Eastern Interconnection Planning Collaborative

Phase 2 Report:

Interregional Transmission Development and Analysis for Three Stakeholder Selected Scenarios
And
Gas-Electric System Interface Study

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PPA	ID	Name	Nameplate Capacity (MW)	Primary Fuel	Secondary Fuel
IESO	2629	Lennox #1	525.0	Dawn NaturalGas-NonCycling	No. 6 Fuel Oil
IESO	2630	Lennox #2	525.0	Dawn NaturalGas-NonCycling	No. 6 Fuel Oil
IESO	2631	Lennox #3	525.0	Dawn NaturalGas-NonCycling	No. 6 Fuel Oil
IESO	2632	Lennox #4	525.0	Dawn NaturalGas-NonCycling	No. 6 Fuel Oil
ISONE	706	Canal Generating Plant #2	580.0	Algonquin_Citygates NaturalGas-NonCycling	No. 6 Fuel Oil
ISONE	722	Capital District Energy Center GTG	44.1	Tennessee_zone6_delivered Natural Gas-Cycling	No. 2 Fuel Oil
ISONE	907	Cleary Flood #9A	118.0	Algonquin_Citygates NaturalGas-SuperPeaking	No. 6 Fuel Oil
ISONE	1235	Devon #10	19.2	Iroquois_zone2 Natural Gas-SuperPeaking	No. 2 Fuel Oil
ISONE	1236	Devon #11	43.0	Iroquois_zone2 Natural Gas-SuperPeaking	Kerosene
ISONE	1237	Devon #12	43.0	Iroquois_zone2 Natural Gas-SuperPeaking	Kerosene
ISONE	1238	Devon #13	43.0	Iroquois_zone2 Natural Gas-SuperPeaking	Kerosene
ISONE	1239	Devon #14	43.0	Iroquois_zone2 Natural Gas-SuperPeaking	Kerosene
ISONE	2026_12	High Street Station #12	16.6	Tennessee_zone6_delivered Natural Gas-SuperPeaking	No. 2 Peaking
ISONE	3034	Middletown #2	113.6	Algonquin_Citygates NaturalGas-NonCycling	No. 6 Fuel Oil
ISONE	3035	Middletown #3	239.4	Algonquin_Citygates NaturalGas-NonCycling	No. 6 Fuel Oil
ISONE	3167	Montville #5	75.0	Algonquin_Citygates NaturalGas-NonCycling	No. 6 Fuel Oil
ISONE	3267	Mystic #7	617.0	Algonquin_Citygates NaturalGas-NonCycling	No. 6 Fuel Oil
ISONE	3327	New Haven Harbor #1	460.0	Algonquin_Citygates NaturalGas-NonCycling	No. 6 Fuel Oil
ISONE	3340	Newington #1	414.0	Algonquin_Citygates NaturalGas-NonCycling	No. 6 Fuel Oil
ISONE	4426	Stony Brook #CT1-CT2-CT3-CW1	360.0	Tennessee_zone6_delivered Natural Gas-NonCycling	No. 2 Fuel Oil
ISONE	4798	Waters River #1	21.3	Tennessee_zone6_delivered Natural Gas-Peaking	No. 2 Peaking
ISONE	4799	Waters River #2	43.6	Tennessee_zone6_delivered Natural Gas-Cycling	No. 2 Peaking
ISONE	4881	West Springfield #3	113.6	Tennessee_zone6_delivered Natural Gas-NonCycling	No. 6 Fuel Oil
ISONE	5125	Bellingham Cogeneration Facility	386.1	Algonquin_Citygates NaturalGas-Cycling	No. 2 Peaking
ISONE	5128	Millenium Power #CT01+ST01	360.0	Tennessee_zone6_delivered Natural Gas-NonCycling	No. 2 Fuel Oil
ISONE	5349	Androscoggin Energy Center CT01-02	109.0	Algonquin_Citygates NaturalGas-Cycling	Kerosene
ISONE	9213	Androscoggin Energy Center CT03	54.5	Algonquin_Citygates NaturalGas-Peaking	Kerosene
ISONE	9232	Kendall Square #4	186.2	Algonquin_Citygates NaturalGas-Cycling	No. 2 Peaking
ISONE	9239	Newington	605.5	Algonquin_Citygates NaturalGas-NonCycling	No. 2 Fuel Oil
ISONE	9554	Pittsfield Generating Co LP #GEN1-4	180.0	Tennessee_zone6_delivered Natural Gas-Cycling	No. 2 Fuel Oil
ISONE	9842	Algonquin Windsor Locks	56.0	Tennessee_zone6_delivered Natural Gas-Peaking	No. 2 Fuel Oil
ISONE	9894	Bucksport Maine #GEN2	15.6	Algonquin_Citygates NaturalGas-Peaking	No. 2 Fuel Oil

PPA	ID	Name	Nameplate Capacity (MW)	Primary Fuel	Secondary Fuel
ISONE	9895	Bucksport Maine #GEN3	72.0	Algonquin_Citygates NaturalGas-Peaking	No. 2 Fuel Oil
ISONE	9974	LEnergia Energy Center #V643+VAX (L'Energia) (Lowell)	27.1	Tennessee_zone6_delivered Natural Gas-Cycling	No. 2 Peaking
ISONE	10519_GT-1	West Springfield #GT-1	60.0	Tennessee_zone6_delivered Natural Gas-Cycling	No. 2 Peaking
ISONE	10519_GT-2	West Springfield #GT-2	60.0	Tennessee_zone6_delivered Natural Gas-Cycling	No. 2 Peaking
ISONE	10953_CT1	Medical Area Total Energy Plant #CT1	12.5	Algonquin_Citygates NaturalGas-NonCycling	No. 2 Fuel Oil
ISONE	10953_CT2	Medical Area Total Energy Plant #CT2	12.5	Algonquin_Citygates NaturalGas-NonCycling	No. 2 Fuel Oil
ISONE	11374	Dartmouth Power Associates #GEN1+GEN2	77.0	Algonquin_Citygates NaturalGas-NonCycling	No. 2 Fuel Oil
ISONE	11478	A L Pierce #4	84.0	Algonquin_Citygates NaturalGas-Cycling	No. 2 Peaking
ISONE	12301	Waterbury Generation #10	96.0	Algonquin_Citygates NaturalGas-Cycling	No. 2 Peaking
ISONE	12446	GenConn Middletown LLC #12	50.0	Algonquin_Citygates NaturalGas-SuperPeaking	Kerosene
ISONE	12447	GenConn Middletown LLC #13	50.0	Algonquin_Citygates NaturalGas-SuperPeaking	Kerosene
ISONE	12448	GenConn Middletown LLC #14	50.0	Algonquin_Citygates NaturalGas-SuperPeaking	Kerosene
ISONE	12449	GenConn Middletown LLC #15	50.0	Algonquin_Citygates NaturalGas-SuperPeaking	Kerosene
ISONE	12450	Kleen Energy Systems Project #U1+U2+ST	693.0	Algonquin_Citygates NaturalGas-NonCycling	No. 2 Fuel Oil
ISONE	2026_12	High Street Station #12	17.2	Tennessee_zone6_delivered Natural Gas-SuperPeaking	No. 2 Peaking
MISO	4961	Willow Glen #4	591.8	Henry Hub NaturalGas-NonCycling	No. 6 Fuel Oil
MISO	1135	Dan E Karn #3	692.5	MichCon_Citygate NaturalGas-Cycling	No. 6 Fuel Oil
MISO	1136	Dan E Karn #4	709.8	MichCon_Citygate NaturalGas-Cycling	No. 6 Fuel Oil
MISO	2221	JH Campbell #A	18.6	ANR_ML7 Natural Gas-Peaking	No. 2 Peaking
MISO	4353	St Clair #11	18.5	MichCon_Citygate NaturalGas-SuperPeaking	No. 2 Peaking
MISO	3740	Point Beach #5	25.0	ANR_ML7 Natural Gas-Peaking	No. 2 Peaking
MISO	2697	Little Gypsy #1	247.7	Henry Hub NaturalGas-NonCycling	No. 2 Fuel Oil
MISO	2698	Little Gypsy #2	420.7	Henry Hub NaturalGas-NonCycling	No. 2 Fuel Oil
MISO	2699	Little Gypsy #3	582.2	Henry Hub NaturalGas-NonCycling	No. 2 Fuel Oil
MISO	1540_4	Fermi #4	16.0	Dawn NaturalGas-SuperPeaking	No. 2 Peaking
MISO	2176	Weston #31	19.6	ANR_ML7 Natural Gas-Peaking	No. 2 Peaking
MISO	5076	Weston #32	56.7	ANR_ML7 Natural Gas-Cycling	No. 2 Peaking
MISO	11010	Meramec #GT2	56.0	TexasGas_zone1 Natural Gas-Cycling	No. 2 Peaking
MISO	1828	Greenwood #1 EIA6035	815.4	Dawn NaturalGas-NonCycling	No. 6 Fuel Oil
MISO	4743	Wabash River #71	2.7	Lebanon_Hub Natural Gas-Cycling	No. 2 Peaking
MISO	4744	Wabash River #72	2.7	Lebanon_Hub Natural Gas-Cycling	No. 2 Peaking
MISO	4745	Wabash River #73	2.7	Lebanon_Hub Natural Gas-Cycling	No. 2 Peaking
MISO	4791	Waterford #1 EIA8056	445.5	Henry Hub NaturalGas-NonCycling	No. 6 Fuel Oil

PPA	ID	Name	Nameplate Capacity (MW)	Primary Fuel	Secondary Fuel
MISO	4792	Waterford #2 EIA8056	445.5	Henry Hub NaturalGas-NonCycling	No. 6 Fuel Oil
MISO	3023	Michoud #2	261.8	Henry Hub NaturalGas-Cycling	No. 6 Fuel Oil
MISO	3024	Michoud #3	582.2	Henry Hub NaturalGas-Cycling	No. 6 Fuel Oil
MISO	1682	Gerald Andrus #1	781.4	TexasGas_zone1 Natural Gas-NonCycling	No. 6 Fuel Oil
MISO	13	AB Brown #4	88.2	Lebanon_Hub Natural Gas-SuperPeaking	No. 2 Peaking
MISO	10203	AB Brown #5	88.2	Lebanon_Hub Natural Gas-Cycling	No. 2 Peaking
MISO	9637	Riverside Energy Center #CTG1-CTG2+STG3	695.7	ANR_ML7 Natural Gas-NonCycling	No. 2 Fuel Oil
MISO	10265	Emery Generation Station	586.6	Northern_Ventura Natural Gas-NonCycling	No. 2 Fuel Oil
MISO	10365	Fox Energy Center #CTG1-CTG2+STG (Phase 1)	620.0	ANR_ML7 Natural Gas-NonCycling	No. 2 Fuel Oil
MISO	5111_1	Lakefield Junction #1	85.0	Northern_Ventura Natural Gas-Cycling	No. 2 Peaking
MISO	5111_2	Lakefield Junction #2	85.0	Northern_Ventura Natural Gas-Cycling	No. 2 Peaking
MISO	5111_3	Lakefield Junction #3	85.0	Northern_Ventura Natural Gas-Cycling	No. 2 Peaking
MISO	5111_4	Lakefield Junction #4	85.0	Northern_Ventura Natural Gas-Cycling	No. 2 Peaking
MISO	5111_5	Lakefield Junction #5	85.0	Northern_Ventura Natural Gas-Cycling	No. 2 Peaking
MISO	5111_6	Lakefield Junction #6	2.0	Northern_Ventura Natural Gas-Cycling	No. 2 Peaking
MISO	9042_11	Pleasant Valley #11	176.0	Northern_Ventura Natural Gas-NonCycling	No. 2 Fuel Oil
MISO	9042_12	Pleasant Valley #12	176.0	Northern_Ventura Natural Gas-NonCycling	No. 2 Fuel Oil
MISO	9042_13	Pleasant Valley #13	135.0	Northern_Ventura Natural Gas-NonCycling	No. 2 Fuel Oil
MISO	9372	Venice #GT2	61.0	Lebanon_Hub Natural Gas-Cycling	No. 2 Peaking
MISO	10072_5	Marion #5	75.0	Lebanon_Hub Natural Gas-Cycling	No. 2 Peaking
MISO	10072_6	Marion #6	75.0	Lebanon_Hub Natural Gas-Cycling	No. 2 Peaking
MISO	10074	Pulliam 31	91.0	ANR_ML7 Natural Gas-Cycling	No. 2 Peaking
MISO	10659	Mankato Power Plant	530.0	Northern_Ventura Natural Gas-NonCycling	No. 2 Fuel Oil
MISO	3596	Paris #1 WEPC	95.3	ANR_ML7 Natural Gas-Cycling	No. 2 Peaking
MISO	3598	Paris #2 WEPC	95.3	ANR_ML7 Natural Gas-Cycling	No. 2 Peaking
MISO	3600	Paris #3 WEPC	95.3	ANR_ML7 Natural Gas-Cycling	No. 2 Peaking
MISO	3602	Paris #4 WEPC	95.3	ANR_ML7 Natural Gas-Cycling	No. 2 Peaking
MISO	1001	Concord #1	95.3	Emerson Natural Gas-Cycling	No. 2 Peaking
MISO	1002	Concord #2	95.3	Emerson Natural Gas-Cycling	No. 2 Peaking
MISO	1003	Concord #3	95.3	Emerson Natural Gas-Cycling	No. 2 Peaking
MISO	1004	Concord #4	95.3	Emerson Natural Gas-Cycling	No. 2 Peaking
MISO	11492	Cannon Falls Energy Center #1	199.0	Northern_Ventura Natural Gas-Cycling	No. 2 Fuel Oil
MISO	11493	Cannon Falls Energy Center #2	199.0	Northern_Ventura Natural Gas-Cycling	No. 2 Fuel Oil

PPA	ID	Name	Nameplate Capacity (MW)	Primary Fuel	Secondary Fuel
MISO	2230	JR Whiting #A	18.6	Dawn NaturalGas-Peaking	No. 2 Peaking
MISO	107	Angus Anson #1	119.7	Northern_Ventura Natural Gas-SuperPeaking	No. 2 Fuel Oil
MISO	108	Angus Anson #2	119.7	Northern_Ventura Natural Gas-SuperPeaking	No. 2 Fuel Oil
MISO	2215	JC Weadock #A	18.6	MichCon_Citygate NaturalGas-Peaking	No. 2 Peaking
MISO	2499	Louisiana 1 #3A	63.0	Henry Hub NaturalGas-Cycling	No. 2 Fuel Oil
MISO	4301	South Fond Du Lac #CT1	86.0	ANR_ML7 Natural Gas-Cycling	No. 2 Peaking
MISO	4302	South Fond Du Lac #CT2	86.0	ANR_ML7 Natural Gas-SuperPeaking	No. 2 Peaking
MISO	4303	South Fond Du Lac #CT3	86.0	ANR_ML7 Natural Gas-SuperPeaking	No. 2 Peaking
MISO	4304	South Fond Du Lac #CT4	86.0	ANR_ML7 Natural Gas-Cycling	No. 2 Peaking
MISO	3932	Rex Brown #3	66.0	ColumbiaGulf_mainlineNatural Gas-Cycling	No. 6 Fuel Oil
MISO	3933	Rex Brown #4	238.7	ColumbiaGulf_mainlineNatural Gas-NonCycling	No. 6 Fuel Oil
MISO	4898_1	Wheaton #1	54.0	Emerson Natural Gas-SuperPeaking	No. 2 Peaking
MISO	4898_2	Wheaton #2	54.0	Emerson Natural Gas-SuperPeaking	No. 2 Peaking
MISO	4898_3	Wheaton #3	54.0	Emerson Natural Gas-SuperPeaking	No. 2 Peaking
MISO	4898_4	Wheaton #4	54.0	Emerson Natural Gas-SuperPeaking	No. 2 Peaking
MISO	4898_5	Wheaton #5	53.1	Emerson Natural Gas-SuperPeaking	No. 2 Peaking
MISO	4898_6	Wheaton #6	53.1	Emerson Natural Gas-SuperPeaking	No. 2 Peaking
MISO	5107_CT01	Alliant Energy Neenah #CT01	185.5	ANR_ML7 Natural Gas-NonCycling	No. 2 Fuel Oil
MISO	5107_CT02	Alliant Energy Neenah #CT02	185.5	ANR_ML7 Natural Gas-NonCycling	No. 2 Fuel Oil
MISO	9377	Cogentrix LSP Cottage Grove #CTG1 &STG1	283.5	Northern_Ventura Natural Gas-Cycling	No. 2 Fuel Oil
MISO	2195_1	Inver Hills #1	46.8	Northern_Ventura Natural Gas-SuperPeaking	No. 2 Peaking
MISO	2195_2	Inver Hills #2	46.8	Northern_Ventura Natural Gas-SuperPeaking	No. 2 Peaking
MISO	2195_3	Inver Hills #3	46.8	Northern_Ventura Natural Gas-SuperPeaking	No. 2 Peaking
MISO	2195_4	Inver Hills #4	46.8	Northern_Ventura Natural Gas-SuperPeaking	No. 2 Peaking
MISO	2195_5	Inver Hills #5	46.8	Northern_Ventura Natural Gas-SuperPeaking	No. 2 Peaking
MISO	2195_6	Inver Hills #6	46.8	Northern_Ventura Natural Gas-SuperPeaking	No. 2 Peaking
MISO	12148	Elk River #CT	210.0	Northern_Ventura Natural Gas-Cycling	No. 2 Peaking
MISO	5381	Germantown #5	106.9	ANR_ML7 Natural Gas-Cycling	No. 2 Peaking
MISO	10798	Faribault Energy Park	334.5	Northern_Ventura Natural Gas-NonCycling	No. 2 Fuel Oil
MISO	9736	Whitewater Cogeneration #CTG1	283.5	Northern_Ventura Natural Gas-Cycling	No. 2 Fuel Oil
MISO	5149	Pine Bluff Energy Center #CT01+ST01	236.0	CentralPointEast Natural Gas-Cycling	No. 2 Fuel Oil
MISO	9997_1	Kinmundy #1	135.0	Alliance_into_interstates Natural Gas-Cycling	No. 2 Fuel Oil
MISO	9997_2	Kinmundy #2	135.0	Alliance_into_interstates Natural Gas-Cycling	No. 2 Fuel Oil
MISO	1411_1	Electrifarm #1	71.2	Northern_Ventura Natural Gas-Peaking	No. 2 Peaking

PPA	ID	Name	Nameplate Capacity (MW)	Primary Fuel	Secondary Fuel
MISO	1411_2	Electrifarm #2	89.0	Northern_Ventura Natural Gas-Peaking	No. 2 Peaking
MISO	1411_3	Electrifarm #3	103.9	Northern_Ventura Natural Gas-Peaking	No. 2 Peaking
MISO	9783_GT1	Peno Creek #GT1	60.0	PanhandleTXOK Natural Gas-Cycling	No. 2 Peaking
MISO	9783_GT2	Peno Creek #GT2	60.0	PanhandleTXOK Natural Gas-Cycling	No. 2 Peaking
MISO	9783_GT3	Peno Creek #GT3	60.0	PanhandleTXOK Natural Gas-Cycling	No. 2 Peaking
MISO	9783_GT4	Peno Creek #GT4	60.0	PanhandleTXOK Natural Gas-Cycling	No. 2 Peaking
MISO	4406	Sterlington #7A-C Entergy	226.3	TexasGas_zone1 Natural Gas-NonCycling	No. 2 Fuel Oil
MISO	5382_1	Gibson City #1	135.0	Alliance_into_interstates Natural Gas-NonCycling	No. 2 Peaking
MISO	5382_2	Gibson City #2	135.0	Alliance_into_interstates Natural Gas-NonCycling	No. 2 Peaking
MISO	5105	De Pere Energy Center #CT01	187.2	ANR_ML7 Natural Gas-NonCycling	No. 2 Peaking
MISO	3731_1	Pleasant Hill #1	41.4	Northern_Ventura Natural Gas-Cycling	No. 2 Peaking
MISO	3731_2	Pleasant Hill #2	41.4	Northern_Ventura Natural Gas-Cycling	No. 2 Peaking
MISO	3731_3	Pleasant Hill #3	97.0	Northern_Ventura Natural Gas-Cycling	No. 2 Peaking
MISO	4481	Sycamore #1MidAmerican	78.8	Northern_Ventura Natural Gas-Cycling	No. 2 Peaking
MISO	4483	Sycamore #2 MidAmerican	78.8	Northern_Ventura Natural Gas-Cycling	No. 2 Peaking
MISO	4869	West Marinette #31	41.8	ANR_ML7 Natural Gas-SuperPeaking	No. 2 Peaking
MISO	4870	West Marinette #32	41.8	ANR_ML7 Natural Gas-SuperPeaking	No. 2 Peaking
MISO	4871	West Marinette #33	83.5	ANR_ML7 Natural Gas-Cycling	No. 2 Peaking
MISO	11332	West Campus Cogeneration Facil #CT1+CT2+STG1	169.3	Northern_Ventura Natural Gas-NonCycling	No. 2 Fuel Oil
MISO	2896	McClellan #1	136.0	CentralPointEast Natural Gas-Cycling	No. 6 Fuel Oil
MISO	4033_3	Rock River #3	27.0	ANR_ML7 Natural Gas-SuperPeaking	No. 2 Peaking
MISO	4033_4	Rock River #4	15.0	ANR_ML7 Natural Gas-SuperPeaking	No. 2 Peaking
MISO	4033_5	Rock River #5	51.0	ANR_ML7 Natural Gas-SuperPeaking	No. 2 Peaking
MISO	4033_6	Rock River #6	51.0	ANR_ML7 Natural Gas-SuperPeaking	No. 2 Peaking
MISO	5083_1	Alsey #1	30.0	Alliance_into_interstates Natural Gas-Cycling	No. 2 Peaking
MISO	5083_2	Alsey #2	30.0	Alliance_into_interstates Natural Gas-Cycling	No. 2 Peaking
MISO	5083_3	Alsey #3	20.0	Alliance_into_interstates Natural Gas-Cycling	No. 2 Peaking
MISO	5083_4	Alsey #4	20.0	Alliance_into_interstates Natural Gas-Cycling	No. 2 Peaking
MISO	5083_5	Alsey #5	25.0	Alliance_into_interstates Natural Gas-Cycling	No. 2 Peaking
MISO	215	Bailey #1 (Carl Bailey)	120.0	CentralPointEast Natural Gas-Cycling	No. 6 Fuel Oil
MISO	529	Broadway #2	88.8	Lebanon_Hub Natural Gas-Cycling	No. 2 Peaking
MISO	2192	Interstate #1	138.6	Alliance_into_interstates Natural Gas-Cycling	No. 2 Peaking
MISO	3410_5	Northeast #5	23.4	Dawn NaturalGas-SuperPeaking	No. 2 Peaking

PPA	ID	Name	Nameplate Capacity (MW)	Primary Fuel	Secondary Fuel
MISO	1716	Glendive GT #GT1	40.7	AECO Hub NaturalGas-Cycling	No. 2 Peaking
MISO	10317	Glendive GT #GT2	43.0	AECO Hub NaturalGas-Cycling	No. 2 Peaking
MISO	984	Columbia #6 EIA2123	12.5	PanhandleTXOK Natural Gas-Peaking	No. 2 Peaking
MISO	986	Columbia #8 EIA2123	35.0	PanhandleTXOK Natural Gas-Cycling	No. 2 Peaking
MISO	9380_1	Elk Mound #1	35.5	Emerson Natural Gas-Cycling	No. 2 Peaking
MISO	9380_2	Elk Mound #2	35.5	Emerson Natural Gas-Cycling	No. 2 Peaking
MISO	4026	Cascade Creek #1	35.0	Northern_Ventura Natural Gas-Peaking	No. 2 Peaking
MISO	10196	Cascade Creek #2	49.9	Northern_Ventura Natural Gas-Peaking	No. 2 Peaking
MISO	5442	West Marinette #34	83.0	ANR_ML7 Natural Gas-Cycling	No. 2 Peaking
MISO	2764_1	Mabelvale #1	19.5	CentralPointEast Natural Gas-SuperPeaking	No. 2 Peaking
MISO	2764_2	Mabelvale #2	19.5	CentralPointEast Natural Gas-SuperPeaking	No. 2 Peaking
MISO	2764_3	Mabelvale #3	19.5	CentralPointEast Natural Gas-SuperPeaking	No. 2 Peaking
MISO	2764_4	Mabelvale #4	19.5	CentralPointEast Natural Gas-SuperPeaking	No. 2 Peaking
MISO	12762	Marshfield Utilities Gas Plant	60.4	ANR_ML7 Natural Gas-Peaking	No. 2 Peaking
MISO	11110	Island Street Peaking Plant	60.5	Emerson Natural Gas-Peaking	No. 2 Peaking
MISO	1789_1	Granite City #1	18.0	Northern_Ventura Natural Gas-SuperPeaking	No. 2 Peaking
MISO	1789_2	Granite City #2	18.0	Northern_Ventura Natural Gas-SuperPeaking	No. 2 Peaking
MISO	1789_3	Granite City #3	18.0	Northern_Ventura Natural Gas-SuperPeaking	No. 2 Peaking
MISO	1789_4	Granite City #4	18.0	Northern_Ventura Natural Gas-SuperPeaking	No. 2 Peaking
MISO	3555	Owatonna #7	19.0	Northern_Ventura Natural Gas-SuperPeaking	No. 2 Peaking
MISO	11014	Solway CT 1	50.0	Emerson Natural Gas-Cycling	No. 2 Peaking
MISO	4460_4	Superior #4	16.0	MichCon_Citygate NaturalGas-SuperPeaking	No. 2 Peaking
MISO	10073	Escanaba #3	17.9	MichCon_Citygate NaturalGas-SuperPeaking	No. 2 Peaking
MISO	188	Austin Downtown #2	3.5	Northern_Ventura Natural Gas-Peaking	No. 6 Fuel Oil
MISO	189	Austin Downtown #3	7.5	Northern_Ventura Natural Gas-Peaking	No. 6 Fuel Oil
MISO	190	Austin Downtown #4	11.5	Northern_Ventura Natural Gas-Peaking	No. 6 Fuel Oil
MISO	191	Austin Downtown #5	6.0	Northern_Ventura Natural Gas-Peaking	No. 6 Fuel Oil
MISO	3038	Miles City GT #1	23.3	AECO Hub NaturalGas-Peaking	No. 2 Peaking
MISO	3181	Mora #5	5.7	Northern_Ventura Natural Gas-Peaking	No. 2 Peaking
MISO	3182	Mora #6	7.0	Northern_Ventura Natural Gas-Peaking	No. 2 Peaking
MISO	2692	Litchfield #5	2.1	Northern_Ventura Natural Gas-SuperPeaking	No. 2 Peaking
MISO	2693	Litchfield #6	2.1	Northern_Ventura Natural Gas-SuperPeaking	No. 2 Peaking
MISO	1554	Flambeau #1 EIA3984 NSP	16.0	Northern_Ventura Natural Gas-Peaking	No. 2 Peaking
MISO	1514	Fairmont #6	6.5	Northern_Ventura Natural Gas-SuperPeaking	No. 2 Peaking

