



Monitoring  
Analytics

# **Summary of Results: IMM CONE CT Compared to Brattle**

The Independent Market Monitor for PJM

July 9, 2014

**BRATTLE vs. SOM CONE CT CAPITAL COST AND REVENUE REQUIREMENTS**

CONE CT Capital Cost		
CONE Area1-AECO Zone	\$Million	\$/kW
2013 SOM	\$311.037	\$758.33
Brattle	\$420.000	\$1,060.61
2012 SOM	\$319.167	\$778.15
2011 SOM	\$311.736	\$760.03
2010 SOM	\$303.280	\$902.44
2009 SOM	\$297.443	\$885.07

Levelized Revenue Requirements												
CONE Area1-AECO Zone	2013 SOM		Brattle 2014		2012 SOM		2011 SOM		2010 SOM		2009 SOM	
Levelized Revenue Requirements	\$/MW-Day	\$/MW-Year	\$/MW-Day	\$/MW-Year	\$/MW-Day	\$/MW-Year	\$/MW-Day	\$/MW-Year	\$/MW-Day	\$/MW-Year	\$/MW-Day	\$/MW-Year
Capital	\$262.21	\$95,708	\$369.86	\$135,000	\$269.59	\$98,399	\$263.33	\$96,114	\$312.70	\$114,135	\$306.76	\$111,966
Fixed O&M	\$38.42	\$14,023	\$41.10	\$15,000	\$40.08	\$14,628	\$39.66	\$14,475	\$46.32	\$16,909	\$45.86	\$16,739
<b>Total</b>	<b>\$300.63</b>	<b>\$109,731</b>	<b>\$410.96</b>	<b>\$150,000</b>	<b>\$309.66</b>	<b>\$113,027</b>	<b>\$302.98</b>	<b>\$110,589</b>	<b>\$359.02</b>	<b>\$131,044</b>	<b>\$352.62</b>	<b>\$128,705</b>

Plant Description	2009-2010 SOM	2011-2013 SOM	Brattle
CT Model	GE Frame 7FA.04	GE Frame 7FA.05	GE Frame 7FA.05
Number of CTs	2	2	2
Plant Capacity (MW)	336.066	410.162	396.000
Heat Rate (BTU/kWh) (HHV)	10,826	10,241	10,309
Financial Assumptions			
Percent Equity	50%	50%	40%
Percent Debt	50%	50%	60%
Debt Term (Years)	20	20	20
Project Life (Years)	20	20	20
Debt Interest Rate (%)	7.0%	7.0%	7.0%
Target Equity IRR (%)	12.0%	12.0%	13.8%
General Escalation (%)	2.5%	2.5%	3.0%
MACRS Depreciation (Yrs)	15	15	15

