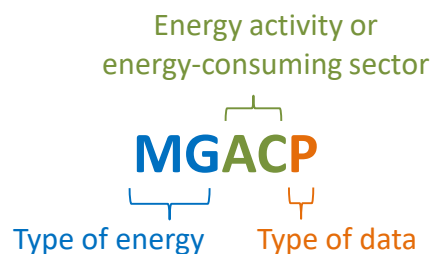


Appendix A. Mnemonic series names (MSN)

This appendix contains an alphabetical listing of the State Energy Data System (SEDS) energy consumption variables, called MSNs. For each variable, SEDS provides: a brief description; unit of measure; and the formulas used to create the variable. Variables that are entered directly from other sources, but not calculated by SEDS, are independent variables. Formulas for the state calculations have “ZZ” following the variable name, where “ZZ” represents the two-letter state code. The formulas for the United States have “US” following the variable name. If the formula for the states and the United States are the same, only one formula is shown.

The SEDS MSN variables have five-character names that generally consist of the following components:



See [Section 1](#) of the SEDS technical notes for explanation of the five-character MSN code descriptions.

Table A1. Consumption variables

MSN	Description	Unit	Formula
ABICB	Aviation gasoline blending components consumed by the industrial sector.	Billion Btu	ABICBZZ = ABTCBZZ ABICBUS = ABTCBUS
ABICP	Aviation gasoline blending components consumed by the industrial sector.	Thousand barrels	ABICPZZ = ABTCPZZ ABICPUS = ABTCPUS
ABTCB	Aviation gasoline blending components total consumption.	Billion Btu	ABTCBZZ = ABTCPZZ * 5.048 ABTCBUS = Σ ABTCBZZ
ABTCP	Aviation gasoline blending components total consumption.	Thousand barrels	ABTCPZZ = (COCAPZZ / COCAPUS) * ABTCPUS ABTCPUS is independent.
AICAP	Aluminum ingot production capacity.	Short tons	AICAPZZ is independent. AICAPUS = Σ AICAPZZ
ARICB	Asphalt and road oil consumed by the industrial sector.	Billion Btu	ARICBZZ = ARICPZZ * 6.636 ARICBUS = Σ ARICBZZ
ARICP	Asphalt and road oil consumed by the industrial sector.	Thousand barrels	ARICPZZ = ASICPZZ + RDICPZZ ARICPUS = Σ ARICPZZ
ARTCB	Asphalt and road oil total consumption.	Billion Btu	ARTCBZZ = ARICBZZ ARTCBUS = ARICBUS
ARTCP	Asphalt and road oil total consumption.	Thousand barrels	ARTCPZZ = ASTCPZZ + RDTCPZZ ARTCPUS = Σ ARTCPZZ
ARTXB	Asphalt and road oil total end-use consumption.	Billion Btu	ARTXBZZ = ARICBZZ ARTXBUS = ARICBUS
ARTXP	Asphalt and road oil total end-use consumption.	Thousand barrels	ARTXPZZ = ARICPZZ ARTXPUS = ARICPUS
ASICP	Asphalt consumed by the industrial sector.	Thousand barrels	Before 2009: ASICPZZ = (ASINPZZ / ASINPUS) * ASTCPUS ASICPUS = Σ ASICPZZ 2009 forward: ASICPZZ = (ASPRPZZ / ASPRPUS) * ASTCPUS ASICPUS = Σ ASICPZZ
ASINP	Asphalt sold to the industrial sector.	Short tons	ASINPZZ is independent. ASINPUS = Σ ASINPZZ
ASPRP	Asphalt (hot-mix and warm-mix) production excluding reclaimed asphalt pavement.	Short tons	ASPRPZZ is independent. ASPRPUS = Σ ASPRPZZ

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
ASTCP	Asphalt total consumption.	Thousand barrels	ASTCPZZ = ASICPZZ ASTCPUS is independent.
AVACB	Aviation gasoline consumed by the transportation sector.	Billion Btu	AVACBZZ = AVACPZZ * 5.048 AVACBUS = ΣAVACBZZ
AVACP	Aviation gasoline consumed by the transportation sector.	Thousand barrels	AVACPZZ = (AVTTPZZ / AVTTPUS) * AVTCPUS AVACPUS = ΣAVACPZZ
AVMIP	Aviation gasoline issued to the military (through 2014).	Thousand barrels	AVMIPZZ is independent. AVMIPUS = ΣAVMIPZZ
AVNMM	Aviation gasoline sold to nonmilitary users (through 2014).	Thousand gallons	AVNMMZZ is independent. AVNMMUS = ΣAVNMMZZ
AVNMP	Aviation gasoline sold to nonmilitary users (through 2014).	Thousand barrels	AVNMPZZ = AVNMMZZ / 42 AVNMPUS = ΣAVNMPZZ
AVTCB	Aviation gasoline total consumption.	Billion Btu	AVTCBZZ = AVACBZZ AVTCBUS = ΣAVTCBZZ
AVTCP	Aviation gasoline total consumption.	Thousand barrels	AVTCPZZ = AVACPZZ AVTCPUS is independent.
AVTTM	Aviation gasoline sold to all users (2015 forward).	Thousand gallons	AVTTMZZ is independent. AVTTMUS = ΣAVTTMZZ
AVTTP	Aviation gasoline total sales to the transportation sector.	Thousand barrels	Before 2015: AVTTPZZ = AVMIPZZ + AVNMPZZ AVTTPUS = ΣAVTTPZZ 2015 forward: AVTTPZZ = AVTTMZZ / 42 AVTTPUS = ΣAVTTPZZ
AVTXB	Aviation gasoline total end-use consumption.	Billion Btu	AVTXBZZ = AVACBZZ AVTXBUS = ΣAVTXBZZ
AVTXP	Aviation gasoline total end-use consumption.	Thousand barrels	AVTXPZZ = AVACPZZ AVTXPUS = ΣAVTXPZZ
B1ABB	Renewable diesel refinery and blender net inputs portion to the transportation sector.	Billion Btu	B1ABBZZ = B1ABPZZ * 5.494 B1ABBUS = ΣB1ABBZZ
B1ABP	Renewable diesel refinery and blender net inputs portion to the transportation sector.	Thousand barrels	B1ABPZZ = B1RIPZZ B1ABPUS = ΣB1ABPZZ

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
B1ACB	Renewable diesel consumed by the transportation sector.	Billion Btu	$B1ACBZZ = B1ACPZZ * 5.494$ $B1ACBUS = \Sigma B1ACBZZ$
B1ACP	Renewable diesel consumed by the transportation sector.	Thousand barrels	$B1ACPZZ = B1TCPZZ$ $B1ACPUS = \Sigma B1ACPZZ$
B1AUB	Renewable diesel product supplied portion to the transportation sector.	Billion Btu	2021 forward: $B1AUBZZ = B1AUPZZ * 5.494$ $B1AUBUS = \Sigma B1AUBZZ$
B1AUP	Renewable diesel product supplied portion to the transportation sector.	Thousand barrels	2021 forward: $B1AUPZZ = (B1ACPZZ / B1ACPUS) * B1SUPUS$ $B1AUPUS = \Sigma B1AUPZZ$
B1RIB	Renewable diesel refinery and blender net inputs.	Billion Btu	$B1RIBZZ = B1RIPZZ * 5.494$ $B1RIBUS = \Sigma B1RIBZZ$
B1RIP	Renewable diesel refinery and blender net inputs.	Thousand barrels	$B1RIPZZ = (B1TCPZZ / B1TCPUS) * B1RIPUS$ B1RIPUS is independent.
B1SUB	Renewable diesel product supplied.	Billion Btu	$B1SUBZZ = B1SUPZZ * 5.494$ $B1SUBUS = \Sigma B1SUBZZ$
B1SUP	Renewable diesel product supplied.	Thousand barrels	$B1SUPZZ = (B1TCPZZ / B1TCPUS) * B1SUPUS$ B1SUPUS is independent.
B1TCB	Renewable diesel total consumption.	Billion Btu	$B1TCBZZ = B1TCPZZ * 5.494$ $B1TCBUS = \Sigma B1TCBZZ$
B1TCP	Renewable diesel total consumption.	Thousand barrels	B1TCPZZ is independent. B1TCPUS is independent.
BDABB	Biodiesel refinery and blender net inputs portion to the transportation sector.	Billion Btu	$BDABBZZ = BDABPZZ * BDTXKUS$ $BDABBUS = \Sigma BDABBZZ$
BDABP	Biodiesel refinery and blender net inputs portion to the transportation sector.	Thousand barrels	$BDABPZZ = (BDACPZZ / BDACPUS) * BDABPUS$ $BDABPUS = (BDACPUS / BDTXPUS) * BDRIPUS$
BDACB	Biodiesel consumed by the transportation sector.	Billion Btu	$BDACBZZ = BDACPZZ * BDTXKUS$ $BDACBUS = \Sigma BDACBZZ$
BDACP	Biodiesel consumed by the transportation sector.	Thousand barrels	BDACPZZ is independent. $BDACPUS = \Sigma BDACPZZ$
BDAUB	Biodiesel product supplied portion to the transportation sector.	Billion Btu	2021 forward: $BDAUBZZ = BDAUPZZ * BDTXKUS$ $BDAUBUS = \Sigma BDAUBZZ$

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
BDAUP	Biodiesel product supplied portion to the transportation sector.	Thousand barrels	2021 forward: $BDAUPZZ = (BDACPZZ / BDACPUS) * BDAUPUS$ $BDAUPUS = (BDACPUS / BDTXPUS) * BDXUPUS$
BDCBB	Biodiesel refinery and blender net inputs portion to the commercial sector.	Billion Btu	$BDCBBZZ = BDCBPZZ * BDTXKUS$ $BDCBBUS = \Sigma BDCBBZZ$
BDCBP	Biodiesel refinery and blender net inputs portion to the commercial sector.	Thousand barrels	$BDCBPZZ = (BDCCPZZ / BDCCPUS) * BDCBPUS$ $BDCBPUS = (BDCCPUS / BDTXPUS) * BDRIPUS$
BDCCB	Biodiesel consumed by the commercial sector.	Billion Btu	$BDCCBZZ = BDCCPZZ * BDTXKUS$ $BDCCBUS = \Sigma BDCCBZZ$
BDCCP	Biodiesel consumed by the commercial sector.	Thousand barrels	BDCCPZZ is independent. $BDCCPUS = \Sigma BDCCPZZ$
BDCUB	Biodiesel product supplied portion to the commercial sector.	Billion Btu	2021 forward: $BDCUBZZ = BDCUPZZ * BDTXKUS$ $BDCUBUS = \Sigma BDCUBZZ$
BDCUP	Biodiesel product supplied portion to the commercial sector.	Thousand barrels	2021 forward: $BDCUPZZ = (BDCCPZZ / BDCCPUS) * BDCUPUS$ $BDCUPUS = (BDCCPUS / BDTXPUS) * BDXUPUS$
BDEIB	Biodiesel consumed by the electric power sector.	Billion Btu	BDEIBZZ is independent. $BDEIBUS = \Sigma BDEIBZZ$
BDEIK	Factor for converting biodiesel consumed by the electric power sector from physical units to Btu.	Million Btu per barrel	$BDEIK = BDEIB / BDEIP$
BDEIP	Biodiesel consumed by the electric power sector.	Thousand barrels	BDEIPZZ is independent. $BDEIPUS = \Sigma BDEIPZZ$
BDEUB	Biodiesel product supplied portion to the electric power sector.	Billion Btu	2021 forward: $BDEUBZZ = BDEIBZZ$ $BDEUBUS = \Sigma BDEUBZZ$
BDEUP	Biodiesel product supplied portion to the electric power sector.	Thousand barrels	2021 forward: $BDEUPZZ = BDEIPZZ$ $BDEUPUS = \Sigma BDEUPZZ$
BDLCB	Energy losses and co-products from the production of biodiesel.	Billion Btu	BDLCBZZ is independent. BDLCBUS is independent.
BDRBB	Biodiesel refinery and blender net inputs portion to the residential sector.	Billion Btu	$BDRBBZZ = BDRBPZZ * BDTXKUS$ $BDRBBUS = \Sigma BDRBBZZ$

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
BDRBP	Biodiesel refinery and blender net inputs portion to the residential sector.	Thousand barrels	$BDRBPZZ = (BDRCPZZ / BDRCPUS) * BDRBPUS$ $BDRBPUS = (BDRCPUS / BDTXPUS) * BDRIPUS$
BDRCB	Biodiesel consumed by the residential sector.	Billion Btu	$BDRCBZZ = BDRCPZZ * BDTXKUS$ $BDRCBUS = \Sigma BDRCBZZ$
BDRCP	Biodiesel consumed by the residential sector.	Thousand barrels	BDRCPZZ is independent. $BDRCPUS = \Sigma BDRCPZZ$
BDRIB	Biodiesel total refinery and blender net inputs.	Billion Btu	$BDRIBZZ = BDRIPZZ * BDTXKUS$ $BDRIBUS = \Sigma BDRIBZZ$
BDRIP	Biodiesel total refinery and blender net inputs.	Thousand barrels	$BDRIPZZ = (BDTXPZZ / BDTXPUS) * BDRIPUS$ BDRIPUS is independent.
BDRUB	Biodiesel product supplied portion to the residential sector.	Billion Btu	2021 forward: $BDRUBZZ = BDRUPZZ * BDTXKUS$ $BDRUBUS = \Sigma BDRUBZZ$
BDRUP	Biodiesel product supplied portion to the residential sector.	Thousand barrels	2021 forward: $BDRUPZZ = (BDRCPZZ / BDRCPUS) * BDRUPUS$ $BDRUPUS = (BDRCPUS / BDTXPUS) * BDXUPUS$
BDSAB	Adjusted total biodiesel consumption blended with distillate fuel oil, portion to the transportation sector (2009 through 2011 only).	Billion Btu	$BDSABZZ = BDSAPZZ * BDTXKUS$ $BDSABUS = \Sigma BDSABUS$
BDSAP	Adjusted total biodiesel consumption blended with distillate fuel oil, portion to the transportation sector (2009 through 2011 only).	Thousand barrels	$BDSAPZZ = (BDACPZZ / BDACPUS) * BDSAPUS$ BDSAPUS is independent.
BDSUB	Biodiesel product supplied.	Billion Btu	2021 forward: $BDSUBZZ = BDAUBZZ + BDCUBZZ + BDEUBZZ + BDRUBZZ$ $BDSUBUS = \Sigma BDSUBZZ$
BDSUP	Biodiesel product supplied.	Thousand barrels	2021 forward: $BDSUPZZ = BDAUPZZ + BDCUPZZ + BDEUPZZ + BDRUPZZ$ BDSUPUS is independent.
BDTCB	Biodiesel total consumption.	Billion Btu	$BDTCBZZ = BDACBZZ + BDCCBZZ + BDEIBZZ + BDRCBZZ$ $BDTCBUS = \Sigma BDTCBZZ$

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
BDTCK	Factor for converting biodiesel total consumption from physical units to Btu.	Million Btu per barrel	BDTCKZZ = BDTCBZZ / BDTCPZZ BDTCKUS = BDTCBUS / BDTCPUS
BDTCP	Biodiesel total consumption.	Thousand barrels	BDTCPZZ = BDACPZZ + BDCCPZZ + BDEIPZZ + BDRCPZZ BDTCPUS is independent.
BDTXB	Biodiesel total end-use consumption.	Billion Btu	BDTXBZZ = BDTCBZZ - BDEIBZZ BDTXBUS = BDTCBUS - BDEIBUS
BDTXKUS	Factor for converting biodiesel used by end-use sectors from physical units to Btu.	Million Btu per barrel	BDTXKUS= 5.359
BDTXP	Biodiesel total end-use consumption.	Thousand barrels	BDTXPZZ = BDTCPZZ - BDEIPZZ BDTXPUS = BDTCPUS - BDEIPUS
BDXUB	Biodiesel product supplied portion to the end-use sectors.	Billion Btu	2021 forward: BDXUBZZ = BDXUPZZ * BDTXKUS BDXUBUS = ΣBDXUBZZ
BDXUP	Biodiesel product supplied portion to the end-use sectors.	Thousand barrels	2021 forward: BDXUPZZ = (BDTXPZZ / BDTXPUS) * BDXUPUS BDXUPUS = BDSUPUS - BDEUPUS
BFLCB	Energy losses and co-products from the production of biofuels.	Billion Btu	BFLCBZZ = BDLCBZZ + EMLCBZZ BFLCBUS = BDLCBUS + EMLCBUS
BFTCB	Biofuels total consumption.	Billion Btu	BFTCBZZ = BDTCBZZ + BFLCBZZ + B1TCBZZ + EMTCBZZ BFTCBUS = BDTCBUS + BFLCBUS + BOTCBUS + B1TCBUS + EMTCBUS
BMCAS	Biomass generating units capacity factor.	Percent	BMCASZZ is independent. BMCASUS is independent.
BMTCB	Biomass total consumption.	Billion Btu	BMTCBZZ = BFTCBZZ+ WWTCBZZ BMTCBUS = BFTCBUS + WWTCBUS
BOABBUS	Other biofuels refinery and blender net inputs portion to the transportation sector for the United States.	Billion Btu	BOABBUS = BORIPUS * 5.359
BOABPUS	Other biofuels refinery and blender net inputs portion to the transportation sector for the United States.	Thousand barrels	BOABPUS = BORIPUS

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
BOACBUS	Other biofuels consumed by the transportation sector for the United States.	Billion Btu	$BOACBUS = BOACPUS * 5.359$
BOACPUS	Other biofuels consumed by the transportation sector for the United States.	Thousand barrels	$BOACPUS = BOTCPUS$
BOAUBUS	Other biofuels product supplied portion to the transportation sector for the United States.	Billion Btu	2021 forward: $BOAUBUS = BOAUPUS * 5.359$
BOAUPUS	Other biofuels product supplied portion to the transportation sector for the United States.	Thousand barrels	2021 forward: $BOAUPUS = BOSUPUS$
BORIBUS	Other biofuels refinery and blender net inputs for the United States.	Billion Btu	$BORIBUS = BORIPUS * 5.359$
BORIPUS	Other biofuels refinery and blender net inputs for the United States.	Thousand barrels	BORIPUS is independent.
BOSUBUS	Other biofuels product supplied for the United States.	Billion Btu	$BOSUBUS = BOSUPUS * 5.359$
BOSUPUS	Other biofuels product supplied for the United States.	Thousand barrels	BOSUPUS is independent.
BOTCBUS	Other biofuels total consumption for the United States.	Billion Btu	$BOTCBUS = BOTCPUS * 5.359$
BOTCPUS	Other biofuels total consumption for the United States.	Thousand barrels	BOTCPUS is independent.
BQICB	Normal butane consumed by the industrial sector.	Billion Btu	$BQICBZZ = BQTCBZZ$ $BQICBUS = BQTCBUS$
BQICP	Normal butane consumed by the industrial sector.	Thousand barrels	$BQICPZZ = BQTCPZZ$ $BQICPUS = BQTCPUS$
BQTCB	Normal butane total consumption.	Billion Btu	$BQTCBZZ = BQTCPZZ * 4.353$ $BQTCBUS = \Sigma BQTCBZZ$
BQTCP	Normal butane total consumption.	Thousand barrels	BQTCPZZ is independent. BQTCPUS is independent.
BTCAS	Battery storage generating units usage factor.	Percent	BTCASZZ is independent. BTCASUS is independent.
BTGBP	Battery storage units net summer capacity in all sectors.	Thousand kilowatts	BTGBPZZ is independent. BTGBPUS is independent.