PPA	ID	Name	Nameplate Capacity (MW)	Primary Fuel	Secondary Fuel
MISO	1515	Fairmont #7	6.5	Northern_Ventura Natural Gas-SuperPeaking	No. 2 Peaking
MISO	4339_2	Spring Valley #2	1.1	Northern_Ventura Natural Gas-SuperPeaking	No. 2 Peaking
MISO	4339_3	Spring Valley #3	2.0	Northern_Ventura Natural Gas-SuperPeaking	No. 2 Peaking
NYISO	6	59th Street #GT1	17.1	Transco_Zone_6_NY NaturalGas-Cycling	Kerosene
NYISO	3903_GT22	Ravenswood #GT22	42.9	Iroquois_zone2 Natural Gas-Cycling	Kerosene
NYISO	3903_GT24	Ravenswood #GT24	42.9	Iroquois_zone2 Natural Gas-Cycling	Kerosene
NYISO	3905_GT32	Ravenswood #GT32	42.9	Iroquois_zone2 Natural Gas-Cycling	Kerosene
NYISO	3905_GT33	Ravenswood #GT33	42.9	Iroquois_zone2 Natural Gas-Cycling	Kerosene
NYISO	169_2-1	Astoria Gas Turbines #2-1	46.5	Iroquois_zone2 Natural Gas-Cycling	Kerosene
NYISO	169_2-3	Astoria Gas Turbines #2-3	46.5	Iroquois_zone2 Natural Gas-Cycling	Kerosene
NYISO	170	Astoria Generating Station #3 EIA8906	376.0	Iroquois_zone2 Natural Gas-NonCycling	No. 6 Fuel Oil
NYISO	171_3-1	Astoria Gas Turbines #3-1	46.5	Iroquois_zone2 Natural Gas-Cycling	Kerosene
NYISO	171_3-3	Astoria Gas Turbines #3-3	46.5	Iroquois_zone2 Natural Gas-Cycling	Kerosene
NYISO	173_4-1	Astoria Gas Turbines #4-1	46.5	Iroquois_zone2 Natural Gas-Cycling	Kerosene
NYISO	173_4-3	Astoria Gas Turbines #4-3	46.5	Iroquois_zone2 Natural Gas-Cycling	Kerosene
NYISO	174	Astoria Generating Station #5 EIA8906	387.0	Iroquois_zone2 Natural Gas-NonCycling	No. 6 Fuel Oil
NYISO	243	Barrett #10	41.8	Transco_Zone_6_NY NaturalGas-Cycling	No. 2 Peaking
NYISO	244	Barrett #11	41.8	Transco_Zone_6_NY NaturalGas-Cycling	No. 2 Peaking
NYISO	245	Barrett #12	41.8	Transco_Zone_6_NY NaturalGas-Cycling	No. 2 Peaking
NYISO	246_3	E F Barrett #3	18.0	Transco_Zone_6_NY NaturalGas-Cycling	No. 2 Peaking
NYISO	246_4	E F Barrett #4	18.0	Transco_Zone_6_NY NaturalGas-Cycling	No. 2 Peaking
NYISO	246_5	E F Barrett #5	18.0	Transco_Zone_6_NY NaturalGas-Cycling	No. 2 Peaking
NYISO	246_6	E F Barrett #6	18.0	Transco_Zone_6_NY NaturalGas-Cycling	No. 2 Peaking
NYISO	246_8	E F Barrett #8	18.0	Transco_Zone_6_NY NaturalGas-Cycling	No. 2 Peaking
NYISO	247	Barrett #9	41.8	Transco_Zone_6_NY NaturalGas-Cycling	No. 2 Peaking
NYISO	248	Barrett #GT1	18.0	Transco_Zone_6_NY NaturalGas-Peaking	No. 2 Peaking
NYISO	249	Barrett #GT2	18.0	Transco_Zone_6_NY NaturalGas-Peaking	No. 2 Peaking
NYISO	250	Barrett #ST1	188.0	Transco_Zone_6_NY NaturalGas-Cycling	No. 6 Fuel Oil
NYISO	251	Barrett #ST2	188.0	Transco_Zone_6_NY NaturalGas-Cycling	No. 6 Fuel Oil
NYISO	3906_GT10	Ravenswood #GT10	25.0	Iroquois_zone2 Natural Gas-Peaking	Kerosene
NYISO	3284_NT12	Narrows Gas Turbines Generating #NT12	22.0	Transco_Zone_6_NY NaturalGas-Peaking	No. 2 Peaking
NYISO	3284_NT16	Narrows Gas Turbines Generating #NT16	22.0	Transco_Zone_6_NY NaturalGas-Peaking	No. 2 Peaking
NYISO	3284_NT14	Narrows Gas Turbines Generating #NT14	22.0	Transco_Zone_6_NY NaturalGas-Peaking	No. 2 Peaking
NYISO	342	CHR-Beaver Falls #1	107.8	IroquoisRecpt Natural Gas-Peaking	No. 2 Peaking

PPA	ID	Name	Nameplate Capacity (MW)	Primary Fuel	Secondary Fuel
NYISO	3284_NT13	Narrows Gas Turbines Generating #NT13	22.0	Transco_Zone_6_NY NaturalGas-Peaking	No. 2 Peaking
NYISO	3906_GT11	Ravenswood #GT11	25.0	Iroquois_zone2 Natural Gas-Cycling	Kerosene
NYISO	3284_NT17	Narrows Gas Turbines Generating #NT17	22.0	Transco_Zone_6_NY NaturalGas-Peaking	No. 2 Peaking
NYISO	483	Bowline #1	621.0	Dominion_SouthPoint NaturalGas-NonCycling	No. 6 Fuel Oil
NYISO	484	Bowline #2	621.0	Dominion_SouthPoint NaturalGas-NonCycling	No. 6 Fuel Oil
NYISO	3284_NT18	Narrows Gas Turbines Generating #NT18	22.0	Transco_Zone_6_NY NaturalGas-Peaking	No. 2 Peaking
NYISO	3906_GT7	Ravenswood #GT7	22.0	Iroquois_zone2 Natural Gas-Cycling	Kerosene
NYISO	3286_NT27	Narrows Gas Turbines Generating #NT27	22.0	Transco_Zone_6_NY NaturalGas-Peaking	No. 2 Peaking
NYISO	3056	Carthage Paper #1	62.9	IroquoisRecpt Natural Gas-Peaking	No. 2 Peaking
NYISO	3286_NT22	Narrows Gas Turbines Generating #NT22	22.0	Transco_Zone_6_NY NaturalGas-Peaking	No. 2 Peaking
NYISO	3286_NT24	Narrows Gas Turbines Generating #NT24	22.0	Transco_Zone_6_NY NaturalGas-Peaking	No. 2 Peaking
NYISO	3286_NT23	Narrows Gas Turbines Generating #NT23	22.0	Transco_Zone_6_NY NaturalGas-Peaking	No. 2 Peaking
NYISO	3906_GT6	Ravenswood #GT6	22.0	Iroquois_zone2 Natural Gas-Cycling	Kerosene
NYISO	3286_NT26	Narrows Gas Turbines Generating #NT26	22.0	Transco_Zone_6_NY NaturalGas-Peaking	No. 2 Peaking
NYISO	939	Linden Cogen #CTG1-CTG6+STG1-STG3 EIA 50006	1,034.9	Transco_Zone_6_NY NaturalGas-NonCycling	No. 2 Fuel Oil
NYISO	3286_NT28	Narrows Gas Turbines Generating #NT28	22.0	Transco_Zone_6_NY NaturalGas-Peaking	No. 2 Peaking
NYISO	3906_GT5	Ravenswood #GT5	21.1	Iroquois_zone2 Natural Gas-Peaking	Kerosene
NYISO	1350	East River #6	156.2	Transco_Zone_6_NY NaturalGas-NonCycling	No. 6 Fuel Oil
NYISO	1351	East River #7	200.0	Transco_Zone_6_NY NaturalGas-NonCycling	No. 6 Fuel Oil
NYISO	1204_14	Charles P Keller #14	6.2	Iroquois_zone2 Natural Gas-Cycling	No. 2 Peaking
NYISO	3906_GT1	Ravenswood #GT1	18.6	Iroquois_zone2 Natural Gas-Peaking	Kerosene
NYISO	1204_12	Charles P Keller #12	5.5	Iroquois_zone2 Natural Gas-Cycling	No. 2 Peaking
NYISO	1204_13	Charles P Keller #13	5.5	Iroquois_zone2 Natural Gas-Cycling	No. 2 Peaking
NYISO	1204_11	Charles P Keller #11	5.2	Iroquois_zone2 Natural Gas-Cycling	No. 2 Peaking
NYISO	2043	Hillburn #GT1	46.5	Algonquin_Citygates NaturalGas-SuperPeaking	Kerosene
NYISO	2157	Indeck - Yerkes #1-2	59.9	NYISO-Niagara Hub NaturalGas-Peaking	No. 2 Peaking
NYISO	2158	Indeck-Corinth #1	92.0	Dominion_SouthPoint NaturalGas-Peaking	No. 2 Peaking
NYISO	2159	Indeck-Corinth #2	55.0	Dominion_SouthPoint NaturalGas-Peaking	No. 2 Peaking
NYISO	1204_10	Charles P Keller #10	3.5	Iroquois_zone2 Natural Gas-Cycling	No. 2 Peaking
NYISO	1204_9	Charles P Keller #9	3.5	Iroquois_zone2 Natural Gas-Cycling	No. 2 Peaking
NYISO	3055	Carr Street Gen Station #1-3 (East Syracuse)	122.6	Dominion_SouthPoint NaturalGas-Cycling	No. 2 Fuel Oil
NYISO	1204_8	Charles P Keller #8	2.4	Iroquois_zone2 Natural Gas-Cycling	No. 2 Peaking
NYISO	3246	Selkirk-I	107.2	Tennessee_zone6_delivered Natural Gas-Cycling	No. 2 Peaking

PPA	ID	Name	Nameplate Capacity (MW)	Primary Fuel	Secondary Fuel
NYISO	3284_NT11	Narrows Gas Turbines Generating #NT11	22.0	Transco_Zone_6_NY NaturalGas-Peaking	No. 2 Peaking
NYISO	3284_NT15	Narrows Gas Turbines Generating #NT15	22.0	Transco_Zone_6_NY NaturalGas-Peaking	No. 2 Peaking
NYISO	3286_NT21	Narrows Gas Turbines Generating #NT21	22.0	Transco_Zone_6_NY NaturalGas-Peaking	No. 2 Peaking
NYISO	3286_NT25	Narrows Gas Turbines Generating #NT25	22.0	Transco_Zone_6_NY NaturalGas-Peaking	No. 2 Peaking
NYISO	1204_7	Charles P Keller #7	2.0	Iroquois_zone2 Natural Gas-Cycling	No. 2 Peaking
NYISO	3397	Fort Orange #GEN1 (Castleton)	47.0	Dominion_SouthPoint NaturalGas-Cycling	No. 2 Peaking
NYISO	3398	Fort Orange #GEN2 (Castleton)	25.0	Dominion_SouthPoint NaturalGas-Peaking	No. 2 Peaking
NYISO	3428	Northport #2	387.0	Iroquois_zone2 Natural Gas-Cycling	No. 6 Peaking
NYISO	3429	Northport #3	387.0	Iroquois_zone2 Natural Gas-Cycling	No. 6 Peaking
NYISO	3430	Northport #4	387.0	Iroquois_zone2 Natural Gas-Cycling	No. 6 Peaking
NYISO	3432	Northport #ST1	387.0	Iroquois_zone2 Natural Gas-Cycling	No. 6 Peaking
NYISO	3532	Sithe-Massena #1	102.1	IroquoisRecpt Natural Gas-Cycling	No. 2 Peaking
NYISO	3540	Oswego #ST5	901.8	Dominion_SouthPoint NaturalGas-Cycling	No. 6 Peaking
NYISO	3541	Oswego #ST6	901.8	Dominion_SouthPoint NaturalGas-Cycling	No. 6 Peaking
NYISO	3560	OxbowPwr-NTonawanda #1	55.3	NYISO-Niagara Hub NaturalGas-Peaking	No. 2 Peaking
NYISO	3761	Port Jefferson #3	188.0	Iroquois_zone2 Natural Gas-Cycling	No. 6 Peaking
NYISO	3762	Port Jefferson #4	188.0	Iroquois_zone2 Natural Gas-Cycling	No. 6 Peaking
NYISO	3901	Ravenswood #1 EIA2500	400.0	Iroquois_zone2 Natural Gas-NonCycling	No. 6 Fuel Oil
NYISO	3902	Ravenswood #2 EIA2500	400.0	Iroquois_zone2 Natural Gas-NonCycling	No. 6 Fuel Oil
NYISO	3903_GT21	Ravenswood #GT21	42.9	Iroquois_zone2 Natural Gas-NonCycling	Kerosene
NYISO	3903_GT23	Ravenswood #GT23	42.9	Iroquois_zone2 Natural Gas-NonCycling	Kerosene
NYISO	3904	Ravenswood #3 EIA2500	1,027.0	Iroquois_zone2 Natural Gas-NonCycling	No. 6 Fuel Oil
NYISO	3905_GT31	Ravenswood #GT31	42.9	Iroquois_zone2 Natural Gas-NonCycling	Kerosene
NYISO	3906_GT4	Ravenswood #GT4	21.1	Iroquois_zone2 Natural Gas-NonCycling	Kerosene
NYISO	3906_GT8	Ravenswood #GT8	25.0	Iroquois_zone2 Natural Gas-NonCycling	Kerosene
NYISO	3906_GT9	Ravenswood #GT9	25.0	Iroquois_zone2 Natural Gas-NonCycling	Kerosene
NYISO	3926	Rensselaer Cogen #GEN1	57.9	Dominion_SouthPoint NaturalGas-Peaking	No. 2 Peaking
NYISO	3927	Rensselaer Cogen #GEN2	45.8	Dominion_SouthPoint NaturalGas-Peaking	No. 2 Peaking
NYISO	3940	Richard M Flynn #NA1-NA2	164.0	Transco_Zone_6_NY NaturalGas-NonCycling	No. 2 Fuel Oil
NYISO	4056	Roseton #1	621.0	Iroquois_zone2 Natural Gas-NonCycling	No. 6 Fuel Oil
NYISO	4057	Roseton #2	621.0	Iroquois_zone2 Natural Gas-NonCycling	No. 6 Fuel Oil
NYISO	4168	Selkirk-II	338.8	Tennessee_zone6_delivered Natural Gas-Cycling	No. 2 Peaking
NYISO	4236	Shoemaker #1	41.9	Dominion_SouthPoint NaturalGas-SuperPeaking	No. 2 Peaking
NYISO	4596	Trigen-NDEC #1 (Nassau Energy)	55.0	Iroquois_zone2 Natural Gas-Peaking	No. 2 Peaking

PPA	ID	Name	Nameplate Capacity (MW)	Primary Fuel	Secondary Fuel
NYISO	4316	South Oaks Hospital #1-2	0.4	Iroquois_zone2 Natural Gas-Peaking	No. 2 Peaking
NYISO	5020	Indeck - Olean #1 EIA10107	90.6	NYISO-Niagara Hub NaturalGas-Peaking	No. 2 Peaking
NYISO	5327	Athens Generation	1,323.0	Iroquois_zone2 Natural Gas-NonCycling	No. 2 Fuel Oil
NYISO	9214	Astoria Energy Project CC1 EIA55375	520.0	Iroquois_zone2 Natural Gas-NonCycling	No. 2 Fuel Oil
NYISO	9220	Astoria Energy II	650.0	Iroquois_zone2 Natural Gas-NonCycling	No. 2 Fuel Oil
NYISO	9714	Brooklyn Navy Yard Cogeneration Partners	322.0	Iroquois_zone2 Natural Gas-NonCycling	No. 2 Fuel Oil
NYISO	9715	Kennedy International Airport Cogen	121.2	Transco_Zone_6_NY NaturalGas-Cycling	No. 2 Peaking
NYISO	9718	Indeck Silver Springs Energy#GEN1-2	56.6	Dominion_SouthPoint NaturalGas-Peaking	No. 2 Peaking
NYISO	9723	Lockport Energy Assoc LP Lockport Cogen	221.3	Tennessee_zone6_delivered Natural Gas-Cycling	No. 2 Peaking
NYISO	9886	Bethpage #1-4	84.0	Iroquois_zone2 Natural Gas-Peaking	No. 2 Peaking
NYISO	9967	Stony Brook Cogen #GEN1	47.0	Iroquois_zone2 Natural Gas-Peaking	No. 2 Peaking
NYISO	10311	Ravenswood CC	250.0	Iroquois_zone2 Natural Gas-NonCycling	Kerosene
NYISO	10946	Equus Freeport Power 1	60.0	Iroquois_zone2 Natural Gas-NonCycling	Kerosene
NYISO	10960	Pinelawn Power Project	82.0	Iroquois_zone2 Natural Gas-NonCycling	Kerosene
NYISO	10963	Plant No 2 #5	60.5	Iroquois_zone2 Natural Gas-Cycling	Kerosene
NYISO	11316	Astoria CC (500MW CC) #CT01+CT02+CA01	528.0	Iroquois_zone2 Natural Gas-NonCycling	Kerosene
NYISO	11317	Caithness Long Island Energy Center	348.9	Iroquois_zone2 Natural Gas-NonCycling	No. 2 Fuel Oil
NYISO	11466	East River #1	180.0	Transco_Zone_6_NY NaturalGas-NonCycling	No. 2 Fuel Oil
NYISO	11467	East River #2	180.0	Transco_Zone_6_NY NaturalGas-NonCycling	No. 2 Fuel Oil
NYISO	11473	Empire Generating Company #1-3 (Besicorp-Empire Power Generating Facility)	672.0	Tennessee_zone6_delivered Natural Gas-NonCycling	No. 2 Fuel Oil
NYISO	11956	Bethlehem Energy Center CCCT #5+6+7+8	893.1	Tennessee_zone6_delivered Natural Gas-NonCycling	No. 2 Fuel Oil
NYISO	12424_1	Bayonne Energy Center (BEC) #GT1	62.5	Transco_Zone_6_NY NaturalGas-Cycling	No. 2 Peaking
NYISO	12424_2	Bayonne Energy Center (BEC) #GT2	62.5	Transco_Zone_6_NY NaturalGas-Cycling	No. 2 Peaking
NYISO	12424_3	Bayonne Energy Center (BEC) #GT3	62.5	Transco_Zone_6_NY NaturalGas-Cycling	No. 2 Peaking
NYISO	12424_4	Bayonne Energy Center (BEC) #GT4	62.5	Transco_Zone_6_NY NaturalGas-Cycling	No. 2 Peaking
NYISO	12424_5	Bayonne Energy Center (BEC) #GT5	62.5	Transco_Zone_6_NY NaturalGas-Cycling	No. 2 Peaking
NYISO	12424_6	Bayonne Energy Center (BEC) #GT6	62.5	Transco_Zone_6_NY NaturalGas-Cycling	No. 2 Peaking
NYISO	12424_7	Bayonne Energy Center (BEC) #GT7	62.5	Transco_Zone_6_NY NaturalGas-Cycling	No. 2 Peaking
NYISO	12424_8	Bayonne Energy Center (BEC) #GT8	62.5	Transco_Zone_6_NY NaturalGas-Cycling	No. 2 Peaking
PJM	104	Anderson #ACT1	41.4	Lebanon_Hub Natural Gas-Cycling	No. 2 Peaking
PJM	105	Anderson #ACT2	41.4	Lebanon_Hub Natural Gas-Cycling	No. 2 Peaking
PJM	287	Bayonne Cogen Tech #IPP	191.6	Transco_Zone_6_NY NaturalGas-Cycling	Kerosene
PJM	330	Bellmeade #1-2-3	330.0	Transco_zone 5_delivered Natural Gas-NonCycling	No. 2 Peaking

PPA	ID	Name	Nameplate Capacity (MW)	Primary Fuel	Secondary Fuel
PJM	346	Bergen #1SC-1ST	737.2	Transco_Zone_6_NY NaturalGas-NonCycling	No. 2 Fuel Oil
PJM	691	Camden #IPP	157.0	Transco_Zone_6_NY NaturalGas-Cycling	Kerosene
PJM	733	Carlls Corner #1	41.9	Transco Zone 6 Non NY NaturalGas-SuperPeaking	Kerosene
PJM	734	Carlls Corner #2	41.9	Transco Zone 6 Non NY NaturalGas-SuperPeaking	Kerosene
PJM	791	Chalk Point #3	659.0	Transco Zone 6 Non NY NaturalGas-NonCycling	No. 6 Fuel Oil
PJM	792	Chalk Point #4	659.0	Transco Zone 6 Non NY NaturalGas-NonCycling	No. 6 Fuel Oil
PJM	795	Chalk Point #GT3	103.0	Transco Zone 6 Non NY NaturalGas-Cycling	No. 2 Peaking
PJM	796	Chalk Point #GT4	103.0	Transco Zone 6 Non NY NaturalGas-Cycling	No. 2 Peaking
PJM	797	Chalk Point #GT5	125.0	Transco Zone 6 Non NY NaturalGas-Cycling	No. 2 Peaking
PJM	798	Chalk Point #GT6	125.0	Transco Zone 6 Non NY NaturalGas-Cycling	No. 2 Peaking
PJM	799	Chalk Point #SGT1 (SMEC)	94.0	Transco Zone 6 Non NY NaturalGas-Cycling	No. 2 Peaking
PJM	841	Chesapeake #GT2	16.3	AppalachiaAvg Hub NaturalGas-SuperPeaking	No. 2 Peaking
PJM	842	Chesapeake #GT4	16.3	AppalachiaAvg Hub NaturalGas-SuperPeaking	No. 2 Peaking
PJM	851	Chesterfield #CT7-CW7	219.4	AppalachiaAvg Hub NaturalGas-NonCycling	No. 2 Fuel Oil
PJM	852	Chesterfield #CT8-CW8	227.2	AppalachiaAvg Hub NaturalGas-NonCycling	No. 2 Fuel Oil
PJM	996_GEN1	Commonwealth Atlantic LP #GEN1	129.6	AppalachiaAvg Hub NaturalGas-NonCycling	No. 2 Fuel Oil
PJM	996_GEN2	Commonwealth Atlantic LP #GEN2	129.6	AppalachiaAvg Hub NaturalGas-NonCycling	No. 2 Fuel Oil
PJM	996_GEN3	Commonwealth Atlantic LP #GEN3	129.6	AppalachiaAvg Hub NaturalGas-NonCycling	No. 2 Fuel Oil
PJM	1107	Cumberland #GT1	99.4	Transco Zone 6 Non NY NaturalGas-SuperPeaking	Kerosene
PJM	1155_1	Darbytown #1	92.1	AppalachiaAvg Hub NaturalGas-Cycling	No. 2 Peaking
PJM	1155_2	Darbytown #2	92.1	AppalachiaAvg Hub NaturalGas-Cycling	No. 2 Peaking
PJM	1155_3	Darbytown #3	92.1	AppalachiaAvg Hub NaturalGas-Cycling	No. 2 Peaking
PJM	1155_4	Darbytown #4	92.1	AppalachiaAvg Hub NaturalGas-Cycling	No. 2 Peaking
PJM	1256	Dicks Creek #1	100.0	Lebanon_Hub Natural Gas-SuperPeaking	No. 2 Peaking
PJM	1257	Dicks Creek #3	16.5	Lebanon_Hub Natural Gas-Peaking	No. 2 Peaking
PJM	1284_GEN1	Doswell Energy Center #GEN1	122.0	Dominion_SouthPoint NaturalGas-Cycling	No. 2 Peaking
PJM	1284_GEN2	Doswell Energy Center #GEN2	122.0	Dominion_SouthPoint NaturalGas-Cycling	No. 2 Peaking
PJM	1284_GEN3	Doswell Energy Center #GEN3	132.0	Dominion_SouthPoint NaturalGas-Cycling	No. 2 Peaking
PJM	1284_GEN4	Doswell Energy Center #GEN4	122.0	Dominion_SouthPoint NaturalGas-Cycling	No. 2 Peaking
PJM	1284_GEN5	Doswell Energy Center #GEN5	122.0	Dominion_SouthPoint NaturalGas-Cycling	No. 2 Peaking
PJM	1284_GEN6	Doswell Energy Center #GEN6	132.0	Dominion_SouthPoint NaturalGas-Cycling	No. 2 Peaking
PJM	1360	Easton #7- #14& #101& #102	33.6	Transco Zone 6 Non NY NaturalGas-Cycling	No. 2 Peaking
PJM	1382	Eddystone #3	391.0	TETCO_M3 NaturalGas-Cycling	No. 6 Peaking
PJM	1384	Eddystone #4	391.0	TETCO_M3 NaturalGas-Cycling	No. 6 Peaking

PPA	ID	Name	Nameplate Capacity (MW)	Primary Fuel	Secondary Fuel
PJM	1391	Edge Moor #5	446.0	Transco Zone 6 Non NY NaturalGas-NonCycling	No. 2 Fuel Oil
PJM	1569	Forked River #1	38.4	Transco Zone 6 Non NY NaturalGas-Peaking	No. 2 Peaking
PJM	1570	Forked River #2	38.4	Transco Zone 6 Non NY NaturalGas-Peaking	No. 2 Peaking
PJM	1598_GT1	Frank M Tait #GT1	103.5	Lebanon_Hub Natural Gas-Cycling	No. 2 Peaking
PJM	1598_GT2	Frank M Tait #GT2	106.1	Lebanon_Hub Natural Gas-Cycling	No. 2 Peaking
PJM	1598_GT3	Frank M Tait #GT3	84.2	Lebanon_Hub Natural Gas-Cycling	No. 2 Peaking
PJM	1598_IC1	Frank M Tait #IC1	2.7	Lebanon_Hub Natural Gas-NonCycling	No. 2 Fuel Oil
PJM	1598_IC2	Frank M Tait #IC2	2.7	Lebanon_Hub Natural Gas-NonCycling	No. 2 Fuel Oil
PJM	1598_IC3	Frank M Tait #IC3	2.7	Lebanon_Hub Natural Gas-NonCycling	No. 2 Fuel Oil
PJM	1598_IC4	Frank M Tait #IC4	2.7	Lebanon_Hub Natural Gas-NonCycling	No. 2 Fuel Oil
PJM	1694	Gilbert #4-5-6-7-8	351.0	Transco Zone 6 Non NY NaturalGas-NonCycling	No. 2 Fuel Oil
PJM	1695_9	Gilbert #9	161.0	Transco Zone 6 Non NY NaturalGas-Cycling	No. 2 Peaking
PJM	1742	Gordonsville LP I #1	150.2	AppalachiaAvg Hub NaturalGas-Cycling	No. 2 Peaking
PJM	1743	Gordonsville LP II #1	150.2	AppalachiaAvg Hub NaturalGas-Cycling	No. 2 Peaking
PJM	1958	Hay Road #HR1+HR2+HR3+HR4	566.0	Transco Zone 6 Non NY NaturalGas-Cycling	Kerosene
PJM	2128_1	Hunterstown #1	20.0	TETCO_M3 NaturalGas-Peaking	No. 2 Peaking
PJM	2128_2	Hunterstown #2	20.0	TETCO_M3 NaturalGas-Peaking	No. 2 Peaking
PJM	2681	Linden #5 EIA2406	96.1	TETCO_M3 NaturalGas-Cycling	Kerosene
PJM	2682	Linden #6 EIA2406	96.1	TETCO_M3 NaturalGas-Cycling	Kerosene
PJM	2683	Linden #7 EIA2406	96.1	TETCO_M3 NaturalGas-Cycling	Kerosene
PJM	2684	Linden #8 EIA2406	96.1	TETCO_M3 NaturalGas-NonCycling	Kerosene
PJM	2863	Martins Creek #3	850.5	TETCO_M3 NaturalGas-NonCycling	No. 6 Fuel Oil
PJM	3212	Mountain #1	27.0	TETCO_M3 NaturalGas-Peaking	No. 2 Peaking
PJM	3213	Mountain #2	27.0	Transco_Zone_6_NY NaturalGas-NonCycling	No. 2 Peaking
PJM	3583_1	Panda Brandywine LP #1	98.7	Transco Zone 6 Non NY NaturalGas-Cycling	No. 2 Peaking
PJM	3583_2	Panda Brandywine LP #2	98.7	Transco Zone 6 Non NY NaturalGas-Cycling	No. 2 Peaking
PJM	3583_3	Panda Brandywine LP #3	91.4	Transco_zone 5_delivered Natural Gas-NonCycling	No. 2 Peaking
PJM	3584	Rosemary Power Station #GEN1+GEN2+GEN3	180.0	Transco Zone 6 Non NY NaturalGas-Cycling	No. 2 Fuel Oil
PJM	3608	Parlin Nug #IPP	139.8	TETCO_M3 NaturalGas-SuperPeaking	No. 2 Peaking
PJM	3628	Paxton Creek Cogeneration #GEN1+GEN2	12.6	Transco Zone 6 Non NY NaturalGas-Peaking	No. 2 Peaking
PJM	3654	Perryman #GT5	192.0	Leidy_Hub Natural Gas-Peaking	No. 2 Peaking
PJM	3778	Portland #3	18.0	Leidy_Hub Natural Gas-Peaking	No. 2 Peaking
PJM	3779	Portland #4	20.0	Leidy_Hub Natural Gas-Peaking	No. 2 Peaking

