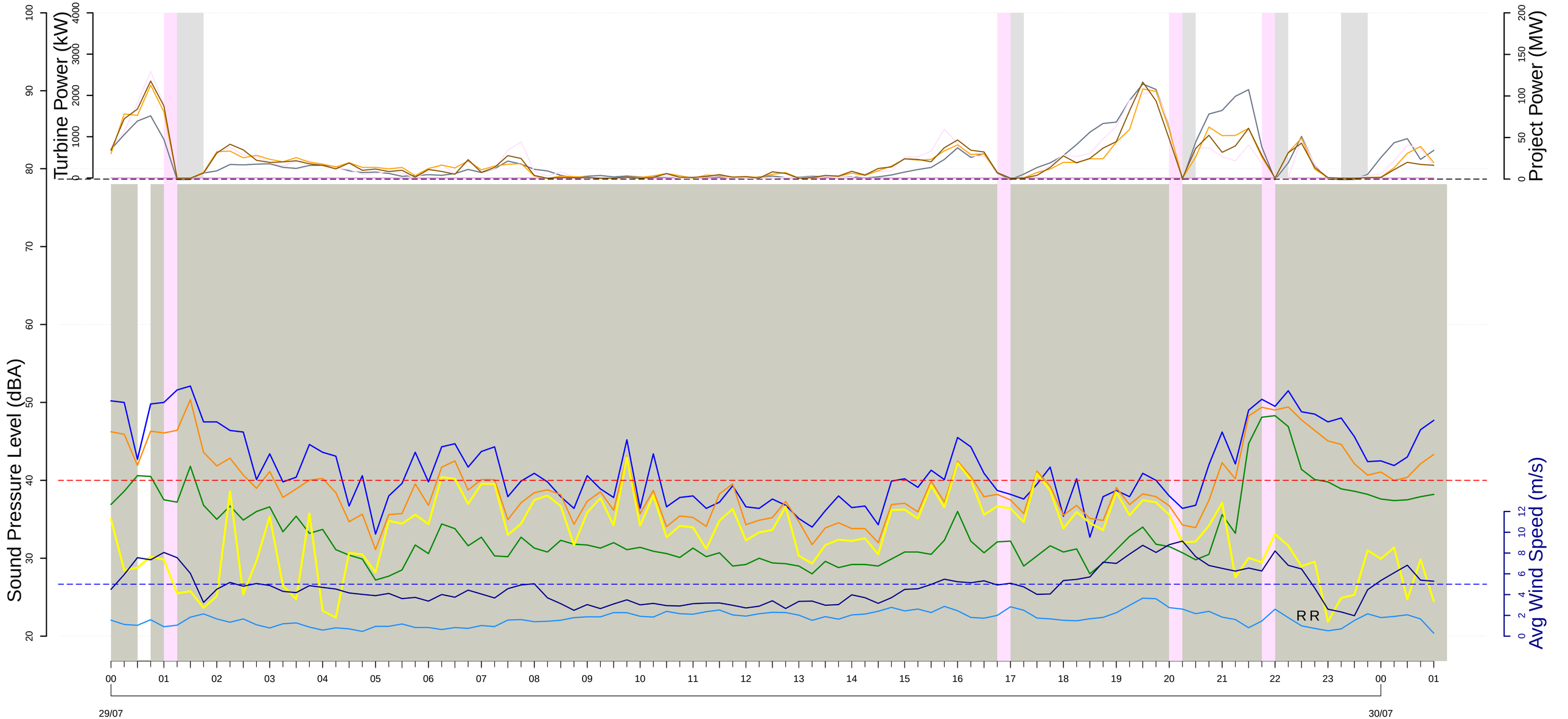
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

Project Power (MW)

REC−121 (Jenkins Residence)
Wednesday, 7 29, 2020

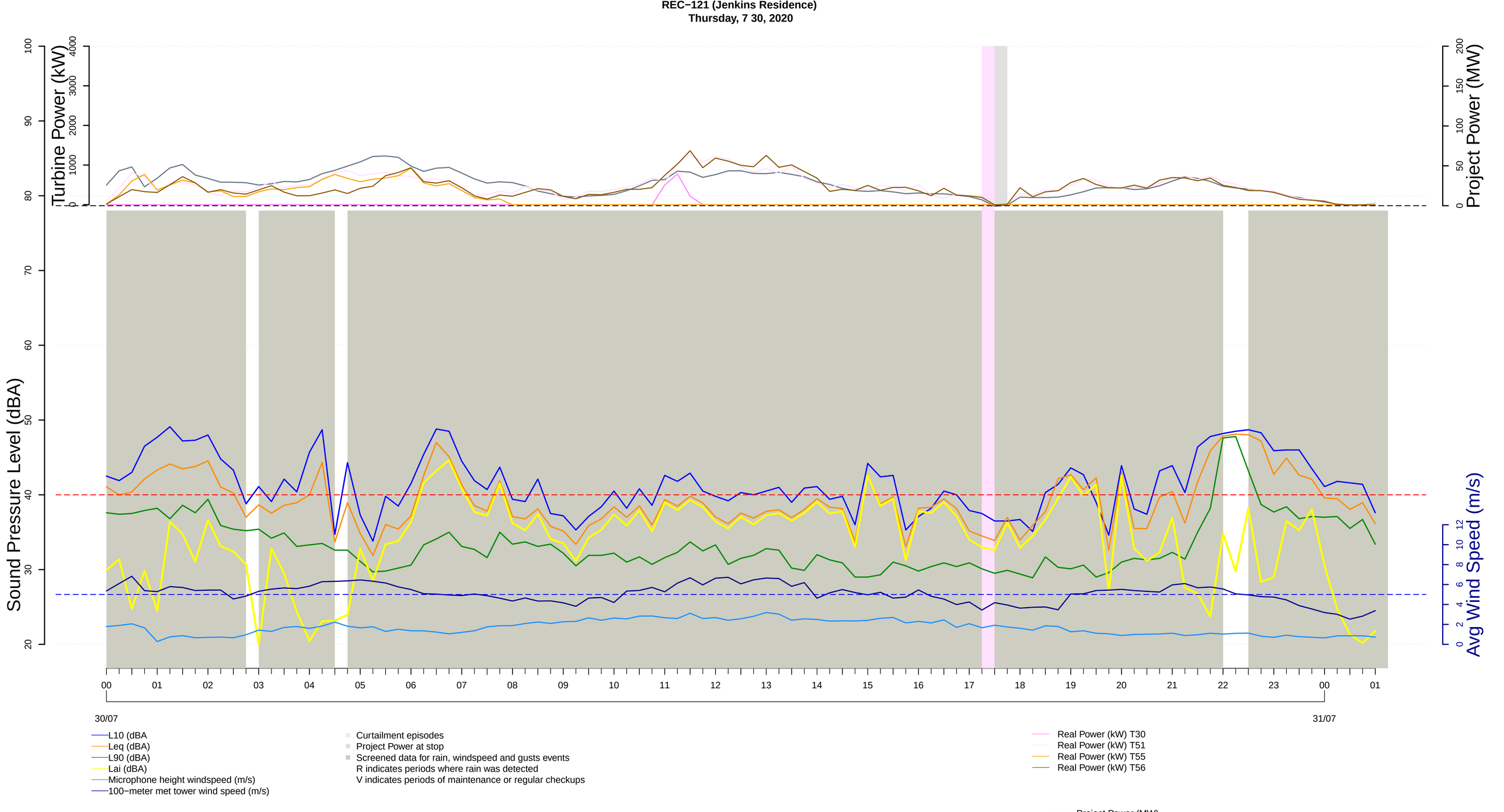


L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

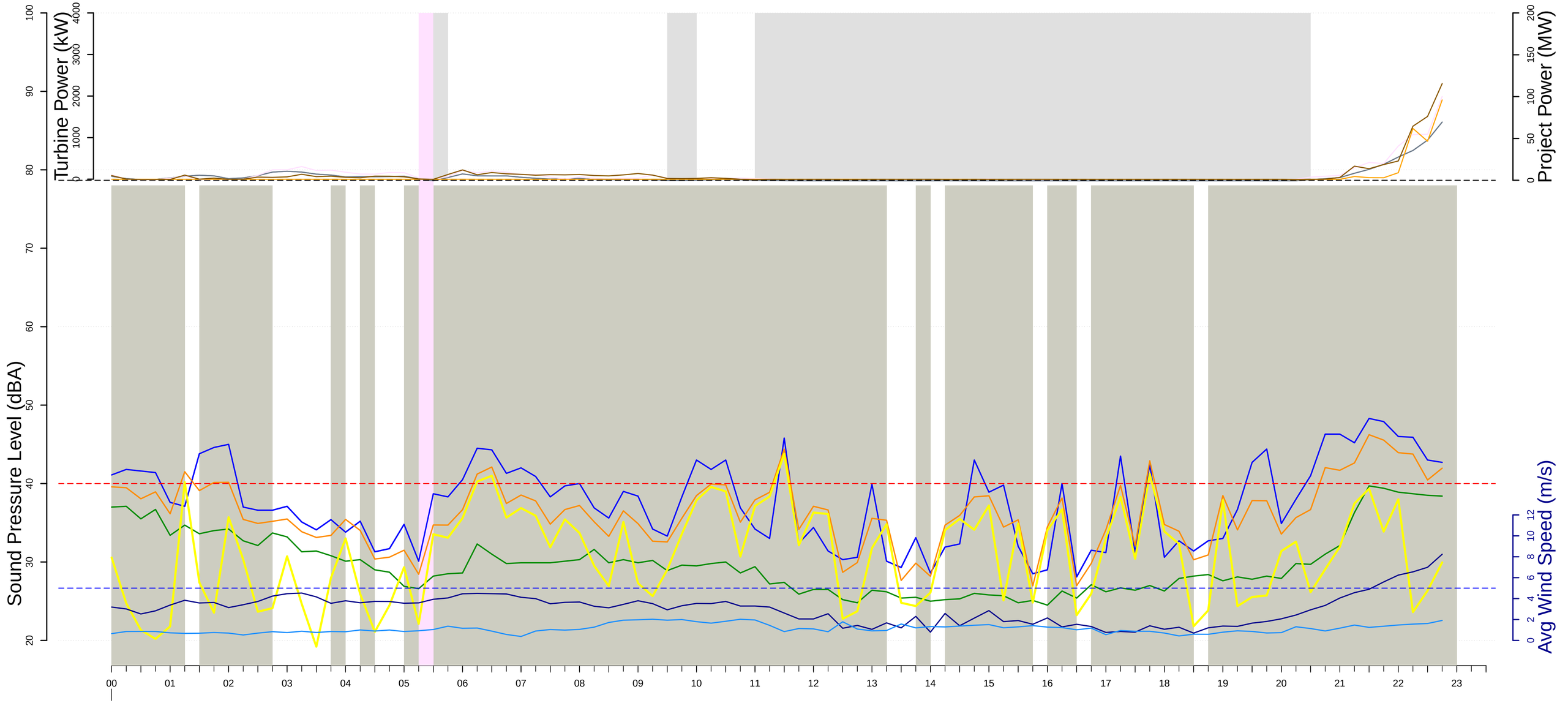
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

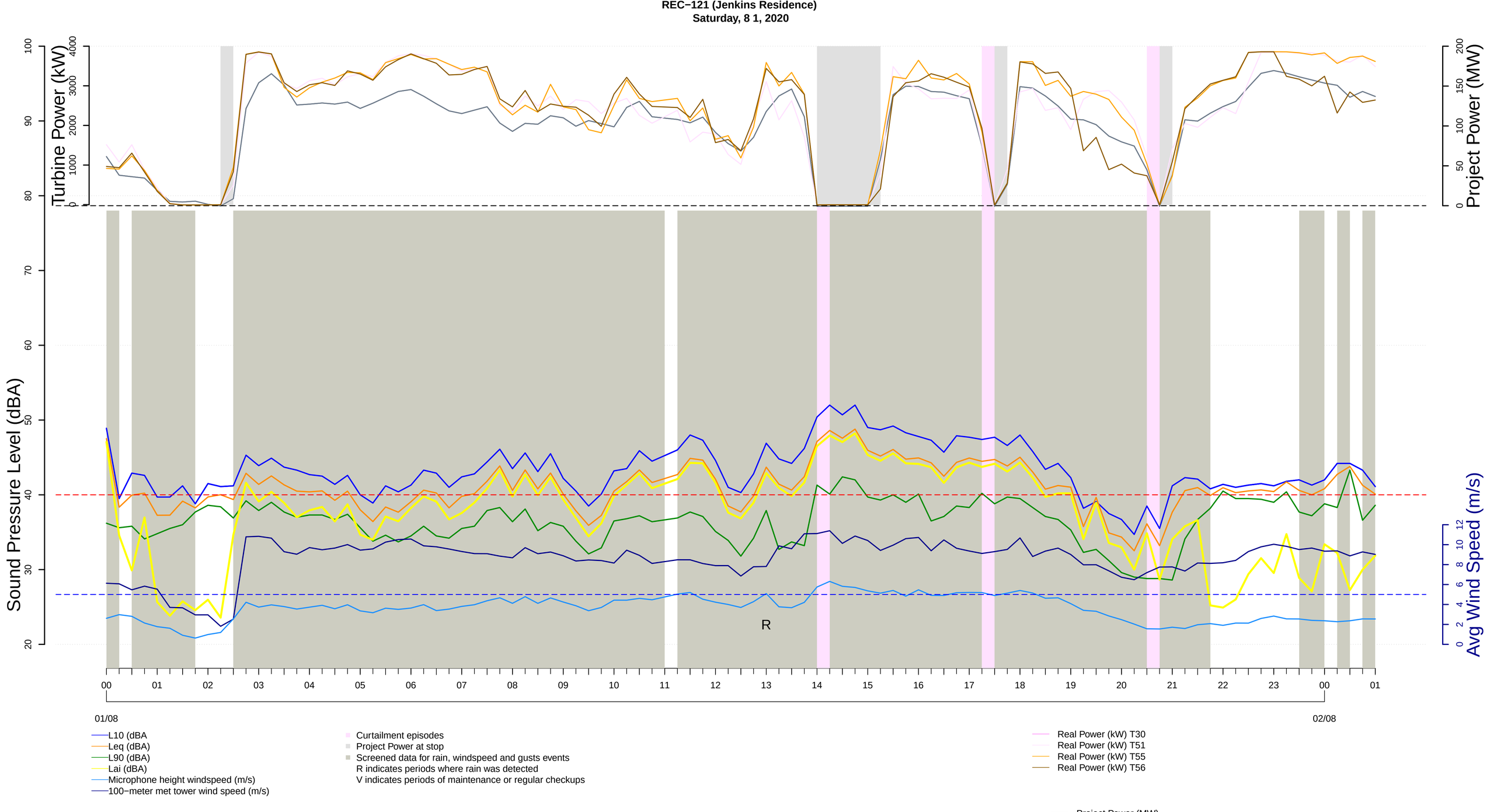
Project Power (MW)


REC−121 (Jenkins Residence)
Thursday, 7 30, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
30/07
31/07
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups
Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56
Project Power (MW)

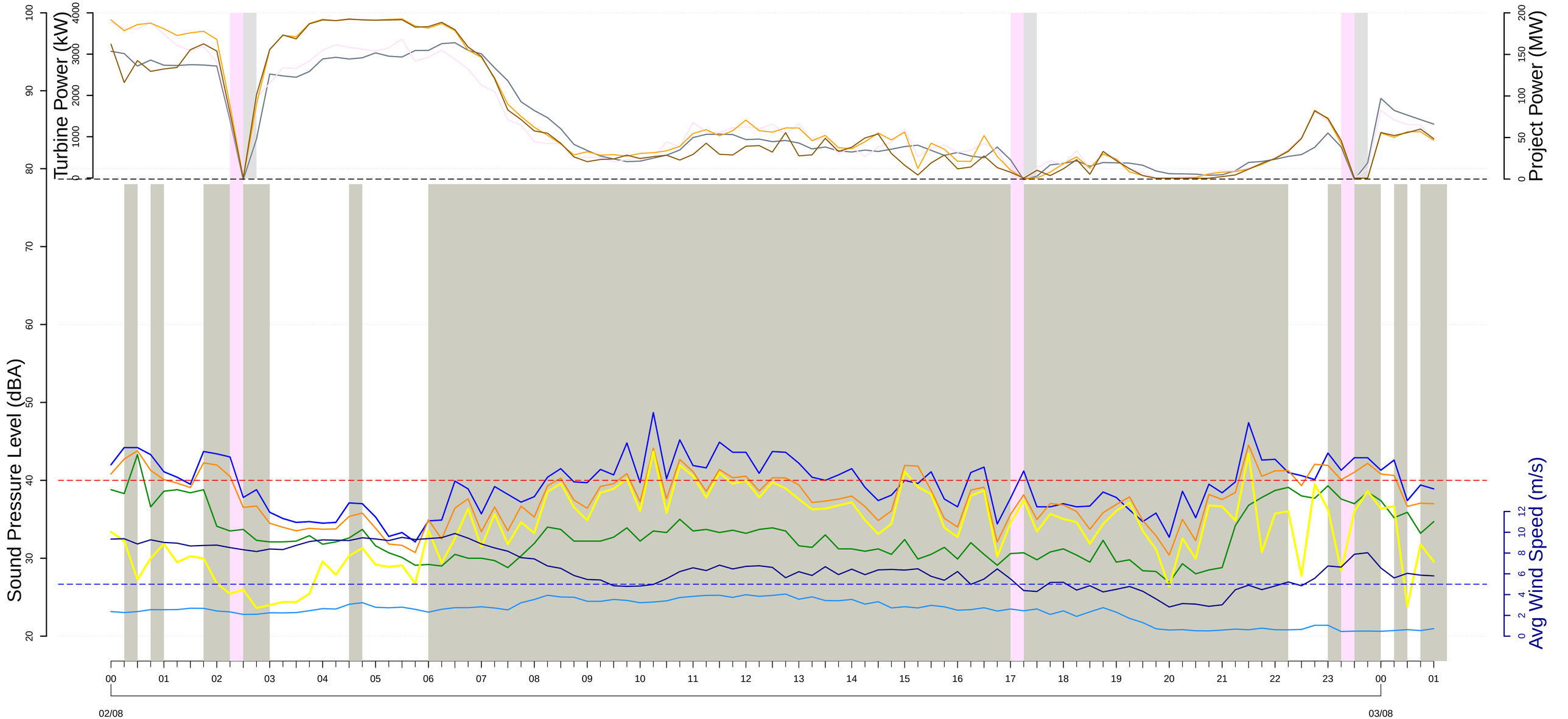
REC−121 (Jenkins Residence)
Friday, 7 31, 2020



- L10 (dBA
- Leq (dBA)
- L90 (dBA)
- Lai (dBA)
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
  V indicates periods of maintenance or regular checkups
- Real Power (kW) T30
- Real Power (kW) T51
- Real Power (kW) T55
- Real Power (kW) T56
- Project Power (MW)


REC−121 (Jenkins Residence)
Saturday, 8 1, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
R
01/08
02/08
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups
Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56
Project Power (MW)

REC−121 (Jenkins Residence)
Sunday, 8 2, 2020



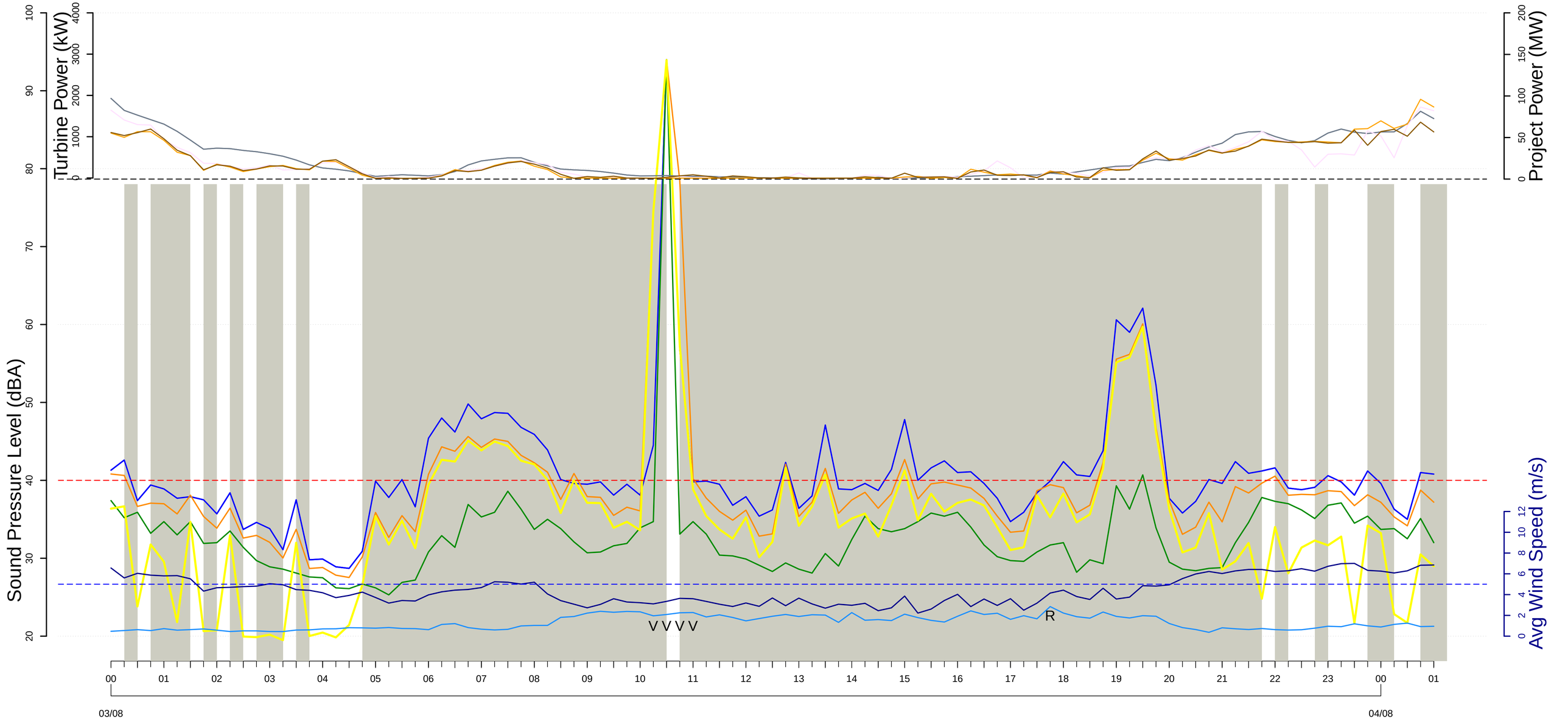
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

Project Power (MW)

REC−121 (Jenkins Residence)
Monday, 8 3, 2020



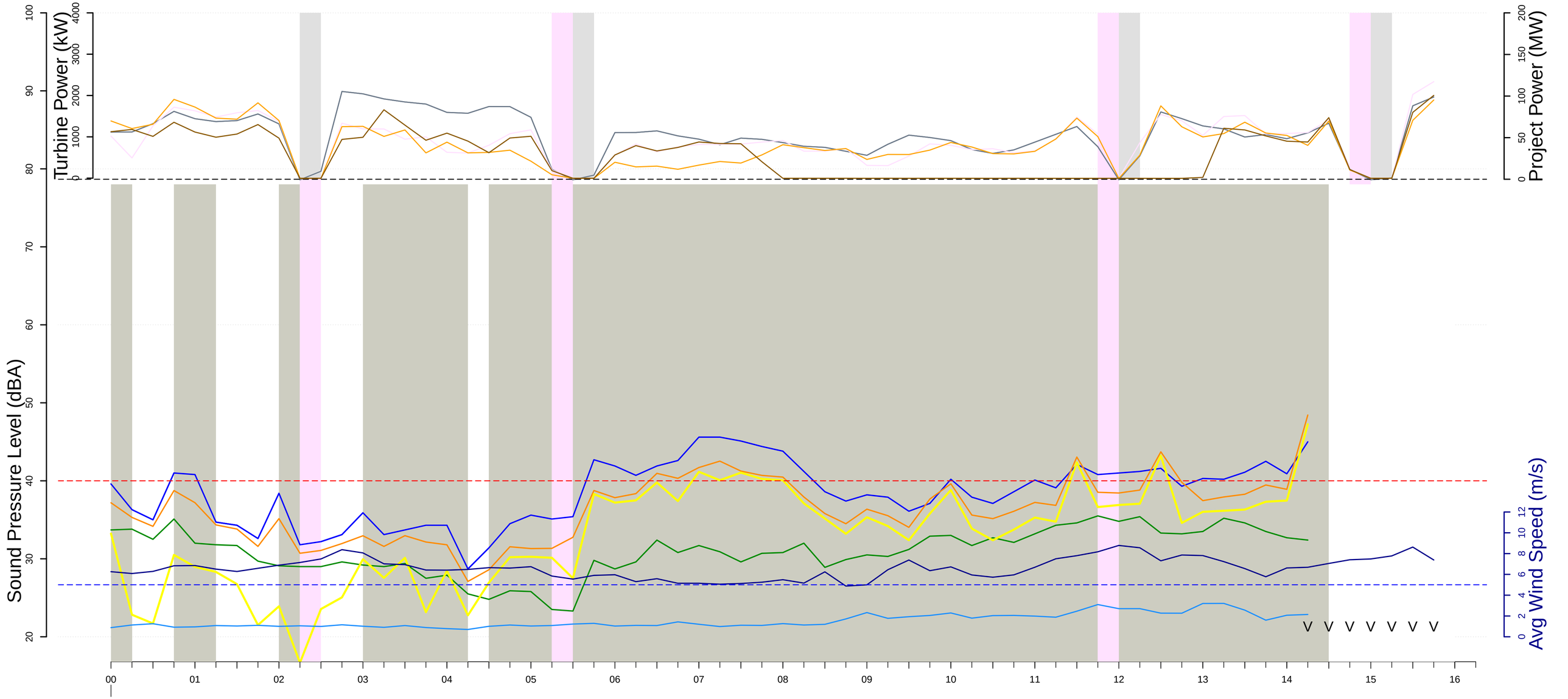
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

Project Power (MW)

REC−121 (Jenkins Residence)
Tuesday, 8 4, 2020



L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

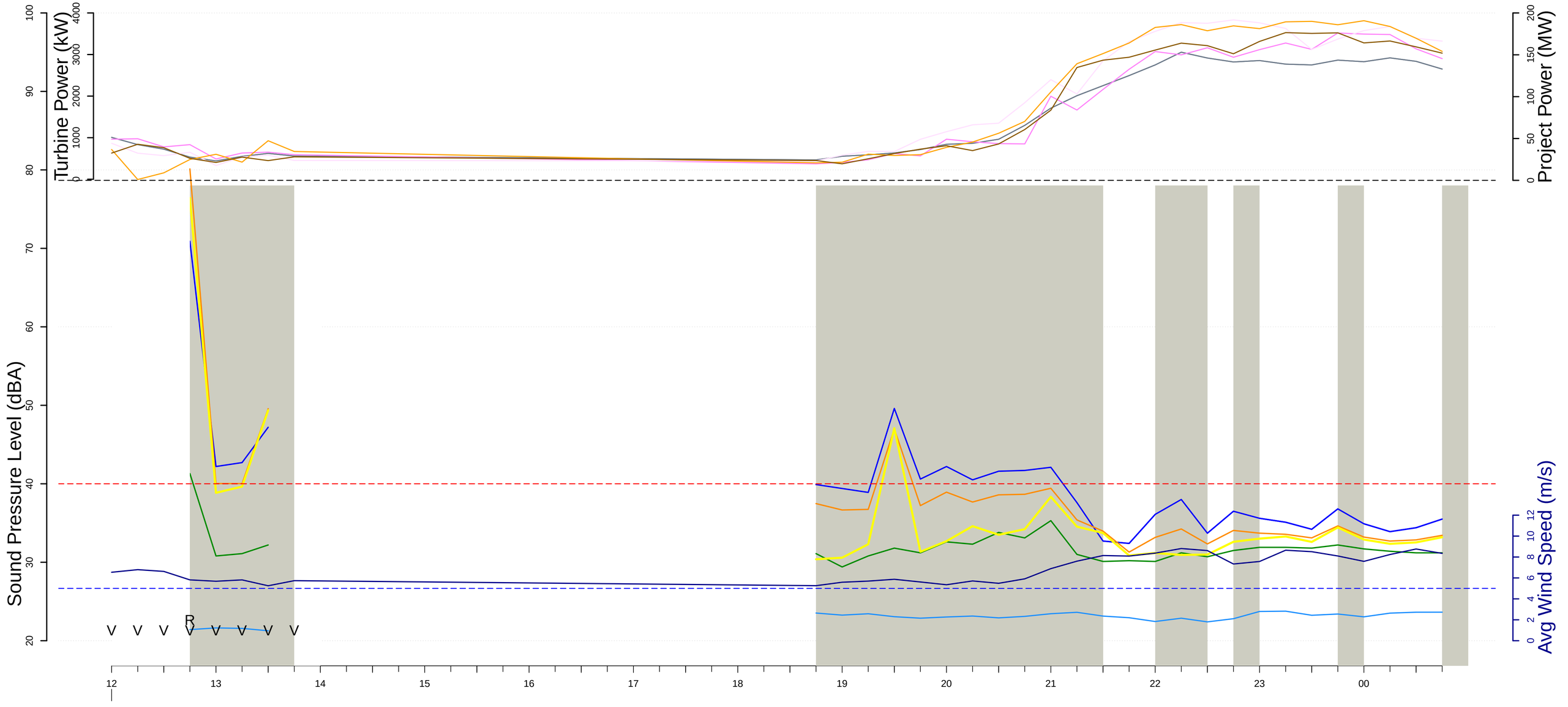
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

Project Power (MW)

REC-139 (Schoenfelder Residence)

REC−139 (Schoenfelder Residence)
Thursday, 7 16, 2020



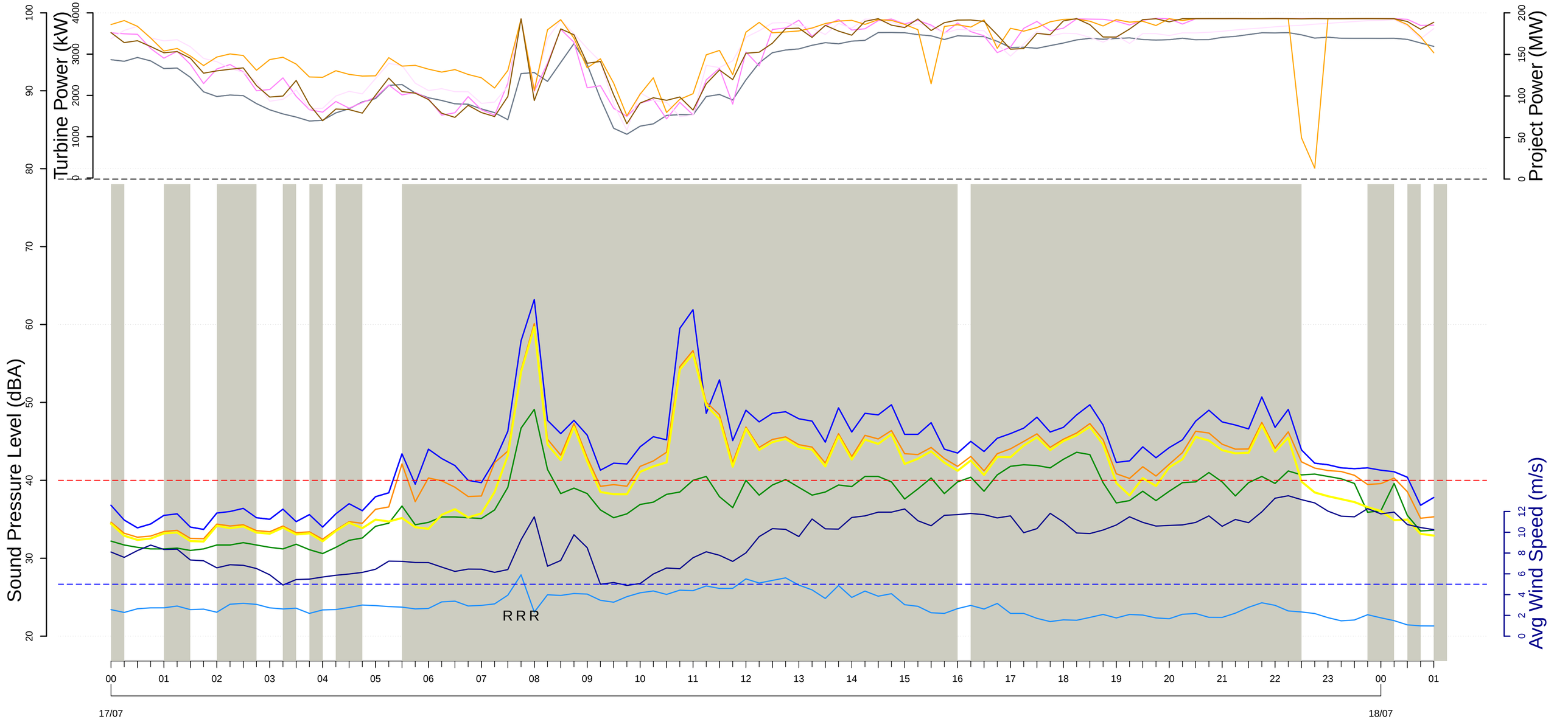
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39

Project Power (MW)

REC−139 (Schoenfelder Residence)
Friday, 7 17, 2020



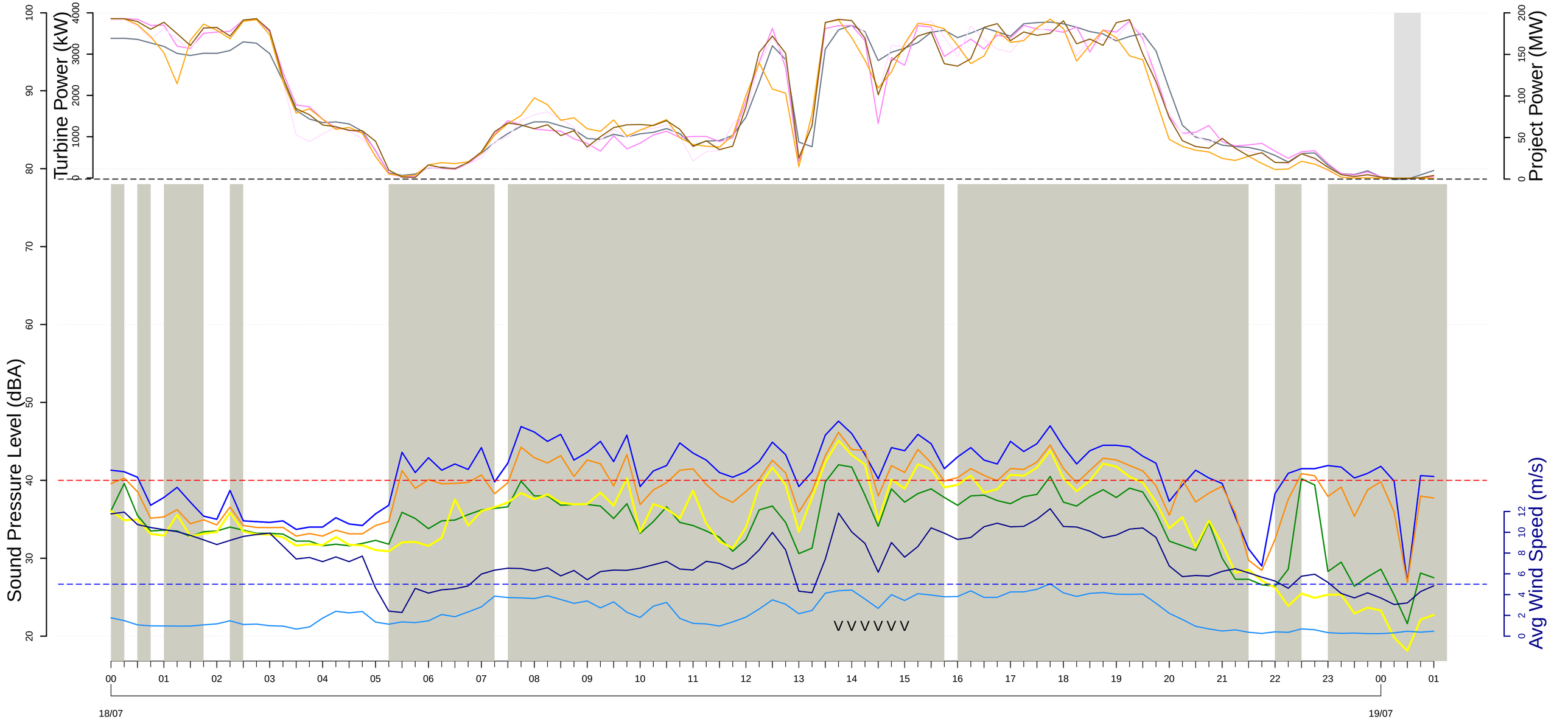
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39

Project Power (MW)

REC−139 (Schoenfelder Residence)
Saturday, 7 18, 2020



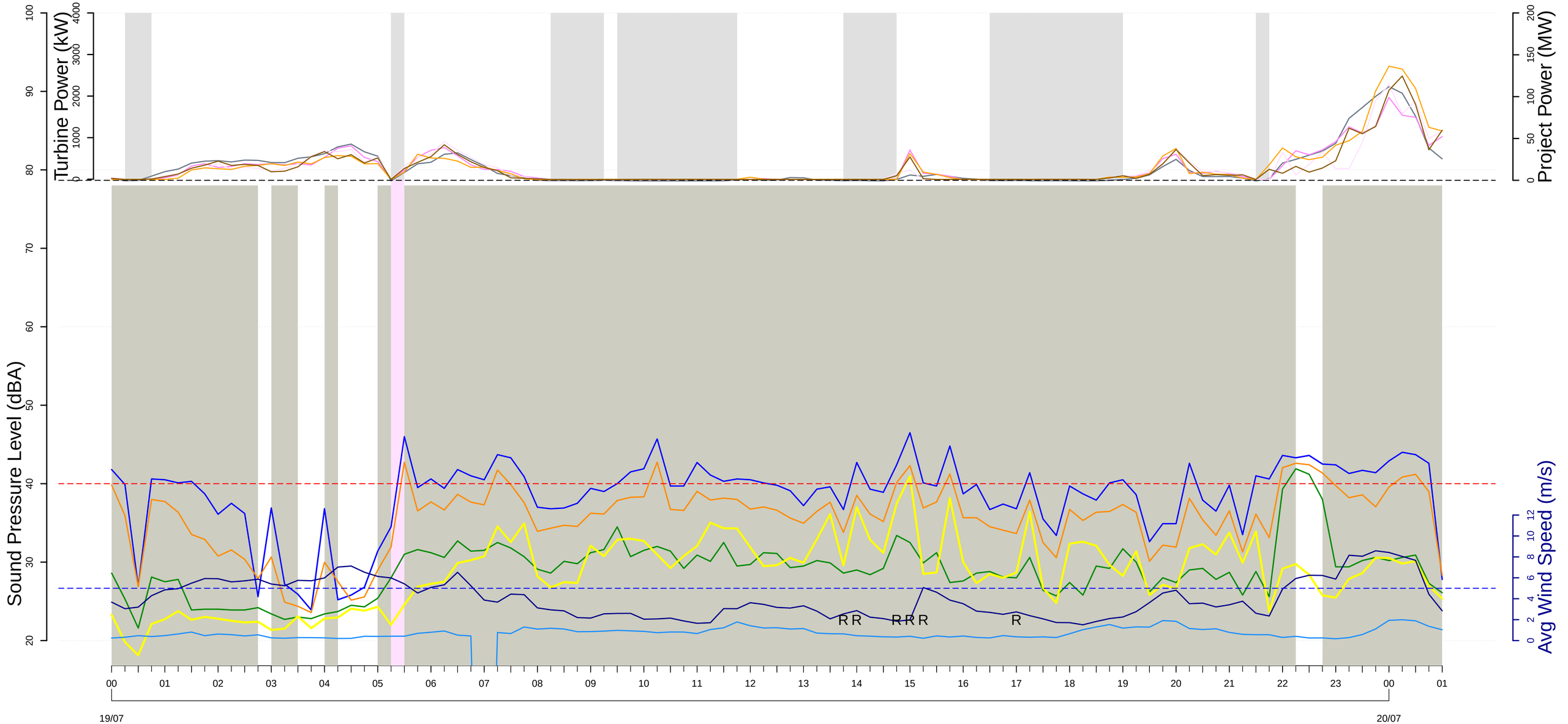
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39

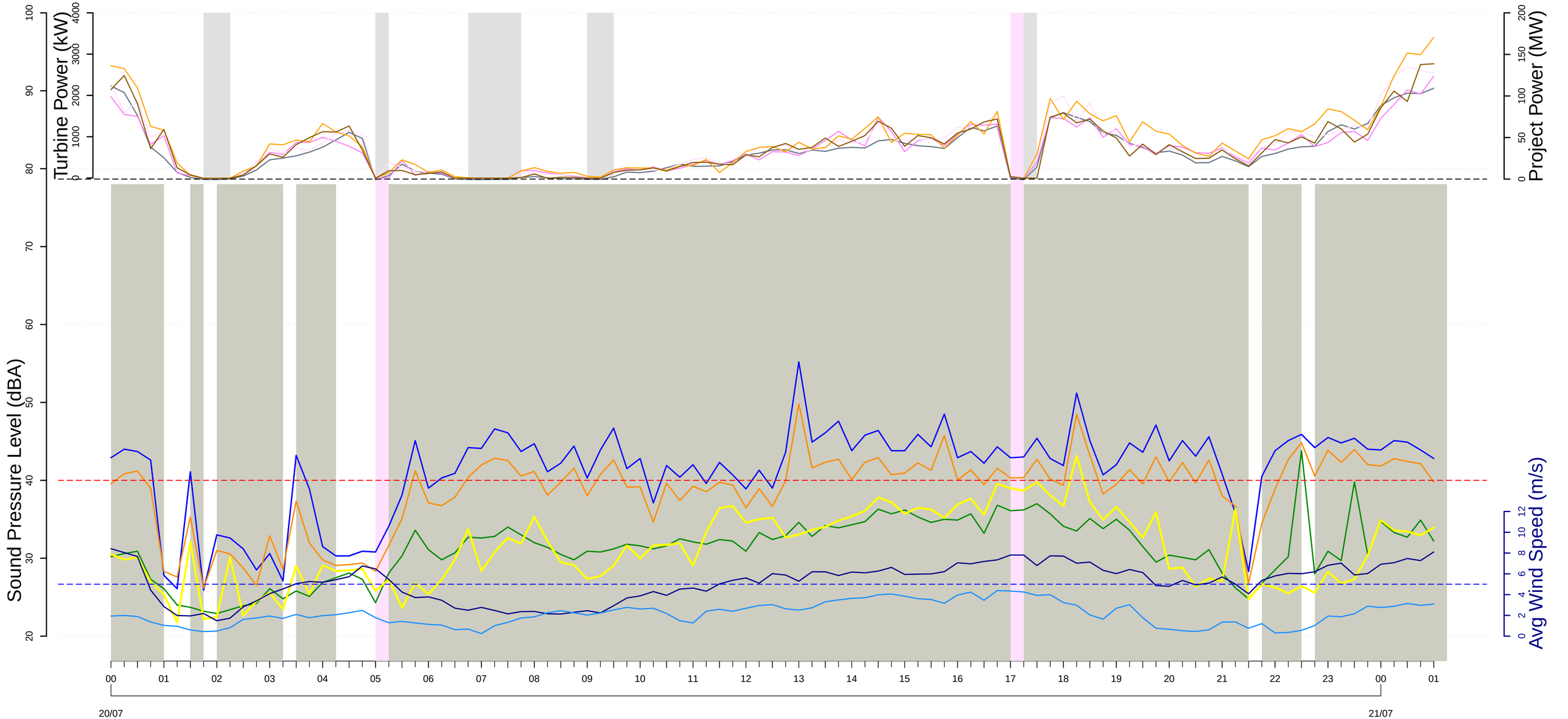
Project Power (MW)

REC−139 (Schoenfelder Residence)
Sunday, 7 19, 2020



- L10 (dBA
- Leq (dBA)
- L90 (dBA)
- Lai (dBA)
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
- R indicates periods where rain was detected
- V indicates periods of maintenance or regular checkups
- Real Power (kW) T23
- Real Power (kW) T58
- Real Power (kW) T48
- Real Power (kW) T39
- Project Power (MW)

REC−139 (Schoenfelder Residence)
Monday, 7 20, 2020



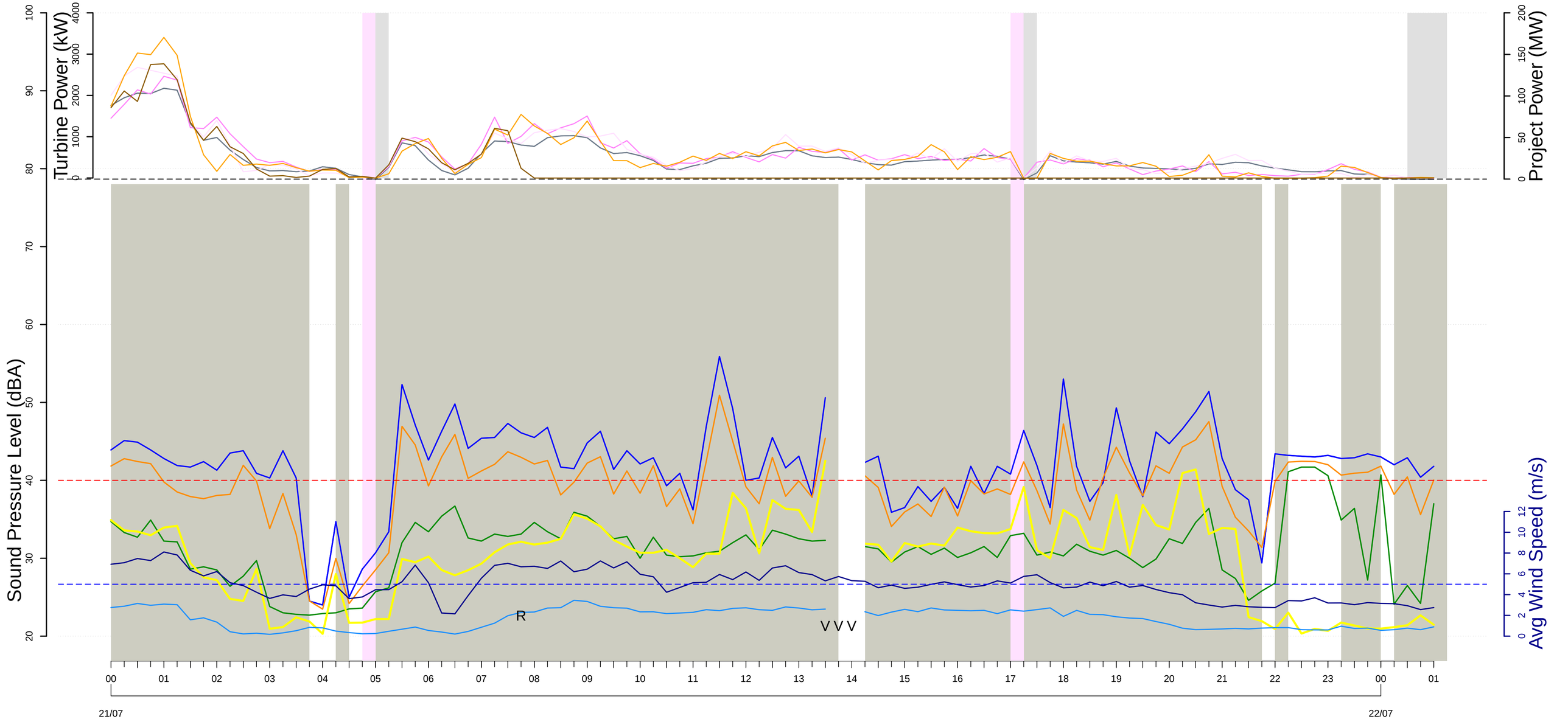
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39

Project Power (MW)

REC−139 (Schoenfelder Residence)
Tuesday, 7 21, 2020



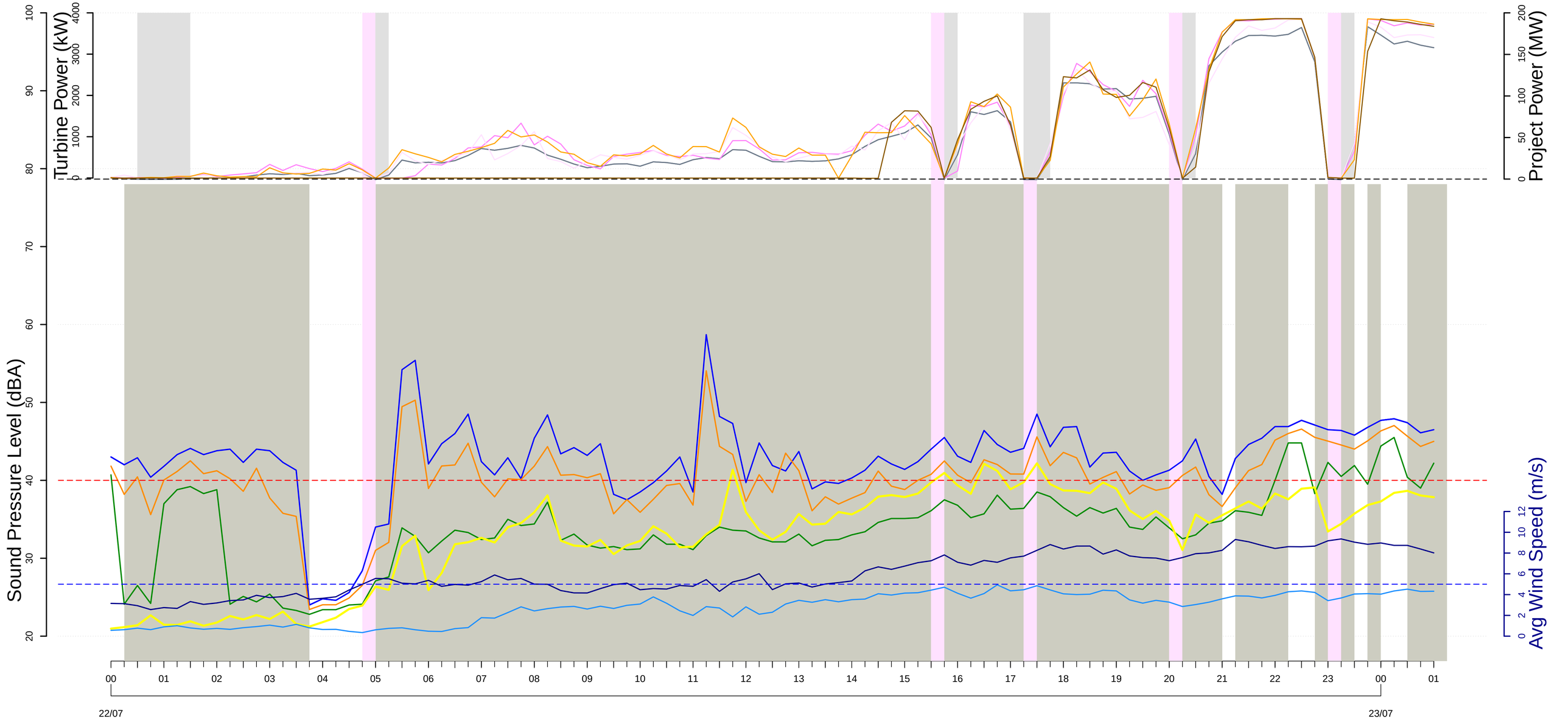
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39

Project Power (MW)

REC−139 (Schoenfelder Residence)
Wednesday, 7 22, 2020



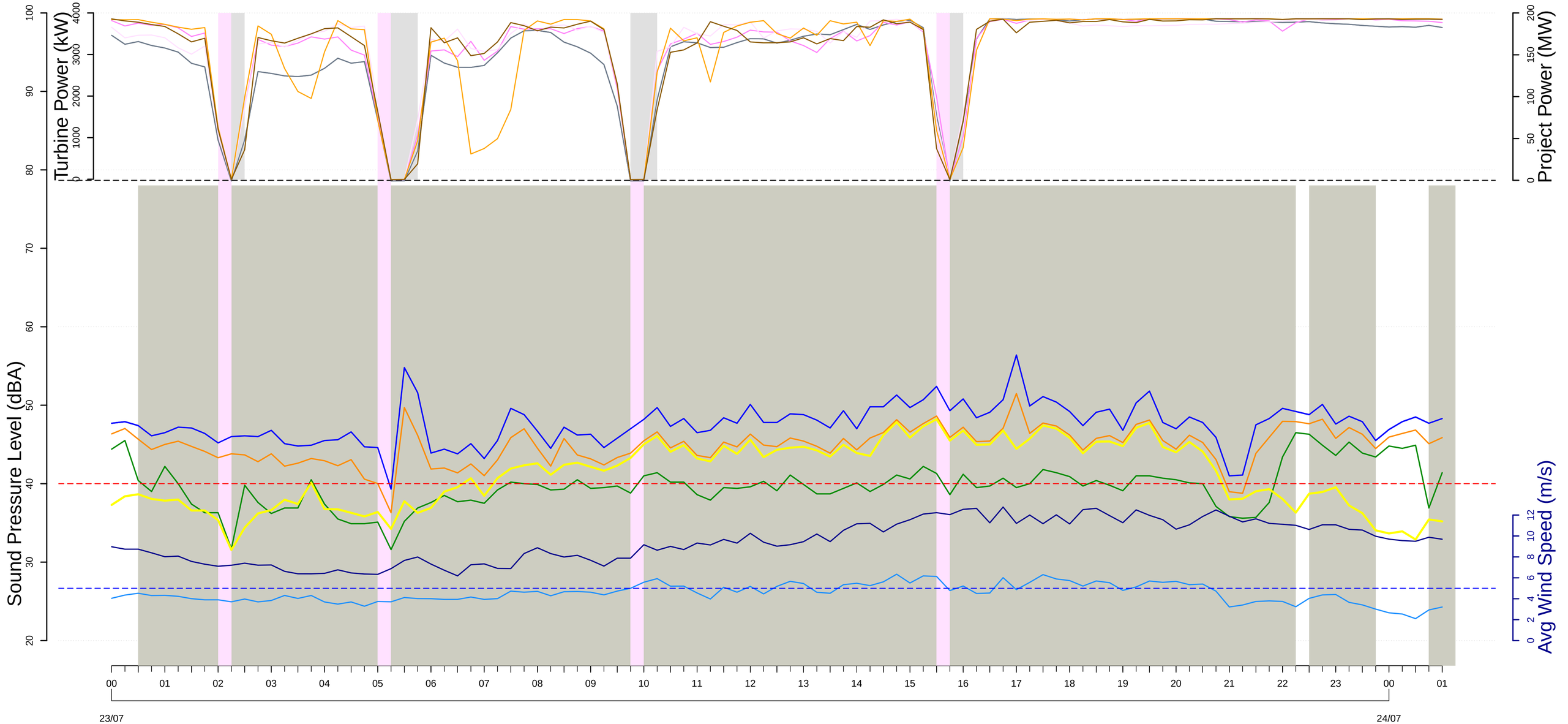
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39

Project Power (MW)

REC−139 (Schoenfelder Residence)
Thursday, 7 23, 2020



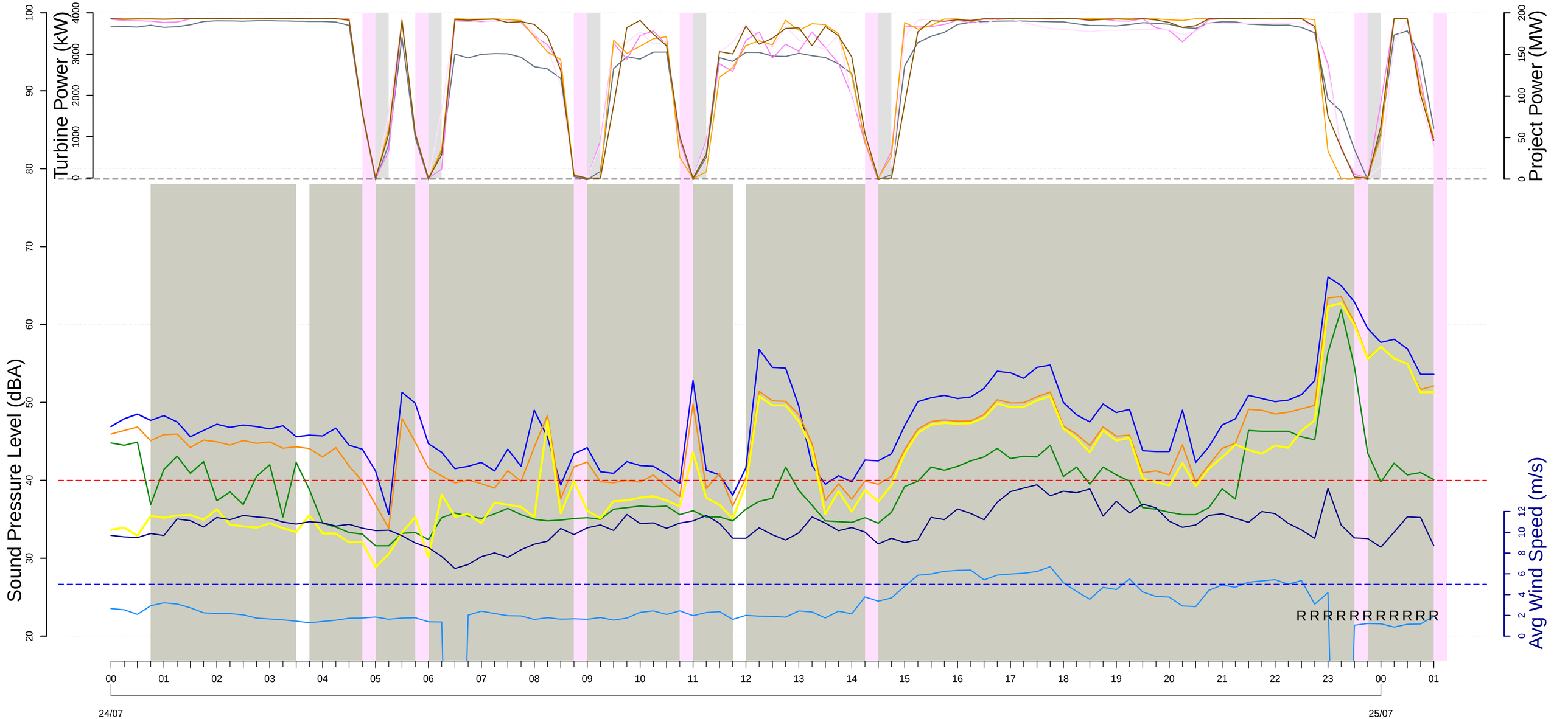
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39

Project Power (MW)

REC−139 (Schoenfelder Residence)
Friday, 7 24, 2020



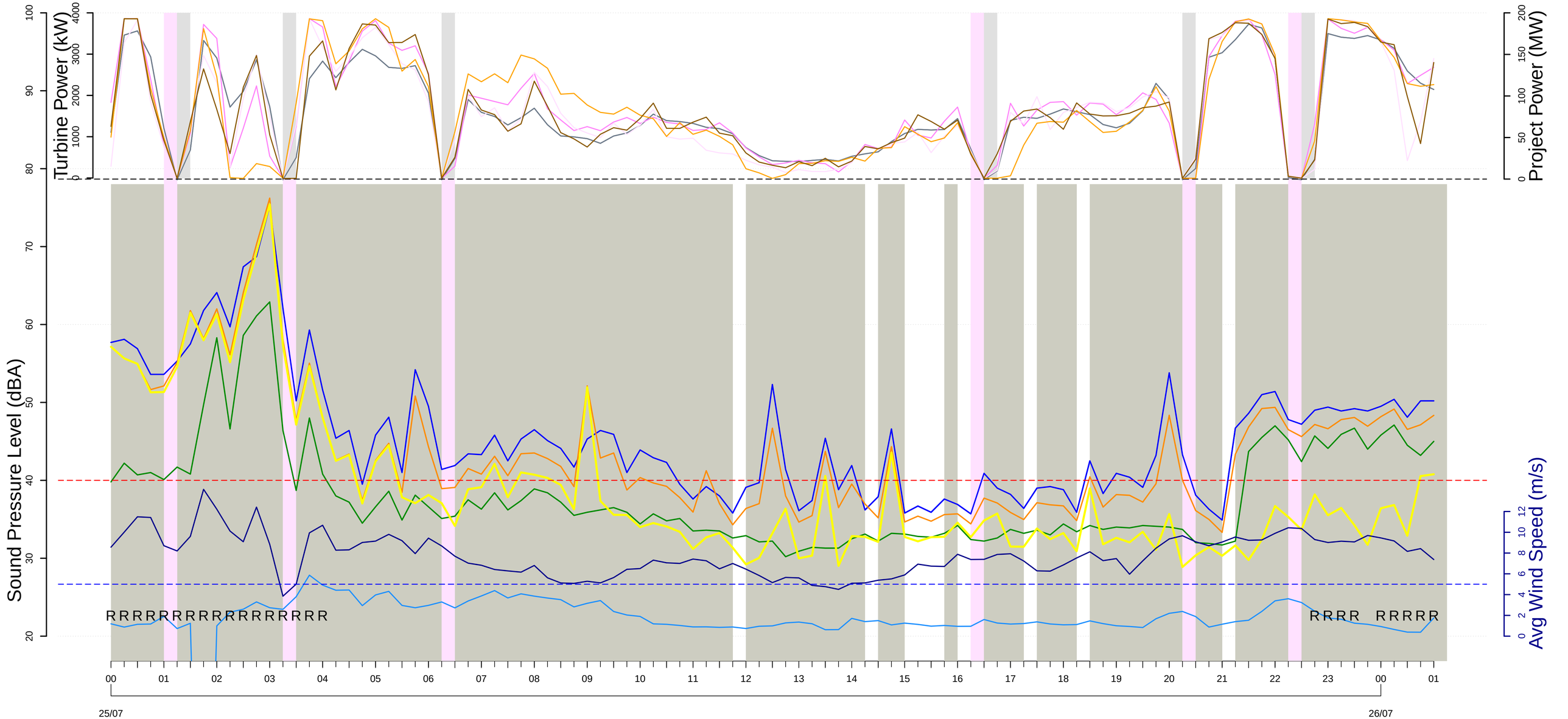
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39

Project Power (MW)

REC−139 (Schoenfelder Residence)
Saturday, 7 25, 2020



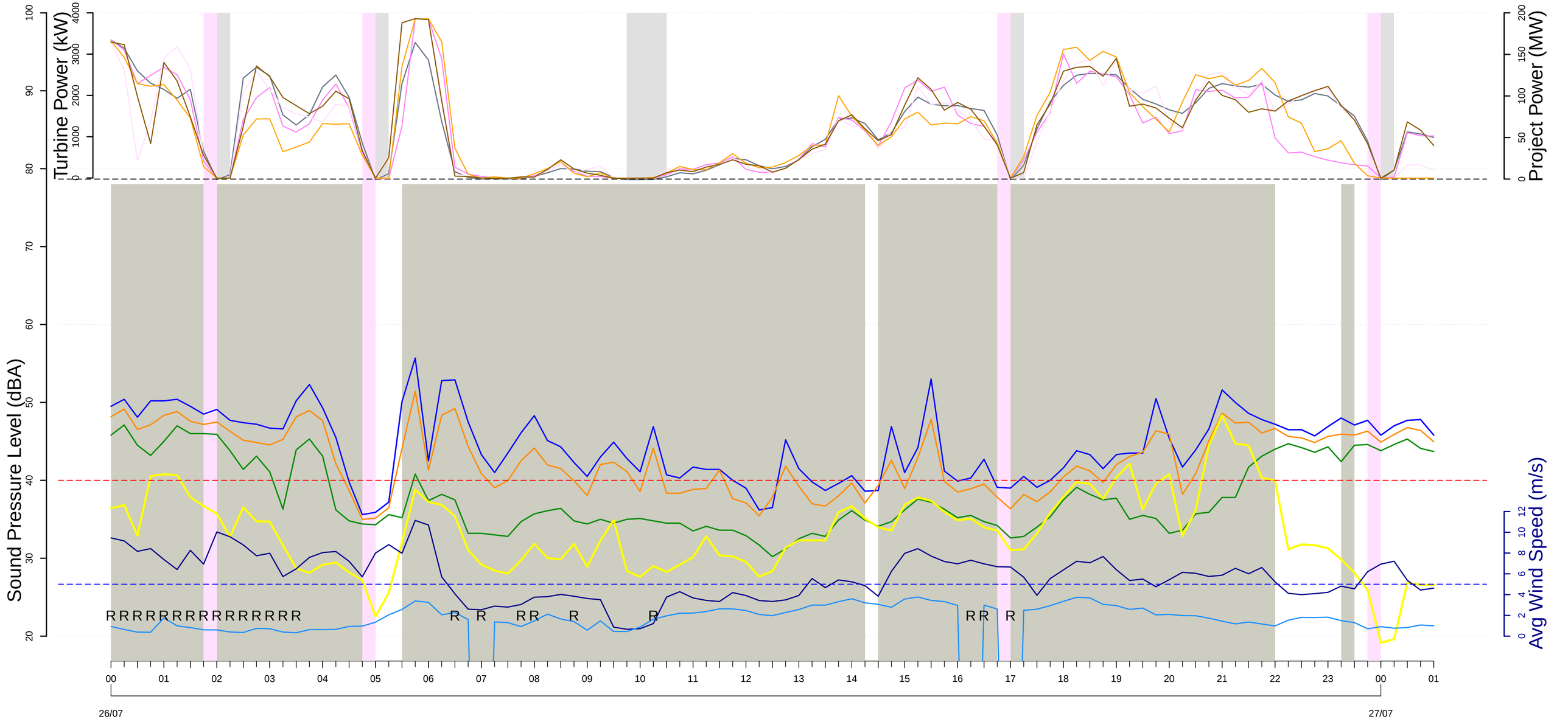
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39

Project Power (MW)

REC−139 (Schoenfelder Residence)
Sunday, 7 26, 2020



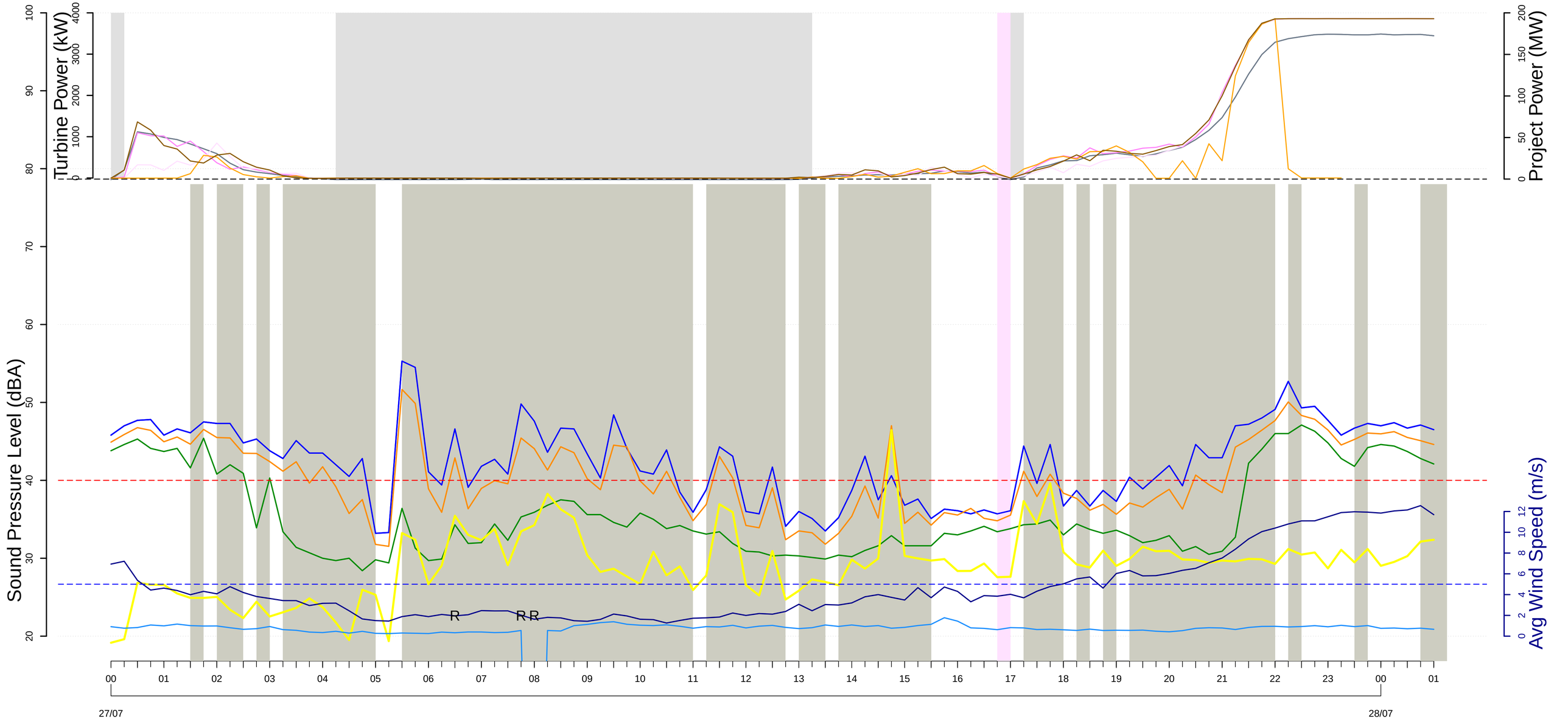
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39

Project Power (MW)

REC−139 (Schoenfelder Residence)
Monday, 7 27, 2020



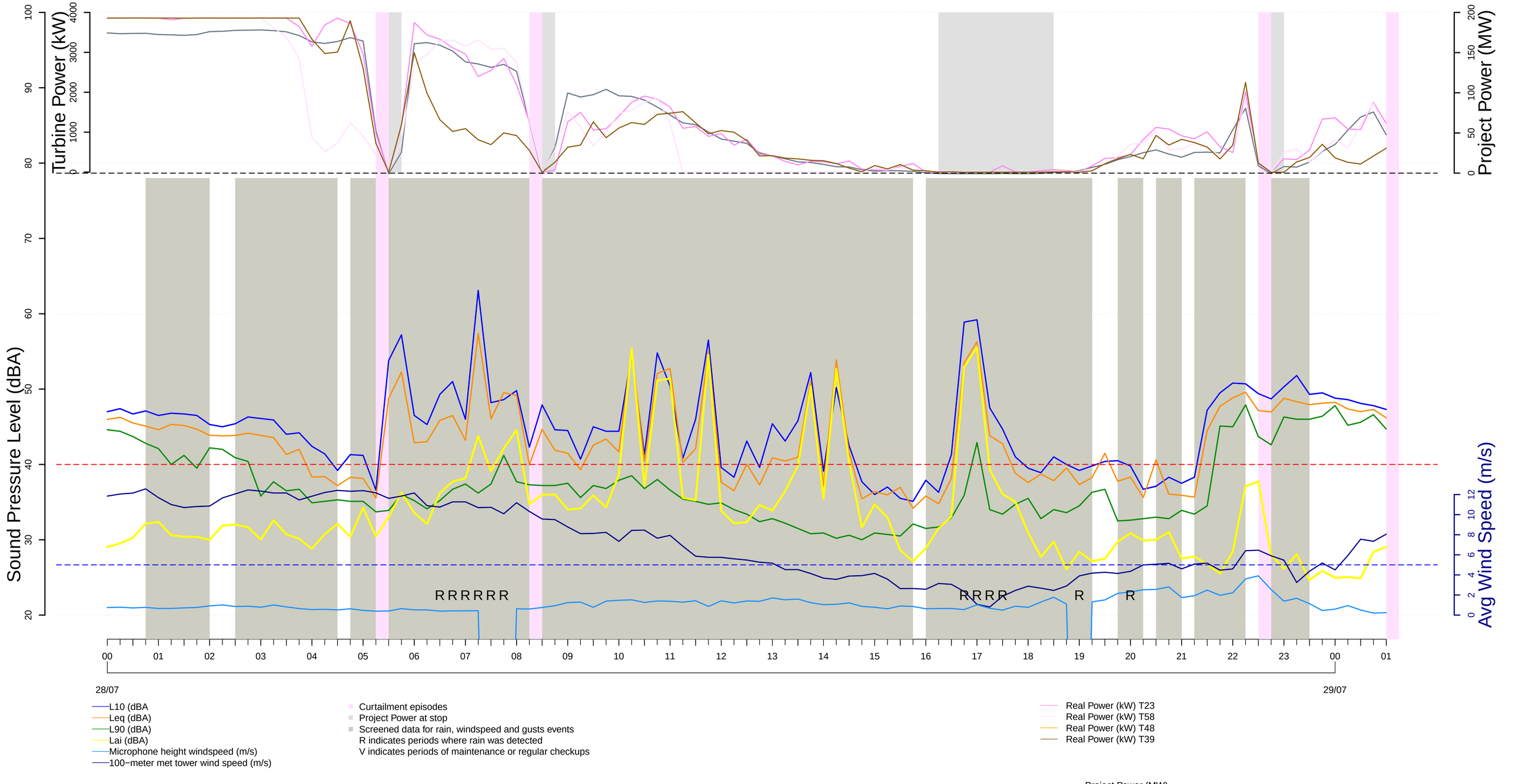
L10 (dBA)
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

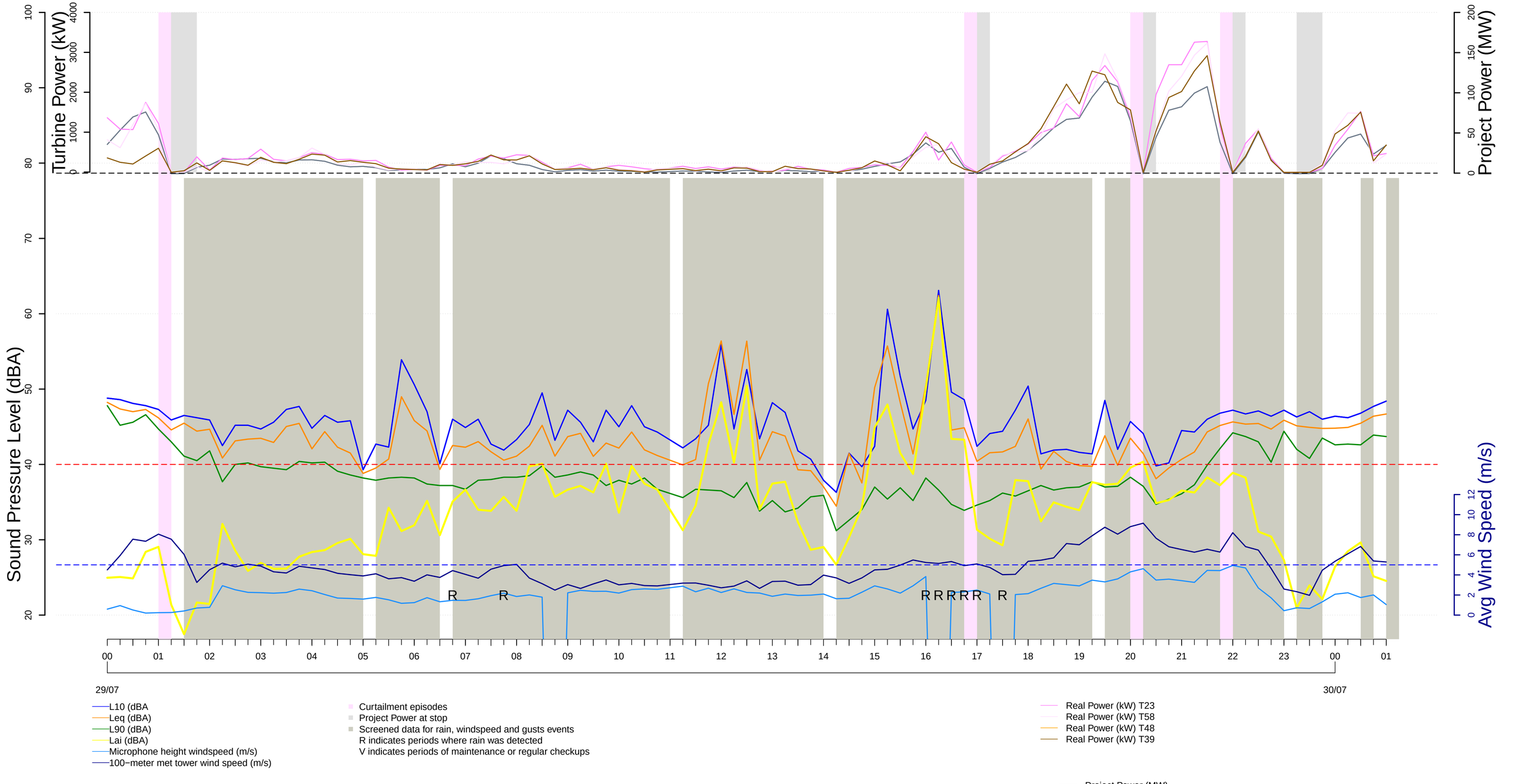
Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39

Project Power (MW)

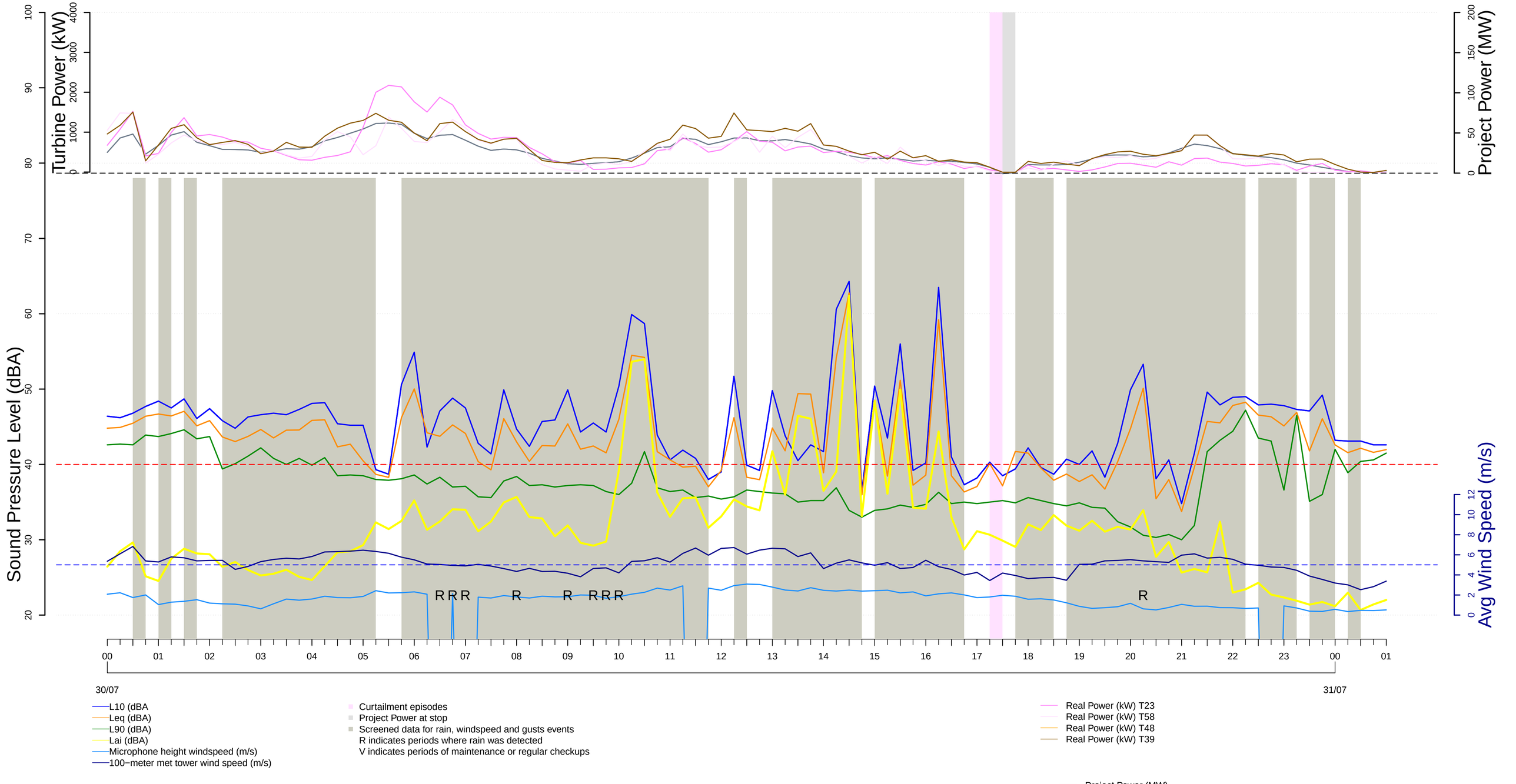
REC−139 (Schoenfelder Residence)
Tuesday, 7 28, 2020



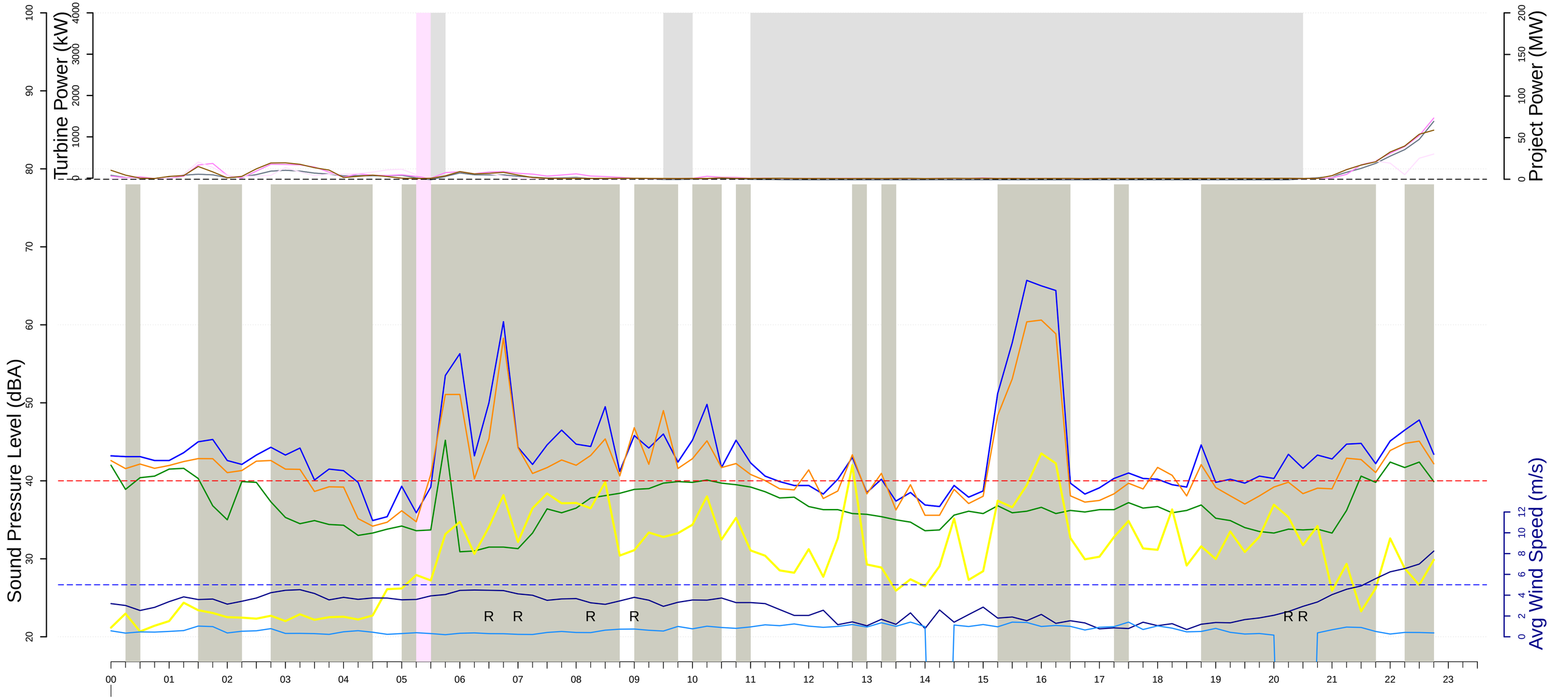
REC−139 (Schoenfelder Residence)
Wednesday, 7 29, 2020



REC−139 (Schoenfelder Residence)
Thursday, 7 30, 2020



REC−139 (Schoenfelder Residence)
Friday, 7 31, 2020



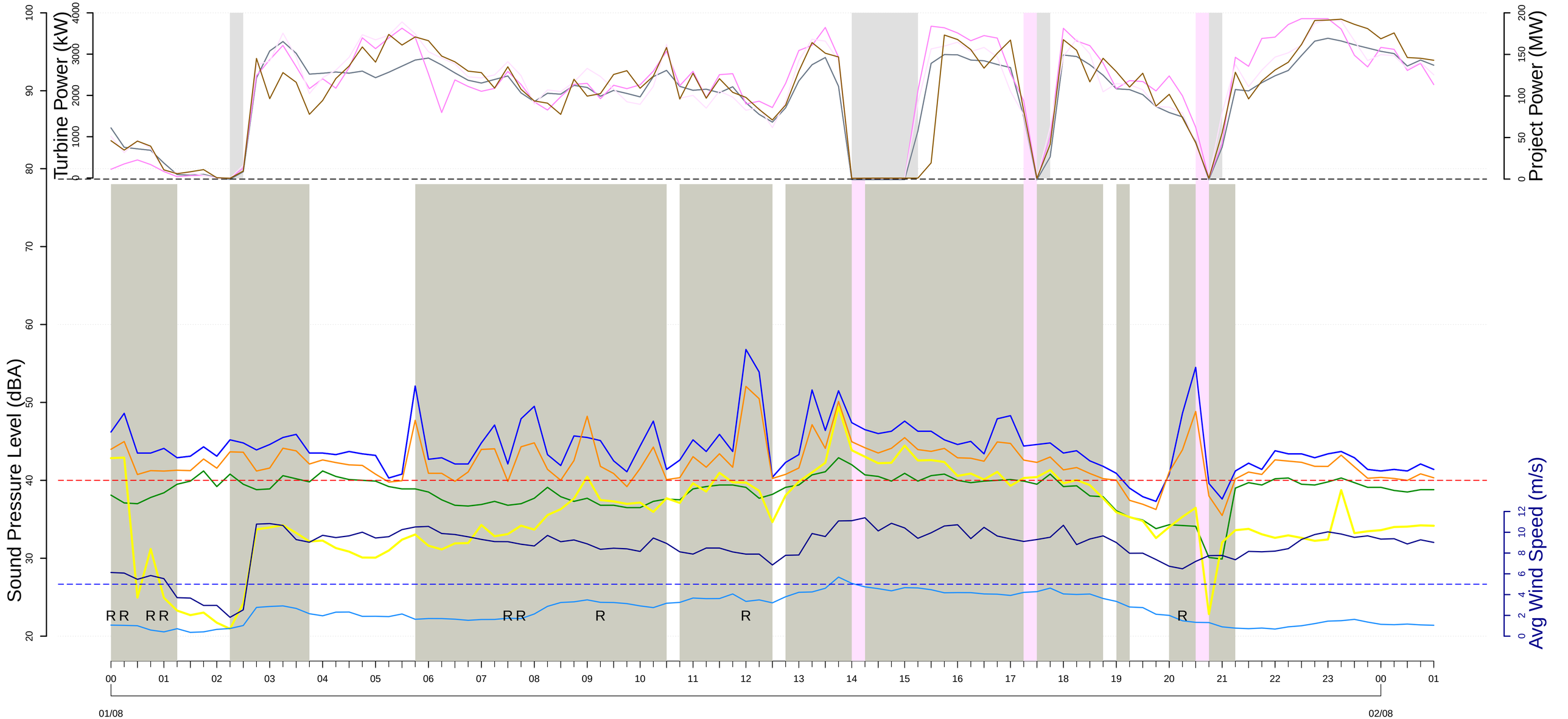
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39

Project Power (MW)

REC−139 (Schoenfelder Residence)
Saturday, 8 1, 2020



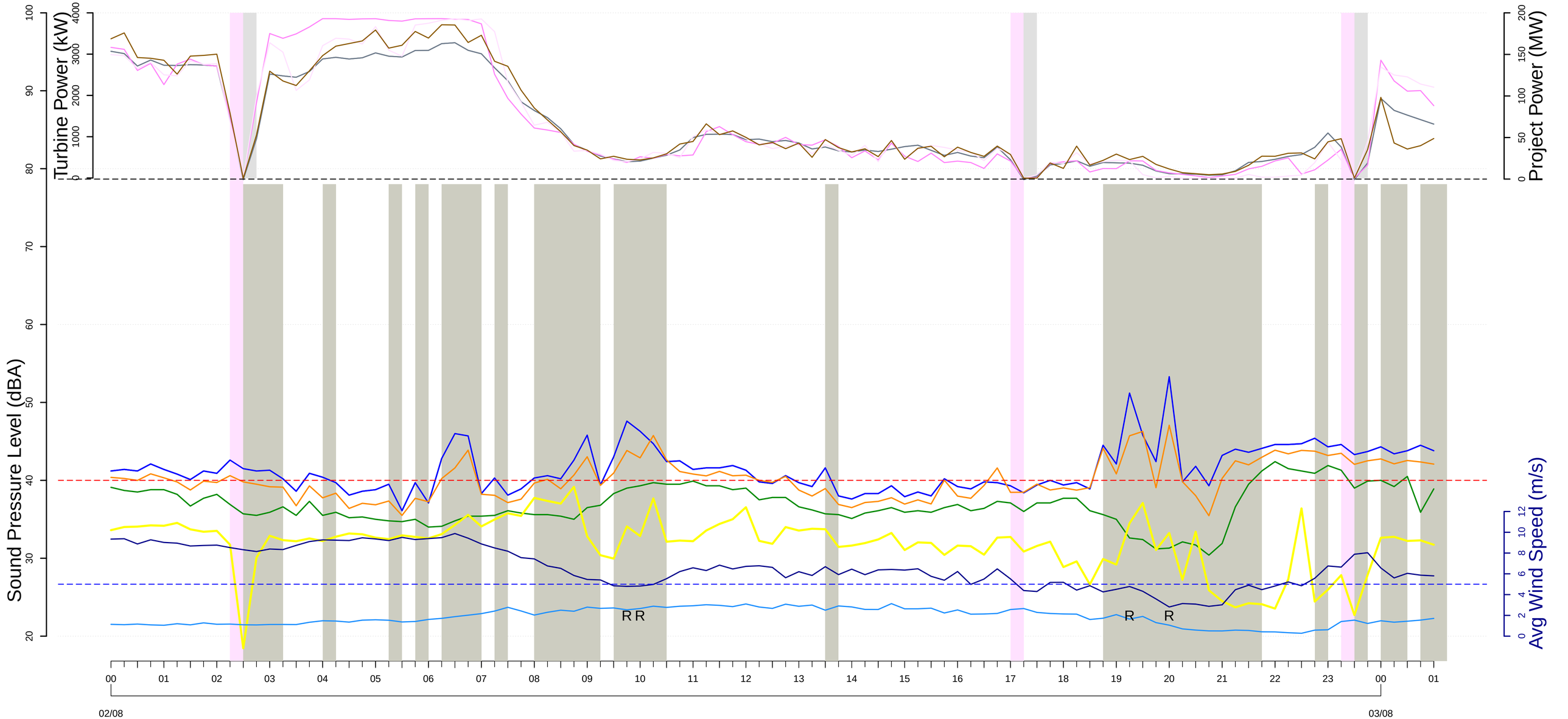
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39

Project Power (MW)

REC−139 (Schoenfelder Residence)
Sunday, 8 2, 2020



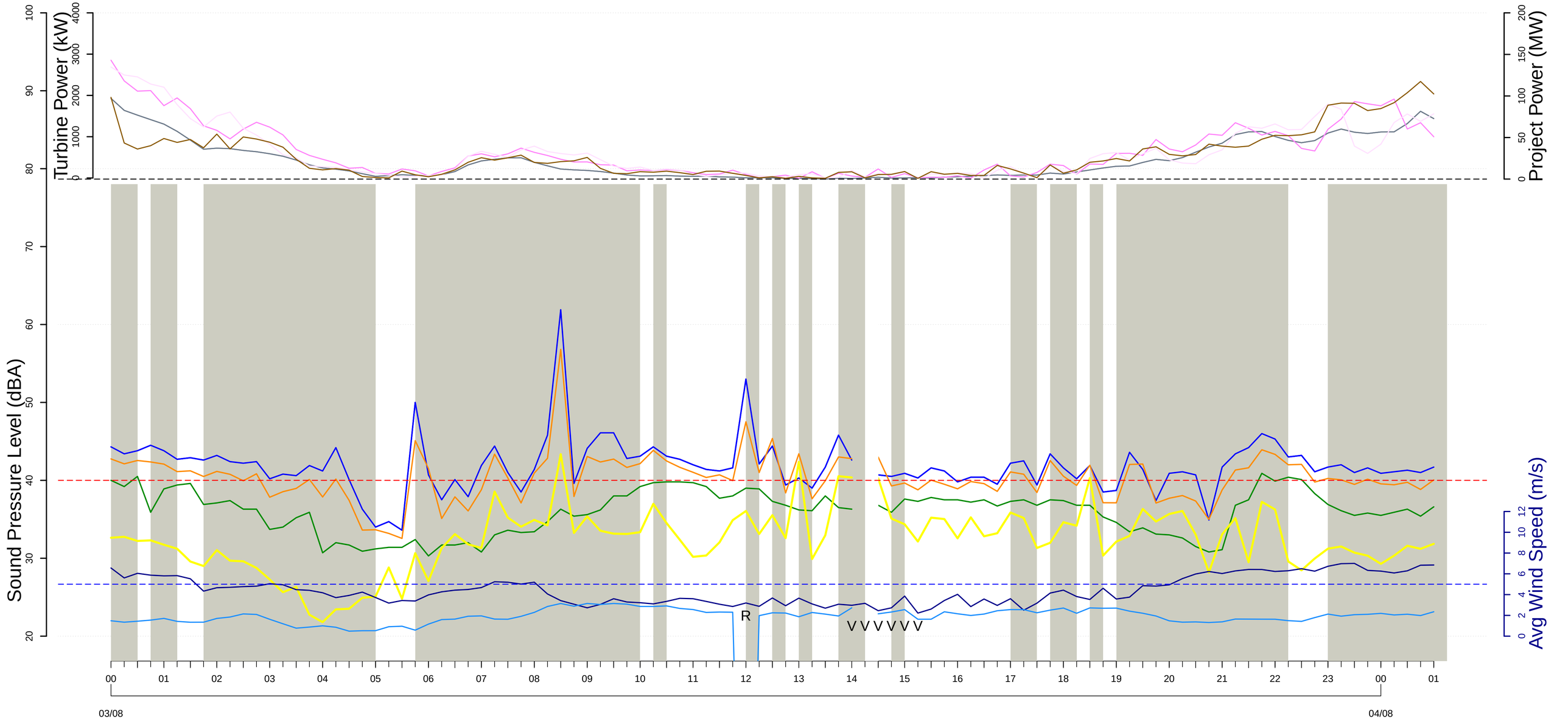
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39

Project Power (MW)

REC−139 (Schoenfelder Residence)
Monday, 8 3, 2020



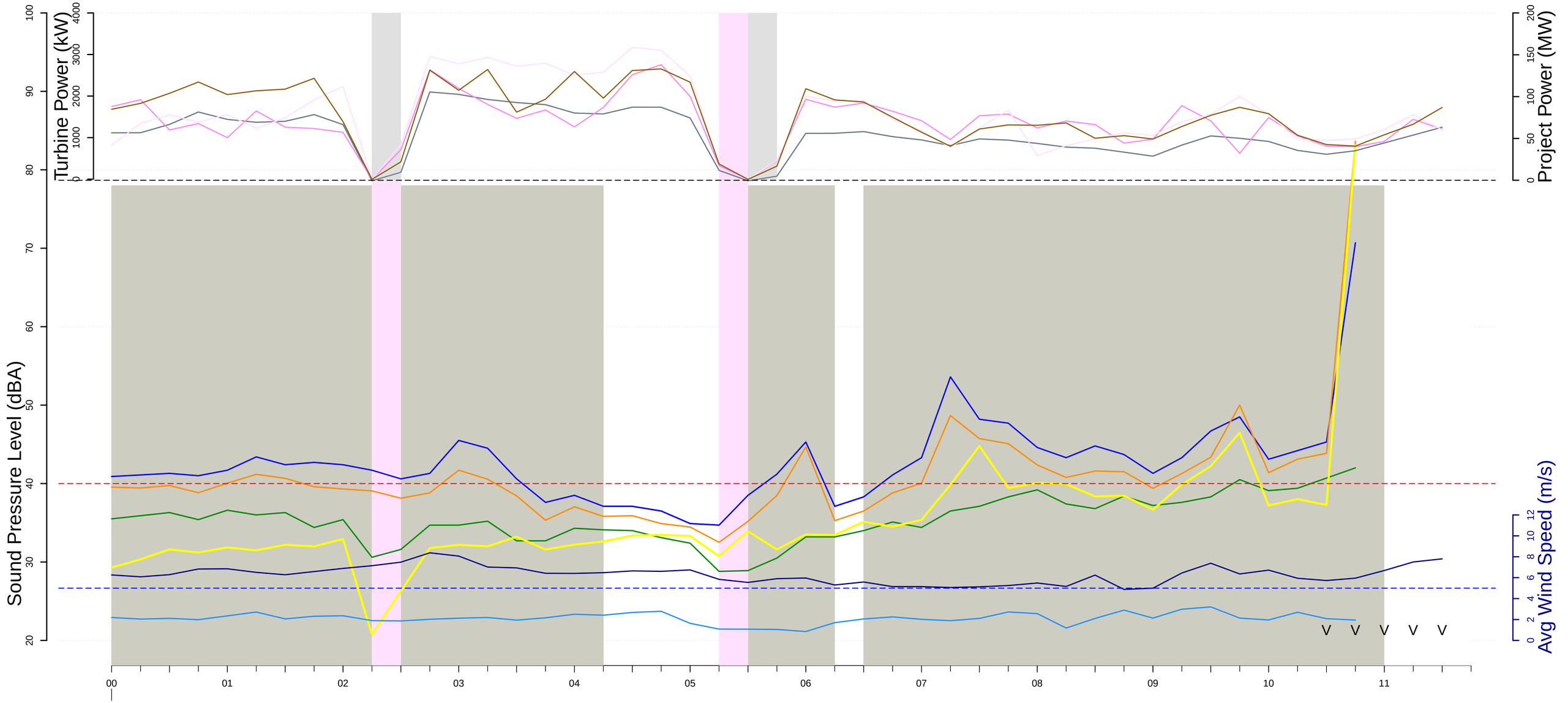
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39

Project Power (MW)

REC−139 (Schoenfelder Residence)
Tuesday, 8 4, 2020



L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

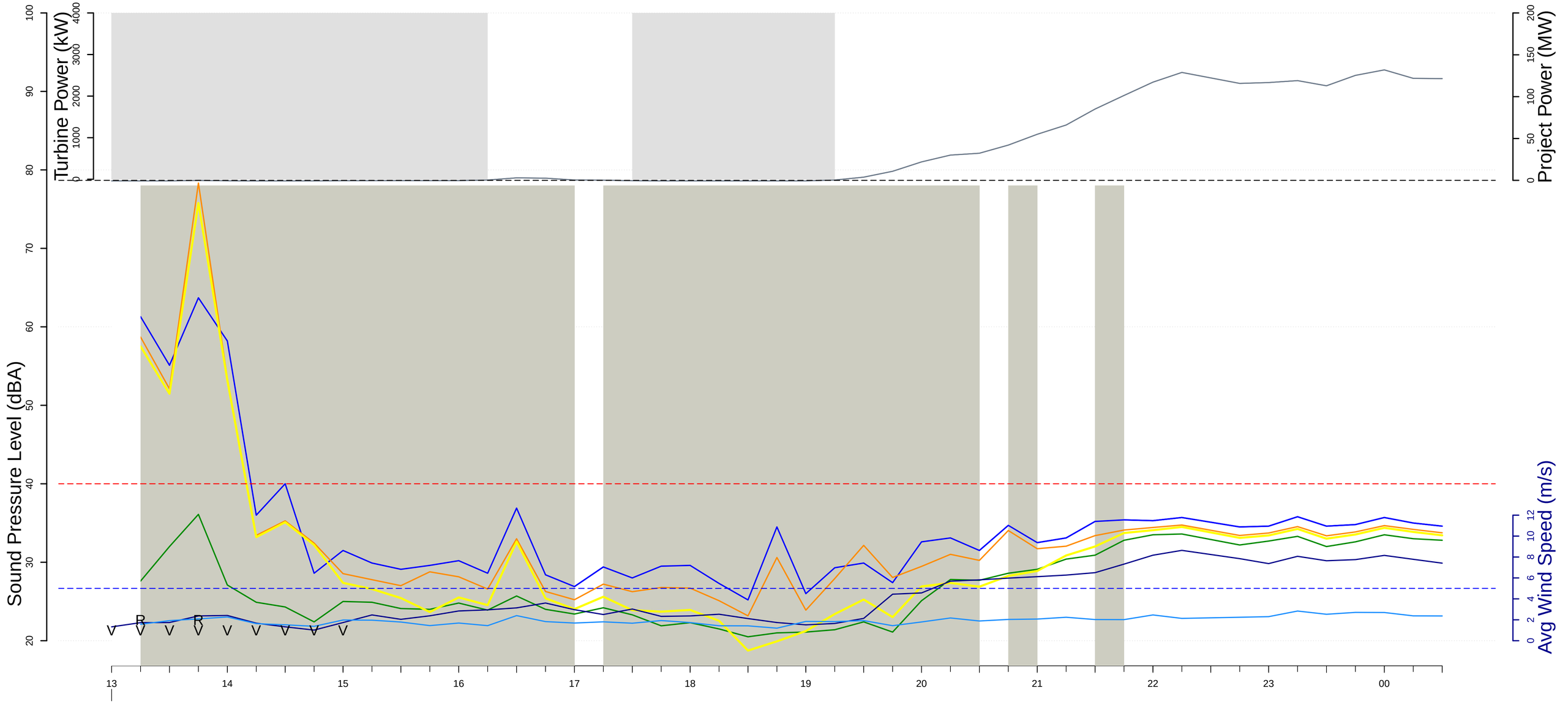
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39

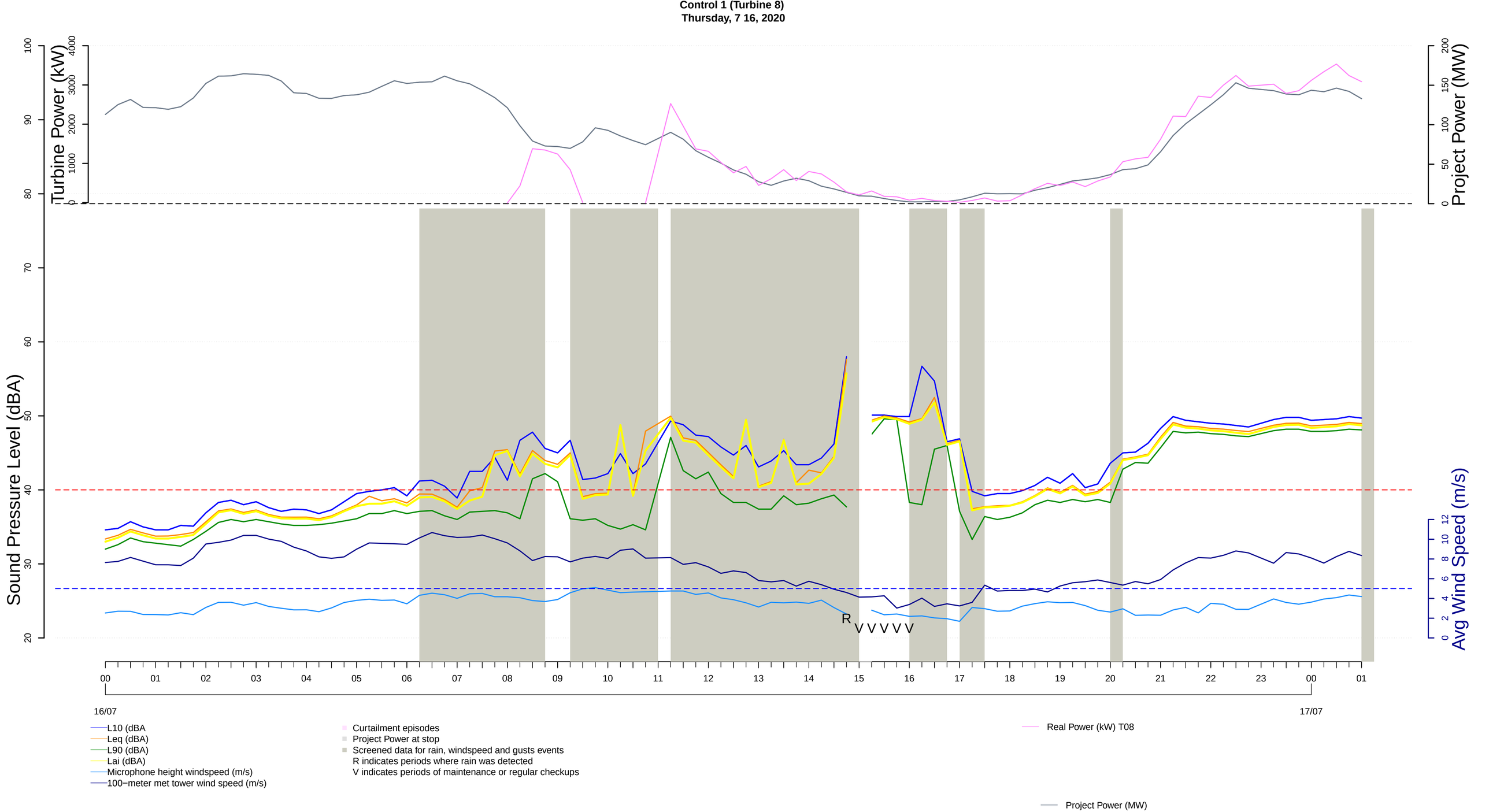
Project Power (MW)

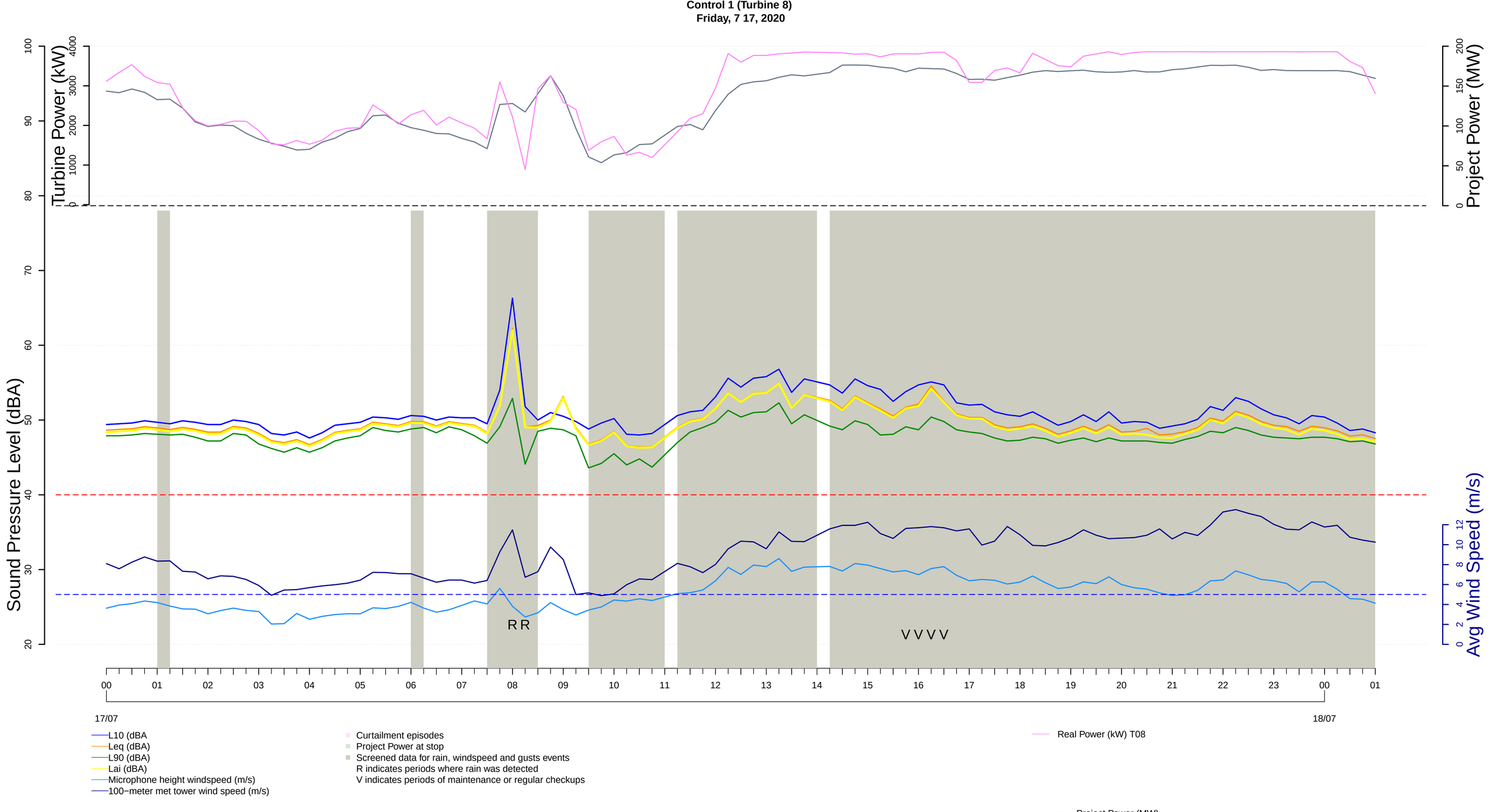
Control 1 (Turbine 8)

Control 1 (Turbine 8)
Wednesday, 7 15, 2020

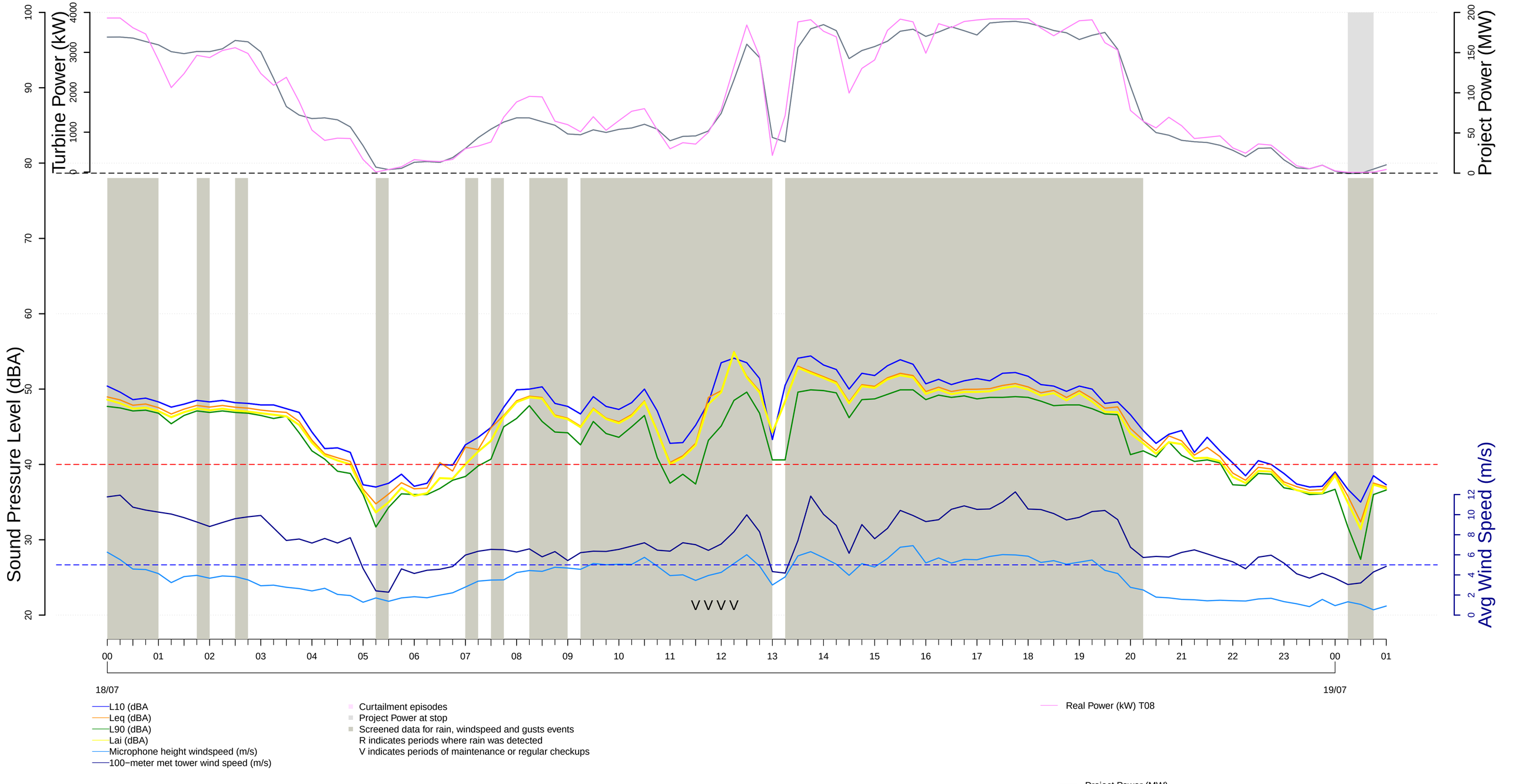


- L10 (dBA
- Leq (dBA)
- L90 (dBA)
- Lai (dBA)
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
- R indicates periods where rain was detected
- V indicates periods of maintenance or regular checkups
- Real Power (kW) T08
- Project Power (MW)

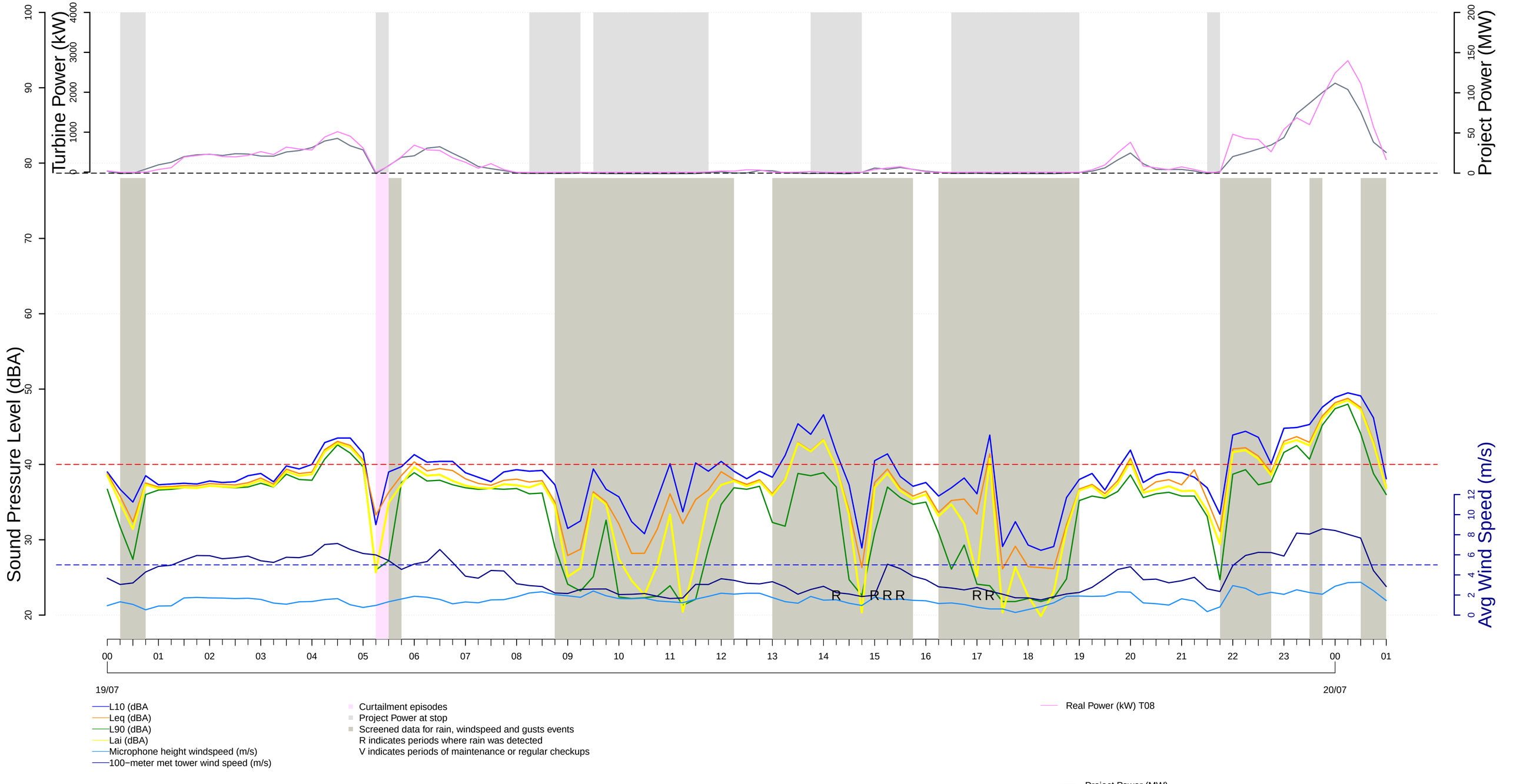

Control 1 (Turbine 8)
Thursday, 7 16, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
R
V V V V V
16/07
17/07
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups
Real Power (kW) T08
Project Power (MW)


Control 1 (Turbine 8)
Friday, 7 17, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
R R
V V V V
17/07
18/07
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups
Real Power (kW) T08
Project Power (MW)

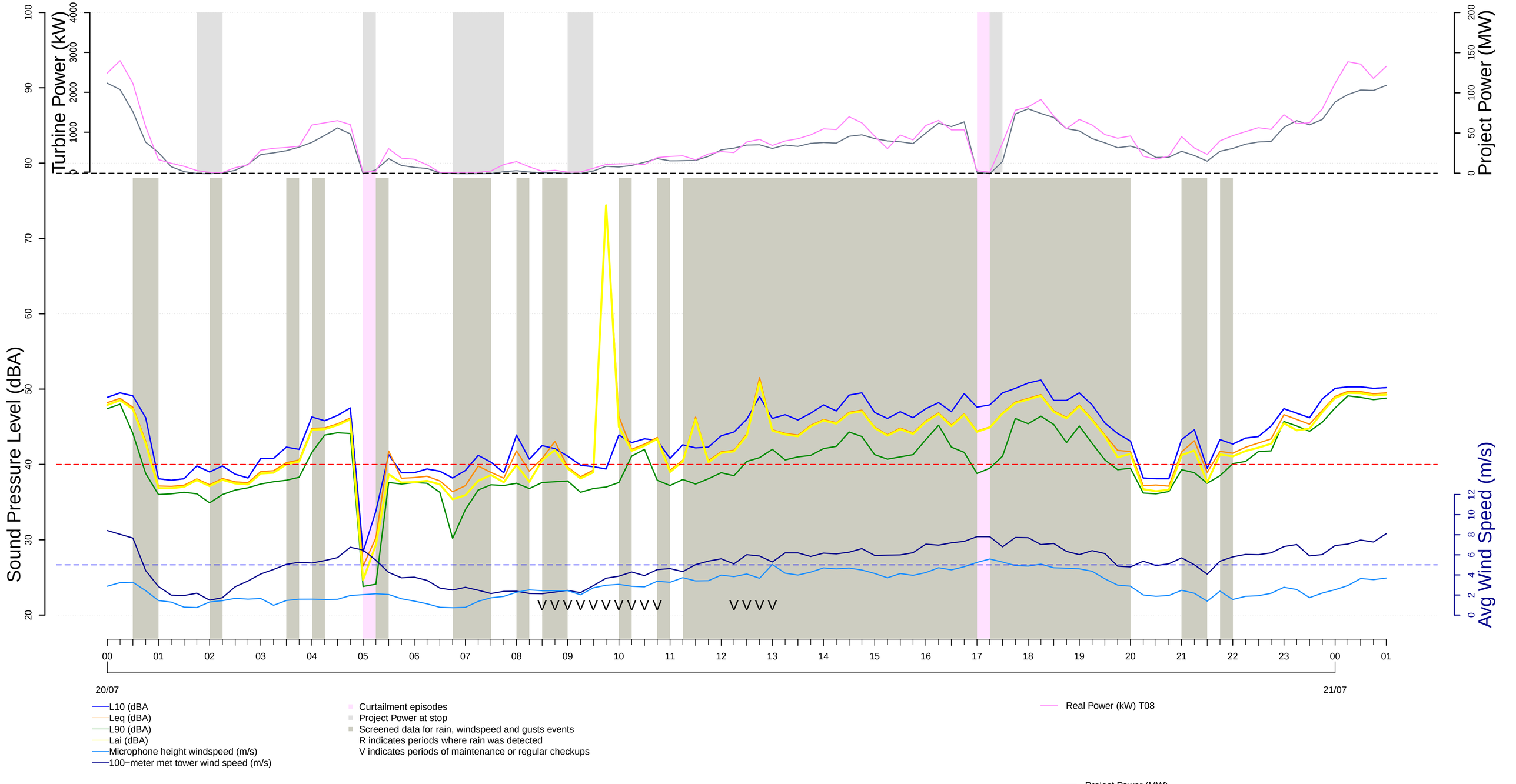
Control 1 (Turbine 8)
Saturday, 7 18, 2020

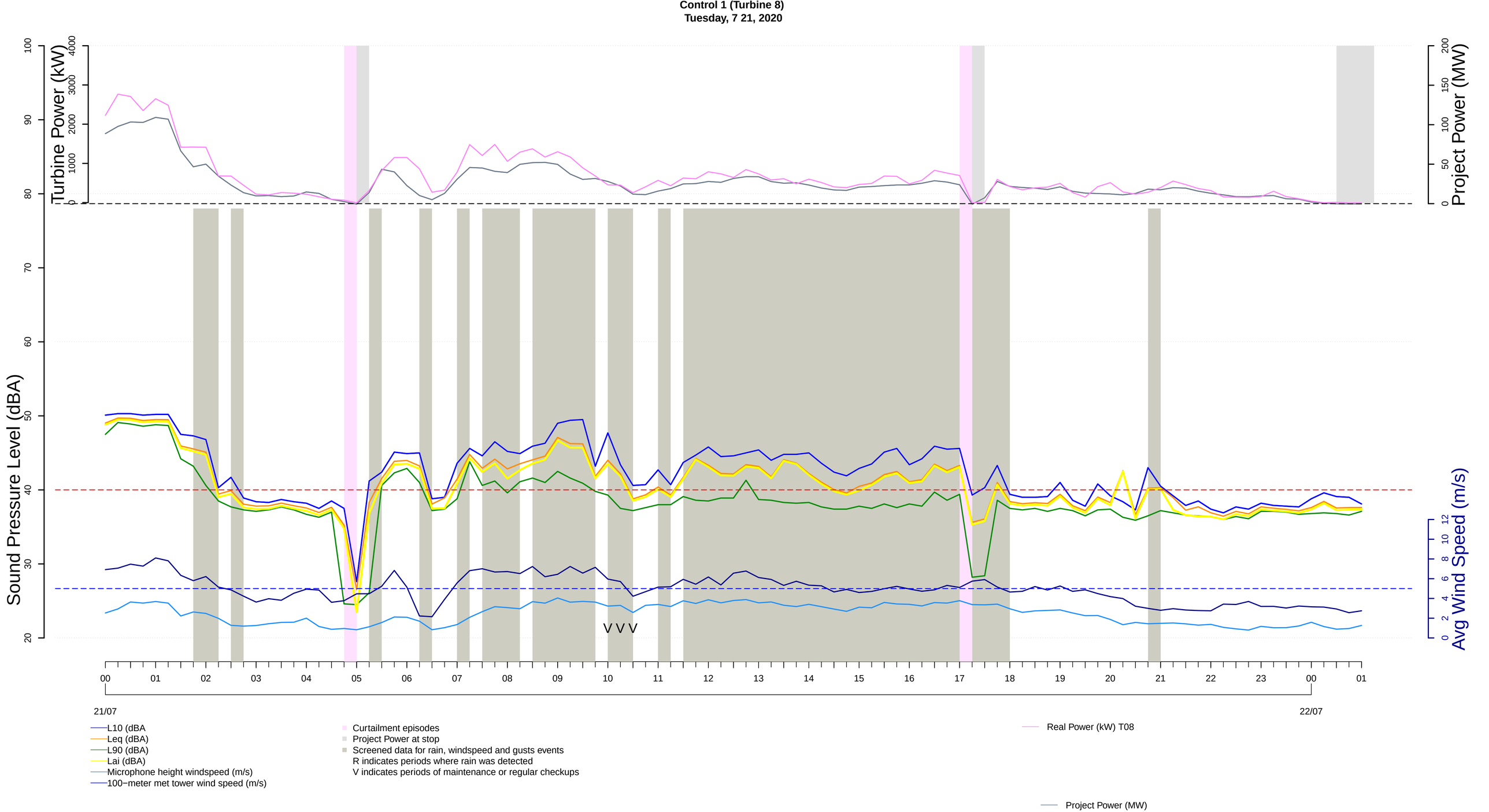


Control 1 (Turbine 8)
Sunday, 7 19, 2020

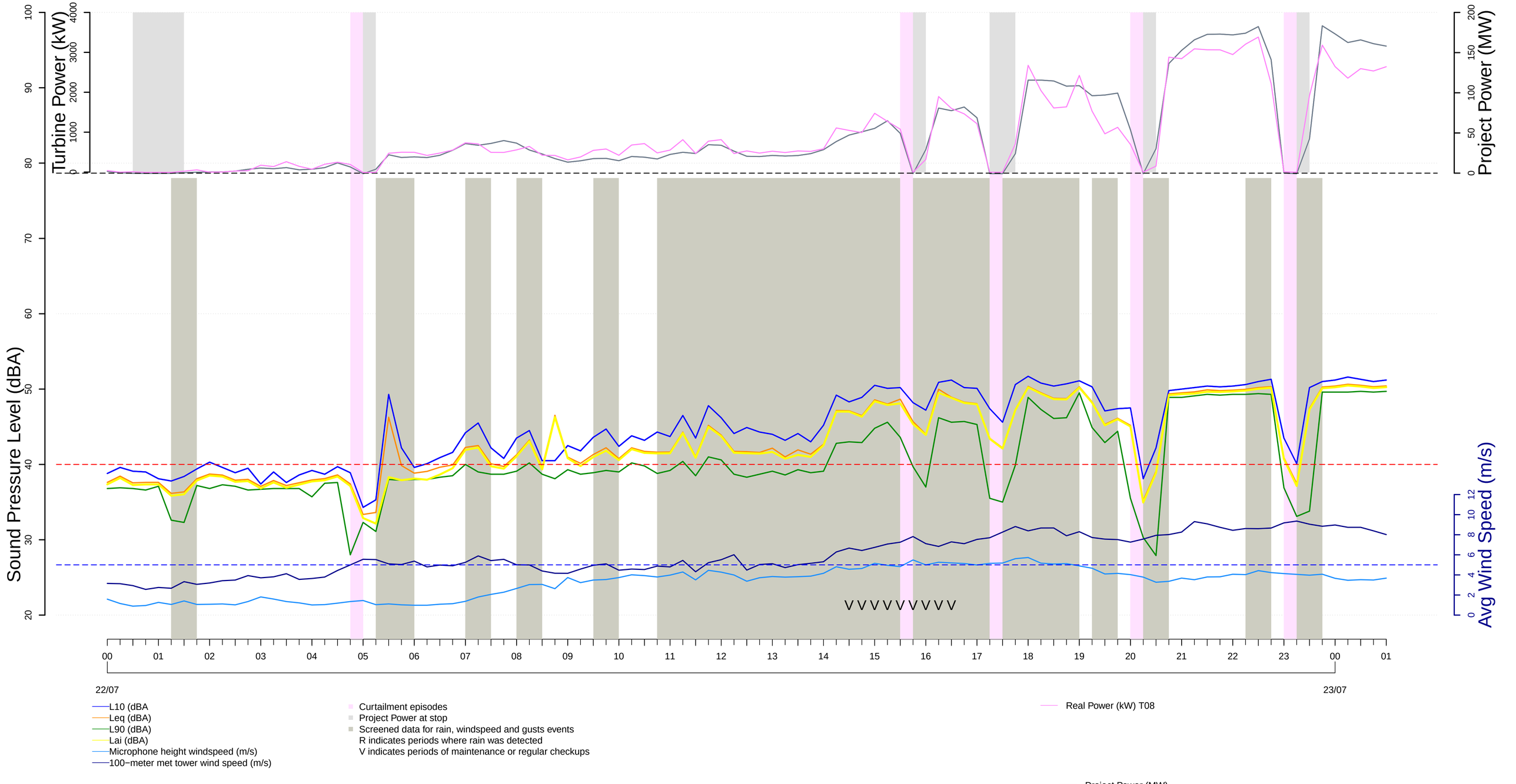


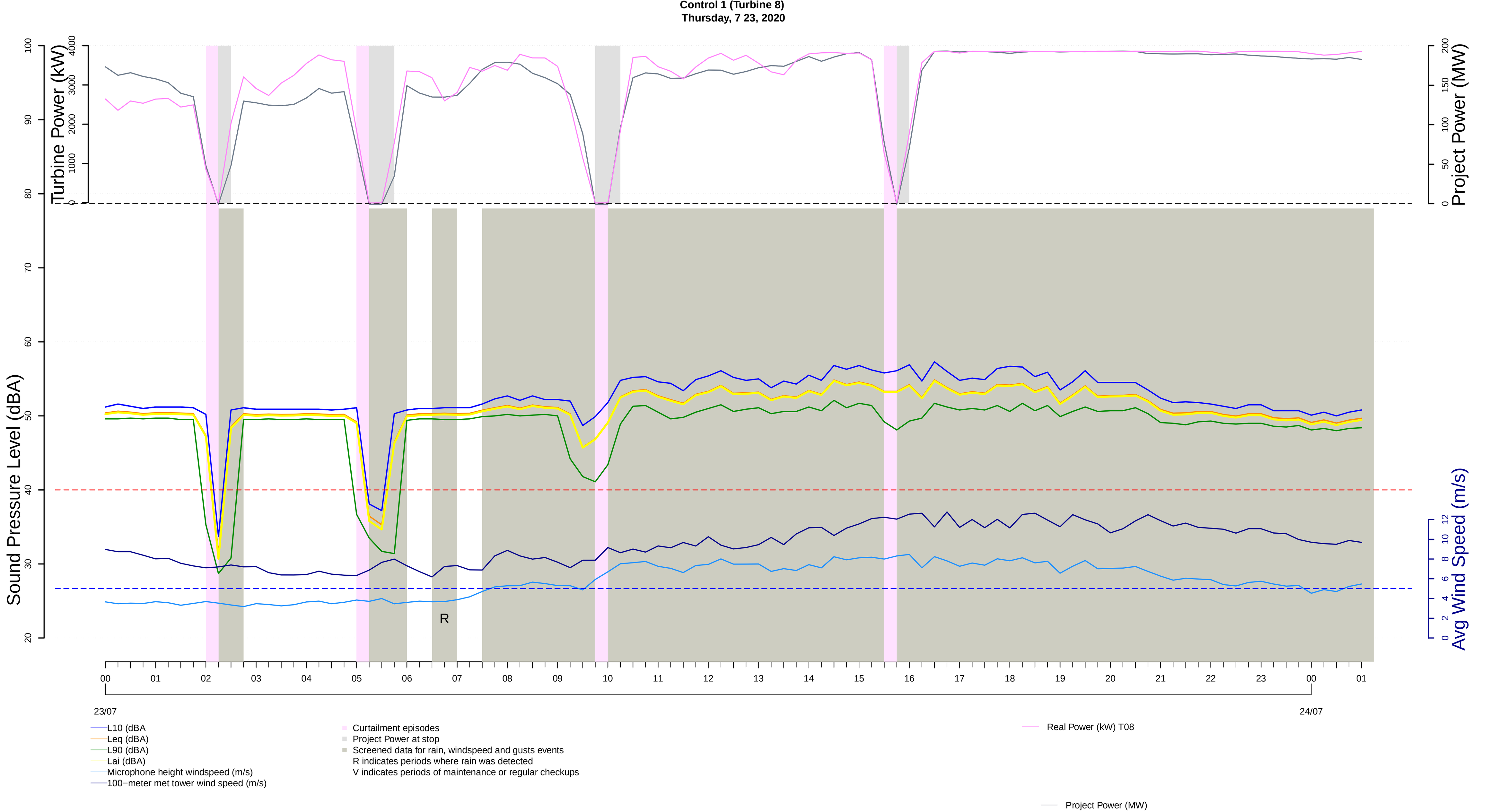
Control 1 (Turbine 8)
Monday, 7 20, 2020



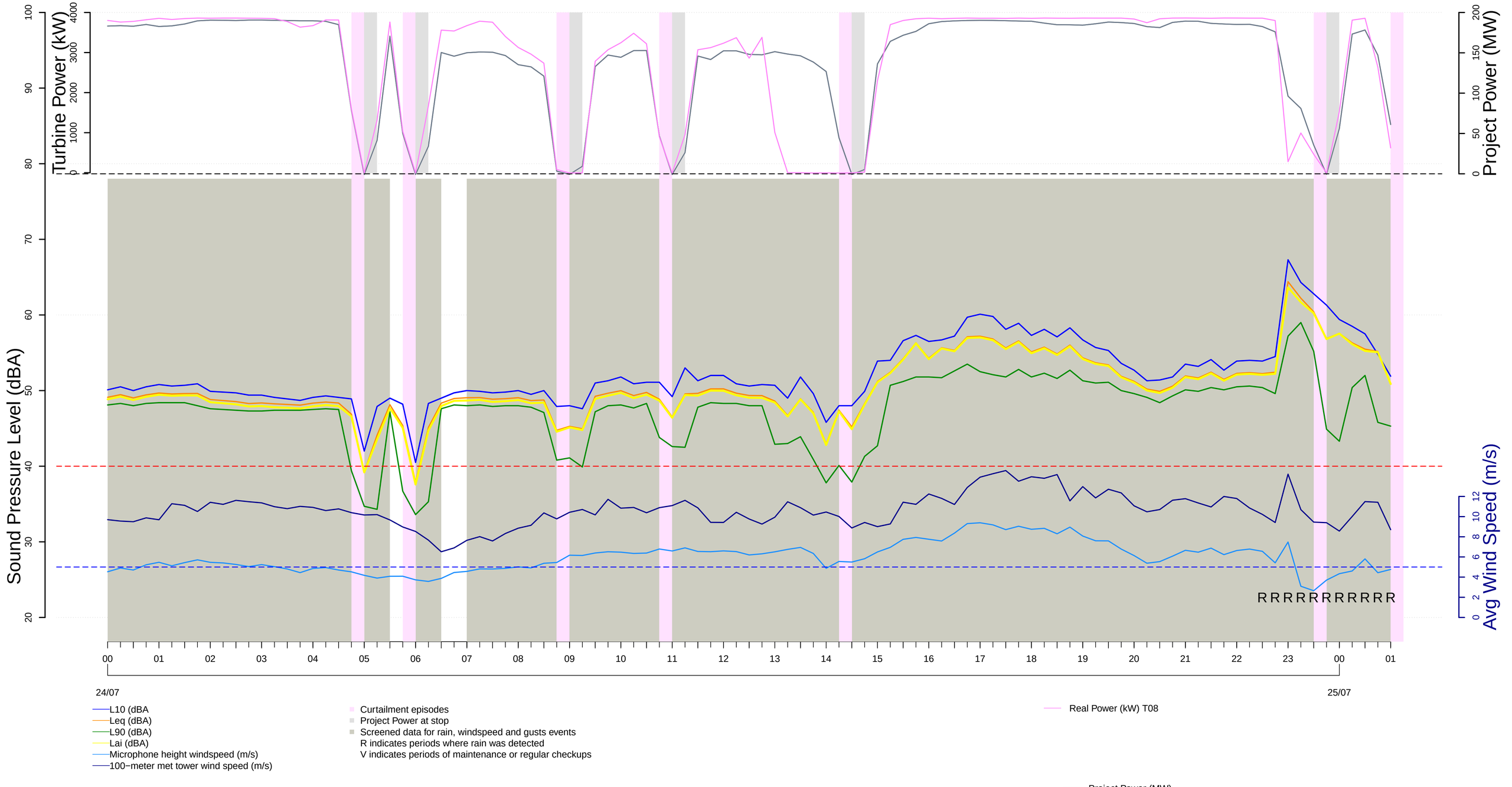

Control 1 (Turbine 8)
Tuesday, 7 21, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
V V V
21/07
22/07
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups
Real Power (kW) T08
Project Power (MW)

Control 1 (Turbine 8)
Wednesday, 7 22, 2020

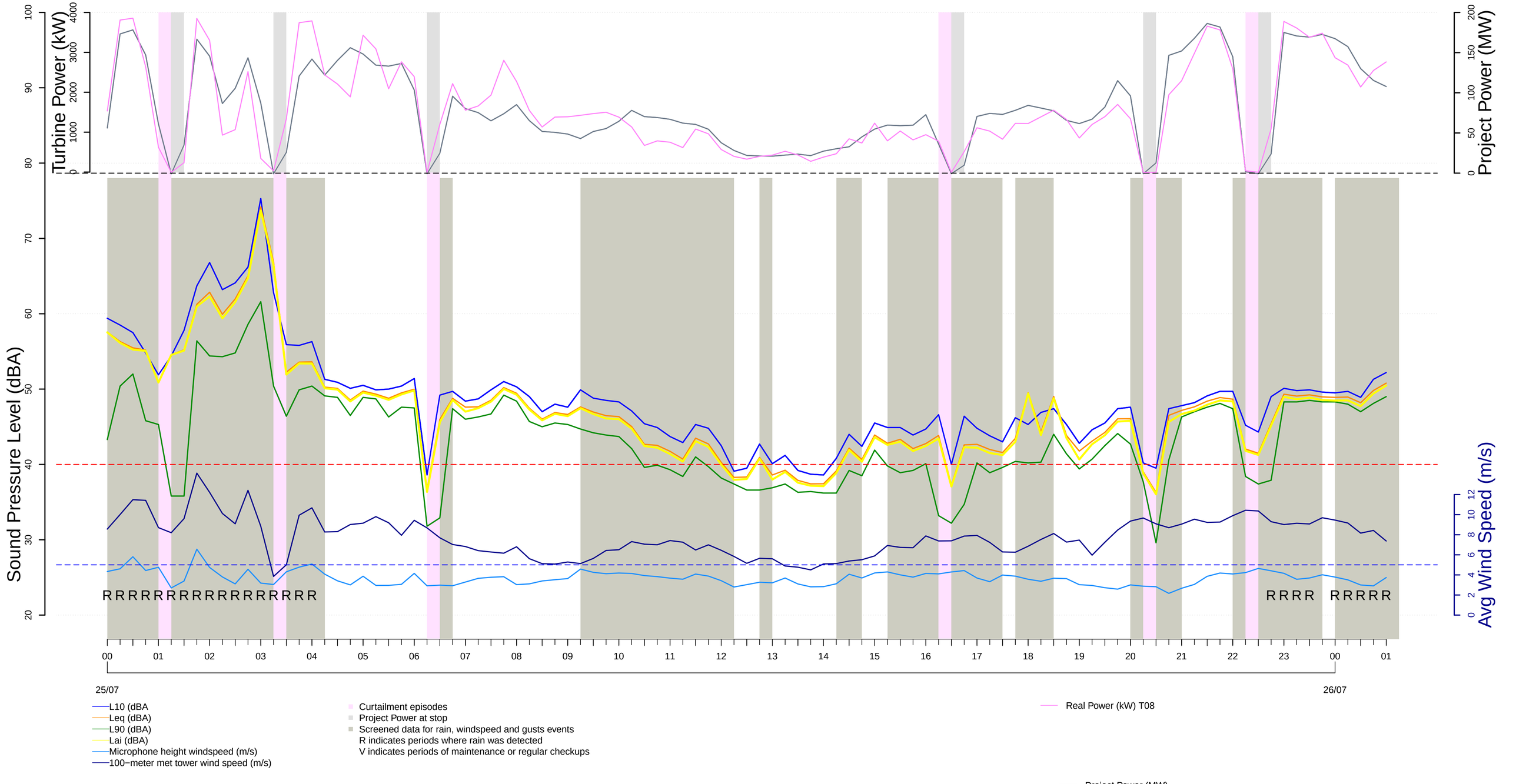


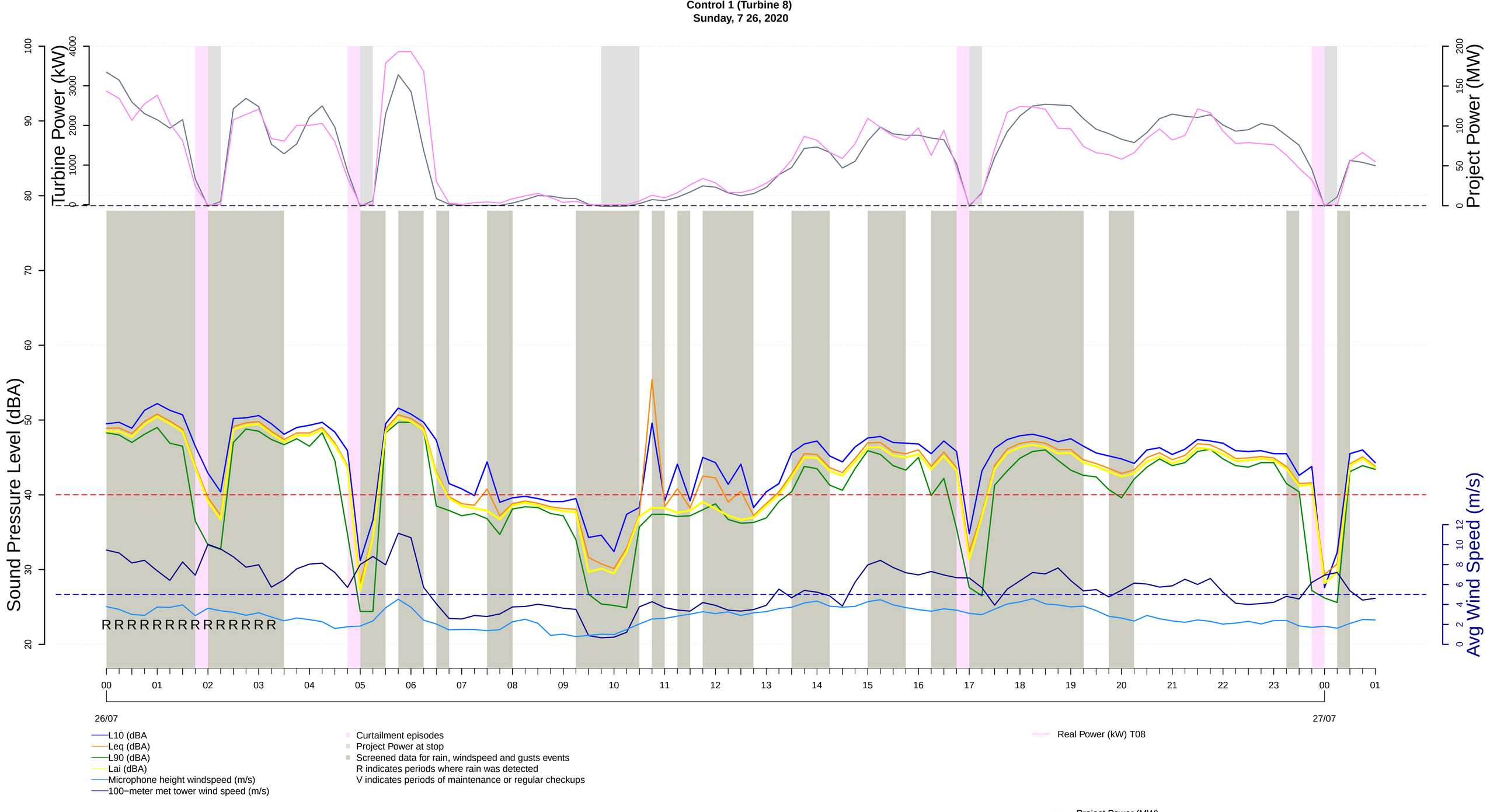

Control 1 (Turbine 8)
Thursday, 7 23, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
R
23/07
24/07
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups
Real Power (kW) T08
Project Power (MW)

Control 1 (Turbine 8)
Friday, 7 24, 2020

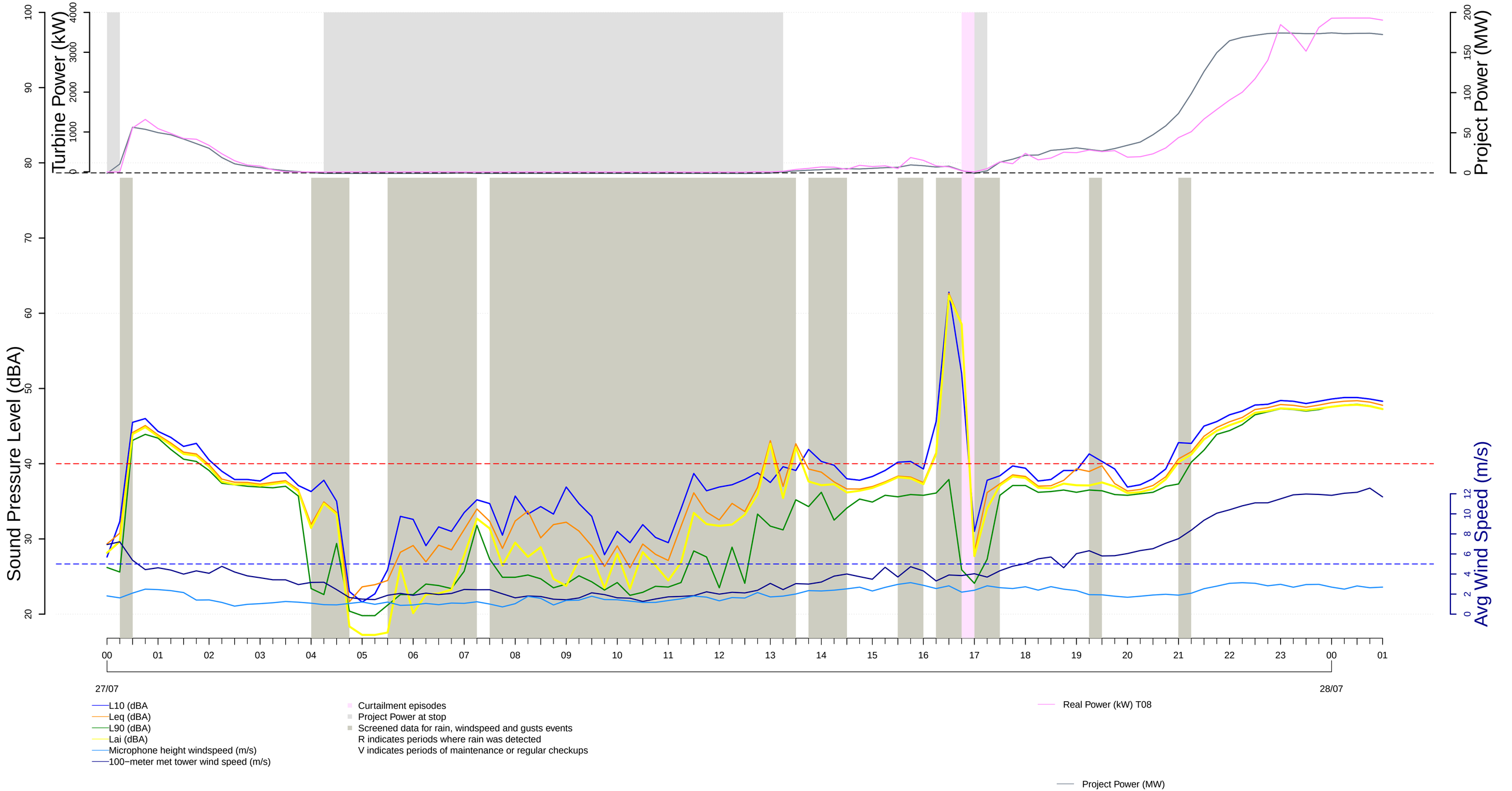


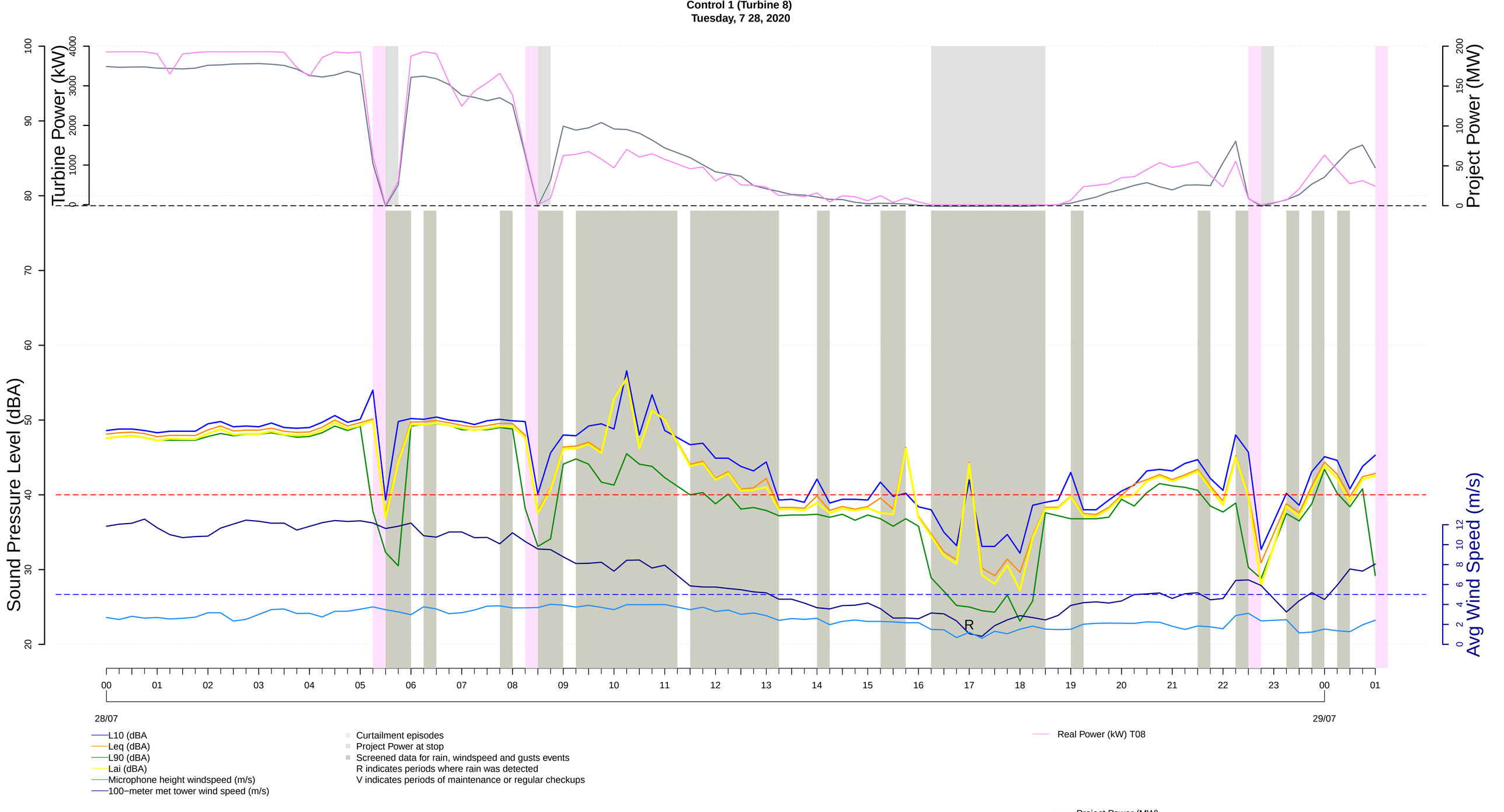
Control 1 (Turbine 8)
Saturday, 7 25, 2020



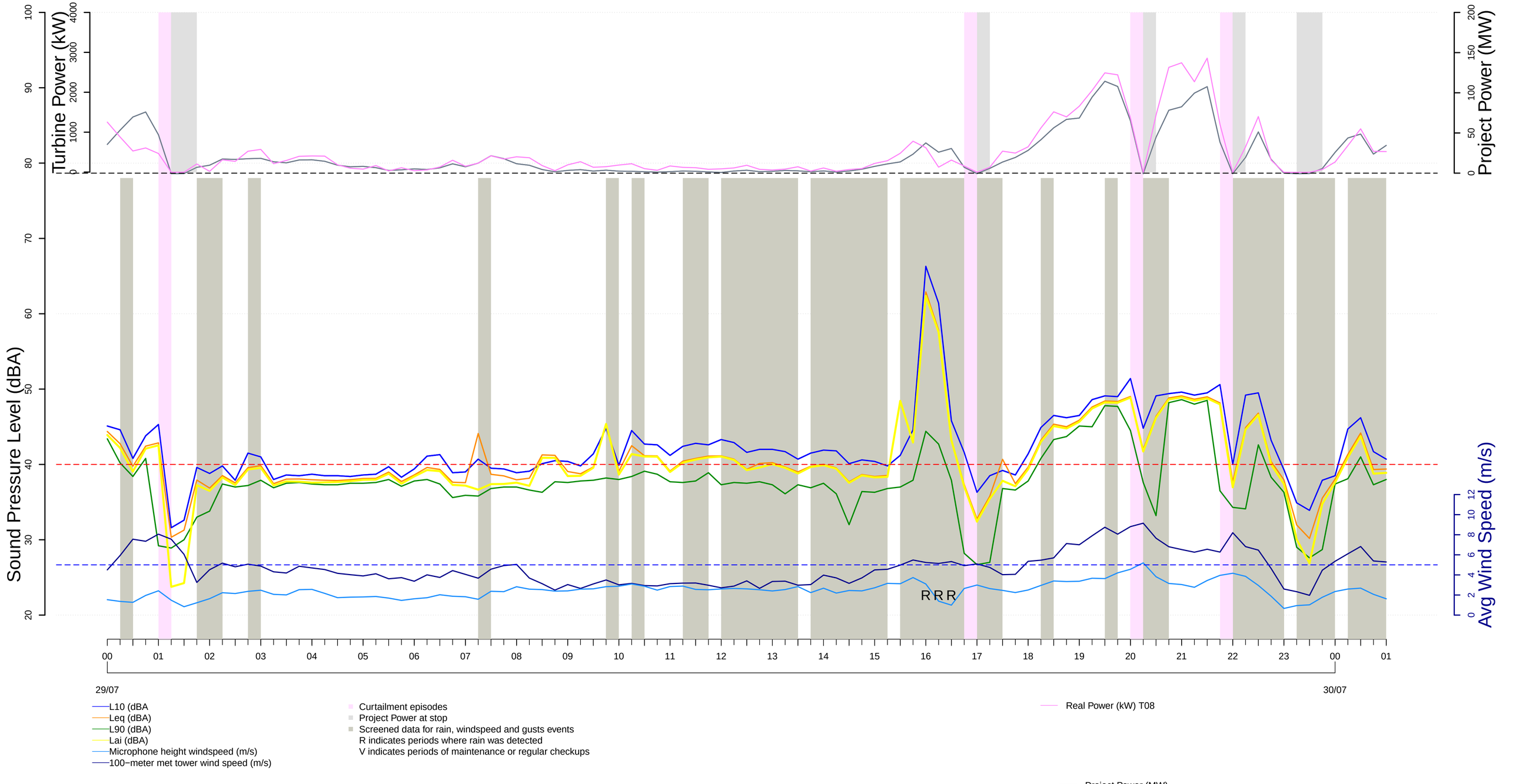

Control 1 (Turbine 8)
Sunday, 7 26, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
RRRRRRRRRRRRRR
26/07
27/07
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups
Real Power (kW) T08
Project Power (MW)

Control 1 (Turbine 8)
Monday, 7 27, 2020

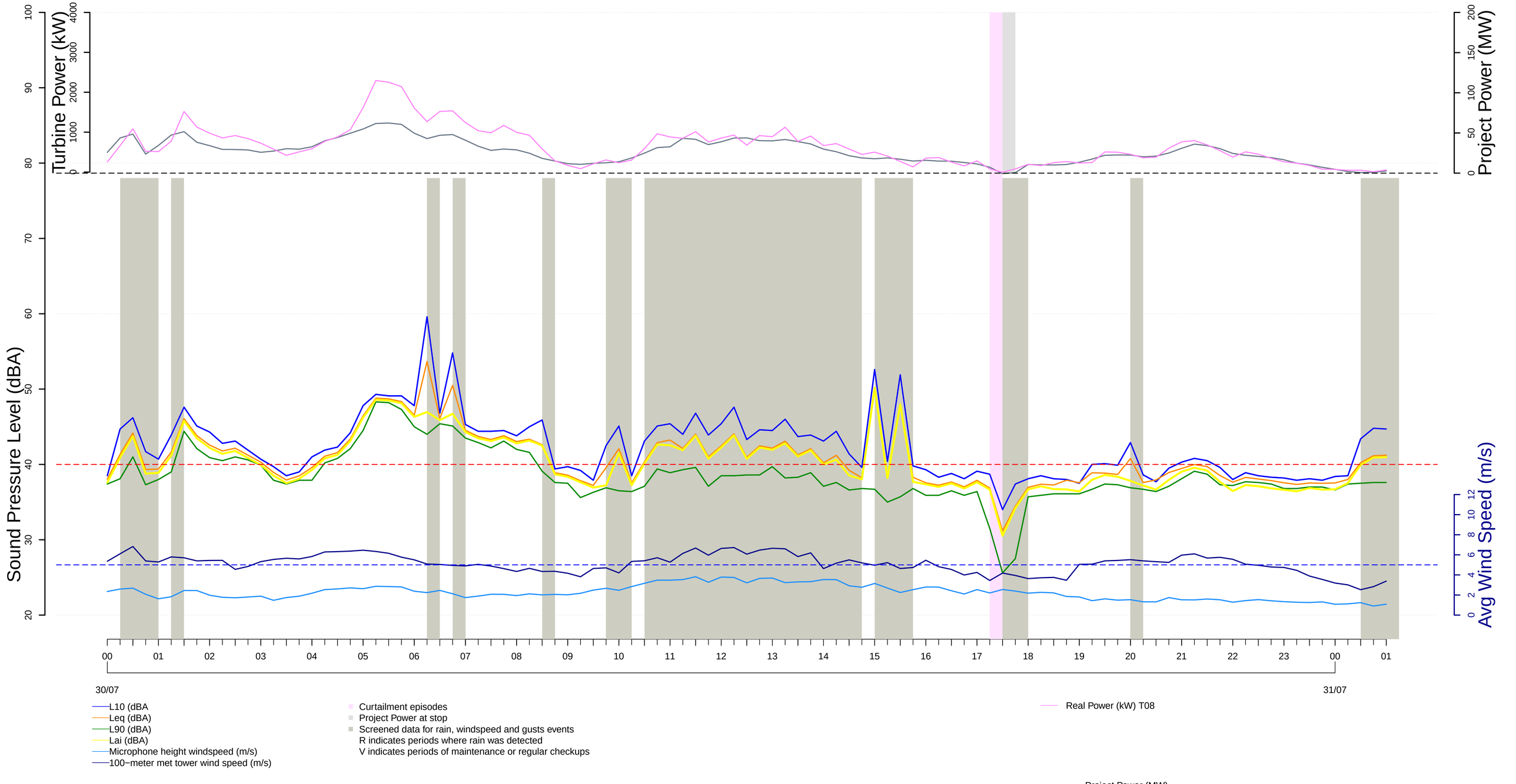



Control 1 (Turbine 8)
Tuesday, 7 28, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
R
28/07
29/07
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups
Real Power (kW) T08
Project Power (MW)

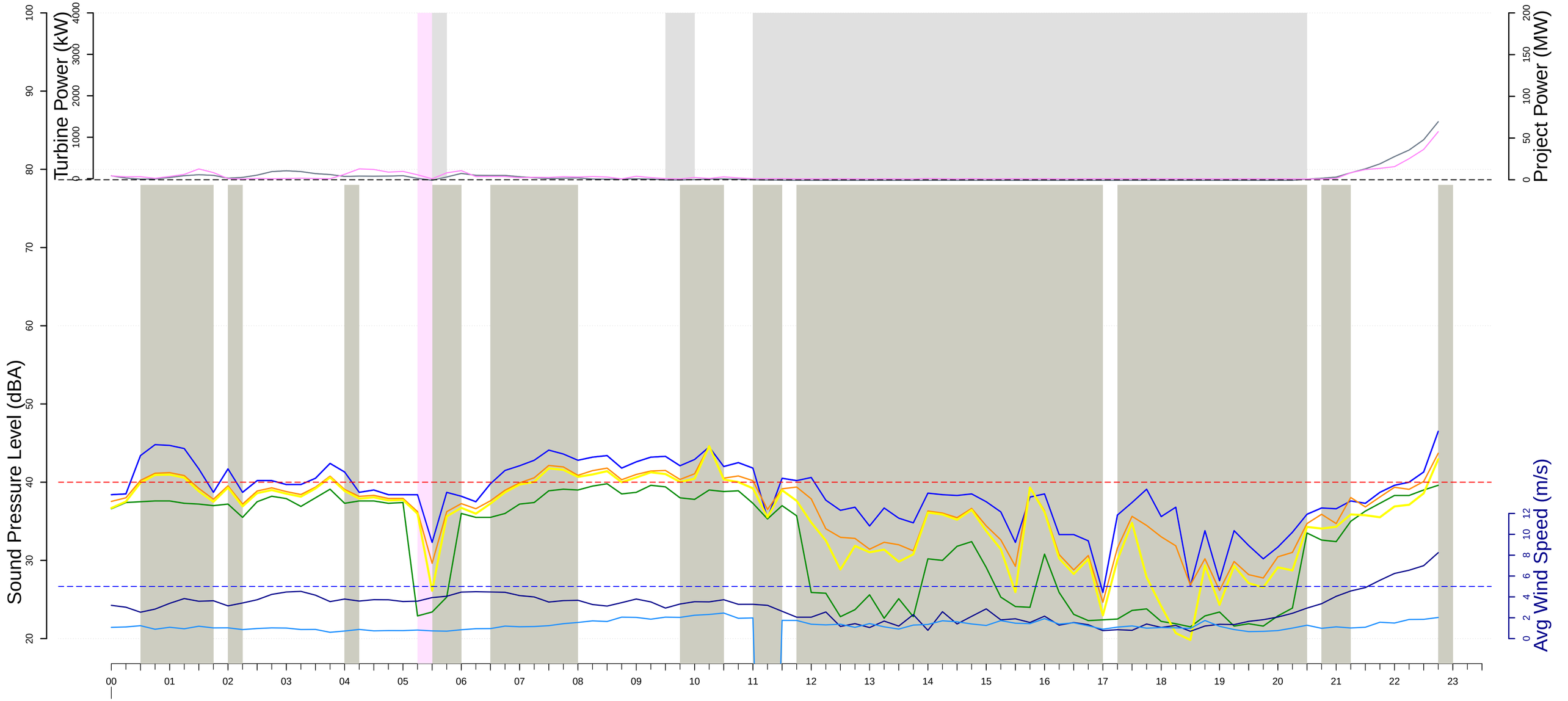
Control 1 (Turbine 8)
Wednesday, 7 29, 2020



Control 1 (Turbine 8)
Thursday, 7 30, 2020



Control 1 (Turbine 8)
Friday, 7 31, 2020

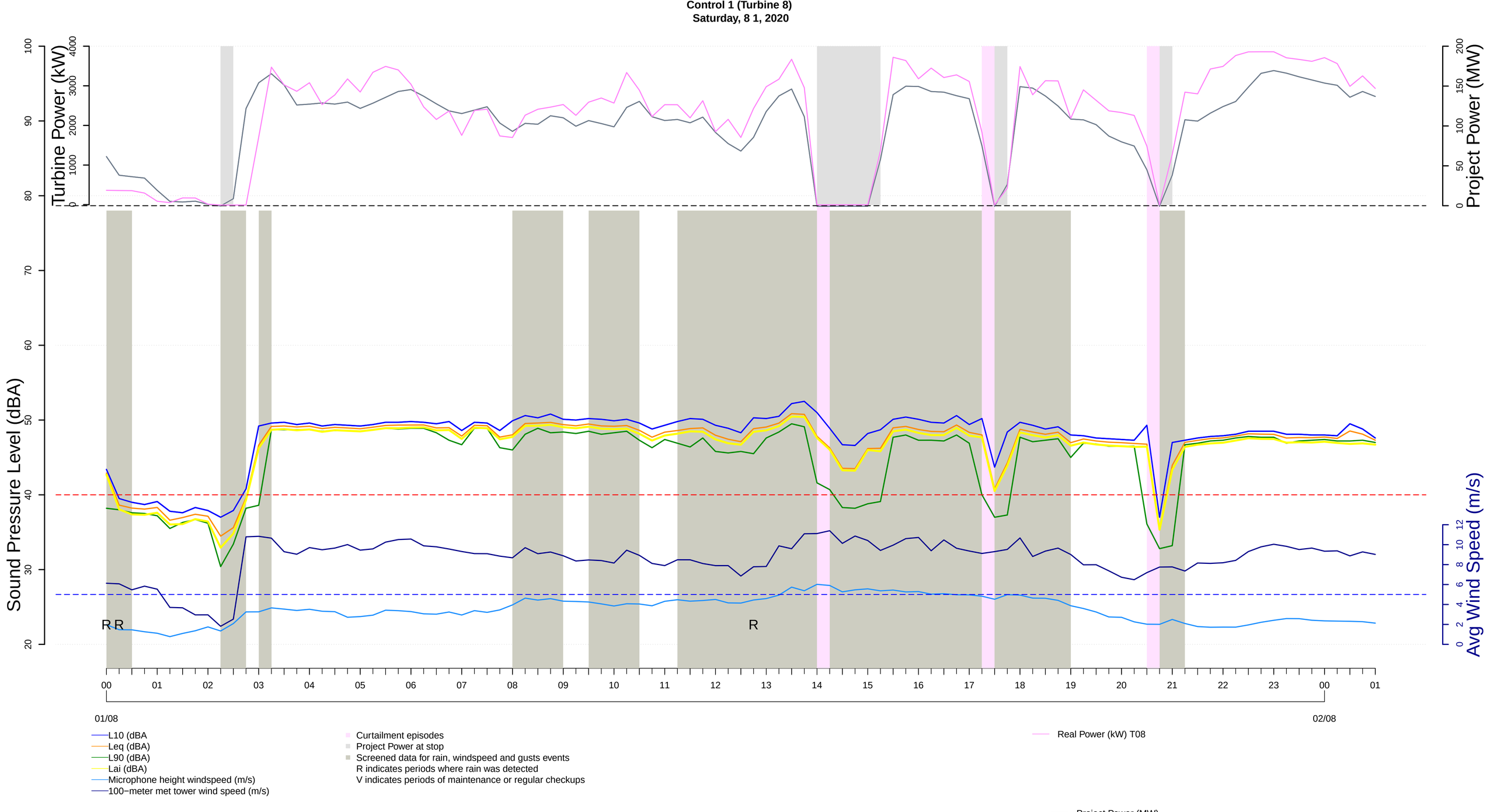


L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

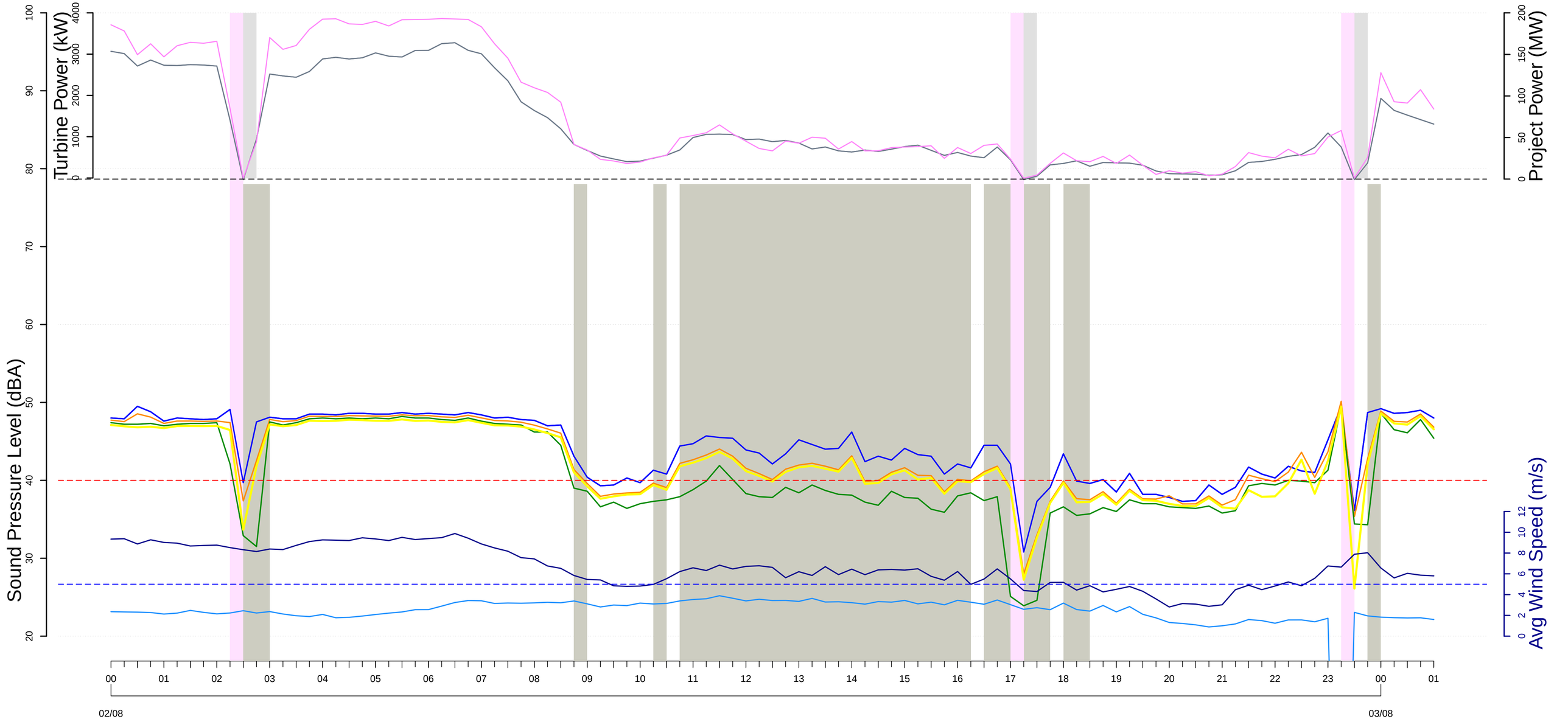
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T08

Project Power (MW)


Control 1 (Turbine 8)
Saturday, 8 1, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
R R
R
01/08
02/08
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups
Real Power (kW) T08
Project Power (MW)

Control 1 (Turbine 8)
Sunday, 8 2, 2020

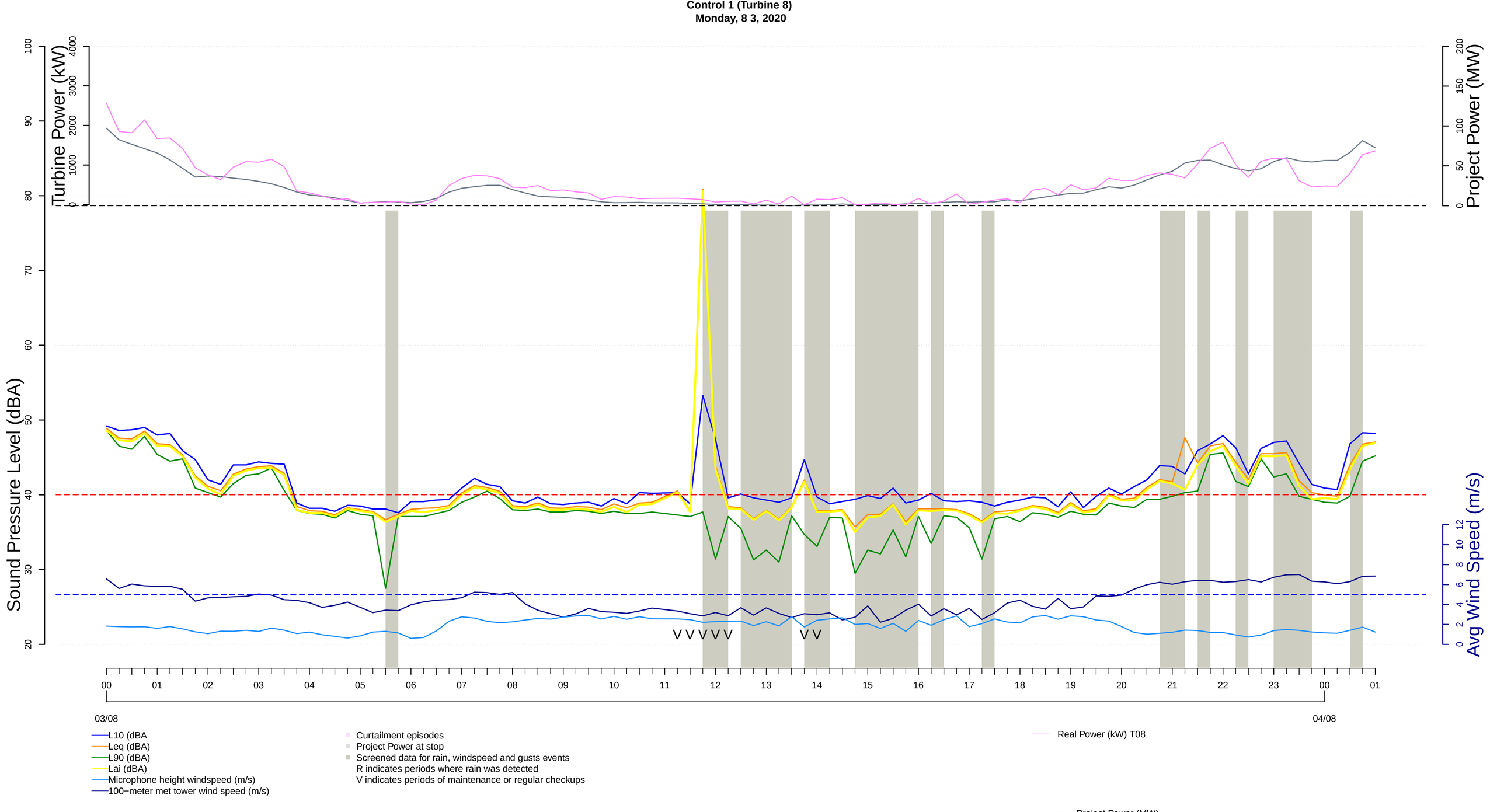


L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

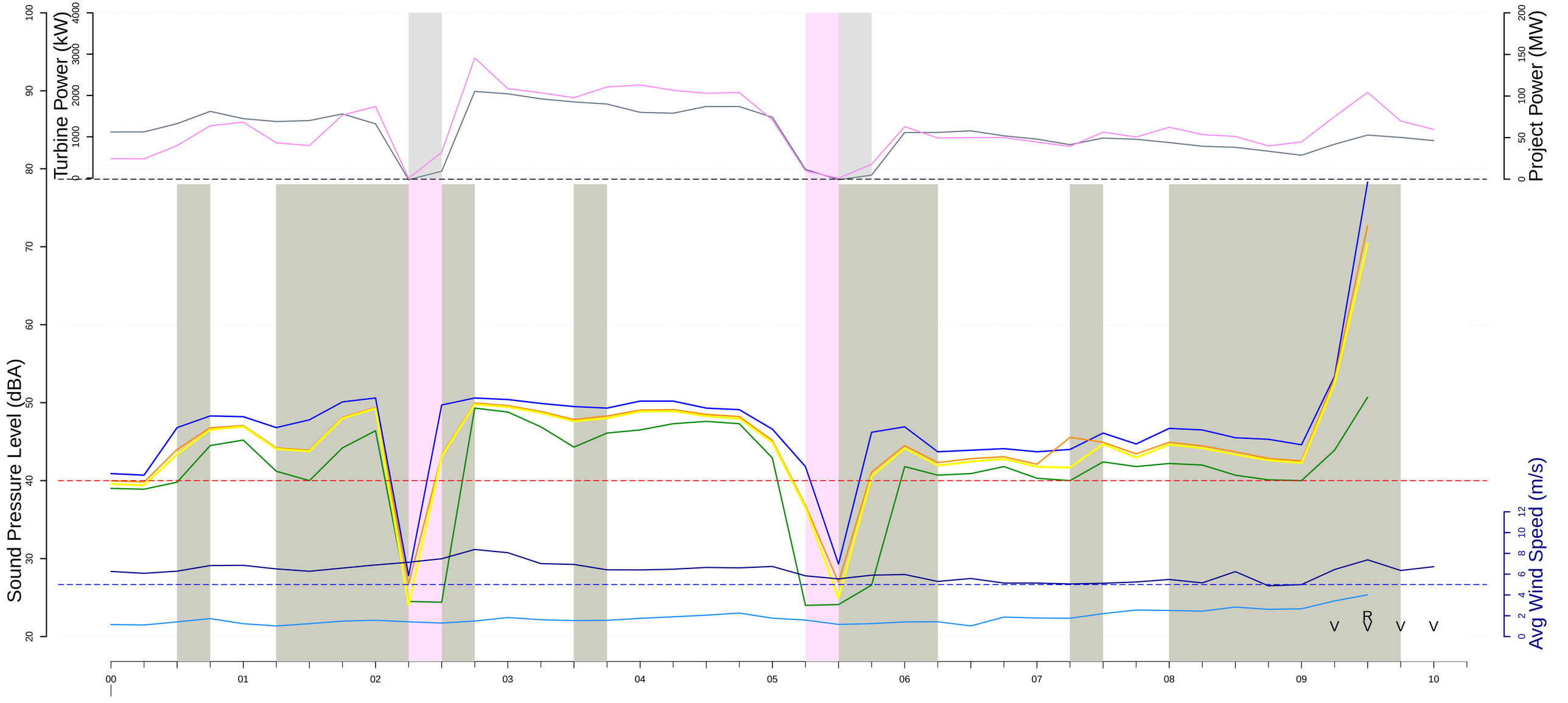
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T08

Project Power (MW)


Control 1 (Turbine 8)
Monday, 8 3, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
V V V V V
V V
03/08
04/08
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups
Real Power (kW) T08
Project Power (MW)

Control 1 (Turbine 8)
Tuesday, 8 4, 2020



L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

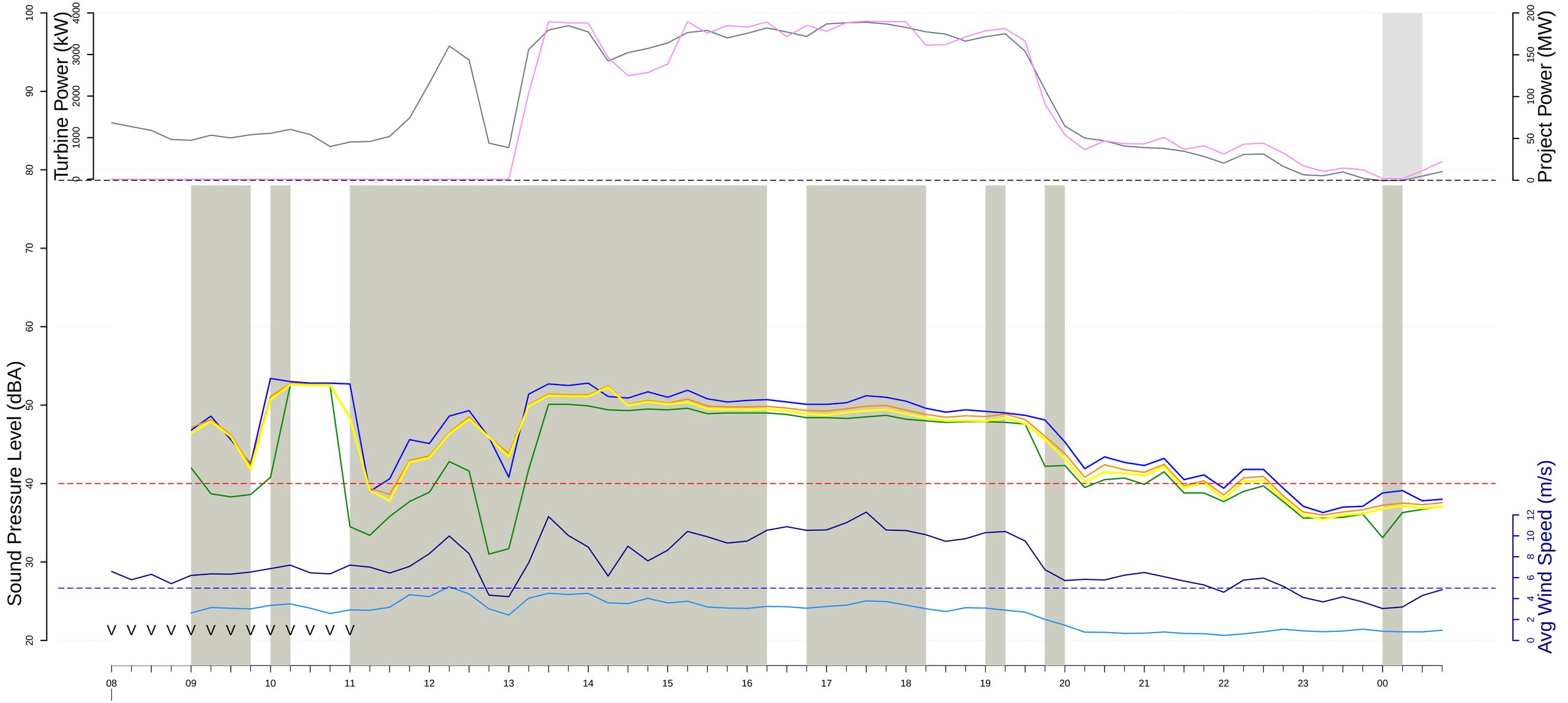
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T08

Project Power (MW)

Control 2 (Turbine 56)

Control 2 (Turbine 56)
Saturday, 7 18, 2020



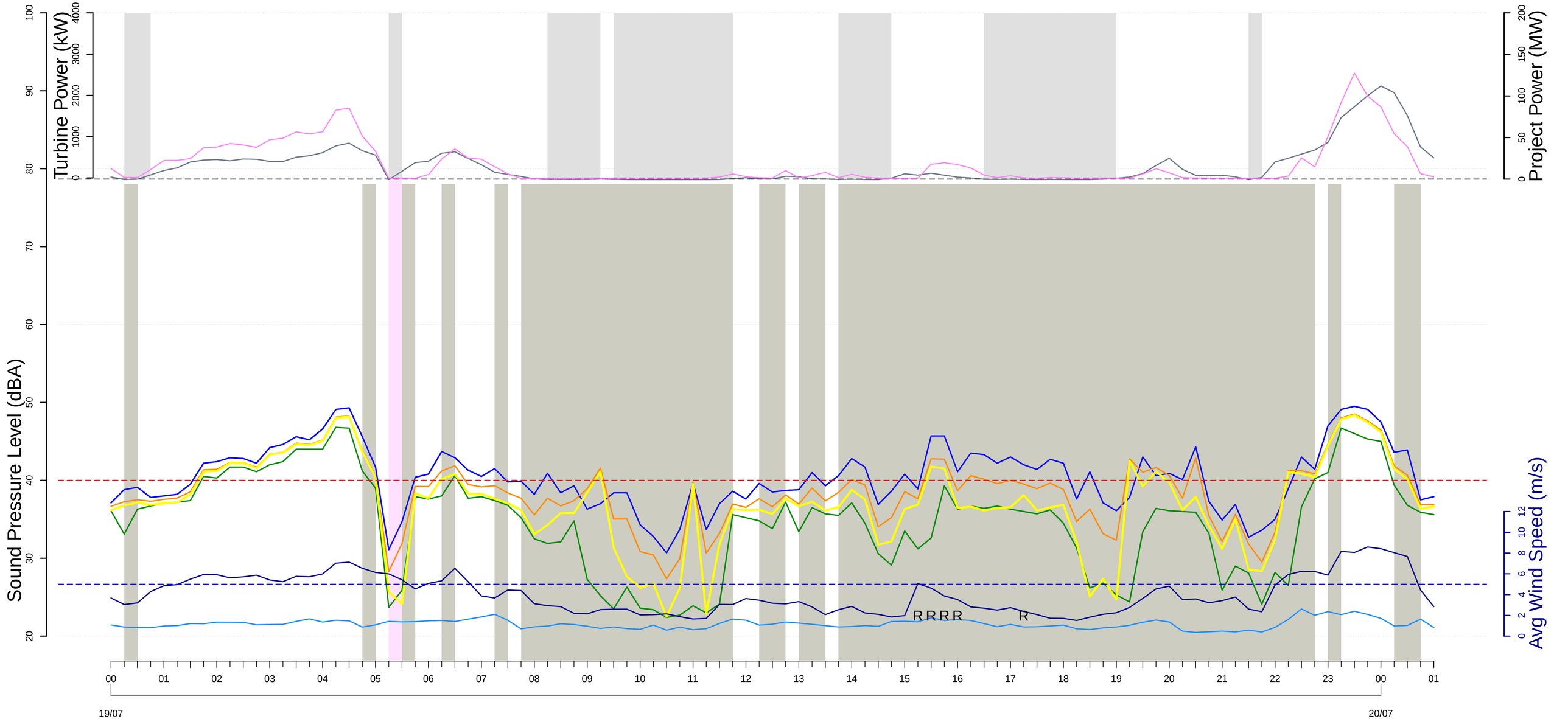
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T56

Project Power (MW)

Control 2 (Turbine 56)
Sunday, 7 19, 2020



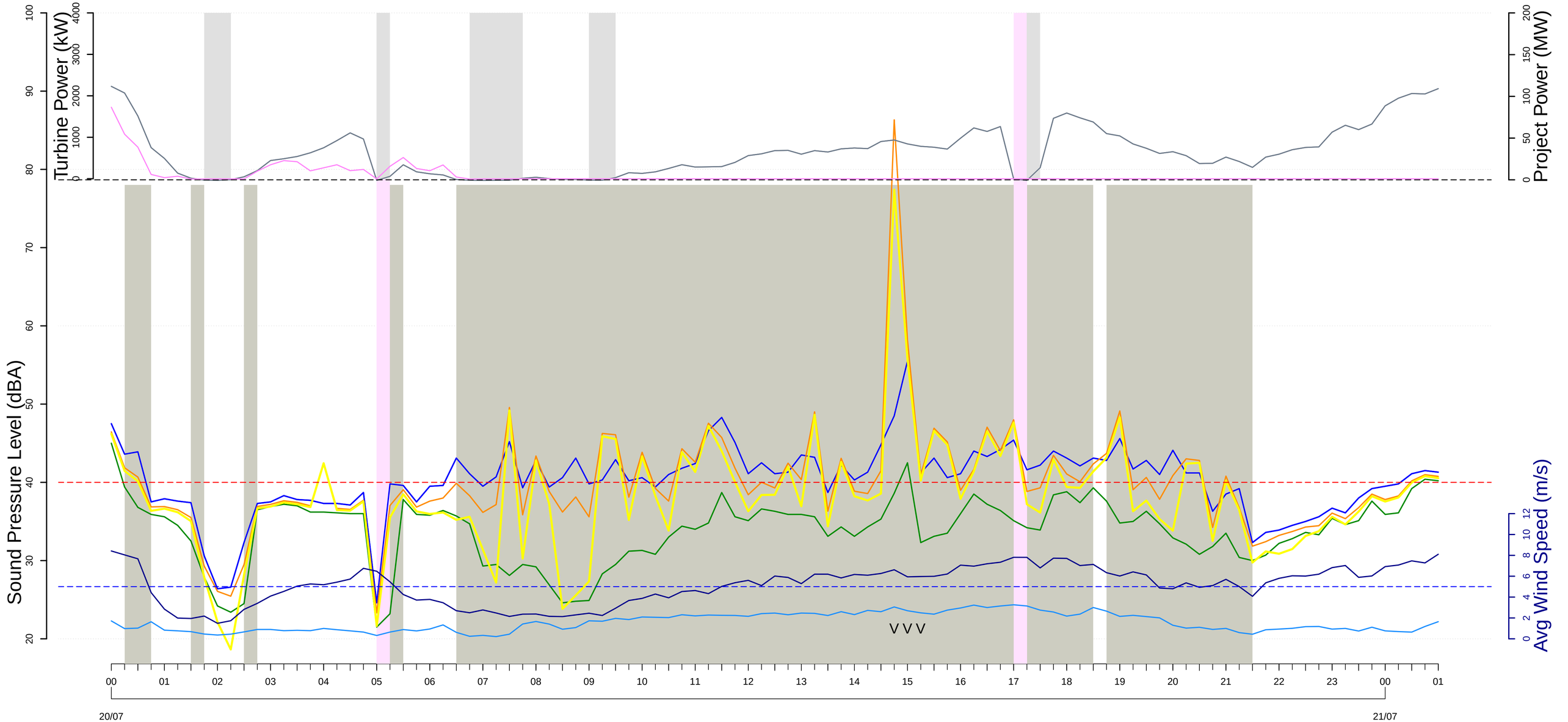
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T56

Project Power (MW)

Control 2 (Turbine 56)
Monday, 7 20, 2020



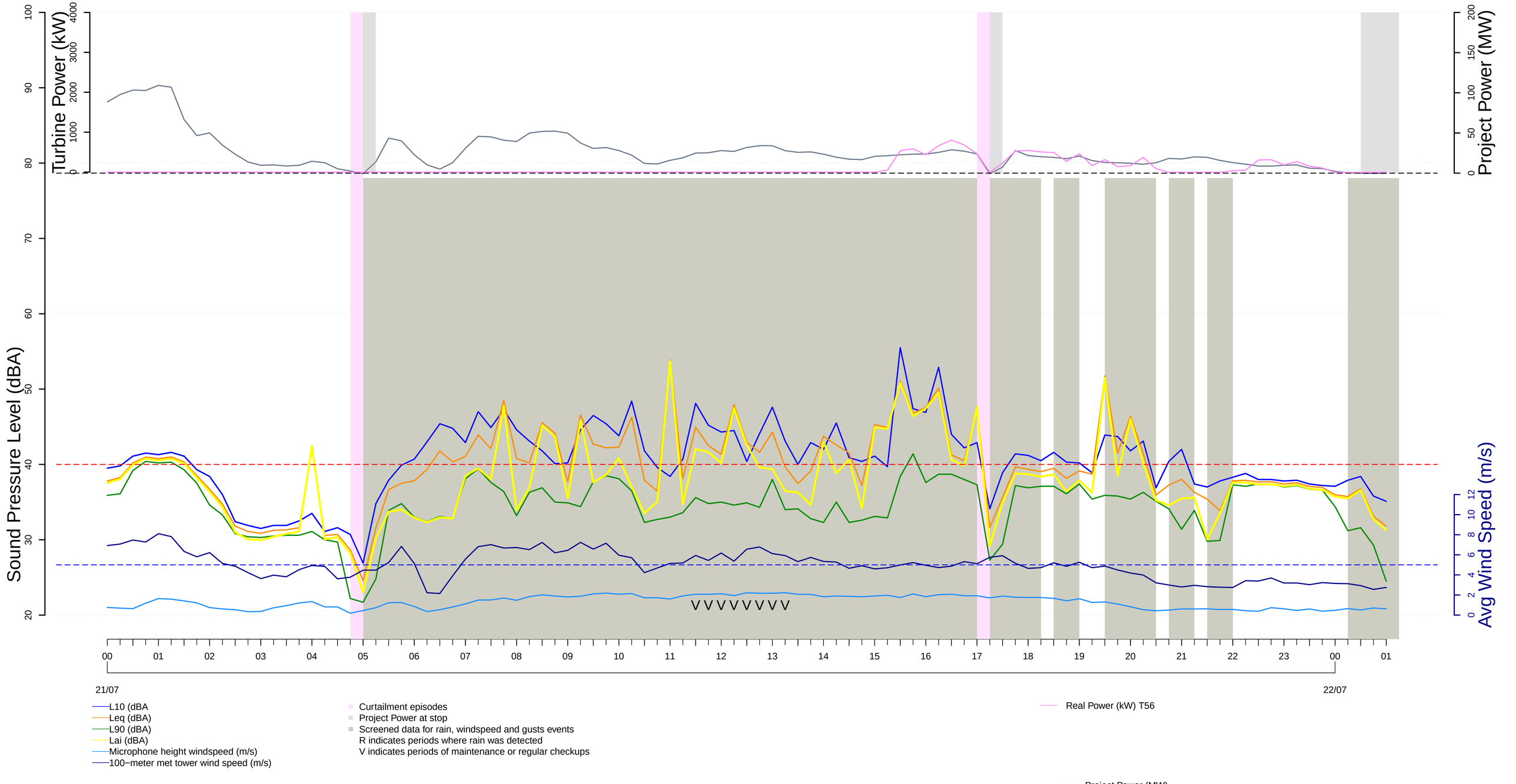
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

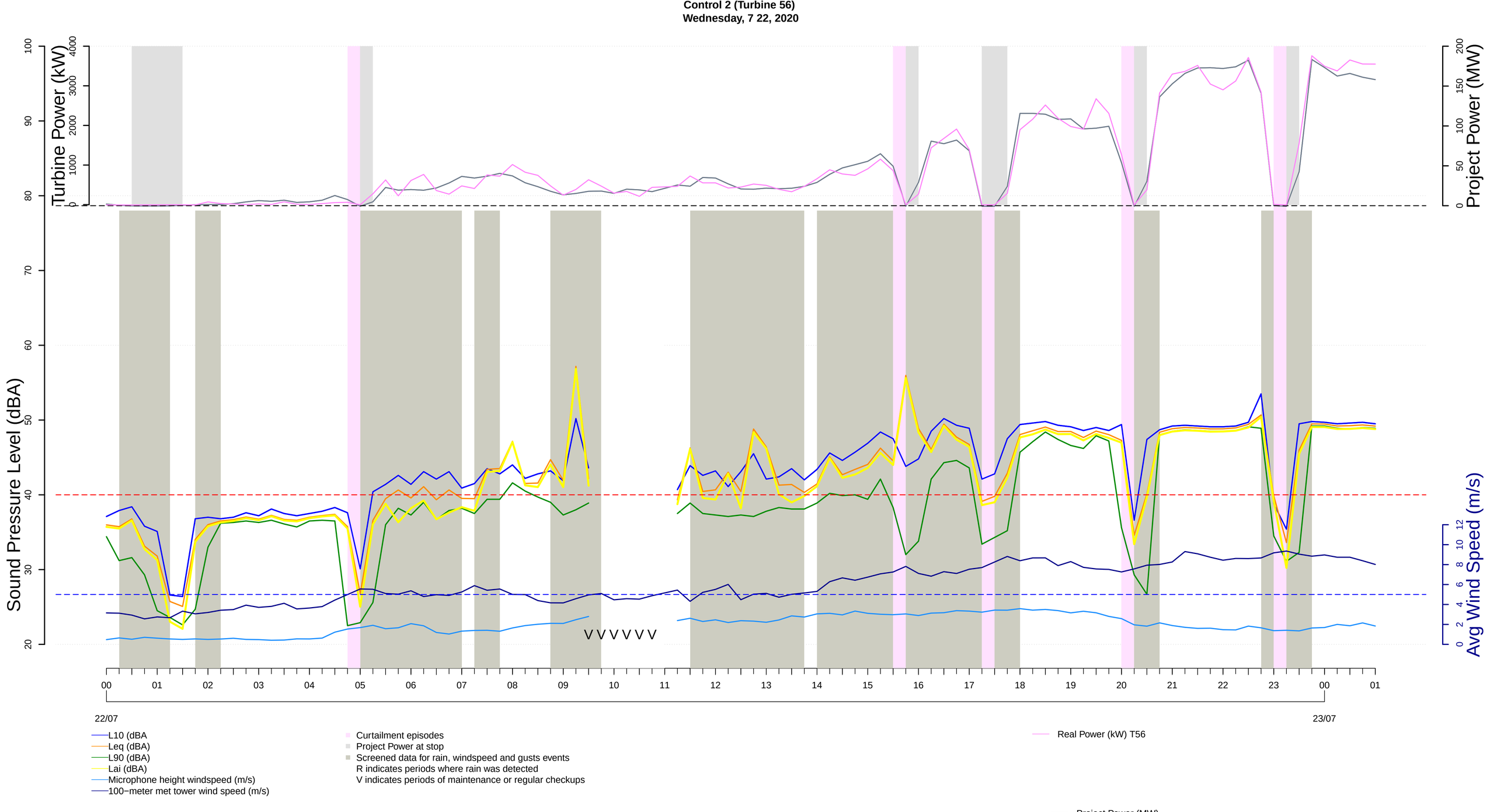
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

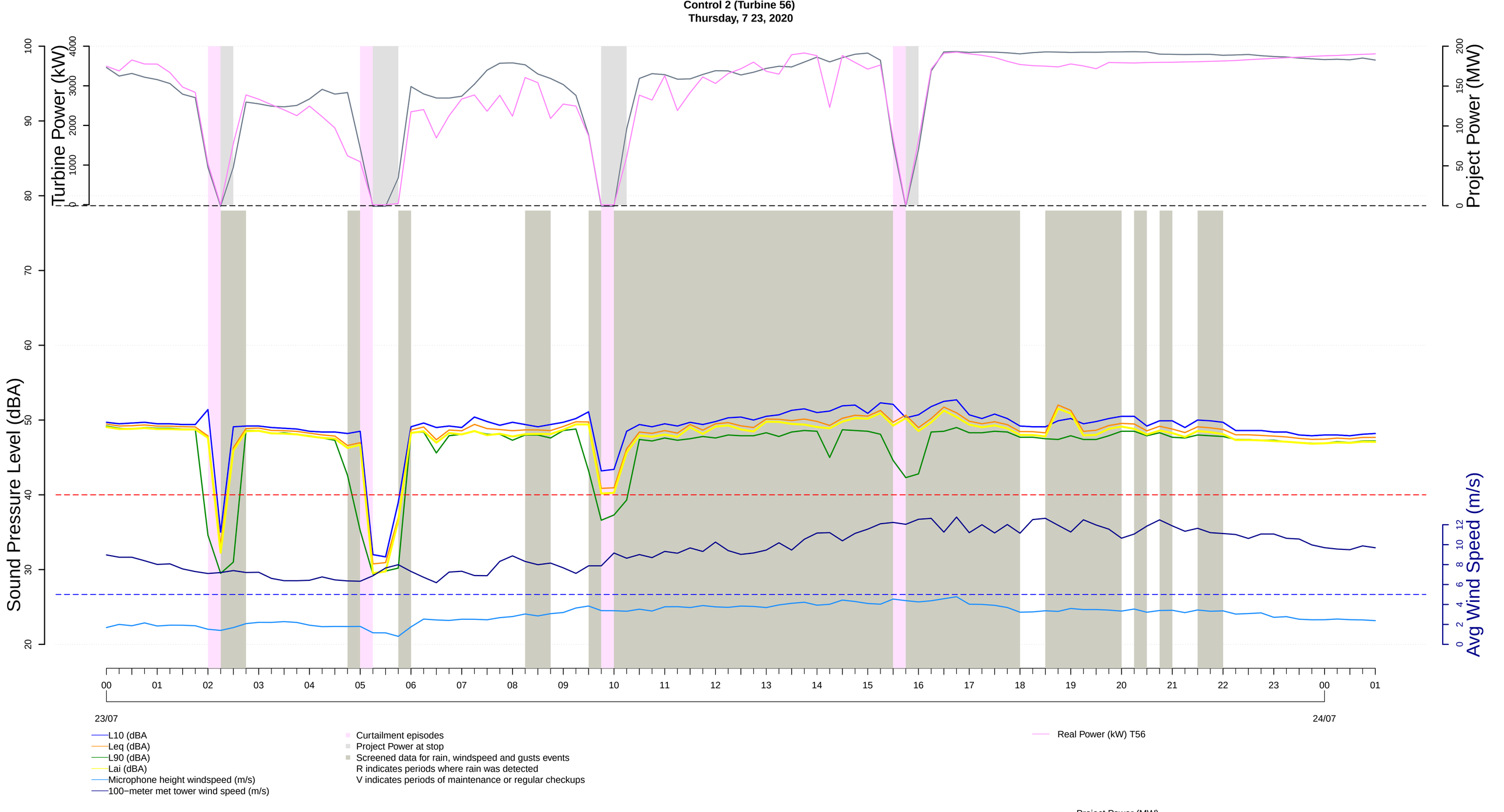
Real Power (kW) T56

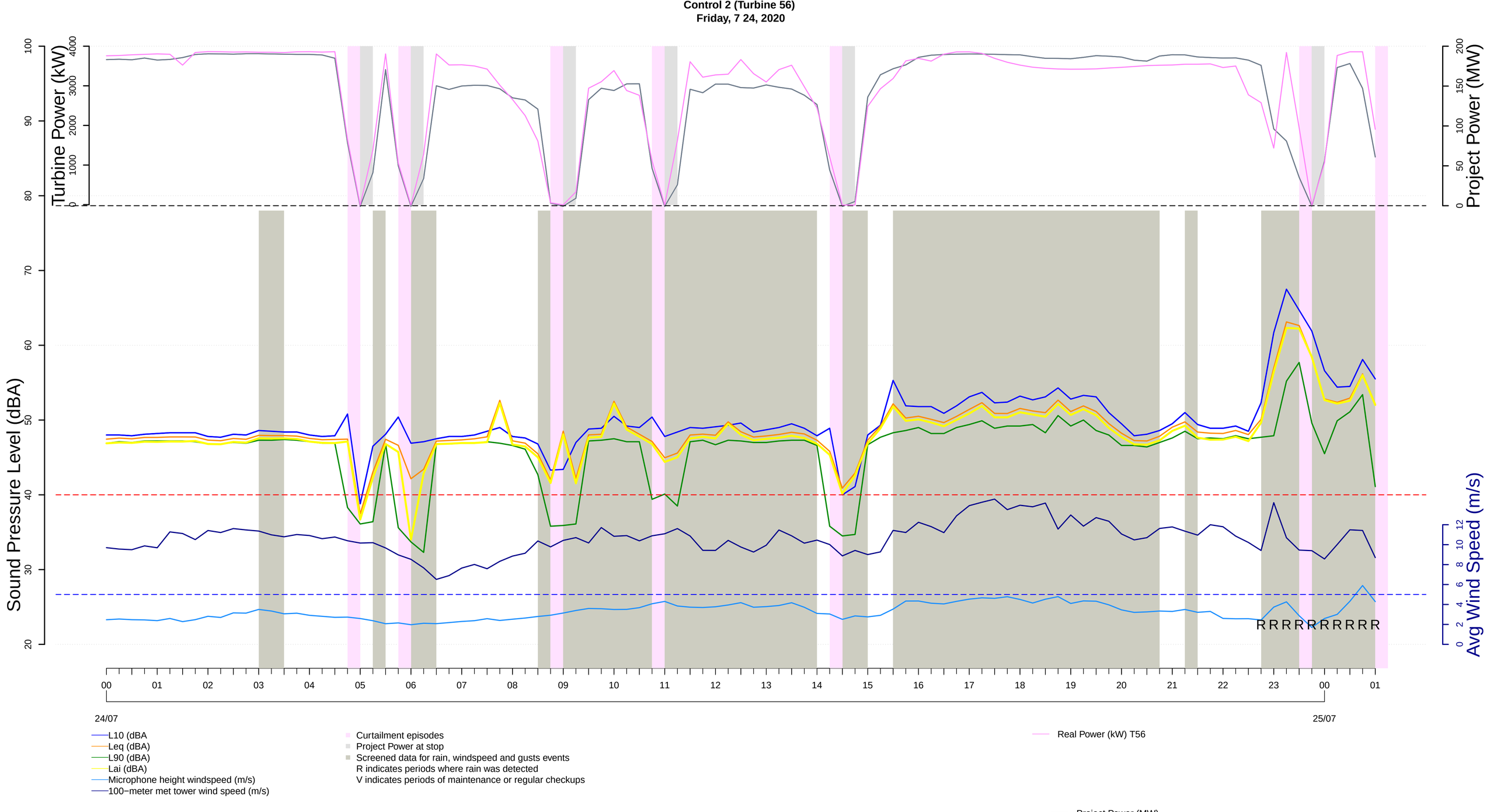
Project Power (MW)

Control 2 (Turbine 56)
Tuesday, 7 21, 2020

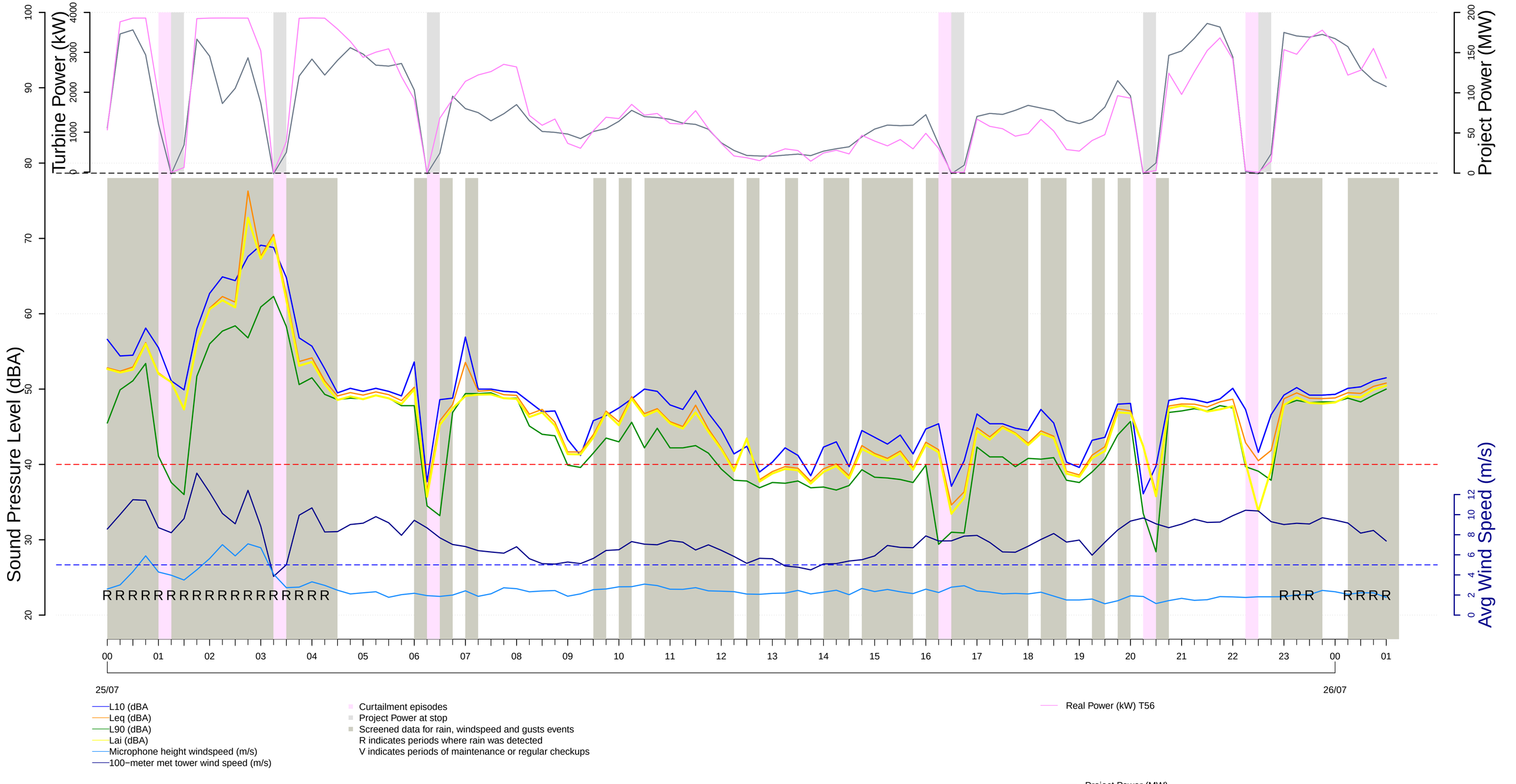



Control 2 (Turbine 56)
Wednesday, 7 22, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
V V V V V V
22/07
23/07
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups
Real Power (kW) T56
Project Power (MW)

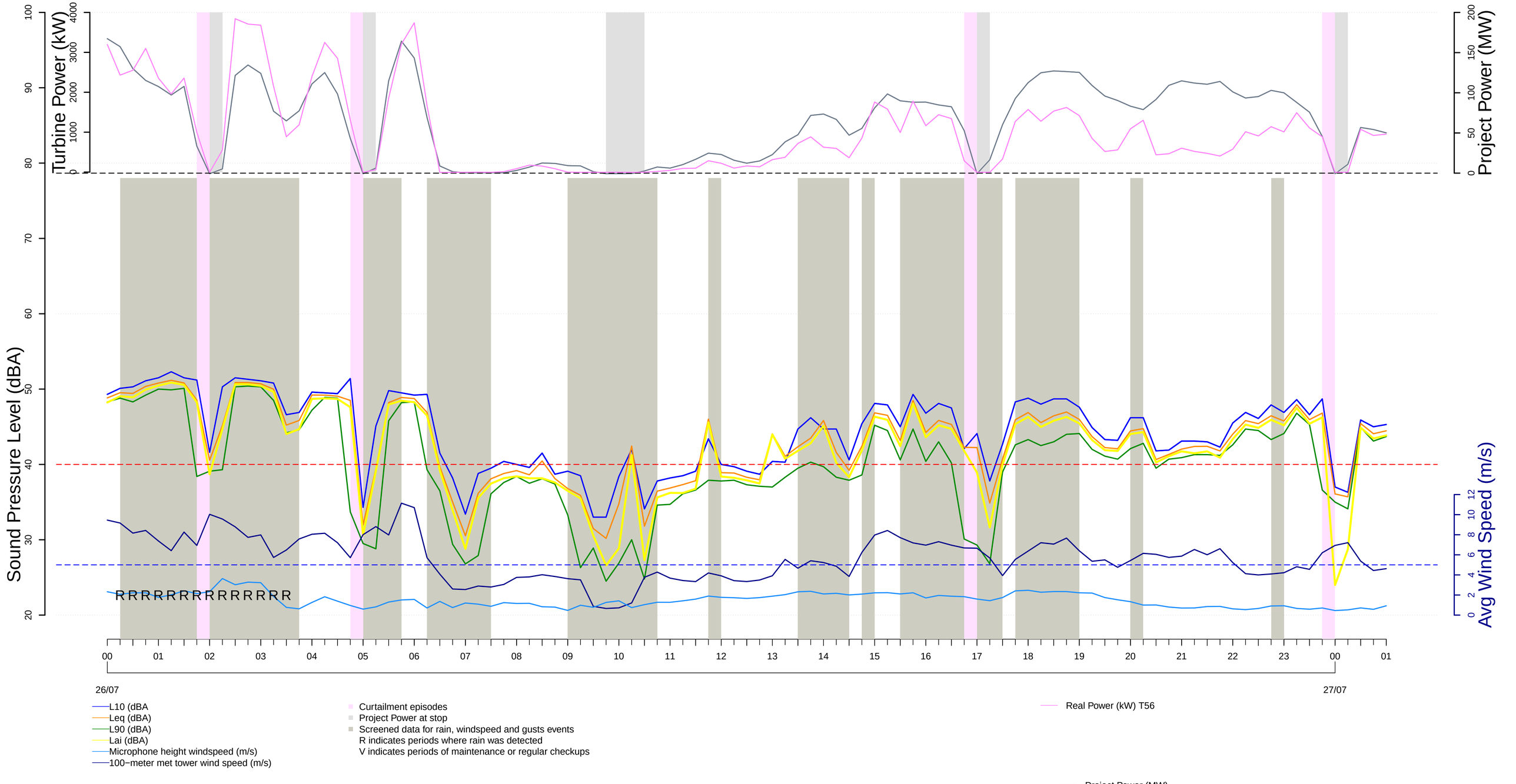

Control 2 (Turbine 56)
Thursday, 7 23, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
23/07
24/07
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups
Real Power (kW) T56
Project Power (MW)


Control 2 (Turbine 56)
Friday, 7 24, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
R R R R R R R R R R
24/07
25/07
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups
Real Power (kW) T56
Project Power (MW)

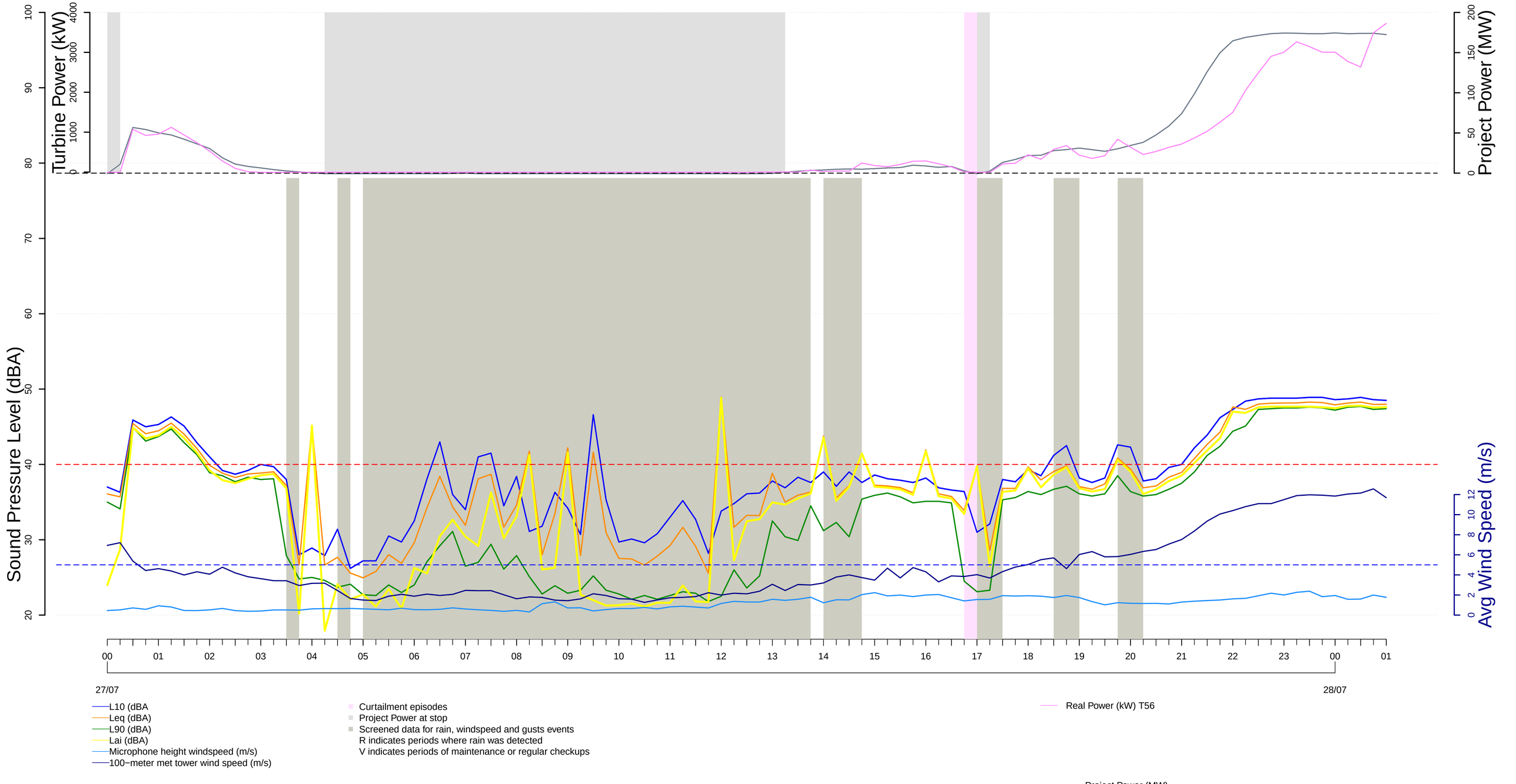
Control 2 (Turbine 56)
Saturday, 7 25, 2020



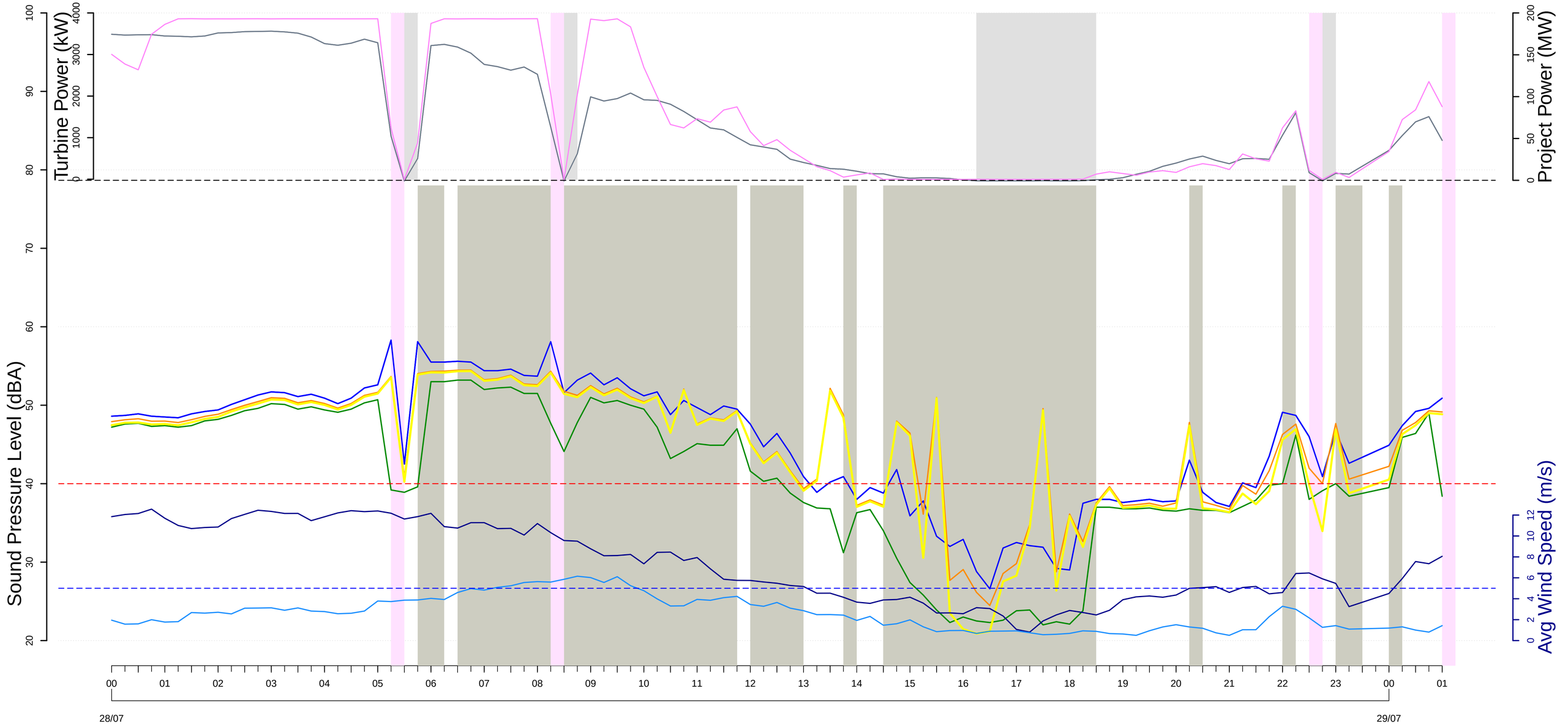
Control 2 (Turbine 56)
Sunday, 7 26, 2020



Control 2 (Turbine 56)
Monday, 7 27, 2020



Control 2 (Turbine 56)
Tuesday, 7 28, 2020

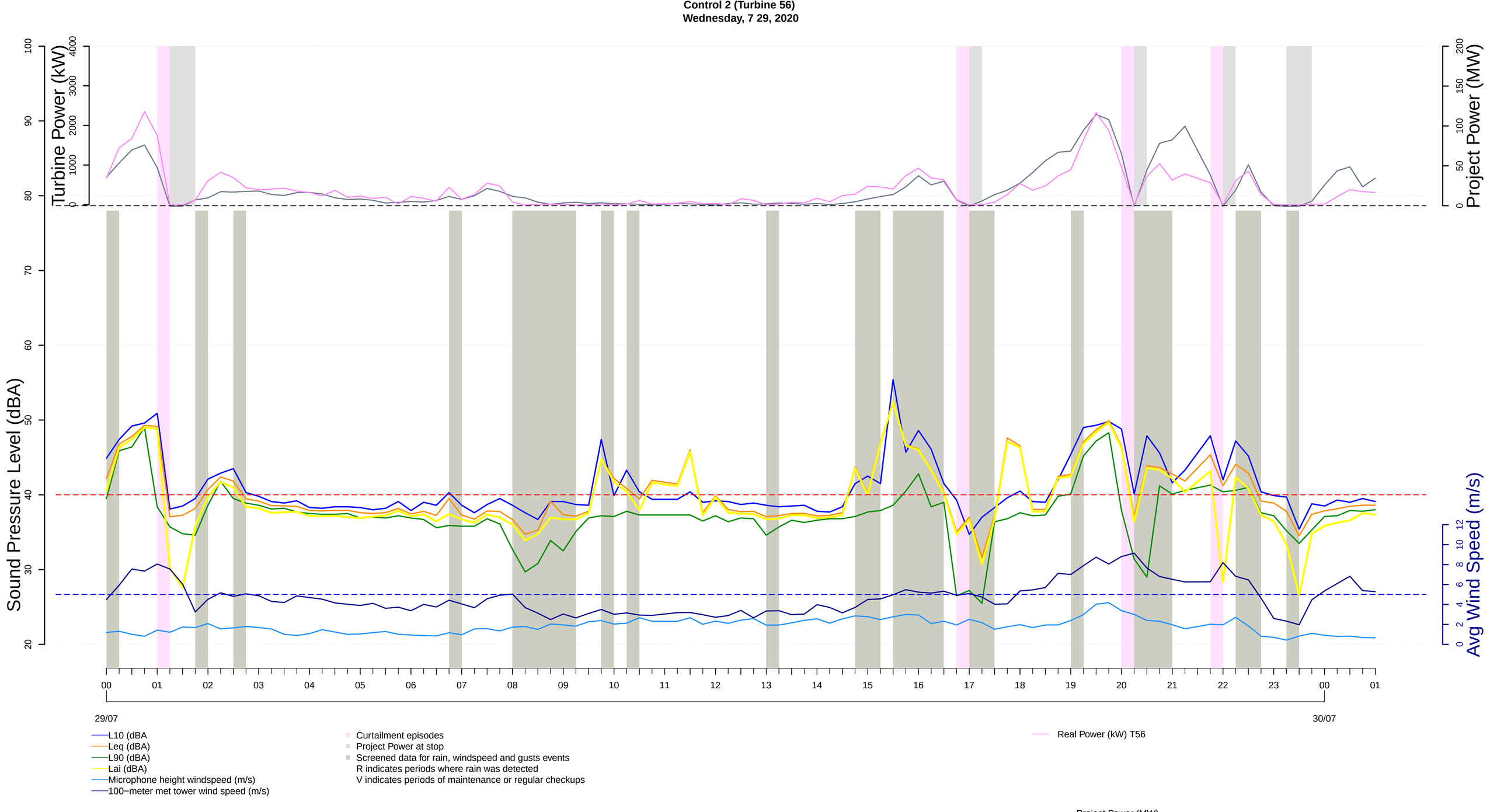


L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

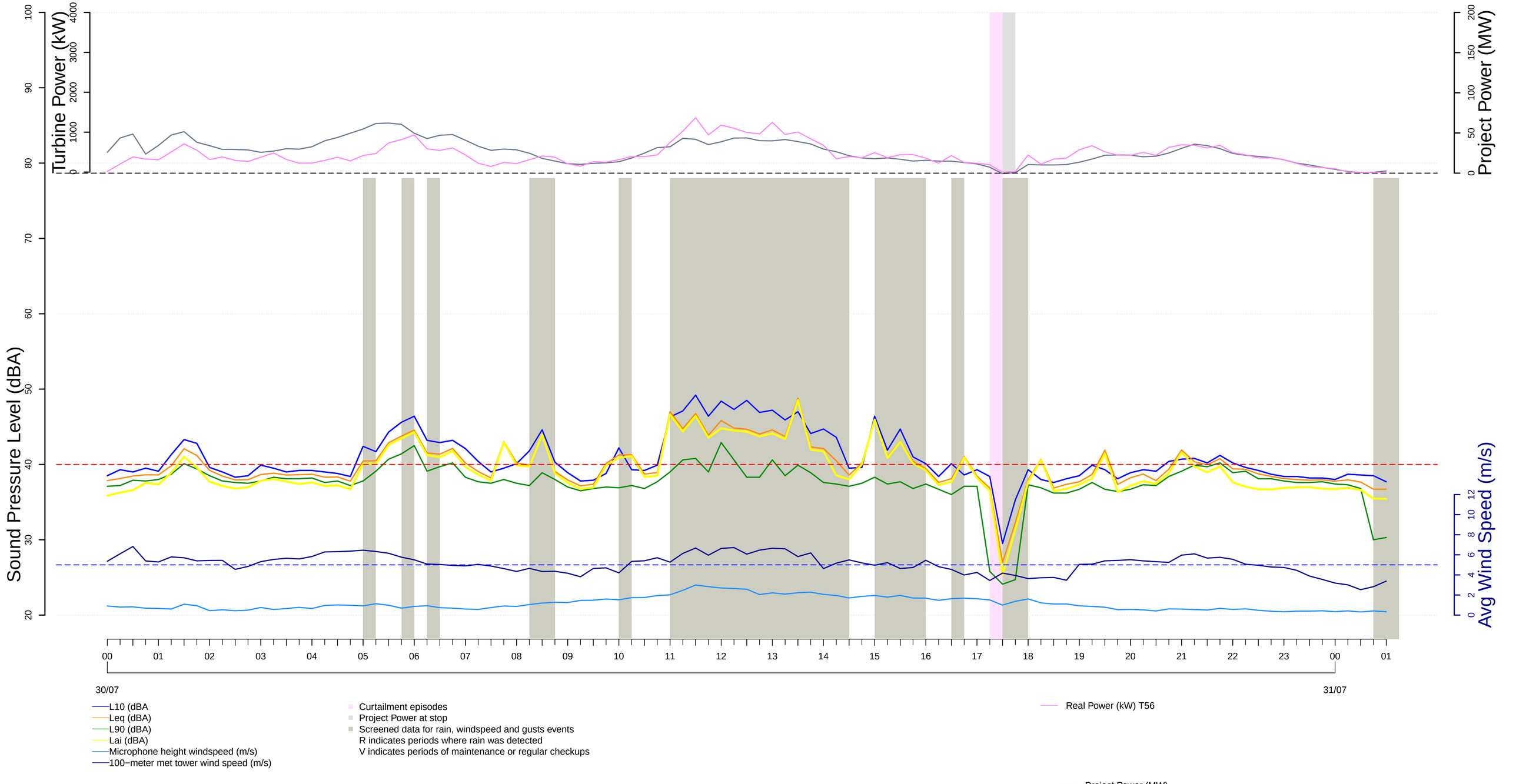
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T56

