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## Analysis of Alternative Extensions of the Existing Production Tax Credit for Wind Generator

Table 1: Summary Results for a Five-Year Extension of the Production Tax Credit for Wind

	2005	2020				2030			
		Reference	PTC 1.0	PTC 1.5	PTC 1.9	Reference	PTC 1.0	PTC 1.5	PTC 1.9
<b>Capacity (gigawatts)</b>									
Coal Steam	314.8	353.8	353.6	352.9	352.9	465.3	465.1	463.1	465.1
Other Fossil Steam	121.3	89.3	89.9	90.2	90.0	87.5	87.4	86.9	87.4
Combined Cycle	176.6	203.9	203.8	202.8	203.1	211.6	211.7	211.2	212.0
Combustion Turbine/Diesel	133.2	127.2	126.8	127.7	127.7	155.1	154.2	157.7	155.0
Nuclear Power	100.0	111.7	111.7	111.7	111.7	112.6	113.5	111.7	111.2
Pumped Storage	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8
Other	0.0	2.1	2.3	2.3	2.1	11.4	11.6	11.7	11.4
Conventional Hydropower	80.6	80.7	80.7	80.7	80.7	80.8	80.8	80.9	80.8
Geothermal	2.3	2.8	2.8	2.7	2.7	3.1	3.2	3.2	3.2
Municipal Solid Waste/Landfill Gas	3.6	4.1	4.1	4.1	4.1	4.2	4.2	4.2	4.2
Wood and Other Biomass	6.5	8.3	8.2	8.1	8.1	11.0	10.7	10.6	10.5
Solar	0.6	1.6	1.6	1.6	1.6	3.5	3.5	3.3	3.4
Wind	9.6	17.8	17.8	23.6	23.8	18.0	18.0	23.6	23.8
Other Industrial Capacity <sup>2</sup>	17.7	27.4	27.3	27.4	27.3	35.2	35.1	35.2	35.0
<b>Total</b>	<b>987.6</b>	<b>1051.6</b>	<b>1051.5</b>	<b>1056.7</b>	<b>1056.7</b>	<b>1220.2</b>	<b>1219.8</b>	<b>1224.2</b>	<b>1223.9</b>
<b>Generation (billion kilowatthours)</b>									
Coal	2014.6	2488.5	2485.2	2481.9	2487.0	3329.9	3327.3	3313.9	3321.8
Petroleum	121.9	103.0	103.0	102.7	102.2	107.2	107.2	106.8	106.5
Natural Gas	751.7	1060.3	1061.4	1042.6	1042.1	936.6	936.0	940.8	936.7
Nuclear Power	780.5	885.2	885.3	885.6	885.5	895.7	902.6	889.8	885.9
Pumped Storage/Other	13.0	7.8	7.8	7.8	7.8	8.5	8.5	8.5	8.5

**Table 1: Summary Results for a Five-Year Extension of the Production Tax Credit for Wind (cont'd)**

	2005	2020				2030			
		Reference	PTC 1.0	PTC 1.5	PTC 1.9	Reference	PTC 1.0	PTC 1.5	PTC 1.9
Conventional Hydropower	265.1	307.0	307.0	307.0	307.0	307.7	307.7	308.2	307.7
Geothermal	15.1	19.8	19.9	19.5	19.4	22.7	23.1	23.2	23.1
Municipal Solid Waste/Landfill Gas	23.3	27.2	27.2	27.2	27.2	27.7	27.7	27.7	27.7
Dedicated Biomass	33.3	47.8	47.5	46.5	46.6	67.5	64.7	64.2	63.4
Biomass Co-Firing	4.5	35.9	39.0	41.9	38.8	34.4	35.2	36.1	38.0
Solar <sup>1</sup>	0.9	3.3	3.4	3.3	3.4	7.2	7.1	6.9	6.9
Wind	14.6	51.4	51.4	72.2	72.4	51.9	51.9	72.2	72.4
Renewable Total	356.8	492.3	495.3	517.7	514.8	519.0	517.4	538.4	539.2
Total (All Generation)	4038.4	5037.2	5038.0	5038.2	5039.4	5796.9	5799.1	5798.2	5798.7
<b>Costs to Government of Wind PTC (billion 2005 dollars)</b>									
Cumulative PTC payments	0.02	4.59	4.83	8.17	9.09	4.59	4.84	8.17	9.17
<b>Electricity Prices and Sales</b>									
Electricity Sales (billion kilowatthours)	3660	4528	4529	4529	4530	5168	5170	5170	5172
Retail Electricity Price (2005 cents/kwh)	8.10	7.90	7.90	7.89	7.88	8.05	8.03	8.04	8.03
<b>Electric Sector Emissions</b>									
Nitrogen Oxides (million short tons)	3.6	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3
Sulfur Dioxide (million short tons)	10.2	3.9	3.9	4.0	3.9	3.6	3.7	3.6	3.7
Mercury (tons)	51.3	19.2	19.5	19.3	20.1	15.5	15.6	15.7	16.0
Carbon Dioxide (million metric tons)	2375.0	2831.7	2827.8	2818.9	2822.6	3338.0	3331.9	3323.5	3324.0
<b>Fuel Prices</b>									
Natural Gas Wellhead Price (2005 dollars per thousand cubic feet)	7.51	5.22	5.22	5.20	5.19	5.98	5.91	5.92	5.91
Coal Minemouth Price (2005 dollars per ton)	23.34	21.58	21.62	21.52	21.54	22.60	22.63	22.63	22.59
<sup>1</sup> Includes solar thermal power, utility-owned photovoltaics, and distributed photovoltaics <sup>2</sup> Includes capacity in the industry sector fueled by petroleum, natural gas or other gaseous fuels. <sup>3</sup> Includes other gaseous fuels and other sources of generation.									
Source: EIA Office of Integrated Analysis and Forecasting. National Energy Modeling System runs AEO2007.D112106A, PTC10X05W.D041307A, PTC15X05W.D041307A, PTC19X05W.D041707A.									