**CONE CT CAPITAL COST DETAIL**

CONE Area 1-AECO Zone	2013 SOM		Brattle 2014		2012 SOM		2011 SOM		2010 SOM		2009 SOM	
	\$000	\$/kW	\$000	\$/kW	\$000	\$/kW	\$000	\$/kW	\$000	\$/kW	\$000	\$/kW
Plant Proper EPC	\$246,014	\$599.80	\$317,300	\$801.26	\$251,328	\$612.75	\$248,983	\$607.04	\$245,058	\$729.20	\$239,810	\$713.58
Electric Interconnect	\$9,996	\$24.37	\$13,000	\$32.83	\$9,809	\$23.91	\$9,622	\$23.46	\$7,518	\$22.37	\$6,971	\$20.74
Gas Interconnect	\$10,505	\$25.61	\$22,600	\$57.07	\$11,000	\$26.82	\$7,040	\$17.16	\$5,201	\$15.48	\$5,735	\$17.07
Equipment Spares-Inventories	\$3,308	\$8.06	\$6,900	\$17.42	\$3,210	\$7.83	\$2,919	\$7.12	\$2,870	\$8.54	\$2,727	\$8.12
Owners Contingency	\$6,150	\$15.00	\$6,100	\$15.40	\$6,283	\$15.32	\$6,225	\$15.18	\$6,126	\$18.23	\$5,995	\$17.84
Mobilization and Startup	\$3,179	\$7.75	\$7,200	\$18.18	\$3,421	\$8.34	\$3,385	\$8.25	\$4,103	\$12.21	\$4,107	\$12.22
Land Purchase	\$2,376	\$5.79	\$2,000	\$5.05	\$2,376	\$5.79	\$2,550	\$6.22	\$2,604	\$7.75	\$2,778	\$8.27
Development Expenses	\$6,094	\$14.86	\$15,900	\$40.15	\$6,007	\$14.65	\$5,885	\$14.35	\$5,704	\$16.97	\$5,612	\$16.70
Legal Fees	\$1,893	\$4.62	\$0	\$0.00	\$1,867	\$4.55	\$1,829	\$4.46	\$1,772	\$5.27	\$1,744	\$5.19
Financing Fees	\$3,110	\$7.58	\$9,400	\$23.74	\$3,192	\$7.78	\$3,117	\$7.60	\$3,033	\$9.02	\$2,974	\$8.85
Interest During Construction	\$16,317	\$39.78	\$19,600	\$49.49	\$16,642	\$40.58	\$16,248	\$39.61	\$15,797	\$47.01	\$15,482	\$46.07
Permits	\$1,310	\$3.19	\$0	\$0.00	\$1,185	\$2.89	\$1,130	\$2.76	\$815	\$2.43	\$797	\$2.37
Emissions Reductions Credits	\$784	\$1.91	\$0	\$0.00	\$2,847	\$6.94	\$2,804	\$6.84	\$2,677	\$7.97	\$2,710	\$8.06
<b>Total Project Cost</b>	<b>\$311,037</b>	<b>\$758.33</b>	<b>\$420,000</b>	<b>\$1,060.61</b>	<b>\$319,167</b>	<b>\$778.15</b>	<b>\$311,736</b>	<b>\$760.03</b>	<b>\$303,280</b>	<b>\$902.44</b>	<b>\$297,443</b>	<b>\$885.07</b>

**CONE CT FIRST YEAR ANNUAL FIXED O&M EXPENSES DETAIL**

CONE Area 1-AECO Zone	2013 SOM		Brattle 2014		2012 SOM		2011 SOM		2010 SOM		2009 SOM	
	\$000	\$/MW-Year	\$000	\$/MW-Year	\$000	\$/MW-Year	\$000	\$/MW-Year	\$000	\$/MW-Year	\$000	\$/MW-Year
Site O&M Labor	\$1,426	\$3,476	\$1,500	\$3,788	\$1,408	\$3,434	\$1,378	\$3,359	\$1,319	\$3,925	\$1,332	\$3,965
O&M Contract Parts & Labor	\$576	\$1,405	\$700	\$1,768	\$569	\$1,388	\$557	\$1,358	\$533	\$1,587	\$533	\$1,587
Electric Purchases-Consumables	\$236	\$575	\$200	\$505	\$233	\$567	\$228	\$555	\$221	\$657	\$217	\$646
Training-Employee Expenses	\$117	\$285	\$0	\$0	\$115	\$281	\$113	\$275	\$108	\$321	\$108	\$321
Asset O&M Management Fee	\$265	\$646	\$400	\$1,010	\$262	\$638	\$256	\$624	\$245	\$729	\$245	\$729
Insurance	\$1,349	\$3,289	\$2,400	\$6,061	\$1,377	\$3,357	\$1,343	\$3,274	\$1,303	\$3,878	\$1,276	\$3,798
G&A	\$181	\$442	\$200	\$505	\$179	\$436	\$175	\$427	\$168	\$499	\$168	\$499
Property Taxes	\$767	\$1,869	\$400	\$1,010	\$986	\$2,404	\$1,026	\$2,501	\$961	\$2,859	\$929	\$2,765
<b>Total</b>	<b>\$4,917</b>	<b>\$11,987</b>	<b>\$5,800</b>	<b>\$14,646</b>	<b>5,129</b>	<b>\$12,504</b>	<b>\$5,075</b>	<b>\$12,374</b>	<b>\$4,858</b>	<b>\$14,454</b>	<b>\$4,809</b>	<b>\$14,309</b>