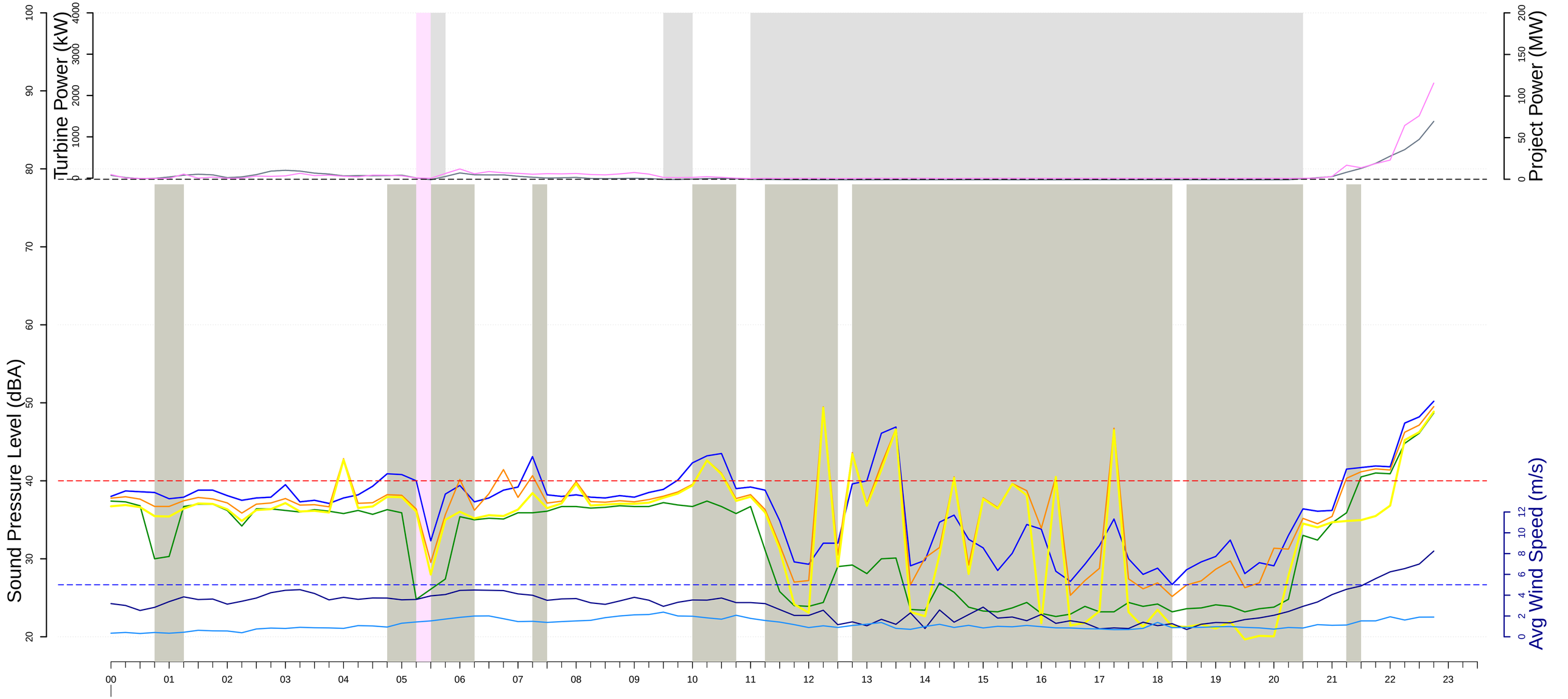
Project Power (MW)


Control 2 (Turbine 56)
Wednesday, 7 29, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
29/07
30/07
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups
Real Power (kW) T56
Project Power (MW)

Control 2 (Turbine 56)
Thursday, 7 30, 2020



Control 2 (Turbine 56)
Friday, 7 31, 2020

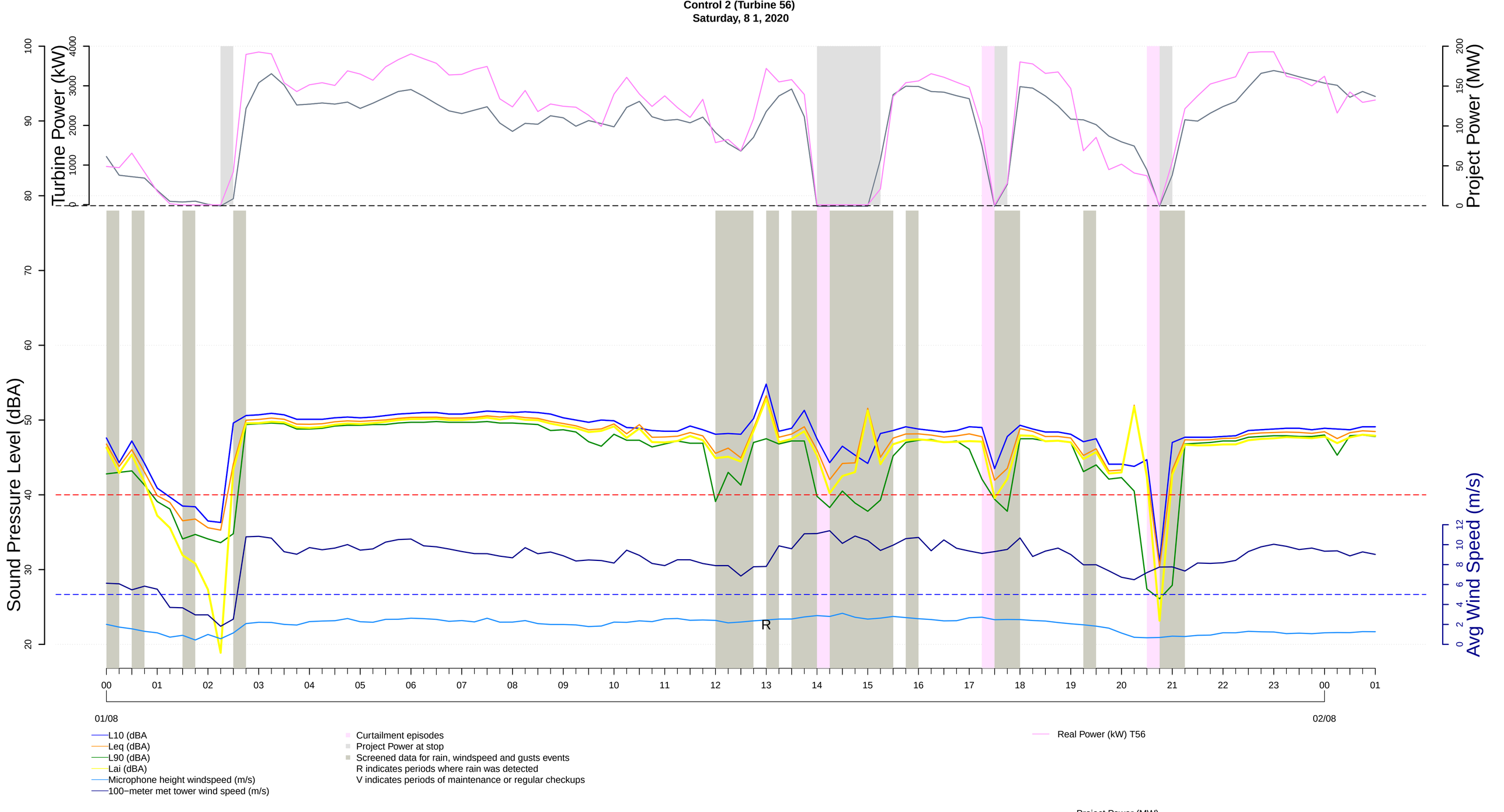


31/07

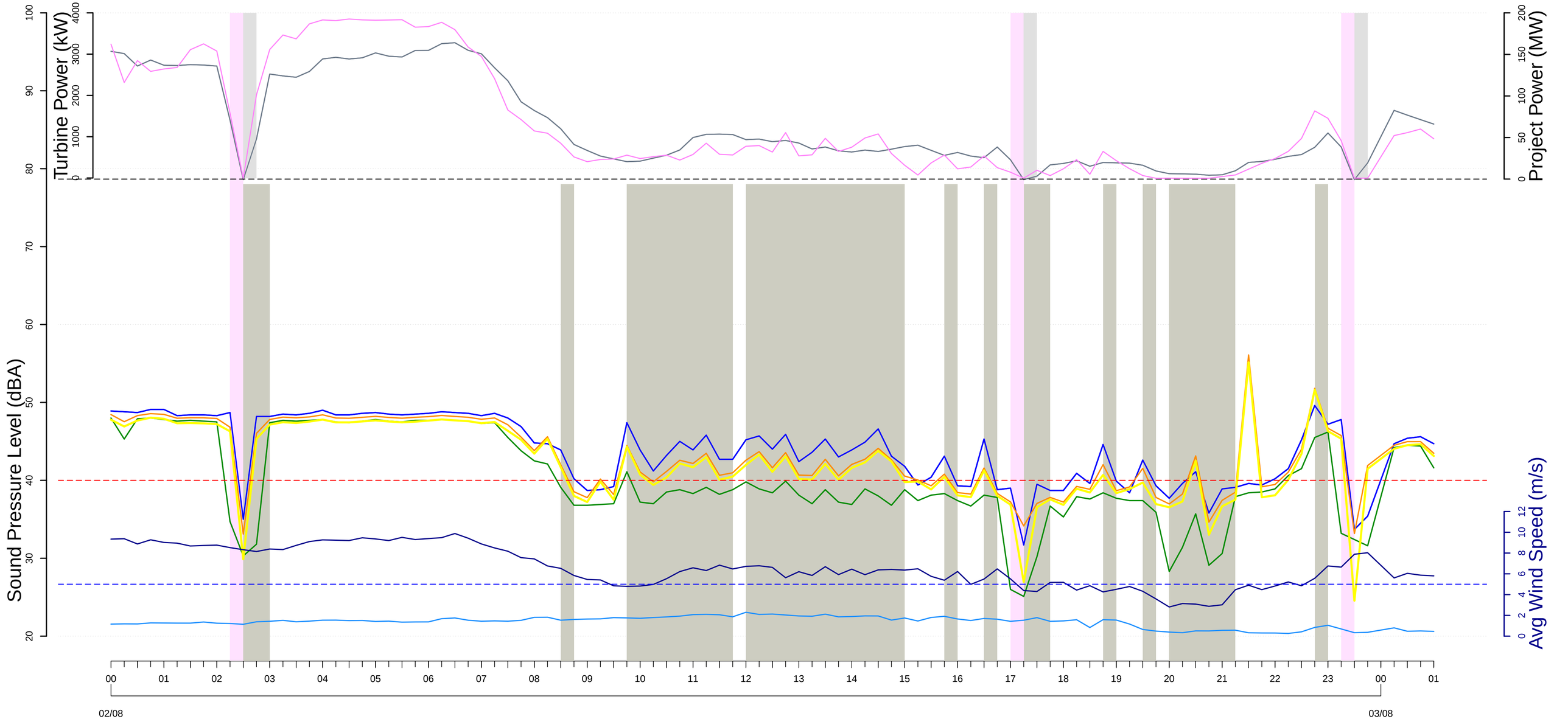
- L10 (dBA
- Leq (dBA)
- L90 (dBA)
- Lai (dBA)
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)

- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
  V indicates periods of maintenance or regular checkups

- Real Power (kW) T56
- Project Power (MW)


Control 2 (Turbine 56)
Saturday, 8 1, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
R
01/08
02/08
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups
Real Power (kW) T56
Project Power (MW)

Control 2 (Turbine 56)
Sunday, 8 2, 2020



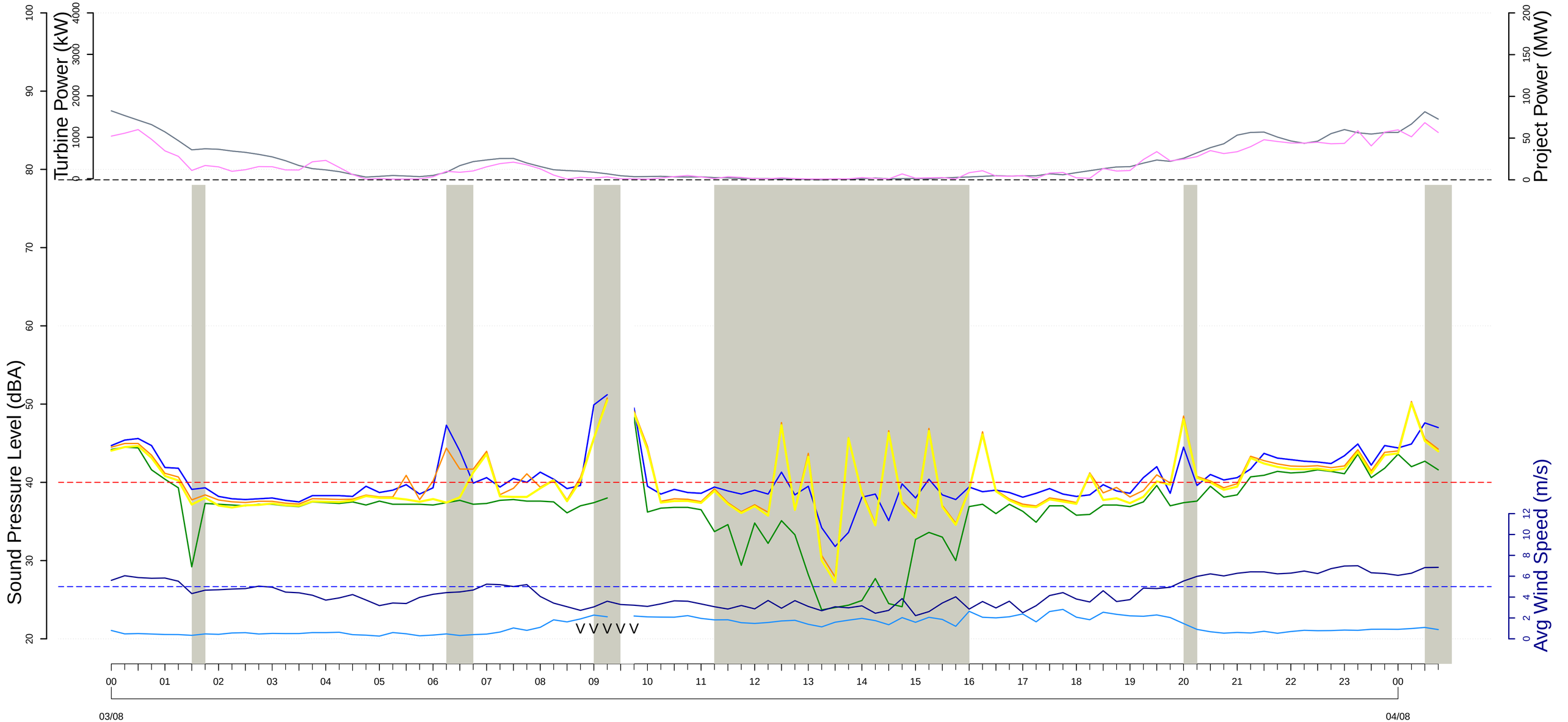
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T56

Project Power (MW)

Control 2 (Turbine 56)
Monday, 8 3, 2020

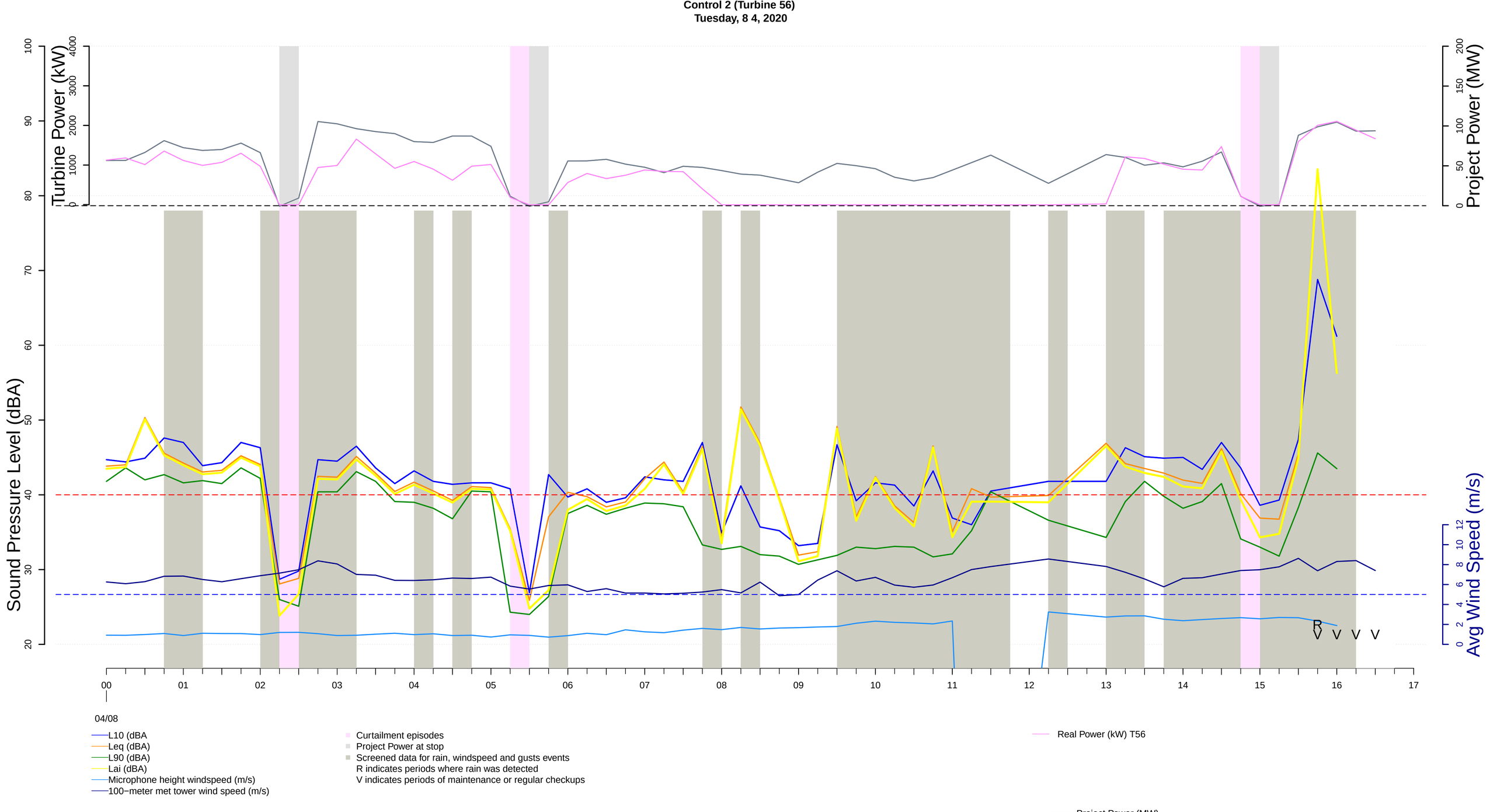


L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)

Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

Real Power (kW) T56

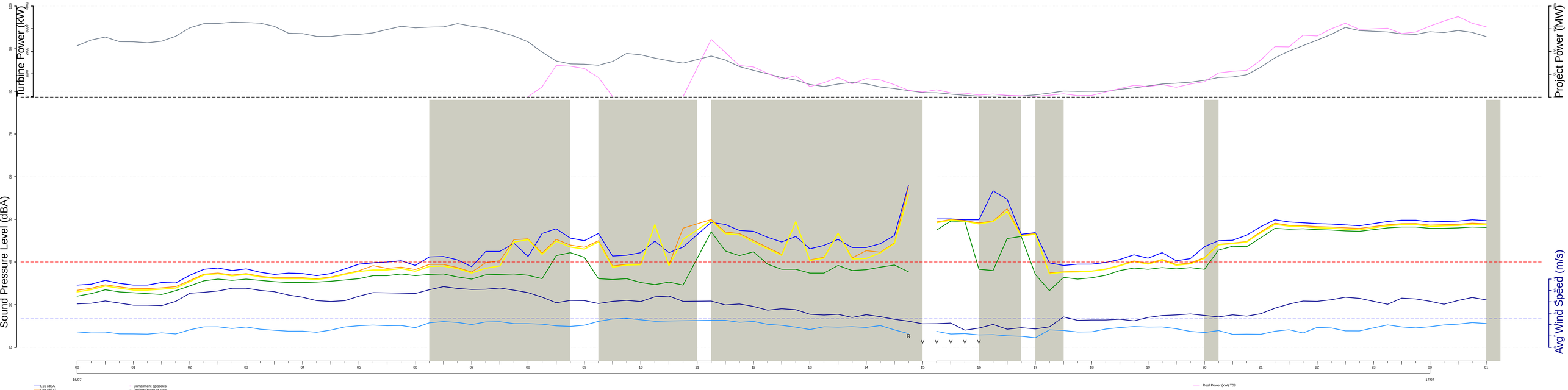
Project Power (MW)


Control 2 (Turbine 56)
Tuesday, 8 4, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
R
V V V V
04/08
L10 (dBA
Leq (dBA)
L90 (dBA)
Lai (dBA)
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups
Real Power (kW) T56
Project Power (MW)

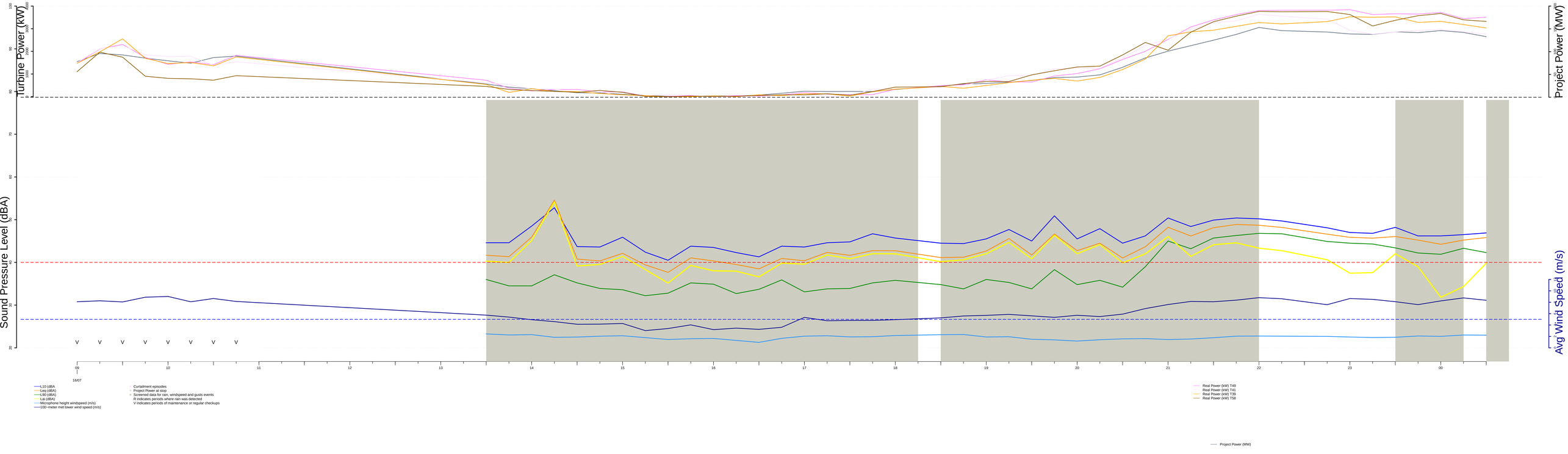
Appendix E-2
Control versus Residence Plots

REC-024 (Pazour Residence)

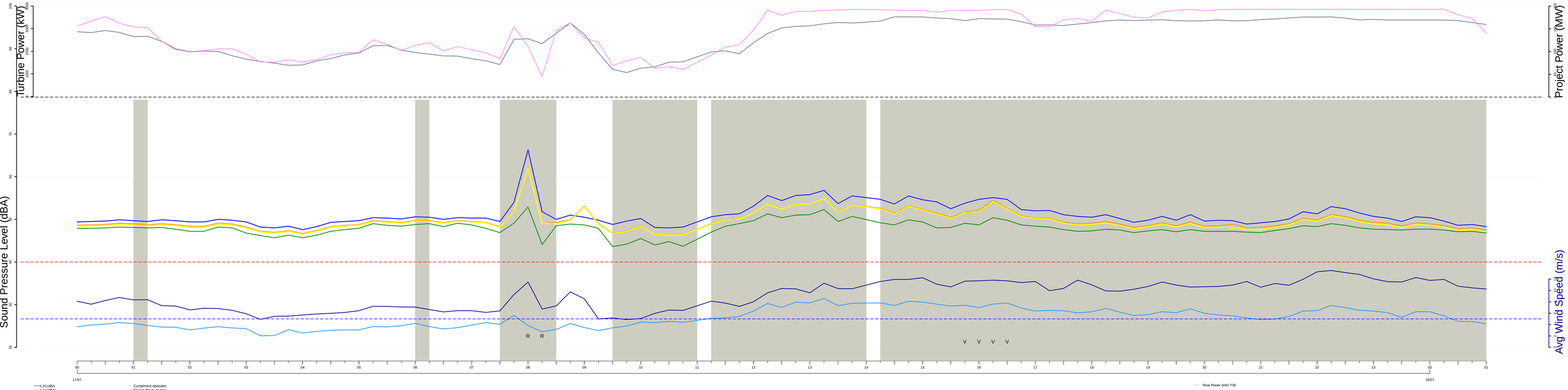
Control 1 (Turbine 8)
Thursday, 7 16, 2020



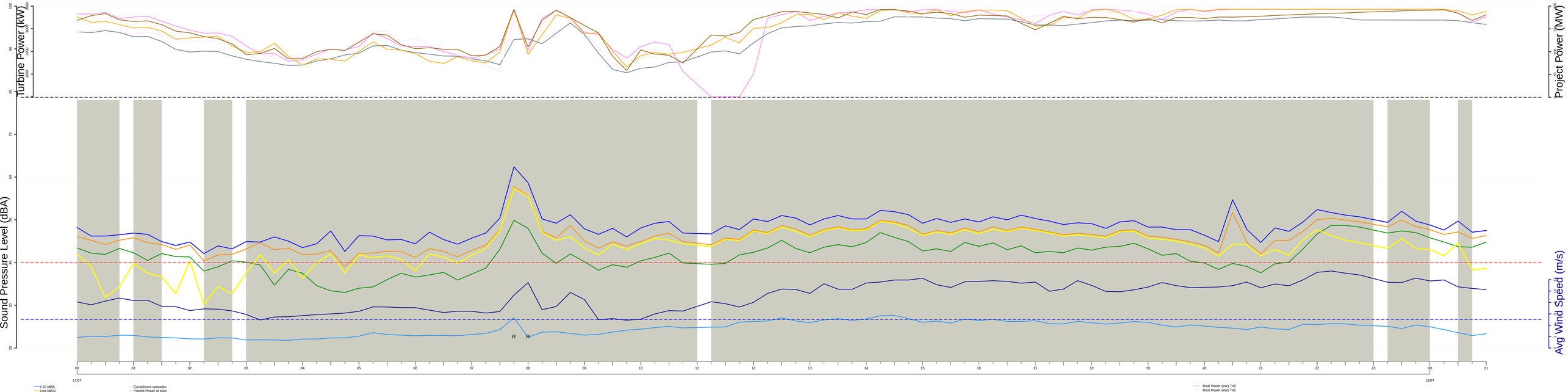
REC~024 (Pazour Residence)
Thursday, 7 16, 2020



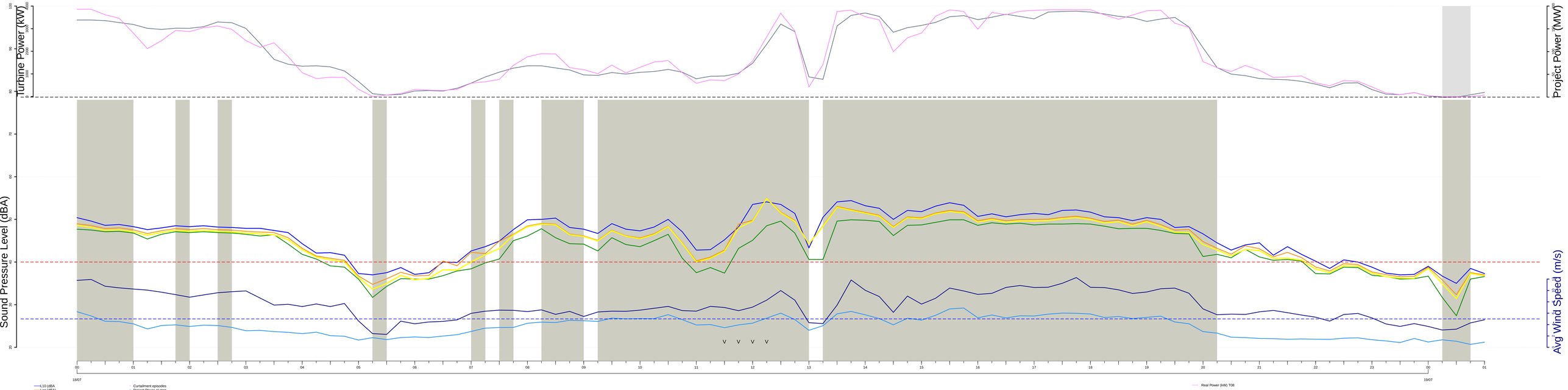
Control 1 (Turbine 8)
Friday, 7 17, 2020



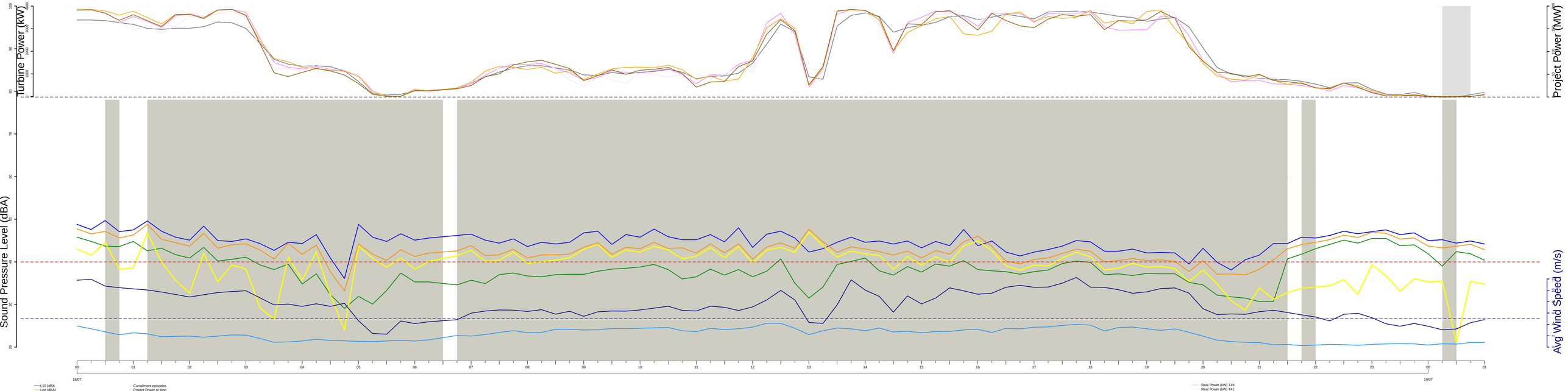
REC~024 (Pazour Residence)
Friday, 7 17, 2020



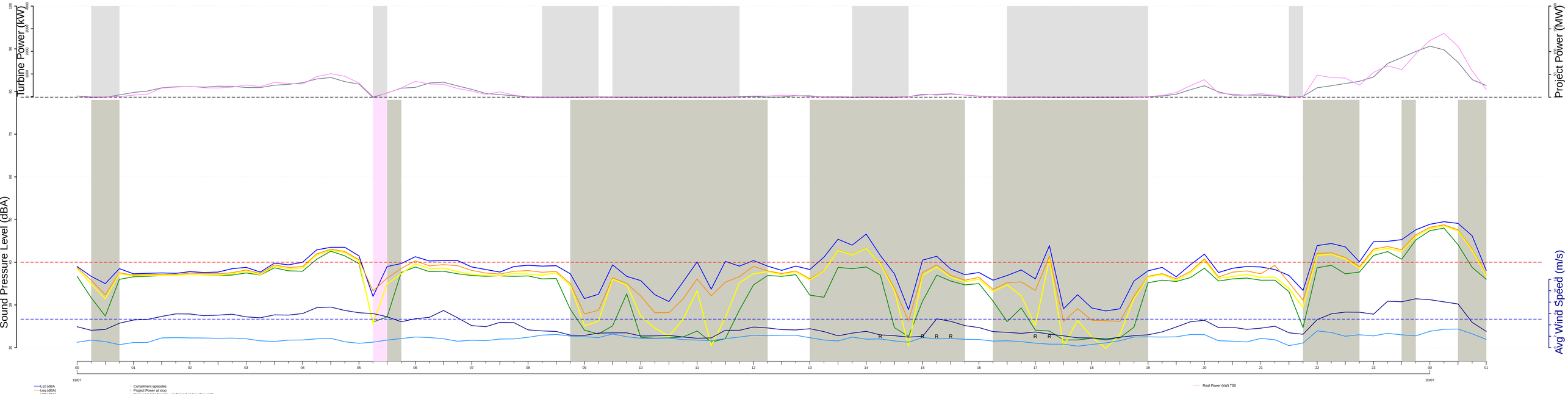
Control 1 (Turbine 8)
Saturday, 7 18, 2020



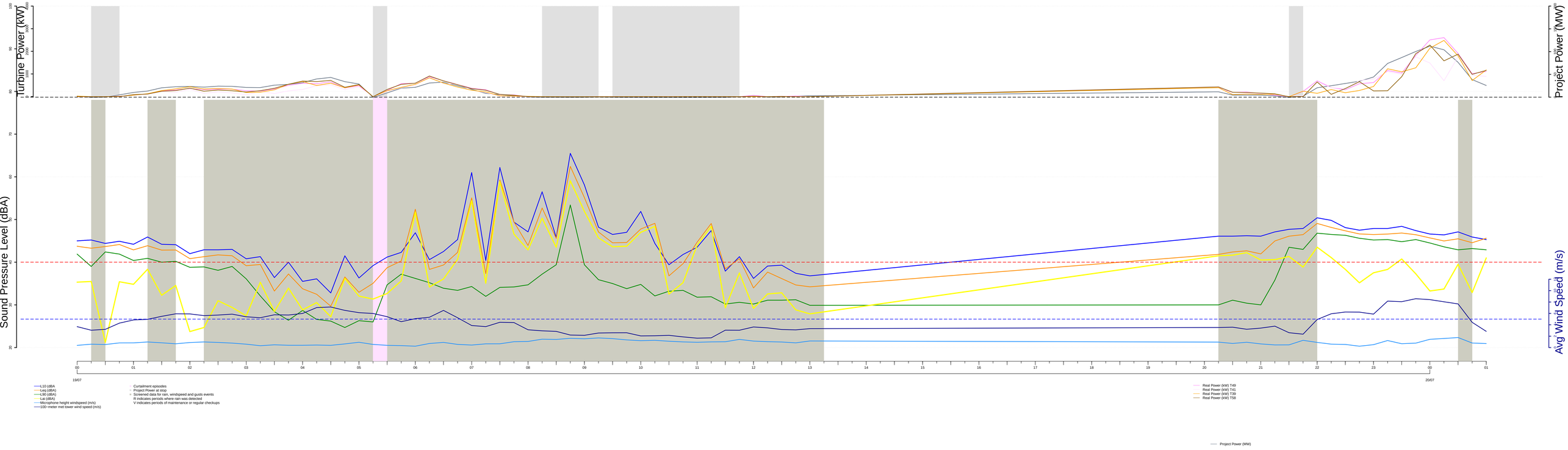
REC~024 (Pazour Residence)
Saturday, 7 18, 2020



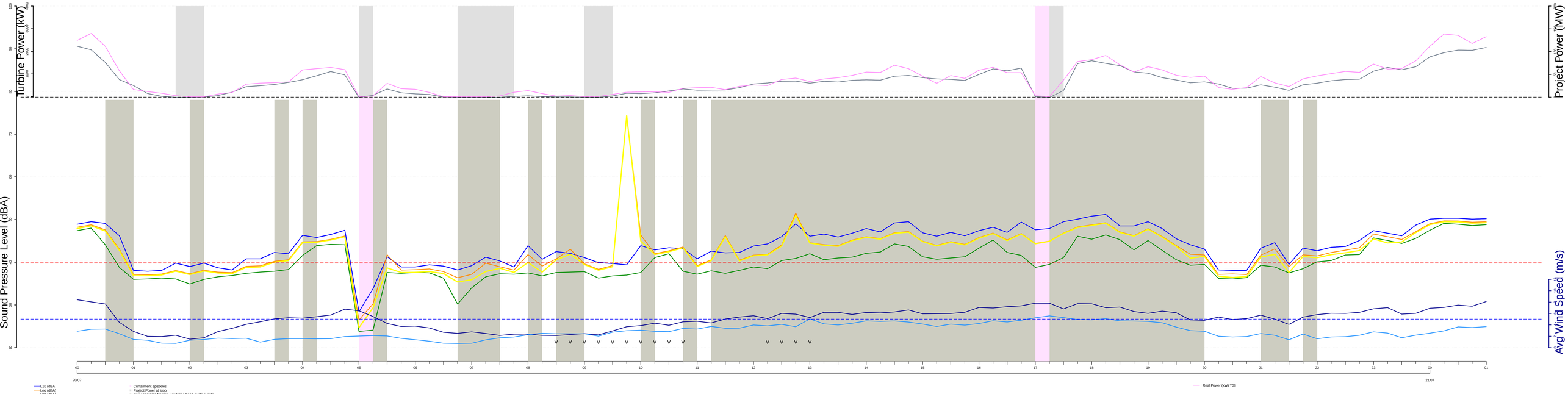
Control 1 (Turbine 8)
Sunday, 7 19, 2020



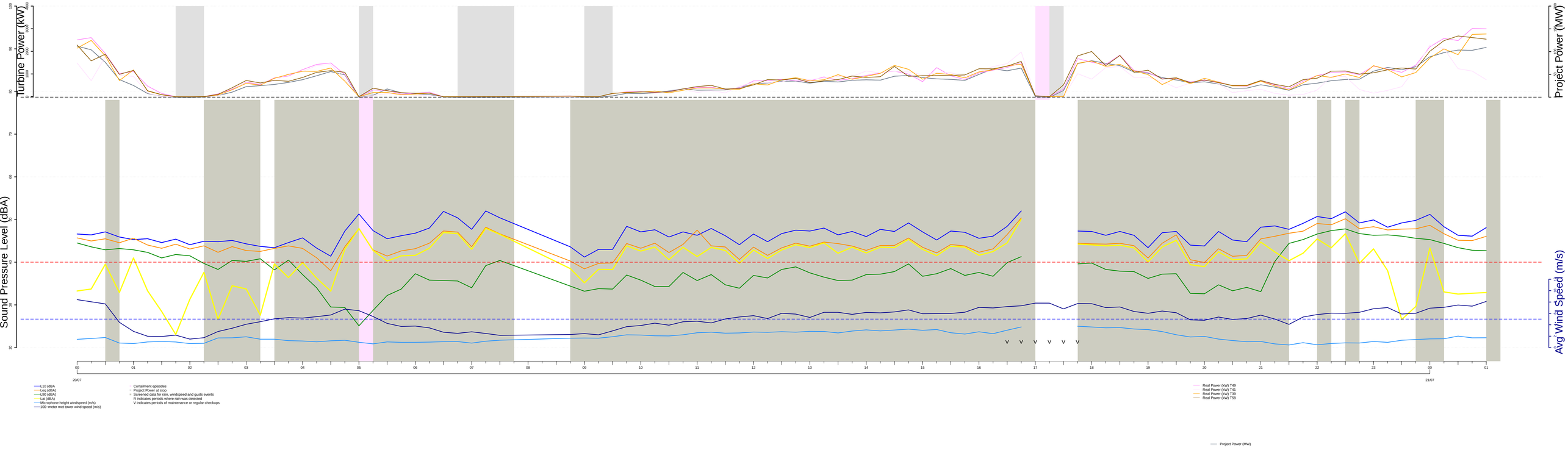
REC~024 (Pazour Residence)
Sunday, 7 19, 2020



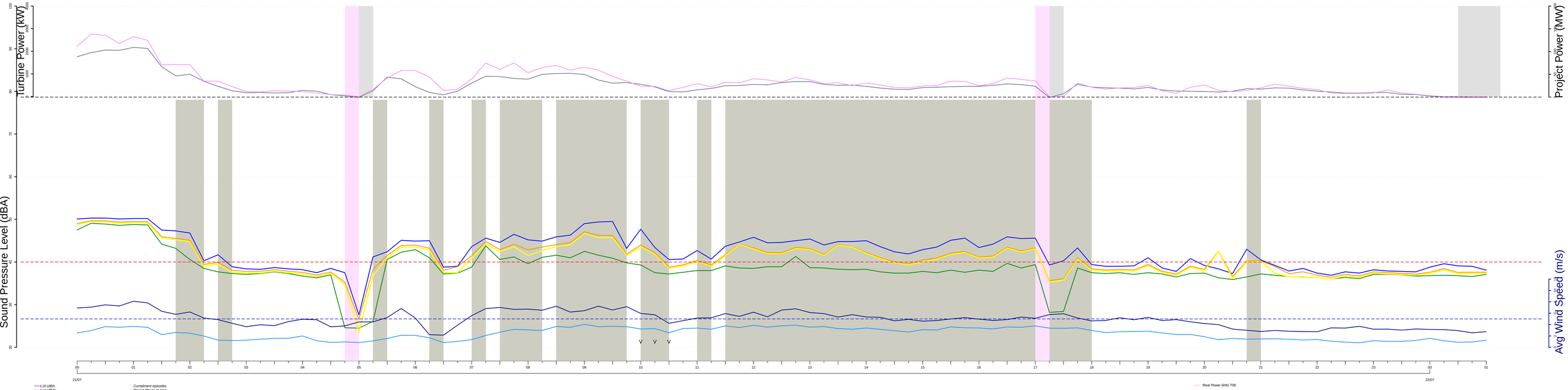
Control 1 (Turbine 8)
Monday, 7 20, 2020



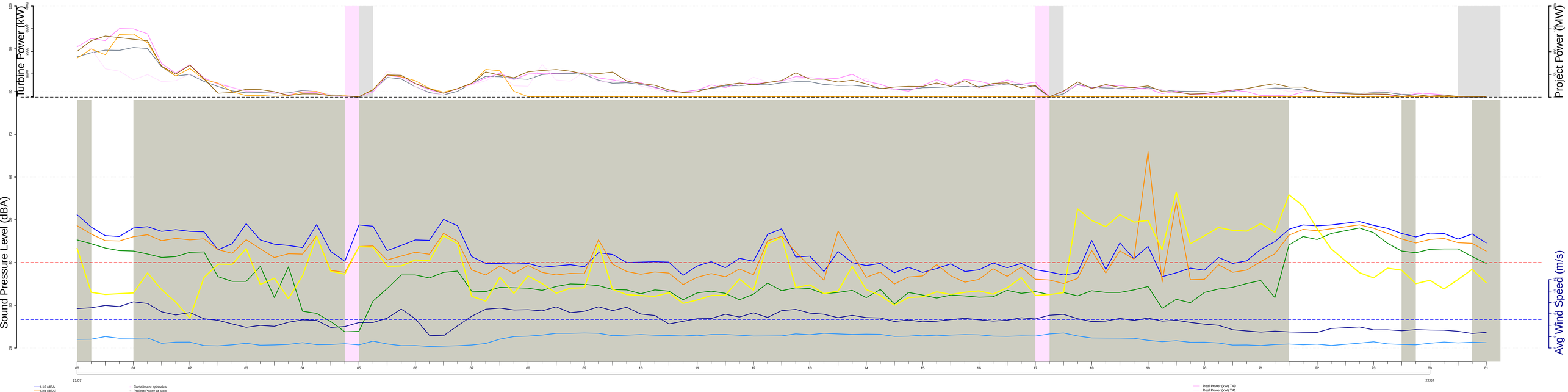
REC~024 (Pazour Residence)
Monday, 7 20, 2020



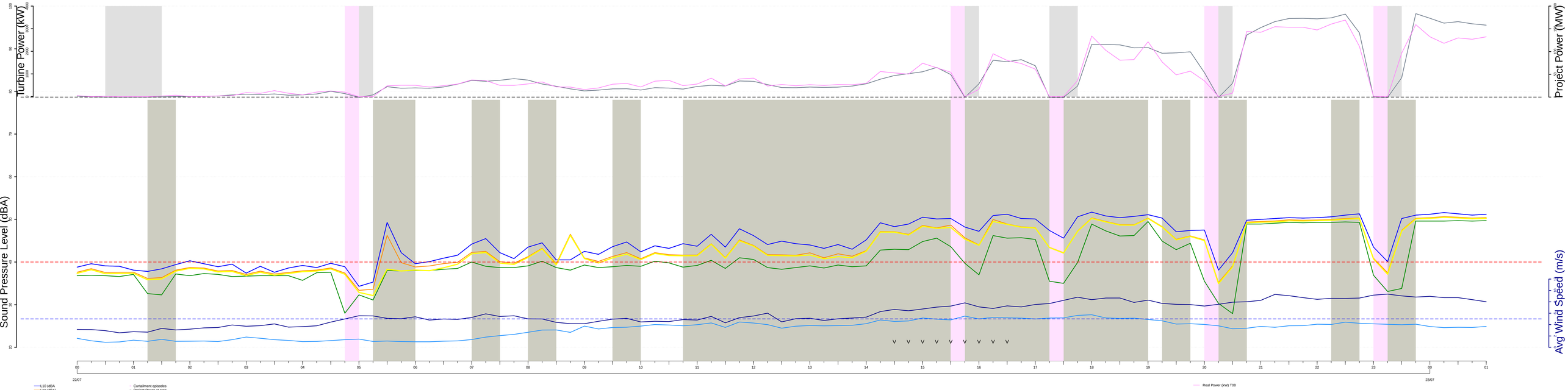
Control 1 (Turbine 8)
Tuesday, 7 21, 2020



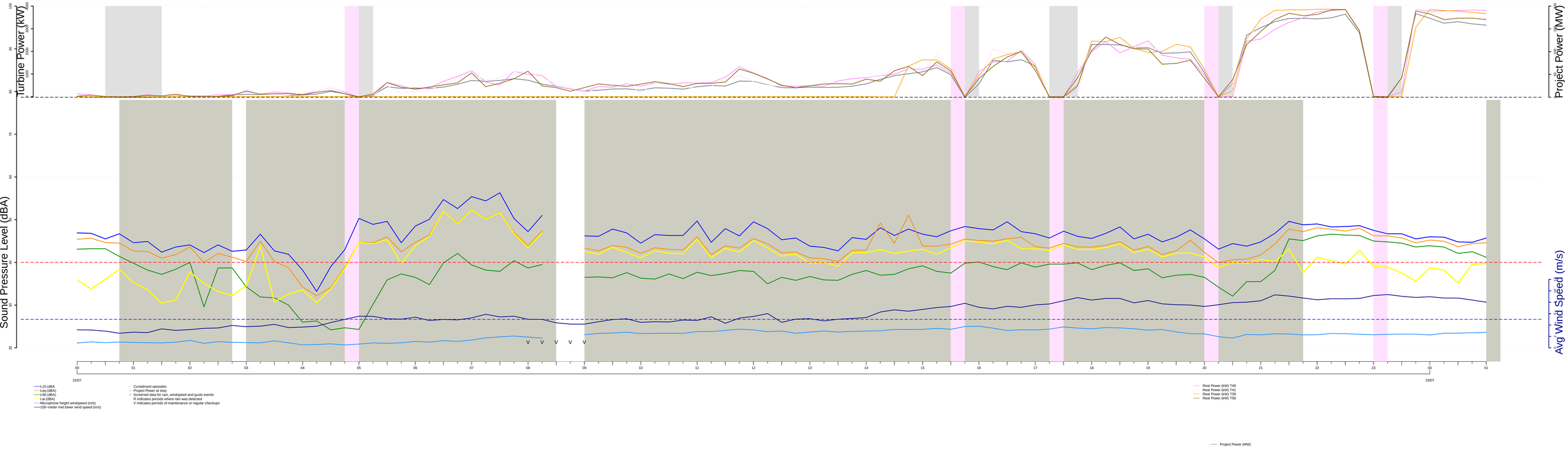
REC~024 (Pazour Residence)
Tuesday, 7 21, 2020



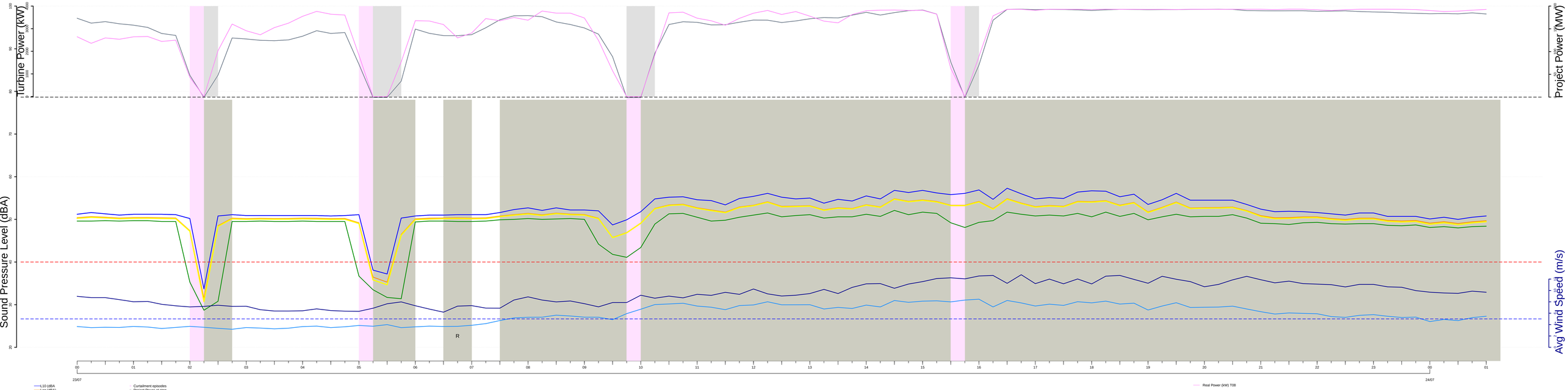
Control 1 (Turbine 8)
Wednesday, 7 22, 2020



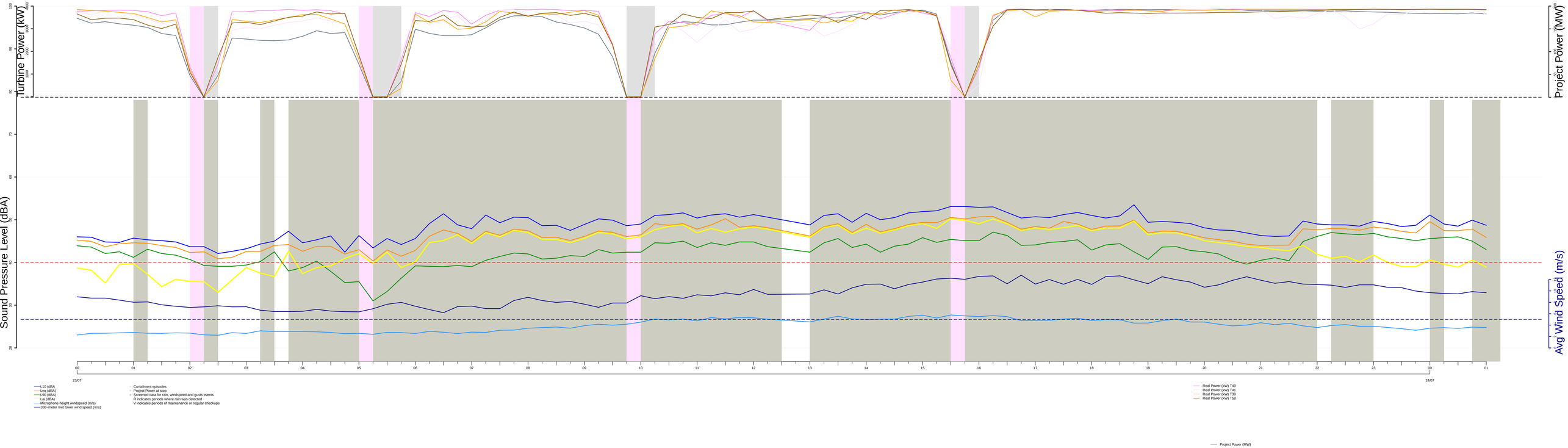
REC~024 (Pazour Residence)
Wednesday, 7 22, 2020



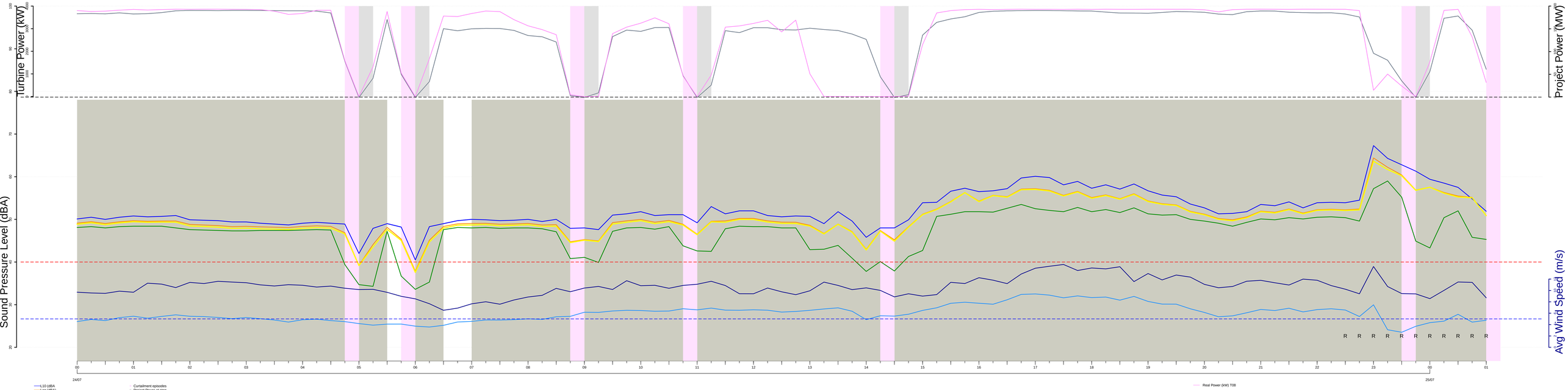
Control 1 (Turbine 8)
Thursday, 7 23, 2020



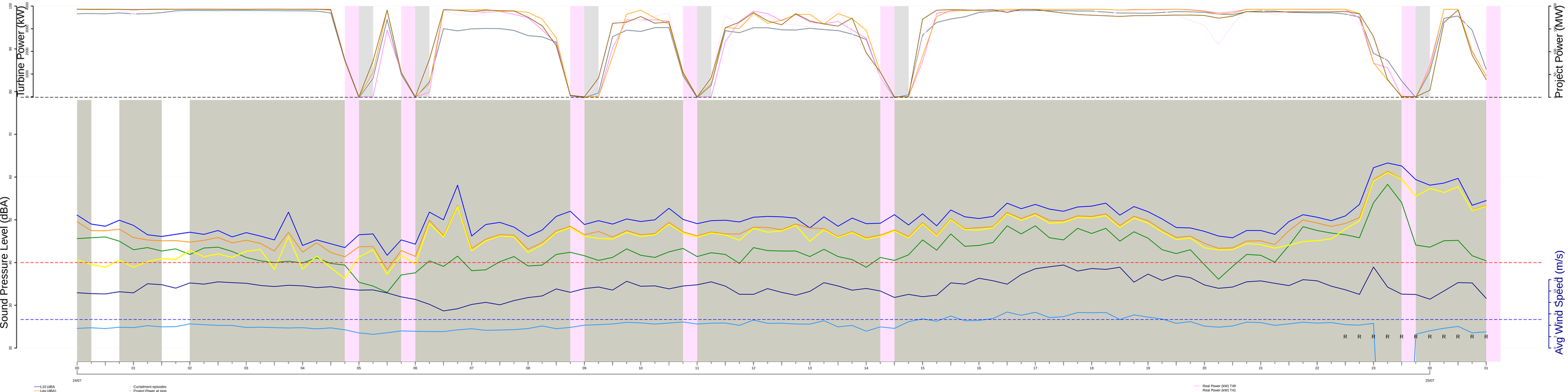
REC~024 (Pazour Residence)
Thursday, 7 23, 2020



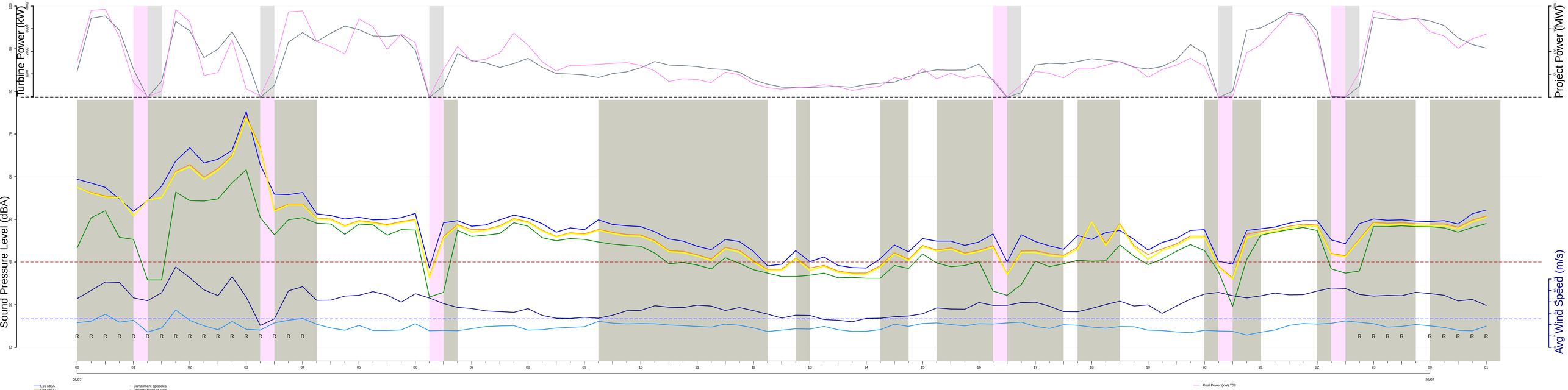
Control 1 (Turbine 8)
Friday, 7 24, 2020



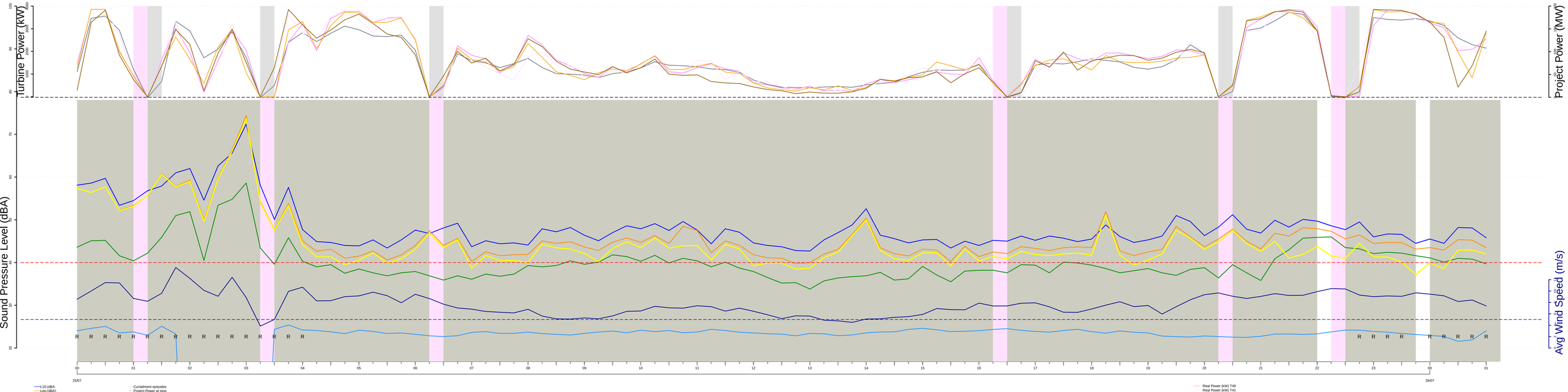
REC~024 (Pazour Residence)
Friday, 7 24, 2020



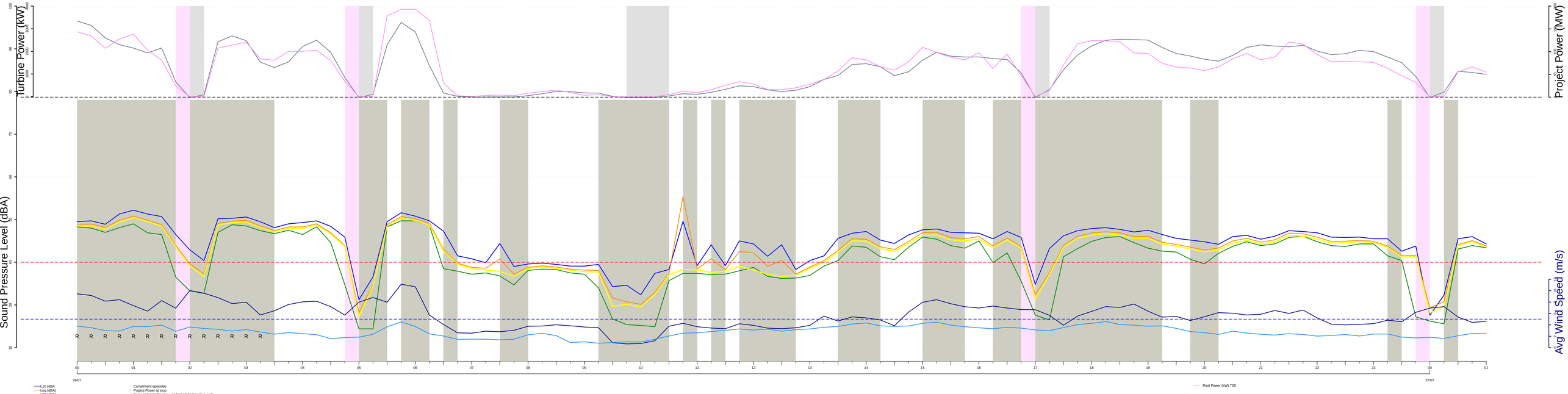
Control 1 (Turbine 8)
Saturday, 7 25, 2020



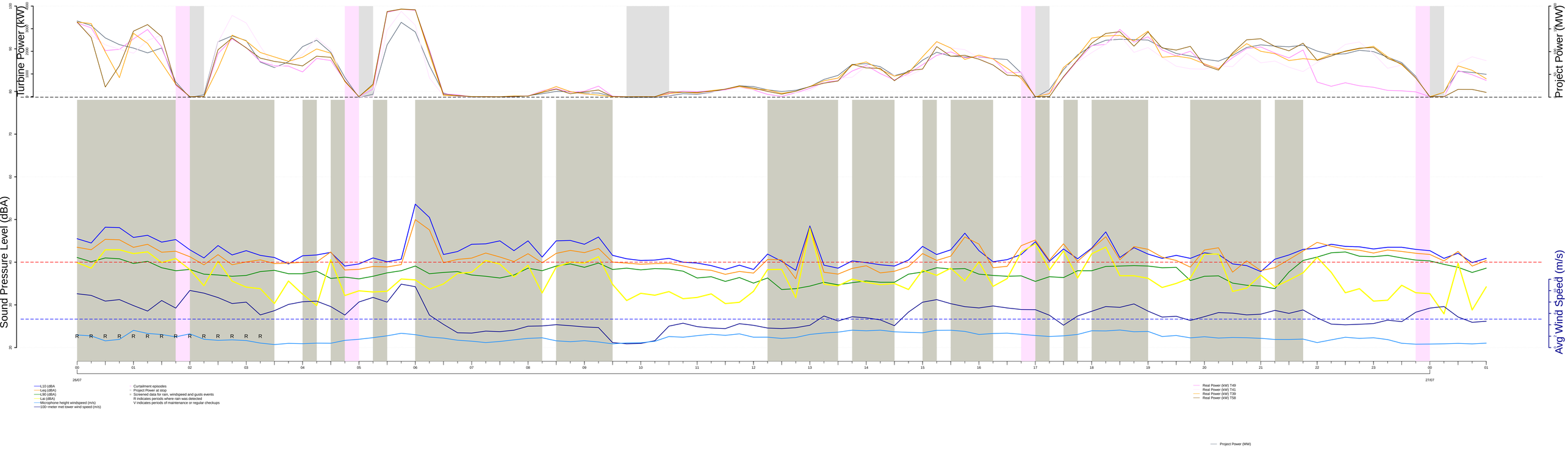
REC~024 (Pazour Residence)
Saturday, 7 25, 2020



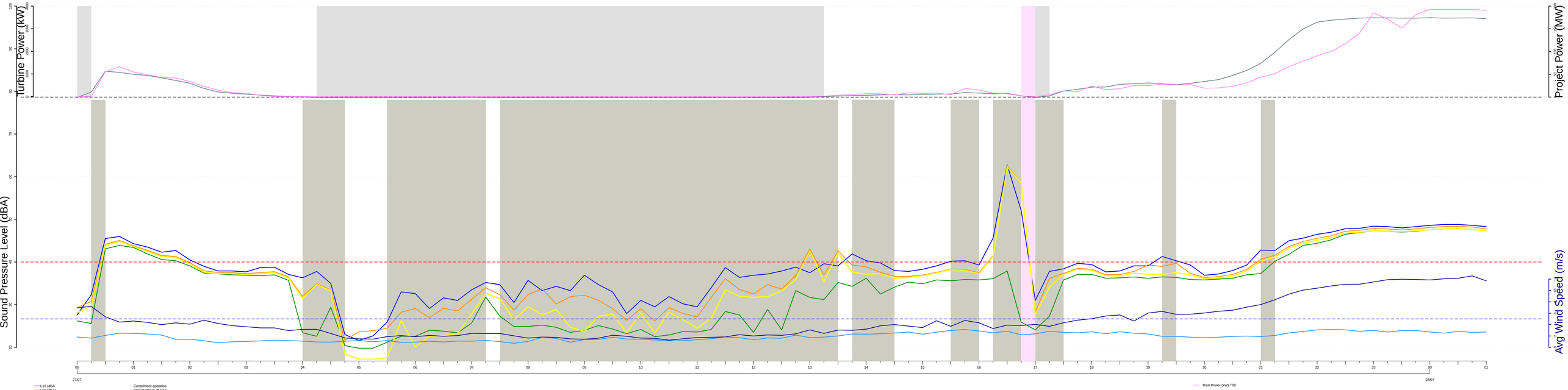
Control 1 (Turbine 8)
Sunday, 7 26, 2020



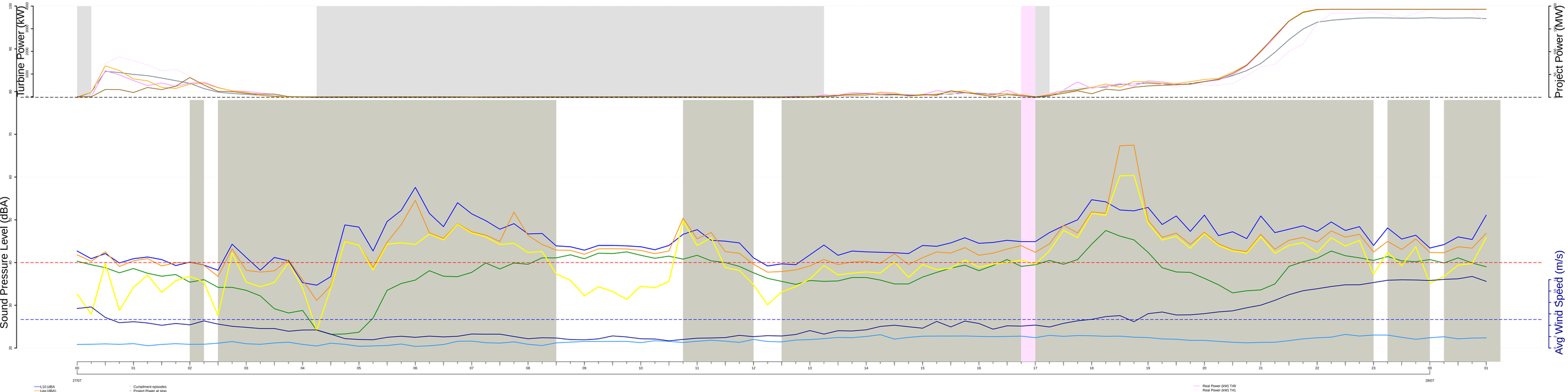
REC~024 (Pazour Residence)
Sunday, 7 26, 2020



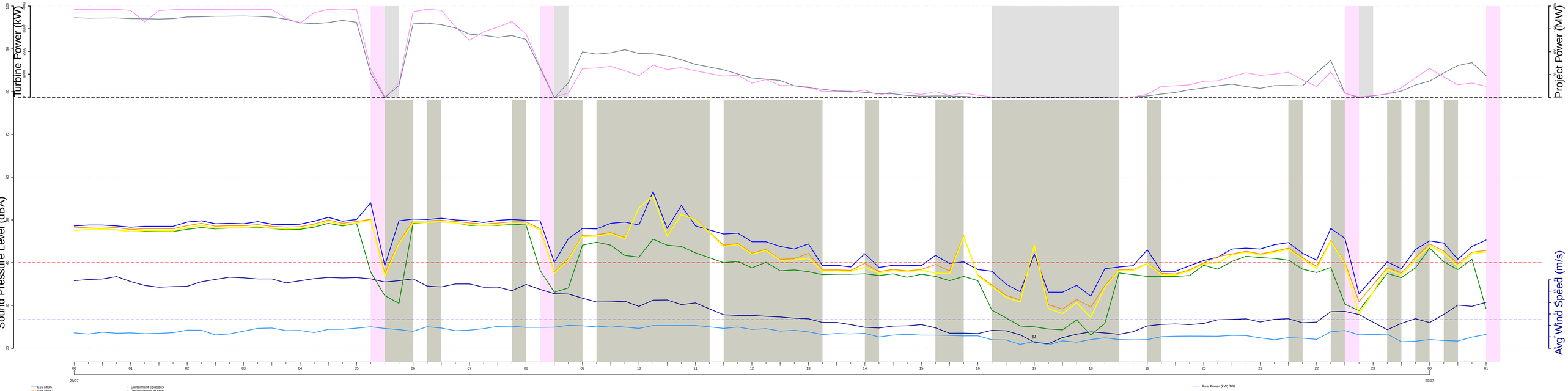
Control 1 (Turbine 8)
Monday, 7 27, 2020



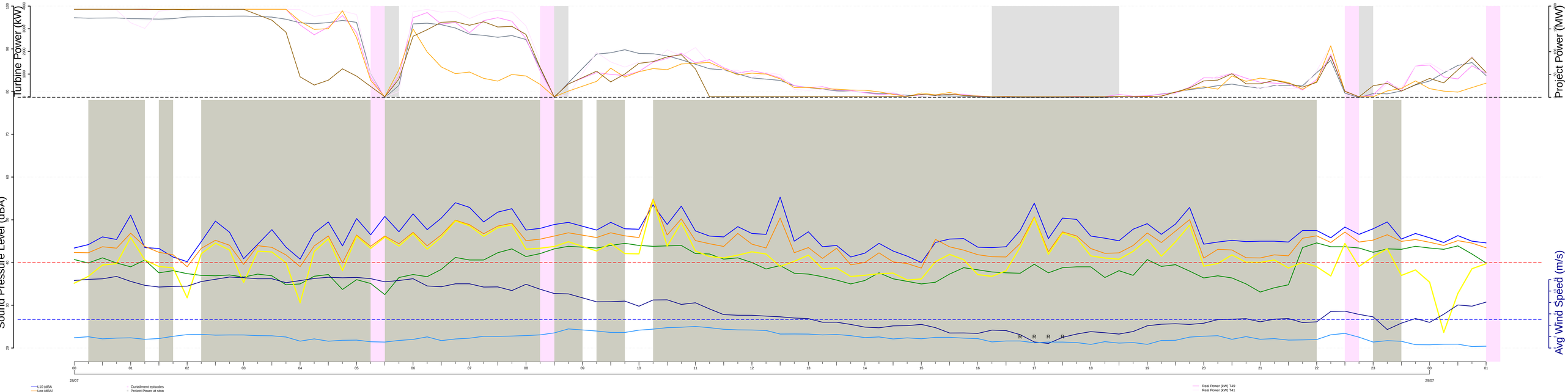
REC~024 (Pazour Residence)
Monday, 7 27, 2020



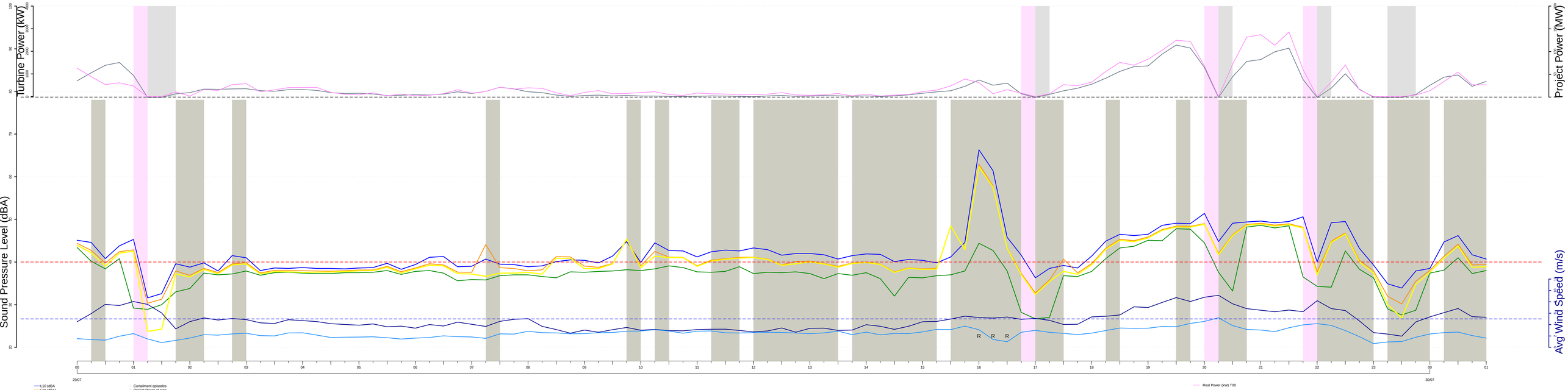
Control 1 (Turbine 8)
Tuesday, 7 28, 2020



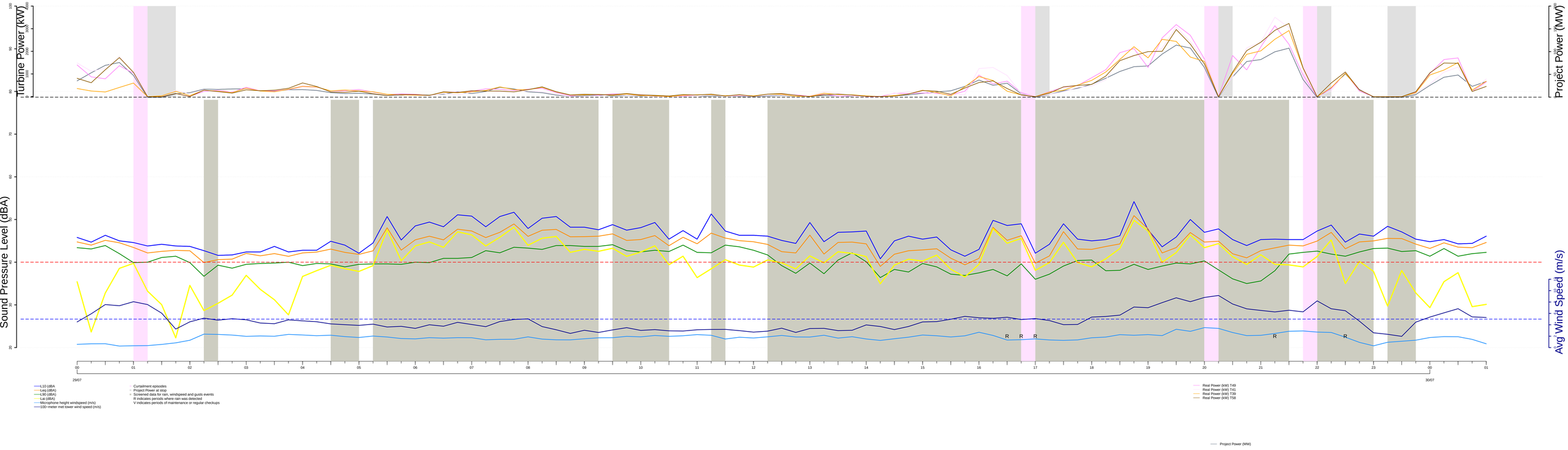
REC~024 (Pazour Residence)
Tuesday, 7 28, 2020



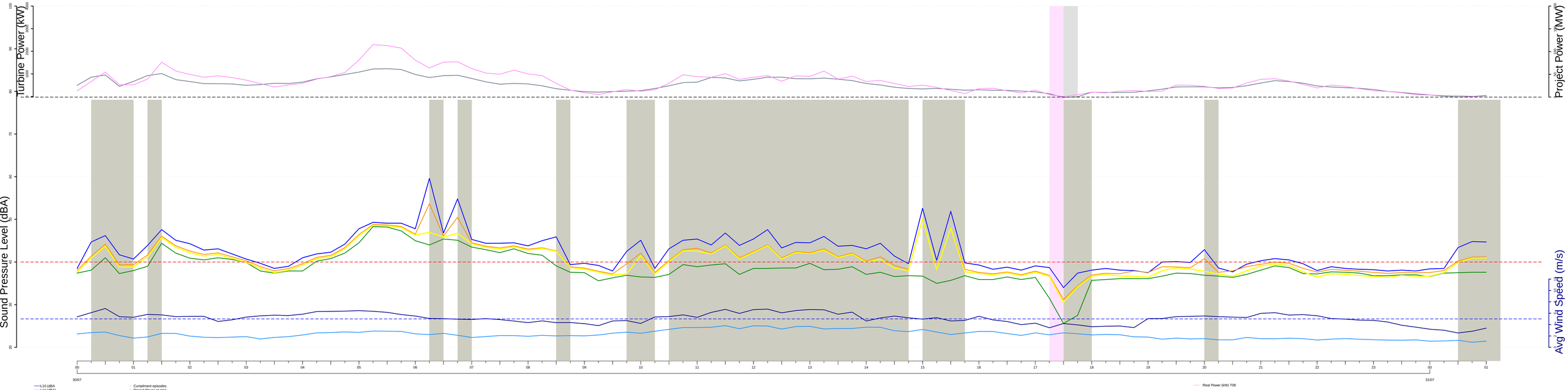
Control 1 (Turbine 8)
Wednesday, 7 29, 2020



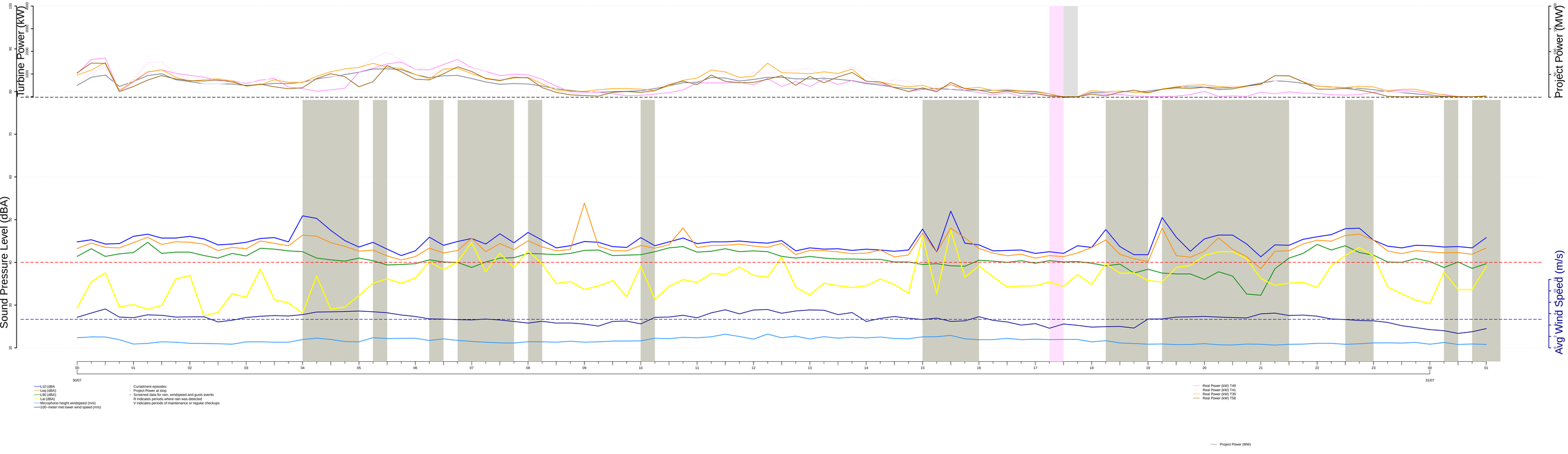
REC~024 (Pazour Residence)
Wednesday, 7 29, 2020



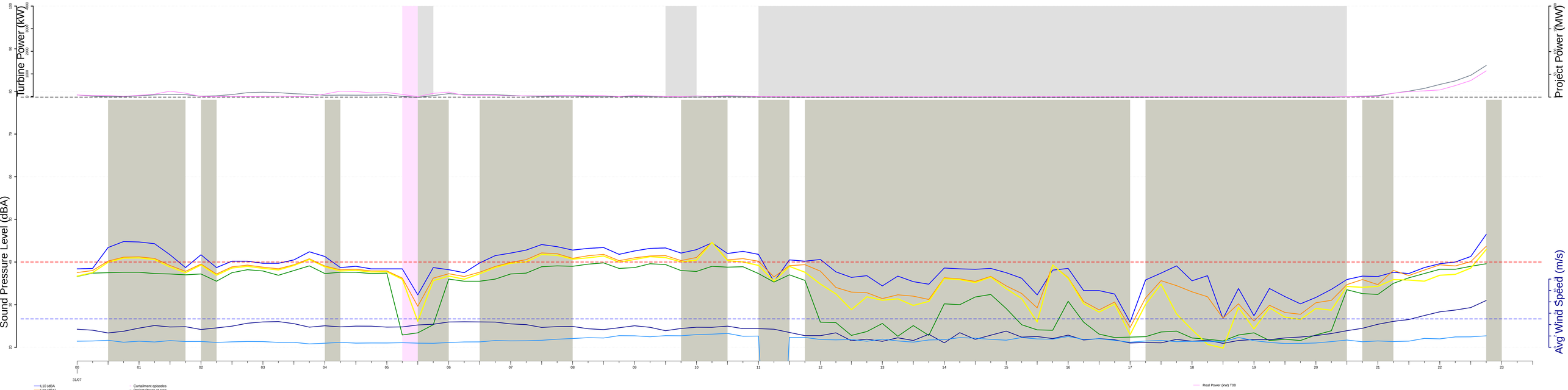
Control 1 (Turbine 8)
Thursday, 7 30, 2020



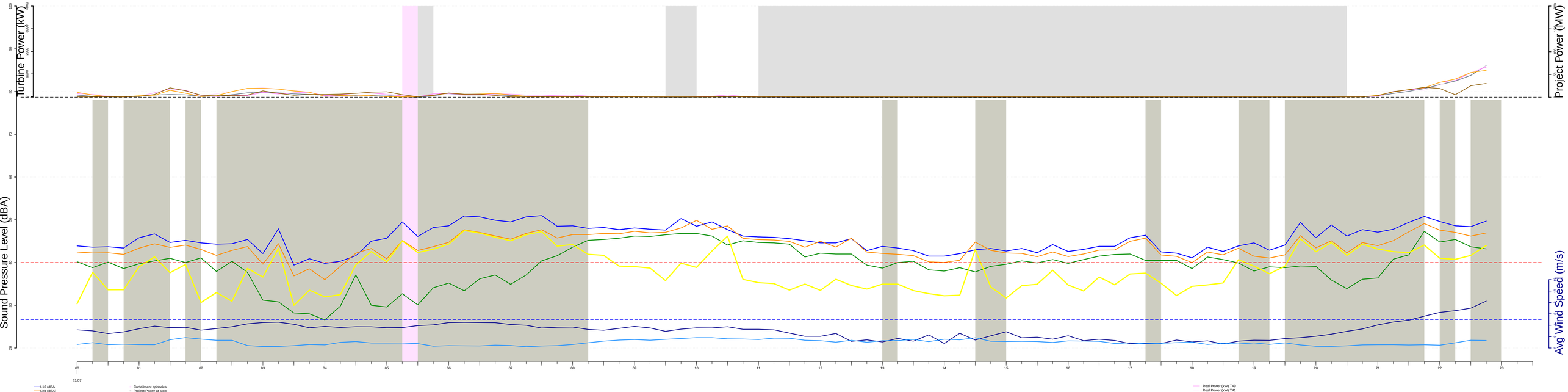
REC~024 (Pazour Residence)
Thursday, 7 30, 2020



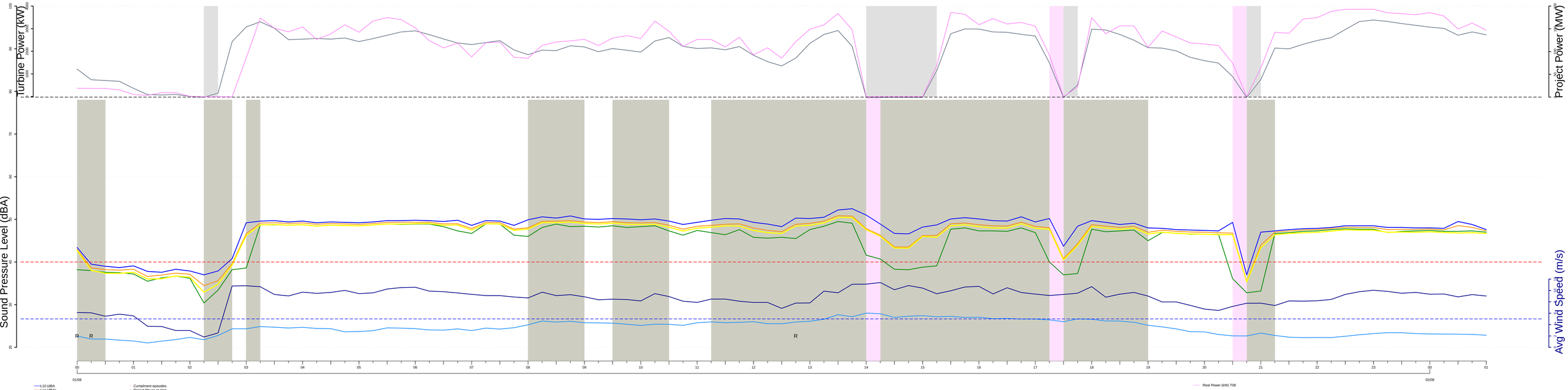
Control 1 (Turbine 8)
Friday, 7 31, 2020



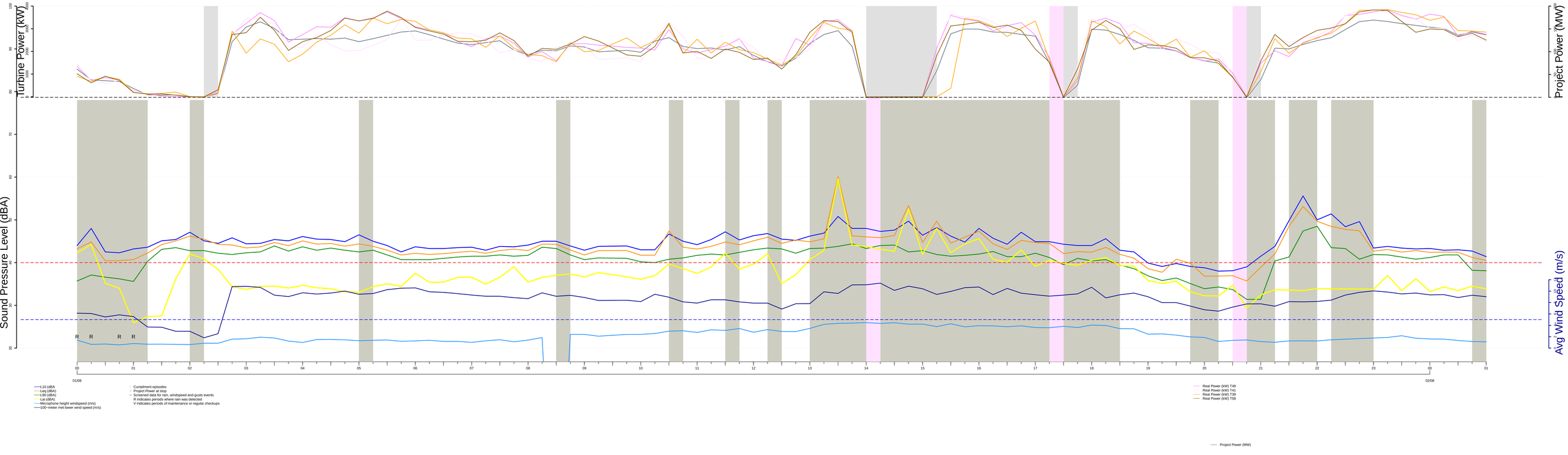
REC~024 (Pazour Residence)
Friday, 7 31, 2020



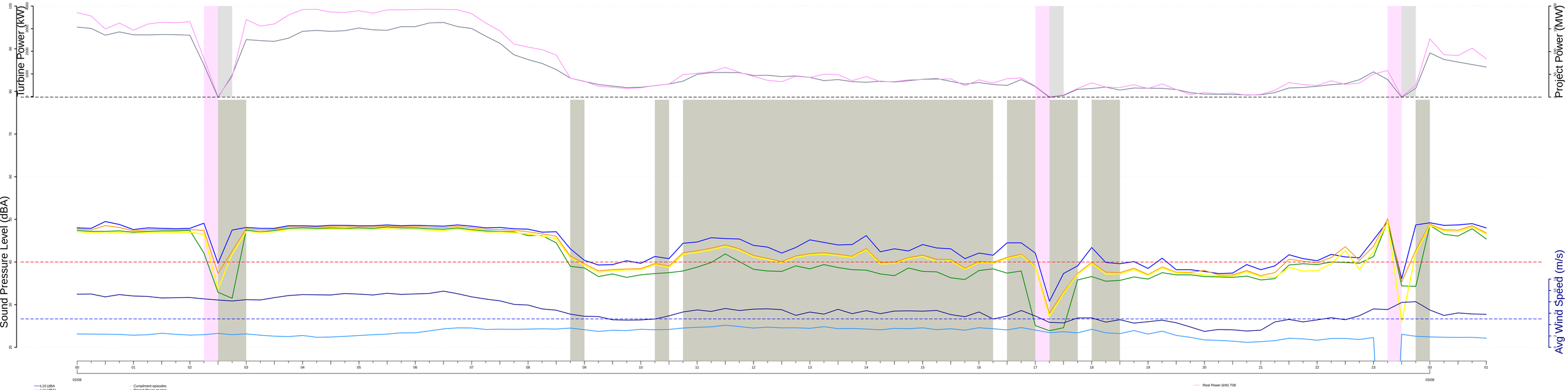
Control 1 (Turbine 8)
Saturday, 8 1, 2020



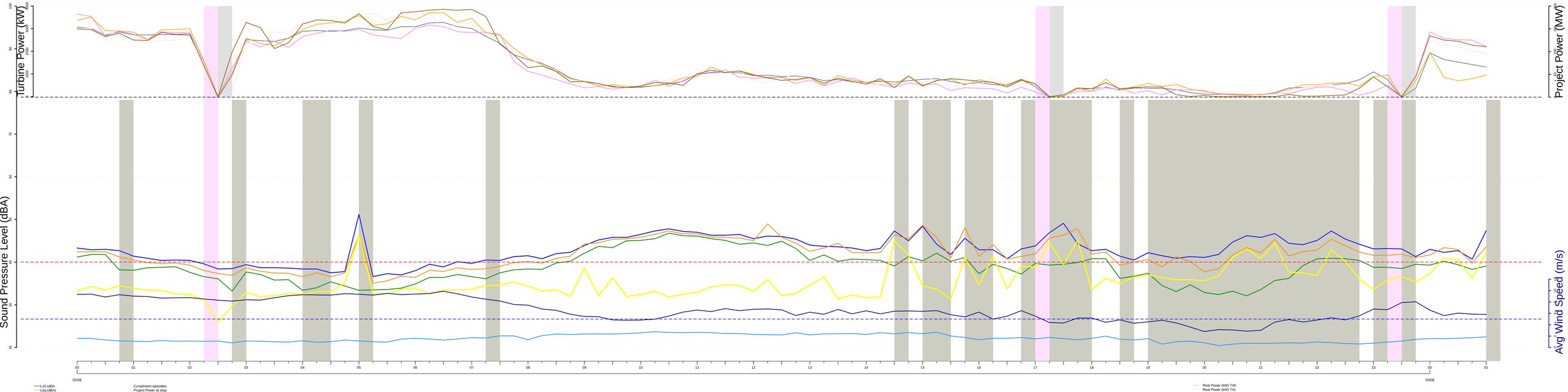
REC−024 (Pazour Residence)
Saturday, 8 1, 2020



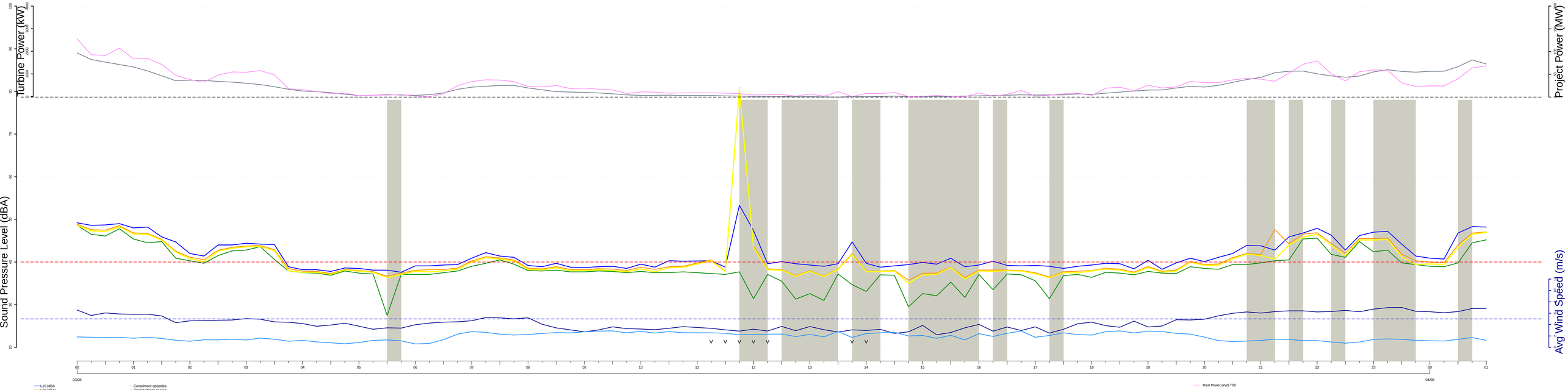
Control 1 (Turbine 8)
Sunday, 8 2, 2020



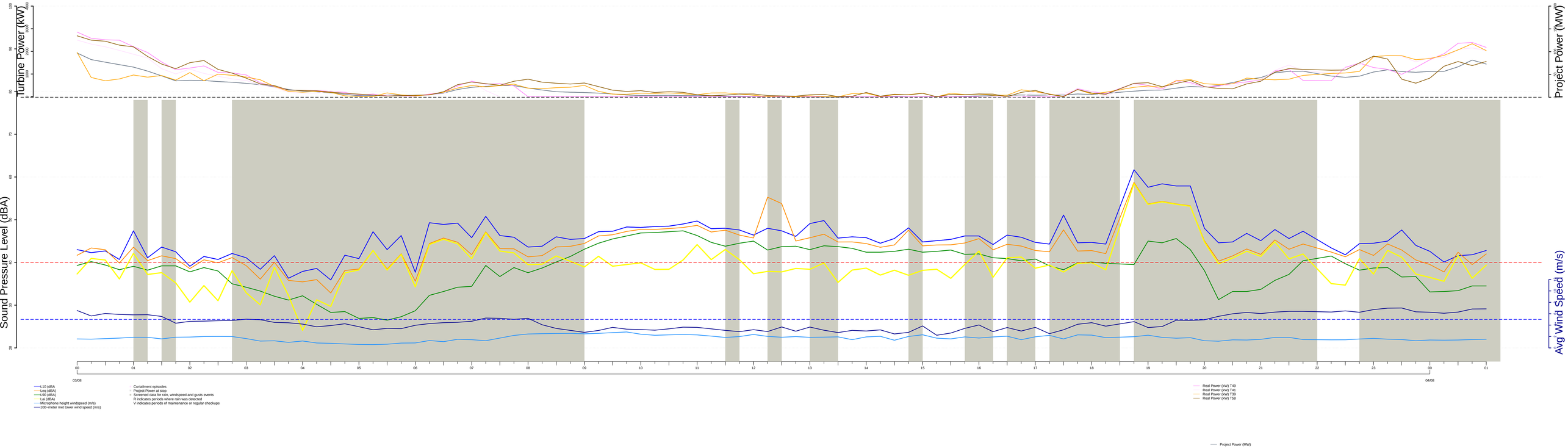
REC~024 (Pazour Residence)
Sunday, 8 2, 2020



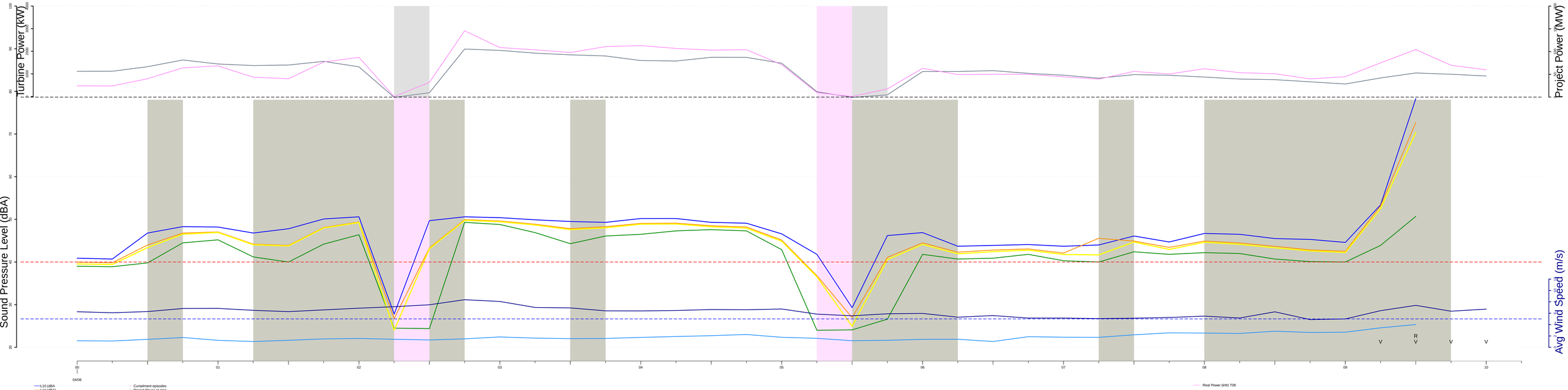
Control 1 (Turbine 8)
Monday, 8 3, 2020



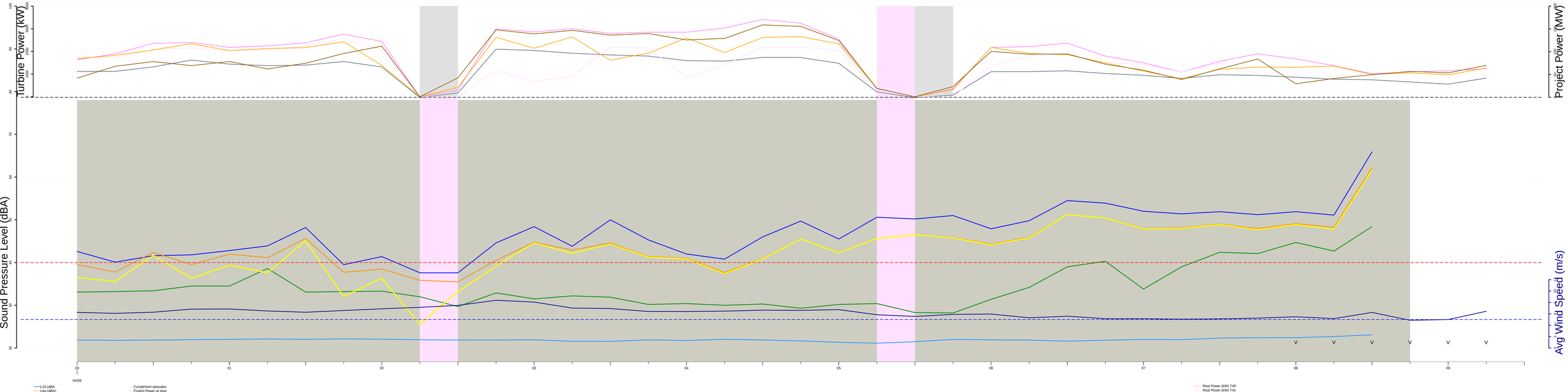
REC~024 (Pazour Residence)
Monday, 8 3, 2020



Control 1 (Turbine 8)
Tuesday, 8 4, 2020

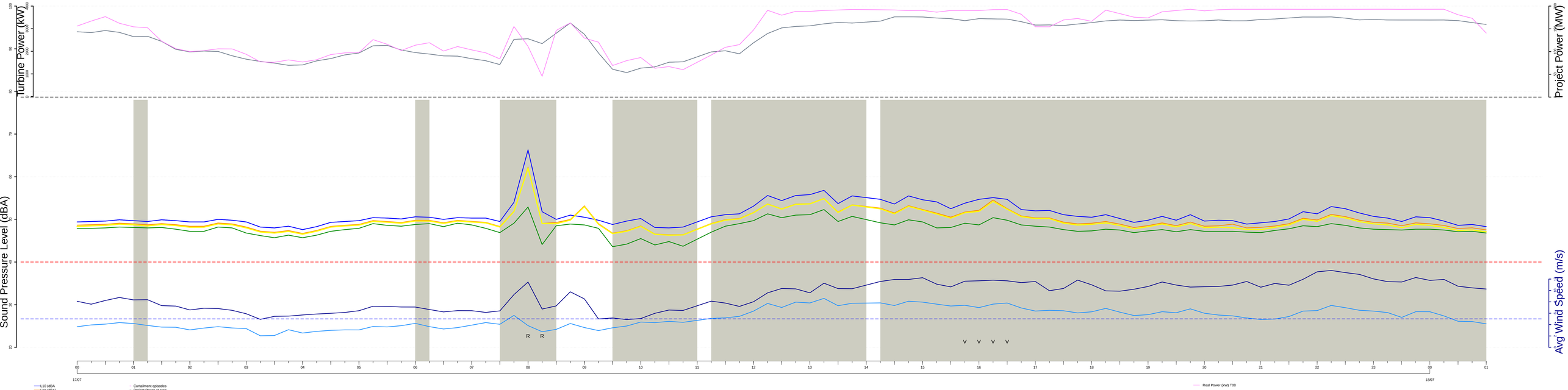


REC~024 (Pazour Residence)
Tuesday, 8 4, 2020

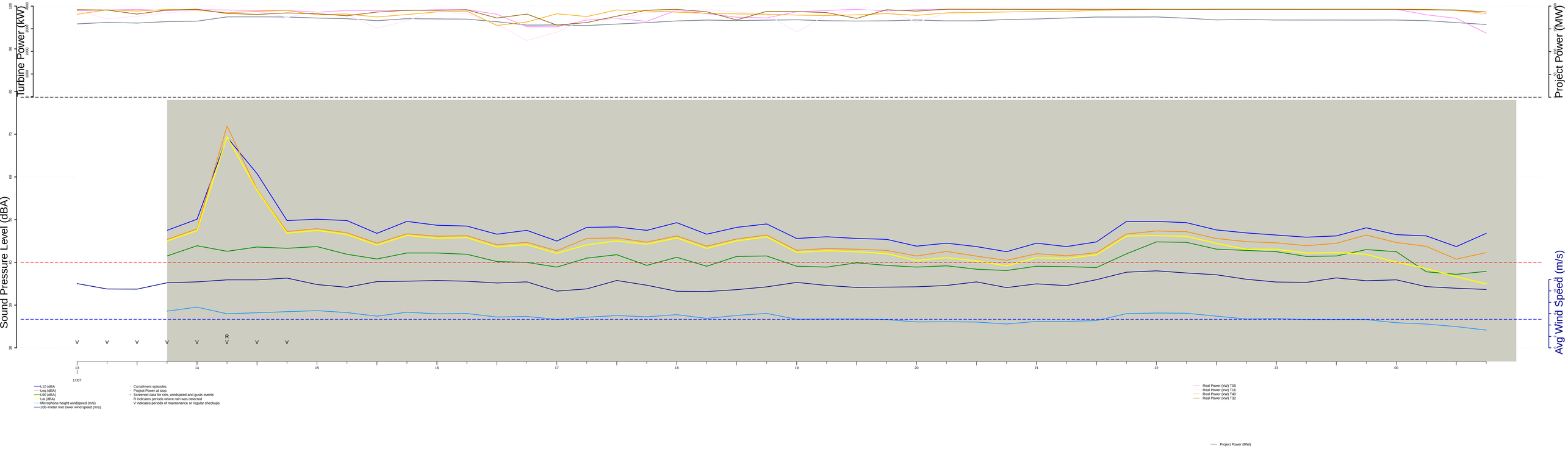


REC-068 (Fuerniss Residence)

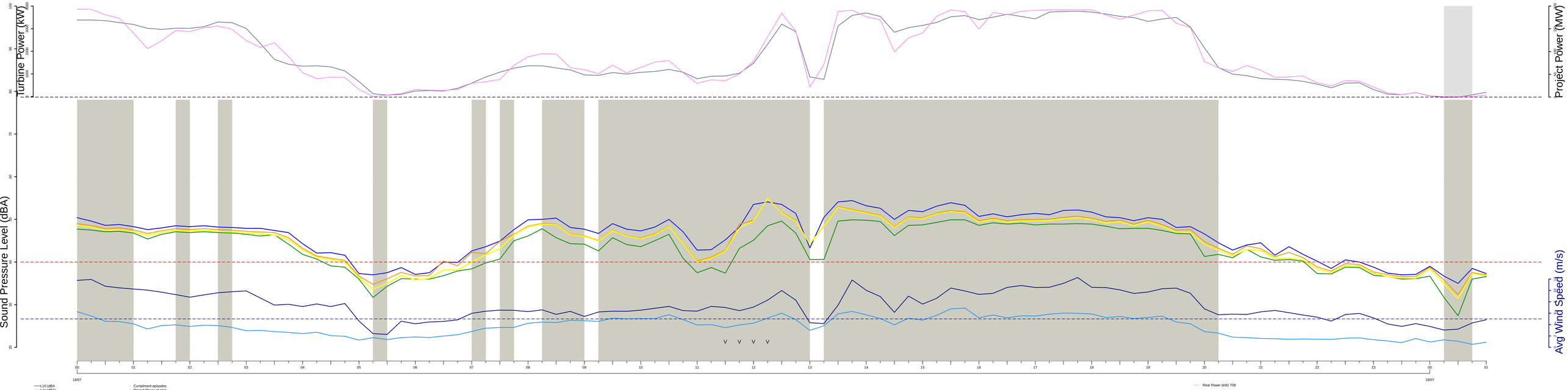
Control 1 (Turbine 8)
Friday, 7 17, 2020



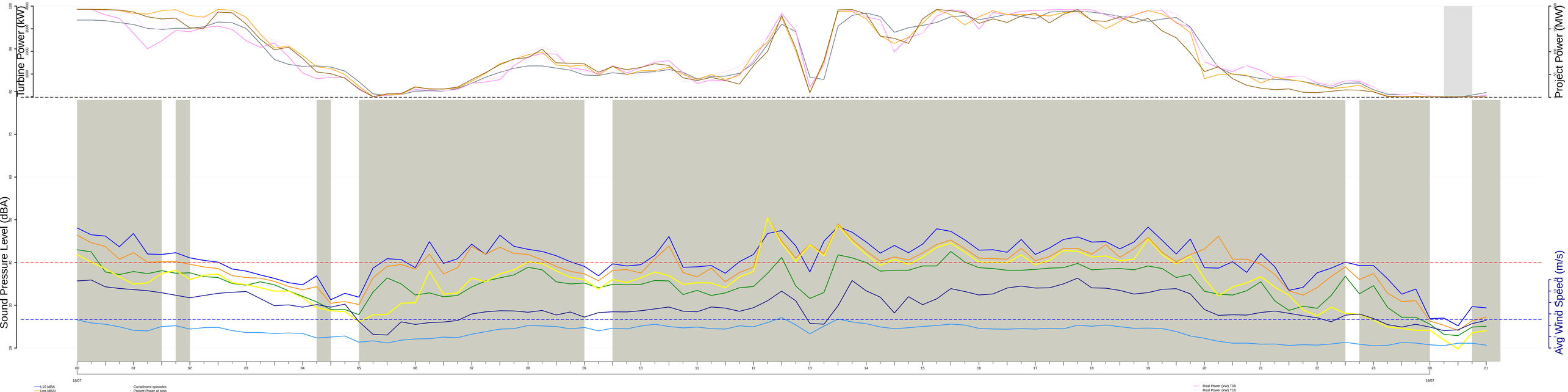
REC~068 (Fuerniss Residence)
Friday, 7 17, 2020



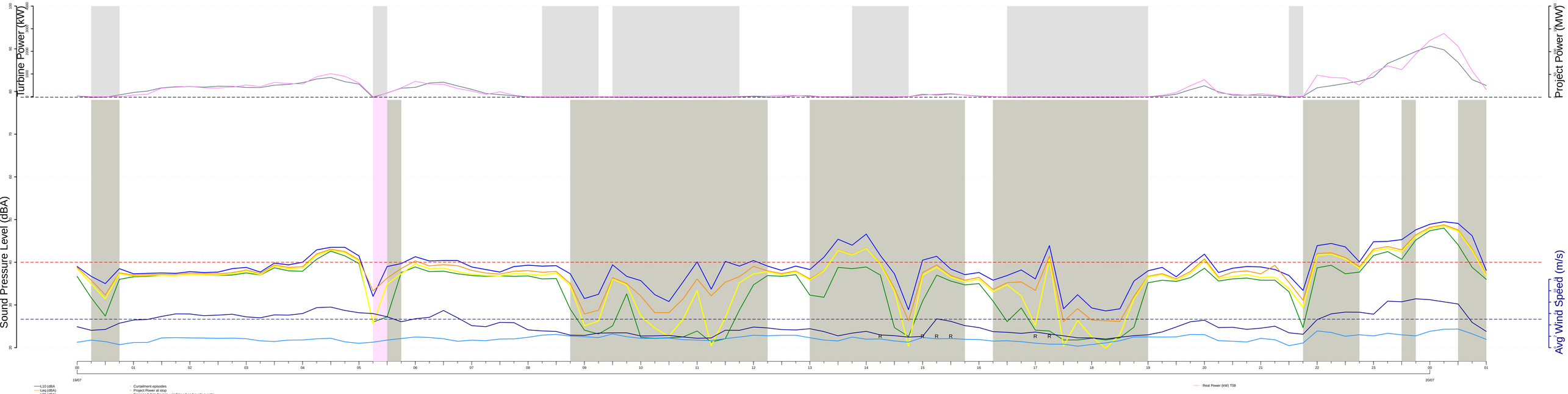
Control 1 (Turbine 8)
Saturday, 7 18, 2020



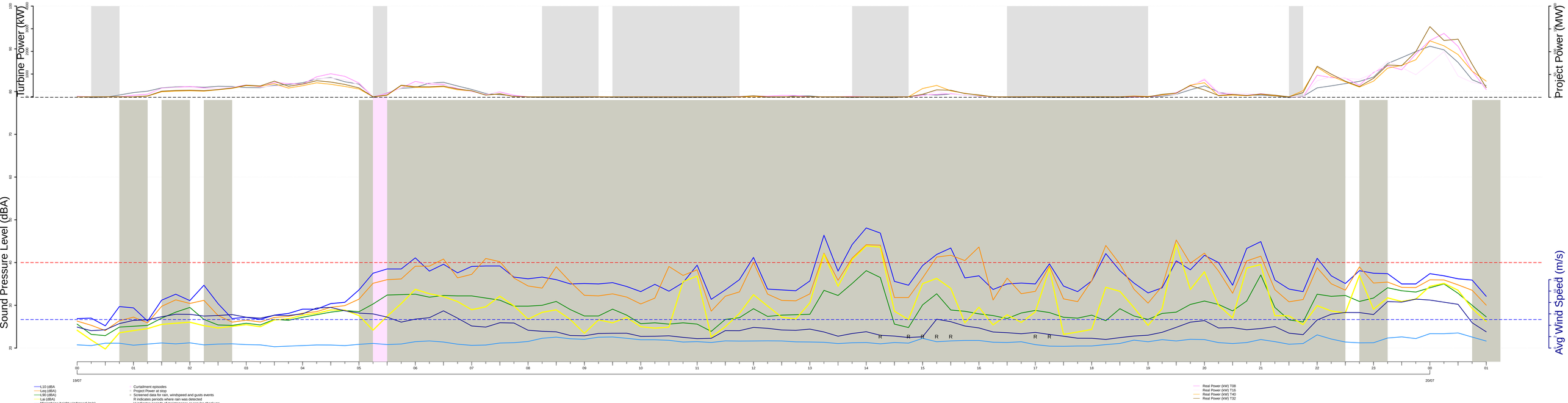
REC~068 (Fuerniss Residence)
Saturday, 7 18, 2020



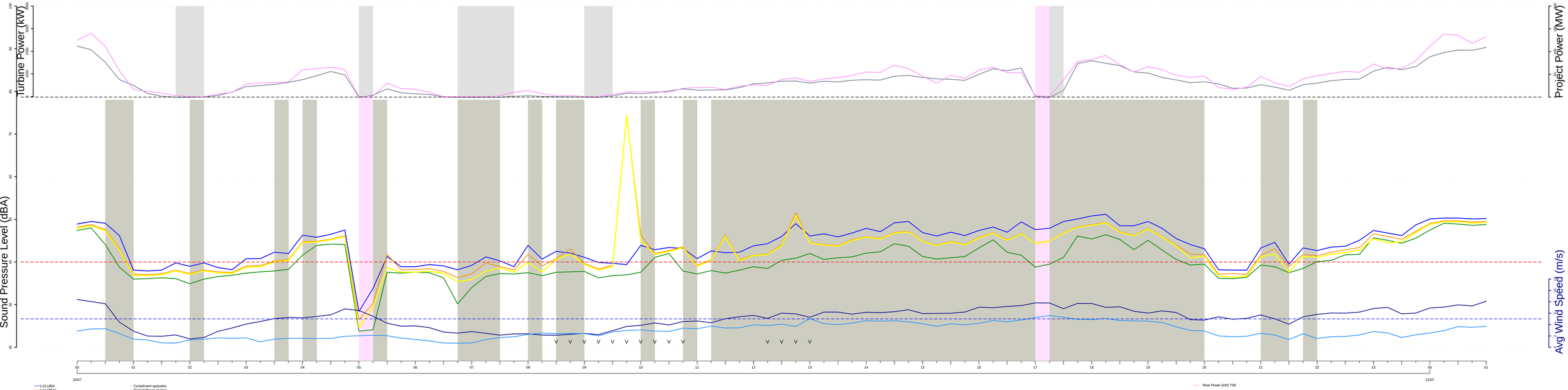
Control 1 (Turbine 8)
Sunday, 7 19, 2020



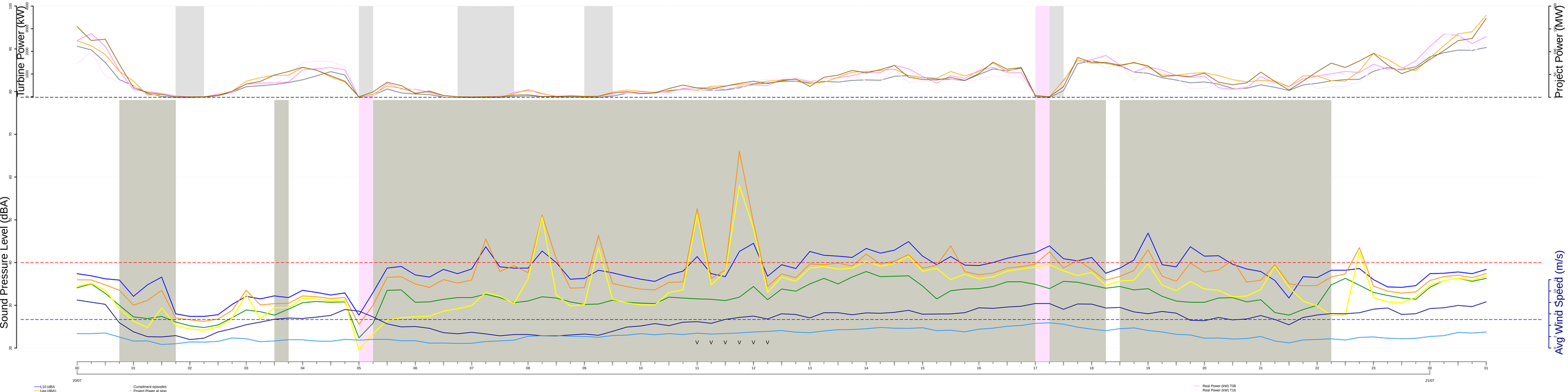
REC~068 (Fuerniss Residence)
Sunday, 7 19, 2020



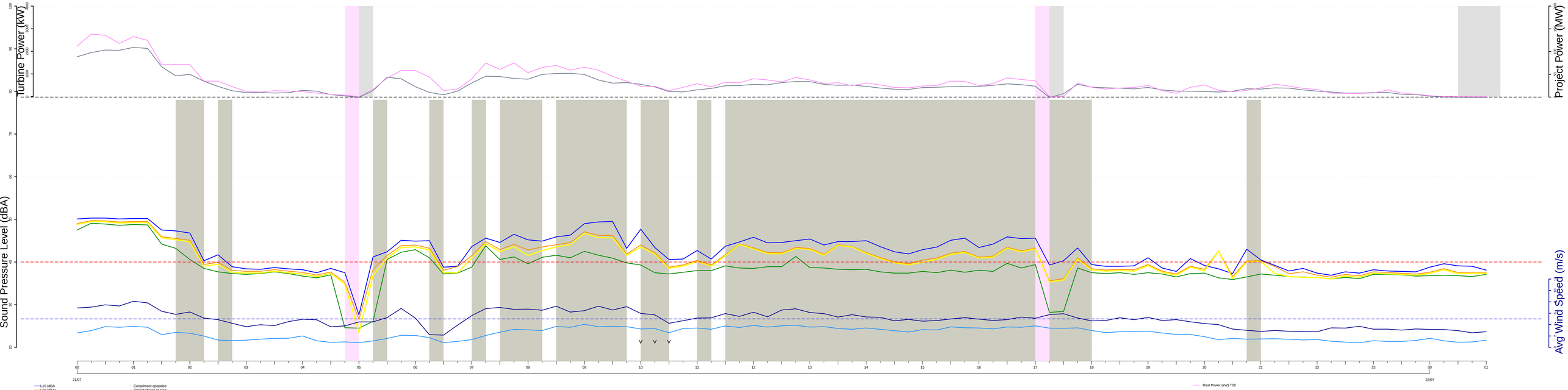
Control 1 (Turbine 8)
Monday, 7 20, 2020



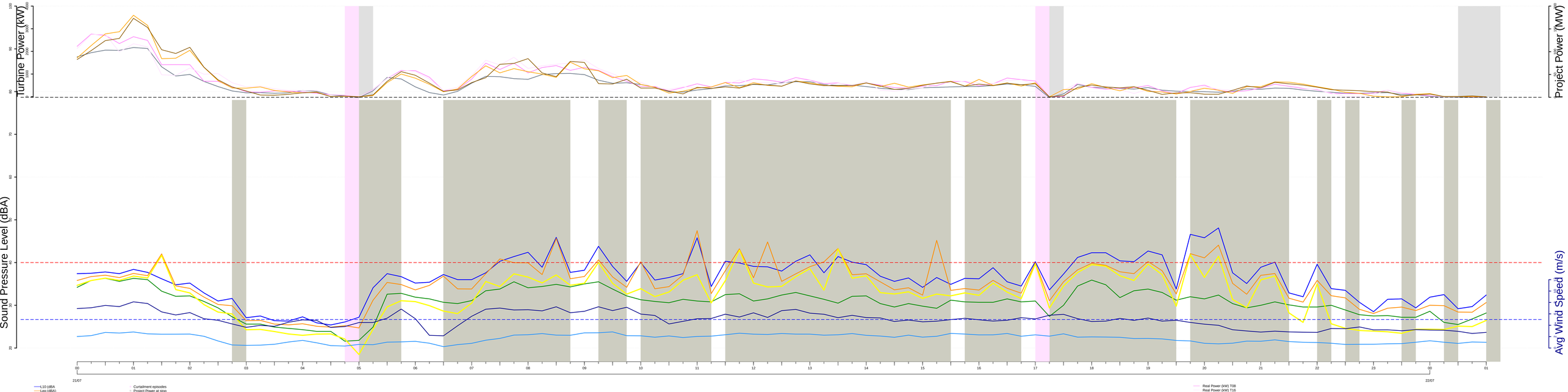
REC~068 (Fuerniss Residence)
Monday, 7 20, 2020



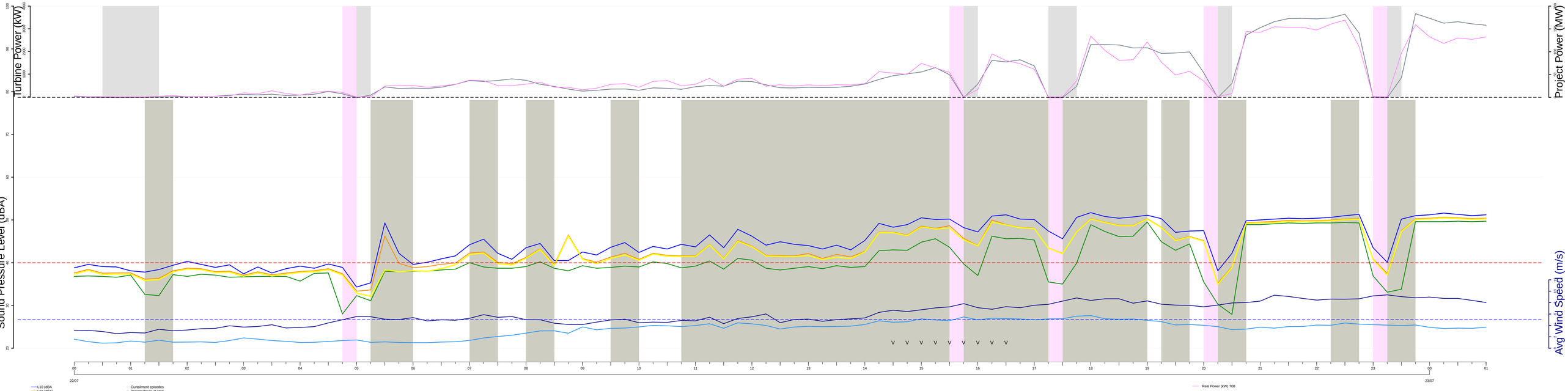
Control 1 (Turbine 8)
Tuesday, 7 21, 2020



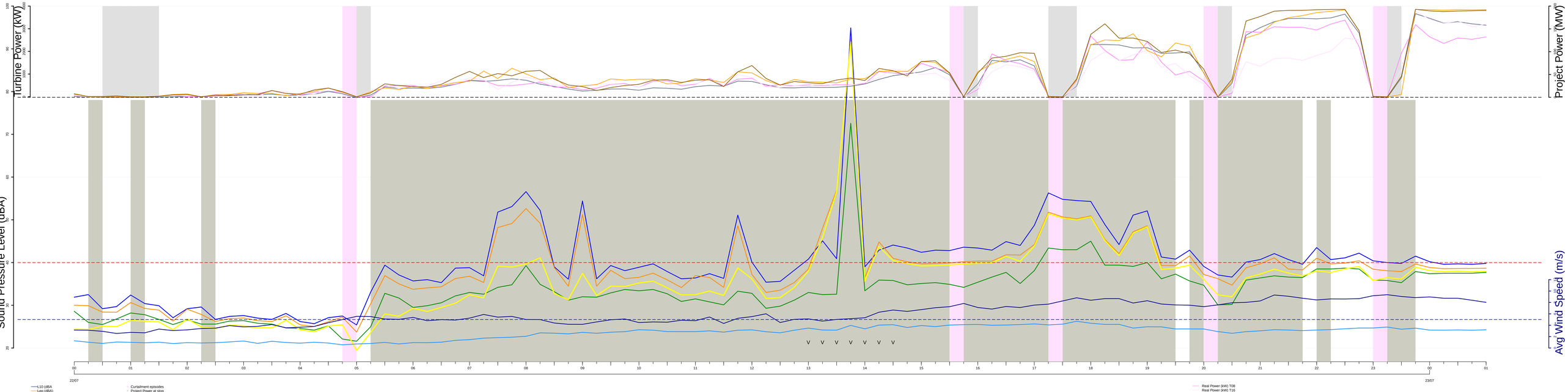
REC~068 (Fuerniss Residence)
Tuesday, 7 21, 2020



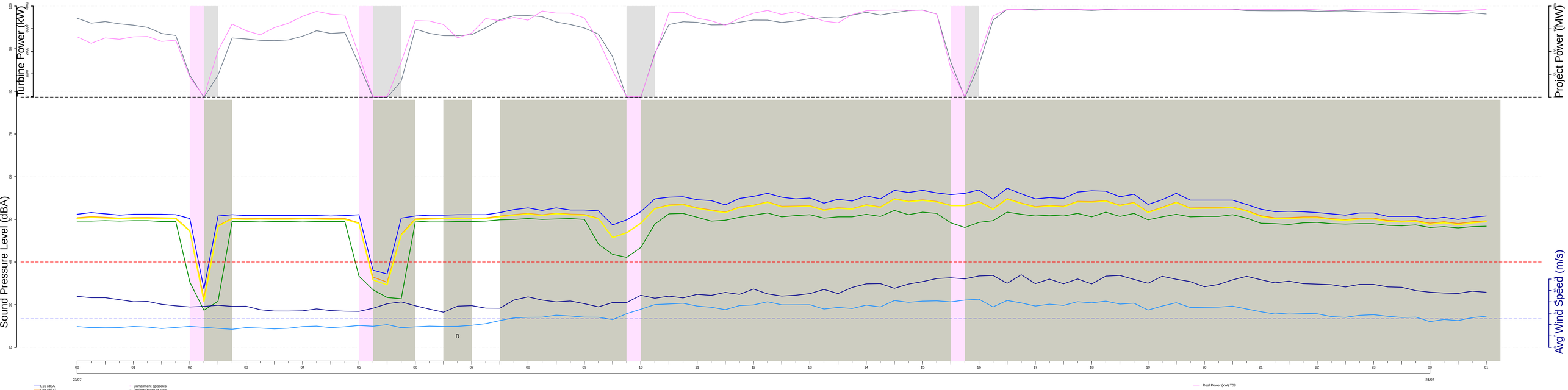
Control 1 (Turbine 8)
Wednesday, 7 22, 2020



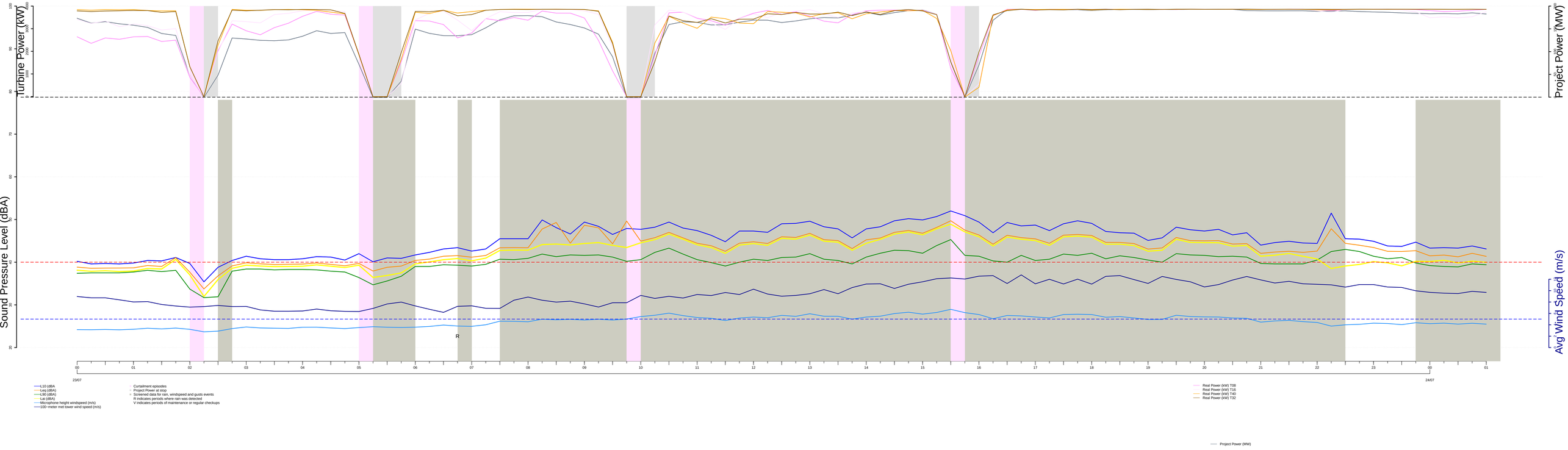
REC~068 (Fuerniss Residence)
Wednesday, 7 22, 2020



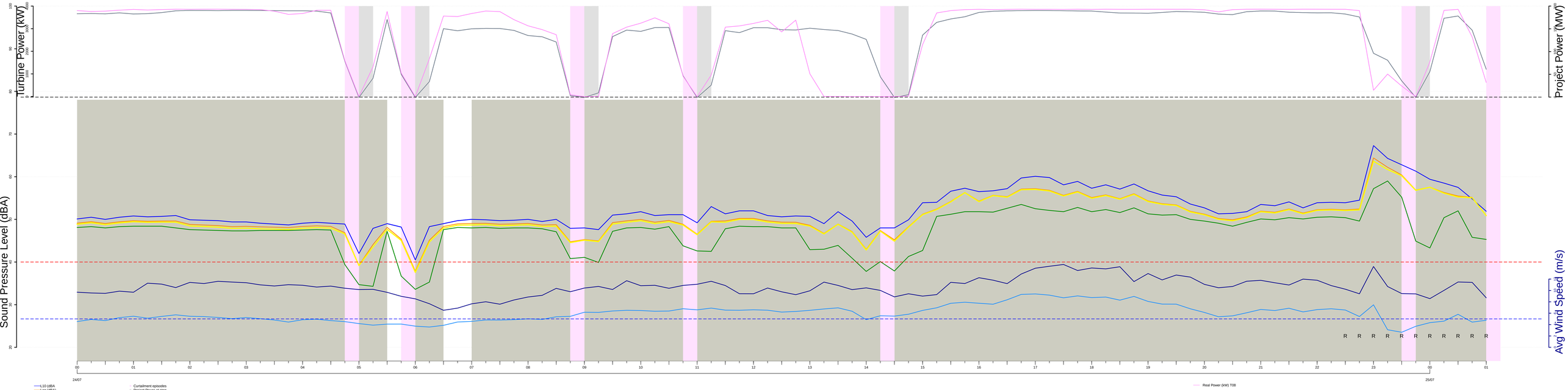
Control 1 (Turbine 8)
Thursday, 7 23, 2020



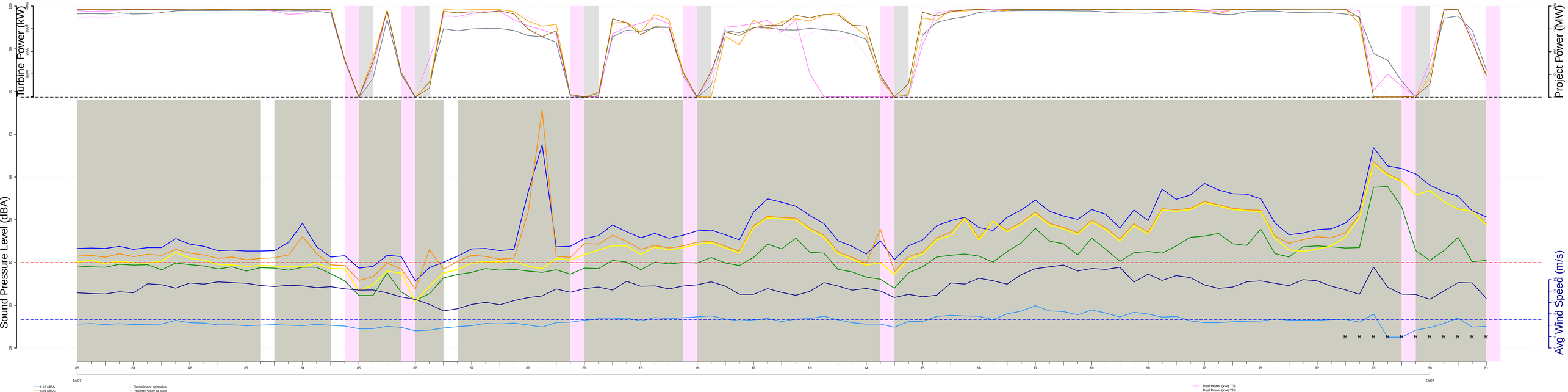
REC~068 (Fuerniss Residence)
Thursday, 7 23, 2020



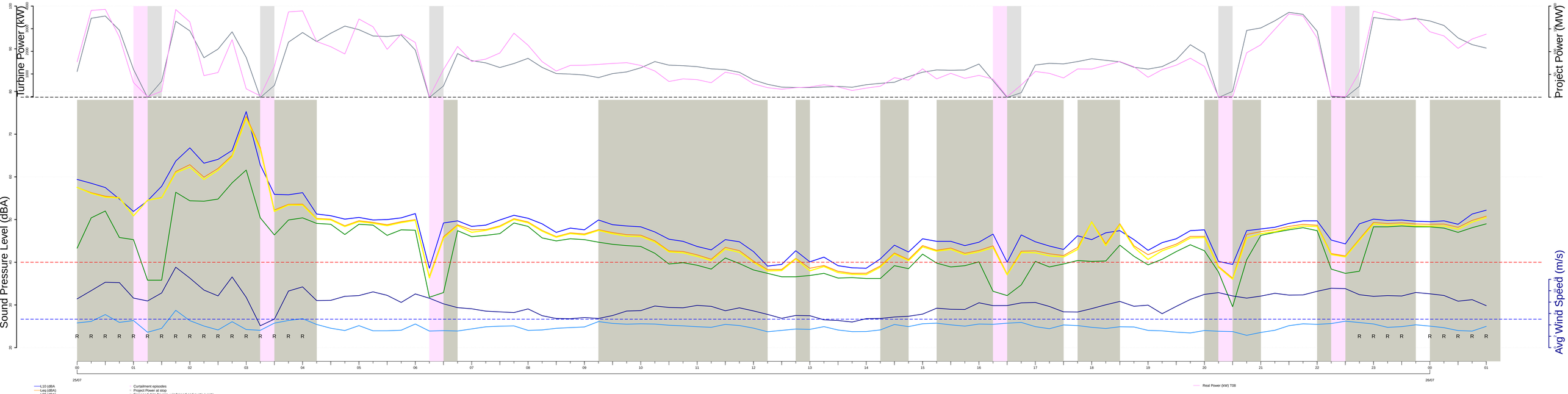
Control 1 (Turbine 8)
Friday, 7 24, 2020



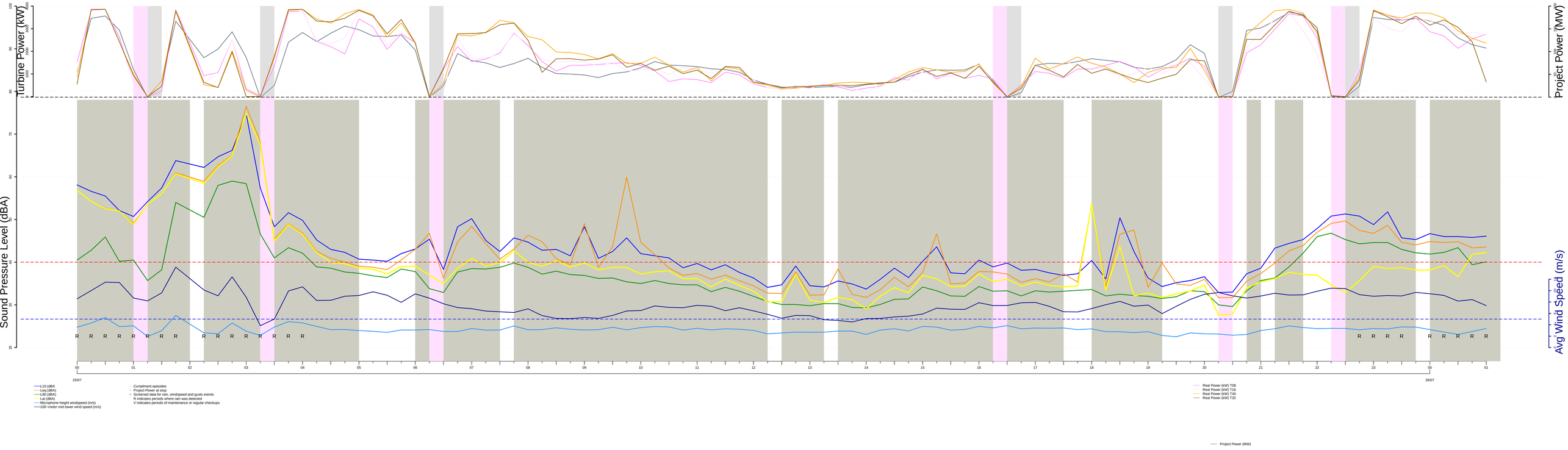
REC~068 (Fuerniss Residence)
Friday, 7 24, 2020



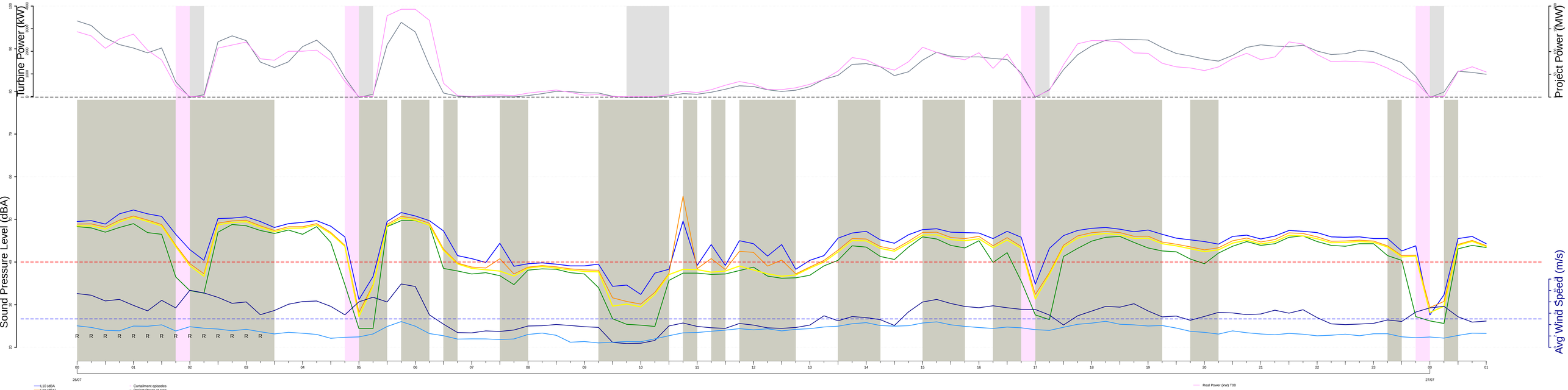
Control 1 (Turbine 8)
Saturday, 7 25, 2020



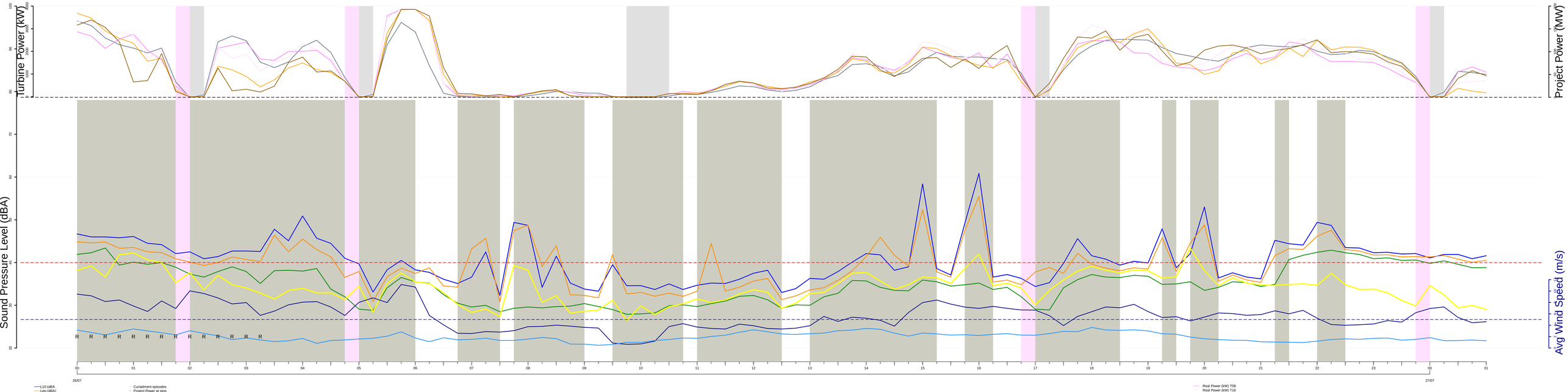
REC~068 (Fuerniss Residence)
Saturday, 7 25, 2020



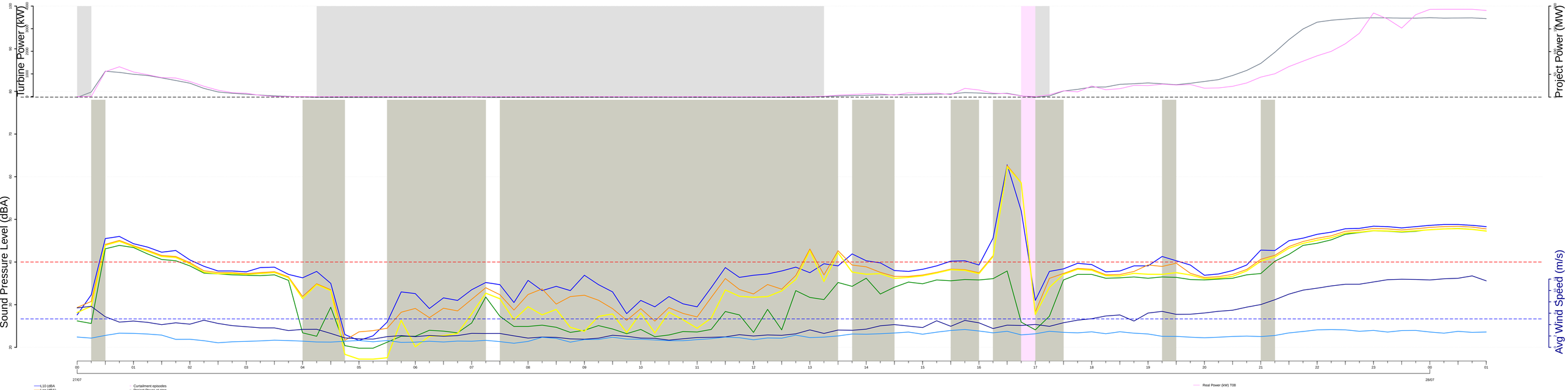
Control 1 (Turbine 8)
Sunday, 7 26, 2020



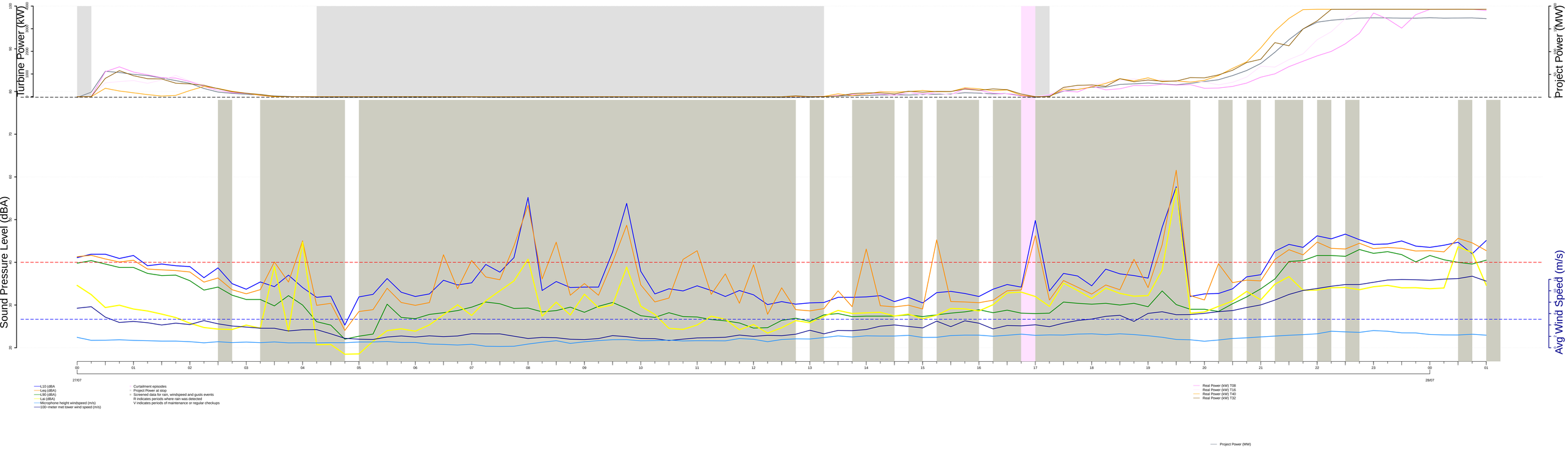
REC~068 (Fuerniss Residence)
Sunday, 7 26, 2020



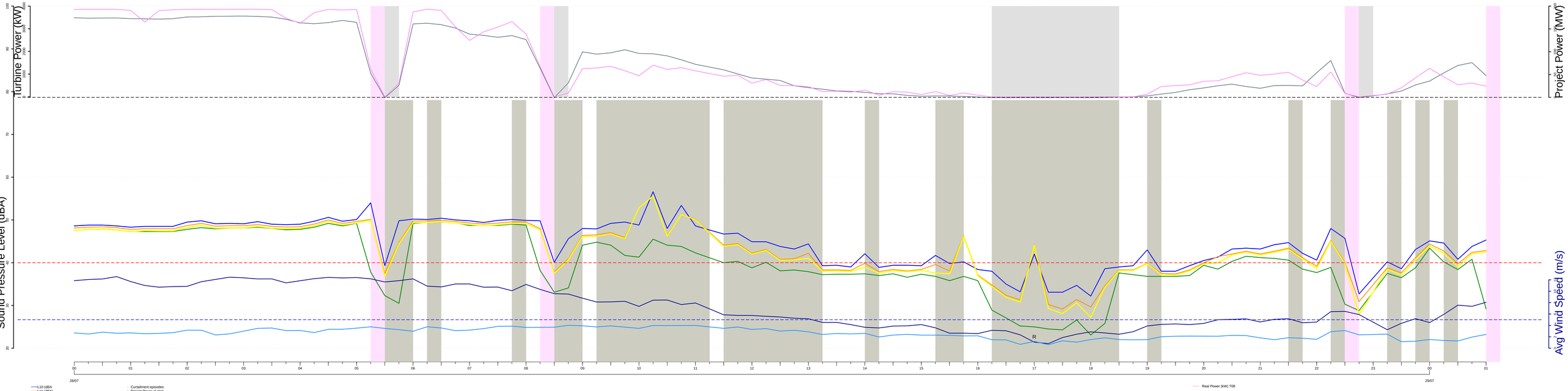
Control 1 (Turbine 8)
Monday, 7 27, 2020



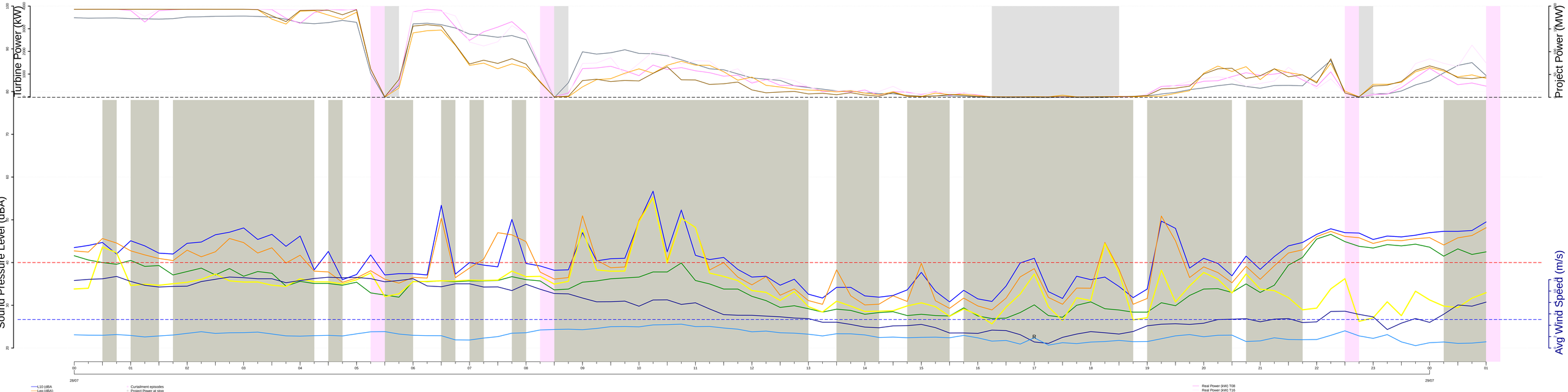
REC~068 (Fuerniss Residence)
Monday, 7 27, 2020



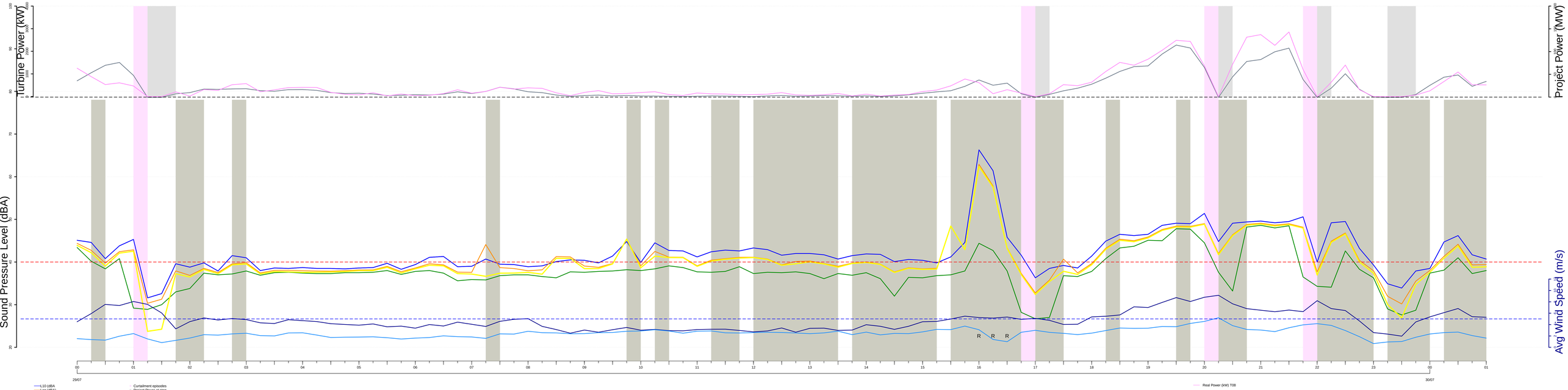
Control 1 (Turbine 8)
Tuesday, 7 28, 2020



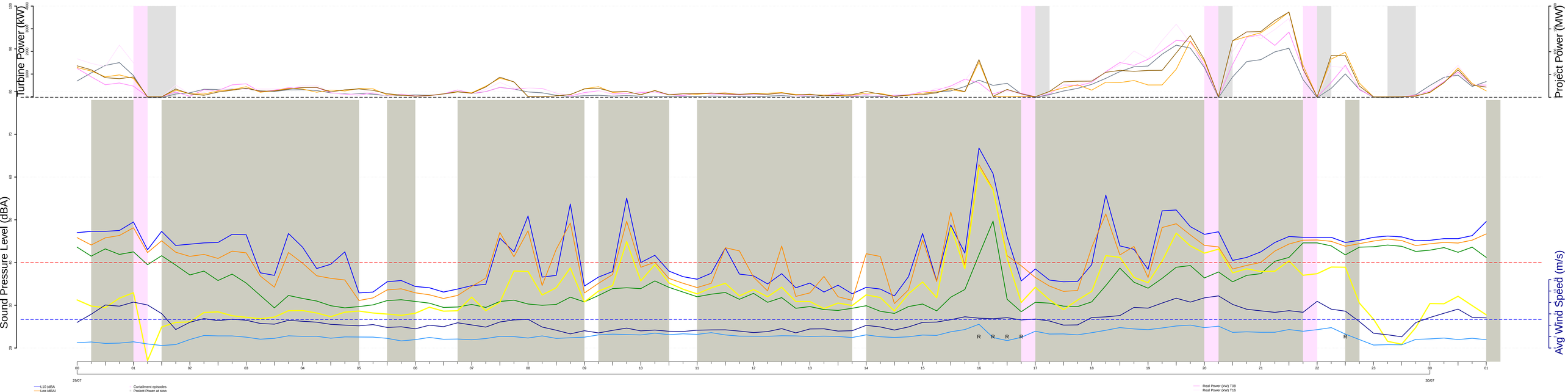
REC~068 (Fuerniss Residence)
Tuesday, 7 28, 2020



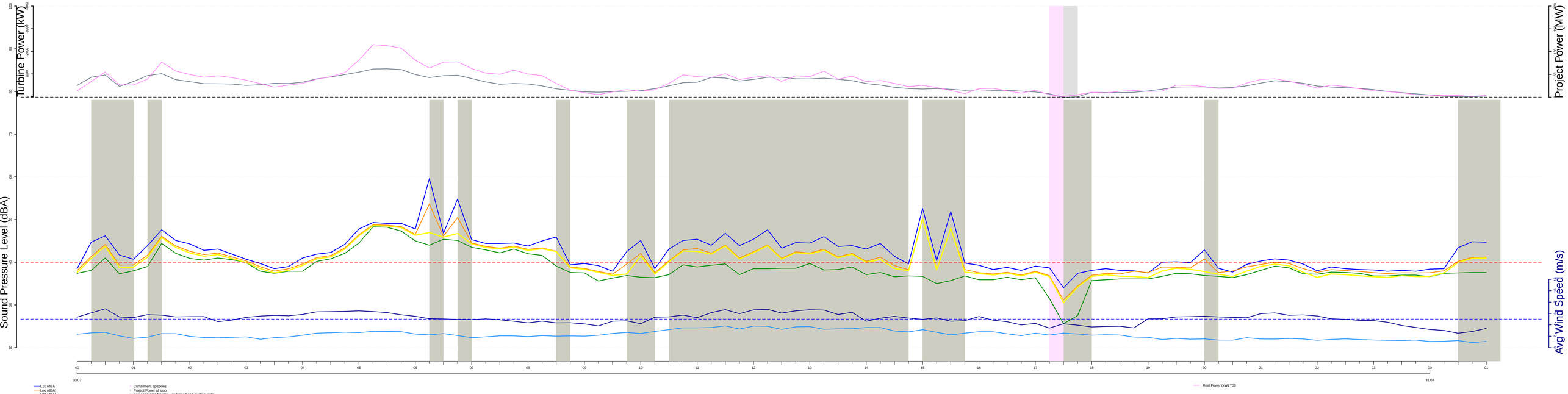
Control 1 (Turbine 8)
Wednesday, 7 29, 2020



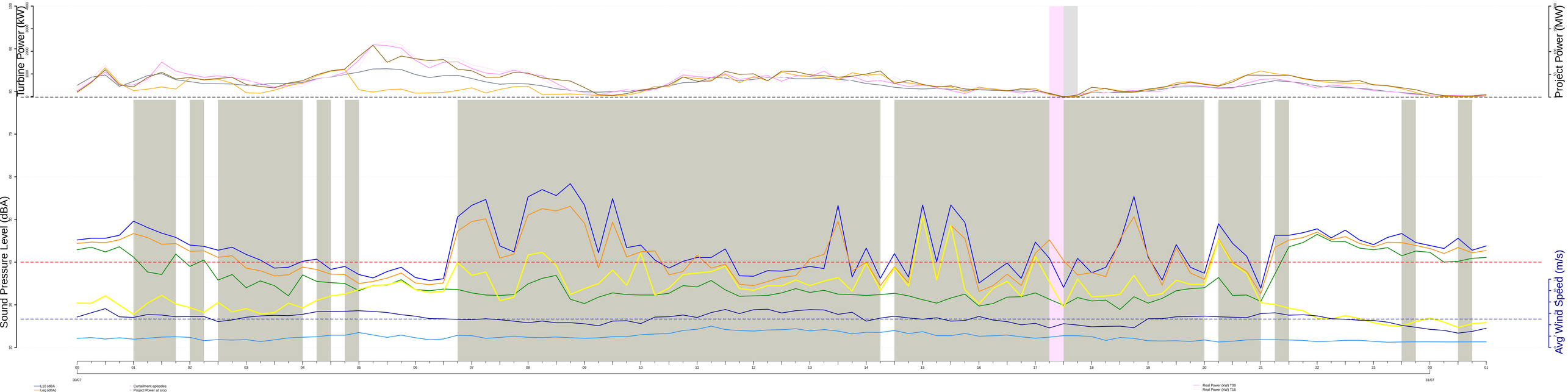
REC~068 (Fuerniss Residence)
Wednesday, 7 29, 2020



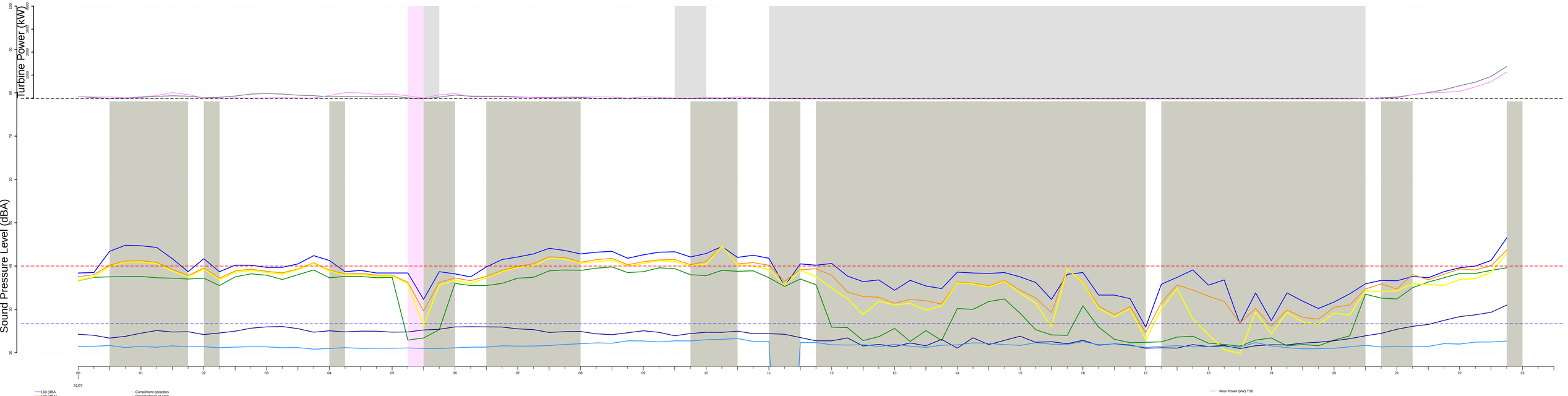
Control 1 (Turbine 8)
Thursday, 7 30, 2020



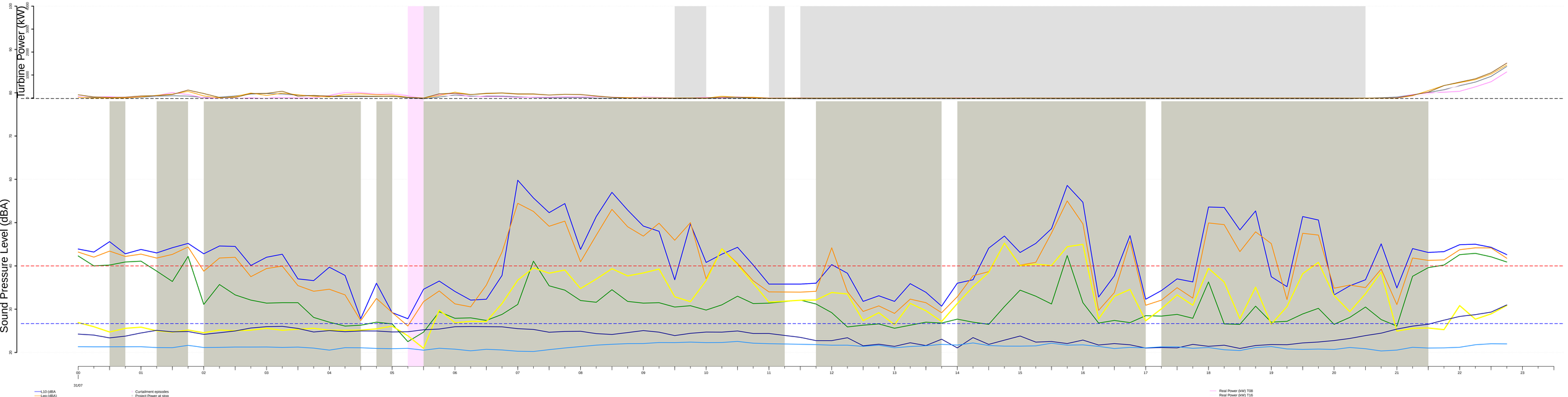
REC~068 (Fuerniss Residence)
Thursday, 7 30, 2020



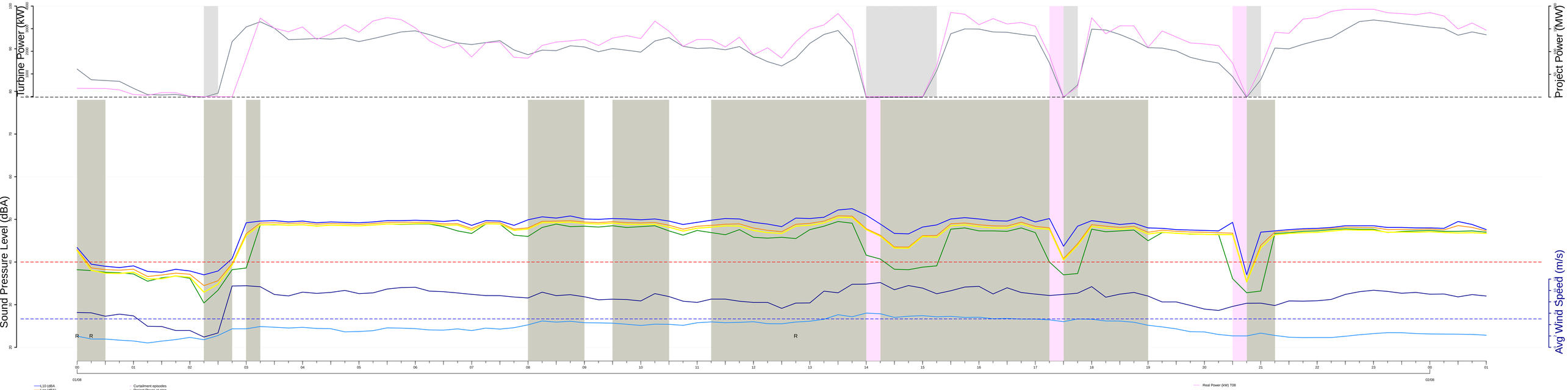
Control 1 (Turbine 8)
Friday, 7 31, 2020



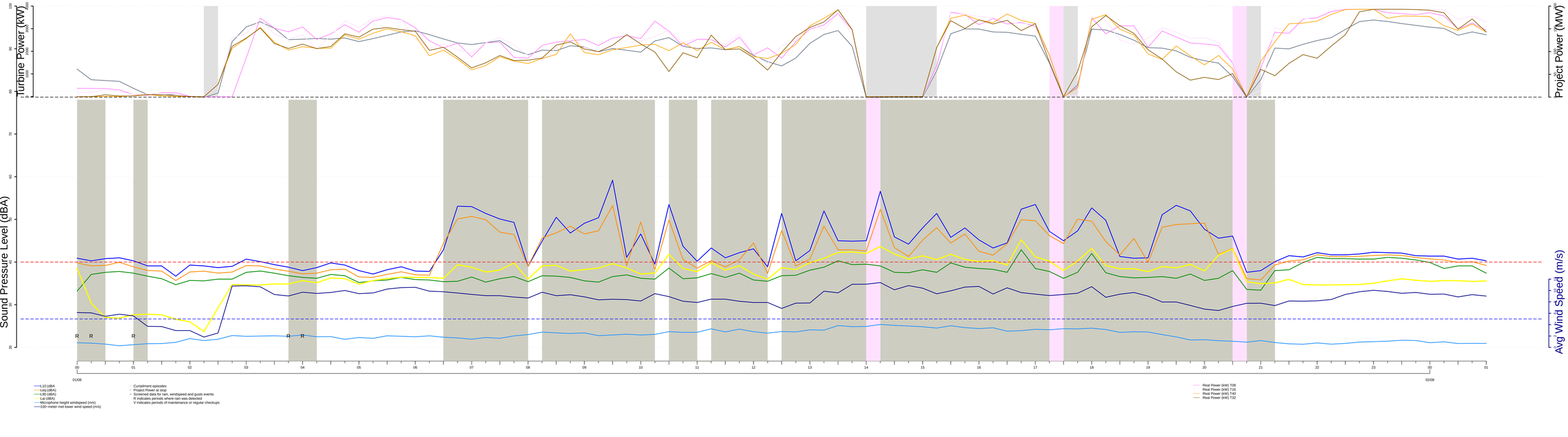
REC~068 (Fuerniss Residence)
Friday, 7 31, 2020



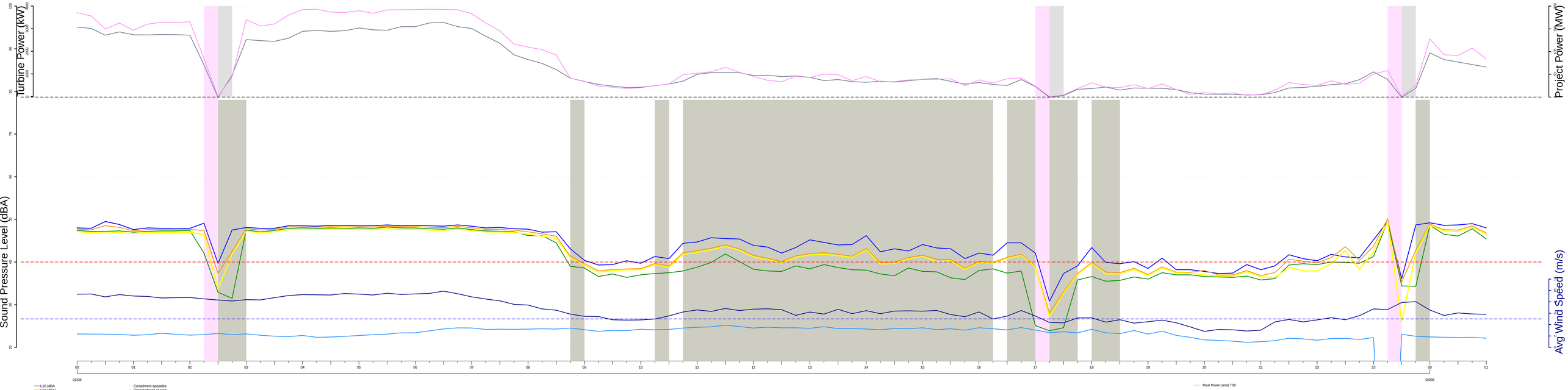
Control 1 (Turbine 8)
Saturday, 8 1, 2020



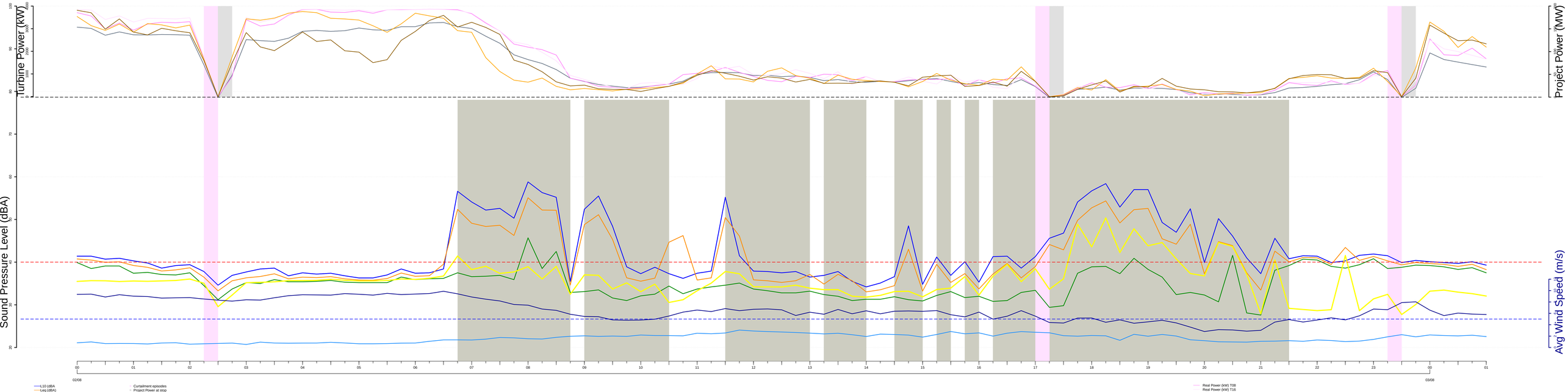
REC~068 (Fuerniss Residence)
Saturday, 8 1, 2020



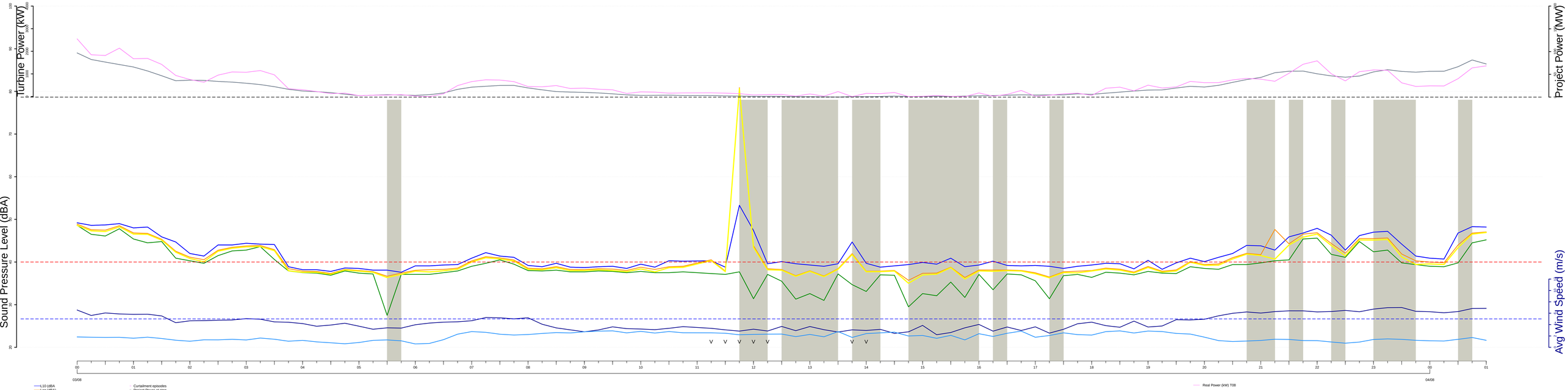
Control 1 (Turbine 8)
Sunday, 8 2, 2020



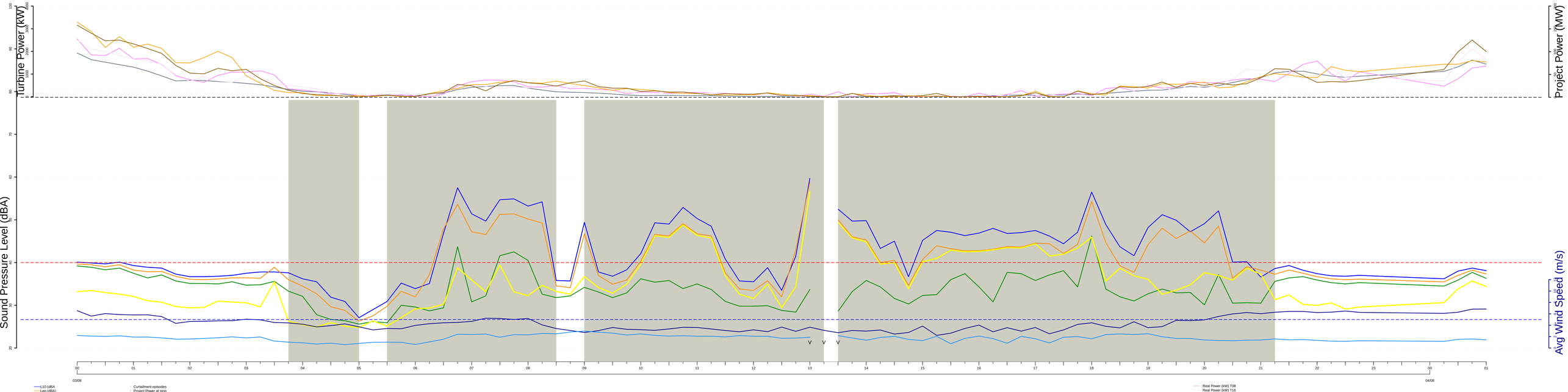
REC~068 (Fuerniss Residence)
Sunday, 8 2, 2020



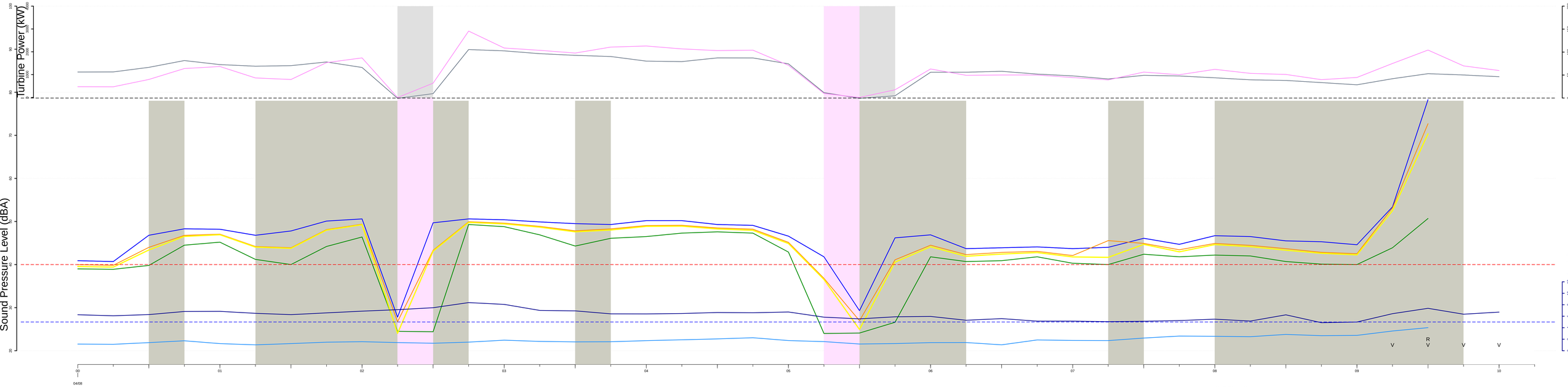
Control 1 (Turbine 8)
Monday, 8 3, 2020



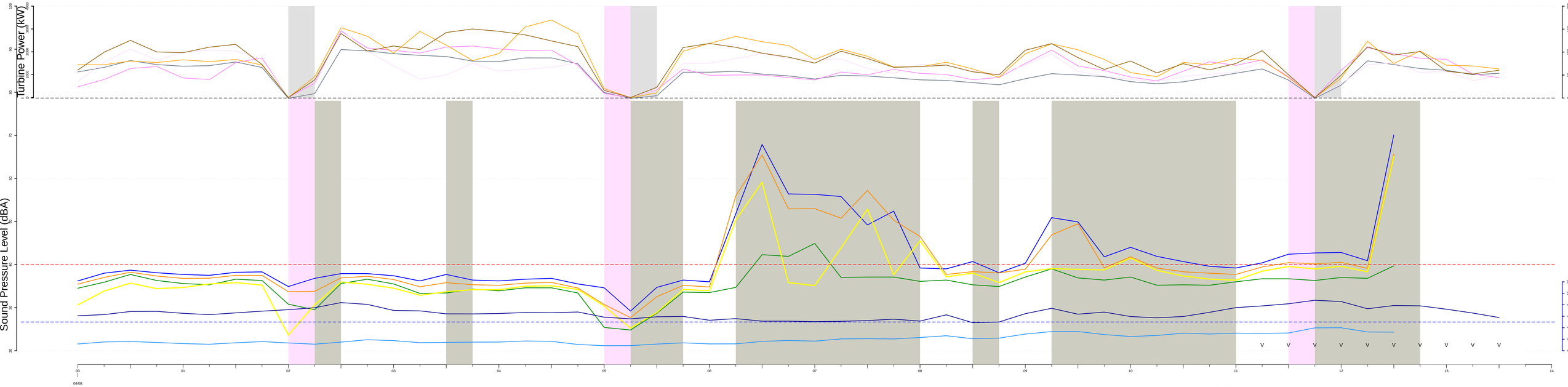
REC~068 (Fuerniss Residence)
Monday, 8 3, 2020



Control 1 (Turbine 8)
Tuesday, 8 4, 2020

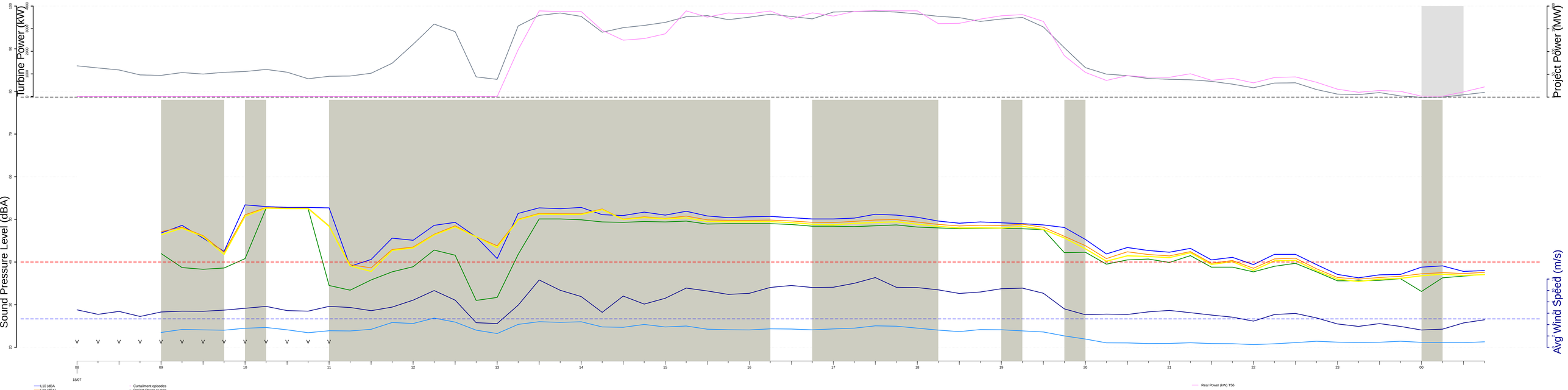


REC~068 (Fuerniss Residence)
Tuesday, 8 4, 2020

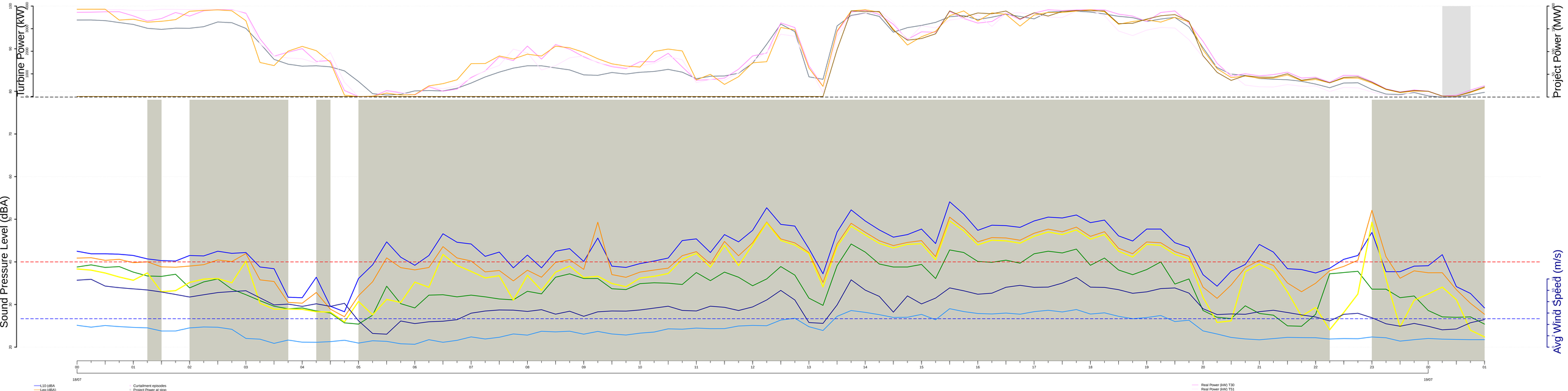


REC-121 (Jenkins Residence)

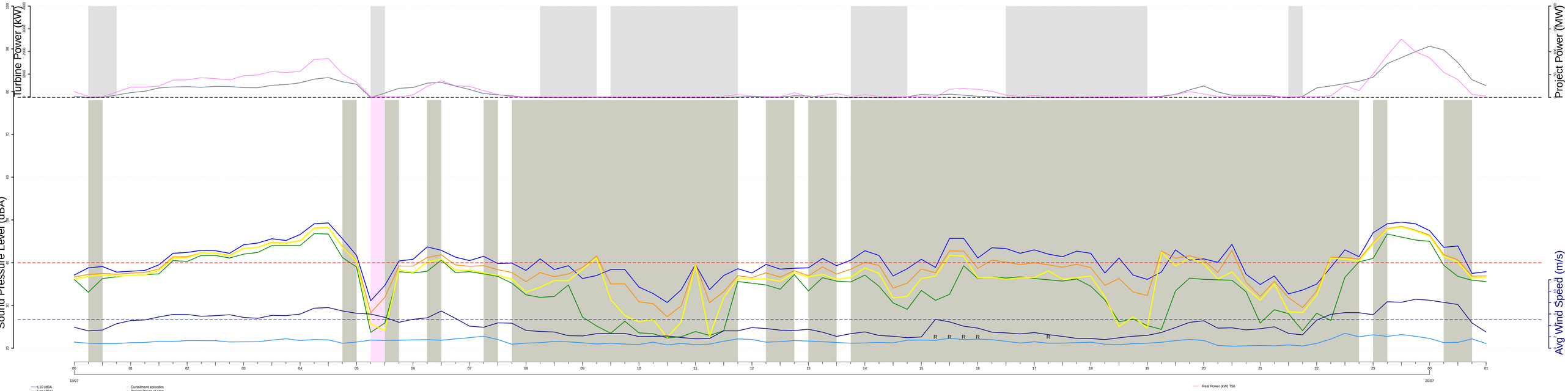
Control 2 (Turbine 56)
Saturday, 7 18, 2020



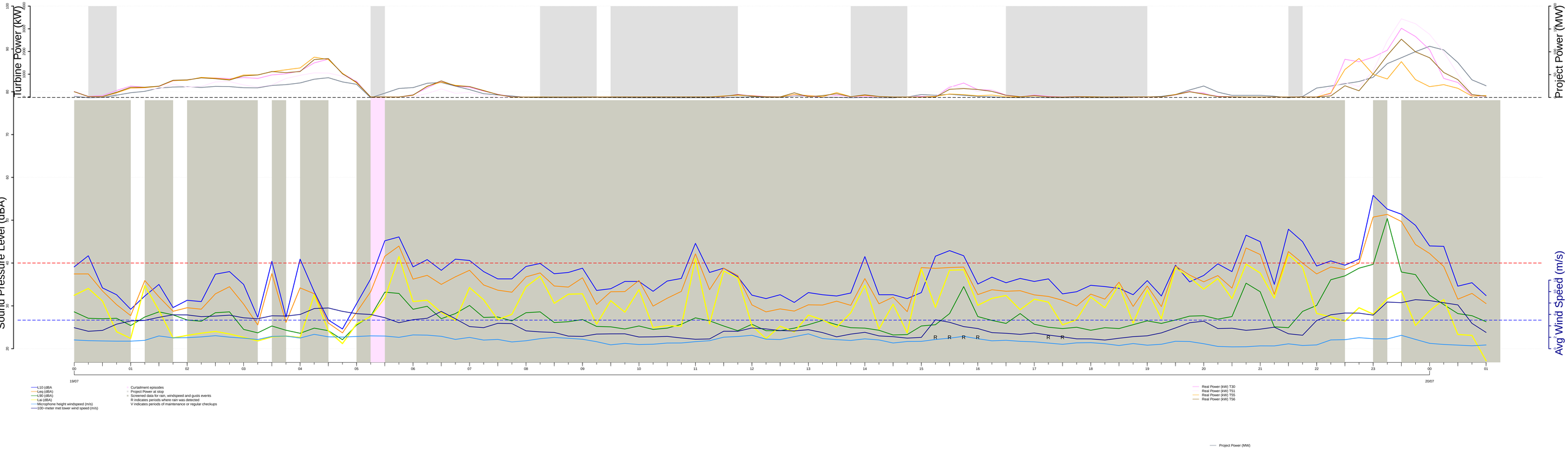
REC~121 (Jenkins Residence)
Saturday, 7 18, 2020



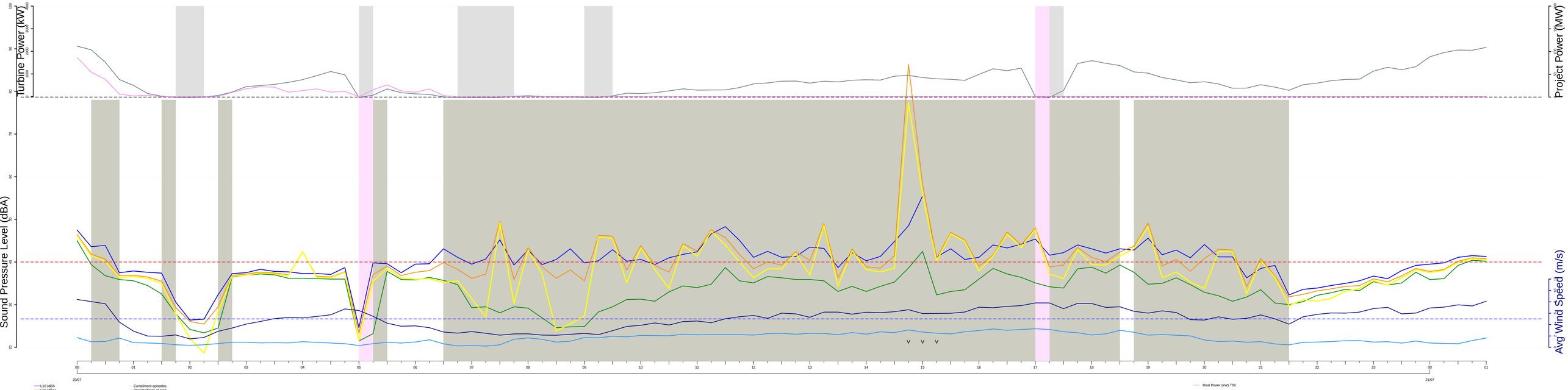
Control 2 (Turbine 56)
Sunday, 7 19, 2020



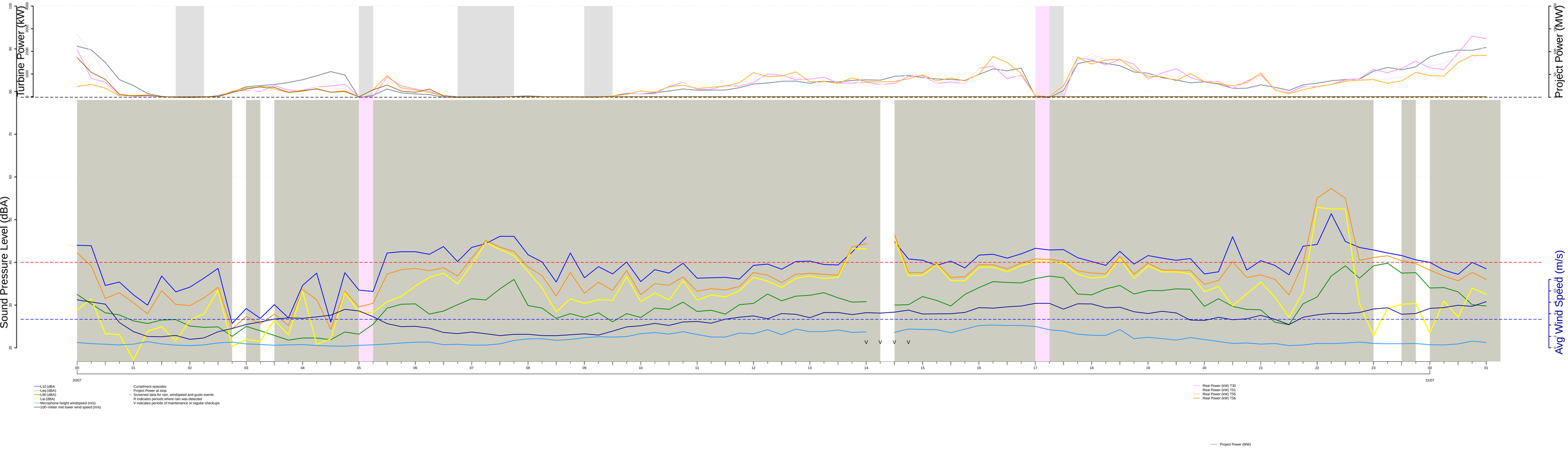
REC~121 (Jenkins Residence)
Sunday, 7 19, 2020



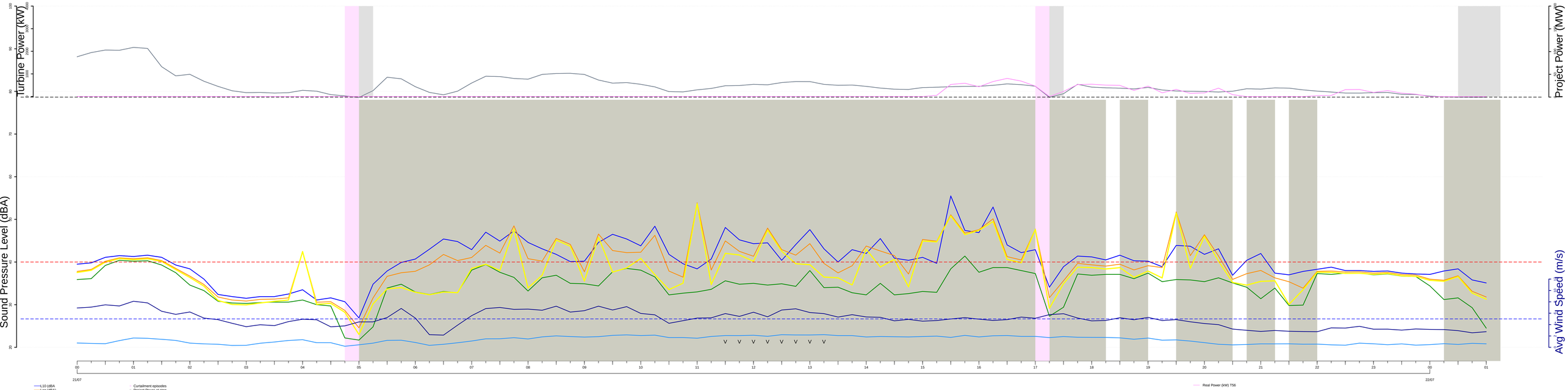
Control 2 (Turbine 56)
Monday, 7 20, 2020



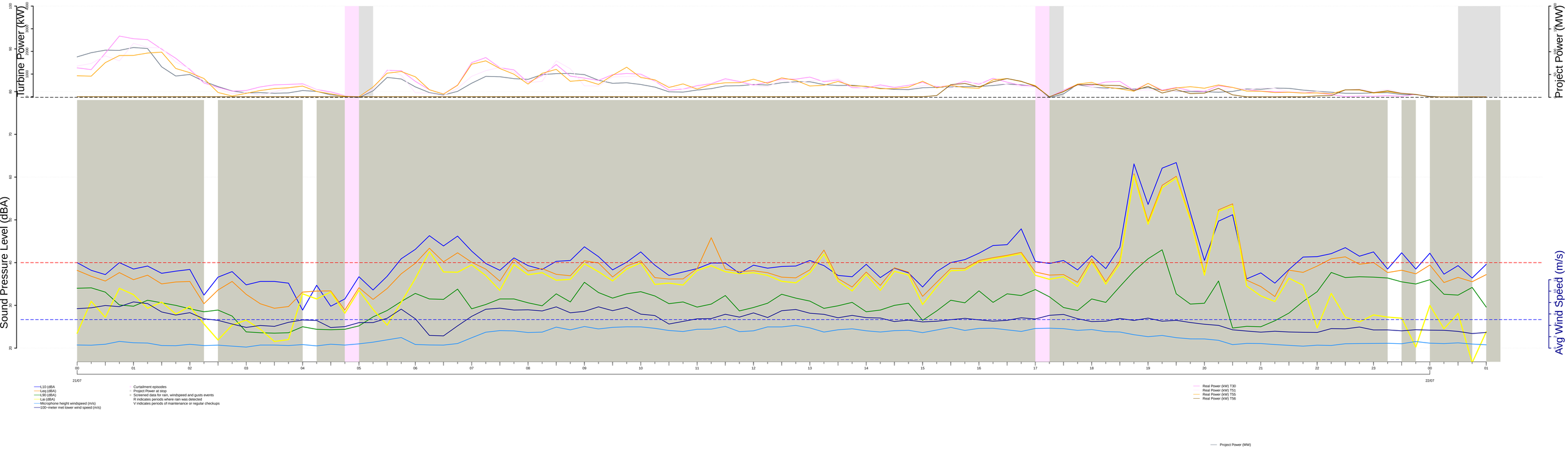
REC~121 (Jenkins Residence)
Monday, 7 20, 2020



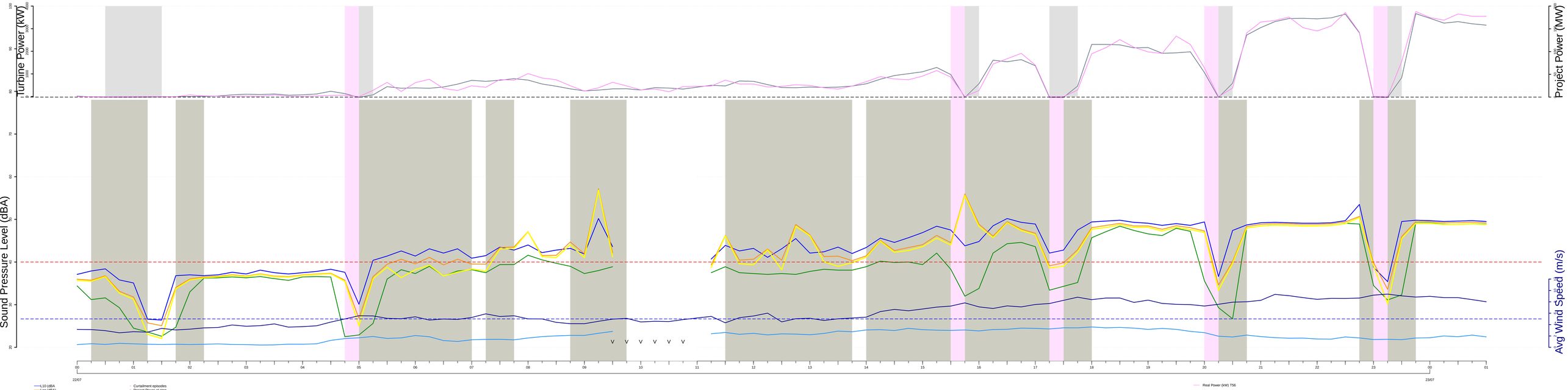
Control 2 (Turbine 56)
Tuesday, 7 21, 2020



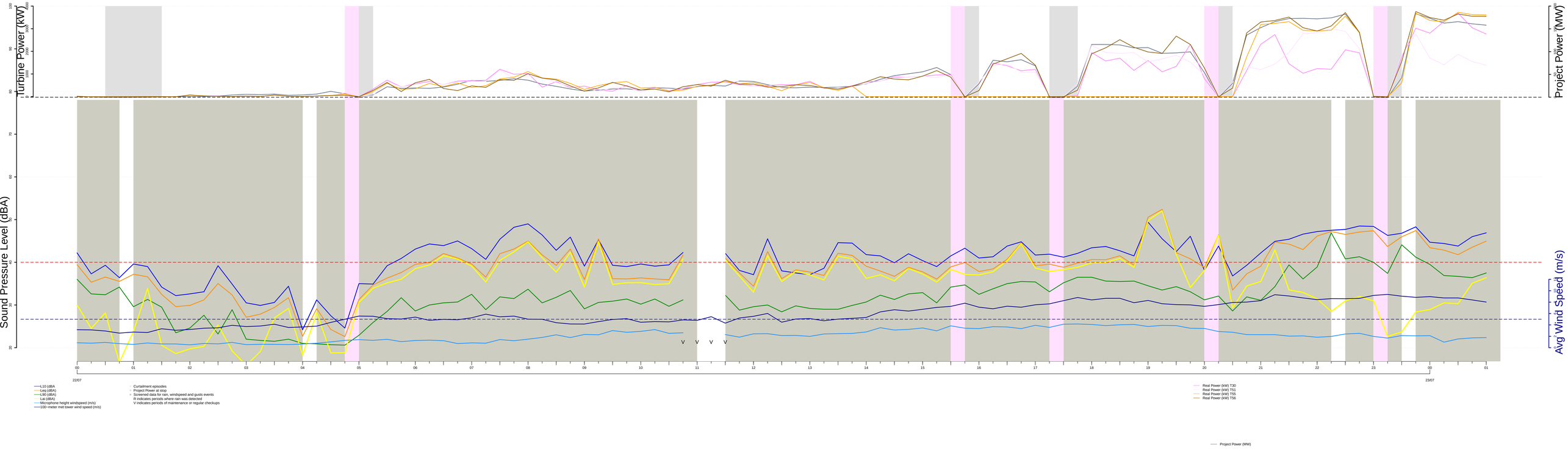
REC~121 (Jenkins Residence)
Tuesday, 7 21, 2020



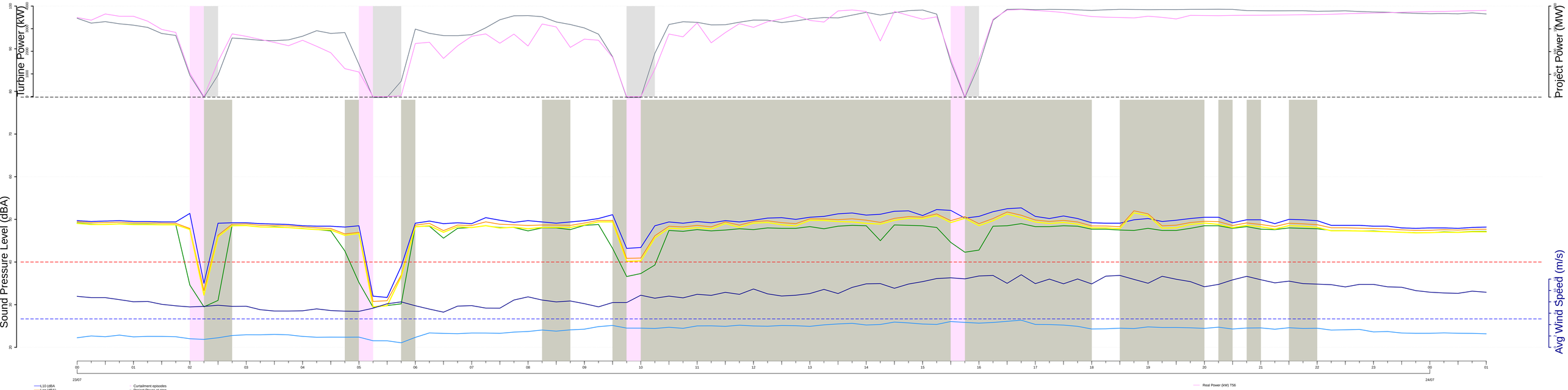
Control 2 (Turbine 56)
Wednesday, 7 22, 2020



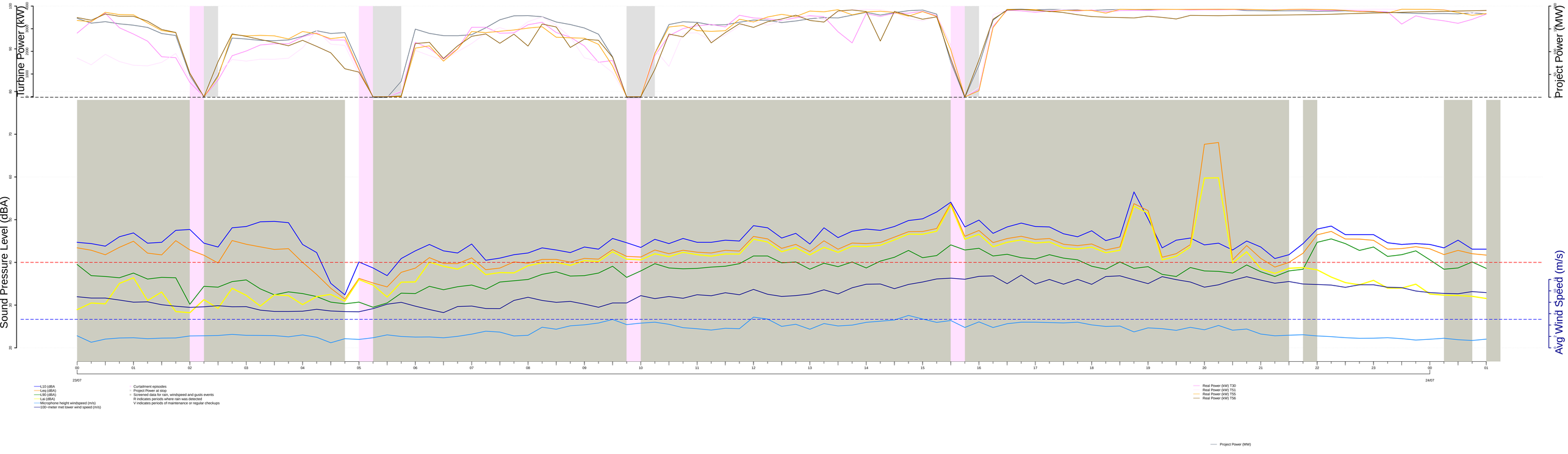
REC~121 (Jenkins Residence)
Wednesday, 7 22, 2020



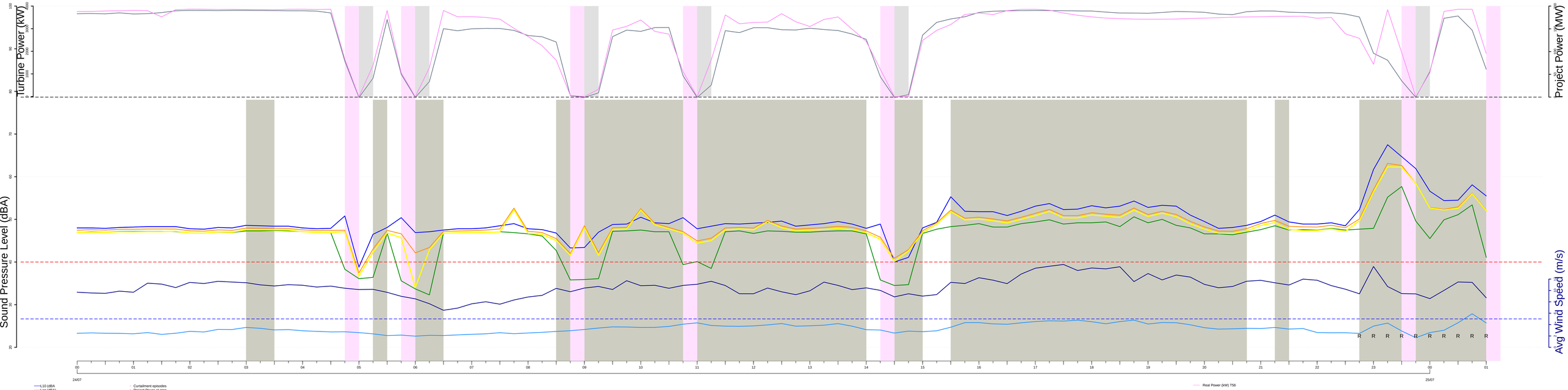
Control 2 (Turbine 56)
Thursday, 7 23, 2020



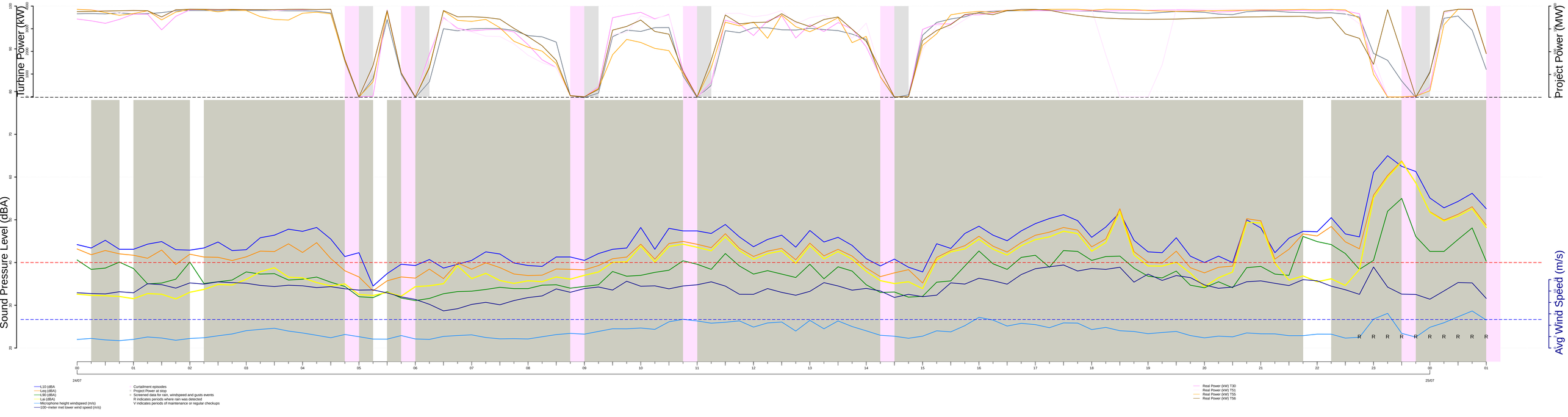
REC~121 (Jenkins Residence)
Thursday, 7 23, 2020



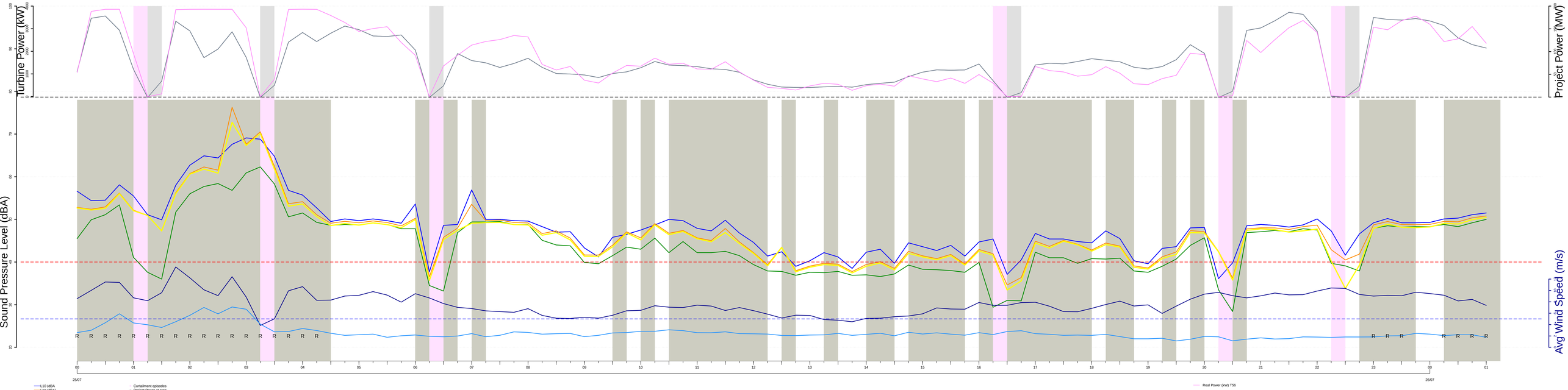
Control 2 (Turbine 56)
Friday, 7 24, 2020



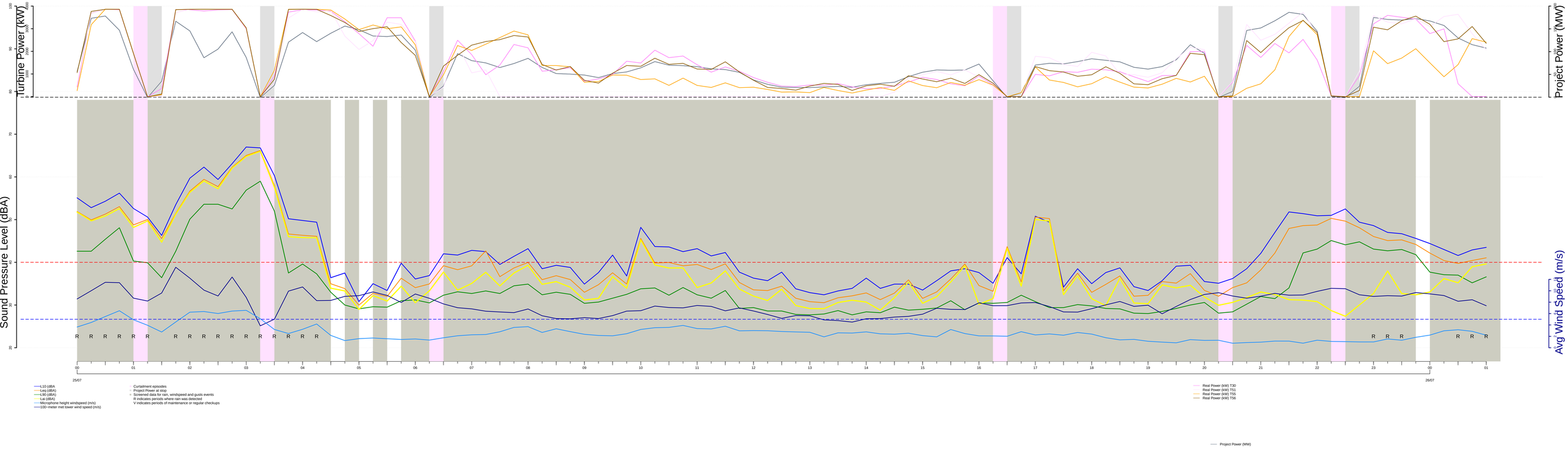
REC~121 (Jenkins Residence)
Friday, 7 24, 2020



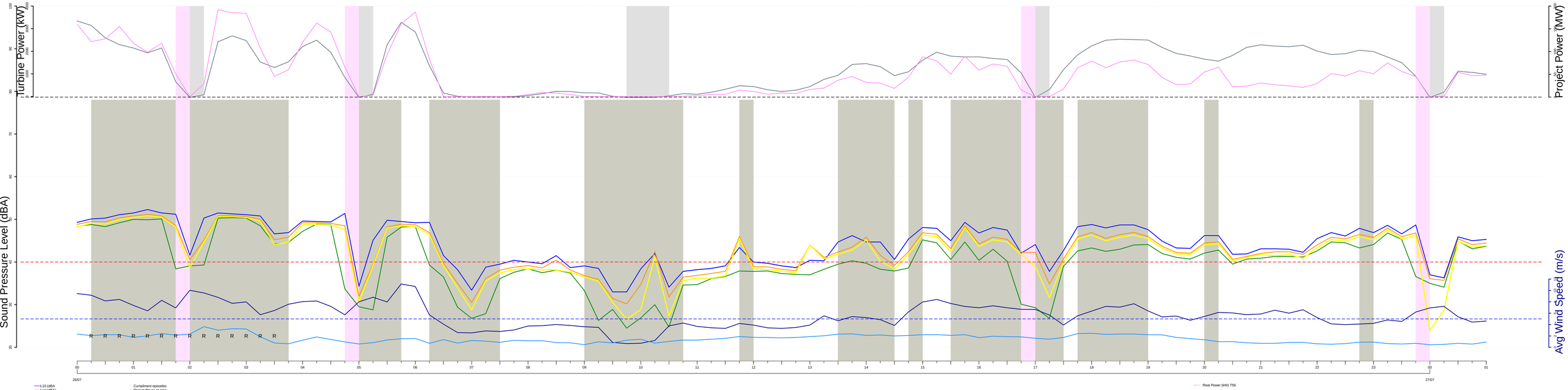
Control 2 (Turbine 56)
Saturday, 7 25, 2020



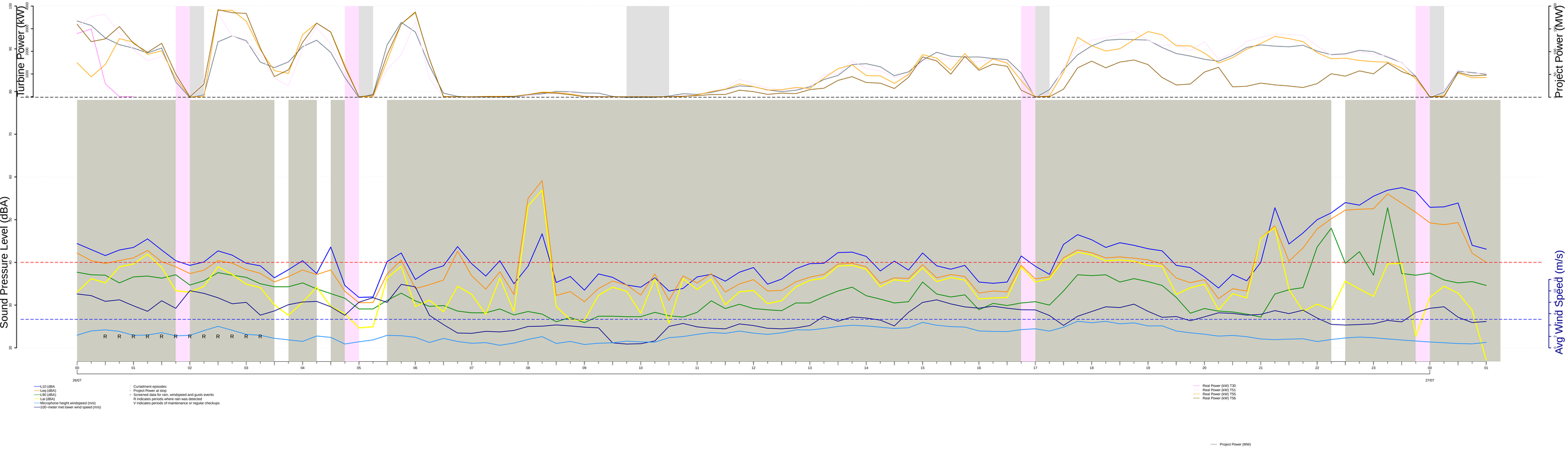
REC~121 (Jenkins Residence)
Saturday, 7 25, 2020



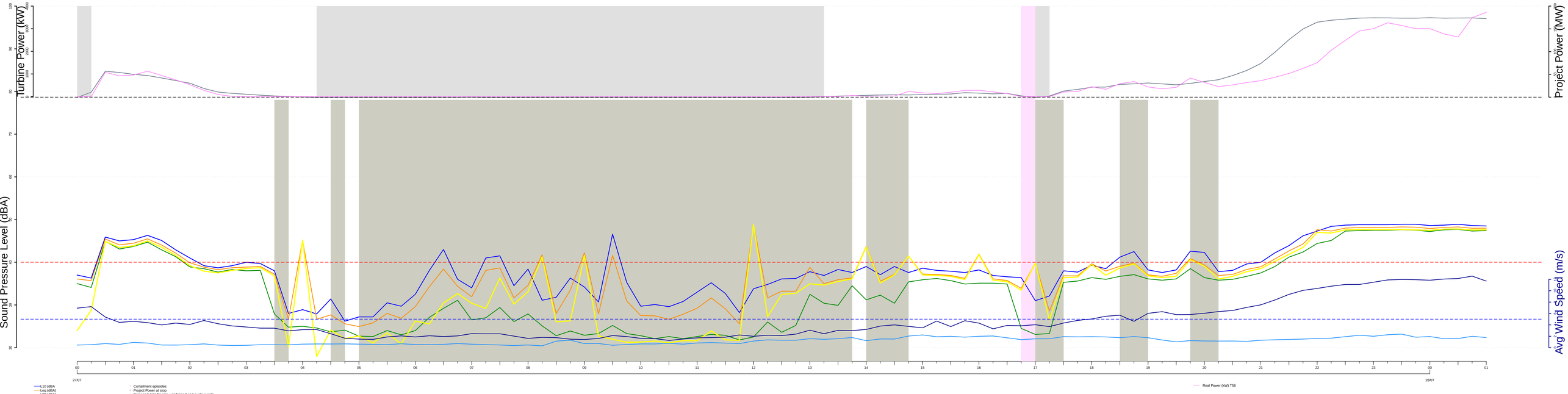
Control 2 (Turbine 56)
Sunday, 7 26, 2020



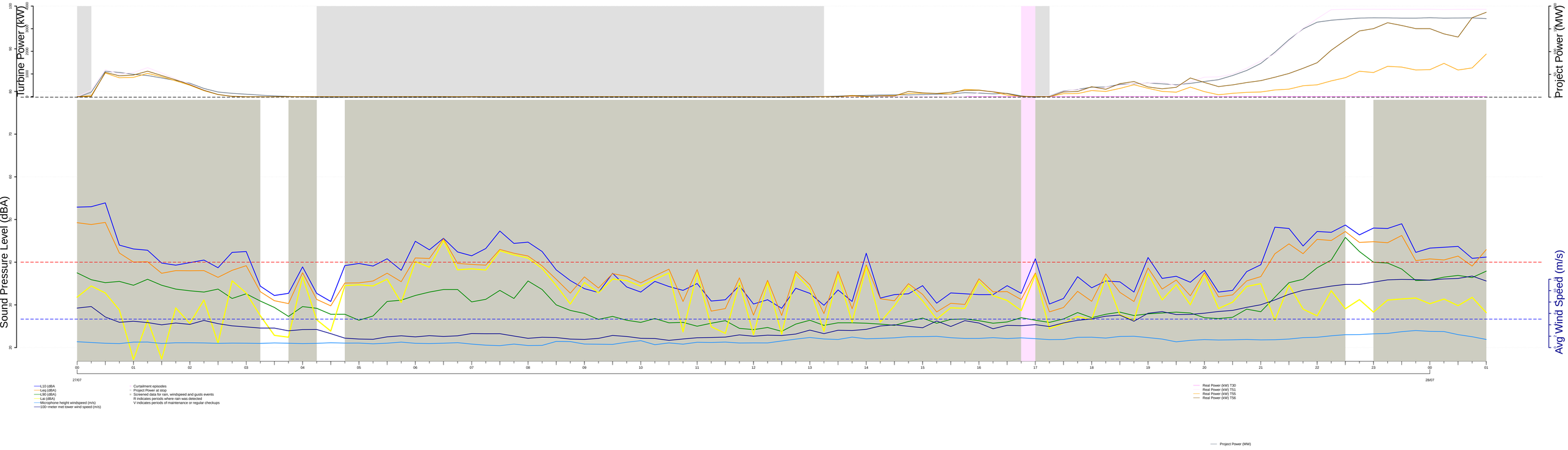
REC~121 (Jenkins Residence)
Sunday, 7 26, 2020



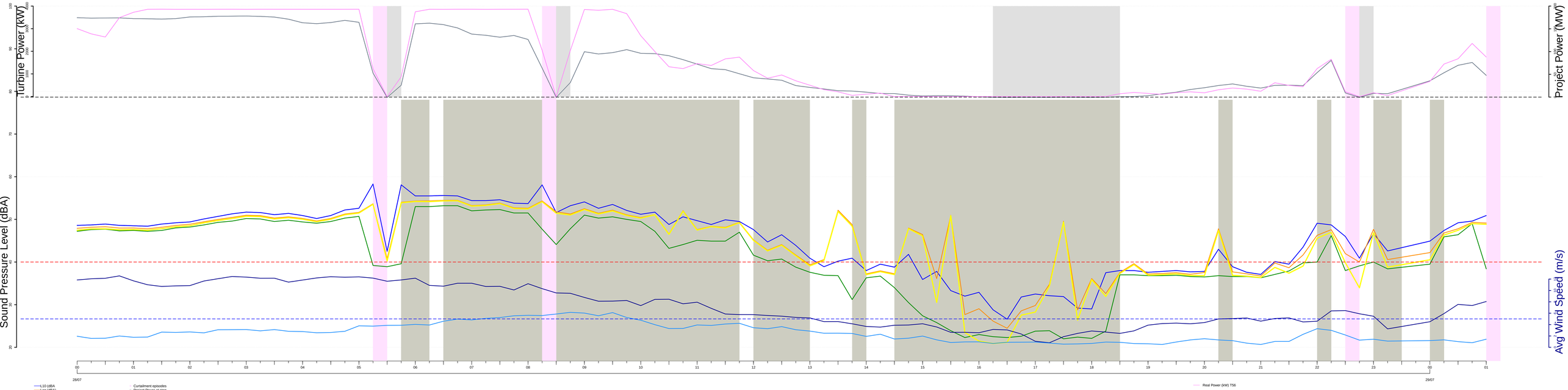
Control 2 (Turbine 56)
Monday, 7 27, 2020



