



Short-Term Energy Outlook

July 25, 2012

Notice of change to electricity generation and renewables forecast tables

Beginning with the August *Short-Term Energy Outlook (STEO)* to be released on August 7, 2012, the U.S. Energy Information Administration (EIA) will change the format of the *STEO* tables for electricity industry overview (Table 7a), electricity generation (Table 7d), electricity generation fuel consumption (Table 7e), and renewable energy (Table 8). The July *STEO* [monthly forecast Excel file](#) with the new tables is now available and includes the new forecast series ID codes.

Electricity Generation and Fuel Consumption

The new electricity generation and fuel consumption tables will feature expanded information on a regional basis. Specifically, EIA will provide generation and fuel consumption projections for the United States and for each of the four [Census regions](#) (Northeast, South, Midwest, and West). In order to accommodate presentation of data on a regional basis, Tables 7d and 7e will present the *STEO* projections by fuel and by region for all sectors combined, instead of categorizing the projections by fuel and by sector for the United States only. Examples of the new formats for Tables 7d and 7e, displaying projections from the July 2012 *Short-Term Energy Outlook*, are shown on pages 4 and 5 of this notice. The units shown on Table 7d have been rescaled from billion kilowatthours per day to thousand megawatthours per day. Some units on Table 7e have also been rescaled.

Detailed projections for generation and fuel consumption in the electric power sector, on a regional and U.S. basis, will be available through the *STEO* [custom table builder](#) beginning on August 7, 2012. EIA has consolidated its *STEO* projections of generation and fuel consumption for the commercial and industrial sectors into a single “end use” sector.¹ Table 7a will now show a single entry for the end-use sector instead of individual entries for the commercial and industrial sectors. Page 3 of this notice shows the new format of the table. Regional generation and fuel consumption projections for the end-use sector will be available through the *STEO* custom table builder. Although separate projections for the commercial and industrial sectors will no longer be available, detailed historical data for the individual sectors will continue to be

¹ This new end-use sector reflects the power generated by combined heat and power and electricity-only plants larger than 1 MW that are operated by commercial and industrial businesses primarily for onsite use. It does not include distributed generation produced by the residential sector.

published in EIA's [Electric Power Monthly](#). Pages 7 and 8 of this notice provide a cross-reference between the series ID codes published in the old versions of Tables 7d and 7e and the new series ID codes that will be available in the custom table builder.

Renewable Energy Consumption

The revised renewable energy table will present primary energy consumption by energy source and by sector. Table 8 currently presents renewable energy supply and consumption by energy source for all sectors. However, in most cases renewable energy supply is identical to consumption. The one exception is for biofuels (ethanol and biodiesel) since consumption may reflect imports, exports, or stock changes. Supply projections for ethanol and biodiesel (in millions of barrels per day) will be available through the *STEO* [custom table builder](#) under the U.S. Crude Oil and Liquid Fuels - Biofuels category. An example of the new format for Table 8, displaying projections from the July 2012 *STEO*, is shown on page 6 of this notice.

Data and projections for U.S. renewable energy have also been added to the [custom table builder](#). The renewable energy category in the custom table builder includes EIA's projections for renewable energy consumption and renewable generating capacity in the electric power sector. Page 9 of this notice references where information from the previous format of Table 8 can be located, along with the new series ID code for each series listed on the previous versions of the table.

EIA will also be adding a renewable energy table to its "[Changes in Forecast from Last Month](#)" file. This table will present EIA's projections for U.S. renewable energy consumption in all sectors and U.S. renewable energy generating capacity in the electric power sector for both the current forecast and the previous month's *STEO*. The new table will be published in the August *STEO*.