PPA	ID	Name	Nameplate Capacity (MW)	Primary Fuel	Secondary Fuel
PJM	3942_1	Richland #1	15.0	Lebanon_Hub Natural Gas-Peaking	No. 2 Peaking
PJM	3942_2	Richland #2	15.0	Lebanon_Hub Natural Gas-Peaking	No. 2 Peaking
PJM	3942_3	Richland #3	15.0	Lebanon_Hub Natural Gas-Cycling	No. 2 Peaking
PJM	3945	Richmond #RCT1	41.4	Lebanon_Hub Natural Gas-Cycling	No. 2 Peaking
PJM	3946	Richmond #RCT2	41.4	Transco Zone 6 Non NY NaturalGas-SuperPeaking	No. 2 Peaking
PJM	4231	Sherman Avenue #SEHR	112.8	Leidy_Hub Natural Gas-Peaking	Kerosene
PJM	4553	Titus #4	18.0	Leidy_Hub Natural Gas-Peaking	No. 2 Peaking
PJM	9465_CTG1	Zion Energy Center #CTG1	198.9	Alliance_into_interstates Natural Gas-NonCycling	No. 2 Fuel Oil
PJM	9465_CTG2	Zion Energy Center #CTG2	198.9	Alliance_into_interstates Natural Gas-NonCycling	No. 2 Fuel Oil
PJM	9465_CTG3	Zion Energy Center #CTG3	198.9	Dominion_SouthPoint NaturalGas-NonCycling	No. 2 Fuel Oil
PJM	9466_1	Troy Energy LLC #1	172.0	Dominion_SouthPoint NaturalGas-NonCycling	No. 2 Fuel Oil
PJM	9466_2	Troy Energy LLC #2	172.0	Dominion_SouthPoint NaturalGas-NonCycling	No. 2 Fuel Oil
PJM	9466_3	Troy Energy LLC #3	172.0	Dominion_SouthPoint NaturalGas-NonCycling	No. 2 Fuel Oil
PJM	9466_4	Troy Energy LLC #4	172.0	AppalachiaAvg Hub NaturalGas-Cycling	No. 2 Fuel Oil
PJM	9468_GT1	Darby Electric Generating Station #GT1	94.0	AppalachiaAvg Hub NaturalGas-Cycling	No. 2 Peaking
PJM	9468_GT2	Darby Electric Generating Station #GT2	94.0	Transco_zone 5_delivered Natural Gas-NonCycling	No. 2 Peaking
PJM	9507	Tenaska Virginia Generating Station	946.1	Transco_zone 5_delivered Natural Gas-NonCycling	No. 2 Fuel Oil
PJM	9729	Foster Wheeler Mt Carmel Inc #TG1	47.3	Dominion_SouthPoint NaturalGas-NonCycling	No. 2 Fuel Oil
PJM	9745_1	Pleasants Energy LLC #1	172.0	Dominion_SouthPoint NaturalGas-NonCycling	No. 2 Fuel Oil
PJM	9746_2	Pleasants Energy LLC #2	172.0	Leidy_Hub Natural Gas-NonCycling	No. 2 Fuel Oil
PJM	9765_CTG1	Bethlehem Power Plant #CTG1	140.0	Leidy_Hub Natural Gas-NonCycling	No. 2 Fuel Oil
PJM	9765_CTG2	Bethlehem Power Plant #CTG2	140.0	Leidy_Hub Natural Gas-NonCycling	No. 2 Fuel Oil
PJM	9765_CTG3	Bethlehem Power Plant #CTG3	140.0	Lebanon_Hub Natural Gas-NonCycling	No. 2 Fuel Oil
PJM	9769_1	Robert P Mone Plant #1	198.0	Lebanon_Hub Natural Gas-NonCycling	No. 2 Fuel Oil
PJM	9769_2	Robert P Mone Plant #2	198.0	Lebanon_Hub Natural Gas-NonCycling	No. 2 Fuel Oil
PJM	9769_3	Robert P Mone Plant #3	198.0	Lebanon_Hub Natural Gas-Cycling	No. 2 Peaking
PJM	9770_GT4	Tait Electric Generating Station #GT4	94.0	Lebanon_Hub Natural Gas-Cycling	No. 2 Peaking
PJM	9770_GT5	Tait Electric Generating Station #GT5	94.0	Lebanon_Hub Natural Gas-Cycling	No. 2 Peaking
PJM	9770_GT6	Tait Electric Generating Station #GT6	94.0	Lebanon_Hub Natural Gas-Cycling	No. 2 Peaking
PJM	9770_GT7	Tait Electric Generating Station #GT7	94.0	Transco Zone 6 Non NY NaturalGas-NonCycling	No. 2 Fuel Oil
PJM	9951	Elmwood Park Power #GEN1+GEN2	83.0	Transco Zone 6 Non NY NaturalGas-Cycling	No. 2 Peaking
PJM	9959_GT1	Sayreville #GT1	53.0	Transco Zone 6 Non NY NaturalGas-Cycling	No. 2 Peaking
PJM	9959_GT2	Sayreville #GT2	53.0	Transco Zone 6 Non NY NaturalGas-Cycling	No. 2 Peaking
PJM	9959_GT3	Sayreville #GT3	53.0	Transco Zone 6 Non NY NaturalGas-Cycling	No. 2 Peaking

PPA	ID	Name	Nameplate Capacity (MW)	Primary Fuel	Secondary Fuel
PJM	9959_GT4	Sayreville #GT4	53.0	Dominion_SouthPoint NaturalGas-NonCycling	No. 2 Fuel Oil
PJM	10162_UNT3	Allegheny Energy Units 3 4 & 5 #UNT3	184.0	Dominion_SouthPoint NaturalGas-NonCycling	No. 2 Fuel Oil
PJM	10162_UNT4	Allegheny Energy Units 3 4 & 5 #UNT4	184.0	Dominion_SouthPoint NaturalGas-NonCycling	No. 2 Fuel Oil
PJM	10162_UNT5	Allegheny Energy Units 3 4 & 5 #UNT5	188.0	AppalachiaAvg Hub NaturalGas-Cycling	No. 2 Peaking
PJM	10171_GT4	J K Smith #GT4	108.0	AppalachiaAvg Hub NaturalGas-Cycling	No. 2 Peaking
PJM	10171_GT5	J K Smith #GT5	108.0	Dominion_SouthPoint NaturalGas-Cycling	No. 2 Peaking
PJM	10176	West Lorain #1D	85.0	Dominion_SouthPoint NaturalGas-Cycling	No. 2 Peaking
PJM	10177	West Lorain #1E	85.0	Dominion_SouthPoint NaturalGas-Cycling	No. 2 Peaking
PJM	10178	West Lorain #1F	85.0	Dominion_SouthPoint NaturalGas-Cycling	No. 2 Peaking
PJM	10179	West Lorain #1G	85.0	Dominion_SouthPoint NaturalGas-Cycling	No. 2 Peaking
PJM	10180	West Lorain #1H	85.0	Dominion_SouthPoint NaturalGas-NonCycling	No. 2 Fuel Oil
PJM	10205_3	Armstrong #3	172.0	Dominion_SouthPoint NaturalGas-NonCycling	No. 2 Fuel Oil
PJM	10205_4	Armstrong #4	172.0	Transco_zone 5_delivered Natural Gas-NonCycling	No. 2 Fuel Oil
PJM	10240	Possum Point #6A+6B+6ST	613.0	Transco_Zone_6_NY NaturalGas-NonCycling	No. 2 Fuel Oil
PJM	10247	Bergen 2101+2201+2301	606.2	Transco Zone 6 Non NY NaturalGas-NonCycling	Kerosene
PJM	10249	Hay Road #HR5+HR6+HR7+HR8	627.0	Transco Zone 6 Non NY NaturalGas-Cycling	No. 2 Peaking
PJM	10252_KD-1	NRG Energy Center Dover #KD-1	50.0	Transco Zone 6 Non NY NaturalGas-Cycling	No. 2 Peaking
PJM	10252_KD-2	NRG Energy Center Dover #KD-2	50.0	Transco_zone 5_delivered Natural Gas-NonCycling	No. 2 Fuel Oil
PJM	10371	Marsh Run Generating	513.3	Leidy_Hub Natural Gas-NonCycling	No. 2 Fuel Oil
PJM	10607	Bethlehem Power Plant #4-8	880.0	Transco Zone 6 Non NY NaturalGas-Cycling	No. 2 Peaking
PJM	10642	Warren F Sam Beasley Generation Station #1	45.0	TETCO_M3 NaturalGas-Cycling	No. 2 Peaking
PJM	10644_UN12	Allegheny Energy Units 12 & 13 #UN12	43.8	TETCO_M3 NaturalGas-Cycling	No. 2 Peaking
PJM	10644_UN13	Allegheny Energy Units 12 & 13 #UN13	43.8	TETCO_M3 NaturalGas-NonCycling	Kerosene
PJM	10806	PSEG Linden Generating Station #1001+1101+1201	593.0	TETCO_M3 NaturalGas-NonCycling	Kerosene
PJM	10807	PSEG Linden Generating Station #2001+2101+2201	593.0	AppalachiaAvg Hub NaturalGas-Cycling	No. 2 Peaking
PJM	10815	J K Smith #GT6	98.0	AppalachiaAvg Hub NaturalGas-Cycling	No. 2 Peaking
PJM	10816	J K Smith #GT7	98.0	Lebanon_Hub Natural Gas-Cycling	No. 2 Peaking
PJM	11071	Anderson #ACT3	85.9	AppalachiaAvg Hub NaturalGas-Cycling	No. 2 Peaking
PJM	11790	Darby Electric Generating Station #GT5	94.0	AppalachiaAvg Hub NaturalGas-Cycling	No. 2 Peaking
PJM	11791	Darby Electric Generating Station #GT6	94.0	AppalachiaAvg Hub NaturalGas-Cycling	No. 2 Peaking
PJM	11825	Darby Electric Generating Station #GT3	94.0	AppalachiaAvg Hub NaturalGas-Cycling	No. 2 Peaking
PJM	11826	Darby Electric Generating Station #GT4	94.0	Transco_zone 5_delivered Natural Gas-NonCycling	No. 2 Fuel Oil

PPA	ID	Name	Nameplate Capacity (MW)	Primary Fuel	Secondary Fuel
PJM	12154	Ladysmith #3	178.5	Transco_zone 5_delivered Natural Gas-NonCycling	No. 2 Fuel Oil
PJM	12155	Ladysmith #4	178.5	Transco_zone 5_delivered Natural Gas-NonCycling	No. 2 Fuel Oil
PJM	12156	Ladysmith #5	178.5	Transco Zone 6 Non NY NaturalGas-Cycling	Kerosene
PJM	12175	Cumberland #CUMB2	131.8	Transco Zone 6 Non NY NaturalGas-NonCycling	No. 2 Fuel Oil
PJM	12295	Delta Power Plant #CTG1+CTG2+CTG3+STG1	629.6	Transco_zone 5_delivered Natural Gas-NonCycling	No. 2 Fuel Oil
PJM	12420	Bear Garden Power Station	679.3	Dominion_SouthPoint NaturalGas-NonCycling	ULSD
TVA	67_G10	Allen Steam Plant #G10	23.9	NG_TVA_Allen NaturalGas	No. 2 Peaking
TVA	67_G11	Allen Steam Plant #G11	23.9	NG_TVA_Allen NaturalGas	No. 2 Peaking
TVA	67_G12	Allen Steam Plant #G12	23.9	NG_TVA_Allen NaturalGas	No. 2 Peaking
TVA	67_G13	Allen Steam Plant #G13	23.9	NG_TVA_Allen NaturalGas	No. 2 Peaking
TVA	67_G14	Allen Steam Plant #G14	23.9	NG_TVA_Allen NaturalGas	No. 2 Peaking
TVA	67_G15	Allen Steam Plant #G15	23.9	NG_TVA_Allen NaturalGas	No. 2 Peaking
TVA	67_G16	Allen Steam Plant #G16	23.9	NG_TVA_Allen NaturalGas	No. 2 Peaking
TVA	67_G17	Allen Steam Plant #G17	59.6	NG_TVA_Allen NaturalGas	No. 2 Peaking
TVA	67_G18	Allen Steam Plant #G18	59.6	NG_TVA_Allen NaturalGas	No. 2 Peaking
TVA	67_G19	Allen Steam Plant #G19	59.6	NG_TVA_Allen NaturalGas	No. 2 Peaking
TVA	67_G20	Allen Steam Plant #G20	59.6	NG_TVA_Allen NaturalGas	No. 2 Peaking
TVA	68_GT1	Allen Steam Plant #GT1	23.9	NG_TVA_Allen NaturalGas	No. 2 Peaking
TVA	68_GT2	Allen Steam Plant #GT2	23.9	NG_TVA_Allen NaturalGas	No. 2 Peaking
TVA	68_GT3	Allen Steam Plant #GT3	23.9	NG_TVA_Allen NaturalGas	No. 2 Peaking
TVA	68_GT4	Allen Steam Plant #GT4	23.9	NG_TVA_Allen NaturalGas	No. 2 Peaking
TVA	68_GT5	Allen Steam Plant #GT5	23.9	NG_TVA_Allen NaturalGas	No. 2 Peaking
TVA	68_GT6	Allen Steam Plant #GT6	23.9	NG_TVA_Allen NaturalGas	No. 2 Peaking
TVA	68_GT7	Allen Steam Plant #GT7	23.9	NG_TVA_Allen NaturalGas	No. 2 Peaking
TVA	68_GT8	Allen Steam Plant #GT8	23.9	NG_TVA_Allen NaturalGas	No. 2 Peaking
TVA	68_GT9	Allen Steam Plant #GT9	23.9	NG_TVA_Colbert NaturalGas	No. 2 Peaking
TVA	961_GT1	Colbert #GT1	59.5	NG_TVA_Colbert NaturalGas	No. 2 Peaking
TVA	961_GT2	Colbert #GT2	59.5	NG_TVA_Colbert NaturalGas	No. 2 Peaking
TVA	961_GT3	Colbert #GT3	59.5	NG_TVA_Colbert NaturalGas	No. 2 Peaking
TVA	961_GT4	Colbert #GT4	59.5	NG_TVA_Colbert NaturalGas	No. 2 Peaking
TVA	961_GT5	Colbert #GT5	59.5	NG_TVA_Colbert NaturalGas	No. 2 Peaking
TVA	961_GT6	Colbert #GT6	59.5	NG_TVA_Colbert NaturalGas	No. 2 Peaking
TVA	961_GT7	Colbert #GT7	59.5	NG_TVA_Colbert NaturalGas	No. 2 Peaking

PPA	ID	Name	Nameplate Capacity (MW)	Primary Fuel	Secondary Fuel
TVA	961_GT8	Colbert #GT8	59.5	NG_TVA_Gallatin NaturalGas	No. 2 Peaking
TVA	1644_GT1	Gallatin #GT1	81.3	NG_TVA_Gallatin NaturalGas	No. 2 Peaking
TVA	1644_GT2	Gallatin #GT2	81.3	NG_TVA_Gallatin NaturalGas	No. 2 Peaking
TVA	1644_GT3	Gallatin #GT3	81.3	NG_TVA_Gallatin NaturalGas	No. 2 Peaking
TVA	1644_GT4	Gallatin #GT4	81.3	NG_TVA_Johnsonville NaturalGas	No. 2 Peaking
TVA	2336_G10	Johnsonville #G10	68.0	NG_TVA_Johnsonville NaturalGas	No. 2 Peaking
TVA	2336_G11	Johnsonville #G11	68.0	NG_TVA_Johnsonville NaturalGas	No. 2 Peaking
TVA	2336_G12	Johnsonville #G12	68.0	NG_TVA_Johnsonville NaturalGas	No. 2 Peaking
TVA	2336_G13	Johnsonville #G13	68.0	NG_TVA_Johnsonville NaturalGas	No. 2 Peaking
TVA	2336_G14	Johnsonville #G14	68.0	NG_TVA_Johnsonville NaturalGas	No. 2 Peaking
TVA	2336_G15	Johnsonville #G15	68.0	NG_TVA_Johnsonville NaturalGas	No. 2 Peaking
TVA	2336_G16	Johnsonville #G16	68.0	NG_TVA_Gallatin NaturalGas	No. 2 Peaking
TVA	5159_GT5	Gallatin #GT5	84.5	NG_TVA_Gallatin NaturalGas	No. 2 Peaking
TVA	5159_GT6	Gallatin #GT6	84.5	NG_TVA_Gallatin NaturalGas	No. 2 Peaking
TVA	5159_GT7	Gallatin #GT7	84.5	NG_TVA_Gallatin NaturalGas	No. 2 Peaking
TVA	5159_GT8	Gallatin #GT8	84.5	NG_TVA_Johnsonville NaturalGas	No. 2 Peaking
TVA	5397_G17	Johnsonville #G17	84.5	NG_TVA_Johnsonville NaturalGas	No. 2 Peaking
TVA	5397_G18	Johnsonville #G18	84.5	NG_TVA_Johnsonville NaturalGas	No. 2 Peaking
TVA	5397_G19	Johnsonville #G19	84.5	NG_TVA_Johnsonville NaturalGas	No. 2 Peaking
TVA	5397_G20	Johnsonville #G20	84.5	NG_TVA_Marshall NaturalGas	No. 2 Peaking
TVA	5404_CT1	Marshall Energy Facility #CT1	86.0	NG_TVA_Marshall NaturalGas	No. 2 Peaking
TVA	5404_CT2	Marshall Energy Facility #CT2	86.0	NG_TVA_Marshall NaturalGas	No. 2 Peaking
TVA	5404_CT3	Marshall Energy Facility #CT3	86.0	NG_TVA_Marshall NaturalGas	No. 2 Peaking
TVA	5404_CT4	Marshall Energy Facility #CT4	86.0	NG_TVA_Marshall NaturalGas	No. 2 Peaking
TVA	5404_CT5	Marshall Energy Facility #CT5	86.0	NG_TVA_Marshall NaturalGas	No. 2 Peaking
TVA	5404_CT6	Marshall Energy Facility #CT6	86.0	NG_TVA_Marshall NaturalGas	No. 2 Peaking
TVA	5404_CT7	Marshall Energy Facility #CT7	86.0	NG_TVA_Marshall NaturalGas	No. 2 Peaking
TVA	5404_CT8	Marshall Energy Facility #CT8	86.0	NG_TVA_LagoonCreek NaturalGas	No. 2 Peaking
TVA	9298_GT1	Lagoon Creek #GT1	84.5	NG_TVA_LagoonCreek NaturalGas	No. 2 Peaking
TVA	9298_GT2	Lagoon Creek #GT2	84.5	NG_TVA_LagoonCreek NaturalGas	No. 2 Peaking
TVA	9298_GT3	Lagoon Creek #GT3	84.5	NG_TVA_LagoonCreek NaturalGas	No. 2 Peaking
TVA	9298_GT4	Lagoon Creek #GT4	84.5	NG_TVA_LagoonCreek NaturalGas	No. 2 Peaking
TVA	9298_GT5	Lagoon Creek #GT5	84.5	NG_TVA_LagoonCreek NaturalGas	No. 2 Peaking
TVA	9298_GT6	Lagoon Creek #GT6	84.5	NG_TVA_LagoonCreek NaturalGas	No. 2 Peaking

PPA	ID	Name	Nameplate Capacity (MW)	Primary Fuel	Secondary Fuel
TVA	9299_GT7	Lagoon Creek #GT7	84.5	NG_TVA_LagoonCreek NaturalGas	No. 2 Peaking
TVA	9299_GT8	Lagoon Creek #GT8	84.5	NG_TVA_KemperCounty NaturalGas	No. 2 Peaking
TVA	9781_GT1	Kemper County #GT1	93.0	NG_TVA_KemperCounty NaturalGas	No. 2 Peaking
TVA	9781_GT2	Kemper County #GT2	93.0	NG_TVA_KemperCounty NaturalGas	No. 2 Peaking
TVA	9781_GT3	Kemper County #GT3	93.0	NG_TVA_KemperCounty NaturalGas	No. 2 Peaking
TVA	9781_GT4	Kemper County #GT4	93.0	NG_TVA_LagoonCreek NaturalGas	No. 2 Peaking
TVA	10234_GT10	Lagoon Creek #GT10	86.2	NG_TVA_LagoonCreek NaturalGas	No. 2 Peaking
TVA	10234_GT11	Lagoon Creek #GT11	86.2	NG_TVA_LagoonCreek NaturalGas	No. 2 Peaking
TVA	10234_GT12	Lagoon Creek #GT12	86.2	NG_TVA_LagoonCreek NaturalGas	No. 2 Peaking
TVA	10234_GT9	Lagoon Creek #GT9	86.2	NG_TVA_Johnsonville NaturalGas	No. 2 Peaking
TVA	11997	Johnsonville #GT1	68.0	NG_TVA_Johnsonville NaturalGas	No. 2 Peaking
TVA	11998	Johnsonville #GT2	68.0	NG_TVA_Johnsonville NaturalGas	No. 2 Peaking
TVA	11999	Johnsonville #GT3	68.0	NG_TVA_Johnsonville NaturalGas	No. 2 Peaking
TVA	12000	Johnsonville #GT4	68.0	NG_TVA_Johnsonville NaturalGas	No. 2 Peaking
TVA	12001	Johnsonville #GT5	68.0	NG_TVA_Johnsonville NaturalGas	No. 2 Peaking
TVA	12002	Johnsonville #GT6	68.0	NG_TVA_Johnsonville NaturalGas	No. 2 Peaking
TVA	12003	Johnsonville #GT7	68.0	NG_TVA_Johnsonville NaturalGas	No. 2 Peaking
TVA	12004	Johnsonville #GT8	68.0	NG_TVA_Johnsonville NaturalGas	No. 2 Peaking
TVA	12005	Johnsonville #GT9	68.0	NG_TVA_Johnsonville NaturalGas	No. 2 Peaking

Table E29-1. General Assumptions

Reference Technology	**2x7FA CC**	**2x7FA GT**	**2xLMS100 GT**
Source cost year (capital)	2018	2018	2018
Base labor market	Cleveland	Cleveland	Newburgh
Gas turbine scope effect ($MM)	$4.700	$4.400	$3.345
Other equipment effect ($MM)	$0.000	$1.310	$0.000
Other construction labor effect ($MM)	$0.000	$1.000	$0.000
Liquid Fuel Sys (other than tank)	$1.000	$1.200	$0.400
Fraction as labor	50%	50%	50%
Demin water sys (other than tank)	$0.800	$0.800	$0.000
Fraction as labor	50%	50%	50%
Demin water with gas only?	TRUE	FALSE	TRUE
EPC Fee Rate	12.00%	10.00%	10.00%
EPC Contingency Rate	10.00%	10.00%	10.00%
Development Cost (% of EPC)	5.00%	5.00%	5.00%
Mobilization & Startup (% of EPC)	1.00%	1.00%	1.00%
Incremental land for tankage	1.0	1.0	1.0
Hours of Commission Testing on ULSD	72	72	72
Non-Fuel Inventories (% of EPC)	0.50%	0.50%	0.50%
Owner's Contingency (% of Owner cost)	9.00%	9.00%	9.00%
Financing Cost (% of EPC and Owner cost)	2.40%	2.40%	2.40%
Rato of Installed Cost to Overnight Cost	1.0960	1.0460	1.0460
Fuel Inventory in Capital	FALSE	FALSE	FALSE
Maintenance Interval - Factored Hours	48,000	48,000	50,000
Maintenance factor for ULSD hours	1.50	1.50	1.50
Cost per maintenance cycle ($MM - matl)	$30.000	$25.000	$25.000
Cost per maintenance cycle ($MM - labor)	$10.000	$8.000	$2.000
NO_x emissions on natural gas (lb/MWh)			
NO_x emissions on ULSD (lb/MWh)			

Table E29-1. General Assumptions

Reference Technology	2x7FA CC	2x7FA GT	2xLMS100 GT
Mat'l and contract services - % of Capital	0.666%	0.208%	0.117%
Fraction as labor	33.30%	33.30%	33.30%
Admin & General - % of Capital	0.131%	0.226%	0.127%
Fraction as labor	33.30%	33.30%	33.30%
Fuel Oil Testing - Hr per year	15	15	15
Insurance - % of Capital	0.600%	0.600%	0.600%
Fuel Inventory Carrying Cost	4.000%	4.000%	4.000%
VO&M other than maintenance ($/MWh)	$1.1400	$1.8900	$2.5200

Fuel Oil Storage Tanks	2x7FA CC	2x7FA GT	2xLMS100 GT	General
Source Cost Year				2004
Escalation v. Tech Base				1.413
Base Labor Market				Albany
Labor Factor v. Tech Base	0.991	0.991	0.762	
"Zero volume" cost ($)				$231,401
Incremental cost ($/gal)				$0.3645
Percent labor				40%

Demin Water Storage Tanks	2x7FA CC	2x7FA GT	2xLMS100 GT	General
Source Cost Year				2004
Escalation v. Tech Base				1.413
Base Labor Market				Albany
Labor Factor v. Tech Base	0.991	0.991	0.762	
"Zero volume" cost ($)				$185,121
Incremental cost ($/gal)				$0.2916
Percent labor				40%
General cost escalation				2.00%
ULSD HHV (Btu/gal)				138,490
Water density (lb/gal)				8.345

Table E29-2. Site Assumptions

Site Reference	OH	NJ	MD	PA	VA	Newburgh	Syracuse	Albany	Poughkeepsie	NYC	LI
PPA	PJM	PJM	PJM	PJM	PJM	NYISO	NYISO	NYISO	NYISO	NYISO	NYISO
Zone/Area	Rest of RTO	EMAAC	SWMAAC	WMAAC	Dominion	G	C	F	G	J	K
State	OH	NJ	MD	PA	VA	NY	NY	NY	NY	NY	NY
County						Rockland	Onandaga	Albany	Dutchess	New York	Suffolk
Labor Market	Cleveland	Newark	Washington	Wilkes-Barre	Richmond	Newburgh	Syracuse	Albany	Suffern	NYC	LI
Labor Market Reference Base	Cleveland	Cleveland	Cleveland	Cleveland	Cleveland	Newburgh	Newburgh	Newburgh	Newburgh	Newburgh	Newburgh
Labor Cost Multiplier (v. Reference Base)	1.000	1.300	0.985	1.022	0.893	1.000	0.706	0.762	1.020	1.199	1.163
Ratio of Reference Base to Cleveland	1.000	1.000	1.000	1.000	1.000	1.300	1.300	1.300	1.300	1.300	1.300
Labor Cost Multiplier (v. Cleveland)	1.000	1.300	0.985	1.022	0.893	1.300	0.917	0.991	1.326	1.558	1.511
Land cost (2018 $/acre)	$38,100	$66,300	$73,900	$41,600	$54,300	$66,300	$66,300	$66,300	$66,300	$837,474	$80,258
Sales tax rate	6.00%	7.03%	6.02%	5.97%	6.25%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%
Real Property Tax Rate	5.6%	4.6%	1.1%	3.7%	1.0%	0.8%	0.8%	0.8%	0.8%	10.3%	0.8%
Real Property Assessment Ratio	35.0%	75.2%	100.0%	100.0%	95.5%	100.0%	100.0%	100.0%	100.0%	45.0%	100.0%
Personal Property Tax Rate	5.6%	0.0%	2.8%	0.0%	1.0%	0.8%	0.8%	0.8%	0.8%	10.3%	0.8%
Personal Property Effective Assessment Ratio	24.0%	0.0%	50.0%	0.0%	95.5%	100.0%	100.0%	100.0%	100.0%	45.0%	100.0%
ULSD Price (2018 $/MMBtu)	$18.00	$18.00	$18.00	$18.00	$18.00	$18.00	$18.00	$18.00	$18.00	$18.00	$18.00
Test energy revenue (2018 $/MWh)	$38.70	$42.30	$38.70	$38.70	$38.70	$38.70	$38.70	$38.70	$38.70	$38.70	$38.70
Elevation above sea level (feet)	1,070	110	150	1,200	390	165	421	275	165	20	16
Summer temperature (for ICAP, F)	89.5	94.0	95.2	91.0	93.7	90.0	90.0	90.0	90.0	90.0	90.0
Summer relative humidity (for ICAP, %)	50.2%	44.2%	45.2%	46.0%	47.2%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%
Winter temperature (for ULSD burn, F)						19.3	17.3	17.3	19.3	28.0	28.0
Winter relative hunidity (for ULSD burn, F)						74.0%	73.7%	73.7%	73.7%	61.7%	66.2%
Variable cost of demin water ($/1,000 gal)											
NO_x allowance price ($/ton)											
CO_2 allowance price ($/ton)											

