

State Energy Data System CSV File Documentation

Consumption Estimates

The State Energy Data System (SEDS) comma-separated value (CSV) files contain consumption estimates shown in the tables located on the [SEDS website](#).

There are three files that contain estimates for all states and years in cross-tabulation format. [Consumption in Physical Units](#) contains the consumption estimates in physical units for all states, [Consumption in Btu](#) contains the consumption estimates in billion British thermal units (Btu) for all states, and [Thermal conversion factors](#) contains all of the varying conversion factors used to convert data between physical units and Btu for all states and the United States. 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 listed in Appendix A, as well as a file for the United States.

The first record in each file serves as a column heading and contains information about the 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 data identifier (5-character mnemonic code, or MSN), and the 59 values for the years 1960 through 2018, with all items separated by commas. All items are enclosed in quotes, which means some systems will read numeric values as alphanumeric unless they are converted. Each file contains SEDS consumption in physical units (e.g., thousand short tons, million cubic feet, etc.) and/or in billion Btu.

Consumption estimates contained in these CSV files are rounded to whole numbers. That is, physical unit consumption is rounded to thousand short tons, million cubic feet, etc., and Btu consumption is rounded to billion Btu. Conversion factors and ratios are rounded to three decimal places. The precision does not necessarily reflect the statistical accuracy of the numbers. Users should see the sources cited in the SEDS [Consumption Technical Notes](#) for a discussion of estimation methodologies for specific data series.

The data files contain additional data series not shown in the report tables that have frequently been requested by customers. For example, the additional data include the individual “Other Petroleum Products” used in the industrial sector, as shown in Appendix D of this documentation.

In addition to the cross-tabulation CSV files, there is a consolidated data file containing approximately 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 explain the data identification codes used in the files. Appendix A lists the state codes. Appendix B gives brief definitions of the components of the variable names. Appendix C lists the specific data series shown in the SEDS tables. Appendix D shows individual petroleum products covered under “Other Petroleum” in the consumption tables.

List of Appendices	
A	State Codes
B	Data Identification Codes (MSN)
C	List of Data Codes shown in Tables
D	Other Petroleum

The consumption estimates contained in SEDS and the methodologies used to derive them are described in the [Consumption Technical Notes](#).

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 Yvonne Taylor, 202-586-1455, or yvonne.taylor@eia.gov.

Appendix A

U.S. Postal State Codes							
Code	Name	Code	Name	Code	Name	Code	Name
AK	Alaska	ID	Idaho	MT	Montana	RI	Rhode Island
AL	Alabama	IL	Illinois	NC	North Carolina	SC	South Carolina
AR	Arkansas	IN	Indiana	ND	North Dakota	SD	South Dakota
AZ	Arizona	KS	Kansas	NE	Nebraska	TN	Tennessee
CA	California	KY	Kentucky	NH	New Hampshire	TX	Texas
CO	Colorado	LA	Louisiana	NJ	New Jersey	UT	Utah
CT	Connecticut	MA	Massachusetts	NM	New Mexico	VA	Virginia
DC	District of Columbia	MD	Maryland	NV	Nevada	VT	Vermont
DE	Delaware	ME	Maine	NY	New York	WA	Washington
FL	Florida	MI	Michigan	OH	Ohio	WI	Wisconsin
GA	Georgia	MN	Minnesota	OK	Oklahoma	WV	West Virginia
HI	Hawaii	MO	Missouri	OR	Oregon	WY	Wyoming
IA	Iowa	MS	Mississippi	PA	Pennsylvania	US	United States

Appendix B

The 5-letter data identifier (MSN) is a SEDS variable name defined as follows:

Data Identification Codes (MSN)	
Characters	Identity
1 and 2	represent an energy source
3 and 4	represent an energy consumption sector or an energy activity
5	represents a type of data