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
BTVHN	Battery electric vehicle (BEV) light-duty stocks.	Thousands of registered vehicles	BTVHNZZ is independent. BTVHNUS = Σ BTVHNZZ
BTVHP	Electricity consumed for battery electric vehicle (BEV) use.	Million kilowatthours	BTVHPZZ is independent. BTVHPUS = Σ BTVHPZZ
BXSUB	Total biofuels (excluding fuel ethanol) product supplied.	Billion Btu	2021 forward: BXSUBZZ = BDSUBZZ + B1SUBZZ BXSUBUS = BDSUBUS + B1SUBUS + BOSUBUS
BXSUP	Total biofuels (excluding fuel ethanol) product supplied.	Thousand barrels	2021 forward: BXSUPZZ = BDSUPZZ + B1SUPZZ BXSUPUS = BDSUPUS + B1SUPUS + BOSUPUS
BYICB	Butylene from refineries consumed by the industrial sector.	Billion Btu	BYICBZZ = BYTCBZZ BYICBUS = BYTCBUS
BYICP	Butylene from refineries consumed by the industrial sector.	Thousand barrels	BYICPZZ = BYTCPZZ BYICPUS = BYTCPUS
BYTCB	Butylene from refineries total consumption.	Billion Btu	BYTCBZZ = BYTCPZZ * 4.377 BYTCBUS = Σ BYTCBZZ
BYTCP	Butylene from refineries total consumption.	Thousand barrels	BYTCPZZ is independent. BYTCPUS is independent.
CCEXBUS	Coal coke exported from the United States.	Billion Btu	CCEXBUS = CCEXPUS * 24.80
CCEXPUS	Coal coke exported from the United States.	Thousand short tons	CCEXPUS is independent.
CCIMBUS	Coal coke imported into the United States.	Billion Btu	CCIMBUS = CCIMPUS * 24.80
CCIMPUS	Coal coke imported into the United States.	Thousand short tons	CCIMPUS is independent.
CCNIBUS	Coal coke net imports into the United States.	Billion Btu	CCNIBUS = CCIMBUS - CCEXBUS
CCNIPUS	Coal coke net imports into the United States.	Thousand short tons	CCNIPUS = CCIMPUS - CCEXPUS
CGVAV	Value of shipments (value added prior to 2001) for the corrugated and solid fiber box manufacturing industry.	Million dollars	CGVAVZZ is independent. CGVAVUS = Σ CGVAVZZ
CLACB	Coal consumed by the transportation sector.	Billion Btu	CLACBZZ = CLACPZZ * CLACKZZ CLACBUS = Σ CLACBZZ
CLACK	Factor for converting coal consumed by the transportation sector from physical units to Btu.	Million Btu per short ton	CLACKZZ is independent. CLACKUS = CLACBUS / CLACPUS

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
CLACP	Coal consumed by the transportation sector.	Thousand short tons	CLACPZZ = (CLICPZZ / CLICPUS) * CLACPUS CLACPUS is independent.
CLCAS	Coal generating units capacity factor.	Percent	CLCASZZ is independent. CLCASUS is independent.
CLCCB	Coal consumed by the commercial sector.	Billion Btu	CLCCBZZ = CLCCPZZ * CLHCKZZ CLCCBUS = Σ CLCCBZZ
CLCCP	Coal consumed by the commercial sector.	Thousand short tons	Before 2008: CLCCPZZ = CLHCPZZ - CLRCPZZ CLCCPUS = Σ CLCCPZZ 2008 forward: CLCCPZZ = (CLHDPZZ / CLHDPUS) * CLHCPUS CLCCPUS = Σ CLCCPZZ
CLEIB	Coal consumed by the electric power sector.	Billion Btu	CLEIBZZ = CLEIPZZ * CLEIKZZ CLEIBUS = Σ CLEIBZZ
CLEIK	Factor for converting coal consumed by the electric power sector from physical units to Btu.	Million Btu per short ton	CLEIKZZ is independent. CLEIKUS = CLEIBUS / CLEIPUS
CLEIP	Coal consumed by the electric power sector.	Thousand short tons	CLEIPZZ is independent. CLEIPUS = Σ CLEIPZZ
CLHCB	Coal consumed by the residential and commercial sectors.	Billion Btu	CLHCBZZ = CLCCBZZ + CLRCBZZ CLHCBUS = Σ CLHCBZZ
CLGBP	Coal generating units net summer capacity in all sectors.	Thousand kilowatts	CLGBPZZ is independent. CLGBPUS is independent.
CLHCK	Factor for converting coal consumed by the residential and commercial sectors from physical units to Btu.	Million Btu per short ton	CLHCKZZ is independent. CLHCKUS = CLHCBUS / CLHCPUS
CLHCP	Coal consumed by the residential and commercial sectors (commercial sector from 2008 forward).	Thousand short tons	CLHCPZZ = (CLHDPZZ / CLHDPUS) * CLHCPUS CLHCPUS is independent.
CLHDP	Coal distributed to the residential and commercial sectors (consumed by the commercial sector for 2008 forward).	Thousand short tons	CLHDPZZ is independent. CLHDPUS = Σ CLHDPZZ
CLICB	Coal consumed by the industrial sector.	Billion Btu	CLICBZZ = CLKCBZZ + CLOCBZZ CLICBUS = Σ CLICBZZ

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
CLICP	Coal consumed by the industrial sector.	Thousand short tons	CLICPZZ = CLKCPZZ + CLOCPZZ CLICPUS = Σ CLICPZZ
CLKCB	Coal consumed at coke plants (coking coal).	Billion Btu	CLKCBZZ = CLKCPZZ * CLKCKZZ CLKCBUS = Σ CLKCBZZ
CLKCK	Factor for converting coal consumed at coke plants from physical units to Btu.	Million Btu per short ton	CLKCKZZ is independent. CLKCKUS = CLKCBUS / CLKCPUS
CLKCP	Coal consumed by coke plants (coking coal).	Thousand short tons	CLKCPZZ = (CLKDPZZ / CLKDPUS) * CLKCPUS CLKCPUS is independent.
CLKDP	Coal distributed to coke plants (coking coal) (consumption for 2008 forward).	Thousand short tons	CLKDPZZ is independent. CLKDPUS = Σ CLKDPZZ
CLOCB	Coal consumed by industrial users other than coke plants.	Billion Btu	CLOCBZZ = CLOCPZZ * CLOCKZZ CLOCBUS = Σ CLOCBZZ
CLOCK	Factor for converting coal consumed by industrial users other than coke plants from physical units to Btu.	Million Btu per short ton	CLOCKZZ is independent. CLOCKUS = CLOCBUS / CLOCPUS
CLOCP	Coal consumed by industrial users other than coke plants.	Thousand short tons	CLOCPZZ = (CLODPZZ / CLODPUS) * CLOCPUS CLOCPUS is independent.
CLODP	Coal distributed to industrial users other than coke plants (consumption for 2008 forward).	Thousand short tons	CLODPZZ is independent. CLODPUS = Σ CLODPZZ
CLRCB	Coal consumed by the residential sector.	Billion Btu	CLRCBZZ = CLRCPZZ * CLHCKZZ CLRCBUS = Σ CLRCBZZ
CLRCP	Coal consumed by the residential sector.	Thousand short tons	Before 2008: CLRCPZZ = CLHCPZZ * CLRCSUS CLRCPUS = Σ CLRCPZZ 2008 forward: CLRCPZZ = 0 CLRCPUS = 0
CLRCSUS	The share of residential and commercial coal consumed by the residential sector for the United States.	Percent	CLRCSUS is independent.
CLTCB	Coal total consumption.	Billion Btu	CLTCBZZ = CLACBZZ + CLCCBZZ + CLEIBZZ + CLICBZZ + CLRCBZZ CLTCBUS = Σ CLTCBZZ

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
CLTCP	Coal total consumption.	Thousand short tons	CLTCPZZ = CLACPZZ + CLCCPZZ + CLEIPZZ + CLICPZZ + CLRCPZZ CLTCPUS = Σ CLTCPZZ
CLTXB	Coal total end-use consumption.	Billion Btu	CLTXBZZ = CLACBZZ + CLCCBZZ + CLICBZZ + CLRCBZZ CLTXBUS = Σ CLTXBZZ
CLTXP	Coal total end-use consumption.	Thousand barrels	CLTXPZZ = CLACPZZ + CLCCPZZ + CLICPZZ + CLRCPZZ CLTXPUS = Σ CLTXPZZ
COCAP	Atmospheric crude oil distillation operable capacity (operating capacity before 2013) at refineries.	Barrels per calendar day	COCAPZZ is independent. COCAPUS = Σ COCAPZZ
COICB	Crude oil consumed by the industrial sector.	Billion Btu	COICBZZ = COTCBZZ COICBUS = COTCBUS
COICP	Crude oil consumed by the industrial sector.	Thousand barrels	COICPZZ = COTCPZZ COICPUS = COTCPUS
COTCB	Crude oil consumed in petroleum industry operations.	Billion Btu	COTCBZZ = COTCPZZ * 5.800 COTCBUS = Σ COTCBZZ
COTCP	Crude oil consumed in petroleum industry operations.	Thousand barrels	COTCPZZ is independent. COTCPUS = Σ COTCPZZ
CTCAP	Catalytic cracking charge capacity of petroleum refineries.	1960 through 1979: Barrels per calendar day; 1980 forward: Barrels per stream day	CTCAPZZ is independent. CTCAPUS = Σ CTCAPZZ
CYCAS	Natural gas combined cycle generating units capacity factor.	Percent	CYCASZZ is independent. CYCASUS is independent.

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
DAACB	Distillate fuel oil, biodiesel, and renewable diesel consumed by the transportation sector.	Billion Btu	Before 2009: $DAACBZZ = DFACBZZ$ $DAACBUS = \Sigma DAACBZZ$ 2009 to 2011: $DAACBZZ = DMACBZZ + BDSABZZ + B1ABBZZ$ $DAACBUS = \Sigma DAACBZZ$ 2012 to 2020: $DAACBZZ = DMACBZZ + BDACBZZ + B1ABBZZ$ $DAACBUS = \Sigma DAACBZZ$ 2021 forward: $DAACBZZ = DMACBZZ + BDABBZZ + BDAUBZZ + B1ABBZZ + B1AUBZZ$ $DAACBUS = \Sigma DAACBZZ$
DAACP	Distillate fuel oil, biodiesel, and renewable diesel consumed by the transportation sector.	Thousand barrels	Before 2021: $DAACPZZ = DFACPZZ$ $DAACPUS = \Sigma DAACPZZ$ 2021 forward: $DAACPZZ = DFACPZZ + BDAUPZZ + B1AUPZZ$ $DAACPUS = \Sigma DAACPZZ$
DACCB	Distillate fuel oil, biodiesel, and renewable diesel consumed by the commercial sector.	Billion Btu	Before 2013: $DACCBZZ = DFCCBZZ$ $DACCBUS = \Sigma DACCBZZ$ 2013 to 2020: $DACCBZZ = DMCCBZZ + BDCCBZZ$ $DACCBUS = \Sigma DACCBZZ$ 2021 forward: $DACCBZZ = DMCCBZZ + BDCBBZZ + BDCUBZZ$ $DACCBUS = \Sigma DACCBZZ$
DACCP	Distillate fuel oil, biodiesel, and renewable diesel consumed by the commercial sector.	Thousand barrels	Before 2021: $DACCPZZ = DFCCPZZ$ $DACCPUS = \Sigma DACCPZZ$ 2021 forward: $DACCPZZ = DFCCPZZ + BDCUPZZ$ $DACCPUS = \Sigma DACCPZZ$

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
DAEIB	Distillate fuel oil, biodiesel, and renewable diesel consumed by the electric power sector.	Billion Btu	Before 2006: $DAEIBZZ = DFEIBZZ$ $DAEIBUS = \Sigma DAEIBZZ$ 2006 to 2020: $DAEIBZZ = DMEIBZZ + BDEIBZZ$ $DAEIBUS = \Sigma DAEIBZZ$ 2021 forward: $DAEIBZZ = DMEIBZZ + BDEUBZZ$ $DAEIBUS = \Sigma DAEIBZZ$
DAEIP	Distillate fuel oil, biodiesel, and renewable diesel consumed by the electric power sector.	Thousand barrels	Before 2021: $DAEIPZZ = DFEIPZZ$ $DAEIPUS = \Sigma DAEIPZZ$ 2021 forward: $DAEIPZZ = DFEIPZZ + BDEUPZZ$ $DAEIPUS = \Sigma DAEIPZZ$
DAICB	Distillate fuel oil, biodiesel, and renewable diesel consumed by the industrial sector.	Billion Btu	$DAICBZZ = DFICBZZ$ $DAICBUS = \Sigma DAICBZZ$
DAICP	Distillate fuel oil, biodiesel, and renewable diesel consumed by the industrial sector.	Thousand barrels	$DAICPZZ = DFICPZZ$ $DAICPUS = \Sigma DAICPZZ$
DARCB	Distillate fuel oil, biodiesel, and renewable diesel consumed by the residential sector.	Billion Btu	Before 2013: $DARCBZZ = DFRCBZZ$ $DARCBUS = \Sigma DARCBZZ$ 2013 to 2020: $DARCBZZ = DMRCBZZ + BDRCBZZ$ $DARCBUS = \Sigma DARCBZZ$ 2021 forward: $DARCBZZ = DMRCBZZ + BDRBBZZ + BDRUBZZ$ $DARCBUS = \Sigma DARCBZZ$
DARCP	Distillate fuel oil, biodiesel, and renewable diesel consumed by the residential sector.	Thousand barrels	Before 2021: $DARCPZZ = DFRCPZZ$ $DARCPUS = \Sigma DARCPZZ$ 2021 forward: $DARCPZZ = DFRCPZZ + BDRUPZZ$ $DARCPUS = \Sigma DARCPZZ$

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
DATCB	Total distillate fuel oil, biodiesel, and renewable diesel consumption.	Billion Btu	<p>Before 2009: $\text{DATCBZZ} = \text{DFTCBZZ}$ $\text{DATCBUS} = \Sigma \text{DATCBZZ}$</p> <p>2009 to 2011: $\text{DATCBZZ} = \text{DMTCBZZ} + \text{BDSABZZ} + \text{B1RIBZZ}$ $\text{DATCBUS} = \Sigma \text{DATCBZZ}$</p> <p>2012 to 2020: $\text{DATCBZZ} = \text{DMTCBZZ} + \text{BDTCBZZ} + \text{B1RIBZZ}$ $\text{DATCBUS} = \Sigma \text{DATCBZZ}$</p> <p>2021 forward: $\text{DATCBZZ} = \text{DMTCBZZ} + \text{BDRIBZZ} + \text{BDSUBZZ} + \text{B1RIBZZ} + \text{B1SUBZZ}$ $\text{DATCBUS} = \Sigma \text{DATCBZZ}$</p>
DATCP	Total distillate fuel oil, biodiesel, and renewable diesel consumption.	Thousand barrels	<p>Before 2021: $\text{DATCPZZ} = \text{DFTCPZZ}$ $\text{DATCPUS} = \Sigma \text{DATCPZZ}$</p> <p>2021 forward: $\text{DATCPZZ} = \text{DFTCPZZ} + \text{BDSUPZZ} + \text{B1SUPZZ}$ $\text{DATCPUS} = \Sigma \text{DATCPZZ}$</p>
DFACB	Distillate fuel oil consumed by the transportation sector.	Billion Btu	<p>Before 2009: $\text{DFACBZZ} = \text{DFACPZZ} * \text{DFTCKUS}$ $\text{DFACBUS} = \Sigma \text{DFACBZZ}$</p> <p>2009 to 2011: $\text{DFACBZZ} = \text{DMACBZZ} + \text{BDSABZZ} + \text{B1ABBZZ}$ $\text{DFACBUS} = \Sigma \text{DFACBZZ}$</p> <p>2012 to 2020: $\text{DFACBZZ} = \text{DMACBZZ} + \text{BDACBZZ} + \text{B1ABBZZ}$ $\text{DFACBUS} = \Sigma \text{DFACBZZ}$</p> <p>2021 forward: $\text{DFACBZZ} = \text{DMACBZZ} + \text{BDABBZZ} + \text{B1ABBZZ}$ $\text{DFACBUS} = \Sigma \text{DFACBZZ}$</p>
DFACP	Distillate fuel oil consumed by the transportation sector.	Thousand barrels	$\text{DFACPZZ} = (\text{DFTRPZZ} / \text{DFNDPZZ}) * \text{DFNCPZZ}$ $\text{DFACPUS} = \Sigma \text{DFACPZZ}$
DFBKP	Distillate fuel oil sales for vessel bunkering use, excluding that sold to the military.	Thousand barrels	<p>DFBKPZZ is independent. $\text{DFBKPUS} = \Sigma \text{DFBKPZZ}$</p>

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
DFCCB	Distillate fuel oil consumed by the commercial sector.	Billion Btu	Before 2013: $DFCCBZZ = DFCCPZZ * DFTCKUS$ $DFCCBUS = \Sigma DFCCBZZ$ 2013 to 2020: $DFCCBZZ = DMCCBZZ + BDCCBZZ$ $DFCCBUS = \Sigma DFCCBZZ$ 2021 forward: $DFCCBZZ = DMCCBZZ + BDCBBZZ$ $DFCCBUS = \Sigma DFCCBZZ$
DFCCP	Distillate fuel oil consumed by the commercial sector.	Thousand barrels	$DFCCPZZ = (DFCMPZZ / DFNDPZZ) * DFNCPZZ$ $DFCCPUS = \Sigma DFCCPZZ$
DFCMP	Distillate fuel oil sales to the commercial sector.	Thousand barrels	DFCMPZZ is independent. $DFCMPUS = \Sigma DFCMPZZ$
DFEIB	Distillate fuel oil consumed by the electric power sector.	Billion Btu	$DFEIBZZ = DFEIPZZ * DFTCKUS$ $DFEIBUS = \Sigma DFEIBZZ$
DFEIP	Distillate fuel oil consumed by the electric power sector.	Thousand barrels	$DFEIPZZ = DKEIPZZ - JKEUPZZ$ $DFEIPUS = \Sigma DFEIPZZ$
DFIBP	Distillate fuel oil sales for industrial space heating and other industrial use, including farm use.	Thousand barrels	DFIBPZZ is independent. $DFIBPUS = \Sigma DFIBPZZ$
DFICB	Distillate fuel oil consumed by the industrial sector.	Billion Btu	$DFICBZZ = DFICPZZ * DFTCKUS$ $DFICBUS = \Sigma DFICBZZ$
DFICP	Distillate fuel oil consumed by the industrial sector.	Thousand barrels	$DFICPZZ = (DFINPZZ / DFNDPZZ) * DFNCPZZ$ $DFICPUS = \Sigma DFICPZZ$
DFINP	Distillate fuel oil sales to the industrial sector.	Thousand barrels	$DFINPZZ = DFIBPZZ + DFOCPZZ + DFOFPZZ + DFOTPPZZ$ $DFINPUS = \Sigma DFINPZZ$
DFMIP	Distillate fuel oil sales to the military, regardless of use.	Thousand barrels	DFMIPZZ is independent. $DFMIPUS = \Sigma DFMIPZZ$
DFNCP	Distillate fuel oil consumption by all end-use sectors.	Thousand barrels	$DFNCPZZ = (DFNDPZZ / DFNDPUS) * DFNCPUS$ $DFNCPUS = DFTCPUS - DFEIPUS$
DFNDP	Distillate fuel oil sales to all end-use sectors.	Thousand barrels	$DFNDPZZ = DFCMPZZ + DFINPZZ + DFRSPZZ + DFTRPZZ$ $DFNDPUS = \Sigma DFNDPZZ$

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
DFOCP	Distillate fuel oil sales for use by oil companies.	Thousand barrels	DFOCPZZ is independent. DFOCPUS = Σ DFOCPZZ
DFOFP	Distillate fuel oil sales as diesel fuel for off-highway use.	Thousand barrels	DFOFPZZ is independent. DFOFPUS = Σ DFOFPZZ
DFONP	Distillate fuel oil sales as diesel fuel for on-highway use.	Thousand barrels	DFONPZZ is independent. DFONPUS = Σ DFONPZZ
DFOTP	Distillate fuel oil sales for all other uses not identified in other sales categories.	Thousand barrels	DFOTPZZ is independent. DFOTPUS = Σ DFOTPZZ
DFRCB	Distillate fuel oil consumed by the residential sector.	Billion Btu	Before 2013: DFRCBZZ = DFRCPPZZ * DFTCKUS DFRCBUS = Σ DFRCBZZ 2013 to 2020: DFRCBZZ = DMRCBZZ + BDRCBZZ DFRCBUS = Σ DFRCBZZ 2021 forward: DFRCBZZ = DMRCBZZ + BDRBBZZ DFRCBUS = Σ DFRCBZZ
DFRCP	Distillate fuel oil consumed by the residential sector.	Thousand barrels	DFRCPZZ = (DFRSPZZ / DFNDPZZ) * DFNCPZZ DFRCPUS = Σ DFRCPZZ
DFRRP	Distillate fuel oil sales for use by railroads.	Thousand barrels	DFRRPZZ is independent. DFRRPUS = Σ DFRRPZZ
DFRSP	Distillate fuel oil sales to the residential sector.	Thousand barrels	DFRSPZZ is independent. DFRSPUS = Σ DFRSPZZ
DFTCB	Distillate fuel oil total consumption.	Billion Btu	DFTCBZZ = DFACBZZ + DFCCBZZ + DFEIBZZ + DFICBZZ + DFRCBZZ DFTCBUS = Σ DFTCBZZ
DFTCKUS	Factor for converting distillate fuel from physical units to Btu.	Million Btu per barrel	DFTCKUS is independent.
DFTCP	Distillate fuel oil total consumption.	Thousand barrels	DFTCPZZ = DFEIPZZ + DFNCPZZ DFTCPUS is independent.
DFTRP	Distillate fuel oil sales to the transportation sector.	Thousand barrels	DFTRPZZ = DFBKPZZ + DFMIPZZ + DFONPZZ + DFRRPZZ DFTRPUS = Σ DFTRPZZ

