

**APPENDIX 1**  
**Avoided Costs and General Model Inputs by EDC**

General Modeling Assumptions & Electric Avoided Costs - Duquense\*

Year	Electric Energy				Electric Capacity		Avoided T & D Costs	
	Seasonal Avoided Energy in Nominal \$				Seasonal Avoided Capacity in Nominal \$		Seasonal Avoided T & D Costs in Nominal \$	
	Winter Peak Energy	Winter Off-Peak Energy	Summer Peak Energy	Summer Off-Peak Energy	Summer Generation	Winter Generation	Summer Generation	Winter Generation
(¢/kWh)	(¢/kWh)	(¢/kWh)	(¢/kWh)	(\$/kW-yr)	(\$/kW-yr)	(\$/kW-yr)	(\$/kW-yr)	
2012	9.39	6.85	10.05	6.62				
2013	9.58	6.94	10.26	6.72				
2014	9.70	7.01	10.52	6.86				
2015	10.09	7.29	10.80	7.04				
2016	10.45	7.53	11.17	7.26				
2017	10.61	7.63	11.34	7.35				
2018	10.70	7.67	11.44	7.39				
2019	10.93	7.81	11.69	7.53				
2020	11.21	8.00	11.99	7.71				
2021	11.27	8.02	12.06	7.72				
2022	11.36	8.05	12.15	7.76				
2023	11.42	8.06	12.21	7.77				
2024	11.61	8.17	12.42	7.87				
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Inflation Rate: 4.4%

Nominal Discount Rate: 6.9%

Reserve Margin: 0%

Winter On Peak Line Loss Factor: 6.1%

Winter Off Peak Line Loss Factor: 6.1%

Summer On Peak Line Loss Factor: 6.1%

Summer Off Peak Line Loss Factor: 6.1%

Winter Demand Loss Factor: 6.1%

Summer Demand Loss Factor: 6.1%

\*Note: The forecast of electric avoided costs shown in this table are calculated in accordance with the methodology as ordered in the 2009 and 2011 TRC orders of the Pennsylvania Public Utilities Commission.

General Modeling Assumptions & Electric Avoided Costs - Met Ed\*

	Electric Energy				Electric Capacity		Avoided T & D Costs	
	Seasonal Avoided Energy in Nominal \$				Seasonal Avoided Capacity in Nominal \$		Seasonal Avoided T & D Costs in Nominal \$	
	Winter Peak Energy	Winter Off-Peak Energy	Summer Peak Energy	Summer Off-Peak Energy	Summer Generation	Winter Generation	Summer Generation	Winter Generation
Year	(¢/kWh)	(¢/kWh)	(¢/kWh)	(¢/kWh)	(\$/kW-yr)	(\$/kW-yr)	(\$/kW-yr)	(\$/kW-yr)
2012	3.52	2.81	4.43	2.98	48.7134	48.7134	0.0950	0.0950
2013	4.28	3.24	4.72	3.12	82.6013	82.6013	0.1200	0.1200
2014	4.69	3.51	4.56	3.40	49.8566	49.8566	0.1215	0.1215
2015	4.82	3.75	4.82	3.62	51.1220	49.8566	0.1216	0.1216
2016	4.82	1.94	4.82	3.87	52.4195	51.1220	0.1226	0.1226
2017	5.58	5.58	5.29	5.29	53.7500	52.4195	0.1226	0.1226
2018	5.89	5.89	5.59	5.59	55.1142	53.7500	0.1248	0.1248
2019	6.18	6.18	5.87	5.87	56.5130	55.1142	0.1268	0.1268
2020	6.48	6.48	6.15	6.15	57.9474	56.5130	0.1299	0.1299
2021	6.78	6.78	6.44	6.44	59.4181	57.9474	0.1320	0.1320
2022	12.51	12.51	12.37	12.37				
2023	12.73	12.73	12.59	12.59				
2024	12.99	12.99	12.82	12.82				
2025	13.24	13.24	13.09	13.09				
2026	13.48	13.48	13.33	13.33				
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Inflation Rate: 1.68%  
 Nominal Discount Rate: 7.92%  
 Reserve Margin: 0%

Winter On Peak Line Loss Factor: 7.18%  
 Winter Off Peak Line Loss Factor: 7.18%  
 Summer On Peak Line Loss Factor: 7.18%  
 Summer Off Peak Line Loss Factor: 7.18%

Winter Demand Loss Factor: 7.18%  
 Summer Demand Loss Factor: 7.18%

\*Note: The forecast of electric avoided costs shown in this table are calculated in accordance with the methodology as ordered in the 2009 and 2011 TRC orders of the Pennsylvania Public Utilities Commission.

