

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 57 values for the years 1960 through 2016, 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 1.7 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 Energy Statistics Team of the Office of Survey Development & Statistical Integration, 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 |
| BM | biomass |
| BQ | normal butane |
| BY | butylene |
| CC | coal coke |
| CL | coal |
| CO | crude oil, including lease condensate |
| DF | distillate fuel oil |
| DK | distillate fuel oil, including kerosene-type jet fuel |
| EL | electricity |
| 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 |
| JK | kerosene-type jet fuel |
| JN | naphtha-type jet fuel |
| 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 production of fuel ethanol) |
| LP | lease and plant fuel |
| NI | net imports |
| OC | industrial consumption, excluding coke plants (for coal only) |
| PZ | pipeline fuel |
| 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 - thousand barrels natural gas - million cubic feet coal - thousand short tons electricity - million kilowatthours population - thousand people |
| K | conversion factor: petroleum - 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. Variables with only four letters indicate that both physical unit and Btu values appear on the table.

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 Major Energy Sources in Physical Units | | | | | |
|--|-------|-------|-------|-------|-------|
| CLTCP | NGTCP | DFTCP | HLTCP | JFTCP | MGTCP |
| RFTCP | PITCP | PATCP | NUETP | HYTCP | ENTCP |

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

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

| Table C4 Total End-Use Energy Consumption Estimates | | | | | | | | |
|---|-------|-------|-------|-------|-------|-------|-------|-------|
| CLTXB | NGTXB | DFTXB | HLTXB | JFTXB | MGTXB | RFTXB | PITXB | PATXB |
| HYTXB | WWTXB | EMLCB | 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 | EMLCB | 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 Energy Consumption Estimates by End-Use Sector | | | | |
|---|-------|-------|-------|-------|
| TERCB | TECCB | TEICB | TEACB | TETCB |

| Table C11 Energy Consumption Estimates by Source | | | |
|---|-------|-------|-------|
| CLTCB | NGTCB | PATCB | ESTCB |

| Table C12 Total Energy Consumption Estimates, Real Gross Domestic Product (GDP), Energy Consumption Estimates per Real Dollar of GDP | | |
|---|-------|-------|
| TETCB | GDPRX | TETGR |

| Table C13 Energy Consumption Estimates per Capita by End-Use Sector | | | | |
|--|-------|-------|-------|-------|
| TERPB | TECPB | TEIPB | TEAPB | TETPB |

Time Series Tables:

| Table CT1 Energy Consumption Estimates for Major Energy Sources in Physical Units | | | | | | |
|--|--------|-------|-------|-------|-------|-------|
| CLTCP | CCNIP* | NGTCP | DFTCP | HLTCP | JFTCP | MGTCP |
| RFTCP | PITCP | PATCP | NUETP | HYTCP | ENTCP | |

| Table CT2 Primary Energy Consumption Estimates | | | | | | |
|---|--------|-------|-------|-------|-------|-------|
| CLTCB | CCNIB* | NNTCB | DFTCB | HLTCB | JFTCB | MMTCB |
| RFTCB | PITCB | PMTCB | FFTCB | NGTCB | MGTCB | |

| Table CT2 Primary Energy Consumption Estimates (Continued) | | | | | | |
|---|-------|-------|---------|-------|-------|-------|
| NUETB | HYTCB | WWTCB | EMTCB | EMLCB | 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 | EMLCB | GETXB |
| SOTXB | ESTXP/B | TNTXB | LOTXB | TETXB | | |

| Table CT4 Residential Sector Energy Consumption Estimates | | | | | | |
|--|---------|---------|---------|---------|---------|---------|
| CLRCP/B | NGRCP/B | DFRCP/B | HLRCP/B | KSRCB/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 | PIICP/B | PAICP/B |
| HYICP/B | WWICB | EMLCB | 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 |
|----------------------|-------|

| | |
|-----------------------|-------|
| Tables D1, D2: | GDPRX |
|-----------------------|-------|

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: |
| ABTC |
| COTC |
| FNTC |
| FOTC |
| FSTC |
| MBTC |
| MSTC |
| SGTC |
| SNTC |
| UOTC |
| WXTC |

| Components of P1TX |
|---------------------------|
| ARTX |
| AVTX |
| KSTX |
| LUTX |
| PCTX |
| OPTX, which includes: |
| ABTX |
| COTX |
| FNTX |
| FOTX |
| FSTX |
| MBTX |
| MSTX |
| SGTX |
| SNTX |
| UOTX |
| WXTX |

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

| |
|------|
| MBIC |
| MSIC |
| SGIC |
| SNIC |
| UOIC |
| WXIC |