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
DFTXB	Distillate fuel oil total end-use consumption.	Billion Btu	DFTXBZZ = DFACBZZ + DFCCBZZ + DFICBZZ + DFRCBZZ DFTXBUS = Σ DFTXBZZ
DFTXP	Distillate fuel oil total end-use consumption.	Thousand barrels	DFTXPZZ = DFACPZZ + DFCCPZZ + DFICPZZ + DFRCPZZ DFTXPUS = Σ DFTXPZZ
DKEIB	Distillate fuel oil (including kerosene-type jet fuel before 2001) consumed by the electric power sector.	Billion Btu	DKEIBZZ = DFEIBZZ + JKEUBZZ DKEIBUS = Σ DKEIBZZ
DKEIP	Distillate fuel oil (including kerosene-type jet fuel before 2001) consumed by the electric power sector.	Thousand barrels	DKEIPZZ is independent. DKEIPUS = Σ DKEIPZZ
DMACB	Distillate fuel oil, excluding biodiesel and renewable diesel, consumed by the transportation sector.	Billion Btu	Before 2009: DMACBZZ = DFACBZZ DMACBUS = Σ DMACBZZ 2009 Forward: DMACBZZ = DMACPZZ * DMTCKUS DMACBUS = Σ DMACBZZ
DMACP	Distillate fuel oil, excluding biodiesel and renewable diesel, consumed by the transportation sector.	Thousand barrels	Before 2009: DMACPZZ = DFACPZZ DMACPUS = Σ DMACPZZ 2009 through 2011: DMACPZZ = DFACPZZ - BDSAPZZ - B1ABPZZ DMACPUS = Σ DMACPZZ 2012 through 2020: DMACPZZ = DFACPZZ - BDACPZZ - B1ABPZZ - BDEIPZZ DMACPUS = Σ DMACPZZ 2021 forward: DMACPZZ = DFACPZZ - BDABPZZ - B1ABPZZ DMACPUS = Σ DMACPZZ
DMCCB	Distillate fuel oil, excluding biofuels, consumed by the commercial sector.	Billion Btu	Before 2013: DMCCBZZ = DFCCBZZ DMCCBUS = Σ DMCCBZZ 2013 forward: DMCCBZZ = DMCCPZZ * DMTCKUS DMCCBUS = Σ DMCCBZZ

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
DMCCP	Distillate fuel oil, excluding biofuels, consumed by the commercial sector.	Thousand barrels	Before 2013: DMCCPZZ = DFCCPZZ DMCCPUS = Σ DMCCPZZ 2013 through 2020: DMCCPZZ = DFCCPZZ - BDCCPZZ DMCCPUS = Σ DMCCPZZ 2021 forward: DMCCPZZ = DFCCPZZ - BDCBPZZ DMCCPUS = Σ DMCCPZZ
DMEIB	Distillate fuel oil, excluding biofuels, consumed by the electric power sector.	Billion Btu	DMEIBZZ = DFEIBZZ DMEIBUS = Σ DMEIBZZ
DMEIP	Distillate fuel oil, excluding biofuels, consumed by the electric power sector.	Thousand barrels	DMEIPZZ = DFEIPZZ DMEIPUS = Σ DMEIPZZ
DMICB	Distillate fuel oil, excluding biofuels, consumed by the industrial sector.	Billion Btu	DMICBZZ = DFICBZZ DMICBUS = Σ DMICBZZ
DMICP	Distillate fuel oil, excluding biofuels, consumed by the industrial sector.	Thousand barrels	DMICPZZ = DFICPZZ DMICPUS = Σ DMICPZZ
DMRCB	Distillate fuel oil, excluding biofuels, consumed by the residential sector.	Billion Btu	Before 2013: DMRCBZZ = DFRCBZZ DMRCBUS = Σ DMRCBZZ 2013 forward: DMRCBZZ = DMRCPZZ * DMTCKUS DMRCBUS = Σ DMRCBZZ
DMRCP	Distillate fuel oil, excluding biofuels, consumed by the residential sector.	Thousand barrels	Before 2013: DMRCPZZ = DFRCPZZ DMRCPUS = Σ DMRCPZZ 2013 through 2020: DMRCPZZ = DFRCPZZ - BDRCPZZ DMRCPUS = Σ DMRCPZZ 2021 forward: DMRCPZZ = DFRCPZZ - BDRBPZZ DMRCPUS = Σ DMRCPZZ

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
DMTCB	Distillate fuel oil, excluding biodiesel and renewable diesel, total consumption.	Billion Btu	Before 2009: DMTCBZZ = DFTCBZZ DMTCBUS = DFTCBUS 2009 forward: DMTCBZZ = DMACBZZ + DMCCBZZ + DMEIBZZ + DMICBZZ + DMRCBZZ DMTCBZZ = Σ DMTCBZZ
DMTCKUS	Factor for converting distillate fuel, excluding biodiesel and renewable diesel, from physical units to Btu.	Million Btu per barrel	DMTCKUS is independent.
DMTCP	Distillate fuel oil, excluding biodiesel and renewable diesel, total consumption.	Thousand barrels	Before 2009: DMTCPZZ = DFTCPZZ DMTCPUS = DFTCPUS 2009 forward: DMTCPZZ = DMACPZZ + DMCCPZZ + DMEIPZZ + DMICPZZ + DMRCPZZ DMTCPUS = Σ DMTCPUS
ELEXB	Electricity exported from the United States.	Billion Btu	ELEXBZZ = ELEXPZZ * 3.412 ELEXBUS = Σ ELEXBZZ
ELEXP	Electricity exported from the United States.	Million kilowatthours	ELEXPZZ is independent. ELEXPUS = Σ ELEXPZZ
ELGBP	Total (all fuels) electric generating units net summer capacity in all sectors.	Thousand kilowatts	ELGBPZZ is independent. ELGBPUS is independent.
ELIMB	Electricity imported into the United States.	Billion Btu	ELIMBZZ = ELIMPZZ * 3.412 ELIMBUS = Σ ELIMBZZ
ELIMP	Electricity imported into the United States.	Million kilowatthours	ELIMPZZ is independent. ELIMPUS = Σ ELIMPZZ
ELISB	Net interstate flow of electricity and associated losses (negative indicates flow out of state).	Billion Btu	Before 1990: ELISBZZ = (ESTCBZZ + LOTCBZZ) - TEEIBZZ ELISBUS = 0 1990 forward: If ELISPZZ < 0, ELISBZZ = -(TEEIBZZ * (-ELISPZZ / (-ELISPZZ + ESTCPZZ))) If ELISPZZ >= 0, ELISBZZ = ELISPZZ * (average heat content of energy for all outflow electricity) ELISBUS = 0

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
ELISP	Net interstate flow of electricity (negative indicates flow out of state).	Million kilowatthours	ELISPZZ is independent. ELISPUS = 0
ELLSS48	The ratio of electrical system energy losses to electricity sold in the contiguous 48 states and the District of Columbia.	Fraction	ELLSS48 = LOTCB48 / ESTCB48
ELNIB	Net imports of electricity into the United States.	Billion Btu	ELNIBZZ = ELIMBZZ - ELEXBZZ ELNIBUS = Σ ELNIBZZ
ELNIP	Net imports of electricity into the United States.	Million kilowatthours	ELNIPZZ = ELIMPZZ - ELEXPZZ ELNIPUS = Σ ELNIPZZ
ELVHN	Total electric vehicle (EV) light-duty stocks.	Thousands of registered vehicles	ELVHNZZ = BTVHNZZ + PHVHNZZ ELVHNUS = Σ ELVHNZZ
ELVHS	Electric vehicle (EV) share of total light-duty vehicles.	Percent	ELVHSZZ = ELVHNZZ / LDVHNZZ * 100
EMACB	Fuel ethanol, excluding denaturant, consumed by the transportation sector.	Billion Btu	EMACBZZ = (MGACPZZ / MGTCPPZZ) * EMTCBZZ EMACBUS = Σ EMACBZZ
EMCCB	Fuel ethanol, excluding denaturant, consumed by the commercial sector.	Billion Btu	EMCCBZZ = (MGCCPZZ / MGTCPPZZ) * EMTCBZZ EMCCBUS = Σ EMCCBZZ
EMICB	Fuel ethanol, excluding denaturant, consumed by the industrial sector.	Billion Btu	EMICBZZ = (MGICPZZ / MGTCPPZZ) * EMTCBZZ EMICBUS = Σ EMICBZZ
EMLCB	Energy losses and co-products from the production of fuel ethanol.	Billion Btu	EMLCBZZ = (EMPRBZZ / EMPRBUS) * EMLCBUS EMLCBUS is independent.
EMPRB	Fuel ethanol production excluding denaturant.	Billion Btu	EMPRBZZ is independent. EMPRBUS is independent.
EMTCB	Fuel ethanol, excluding denaturant, total consumption.	Billion Btu	EMTCBZZ = (EMTCBUS / ENTCBUS) * ENTCBZZ EMTCBUS is independent.
ENACB	Fuel ethanol, including denaturant, consumed by the transportation sector.	Billion Btu	ENACBZZ = (MGACPZZ / MGTCPPZZ) * ENTCBZZ ENACBUS = Σ ENACBZZ
ENACP	Fuel ethanol, including denaturant, consumed by the transportation sector.	Thousand barrels	ENACPZZ = (MGACPZZ / MGTCPPZZ) * ENTCPZZ ENACPUS = Σ ENACPZZ
ENCCB	Fuel ethanol, including denaturant, consumed by the commercial sector.	Billion Btu	ENCCBZZ = (MGCCPZZ / MGTCPPZZ) * ENTCBZZ ENCCBUS = Σ ENCCBZZ
ENCCP	Fuel ethanol, including denaturant, consumed by the commercial sector.	Thousand barrels	ENCCPZZ = (MGCCPZZ / MGTCPPZZ) * ENTCPZZ ENCCPUS = Σ ENCCPZZ

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
ENICB	Fuel ethanol, including denaturant, consumed by the industrial sector.	Billion Btu	ENICBZZ = (MGICPZZ / MGTCPPZZ) * ENTCBZZ ENICBUS = ΣENICBZZ
ENICP	Fuel ethanol, including denaturant, consumed by the industrial sector.	Thousand barrels	ENICPZZ = (MGICPZZ / MGTCPPZZ) * ENTCPZZ ENICPUS = ΣENICPZZ
ENTCB	Fuel ethanol, including denaturant, total consumption.	Billion Btu	ENTCBZZ = (ENTCPZZ / ENTCPUS) * ENTCBUS ENTCBUS is independent.
ENTCKUS	Fuel ethanol total consumption conversion factor for the United States.	Million Btu per barrel	ENTCKUS = ENTCBUS / ENTCPUS
ENTCP	Fuel ethanol, including denaturant, total consumption.	Thousand barrels	ENTCPZZ = (ENTRPZZ / ENTRPUS) * ENTCPUS ENTCPUS is independent.
ENTRP	Fuel ethanol blended into motor gasoline.	Thousand gallons	ENTRPZZ is independent. ENTRPUS = ΣENTRPZZ
EQICB	Ethane consumed by the industrial sector.	Billion Btu	EQICBZZ = EQTCBZZ EQICBUS = EQTCBUS
EQICP	Ethane consumed by the industrial sector.	Thousand barrels	EQICPZZ = EQTCPZZ EQICPUS = EQTCPUS
EQTCB	Ethane total consumption.	Billion Btu	EQTCBZZ = EQTCPZZ * 2.783 EQTCBUS = ΣEQTCBZZ
EQTCP	Ethane total consumption.	Thousand barrels	EQTCPZZ is independent. EQTCPUS is independent.
ESACB	Electricity consumed by (sales to ultimate customers in) the transportation sector.	Billion Btu	ESACBZZ = ESACPZZ * 3.412 ESACBUS = ΣESACBZZ
ESACP	Electricity consumed by (sales to ultimate customers in) the transportation sector.	Million kilowatthours	Before 2003: ESACPZZ = ESTRPZZ ESACPUS = ΣESACPZZ 2003 forward: ESACPZZ is independent. ESACPUS = ΣESACPZZ
ESCCB	Electricity consumed by (sales to ultimate customers in) the commercial sector.	Billion Btu	ESCCBZZ = ESCCPZZ * 3.412 ESCCBUS = ΣESCCBZZ

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
ESCCP	Electricity consumed by (sales to ultimate customers in) the commercial sector.	Million kilowatthours	Before 2003: $ESCCPZZ = ESCMPZZ + (ESOTPZZ - ESTRPZZ)$ $ESCCPUS = \sum ESCCPZZ$ 2003 forward: $ESCCPZZ = ESCMPZZ$ $ESCCPUS = \sum ESCCPZZ$
ESCMP	Electricity sold to a portion of the commercial sector.	Million kilowatthours	ESCMPZZ is independent. $ESCMPUS = \sum ESCMPZZ$
ESICB	Electricity consumed by (sales to ultimate customers in) the industrial sector.	Billion Btu	$ESICBZZ = ESICPZZ * 3.412$ $ESICBUS = \sum ESICBZZ$
ESICP	Electricity consumed by (sales to ultimate customers in) the industrial sector.	Million kilowatthours	ESICPZZ is independent. $ESICPUS = \sum ESICPZZ$
ESOTP	Electricity sold to the "Other" sector (i.e., public street and highway lighting, sales to other public authorities, railroads and railways, and interdepartmental sales) (through 2002).	Million kilowatthours	ESOTPZZ is independent. $ESOTPUS = \sum ESOTPZZ$
ESRCB	Electricity consumed by (sales to ultimate customers in) the residential sector.	Billion Btu	$ESRCBZZ = ESRCPZZ * 3.412$ $ESRCBUS = \sum ESRCBZZ$
ESRCP	Electricity consumed by (sales to ultimate customers in) the residential sector.	Million kilowatthours	ESRCPZZ is independent. $ESRCPUS = \sum ESRCPZZ$
ESRPP	Electricity consumed by (sales to ultimate customers in) the residential sector per capita.	Kilowatthours	$ESRPP = ESRCP / TPOPP * 1000$
ESTCB	Electricity total consumption (electricity sales to ultimate customers).	Billion Btu	$ESTCBZZ = ESTCPZZ * 3.412$ $ESTCBUS = \sum ESTCBZZ$ $ESTCB48 = ESTCBUS - (ESTCBAK + ESTCBHI)$
ESTCKUS	Electricity conversion factor for the United States.	Thousand Btu per kilowatthour	$ESTCKUS = 3.412$
ESTCP	Electricity total consumption (electricity sales to ultimate customers).	Million kilowatthours	$ESTCPZZ = ESACPZZ + ESCCPZZ + ESICPZZ + ESRCPZZ$ $ESTCPUS = \sum ESTCPZZ$
ESTPP	Electricity total consumption (electricity sales to ultimate customers) per capita.	Kilowatthours	$ESTPP = ESTCP / TPOPP * 1000$
ESTRP	Electricity consumed by transit systems (through 2002).	Million kilowatthours	ESTRPZZ is independent. $ESTRPUS = \sum ESTRPZZ$

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
ESTRSUS	The share of electricity sold to the “Other” sector (ESOTP) that is used for transportation in the United States (through 2002).	Fraction	$ESTRSUS = ESACPUS / ESOTPUS$
ESTXB	Electricity total end-use consumption (electricity sales to ultimate customers).	Billion Btu	$ESTXBZZ = ESACBZZ + ESCCBZZ + ESICBZZ + ESRCBZZ$ $ESTXBUS = \sum ESTXBZZ$
ESTXP	Electricity total end-use consumption (electricity sales to ultimate customers).	Million kilowatthours	$ESTXPZZ = ESACPZZ + ESCCPZZ + ESICPZZ + ESRCPZZ$ $ESTXPUS = \sum ESTXPZZ$
ESVHP	Electricity consumed for electric vehicle (EV) use.	Million kilowatthours	ESVHPZZ is independent. $ESVHPUS = \sum ESVHPZZ$
EV0CN	Legacy charging ports for electric vehicles.	Number	EV0CNZZ is independent. EV0CNUS is independent.
EV1CN	Level 1 charging ports for electric vehicles.	Number	EV1CNZZ is independent. EV1CNUS is independent.
EV2CN	Level 2 charging ports for electric vehicles.	Number	EV2CNZZ is independent. EV2CNUS is independent.
EV2CR	Level 2 charging ports per location.	Number	EV2CRZZ is independent. EV2CRUS is independent.
EVCHN	Total charging ports for electric vehicles.	Number	EVCHNZZ is independent. EVCHNUS is independent.
EVCHP	Total electric vehicle charging locations.	Number	EVCHPZZ is independent. EVCHPUS is independent.
EVDEN	DC fast charging ports for electric vehicles.	Number	EVDENZZ is independent. EVDENUS is independent.
EVDEN	DC fast charging ports per location.	Number	EVDENZZ is independent. EVDENUS is independent.
EVNNP	Electric vehicle charging locations with both networked and non-networked ports.	Number	EVNNPZZ is independent. EVNNPUS is independent.
EVNOP	Electric vehicle charging locations with non-networked ports only.	Number	EVNOPZZ is independent. EVNOPUS is independent.
EVNTP	Electric vehicle charging locations with networked ports only.	Number	EVNTPZZ is independent. EVNTPUS is independent.

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
EVPPP	Electric vehicle charging locations with both public and private ports.	Number	EVPPPZZ is independent. EVPPPUS is independent.
EVPUP	Electric vehicle charging locations with public ports only.	Number	EVPUPZZ is independent. EVPUPUS is independent.
EVPVP	Electric vehicle charging locations with private ports only.	Number	EVPVPZZ is independent. EVPVPUS is independent.
EYICB	Ethylene from refineries consumed by the industrial sector.	Billion Btu	EYICBZZ = EYTCBZZ EYICBUS = EYTCBUS
EYICP	Ethylene from refineries consumed by the industrial sector.	Thousand barrels	EYICPZZ = EYTCPZZ EYICPUS = EYTCPUS
EYTCB	Ethylene from refineries total consumption.	Billion Btu	EYTCBZZ = EYTCPZZ * 2.436 EYTCBUS = ΣEYTCBZZ
EYTCP	Ethylene from refineries total consumption.	Thousand barrels	EYTCPZZ is independent. EYTCPUS is independent.
FFETKUS	Fossil-fueled steam-electric power plant conversion factor.	Thousand Btu per kilowatthour	FFETKUS is independent.
FFGBP	Fossil fuel total generating units net summer capacity in all sectors.	Thousand kilowatts	FFGBPZZ is independent. FFGBPUS is independent.
FFTCB	Fossil fuels total consumption.	Billion Btu	FFTCBZZ = CLTCBZZ + NNTCBZZ + PMTCBZZ FFTCBUS = CCNIBUS + CLTCBUS + NNTCBUS + PMTCBUS
FNCAS	State's share of U.S. capacity of steam crackers using naphtha as feedstocks.	Percent share	FNCASZZ is independent.
FNICB	Petrochemical feedstocks, naphtha less than 401° F, consumed by the industrial sector.	Billion Btu	FNICBZZ = FNTCBZZ FNICBUS = FNTCBUS
FNICP	Petrochemical feedstocks, naphtha less than 401° F, consumed by the industrial sector.	Thousand barrels	FNICPZZ = FNTCPZZ FNICPUS = FNTCPUS
FNTCB	Petrochemical feedstocks, naphtha less than 401° F, total consumption.	Billion Btu	FNTCBZZ = FNTCPZZ * 5.248 FNTCBUS = ΣFNTCBZZ
FNTCP	Petrochemical feedstocks, naphtha less than 401° F, total consumption.	Thousand barrels	FNTCPZZ = FNTCPUS * FNCASZZ FNTCPUS is independent.
FOCAS	State's share of U.S. capacity of steam crackers using other oils as feedstocks.	Percent share	FOCASZZ is independent.

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
FOICB	Petrochemical feedstocks, other oils equal to or greater than 401° F, consumed by the industrial sector.	Billion Btu	FOICBZZ = FOTCBZZ FOICBUS = FOTCBUS
FOICP	Petrochemical feedstocks, other oils equal to or greater than 401° F, consumed by the industrial sector.	Thousand barrels	FOICPZZ = FOTCPZZ FOICPUS = FOTCPUS
FOTCB	Petrochemical feedstocks, other oils equal to or greater than 401° F, total consumption.	Billion Btu	FOTCBZZ = FOTCPZZ * 5.825 FOTCBUS = ΣFOTCBZZ
FOTCP	Petrochemical feedstocks, other oils equal to or greater than 401° F, total consumption.	Thousand barrels	FOTCPZZ = FOTCPUS * FOCASZZ FOTCPUS is independent.
FSICB	Petrochemical feedstocks, still gas, consumed by the industrial sector (through 1985).	Billion Btu	FSICBZZ = FSTCBZZ FSICBUS = FSTCBUS
FSICP	Petrochemical feedstocks, still gas, consumed by the industrial sector (through 1985).	Thousand barrels	FSICPZZ = FSTCPZZ FSICPUS = FSTCPUS
FSTCB	Petrochemical feedstocks, still gas, total consumption (through 1985).	Billion Btu	FSTCBZZ = FSTCPZZ * 6.000 FSTCBUS = ΣFSTCBZZ
FSTCP	Petrochemical feedstocks, still gas, total consumption (through 1985).	Thousand barrels	FSTCPZZ = (COCAPZZ / COCAPUS) * FSTCPUS FSTCPUS is independent.
GDPRV	Current-dollar gross domestic product (GDP).	Million dollars	GDPRVZZ is independent. GDPRVUS is independent.
GDPRX	Real gross domestic product (GDP).	Million chained (2017) dollars	GDPRXZZ is independent. GDPRXUS is independent.
GEC4B	Geothermal energy consumed as direct heat or from heat pumps in the commercial sector.	Billion Btu	GEC4BZZ is independent. GEC4BUS = ΣGEC4BZZ
GEC5B	Geothermal energy consumed for electricity generation at utility-scale commercial CHP and electricity-only facilities.	Billion Btu	GEC5BZZ = GEC5PZZ * 3.412 GEC5BUS = ΣGEC5BZZ
GEC5P	Geothermal electricity net generation at utility-scale commercial CHP and electricity-only facilities.	Million kilowatthours	GEC5PZZ is independent. GEC5PUS = ΣGEC5PZZ
GECAS	Geothermal generating units capacity factor.	Percent	GECASZZ is independent. GECASUS is independent.