Table E29-3. Incremental Costs for Dual-Fuel Capability – Combined Cycle – 2x1 GE 7FA

Location	Base	RTO	EMAAC	SWMAAC	WMAAC	Dominion	G	C	F	G	J	K
Locational Assumptions	OH	OH	NJ	MD	PA	VA	Newburgh	Syracuse	Albany	Poughkeepsie	NYC	LI
Elevation above sea level (feet)	1,070	1,070	110	150	1,200	390	165	421	275	165	20	16
Summer temperature (for ICAP, F)	89.5	89.5	94.0	95.2	91.0	93.7	90.0	90.0	90.0	90.0	90.0	90.0
Summer relative humidity (for ICAP, %)	50.2%	50.2%	44.2%	45.2%	46.0%	47.2%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%
Winter temperature (for ULSD burn, F)	0.0	0.0	0.0	0.0	0.0	0.0	19.3	17.3	17.3	19.3	28.0	28.0
Winter relative hunidity (for ULSD burn, F)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	74.0%	73.7%	73.7%	73.7%	61.7%	66.2%
Adjusted Performance Data												
Summer Installed Capacity (w/duct burners, MW)	651	651	668	664	649	660	660	660	660	660	660	660
Test output on ULSD (w/o duct burners, MW)	578	578	595	591	576	587	587	587	587	587	587	587
Test heat rate on ULSD (w/o duct burners, Btu/kWh)	6,791	6,791	6,800	6,811	6,792	6,808	6,791	6,791	6,791	6,791	6,791	6,791
ULSD burn rate (MMBtu/h)	3,925	3,925	4,046	4,025	3,912	3,996	3,986	3,986	3,986	3,986	3,986	3,986
Water injection rate on ULSD (gal/h)	42,000	42,000	42,000	42,000	42,000	42,000	42,000	42,000	42,000	42,000	42,000	42,000
Labor cost multiplier (v. OH)	1.000	1.000	1.300	0.985	1.022	0.893	1.300	0.917	0.991	1.326	1.558	1.511
Land cost (2018 $/acre)	$38,100	$38,100	$66,300	$73,900	$41,600	$54,300	$66,300	$66,300	$66,300	$66,300	$837,474	$80,258
Sales tax rate	6.00%	6.00%	7.03%	6.02%	5.97%	6.25%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%
ULSD Storage Capacity (days of full load)	3	3	3	3	3	3	3	3	3	3	3	3
Capacity in gallons	2,040,683	2,040,683	2,103,488	2,092,726	2,033,922	2,077,647	2,072,459	2,072,459	2,072,459	2,072,459	2,072,459	2,072,459
Demin Water Storage Capacity (days at full load on ULSD)	2	2	2	2	2	2	2	2	2	2	2	2
Capacity in gallons	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000
Average Days of inventory on ULSD	3	3	3	3	3	3	3	3	3	3	3	3
Inventory in gallons	2,040,683	2,040,683	2,103,488	2,092,726	2,033,922	2,077,647	2,072,459	2,072,459	2,072,459	2,072,459	2,072,459	2,072,459
ULSD Price (2018 $/MMBtu)	$18.00	$18.00	$18.00	$18.00	$18.00	$18.00	$18.00	$18.00	$18.00	$18.00	$18.00	$18.00
Test energy revenue (2018 $/MWh)	$38.70	$38.70	$42.30	$38.70	$38.70	$38.70	$38.70	$38.70	$38.70	$38.70	$38.70	$38.70
Real Property Tax Rate	5.6%	5.6%	4.6%	1.1%	3.7%	1.0%	0.8%	0.8%	0.8%	0.8%	10.3%	0.8%
Real Property Assessment Ratio	35.0%	35.0%	75.2%	100.0%	100.0%	95.5%	100.0%	100.0%	100.0%	100.0%	45.0%	100.0%
Personal Property Tax Rate	5.6%	5.6%	0.0%	2.8%	0.0%	1.0%	0.8%	0.8%	0.8%	0.8%	10.3%	0.8%
Personal Property Effective Assessment Ratio	24.0%	24.0%	0.0%	50.0%	0.0%	95.5%	100.0%	100.0%	100.0%	100.0%	45.0%	100.0%

Table E29-3. Incremental Costs for Dual-Fuel Capability – Combined Cycle – 2x1 GE 7FA

Location	Base	RTO	EMAAC	SWMAAC	WMAAC	Dominion	G	C	F	G	J	K
Nominal Capital $MM for 2018 CO												
Gas Turbine Scope	$4.700	$4.700	$4.700	$4.700	$4.700	$4.700	$4.700	$4.700	$4.700	$4.700	$4.700	$4.700
Other major equipment	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Other construction labor	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Liquid Fuel, Demin water handling (Mat'l)	$0.900	$0.900	$0.900	$0.900	$0.900	$0.900	$0.900	$0.900	$0.900	$0.900	$0.900	$0.900
Liquid Fuel, Demin water handling (Labor)	$0.900	$0.900	$1.170	$0.887	$0.920	$0.804	$1.170	$0.826	$0.891	$1.193	$1.402	$1.360
Liquid fuel storage tank (Mat'l)	$0.827	$0.827	$0.846	$0.843	$0.825	$0.838	$0.837	$0.837	$0.837	$0.837	$0.837	$0.837
Liquid fuel storage tank (Labor)	$0.556	$0.556	$0.740	$0.559	$0.568	$0.504	$0.732	$0.516	$0.558	$0.747	$0.877	$0.851
Demin water storage tank (Mat'l)	$0.498	$0.498	$0.498	$0.498	$0.498	$0.498	$0.498	$0.498	$0.498	$0.498	$0.498	$0.498
Demin water storage tank (Labor)	$0.335	$0.335	$0.436	$0.331	$0.343	$0.300	$0.436	$0.308	$0.332	$0.445	$0.523	$0.507
Incremental Land for Tanks	$0.038	$0.038	$0.066	$0.074	$0.042	$0.054	$0.066	$0.066	$0.066	$0.066	$0.837	$0.080
Startup Testing ULSD	$5.087	$5.087	$5.244	$5.217	$5.070	$5.179	$5.166	$5.166	$5.166	$5.166	$5.166	$5.166
Startup Testing Energy Sales on ULSD	($1.611)	($1.611)	($1.812)	($1.647)	($1.605)	($1.636)	($1.636)	($1.636)	($1.636)	($1.636)	($1.636)	($1.636)
Inventory carrying cost as O&M	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Total Incremental Direct Cost	$12.232	$12.232	$12.788	$12.362	$12.261	$12.142	$12.869	$12.182	$12.313	$12.917	$14.105	$13.263
Sales tax on equipment and materials	$0.416	$0.416	$0.488	$0.418	$0.413	$0.434	$0.485	$0.485	$0.485	$0.485	$0.485	$0.485
EPC Fee	$1.096	$1.096	$1.173	$1.096	$1.100	$1.077	$1.171	$1.088	$1.104	$1.177	$1.227	$1.217
EPC Contingency	$1.023	$1.023	$1.095	$1.023	$1.027	$1.005	$1.093	$1.016	$1.031	$1.098	$1.145	$1.135
Development Cost	$0.563	$0.563	$0.602	$0.563	$0.565	$0.553	$0.601	$0.559	$0.567	$0.604	$0.630	$0.624
Mobilization & Startup	$0.113	$0.113	$0.120	$0.113	$0.113	$0.111	$0.120	$0.112	$0.113	$0.121	$0.126	$0.125
Non-fuel Inventories	$0.056	$0.056	$0.060	$0.056	$0.056	$0.055	$0.060	$0.056	$0.057	$0.060	$0.063	$0.062
Owner's Contingency	$0.332	$0.332	$0.331	$0.343	$0.331	$0.339	$0.340	$0.339	$0.339	$0.340	$0.410	$0.342
Financing Fees	$0.380	$0.380	$0.400	$0.383	$0.381	$0.377	$0.402	$0.380	$0.384	$0.403	$0.437	$0.414
Indirect (factored) Costs	$3.977	$3.977	$4.271	$3.996	$3.986	$3.951	$4.272	$4.035	$4.080	$4.289	$4.522	$4.405
Total Overnight Cost	$16.209	$16.209	$17.059	$16.357	$16.247	$16.093	$17.142	$16.217	$16.394	$17.206	$18.627	$17.669
Total Installed Cost	$17.765	$17.765	$18.697	$17.928	$17.806	$17.638	$18.788	$17.773	$17.968	$18.857	$20.416	$19.365
Installed Cost per kW of ICAP	$27.29	$27.29	$27.99	$27.00	$27.44	$26.72	$28.47	$26.93	$27.22	$28.57	$30.93	$29.34

Table E29-3. Incremental Costs for Dual-Fuel Capability – Combined Cycle – 2x1 GE 7FA

Location	Base	RTO	EMAAC	SWMAAC	WMAAC	Dominion	G	C	F	G	J	K
Annual Fixed O&M Cost (2018 $MM /yr)												
Materials & Contract Services	$0.118	$0.118	$0.130	$0.118	$0.119	$0.114	$0.130	$0.115	$0.118	$0.131	$0.140	$0.138
Administrative & General Expense	$0.023	$0.023	$0.026	$0.023	$0.023	$0.022	$0.026	$0.023	$0.023	$0.026	$0.028	$0.027
ULSD for Regular Testing	$1.060	$1.060	$1.092	$1.087	$1.056	$1.079	$1.076	$1.076	$1.076	$1.076	$1.076	$1.076
Energy Offset for Testing	($0.336)	($0.336)	($0.378)	($0.343)	($0.334)	($0.341)	($0.341)	($0.341)	($0.341)	($0.341)	($0.341)	($0.341)
Property Taxes	$0.259	$0.259	$0.131	$0.239	$0.122	$0.168	$0.140	$0.133	$0.134	$0.141	$0.941	$0.145
Insurance	$0.107	$0.107	$0.112	$0.108	$0.107	$0.106	$0.113	$0.107	$0.108	$0.113	$0.122	$0.116
ULSD Inventory Carrying Cost as Fixed O&M	$0.203	$0.203	$0.210	$0.209	$0.203	$0.207	$0.207	$0.207	$0.207	$0.207	$0.207	$0.207
Total Fixed O&M (2018 $MM/yr)	$1.435	$1.435	$1.323	$1.440	$1.296	$1.355	$1.351	$1.319	$1.325	$1.353	$2.173	$1.369
Total Fixed O&M (2018 $kW-yr)	$2.20	$2.20	$1.98	$2.17	$2.00	$2.05	$2.05	$2.00	$2.01	$2.05	$3.29	$2.07
Variable O&M Cost (2018 $/MWh)												
On Natural Gas Fuel												
Major Maintenance Materials	$0.96	$0.96	$0.94	$0.94	$0.96	$0.95	$0.95	$0.95	$0.95	$0.95	$0.95	$0.95
Major Maintenance Labor	$0.32	$0.32	$0.41	$0.31	$0.33	$0.28	$0.41	$0.29	$0.31	$0.42	$0.49	$0.48
Other (Catalyst, ammonia, water, etc.)	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14
Total - Natural Gas Fuel	$2.42	$2.42	$2.48	$2.39	$2.43	$2.37	$2.50	$2.38	$2.40	$2.51	$2.58	$2.56
On Liquid Fuel												
Major Maintenance Materials	$1.44	$1.44	$1.40	$1.41	$1.44	$1.42	$1.42	$1.42	$1.42	$1.42	$1.42	$1.42
Major Maintenance Labor	$0.48	$0.48	$0.61	$0.46	$0.49	$0.42	$0.62	$0.43	$0.47	$0.63	$0.74	$0.72
Other (Catalyst, ammonia, water, etc.)	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14
Total - Liquid Fuel	$3.06	$3.06	$3.15	$3.02	$3.08	$2.98	$3.18	$2.99	$3.03	$3.19	$3.30	$3.28

Sums of amounts shown in columns may not match indicated totals due to rounding.

Table E29-4. Incremental Costs for Dual-Fuel Capability – Simple Cycle – 2x GE 7FA

Location	Base	RTO	EMAAC	SWMAAC	WMAAC	Dominion	G	C	F	G	J	K
Locational Assumptions	OH	OH	NJ	MD	PA	VA	Newburgh	Syracuse	Albany	Poughkeepsie	NYC	LI
Elevation above sea level (feet)	1,070	1,070	110	150	1,200	390	165	421	275	165	20	16
Summer temperature (for ICAP, F)	89.5	89.5	94.0	95.2	91.0	93.7	90.0	90.0	90.0	90.0	90.0	90.0
Summer relative humidity (for ICAP, %)	50.2%	50.2%	44.2%	45.2%	46.0%	47.2%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%
Winter temperature (for ULSD burn, F)	0.0	0.0	0.0	0.0	0.0	0.0	19.3	17.3	17.3	19.3	28.0	28.0
Winter relative hunidity (for ULSD burn, F)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	74.0%	73.7%	73.7%	73.7%	61.7%	66.2%
Adjusted Performance Data												
Summer Installed Capacity (w/duct burners, MW)	385	385	396	393	383	391	385	385	385	385	385	385
Test output on ULSD (w/o duct burners, MW)	385	385	396	393	383	391	385	385	385	385	385	385
Test heat rate on ULSD (w/o duct burners, Btu/kWh)	10,297	10,297	10,309	10,322	10,296	10,317	10,297	10,297	10,297	10,297	10,297	10,297
ULSD burn rate (MMBtu/h)	3,964	3,964	4,082	4,057	3,943	4,034	3,964	3,964	3,964	3,964	3,964	3,964
Water injection rate on ULSD (gal/h)	42,000	42,000	42,000	42,000	42,000	42,000	42,000	42,000	42,000	42,000	42,000	42,000
Labor cost multiplier (v. OH)	1.000	1.000	1.300	0.985	1.022	0.893	1.300	0.917	0.991	1.326	1.558	1.511
Land cost (2018 $/acre)	$38,100	$38,100	$66,300	$73,900	$41,600	$54,300	$66,300	$66,300	$66,300	$66,300	$837,474	$80,258
Sales tax rate	6.00%	6.00%	7.03%	6.02%	5.97%	6.25%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%
ULSD Storage Capacity (days of full load)	3	3	3	3	3	3	3	3	3	3	3	3
Capacity in gallons	2,061,036	2,061,036	2,122,393	2,108,970	2,050,130	2,097,221	2,061,036	2,061,036	2,061,036	2,061,036	2,061,036	2,061,036
Demin Water Storage Capacity (days at full load on ULSD)	2	2	2	2	2	2	2	2	2	2	2	2
Capacity in gallons	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000
Average Days of inventory on ULSD	3	3	3	3	3	3	3	3	3	3	3	3
Inventory in gallons	2,061,036	2,061,036	2,122,393	2,108,970	2,050,130	2,097,221	2,061,036	2,061,036	2,061,036	2,061,036	2,061,036	2,061,036
ULSD Price (2018 $/MMBtu)	$18.00	$18.00	$18.00	$18.00	$18.00	$18.00	$18.00	$18.00	$18.00	$18.00	$18.00	$18.00
Test energy revenue (2018 $/MWh)	$38.70	$38.70	$42.30	$38.70	$38.70	$38.70	$38.70	$38.70	$38.70	$38.70	$38.70	$38.70
Real Property Tax Rate	5.6%	5.6%	4.6%	1.1%	3.7%	1.0%	0.8%	0.8%	0.8%	0.8%	10.3%	0.8%
Real Property Assessment Ratio	35.0%	35.0%	75.2%	100.0%	100.0%	95.5%	100.0%	100.0%	100.0%	100.0%	45.0%	100.0%
Personal Property Tax Rate	5.6%	5.6%	0.0%	2.8%	0.0%	1.0%	0.8%	0.8%	0.8%	0.8%	10.3%	0.8%
Personal Property Effective Assessment Ratio	24.0%	24.0%	0.0%	50.0%	0.0%	95.5%	100.0%	100.0%	100.0%	100.0%	45.0%	100.0%

Table E29-4. Incremental Costs for Dual-Fuel Capability – Simple Cycle – 2x GE 7FA

Location	Base	RTO	EMAAC	SWMAAC	WMAAC	Dominion	G	C	F	G	J	K
Nominal Capital $MM for 2018 CO												
Gas Turbine Scope	$4.400	$4.400	$4.400	$4.400	$4.400	$4.400	$4.400	$4.400	$4.400	$4.400	$4.400	$4.400
Other major equipment	$1.310	$1.310	$1.310	$1.310	$1.310	$1.310	$1.310	$1.310	$1.310	$1.310	$1.310	$1.310
Other construction labor	$1.000	$1.000	$0.000	$0.985	$0.000	$0.880	$1.144	$0.000	$1.133	$0.000	$1.765	$0.000
Liquid Fuel, Demin water handling (Mat'l)	$1.000	$1.000	$1.000	$1.000	$1.000	$1.000	$1.000	$1.000	$1.000	$1.000	$1.000	$1.000
Liquid Fuel, Demin water handling (Labor)	$1.000	$1.000	$1.300	$0.985	$1.022	$0.893	$1.300	$0.917	$0.991	$1.326	$1.558	$1.511
Liquid fuel storage tank (Mat'l)	$0.833	$0.833	$0.852	$0.848	$0.830	$0.844	$0.833	$0.833	$0.833	$0.833	$0.833	$0.833
Liquid fuel storage tank (Labor)	$0.561	$0.561	$0.745	$0.562	$0.571	$0.507	$0.729	$0.514	$0.555	$0.743	$0.874	$0.847
Demin water storage tank (Mat'l)	$0.655	$0.655	$0.655	$0.655	$0.655	$0.655	$0.655	$0.655	$0.655	$0.655	$0.655	$0.655
Demin water storage tank (Labor)	$0.441	$0.441	$0.573	$0.435	$0.451	$0.394	$0.573	$0.405	$0.437	$0.585	$0.687	$0.666
Incremental Land for Tanks	$0.038	$0.038	$0.066	$0.074	$0.042	$0.054	$0.066	$0.066	$0.066	$0.066	$0.837	$0.080
Startup Testing ULSD	$5.138	$5.138	$5.291	$5.257	$5.111	$5.228	$5.138	$5.138	$5.138	$5.138	$5.138	$5.138
Startup Testing Energy Sales on ULSD	($1.073)	($1.073)	($1.206)	($1.095)	($1.067)	($1.089)	($1.073)	($1.073)	($1.073)	($1.073)	($1.073)	($1.073)
Inventory carrying cost as O&M	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Total Incremental Direct Cost	$15.303	$15.303	$14.987	$15.417	$14.325	$15.077	$16.075	$14.166	$15.445	$14.984	$17.984	$15.368
Sales tax on equipment and materials	$0.492	$0.492	$0.578	$0.495	$0.489	$0.513	$0.574	$0.574	$0.574	$0.574	$0.574	$0.574
EPC Fee	$1.169	$1.169	$1.141	$1.168	$1.073	$1.140	$1.252	$1.061	$1.189	$1.143	$1.366	$1.180
EPC Contingency	$1.286	$1.286	$1.255	$1.284	$1.180	$1.254	$1.377	$1.167	$1.308	$1.257	$1.502	$1.298
Development Cost	$0.707	$0.707	$0.691	$0.706	$0.649	$0.690	$0.757	$0.642	$0.719	$0.691	$0.826	$0.714
Mobilization & Startup	$0.141	$0.141	$0.138	$0.141	$0.130	$0.138	$0.151	$0.128	$0.144	$0.138	$0.165	$0.143
Non-fuel Inventories	$0.071	$0.071	$0.069	$0.071	$0.065	$0.069	$0.076	$0.064	$0.072	$0.069	$0.083	$0.071
Owner's Contingency	$0.388	$0.388	$0.392	$0.400	$0.385	$0.396	$0.392	$0.389	$0.391	$0.390	$0.464	$0.392
Financing Fees	$0.469	$0.469	$0.462	$0.472	$0.439	$0.463	$0.496	$0.437	$0.476	$0.462	$0.551	$0.474
Indirect (factored) Costs	$4.725	$4.725	$4.727	$4.738	$4.410	$4.662	$5.075	$4.462	$4.873	$4.725	$5.530	$4.845
Total Overnight Cost	$20.028	$20.028	$19.713	$20.155	$18.735	$19.739	$21.150	$18.628	$20.318	$19.709	$23.515	$20.213
Total Installed Cost	$20.949	$20.949	$20.620	$21.082	$19.597	$20.647	$22.123	$19.484	$21.253	$20.615	$24.596	$21.143
Installed Cost per kW of ICAP	$54.41	$54.41	$52.07	$53.64	$51.17	$52.80	$57.46	$50.61	$55.20	$53.55	$63.89	$54.92

Table E29-4. Incremental Costs for Dual-Fuel Capability – Simple Cycle – 2x GE 7FA

Location	Base	RTO	EMAAC	SWMAAC	WMAAC	Dominion	G	C	F	G	J	K
Annual Fixed O&M Cost (2018 $MM /yr)												
Materials & Contract Services	$0.044	$0.044	$0.048	$0.043	$0.044	$0.042	$0.048	$0.042	$0.043	$0.048	$0.052	$0.051
Administrative & General Expense	$0.047	$0.047	$0.052	$0.047	$0.048	$0.046	$0.052	$0.046	$0.047	$0.052	$0.056	$0.055
ULSD for Regular Testing	$1.070	$1.070	$1.102	$1.095	$1.065	$1.089	$1.070	$1.070	$1.070	$1.070	$1.070	$1.070
Energy Offset for Testing	($0.223)	($0.223)	($0.251)	($0.228)	($0.222)	($0.227)	($0.223)	($0.223)	($0.223)	($0.223)	($0.223)	($0.223)
Property Taxes	$0.303	$0.303	$0.138	$0.283	$0.129	$0.196	$0.166	$0.146	$0.159	$0.155	$1.138	$0.159
Insurance	$0.126	$0.126	$0.124	$0.126	$0.118	$0.124	$0.133	$0.117	$0.128	$0.124	$0.148	$0.127
ULSD Inventory Carrying Cost as Fixed O&M	$0.206	$0.206	$0.212	$0.210	$0.204	$0.209	$0.206	$0.206	$0.206	$0.206	$0.206	$0.206
Total Fixed O&M (2018 $MM/yr)	$1.572	$1.572	$1.424	$1.577	$1.385	$1.479	$1.451	$1.404	$1.430	$1.431	$2.446	$1.444
Total Fixed O&M (2018 $kW-yr)	$4.08	$4.08	$3.60	$4.01	$3.62	$3.78	$3.77	$3.65	$3.71	$3.72	$6.35	$3.75
Variable O&M Cost (2018 $/MWh)												
On Natural Gas Fuel												
Major Maintenance Materials	$1.35	$1.35	$1.32	$1.33	$1.36	$1.33	$1.35	$1.35	$1.35	$1.35	$1.35	$1.35
Major Maintenance Labor	$0.43	$0.43	$0.55	$0.42	$0.44	$0.38	$0.56	$0.40	$0.43	$0.57	$0.67	$0.65
Other (Catalyst, ammonia, water, etc.)	$1.89	$1.89	$1.89	$1.89	$1.89	$1.89	$1.89	$1.89	$1.89	$1.89	$1.89	$1.89
Total - Natural Gas Fuel	$3.68	$3.68	$3.75	$3.63	$3.69	$3.60	$3.81	$3.64	$3.67	$3.82	$3.92	$3.90
On Liquid Fuel												
Major Maintenance Materials	$2.03	$2.03	$1.97	$1.99	$2.04	$2.00	$2.03	$2.03	$2.03	$2.03	$2.03	$2.03
Major Maintenance Labor	$0.65	$0.65	$0.82	$0.63	$0.67	$0.57	$0.84	$0.60	$0.64	$0.86	$1.01	$0.98
Other (Catalyst, ammonia, water, etc.)	$1.89	$1.89	$1.89	$1.89	$1.89	$1.89	$1.89	$1.89	$1.89	$1.89	$1.89	$1.89
Total - Liquid Fuel	$4.57	$4.57	$4.68	$4.50	$4.60	$4.46	$4.76	$4.51	$4.56	$4.78	$4.93	$4.90

Sums of amounts shown in columns may not match indicated totals due to rounding.