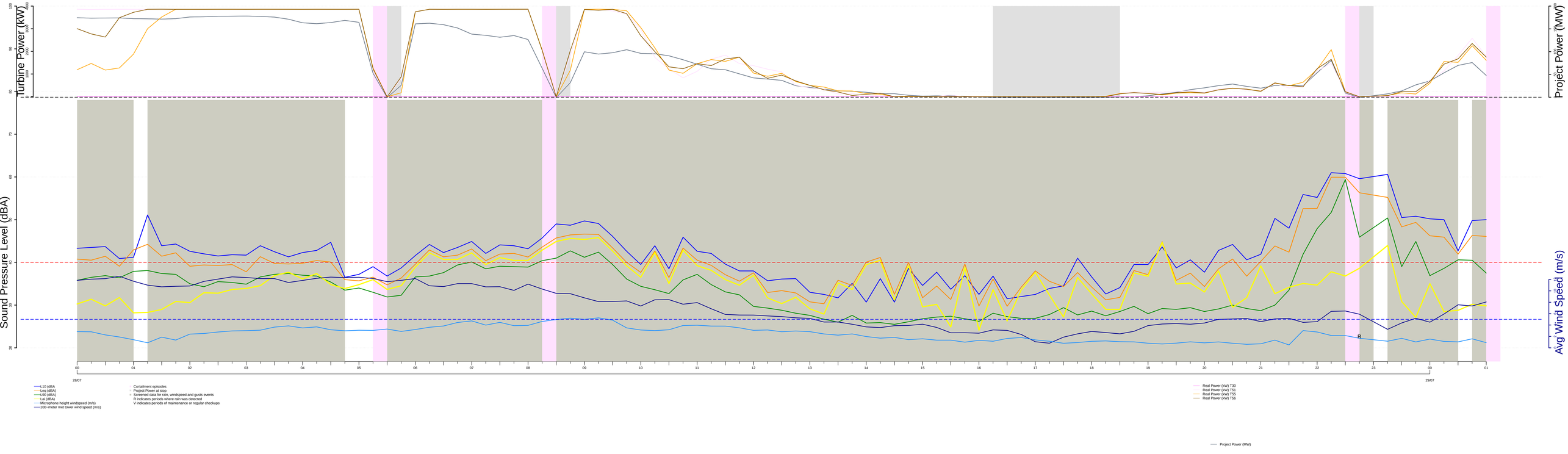
REC~121 (Jenkins Residence)
Monday, 7 27, 2020



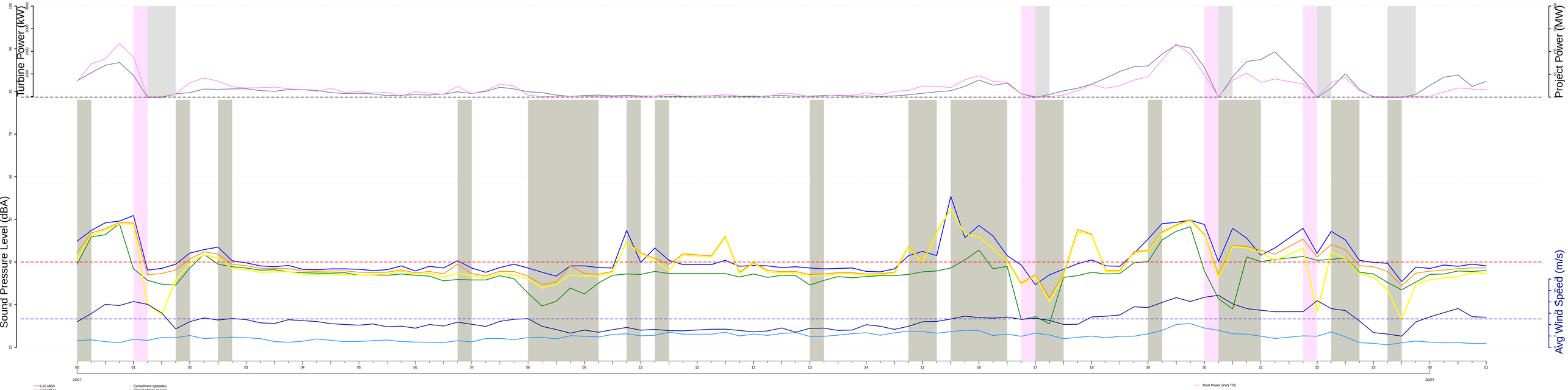
Control 2 (Turbine 56)
Tuesday, 7 28, 2020



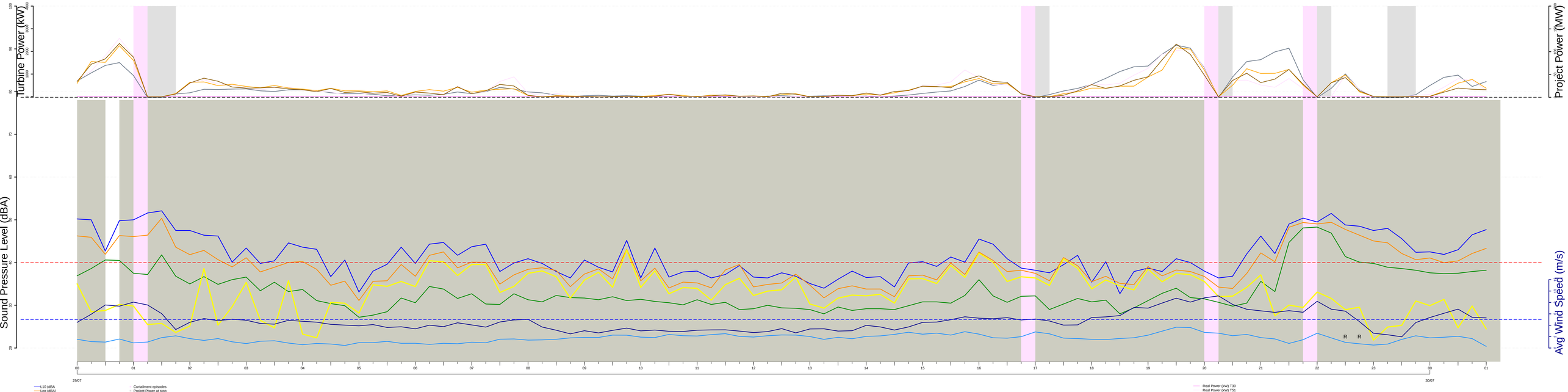
REC~121 (Jenkins Residence)
Tuesday, 7 28, 2020



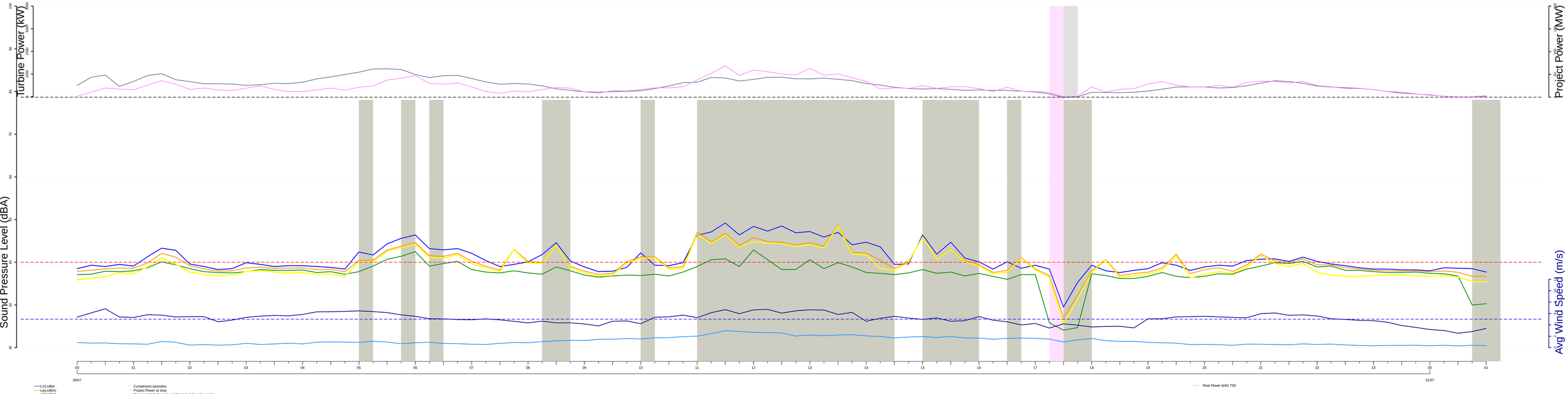
Control 2 (Turbine 56)
Wednesday, 7 29, 2020



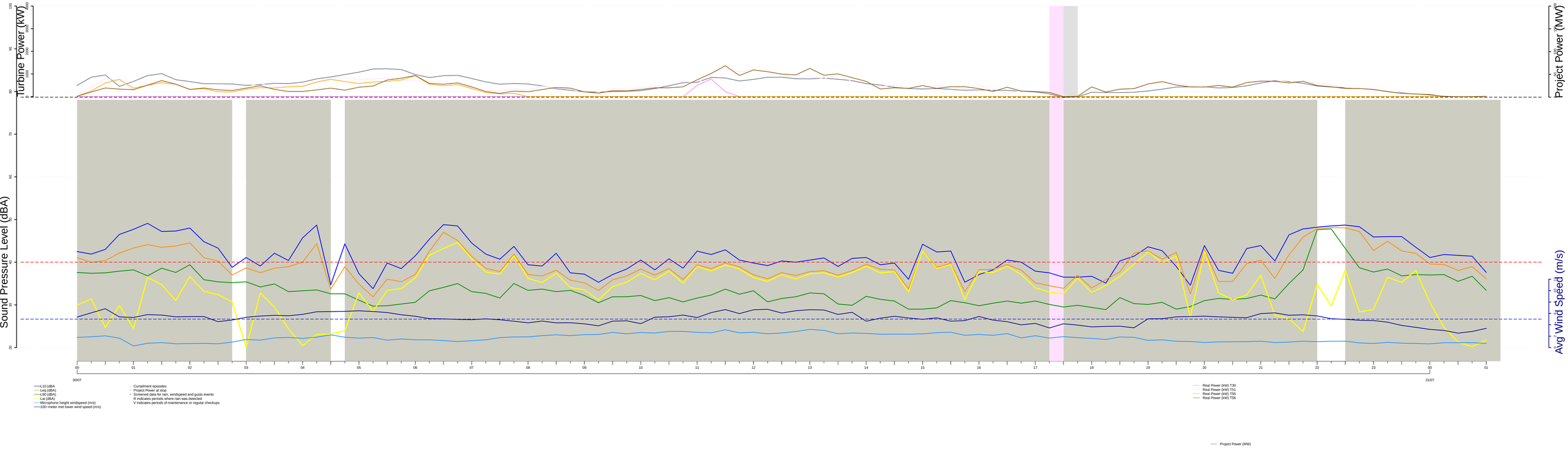
REC~121 (Jenkins Residence)
Wednesday, 7 29, 2020



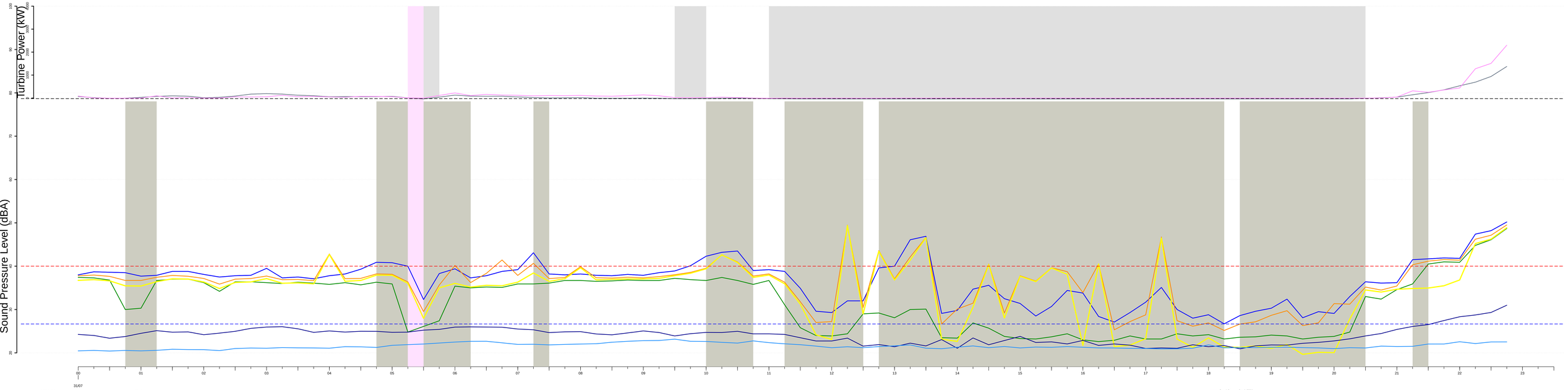
Control 2 (Turbine 56)
Thursday, 7 30, 2020



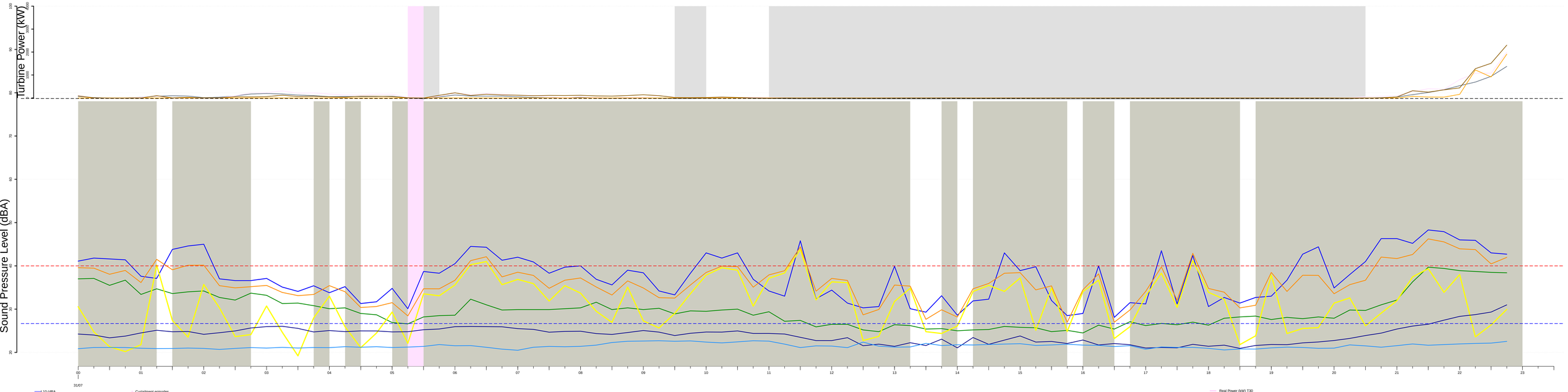
REC~121 (Jenkins Residence)
Thursday, 7 30, 2020



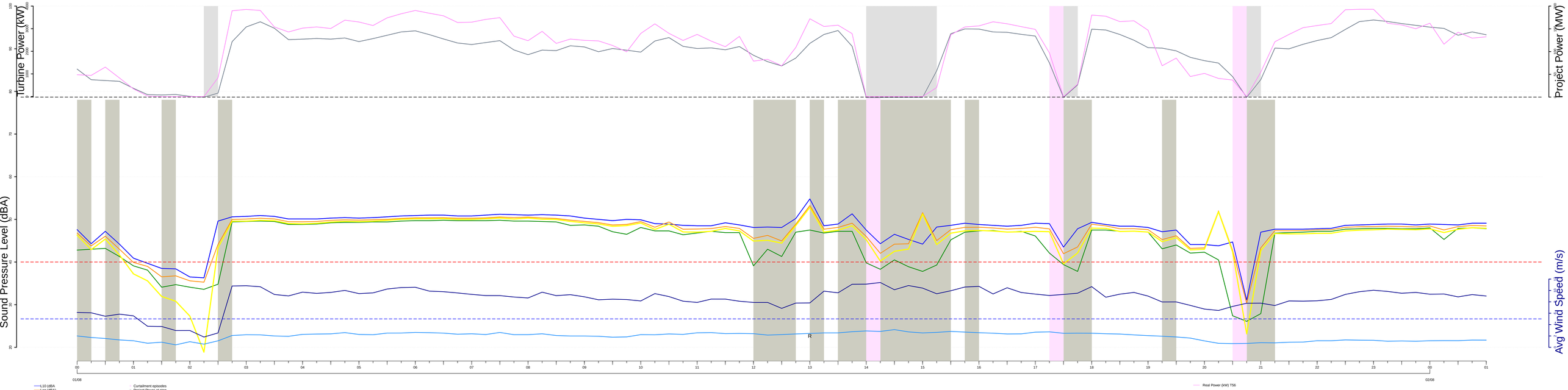
Control 2 (Turbine 56)
Friday, 7 31, 2020



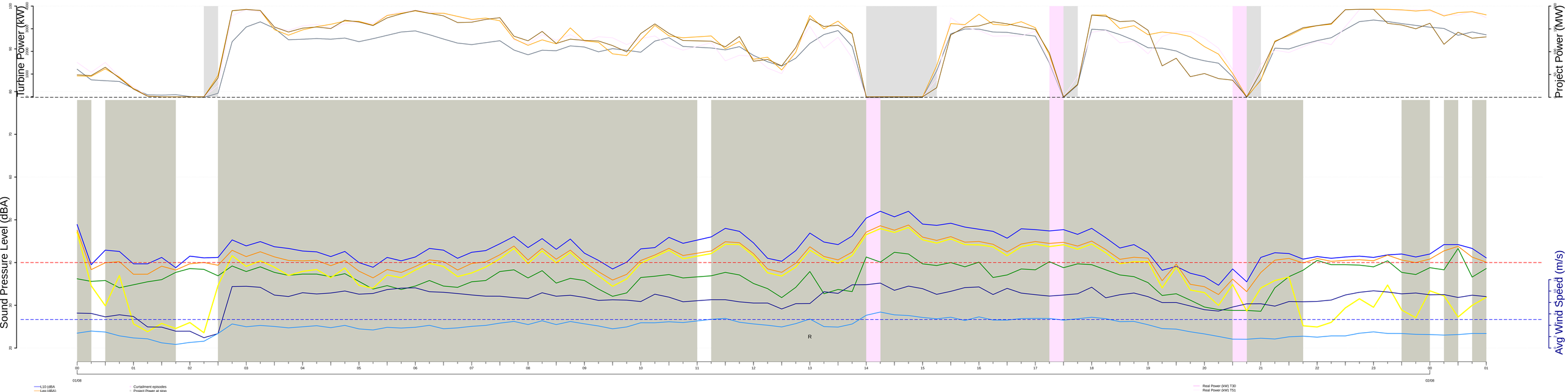
REC~121 (Jenkins Residence)
Friday, 7 31, 2020



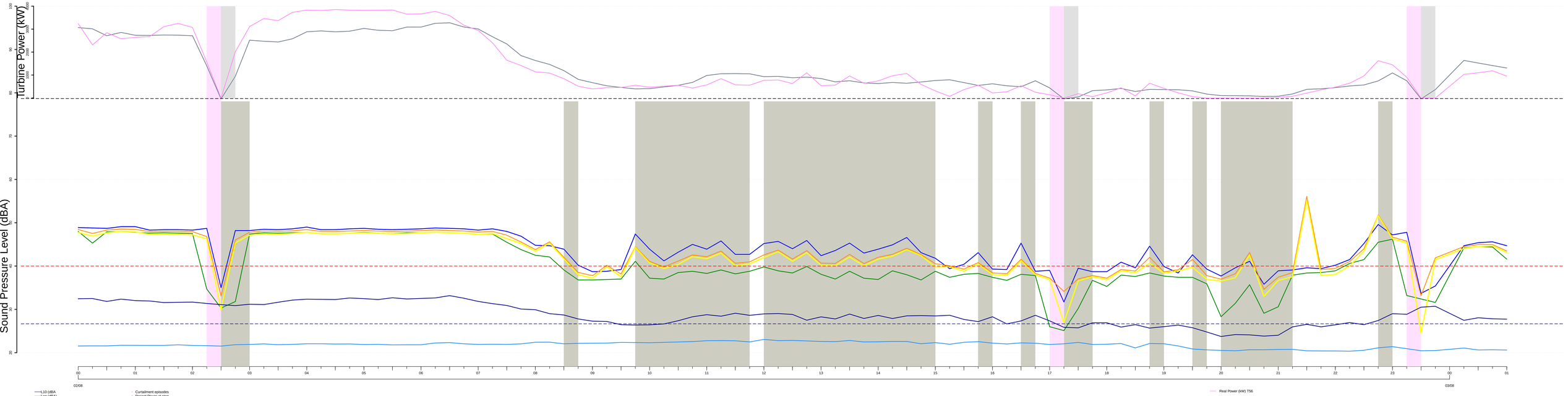
Control 2 (Turbine 56)
Saturday, 8 1, 2020



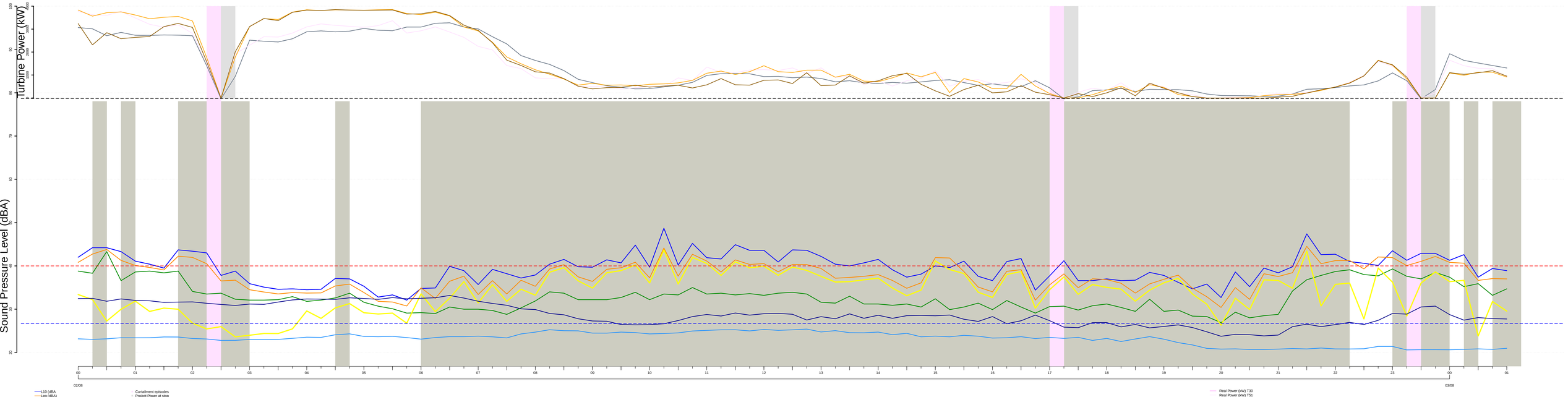
REC~121 (Jenkins Residence)
Saturday, 8 1, 2020



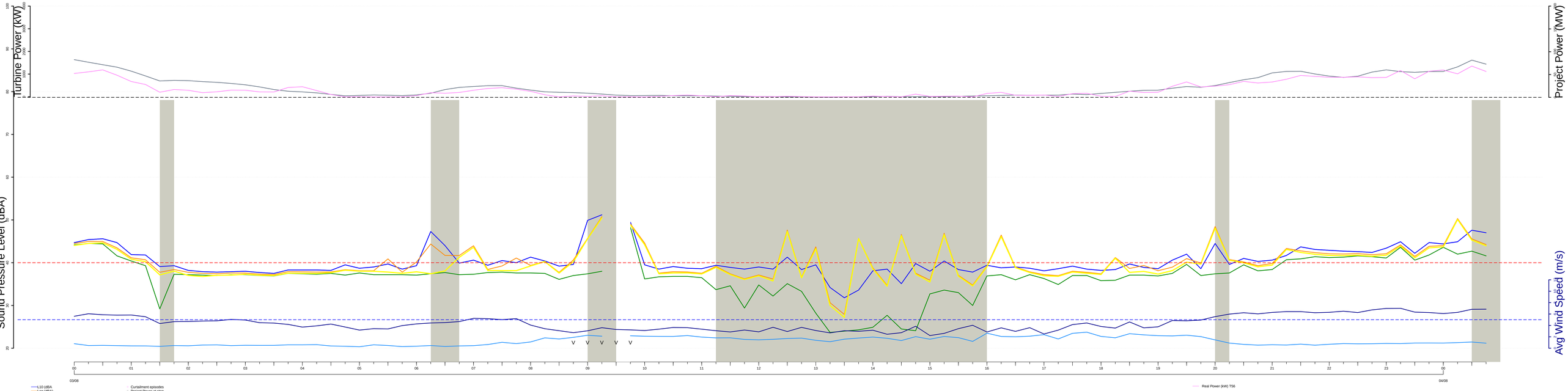
Control 2 (Turbine 56)
Sunday, 8 2, 2020



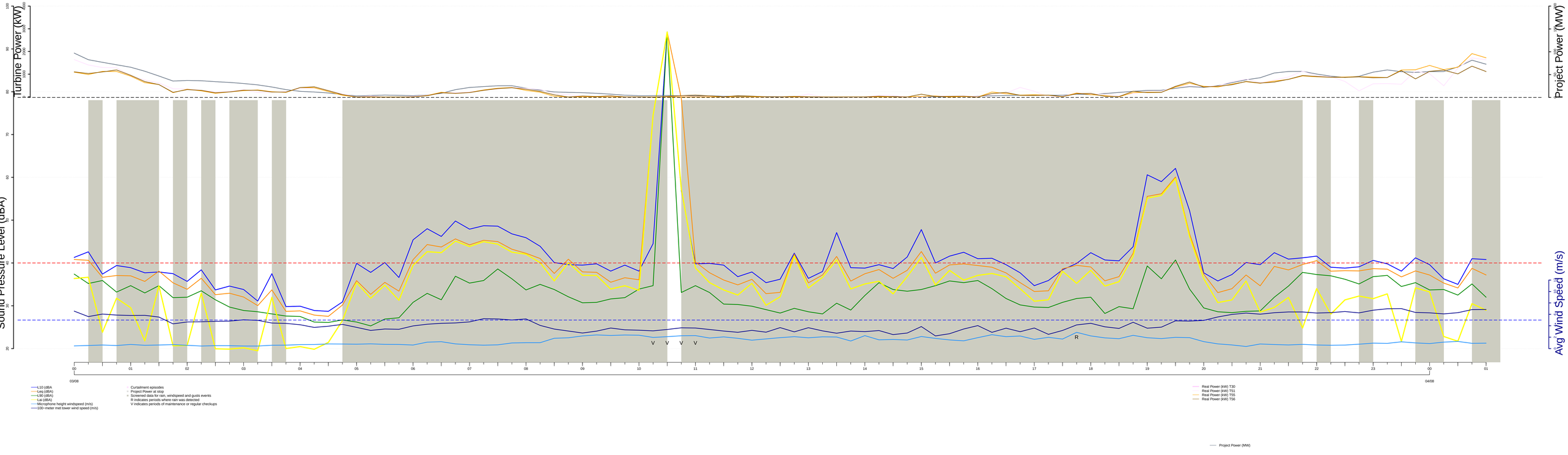
REC~121 (Jenkins Residence)
Sunday, 8 2, 2020



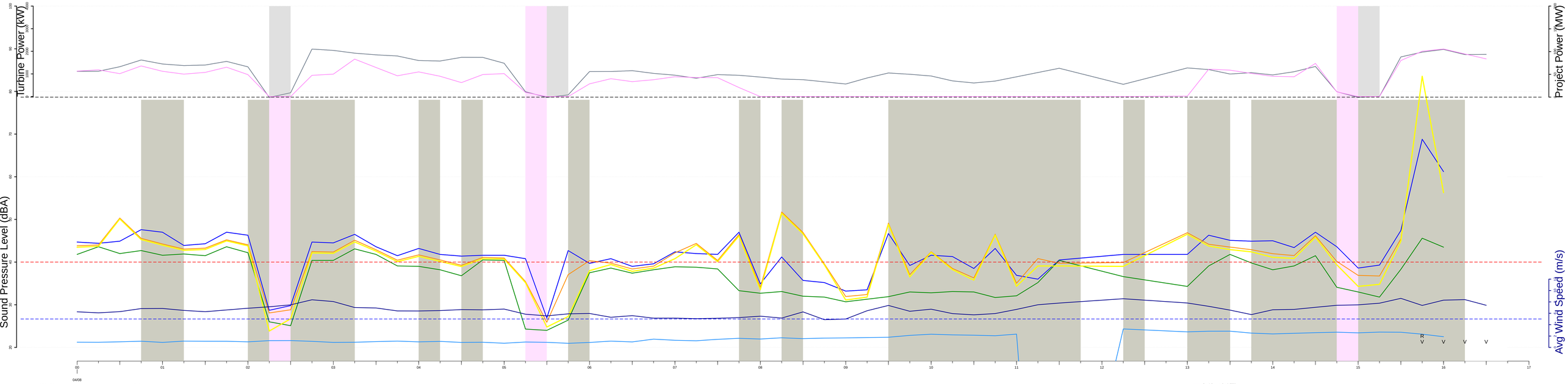
Control 2 (Turbine 56)
Monday, 8 3, 2020



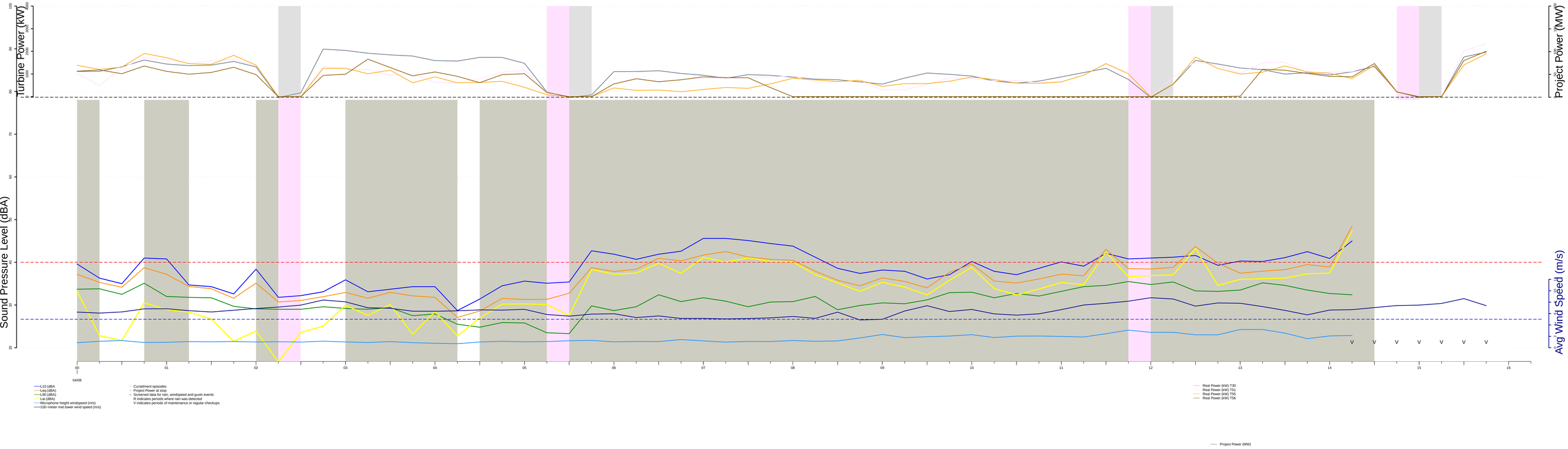
REC~121 (Jenkins Residence)
Monday, 8 3, 2020



Control 2 (Turbine 56)
Tuesday, 8 4, 2020

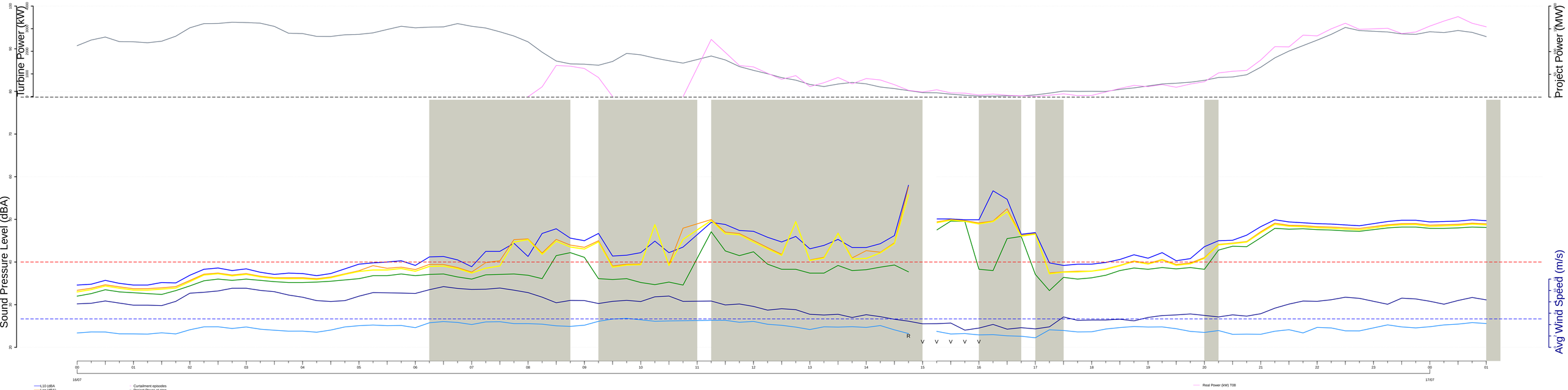


REC~121 (Jenkins Residence)
Tuesday, 8 4, 2020



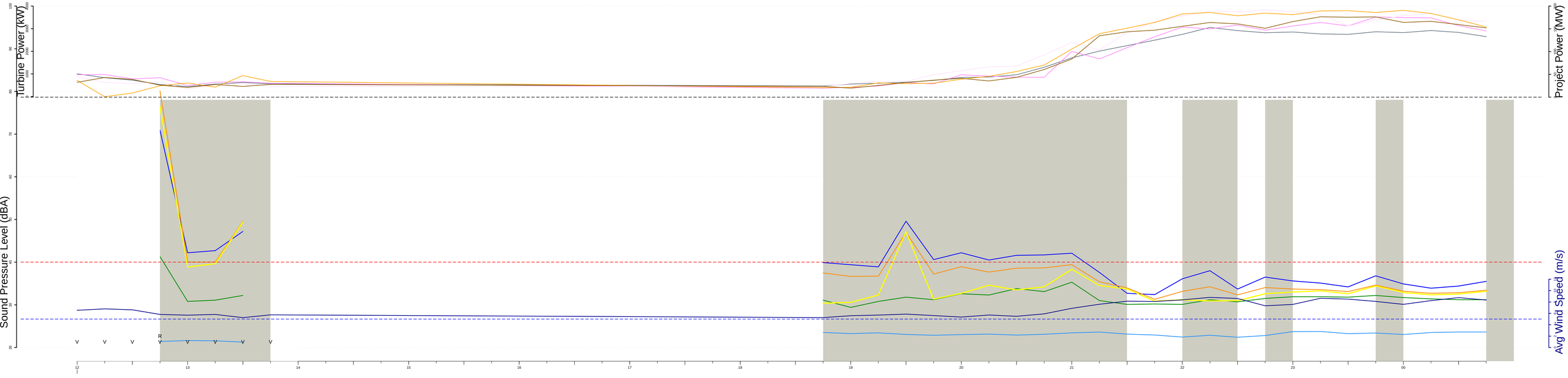
REC-139 (Schoenfelder Residence)

Control 1 (Turbine 8)
Thursday, 7 16, 2020



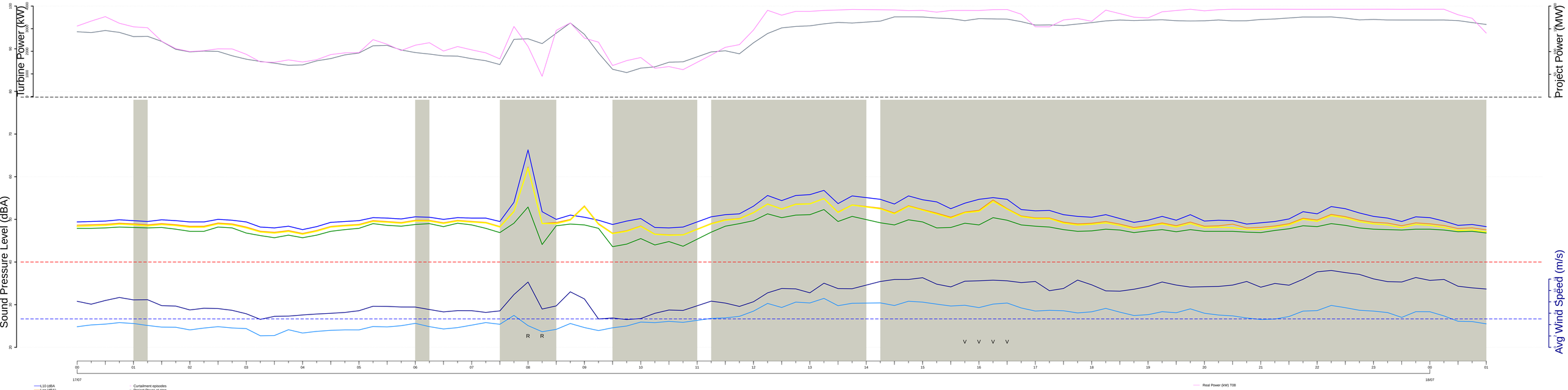
L10 (dBA)
Leq (dBA)
L90 (dBA)
Lat (dBA)
Microphone height windspeed (m/s)
100~meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

REC~139 (Schoenfelder Residence)
Thursday, 7 16, 2020

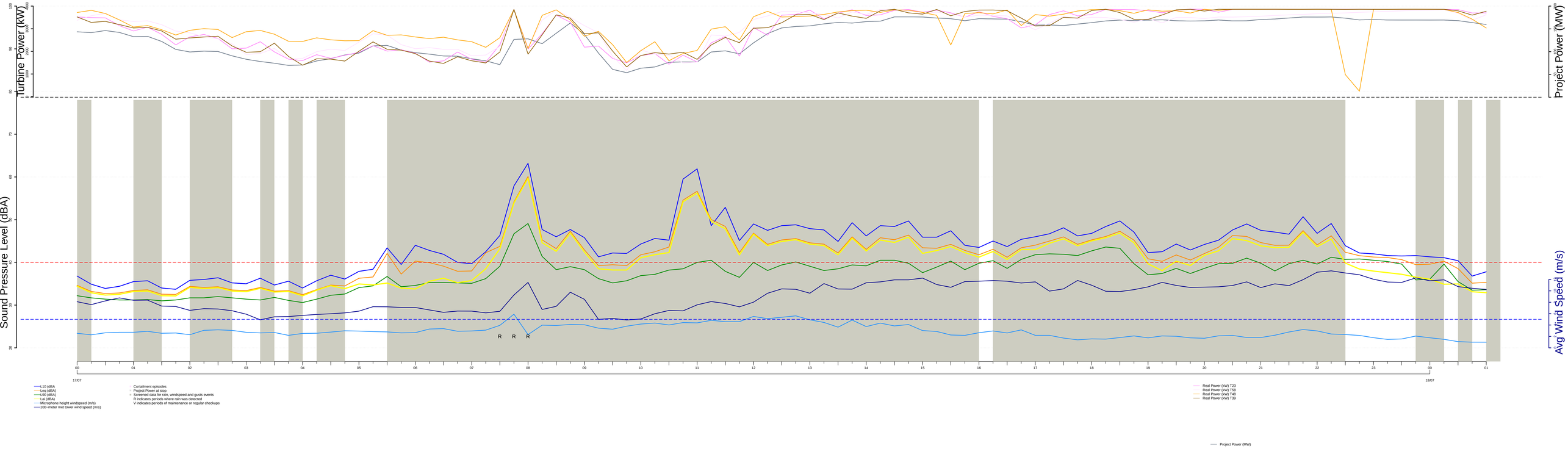


L10 (dBA)
Leq (dBA)
L90 (dBA)
Lat (dBA)
Microphone height windspeed (m/s)
100~meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
V indicates periods of maintenance or regular checkups

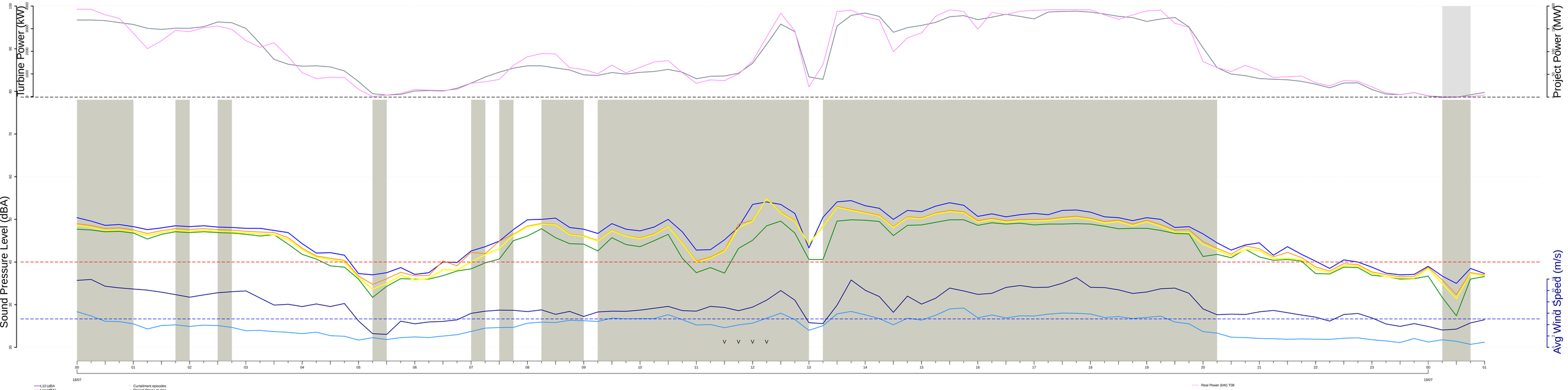
Control 1 (Turbine 8)
Friday, 7 17, 2020



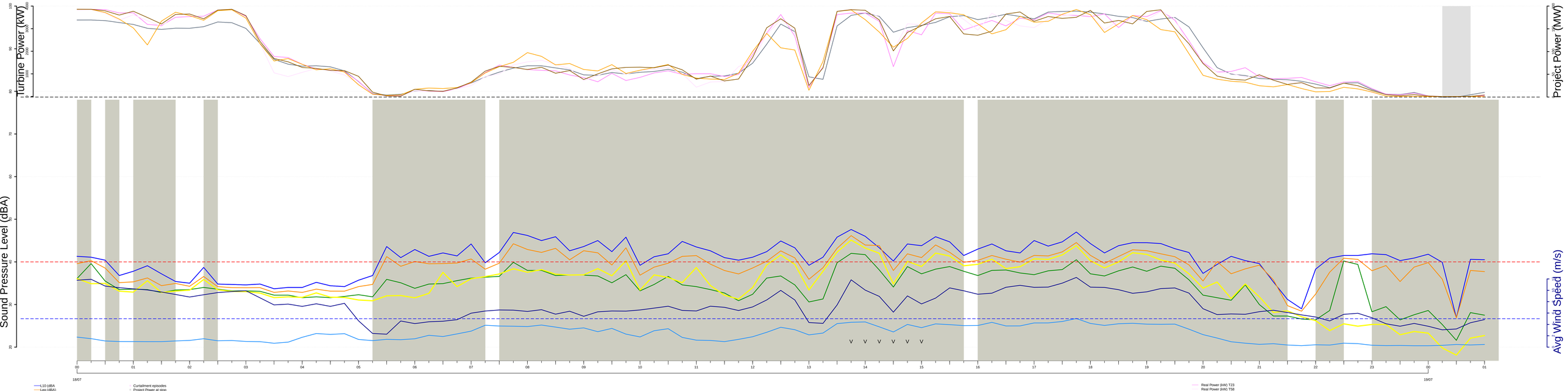
REC~139 (Schoenfelder Residence)
Friday, 7 17, 2020



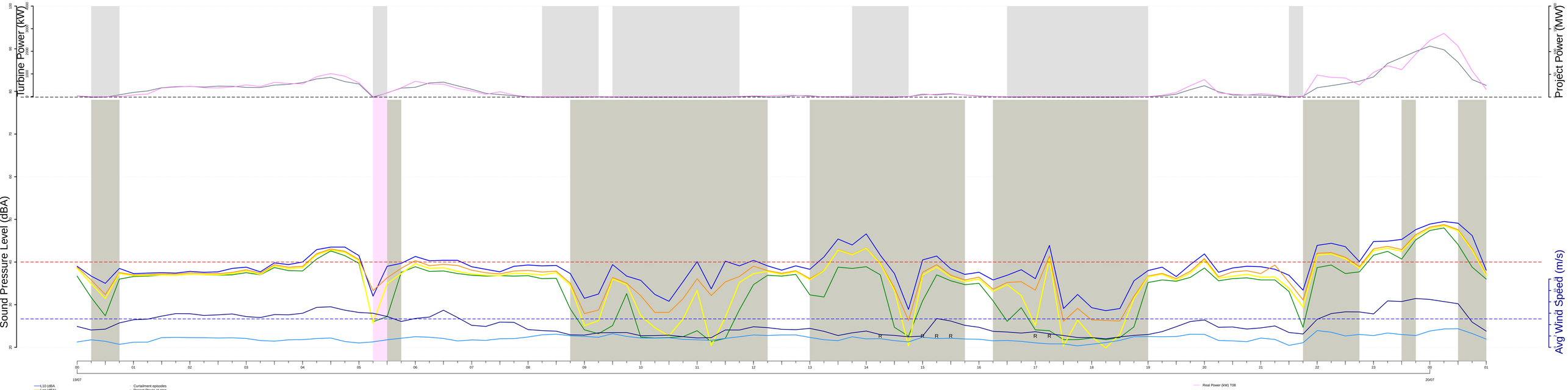
Control 1 (Turbine 8)
Saturday, 7 18, 2020



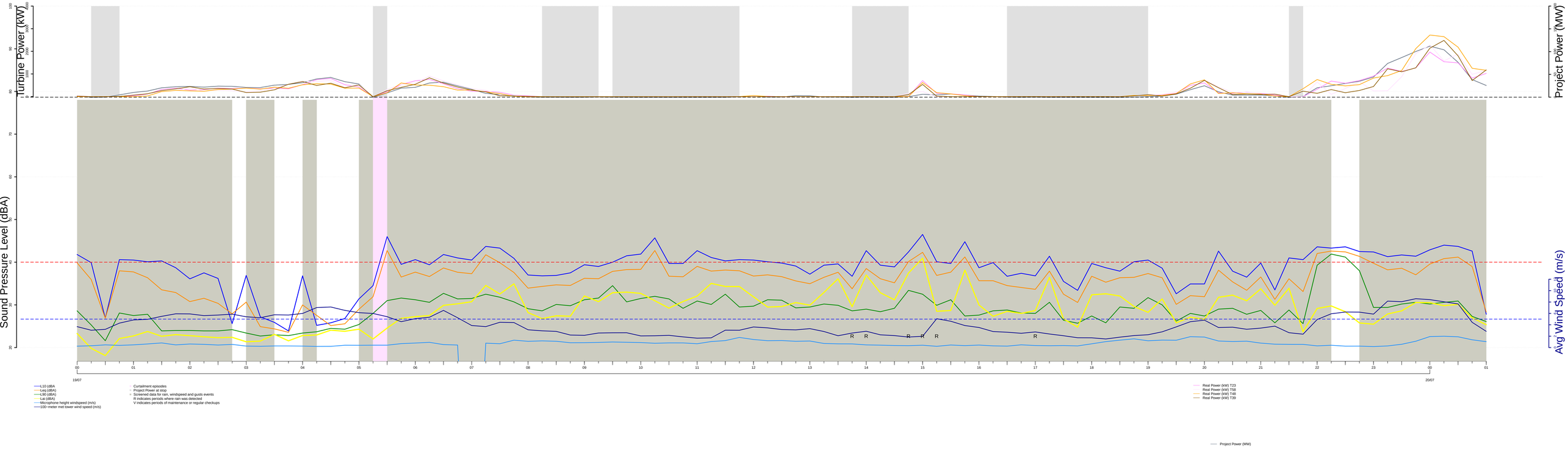
REC~139 (Schoenfelder Residence)
Saturday, 7 18, 2020



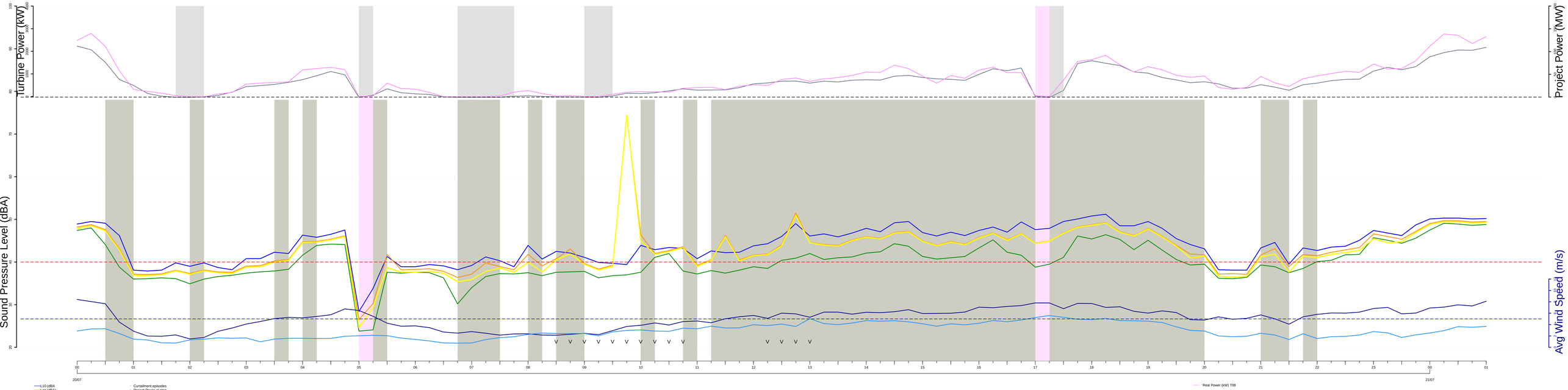
Control 1 (Turbine 8)
Sunday, 7 19, 2020



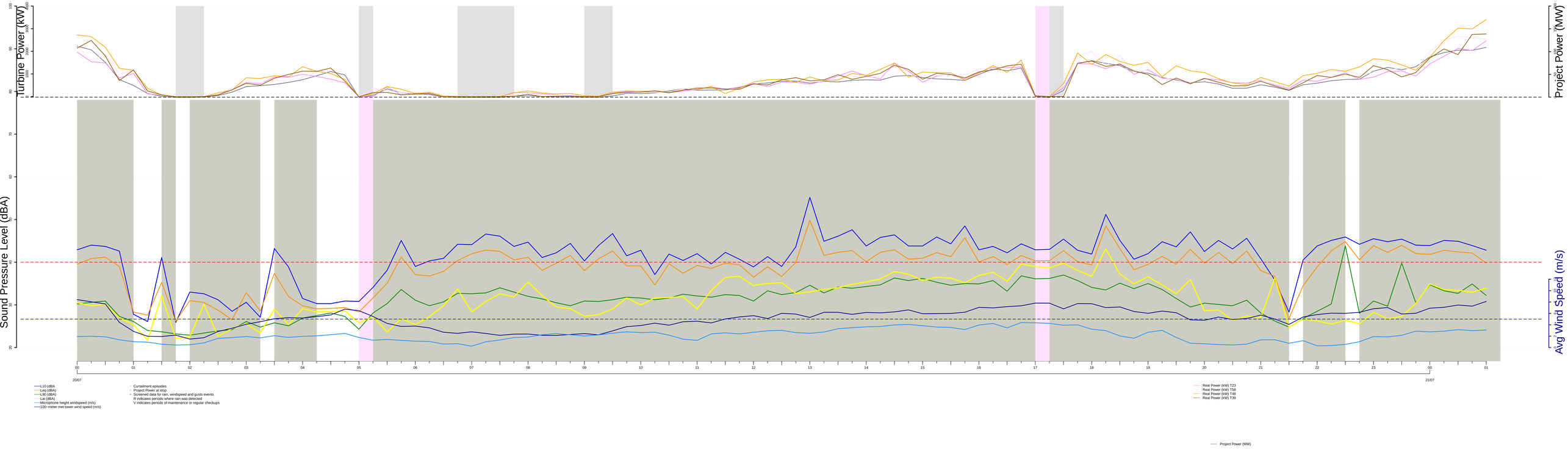
REC~139 (Schoenfelder Residence)
Sunday, 7 19, 2020



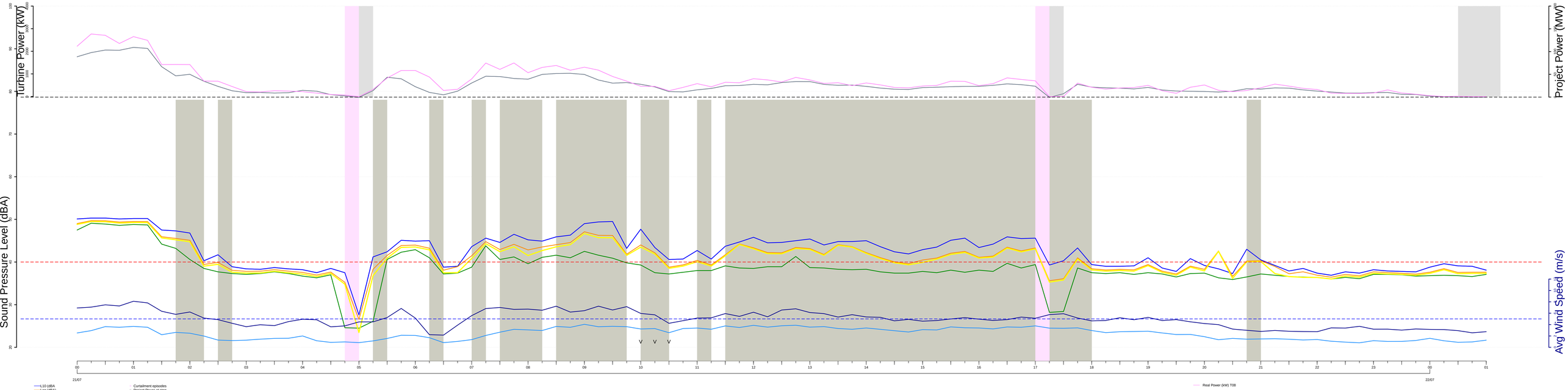
Control 1 (Turbine 8)
Monday, 7 20, 2020



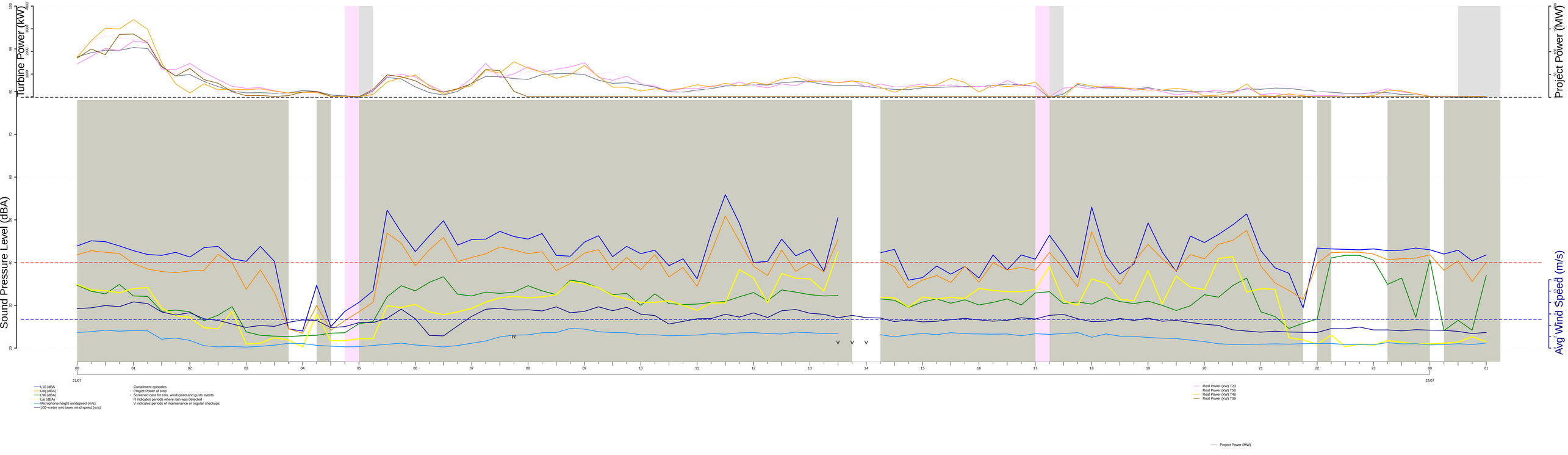
REC~139 (Schoenfelder Residence)
Monday, 7 20, 2020



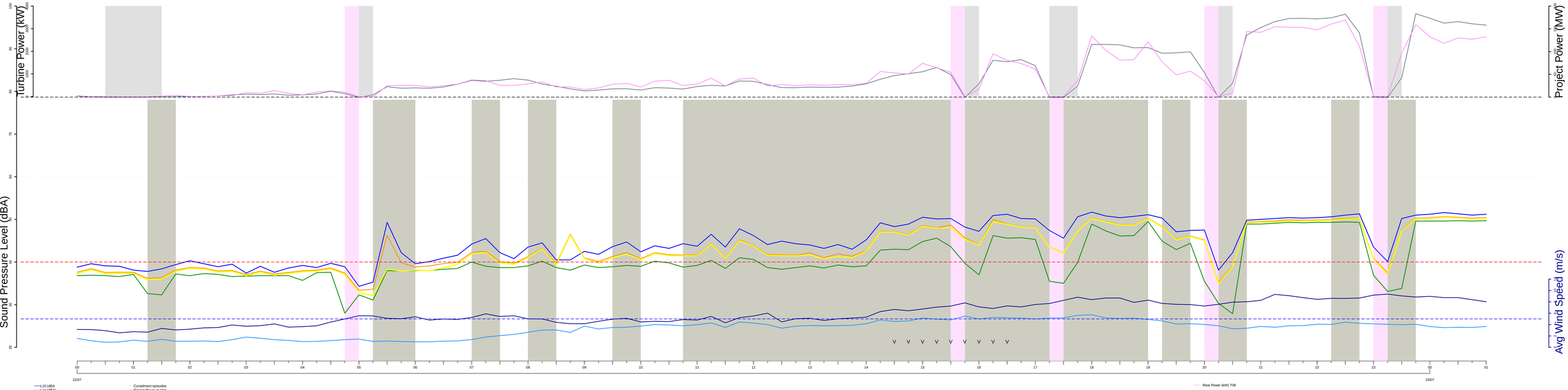
Control 1 (Turbine 8)
Tuesday, 7 21, 2020



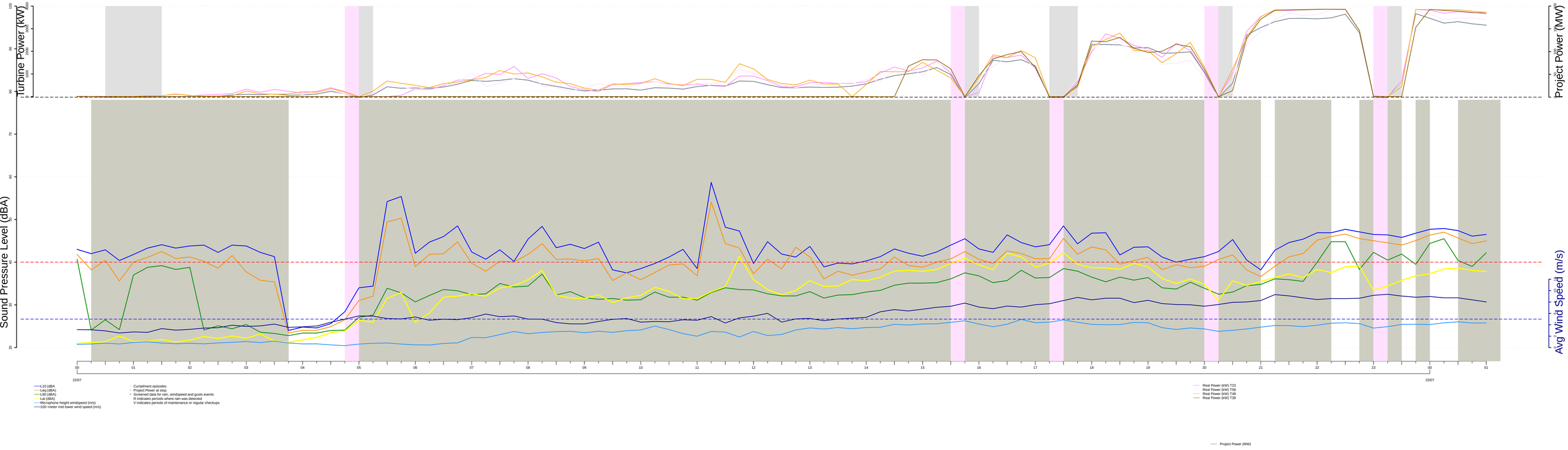
REC~139 (Schoenfelder Residence)
Tuesday, 7 21, 2020



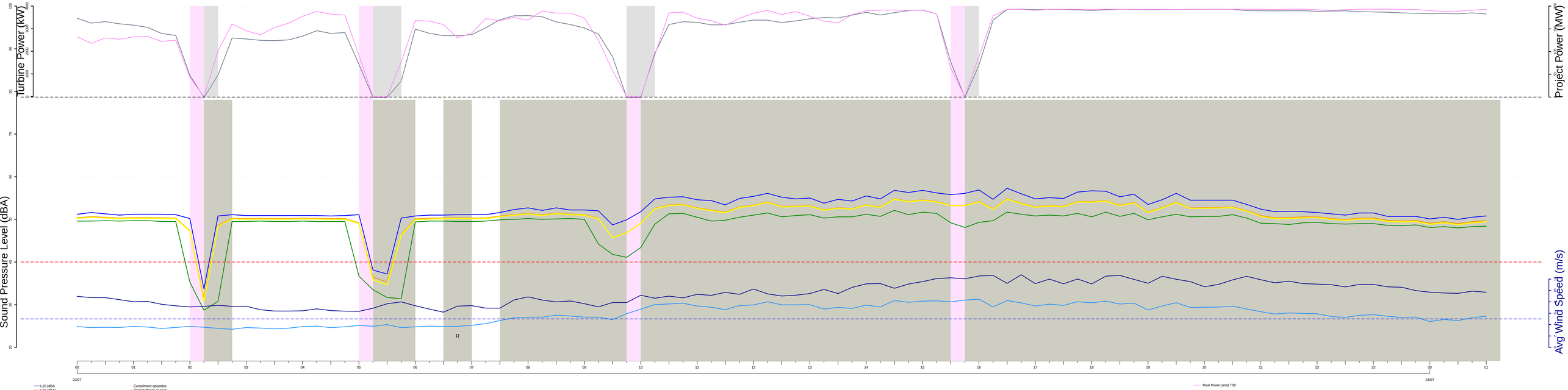
Control 1 (Turbine 8)
Wednesday, 7 22, 2020



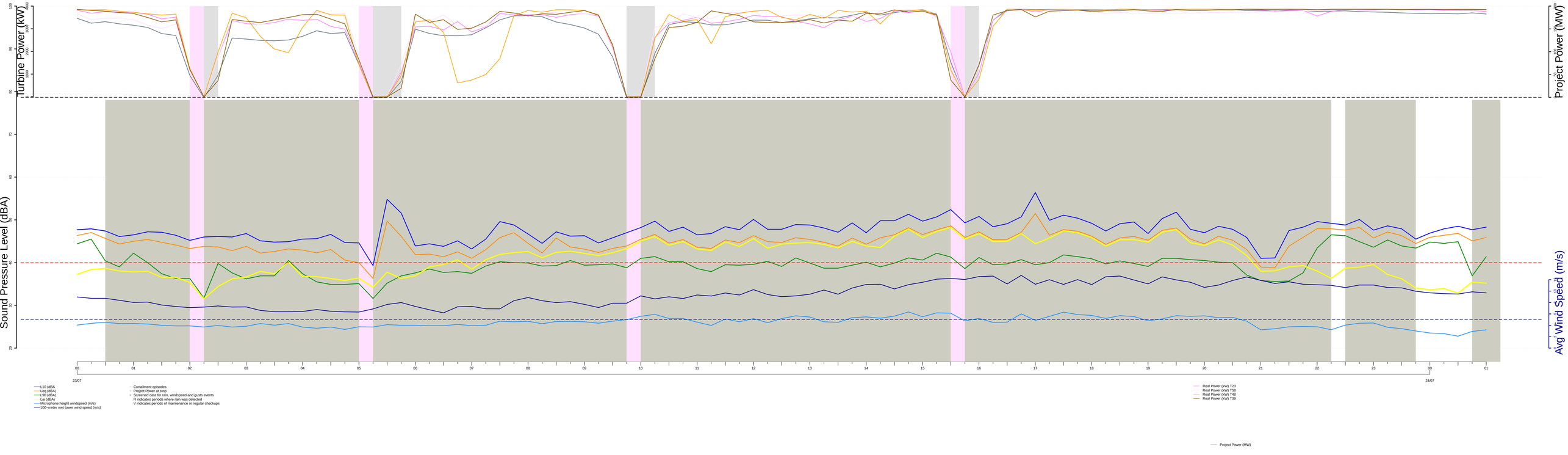
REC~139 (Schoenfelder Residence)
Wednesday, 7 22, 2020



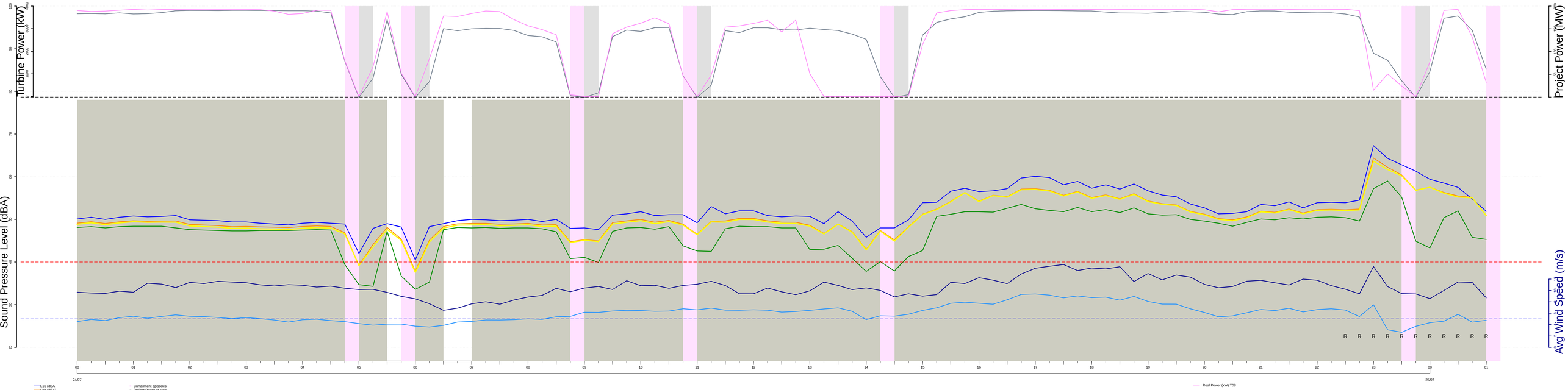
Control 1 (Turbine 8)
Thursday, 7 23, 2020



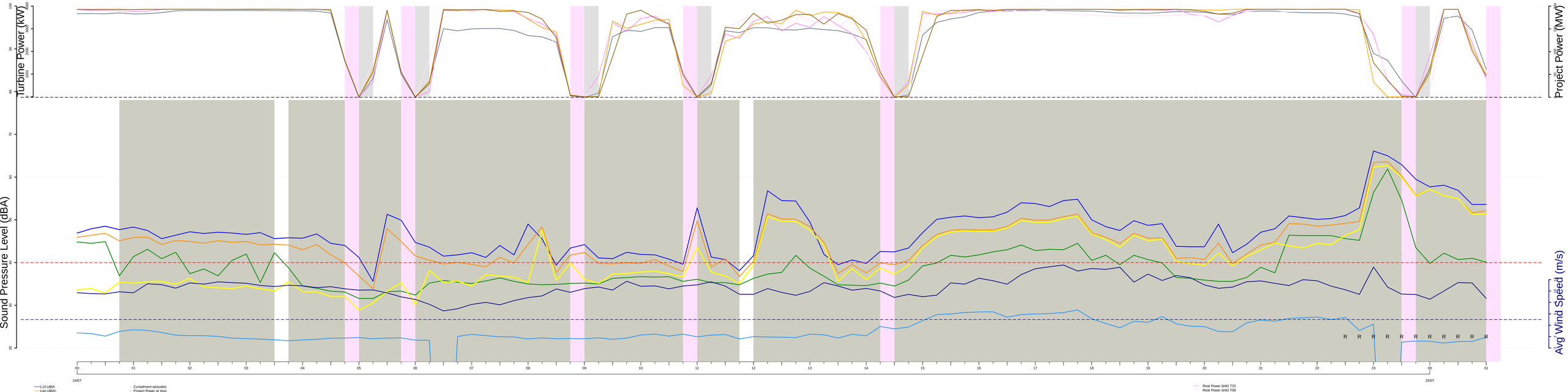
REC~139 (Schoenfelder Residence)
Thursday, 7 23, 2020



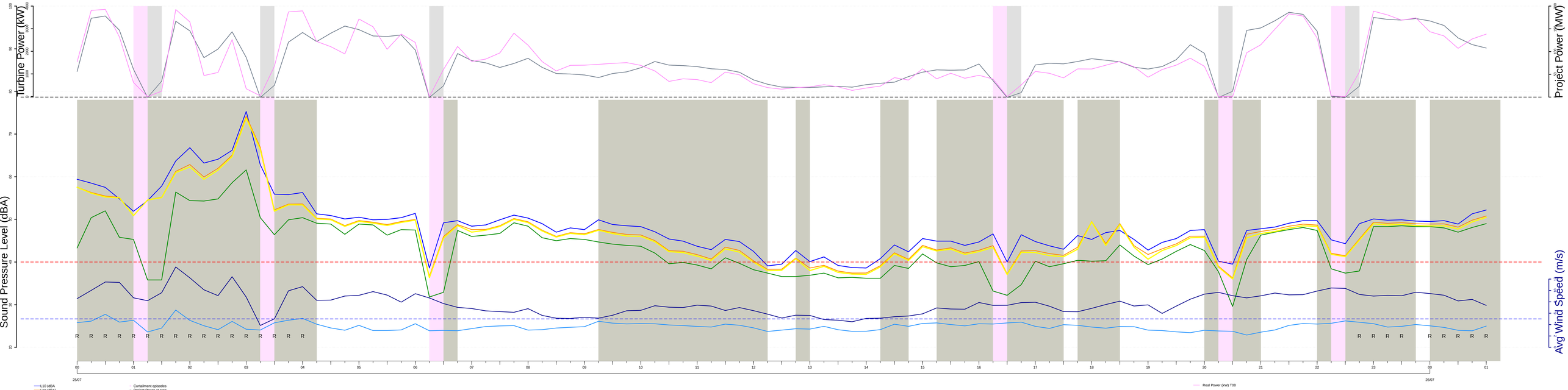
Control 1 (Turbine 8)
Friday, 7 24, 2020



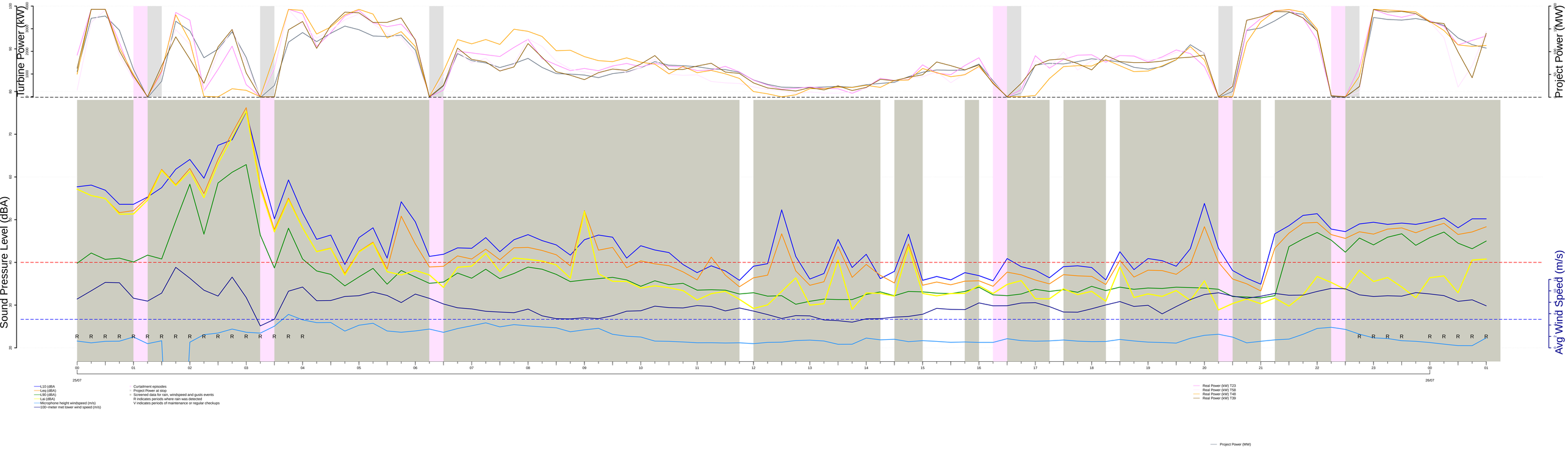
REC~139 (Schoenfelder Residence)
Friday, 7 24, 2020



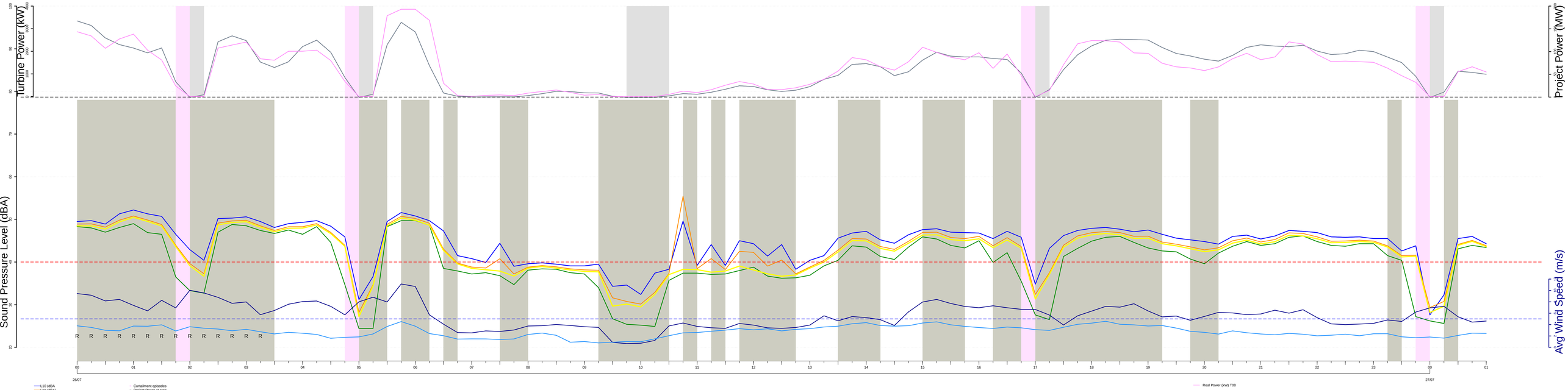
Control 1 (Turbine 8)
Saturday, 7 25, 2020



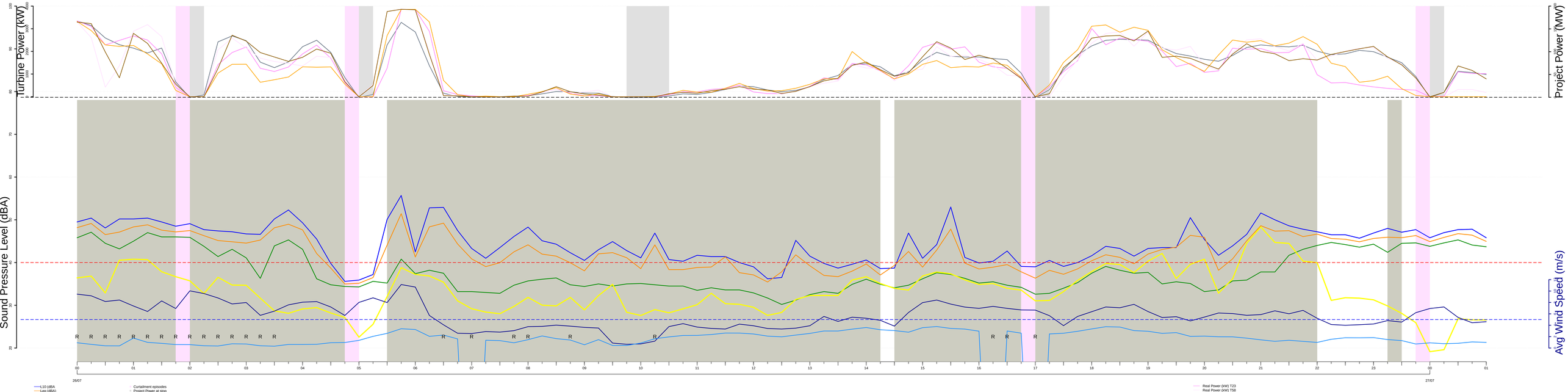
REC~139 (Schoenfelder Residence)
Saturday, 7 25, 2020



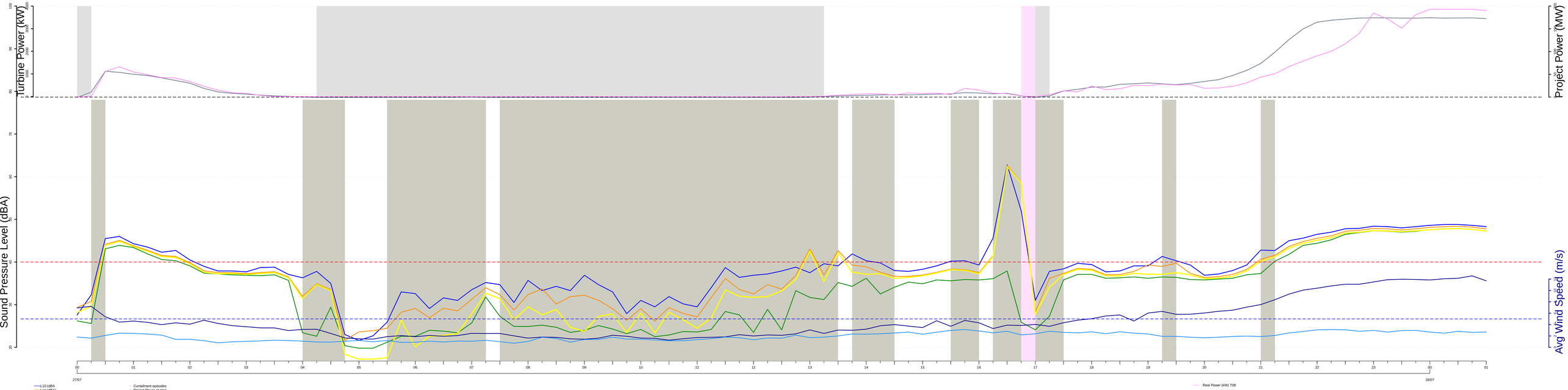
Control 1 (Turbine 8)
Sunday, 7 26, 2020



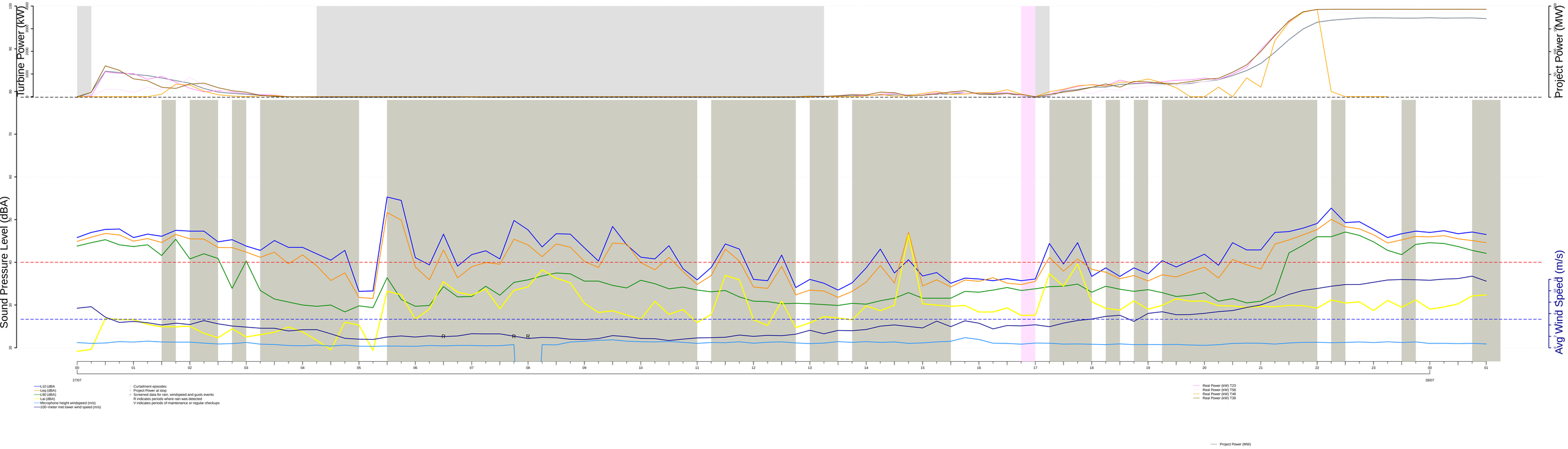
REC~139 (Schoenfelder Residence)
Sunday, 7 26, 2020



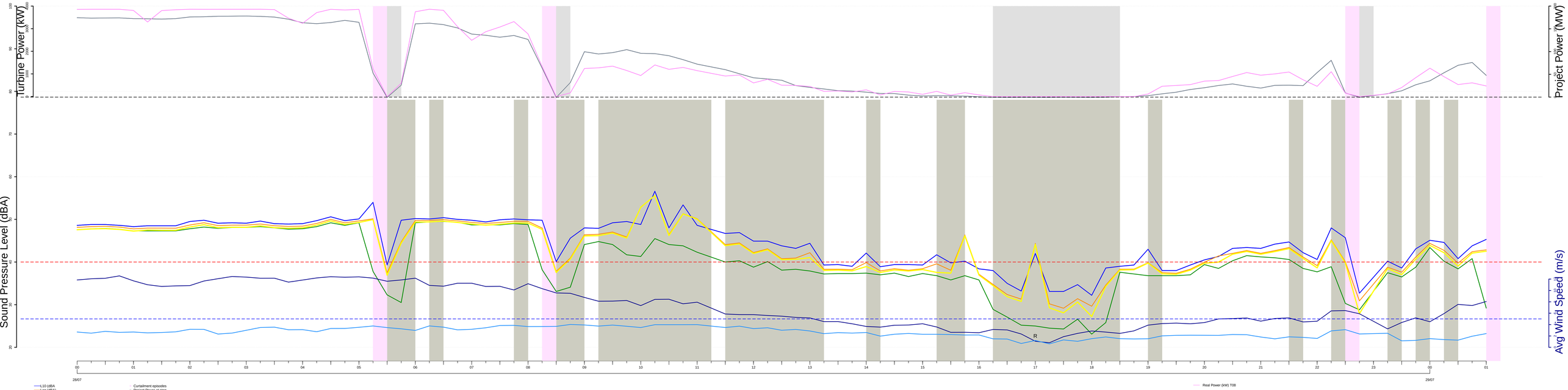
Control 1 (Turbine 8)
Monday, 7 27, 2020



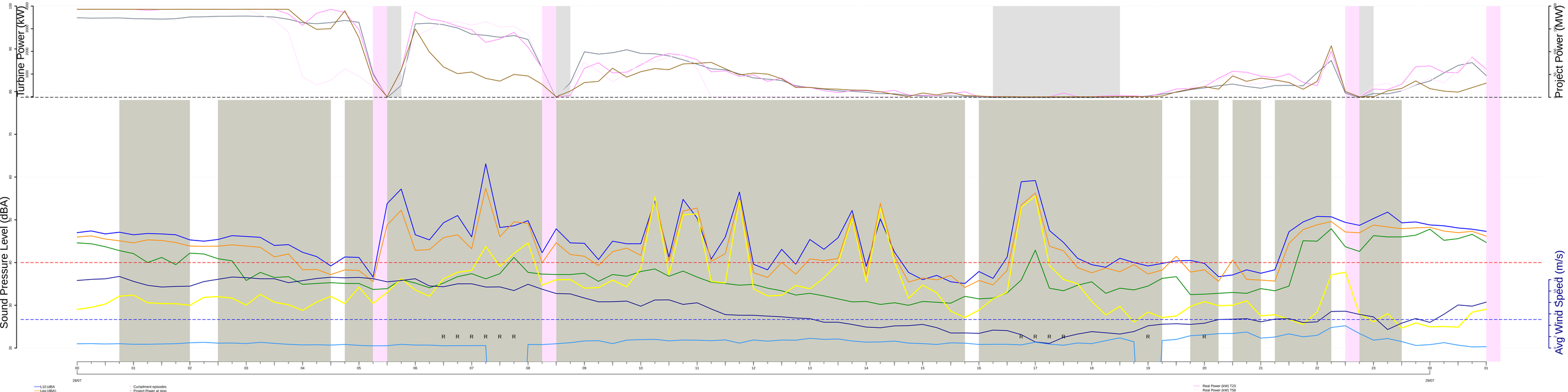
REC~139 (Schoenfelder Residence)
Monday, 7 27, 2020



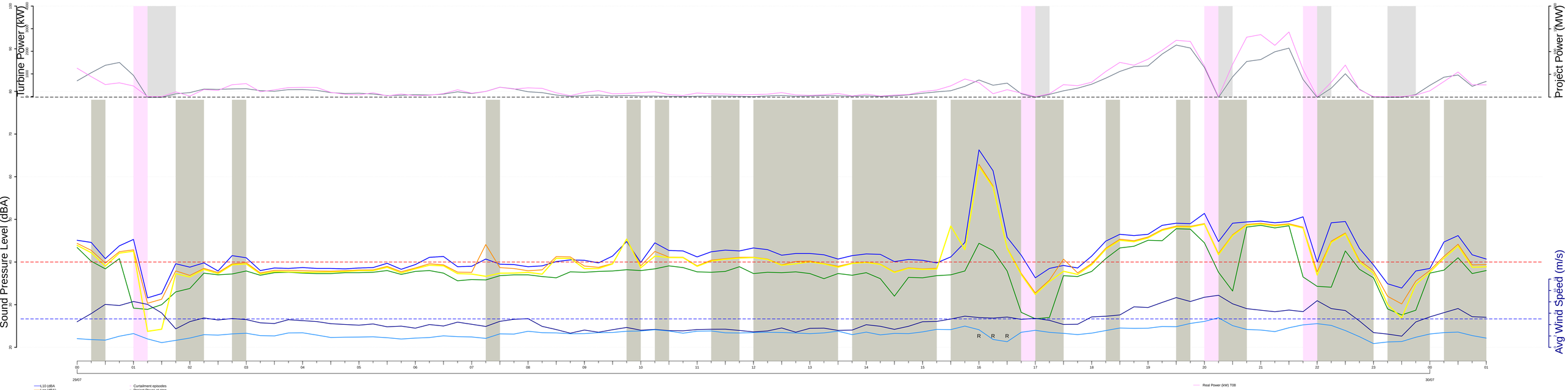
Control 1 (Turbine 8)
Tuesday, 7 28, 2020



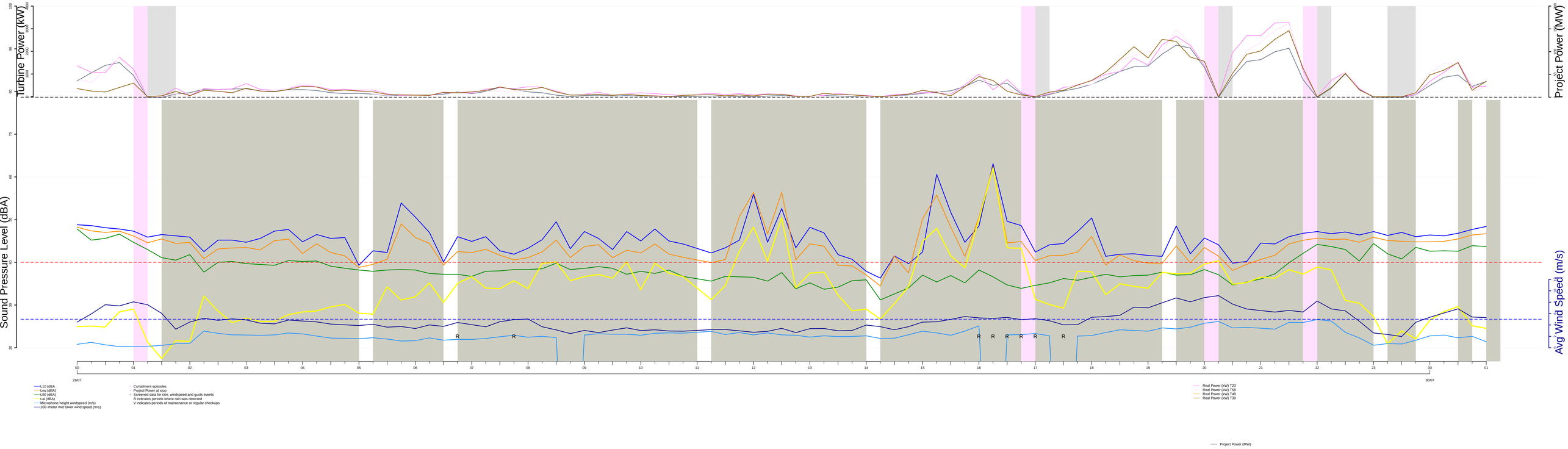
REC~139 (Schoenfelder Residence)
Tuesday, 7 28, 2020



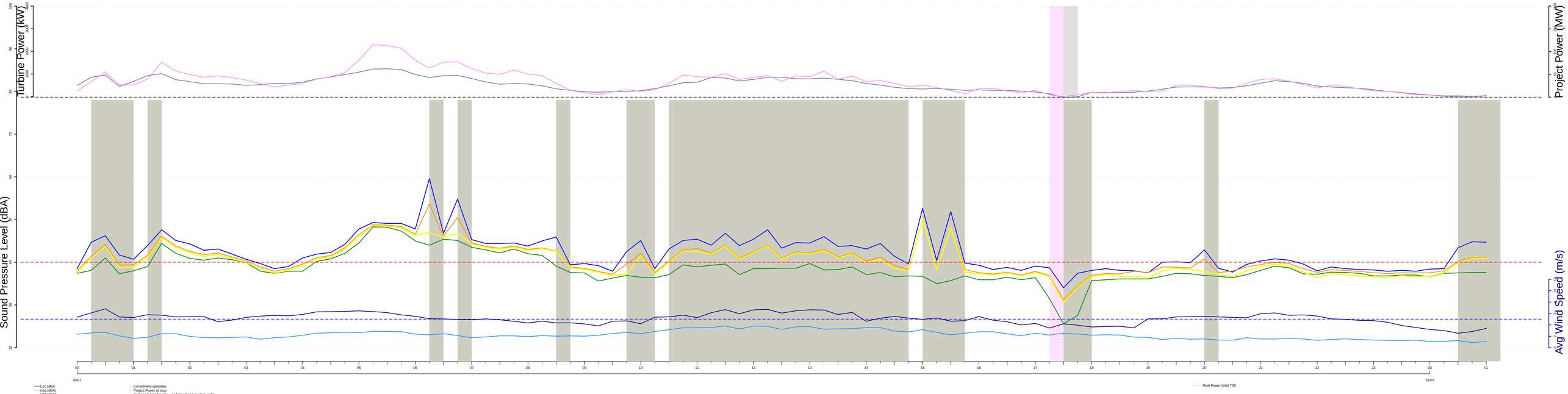
Control 1 (Turbine 8)
Wednesday, 7 29, 2020



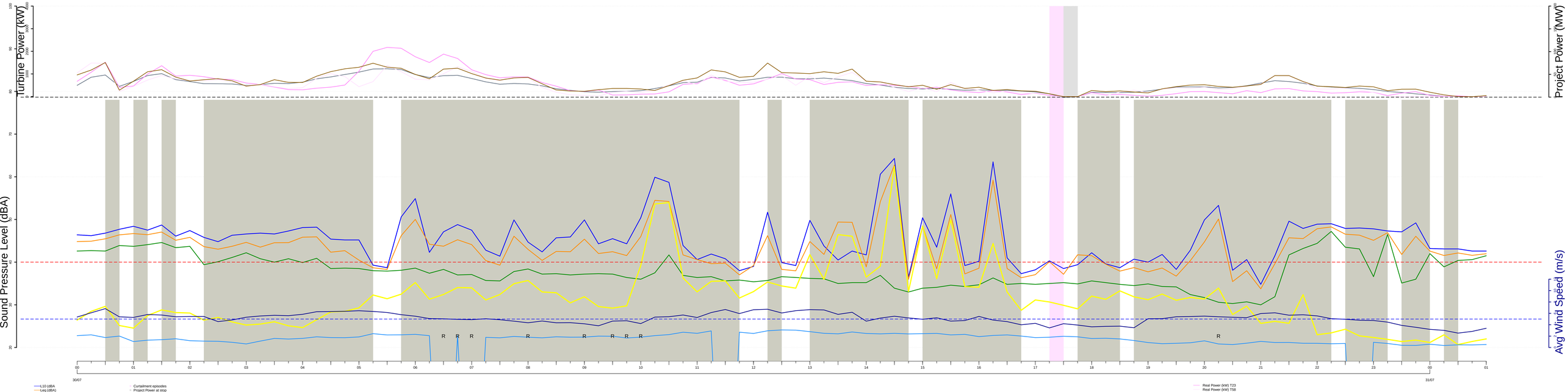
REC~139 (Schoenfelder Residence)
Wednesday, 7 29, 2020



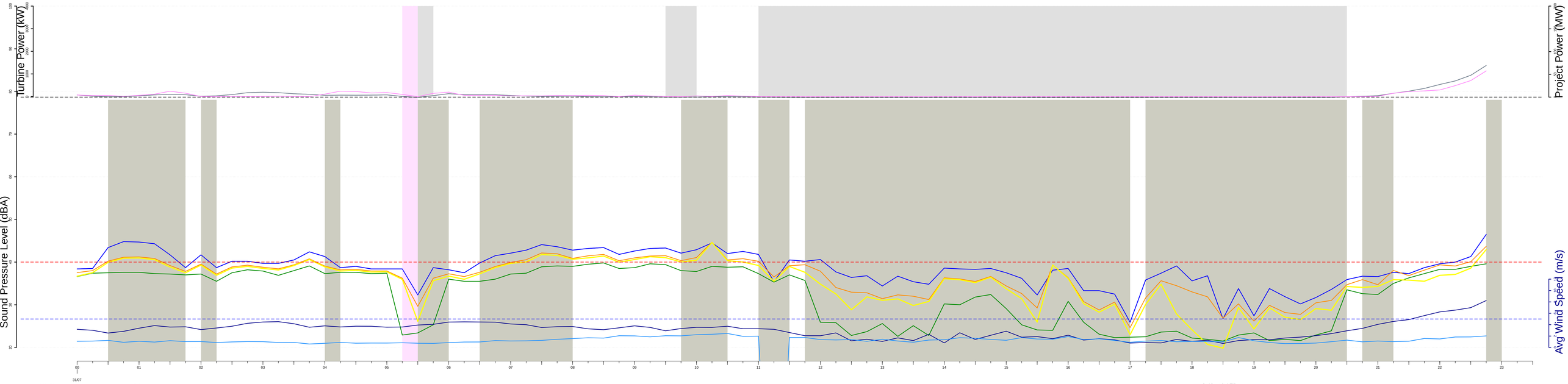
Control 1 (Turbine 8)
Thursday, 7 30, 2020



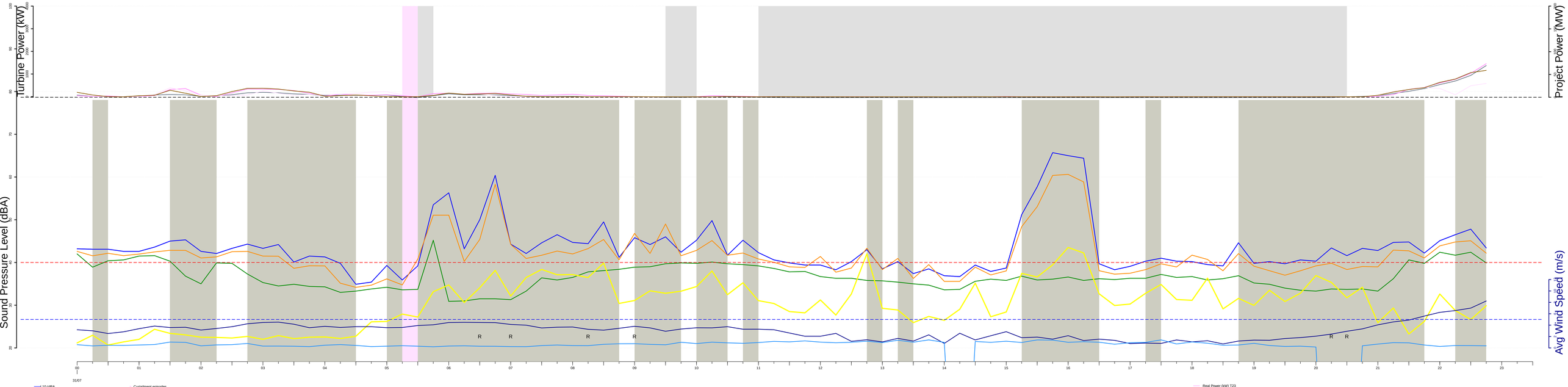
REC~139 (Schoenfelder Residence)
Thursday, 7 30, 2020



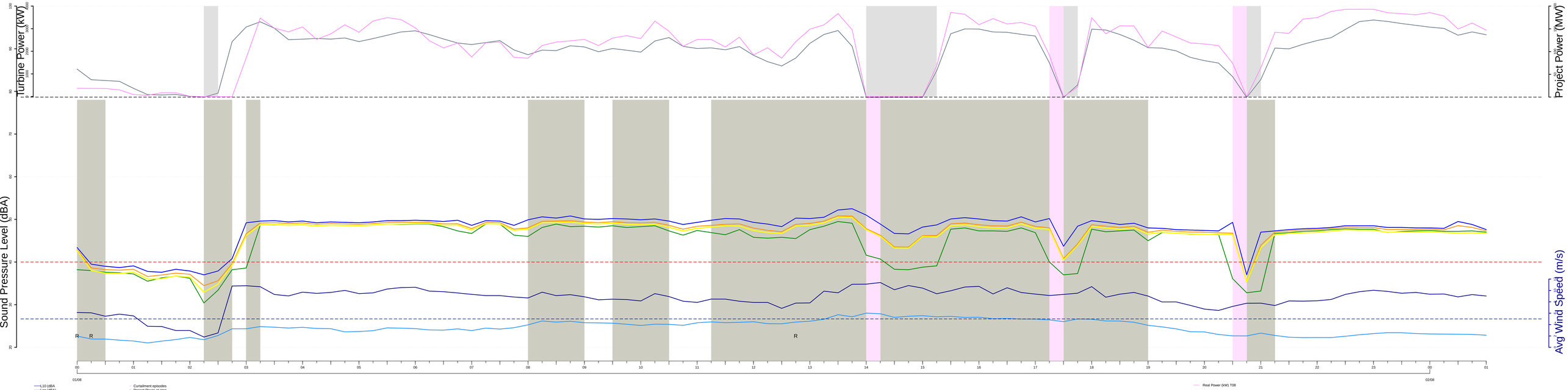
Control 1 (Turbine 8)
Friday, 7 31, 2020



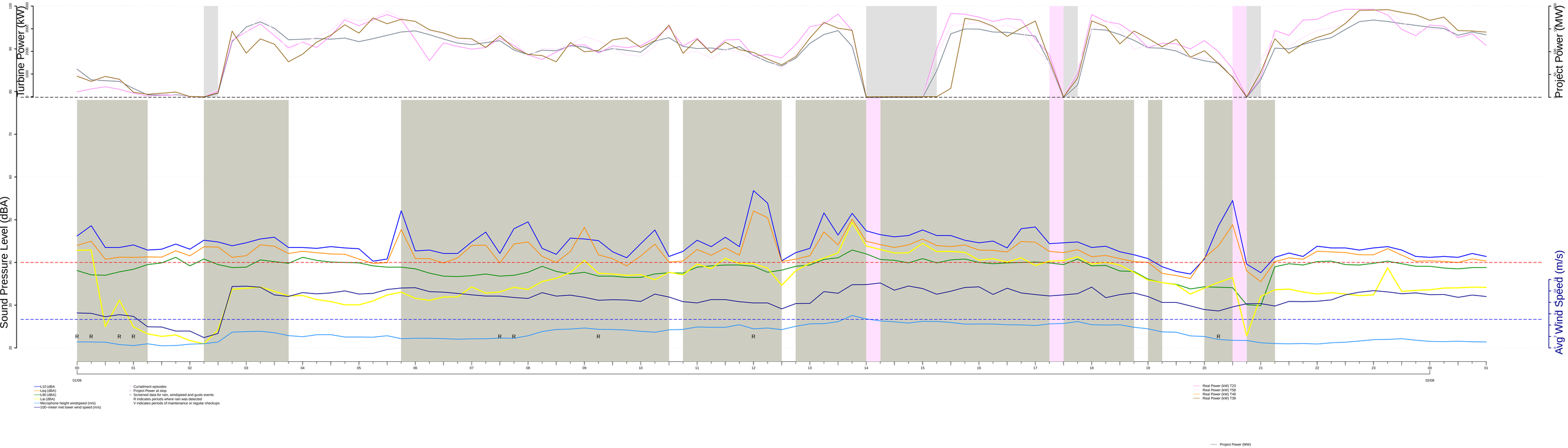
REC~139 (Schoenfelder Residence)
Friday, 7 31, 2020



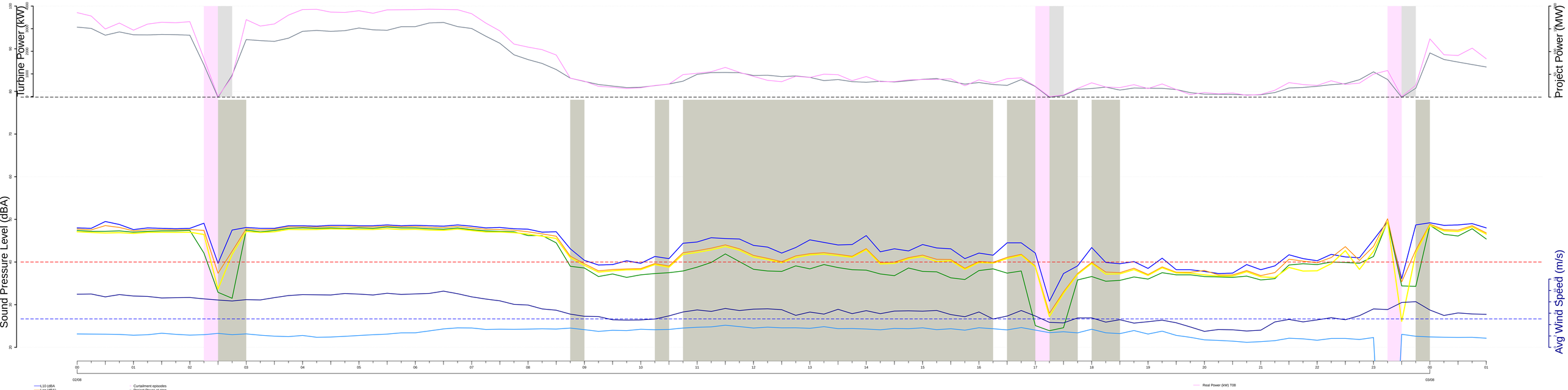
Control 1 (Turbine 8)
Saturday, 8 1, 2020



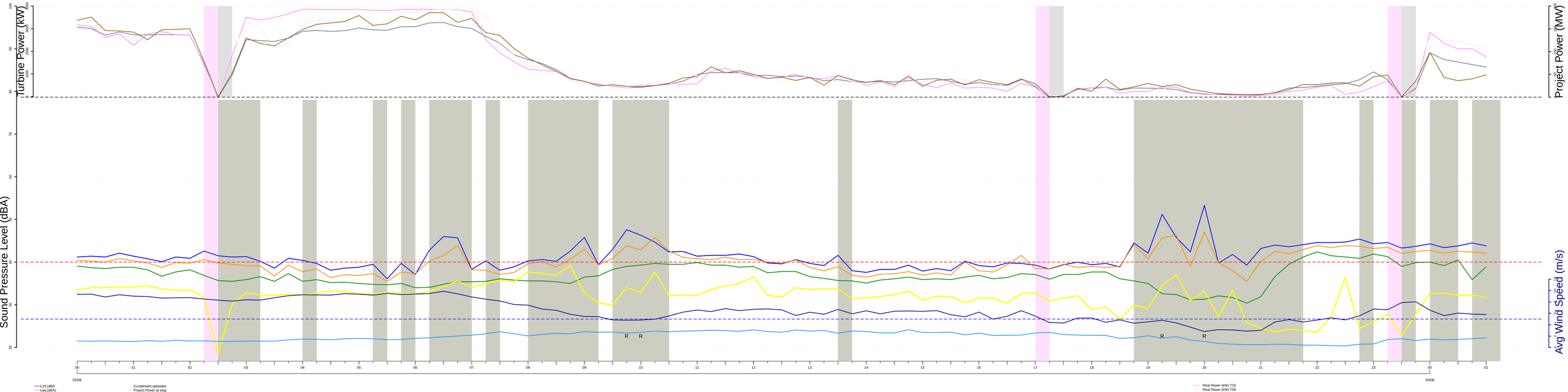
REC~139 (Schoenfelder Residence)
Saturday, 8 1, 2020



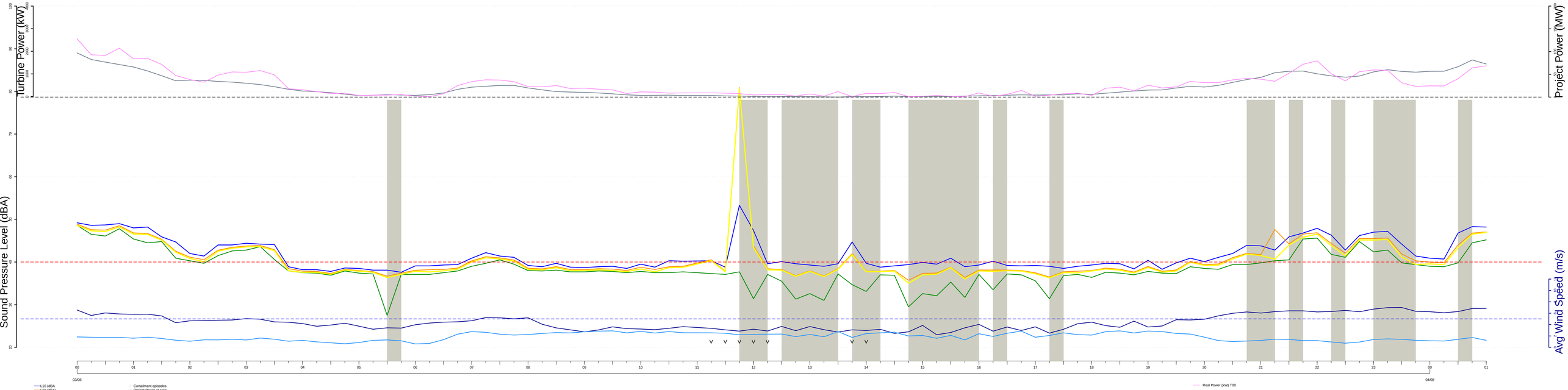
Control 1 (Turbine 8)
Sunday, 8 2, 2020



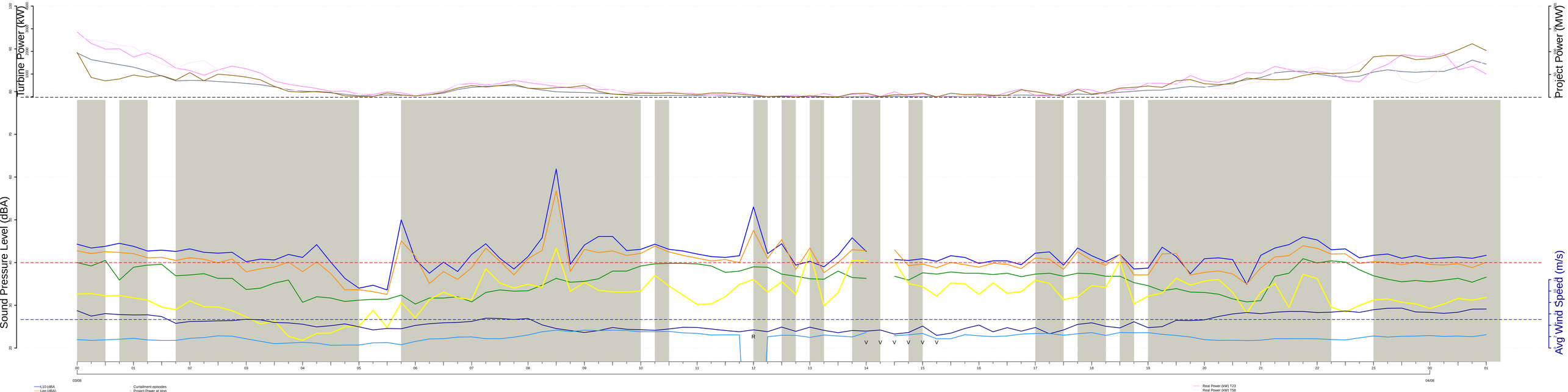
REC~139 (Schoenfelder Residence)
Sunday, 8 2, 2020



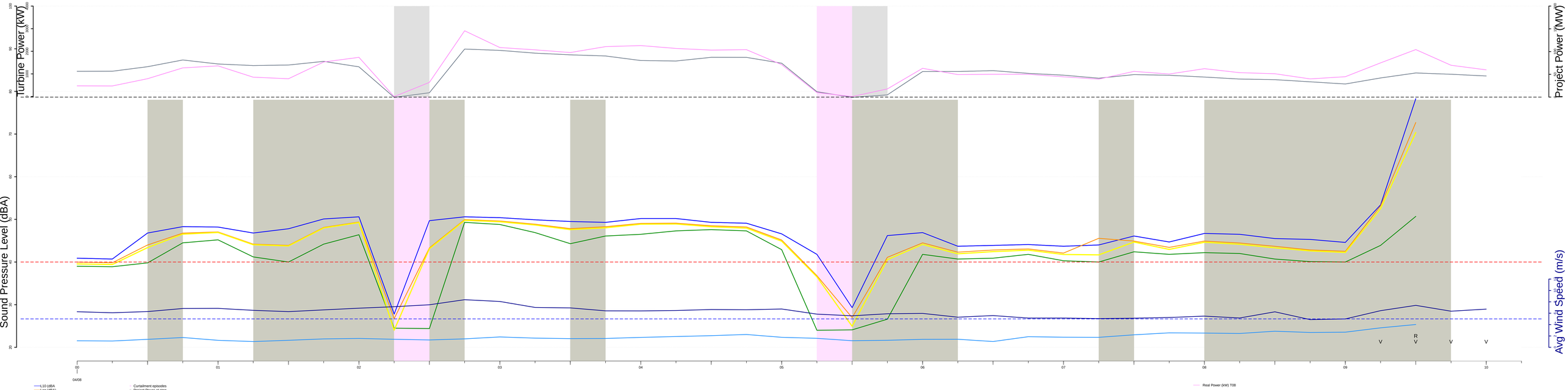
Control 1 (Turbine 8)
Monday, 8 3, 2020



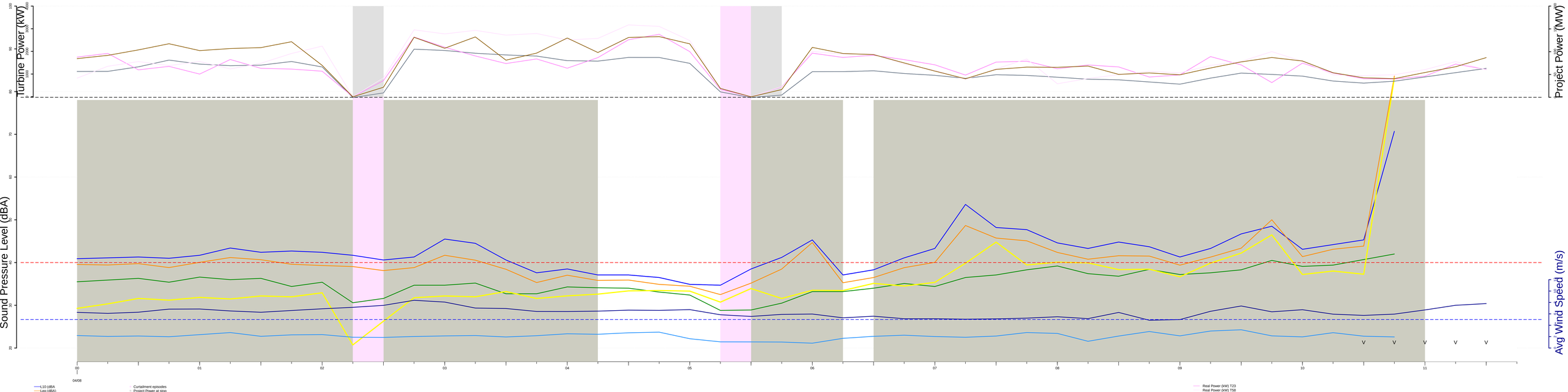
REC~139 (Schoenfelder Residence)
Monday, 8 3, 2020



Control 1 (Turbine 8)
Tuesday, 8 4, 2020

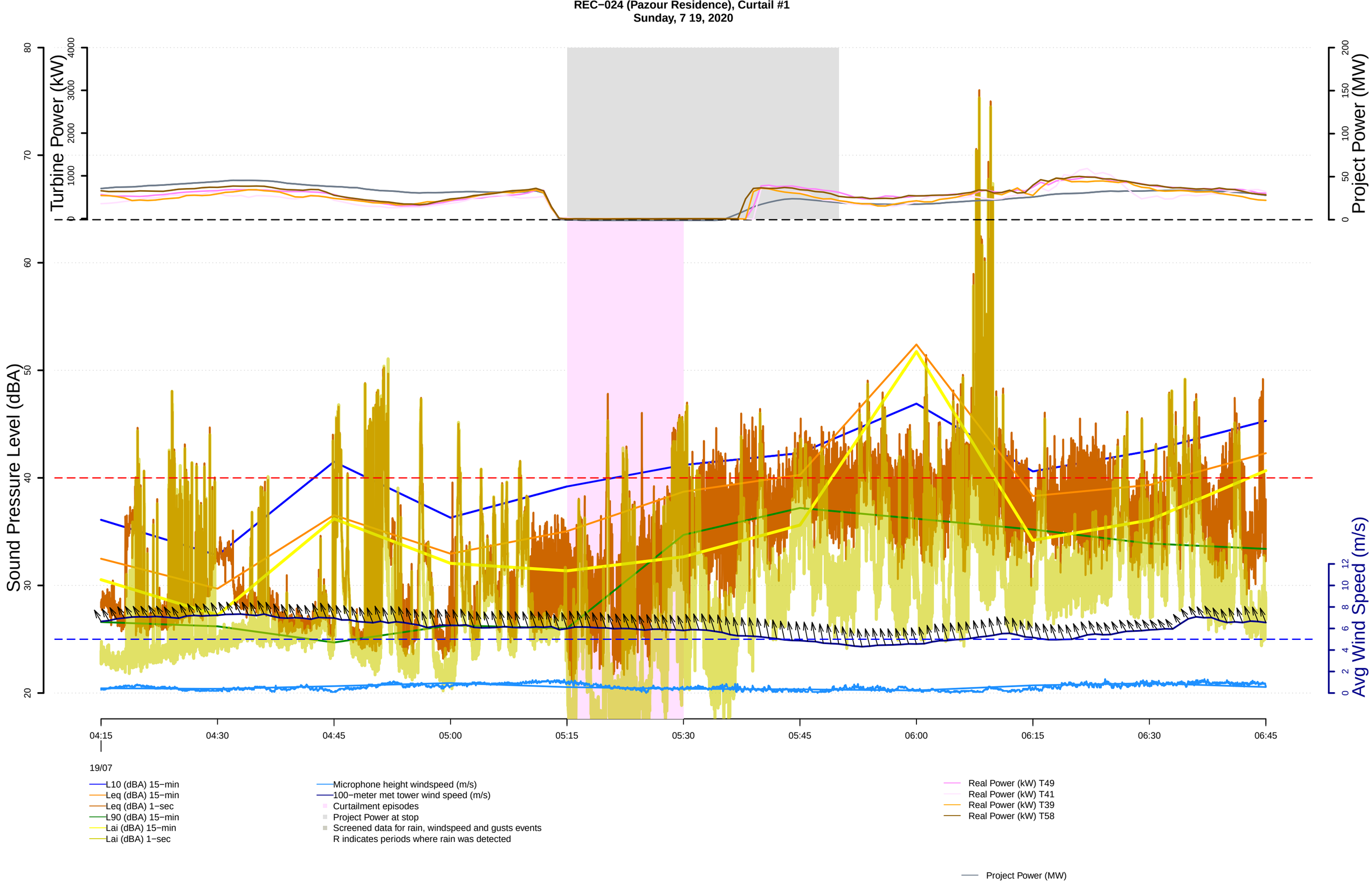


REC~139 (Schoenfelder Residence)
Tuesday, 8 4, 2020

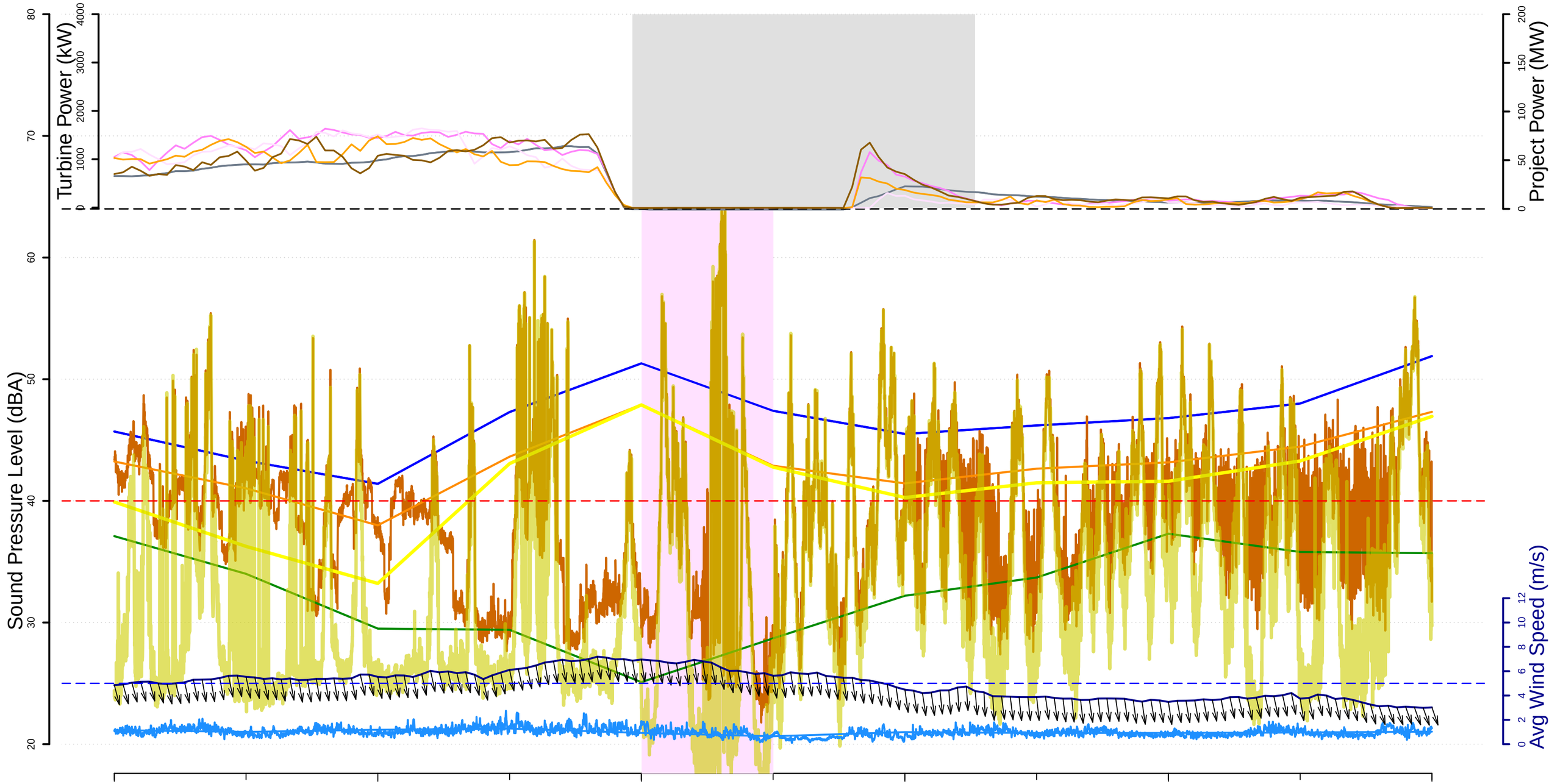


Appendix F
Curtailment Plots

REC-024 (Pazour Residence)

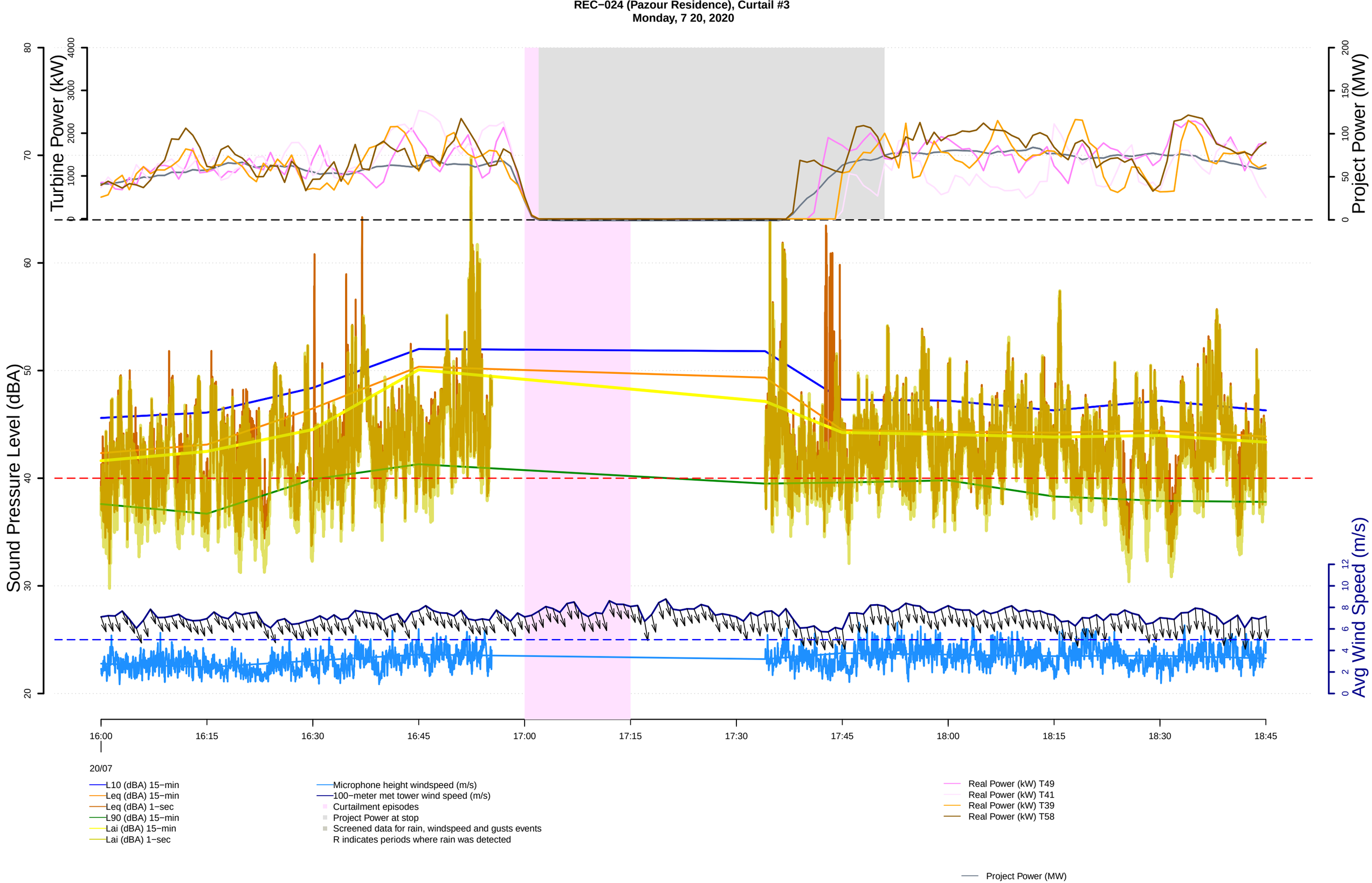

REC−024 (Pazour Residence), Curtail #1
Sunday, 7 19, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
04:15
04:30
04:45
05:00
05:15
05:30
05:45
06:00
06:15
06:30
06:45
19/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58
Project Power (MW)

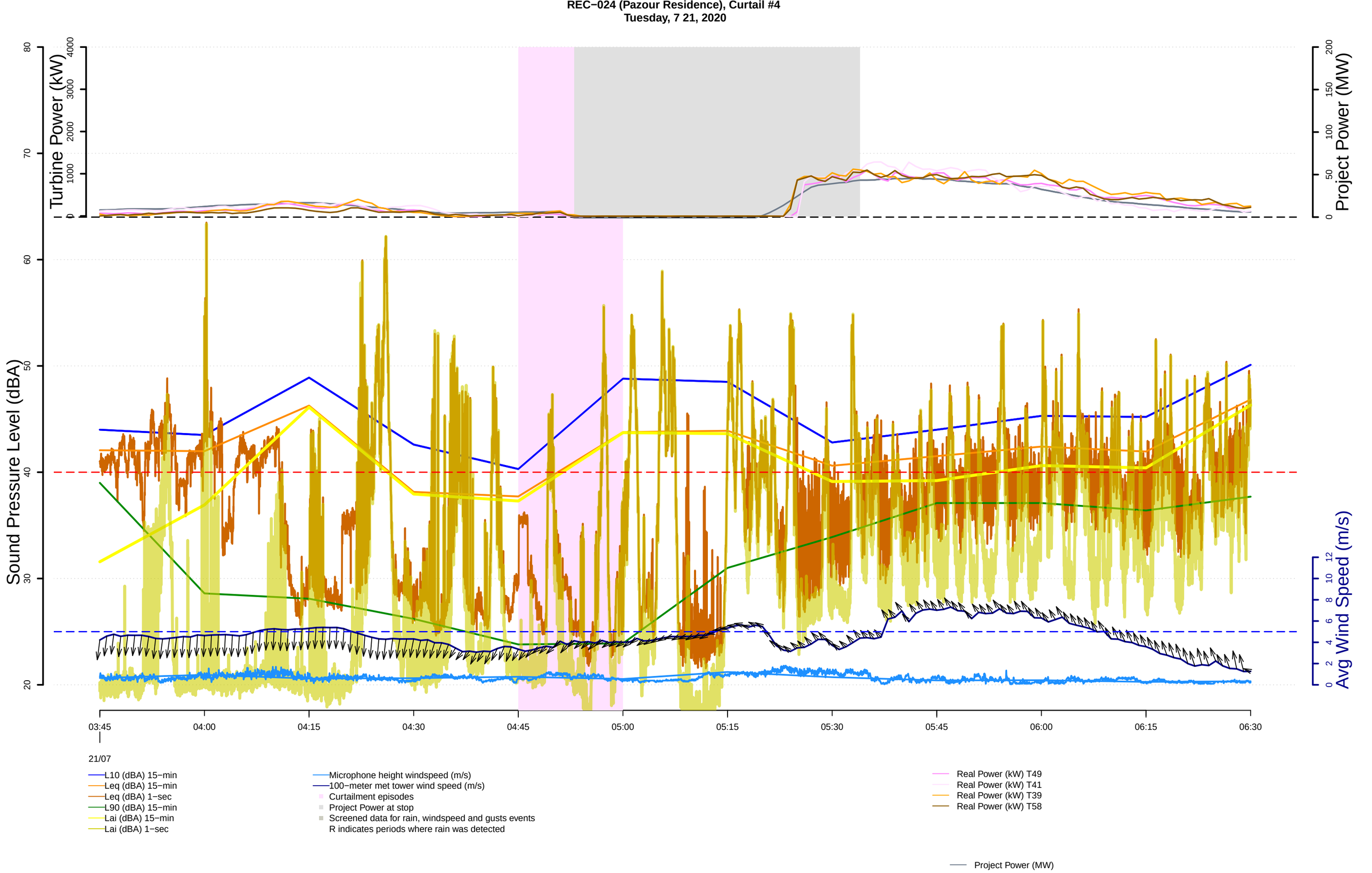
REC−024 (Pazour Residence), Curtail #2
Monday, 7 20, 2020



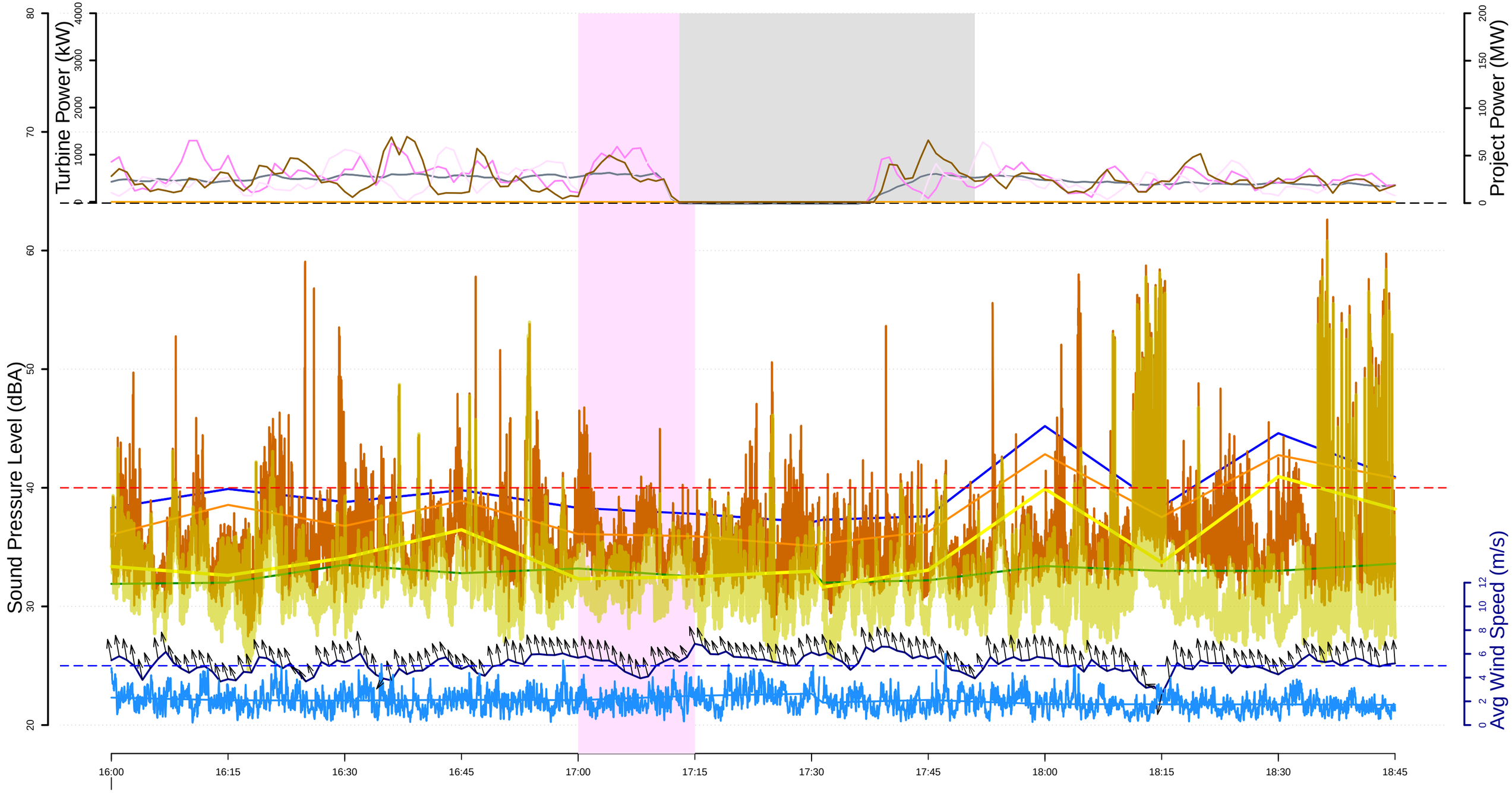
20/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T49
- Real Power (kW) T41
- Real Power (kW) T39
- Real Power (kW) T58
- Project Power (MW)


REC−024 (Pazour Residence), Curtail #3
Monday, 7 20, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
16:00
16:15
16:30
16:45
17:00
17:15
17:30
17:45
18:00
18:15
18:30
18:45
20/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58
Project Power (MW)

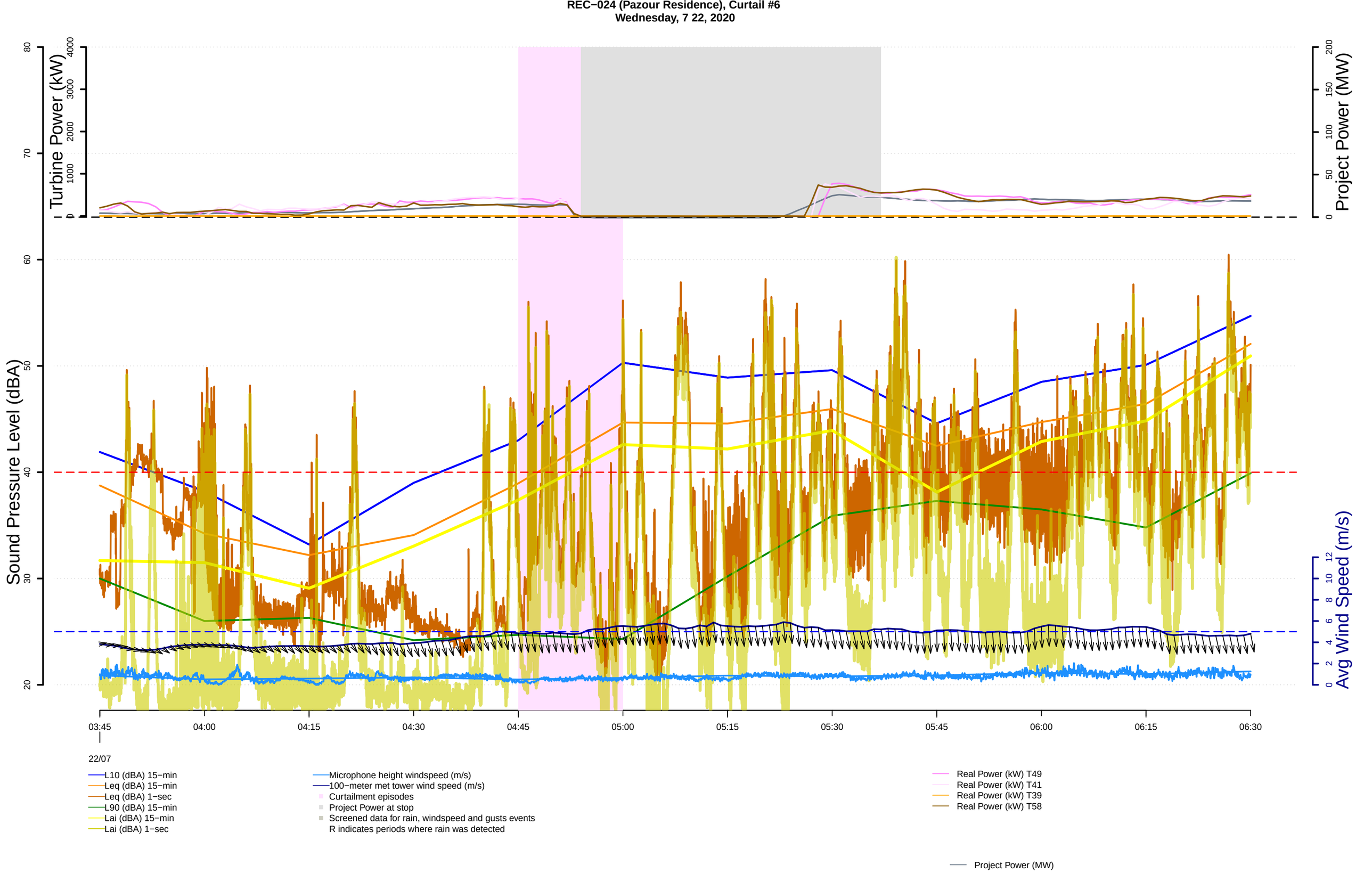

REC−024 (Pazour Residence), Curtail #4
Tuesday, 7 21, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
03:45
04:00
04:15
04:30
04:45
05:00
05:15
05:30
05:45
06:00
06:15
06:30
21/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58
Project Power (MW)

REC−024 (Pazour Residence), Curtail #5
Tuesday, 7 21, 2020

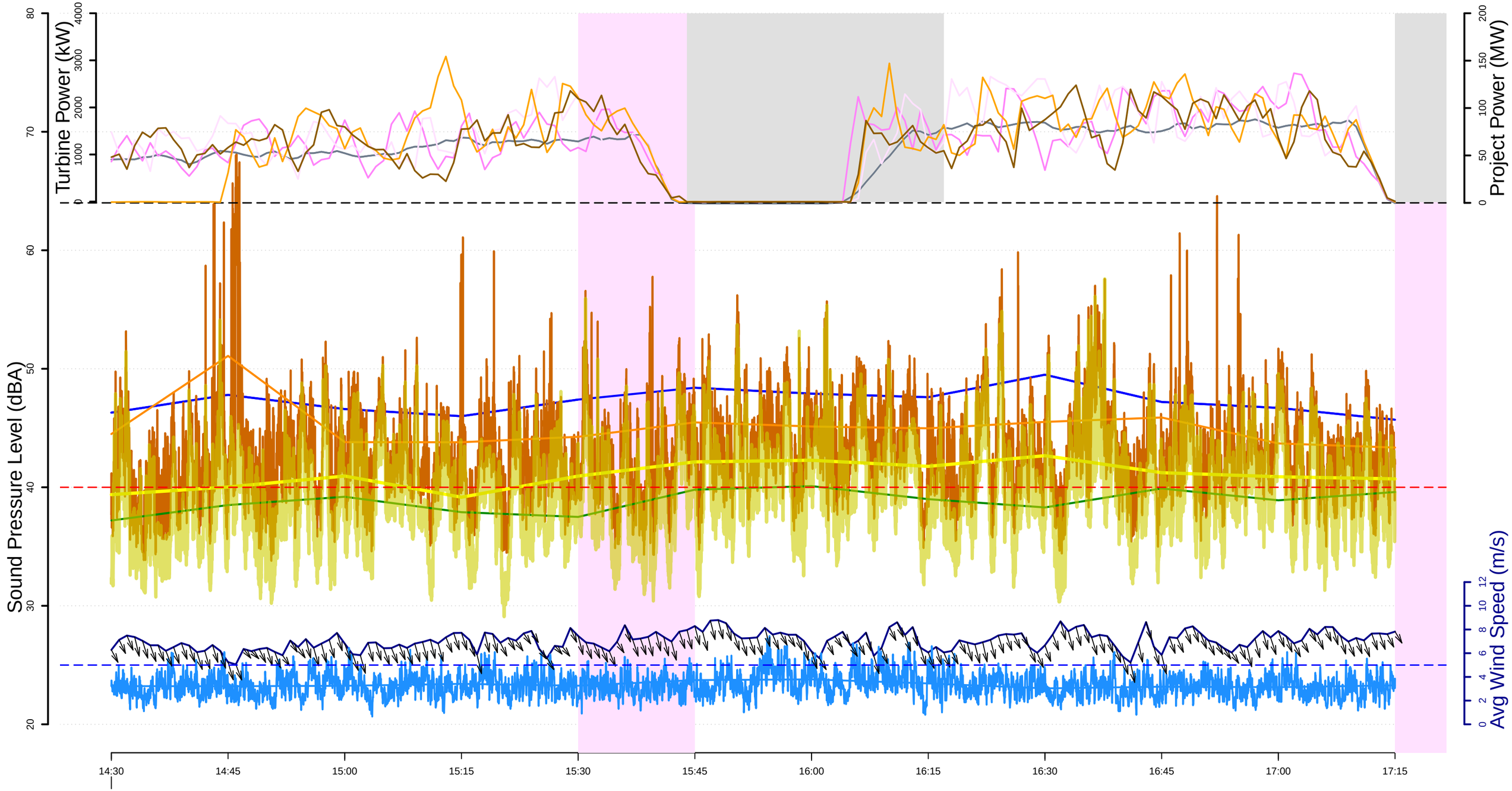


21/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T49
- Real Power (kW) T41
- Real Power (kW) T39
- Real Power (kW) T58
- Project Power (MW)

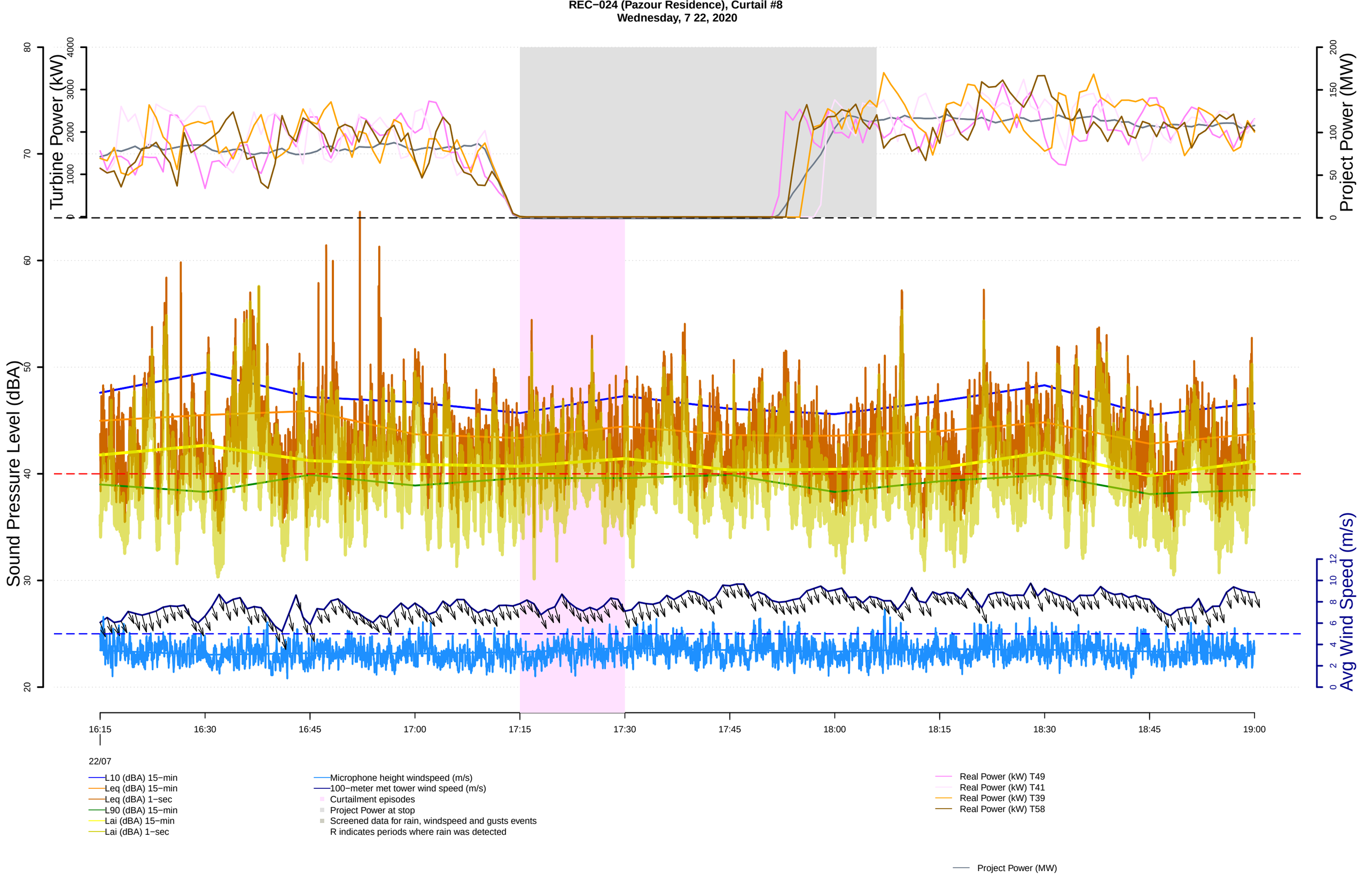

REC−024 (Pazour Residence), Curtail #6
Wednesday, 7 22, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
03:45
04:00
04:15
04:30
04:45
05:00
05:15
05:30
05:45
06:00
06:15
06:30
22/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58
Project Power (MW)

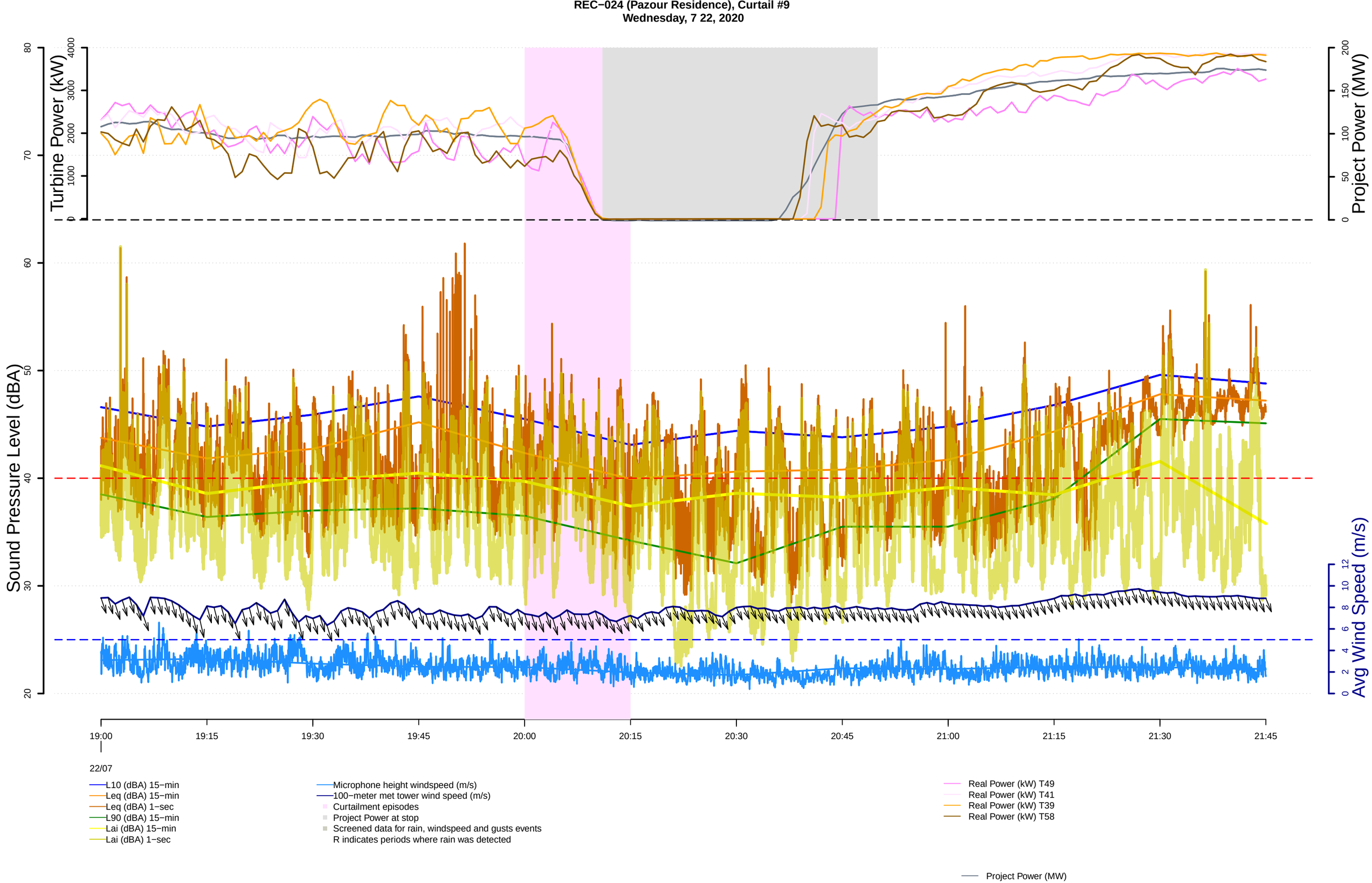
REC−024 (Pazour Residence), Curtail #7
Wednesday, 7 22, 2020



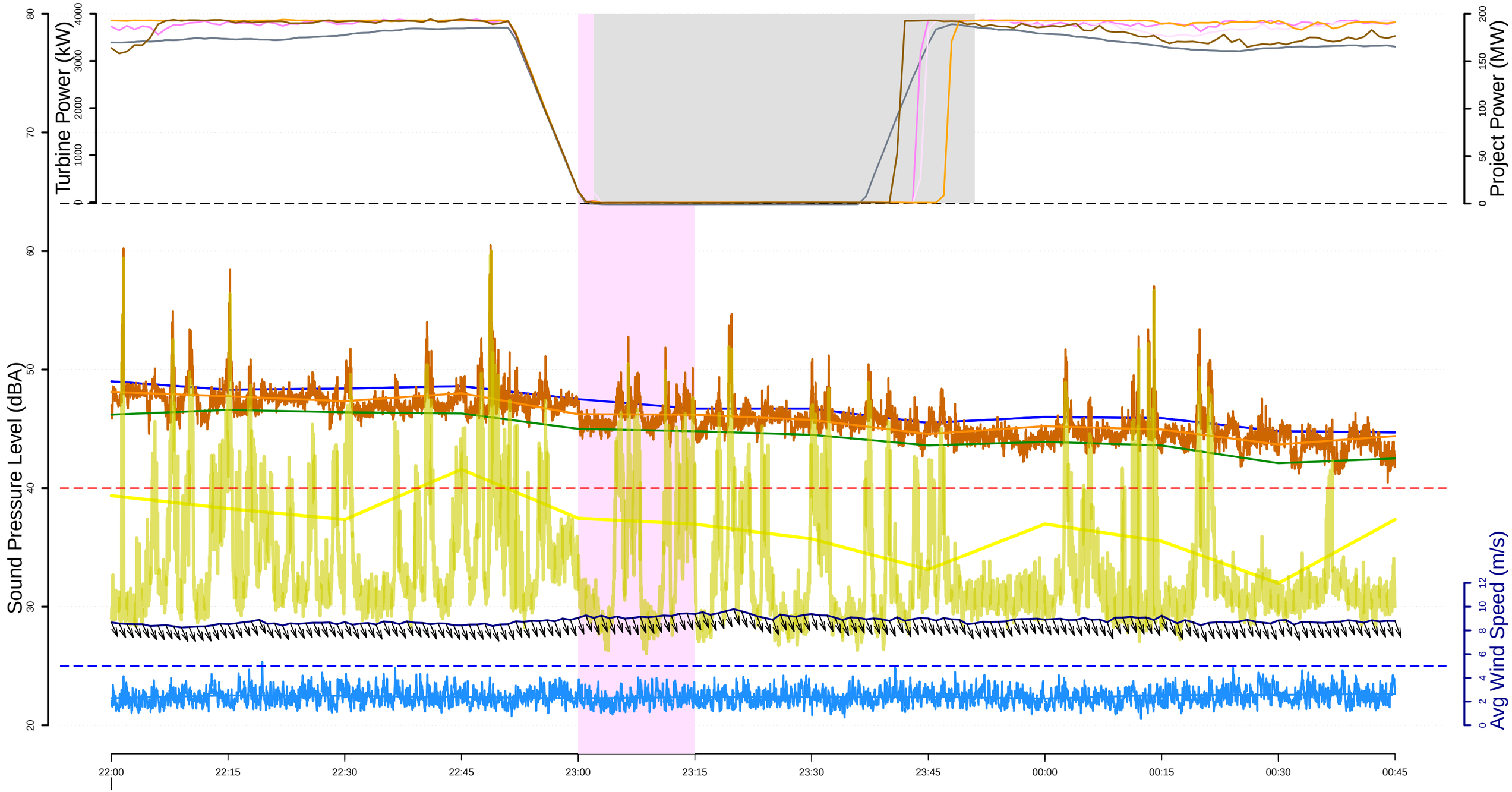
22/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T49
- Real Power (kW) T41
- Real Power (kW) T39
- Real Power (kW) T58
- Project Power (MW)


REC−024 (Pazour Residence), Curtail #8
Wednesday, 7 22, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
16:15
16:30
16:45
17:00
17:15
17:30
17:45
18:00
18:15
18:30
18:45
19:00
22/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58
Project Power (MW)


REC−024 (Pazour Residence), Curtail #9
Wednesday, 7 22, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
19:00
19:15
19:30
19:45
20:00
20:15
20:30
20:45
21:00
21:15
21:30
21:45
22/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58
Project Power (MW)

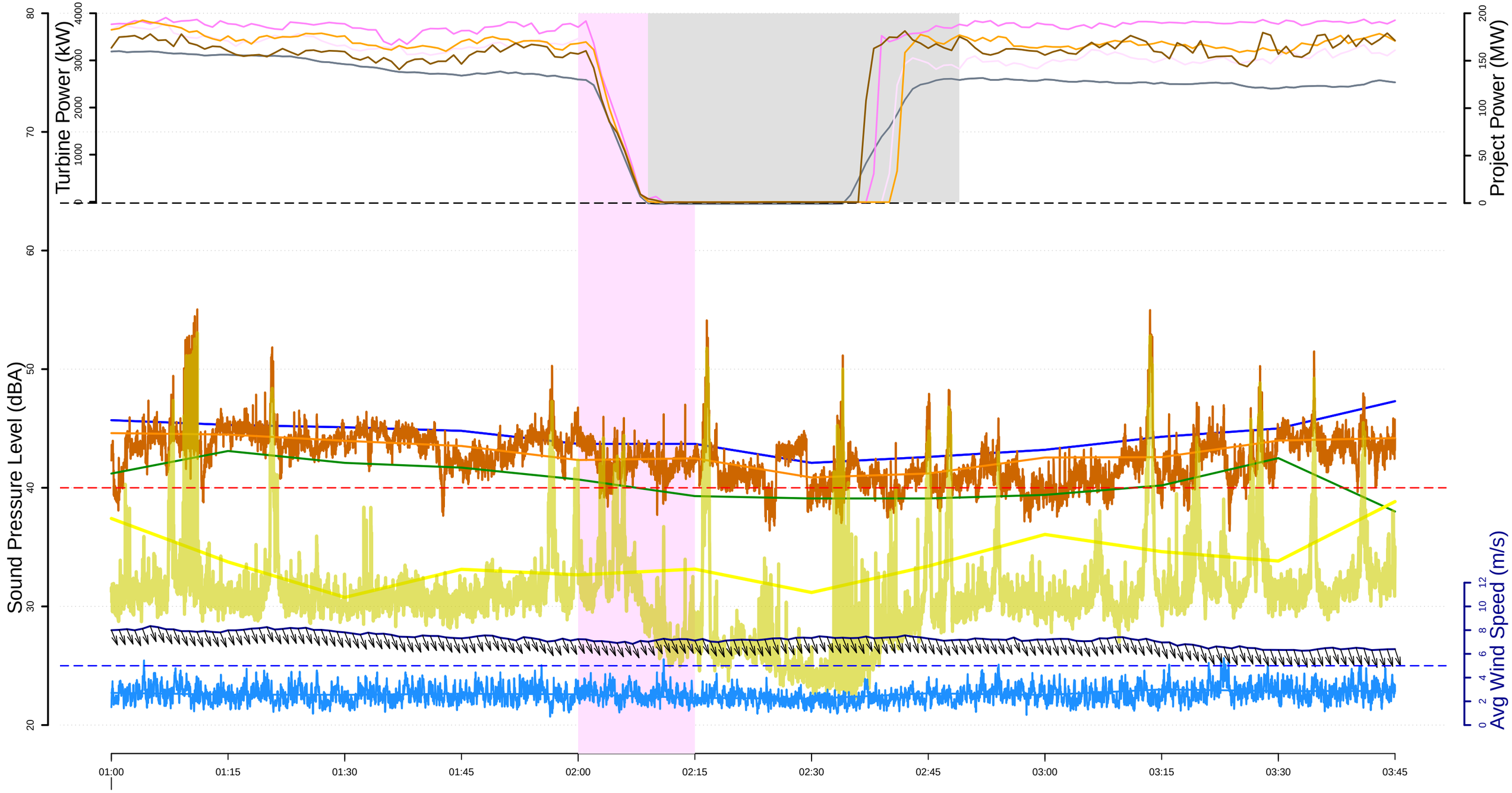
REC−024 (Pazour Residence), Curtail #10
Wednesday, 7 22, 2020



22/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T49
- Real Power (kW) T41
- Real Power (kW) T39
- Real Power (kW) T58
- Project Power (MW)

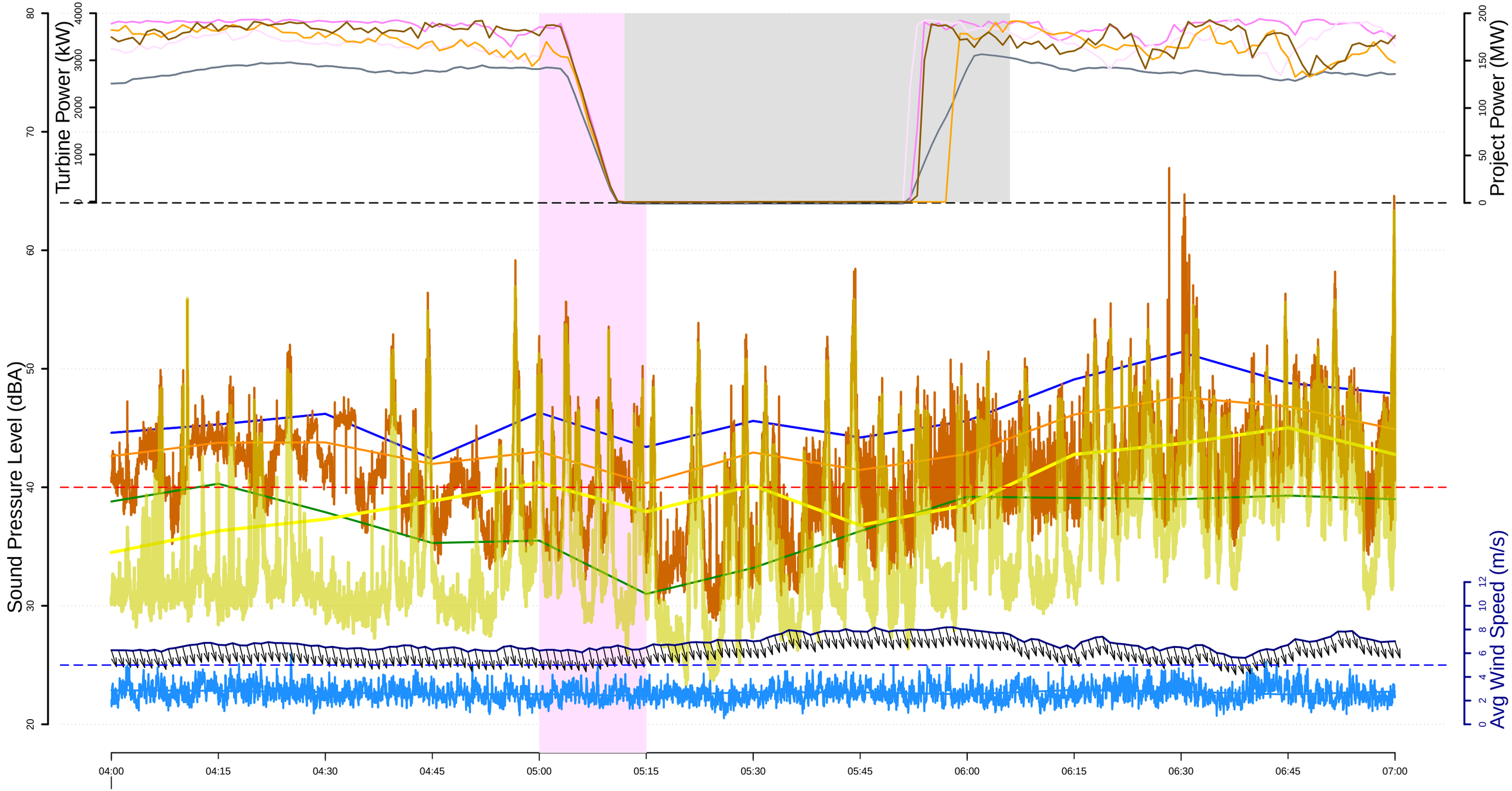
REC−024 (Pazour Residence), Curtail #11
Thursday, 7 23, 2020



23/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T49
- Real Power (kW) T41
- Real Power (kW) T39
- Real Power (kW) T58
- Project Power (MW)

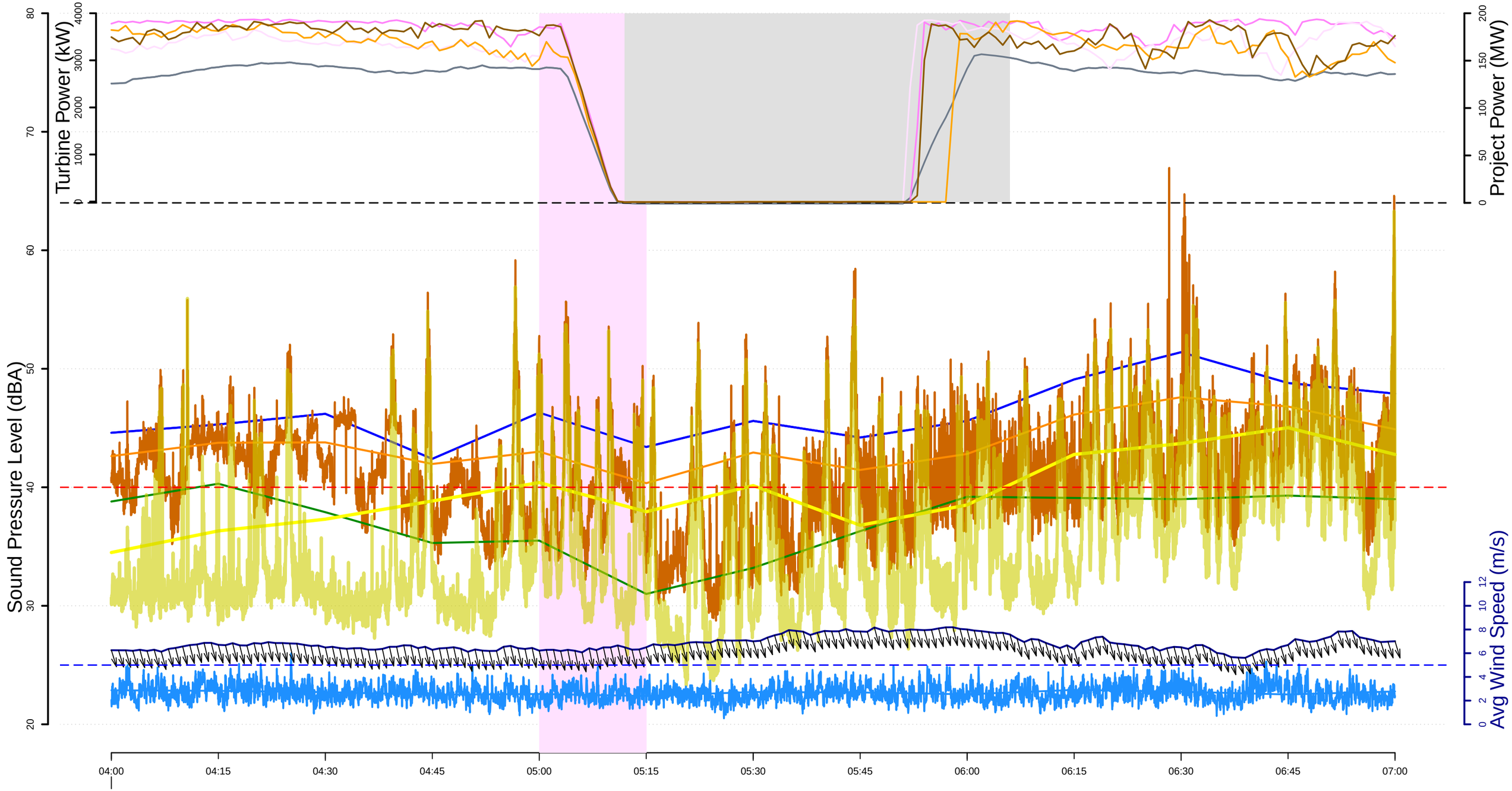
REC−024 (Pazour Residence), Curtail #12
Thursday, 7 23, 2020



23/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T49
- Real Power (kW) T41
- Real Power (kW) T39
- Real Power (kW) T58
- Project Power (MW)

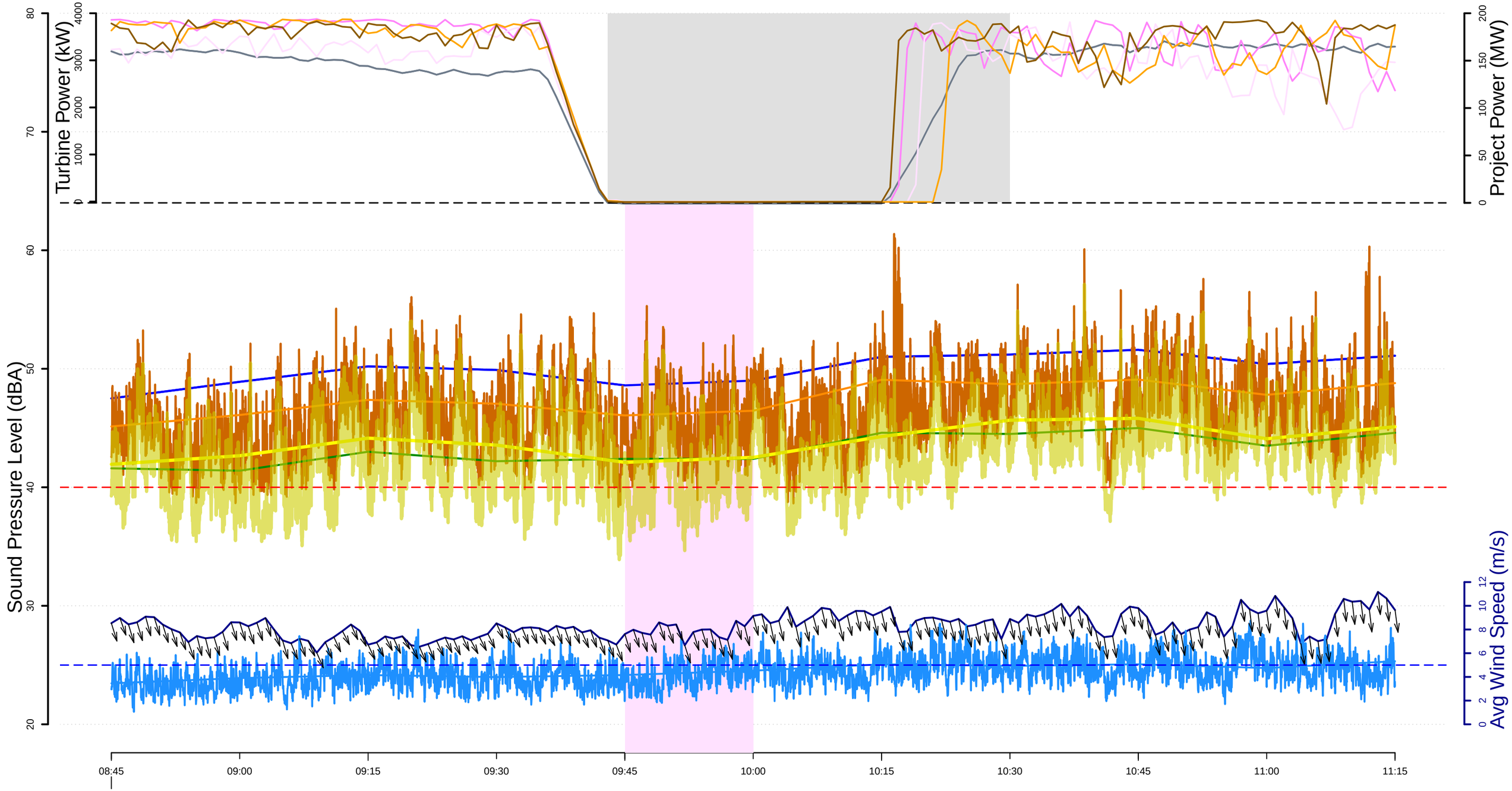
REC−024 (Pazour Residence), Curtail #13
Thursday, 7 23, 2020



23/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T49
- Real Power (kW) T41
- Real Power (kW) T39
- Real Power (kW) T58
- Project Power (MW)

REC−024 (Pazour Residence), Curtail #14
Thursday, 7 23, 2020



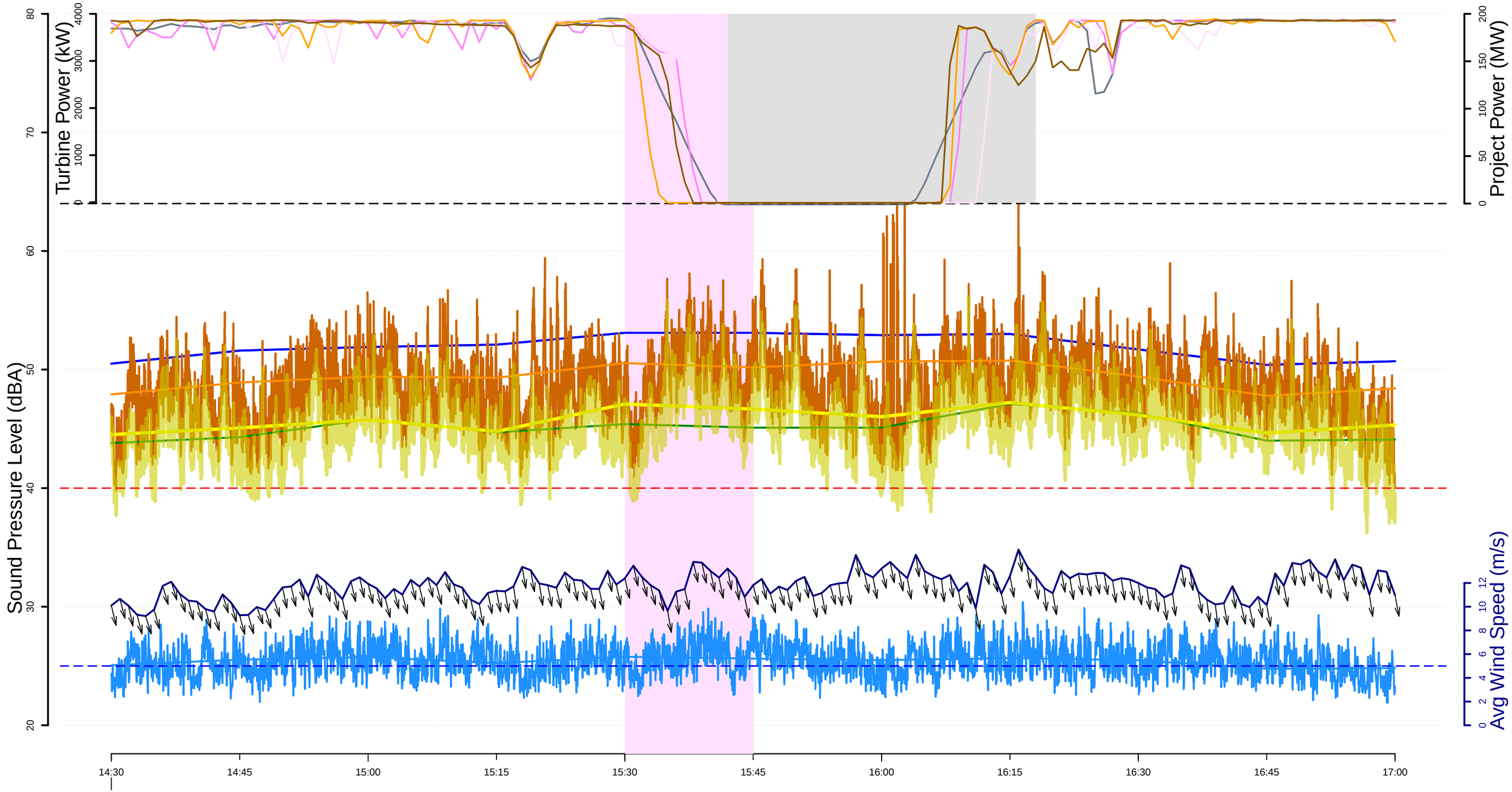
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58

Project Power (MW)

REC−024 (Pazour Residence), Curtail #15
Thursday, 7 23, 2020



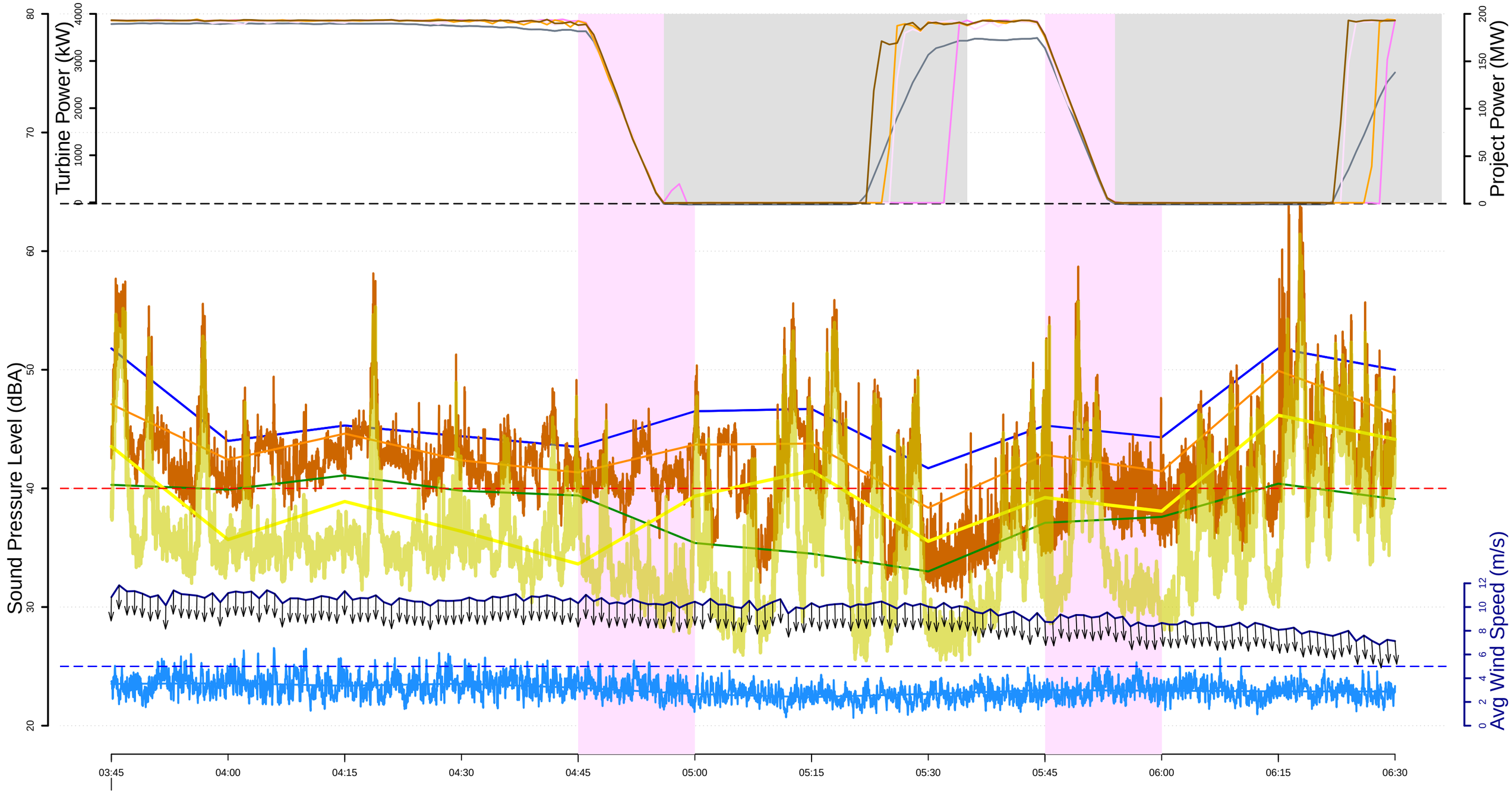
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58

Project Power (MW)

REC−024 (Pazour Residence), Curtail #16
Friday, 7 24, 2020



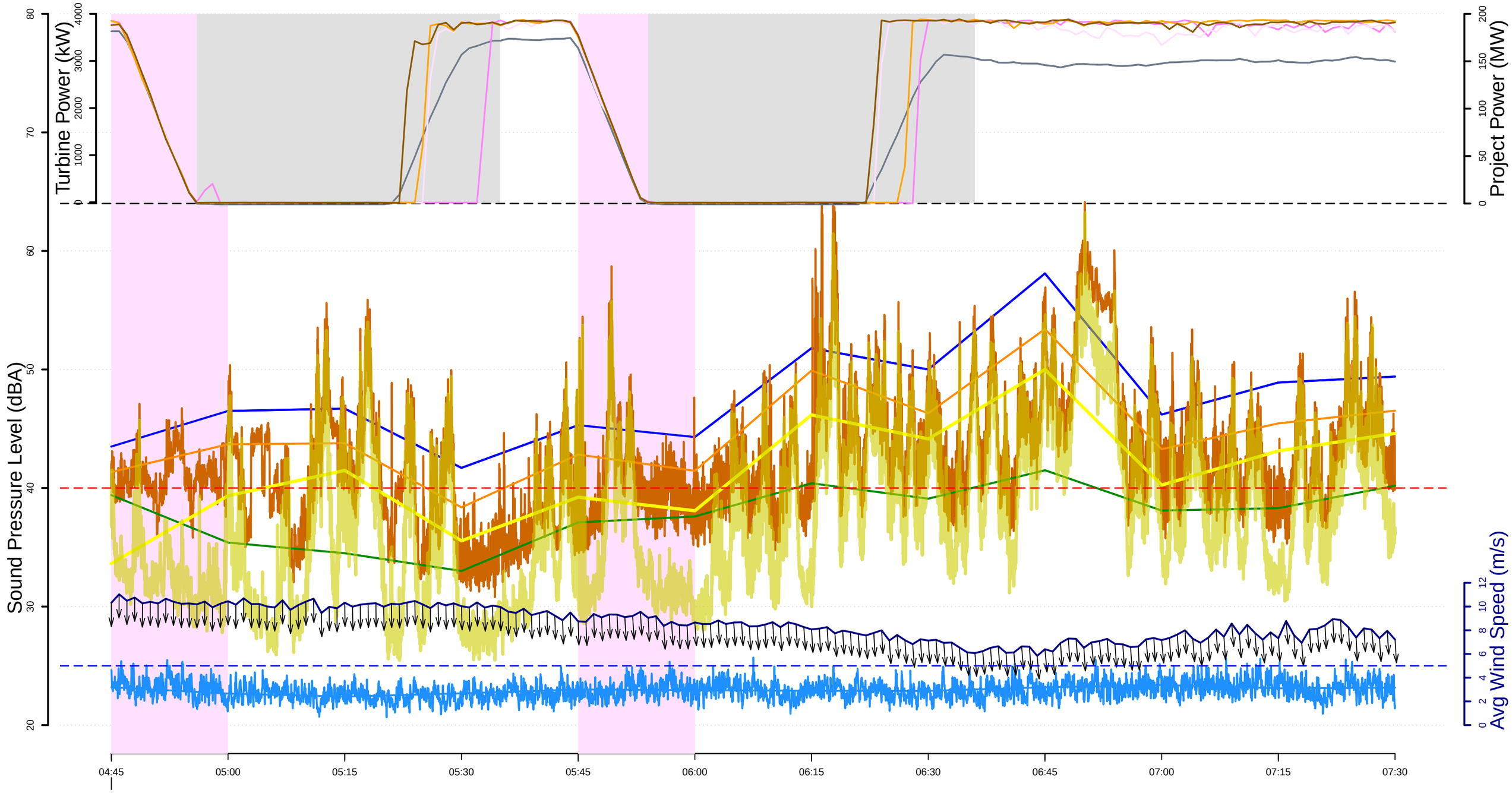
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58

Project Power (MW)

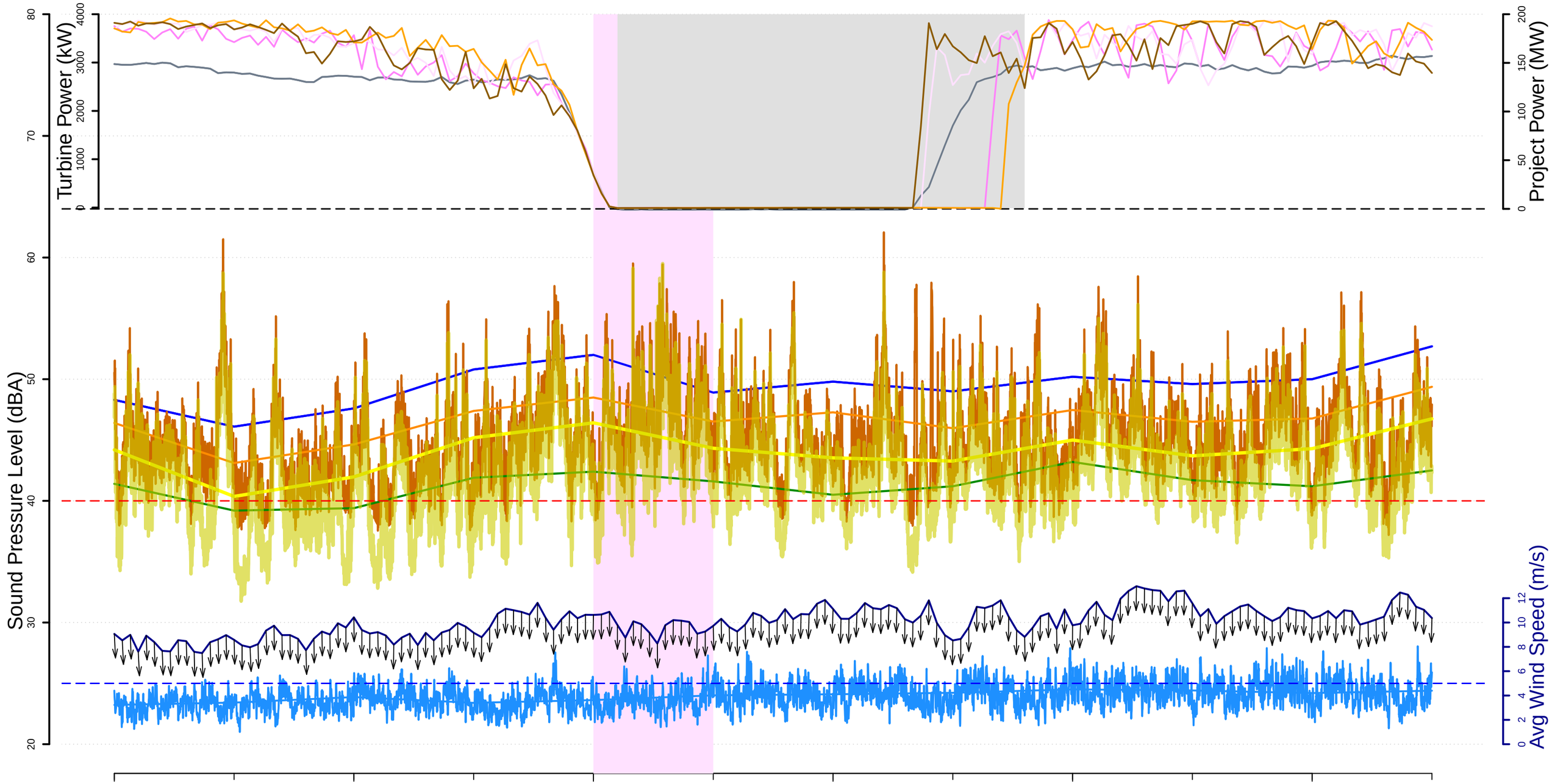
REC−024 (Pazour Residence), Curtail #17
Friday, 7 24, 2020



24/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T49
- Real Power (kW) T41
- Real Power (kW) T39
- Real Power (kW) T58
- Project Power (MW)

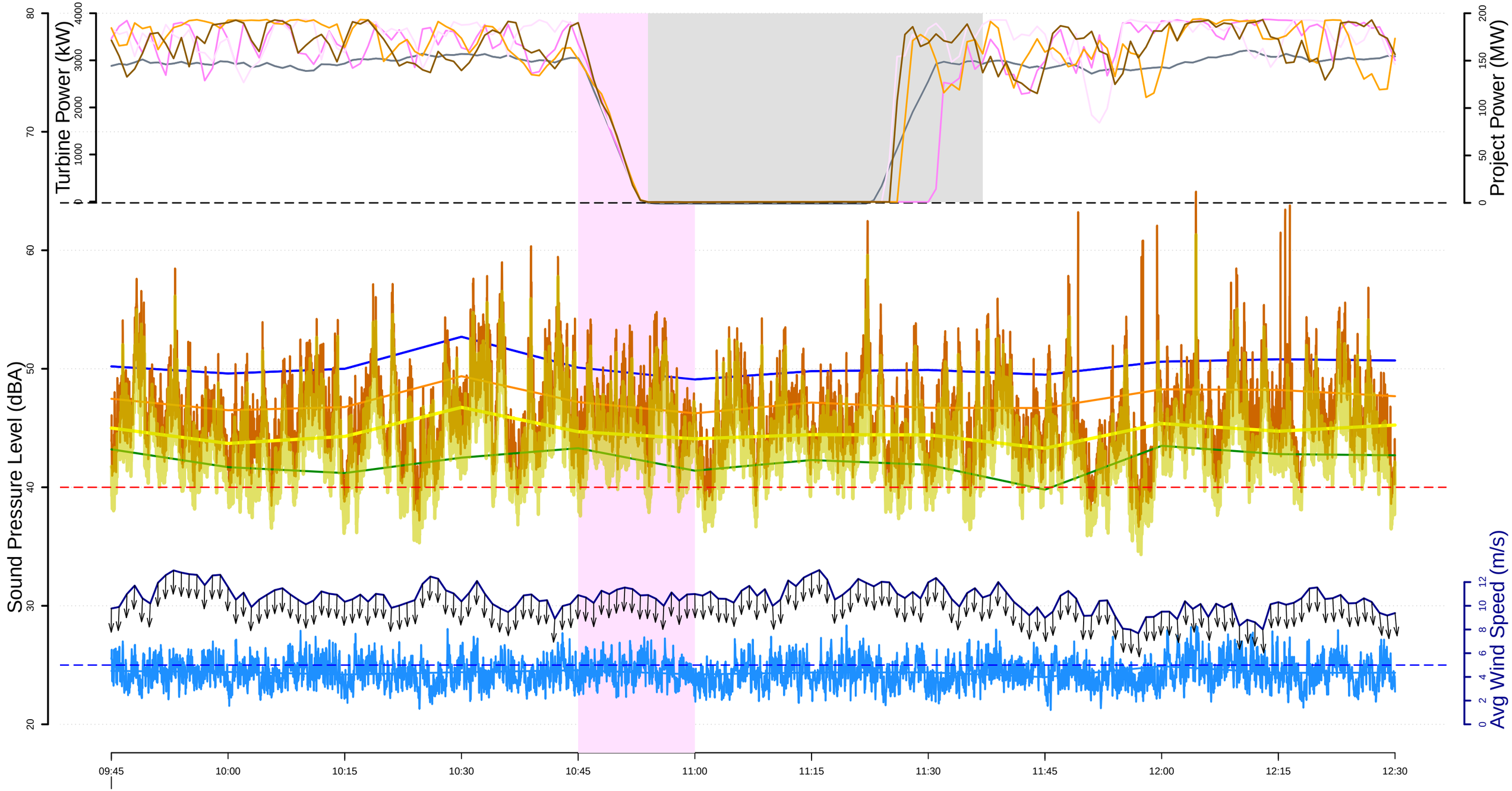
REC−024 (Pazour Residence), Curtail #18
Friday, 7 24, 2020



24/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T49
- Real Power (kW) T41
- Real Power (kW) T39
- Real Power (kW) T58
- Project Power (MW)

REC−024 (Pazour Residence), Curtail #19
Friday, 7 24, 2020



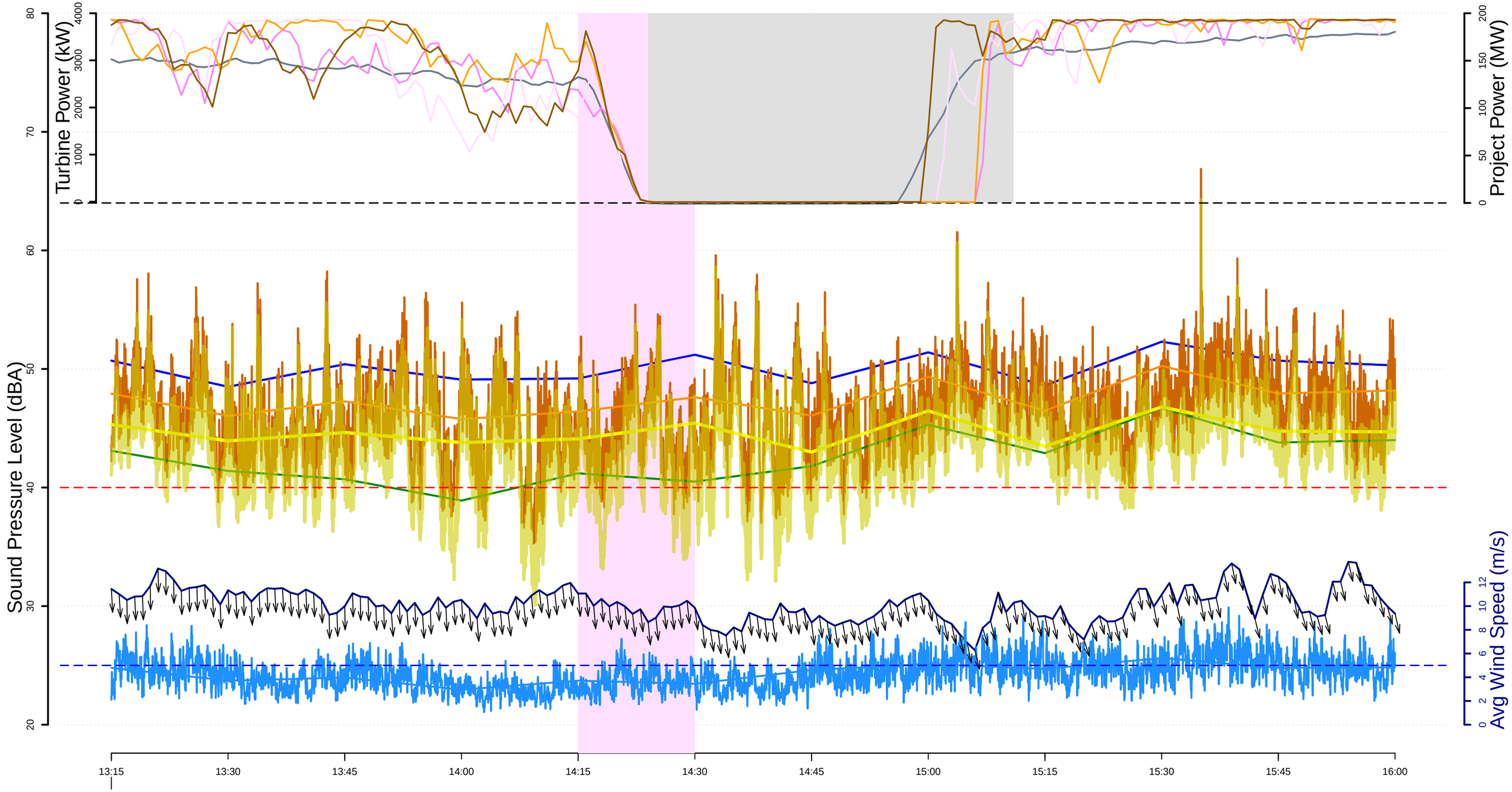
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58

Project Power (MW)

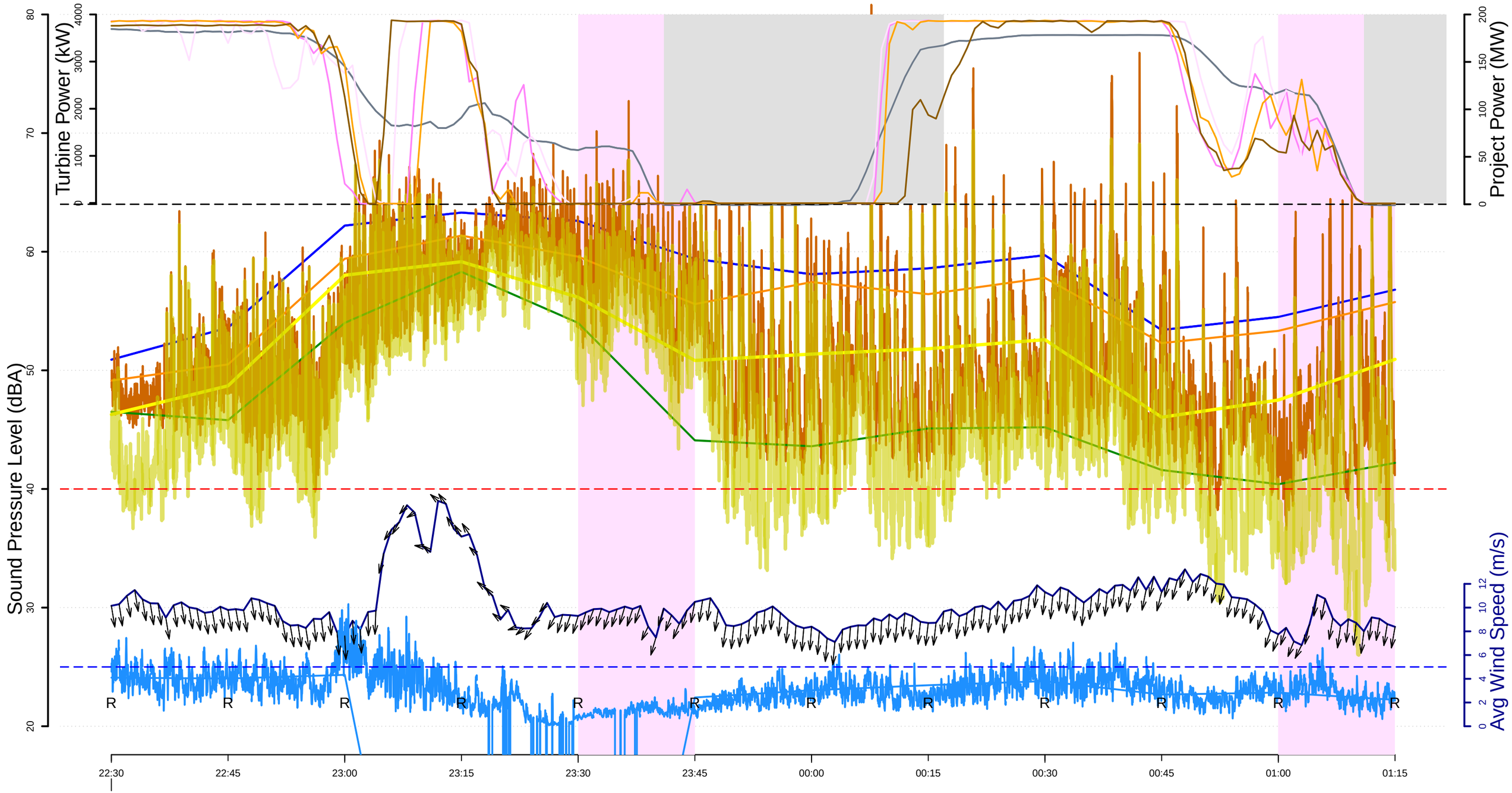
REC−024 (Pazour Residence), Curtail #20
Friday, 7 24, 2020



24/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T49
- Real Power (kW) T41
- Real Power (kW) T39
- Real Power (kW) T58
- Project Power (MW)

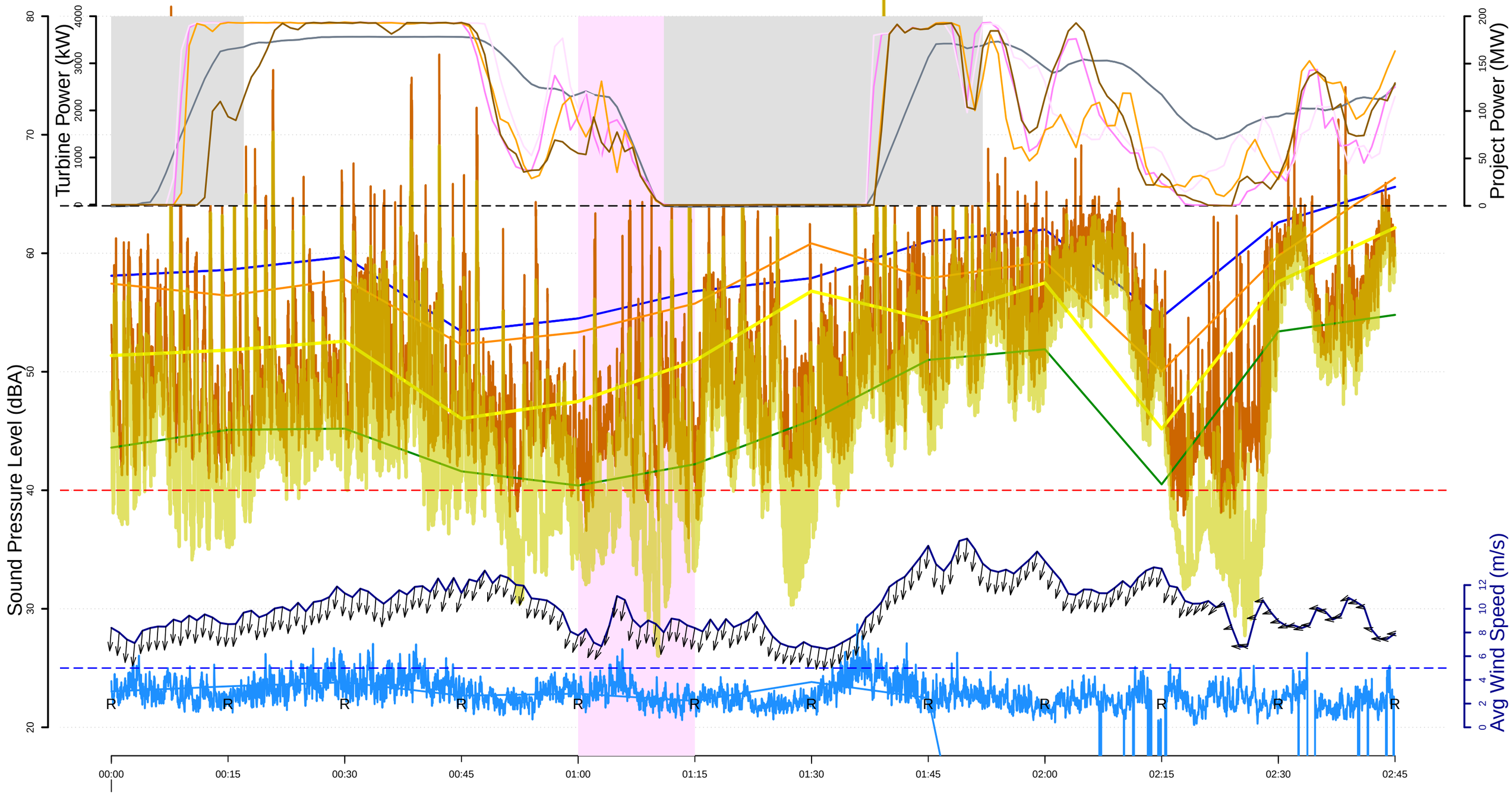
REC−024 (Pazour Residence), Curtail #21
Friday, 7 24, 2020



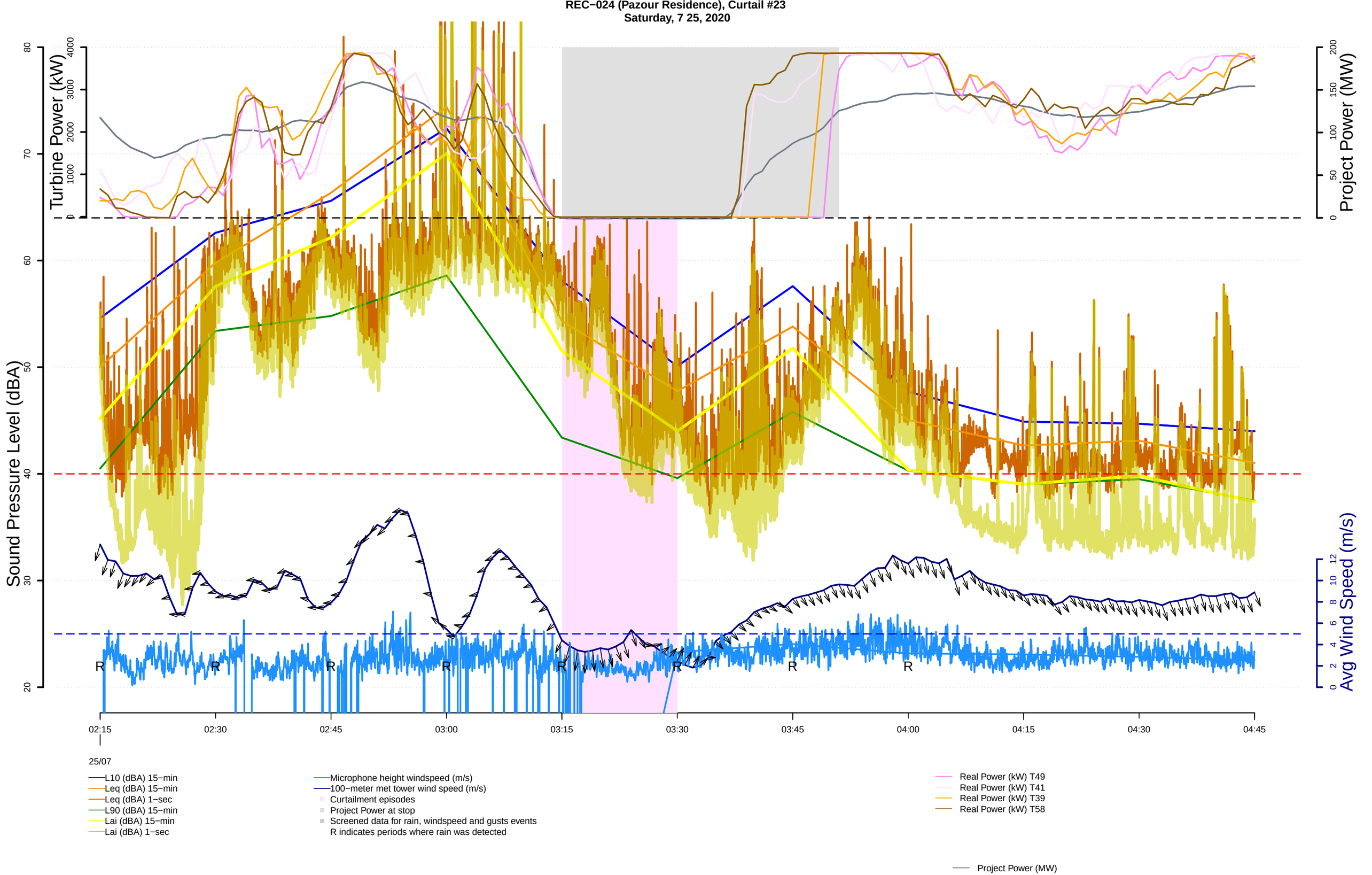
24/07

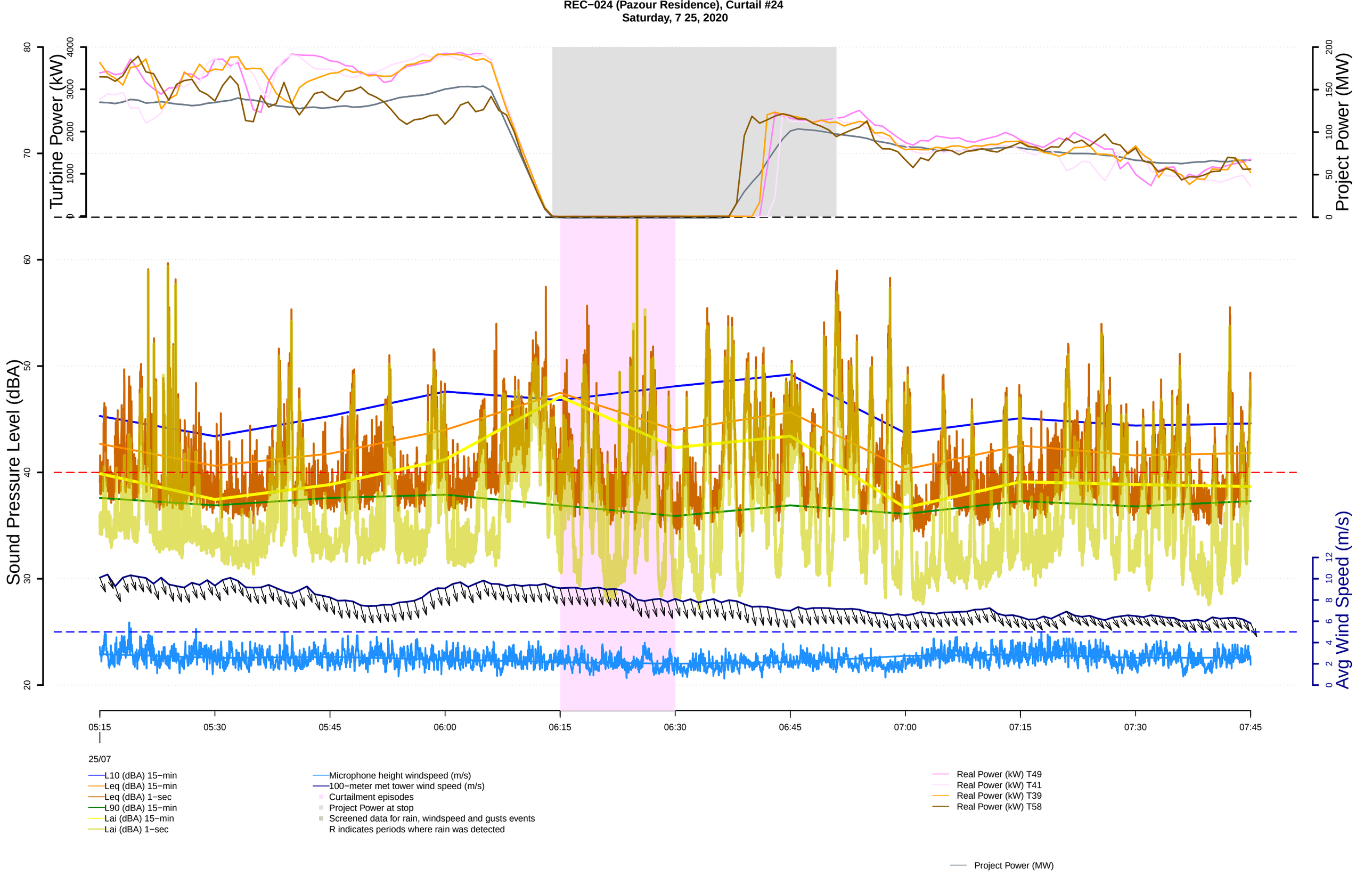
- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
- R indicates periods where rain was detected
- Real Power (kW) T49
- Real Power (kW) T41
- Real Power (kW) T39
- Real Power (kW) T58
- Project Power (MW)

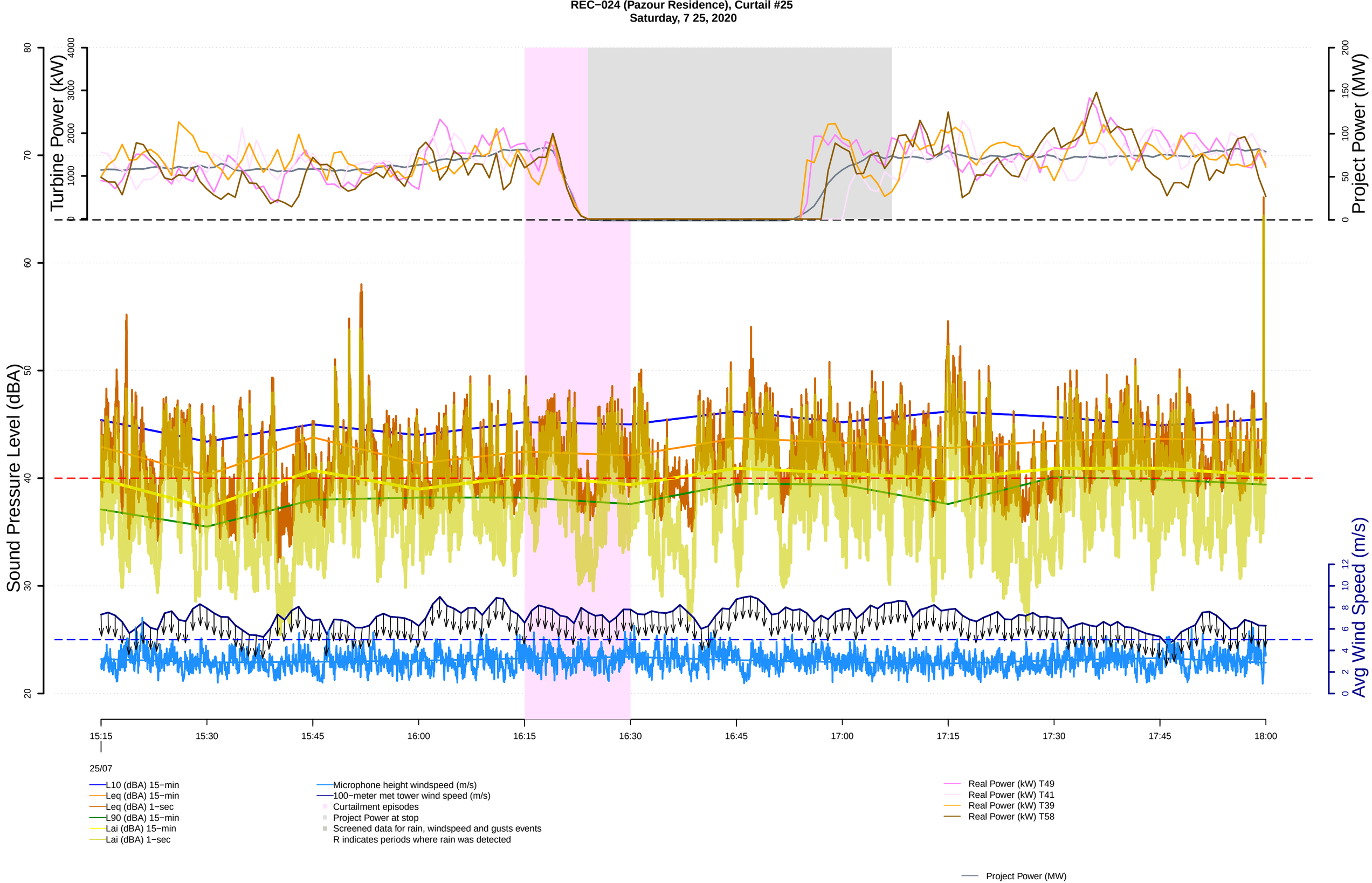
REC−024 (Pazour Residence), Curtail #22
Saturday, 7 25, 2020

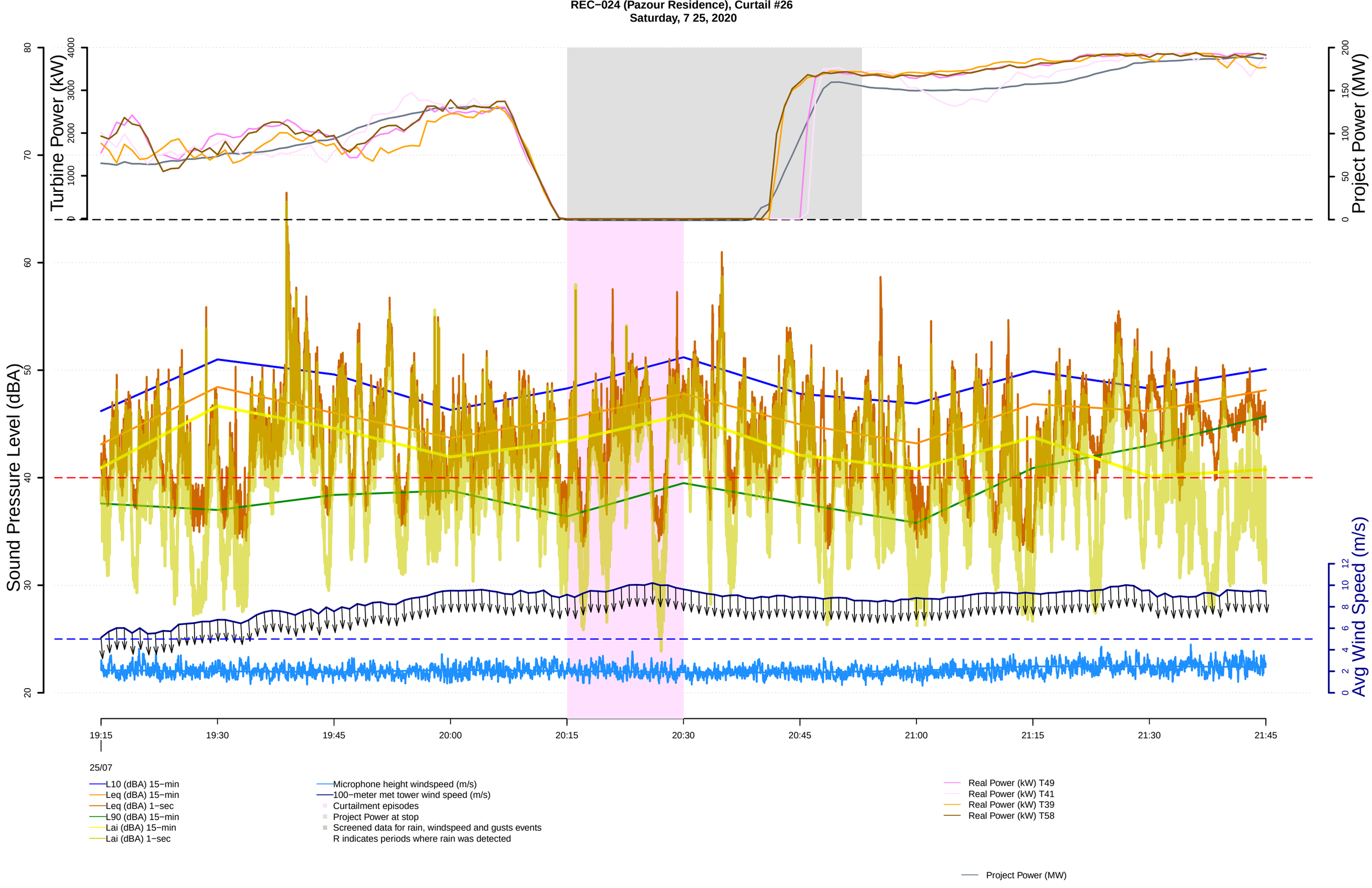


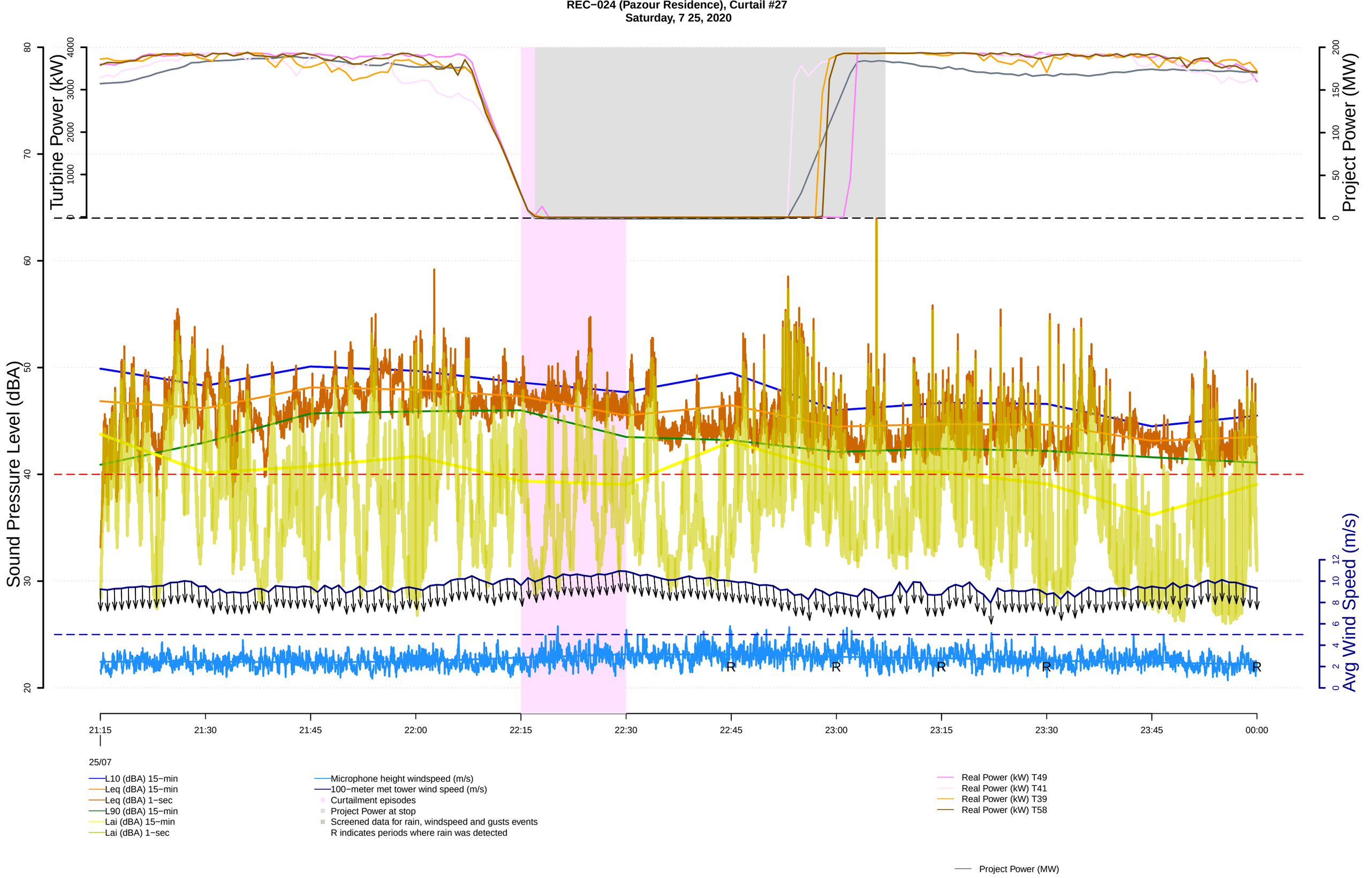
- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
- R indicates periods where rain was detected
- Real Power (kW) T49
- Real Power (kW) T41
- Real Power (kW) T39
- Real Power (kW) T58
- Project Power (MW)

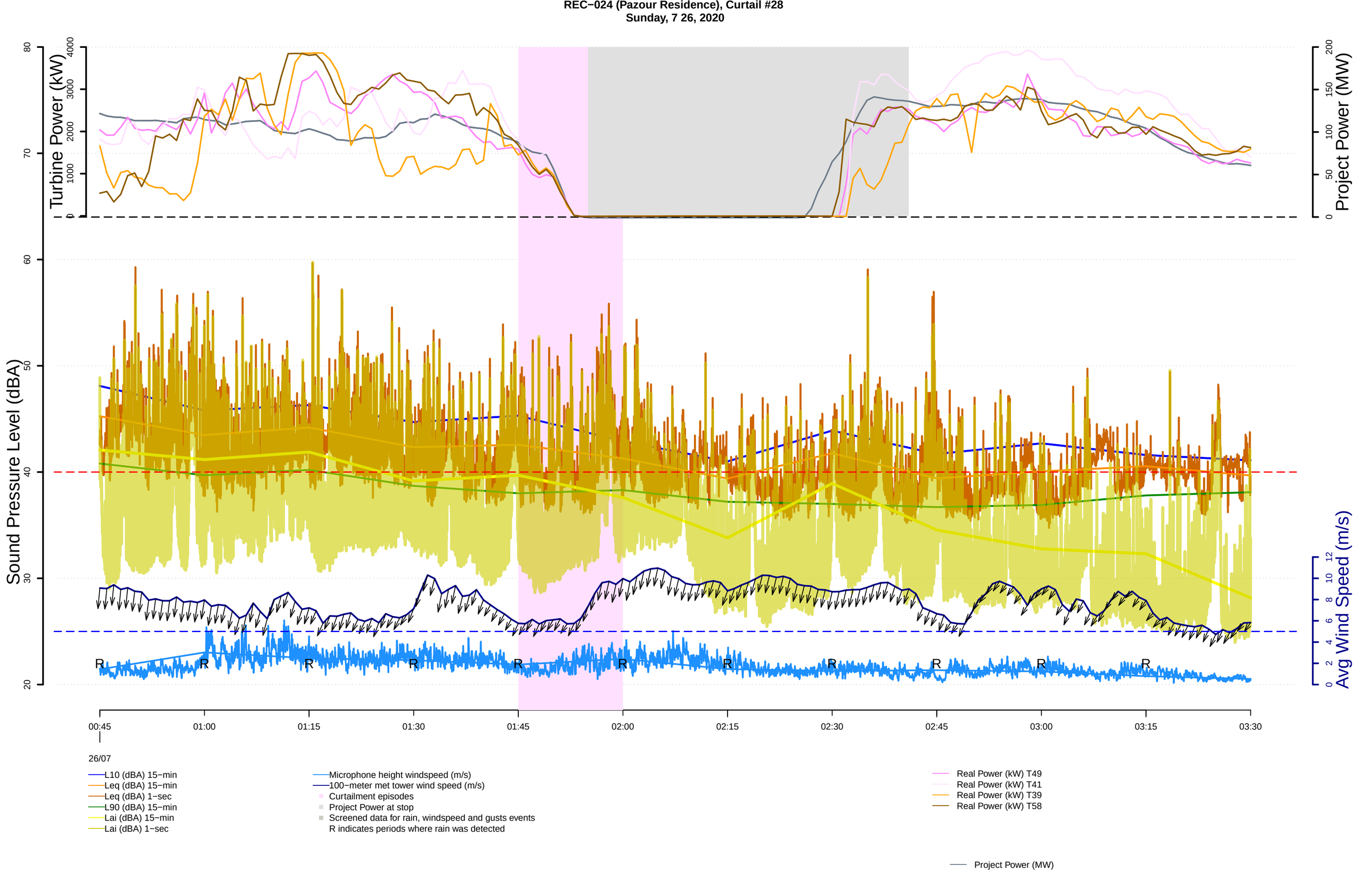

REC−024 (Pazour Residence), Curtail #23
Saturday, 7 25, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
02:15
02:30
02:45
03:00
03:15
03:30
03:45
04:00
04:15
04:30
04:45
25/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58
Project Power (MW)


REC−024 (Pazour Residence), Curtail #24
Saturday, 7 25, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
05:15
05:30
05:45
06:00
06:15
06:30
06:45
07:00
07:15
07:30
07:45
25/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58
Project Power (MW)

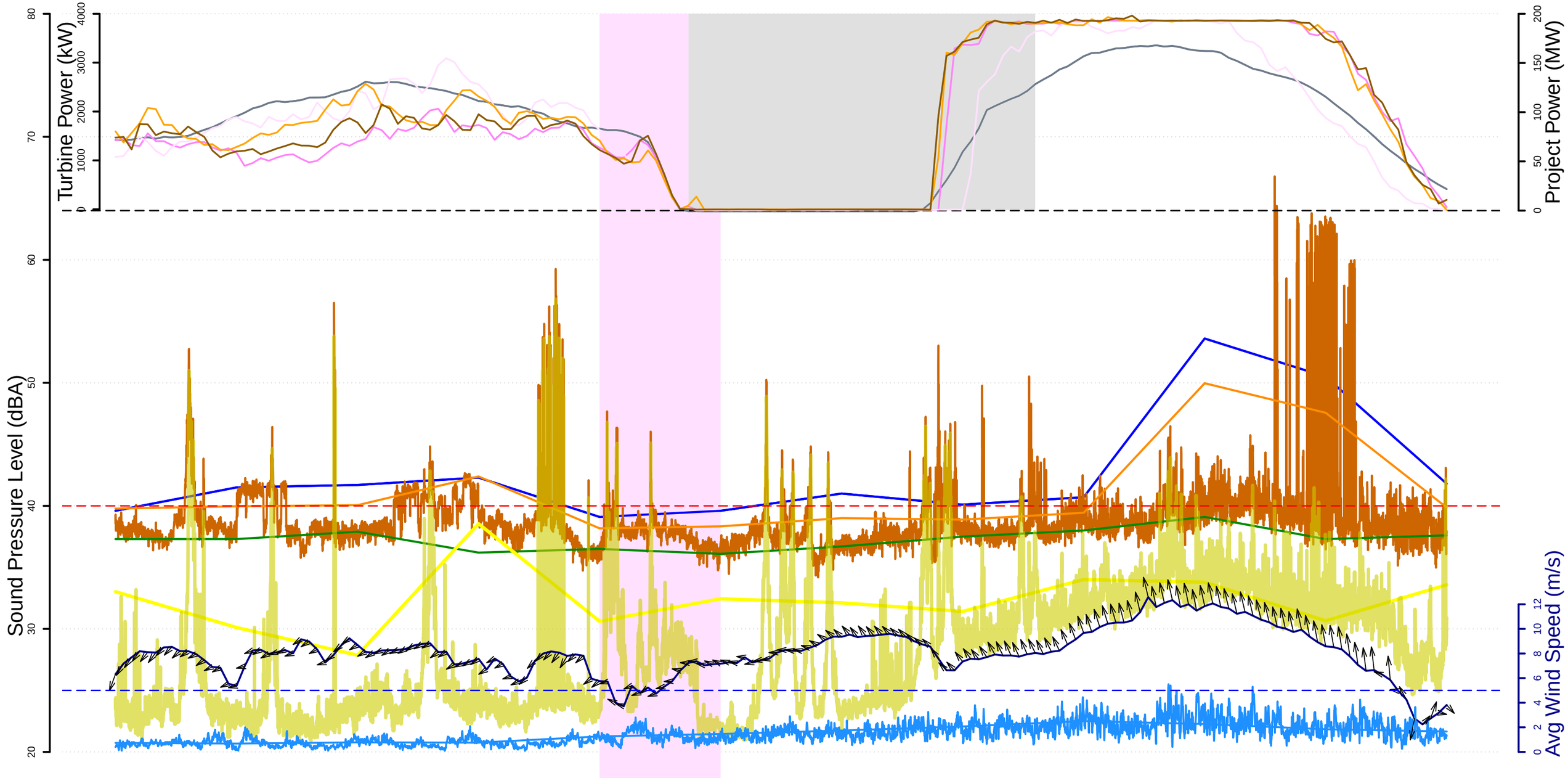

REC−024 (Pazour Residence), Curtail #25
Saturday, 7 25, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
15:15
15:30
15:45
16:00
16:15
16:30
16:45
17:00
17:15
17:30
17:45
18:00
25/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58
Project Power (MW)