NEW FORMAT Table 7a. U.S. Electricity Industry Overview

U.S. Energy Information Administration | Short-Term Energy Outlook - July 2012

	2011				2012				2013				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2011	2012	2013
Electricity Supply (billion kilowatthours per day)															
Electricity Generation	11.07	10.94	12.65	10.33	10.56	<i>10.89</i>	<i>12.28</i>	<i>10.65</i>	<i>11.02</i>	<i>10.84</i>	<i>12.32</i>	<i>10.70</i>	11.25	<i>11.10</i>	<i>11.22</i>
Electric Power Sector (a)	10.66	10.54	12.22	9.92	10.14	<i>10.50</i>	<i>11.85</i>	<i>10.25</i>	<i>10.62</i>	<i>10.45</i>	<i>11.90</i>	<i>10.31</i>	10.84	<i>10.69</i>	<i>10.82</i>
End-use Sector (b)	0.41	0.41	0.43	0.41	0.42	<i>0.40</i>	<i>0.42</i>	<i>0.40</i>	<i>0.41</i>	<i>0.39</i>	<i>0.42</i>	<i>0.40</i>	0.41	<i>0.41</i>	<i>0.40</i>
Net Imports	0.08	0.10	0.13	0.09	0.10	<i>0.09</i>	<i>0.11</i>	<i>0.08</i>	<i>0.08</i>	<i>0.07</i>	<i>0.10</i>	<i>0.07</i>	0.10	<i>0.09</i>	<i>0.08</i>
Total Supply	11.15	11.04	12.78	10.42	10.66	<i>10.99</i>	<i>12.39</i>	<i>10.73</i>	<i>11.10</i>	<i>10.91</i>	<i>12.43</i>	<i>10.77</i>	11.35	<i>11.19</i>	<i>11.30</i>
Losses and Unaccounted for (c) ...	0.59	0.95	0.86	0.74	0.63	<i>0.92</i>	<i>0.75</i>	<i>0.74</i>	<i>0.58</i>	<i>0.88</i>	<i>0.77</i>	<i>0.73</i>	0.79	<i>0.76</i>	<i>0.74</i>
Electricity Consumption (billion kilowatthours per day)															
Retail Sales	10.21	9.74	11.55	9.33	9.66	<i>9.73</i>	<i>11.27</i>	<i>9.64</i>	<i>10.17</i>	<i>9.69</i>	<i>11.29</i>	<i>9.70</i>	10.21	<i>10.08</i>	<i>10.21</i>
Residential Sector	4.12	3.49	4.69	3.30	3.67	<i>3.39</i>	<i>4.43</i>	<i>3.50</i>	<i>4.03</i>	<i>3.41</i>	<i>4.44</i>	<i>3.54</i>	3.90	<i>3.75</i>	<i>3.85</i>
Commercial Sector	3.45	3.56	4.05	3.39	3.36	<i>3.60</i>	<i>3.99</i>	<i>3.46</i>	<i>3.49</i>	<i>3.58</i>	<i>4.02</i>	<i>3.49</i>	3.61	<i>3.60</i>	<i>3.65</i>
