Section 1. Documentation Guide

This section describes the data identification codes in the State Energy Data System (SEDS). Sections 2 through 7, one for each energy source and total energy, provide: descriptions of all the data series that are entered into SEDS; the formulas applied in SEDS for creating additional data series; and notes on special circumstances for any series.

Appendix A is an alphabetical listing of the variable names and formulas used in consumption estimation; Appendix B lists the conversion factors used to convert physical units into British thermal units and cites the sources for those factors; Appendix C provides the state-level resident population data used in per capita calculations; Appendix D presents the real gross domestic product by state used to calculate total energy per real dollar of economic output; Appendix E provides metric and other physical conversion factors for measures used in energy analyses; and Appendix F summarizes changes made since the last complete release of SEDS estimates.

There are about 1,000 variables in SEDS. All of the variables are identified by five-character mnemonic series names, or MSN. In the following example, MGACP is the identifying code for data on motor gasoline consumption in the transportation sector in physical units:

Energy activity or energy-consuming sector



The energy sources and products in SEDS, which are represented by the first two letters of the variable name, are

AB = aviation gasoline blending components

AI = aluminum ingot AR = asphalt and road oil

AS = asphalt

AV = aviation gasoline

BD biodiesel BF biofuels BM biomass normal butane BO BY butvlene CC coal coke CG corrugated and solid fiber boxes CL coal CO crude oil, including lease condensate CT catalytic cracking DF distillate fuel oil DK distillate fuel oil, including kerosene-type jet fuel DM distillate fuel oil, excluding biodiesel EL electricity ΕM fuel ethanol, excluding denaturant ΕN fuel ethanol, including denaturant EQ ethane ES electricity sales ethylene FΥ FF fossil fuels petrochemical feedstocks, naphtha less than 401°F FΝ FO petrochemical feedstocks, other oils equal to or greater than 401°F FS petrochemical feedstocks, still gas

geothermal energy

hydroelectric power

jet fuel, kerosene-type

jet fuel, naphtha-type

isobutane

iet fuel

kerosene

isobutylene

hydrocarbon gas liquids

conventional hydroelectric power

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D	LO	=	electrical system energy losses	WY	=	wind
0	LU	=	lubricants			
С	MB	=	motor gasoline blending components		The energy-consuming sectors, identified by characters thre	
	MG	=	motor gasoline	each varial	ole nar	ne, are
U	MM	=	motor gasoline excluding fuel ethanol	AC	=	transportation sector consumption
M	MS	=	miscellaneous petroleum products	CC	=	commercial sector consumption
Ε	NA	=	natural gasoline (including isopentane) (before 1984)	EG	=	electric power sector generation (also consumption)
N	NG	=	natural gas, including supplemental gaseous fuels	EI	=	electric power sector consumption
_	NN	=	natural gas, excluding supplemental gaseous fuels	IC	=	industrial sector consumption
ı	NU	=	nuclear electric power	RC	=	residential sector consumption
Α	OC	=	organic chemicals	TC	=	total consumption of all energy-consuming sectors
Т	OP	=	other petroleum products	TX	=	total end-use consumption
1	P1	=	asphalt and road oil, aviation gasoline, kerosene, lubricants,			
O N G			petroleum coke, and other petroleum products	Many other characters occur in the third and fourth positions of the variable names for the sales, deliveries, and distribution data series used in		
	PA	=	all petroleum products			
	PC	=	petroleum coke			calculations in SEDS to derive the end-use consumption
	PI	=	paints and allied products	estimates. Examples of these codes are		
	PL	=	plant condensate	BK	=	sales for use in vessel bunkering
	PM	=	all petroleum products excluding ethanol blended into	CA	=	capacity
U			motor gasoline	IN	=	deliveries to the industrial sector
ı	PP	=	natural gasoline (previously pentanes plus)	KC	=	consumption at coke plants
D	PQ	=	propane	LP	=	lease and plant fuel
Ε	PY	=	propylene	OD	=	distribution to other industrial users
	RD	=	road oil	VA	=	value of shipments or value-added in manufacture
	RE	=	renewable energy			·
	RF	=	residual fuel oil	A few data series are derived by dividing the consumption series by the resident population. The third and fourth positions are represented by		
	SF	=	supplemental gaseous fuels			
	SG	=	still gas	TP	=	total consumption per capita
	SN	=	special naphtha	RP	=	residential sector consumption per capita (electricity only)
	SO	=	photovoltaic and solar thermal energy	131		residential sector consumption per capita (electricity only)
	TE	=	total energy	Combining the first two components (the first four letters) produces variable names, such as		
	TN	=	total net energy (net of electrical system energy losses)			
	UO	=	unfinished oils	NGIC	_	natural gas (including supplemental gaseous fuels)
	US	=	unfractionated streams	NOIC	_	consumed by the industrial sector
	WD	=	wood	NGIN	=	
	WS	=	waste	110111		delivered to the industrial sector
	WW	=	wood and waste	RFAC	=	residual fuel oil consumed by the transportation sector
	WX	=	waxes	RFBK	=	