REC−024 (Pazour Residence), Curtail #26
Saturday, 7 25, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
19:15
19:30
19:45
20:00
20:15
20:30
20:45
21:00
21:15
21:30
21:45
25/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58
Project Power (MW)


REC−024 (Pazour Residence), Curtail #27
Saturday, 7 25, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
R
21:15
21:30
21:45
22:00
22:15
22:30
22:45
23:00
23:15
23:30
23:45
00:00
25/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58
Project Power (MW)


REC−024 (Pazour Residence), Curtail #28
Sunday, 7 26, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
00:45
01:00
01:15
01:30
01:45
02:00
02:15
02:30
02:45
03:00
03:15
03:30
26/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58
Project Power (MW)

REC−024 (Pazour Residence), Curtail #29
Sunday, 7 26, 2020



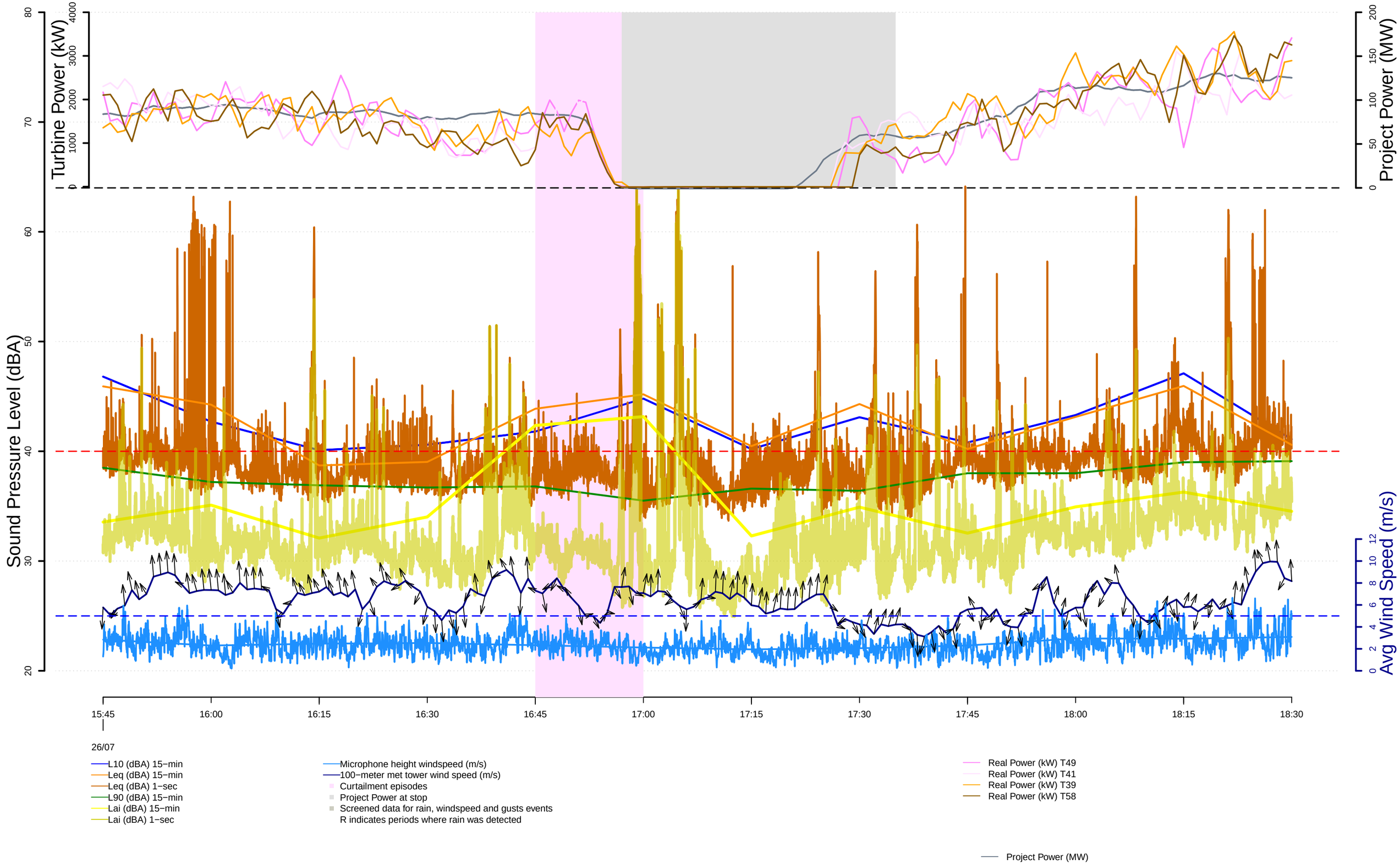
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

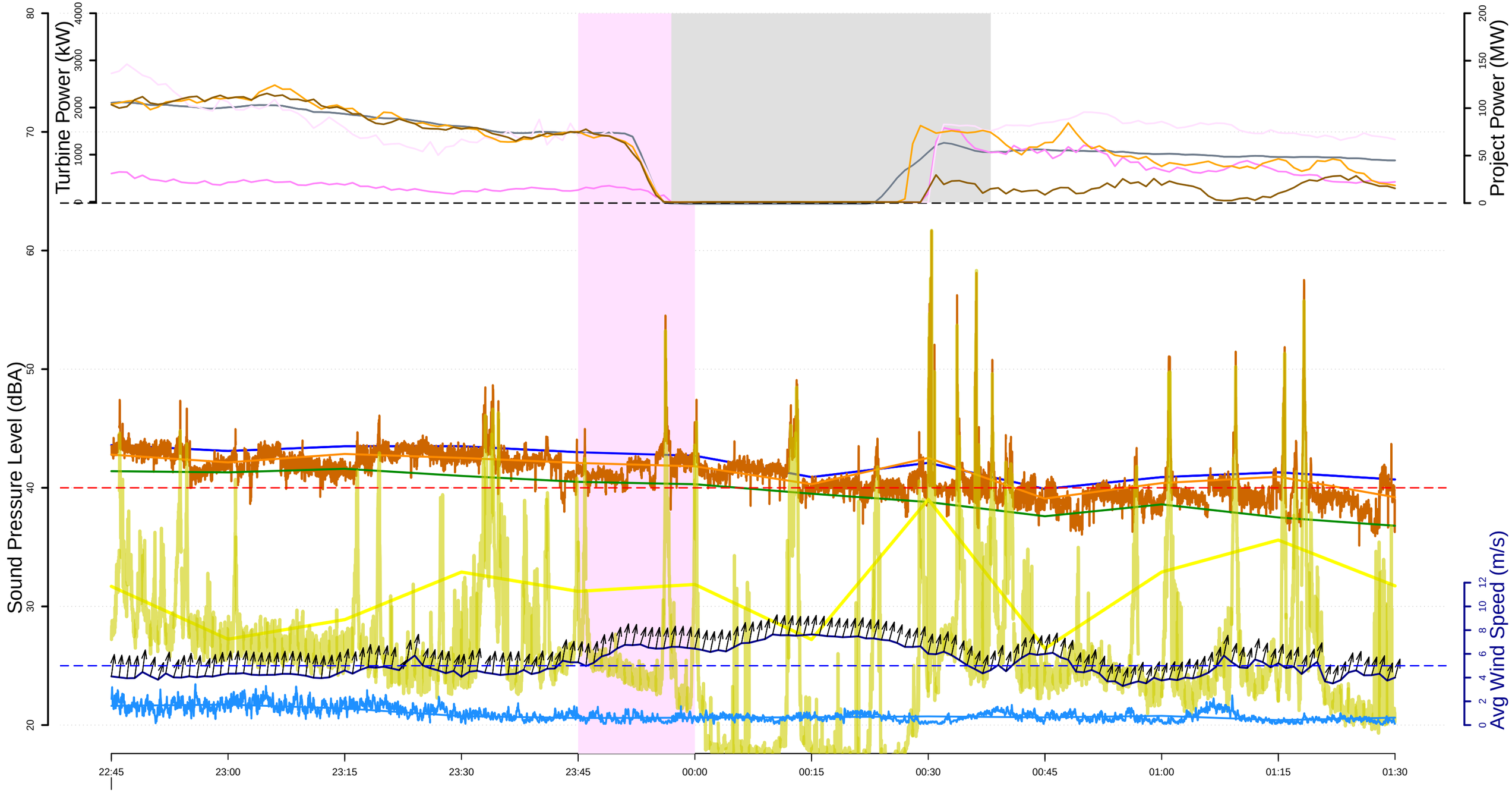
Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58

Project Power (MW)

REC−024 (Pazour Residence), Curtail #30
Sunday, 7 26, 2020



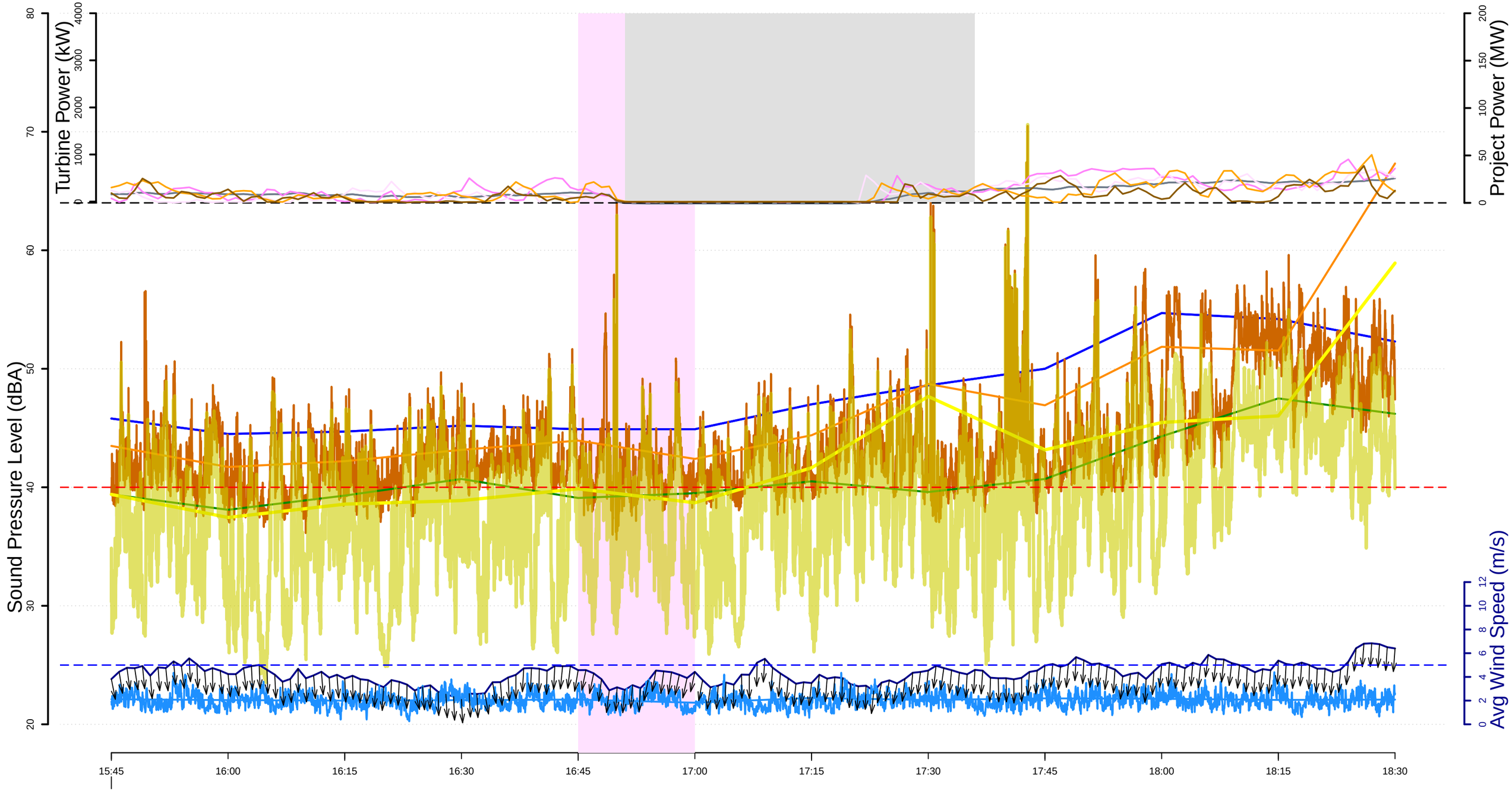
REC−024 (Pazour Residence), Curtail #31
Sunday, 7 26, 2020



26/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T49
- Real Power (kW) T41
- Real Power (kW) T39
- Real Power (kW) T58
- Project Power (MW)

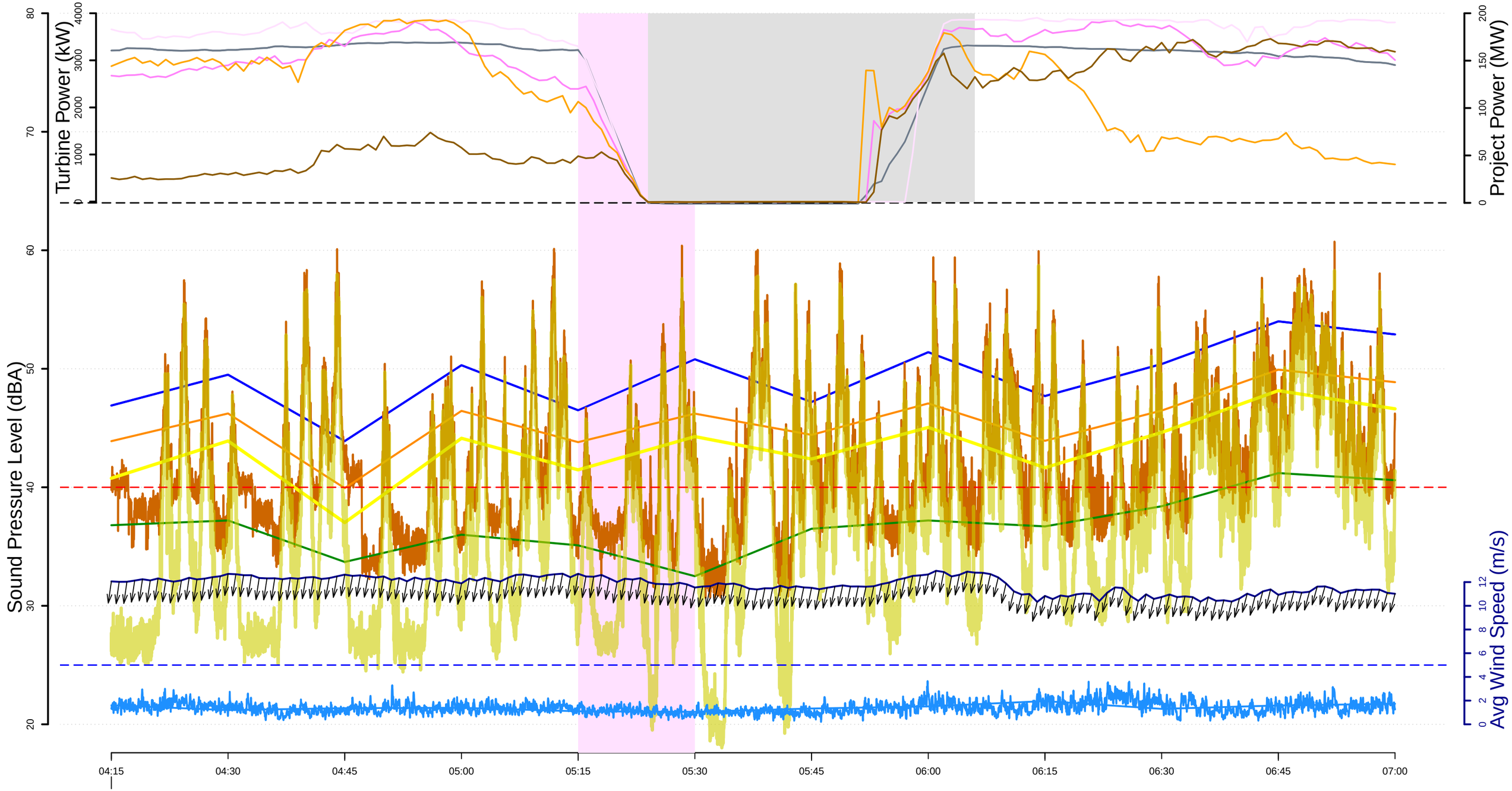
REC−024 (Pazour Residence), Curtail #32
Monday, 7 27, 2020



27/07

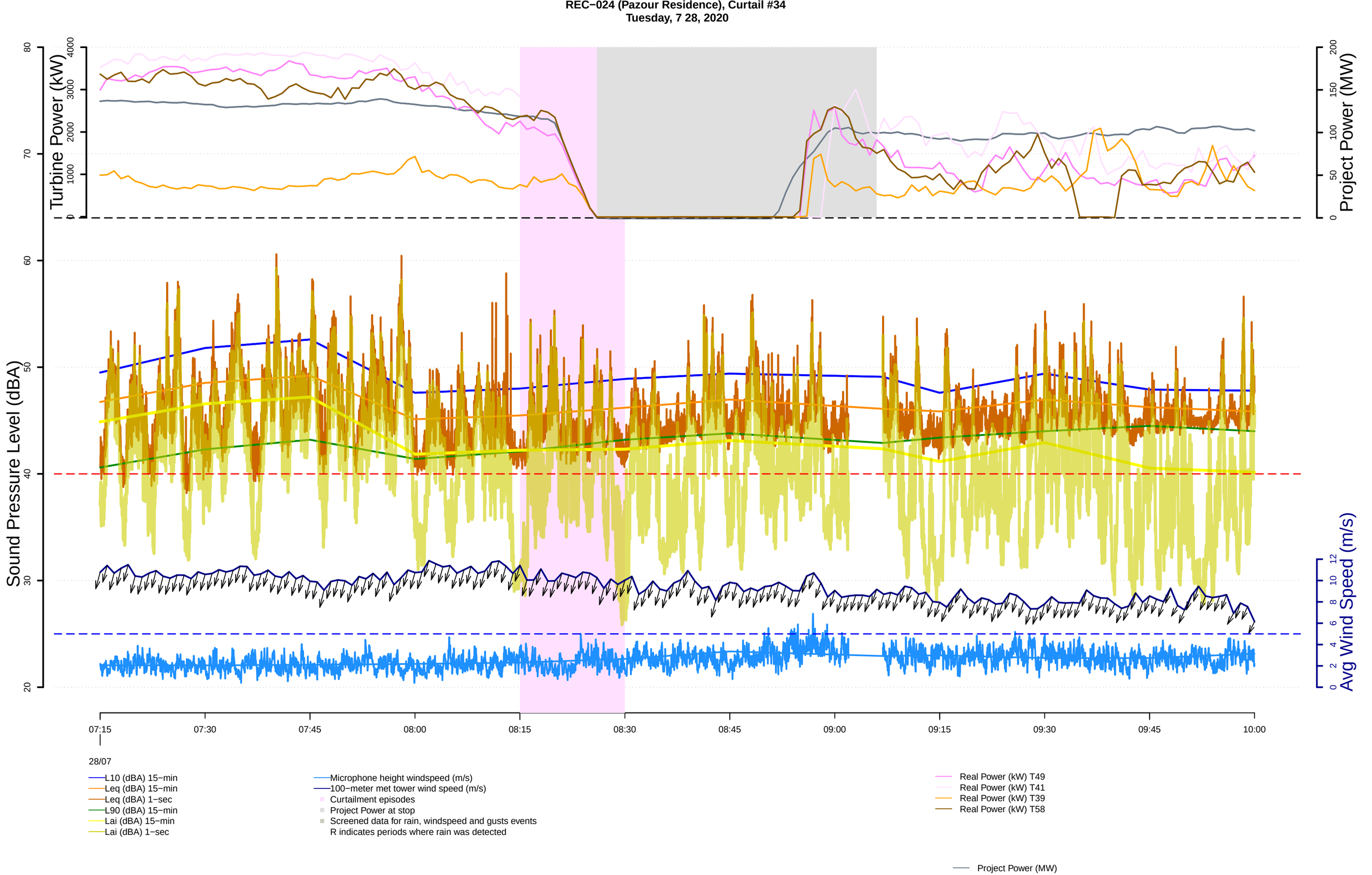
- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T49
- Real Power (kW) T41
- Real Power (kW) T39
- Real Power (kW) T58
- Project Power (MW)

REC−024 (Pazour Residence), Curtail #33
Tuesday, 7 28, 2020

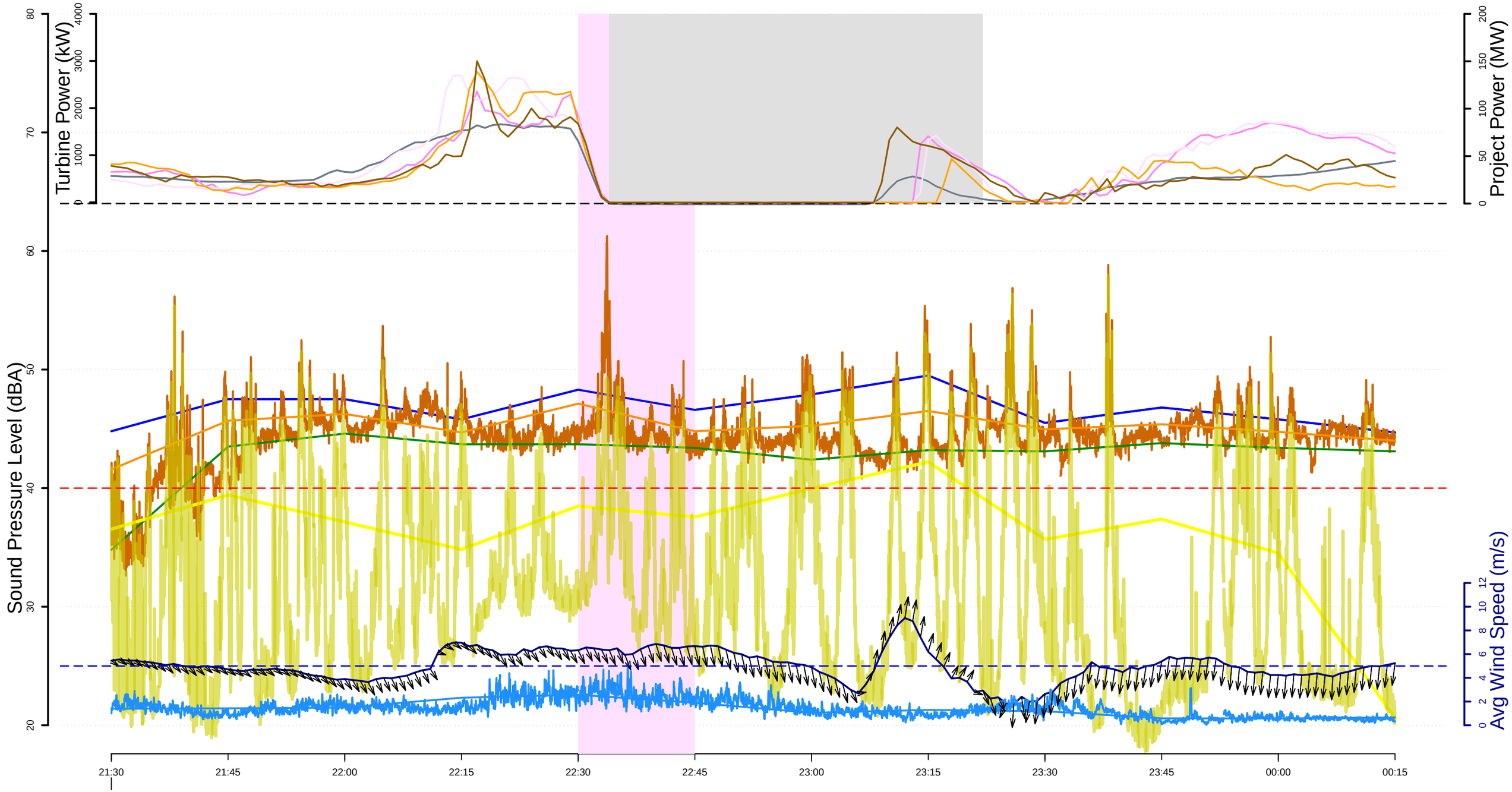


28/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T49
- Real Power (kW) T41
- Real Power (kW) T39
- Real Power (kW) T58
- Project Power (MW)


REC−024 (Pazour Residence), Curtail #34
Tuesday, 7 28, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
07:15
07:30
07:45
08:00
08:15
08:30
08:45
09:00
09:15
09:30
09:45
10:00
28/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58
Project Power (MW)

REC−024 (Pazour Residence), Curtail #35
Tuesday, 7 28, 2020



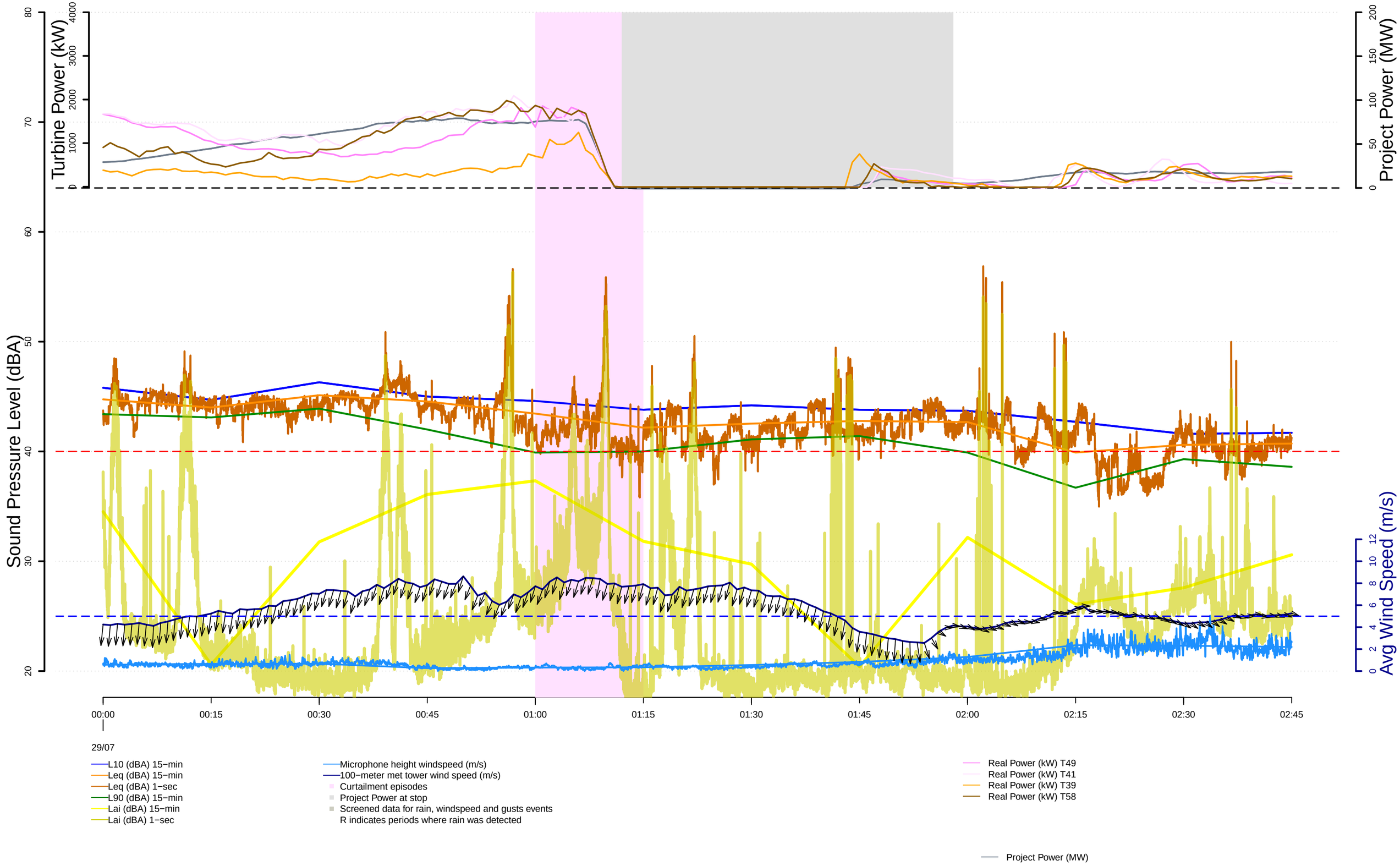
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

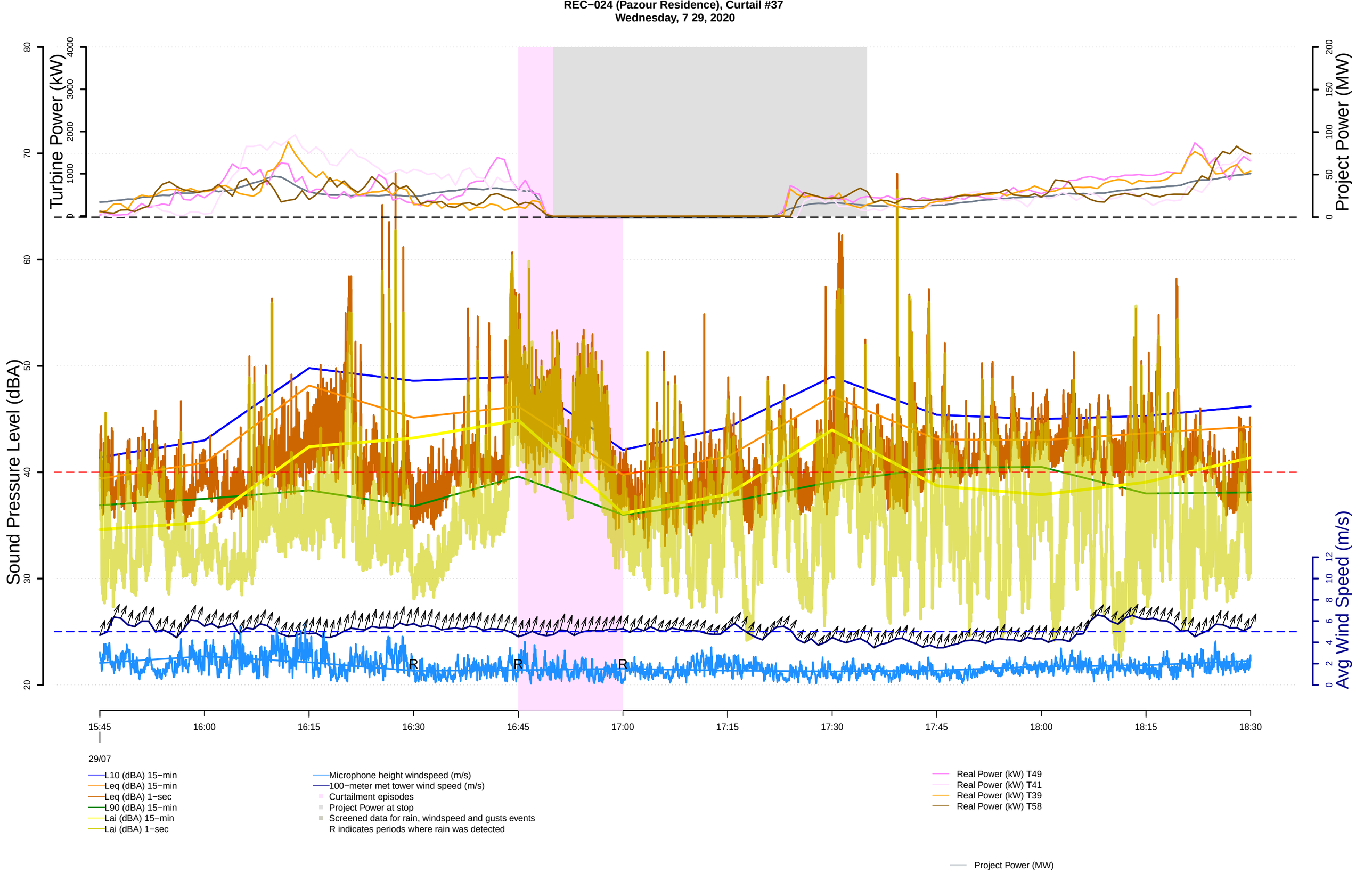
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58

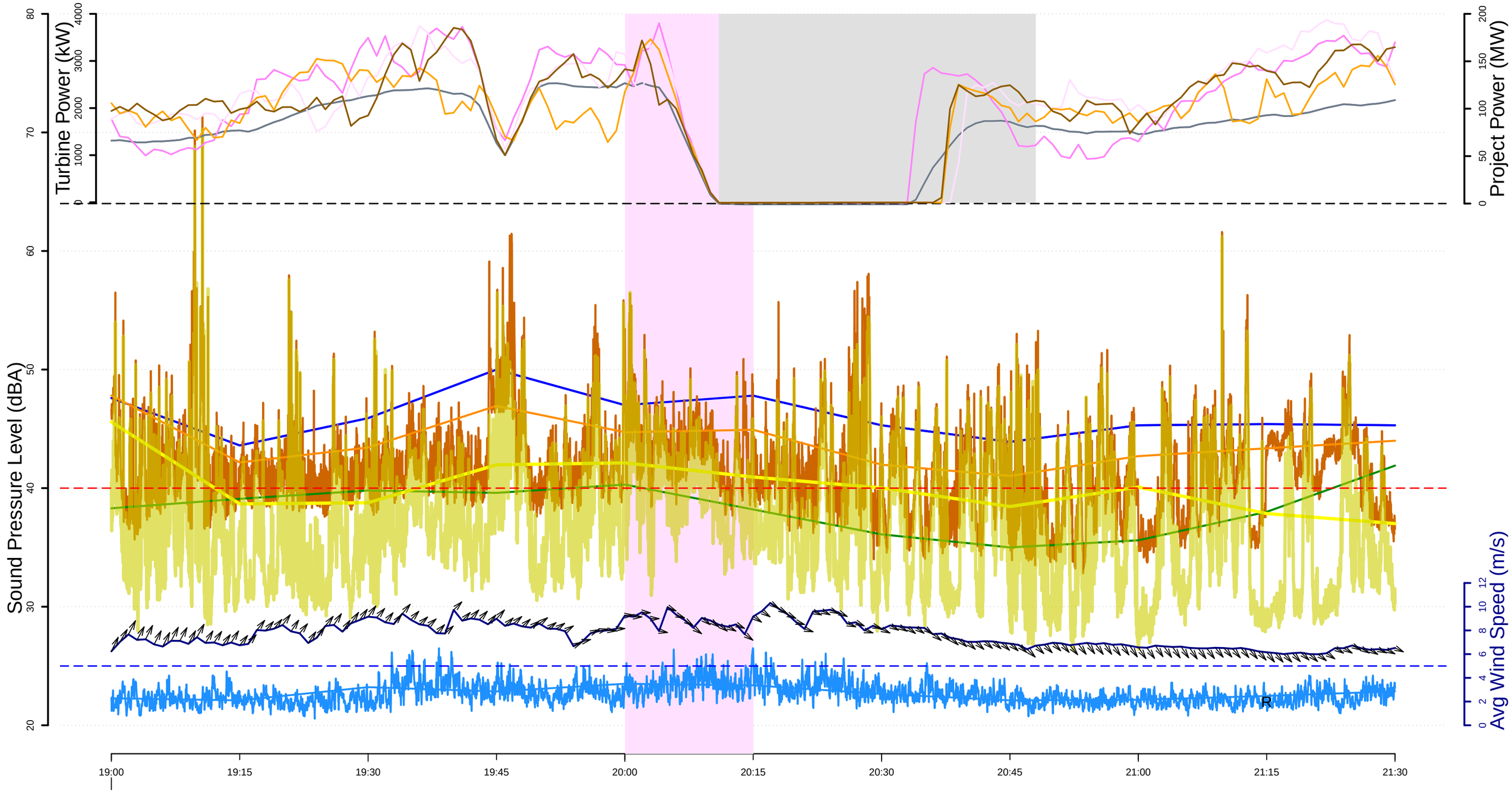
Project Power (MW)

REC−024 (Pazour Residence), Curtail #36
Wednesday, 7 29, 2020




REC−024 (Pazour Residence), Curtail #37
Wednesday, 7 29, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
R
R
R
15:45
16:00
16:15
16:30
16:45
17:00
17:15
17:30
17:45
18:00
18:15
18:30
29/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58
Project Power (MW)

REC−024 (Pazour Residence), Curtail #38
Wednesday, 7 29, 2020



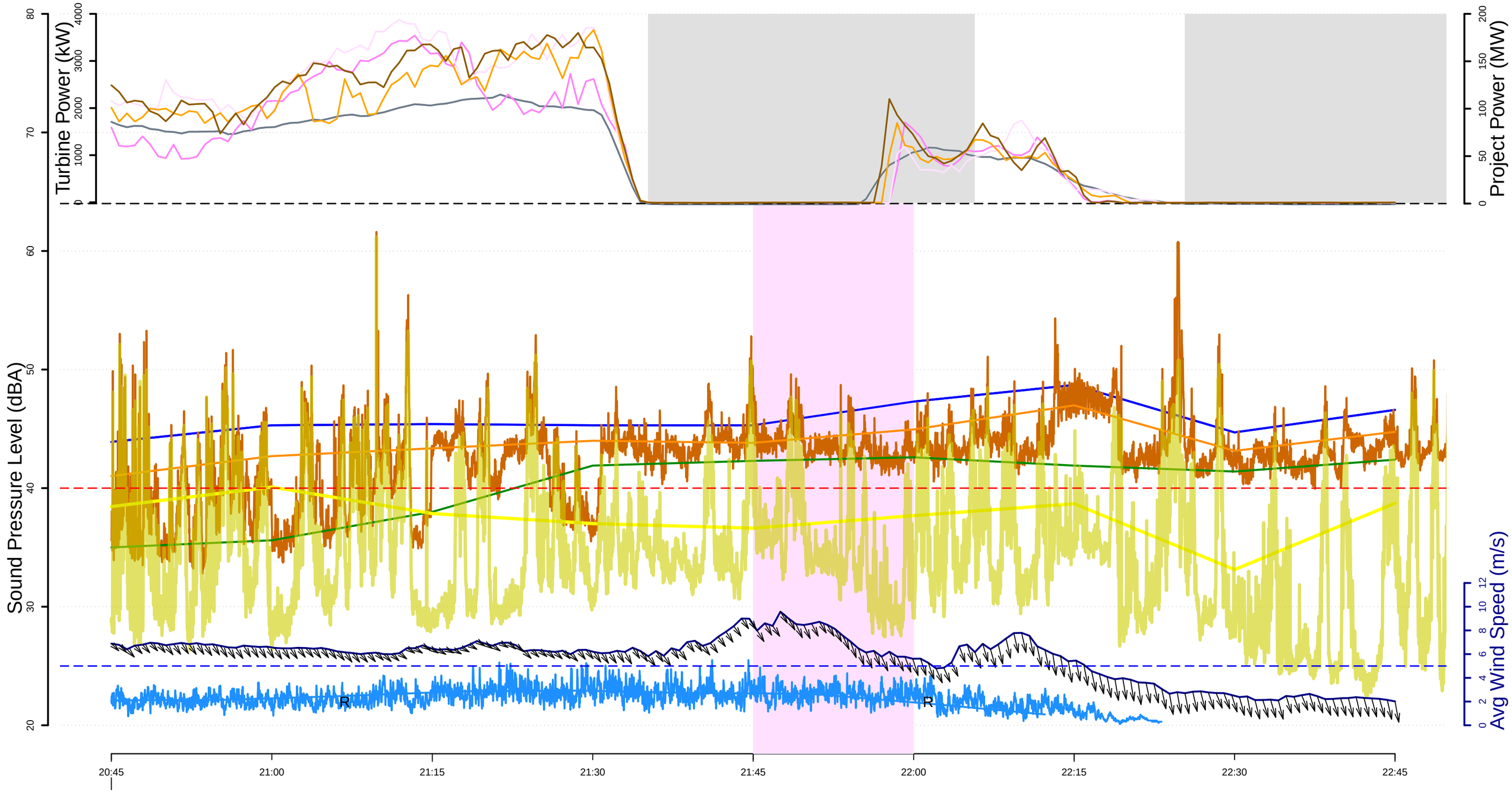
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58

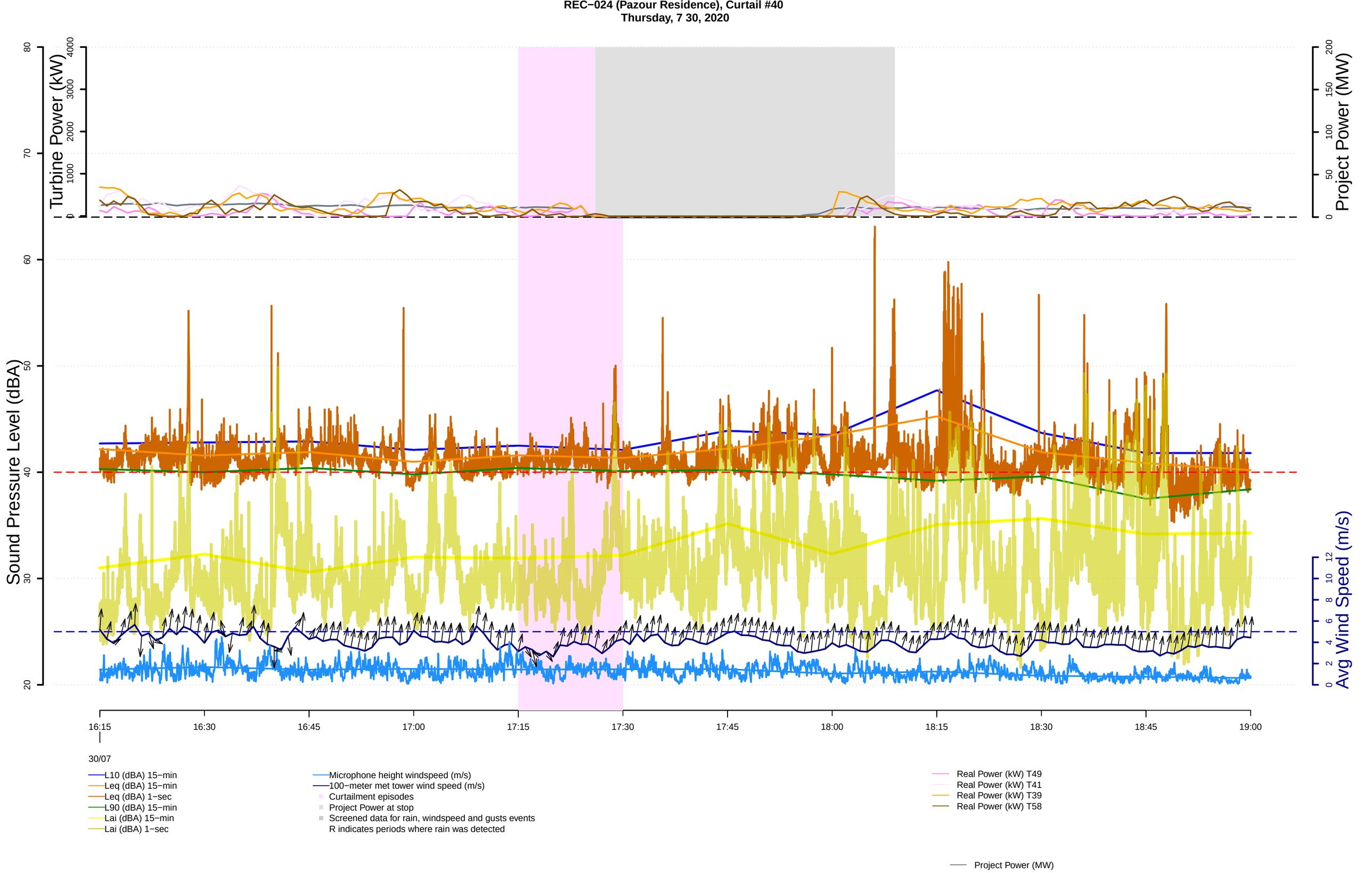
Project Power (MW)

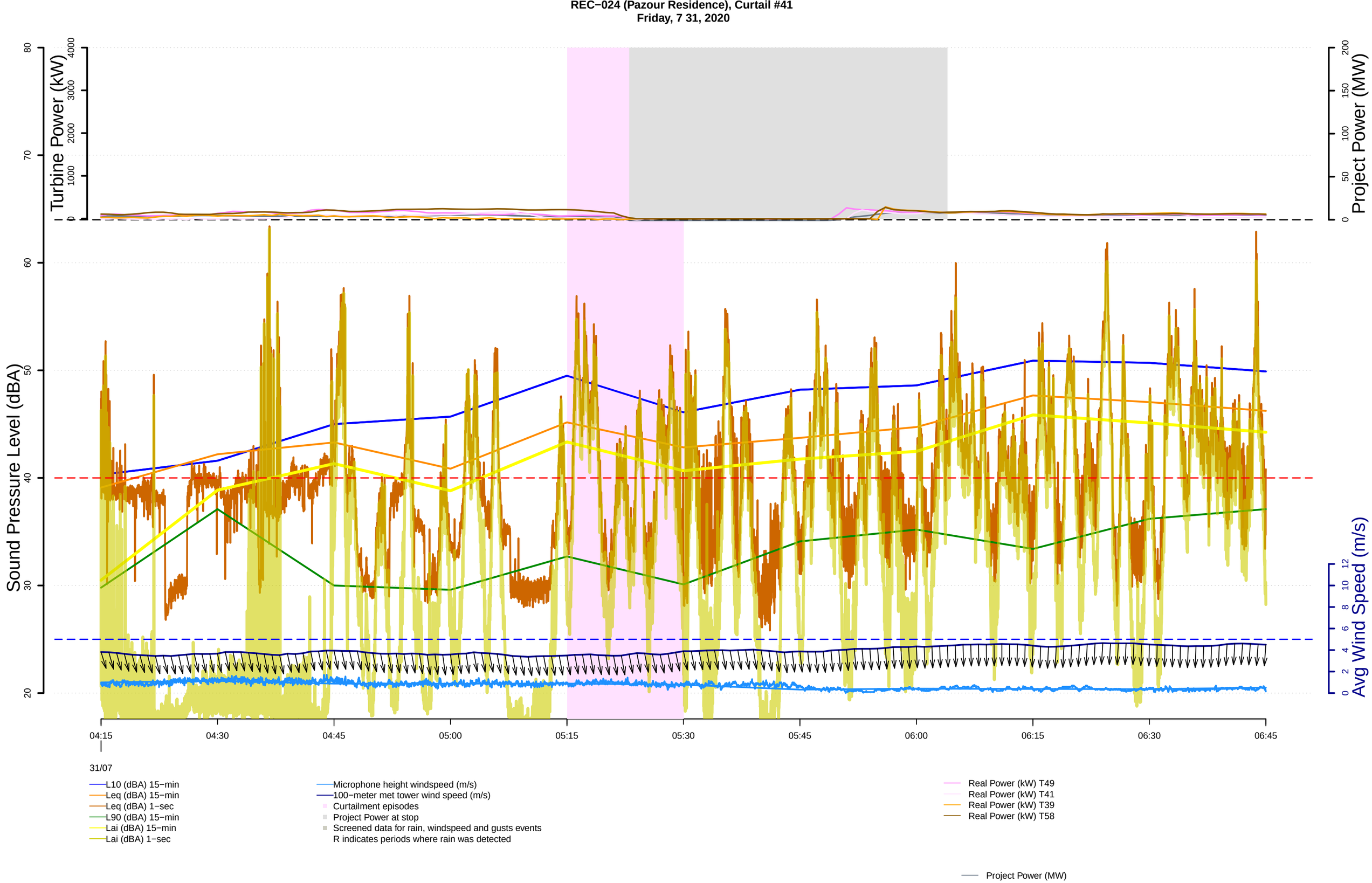
REC−024 (Pazour Residence), Curtail #39
Wednesday, 7 29, 2020

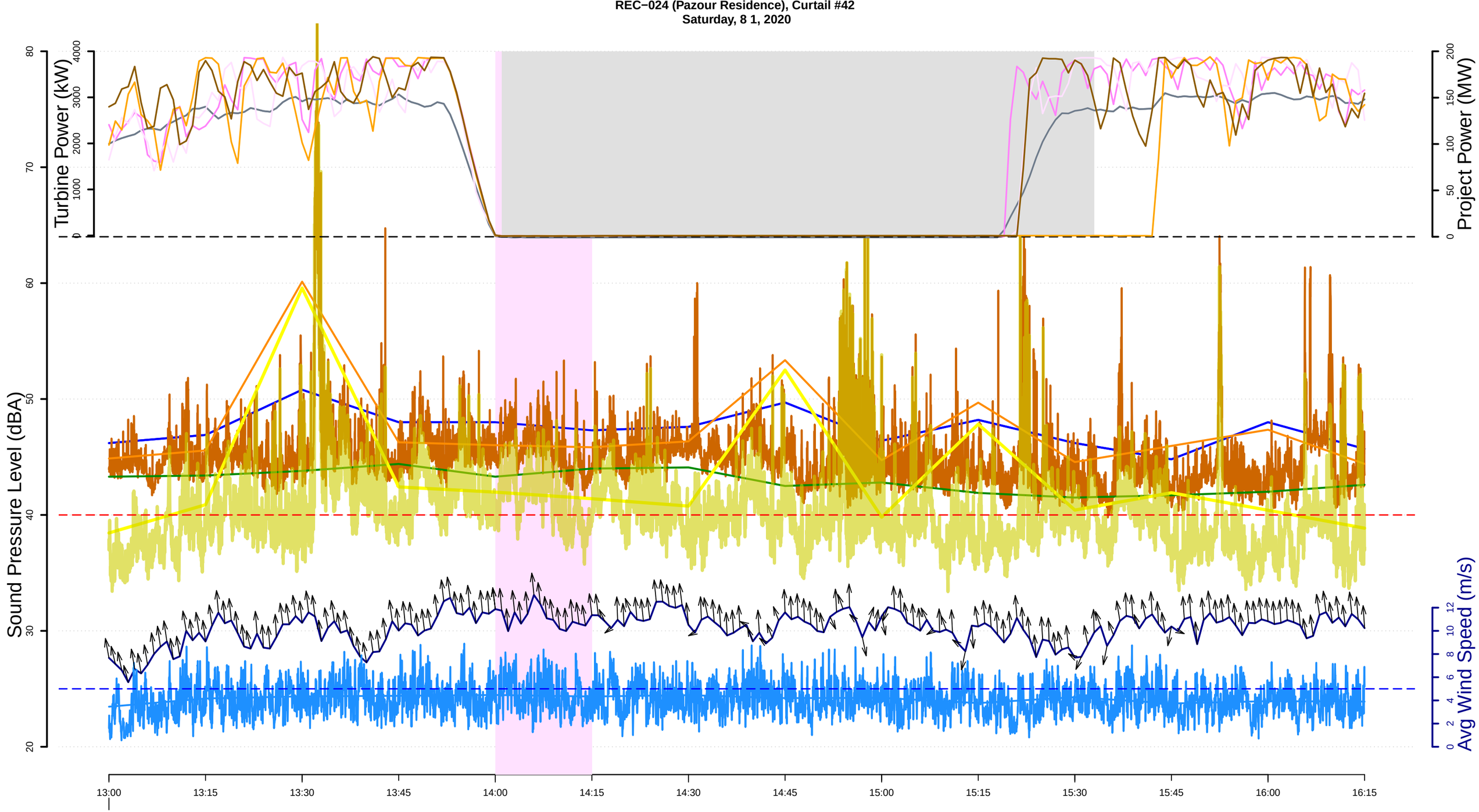


29/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
- R indicates periods where rain was detected
- Real Power (kW) T49
- Real Power (kW) T41
- Real Power (kW) T39
- Real Power (kW) T58
- Project Power (MW)


REC−024 (Pazour Residence), Curtail #40
Thursday, 7 30, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
16:15
16:30
16:45
17:00
17:15
17:30
17:45
18:00
18:15
18:30
18:45
19:00
30/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58
Project Power (MW)


REC−024 (Pazour Residence), Curtail #41
Friday, 7 31, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
04:15
04:30
04:45
05:00
05:15
05:30
05:45
06:00
06:15
06:30
06:45
31/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58
Project Power (MW)

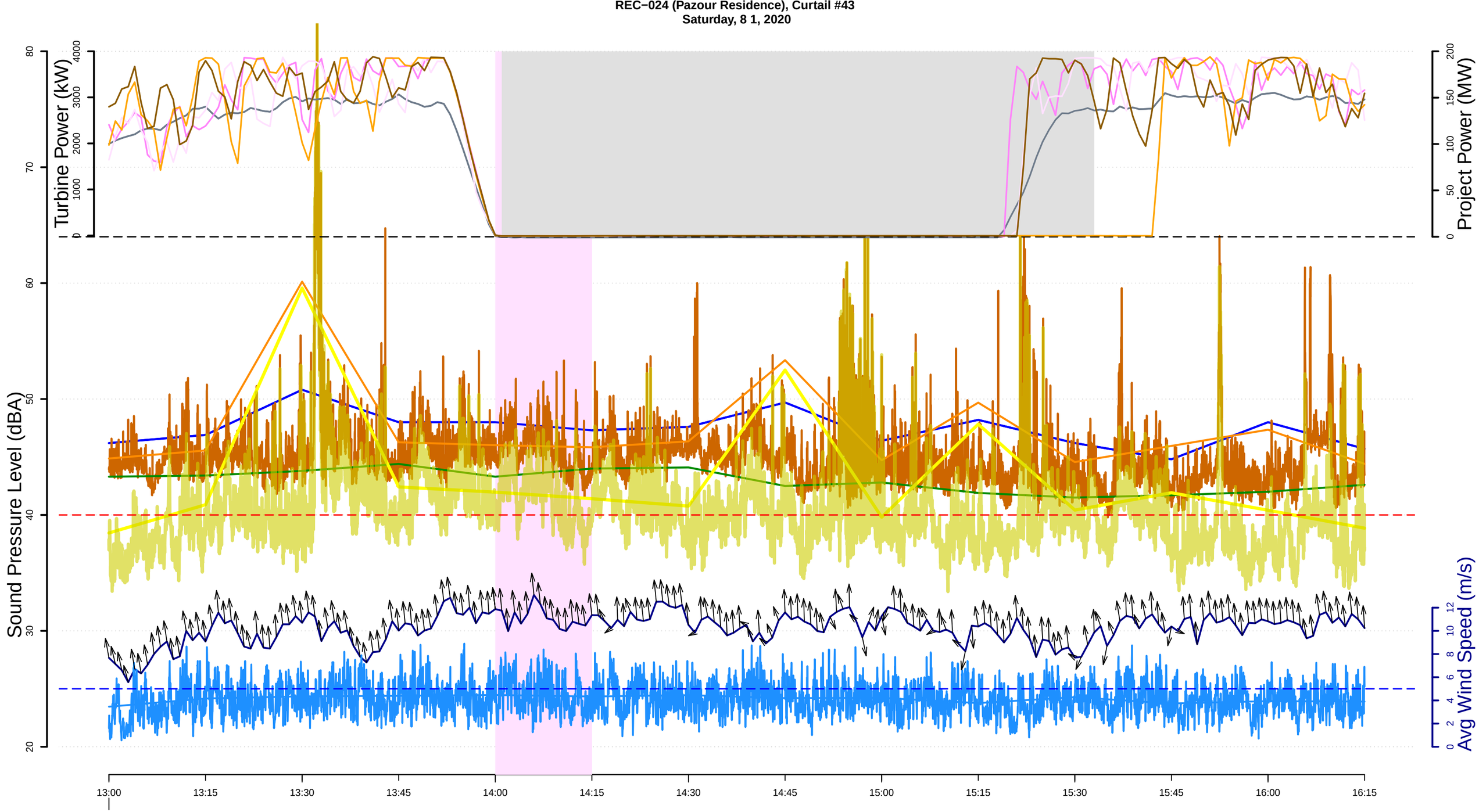


L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58

Project Power (MW)

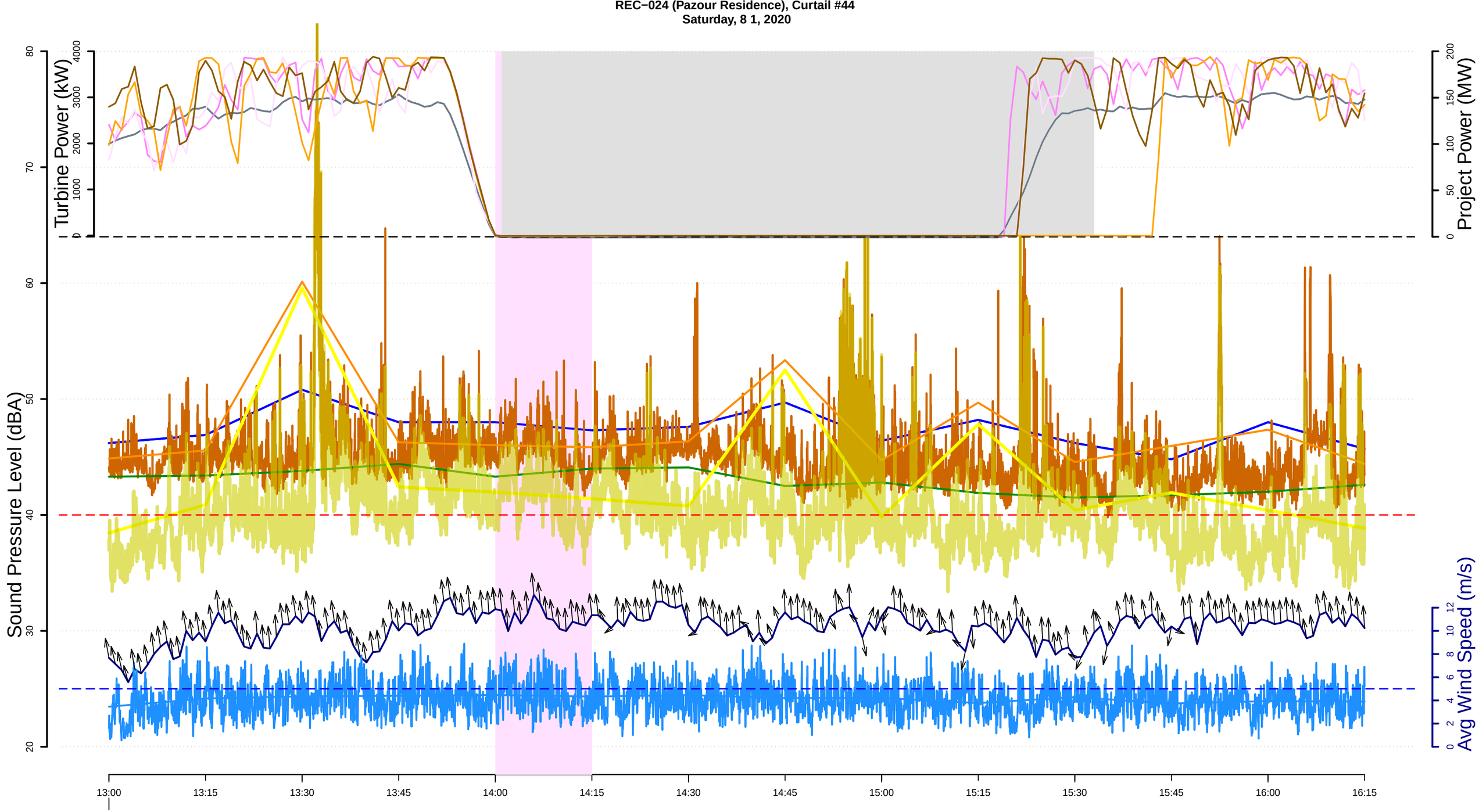


L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58

Project Power (MW)



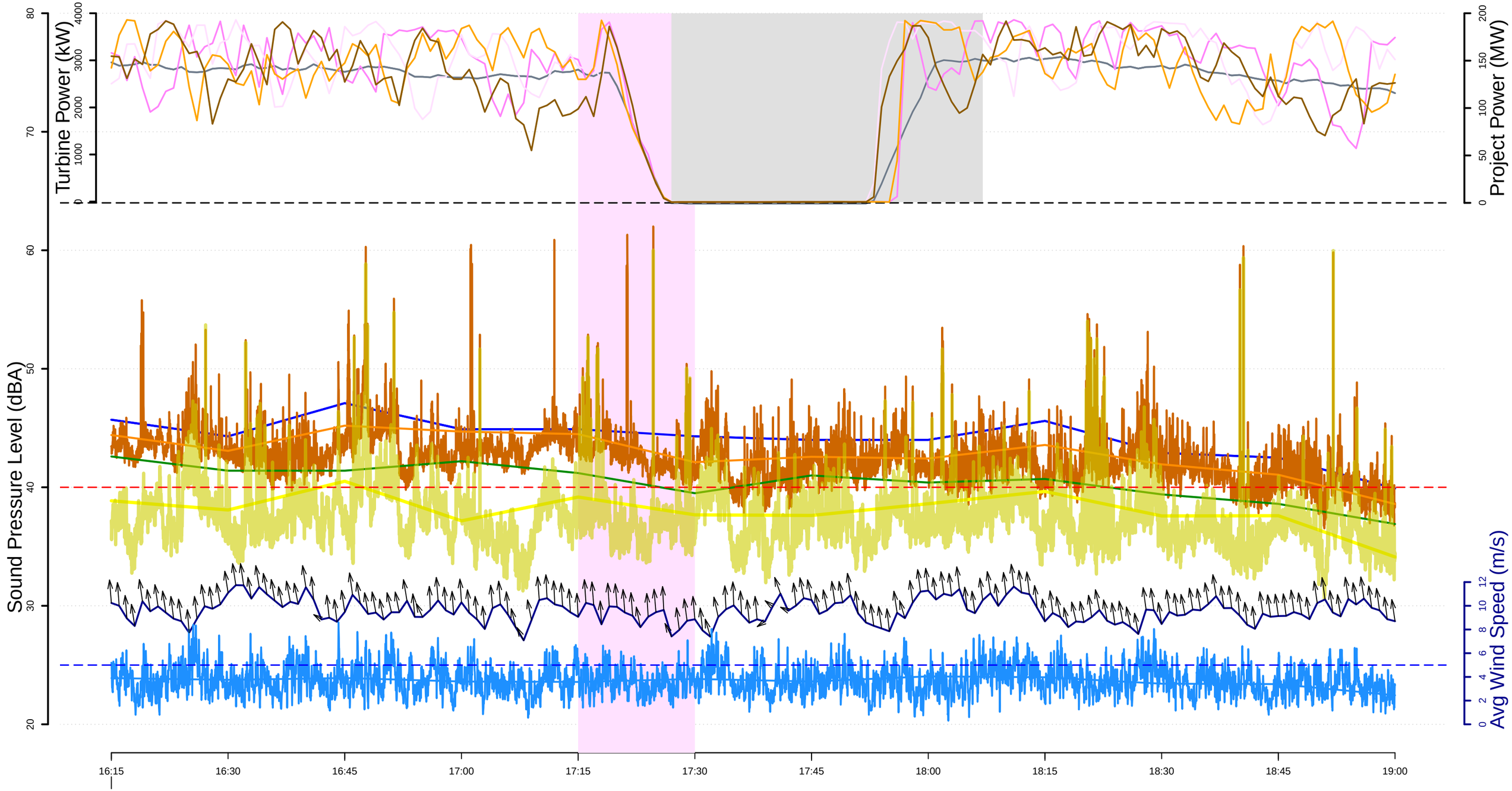
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58

Project Power (MW)

REC−024 (Pazour Residence), Curtail #45
Saturday, 8 1, 2020



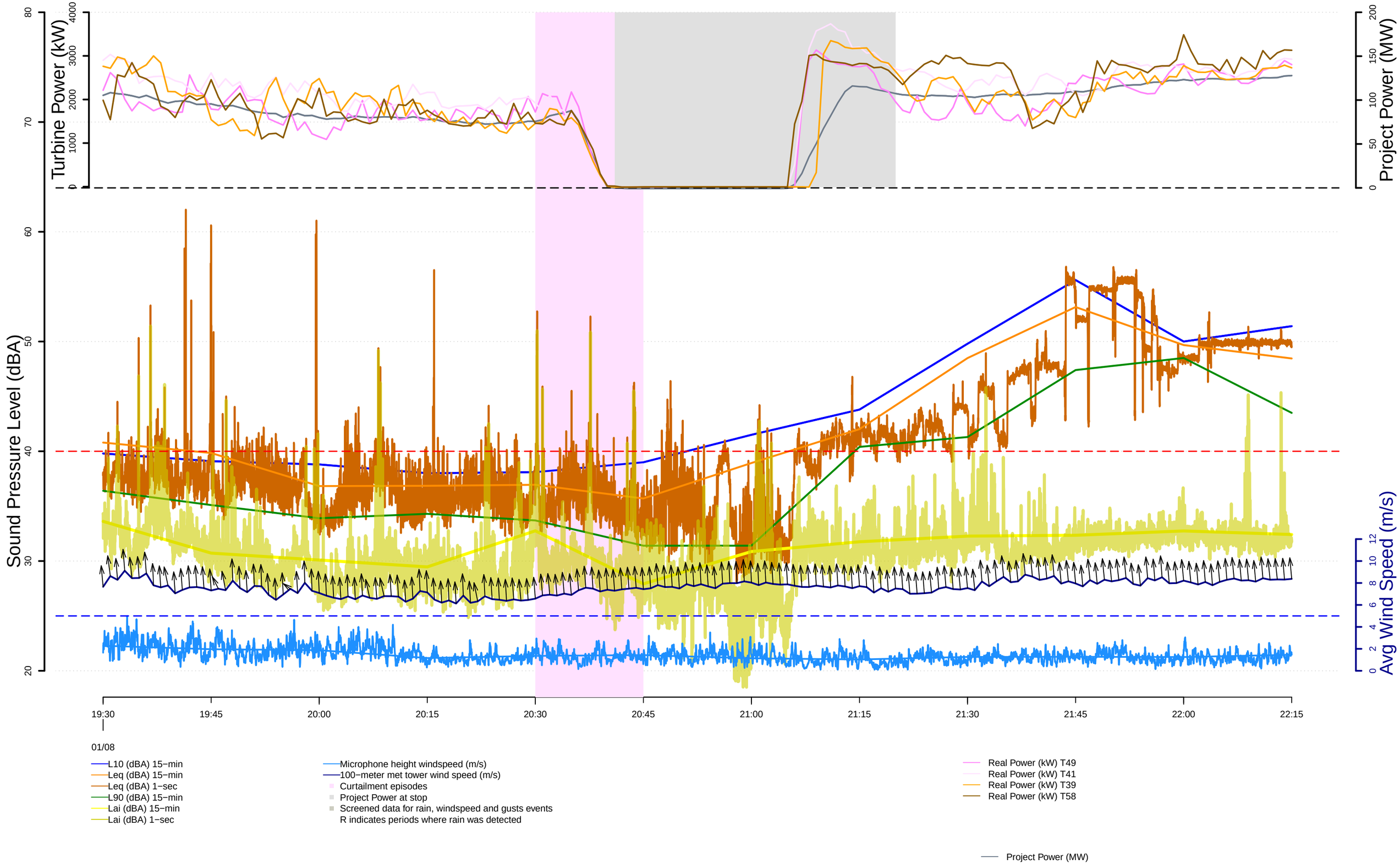
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

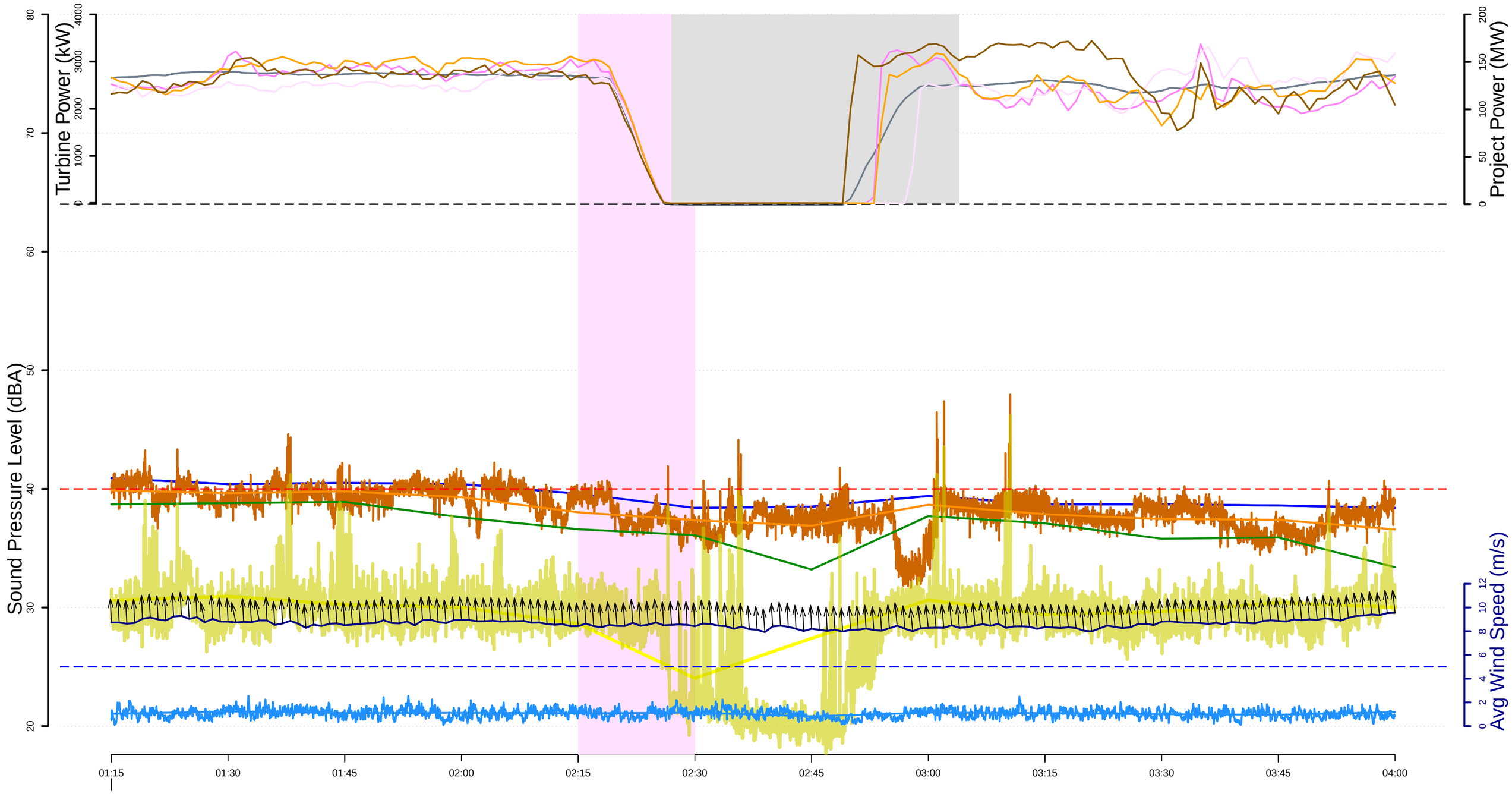
Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58

Project Power (MW)

REC−024 (Pazour Residence), Curtail #46
Saturday, 8 1, 2020



REC−024 (Pazour Residence), Curtail #47
Sunday, 8 2, 2020

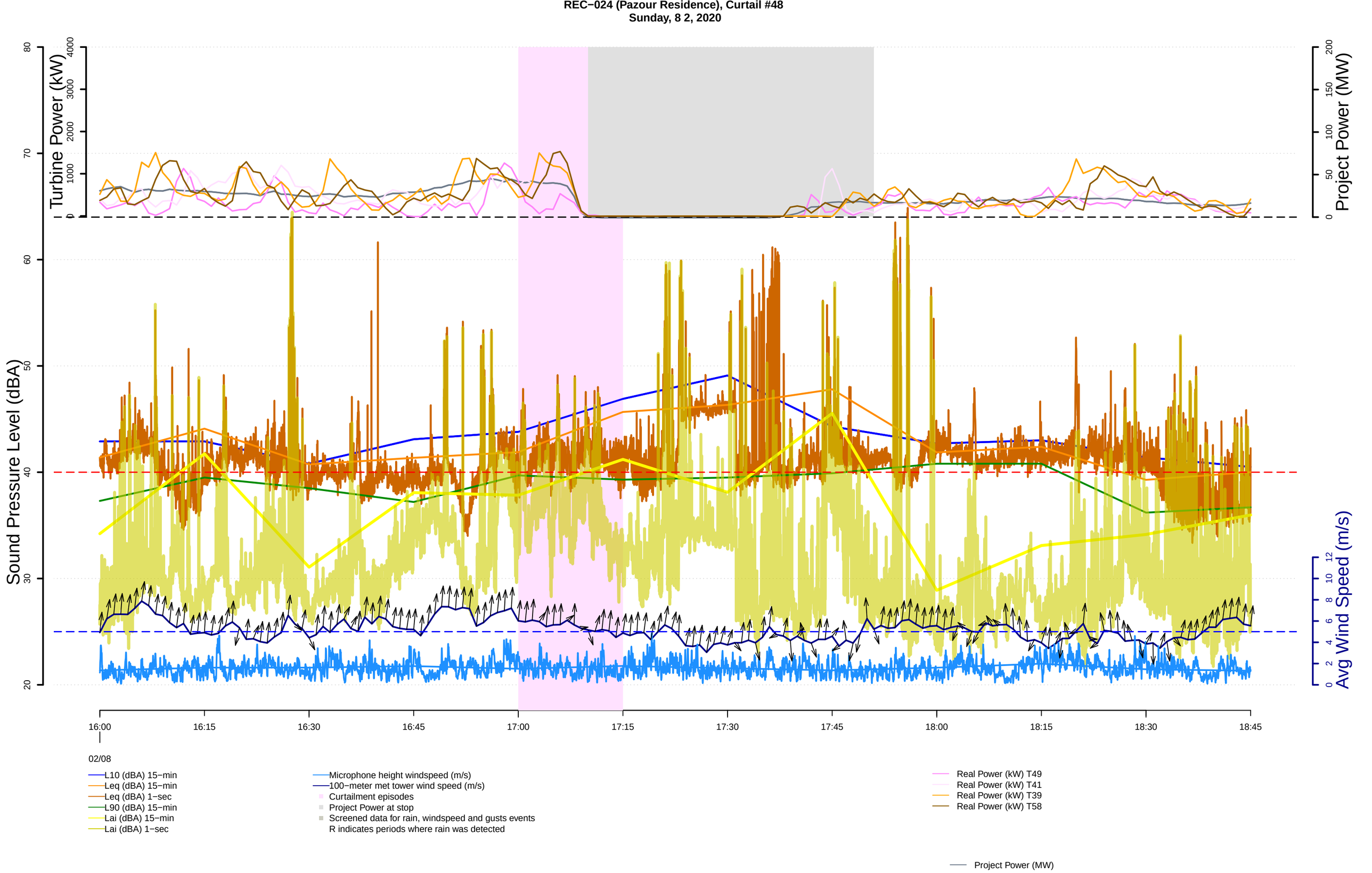


L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

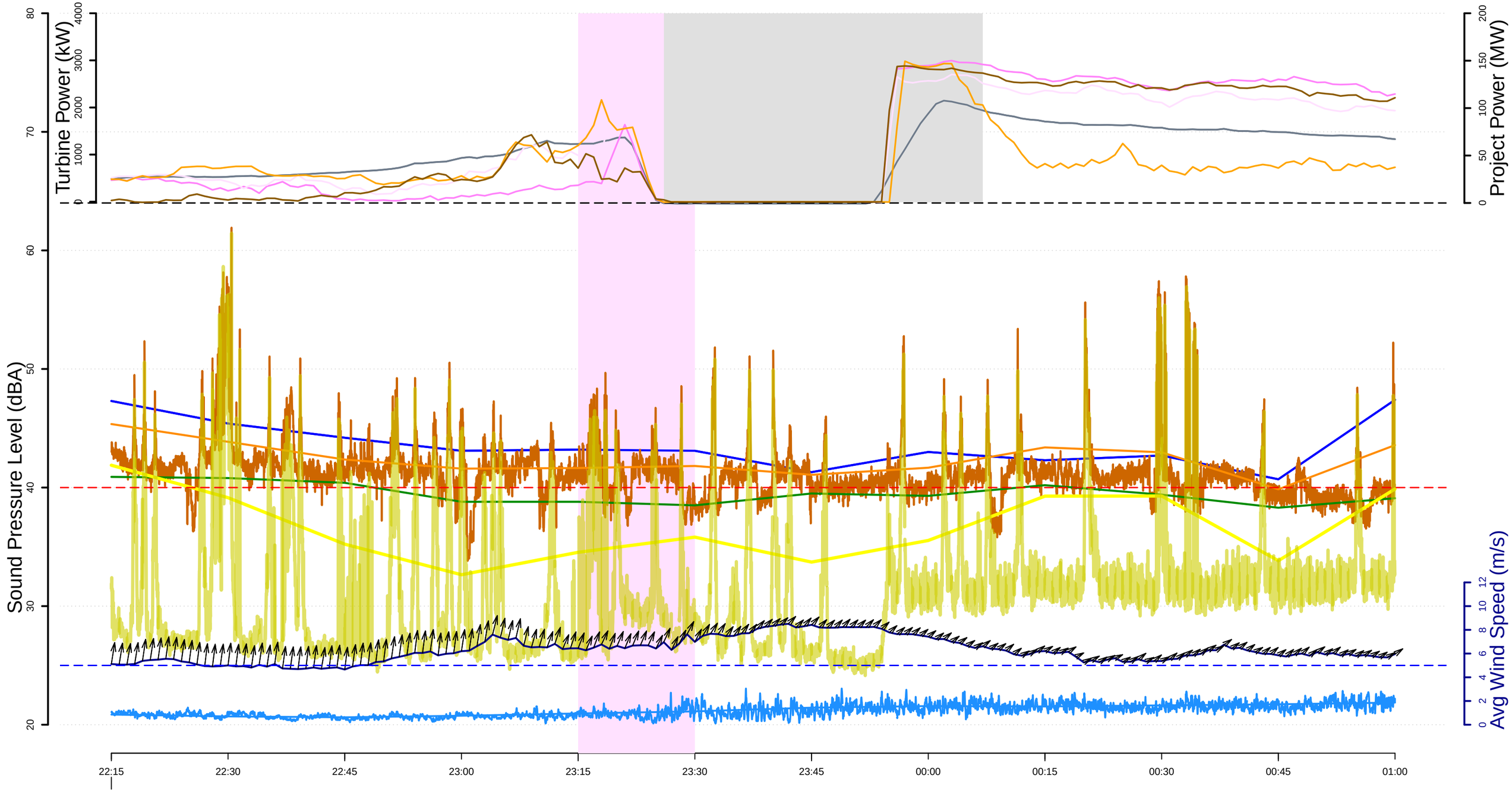
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58

Project Power (MW)


REC−024 (Pazour Residence), Curtail #48
Sunday, 8 2, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
16:00
16:15
16:30
16:45
17:00
17:15
17:30
17:45
18:00
18:15
18:30
18:45
02/08
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58
Project Power (MW)

REC−024 (Pazour Residence), Curtail #49
Sunday, 8 2, 2020

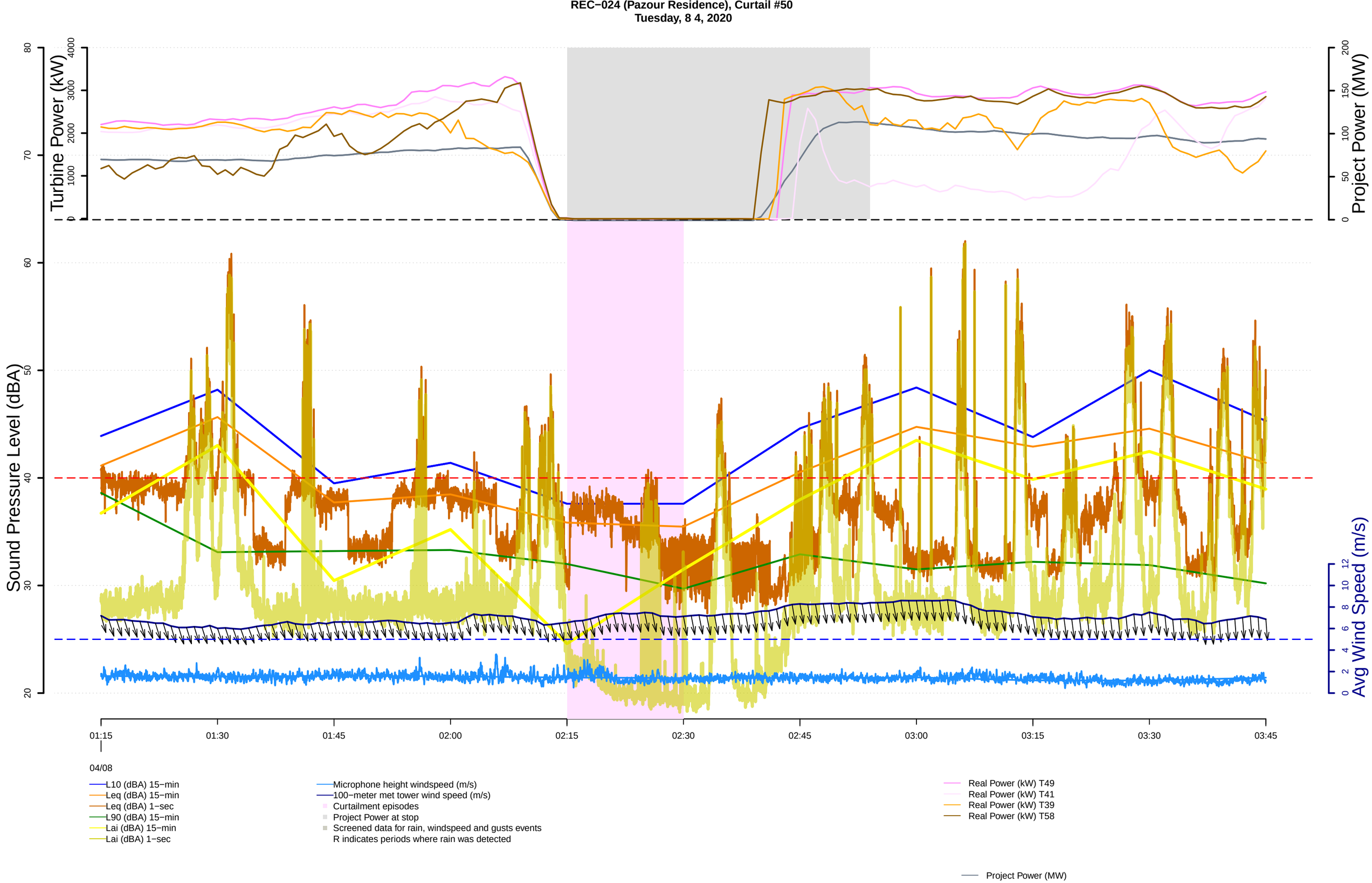


L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

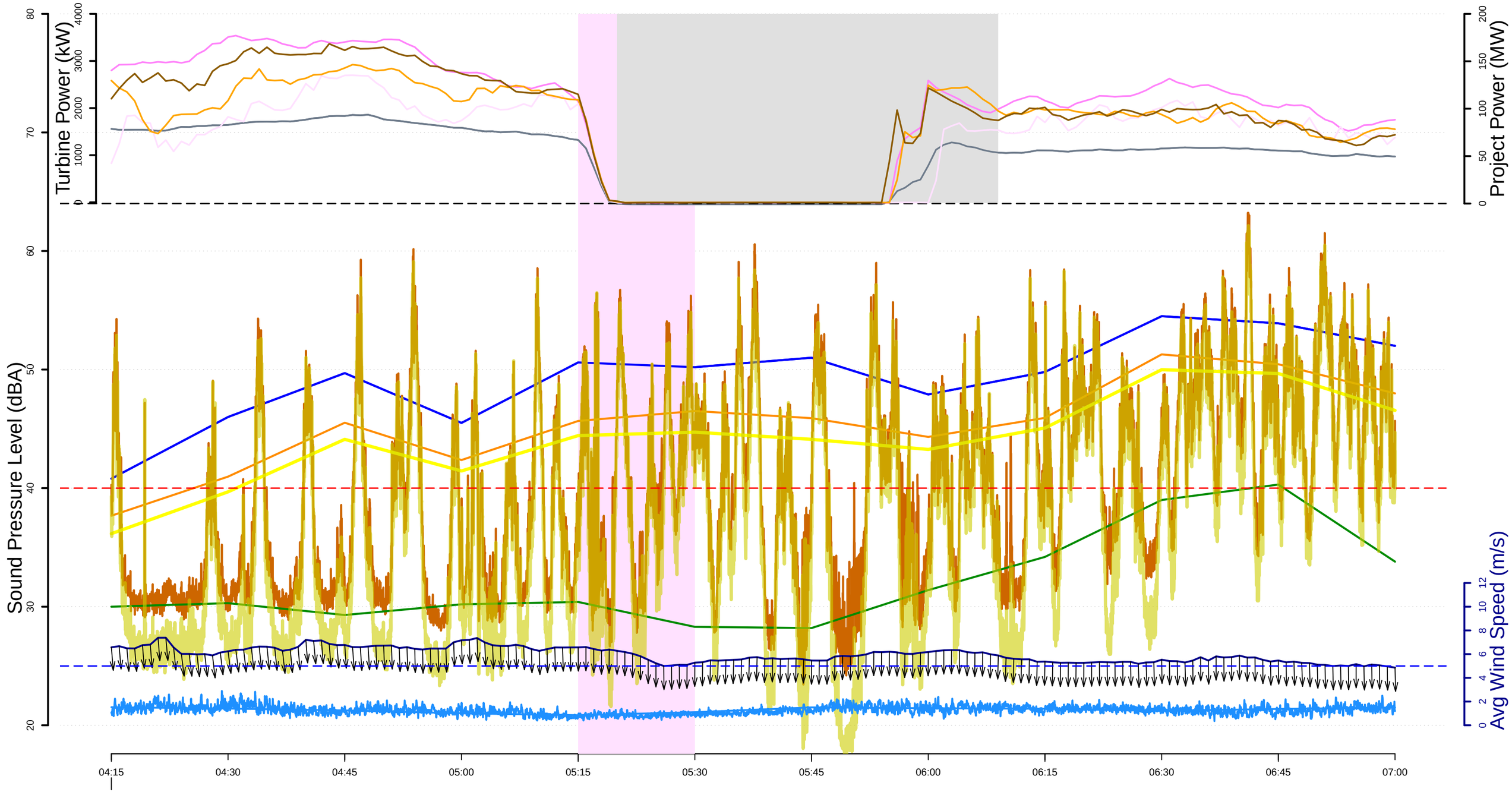
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58

Project Power (MW)


REC−024 (Pazour Residence), Curtail #50
Tuesday, 8 4, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
01:15
01:30
01:45
02:00
02:15
02:30
02:45
03:00
03:15
03:30
03:45
04/08
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T49
Real Power (kW) T41
Real Power (kW) T39
Real Power (kW) T58
Project Power (MW)

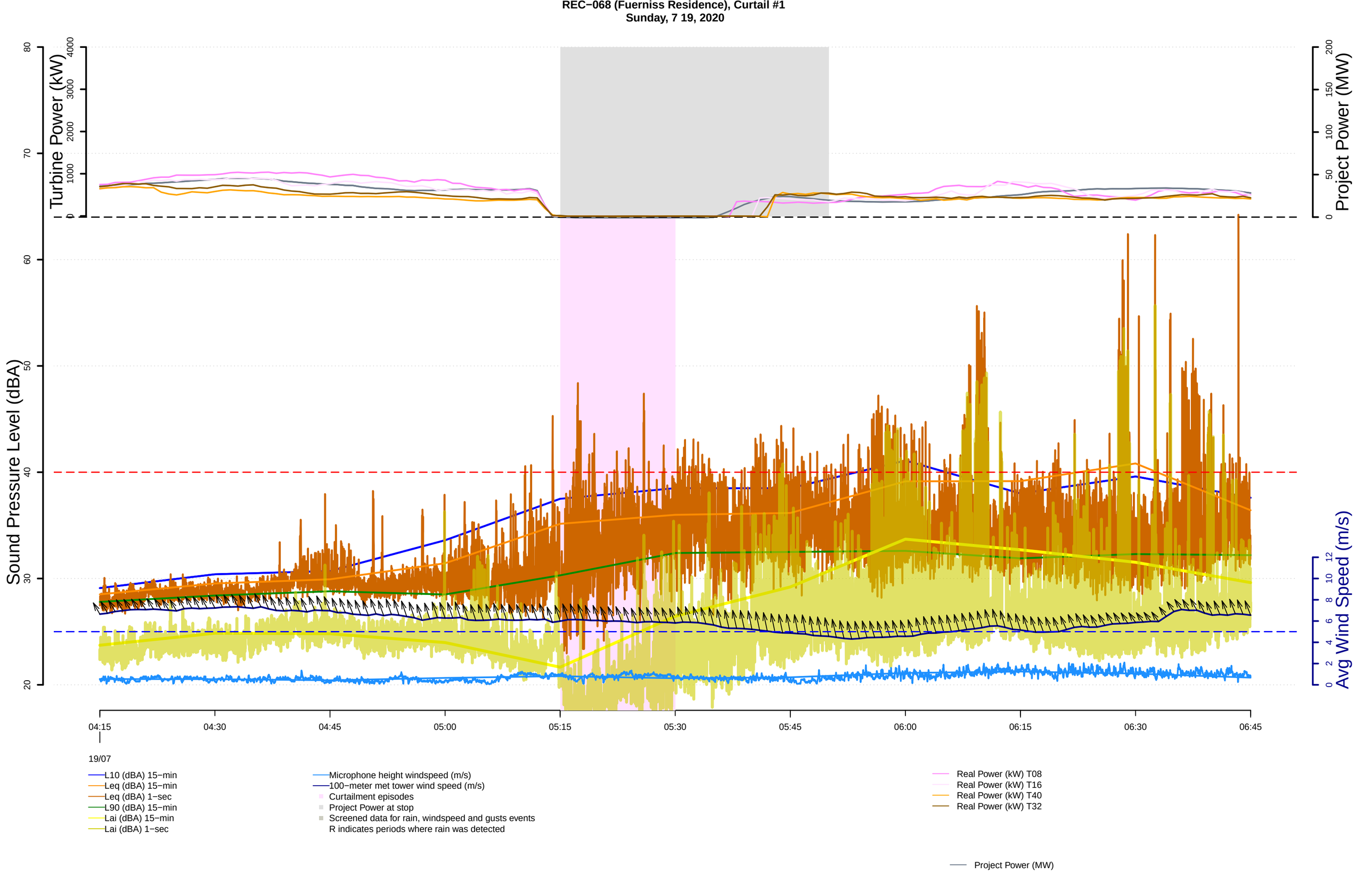
REC−024 (Pazour Residence), Curtail #51
Tuesday, 8 4, 2020



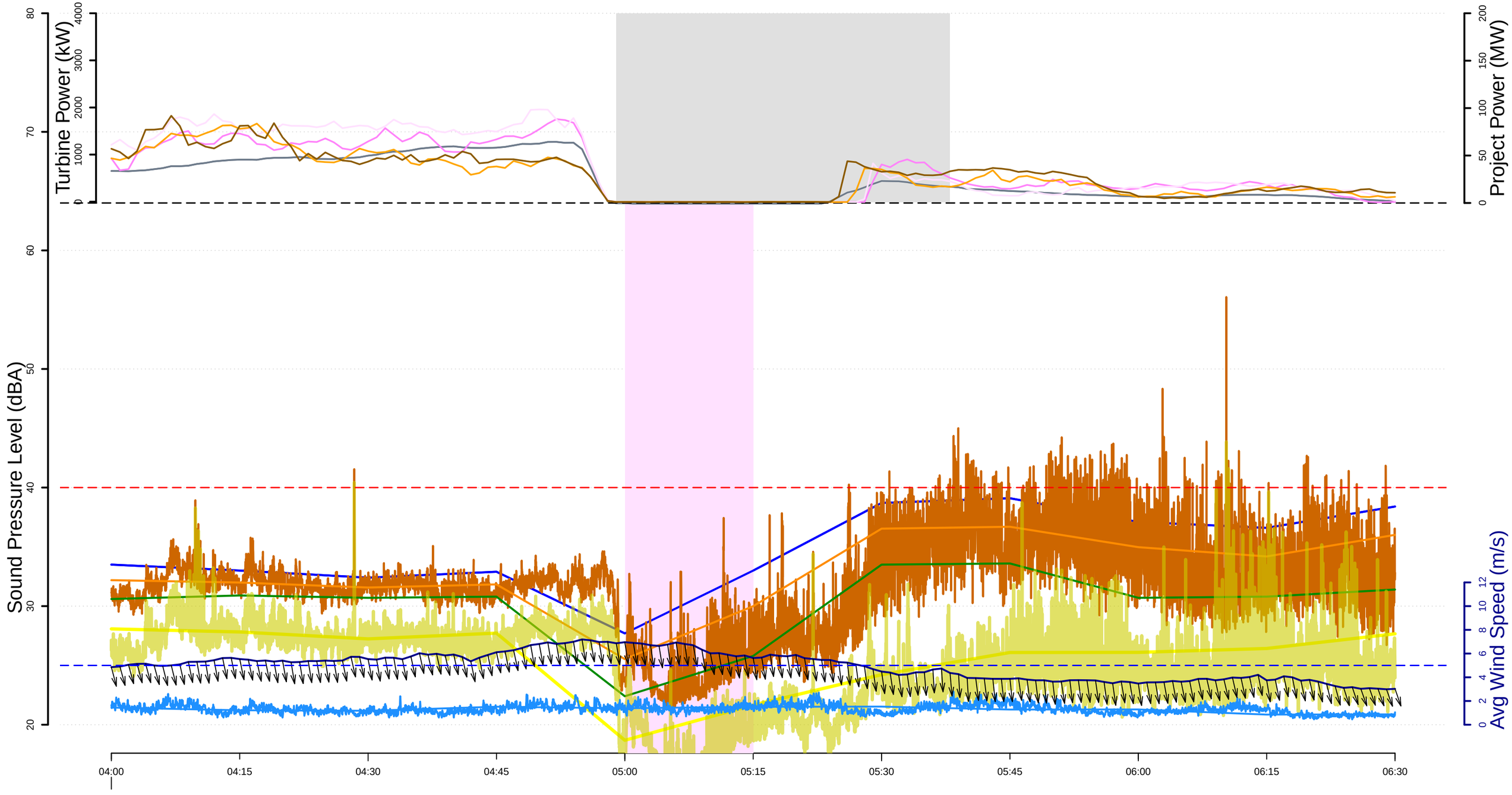
04/08

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T49
- Real Power (kW) T41
- Real Power (kW) T39
- Real Power (kW) T58
- Project Power (MW)

REC-068 (Fuerniss Residence)

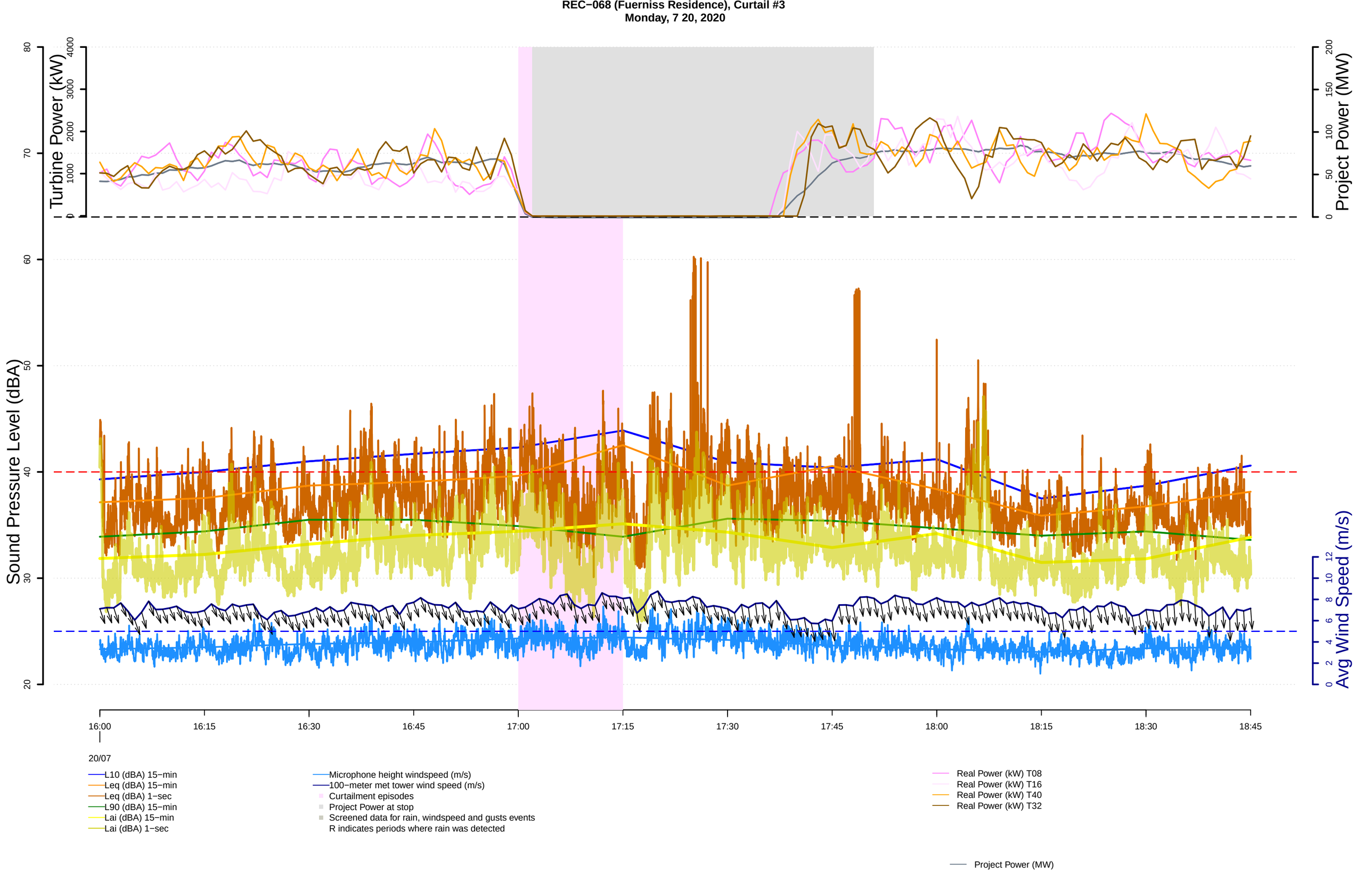

REC−068 (Fuerniss Residence), Curtail #1
Sunday, 7 19, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
04:15
04:30
04:45
05:00
05:15
05:30
05:45
06:00
06:15
06:30
06:45
19/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32
Project Power (MW)

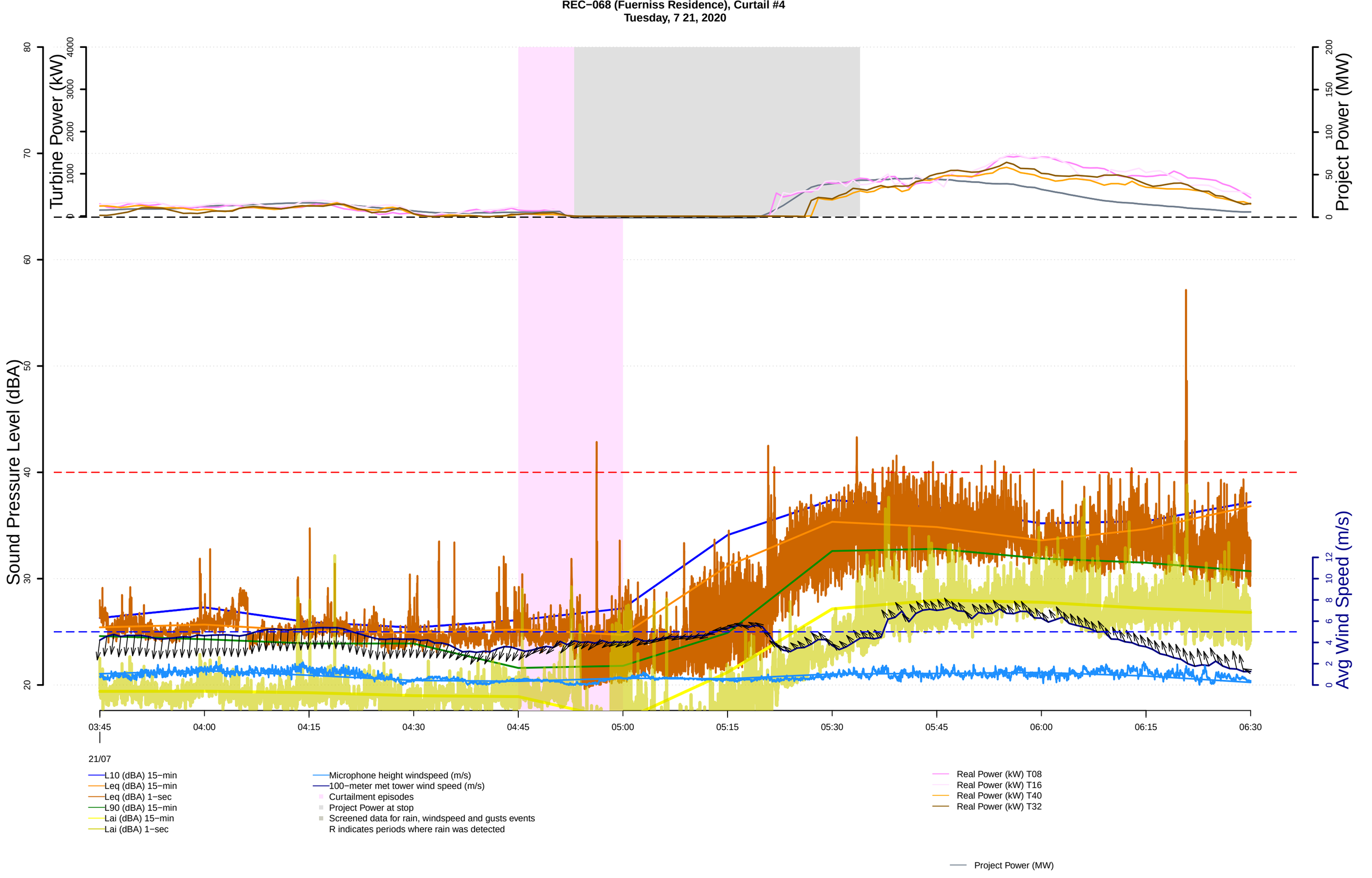
REC−068 (Fuerniss Residence), Curtail #2
Monday, 7 20, 2020



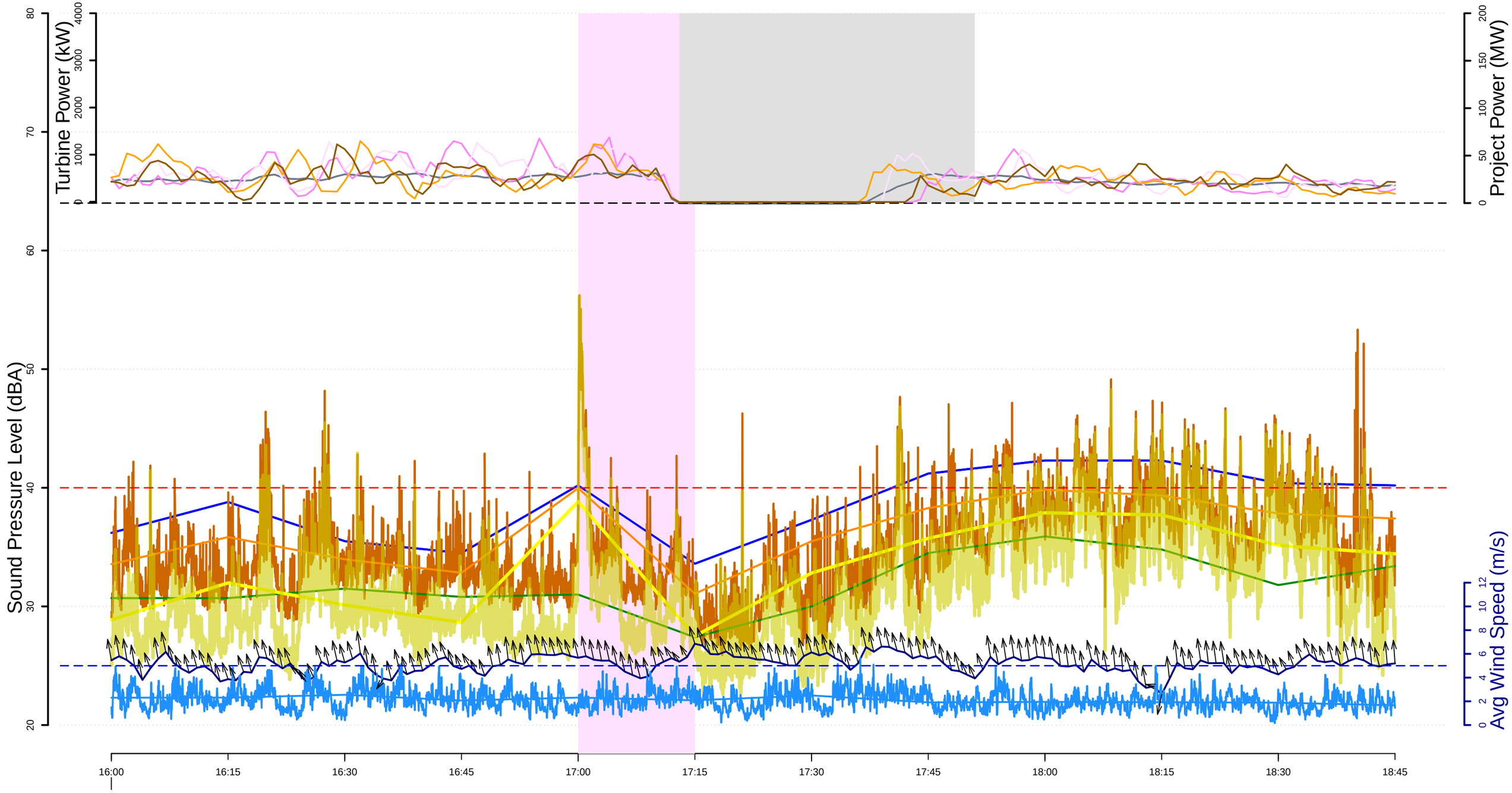
20/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T08
- Real Power (kW) T16
- Real Power (kW) T40
- Real Power (kW) T32
- Project Power (MW)


REC−068 (Fuerniss Residence), Curtail #3
Monday, 7 20, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
16:00
16:15
16:30
16:45
17:00
17:15
17:30
17:45
18:00
18:15
18:30
18:45
20/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32
Project Power (MW)


REC−068 (Fuerniss Residence), Curtail #4
Tuesday, 7 21, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
03:45
04:00
04:15
04:30
04:45
05:00
05:15
05:30
05:45
06:00
06:15
06:30
21/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32
Project Power (MW)

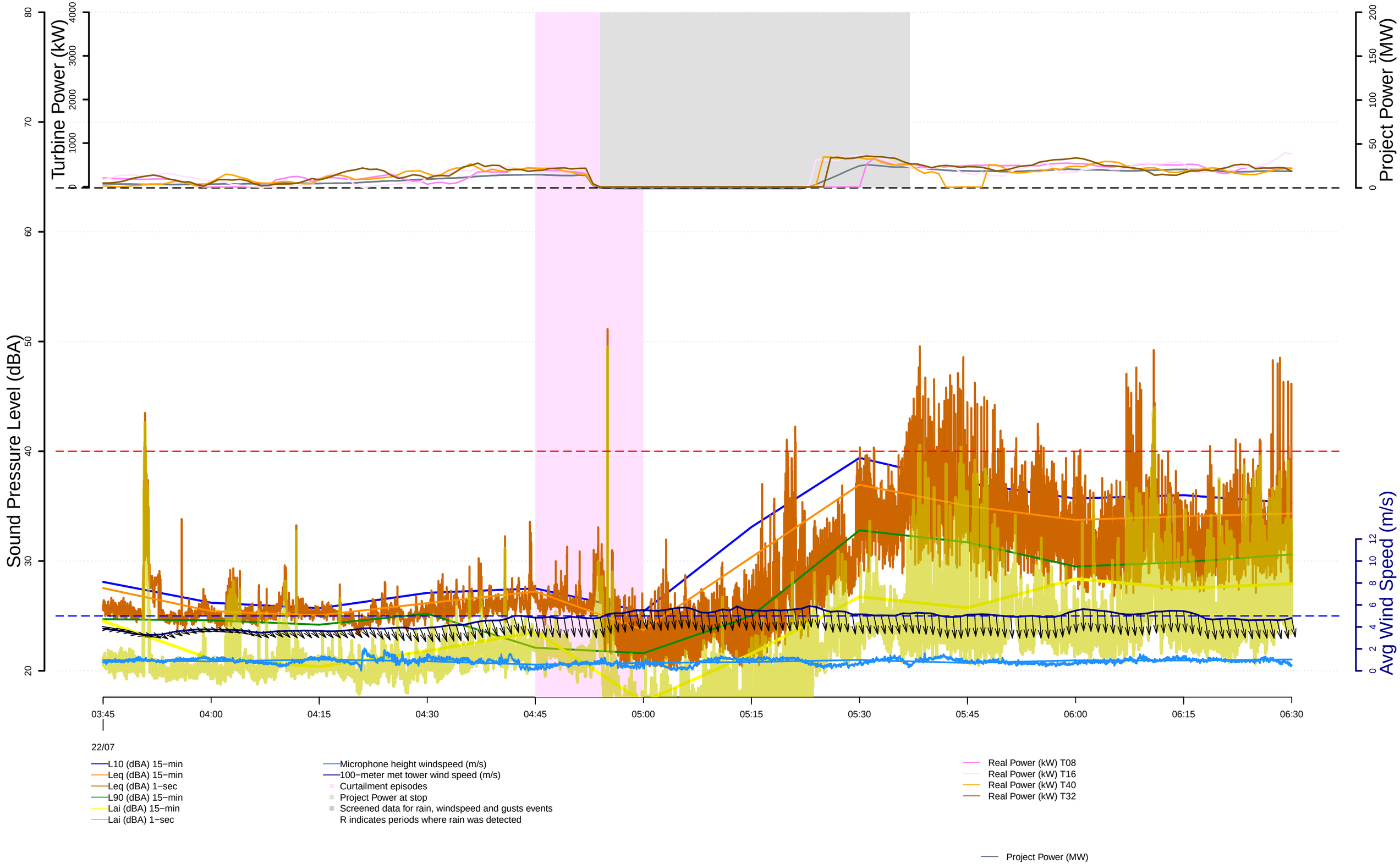
REC−068 (Fuerniss Residence), Curtail #5
Tuesday, 7 21, 2020



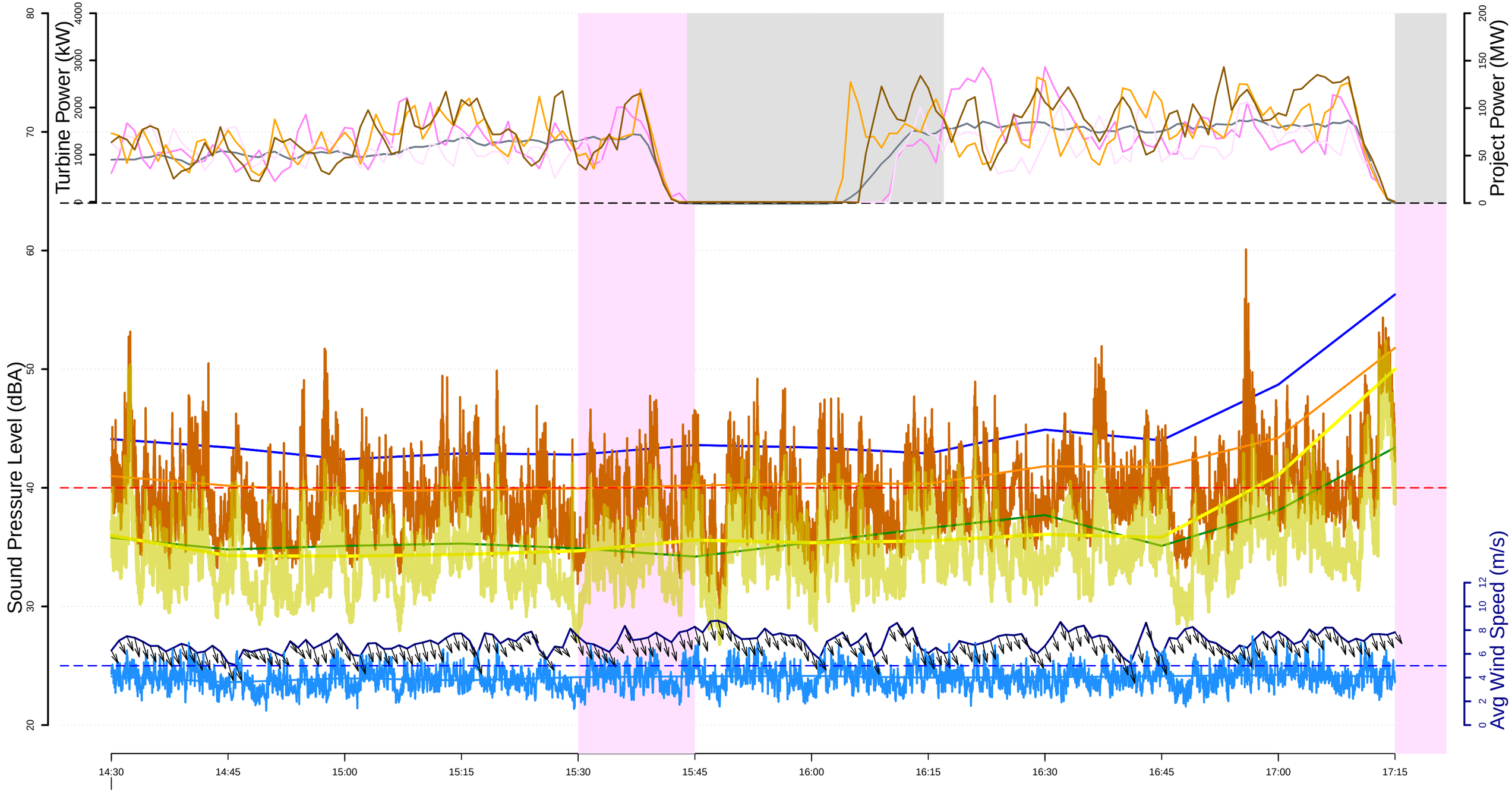
21/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T08
- Real Power (kW) T16
- Real Power (kW) T40
- Real Power (kW) T32
- Project Power (MW)

REC−068 (Fuerniss Residence), Curtail #6
Wednesday, 7 22, 2020



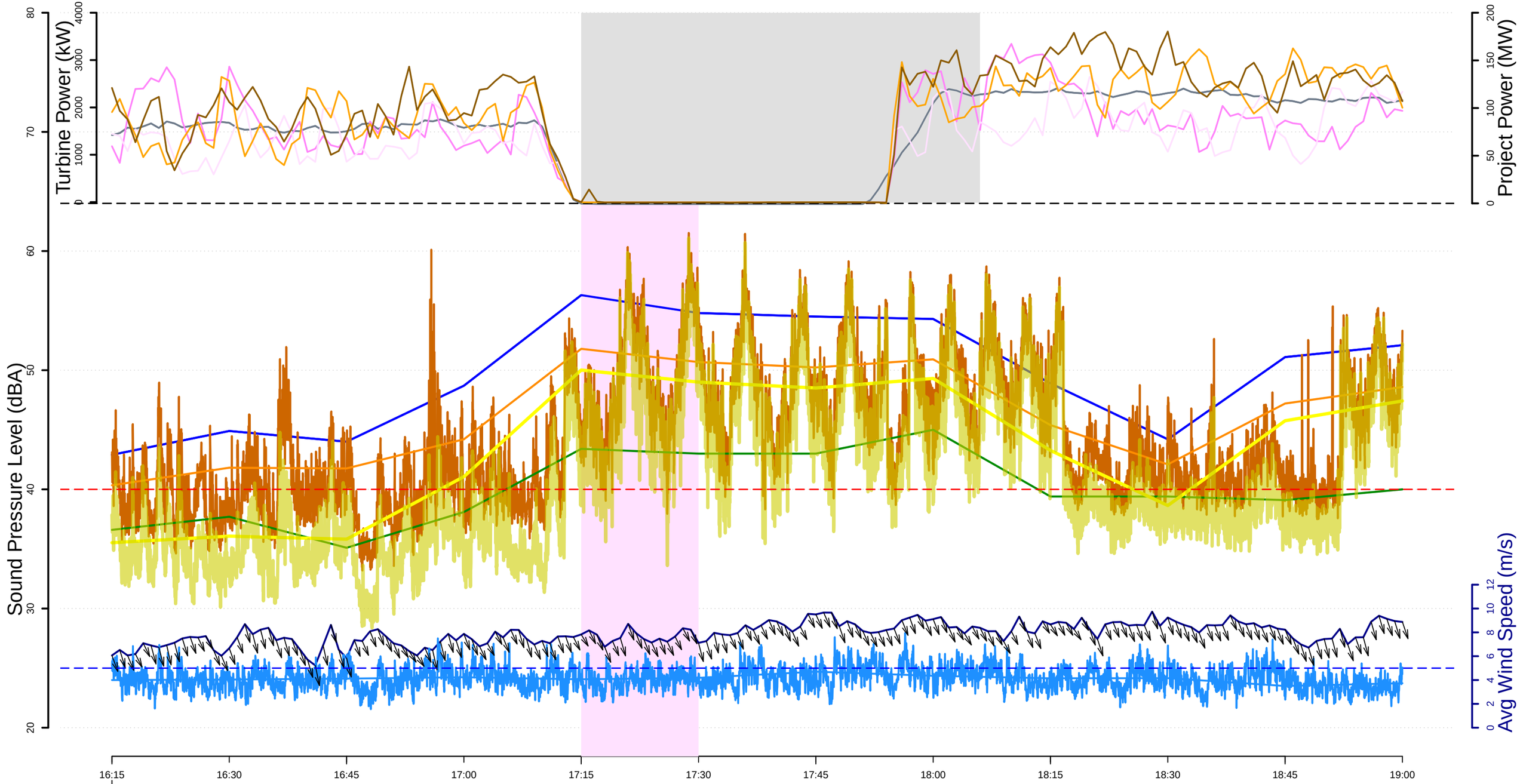
REC−068 (Fuerniss Residence), Curtail #7
Wednesday, 7 22, 2020



22/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T08
- Real Power (kW) T16
- Real Power (kW) T40
- Real Power (kW) T32
- Project Power (MW)

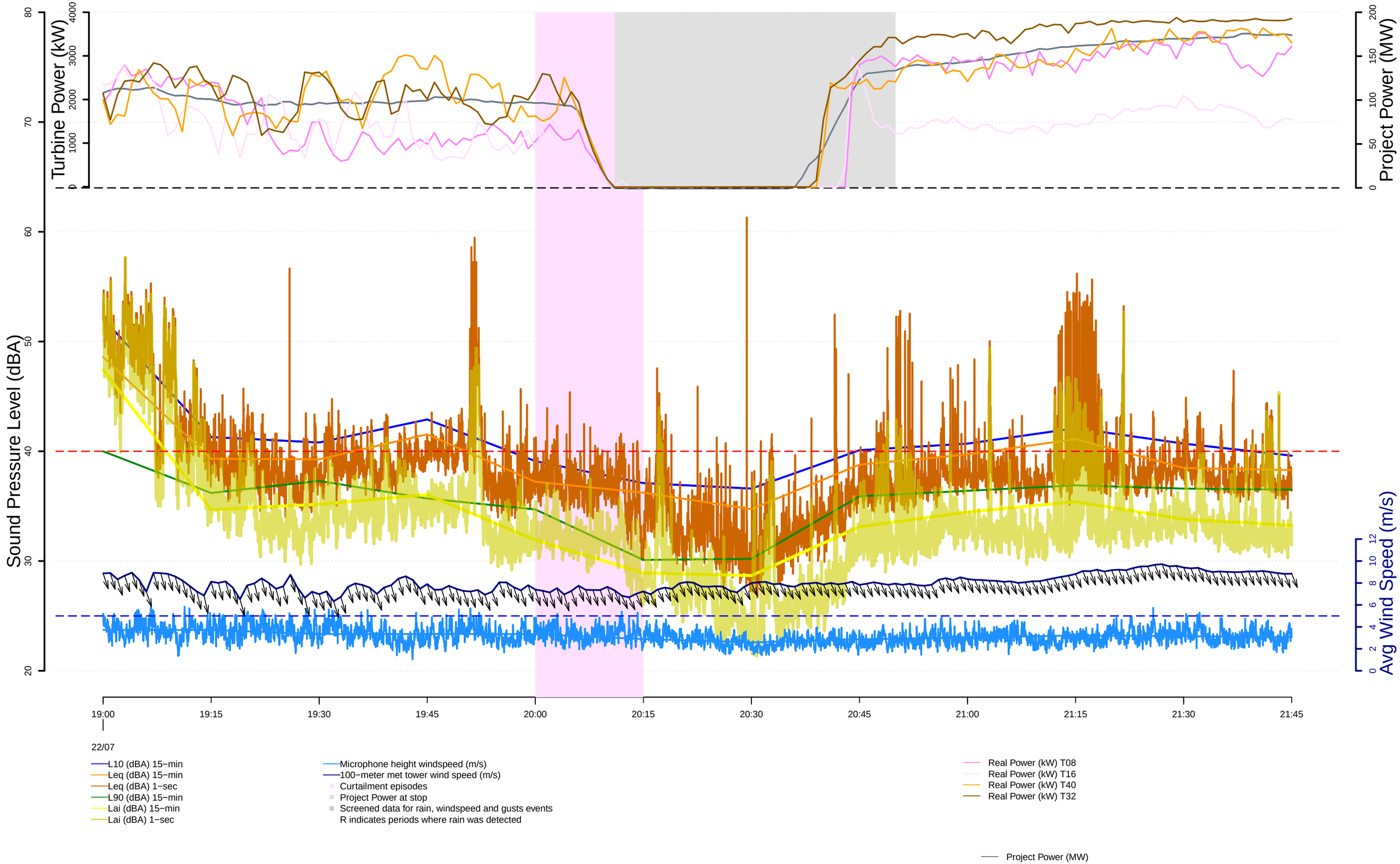
REC−068 (Fuerniss Residence), Curtail #8
Wednesday, 7 22, 2020



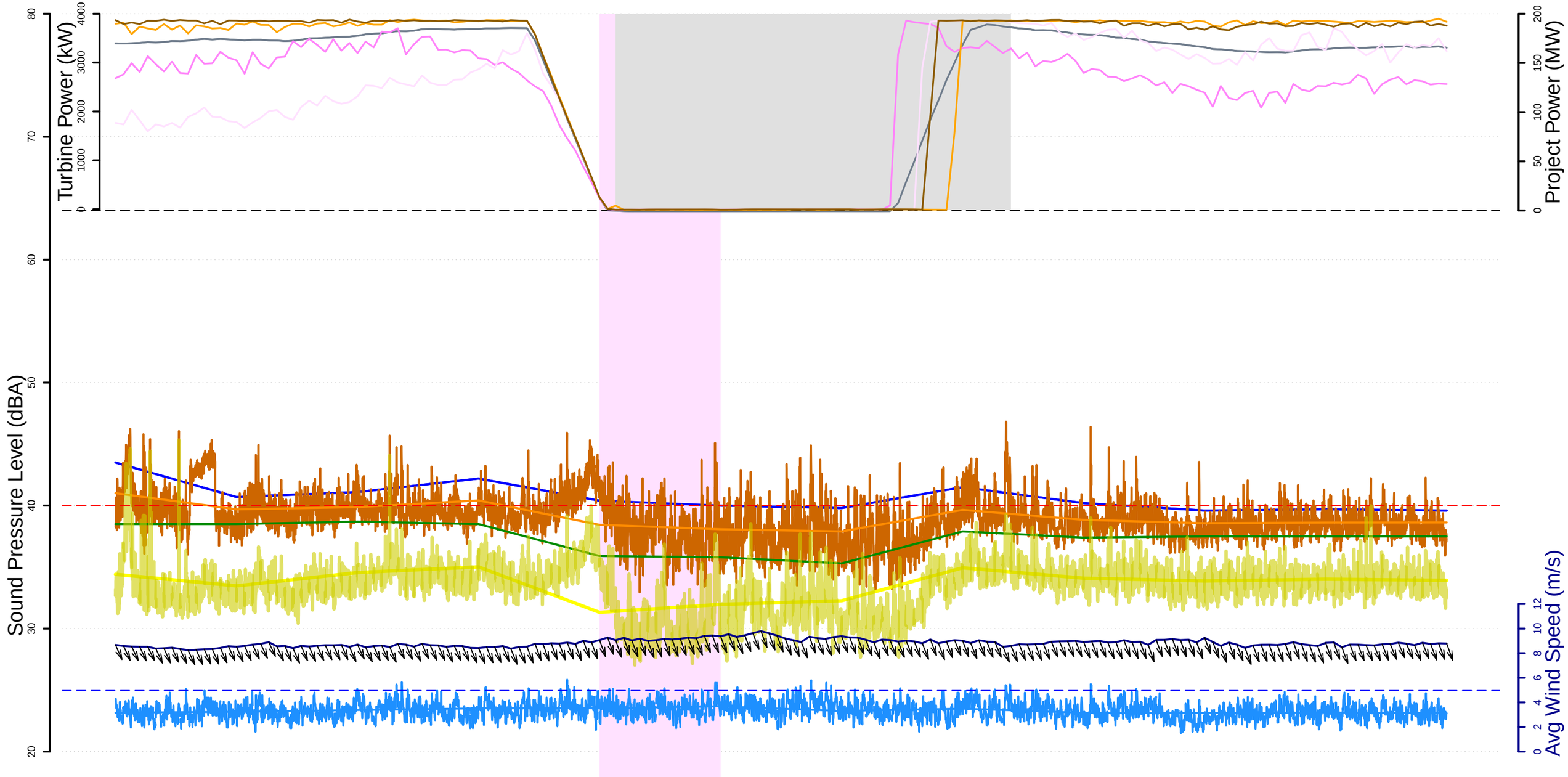
22/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T08
- Real Power (kW) T16
- Real Power (kW) T40
- Real Power (kW) T32
- Project Power (MW)

REC−068 (Fuerniss Residence), Curtail #9
Wednesday, 7 22, 2020



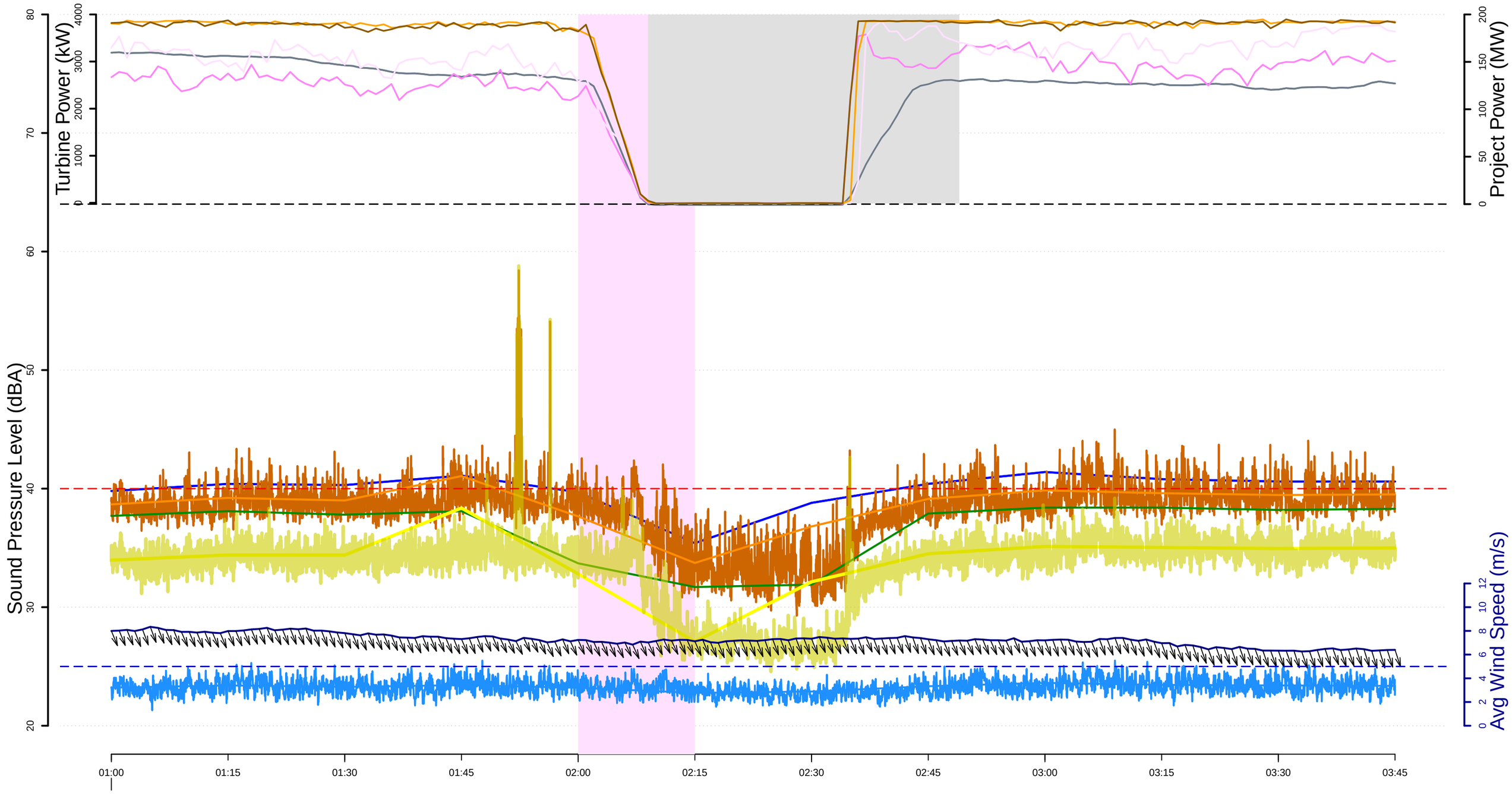
REC−068 (Fuerniss Residence), Curtail #10
Wednesday, 7 22, 2020



22/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T08
- Real Power (kW) T16
- Real Power (kW) T40
- Real Power (kW) T32
- Project Power (MW)

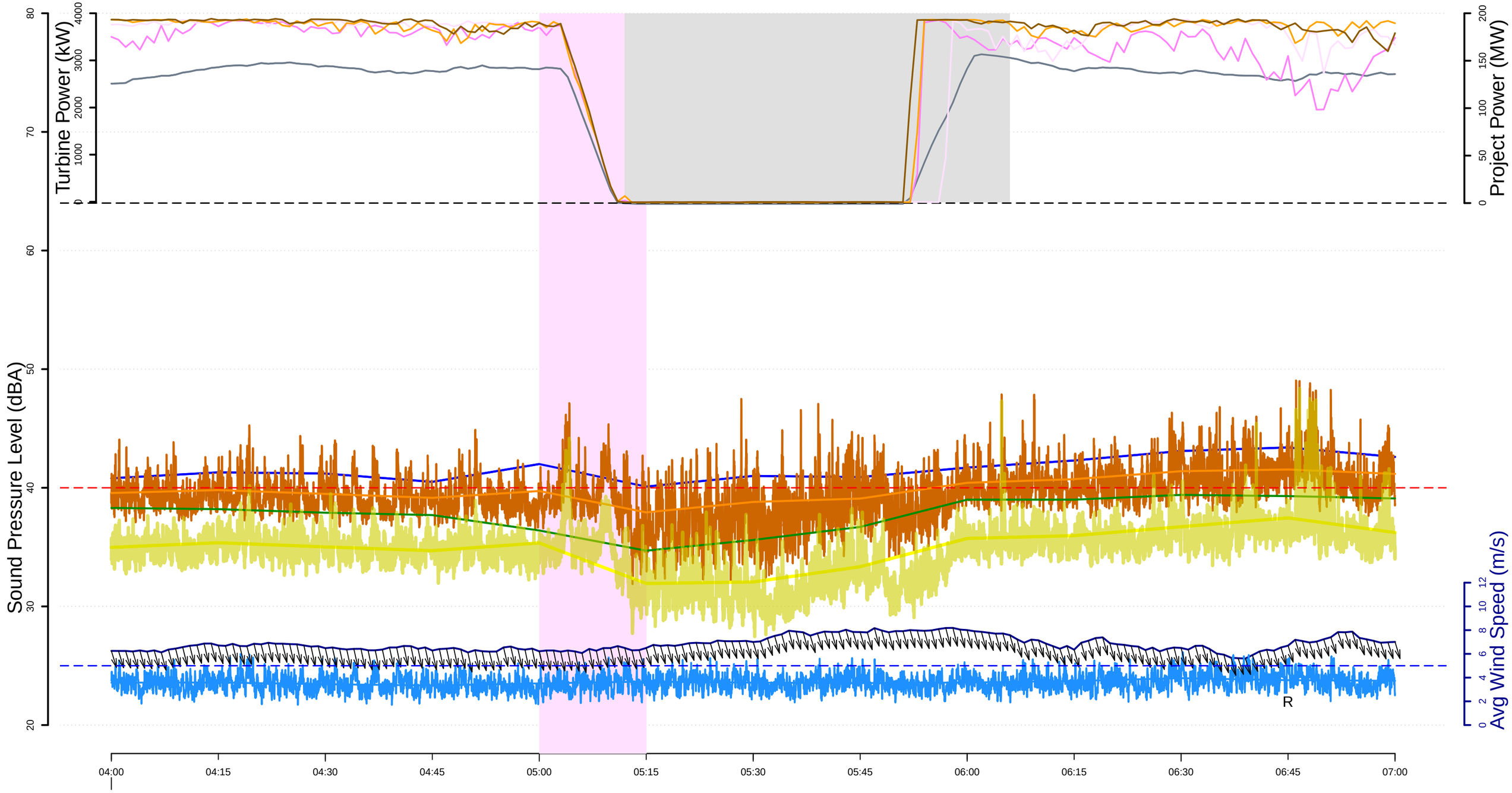
REC−068 (Fuerniss Residence), Curtail #11
Thursday, 7 23, 2020



23/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T08
- Real Power (kW) T16
- Real Power (kW) T40
- Real Power (kW) T32
- Project Power (MW)

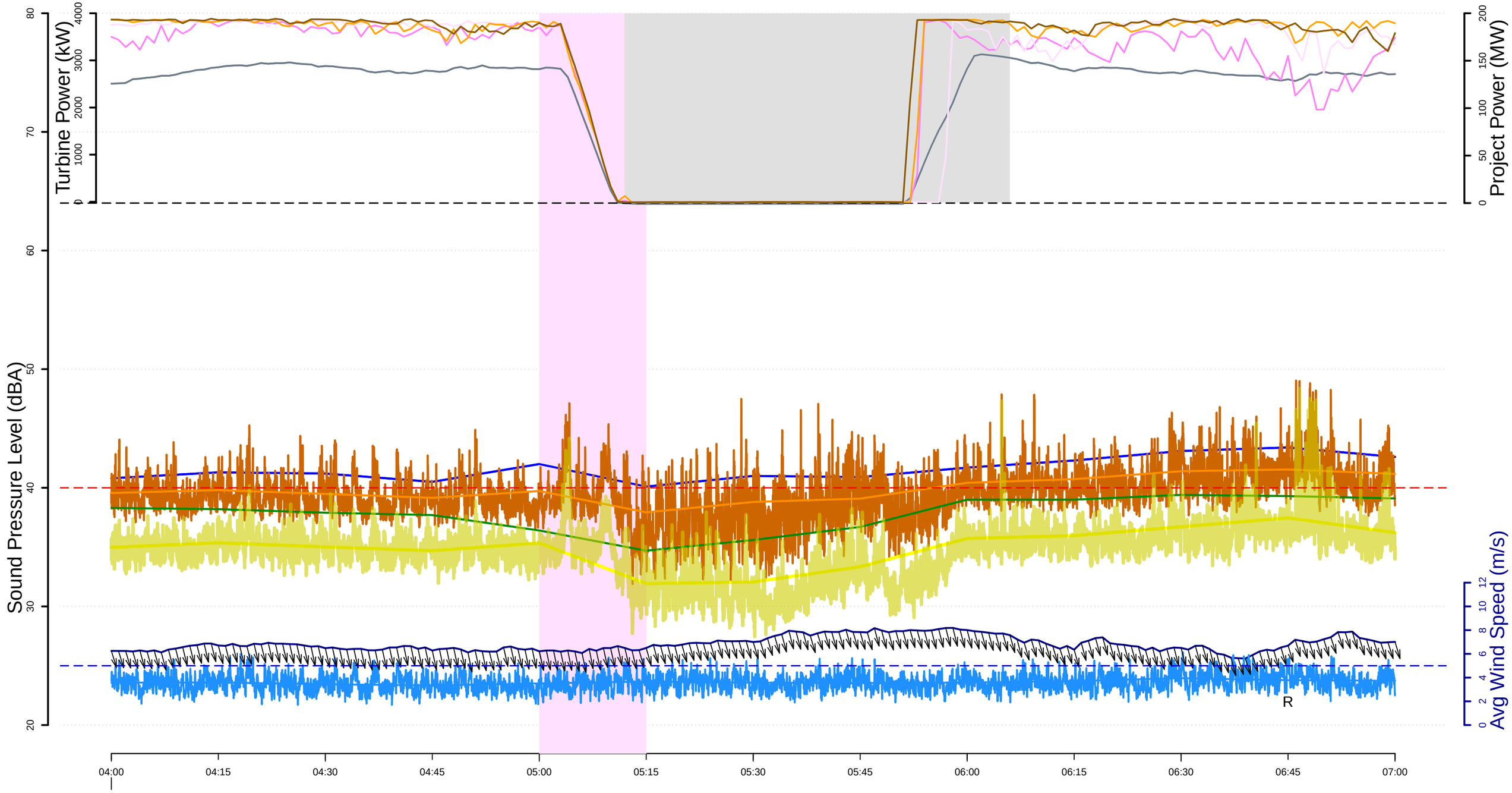
REC−068 (Fuerniss Residence), Curtail #12
Thursday, 7 23, 2020



23/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
- R indicates periods where rain was detected
- Real Power (kW) T08
- Real Power (kW) T16
- Real Power (kW) T40
- Real Power (kW) T32
- Project Power (MW)

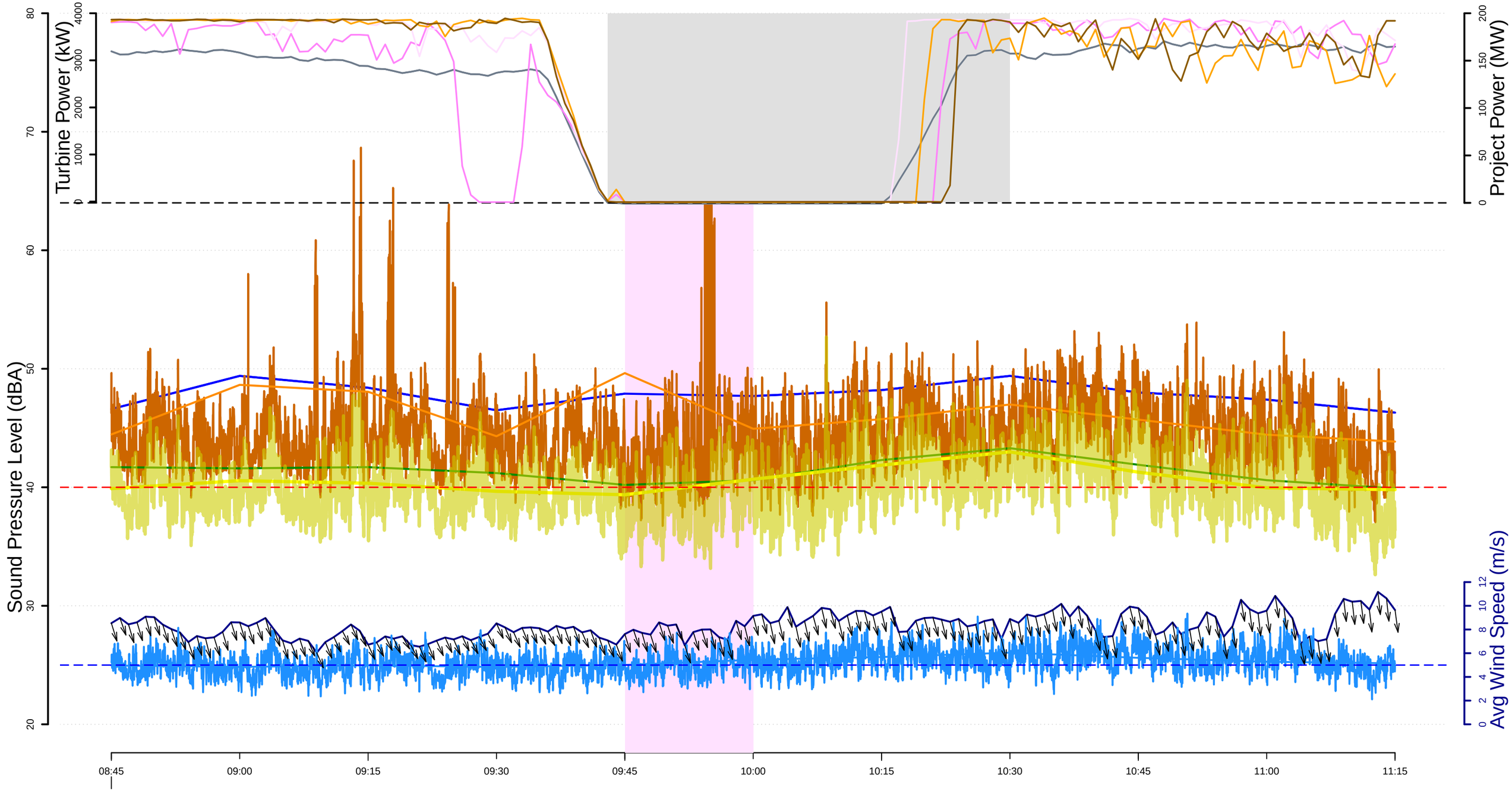
REC−068 (Fuerniss Residence), Curtail #13
Thursday, 7 23, 2020



23/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
- R indicates periods where rain was detected
- Real Power (kW) T08
- Real Power (kW) T16
- Real Power (kW) T40
- Real Power (kW) T32
- Project Power (MW)

REC−068 (Fuerniss Residence), Curtail #14
Thursday, 7 23, 2020



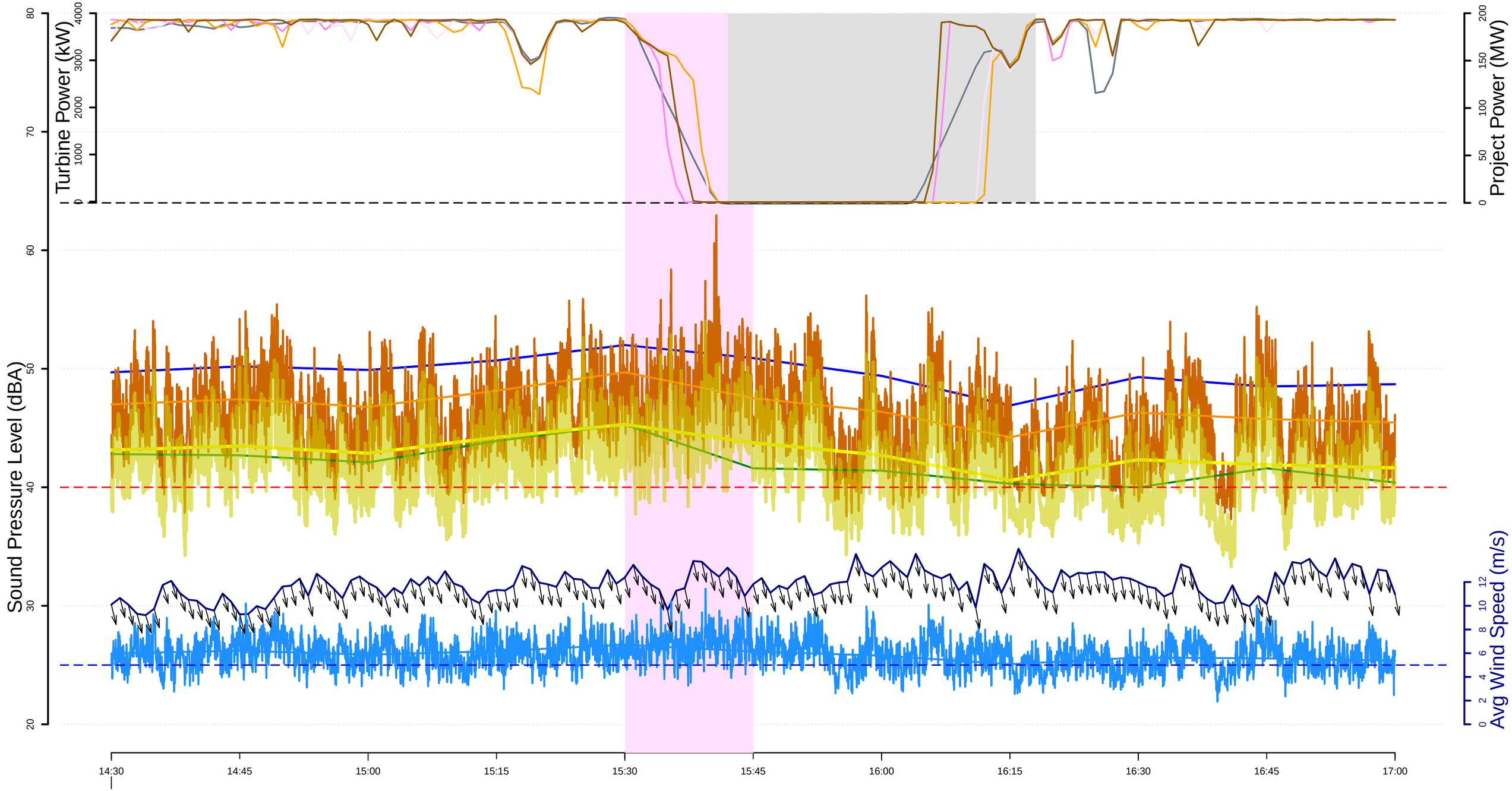
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32

Project Power (MW)

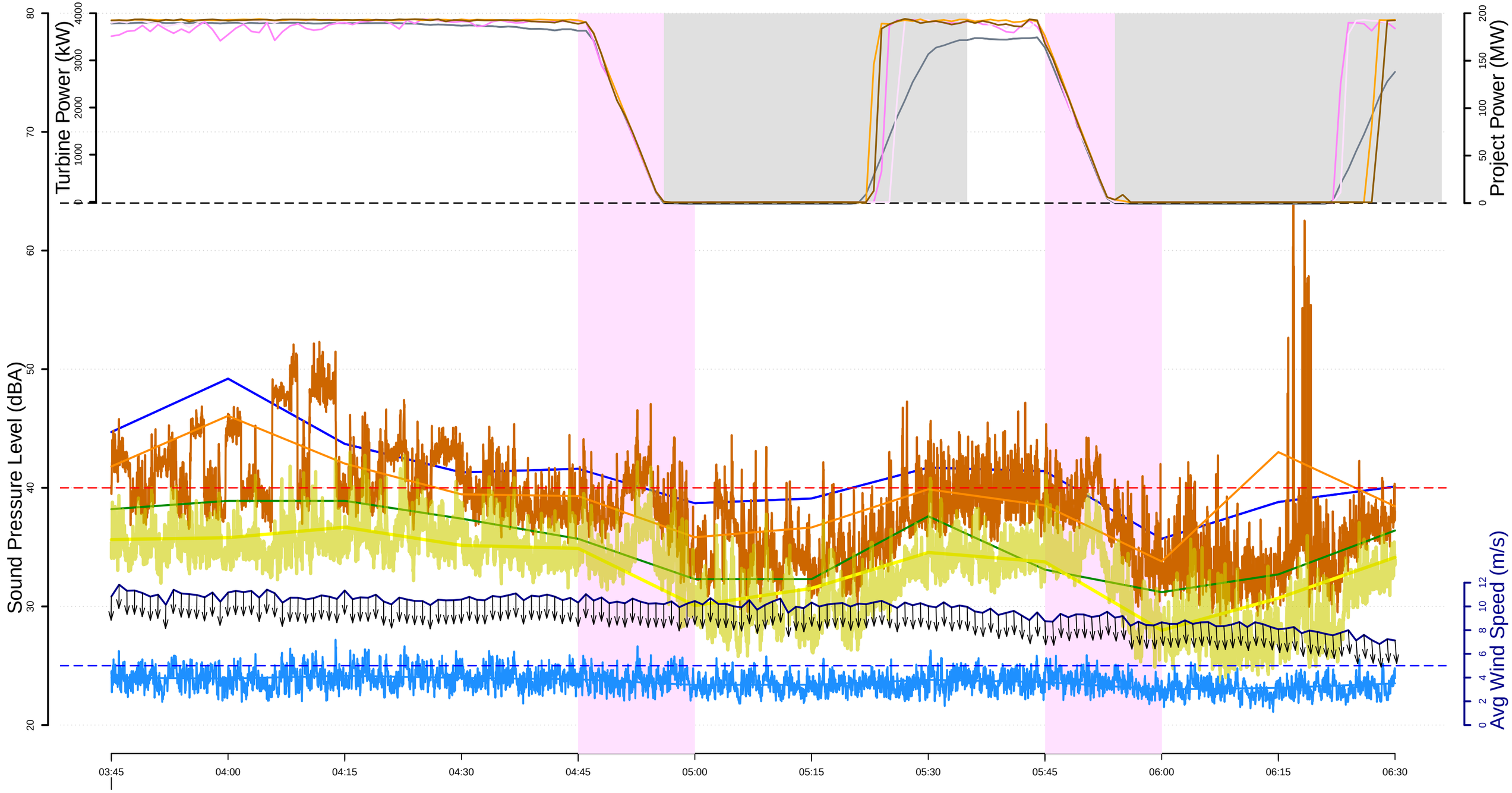
REC−068 (Fuerniss Residence), Curtail #15
Thursday, 7 23, 2020



23/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T08
- Real Power (kW) T16
- Real Power (kW) T40
- Real Power (kW) T32
- Project Power (MW)

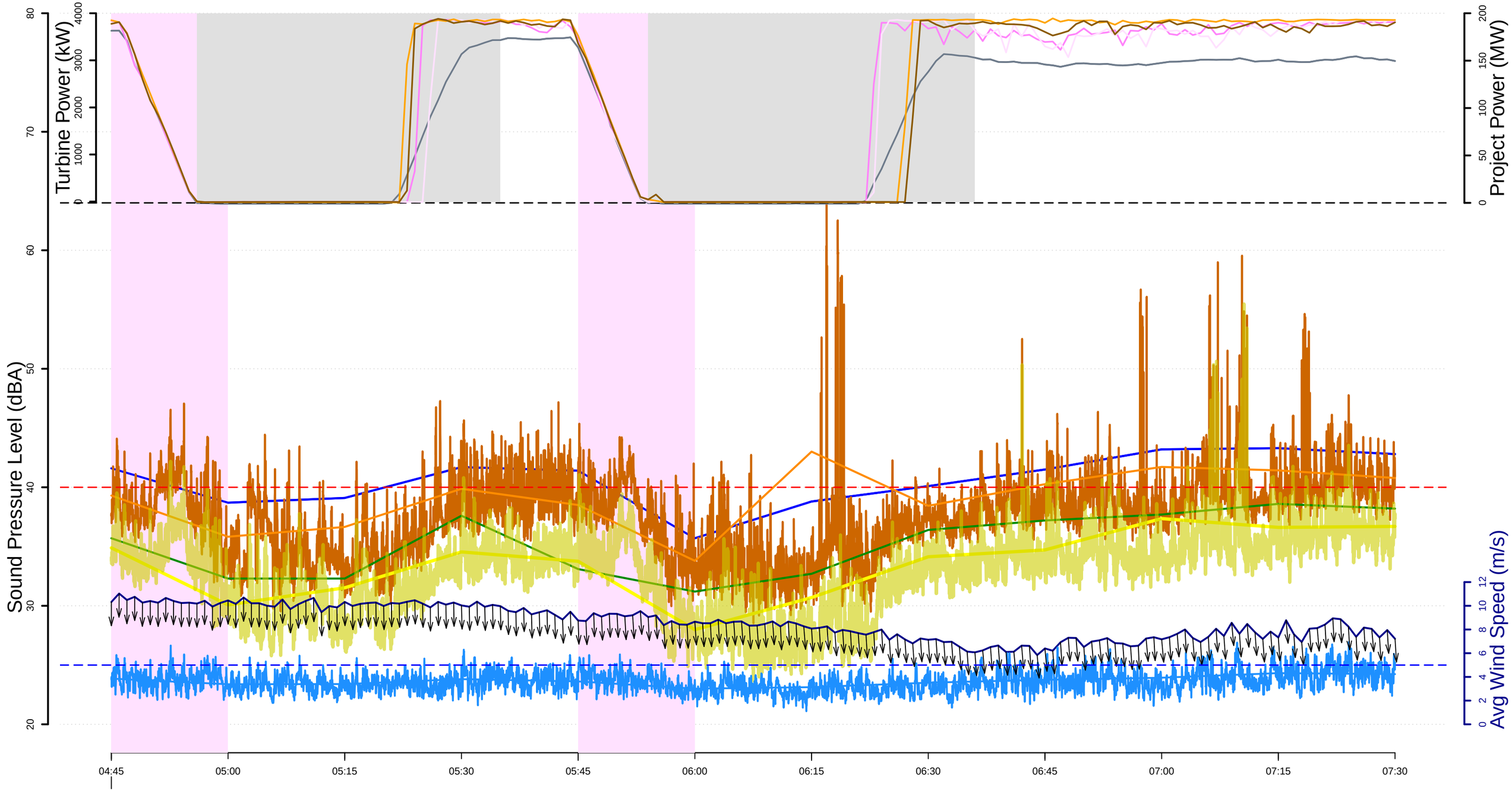
REC−068 (Fuerniss Residence), Curtail #16
Friday, 7 24, 2020



24/07

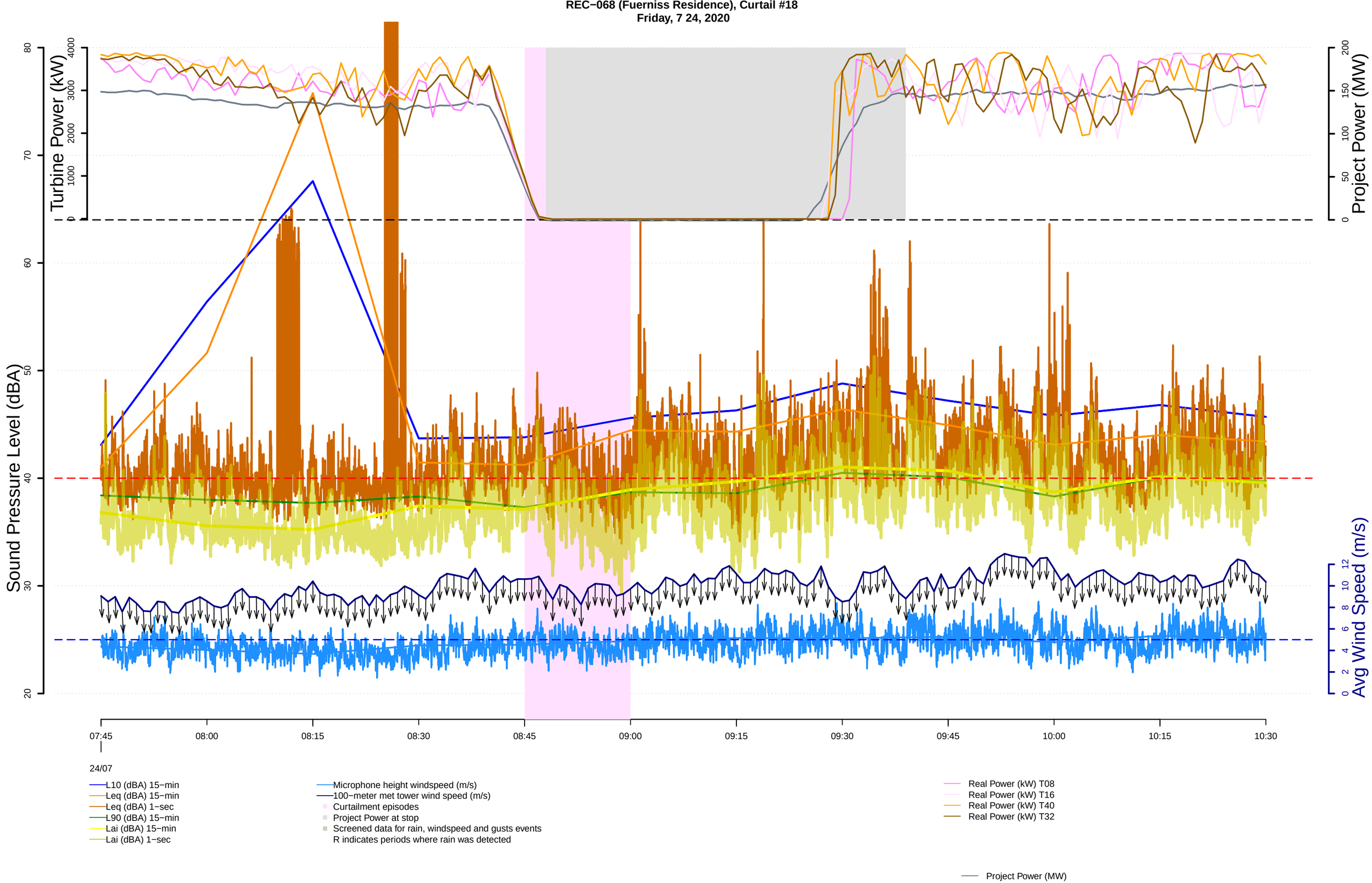
- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T08
- Real Power (kW) T16
- Real Power (kW) T40
- Real Power (kW) T32
- Project Power (MW)

REC−068 (Fuerniss Residence), Curtail #17
Friday, 7 24, 2020

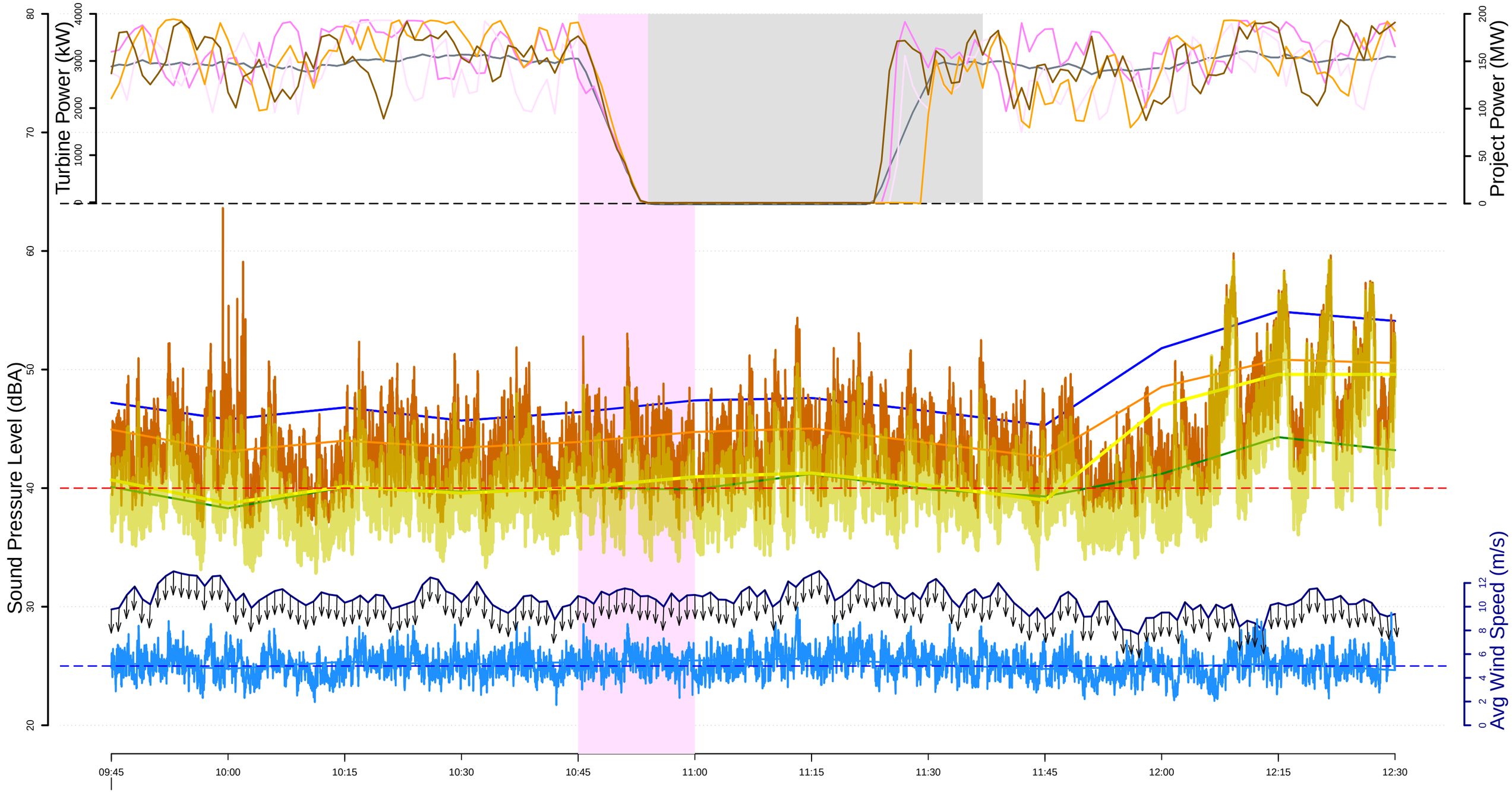


24/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T08
- Real Power (kW) T16
- Real Power (kW) T40
- Real Power (kW) T32
- Project Power (MW)


REC−068 (Fuerniss Residence), Curtail #18
Friday, 7 24, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
07:45
08:00
08:15
08:30
08:45
09:00
09:15
09:30
09:45
10:00
10:15
10:30
24/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32
Project Power (MW)

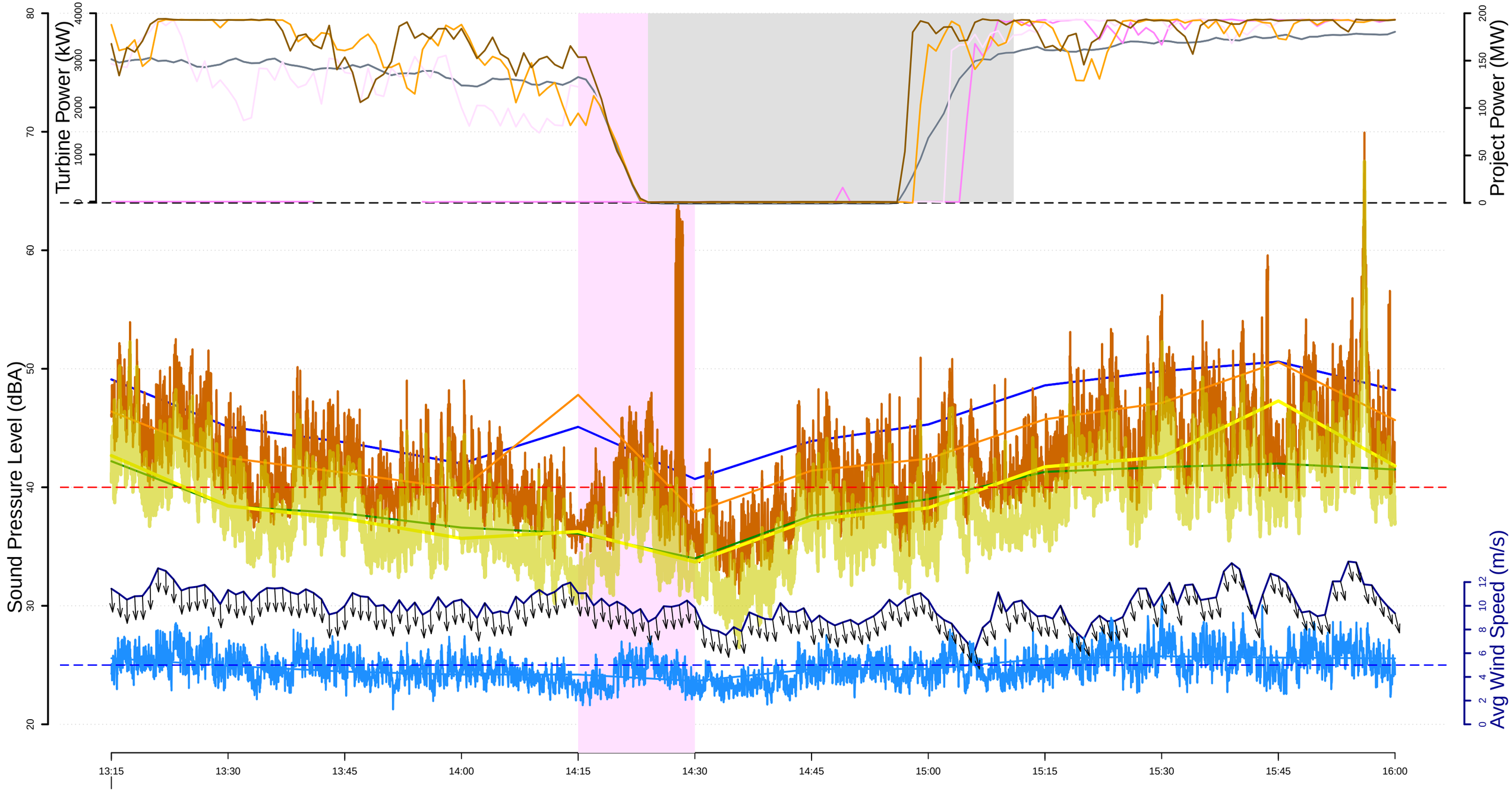
REC−068 (Fuerniss Residence), Curtail #19
Friday, 7 24, 2020



24/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T08
- Real Power (kW) T16
- Real Power (kW) T40
- Real Power (kW) T32
- Project Power (MW)

REC−068 (Fuerniss Residence), Curtail #20
Friday, 7 24, 2020



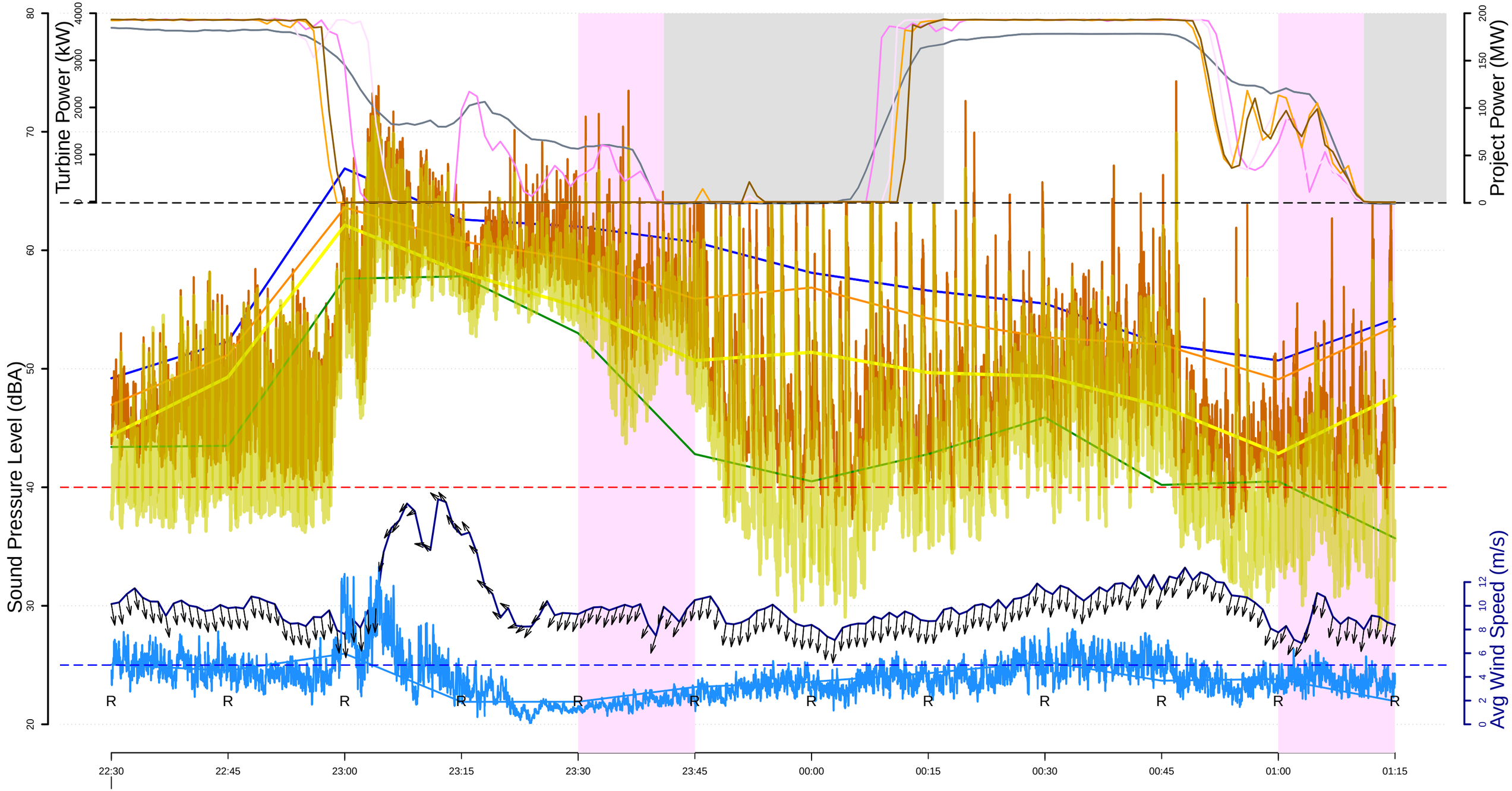
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32

Project Power (MW)

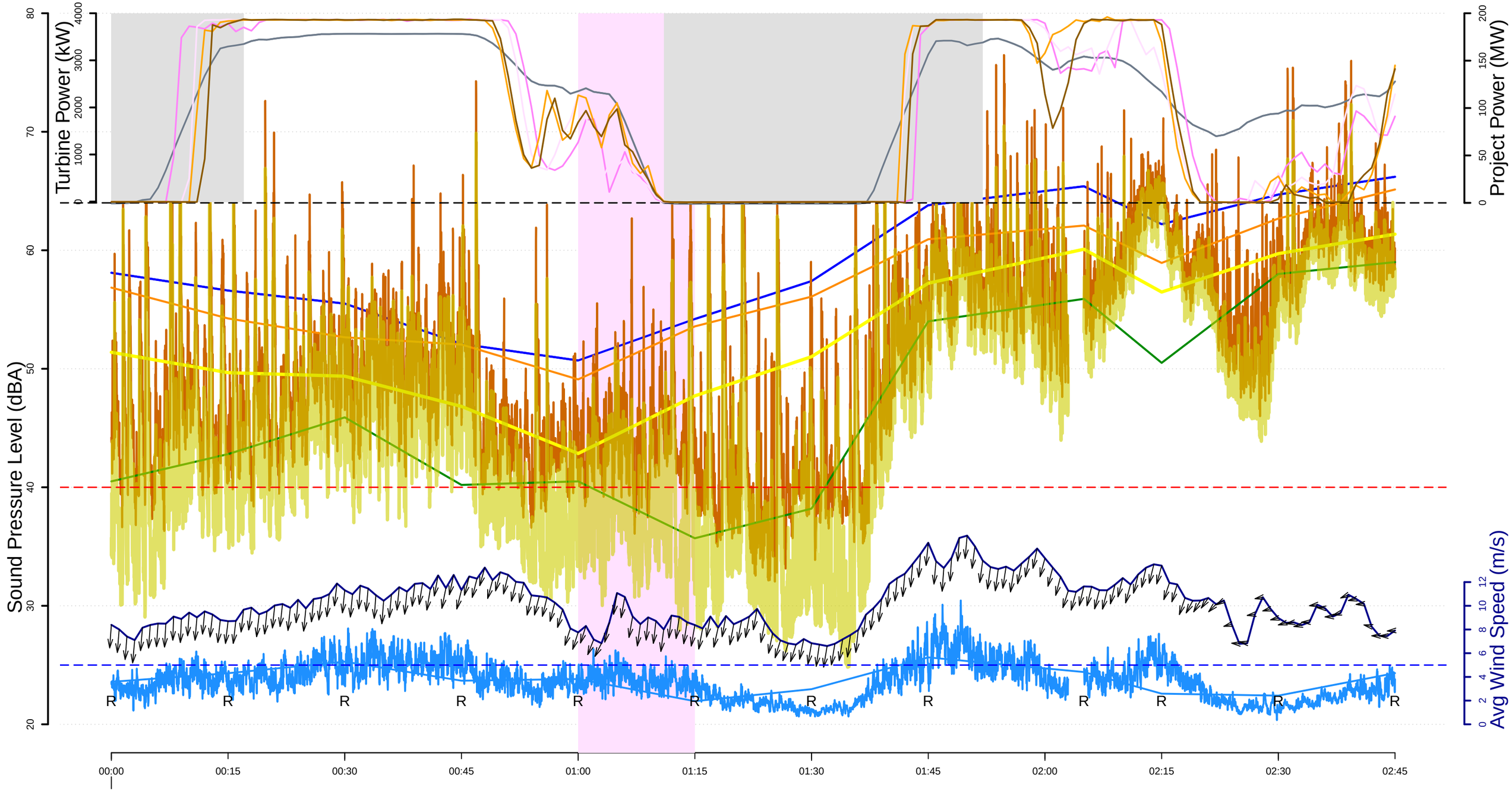
REC−068 (Fuerniss Residence), Curtail #21
Friday, 7 24, 2020



24/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
- R indicates periods where rain was detected
- Real Power (kW) T08
- Real Power (kW) T16
- Real Power (kW) T40
- Real Power (kW) T32
- Project Power (MW)

REC−068 (Fuerniss Residence), Curtail #22
Saturday, 7 25, 2020

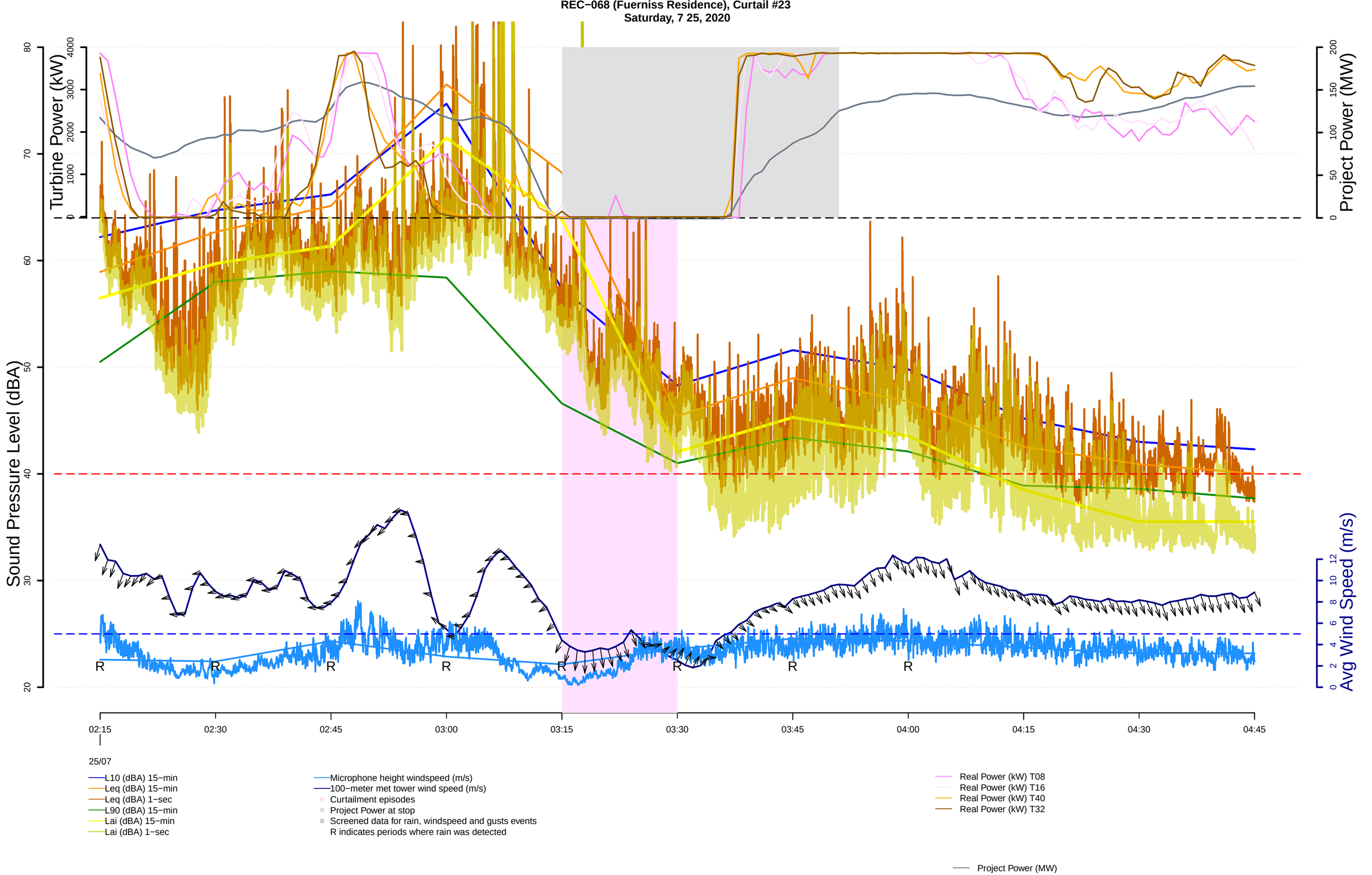


L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

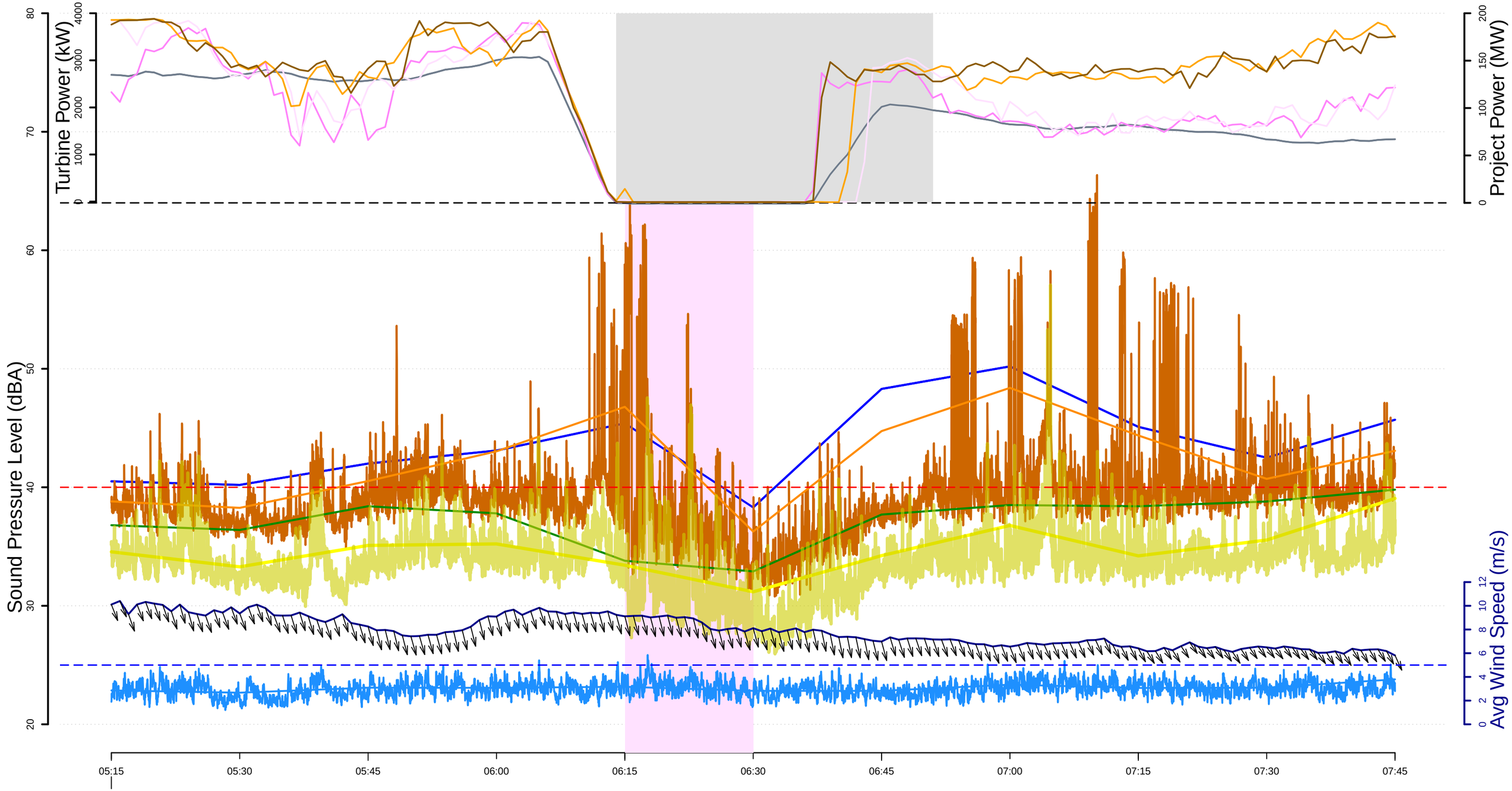
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32

Project Power (MW)


REC−068 (Fuerniss Residence), Curtail #23
Saturday, 7 25, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
R
02:15
02:30
02:45
03:00
03:15
03:30
03:45
04:00
04:15
04:30
04:45
25/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32
Project Power (MW)

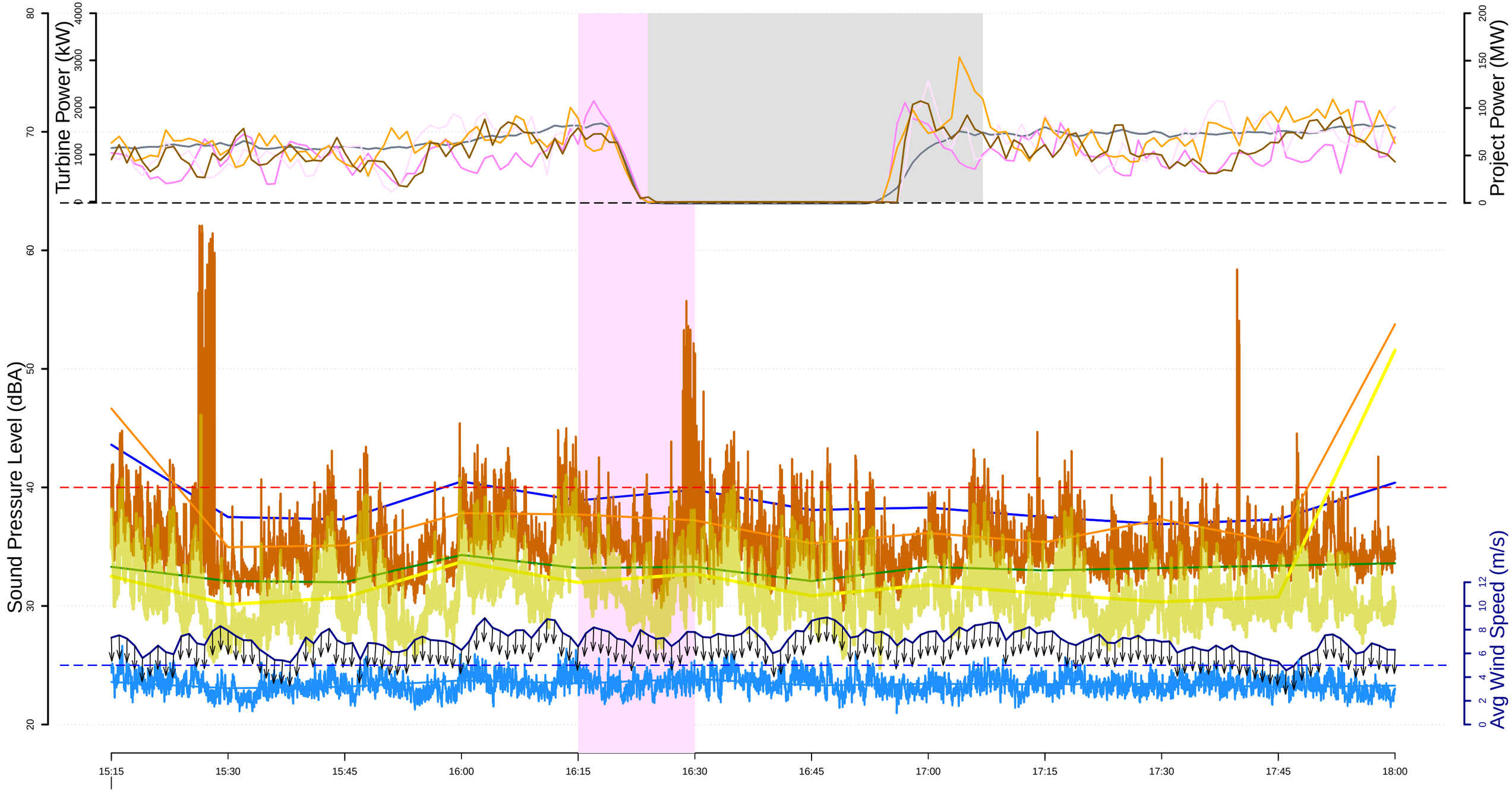
REC−068 (Fuerniss Residence), Curtail #24
Saturday, 7 25, 2020



25/07

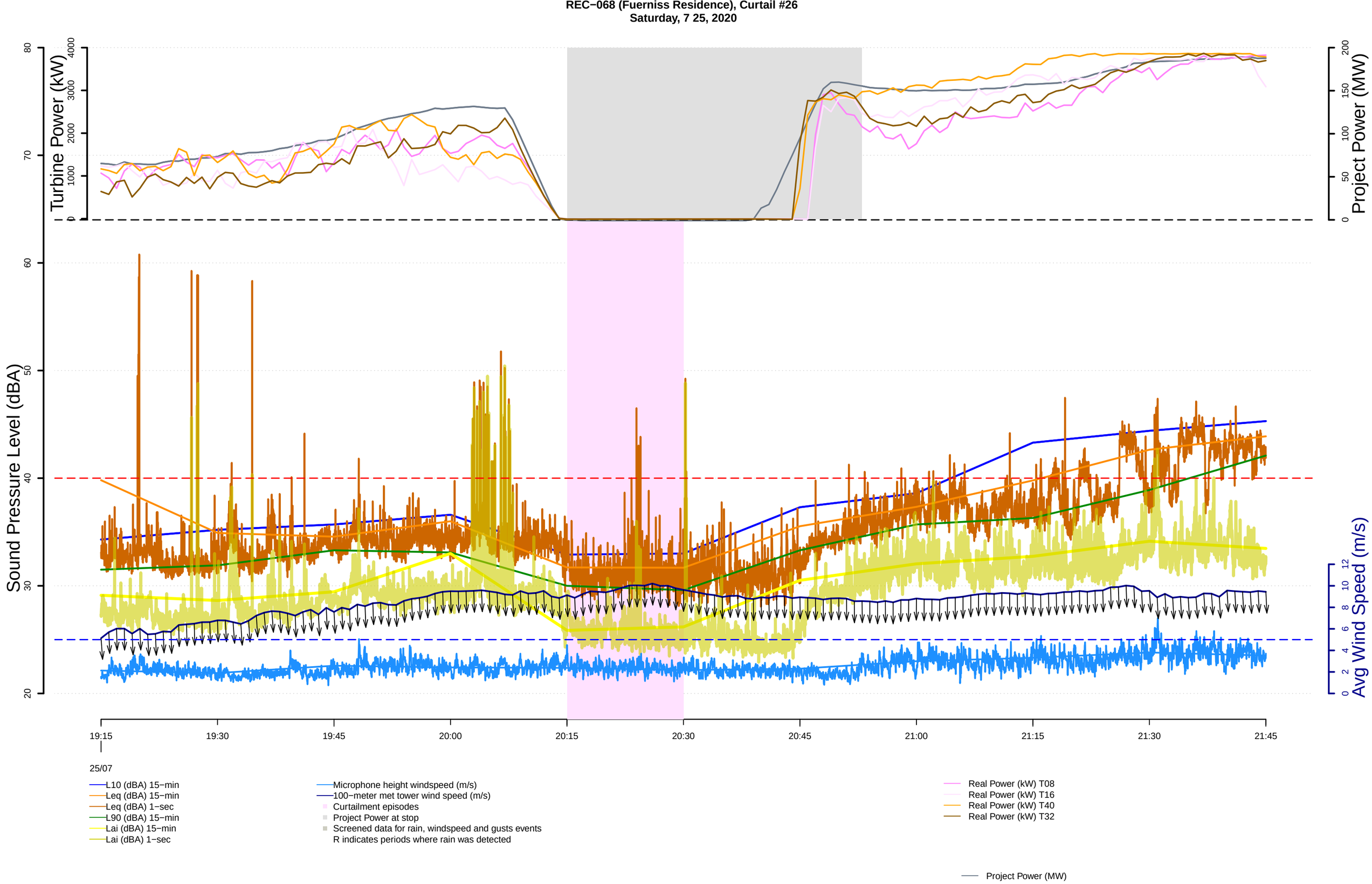
- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T08
- Real Power (kW) T16
- Real Power (kW) T40
- Real Power (kW) T32
- Project Power (MW)

REC−068 (Fuerniss Residence), Curtail #25
Saturday, 7 25, 2020

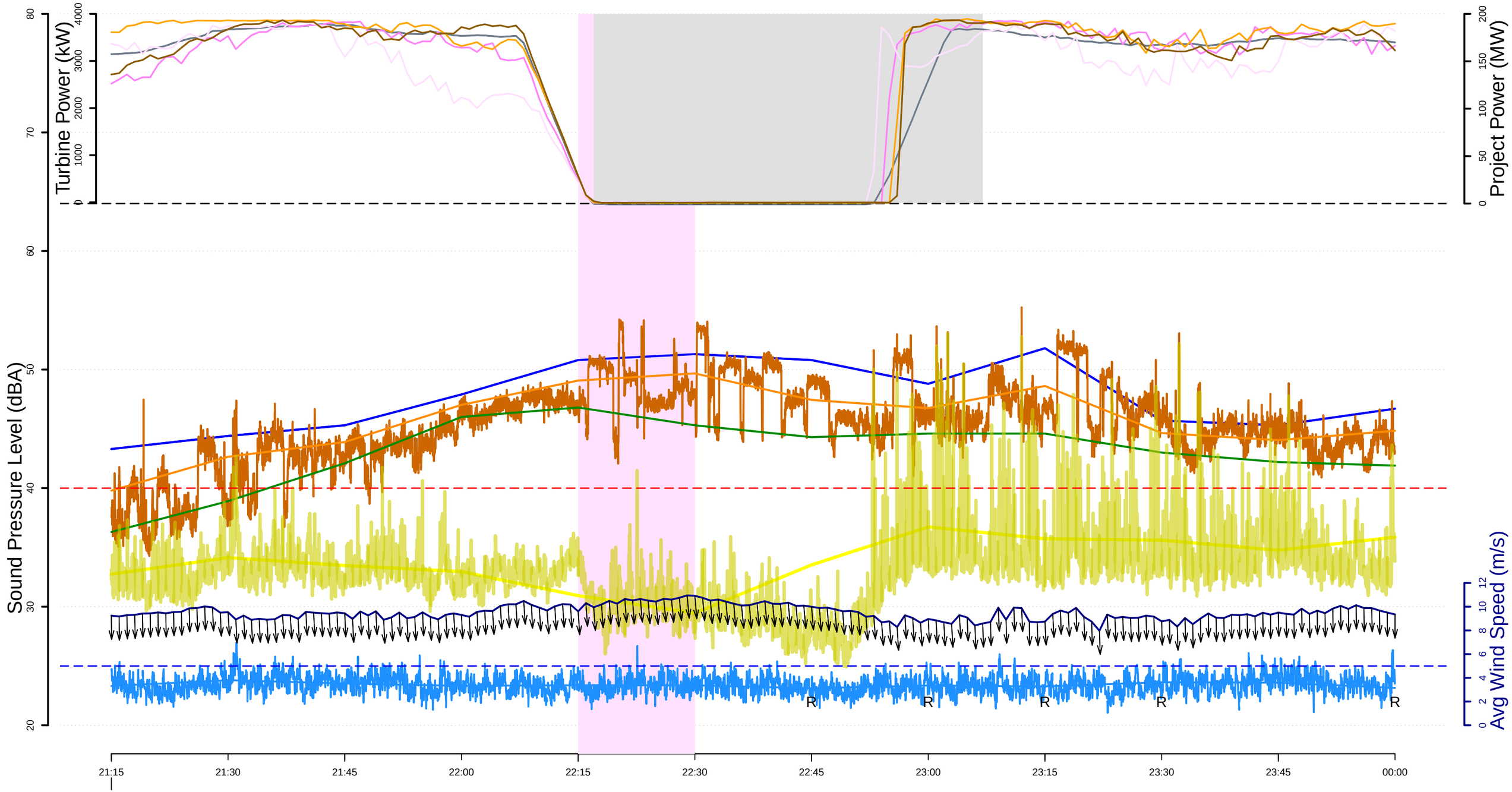


25/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T08
- Real Power (kW) T16
- Real Power (kW) T40
- Real Power (kW) T32
- Project Power (MW)


REC−068 (Fuerniss Residence), Curtail #26
Saturday, 7 25, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
19:15
19:30
19:45
20:00
20:15
20:30
20:45
21:00
21:15
21:30
21:45
25/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32
Project Power (MW)

REC−068 (Fuerniss Residence), Curtail #27
Saturday, 7 25, 2020



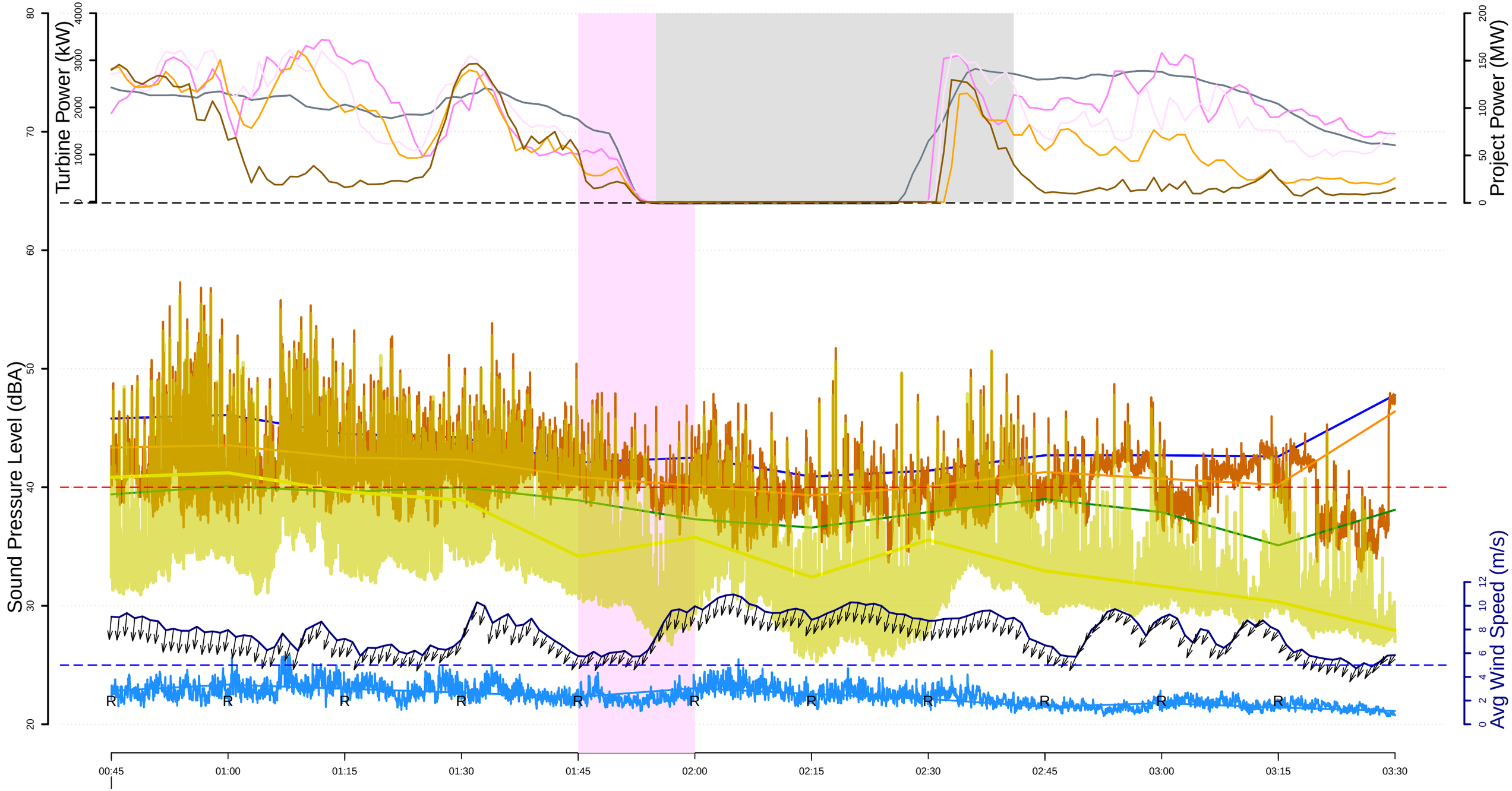
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32

Project Power (MW)

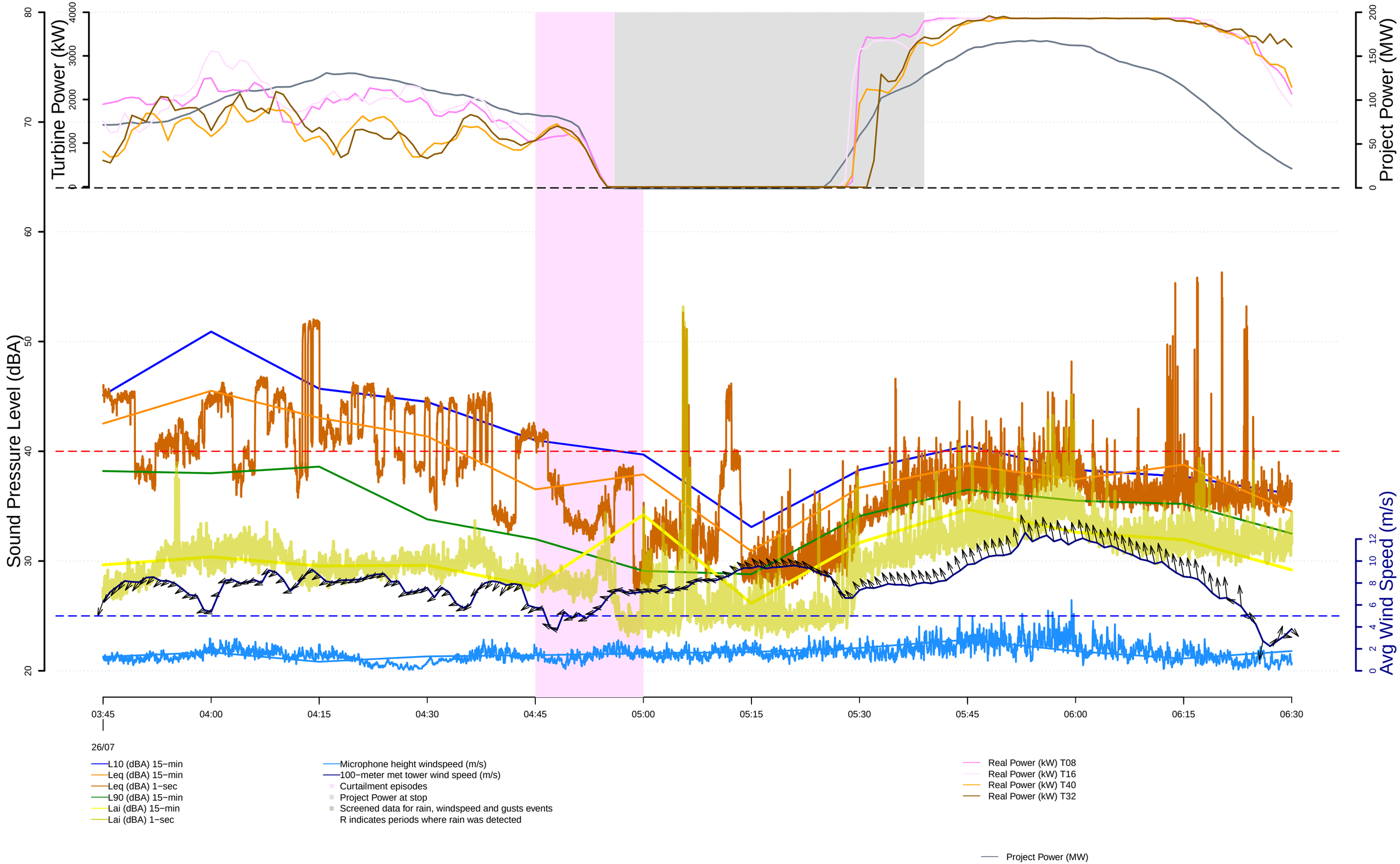
REC−068 (Fuerniss Residence), Curtail #28
Sunday, 7 26, 2020



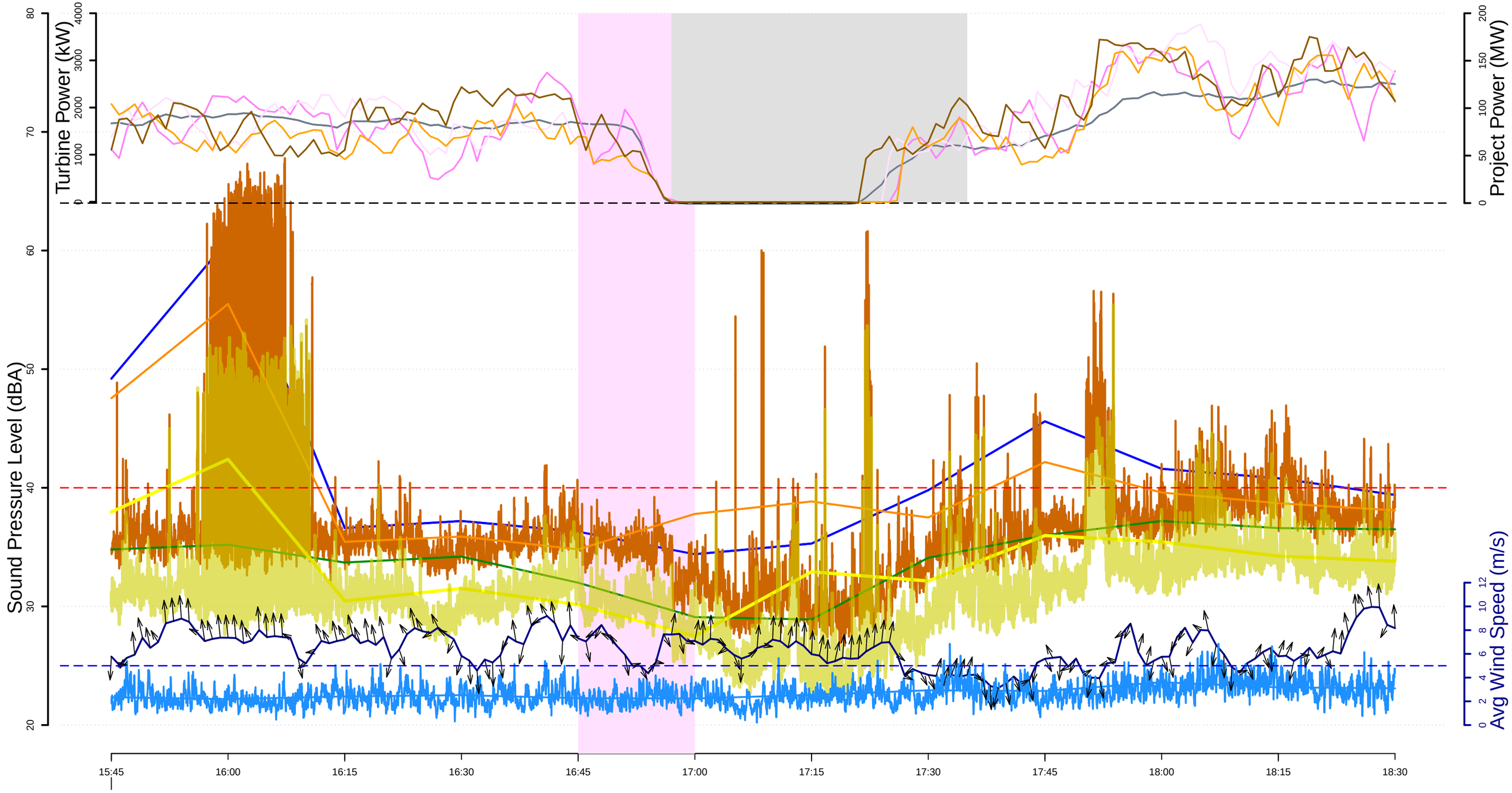
26/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
- R indicates periods where rain was detected
- Real Power (kW) T08
- Real Power (kW) T16
- Real Power (kW) T40
- Real Power (kW) T32
- Project Power (MW)

REC−068 (Fuerniss Residence), Curtail #29
Sunday, 7 26, 2020



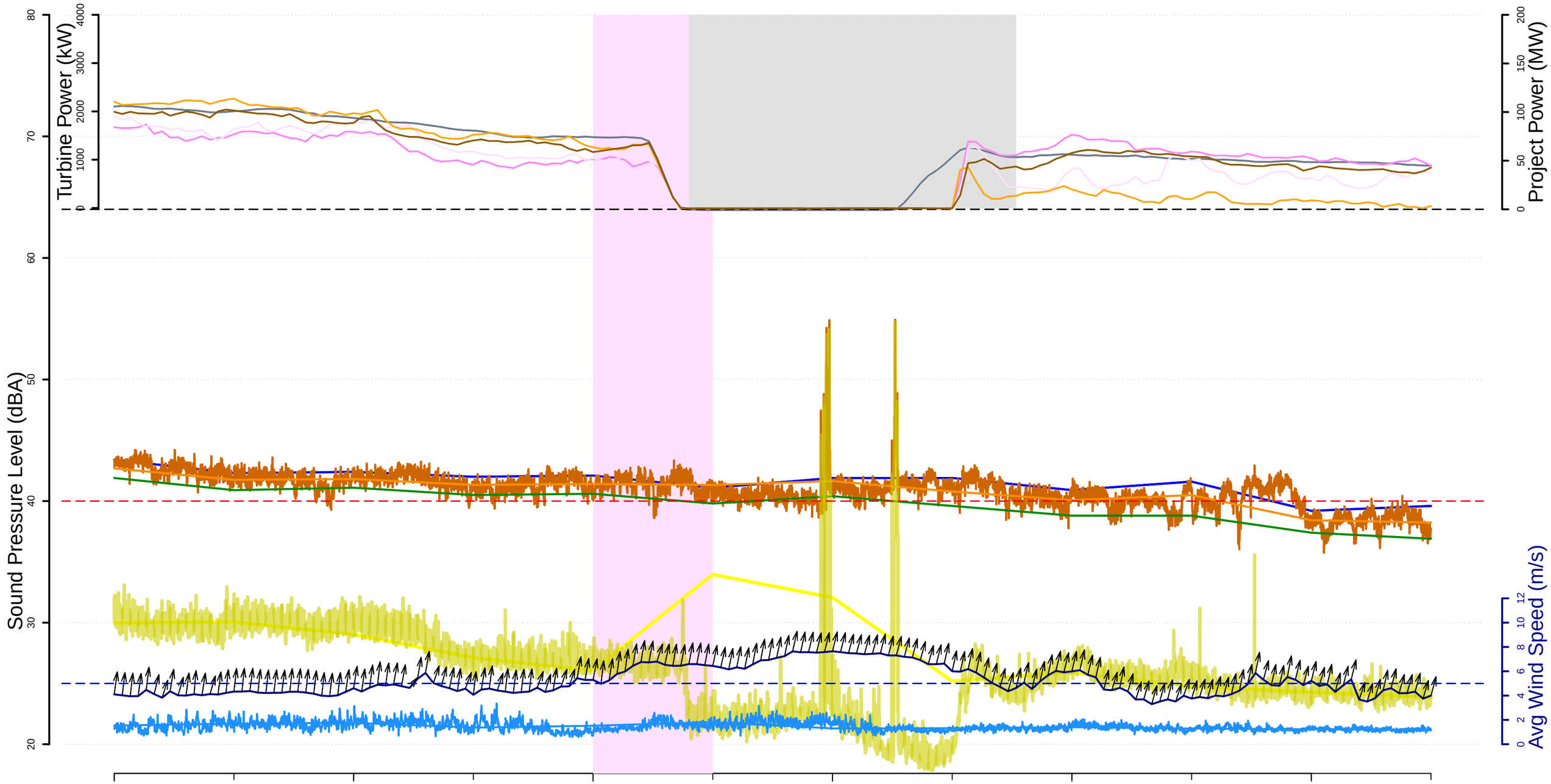
REC−068 (Fuerniss Residence), Curtail #30
Sunday, 7 26, 2020



26/07

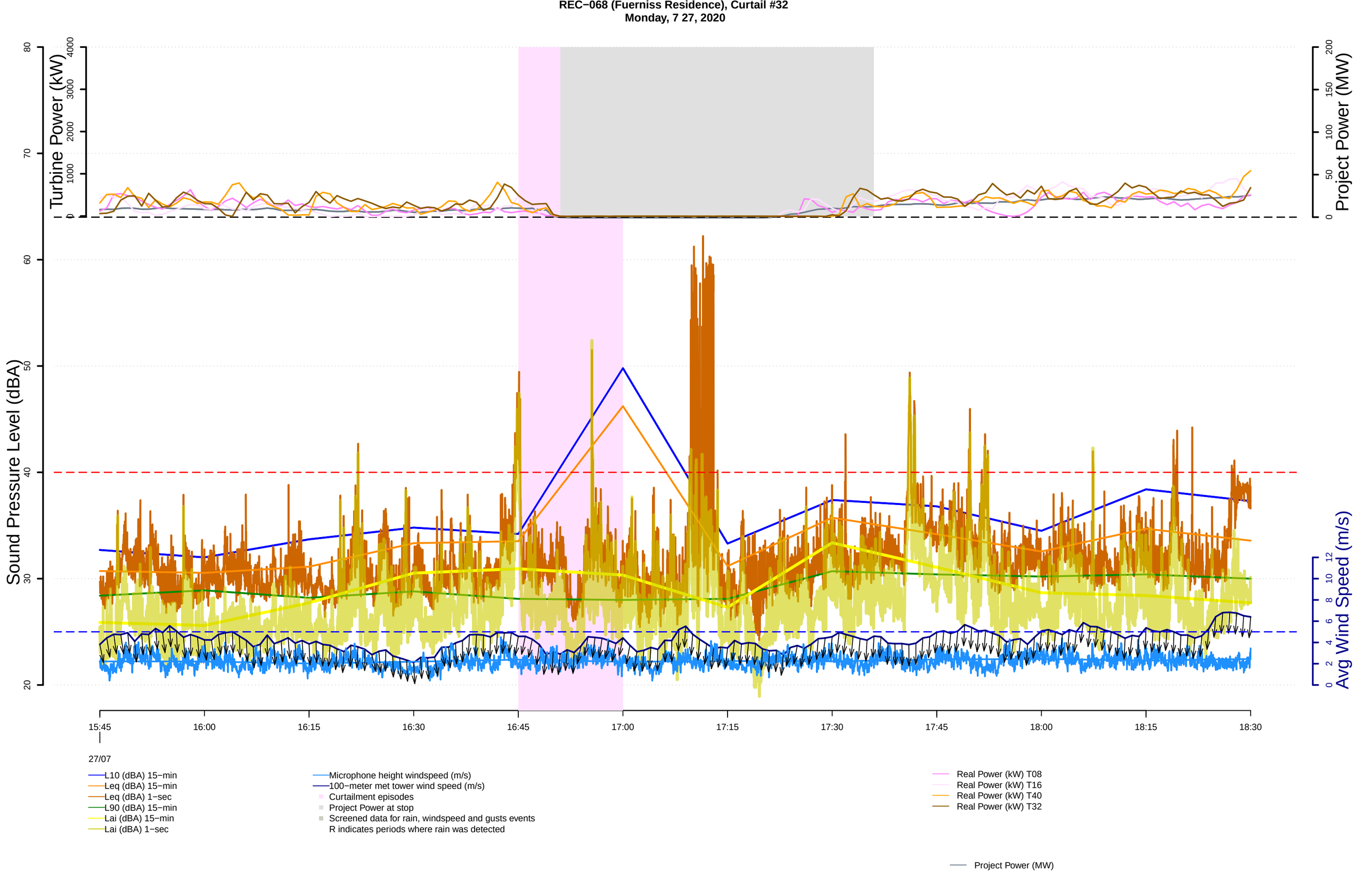
- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T08
- Real Power (kW) T16
- Real Power (kW) T40
- Real Power (kW) T32
- Project Power (MW)

REC−068 (Fuerniss Residence), Curtail #31
Sunday, 7 26, 2020

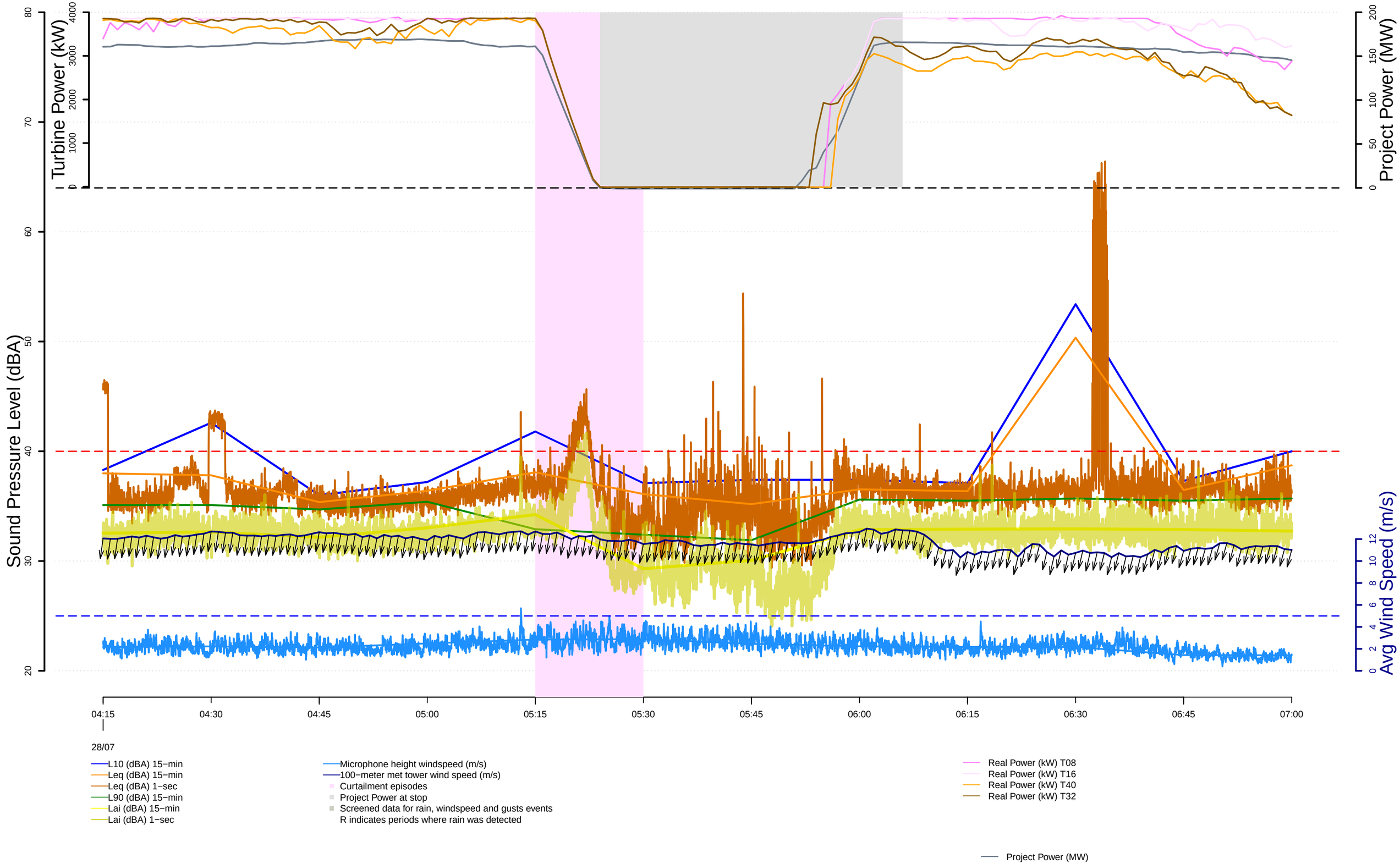


26/07

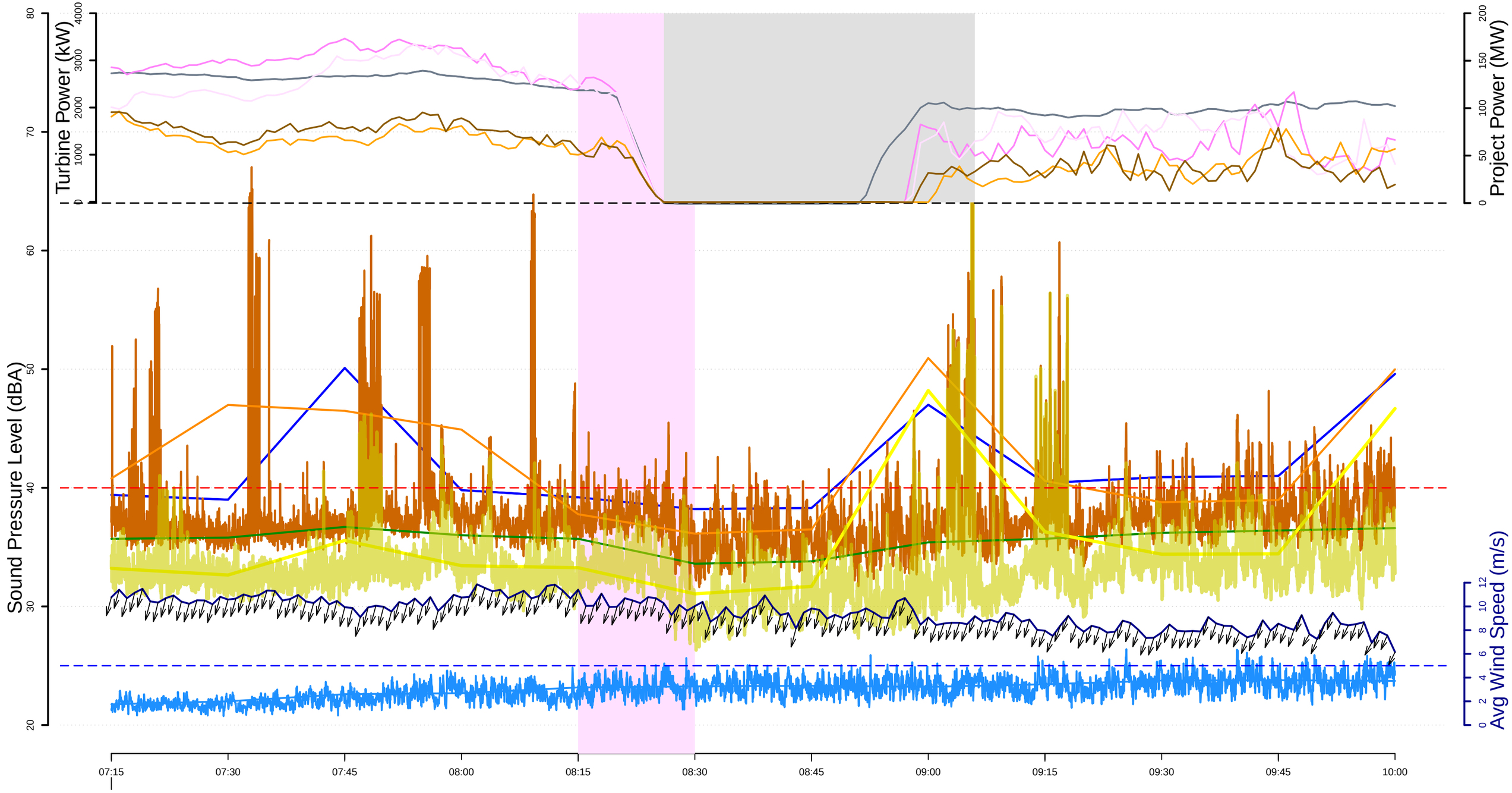
- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T08
- Real Power (kW) T16
- Real Power (kW) T40
- Real Power (kW) T32
- Project Power (MW)


REC−068 (Fuerniss Residence), Curtail #32
Monday, 7 27, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
15:45
16:00
16:15
16:30
16:45
17:00
17:15
17:30
17:45
18:00
18:15
18:30
27/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32
Project Power (MW)

REC−068 (Fuerniss Residence), Curtail #33
Tuesday, 7 28, 2020



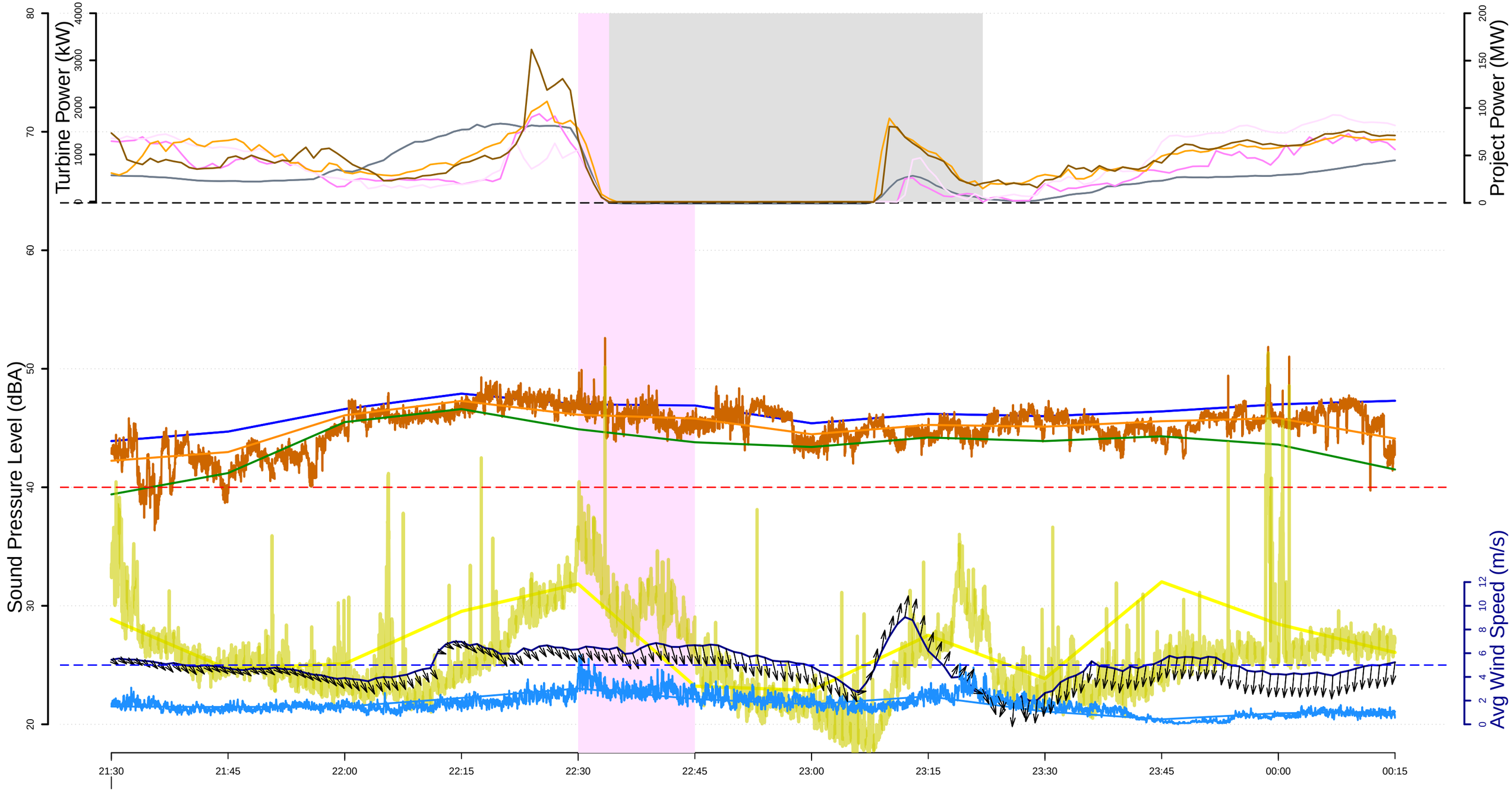
REC−068 (Fuerniss Residence), Curtail #34
Tuesday, 7 28, 2020