Industrial Sector	2.61	2.67	2.79	2.62	2.61	<i>2.71</i>	<i>2.82</i>	<i>2.66</i>	<i>2.62</i>	<i>2.68</i>	<i>2.81</i>	<i>2.65</i>	2.67	<i>2.70</i>	<i>2.69</i>
Transportation Sector	0.02	0.02	0.02	0.02	0.02	<i>0.02</i>	<i>0.02</i>	<i>0.02</i>	<i>0.02</i>	<i>0.02</i>	<i>0.02</i>	<i>0.02</i>	0.02	<i>0.02</i>	<i>0.02</i>
Direct Use (d)	0.35	0.35	0.37	0.35	0.36	<i>0.34</i>	<i>0.37</i>	<i>0.35</i>	<i>0.35</i>	<i>0.34</i>	<i>0.37</i>	<i>0.34</i>	0.36	<i>0.36</i>	<i>0.35</i>
Total Consumption	10.56	10.09	11.92	9.68	10.03	<i>10.07</i>	<i>11.64</i>	<i>9.99</i>	<i>10.52</i>	<i>10.03</i>	<i>11.65</i>	<i>10.04</i>	10.57	<i>10.43</i>	<i>10.56</i>
Prices															
Power Generation Fuel Costs (dollars per million Btu)															
Coal	2.34	2.42	2.46	2.37	2.41	<i>2.42</i>	<i>2.39</i>	<i>2.35</i>	<i>2.38</i>	<i>2.33</i>	<i>2.32</i>	<i>2.27</i>	2.40	<i>2.39</i>	<i>2.33</i>
Natural Gas	5.02	4.92	4.76	4.13	3.31	<i>3.01</i>	<i>3.23</i>	<i>3.76</i>	<i>3.96</i>	<i>3.65</i>	<i>3.75</i>	<i>4.17</i>	4.71	<i>3.31</i>	<i>3.87</i>
Residual Fuel Oil	15.88	18.29	20.10	20.05	21.27	<i>19.77</i>	<i>17.81</i>	<i>17.29</i>	<i>17.11</i>	<i>16.86</i>	<i>16.74</i>	<i>16.82</i>	18.49	<i>18.90</i>	<i>16.87</i>
Distillate Fuel Oil	20.79	23.37	22.74	22.86	23.80	<i>23.16</i>	<i>21.96</i>	<i>22.47</i>	<i>22.21</i>	<i>22.56</i>	<i>22.61</i>	<i>23.26</i>	22.40	<i>22.81</i>	<i>22.64</i>
End-Use Prices (cents per kilowatthour)															
Residential Sector	11.19	11.95	12.18	11.82	11.57	<i>12.15</i>	<i>12.46</i>	<i>11.86</i>	<i>11.35</i>	<i>12.27</i>	<i>12.55</i>	<i>12.02</i>	11.79	<i>12.03</i>	<i>12.06</i>
Commercial Sector	9.97	10.38	10.76	10.07	9.93	<i>10.21</i>	<i>10.66</i>	<i>10.07</i>	<i>9.96</i>	<i>10.37</i>	<i>10.83</i>	<i>10.20</i>	10.32	<i>10.24</i>	<i>10.36</i>
Industrial Sector	6.63	6.86	7.36	6.68	6.51	<i>6.69</i>	<i>7.13</i>	<i>6.56</i>	<i>6.50</i>	<i>6.76</i>	<i>7.22</i>	<i>6.67</i>	6.89	<i>6.73</i>	<i>6.80</i>

