

Energy Market and Economic Impacts of S. 280, the Climate Stewardship and Innovation Act of 2007

Table 13. Summary of Emissions and Energy Market Results
(emissions in million metric tons CO₂ equivalent; other results in indicated units)

	2005	2020				2030			
		Refer- ence	S.280 Core	Fixed 30% Offset	No Inter- national	Refer- ence	S.280 Core	Fixed 30% Offset	No Inter- national
Greenhouse gas emissions									
Energy-related carbon dioxide	5945	6879	6116	6351	5878	7888	5520	6446	4995
Nonenergy carbon dioxide	63	76	72	74	71	84	76	78	74
Methane	612	694	542	563	525	772	573	557	552
Nitrous oxide	367	388	355	360	348	410	375	368	361
Fluorinated gases	160	340	268	279	264	518	443	444	443
Total	7147	8377	7353	7627	7086	9672	6987	7893	6425
Covered energy-related carbon dioxide	5242	6090	5333	5568	5092	7064	4702	5635	4174
Other covered emissions	323	524	390	407	382	719	567	570	565
Total covered emissions	5565	6614	5722	5974	5474	7783	5269	6205	4739
Offsets									
Noncovered emission reductions	0	0	94	71	115	0	99	122	134
Biogenic carbon sequestration	0	0	260	156	424	0	360	604	830
International sources	0	0	984	1112	0	0	505	237	0
Total offsets	0	0	1338	1338	538	0	964	963	964
Compliance summary									
Allowances issued (cap)	NA	NA	4461	4461	4461	NA	3209	3209	3209
Covered emissions, less offsets	5565	6614	4385	4636	4935	7783	4305	5242	3776
Net allowance bank change	NA	NA	76	-176	-475	NA	-1096	-2033	-566
Allowance price (2005 dollars per metric ton CO₂ equivalent)	NA	NA	22.2	14.4	30.6	NA	47.9	31.0	57.6
Offset Price (2005 dollars per metric ton CO₂ equivalent)	NA	NA	20.9	14.4	30.6	NA	19.5	31.0	41.8
Delivered energy prices (2005 dollars per unit indicated)(includes allowance cost)									
Motor gasoline, transport (per gallon)	2.32	1.97	2.14	2.08	2.20	2.21	2.56	2.46	2.62
Jet fuel (per gallon)	1.77	1.40	1.60	1.53	1.67	1.64	2.04	1.93	2.13
Diesel (per gallon)	2.41	2.10	2.30	2.24	2.38	2.34	2.78	2.66	2.87
Natural gas (per thousand cubic feet)									
Residential	12.80	10.83	10.62	10.72	10.58	11.66	11.33	11.60	11.28
Electric power	8.41	5.91	6.73	6.45	7.07	6.42	8.38	7.82	8.85
Coal, electric power sector (per million Btu)	1.53	1.57	3.59	2.88	4.35	1.70	5.85	4.45	6.63
Electricity (cents per kilowatthour)	8.10	7.91	8.72	8.40	8.99	8.05	9.75	9.37	10.03
Primary energy use (quadrillion Btu)									
Liquid fuels	40.7	46.5	45.2	45.6	45.0	52.1	49.3	50.0	48.9
Natural gas	22.7	27.1	26.3	26.5	25.7	26.9	25.0	26.1	24.8
Coal	22.9	27.1	20.4	22.5	18.4	34.1	12.1	20.9	7.4
Nuclear power	8.1	9.2	10.4	9.8	10.4	9.1	19.9	12.2	23.0
Renewable	5.9	8.5	11.9	10.5	13.8	9.0	17.0	15.4	17.8
Other	0.1	0.0	0.1	0.1	0.1	0.0	0.2	0.1	0.2
Total	100.3	118.4	114.3	115.0	113.4	131.1	123.5	124.7	122.1
Purchased electricity	12.5	15.5	14.7	14.9	14.7	17.6	16.2	16.3	16.0

Note: For simplicity the "delivered" prices of coal and natural gas to the electric power sector represent the effective delivered cost, including the cost of emissions allowances.

Sources: National Energy Model System runs S280BASE.D060107a, S280.D060107A, S280STRAW.D060207A, and S280NOINTL.D061507A.

Table 14. Allocation of Revenues for the S280 Core Case

Type of Revenue	Allocation Share	Destination
Permit Revenue not allocated to CCCC	Starting in 2012, 70%, falling to 10% by 2030	Business
CCCC Auction Share	Starting in 2012, 30%, rising to 90% by 2030	See Below
Allocation of CCCC Auction Revenue		
Transition and Adaptation	In 2012, 20%, falling 2% per year	Consumers
Mitigation and Adaptation	10% of CCCC Revenues	Consumers
Fish and Wildlife Adaptation	10% of CCCC Revenues	Government
Technology Deployment	50% of CCCC Revenues	10% to Consumers; 90% to Business
Other CCCC Programs	10% of CCCC revenue, rising to 30% by 2030	Government

Source: See Appendix B.