Table E29-5. Incremental Costs for Dual-Fuel Capability – Simple Cycle – 2x LMS100

Location	Base	RTO	EMAAC	SWMAAC	WMAAC	Dominion	G	C	F	G	J	K
Locational Assumptions	Newburgh	OH	NJ	MD	PA	VA	Newburgh	Syracuse	Albany	Poughkeepsie	NYC	LI
Elevation above sea level (feet)	165	1,070	110	150	1,200	390	165	421	275	165	20	16
Summer temperature (for ICAP, F)	90.0	89.5	94.0	95.2	91.0	93.7	90.0	90.0	90.0	90.0	90.0	90.0
Summer relative humidity (for ICAP, %)	70.0%	50.2%	44.2%	45.2%	46.0%	47.2%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%
Winter temperature (for ULSD burn, F)	19.3	0.0	0.0	0.0	0.0	0.0	19.3	17.3	17.3	19.3	28.0	28.0
Winter relative hunidity (for ULSD burn, F)	74.0%	0.0%	0.0%	0.0%	0.0%	0.0%	74.0%	73.7%	73.7%	73.7%	61.7%	66.2%
Adjusted Performance Data												
Summer Installed Capacity (MW)	184.4	183.6	183.6	183.6	183.6	183.6	184.4	186.3	183.6	184.4	184.0	185.5
Test output on ULSD (Winter, MW)	200.5	200.9	200.9	200.9	200.9	200.9	200.5	201.7	200.9	200.5	198.5	200.1
Test heat rate on ULSD (w/o duct burners, Btu/kWh)	9,068	9,056	9,056	9,056	9,056	9,056	9,068	9,046	9,056	9,068	9,159	9,086
ULSD burn rate (MMBtu/h)	1,818	1,819	1,819	1,819	1,819	1,819	1,818	1,825	1,819	1,818	1,818	1,818
Incr'l Water injection rate on ULSD (gal/h)	0	0	0	0	0	0	0	0	0	0	0	0
Labor cost multiplier (v. Newburgh)	1.000	0.769	1.000	0.758	0.787	0.687	1.000	0.706	0.762	1.020	1.199	1.163
Land cost (2018 $/acre)	$66,300	$38,100	$66,300	$73,900	$41,600	$54,300	$66,300	$66,300	$66,300	$66,300	$837,474	$80,258
Sales tax rate	7.00%	6.00%	7.03%	6.02%	5.97%	6.25%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%
ULSD Storage Capacity (days of full load)	3	3	3	3	3	3	3	3	3	3	3	3
Capacity in gallons	945,330	945,868	945,868	945,868	945,868	945,868	945,330	948,586	945,868	945,330	945,293	945,317
Demin Water Storage Capacity (days at full load on ULSD)	2	2	2	2	2	2	2	2	2	2	2	2
Capacity in gallons	0	0	0	0	0	0	0	0	0	0	0	0
Average Days of inventory on ULSD	3	3	3	3	3	3	3	3	3	3	3	3
Inventory in gallons	945,330	945,868	945,868	945,868	945,868	945,868	945,330	948,586	945,868	945,330	945,293	945,317
ULSD Price (2018 $/MMBtu)	$18.00	$18.00	$18.00	$18.00	$18.00	$18.00	$18.00	$18.00	$18.00	$18.00	$18.00	$18.00
Test energy revenue (2018 $/MWh)	$38.70	$38.70	$42.30	$38.70	$38.70	$38.70	$38.70	$38.70	$38.70	$38.70	$38.70	$38.70
Real Property Tax Rate	0.8%	5.6%	4.6%	1.1%	3.7%	1.0%	0.8%	0.8%	0.8%	0.8%	10.3%	0.8%
Real Property Assessment Ratio	100.0%	35.0%	75.2%	100.0%	100.0%	95.5%	100.0%	100.0%	100.0%	100.0%	45.0%	100.0%
Personal Property Tax Rate	0.8%	5.6%	0.0%	2.8%	0.0%	1.0%	0.8%	0.8%	0.8%	0.8%	10.3%	0.8%
Personal Property Effective Assessment Ratio	100.0%	24.0%	0.0%	50.0%	0.0%	95.5%	100.0%	100.0%	100.0%	100.0%	45.0%	100.0%

Table E29-5. Incremental Costs for Dual-Fuel Capability – Simple Cycle – 2x LMS100

Location	Base	RTO	EMAAC	SWMAAC	WMAAC	Dominion	G	C	F	G	J	K
Nominal Capital $MM for 2018 CO												
Gas Turbine Scope	$3.345	$3.345	$3.345	$3.345	$3.345	$3.345	$3.345	$3.345	$3.345	$3.345	$3.345	$3.345
Other major equipment	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Other construction labor	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Liquid Fuel, Demin water handling (Mat'l)	$0.200	$0.200	$0.200	$0.200	$0.200	$0.200	$0.200	$0.200	$0.200	$0.200	$0.200	$0.200
Liquid Fuel, Demin water handling (Labor)	$0.200	$0.154	$0.200	$0.152	$0.157	$0.137	$0.200	$0.141	$0.152	$0.204	$0.240	$0.233
Liquid fuel storage tank (Mat'l)	$0.488	$0.488	$0.488	$0.488	$0.488	$0.488	$0.488	$0.489	$0.488	$0.488	$0.488	$0.488
Liquid fuel storage tank (Labor)	$0.427	$0.329	$0.427	$0.324	$0.336	$0.294	$0.427	$0.302	$0.326	$0.436	$0.512	$0.497
Demin water storage tank (Mat'l)	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Demin water storage tank (Labor)	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Incremental Land for Tanks	$0.066	$0.038	$0.066	$0.074	$0.042	$0.054	$0.066	$0.066	$0.066	$0.066	$0.837	$0.080
Startup Testing ULSD	$2.357	$2.358	$2.358	$2.358	$2.358	$2.358	$2.357	$2.365	$2.358	$2.357	$2.356	$2.357
Startup Testing Energy Sales on ULSD	($0.559)	($0.560)	($0.612)	($0.560)	($0.560)	($0.560)	($0.559)	($0.562)	($0.560)	($0.559)	($0.553)	($0.558)
Inventory carrying cost as O&M	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Total Incremental Direct Cost	$6.525	$6.352	$6.473	$6.381	$6.367	$6.317	$6.525	$6.346	$6.376	$6.537	$7.426	$6.642
Sales tax on equipment and materials	$0.282	$0.242	$0.284	$0.243	$0.241	$0.252	$0.282	$0.282	$0.282	$0.282	$0.282	$0.282
EPC Fee	$0.494	$0.476	$0.494	$0.475	$0.477	$0.472	$0.494	$0.476	$0.479	$0.496	$0.507	$0.504
EPC Contingency	$0.544	$0.523	$0.544	$0.523	$0.524	$0.519	$0.544	$0.524	$0.527	$0.545	$0.557	$0.555
Development Cost	$0.299	$0.288	$0.299	$0.288	$0.288	$0.285	$0.299	$0.288	$0.290	$0.300	$0.307	$0.305
Mobilization & Startup	$0.060	$0.058	$0.060	$0.058	$0.058	$0.057	$0.060	$0.058	$0.058	$0.060	$0.061	$0.061
Non-fuel Inventories	$0.030	$0.029	$0.030	$0.029	$0.029	$0.029	$0.030	$0.029	$0.029	$0.030	$0.031	$0.031
Owner's Contingency	$0.176	$0.173	$0.171	$0.176	$0.173	$0.174	$0.176	$0.176	$0.176	$0.176	$0.246	$0.177
Financing Fees	$0.202	$0.195	$0.201	$0.196	$0.196	$0.195	$0.202	$0.196	$0.197	$0.202	$0.226	$0.205
Indirect (factored) Costs	$2.087	$1.984	$2.083	$1.987	$1.986	$1.983	$2.087	$2.029	$2.039	$2.091	$2.217	$2.121
Total Overnight Cost	$8.611	$8.336	$8.556	$8.368	$8.353	$8.300	$8.611	$8.375	$8.415	$8.628	$9.643	$8.763
Total Installed Cost	$9.007	$8.720	$8.949	$8.753	$8.737	$8.681	$9.007	$8.760	$8.802	$9.025	$10.086	$9.166
Installed Cost per kW of ICAP	$48.85	$47.49	$48.74	$47.67	$47.59	$47.28	$48.85	$47.03	$47.94	$48.94	$54.82	$49.41

Table E29-5. Incremental Costs for Dual-Fuel Capability – Simple Cycle – 2x LMS100

Location	Base	RTO	EMAAC	SWMAAC	WMAAC	Dominion	G	C	F	G	J	K
Annual Fixed O&M Cost (2018 $MM /yr)												
Materials & Contract Services	$0.011	$0.010	$0.011	$0.010	$0.010	$0.009	$0.011	$0.010	$0.010	$0.011	$0.011	$0.011
Administrative & General Expense	$0.011	$0.011	$0.011	$0.011	$0.011	$0.010	$0.011	$0.010	$0.011	$0.012	$0.012	$0.012
ULSD for Regular Testing	$0.491	$0.491	$0.491	$0.491	$0.491	$0.491	$0.491	$0.493	$0.491	$0.491	$0.491	$0.491
Energy Offset for Testing	($0.116)	($0.117)	($0.127)	($0.117)	($0.117)	($0.117)	($0.116)	($0.117)	($0.117)	($0.116)	($0.115)	($0.116)
Property Taxes	$0.068	$0.124	$0.047	$0.119	$0.044	$0.083	$0.068	$0.066	$0.066	$0.068	$0.466	$0.069
Insurance	$0.054	$0.052	$0.054	$0.053	$0.052	$0.052	$0.054	$0.053	$0.053	$0.054	$0.061	$0.055
ULSD Inventory Carrying Cost as Fixed O&M	$0.094	$0.094	$0.094	$0.094	$0.094	$0.094	$0.094	$0.095	$0.094	$0.094	$0.094	$0.094
Total Fixed O&M (2018 $MM/yr)	$0.612	$0.666	$0.581	$0.661	$0.586	$0.624	$0.612	$0.608	$0.608	$0.613	$1.020	$0.616
Total Fixed O&M (2018 $kW-yr)	$3.32	$3.63	$3.16	$3.60	$3.19	$3.40	$3.32	$3.27	$3.31	$3.32	$5.54	$3.32
Variable O&M Cost (2018 $/MWh)												
On Natural Gas Fuel												
Major Maintenance Materials	$2.71	$2.72	$2.72	$2.72	$2.72	$2.72	$2.71	$2.68	$2.72	$2.71	$2.72	$2.70
Major Maintenance Labor	$0.22	$0.17	$0.22	$0.17	$0.17	$0.15	$0.22	$0.15	$0.17	$0.22	$0.26	$0.25
Other (Catalyst, ammonia, water, etc.)	$2.52	$2.52	$2.52	$2.52	$2.52	$2.52	$2.52	$2.52	$2.52	$2.52	$2.52	$2.52
Total - Natural Gas Fuel	$5.45	$5.41	$5.46	$5.41	$5.41	$5.39	$5.45	$5.36	$5.41	$5.45	$5.50	$5.47
On Liquid Fuel												
Major Maintenance Materials	$4.07	$4.08	$4.08	$4.08	$4.08	$4.08	$4.07	$4.03	$4.08	$4.07	$4.08	$4.04
Major Maintenance Labor	$0.33	$0.25	$0.33	$0.25	$0.26	$0.22	$0.33	$0.23	$0.25	$0.33	$0.39	$0.38
Other (Catalyst, ammonia, water, etc.)	$2.52	$2.52	$2.52	$2.52	$2.52	$2.52	$2.52	$2.52	$2.52	$2.52	$2.52	$2.52
Total - Liquid Fuel	$6.91	$6.86	$6.93	$6.85	$6.86	$6.83	$6.91	$6.77	$6.85	$6.92	$6.99	$6.94

Sums of amounts shown in columns may not match indicated totals due to rounding.

Location No.	PPA	Location Name	City/Town	County	NO_x Non-Attainment or OTR ?	CC Technology	SC Technology	WACC
1	ISO-NE	Central CT	Middletown	Middlesex	TRUE	2x1 GE 7FA CC	2 x LMS100 w/SCR	8.05%
2	ISO-NE	SW CT	Norwalk	Fairfield	TRUE	2x1 GE 7FA CC	2 x LMS100 w/SCR	8.03%
3	ISO-NE	Cape Cod	Sandwich	Barnstable	TRUE	2x1 GE 7FA CC	2 x LMS100 w/SCR	8.03%
4	ISO-NE	SE MA	Somerset	Bristol	TRUE	2x1 GE 7FA CC	2 x LMS100 w/SCR	8.01%
5	ISO-NE	Maine	Yarmouth	Cumberland	TRUE	2x1 GE 7FA CC	2 x LMS100 w/SCR	8.02%
6	ISO-NE	New Hampshire	Bow	Merrimack	TRUE	2x1 GE 7FA CC	2 x LMS100 w/SCR	8.02%
7	ISO-NE	Vermont	Vernon	Windham	TRUE	2x1 GE 7FA CC	2 x LMS100 w/SCR	7.78%
8	NYISO	NYC	NYC (Astoria))	Queens	TRUE	2x1 GE 7FA CC	2 x LMS100 w/SCR	8.02%
9	NYISO	Long Island	Yaphank	Suffolk	TRUE	2x1 GE 7FA CC	2 x LMS100 w/SCR	8.02%
10	NYISO	Lower Hudson Valley	Newburgh	Orange	TRUE	2x1 GE 7FA CC	2 x LMS100 w/SCR	8.06%
11	NYISO	Capital District	Albany	Albany	TRUE	2x1 GE 7FA CC	2 x LMS100 w/SCR	8.09%
12	MISO	Upper Penninsula	Marquette	Marquette	FALSE	2x1 GE 7FA CC	2 x GE 7FA No SCR	7.98%
13	MISO	Twin Cities	St. Paul	Ramsey	FALSE	2x1 GE 7FA CC	2 x GE 7FA No SCR	7.99%
14	MISO	Southern Illinois	Carbondale	Jackson	FALSE	2x1 GE 7FA CC	2 x GE 7FA No SCR	8.09%
15	PJM	Dominion North	Arlington	Arlington	TRUE	2x1 GE 7FA CC	2 x LMS100 w/SCR	7.98%
16	PJM	PEPCO	Washington	DC	TRUE	2x1 GE 7FA CC	2 x LMS100 w/SCR	8.02%
17	PJM	BGE	Baltimore	Baltimore	TRUE	2x1 GE 7FA CC	2 x LMS100 w/SCR	8.01%
18	PJM	Delmarva	Wilmington	New Castle	TRUE	2x1 GE 7FA CC	2 x LMS100 w/SCR	7.98%
19	PJM	PECO	Philadelphia	Philadelphia	TRUE	2x1 GE 7FA CC	2 x LMS100 w/SCR	8.00%
20	PJM	PSEG North	Newark	Essex	TRUE	2x1 GE 7FA CC	2 x LMS100 w/SCR	8.00%
21	PJM	PSEG South	Trenton	Mercer	TRUE	2x1 GE 7FA CC	2 x LMS100 w/SCR	8.07%
22	TVA	Maury East		Maury	FALSE	2x1 GE 7FA CC	2 x GE 7FA No SCR	8.07%
23	TVA	Colbert		Colbert	FALSE	2x1 GE 7FA CC	2 x GE 7FA No SCR	8.07%
24	TVA	Johnsonville	New Johnsonville	Humphreys	FALSE	2x1 GE 7FA CC	2 x GE 7FA No SCR	8.09%
25	TVA	Summer Shade	Summer Shade	Metcalfe	FALSE	2x1 GE 7FA CC	2 x GE 7FA No SCR	8.25%
26	IESO	Central	Toronto		FALSE	2x1 GE 7FA CC	2 x GE 7FA No SCR	8.61%
27	IESO	East	Greater Napanee		FALSE	2x1 GE 7FA CC	2 x GE 7FA No SCR	8.61%

Location No.	PPA	Location Name	MHQ for CC (Dth/h)	MHQ for LMS100 SC (Dth/h)	MHQ for frame SC (Dth/h)	Cap Factor for CC (gas)	Cap Factor for LMS100 SC (gas)	Cap Factor for Frame SC (gas)
1	ISO-NE	Central CT	4,392	1,966	4,399	47.6%	23.8%	23.8%
2	ISO-NE	SW CT	4,392	1,966	4,399	47.6%	23.8%	23.8%
3	ISO-NE	Cape Cod	4,392	1,966	4,399	47.6%	23.8%	23.8%
4	ISO-NE	SE MA	4,392	1,966	4,399	47.6%	23.8%	23.8%
5	ISO-NE	Maine	4,392	1,966	4,399	47.6%	23.8%	23.8%
6	ISO-NE	New Hampshire	4,392	1,966	4,399	47.6%	23.8%	23.8%
7	ISO-NE	Vermont	4,392	1,966	4,399	47.6%	23.8%	23.8%
8	NYISO	NYC	4,392	1,966	4,399	47.6%	23.8%	23.8%
9	NYISO	Long Island	4,392	1,966	4,399	47.6%	23.8%	23.8%
10	NYISO	Lower Hudson Valley	4,392	1,966	4,399	47.6%	23.8%	23.8%
11	NYISO	Capital District	4,392	1,966	4,399	47.6%	23.8%	23.8%
12	MISO	Upper Penninsula	4,392	1,966	4,399	47.6%	23.8%	23.8%
13	MISO	Twin Cities	4,392	1,966	4,399	47.6%	23.8%	23.8%
14	MISO	Southern Illinois	4,392	1,966	4,399	47.6%	23.8%	23.8%
15	PJM	Dominion North	4,392	1,966	4,399	47.6%	23.8%	23.8%
16	PJM	PEPCO	4,392	1,966	4,399	47.6%	23.8%	23.8%
17	PJM	BGE	4,392	1,966	4,399	47.6%	23.8%	23.8%
18	PJM	Delmarva	4,392	1,966	4,399	47.6%	23.8%	23.8%
19	PJM	PECO	4,392	1,966	4,399	47.6%	23.8%	23.8%
20	PJM	PSEG North	4,392	1,966	4,399	47.6%	23.8%	23.8%
21	PJM	PSEG South	4,392	1,966	4,399	47.6%	23.8%	23.8%
22	TVA	Maury East	4,392	1,966	4,399	47.6%	23.8%	23.8%
23	TVA	Colbert	4,392	1,966	4,399	47.6%	23.8%	23.8%
24	TVA	Johnsonville	4,392	1,966	4,399	47.6%	23.8%	23.8%
25	TVA	Summer Shade	4,392	1,966	4,399	47.6%	23.8%	23.8%
26	IESO	Central	4,392	1,966	4,399	47.6%	23.8%	23.8%
27	IESO	East	4,392	1,966	4,399	47.6%	23.8%	23.8%

Location No.	PPA	Location Name	Supply Point	Path	Pipeline FT Rate ($/mo per Dth/day)	Pipeline IT Rate ($/Dth)	LDC for IT	LDC IT Rate ($/Dth)
1	ISO-NE	Central CT	Marcellus	Algonquin	$56.553	$0.428		
2	ISO-NE	SW CT	Marcellus	Tenessee	$25.891	$0.383	Yankee	$0.250
3	ISO-NE	Cape Cod	Marcellus	Algonquin	$58.639	$0.496		
4	ISO-NE	SE MA	Marcellus	Algonquin	$56.553	$0.469		
5	ISO-NE	Maine	Atlantic Canada	PNGTS	$74.835	$1.706		
6	ISO-NE	New Hampshire	Marcellus/Utica	Tennessee	$39.255	$0.383		
7	ISO-NE	Vermont	Marcellus/Utica	Tennessee	$39.255	$0.383		
8	NYISO	NYC	Marcellus	Spectra	$30.718	$0.490	ConEd	$0.192
9	NYISO	Long Island	Marcellus	Iroquois	$30.718	$0.490	NGrid	$0.240
10	NYISO	Lower Hudson Valley	Marcellus	Millennium	$19.769	$0.652		
11	NYISO	Capital District	Marcellus	Tennessee	$6.522	$0.259		
12	MISO	Upper Penninsula	West Texas	Northern Natural	$14.876	$0.800		
13	MISO	Twin Cities	West Texas	Northern Natural	$14.876	$0.800		
14	MISO	Southern Illinois	Gulf	NGPL	$9.995	$0.394		
15	PJM	Dominion North	Gulf	Transco	$23.725	$0.417		
16	PJM	PEPCO	Gulf	Transco	$23.725	$0.417		
17	PJM	BGE	Marcellus	Columbia	$11.287	$0.143	BGE	$0.399
18	PJM	Delmarva	Marcellus	Texas Eastern	$13.978	$0.185		
19	PJM	PECO	Marcellus	Transco	$20.499	$0.490	PGW	$0.580
20	PJM	PSEG North	Marcellus	Transco	$20.499	$0.490	PSEG	$0.676
21	PJM	PSEG South	Marcellus	PennEast Project	$18.250	$0.490	PSEG	$0.676
22	TVA	Maury East	Marcellus/Utica	Texas Eastern	$19.467	$0.247		
23	TVA	Colbert	Gulf	AlaTenn	$15.291	$0.515		
24	TVA	Johnsonville	Gulf	Tennessee	$11.938	$0.404		
25	TVA	Summer Shade	Gulf	Columbia Gulf	$6.388	$0.152		
26	IESO	Central	Western Canada	TransCanada	$45.488	$1.496		
27	IESO	East	Western Canada	TransCanada	$47.945	$1.576		

Location No.	PPA	Location Name	Total Effective IT Rate ($/Dth)	Lateral Length (miles)	Lateral Cost ($MM)	Interruption Days	
						Pipeline IT	LDC IT
1	ISO-NE	Central CT	$0.43			50	
2	ISO-NE	SW CT	$0.63	3.5	$42.2	30	30
3	ISO-NE	Cape Cod	$0.50			50	
4	ISO-NE	SE MA	$0.47			50	
5	ISO-NE	Maine	$1.71			12	
6	ISO-NE	New Hampshire	$0.38			12	
7	ISO-NE	Vermont	$0.38			62	
8	NYISO	NYC	$0.68	2.5	$69.2	25	30
9	NYISO	Long Island	$0.73	29.1	$259.0	25	30
10	NYISO	Lower Hudson Valley	$0.65			83	
11	NYISO	Capital District	$0.26			62	
12	MISO	Upper Penninsula	$0.80			0	
13	MISO	Twin Cities	$0.80			0	
14	MISO	Southern Illinois	$0.39			0	
15	PJM	Dominion North	$0.42			59	
16	PJM	PEPCO	$0.42			59	
17	PJM	BGE	$0.54	19.5	$88.9	23	20
18	PJM	Delmarva	$0.19			30	
19	PJM	PECO	$1.07	0.5	$10.0	30	20
20	PJM	PSEG North	$1.17	0.4	$9.2	9	20
21	PJM	PSEG South	$1.17	1.3	$20.7	9	20
22	TVA	Maury East	$0.25			0	
23	TVA	Colbert	$0.52			0	
24	TVA	Johnsonville	$0.40			0	
25	TVA	Summer Shade	$0.15			0	
26	IESO	Central	$1.50			39	
27	IESO	East	$1.58			39	

Location No.	PPA	Location Name	Combined Cycle				
			Lateral Rate ($/mo per Dth/day)	Total FT Rate ($/mo per Dth/day)	Adj Cap Factor	Avoided IT Cost ($/mo per Dth/day)	Incr Cost of FT ($/mo per Dth/day)
1	ISO-NE	Central CT	$0.000	$54.690	41.1%	$6.032	$48.658
2	ISO-NE	SW CT	$5.365	$30.403	43.7%	$9.494	$20.909
3	ISO-NE	Cape Cod	$0.000	$56.707	41.1%	$7.000	$49.707
4	ISO-NE	SE MA	$0.000	$54.690	41.1%	$6.622	$48.067
5	ISO-NE	Maine	$0.000	$72.369	46.1%	$26.974	$45.396
6	ISO-NE	New Hampshire	$0.000	$37.962	46.1%	$6.052	$31.910
7	ISO-NE	Vermont	$0.000	$37.962	39.5%	$5.198	$32.764
8	NYISO	NYC	$8.798	$38.503	43.7%	$10.237	$28.267
9	NYISO	Long Island	$32.927	$62.633	43.7%	$10.957	$51.676
10	NYISO	Lower Hudson Valley	$0.000	$19.118	36.8%	$8.233	$10.885
11	NYISO	Capital District	$0.000	$6.307	39.5%	$3.515	$2.792
12	MISO	Upper Penninsula	$0.000	$14.385	47.6%	$13.076	$1.310
13	MISO	Twin Cities	$0.000	$14.385	47.6%	$13.076	$1.310
14	MISO	Southern Illinois	$0.000	$9.666	47.6%	$6.445	$3.221
15	PJM	Dominion North	$0.000	$22.943	39.9%	$5.711	$17.233
16	PJM	PEPCO	$0.000	$22.943	39.9%	$5.710	$17.233
17	PJM	BGE	$11.306	$22.221	44.6%	$8.300	$13.921
18	PJM	Delmarva	$0.000	$13.517	43.7%	$2.783	$10.735
19	PJM	PECO	$1.271	$21.095	43.7%	$16.060	$5.035
20	PJM	PSEG North	$1.170	$20.993	45.0%	$18.023	$2.970
21	PJM	PSEG South	$2.628	$20.277	45.0%	$18.020	$2.257
22	TVA	Maury East	$0.000	$18.825	47.6%	$4.043	$14.782
23	TVA	Colbert	$0.000	$14.787	47.6%	$8.421	$6.366
24	TVA	Johnsonville	$0.000	$11.544	47.6%	$6.604	$4.940
25	TVA	Summer Shade	$0.000	$6.177	47.6%	$2.484	$3.693
26	IESO	Central	$0.000	$43.989	42.5%	$21.805	$22.184
27	IESO	East	$0.000	$46.365	42.5%	$22.981	$23.384

Location No.	PPA	Location Name	2xLMS100 Simple Cycle			
			Lateral Rate ($/mo per Dth/day)	Total FT Rate ($/mo per Dth/day)	Adj Cap Factor	Avoided IT Cost ($/mo per Dth/day)
1	ISO-NE	Central CT	$0.000	$54.690	20.5%	$3.016
2	ISO-NE	SW CT	$11.983	$37.020	21.9%	$4.747
3	ISO-NE	Cape Cod	$0.000	$56.707	20.5%	$3.500
4	ISO-NE	SE MA	$0.000	$54.690	20.5%	$3.311
5	ISO-NE	Maine	$0.000	$72.369	23.0%	$13.487
6	ISO-NE	New Hampshire	$0.000	$37.962	23.0%	$3.026
7	ISO-NE	Vermont	$0.000	$37.962	19.8%	$2.599
8	NYISO	NYC	$19.649	$49.355	21.9%	$5.118
9	NYISO	Long Island	$73.542	$103.248	21.9%	$5.479
10	NYISO	Lower Hudson Valley	$0.000	$19.118	18.4%	$4.116
11	NYISO	Capital District	$0.000	$6.307	19.8%	$1.757
12	MISO	Upper Penninsula	$0.000	$14.385	23.8%	$6.538
13	MISO	Twin Cities	$0.000	$14.385	23.8%	$6.538
14	MISO	Southern Illinois	$0.000	$9.666	23.8%	$3.223
15	PJM	Dominion North	$0.000	$22.943	20.0%	$2.855
16	PJM	PEPCO	$0.000	$22.943	20.0%	$2.855
17	PJM	BGE	$25.251	$36.166	22.3%	$4.150
18	PJM	Delmarva	$0.000	$13.517	21.9%	$1.391
19	PJM	PECO	$2.839	$22.663	21.9%	$8.030
20	PJM	PSEG North	$2.612	$22.436	22.5%	$9.012
21	PJM	PSEG South	$5.869	$23.518	22.5%	$9.010
22	TVA	Maury East	$0.000	$18.825	23.8%	$2.021
23	TVA	Colbert	$0.000	$14.787	23.8%	$4.211
24	TVA	Johnsonville	$0.000	$11.544	23.8%	$3.302
25	TVA	Summer Shade	$0.000	$6.177	23.8%	$1.242
26	IESO	Central	$0.000	$43.989	21.3%	$10.902
27	IESO	East	$0.000	$46.365	21.3%	$11.491

Location No.	PPA	Location Name	2x7FA Simple Cycle			
			Lateral Rate ($/mo per Dth/day)	Total FT Rate ($/mo per Dth/day)	Adj Cap Factor	Avoided IT Cost ($/mo per Dth/day)
1	ISO-NE	Central CT	$0.000	$54.690	20.5%	$3.016
2	ISO-NE	SW CT	$5.357	$30.394	21.9%	$4.747
3	ISO-NE	Cape Cod	$0.000	$56.707	20.5%	$3.500
4	ISO-NE	SE MA	$0.000	$54.690	20.5%	$3.311
5	ISO-NE	Maine	$0.000	$72.369	23.0%	$13.487
6	ISO-NE	New Hampshire	$0.000	$37.962	23.0%	$3.026
7	ISO-NE	Vermont	$0.000	$37.962	19.8%	$2.599
8	NYISO	NYC	$8.784	$38.489	21.9%	$5.118
9	NYISO	Long Island	$32.875	$62.581	21.9%	$5.479
10	NYISO	Lower Hudson Valley	$0.000	$19.118	18.4%	$4.116
11	NYISO	Capital District	$0.000	$6.307	19.8%	$1.757
12	MISO	Upper Penninsula	$0.000	$14.385	23.8%	$6.538
13	MISO	Twin Cities	$0.000	$14.385	23.8%	$6.538
14	MISO	Southern Illinois	$0.000	$9.666	23.8%	$3.223
15	PJM	Dominion North	$0.000	$22.943	20.0%	$2.855
16	PJM	PEPCO	$0.000	$22.943	20.0%	$2.855
17	PJM	BGE	$11.288	$22.203	22.3%	$4.150
18	PJM	Delmarva	$0.000	$13.517	21.9%	$1.391
19	PJM	PECO	$1.269	$21.093	21.9%	$8.030
20	PJM	PSEG North	$1.168	$20.991	22.5%	$9.012
21	PJM	PSEG South	$2.624	$20.272	22.5%	$9.010
22	TVA	Maury East	$0.000	$18.825	23.8%	$2.021
23	TVA	Colbert	$0.000	$14.787	23.8%	$4.211
24	TVA	Johnsonville	$0.000	$11.544	23.8%	$3.302
25	TVA	Summer Shade	$0.000	$6.177	23.8%	$1.242
26	IESO	Central	$0.000	$43.989	21.3%	$10.902
27	IESO	East	$0.000	$46.365	21.3%	$11.491

