

•COMMAND or Keyword	Abbrev	Subprogram — Command	DOE-2 Basics (2.1D)	BDL Summary (2.1D)	Supp (2.1D)	Ref Man (2.1A)	Program — year Version — added
HTANK-FREEZ-T	H-F-T	P — ENERGY-STORAGE		39		V.76	2.0-2/15/79
HTANK-LOSS-COEF	H-L-C	P — ENERGY-STORAGE		39		V.74	2.0-2/15/79
HTANK-T-RANGE	H-T-R	P — ENERGY-STORAGE		39		V.74	2.0-2/15/79
HTPUMP-0Z		S — SUBR-FUNCTIONS		29	1.5		2.1D-6/30/89
HTPUMP-1Z		S — SUBR-FUNCTIONS		29	1.5		2.1D-6/30/89
HTPUMP-2		S — SUBR-FUNCTIONS		29	1.5		2.1D-6/30/89
HUMIDIFIER-TYPE	H-TYPE	S — SYSTEM	4.88,F.15	27	3.23		2.1B-1/15/83
HVUNIT-0		S — SUBR-FUNCTIONS		29	1.5		2.1D-6/30/89
HVUNIT-1Z		S — SUBR-FUNCTIONS		29	1.5		2.1D-6/30/89
HVUNIT-2		S — SUBR-FUNCTIONS		29	1.5		2.1D-6/30/89
HVUNIT-3		S — SUBR-FUNCTIONS		29	1.5		2.1D-6/30/89
HW-BOILER-HIR		P — PLANT-PARAMETERS	5.13,F.17	34		V.24,V.30	2.1-5/15/80
HW-BOILER-HIR-FPLR		P — EQUIPMENT-QUAD		37		V.44,45	2.1-5/15/80
HW-SCHEDULE	HW-SCH	L — BUILDING-RESOURCE	3.34,F.10	16		III.39	2.0-2/15/79
INDUCTION-RATIO	I-R	S — SYSTEM-TERMINAL		25		IV.231	2.0-2/15/79
INDUC-0		S — SUBR-FUNCTIONS		29	1.5		2.1D-6/30/89
INDUC-1Z		S — SUBR-FUNCTIONS		29	1.5		2.1D-6/30/89
INDUC-2		S — SUBR-FUNCTIONS		29	1.5		2.1D-6/30/89
INDUC-MODE-SCH	I-M-SCH	S — SYSTEM-FLUID		25		IV.234	2.0-2/15/79
INF-CFM/SQFT	I-CFM	L — SPACE-CONDITIONS	3.23,F.7	9		III.50	2.0-2/15/79
INDUCED-AIR-ZONE	I-A-Z	↑ — ZONE	4.48,F.13	24			? - ?
INF-COEF	I-C	L — DOOR		14		III.110	2.1-5/15/80
		L — EXTERIOR-WALL or ROOF		11		III.101	2.0-2/15/79
		L — TROMBE-WALL-V or -NV		12			2.1B-1/15/83
		L — WINDOW		13		III.107	2.0-2/15/79
INF-METHOD	I-M	L — SPACE-CONDITIONS	3.22,F.7	9		III.49	2.0-2/15/79
INF-SCHEDULE	I-SCH	L — SPACE-CONDITIONS	3.23,F.7	9		III.49	2.0-2/15/79
•INPUT ECONOMICS		E	3.2,6.1,F.19	42		II.15,III.21	2.0-2/15/79
•INPUT LOADS		L	2.1,3.2,F.3	1		II.15,III.21	2.0-2/15/79
•INPUT PLANT		P	3.2,5.1,F.16	31		II.15,III.21	2.0-2/15/79

•COMMAND or Keyword	Abbrev	Subprogram — Command	DOE-2 Basics (2.1D)	BDL Summary (2.1D)	Supp (2.1D)	Ref Man (2.1A)	Program — year Version — added
•INPUT SYSTEMS		S	3.2,4.60,F.12	19		II.15,III.21	2.0—2/15/79
INPUT-UNITS		INPUT-ECONOMICS		42			2.0—2/15/79
		INPUT-LOADS		1			2.1B—1/15/83
		INPUT-PLANT		31			2.1B—1/15/83
		INPUT-SYSTEMS		19			2.1B—1/15/83
		LIBRARY-INPUT LOADS		1			2.1—5/15/80
		METRIC (option)			1.27		2.1B—1/15/83
		PARAMETRIC-INPUT			1.27		2.1B—1/15/83
		ECONOMICS		42			2.1B—1/15/83
		LOADS		1			2.1B—1/15/83
		PLANT		31			2.1B—1/15/83
		SYSTEMS		19			2.1B—1/15/83
INSIDE-EMISS	I-E	L — GLASS-TYPE		6	2.77		2.1B—1/15/83
INSIDE-FILM-RES	I-F-R	L — LAYERS	3.7,F.16	5		III.76	2.0—2/15/79
INSIDE-SOL-ABS	I-S-A	L — EXTERIOR-WALL or ROOF		11	2.10		2.1C—5/15/84
		L — INTERIOR-WALL		15	2.10		2.1C—5/15/84
		L — TROMBE-WALL-V or -NV		12			2.1C—5/15/84
		L — UNDERGROUND-WALL or -FLOOR		16	2.10		2.1C—5/15/84
INSIDE-VIS-REFL	I-V-R	L — DOOR	F.10	14	2.34,2.55		2.1B—1/15/83
		L — EXTERIOR-WALL or ROOF		11	2.34,2.55		2.1B—1/15/83
		L — INTERIOR-WALL		15	2.34,2.55		2.1B—1/15/83
		L — TROMBE-WALL-V or -NV		12			2.1B—1/15/83
		L — UNDERGROUND-WALL or -FLOOR		16	2.34,2.55		2.1B—1/15/83
		L — WINDOW		13	2.34,2.55		2.1B—1/15/83
INSTALLATION	I	P — PLANT-EQUIPMENT		32		V.13	2.0—2/15/79
INSTALLATION-EXP		P — PLANT-COSTS		40			2.1B—1/15/83
INSTALLATION-REF	I-R	P — REFERENCE-COSTS		40		V.94	2.0—2/15/79
INSTALLED-NUMBER	I-N	P — PLANT-EQUIPMENT	5.8,F.16	32		V.11.1	2.0—2/15/79
INSTALL-COST	I-C	E — COMPONENT-COST		44		VI.6	2.0—2/15/79
INT-WALL-TYPE	I-W-TYPE	L — INTERIOR-WALL		15	2.82		2.1B—1/15/83
•INTERIOR-WALL	I-W	L	3.32,F.10	15	2.3,2.10, 2.55,2.82	III.69, III.113	2.0—2/15/79
KWH/KW-DEM-TYPE	K-D-T	E — COST-PARAMETERS	6.10,F.20	44	5.8		2.1C—5/15/84

•COMMAND or Keyword	Abbrev	Subprogram — Command	DOE-2 Basics (2.1D)	BDL Summary (2.1D)	Supp (2.1D)	Ref Man (2.1A)	Program — year Version — added
LABOR	L	P — PLANT-COSTS		40		V.91	2.0—2/15/79
LABOR-INFLTN	L-I	P — PLANT-COSTS		40		V.91	2.0—2/15/79
LATITUDE	LAT	L — BUILDING-LOCATION	3.4,F.3	2		III.30	2.0—2/15/79
•LAYERS	LA)	L	3.7,F.6	5		III.76	2.0—2/15/79
LAYERS	LA	L — CONSTRUCTION	3.9,F.6	5		III.80	2.0—2/15/79
LEFT-FIN-A	L-F-A	L — DOOR	F.10	14	2.66		2.1B—1/15/83
		L — WINDOW	3.29,F.9	13	2.66		2.1B—1/15/83
LEFT-FIN-B	L-F-B	L — DOOR	F.10	14	2.66		2.1B—1/15/83
		L — WINDOW	3.29,F.9	13	2.66		2.1B—1/15/83
LEFT-FIN-D	L-F-D	L — DOOR	F.10	14	2.67		2.1B—1/15/83
		L — WINDOW	3.29,F.9	13	2.67		2.1B—1/15/83
LEFT-FIN-H	L-F-H	L — DOOR	F.10	14	2.67		2.1B—1/15/83
		L — WINDOW	3.29,F.9	13	2.67		2.1B—1/15/83
LEVEL		LS — FUNCTION		17			2.1C—5/15/84
•LIBRARY-INPUT LOADS		L		1			2.1—5/15/80
LIFE-EXP	L-E	P — PLANT-COSTS		40			2.1B—1/15/83
LIFE-REF	L-R	P — REFERENCE-COSTS		40		V.94	2.0—2/15/79
LIGHTING-KW	L-KW	L — SPACE-CONDITIONS	3.17,F.7	7		III.44	2.0—2/15/79
LIGHTING-SCHEDULE	L-SCH	L — SPACE-CONDITIONS	3.17,F.7	7		III.44	2.0—2/15/79
LIGHTING-TYPE	L-T	L — SPACE-CONDITIONS	3.17,F.7	7		III.44	2.0—2/15/79
LIGHTING-W/SQFT	L-W	L — SPACE-CONDITIONS	3.18,F.7	7		III.45	2.0—2/15/79
LIGHT-CTRL-PROB	L-C-P	L — SPACE-CONDITIONS		9	2.34,2.48		2.1B—1/15/83
LIGHT-CTRL-STEPS	L-C-S	L — SPACE-CONDITIONS		9	2.34,2.47		2.1B—1/15/83
LIGHT-CTRL-TYPE1	L-C-T1	L — SPACE-CONDITIONS		9	2.34,2.46		2.1B—1/15/83
LIGHT-CTRL-TYPE2	L-C-T2	L — SPACE-CONDITIONS		9	2.34,2.46		2.1B—1/15/83
LIGHT-HEAT-TO	L-H-T	L — SPACE-CONDITIONS		7			2.1B—1/15/83
LIGHT-RAD-FRAC	L-R-F	L — SPACE-CONDITIONS		7	2.70		2.1B—1/15/83
LIGHT-REF-POINT1	L-R-P1	L — SPACE-CONDITIONS		9	2.34,2.45		2.1B—1/15/83
LIGHT-REF-POINT2	L-R-P2	L — SPACE-CONDITIONS		9	2.34,2.45		2.1B—1/15/83
LIGHT-SET-POINT1	L-S-P1	L — SPACE-CONDITIONS		7	2.34,2.46		2.1B—1/15/83
LIGHT-SET-POINT2	L-S-P2	L — SPACE-CONDITIONS		7	2.34,2.46		2.1B—1/15/83

