

House Energy Bills as Reported out of Committees
 ACEEE's assessment of the potential energy and carbon savings
 16-Jul-07

TITLE I Promoting Energy Efficiency - Estimated Energy Savings Impacts with Full Appropriation of Authorized Funding

Annual Energy Savings Estimates		2010						2020						2030						
Subtitle	Section	Electricity (TWh)	Avoided Peak Demand (MW)	Direct Natural Gas (BCF) (6)	Indirect Natural Gas (BCF) (5)	Primary Energy Savings (Quads)	Carbon (MMT) (5.7)	Electricity (TWh)	Avoided Peak Demand (MW)	Direct Natural Gas (BCF)	Indirect Natural Gas (BCF) (5)	Primary Energy Savings (Quads)	Carbon (MMT) (5.7)	Electricity (TWh)	Avoided Peak Demand (MW)	Direct Natural Gas (BCF)	Indirect Natural Gas (BCF) (5)	Primary Energy Savings (Quads)	Carbon (MMT) (5.7)	Carbon Dioxide (MMT)
Subtitle A - Appliance Efficiency (1)	Sec. 101 Energy Standards for home appliances	N/A	N/A	N/A	N/A	N/A	N/A	23	6297.75	N/A	118	0.24	4.6	46.65	12,596	N/A	228	0.47	9.3	34.1
	Sec. 102 Motor Efficiency Standards	N/A	N/A	N/A	N/A	N/A	N/A	4.5	1221	N/A	22.9	0.05	0.9	8	2,160	N/A	39.1	0.08	1.6	5.9
	Sec. 103 Residential Boilers	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7.6	N/A	0.01	0.11	N/A	N/A	16.5	N/A	0.02	0.24	0.9
	Sec. 104 Regional Variations in heating or cooling standards	N/A	N/A	N/A	N/A	N/A	N/A	2.5	670	77	13	0.10	1.6	7.4	2,011	162	36	0.24	3.9	14.2
	Sec. 111 Furnace Fan Standard Process	N/A	N/A	N/A	N/A	N/A	N/A	5.2	1404	N/A	26	0.05	1.0	13	3,510	N/A	64	0.13	2.6	9.5
	Sec. 113 Energy Efficient Standby Power Devices	N/A	N/A	N/A	N/A	N/A	N/A	1.5	407	N/A	8	0.02	0.3	3.0	814	N/A	15	0.03	0.6	2.2
Sec. 114 External Power Supply Efficiency Standards	2.17	585	N/A	11	0.02	0.5	5.8	1561	N/A	29	0.06	1.2	5.8	1,561	N/A	28	0.06	1.2	4.2	
Subtitle B - Lighting Efficiency (1)	Sec. 121 Efficient Light Bulbs	N/A	N/A	N/A	N/A	N/A	N/A	80.96	21,859	N/A	410	0.84	16.1	142.8	38,556	N/A	698	1.44	28.5	104.4
	Sec. 122 Incandescent Reflector Lamps	N/A	N/A	N/A	N/A	N/A	N/A	5.8	1,566	N/A	29	0.06	1.2	5.8	1,566	N/A	28	0.06	1.2	4.2
Subtitle C - Residential Building Efficiency (2)	Sec. 131 Encouraging Stronger Building Codes	-	-	-	0.0	-	-	50	13,529	414	254	0.97	16	153	41,397	1,268	749	2.97	47.0	172
	Sec. 132 Manufactured Housing	N/A	N/A	N/A	N/A	N/A	N/A	2.8	747	6.8	14	0.04	0.7	5.2	1,404	12.6	25	0.06	1.2	4
Subtitle D - Commercial and Federal Building Efficiency(8)	Commercial Building Initiative (budget constrained)	9.7	2,622	23.9	49.20	0.13	2.41	58.3	15,735	143.6	295	0.77	14.49	107	28,847	263	541	1.41	25.16	92
	Commercial Building Initiative with full authorization	48.6	13,112	718.1	245.98	1.24	20.86	291.4	78,674	718.1	1,476	3.85	72.43	534	144,236	1,317	2,706	7.06	125.82	462
Subtitle E - Industrial Energy Efficiency (3)	Sec. 147-149. Efficiency in Federal Buildings	N/A	N/A	N/A	N/A	N/A	N/A	5.6	1,504	20.4	28	0.09	1.4	10.5	2,846	27.2	53	0.14	2.5	9
	Sec. 161 Incentives for Recovery, Utilization and Prevention of Industrial Waste Energy	27	7200	N/A	135	0.29	5.7	6.7	1,800	N/A	33.8	0.07	1.3	6.7	1,800	N/A	33.8	0.07	1.3	4.9
Subtitle F - Energy Efficiency of Public Institutions (4)	Secs. 171-175 Energy Efficiency in Public Institutions	3.6	978.5	22.1	18.4	0.06	1.1	8.0	2,153	47.3	40.4	0.13	2.2	15.3	4,120	89	77	0.24	4.3	15.9
	Public Institutions	2.4	648	14.6	12.2	0.04	0.72	5.3	1,426	31	26.7	0.09	1.4	10	2,728	59	51	0.16	2.9	10.6
Subtitle H - Energy Efficiency Block Grant Program (10)	Public Schools	1.2	330.5	7.5	6.2	0.02	0.4	2.7	727	16.0	13.6	0.04	0.7	5.2	1,391	30	26	0.08	1.5	5.4
	Secs. 191-198 Block Grant Program	0.38	101	2.33	1.9	0.01	0.11	0.25	68	1.56	1.3	0.004	0.1	-	-	N/A	0	-	-	-
Energy and Commerce Subtotal		42.5	11,487.4	48.3	215.5	0.5	9.7	261.2	70,519.7	718.3	1,322.9	3.5	63.3	530.3	143,186.7	1,838.0	2,616.8	7.4	131	479.0
Ways and Means		0.5	658	15.2	12.35	0.04	0.74	3.9	1,066	24.6	20.00	0.07	1.20	2.4	638	14.7	11.38	0.04	0.7	2.5
Tax Credits		1.7	461	5.6	8.64	0.02	0.44	13.1	3,532	43.0	66.26	0.18	3.41	13.1	3,532	43.0	66.26	0.18	3.2	11.9
Ways and Means Subtotal		4.7	1,259.5	37.4	23.6	0.1	1.6	18.2	4916.1	148.6	92.2	0.4	7.4	16.4	4,435.1	97.6	83.2	0.3	4.7	17.4
TOTAL		47.21	12,747	85.70	239	0.59	11.30	279	75,436	867	1,415	3.90	70.72	547	147,622	1,936	2,700	7.7	135	496.4

