

**PNM EXHIBIT PJO-5**

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**Consisting of 3 pages**

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**Resource Alternatives**

**Gas Alternatives**

Resource Name	Aero Turbine	Gas Turbine (small)	Gas Turbine (large) SJ	Gas Turbine (large)	Gas Turbine (large) SJGS	Gas Turbine (large)	Combined Cycle	Combined Cycle	Reciprocating Engines	La Luz II	Existing Combined Cycle
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**Capital Costs/Non-fuel Revenue Requirements**

IRP Size, MW	40	85	143	143	177	177	204	250	93	40	250
IRP Reference Year	2014	2014	2014	2014	2014	2014	2014	2014	2014	2014	2014
Construction Escalation, %	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%
Total Plant Cost, \$000's	62,541	135,493	146,642	136,642	162,644	153,585	331,136	341,303	134,376	54,172	173,000
AFUDC, \$000's	3,205	7,198	7,690	7,165	21,152	19,789	31,255	44,063	7,046	2,776	
Total Capital+AFUDC, \$000's	65,746	142,692	154,331	143,807	183,797	173,373	362,391	385,366	141,422	56,948	173,000
Total Capital+AFUDC, \$/kW	1,644	1,679	1,079	1,006	1,038	979	1,780	1,545	1,521	1,424	692
Total Capital NPV Strat Input, \$000's	\$ 77,300	\$ 164,094	\$ 181,459	\$ 169,183	\$ 216,743	\$ 204,446	\$ 441,981	\$ 469,631	\$ 166,307	\$ 66,977	\$ 211,565

**IRP/BART Performance and O&M**

IRP/BART Size, MW	40	85	143	143	177	177	204	250	93	40	250
Year 1st Available	2016	2017	2017	2017	2017	2017	2018	2018	2017	2017	2016
Fixed O&M*, \$000's/yr	\$ 1,482	\$ 2,996	\$ 3,822	\$ 3,822	\$ 4,101	\$ 4,101	\$ 9,142	\$ 12,290	\$ 3,797	\$ 1,333	\$ 10,410
Fixed O&M*, \$/kW-yr	\$ 37.04	\$ 35.24	\$ 28.68	\$ 28.68	\$ 23.16	\$ 23.16	\$ 44.91	\$ 49.26	\$ 40.83	\$ 33.34	\$ 41.64
Fixed O&M*, k\$/yr											
Variable O&M, \$/MWh	\$ 4.77	\$ 3.63	\$ 9.69	\$ 9.69	\$ 8.23	\$ 8.23	\$ 2.55	\$ 3.94	\$ 1.05	\$ 4.77	\$ 2.60
Variable O&M, k\$/yr											
Equivalent Availability	95%	95%	95%	95%	95%	95%	95%	89%	98%	0.95	95%
Heat rate, Btu/kWh	9,800	9,150	10,142	10,142	9,790	9,790	7,104	6,946	8,900	9,800	7,000

**PPA Alternatives**

IRP Reference Year											
PPA Alternative - LCOE (\$/MWh) @ IRP											

**Emissions Data**

CO (lbs/MWh)	0.12	0.28	0.18	0.18	0.17	0.17	0.12	0.11	0.26	0.12	0.12
NOx (lbs/MWh)	0.08	0.11	0.39	0.39	0.37	0.37	0.08	0.05	3.65	0.08	0.08
Particulate (lbs/MWh)	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
SO2 (lbs/MWh)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CO2 (lbs/MWh)	1140	1115	1300	1300	1245	1245	845	820	980	1140	845
Mercury (lbs/kWh)											

\* FOM includes operations and maintenance, property taxes and gas reservation fees if applicable

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Resource Alternatives										
	Coal & Nuclear			Renewables						
Resource Name	Coal w/carbon capture	Nuclear	Palo Verde 3 (2,500 \$/kW)	Solar Trough	Solar Trough (storage)	Solar PV	Solar PV	Wind	Biomass	Geothermal