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
GECCB	Geothermal energy consumed by the commercial sector.	Billion Btu	GECCBZZ = GEC4BZZ + GEC5BZZ GECCBUS = Σ GECCBZZ
GEEGB	Geothermal energy consumed for electricity generation by the electric power sector.	Billion Btu	GEEGBZZ = GEEGPZZ * 3.412 GEEGBUS = Σ GEEGBZZ
GEEGP	Geothermal electricity net generation in the electric power sector.	Million kilowatthours	GEEGPZZ is independent. GEEGPUS = Σ GEEGPZZ
GEGBP	Geothermal generating units net summer capacity in all sectors.	Thousand kilowatts	GEGBPZZ is independent. GEGBPUS is independent.
GEICB	Geothermal energy consumed by the industrial sector.	Billion Btu	GEICBZZ is independent. GEICBUS = Σ GEICBZZ
GERCB	Geothermal energy consumed by the residential sector.	Billion Btu	GERCBZZ is independent. GERCBUS = Σ GERCBZZ
GETCB	Geothermal energy total consumption.	Billion Btu	GETCBZZ = GECCBZZ + GEEGBZZ + GEICBZZ + GERCBZZ GETCBUS = Σ GETCBZZ
GETXB	Geothermal energy total end-use consumption.	Billion Btu	GETXBZZ = GECCBZZ + GEICBZZ + GERCBZZ GETXBUS = Σ GETXBZZ
HLACB	Hydrocarbon gas liquids consumed by the transportation sector.	Billion Btu	Before 2010: HLACBZZ = LGACBZZ HLACBUS = Σ HLACBZZ 2010 forward: HLACBZZ = PQACBZZ HLACBUS = Σ HLACBZZ
HLACP	Hydrocarbon gas liquids consumed by the transportation sector.	Thousand barrels	Before 2010: HLACPZZ = LGACPZZ HLACPUS = Σ HLACPZZ 2010 forward: HLACPZZ = PQACPZZ HLACPUS = Σ HLACPZZ
HLCCB	Hydrocarbon gas liquids consumed by the commercial sector.	Billion Btu	Before 2010: HLCCBZZ = LGCCBZZ HLCCBUS = Σ HLCCBZZ 2010 forward: HLCCBZZ = PQCCBZZ HLCCBUS = Σ HLCCBZZ

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
HLCCP	Hydrocarbon gas liquids consumed by the commercial sector.	Thousand barrels	Before 2010: $HLCCPZZ = LGCCPZZ$ $HLCCPUS = \Sigma HLCCPZZ$ 2010 forward: $HLCCPZZ = PQCCPZZ$ $HLCCPUS = \Sigma HLCCPZZ$
HLICB	Hydrocarbon gas liquids consumed by the industrial sector.	Billion Btu	Before 1984: $HLICBZZ = LGICBZZ + NATCBZZ + PLTCBZZ + USTCBZZ$ 1984 through 2009: $HLICBZZ = LGICBZZ + PPICBZZ$ 2010 forward: $HLICBZZ = BQICBZZ + BYICBZZ + EQICBZZ + EYICBZZ + IQICBZZ + IYICBZZ + PPICBZZ + PQICBZZ + PYICBZZ$ $HLICBUS = \Sigma HLICBZZ$ for all years.
HLICK	Average factor for converting hydrocarbon gas liquids consumed by the industrial sector from physical unit to Btu.	Million Btu per barrel	$HLICKZZ = HLICBZZ / HLICPZZ$ $HLICKUS = HLICBUS / HLICPUS$
HLICP	Hydrocarbon gas liquids consumed by the industrial sector.	Thousand barrels	Before 1984: $HLICPZZ = LGICPZZ + NATCPZZ + PLTCPZZ + USTCPZZ$ 1984 through 2009: $HLICPZZ = LGICPZZ + PPICPZZ$ 2010 forward: $HLICPZZ = BQICPZZ + BYICPZZ + EQICPZZ + EYICPZZ + IQICPZZ + IYICPZZ + PPICPZZ + PQICPZZ + PYICPZZ$ $HLICPUS = \Sigma HLICPZZ$ for all years.
HLRCB	Hydrocarbon gas liquids consumed by the residential sector.	Billion Btu	Before 2010: $HLRCBZZ = LGRCBZZ$ $HLRCBUS = \Sigma HLRCBZZ$ 2010 forward: $HLRCBZZ = PQRCBZZ$ $HLRCBUS = \Sigma HLRCBZZ$

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
HLRCP	Hydrocarbon gas liquids consumed by the residential sector.	Thousand barrels	Before 2010: HLRCPZZ = LGRCPPZZ HLRCPUS = ΣHLRCPZZ 2010 forward: HLRCPZZ = PQRCPZZ HLRCPUS = ΣHLRCPZZ
HLTCB	Hydrocarbon gas liquids total consumption.	Billion Btu	HLTCBZZ = HLACBZZ + HLCCBZZ + HLICBZZ + HLRCBZZ HLTCBUS = ΣHLTCBZZ
HLTCK	Average factor for converting hydrocarbon gas liquids total consumption from physical unit to Btu.	Million Btu per barrel	HLTCKZZ = HLTCBZZ / HLTCPZZ HLTCKUS = HLTCBUS / HLTCPUS
HLTCP	Hydrocarbon gas liquids total consumption.	Thousand barrels	HLTCPZZ = HLACPZZ + HLCCPZZ + HLICPZZ + HLRCPZZ for all years. Before 1984: HLTCPUS = LGTCPUS + NATCPUS + PLTCPUS + USTCPUS 1984 through 2009: HLTCPUS = LGTCPUS + PPTCPUS 2010 forward: HLTCPUS is independent.
HLTXB	Hydrocarbon gas liquids total end-use consumption.	Billion Btu	HLTXBZZ = HLACBZZ + HLCCBZZ + HLICBZZ + HLRCBZZ HLTXBUS = ΣHLTXBZZ
HLTXP	Hydrocarbon gas liquids total end-use consumption.	Thousand barrels	HLTXPZZ = HLACPZZ + HLCCPZZ + HLICPZZ + HLRCPZZ HLTXPUS = ΣHLTXPZZ
HPCAS	Hydroelectric pumped storage generating units usage factor.	Percent	HPCASZZ is independent. HPCASUS is independent.
HPGBP	Hydroelectric pumped storage generating units net summer capacity in all sectors.	Thousand kilowatts	HPGBPZZ is independent. HPGBPUS is independent.
HVC5P	Conventional hydroelectricity net generation at commercial CHP and electricity-only facilities.	Million kilowatthours	HVC5PZZ is independent. HVC5PUS = ΣHVC5PZZ
HVCAS	Conventional hydroelectric generating units capacity factor.	Percent	HVCASZZ is independent. HVCASUS is independent.

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
HVEGP	Conventional hydroelectricity net generation in the electric power sector.	Million kilowatthours	HVEGPZZ is independent. HVEGPUS = Σ HVEGPZZ
HVGBP	Conventional hydroelectric power generating units net summer capacity in all sectors.	Thousand kilowatts	HVGBPZZ is independent. HVGBPUS is independent.
HVI5P	Conventional hydroelectricity net generation at industrial CHP and electricity-only facilities.	Million kilowatthours	HVI5PZZ is independent. HVI5PUS = Σ HVI5PZZ
HYCCB	Hydropower consumed by the commercial sector.	Billion Btu	HYCCBZZ = HYCCPZZ * 3.412 HYCCBUS = Σ HYCCBZZ
HYCCP	Hydroelectricity net generation in the commercial sector.	Million kilowatthours	HYCCPZZ = HVC5PZZ HYCCPUS = Σ HYCCPZZ
HYEGB	Hydropower consumed for electricity generation by the electric power sector.	Billion Btu	HYEGBZZ = HVEGPZZ * 3.412 HYEGBUS = Σ HYEGBZZ
HYEGP	Hydroelectricity net generation in the electric power sector.	Million kilowatthours	HYEGPZZ = HVEGPZZ HYEGPUS = Σ HYEGPZZ
HYICB	Hydropower consumed by the industrial sector.	Billion Btu	HYICBZZ = HYICPZZ * 3.412 HYICBUS = Σ HYICBZZ
HYICP	Hydroelectricity net generation in the industrial sector.	Million kilowatthours	HYICPZZ = HVI5PZZ HYICPUS = Σ HYICPZZ
HYTCB	Hydropower total consumption.	Billion Btu	HYTCBZZ = HYCCBZZ + HYEGBZZ + HYICBZZ HYTCBUS = Σ HYTCBZZ
HYTCP	Hydroelectricity total net generation.	Million kilowatthours	HYTCPZZ = HYCCPZZ + HYEGPZZ + HYICPZZ HYTCPUS = Σ HYTCPZZ
HYTXB	Hydropower energy total end-use consumption.	Billion Btu	HYTXBZZ = HYCCBZZ + HYICBZZ HYTXBUS = Σ HYTXBZZ
HYTXP	Hydroelectricity, total end-use net generation.	Million kilowatthours	HYTXPZZ = HYCCPZZ + HYICPZZ HYTXPUS = Σ HYTXPZZ
IQICB	Isobutane consumed by the industrial sector.	Billion Btu	IQICBZZ = IQTCBZZ IQICBUS = IQTCBUS
IQICP	Isobutane consumed by the industrial sector.	Thousand barrels	IQICPZZ = IQTCPZZ IQICPUS = IQTCPUS
IQTCB	Isobutane total consumption.	Billion Btu	IQTCBZZ = IQTCPZZ * 4.183 IQTCBUS = Σ IQTCBZZ

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
IQTCP	Isobutane total consumption.	Thousand barrels	IQTCPZZ is independent. IQTCPUS is independent.
IYICB	Isobutylene from refineries consumed by the industrial sector.	Billion Btu	IYICBZZ = IYTCBZZ IYICBUS = IYTCBUS
IYICP	Isobutylene from refineries consumed by the industrial sector.	Thousand barrels	IYICPZZ = IYTCPZZ IYICPUS = IYTCPUS
IYTCB	Isobutylene from refineries total consumption.	Billion Btu	IYTCBZZ = IYTCPZZ * 4.355 IYTCBUS = Σ IYTCBZZ
IYTCP	Isobutylene from refineries total consumption.	Thousand barrels	IYTCPZZ is independent. IYTCPUS is independent.
JFACB	Jet fuel consumed by the transportation sector.	Billion Btu	JFACBZZ = JKACBZZ + JNACBZZ JFACBUS = Σ JFACBZZ
JFACP	Jet fuel consumed by the transportation sector.	Thousand barrels	JFACPZZ = JKACPZZ + JNACPZZ JFACPUS = Σ JFACPZZ
JFEUB	Jet fuel consumed by the electric power sector (through 1982).	Billion Btu	JFEUBZZ = JKEUBZZ JFEUBUS = JKEUBUS
JFEUP	Jet fuel consumed by the electric power sector (through 1982).	Thousand barrels	JFEUPZZ = JKEUPZZ JFEUPUS = JKEUPUS
JFTCB	Jet fuel total consumption.	Billion Btu	JFTCBZZ = JFACBZZ + JFEUBZZ JFTCBUS = Σ JFTCBZZ
JFTCP	Jet fuel total consumption.	Thousand barrels	JFTCPZZ = JFACPZZ + JFEUPZZ JFTCPUS = Σ JFTCPZZ
JFTXB	Jet fuel total end-use consumption.	Billion Btu	JFTXBZZ = JFACBZZ JFTXBUS = Σ JFTXBZZ
JFTXP	Jet fuel total end-use consumption.	Thousand barrels	JFTXPZZ = JFACPZZ JFTXPUS = Σ JFTXPZZ
JKACB	Kerosene-type jet fuel consumed by the transportation sector.	Billion Btu	JKACBZZ = JKACPZZ * 5.670 JKACBUS = Σ JKACBZZ

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
JKACP	Kerosene-type jet fuel consumed by the transportation sector.	Thousand barrels	Before 2010: $JKACPZZ = (JKTTPZZ / JKTTPUS) * JKACPUS$ $JKACPUS = JKTCPUS - JKEUPUS$ 2010 forward: JKACPZZ is independent. $JKACPUS = \Sigma JKACPZZ$
JKEUB	Kerosene-type jet fuel consumed by the electric power sector (through 1982).	Billion Btu	$JKEUBZZ = JKEUPZZ * 5.670$ $JKEUBUS = \Sigma JKEUBZZ$
JKEUP	Kerosene-type jet fuel consumed by the electric power sector (through 1982).	Thousand barrels	JKEUPZZ is independent. $JKEUPUS = \Sigma JKEUPZZ$
JKTCB	Kerosene-type jet fuel total consumption.	Billion Btu	$JKTCBZZ = JKTCPZZ * 5.670$ $JKTCBUS = \Sigma JKTCBZZ$
JKTCP	Kerosene-type jet fuel total consumption.	Thousand barrels	Before 2010: $JKTCPZZ = JKACPZZ + JKEUPZZ$ JKTCPUS is independent. 2010 forward: $JKTCPZZ = JKACPZZ$ JKTCPUS is independent.
JKTTP	Kerosene-type jet fuel total sold (through 2009).	Thousand gallons	JKTTPZZ is independent. $JKTTPUS = \Sigma JKTTPZZ$
JNACB	Naphtha-type jet fuel consumed by the transportation sector.	Billion Btu	$JNACBZZ = JNTCBZZ$ $JNACBUS = JNTCBUS$
JNACP	Naphtha-type jet fuel consumed by the transportation sector.	Thousand barrels	$JNACPZZ = JNTCPZZ$ $JNACPUS = JNTCPUS$
JNMIP	Naphtha-type jet fuel issued to the military.	Thousand barrels	JNMIPZZ is independent. $JNMIPUS = \Sigma JNMIPZZ$
JNTCB	Naphtha-type jet fuel total consumption.	Billion Btu	$JNTCBZZ = JNTCPZZ * 5.355$ $JNTCBUS = \Sigma JNTCBZZ$
JNTCP	Naphtha-type jet fuel total consumption.	Thousand barrels	$JNTCPZZ = (JNMIPZZ / JNMIPUS) * JNTCPUS$ JNTCPUS is independent.
KSCCB	Kerosene consumed by the commercial sector.	Billion Btu	$KSCCBZZ = KSCCPZZ * 5.670$ $KSCCBUS = \Sigma KSCCBZZ$
KSCCP	Kerosene consumed by the commercial sector.	Thousand barrels	$KSCCPZZ = (KSCMPZZ / KSTTPZZ) * KSTCPZZ$ $KSCCPUS = \Sigma KSCCPZZ$

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
KSCMP	Kerosene sold to the commercial sector.	Thousand barrels	KSCMPZZ is independent. KSCMPUS = Σ KSCMPZZ
KSICB	Kerosene consumed by the industrial sector.	Billion Btu	KSICBZZ = KSICPZZ * 5.670 KSICBUS = Σ KSICBZZ
KSICP	Kerosene consumed by the industrial sector.	Thousand barrels	KSICPZZ = (KSINPZZ / KSTTPZZ) * KSTCPZZ KSICPUS = Σ KSICPZZ
KSIHP	Kerosene sold for industrial heating and processing.	Thousand barrels	KSIHPZZ is independent. KSIHPUS = Σ KSIHPZZ
KSINP	Kerosene sold to the industrial sector.	Thousand barrels	KSINPZZ = KSIHPZZ + KSOTPZZ KSINPUS = Σ KSINPZZ
KSOTP	Kerosene sold for all other uses, including farm use.	Thousand barrels	KSOTPZZ is independent. KSOTBUS = Σ KSOTPZZ
KSRCB	Kerosene consumed by the residential sector.	Billion Btu	KSRCBZZ = KSRCPZZ * 5.670 KSRCBUS = Σ KSRCBZZ
KSRCP	Kerosene consumed by the residential sector.	Thousand barrels	KSRCPZZ = (KSRSPZZ / KSTTPZZ) * KSTCPZZ KSRCPUS = Σ KSRCPZZ
KSRSP	Kerosene sold to the residential sector.	Thousand barrels	KSRSPZZ is independent. KSRSPUS = Σ KSRSPZZ
KSTCB	Kerosene total consumption.	Billion Btu	KSTCBZZ = KSCCBZZ + KSICBZZ + KSRCBZZ KSTCBUS = Σ KSTCBZZ
KSTCP	Kerosene total consumption.	Thousand barrels	KSTCPZZ = (KSTTPZZ / KSTTPUS) * KSTCPUS KSTCPUS is independent.
KSTTP	Kerosene total sold.	Thousand barrels	KSTTPZZ = KSCMPZZ + KSINPZZ + KSRSPZZ KSTTPUS = Σ KSTTPZZ
KSTXB	Kerosene total end-use consumption.	Billion Btu	KSTXBZZ = KSCCBZZ + KSICBZZ + KSRCBZZ KSTXBUS = Σ KSTXBZZ
KSTXP	Kerosene total end-use consumption.	Thousand barrels	KSTXPZZ = KSCCPZZ + KSICPZZ + KSRCPZZ KSTXPUS = Σ KSTXPZZ
LDVHN	Total (all fuels) vehicle light-duty stocks.	Thousands of registered vehicles	LDVHNZZ is independent. LDVHNUS is independent.
LGACB	LPG consumed by the transportation sector (through 2009).	Billion Btu	LGACBZZ = LGACPZZ * 3.841 LGACBUS = Σ LGACBZZ

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
LGACP	LPG consumed by the transportation sector (through 2009).	Thousand barrels	LGACPZZ = LGCBPZZ * LGTRSUS LGACPUS = Σ LGACPZZ
LGCBM	LPG sales for internal combustion engine use (through 2009).	Thousand gallons	LGCBMZZ is independent. LGCBMUS = Σ LGCBMZZ
LGCBP	LPG consumed for internal combustion engine use (through 2009).	Thousand barrels	LGCBPZZ = LGCBMZZ / 42 LGCBPUS = Σ LGCBPZZ
LGCCB	LPG consumed by the commercial sector (through 2009).	Billion Btu	LGCCBZZ = LGCCPZZ * 3.841 LGCCBUS = Σ LGCCBZZ
LGCCP	LPG consumed by the commercial sector (through 2009).	Thousand barrels	LGCCPZZ = LGHCPZZ * LGCCSZZ LGCCPUS = Σ LGCCPZZ
LGCCS	The share of residential and commercial LPG consumed by the commercial sector (through 2009).	Percent	LGCCSZZ is independent.
LGHCM	LPG sold for residential and commercial use (through 2009).	Thousand gallons	LGHCMZZ is independent. LGHCMUS = Σ LGHCMZZ
LGHCP	LPG consumed by the residential and commercial sectors (through 2009).	Thousand barrels	LGHCPZZ = LGHCMZZ / 42 LGHCPUS = Σ LGHCPZZ
LGICB	LPG consumed by the industrial sector (through 2009).	Billion Btu	LGICBZZ = (LGICPZZ / LGICPUS) * LGICBUS LGICBUS = LGTCBUS - (LGACBUS + LGCCBUS + LGRCBUS)
LGICKUS	Average conversion factor for industrial consumption of LPG for the United States (through 2009).	Million Btu per barrel	LGICKUS = LGICBUS / LGICPUS
LGICP	LPG consumed by the industrial sector (through 2009).	Thousand barrels	Before 2008: LGICPZZ = LGTCPZZ - (LGACPZZ + LGCCPZZ + LGRCPPZZ) LGICPUS = Σ LGICPZZ For 2008 and 2009: LGICPZZ is independent. LGICPUS = Σ LGICPZZ
LGRCB	LPG consumed by the residential sector (through 2009).	Billion Btu	LGRCBZZ = LGRCPPZZ * 3.841 LGRCBUS = Σ LGRCBZZ
LGRCP	LPG consumed by the residential sector (through 2009).	Thousand barrels	LGRCPPZZ = LGHCPZZ * LGRCSSZZ LGRCBUS = Σ LGRCPPZZ

