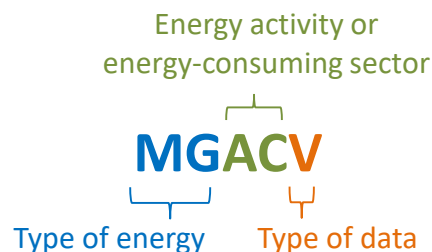# Section 1. Documentation Guide

This section describes the common data identification codes used in the State Energy Data System (SEDS). Sections 2 through 6 provide information for each of the major energy sources: coal, natural gas, petroleum, renewable energy, and electricity. Section 7 describes adjustments for consumption of industrial process fuel, intermediate products, and other uncosted energy sources that SEDS removes to calculate expenditures.

Section 8 "Other Indicators" presents the degree day data, electric net summer capacity data, resident population data used in per capita calculations, and current-dollar gross domestic product (GDP) used to calculate energy expenditures per dollar of GDP. Appendix A is an alphabetical listing of all the variable names and formulas used in the price and expenditure module. Appendix B provides metric and other physical conversion factors for measures used in energy analyses. Appendix C summarizes the changes in SEDS content made since the last complete release of data.

There are about 1,000 variables in SEDS, each identified by a unique five-character mnemonic series name, or MSN. All published MSNs are listed in the Codes and Descriptions file on the SEDS website here: http://www.eia.gov/state/seds/CDF/Codes_and_Descriptions.xlsx.

In the following example, MGACV is the identifying code for motor gasoline expenditures in the transportation sector in million dollars:

Energy activity or
energy-consuming sector

MGACV

Type of energy   Type of data

The first two characters in the SEDS variable names represent energy sources and products:

AR = asphalt and road oil
AV = aviation gasoline
B1 = renewable diesel

BD = biodiesel
BF = biofuels
BO = other biofuels
BT = battery storage
BX = total biofuels (excluding fuel ethanol)
CC = coal coke
CL = coal
DF = distillate fuel oil
EL = electricity
EM = fuel ethanol, excluding denaturant
ES = electricity sales
FN = petrochemical feedstocks, naphtha less than 401°F
FO = petrochemical feedstocks, other oils equal to or greater than 401°F
FS = petrochemical feedstocks, still gas
HL = hydrocarbon gas liquids
HP = hydroelectric pumped storage
JF = jet fuel
KS = kerosene
LU = lubricants
MG = motor gasoline
MS = miscellaneous petroleum products
NG = natural gas, including supplemental gaseous fuels
NU = nuclear electric power
OH = other hydrocarbon gas liquids
OJ = other gases
OP = other petroleum products
P1 = asphalt and road oil, aviation gasoline, kerosene, lubricants, petroleum coke, and other petroleum products
P5 = other intermediate products (petroleum only)
PA = all petroleum products
PC = petroleum coke
PE = primary energy
PQ = propane
RF = residual fuel oil
SN = special naphtha
SU = product supplied
TE = total energy
TN = end-use energy consumption
WD = wood

WW = wood and waste
WX = waxes

SEDS assumes that there are no direct fuel costs for hydroelectric (HY), geothermal (GE), solar thermal and photovoltaic (SO), and wind (WY) energy. There are no price and expenditure MSNs for these energy sources. SEDS also assumes that all biofuels are consumed as a mixture with finished petroleum products, and therefore there are not separate price or expenditure data for biofuels.

The third and fourth characters in the SEDS variable names have several meanings and some are specific to only certain energy sources. First, many represent the energy-consuming sectors:

AC = transportation sector
CC = commercial sector
EG = electric power sector (generation)
EI = electric power sector (consumption)
ET = total cost of electricity generation (nuclear only)
IC = industrial sector
RC = residential sector
TC = total consumption of all energy-consuming sectors
TX = total end-use consumption

"TP" in the third and fourth characters represents per capita expenditures.

The third and fourth characters in the SEDS variable names also indicates activities such as trade and subsectors that SEDS uses to calculate prices and expenditures. Examples are:

EX = exports
GB = generating units net summer capacity total (all sectors)
IM = imports
IS = industrial consumption, costed
KC = coke plants (coal only)
NI = net imports
OC = industrial consumption, excluding coke plants
SU = product supplied

Lastly, the third and fourth characters in the SEDS variable names identify the activities used to calculate adjusted consumption for the expenditure calculations. Examples are:

AS = transportation sector adjusted consumption
CS = commercial sector adjusted consumption
IS = industrial sector adjusted consumption
RS = residential sector adjusted consumption

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

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

SC = total adjusted consumption, all sectors
SS = total adjusted consumption, all end-use sectors

Section 7 describes all the variables used in the calculation of adjusted consumption and Appendix A2 lists the MSNs and the formulas.

The fifth character of the SEDS variable name identifies the units or type of data:

B = consumption in British thermal units (Btu)
D = price in dollars per million Btu
K = factor for converting data from physical units to Btu
P = data in standardized physical units
S = share or ratio expressed as a fraction

V   = expenditure in million dollars

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

GDPRV = current-dollar gross domestic product (GDP)
TEGDS = total energy expenditures as percent of current-dollar GDP
TPOPP = resident population
ZWCDP = cooling degree days (CDD)
ZWHDP = heating degree days (HDD)

Throughout the Technical Notes, SEDS often describes the variables with a geographic identification attached to them. Geographic areas used in SEDS are the 50 states, the District of Columbia (represented by the U.S. Postal Service state abbreviations), and the United States as a whole. In SEDS, the term "state" includes the District of Columbia.

Table TN1.1 shows the geographic area codes used in SEDS.