

2014 IRP: Generation Costs and Performance Data for New Alternatives - 1st Draft

Resource	Gas Resources							Coal & Nuclear		Renewables						
	Aero Turbine	Gas Turbine (small)	Gas Turbine (large)	Gas Turbine (large)	Combined Cycle	Combined Cycle	Reciprocating Engines	Coal w/carbon capture	Nuclear	Solar Trough	Solar Trough (storage)	Solar PV	Solar PV	Wind	Biomass	Geothermal
IRP Reference Year	2014	2014	2014	2014	2014	2014	2014	2014	2014	2014	2014	2014	2014	See Data Below		
Construction Escalation, %	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%			
O&M Escalation, %	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%			
IRP Database (Adjusted for Reference Year)																
IRP Size, MW	40	85	143	177	204	250	93	200	200	50	50	20	20			
Total Plant Cost, \$/kW	1,431	1,425	880	778	1,425	1,229	1,328	4,034	4,305	3,575	6,246	1,999	2,000			
AFUDC, \$/kW	74	78	46	110	143	167	70	741	1,279	342	597	47	46			
Total Owners Costs, \$/kW	104	140	78	90	173	114	90	330	439	242	416	-	-			
Total Capital, \$/kW	1,609	1,643	1,004	977	1,741	1,511	1,488	5,105	6,023	4,159	7,259	2,046	2,046			
Year 1st Available	2017	2017	2017	2017	2018	2018	2017	2020	2020	2018	2018	2016	2017			
Total Capital, k\$	\$ 64,340	\$ 139,692	\$ 140,624	\$ 172,972	\$ 354,439	\$ 376,955	\$ 138,380	\$ 1,021,020	\$ 1,204,539	\$ 207,974	\$ 362,973	\$ 45,560	\$ 45,104			
IRP Performance and O&M																
IRP Size, MW	40	85	143	177	204	250	93	200	200	50	50	20	20			
Fixed O&M, \$/kWyr	19.36	17.42	12.03	7.41	26.92	32.54	23.73	79.24	100.34	344.61	365.77	17.11	17.53			
Variable O&M, mills/kwh	4.77	3.63	9.69	8.23	2.55	3.94	1.05	9.30	5.64	3.22	2.04	-	-			
Equivalent Availability	95%	95%	95%	95%	95%	89%	98%	92%	94%	N/A	N/A	N/A	N/A			
Heat rate, Btu/kWH	9,800	9,150	10,142	9,790	7,104	6,946	8,900	13,250	10,510	No Fuel Conversion to Heat, so N/A						
PPA Alternative																
RFP Reference Year														2015	2015	2014
PPA Alternative - COE (\$/MWh) @ RFP														\$ 45.52	\$ 113.23	\$ 131.49
IRP Reference Year														2014	2014	2014
PPA Alternative - COE (\$/MWh) @ IRP														\$ 44.41	\$ 110.47	\$ 131.49
Emissions Data																
CO(lbs/MWh)	0.12	0.28	0.18	0.17	0.12	0.11	0.26	0.00								0.10
NOx (lbs/MWh)	0.08	0.11	0.39	0.37	0.08	0.05	3.65	0.47								0.70
Particulate (lbs/MWh)	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.27								0.23
SO2 (lbs/MWh)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25								0.13
CO2 (lbs/MWh)	1140	1115	1300	1245	845	820	980	280								2,728
Mercury (lbs/kWh)																