•COMMAND or Keyword	Abbrev	Subprogram — Command	DOE-2 Basics (2.1D)	BDL Summary (2.1D)	Supp (2.1D)	Ref Man (2.1A)	Program — year Version — added
LIGHT-TO-OTHER	L-T-O	L — SPACE-CONDITIONS		7	2.69		2.1B-1/15/83
LIGHT-TO-RETURN	L-T-R	L — SPACE-CONDITIONS		7	2.69		2.1B-1/15/83
LIGHT-TO-SPACE	L-T-S	L — SPACE-CONDITIONS	F.7	7	2.69	III.46	2.0-2/15/79
LIKE		general information	2.3			II.4	
		L — CONSTRUCTION	3.9			III.80	2.0-2/15/79
		L — DESIGN-DAY				III.26	2.0-2/15/79
		L — DOOR	3.37			III.110	2.0-2/15/79
		L — EXTERIOR-WALL or -ROOF	3.35			III.100	2.0-2/15/79
		L — GLASS-TYPE	3.13			III.87	2.0-2/15/79
		L — INTERIOR-WALL	3.32			III.113	2.0-2/15/79
		L — MATERIAL				III.73	2.0-2/15/79
		L — SPACE	3.24			III.94	2.0-2/15/79
		L — SPACE-CONDITIONS	3.16			III.43	2.0-2/15/79
		L — UNDERGROUND-WALL or -FLOOR	3.33			III.118	2.0-2/15/79
		L — WINDOW	3.27			III.107	2.0-2/15/79
LIMITS		LSPE — DIAGNOSTIC		1			2.0-2/15/79
•LOAD-ASSIGNMENT	L-A	P		39	4.2	V.8,52	2.0-2/15/79
LOAD-ASSIGNMENT	L-A	P — LOAD-MANAGEMENT		39		V.60	2.0-2/15/79
•LOAD-MANAGEMENT	L-M	P		39		V.8,59	2.0-2/15/79
LOAD-RANGE	L-R	P — LOAD-ASSIGNMENT		39		V.52	2.0-2/15/79
•LOADS-REPORT	L-R	L	3.36,F.11	17		III.123	2.0-2/15/79
LOCATION	LOC	L — EXTERIOR-WALL or ROOF		11		III.102	2.0-2/15/79
		L — INTERIOR-WALL		15		III.113	2.1-5/15/80
		L — TROMBE-WALL-V or -NV		12			2.1B-1/15/83
		L — UNDERGROUND-WALL or -FLOOR		16		III.119	2.1-5/15/80
LONGITUDE	LON	L — BUILDING-LOCATION	3.4,F.3	2		III.30	2.0-2/15/79
LOWER-VENT-AREA	L-V-A	L — WALL-PARAMETERS		5	2.8,2.61		2.1B-1/15/83
LOW-SPEED-RATIOS	L-S-R	S — SYSTEM-FANS		24		IV.227	2.1-5/15/80
MAINTENANCE	M	P — PLANT-EQUIPMENT		32		V.14	2.0-2/15/79
MAINTENANCE-EXP	M-E	P — PLANT-COSTS		40			2.1B-1/15/83
MAINTENANCE-REF	M-R	P — REFERENCE-COSTS		40		V.94	2.0-2/15/79
MAJ-OVHL-COST	MAJ-O-C	E — COMPONENT-COST		44		V.8	2.0-2/15/79

•COMMAND or Keyword	Abbrev	Subprogram — Command	DOE-2 Basics (2.1D)	BDL Summary (2.1D)	Supp (2.1D)	Ref Man (2.1A)	Program — year Version — added
MAJ-OVHL-CST-EXP	MAJ-O-C	P — PLANT-COSTS		40			2.1B-1/15/83
MAJ-OVHL-CST-REF	MAJ-O-C	P — REFERENCE-COSTS		40		V.95	2.0-2/15/79
MAJ-OVHL-INT	MAJ-O-I	E — COMPONENT-COST		44		V.8	2.0-2/15/79
MAJ-OVHL-INT-EXP	MAJ-O-I	P — PLANT-COSTS		40			2.1B-1/15/83
MAJ-OVHL-INT-REF	MAJ-O-I	P — REFERENCE-COSTS		40		V.95	2.0-2/15/79
MAJOR-OVHL-COST	MAJ-O-C	P — PLANT-EQUIPMENT		32		V.14	2.0-2/15/79
MAJOR-OVHL-INT	MAJ-O-I	P — PLANT-EQUIPMENT		32		V.14	2.0-2/15/79
MAKEUP-WTR-T	M-W-T	P — PLANT-PARAMETERS		34		V.24,V.30	2.0-2/15/79
•MATERIAL	MAT	L		4		III.73	2.0-2/15/79
MATERIAL	MAT	L — LAYERS	3.7,F.6	5		III.76	2.0-2/15/79
MATERIALS-INFLTN	M-I	P — PLANT-COSTS		40		V.91	2.0-2/15/79
MAX-COND-RCVRY	M-C-R	S — SYSTEM-EQUIPMENT	4.89,F.15	26		IV.249	2.1-5/15/80
MAX-COOL-RATE	MAX-C-R	S — ZONE		22		IV.18,200	2.0-2/15/79
MAX-FAN-RATIO	MAX-F-R	S — SYSTEM-FANS		24	3.31	IV.227	2.0-2/15/79
MAX-FLUID-T	MAX-F-T	S — SYSTEM-FLUID	4.85,F.15	25		IV.235	2.0-2/15/79
MAX-GLARE	M-G	L — SPACE-CONDITIONS		9	2.34,2.49		2.1B-1/15/83
MAX-HEAT-RATE	MAX-H-R	S — ZONE		22		IV.18,199	2.0-2/15/79
MAX-HP-SUPP-T	M-SUPP-T	S — SYSTEM-EQUIPMENT		26	3.15		2.1C-5/15/84
MAX-HUMIDITY	MAX-H	S — SYSTEM-CONTROL	4.73,F.14	23	3.23,3.31	IV.208	2.0-2/15/79
MAX-NUMBER-AVAIL	M-N-A	P — PLANT-EQUIPMENT		32		V.11.1	2.0-2/15/79
MAX-OA-FRACTION	M-O-F	S — SYSTEM-AIR		23		IV.217	2.1-5/15/80
MAX-RATIO	MAX-R	P — PART-LOAD-RATIO		33	4.18,4.21	V.18	2.0-2/15/79
MAX-SOLAR-SCH	M-S-SCH	L — WINDOW	3.27,F.9	13	2.34,2.53		2.1B-1/15/83
MAX-SUPPLY-T	MAX-S-T	S — SYSTEM-CONTROL	4.71,F.14	23	3.15	IV.203	2.0-2/15/79
MAX-VENT-RATE	M-V-R	S — SYSTEM-AIR		23	3.33,3.34		2.1D-6/30/89
MINOR-OVHL-COST	MIN-O-C	P — PLANT-EQUIPMENT		32			2.0-2/15/79
MINOR-OVHL-INT	MIN-O-I	P — PLANT-EQUIPMENT		32			2.0-2/15/79
MIN-AIR-SCH	M-A-SCH	S — SYSTEM-AIR	4.77,F.14	23	3.22,3.31	IV.215	2.0-2/15/79
MIN-CFM-RATIO	M-C-R	S — SYSTEM-TERMINAL	4.89,F.14	25		IV.231	2.0-2/15/79
		S — ZONE	4.69,F.13	22		IV.200	2.1-5/15/80
MIN-CFM-SCH	M-C-SCH	S — ZONE	4.70,F.13	22	3.22		2.1B-1/15/83

•COMMAND or Keyword	Abbrev	Subprogram -- Command	DOE-2 Basics (2.1D)	BDL Summary (2.1D)	Supp (2.1D)	Ref Man (2.1A)	Program -- year Version -- added
MIN-COND-AIR-T		P -- PLANT-PARAMETERS	5.11,F.17	35		V.22,V.23	2.1-5/15/80
MIN-FAN-RATIO	MIN-F-R	S -- SYSTEM-FANS		24	3.31	IV.227	2.0-2/15/79
MIN-FLOW-RATIO		S -- SYSTEM-TERMINAL			3.31		2.0-2/15/79
MIN-FLUID-T	MIN-F-T	S -- SYSTEM-FLUID	4.85,F.15	25		IV.234	2.0-2/15/79
MIN-HGB-RATIO	M-H-R	S -- SYSTEM-EQUIPMENT		26		IV.248	2.1-5/15/80
MIN-HP-T	M-H-T	S -- SYSTEM-EQUIPMENT		26	3.15	IV.251	2.1-5/15/80
MIN-HUMIDITY	MIN-H	S -- SYSTEM-CONTROL	4.75,F.14	23		IV.208	2.0-2/15/79
MIN-LIGHT-FRAC	M-L-F	L -- SPACE-CONDITIONS		9	2.34,2.47		2.1B-1/15/83
MIN-MONTHLY-CHG	M-M-C	E -- ENERGY-COST	6.3,F.19	42	5.3		2.0-2/15/79
MIN-OUTSIDE-AIR	M-O-A	S -- SYSTEM-AIR	4.76,F.14	23	3.31	IV.214	2.0-2/15/79
		P -- PLANT-EQUIPMENT				V.14	2.0-2/15/79
MIN-OVHL-COST	MIN-O-C	E -- COMPONENT-COST		44		V.18	2.0-2/15/79
MIN-OVHL-CST-EXP	MIN-O-C	P -- PLANT-COSTS		40			2.1B-1/15/83
MIN-OVHL-CST-REF	MIN-O-C	P -- REFERENCE-COSTS		40		V.94	2.0-2/15/79
MIN-OVHL-INT	MIN-O-I	E -- COMPONENT-COST		44		VI.8	2.0-2/15/79
		P -- PLANT-EQUIPMENT				V.14	2.0-2/15/79
MIN-OVHL-INT-EXP	MIN-O-I	P -- PLANT-COSTS		40			2.1B-1/15/83
MIN-OVHL-INT-REF	MIN-O-I	P -- REFERENCE-COSTS		40		V.94	2.0-2/15/79
MIN-POWER-FRAC	M-P-F	L -- SPACE-CONDITIONS		9	2.34,2.47		2.1B-1/15/83
MIN-RATIO	MIN-R	P -- PART-LOAD-RATIO		33	4.18,4.21	V.18	2.0-2/15/79
MIN-SUPPLY-T	MIN-S-T	S -- SYSTEM-CONTROL	4.72,F.14	23		IV.206	2.0-2/15/79
MIN-TRACK-LOAD		P -- PLANT-PARAMETERS		36	4.2		2.1C-5/15/84
MIN-TWR-WTR-T		P -- PLANT-PARAMETERS	5.12,F.17	35		V.23,V.28	2.1-5/15/80
MIN-UNLOAD-RATIO	M-U-R	S -- SYSTEM-EQUIPMENT		26		IV.248	2.1-5/15/80
MOTOR-PLACEMENT	M-P	S -- SYSTEM-FANS		24		IV.225	2.0-2/15/79
MULTIPLIER	M	L -- DOOR		14		III.110	2.1-5/15/80
		E -- ENERGY-COST				V.88	2.0-2/15/79
		L -- EXTERIOR-WALL or ROOF	3.25,F.8	11		III.102	2.0-2/15/79
		L -- SPACE		10	2.81	III.94	2.0-2/15/79
		L -- TROMBE-WALL-V or -NV		12			2.1B-1/15/83
		L -- UNDERGROUND-WALL or -FLOOR		16		III.119	2.0-2/15/79
		L -- WINDOW		13		III.107	2.0-2/15/79
		S -- ZONE		22		IV.8,199	2.0-2/15/79

•COMMAND or Keyword	Abbrev	Subprogram -- Command	DOE-2 Basics (2.1D)	BDL Summary (2.1D)	Supp (2.1D)	Ref Man (2.1A)	Program -- year Version -- added
NAME		LS -- FUNCTION		17	1.3		2.1D--6/30/89
NATURAL-VENT-AC	N-V-A	S -- SYSTEM			3.34		2.0A--6/15/79
		S -- SYSTEM-AIR	4.78,F.14	23	3.34	IV.217	2.1--5/15/80
NATURAL-VENT-SCH	N-V-SCH	S -- SYSTEM			3.34		2.0A--6/15/79
		S -- SYSTEM-AIR	4.78,F.14	23	3.34	IV.217	2.1--5/15/80
NEUTRAL-LEVEL	N-L	L -- SPACE-CONDITIONS		9	2.74,3.34		2.1C--5/15/84
NEUTRAL-ZONE-HT	N-Z-H	L -- SPACE-CONDITIONS		9		III.51	2.0--2/15/79
NEXT-TO	N-T	L -- INTERIOR-WALL	3.32,F.10	15		III.114	2.0--2/15/79
NIGHT-CYCLE-CTRL	N-C-C	S -- SYSTEM			3.31		2.0A--6/15/79
		S -- SYSTEM-FANS	4.83,F.14	24	3.5	IV.18,228	2.1--5/15/80
NIGHT-VENT-CTRL	N-V-C	S -- SYSTEM-FANS		24	3.19		2.1B--1/15/83
NIGHT-VENT-DT	N-V-D	S -- SYSTEM-FANS		24	3.19		2.1B--1/15/83
NIGHT-VENT-RATIOS	N-V-R	S -- SYSTEM-FANS		24	3.20		2.1B--1/15/83
NIGHT-VENT-SCH	NT-V-SCH	S -- SYSTEM-FANS		24	3.19		2.1B--1/15/83
NUMBER	N	P -- LOAD-ASSIGNMENT		39		V.53	2.0--2/15/79
NUMBER-OF-PEOPLE	N-O-P	L -- SPACE-CONDITIONS	3.16,F.7	7		III.43	2.0--2/15/79
NUMBER-OF-UNITS	N-O-U	E -- COMPONENT-COST		44		VI.6	2.0--2/15/79
OA-CFM/PER	O-CFM/P	S -- ZONE-AIR	4.66,F.13	21		IV.190	2.0--2/15/79
OA-CHANGES	O-C	S -- ZONE-AIR	4.66,F.13	21		IV.190	2.0--2/15/79
OA-CONTROL	O-CTRL	S -- SYSTEM-AIR	4.77,F.14	23		IV.215	2.0--2/15/79
OPEN-CENT-CAP-FT		P -- EQUIPMENT-QUAD		37		V.41,43	2.1--5/15/80
OPEN-CENT-COND-PWR		P -- PLANT-PARAMETERS		34		V.23,V.26	2.1--5/15/80
OPEN-CENT-COND-TYPE		P -- PLANT-PARAMETERS		34		V.23,V.26	2.1--5/15/80
OPEN-CENT-EIR-FPLR		P -- EQUIPMENT-QUAD		37		V.42,43	2.1--5/15/80
OPEN-CENT-EIR-FT		P -- EQUIPMENT-QUAD		37		V.42	2.1--5/15/80
OPEN-CENT-MOTOR-EFF		P -- PLANT-PARAMETERS		34		V.23,V.26	2.1--5/15/80
OPEN-CENT-UNL-RAT		P -- PLANT-PARAMETERS		34		V.23,V.26	2.1--5/15/80
OPEN-REC-CAP-FT		P -- EQUIPMENT-QUAD		37		V.42,43	2.1--5/15/80
OPEN-REC-COND-PWR		P -- PLANT-PARAMETERS		34		V.23,V.27	2.1--5/15/80

