

# SEDS Data File and Table Variables

## Price and Expenditure Estimates

The State Energy Data System (SEDS) publishes a complete set of annual state-level energy estimates in PDF and HTML tables on the [SEDS complete](#) website. SEDS also provides the data in various CSV and zip files, including some variables that are not published in the tables. See the [Price and Expenditure Technical Notes](#) for the sources and methods used to estimate SEDS energy prices and expenditures.

This document lists the SEDS variables (called MSNs) used in each published table and in the data files. See [Section 1](#) of the SEDS Technical Notes for explanation of the five-character MSN code descriptions and the [Codes and Descriptions](#) file for definitions of the published MSN variables.

There are three CSV files that contain estimates for all states and years in cross-tabulation format. [Prices](#) contains the price estimates for all states and [Expenditures](#) contains the expenditure estimates for all states. The third file, [Adjusted Consumption for Expenditure Calculations](#) contains adjusted consumption estimates used in calculating expenditures (see Appendix C below). Zip files are also available for the large data files. In addition, there is a CSV file for each state, named with the two-letter U.S. Postal Code, as well as a file for the United States.

The first record in each file serves as a column heading and contains information about data in each of the following records. Each data file record that follows begins with the data\_status (5 characters, identifying the year of the data cycle plus an “F” that denotes “final”), followed by the state code (2 characters), the MSN code identifier, and the values for the years 1970 through 2020.

Price estimates contained in these CSV files are rounded to two decimal places, and expenditure estimates are rounded to one decimal place. Adjusted consumption estimates are rounded to whole numbers in billion Btu, and conversion factors, percentages, and ratios are usually rounded to a few decimal places. The precision does not necessarily reflect the statistical accuracy of the numbers. Electric power sector fuel expenditures, shown as negative numbers in tables on expenditures by source, are positive numbers in the data files.

The data files contain additional data series not shown in the report tables that have frequently been requested by customers. For example, in addition to reporting prices and expenditures for “Other Petroleum,” data prices for the components, as shown in Appendix B of this document, are also available.

Expenditure estimates are calculated as the product of the SEDS price and consumption estimates. Consumption estimates used in the price and expenditure tables are not always identical to those contained in the consumption data tables. [Section 7: Consumption Adjustments for Calculating Expenditures](#) in the Price and Expenditure Technical Notes explains the adjustments.

In addition to the cross-tabulation CSV files, there is a large consolidated data file containing over 1.8 million records of the complete set of SEDS production, consumption, price, and expenditure estimates. Users can download the [zip file](#) or the [CSV file](#) for further processing.

The following appendices show the specific data series shown in the SEDS tables, the individual petroleum products included in “Other Petroleum,” and the adjusted consumption variables used in expenditure calculations.

List of Appendices	
<a href="#">A</a>	List of MSN Codes Shown in Tables
<a href="#">B</a>	Other Petroleum
<a href="#">C</a>	Consumption Adjustments for Calculating Expenditures

**Contacts:**

The State Energy Data System tables were prepared by the Integrated Statistics Team of the Office of Energy Demand & Integrated Statistics, U.S. Energy Information Administration. Questions concerning the contents of the State Energy Data System or these files may be referred to Mickey Francis, 202-586-0525, or [eiainfoUSstates@eia.gov](mailto:eiainfoUSstates@eia.gov).

**Appendix A**

The following section lists the SEDS variables in the order they appear in the price and expenditure tables. Each table column contains one variable.

**Summary Tables:**

Table E1 Primary Energy, Electricity, and Total Energy Price Estimates							
CLTCD	NGTCD	DFTCD	HLTCD	JFTCD	MGTCD	RFTCD	PITCD
PATCD	NUETD	WWTCD	PETCD	PEEID	ESTCD	TETCD	

Table E2 Total End-Use Energy Price Estimates						
CLTXD	NGTXD	DFTXD	HLTXD	JFTXD	MGTXD	RFTXD
P1TXD	PATXD	WWTXD	PETXD	ESTXD	TETXD	

Table E3 Residential Sector Energy Price Estimates				
CLRCD	NGRCD	DFRCD	HLRCD	KSRC
PARCD	WDRCD	PERCD	ESRCD	TERCD

Table E4 Commercial Sector Energy Price Estimates					
CLCCD	NGCCD	DFCCD	HLCCD	KSCCD	MGCCD
RFCCD	PACCD	WWCCD	PECCD	ESCCD	TECCD

<b>Table E5 Industrial Sector Energy Price Estimates</b>						
CLKCD	CLOCD	CLICD	NGICD	DFICD	HLICD	MGICD
RFICD	PIICD	PAICD	WWICD	PEICD	ESICD	TEICD

<b>Table E6 Transportation Sector Energy Price Estimates</b>						
CLACD	NGACD	AVACD	DFACD	HLACD	JFACD	LUACD
MGACD	RFACD	PAACD	PEACD	ESACD	TEACD	

<b>Table E7 Electric Power Sector Energy Price Estimates</b>				
CLEID	NGEID	DKEID	PCEID	RFEID
PAEID	NUEGD	WWEID	ELIMD	PEEID

