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The Integrating Model of the Project Independence Evaluation System

Volume VI — Data Documentation. Part II

February 1979

Prepared for:
U.S. Department of Energy
Energy Information Administration
Assistant Administrator for Applied Analysis
Under Contract No. EC-77C-01-8558

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Volume VI — Data Documentation. Part II

February 1979

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Washington, D.C. 20016

Under Contract No. EC-77C-01-8558

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U.S. Department of Energy

Energy Information Administration

Assistant Administrator for Applied Analysis

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Washington, D.C. 20461

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Released for printing October 3, 1979.

EIA Perspective

This contractor report was prepared by Logistics Management Institute and provides documentation of the version of the Project Independence Evaluation System (PIES) as it existed on January 1, 1978. Since that date, PIES has evolved into what is now called the Mid Range Energy Market Model (MEMM), a major component of the Mid Range Energy Forecasting System (MEFS). Major structural changes that have occurred between January 1, 1978 and January 1, 1979, are documented in the supplemental volume entitled, "Revisions to the Midterm Energy Market Model Relating to Natural Gas Regulation, Advanced Technologies, Coal Demand and Dynamics." Together, the six volume set of documentation, plus the supplemental volume on revisions, form the most comprehensive and up-to-date version of MEMM documentation currently available, documentation which significantly surpasses in both form and content the single volume published in January, 1977.

Although this documentation has not gone through the appropriate review process and clearance procedures to be published as an EIA endorsed report, it is currently being made available in its present form as an interim measure to satisfy many outstanding requests for MEMM documentation. As this report has not been submitted to comprehensive review, EIA does not endorse any information contained herein. The documentation is presently being subjected to comprehensive review both inside and outside the Department of Energy. A contract is currently in process to update it to the version used for the 1978 Annual Report to Congress (published in July 1979). This new version of the documentation report is intended to bring the MEMM documentation into conformity with EIA's documentation standards and to respond to any issues raised as a result of the review process. The results of the latter effort will result in a set of MEMM documentation fully cleared and endorsed by EIA, available in 1980.

PREFACE

This documentation describes the Project Independence Evaluation System (PIES) Integrating Model as it existed on January 1, 1978. The complete documentation consists of six volumes describing the various aspects of the Integrating Model as follows:

- Volume I is an executive summary, providing a simple, nontechnical overview of PIES.
- Volume II is a primer, describing and illustrating the basic inputs to the PIES algorithm.
- Volume III is a user's guide, describing scenario specification and the operational procedures for running the Integrating Model.
- Volume IV is the main model documentation, describing the theoretical basis of the Integrating Model and each of the supply submodels.
- Volume V is code documentation, describing the data processing aspects of PIES: the data flow through the PIES programs, the functions performed by each program, the data inputs and outputs, and the PIES naming conventions.
- Volume VI is data documentation, containing the standard table data used for the Administrator's Report at the beginning of 1978, along with primary data sources and the office responsible. It also contains a copy of a PIES Integrating Model Report with a description of its contents.

The data and scenarios used in these volumes are those used in the 1977 Annual Report to Congress, (actually published in 1978), prepared by the Energy Information Administration. In all volumes, we refer to this report as the Administrator's Annual Report (AAR).

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III. ALTERNATE SCENARIOS

INTRODUCTION

The EIA scenarios and projection series were described in Chapter I. Although only six projection series are discussed in the 1978 AAR, all ten supply/demand combinations (shown in Figure I-2), are available to PIES; the six series were chosen for the AAR because they generated the broadest range of energy projection possibilities.

Chapter II contains the data tables for the mid-range supply and demand projection series.¹ This Chapter adds the tables for high and low demand/supply scenarios and increasing world oil prices in the mid-range scenarios necessary to generate the ten possible series.

Demand assumptions affect the demand and elasticity input data. These low and high demand input data tables are listed in the first section of this Chapter.

The sectors affected by the high and low supply assumptions are imports, synthetics and oil and gas. The synthetics and imports tables appeared in Chapter II of this volume. Oil and gas tables reflecting these alternate scenarios are listed in this Chapter.

The assumption of increasing real world oil prices is represented by the data tables for oil and gas, and refineries. These data tables generated under the increasing price assumption are given in the third section.

Data sources for the tables in this Chapter are the same as for the corresponding groups of tables in Chapter II. Actual data values may have changed because of different assumptions about the economy and oil and gas production. However, the inputs used to generate the data tables are derived from the same sources as the mid-range supply and demand tables in Chapter II.

LOW AND HIGH DEMAND DATA

The 1985 and 1990 low and high demand and elasticity tables are identical in format to those shown in Chapter II. The low demand and elasticity tables for 1985 and 1990 appear first, followed by the high demand tables for the two target years.

DEMAND DATA
CYCLE LONG

III-2

DATA SOURCES: ELECTRICITY - STATISTICAL YEARBOOK, EDISON ELECTRIC INSTITUTE, WASHINGTON, D.C.
GAS, OIL, COAL: VARIOUS VOLUMES OF MINERAL INDUSTRY SURVEYS, PRODUCED BY THE BUREAU OF MINES.
JET FUEL: NEWSLETTERS AND RELEASES FROM THE ETHEL CORPORATION OF HOUSTON, TEXAS.

OFFICE RESPONSIBLE: OFFICE OF ENERGY USE ANALYSIS, ENERGY INFORMATION ADMINISTRATION (EIA).

TABLE 1 DEMAND POINTS IN TRILLIONS OF BTU'S FOR 1985

	DCE 1	DCE 2	DCE 3	DCE 4	DCE 5	DCE 6	DCE 7	DCE 8	DCE 9	DCE 10
ELECTRICITY RES	65.72	162.08	212.55	646.01	366.73	247.78	121.43	86.09	145.03	152.94
NATURAL GAS RES	453.78	1202.55	1252.37	803.77	4815.86	1966.15	1253.01	882.01	1412.01	288.50
DISTILLATE FUEL RES	237.97	358.67	162.55	100.43	427.50	47.99	47.12	15.40	15.35	46.39
LIQUID GAS RES	14.89	17.42	17.28	75.51	111.62	71.96	75.97	40.04	3.35	1.96
ELECTRICITY COM	74.06	154.59	185.66	346.12	319.16	214.65	93.27	91.92	197.10	91.76
NATURAL GAS COM	210.95	426.34	451.58	562.65	1658.66	533.36	319.12	209.46	456.28	134.52
DISTILLATE FUEL COM	131.08	111.32	73.87	44.18	141.05	34.49	26.08	24.52	11.37	29.69
RESIDUAL FUEL COM	87.43	156.62	36.08	22.49	73.35	29.11	4.78	7.26	2.91	11.22
ELECTRICITY IND	77.30	154.00	364.64	800.79	753.55	404.57	149.69	84.49	178.33	190.61
NATURAL GAS IND	208.63	550.89	1050.58	2050.58	3397.71	12638.52	736.97	445.35	2106.07	511.74
DISTILLATE FUEL IND	12.04	20.08	93.61	74.54	118.41	83.68	26.93	52.19	43.23	40.14
RESIDUAL FUEL IND	85.48	45.07	63.40	91.90	51.88	231.00	8.94	13.35	31.43	22.35
LIQUID GAS IND	31.98	21.40	35.01	68.88	141.42	136.31	69.23	26.89	53.26	4.20
CCAL IND	0.34	8.30	36.90	36.10	78.60	11.42	12.92	25.03	5.39	6.21
GASOLINE TRANS	385.09	654.14	758.93	1454.56	1565.56	934.41	469.24	279.41	901.36	270.17
DISTILLATE FUEL TRAN	29.65	54.41	106.01	219.01	222.65	201.59	87.79	61.04	116.01	50.16
JET FUEL TRANS	38.06	115.27	74.74	189.67	126.06	117.31	33.67	40.71	252.40	68.91
RESIDUAL FUEL TRANS	7.53	21.97	39.99	26.43	4.30	88.43	0.45	0.52	51.45	9.26
ELECTRICITY TRANS	0.08	6.34	2.89	0.0	0.96	0.0	0.08	0.0	0.72	0.0
NATURAL GAS RAW MAT	10.66	22.23	162.84	428.56	185.35	1404.91	232.91	23.01	113.40	93.29
LIQUID GAS COM	1.29	1.61	1.81	7.91	10.85	5.71	6.41	3.54	0.7	6.24
LIQUID GAS TRANS	0.05	0.59	0.42	1.40	1.30	8.37	0.71	0.81	0.62	0.20
LIQUID GAS FEEDSTOCK	0.0	0.0	14.33	38.48	55.40	1163.03	32.55	0.0	16.75	0.0
LIQUID GAS RAW MAT	11.21	28.74	22.65	33.39	43.04	21.58	10.61	7.39	23.37	7.75
CIL RAW MAT	6.01	26.35	32.06	56.48	69.13	55.24	16.62	11.41	20.27	38.19
NAPHA IND	9.27	26.50	6.98	4.77	52.02	124.29	0.96	0.0	8.40	0.0
ASPHALT COM	15.36	34.41	35.92	77.02	103.12	68.60	29.04	24.00	44.43	24.69
CCAL RES&COM	0.01	0.14	0.95	0.99	2.09	0.01	0.13	0.06	0.01	0.10
CCAL TRANS	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET CCAL IND	0.0	15.57	102.44	24.55	101.40	2.09	0.90	9.31	6.11	0.0

TABLE 2 DEMAND POINTS IN TRILLIONS OF BTU'S FOR 1990

	DCE 1	DCE 2	DCE 3	DCE 4	DCE 5	DCE 6	DCE 7	DCE 8	DCE 9	DCE 10
ELECTRICITY RES	66.81	166.82	219.49	839.46	378.33	265.02	132.76	97.97	157.28	159.67
NATURAL GAS RES	444.25	1137.41	1211.53	612.89	4641.36	1950.34	1093.26	943.88	1468.77	352.82
DISTILLATE FUEL RES	249.57	365.84	168.54	116.95	453.65	54.30	50.38	15.02	15.68	51.05
LIQUID GAS RES	15.89	17.89	17.78	82.27	114.32	77.42	77.97	43.43	3.35	2.03
ELECTRICITY CCM	79.79	212.57	210.41	403.99	349.61	235.71	104.68	102.62	206.09	93.49
NATURAL GAS CCM	195.57	355.29	397.42	475.56	1299.35	449.25	247.99	170.79	402.40	106.08
DISTILLATE FUEL CCM	140.97	112.50	81.61	51.28	152.20	38.57	27.79	27.80	11.78	31.71
RESIDUAL FUEL CCM	86.98	151.53	36.27	23.86	72.02	29.48	4.59	7.33	2.64	10.59
ELECTRICITY IND	84.61	221.29	419.20	959.89	865.47	466.11	181.83	90.58	197.08	195.07
NATURAL GAS IND	218.80	573.14	1075.97	2167.84	3715.50	14691.29	742.16	443.72	2144.94	489.96
DISTILLATE FUEL IND	13.47	33.86	109.47	89.61	142.53	106.02	32.99	64.10	48.51	48.78
RESIDUAL FUEL IND	96.53	47.47	67.47	105.03	56.43	314.03	10.64	13.05	33.09	23.68
LIQUID GAS IND	37.88	24.55	40.65	82.00	168.72	169.66	83.29	33.08	59.04	4.96
CCAL IND	0.37	9.04	40.69	42.36	88.97	14.47	15.12	29.56	6.22	6.81
GASLINE TRANS	399.39	664.14	791.75	1575.91	1610.64	1002.30	482.72	296.26	943.34	285.83
DISTILLATE FUEL TRAN	29.16	52.00	105.11	228.47	216.63	207.44	85.43	61.84	115.44	50.66
JET FUEL TRANS	36.33	104.64	73.03	199.85	119.03	119.36	32.29	40.53	238.68	67.19
RESIDUAL FUEL TRANS	7.57	22.16	40.23	26.59	4.33	88.96	0.45	0.53	51.76	9.31
ELECTRICITY TRANS	0.00	6.34	2.89	0.0	0.96	0.0	0.08	0.0	0.72	0.0
NATURAL GAS RAW MAT	13.70	28.18	206.97	565.17	238.57	1783.87	287.74	28.87	139.95	111.81
LIQUID GAS COM	1.29	1.55	1.78	7.79	10.70	5.32	5.98	3.51	0.46	0.23
LIQUID GAS TRANS	0.04	0.51	0.36	1.22	1.14	7.32	0.62	0.71	0.54	0.18
LIQUID GAS FEEDSTOCK	0.0	0.0	17.10	47.20	66.75	1439.30	39.25	0.0	20.45	0.0
LIQUID GAS RAW MAT	14.63	37.51	29.57	43.58	56.19	28.17	13.85	9.65	30.51	10.12
OIL RAW MAT	7.13	31.23	38.00	66.95	81.94	65.48	19.70	13.52	24.03	45.27
NAPHA IND	11.60	22.77	8.65	6.11	65.20	160.99	1.20	0.0	10.52	0.0
ASPHALT CCM	15.83	34.85	35.92	83.16	107.21	71.80	29.58	25.70	47.85	27.06
COAL RESSCOM	0.01	0.05	0.64	0.68	1.39	0.00	0.08	0.03	0.00	0.07
CCAL TRANS	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	15.59	102.74	24.97	102.26	2.14	0.92	9.39	6.21	0.0