•COMMAND or Keyword	Abbrev	Subprogram — Command	DOE-2 Basics (2.1D)	BDL Summary (2.1D)	Supp (2.1D)	Ref Man (2.1A)	Program — year Version — added
OPEN-REC-COND-TYPE		P — PLANT-PARAMETERS		34		V.23,V.27	2.1—5/15/80
OPEN-REC-EIR-FPLR		P — EQUIPMENT-QUAD		37		V.42,43	2.1—5/15/80
OPEN-REC-EIR-FT		P — EQUIPMENT-QUAD		37		V.42,43	2.1—5/15/80
OPEN-REC-MOTOR-EFF		P — PLANT-PARAMETERS		34		V.23,V.27	2.1—5/15/80
OPEN-REC-UNL-RAT		P — PLANT-PARAMETERS		34		V.23,V.27	2.1—5/15/80
OPEN-SHADE-SCH	O-S-SCH	L — WINDOW		13	2.31,2.34		2.1C—5/15/84
OPEN-VENT-SCH	O-V-SCH	S — SYSTEM-AIR		23	3.33,3.34		2.1D—6/30/89
OPERATING-RATIO	O-R	P — PART-LOAD-RATIO		33	4.21	V.18	2.0—2/15/79
OPERATIONS-COST	O-C	E — BASELINE		44		V1.9,11	2.0—2/15/79
OPERATION-MODE	O-M	P — LOAD-ASSIGNMENT		39		V.54	2.0—2/15/79
OPSTRT		S — SUBR-FUNCTIONS		29	1.5		2.1D—6/30/89
OPTION	O	LS — HOURLY-REPORT		17,30		III.127	2.0A—6/15/79
OUTPUT-MAX		SP — CURVE-FIT		19	3.21		2.1B—1/15/83
OUTPUT-MIN		SP — CURVE-FIT		19	3.21		2.1B—1/15/83
OUTPUT-UNITS		L — INPUT-LOADS		1			2.1B—1/15/83
		P — INPUT-PLANT		31			2.1B—1/15/83
		S — INPUT-SYSTEMS		19			2.1B—1/15/83
		PARAMETRIC-INPUT			1.27		2.1B—1/15/83
		ECONOMICS		42			2.1B—1/15/83
		LOADS		1			2.1B—1/15/83
		PLANT		31			2.1B—1/15/83
		SYSTEMS		19			2.1B—1/15/83
OUTSIDE-AIR-CFM	O-A-CFM	S — ZONE-AIR	4.66,F.13	21			2.0—2/15/79
OUTSIDE-FAN-KW	O-F-KW	S — SYSTEM-EQUIPMENT		26		IV.249	2.1—5/15/80
OUTSIDE-FAN-MODE	O-F-M	S — SYSTEM-EQUIPMENT		26		IV.249	2.1—5/15/80
OUTSIDE-FAN-T	O-F-T	S — SYSTEM-EQUIPMENT		26		IV.249	2.1—5/15/80
OUTSIDE-HI	O-H	S — DAY-RESET-SCH	4.61,F.12	20		IV.177	2.0—2/15/79
OUTSIDE-HI-R		S — DAY-RESET-SCH			1.29		2.1D—metric
OUTSIDE-LO	O-L	S — DAY-RESET-SCH	4.62,F.12	20		IV.177	2.0—2/15/79
OUTSIDE-LO-R		S — DAY-RESET-SCH			1.29		2.1D—metric
OVERHANG-A	OH-A	L — DOOR	F.10	14	2.65		2.1B—1/15/83
		L — WINDOW	3.28,F.9	13	2.65		2.1B—1/15/83
OVERHANG-ANGLE	OH-ANG	L — DOOR	F.10	14	2.66		2.1B—1/15/83

•COMMAND or Keyword	Abbrev	Subprogram — Command	DOE-2 Basics (2.1D)	BDL Summary (2.1D)	Supp (2.1D)	Ref Man (2.1A)	Program — year Version — added
		L — WINDOW	3.28,F.9	13	2.66		2.1B—1/15/83
OVERHANG-B	OH-B	L — DOOR	F.10	14	2.65		2.1B—1/15/83
		L — WINDOW	3.28,F.9	13	2.65		2.1B—1/15/83
OVERHANG-D	OH-D	L — DOOR	F.10	14	2.65		2.1B—1/15/83
		L — WINDOW	3.28,F.9	13	2.65		2.1B—1/15/83
OVERHANG-W	OH-W	L — DOOR	F.10	14	2.65		2.1B—1/15/83
		L — WINDOW	3.28,F.9	13	2.65		2.1B—1/15/83
OVER-BLOCK-RANGE	O-B-R	E — CHARGE-ASSIGNMENT	6.6,F.20	43	5.5		2.1C—5/15/84
PANEL-0Z		S — SUBR-FUNCTIONS		29	1.5		2.1D—6/30/89
PANEL-1		S — SUBR-FUNCTIONS		29	1.5		2.1D—6/30/89
PANEL-LOSS-RATIO	P-L-R	S — ZONE		22		IV.200	2.0—2/15/79
PANES	P	L — GLASS-TYPE	F.6	6		III.87	2.0—2/15/79
•PARAMETER		LSPE		2,19		II.20,V.8	2.0—2/15/79
				31,42			
•PARAMETRIC-INPUT							
•ECONOMICS		E	42			II.15,II.16	2.1—5/15/80
•LOADS		L	1			II.15,II.16	2.1—5/15/80
•PLANT		P	31			II.15,II.16	2.1—5/15/80
•SYSTEMS		S	19			II.15,II.16	2.1—5/15/80
•PART-LOAD-RATIO	P-L-R	P	F.16	33		V.8,18	2.0—2/15/79
PEOPLE-HEAT-GAIN	P-H-G	L — SPACE-CONDITIONS	F.7	7		III.43	2.0—2/15/79
PEOPLE-HG-LAT	P-H-L	L — SPACE-CONDITIONS	F.7	7		III.44	2.0—2/15/79
PEOPLE-HG-SENS	P-H-S	L — SPACE-CONDITIONS	F.7	7		III.44	2.0—2/15/79
PEOPLE-SCHEDULE	P-SCH	L — SPACE-CONDITIONS	F.7	7		III.43	2.0—2/15/79
PIU-0		S — SUBR-FUNCTIONS		29	1.5		2.1D—6/30/89
PIU-1		S — SUBR-FUNCTIONS		29	1.5		2.1D—6/30/89
•PLANT-ASSIGNMENT	P-A	S		29		IV.267,V.8,98	2.0—2/15/79
•PLANT-COSTS	P-C	P		40		V.8,91	2.0—2/15/79
•PLANT-EQUIPMENT	P-E	P	F.16	32		V.8,9	2.0—2/15/79
PLANT-EQUIPMENT	P-E	P — LOAD-ASSIGNMENT		39		V.8,53	2.0—2/15/79
•PLANT-PARAMETERS	P-P	P	F.17	34,35,	4.1,4.8,	V.8,22	2.0—2/15/79

•COMMAND or Keyword	Abbrev	Subprogram -- Command	DOE-2 Basics (2.1D)	BDL Summary (2.1D)	Supp (2.1D)	Ref Man (2.1A)	Program -- year Version -- added
				38	4.13		
•PLANT-REPORT	P-R	P	F.18	40		V.8,100	2.0-2/15/79
PLENUM-NAMES	P-N	S -- SYSTEM		27	3.31	IV.264	2.0-2/15/79
POWER-FACT-CORR	P-F-C	E -- COST-PARAMETERS	6.10,F.20	44	5.8		2.1C-5/15/84
PRED-LOAD-RANGE	P-L-R	P -- LOAD-MANAGEMENT		39		V.60	2.0-2/15/79
PREHEAT-SOURCE	PREHEAT	S -- SYSTEM	4.87,F.15	27		IV.260-3	2.0-2/15/79
PREHEAT-T	P-T	S -- SYSTEM-CONTROL	4.75,F.14	23			2.0-2/15/79
PROJECT-LIFE	P-L	P -- PLANT-COSTS		40			2.0-2/15/79
PTAC-0		S -- SUBR-FUNCTIONS		29	1.5		2.1D-6/30/89
PTAC-1Z		S -- SUBR-FUNCTIONS		29	1.5		2.1D-6/30/89
PTAC-2		S -- SUBR-FUNCTIONS		29	1.5		2.1D-6/30/89
QREGPL-FWB1WB6	QRPL-FWB	S -- SYSTEM-EQUIPMENT		27	3.31		2.1D-6/30/89
QREG-FWB1WB6	QR-FWB	S -- SYSTEM-EQUIPMENT		27	3.31		2.1D-6/30/89
RADIATIONS		LSP -- DAY-SCHEDULE			1.28		2.1D-metric
RATED-CCAP-FCFM	R-CC-FC	S -- SYSTEM-EQUIPMENT		26		IV.243,246	2.1-5/15/80
RATED-CEIR-FCFM	R-CE-FC	S -- SYSTEM-EQUIPMENT		26		IV.243,246	2.1-5/15/80
RATED-CFM	R-CFM	S -- SYSTEM-AIR		23		IV.214	2.1-5/15/80
		S -- ZONE-AIR		21		IV.189	2.1-5/15/80
RATED-HCAP-FCFM	R-HC-FC	S -- SYSTEM-EQUIPMENT		26		IV.243,250	2.1-5/15/80
RATED-HEIR-FCFM	R-HE-FC	S -- SYSTEM-EQUIPMENT		26		IV.243,251	2.1-5/15/80
RATED-SH-FCFM	R-S-FC	S -- SYSTEM-EQUIPMENT		26		IV.243,246	2.1-5/15/80
RATE-LIMITATION	R-L	E -- ENERGY-COST	6.3,F.19	42	5.3		2.1C-5/15/84
RECOVERY-EFF	REC-E	S -- SYSTEM-AIR	4.77,F.14	23		IV.215	2.0-2/15/79
RECVR-HEAT/BLOW	R-H-B	P -- PLANT-PARAMETERS		34		V.24,V.30	2.0-2/15/79
•REFERENCE-OOSTS	R-C	P		40		V.8,94	2.0-2/15/79
REFG-AUX-HEAT		S -- ZONE		22	3.7		2.1C-5/15/84
REFG-AUX-KW		S -- ZONE		22	3.7		2.1C-5/15/84
REFG-AUX-SCH		S -- ZONE		22	3.7		2.1C-5/15/84