- = no data available

Prices are not adjusted for inflation.

(a) Generation supplied by electricity-only and combined-heat-and-power (CHP) plants operated by electric utilities and independent power producers.

(b) Generation supplied by CHP and electricity-only plants operated by businesses in the commercial and industrial sectors, primarily for onsite use.

(c) Includes transmission and distribution losses, data collection time-frame differences, and estimation error.

(d) Direct Use represents commercial and industrial facility use of onsite net electricity generation; and electrical sales or transfers to adjacent or collocated facilities for which revenue information is not available. See Table 7.6 of the EIA *Monthly Energy Review*.

Notes: The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

Historical data: Latest data available from Energy Information Administration databases supporting the following reports: *Electric Power Monthly*, DOE/EIA-0226; and *Electric Power Annual*, DOE/EIA-0348.

Minor discrepancies with published historical data are due to independent rounding.

Projections: Generated by simulation of the U.S. Energy Information Administration *Short-Term Energy Outlook* model.

NEW FORMAT Table 7e. U.S. and Regional Fuel Consumption for Electricity Generation, All Sectors

U.S. Energy Information Administration | Short-Term Energy Outlook - July 2012

	2011				2012				2013				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2011	2012	2013
Fuel Consumption for Electricity Generation, All Sectors															
United States															
Coal (thousand st/d)	2,622	2,467	2,859	2,277	2,098	1,993	2,425	2,251	2,290	2,015	2,316	2,133	2,556	2,193	2,189
Natural Gas (million cf/d)	17,454	20,657	28,512	19,639	22,549	27,011	32,021	22,056	21,222	23,912	32,378	22,960	21,590	25,916	25,143
Petroleum (thousand b/d)	157	133	146	107	108	105	130	116	141	132	146	124	136	115	136
Residual Fuel Oil	43	42	42	30	29	33	51	33	37	41	46	34	39	37	39
Distillate Fuel Oil	33	31	30	25	22	28	24	24	30	24	27	26	30	25	27
Petroleum Coke (a)	77	55	70	48	54	40	50	53	66	62	68	60	62	49	64
Other Petroleum Liquids (b)	5	4	5	4	4	5	5	5	8	5	6	5	5	5	6
Northeast Census Region															
Coal (thousand st/d)	171	151	174	123	122	91	113	134	169	96	106	122	154	115	123
Natural Gas (million cf/d)	3,203	3,652	4,724	3,605	3,756	4,302	5,277	3,933	3,469	3,881	5,091	3,962	3,800	4,319	4,105
Petroleum (thousand b/d)	20	9	15	5	5	5	11	7	15	7	15	8	12	7	11
South Census Region															
Coal (thousand st/d)	1,114	1,134	1,258	913	837	895	1,029	872	894	881	958	816	1,105	908	887
Natural Gas (million cf/d)	10,019	13,155	17,007	11,095	12,670	16,398	18,890	12,401	12,106	14,926	19,217	12,902	12,833	15,093	14,802
Petroleum (thousand b/d)	75	62	69	45	48	46	58	50	65	68	68	56	63	50	64
Midwest Census Region															
Coal (thousand st/d)	1,014	918	1,073	899	840	766	941	883	908	798	949	870	976	858	882
Natural Gas (million cf/d)	1,082	1,092	2,040	1,064	1,908	2,546	2,704	1,561	1,600	1,666	2,350	1,587	1,321	2,179	1,802
Petroleum (thousand b/d)	16	16	16	13	12	13	16	14	15	15	16	15	15	14	15
West Census Region															
Coal (thousand st/d)	322	263	355	343	300	241	343	363	319	240	302	325	321	312	297
Natural Gas (million cf/d)	3,149	2,757	4,742	3,876	4,214	3,765	5,151	4,161	4,048	3,440	5,719	4,509	3,636	4,325	4,434
Petroleum (thousand b/d)	46	46	47	44	43	42	46	44	45	42	46	46	46	44	45
End-of-period U.S. Fuel Inventories Held by Electric Power Sector															
Coal (million short tons)	166.7	165.7	144.4	175.1	196.4	206.7	194.7	199.8	195.2	205.9	193.9	199.1	175.1	199.8	199.1
Residual Fuel Oil (mmb)	15.4	16.4	15.7	15.5	15.3	16.7	15.9	15.3	14.5	15.7	14.9	14.3	15.5	15.3	14.3
Distillate Fuel Oil (mmb)	16.5	16.8	16.7	17.1	16.9	16.9	17.1	17.2	16.7	16.6	16.7	16.9	17.1	17.2	16.9
Petroleum Coke (mmb)	2.4	2.5	1.9	2.3	2.0	2.5	2.6	2.6	2.9	2.9	3.0	2.9	2.3	2.6	2.9

(a) Petroleum coke consumption converted from short tons to barrels by multiplying by five.

(b) Other petroleum liquids include jet fuel, kerosene, and waste oil.

Notes: Data reflect generation supplied by electricity-only and combined-heat-and-power (CHP) plants operated by electric utilities, independent power producers, and the commercial and industrial sectors. Data include fuel consumed only for generation of electricity. Values do not include consumption by CHP plants for useful thermal output. The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

Physical Units: st/d = short tons per day; b/d = barrels per day; cf/d = cubic feet per day; mmb = million barrels.