TABLE 3 INITIAL PRICES IN TRILLIONS OF BTU'S FOR 1985

	DOE 1	DOE 2	DOE 3	DOE 4	DOE 5	DOE 6	DOE 7	DOE 8	DOE 9	DOE 10
ELECTRICITY RES	43.90	45.24	37.83	32.16	35.53	39.88	35.42	27.95	40.57	20.21
NATURAL GAS RES	3.97	3.59	3.14	2.68	2.60	1.98	1.85	1.81	3.34	3.16
DISTILLATE FUEL RES	19.49	19.99	20.88	21.24	19.05	19.63	18.54	19.48	19.78	19.78
LIQUID GAS RES	14.27	14.66	15.72	15.74	13.90	14.17	13.58	13.73	13.89	13.89
ELECTRICITY CCM	43.63	50.42	36.14	32.54	35.46	38.12	34.65	25.48	37.82	20.14
NATURAL GAS CCM	3.38	3.06	2.73	2.23	2.32	2.15	3.26	2.49	2.88	2.64
DISTILLATE FUEL COM	18.28	18.72	18.92	18.94	18.12	18.35	17.66	18.33	18.39	18.39
RESIDUAL FUEL COM	16.34	16.85	18.49	16.52	17.65	16.69	17.70	19.06	16.73	16.35
ELECTRICITY IND	37.11	26.59	29.38	27.39	27.89	33.21	29.21	21.15	32.75	14.48
NATURAL GAS IND	2.88	2.45	2.36	2.02	3.00	1.89	2.95	2.07	2.30	2.04
DISTILLATE FUEL IND	18.27	18.63	19.40	19.35	18.10	18.26	17.62	18.52	18.39	18.39
RESIDUAL FUEL IND	16.64	17.40	18.06	16.34	17.52	16.64	17.54	18.77	16.71	17.01
LIQUID GAS IND	13.46	13.75	14.44	14.52	13.40	13.42	13.05	13.00	13.05	13.05
CCAL IND	38.36	26.11	33.91	37.78	32.89	30.87	31.68	25.92	33.43	33.01
GASOLINE TRANS	27.77	28.76	27.65	27.28	27.18	26.33	26.63	26.95	28.13	28.19
DISTILLATE FUEL TRAN	23.94	24.20	25.07	25.02	23.77	23.93	23.29	24.19	24.06	24.06
JET FUEL TRANS	19.42	19.92	21.13	21.34	19.02	19.56	18.48	19.58	19.71	19.71
RESIDUAL FUEL TRANS	16.64	17.40	18.06	16.34	17.52	16.64	17.54	18.77	16.71	17.01

TABLE 4 INITIAL PRICES IN TRILLIONS OF BTU \$ FOR 1990

	DCE 1	DCE 2	DCE 3	DCE 4	DCE 5	DCE 6	DCE 7	DCE 8	DCE 9	DCE 10
ELECTRICITY RES	47.29	48.12	41.01	34.20	38.48	43.24	36.28	31.16	41.79	22.42
NATURAL GAS RES	4.75	4.15	3.55	3.23	3.38	2.49	2.68	2.35	3.17	2.84
DISTILLATE FUEL RES	20.37	20.87	21.76	22.12	19.93	20.51	19.42	20.36	20.64	20.64
LIQUID GAS RES	14.74	15.13	16.19	16.22	14.46	14.65	14.10	14.50	14.98	14.98
ELECTRICITY CCM	47.02	53.29	39.32	34.58	38.41	41.48	35.51	28.68	39.04	22.35
NATURAL GAS CCM	4.16	3.62	3.14	2.78	3.09	2.74	3.38	2.80	2.71	3.58
DISTILLATE FUEL CCM	19.16	19.60	19.80	19.82	19.00	19.23	18.54	19.21	19.25	19.25
RESIDUAL FUEL CCM	17.34	17.85	19.49	17.52	18.65	17.69	18.70	20.00	17.73	17.35
ELECTRICITY IND	40.50	29.47	32.55	29.44	30.84	36.57	30.06	24.35	33.97	16.69
NATURAL GAS IND	3.66	3.01	2.78	2.49	2.80	2.48	3.07	2.38	3.02	3.27
DISTILLATE FUEL IND	19.15	19.51	20.28	20.23	18.98	19.14	18.50	19.40	19.25	19.25
RESIDUAL FUEL IND	17.64	18.40	19.06	17.34	18.52	17.64	18.54	19.71	17.71	18.01
LIQUID GAS IND	13.93	14.22	14.91	15.00	13.88	13.90	13.57	13.77	14.14	14.14
CCAL IND	39.24	36.57	34.74	38.63	33.88	32.53	32.69	27.45	35.15	37.62
GASOLINE TRANS	28.52	29.54	28.40	28.03	27.91	27.09	27.38	27.70	28.86	28.92
DISTILLATE FUEL TRAN	24.82	25.18	25.55	25.90	24.65	24.81	24.17	25.07	24.92	24.92
JET FUEL TRANS	20.21	20.71	21.93	22.15	19.82	20.37	19.28	20.39	20.49	20.49
RESIDUAL FUEL TRANS	17.64	18.40	19.06	17.34	18.52	17.64	18.54	19.71	17.71	18.01

TABLE 5 UNSCALED ELASTICITIES FOR DEMAND REGION 1 - 1985

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.723	0.084	0.204	0.0	0.014	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.077	-0.582	0.075	0.0	0.006	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.181	0.075	-0.690	0.0	0.013	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.036	0.017	0.047	0.0	-0.525	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.629	0.026	0.064	0.045	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.202	-0.823	0.068	0.060	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.033	0.013	-0.552	0.009	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.077	0.006	0.062	-0.640	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.344	0.036	0.022	0.041	0.035	0.002	0.0	0.0	0.0
NATURAL GAS IND	0.125	-0.382	0.014	0.008	0.021	0.002	0.0	0.0	0.0
DISTILLATE FUEL IND	0.274	0.034	-0.596	0.043	0.033	0.002	0.0	0.0	0.0
RESIDUAL FUEL IND	0.121	0.024	0.020	-0.408	0.028	0.003	0.0	0.0	0.0
LIQUID GAS IND	0.196	0.028	0.018	0.022	-0.477	0.002	0.0	0.0	0.0
COAL IND	0.102	0.015	0.010	0.011	0.015	-0.366	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.086	0.0	0.0	0.0	-0.239	0.0	-0.156
DISTILLATE FUEL TRAN	0.0	0.0	-0.867	0.0	0.0	0.0	0.515	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.210	-0.210
RESIDUAL FUEL TRANS	0.0	0.0	0.192	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPTHA IND	0.0	0.0	0.0	0.0	-0.069	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.071	0.0	0.0	0.0	-0.196	0.0	0.0
COAL RES&COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.557	0.047	0.092	0.030	0.017	0.001	0.0	0.0	0.138
NATURAL GAS	0.119	-0.590	0.058	0.017	0.008	0.0	0.0	0.0	0.083
DISTILLATE FUEL	0.124	0.049	-0.656	0.004	0.009	0.0	0.037	0.0	-0.602
RESIDUAL FUEL	0.094	0.014	0.048	-0.515	0.013	0.001	0.0	0.0	-0.454
LIQUID GAS	0.115	0.019	0.022	0.012	-0.387	0.001	0.0	0.0	-0.357
OTHER PETROLEUM	0.0	0.0	0.037	0.0	-0.020	0.0	-0.103	0.0	-0.088
OIL	0.070	0.022	-0.210	-0.095	-0.009	0.0	-0.065	-0.007	-0.391
COAL	0.099	0.014	0.010	0.011	0.015	-0.355	0.0	0.0	0.035

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TABLE 6 UNSCALED ELASTICITIES FOR DEMAND REGION 2 - 1985

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.533	0.037	0.080	0.0	-0.006	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.100	-0.579	0.053	0.0	0.004	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.150	0.052	-0.629	0.0	0.003	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.049	0.019	0.035	0.0	-0.526	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.572	0.021	0.022	0.034	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.261	-0.831	0.031	0.045	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.020	0.011	-0.534	0.007	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.136	0.005	0.010	-0.646	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.349	0.034	0.034	0.035	0.021	0.013	0.0	0.0	0.0
NATURAL GAS IND	0.109	-0.386	0.021	0.020	0.014	0.009	0.0	0.0	0.0
DISTILLATE FUEL IND	0.272	0.038	-0.584	0.034	0.020	0.012	0.0	0.0	0.0
RESIDUAL FUEL IND	0.086	0.015	0.028	-0.375	0.020	0.014	0.0	0.0	0.0
LIQUID GAS IND	0.183	0.026	0.028	0.028	-0.487	0.011	0.0	0.0	0.0
COAL IND	0.095	0.014	0.015	0.015	0.010	-0.361	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.086	0.0	0.0	0.0	-0.239	0.0	-0.156
DISTILLATE FUEL TRAN	0.0	0.0	-0.867	0.0	0.0	0.0	0.515	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.210	-0.210
RESIDUAL FUEL TRANS	0.0	0.0	0.192	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPTHA IND	0.0	0.0	0.0	0.0	-0.069	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.071	0.0	0.0	0.0	-0.196	0.0	0.0
COAL RES&COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.477	0.031	0.043	0.024	0.005	0.004	0.0	0.0	0.072
NATURAL GAS	0.135	-0.578	0.040	0.014	0.006	0.002	0.0	0.0	0.060
DISTILLATE FUEL	0.116	0.038	-0.630	0.003	0.004	0.001	0.051	0.0	-0.567
RESIDUAL FUEL	0.110	0.006	0.036	-0.530	0.004	0.003	0.0	0.0	-0.490
LIQUID GAS	0.068	0.013	0.017	0.009	-0.279	0.003	0.0	0.0	-0.258
OTHER PETROLEUM	0.0	0.0	0.030	0.0	-0.020	0.0	-0.082	0.0	-0.074
OIL	0.059	0.014	-0.169	-0.083	-0.007	0.001	-0.072	-0.014	-0.349
COAL	0.029	0.004	0.004	0.004	0.003	-0.108	0.0	0.0	0.012