•COMMAND or Keyword	Abbrev	Subprogram — Command	DOE-2 Basics (2.1D)	BDL Summary (2.1D)	Supp (2.1D)	Ref Man (2.1A)	Program — year Version — added
REFG-COMP-CAP		S — SYSTEM		28	3.8		2.1C-5/15/84
REFG-COMP-EER		S — SYSTEM		28	3.9		2.1C-5/15/84
REFG-COMP-GROUP		S — SYSTEM		28	3.9		2.1C-5/15/84
REFG-COND-TYPE		S — SYSTEM		28	3.10		2.1C-5/15/84
REFG-DEF-CTRL		S — ZONE		22	3.8		2.1C-5/15/84
REFG-DEF-EFF		S — ZONE		22	3.8		2.1C-5/15/84
REFG-DEF-MECH		S — ZONE		22	3.8		2.1C-5/15/84
REFG-DISCHARGE-T		S — ZONE		22	3.7		2.1C-5/15/84
REFG-EVAP-T		S — ZONE		22	3.7		2.1C-5/15/84
REFG-FAN-KW		S — SYSTEM		28	3.9		2.1C-5/15/84
REFG-FAN-T		S — SYSTEM		28	3.10		2.1C-5/15/84
REFG-HTREC-GROUP		S — SYSTEM		28	3.10		2.1C-5/15/84
REFG-HTREC-T		S — SYSTEM		28	3.10		2.1C-5/15/84
REFG-HTREC-UNITS		S — SYSTEM		28	3.10		2.1C-5/15/84
REFG-KW-FPLR		S — SYSTEM-EQUIPMENT		26	3.11		2.1C-5/15/84
REFG-KW-FTCOND		S — SYSTEM-EQUIPMENT		26	3.11		2.1C-5/15/84
REFG-LAT-SCH		S — ZONE		22	3.7		2.1C-5/15/84
REFG-MAX-HTREC		S — SYSTEM		28	3.10		2.1C-5/15/84
REFG-MIN-COND-T		S — SYSTEM		28	3.10		2.1C-5/15/84
REFG-PUMP-KW		S — SYSTEM		28	3.10		2.1C-5/15/84
REFG-SENS-SCH		S — ZONE		28	3.7		2.1C-5/15/84
REFG-SIZING-RAT		S — SYSTEM		28	3.8		2.1C-5/15/84
REFG-ZONE-DES-RH		S — ZONE		22	3.7		2.1C-5/15/84
REFG-ZONE-DES-T		S — ZONE		22	3.6		2.1C-5/15/84
REFG-ZONE-LOAD		S — ZONE		22	3.6		2.1C-5/15/84
REFG-ZONE-SHR		S — ZONE		22	3.6		2.1C-5/15/84
REHEAT-DELTA-T	R-D-T	S — SYSTEM-TERMINAL		25		IV.231	2.0-2/15/79
		S — SYSTEM	4.89,F.15				
		S — ZONE	4.69,F.13	22	3.4		2.1C-5/15/84
REPLACE-COST	R-C	E — BASELINE		44		VI.9,11	2.0-2/15/79
•REPORT-BLOCK	R-B	LSPE		17,30,41		II.30,III.130, IV.275,V.8,105	2.0-2/15/79

•COMMAND or Keyword	Abbrev	Subprogram — Command	DOE-2 Basics (2.1D)	BDL Summary (2.1D)	Supp (2.1D)	Ref Man (2.1A)	Program — year Version — added
REPORT-BLOCK	R-B	LSP — HOURLY-REPORT		17,30		III.127,IV.273,V.103	0—2/15/79
REPORT-FREQUENCY	R-F	ECONOMICS-REPORT		45			2.1C—5/15/84
		LOADS-REPORT		17	1.25		2.1C—5/15/84
		PLANT-REPORT		40	1.25		2.1C—5/15/84
		SYSTEMS-REPORT		29	1.25		2.1C—5/15/84
REPORT-SCHEDULE	R-SCH	HOURLY-REPORT		17,30		III.127,IV.273 V.103	2.0—2/15/79
•RESET-SCHEDULE	R-SCH	S	4.81,F.12	20		IV.176	2.0—2/15/79
RESISTANCE	RES	L — MATERIAL		4		III.74	2.0—2/15/79
RESOURCE	R	E — CHARGE-ASSIGNMENT	6.5,F.20	43	5.4		2.1C—5/15/84
		E — ENERGY-COST	6.2,F.19	42	5.2		2.0—2/15/79
		P — ENERGY-RESOURCE	5.16,F.18	39	4.14		2.1C—5/15/84
RESYS-0		S — SUBR-FUNCTIONS		29	1.5		2.1D—6/30/89
RESYS-1Z		S — SUBR-FUNCTIONS		29	1.5		2.1D—6/30/89
RESYS-2Z		S — SUBR-FUNCTIONS		29	1.5		2.1D—6/30/89
RESYS-3Z		S — SUBR-FUNCTIONS		29	1.5		2.1D—6/30/89
RESYS-4Z		S — SUBR-FUNCTIONS		29	1.5		2.1D—6/30/89
RESYS-5		S — SUBR-FUNCTIONS		29	1.5		2.1D—6/30/89
RES-INF-COEF	R-I-C	L — SPACE-CONDITIONS	3.22,F.7	9		III.50	2.0A—6/15/79
RES-INF-CST		L — SPACE-CONDITIONS			1.29		2.1D—6/30/89
RES-INF-WND		L — SPACE-CONDITIONS			1.29		2.1D—6/30/89
RES-INF-TEMP		L — SPACE-CONDITIONS			1.29		2.1D—6/30/89
RETURN-AIR-PATH	R-A-P	S — SYSTEM		27	2.72,3.31	IV.282	2.0—2/15/79
RETURN-CFM	R-CFM	S — SYSTEM-AIR		23		IV.214	2.0—2/15/79
RETURN-DELTA-T	RET-D-T	S — SYSTEM-FANS	4.83,F.14	24		IV.226	2.1—5/15/80
RETURN-EFF	R-E	S — SYSTEM-FANS		24		IV.227	2.0—2/15/79
RETURN-KW	R-KW	S — SYSTEM-FANS	4.83,F.14	24		IV.226	2.1—5/15/80
RETURN-STATIC	R-S	S — SYSTEM-FANS		24		IV.227	2.0—2/15/79
RFACT-CFM-EXPONENT		P — PLANT-PARAMETERS		35		V.23,V.28	2.1—5/15/80
RIGHT-FIN-A	R-F-A	L — DOOR	F.10	14	2.67		2.1B—1/15/83
		L — WINDOW	3.29,F.9	13	2.67		2.1B—1/15/83
RIGHT-FIN-B	R-F-B	L — DOOR	F.10	14	2.67		2.1B—1/15/83
		L — WINDOW	3.30,F.9	13	2.67		2.1B—1/15/83

•COMMAND or Keyword	Abbrev	Subprogram — Command	DOE-2 Basics (2.1D)	BDL Summary (2.1D)	Supp (2.1D)	Ref Man (2.1A)	Program — year Version — added
RIGHT-FIN-D	R-F-D	L — DOOR	F.10	14	2.67		2.1B-1/15/83
		L — WINDOW	3.30,F.9	13	2.67		2.1B-1/15/83
RIGHT-FIN-H	R-F-H	L — DOOR	F.10	14	2.67		2.1B-1/15/83
		L — WINDOW	3.30,F.9	13	2.67		2.1B-1/15/83
ROUGHNESS	RO	L — CONSTRUCTION	3.12,F.6	5		III.84	2.0-2/15/79
•RUN-PERIOD		L	3.3,F.3	2		III.21	2.0-2/15/79
•SAVE-FILES		LS		18,30		II.34	2.1-5/15/80
•SCHEDULE	SCH	LSPE	2.6,2.7,F.4, F.12,F.19	4,20, 32,42	1.7	II.12,29,V.8	2.0-2/15/79
SDSF-0		S — SUBR-FUNCTIONS		29	1.5		2.1D-6/30/89
SDSF-1		S — SUBR-FUNCTIONS		29	1.5		2.1D-6/30/89
SEASON	S	E — CHARGE-ASSIGNMENT	6.6,F.20	43	5.5		2.1C-5/15/84
SETBACK	SETB	L — DOOR	3.31,F.10	14		III.110	2.1-5/15/80
		L — WINDOW	3.27,F.9	13		III.107	2.0-2/15/79
•SET-DEFAULT	SET	L		2		II.22,V.8	2.0-2/15/79
SHADE-GND-REFL	S-G-R	L — BUILDING-SHADE		6	2.44		2.1B-1/15/83
		L — FIXED-SHADE		6	2.44		2.1B-1/15/83
SHADE-SCHEDULE	S-SCH	L — BUILDING-SHADE		6	2.67		2.1B-1/15/83
		L — FIXED-SHADE		6	2.67		2.1B-1/15/83
SHADE-VIS-REFL	S-V-R	L — BUILDING-SHADE		6	2.34,2.44		2.1B-1/15/83
		L — FIXED-SHADE		6	2.34,2.44		2.1B-1/15/83
SHADING-COEF	S-C	L — GLASS-TYPE	3.13,F.6	6	2.77	III.88	2.0-2/15/79
SHADING-DIVISION	S-D	L — DOOR		14		III.110	2.1-5/15/80
		L — EXTERIOR-WALL or ROOF		11		III.102	2.0-2/15/79
		L — TROMBE-WALL-V or -NV		12			2.1B-1/15/83
		L — WINDOW		13		III.107	2.0-2/15/79
SHADING-SCHEDULE	S-SCH	L — WINDOW	3.27,F.9	13		III.107	2.0-2/15/79
SHADING-SURFACE	S-S	L — EXTERIOR-WALL or ROOF		11	2.67		2.1B-1/15/83
		L — TROMBE-WALL-V or -NV		12			2.1B-1/15/83
SHAPE		L — SPACE		10		III.97	2.0-2/15/79
SHIELDING-COEF	S-COEF	L — BUILDING-LOCATION		2	2.74,3.34		2.1B-1/15/83

•COMMAND or Keyword	Abbrev	Subprogram — Command	DOE-2 Basics (2.1D)	BDL Summary (2.1D)	Supp (2.1D)	Ref Man (2.1A)	Program — year Version — added
SINGLE-SPACED		LSPE — DIAGNOSTIC		1			2.1B—1/15/83
SITE-FACTOR	S-F	P — PLANT-COSTS		40		V.92	2.0—2/15/79
SIZE		P — PLANT-EQUIPMENT	5.7,F.16	32		V.11	2.0—2/15/79
SIZE-REF	S-R	P — REFERENCE-COSTS		40		V.94	2.0—2/15/79
SIZING-OPTION	S-O	S — SYSTEM		27		IV.262	2.1—5/15/80
		S — ZONE		22		IV.201.1	2.1B—1/15/83
SIZING-RATIO	S-R	S — SYSTEM	4.88,F.15	27		IV.18,262	2.0—2/15/79
SKY-FORM-FACTOR	S-F-F	L — DOOR		14		III.110	2.1—5/15/80
		L — EXTERIOR-WALL or ROOF		11		III.100	2.0—2/15/79
		L — TROMBE-WALL-V or -NV		12			2.1B—1/15/83
		L — WINDOW		13		III.107	2.0—2/15/79
SOLAR-FRACTION	S-F	L — EXTERIOR-WALL or ROOF		11		III.103	2.1—5/15/80
		L — INTERIOR-WALL		15		III.114	2.1—5/15/80
		L — TROMBE-WALL-V or -NV		12			2.1B—1/15/83
		L — UNDERGROUND-WALL or -FLOOR		16		III.119	2.1—5/15/80
SOL-TRANS-SCH	S-T-SCH	L — WINDOW		13	2.4		2.1C—5/15/84
SOURCE-BTU/HR	S-B	L — SPACE-CONDITIONS	3.21,F.7	7		III.48	2.0—2/15/79
SOURCE-LATENT	S-L	L — SPACE-CONDITIONS	3.22,F.7	7		III.49	2.0—2/15/79
SOURCE-SCHEDULE	S-SCH	L — SPACE-CONDITIONS	3.21,F.7	7		III.48	2.0—2/15/79
SOURCE-SENSIBLE	S-S	L — SPACE-CONDITIONS	3.21,F.7	7		III.49	2.0—2/15/79
SOURCE-SITE-EFF	S-S-E	P — ENERGY-RESOURCE	5.16,F.18	39	4.14		2.0A—6/15/79
SOURCE-TYPE	S-T	L — SPACE-CONDITIONS	3.20,F.7	7		III.47	2.0—2/15/79
•SPACE	S	L	3.24,F.8	10	1.4,2.81	III.94	2.0—2/15/79
•SPACE-CONDITIONS	S-C	L	3.15,F.7	7,9	2.3,2.45 2.69	III.42	2.0—2/15/79
SPACE-CONDITIONS	S-C	L — SPACE	3.24,F.8	10		III.97	2.0—2/15/79
SPECIFIC-HEAT	S-H	L — MATERIAL		4		III.73	2.0—2/15/79
SSBASB		S — SUBR-FUNCTIONS		29	1.5		2.1D—6/30/89
SSFCOR		S — SUBR-FUNCTIONS		29	1.5		2.1D—6/30/89
SS-FLOW-SCH	SS-F-SCH	S — ZONE-AIR		21	2.12		2.1C—metric
SS-FLOW-T-SCH		S — ZONE-AIR		21	2.12		2.1C—5/15/84
SS-VENT-CST	S-V-CST	S — ZONE-AIR		21	2.11		2.1C—5/15/84
SS-VENT-KW	S-V-KW	S — ZONE-AIR		21	2.12		2.1C—5/15/84