Historical data: Latest data available from U.S. Energy Information Administration *Electric Power Monthly* and *Electric Power Annual*.

Projections: Generated by simulation of the U.S. Energy Information Administration *Short-Term Energy Outlook* model.

REVISIONS TO Table 7d. U.S. Electricity Generation by Fuel and Sector

Previous table format and series ID		New source	New series ID
Electric Power Sector			
Coal	CLEPTOT	Custom table builder	CLEP_US
Natural Gas	NGEPTOT	Custom table builder	NGEP_US
Other Gases	OGIPTOT	Custom table builder	OGEP_US
Petroleum	PAEPTOT	Custom table builder	PAEP_US
Residual Fuel Oil	RFEPTOT	Custom table builder	RFEPTOT
Distillate Fuel Oil	DKEPTOT	Custom table builder	DKEPTOT
Petroleum Coke	PCEPTOT	Custom table builder	PCEPTOT
Other Petroleum	OPEPTOT	Custom table builder	OPEPTOT
Nuclear	NUEPTOT	Custom table builder	NUEPTOT
Pumped Storage Hydroelectric	HPEPTOT	Custom table builder	HPEPTOT
Renewables:			
Conventional Hydroelectric	HVEPTOT	Custom table builder	HVEPTOT
Geothermal	GEEPTOT	Custom table builder	GEEPTOT
Solar	SOEPTOT	Custom table builder	SOEPTOT
Wind	WYEPTOT	Custom table builder	WYEPTOT
Wood and Wood Waste	WWEPTOT	Custom table builder	WWEPTOT
Other Renewables	OWEPTOT	Custom table builder	OWEPTOT
Other Fuels	OTEPTOT	Custom table builder	OTEPTOT
Subtotal Electric Power Sector	EPEOPUS	Custom table builder	EPEOPUS
Commercial Sector			
Coal	CLCEPUS	No longer available - replaced by projections in custom table builder for end-use sector (combination of commercial & industrial sectors)	CLCH_US
Natural Gas	NGCEPUS		NGCH_US
Petroleum	PACEPUS		PACH_US
Renewables	OWCEPUS		OWCH_US
Other Fuels	OTCEPUS		OTCH_US
Subtotal Commercial Sector	CMEOPUS		CHEO_US
Industrial Sector			
Coal	CLCOPUS	No longer available - replaced by projections in custom table builder for end-use sector (combination of commercial & industrial sectors)	CLCH_US
Natural Gas	NGCOPUS		NGCH_US
Other Gases	OGCOPUS		OGCH_US
Petroleum	PACOPUS		PACH_US
Renewables:			
Conventional Hydroelectric	HVCOPUS	No longer available - replaced by projections in custom table builder for end-use sector (combination of commercial & industrial sectors)	HVCH_US
Wood and Wood Waste	WWCOPUS		WWCH_US
Other Renewables	OWCOPUS		OWCH_US
Other Fuels	OTCOPUS		OTCH_US
Subtotal Industrial Sector	INEOPUS		CHEO_US
Total All Sectors	TSEOPUS	Table 7d	TSEO_US

REVISIONS TO Table 7e. U.S. Fuel Consumption for Electricity Generation by Sector