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
LGRCS	The share of residential and commercial LPG consumed by the residential sector (through 2009).	Percent	LGRCSZZ is independent.
LGTCB	LPG total consumption (through 2009).	Billion Btu	LGTCBZZ = LGACBZZ + LGCCBZZ + LGICBZZ + LGRCBZZ LGTCBUS is independent.
LGTCKUS	Factor for converting LPG from physical units to Btu for the United States (through 2009).	Million Btu per barrel	LGTCKUS is independent.
LGTCP	LPG total consumption (through 2009).	Thousand barrels	Before 2008: LGTCPZZ = (LGTPPZZ / LGTPPUS) * LGTCPUS LGTCPUS is independent. For 2008 and 2009: LGTCPZZ = LGACPZZ + LGCCPZZ + LGICPZZ + LGRCPPZZ LGTCPUS is independent.
LGTRSUS	The transportation sector's share of LPG internal combustion engine sales for the United States (through 2009).	Fraction	LGTRSUS is independent.
LGTPP	LPG total sold (through 2009).	Thousand gallons	LGTPPZZ is independent. LGTPPUS = Σ LGTPPZZ
LGTXB	LPG total end-use consumption (through 2009).	Billion Btu	LGTXBZZ = LGACBZZ + LGCCBZZ + LGICBZZ + LGRCBZZ LGTXBUS = Σ LGTXBZZ
LGTXP	LPG total end-use consumption (through 2009).	Thousand barrels	LGTXPZZ = LGACPZZ + LGCCPZZ + LGICPZZ + LGRCPPZZ LGTXPUS = Σ LGTXPZZ
LOACB	The transportation sector's share of electrical system energy losses.	Billion Btu	LOACBZZ = (ESACBZZ / ESTCBZZ) * LOTCBZZ LOACBUS = Σ LOACBZZ
LOCCB	The commercial sector's share of electrical system energy losses.	Billion Btu	LOCCBZZ = (ESCCBZZ / ESTCBZZ) * LOTCBZZ LOCCBUS = Σ LOCCBZZ
LOICB	The industrial sector's share of electrical system energy losses.	Billion Btu	LOICBZZ = (ESICBZZ / ESTCBZZ) * LOTCBZZ LOICBUS = Σ LOICBZZ
LORCB	The residential sector's share of electrical system energy losses.	Billion Btu	LORCBZZ = (ESRCBZZ / ESTCBZZ) * LOTCBZZ LORCBUS = Σ LORCBZZ

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
LOTGB	Total electrical system energy losses.	Billion Btu	Before 1990: $LOTGBZZ = ESTGBZZ * ELLSS48$ Exceptions: $LOTGBAK = TEEIBAK - ESTGBAK$ $LOTGBHI = TEEIBHI - ESTGBHI$ $LOTGBUS = TEEIBUS - ESTGBUS$ $LOTGB48 = LOTGBUS - (LOTGBAK + LOTGBHI)$ 1990 forward: $LOTGBZZ = TEEBZZ - ESTGBZZ$ $LOTGBUS = TEEIBUS - ESTGBUS$
LOTXB	Total electrical system energy losses allocated to the end-use sectors.	Billion Btu	$LOTXBZZ = LOACBZZ + LOCCBZZ + LOICBZZ + LORCBZZ$ $LOTXBUS = \Sigma LOTXBZZ$
LUACB	Lubricants consumed by the transportation sector.	Billion Btu	$LUACBZZ = LUACPZZ * 6.065$ $LUACBUS = \Sigma LUACBZZ$
LUACP	Lubricants consumed by the transportation sector.	Thousand barrels	Before 2010: $LUACPZZ = (LUTRPZZ / LUTTPZZ) * LUTCPZZ$ $LUACPUS = \Sigma LUACPZZ$ 2010 forward: LUACPZZ is independent. LUACPUS is independent.
LUICB	Lubricants consumed by the industrial sector.	Billion Btu	$LUICBZZ = LUICPZZ * 6.065$ $LUICBUS = \Sigma LUICBZZ$
LUICP	Lubricants consumed by the industrial sector.	Thousand barrels	Before 2010: $LUICPZZ = (LUINPZZ / LUTTPZZ) * LUTCPZZ$ $LUICPUS = \Sigma LUICPZZ$ 2010 forward: LUICPZZ is independent. LUICPUS is independent.
LUINP	Lubricants sold to the industrial sector (through 2009).	Thousand barrels	$LUINPZZ$ is independent. $LUINPUS = \Sigma LUINPZZ$
LUTCB	Lubricants total consumption.	Billion Btu	$LUTCBZZ = LUACBZZ + LUICBZZ$ $LUTCBUS = \Sigma LUTCBZZ$

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
LUTCP	Lubricants total consumption.	Thousand barrels	Before 2010: $LUTCPZZ = (LUTTPZZ / LUTTPUS) * LUTCPUS$ LUTCPUS is independent. 2010 forward: $LUTCPZZ = LUACPZZ + LUICPZZ$ LUTCPUS is independent.
LUTRP	Lubricants sold to the transportation sector (through 2009).	Thousand barrels	LUTRPZZ is independent. $LUTRPUS = \Sigma LUTRPZZ$
LUTTP	Lubricants total sold (through 2009).	Thousand barrels	$LUTTPZZ = LUINPZZ + LUTRPZZ$ $LUTTPUS = \Sigma LUTTPZZ$
LUTXB	Lubricants total end-use consumption.	Billion Btu	$LUTXBZZ = LUACBZZ + LUICBZZ$ $LUTXBUS = \Sigma LUTXBZZ$
LUTXP	Lubricants total end-use consumption.	Thousand barrels	$LUTXPZZ = LUACPZZ + LUICPZZ$ $LUTXPUS = \Sigma LUTXPZZ$
MBICB	Motor gasoline blending components consumed by the industrial sector.	Billion Btu	$MBICBZZ = MBTCBZZ$ $MBICBUS = MBTCBUS$
MBICP	Motor gasoline blending components consumed by the industrial sector.	Thousand barrels	$MBICPZZ = MBTCPZZ$ $MBICPUS = MBTCPUS$
MBTCB	Motor gasoline blending components total consumption.	Billion Btu	$MBTCBZZ = MBTCPZZ * MBTCKUS$ $MBTCBUS = \Sigma MBTCBZZ$
MBTCKUS	Factor for converting motor gasoline blending components from physical units to Btu.	Million Btu per barrel	MBTCKUS is independent.
MBTCP	Motor gasoline blending components total consumption.	Thousand barrels	$MBTCPZZ = (COCAPZZ / COCAPUS) * MBTCPUS$ MBTCPUS is independent.
MGACB	Motor gasoline consumed by the transportation sector.	Billion Btu	$MGACBZZ = MGACPZZ * MGTCKUS$ $MGACBUS = \Sigma MGACBZZ$
MGACP	Motor gasoline consumed by the transportation sector.	Thousand barrels	$MGACPZZ = (MGTRPZZ / MGTPPZZ) * MGTPPZZ$ $MGACPUS = \Sigma MGACPZZ$
MGAGP	Motor gasoline sold for agricultural use.	Thousand gallons	MGAGPZZ is independent. $MGAGPUS = \Sigma MGAGPZZ$
MGBTP	Motor gasoline sold for boating use (2015 forward).	Thousand gallons	MGBTPZZ is independent. $MGBTPUS = \Sigma MGBTPZZ$

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
MGCCB	Motor gasoline consumed by the commercial sector.	Billion Btu	MGCCBZZ = MGCCPZZ * MGTCBUS MGCCBUS = ΣMGCCBZZ
MGCCP	Motor gasoline consumed by the commercial sector.	Thousand barrels	MGCCPZZ = (MGCMPZZ / MGTPPZZ) * MGTCBUS MGCCBUS = ΣMGCCPZZ
MGCMP	Motor gasoline sold to the commercial sector.	Thousand gallons	Before 2015: MGCMPZZ = MGMPZZ + MGPNPZZ MGCMPUS = ΣMGCMPZZ 2015 forward: MGCMPZZ = MGLGPZZ + MGMPZZ + MGPNPZZ MGCMPUS = ΣMGCMPZZ
MGCUP	Motor gasoline sold for construction use.	Thousand gallons	MGCUPZZ is independent. MGCUPUS = ΣMGCUPZZ
MGICB	Motor gasoline consumed by the industrial sector.	Billion Btu	MGICBZZ = MGICPZZ * MGTCBUS MGICBUS = ΣMGICBZZ
MGICP	Motor gasoline consumed by the industrial sector.	Thousand barrels	MGICPZZ = (MGINPZZ / MGTPPZZ) * MGTCBUS MGICBUS = ΣMGICPZZ
MGINP	Motor gasoline sold to the industrial sector.	Thousand gallons	MGINPZZ = MGAGPZZ + MGCUPZZ + MGIYPZZ MGINPUS = ΣMGINPZZ
MGIYP	Motor gasoline sold for industrial and commercial use (Federal Highway Administration terminology).	Thousand gallons	MGIYPZZ is independent. MGIYPUS = ΣMGIYPZZ
MGLGP	Motor gasoline sold for lawn and garden use (2015 forward).	Thousand gallons	MGLGPZZ is independent. MGLGPUS = ΣMGLGPZZ
MGMFP	Motor gasoline sold for highway use.	Thousand gallons	MGMFPZZ is independent. MGMFPUS = ΣMGMFPZZ
MGMRP	Motor gasoline sold for marine use (through 2014).	Thousand gallons	MGMRPZZ is independent. MGMRPUS = ΣMGMRPZZ
MGMP	Motor gasoline sold for miscellaneous and unclassified uses.	Thousand gallons	MGMPZZ is independent. MGMPUS = ΣMGMPZZ
MGPNP	Motor gasoline sold for public nonhighway use.	Thousand gallons	MGPNPZZ is independent. MGPNPUS = ΣMGPNPZZ
MGRVP	Motor gasoline sold for recreational vehicle use (2015 forward).	Thousand gallons	MGRVPZZ is independent. MGRVPUS = ΣMGRVPZZ

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
MGSFP	Special fuels sold (Federal Highway Administration terminology; primarily diesel fuel with small amounts of liquefied petroleum gases).	Thousand gallons	MGSFPZZ is independent. MGSFPUS = Σ MGSFPZZ
MGTCB	Motor gasoline total consumption.	Billion Btu	MGTCBZZ = MGACBZZ + MGCCBZZ + MGICBZZ MGTCBUS = Σ MGTCBZZ
MGTCKUS	Factor for converting motor gasoline from physical units to Btu.	Million Btu per barrel	MGTCKUS is independent.
MGTCP	Motor gasoline total consumption.	Thousand barrels	MGTCPZZ = (MGTPPZZ / MGTPPUS) * MGTCBUS MGTCPUS is independent.
MGTRP	Motor gasoline sold to the transportation sector.	Thousand gallons	Before 2015: MGTRPZZ = MGMFPZZ + MGMRPZZ - MGSFPZZ MGTRPUS = Σ MGTRPZZ 2015 forward: MGTRPZZ = MGBTPZZ + MGMFPZZ + MGRVPZZ - MGSFPZZ MGTRPUS = Σ MGTRPZZ
MGTPP	Motor gasoline total sold.	Thousand gallons	MGTPPZZ = MGCMPPZZ + MGINPZZ + MGTRPZZ MGTPPUS = Σ MGTPPZZ
MGTXB	Motor gasoline total end-use consumption.	Billion Btu	MGTXBZZ = MGACBZZ + MGCCBZZ + MGICBZZ MGTXBUS = Σ MGTXBZZ
MGTXP	Motor gasoline total end-use consumption.	Thousand barrels	MGTXPZZ = MGACPZZ + MGCCPZZ + MGICPZZ MGTXPUS = Σ MGTXPZZ
MMACB	Motor gasoline, excluding fuel ethanol, consumed by the transportation sector.	Billion Btu	Before 1993: MMACBZZ = MGACBZZ MMACBUS = MGACBUS 1993 forward: MMACBZZ = MGACBZZ - EMACBZZ MMACBUS = MGACBUS - EMACBUS
MMCCB	Motor gasoline, excluding fuel ethanol, consumed by the commercial sector.	Billion Btu	Before 1993: MMCCBZZ = MGCCBZZ MMCCBUS = MGCCBUS 1993 forward: MMCCBZZ = MGCCBZZ - EMCCBZZ MMCCBUS = MGCCBUS - EMCCBUS

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
MMICB	Motor gasoline, excluding fuel ethanol, consumed by the industrial sector.	Billion Btu	Before 1993: MMICBZZ = MGICBZZ MMICBUS = MGICBUS 1993 forward: MMICBZZ = MGICBZZ - EMICBZZ MMICBUS = MGICBUS - EMICBUS
MMTCB	Motor gasoline, excluding fuel ethanol, total consumption.	Billion Btu	Before 1993: MMTCBZZ = MGTCBZZ MMTCBUS = MGTCBUS 1993 forward: MMTCBZZ = MGTCBZZ - EMTCBZZ MMTCBUS = MGTCBUS - EMTCBUS
MSICB	Miscellaneous petroleum products consumed by the industrial sector.	Billion Btu	MSICBZZ = MSTCBZZ MSICBUS = MSTCBUS
MSICP	Miscellaneous petroleum products consumed by the industrial sector.	Thousand barrels	MSICPZZ = MSTCPZZ MSICPUS = MSTCPUS
MSTCB	Miscellaneous petroleum products total consumption.	Billion Btu	MSTCBZZ = MSTCPZZ * 5.796 MSTCBUS = ΣMSTCBZZ
MSTCP	Miscellaneous petroleum products total consumption.	Thousand barrels	MSTCPZZ = (OCVAVZZ / OCVAVUS) * MSTCPUS MSTCPUS is independent.
NAICB	Natural gasoline consumed by the industrial sector (through 1983).	Billion Btu	NAICBZZ = NATCBZZ NAICBUS = NATCBUS
NAICP	Natural gasoline consumed by the industrial sector (through 1983).	Thousand barrels	NAICPZZ = NATCPZZ NAICPUS = NATCPUS
NATCB	Natural gasoline total consumption (through 1983).	Billion Btu	NATCBZZ = NATCPZZ * 4.638 NATCBUS = ΣNATCBZZ
NATCP	Natural gasoline total consumption (through 1983).	Thousand barrels	NATCPZZ = NATCPUS * FNCASZZ NATCPUS is independent.
NGACB	Natural gas consumed by the transportation sector.	Billion Btu	NGACBZZ = NGACPZZ * NGTXKZZ NGACBUS = ΣNGACBZZ
NGACP	Natural gas consumed by the transportation sector.	Million cubic feet	NGACPZZ = NGPZPZZ + NGVHPZZ NGACPUS = ΣNGACPZZ

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
NGCCB	Natural gas delivered to the commercial sector, used as consumption (including supplemental gaseous fuels).	Billion Btu	NGCCBZZ = NGCCPZZ * NGTXKZZ NGCCBUS = ΣNGCCBZZ
NGCCP	Natural gas delivered to the commercial sector, used as consumption (including supplemental gaseous fuels).	Million cubic feet	NGCCPZZ is independent. NGCCPUS = ΣNGCCPZZ
NGEIB	Natural gas consumed by the electric power sector (including supplemental gaseous fuels).	Billion Btu	Before 2010: NGEIBZZ = NGEIPZZ * NGEIKZZ NGEIBUS = ΣNGEIBZZ 2010 forward: NGEIBZZ is independent. NGEIBUS = ΣNGEIBZZ
NGEIK	Factor for converting natural gas consumed by the electric power sector from physical units to Btu.	Thousand Btu per cubic foot	NGEIKZZ is independent. NGEIKUS = NGEIBUS / NGEIPUS
NGEIP	Natural gas consumed by the electric power sector (including supplemental gaseous fuels).	Million cubic feet	NGEIPZZ is independent. NGEIPUS = ΣNGEIPZZ
NGGBP	Natural gas generating units net summer capacity in all sectors.	Thousand kilowatts	NGGBPZZ is independent. NGGBPUS is independent.
NGICB	Natural gas consumed by the industrial sector (including supplemental gaseous fuels).	Billion Btu	NGICBZZ = NGICPZZ * NGTXKZZ NGICBUS = ΣNGICBZZ
NGICP	Natural gas consumed by the industrial sector (including supplemental gaseous fuels).	Million cubic feet	NGICPZZ = NGINPZZ + NGLEPZZ + NGPLPZZ NGICPUS = ΣNGICPZZ
NGINP	A portion of the natural gas delivered to the industrial sector.	Million cubic feet	NGINPZZ is independent. NGINPUS = ΣNGINPZZ
NGLEP	Natural gas consumed as lease fuel.	Million cubic feet	NGLEPZZ is independent. NGLEPUS = ΣNGLEPZZ
NGLPB	Natural gas consumed as lease and plant fuel.	Billion Btu	NGLPBZZ = NGLPPZZ * NGTXKZZ NGLPBUS = ΣNGLPBZZ
NGLPP	Natural gas consumed as lease and plant fuel.	Million cubic feet	NGLPPZZ = NGLEPZZ + NGPLPZZ NGLPPUS = ΣNGLPPZZ
NGPLP	Natural gas consumed as plant fuel.	Million cubic feet	NGPLPZZ is independent. NGPLPUS = ΣNGPLPZZ

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
NGPZB	Natural gas for pipeline and distribution use.	Billion Btu	NGPZBZZ = NGPZPZZ * NGTXKZZ NGPZBUS = ΣNGPZBZZ
NGPZP	Natural gas for pipeline and distribution use.	Million cubic feet	NGPZPZZ is independent. NGPZPUS = ΣNGPZPZZ
NGRCB	Natural gas delivered to the residential sector, used as consumption (including supplemental gaseous fuels).	Billion Btu	NGRCBZZ = NGRCPZZ * NGTXKZZ NGRCBUS = ΣNGRCBZZ
NGRCP	Natural gas delivered to the residential sector, used as consumption (including supplemental gaseous fuels).	Million cubic feet	NGRCPZZ is independent. NGRCPUS = ΣNGRCPZZ
NGSFP	Supplemental gaseous fuels supplies.	Million cubic feet	NGSFPZZ is independent. NGSFPUS = ΣNGSFPZZ
NGTCB	Natural gas total consumption (including supplemental gaseous fuels).	Billion Btu	NGTCBZZ = NGTCPZZ * NGTCKZZ NGTCBUS = ΣNGTCBZZ
NGTCK	Factor for converting natural gas total consumption from physical units to Btu.	Thousand Btu per cubic foot	NGTCKZZ is independent. NGTCKUS = NGTCBUS / NGTCPUS
NGTCP	Natural gas total consumption (including supplemental gaseous fuels).	Million cubic feet	NGTCPZZ = NGACPZZ + NGCCPZZ + NGEIPZZ + NGICPZZ + NGRCPZZ NGTCPUS = ΣNGTCPZZ
NGTPB	Natural gas total consumption (including supplemental gaseous fuels) per capita.	Million Btu	NGTPB = NGTCB / TPOPP
NGTPP	Natural gas total consumption (including supplemental gaseous fuels) per capita.	Thousand cubic feet	NGTPP = NGTCP / TPOPP
NGTXB	Natural gas total end-use consumption (including supplemental gaseous fuels).	Billion Btu	NGTXBZZ = NGACBZZ + NGCCBZZ + NGICBZZ + NGRCBZZ NGTXBUS = ΣNGTXBZZ
NGTXK	Factor for converting natural gas used by end-use sectors from physical units to Btu.	Thousand Btu per cubic foot	NGTXKZZ = (NGTCBZZ - NGEIBZZ) / (NGTCPZZ - NGEIPZZ) NGTXKUS = (NGTCBUS - NGEIBUS) / (NGTCPUS - NGEIPUS)
NGTXP	Natural gas total end-use consumption (including supplemental gaseous fuels).	Million cubic feet	NGTXPZZ = NGACPZZ + NGCCPZZ + NGICPZZ + NGRCPZZ NGTXPUS = ΣNGTXPZZ

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
NGTZP	Natural gas consumed in sectors that have supplemental gaseous fuels commingled with natural gas.	Million cubic feet	NGTZPZZ = NGCCPZZ + NGEIPZZ + NGINPZZ + NGRCPZZ NGTZPUS = Σ NGTZPZZ
NGVHB	Natural gas consumed as vehicle fuel.	Billion Btu	NGVHBZZ = NGVHPZZ * NGTXKZZ NGVHBUS = Σ NGVHBZZ
NGVHP	Natural gas consumed as vehicle fuel.	Million cubic feet	NGVHPZZ is independent. NGVHPUS = Σ NGVHPZZ
NNACB	Natural gas consumed by the transportation sector.	Billion Btu	NNACBZZ = NGACBZZ NNACBUS = Σ NNACBZZ
NNCCB	Natural gas consumed by the commercial sector (excluding supplemental gaseous fuels).	Billion Btu	NNCCBZZ = NGCCBZZ - SFCCBZZ NNCCBUS = Σ NNCCBZZ
NNEIB	Natural gas consumed by the electric power sector (excluding supplemental gaseous fuels).	Billion Btu	NNEIBZZ = NGEIBZZ - SFEIBZZ NNEIBUS = Σ NNEIBZZ
NNICB	Natural gas consumed by the industrial sector (excluding supplemental gaseous fuels).	Billion Btu	NNICBZZ = NGICBZZ - SFINBZZ NNICBUS = Σ NNICBZZ
NNRCB	Natural gas consumed by the residential sector (excluding supplemental gaseous fuels).	Billion Btu	NNRCBZZ = NGRCBZZ - SFRCBZZ NNRCBUS = Σ NNRCBZZ
NNTCB	Natural gas total consumption (excluding supplemental gaseous fuels).	Billion Btu	NNTCBZZ = NGTCBZZ - SFTCBZZ NNTCBUS = Σ NNTCBZZ
NTCAS	Natural gas turbine generating units capacity factor.	Percent	NTCASZZ is independent. NTCASUS is independent.
NUCAS	Nuclear generating units capacity factor.	Percent	NUCASZZ is independent. NUCASUS is independent.
NUEGB	Nuclear energy consumed for electricity generation by the electric power sector.	Billion Btu	NUEGBZZ = NUEGPZZ * NUETKUS NUEGBUS = Σ NUEGBZZ
NUEGP	Nuclear electricity net generation in the electric power sector.	Million kilowatthours	NUEGPZZ is independent. NUEGPUS = Σ NUEGPZZ
NUETB	Nuclear energy consumed for electricity generation, total.	Billion Btu	NUETBZZ = NUEGBZZ NUETBUS = NUEGBUS
NUETKUS	Factor for converting electricity generated from nuclear power from physical units to Btu.	Thousand Btu per kilowatthour	NUETKUS is independent.
NUETP	Nuclear electricity total net generation.	Million kilowatthours	NUETPZZ = NUEGPZZ NUETPUS = Σ NUETPZZ