•COMMAND or Keyword	Abbrev	Subprogram — Command	DOE-2 Basics (2.1D)	BDL Summary (2.1D)	Supp (2.1D)	Ref Man (2.1A)	Program — year Version — added
SS-VENT-LIMIT-T	S-V-L-T	S — ZONE-AIR		21	2.12		2.1C-5/15/84
SS-VENT-SCH	S-V-SCH	S — ZONE-AIR		21	2.11		2.1C-5/15/84
SS-VENT-TEMP	S-V-TEMP	S — ZONE-AIR		21	2.11		2.1C-5/15/84
SS-VENT-T-SCH	S-V-T-SCH	S — ZONE-AIR		21	2.11		2.1C-5/15/84
SS-VENT-WND	S-V-WND	S — ZONE-AIR		21	2.11		2.1C-5/15/84
STM-BOILER-HIR		P — PLANT-PARAMETERS	5.13,F.17	34		V.24,V.30	2.1-5/15/80
STM-BOILER-HIR-FPLR		P — EQUIPMENT-QUAD		37		V.44,45	2.1-5/15/80
STM-PRES		P — PLANT-PARAMETERS		36		V.25,V.32	2.0-2/15/79
STM-SATURATION-T		P — PLANT-PARAMETERS		36	4.8	V.25,V.32	2.0-2/15/79
•STOP		L	F.20	18,30, 41,45		II.35	2.0-2/15/79
STURB-ENTH-FPIX		P — EQUIPMENT-QUAD		38	4.11		2.1C-5/15/84
STURB-EXH-PRES		P — PLANT-PARAMETERS		36		V.24,V.31	2.0-2/15/79
STURB-I/O-FPLR		P — EQUIPMENT-QUAD		38	4.11	V.44,47	2.1-5/15/80
STURB-MECH-EFF		P — PLANT-PARAMETERS		36	4.8		2.1C-5/15/84
STURB-PRES		P — PLANT-PARAMETERS		36		V.24,V.32	2.0-2/15/79
STURB-T		P — PLANT-PARAMETERS		36		V.25,V.32	2.0-2/15/79
STURB-WTR-RETURN		P — PLANT-PARAMETERS		36		V.25,V.32	2.0-2/15/79
SUMMARY	S	E — ECONOMICS-REPORT	6.17,F.20	45		VI.12	2.0-2/15/79
		L — LOADS-REPORT	3.36,F.11	17		III.123	2.0-2/15/79
		P — PLANT-REPORT	5.17,F.18	40		V.100	2.0-2/15/79
		S — SYSTEMS-REPORT	4.90,F.15	29		IV.269	2.0-2/15/79
•SUBR-FUNCTIONS		S	29	1.5			2.1D-6/30/89
SUM-1		S — SUBR-FUNCTIONS		29	1.5		2.1D-6/30/89
SUM-2Z		S — SUBR-FUNCTIONS		29	1.5		2.1D-6/30/89
SUM-3Z		S — SUBR-FUNCTIONS		29	1.5		2.1D-6/30/89
SUM-4Z		S — SUBR-FUNCTIONS		29	1.5		2.1D-6/30/89
SUM-6		S — SUBR-FUNCTIONS		29	1.5		2.1D-6/30/89
SUNSPACE	SUNSP	L — SPACE-CONDITIONS		9	2.3		2.1C-5/15/84
SUN-CTRL-PROB	S-C-P	L — WINDOW		13	2.34,2.53		2.1B-1/15/83
SUPPLY-1	S-1	P — HEAT-RECOVERY	5.15,F.18	38		V.66	2.0-2/15/79
SUPPLY-2	S-2	P — HEAT-RECOVERY		38		V.66	2.0-2/15/79

•COMMAND or Keyword	Abbrev	Subprogram — Command	DOE-2 Basics (2.1D)	BDL Summary (2.1D)	Supp (2.1D)	Ref Man (2.1A)	Program — year Version — added
SUPPLY-5	S-5	P — HEAT-RECOVERY		38		V.66	2.0—2/15/79
SUPPLY-CFM	S-CFM	S — SYSTEM-AIR	4.76,F.14	23	3.25	IV.213	2.0—2/15/79
SUPPLY-DELTA-T	SUP-D-T	S — SYSTEM-FANS	4.82,F.14	24	3.31	IV.223	2.1—5/15/80
SUPPLY-EFF	S-E	S — SYSTEM-FANS		24		IV.225	2.0—2/15/79
SUPPLY-FLOW	S-F	S — SYSTEM-AIR		23	3.31		2.1D—6/30/89
SUPPLY-HI	S-H	S — DAY-RESET-SCH	4.61,F.12	20		IV.176	2.0—2/15/79
SUPPLY-HI-R		S — DAY-RESET-SCH			1.29		2.1D—metric
SUPPLY-KW	S-KW	S — SYSTEM-FANS	4.82,F.14	24		IV.224	2.1—5/15/80
SUPPLY-LO	S-L	S — DAY-RESET-SCH	4.61,F.12	20	1.29	IV.177	2.0—2/15/79
SUPPLY-LO-R		S — DAY-RESET-SCH			1.29		2.1D—metric
SUPPLY-MECH-EFF	S-M-E	S — SYSTEM-FANS		24		IV.224	2.0—2/15/79
SUPPLY-STATIC	S-S	S — SYSTEM-FANS		24		IV.224	2.0—2/15/79
•SYSTEM	SYST	S	F.15	27,28	3.8,3.19	IV.18,257	2.0—2/15/79
•SYSTEM-AIR	S-A	S	4.76,F.14	23		IV.213	2.0—2/15/79
SYSTEM-AIR	S-A	S — SYSTEM	4.87,F.15	27		IV.259	2.0—2/15/79
•SYSTEM-CONTROL	S-C	S	4.71,F.14	23		IV.203	2.0—2/15/79
SYSTEM-CONTROL	S-C	S — SYSTEM	4.87,F.15	27		IV.18,258	2.0—2/15/79
•SYSTEM-EQUIPMENT	S-EQ	S		26,27	3.15,3.26	IV.237	2.1—5/15/80
SYSTEM-EQUIPMENT	S-EQ	S — SYSTEM		27		IV.259	2.1—5/15/80
•SYSTEM-FANS	S-FANS	S	4.81,F.14	24	3.5,3.17 3.19	IV.18,221	2.0—2/15/79
SYSTEM-FANS	S-FANS	S — SYSTEM	4.87,F.15	27		IV.18,259	2.0—2/15/79
•SYSTEM-FLUID	S-FLU	S	4.85,F.15	25		IV.234	2.0—2/15/79
SYSTEM-FLUID	S-FLU	S — SYSTEM	4.87,F.15	27		IV.259	2.0—2/15/79
SYSTEM-NAMES	S-N	S — PLANT-ASSIGNMENT		29		IV.267	2.0—2/15/79
•SYSTEM-TERMINAL	S-T	S		25		IV.231	2.0—2/15/79
SYSTEM-TERMINAL	S-T	S — SYSTEM		27		IV.259	2.0—2/15/79
SYSTEM-TYPE	S-TYPE	S — SYSTEM	4.86-7,F.15	27		IV.18,257	2.0—2/15/79
•SYSTEMS-REPORT	S-R	S	4.90,F.15	29		IV.269	2.0—2/15/79
SZCI-0		S — SUBR-FUNCTIONS		29	1.5		2.1D—6/30/89
SZCI-1Z		S — SUBR-FUNCTIONS		29	1.5		2.1D—6/30/89

•COMMAND or Keyword	Abbrev	Subprogram — Command	DOE-2 Basics (2.1D)	BDL Summary (2.1D)	Supp (2.1D)	Ref Man (2.1A)	Program — year Version — added
SZCI-2		S — SUBR-FUNCTIONS		29	1.5		2.1D-6/30/89
T8PL-FWB1WB6	TPL-FWB	S — SYSTEM-EQUIPMENT		27	3.31		2.1D-6/30/89
T8-FWB1WB6	T-FWB	S — SYSTEM-EQUIPMENT		27	3.31		2.1D-6/30/89
TABLE		LS — ASSIGN			1.8		2.1D-6/30/89
TASK-LIGHTING-KW	T-L-KW	L — SPACE-CONDITIONS	3.19,F.7	7		III.46	2.0-2/15/79
TASK-LIGHT-SCH	T-L-SCH	L — SPACE-CONDITIONS	3.18,F.7	7		III.46	2.0-2/15/79
TASK-LT-W/SQFT	T-L-W	L — SPACE-CONDITIONS	3.19,F.7	7		III.46	2.0-2/15/79
TC-CHLR-CAP-FT		P — EQUIPMENT-QUAD		37		V.44,45	2.1A-5/15/81
TDVPIU-0		S — SUBR-FUNCTIONS		29	1.5		2.1D-6/30/89
TDVPIU-1		S — SUBR-FUNCTIONS		29	1.5		2.1D-6/30/89
TEMDEV-0		S — SUBR-FUNCTIONS		29	1.5		2.1D-6/30/89
TEMDEV-1		S — SUBR-FUNCTIONS		29	1.5		2.1D-6/30/89
TEMDEV-2		S — SUBR-FUNCTIONS		29	1.5		2.1D-6/30/89
TEMDEV-3		S — SUBR-FUNCTIONS		29	1.5		2.1D-6/30/89
TEMPERATURE	T	L — SPACE-CONDITIONS	3.16,F.7	7		III.43	2.0-2/15/79
TEMPERATURES		LSP — DAY-SCHEDULE			1.28		2.1D-metric
TERMINAL-TYPE	TER-TYPE	S — ZONE	4.68,F.13	22	3.3		2.1C-5/15/84
TERRAIN-PAR1	T-P1	L — BUILDING-LOCATION		2	2.75,3.34		2.1B-1/15/83
TERRAIN-PAR2	T-P2	L — BUILDING-LOCATION		2	2.75,3.34		2.1B-1/15/83
THERMOSTAT-TYPE	T-TYPE	S — ZONE-CONTROL	4.65,F.12	20		IV.18,195	2.0-2/15/79
THICKNESS	TH	L — LAYERS	3.8,F.6	5		III.77	2.0-2/15/79
		L — MATERIAL		4		III.73	2.0-2/15/79
THROTTLING-RANGE	T-R	S — ZONE-CONTROL	4.65,F.12	20	3.21	IV.18,196	2.0-2/15/79
TILT		L — BUILDING-SHADE		6		III.35	2.0-2/15/79
		L — EXTERIOR-WALL or ROOF	3.26,F.8	11		III.102	2.0-2/15/79
		L — FIXED-SHADE		6			2.1B-1/15/83
		L — INTERIOR-WALL		15		III.115	2.1-5/15/80
		L — TROMBE-WALL-V or -NV		12			2.1B-1/15/83
		L — UNDERGROUND-WALL or -FLOOR		16		III.120	2.1-5/15/80
TIME-ZONE	T-Z	L — BUILDING-LOCATION	3.4,F.3	2		III.30	2.0-2/15/79
•TITLE		LSPE	F.3,F.12,	1,19,		H.19,V.8	2.0-2/15/79