TABLE 7 UNSCALED ELASTICITIES FOR DEMAND REGION 3 - 1985

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.482	0.046	0.023	0.0	-0.009	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.117	-0.583	0.037	0.0	0.006	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.182	0.049	-0.659	0.0	0.006	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.066	0.020	0.017	0.0	-0.326	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.569	0.031	0.028	0.015	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.259	-0.818	0.040	0.024	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.106	0.004	-0.605	-0.001	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.147	0.010	0.011	-0.663	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.348	0.031	0.046	0.030	0.018	0.014	0.0	0.0	0.0
NATURAL GAS IND	0.109	-0.388	0.027	0.019	0.012	0.009	0.0	0.0	0.0
DISTILLATE FUEL IND	0.273	0.030	-0.572	0.028	0.017	0.013	0.0	0.0	0.0
RESIDUAL FUEL IND	0.087	0.013	0.034	-0.376	0.018	0.012	0.0	0.0	0.0
LIQUID GAS IND	0.184	0.022	0.037	0.025	-0.489	0.012	0.0	0.0	0.0
COAL IND	0.095	0.012	0.019	0.013	0.008	-0.361	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.086	0.0	0.0	0.0	-0.239	0.0	-0.156
DISTILLATE FUEL TRAN	0.0	0.0	-0.867	0.0	0.0	0.0	0.515	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.210	-0.210
RESIDUAL FUEL TRANS	0.0	0.0	0.192	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPTHA IND	0.0	0.0	0.0	0.0	-0.069	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL RES&COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.439	0.035	0.035	0.018	0.006	0.006	0.0	0.0	0.059
NATURAL GAS	0.132	-0.520	0.032	0.011	0.007	0.003	0.0	0.0	0.049
DISTILLATE FUEL	0.145	0.026	-0.681	0.006	0.006	0.003	0.126	0.0	-0.531
RESIDUAL FUEL	0.080	0.008	0.072	-0.386	0.008	0.005	0.0	0.0	-0.306
LIQUID GAS	0.083	0.012	0.017	0.009	-0.285	0.004	0.0	0.0	-0.262
OTHER PETROLEUM	0.0	0.0	0.0	0.0	-0.006	0.0	0.0	0.0	-0.006
OIL	0.055	0.009	-0.149	-0.038	-0.010	0.002	-0.072	-0.010	-0.280
COAL	0.022	0.003	0.004	0.003	0.002	-0.082	0.0	0.0	0.009

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TABLE 8 UNSCALED ELASTICITIES FOR DEMAND REGION 4 • 1985

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.470	0.016	0.024	0.0	0.005	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.283	-0.785	0.052	0.0	0.027	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.768	0.056	-1.272	0.0	0.025	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.090	0.004	0.007	0.0	-0.525	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.536	0.022	0.012	0.006	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.300	-0.829	0.022	0.012	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.122	-0.001	-0.615	-0.003	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.169	0.003	-0.002	-0.667	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.324	0.027	0.027	0.025	0.021	0.015	0.0	0.0	0.0
NATURAL GAS IND	0.116	-0.388	0.017	0.017	0.014	0.011	0.0	0.0	0.0
DISTILLATE FUEL IND	0.298	0.026	-0.591	0.023	0.019	0.014	0.0	0.0	0.0
RESIDUAL FUEL IND	0.088	0.015	0.024	-0.377	0.020	0.017	0.0	0.0	0.0
LIQUID GAS IND	0.198	0.020	0.022	0.021	-0.487	0.013	0.0	0.0	0.0
COAL IND	0.103	0.011	0.012	0.011	0.009	-0.359	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.086	0.0	0.0	0.0	-0.239	0.0	-0.156
DISTILLATE FUEL TRAN	0.0	0.0	-0.867	0.0	0.0	0.0	0.515	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.210	-0.210
RESIDUAL FUEL TRANS	0.0	0.0	0.192	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPHTHA IND	0.0	0.0	0.0	0.0	-0.069	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.082	0.0	0.0	0.0	-0.228	0.0	0.0
COAL RES&COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.418	0.022	0.023	0.012	0.011	0.007	0.0	0.0	0.047
NATURAL GAS	0.168	-0.496	0.023	0.011	0.013	0.006	0.0	0.0	0.047
DISTILLATE FUEL	0.244	0.017	-0.887	0.004	0.009	0.002	0.258	0.0	-0.587
RESIDUAL FUEL	0.086	0.010	0.051	-0.381	0.013	0.011	0.0	0.0	-0.317
LIQUID GAS	0.091	0.007	0.009	0.007	-0.323	0.004	0.0	0.0	-0.313
OTHER PETROLEUM	0.0	0.0	0.049	0.0	-0.002	0.0	-0.134	0.0	-0.090
OIL	0.057	0.004	-0.105	-0.023	-0.018	0.001	-0.091	-0.016	-0.255
COAL	0.056	0.006	0.006	0.006	0.005	-0.193	0.0	0.0	0.018

TABLE 9 UNSCALED ELASTICITIES FOR DEMAND REGION 5 - 1985

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.506	-0.007	0.060	0.0	0.031	0.0	0.0	0.0	0.0
NATURAL GAS RES	-0.042	-0.360	-0.011	0.0	-0.012	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.101	-0.003	-0.537	0.0	0.016	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.050	0.030	0.020	0.0	-0.523	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.589	0.050	0.029	0.016	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.237	-0.797	0.041	0.025	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.093	0.015	-0.604	0.0	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.129	0.025	0.012	-0.662	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.358	0.056	0.031	0.017	0.028	0.016	0.0	0.0	0.0
NATURAL GAS IND	0.114	-0.387	0.020	0.012	0.018	0.011	0.0	0.0	0.0
DISTILLATE FUEL IND	0.262	0.058	-0.587	0.015	0.027	0.016	0.0	0.0	0.0
RESIDUAL FUEL IND	0.104	0.0	0.027	-0.383	0.025	0.015	0.0	0.0	0.0
LIQUID GAS IND	0.184	0.033	0.026	0.015	-0.482	0.014	0.0	0.0	0.0
COAL IND	0.095	0.017	0.014	0.008	0.013	-0.359	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.086	0.0	0.0	0.0	-0.239	0.0	-0.156
DISTILLATE FUEL TRAN	0.0	0.0	-0.867	0.0	0.0	0.0	0.515	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.210	-0.210
RESIDUAL FUEL TRANS	0.0	0.0	0.192	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPHTHA IND	0.0	0.0	0.0	0.0	-0.069	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.118	0.0	0.0	0.0	-0.326	0.0	0.0
COAL RESSCOM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.447	0.039	0.038	0.012	0.023	0.009	0.0	0.0	0.073
NATURAL GAS	0.060	-0.439	0.009	0.008	0.0	0.004	0.0	0.0	0.017
DISTILLATE FUEL	0.096	0.009	-0.634	0.002	0.011	0.002	0.127	0.0	-0.481
RESIDUAL FUEL	0.116	0.015	0.023	-0.539	0.010	0.006	0.0	0.0	-0.506
LIQUID GAS	0.087	0.022	0.016	0.006	-0.346	0.005	0.0	0.0	-0.330
OTHER PETROLEUM	0.0	0.0	0.058	0.0	-0.015	0.0	-0.159	0.0	-0.119
OIL	0.041	0.005	-0.139	-0.024	-0.025	0.001	-0.083	-0.008	-0.282
COAL	0.037	0.007	0.005	0.003	0.005	-0.138	0.0	0.0	0.013

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TABLE 10 UNSCALED ELASTICITIES FOR DEMAND REGION 6 - 1985

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.503	0.047	0.017	0.0	0.017	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.180	-0.599	-0.001	0.0	-0.003	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.271	0.056	-0.774	0.0	0.025	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.079	0.016	0.003	0.0	-0.523	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.543	0.025	0.012	0.010	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.291	-0.825	0.021	0.017	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.120	0.001	-0.615	-0.003	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.165	0.006	-0.002	-0.666	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.406	0.090	0.026	0.043	0.032	0.007	0.0	0.0	0.0
NATURAL GAS IND	0.120	-0.403	0.018	0.027	0.021	0.006	0.0	0.0	0.0
DISTILLATE FUEL IND	0.209	0.098	-0.592	0.041	0.030	0.007	0.0	0.0	0.0
RESIDUAL FUEL IND	0.147	-0.058	0.025	-0.364	0.030	0.009	0.0	0.0	0.0
LIQUID GAS IND	0.168	0.035	0.022	0.036	-0.478	0.007	0.0	0.0	0.0
COAL IND	0.089	0.016	0.012	0.019	0.014	-0.363	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.086	0.0	0.0	0.0	-0.239	0.0	-0.156
DISTILLATE FUEL TRAN	0.0	0.0	-0.867	0.0	0.0	0.0	0.515	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.210	-0.210
RESIDUAL FUEL TRANS	0.0	0.0	0.192	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS CDM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPHTHA IND	0.0	0.0	0.0	0.0	-0.069	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.056	0.0	0.0	0.0	-0.155	0.0	0.0
COAL RESSCOM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL INC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.468	0.061	0.020	0.022	0.019	0.003	0.0	0.0	0.062
NATURAL GAS	0.123	-0.407	0.014	0.021	0.016	0.004	0.0	0.0	0.051
DISTILLATE FUEL	0.095	0.030	-0.768	0.009	0.010	0.001	0.284	0.0	-0.436
RESIDUAL FUEL	0.112	-0.038	0.065	-0.332	0.020	0.006	0.0	0.0	-0.247
LIQUID GAS	0.020	0.004	0.002	0.003	-0.072	0.001	0.0	0.0	-0.070
OTHER PETROLEUM	0.0	0.0	0.017	0.0	-0.034	0.0	-0.046	0.0	-0.064
OIL	0.033	0.0	-0.059	-0.040	-0.023	0.001	-0.036	-0.008	-0.168
COAL	0.073	0.013	0.010	0.016	0.012	-0.297	0.0	0.0	0.037