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
NUGBP	Nuclear generating units net summer capacity in all sectors.	Thousand kilowatts	NUGBPZZ is independent. NUGBPUS is independent.
NYCAS	Natural gas conventional steam generating units capacity factor.	Percent	NYCASZZ is independent. NYCASUS is independent.
OCVAV	Value of shipments (value added prior to 2001) for the industrial organic chemical manufacturing industry.	Million dollars	OCVAVZZ is independent. OCVAVUS = Σ OCVAVZZ
OHICB	Other hydrocarbon gas liquids (other than propane) consumed by the industrial sector.	Billion Btu	OHICB = HLICB - PQICB
OJGBP	Other gases generating units net summer capacity in all sectors.	Thousand kilowatts	OJGBPZZ is independent. OJGBPUS is independent.
OMTCB	Other petroleum products consumption, excluding biofuels.	Billion Btu	OMTCBZZ = OPTCBZZ - BXSUBZZ OMTCBUS = OPTCBUS - BXSUBUS
OPACB	Other petroleum products consumed by the transportation sector.	Billion Btu	2021 forward: OPACBZZ = BDAUBZZ + B1AUBZZ OPACBUS = BDAUBUS + B1AUBUS + BOAUBUS
OPACP	Other petroleum products consumed by the transportation sector.	Thousand barrels	2021 forward: OPACPZZ = BDAUPZZ + B1AUPZZ OPACPUS = BDAUPUS + B1AUPUS + BOAUPUS
OPCCB	Other petroleum products consumed by the commercial sector.	Billion Btu	2021 forward: OPCCBZZ = BDCUBZZ OPCCBUS = Σ OPCCBZZ
OPCCP	Other petroleum products consumed by the commercial sector.	Thousand barrels	2021 forward: OPCCPZZ = BDCUPZZ OPCCPUS = Σ OPCCPZZ
OPEIB	Other petroleum products consumed by the electric power sector.	Billion Btu	2021 forward: OPEIBZZ = BDEUBZZ OPEIBUS = Σ OPEIBZZ
OPEIP	Other petroleum products consumed by the electric power sector.	Thousand barrels	2021 forward: OPEIPZZ = BDEUPZZ OPEIPUS = Σ OPEIPZZ

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
OPICB	Other petroleum products consumed by the industrial sector.	Billion Btu	$OPICBZZ = ABICBZZ + COICBZZ + FNICBZZ + FOICBZZ + FSICBZZ + MBICBZZ + MSICBZZ + SGICBZZ + SNICBZZ + UOICBZZ + WXICBZZ$ $OPICBUS = \Sigma OPICBZZ$
OPICP	Other petroleum products consumed by the industrial sector.	Thousand barrels	$OPICPZZ = ABICPZZ + COICPZZ + FNICPZZ + FOICPZZ + FSICPZZ + MBICPZZ + MSICPZZ + SGICPZZ + SNICPZZ + UOICPZZ + WXICPZZ$ $OPICPUS = \Sigma OPICPZZ$
OPRCB	Other petroleum products consumed by the residential sector.	Billion Btu	2021 forward: $OPRCBZZ = BDRUBZZ$ $OPRCBUS = \Sigma OPRCBZZ$
OPRCP	Other petroleum products consumed by the residential sector.	Thousand barrels	2021 forward: $OPRCPZZ = BDRUPZZ$ $OPRCPUS = \Sigma OPRCPZZ$
OPTCB	Other petroleum products total consumption.	Billion Btu	$OPTCBZZ = ABTCBZZ + BXSUBZZ + COTCBZZ + FNTCBZZ + FOTCBZZ + FSTCBZZ + MBTCBZZ + MSTCBZZ + SGTCBZZ + SNTCBZZ + UOTCBZZ + WXTCBZZ$ $OPTCBUS = ABTCBUS + BXSUBUS + COTCBUS + FNTCBUS + FOTCBUS + FSTCBUS + MBTCBUS + MSTCBUS + SGTCBUS + SNTCBUS + UOTCBUS + WXTCBUS$
OPTCP	Other petroleum products total consumption.	Thousand barrels	$OPTCPZZ = ABTCPZZ + BXSUPZZ + COTCPZZ + FNTCPZZ + FOTCPZZ + FSTCPZZ + MBTCPZZ + MSTCPZZ + SGTCPZZ + SNTCPZZ + UOTCPZZ + WXTCPZZ$ $OPTCPUS = ABTCPUS + BXSUPUS + COTCPUS + FNTCPUS + FOTCPUS + FSTCPUS + MBTCPUS + MSTCPUS + SGTCPUS + SNTCPUS + UOTCPUS + WXTCPUS$
OPTXB	Other petroleum products total end-use consumption.	Billion Btu	2021 forward: $OPTXBZZ = OPACBZZ + OPCCBZZ + OPICBZZ + OPRCBZZ$ $OPTXBUS = OPACBUS + OPCCBUS + OPICBUS + OPRCBUS$

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
OPTXP	Other petroleum products total end-use consumption.	Thousand barrels	2021 forward: $OPTXPZZ = OPACPZZ + OPCCPZZ + OPICPZZ + OPRCPZZ$ $OPTXPUS = OPACPUS + OPCCPUS + OPICPUS + OPRCPUS$
OTGBP	Other generating units net summer capacity in all sectors.	Thousand kilowatts	OTGBPZZ is independent. OTGBPUS is independent.
P1ICB	Asphalt and road oil, kerosene, lubricants, petroleum coke, and “other petroleum products” consumed by the industrial sector.	Billion Btu	$P1ICBZZ = ARICBZZ + KSICBZZ + LUICBZZ + OPICBZZ + PCICBZZ$ $P1ICBUS = ARICBUS + KSICBUS + LUICBUS + OPICBUS + PCICBUS$
P1ICP	Asphalt and road oil, kerosene, lubricants, petroleum coke, and “other petroleum products” consumed by the industrial sector.	Thousand barrels	$P1ICPZZ = ARICPZZ + KSICPZZ + LUICPZZ + OPICPZZ + PCICPZZ$ $P1ICPUS = ARICPUS + KSICPUS + LUICPUS + OPICPUS + PCICPUS$
P1TCB	Asphalt and road oil, aviation gasoline, kerosene, lubricants, petroleum coke, and “other petroleum products” total consumption.	Billion Btu	$P1TCBZZ = ARTCBZZ + AVTCBZZ + KSTCBZZ + LUTCBZZ + OPTCBZZ + PCTCBZZ$ $P1TCBUS = ARTCBUS + AVTCBUS + KSTCBUS + LUTCBUS + OPTCBUS + PCTCBUS$
P1TCP	Asphalt and road oil, aviation gasoline, kerosene, lubricants, petroleum coke, and “other petroleum products” total consumption.	Thousand barrels	$P1TCPZZ = ARTCPZZ + AVTCPZZ + KSTCPZZ + LUTCPZZ + OPTCPZZ + PCTCPZZ$ $P1TCPUS = ARTCPUS + AVTCPUS + KSTCPUS + LUTCPUS + OPTCPUS + PCTCPUS$
P1TXB	Asphalt and road oil, aviation gasoline, kerosene, lubricants, petroleum coke, and “other petroleum products” total end-use consumption.	Billion Btu	$P1TXB = ARTXB + AVTXB + KSTXB + LUTXB + OPTXB + PCTXB$
P1TXP	Asphalt and road oil, aviation gasoline, kerosene, lubricants, petroleum coke, and “other petroleum products” total end-use consumption.	Thousand barrels	$P1TXP = ARTXP + AVTXP + KSTXP + LUTXP + OPTXP + PCTXP$

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
PAACB	All petroleum products consumed by the transportation sector.	Billion Btu	$PAACBZZ = AVACBZZ + DFACBZZ + HLACBZZ + JFACBZZ + LUACBZZ + MGACBZZ + OPACBZZ + RFACBZZ$ $PAACBUS = AVACBUS + DFACBUS + HLACBUS + JFACBUS + LUACBUS + MGACBUS + OPACBUS + RFACBUS$
PAACKUS	Factor for converting all petroleum products consumed by the transportation sector from physical units to Btu for the United States.	Million Btu per barrel	$PAACKUS = PAACBUS / PAACPUS$
PAACP	All petroleum products consumed by the transportation sector.	Thousand barrels	$PAACPZZ = AVACPZZ + DFACPZZ + HLACPZZ + JFACPZZ + LUACPZZ + MGACPZZ + OPACPZZ + RFACPZZ$ $PAACPUS = AVACPUS + DFACPUS + HLACPUS + JFACPUS + LUACPUS + MGACPUS + OPACPUS + RFACPUS$
PACAS	Petroleum generating units capacity factor.	Percent	PACASZZ is independent. PACASUS is independent.
PACCB	All petroleum products consumed by the commercial sector.	Billion Btu	$PACCBZZ = DFCCBZZ + HLCCBZZ + KSCCBZZ + MGCCBZZ + OPCCBZZ + PCCCBZZ + RFCCBZZ$ $PACCBUS = \Sigma PACCBZZ$
PACCKUS	Factor for converting all petroleum products consumed by the commercial sector from physical units to Btu for the United States.	Million Btu per barrel	$PACCKUS = PACCBUS / PACCPUS$
PACCP	All petroleum products consumed by the commercial sector.	Thousand barrels	$PACCPZZ = DFCCPZZ + HLCCPZZ + KSCCPZZ + MGCCPZZ + OPCCPZZ + PCCCPZZ + RFCCPZZ$ $PACCPUS = \Sigma PACCPZZ$
PAEIB	All petroleum products consumed by the electric power sector.	Billion Btu	$PAEIBZZ = DFEIBZZ + JKEUBZZ + OPEIBZZ + PCEIBZZ + RFEIBZZ$ $PAEIBUS = \Sigma PAEIBZZ$
PAEIKUS	Factor for converting all petroleum products consumed by the electric power sector from physical units to Btu for the United States.	Million Btu per barrel	$PAEIKUS = PAEIBUS / PAEIPUS$
PAEIP	All petroleum products consumed by the electric power sector.	Thousand barrels	$PAEIPZZ = DFEIPZZ + JKEUPZZ + OPEIPZZ + PCEIPZZ + RFEIPZZ$ $PAEIPUS = \Sigma PAEIPZZ$

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
PAGBP	Petroleum generating units net summer capacity in all sectors.	Thousand kilowatts	PAGBPZZ is independent. PAGBPUS is independent.
PAHCBUS	All petroleum products consumed by the residential and commercial sectors combined.	Billion Btu	PAHCBUS = PACCBUS + PARCBUS
PAHCKUS	Factor for converting all petroleum products consumed by the residential and commercial sectors combined from physical units to Btu for the United States.	Million Btu per barrel	PAHCKUS = PAHCBUS / PAHCPUS
PAHCPUS	All petroleum products consumed by the residential and commercial sectors combined for the United States.	Thousand barrels	PAHCPUS = PACCPUS + PARCPUS
PAICB	All petroleum products consumed by the industrial sector.	Billion Btu	PAICBZZ = ARICBZZ + DFICBZZ + HLICBZZ + KSICBZZ + LUICBZZ + MGICBZZ + OPICBZZ + PCICBZZ + RFICBZZ PAICBUS = Σ PAICBZZ
PAICKUS	Factor for converting all petroleum products consumed by the industrial sector from physical units to Btu for the United States.	Million Btu per barrel	PAICKUS = PAICBUS / PAICPUS
PAICP	All petroleum products consumed by the industrial sector.	Thousand barrels	PAICPZZ = ARICPZZ + DFICPZZ + HLICPZZ + KSICPZZ + LUICPZZ + MGICPZZ + OPICPZZ + PCICPZZ + RFICPZZ PAICPUS = Σ PAICPZZ
PARCB	All petroleum products consumed by the residential sector.	Billion Btu	PARCBZZ = DFRCBZZ + HLRCBZZ + KSRCBZZ + OPRCBZZ PARCBUS = Σ PARCBZZ
PARCKUS	Factor for converting all petroleum products consumed by the residential sector from physical units to Btu for the United States.	Million Btu per barrel	PARCKUS = PARCBUS / PARCPUS
PARCP	All petroleum products consumed by the residential sector.	Thousand barrels	PARCPZZ = DFRCPZZ + HLRCPZZ + KSRCPZZ + OPRCPZZ PARCPUS = Σ PARCPZZ

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
PATCB	All petroleum products total consumption.	Billion Btu	$\begin{aligned} \text{PATCBZZ} &= \text{ARTCBZZ} + \text{AVTCBZZ} + \text{DFTCBZZ} + \text{HLTCBZZ} + \text{JFTCBZZ} + \text{KSTCBZZ} + \text{LUTCBZZ} + \text{MGTCBZZ} + \text{OPTCBZZ} + \text{PCTCBZZ} + \text{RFTCBZZ} \\ \text{PATCBUS} &= \text{ARTCBUS} + \text{AVTCBUS} + \text{DFTCBUS} + \text{HLTCBUS} + \text{JFTCBUS} + \text{KSTCBUS} + \text{LUTCBUS} + \text{MGTCBUS} + \text{OPTCBUS} + \text{PCTCBUS} + \text{RFTCBUS} \end{aligned}$
PATCKUS	Factor for converting all petroleum products consumed by all sectors from physical units to Btu for the United States.	Million Btu per barrel	$\text{PATCKUS} = \text{PATCBUS} / \text{PATCPUS}$
PATCP	All petroleum products total consumption.	Thousand barrels	$\begin{aligned} \text{PATCPZZ} &= \text{ARTCPZZ} + \text{AVTCPZZ} + \text{DFTCPZZ} + \text{HLTCPZZ} + \text{JFTCPZZ} + \text{KSTCPZZ} + \text{LUTCPZZ} + \text{MGTCPZZ} + \text{OPTCPZZ} + \text{PCTCPZZ} + \text{RFTCPZZ} \\ \text{PATCPUS} &= \text{ARTCPUS} + \text{AVTCPUS} + \text{DFTCPUS} + \text{HLTCPUS} + \text{JFTCPUS} + \text{KSTCPUS} + \text{LUTCPUS} + \text{MGTCPUS} + \text{OPTCPUS} + \text{PCTCPUS} + \text{RFTCPUS} \end{aligned}$
PATPB	All petroleum products total consumption per capita.	Million Btu	$\text{PATPB} = \text{PATCB} / \text{TPOPP}$
PATPP	All petroleum products total consumption per capita.	Barrels	$\text{PATPP} = \text{PATCP} / \text{TPOPP}$
PATXB	All petroleum products total end-use consumption.	Billion Btu	$\begin{aligned} \text{PATXBZZ} &= \text{ARTXBZZ} + \text{AVTXBZZ} + \text{DFTXBZZ} + \text{HLTXBZZ} + \text{JFTXBZZ} + \text{KSTXBZZ} + \text{LUTXBZZ} + \text{MGTXBZZ} + \text{OPTXBZZ} + \text{PCTXBZZ} + \text{RFTXBZZ} \\ \text{PATXBUS} &= \text{ARTXBUS} + \text{AVTXBUS} + \text{DFTXBUS} + \text{HLTXBUS} + \text{JFTXBUS} + \text{KSTXBUS} + \text{LUTXBUS} + \text{MGTXBUS} + \text{OPTXBUS} + \text{PCTXBUS} + \text{RFTXBUS} \end{aligned}$
PATXP	All petroleum products total end-use consumption.	Thousand barrels	$\begin{aligned} \text{PATXPZZ} &= \text{ARTXPZZ} + \text{AVTXPZZ} + \text{DFTXPZZ} + \text{HLTXPZZ} + \text{JFTXPZZ} + \text{KSTXPZZ} + \text{LUTXPZZ} + \text{MGTXPZZ} + \text{OPTXPZZ} + \text{PCTXPZZ} + \text{RFTXPZZ} \\ \text{PATXPUS} &= \text{ARTXPUS} + \text{AVTXPUS} + \text{DFTXPUS} + \text{HLTXPUS} + \text{JFTXPUS} + \text{KSTXPUS} + \text{LUTXPUS} + \text{MGTXPUS} + \text{OPTXPUS} + \text{PCTXPUS} + \text{RFTXPUS} \end{aligned}$
PCC3M	Petroleum coke consumed for combined-heat-and-power in the commercial sector.	Thousand tons	$\begin{aligned} \text{PCC3MZZ} &\text{ is independent.} \\ \text{PCC3MUS} &= \Sigma \text{PCC3MZZ} \end{aligned}$
PCCCB	Petroleum coke consumed by the commercial sector.	Billion Btu	$\begin{aligned} \text{PCCCBZZ} &= \text{PCCCPZZ} * \text{PCMKKUS} \\ \text{PCCCBUS} &= \Sigma \text{PCCCBZZ} \end{aligned}$
PCCCP	Petroleum coke consumed by the commercial sector.	Thousand barrels	$\begin{aligned} \text{PCCCPZZ} &= \text{PCC3MZZ} * 5 \\ \text{PCCCPUS} &= \Sigma \text{PCCCPZZ} \end{aligned}$

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
PCCTKUS	Factor for converting petroleum coke, catalyst coke from physical units to Btu.	Million Btu per barrel	PCCTKUS is independent.
PCEIB	Petroleum coke consumed by the electric power sector.	Billion Btu	$PCEIBZZ = PCEIPZZ * PCMKKUS$ $PCEIBUS = \Sigma PCEIBZZ$
PCEIM	Petroleum coke consumed by the electric power sector.	Thousand tons	PCEIMZZ is independent. $PCEIMUS = \Sigma PCEIMZZ$
PCEIP	Petroleum coke consumed by the electric power sector.	Thousand barrels	$PCEIPZZ = PCEIMZZ * 5$ $PCEIPUS = \Sigma PCEIPZZ$
PCI3B	Petroleum coke consumed for combined-heat-and-power in the industrial sector.	Billion Btu	$PCI3BZZ = PCI3PZZ * PCMKKUS$ $PCI3BUS = \Sigma PCI3BZZ$
PCI3M	Petroleum coke consumed for combined-heat-and-power in the industrial sector.	Thousand tons	PCI3MZZ is independent. $PCI3MUS = \Sigma PCI3MZZ$
PCI3P	Petroleum coke consumed for combined-heat-and-power in the industrial sector.	Thousand barrels	$PCI3PZZ = PCI3MZZ * 5$ $PCI3PUS = \Sigma PCI3PZZ$
PCICB	Petroleum coke consumed in the industrial sector.	Billion Btu	$PCICBZZ = PCI3BZZ + PCOCBZZ + PCRFBZZ$ $PCICBUS = \Sigma PCICBZZ$
PCICP	Petroleum coke consumed in the industrial sector.	Thousand barrels	$PCICPZZ = PCI3PZZ + PCOCPZZ + PCRFPZZ$ $PCICPUS = PCTCPUS - PCCCPUS - PCEIPUS$
PCMKKUS	Factor for converting petroleum coke, marketable coke from physical units to Btu.	Million Btu per barrel	PCMKKUS is independent.
PCOCB	Petroleum coke consumed in the industrial sector other than for refinery use and combined-heat-and-power.	Billion Btu	$PCOCBZZ = PCOCPZZ * PCMKKUS$ $PCOCBUS = \Sigma PCOCBZZ$
PCOCP	Petroleum coke consumed in the industrial sector other than for refinery use and combined-heat-and-power.	Thousand barrels	$PCOCPZZ = (AICAPZZ / AICAPUS) * PCOCPUS$ $PCOCPUS = PCICPUS - PCI3PUS - PCRFPUS$
PCRFB	Petroleum coke consumed as refinery fuel.	Billion Btu	$PCRFBZZ = PCRFPZZ * PCCTKUS$ $PCRFBUS = \Sigma PCRFBZZ$

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
PCRFP	Petroleum coke consumed as refinery fuel.	Thousand barrels	Before 1981: PCRFPZZ is independent for selected states. $PCRFPZZ = (CTCAPZZ / CTCAPGZ) * PCRFPZ$ for states belonging to a specific state group, GZ. 1981 through 2012: $PCRFPZZ = (CTCAPZZ / CTCAPPZ) * PCRFPZ$ for states belonging to a specific PADD, PZ. 2013 forward: PCRFPZZ is independent. $PCRFPUS = \sum PCRFPZZ$ for all years.
PCTCB	Petroleum coke total consumption.	Billion Btu	$PCTCBZZ = PCCCBZZ + PCEIBZZ + PCICBZZ$ $PCTCBUS = \sum PCTCBZZ$
PCTCP	Petroleum coke total consumption.	Thousand barrels	$PCTCPZZ = PCCCPZZ + PCEIPZZ + PCICPZZ$ PCTCPUS is independent.
PCTXB	Petroleum coke total end-use consumption.	Billion Btu	$PCTXBZZ = PCCCBZZ + PCICBZZ$ $PCTXBUS = \sum PCTXBZZ$
PCTXP	Petroleum coke total end-use consumption.	Thousand barrels	$PCTXPZZ = PCCCPZZ + PCICPZZ$ $PCTXPUS = \sum PCTXPZZ$
PHVHN	Plug-in hybrid electric vehicle (PHEV) light-duty stocks.	Thousands of registered vehicles	PHVHNZZ is independent. $PHVHNUS = \sum PHVHNZZ$
PHVHP	Electricity consumed for plug-in hybrid electric vehicle (PHEV) use.	Million kilowatthours	PHVHPZZ is independent. $PHVHPUS = \sum PHVHPZZ$
PIVAV	Value of shipments (value added prior to 2001) for the paint and coating manufacturing industry.	Million dollars	PIVAVZZ is independent. $PIVAVUS = \sum PIVAVZZ$
PLICB	Plant condensate consumed by the industrial sector (through 1983).	Billion Btu	$PLICBZZ = PLTCBZZ$ $PLICBUS = PLTCBUS$
PLICP	Plant condensate consumed by the industrial sector (through 1983).	Thousand barrels	$PLICPZZ = PLTCPZZ$ $PLICPUS = PLTCPUS$
PLTCB	Plant condensate total consumption (through 1983).	Billion Btu	$PLTCBZZ = PLTCPZZ * 5.418$ $PLTCBUS = \sum PLTCBZZ$
PLTCP	Plant condensate total consumption (through 1983).	Thousand barrels	$PLTCPZZ = PLTCPUS * FNCASZZ$ PLTCPUS is independent.