Energy Source (Characters 1 and 2)	
Code	Name
AB	aviation gasoline blending components
AR	asphalt and road oil
AV	aviation gasoline
BD	biodiesel
BF	biofuels
BM	biomass
BQ	normal butane
BY	butylene
CC	coal coke
CL	coal
CO	crude oil, including lease condensate
DF	distillate fuel oil
DM	distillate fuel oil excluding biodiesel
EL	electricity (imports, exports, and interstate flow)
EM	fuel ethanol, excluding denaturant
EN	fuel ethanol, including denaturant
EQ	ethane
ES	electricity sales
EY	ethylene
FF	fossil fuels

FN	petrochemical feedstocks, naphtha less than 401 degrees F
FO	petrochemical feedstocks, other oils equal to or greater than 401 degrees F
FS	petrochemical feedstocks, still gas
GE	geothermal energy
HL	hydrocarbon gas liquids
HY	hydroelectric power
IQ	isobutane
IY	isobutylene
JF	jet fuel, total
KS	kerosene
LO	electrical system energy losses
LU	lubricants
MB	motor gasoline blending components
MG	motor gasoline
MM	motor gasoline excluding fuel ethanol
MS	miscellaneous petroleum products
NA	natural gasoline (including isopentane)
NG	natural gas
NN	natural gas excluding supplemental gaseous fuels
NU	nuclear electric power
OH	other hydrocarbon gas liquids (other than propane)
OP	other petroleum products, subtotal
P1	asphalt and road oil, aviation gasoline, kerosene, lubricants, petroleum coke, and "other petroleum products"
PA	all petroleum products
PC	petroleum coke
PL	plant condensate
PM	all petroleum products, excluding fuel ethanol blended into motor gasoline
PP	natural gasoline (pentanes plus)
PQ	propane
PY	propylene
RE	renewable energy

RF	residual fuel oil
SF	supplemental gaseous fuels
SG	still gas
SN	special naphthas
SO	solar thermal and photovoltaic energy
TE	total energy
TN	total net energy
UO	unfinished oils
US	unfractionated streams
WD	wood
WS	biomass waste
WW	wood and biomass waste
WX	waxes
WY	wind

The following codes represent the four end-use consuming sectors, electric power, and total energy consumption:

Energy Consumption Sectors (Characters 3 and 4)	
Code	Name
AC	transportation sector consumption
CC	commercial sector consumption
EI	electric power sector consumption
HC	residential and commercial sectors combined consumption
IC	industrial sector consumption
RC	residential sector consumption
TC	total consumption of all sectors
TX	total consumption of all end-use sectors

The following codes represent energy activities, other energy-consuming sectors, and derived concepts:

Energy Activities (Characters 3 and 4)	
Code	Name
AP	transportation sector consumption per capita
CP	commercial sector consumption per capita

EG	electricity net generation, electric power sector
ET	electricity net generation, total
EX	exports
IM	imports
IP	industrial sector consumption per capita
IS	interstate flow (of electricity)
KC	coke plants consumption
LC	energy losses and co-products (from the production of biofuels)
LP	lease and plant fuel
NI	net imports
OC	industrial consumption, excluding coke plants (for coal only)
PZ	pipeline and distribution use
RP	residential sector consumption per capita
TP	total consumption per capita
VH	vehicle fuel

Types (Character 5)	
Code	Name
B	data in billion British thermal units (Btu)
P	data in physical units: petroleum and biofuels - thousand barrels natural gas - million cubic feet coal - thousand short tons electricity - million kilowatthours population - thousand people
K	conversion factor: petroleum and biofuels - million Btu per barrel natural gas - thousand Btu per cubic foot coal - million Btu per short ton electricity (fossil-fueled and nuclear plant heat rates) - thousand Btu per kilowatthours (U.S. only)

Other SEDS variables that do not follow this convention include:

Code	Name
TPOPP	resident population
GDPRX	real gross domestic product
TETGR	total energy consumed per dollar of real gross domestic product

Appendix C

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

Summary Tables:

Table C1 Energy Consumption Overview: Estimates by Energy Source and End-Use Sector						
TETCB	CLTCB	NNTCB	PMTCB	FFTCB	NUETB	RETCB
ELISB	ELNIB	TERCB	TECCB	TEICB	TEACB	