TABLE 11 UNSCALED ELASTICITIES FOR DEMAND REGION 7 - 1985

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.537	0.054	0.030	0.0	0.032	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.144	-0.584	0.006	0.0	0.012	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.233	0.062	-0.758	0.0	0.042	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.066	0.020	0.007	0.0	-0.517	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.514	0.059	0.020	0.004	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.255	-0.789	0.031	0.008	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.101	0.016	-0.611	-0.002	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.141	0.026	0.004	-0.667	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.364	0.047	0.031	0.013	0.049	0.015	0.0	0.0	0.0
NATURAL GAS IND	0.113	-0.391	0.020	0.009	0.027	0.010	0.0	0.0	0.0
DISTILLATE FUEL IND	0.256	0.049	-0.587	0.012	0.047	0.014	0.0	0.0	0.0
RESIDUAL FUEL IND	0.104	-0.005	0.027	-0.387	0.034	0.015	0.0	0.0	0.0
LIQUID GAS IND	0.180	0.026	0.026	0.011	-0.467	0.013	0.0	0.0	0.0
COAL IND	0.094	0.014	0.014	0.006	0.020	-0.360	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.086	0.0	0.0	0.0	-0.239	0.0	-0.156
DISTILLATE FUEL TRAN	0.0	0.0	-0.867	0.0	0.0	0.0	0.515	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.210	-0.210
RESIDUAL FUEL TRANS	0.0	0.0	0.192	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPHTHA IND	0.0	0.0	0.0	0.0	-0.069	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.056	0.0	0.0	0.0	-0.155	0.0	0.0
COAL RESSCOM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.476	0.052	0.028	0.006	0.030	0.006	0.0	0.0	0.064
NATURAL GAS	0.137	-0.503	0.013	0.004	0.014	0.003	0.0	0.0	0.030
DISTILLATE FUEL	0.110	0.025	-0.763	0.001	0.017	0.002	0.241	0.0	-0.478
RESIDUAL FUEL	0.114	0.006	0.023	-0.480	0.021	0.009	0.0	0.0	-0.435
LIQUID GAS	0.089	0.017	0.012	0.004	-0.365	0.005	0.0	0.0	-0.374
OTHER PETROLEUM	0.0	0.0	0.037	0.0	-0.001	0.0	-0.101	0.0	-0.068
OIL	0.041	0.008	-0.119	-0.008	-0.054	0.001	-0.071	-0.008	-0.264
COAL	0.085	0.013	0.012	0.006	0.018	-0.328	0.0	0.0	0.036

TABLE 12 UNSCALED ELASTICITIES FOR DEMAND REGION 8 - 1985

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.557	0.068	0.030	0.0	0.038	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.184	-0.613	-0.003	0.0	0.011	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.131	0.055	-0.643	0.0	0.035	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.064	0.025	0.004	0.0	-0.517	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.575	0.040	0.030	0.010	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.251	-0.807	0.044	0.017	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.105	0.007	-0.606	-0.002	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.144	0.015	0.010	-0.665	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.437	0.043	0.092	0.034	0.043	0.017	0.0	0.0	0.0
NATURAL GAS IND	0.084	-0.390	0.045	0.021	0.025	0.004	0.0	0.0	0.0
DISTILLATE FUEL IND	0.183	0.044	-0.526	0.033	0.041	0.018	0.0	0.0	0.0
RESIDUAL FUEL IND	0.082	0.001	0.049	-0.373	0.033	-0.002	0.0	0.0	0.0
LIQUID GAS IND	0.131	0.025	0.068	0.028	-0.471	0.009	0.0	0.0	0.0
COAL IND	0.069	0.013	0.035	0.015	0.018	-0.362	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.086	0.0	0.0	0.0	-0.239	0.0	-0.156
DISTILLATE FUEL TRAN	0.0	0.0	-0.867	0.0	0.0	0.0	0.515	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.210	-0.210
RESIDUAL FUEL TRANS	0.0	0.0	0.192	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPTHA IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.101	0.0	0.0	0.0	-0.279	0.0	0.0
COAL RES&COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.525	0.050	0.050	0.014	0.026	0.005	0.0	0.0	0.090
NATURAL GAS	0.163	-0.569	0.017	0.008	0.013	0.001	0.0	0.0	0.039
DISTILLATE FUEL	0.093	0.022	-0.685	0.011	0.018	0.006	0.206	0.0	-0.431
RESIDUAL FUEL	0.103	0.006	0.038	-0.474	0.020	-0.001	0.0	0.0	-0.416
LIQUID GAS	0.078	0.021	0.025	0.010	-0.423	0.003	0.0	0.0	-0.394
OTHER PETROLEUM	0.0	0.0	0.071	0.0	0.0	0.0	-0.197	0.0	-0.129
OIL	0.037	0.008	-0.137	-0.016	-0.035	0.002	-0.063	-0.014	-0.267
COAL	0.048	0.009	0.024	0.010	0.013	-0.250	0.0	0.0	0.047

TABLE 13 UNSCALED ELASTICITIES FOR DEMAND REGION 9 - 1985

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.550	0.114	0.011	0.0	0.003	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.296	-0.730	0.011	0.0	0.001	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.320	0.167	-0.907	0.0	-0.002	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.065	0.035	0.002	0.0	-0.526	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.536	0.034	0.004	0.001	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.304	-0.812	0.010	0.003	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.117	0.003	-0.615	-0.002	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.164	0.009	-0.003	-0.666	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.356	0.049	0.036	0.022	0.032	0.009	0.0	0.0	0.0
NATURAL GAS IND	0.129	-0.406	0.023	0.015	0.021	0.007	0.0	0.0	0.0
DISTILLATE FUEL IND	0.261	0.054	-0.582	0.021	0.030	0.008	0.0	0.0	0.0
RESIDUAL FUEL IND	0.137	-0.040	0.031	-0.379	0.028	0.011	0.0	0.0	0.0
LIQUID GAS IND	0.194	0.017	0.030	0.019	-0.479	0.008	0.0	0.0	0.0
COAL IND	0.102	0.008	0.016	0.010	0.014	-0.362	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.086	0.0	0.0	0.0	-0.239	0.0	-0.156
DISTILLATE FUEL TRAN	0.0	0.0	-0.867	0.0	0.0	0.0	0.515	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.210	-0.210
RESIDUAL FUEL TRANS	0.0	0.0	0.192	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPHTHA IND	0.0	0.0	0.0	0.0	-0.069	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.140	0.0	0.0	0.0	-0.388	0.0	0.0
COAL RES&COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.478	0.061	0.017	0.008	0.012	0.003	0.0	0.0	0.037
NATURAL GAS	0.203	-0.553	0.017	0.008	0.011	0.004	0.0	0.0	0.036
DISTILLATE FUEL	0.097	0.027	-0.786	0.005	0.007	0.002	0.319	0.0	-0.422
RESIDUAL FUEL	0.058	-0.014	0.124	-0.242	0.011	0.004	0.0	0.0	-0.107
LIQUID GAS	0.110	0.011	0.017	0.011	-0.280	0.004	0.0	0.0	-0.254
OTHER PETROLEUM	0.0	0.0	0.089	0.0	-0.008	0.0	-0.246	0.0	-0.169
OIL	0.021	0.003	-0.037	-0.014	-0.012	0.001	-0.103	-0.034	-0.201
COAL	0.044	0.003	0.007	0.005	0.006	-0.156	0.0	0.0	0.017

TABLE 14 UNSCALED ELASTICITIES FOR DEMAND REGION 10 - 1985

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.698	0.138	0.139	0.0	-0.002	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.294	-0.809	0.091	0.0	0.001	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.287	0.104	-0.811	0.0	-0.004	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.061	0.020	0.020	0.0	-0.526	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.593	0.035	0.046	0.016	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.227	-0.811	0.063	0.026	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.097	0.004	-0.596	-0.001	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.133	0.011	0.024	-0.663	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.416	0.059	0.076	0.042	0.010	0.019	0.0	0.0	0.0
NATURAL GAS IND	0.082	-0.380	0.041	0.025	0.007	0.013	0.0	0.0	0.0
DISTILLATE FUEL IND	0.207	0.059	-0.543	0.040	0.009	0.018	0.0	0.0	0.0
RESIDUAL FUEL IND	0.062	0.014	0.050	-0.368	0.010	0.019	0.0	0.0	0.0
LIQUID GAS IND	0.138	0.039	0.059	0.034	-0.497	0.017	0.0	0.0	0.0
COAL IND	0.072	0.020	0.031	0.018	0.005	-0.358	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.086	0.0	0.0	0.0	-0.239	0.0	-0.156
DISTILLATE FUEL TRAN	0.0	0.0	-0.867	0.0	0.0	0.0	0.515	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.210	-0.210
RESIDUAL FUEL TRANS	0.0	0.0	0.192	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPTHA IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.140	0.0	0.0	0.0	-0.388	0.0	0.0
COAL RES&COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.551	0.082	0.092	0.022	0.004	0.009	0.0	0.0	0.117
NATURAL GAS	0.154	-0.525	0.055	0.016	0.004	0.007	0.0	0.0	0.074
DISTILLATE FUEL	0.148	0.044	-0.723	0.010	0.001	0.004	0.154	0.0	-0.542
RESIDUAL FUEL	0.070	0.010	0.072	-0.402	0.005	0.010	0.0	0.0	-0.324
LIQUID GAS	0.050	0.014	0.020	0.010	-0.218	0.005	0.0	0.0	-0.190
OTHER PETROLEUM	0.0	0.0	0.060	0.0	0.0	0.0	-0.164	0.0	-0.107
OIL	0.048	0.014	-0.152	-0.029	-0.003	0.002	-0.070	-0.023	-0.278
COAL	0.071	0.019	0.030	0.018	0.005	-0.351	0.0	0.0	0.052

TABLE 15 UNSCALED ELASTICITIES FOR DEMAND REGION 1 - 1990

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.933	0.117	0.320	0.0	0.018	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.078	-0.687	0.121	0.0	0.007	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.189	0.104	-0.788	0.0	0.016	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.031	0.022	0.051	0.0	-0.585	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.716	0.034	0.079	0.052	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.240	-0.966	0.100	0.076	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.058	0.019	-0.647	0.016	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.060	0.007	0.053	-0.673	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.405	0.050	0.025	0.066	0.043	0.002	0.0	0.0	0.0
NATURAL GAS IND	0.153	-0.443	0.015	0.022	0.025	0.002	0.0	0.0	0.0
DISTILLATE FUEL IND	0.317	0.048	-0.693	0.066	0.041	0.002	0.0	0.0	0.0
RESIDUAL FUEL IND	0.170	0.035	0.023	-0.491	0.036	0.003	0.0	0.0	0.0
LIQUID GAS IND	0.237	0.039	0.021	0.041	-0.562	0.002	0.0	0.0	0.0
COAL IND	0.118	0.020	0.010	0.021	0.017	-0.412	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.110	0.0	0.0	0.0	-0.266	0.0	-0.156
DISTILLATE FUEL TRAN	0.0	0.0	-1.087	0.0	0.0	0.0	0.718	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.221	-0.221
RESIDUAL FUEL TRANS	0.0	0.0	0.191	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPTHA IND	0.0	0.0	0.0	0.0	-0.069	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.090	0.0	0.0	0.0	-0.217	0.0	0.0
COAL RES&COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.665	0.064	0.130	0.042	0.021	0.001	0.0	0.0	0.192
NATURAL GAS	0.136	-0.687	0.089	0.025	0.010	0.0	0.0	0.0	0.122
DISTILLATE FUEL	0.138	0.068	-0.759	0.007	0.011	0.0	0.049	0.0	-0.689
RESIDUAL FUEL	0.109	0.019	0.044	-0.568	0.016	0.001	0.0	0.0	-0.508
LIQUID GAS	0.136	0.026	0.023	0.022	-0.436	0.001	0.0	0.0	-0.395
OTHER PETROLEUM	0.0	0.0	0.044	0.0	-0.022	0.0	-0.105	0.0	-0.084
OIL	0.080	0.031	-0.237	-0.106	-0.011	0.0	-0.067	-0.007	-0.437
COAL	0.116	0.019	0.010	0.020	0.017	-0.405	0.0	0.0	0.047