28/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T08
- Real Power (kW) T16
- Real Power (kW) T40
- Real Power (kW) T32
- Project Power (MW)

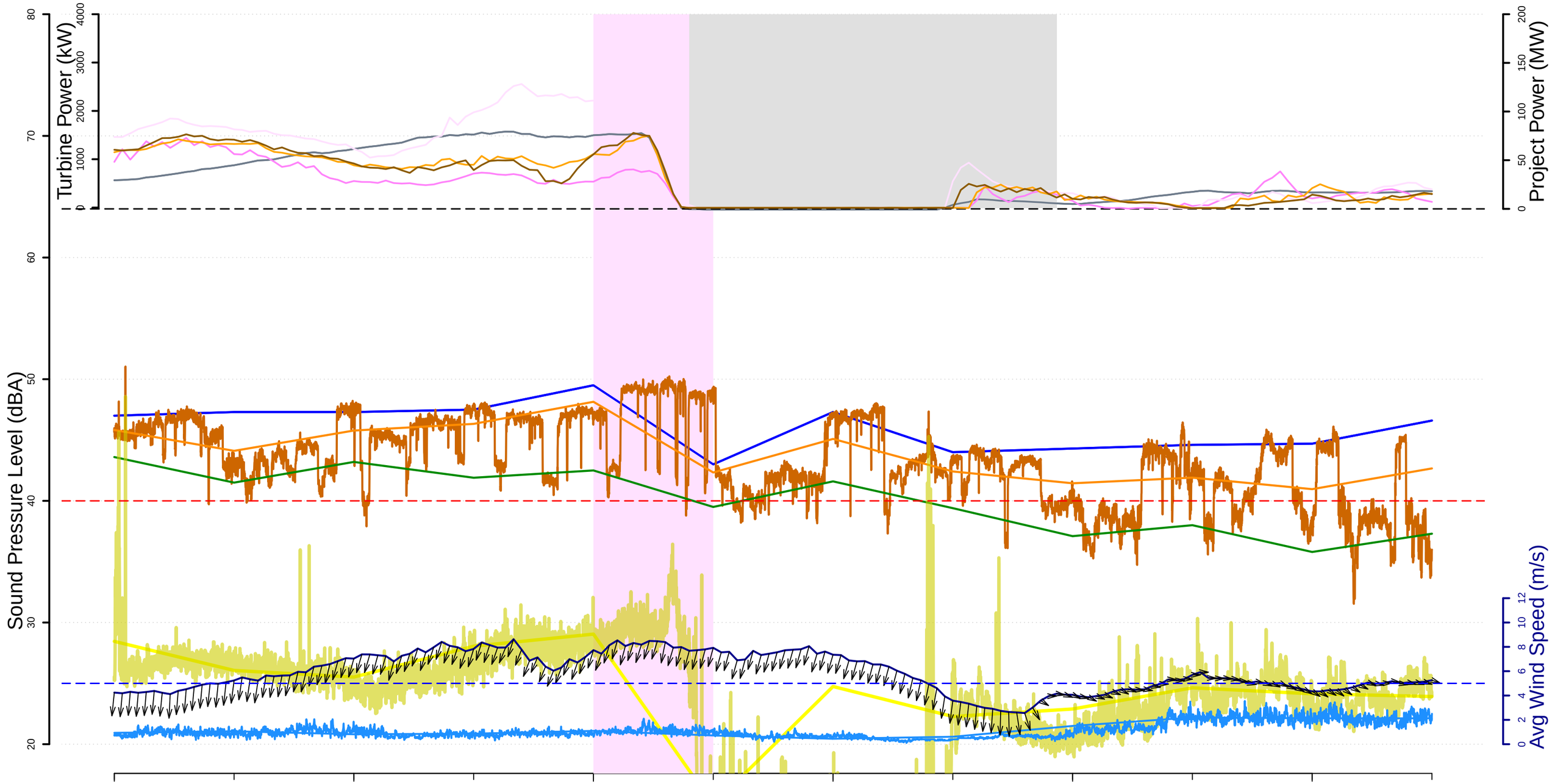
REC−068 (Fuerniss Residence), Curtail #35
Tuesday, 7 28, 2020



28/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T08
- Real Power (kW) T16
- Real Power (kW) T40
- Real Power (kW) T32
- Project Power (MW)

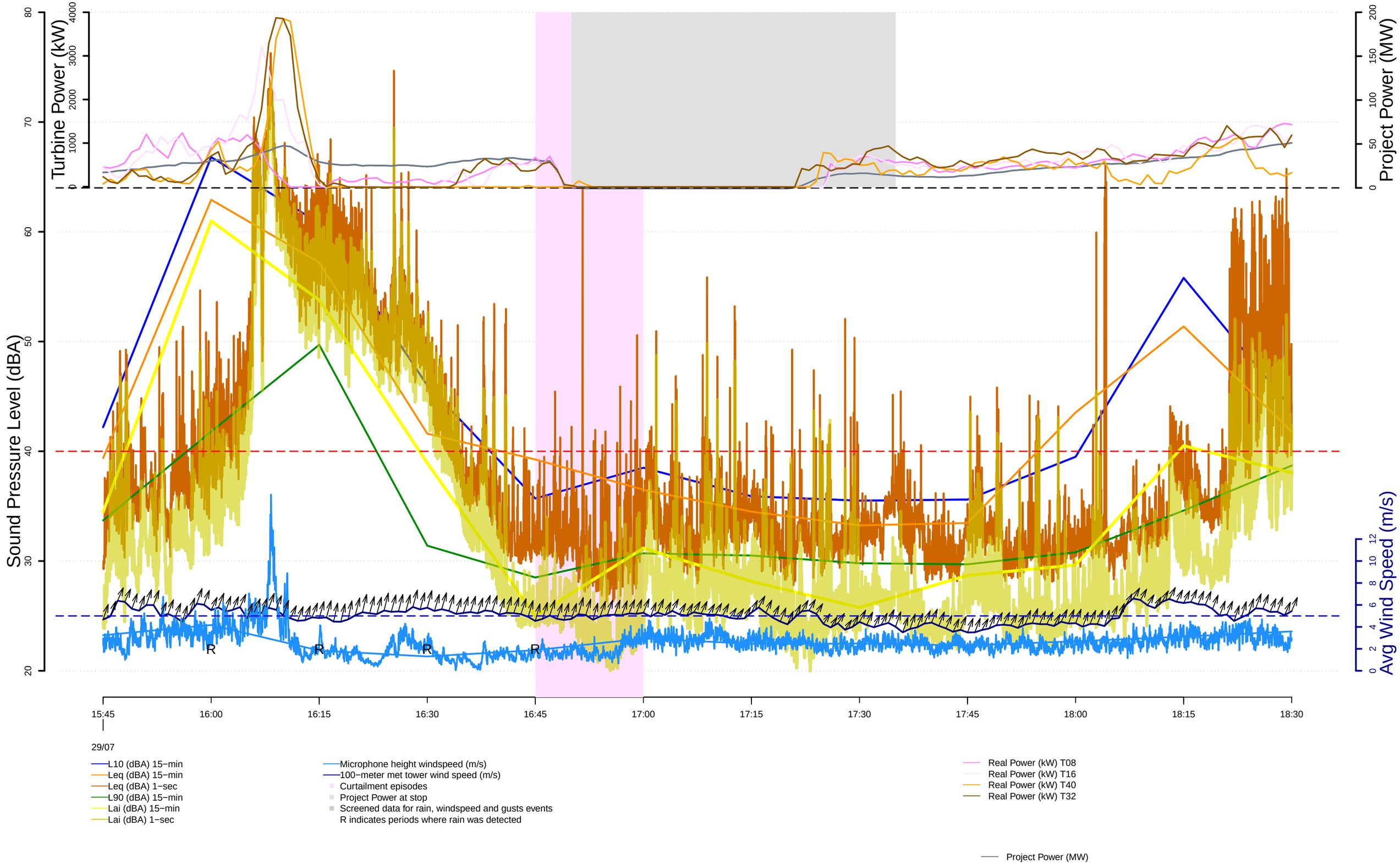
REC−068 (Fuerniss Residence), Curtail #36
Wednesday, 7 29, 2020



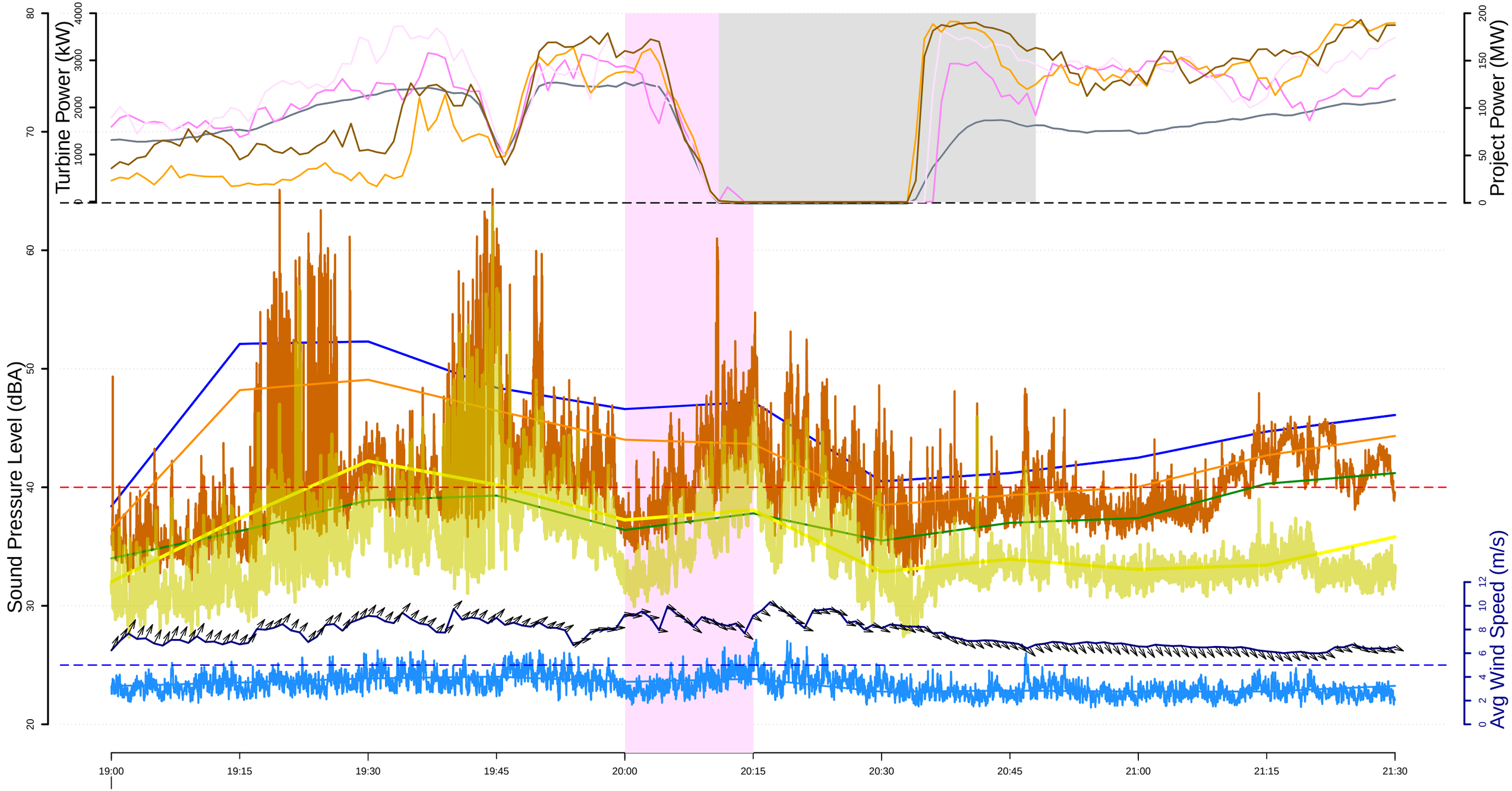
29/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T08
- Real Power (kW) T16
- Real Power (kW) T40
- Real Power (kW) T32
- Project Power (MW)

REC−068 (Fuerniss Residence), Curtail #37
Wednesday, 7 29, 2020



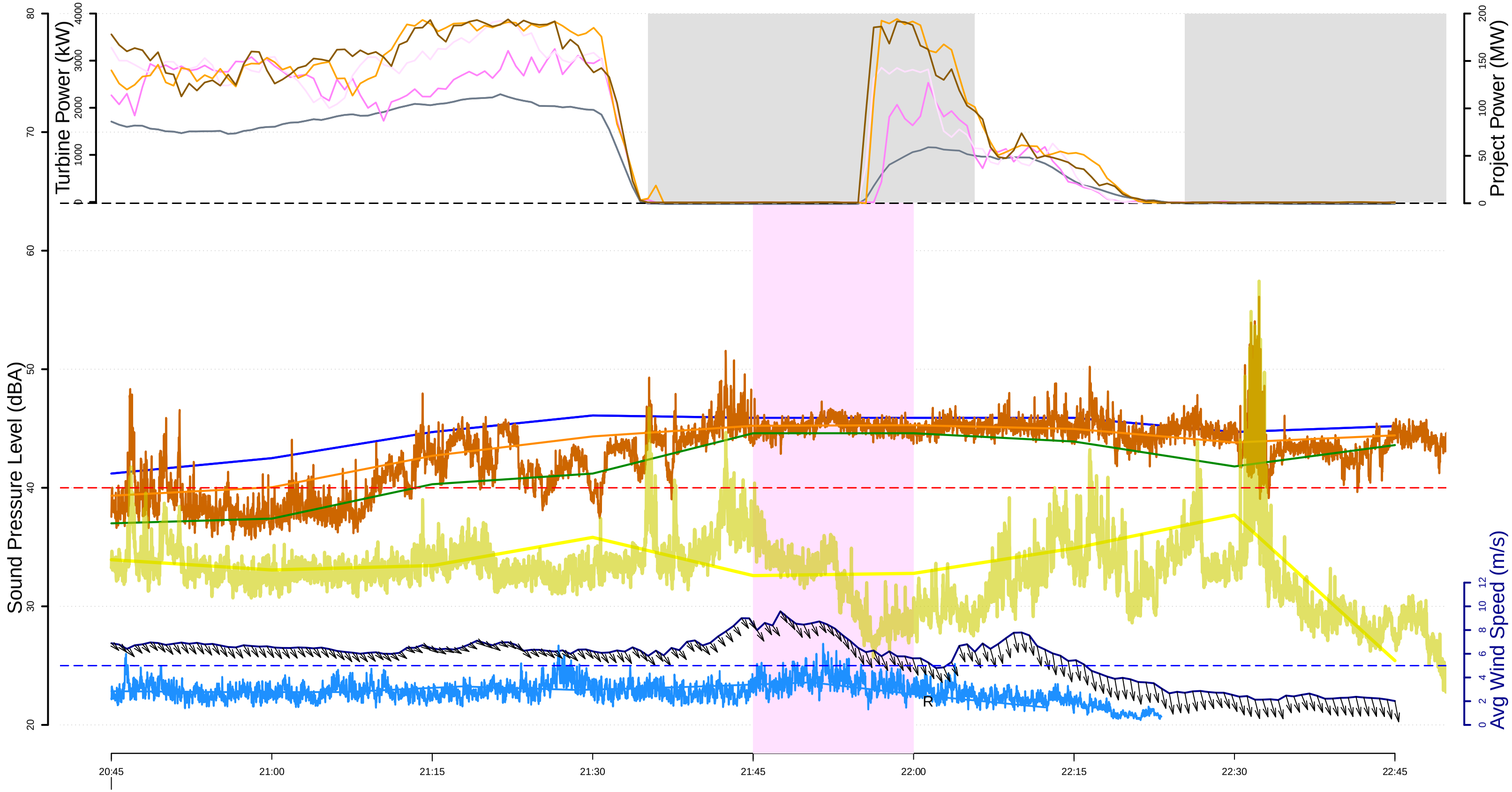
REC−068 (Fuerniss Residence), Curtail #38
Wednesday, 7 29, 2020



29/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T08
- Real Power (kW) T16
- Real Power (kW) T40
- Real Power (kW) T32
- Project Power (MW)

REC−068 (Fuerniss Residence), Curtail #39
Wednesday, 7 29, 2020



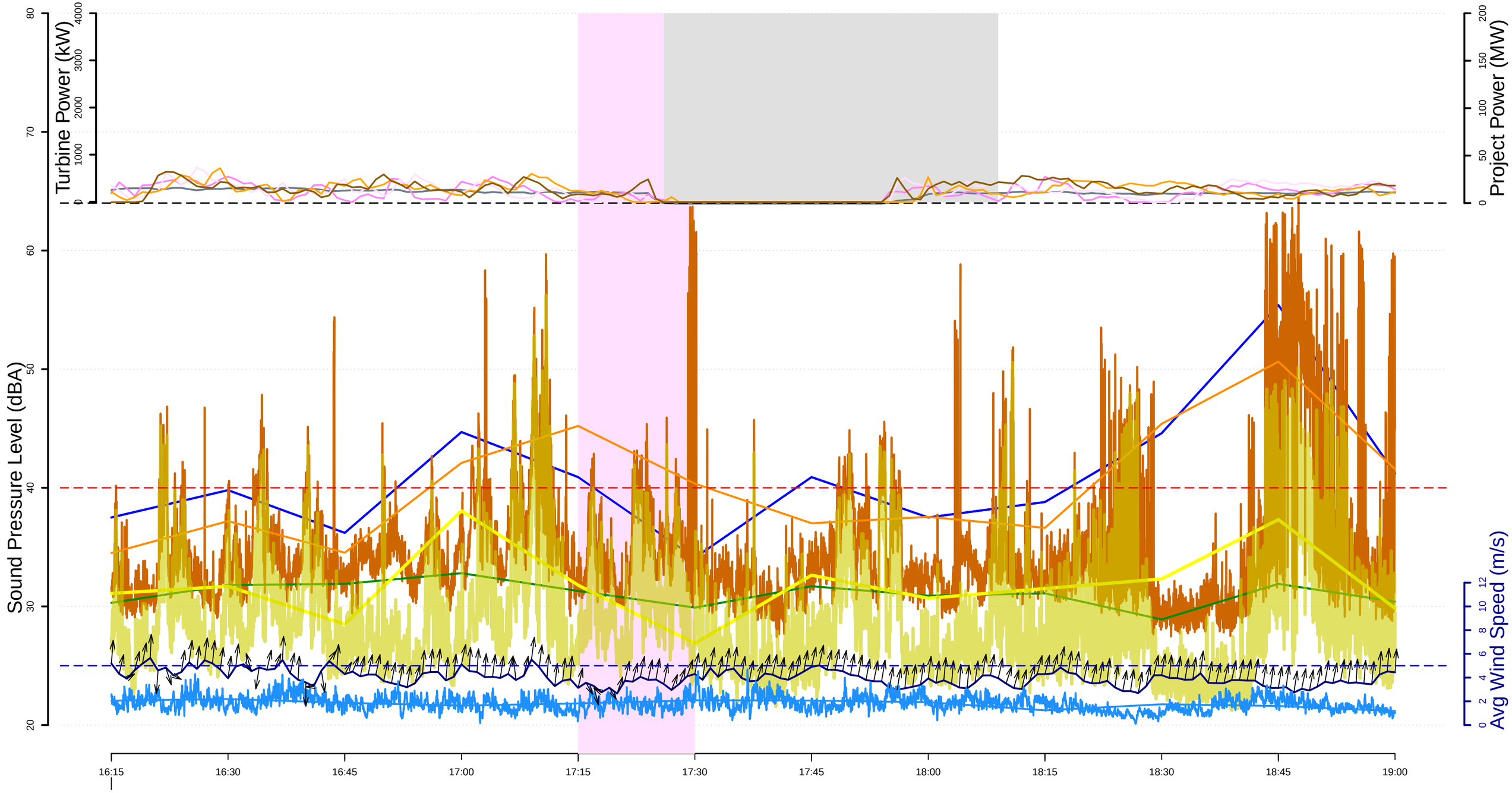
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32

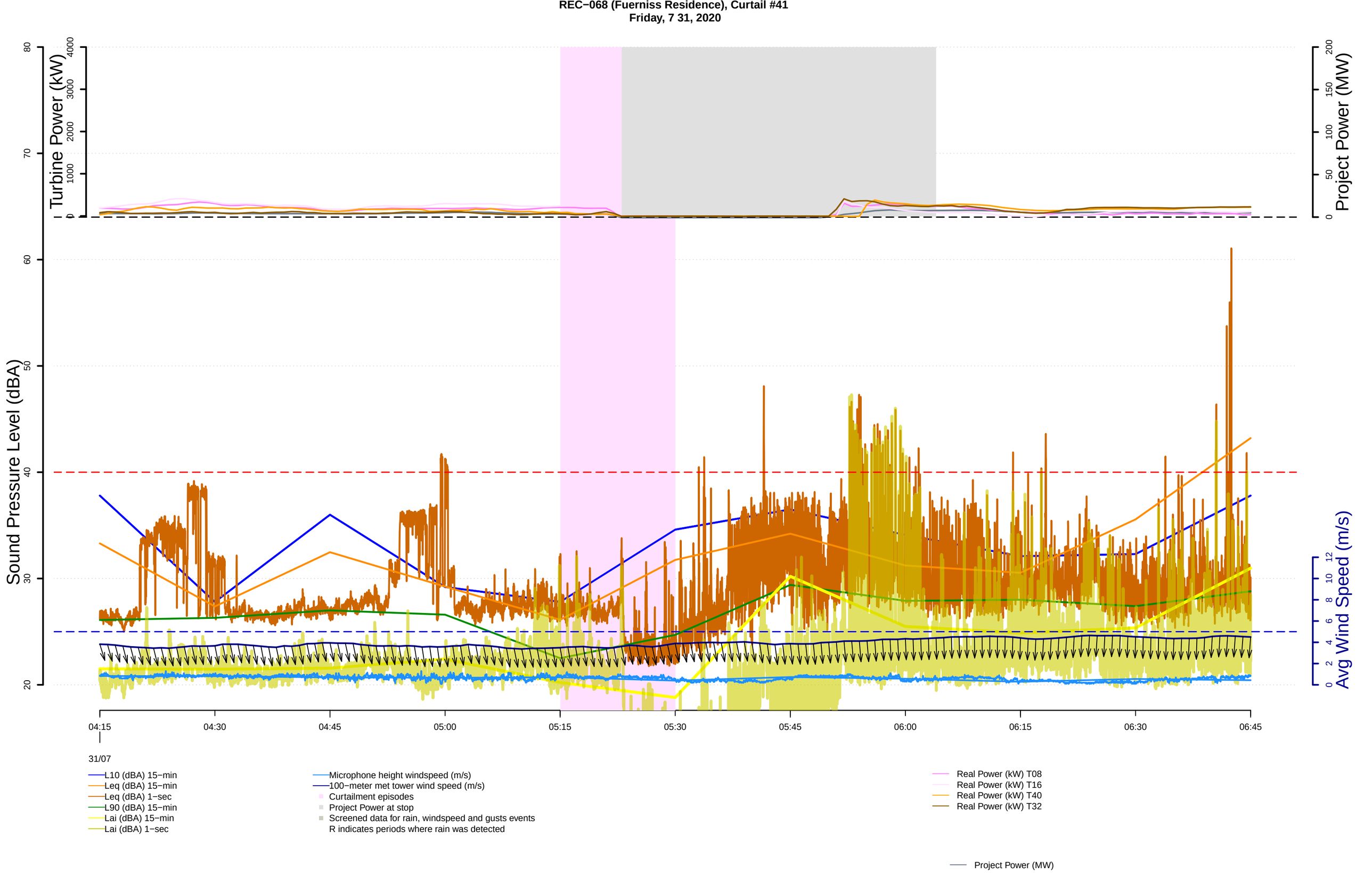
Project Power (MW)

REC−068 (Fuerniss Residence), Curtail #40
Thursday, 7 30, 2020

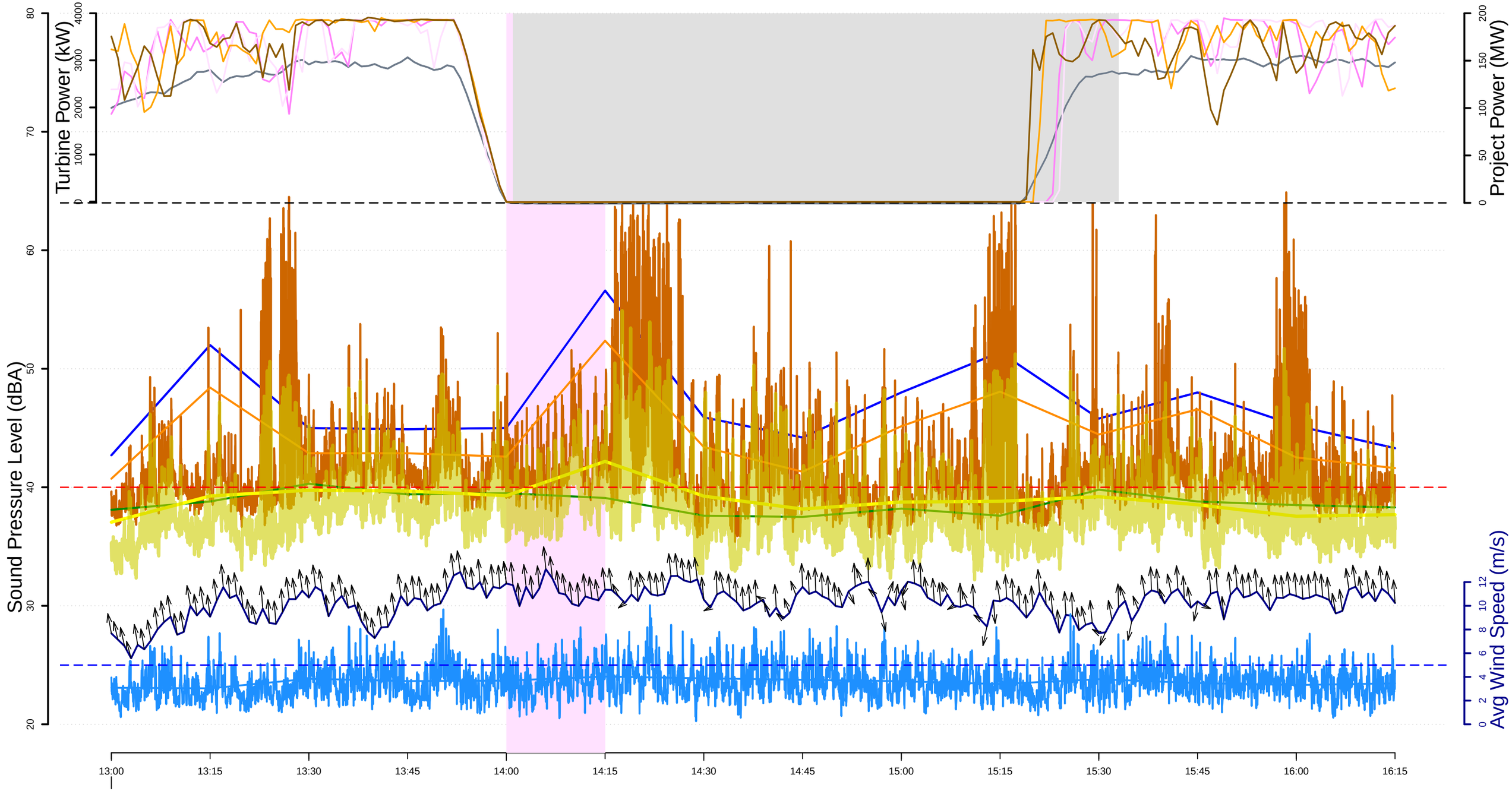


30/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T08
- Real Power (kW) T16
- Real Power (kW) T40
- Real Power (kW) T32
- Project Power (MW)


REC−068 (Fuerniss Residence), Curtail #41
Friday, 7 31, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
04:15
04:30
04:45
05:00
05:15
05:30
05:45
06:00
06:15
06:30
06:45
31/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32
Project Power (MW)

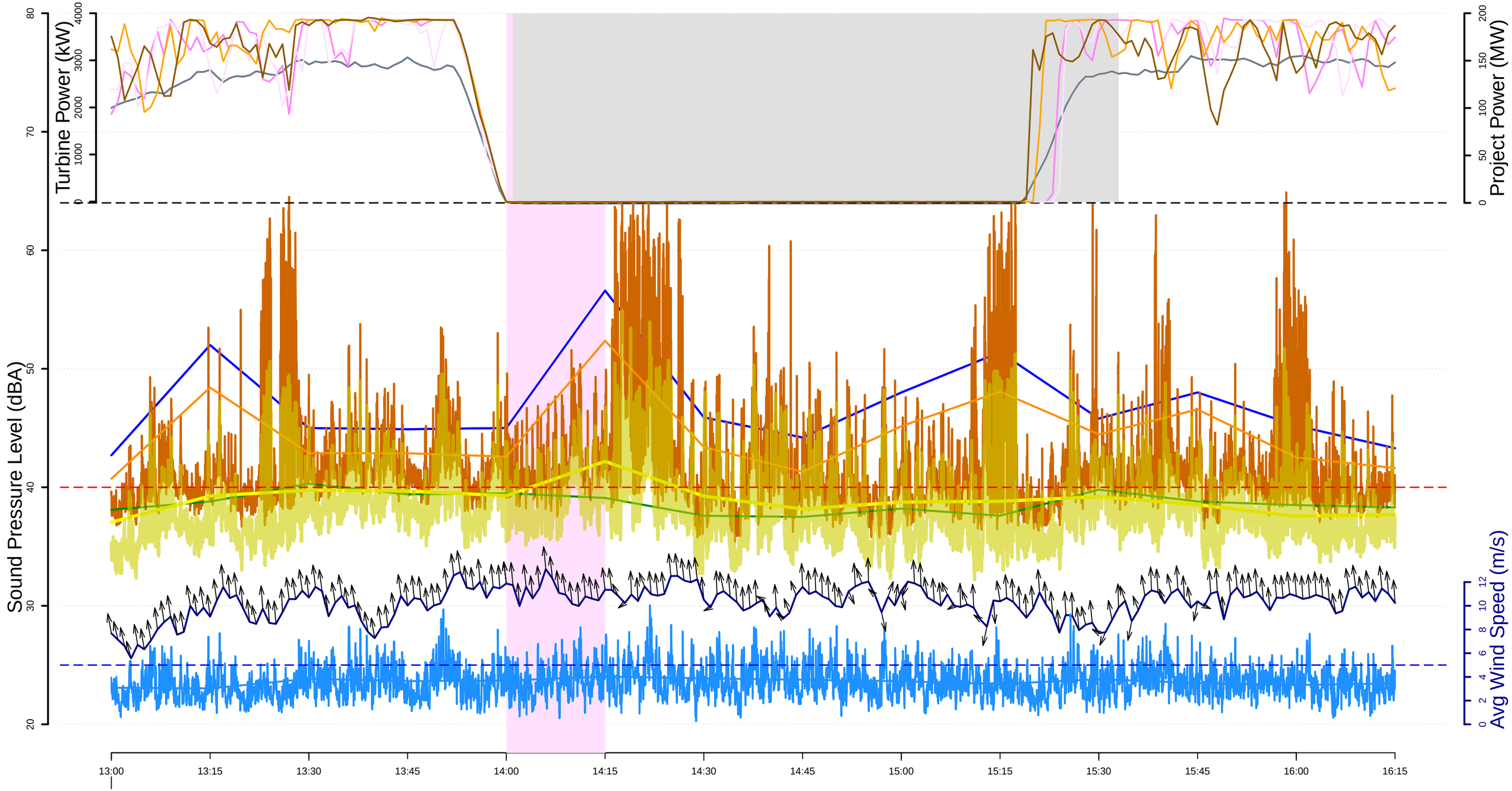
REC−068 (Fuerniss Residence), Curtail #42
Saturday, 8 1, 2020



01/08

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T08
- Real Power (kW) T16
- Real Power (kW) T40
- Real Power (kW) T32
- Project Power (MW)

REC−068 (Fuerniss Residence), Curtail #43
Saturday, 8 1, 2020



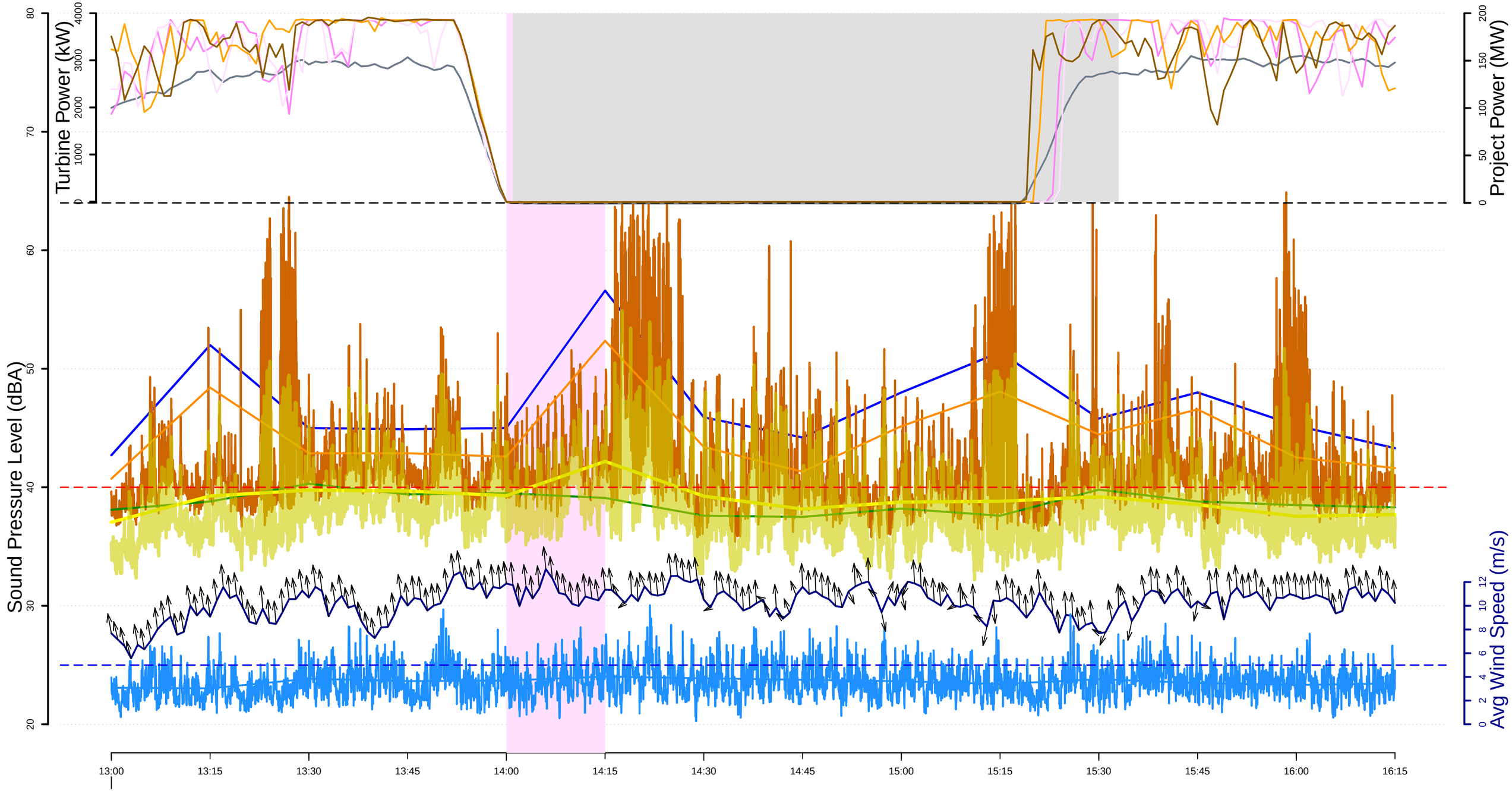
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32

Project Power (MW)

REC−068 (Fuerniss Residence), Curtail #44
Saturday, 8 1, 2020



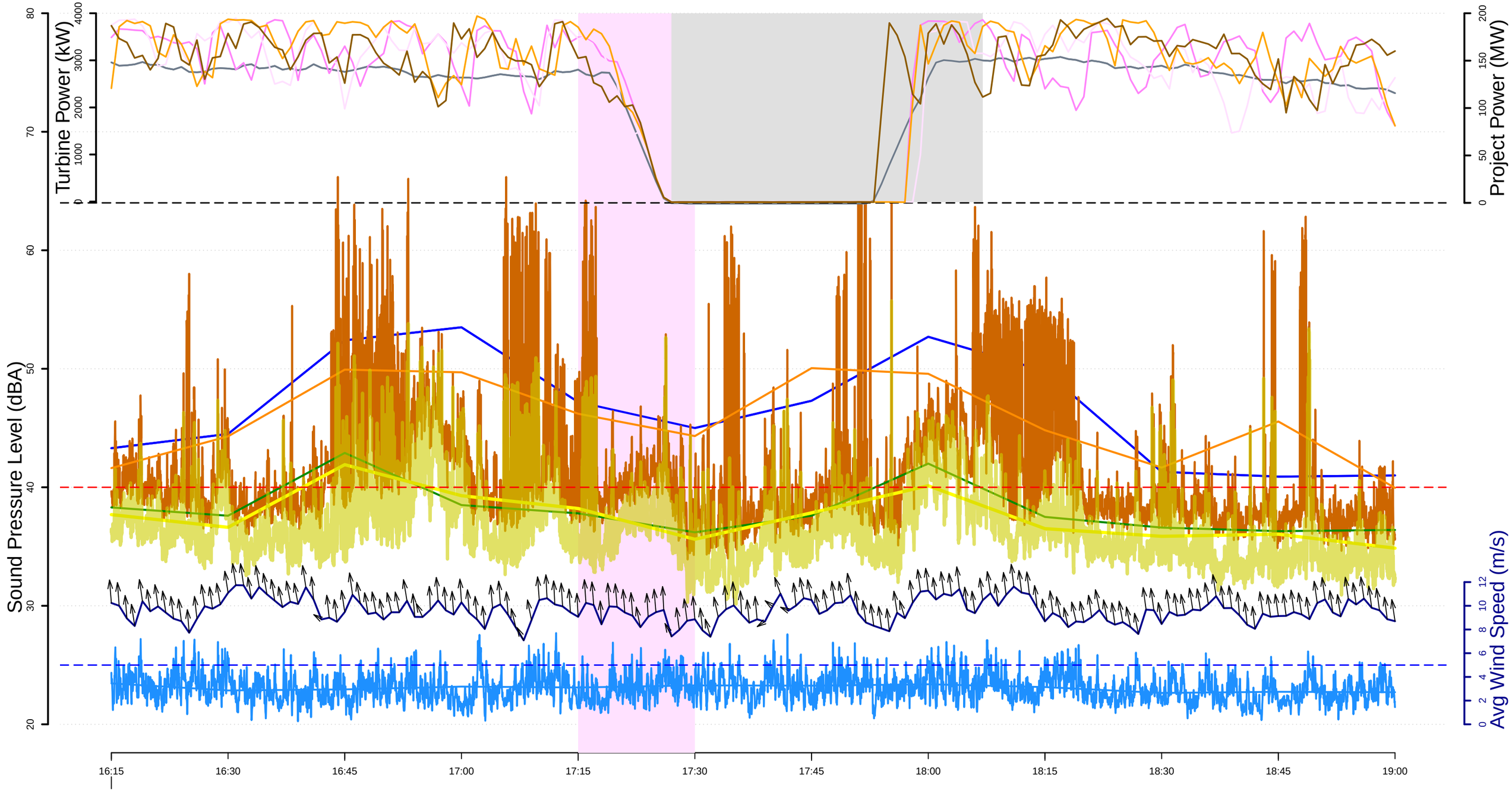
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32

Project Power (MW)

REC−068 (Fuerniss Residence), Curtail #45
Saturday, 8 1, 2020



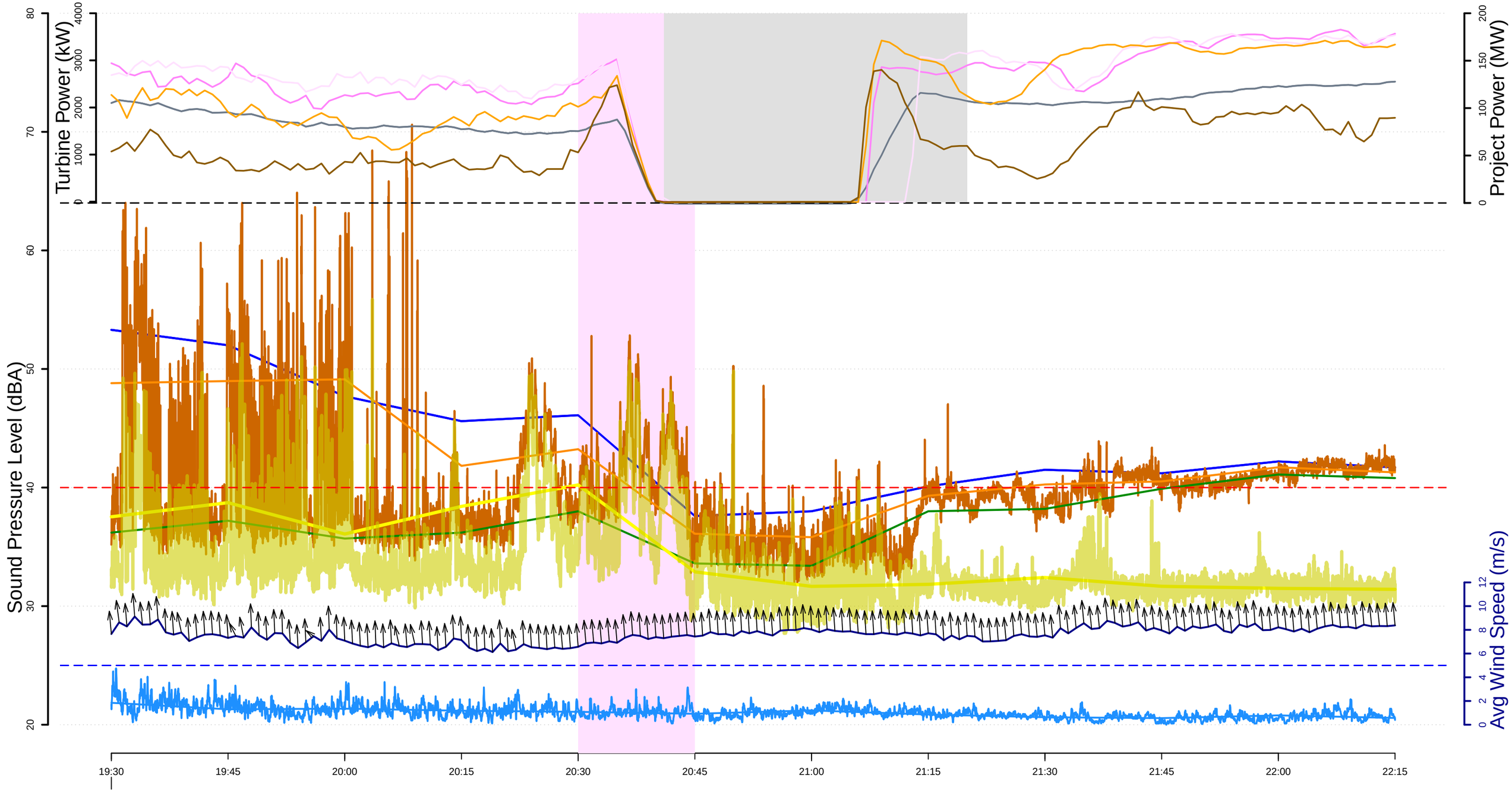
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32

Project Power (MW)

REC−068 (Fuerniss Residence), Curtail #46
Saturday, 8 1, 2020



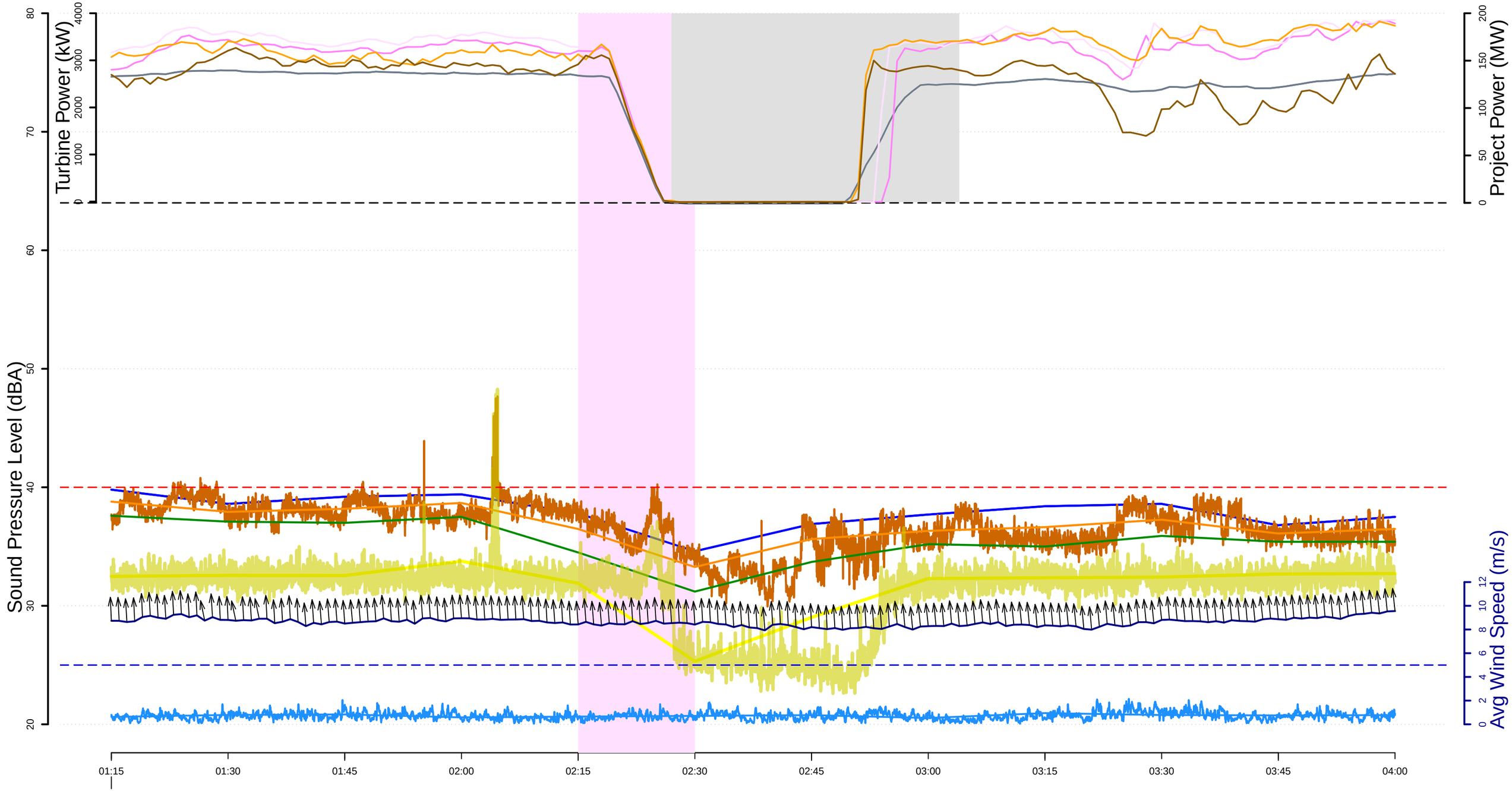
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32

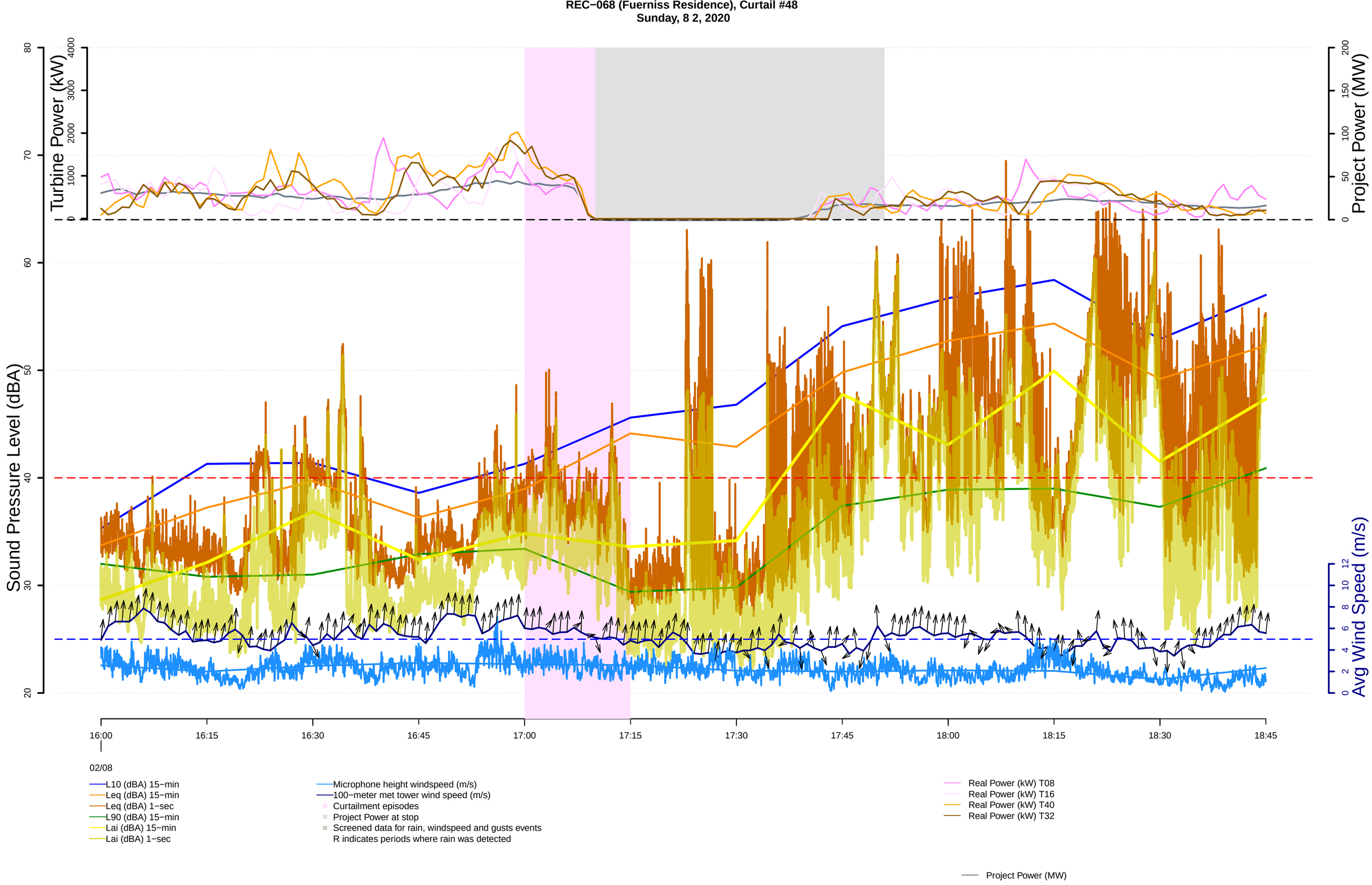
Project Power (MW)

REC−068 (Fuerniss Residence), Curtail #47
Sunday, 8 2, 2020

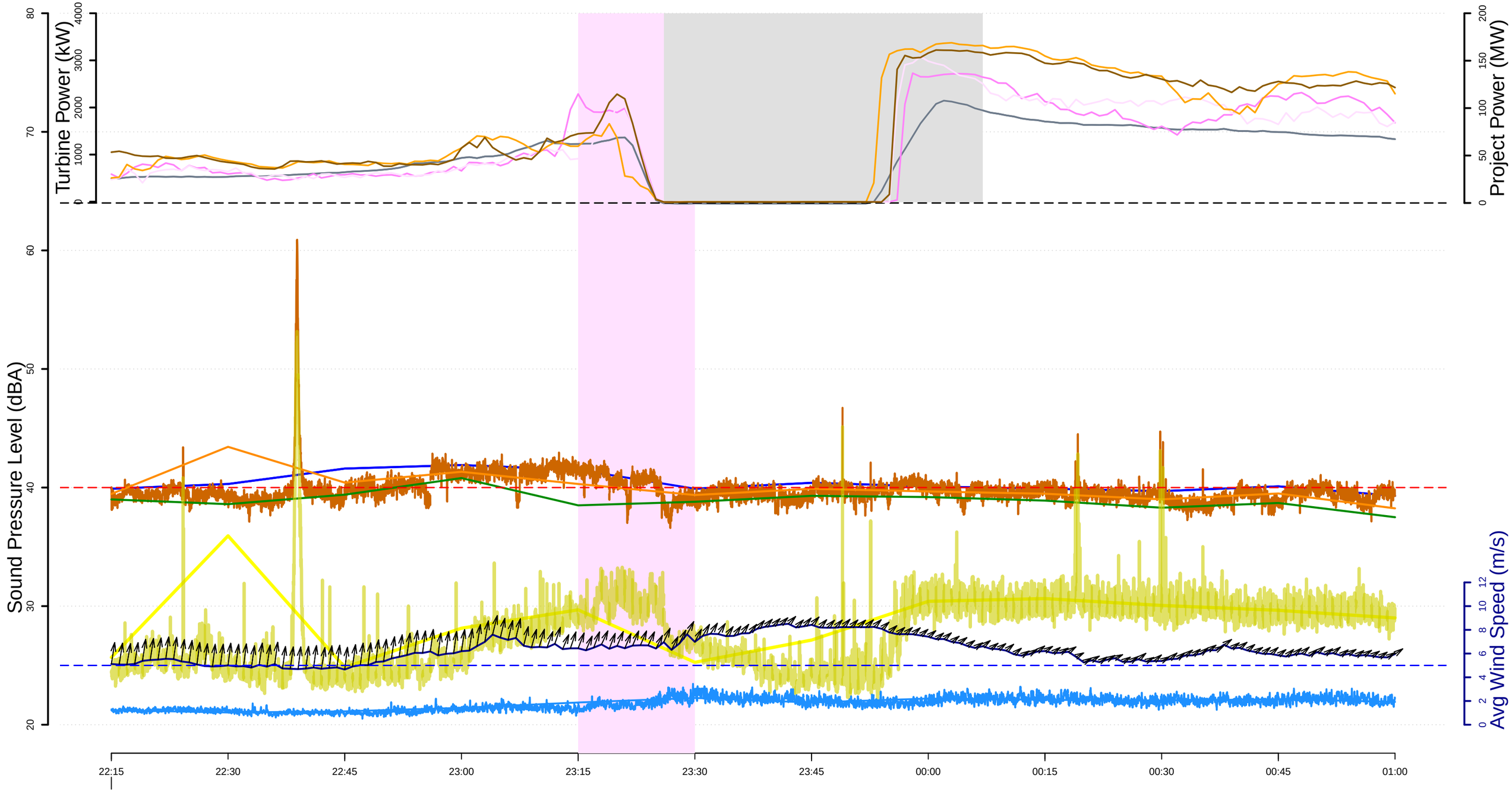


02/08

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T08
- Real Power (kW) T16
- Real Power (kW) T40
- Real Power (kW) T32
- Project Power (MW)


REC−068 (Fuerniss Residence), Curtail #48
Sunday, 8 2, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
16:00
16:15
16:30
16:45
17:00
17:15
17:30
17:45
18:00
18:15
18:30
18:45
02/08
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32
Project Power (MW)

REC−068 (Fuerniss Residence), Curtail #49
Sunday, 8 2, 2020

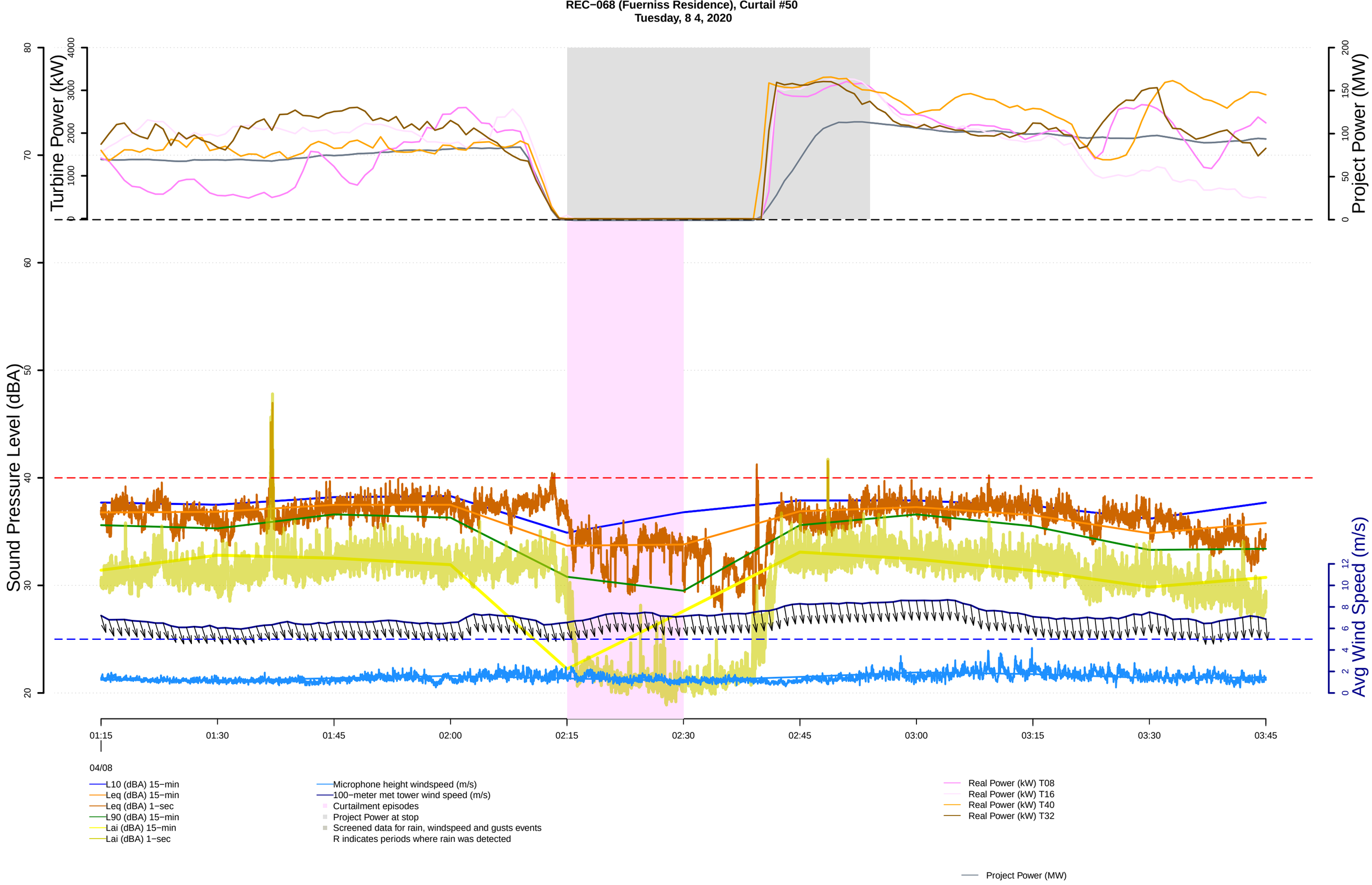


L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

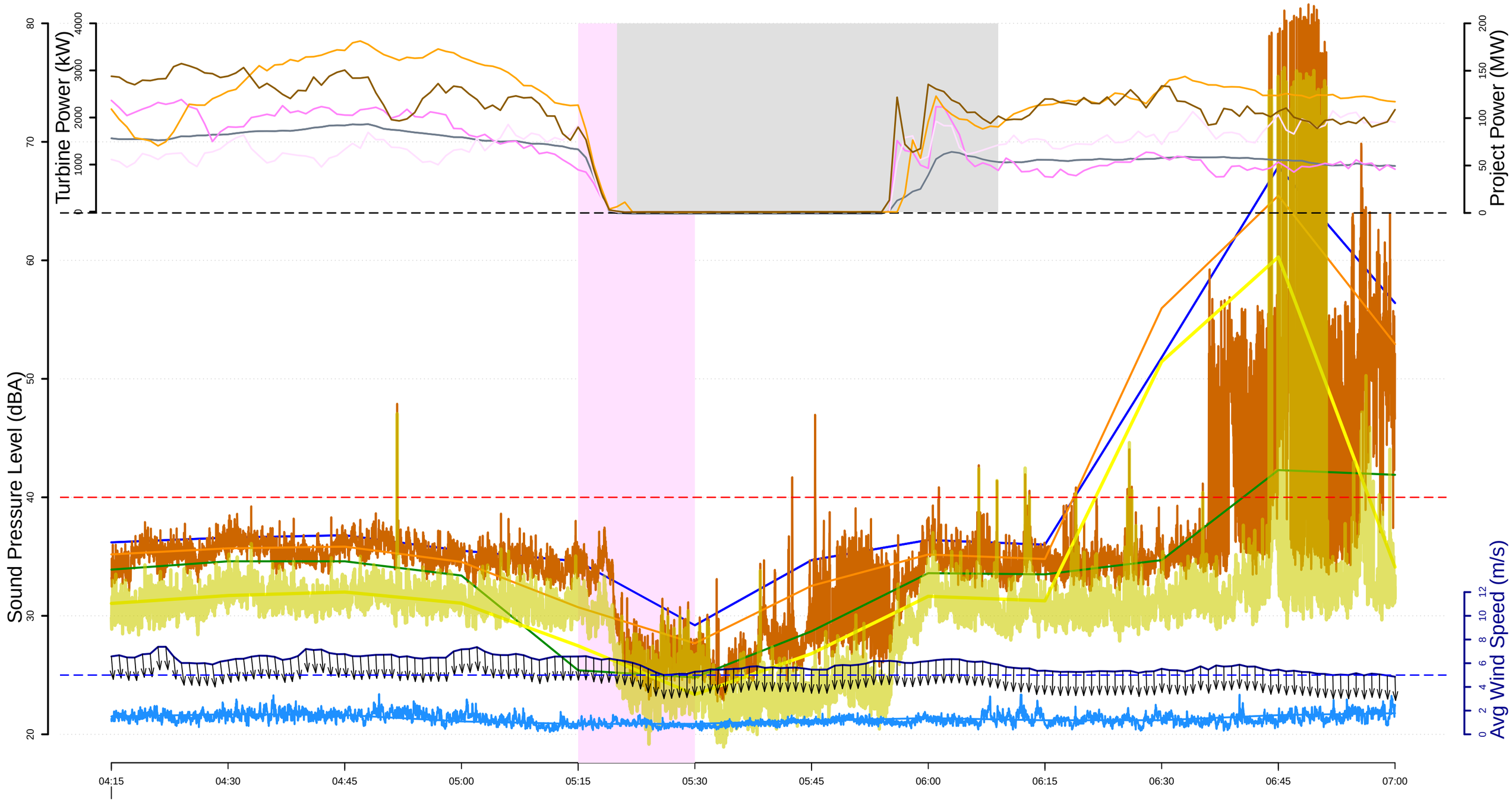
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32

Project Power (MW)


REC−068 (Fuerniss Residence), Curtail #50
Tuesday, 8 4, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
01:15
01:30
01:45
02:00
02:15
02:30
02:45
03:00
03:15
03:30
03:45
04/08
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32
Project Power (MW)

REC−068 (Fuerniss Residence), Curtail #51
Tuesday, 8 4, 2020



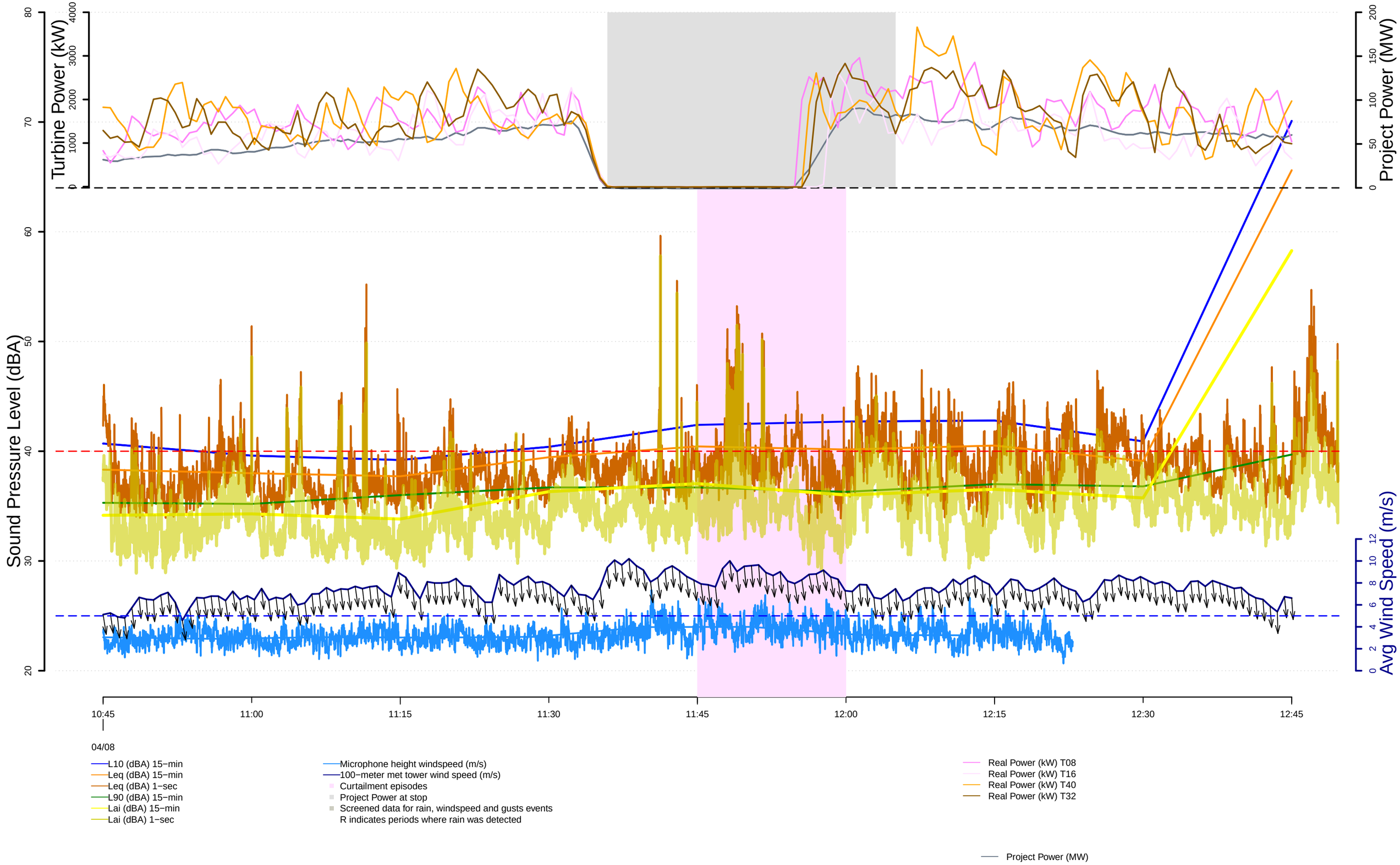
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

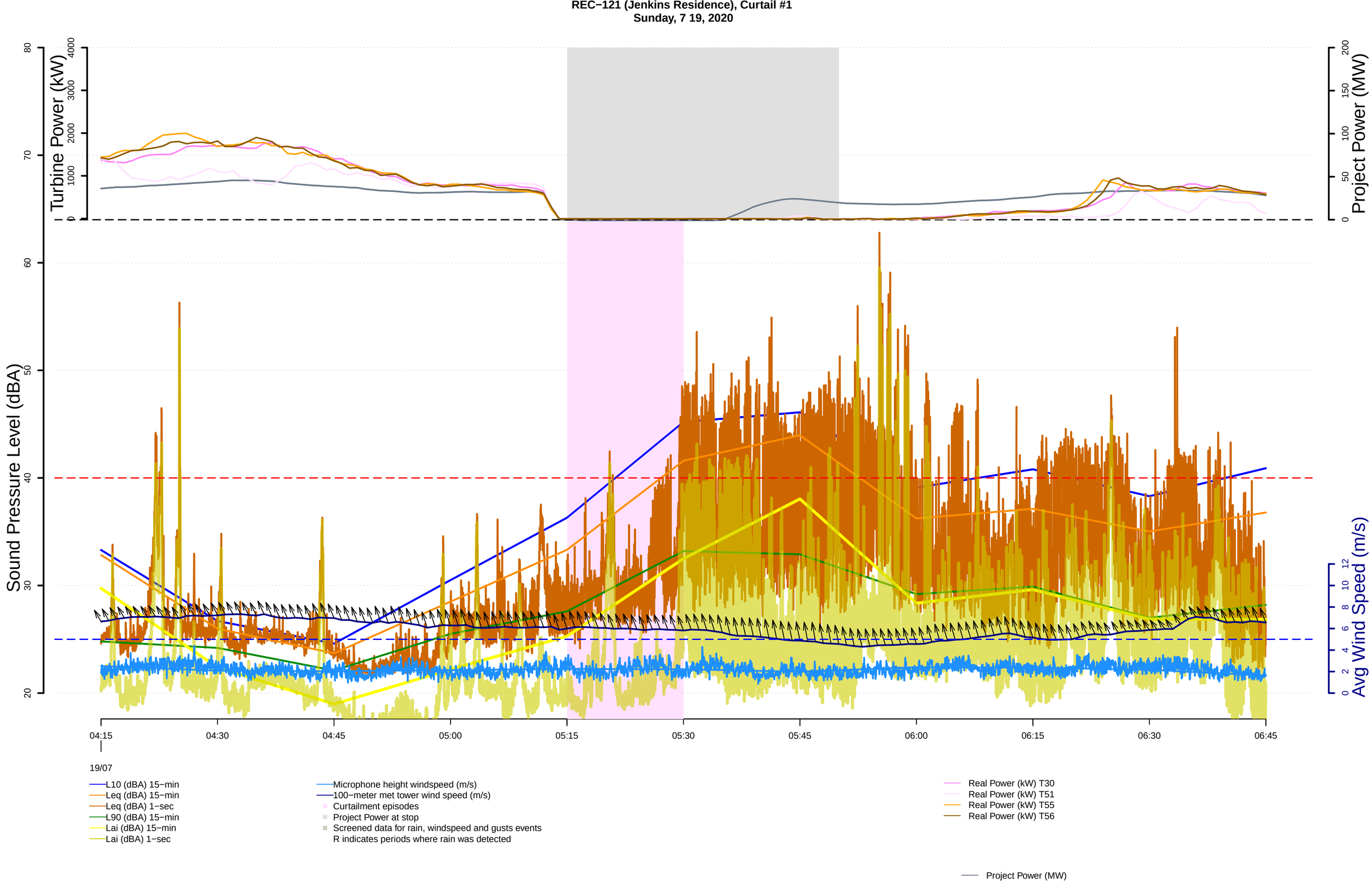
Real Power (kW) T08
Real Power (kW) T16
Real Power (kW) T40
Real Power (kW) T32

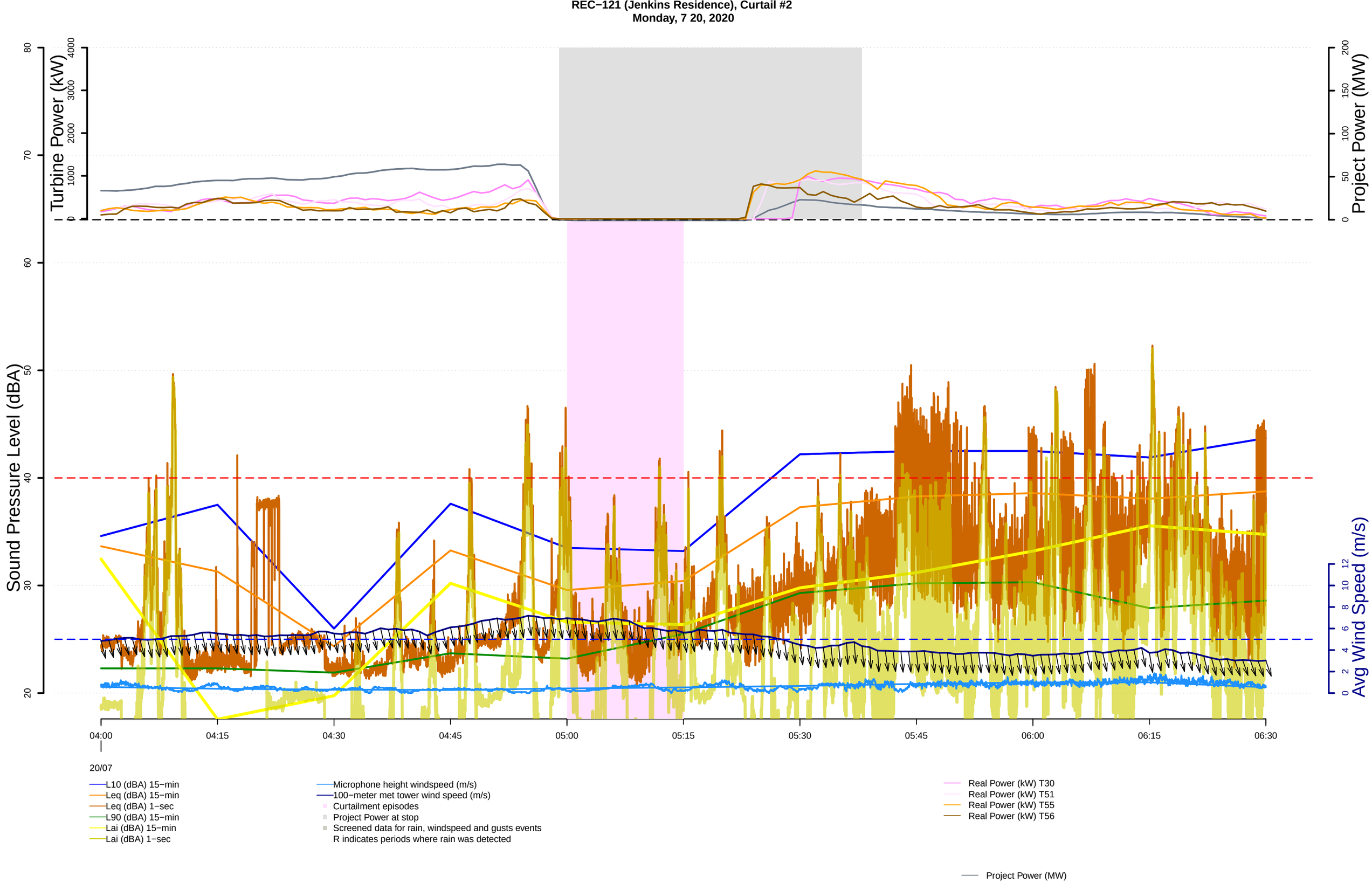
Project Power (MW)

REC−068 (Fuerniss Residence), Curtail #52
Tuesday, 8 4, 2020

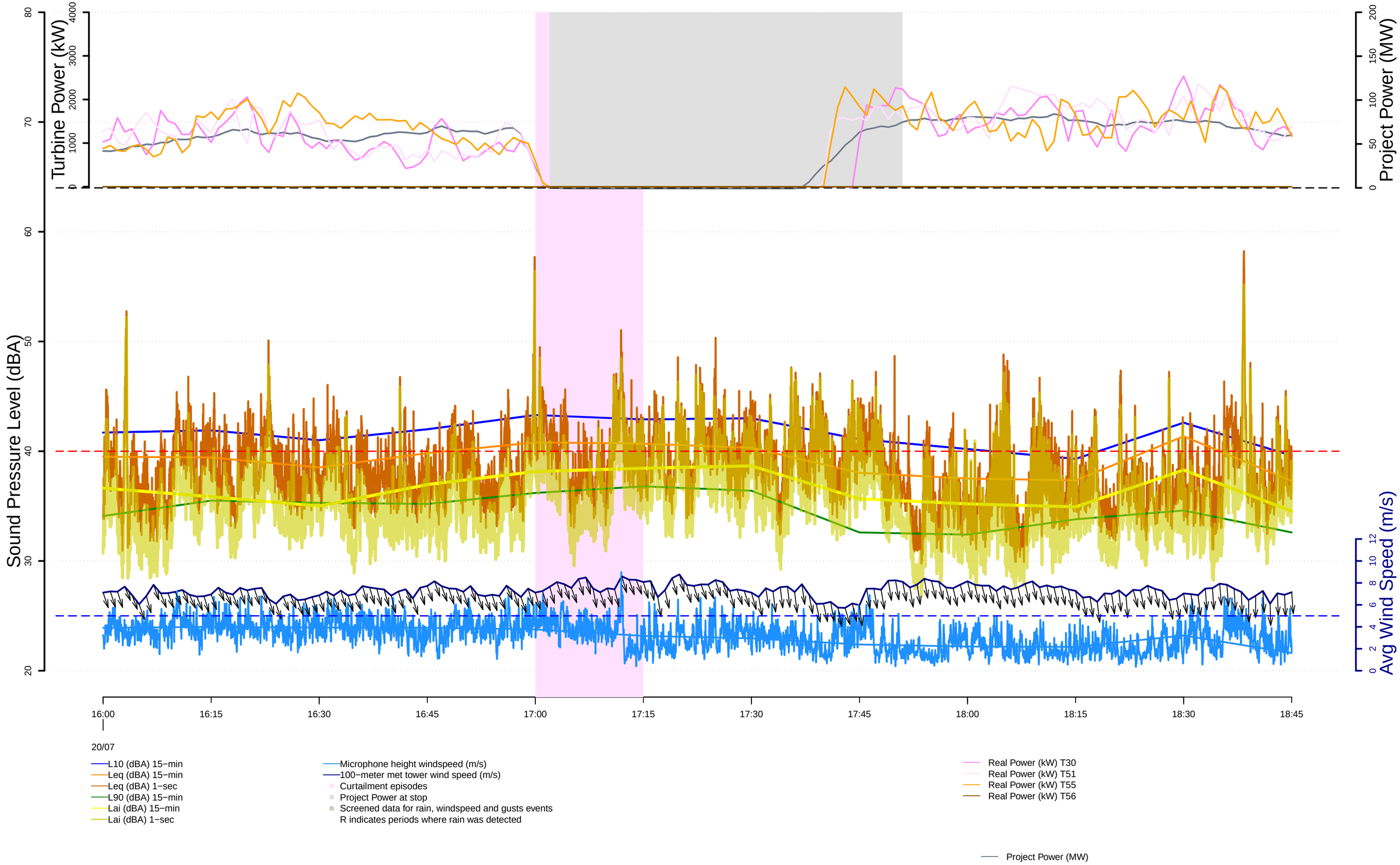


REC-121 (Jenkins Residence)

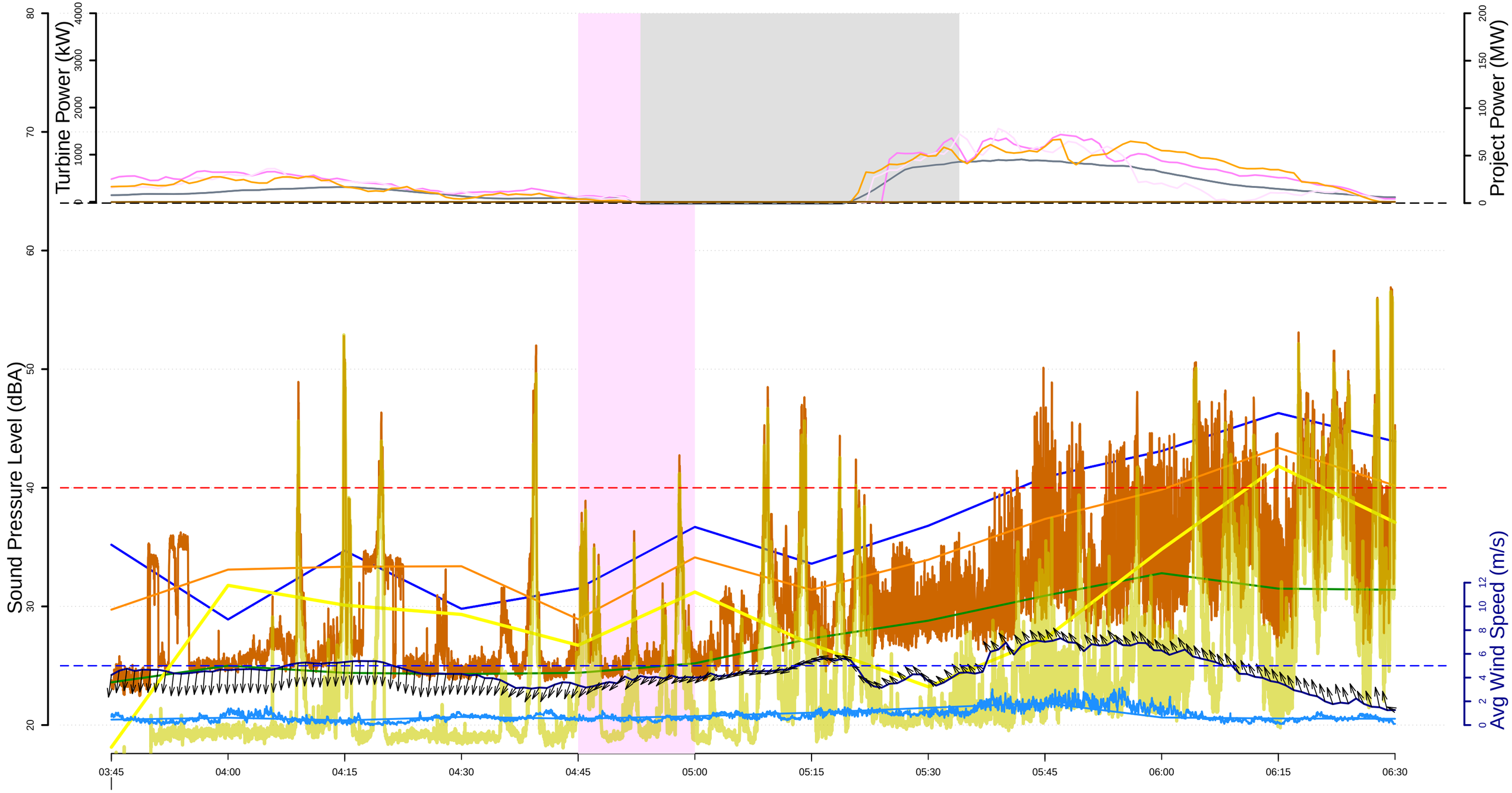

REC−121 (Jenkins Residence), Curtail #1
Sunday, 7 19, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
04:15
04:30
04:45
05:00
05:15
05:30
05:45
06:00
06:15
06:30
06:45
19/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56
Project Power (MW)


REC−121 (Jenkins Residence), Curtail #2
Monday, 7 20, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
04:00
04:15
04:30
04:45
05:00
05:15
05:30
05:45
06:00
06:15
06:30
20/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56
Project Power (MW)

REC−121 (Jenkins Residence), Curtail #3
Monday, 7 20, 2020



REC−121 (Jenkins Residence), Curtail #4
Tuesday, 7 21, 2020



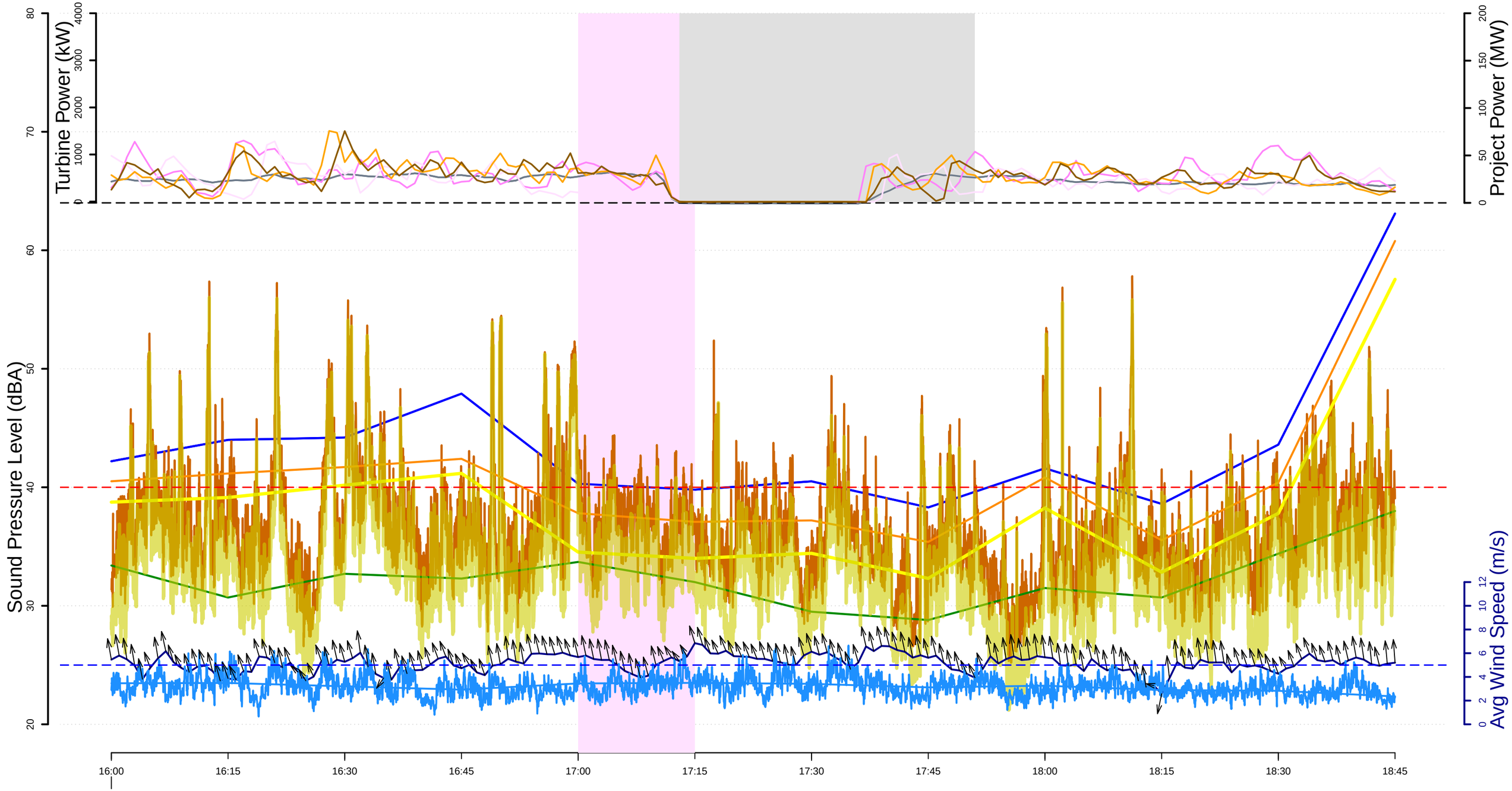
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

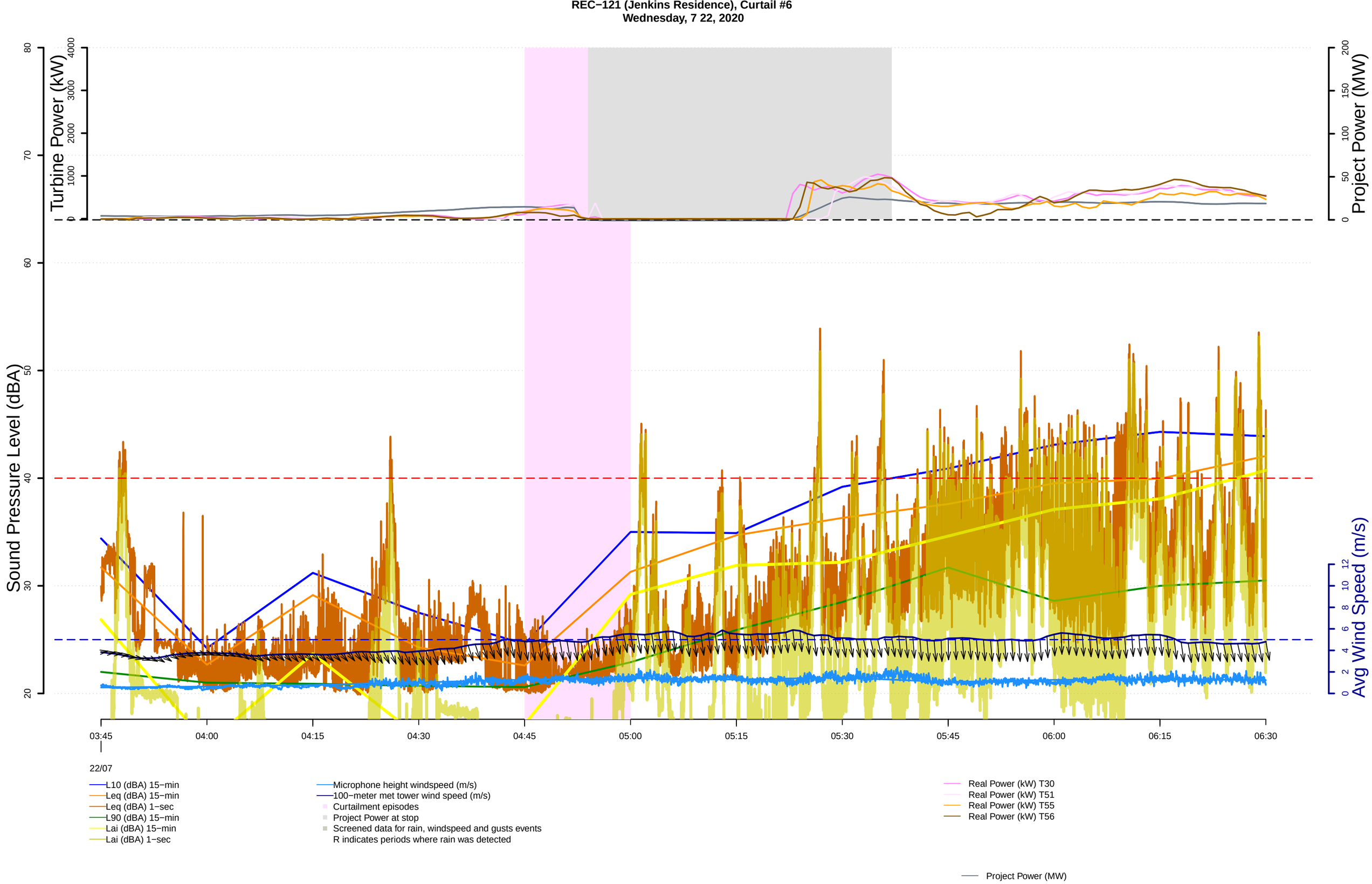
Project Power (MW)

REC−121 (Jenkins Residence), Curtail #5
Tuesday, 7 21, 2020

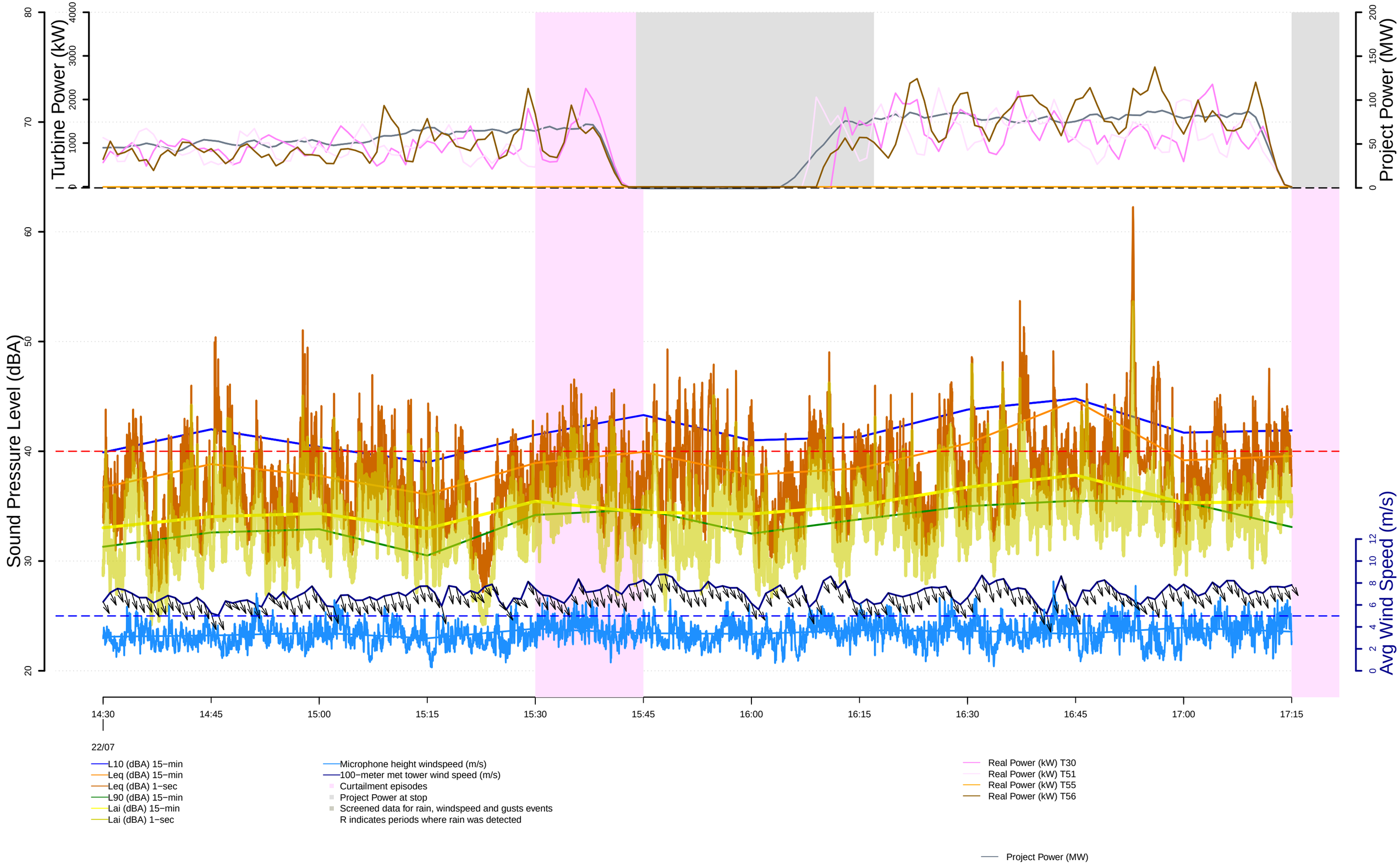


21/07

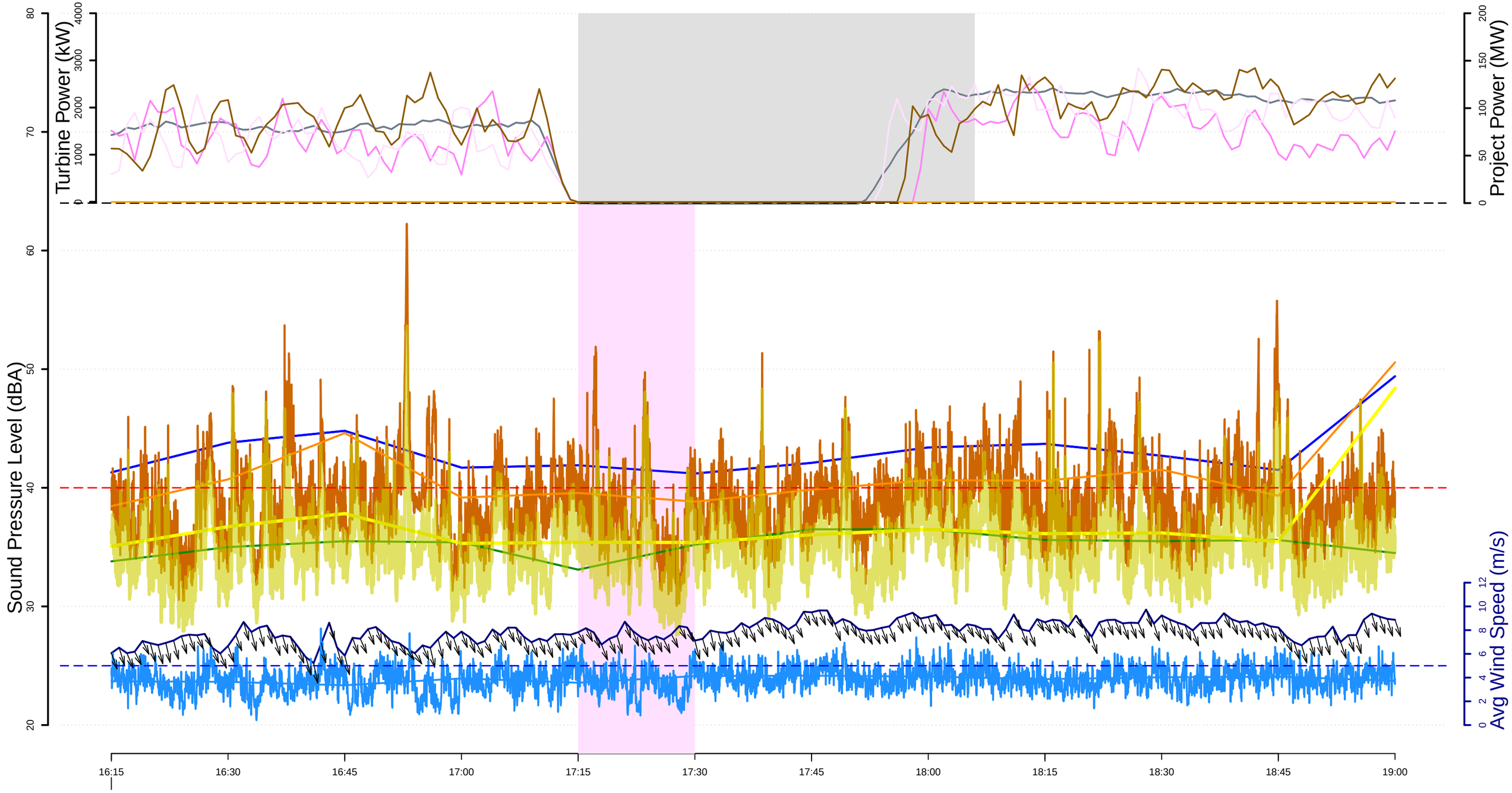
- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T30
- Real Power (kW) T51
- Real Power (kW) T55
- Real Power (kW) T56
- Project Power (MW)


REC−121 (Jenkins Residence), Curtail #6
Wednesday, 7 22, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
03:45
04:00
04:15
04:30
04:45
05:00
05:15
05:30
05:45
06:00
06:15
06:30
22/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56
Project Power (MW)

REC−121 (Jenkins Residence), Curtail #7
Wednesday, 7 22, 2020



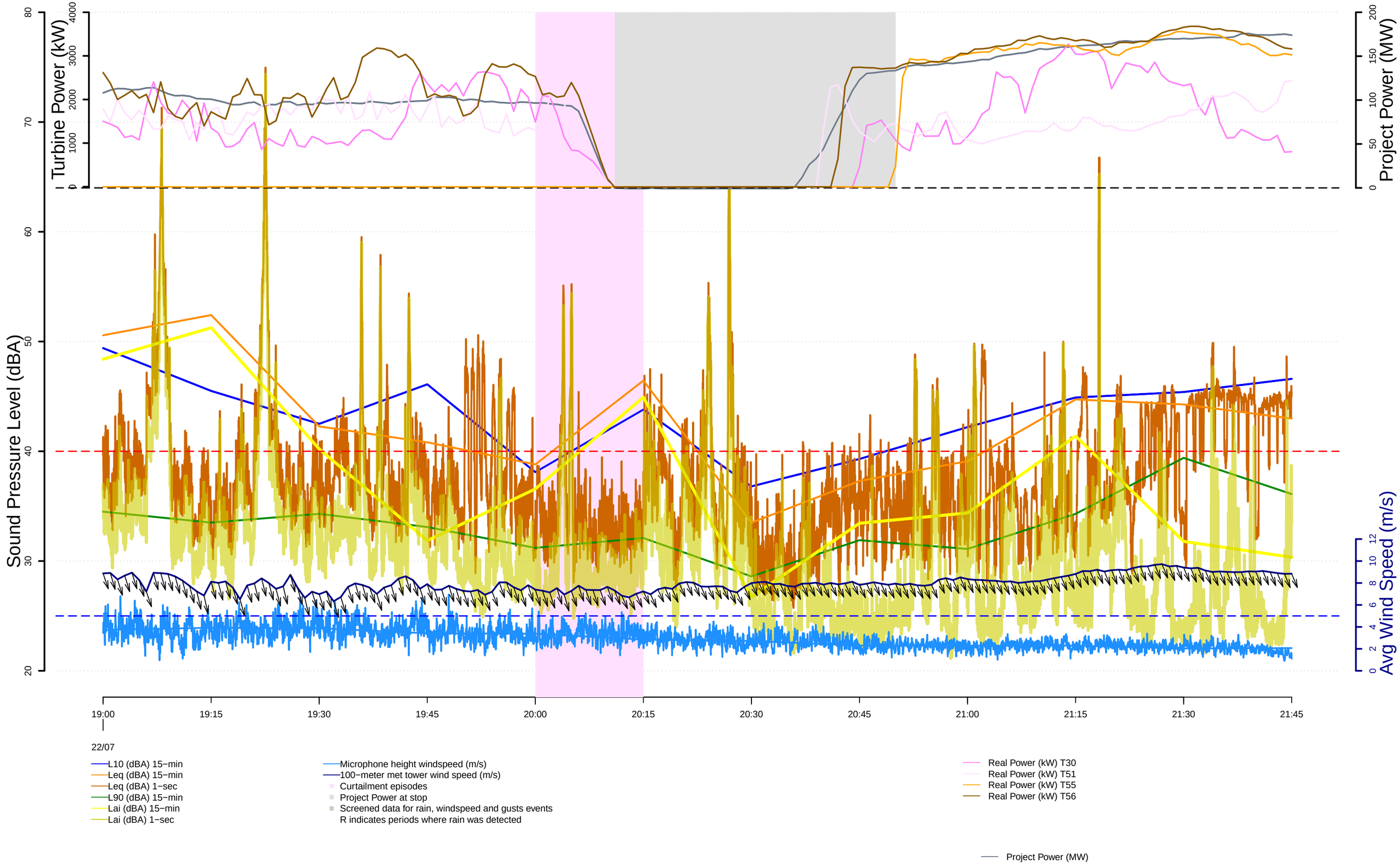
REC−121 (Jenkins Residence), Curtail #8
Wednesday, 7 22, 2020



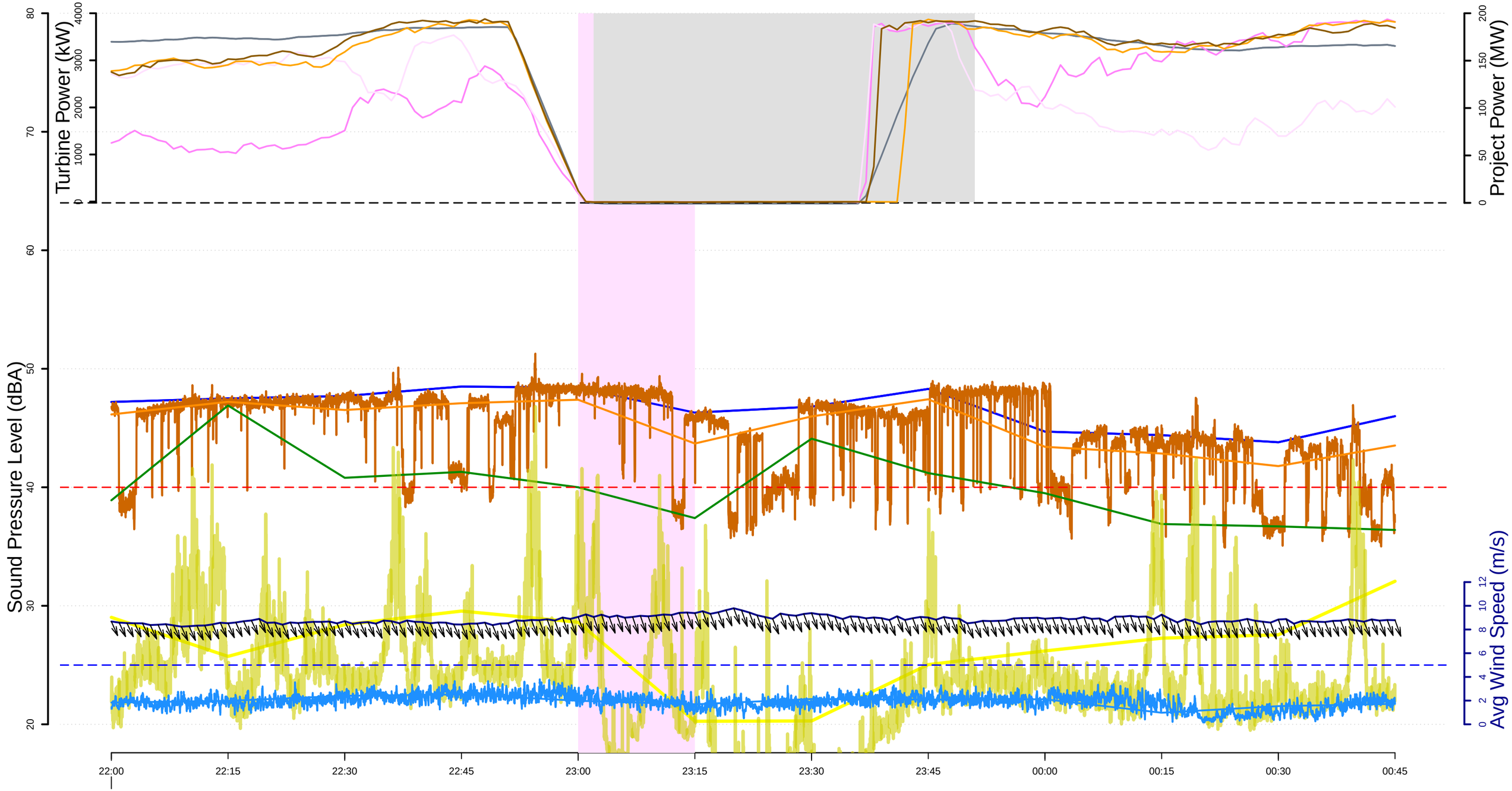
22/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T30
- Real Power (kW) T51
- Real Power (kW) T55
- Real Power (kW) T56
- Project Power (MW)

REC−121 (Jenkins Residence), Curtail #9
Wednesday, 7 22, 2020



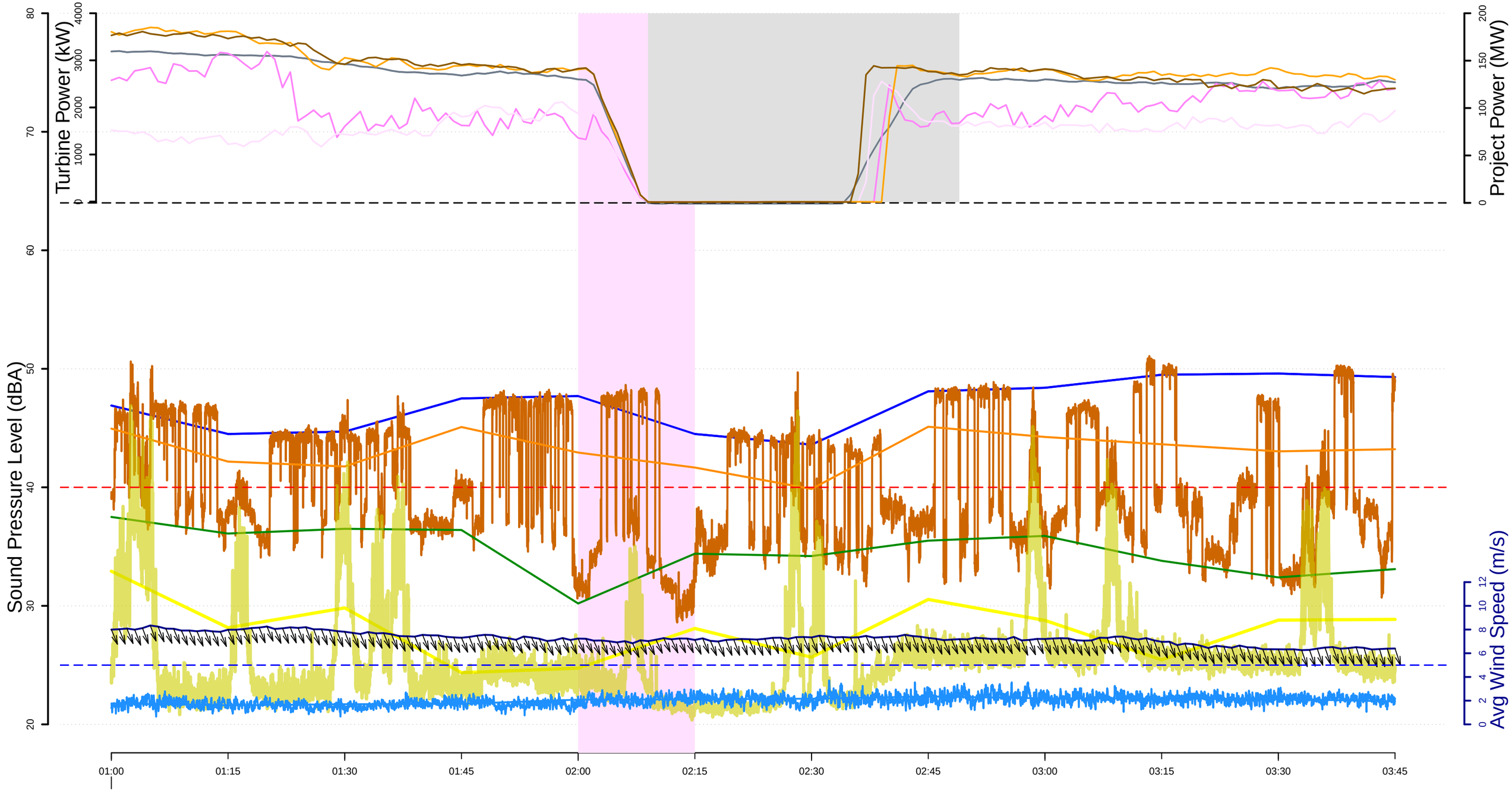
REC−121 (Jenkins Residence), Curtail #10
Wednesday, 7 22, 2020



22/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T30
- Real Power (kW) T51
- Real Power (kW) T55
- Real Power (kW) T56
- Project Power (MW)

REC−121 (Jenkins Residence), Curtail #11
Thursday, 7 23, 2020



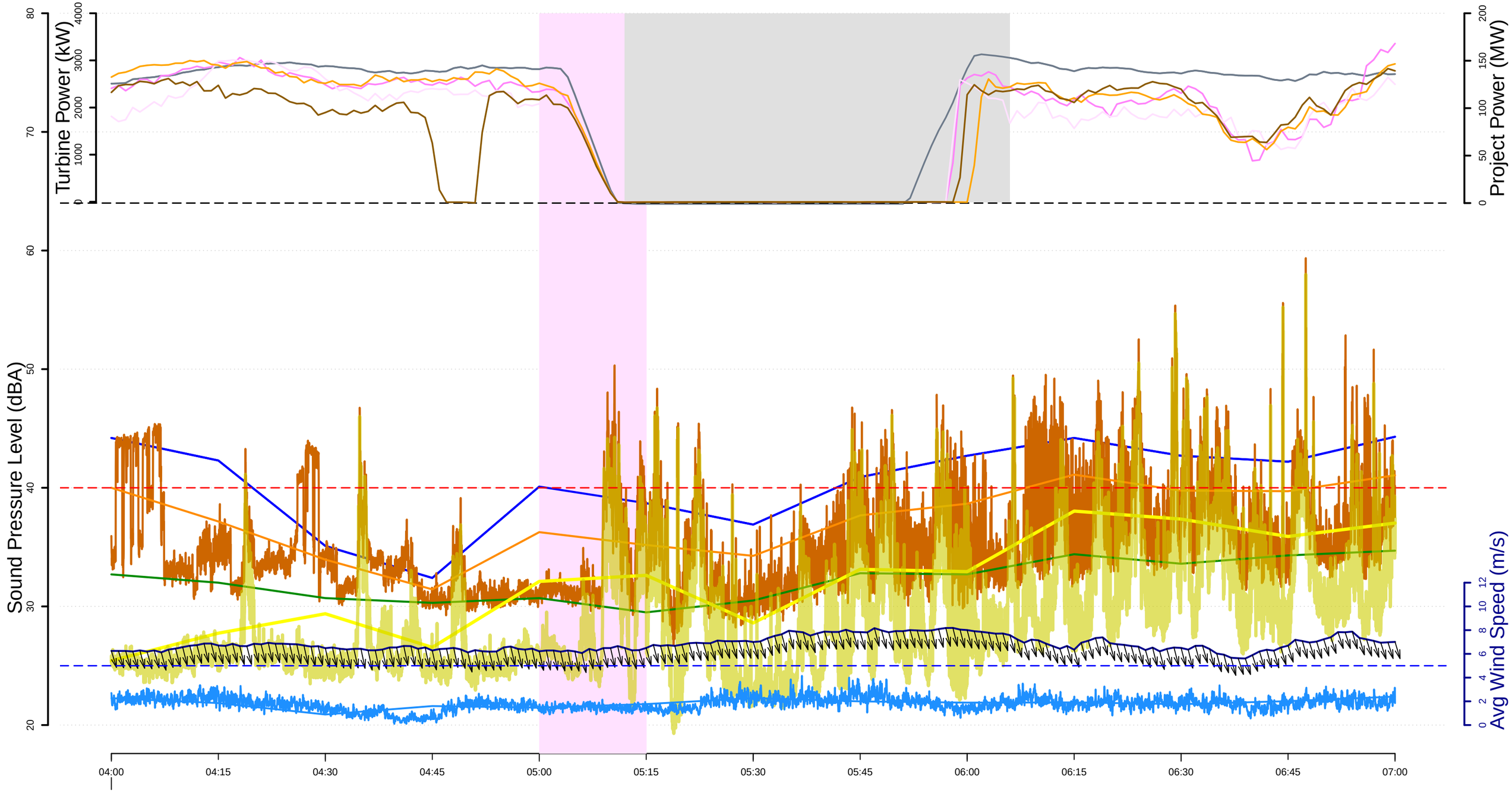
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

Project Power (MW)

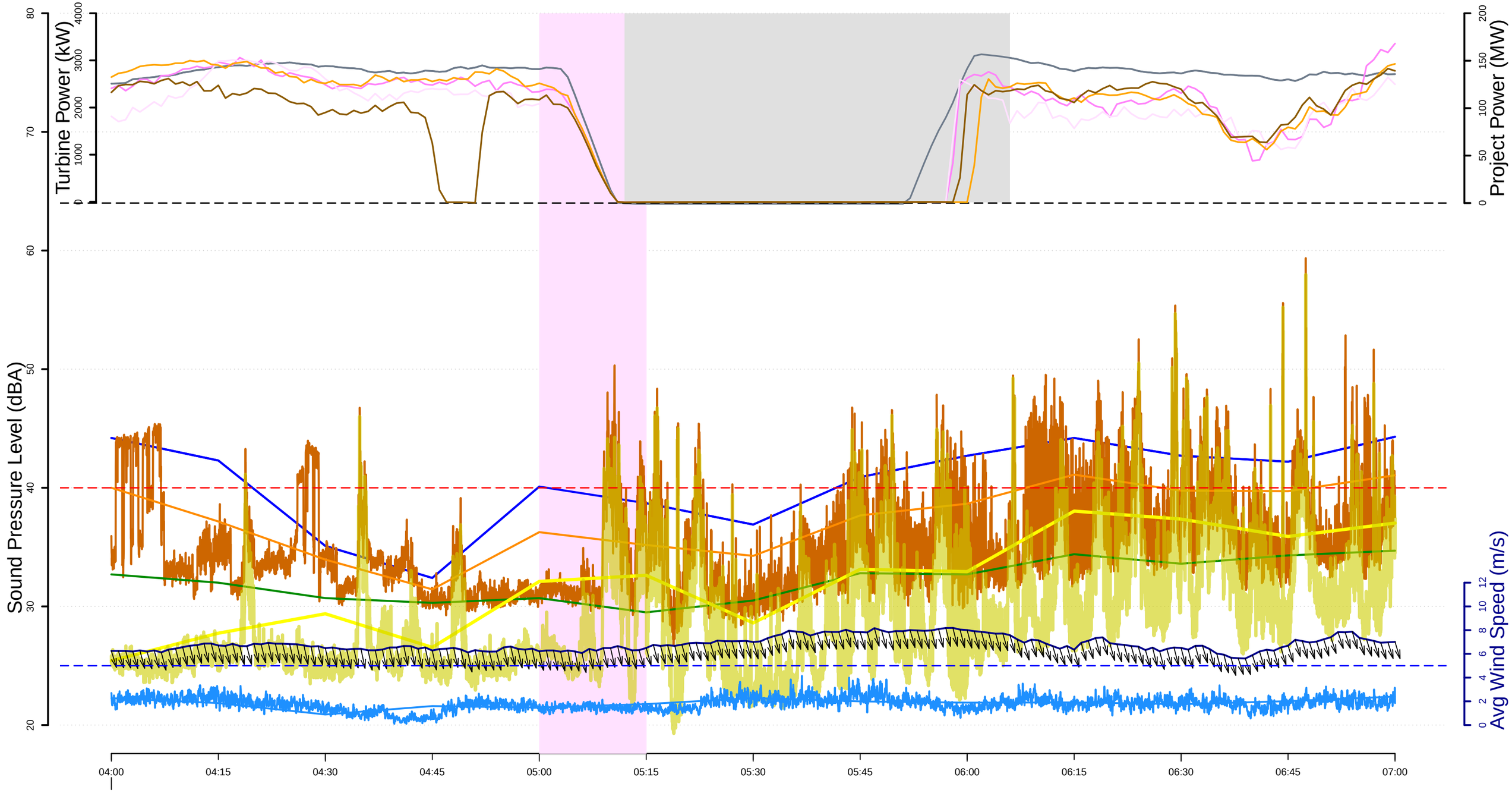
REC−121 (Jenkins Residence), Curtail #12
Thursday, 7 23, 2020



23/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T30
- Real Power (kW) T51
- Real Power (kW) T55
- Real Power (kW) T56
- Project Power (MW)

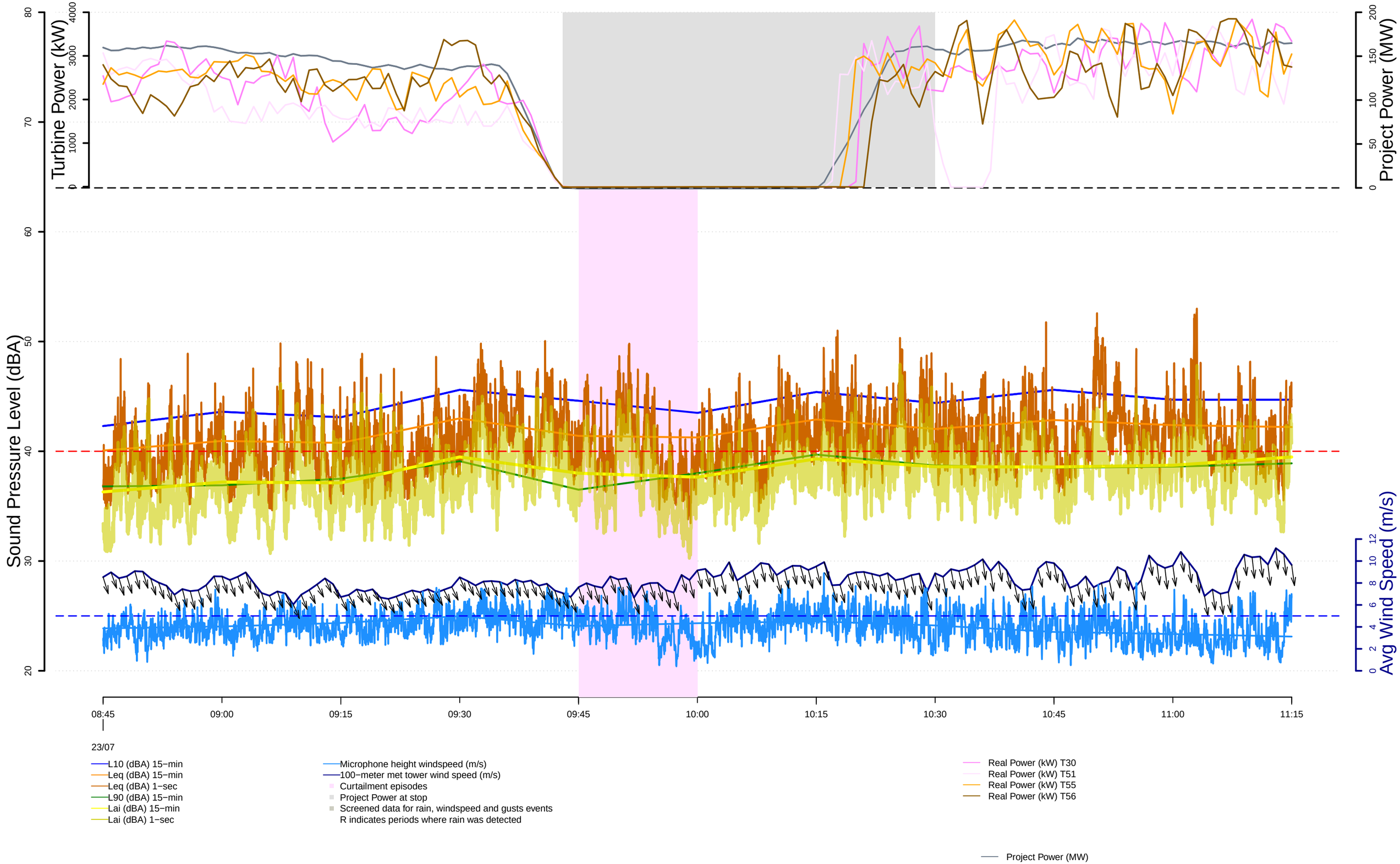
REC−121 (Jenkins Residence), Curtail #13
Thursday, 7 23, 2020



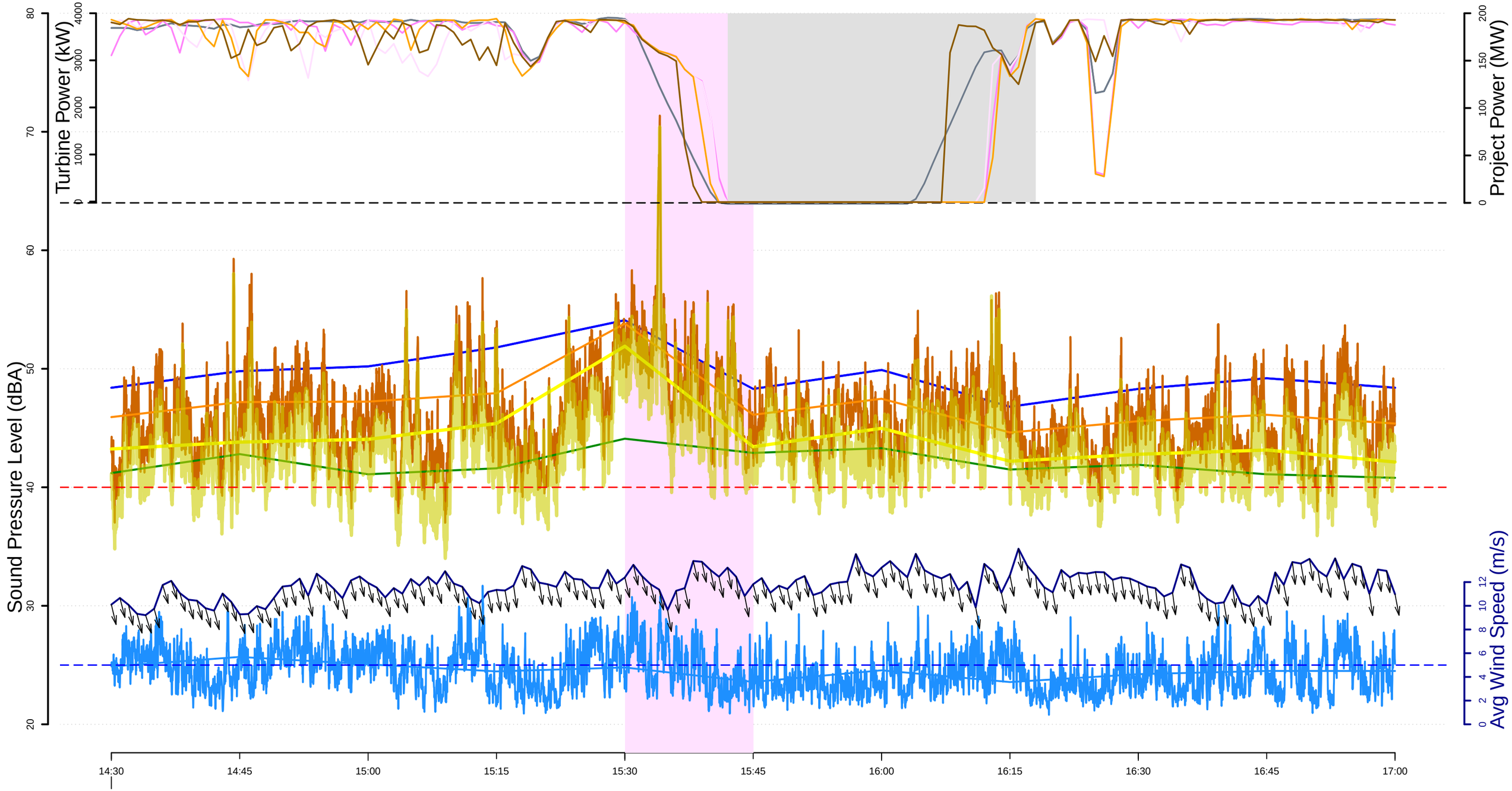
23/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T30
- Real Power (kW) T51
- Real Power (kW) T55
- Real Power (kW) T56
- Project Power (MW)

REC−121 (Jenkins Residence), Curtail #14
Thursday, 7 23, 2020



REC−121 (Jenkins Residence), Curtail #15
Thursday, 7 23, 2020



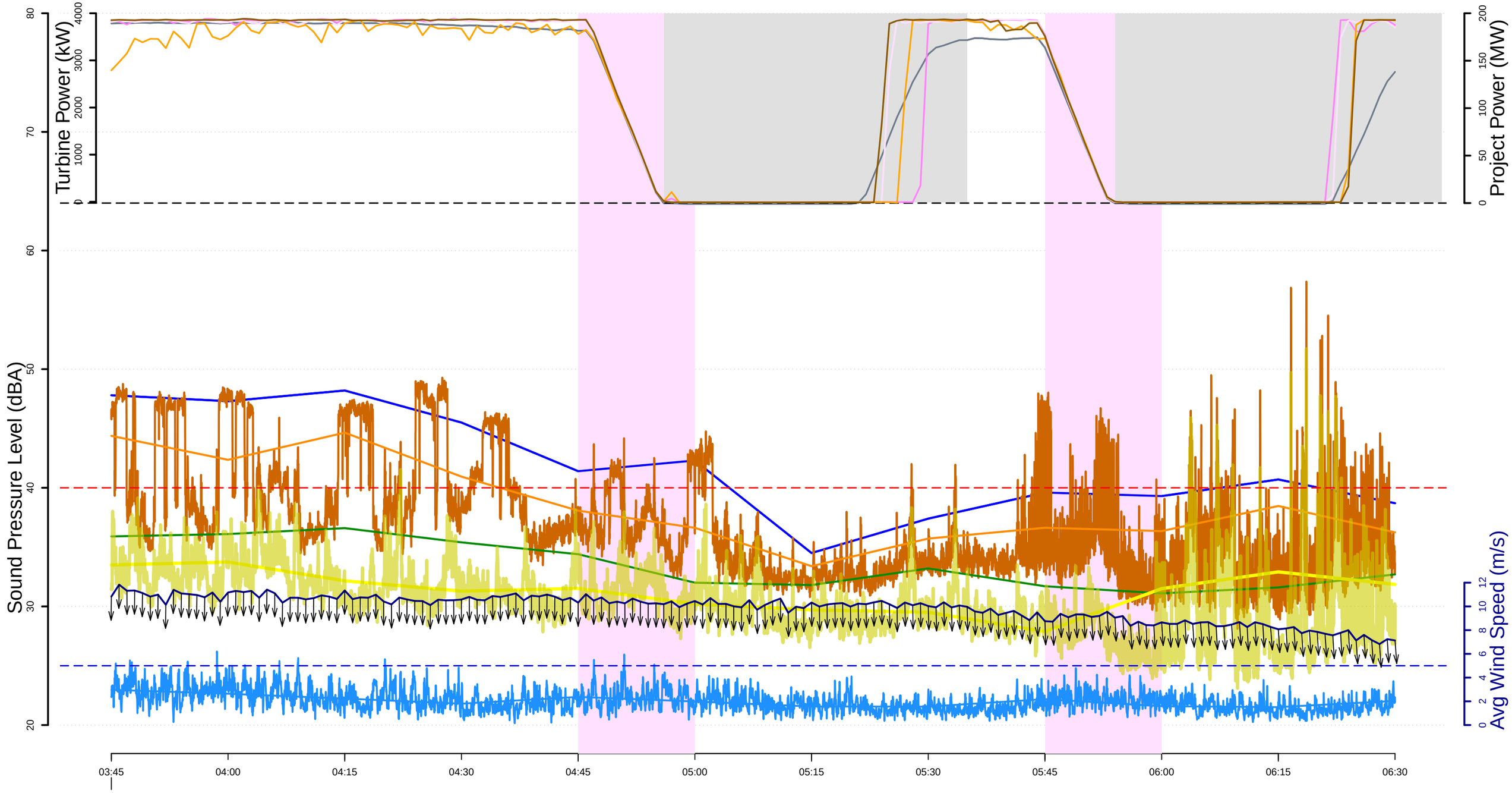
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

Project Power (MW)

REC−121 (Jenkins Residence), Curtail #16
Friday, 7 24, 2020



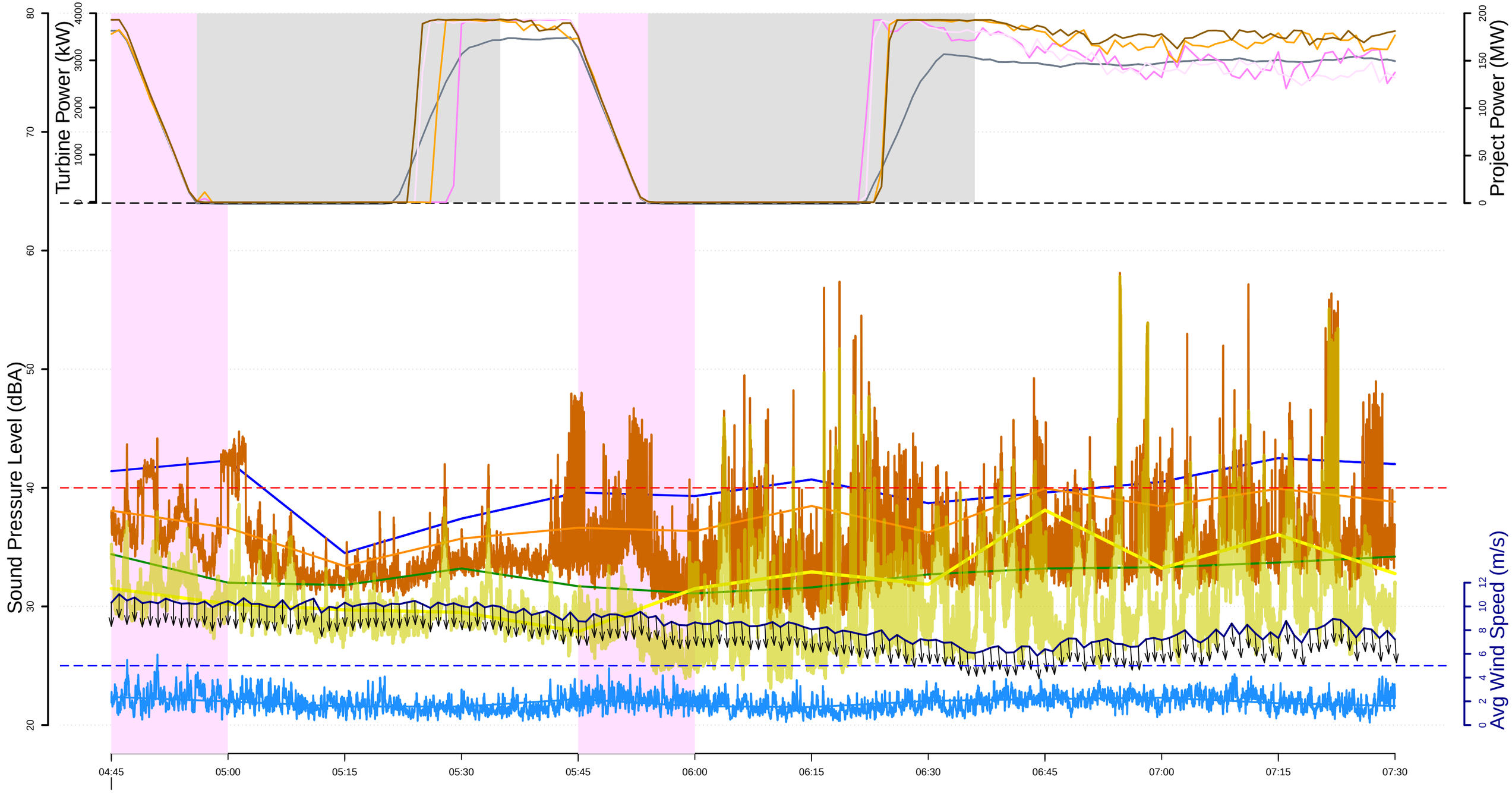
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

Project Power (MW)

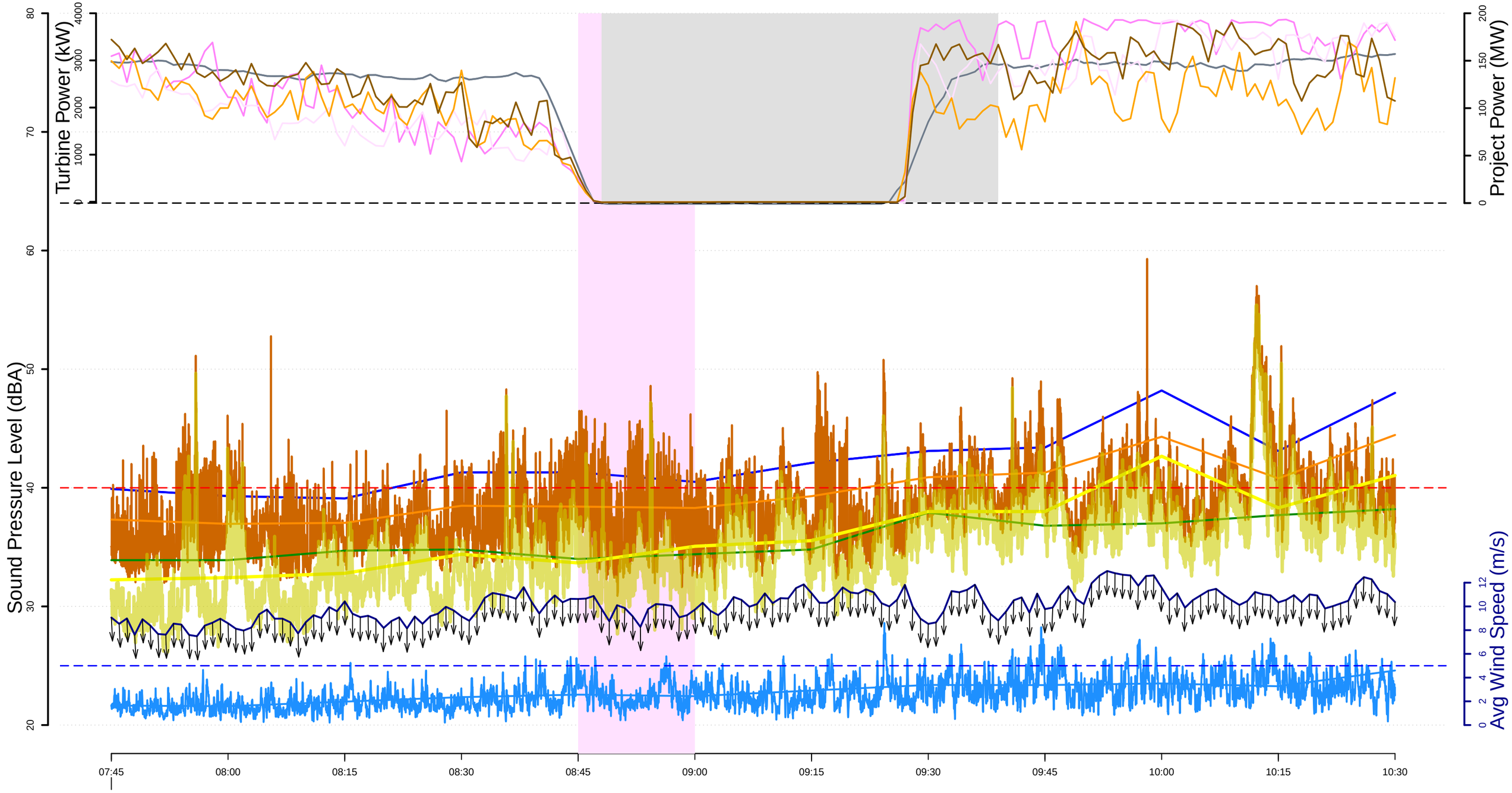
REC−121 (Jenkins Residence), Curtail #17
Friday, 7 24, 2020



24/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T30
- Real Power (kW) T51
- Real Power (kW) T55
- Real Power (kW) T56
- Project Power (MW)

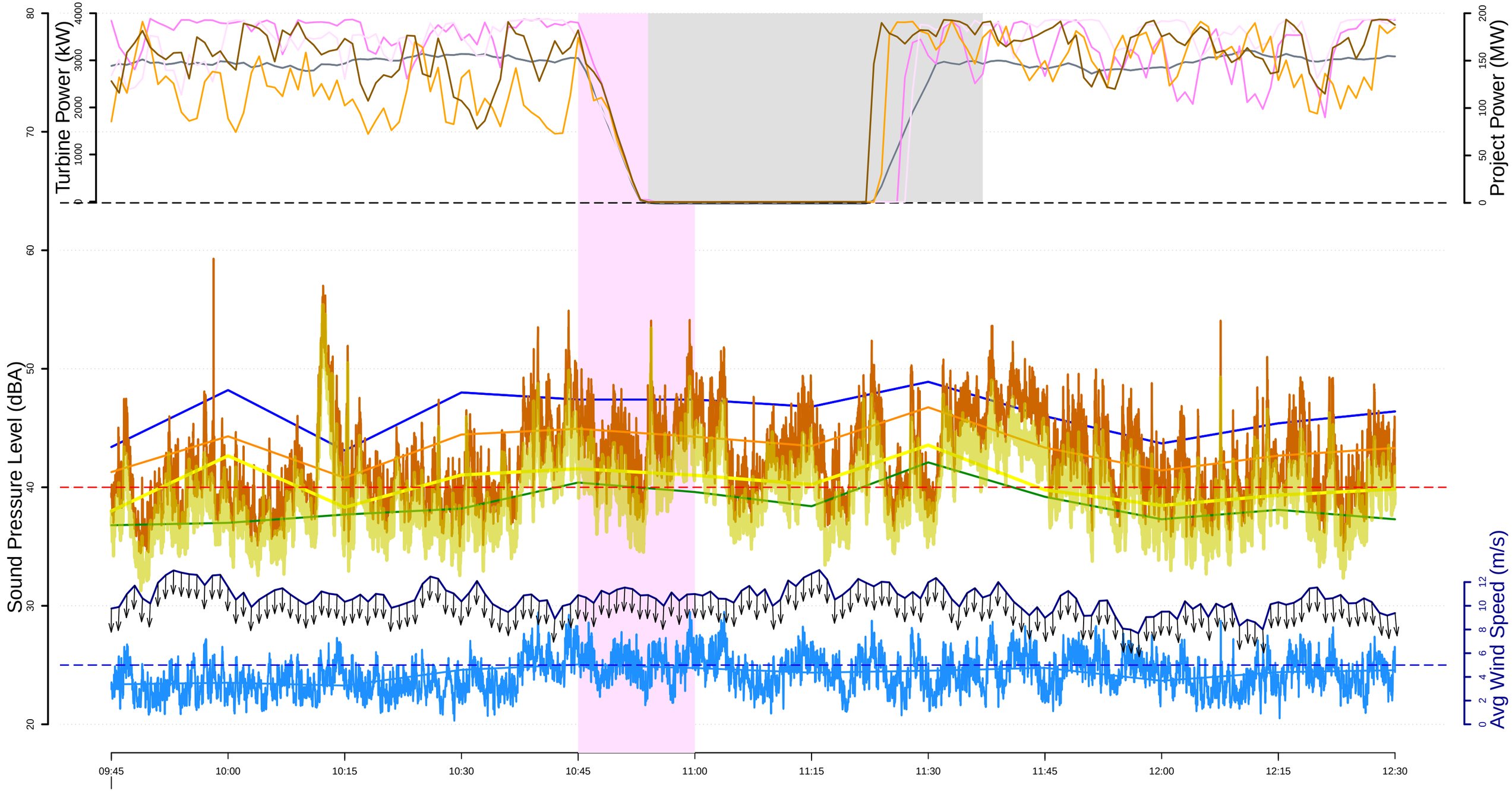
REC−121 (Jenkins Residence), Curtail #18
Friday, 7 24, 2020



24/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T30
- Real Power (kW) T51
- Real Power (kW) T55
- Real Power (kW) T56
- Project Power (MW)

REC−121 (Jenkins Residence), Curtail #19
Friday, 7 24, 2020



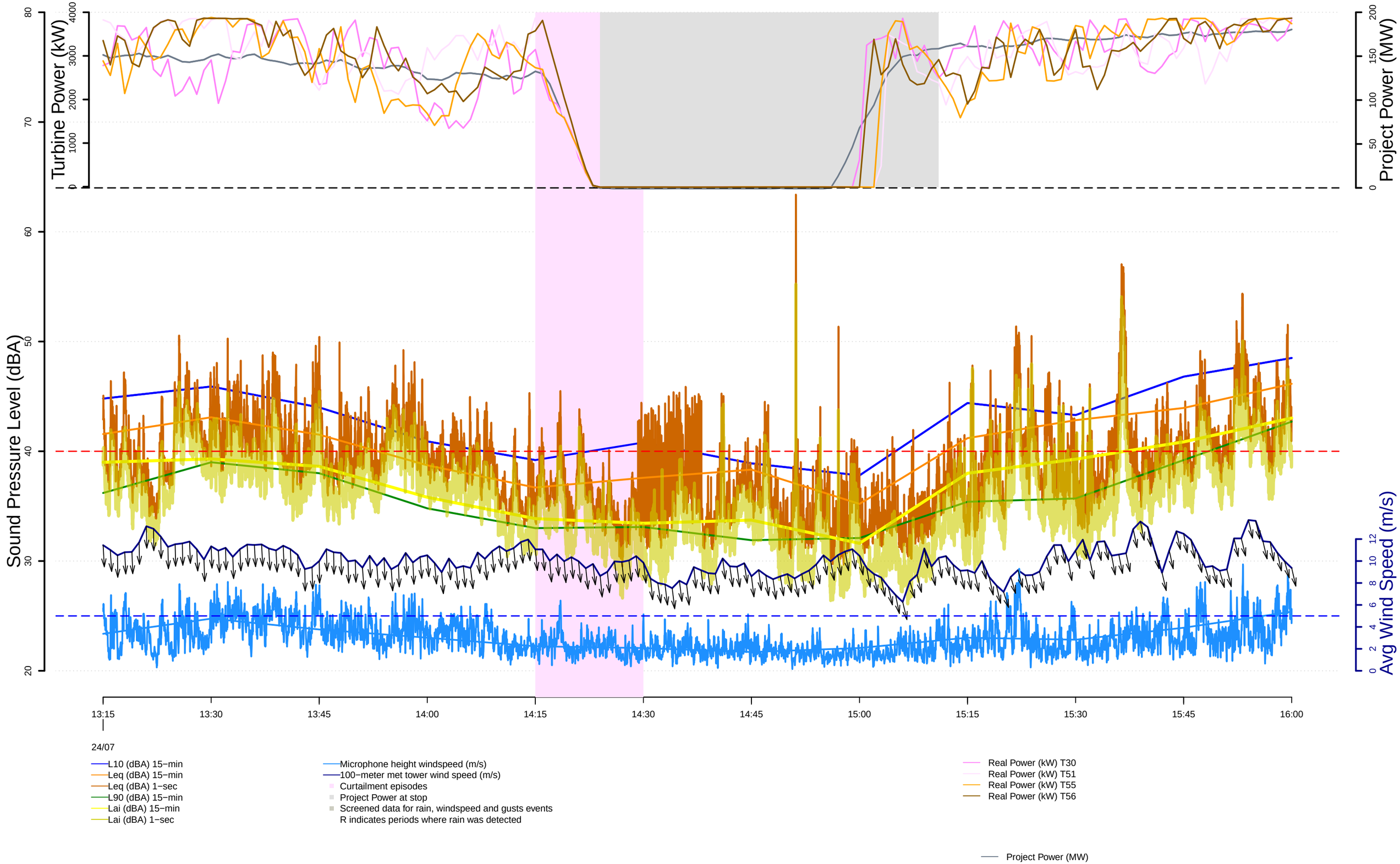
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

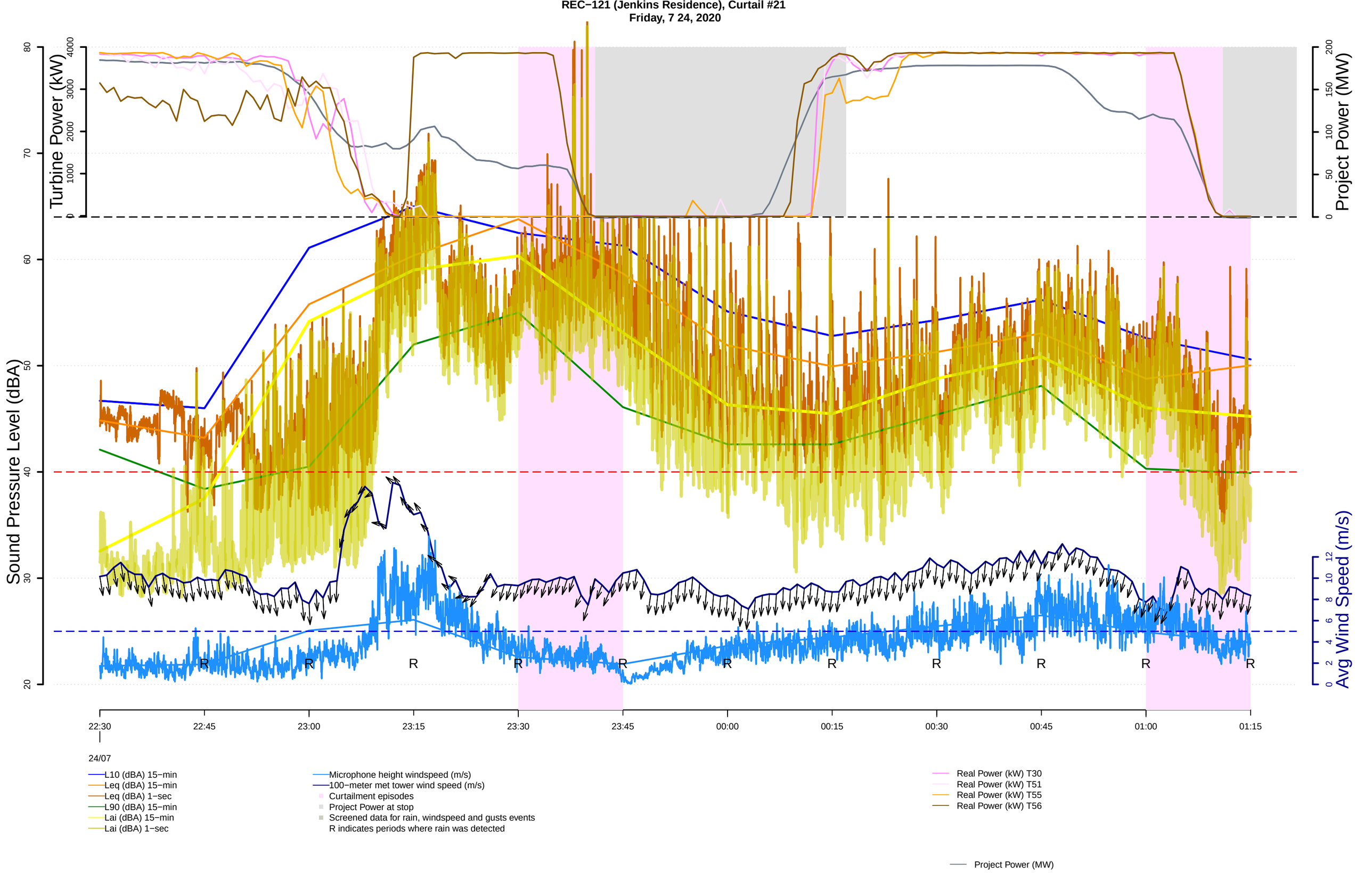
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

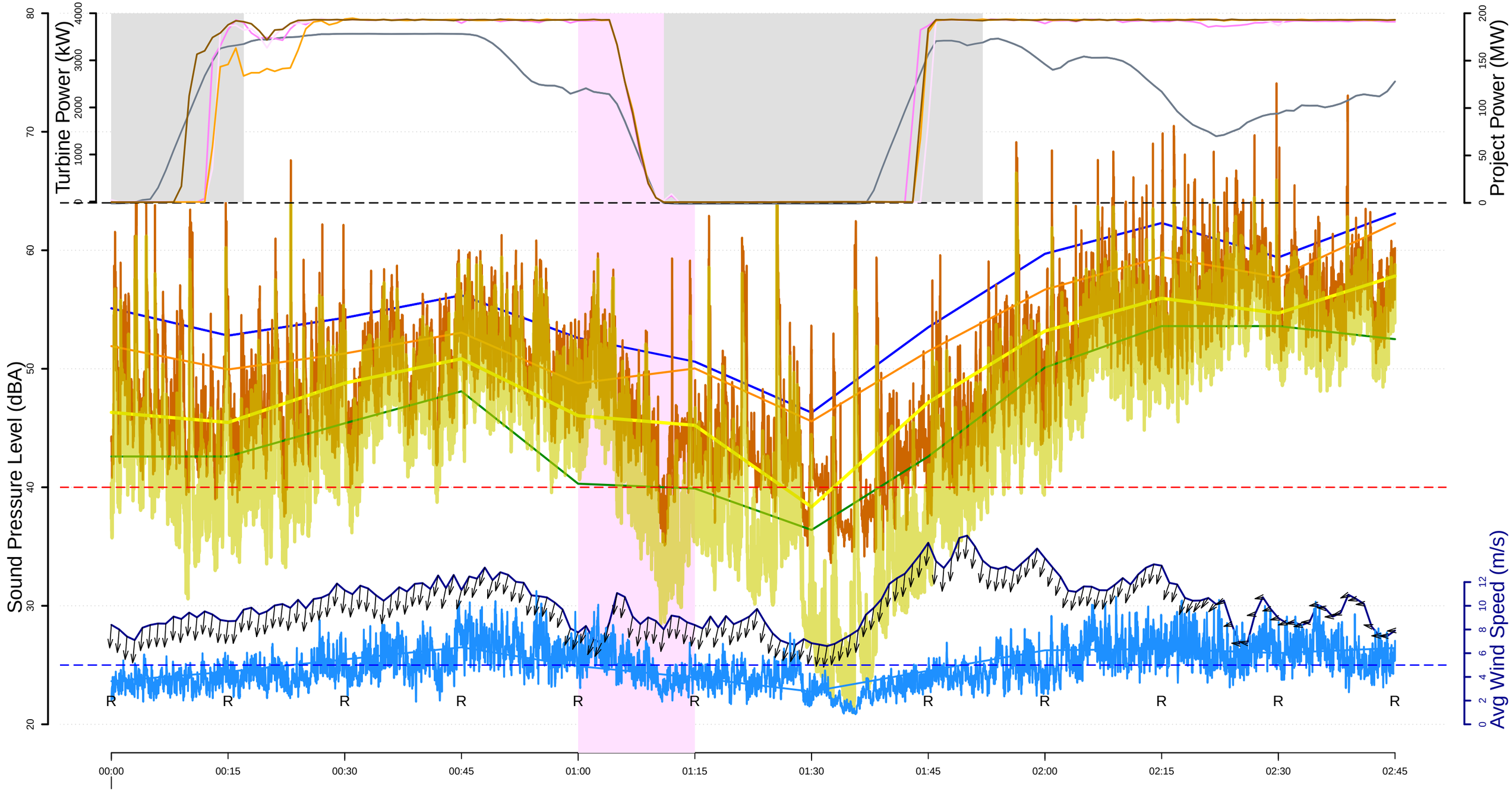
Project Power (MW)

REC−121 (Jenkins Residence), Curtail #20
Friday, 7 24, 2020




REC−121 (Jenkins Residence), Curtail #21
Friday, 7 24, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
22:30
22:45
23:00
23:15
23:30
23:45
00:00
00:15
00:30
00:45
01:00
01:15
24/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56
Project Power (MW)

REC−121 (Jenkins Residence), Curtail #22
Saturday, 7 25, 2020

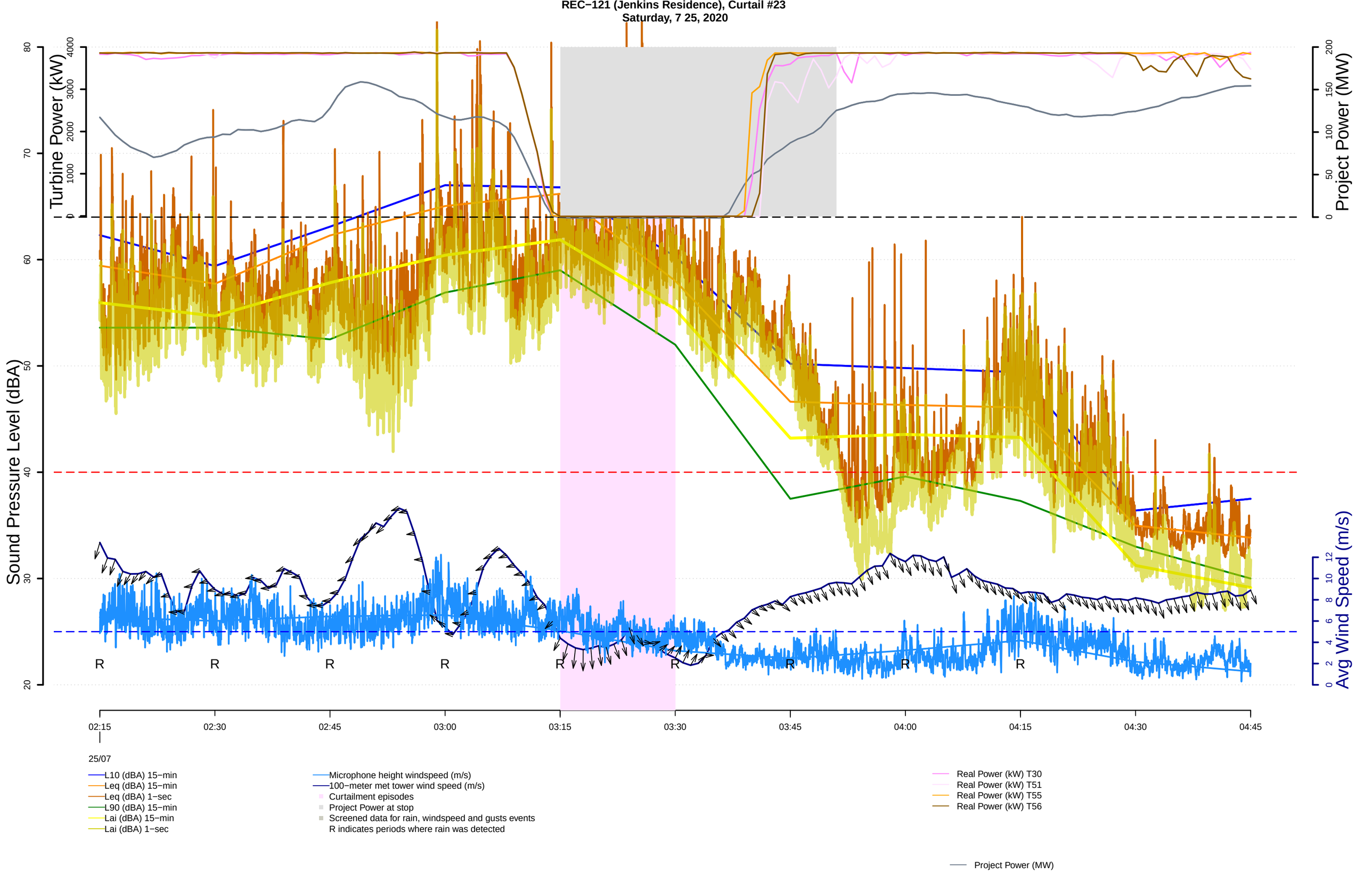


L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

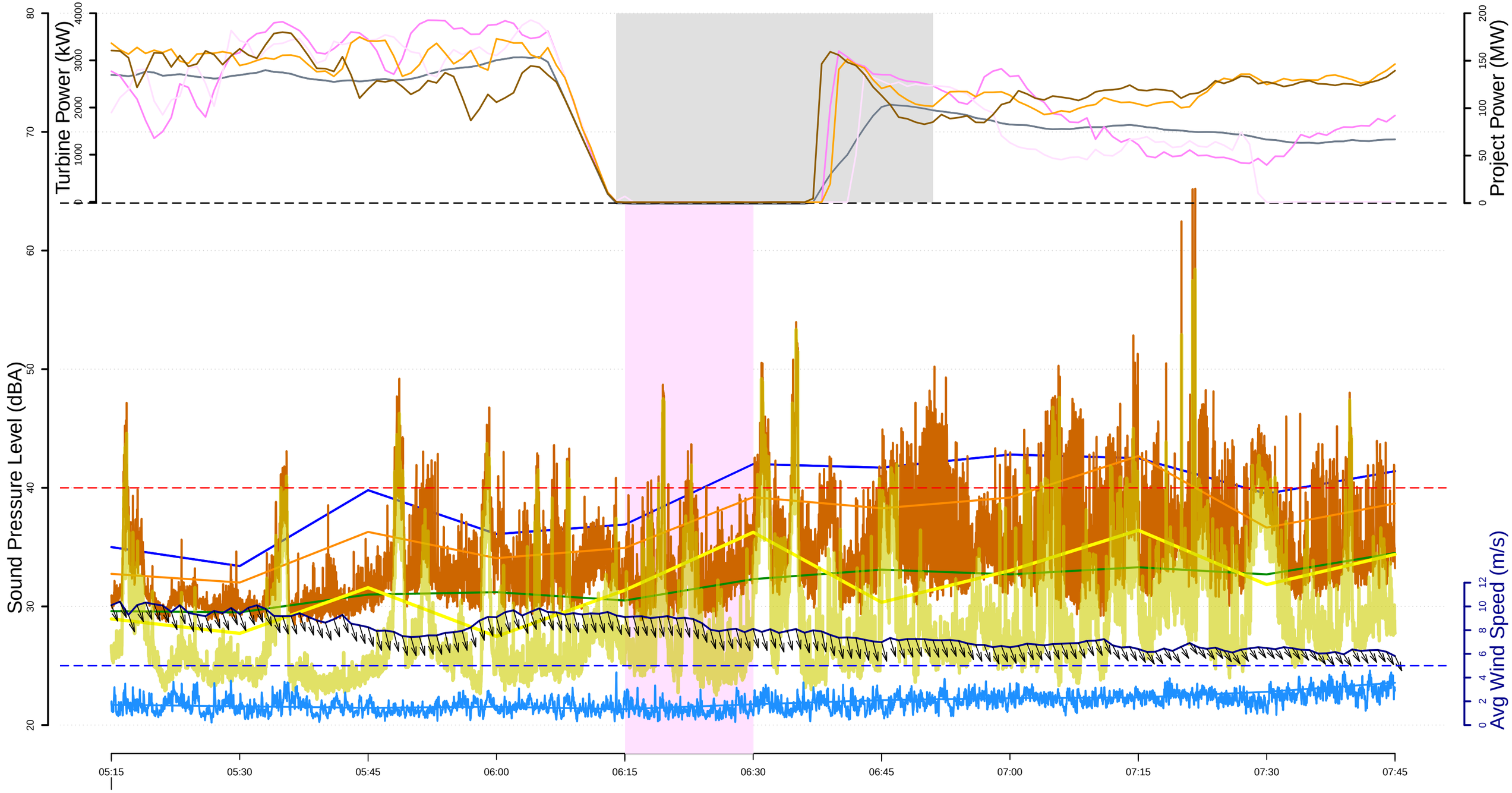
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

Project Power (MW)


REC−121 (Jenkins Residence), Curtail #23
Saturday, 7 25, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
R
02:15
02:30
02:45
03:00
03:15
03:30
03:45
04:00
04:15
04:30
04:45
25/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56
Project Power (MW)

REC−121 (Jenkins Residence), Curtail #24
Saturday, 7 25, 2020

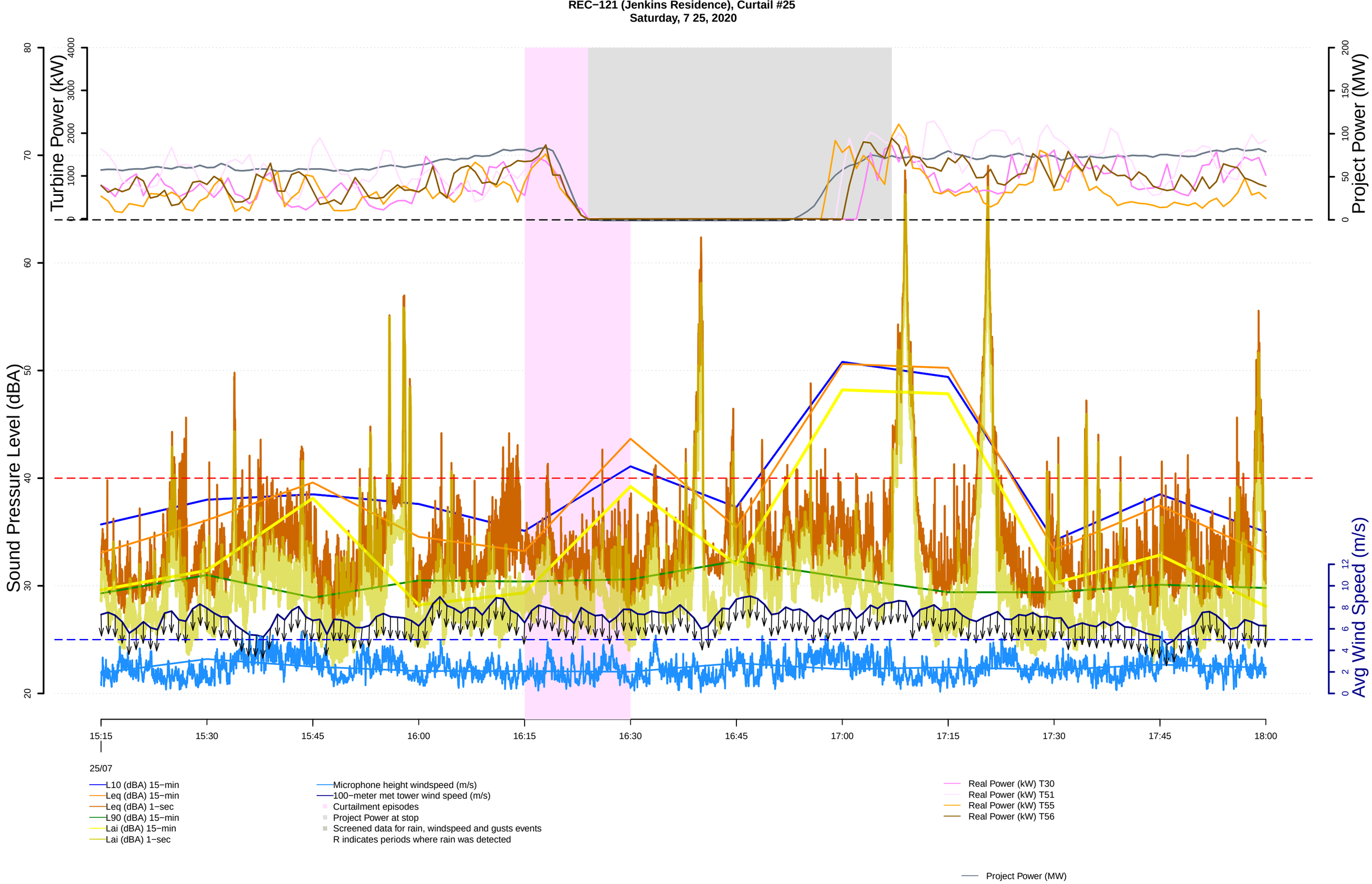


L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

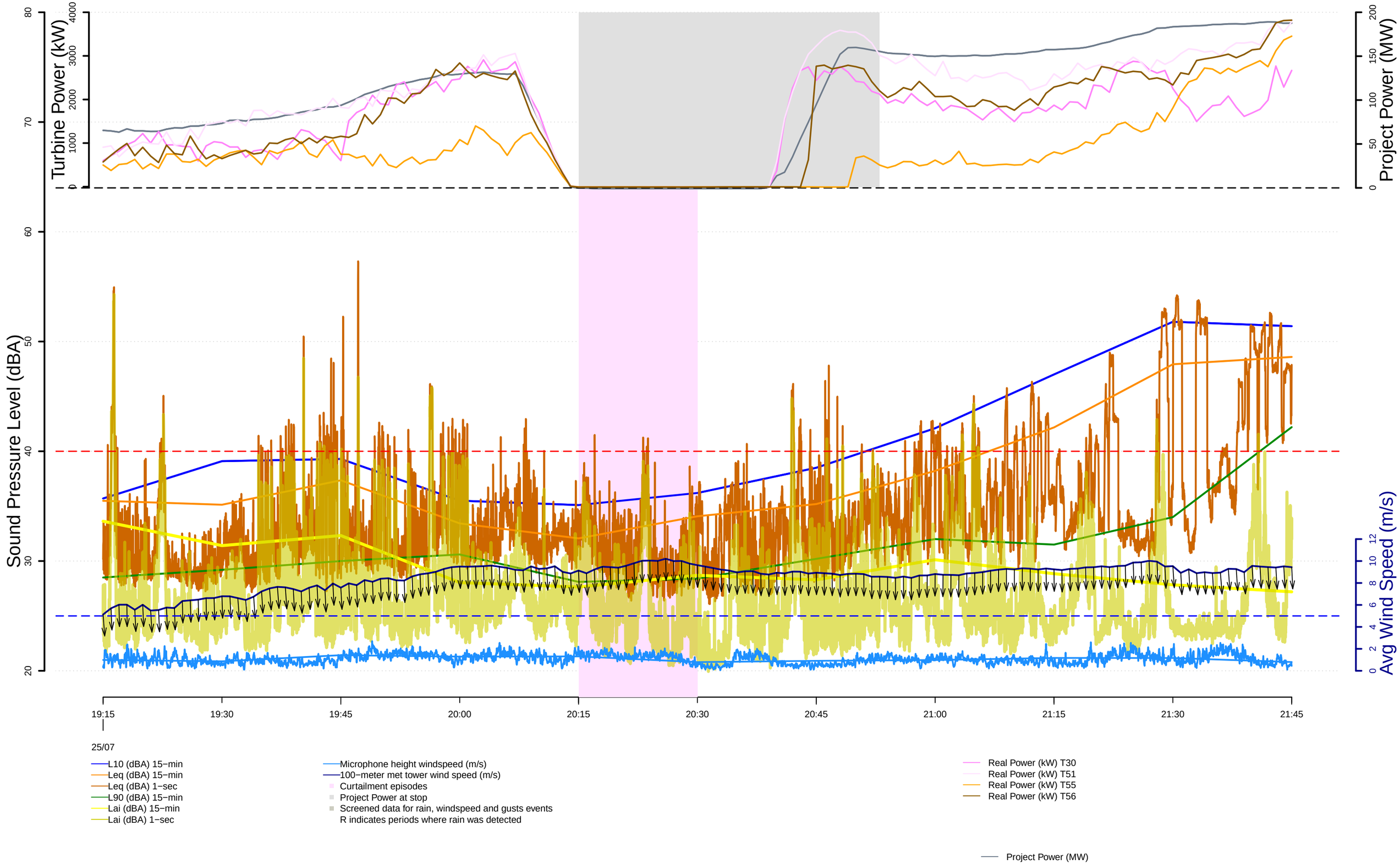
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

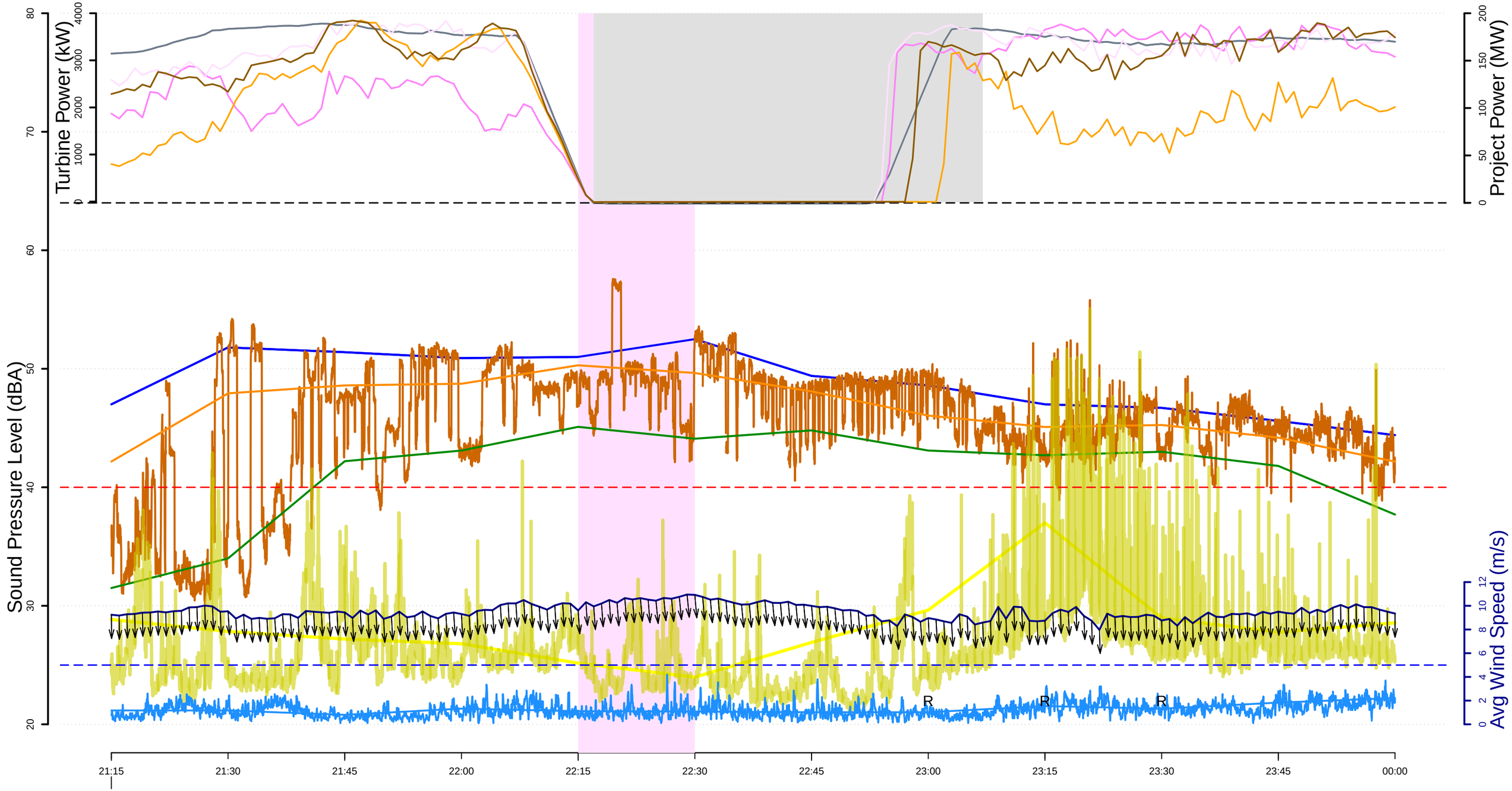
Project Power (MW)


REC−121 (Jenkins Residence), Curtail #25
Saturday, 7 25, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
15:15
15:30
15:45
16:00
16:15
16:30
16:45
17:00
17:15
17:30
17:45
18:00
25/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56
Project Power (MW)

REC−121 (Jenkins Residence), Curtail #26
Saturday, 7 25, 2020



REC−121 (Jenkins Residence), Curtail #27
Saturday, 7 25, 2020



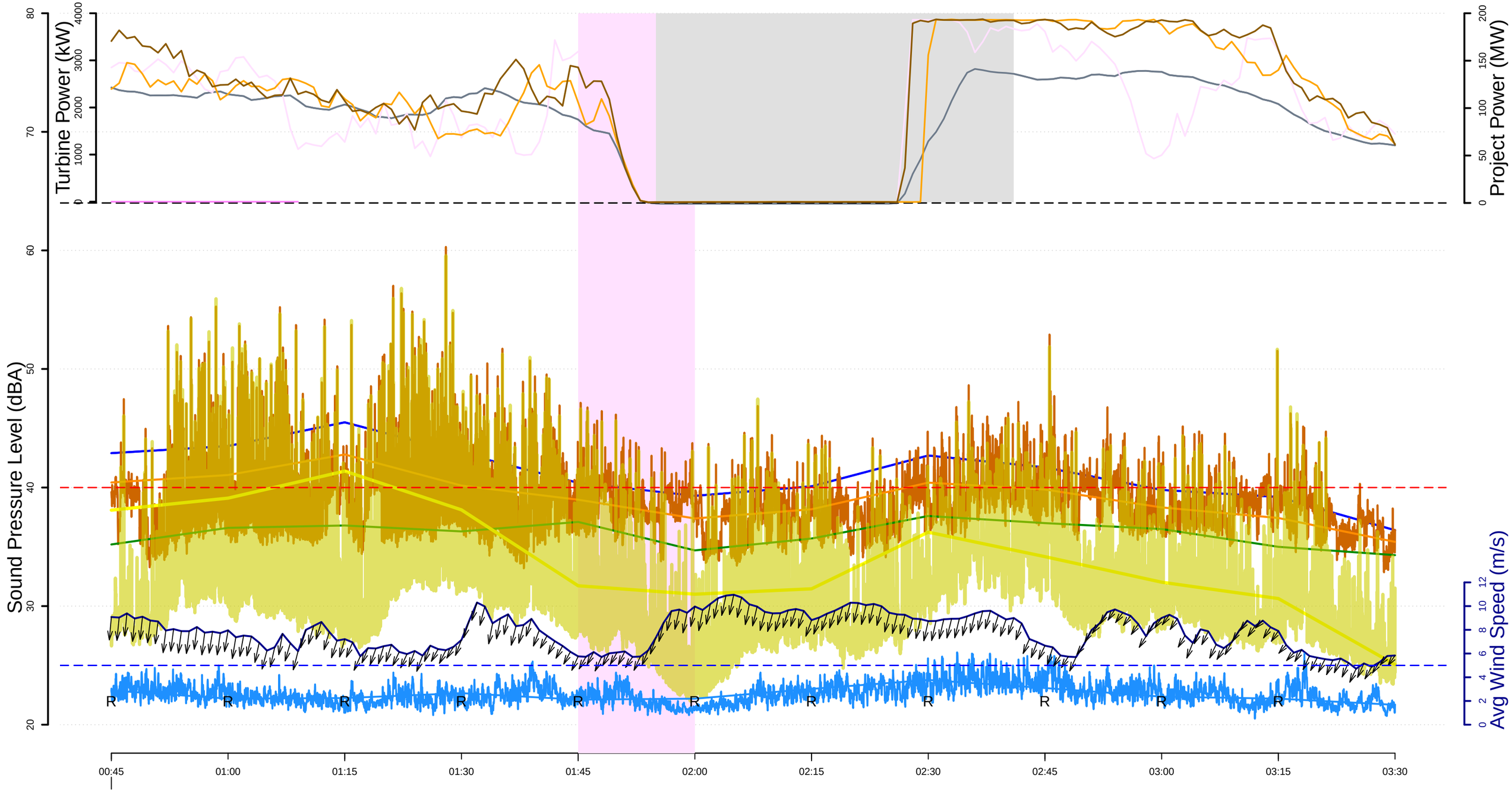
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

Project Power (MW)

REC−121 (Jenkins Residence), Curtail #28
Sunday, 7 26, 2020



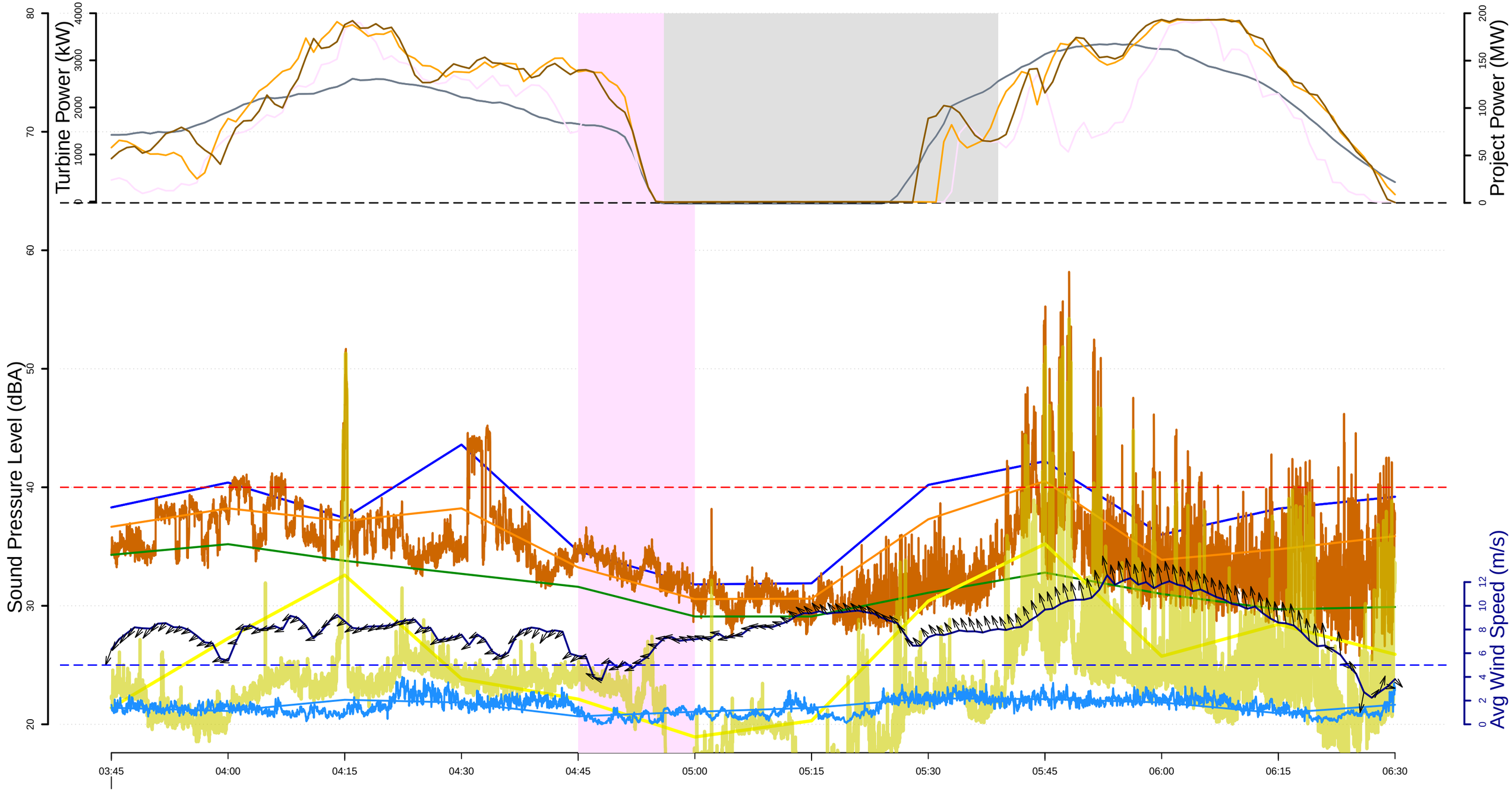
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

Project Power (MW)

REC−121 (Jenkins Residence), Curtail #29
Sunday, 7 26, 2020



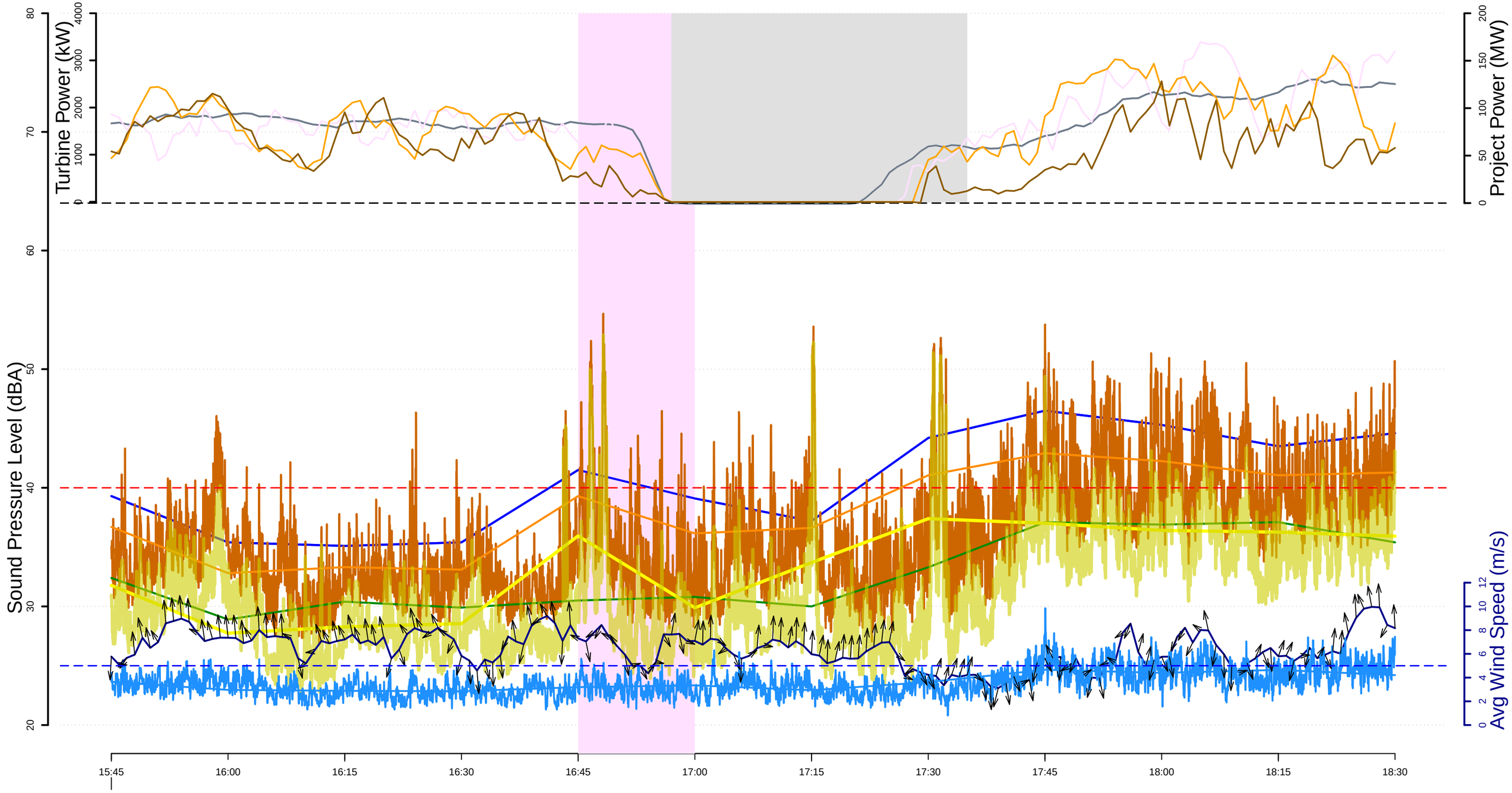
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

Project Power (MW)

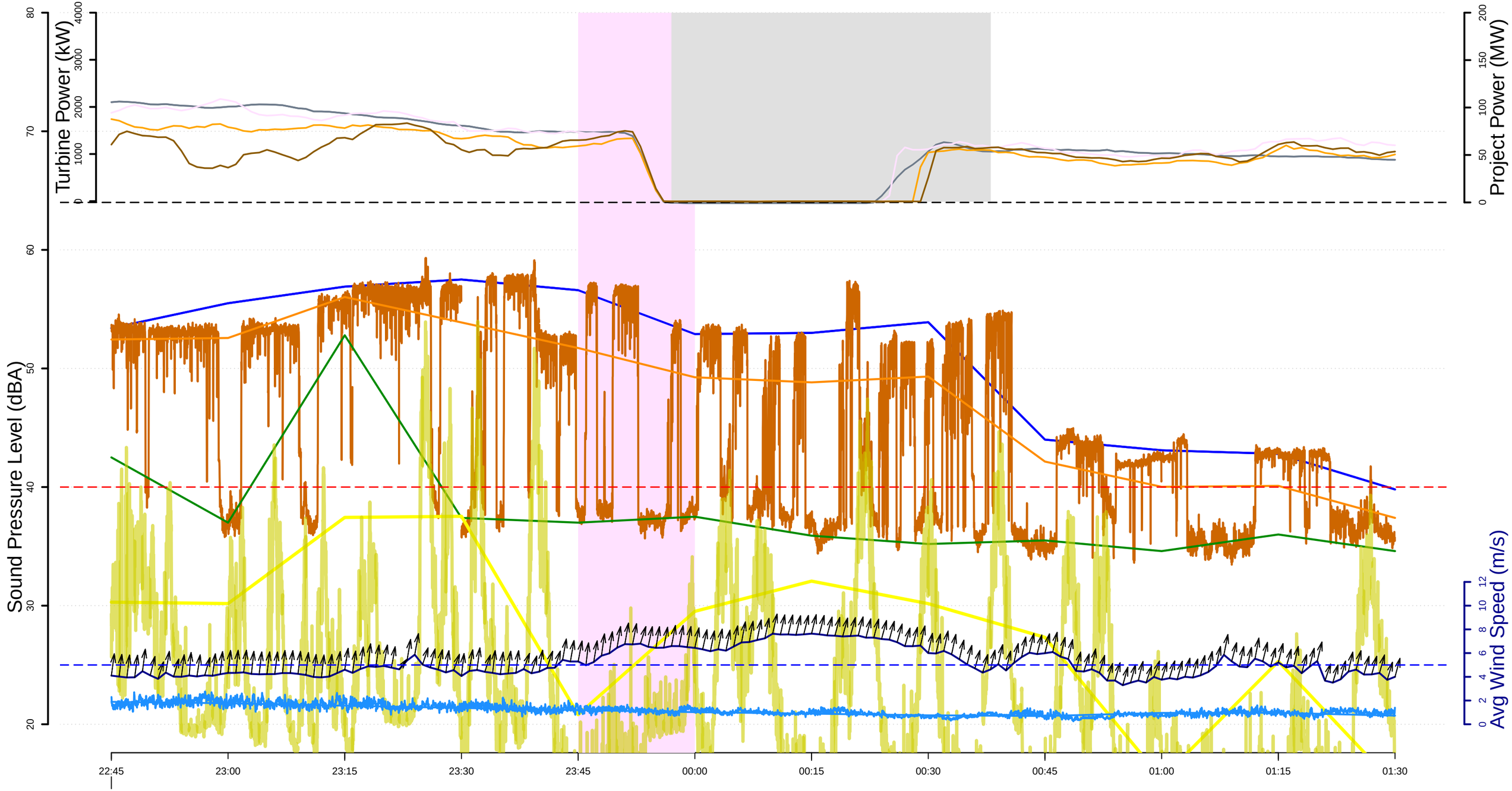
REC−121 (Jenkins Residence), Curtail #30
Sunday, 7 26, 2020



26/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T30
- Real Power (kW) T51
- Real Power (kW) T55
- Real Power (kW) T56
- Project Power (MW)

REC−121 (Jenkins Residence), Curtail #31
Sunday, 7 26, 2020



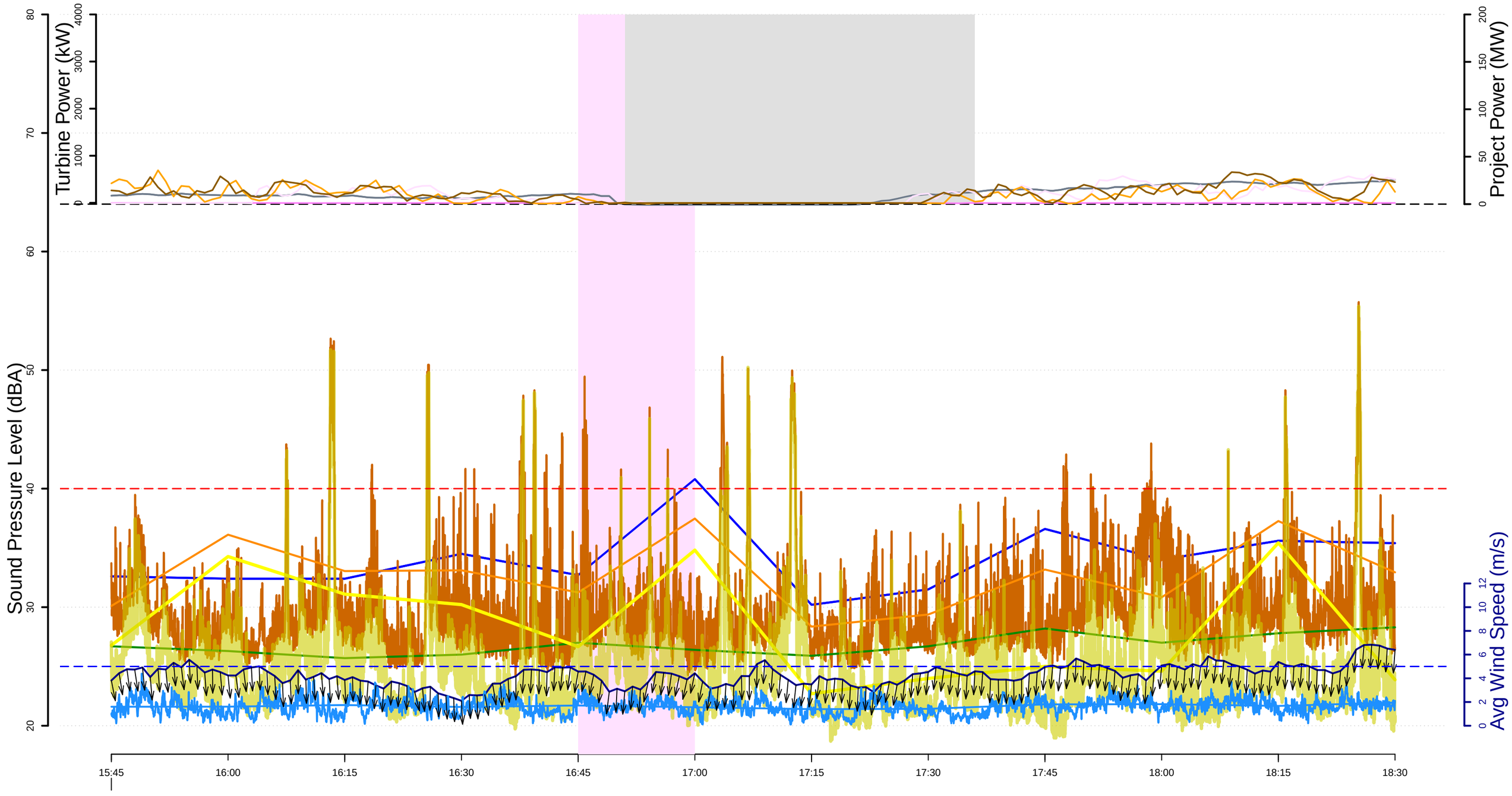
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

Project Power (MW)

REC−121 (Jenkins Residence), Curtail #32
Monday, 7 27, 2020



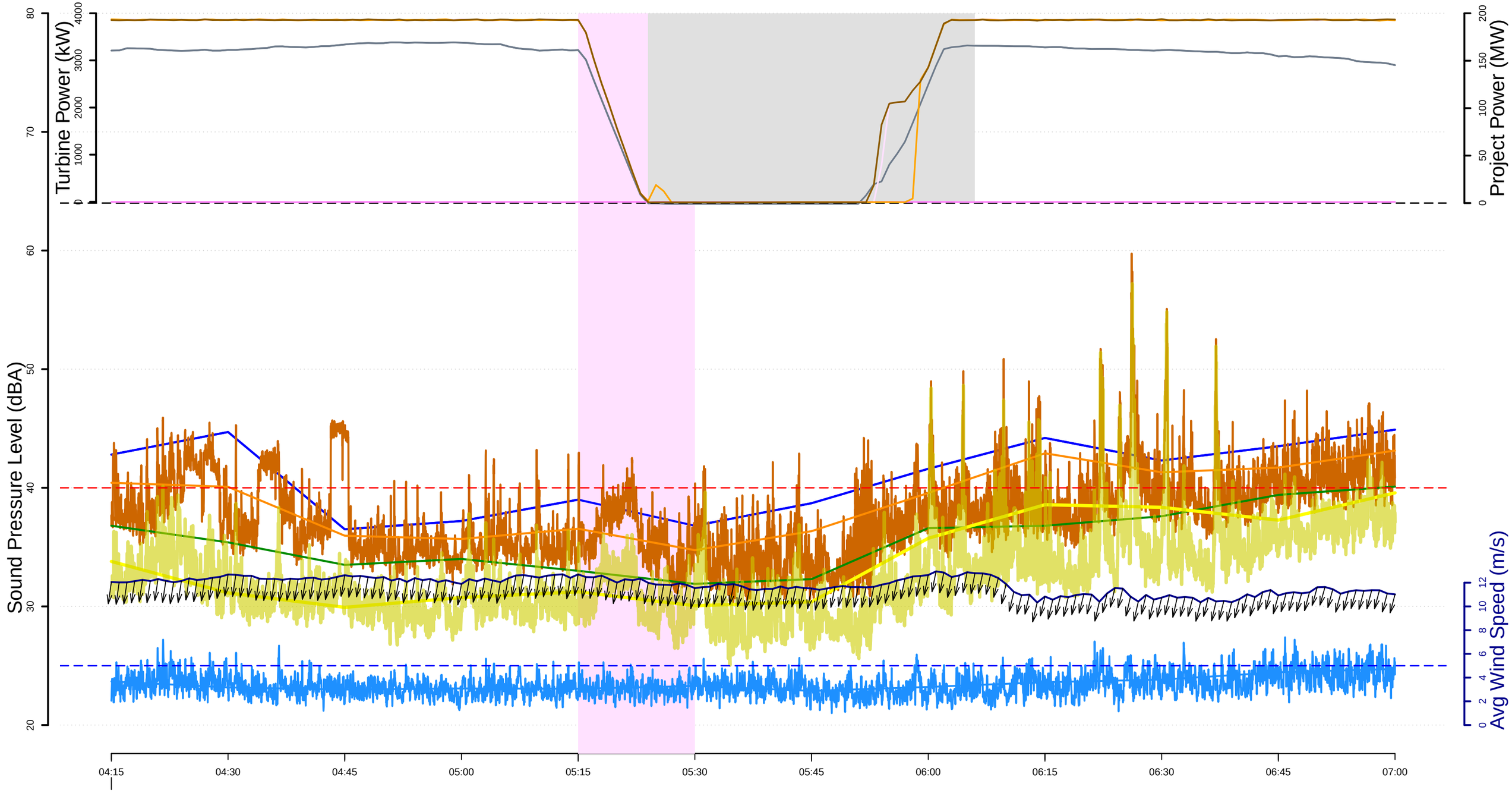
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

Project Power (MW)

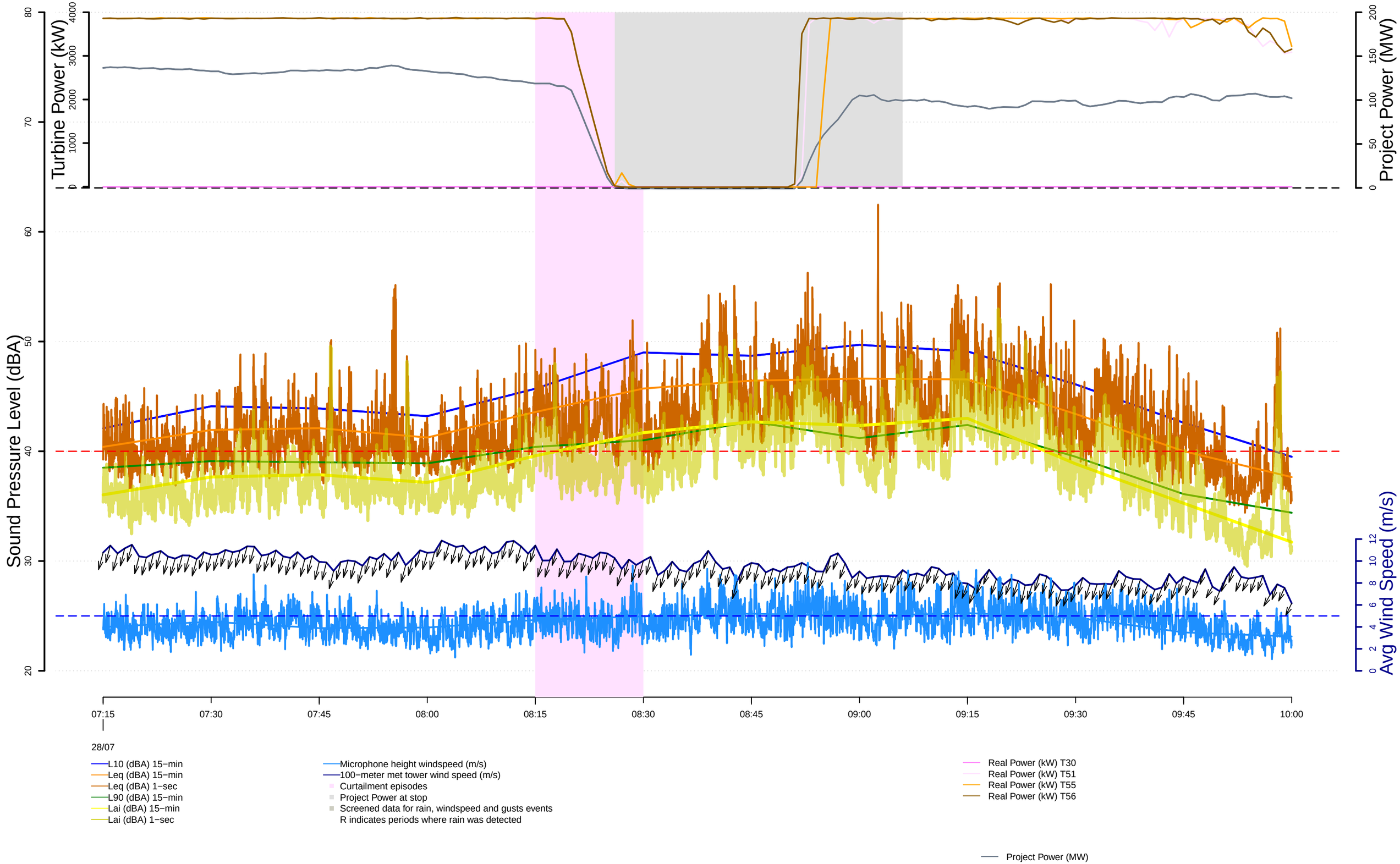
REC−121 (Jenkins Residence), Curtail #33
Tuesday, 7 28, 2020



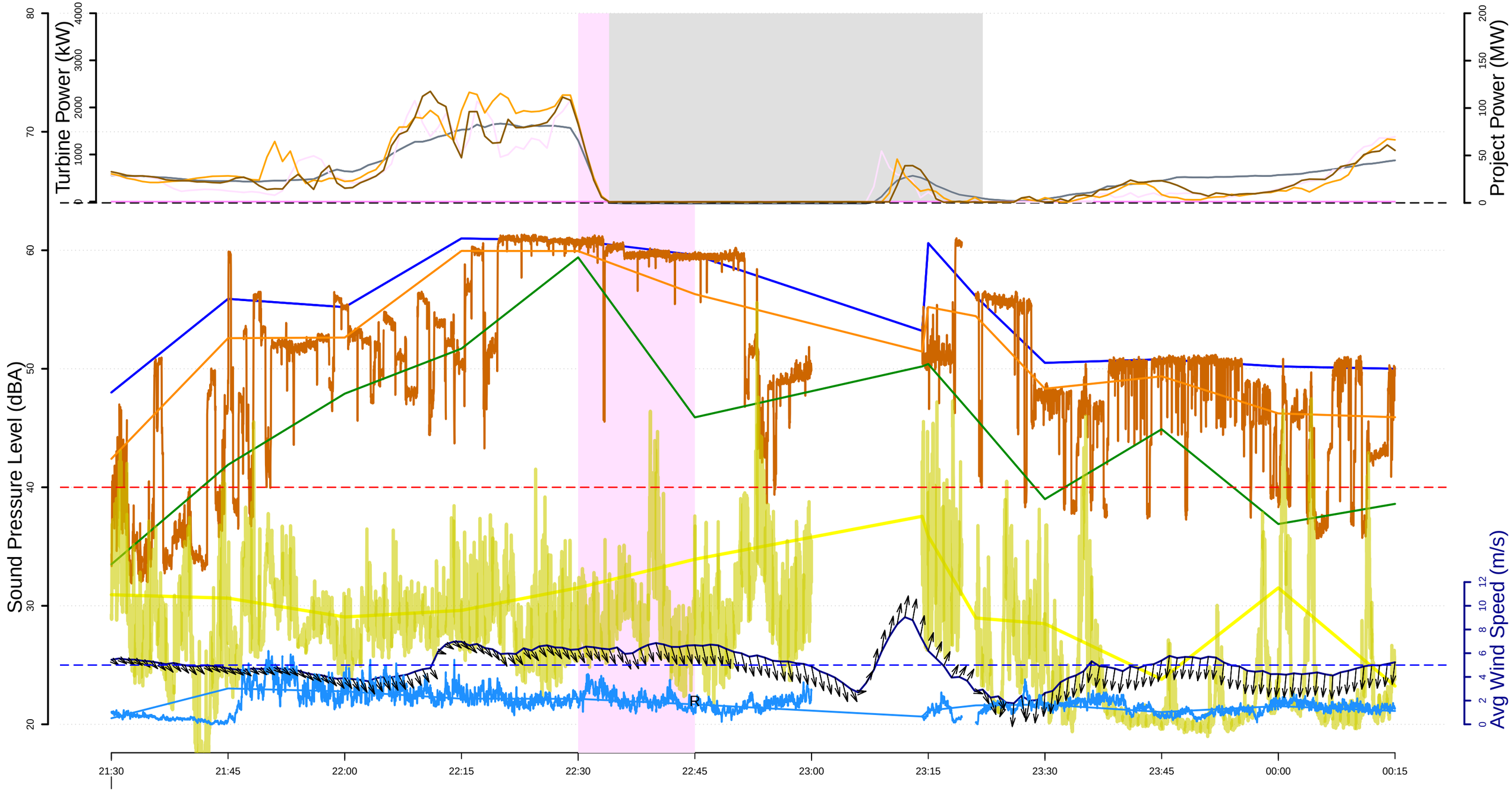
28/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T30
- Real Power (kW) T51
- Real Power (kW) T55
- Real Power (kW) T56
- Project Power (MW)

REC−121 (Jenkins Residence), Curtail #34
Tuesday, 7 28, 2020



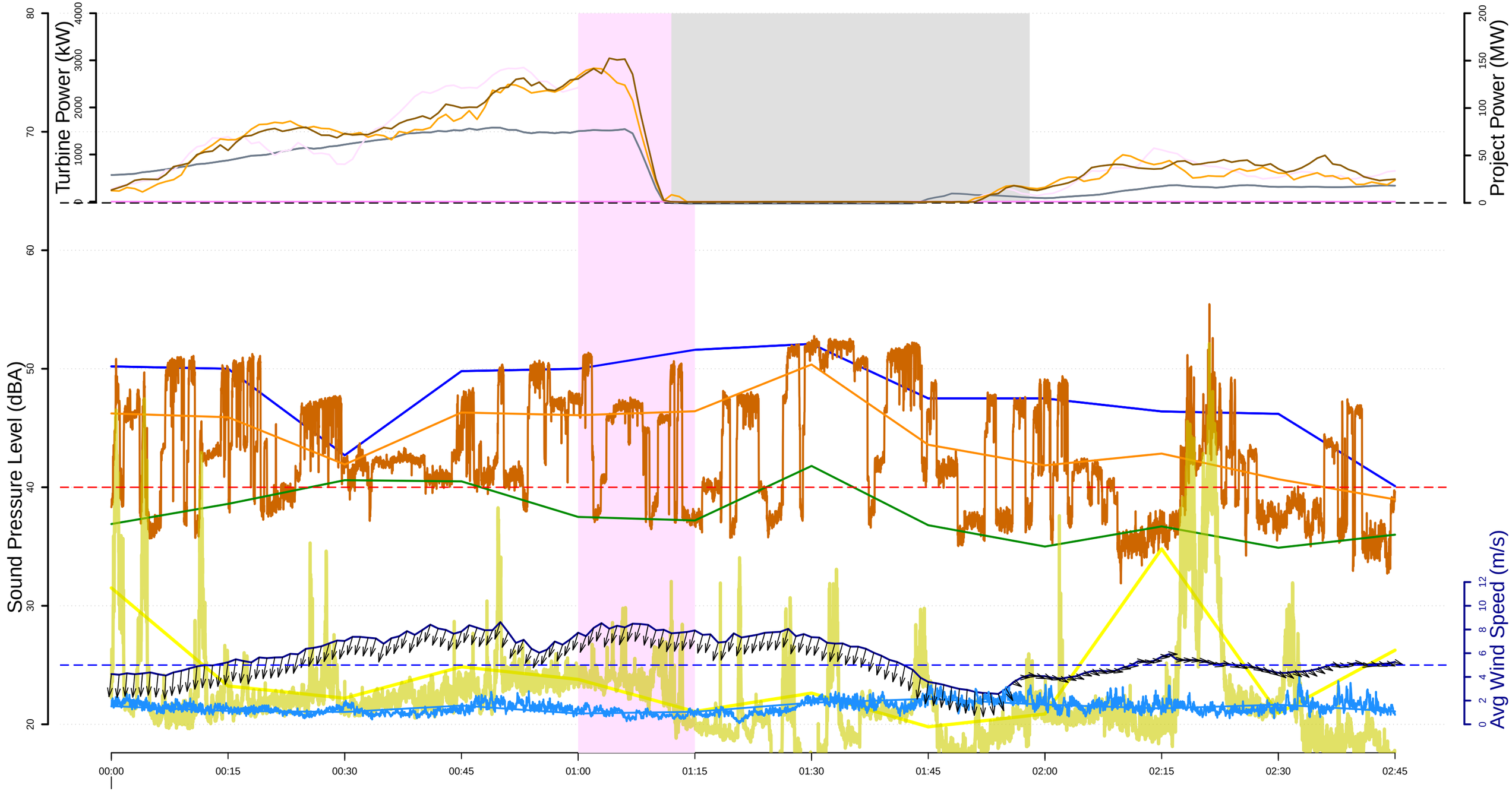
REC−121 (Jenkins Residence), Curtail #35
Tuesday, 7 28, 2020



28/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
- R indicates periods where rain was detected
- Real Power (kW) T30
- Real Power (kW) T51
- Real Power (kW) T55
- Real Power (kW) T56
- Project Power (MW)

REC−121 (Jenkins Residence), Curtail #36
Wednesday, 7 29, 2020



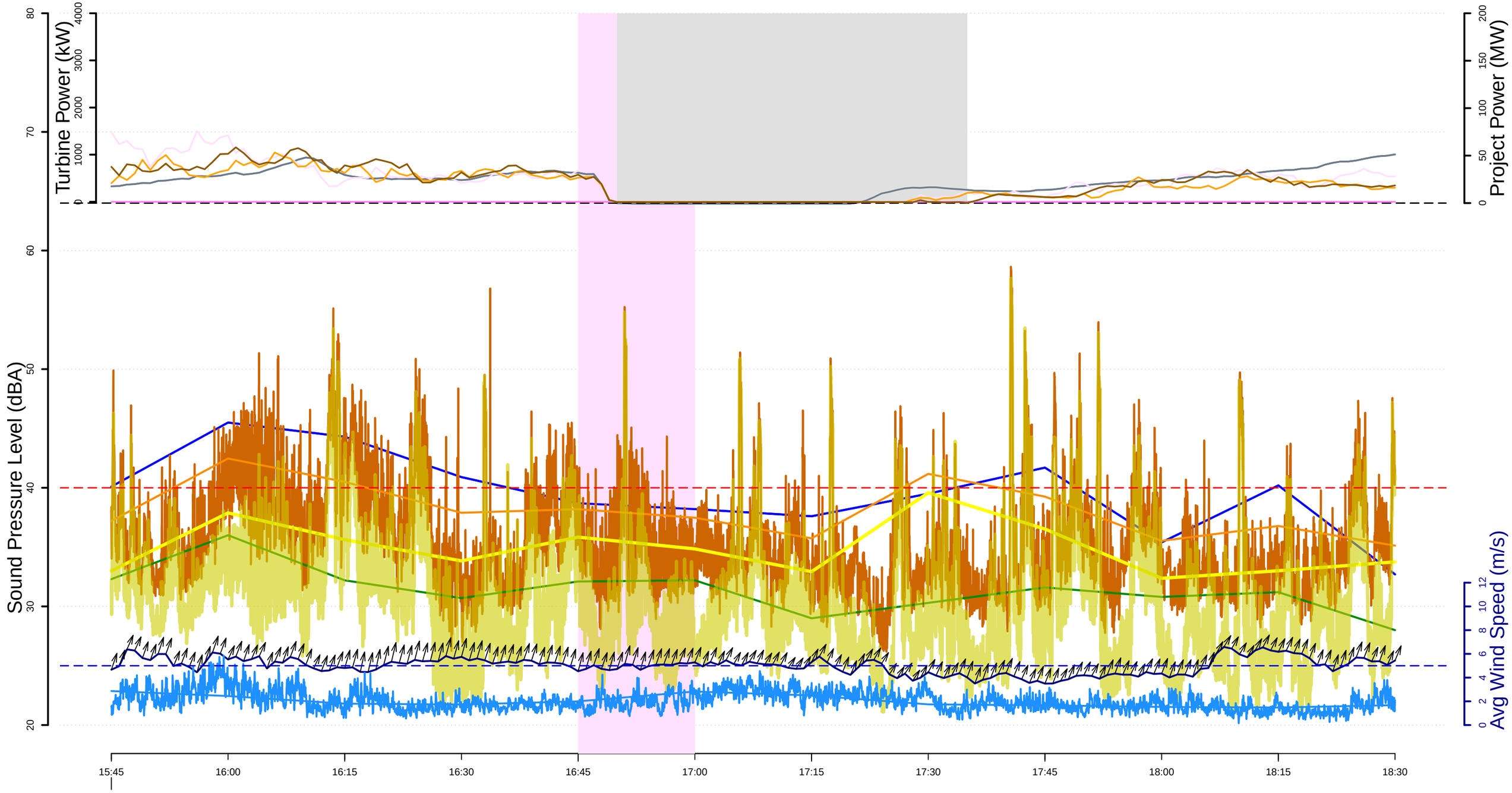
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

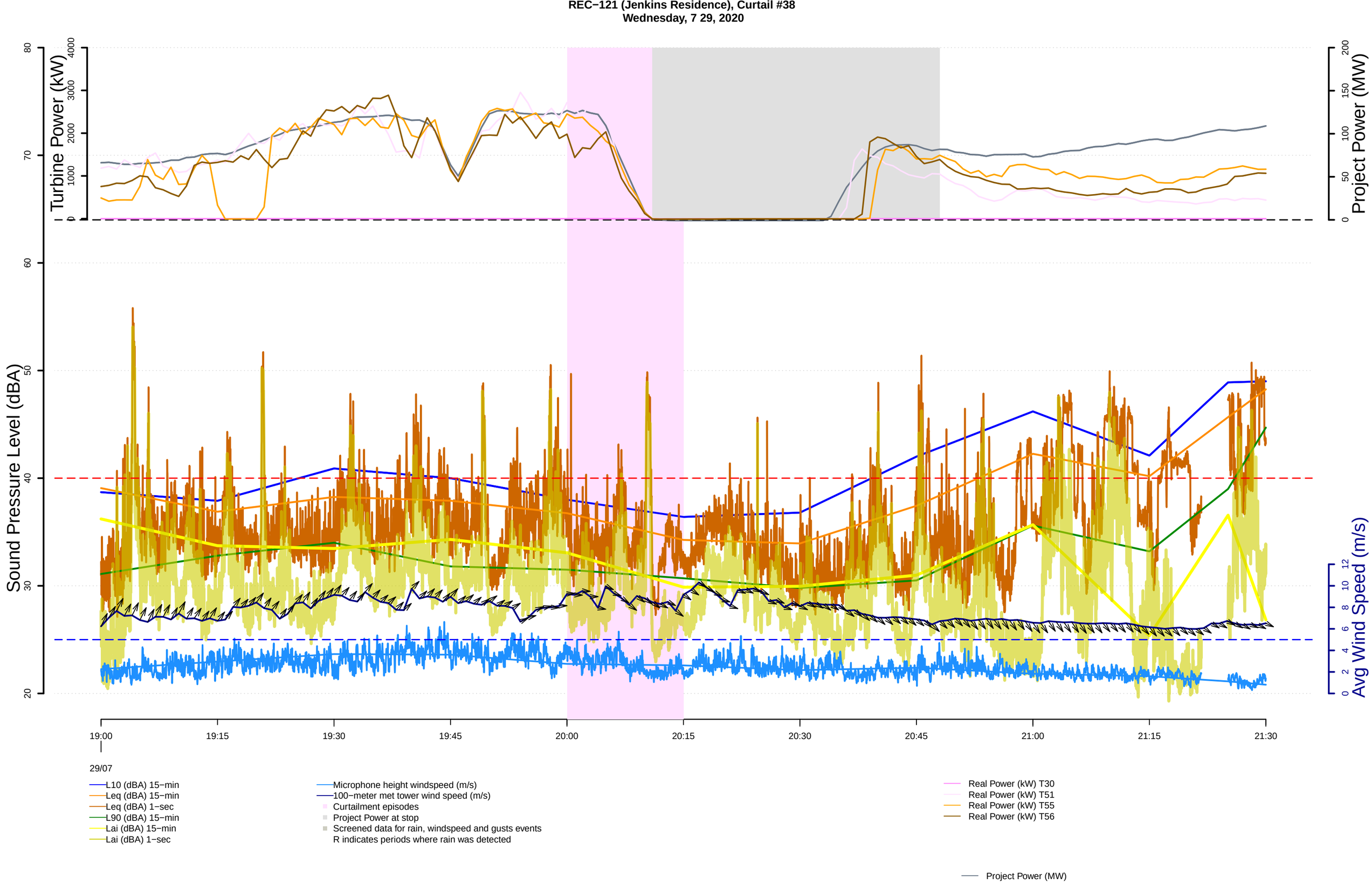
Project Power (MW)

REC−121 (Jenkins Residence), Curtail #37
Wednesday, 7 29, 2020

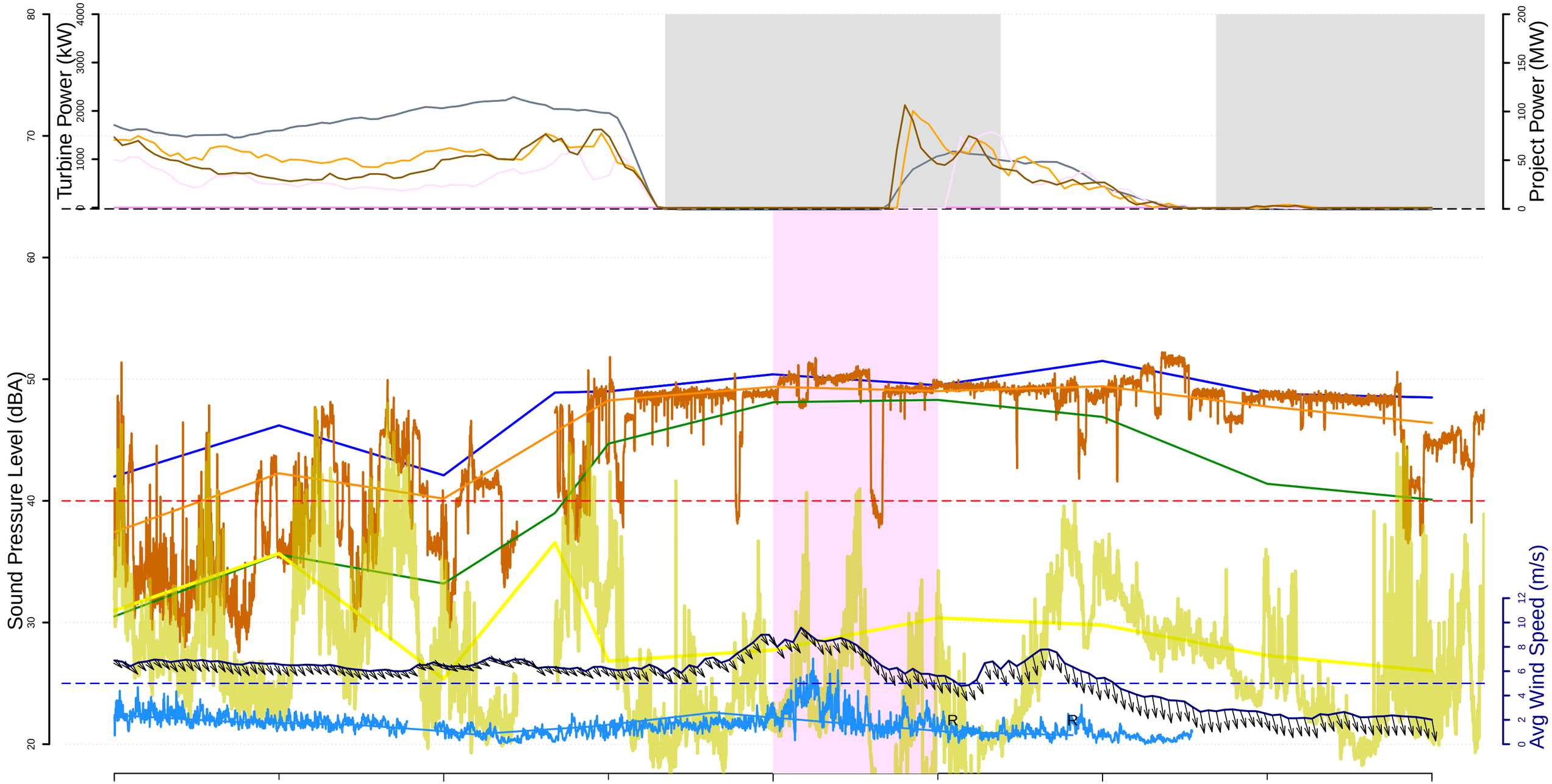


29/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T30
- Real Power (kW) T51
- Real Power (kW) T55
- Real Power (kW) T56
- Project Power (MW)


REC−121 (Jenkins Residence), Curtail #38
Wednesday, 7 29, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
19:00
19:15
19:30
19:45
20:00
20:15
20:30
20:45
21:00
21:15
21:30
29/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56
Project Power (MW)

REC−121 (Jenkins Residence), Curtail #39
Wednesday, 7 29, 2020



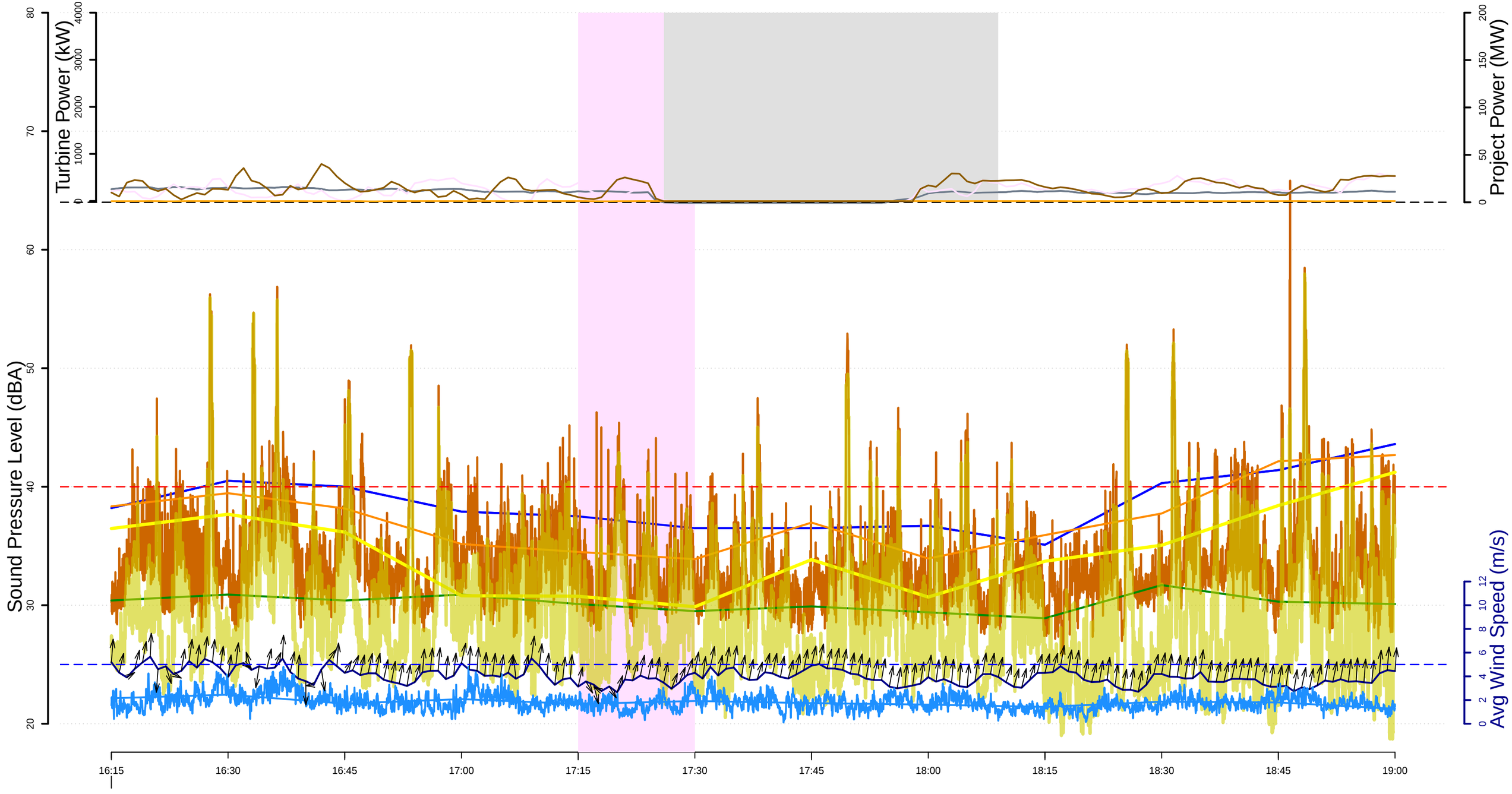
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

Project Power (MW)