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
PMACB	All petroleum products, excluding biofuels, consumed by the transportation sector.	Billion Btu	$PMACBZZ = AVACBZZ + DMACBZZ + JFACBZZ + HLACBZZ + LUACBZZ + MMACBZZ + RFACBZZ$ $PMACBUS = AVACBUS + DMACBUS + JFACBUS + HLACBUS + LUACBUS + MMACBUS + RFACBUS$
PMCCB	All petroleum products, excluding biofuels, consumed by the commercial sector.	Billion Btu	$PMCCBZZ = DMCCBZZ + HLCCBZZ + KSCCBZZ + MMCCBZZ + PCCCBZZ + RFCCBZZ$ $PMCCBUS = DMCCBUS + HLCCBUS + KSCCBUS + MMCCBUS + PCCCBUS + RFCCBUS$
PMEIB	All petroleum products, excluding biofuels, consumed by the electric power sector.	Billion Btu	$PMEIBZZ = DMEIBZZ + JKEUBZZ + PCEIBZZ + RFEIBZZ$ $PMEIBUS = \Sigma PMEIBZZ$
PMICB	All petroleum products, excluding biofuels, consumed by the industrial sector.	Billion Btu	$PMICBZZ = ARICBZZ + DMICBZZ + HLICBZZ + KSICBZZ + LUICBZZ + MMICBZZ + OPICBZZ + PCICBZZ + RFICBZZ$ $PMICBUS = ARICBUS + DMICBUS + HLICBUS + KSICBUS + LUICBUS + MMICBUS + OPICBUS + PCICBUS + RFICBUS$
PMRCB	All petroleum products, excluding biofuels, consumed by the residential sector.	Billion Btu	$PMRCBZZ = DMRCBZZ + HLRCBZZ + KSRCBZZ$ $PMRCBUS = \Sigma PMRCBZZ$
PMTCB	All petroleum products, excluding biofuels, total consumption.	Billion Btu	$PMTCBZZ = ARTCBZZ + AVTCBZZ + DMTCBZZ + HLTCBZZ + JFTCBZZ + KSTCBZZ + LUTCBZZ + MMTCBZZ + OMTCBZZ + PCTCBZZ + RFTCBZZ$ $PMTCBUS = ARTCBUS + AVTCBUS + DMTCBUS + HLTCBUS + JFTCBUS + KSTCBUS + LUTCBUS + MMTCBUS + OMTCBUS + PCTCBUS + RFTCBUS$
PPICB	Natural gasoline (pentanes plus) consumed by the industrial sector.	Billion Btu	$PPICBZZ = PPTCBZZ$ $PPICBUS = PPTCBUS$
PPICP	Natural gasoline (pentanes plus) consumed by the industrial sector.	Thousand barrels	$PPICPZZ = PPTCPZZ$ $PPICPUS = PPTCPUS$
PPTCB	Natural gasoline (pentanes plus) total consumption.	Billion Btu	$PPTCBZZ = PPTCPZZ * 4.638$ $PPTCBUS = \Sigma PPTCBZZ$
PPTCP	Natural gasoline (pentanes plus) total consumption.	Thousand barrels	$PPTCPZZ = PPTCPUS * FNCASZZ$ $PPTCPUS$ is independent.
PQACB	Propane consumed by the transportation sector.	Billion Btu	$PQACBZZ = PQACPZZ * 3.841$ $PQACBUS = \Sigma PQACBZZ$

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
PQACP	Propane consumed by the transportation sector.	Thousand barrels	PQACPZZ is independent. PQACPUS is independent.
PQCCB	Propane consumed by the commercial sector.	Billion Btu	$PQCCBZZ = PQCCPZZ * 3.841$ $PQCCBUS = \Sigma PQCCBZZ$
PQCCP	Propane consumed by the commercial sector.	Thousand barrels	PQCCPZZ is independent. PQCCPUS is independent.
PQICB	Propane consumed by the industrial sector.	Billion Btu	$PQICBZZ = PQICPZZ * 3.841$ $PQICBUS = \Sigma PQICBZZ$
PQICP	Propane consumed by the industrial sector.	Thousand barrels	PQICPZZ is independent. PQICPUS is independent.
PQRCB	Propane consumed by the residential sector.	Billion Btu	$PQRCBZZ = PQRCPZZ * 3.841$ $PQRCBUS = \Sigma PQRCBZZ$
PQRCP	Propane consumed by the residential sector.	Thousand barrels	PQRCPZZ is independent. PQRCBUS is independent.
PQTCB	Propane total consumption.	Billion Btu	$PQTCBZZ = PQACBZZ + PQCCBZZ + PQICBZZ + PQRCBZZ$ $PQTCBUS = \Sigma PQTCBZZ$
PQTCP	Propane total consumption.	Thousand barrels	$PQTCPZZ = PQACPZZ + PQCCPZZ + PQICPZZ + PQRCPZZ$ PQTCPUS is independent.
PQTXB	Propane total end-use consumption.	Billion Btu	$PQTXBZZ = PQACBZZ + PQCCBZZ + PQICBZZ + PQRCBZZ$ $PQTXBUS = \Sigma PQTXBZZ$
PQTXP	Propane total end-use consumption.	Thousand barrels	$PQTXPZZ = PQTCPZZ$ $PQTXPUS = \Sigma PQTXPZZ$
PYICB	Propylene from refineries consumed by the industrial sector.	Billion Btu	$PYICBZZ = PYTCBZZ$ $PYICBUS = PYTCBUS$
PYICP	Propylene from refineries consumed by the industrial sector.	Thousand barrels	$PYICPZZ = PYTCPZZ$ $PYICPUS = PYTCPUS$
PYTCB	Propylene from refineries total consumption.	Billion Btu	$PYTCBZZ = PYTCPZZ * 3.835$ $PYTCBUS = \Sigma PYTCBZZ$
PYTCP	Propylene from refineries total consumption.	Thousand barrels	PYTCPZZ is independent. PYTCPUS is independent.

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
RDICP	Road oil consumed by the industrial sector (through 1982).	Thousand barrels	RDICPZZ = (RDINPZZ / RDINPUS) * RDTCPUS RDICPUS = \sum RDICPZZ
RDINP	Road oil sold to the industrial sector (through 1982).	Short tons	RDINPZZ is independent. RDINPUS = \sum RDINPZZ
RDTCP	Road oil total consumption (through 1982).	Thousand barrels	RDTCPZZ = RDICPZZ RDTCPUS is independent.
REACB	Renewable energy sources consumed by the transportation sector.	Billion Btu	REACBZZ = BDACBZZ + B1ACBZZ + EMACBZZ REACBUS = BDACBUS + BOACBUS + B1ACBUS + EMACBUS
RECCB	Renewable energy sources consumed by the commercial sector.	Billion Btu	RECCBZZ = BDCCBZZ + EMCCBZZ + GECCBZZ + HYCCBZZ + SOCCBZZ + WWCCBZZ + WYCCBZZ RECCBUS = BDCCBUS + EMCCBUS + GECCBUS + HYCCBUS + SOCCBUS + WWCCBUS + WYCCBUS
REEIB	Renewable energy sources consumed by the electric power sector.	Billion Btu	REEIBZZ = BDEIBZZ + GEEGBZZ + HYEGBZZ + SOEGBZZ + WDEIBZZ + WYEGBZZ + WZEIBZZ REEIBUS = BDEIBUS + GEEGBUS + HYEGBUS + SOEGBUS + WDEIBUS + WYEGBUS + WZEIBUS
REGBP	Renewable energy total generating units net summer capacity in all sectors.	Thousand kilowatts	REGBPZZ is independent. REGBPUS is independent.
REICB	Renewable energy sources consumed by the industrial sector.	Billion Btu	REICBZZ = BDLCBZZ + EMICBZZ + EMLCBZZ + GEICBZZ + HYICBZZ + SOICBZZ + WWICBZZ + WYICBZZ REICBUS = BDLCBUS + EMICBUS + EMLCBUS + GEICBUS + HYICBUS + SOICBUS + WWICBUS + WYICBUS
RERCB	Renewable energy sources consumed by the residential sector.	Billion Btu	RERCBZZ = BDRCBZZ + GERCBZZ + SORCBZZ + WDRCBZZ RERCBUS = BDRCBUS + GERCBUS + SORCBUS + WDRCBUS

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
RETCB	Renewable energy total consumption.	Billion Btu	$RETCBZZ = BDL CBZZ + BDT CBZZ + B1T CBZZ + EML CBZZ + EMT CBZZ + GET CBZZ + HYT CBZZ + SOT CBZZ + WDT CBZZ + WYT CBZZ + WZT CBZZ$ $RETCBUS = BDL CBUS + BDT CBUS + BOT CBUS + B1T CBUS + EML CBUS + EMT CBUS + GET CBUS + HYT CBUS + SOT CBUS + WDT CBUS + WYT CBUS + WZT CBUS$
RFACB	Residual fuel oil consumed by the transportation sector.	Billion Btu	$RFACBZZ = RFACPZZ * 6.287$ $RFACBUS = \Sigma RFACBZZ$
RFACP	Residual fuel oil consumed by the transportation sector.	Thousand barrels	$RFACPZZ = (RFTRPZZ / RFNDPZZ) * RFNCPZZ$ $RFACPUS = \Sigma RFACPZZ$
RFBKP	Residual fuel oil sold for vessel bunkering use, excluding deliveries to the military.	Thousand barrels	$RFBKPZZ$ is independent. $RFBKPUS = \Sigma RFBKPZZ$
RFCCB	Residual fuel oil consumed by the commercial sector.	Billion Btu	$RFCCBZZ = RFCCPZZ * 6.287$ $RFCCBUS = \Sigma RFCCBZZ$
RFCCP	Residual fuel oil consumed by the commercial sector.	Thousand barrels	$RFCCPZZ = (RFCMPZZ / RFNDPZZ) * RFNCPZZ$ $RFCCPUS = \Sigma RFCCPZZ$
RFCMP	Residual fuel oil sold to the commercial sector.	Thousand barrels	$RFCMPZZ$ is independent. $RFCMPUS = \Sigma RFCMPZZ$
RFEIB	Residual fuel oil consumed by the electric power sector.	Billion Btu	$RFEIBZZ = RFEIPZZ * 6.287$ $RFEIBUS = \Sigma RFEIBZZ$
RFEIP	Residual fuel oil consumed by the electric power sector.	Thousand barrels	$RFEIPZZ$ is independent. $RFEIPUS = \Sigma RFEIPZZ$
RFIBP	A portion of residual fuel oil sold for industrial use, including industrial space heating.	Thousand barrels	$RFIBPZZ$ is independent. $RFIBPUS = \Sigma RFIBPZZ$
RFICB	Residual fuel oil consumed by the industrial sector.	Billion Btu	$RFICBZZ = RFICPZZ * 6.287$ $RFICBUS = \Sigma RFICBZZ$
RFICP	Residual fuel oil consumed by the industrial sector.	Thousand barrels	$RFICPZZ = (RFINPZZ / RFNDPZZ) * RFNCPZZ$ $RFICPUS = \Sigma RFICPZZ$
RFINP	Residual fuel oil sold to the industrial sector.	Thousand barrels	$RFINPZZ = RFIBPZZ + RFMSPZZ + RFOCPZZ$ $RFINPUS = \Sigma RFINPZZ$
RFMIP	Residual fuel oil sold to the military, regardless of use.	Thousand barrels	$RFMIPZZ$ is independent. $RFMIPUS = \Sigma RFMIPZZ$

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
RFMSP	Residual fuel oil sold for miscellaneous uses.	Thousand barrels	RFMSPZZ is independent. RFMSPUS = Σ RFMSPZZ
RFNCP	Residual fuel oil consumption by all end-use sectors.	Thousand barrels	RFNCPZZ = (RFNDPZZ / RFNDPUS) * RFNCPUS RFNCPUS = RFTCPUS - RFEIPUS
RFNDP	Residual fuel oil sales to all end-use sectors.	Thousand barrels	RFNDPZZ = RFCMPZZ + RFINPZZ + RFTRPZZ RFNDPUS = Σ RFNDPZZ
RFOCP	Residual fuel oil sold for use by oil companies.	Thousand barrels	RFOCPZZ is independent. RFOCPUS = Σ RFOCPZZ
RFRRP	Residual fuel oil sold for use by railroads.	Thousand barrels	RFRRPZZ is independent. RFRRPUS = Σ RFRRPZZ
RFTCB	Residual fuel oil total consumption.	Billion Btu	RFTCBZZ = RFACBZZ + RFCCBZZ + RFEIBZZ + RFICBZZ RFTCBUS = Σ RFTCBZZ
RFTCP	Residual fuel oil total consumption.	Thousand barrels	RFTCPZZ = RFEIPZZ + RFNCPZZ RFTCPUS is independent.
RFTRP	Residual fuel oil sold to the transportation sector.	Thousand barrels	RFTRPZZ = RFBKPZZ + RFMIPZZ + RFRRPZZ RFTRPUS = Σ RFTRPZZ
RFTXB	Residual fuel oil total end-use consumption.	Billion Btu	RFTXBZZ = RFACBZZ + RFCCBZZ + RFICBZZ RFTXBUS = Σ RFTXBZZ
RFTXP	Residual fuel oil total end-use consumption.	Thousand barrels	RFTXPZZ = RFACPZZ + RFCCPZZ + RFICPZZ RFTXPUS = Σ RFTXPZZ
SFCCB	Supplemental gaseous fuels consumed by the commercial sector.	Billion Btu	SFCCBZZ = SFCCPZZ * NGTXKZZ SFCCBUS = Σ SFCCBZZ
SFCCP	Supplemental gaseous fuels consumed by the commercial sector.	Million cubic feet	SFCCPZZ = NGSFPZZ * (NGCCPZZ / NGTZPZZ) SFCCPUS = Σ SFCCPZZ
SFEIB	Supplemental gaseous fuels consumed by the electric power sector.	Billion Btu	SFEIBZZ = SFEIPZZ * NGEIKZZ SFEIBUS = Σ SFEIBZZ
SFEIP	Supplemental gaseous fuels consumed by the electric power sector.	Million cubic feet	SFEIPZZ = NGSFPZZ * (NGEIPZZ / NGTZPZZ) SFEIPUS = Σ SFEIPZZ
SFINB	Supplemental gaseous fuels consumed by the industrial sector.	Billion Btu	SFINBZZ = SFINPZZ * NGTXKZZ SFINBUS = Σ SFINBZZ
SFINP	Supplemental gaseous fuels consumed by the industrial sector.	Million cubic feet	SFINPZZ = NGSFPZZ * (NGINPZZ / NGTZPZZ) SFINPUS = Σ SFINPZZ

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
SFRCB	Supplemental gaseous fuels consumed by the residential sector.	Billion Btu	$SFRCBZZ = SFRCPPZZ * NGTXKZZ$ $SFRCBUS = \sum SFRCBZZ$
SFRCP	Supplemental gaseous fuels consumed by the residential sector.	Million cubic feet	$SFRCPZZ = NGSFPZZ * (NGRCPZZ / NGTZPZZ)$ $SFRCPUS = \sum SFRCPZZ$
SFTCB	Supplemental gaseous fuels total consumption.	Billion Btu	$SFTCBZZ = SFCCBZZ + SFEIBZZ + SFINBZZ + SFRCBZZ$ $SFTCBUS = \sum SFTCBZZ$
SFTCP	Supplemental gaseous fuels total consumption.	Million cubic feet	$SFTCPZZ = SFCCPZZ + SFEIPZZ + SFINPZZ + SFRCPZZ$ $SFTCPUS = \sum SFTCPZZ$
SGICB	Still gas consumed by the industrial sector.	Billion Btu	$SGICBZZ = SGTCBZZ$ $SGICBUS = SGTCBUS$
SGICP	Still gas consumed by the industrial sector.	Thousand barrels	$SGICPZZ = SGTCPZZ$ $SGICPUS = SGTCPUS$
SGTCB	Still gas total consumption.	Billion Btu	Before 2016: $SGTCBZZ = SGTCPZZ * 6.000$ $SGTCBUS = \sum SGTCBZZ$ 2016 forward: $SGTCBZZ = SGTCPZZ * 6.287$ $SGTCBUS = \sum SGTCBZZ$
SGTCP	Still gas total consumption.	Thousand barrels	$SGTCPZZ = (COCAPZZ / COCAPUS) * SGTCPUS$ SGTCPUS is independent.
SHCAS	Solar thermal generating units capacity factor.	Percent	SHCASZZ is independent. SHCASUS is independent.
SNICB	Special naphthas consumed by the industrial sector.	Billion Btu	$SNICBZZ = SNTCBZZ$ $SNICBUS = SNTCBUS$
SNICP	Special naphthas consumed by the industrial sector.	Thousand barrels	$SNICPZZ = SNTCPZZ$ $SNICPUS = SNTCPUS$
SNTCB	Special naphthas total consumption.	Billion Btu	$SNTCBZZ = SNTCPZZ * 5.248$ $SNTCBUS = \sum SNTCBZZ$
SNTCP	Special naphthas total consumption.	Thousand barrels	$SNTCPZZ = (PIVAVZZ / PIVAVUS) * SNTCPUS$ SNTCPUS is independent.