TABLE 16 UNSCALED ELASTICITIES FOR DEMAND REGION 2 - 1990

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.544	0.026	0.045	0.0	-0.006	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.116	-0.681	0.081	0.0	0.005	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.174	0.071	-0.727	0.0	0.006	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.053	0.019	0.034	0.0	-0.587	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.648	0.027	0.028	0.041	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.322	-0.977	0.044	0.060	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.054	0.015	-0.637	0.013	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.111	0.006	0.008	-0.679	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.397	0.055	0.039	0.042	0.024	0.015	0.0	0.0	0.0
NATURAL GAS IND	0.143	-0.444	0.023	0.025	0.016	0.011	0.0	0.0	0.0
DISTILLATE FUEL IND	0.328	0.054	-0.679	0.040	0.022	0.014	0.0	0.0	0.0
RESIDUAL FUEL IND	0.138	0.027	0.034	-0.466	0.024	0.018	0.0	0.0	0.0
LIQUID GAS IND	0.233	0.040	0.032	0.034	-0.576	0.014	0.0	0.0	0.0
COAL IND	0.116	0.020	0.016	0.017	0.010	-0.406	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.110	0.0	0.0	0.0	-0.266	0.0	-0.156
DISTILLATE FUEL TRAN	0.0	0.0	-1.087	0.0	0.0	0.0	0.718	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.221	-0.221
RESIDUAL FUEL TRANS	0.0	0.0	0.191	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPHTHA	0.0	0.0	0.0	0.0	-0.069	0.0	0.0	0.0	0.0
ASPHALT	0.0	0.0	0.090	0.0	0.0	0.0	-0.217	0.0	0.0
COAL RES COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.522	0.037	0.037	0.030	0.007	0.005	0.0	0.0	0.073
NATURAL GAS	0.162	-0.665	0.058	0.018	0.007	0.003	0.0	0.0	0.082
DISTILLATE FUEL	0.144	0.052	-0.738	0.005	0.005	0.001	0.068	0.0	-0.656
RESIDUAL FUEL	0.102	0.009	0.035	-0.571	0.004	0.003	0.0	0.0	-0.530
LIQUID GAS	0.082	0.016	0.017	0.010	-0.297	0.004	0.0	0.0	-0.274
OTHER PETROLEUM	0.0	0.0	0.034	0.0	-0.022	0.0	-0.082	0.0	-0.071
DIL	0.068	0.020	-0.192	-0.090	-0.009	0.001	-0.074	-0.013	-0.384
COAL	0.037	0.006	0.005	0.005	0.003	-0.128	0.0	0.0	0.014

TABLE 17 UNSCALED ELASTICITIES FOR DEMAND REGION 3 - 1990

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.498	0.025	0.003	0.0	-0.010	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.140	-0.680	0.054	0.0	0.007	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.214	0.073	-0.771	0.0	0.008	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.071	0.020	0.015	0.0	-0.587	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.641	0.039	0.032	0.018	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.326	-0.959	0.051	0.031	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.080	0.004	-0.637	-0.002	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.121	0.010	0.010	-0.696	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.395	0.045	0.057	0.034	0.021	0.018	0.0	0.0	0.0
NATURAL GAS IND	0.144	-0.448	0.032	0.021	0.014	0.012	0.0	0.0	0.0
DISTILLATE FUEL IND	0.329	0.044	-0.662	0.031	0.019	0.017	0.0	0.0	0.0
RESIDUAL FUEL IND	0.138	0.025	0.043	-0.470	0.021	0.018	0.0	0.0	0.0
LIQUID GAS IND	0.234	0.034	0.045	0.028	-0.578	0.015	0.0	0.0	0.0
COAL IND	0.116	0.017	0.022	0.014	0.009	-0.405	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.110	0.0	0.0	0.0	-0.266	0.0	-0.156
DISTILLATE FUEL TRAN	0.0	0.0	-1.087	0.0	0.0	0.0	0.718	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.221	-0.221
RESIDUAL FUEL TRANS	0.0	0.0	0.191	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPHTHA IND	0.0	0.0	0.0	0.0	-0.069	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL RES&COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.482	0.038	0.036	0.021	0.007	0.009	0.0	0.0	0.064
NATURAL GAS	0.161	-0.591	0.042	0.012	0.008	0.004	0.0	0.0	0.062
DISTILLATE FUEL	0.170	0.038	-0.792	0.007	0.007	0.004	0.166	0.0	-0.600
RESIDUAL FUEL	0.096	0.014	0.073	-0.442	0.009	0.008	0.0	0.0	-0.358
LIQUID GAS	0.101	0.016	0.019	0.011	-0.313	0.006	0.0	0.0	-0.287
OTHER PETROLEUM	0.0	0.0	0.0	0.0	-0.007	0.0	0.0	0.0	-0.007
OIL	0.066	0.013	-0.170	-0.042	-0.012	0.002	-0.069	-0.010	-0.308
COAL	0.029	0.004	0.006	0.003	0.002	-0.099	0.0	0.0	0.011

TABLE 18 UNSCALED ELASTICITIES FOR DEMAND REGION 4 - 1990

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.534	0.017	0.029	0.0	0.006	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.422	-1.003	0.062	0.0	0.037	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.843	0.060	-1.411	0.0	0.025	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.091	0.004	0.009	0.0	-0.986	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.604	0.029	0.014	0.007	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.379	-0.975	0.028	0.015	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.092	0.002	-0.646	-0.004	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.140	0.007	-0.003	-0.700	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.364	0.042	0.030	0.028	0.023	0.018	0.0	0.0	0.0
NATURAL GAS IND	0.155	-0.447	0.019	0.018	0.015	0.013	0.0	0.0	0.0
DISTILLATE FUEL IND	0.361	0.041	-0.688	0.025	0.021	0.016	0.0	0.0	0.0
RESIDUAL FUEL IND	0.145	0.028	0.028	-0.472	0.024	0.022	0.0	0.0	0.0
LIQUID GAS IND	0.254	0.033	0.025	0.024	-0.576	0.016	0.0	0.0	0.0
COAL IND	0.126	0.017	0.012	0.012	0.010	-0.405	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.110	0.0	0.0	0.0	-0.266	0.0	-0.156
DISTILLATE FUEL TRAN	0.0	0.0	-1.087	0.0	0.0	0.0	0.718	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.221	-0.221
RESIDUAL FUEL TRANS	0.0	0.0	0.191	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPHTHA IND	0.0	0.0	0.0	0.0	-0.069	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.105	0.0	0.0	0.0	-0.253	0.0	0.0
COAL RESBCOM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.474	0.030	0.027	0.013	0.012	0.008	0.0	0.0	0.052
NATURAL GAS	0.209	-0.542	0.024	0.012	0.014	0.007	0.0	0.0	0.051
DISTILLATE FUEL	0.287	0.022	-1.043	0.004	0.010	0.003	0.342	0.0	-0.654
RESIDUAL FUEL	0.120	0.020	0.050	-0.454	0.015	0.014	0.0	0.0	-0.388
LIQUID GAS	0.108	0.011	0.011	0.007	-0.359	0.005	0.0	0.0	-0.346
OTHER PETROLEUM	0.0	0.0	0.059	0.0	-0.003	0.0	-0.142	0.0	-0.086
OIL	0.070	0.006	-0.118	-0.028	-0.022	0.002	-0.086	-0.016	-0.276
COAL	0.073	0.010	0.007	0.007	0.006	-0.233	0.0	0.0	0.020

TABLE 19 UNSCALED ELASTICITIES FOR DEMAND REGION 5 - 1990

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.641	0.002	0.118	0.0	0.048	0.0	0.0	0.0	0.0
NATURAL GAS RES	-0.068	-0.378	-0.024	0.0	-0.013	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.147	0.003	-0.649	0.0	0.022	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.043	0.039	0.022	0.0	-0.583	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.669	0.065	0.032	0.018	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.248	-0.920	0.050	0.031	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.072	0.009	-0.635	0.0	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.108	0.021	0.012	-0.694	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.400	0.071	0.037	0.018	0.034	0.020	0.0	0.0	0.0
NATURAL GAS IND	0.150	-0.445	0.023	0.012	0.021	0.013	0.0	0.0	0.0
DISTILLATE FUEL IND	0.323	0.071	-0.681	0.016	0.032	0.019	0.0	0.0	0.0
RESIDUAL FUEL IND	0.157	0.015	0.032	-0.481	0.031	0.020	0.0	0.0	0.0
LIQUID GAS IND	0.236	0.046	0.030	0.016	-0.568	0.017	0.0	0.0	0.0
COAL IND	0.118	0.023	0.015	0.008	0.014	-0.405	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.110	0.0	0.0	0.0	-0.266	0.0	-0.156
DISTILLATE FUEL TRAN	0.0	0.0	-1.087	0.0	0.0	0.0	0.718	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.221	-0.221
RESIDUAL FUEL TRANS	0.0	0.0	0.191	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPTHA IND	0.0	0.0	0.0	0.0	-0.069	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.150	0.0	0.0	0.0	-0.362	0.0	0.0
COAL RES&COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.517	0.053	0.056	0.014	0.030	0.011	0.0	0.0	0.098
NATURAL GAS	0.068	-0.474	0.003	0.009	0.002	0.005	0.0	0.0	0.016
DISTILLATE FUEL	0.128	0.013	-0.748	0.002	0.015	0.003	0.164	0.0	-0.555
RESIDUAL FUEL	0.124	0.018	0.025	-0.595	0.012	0.008	0.0	0.0	-0.558
LIQUID GAS	0.108	0.029	0.018	0.006	-0.386	0.007	0.0	0.0	-0.366
OTHER PETROLEUM	0.0	0.0	0.068	0.0	-0.017	0.0	-0.161	0.0	-0.112
OIL	0.054	0.007	-0.159	-0.027	-0.030	0.002	-0.081	-0.008	-0.310
COAL	0.049	0.009	0.006	0.003	0.006	-0.167	0.0	0.0	0.016

TABLE 20 UNSCALED ELASTICITIES FOR DEMAND REGION 6 - 1990

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.580	0.060	0.022	0.0	0.020	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.140	-0.618	0.002	0.0	-0.004	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.332	0.076	-0.916	0.0	0.032	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.078	0.020	0.005	0.0	-0.583	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.614	0.035	0.014	0.011	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.364	-0.965	0.026	0.022	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.090	0.003	-0.645	-0.004	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.136	0.010	-0.002	-0.699	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.484	0.135	0.029	0.060	0.035	0.007	0.0	0.0	0.0
NATURAL GAS IND	0.139	-0.447	0.019	0.037	0.023	0.006	0.0	0.0	0.0
DISTILLATE FUEL IND	0.234	0.142	-0.689	0.056	0.033	0.006	0.0	0.0	0.0
RESIDUAL FUEL IND	0.188	-0.037	0.029	-0.447	0.036	0.010	0.0	0.0	0.0
LIQUID GAS IND	0.195	0.070	0.024	0.050	-0.566	0.007	0.0	0.0	0.0
COAL IND	0.097	0.035	0.012	0.025	0.015	-0.410	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.110	0.0	0.0	0.0	-0.266	0.0	-0.156
DISTILLATE FUEL TRAN	0.0	0.0	-1.087	0.0	0.0	0.0	0.718	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.221	-0.221
RESIDUAL FUEL TRANS	0.0	0.0	0.191	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPHTHA IND	0.0	0.0	0.0	0.0	-0.069	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.071	0.0	0.0	0.0	-0.172	0.0	0.0
COAL RES&COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.542	0.090	0.023	0.031	0.022	0.003	0.0	0.0	0.076
NATURAL GAS	0.132	-0.436	0.015	0.029	0.017	0.004	0.0	0.0	0.062
DISTILLATE FUEL	0.115	0.047	-0.917	0.014	0.013	0.002	0.372	0.0	-0.487
RESIDUAL FUEL	0.146	-0.026	0.060	-0.401	0.025	0.007	0.0	0.0	-0.315
LIQUID GAS	0.023	0.008	0.003	0.005	-0.080	0.001	0.0	0.0	-0.075
OTHER PETROLEUM	0.0	0.0	0.019	0.0	-0.037	0.0	-0.045	0.0	-0.063
OIL	0.042	0.005	-0.065	-0.052	-0.026	0.001	-0.028	-0.007	-0.182
COAL	0.082	0.030	0.010	0.021	0.013	-0.347	0.0	0.0	0.044