Table C2 Energy Consumption Estimates for Selected Energy Sources in Physical Units						
CLTCP	NGTCP	DFTCP	HLTCP	JFTCP	MGTCP	RFTCP
PITCP	PATCP	NUETP	HYTCP	WYTCP	ENTCP	BDTCP

Table C3 Primary Energy Consumption Estimates						
CLTCB	NNTCB	DMTCB	HLTCB	JFTCB	MMTCB	RFTCB
PITCB	PMTCB	FFTCB	NGTCB	DFTCB	MGTCB	

Table C3 Primary Energy Consumption Estimates (Continued)						
NUETB	HYTCB	WWTCB	EMTCB	BDTCB	BFLCB	BMTCB
GETCB	SOTCB	WYTCB	RETCB	ELISB	ELNIB	TETCB

Table C4 Total End-Use Energy Consumption Estimates								
CLTXB	NGTXB	DFTXB	HLTXB	JFTXB	MGTXB	RFTXB	P1TXB	PATXB
HYTXB	WWTXB	BFLCB	GETXB	SOTXB	ESTXB	TNTXB	LOTXB	TETXB

Table C5 Residential Sector Energy Consumption Estimates						
CLRCB	NGRCB	DFRCB	HLRCB	KSRCB	PARCB	WDRCB
GERCB	SORCB	ESRCB	TNRCB	LORCB	TERCB	

Table C6 Commercial Sector Energy Consumption Estimates							
CLCCB	NGCCB	DFCCB	HLCCB	KSCCB	MGCCB	RFCCB	PACCB
HYCCB	WWCCB	GECCB	SOCCB	ESCCB	TNCCB	LOCCB	TECCB

Table C7 Industrial Sector Energy Consumption Estimates								
CLICB	NGICB	DFICB	HLICB	MGICB	RFICB	PIICB	PAICB	HYICB
WWICB	BFLCB	GEICB	SOICB	ESICB	TNICB	LOICB	TEICB	

Table C8 Transportation Sector Energy Consumption Estimates						
CLACB	NGACB	AVACB	DFACB	HLACB	JFACB	LUACB
MGACB	RFACB	PAACB	ESACB	TNACB	LOACB	TEACB

Table C9 Electric Power Sector Consumption Estimates						
CLEIB	NGEIB	DKEIB	PCEIB	RFEIB	PAEIB	NUEGB
HYEGB	WWEIB	GEEGB	SOEGB	WYEGB	ELNIB	TEEIB

Ranking Tables:

Table C10 Total Energy Consumption Estimates, Real Gross Domestic Product (GDP), Energy Consumption Estimates per Real Dollar of GDP		
TETCB	GDPRX	TETGR

Table C11 Energy Consumption Estimates by End-Use Sector				
TERCB	TECCB	TEICB	TEACB	TETCB

Table C12 Primary Energy Consumption Estimates by Source				
CLTCB	NGTCB	PATCB	NUTCB	RETCB

Table C13 Renewable Energy Consumption Estimates by Source				
BMTCB	GETCB	HYTCB	SOTCB	WYTCB

Table C14 Energy Consumption Estimates per Capita by End-Use Sector

TERPB	TECPB	TEIPB	TEAPB	TETPB
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Table C15 Petroleum Consumption, Total and per Capita

PATCP	PATPP	PATCB	PATPB
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Table C16 Natural Gas Consumption, Total and per Capita

NGTCP	NGTTP	NGTCB	NGTPB
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Table C17 Electricity Retail Sales, Total and Residential, Total and per Capita

ESTCP	ESTPP	ESRCP	ESRPP
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Time Series Tables:**Table CT1 Energy Consumption Estimates for Selected Energy Sources in Physical Units**

CLTCP	CCNIP*	NGTCP	DFTCP	HLTCP	JFTCP	MGTCP
RFTCP	P1TCP	PATCP	NUETP	HYTCP	ENTCP	BDTCP

Table CT2 Primary Energy Consumption Estimates

CLTCB	CCNIB*	NNTCB	DMTCB	HLTCB	JFTCB	MMTCB
RFTCB	P1TCB	PMTCB	FFTCB	NGTCB	DFTCB	MGTCB

Table CT2 Primary Energy Consumption Estimates (Continued)