•COMMAND or Keyword	Abbrev	Subprogram — Command	DOE-2 Basics (2.1D)	BDL Summary (2.1D)	Supp (2.1D)	Ref Man (2.1A)	Program — year Version — added
			F.16,F.19	31,42			
TRANSMITTANCE	TR	L — BUILDING—SHADE		6		III.35	2.0—2/15/79
		L — FIXED—SHADE		6			2.1B—1/15/83
•TROMBE—WALL—NV	T—W—NV	L		12	2.60		2.1B—1/15/83
•TROMBE—WALL—V	T—W—V	L		12	2.60		2.1B—1/15/83
TROM—VENT—SCH	T—V—SCH	S — ZONE		22	2.61		2.1B—1/15/83
TSOLVE—0		S — SUBR—FUNCTIONS		29	1.5		2.1D—6/30/89
TSOLVE—1		S — SUBR—FUNCTIONS		29	1.5		2.1D—6/30/89
TWR—APP—FRFACT		P — EQUIPMENT—QUAD		37		V.44,45	2.1—5/15/80
		S — SYSTEM—EQUIPMENT		27	3.11		2.1C—5/15/84
TWR—CELL—MAX—GPM		P — PLANT—PARAMETERS		35		V.23,V.28	2.1—5/15/80
TWR—DESIGN—WETBULB		P — PLANT—PARAMETERS	5.12,F.17	35		V.23,V.28	2.1—5/15/80
TWR—FAN—CONTROL		P — PLANT—PARAMETERS	5.12,F.17	35		V.24,V.28	2.1—5/15/80
TWR—FAN—ELEC—FTU		P — EQUIPMENT—QUAD		37		V.44,45	2.1—5/15/80
TWR—FAN—LOW—CFM		P — PLANT—PARAMETERS		35		V.24,V.28	2.1—5/15/80
TWR—FAN—LOW—ELEC		P — PLANT—PARAMETERS		35		V.24,V.28	2.1—5/15/80
TWR—FAN—OFF—CFM		P — PLANT—PARAMETERS		35		V.24,V.28	2.1—5/15/80
TWR—IMPELLER—EFF		P — PLANT—PARAMETERS		35		V.24,V.28	2.1—5/15/80
TWR—MOTOR—EFF		P — PLANT—PARAMETERS		35		V.24,V.28	2.1—5/15/80
TWR—PUMP—HEAD		P — PLANT—PARAMETERS	5.12,F.17	35		V.24,V.28	2.1—5/15/80
TWR—RFACT—FAT		P — EQUIPMENT—QUAD		37		V.44,45	2.1—5/15/80
TWR—RFACT—FRT		P — EQUIPMENT—QUAD		37		V.44,45	2.1—5/15/80
		S — SYSTEM—EQUIPMENT		27	3.11		2.1C—5/15/84
TWR—TEMP—CONTROL		P — PLANT—PARAMETERS	5.12,F.17	35		V.24,V.29	2.1—5/15/80
		S — SYSTEM—EQUIPMENT					2.1C—5/15/84
TWR—WTR—SET—POINT		P — PLANT—PARAMETERS	5.13,F.17	35		V.24,V.29	2.1—5/15/80
TWR—WTR—THROTTLE		P — PLANT—PARAMETERS		35		V.24,V.29	2.1—5/15/80
TYPE		E — CHARGE—ASSIGNMENT	6.6,F.20	43	5.5		2.1C—5/15/84
		SP — CURVE—FIT		19		IV.181	2.1—5/15/80
		P — LOAD—ASSIGNMENT		39		V.52	2.0—2/15/79
		P — PART—LOAD—RATIO	5.9-10,F.16	33		V.18	2.0—2/15/79
		P — PLANT—EQUIPMENT	5.7-8,F.16	32		V.11	2.0—2/15/79
		P — REFERENCE—COSTS		40		V.94	2.0—2/15/79

*COMMAND or Keyword	Abbrev	Subprogram — Command	DOE-2 Basics (2.1D)	BDL Summary (2.1D)	Supp (2.1D)	Ref Man (2.1A)	Program — year Version — added
U-EFFECTIVE	U-EFF	L — UNDERGROUND-WALL or -FLOOR		16		III.120	2.1A—5/15/81
*UNDERGROUND-WALL or -FLOOR	U-W	L	3.33,F.10	16	2.10,2.55	III.69,III.118	2.0—2/15/79
UNIFORM-CHARGE	U-C	E — CHARGE-ASSIGNMENT	6.6,F.20	43	5.5		2.1C—5/15/84
UNIFORM-COST	U-C	E — ENERGY-COST	6.2,F.19	42	5.2		2.0—2/15/79
UNIT	U	E — ENERGY-COST	6.2,F.19	42	5.2		2.0—2/15/79
UNITH-0		S — SUBR-FUNCTIONS		29	1.5		2.1D—6/30/89
UNITH-1Z		S — SUBR-FUNCTIONS		29	1.5		2.1D—6/30/89
UNITH-2Z		S — SUBR-FUNCTIONS		29	1.5		2.1D—6/30/89
UNITH-3		S — SUBR-FUNCTIONS		29	1.5		2.1D—6/30/89
UNITV-0		S — SUBR-FUNCTIONS		29	1.5		2.1D—6/30/89
UNITV-1Z		S — SUBR-FUNCTIONS		29	1.5		2.1D—6/30/89
UNITV-2		S — SUBR-FUNCTIONS		29	1.5		2.1D—6/30/89
UNIT-NAME	U-N	E — COMPONENT-COST		44		VI.6	2.0—2/15/79
UPPER-VENT-AREA	U-V-A	L — WALL-PARAMETERS		5	2.8,2.61		2.1B—1/15/83
U-NAME-		LSPE — PARAMETER		2			2.1—5/15/80
U-VALUE	U	L — CONSTRUCTION	3.9,F.6	5		III.80	2.0—2/15/79
VALUES		LSP — DAY-SCHEDULE			1.28		2.0—2/15/79
VARIABLE-LIST	V-L	LSPE — REPORT-BLOCK		17,30,41		III.130,IV.275,V.108.0	2.0—2/15/79
VARIABLE-TYPE	V-T	LSPE — REPORT-BLOCK		17,30,41		III.130,IV.275,V.108.0	2.0—2/15/79
VARVOL-0		S — SUBR-FUNCTIONS		29	1.5		2.1D—6/30/89
VARVOL-1Z		S — SUBR-FUNCTIONS		29	1.5		2.1D—6/30/89
VARVOL-2		S — SUBR-FUNCTIONS		29	1.5		2.1D—6/30/89
VARVOL-3		S — SUBR-FUNCTIONS		29	1.5		2.1D—6/30/89
VENT-METHOD	V-M	S — SYSTEM-AIR		23	3.33		2.1D—6/30/89
VENT-TEMP-SCH	V-T-SCH	S — SYSTEM-AIR	4.78,F.14	23	3.20,3.34	IV.217	2.1—5/15/80
VERIFICATION	V	E — ECONOMICS-REPORT	6.17	45		VI.12	2.0—2/15/79
		L — LOADS-REPORT	3.36,F.11	17		III.123	2.0—2/15/79
		P — PLANT-REPORT	5.17	40		V.100	2.0—2/15/79

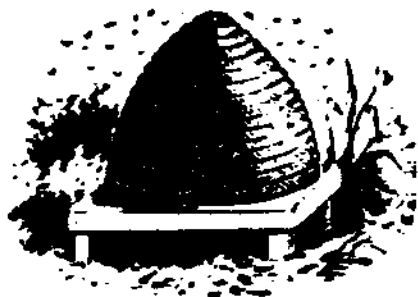
•COMMAND or Keyword	Abbrev	Subprogram — Command	DOE-2 Basics (2.1D)	BDL Summary (2.1D)	Supp (2.1D)	Ref Man (2.1A)	Program — year Version — added
		S — SYSTEMS-REPORT	4.90	29		IV.269	2.0—2/15/79
VERT-TRANS-KW	V-T-KW	L — BUILDING-RESOURCE	3.35,F.10	16		III.40	2.0A—6/15/79
VERT-TRANS-SCH	V-T-SCH	L — BUILDING-RESOURCE	3.35,F.10	16		III.40	2.0A—6/15/79
VERT-VENT-SEP	V-V-S	L — WALL-PARAMETERS		5	2.8,2.61		2.1B—1/15/83
VIEW-AZIMUTH	V-AZ	L — SPACE-CONDITIONS		9	2.34,2.49		2.1B—1/15/83
VIS-TRANS	V-T	L — GLASS-TYPE		6	2.34,2.45		2.1B—1/15/83
VIS-TRANS-SCH	V-T-SCH	L — WINDOW		13	2.34,2.52		2.1B—1/15/83
VOLUME	V	L — SPACE	3.24,F.8	10		III.97	2.0—2/15/79
•WALL-PARAMETERS	W-P	L		5	2.6,2.60		2.1B—1/15/83
WALL-PARAMETERS	W-P	L — CONSTRUCTION		5			2.1B—1/15/83
WARNINGS		L — DIAGNOSTIC	F.3	1			2.1D—6/30/89
•WEEK-SCHEDULE	W-SCH	LSPE	2.6,F.4, F.12,F.19	3,19, 32,42		II.27,V.8	2.0—2/15/79
WEIGHTING-FACTOR	W-F	L — SPACE-CONDITIONS		7		III.53	2.1—5/15/80
WIDTH	W	L — BUILDING-SHADE		6		III.35	2.0—2/15/79
		L — DOOR	3.31,F.10	14		III.110	2.1—5/15/80
		L — FIXED-SHADE		6			2.1B—1/15/83
		L — EXTERIOR-WALL or ROOF	3.26,F.8	11		III.102	2.0—2/15/79
		L — INTERIOR-WALL		15		III.113	2.1—5/15/80
		L — SPACE		10		III.97	2.0—2/15/79
		L — TROMBE-WALL-V or -NV		12			2.1B—1/15/83
		L — UNDERGROUND-WALL or -FLOOR		16		III.119	2.1—5/15/80
		L — WINDOW	3.27,F.9	13		III.108	2.0—2/15/79
•WINDOW	WI	L	3.27,F.9	13	1.4,2.4,2.31, 2.52,2.55,2.65	III.107	2.0—2/15/79
WINDOW-SPEC-FN		L — WINDOW		13	1.4		2.1C—5/15/84
WIND-DIR	W-D	L — DESIGN-DAY		3		III.27	2.0—2/15/79
WIND-SPEED	W-S	L — DESIGN-DAY		3		III.27	2.0—2/15/79
WIN-SHADE-TYPE	W-S-T	L — WINDOW		13	2.34,2.52		2.1B—1/15/83
WS-HEIGHT	W-H	L — BUILDING-LOCATION		2	2.75,3.34		2.1B—1/15/83
WS-HEIGHT-LIST	W-H-L	L — BUILDING-LOCATION		2			2.1D—6/30/89

