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

Table 2: Summary Energy Market Results for the Reference, S. 1766 Core, and Half CCS Bonus Cases

(million metric tons CO_2 equivalent, except as noted)

	2005	2020			2030		
		Refer-ence	S. 1766 Core	Half CCS Bonus	Refer-ence	S. 1766 Core	Half CCS Bonus
Greenhouse gas emissions							
Energy-related carbon dioxide	5945	6886	6288	6375	7889	5770	6252
Other covered emissions	194	378	299	299	559	468	468
Total covered emissions	6140	7264	6588	6674	8448	6238	6719
Total greenhouse gas emissions	7147	8383	7598	7685	9673	7305	7787
Emissions reduction from Reference case							
Energy-related carbon dioxide		n.a.	597	510	n.a.	2119	1637
Carbon capture and storage		*n.a.*	*251*	*23*	*n.a.*	*1511*	*246*
Other covered emissions		n.a.	79	79	n.a.	91	91
Offset credits		n.a.	106	106	n.a.	153	153
Nonenergy carbon dioxide		n.a.	3	3	n.a.	5	5
Total emissions reduction			784	698		2368	1886
Biogenic carbon sequestration			171	171		479	479
Total (including carbon sequestration)			956	869		2847	2365
Compliance summary							
Allowances issued (cap)	n.a.	6189	6189	6189	4818	4818	4818
Covered emissions, less offset credits	6151	7264	6482	6569	8448	6085	6567
Net allowance bank change	0	0	0	0	0	0	0
TAP sales	0	0	293	380	0	1267	1749
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	2.09	2.09	2.21	2.39	2.40
Jet fuel (per gallon)	1.77	1.40	1.54	1.54	1.64	1.87	1.88
Diesel (per gallon)	2.41	2.09	2.24	2.24	2.35	2.60	2.60
Natural gas (per thousand cubic feet)							
Residential	12.80	10.85	11.36	11.67	11.69	12.48	12.67
Electric power	8.41	5.93	6.16	6.60	6.46	6.66	6.95
Coal, electric power sector (per million Btu)	1.53	1.57	3.01	2.97	1.70	4.11	3.87
Electricity (cents per kilowatthour)	8.10	7.90	8.18	8.36	8.06	8.88	8.75
Energy consumption (quadrillion Btu)							
Liquid fuels	40.7	46.5	45.5	45.3	52.0	50.2	50.0
Natural gas	22.7	27.1	25.7	26.8	26.9	23.1	24.5
Coal	22.9	27.1	25.1	23.0	34.1	31.3	22.2
Nuclear power	8.1	9.2	9.7	10.0	9.1	10.2	16.9
Renewable/Other	6.0	8.4	10.2	10.8	9.1	10.6	14.2
Total	100.3	118.4	116.1	116.0	131.2	125.3	127.8
Purchased electricity	12.5	15.5	15.3	15.3	17.6	17.3	17.2
Electricity generation (billion kilowatthours)							
Petroleum	141	120	64	65	124	52	56
Natural gas	752	1055	978	1129	923	528	733
Coal	2015	2475	2334	2073	3340	3382	2087
Nuclear power	780	885	928	960	869	981	1625
Renewable	350	505	684	741	541	717	1149
Total	4038	5039	4988	4968	5797	5661	5650

TAP: Technology Accelerator Payment
Source: NEMS runs S1766BASE.D102307A, S1766.D103007A, and S1766ALTCCS.D103007A.