Previous table format and series ID		New source	New series ID
Electric Power Sector (a)			
Coal (mmst/d)	CLEPCON_EL	Custom table builder	CLEPCON_EL_US
Natural Gas (bcf/d)	NGEPCON_EL	Custom table builder	NGEPCON_EL_US
Petroleum (mmb/d) (b)	PAEPCON_EL	Custom table builder	PAEPCON_EL_US
Residual Fuel Oil (mmb/d)	RFEPCON_EL	Custom table builder	RFEPCON_EL_US
Distillate Fuel Oil (mmb/d)	DKEPCON_EL	Custom table builder	DKEPCON_EL_US
Petroleum Coke (mmst/d)	PCEPCON_EL	Custom table builder	PCEPCON_EL_US
Other Petroleum (mmb/d)	OPEPCON_EL	Custom table builder	OPEPCON_EL_US
Commercial Sector (c)			
Coal (mmst/d)	CLCECON_EL	No longer available - replaced by projections in custom table builder for end-use sector (combination of commercial & industrial sectors)	CLCHCON_EL_US
Natural Gas (bcf/d)	NGCECON_EL		NGCHCON_EL_US
Petroleum (mmb/d) (b)	PACECON_EL		PACHCON_EL_US
Industrial Sector (c)			
Coal (mmst/d)	CLCGCON_EL	No longer available - replaced by projections in custom table builder for end-use sector (combination of commercial & industrial sectors)	CLCHCON_EL_US
Natural Gas (bcf/d)	NGCGCON_EL		NGCHCON_EL_US
Petroleum (mmb/d) (b)	PACGCON_EL		PACHCON_EL_US
Total All Sectors			
Coal (mmst/d)	CLTOCON_EL	Table 7e	CLTOCON_EL_US
Natural Gas (bcf/d)	NGTOCON_EL	Table 7e	NGTOCON_EL_US
Petroleum (mmb/d) (b)	PATOCN_EL	Table 7e	PATOCN_EL_US
End-of-period Fuel Inventories Held by Electric Power Sector			
Coal (mmst)	CLPS_EP	Table 7e	Same
Residual Fuel Oil (mmb)	RFPS_EP	Table 7e	Same
Distillate Fuel Oil (mmb)	DKPS_EP	Table 7e	Same
Petroleum Coke (mmb)	PCPS_EP	Table 7e	Same

REVISIONS TO Table 8. U.S. Renewable Energy Supply and Consumption

Previous table format and series ID		New source	New series ID
Supply			
Hydroelectric Power (a)	HVTCBUS	} Table 8 - U.S. supply is equal to aggregate U.S. consumption across all sectors	Same
Wood Biomass (b)	WWTCBUS		Same
Waste Biomass (c)	OWTCBUS		Same
Wind	WYTCBUS		Same
Geothermal	GETCBUS		Same
Solar	SOTCBUS		Same
Ethanol (d)	EOPRBUS	} No longer available. Custom table builder has projections for U.S. supply in physical units	EOPRPUS
Biodiesel (d)	B DPRBUS		B DPRBUS
Total	REPRBUS	No longer available	N/A
Consumption			
Electric Power Sector			
Hydroelectric Power (a)	HVECBUS	Table 8	Same
Wood Biomass (b)	WWEPCONB	Table 8	Same
Waste Biomass (c)	OWEPCONB	Table 8	Same
Wind	WYECBUS	Table 8	Same
Geothermal	GE ECBUS	Table 8	Same
Solar	SO ECBUS	Table 8	Same
Subtotal	REECBUS	Table 8	Same
Industrial Sector			
Hydroelectric Power (a)	HVICBUS	Table 8	Same
Wood Biomass (b)	WWICBUS	Table 8	Same
Waste Biomass (c)	OWICBUS	Table 8	Same
Geothermal	GEICBUS	Table 8	Same
Subtotal	REICBUS	Table 8	Same
Commercial Sector			
Geothermal	GECCBUS	Table 8	Same
Wood Biomass (b)	WWCCBUS	Table 8	Same
Waste Biomass (c)	OWCCBUS	Table 8	Same
Subtotal	RECCBUS	Table 8	Same
Residential Sector			
Wood Biomass (b)	WWRCBUS	Table 8	Same
Geothermal	GERCBUS	Table 8	Same
Solar	SORCBUS	Table 8	Same
Subtotal	RERCBUS	Table 8	Same
Transportation Sector			
Ethanol (d)	EOTCBUS	Table 8	Same
Biodiesel (d)	BDTCBUS	Table 8	Same
Total Consumption	RETCBUS	Table 8	Same