Cumulative Energy Savings Estimates

		2010						2020						2030						
Subtitle	Section	Electricity (TWh)	Direct Natural Gas (BCF)	Indirect Natural Gas (BCF) (5)	Primary Energy Savings (Quads)	Carbon (MMT) (5.7)	Electricity (TWh)	Direct Natural Gas (BCF)	Indirect Natural Gas (BCF) (5)	Primary Energy Savings (Quads)	Carbon (MMT) (5.7)	Electricity (TWh)	Direct Natural Gas (BCF)	Indirect Natural Gas (BCF) (5)	Primary Energy Savings (Quads)	Carbon (MMT) (5.7)	Carbon Dioxide (MMT)			
Subtitle A - Appliance Efficiency (1)	Sec. 101 Energy Standards for home appliances	N/A	N/A	N/A	N/A	N/A	128	N/A	650	1.34	25.6	490	N/A	2,393	4.93	97.6	358.3			
	Sec. 102 Motor Efficiency Standards	N/A	N/A	N/A	N/A	N/A	32	N/A	160.3	0.33	6.3	96	N/A	469	0.97	19.1	70.2			
	Sec. 103 Residential Boilers	N/A	N/A	N/A	N/A	N/A	N/A	N/A	38	N/A	0.04	0.56	N/A	163	N/A	0.16	2.39	8.8		
	Sec. 104 Regional Variations in heating or cooling standards	N/A	N/A	N/A	N/A	N/A	7.4	384	38	0.46	7.1	60	1,620	291	2.22	35.7	131.0			
	Sec. 111 Furnace Fan Standard Process	N/A	N/A	N/A	N/A	N/A	23	N/A	119	0.24	4.7	118	N/A	578	1.19	23.6	86.5			
	Sec. 113 Energy Efficient Standby Power Devices	N/A	N/A	N/A	N/A	N/A	8	N/A	42	0.09	1.7	32	N/A	155	0.32	6.3	23.1			
Sec. 114 External Power Supply Efficiency Standards	N/A	N/A	N/A	N/A	N/A	55	N/A	278	0.57	10.9	113	N/A	551	1.13	22.5	82.4				
Subtitle B - Lighting Efficiency (9)	Sec. 121 Efficient Light Bulbs	N/A	N/A	N/A	N/A	N/A	601	N/A	3044	6.26	119.8	2,029	N/A	9,914	20.40	404.4	1,484			
	Sec. 122 Incandescent Reflector Lamps	N/A	N/A	N/A	N/A	N/A	49	N/A	249	0.51	9.8	107	N/A	523	1.08	21.3	78.3			
Subtitle C - Residential Building Efficiency (2)	Sec. 131 Encouraging Stronger Building Codes	-	-	0	-	0.0	247	2,043	1,252	4.78	79.3	1,331	11,003	6,502	25.7	408.0	1,497			
	Sec. 132 Manufactured Housing	N/A	N/A	N/A	N/A	N/A	18	45	93	0.24	4.3	60	145	292	0.75	14.0	51			
Subtitle D - Commercial and Federal Building Efficiency	Commercial Building Initiative	14.6	35.9	73.8	0.19	3.6	379	934	1918.7	5.01	94.2	1,229	3,028	6,223	16.24	289.4	1,062			
	Commercial Building Initiative with full authorization	72.8	179.5	368.98	0.96	18.11	1,894	4,667.8	9,593	25.03	470.82	6,143	15,140	31,117	81.19	1,446.87	5,310			
Subtitle E - Industrial Energy Efficiency (3)	Sec. 147-149. Efficiency in Federal Buildings	N/A	N/A	N/A	N/A	N/A	47.5	151	241	0.65	11.7	141	428	713	1.80	34.3	126			
	Sec. 161 Incentives for Recovery, Utilization and Prevention of Industrial Waste Energy	100	N/A	507	1.08	21.2	340	N/A	1722	3.54	67.8	540	N/A	2,735	5.43	107.6	395			
Subtitle F - Energy Efficiency of Public Institutions (4)	Secs. 171-175 Energy Efficiency in Public Institutions	6.2	37.9	31.5	0.10	1.9	64.6	341.3	327.0	1.01	17.9	114.7	615	581	1.77	31.9	117.1			