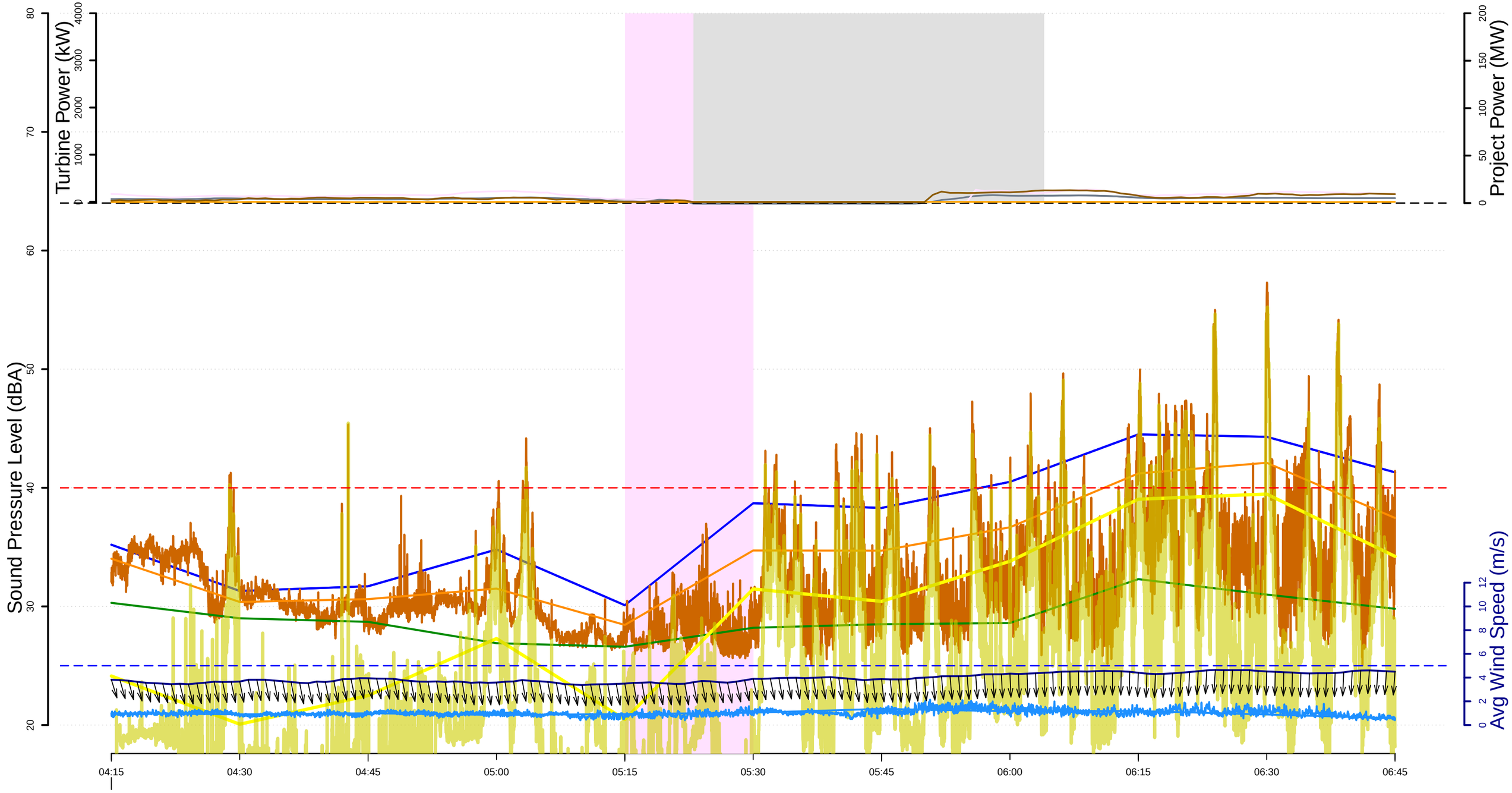
REC−121 (Jenkins Residence), Curtail #40
Thursday, 7 30, 2020



30/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T30
- Real Power (kW) T51
- Real Power (kW) T55
- Real Power (kW) T56
- Project Power (MW)

REC−121 (Jenkins Residence), Curtail #41
Friday, 7 31, 2020



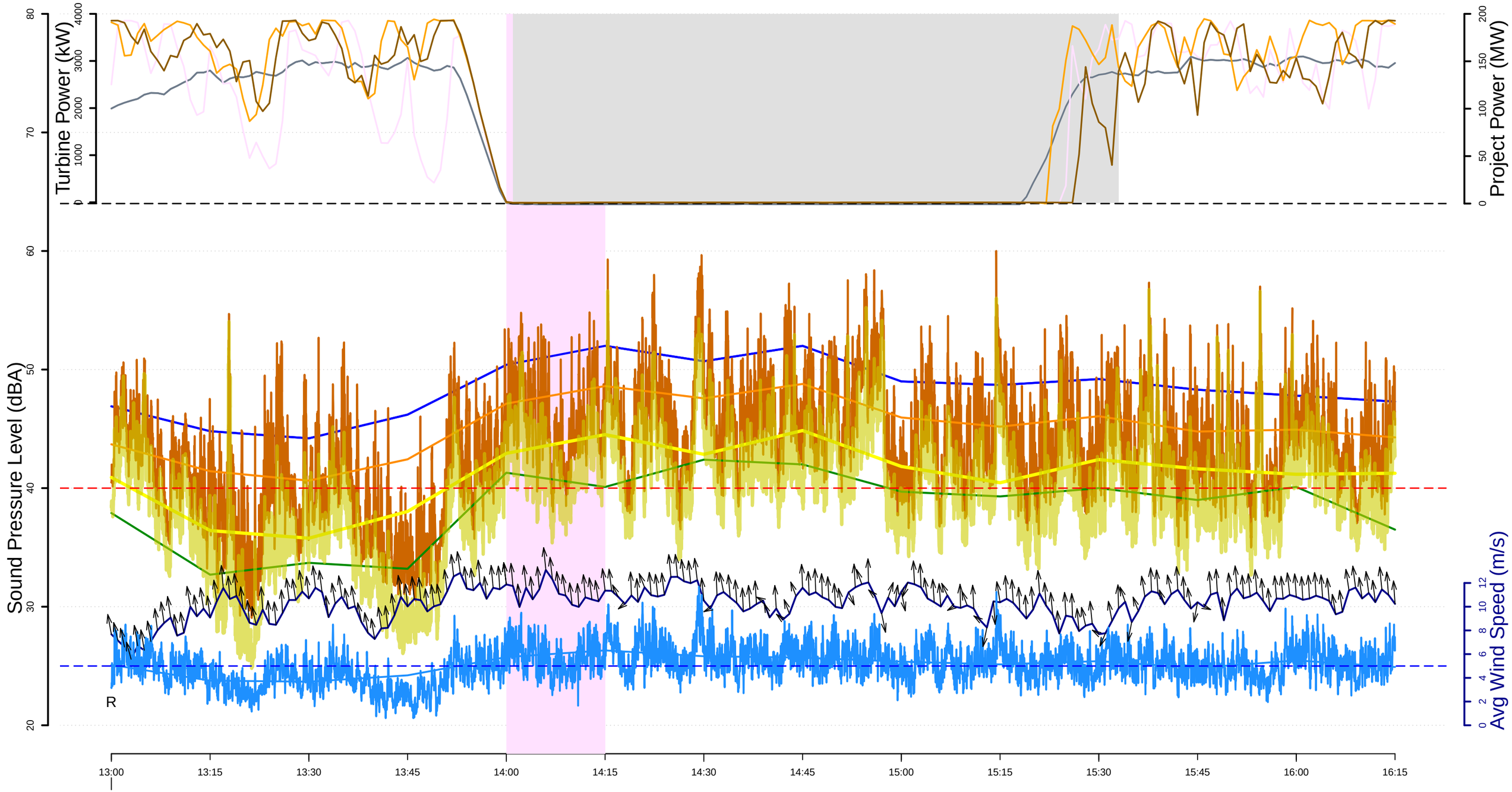
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

Project Power (MW)

REC−121 (Jenkins Residence), Curtail #42
Saturday, 8 1, 2020



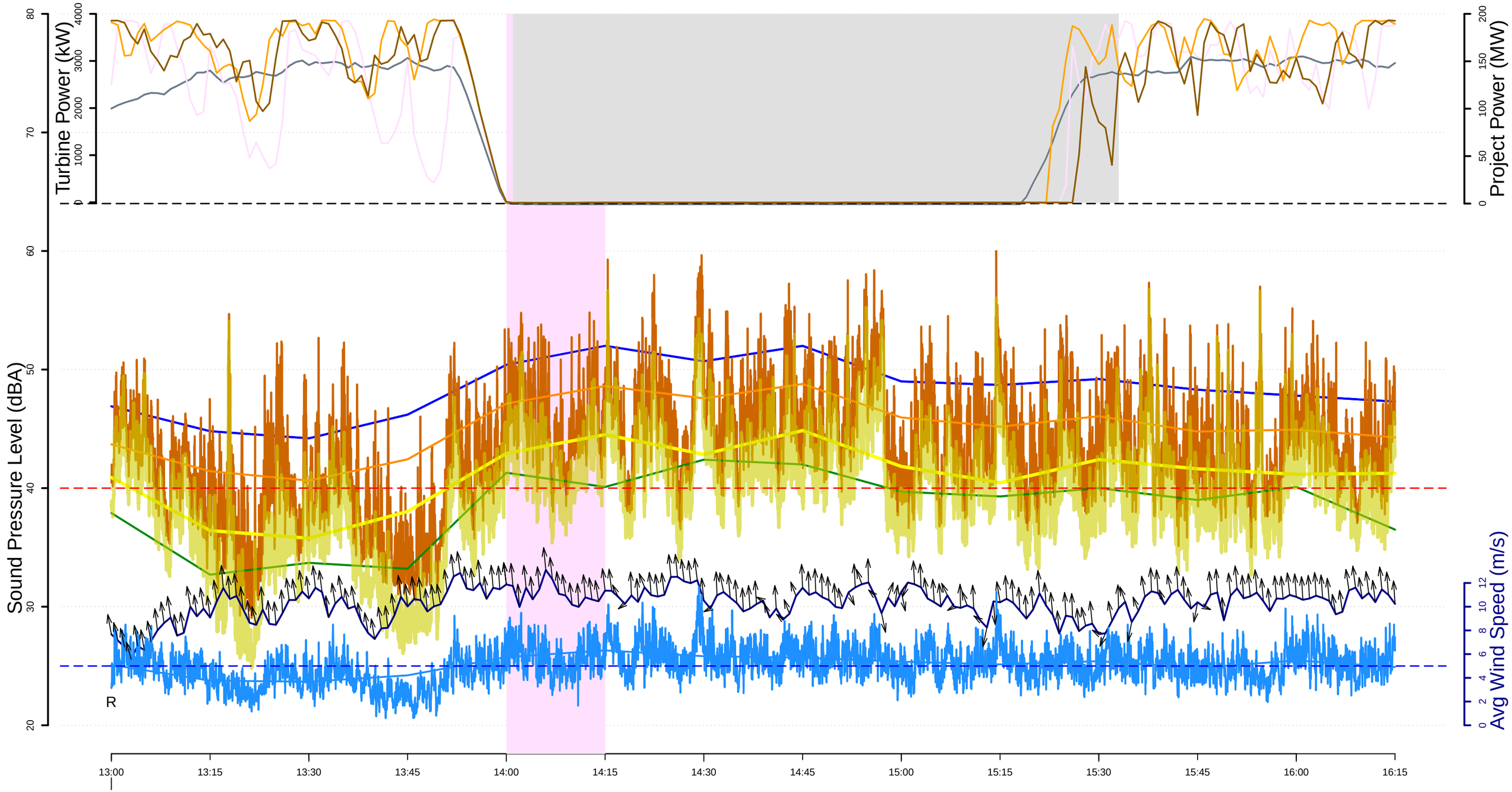
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

Project Power (MW)

REC−121 (Jenkins Residence), Curtail #43
Saturday, 8 1, 2020



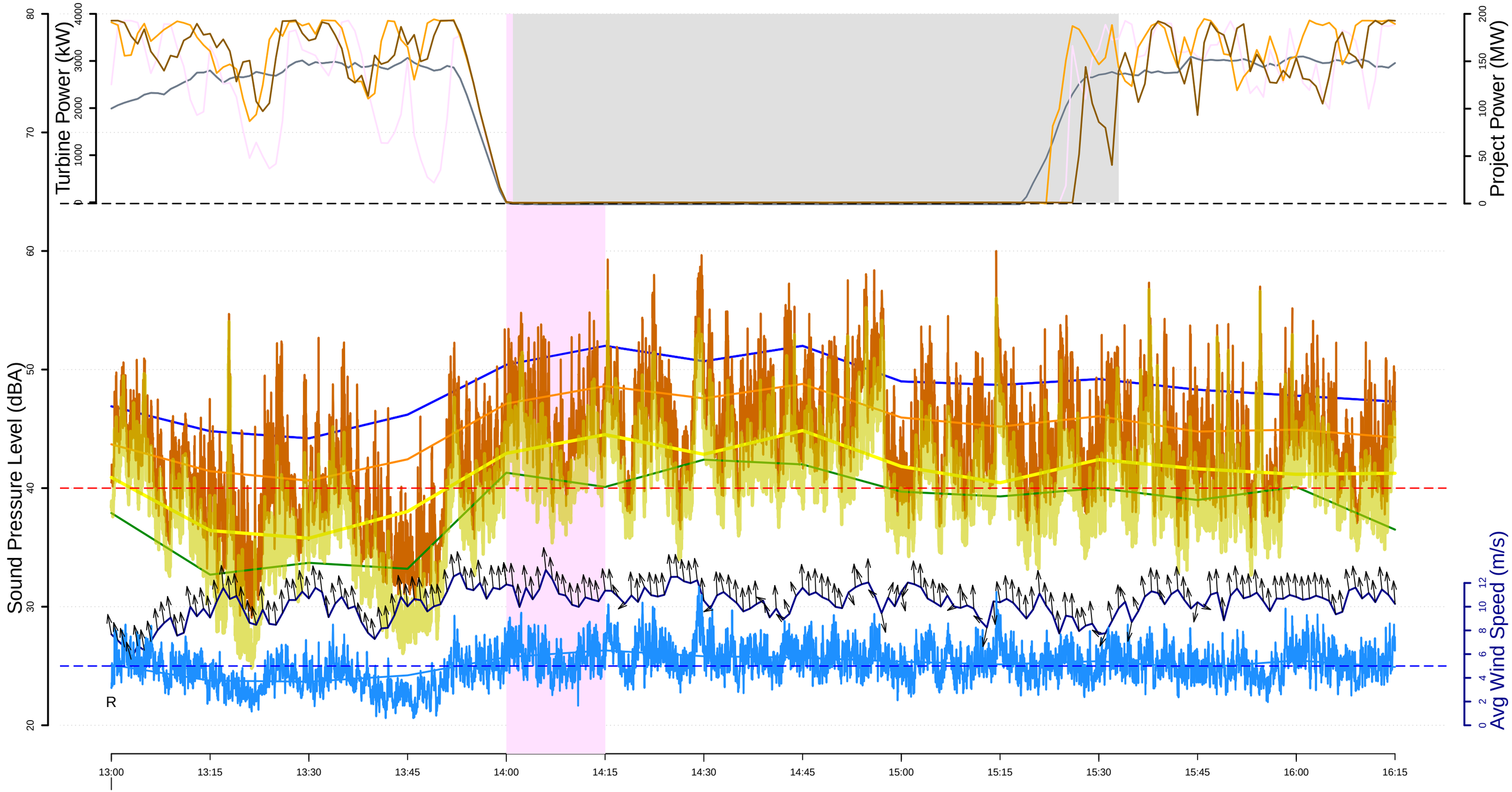
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

Project Power (MW)

REC−121 (Jenkins Residence), Curtail #44
Saturday, 8 1, 2020



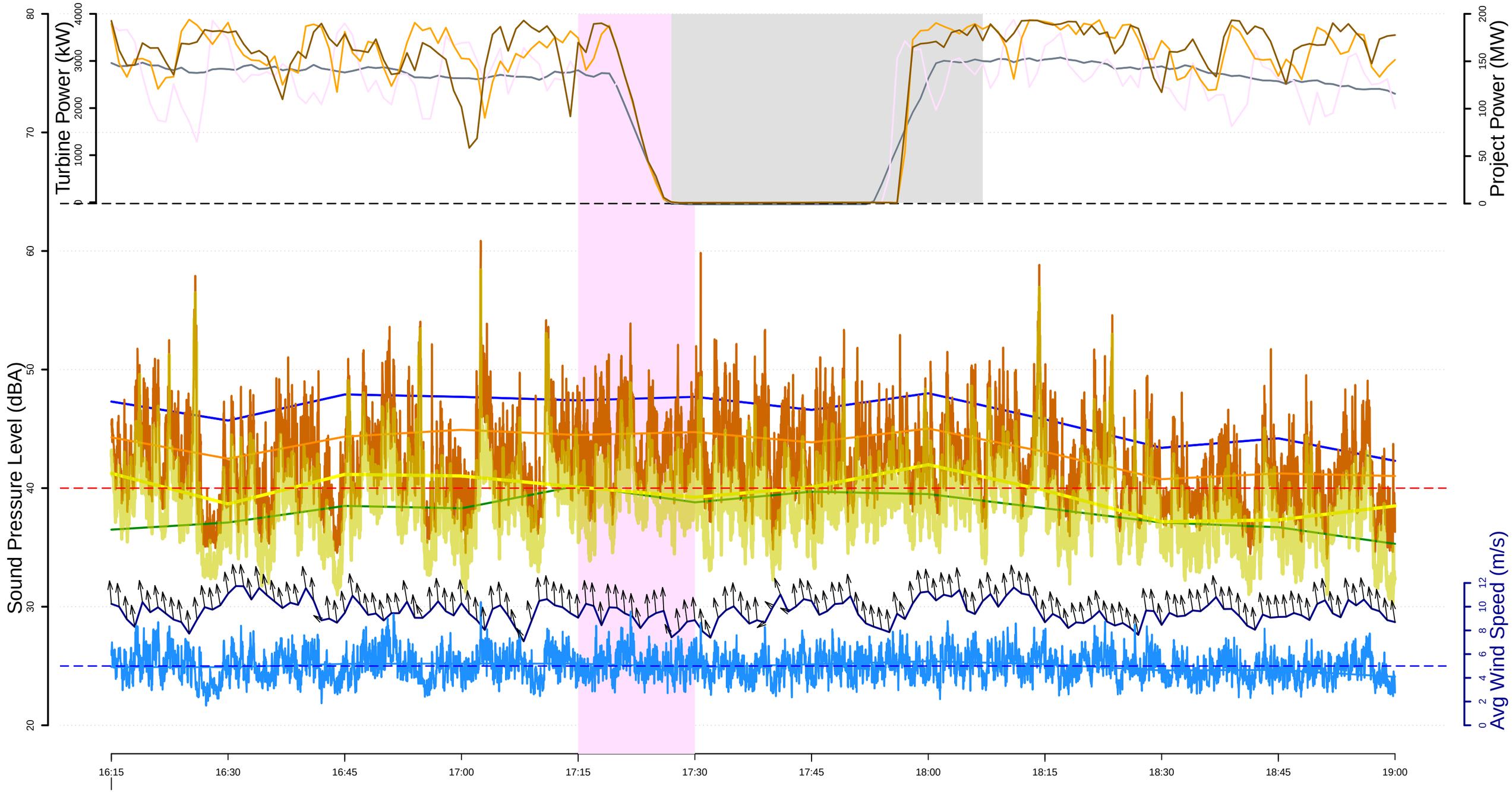
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

Project Power (MW)

REC−121 (Jenkins Residence), Curtail #45
Saturday, 8 1, 2020



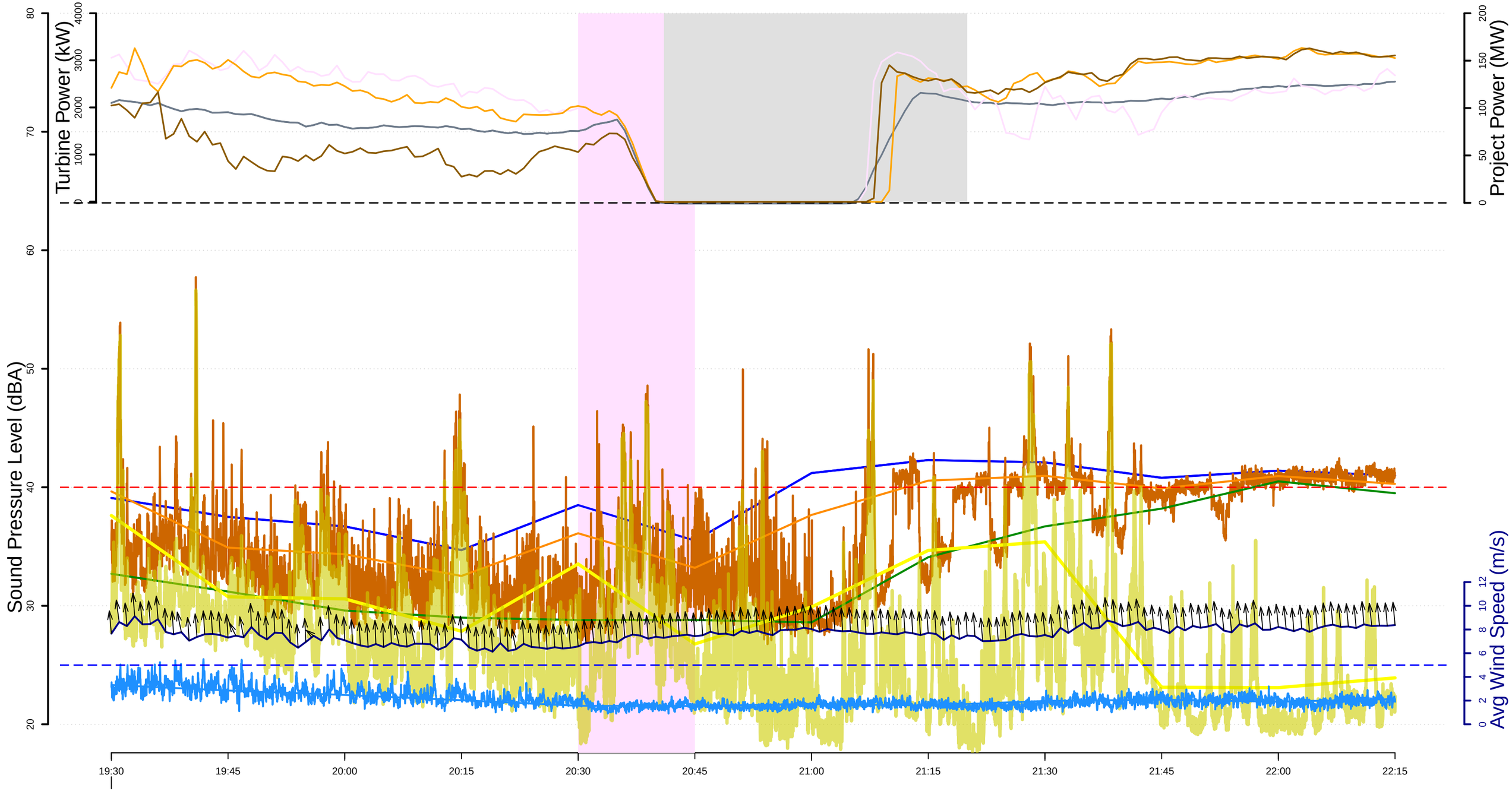
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

Project Power (MW)

REC−121 (Jenkins Residence), Curtail #46
Saturday, 8 1, 2020

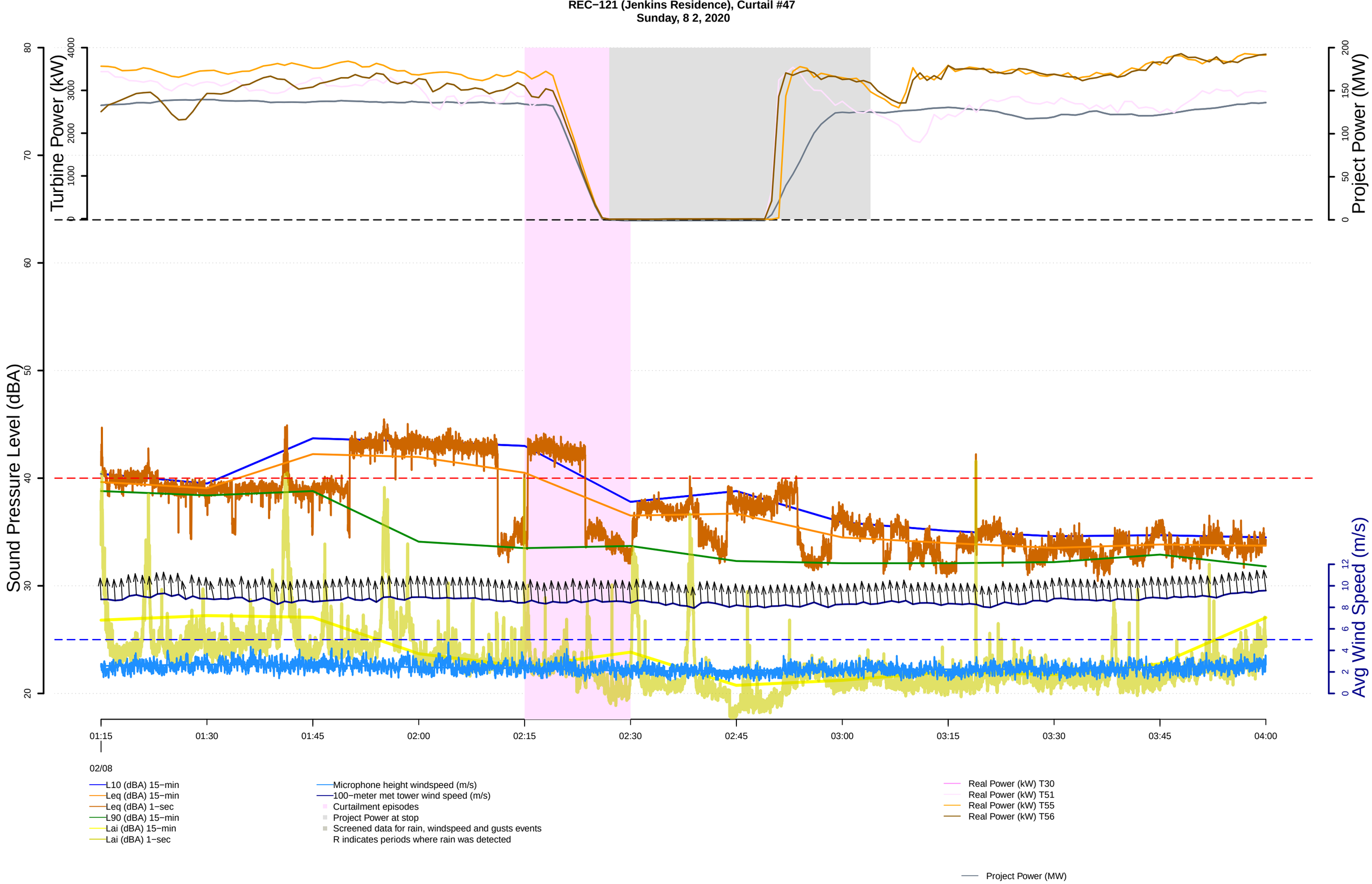


L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

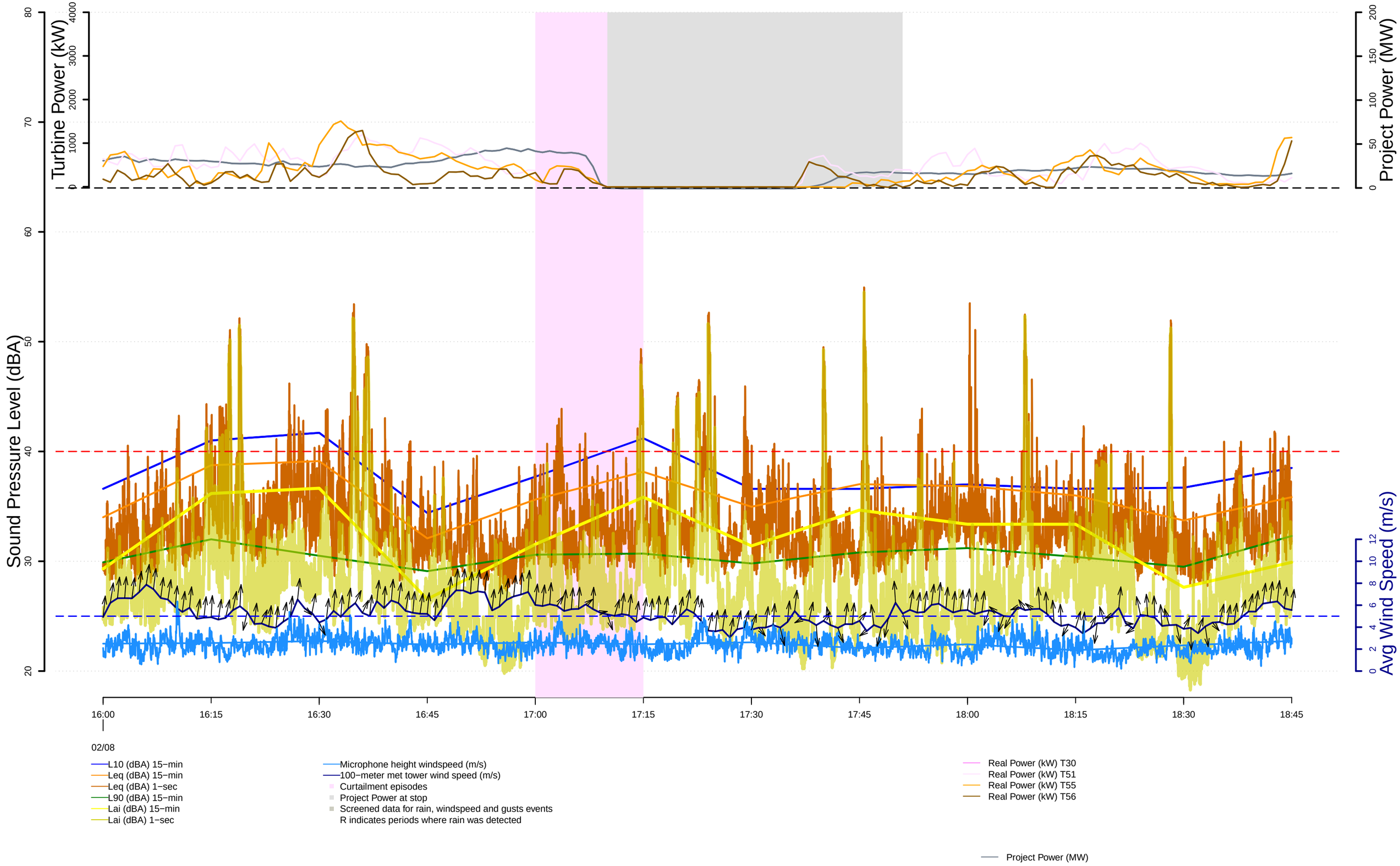
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

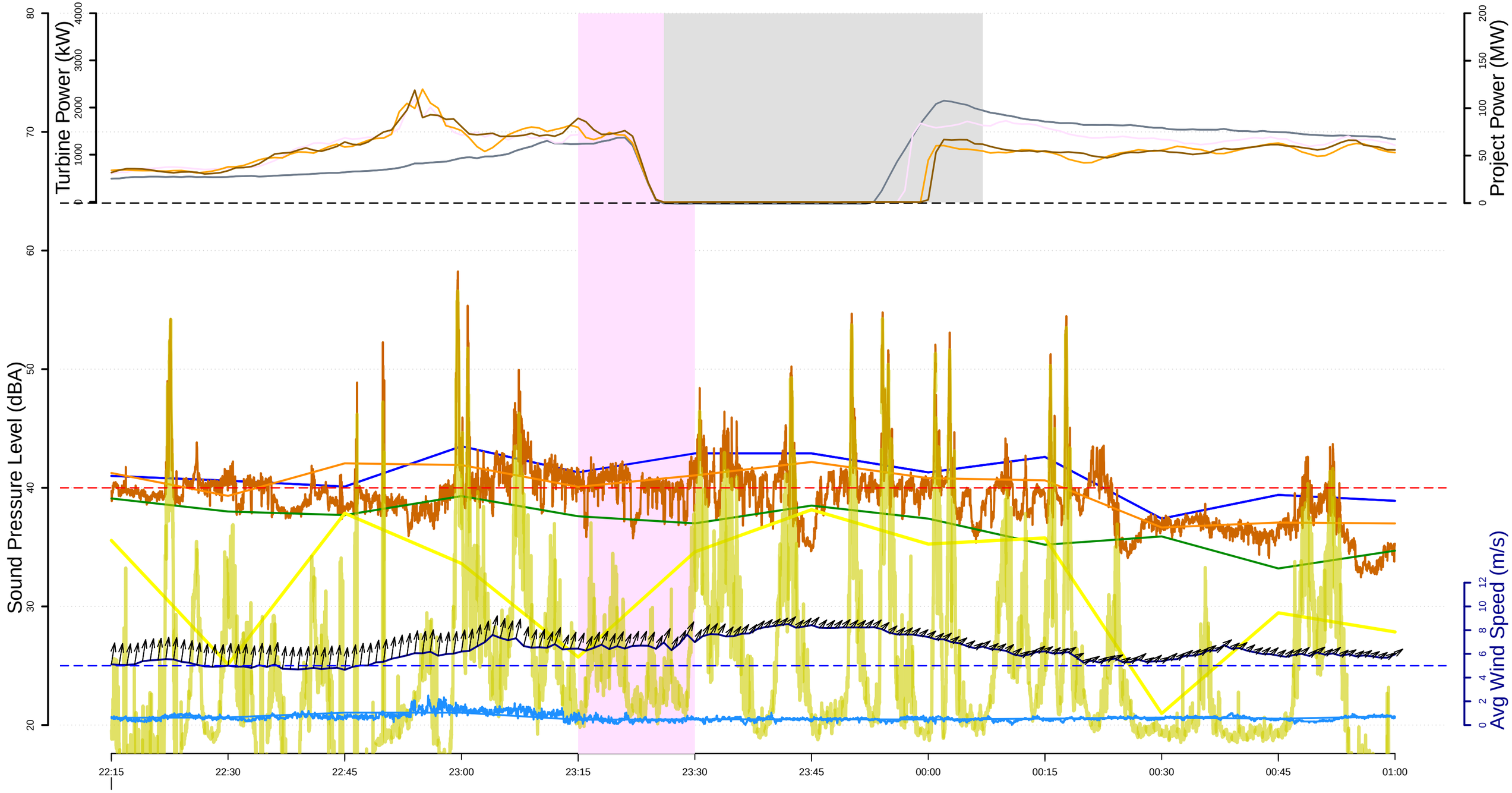
Project Power (MW)


REC−121 (Jenkins Residence), Curtail #47
Sunday, 8 2, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
01:15
01:30
01:45
02:00
02:15
02:30
02:45
03:00
03:15
03:30
03:45
04:00
02/08
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56
Project Power (MW)

REC−121 (Jenkins Residence), Curtail #48
Sunday, 8 2, 2020

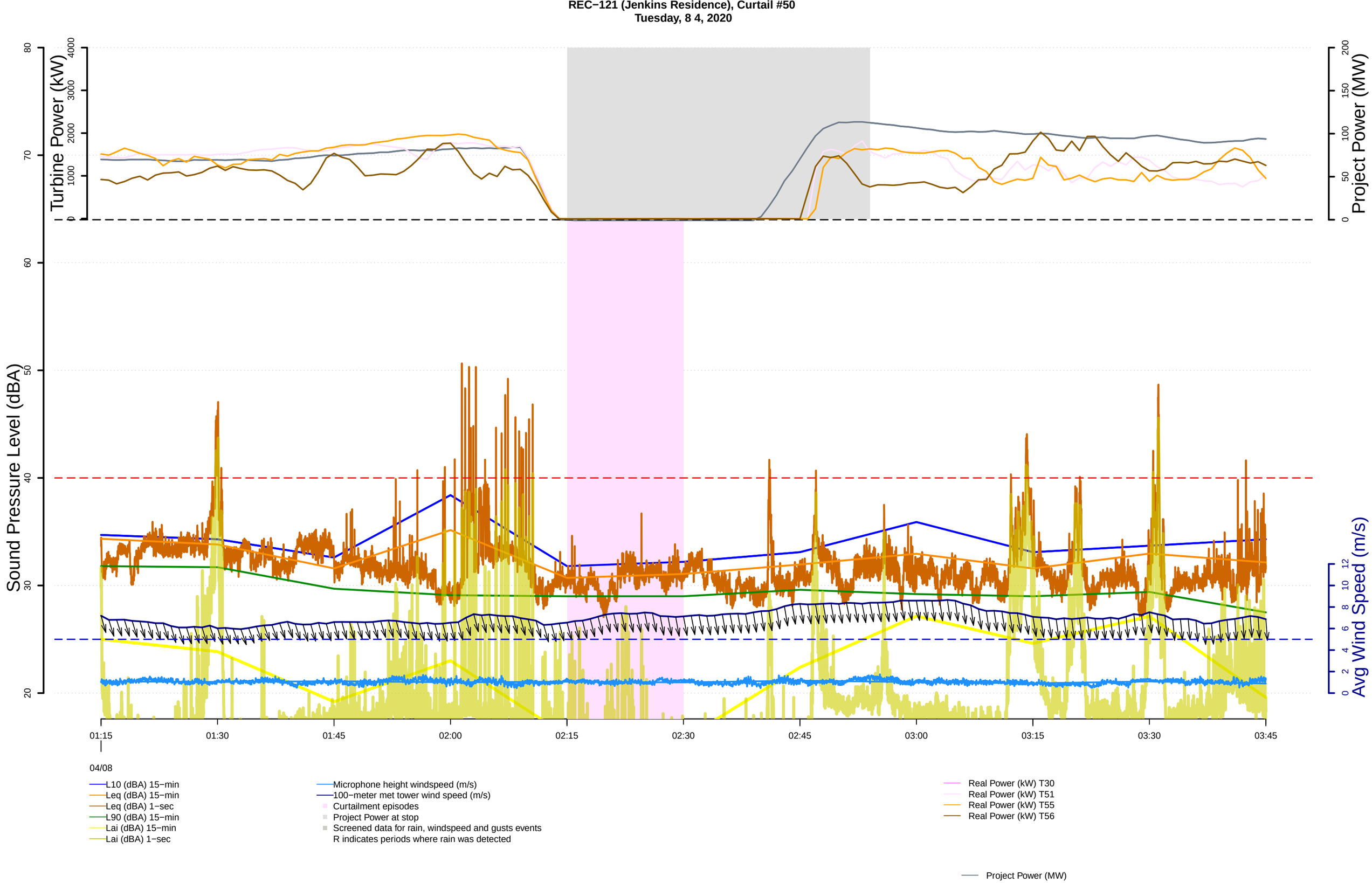


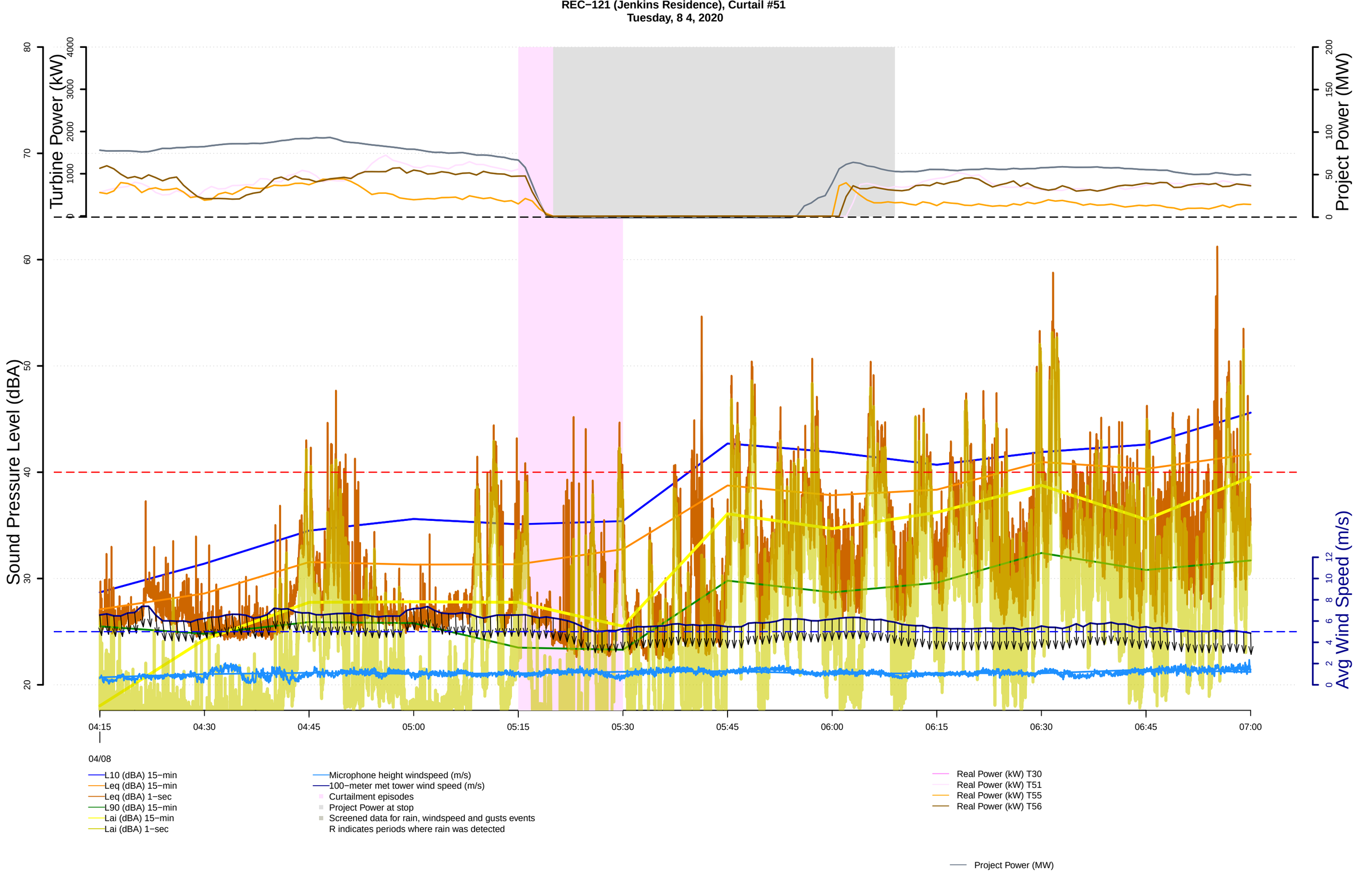
REC−121 (Jenkins Residence), Curtail #49
Sunday, 8 2, 2020



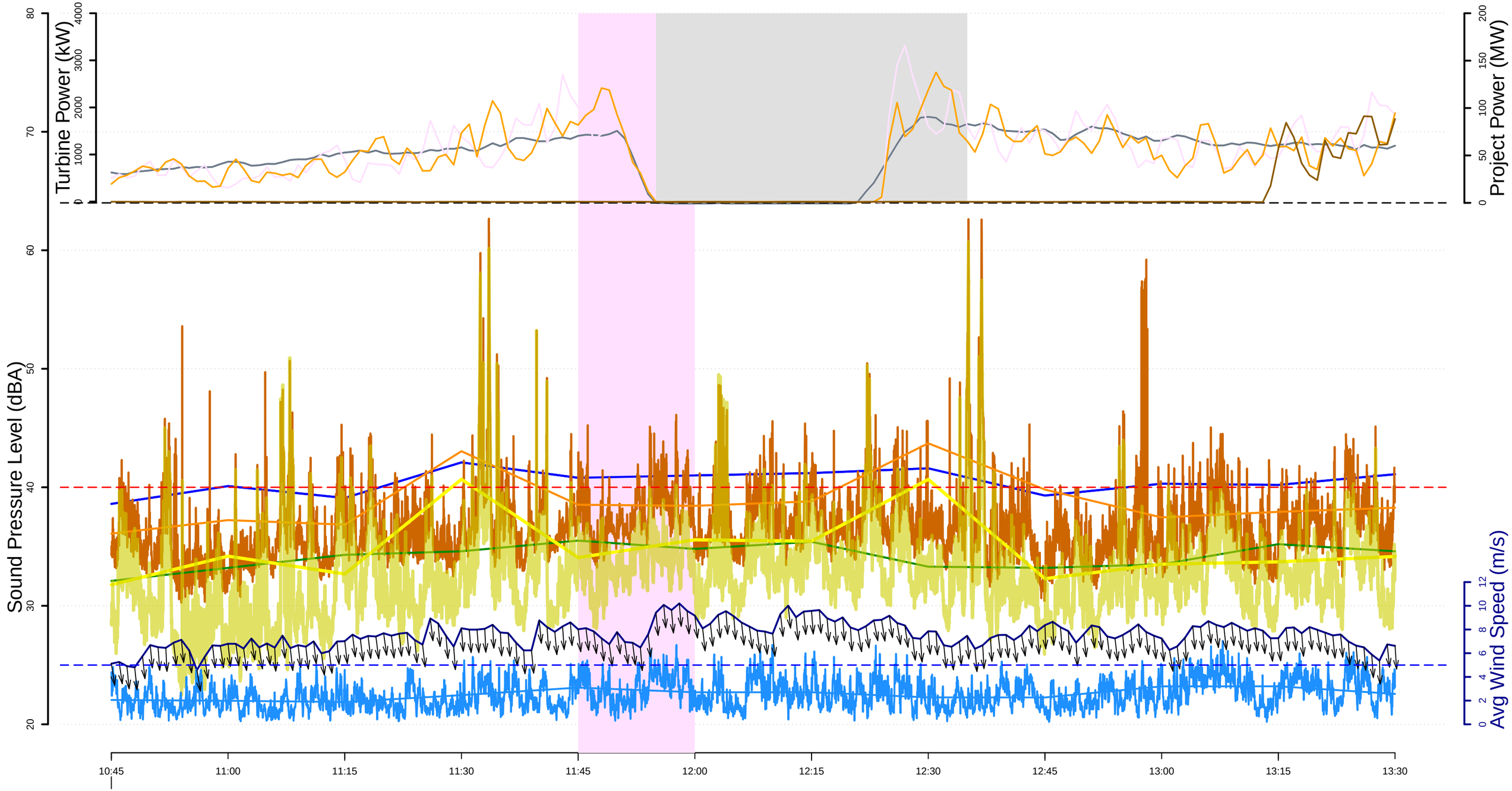
02/08

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T30
- Real Power (kW) T51
- Real Power (kW) T55
- Real Power (kW) T56
- Project Power (MW)


REC−121 (Jenkins Residence), Curtail #50
Tuesday, 8 4, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
01:15
01:30
01:45
02:00
02:15
02:30
02:45
03:00
03:15
03:30
03:45
04/08
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56
Project Power (MW)


REC−121 (Jenkins Residence), Curtail #51
Tuesday, 8 4, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
04:15
04:30
04:45
05:00
05:15
05:30
05:45
06:00
06:15
06:30
06:45
07:00
04/08
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56
Project Power (MW)

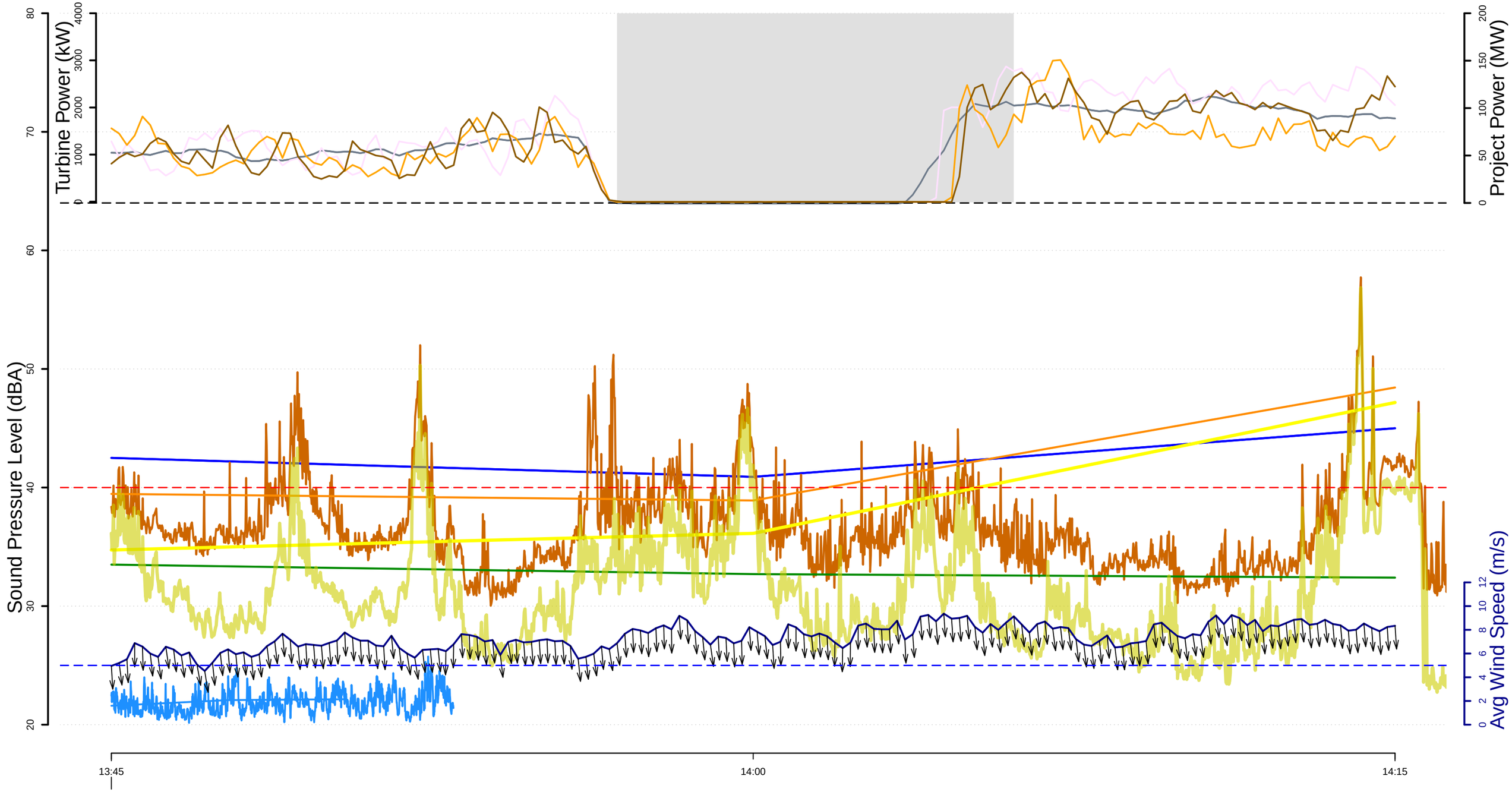
REC−121 (Jenkins Residence), Curtail #52
Tuesday, 8 4, 2020



04/08

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T30
- Real Power (kW) T51
- Real Power (kW) T55
- Real Power (kW) T56
- Project Power (MW)

REC−121 (Jenkins Residence), Curtail #53
Tuesday, 8 4, 2020



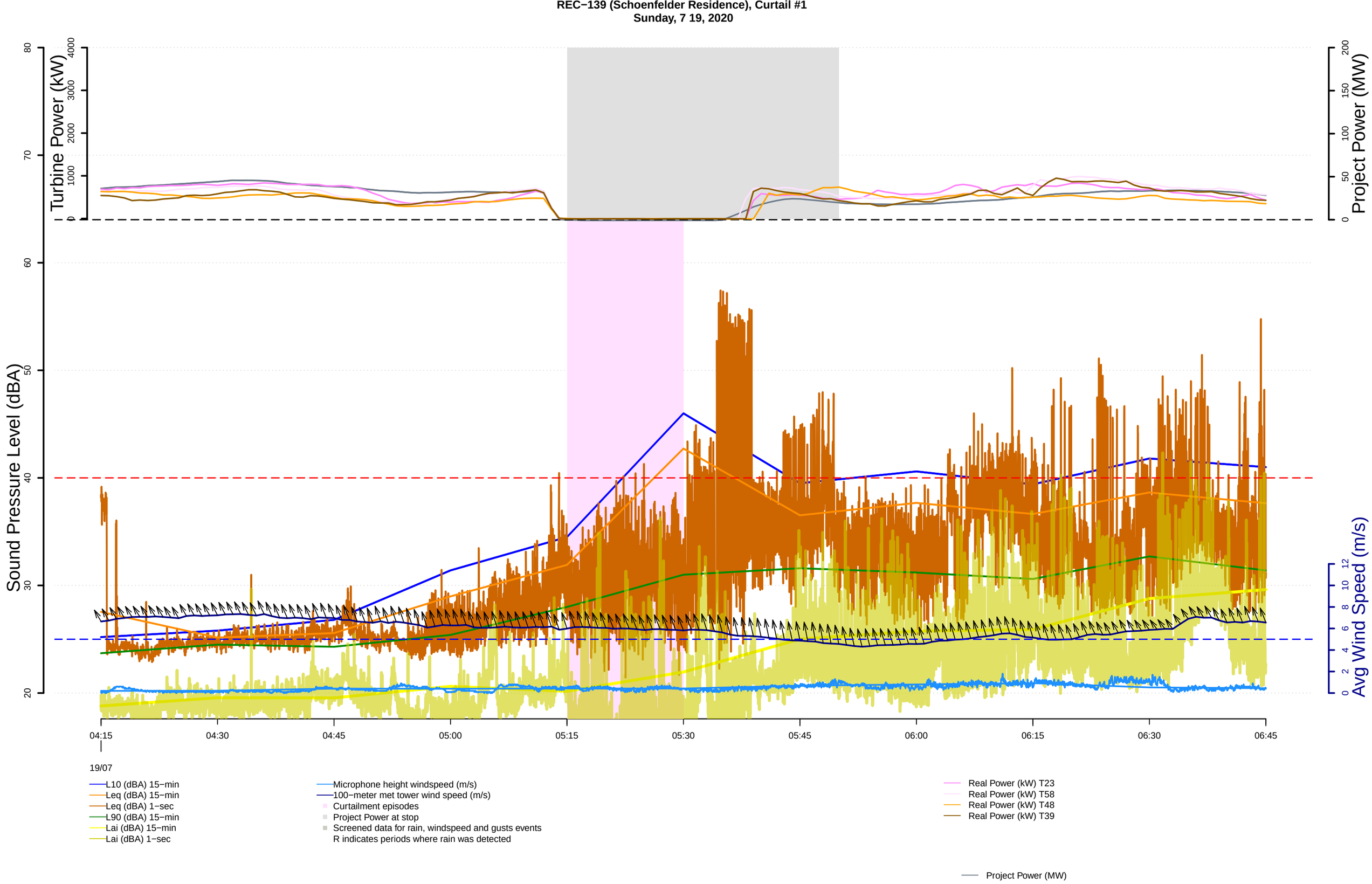
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

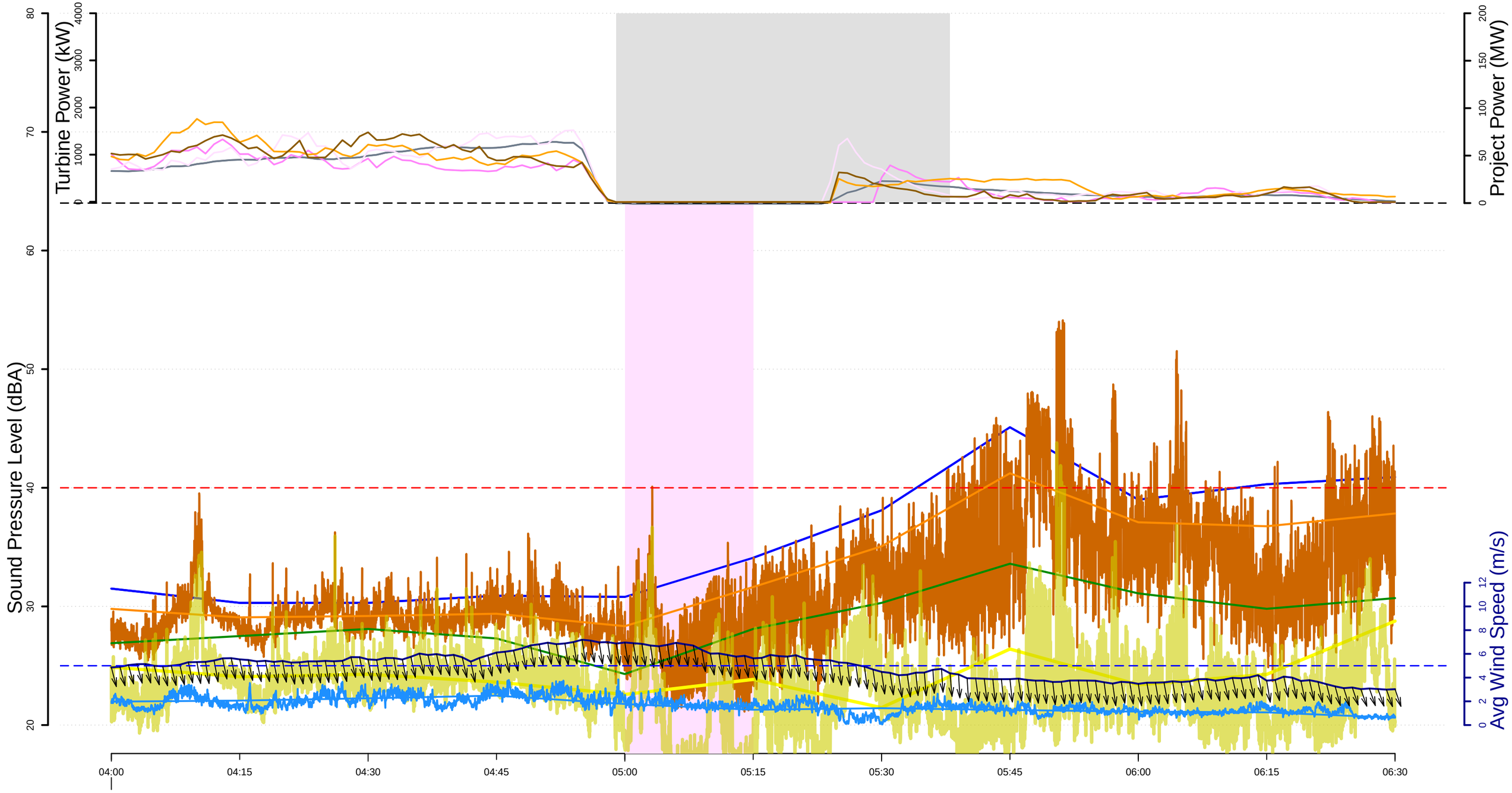
Real Power (kW) T30
Real Power (kW) T51
Real Power (kW) T55
Real Power (kW) T56

Project Power (MW)

REC-139 (Schoenfelder Residence)

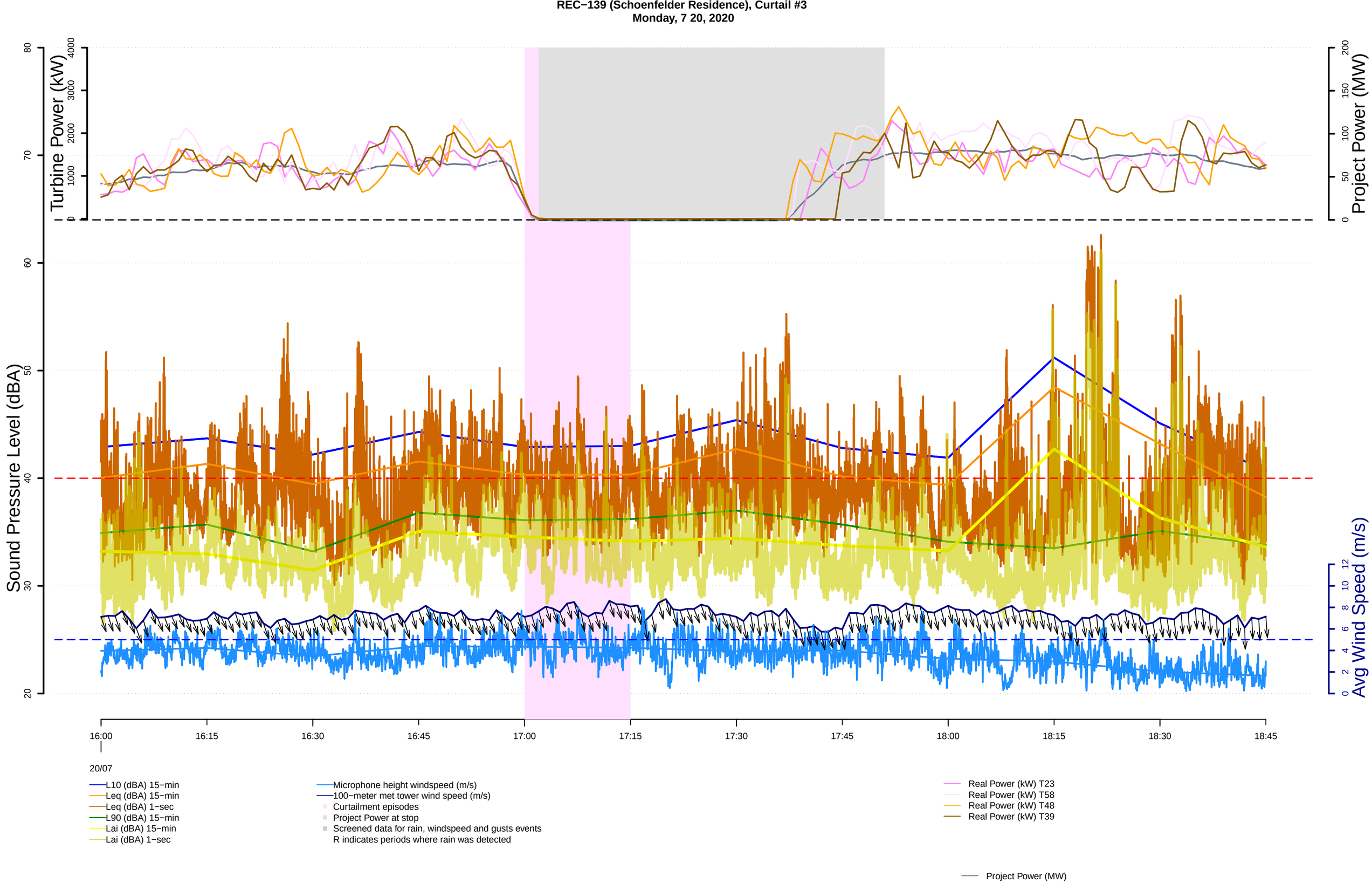

REC−139 (Schoenfelder Residence), Curtail #1
Sunday, 7 19, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
04:15
04:30
04:45
05:00
05:15
05:30
05:45
06:00
06:15
06:30
06:45
19/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39
Project Power (MW)

REC−139 (Schoenfelder Residence), Curtail #2
Monday, 7 20, 2020



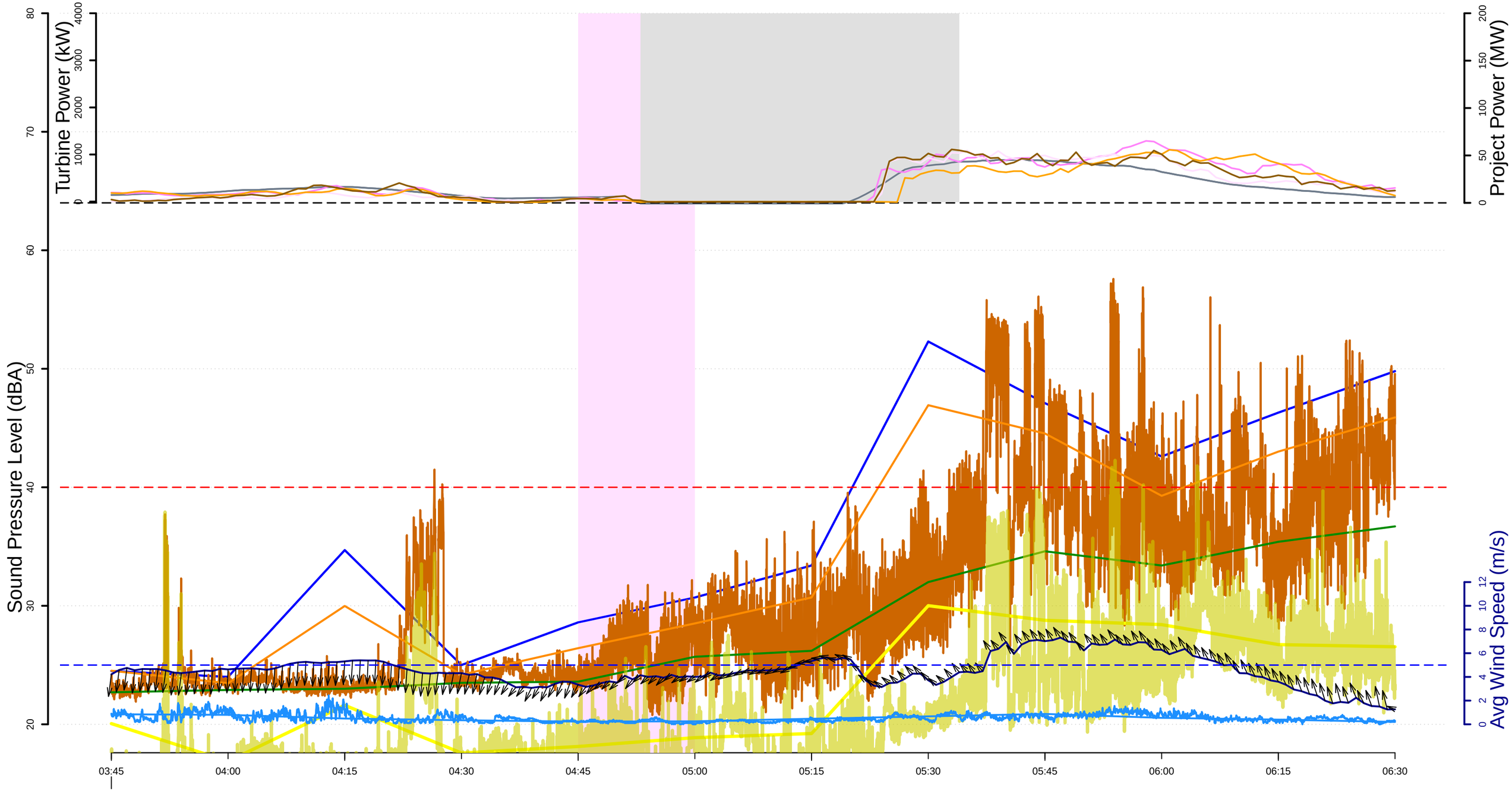
20/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T23
- Real Power (kW) T58
- Real Power (kW) T48
- Real Power (kW) T39
- Project Power (MW)



REC−139 (Schoenfelder Residence), Curtail #3
Monday, 7 20, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
16:00
16:15
16:30
16:45
17:00
17:15
17:30
17:45
18:00
18:15
18:30
18:45
20/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39
Project Power (MW)

REC−139 (Schoenfelder Residence), Curtail #4
Tuesday, 7 21, 2020



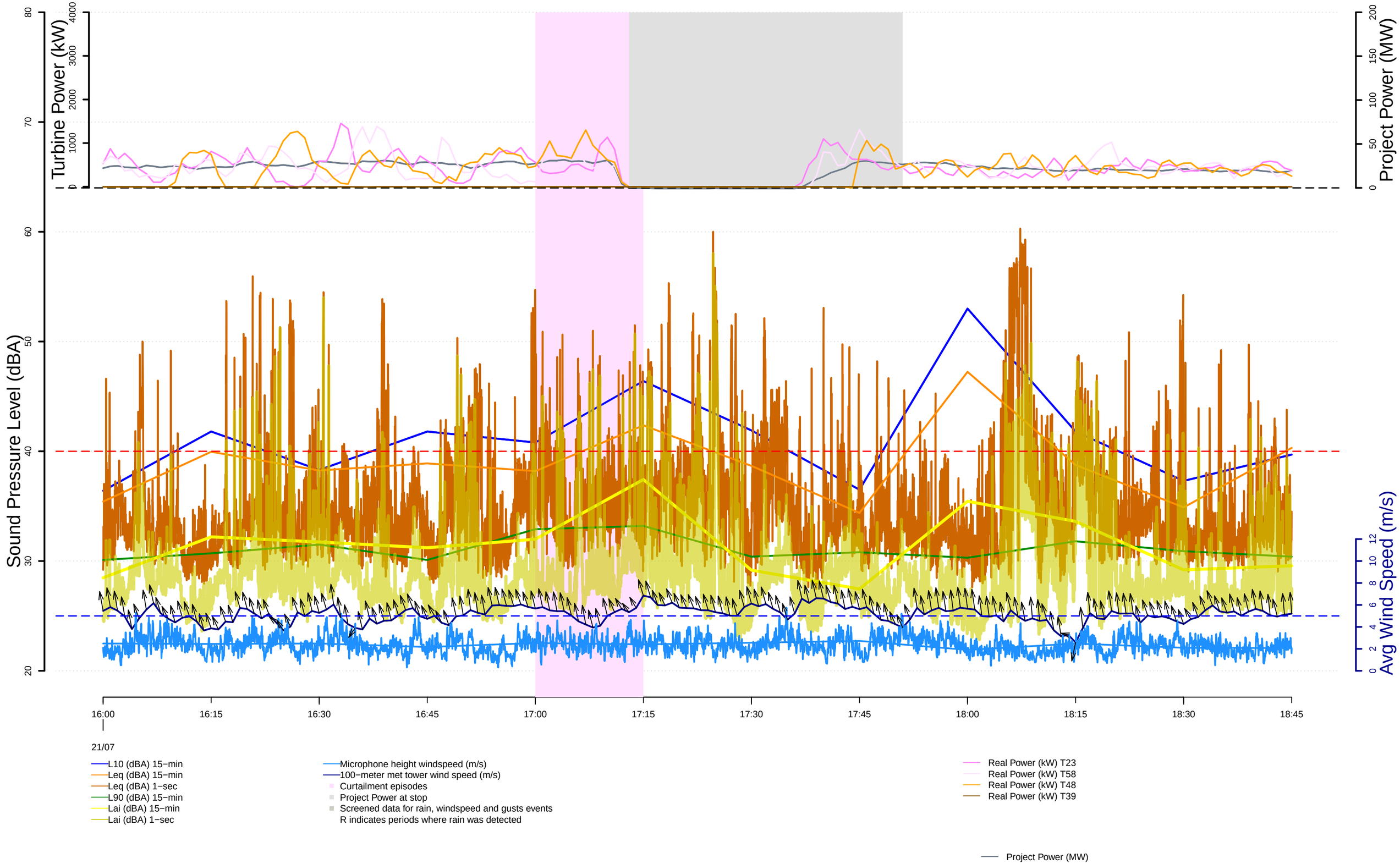
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

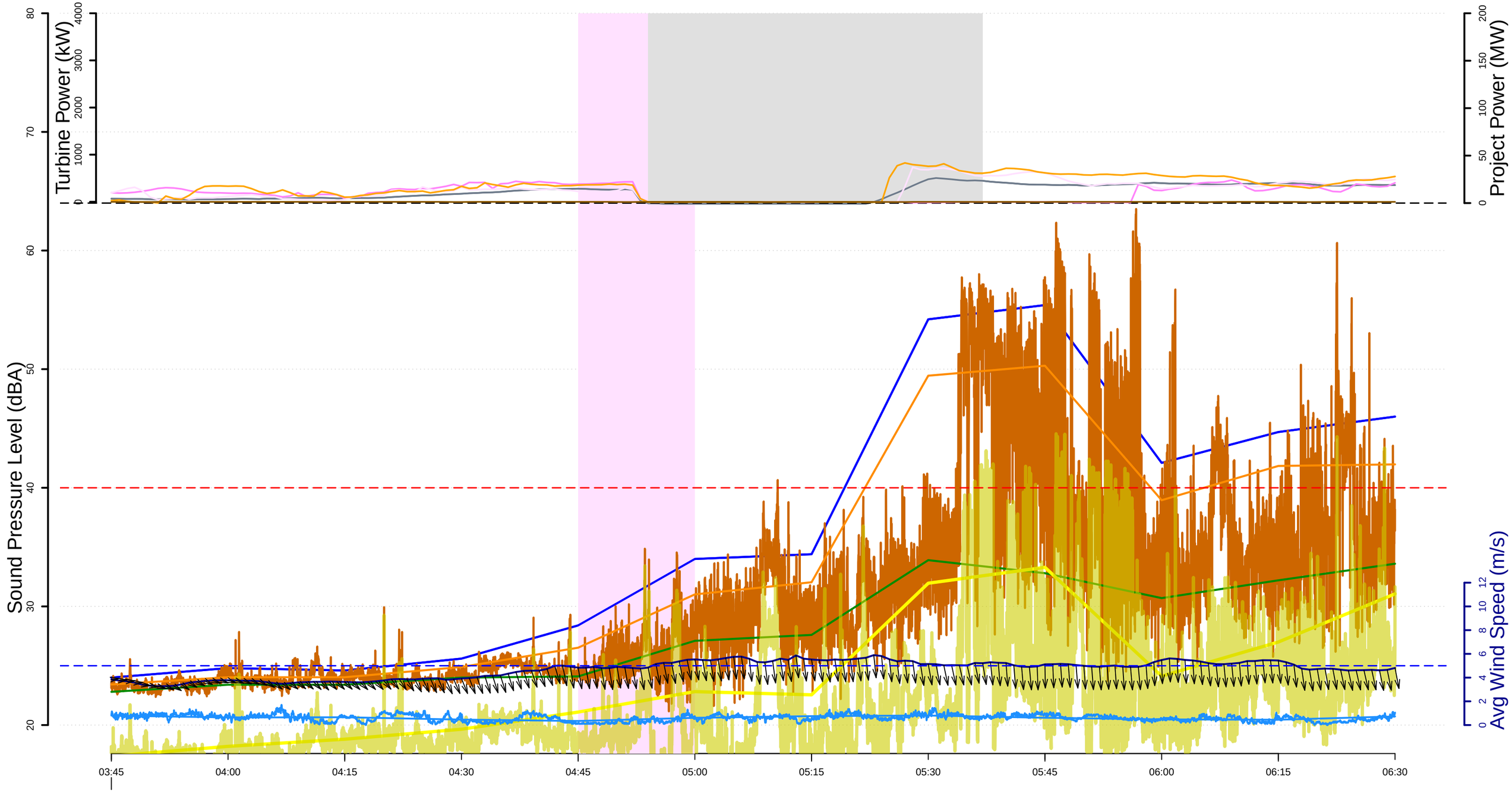
Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39

Project Power (MW)

REC−139 (Schoenfelder Residence), Curtail #5
Tuesday, 7 21, 2020



REC−139 (Schoenfelder Residence), Curtail #6
Wednesday, 7 22, 2020



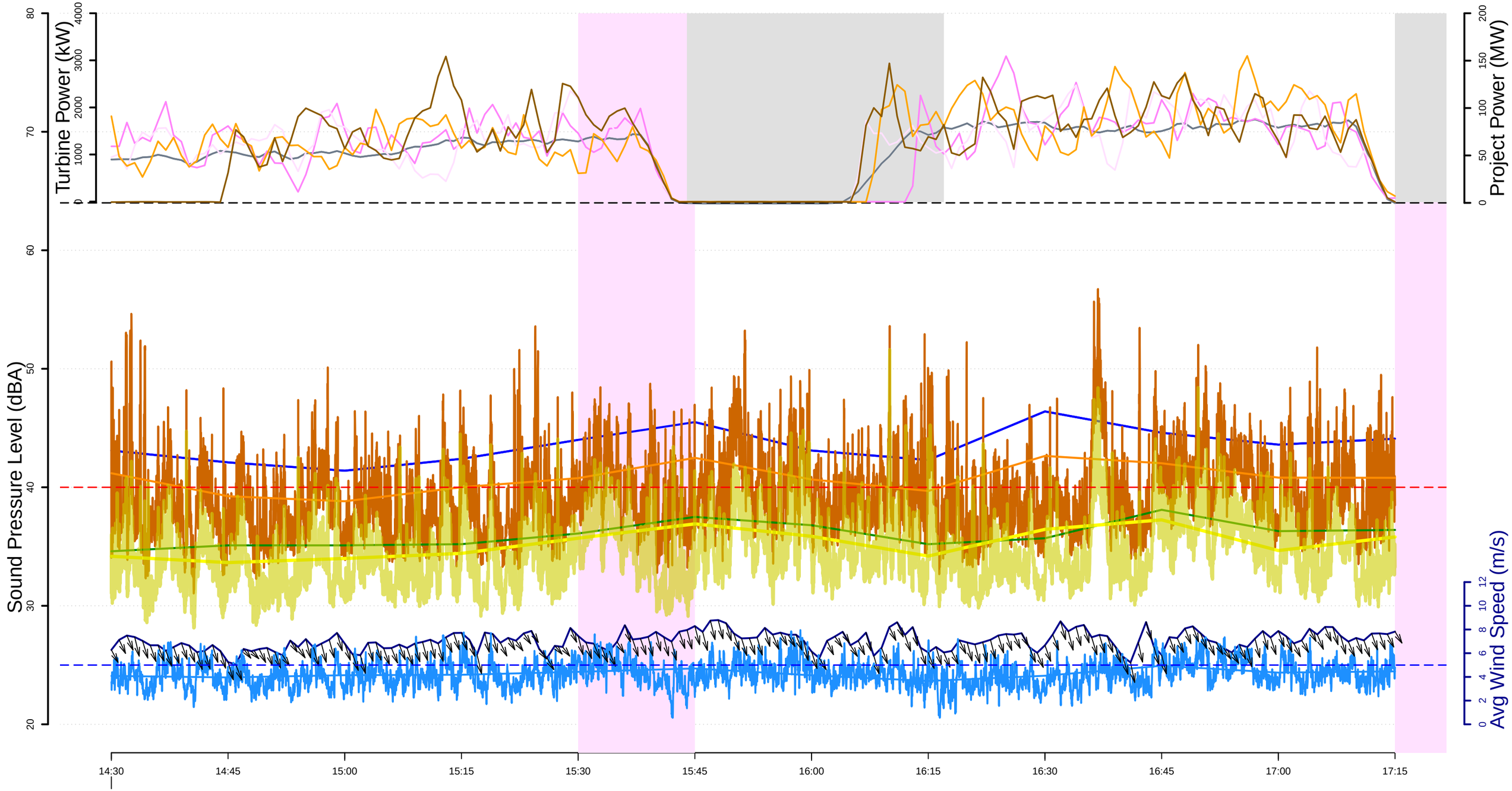
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39

Project Power (MW)

REC−139 (Schoenfelder Residence), Curtail #7
Wednesday, 7 22, 2020



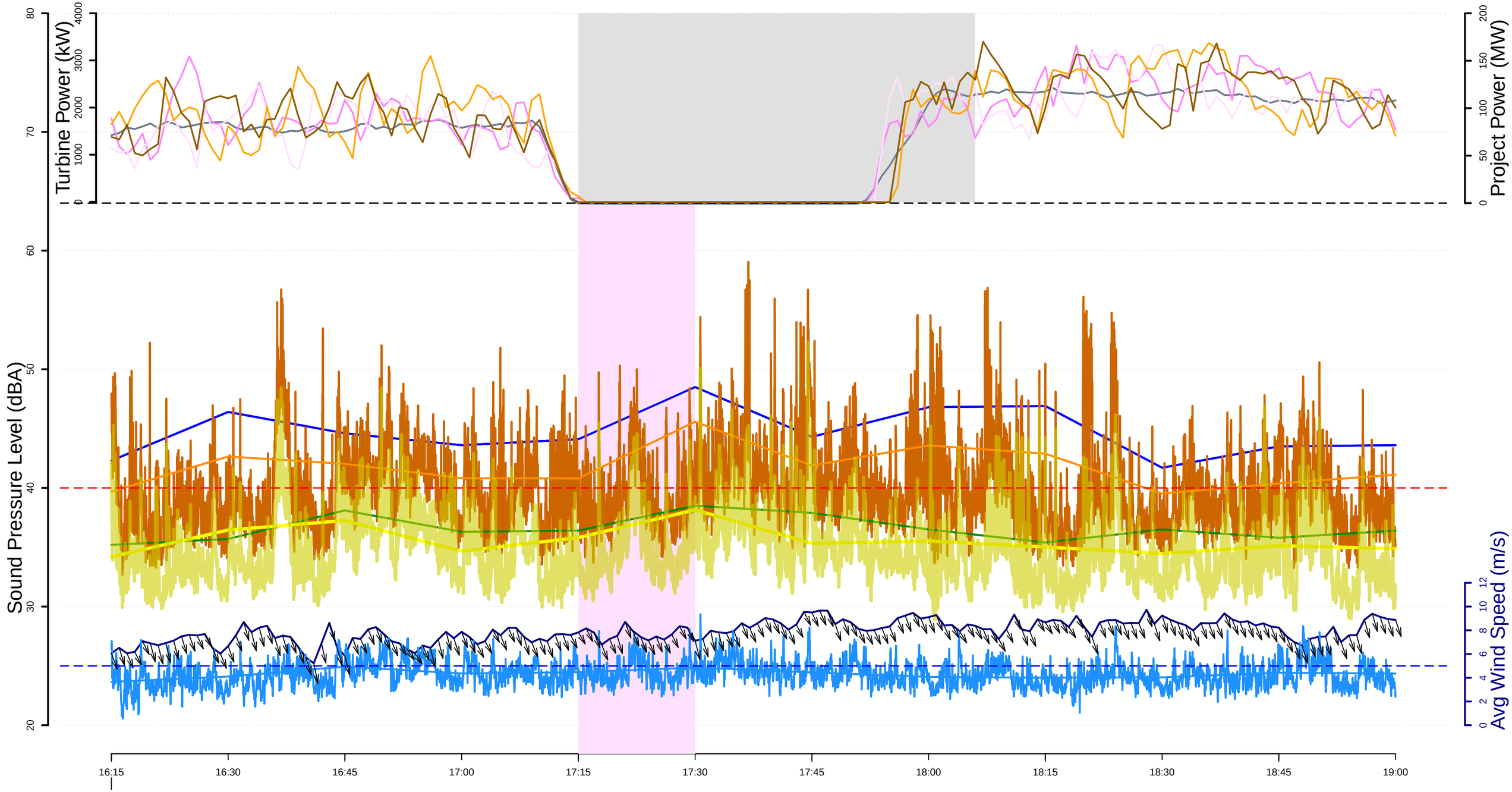
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39

Project Power (MW)

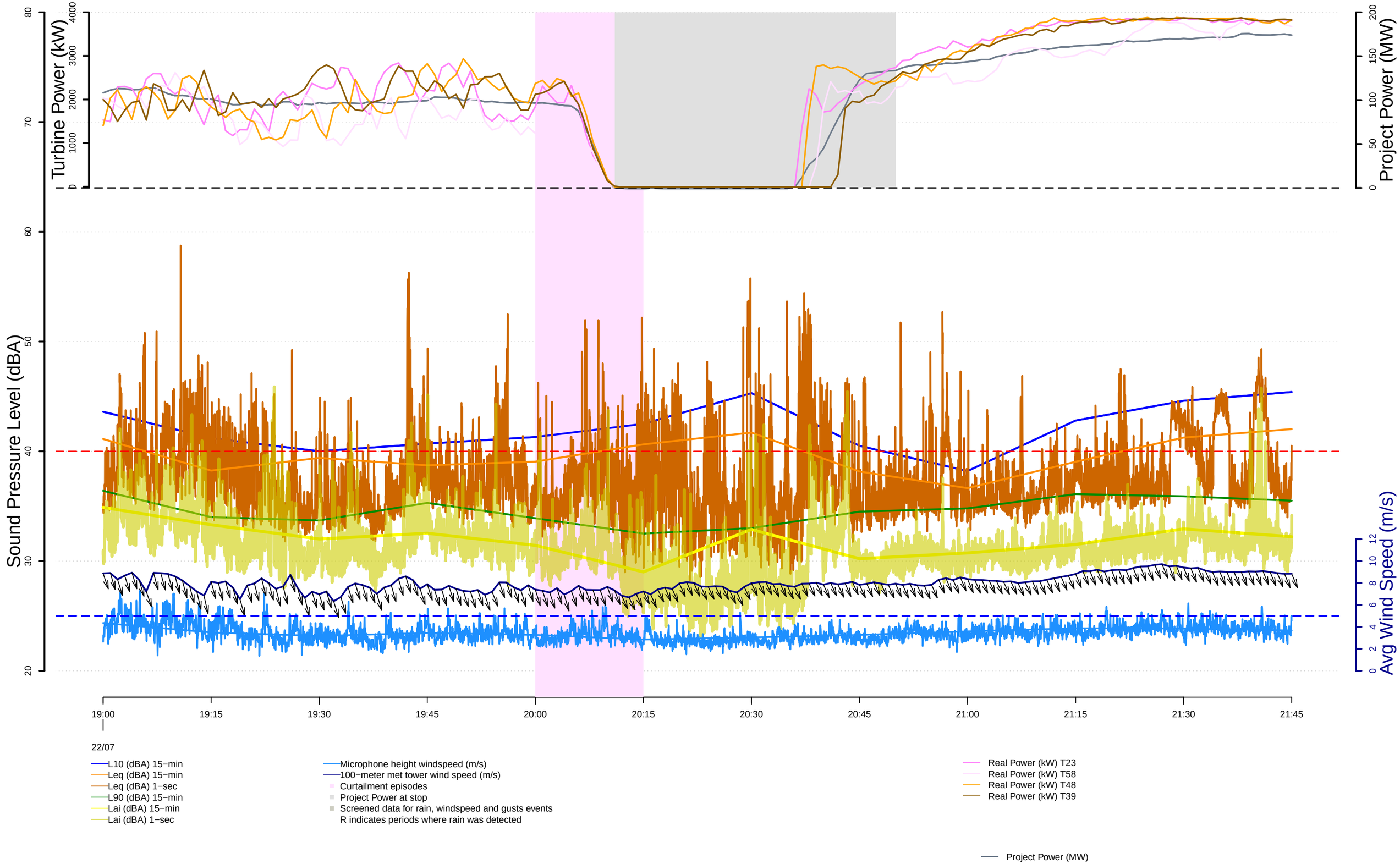
REC−139 (Schoenfelder Residence), Curtail #8
Wednesday, 7 22, 2020



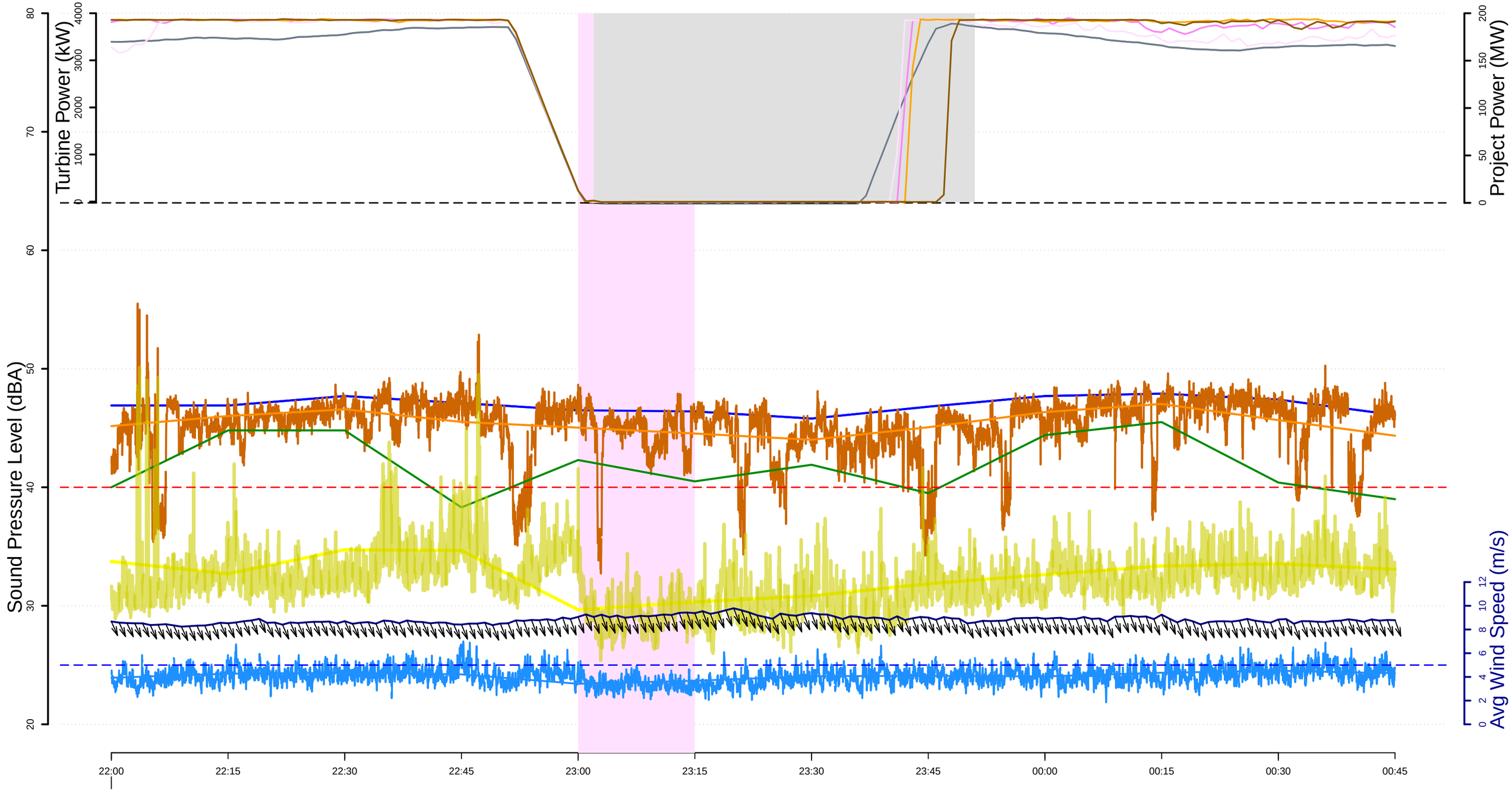
22/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T23
- Real Power (kW) T58
- Real Power (kW) T48
- Real Power (kW) T39
- Project Power (MW)

REC−139 (Schoenfelder Residence), Curtail #9
Wednesday, 7 22, 2020



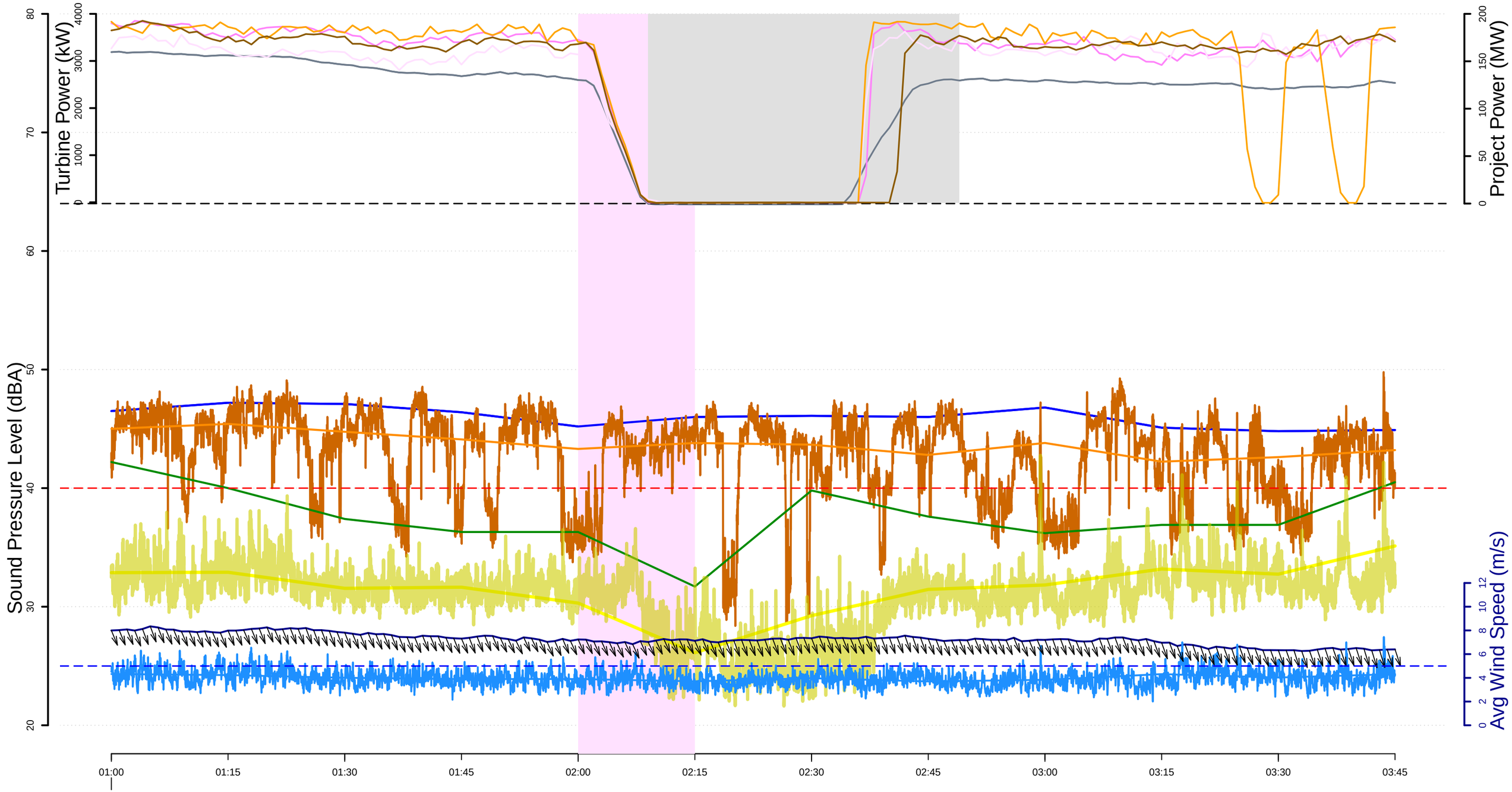
REC−139 (Schoenfelder Residence), Curtail #10
Wednesday, 7 22, 2020



22/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T23
- Real Power (kW) T58
- Real Power (kW) T48
- Real Power (kW) T39
- Project Power (MW)

REC−139 (Schoenfelder Residence), Curtail #11
Thursday, 7 23, 2020

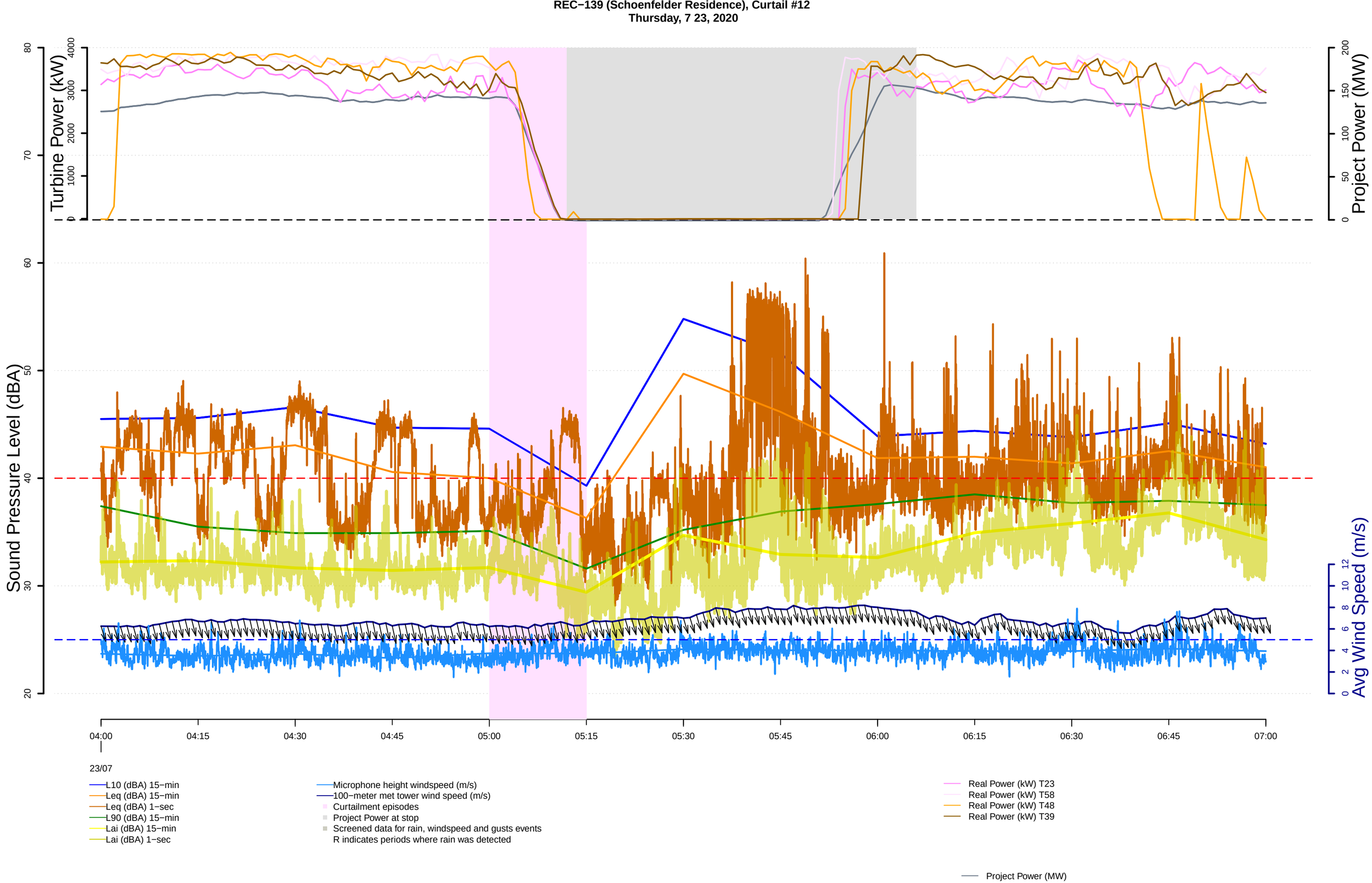


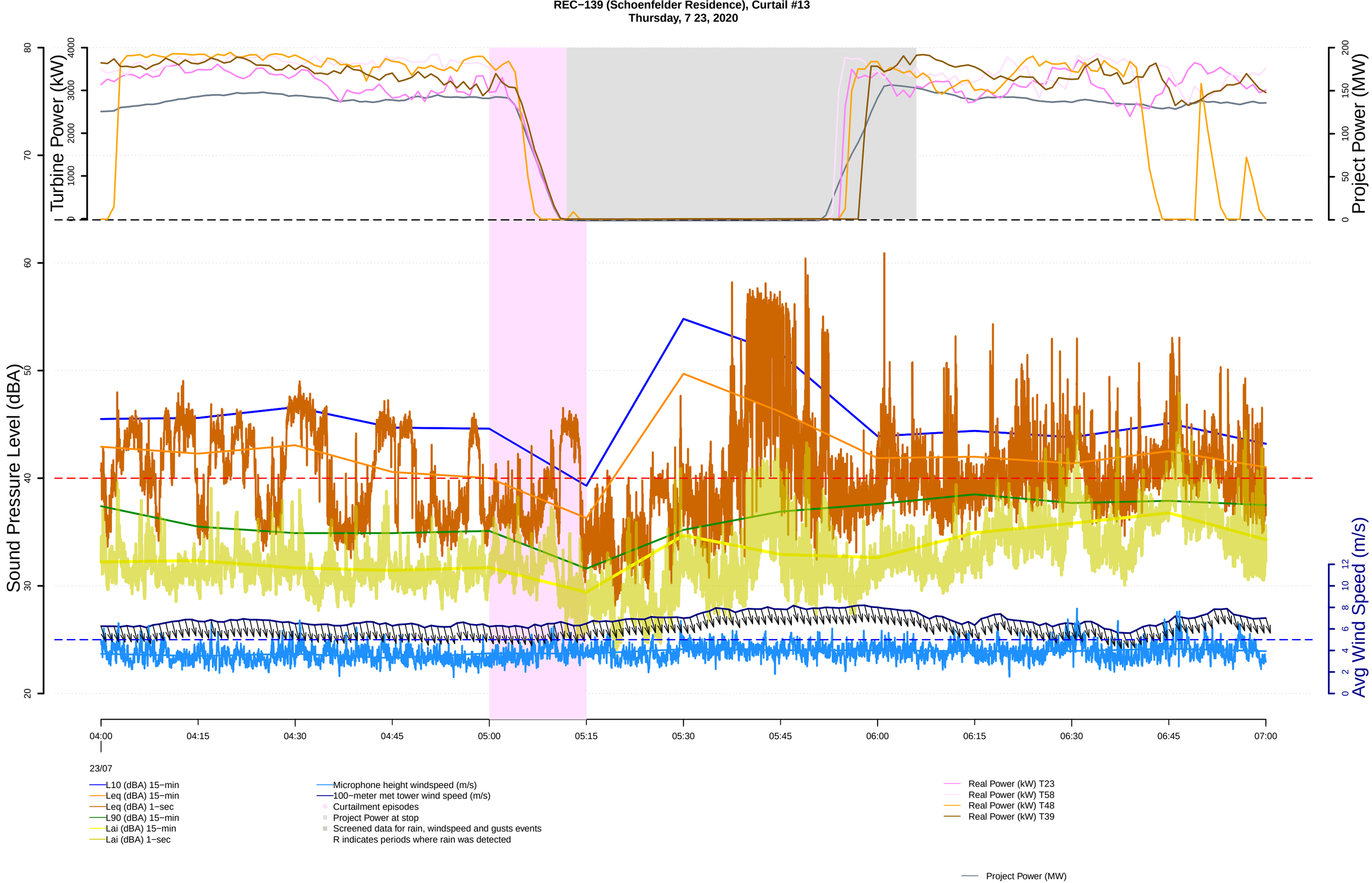
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

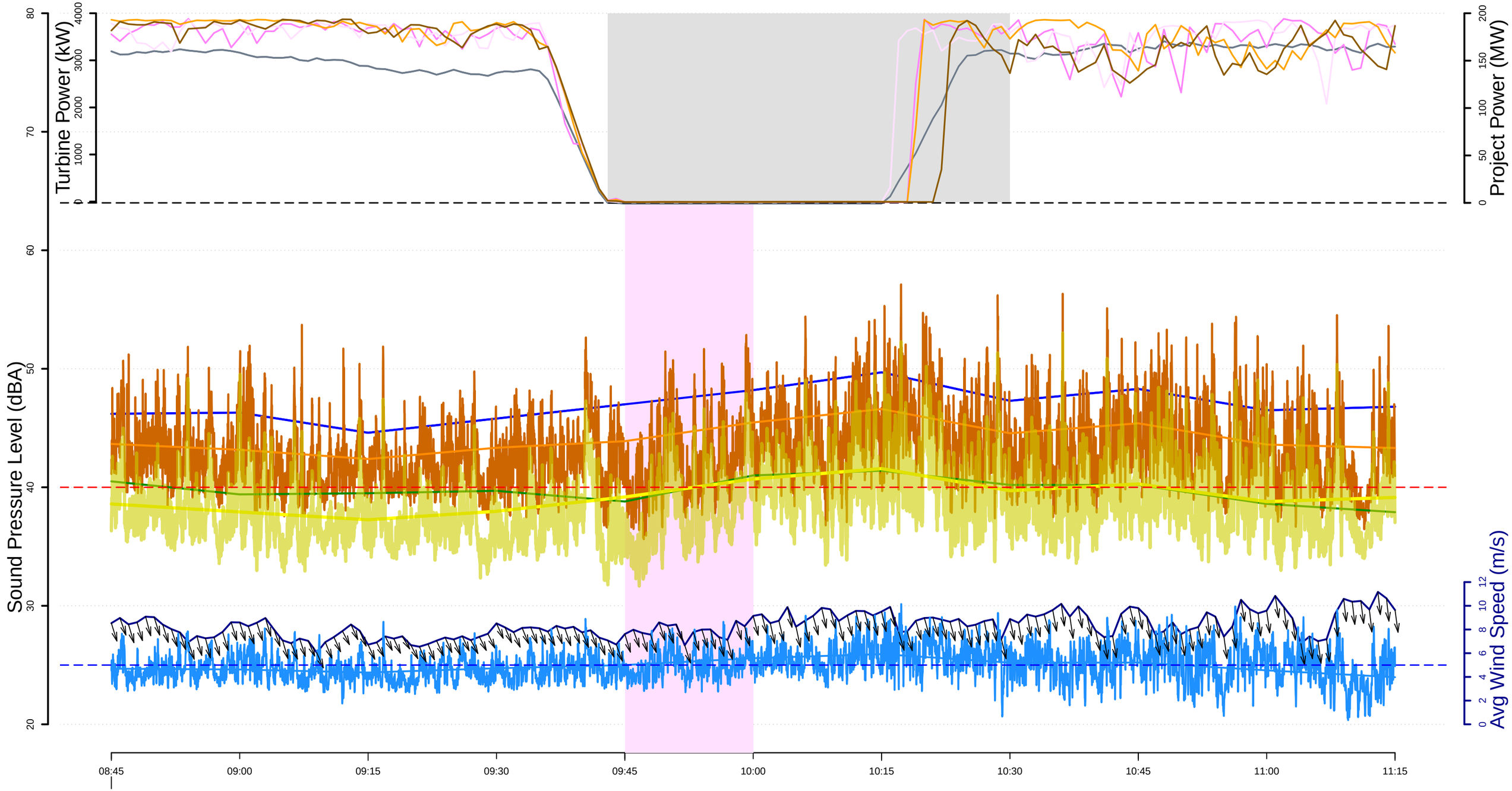
Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39

Project Power (MW)


REC−139 (Schoenfelder Residence), Curtail #12
Thursday, 7 23, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
04:00
04:15
04:30
04:45
05:00
05:15
05:30
05:45
06:00
06:15
06:30
06:45
07:00
23/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39
Project Power (MW)


REC−139 (Schoenfelder Residence), Curtail #13
Thursday, 7 23, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
04:00
04:15
04:30
04:45
05:00
05:15
05:30
05:45
06:00
06:15
06:30
06:45
07:00
23/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39
Project Power (MW)

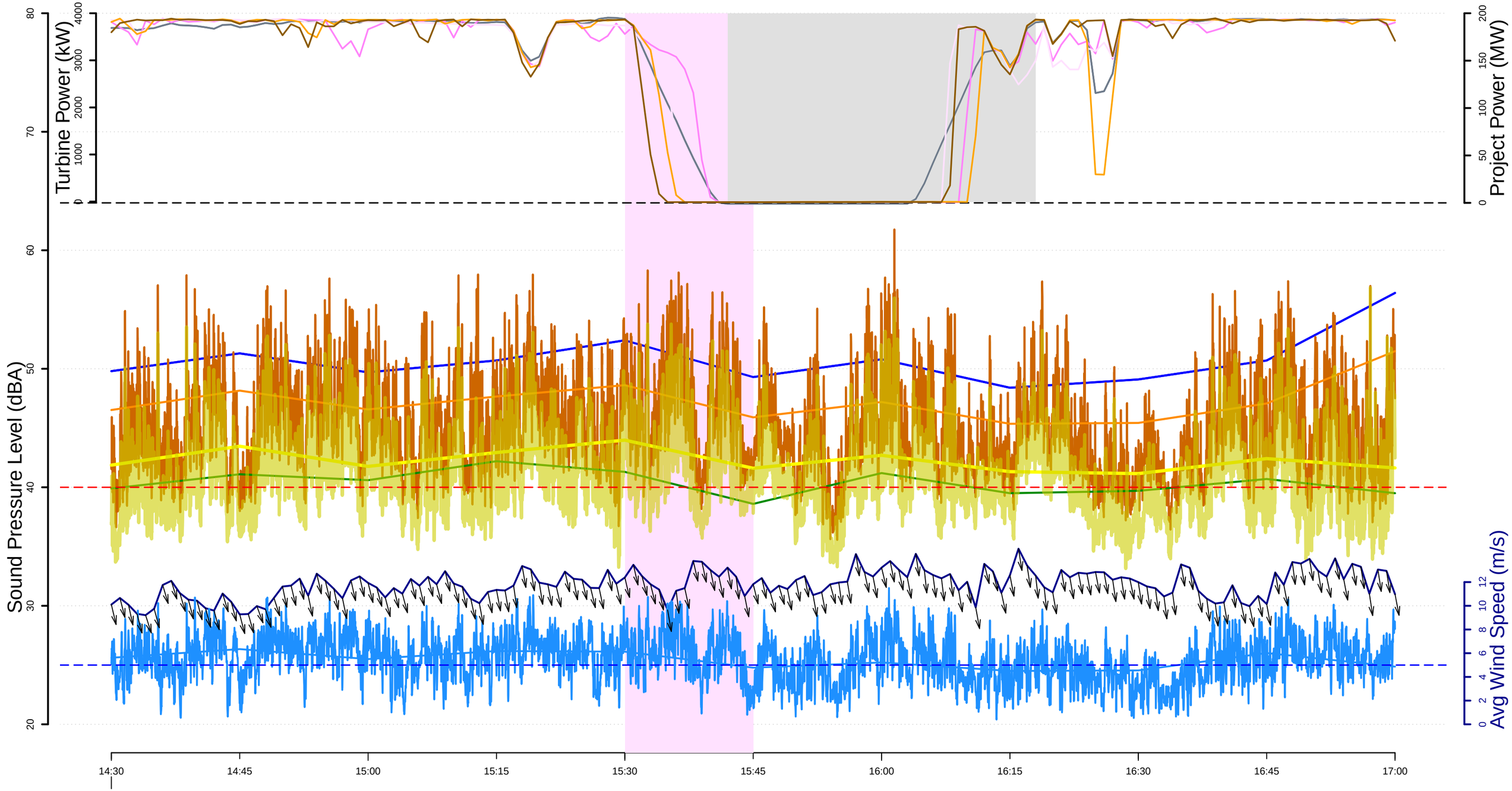
REC−139 (Schoenfelder Residence), Curtail #14
Thursday, 7 23, 2020



23/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T23
- Real Power (kW) T58
- Real Power (kW) T48
- Real Power (kW) T39
- Project Power (MW)

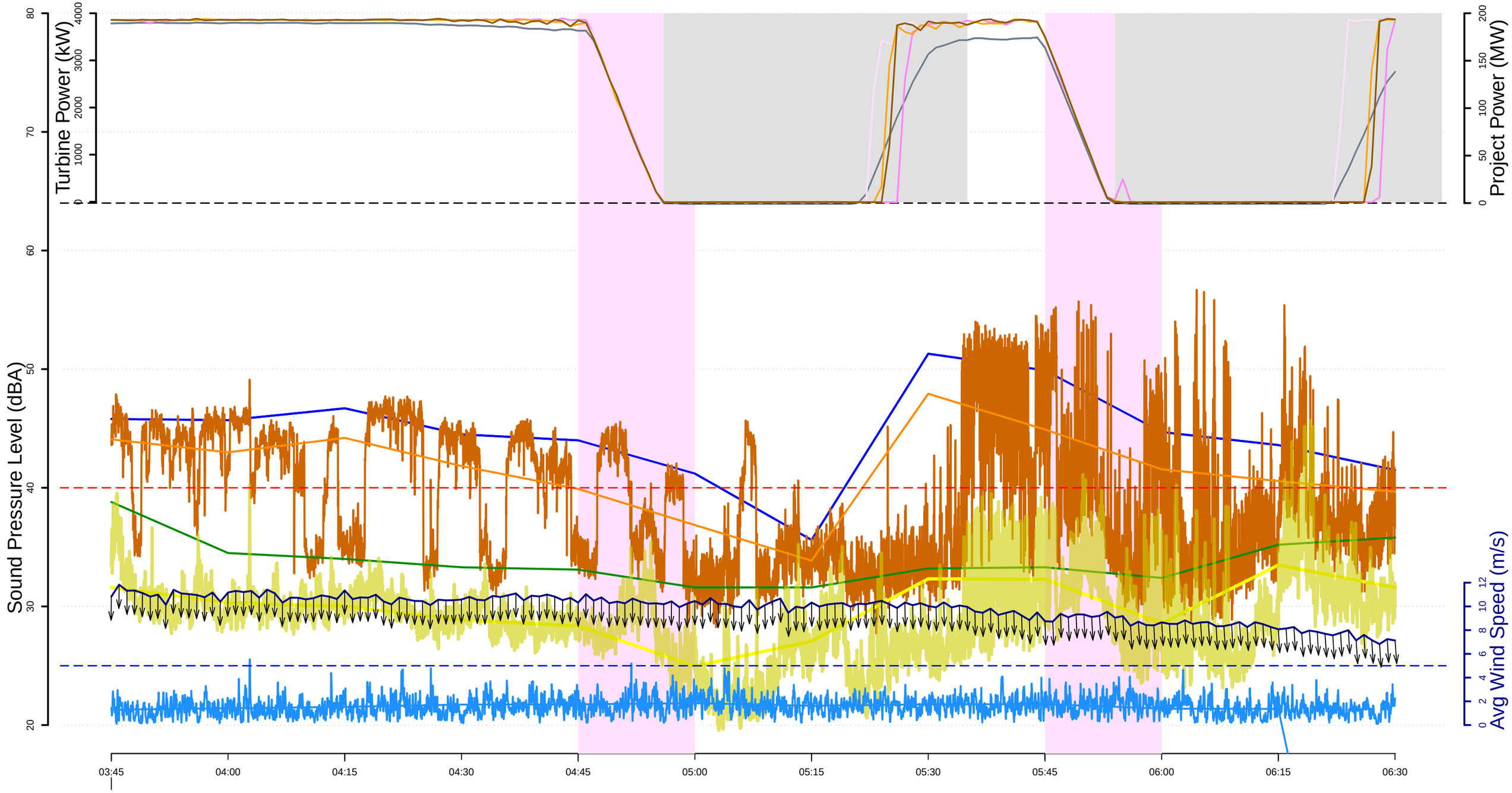
REC−139 (Schoenfelder Residence), Curtail #15
Thursday, 7 23, 2020



23/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T23
- Real Power (kW) T58
- Real Power (kW) T48
- Real Power (kW) T39
- Project Power (MW)

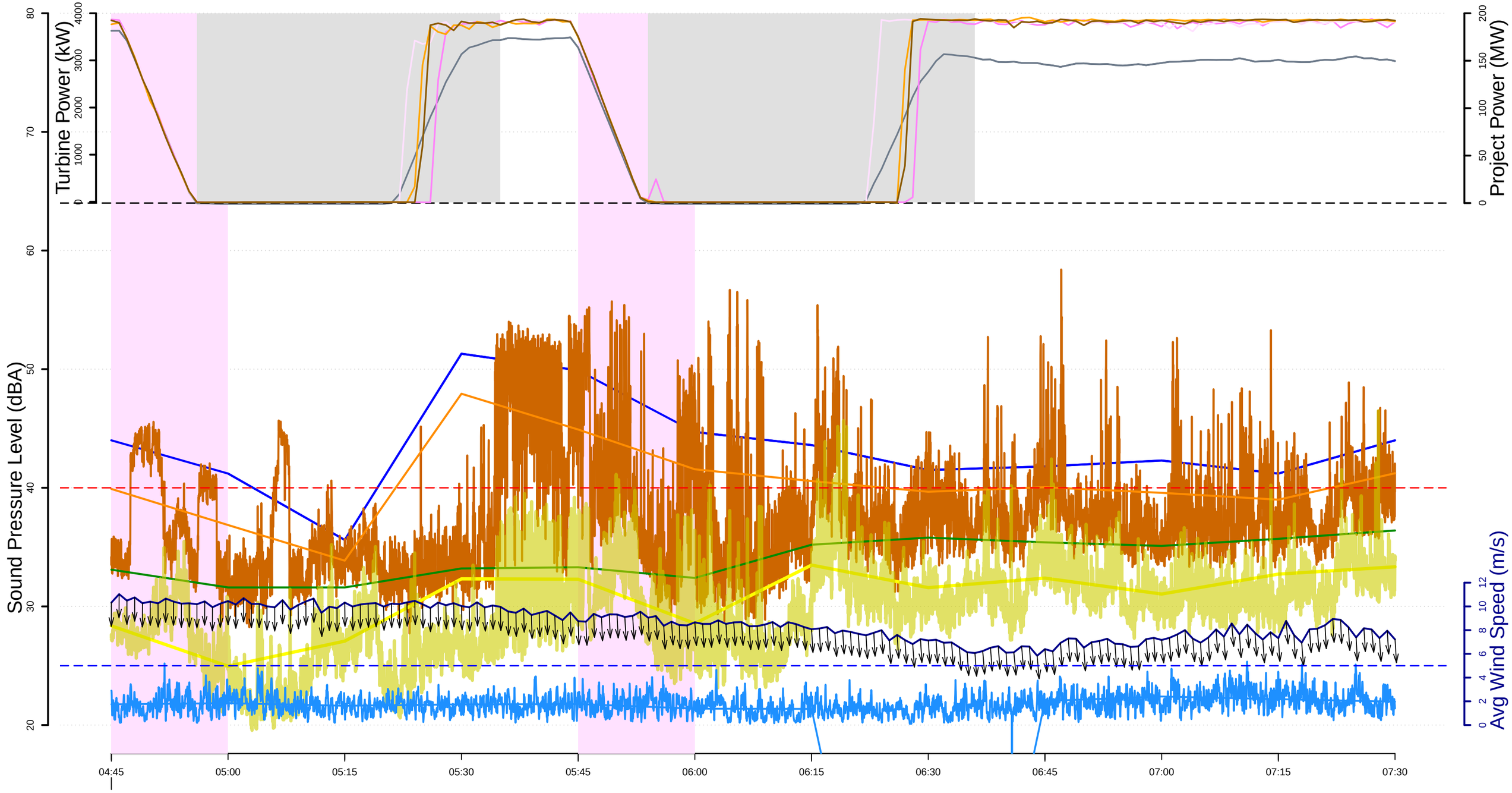
REC−139 (Schoenfelder Residence), Curtail #16
Friday, 7 24, 2020



24/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T23
- Real Power (kW) T58
- Real Power (kW) T48
- Real Power (kW) T39
- Project Power (MW)

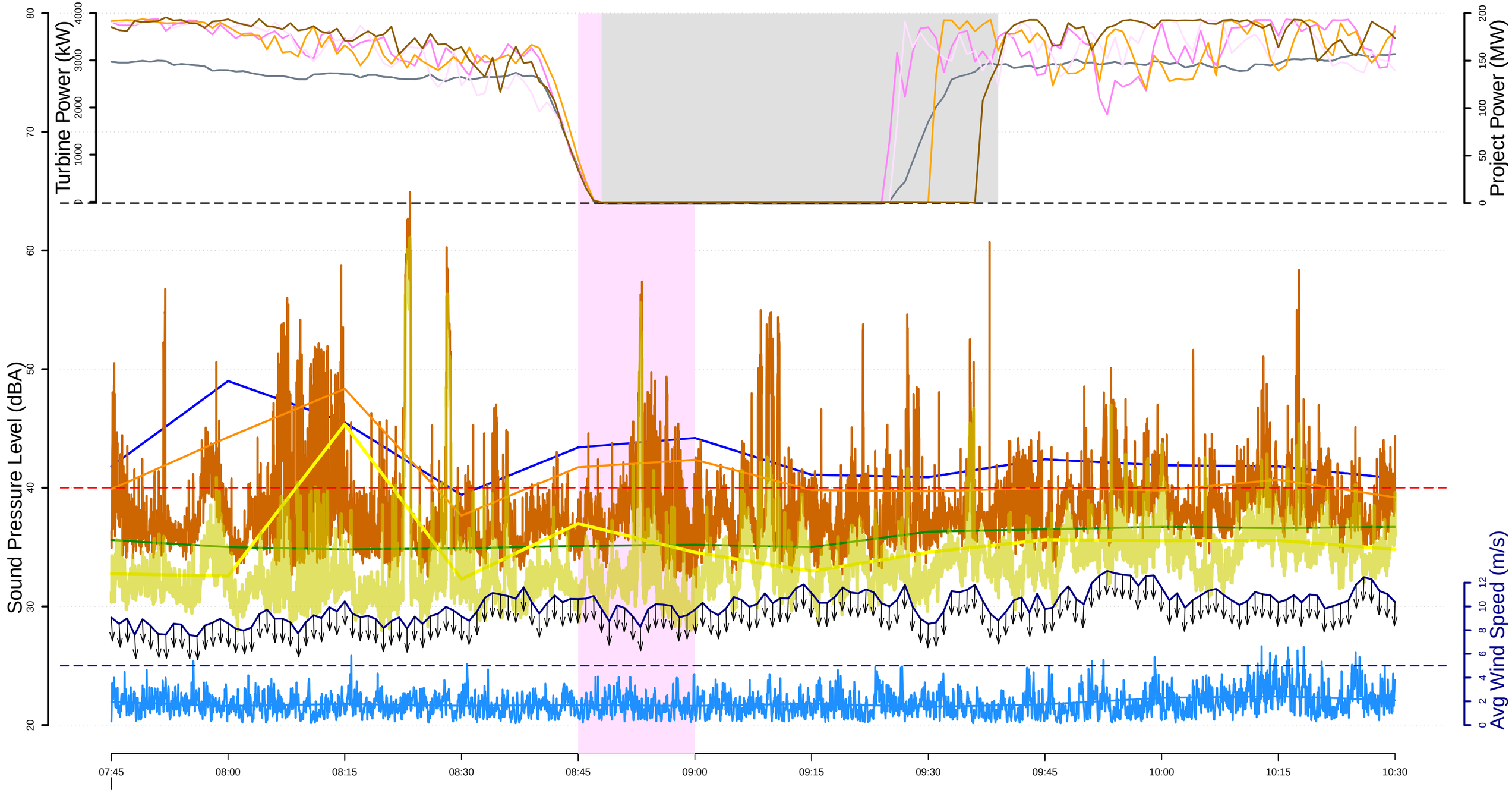
REC−139 (Schoenfelder Residence), Curtail #17
Friday, 7 24, 2020



24/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T23
- Real Power (kW) T58
- Real Power (kW) T48
- Real Power (kW) T39
- Project Power (MW)

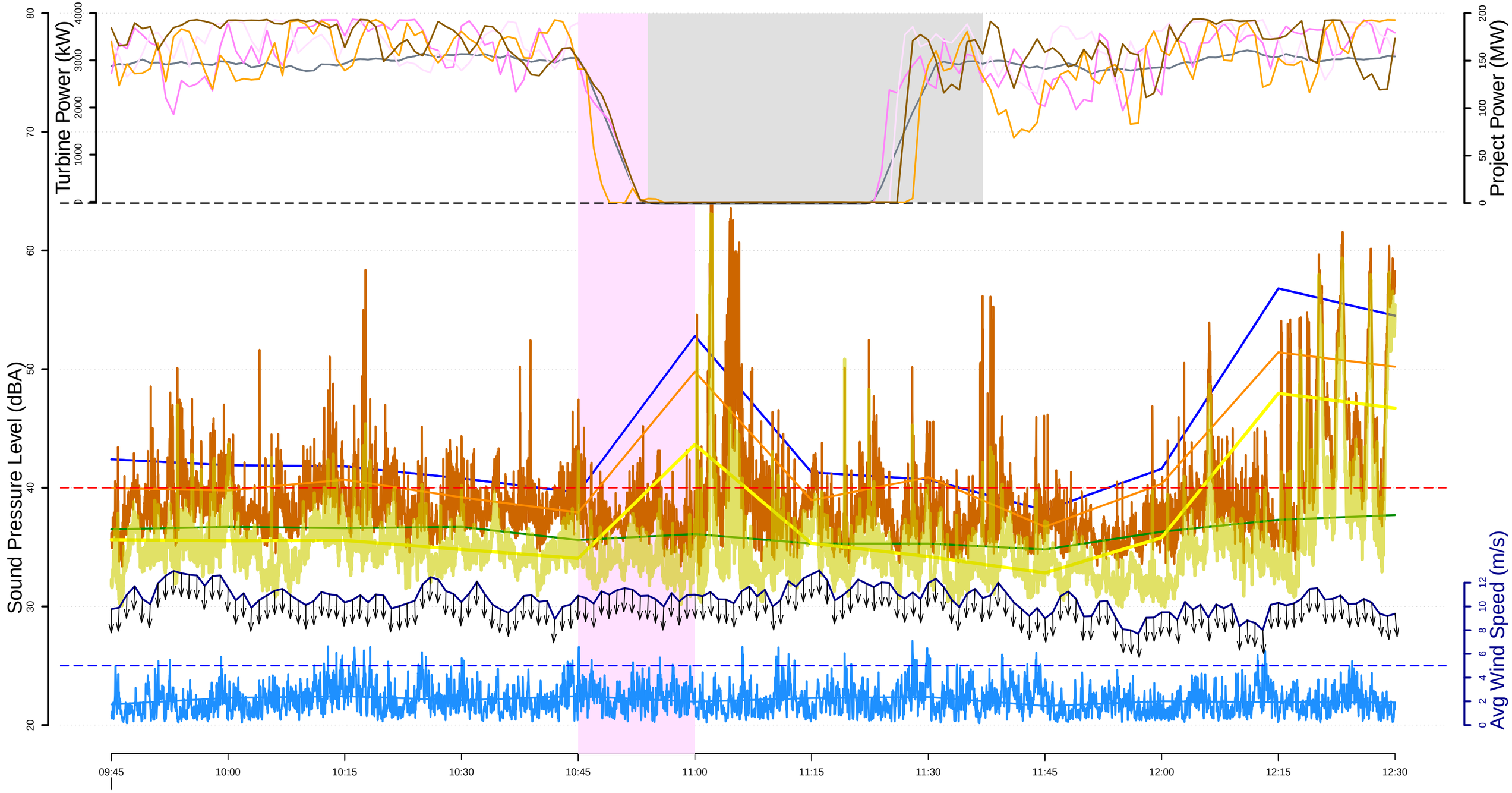
REC−139 (Schoenfelder Residence), Curtail #18
Friday, 7 24, 2020



24/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T23
- Real Power (kW) T58
- Real Power (kW) T48
- Real Power (kW) T39
- Project Power (MW)

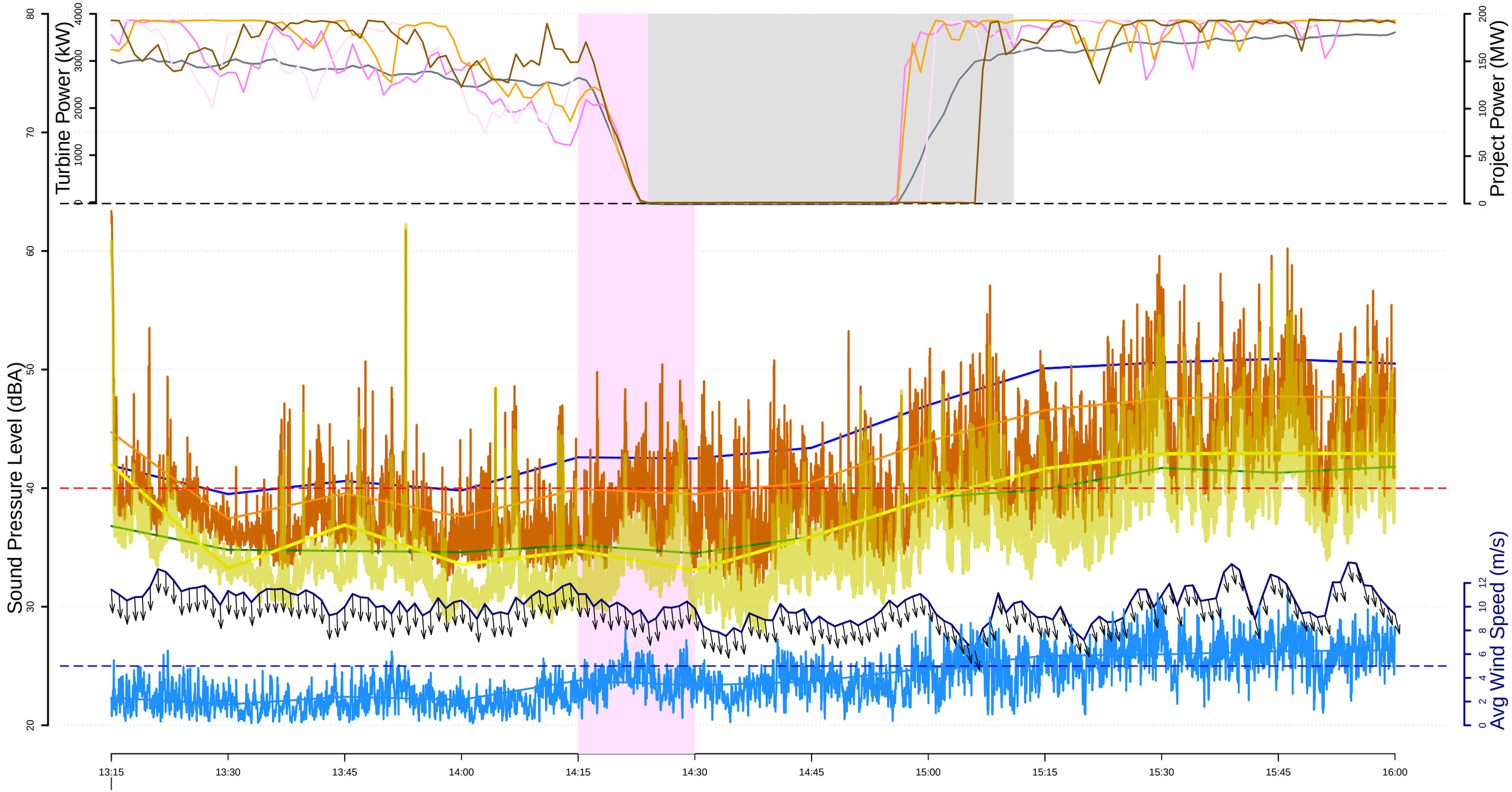
REC−139 (Schoenfelder Residence), Curtail #19
Friday, 7 24, 2020



24/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T23
- Real Power (kW) T58
- Real Power (kW) T48
- Real Power (kW) T39
- Project Power (MW)

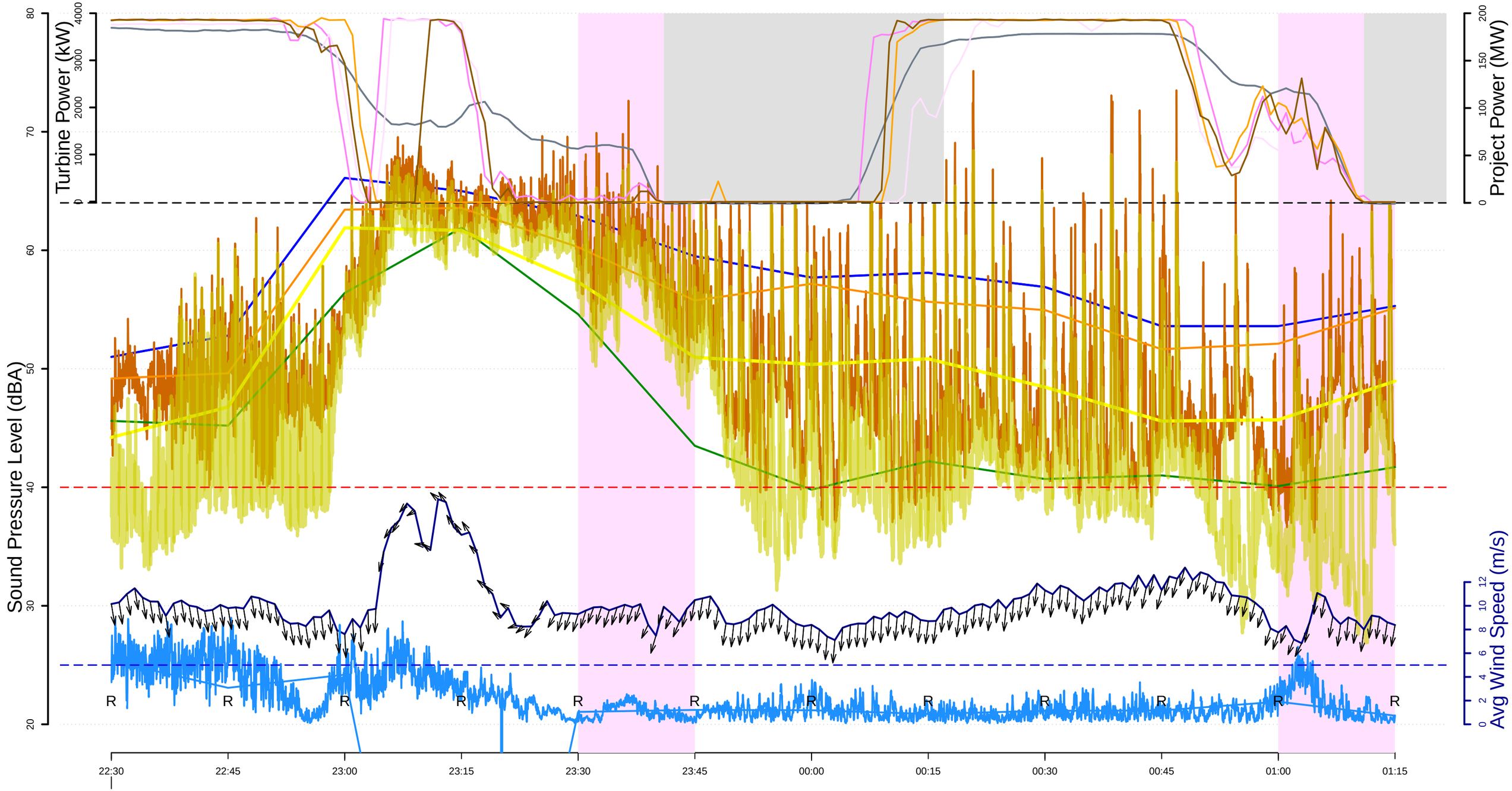
REC−139 (Schoenfelder Residence), Curtail #20
Friday, 7 24, 2020



24/07

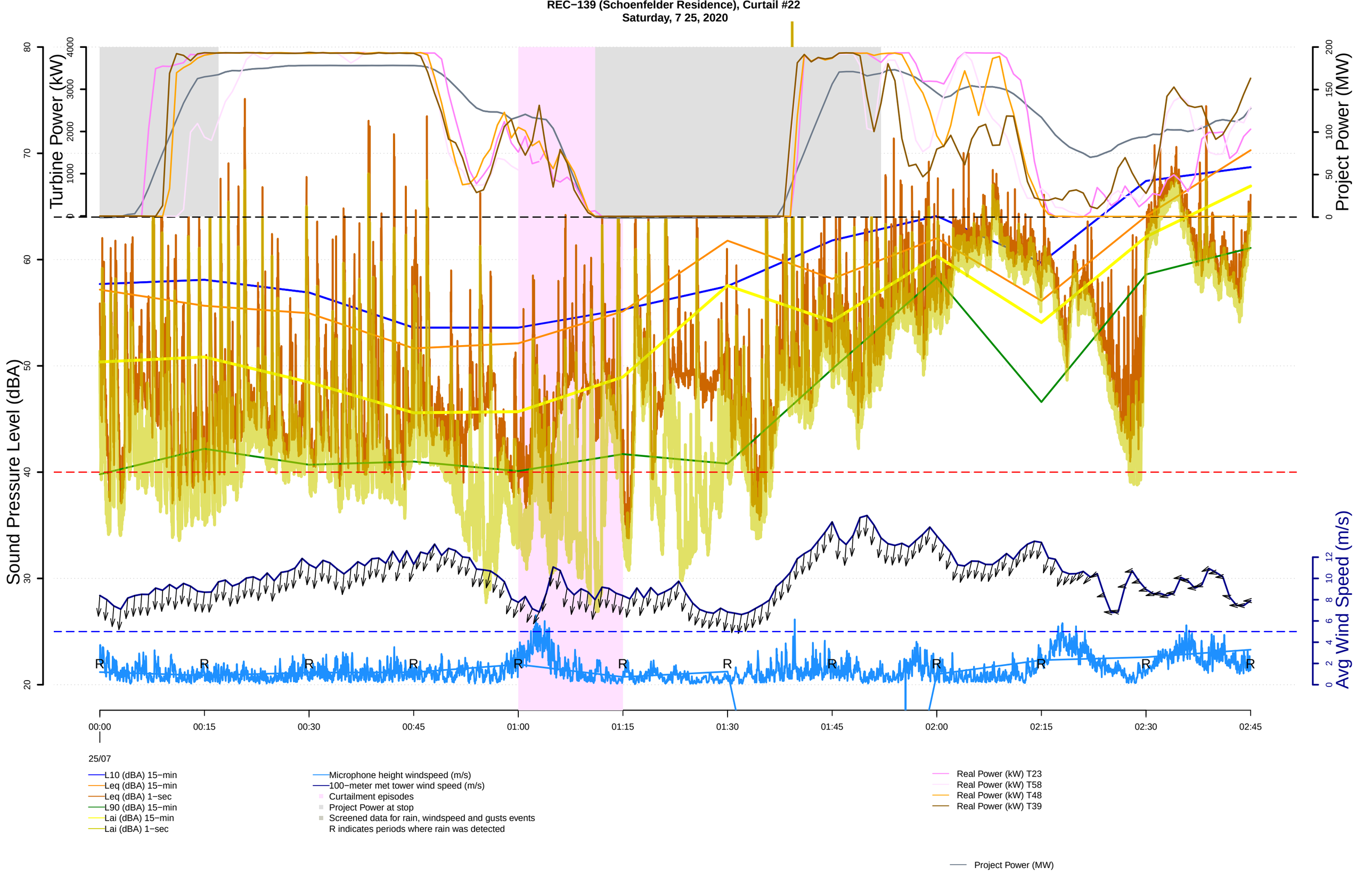
- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T23
- Real Power (kW) T58
- Real Power (kW) T48
- Real Power (kW) T39
- Project Power (MW)

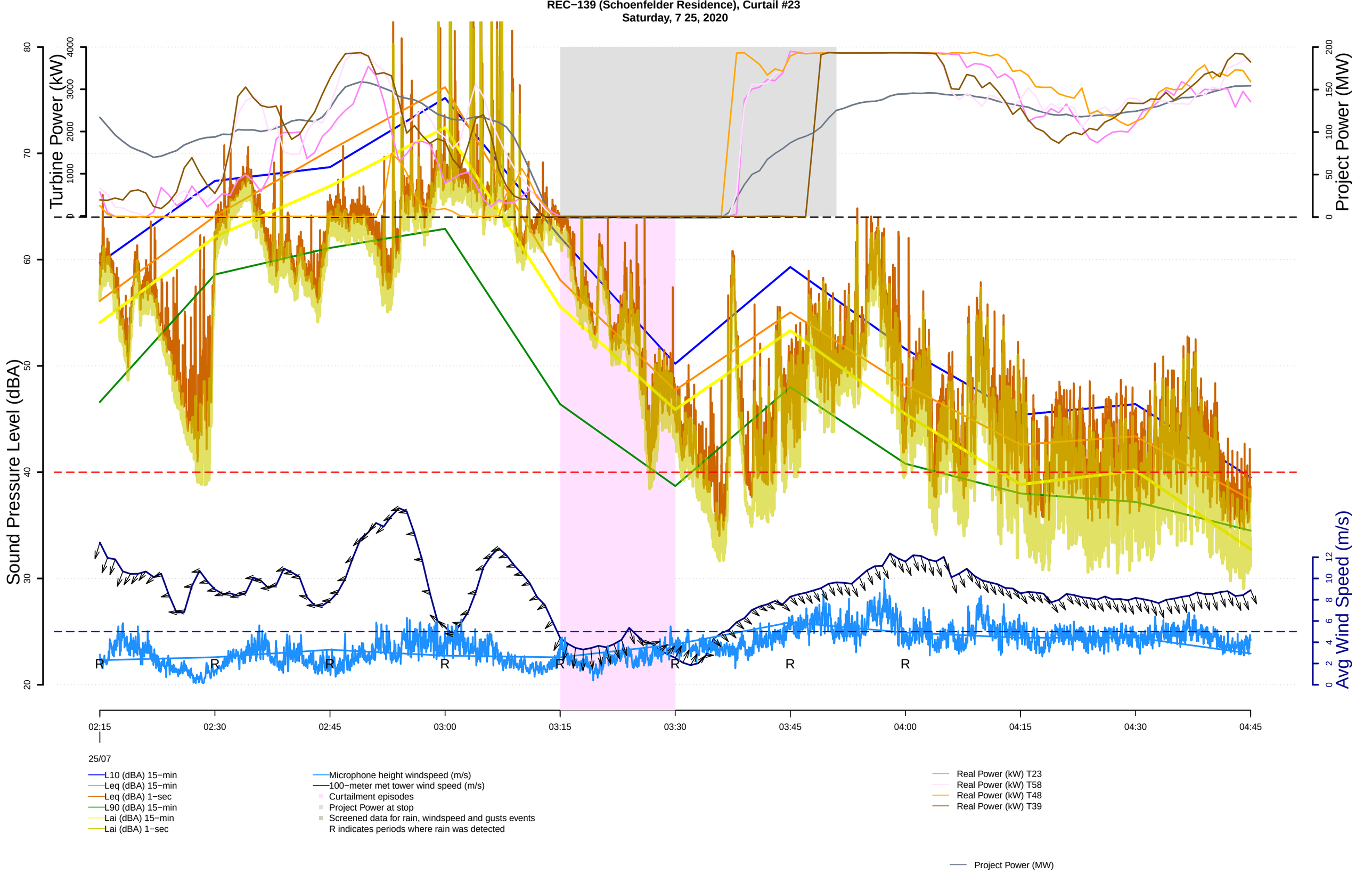
REC−139 (Schoenfelder Residence), Curtail #21
Friday, 7 24, 2020



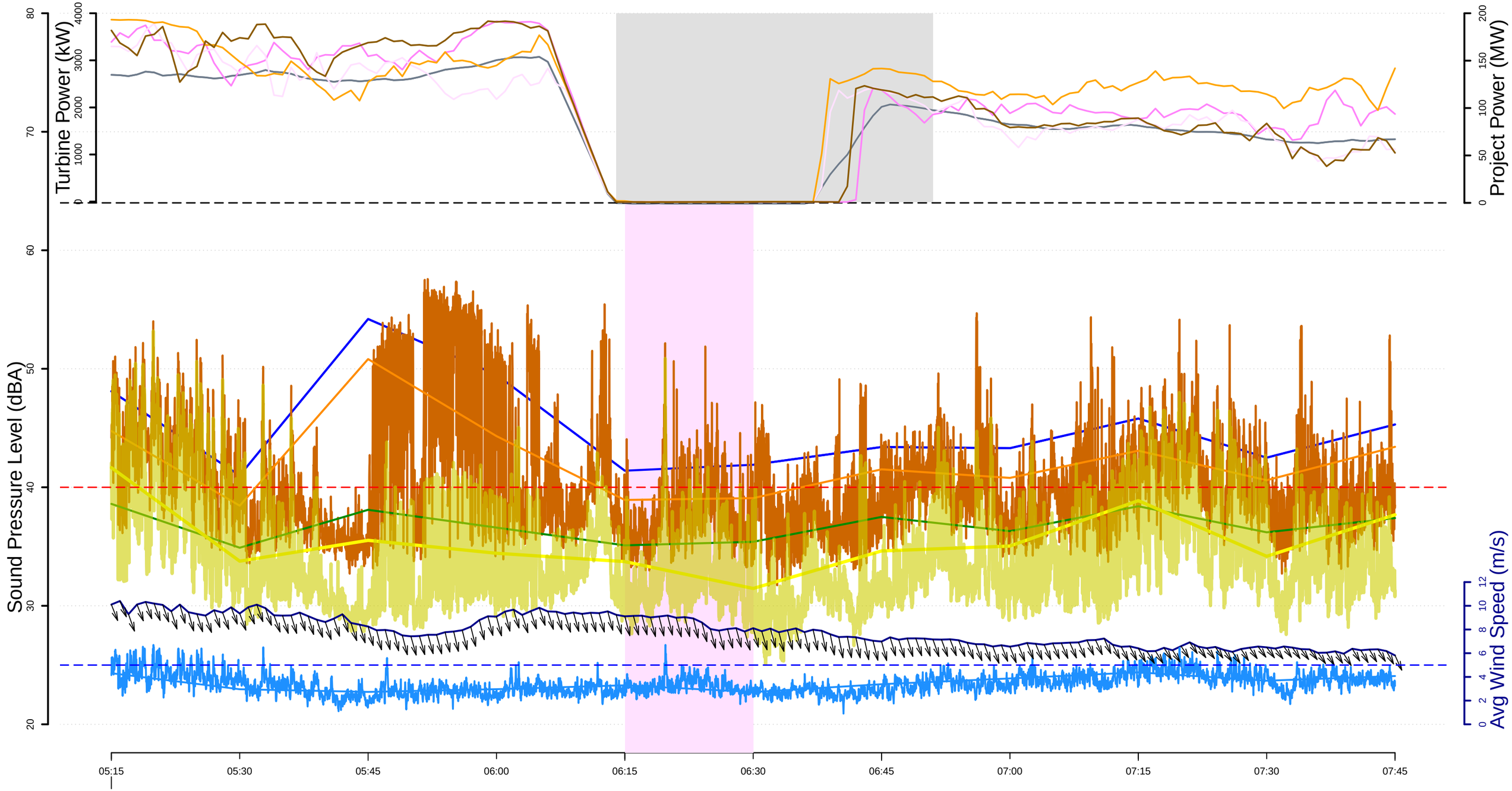
24/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
- R indicates periods where rain was detected
- Real Power (kW) T23
- Real Power (kW) T58
- Real Power (kW) T48
- Real Power (kW) T39
- Project Power (MW)


REC−139 (Schoenfelder Residence), Curtail #22
Saturday, 7 25, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
00:00
00:15
00:30
00:45
01:00
01:15
01:30
01:45
02:00
02:15
02:30
02:45
25/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39
Project Power (MW)

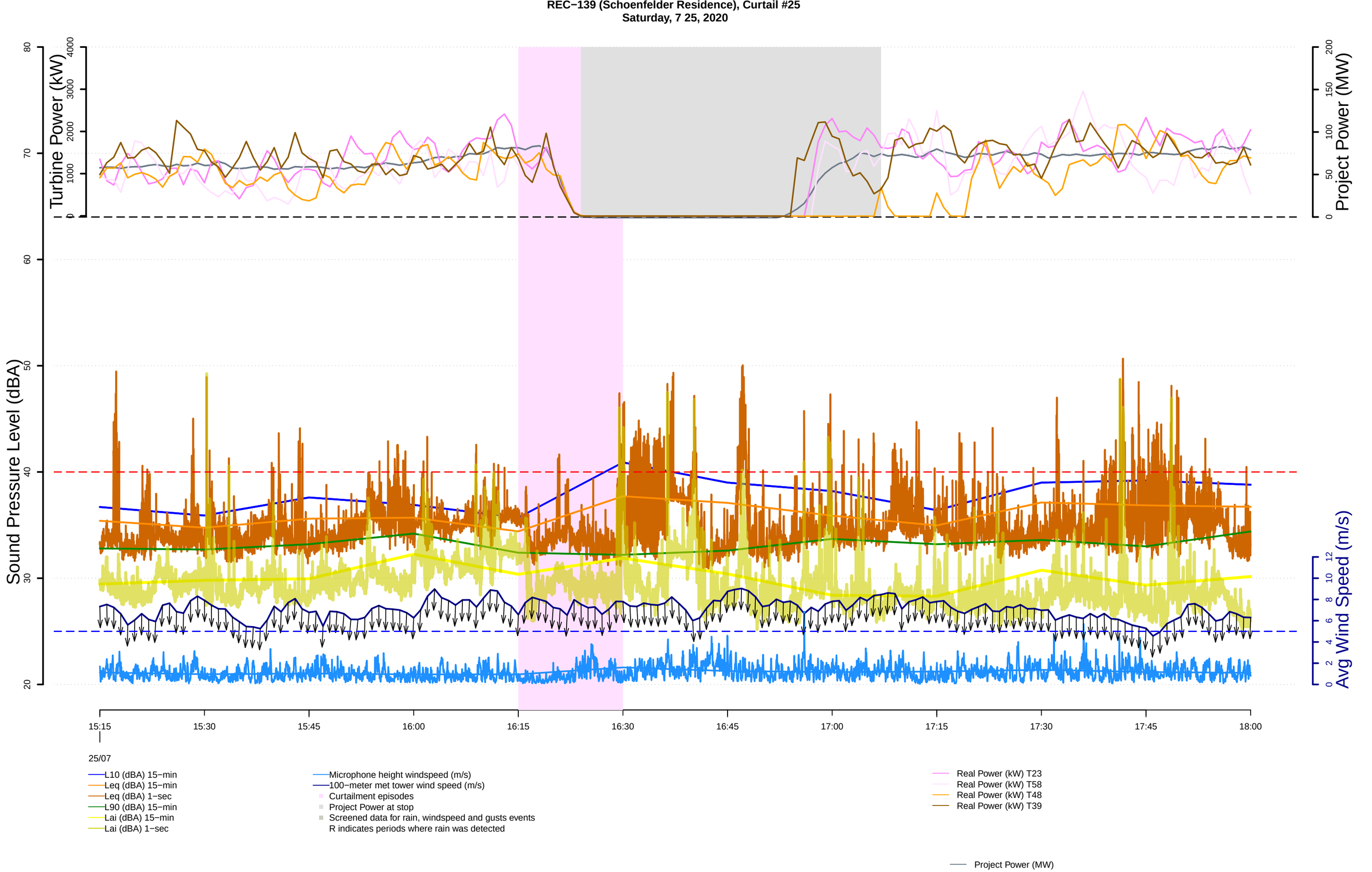

REC−139 (Schoenfelder Residence), Curtail #23
Saturday, 7 25, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
02:15
02:30
02:45
03:00
03:15
03:30
03:45
04:00
04:15
04:30
04:45
25/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39
Project Power (MW)

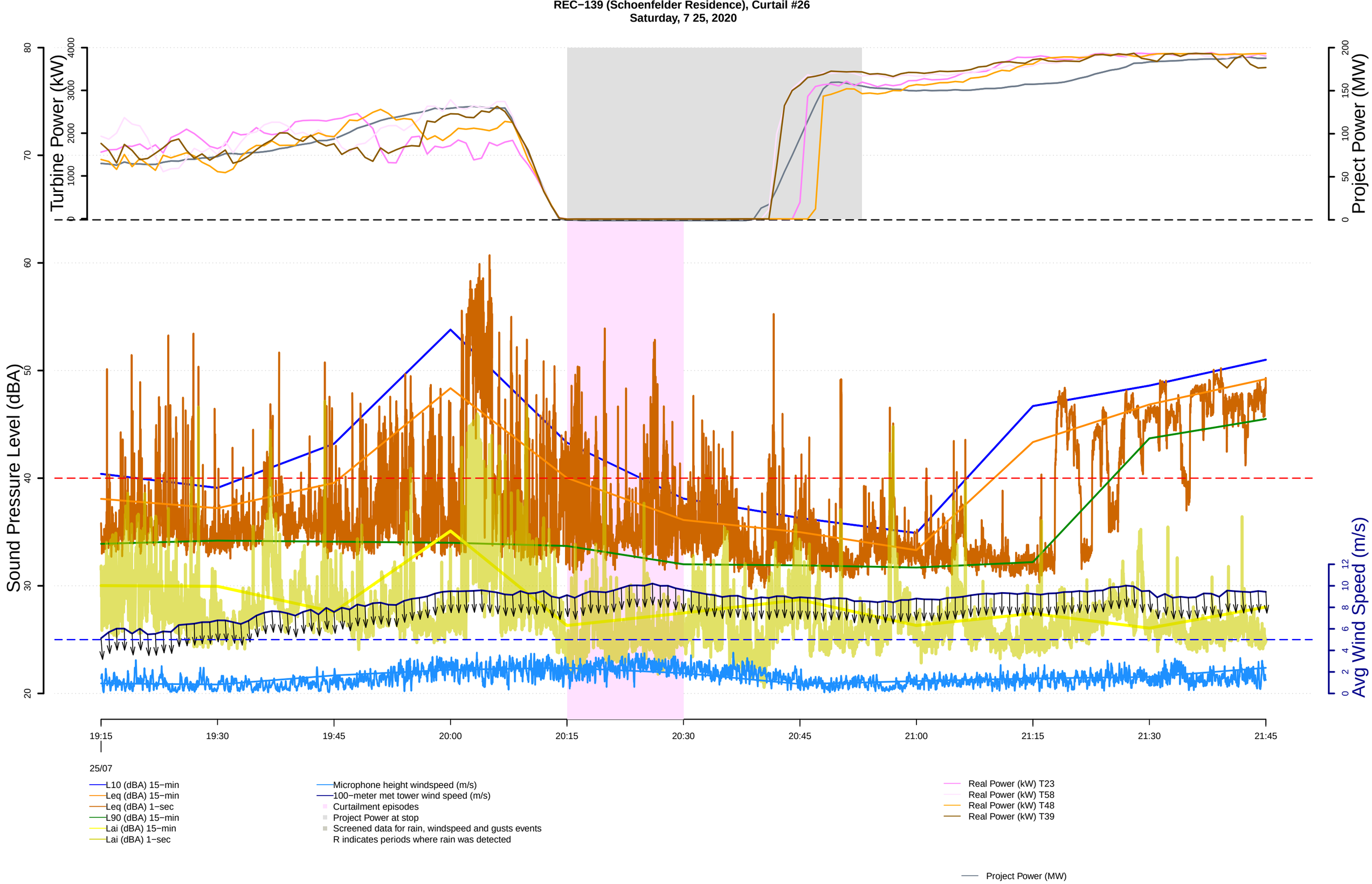
REC−139 (Schoenfelder Residence), Curtail #24
Saturday, 7 25, 2020

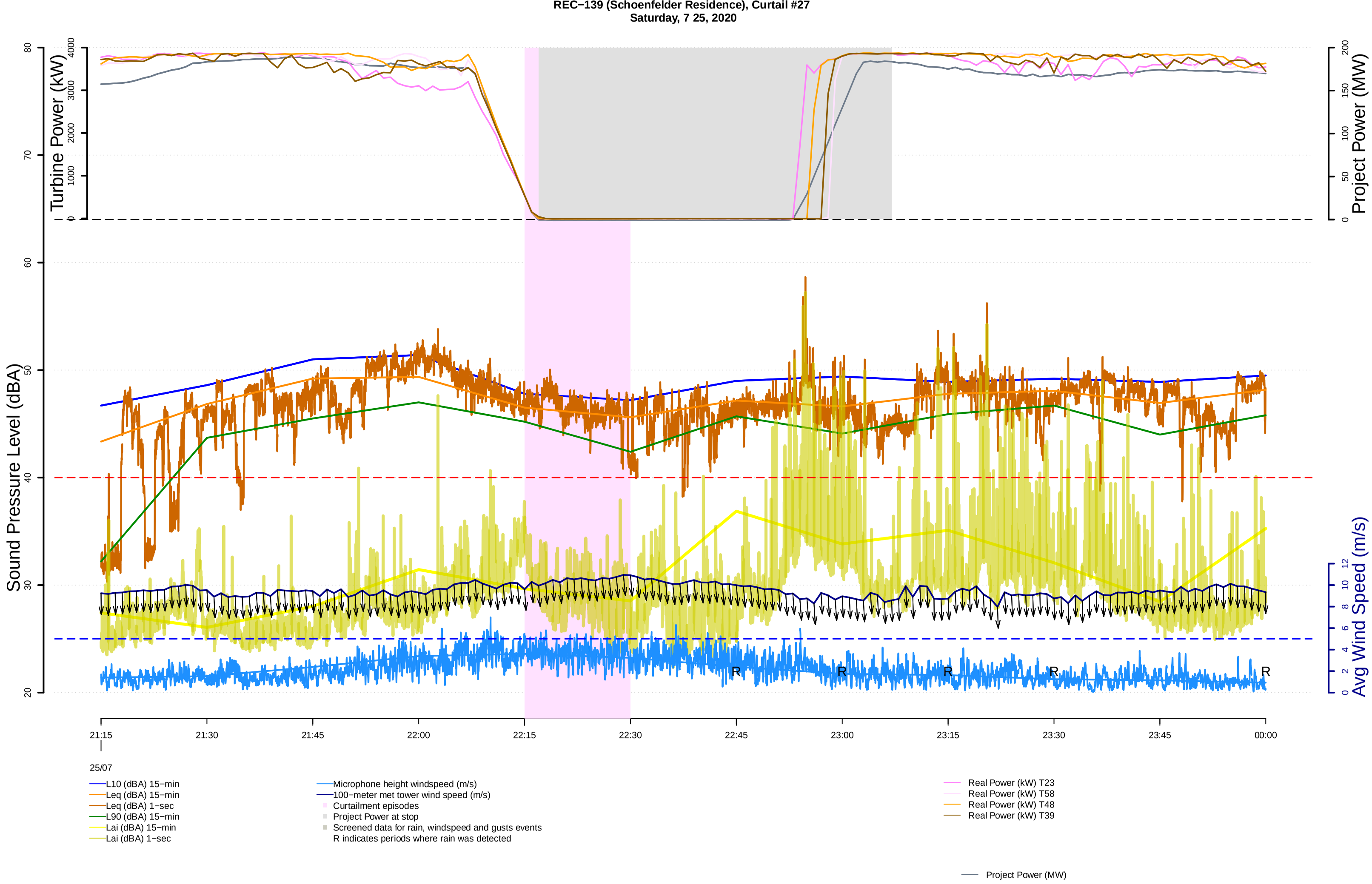


25/07

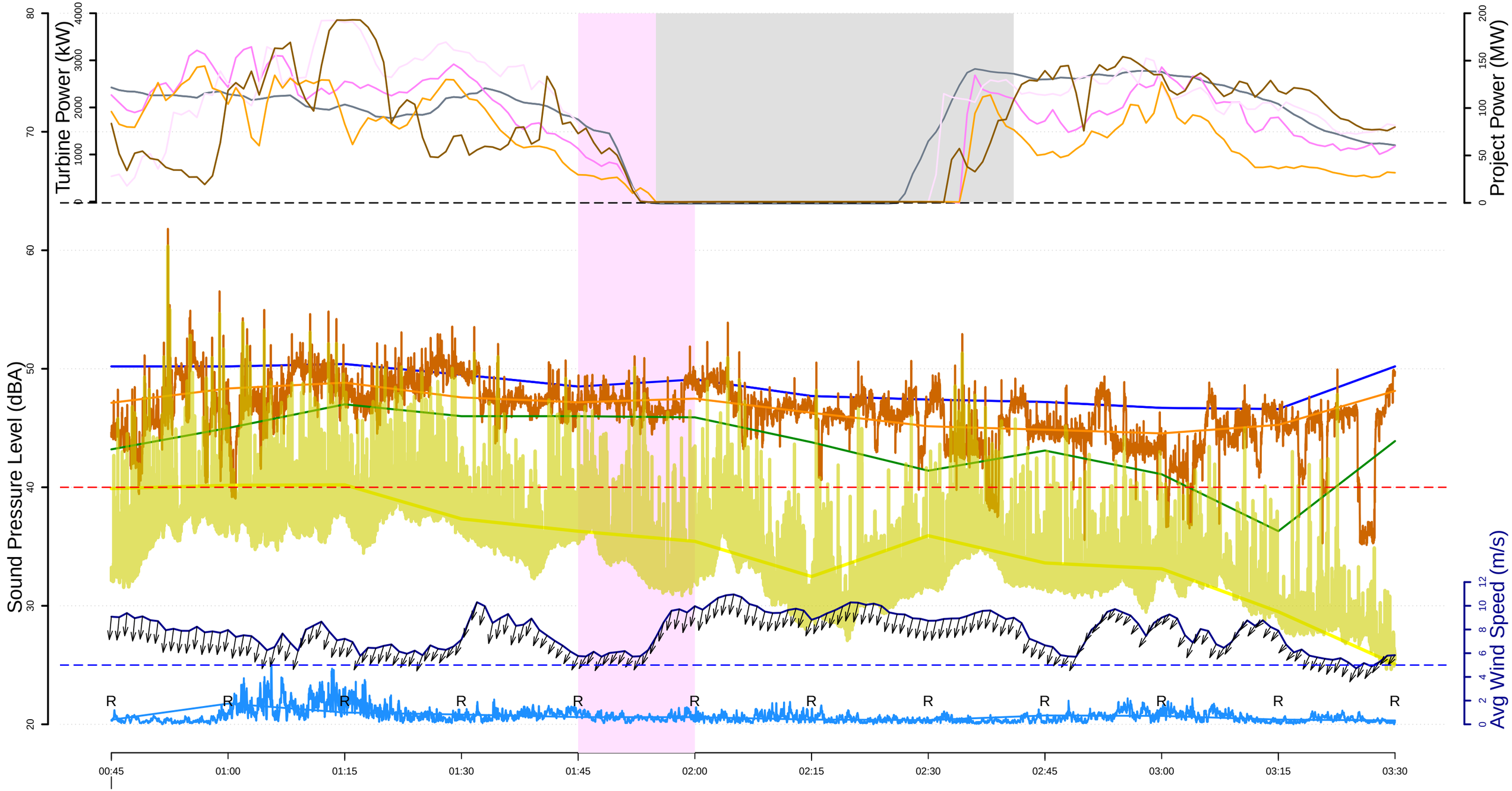
- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T23
- Real Power (kW) T58
- Real Power (kW) T48
- Real Power (kW) T39
- Project Power (MW)


REC−139 (Schoenfelder Residence), Curtail #25
Saturday, 7 25, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
15:15
15:30
15:45
16:00
16:15
16:30
16:45
17:00
17:15
17:30
17:45
18:00
25/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39
Project Power (MW)


REC−139 (Schoenfelder Residence), Curtail #26
Saturday, 7 25, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
19:15
19:30
19:45
20:00
20:15
20:30
20:45
21:00
21:15
21:30
21:45
25/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39
Project Power (MW)


REC−139 (Schoenfelder Residence), Curtail #27
Saturday, 7 25, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
R
21:15
21:30
21:45
22:00
22:15
22:30
22:45
23:00
23:15
23:30
23:45
00:00
25/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39
Project Power (MW)

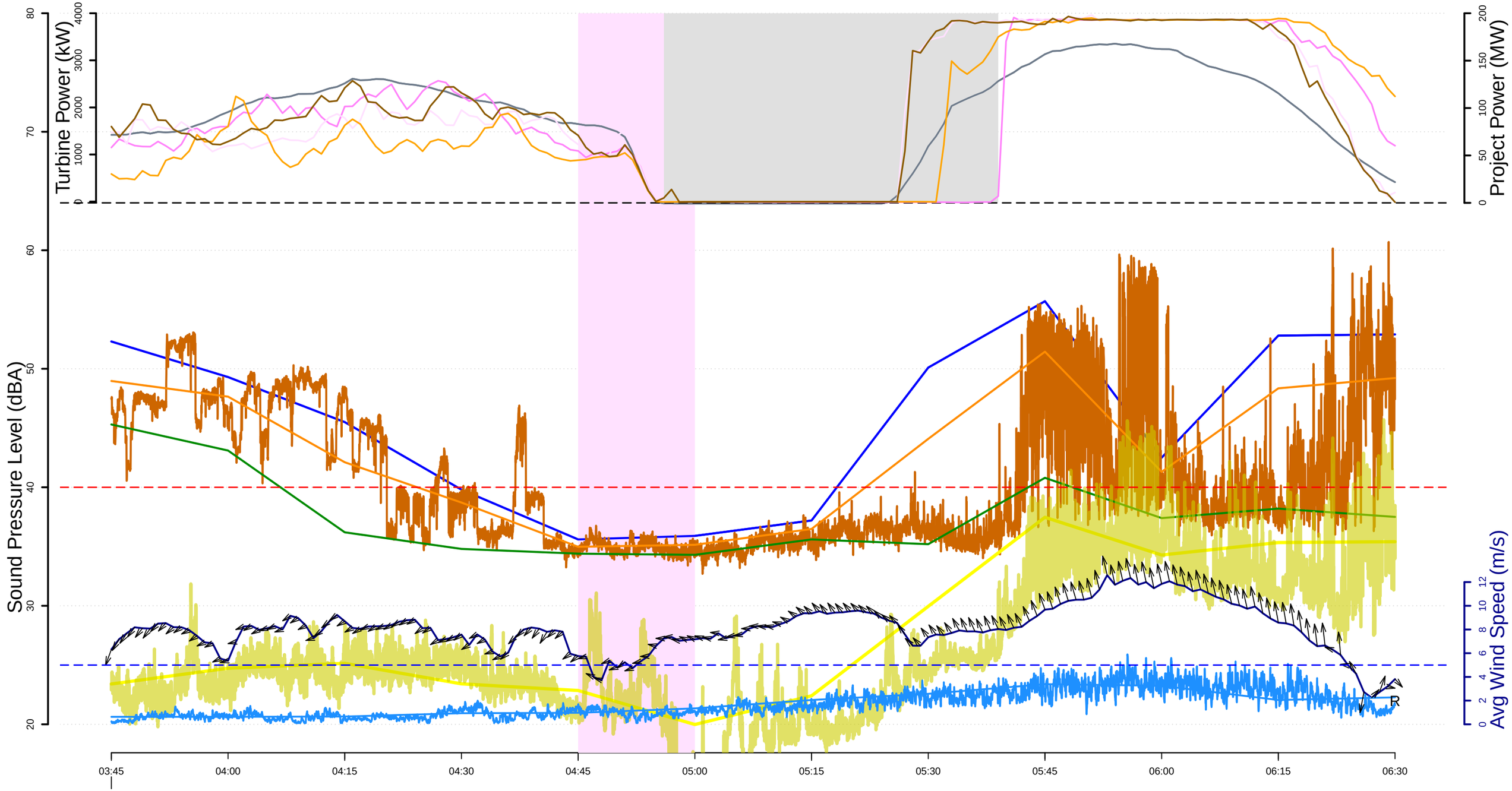
REC−139 (Schoenfelder Residence), Curtail #28
Sunday, 7 26, 2020



26/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
- R indicates periods where rain was detected
- Real Power (kW) T23
- Real Power (kW) T58
- Real Power (kW) T48
- Real Power (kW) T39
- Project Power (MW)

REC−139 (Schoenfelder Residence), Curtail #29
Sunday, 7 26, 2020



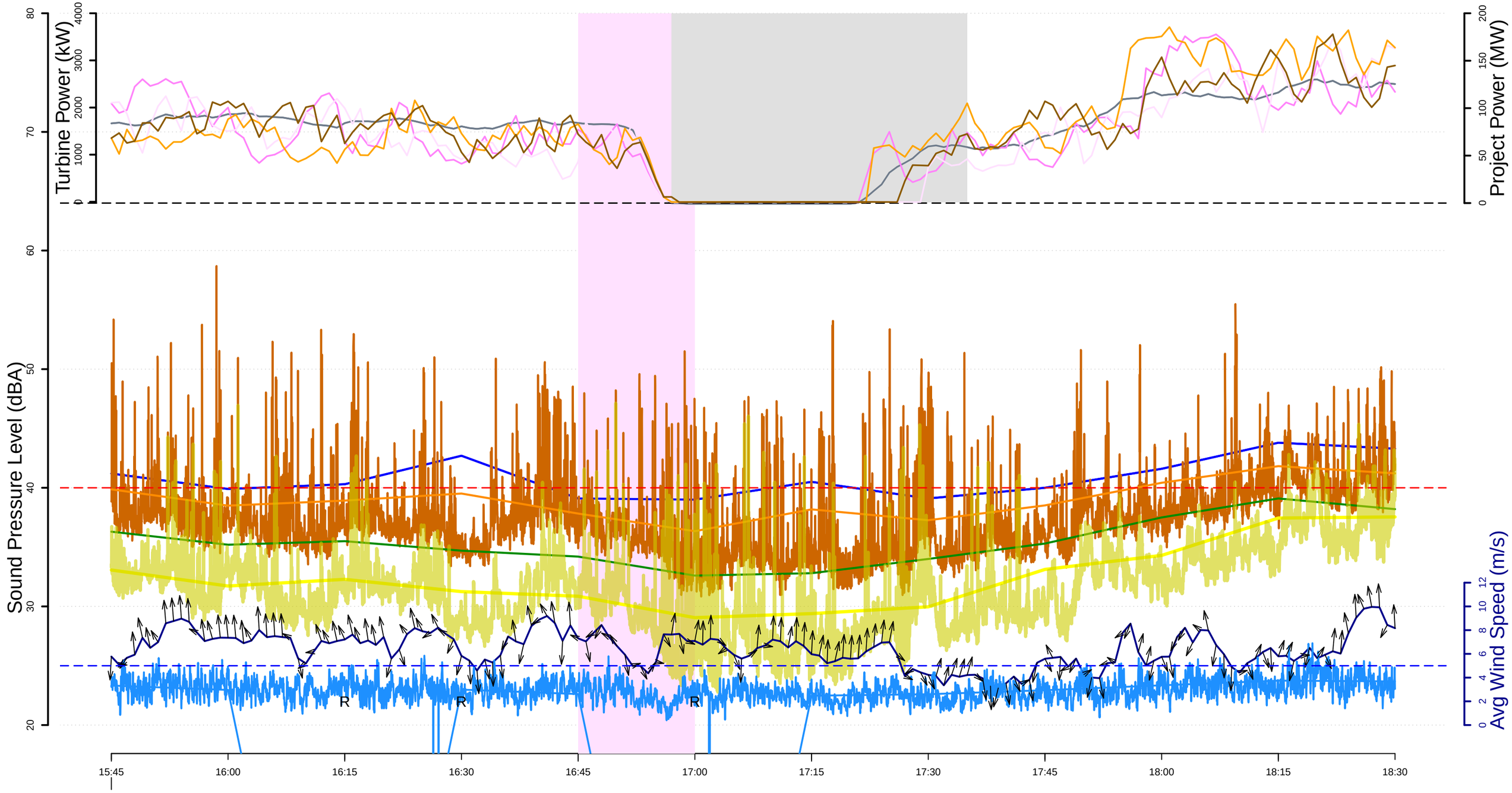
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39

Project Power (MW)

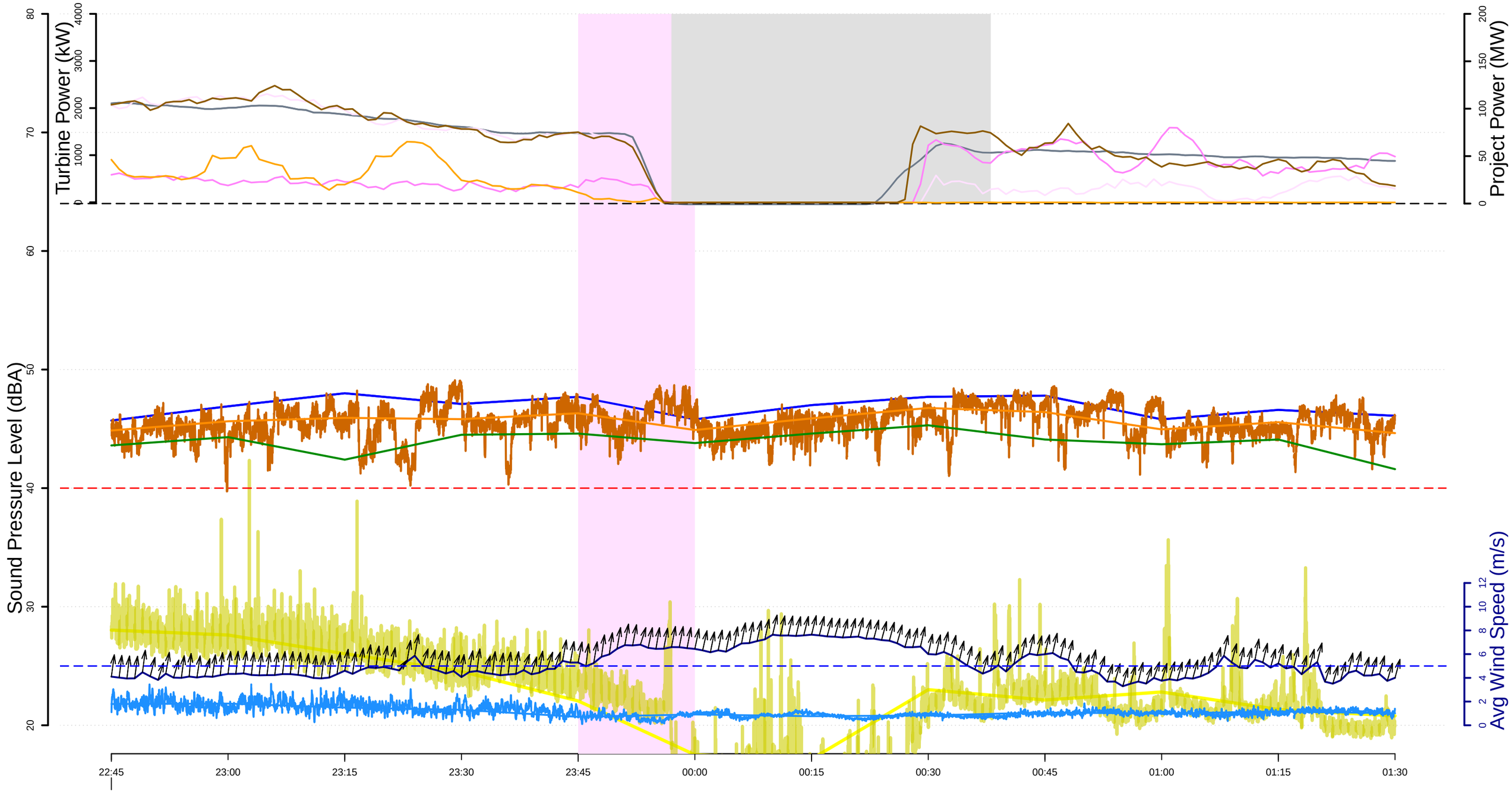
REC−139 (Schoenfelder Residence), Curtail #30
Sunday, 7 26, 2020



26/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
- R indicates periods where rain was detected
- Real Power (kW) T23
- Real Power (kW) T58
- Real Power (kW) T48
- Real Power (kW) T39
- Project Power (MW)

REC−139 (Schoenfelder Residence), Curtail #31
Sunday, 7 26, 2020

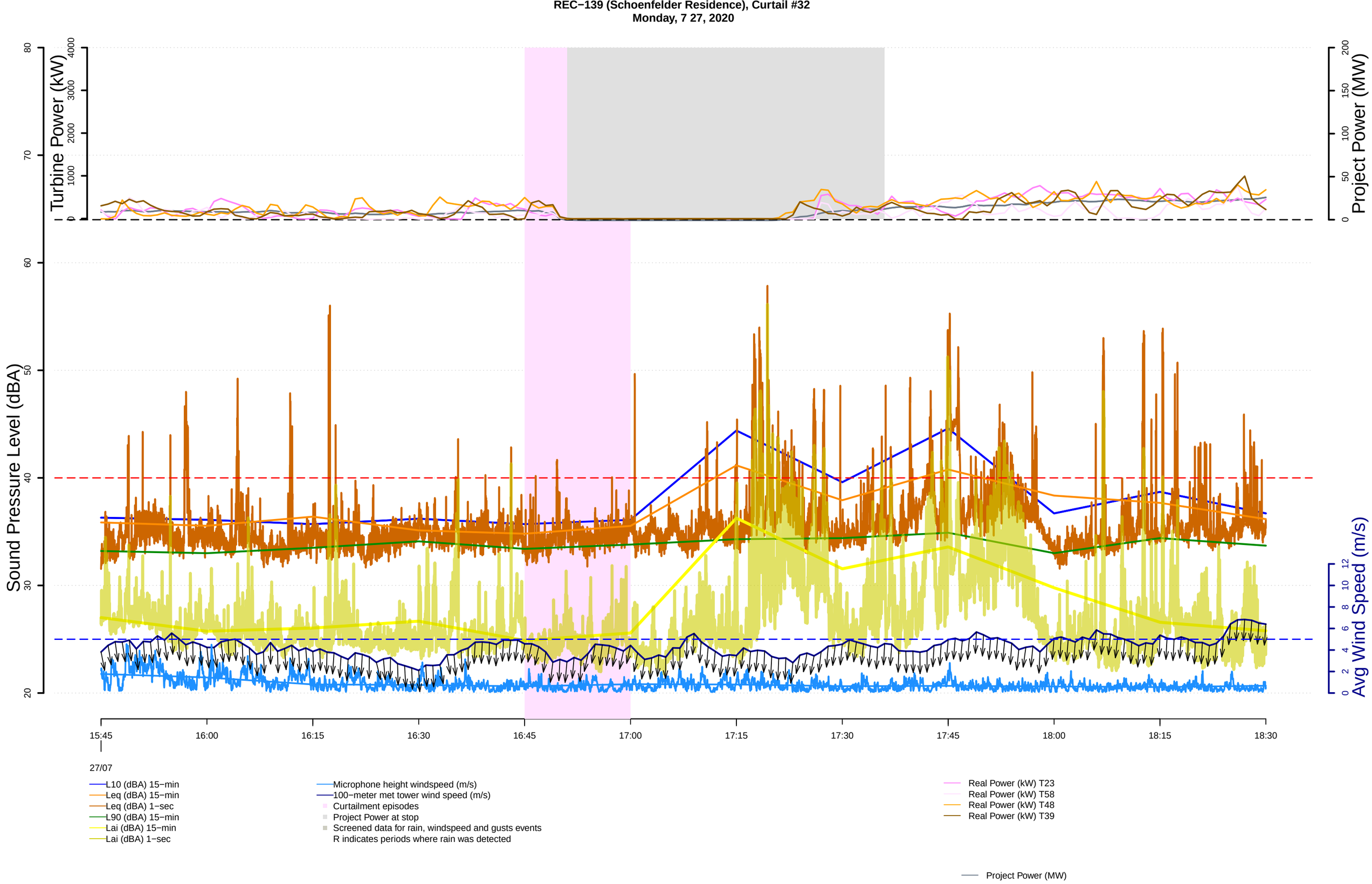


L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

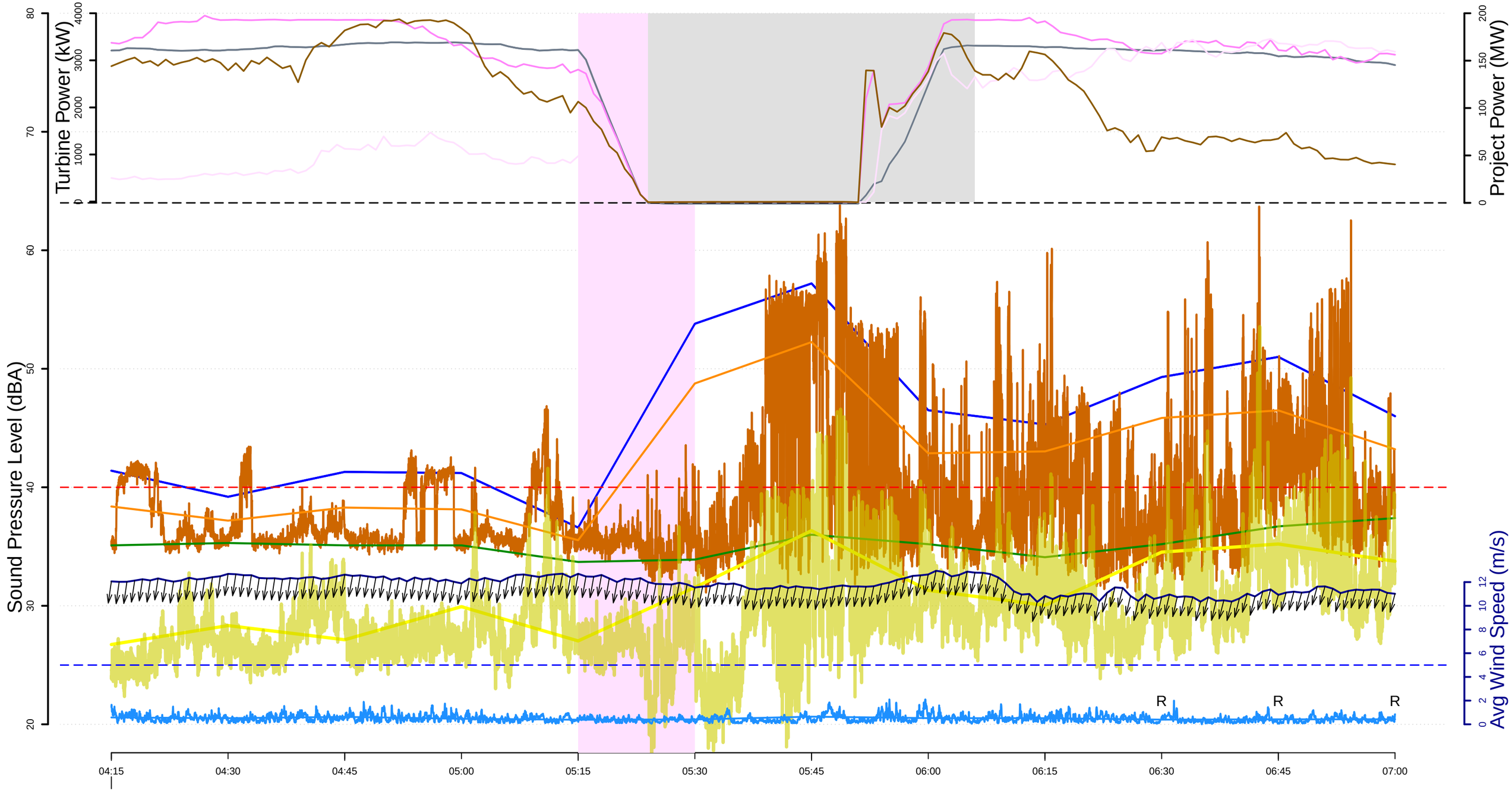
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39

Project Power (MW)


REC−139 (Schoenfelder Residence), Curtail #32
Monday, 7 27, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
15:45
16:00
16:15
16:30
16:45
17:00
17:15
17:30
17:45
18:00
18:15
18:30
27/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39
Project Power (MW)

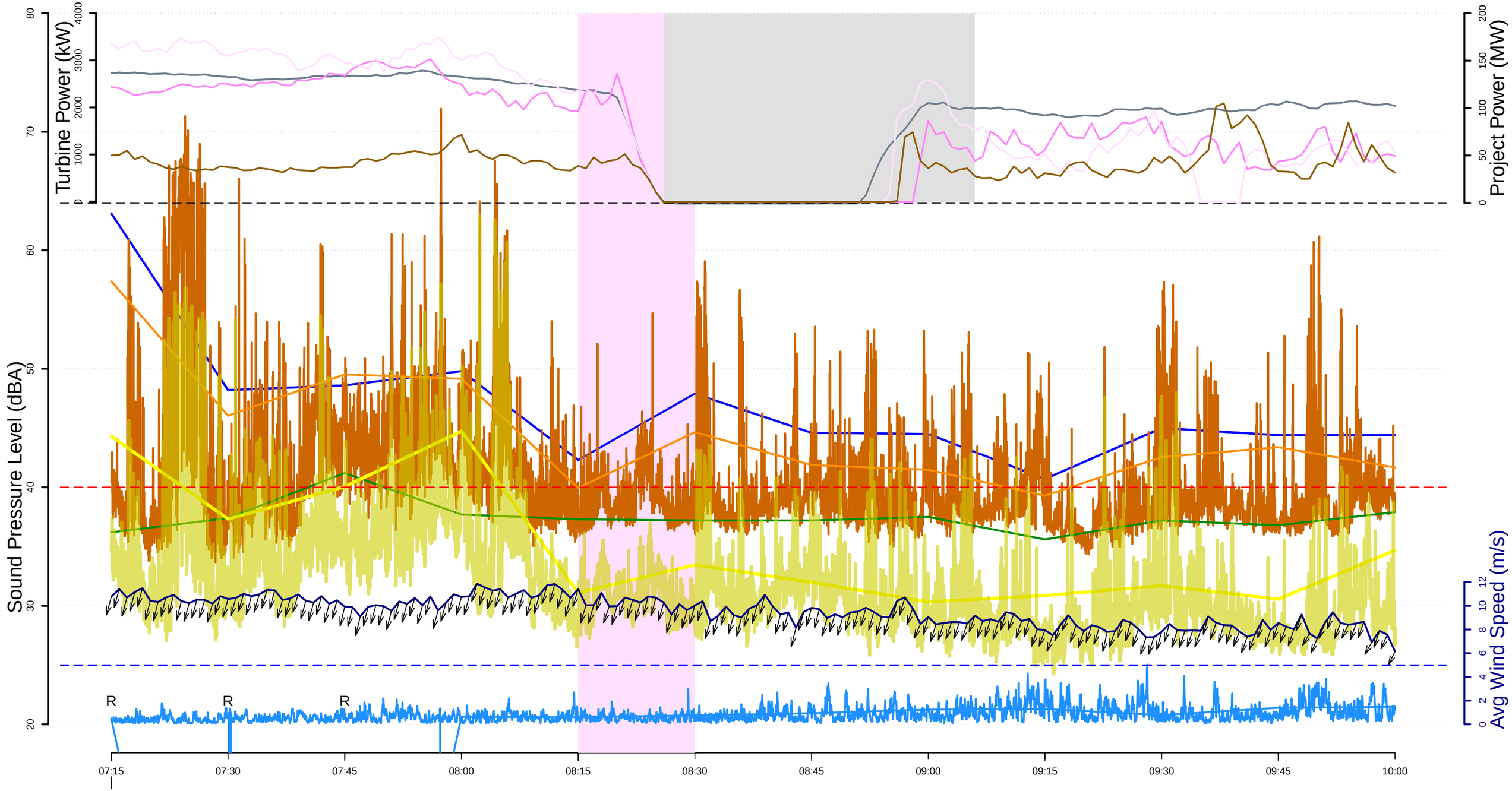
REC−139 (Schoenfelder Residence), Curtail #33
Tuesday, 7 28, 2020



28/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
- R indicates periods where rain was detected
- Real Power (kW) T23
- Real Power (kW) T58
- Real Power (kW) T48
- Real Power (kW) T39
- Project Power (MW)

REC−139 (Schoenfelder Residence), Curtail #34
Tuesday, 7 28, 2020



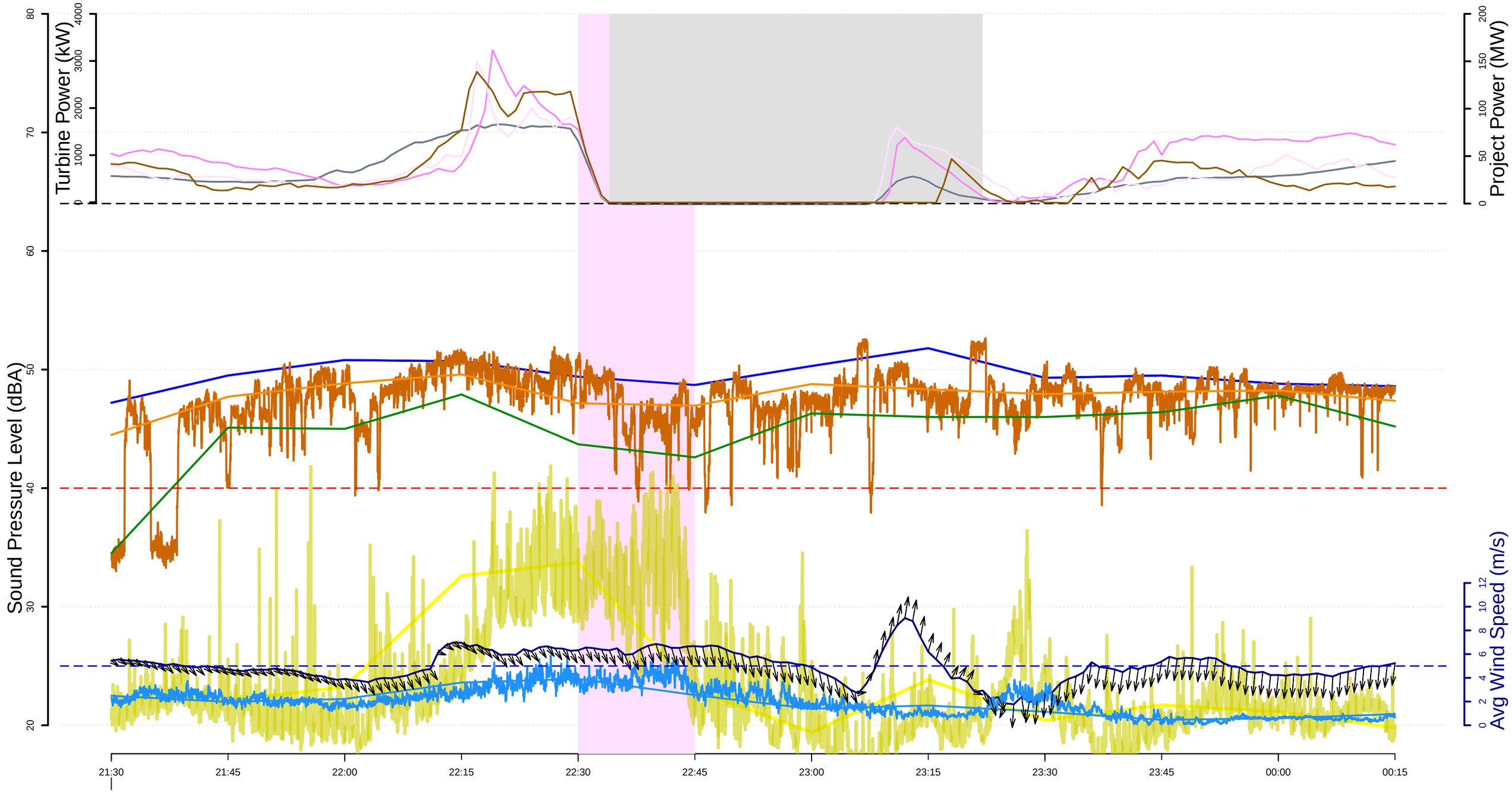
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39

Project Power (MW)

REC−139 (Schoenfelder Residence), Curtail #35
Tuesday, 7 28, 2020



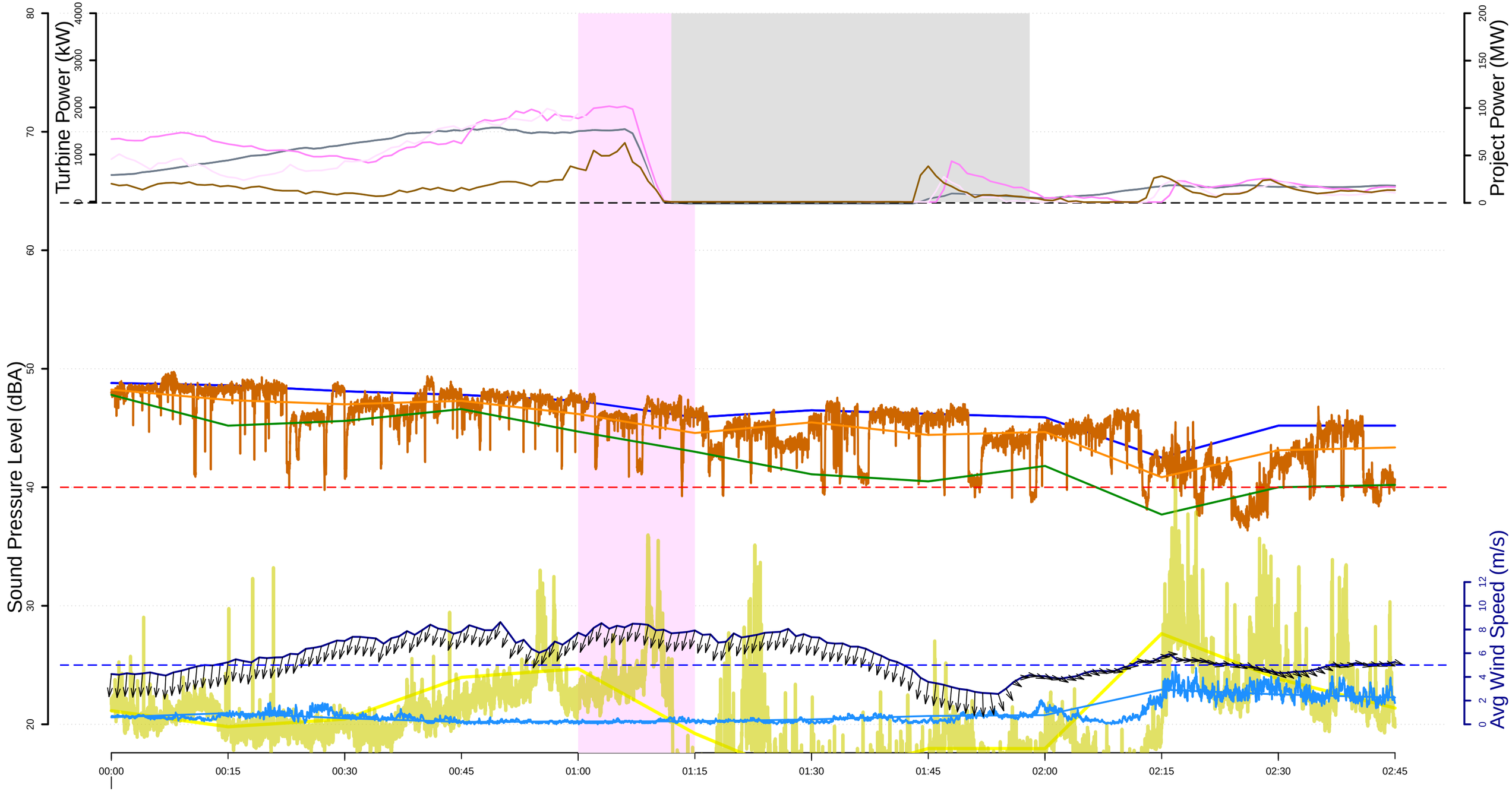
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39

Project Power (MW)

REC−139 (Schoenfelder Residence), Curtail #36
Wednesday, 7 29, 2020

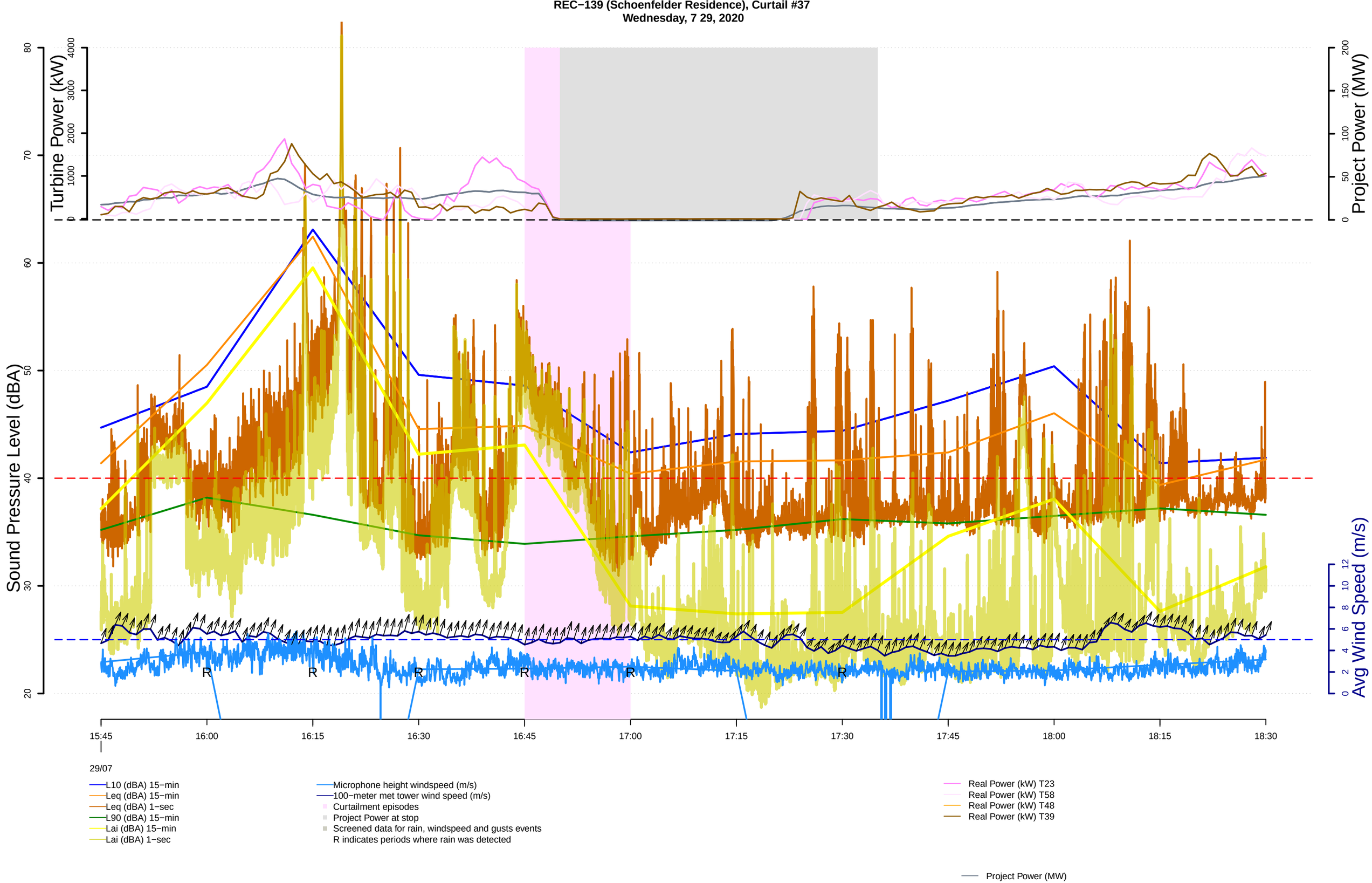


L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

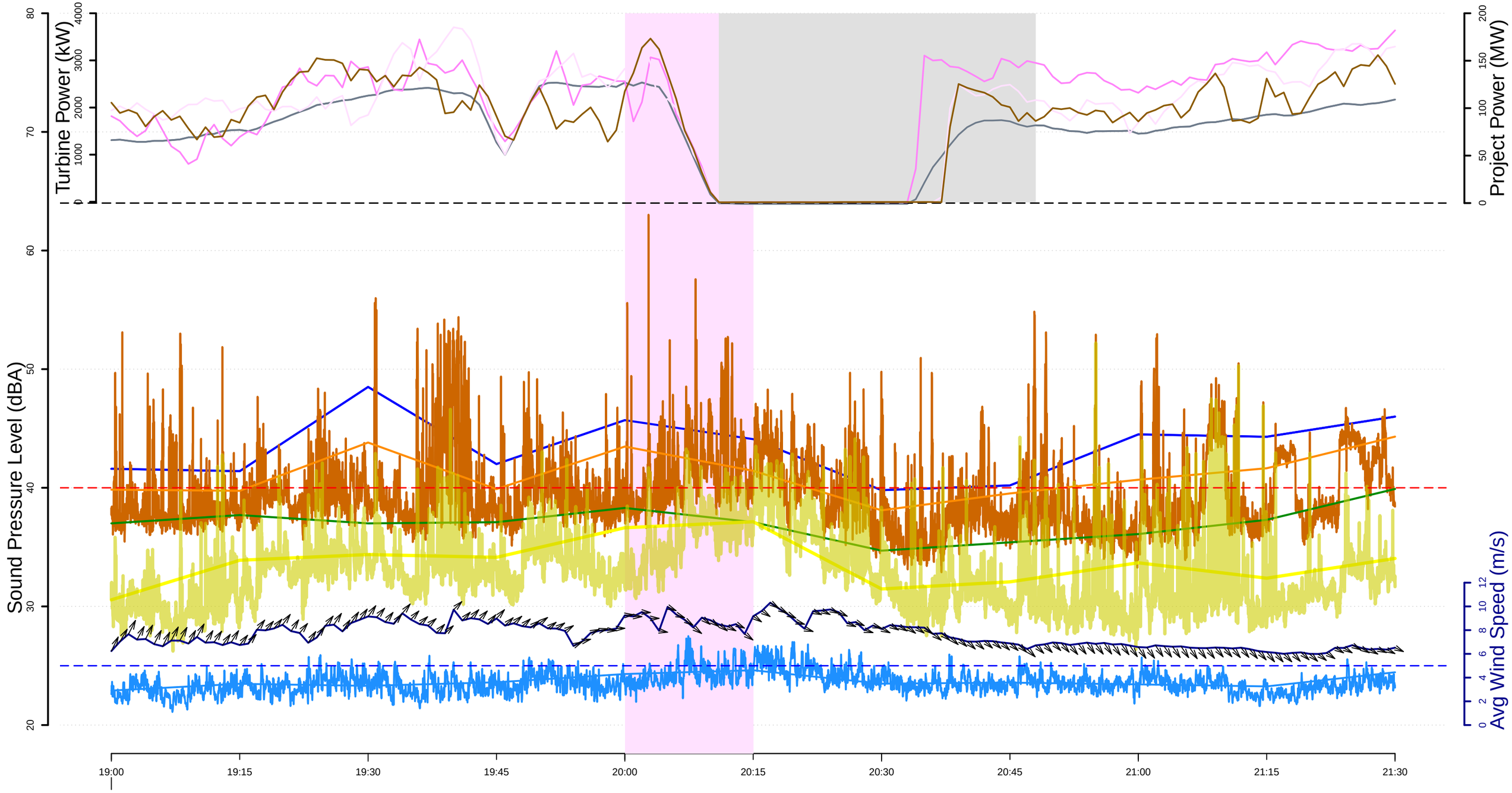
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39

Project Power (MW)


REC−139 (Schoenfelder Residence), Curtail #37
Wednesday, 7 29, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
R
15:45
16:00
16:15
16:30
16:45
17:00
17:15
17:30
17:45
18:00
18:15
18:30
29/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39
Project Power (MW)

REC−139 (Schoenfelder Residence), Curtail #38
Wednesday, 7 29, 2020



29/07

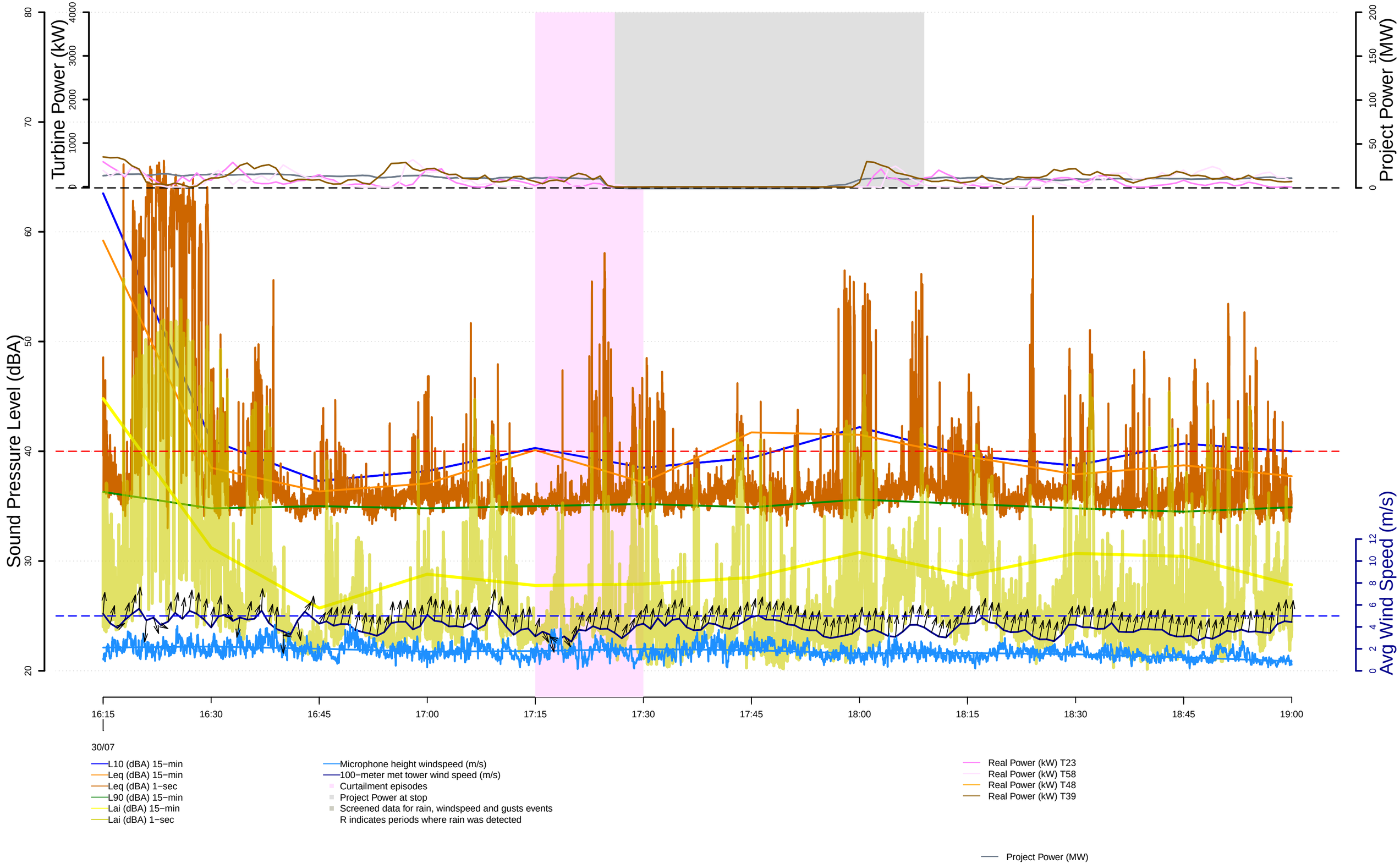
- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T23
- Real Power (kW) T58
- Real Power (kW) T48
- Real Power (kW) T39
- Project Power (MW)

REC−139 (Schoenfelder Residence), Curtail #39
Wednesday, 7 29, 2020

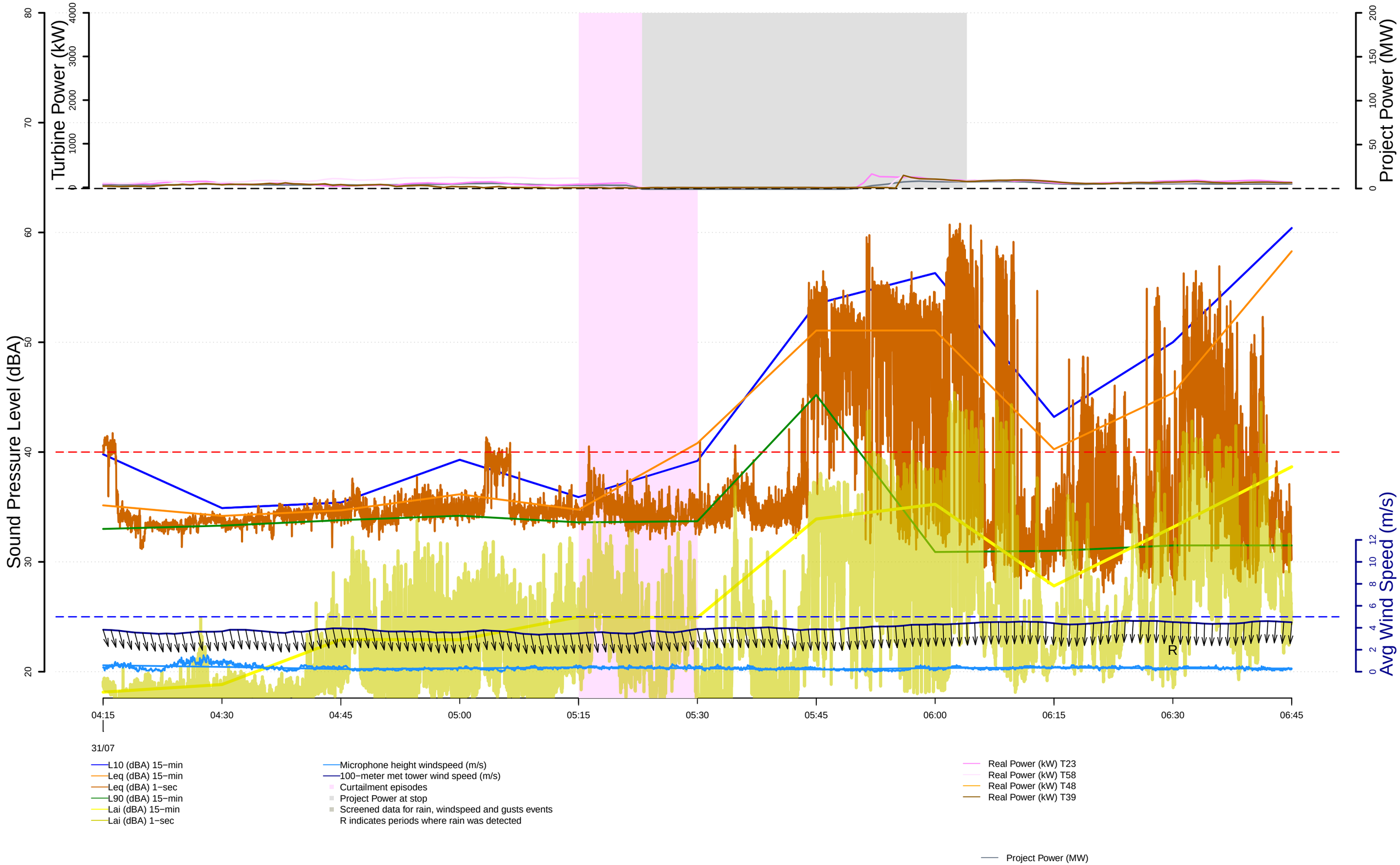
29/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T23
- Real Power (kW) T58
- Real Power (kW) T48
- Real Power (kW) T39
- Project Power (MW)

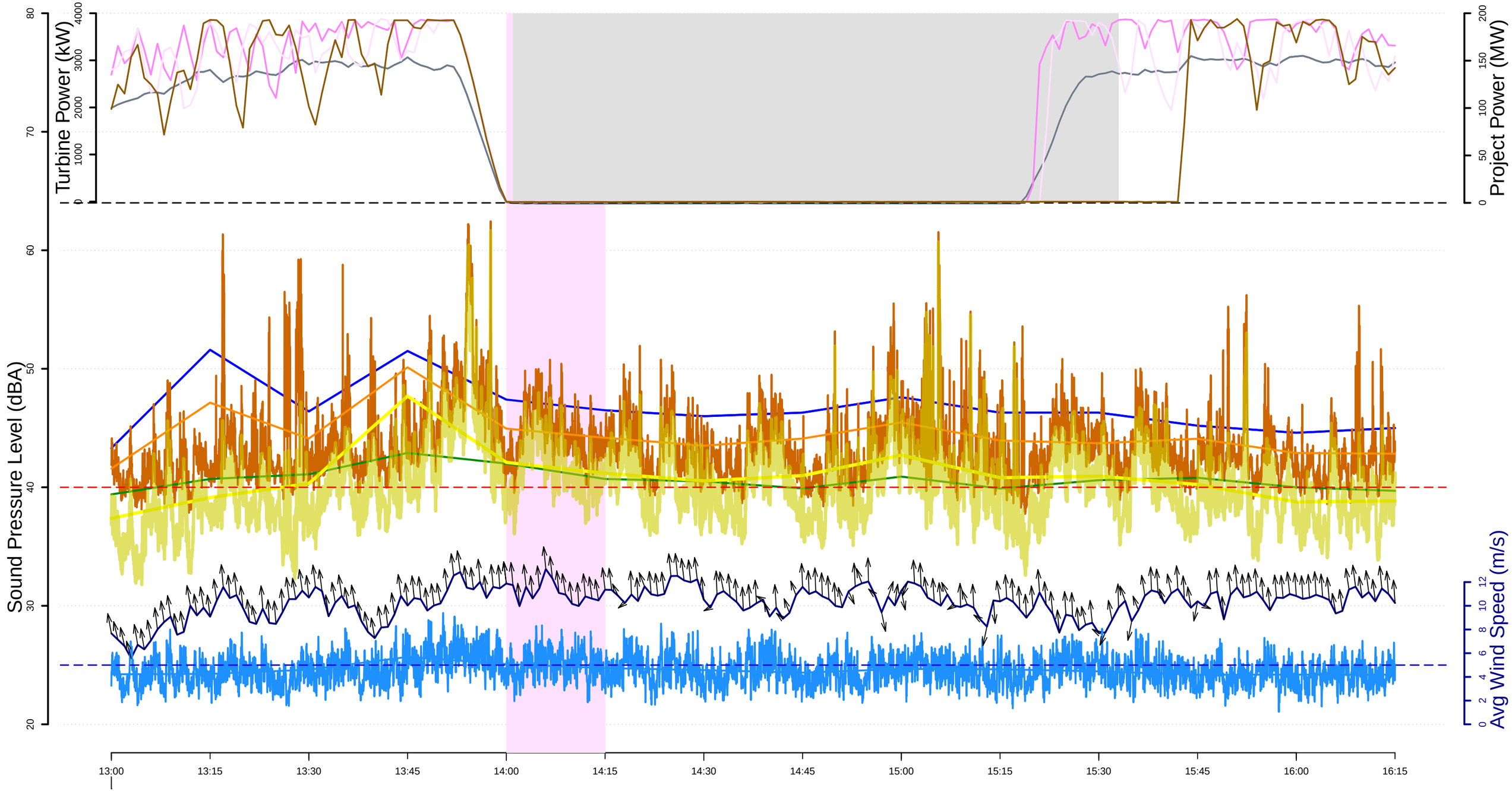
REC−139 (Schoenfelder Residence), Curtail #40
Thursday, 7 30, 2020



REC−139 (Schoenfelder Residence), Curtail #41
Friday, 7 31, 2020



REC−139 (Schoenfelder Residence), Curtail #42
Saturday, 8 1, 2020



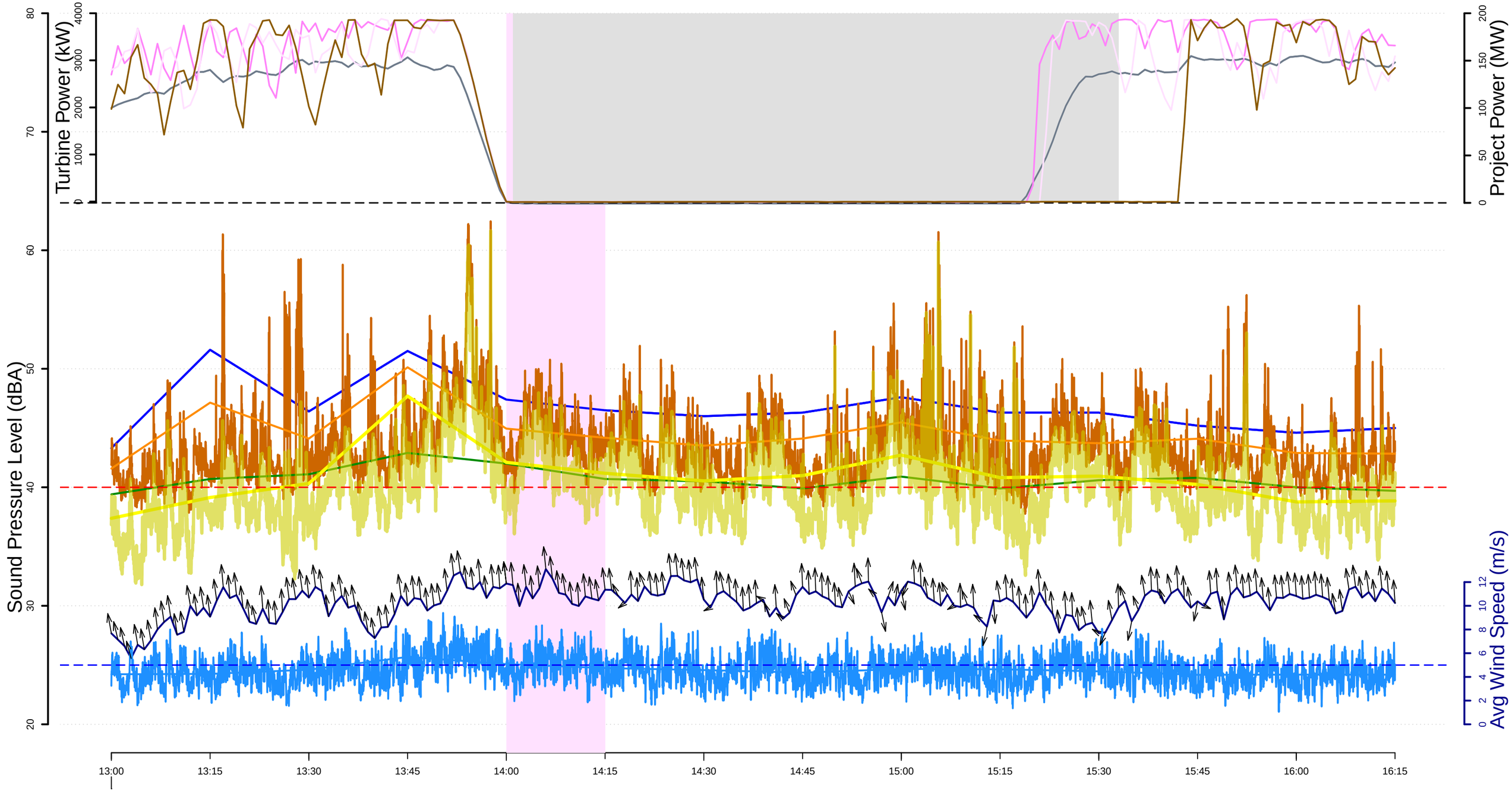
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39

Project Power (MW)

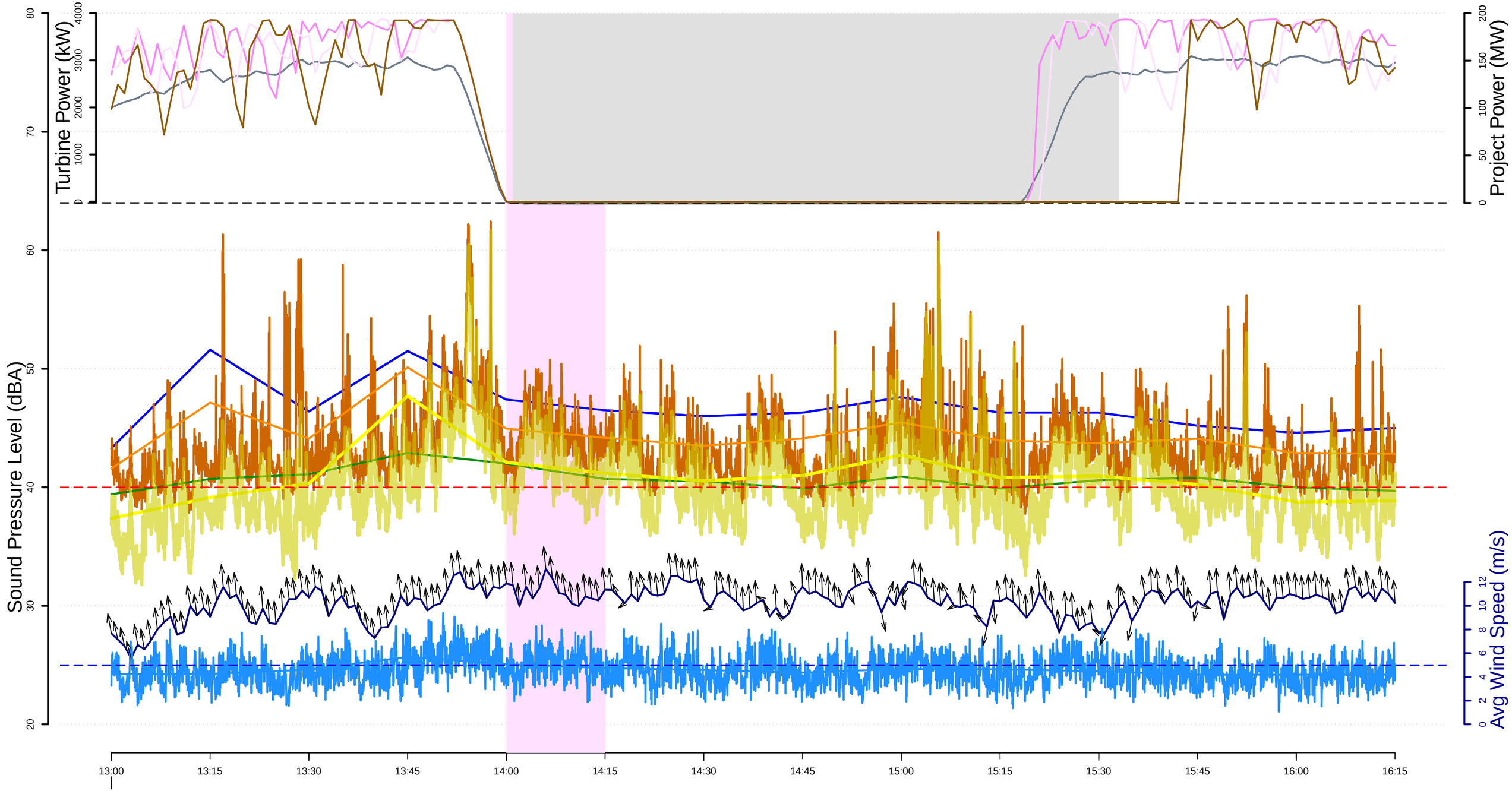
REC−139 (Schoenfelder Residence), Curtail #43
Saturday, 8 1, 2020



01/08

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T23
- Real Power (kW) T58
- Real Power (kW) T48
- Real Power (kW) T39
- Project Power (MW)

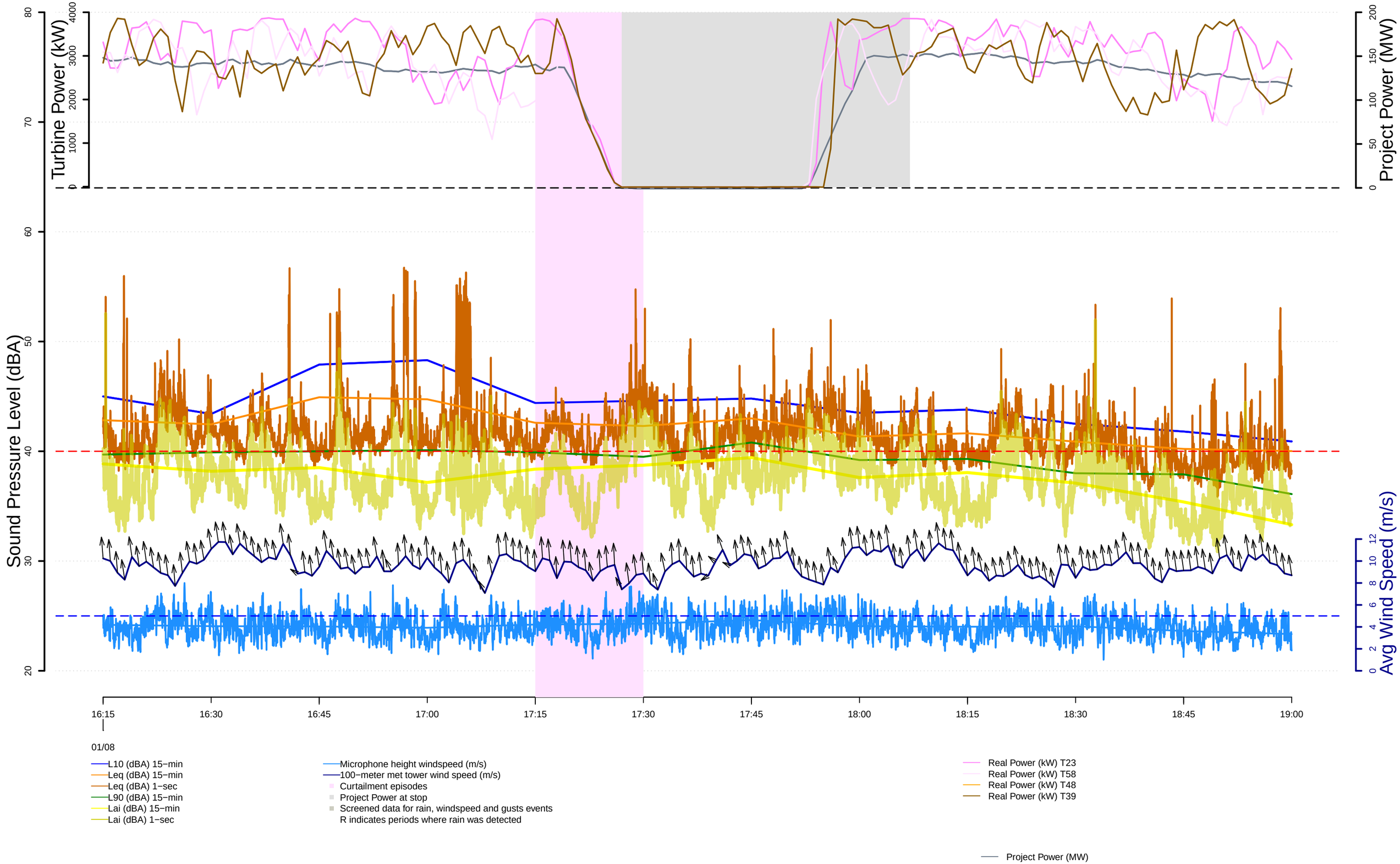
REC−139 (Schoenfelder Residence), Curtail #44
Saturday, 8 1, 2020



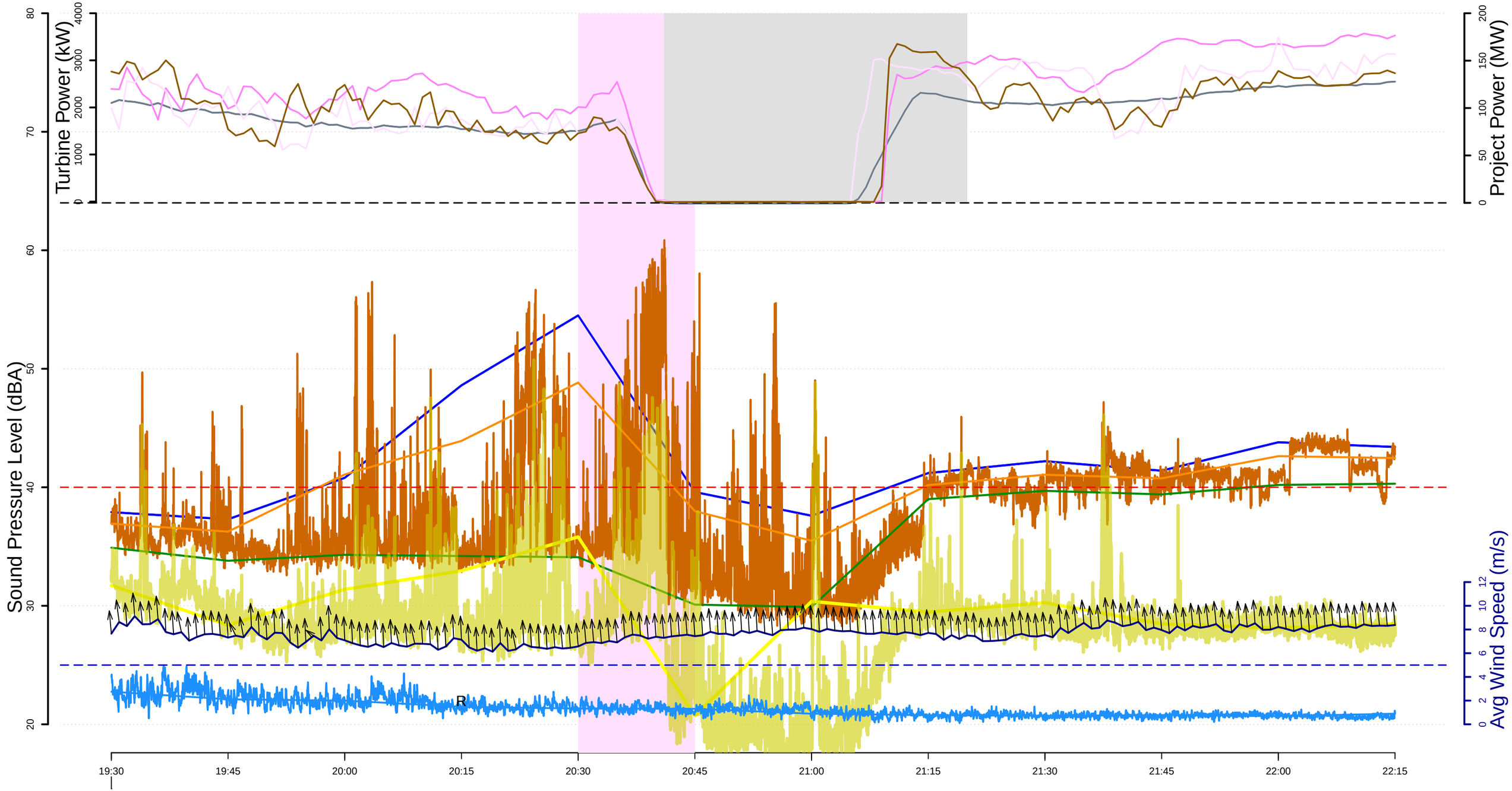
01/08

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T23
- Real Power (kW) T58
- Real Power (kW) T48
- Real Power (kW) T39
- Project Power (MW)

