Illustration of the Impact of Emission Cost Adders on Generation Dispatch Costs

Based on ISO New England's Scenario Analysis Assumptions

Costs are in 2006 $/MWh for the Year 2020

	Technology Type	Fuel Type	HeatRate (Btu/kWh)	Fuel Price ($/MBtu)	Emission Rate (Lb/MBtu)			Emission Cost Adder ($/MWh)			Fuel Cost ($/MWh)	Emission Cost Adders	Cost of Energy ($/MWh)
					SO2	NOx	CO2	SO2	NOx	CO2			
Existing Units	Coal	COAL	11,000	2.11	0.71	0.20	213	3.8	2.6	23.5	23.2	29.8	53.0
	Gas Combined Cycle	GAS	7,700	6.16	0.00	0.05	129	0.0	0.4	9.9	47.5	10.4	57.8
	Gas Steam	GAS	10,500	6.16	0.07	0.25	211	0.3	3.1	22.2	64.7	25.6	90.3
	Oil Steam	Residual	11,000	7.03	0.74	0.26	196	4.0	3.4	21.5	77.3	28.9	106.2
	Peaking Comb Turbine	Distillate	12,500	11.93	0.32	1.17	170	2.0	17.2	21.2	149.2	40.4	189.5
New Units	Landfill Gas	LFG	10,500	0	0.2	0.03	0	1.0	0.4	0.0	0.0	1.4	1.4
	Nuclear	Uranium	10,000	1.7	0	0	0	0.0	0.0	0.0	17.0	0.0	17.0
	IGCC with 90% CO2 Sequestration	NAPP COAL	9,750	2.00	0.03	0.01	21	0.1	0.1	2.0	19.5	2.3	21.8
	IGCC no CO2 Sequestration	NAPP COAL	8,600	2.00	0.03	0.01	210	0.1	0.1	18.1	17.2	18.3	35.5
	Nat Gas Combined Cycle	GAS	6,500	6.16	0.0006	0.01	120	0.0	0.1	7.8	40.1	7.9	47.9
	Fuel Cell	GAS	8,000	6.16	0.0006	0.0088	116	0.0	0.1	9.3	49.3	9.4	58.7
	Peaking Combustion Turbine	GAS	8,500	6.16	0.0006	0.03	120	0.0	0.3	10.2	52.4	10.5	62.9
	Biomass	Wood Chips	14,000	3.33	0.02	0.075	170	0.1	1.2	23.8	46.6	25.2	71.8
	CHP Gas Turbine	GAS	9,750	6.16	0.0006	0.014	120	0.0	0.2	11.7	60.1	11.9	72.0

Notes:

1. Fuel Prices - From Levitan Fuel Price Forecast and an assumed deflation rate of 2.5%
2. Other assumptions from Scenarion Analysis Technology Table
3. Allowance Prices from AEO 2006
4. For biomass, CO2 cost is calculated based on the emitted CO2. The effect of re-absorption is not reflected.
5. IGCC and CHP have minor adjustments for consistency with assumptions

	SO2	NOx	CO2
Allowance Price (2004 $/ton):	930	2250	20.0
(2006 $/ton)	969	2345	20.0

1 ton = 2000 Lbs

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