TABLE 21 UNSCALED ELASTICITIES FOR DEMAND REGION 7 - 1990

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.626	0.075	0.037	0.0	0.037	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.106	-0.599	0.005	0.0	0.008	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.275	0.090	-0.894	0.0	0.053	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.062	0.026	0.008	0.0	-0.577	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.643	0.062	0.023	0.005	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.323	-0.924	0.038	0.010	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.081	0.008	-0.642	-0.003	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.123	0.018	0.003	-0.679	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.420	0.072	0.037	0.015	0.059	0.017	0.0	0.0	0.0
NATURAL GAS IND	0.141	-0.444	0.022	0.011	0.033	0.012	0.0	0.0	0.0
DISTILLATE FUEL IND	0.303	0.072	-0.681	0.014	0.056	0.015	0.0	0.0	0.0
RESIDUAL FUEL IND	0.149	0.016	0.032	-0.484	0.043	0.018	0.0	0.0	0.0
LIQUID GAS IND	0.222	0.047	0.030	0.013	-0.550	0.015	0.0	0.0	0.0
COAL IND	0.111	0.024	0.015	0.007	0.023	-0.406	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.110	0.0	0.0	0.0	-0.266	0.0	-0.156
DISTILLATE FUEL TRAN	0.0	0.0	-1.087	0.0	0.0	0.0	0.718	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.221	-0.221
RESIDUAL FUEL TRANS	0.0	0.0	0.191	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPTHA IND	0.0	0.0	0.0	0.0	-0.069	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.071	0.0	0.0	0.0	-0.172	0.0	0.0
COAL RES&COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.542	0.070	0.034	0.008	0.037	0.007	0.0	0.0	0.078
NATURAL GAS	0.131	-0.518	0.014	0.004	0.014	0.004	0.0	0.0	0.032
DISTILLATE FUEL	0.134	0.037	-0.905	0.002	0.023	0.003	0.317	0.0	-0.537
RESIDUAL FUEL	0.136	0.016	0.027	-0.545	0.028	0.012	0.0	0.0	-0.490
LIQUID GAS	0.106	0.027	0.014	0.005	-0.408	0.006	0.0	0.0	-0.411
OTHER PETROLEUM	0.0	0.0	0.044	0.0	-0.002	0.0	-0.106	0.0	-0.064
OIL	0.051	0.013	-0.134	-0.009	-0.063	0.002	-0.063	-0.008	-0.286
COAL	0.102	0.022	0.014	0.006	0.021	-0.375	0.0	0.0	0.042

TABLE 22 UNSCALED ELASTICITIES FOR DEMAND REGION B - 1990

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.653	0.091	0.034	0.0	0.052	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.116	-0.600	0.0	0.0	0.007	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.198	0.074	-0.798	0.0	0.049	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.060	0.032	0.004	0.0	-0.577	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.642	0.045	0.033	0.011	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.323	-0.950	0.053	0.022	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.081	0.004	-0.638	-0.003	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.123	0.012	0.009	-0.698	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.498	0.062	0.113	0.035	0.051	0.020	0.0	0.0	0.0
NATURAL GAS IND	0.111	-0.446	0.057	0.021	0.029	0.004	0.0	0.0	0.0
DISTILLATE FUEL IND	0.226	0.061	-0.607	0.033	0.048	0.020	0.0	0.0	0.0
RESIDUAL FUEL IND	0.124	0.017	0.067	-0.469	0.040	-0.002	0.0	0.0	0.0
LIQUID GAS IND	0.170	0.041	0.084	0.029	-0.556	0.011	0.0	0.0	0.0
COAL IND	0.085	0.021	0.042	0.014	0.020	-0.408	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.110	0.0	0.0	0.0	-0.266	0.0	-0.156
DISTILLATE FUEL TRAN	0.0	0.0	-1.087	0.0	0.0	0.0	0.718	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.221	-0.221
RESIDUAL FUEL TRANS	0.0	0.0	0.191	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPTHA IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.128	0.0	0.0	0.0	-0.310	0.0	0.0
COAL RES&COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.601	0.065	0.058	0.015	0.033	0.006	0.0	0.0	0.105
NATURAL GAS	0.139	-0.590	0.022	0.009	0.012	0.001	0.0	0.0	0.042
DISTILLATE FUEL	0.118	0.031	-0.802	0.012	0.023	0.008	0.267	0.0	-0.481
RESIDUAL FUEL	0.120	0.015	0.047	-0.551	0.023	-0.001	0.0	0.0	-0.481
LIQUID GAS	0.092	0.030	0.033	0.011	-0.479	0.004	0.0	0.0	-0.441
OTHER PETROLEUM	0.0	0.0	0.088	0.0	0.0	0.0	-0.211	0.0	-0.124
OIL	0.048	0.012	-0.158	-0.017	-0.041	0.003	-0.054	-0.014	-0.290
COAL	0.062	0.015	0.031	0.010	0.015	-0.294	0.0	0.0	0.055

TABLE 23 UNSCALED ELASTICITIES FOR DEMAND REGION 9 - 1990

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.658	0.161	0.013	0.0	0.004	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.303	-0.797	0.013	0.0	0.001	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.284	0.159	-0.923	0.0	-0.001	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.065	0.037	0.002	0.0	-0.586	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.603	0.042	0.005	0.001	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.383	-0.953	0.012	0.004	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.088	0.003	-0.646	-0.002	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.136	0.011	-0.004	-0.699	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.426	0.090	0.042	0.027	0.038	0.010	0.0	0.0	0.0
NATURAL GAS IND	0.153	-0.453	0.026	0.018	0.024	0.008	0.0	0.0	0.0
DISTILLATE FUEL IND	0.294	0.095	-0.677	0.025	0.036	0.009	0.0	0.0	0.0
RESIDUAL FUEL IND	0.184	-0.022	0.037	-0.472	0.036	0.013	0.0	0.0	0.0
LIQUID GAS IND	0.228	0.048	0.034	0.024	-0.564	0.009	0.0	0.0	0.0
COAL IND	0.113	0.024	0.017	0.012	0.016	-0.409	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.110	0.0	0.0	0.0	-0.266	0.0	-0.156
DISTILLATE FUEL TRAN	0.0	0.0	-1.087	0.0	0.0	0.0	0.718	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.221	-0.221
RESIDUAL FUEL TRANS	0.0	0.0	0.191	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPHTHA IND	0.0	0.0	0.0	0.0	-0.069	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.178	0.0	0.0	0.0	-0.431	0.0	0.0
COAL RES&COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.554	0.091	0.020	0.010	0.014	0.003	0.0	0.0	0.044
NATURAL GAS	0.226	-0.610	0.019	0.010	0.013	0.004	0.0	0.0	0.042
DISTILLATE FUEL	0.108	0.039	-0.933	0.007	0.009	0.002	0.426	0.0	-0.454
RESIDUAL FUEL	0.078	-0.008	0.124	-0.284	0.014	0.005	0.0	0.0	-0.145
LIQUID GAS	0.125	0.027	0.019	0.013	-0.316	0.005	0.0	0.0	-0.286
OTHER PETROLEUM	0.0	0.0	0.109	0.0	-0.008	0.0	-0.261	0.0	-0.162
OIL	0.026	0.006	-0.038	-0.016	-0.015	0.001	-0.103	-0.033	-0.210
COAL	0.054	0.011	0.008	0.006	0.008	-0.192	0.0	0.0	0.021

TABLE 24 UNSCALED ELASTICITIES FOR DEMAND REGION 10 - 1990

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.763	0.137	0.147	0.0	-0.003	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.305	-0.889	0.102	0.0	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.243	0.102	-0.823	0.0	-0.004	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.060	0.022	0.023	0.0	-0.587	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.665	0.043	0.051	0.019	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.293	-0.953	0.076	0.033	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.071	0.004	-0.627	-0.002	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.108	0.011	0.023	-0.696	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.468	0.068	0.085	0.044	0.010	0.022	0.0	0.0	0.0
NATURAL GAS IND	0.115	-0.434	0.045	0.026	0.007	0.015	0.0	0.0	0.0
DISTILLATE FUEL IND	0.257	0.087	-0.635	0.042	0.010	0.020	0.0	0.0	0.0
RESIDUAL FUEL IND	0.114	0.031	0.059	-0.463	0.012	0.023	0.0	0.0	0.0
LIQUID GAS IND	0.185	0.060	0.065	0.036	-0.587	0.019	0.0	0.0	0.0
COAL IND	0.092	0.030	0.032	0.018	0.005	-0.404	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.110	0.0	0.0	0.0	-0.266	0.0	-0.156
DISTILLATE FUEL TRAN	0.0	0.0	-1.087	0.0	0.0	0.0	0.718	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.221	-0.221
RESIDUAL FUEL TRANS	0.0	0.0	0.191	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPTHA IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.178	0.0	0.0	0.0	-0.431	0.0	0.0
COAL RES&COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.612	0.095	0.099	0.023	0.004	0.009	0.0	0.0	0.126
NATURAL GAS	0.186	-0.594	0.063	0.016	0.003	0.007	0.0	0.0	0.082
DISTILLATE FUEL	0.151	0.053	-0.805	0.011	0.001	0.005	0.197	0.0	-0.581
RESIDUAL FUEL	0.090	0.019	0.074	-0.463	0.006	0.012	0.0	0.0	-0.382
LIQUID GAS	0.062	0.020	0.022	0.011	-0.238	0.006	0.0	0.0	-0.208
OTHER PETROLEUM	0.0	0.0	0.073	0.0	0.0	0.0	-0.173	0.0	-0.102
OIL	0.053	0.017	-0.168	-0.033	-0.004	0.003	-0.066	-0.022	-0.297
COAL	0.091	0.030	0.032	-0.018	0.005	-0.399	0.0	0.0	0.054

DEMAND DATA
CEASPIKIT

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DATA SOURCES: ELECTRICITY - STATISTICAL YEARBOOK, EDISON ELECTRIC INSTITUTE, WASHINGTON, D.C.
GAS, OIL, COAL: VARIOUS VOLUMES OF MINERAL INDUSTRY SURVEYS, PRODUCED BY THE BUREAU OF MINES.
JET FUEL: NEWSLETTERS AND RELEASES FROM THE ETHEL CORPORATION OF HOUSTON, TEXAS.

OFFICE RESPONSIBLE: OFFICE OF ENERGY USE ANALYSIS, ENERGY INFORMATION ADMINISTRATION (EIA).