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
SOC5B	Solar energy consumed for electricity generation at utility-scale commercial CHP and electricity-only facilities.	Billion Btu	SOC5BZZ = SOC5PZZ * 3.412 SOC5BUS = Σ SOC5BZZ
SOC5P	Solar thermal and photovoltaic electricity net generation at utility-scale commercial CHP and electricity-only facilities.	Million kilowatthours	SOC5PZZ is independent. SOC5PUS = Σ SOC5PZZ
SOC7B	Solar energy consumed for electricity generation at small-scale commercial facilities.	Billion Btu	SOC7BZZ = SOC7PZZ * 3.412 SOC7BUS = Σ SOC7BZZ
SOC7P	Photovoltaic electricity generation at small-scale commercial facilities.	Million kilowatthours	SOC7PZZ is independent. SOC7PUS = Σ SOC7PZZ
SOCCB	Solar energy consumed by the commercial sector.	Billion Btu	SOCCBZZ = SOC5BZZ + SOC7BZZ SOCCBUS = Σ SOCCBZZ
SOCCP	Solar thermal and photovoltaic electricity net generation in the commercial sector.	Million kilowatthours	SOCCPZZ = SOC5PZZ + SOC7PZZ SOCCPUS = Σ SOCCPZZ
SOEGB	Solar energy consumed for electricity generation by the electric power sector.	Billion Btu	SOEGBZZ = SOEGPZZ * 3.412 SOEGBUS = Σ SOEGBZZ
SOEGP	Solar thermal and photovoltaic electricity net generation in the electric power sector.	Million kilowatthours	SOEGPZZ is independent. SOEGPUS = Σ SOEGPZZ
SOGBP	Solar generating units net summer capacity in all sectors.	Thousand kilowatts	SOGBPZZ is independent. SOGBPUS is independent.
SOI5B	Solar energy consumed for electricity generation at utility-scale industrial CHP and electricity-only facilities.	Billion Btu	SOI5BZZ = SOI5PZZ * 3.412 SOI5BUS = Σ SOI5BZZ
SOI5P	Solar thermal and photovoltaic electricity net generation at utility-scale industrial CHP and electricity-only facilities.	Million kilowatthours	SOI5PZZ is independent. SOI5PUS = Σ SOI5PZZ
SOI7B	Solar energy consumed for electricity generation at small-scale industrial facilities.	Billion Btu	SOI7BZZ = SOI7PZZ * 3.412 SOI7BUS = Σ SOI7BZZ
SOI7P	Photovoltaic electricity generation at small-scale industrial facilities.	Million kilowatthours	SOI7PZZ is independent. SOI7PUS = Σ SOI7PZZ
SOICB	Solar energy consumed by the industrial sector.	Billion Btu	SOICBZZ = SOI5BZZ + SOI7BZZ SOICBUS = Σ SOICBZZ

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
SOICP	Solar thermal and photovoltaic electricity net generation in the industrial sector.	Million kilowatthours	SOICPZZ = SOI5PZZ + SOI7PZZ SOICPUS = Σ SOICPZZ
SOR7B	Solar energy consumed for electricity generation by small-scale applications in the residential sector.	Billion Btu	SOR7BZZ = SOR7PZZ * 3.412 SOR7BUS = Σ SOR7BZZ
SOR7P	Solar photovoltaic electricity generation by small-scale applications in the residential sector.	Million kilowatthours	SOR7PZZ is independent. SOR7PUS = Σ SOR7PZZ
SORCB	Solar energy consumed by the residential sector.	Billion Btu	SORCBZZ = SOR7BZZ + SOT8BZZ SORCBUS = Σ SORCBZZ
SOT8B	Solar thermal energy consumed as heat.	Billion Btu	SOT8BZZ = (SOTTPZZ / SOTTPUS) * SOT8BUS SOT8BUS is independent.
SOTCB	Solar energy total consumption.	Billion Btu	SOTCBZZ = SOCCBZZ + SOEGBZZ + SOICBZZ + SORCBZZ SOTCBUS = Σ SOTCBZZ
SOTGP	Solar thermal and photovoltaic electricity total net generation.	Million kilowatthours	SOTGPZZ = SOCCPZZ + SOEGPZZ + SOICPZZ + SOR7PZZ SOTGPUS = Σ SOTGPZZ
SOTTP	Rolling 20-year accumulation of shipments of solar thermal energy collectors.	Square feet	SOTTPZZ is independent. SOTTPUS = Σ SOTTPZZ
SOTXB	Solar energy total end-use consumption.	Billion Btu	SOTXBZZ = SOCCBZZ + SOICBZZ + SORCBZZ SOTXBUS = Σ SOTXBZZ
SPCAS	Solar photovoltaic generating units capacity factor.	Percent	SPCASZZ is independent. SPCASUS is independent.

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
TEACB	Total energy consumption in the transportation sector.	Billion Btu	<p>Before 1993: $TEACBZZ = CLACBZZ + EMACBZZ + ESACBZZ + LOACBZZ + NGACBZZ + PAACBZZ$ $TEACBUS = CLACBUS + EMACBUS + ESACBUS + LOACBUS + NGACBUS + PAACBUS$</p> <p>1993 through 2008: $TEACBZZ = BDACBZZ + CLACBZZ + ESACBZZ + LOACBZZ + NGACBZZ + PAACBZZ$ $TEACBUS = BDACBUS + CLACBUS + ESACBUS + LOACBUS + NGACBUS + PAACBUS$</p> <p>2009 forward: $TEACBZZ = CLACBZZ + ESACBZZ + LOACBZZ + NGACBZZ + PAACBZZ$ $TEACBUS = CLACBUS + ESACBUS + LOACBUS + NGACBUS + PAACBUS$</p>
TEAPB	Total energy consumption per capita in the transportation sector.	Million Btu	$TEAPBZZ = TEACBZZ / TPOPPZZ$ $TEAPBUS = TEACBUS / TPOPPUS$
TECCB	Total energy consumption in the commercial sector.	Billion Btu	<p>Before 1993: $TECCBZZ = CLCCBZZ + EMCCBZZ + ESCCBZZ + GECCBZZ + HYCCBZZ + LOCCBZZ + NGCCBZZ + PACCBZZ + SOCCBZZ + WWCCBZZ - SFCCBZZ$ $TECCBUS = CLCCBUS + EMCCBUS + ESCCBUS + GECCBUS + HYCCBUS + LOCCBUS + NGCCBUS + PACCBUS + SOCCBUS + WWCCBUS - SFCCBUS$</p> <p>1993 forward: $TECCBZZ = CLCCBZZ + ESCCBZZ + GECCBZZ + HYCCBZZ + LOCCBZZ + NGCCBZZ + PACCBZZ + SOCCBZZ + WWCCBZZ + WYCCBZZ - SFCCBZZ$ $TECCBUS = CLCCBUS + ESCCBUS + GECCBUS + HYCCBUS + LOCCBUS + NGCCBUS + PACCBUS + SOCCBUS + WWCCBUS + WYCCBUS - SFCCBUS$</p>
TECPB	Total energy consumption per capita in the commercial sector.	Million Btu	$TECPBZZ = TECCBZZ / TPOPPZZ$ $TECPBUS = TECCBUS / TPOPPUS$
TEEIB	Total energy consumption in the electric power sector plus net imports of electricity into the United States.	Billion Btu	$TEEIBZZ = CLEIBZZ + ELNIBZZ + GEEGBZZ + HYEGBZZ + NGEIBZZ + NUEGBZZ + PAEIBZZ + SOEGBZZ + WWEIBZZ + WYEGBZZ - SFEIBZZ$ $TEEIBUS = \Sigma TEEIBZZ$

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
TEESB	Total energy used to generate the electricity consumed in a state.	Billion Btu	TEESBZZ = ELISBZZ + TEEIBZZ TEESBUS = TEEIBUS
TEICB	Total energy consumption in the industrial sector.	Billion Btu	<p>Before 1993:</p> $\text{TEICBZZ} = \text{CLICBZZ} + \text{NGICBZZ} + \text{PAICBZZ} + \text{EMICBZZ} + \text{EMLCBZZ} + \text{GEICBZZ} + \text{HYICBZZ} + \text{SOICBZZ} + \text{WWICBZZ} + \text{ESICBZZ} + \text{LOICBZZ} - \text{SFINBZZ}$ $\text{TEICBUS} = \text{CLICBUS} + \text{CCNIBUS} + \text{NGICBUS} + \text{PAICBUS} + \text{EMICBUS} + \text{EMLCBUS} + \text{GEICBUS} + \text{HYICBUS} + \text{SOICBUS} + \text{WWICBUS} + \text{ESICBUS} + \text{LOICBUS} - \text{SFINBUS}$ <p>1993 through 2000:</p> $\text{TEICBZZ} = \text{CLICBZZ} + \text{NGICBZZ} + \text{PAICBZZ} + \text{EMLCBZZ} + \text{GEICBZZ} + \text{HYICBZZ} + \text{SOICBZZ} + \text{WWICBZZ} + \text{WYICBZZ} + \text{ESICBZZ} + \text{LOICBZZ} - \text{SFINBZZ}$ $\text{TEICBUS} = \text{CLICBUS} + \text{CCNIBUS} + \text{NGICBUS} + \text{PAICBUS} + \text{EMLCBUS} + \text{GEICBUS} + \text{HYICBUS} + \text{SOICBUS} + \text{WWICBUS} + \text{WYICBUS} + \text{ESICBUS} + \text{LOICBUS} - \text{SFINBUS}$ <p>2001 forward:</p> $\text{TEICBZZ} = \text{CLICBZZ} + \text{NGICBZZ} + \text{PAICBZZ} + \text{BFLCBZZ} + \text{GEICBZZ} + \text{HYICBZZ} + \text{SOICBZZ} + \text{WWICBZZ} + \text{WYICBZZ} + \text{ESICBZZ} + \text{LOICBZZ} - \text{SFINBZZ}$ $\text{TEICBUS} = \text{CLICBUS} + \text{CCNIBUS} + \text{NGICBUS} + \text{PAICBUS} + \text{BFLCBUS} + \text{GEICBUS} + \text{HYICBUS} + \text{SOICBUS} + \text{WWICBUS} + \text{WYICBUS} + \text{ESICBUS} + \text{LOICBUS} - \text{SFINBUS}$
TEIPB	Total energy consumption per capita in the industrial sector.	Million Btu	TEIPBZZ = TEICBZZ / TPOPPZZ TEIPBUS = TEICBUS / TPOPPUS
TERCB	Total energy consumption in the residential sector.	Billion Btu	$\text{TERCBZZ} = \text{CLRCBZZ} + \text{ESRCBZZ} + \text{GERCBZZ} + \text{LORCBZZ} + \text{NGRCBZZ} + \text{PARCBZZ} + \text{SORCBZZ} + \text{WDRCBZZ} - \text{SFRCBZZ}$ $\text{TERCBUS} = \text{CLRCBUS} + \text{ESRCBUS} + \text{GERCBUS} + \text{LORCBUS} + \text{NGRCBUS} + \text{PARCBUS} + \text{SORCBUS} + \text{WDRCBUS} - \text{SFRCBUS}$

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
TERPB	Total energy consumption per capita in the residential sector.	Million Btu	TERPBZZ = TERCBZZ / TPOPPZZ TERPBUS = TERCBUS / TPOPPUS
TETCB	Total energy consumption.	Billion Btu	TETCBZZ = ELISBZZ + ELNIBZZ + FFTCBZZ + NUETBZZ + RETCBZZ TETCBUS = ELNIBUS + FFTCBUS + NUETBUS + RETCBUS
TETGR	Total energy consumption per dollar of real gross domestic product (GDP).	Thousand Btu per chained (2017) dollars	TETGRZZ = TETCBZZ / GDPRXZZ TETGRUS = TETCBUS / GDPRXUS
TETPB	Total energy consumption per capita.	Million Btu	TETPBZZ = TETCBZZ / TPOPPZZ TETPBUS = TETCBUS / TPOPPUS
TETXB	Total end-use sector energy consumption.	Billion Btu	TETXB = TEACB + TECCB + TEICB + TERCB
TNACB	End-use energy consumption in the transportation sector.	Billion Btu	TNACBZZ = TEACBZZ - LOACBZZ TNACBUS = TEACBUS - LOACBUS
TNCCB	End-use energy consumption in the commercial sector.	Billion Btu	TNCCBZZ = TECCBZZ - LOCCBZZ TNCCBUS = TECCBUS - LOCCBUS
TNICB	End-use energy consumption in the industrial sector.	Billion Btu	TNICBZZ = TEICBZZ - LOICBZZ TNICBUS = TEICBUS - LOICBUS
TNRCB	End-use energy consumption in the residential sector.	Billion Btu	TNRCBZZ = TERCBZZ - LORCBZZ TNRCBUS = TERCBUS - LORCBUS
TNTCB	Total end-use energy consumption.	Billion Btu	TNTCB = TNRCB + TNCCB + TNICB + TNACB
TPOPP	Resident population including Armed Forces.	Thousand population	TPOPPZZ is independent. TPOPPUS is independent.
UOICB	Unfinished oils consumed by the industrial sector.	Billion Btu	UOICBZZ = UOTCBZZ UOICBUS = UOTCBUS
UOICP	Unfinished oils consumed by the industrial sector.	Thousand barrels	UOICPZZ = UOTCPZZ UOICPUS = UOTCPUS
UOTCB	Unfinished oils total consumption.	Billion Btu	UOTCBZZ = UOTCPZZ * 5.825 UOTCBUS = Σ UOTCBZZ
UOTCP	Unfinished oils total consumption.	Thousand barrels	UOTCPZZ = (COCAPZZ / COCAPUS) * UOTCPUS UOTCPUS is independent.
USICB	Unfractionated streams consumed by the industrial sector (through 1983).	Billion Btu	USICBZZ = USTCBZZ USICBUS = USTCBUS

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
USICP	Unfractionated streams consumed by the industrial sector (through 1983).	Thousand barrels	USICPZZ = USTCPZZ USICPUS = USTCPUS
USTCB	Unfractionated streams total consumption (through 1983).	Billion Btu	USTCBZZ = USTCPZZ * 3.800 USTCBUS = Σ USTCBZZ
USTCP	Unfractionated streams total consumption (through 1983).	Thousand barrels	USTCPZZ = USTCPUS * FNCASZZ USTCPUS is independent.
WDC3B	Wood consumed by CHP and electricity-only facilities in the commercial sector.	Billion Btu	WDC3BZZ is independent. WDC3BUS = Σ WDC3BZZ
WDC4B	Wood energy consumed for other uses in the commercial sector.	Billion Btu	WDC4BZZ = (WDRCPZZ / WDRCPUS) * WDC4BUS WDC4BUS = WDCCBUS - WDC3BUS
WDCCB	Wood energy consumed by the commercial sector.	Billion Btu	WDCCBZZ = WDC3BZZ + WDC4BZZ WDCCBUS is independent.
WDEIB	Wood consumed by the electric power sector.	Billion Btu	WDEIBZZ is independent. WDEIBUS = Σ WDEIBZZ
WDGBP	Wood generating units net summer capacity in all sectors.	Thousand kilowatts	WDGBPZZ is independent. WDGBPUS is independent.
WDI3B	Wood consumed by CHP and electricity-only facilities in the industrial sector.	Billion Btu	WDI3BZZ is independent. WDI3BUS = Σ WDI3BZZ
WDI4B	Wood energy consumed for other uses in the industrial sector.	Billion Btu	WDI4BZZ is independent. WDI4BUS = Σ WDI4BZZ
WDICB	Wood energy consumed by the industrial sector.	Billion Btu	WDICBZZ = WDI3BZZ + WDI4BZZ WDICBUS = Σ WDICBZZ
WDRCB	Wood energy consumed by the residential sector.	Billion Btu	Before 2015: WDRCBZZ = WDRCPZZ * 20 WDRCBUS = Σ WDRCBZZ 2015 forward: WDRCBZZ is independent. WDRCBUS = Σ WDRCBZZ
WDRCP	Wood energy consumed by the residential sector (through 2014).	Thousand cords	WDRCPZZ is independent. WDRCPUS = Σ WDRCPZZ
WDTCB	Wood energy total consumption.	Billion Btu	WDTCBZZ = WDCCBZZ + WDEIBZZ + WDICBZZ + WDRCBZZ WDTCBUS = Σ WDTCBZZ

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
WSC3B	Waste consumed by CHP and electricity-only facilities in the commercial sector.	Billion Btu	WSC3BZZ is independent. WSC3BUS = Σ WSC3BZZ
WSCCB	Waste energy consumed by the commercial sector.	Billion Btu	WSCCBZZ = WSC3BZZ WSCCBUS = Σ WSCCBZZ
WSEIB	Waste consumed by the electric power sector.	Billion Btu	WSEIBZZ is independent. WSEIBUS = Σ WSEIBZZ
WSGBP	Waste generating units net summer capacity in all sectors.	Thousand kilowatts	WSGBPZZ is independent. WSGBPUS is independent.
WSI3B	Waste consumed by CHP and electricity-only facilities in the industrial sector.	Billion Btu	WSI3BZZ is independent. WSI3BUS = Σ WSI3BZZ
WSI4B	Waste energy consumed for other uses in the industrial sector.	Billion Btu	WSI4BZZ is independent. WSI4BUS = Σ WSI4BZZ
WSICB	Waste energy consumed by the industrial sector.	Billion Btu	WSICBZZ = WSI3BZZ + WSI4BZZ WSICBUS = Σ WSICBZZ
WSTCB	Waste energy total consumption.	Billion Btu	WSTCBZZ = WSCCBZZ + WSEIBZZ + WSICBZZ WSTCBUS = Σ WSTCBZZ
WWCCB	Wood and waste consumed in the commercial sector.	Billion Btu	WWCCBZZ = WDCCBZZ + WSCCBZZ WWCCBUS = Σ WWCCBZZ
WWEIB	Wood and waste consumed by the electric power sector.	Billion Btu	WWEIBZZ = WDEIBZZ + WSEIBZZ WWEIBUS = Σ WWEIBZZ
WWI4B	Wood and waste consumed in manufacturing processes in the industrial sector.	Billion Btu	WWI4BZZ = WDI4BZZ + WSI4BZZ WWI4BUS = Σ WWI4BZZ
WWICB	Wood and waste consumed in the industrial sector.	Billion Btu	WWICBZZ = WDICBZZ + WSICBZZ WWICBUS = Σ WWICBZZ
WWTCB	Wood and waste total consumption.	Billion Btu	WWTCBZZ = WDTCBZZ + WSTCBZZ WWTCBUS = Σ WWTCBZZ
WWTXB	Wood and waste total end-use consumption.	Billion Btu	WWTXBZZ = WDCCBZZ + WDICBZZ + WDRCBZZ + WSCCBZZ + WSICBZZ WWTXBUS = Σ WWTXBZZ
WXICB	Waxes consumed by the industrial sector.	Billion Btu	WXICBZZ = WXTCBZZ WXICBUS = WXTCBUS
WXICP	Waxes consumed by the industrial sector.	Thousand barrels	WXICPZZ = WXTCPZZ WXICPUS = WXTCPUS

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
WXTCB	Waxes total consumption.	Billion Btu	$WXTCBZZ = WXTCPZZ * 5.537$ $WXTCBUS = \Sigma WXTCBZZ$
WXTCP	Waxes total consumption.	Thousand barrels	$WXTCPZZ = (CGVAVZZ / CGVAVUS) * WXTCPUS$ WXTCPUS is independent.
WYC5B	Wind energy consumed at commercial CHP and electricity-only facilities.	Billion Btu	$WYC5BZZ = WYC5PZZ * 3.412$ $WYC5BUS = \Sigma WYC5BZZ$
WYC5P	Wind electricity net generation at utility-scale commercial CHP and electricity-only facilities.	Million kilowatthours	WYC5PZZ is independent. $WYC5PUS = \Sigma WYC5PZZ$
WYCAS	Wind generating units capacity factor.	Percent	WYCASZZ is independent. WYCASUS is independent.
WYCCB	Wind energy consumed by the commercial sector.	Billion Btu	$WYCCBZZ = WYC5BZZ$ $WYCCBUS = \Sigma WYCCBZZ$
WYCCP	Wind electricity net generation in the commercial sector.	Million kilowatthours	$WYCCPZZ = WYC5PZZ$ $WYCCPUS = \Sigma WYCCPZZ$
WYEGB	Wind energy consumed for electricity generation by the electric power sector.	Billion Btu	$WYEGBZZ = WYEGPZZ * 3.412$ $WYEGBUS = \Sigma WYEGBZZ$
WYEGP	Wind electricity net generation in the electric power sector.	Million kilowatthours	WYEGPZZ is independent. $WYEGPUS = \Sigma WYEGPZZ$
WYGBP	Wind generating units net summer capacity in all sectors.	Thousand kilowatts	WYGBPZZ is independent. WYGBPUS is independent.
WYI5B	Wind energy consumed for electricity generation at industrial CHP and electricity-only facilities.	Billion Btu	$WYI5BZZ = WYI5PZZ * 3.412$ $WYI5BUS = \Sigma WYI5BZZ$
WYI5P	Wind electricity net generation at utility-scale industrial CHP and electricity-only facilities.	Million kilowatthours	WYI5PZZ is independent. $WYI5PUS = \Sigma WYI5PZZ$
WYICB	Wind energy consumed by the industrial sector.	Billion Btu	$WYICBZZ = WYI5BZZ$ $WYICBUS = \Sigma WYICBZZ$
WYICP	Wind electricity net generation in the industrial sector.	Million kilowatthours	$WYICPZZ = WYI5PZZ$ $WYICPUS = \Sigma WYICPZZ$
WYTCB	Wind energy total consumption.	Billion Btu	$WYTCBZZ = WYCCBZZ + WYEGBZZ + WYICBZZ$ $WYTCBUS = \Sigma WYTCBZZ$
WYTCP	Wind electricity total net generation.	Million kilowatthours	$WYTCPZZ = WYCCPZZ + WYEGPZZ + WYICPZZ$ $WYTCPUS = \Sigma WYTCPZZ$

Table A1. Consumption variables (cont.)

MSN	Description	Unit	Formula
WYTXB	Wind energy total end-use consumption.	Billion Btu	WYTXBZZ = WYCCBZZ + WYICBZZ WYTXBUS = Σ WYTXBZZ
WYTXP	Wind energy total end-use net generation.	Million kilowatthours	WYTXPZZ = WYCCPZZ + WYICPZZ WYTXPUS = Σ WYTXPZZ
WZEIB	Waste, excluding biodiesel, consumed by the electric power sector.	Billion Btu	WZEIBZZ = WSEIBZZ - BDEIBZZ WZEIBUS = Σ WZEIBZZ
WZTCB	Waste, excluding biodiesel, total consumption.	Billion Btu	WZTCBZZ = WSCCBZZ + WZEIBZZ + WSICBZZ WZTCBUS = Σ WZTCBZZ
ZWCDP	Cooling degree days (CDD).	Cooling degree days	ZWCDPZZ is independent. ZWCDPUS is independent.
ZWHDP	Heating degree days (HDD).	Heating degree days	ZWHDPZZ is independent. ZWHDPUS is independent.