The fifth character of the variable names in SEDS identifies the type of data by using one of the following letters:

B = data in British thermal units (Btu)

K = factor for converting data from physical units to Btu

M = data in alternative physical units
P = data in standardized physical units
S = share or ratio expressed as a fraction

V = value in million dollars

In general, data entered into SEDS are in physical units, represented by a "P" in the fifth character; for example, coal data are in thousand short tons, petroleum data are in thousand barrels, and natural gas data are in million cubic feet. In a few cases, data are obtained from the source documents in different units. such as thousand gallons instead of thousand barrels, and are represented by an "M" until converted in SEDS to the unit that is consistent with other variables. Conversion factors, represented by a "K" in the fifth character, are applied to the physical unit data to convert the data to British thermal units, a common unit for all forms of energy. The derived data series in billion British thermal units are represented by "B" in the fifth character. In a few cases, consumption estimates are derived by calculating shares of aggregated consumption data. The fractions used to calculate the consumption shares are identified by an "S" in the fifth character. The consumption estimates for some petroleum products are based on the value added in the manufacturing process by related industries in each state. The data series for those industrial activities are in million dollars, and the variable names contain "V" in the fifth character.

There are a few variables that do not follow the convention:

GDPRX = real gross domestic product

TETGR = total energy consumption per real dollar of GDP

TPOPP = resident population

Associated with, and sometimes attached to, each variable name is the geographic identification. Geographic areas used in SEDS are the 50 states and the District of Columbia (represented by the U.S. Postal Service state abbreviations) and the United States as a whole. Some estimates of electricity sales and losses are derived by using only the contiguous 48 states and the District of Columbia, and the variables used in those calculations are identified by "48." The geographic area codes used in SEDS are shown in Table TN1.1.

Throughout this report, the term "state" includes the District of Columbia. Throughout this documentation, "ZZ" is used as a geographic identifier to

Table TN1.1. Geographic area codes used in the State Energy Data System

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Code	State	Code	State
AK	Alaska	NC	North Carolina
AL	Alabama	ND	North Dakota
AR	Arkansas	NE	Nebraska
AZ	Arizona	NH	New Hampshire
CA	California	NJ	New Jersey
CO	Colorado	NM	New Mexico
CT	Connecticut	NV	Nevada
DC	District of Columbia	NY	New York
DE	Delaware	ОН	Ohio
FL	Florida	OK	Oklahoma
GA	Georgia	OR	Oregon
HI	Hawaii	PA	Pennsylvania
IA	lowa	RI	Rhode Island
ID	Idaho	SC	South Carolina
IL	Illinois	SD	South Dakota
IN	Indiana	TN	Tennessee
KS	Kansas	TX	Texas
KY	Kentucky	UT	Utah
LA	Louisiana	VA	Virginia
MA	Massachusetts	VT	Vermont
MD	Maryland	WA	Washington
ME	Maine	WI	Wisconsin
MI	Michigan	WV	West Virginia
MN	Minnesota	WY	Wyoming
MO	Missouri	US	United States
MS	Mississippi	48	The contiguous 48
MT	Montana		states and the District of Columbia

represent the different state abbreviations that would be interchanged in that position of the variable name.