Location No.	PPA	Location Name	Site-Specific Simple Cycle		
			Total FT Rate ($/mo per Dth/day)	Avoided IT Cost ($/mo per Dth/day)	Incr Cost of FT ($/mo per Dth/day)
1	ISO-NE	Central CT	$54.690	$3.016	$51.674
2	ISO-NE	SW CT	$37.020	$4.747	$32.273
3	ISO-NE	Cape Cod	$56.707	$3.500	$53.207
4	ISO-NE	SE MA	$54.690	$3.311	$51.379
5	ISO-NE	Maine	$72.369	$13.487	$58.882
6	ISO-NE	New Hampshire	$37.962	$3.026	$34.936
7	ISO-NE	Vermont	$37.962	$2.599	$35.363
8	NYISO	NYC	$49.355	$5.118	$44.236
9	NYISO	Long Island	$103.248	$5.479	$97.769
10	NYISO	Lower Hudson Valley	$19.118	$4.116	$15.001
11	NYISO	Capital District	$6.307	$1.757	$4.550
12	MISO	Upper Penninsula	$14.385	$6.538	$7.848
13	MISO	Twin Cities	$14.385	$6.538	$7.848
14	MISO	Southern Illinois	$9.666	$3.223	$6.443
15	PJM	Dominion North	$22.943	$2.855	$20.088
16	PJM	PEPCO	$22.943	$2.855	$20.088
17	PJM	BGE	$36.166	$4.150	$32.017
18	PJM	Delmarva	$13.517	$1.391	$12.126
19	PJM	PECO	$22.663	$8.030	$14.633
20	PJM	PSEG North	$22.436	$9.012	$13.424
21	PJM	PSEG South	$23.518	$9.010	$14.508
22	TVA	Maury East	$18.825	$2.021	$16.804
23	TVA	Colbert	$14.787	$4.211	$10.577
24	TVA	Johnsonville	$11.544	$3.302	$8.242
25	TVA	Summer Shade	$6.177	$1.242	$4.935
26	IESO	Central	$43.989	$10.902	$33.087
27	IESO	East	$46.365	$11.491	$34.875

Location No.	PPA	Location Name	PPA Zone	State/ Prov.	City/Town	County	Target ULSD Inventory for CC (day full load)	Target ULSD Inventory for SC (day full load)	ULSD Tank Capacity for CC (day full load)	ULSD Tank Capacity for SC (day full load)
1	ISO-NE	Central CT	CT	CT	Middletown	Middlesex	3.3	1.7	4.6	4.6
2	ISO-NE	SW CT	CT	CT	Norwalk	Fairfield	5.7	2.9	7.0	5.8
3	ISO-NE	Cape Cod	SEMA	MA	Sandwich	Barnstable	5.7	2.9	7.0	5.8
4	ISO-NE	SE MA	SEMA	MA	Somerset	Bristol	5.7	2.9	7.0	5.8
5	ISO-NE	Maine	ME	ME	Yarmouth	Cumberland	6.7	3.3	8.0	6.3
6	ISO-NE	New Hampshire	NH	NH	Bow	Merrimack	2.9	1.4	2.9	1.4
7	ISONE	Vermont	VT	VT	Vernon	Windham	4.8	2.4	4.8	2.4
8	NYISO	NYC	J	NY	NYC (Astoria)	Queens	4.8	2.4	6.1	5.3
9	NYISO	Long Island	K	NY	Yaphank	Suffolk	2.9	1.4	2.9	1.4
10	NYISO	Lower Hudson Valley	GHI	NY	Newburgh	Orange	6.2	3.1	7.0	4.8
11	NYISO	Capital District	F	NY	Albany	Albany	3.3	1.7	3.3	1.7
12	MISO	Upper Penninsula		MI	Marquette	Marquette	3.3	1.7	3.3	1.7
13	MISO	Twin Cities		MN	St. Paul	Ramsey	1.9	1.0	1.9	1.0
14	MISO	Southern Illinois		IL	Carbondale	Jackson	1.9	1.0	1.9	1.0
15	PJM	Dominion North	Dominion	VA	Arlington	Arlington	2.4	1.2	2.4	1.2
16	PJM	PEPCO	PEPCO	MD	Washington	DC	2.4	1.2	2.4	1.2
17	PJM	BGE	BGE	MD	Baltimore	Baltimore	6.2	3.1	7.5	6.0
18	PJM	Delmarva	Delmarva	DE	Wilmington	New Castle	3.3	1.7	3.3	1.7
19	PJM	PECO	PECO	PA	Philadelphia	Philadelphia	3.3	1.7	3.3	1.7
20	PJM	PSEG North	PSEG N	NJ	Newark	Essex	2.4	1.2	2.4	1.2
21	PJM	PSEG South	PSEG S	NJ	Trenton	Mercer	2.4	1.2	2.4	1.2
22	TVA	Maury East		TN		Maury	1.9	1.0	1.9	1.0
23	TVA	Colbert		AL		Colbert	9.5	4.8	10.3	5.5
24	TVA	Johnsonville		TN	New Johnsonville	Humphreys	9.5	4.8	10.3	5.5
25	TVA	Summer Shade		KY	Summer Shade	Metcalfe	2.4	1.2	2.4	1.2
26	IESO	Central	Central	ON	Toronto		2.4	1.2	2.4	1.2
27	IESO	East	East	ON	Greater Napanee		2.4	1.2	2.4	1.2

Location No.	PPA	Location Name	ULSD Depot	Rack Index	ULSD Rack Price ($/gal)	ULSD Delivery Mode	Delivery Unit Size (gal)	ULSD Delivery Distance (miles)	ULSD Delivery Cost ($/gal)	ULSD Del'd Price ($/gal)
1	ISO-NE	Central CT	NYH	NYH	$2.74	Barge	1,000,000	na	$0.06	$2.80
2	ISO-NE	SW CT	NYH	NYH	$2.74	Barge	1,000,000	na	$0.04	$2.78
3	ISO-NE	Cape Cod	NYH	NYH	$2.74	Barge	1,000,000	na	$0.06	$2.80
4	ISO-NE	SE MA	NYH	NYH	$2.74	Barge	1,000,000	na	$0.06	$2.80
5	ISO-NE	Maine	NYH	NYH	$2.74	Barge	1,000,000	na	$0.08	$2.82
6	ISO-NE	New Hampshire	Chelsea, MA	RACKD3N PY0 S94 T7	$2.84	Truck	10,000	54	$0.05	$2.89
7	ISONE	Vermont	Rutland, VT	RACKG8N PY0 SL6 T2	$2.91	Truck		80	$0.06	$2.97
8	NYISO	NYC	NYH	NYH	$2.74	Barge	1,000,000	na	$0.00	$2.74
9	NYISO	Long Island	Inwood, NY	RACKM5N PY0 SCF T11	$2.78	Truck	10,000	51	$0.05	$2.83
10	NYISO	Lower Hudson Valley	NYH	NYH	$2.74	Barge	600,000	na	$0.05	$2.79
11	NYISO	Capital District	Albany, NY	RACKI5N PY0 R	$2.80	Truck	10,000	<20	$0.04	$2.84
12	MISO	Upper Penninsula	Cheboygan, MI	RACKL3N PY0 R	$2.88	Truck	10,000	183	$0.09	$2.97
13	MISO	Twin Cities	St. Paul, MN	RACKX3N PY0 R	$2.85	Truck	10,000	<20	$0.04	$2.89
14	MISO	Southern Illinois	Cape Girardeau, MO	RACK04N PY0 S07 T3	$2.80	Truck	10,000	47	$0.05	$2.85
15	PJM	Dominion North	Fairfax, VA	RACKB8N PY0 SB6 T6	$2.76	Truck	10,000	<20	$0.04	$2.80
16	PJM	PEPCO	Fairfax, VA	RACKB8N PY0 SB6 T6	$2.76	Truck	10,000	<20	$0.04	$2.80
17	PJM	BGE	NYH	NYH	$2.74	Barge	1,000,000	na	$0.06	$2.80
18	PJM	Delmarva	Delaware City, DE	RACK11N PY0 R	$2.77	Truck	10,000	<20	$0.04	$2.81
19	PJM	PECO	Philadelphia, PA	RACKQ6N PY0 R	$2.76	Truck	10,000	<20	$0.04	$2.80
20	PJM	PSEG North	Newark, NJ	RACK95N PY0 R	$2.77	Truck	10,000	<20	$0.04	$2.81
21	PJM	PSEG South	Trenton, NJ	RACKB5N PY0 SHD T3	$2.80	Truck	10,000	<20	$0.04	$2.84
22	TVA	Maury East	Nashville, TN	RACKB7N PY0 R	$2.79	Truck	10,000	53	$0.05	$2.84
23	TVA	Colbert	New Orleans, LA	Gulf Coast	$2.71	Barge	600,000	na	$0.09	$2.80
24	TVA	Johnsonville	New Orleans, LA	Gulf Coast	$2.71	Barge	600,000	na	$0.09	$2.80
25	TVA	Summer Shade	Nashville, TN	RACKB7N PY0 R	$2.79	Truck	10,000	108	$0.08	$2.87
26	IESO	Central	Toronto, ON	RACKR9N PW0 R	$2.81	Truck	10,000	<20	$0.04	$2.85
27	IESO	East	Kingston, ON	RACKADN PW0 R	$2.87	Truck	10,000	27	$0.04	$2.91

Location No.	PPA	Location Name	ULSD Delivery Lag (days)	Design Delivery Interrupt (days)	RGDS S0 W18 Constrained Segment	RGDS W18 Constraint Level	NG Constraint Inventory (days)	Days of Average Burn (excl. barge vol adder)
1	ISO-NE	Central CT	1	3	Texas Eastern M3 North	High	3	7
2	ISO-NE	SW CT	6	3	Tennessee Z4 PA	High	3	12
3	ISO-NE	Cape Cod	6	3	Texas Eastern M3 North	High	3	12
4	ISO-NE	SE MA	6	3	Texas Eastern M3 North	High	3	12
5	ISO-NE	Maine	9	3	TransCanada Quebec	Moderate	2	14
6	ISO-NE	New Hampshire	1	3	TransCanada Quebec	Moderate	2	6
7	ISONE	Vermont	2	5	Tennessee Z5 NY	High	3	10
8	NYISO	NYC	5	3	Constitution	Moderate	2	10
9	NYISO	Long Island	1	3	Constitution	Moderate	2	6
10	NYISO	Lower Hudson Valley	7	3	Millennium	High	3	13
11	NYISO	Capital District	1	3	Tennessee Z5 NY	High	3	7
12	MISO	Upper Penninsula	2	5	None	None	0	7
13	MISO	Twin Cities	1	3	None	None	0	4
14	MISO	Southern Illinois	1	3	None	None	0	4
15	PJM	Dominion North	1	3	Transco Z5	Low	1	5
16	PJM	PEPCO	1	3	Transco Z5	Low	1	5
17	PJM	BGE	8	3	Columbia Gas VA/MD	Moderate	2	13
18	PJM	Delmarva	1	3	Texas Eastern M2 PA South	High	3	7
19	PJM	PECO	1	3	Texas Eastern M2 PA South	High	3	7
20	PJM	PSEG North	1	3	Transco Z6 Leidy to 210	Low	1	5
21	PJM	PSEG South	1	3	Transco Z6 Leidy to 210	Low	1	5
22	TVA	Maury East	1	3	None	None	0	4
23	TVA	Colbert	17	3	None	None	0	20
24	TVA	Johnsonville	17	3	None	None	0	20
25	TVA	Summer Shade	2	3	None	None	0	5
26	IESO	Central	1	3	Union Gas Dawn	Low	1	5
27	IESO	East	1	3	Union Gas Dawn	Low	1	5

Location No.	PPA	Location Name	CC MHQ (Dth/h)	SC MHQ (Dth/h)	CC Tank Cap Adder for Del Size (days)	SC Tank Cap Adder for Del Size (days)
1	ISO-NE	Central CT	4,392	1,966	1.31	2.92
2	ISO-NE	SW CT	4,392	1,966	1.31	2.92
3	ISO-NE	Cape Cod	4,392	1,966	1.31	2.92
4	ISO-NE	SE MA	4,392	1,966	1.31	2.92
5	ISO-NE	Maine	4,392	1,966	1.31	2.92
6	ISO-NE	New Hampshire	4,392	1,966	0.00	0.00
7	ISONE	Vermont	4,392	1,966	0.00	0.00
8	NYISO	NYC	4,392	1,966	1.31	2.92
9	NYISO	Long Island	4,392	1,966	0.00	0.00
10	NYISO	Lower Hudson Valley	4,392	1,966	0.79	1.75
11	NYISO	Capital District	4,392	1,966	0.00	0.00
12	MISO	Upper Penninsula	4,392	4,399	0.00	0.00
13	MISO	Twin Cities	4,392	4,399	0.00	0.00
14	MISO	Southern Illinois	4,392	4,399	0.00	0.00
15	PJM	Dominion North	4,392	1,966	0.00	0.00
16	PJM	PEPCO	4,392	1,966	0.00	0.00
17	PJM	BGE	4,392	1,966	1.31	2.92
18	PJM	Delmarva	4,392	1,966	0.00	0.00
19	PJM	PECO	4,392	1,966	0.00	0.00
20	PJM	PSEG North	4,392	1,966	0.00	0.00
21	PJM	PSEG South	4,392	1,966	0.00	0.00
22	TVA	Maury East	4,392	4,399	0.00	0.00
23	TVA	Colbert	4,392	4,399	0.79	0.78
24	TVA	Johnsonville	4,392	4,399	0.79	0.78
25	TVA	Summer Shade	4,392	4,399	0.00	0.00
26	IESO	Central	4,392	4,399	0.00	0.00
27	IESO	East	4,392	4,399	0.00	0.00

Table E32-1. Combined Cycle – 2x1 GE 7FA

Location No.	**Base**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**
PPA	PJM	ISONE	ISONE	ISONE	ISONE	ISONE	ISONE	ISONE	NYISO	NYISO	NYISO	NYISO	MISO	MISO
Location Name		Central CT	SW CT	Cape Cod	SE MA	Maine	New Hampshire	Vermont	NYC	Long Island	Lower Hudson Valley	Capital District	Upper Penninsula	Twin Cities
Area/Zone		CT	CT	SEMA	SEMA	ME	NH	VT	J	K	GHI	F	North	North
State	OH	CT	CT	MA	MA	ME	NH	VT	NY	NY	NY	NY	MI	MN
County		Middlesex	Fairfield	Barnstable	Bristol	Cumberland	Merrimack	Windham	Queens	Suffolk	Orange	Albany	Marquette	Ramsey
City/Town	Cleveland	Middletown	Norwalk	Sandwich	Somerset	Yarmouth	Bow	Vernon	NYC (Astoria)	Yaphank	Newburgh	Albany	Marquette	St. Paul
Locational Assumptions														
Elevation above sea level (feet)	1,070	0	0	0	0	0	0	0	0	0	0	0	0	0
Summer temperature (for ICAP, F)	89.5	90	90	90	90	90	90	90	90	90	90	90	90	90
Winter temperature (for ULSD burn and MDQ, F)	0.0	20	20	20	20	20	20	20	20	20	20	20	20	20
Adjusted Performance Data														
Summer Installed Capacity (w/duct burners, MW)	651	620	620	620	620	620	620	620	620	620	620	620	620	620
Winter Output on NG (w/o duct burners, MW)		668	668	668	668	668	668	668	668	668	668	668	668	668
Winter Heat Rate on NG (w/o duct burners, Btu/kWh)		6,575	6,575	6,575	6,575	6,575	6,575	6,575	6,575	6,575	6,575	6,575	6,575	6,575
Winter Burn Rate on NG (MMBtu/h)		4,392	4,392	4,392	4,392	4,392	4,392	4,392	4,392	4,392	4,392	4,392	4,392	4,392
Winter Output on ULSD (w/o duct burners, MW)		652	652	652	652	652	652	652	652	652	652	652	652	652
Winter Heat Rate on ULSD (w/o duct burners, Btu/kWh)		6,968	6,968	6,968	6,968	6,968	6,968	6,968	6,968	6,968	6,968	6,968	6,968	6,968
Winter Burn Rate on ULSD (MMBtu/h)		4,540	4,540	4,540	4,540	4,540	4,540	4,540	4,540	4,540	4,540	4,540	4,540	4,540
Test output on ULSD (w/o duct burners, MW)	578	652	652	652	652	652	652	652	652	652	652	652	652	652
Test heat rate on ULSD (w/o duct burners, Btu/kWh)	6,791	6,957	6,957	6,957	6,957	6,957	6,957	6,957	6,957	6,957	6,957	6,957	6,957	6,957
ULSD test burn rate (MMBtu/h)	3,925	4,536	4,536	4,536	4,536	4,536	4,536	4,536	4,536	4,536	4,536	4,536	4,536	4,536
Water injection rate on ULSD (gal/h)	42,000	42,000	42,000	42,000	42,000	42,000	42,000	42,000	42,000	42,000	42,000	42,000	42,000	42,000
NO_x emission rate on natural gas (lb/MWh)		0.049	0.049	0.049	0.049	0.049	0.049	0.049	0.049	0.049	0.049	0.049	0.049	0.049
NO_x emission rate on ULSD (lb/MWh)		0.162	0.162	0.162	0.162	0.162	0.162	0.162	0.162	0.162	0.162	0.162	0.162	0.162

Table E32-1. Combined Cycle – 2x1 GE 7FA

Location No.	Base	1	2	3	4	5	6	7	8	9	10	11	12	13
Labor cost multiplier (v. Cleveland)	1.000	1.139	1.139	1.265	1.265	0.852	0.957	0.841	1.558	1.511	1.300	0.991	1.142	1.138
Land cost (2018 $/acre)	$38,100	$50,000	$50,000	$50,000	$50,000	$25,000	$50,000	$25,000	$850,000	$75,000	$75,000	$50,000	$15,000	$50,000
Sales tax rate	6.00%	6.35%	6.35%	6.25%	6.25%	5.50%	0.00%	6.00%	8.88%	8.63%	8.13%	8.00%	6.00%	7.63%
ULSD Storage Capacity (days of full load)	3	4.6	7.0	7.0	7.0	8.0	2.9	4.8	6.1	2.9	7.0	3.3	3.3	1.9
Capacity in gallons	2,040,683	3,652,274	5,525,378	5,525,378	5,525,378	6,274,619	2,247,724	3,746,207	4,776,136	2,247,724	5,488,027	2,622,345	2,622,345	1,498,483
Demin Water Storage Capacity (days at full load on ULSD)	2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Capacity in gallons	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000
Average Days of inventory on ULSD	3	3.3	5.7	5.7	5.7	6.7	2.9	4.8	4.8	2.9	6.2	3.3	3.3	1.9
Inventory in gallons	2,040,683	2,622,345	4,495,448	4,495,448	4,495,448	5,244,690	2,247,724	3,746,207	3,746,207	2,247,724	4,870,069	2,622,345	2,622,345	1,498,483
ULSD Price (2018 $/MMBtu)	$18.00	$21.885	$21.728	$21.885	$21.885	$22.002	$22.576	$23.245	$21.416	$22.119	$21.807	$22.178	$23.245	$22.569
Test energy revenue (2018 $/MWh)	$38.70	$40.840	$40.840	$40.690	$40.690	$40.530	$40.690	$40.690	$46.440	$55.500	$45.400	$43.940	$42.940	$42.080
Effective Real Property Tax Rate	2.0%	2.00%	2.00%	2.00%	2.00%	1.80%	2.00%	2.20%	5.00%	4.00%	4.00%	4.00%	3.00%	3.50%
Effective Personal Property Tax Rate	1.3%	0.60%	0.60%	0.30%	0.30%	1.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%
Firm Transportation Rate (Level for 2018 $/mo per Dth/d)		$54.69	$30.40	$56.71	$54.69	$72.37	$37.96	$37.96	$38.50	$62.63	$19.12	$6.31	$14.39	$14.39
Avoided IT Rate (Level for 2018 $/mo per Dth/d)		$6.03	$9.49	$7.00	$6.62	$26.97	$6.05	$5.20	$10.24	$10.96	$8.23	$3.51	$13.08	$13.08
Weighted Cost of Capital		8.06%	8.05%	8.03%	8.03%	8.01%	8.02%	8.02%	7.78%	8.02%	8.02%	8.06%	8.09%	7.98%
Inventory Carrying Charge (level current $)		15.41%	15.47%	15.53%	15.53%	15.64%	15.59%	15.59%	16.73%	15.56%	15.56%	15.42%	15.30%	15.75%
Combined Cycle Plant Charge Rate (level current $)		13.55%	13.57%	13.60%	13.60%	13.66%	13.63%	13.63%	14.19%	13.62%	13.62%	13.55%	13.49%	13.71%
NO_x Emission Reduction Credit Multiplier		1.15	1.15	1.26	1.26	1.15	1.15	1.15	1.15	1.15	1.15	1.15	0.00	0.00
Nominal ERC Price (2018$ per ton/yr PTE)		$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000

Table E32-1. Combined Cycle – 2x1 GE 7FA

Location No.	Base	1	2	3	4	5	6	7	8	9	10	11	12	13
Nominal Capital $MM for 2018 CO														
Gas Turbine Scope	$4.700	$4.700	$4.700	$4.700	$4.700	$4.700	$4.700	$4.700	$4.700	$4.700	$4.700	$4.700	$4.700	$4.700
Other major equipment	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Other construction labor	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Liquid Fuel, Demin water handling (Mat'l)	$0.900	$0.900	$0.900	$0.900	$0.900	$0.900	$0.900	$0.900	$0.900	$0.900	$0.900	$0.900	$0.900	$0.900
Liquid Fuel, Demin water handling (Labor)	$0.900	$1.025	$1.025	$1.139	$1.139	$0.767	$0.861	$0.757	$1.402	$1.360	$1.170	$0.891	$1.028	$1.024
Liquid fuel storage tank (Mat'l)	$0.827	$1.325	$1.904	$1.904	$1.904	$2.135	$0.891	$1.354	$1.672	$0.891	$1.892	$1.007	$1.007	$0.659
Liquid fuel storage tank (Labor)	$0.556	$1.016	$1.459	$1.621	$1.621	$1.224	$0.574	$0.766	$1.753	$0.906	$1.655	$0.671	$0.773	$0.505
Demin water storage tank (Mat'l)	$0.498	$0.498	$0.498	$0.498	$0.498	$0.498	$0.498	$0.498	$0.498	$0.498	$0.498	$0.498	$0.498	$0.498
Demin water storage tank (Labor)	$0.335	$0.382	$0.382	$0.424	$0.424	$0.286	$0.321	$0.282	$0.523	$0.507	$0.436	$0.332	$0.383	$0.382
Incremental Land for Tanks	$0.038	$0.050	$0.050	$0.050	$0.050	$0.025	$0.050	$0.025	$0.850	$0.075	$0.075	$0.050	$0.015	$0.050
Startup Testing ULSD	$5.087	$7.148	$7.096	$7.148	$7.148	$7.186	$7.373	$7.592	$6.994	$7.224	$7.122	$7.243	$7.592	$7.371
Startup Testing Energy Sales on ULSD	($1.611)	($1.917)	($1.917)	($1.910)	($1.910)	($1.903)	($1.910)	($1.910)	($2.180)	($2.605)	($2.131)	($2.063)	($2.016)	($1.975)
Emission Reduction Credits		$0.469	$0.469	$0.514	$0.514	$0.469	$0.469	$0.469	$0.469	$0.469	$0.469	$0.469	$0.000	$0.000
(Inventory carrying cost as O&M)	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Total Incremental Direct Cost	$12.232	$15.595	$16.567	$16.987	$16.987	$16.287	$14.728	$15.432	$17.581	$14.924	$16.786	$14.699	$14.880	$14.114
Sales tax on equipment and materials	$0.416	$0.471	$0.508	$0.500	$0.500	$0.453	$0.000	$0.447	$0.690	$0.603	$0.649	$0.568	$0.426	$0.515
EPC Fee	$1.096	$1.238	$1.365	$1.402	$1.402	$1.316	$1.049	$1.164	$1.457	$1.244	$1.428	$1.148	$1.166	$1.102
EPC Contingency	$1.023	$1.156	$1.274	$1.309	$1.309	$1.228	$0.979	$1.087	$1.359	$1.161	$1.333	$1.072	$1.088	$1.029
Development Cost	$0.563	$0.636	$0.701	$0.720	$0.720	$0.675	$0.539	$0.598	$0.748	$0.638	$0.733	$0.589	$0.598	$0.566
Mobilization & Startup	$0.113	$0.127	$0.140	$0.144	$0.144	$0.135	$0.108	$0.120	$0.150	$0.128	$0.147	$0.118	$0.120	$0.113
Non-fuel Inventories	$0.056	$0.064	$0.070	$0.072	$0.072	$0.068	$0.054	$0.060	$0.075	$0.064	$0.073	$0.059	$0.060	$0.057
Owner's Contingency	$0.332	$0.535	$0.532	$0.542	$0.542	$0.538	$0.553	$0.572	$0.572	$0.482	$0.518	$0.529	$0.519	$0.505
Financing Fees	$0.380	$0.476	$0.508	$0.520	$0.520	$0.497	$0.432	$0.468	$0.543	$0.462	$0.520	$0.451	$0.453	$0.432
Indirect (factored) Costs	$3.977	$4.701	$5.098	$5.209	$5.209	$4.909	$3.714	$4.515	$5.593	$4.781	$5.401	$4.534	$4.430	$4.319
Total Overnight Cost	$16.209	$20.297	$21.665	$22.196	$22.196	$21.196	$18.442	$19.947	$23.174	$19.705	$22.187	$19.233	$19.310	$18.432
Total Installed Cost	$17.765	$22.245	$23.744	$24.327	$24.327	$23.231	$20.212	$21.862	$25.399	$21.597	$24.317	$21.079	$21.164	$20.202
Installed Cost per kW of ICAP	$27.29	$35.91	$38.33	$39.27	$39.27	$37.50	$32.63	$35.29	$41.00	$34.86	$39.25	$34.03	$34.16	$32.61

Table E32-1. Combined Cycle – 2x1 GE 7FA

Location No.	Base	1	2	3	4	5	6	7	8	9	10	11	12	13
Annual Fixed O&M Cost (2018 $MM/yr)														
Materials & Contract Services	$0.118	$0.124	$0.124	$0.129	$0.129	$0.112	$0.117	$0.112	$0.140	$0.138	$0.130	$0.118	$0.124	$0.124
Administrative & General Expense	$0.023	$0.024	$0.024	$0.025	$0.025	$0.022	$0.023	$0.022	$0.028	$0.027	$0.026	$0.023	$0.024	$0.024
ULSD for Regular Testing	$1.060	$1.489	$1.478	$1.489	$1.489	$1.497	$1.536	$1.582	$1.457	$1.505	$1.484	$1.509	$1.582	$1.536
Energy Offset for Testing	($0.336)	($0.399)	($0.399)	($0.398)	($0.398)	($0.396)	($0.398)	($0.398)	($0.454)	($0.543)	($0.444)	($0.430)	($0.420)	($0.412)
Property Taxes	$0.259	$0.180	$0.210	$0.173	$0.173	$0.261	$0.064	$0.091	$0.383	$0.167	$0.264	$0.147	$0.258	$0.105
Insurance	$0.107	$0.133	$0.142	$0.146	$0.146	$0.139	$0.121	$0.131	$0.152	$0.130	$0.146	$0.126	$0.127	$0.121
ULSD Inventory Carrying Cost as Fixed O&M	$0.203	$1.225	$2.093	$2.116	$2.116	$2.499	$1.095	$1.880	$1.859	$1.072	$2.289	$1.242	$1.291	$0.737
Total Fixed O&M (2018 $MM/yr)	$1.435	$2.776	$3.672	$3.680	$3.680	$4.135	$2.559	$3.420	$3.565	$2.496	$3.895	$2.736	$2.986	$2.236
Total Fixed O&M (2018 $kW-yr)	$2.20	$4.48	$5.93	$5.94	$5.94	$6.68	$4.13	$5.52	$5.75	$4.03	$6.29	$4.42	$4.82	$3.61
Variable O&M Cost (2018 $/MWh)														
On Natural Gas Fuel														
Major Maintenance Materials	$0.96	$1.01	$1.01	$1.01	$1.01	$1.01	$1.01	$1.01	$1.01	$1.01	$1.01	$1.01	$1.01	$1.01
Major Maintenance Labor	$0.32	$0.38	$0.38	$0.43	$0.43	$0.29	$0.32	$0.28	$0.52	$0.51	$0.44	$0.33	$0.38	$0.38
Other (Catalyst, ammonia, water, etc.)	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14
Total - Natural Gas Fuel	$2.42	$2.53	$2.53	$2.57	$2.57	$2.44	$2.47	$2.43	$2.67	$2.66	$2.59	$2.48	$2.53	$2.53
On Liquid Fuel														
Major Maintenance Materials	$1.44	$1.51	$1.51	$1.51	$1.51	$1.51	$1.51	$1.51	$1.51	$1.51	$1.51	$1.51	$1.51	$1.51
Major Maintenance Labor	$0.48	$0.57	$0.57	$0.64	$0.64	$0.43	$0.48	$0.42	$0.79	$0.76	$0.66	$0.50	$0.58	$0.57
Other (Catalyst, ammonia, water, etc.)	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14
Total - Liquid Fuel	$3.06	$3.23	$3.23	$3.29	$3.29	$3.08	$3.14	$3.08	$3.44	$3.42	$3.31	$3.15	$3.23	$3.23
Fuel Assurance Cost Comparison														
(Levelized Current $/kW-yr of ICAP for 2018 CO Date)														
Firm Transportation for Natural Gas														
FT Reservation Charge		$111.67	$62.08	$115.79	$111.67	$147.77	$77.51	$77.51	$78.62	$127.89	$39.04	$12.88	$29.37	$29.37
Avoided IT Charge		($12.32)	($19.39)	($14.29)	($13.52)	($55.08)	($12.36)	($10.61)	($20.90)	($22.37)	($16.81)	($7.18)	($26.70)	($26.70)
Net FT Cost		$99.35	$42.69	$101.49	$98.15	$92.69	$65.16	$66.90	$57.72	$105.51	$22.22	$5.70	$2.67	$2.67
Dual-Fuel Capability														
Capital Charges for Incremental Plant		$4.86	$5.20	$5.34	$5.34	$5.12	$4.45	$4.81	$5.82	$4.75	$5.35	$4.61	$4.61	$4.47
Carrying Charges on Fuel Inventory		$1.98	$3.38	$3.42	$3.42	$4.03	$1.77	$3.03	$3.00	$1.73	$3.70	$2.01	$2.08	$1.19
Incremental Fixed O&M (Excl. Fuel Inventory)		$2.95	$3.01	$2.98	$2.98	$3.11	$2.79	$2.93	$3.25	$2.71	$3.06	$2.84	$3.23	$2.85
Total		$9.79	$11.59	$11.73	$11.73	$12.27	$9.00	$10.78	$12.07	$9.19	$12.10	$9.46	$9.92	$8.51

Sums of amounts shown in columns may not match indicated totals due to rounding.

