

1. Please explain why each of the six primary turbines became alternates (8, 9, 10, 67, 73, and 88).
  - T8, T9, and T10 became alternates as there are other wind turbines in the array that are more cost effective to construct. This is due to other wind turbines having shorter access roads and less linear feet of underground collection to install. Also these three WTGs would require a wetland crossing (underground collection).
  - T67A, T73A and T88A became alternates because the cost to install access roads and underground collection will be incrementally more expensive (more feet needed of roads and underground collection) to avoid cultural resources near these turbines, including the potential of needing to bore underground collection. Additionally, there is a wetland crossing (road and underground collection) required to reach T73A and T88A.
  
2. Please explain why turbines 84, 85, 86 and 87 were selected from the available alternatives to become primary turbines.
  - T84, T85, T86, and T87 were selected as primary wind turbines as there are no cultural resources in proximity to the wind turbines, access roads and underground collection. Additionally there are no wetlands in proximity to the wind turbines, access roads and underground collection. These turbines have some of the shortest access roads and shortest underground collection lines within the project. The result is these are four of the most economic wind turbines to construct.
  - T80 and T89 were selected as primary wind turbines as they complete the string of T77, T78 and T79. The addition of these two wind turbines balances the electrical circuit and optimizes the workload for the operations and maintenance staff as staff will not have to drive down to the most southern part of the project site to service just three wind turbines. Additionally these wind turbines have minimal cultural resources and wetland associated challenges. Finally access to T89, T80, T79, T78 and T77 is now provided via maintained township roads as the landowner who has turbines T77 and T78 sited on their property did not want access to these turbines to occur from their private driveway as was previously contemplated.
  
3. Please provide the information shown in "Table 8-3: Turbine Options" of the Application for the new proposed turbine model.

**Table 8-3: Turbine Options**

<b>Model Name</b>	<b>Current Nameplate Capacity (MW)</b>	<b>Hub Height (meters/feet)</b>	<b>Rotor Diameter (meters/feet)</b>	<b>Tip Height (meters/feet)</b>	<b>Swept Area (sq. meters / sq. feet)</b>
GE 2.82/127	2.82	89/290	127/417	153/499	12,668/136,354
GE 2.32/116	2.32	80/262	116/381	138/453	10,568/113,753

4. For each of the turbine adjustments of more than 250 ft (Turbines 8, 9, 10), please provide a chart with similar information as shown on Page 1 of the following letter: <https://puc.sd.gov/commission/dockets/electric/2018/EL18-026/ltr090319.pdf>. Provide a summary of the before and after impacts of the turbine adjustment for noise, shadow flicker, and turbine distance from residence associated with the closest receptor.

## Sweetland Wind Farm

Turbine Number	Noise Level (dBA) (Nearest Non-participating, Receptor 11)	Noise Level (dBA) (Nearest Participating, Receptor 10)	Shadow Flicker Level (HH:MM/year) (Nearest Non-participating, Receptor 11)	Shadow Flicker Level (HH:MM/year) (Nearest Participating, Receptor 10)	Distance (feet) (Nearest Non-participating, Receptor 11)	Distance (feet) (Nearest Participating, Receptor 10)
8 (approved)	42	47	7:05	23:21	6,046	4,589
8A (proposed)	41	45	3:04	18:14	6,343	4,723
9 (approved)	42	47	7:05	23:21	4,815	3,209
9A (proposed)	41	45	3:04	18:14	5,326	3,450
10 (approved)	42	47	7:05	23:21	3,650	1,612
10A (proposed)	41	45	3:04	18:14	4,509	2,199