General Modeling Assumptions & Electric Avoided Costs - PECO\*

	Electric Energy				Electric Capacity**		Avoided T & D Costs	
	Seasonal Avoided Energy in Nominal \$				Seasonal Avoided Capacity in Nominal \$		Seasonal Avoided T & D Costs in Nominal \$	
	Winter Peak Energy	Winter Off-Peak Energy	Summer Peak Energy	Summer Off-Peak Energy	Summer Generation	Winter Generation	Summer Generation	Winter Generation
Year	(¢/kWh)	(¢/kWh)	(¢/kWh)	(¢/kWh)	(\$/kW-yr)	(\$/kW-yr)	(\$/kW-yr)	(\$/kW-yr)
2012	4.57	3.24	4.57	3.24	\$48.71			
2013	4.74	3.47	4.74	3.47	\$74.93			
2014	4.97	3.68	4.97	3.68	\$66.48			
2015	5.20	3.87	5.20	3.87	\$50.64			
2016	5.45	4.09	5.45	4.09	\$52.88			
2017	5.90	4.43	5.90	4.43	\$55.22			
2018	6.36	4.77	6.36	4.77	\$57.67			
2019	6.81	5.11	6.81	5.11	\$60.22			
2020	7.25	5.45	7.25	5.45	\$62.88			
2021	7.69	5.77	7.69	5.77	\$65.67			
2022	7.29	5.47	7.29	5.47	\$68.57			
2023	7.65	5.75	7.65	5.75	\$71.61			
2024	7.96	5.98	7.96	5.98	\$74.78			
2025	8.16	6.13	8.16	6.13	\$78.09			
2026	8.61	6.47	8.61	6.47	\$81.54			
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Inflation Rate: 1.6%  
 Nominal Discount Rate: 7.6%  
 Reserve Margin: 0%

Winter On Peak Line Loss Factor: 7.1%  
 Winter Off Peak Line Loss Factor: 7.1%  
 Summer On Peak Line Loss Factor: 7.1%  
 Summer Off Peak Line Loss Factor: 7.1%

Winter Demand Loss Factor: 7.1%  
 Summer Demand Loss Factor: 7.1%

\*Note: The forecast of electric avoided costs shown in this table are calculated in accordance with the methodology as ordered in the 2009 and 2011 TRC orders of the Pennsylvania Public Utilities Commission.

\*\*Note: GDS converted the avoided cost per MW day numbers provided by PECO to an avoided cost per kW/year by multiplying the cost per MW day numbers by 365 days, and dividing by 1000.

General Modeling Assumptions & Electric Avoided Costs - Penelec\*

	Electric Energy				Electric Capacity		Avoided T & D Costs	
	Seasonal Avoided Energy in Nominal \$				Seasonal Avoided Capacity in Nominal \$		Seasonal Avoided T & D Costs in Nominal \$	
	Winter Peak Energy	Winter Off-Peak Energy	Summer Peak Energy	Summer Off-Peak Energy	Summer Generation	Winter Generation	Summer Generation	Winter Generation
Year	(¢/kWh)	(¢/kWh)	(¢/kWh)	(¢/kWh)	(\$/kW-yr)	(\$/kW-yr)	(\$/kW-yr)	(\$/kW-yr)
2012	3.52	2.81	4.43	2.98	48.7134	48.7134	0.0950	0.0950
2013	4.28	3.24	4.72	3.12	82.6013	82.6013	0.1200	0.1200
2014	4.69	3.51	4.56	3.40	49.8566	49.8566	0.1215	0.1215
2015	4.82	3.75	4.82	3.62	51.1220	49.8566	0.1216	0.1216
2016	4.82	1.94	4.82	3.87	52.4195	51.1220	0.1226	0.1226
2017	5.58	5.58	5.29	5.29	53.7500	52.4195	0.1226	0.1226
2018	5.89	5.89	5.59	5.59	55.1142	53.7500	0.1248	0.1248
2019	6.18	6.18	5.87	5.87	56.5130	55.1142	0.1268	0.1268
2020	6.48	6.48	6.15	6.15	57.9474	56.5130	0.1299	0.1299
2021	6.78	6.78	6.44	6.44	59.4181	57.9474	0.1320	0.1320
2022	12.51	12.51	12.37	12.37				
2023	12.73	12.73	12.59	12.59				
2024	12.99	12.99	12.82	12.82				
2025	13.24	13.24	13.09	13.09				
2026	13.48	13.48	13.33	13.33				
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Inflation Rate: 1.68%  
 Nominal Discount Rate: 7.92%  
 Reserve Margin: 0%