TABLE 1 DEMAND POINTS IN TRILLIONS OF BTU'S FOR 1985

	DOE 1	DOE 2	DOE 3	DOE 4	DOE 5	DOE 6	DOE 7	DOE 8	DOE 9	DOE 10
ELECTRICITY RES	67.18	165.65	217.32	686.31	375.13	253.27	124.10	87.64	148.30	158.34
NATURAL GAS RES	463.74	1228.81	1279.70	809.84	4910.67	2008.87	1280.24	915.55	1442.85	295.44
DISTILLATE FUEL RES	243.19	366.50	166.15	103.64	437.00	49.04	48.15	15.67	15.68	47.71
LIQUID GAS RES	15.21	17.80	17.65	77.41	114.04	73.51	77.62	40.90	3.42	2.01
ELECTRICITY COM	76.98	202.67	197.13	359.74	331.73	223.10	96.95	95.54	205.15	55.49
NATURAL GAS COM	219.87	444.37	470.66	586.44	1728.81	555.90	332.61	218.34	476.35	140.40
DISTILLATE FUEL COM	136.14	115.62	76.73	45.89	146.50	35.82	27.09	25.47	11.83	30.87
RESIDUAL FUEL COM	91.17	163.20	37.62	23.45	76.49	30.35	4.98	7.57	3.04	11.71
ELECTRICITY IND	82.66	207.45	389.93	856.33	805.81	432.63	160.07	90.37	191.15	204.26
NATURAL GAS IND	223.11	565.10	1123.44	2192.81	3633.37	13515.14	788.09	476.35	2258.38	548.38
DISTILLATE FUEL IND	12.88	32.16	100.11	79.71	126.62	89.48	28.80	55.82	46.34	43.02
RESIDUAL FUEL IND	91.41	48.20	67.80	98.27	55.48	247.02	9.56	14.28	33.69	23.95
LIQUID GAS IND	34.20	22.88	37.43	73.66	151.23	145.76	74.04	28.77	57.09	4.50
CCAL IND	0.36	8.88	39.46	38.60	84.06	12.21	13.82	26.77	5.78	6.66
GASLINE TRANS	411.57	659.11	811.10	1554.56	1673.19	998.65	501.50	298.62	963.73	288.74
DISTILLATE FUEL TRAN	31.63	58.05	113.08	233.62	237.51	215.04	93.65	65.11	123.75	53.51
JET FUEL TRANS	41.51	125.72	81.51	206.86	137.49	127.95	36.72	44.40	275.27	75.16
RESIDUAL FUEL TRANS	7.53	31.57	39.99	26.43	4.30	88.43	0.45	0.52	51.45	9.26
ELECTRICITY TRANS	0.08	6.34	2.85	0.0	0.96	0.0	0.08	0.0	0.72	0.0
NATURAL GAS RAW MAT	11.92	24.85	182.04	479.07	207.20	1540.62	255.39	25.21	124.35	102.34
LIQUID GAS COM	1.29	1.61	1.81	7.91	10.85	5.71	6.41	3.54	0.47	0.24
LIQUID GAS TRANS	0.05	0.60	0.42	1.40	1.30	8.38	0.71	0.81	0.62	0.20
LIQUID GAS FEEDSTCK	0.0	0.0	15.56	41.77	60.16	1262.79	35.34	0.0	18.40	0.0
LIQUID GAS RAW MAT	11.21	28.74	22.65	33.39	43.04	21.58	10.61	7.39	23.37	7.75
OIL RAW MAT	6.01	26.35	32.06	56.48	69.13	55.24	16.62	11.41	20.27	38.19
NAPTHA IND	10.26	25.31	7.72	5.27	57.54	137.48	1.06	0.0	9.29	0.0
ASPHALT COM	16.22	36.34	35.92	82.06	112.90	71.62	30.32	25.93	49.48	27.50
CCAL RESECOM	0.01	0.14	0.99	0.99	2.09	0.01	0.13	0.06	0.01	0.10
CCAL TRANS	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HET COAL IND	0.0	16.46	105.60	25.31	104.53	2.16	0.94	9.63	6.32	0.0

TABLE 2 DEMAND POINTS IN TRILLIONS OF BTU'S FOR 1990

	DOE 1	DOE 2	DOE 3	DOE 4	DOE 5	DOE 6	DOE 7	DOE 8	DOE 9	DOE 10
ELECTRICITY RES	68.82	171.85	226.13	917.11	390.35	272.96	136.73	100.19	162.07	167.78
NATURAL GAS RES	457.36	1170.99	1247.40	610.02	4763.76	2007.27	1125.29	993.01	1512.44	364.77
DISTILLATE FUEL RES	256.54	376.68	173.55	122.43	467.43	55.90	51.87	15.35	16.15	53.17
LIQUID GAS RES	16.36	18.42	18.30	85.24	117.66	79.67	80.24	44.69	3.45	2.09
ELECTRICITY COM	84.07	223.98	221.72	425.70	368.37	248.36	110.31	108.19	218.16	98.90
NATURAL GAS COM	207.66	377.26	422.03	505.01	1379.65	477.01	263.35	181.50	429.94	113.24
DISTILLATE FUEL COM	148.32	118.79	85.88	53.96	160.13	41.00	29.24	29.27	12.45	33.49
RESIDUAL FUEL COM	92.45	161.05	38.56	25.36	76.54	31.33	4.87	7.79	2.83	11.32
ELECTRICITY IND	93.76	245.23	464.54	1063.72	959.09	516.58	201.50	100.49	220.30	217.80
NATURAL GAS IND	242.47	635.13	1192.35	2402.33	4117.38	16282.06	822.44	492.30	2397.66	547.05
DISTILLATE FUEL IND	14.93	37.52	121.31	99.31	157.95	117.50	36.56	71.12	54.23	54.46
RESIDUAL FUEL IND	106.98	52.60	74.77	116.39	62.53	348.04	11.79	14.48	36.99	26.44
LIQUID GAS IND	41.57	27.25	45.05	90.87	186.97	188.03	92.29	36.71	66.00	5.54
COAL IND	0.41	10.02	45.10	46.94	98.59	16.04	16.75	32.79	6.95	7.60
GASOLINE TRANS	438.27	728.79	868.82	1729.33	1767.42	1099.88	529.71	325.10	1035.17	313.66
DISTILLATE FUEL TRAN	32.04	57.13	115.47	251.01	237.99	227.90	93.86	67.94	126.82	55.65
JET FUEL TRANS	40.69	117.44	81.81	223.88	133.33	133.71	36.17	45.40	267.36	75.26
RESIDUAL FUEL TRANS	7.57	32.16	40.23	26.59	4.33	88.96	0.45	0.53	51.76	9.31
ELECTRICITY TRANS	0.08	6.34	2.89	0.0	0.96	0.0	0.08	0.0	0.72	9.0
NATURAL GAS RAW MAT	14.95	30.74	225.80	616.62	260.28	1917.14	308.71	31.03	150.41	120.17
LIQUID GAS COM	1.28	1.59	1.78	7.79	10.70	5.32	5.98	3.51	0.46	0.23
LIQUID GAS TRANS	0.04	0.52	0.37	1.22	1.14	7.33	0.62	0.71	0.54	0.18
LIQUID GAS FEEDSTOCK	0.0	0.0	18.24	50.33	71.19	1534.89	41.86	0.0	21.81	0.0
LIQUID GAS RAW MAT	14.63	37.51	29.57	43.58	56.19	28.17	13.85	9.65	30.51	10.12
OIL RAW MAT	7.13	31.23	38.00	66.95	81.94	65.48	19.70	13.52	24.33	45.27
NAPHTHA IND	12.55	35.46	5.36	6.61	70.55	174.19	1.30	0.0	11.38	0.0
ASPHALT COM	17.08	37.60	35.92	90.86	121.68	76.26	31.42	28.64	55.63	31.47
COAL RES&COM	0.01	0.09	0.64	0.68	1.39	0.00	0.08	0.03	0.00	0.07
COAL TRANS	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	16.96	108.98	26.49	108.46	2.29	0.98	10.03	6.53	0.0

TABLE 3 INITIAL PRICES IN TRILLIONS CF BTU \$ FOR 1985

	DOE 1	DOE 2	DOE 3	DOE 4	DOE 5	DOE 6	DOE 7	DOE 8	DOE 9	DOE 10
ELECTRICITY RES	43.90	45.24	37.83	32.16	35.53	39.88	35.42	27.95	40.57	20.21
NATURAL GAS RES	3.97	3.59	3.14	2.68	2.60	1.98	1.85	1.81	3.34	3.16
DISTILLATE FUEL RES	19.49	19.99	20.88	21.24	19.05	19.63	18.54	19.48	19.78	19.78
LIQUID GAS RES	14.27	14.66	15.72	15.74	13.98	14.17	13.58	13.73	13.89	13.89
ELECTRICITY CGM	43.63	50.42	36.14	32.54	35.46	38.12	34.65	25.48	37.82	20.14
NATURAL GAS CGM	3.38	3.06	2.73	2.23	2.32	2.15	3.26	2.49	2.88	2.64
DISTILLATE FUEL CGM	18.28	18.72	18.92	18.94	18.12	18.35	17.66	18.33	18.39	18.39
RESIDUAL FUEL CGM	16.34	16.85	18.49	16.52	17.65	16.69	17.70	19.06	16.73	16.35
ELECTRICITY IND	37.11	26.55	29.38	27.39	27.89	33.21	29.21	21.15	32.75	14.48
NATURAL GAS IND	2.88	2.45	2.36	2.02	3.00	1.89	2.95	2.07	2.30	2.04
DISTILLATE FUEL IND	18.27	18.63	19.40	19.35	18.10	18.26	17.62	18.52	18.39	18.39
RESIDUAL FUEL IND	16.64	17.40	18.06	16.34	17.52	16.64	17.54	18.77	16.71	17.01
LIQUID GAS IND	13.46	13.75	14.44	14.52	13.40	13.42	13.05	13.00	13.05	13.05
CCAL IND	38.36	36.11	33.91	37.78	32.89	30.87	31.68	25.92	33.43	33.01
GASOLINE TRANS	27.77	28.79	27.65	27.28	27.18	26.33	26.63	26.95	28.13	28.19
DISTILLATE FUEL TRAN	23.94	24.30	25.07	25.02	23.77	23.93	23.29	24.19	24.06	24.06
JET FUEL TRANS	19.42	19.92	21.13	21.34	19.02	19.56	18.48	19.58	19.71	19.71
RESIDUAL FUEL TRANS	16.64	17.40	18.06	16.34	17.52	16.64	17.54	18.77	16.71	17.01