<b>Table E8 Primary Energy, Electricity, and Total Energy Expenditure Estimates</b>							
CLTCV	NGTCV	DFTCV	HLTCV	JFTCV	MGTCV	RFTCV	PITCV
PATCV	NUETV	WWTCV	PETCV	PEEIV	ESTCV	TETCV	

<b>Table E9 Total End-Use Energy Expenditure Estimates</b>						
CLTXV	NGTXV	DFTXV	HLTXV	JFTXV	MGTXV	RFTXV
P1TXV	PATXV	WWTXV	PETXV	ESTXV	TETXV	

<b>Table E10 Residential Sector Energy Expenditure Estimates</b>				
CLRCV	NGRCV	DFRCV	HLRCV	KSRCV
PARCV	WDRCV	PERCV	ESRCV	TERCV

<b>Table E11 Commercial Sector Energy Expenditure Estimates</b>					
CLCCV	NGCCV	DFCCV	HLCCV	KSCCV	MGCCV
RFCCV	PACCV	WWCCV	PECCV	ESCCV	TECCV

<b>Table E12 Industrial Sector Energy Expenditure Estimates</b>						
CLKCV	CLOCV	CLICV	NGICV	DFICV	HLICV	MGICV
RFICV	PIICV	PAICV	WWICV	PEICV	ESICV	TEICV

<b>Table E13 Transportation Sector Energy Expenditure Estimates</b>						
CLACV	NGACV	AVACV	DFACV	HLACV	JFACV	LUACV
MGACV	RFACV	PAACV	PEACV	ESACV	TEACV	

<b>Table E14 Electric Power Sector Energy Expenditure Estimates</b>				
CLEIV	NGEIV	DKEIV	PCEIV	RFEIV
PAEIV	NUEGV	WWEIV	ELIMV	PEEIV

**Ranking Tables:**

<b>Table E15 Total Energy Price and Expenditure Estimates (Total, per Capita, and per GDP)</b>			
TETCD	TETCV	TETPV	TEGDS

<b>Table E16 Total Energy Price Estimates by End-Use Sector</b>				
TERCD	TECCD	TEICD	TEACD	TETCD

<b>Table E17 Total Energy Expenditure Estimates by End-Use Sector</b>				
TERCV	TECCV	TEICV	TEACV	TETCV

<b>Table E18 Petroleum and Natural Gas Price and Expenditure Estimates</b>			
PATCD	PATCV	NGTCD	NGTCV

<b>Table E19 Coal and Electricity Retail Sales Price and Expenditure Estimates</b>			
CLTCD	CLTCV	ESTCD	ESTCV

<b>Table E20 Motor Gasoline Price and Expenditure Estimates</b>		
MGTCV	MGTCV	MGTPV

<b>Table E21 Population, GDP, and Degree Days</b>				
TPOPP	GDPRX	GDPRV	ZWHDP	ZWCDP

**Time Series Tables:**

<b>Table ET1 Primary Energy, Electricity, and Total Energy Price and Expenditure Estimates</b>						
CLKCD/V	CLXCD/V	CLTCD/V	CCEXD/V*	CCIMD/V*	NGTCD/V	DFTCD/V
HLTCD/V	JFTCD/V	MGTCDD/V	RFTCD/V	P1TCD/V	PATCD/V	NUETD/V
WWTCD/V	PETCD/V	PEEID/V	ESTCD/V	TETCD/V		

<b>Table ET2 Total End-Use Energy Price and Expenditure Estimates</b>							
CLTXD/V	CCEXD/V*	CCIMD/V*	NGTXD/V	DFTXD/V	HLTXD/V	JFTXD/V	MGTXD/V
RFTXD/V	P1TXD/V	PATXD/V	WWTXD/V	PETXD/V	ESTXD/V	TETXD/V	

<b>Table ET3 Residential Sector Energy Price and Expenditure Estimates</b>				
CLRCD/V	NGRCD/V	DFRCD/V	HLRCD/V	KSRCD/V
PARCD/V	WDRCD/V	PERCD/V	ESRCD/V	TERCD/V

<b>Table ET4 Commercial Sector Energy Price and Expenditure Estimates</b>					
CLCCD/V	NGCCD/V	DFCCD/V	HLCCD/V	KSCCD/V	MGCCD/V
RFCCD/V	PACCD/V	WWCCD/V	PECCD/V	ESCCD/V	TECCD/V

<b>Table ET5 Industrial Sector Energy Price and Expenditure Estimates</b>							
CLKCD/V	CLOCD/V	CLICD/V	CCEXD/V*	CCIMD/V*	NGICD/V	DFICD/V	HLICD/V
MGICD/V	RFICD/V	P1ICD/V	PAICD/V	WWICD/V	PEICD/V	ESICD/V	TEICD/V

<b>Table ET6 Transportation Sector Energy Price and Expenditure Estimates</b>						
CLACD/V	NGACD/V	AVACD/V	DFACD/V	HLACD/V	JFACD/V	LUACD/V
MGACD/V	RFACD/V	PAACD/V	PEACD/V	ESACD/V	TEACD/V	

<b>Table ET7 Electric Power Sector Price and Expenditure Estimates</b>				
CLEID/V	NGEID/V	DKEID/V	PCEID/V	RFEID/V
PAEID/V	NUEGD/V	WWEID/V	ELIMD/V	PEEID/V

\* Appear only on U.S. tables.