•COMMAND or Keyword	Abbrev	Subprogram — Command	DOE-2 Basics (2.1D)	BDL Summary (2.1D)	Supp (2.1D)	Ref Man (2.1A)	Program -- year Version -- added
WS-TERRAIN-PAR1	W-T-P1	L — BUILDING-LOCATION		2	2.75,3.34		2.1B-1/15/83
WS-TERRAIN-PAR2	W-T-P2	L — BUILDING-LOCATION		2	2.75,3.34		2.1B-1/15/83
X		L — BUILDING-SHADE		6		III.35	2.0-2/15/79
		L — DOOR		14		III.110	2.1-5/15/80
		L — EXTERIOR-WALL or ROOF	III.102	11		III.102	2.0-2/15/79
		L — INTERIOR-WALL		15	2.3		2.1C-5/15/84
		L — SPACE		10		III.97	2.0-2/15/79
		L — TROMBE-WALL-V or -NV		12			2.1B-1/15/83
		L — WINDOW		13		III.107	2.0-2/15/79
X-REF		L — BUILDING-LOCATION		2	2.63,2.64		2.1B-1/15/83
		L — FIXED-SHADE		6			2.1B-1/15/83
Y		L — BUILDING-SHADE		6		III.35	2.0-2/15/79
		L — DOOR		14		III.110	2.1-5/15/80
		L — EXTERIOR-WALL or ROOF		11		III.102	2.0-2/15/79
		L — INTERIOR-WALL		15	2.3		2.1C-5/15/84
		L — SPACE		10		III.97	2.0-2/15/79
		L — TROMBE-WALL-V or -NV		12			2.1B-1/15/83
		L — WINDOW		13		III.107	2.0-2/15/79
Y-REF		L — BUILDING-LOCATION		2	2.63,2.64		2.1B-1/15/83
		L — FIXED-SHADE		6			2.1B-1/15/83
Z		L — BUILDING-SHADE		6		III.35	2.0-2/15/79
		L — EXTERIOR-WALL or ROOF		11		III.102	2.0-2/15/79
		L — INTERIOR-WALL		15	2.3		2.1C-5/15/84
		L — SPACE		10		III.97	2.0-2/15/79
		L — TROMBE-WALL-V or -NV		12			2.1B-1/15/83
•ZONE	Z	S	4.68,F.13	22	3.3,3.6	IV.18,198	2.0-2/15/79
•ZONE-AIR	Z-A	S	4.68,F.13	21		IV.188	2.0-2/15/79
ZONE-AIR	Z-A	S — ZONE	4.68,F.13	22		IV.199	2.0-2/15/79
•ZONE-CONTROL	Z-C	S	4.64,F.12	20		IV.18,193	2.0-2/15/79

•COMMAND or Keyword	Abbrev	Subprogram — Command	DOE-2 Basics (2.1D)	BDL Summary (2.1D)	Supp (2.1D)	Ref Man (2.1A)	Program — year Version — added
ZONE-CONTROL	Z-C	S — ZONE	4.68,F.13	22		IV.18,199	2.0—2/15/79
•ZONE-FANS	Z-F	S		21	3.4		2.1C—5/15/84
ZONE-FANS	Z-F	S — ZONE		22			2.1C—5/15/84
ZONE-FAN-CFM	Z-F-CFM	S — ZONE-FANS	4.69,F.13	21	3.4		2.1C—5/15/84
ZONE-FAN-KW	Z-F-KW	S — ZONE-FANS	4.69,F.13	21	3.5		2.1C—5/15/84
ZONE-FAN-RATIO	Z-F-R	S — ZONE-FANS	4.69,F.13	21	3.5		2.1C—5/15/84
ZONE-FAN-T-SCH	Z-F-SCH	S — ZONE-FANS	4.69,F.13	21	3.5		2.1C—5/15/84
ZONE-FRACTION1	Z-F1	L — SPACE-CONDITIONS		9	2.34,2.46		2.1B—1/15/83
ZONE-FRACTION2	Z-F2	L — SPACE-CONDITIONS		9	2.34,2.46		2.1B—1/15/83
ZONE-HEAT-SOURCE	Z-H-S	S — SYSTEM	4.87,F.15	27		IV.260-3	2.0—2/15/79
ZONE-NAMES	Z-N	S — SYSTEM	4.88,F.15	27	3.31	IV.18,264	2.0—2/15/79
ZONE-TYPE	Z-TYPE	L — SPACE-CONDITIONS		9		III.53,IV.18	2.0—2/15/79
		S — ZONE		22		IV.198	2.0—2/15/79
Z-REF		L — FIXED-SHADE		6			2.1B—1/15/83



The State of Utah's
"Building Design Center"



"Streamlining your energy efficient building design process can save you time and money. Matching your building clients' needs with the latest in energy efficient technologies can give your firm a competitive edge. Using energy-related software to model buildings and systems enhances the economics of your final product. The Building Design Center is available to help you accomplish these objectives."

The Utah Division of Energy is the sponsor of a new Building Design Center in Salt Lake City. The Center is an educational resource that offers demonstrations of the latest in energy efficient building and system design. Engineers and architects are able to use the Center's library of design information, modeling software, and human help in making design decisions for new buildings and retrofits of existing buildings.

In addition to providing access to energy-related software, the Center offers professional skill-enhancement seminars. Early this year, a DOE-2 training course was held at the Center. Both beginning and advanced training was offered to 27 program users (20 more people had to be turned away due to space limitations). Course instructor was Marlon Addison from Energy Simulation Specialists in Tempe, AZ. In addition to DOE-2.1D, the Building Design Center offers engineers and architects preliminary versions of two new pieces of software, written by program users in the private sector: DOE-PLUS from Building Blocks Software of Berkeley, CA, and EZ-DOE from Elite Software of Bryan, TX.

For more information, please contact Britt Reid at (801) 538-5428 or write the Utah Division of Energy, Suite 450, 3 Triad Center, Salt Lake City, UT 84180-1204

DOE-Plus™

ITEM Systems

(formerly Building Blocks Software)

P.O. Box 5218, Berkeley, CA 94705-0218

Phone: (510) 549-1444

Fax: (510) 549-1778

Introduction

DOE-Plus™ is an interactive program used to create or edit a complete description of a building, simulate the building with DOE-2, and graphically analyze the simulation results. DOE-Plus is a complete implementation of DOE-2, with the added benefits of quick, easy entry of building description data with context-sensitive help messages (containing definitions and sample input for every DOE-2 keyword) and interactive error checking of user input data.

Additional features include graphical analysis of a building (DOE-Plus will draw a 3-D view of the building that can be interactively rotated), graphical analysis of the simulation results (DOE-Plus will plot data from DOE-2 standard reports in user-designed graphs), display of a building description file in a tree format (showing the relationships between various DOE-2 commands), display of a multi-year calendar to aid in scheduling building occupancy events on specific dates, and graphical entry of building occupancy schedules using a bar-chart format.

DOE-Plus meets the need for an interactive environment for DOE-2 users, providing the means to quickly and easily input data and analyze results. DOE-Plus is valuable to both new and experienced DOE-2 users because of the interactive help and error detection, the reduced time needed to fully describe a building for simulation by DOE-2, and the powerful set of utilities for analyzing input data and the results of DOE-2 simulations.

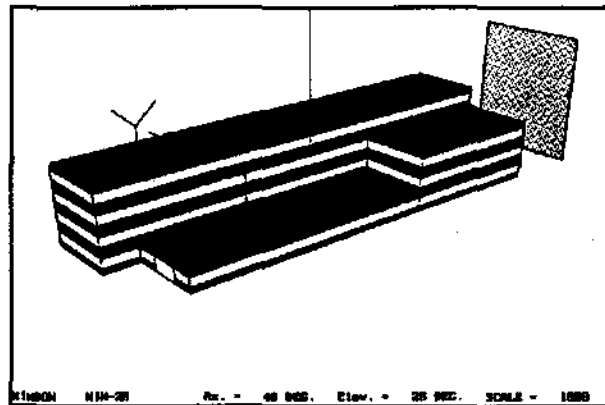
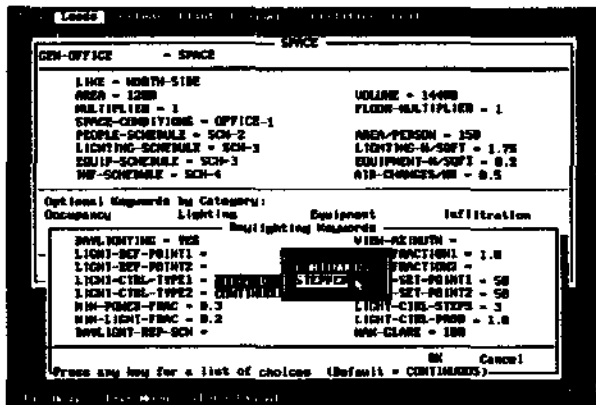
Features

DOE-Plus features full mouse support, pull-down menus, pop-up option lists, context-sensitive help, interactive error detection, and support for a full range of graphics and non-graphics hardware.

The design of DOE-Plus reflects its developers' many years of DOE-2 experience. DOE-Plus makes extensive use of built-in libraries to store and retrieve schedules, materials, constructions, entire HVAC systems, etc. All DOE-Plus libraries can be completely customized, allowing the user to store commonly used portions of DOE-2 input files. Required DOE-2 commands and keywords are automatically identified. Commands and keywords are logically grouped according to application. Time saving DOE-2 commands, such as LIKE, PARAMETER, and SET-DEFAULT are fully implemented. Standard default values and limits are displayed for every keyword. DOE-Plus objects (such as schedules, walls, or windows) are identified by the familiar DOE-2 U-names.

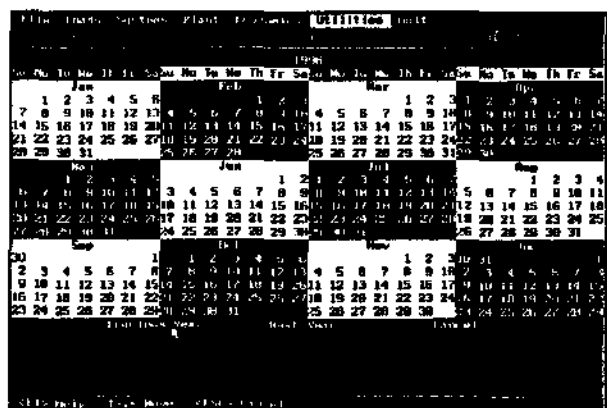
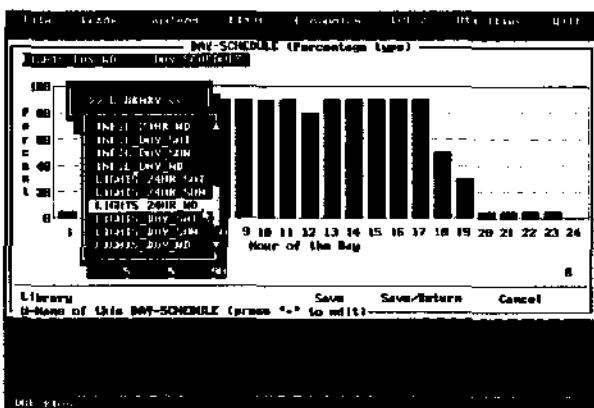
DOE-Plus is a trademark of ITEM Systems.

DOE-Plus has several features that are useful for both new and experienced DOE-2 users.



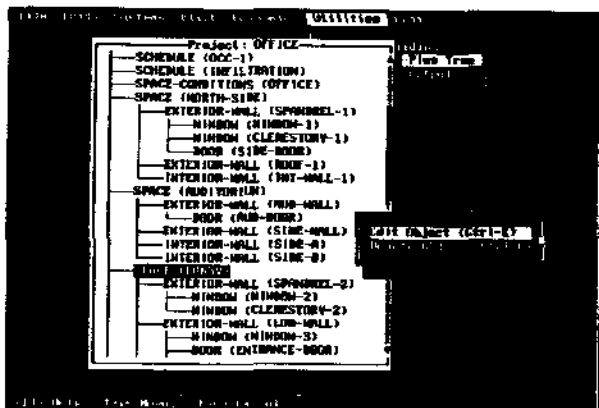
The input screens in DOE-Plus are organized by familiar DOE-2 commands. Pop-up choice lists identify valid codewords or U-names, eliminating typing errors. U-names are automatically tracked according to command and keyword. Required and non-default keywords are color-coded for easy identification. All keywords have help messages that are displayed with the F1 key. Commands that have a large number of keywords have subscreens that are used to organize the keywords into logical groups based on application (such as daylighting, or heating control).

The three dimensional view of a building allows a user to quickly verify the location of walls, windows, doors, shades, etc. The 3-D view can be interactively rotated with the mouse or cursor keys. Pointing to a wall, window, shade, etc. displays the type of surface and its U-name. By clicking the mouse, the input screen that describes that surface is displayed, allowing the user to change the value of any keyword (such as orientation or location). If the user saves the changed data, the 3-D view is redrawn using the new data. In this manner, accidentally mislocated objects can be quickly identified and corrected.

