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Energy Market and Economic Impacts of S.1766, the Low Carbon Economy Act of 2007

Table ES4: Summary Energy Market Results for the Reference, S. 1766 Reference Plus Policies, and Limited Alternatives Cases

(million metric tons CO_2 equivalent, except as noted)

	2005	2020			2030		
		Refer-ence	S. 1766 Reference & Policies	Limited Alter-natives	Refer-ence	S. 1766 Reference & Policies	Limited Alter-natives
Greenhouse gas emissions							
Energy-related carbon dioxide	5945	6886	6133	6572	7889	5627	7134
Other covered emissions	194	378	300	299	559	468	468
Total covered emissions	6140	7264	6433	6871	8448	6094	7602
Total greenhouse gas emissions	7147	8383	7445	7881	9673	7162	8667
Emissions reduction from Reference case							
Energy-related carbon dioxide		n.a.	753	314	n.a.	2262	754
Carbon capture and storage		*n.a.*	*237*	*0*	*n.a.*	*1379*	*0*
Other covered emissions		n.a.	77	79	n.a.	91	91
Offset credits		n.a.	105	106	n.a.	153	153
Nonenergy carbon dioxide		n.a.	3	3	n.a.	5	7
Total emissions reduction			938	502		2511	1006
Biogenic carbon sequestration			165	171		479	479
Total (including carbon sequestration)			1103	673		2989	1484
Compliance summary							
Allowances issued (cap)	n.a.	6189	6189	6189	4818	4818	4818
Covered emissions, less offset credits	6151	7264	6328	6765	8448	5942	7450
Net allowance bank change	0	0	-139	0	0	0	0
TAP sales	0	0	0	576	0	1124	2632
Allowance price (2005 dollars per metric ton CO_2 equivalent)	n.a.	0	15	15	0	25	25
TAP price (2005 dollars per metric ton CO_2 equivalent)	n.a.	0	15	15	0	25	25
Delivered energy prices (2005 dollars per unit indicated)							
Motor gasoline, transport (per gallon)	2.32	1.97	2.04	2.09	2.21	2.21	2.41
Jet fuel (per gallon)	1.77	1.40	1.54	1.54	1.64	1.87	1.87
Diesel (per gallon)	2.41	2.09	2.26	2.23	2.35	2.61	2.61
Natural gas (per thousand cubic feet)							
Residential	12.80	10.85	11.29	11.86	11.69	12.56	13.73
Electric power	8.41	5.93	6.09	6.88	6.46	6.74	8.53
Coal, electric power sector (per million Btu)	1.53	1.57	2.96	3.01	1.70	4.09	3.98
Electricity (cents per kilowatthour)	8.10	7.90	8.21	8.53	8.06	8.90	9.68
Energy consumption (quadrillion Btu)							
Liquid fuels	40.7	46.5	44.2	45.4	52.0	47.4	50.0
Natural gas	22.7	27.1	25.5	27.4	26.9	23.1	28.5
Coal	22.9	27.1	24.2	24.4	34.1	30.1	26.6
Nuclear power	8.1	9.2	9.7	9.2	9.1	10.2	9.3
Renewable/Other	6.0	8.4	11.3	8.8	9.1	11.7	11.7
Total	100.3	118.4	114.9	115.3	131.2	122.4	126.2
Purchased electricity	12.5	15.5	15.3	15.2	17.6	17.3	16.9
Electricity generation (billion kilowatthours)							
Petroleum	141	120	62	66	124	52	67
Natural gas	752	1055	952	1263	923	532	1383
Coal	2015	2475	2246	2208	3340	3226	2505
Nuclear power	780	885	933	885	869	974	896
Renewable	350	505	791	529	541	870	671
Total	4038	5039	4983	4952	5797	5654	5522

TAP: Technology Accelerator Payment
Source: NEMS runs S1766BASE.D102307A, S1766REFPOLS.D120507C, and S1766BIV.D102907A.