

Customer Impact

NW Incremental Cost vs. Oak Tree Offer

Year	NorthWestern Estimate Cost
2013	\$ 2,238,908
2014	\$ 2,307,333
2015	\$ 2,485,011
2016	\$ 2,658,589
2017	\$ 3,010,655
2018	\$ 3,316,791
2019	\$ 3,628,871
2020	\$ 4,018,849
2021	\$ 4,468,572
2022	\$ 4,961,819
2023	\$ 5,495,181
2024	\$ 5,999,522
2025	\$ 6,550,150
2026	\$ 7,151,315
2027	\$ 7,807,654
2028	\$ 8,524,231
2029	\$ 9,306,574
2030	\$ 10,160,719
2031	\$ 11,093,258
2032	\$ 12,111,383
	\$ 117,295,385

20 Year Levelized Avoided Cost

\$60.72

2010 dollars

4.15 \$/MWh

Hours per year 4,896 3,864

% split hours/year 56% 44%

Additional Oper Cost Envir Law (Otter Tail filing Attachment 3, report pag 16)

Inflation 2.5%

Ton CO2 per MWh 1.00

Oak Tree Estimated Annual Production

76,652 MWh

Load Duration Curve Annual Purchases

Y/Y Change 4.60% Generation HL

Forecasted Ave. Market Purchase Cost LL

Wtd Average Annual

Coal Variable b4 GHG

Coal carbon Adder

Total Coal Var \$/MWh

Gas Variable b4 GHG

Gas carbon Adder

Total Gas Var \$/MWh

Year	Load Duration Curve Annual Purchases	Y/Y Change 4.60% Generation HL	Forecasted Ave. Market Purchase Cost LL	Wtd Average Annual	Coal Variable b4 GHG	Coal carbon Adder	Total Coal Var \$/MWh	Gas Variable b4 GHG 10500 HR NWE Gas VOM	Gas carbon Adder	Total Gas Var \$/MWh
2013	56%	44%	\$ 40.62	\$ 25.19	\$33.81	\$23.35	\$0.00	\$23.35	51.01	\$ - \$ 51.01
2014	60%	40%	\$ 41.10	\$ 25.49	\$34.21	\$23.93	\$0.00	\$23.93	51.61	\$ - \$ 51.61
2015	65%	35%	\$ 44.05	\$ 27.31	\$36.67	\$24.53	\$0.00	\$24.53	55.31	\$ - \$ 55.31
2016	70%	30%	\$ 46.58	\$ 28.88	\$38.77	\$25.15	\$0.00	\$25.15	58.49	\$ - \$ 58.49
2017	74%	26%	\$ 50.85	\$ 31.53	\$42.33	\$30.59	\$0.00	\$30.59	63.86	\$ - \$ 63.86
2018	79%	21%	\$ 56.09	\$ 34.21	\$46.44	\$31.35	\$0.00	\$31.35	69.72	\$ - \$ 69.72
2019	83%	17%	\$ 60.61	\$ 37.59	\$50.46	\$32.14	\$0.00	\$32.14	76.12	\$ - \$ 76.12
2020	88%	12%	\$ 66.18	\$ 41.04	\$55.09	\$32.94	\$0.00	\$32.94	83.10	\$ - \$ 83.10
2021	93%	7%	\$ 72.25	\$ 44.80	\$60.14	\$33.76	\$0.00	\$33.76	90.73	\$ - \$ 90.73
2022	97%	3%	\$ 78.88	\$ 48.91	\$65.66	\$34.61	\$0.00	\$34.61	99.05	\$ - \$ 99.05
2023	100%	0%	\$ 86.12	\$ 53.40	\$71.69	\$35.47	\$0.00	\$35.47	108.14	\$ - \$ 108.14
2024	100%	0%	\$ 94.03	\$ 58.31	\$78.27	\$36.36	\$0.00	\$36.36	118.07	\$ - \$ 118.07
2025	100%	0%	\$ 102.65	\$ 63.66	\$85.45	\$37.27	\$0.00	\$37.27	128.90	\$ - \$ 128.90
2026	100%	0%	\$ 112.08	\$ 69.50	\$93.30	\$38.20	\$0.00	\$38.20	140.74	\$ - \$ 140.74
2027	100%	0%	\$ 122.36	\$ 75.88	\$101.86	\$39.15	\$0.00	\$39.15	153.65	\$ - \$ 153.65
2028	100%	0%	\$ 133.59	\$ 82.84	\$111.21	\$40.13	\$0.00	\$40.13	167.75	\$ - \$ 167.75
2029	100%	0%	\$ 145.85	\$ 90.44	\$121.41	\$41.14	\$0.00	\$41.14	183.15	\$ - \$ 183.15
2030	100%	0%	\$ 159.24	\$ 98.75	\$132.56	\$42.16	\$0.00	\$42.16	199.96	\$ - \$ 199.96
2031	100%	0%	\$ 173.86	\$ 107.81	\$144.72	\$43.22	\$0.00	\$43.22	218.31	\$ - \$ 218.31
2032	100%	0%	\$ 189.81	\$ 117.70	\$158.00	\$44.30	\$0.00	\$44.30	238.34	\$ - \$ 238.34

Carbon

Gas

2013	\$ -	4.86
2014	\$ -	4.92
2015	\$ -	5.27
2016	\$ -	5.57
2017	\$ -	6.08
2018	\$ -	6.64
2019	\$ -	7.25
2020	\$ -	7.91
2021	\$ -	8.64
2022	\$ -	9.43
2023	\$ -	10.30
2024	\$ -	11.24
2025	\$ -	12.28
2026	\$ -	13.40
2027	\$ -	14.63
2028	\$ -	15.98
2029	\$ -	17.44
2030	\$ -	19.04
2031	\$ -	20.79
2032	\$ -	22.70