NUETB	HYTCB	WWTCB	EMTCB	BDTCB	BFLCB	BMTCB
GETCB	SOTCB	WYTCB	RETCB	ELISB**	ELNIB	TETCB

Table CT3 Total End-Use Energy Consumption Estimates

CLTXP/B	CCNIP/B*	NGTXP/B	DFTXP/B	HLTXP/B	JFTXP/B	MGTXP/B
RFTXP/B	P1TXP/B	PATXP/B	HYTXP/B	WWTXB	BFLCB	GETXB
SOTXB	ESTXP/B	TNTXB	LOTXB	TETXB		

Table CT4 Residential Sector Energy Consumption Estimates

CLRCP/B	NGRCP/B	DFRCP/B	HLRCP/B	KSRCP/B	PARCP/B	WDRCP/B
GERCB	SORCB	ESRCP/B	TNRCB	LORCB	TERCB	

Table CT5 Commercial Sector Energy Consumption Estimates							
CLCCP/B	NGCCP/B	DFCCP/B	HLCCP/B	KSCCP/B	MGCCP/B	RFCCP/B	PACCP/B
HYCCP/B	WWCCB	GECCB	SOCCP/B	ESCCP/B	TNCCB	LOCCB	TECCB

Table CT6 Industrial Sector Energy Consumption Estimates								
CLICP/B	CCNIP/B*	NGICP/B	DFICP/B	HLICP/B	MGICP/B	RFICP/B	P1ICP/B	PAICP/B
HYICP/B	WWICB	BFLCB	GEICB	SOICP/B	ESICP/B	TNICB	LOICB	TEICB

Table CT7 Transportation Sector Energy Consumption Estimates						
CLACP/B	NGACP/B	AVACP/B	DFACP/B	HLACP/B	JFACP/B	LUACP/B
MGACP/B	RFACP/B	PAACP/B	ESACP/B	TNACB	LOACB	TEACB

Table CT8 Electric Power Sector Consumption Estimates						
CLEIP/B	NGEIP/B	DKEIP/B	PCEIP/B	RFEIP/B	PAEIP/B	NUEGP/B
HYEGP/B	WWEIB	GEEGP/B	SOEGP/B	WYEGP/B	ELNIP/B	TEEIB

* Appear only on U.S. tables.

** Appear only on state tables.

Consumption Technical Notes Appendix Tables:

Table B1						
DFTCKUS	HLICKUS	HLTCKUS	MGTCKUS	PATCKUS	FFETKUS	NUETKUS

Tables B2, B3:	NGEIK
Tables B4, B5:	NGTXK
Tables B6, B7:	NGTCK
Tables B8, B9:	CLHCK
Tables B10, B11:	CLOCK
Tables B12, B13:	CLEIK
Tables B14, B15:	HLICK
Tables B16, B17:	HLTCK

Tables C1-C6:	TPOPP
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Tables D1, D2:	GDPRX
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Appendix D

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 Consumption Technical Notes. Data for the detailed products are available in the CSV file.

The following lists the components of “Other Petroleum,” the fifth character is either “P” for physical units, or “B” for Btu.

Components of P1TC
ARTC
AVTC
KSTC
LUTC
PCTC
OPTC, which includes:
ABIC
COIC
FNIC
FOIC
FSIC
MBIC
MSIC
SGIC
SNIC
UOIC
WXIC

Components of P1TX
ARTX
AVTX
KSTX
LUTX
PCTX
OPTX, which includes:
ABIC
COIC
FNIC
FOIC
FSIC
MBIC
MSIC
SGIC
SNIC
UOIC
WXIC

Components of P1IC
ARIC
KSIC
LUIC
PCIC
OPIC, which includes:
ABIC
COIC
FNIC
FOIC
FSIC

MBIC
MSIC
SGIC
SNIC
UOIC
WXIC