Table 2: Summary Results for a Permanent Extension of the Production Tax Credit for Wind

	2005	2020				2030			
		Reference	PTC 1.0	PTC 1.5	PTC 1.9	Reference	PTC 1.0	PTC 1.5	PTC 1.9
<b>Capacity (gigawatts)</b>									
Coal Steam	314.8	353.8	353.8	352.2	348.4	465.3	467.7	457.9	448.7
Other Fossil Steam	121.3	89.3	88.5	89.0	89.4	87.5	85.7	85.8	86.4
Combined Cycle	176.6	203.9	201.9	202.1	203.0	211.6	211.0	212.4	213.7
Combustion Turbine/Diesel	133.2	127.2	127.2	127.3	127.3	155.1	158.2	156.9	161.8
Nuclear Power	100.0	111.7	111.7	111.7	111.7	112.6	111.9	111.3	110.6
Pumped Storage	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8
Other	0.0	2.1	2.3	2.3	2.2	11.4	12.9	13.0	12.0
Conventional Hydropower	80.6	80.7	80.7	80.8	80.8	80.8	81.0	81.0	80.8
Geothermal	2.3	2.8	2.7	2.7	2.7	3.1	3.3	3.2	3.2
Municipal Solid Waste/Landfill Gas	3.6	4.1	4.1	4.1	4.1	4.2	4.2	4.2	4.2
Wood and Other Biomass	6.5	8.3	8.2	8.1	8.2	11.0	10.5	10.5	10.6
Solar	0.6	1.6	1.6	1.6	1.6	3.5	3.3	3.5	3.1
Wind	9.6	17.8	22.3	29.5	40.3	18.0	23.9	34.4	56.3
Other Industrial Capacity <sup>2</sup>	17.7	27.4	27.4	27.4	27.3	35.2	35.3	35.3	35.1
Total	987.6	1051.6	1053.3	1059.6	1067.8	1220.2	1229.7	1230.1	1247.4
<b>Generation (billion kilowatthours)</b>									
Coal	2014.6	2488.5	2487.3	2475.5	2441.8	3329.9	3341.7	3273.6	3208.0
Petroleum	121.9	103.0	102.6	102.6	102.0	107.2	107.0	106.7	106.4
Natural Gas	751.7	1060.3	1043.4	1029.0	1031.8	936.6	913.1	947.1	954.4
Nuclear Power	780.5	885.2	885.4	885.3	885.3	895.7	889.4	886.2	881.0
Pumped Storage/Other	13.0	7.8	7.8	7.8	7.7	8.5	8.5	8.5	8.4

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Combustion Turbine/Diesel	133.2	127.2	127.2	127.3	127.3	155.1	158.2	156.9	161.8
Nuclear Power	100.0	111.7	111.7	111.7	111.7	112.6	111.9	111.3	110.6
Pumped Storage	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8
Other	0.0	2.1	2.3	2.3	2.2	11.4	12.9	13.0	12.0
Conventional Hydropower	80.6	80.7	80.7	80.8	80.8	80.8	81.0	81.0	80.8
Geothermal	2.3	2.8	2.7	2.7	2.7	3.1	3.3	3.2	3.2
Municipal Solid Waste/Landfill Gas	3.6	4.1	4.1	4.1	4.1	4.2	4.2	4.2	4.2
Wood and Other Biomass	6.5	8.3	8.2	8.1	8.2	11.0	10.5	10.5	10.6
Solar	0.6	1.6	1.6	1.6	1.6	3.5	3.3	3.5	3.1
Wind	9.6	17.8	22.3	29.5	40.3	18.0	23.9	34.4	56.3
Other Industrial Capacity <sup>2</sup>	17.7	27.4	27.4	27.4	27.3	35.2	35.3	35.3	35.1
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