**Capital Costs/Non-Fuel Revenue Requirements**

IRP Size, MW	200	200	134	50	50	20	20			
IRP Reference Year	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%			
O&M Escalation, %	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%			
Total Plant Cost, \$000's	886,819	964,048	303,493	190,863	333,109	40,617	41,632			
AFUDC, \$000's	152,112	256,318	-	18,015	31,441	1,077	1,104			
Total Capital+AFUDC, \$000's	1,038,932	1,220,366	303,493	208,878	364,550	41,694	42,736			
Total Capital+AFUDC, \$/kW	5,195	6,102	2,265	4,178	7,291	2,085	2,137			
Total Capital NPV Strat Input, \$000's	\$ 1,265,520	\$ 1,365,379	\$ 334,800	\$ 207,821	\$ 362,706	\$ 39,865	\$ 45,947			

**IRP/BART Performance and O&M**

IRP/BART Size, MW	200	200	134	50	50	20	20			
Year 1st Available	2020	2020	2015	2018	2018	2016	2017			
Fixed O&M*, \$000's/yr	\$ 20,212	\$ 24,811	\$ 28,751	\$ 18,184	\$ 19,954	\$ 533	\$ 536			
Fixed O&M*, \$/kW-yr	\$ 101.06	\$ 124.06	\$ 215	\$ 363.69	\$ 399.09	\$ 26.66	\$ 26.78			
Fixed O&M*, k\$/yr			\$ 28,751							
Variable O&M, \$/MWh	\$ 9.30	\$ 5.64		\$ 3.22	\$ 2.04	\$ -	\$ -			
Variable O&M, k\$/yr										
Equivalent Availability	92%	94%	98%							
Heat rate, Btu/kWh	13,250	10,510	10,300							

**PPA Alternatives**

IRP Reference Year								2014	2014	2014
PPA Alternative - LCOE (\$/MWh) @ IRP								\$ 44.41	\$ 110.47	\$ 131.49

**Emissions Data**

CO (lbs/MWh)	0.00							0.10		
NOx (lbs/MWh)	0.47							0.70		
Particulate (lbs/MWh)	0.27							0.23		
SO2 (lbs/MWh)	0.25							0.13		
CO2 (lbs/MWh)	280							2,728		
Mercury (lbs/kWh)										

\* FOM includes operations and maintenance, property taxes and g

	<b>Resource Alternatives</b>				
	<b>Regional Haze Alternatives</b>				
<b>Resource Name</b>	<b>SNCRs on SJGS U2&amp;U3 (78 MW to SJ4)</b>	<b>SCRs on FC4</b>	<b>SCRs on FC5</b>	<b>SCRs on SJGS U1-U4 (Total)</b>	<b>4Unit Shutdown SJGS</b>

**Capital Costs/Non-Fuel Revenue Requirements**

IRP Size, MW					
IRP Reference Year	2014	2014	2014	2014	2014
Construction Escalation, %	2.5%	2.5%	2.5%	2.5%	2.5%
O&M Escalation, %	2.5%	2.5%	2.5%	2.5%	2.5%
Total Plant Cost, \$000's	\$ 73,808	\$ 34,058	\$ 31,096	\$ 422,521	
AFUDC, \$000's	\$ 4,181	\$ 4,224	\$ 3,857	\$ 18,978	
Total Capital+AFUDC, \$000's	\$ 77,989	\$ 38,282	\$ 34,953	\$ 441,500	
Total Capital+AFUDC, \$/kW	N/A	\$ 391	\$ 343	\$ 564	
Total Capital NPV Strat Input, \$000's	\$ 85,514	\$ 39,611	\$ 36,170	\$ 467,078	

**IRP/BART Performance and O&M**

IRP/BART Size, MW	443	98	102	783	783
Year 1st Available	2018	2017	2018	2017	2017
Fixed O&M*, \$000's/yr					
Fixed O&M*, \$/kW-yr					
Fixed O&M*, k\$/yr				\$ 12,919	\$ 103,557
Variable O&M, \$/MWh					
Variable O&M, k\$/yr	-	\$ 564	\$ 564	\$ 6,443	
Equivalent Availability					
Heat rate, Btu/kWh					

**PPA Alternatives**

IRP Reference Year					
PPA Alternative - LCOE (\$/MWh) @ IRP					

**Emissions Data**

CO (lbs/MWh)					
NOx (lbs/MWh)					
Particulate (lbs/MWh)					
SO2 (lbs/MWh)					
CO2 (lbs/MWh)					
Mercury (lbs/kWh)					

\* FOM includes operations and maintenance, property taxes and g