REC−139 (Schoenfelder Residence), Curtail #45
Saturday, 8 1, 2020



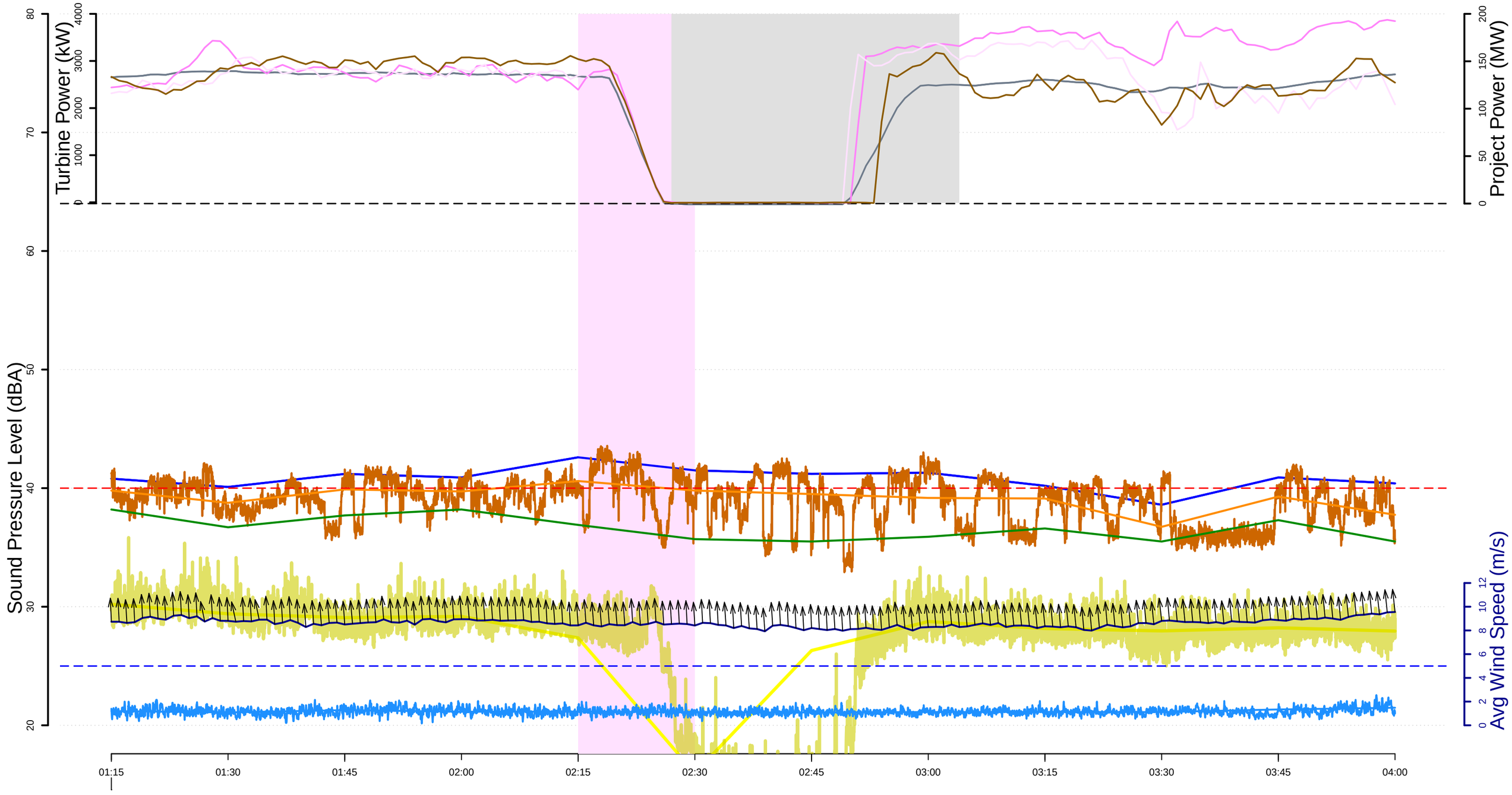
REC−139 (Schoenfelder Residence), Curtail #46
Saturday, 8 1, 2020



01/08

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
- R indicates periods where rain was detected
- Real Power (kW) T23
- Real Power (kW) T58
- Real Power (kW) T48
- Real Power (kW) T39
- Project Power (MW)

REC−139 (Schoenfelder Residence), Curtail #47
Sunday, 8 2, 2020



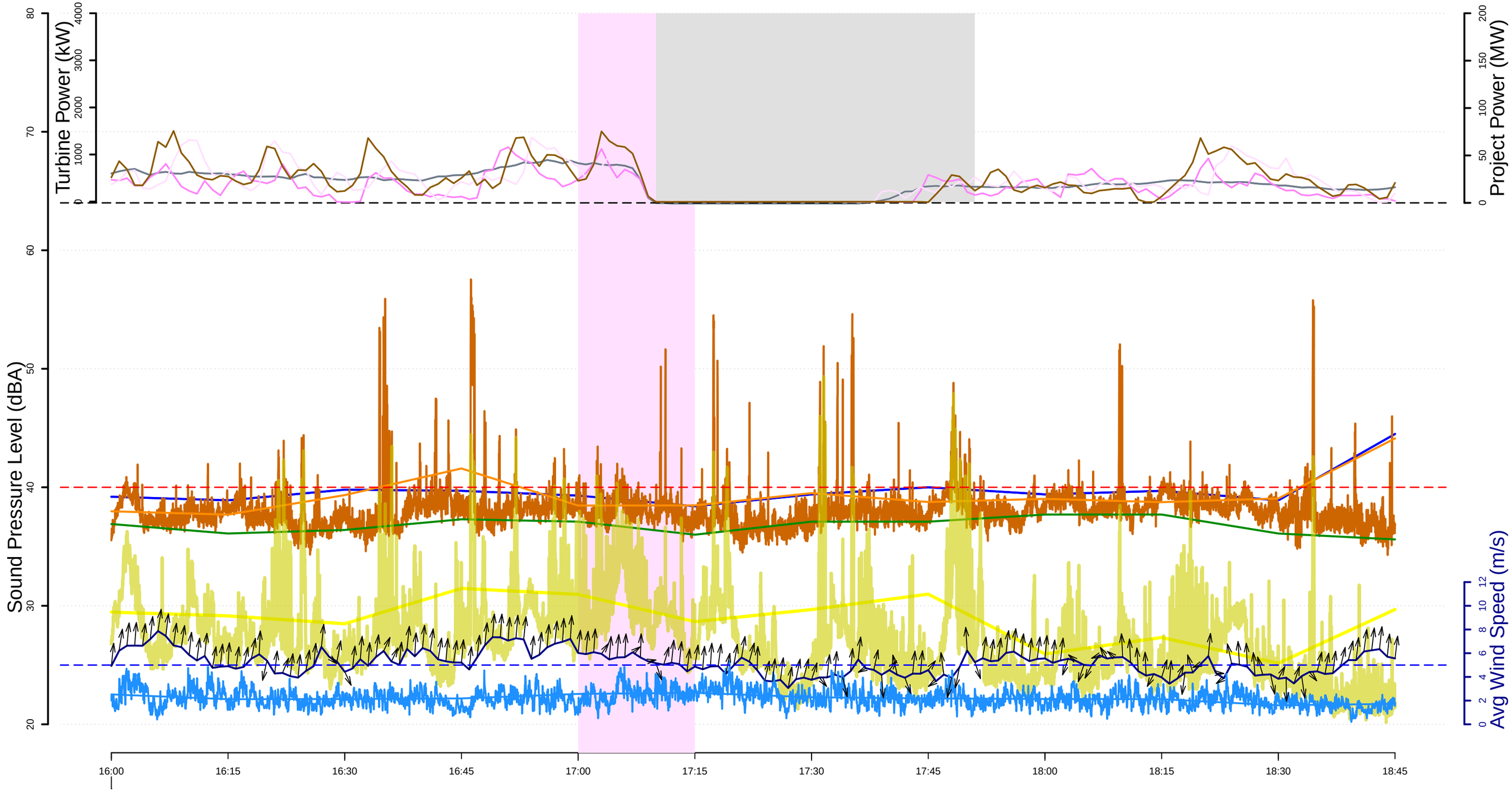
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39

Project Power (MW)

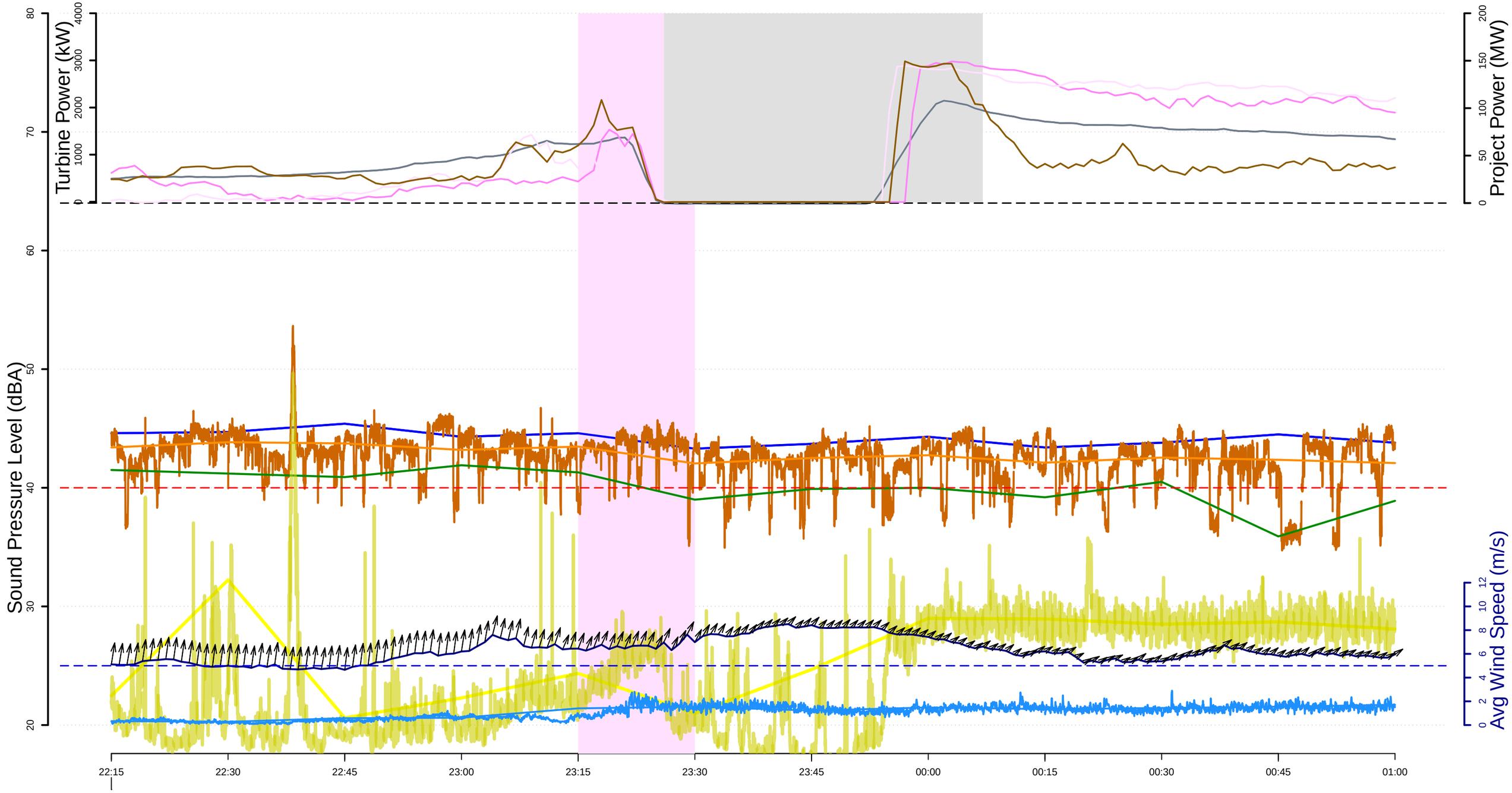
REC−139 (Schoenfelder Residence), Curtail #48
Sunday, 8 2, 2020



02/08

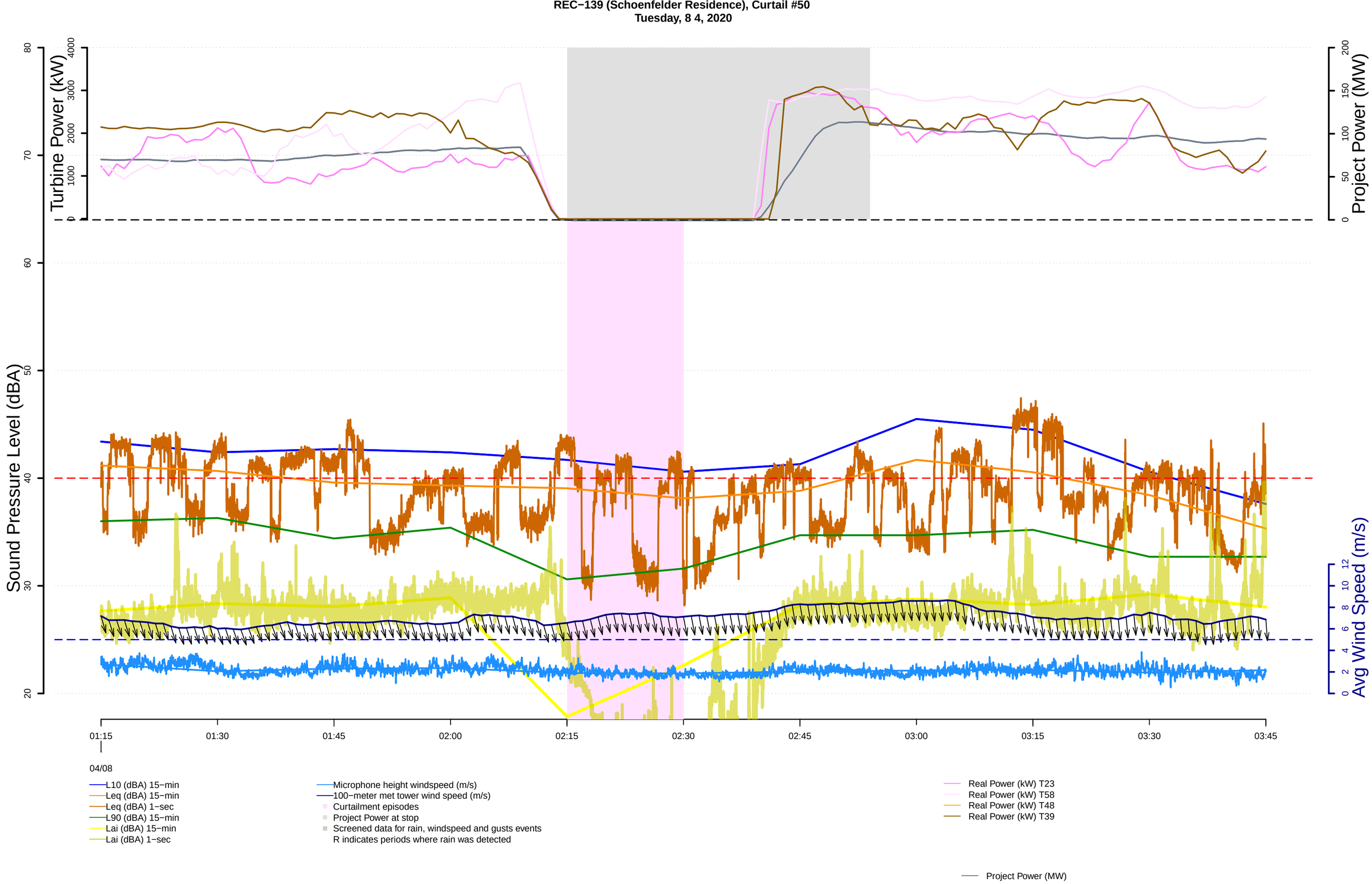
- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T23
- Real Power (kW) T58
- Real Power (kW) T48
- Real Power (kW) T39
- Project Power (MW)

REC−139 (Schoenfelder Residence), Curtail #49
Sunday, 8 2, 2020

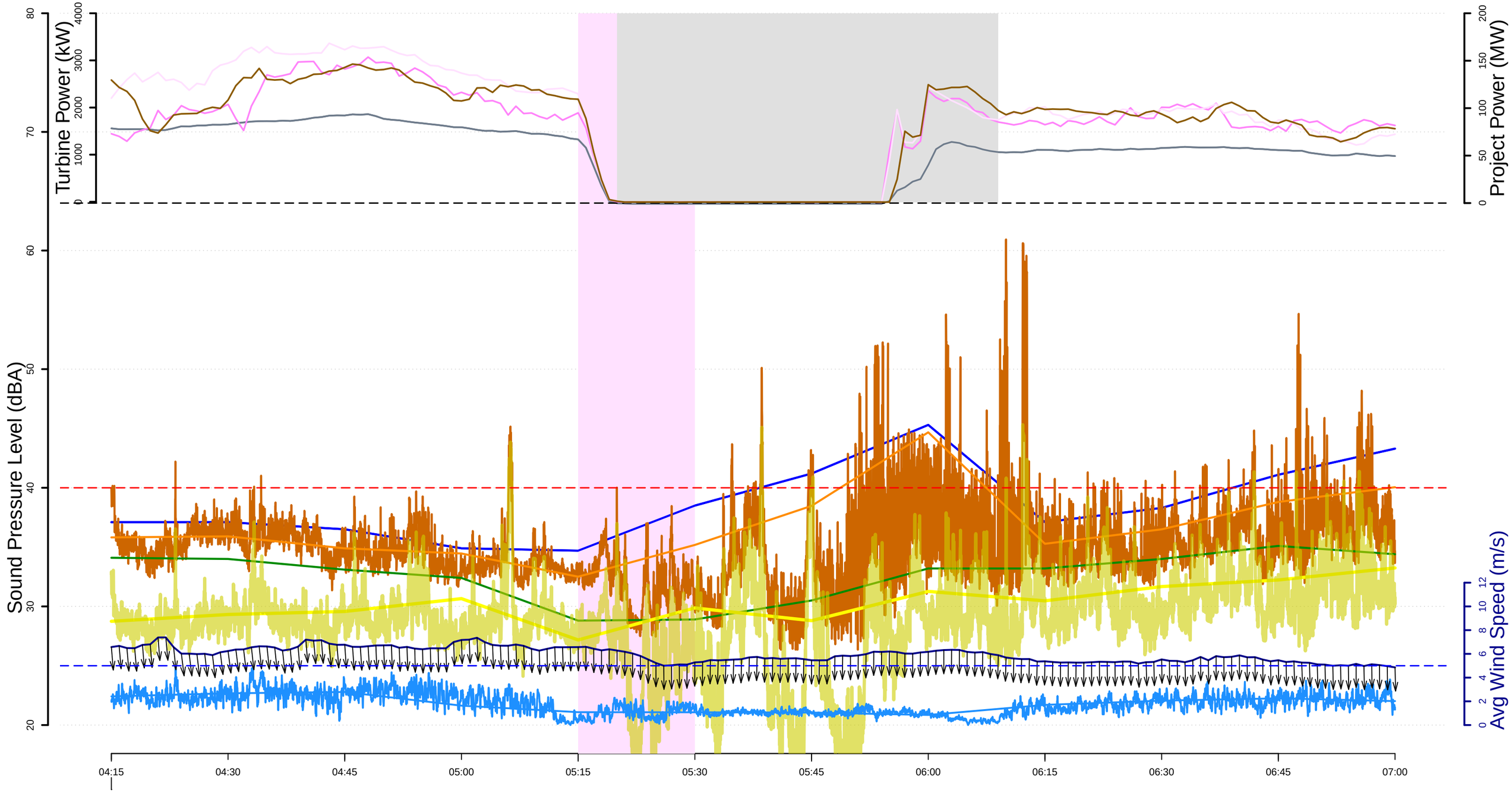


02/08

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T23
- Real Power (kW) T58
- Real Power (kW) T48
- Real Power (kW) T39
- Project Power (MW)


REC−139 (Schoenfelder Residence), Curtail #50
Tuesday, 8 4, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
01:15
01:30
01:45
02:00
02:15
02:30
02:45
03:00
03:15
03:30
03:45
04/08
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T23
Real Power (kW) T58
Real Power (kW) T48
Real Power (kW) T39
Project Power (MW)

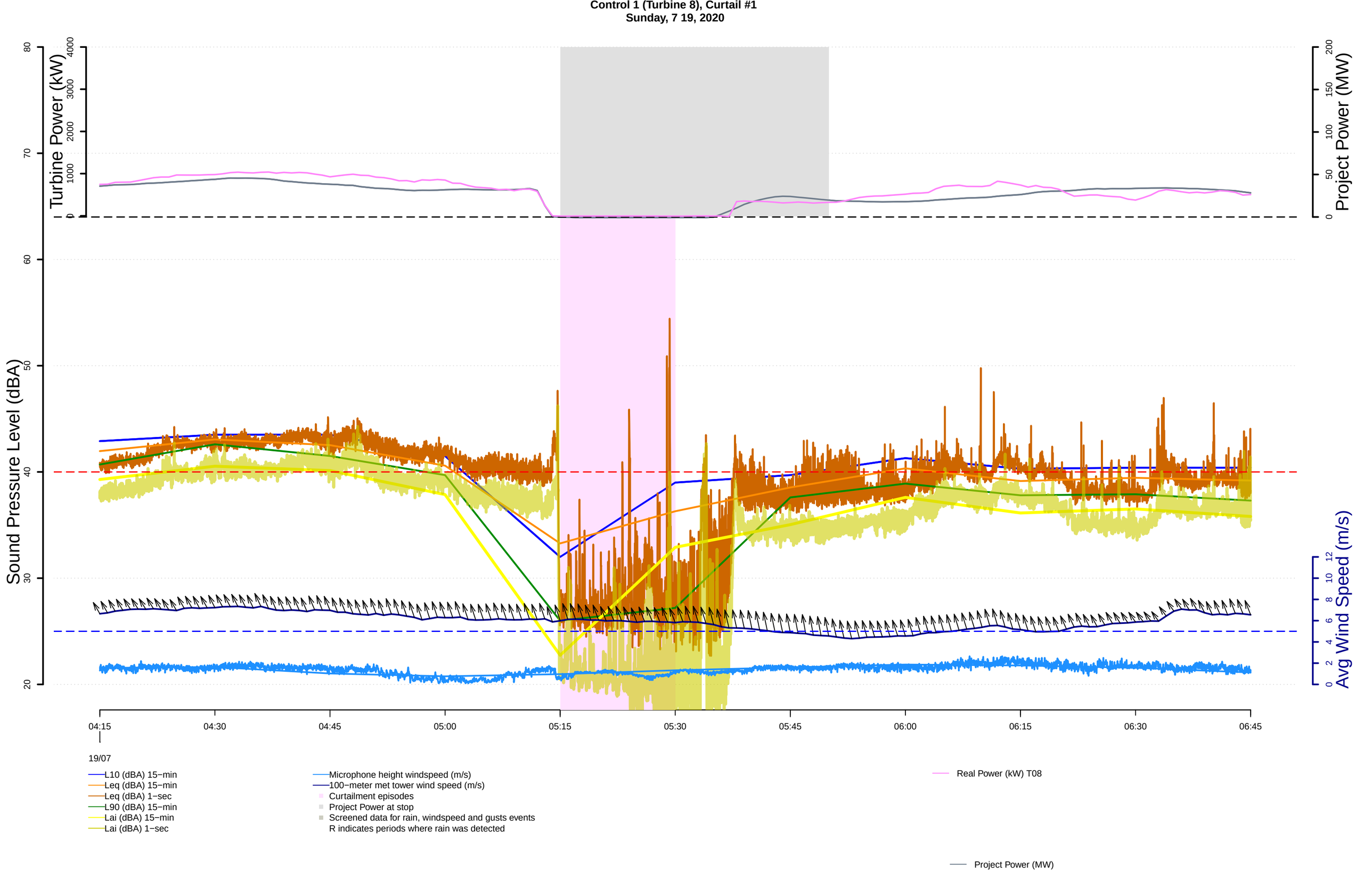
REC−139 (Schoenfelder Residence), Curtail #51
Tuesday, 8 4, 2020

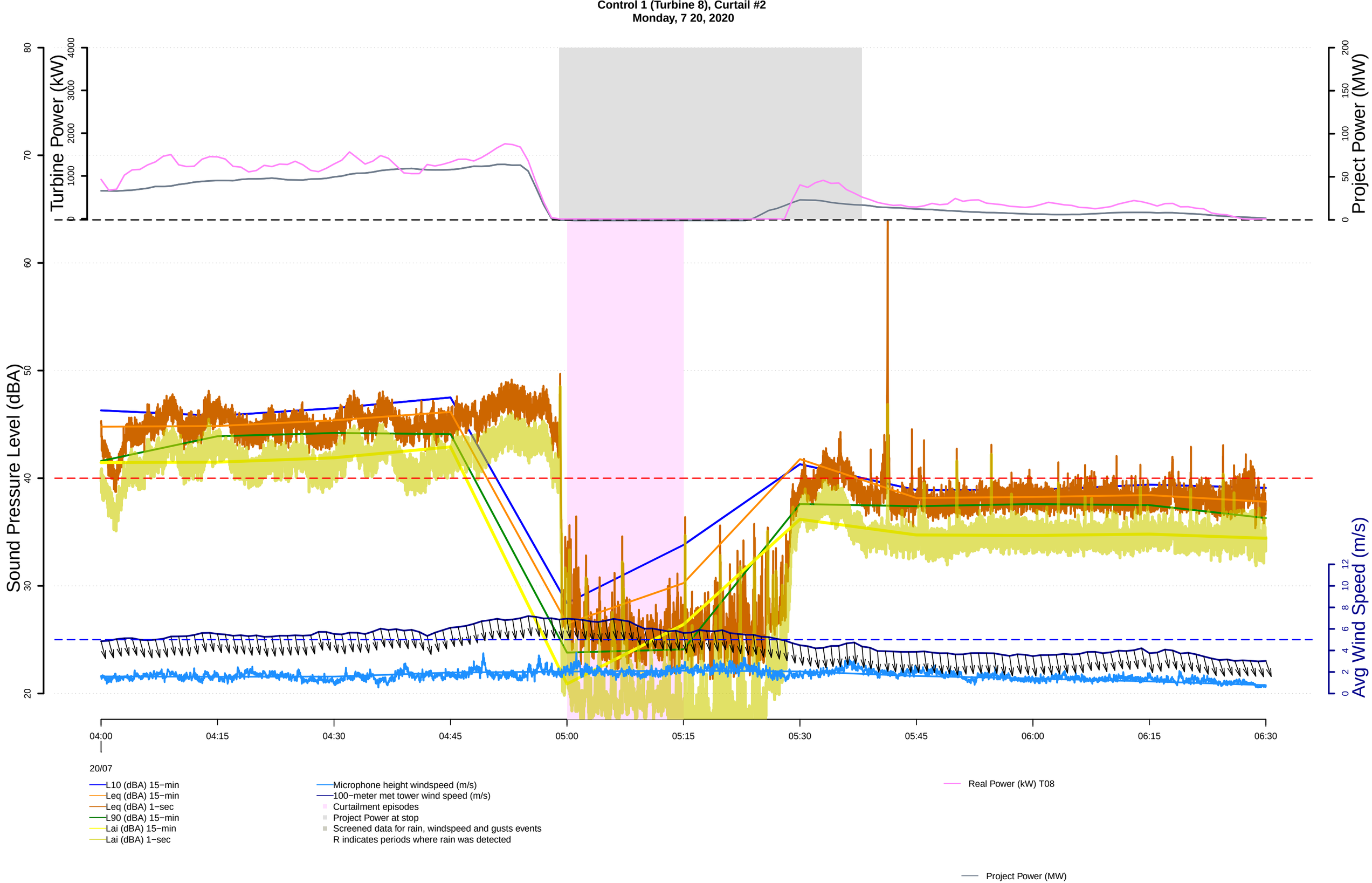


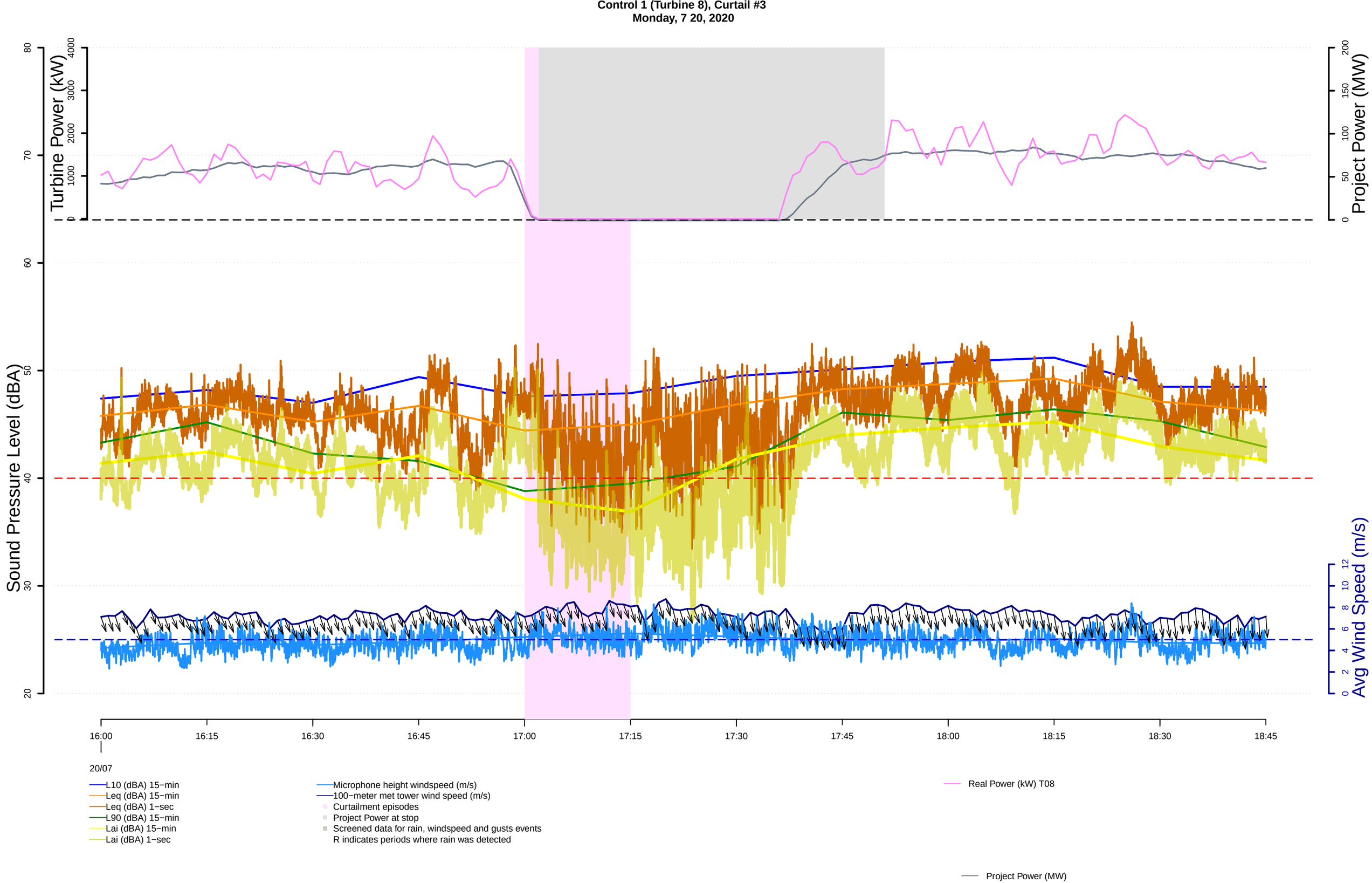
04/08

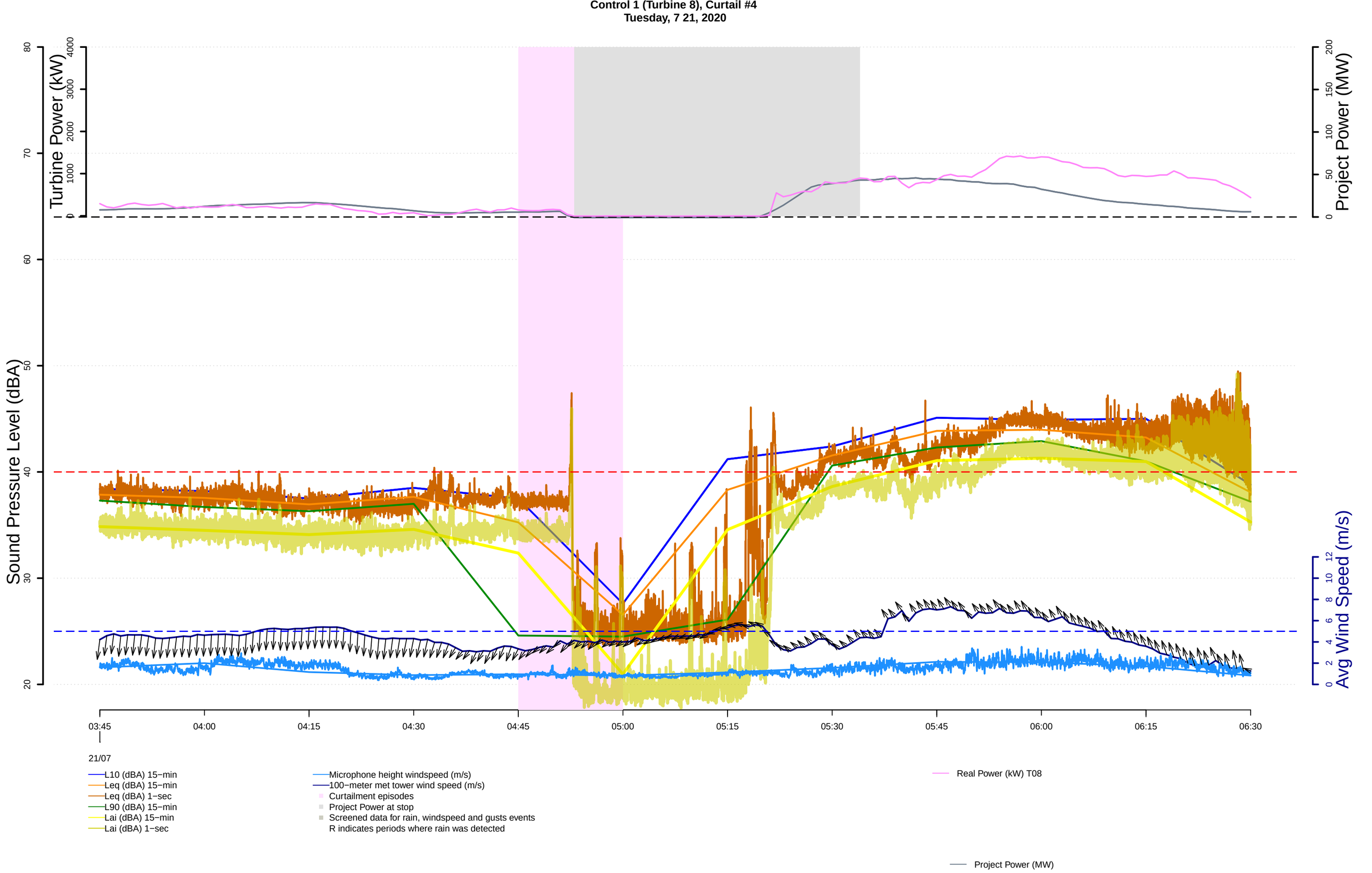
- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T23
- Real Power (kW) T58
- Real Power (kW) T48
- Real Power (kW) T39
- Project Power (MW)

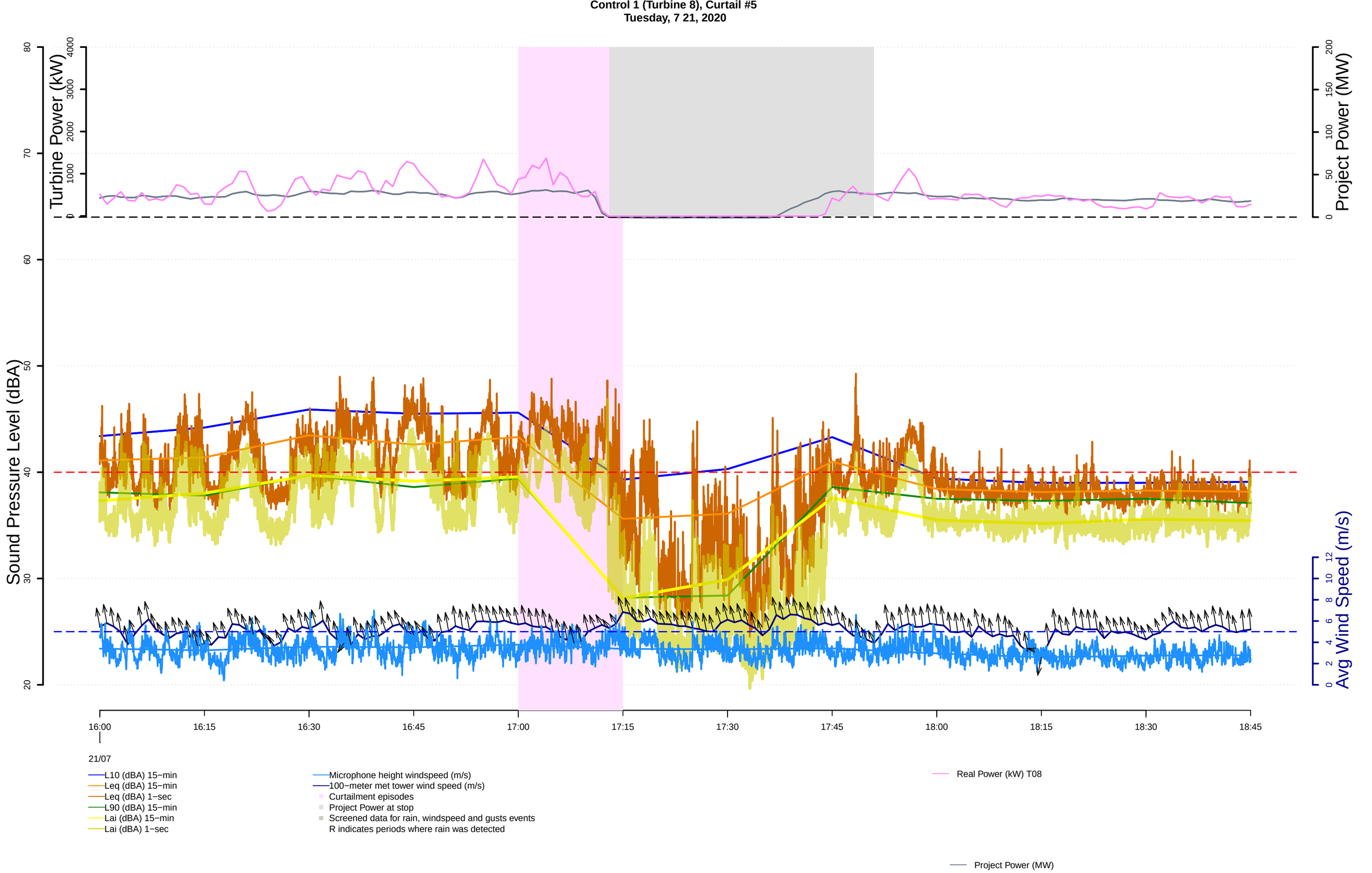
Control 1 (Turbine 8)

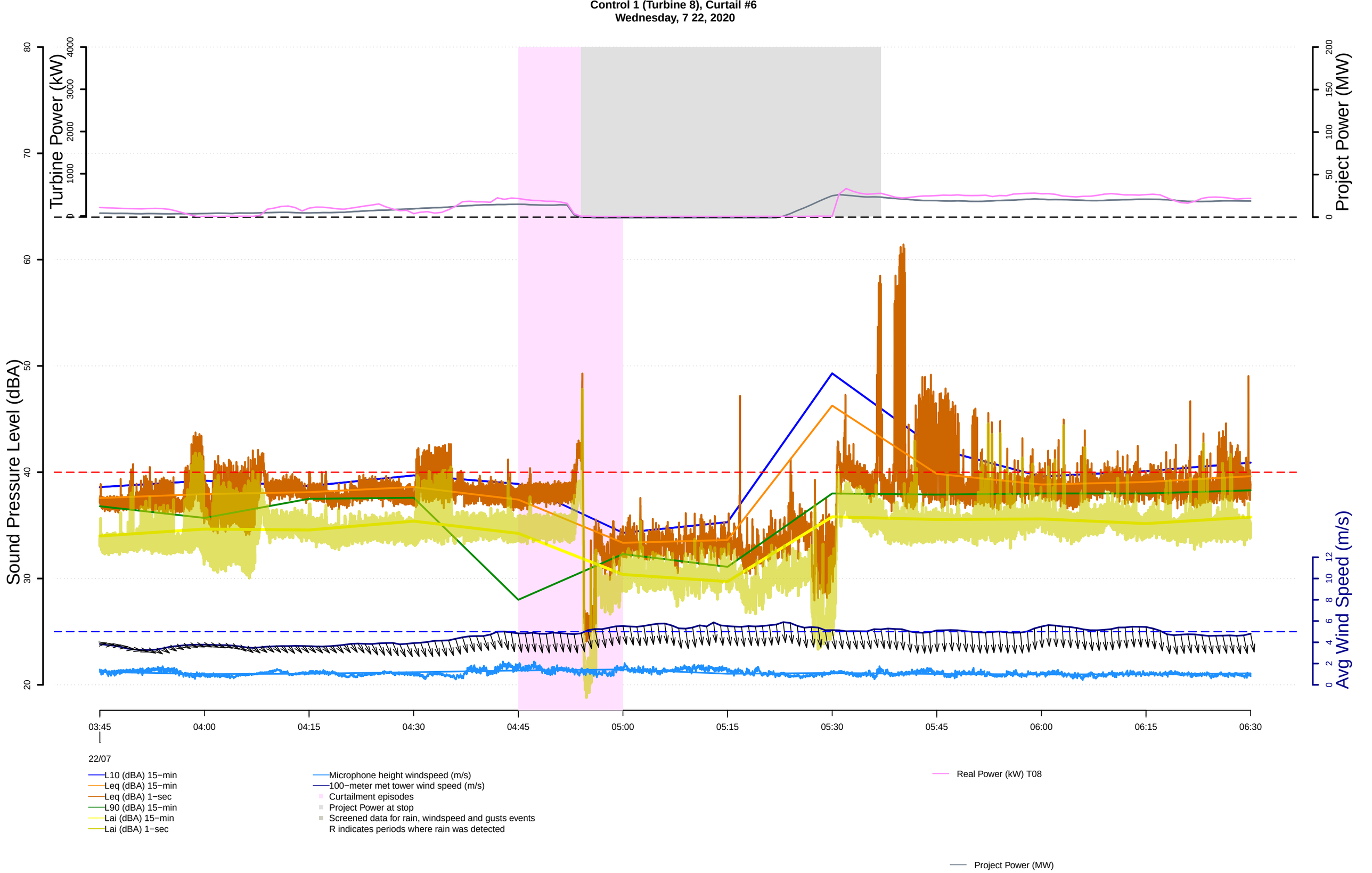

Control 1 (Turbine 8), Curtail #1
Sunday, 7 19, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
04:15
04:30
04:45
05:00
05:15
05:30
05:45
06:00
06:15
06:30
06:45
19/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)

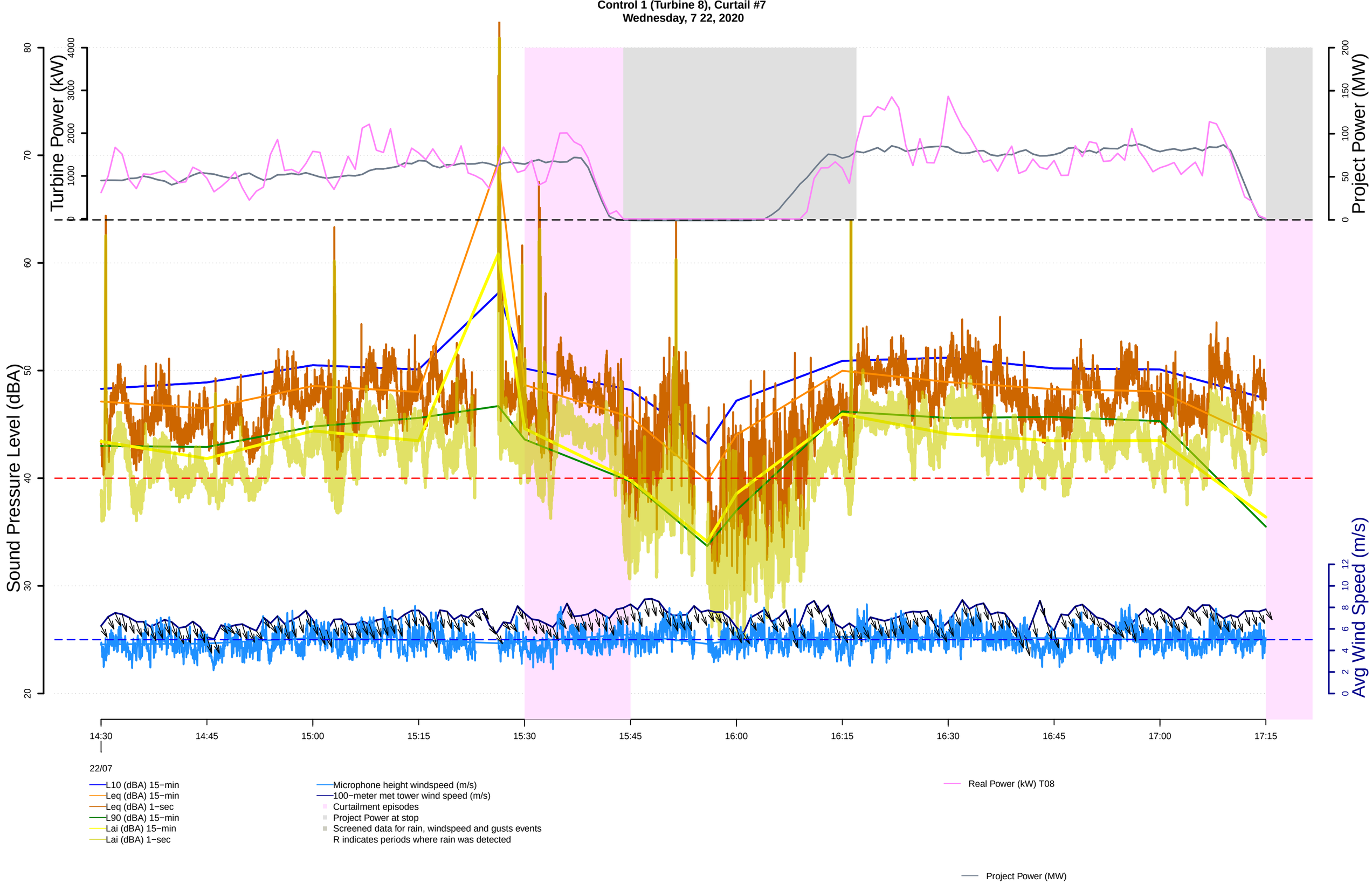

Control 1 (Turbine 8), Curtail #2
Monday, 7 20, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
04:00
04:15
04:30
04:45
05:00
05:15
05:30
05:45
06:00
06:15
06:30
20/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)

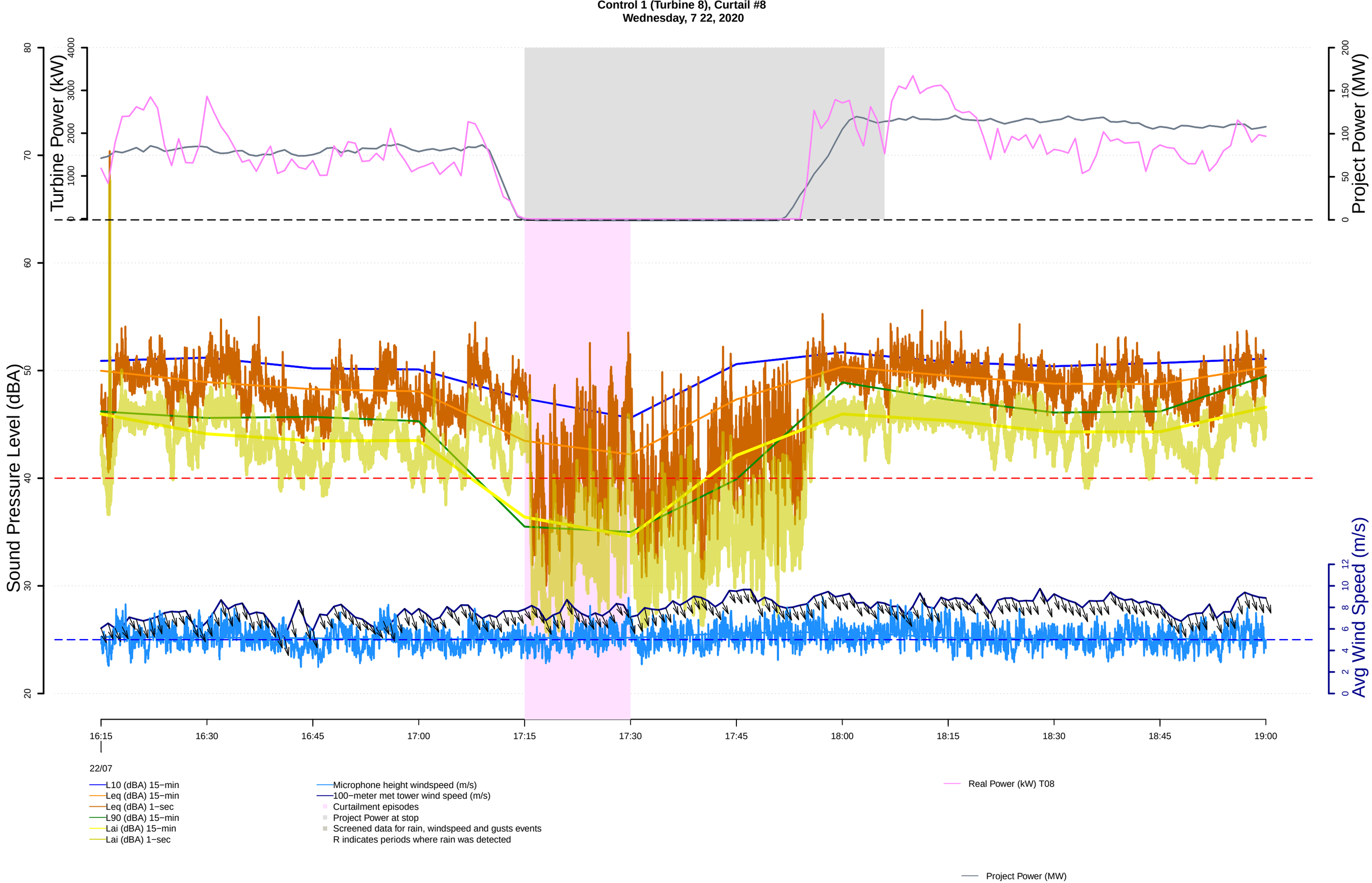

Control 1 (Turbine 8), Curtail #3
Monday, 7 20, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
16:00
16:15
16:30
16:45
17:00
17:15
17:30
17:45
18:00
18:15
18:30
18:45
20/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)


Control 1 (Turbine 8), Curtail #4
Tuesday, 7 21, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
03:45
04:00
04:15
04:30
04:45
05:00
05:15
05:30
05:45
06:00
06:15
06:30
21/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)

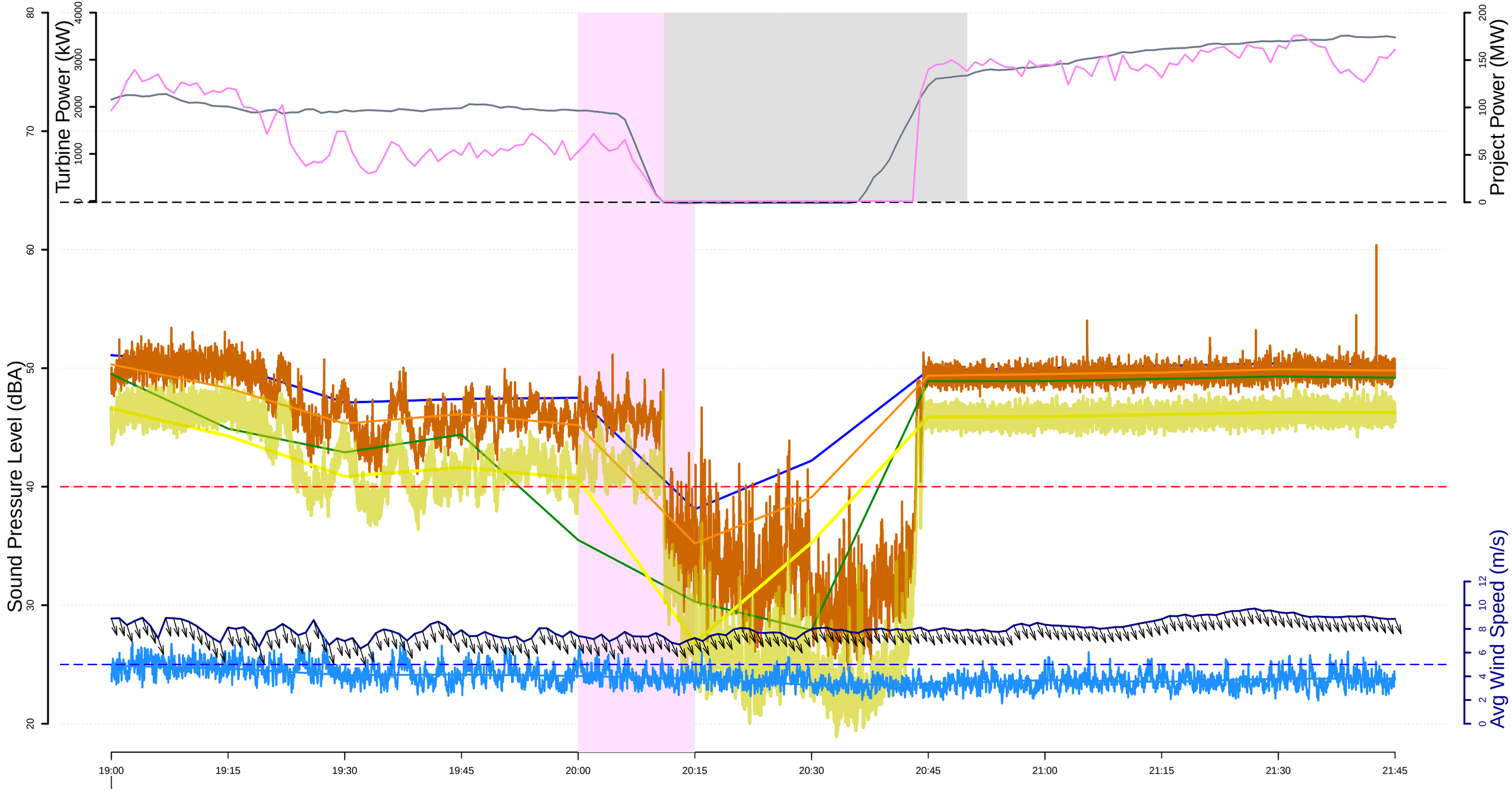

Control 1 (Turbine 8), Curtail #5
Tuesday, 7 21, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
16:00
16:15
16:30
16:45
17:00
17:15
17:30
17:45
18:00
18:15
18:30
18:45
21/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)


Control 1 (Turbine 8), Curtail #6
Wednesday, 7 22, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
03:45
04:00
04:15
04:30
04:45
05:00
05:15
05:30
05:45
06:00
06:15
06:30
22/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)


Control 1 (Turbine 8), Curtail #7
Wednesday, 7 22, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
14:30
14:45
15:00
15:15
15:30
15:45
16:00
16:15
16:30
16:45
17:00
17:15
22/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)


Control 1 (Turbine 8), Curtail #8
Wednesday, 7 22, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
16:15
16:30
16:45
17:00
17:15
17:30
17:45
18:00
18:15
18:30
18:45
19:00
22/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)

Control 1 (Turbine 8), Curtail #9
Wednesday, 7 22, 2020

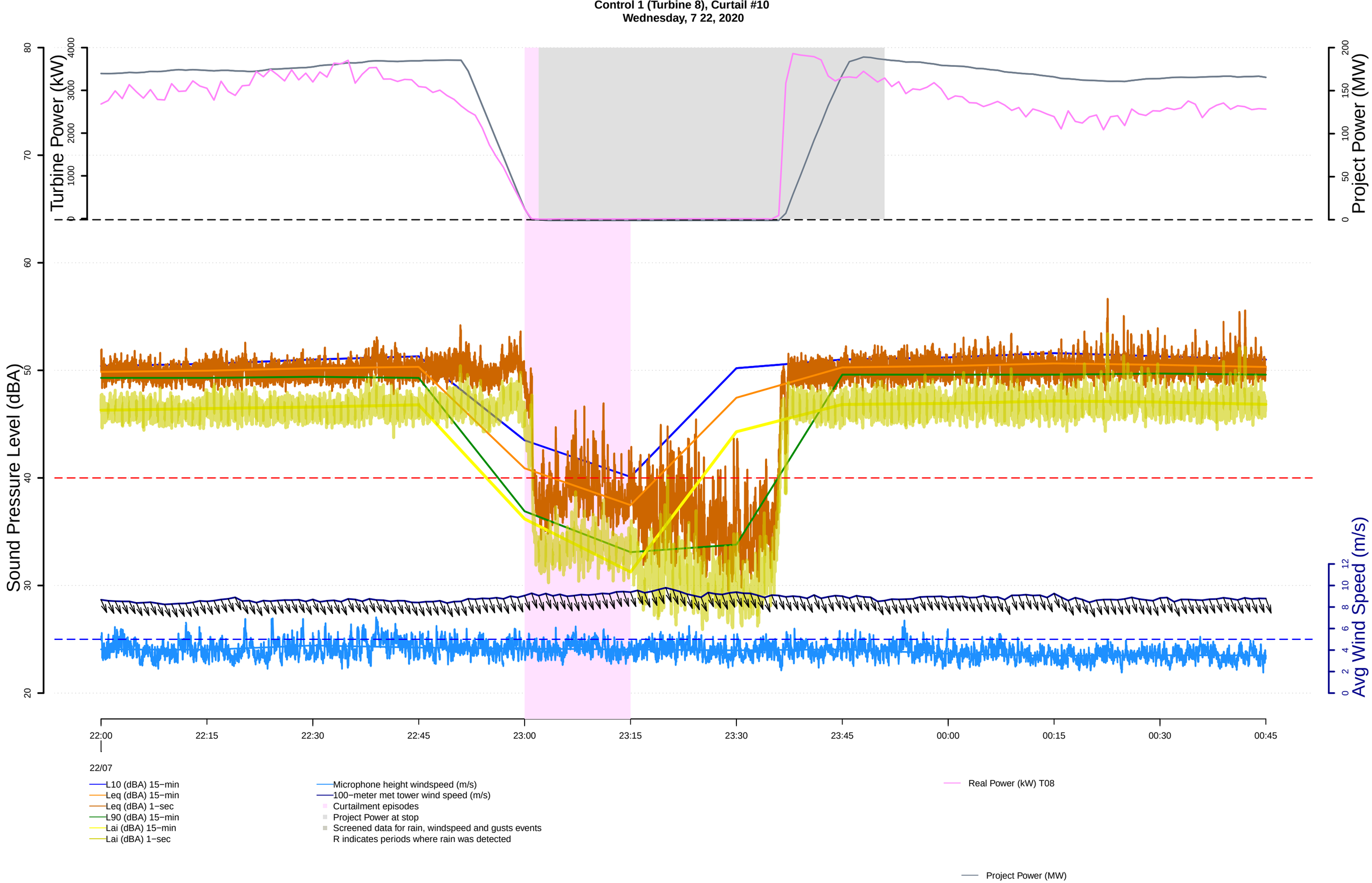


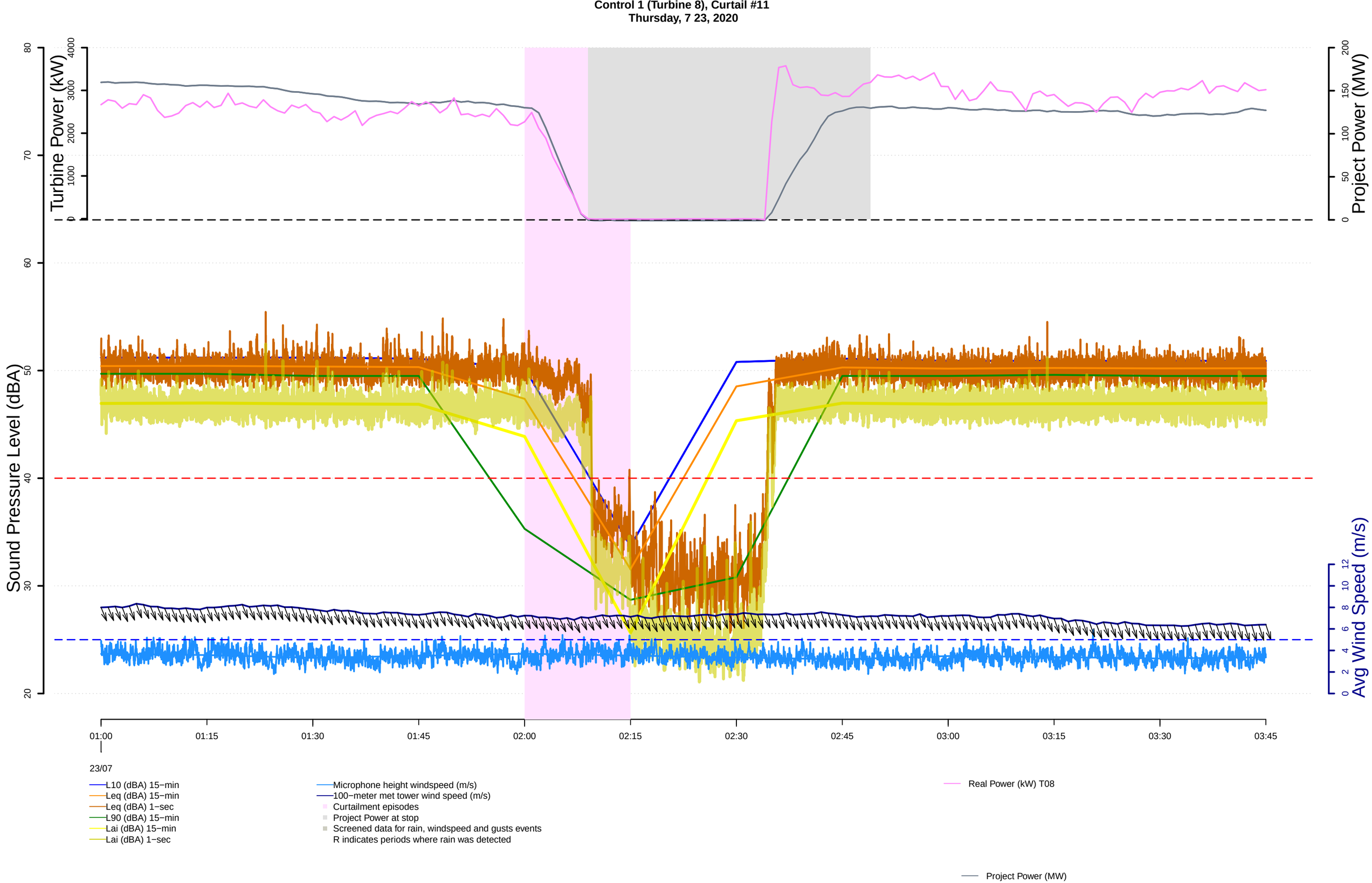
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

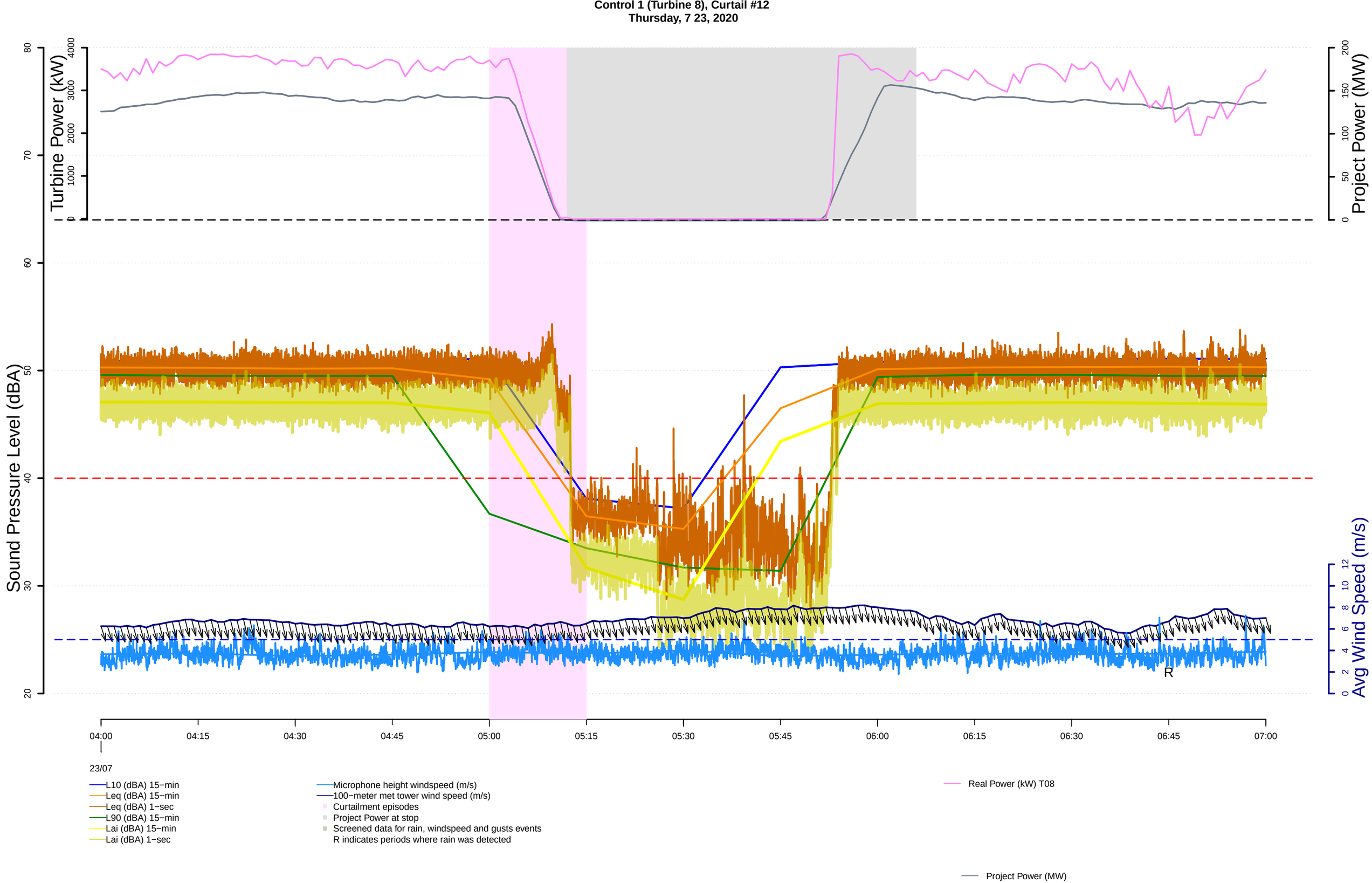
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

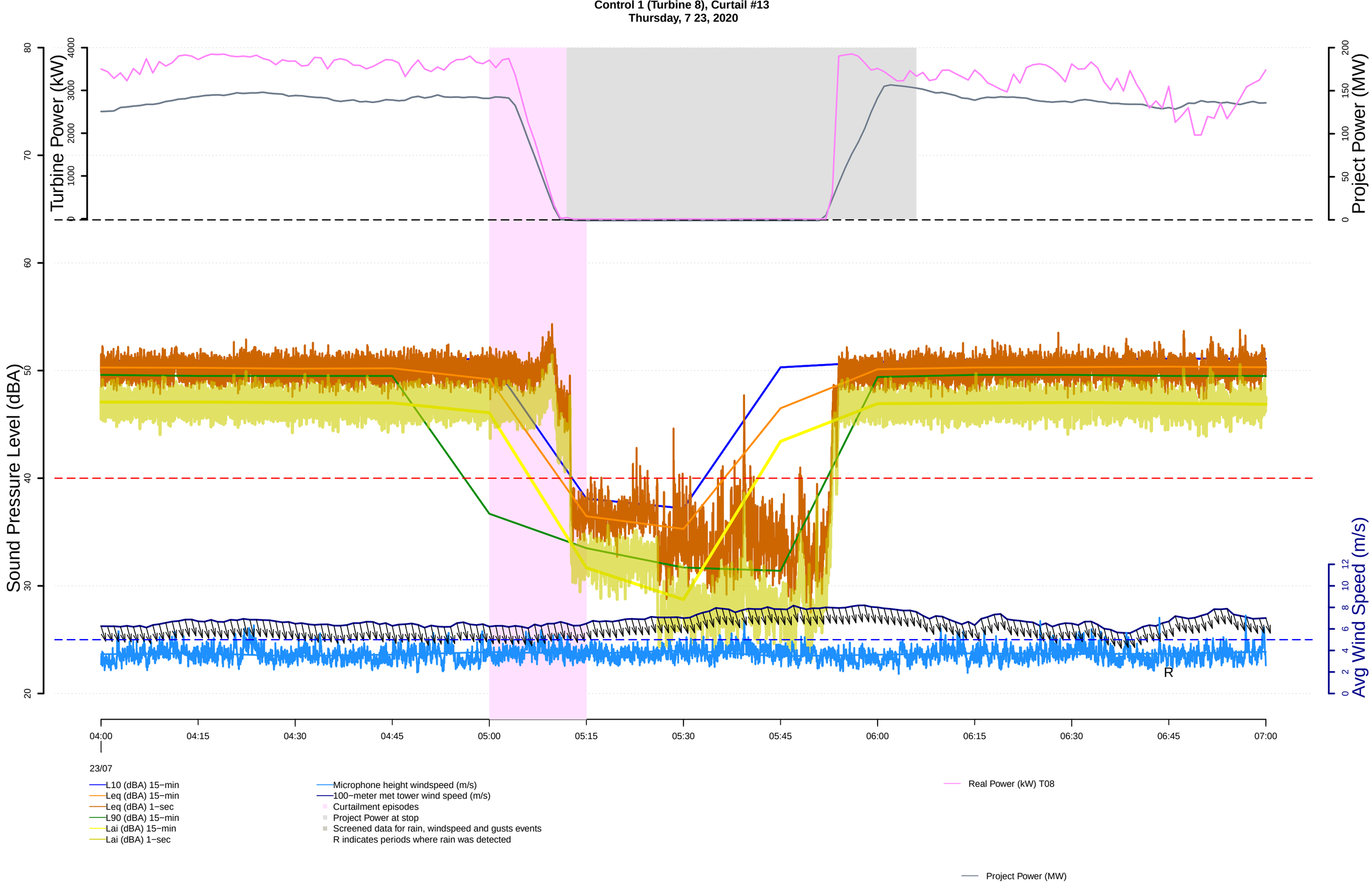
Real Power (kW) T08

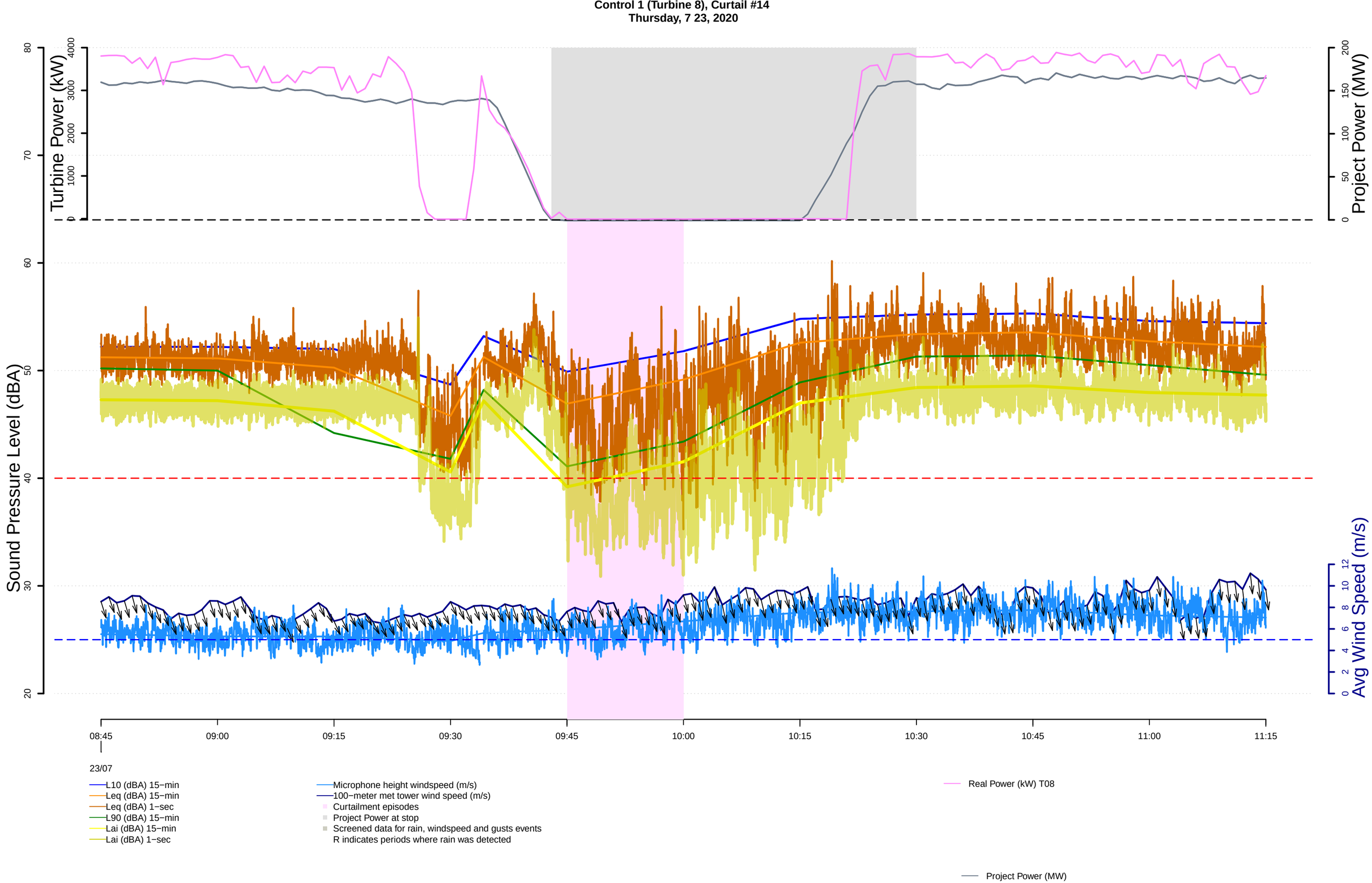
Project Power (MW)

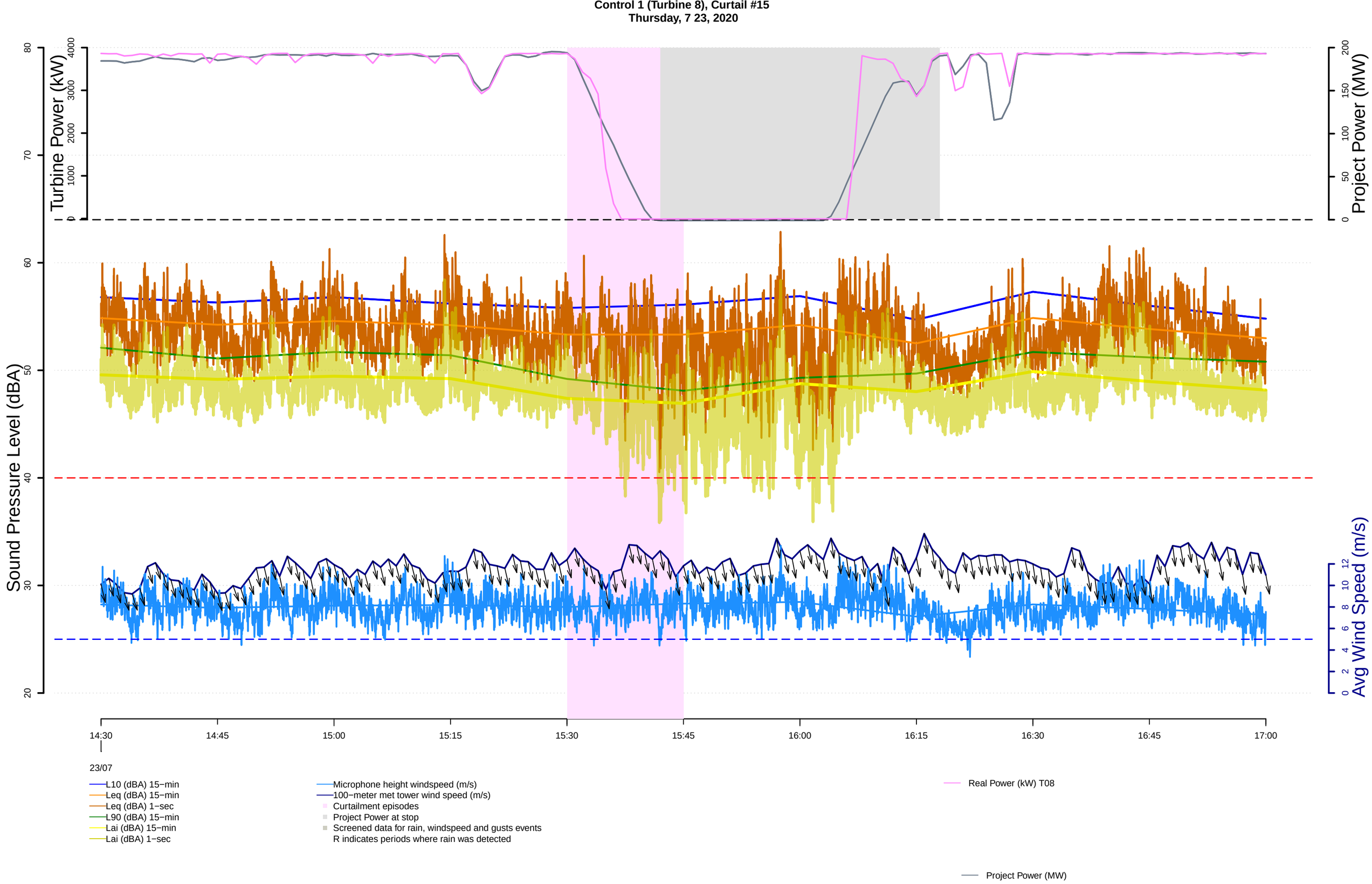

Control 1 (Turbine 8), Curtail #10
Wednesday, 7 22, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
22:00
22:15
22:30
22:45
23:00
23:15
23:30
23:45
00:00
00:15
00:30
00:45
22/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)


Control 1 (Turbine 8), Curtail #11
Thursday, 7 23, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
01:00
01:15
01:30
01:45
02:00
02:15
02:30
02:45
03:00
03:15
03:30
03:45
23/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)

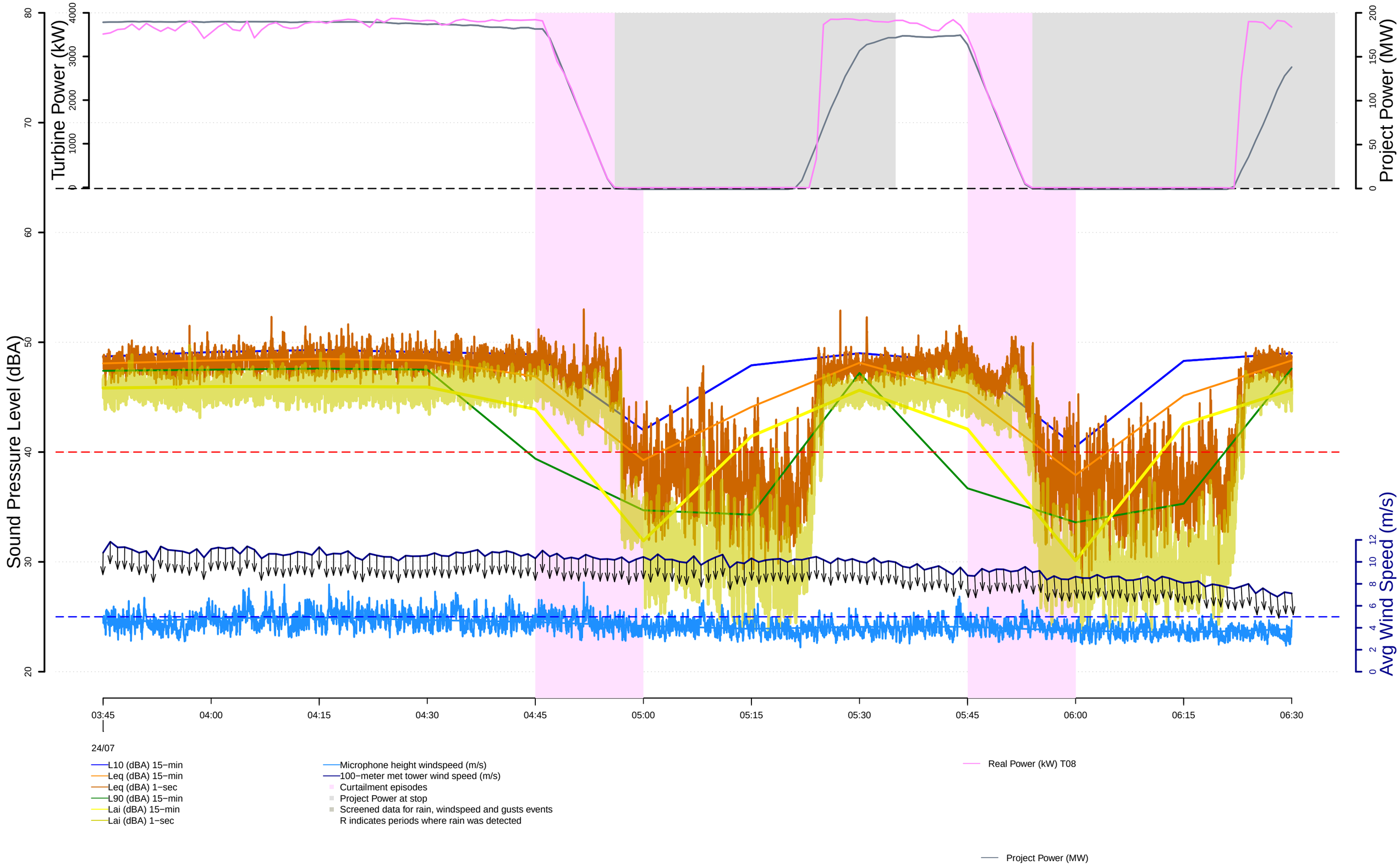

Control 1 (Turbine 8), Curtail #12
Thursday, 7 23, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
R
04:00
04:15
04:30
04:45
05:00
05:15
05:30
05:45
06:00
06:15
06:30
06:45
07:00
23/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)


Control 1 (Turbine 8), Curtail #13
Thursday, 7 23, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
R
04:00
04:15
04:30
04:45
05:00
05:15
05:30
05:45
06:00
06:15
06:30
06:45
07:00
23/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)

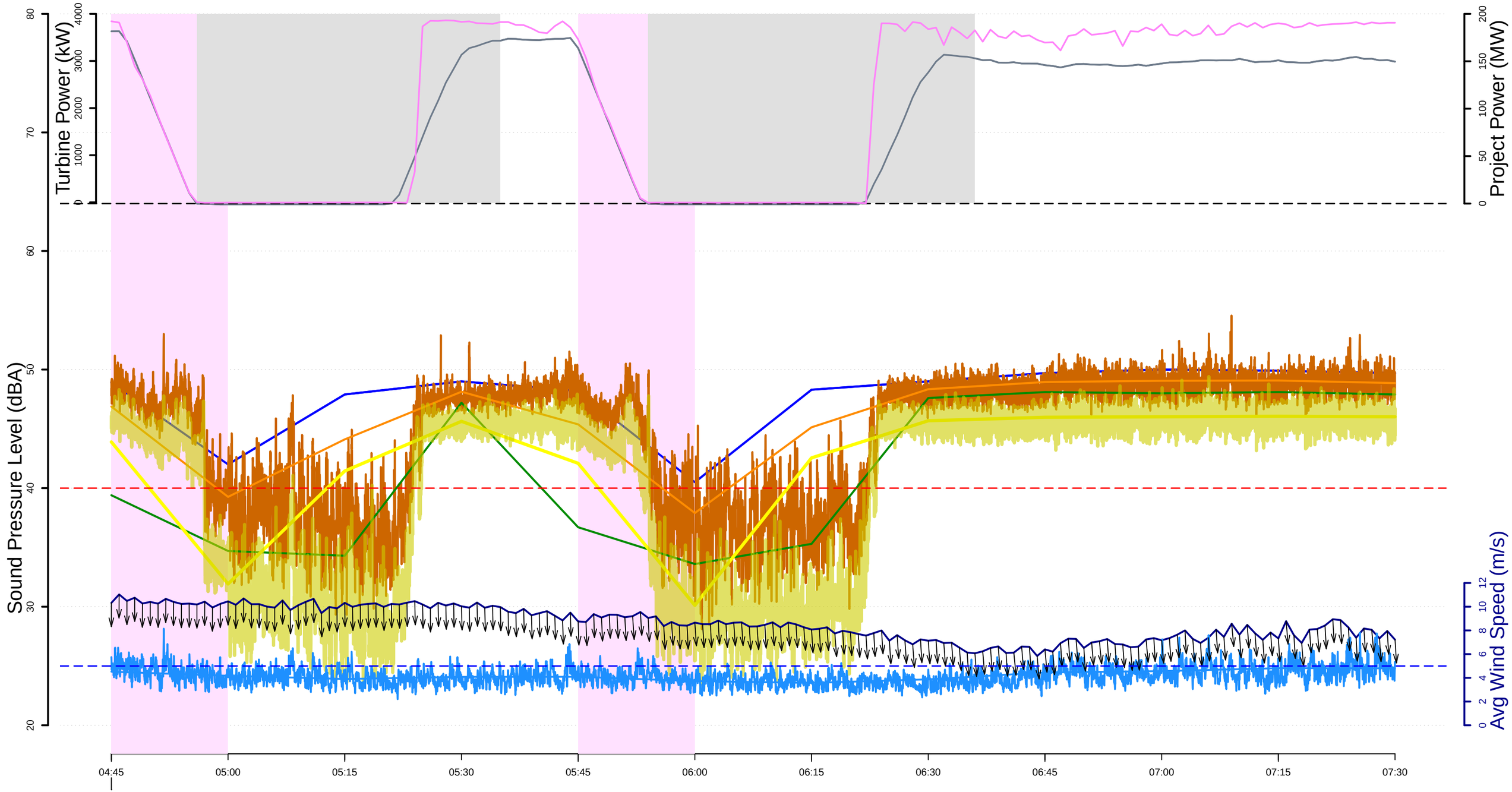

Control 1 (Turbine 8), Curtail #14
Thursday, 7 23, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
08:45
09:00
09:15
09:30
09:45
10:00
10:15
10:30
10:45
11:00
11:15
23/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)


Control 1 (Turbine 8), Curtail #15
Thursday, 7 23, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
14:30
14:45
15:00
15:15
15:30
15:45
16:00
16:15
16:30
16:45
17:00
23/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)

Control 1 (Turbine 8), Curtail #16
Friday, 7 24, 2020



Control 1 (Turbine 8), Curtail #17
Friday, 7 24, 2020

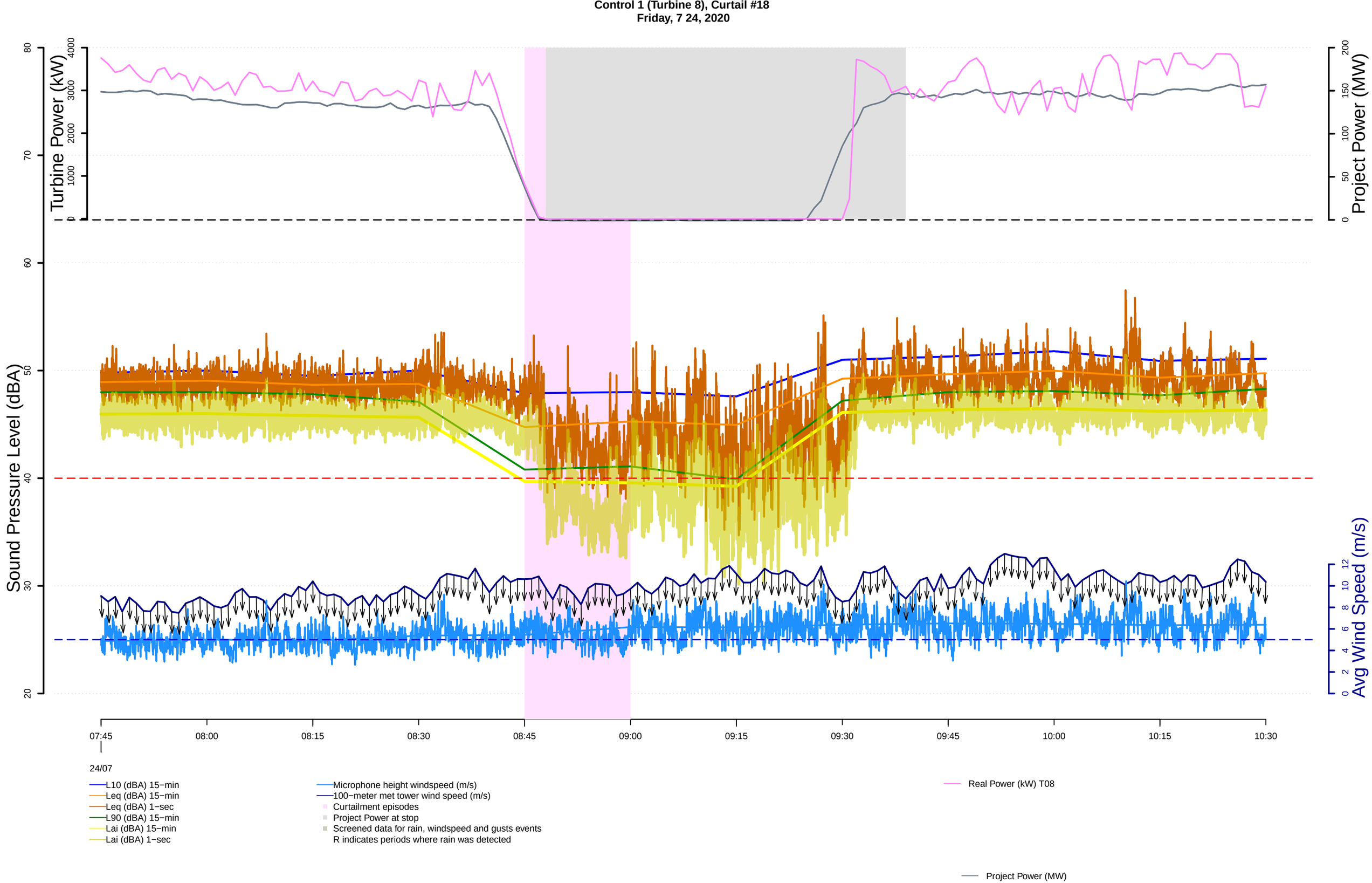


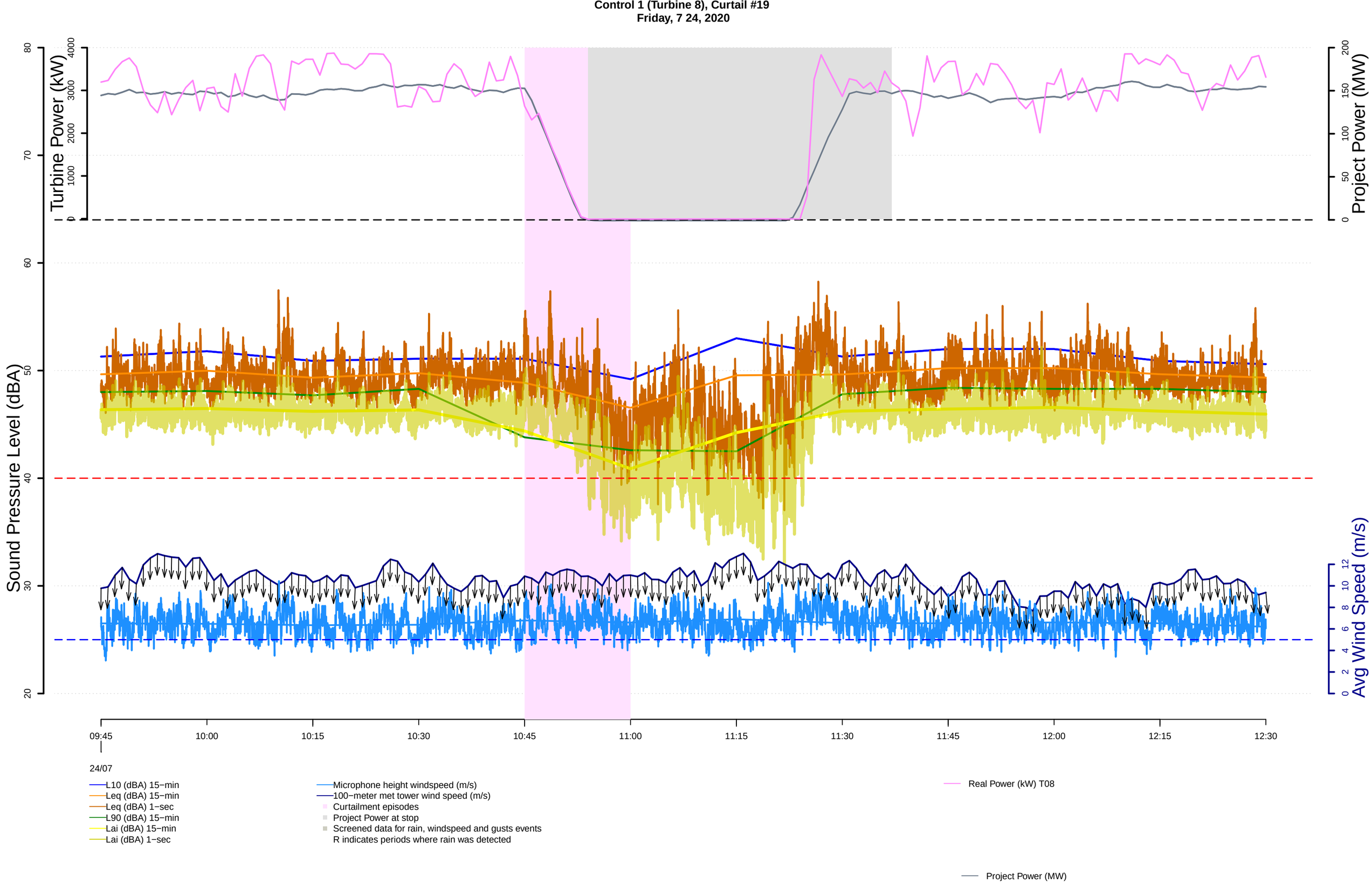
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

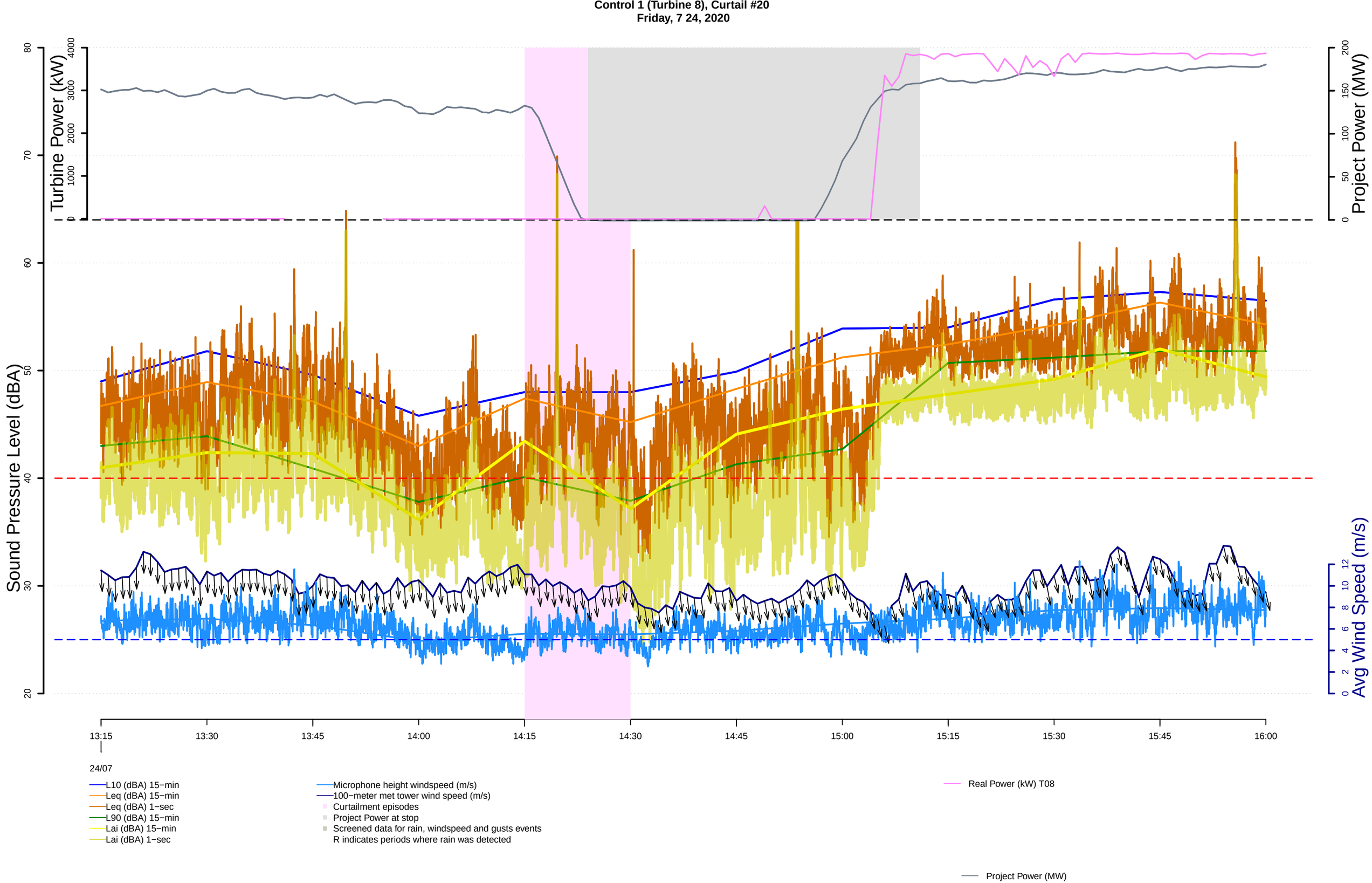
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

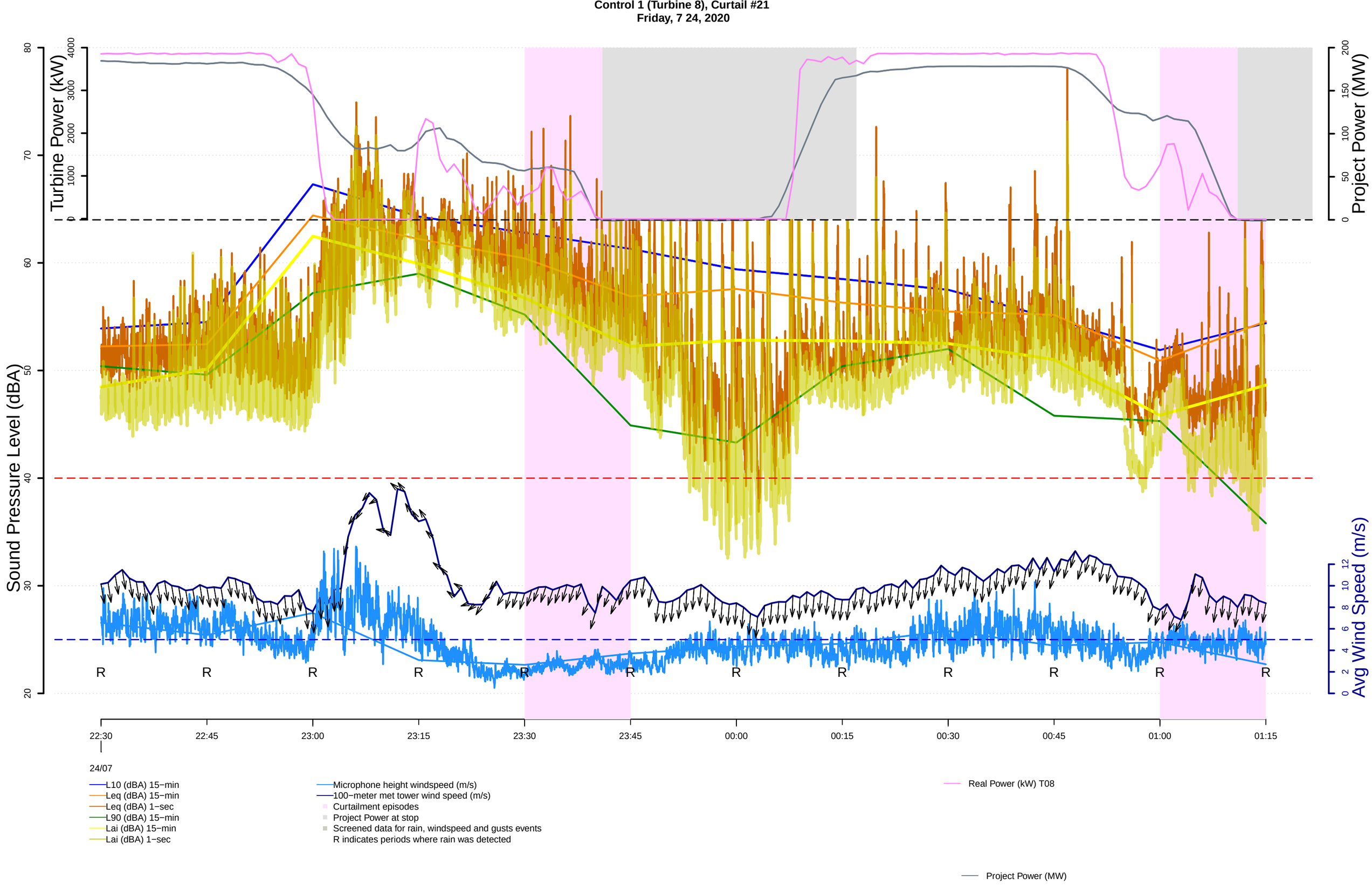
Real Power (kW) T08

Project Power (MW)

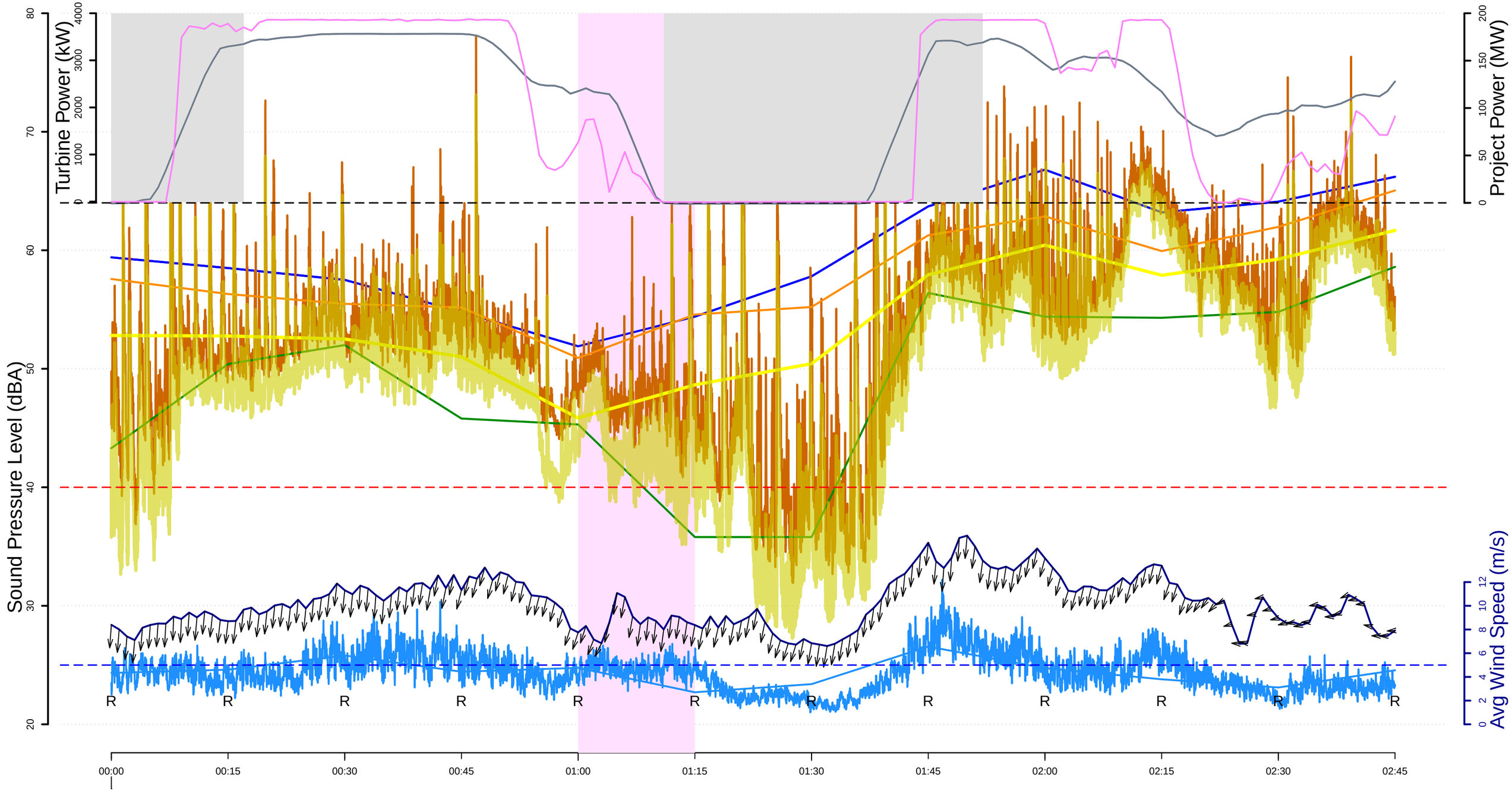

Control 1 (Turbine 8), Curtail #18
Friday, 7 24, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
07:45
08:00
08:15
08:30
08:45
09:00
09:15
09:30
09:45
10:00
10:15
10:30
24/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)


Control 1 (Turbine 8), Curtail #19
Friday, 7 24, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
09:45
10:00
10:15
10:30
10:45
11:00
11:15
11:30
11:45
12:00
12:15
12:30
24/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)

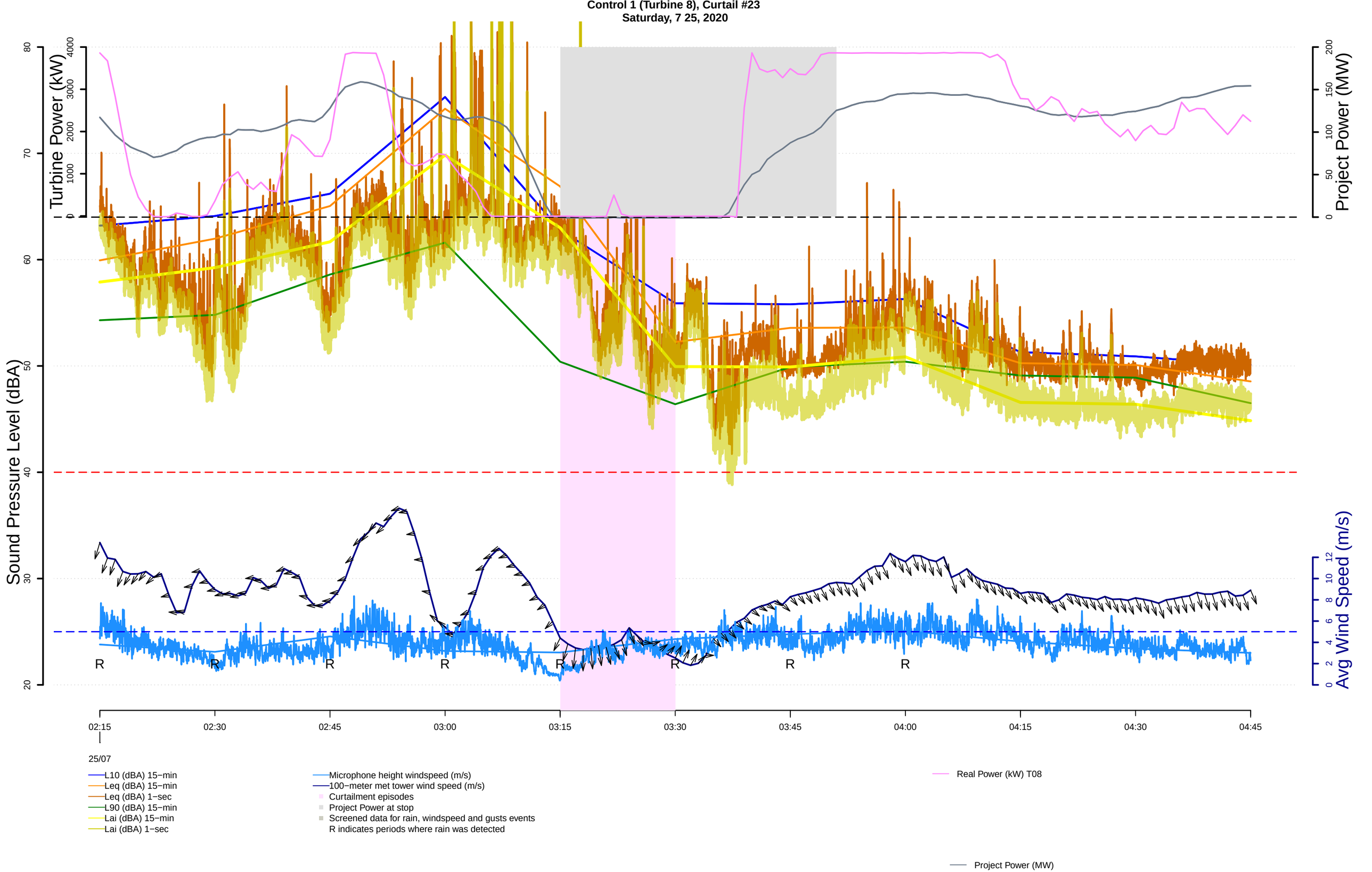

Control 1 (Turbine 8), Curtail #20
Friday, 7 24, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
13:15
13:30
13:45
14:00
14:15
14:30
14:45
15:00
15:15
15:30
15:45
16:00
24/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)

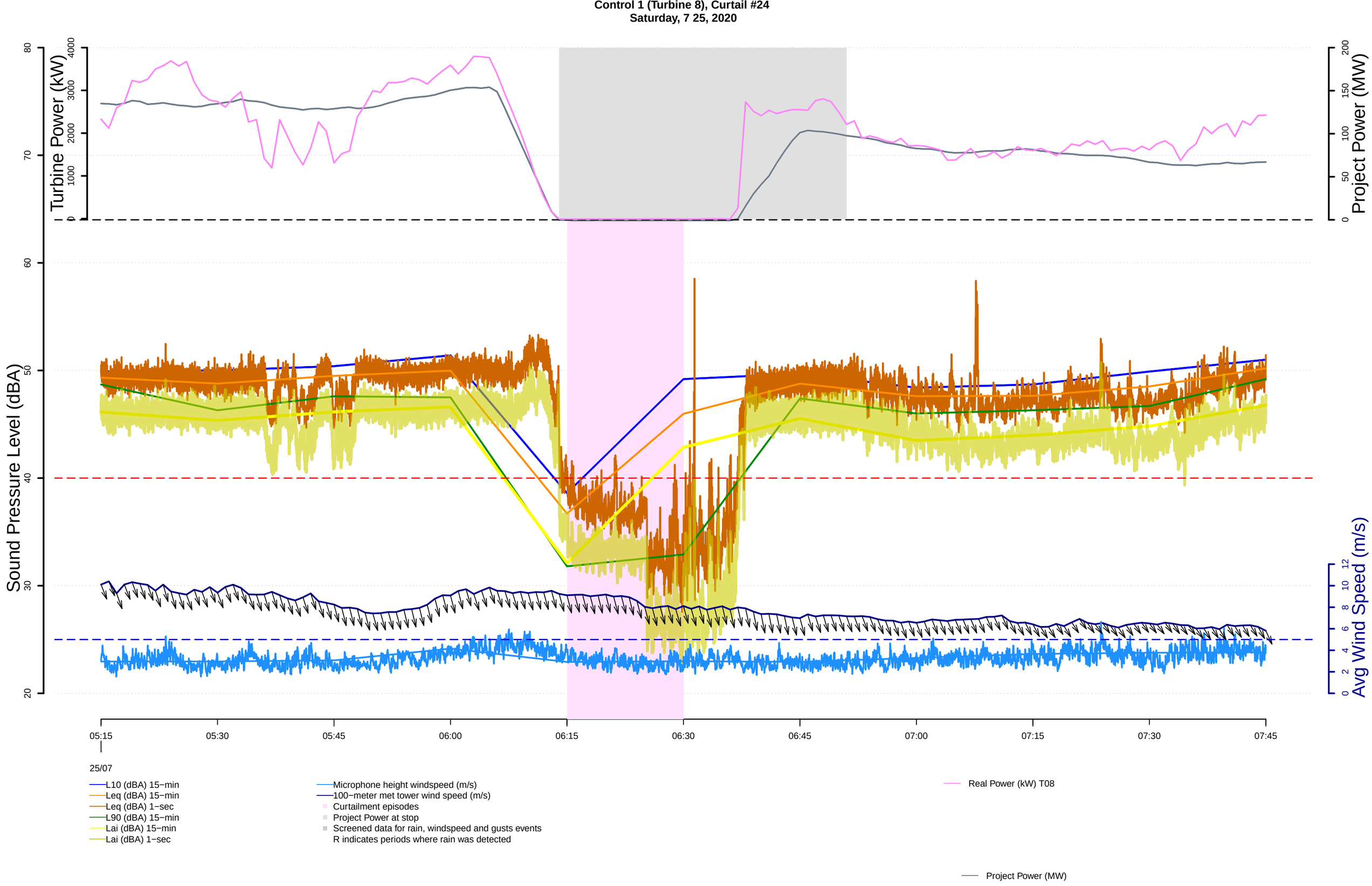

Control 1 (Turbine 8), Curtail #21
Friday, 7 24, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
R
22:30
22:45
23:00
23:15
23:30
23:45
00:00
00:15
00:30
00:45
01:00
01:15
24/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)

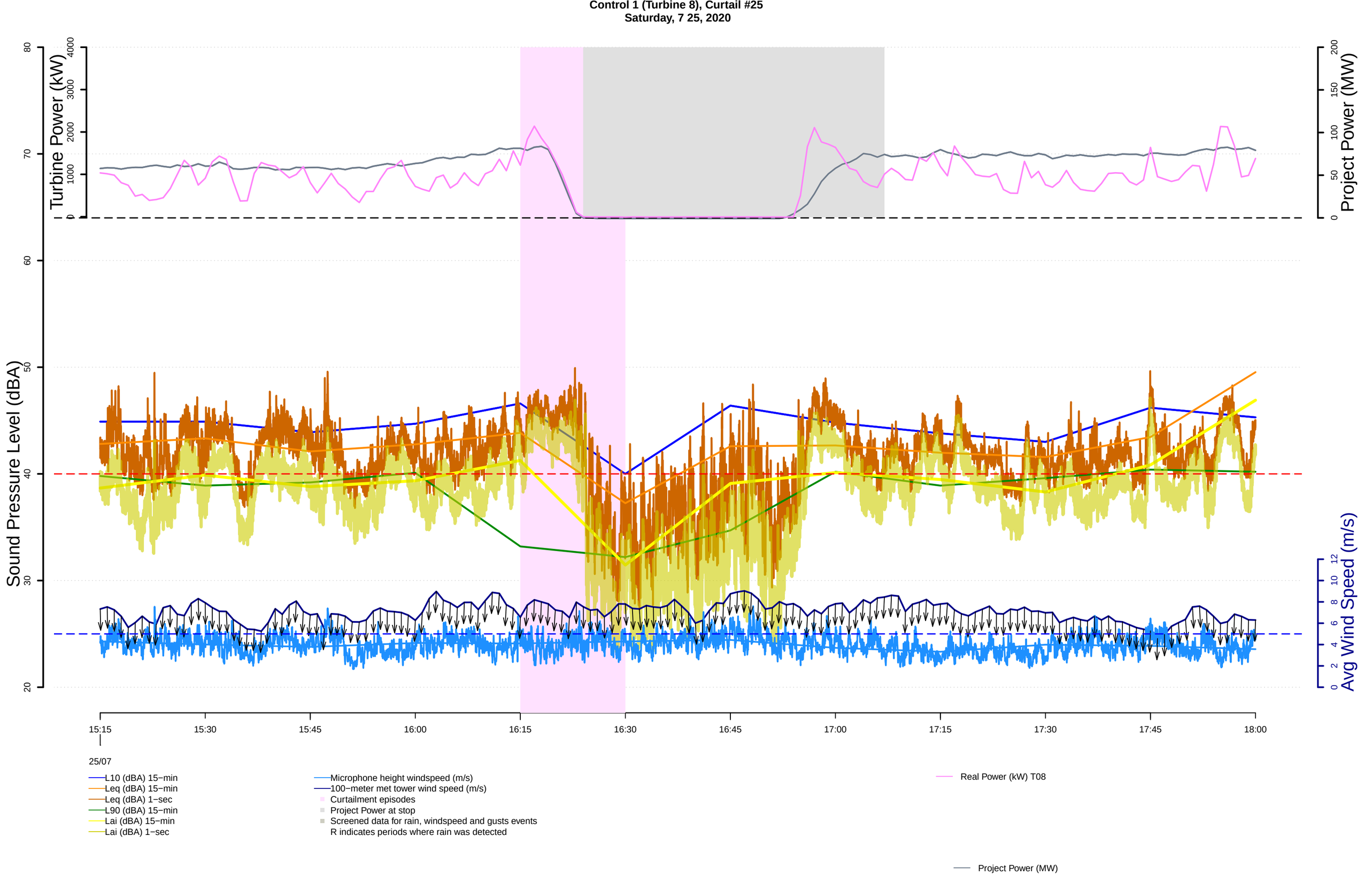
Control 1 (Turbine 8), Curtail #22
Saturday, 7 25, 2020

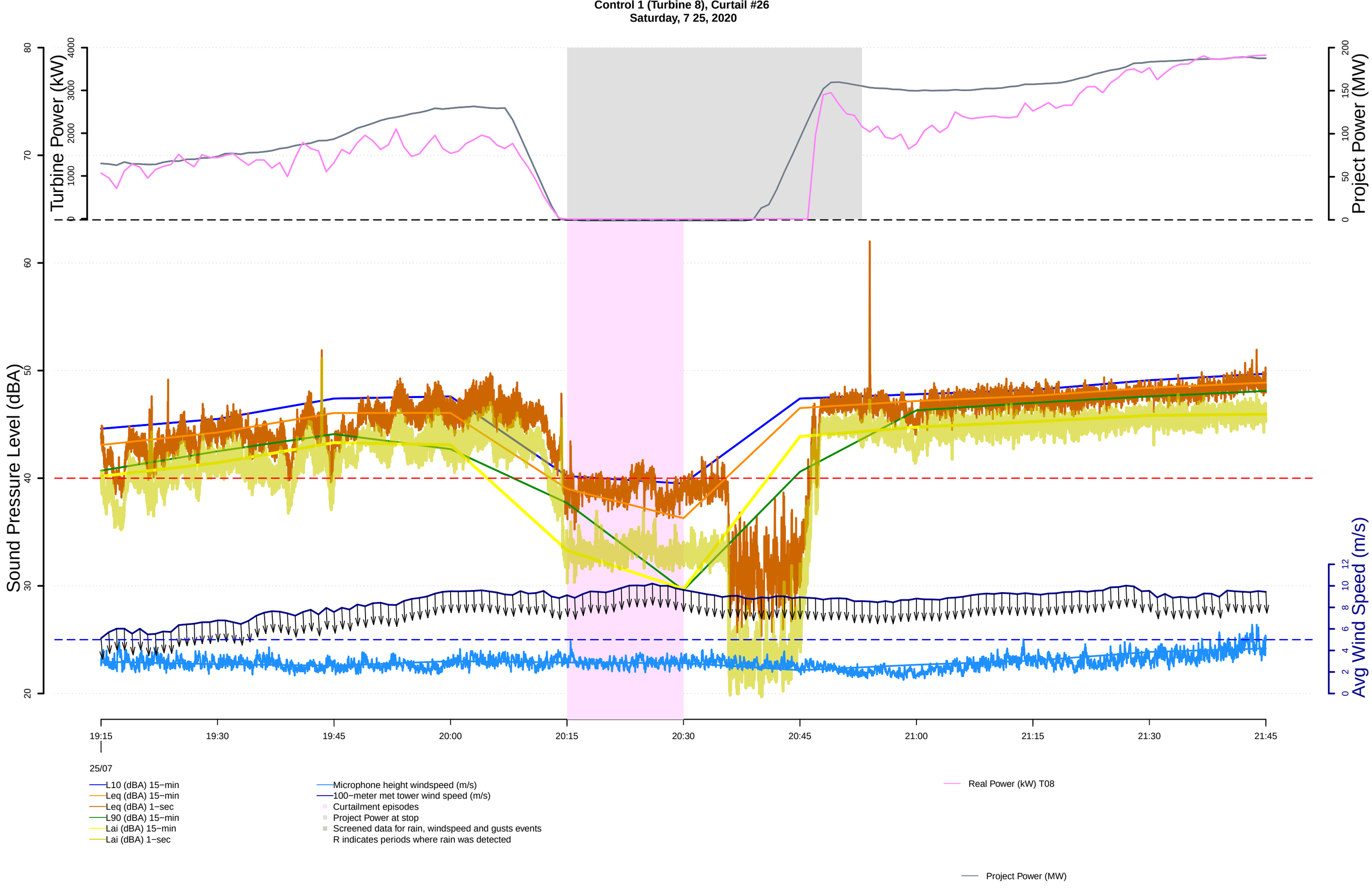


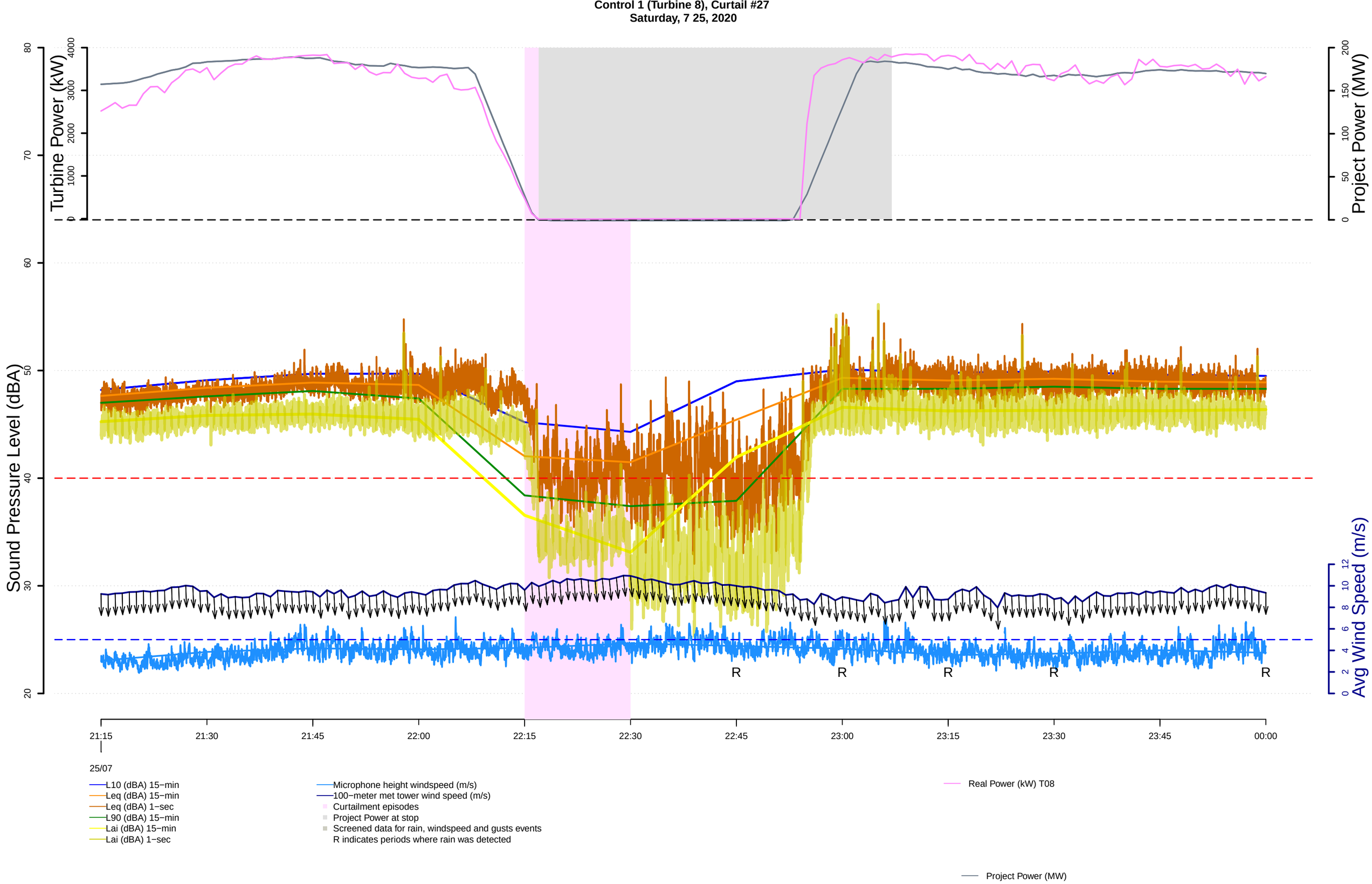
- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
- R indicates periods where rain was detected
- Real Power (kW) T08
- Project Power (MW)

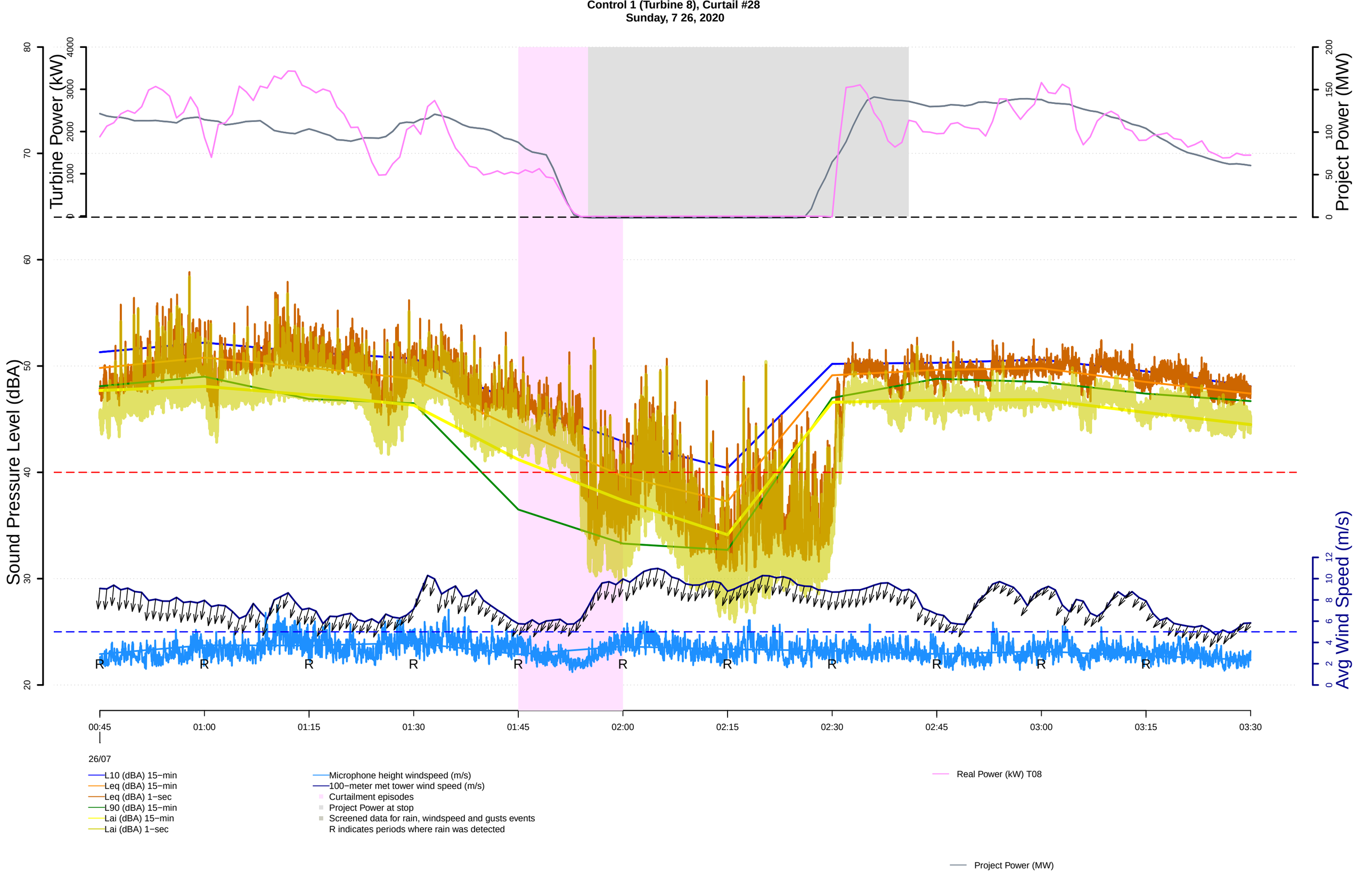

Control 1 (Turbine 8), Curtail #23
Saturday, 7 25, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
R
02:15
02:30
02:45
03:00
03:15
03:30
03:45
04:00
04:15
04:30
04:45
25/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)

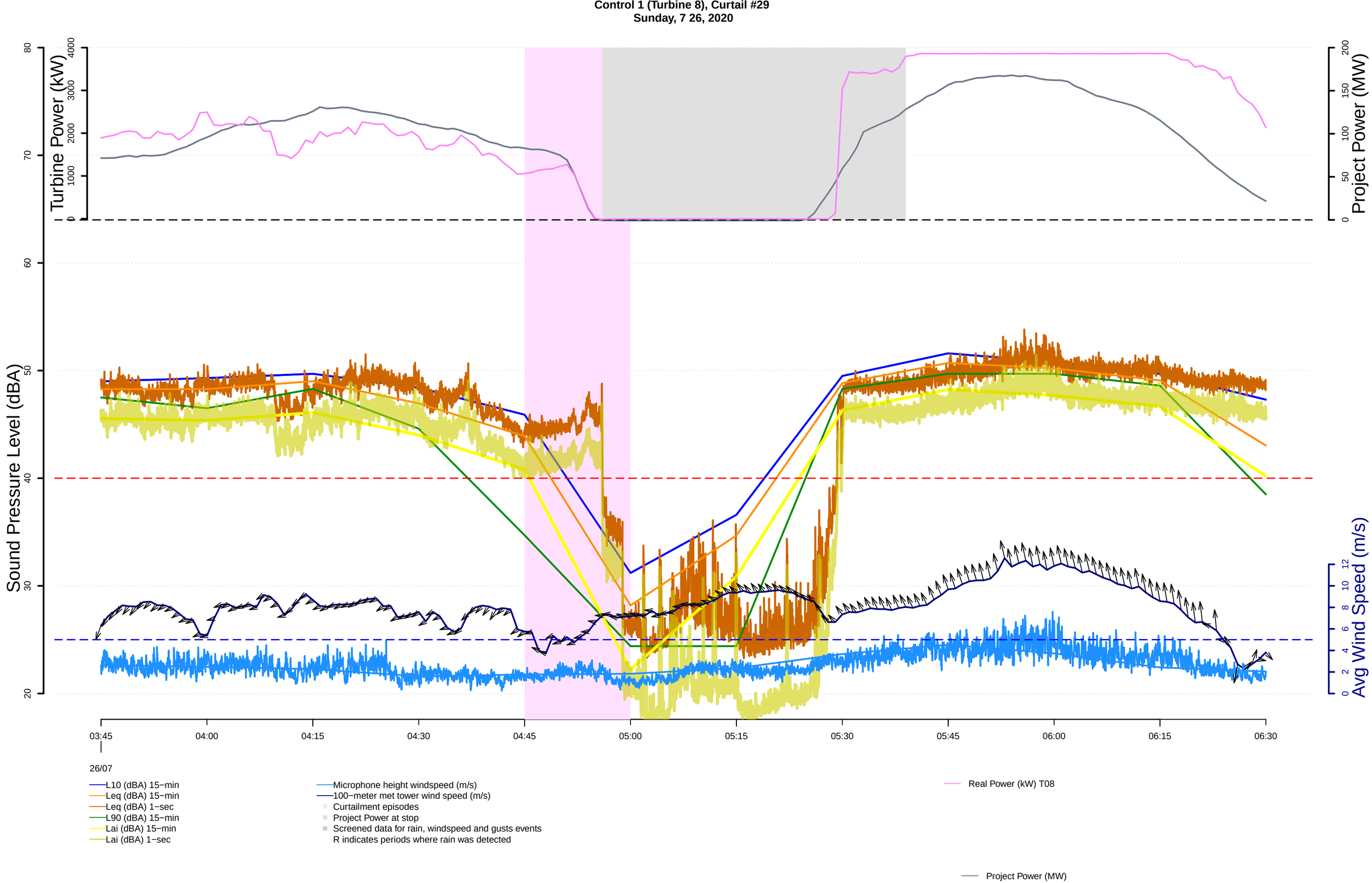

Control 1 (Turbine 8), Curtail #24
Saturday, 7 25, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
05:15
05:30
05:45
06:00
06:15
06:30
06:45
07:00
07:15
07:30
07:45
25/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)

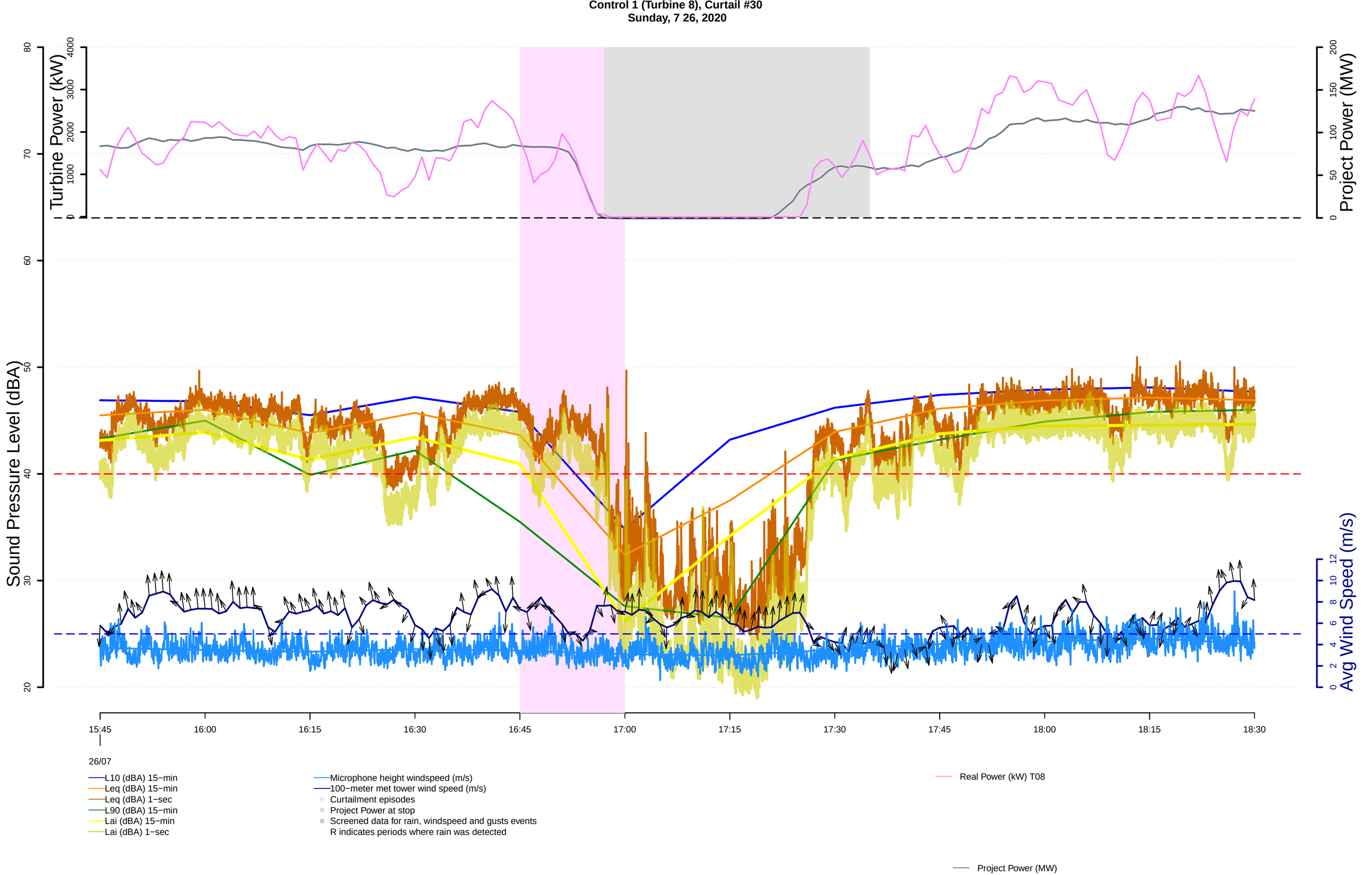

Control 1 (Turbine 8), Curtail #25
Saturday, 7 25, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
15:15
15:30
15:45
16:00
16:15
16:30
16:45
17:00
17:15
17:30
17:45
18:00
25/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)

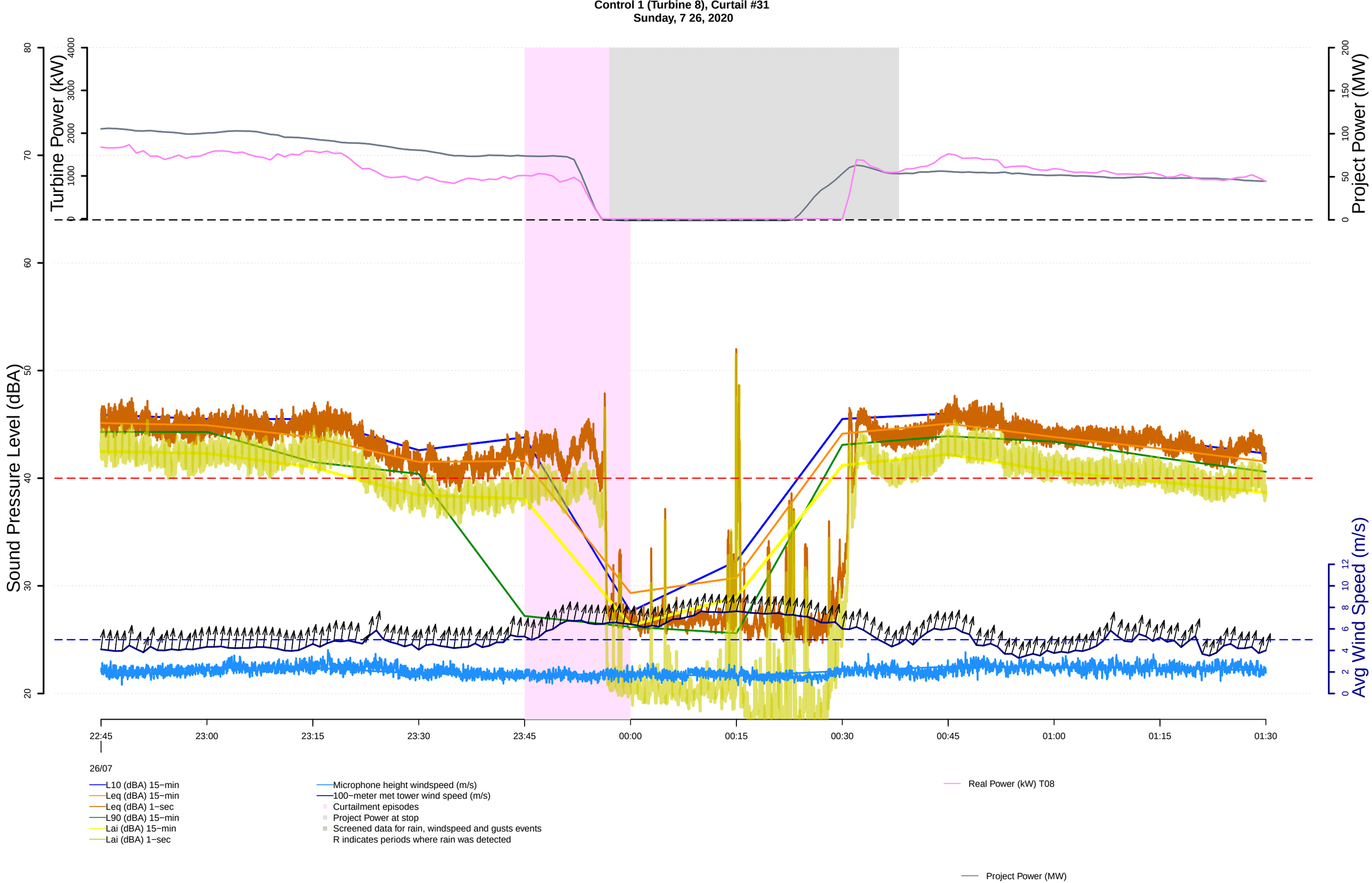

Control 1 (Turbine 8), Curtail #26
Saturday, 7 25, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
19:15
19:30
19:45
20:00
20:15
20:30
20:45
21:00
21:15
21:30
21:45
25/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)

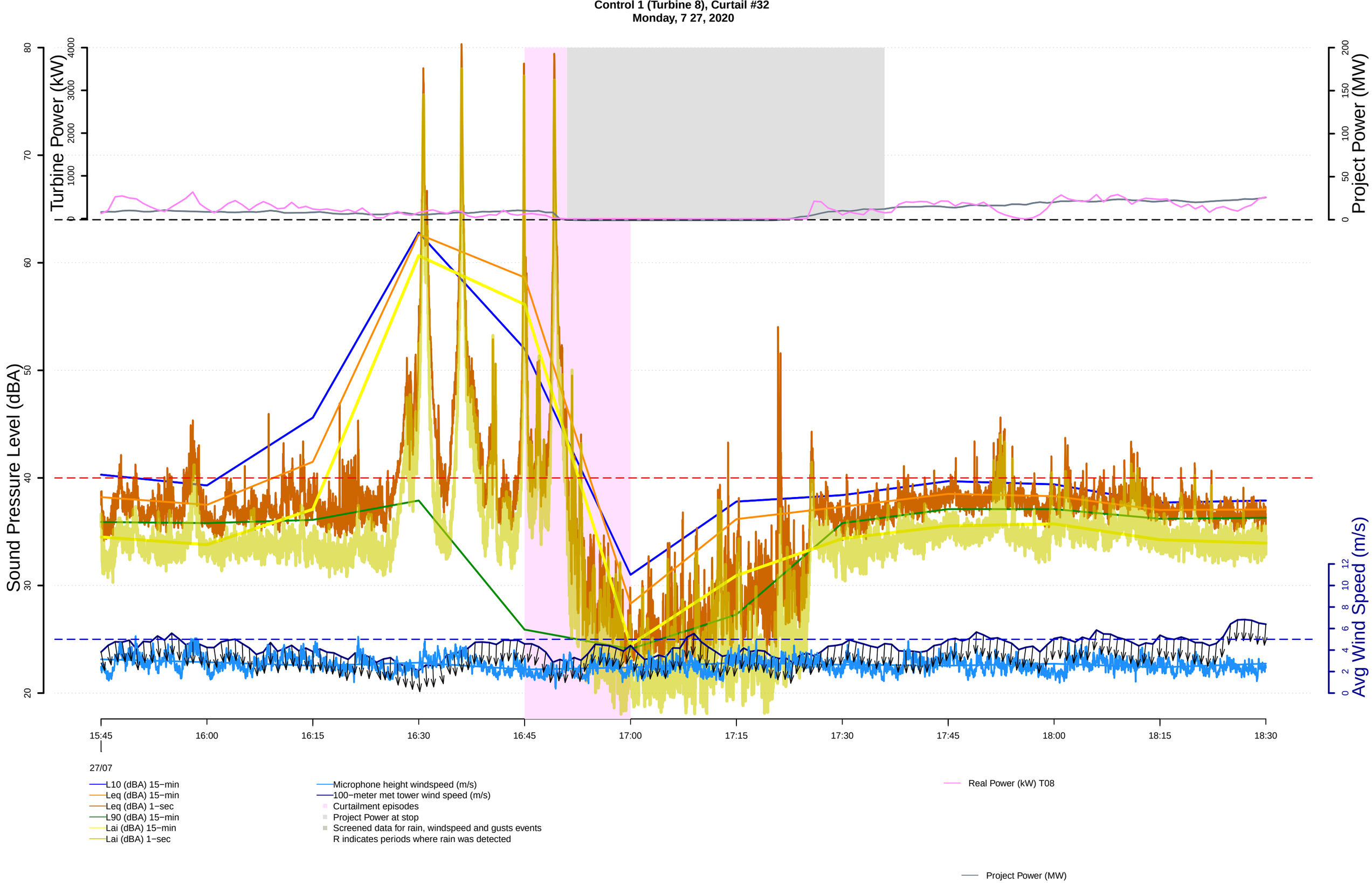

Control 1 (Turbine 8), Curtail #27
Saturday, 7 25, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
R
21:15
21:30
21:45
22:00
22:15
22:30
22:45
23:00
23:15
23:30
23:45
00:00
25/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)

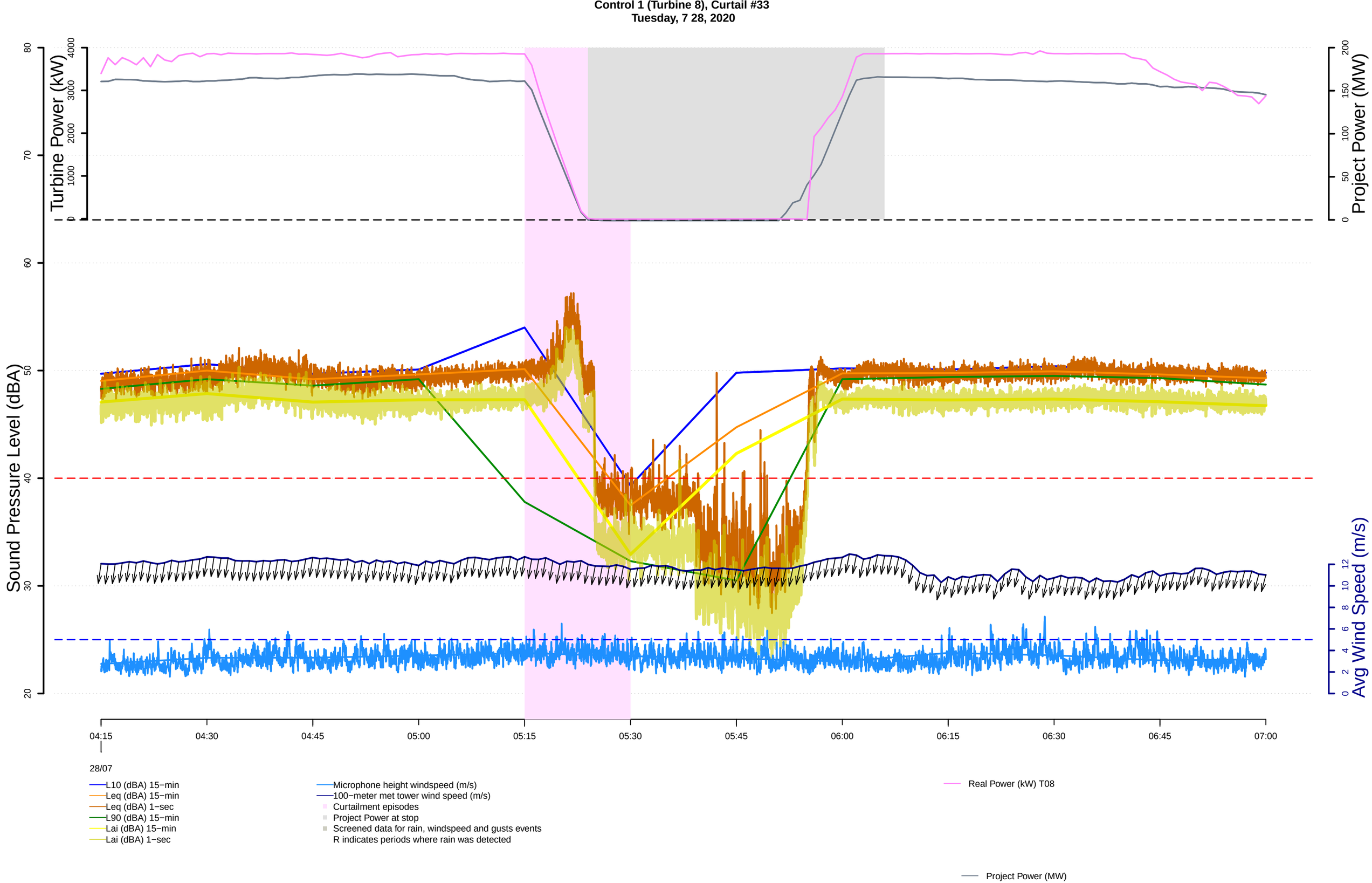

Control 1 (Turbine 8), Curtail #28
Sunday, 7 26, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
00:45
01:00
01:15
01:30
01:45
02:00
02:15
02:30
02:45
03:00
03:15
03:30
26/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)

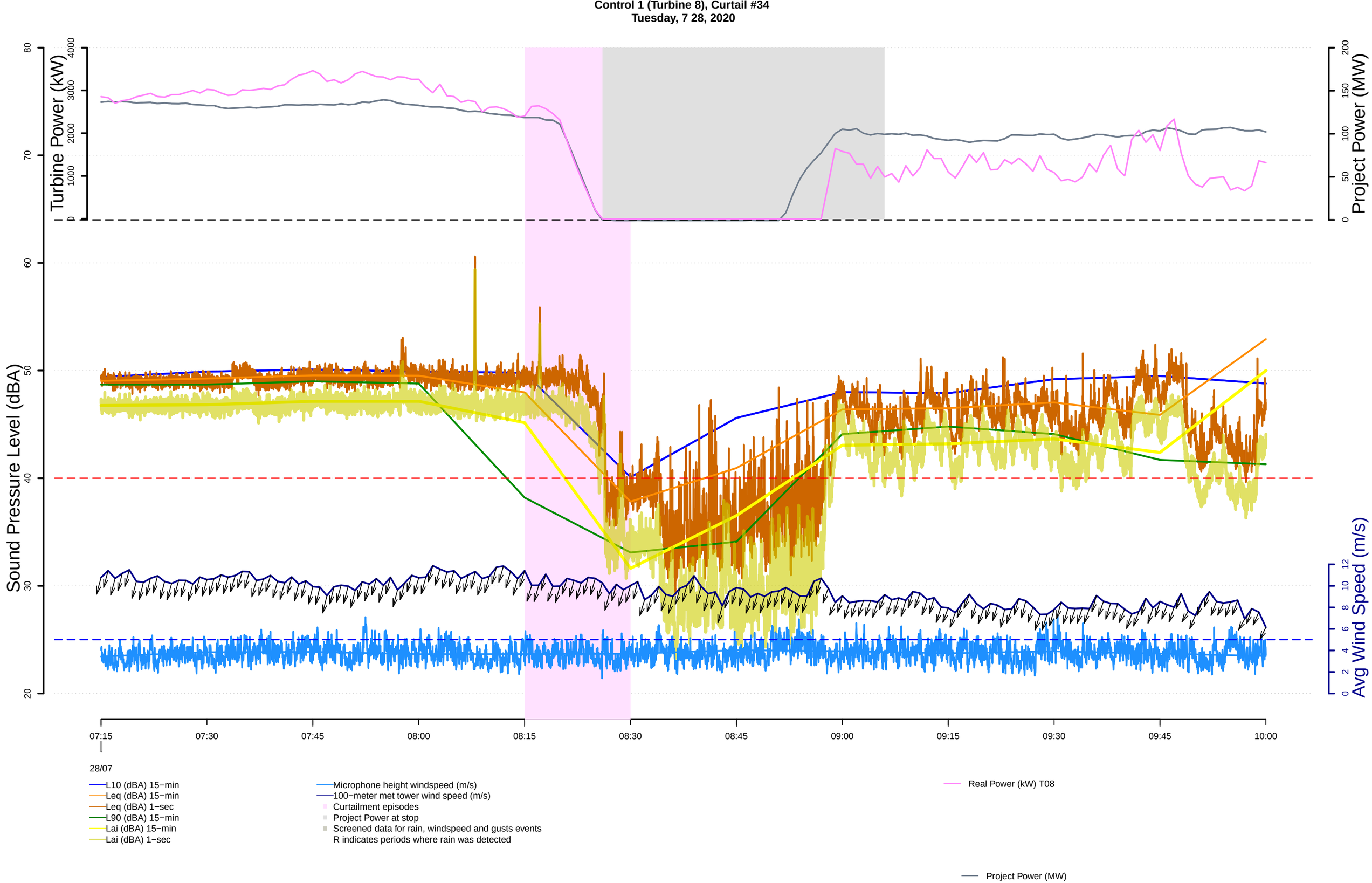

Control 1 (Turbine 8), Curtail #29
Sunday, 7 26, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
03:45
04:00
04:15
04:30
04:45
05:00
05:15
05:30
05:45
06:00
06:15
06:30
26/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)

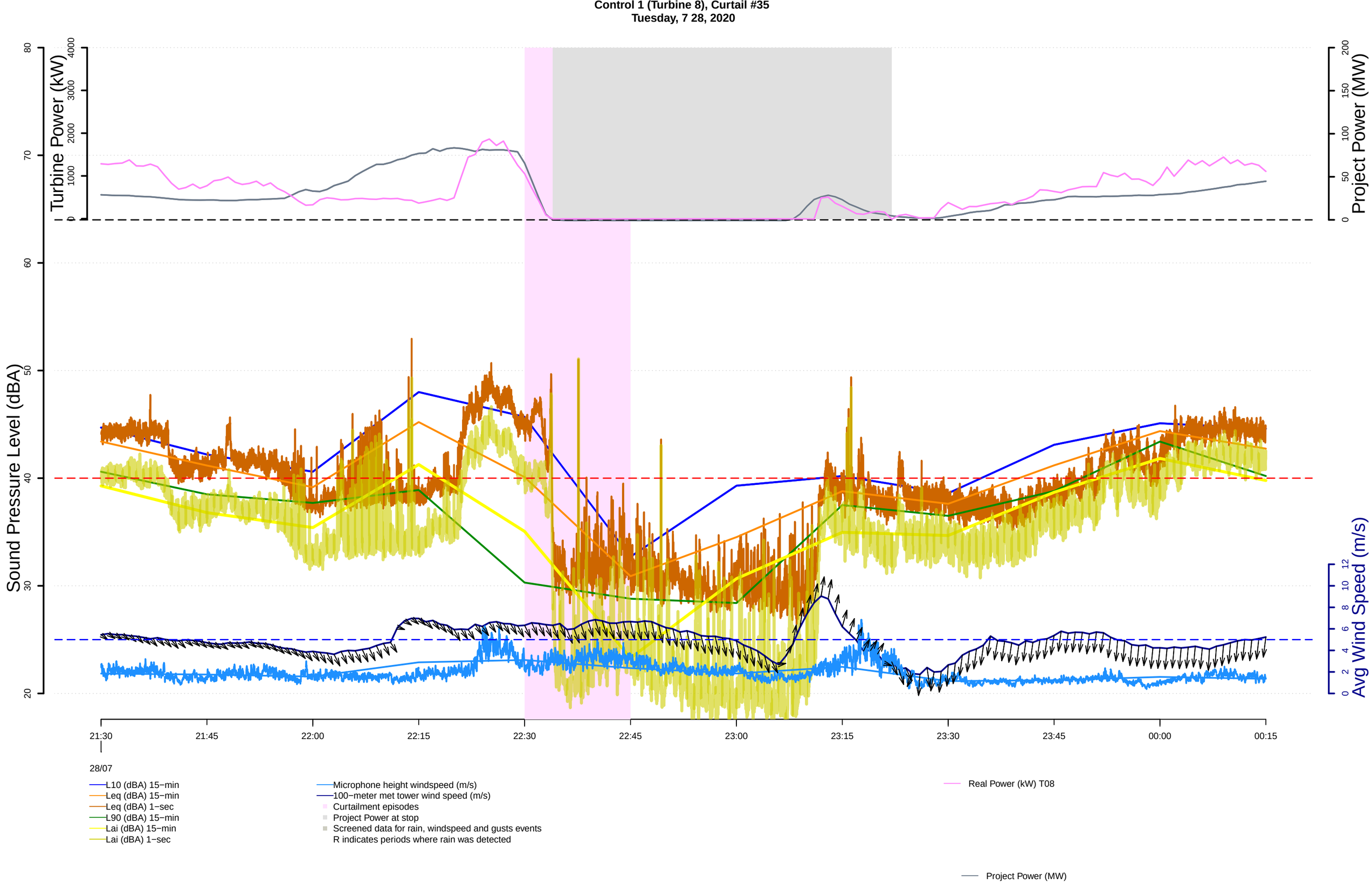

Control 1 (Turbine 8), Curtail #30
Sunday, 7 26, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
15:45
16:00
16:15
16:30
16:45
17:00
17:15
17:30
17:45
18:00
18:15
18:30
26/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)


Control 1 (Turbine 8), Curtail #31
Sunday, 7 26, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
22:45
23:00
23:15
23:30
23:45
00:00
00:15
00:30
00:45
01:00
01:15
01:30
26/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)

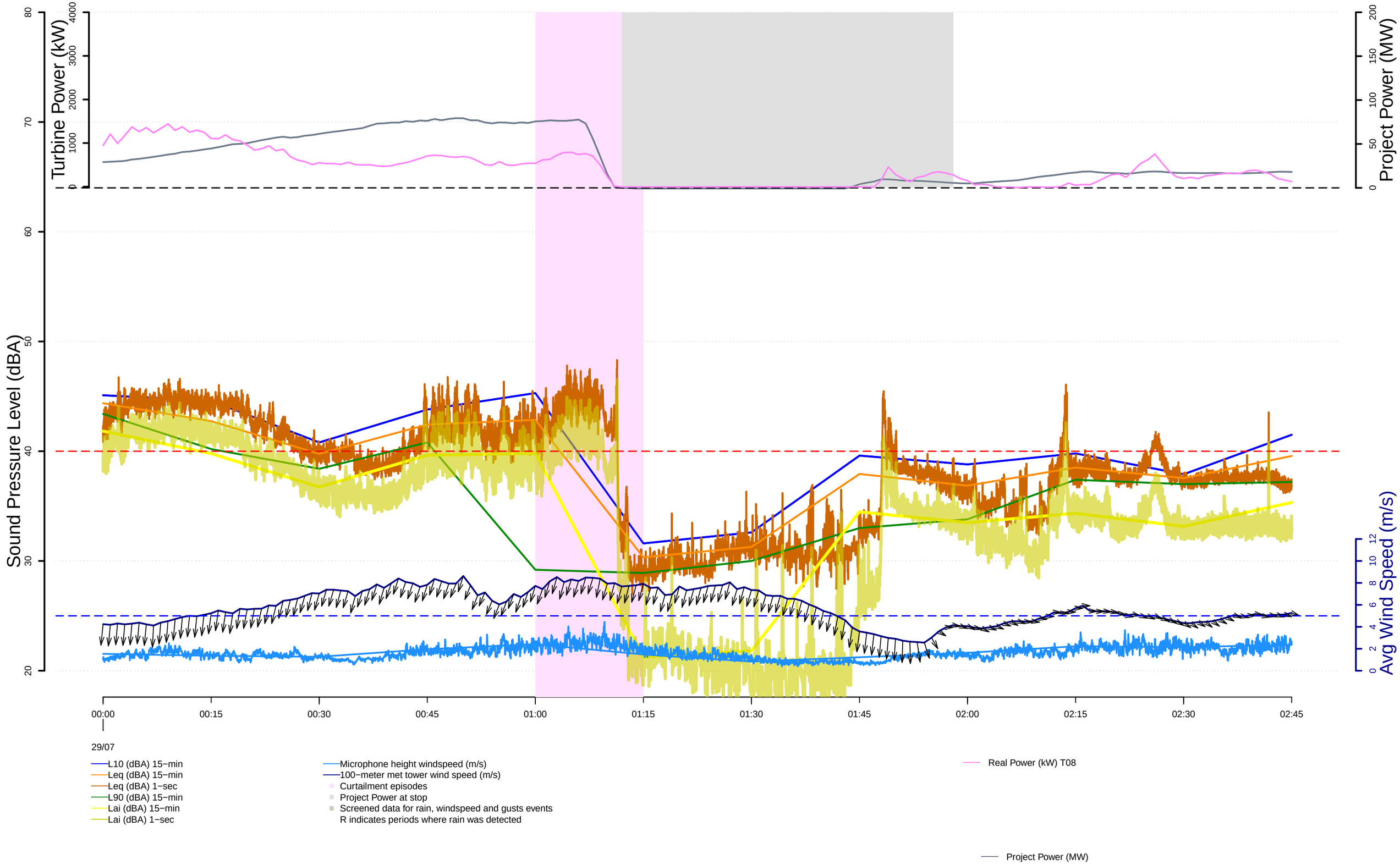

Control 1 (Turbine 8), Curtail #32
Monday, 7 27, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
15:45
16:00
16:15
16:30
16:45
17:00
17:15
17:30
17:45
18:00
18:15
18:30
27/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)


Control 1 (Turbine 8), Curtail #33
Tuesday, 7 28, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
04:15
04:30
04:45
05:00
05:15
05:30
05:45
06:00
06:15
06:30
06:45
07:00
28/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)

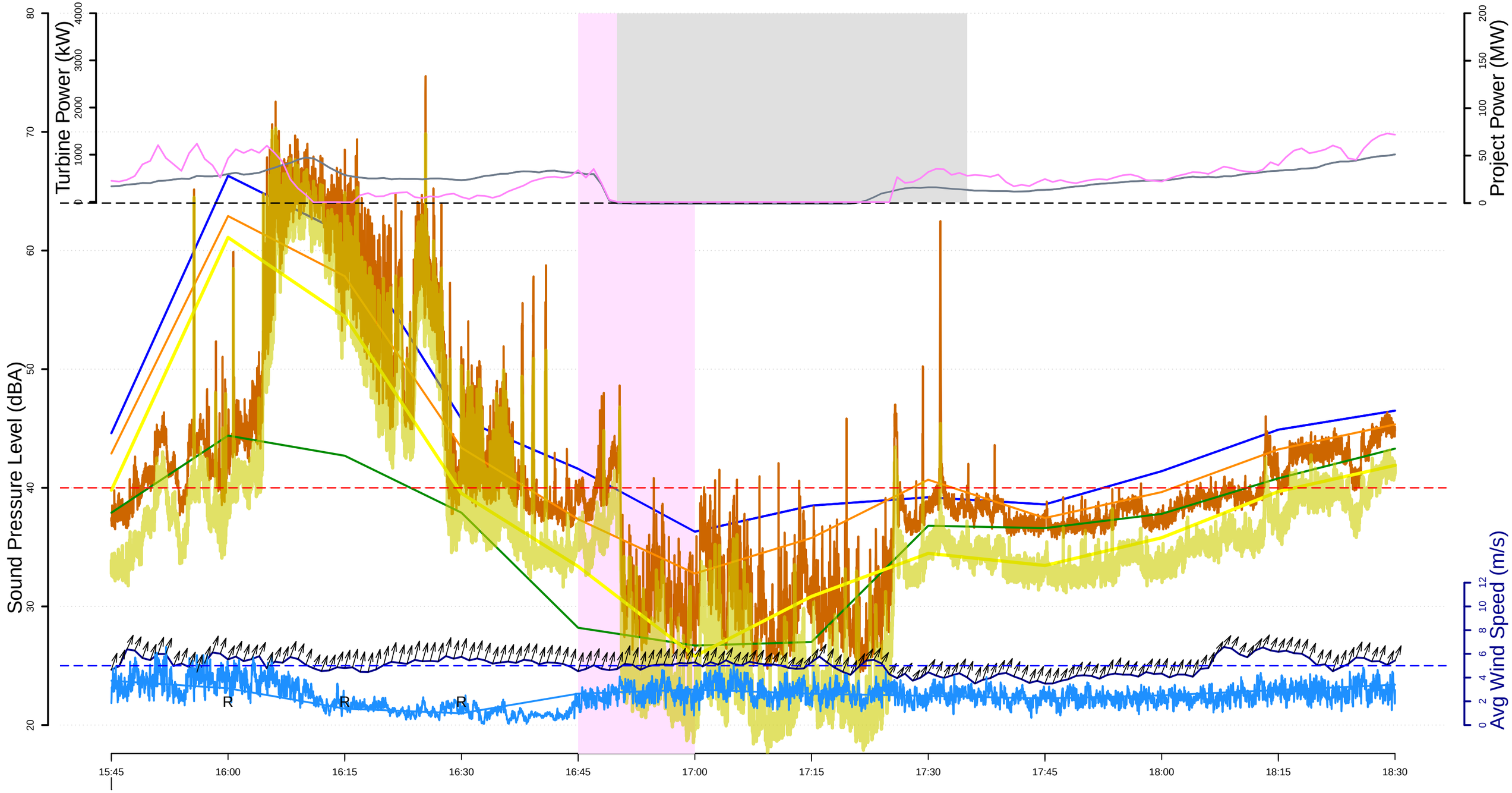

Control 1 (Turbine 8), Curtail #34
Tuesday, 7 28, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
07:15
07:30
07:45
08:00
08:15
08:30
08:45
09:00
09:15
09:30
09:45
10:00
28/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)


Control 1 (Turbine 8), Curtail #35
Tuesday, 7 28, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
21:30
21:45
22:00
22:15
22:30
22:45
23:00
23:15
23:30
23:45
00:00
00:15
28/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)

Control 1 (Turbine 8), Curtail #36
Wednesday, 7 29, 2020

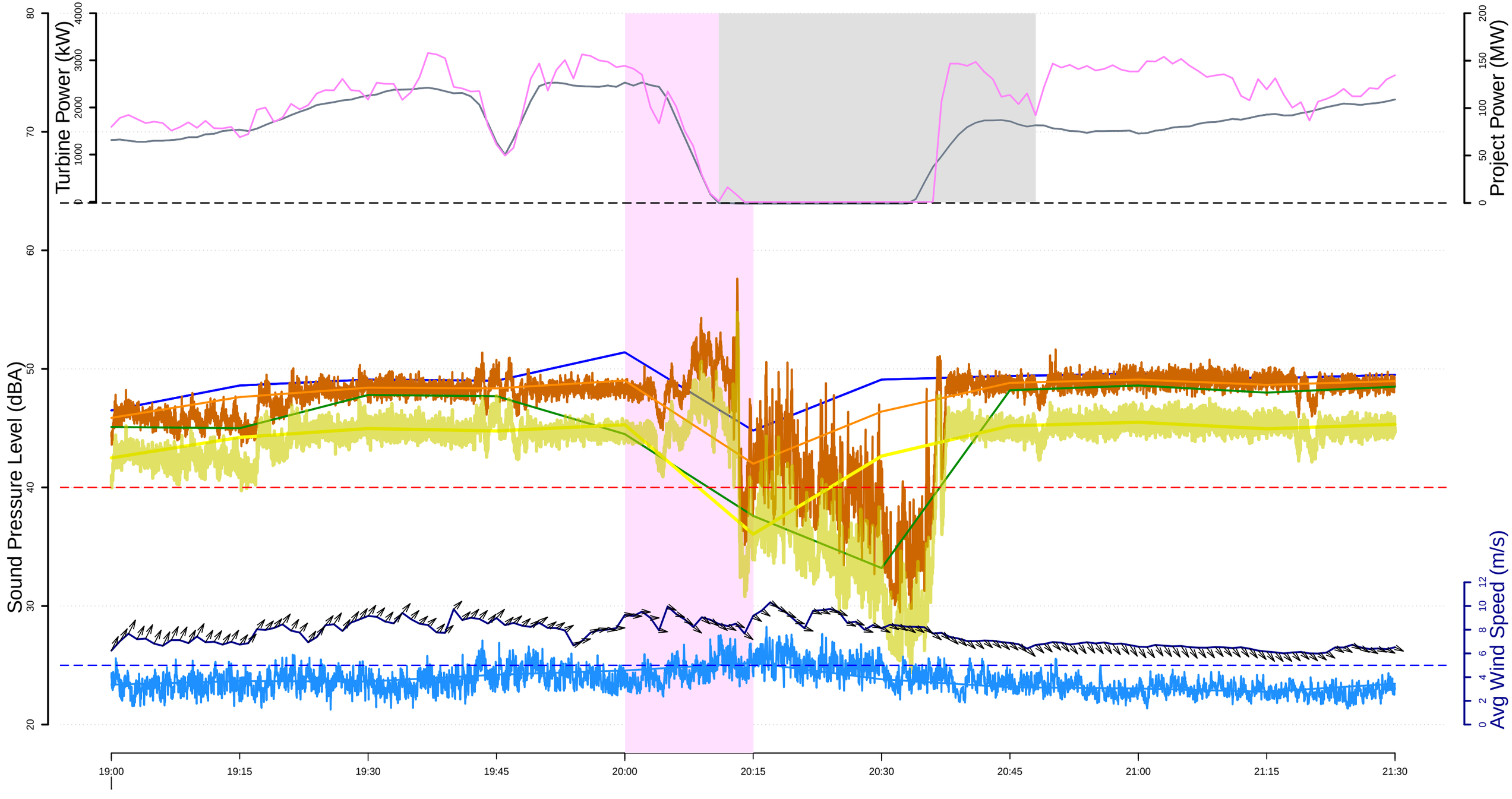


Control 1 (Turbine 8), Curtail #37
Wednesday, 7 29, 2020

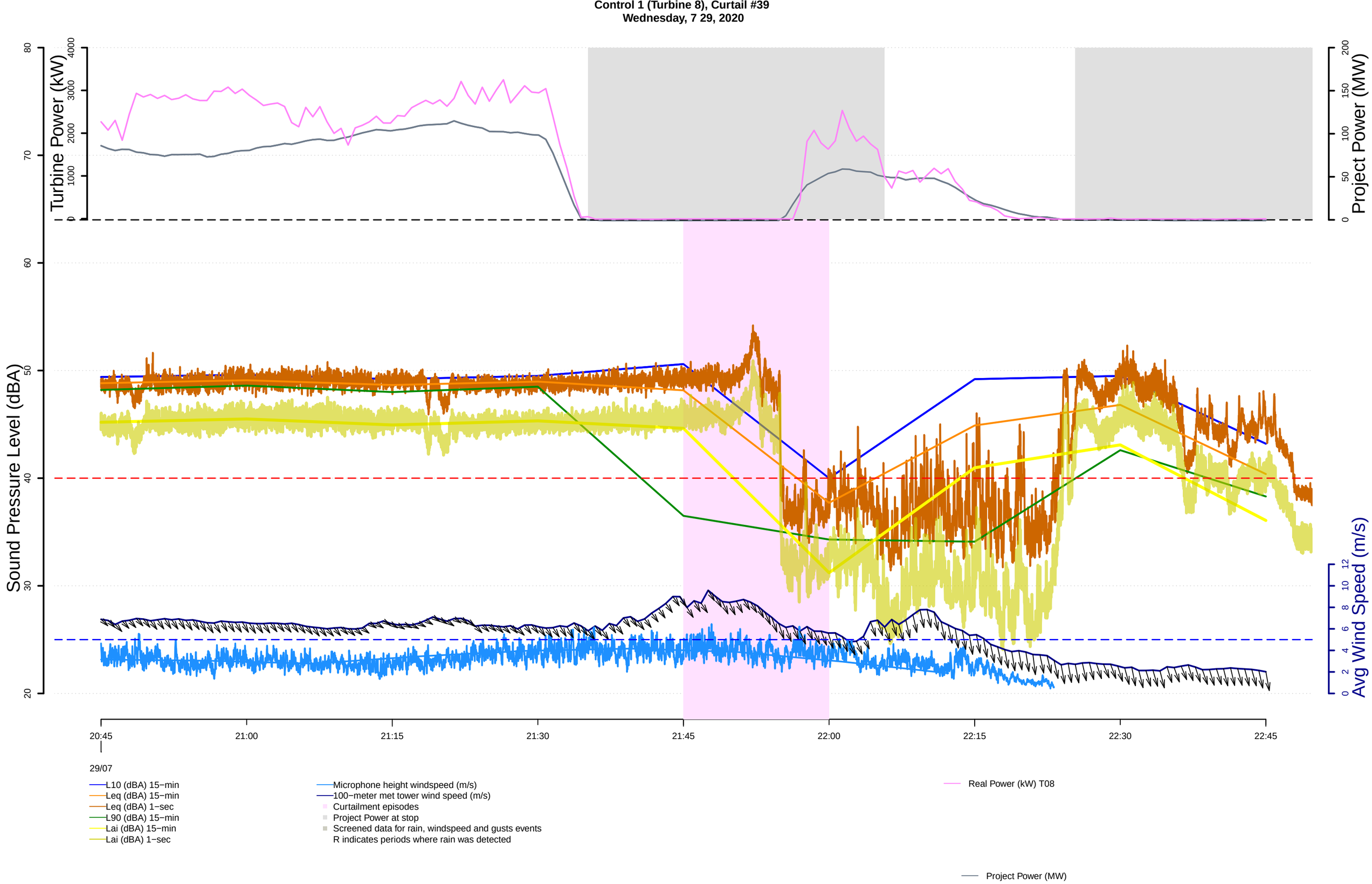


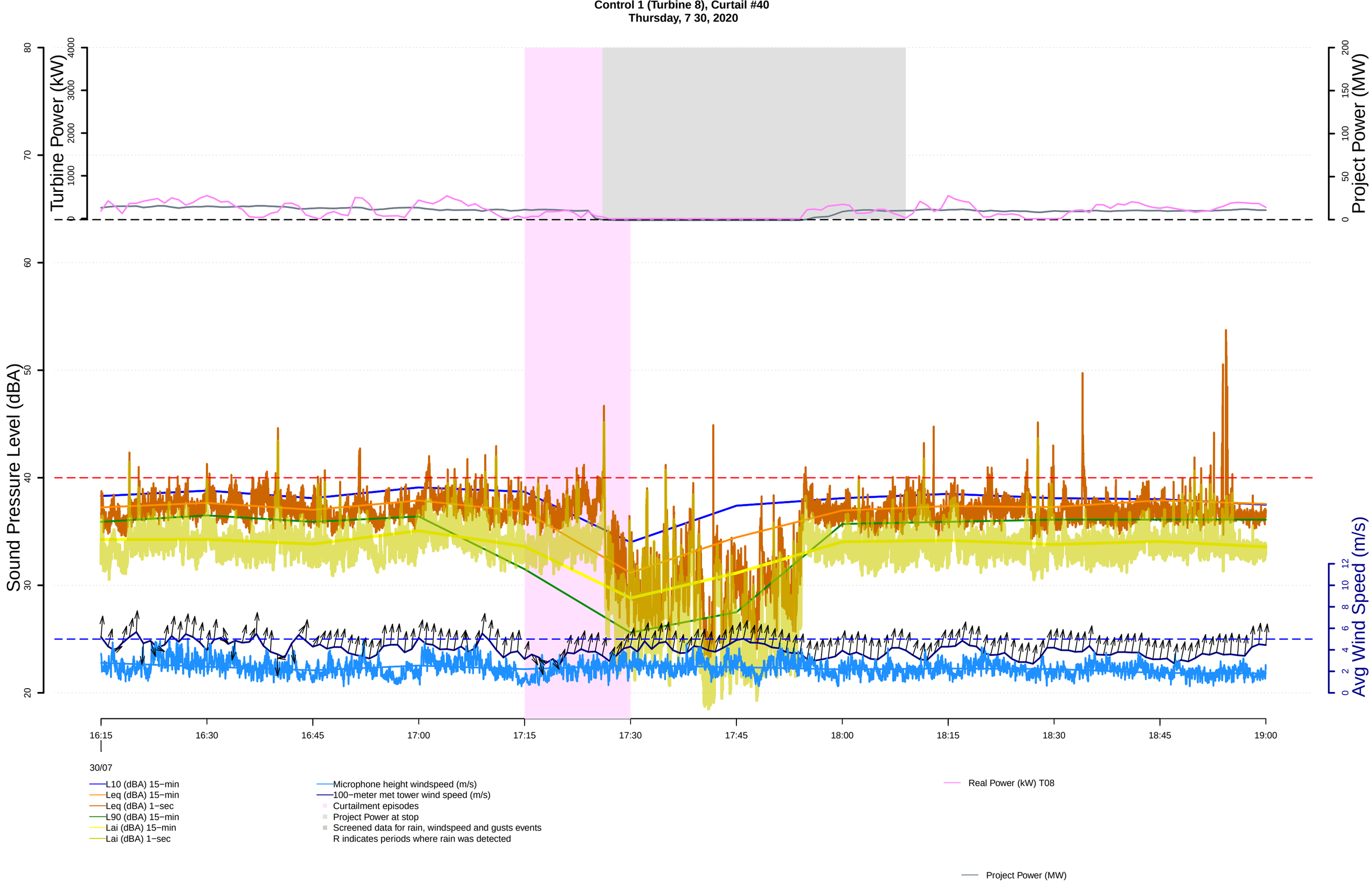
- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
- R indicates periods where rain was detected
- Real Power (kW) T08
- Project Power (MW)

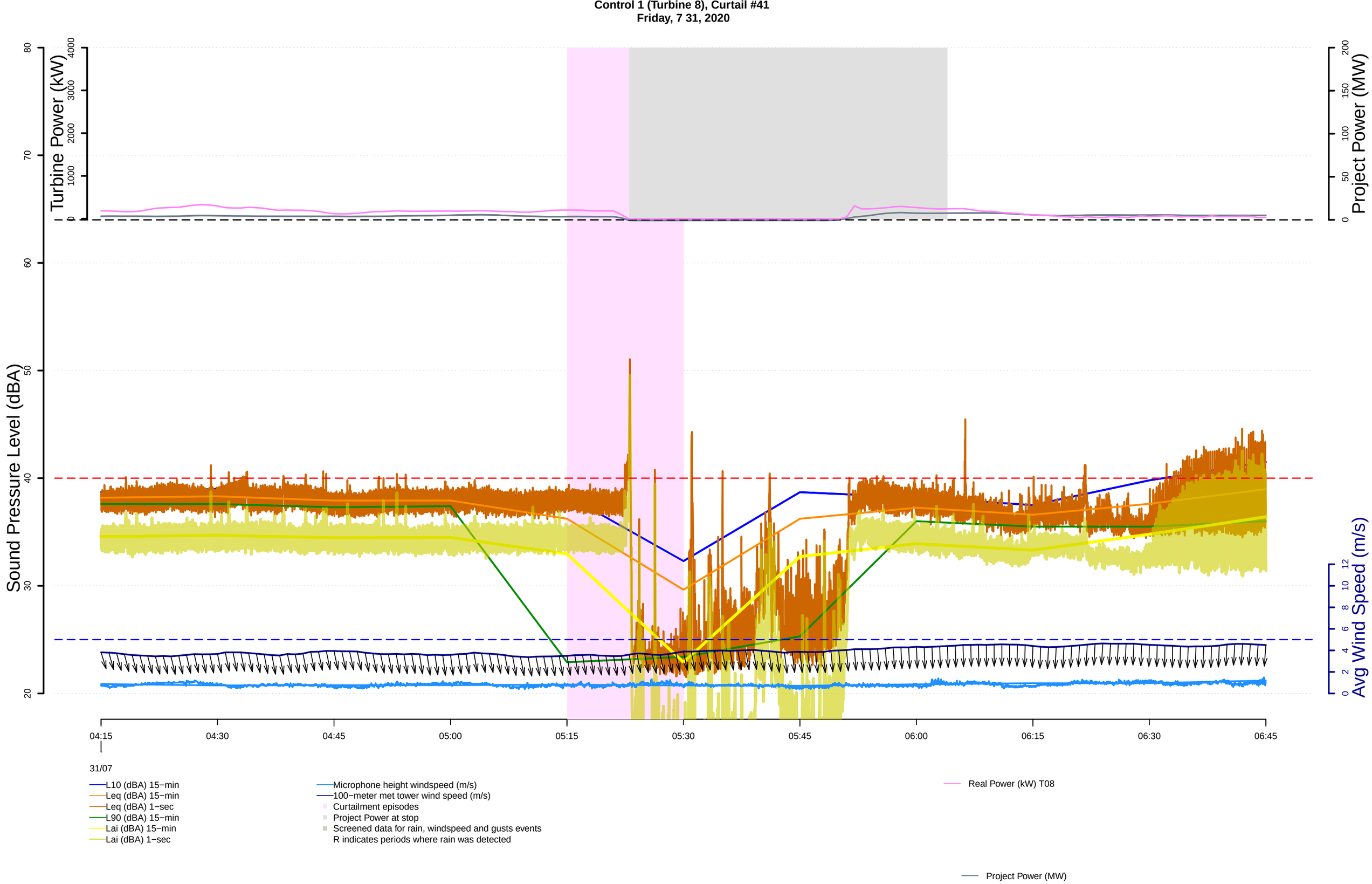
Control 1 (Turbine 8), Curtail #38
Wednesday, 7 29, 2020



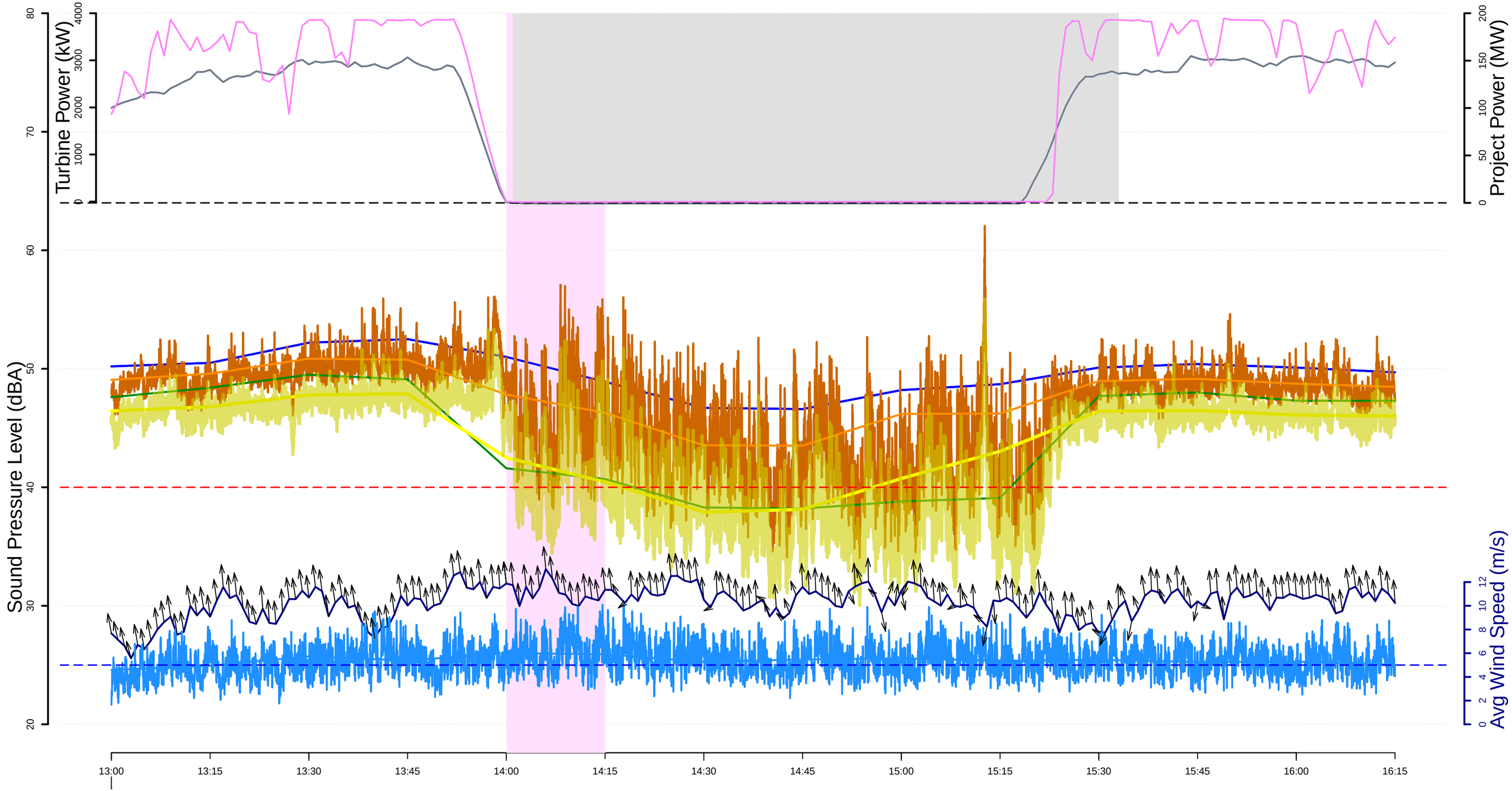
- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T08
- Project Power (MW)


Control 1 (Turbine 8), Curtail #39
Wednesday, 7 29, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
20:45
21:00
21:15
21:30
21:45
22:00
22:15
22:30
22:45
29/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)


Control 1 (Turbine 8), Curtail #40
Thursday, 7 30, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
16:15
16:30
16:45
17:00
17:15
17:30
17:45
18:00
18:15
18:30
18:45
19:00
30/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)


Control 1 (Turbine 8), Curtail #41
Friday, 7 31, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
04:15
04:30
04:45
05:00
05:15
05:30
05:45
06:00
06:15
06:30
06:45
31/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)

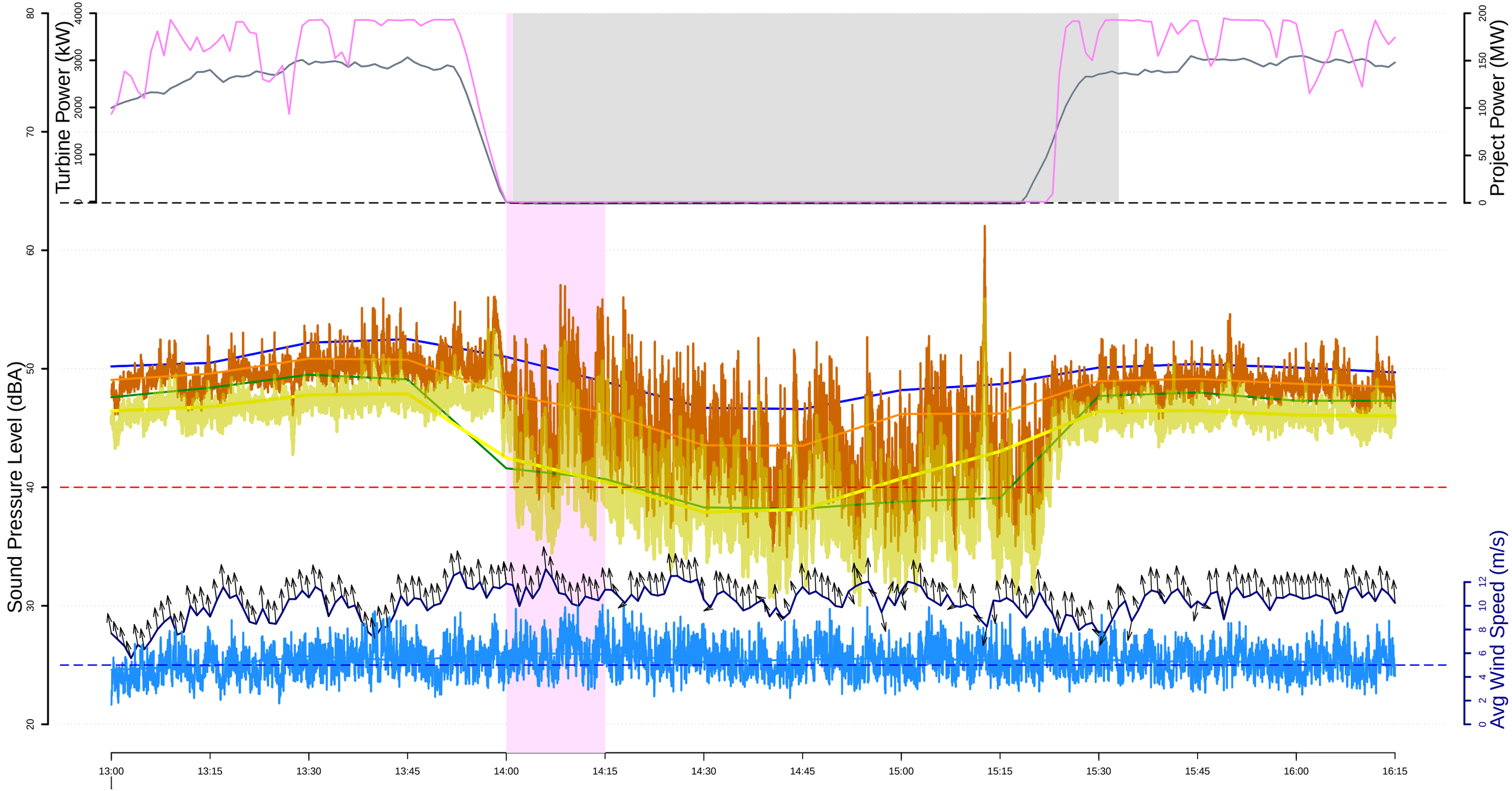
Control 1 (Turbine 8), Curtail #42
Saturday, 8 1, 2020



01/08

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T08
- Project Power (MW)

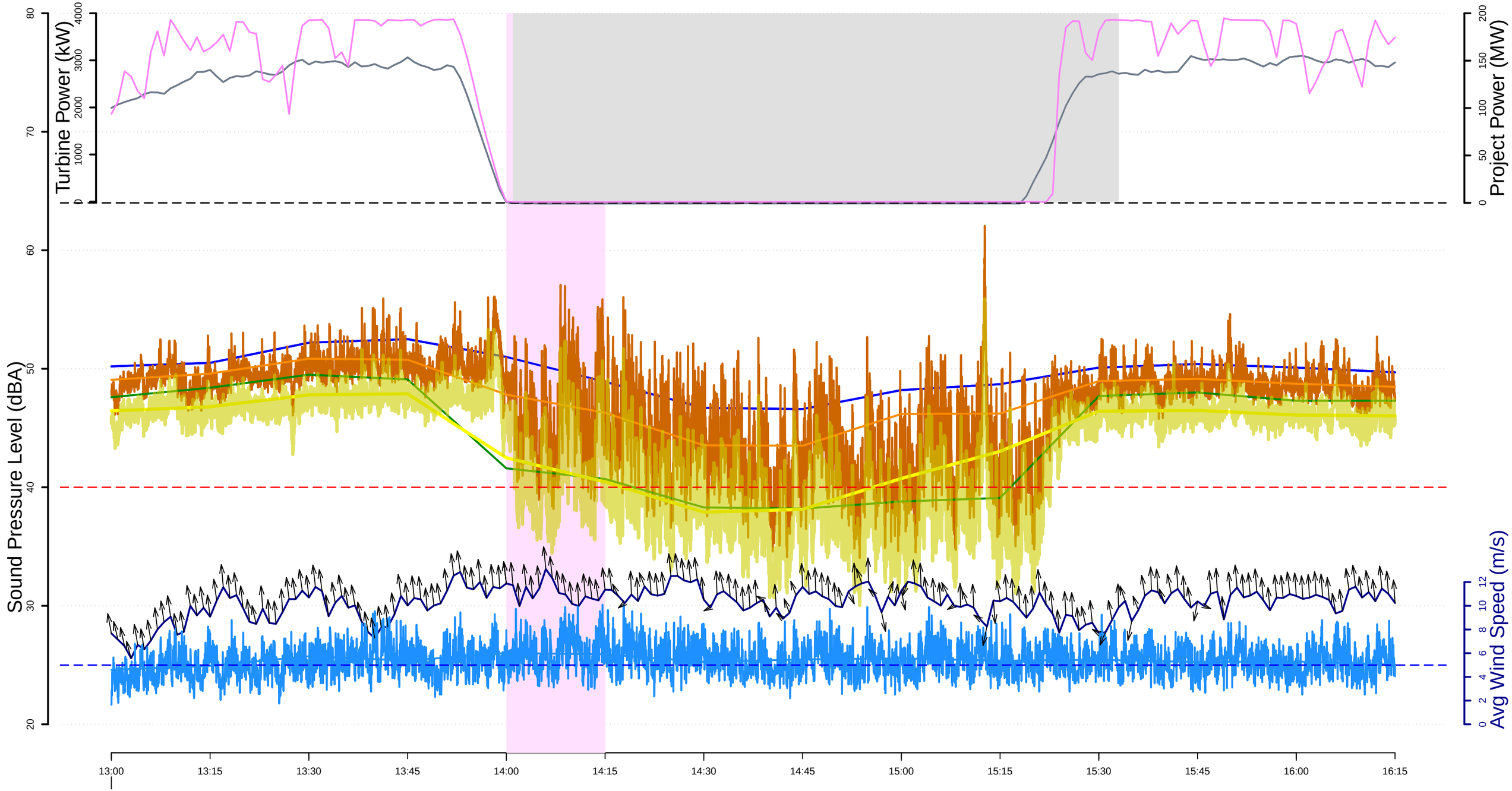
Control 1 (Turbine 8), Curtail #43
Saturday, 8 1, 2020



01/08

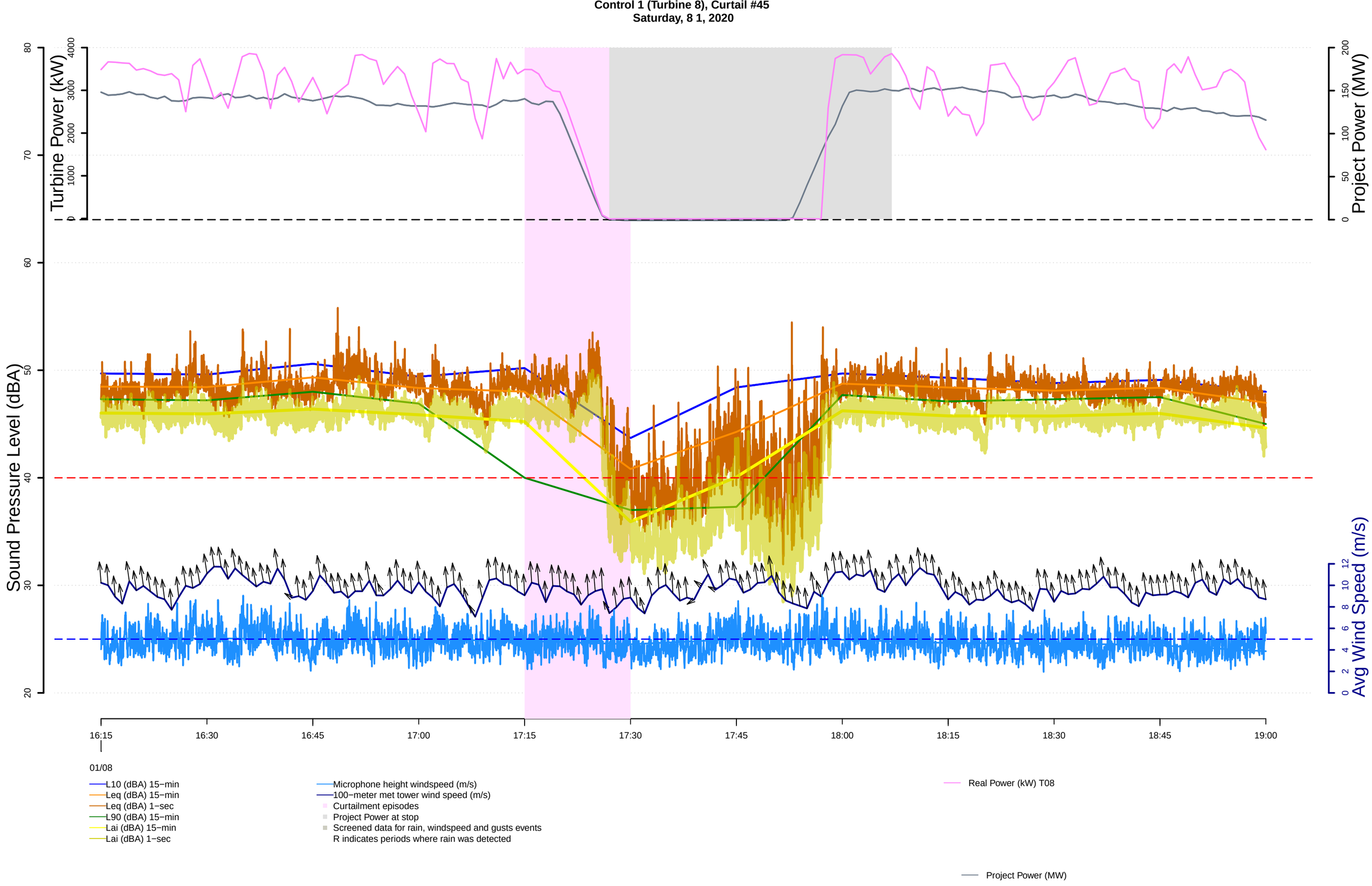
- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T08
- Project Power (MW)

Control 1 (Turbine 8), Curtail #44
Saturday, 8 1, 2020

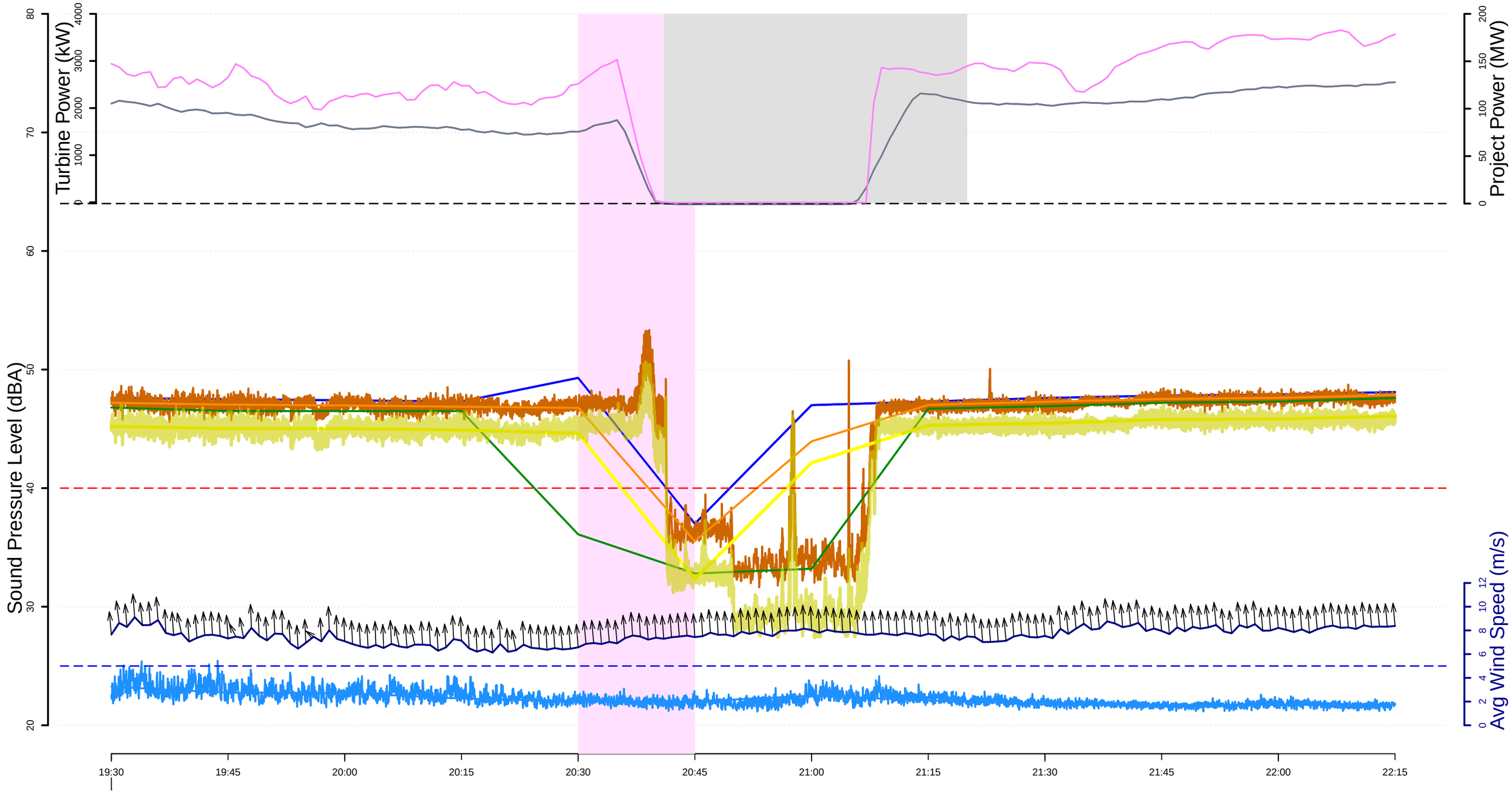


01/08

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T08
- Project Power (MW)


Control 1 (Turbine 8), Curtail #45
Saturday, 8 1, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
16:15
16:30
16:45
17:00
17:15
17:30
17:45
18:00
18:15
18:30
18:45
19:00
01/08
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)

Control 1 (Turbine 8), Curtail #46
Saturday, 8 1, 2020

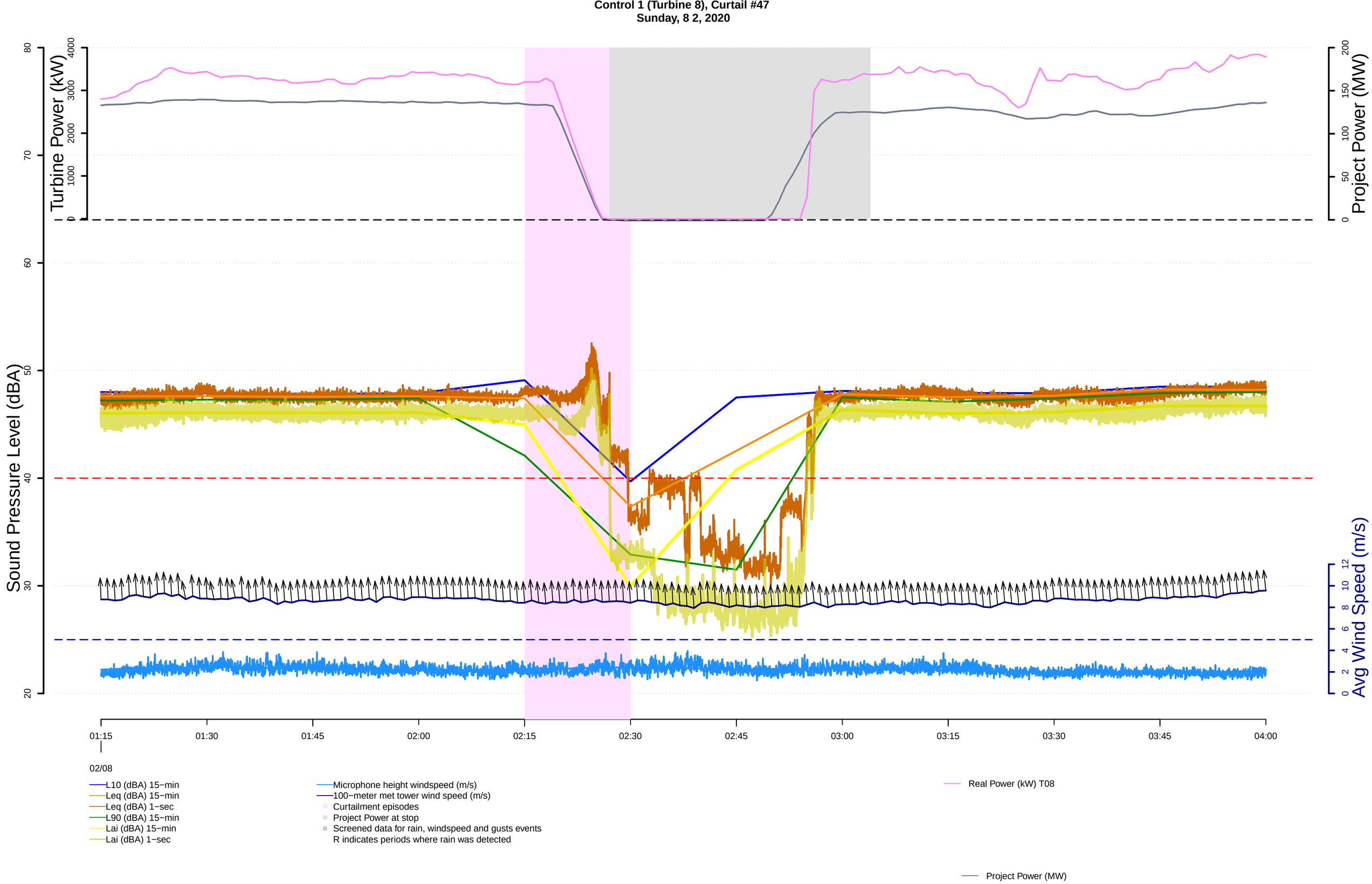


L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

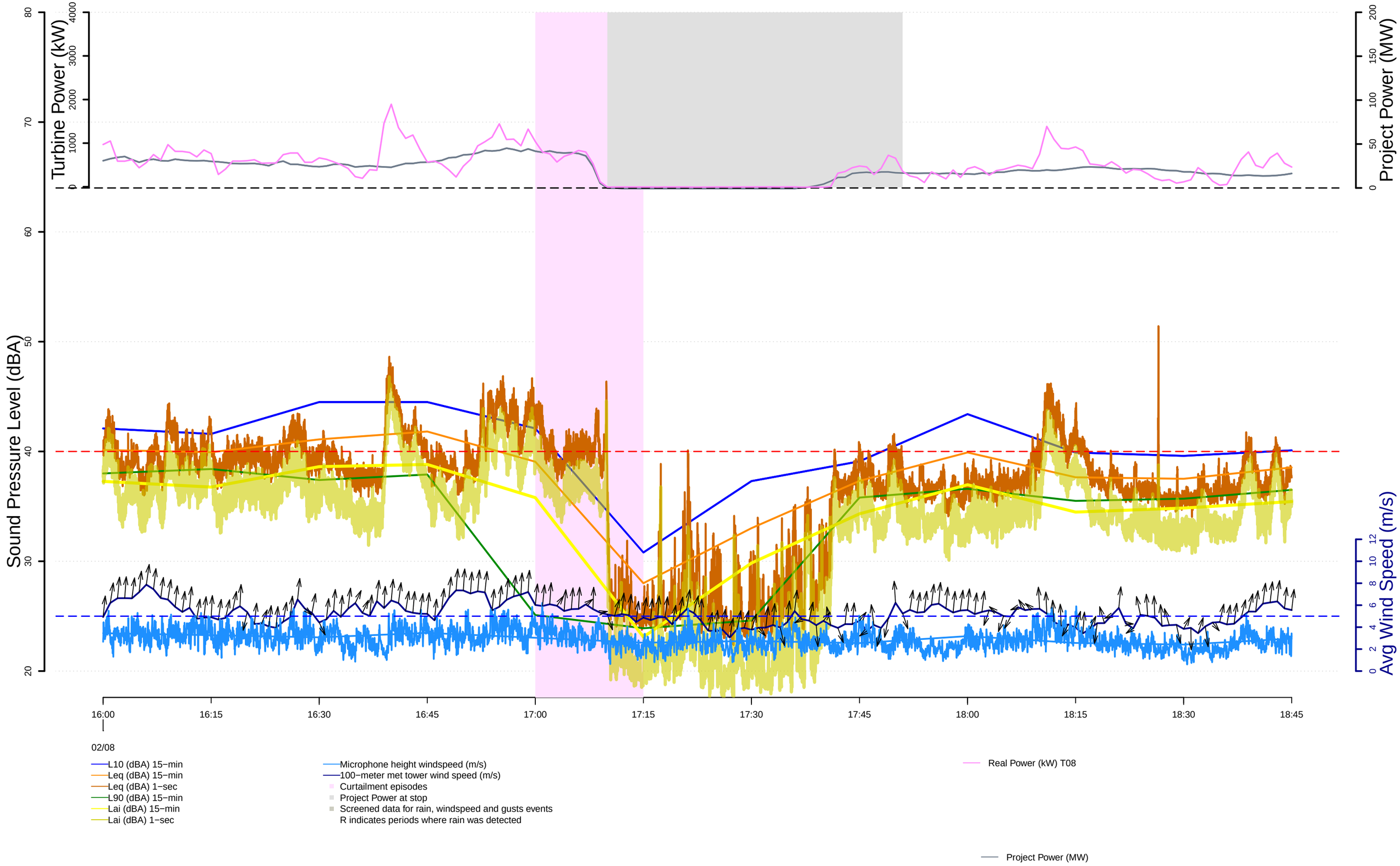
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

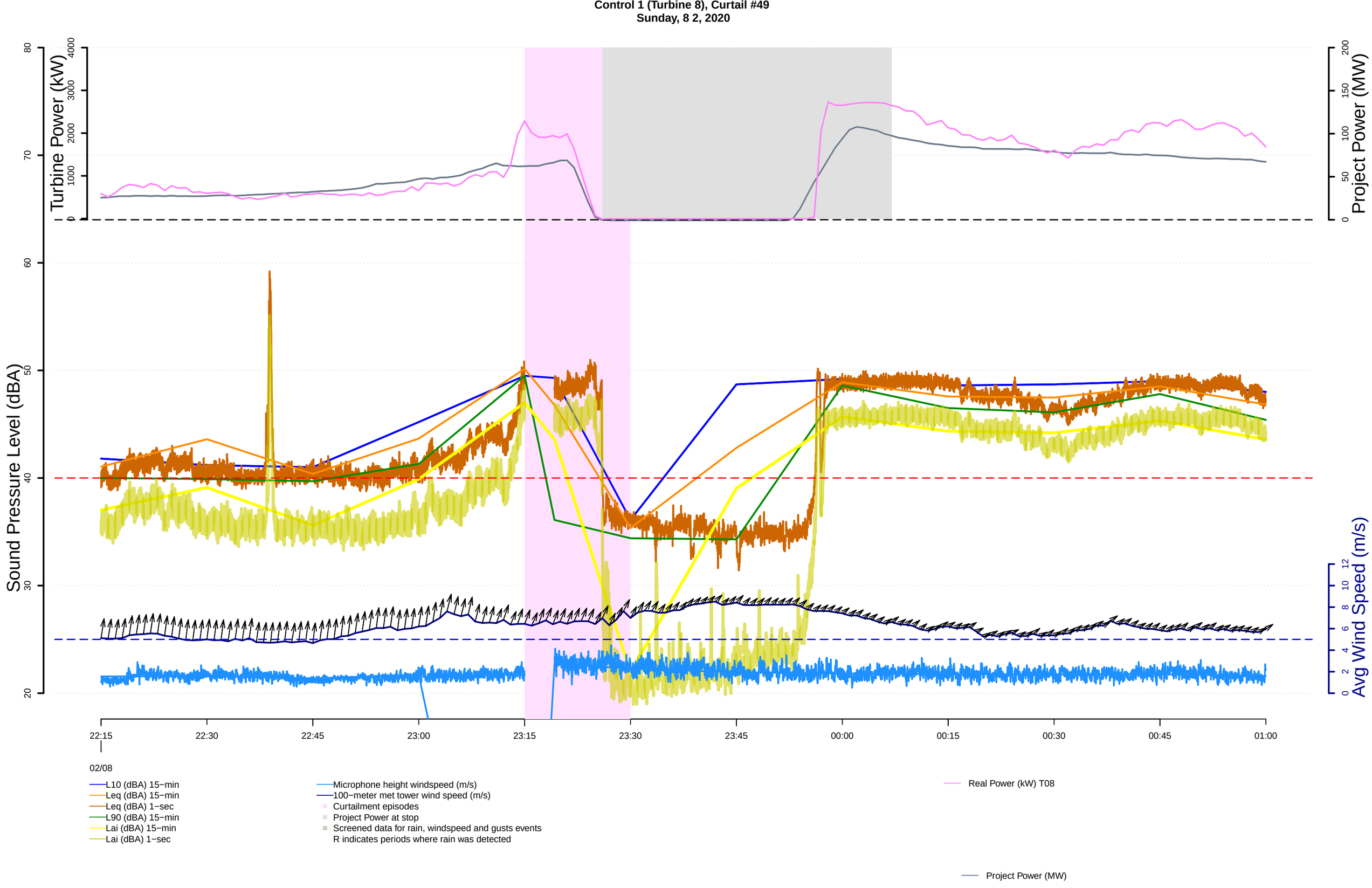
Real Power (kW) T08

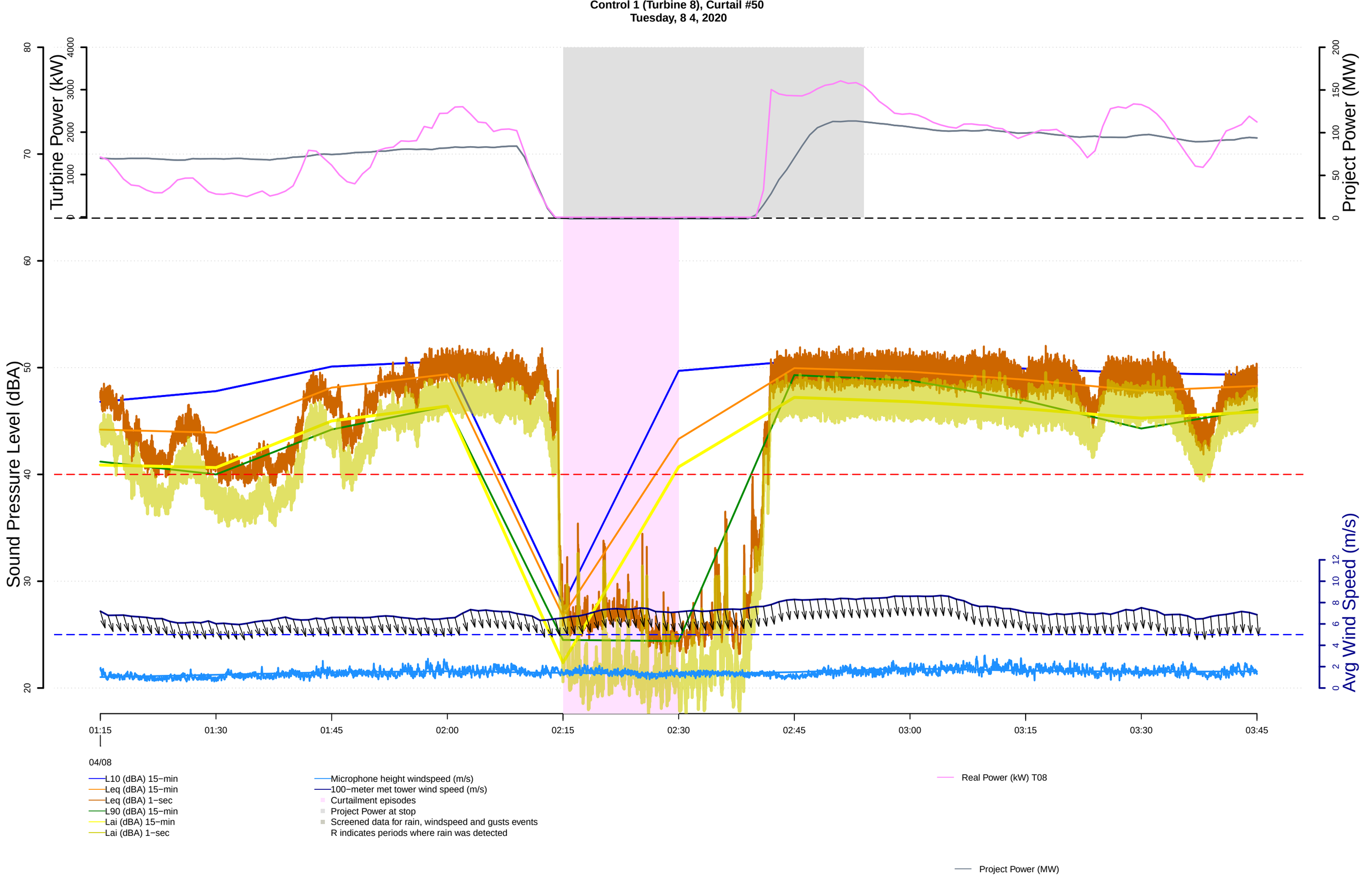
Project Power (MW)


Control 1 (Turbine 8), Curtail #47
Sunday, 8 2, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
01:15
01:30
01:45
02:00
02:15
02:30
02:45
03:00
03:15
03:30
03:45
04:00
02/08
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)

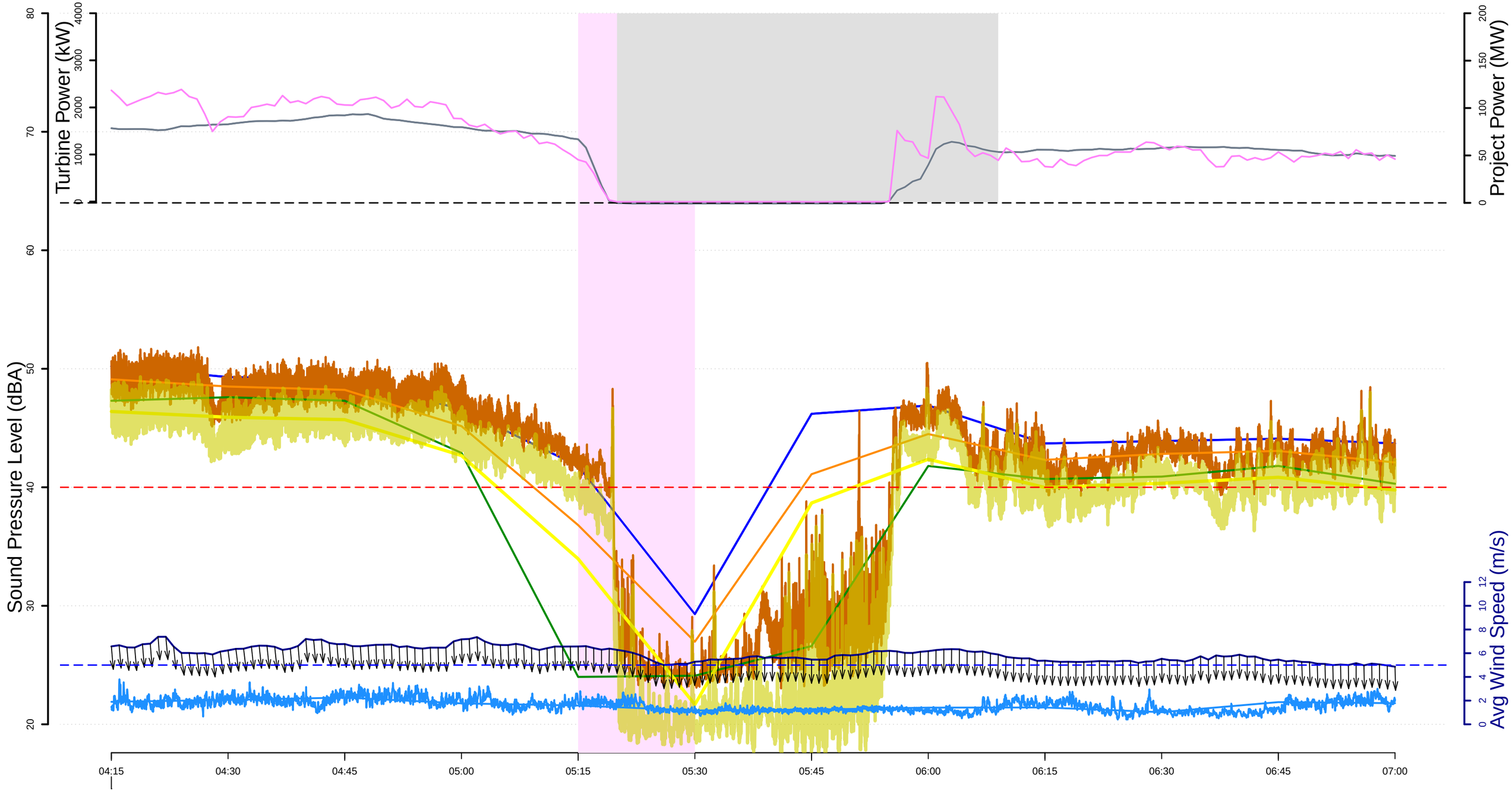
Control 1 (Turbine 8), Curtail #48
Sunday, 8 2, 2020




Control 1 (Turbine 8), Curtail #49
Sunday, 8 2, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
22:15
22:30
22:45
23:00
23:15
23:30
23:45
00:00
00:15
00:30
00:45
01:00
02/08
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)


Control 1 (Turbine 8), Curtail #50
Tuesday, 8 4, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
01:15
01:30
01:45
02:00
02:15
02:30
02:45
03:00
03:15
03:30
03:45
04/08
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T08
Project Power (MW)

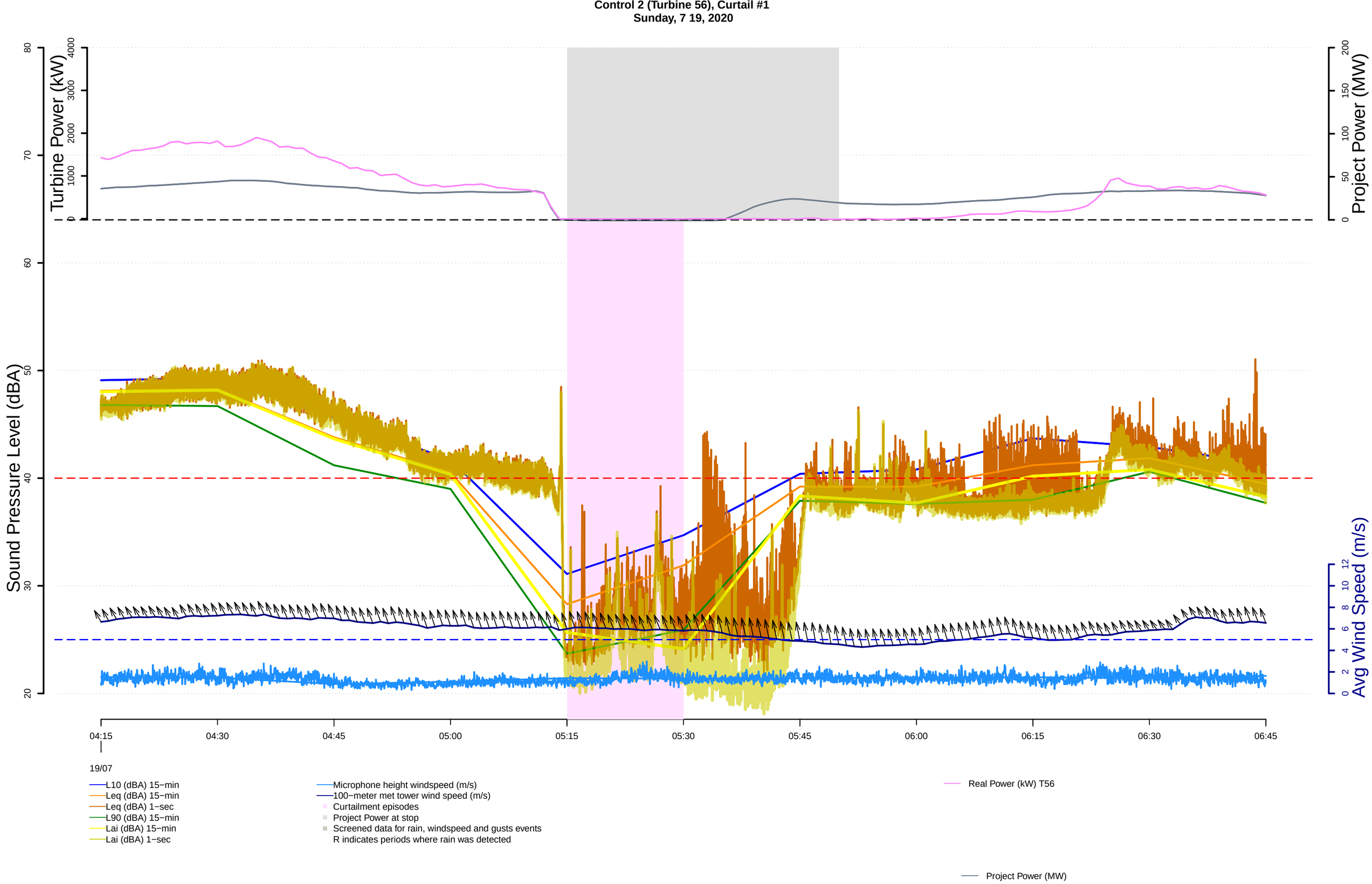
Control 1 (Turbine 8), Curtail #51
Tuesday, 8 4, 2020