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## Appendix B

### Other Petroleum

In the Total Energy, Total End-Use, and Industrial Sector tables, “Other Petroleum” includes asphalt and road oil, aviation gasoline, kerosene, lubricants, petroleum coke, and “other petroleum products” as described in Section 4 of the Price and Expenditure Technical Notes. Data for the detailed products are available in the CSV file.

<b>Components of P1TCD/V</b>
ARTCD/V
AVTCD/V
KSTCD/V
LUTCD/V
PCTCD/V
OPTCD/V, which includes:
FNICD/V
FOICD/V
FSICD/V
SNICD/V
WXICD/V
MSICD/V

<b>Components of P1TXD/V</b>
ARTXD/V
AVTXD/V
KSTXD/V
LUTXD/V
PCTXD/V
OPTXD/V, which includes:
FNICD/V
FOICD/V
FSICD/V
SNICD/V
WXICD/V
MSICD/V

<b>Components of P1ICD/V</b>
ARICD/V
KSICD/V
LUICD/V
PCICD/V
OPICD/V, which includes:
FNICD/V
FOICD/V
FSICD/V
SNICD/V
WXICD/V
MSICD/V

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## Appendix C

### Consumption Adjustments for Calculating Expenditures

To calculate energy expenditures, SEDS consumption is adjusted to remove quantities of process fuel, intermediate products, renewable energy consumption that has no direct fuel cost, and other adjustments. All such series are included in these files are in a CSV file named [Adjusted Consumption for Expenditure Calculations](#). Not all associated SEDS consumption variables are displayed here, but they are available on the SEDS files. The most recent year's estimates by state are shown in Table TN7.1 and the U.S. estimates for all years are shown in Table TN7.2 in Section 7 of the SEDS [Price and Expenditure Technical Notes](#).

Consumption Variables	
Code	Description
BDLCB	Energy losses and co-products from the production of biodiesel
BFLCB	Energy losses and co-products from the production of biofuels
CLOSB	Industrial coal consumption, excluding coke plants and processing fuel
CLRFB	Coal used at refineries
COICB	Industrial crude oil consumption in petroleum industry operations
DFISB	Industrial distillate fuel oil consumption, costed
DFRFB	Distillate fuel oil used at refineries
EMLCB	Energy losses and co-products from the production of fuel ethanol
ESISB	Industrial electricity consumption, costed
ESRFB	Electricity used at refineries
GECCB	Commercial geothermal energy consumption
GEICB	Industrial geothermal energy consumption
GERCB	Residential geothermal energy consumption
HLISB	Industrial hydrocarbon gas liquids consumption, costed
HLRFB	Hydrocarbon gas liquids used at refineries
HYCCB	Commercial hydropower consumption
HYICB	Industrial hydropower consumption
LOTGB	Electrical system energy losses
NGISB	Industrial natural gas consumption, costed
NGLPB	Natural gas lease and plant fuel consumption



NGPZB	Natural gas for pipeline and distribution use
NGRFB	Natural gas used at refineries
OPISB	Other petroleum products consumed by the industrial sector excluding refinery fuel and intermediate products
OPSCB	Other petroleum products total adjusted consumption for refinery fuel and intermediate products
P5RFB	Other petroleum used at refineries
PCISB	Industrial petroleum coke consumption, costed
PCRFB	Petroleum coke used at refineries
PQISB	Propane consumed by the industrial sector excluding refinery fuel
PQRFB	Propane used at refineries
RFISB	Industrial residual fuel oil consumption, costed
RFRFB	Residual fuel oil used at refineries
SFCCB	Commercial supplemental gaseous fuel consumption
SFINB	Industrial supplemental gaseous fuel consumption
SFRCB	Residential supplemental gaseous fuel consumption
SOCCB	Solar energy consumed for electricity generation by the commercial sector
SOICB	Solar energy consumed for electricity generation by the industrial sector
SORCB	Solar energy consumed by the residential sector (including small amount of solar thermal energy consumed as heat by the commercial and industrial sectors)
TEPFB	Total energy used as process fuel
TERFB	Total energy used at refineries
TETCB	Total energy consumption
TNSCB	Total adjusted consumption
WDRSB	Residential wood consumption, costed
WDRXB	Residential wood at no cost
WWCSB	Commercial wood and biomass waste consumption, costed
WWCXB	Commercial wood and biomass waste consumption at no cost
WWISB	Industrial wood and biomass waste consumption, costed
WWIXB	Industrial wood and biomass waste at no cost
WYCCB	Commercial wind energy consumption
WYICB	Industrial wind energy consumption