Table E32-1. Combined Cycle – 2x1 GE 7FA

Location No.	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**
PPA	MISO	PJM	PJM	PJM	PJM	PJM	PJM	PJM	TVA	TVA	TVA	TVA	IESO	IESO
Location Name	Southern Illinois	Dominion North	PEPCO	BGE	Delmarva	PECO	PSEG North	PSEG South	Maury East	Colbert	Johnsonville	Summer Shade	Central	East
Area/Zone	Central	Dominion	PEPCO	BGE	Delmarva	PECO	PSEG N	PSEG S	Central	South	Central	Central	Central	East
State	IL	VA	MD	MD	DE	PA	NJ	NJ	TN	AL	TN	KY	ON	ON
County	Jackson	Arlington	DC	Baltimore	New Castle	Philadelphia	Essex	Mercer	Maury	Colbert	Humphreys	Metcalfe	na	na
City/Town	Carbondale	Arlington	Washington	Baltimore	Wilmington	Philadelphia	Newark	Trenton	na	na	New Johnsonville	Summer Shade	Toronto	Greater Napanee
Locational Assumptions														
Elevation above sea level (feet)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Summer temperature (for ICAP, F)	90	90	90	90	90	90	90	90	90	90	90	90	90	90
Winter temperature (for ULSD burn and MDQ, F)	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Adjusted Performance Data														
Summer Installed Capacity (w/duct burners, MW)	620	620	620	620	620	620	620	620	620	620	620	620	620	620
Winter Output on NG (w/o duct burners, MW)	668	668	668	668	668	668	668	668	668	668	668	668	668	668
Winter Heat Rate on NG (w/o duct burners, Btu/kWh)	6,575	6,575	6,575	6,575	6,575	6,575	6,575	6,575	6,575	6,575	6,575	6,575	6,575	6,575
Winter Burn Rate on NG (MMBtu/h)	4,392	4,392	4,392	4,392	4,392	4,392	4,392	4,392	4,392	4,392	4,392	4,392	4,392	4,392
Winter Output on ULSD (w/o duct burners, MW)	652	652	652	652	652	652	652	652	652	652	652	652	652	652
Winter Heat Rate on ULSD (w/o duct burners, Btu/kWh)	6,968	6,968	6,968	6,968	6,968	6,968	6,968	6,968	6,968	6,968	6,968	6,968	6,968	6,968
Winter Burn Rate on ULSD (MMBtu/h)	4,540	4,540	4,540	4,540	4,540	4,540	4,540	4,540	4,540	4,540	4,540	4,540	4,540	4,540
Test output on ULSD (w/o duct burners, MW)	652	652	652	652	652	652	652	652	652	652	652	652	652	652
Test heat rate on ULSD (w/o duct burners, Btu/kWh)	6,957	6,957	6,957	6,957	6,957	6,957	6,957	6,957	6,957	6,957	6,957	6,957	6,957	6,957
ULSD test burn rate (MMBtu/h)	4,536	4,536	4,536	4,536	4,536	4,536	4,536	4,536	4,536	4,536	4,536	4,536	4,536	4,536
Water injection rate on ULSD (gal/h)	42,000	42,000	42,000	42,000	42,000	42,000	42,000	42,000	42,000	42,000	42,000	42,000	42,000	42,000
NO_x emission rate on natural gas (lb/MWh)	0.049	0.049	0.049	0.049	0.049	0.049	0.049	0.049	0.049	0.049	0.049	0.049	0.049	0.049
NO_x emission rate on ULSD (lb/MWh)	0.162	0.162	0.162	0.162	0.162	0.162	0.162	0.162	0.162	0.162	0.162	0.162	0.162	0.162

Table E32-1. Combined Cycle – 2x1 GE 7FA

Location No.	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Labor cost multiplier (v. Cleveland)	0.931	1.128	1.225	1.080	1.060	1.302	1.269	1.269	0.867	0.867	0.867	0.931	1.547	1.467
Land cost (2018 $/acre)	$25,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$5,000	$5,000	$5,000	$5,000	$50,000	$25,000
Sales tax rate	8.50%	6.00%	5.75%	6.00%	0.00%	8.00%	7.00%	7.00%	5.50%	9.25%	9.75%	6.00%	13.00%	13.00%
ULSD Storage Capacity (days of full load)	1.9	2.4	2.4	7.5	3.3	3.3	2.4	2.4	1.9	10.3	10.3	2.4	2.4	2.4
Capacity in gallons	1,498,483	1,873,104	1,873,104	5,899,998	2,622,345	2,622,345	1,873,104	1,873,104	1,498,483	8,110,372	8,110,372	1,873,104	1,873,104	1,873,104
Demin Water Storage Capacity (days at full load on ULSD)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Capacity in gallons	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000
Average Days of inventory on ULSD	1.9	2.4	2.4	6.2	3.3	3.3	2.4	2.4	1.9	9.5	9.5	2.4	2.4	2.4
Inventory in gallons	1,498,483	1,873,104	1,873,104	4,870,069	2,622,345	2,622,345	1,873,104	1,873,104	1,498,483	7,492,414	7,492,414	1,873,104	1,873,104	1,873,104
ULSD Price (2018 $/MMBtu)	$22.244	$21.865	$21.865	$21.846	$21.943	$21.865	$21.943	$22.178	$22.186	$21.885	$21.885	$22.399	$22.256	$22.752
Test energy revenue (2018 $/MWh)	$40.520	$39.040	$42.610	$42.610	$42.190	$41.750	$42.620	$42.620	$39.610	$38.130	$39.610	$38.540	$33.490	$33.570
Effective Real Property Tax Rate	2.80%	1.00%	1.85%	2.36%	0.90%	4.10%	1.90%	1.90%	1.65%	0.75%	1.65%	1.10%	2.94%	2.17%
Effective Personal Property Tax Rate	0.00%	0.00%	0.20%	0.50%	0.00%	0.00%	0.00%	0.00%	0.75%	0.50%	0.75%	0.25%	0.00%	0.00%
Firm Transportation Rate (Level for 2018 $/mo per Dth/d)	$9.67	$22.94	$22.94	$22.22	$13.52	$21.09	$20.99	$20.28	$18.83	$14.79	$11.54	$6.18	$43.99	$46.37
Avoided IT Rate (Level for 2018 $/mo per Dth/d)	$6.45	$5.71	$5.71	$8.30	$2.78	$16.06	$18.02	$18.02	$4.04	$8.42	$6.60	$2.48	$21.80	$22.98
Weighted Cost of Capital	7.99%	8.09%	7.98%	8.02%	8.01%	7.98%	8.00%	8.00%	8.07%	8.07%	8.07%	8.09%	8.61%	8.61%
Inventory Carrying Charge (level current $)	15.71%	15.30%	15.77%	15.56%	15.61%	15.77%	15.65%	15.65%	15.35%	15.35%	15.35%	15.30%	13.50%	13.50%
Combined Cycle Plant Charge Rate (level current $)	13.69%	13.49%	13.72%	13.62%	13.64%	13.72%	13.66%	13.66%	13.52%	13.52%	13.52%	13.49%	12.34%	12.34%
NO_x Emission Reduction Credit Multiplier	0.00	1.15	1.30	1.30	1.15	1.15	1.30	1.30	0.00	0.00	0.00	0.00	0.00	0.00
Nominal ERC Price (2018$ per ton/yr PTE)	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000

Table E32-1. Combined Cycle – 2x1 GE 7FA

Location No.	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Nominal Capital $MM for 2018 CO														
Gas Turbine Scope	$4.700	$4.700	$4.700	$4.700	$4.700	$4.700	$4.700	$4.700	$4.700	$4.700	$4.700	$4.700	$4.700	$4.700
Other major equipment	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Other construction labor	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Liquid Fuel, Demin water handling (Mat'l)	$0.900	$0.900	$0.900	$0.900	$0.900	$0.900	$0.900	$0.900	$0.900	$0.900	$0.900	$0.900	$0.900	$0.900
Liquid Fuel, Demin water handling (Labor)	$0.838	$1.015	$1.103	$0.972	$0.954	$1.172	$1.143	$1.143	$0.781	$0.781	$0.781	$0.838	$1.392	$1.321
Liquid fuel storage tank (Mat'l)	$0.659	$0.775	$0.775	$2.019	$1.007	$1.007	$0.775	$0.775	$0.659	$2.702	$2.702	$0.775	$0.775	$0.775
Liquid fuel storage tank (Labor)	$0.413	$0.588	$0.639	$1.468	$0.718	$0.882	$0.662	$0.662	$0.385	$1.577	$1.577	$0.486	$0.807	$0.765
Demin water storage tank (Mat'l)	$0.498	$0.498	$0.498	$0.498	$0.498	$0.498	$0.498	$0.498	$0.498	$0.498	$0.498	$0.498	$0.498	$0.498
Demin water storage tank (Labor)	$0.312	$0.378	$0.411	$0.362	$0.356	$0.437	$0.426	$0.426	$0.291	$0.291	$0.291	$0.312	$0.519	$0.492
Incremental Land for Tanks	$0.025	$0.050	$0.050	$0.050	$0.050	$0.050	$0.050	$0.050	$0.005	$0.005	$0.005	$0.005	$0.050	$0.025
Startup Testing ULSD	$7.265	$7.141	$7.141	$7.135	$7.167	$7.141	$7.167	$7.243	$7.246	$7.148	$7.148	$7.316	$7.269	$7.431
Startup Testing Energy Sales on ULSD	($1.902)	($1.833)	($2.000)	($2.000)	($1.981)	($1.960)	($2.001)	($2.001)	($1.859)	($1.790)	($1.859)	($1.809)	($1.572)	($1.576)
Emission Reduction Credits	$0.000	$0.469	$0.530	$0.530	$0.469	$0.469	$0.530	$0.530	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
(Inventory carrying cost as O&M)	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Total Incremental Direct Cost	$13.709	$14.682	$14.747	$16.635	$14.837	$15.296	$14.850	$14.926	$13.605	$16.812	$16.743	$14.021	$15.337	$15.332
Sales tax on equipment and materials	$0.574	$0.412	$0.395	$0.487	$0.000	$0.568	$0.481	$0.481	$0.372	$0.814	$0.858	$0.412	$0.894	$0.894
EPC Fee	$1.067	$1.112	$1.131	$1.369	$1.096	$1.220	$1.150	$1.150	$1.030	$1.472	$1.477	$1.071	$1.258	$1.241
EPC Contingency	$0.996	$1.038	$1.055	$1.278	$1.023	$1.138	$1.074	$1.074	$0.962	$1.374	$1.378	$0.999	$1.174	$1.159
Development Cost	$0.548	$0.571	$0.580	$0.703	$0.563	$0.626	$0.590	$0.590	$0.529	$0.755	$0.758	$0.550	$0.646	$0.637
Mobilization & Startup	$0.110	$0.114	$0.116	$0.141	$0.113	$0.125	$0.118	$0.118	$0.106	$0.151	$0.152	$0.110	$0.129	$0.127
Non-fuel Inventories	$0.055	$0.057	$0.058	$0.070	$0.056	$0.063	$0.059	$0.059	$0.053	$0.076	$0.076	$0.055	$0.065	$0.064
Owner's Contingency	$0.500	$0.540	$0.531	$0.533	$0.529	$0.530	$0.533	$0.540	$0.500	$0.503	$0.497	$0.511	$0.535	$0.546
Financing Fees	$0.421	$0.445	$0.447	$0.509	$0.437	$0.470	$0.453	$0.455	$0.412	$0.527	$0.527	$0.425	$0.481	$0.480
Indirect (factored) Costs	$4.272	$4.289	$4.313	$5.090	$3.816	$4.740	$4.458	$4.467	$3.962	$5.671	$5.722	$4.133	$5.181	$5.149
Total Overnight Cost	$17.981	$18.972	$19.060	$21.724	$18.653	$20.037	$19.308	$19.393	$17.568	$22.484	$22.465	$18.154	$20.518	$20.480
Total Installed Cost	$19.707	$20.793	$20.889	$23.810	$20.444	$21.960	$21.161	$21.255	$19.254	$24.642	$24.622	$19.897	$22.488	$22.446
Installed Cost per kW of ICAP	$31.81	$33.56	$33.72	$38.43	$33.00	$35.45	$34.16	$34.31	$31.08	$39.78	$39.74	$32.12	$36.30	$36.23

Table E32-1. Combined Cycle – 2x1 GE 7FA

Location No.	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Annual Fixed O&M Cost (2018 $MM/yr)														
Materials & Contract Services	$0.116	$0.123	$0.127	$0.121	$0.121	$0.130	$0.129	$0.129	$0.113	$0.113	$0.113	$0.116	$0.140	$0.137
Administrative & General Expense	$0.023	$0.024	$0.025	$0.024	$0.024	$0.026	$0.025	$0.025	$0.022	$0.022	$0.022	$0.023	$0.028	$0.027
ULSD for Regular Testing	$1.514	$1.488	$1.488	$1.486	$1.493	$1.488	$1.493	$1.509	$1.510	$1.489	$1.489	$1.524	$1.514	$1.548
Energy Offset for Testing	($0.396)	($0.382)	($0.417)	($0.417)	($0.413)	($0.408)	($0.417)	($0.417)	($0.387)	($0.373)	($0.387)	($0.377)	($0.328)	($0.328)
Property Taxes	$0.077	$0.032	$0.091	$0.220	$0.033	$0.169	$0.065	$0.065	$0.148	$0.128	$0.232	$0.068	$0.114	$0.081
Insurance	$0.118	$0.125	$0.125	$0.143	$0.123	$0.132	$0.127	$0.128	$0.116	$0.148	$0.148	$0.119	$0.135	$0.135
ULSD Inventory Carrying Cost as Fixed O&M	$0.725	$0.868	$0.894	$2.292	$1.244	$1.252	$0.891	$0.900	$0.707	$3.486	$3.486	$0.889	$0.779	$0.797
Total Fixed O&M (2018 $MM/yr)	$2.176	$2.278	$2.334	$3.871	$2.624	$2.788	$2.313	$2.339	$2.227	$5.014	$5.103	$2.361	$2.382	$2.396
Total Fixed O&M (2018 $kW-yr)	$3.51	$3.68	$3.77	$6.25	$4.24	$4.50	$3.73	$3.78	$3.60	$8.09	$8.24	$3.81	$3.85	$3.87
Variable O&M Cost (2018 $/MWh)														
On Natural Gas Fuel														
Major Maintenance Materials	$1.01	$1.01	$1.01	$1.01	$1.01	$1.01	$1.01	$1.01	$1.01	$1.01	$1.01	$1.01	$1.01	$1.01
Major Maintenance Labor	$0.31	$0.38	$0.41	$0.36	$0.36	$0.44	$0.43	$0.43	$0.29	$0.29	$0.29	$0.31	$0.52	$0.49
Other (Catalyst, ammonia, water, etc.)	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14
Total - Natural Gas Fuel	$2.46	$2.53	$2.56	$2.51	$2.51	$2.59	$2.58	$2.58	$2.44	$2.44	$2.44	$2.46	$2.67	$2.64
On Liquid Fuel														
Major Maintenance Materials	$1.51	$1.51	$1.51	$1.51	$1.51	$1.51	$1.51	$1.51	$1.51	$1.51	$1.51	$1.51	$1.51	$1.51
Major Maintenance Labor	$0.47	$0.57	$0.62	$0.54	$0.53	$0.66	$0.64	$0.64	$0.44	$0.44	$0.44	$0.47	$0.78	$0.74
Other (Catalyst, ammonia, water, etc.)	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14	$1.14
Total - Liquid Fuel	$3.12	$3.22	$3.27	$3.20	$3.19	$3.31	$3.29	$3.29	$3.09	$3.09	$3.09	$3.12	$3.43	$3.39
Fuel Assurance Cost Comparison														
(Levelized Current $/kW-yr of ICAP for 2018 CO Date)														
Firm Transportation for Natural Gas														
FT Reservation Charge	$19.74	$46.85	$46.85	$45.37	$27.60	$43.07	$42.86	$41.40	$38.44	$30.19	$23.57	$12.61	$89.82	$94.67
Avoided IT Charge	($13.16)	($11.66)	($11.66)	($16.95)	($5.68)	($32.79)	($36.80)	($36.79)	($8.25)	($17.19)	($13.49)	($5.07)	($44.52)	($46.92)
Net FT Cost	$6.58	$35.19	$35.19	$28.43	$21.92	$10.28	$6.06	$4.61	$30.18	$13.00	$10.09	$7.54	$45.30	$47.75
Dual-Fuel Capability														
Capital Charges for Incremental Plant	$4.36	$4.53	$4.63	$5.23	$4.50	$4.86	$4.67	$4.69	$4.20	$5.38	$5.37	$4.33	$4.48	$4.47
Carrying Charges on Fuel Inventory	$1.17	$1.40	$1.44	$3.70	$2.01	$2.02	$1.44	$1.45	$1.14	$5.63	$5.63	$1.43	$1.26	$1.29
Incremental Fixed O&M (Excl. Fuel Inventory)	$2.76	$2.68	$2.74	$3.00	$2.63	$2.93	$2.71	$2.74	$2.89	$2.91	$3.08	$2.80	$3.04	$3.03
Total	$8.29	$8.61	$8.81	$11.94	$9.14	$9.81	$8.81	$8.88	$8.24	$13.91	$14.08	$8.57	$8.78	$8.79

Sums of amounts shown in columns may not match indicated totals due to rounding.

Table E32-2. Simple Cycle – Technology by Site

Location No.	**Base**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**
PPA	PJM	ISONE	ISONE	ISONE	ISONE	ISONE	ISONE	ISONE	NYISO	NYISO	NYISO	NYISO	MISO	MISO
Location Name		Central CT	SW CT	Cape Cod	SE MA	Maine	New Hampshire	Vermont	NYC	Long Island	Lower Hudson Valley	Capital District	Upper Penninsula	Twin Cities
Area/Zone		CT	CT	SEMA	SEMA	ME	NH	VT	J	K	GHI	F	North	North
State	OH	CT	CT	MA	MA	ME	NH	VT	NY	NY	NY	NY	MI	MN
County		Middlesex	Fairfield	Barnstable	Bristol	Cumberland	Merrimack	Windham	Queens	Suffolk	Orange	Albany	Marquette	Ramsey
City/Town	Cleveland	Middletown	Norwalk	Sandwich	Somerset	Yarmouth	Bow	Vernon	NYC (Astoria)	Yaphank	Newburgh	Albany	Marquette	St. Paul
Locational Assumptions														
NO_x Non-Attainment Status		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE
Simple Cycle Technology Selection		2xLMS100 w/SCR	2xLMS100 w/SCR	2xLMS100 w/SCR	2xLMS100 w/SCR	2xLMS100 w/SCR	2xLMS100 w/SCR	2xLMS100 w/SCR	2xLMS100 w/SCR	2xLMS100 w/SCR	2xLMS100 w/SCR	2xLMS100 w/SCR	2x7FA w/o SCR	2x7FA w/o SCR
Adjusted Performance Data														
Summer Installed Capacity (MW)		201	201	201	201	201	201	201	201	201	201	201	414	414
Winter Output on NG (MW)		224	224	224	224	224	224	224	224	224	224	224	458	458
Winter Heat Rate on NG (Btu/kWh)		8,776	8,776	8,776	8,776	8,776	8,776	8,776	8,776	8,776	8,776	8,776	9,605	9,605
Winter Burn Rate on NG (MMBtu/h)		1,966	1,966	1,966	1,966	1,966	1,966	1,966	1,966	1,966	1,966	1,966	4,399	4,399
Winter Output on ULSD (MW)		192	192	192	192	192	192	192	192	192	192	192	448	448
Winter Heat Rate on ULSD (Btu/kWh)		8,908	8,908	8,908	8,908	8,908	8,908	8,908	8,908	8,908	8,908	8,908	10,107	10,107
Winter Burn Rate on ULSD (MMBtu/h)		1,713	1,713	1,713	1,713	1,713	1,713	1,713	1,713	1,713	1,713	1,713	4,528	4,528
Test output on ULSD (MW)		218	218	218	218	218	218	218	218	218	218	218	444	444
Test heat rate on ULSD (Btu/kWh)		8,628	8,628	8,628	8,628	8,628	8,628	8,628	8,628	8,628	8,628	8,628	10,203	10,203
ULSD test burn rate (MMBtu/h)		1,884	1,884	1,884	1,884	1,884	1,884	1,884	1,884	1,884	1,884	1,884	4,530	4,530
Water injection rate on ULSD (gal/h)		0	0	0	0	0	0	0	0	0	0	0	42,000	42,000
NO_x emission rate on natural gas (lb/MWh)		0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.329	0.329
NO_x emission rate on ULSD (lb/MWh)		0.199	0.199	0.199	0.199	0.199	0.199	0.199	0.199	0.199	0.199	0.199	1.659	1.659
Labor cost multiplier (v. Cleveland)		1.139	1.139	1.265	1.265	0.852	0.957	0.841	1.558	1.511	1.300	0.991	1.142	1.138
Land cost (2018 $/acre)		$50,000	$50,000	$50,000	$50,000	$25,000	$50,000	$25,000	$850,000	$75,000	$75,000	$50,000	$15,000	$50,000
Sales tax rate		6.35%	6.35%	6.25%	6.25%	5.50%	0.00%	6.00%	8.88%	8.63%	8.13%	8.00%	6.00%	7.63%
ULSD Storage Capacity (days of full load)		4.6	5.8	5.8	5.8	6.3	1.4	2.4	5.3	1.4	4.8	1.7	1.7	1.0
Capacity in gallons		1,362,690	1,716,071	1,716,071	1,716,071	1,857,423	424,057	706,762	1,574,718	424,057	1,439,565	494,734	1,307,798	747,313

Table E32-2. Simple Cycle – Technology by Site

Location No.	Base	1	2	3	4	5	6	7	8	9	10	11	12	13
Demin Water Storage Capacity (days at full load on ULSD)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0
Capacity in gallons		0	0	0	0	0	0	0	0	0	0	0	2,016,000	2,016,000
Average Days of inventory on ULSD		1.7	2.9	2.9	2.9	3.3	1.4	2.4	2.4	1.4	3.1	1.7	1.7	1.0
Inventory in gallons		494,734	848,115	848,115	848,115	989,467	424,057	706,762	706,762	424,057	918,791	494,734	1,307,798	747,313
ULSD Price (2018 $/MMBtu)		$21.885	$21.728	$21.885	$21.885	$22.002	$22.576	$23.245	$21.416	$22.119	$21.807	$22.178	$23.245	$22.569
Test energy revenue (2018 $/MWh)		$40.840	$40.840	$40.690	$40.690	$40.530	$40.690	$40.690	$46.440	$55.500	$45.400	$43.940	$42.940	$42.080
Effective Real Property Tax Rate		2.00%	2.00%	2.00%	2.00%	1.80%	2.00%	2.20%	5.00%	4.00%	4.00%	4.00%	3.00%	3.50%
Effective Personal Property Tax Rate		0.60%	0.60%	0.30%	0.30%	1.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%
Firm Transportation Rate (Level for 2018 $/mo per Dth/d)		$54.69	$37.02	$56.71	$54.69	$72.37	$37.96	$37.96	$49.35	$103.25	$19.12	$6.31	$14.39	$14.39
Avoided IT Rate (Level for 2018 $/mo per Dth/d)		$3.02	$4.75	$3.50	$3.31	$13.49	$3.03	$2.60	$5.12	$5.48	$4.12	$1.76	$6.54	$6.54
Weighted Cost of Capital		8.06%	8.05%	8.03%	8.03%	8.01%	8.02%	8.02%	7.78%	8.02%	8.02%	8.06%	8.09%	7.98%
Inventory Carrying Charge (level current $)		15.41%	15.47%	15.53%	15.53%	15.64%	15.59%	15.59%	16.73%	15.56%	15.56%	15.42%	15.30%	15.75%
Simple Cycle Plant Charge Rate (level current $)		13.06%	13.08%	13.10%	13.10%	13.14%	13.12%	13.12%	13.57%	13.12%	13.12%	13.06%	13.01%	13.18%
NO_x Emission Reduction Credit Multiplier		1.15	1.15	1.26	1.26	1.15	1.15	1.15	1.15	1.15	1.15	1.15	0.00	0.00
Nominal ERC Price (2018$ per ton/yr PTE)		$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000