	Public Institutions	4	25.1	20.8	0.07	1.2	43	226.00	216.6	0.67	11.8	75.9	407.6	384.7	1.17	21.1	77.5			
Subtitle H - Energy Efficiency Block Grant Program (10)	Public Schools	2.1	12.8	10.6	0.04	0.6	21.8	115.3	110.5	0.34	6.0	38.7	208	196	0.60	10.8	39.0			
	Secs. 191-198 Block Grant Program	0.8	4.67	4	0.01	0.23	6.1	38.10	31	0.10	1.8	6.3	38.88	32	0.10	1.8	6.7			
Energy and Commerce Subtotal		121.5	78.5	615.6	1.4	27.0	1,878.4	3,973.3	9,514.4	23.8	437.7	5,975.0	17,041.3	29,556.6	79.3	1,423.3	5,220.0			
Ways and Means		3.7	22.9	18.7	0.06	1.1	50.0	310.8	253	0.83	14.5	80.1	498	391	1.30	23.3	85.4			
Tax Credits		1.1	33.2	5.4	0.05	0.7	17.0	530	86	0.73	11.2	36.5	1,154	178	1.57	24.2	88.9			
Ways and Means Subtotal		8.2	0.0	67.3	41.3	0.2	2.7	139.7	0.0	1100.7	707.6	2.8	50.1	310.7	0.0	2342.0	1518.1	6.3	110.5	405.6
TOTAL		129.69	-	145.81	656.87	1.54	29.70	2,146.39	-	5,074.06	10,871.71	28.01	513.40	6,775	-	19,383	33,470	90.5	1,630	5,983.9

Notes:

- Appliance efficiency assessments were prepared based on an analysis by Andrew Delaski of ASAP. Section 121 lighting efficiency assessments were prepared based on an analysis by Jeff Harris of ASE.
- These estimates are based on an analysis prepared by the Alliance to save energy adapted by ACEEE. Assumes half of states adopt standards.
- These estimates were made by Neal Elliott assuming that 50% of the impact of the provision would come directly from incentivized project with the remainder resulting from the regulatory changes that make projects cost effective.
- These estimates were based on a detailed assessment of the provision by Mark Spurr of IDEA adapted by ACEEE.
- Indirect gas is the gas avoided in electric power generation. Indirect gas and electric carbon emissions reductions are based on national average fuel mix and heat rate as projected in AEO 2005.
- Direct gas represents the natural gas saved directly by the measures.
- Carbon savings estimates do not include direct coal savings, which result from displaced steam generation.
- Commercial building initiative savings depend on level of authorized funding. We assume \$40 million in annual funding as the budget-constrained scenario. It is this scenario that is included in the total.
- Lighting estimates based on likely standards that could be implemented. Lower estimates reflected in totals. Double counting with Subtitle C and D are ignored.
- Savings from the block grant program depend on the level of funding. This analysis assumes funding of \$100 million per year from 2008-2012.
- Primary savings from Plug-in Hybrid tax credits represent oil savings.