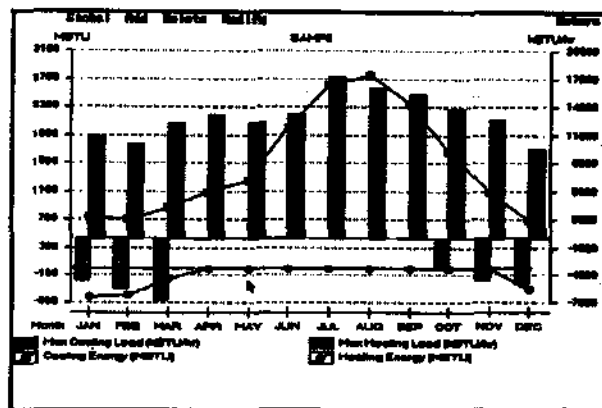


DOE-Plus allows either conventional or graphic entry of operation schedules. The graphic feature displays hourly profiles so the user can quickly identify input errors.

DOE-Plus can display a full year calendar for any year, so that the user can conveniently identify dates used in DOE-2 SCHEDULES. The user can quickly page through years at the click of a mouse or the "Page-Up" or "Page-Down" keys.



The tree-like structure of a user's building description file identifies relationships between objects (such as an EXTERIOR-WALL and the SPACE to which it is attached). At the push of a button, the user can quickly jump to the input screen for any object in order to edit or delete it.



DOE-Plus can display plots of variables simulated by DOE-2, enabling rapid and thorough analysis of results. A user is no longer limited to tables of printed numbers. All plots are user-defined and may include combinations of bars, lines, various colors and fill patterns, grid lines, legend styles, and multiple Y axes.

A central feature of DOE-Plus is the customizable library that is used to store and retrieve virtually any part of a building or plot description. DOE-Plus is shipped with a predefined library, but the user can modify or add to the standard library in order to create a version that customized for the specific needs of the user. For example, a user may want to add specialized schedules or HVAC systems that are commonly used in their work. In any subsequent DOE-Plus session, it will then be possible to simply retrieve the information directly from the library, rather than entering it again. The library is also used to store and retrieve plot descriptions, where the information in the library includes the variables to be plotted as well as the plot type, colors, fill patterns, legend, etc. On any subsequent simulations, the user simply needs to retrieve a plot description from the DOE-Plus library and the data from the current simulation is automatically inserted and plotted.

DOE-Plus fully utilizes several powerful features of the DOE-2 Building Description Language, including LIKE, PARAMETER, and SET-DEFAULT. These features were designed to shorten the time for data entry in the original DOE-2 batch environment. In the interactive environment of DOE-Plus, these features enable even more rapid entry of data and parametric simulations.

The standard version of DOE-Plus runs on an IBM compatible computer with a 386 or higher CPU, with a math coprocessor, 4 Mbytes of available RAM, and a hard disk. A color VGA monitor and mouse are highly recommended but not required.

For more information about DOE-Plus, please contact:

ITEM Systems, P.O. Box 5218, Berkeley, CA 94705-0218
Phone: (510) 549-1444 Fax: (510) 549-1778

I B P S A

**INTERNATIONAL
BUILDING
PERFORMANCE
SIMULATION
ASSOCIATION**

THIRD INTERNATIONAL CONFERENCE

Preliminary Notice

BUILDING SIMULATION '93

ADELAIDE

AUSTRALIA

16-18 AUGUST 1993

*If you would like to receive more information
please contact:*

**Terry Williamson, Conference Committee Chairman
Department of Architecture
University of Adelaide
GPO Box 489
Adelaide, SA, 5001
Australia**

Phone: +61 8 228 5836

Fax: +61 8 223 7239

E-mail: twilliam@arch.adelaide.edu.au

■ ■ ■ ■ **DOE-2 DIRECTORY** ■ ■ ■ ■
 Program Related Software and Services

■ ■ **Source Code** ■ ■

(2.1D VAX and SUN-4 Only)
 Simulation Research Group
 Bldg. 90, Room 3147
 Lawrence Berkeley Laboratory
 Berkeley, CA 94720 (510) 486-5711

(2.1C and 2.1D Mainframe Only)
 Energy Science/Technology Software Center
 Oak Ridge National Laboratory
 P.O. Box 1020
 Oak Ridge, TN 37831-1020 (615) 576-2606

(2.1D VMS, ULTRIX, SCO UNIX)
 Finite Technologies, Inc.
 821 N Street, #102
 Anchorage, AK 99504 (907) 272-2714

■ ■ **PC VERSIONS** ■ ■

MICRO-DOE2 (DOE-2.1D for Microcomputers)
 Acrosoft International (Gene Tsai)
 9745 East Hampden Avenue
 Denver, CO 80231 (303) 368-9225

FTIDOE v2.1D (DOE-2.1D for Microcomputers)
 Finite Technologies, Inc. (see above for address)

ADM-DOE2 (DOE-2.1D for Microcomputers)
 ADM Associates, Inc. (Taghi Alereza)
 3299 Ramos Circle
 Sacramento, CA 95827 (916) 363-8383

PRC-DOE2 (DOE-2.1D for Microcomputers)
 Partnership for Resource Conservation
 140 South 34th Street
 Boulder, CO 80303 (303) 499-8611

■ ■ **Utility Programs** ■ ■

DOE-Plus™ (Pre- and Post-Processor)
 ITEM Systems (formerly Building Blocks Software)
 P.O. Box 5218
 Berkeley, CA 94705-0218 (510) 549-1444

Graphs from DOE-2
 Ernie Jessup
 4977 Canoga Avenue
 Woodland Hills, CA 91364 (818) 884-3997

COMPLY 24 - California Standards
 Gabel Dodd Associates (Michael Gabel)
 1818 Harmon Street
 Berkeley, CA 94703 (510) 428-0803

Pre-DOE - (BDL math pre-processor)
 Nick Luick
 19030 State Street
 Corona, CA 91719 (714) 278-3131

■ ■ **VIDEO** ■ ■

DOE-2 Instructional Video and Manual
 Prof. Jan Kreider - JCEM
 University of Colorado at Boulder
 Campus Box 428
 Boulder, CO 80309-0428 (303) 492-3915

■ ■ **DOE-2 Training** ■ ■

Mech. Engs., Consulting, Training
 Marlon Addison
 Energy Simulation Specialists
 64 East Broadway, Suite 230
 Tempe, AZ 85282 (602) 967-5278

Training, Consulting, PC version of DOE-2
 Paul Reeves
 Partnership for Resource Conservation
 140 South 34th Street
 Boulder, CO 80303 (303) 499-8611

■ ■ **Weather Tapes** ■ ■

TMY or TRY tapes:
 National Climatic Data Center
 Federal Building
 Asheville, North Carolina 28801
 Phone: (704) 259-0871 climate data
 Phone: (704) 259-0682 main number

CTZ tapes:
 California Energy Commission
 Attn: Bruce Maeda, MS-25
 1516-9th Street
 Sacramento, CA 95814-5512
 Phone: 1-800-772-3300 Energy Hotline
 or: (916) 654-5106

WYEC tapes:
 ASHRAE
 1791 Tullie Circle N.E.
 Atlanta, GA 30329
 Phone: (404) 636-8400

■ ■ CONSULTANTS ■ ■

<p><i>Consulting Engineers</i> Craig Cattelino Burns & McDonnell Engineers 8055 E. Tufts Avenue, Suite 330 Denver, CO 80237 (303) 721-9292</p>	<p><i>Consultant</i> Greg Cunningham Cunningham + Associates 512 Second Street San Francisco, CA (415) 495-2220</p>
<p><i>Microcomputer Versions for European Users</i> Werner Gygli Informatik Energietechnik Weiherweg 19 CH-8604 Volketswil Switzerland</p>	<p><i>Consultant</i> Jeff Hirsch 2138 Morongo Camarillo, CA 93010 (805) 482-5515</p>
<p><i>Large Facility Modeling</i> George F. Marton, P.E. 1129 Keith Avenue Berkeley, CA 94708 (510) 841-8083</p>	<p><i>Computer-Aided Mechanical Engineering</i> Mike Roberts Roberts Engineering Co. 11946 Pennsylvania Kansas City, MO 64145 (816) 942-8121</p>
<p><i>Mainframe Versions for European Users</i> Joerg Tscherry EMPA, Section 175 8600 Dubendorf Switzerland</p>	<p><i>Consultant</i> Philip Wemhoff 1512 South McDuff Avenue Jacksonville, FL 32205 (904) 632-7393</p>
<p><i>Consultant</i> Steven D. Gates, P.E. Building HVAC Design/Performance Modeling 2028 Murphys Court Gold River, CA 95670 (916) 638-7540</p>	<p><i>Consultant</i> Donald E. Croy CAER Engineers, Inc. 814 Eleventh Street Golden, CO 80401 (303) 279-8136</p>
<p><i>Consulting Engineers</i> Jeff Ponsness, P.E. Criterion Engineers 5331 SW Macadam Ave., Suite 205 Portland, OR 97201 (503) 224-8608</p>	<p><i>Consulting Engineers</i> Sue Reilly Enermodal Engineering 1221 Preservation Park Way Oakland, CA 94612 (510) 832-4721</p>
<p><i>Consultants</i> Charles Eley, Mark Hydeman, Terry Laird Eley Associates 142 Minna Street San Francisco, CA 94105 (415) 957-1977</p>	<p><i>Consultant - Training</i> Paul Reeves Partnership for Resource Conservation 140 South 34th Street Boulder, CO 80303 (303) 499-8611</p>

■ ■ ■ ■ **DOE-2 PROGRAM DOCUMENTATION** ■ ■ ■ ■

National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161

	NTIS Order No.	Cost of Documentation	
		Cost/U.S.	Cost/Foreign
DOE-2 Basics Manual (2.1D)	DE-920-07955	43.00	86.00
BDL Summary (2.1D)	DE-890-17726	26.00	52.00
Sample Run Book (2.1D)	DE-890-17727	66.00	132.00
Reference Manual (2.1A)	LBL-8708, Rev.2	115.00	230.00
Supplement (2.1D)	DE-890-17728	59.00	118.00
Engineers Manual (2.1A) [algorithm descriptions]	DE-830-04575	50.00	100.00

Phone orders using Visa or Mastercard (703) 487-4650 or FAX (703) 321-8547
 Overnight Express - 24-hr in-house processing - \$22 surcharge per title
 First Class Mail - 24-hr in-house processing - \$12 surcharge per title

■ ■ ■ ■ **A N N O U N C E M E N T S** ■ ■ ■ ■

Job Available

Progressive energy, architecture, and software design firm is seeking architects and engineers with two years minimum experience using energy simulation programs (DOE-2.1D) and CAD. Additional skills and interests are desirable in environmental design and software/multimedia development.

Send resume and letter to:
 Personnel Manager
 Suite 100
 5800 Baker Road
 Minnetonka, MN 55345

8/92 850 — (c) 1992 Regents of the University of California, Lawrence Berkeley Laboratory.

This work was supported by the Assistant Secretary for Conservation and Renewable Energy, Office of Building Technologies, Building Systems and Materials Division of the U. S. Department of Energy, under Contract No. DE-AC03-76SF00098.

*** * * * * D I S C L A I M E R * * * * ***

This document was prepared as an account of work sponsored by the US Government. Neither the US Government nor any agency thereof, nor the Regents of the University of California, nor their employees, makes any express/implied warranty or assumes legal liability or responsibility for the completeness, accuracy, or usefulness of information, apparatus, product, or process disclosed, or represents that use thereof would not infringe privately owned rights. References herein to specific commercial products, process, or services by tradenames, trademarks, manufacturers, etc., does not necessarily constitute or imply its endorsement, recommendation, or favoring by the US Government or any agency thereof, or the Regents of the University of California. Views and opinions of the authors expressed herein don't necessarily state or reflect those of the US Government or agencies thereof, or the Regents of the University of California, and shall not be used for advertising or product endorsement. So there!!