Table E32-2. Simple Cycle – Technology by Site

Location No.	Base	1	2	3	4	5	6	7	8	9	10	11	12	13
Nominal Capital $MM for 2018 CO														
Gas Turbine Scope		$3.345	$3.345	$3.345	$3.345	$3.345	$3.345	$3.345	$3.345	$3.345	$3.345	$3.345	$4.400	$4.400
Other major equipment		$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$1.310	$1.310
Other construction labor		$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$1.142	$1.138
Liquid Fuel, Demin water handling (Mat'l)		$0.200	$0.200	$0.200	$0.200	$0.200	$0.200	$0.200	$0.200	$0.200	$0.200	$0.200	$1.000	$1.000
Liquid Fuel, Demin water handling (Labor)		$0.175	$0.175	$0.195	$0.195	$0.131	$0.147	$0.129	$0.240	$0.233	$0.200	$0.152	$1.142	$1.138
Liquid fuel storage tank (Mat'l)		$0.617	$0.726	$0.726	$0.726	$0.770	$0.327	$0.415	$0.683	$0.327	$0.641	$0.349	$0.600	$0.427
Liquid fuel storage tank (Labor)		$0.473	$0.557	$0.619	$0.619	$0.442	$0.211	$0.235	$0.716	$0.333	$0.561	$0.233	$0.461	$0.327
Demin water storage tank (Mat'l)		$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.655	$0.655
Demin water storage tank (Labor)		$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.504	$0.502
Incremental Land for Tanks		$0.050	$0.050	$0.050	$0.050	$0.025	$0.050	$0.025	$0.850	$0.075	$0.075	$0.050	$0.015	$0.050
Startup Testing ULSD		$2.969	$2.948	$2.969	$2.969	$2.985	$3.063	$3.154	$2.905	$3.001	$2.958	$3.009	$7.582	$7.361
Startup Testing Energy Sales on ULSD		($0.642)	($0.642)	($0.640)	($0.640)	($0.637)	($0.640)	($0.640)	($0.730)	($0.873)	($0.714)	($0.691)	($1.373)	($1.345)
Emission Reduction Credits		$0.161	$0.161	$0.177	$0.177	$0.161	$0.161	$0.161	$0.161	$0.161	$0.161	$0.161	$0.000	$0.000
(Inventory carrying cost as O&M)		$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Total Incremental Direct Cost		$7.349	$7.521	$7.641	$7.641	$7.422	$6.865	$7.024	$8.370	$6.802	$7.428	$6.808	$17.438	$16.963
Sales tax on equipment and materials		$0.264	$0.271	$0.267	$0.267	$0.237	$0.000	$0.238	$0.375	$0.334	$0.340	$0.312	$0.478	$0.594
EPC Fee		$0.508	$0.528	$0.535	$0.535	$0.513	$0.423	$0.456	$0.556	$0.477	$0.529	$0.459	$1.169	$1.149
EPC Contingency		$0.558	$0.580	$0.589	$0.589	$0.564	$0.465	$0.502	$0.611	$0.525	$0.582	$0.505	$1.286	$1.264
Development Cost		$0.307	$0.319	$0.324	$0.324	$0.310	$0.256	$0.276	$0.336	$0.289	$0.320	$0.278	$0.707	$0.695
Mobilization & Startup		$0.061	$0.064	$0.065	$0.065	$0.062	$0.051	$0.055	$0.067	$0.058	$0.064	$0.056	$0.141	$0.139
Non-fuel Inventories		$0.031	$0.032	$0.032	$0.032	$0.031	$0.026	$0.028	$0.034	$0.029	$0.032	$0.028	$0.071	$0.070
Owner's Contingency		$0.237	$0.235	$0.239	$0.239	$0.236	$0.244	$0.250	$0.296	$0.221	$0.232	$0.235	$0.579	$0.565
Financing Fees		$0.224	$0.229	$0.233	$0.233	$0.225	$0.200	$0.212	$0.255	$0.210	$0.229	$0.208	$0.525	$0.515
Indirect (factored) Costs		$2.190	$2.258	$2.283	$2.283	$2.178	$1.665	$2.016	$2.531	$2.141	$2.327	$2.080	$4.957	$4.990
Total Overnight Cost		$9.539	$9.779	$9.924	$9.924	$9.600	$8.530	$9.040	$10.901	$8.943	$9.754	$8.888	$22.395	$21.953
Total Installed Cost		$9.977	$10.229	$10.381	$10.381	$10.042	$8.922	$9.456	$11.403	$9.355	$10.203	$9.297	$23.425	$22.963
Installed Cost per kW of ICAP		$49.60	$50.85	$51.60	$51.60	$49.91	$44.35	$47.00	$56.68	$46.50	$50.72	$46.22	$56.58	$55.47

Table E32-2. Simple Cycle – Technology by Site

Location No.	Base	1	2	3	4	5	6	7	8	9	10	11	12	13
Annual Fixed O&M Cost (2018 $MM/yr)														
Materials & Contract Services		$0.010	$0.010	$0.010	$0.010	$0.009	$0.010	$0.009	$0.011	$0.011	$0.011	$0.010	$0.046	$0.046
Administrative & General Expense		$0.011	$0.011	$0.011	$0.011	$0.010	$0.010	$0.010	$0.012	$0.012	$0.011	$0.011	$0.050	$0.050
ULSD for Regular Testing		$0.619	$0.614	$0.619	$0.619	$0.622	$0.638	$0.657	$0.605	$0.625	$0.616	$0.627	$1.580	$1.534
Energy Offset for Testing		($0.134)	($0.134)	($0.133)	($0.133)	($0.133)	($0.133)	($0.133)	($0.152)	($0.182)	($0.149)	($0.144)	($0.286)	($0.280)
Property Taxes		$0.076	$0.081	$0.060	$0.060	$0.112	$0.015	$0.020	$0.153	$0.040	$0.070	$0.035	$0.266	$0.093
Insurance		$0.060	$0.061	$0.062	$0.062	$0.060	$0.054	$0.057	$0.068	$0.056	$0.061	$0.056	$0.141	$0.138
ULSD Inventory Carrying Cost as Fixed O&M		$0.231	$0.395	$0.399	$0.399	$0.472	$0.207	$0.355	$0.351	$0.202	$0.432	$0.234	$0.644	$0.368
Total Fixed O&M (2018 $MM/yr)		$0.873	$1.039	$1.029	$1.029	$1.152	$0.800	$0.974	$1.049	$0.765	$1.053	$0.828	$2.439	$1.947
Total Fixed O&M (2018 $kW-yr)		$4.34	$5.16	$5.11	$5.11	$5.73	$3.98	$4.84	$5.21	$3.80	$5.23	$4.11	$5.89	$4.70
Variable O&M Cost (2018 $/MWh)														
On Natural Gas Fuel														
Major Maintenance Materials		$2.49	$2.49	$2.49	$2.49	$2.49	$2.49	$2.49	$2.49	$2.49	$2.49	$2.49	$1.26	$1.26
Major Maintenance Labor		$0.17	$0.17	$0.19	$0.19	$0.13	$0.15	$0.13	$0.24	$0.23	$0.20	$0.15	$0.46	$0.46
Other (Catalyst, ammonia, water, etc.)		$2.52	$2.52	$2.52	$2.52	$2.52	$2.52	$2.52	$2.52	$2.52	$2.52	$2.52	$1.89	$1.89
Total - Natural Gas Fuel		$5.18	$5.18	$5.20	$5.20	$5.14	$5.15	$5.13	$5.24	$5.24	$5.20	$5.16	$3.61	$3.61
On Liquid Fuel														
Major Maintenance Materials		$3.73	$3.73	$3.73	$3.73	$3.73	$3.73	$3.73	$3.73	$3.73	$3.73	$3.73	$1.89	$1.89
Major Maintenance Labor		$0.26	$0.26	$0.29	$0.29	$0.20	$0.22	$0.19	$0.36	$0.35	$0.30	$0.23	$0.69	$0.69
Other (Catalyst, ammonia, water, etc.)		$2.52	$2.52	$2.52	$2.52	$2.52	$2.52	$2.52	$2.52	$2.52	$2.52	$2.52	$1.89	$1.89
Total - Liquid Fuel		$6.51	$6.51	$6.54	$6.54	$6.44	$6.47	$6.44	$6.61	$6.59	$6.55	$6.48	$4.47	$4.46
Fuel Assurance Cost Comparison														
(Levelized Current $/kW-yr of ICAP for 2018 CO Date)														
Firm Transportation for Natural Gas														
FT Reservation Charge		$153.96	$104.22	$159.64	$153.96	$203.74	$106.87	$106.87	$138.95	$290.67	$53.82	$17.76	$44.02	$44.02
Avoided IT Charge		($8.49)	($13.36)	($9.85)	($9.32)	($37.97)	($8.52)	($7.32)	($14.41)	($15.42)	($11.59)	($4.95)	($20.01)	($20.01)
Net FT Cost		$145.47	$90.86	$149.79	$144.64	$165.77	$98.35	$99.55	$124.54	$275.24	$42.23	$12.81	$24.02	$24.02
Dual-Fuel Capability														
Capital Charges for Incremental Plant		$6.48	$6.65	$6.76	$6.76	$6.56	$5.82	$6.17	$7.69	$6.10	$6.65	$6.04	$7.36	$7.31
Carrying Charges on Fuel Inventory		$1.15	$1.96	$1.98	$1.98	$2.34	$1.03	$1.76	$1.74	$1.01	$2.15	$1.16	$1.56	$0.89
Incremental Fixed O&M (Excl. Fuel Inventory)		$3.76	$3.78	$3.69	$3.69	$3.99	$3.48	$3.63	$4.10	$3.30	$3.64	$3.48	$5.11	$4.50
Total		$11.38	$12.39	$12.44	$12.44	$12.89	$10.33	$11.57	$13.53	$10.40	$12.44	$10.68	$14.03	$12.70

Sums of amounts shown in columns may not match indicated totals due to rounding.

Table E32-2. Simple Cycle – Technology by Site

Location No.	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**
PPA	MISO	PJM	PJM	PJM	PJM	PJM	PJM	PJM	TVA	TVA	TVA	TVA	IESO	IESO
Location Name	Southern Illinois	Dominion North	PEPCO	BGE	Delmarva	PECO	PSEG North	PSEG South	Maury East	Colbert	Johnsonville	Summer Shade	Central	East
Area/Zone	Central	Dominion	PEPCO	BGE	Delmarva	PECO	PSEG N	PSEG S	Central	South	Central	Central	Central	East
State	IL	VA	MD	MD	DE	PA	NJ	NJ	TN	AL	TN	KY	ON	ON
County	Jackson	Arlington	DC	Baltimore	New Castle	Philadelphia	Essex	Mercer	Maury	Colbert	Humphreys	Metcalfe	na	na
City/Town	Carbondale	Arlington	Washington	Baltimore	Wilmington	Philadelphia	Newark	Trenton	na	na	New Johnsonville	Summer Shade	Toronto	Greater Napanee
Locational Assumptions														
NO_x Non-Attainment Status	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
Simple Cycle Technology Selection	2x7FA w/o SCR	2xLMS100 w/SCR	2xLMS100 w/SCR	2xLMS100 w/SCR	2xLMS100 w/SCR	2xLMS100 w/SCR	2xLMS100 w/SCR	2xLMS100 w/SCR	2x7FA w/o SCR	2x7FA w/o SCR	2x7FA w/o SCR	2x7FA w/o SCR	2x7FA w/o SCR	2x7FA w/o SCR
Adjusted Performance Data														
Summer Installed Capacity (MW)	414	201	201	201	201	201	201	201	414	414	414	414	414	414
Winter Output on NG (MW)	458	224	224	224	224	224	224	224	458	458	458	458	458	458
Winter Heat Rate on NG (Btu/kWh)	9,605	8,776	8,776	8,776	8,776	8,776	8,776	8,776	9,605	9,605	9,605	9,605	9,605	9,605
Winter Burn Rate on NG (MMBtu/h)	4,399	1,966	1,966	1,966	1,966	1,966	1,966	1,966	4,399	4,399	4,399	4,399	4,399	4,399
Winter Output on ULSD (MW)	448	192	192	192	192	192	192	192	448	448	448	448	448	448
Winter Heat Rate on ULSD (Btu/kWh)	10,107	8,908	8,908	8,908	8,908	8,908	8,908	8,908	10,107	10,107	10,107	10,107	10,107	10,107
Winter Burn Rate on ULSD (MMBtu/h)	4,528	1,713	1,713	1,713	1,713	1,713	1,713	1,713	4,528	4,528	4,528	4,528	4,528	4,528
Test output on ULSD (MW)	444	218	218	218	218	218	218	218	444	444	444	444	444	444
Test heat rate on ULSD (Btu/kWh)	10,203	8,628	8,628	8,628	8,628	8,628	8,628	8,628	10,203	10,203	10,203	10,203	10,203	10,203
ULSD test burn rate (MMBtu/h)	4,530	1,884	1,884	1,884	1,884	1,884	1,884	1,884	4,530	4,530	4,530	4,530	4,530	4,530
Water injection rate on ULSD (gal/h)	42,000	0	0	0	0	0	0	0	42,000	42,000	42,000	42,000	42,000	42,000
NO_x emission rate on natural gas (lb/MWh)	0.329	0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.329	0.329	0.329	0.329	0.329	0.329
NO_x emission rate on ULSD (lb/MWh)	1.659	0.199	0.199	0.199	0.199	0.199	0.199	0.199	1.659	1.659	1.659	1.659	1.659	1.659
Labor cost multiplier (v. Cleveland)	0.931	1.128	1.225	1.080	1.060	1.302	1.269	1.269	0.867	0.867	0.867	0.931	1.547	1.467
Land cost (2018 $/acre)	$25,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$5,000	$5,000	$5,000	$5,000	$50,000	$25,000
Sales tax rate	8.50%	6.00%	5.75%	6.00%	0.00%	8.00%	7.00%	7.00%	5.50%	9.25%	9.75%	6.00%	13.00%	13.00%
ULSD Storage Capacity (days of full load)	1.0	1.2	1.2	6.0	1.7	1.7	1.2	1.2	1.0	5.5	5.5	1.2	1.2	1.2
Capacity in gallons	747,313	353,381	353,381	1,786,747	494,734	494,734	353,381	353,381	747,313	4,351,959	4,351,959	934,142	934,142	934,142

Table E32-2. Simple Cycle – Technology by Site

Location No.	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Demin Water Storage Capacity (days at full load on ULSD)	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0
Capacity in gallons	2,016,000	0	0	0	0	0	0	0	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000
Average Days of inventory on ULSD	1.0	1.2	1.2	3.1	1.7	1.7	1.2	1.2	1.0	4.8	4.8	1.2	1.2	1.2
Inventory in gallons	747,313	353,381	353,381	918,791	494,734	494,734	353,381	353,381	747,313	3,736,567	3,736,567	934,142	934,142	934,142
ULSD Price (2018 $/MMBtu)	$22.244	$21.865	$21.865	$21.846	$21.943	$21.865	$21.943	$22.178	$22.186	$21.885	$21.885	$22.399	$22.256	$22.752
Test energy revenue (2018 $/MWh)	$40.520	$39.040	$42.610	$42.610	$42.190	$41.750	$42.620	$42.620	$39.610	$38.130	$39.610	$38.540	$33.490	$33.570
Effective Real Property Tax Rate	2.80%	1.00%	1.85%	2.36%	0.90%	4.10%	1.90%	1.90%	1.65%	0.75%	1.65%	1.10%	2.94%	2.17%
Effective Personal Property Tax Rate	0.00%	0.00%	0.20%	0.50%	0.00%	0.00%	0.00%	0.00%	0.75%	0.50%	0.75%	0.25%	0.00%	0.00%
Firm Transportation Rate (Level for 2018 $/mo per Dth/d)	$9.67	$22.94	$22.94	$36.17	$13.52	$22.66	$22.44	$23.52	$18.83	$14.79	$11.54	$6.18	$43.99	$46.37
Avoided IT Rate (Level for 2018 $/mo per Dth/d)	$3.22	$2.86	$2.85	$4.15	$1.39	$8.03	$9.01	$9.01	$2.02	$4.21	$3.30	$1.24	$10.90	$11.49
Weighted Cost of Capital	7.99%	8.09%	7.98%	8.02%	8.01%	7.98%	8.00%	8.00%	8.07%	8.07%	8.07%	8.09%	8.61%	8.61%
Inventory Carrying Charge (level current $)	15.71%	15.30%	15.77%	15.56%	15.61%	15.77%	15.65%	15.65%	15.35%	15.35%	15.35%	15.30%	13.50%	13.50%
Simple Cycle Plant Charge Rate (level current $)	13.17%	13.01%	13.19%	13.11%	13.13%	13.19%	13.15%	13.15%	13.03%	13.03%	13.03%	13.01%	11.60%	11.60%
NO_x Emission Reduction Credit Multiplier	0.00	1.15	1.30	1.30	1.15	1.15	1.30	1.30	0.00	0.00	0.00	0.00	0.00	0.00
Nominal ERC Price (2018$ per ton/yr PTE)	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000

Table E32-2. Simple Cycle – Technology by Site

Location No.	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Nominal Capital $MM for 2018 CO														
Gas Turbine Scope	$4.400	$3.345	$3.345	$3.345	$3.345	$3.345	$3.345	$3.345	$4.400	$4.400	$4.400	$4.400	$4.400	$4.400
Other major equipment	$1.310	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$1.310	$1.310	$1.310	$1.310	$1.310	$1.310
Other construction labor	$0.931	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.867	$0.867	$0.867	$0.931	$1.547	$1.467
Liquid Fuel, Demin water handling (Mat'l)	$1.000	$0.200	$0.200	$0.200	$0.200	$0.200	$0.200	$0.200	$1.000	$1.000	$1.000	$1.000	$1.000	$1.000
Liquid Fuel, Demin water handling (Labor)	$0.931	$0.174	$0.189	$0.166	$0.163	$0.200	$0.195	$0.195	$0.867	$0.867	$0.867	$0.931	$1.547	$1.467
Liquid fuel storage tank (Mat'l)	$0.427	$0.305	$0.305	$0.748	$0.349	$0.349	$0.305	$0.305	$0.427	$1.541	$1.541	$0.485	$0.485	$0.485
Liquid fuel storage tank (Labor)	$0.268	$0.232	$0.252	$0.544	$0.249	$0.306	$0.261	$0.261	$0.249	$0.900	$0.900	$0.304	$0.505	$0.479
Demin water storage tank (Mat'l)	$0.655	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.655	$0.655	$0.655	$0.655	$0.655	$0.655
Demin water storage tank (Labor)	$0.411	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.383	$0.383	$0.383	$0.411	$0.682	$0.647
Incremental Land for Tanks	$0.025	$0.050	$0.050	$0.050	$0.050	$0.050	$0.050	$0.050	$0.005	$0.005	$0.005	$0.005	$0.050	$0.025
Startup Testing ULSD	$7.256	$2.966	$2.966	$2.964	$2.977	$2.966	$2.977	$3.009	$7.236	$7.138	$7.138	$7.306	$7.259	$7.421
Startup Testing Energy Sales on ULSD	($1.295)	($0.614)	($0.670)	($0.670)	($0.663)	($0.656)	($0.670)	($0.670)	($1.266)	($1.219)	($1.266)	($1.232)	($1.071)	($1.073)
Emission Reduction Credits	$0.000	$0.161	$0.182	$0.182	$0.161	$0.161	$0.182	$0.182	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
(Inventory carrying cost as O&M)	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Total Incremental Direct Cost	$16.318	$6.820	$6.819	$7.530	$6.831	$6.922	$6.846	$6.878	$16.134	$17.847	$17.800	$16.506	$18.369	$18.284
Sales tax on equipment and materials	$0.662	$0.231	$0.221	$0.258	$0.000	$0.312	$0.270	$0.270	$0.429	$0.824	$0.868	$0.471	$1.021	$1.021
EPC Fee	$1.100	$0.449	$0.451	$0.526	$0.431	$0.471	$0.458	$0.458	$1.059	$1.275	$1.279	$1.090	$1.315	$1.293
EPC Contingency	$1.209	$0.494	$0.496	$0.579	$0.474	$0.518	$0.503	$0.503	$1.165	$1.402	$1.407	$1.199	$1.447	$1.422
Development Cost	$0.665	$0.271	$0.273	$0.318	$0.261	$0.285	$0.277	$0.277	$0.641	$0.771	$0.774	$0.659	$0.796	$0.782
Mobilization & Startup	$0.133	$0.054	$0.055	$0.064	$0.052	$0.057	$0.055	$0.055	$0.128	$0.154	$0.155	$0.132	$0.159	$0.156
Non-fuel Inventories	$0.067	$0.027	$0.027	$0.032	$0.026	$0.029	$0.028	$0.028	$0.064	$0.077	$0.077	$0.066	$0.080	$0.078
Owner's Contingency	$0.557	$0.238	$0.235	$0.236	$0.234	$0.235	$0.236	$0.239	$0.555	$0.554	$0.550	$0.565	$0.583	$0.595
Financing Fees	$0.497	$0.206	$0.206	$0.229	$0.199	$0.212	$0.208	$0.209	$0.484	$0.550	$0.550	$0.497	$0.570	$0.567
Indirect (factored) Costs	$4.890	$1.970	$1.965	$2.241	$1.677	$2.118	$2.035	$2.038	$4.524	$5.607	$5.660	$4.678	$5.970	$5.915
Total Overnight Cost	$21.208	$8.790	$8.784	$9.771	$8.508	$9.040	$8.880	$8.916	$20.658	$23.454	$23.460	$21.184	$24.339	$24.199
Total Installed Cost	$22.184	$9.194	$9.188	$10.220	$8.899	$9.456	$9.289	$9.326	$21.608	$24.533	$24.539	$22.159	$25.458	$25.313
Installed Cost per kW of ICAP	$53.58	$45.70	$45.67	$50.80	$44.24	$47.00	$46.17	$46.36	$52.19	$59.26	$59.27	$53.52	$61.49	$61.14

Table E32-2. Simple Cycle – Technology by Site

Location No.	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Annual Fixed O&M Cost (2018 $MM/yr)														
Materials & Contract Services	$0.043	$0.010	$0.010	$0.010	$0.010	$0.011	$0.010	$0.010	$0.042	$0.042	$0.042	$0.043	$0.052	$0.050
Administrative & General Expense	$0.046	$0.011	$0.011	$0.011	$0.011	$0.011	$0.011	$0.011	$0.045	$0.045	$0.045	$0.046	$0.056	$0.055
ULSD for Regular Testing	$1.512	$0.618	$0.618	$0.617	$0.620	$0.618	$0.620	$0.627	$1.508	$1.487	$1.487	$1.522	$1.512	$1.546
Energy Offset for Testing	($0.270)	($0.128)	($0.140)	($0.140)	($0.138)	($0.137)	($0.140)	($0.140)	($0.264)	($0.254)	($0.264)	($0.257)	($0.223)	($0.224)
Property Taxes	$0.068	$0.008	$0.030	$0.080	$0.008	$0.039	$0.016	$0.016	$0.164	$0.122	$0.209	$0.070	$0.097	$0.069
Insurance	$0.133	$0.055	$0.055	$0.061	$0.053	$0.057	$0.056	$0.056	$0.130	$0.147	$0.147	$0.133	$0.153	$0.152
ULSD Inventory Carrying Cost as Fixed O&M	$0.362	$0.164	$0.169	$0.432	$0.235	$0.236	$0.168	$0.170	$0.353	$1.739	$1.739	$0.443	$0.389	$0.397
Total Fixed O&M (2018 $MM/yr)	$1.893	$0.738	$0.754	$1.073	$0.798	$0.836	$0.742	$0.751	$1.977	$3.328	$3.405	$2.000	$2.035	$2.046
Total Fixed O&M (2018 $kW-yr)	$4.57	$3.67	$3.75	$5.33	$3.97	$4.15	$3.69	$3.73	$4.77	$8.04	$8.22	$4.83	$4.92	$4.94
Variable O&M Cost (2018 $/MWh)														
On Natural Gas Fuel														
Major Maintenance Materials	$1.26	$2.49	$2.49	$2.49	$2.49	$2.49	$2.49	$2.49	$1.26	$1.26	$1.26	$1.26	$1.26	$1.26
Major Maintenance Labor	$0.37	$0.17	$0.19	$0.17	$0.16	$0.20	$0.19	$0.19	$0.35	$0.35	$0.35	$0.37	$0.62	$0.59
Other (Catalyst, ammonia, water, etc.)	$1.89	$2.52	$2.52	$2.52	$2.52	$2.52	$2.52	$2.52	$1.89	$1.89	$1.89	$1.89	$1.89	$1.89
Total - Natural Gas Fuel	$3.52	$5.18	$5.19	$5.17	$5.17	$5.20	$5.20	$5.20	$3.50	$3.50	$3.50	$3.52	$3.77	$3.74
On Liquid Fuel														
Major Maintenance Materials	$1.89	$3.73	$3.73	$3.73	$3.73	$3.73	$3.73	$3.73	$1.89	$1.89	$1.89	$1.89	$1.89	$1.89
Major Maintenance Labor	$0.56	$0.26	$0.28	$0.25	$0.24	$0.30	$0.29	$0.29	$0.52	$0.52	$0.52	$0.56	$0.93	$0.89
Other (Catalyst, ammonia, water, etc.)	$1.89	$2.52	$2.52	$2.52	$2.52	$2.52	$2.52	$2.52	$1.89	$1.89	$1.89	$1.89	$1.89	$1.89
Total - Liquid Fuel	$4.34	$6.51	$6.53	$6.50	$6.49	$6.55	$6.54	$6.54	$4.30	$4.30	$4.30	$4.34	$4.71	$4.66
Fuel Assurance Cost Comparison														
(Levelized Current $/kW-yr of ICAP for 2018 CO Date)														
Firm Transportation for Natural Gas														
FT Reservation Charge	$29.58	$64.59	$64.59	$101.82	$38.05	$63.80	$63.16	$66.21	$57.61	$45.25	$35.33	$18.90	$134.62	$141.89
Avoided IT Charge	($9.86)	($8.04)	($8.04)	($11.68)	($3.92)	($22.61)	($25.37)	($25.36)	($6.19)	($12.89)	($10.11)	($3.80)	($33.36)	($35.16)
Net FT Cost	$19.72	$56.55	$56.55	$90.13	$34.14	$41.19	$37.79	$40.84	$51.42	$32.37	$25.22	$15.10	$101.25	$106.72
Dual-Fuel Capability														
Capital Charges for Incremental Plant	$7.06	$5.95	$6.03	$6.66	$5.81	$6.20	$6.07	$6.09	$6.80	$7.72	$7.73	$6.96	$7.13	$7.09
Carrying Charges on Fuel Inventory	$0.87	$0.81	$0.84	$2.15	$1.17	$1.17	$0.84	$0.84	$0.85	$4.20	$4.20	$1.07	$0.94	$0.96
Incremental Fixed O&M (Excl. Fuel Inventory)	$4.36	$3.36	$3.43	$3.75	$3.30	$3.52	$3.37	$3.41	$4.62	$4.53	$4.74	$4.43	$4.67	$4.68
Total	$12.29	$10.13	$10.30	$12.57	$10.28	$10.89	$10.27	$10.34	$12.28	$16.45	$16.67	$12.47	$12.75	$12.73

Sums of amounts shown in columns may not match indicated totals due to rounding.