Winter On Peak Line Loss Factor: 9.45%  
 Winter Off Peak Line Loss Factor: 9.45%  
 Summer On Peak Line Loss Factor: 9.45%  
 Summer Off Peak Line Loss Factor: 9.45%

Winter Demand Loss Factor: 9.45%  
 Summer Demand Loss Factor: 9.45%

\*Note: The forecast of electric avoided costs shown in this table are calculated in accordance with the methodology as ordered in the 2009 and 2011 TRC orders of the Pennsylvania Public Utilities Commission.

General Modeling Assumptions & Electric Avoided Costs - Penn Power\*

	Electric Energy				Electric Capacity		Avoided T & D Costs	
	Seasonal Avoided Energy in Nominal \$				Seasonal Avoided Capacity in Nominal \$		Seasonal Avoided T & D Costs in Nominal \$	
	Winter Peak Energy	Winter Off-Peak Energy	Summer Peak Energy	Summer Off-Peak Energy	Summer Generation	Winter Generation	Summer Generation	Winter Generation
Year	(¢/kWh)	(¢/kWh)	(¢/kWh)	(¢/kWh)	(\$/kW-yr)	(\$/kW-yr)	(\$/kW-yr)	(\$/kW-yr)
2012	3.52	2.81	4.43	2.98	7.4730	7.4730	0.0950	0.0950
2013	4.28	3.24	4.72	3.12	10.1284	10.1284	0.1200	0.1200
2014	4.69	3.51	4.56	3.40	46.0178	46.0178	0.1215	0.1215
2015	4.82	3.75	4.82	3.62	47.1858	49.8566	0.1216	0.1216
2016	4.82	1.94	4.82	3.87	48.3834	51.1220	0.1226	0.1226
2017	5.58	5.58	5.29	5.29	49.6114	52.4195	0.1226	0.1226
2018	5.89	5.89	5.59	5.59	50.8706	53.7500	0.1248	0.1248
2019	6.18	6.18	5.87	5.87	52.1617	55.1142	0.1268	0.1268
2020	6.48	6.48	6.15	6.15	53.4856	56.5130	0.1299	0.1299
2021	6.78	6.78	6.44	6.44	54.8431	57.9474	0.1320	0.1320
2022	12.51	12.51	12.37	12.37				
2023	12.73	12.73	12.59	12.59				
2024	12.99	12.99	12.82	12.82				
2025	13.24	13.24	13.09	13.09				
2026	13.48	13.48	13.33	13.33				
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Inflation Rate: 1.68%  
 Nominal Discount Rate: 7.92%  
 Reserve Margin: 0%

Winter On Peak Line Loss Factor: 6.2%  
 Winter Off Peak Line Loss Factor: 6.2%  
 Summer On Peak Line Loss Factor: 6.2%  
 Summer Off Peak Line Loss Factor: 6.2%

Winter Demand Loss Factor: 6.2%  
 Summer Demand Loss Factor: 6.2%

\*Note: The forecast of electric avoided costs shown in this table are calculated in accordance with the methodology as ordered in the 2009 and 2011 TRC orders of the Pennsylvania Public Utilities Commission.