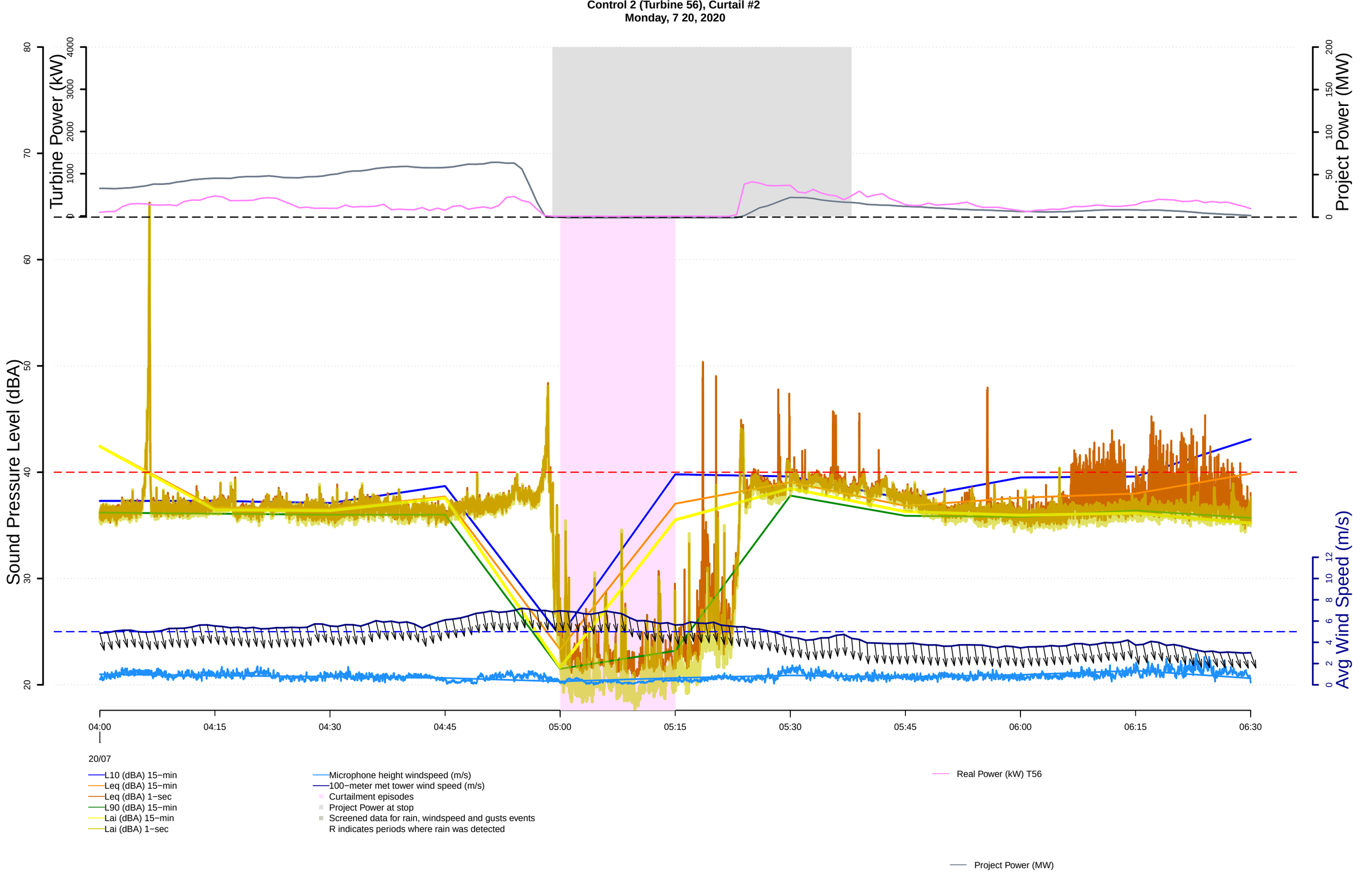


04/08

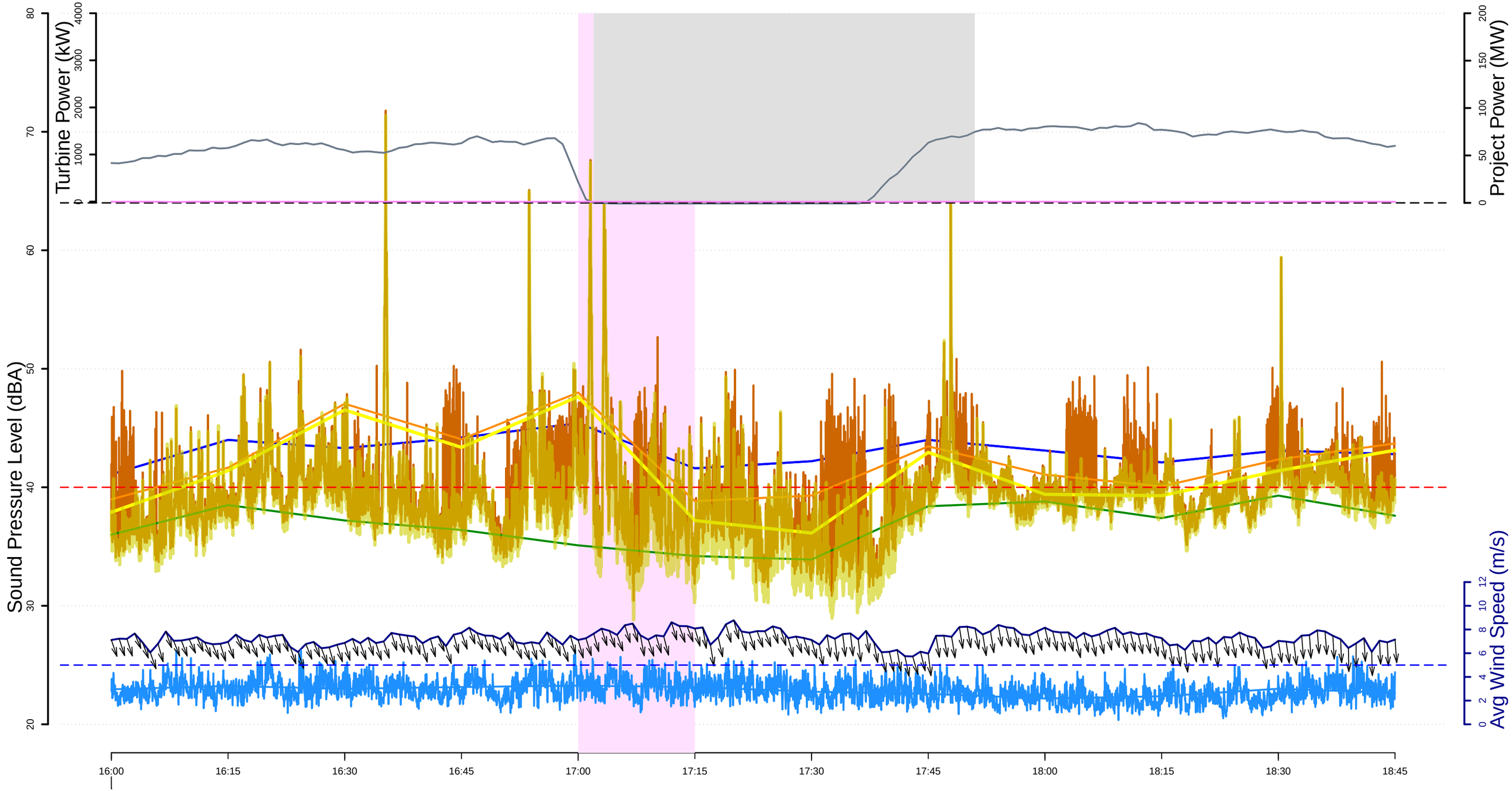
- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T08
- Project Power (MW)

Control 2 (Turbine 56)


Control 2 (Turbine 56), Curtail #1
Sunday, 7 19, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
04:15
04:30
04:45
05:00
05:15
05:30
05:45
06:00
06:15
06:30
06:45
19/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T56
Project Power (MW)


Control 2 (Turbine 56), Curtail #2
Monday, 7 20, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
04:00
04:15
04:30
04:45
05:00
05:15
05:30
05:45
06:00
06:15
06:30
20/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T56
Project Power (MW)

Control 2 (Turbine 56), Curtail #3
Monday, 7 20, 2020

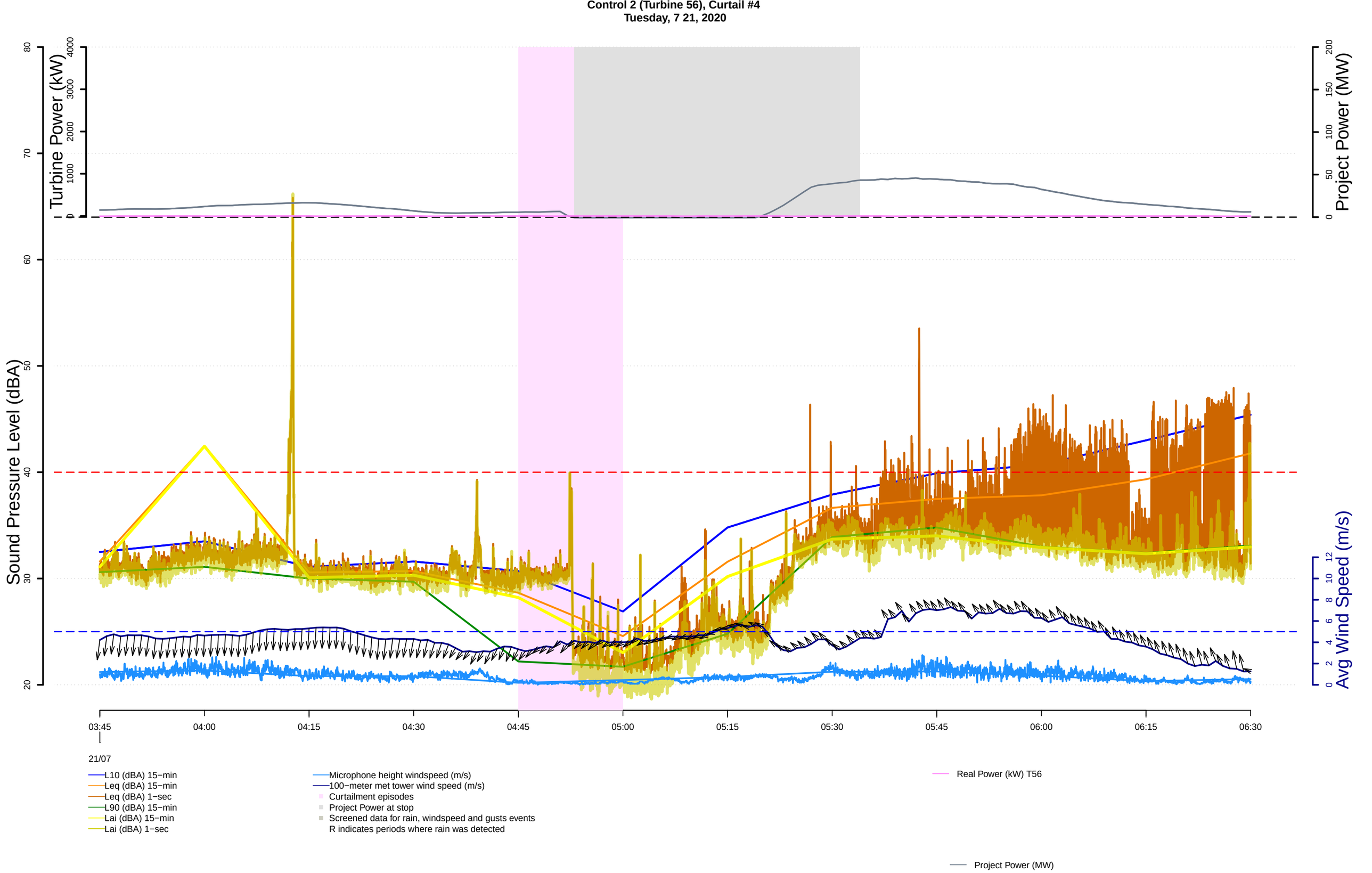


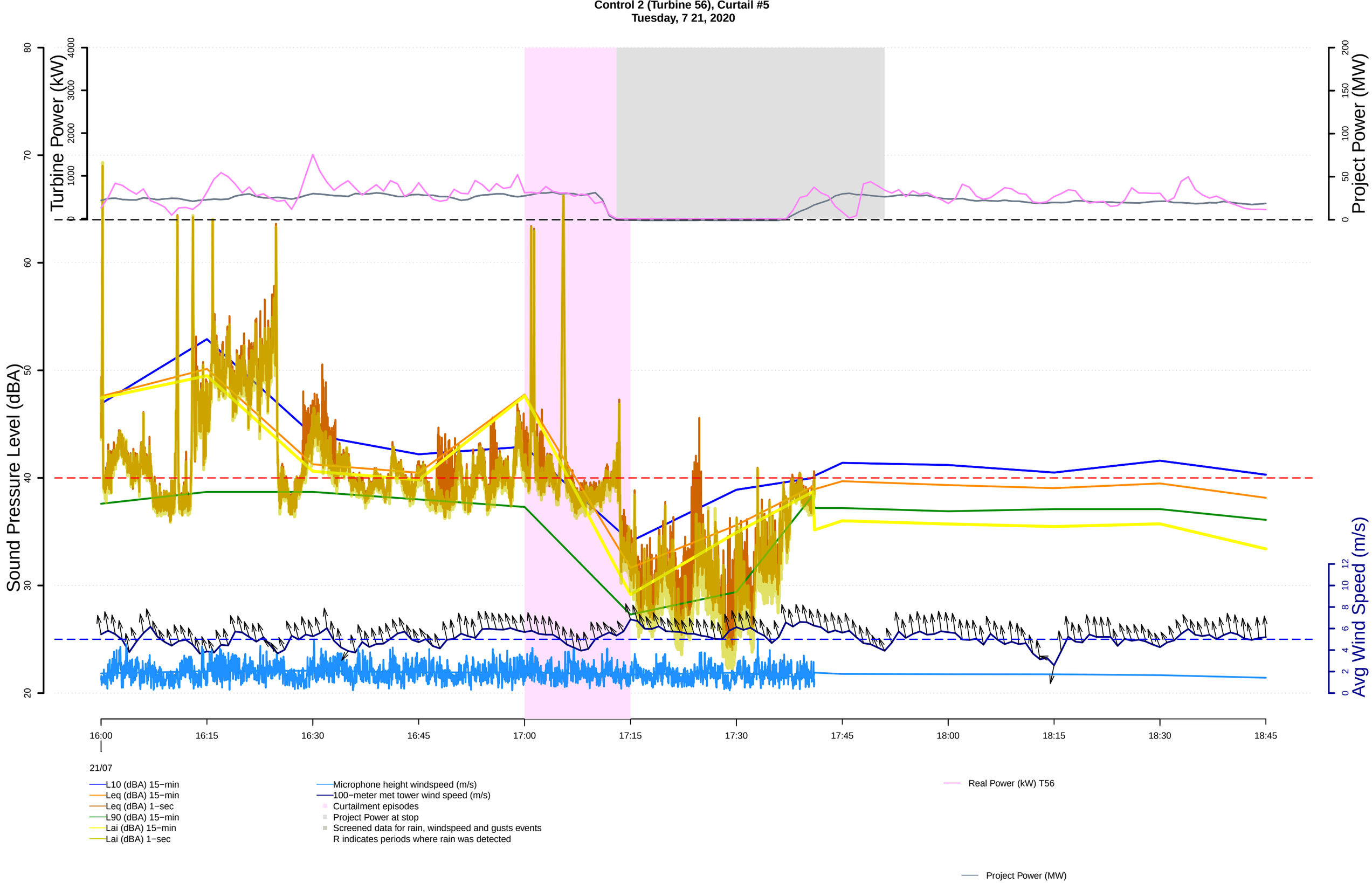
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

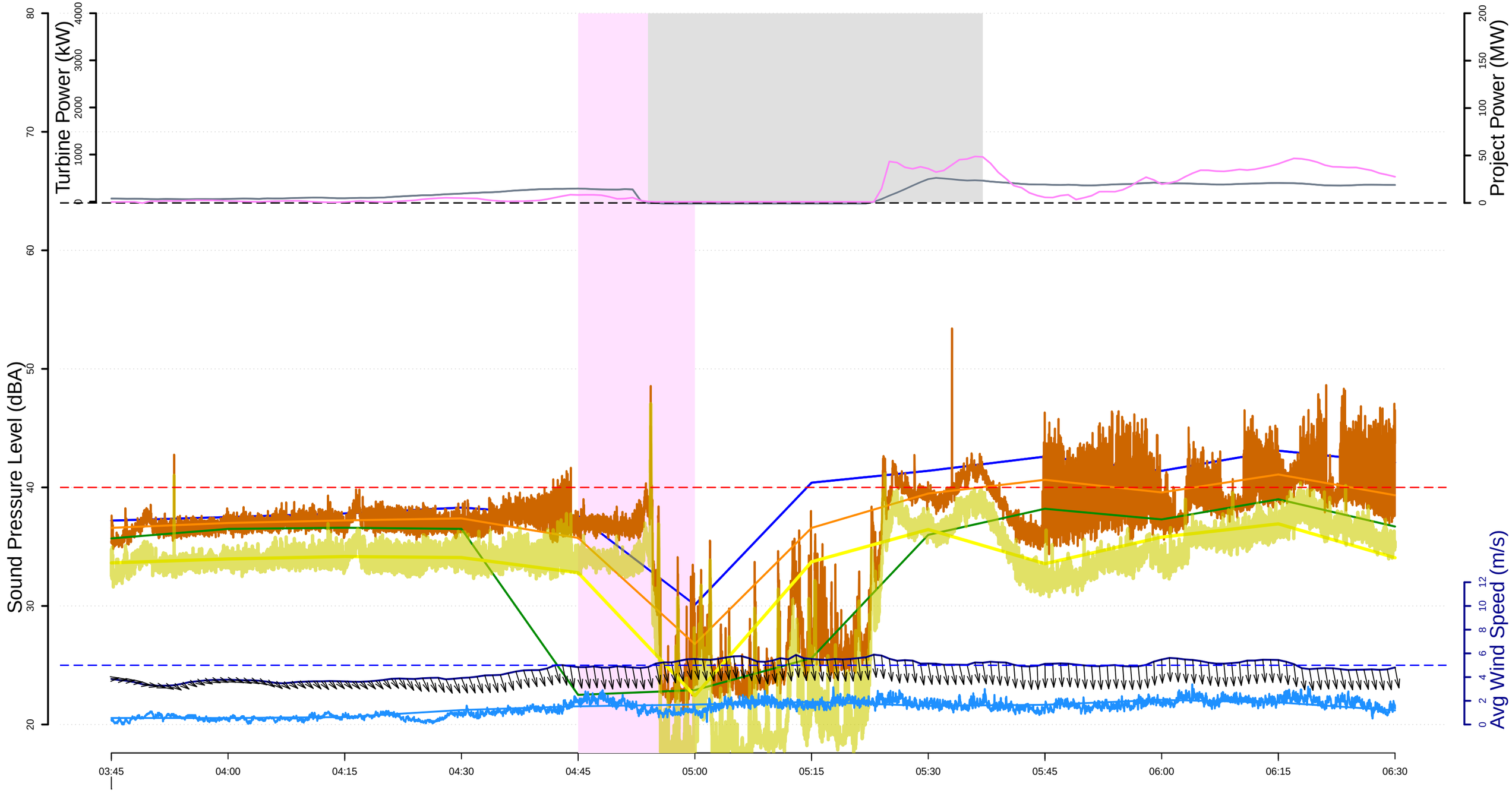
Real Power (kW) T56

Project Power (MW)


Control 2 (Turbine 56), Curtail #4
Tuesday, 7 21, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
03:45
04:00
04:15
04:30
04:45
05:00
05:15
05:30
05:45
06:00
06:15
06:30
21/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T56
Project Power (MW)


Control 2 (Turbine 56), Curtail #5
Tuesday, 7 21, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
16:00
16:15
16:30
16:45
17:00
17:15
17:30
17:45
18:00
18:15
18:30
18:45
21/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T56
Project Power (MW)

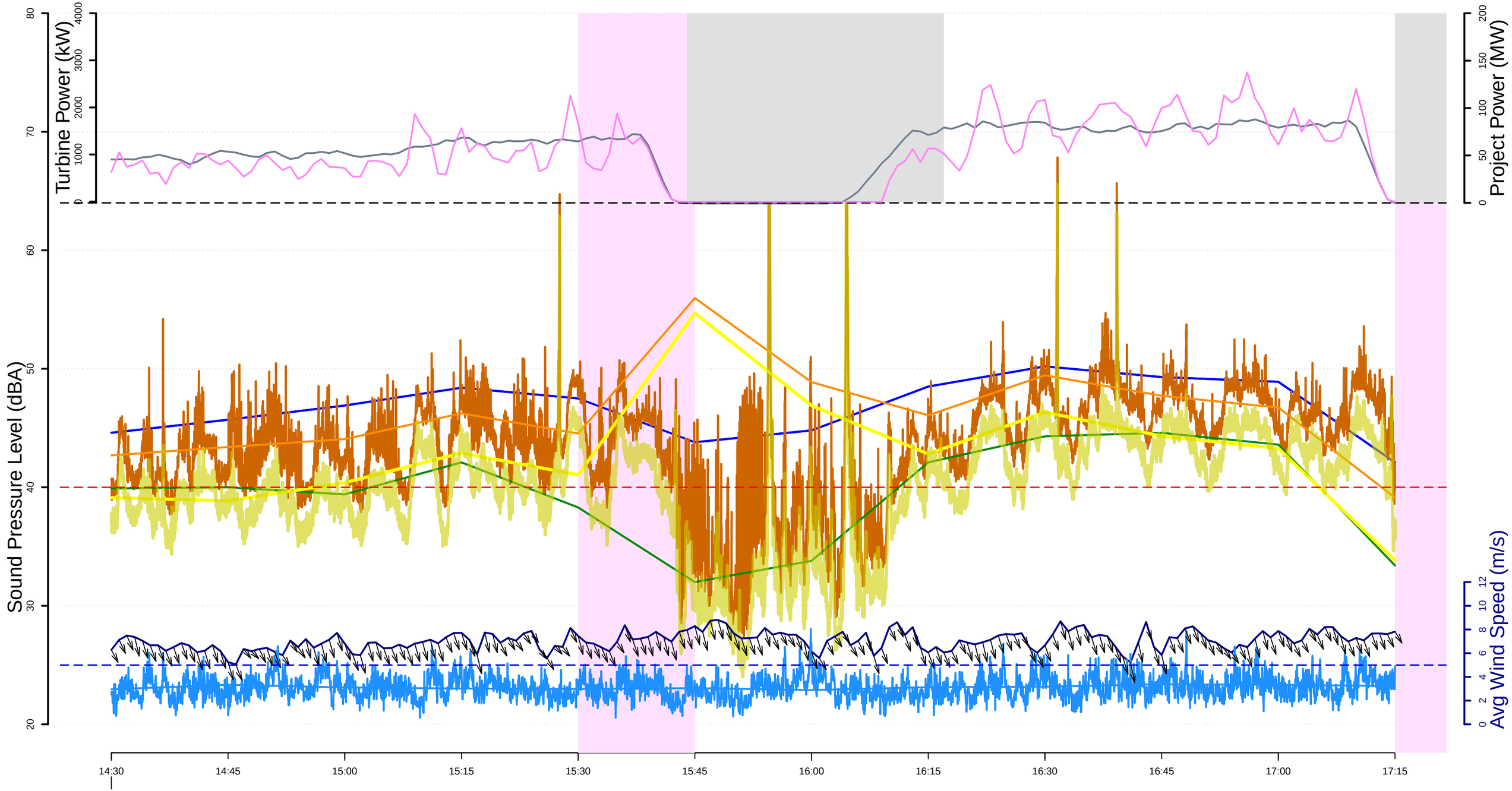
Control 2 (Turbine 56), Curtail #6
Wednesday, 7 22, 2020



22/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T56
- Project Power (MW)

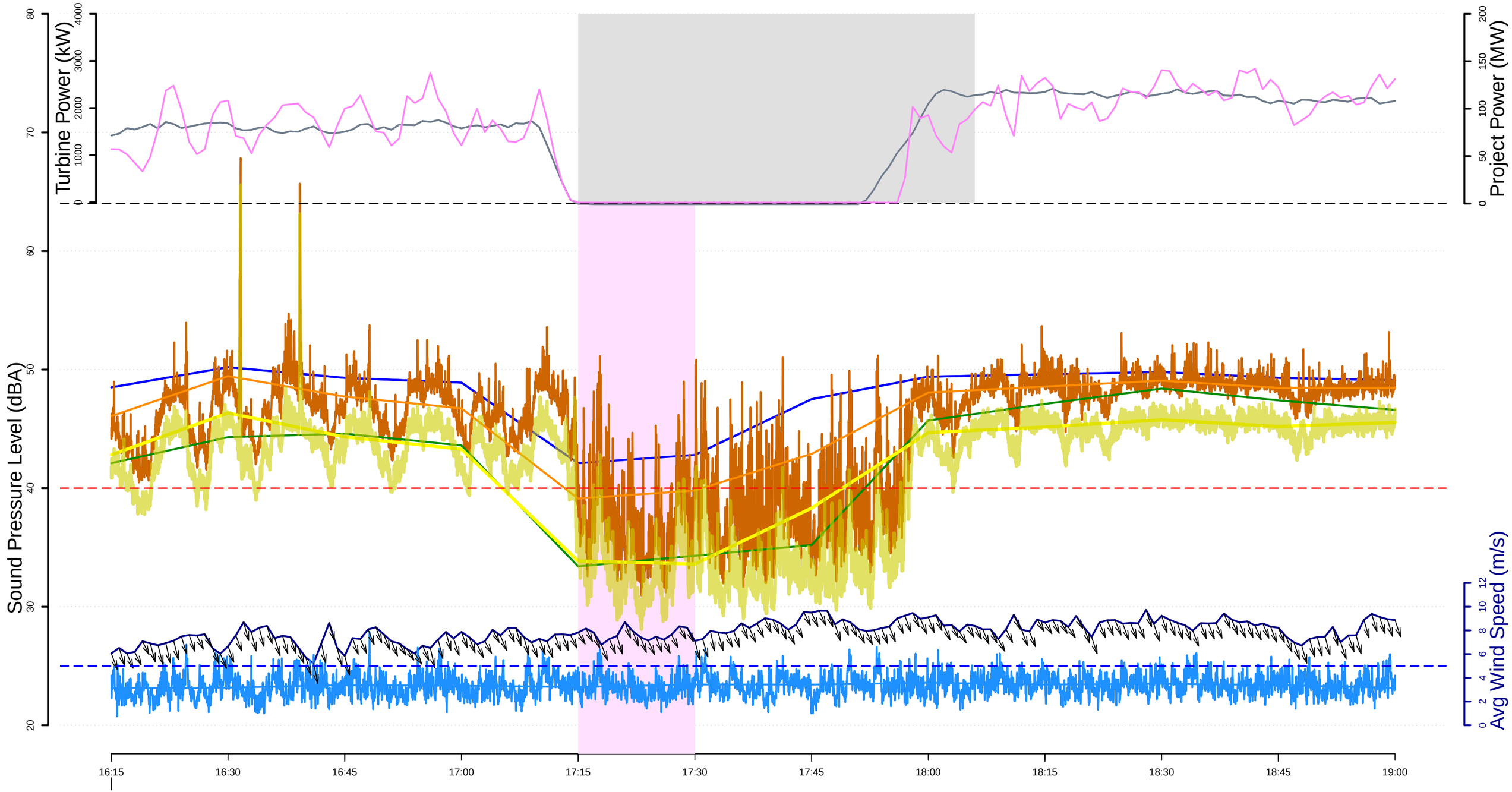
Control 2 (Turbine 56), Curtail #7
Wednesday, 7 22, 2020



22/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T56
- Project Power (MW)

Control 2 (Turbine 56), Curtail #8
Wednesday, 7 22, 2020

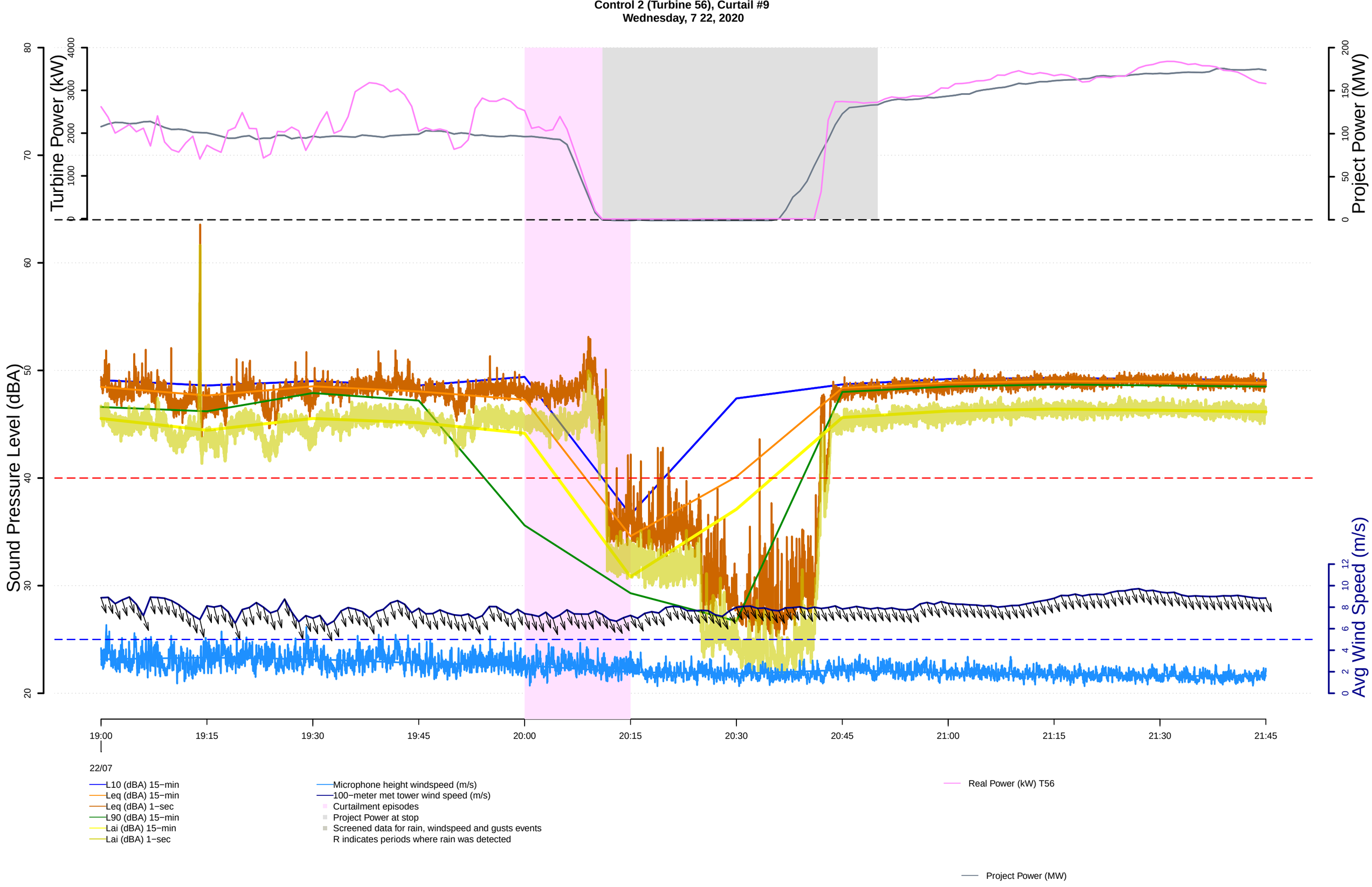


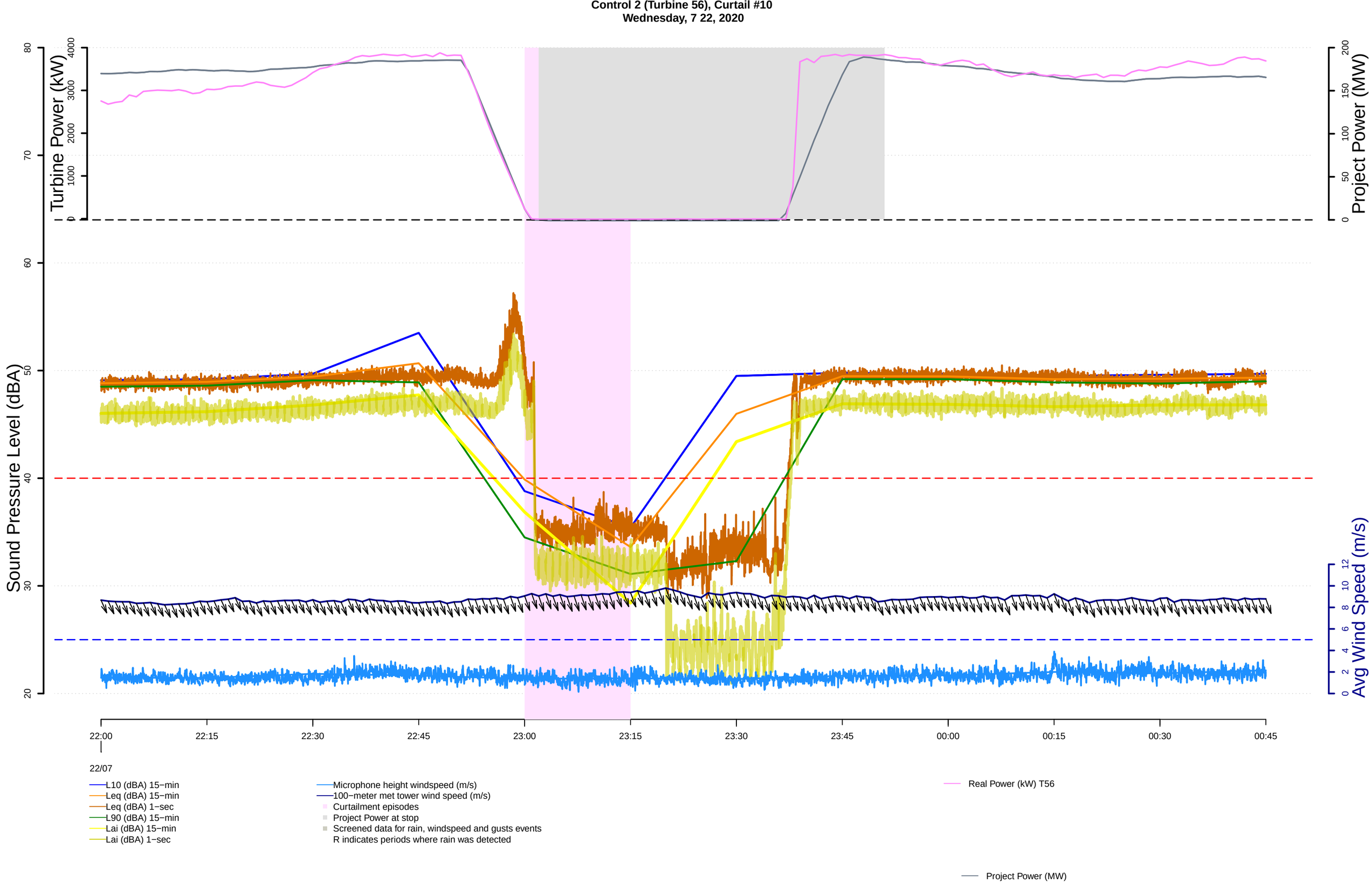
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

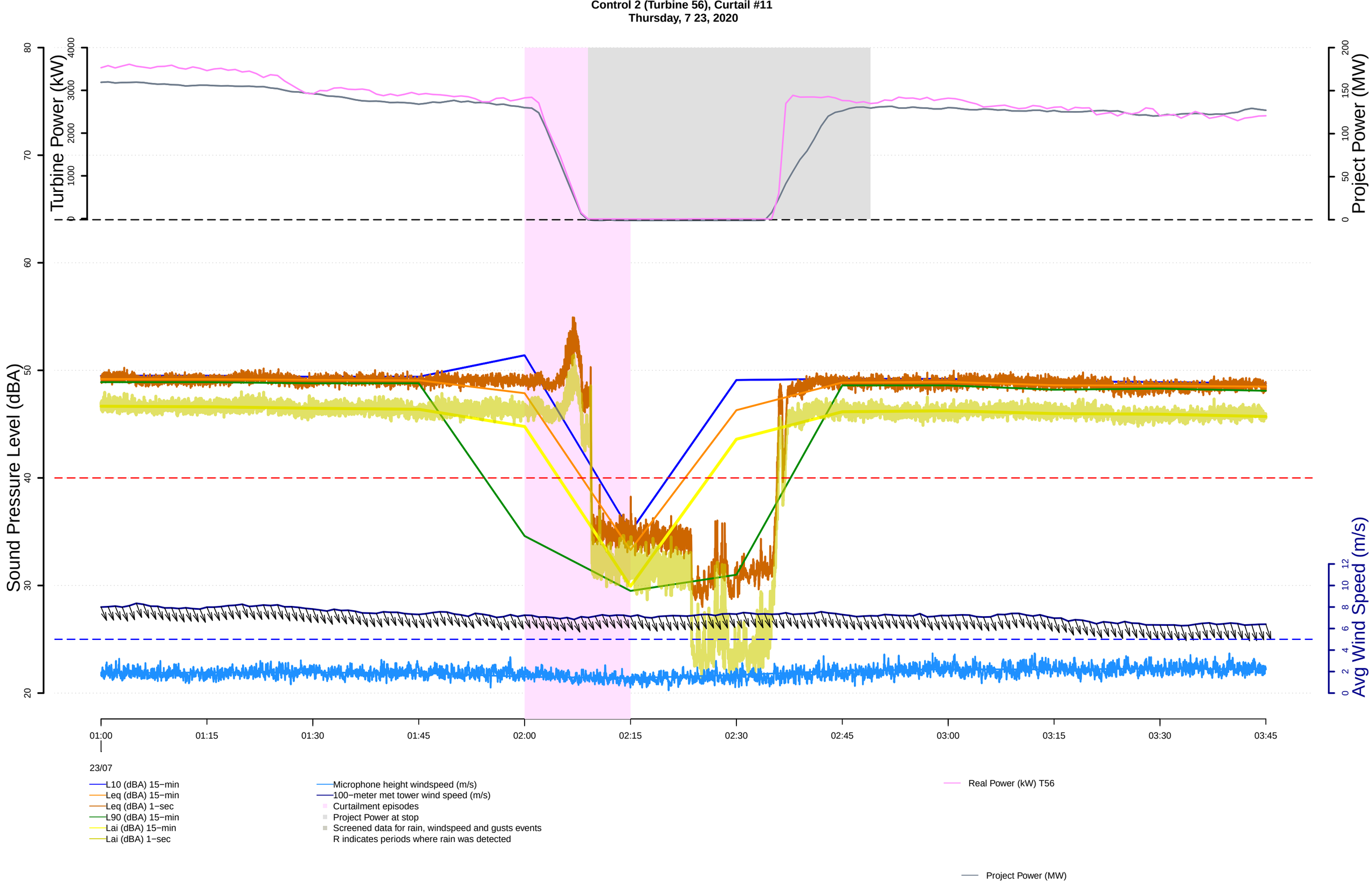
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T56

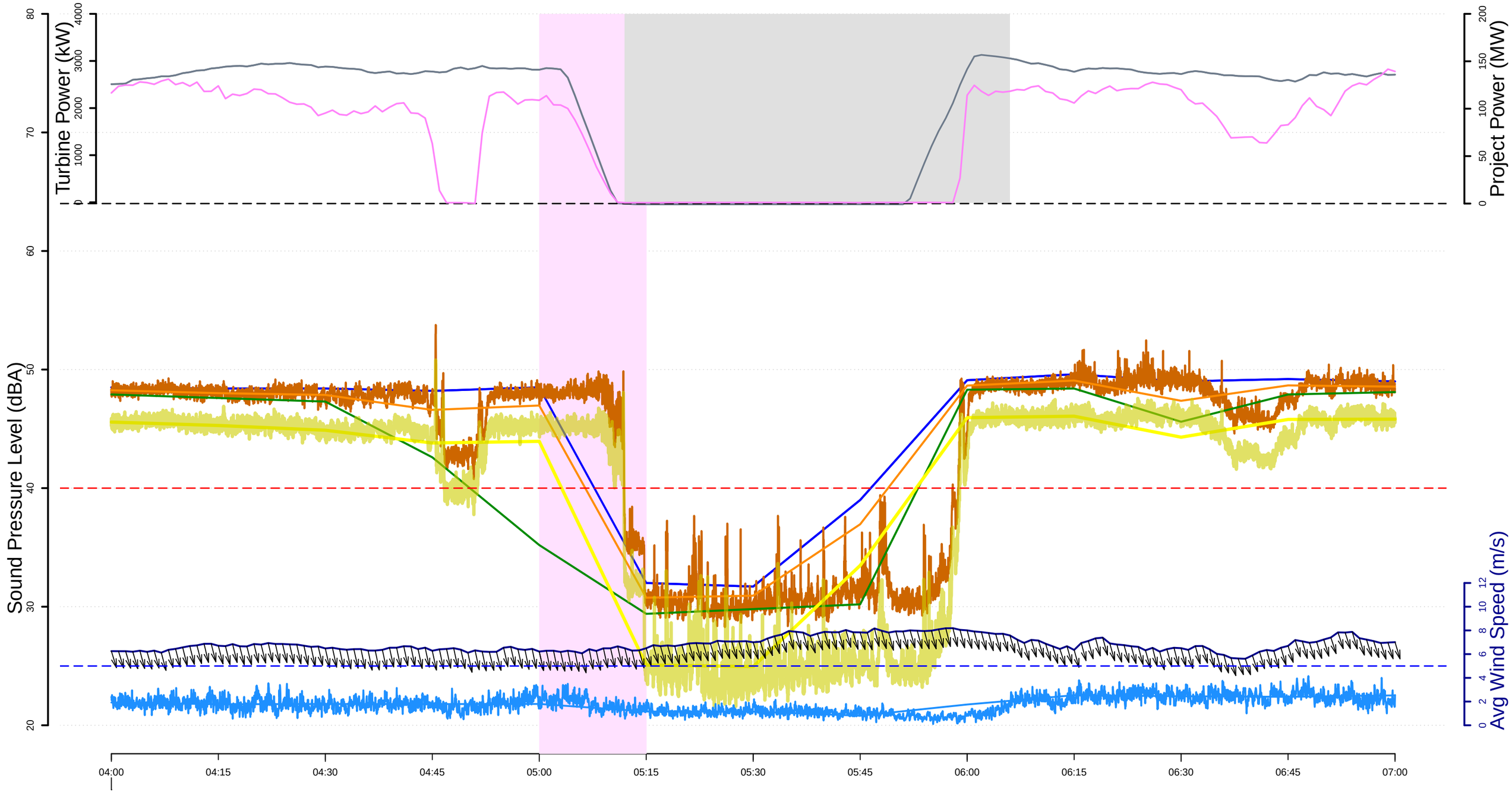
Project Power (MW)


Control 2 (Turbine 56), Curtail #9
Wednesday, 7 22, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
19:00
19:15
19:30
19:45
20:00
20:15
20:30
20:45
21:00
21:15
21:30
21:45
22/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T56
Project Power (MW)


Control 2 (Turbine 56), Curtail #10
Wednesday, 7 22, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
22/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T56
Project Power (MW)


Control 2 (Turbine 56), Curtail #11
Thursday, 7 23, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
01:00
01:15
01:30
01:45
02:00
02:15
02:30
02:45
03:00
03:15
03:30
03:45
23/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T56
Project Power (MW)

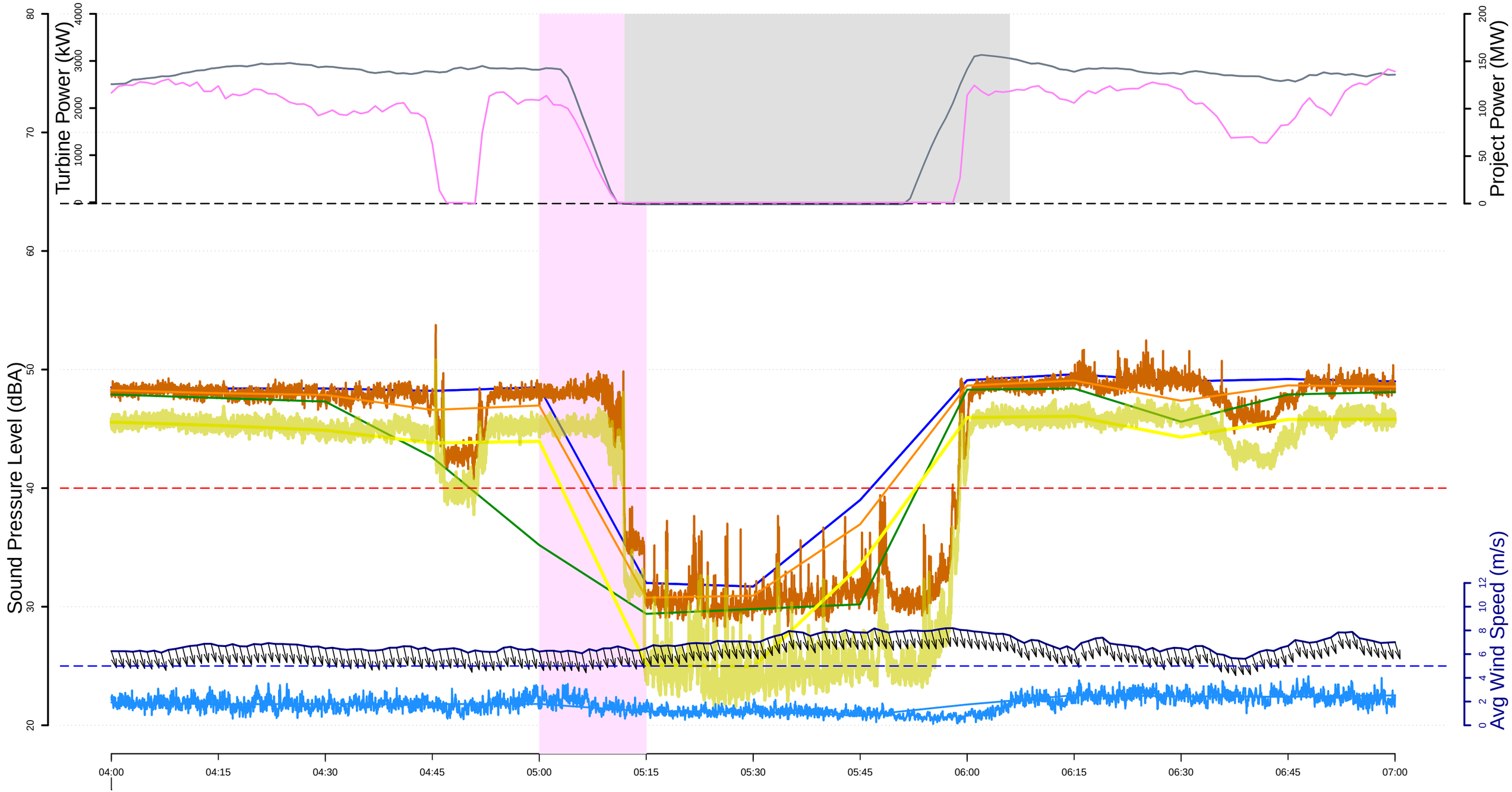
Control 2 (Turbine 56), Curtail #12
Thursday, 7 23, 2020



23/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T56
- Project Power (MW)

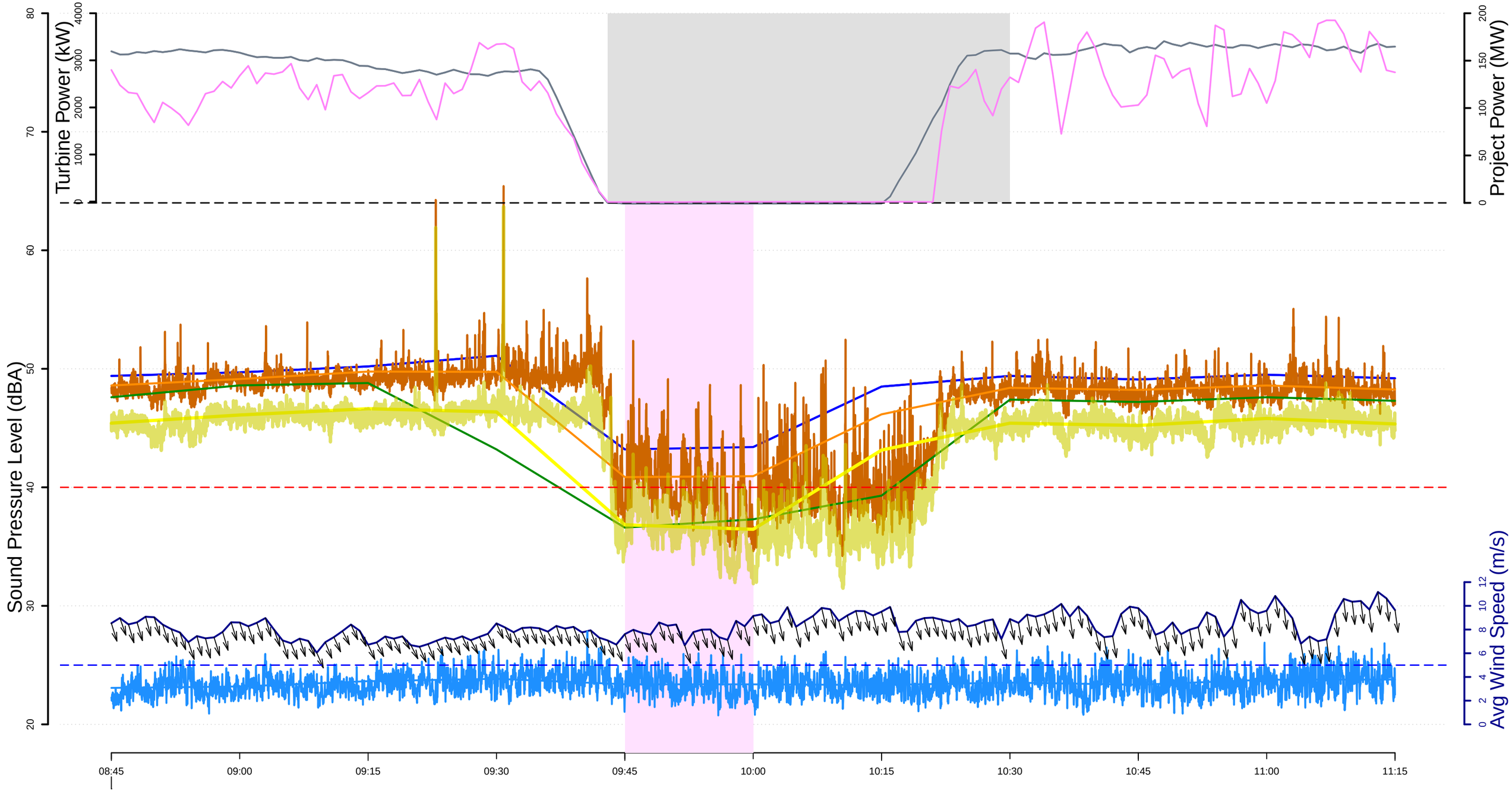
Control 2 (Turbine 56), Curtail #13
Thursday, 7 23, 2020



23/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T56
- Project Power (MW)

Control 2 (Turbine 56), Curtail #14
Thursday, 7 23, 2020

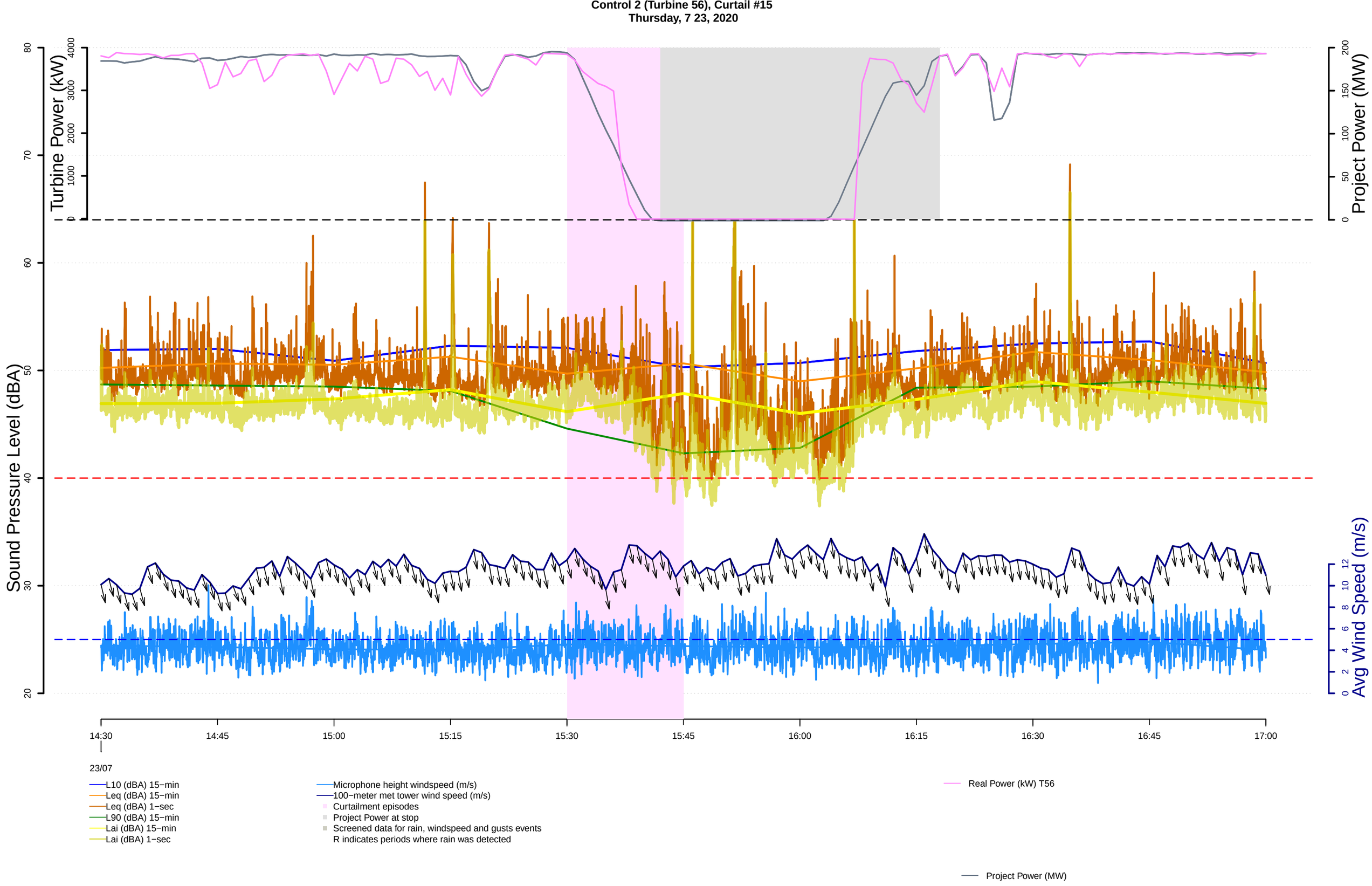


L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

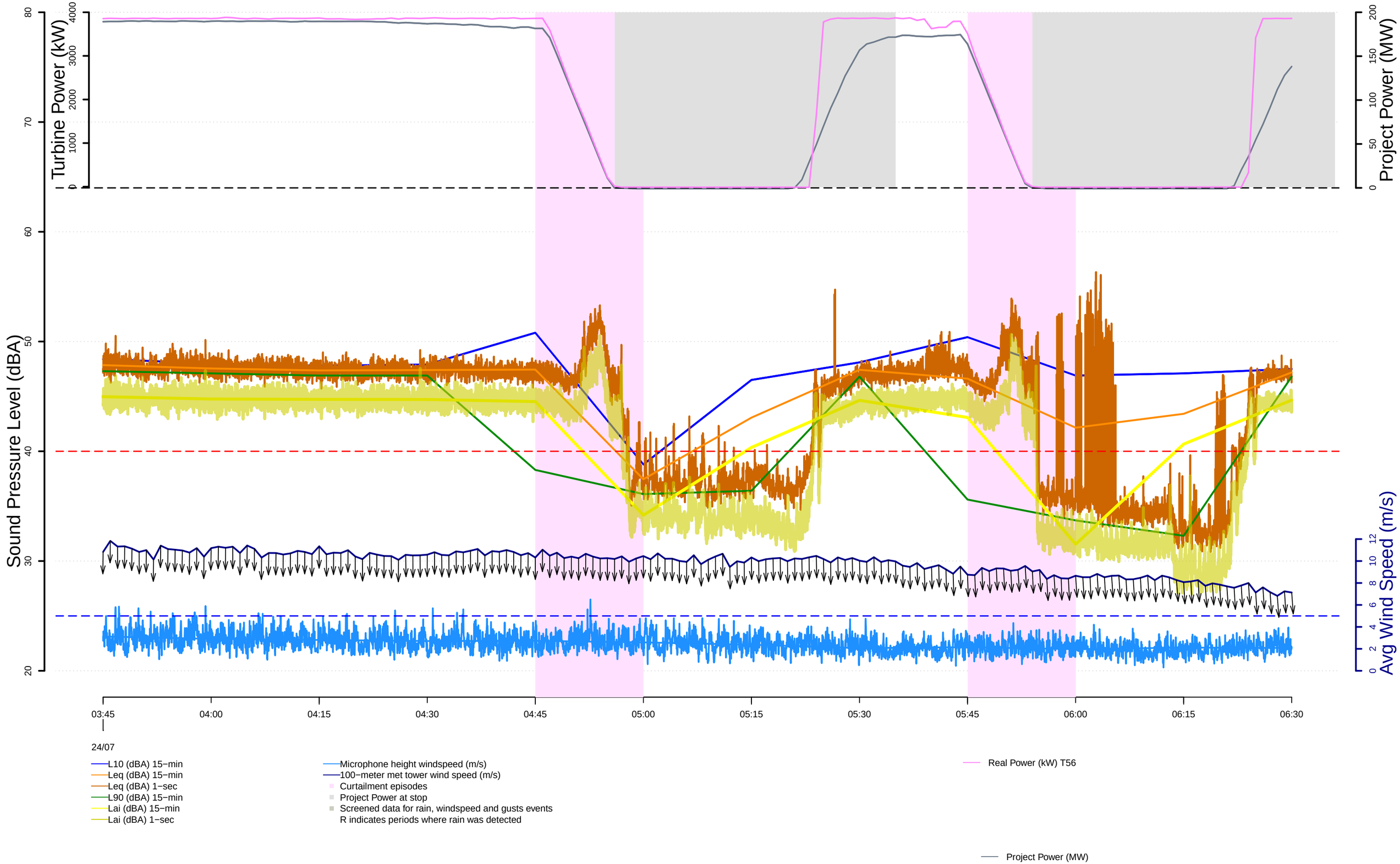
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

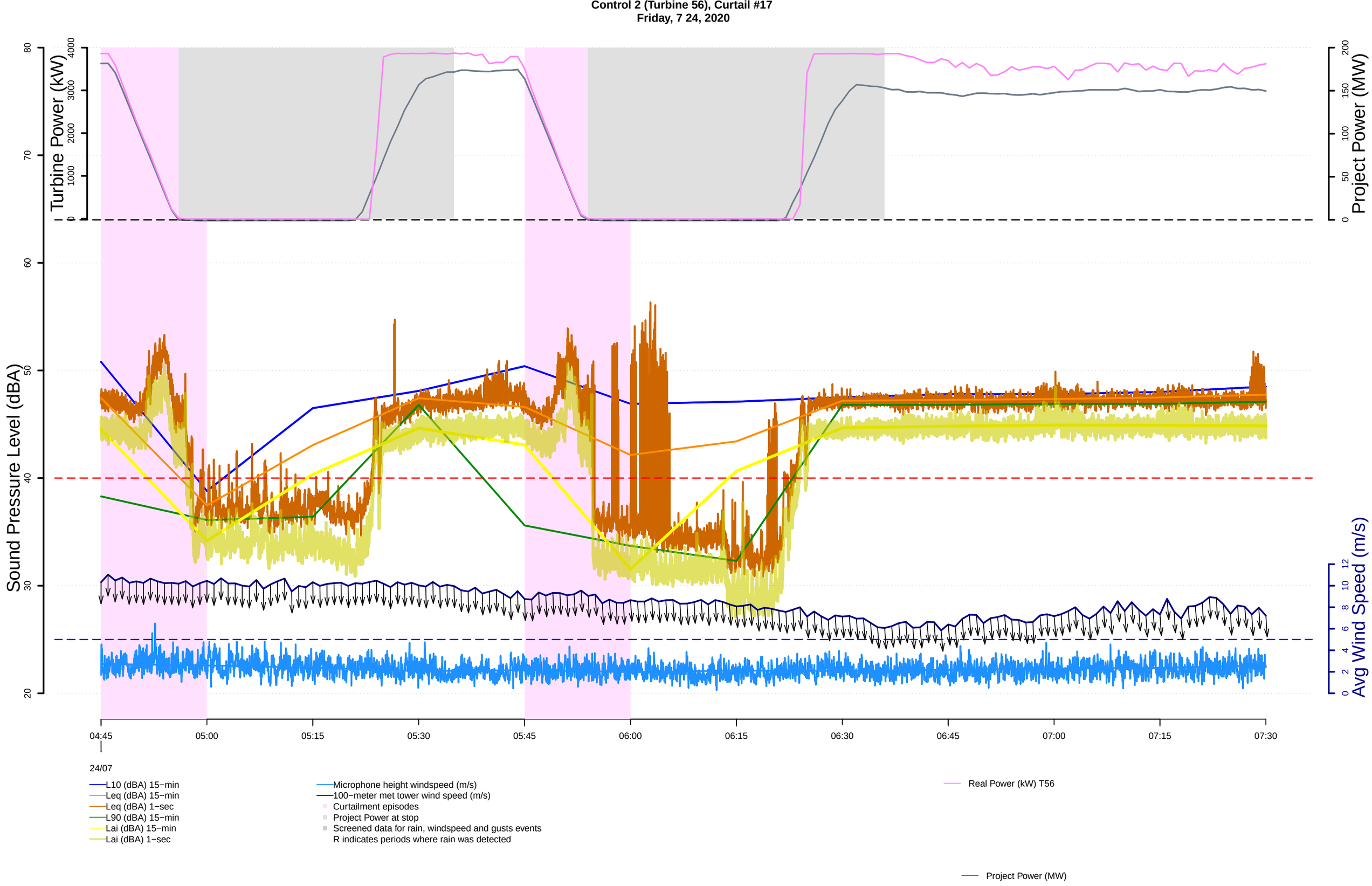
Real Power (kW) T56

Project Power (MW)

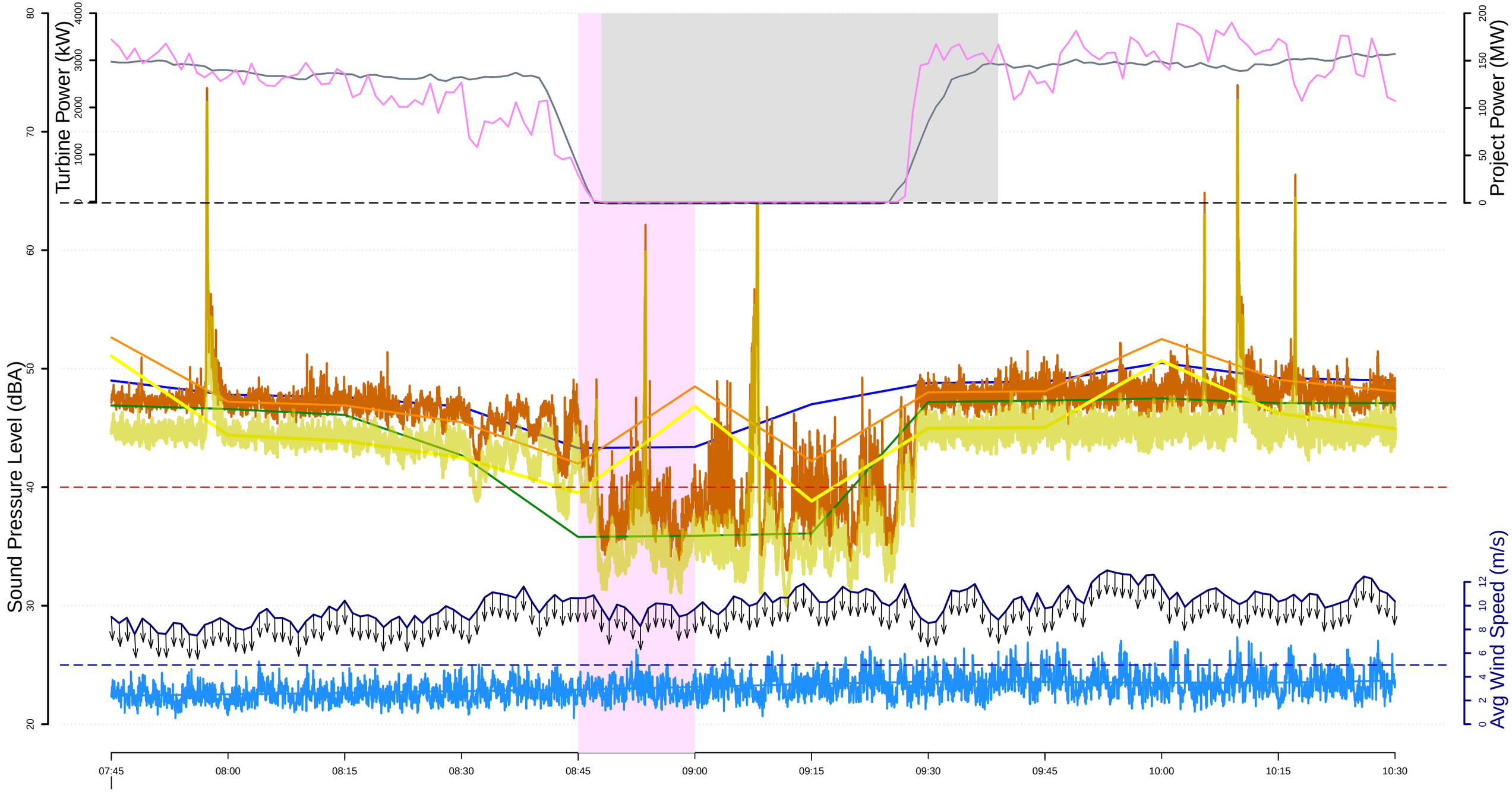

Control 2 (Turbine 56), Curtail #15
Thursday, 7 23, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
14:30
14:45
15:00
15:15
15:30
15:45
16:00
16:15
16:30
16:45
17:00
23/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T56
Project Power (MW)

Control 2 (Turbine 56), Curtail #16
Friday, 7 24, 2020




Control 2 (Turbine 56), Curtail #17
Friday, 7 24, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
04:45
05:00
05:15
05:30
05:45
06:00
06:15
06:30
06:45
07:00
07:15
07:30
24/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T56
Project Power (MW)

Control 2 (Turbine 56), Curtail #18
Friday, 7 24, 2020



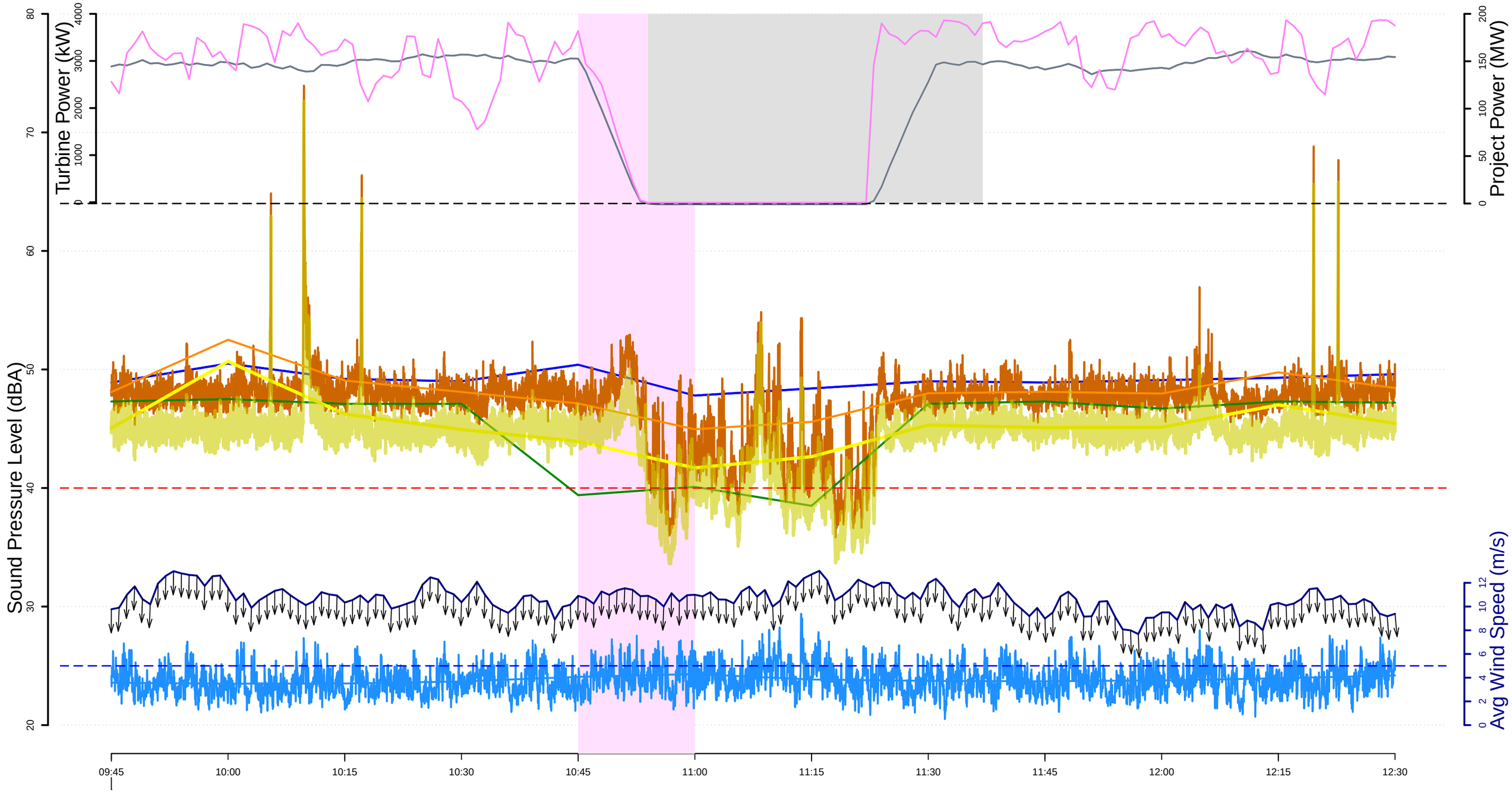
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T56

Project Power (MW)

Control 2 (Turbine 56), Curtail #19
Friday, 7 24, 2020

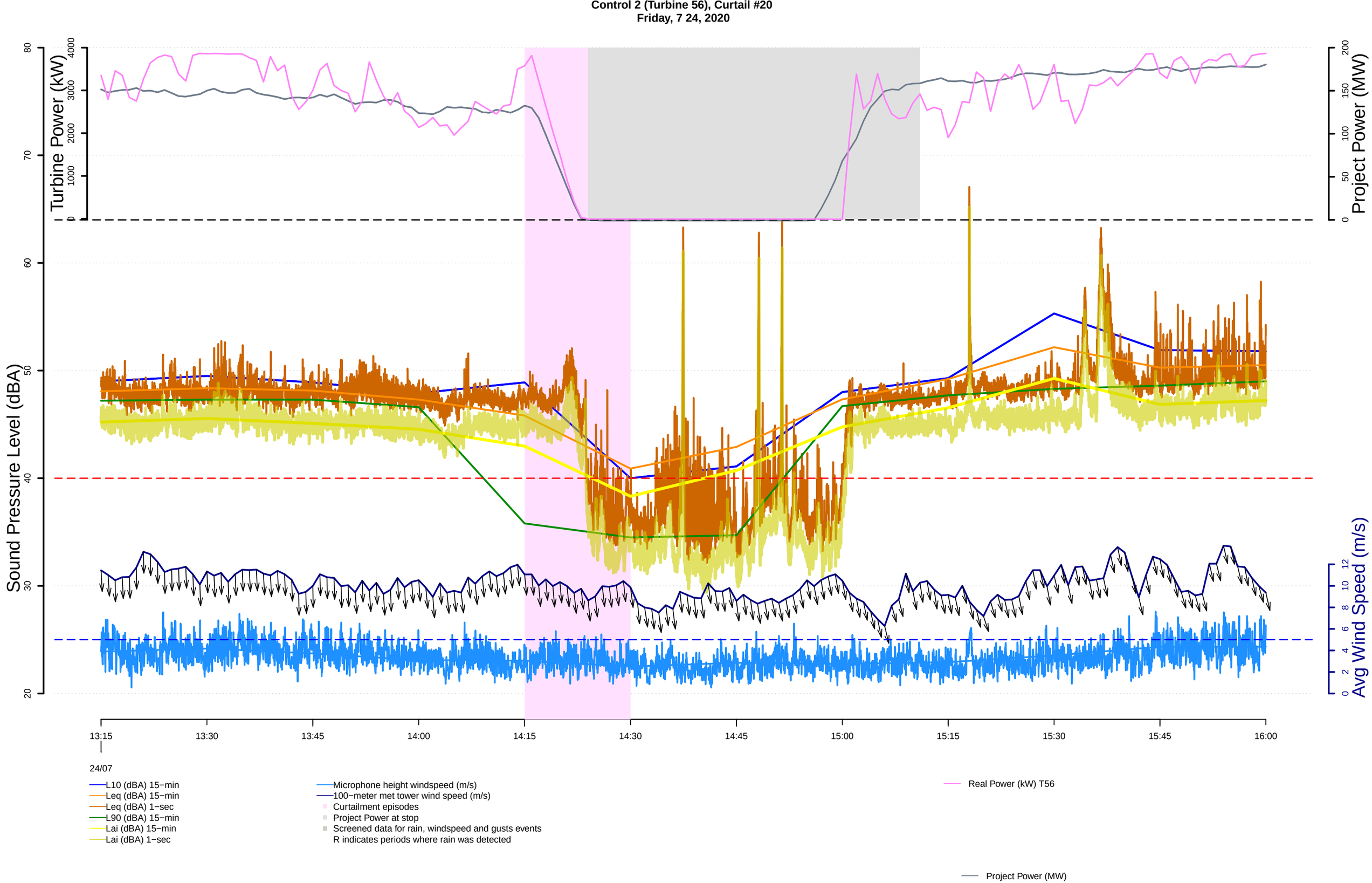


L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

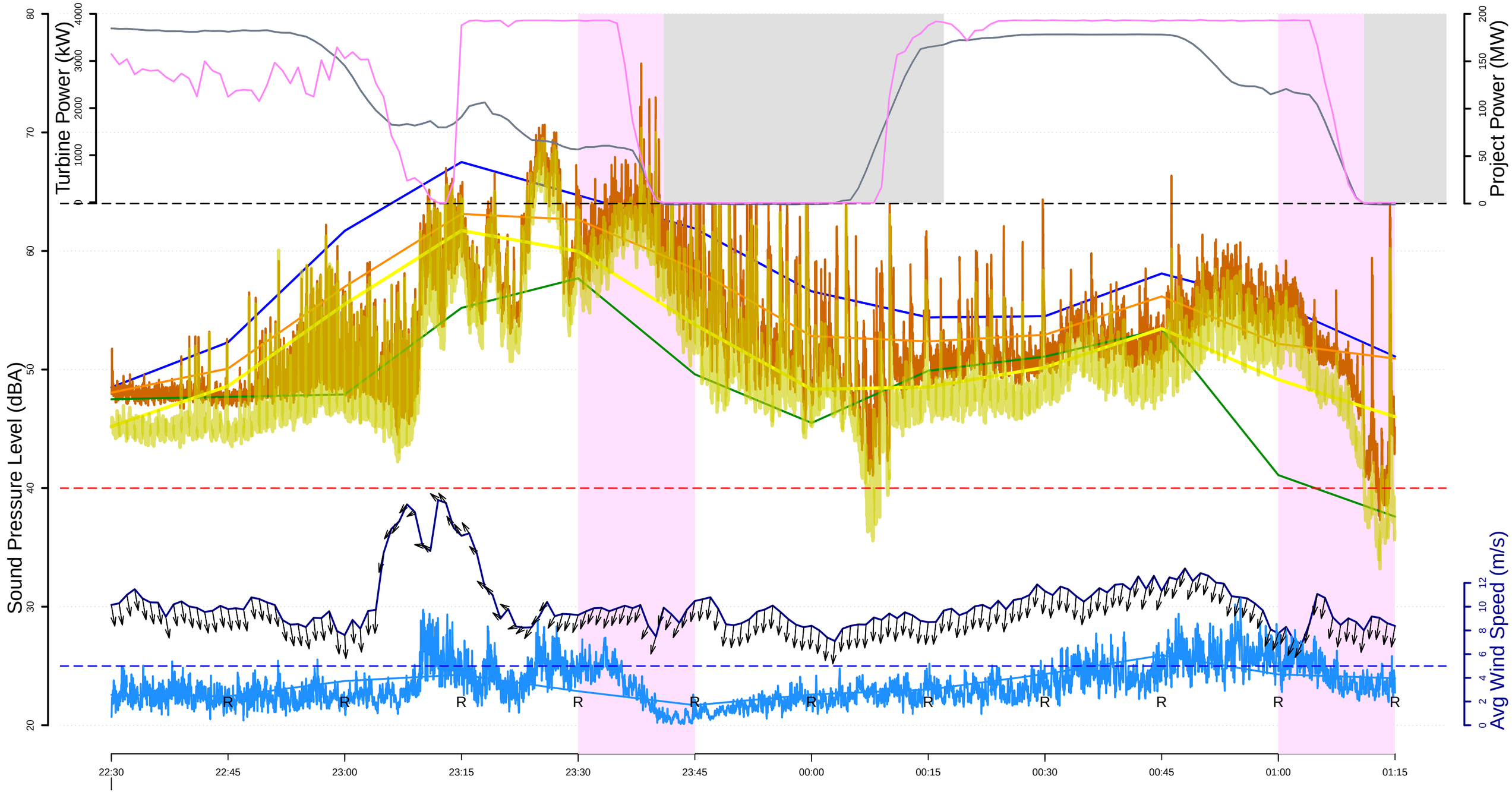
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T56

Project Power (MW)


Control 2 (Turbine 56), Curtail #20
Friday, 7 24, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
13:15
13:30
13:45
14:00
14:15
14:30
14:45
15:00
15:15
15:30
15:45
16:00
24/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T56
Project Power (MW)

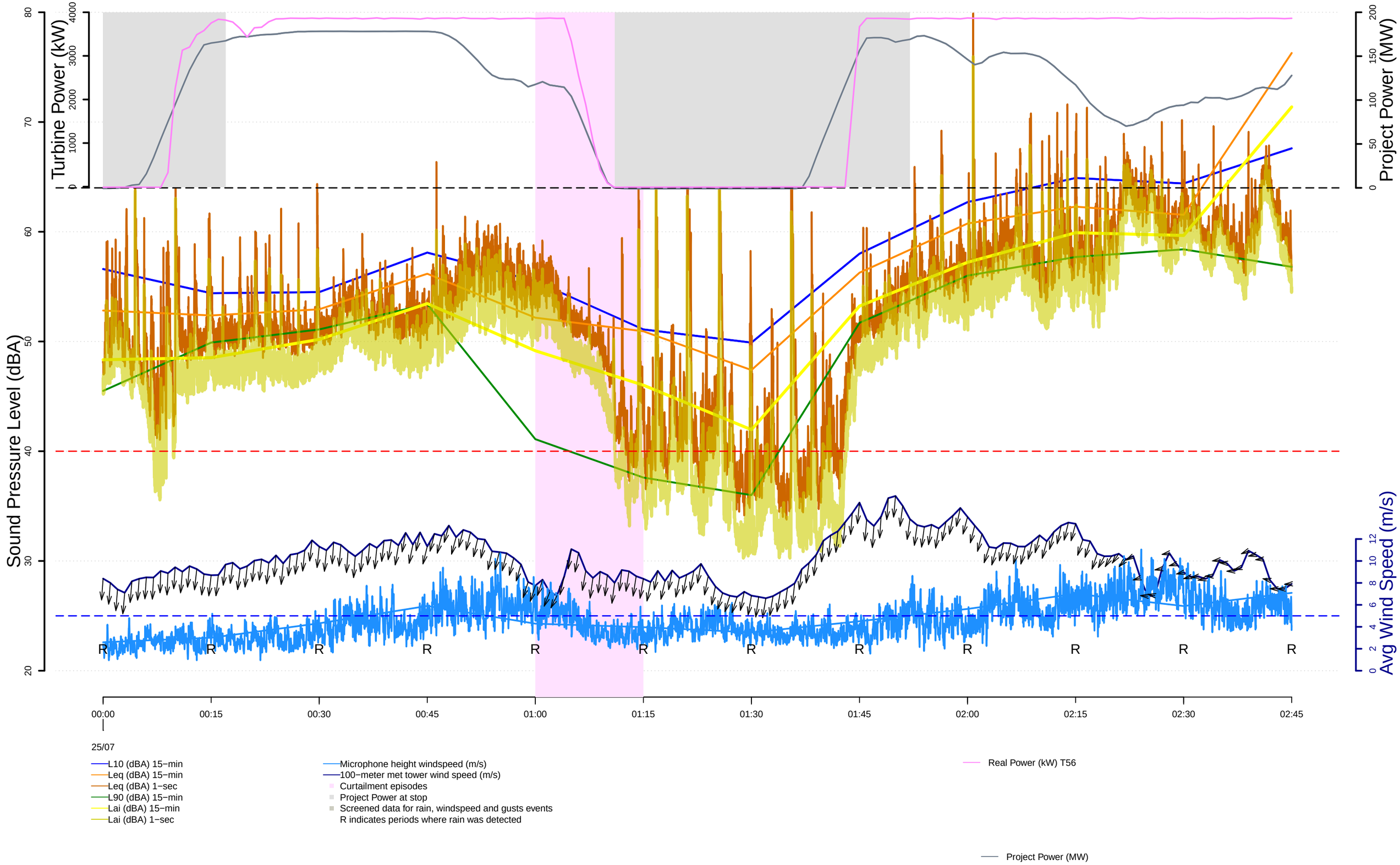
Control 2 (Turbine 56), Curtail #21
Friday, 7 24, 2020

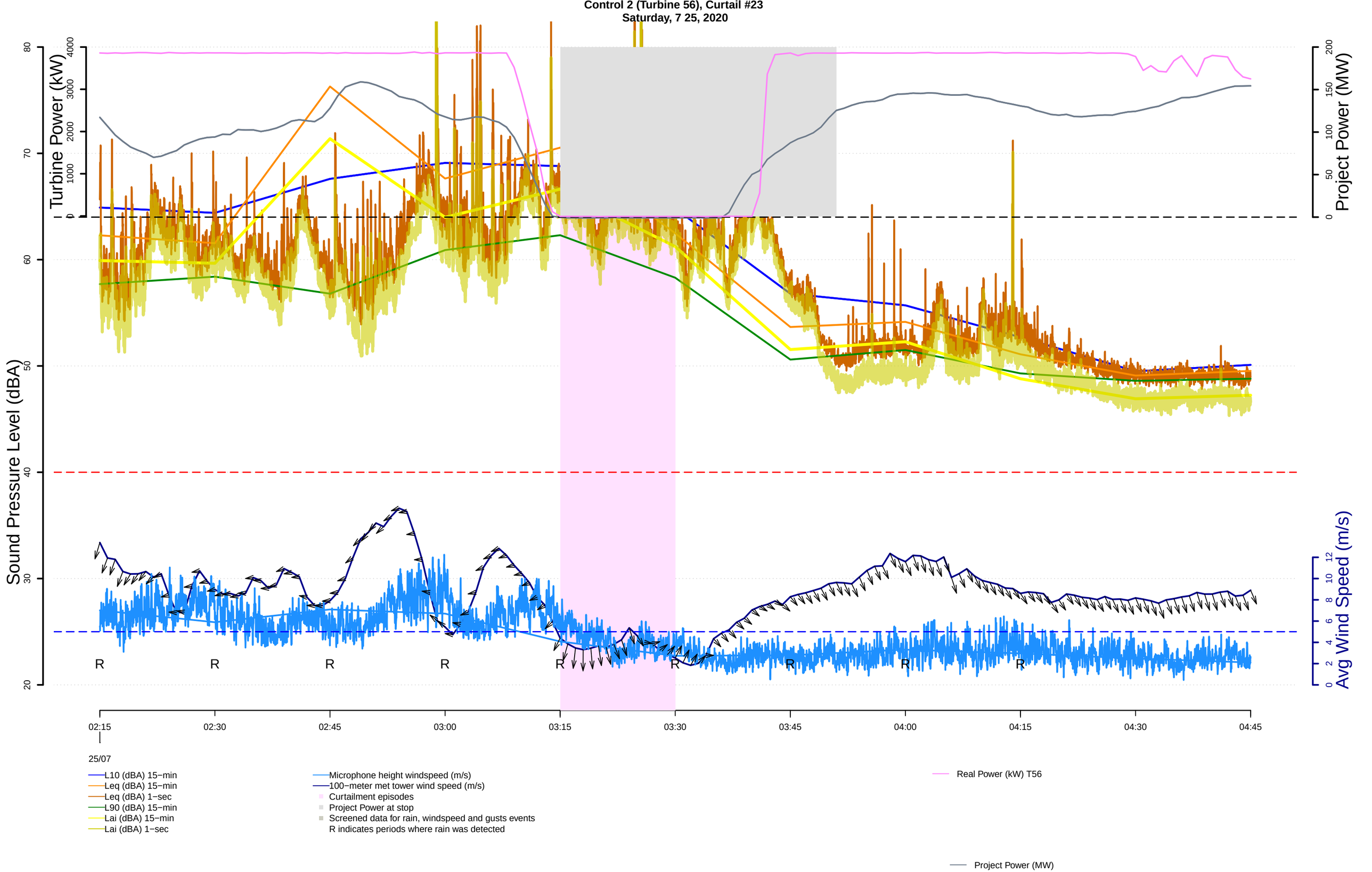


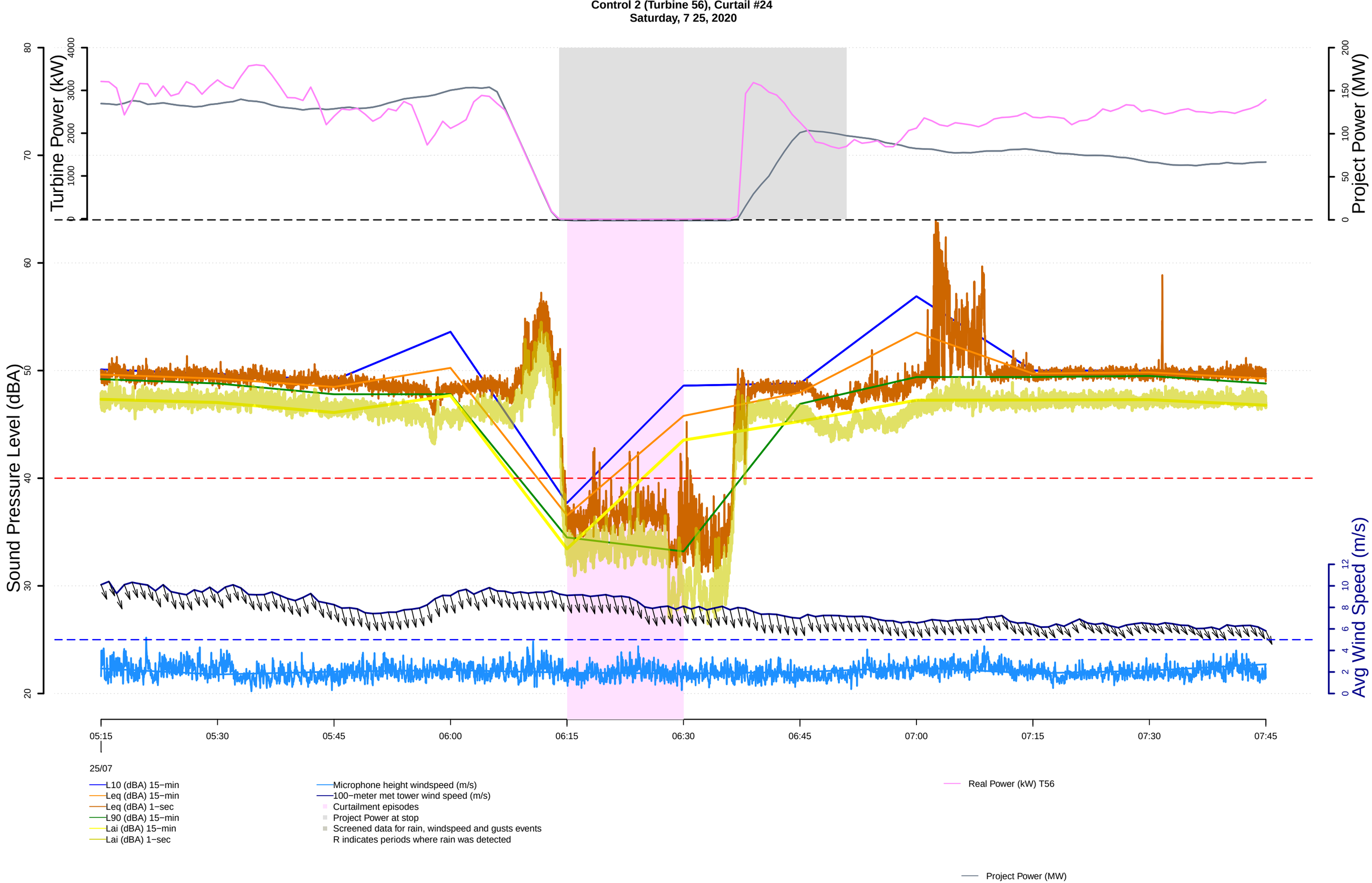
24/07

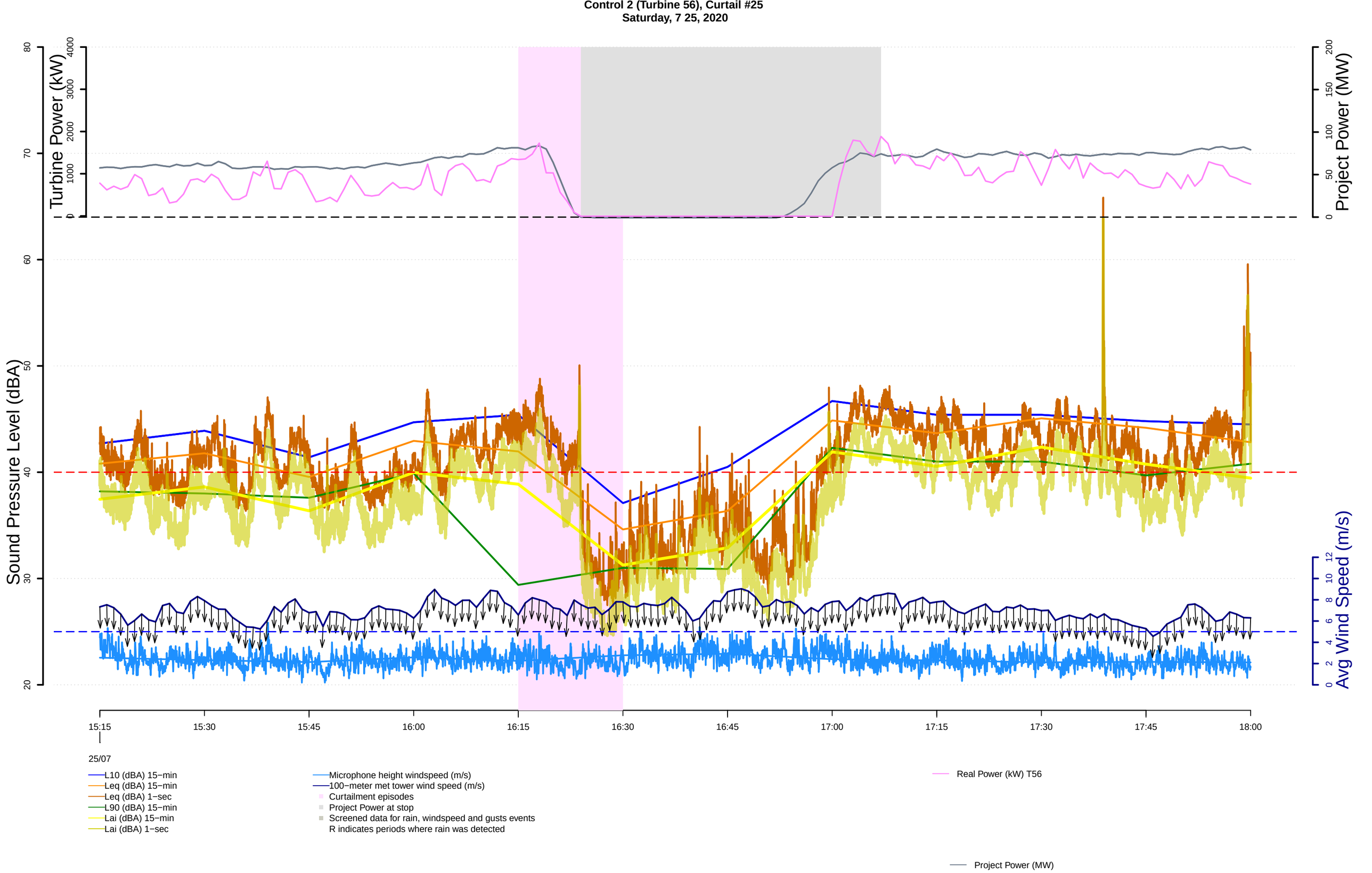
- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
- R indicates periods where rain was detected
- Real Power (kW) T56
- Project Power (MW)

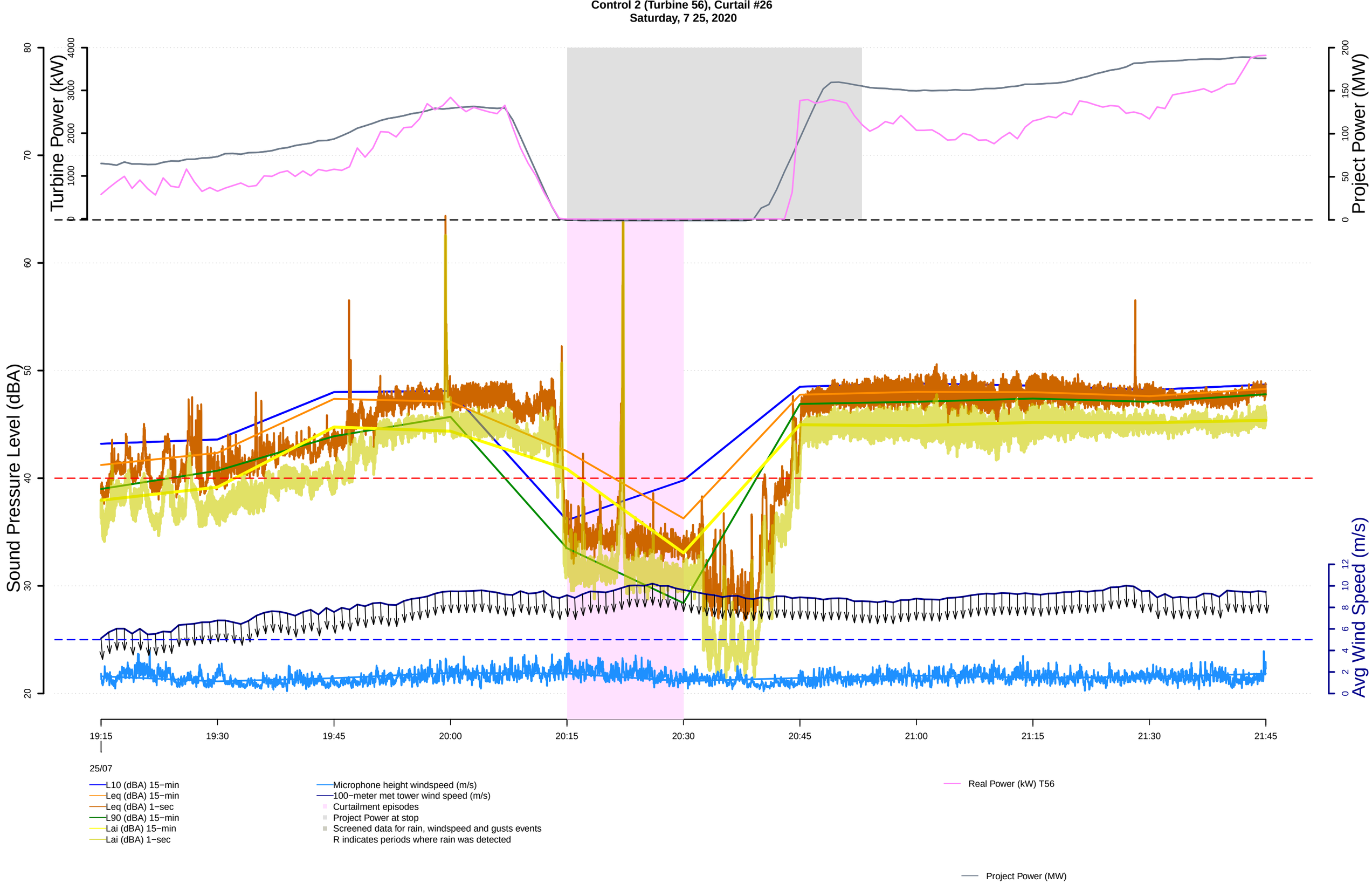
Control 2 (Turbine 56), Curtail #22
Saturday, 7 25, 2020

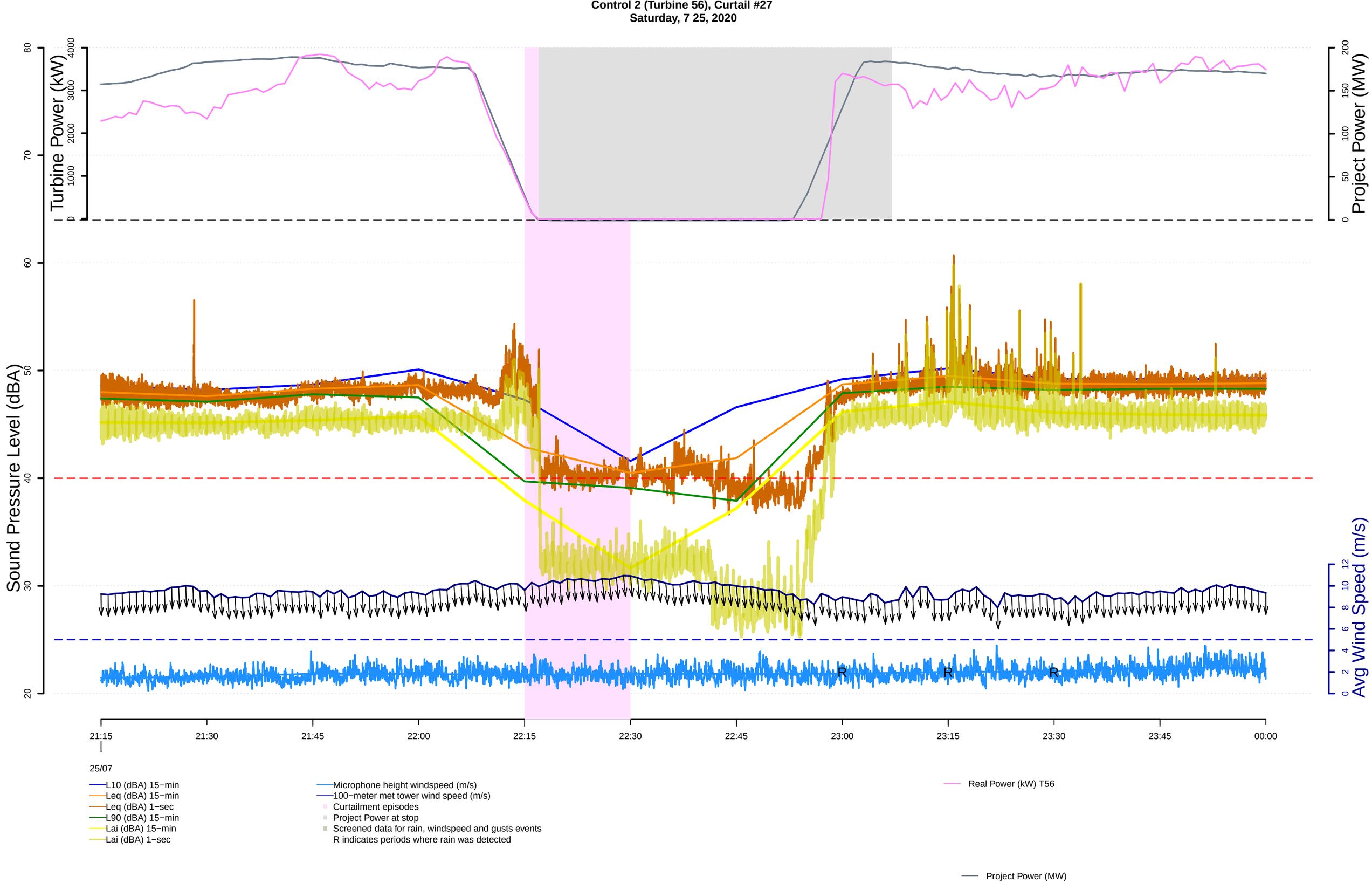


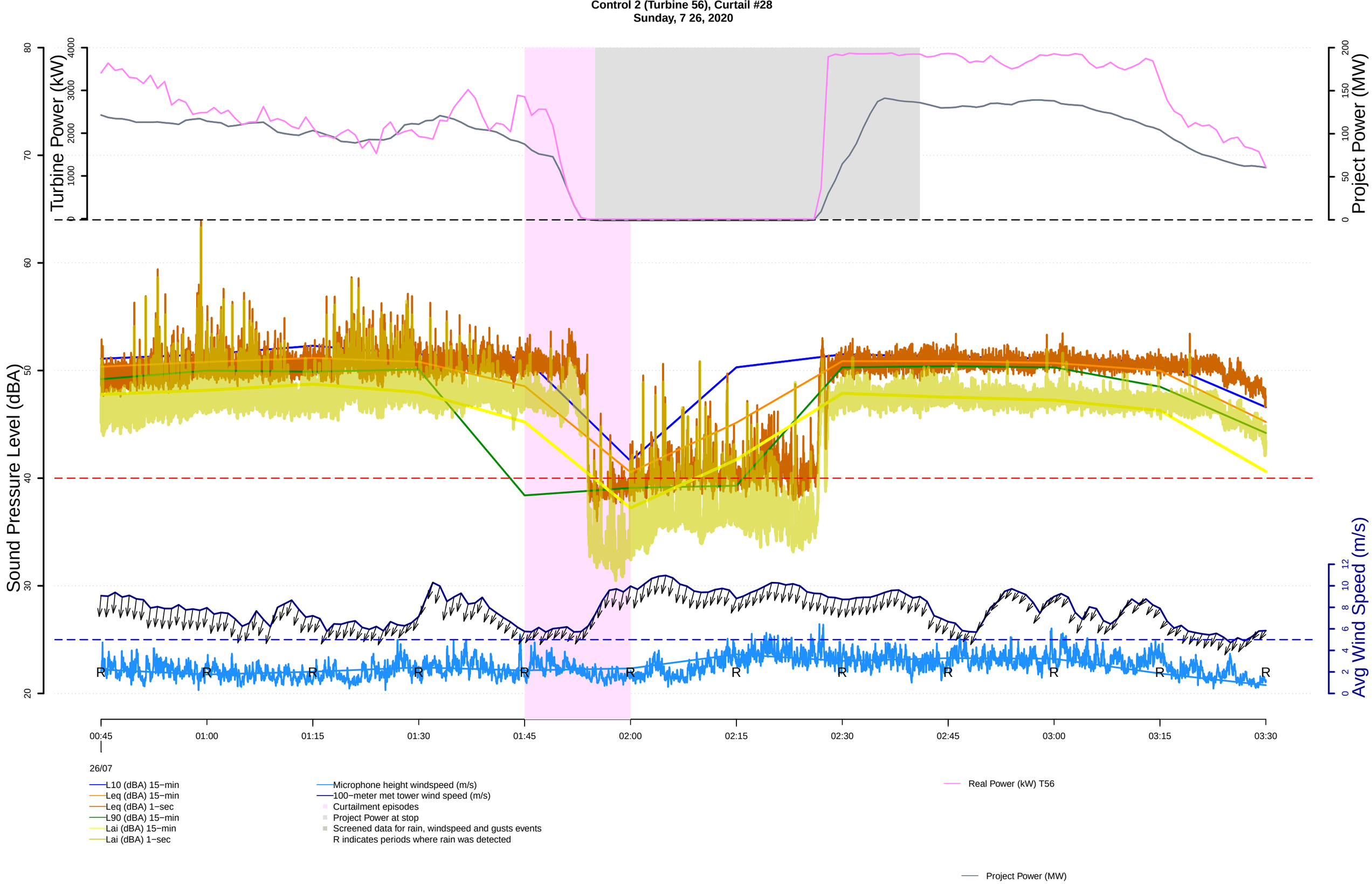

Control 2 (Turbine 56), Curtail #23
Saturday, 7 25, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
R
02:15
02:30
02:45
03:00
03:15
03:30
03:45
04:00
04:15
04:30
04:45
25/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T56
Project Power (MW)


Control 2 (Turbine 56), Curtail #24
Saturday, 7 25, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
05:15
05:30
05:45
06:00
06:15
06:30
06:45
07:00
07:15
07:30
07:45
25/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T56
Project Power (MW)

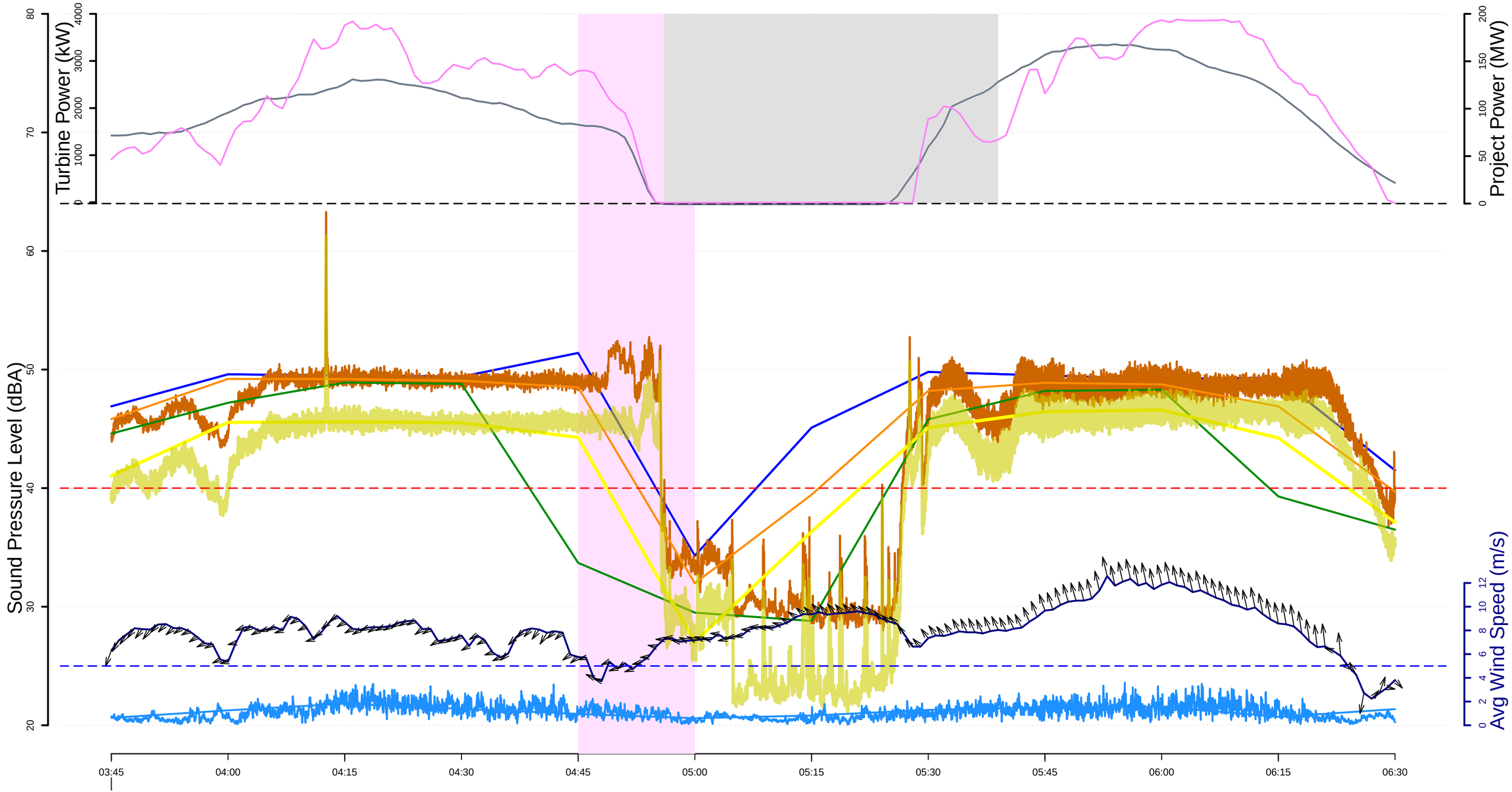

Control 2 (Turbine 56), Curtail #25
Saturday, 7 25, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
15:15
15:30
15:45
16:00
16:15
16:30
16:45
17:00
17:15
17:30
17:45
18:00
25/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T56
Project Power (MW)


Control 2 (Turbine 56), Curtail #26
Saturday, 7 25, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
19:15
19:30
19:45
20:00
20:15
20:30
20:45
21:00
21:15
21:30
21:45
25/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T56
Project Power (MW)


Control 2 (Turbine 56), Curtail #27
Saturday, 7 25, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
R
21:15
21:30
21:45
22:00
22:15
22:30
22:45
23:00
23:15
23:30
23:45
00:00
25/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T56
Project Power (MW)


Control 2 (Turbine 56), Curtail #28
Sunday, 7 26, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
00:45
01:00
01:15
01:30
01:45
02:00
02:15
02:30
02:45
03:00
03:15
03:30
26/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T56
Project Power (MW)

Control 2 (Turbine 56), Curtail #29
Sunday, 7 26, 2020



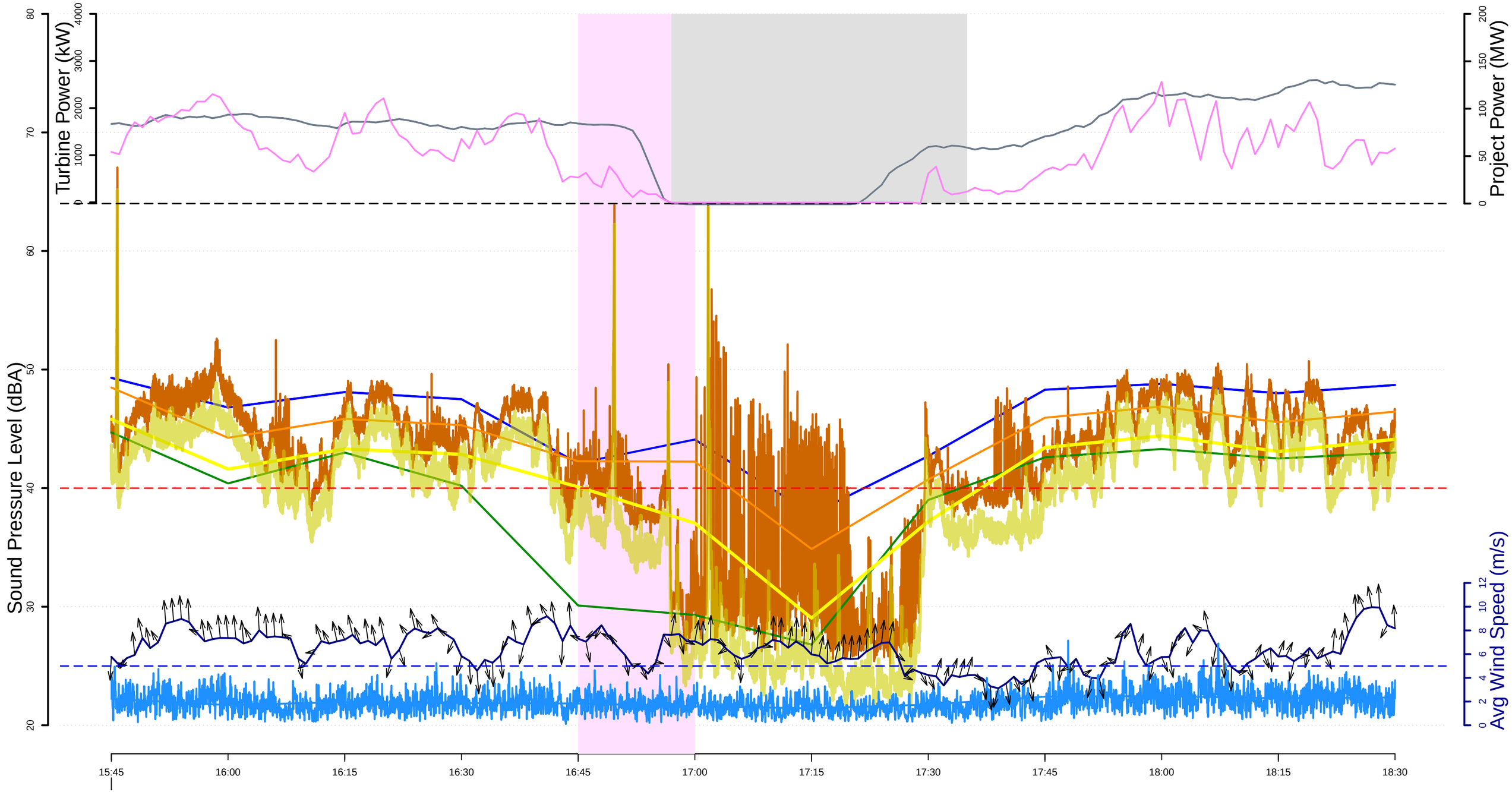
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

Real Power (kW) T56

Project Power (MW)

Control 2 (Turbine 56), Curtail #30
Sunday, 7 26, 2020



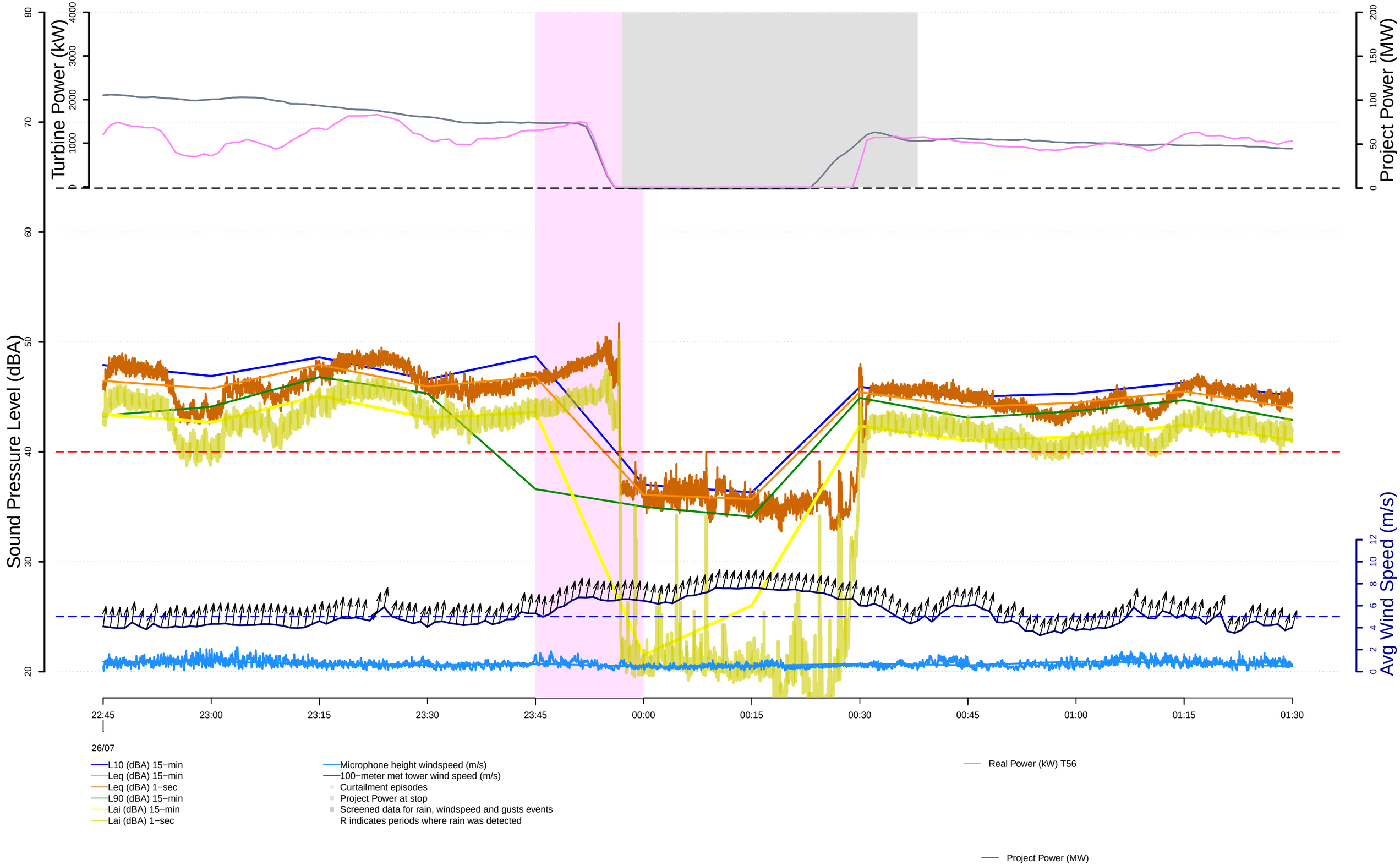
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

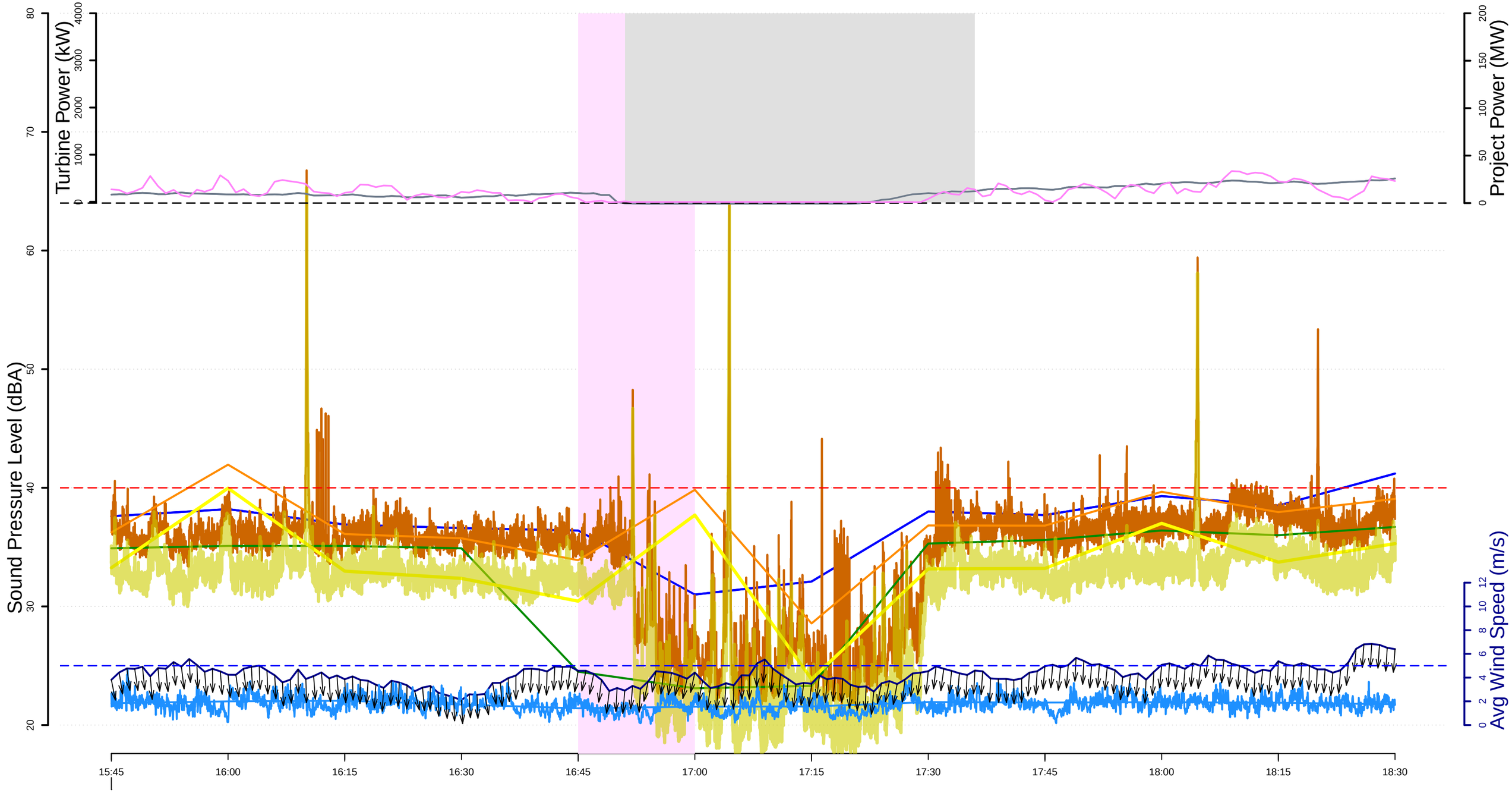
Real Power (kW) T56

Project Power (MW)

Control 2 (Turbine 56), Curtail #31
Sunday, 7 26, 2020

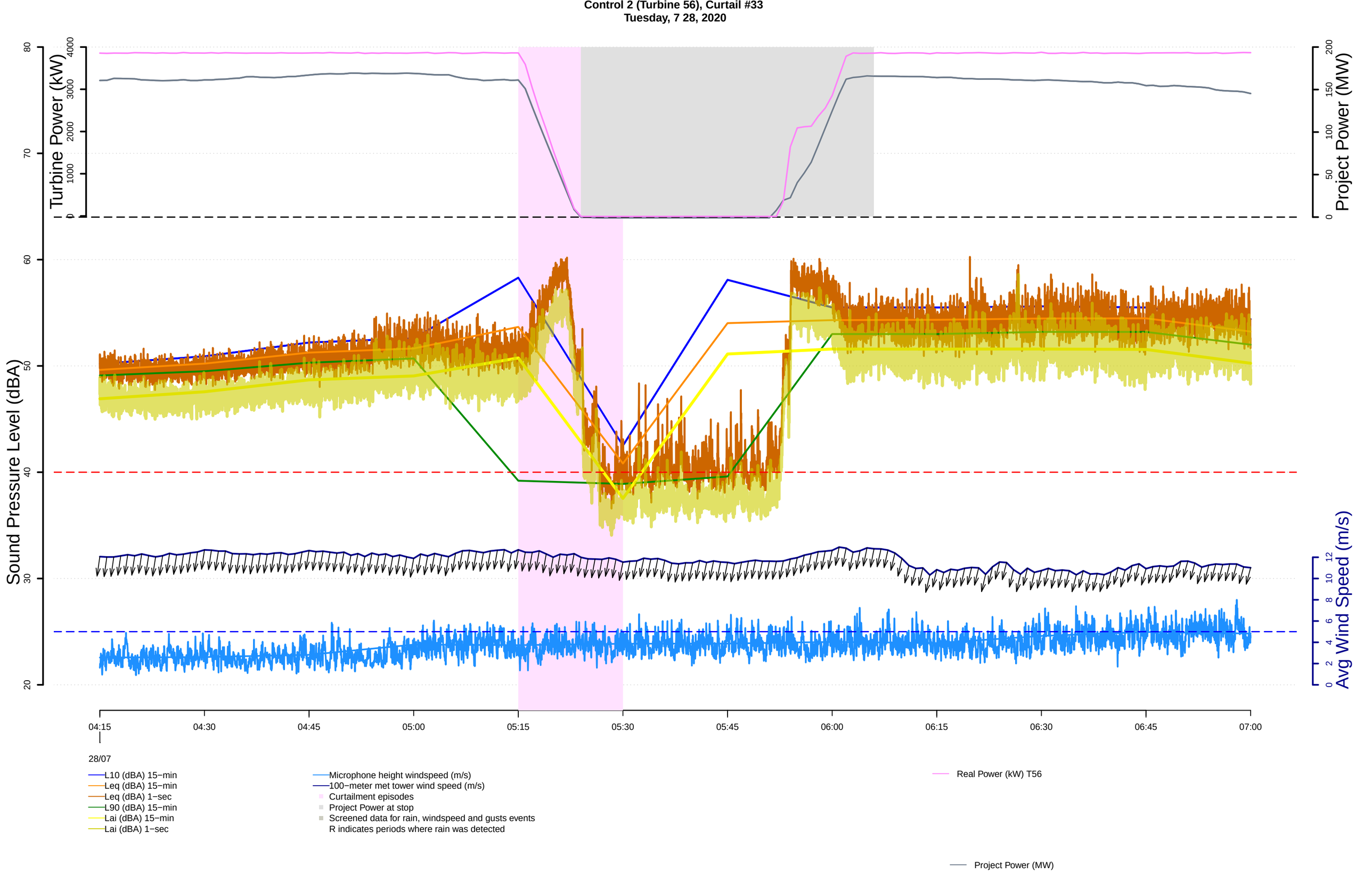


Control 2 (Turbine 56), Curtail #32
Monday, 7 27, 2020

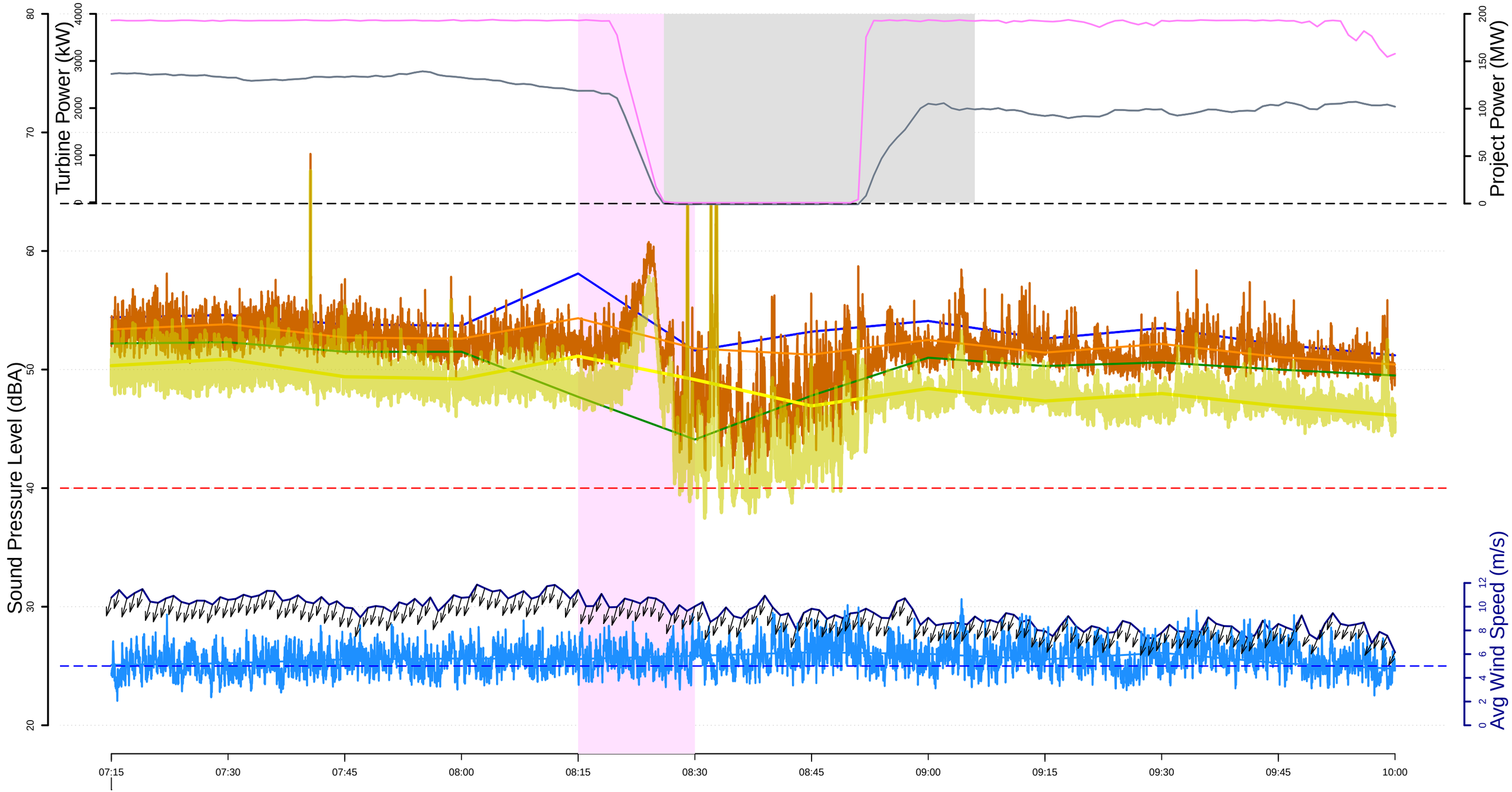


27/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T56
- Project Power (MW)

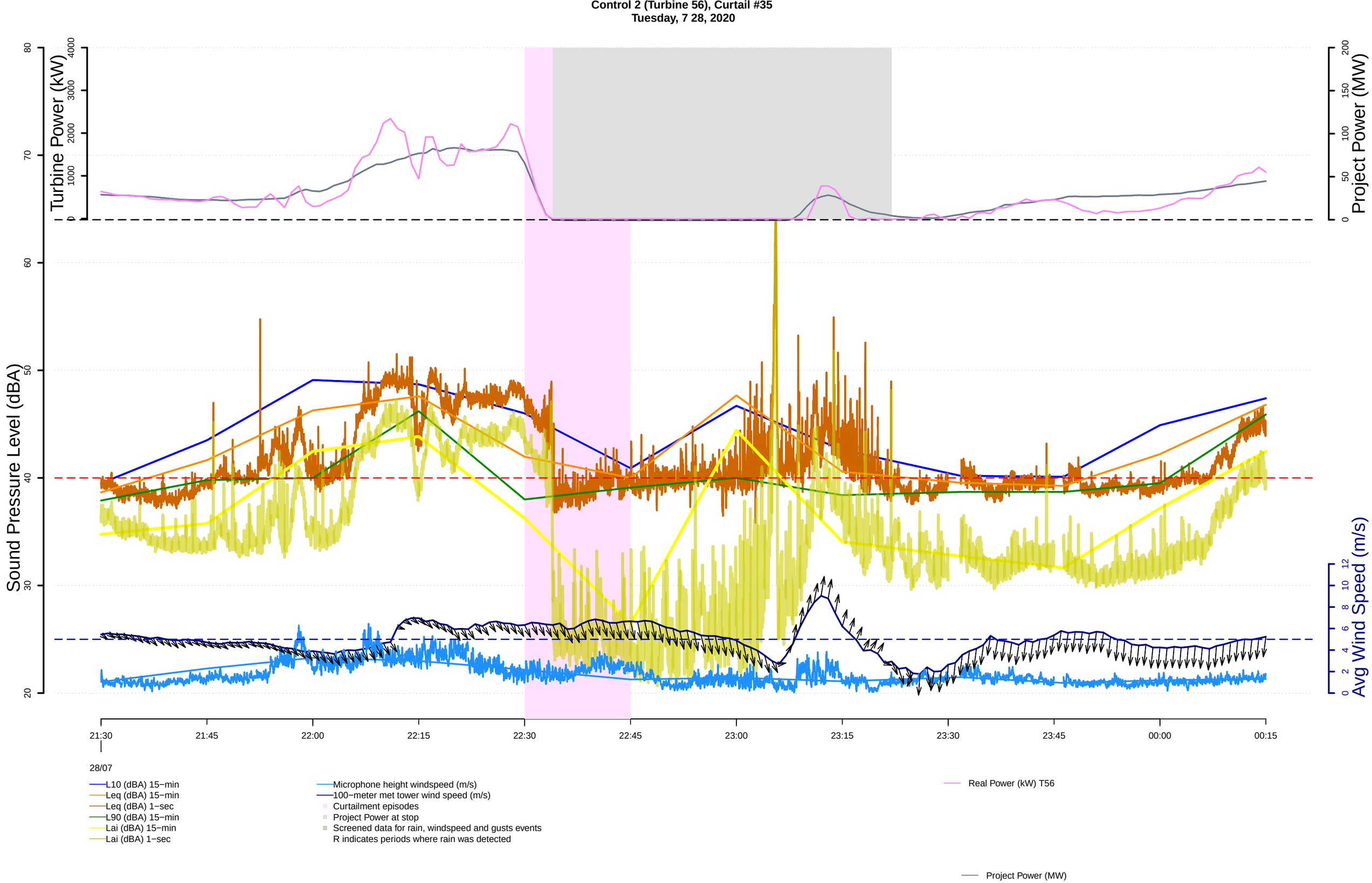

Control 2 (Turbine 56), Curtail #33
Tuesday, 7 28, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
04:15
04:30
04:45
05:00
05:15
05:30
05:45
06:00
06:15
06:30
06:45
07:00
28/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T56
Project Power (MW)

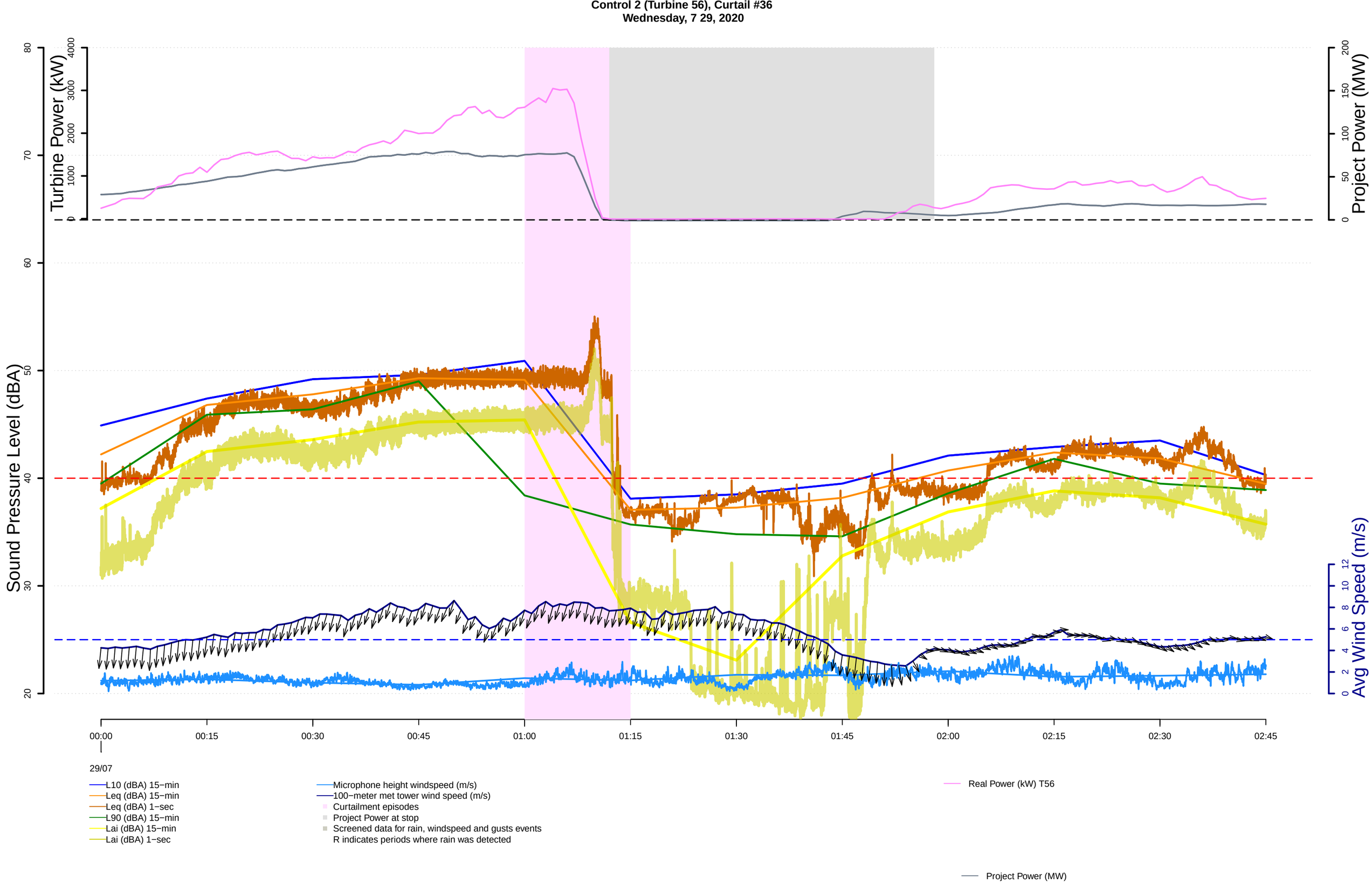
Control 2 (Turbine 56), Curtail #34
Tuesday, 7 28, 2020



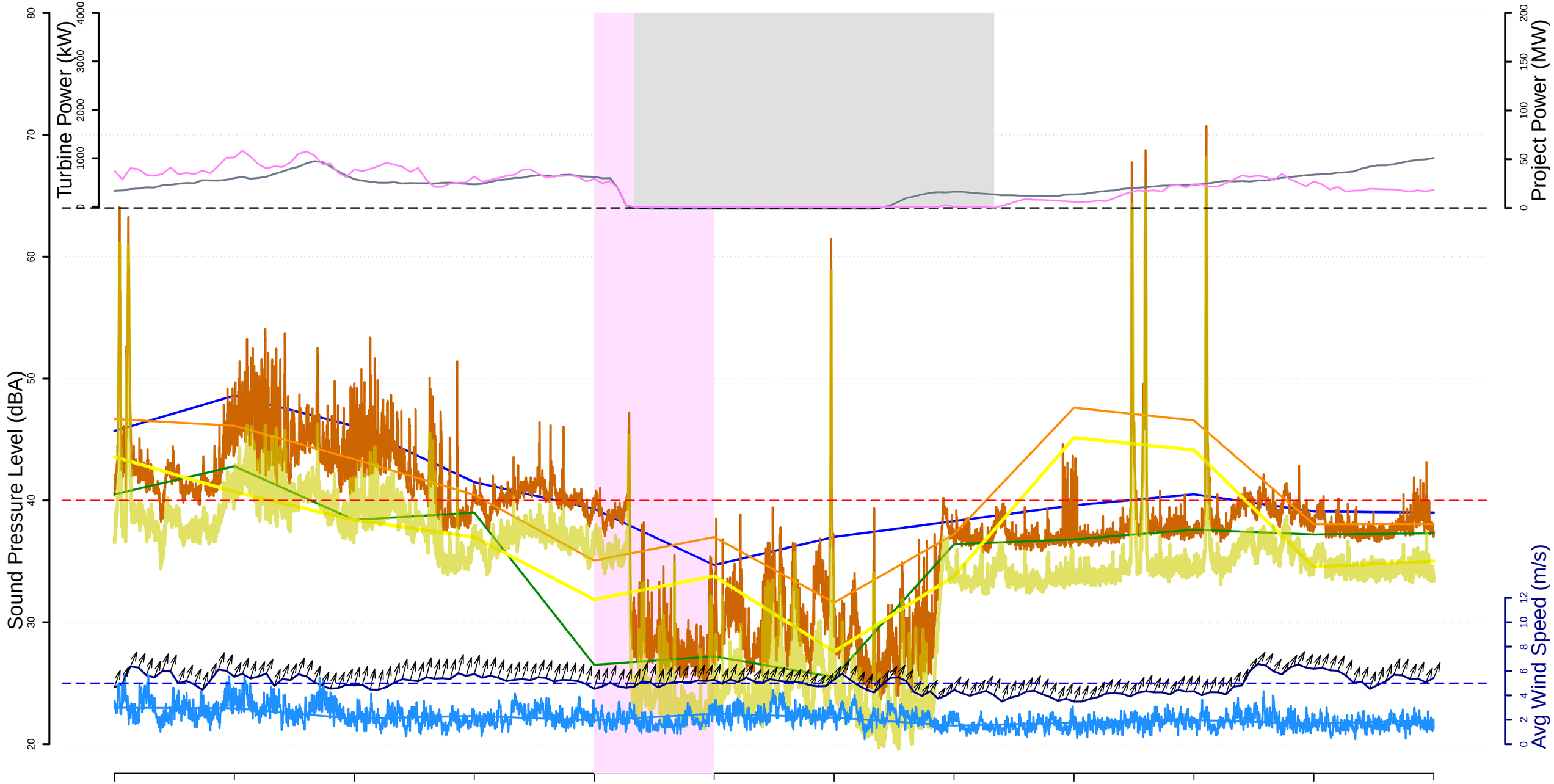
28/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T56
- Project Power (MW)


Control 2 (Turbine 56), Curtail #35
Tuesday, 7 28, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
21:30
21:45
22:00
22:15
22:30
22:45
23:00
23:15
23:30
23:45
00:00
00:15
28/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T56
Project Power (MW)


Control 2 (Turbine 56), Curtail #36
Wednesday, 7 29, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
00:00
00:15
00:30
00:45
01:00
01:15
01:30
01:45
02:00
02:15
02:30
02:45
29/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T56
Project Power (MW)

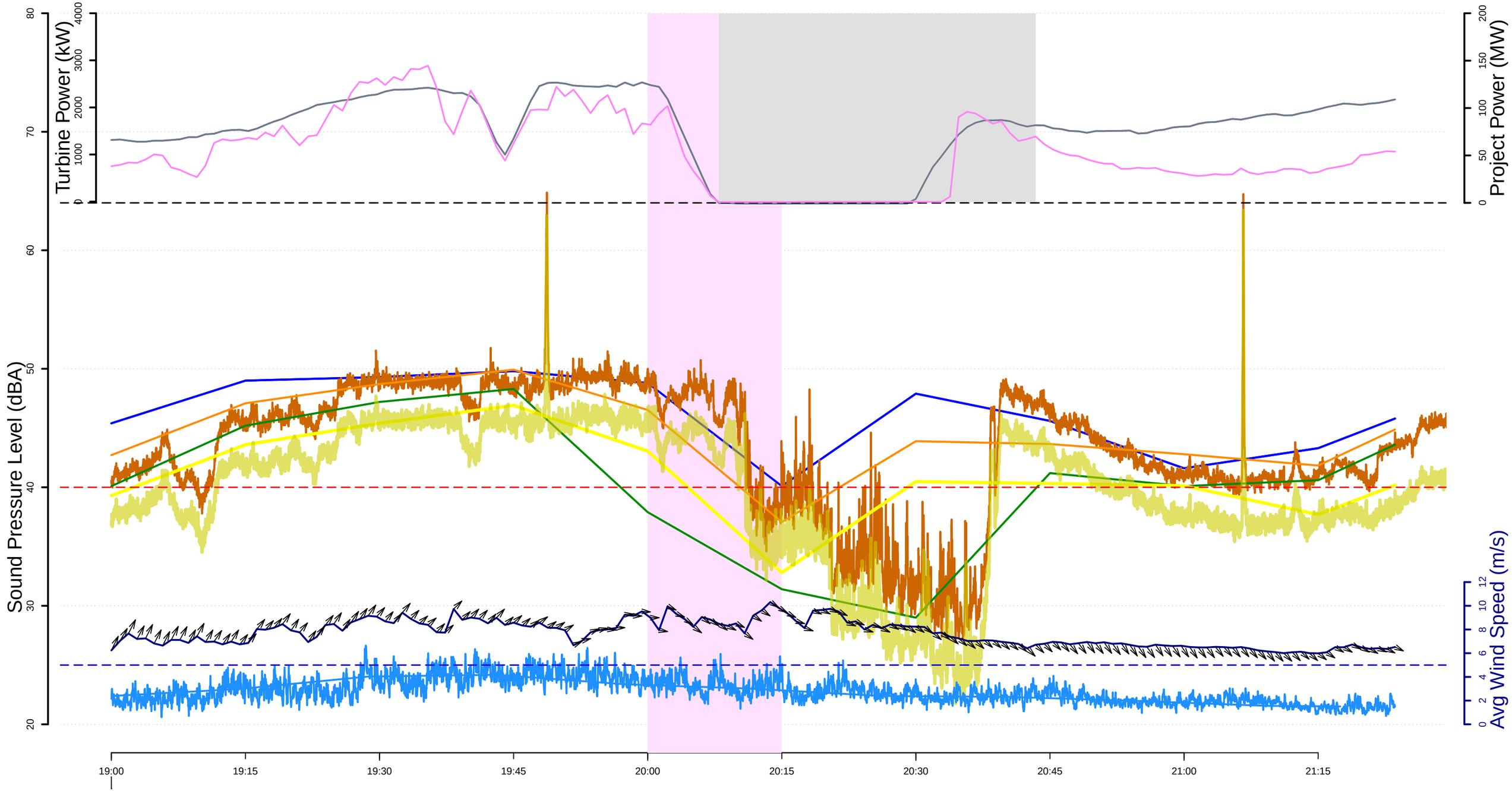
Control 2 (Turbine 56), Curtail #37
Wednesday, 7 29, 2020



29/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T56
- Project Power (MW)

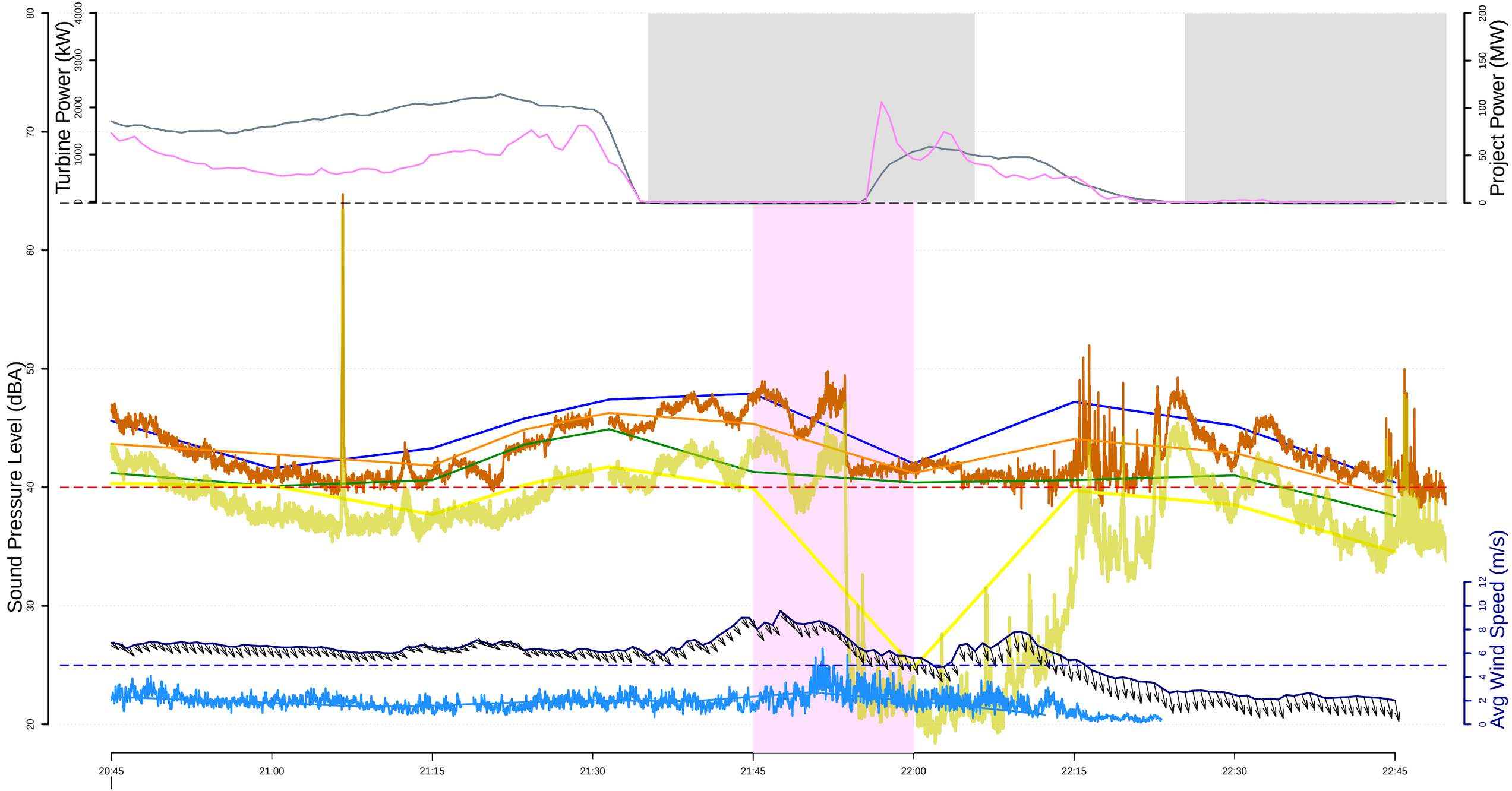
Control 2 (Turbine 56), Curtail #38
Wednesday, 7 29, 2020



29/07

- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T56
- Project Power (MW)

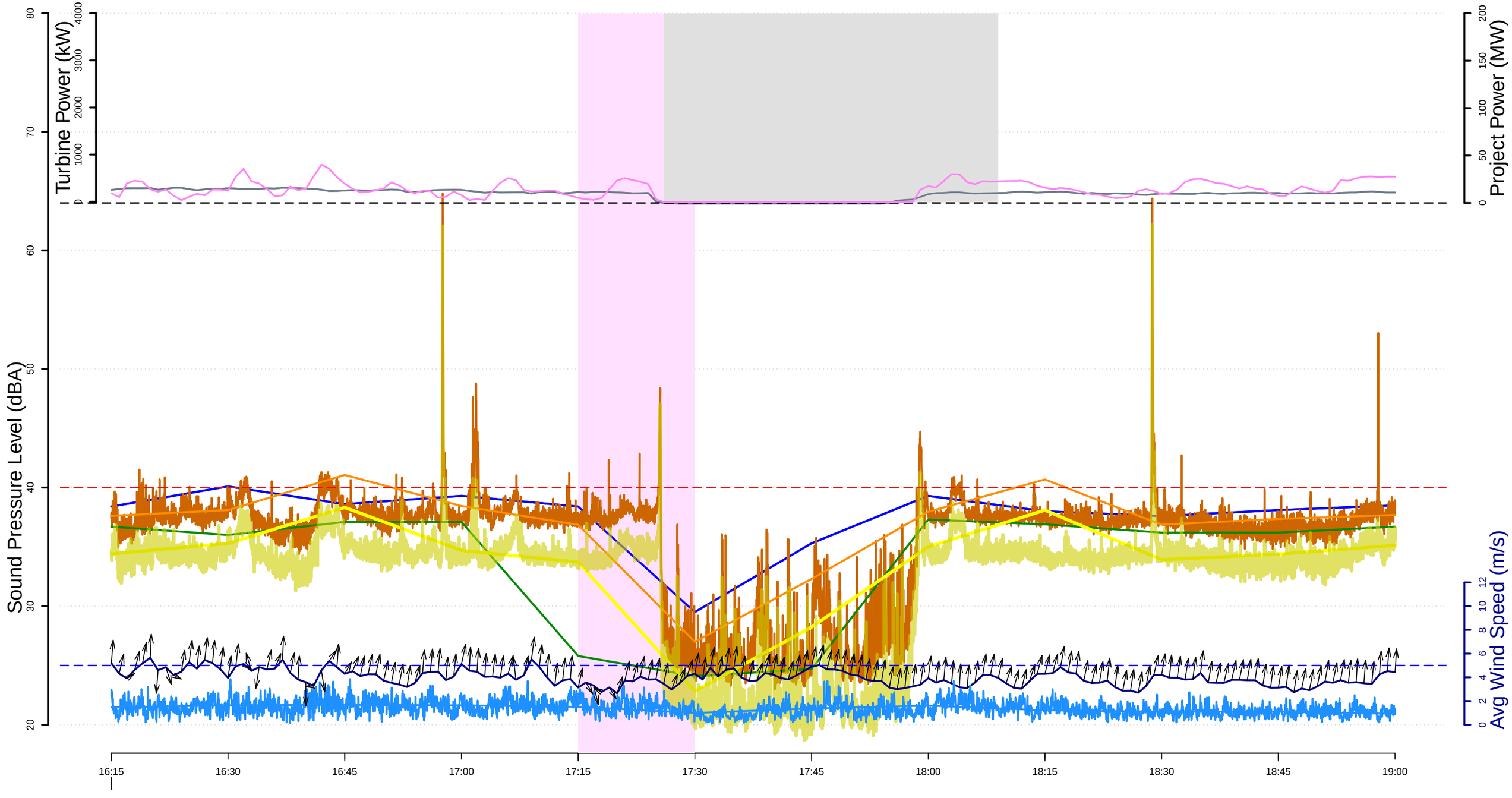
Control 2 (Turbine 56), Curtail #39
Wednesday, 7 29, 2020



29/07

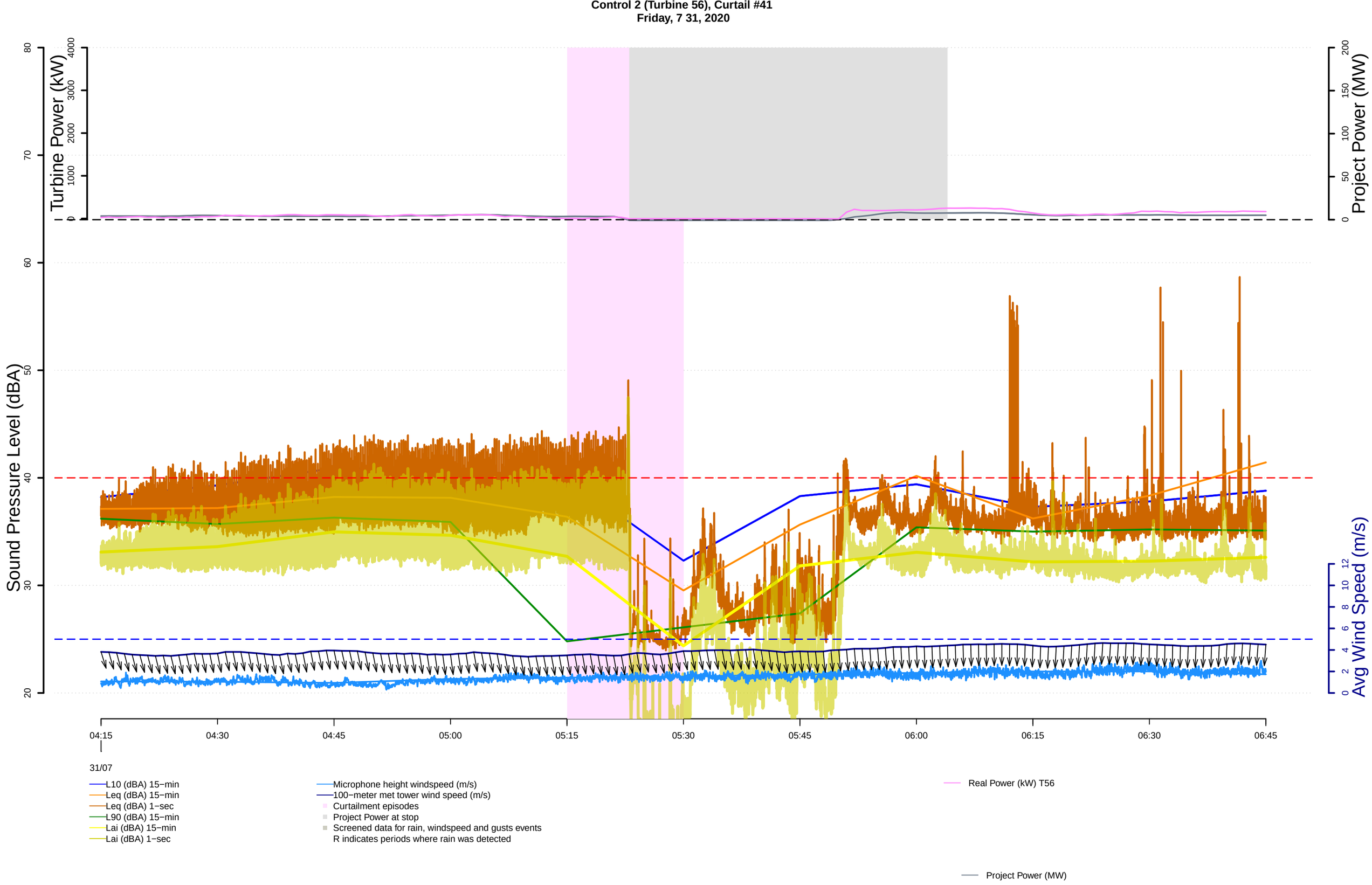
- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T56
- Project Power (MW)

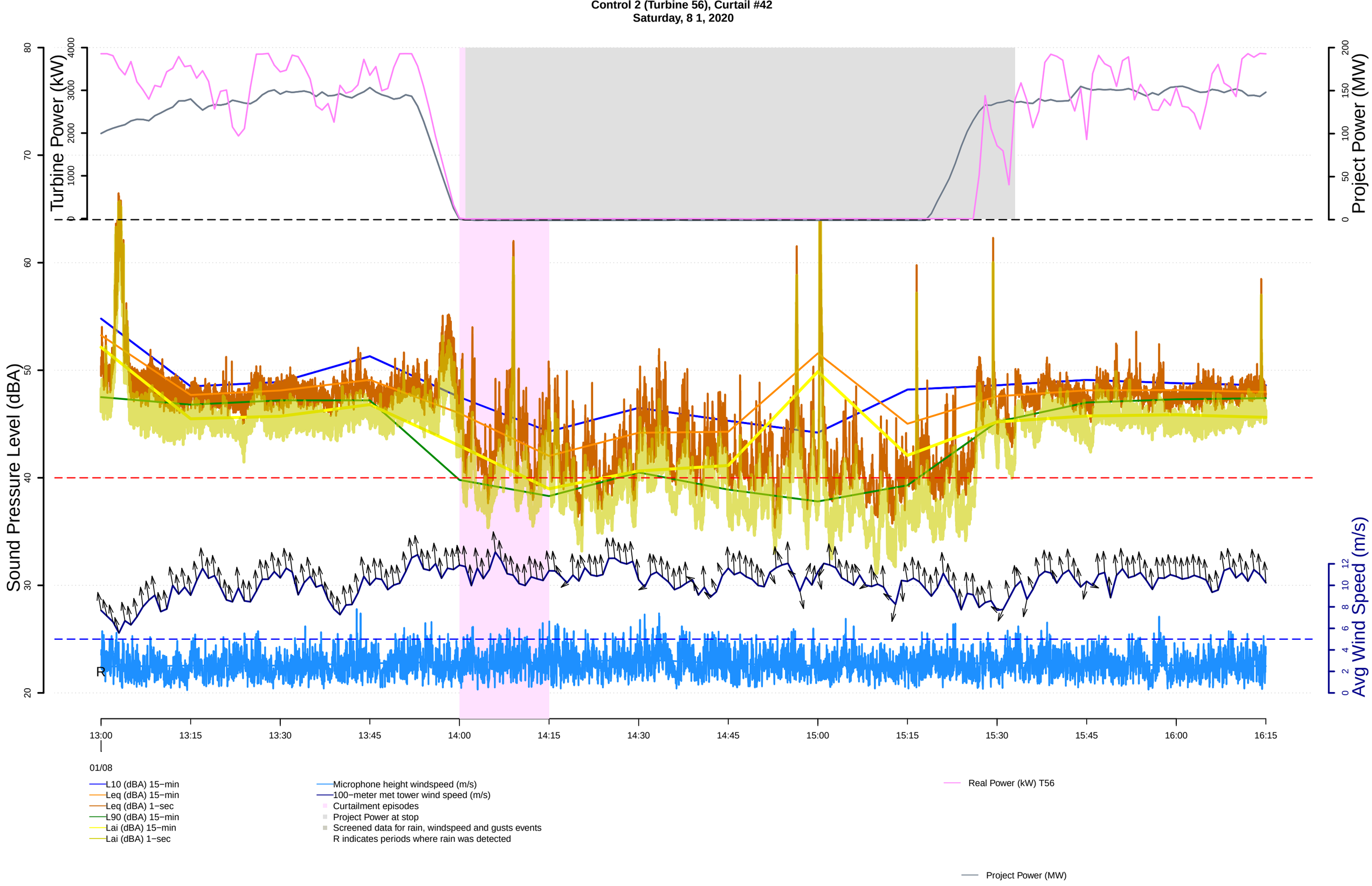
Control 2 (Turbine 56), Curtail #40
Thursday, 7 30, 2020

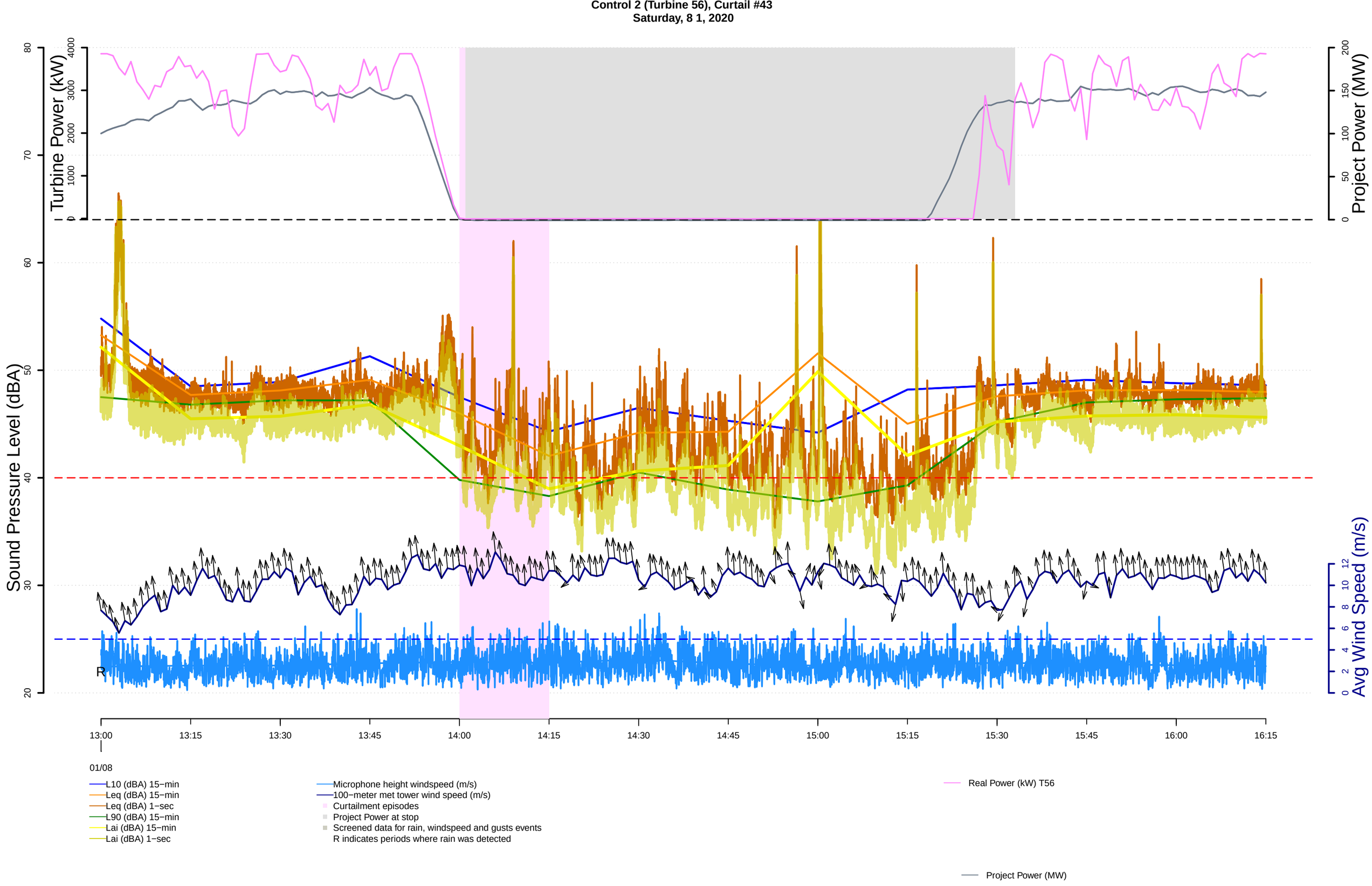


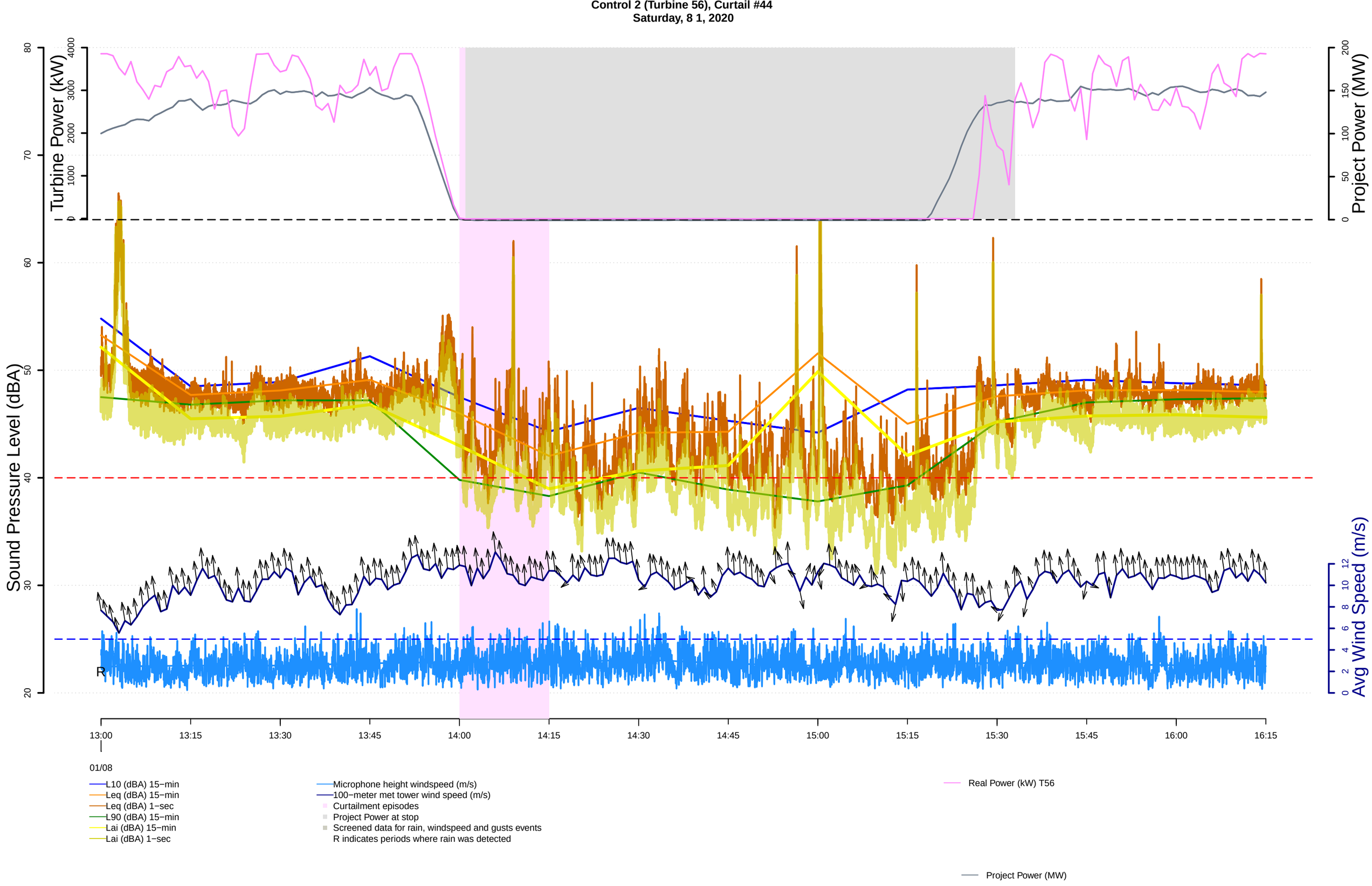
30/07

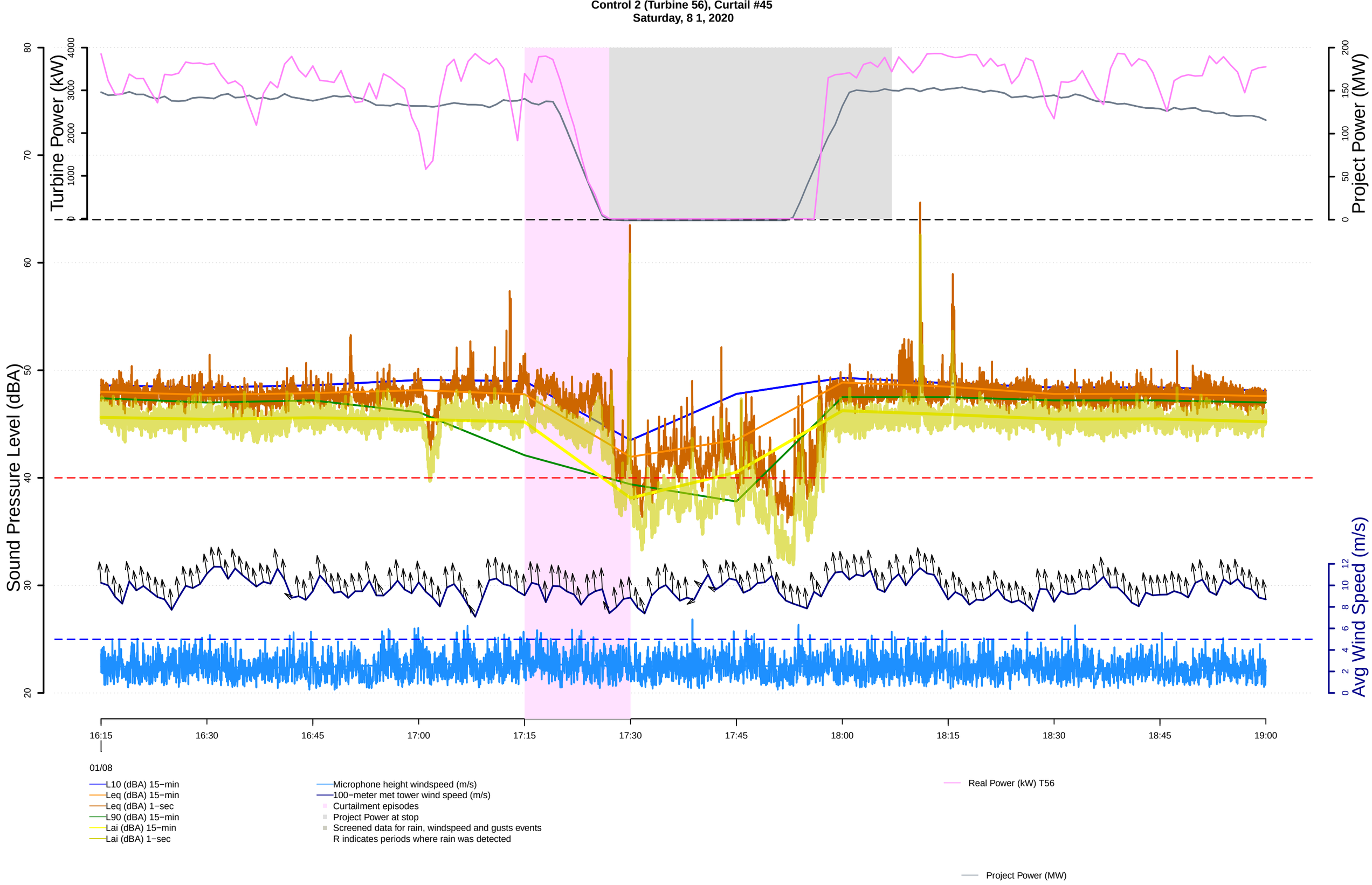
- L10 (dBA) 15−min
- Leq (dBA) 15−min
- Leq (dBA) 1−sec
- L90 (dBA) 15−min
- Lai (dBA) 15−min
- Lai (dBA) 1−sec
- Microphone height windspeed (m/s)
- 100−meter met tower wind speed (m/s)
- Curtailment episodes
- Project Power at stop
- Screened data for rain, windspeed and gusts events
  R indicates periods where rain was detected
- Real Power (kW) T56
- Project Power (MW)

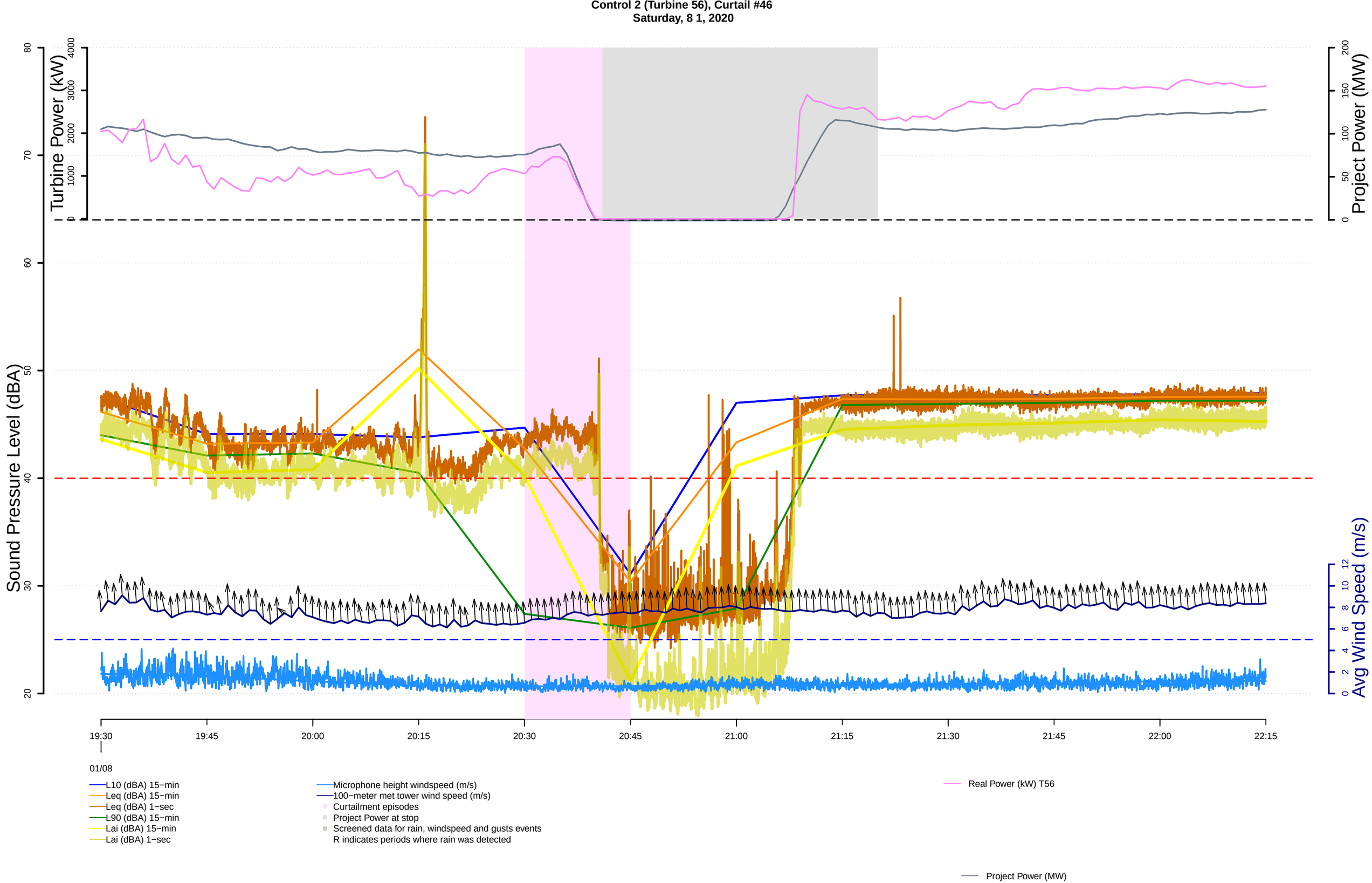

Control 2 (Turbine 56), Curtail #41
Friday, 7 31, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
04:15
04:30
04:45
05:00
05:15
05:30
05:45
06:00
06:15
06:30
06:45
31/07
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T56
Project Power (MW)

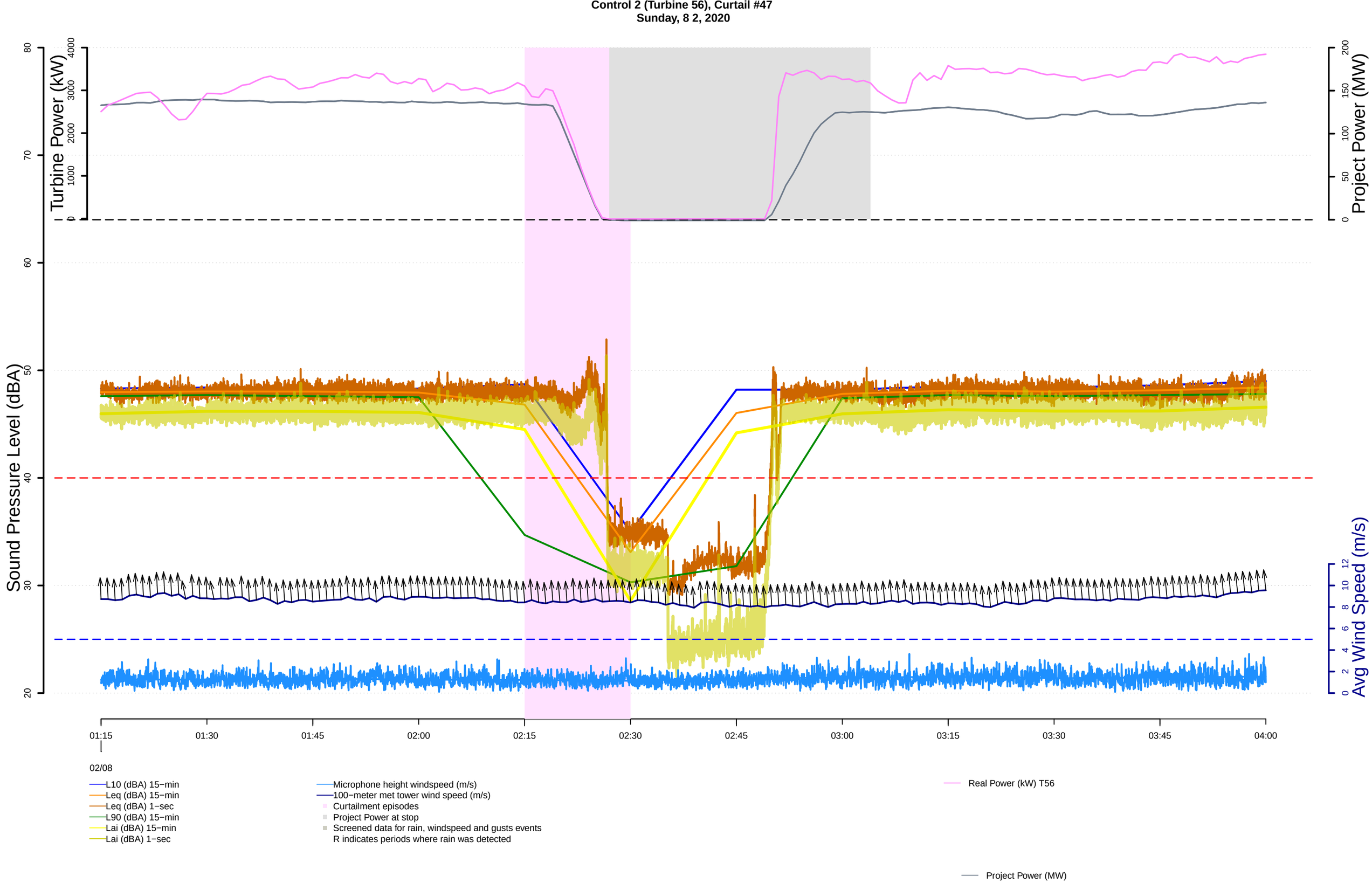

Control 2 (Turbine 56), Curtail #42
Saturday, 8 1, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
R
13:00
13:15
13:30
13:45
14:00
14:15
14:30
14:45
15:00
15:15
15:30
15:45
16:00
16:15
01/08
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T56
Project Power (MW)

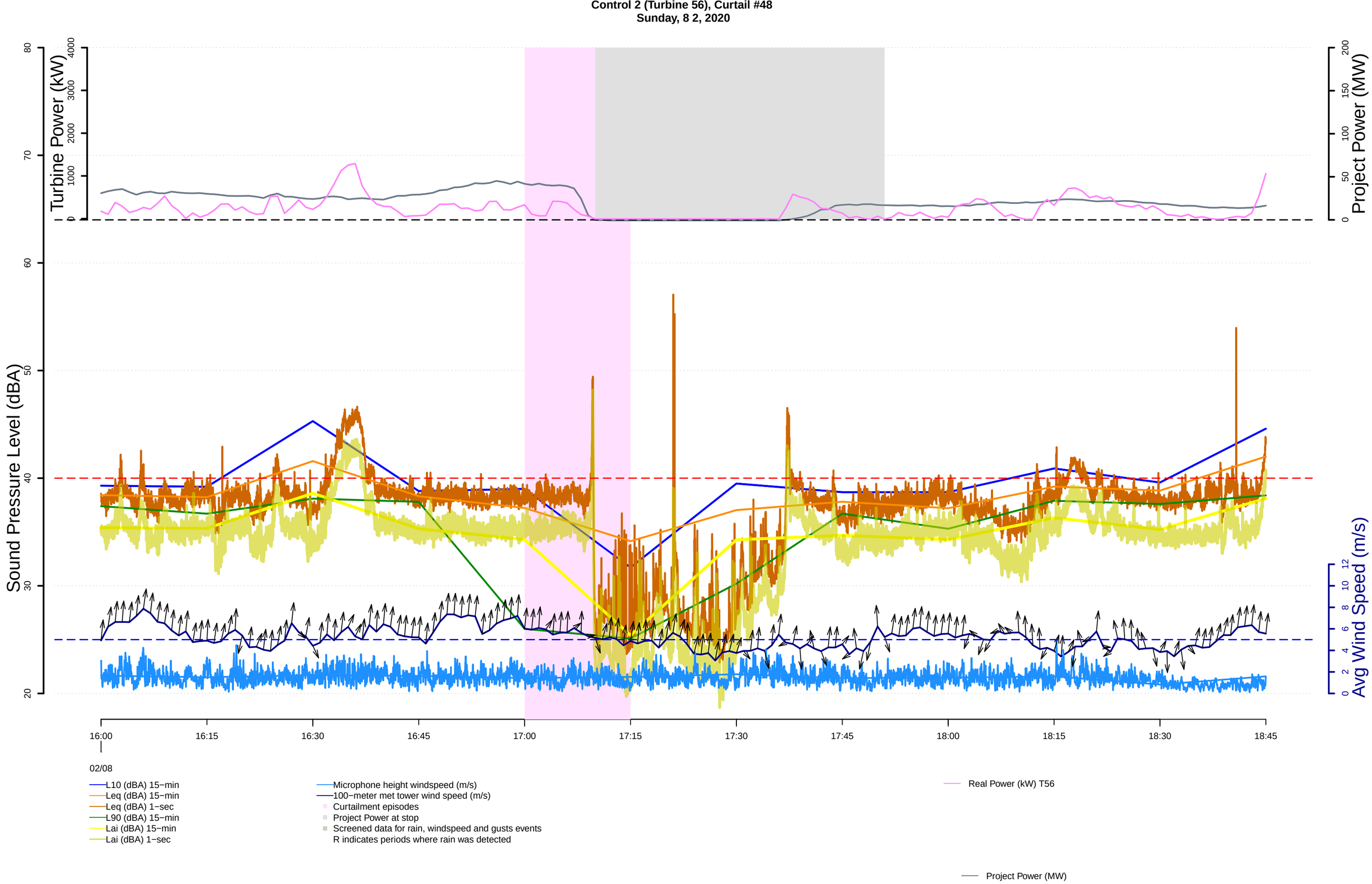

Control 2 (Turbine 56), Curtail #43
Saturday, 8 1, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
R
13:00
13:15
13:30
13:45
14:00
14:15
14:30
14:45
15:00
15:15
15:30
15:45
16:00
16:15
01/08
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T56
Project Power (MW)


Control 2 (Turbine 56), Curtail #44
Saturday, 8 1, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
R
13:00
13:15
13:30
13:45
14:00
14:15
14:30
14:45
15:00
15:15
15:30
15:45
16:00
16:15
01/08
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T56
Project Power (MW)

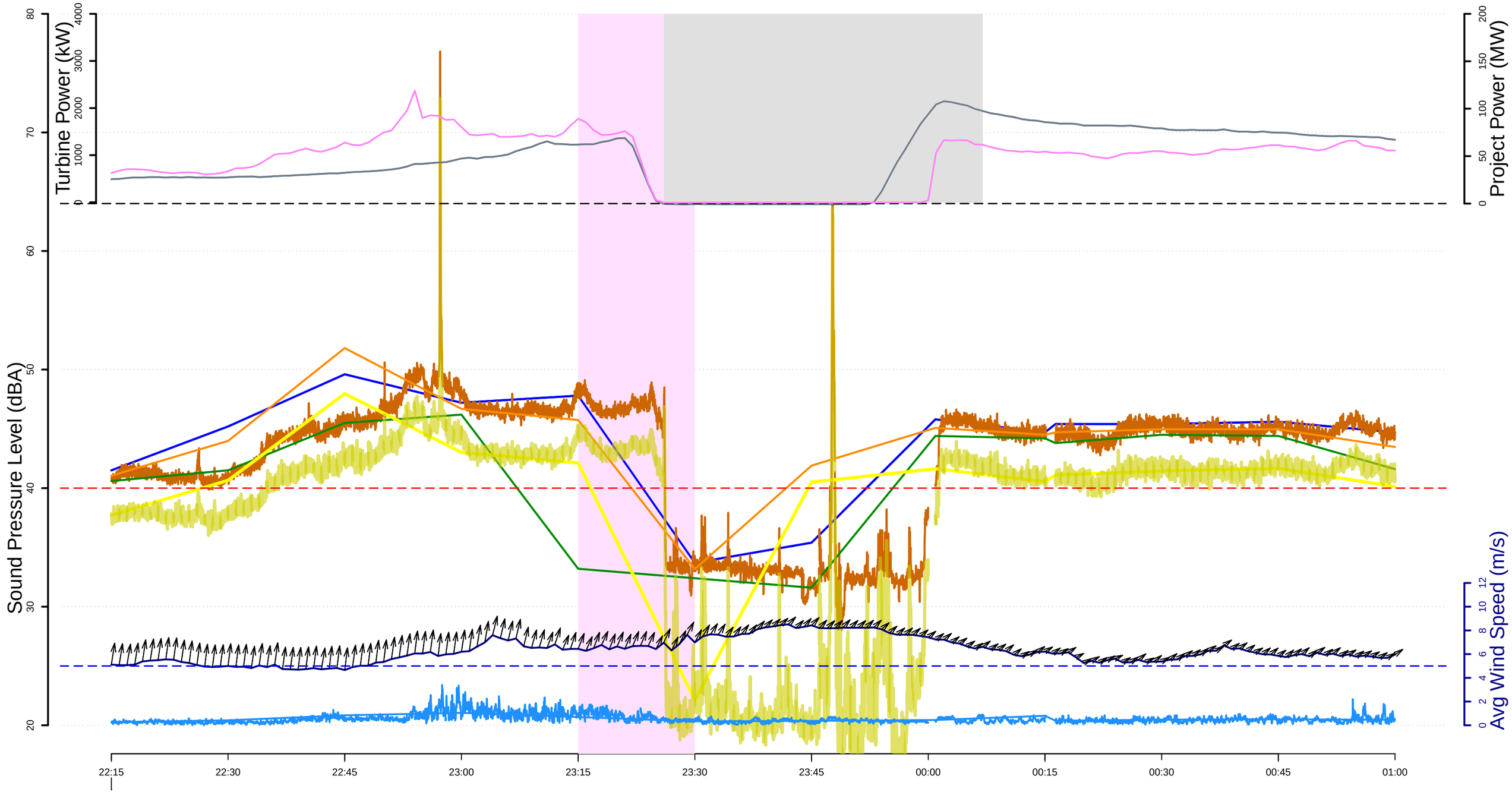

Control 2 (Turbine 56), Curtail #45
Saturday, 8 1, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
16:15
16:30
16:45
17:00
17:15
17:30
17:45
18:00
18:15
18:30
18:45
19:00
01/08
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T56
Project Power (MW)


Control 2 (Turbine 56), Curtail #46
Saturday, 8 1, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
19:30
19:45
20:00
20:15
20:30
20:45
21:00
21:15
21:30
21:45
22:00
22:15
01/08
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T56
Project Power (MW)


Control 2 (Turbine 56), Curtail #47
Sunday, 8 2, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
01:15
01:30
01:45
02:00
02:15
02:30
02:45
03:00
03:15
03:30
03:45
04:00
02/08
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T56
Project Power (MW)


Control 2 (Turbine 56), Curtail #48
Sunday, 8 2, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
16:00
16:15
16:30
16:45
17:00
17:15
17:30
17:45
18:00
18:15
18:30
18:45
02/08
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T56
Project Power (MW)

Control 2 (Turbine 56), Curtail #49
Sunday, 8 2, 2020

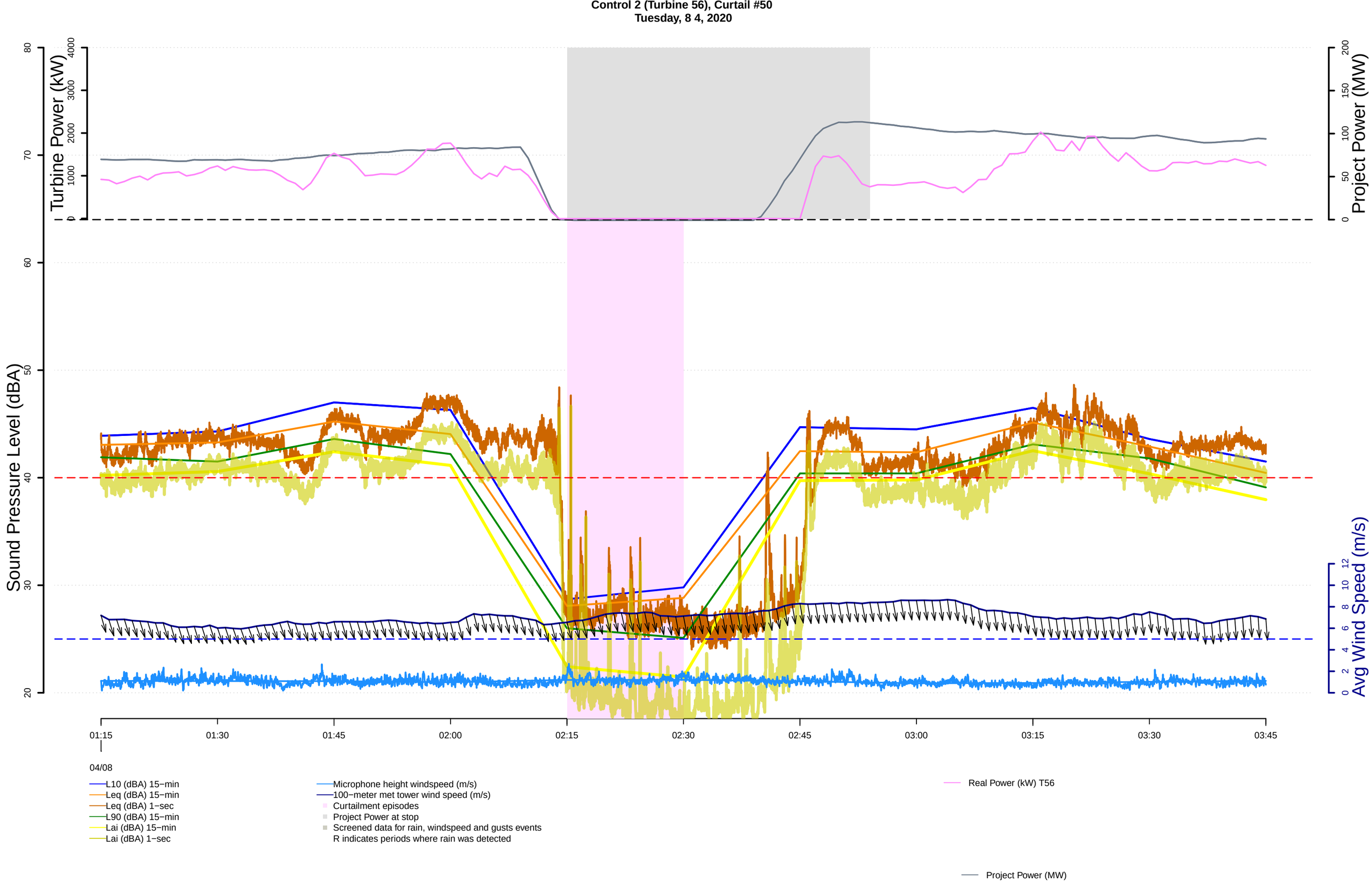


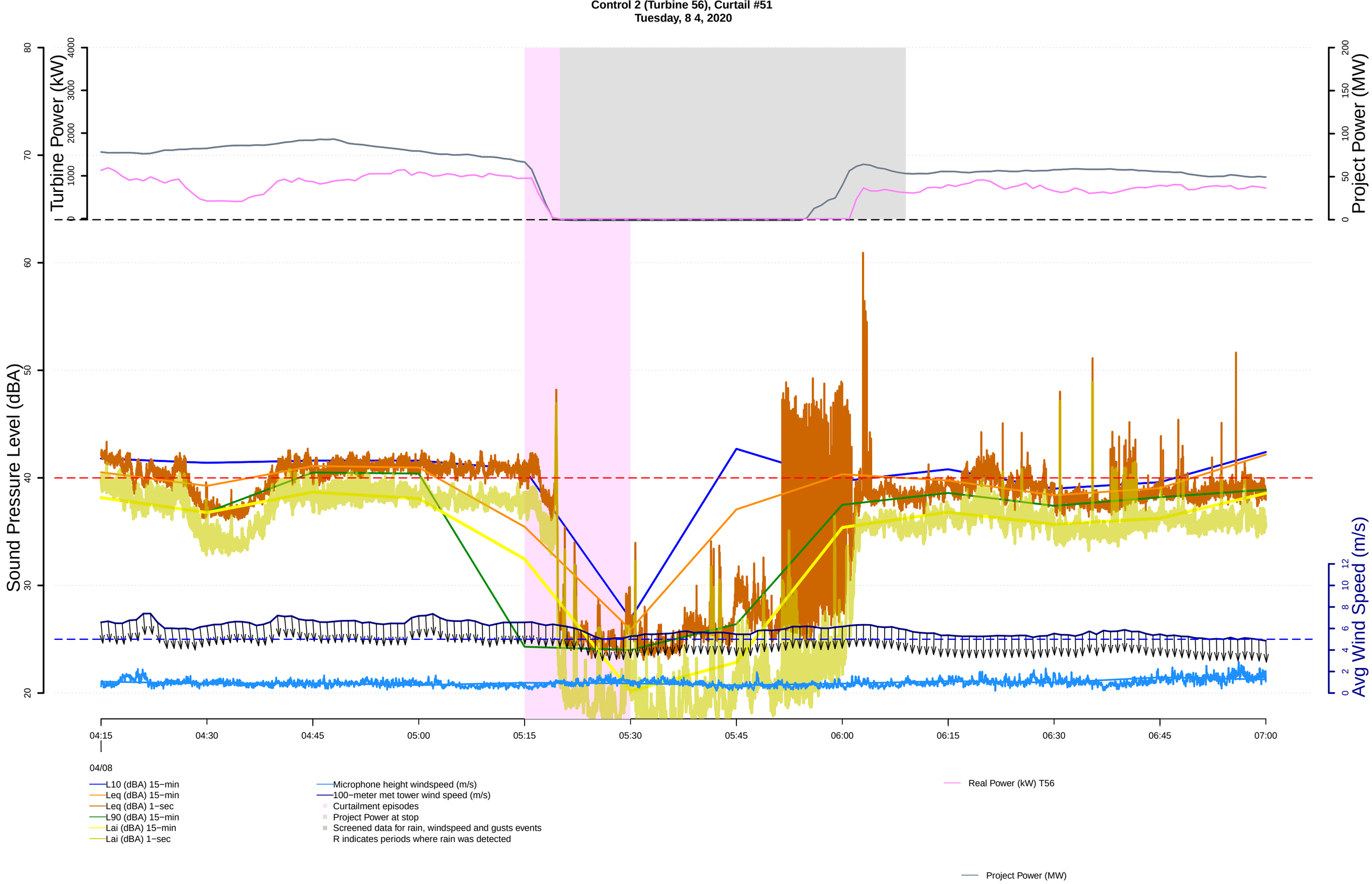
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec

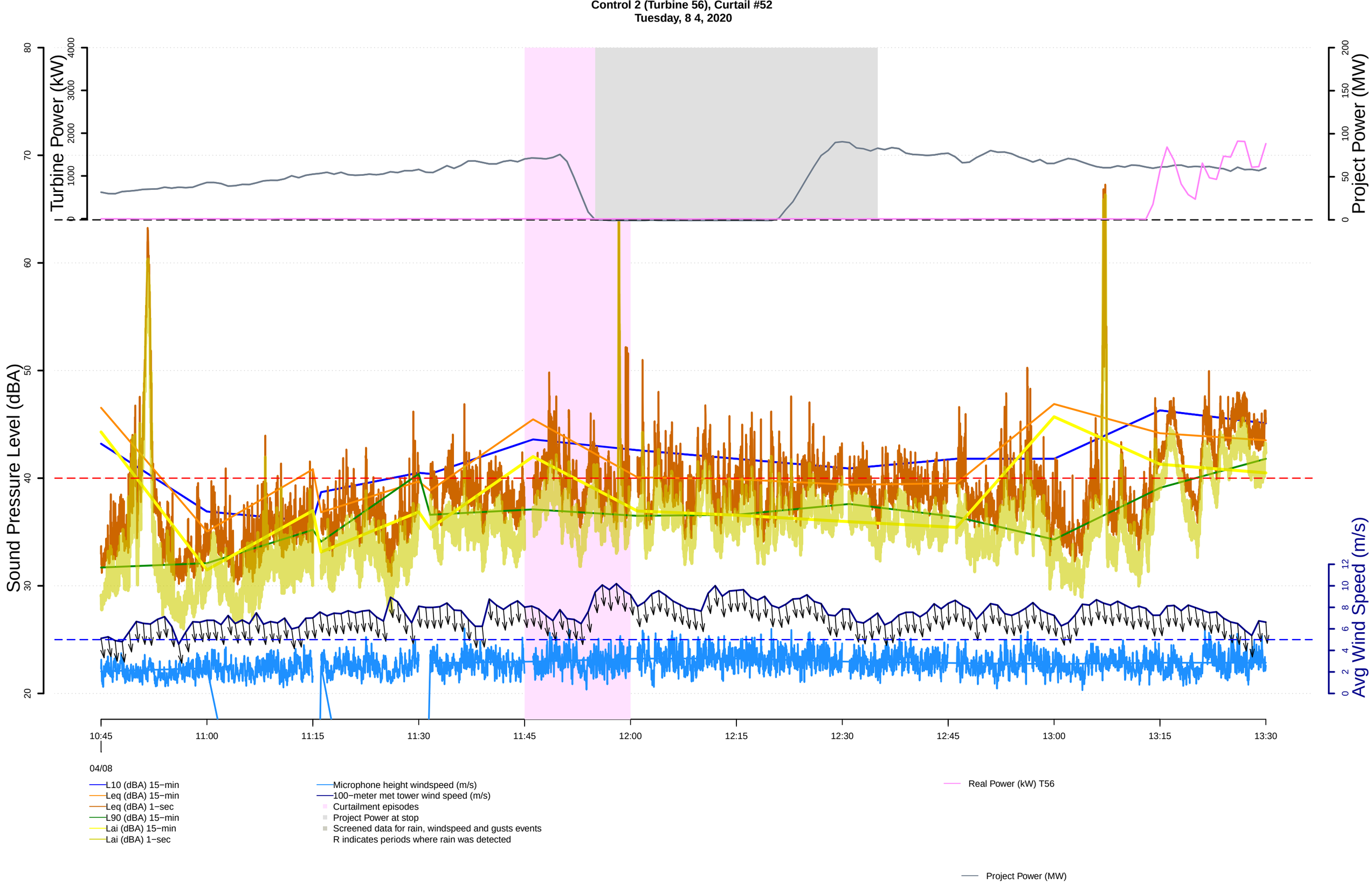
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected

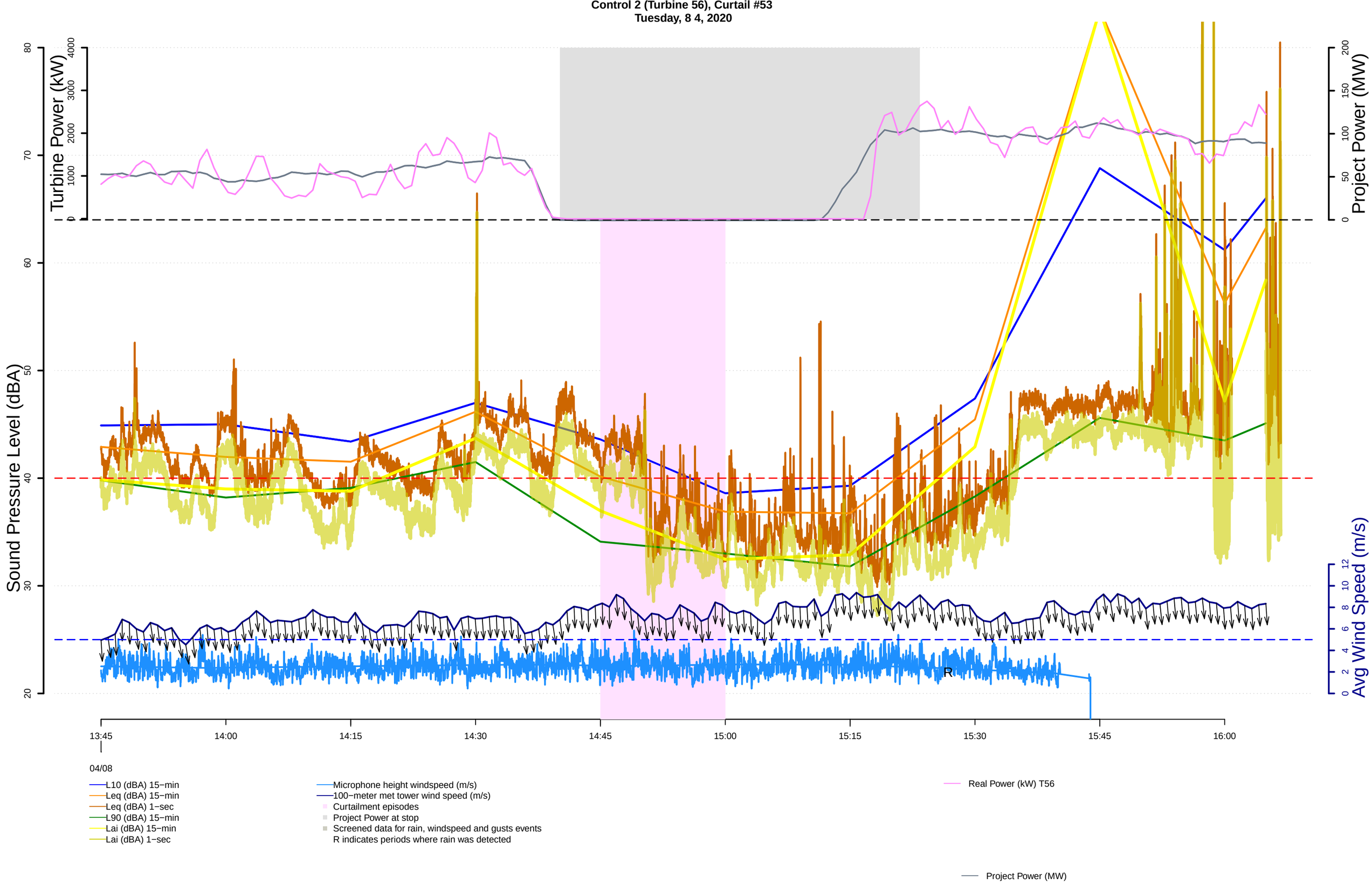
Real Power (kW) T56

Project Power (MW)


Control 2 (Turbine 56), Curtail #50
Tuesday, 8 4, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
01:15
01:30
01:45
02:00
02:15
02:30
02:45
03:00
03:15
03:30
03:45
04/08
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T56
Project Power (MW)


Control 2 (Turbine 56), Curtail #51
Tuesday, 8 4, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
04:15
04:30
04:45
05:00
05:15
05:30
05:45
06:00
06:15
06:30
06:45
07:00
04/08
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T56
Project Power (MW)


Control 2 (Turbine 56), Curtail #52
Tuesday, 8 4, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
10:45
11:00
11:15
11:30
11:45
12:00
12:15
12:30
12:45
13:00
13:15
13:30
04/08
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T56
Project Power (MW)


Control 2 (Turbine 56), Curtail #53
Tuesday, 8 4, 2020
Turbine Power (kW)
Project Power (MW)
Sound Pressure Level (dBA)
Avg Wind Speed (m/s)
R
13:45
14:00
14:15
14:30
14:45
15:00
15:15
15:30
15:45
16:00
04/08
L10 (dBA) 15−min
Leq (dBA) 15−min
Leq (dBA) 1−sec
L90 (dBA) 15−min
Lai (dBA) 15−min
Lai (dBA) 1−sec
Microphone height windspeed (m/s)
100−meter met tower wind speed (m/s)
Curtailment episodes
Project Power at stop
Screened data for rain, windspeed and gusts events
R indicates periods where rain was detected
Real Power (kW) T56
Project Power (MW)

Appendix G
Consultant Resume

Jacobs

Mark Bastasch, P.E., INCE Bd. Cert.

PRINCIPAL ACOUSTICAL ENGINEER

Mr. Bastasch has more than 20 years of experience conducting acoustical evaluations and working with multimedia environmental permitting and design teams. For over a decade, Mr. Bastasch has provided technical leadership on acoustical matters related to renewable energy facilities. He has been an invited speaker to organizations such as Harvard Law School's Consensus Building Institute, the U.S. Department of Energy's (USDOE) Wind Powering America, the International Energy Agency/USDOE National Renewable Energy Laboratory, National Wind Coordinating Council, Law Seminars International, Midwest Energy Bar Association, American Wind Energy Association, and USDOE's New England Wind Energy Education Project; and he has served as plenary speaker or session chair at conferences in Australia, Japan, Italy, and England. Mr. Bastasch has acoustical permitting and design experience in the U.S. power and infrastructure sectors and he has supported multiple design and engineer, procure, construct efforts both domestically and internationally, each of which has fully complied with applicable regulatory limits. He served as lead acoustical consultant on Australia's largest coal seam, gas-fueled, air-cooled, combined-cycle power plant and on Power Engineering's Best Gas-fired Project for 2013 (the Empire Generating Project in Rensselaer, New York).

Mr. Bastasch's work on wind energy has been cited by officials from Oregon to Maine. He provided acoustical expertise on the first major wind projects in Oregon, including the Stateline facility, which when permitted in the early 2000s was the largest wind project in the world. Mr. Bastasch was also acknowledged by the Oregon Health Authority for providing technical input to their "Strategic Health Impact Assessment on Oregon Wind Energy Developments."

Areas of Expertise

- Specializes in industrial noise measurements, modeling, and control for power, industrial, and transportation clients.
- Has prepared acoustical analyses or expert testimony for more than 15,000 megawatts (MW) from gas-fired power facilities and more than 5,000 MW from wind generation facilities.
- Appointed by Oregon State Board of Examiners for Engineering and Land Surveyors to develop and grade the Professional Engineering (P.E.) exam in Acoustics. Oregon was the only state to issue a P.E. in acoustics.
- Experienced in analyzing noise levels for no-build and build alternatives; supporting feasibility, design, and siting analyses of industrial, high-tech, and data center facilities; and preparing noise and vibration impact assessment reports.
- Has served as an acoustical technical lead for numerous transportation projects in Alaska, California, Colorado, Oregon, Washington, and Idaho; tasks include monitoring, modeling, and mitigation recommendations in accordance with applicable state laws.

EDUCATION/QUALIFICATIONS

M.S., Environmental Engineering, William Marsh Rice University, Houston, Texas, 1997

B.S. (*cum laude*), Environmental Engineering, Cal Poly, San Luis Obispo, California, 1994

PROFESSIONAL REGISTRATIONS

Professional Acoustical Engineer: Oregon (No. 58990AC)

Professional Environmental Engineer: Oregon (No. 58990EN)

Professional Civil Engineer: Oregon, (No. 58990PE)

Board Certified, Institute of Noise Control Engineering (INCE Bd. Cert.)

MEMBERSHIPS AND AFFILIATIONS

Member, Institute of Noise Control Engineering (INCE)

Member, Acoustical Society of America

Organizer, INCE-E Wind Turbine Noise Conference Series

Member, United States National Committee Technical Advisory Group to the TC88, IEC 61400 Wind Turbine Sound Standard Working Group

Member, Acoustical Society of America Wind Turbine Standard Working Group

Participant, IEA Wind Task 39: Quiet Wind Turbine Technology

AWARDS/HONORS

2010 CEO Excellence Team Award Winner

2016 CEO Excellence Career Achievement Award Nominee

2018 Joseph J. Jacobs Master Builder Award Project Team Member

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- Has conducted numerous noise studies in conjunction with National Environmental Policy Act (NEPA) documents and the energy facility siting requirements of various states.

Representative Project Experience

Wind and Solar Energy Projects

Lead Acoustical Engineer; South Fork Wind Farm; Deepwater Wind; Offshore Massachusetts, Rhode Island, and New York. Subject matter expert on noise evaluations and documentation. Conducted senior technical review of noise-related impact analysis focusing on in-air noise from the proposed construction and operation activities.

Lead Acoustical Engineer; Stateline Wind Project; Oregon and Washington. Led acoustical analysis for a 263-MW wind farm and prepared environmental documentation to comply with both Oregon and Washington standards. At the time of permitting, this was the largest wind project in the world.

Lead Acoustical Engineer; Biglow Canyon Wind Farm; Orion Renewable Energy and Portland General Electric; Oregon. Provided acoustical analysis and regulatory assistance to support the permitting and construction of the Biglow facilities. Efforts included monitoring, modeling, regulatory review, and preparation of compliance filings.

Lead Acoustical Engineer; Massachusetts Military Reservation, United States Air Force. Prepared acoustical analysis to support NEPA environmental assessments (EAs) for the addition of on-base wind turbines.

Lead Acoustical Engineer; High Plains Wind Project, Seven Mile Hill Wind Project, and Glenrock Wind Project; Wyoming. Prepared technical noise analysis for submittal in support of the Industrial Development Information permitting process. Developed noise models and contours to assess potential acoustical compliance with multiple turbine types and layouts.

Lead Acoustical Engineer; Kittitas Valley Wind Project; Washington. Led the successful filing of an acoustical analysis for the Washington Energy Facility Siting Evaluation Council (EFSEC) for a 121-turbine wind energy project. This was the first time Washington's EFSEC siting process had been used for a wind project. Provided expert testimony at state and local level. Project permit was upheld by State of Washington's highest court.

Lead Acoustical Engineer; Wild Horse Wind Project; Washington. Led environmental and engineering noise studies to support a 158-wind-turbine project with an installed nameplate capacity of up to 312 MW and associated transmission, substation, roads, and operation and maintenance facility.

Lead Acoustical Engineer; Palouse Wind Project; First Wind; Washington. Prepared acoustical analysis in support of State Environmental Policy Act Environmental Impact Statement (EIS) and Conditional Use Permit application efforts for this 100-MW project in Whitman County. Tasks included public meeting attendance, preparing expert witness testimony, and supporting public hearing.

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Lead Acoustical Engineer; Lower Snake River Wind Project; RES Americas and Puget Sound Energy; Washington. Prepared permitting analysis, expert reporting, and testimony to support the permitting of this 1,400-MW wind farm. Tasks included supporting extensive public outreach at various open house and other forums as well as responding to multiple acoustical comments from the public and agencies during the permitting process. The second phase of this project was recently constructed and is now owned by Portland General Electric.

Lead Acoustical Engineer; Boardman Solar Energy Facility; Invenergy, Oregon. Prepared acoustical analysis for the 800-acre Boardman Solar Energy Facility, which is a 75-MW, photovoltaic solar energy generation facility. Authored Exhibit X, Noise, for the facility's Application for Site Certificate to the Oregon Energy Facility Siting Council. Responded to agency information request. The Site Certificate was issued for the facility in February 2018.

Acoustical Engineer, Carty Generating Station and Carty Solar; Portland General Electric; Boardman, Oregon. Responsible for developing the acoustical analysis to support Exhibit X for the proposed expansion of the Carty Generating Station and Carty Solar, a 50-MW photovoltaic project.

Power Plants

Lead Acoustical Engineer; Application for Certification; Alamitos Energy Center; AES Southland Development LLC; California. Authored acoustical analysis for a 1,040-MW repower of the existing Alamitos Beach Generating Station located within the coastal zone of Long Beach, California. Tasks included ambient monitoring, acoustical modeling of operational and construction noise, regulatory evaluation, and participation in California Energy Commission (CEC) workshops. The CEC issued the final decision for the project in May 2017.

Lead Acoustical Engineer; Application for Certification; Huntington Beach Energy Project; AES Southland Development LLC; California. Authored acoustical analysis for an 840-MW repower of the existing Huntington Beach Generating Station located within the coastal zone of Huntington Beach, California. Tasks included operational monitoring, acoustical modeling of operational and construction noise, regulatory evaluation and participation in CEC workshops. Mobilized team to provide expert testimony on potential impacts of sound levels on sensitive species. The CEC issued the final decision for the project in May 2017.

Acoustical Engineer; Empire Generating Project; Rensselaer, New York. Comprehensive acoustical analysis, design, specification and compliance assessment of the new 535-MW combined-cycle Empire Generating Plant engineered and constructed by CH2M HILL. The project, formerly known as BESI Corp., was named the Best Gas-Fired Project by Power Engineering in 2013. The project underwent extensive permitting under New York's Article X, which required detailed analysis during the bid, design, construction, and compliance phases.

Acoustical Engineer; Port Westward Generating Project (1 and 2); Portland General Electric; Oregon. Comprehensive acoustical permitting and compliance assessment of a new 425-MW combined-

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cycle facility and subsequent amendment for 200-MW additional peaking capacity. Provided owners acoustical engineering services in support of the Port Westward combined-cycle facility and peaking facility. Project experience included facility noise modeling and operational compliance assessment for submittal to the Oregon Energy Facility Siting Council. After the successful operation of the combined-cycle facility, multiple options for peaking options were evaluated. Developed acoustical mitigation in consultation with OEMs and PGE to satisfy overall facility permitting requirements.

Lead Acoustical Engineer; Licensing and Permitting for San Francisco Electric Reliability Project (SFERP); San Francisco Public Utilities Commission. Led acoustical tasks to develop a 145-MW simple-cycle plant in southeast San Francisco, using three LM 6000 turbines.

Lead Acoustical Engineer; Hermiston Power Project, Calpine Corporation, Hermiston, Oregon. Conducted acoustical and vibration monitoring to determine if steam turbine generator, heat recovery steam generators, stacks, and combustion turbine generators complied with warranted levels within a time critical schedule. Prepared detailed environmental noise monitoring to demonstrate that the facility complied with permit conditions and minimized the time full load operation was needed during off-peak hours. Oregon Department of Energy accepted the report without comment.

Lead Acoustical Engineer; Walnut Energy Center; Turlock Irrigation District; Turlock, California. Led acoustical tasks for a combined-cycle power plant, which included developing detailed noise model; comparing expected noise levels with the city of Turlock, County of Stanislaus, and the CEC's noise guidelines; preparing Application for Certification and subsequent amendments submitted to the CEC.

Lead Acoustical Engineer; MEGS; Modesto Irrigation District; Ripon, California. Led acoustics for a LM6000 (Norway package) power plant. Tasks included coordinating measurements of operating Norway Package with General Electric; developing detailed noise model; comparing expected noise levels with the City of Ripon, County of Stanislaus, and CEC noise guidelines; preparing Application for Certification and subsequent amendments submitted to the CEC; and review of Conditions of Certification, testimony at CEC evidentiary hearings.

Lead Acoustical Engineer; Humboldt Bay Repowering Project; Pacific Gas & Electric; Humboldt, California. Prepared application for certification to the CEC. Facility is a load-following power plant consisting of 10 natural gas-fired Wärtsilä 18V50DF 16.3-MW reciprocating engine-generator sets and associated equipment with a combined nominal generating capacity of 163 MW. Developed and executed operational compliance monitoring strategy. Compliance assessment was accepted by the CEC without comment.

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Transportation

Lead Acoustical Engineer; Interstate 5 Delta Park to Lombard; Oregon Department of Transportation; Portland, Oregon. Prepared noise analysis, technical report, and input for the EA/EIR as well as final noise wall design for this heavily traveled section of interstate highway.

Lead Acoustical Engineer; Reconstruction of Hyampom Road; Shasta Trinity National Forest; Trinity County, California. Prepared noise analysis, technical report, and input for the EA/EIR for the Federal Highway Administration Central Federal Lands Highway Division. Analysis cost and timeline was reduced by performing a desktop analysis given remote project site, low traffic volumes, and few residential receptors.

Lead Acoustical Engineer; Idaho 16, I-84 to SH-44 Environmental Study; Idaho Transportation Department. Led noise review on this highly visible project with a 3-year accelerated schedule studying a new 6.5-mile route connecting I-84 to SH-44. The project encompasses a river crossing and connections across the valley with impacts to farmlands, residential subdivisions, wetlands, and commercial areas.

Task Manager; Huffman Road Reconstruction Project Noise Studies and Mitigation Design; Alaska Department of Transportation and Public Facilities. Prepared preliminary noise analysis for noise measurements collected at seven locations in the project area. Estimated future build noise levels and developed preliminary mitigation measures in accordance with the Alaska Department of Transportation and Public Facilities.

Noise Analysis for Various Sectors

Acoustical Engineer, General Dynamics Electric Boat Project, Groton, Connecticut. Prepared acoustical analysis to support the design and permitting of an additional manufacturing facility for construction of the new Columbia class of submarines. Analysis was reviewed by the Authority Having Jurisdiction (AHJ) as well as their acoustical consultant and no changes were requested. Project was approved.

Acoustical Engineer, Boardman to Hemingway Transmission Line Project, Idaho Power, Oregon. Responsible for preparing an updated acoustical analysis of this 500-kV transmission line between Boardman, Oregon and Melba, Idaho. Provided senior review for Exhibit AA (EMF) and DD (Induced Currents) and facilitate appropriate level of acoustical discussion in other exhibits.

Acoustic Lead, Embarcadero-Potrero 230 kV Transmission Project. PG&E, San Francisco County, California. Acoustical technical lead for the development and filing of the Proponent's Environmental Assessment (PEA) for a new 3.5-mile 230-kV underground and submarine cable. This critical infrastructure project is designed to maintain power to San Francisco under a major seismic event scenario.

Lead Acoustical Engineer; Oregon LNG Bidirectional Terminal and Pipeline Project, Oregon. Acoustical engineering lead supporting permitting and preparation of numerous applications to federal, state, and local permitting agencies. The project consists of a liquefied natural gas

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(LNG) terminal with a base load liquefaction capacity of 9.6 million metric tons per year requiring and a base load regasification capacity of 0.5 Bscf/d. The terminal included a slip and berth for loading and offloading LNG carriers, and onshore facilities consisting of natural gas pretreatment, natural gas liquefaction, LNG vaporization, LNG storage, and associated support facilities. Prepared the requisite environmental resource reports in support of the project application to the Federal Energy Regulatory Commission as well as acoustical analysis in support of the biological assessment of marine and terrestrial species submitted to National Marine Fisheries Service and U.S. Fish and Wildlife Service.

Lead Acoustical Engineer; Tacoma LNG Project; Puget Sound Energy; Pierce County, Washington. Responsible for supporting acoustical permitting aspects related to the construction and operation of an LNG fueling facility to serve various industries in the Pacific Northwest. The proposed project includes the LNG fueling facility on approximately 36 acres and numerous improvements to an existing natural gas distribution system throughout Pierce County, Washington. Tasks included supporting a Supplemental Environmental Impact Statement in compliance with the Washington State Environmental Policy Act.

Acoustical Engineer; Water Storage Reservoir; Windsor, California. Prepared acoustical analysis of the construction and operation of the reservoir to support the supplemental environmental impact report for CEQA compliance. Also developed responses to comments received during the permitting process. Project involved comprehensive preliminary engineering and environmental services for a new water storage reservoir to provide seasonal storage needed by the Town's recycled water system.

Acoustical Task Leader; Tehachapi Transmission Line; Southern California Edison; California. Prepared acoustical analysis to support regulatory permitting requirements. This multimillion-dollar proponent's environmental assessment (PEA) included preparation of and support activities for a PEA submitted to the California Public Utilities Commission for an approximate 170-mile transmission line and substation project on federal, state, and private property.

Acoustical Task Lead; Odessa Environmental Impact Statement; Eastern Washington. Prepared acoustical analysis to support regulatory permitting requirements. Tasks included modeling and preparing required environmental documentation. The EIS evaluated alternatives to deliver surface water from the Columbia Basin Project to irrigated lands that currently rely on a declining groundwater supply from the Odessa Groundwater Management Subarea in eastern Washington.

Representative Publications and Presentations

Moderator, Conference Organizer, and Instructor for "Introduction to Acoustics" at INCE-Europe Wind Turbine Noise 2017. Rotterdam, Netherlands. May 2017.

Plenary Speaker. Acoustics 2016. "Wind Turbine Sound: Past, Present and Future." Brisbane, Australia. November 2016.

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"Glad to Hear It! A Brief Update on Wind Turbine Sound." Canadian Wind Energy Association Annual Conference. Calgary, Alberta. November 2016.

"Glad to Hear It! Wind Turbine Sound." American Wind Energy Association Wind Power Project Siting and Environmental Compliance Conference and Wind Power Conference. March and May 2016.

Wind Turbine Noise Topic Organizer. InterNoise 2014. Melbourne, Australia. November 2014.

Plenary Speaker. INCE-USA Noise-Con 2013. Denver, Colorado. August 28, 2013.

Instructor: "Introduction to Acoustics." INCE-Europe Wind Turbine Noise 2013. Denver, Colorado. August 27, 2013.

"Criteria." Wind Turbine Noise. Bowdler & Leventhall, editors. Multi-Science Publishing Co. Ltd. ISBN 978-1-907132-30-8. January 2012.

"AWEA/CanWEA Expert Sound Panel and Wind Turbine Sound Regulations." University of Tokyo, Tokyo, Japan. September 12, 2011.

"Wind Turbine Sound." Consensus Building Institute Workshop of Facilitating Wind Energy Siting, Harvard Law School, Cambridge, MA. March 23-25, 2011.

"Wind Turbine Sound and Health – An Expert Panel Review." American Wind Energy Association, Windpower 2010. Dallas, TX, May 24-27, 2011.

"Wind Turbine Noise." American Wind Energy Association Wind Power Project Siting Workshop, Milwaukee, WI. February 28 – March 2, 2007.

"Wind Turbine Noise – An Overview." Mark Bastasch, Jeroen van Dam, Bo Søndergaard, and Anthony Rogers. *Journal of the Canadian Acoustical Association*. June 2006. Vol. 34 No. 2.

"Wind Turbine Generator Noise Prediction - Comparison of Computer Models." Tickell, C. E., J. T. Ellis, and M. Bastasch. Proceedings of ACOUSTICS 2004, 3-5 November 2004, Gold Coast, Australia.