General Modeling Assumptions & Electric Avoided Costs - PPL\*

	Electric Energy				Electric Capacity		Avoided T & D Costs	
	Seasonal Avoided Energy in Nominal \$				Seasonal Avoided Capacity in Nominal \$		Seasonal Avoided T & D Costs in Nominal \$	
	Winter Peak Energy	Winter Off-Peak Energy	Summer Peak Energy	Summer Off-Peak Energy	Summer Generation	Winter Generation	Summer Generation	Winter Generation
Year	(¢/kWh)	(¢/kWh)	(¢/kWh)	(¢/kWh)	(\$/kW-yr)	(\$/kW-yr)	(\$/kW-yr)	(\$/kW-yr)
2012	6.21	5.28	7.60	5.61	42.5100			
2013	6.14	5.29	6.59	5.05	44.5080			
2014	6.58	5.53	6.93	5.29	46.5998			
2015	7.06	5.87	6.84	5.68	48.7900			
2016	7.44	6.19	7.20	5.99	51.0832			
2017	8.52	8.52	7.73	7.73	53.4841			
2018	8.93	8.94	8.13	8.13	55.9978			
2019	9.35	9.36	8.53	8.53	58.6297			
2020	9.75	9.75	8.92	8.91	61.3853			
2021	10.17	10.17	9.32	9.32	64.2704			
2022	9.63	9.63	9.43	9.43	67.2911			
2023	9.98	9.98	9.76	9.76				
2024	10.33	10.33	10.11	10.11				
2025	10.69	10.69	10.46	10.46				
2026	11.06	11.06	10.83	10.83				
2027	11.43	11.43	11.20	11.20				
2028	11.82	11.82	11.57	11.57				
2029	12.22	12.22	11.97	11.97				
2030	12.60	12.60	12.37	12.37				
2031	13.00	13.00	12.74	12.74				
2032	13.44	13.44	13.16	13.16				
2033	13.90	13.90	13.61	13.61				
2034								
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Inflation Rate: 2.50%  
 Nominal Discount Rate: 6.40%  
 Reserve Margin: 0%

Winter On Peak Line Loss Factor: 8.047%  
 Winter Off Peak Line Loss Factor: 8.047%  
 Summer On Peak Line Loss Factor: 8.047%  
 Summer Off Peak Line Loss Factor: 8.047%

Winter Demand Loss Factor: 8.047%  
 Summer Demand Loss Factor: 8.047%

\*Note: The forecast of electric avoided costs shown in this table are calculated in accordance with the methodology as ordered in the 2009 and 2011 TRC orders of the Pennsylvania Public Utilities Commission.

General Modeling Assumptions & Electric Avoided Costs - West Penn Power\*

	Electric Energy				Electric Capacity		Avoided T & D Costs	
	Seasonal Avoided Energy in Nominal \$				Seasonal Avoided Capacity in Nominal \$		Seasonal Avoided T & D Costs in Nominal \$	
	Winter Peak Energy	Winter Off-Peak Energy	Summer Peak Energy	Summer Off-Peak Energy	Summer Generation	Winter Generation	Summer Generation	Winter Generation
Year	(¢/kWh)	(¢/kWh)	(¢/kWh)	(¢/kWh)	(\$/kW-yr)	(\$/kW-yr)	(\$/kW-yr)	(\$/kW-yr)
2012	3.52	2.81	4.43	2.98	6.0120	6.0120	0.0165	0.0165
2013	4.28	3.24	4.72	3.12	10.1284	10.1284	0.0277	0.0277
2014	4.69	3.51	4.56	3.40	46.0178	46.0178	0.1260	0.1260
2015	4.82	3.75	4.82	3.62	47.1858	49.8566	0.1260	0.1260
2016	4.82	1.94	4.82	3.87	48.3834	51.1220	0.1260	0.1260
2017	5.58	5.58	5.29	5.29	49.6114	52.4195	0.1260	0.1260
2018	5.89	5.89	5.59	5.59	50.8706	53.7500	0.1260	0.1260
2019	6.18	6.18	5.87	5.87	52.1617	55.1142	0.1260	0.1260
2020	6.48	6.48	6.15	6.15	53.4856	56.5130	0.1260	0.1260
2021	6.78	6.78	6.44	6.44	54.8431	57.9474	0.1260	0.1260
2022	12.51	12.51	12.37	12.37				
2023	12.73	12.73	12.59	12.59				
2024	12.99	12.99	12.82	12.82				
2025	13.24	13.24	13.09	13.09				
2026	13.48	13.48	13.33	13.33				
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<b>Inflation Rate: 1.68%</b>	<b>Winter On Peak Line Loss Factor: 9.434%</b>
<b>Nominal Discount Rate: 9.03%</b>	<b>Winter Off Peak Line Loss Factor: 8.537%</b>
<b>Reserve Margin: 0%</b>	<b>Summer On Peak Line Loss Factor: 9.434%</b>
	<b>Summer Off Peak Line Loss Factor: 8.537%</b>
	<b>Winter Demand Loss Factor: 14.019%</b>
	<b>Summer Demand Loss Factor: 15.817%</b>

\*Note: The forecast of electric avoided costs shown in this table are calculated in accordance with the methodology as ordered in the 2009 and 2011 TRC orders of the Pennsylvania Public Utilities Commission.