TABLE 4 INITIAL PRICES IN TRILLIONS OF BTU'S FOR 1990

	DOE 1	DOE 2	DOE 3	DOE 4	DOE 5	DOE 6	DOE 7	DOE 8	DOE 9	DOE 10
ELECTRICITY RES	47.29	48.12	41.01	34.20	38.48	43.24	36.28	31.16	41.79	22.42
NATURAL GAS RES	4.75	4.15	3.55	3.23	3.38	2.49	2.68	2.35	3.17	2.84
DISTILLATE FUEL RES	20.37	20.87	21.76	22.12	19.93	20.51	19.42	20.36	20.64	20.64
LIQUID GAS RES	14.74	15.13	16.19	16.22	14.46	14.65	14.10	14.50	14.98	14.98
ELECTRICITY COM	47.02	53.29	35.32	34.58	38.41	41.48	35.51	28.68	39.04	22.35
NATURAL GAS COM	4.16	3.62	3.14	2.78	3.09	2.74	3.38	2.80	2.71	3.58
DISTILLATE FUEL COM	19.16	19.60	19.80	19.82	19.00	19.23	18.54	19.21	19.25	19.25
RESIDUAL FUEL COM	17.34	17.85	19.49	17.52	18.65	17.69	18.70	20.00	17.73	17.35
ELECTRICITY IND	40.50	29.47	32.55	29.44	30.84	36.57	30.06	24.35	33.97	16.69
NATURAL GAS IND	3.66	3.01	2.78	2.49	2.80	2.48	3.07	2.38	3.02	3.27
DISTILLATE FUEL IND	19.15	19.51	20.28	20.23	18.98	19.14	18.50	19.40	19.25	19.25
RESIDUAL FUEL IND	17.64	18.40	19.06	17.34	18.52	17.64	18.54	19.71	17.71	18.01
LIQUID GAS IND	13.93	14.22	14.91	15.00	13.88	13.90	13.57	13.77	14.14	14.14
CCAL IND	39.24	36.97	34.74	38.63	33.88	32.53	32.69	27.45	35.15	37.62
GASOLINE TRANS	28.52	29.54	28.40	28.03	27.93	27.08	27.38	27.70	28.86	28.92
DISTILLATE FUEL TRAN	24.82	25.18	25.95	25.90	24.65	24.81	24.17	25.07	24.92	24.92
JET FUEL TRANS	20.21	20.71	21.93	22.15	19.82	20.37	19.28	20.39	20.49	20.49
RESIDUAL FUEL TRANS	17.64	18.40	19.06	17.34	18.52	17.64	18.54	19.71	17.71	18.01

TABLE 5 UNSCALED ELASTICITIES FOR DEMAND REGION 1 - 1985

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.723	0.084	0.204	0.0	0.014	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.077	-0.582	0.075	0.0	0.006	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.181	0.075	-0.690	0.0	0.013	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.036	0.017	0.047	0.0	-0.525	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.629	0.026	0.064	0.045	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.202	-0.823	0.068	0.060	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.033	0.013	-0.552	0.009	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.077	0.006	0.062	-0.640	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.344	0.036	0.022	0.041	0.035	0.002	0.0	0.0	0.0
NATURAL GAS IND	0.125	-0.382	0.014	0.008	0.021	0.002	0.0	0.0	0.0
DISTILLATE FUEL IND	0.274	0.034	-0.596	0.043	0.033	0.002	0.0	0.0	0.0
RESIDUAL FUEL IND	0.121	0.024	0.020	-0.408	0.028	0.003	0.0	0.0	0.0
LIQUID GAS IND	0.196	0.028	0.018	0.022	-0.477	0.002	0.0	0.0	0.0
COAL IND	0.102	0.015	0.010	0.011	0.015	-0.366	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.090	0.0	0.0	0.0	-0.247	0.0	-0.161
DISTILLATE FUEL TRAN	0.0	0.0	-0.905	0.0	0.0	0.0	0.540	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.211	-0.211
RESIDUAL FUEL TRANS	0.0	0.0	0.192	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPHTHA IND	0.0	0.0	0.0	0.0	-0.069	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.073	0.0	0.0	0.0	-0.202	0.0	0.0
COAL RES&COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.554	0.047	0.091	0.030	0.017	0.001	0.0	0.0	0.137
NATURAL GAS	0.119	-0.588	0.058	0.017	0.008	0.0	0.0	0.0	0.083
DISTILLATE FUEL	0.123	0.048	-0.659	0.004	0.009	0.0	0.041	0.0	-0.601
RESIDUAL FUEL	0.095	0.014	0.047	-0.514	0.013	0.001	0.0	0.0	-0.454
LIQUID GAS	0.117	0.019	0.022	0.012	-0.391	0.001	0.0	0.0	-0.361
OTHER PETROLEUM	0.0	0.0	0.039	0.0	-0.021	0.0	-0.106	0.0	-0.090
OIL	0.069	0.022	-0.205	-0.095	-0.010	0.0	-0.068	-0.007	-0.389
COAL	0.100	0.014	0.009	0.011	0.015	-0.355	0.0	0.0	0.035

TABLE 6 UNSCALED ELASTICITIES FOR DEMAND REGION 2 - 1985

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.533	0.037	0.080	0.0	-0.006	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.100	-0.579	0.053	0.0	0.004	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.150	0.052	-0.629	0.0	0.005	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.049	0.019	0.035	0.0	-0.526	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.572	0.021	0.022	0.034	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.261	-0.831	0.031	0.045	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.020	0.011	-0.534	0.007	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.136	0.005	0.010	-0.646	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.349	0.038	0.034	0.035	0.021	0.013	0.0	0.0	0.0
NATURAL GAS IND	0.109	-0.386	0.021	0.020	0.014	0.009	0.0	0.0	0.0
DISTILLATE FUEL IND	0.272	0.038	-0.584	0.034	0.020	0.012	0.0	0.0	0.0
RESIDUAL FUEL IND	0.086	0.015	0.028	-0.375	0.020	0.014	0.0	0.0	0.0
LIQUID GAS IND	0.183	0.026	0.028	0.028	-0.487	0.011	0.0	0.0	0.0
COAL IND	0.095	0.014	0.015	0.015	0.010	-0.361	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.090	0.0	0.0	0.0	-0.247	0.0	-0.161
DISTILLATE FUEL TRAN	0.0	0.0	-0.905	0.0	0.0	0.0	0.540	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.211	-0.211
RESIDUAL FUEL TRANS	0.0	0.0	0.192	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPHTHA IND	0.0	0.0	0.0	0.0	-0.069	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.073	0.0	0.0	0.0	-0.202	0.0	0.0
COAL RESSCOM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.476	0.031	0.043	0.024	0.006	0.004	0.0	0.0	0.072
NATURAL GAS	0.135	-0.576	0.040	0.015	0.006	0.002	0.0	0.0	0.060
DISTILLATE FUEL	0.116	0.038	-0.635	0.003	0.004	0.001	0.055	0.0	-0.567
RESIDUAL FUEL	0.110	0.006	0.036	-0.531	0.004	0.003	0.0	0.0	-0.492
LIQUID GAS	0.071	0.013	0.018	0.009	-0.285	0.004	0.0	0.0	-0.262
OTHER PETROLEUM	0.0	0.0	0.031	0.0	-0.021	0.0	-0.085	0.0	-0.077
OIL	0.058	0.014	-0.165	-0.083	-0.007	0.001	-0.075	-0.014	-0.348
COAL	0.029	0.004	0.005	0.005	0.003	-0.110	0.0	0.0	0.012

TABLE 7 UNSCALED ELASTICITIES FOR DEMAND REGION 3 - 1985

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.482	0.046	0.023	0.0	-0.009	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.117	-0.583	0.037	0.0	0.006	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.182	0.049	-0.699	0.0	0.006	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.066	0.020	0.017	0.0	-0.326	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.569	0.031	0.028	0.015	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.259	-0.818	0.040	0.024	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.106	0.004	-0.605	-0.001	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.147	0.010	0.011	-0.663	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.348	0.031	0.046	0.030	0.018	0.014	0.0	0.0	0.0
NATURAL GAS IND	0.109	-0.388	0.027	0.017	0.012	0.009	0.0	0.0	0.0
DISTILLATE FUEL IND	0.273	0.030	-0.572	0.028	0.017	0.013	0.0	0.0	0.0
RESIDUAL FUEL IND	0.087	0.013	0.034	-0.376	0.018	0.012	0.0	0.0	0.0
LIQUID GAS IND	0.184	0.022	0.037	0.024	-0.490	0.012	0.0	0.0	0.0
COAL IND	0.095	0.012	0.019	0.013	0.008	-0.560	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.090	0.0	0.0	0.0	-0.247	0.0	-0.161
DISTILLATE FUEL TRAN	0.0	0.0	-0.905	0.0	0.0	0.0	0.540	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.212	-0.212
RESIDUAL FUEL TRANS	0.0	0.0	0.192	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPHTHA IND	0.0	0.0	0.0	0.0	-0.069	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL RES&COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.438	0.035	0.035	0.018	0.006	0.007	0.0	0.0	0.059
NATURAL GAS	0.131	-0.516	0.032	0.011	0.007	0.003	0.0	0.0	0.049
DISTILLATE FUEL	0.145	0.025	-0.691	0.006	0.006	0.003	0.135	0.0	-0.531
RESIDUAL FUEL	0.081	0.009	0.070	-0.389	0.008	0.005	0.0	0.0	-0.310
LIQUID GAS	0.085	0.012	0.017	0.010	-0.267	0.005	0.0	0.0	-0.264
OTHER PETROLEUM	0.0	0.0	0.0	0.0	-0.007	0.0	0.0	0.0	-0.007
OIL	0.054	0.009	-0.148	-0.037	-0.010	0.002	-0.075	-0.010	-0.282
COAL	0.023	0.003	0.005	0.003	0.002	-0.084	0.0	0.0	0.010

TABLE 8 UNSCALED ELASTICITIES FOR DEMAND REGION 4 - 1985

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.469	0.015	0.024	0.0	0.006	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.285	-0.786	0.051	0.0	0.027	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.772	0.054	-1.274	0.0	0.025	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.090	0.004	0.007	0.0	-0.525	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.536	0.022	0.012	0.006	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.300	-0.829	0.022	0.012	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.122	-0.001	-0.615	-0.003	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.169	0.003	-0.002	-0.667	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.324	0.027	0.027	0.025	0.021	0.015	0.0	0.0	0.0
NATURAL GAS IND	0.116	-0.388	0.017	0.017	0.014	0.011	0.0	0.0	0.0
DISTILLATE FUEL IND	0.298	0.026	-0.591	0.023	0.019	0.014	0.0	0.0	0.0
RESIDUAL FUEL IND	0.088	0.015	0.024	-0.377	0.020	0.016	0.0	0.0	0.0
LIQUID GAS IND	0.198	0.020	0.022	0.021	-0.487	0.013	0.0	0.0	0.0
COAL IND	0.103	0.011	0.012	0.011	0.010	-0.359	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.090	0.0	0.0	0.0	-0.247	0.0	-0.161
DISTILLATE FUEL TRAN	0.0	0.0	-0.905	0.0	0.0	0.0	0.540	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.212	-0.212
RESIDUAL FUEL TRANS	0.0	0.0	0.192	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPHTHA IND	0.0	0.0	0.0	0.0	-0.069	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.086	0.0	0.0	0.0	-0.236	0.0	0.0
COAL RES&COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.417	0.022	0.023	0.012	0.011	0.007	0.0	0.0	0.047
NATURAL GAS	0.165	-0.489	0.023	0.011	0.013	0.006	0.0	0.0	0.046
DISTILLATE FUEL	0.241	0.017	-0.904	0.004	0.009	0.002	0.273	0.0	-0.587
RESIDUAL FUEL	0.087	0.010	0.049	-0.382	0.013	0.011	0.0	0.0	-0.319
LIQUID GAS	0.092	0.007	0.009	0.007	-0.324	0.004	0.0	0.0	-0.313
OTHER PETROLEUM	0.0	0.0	0.052	0.0	-0.002	0.0	-0.142	0.0	-0.095
OIL	0.056	0.004	-0.105	-0.023	-0.018	0.001	-0.094	-0.016	-0.258
COAL	0.057	0.006	0.007	0.006	0.005	-0.197	0.0	0.0	0.018

TABLE 9 UNSCALED ELASTICITIES FOR DEMAND REGION 5 - 1985

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.506	-0.007	0.060	0.0	0.031	0.0	0.0	0.0	0.0
NATURAL GAS RES	-0.042	-0.360	-0.011	0.0	-0.012	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.101	-0.003	-0.537	0.0	0.016	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.050	0.030	0.020	0.0	-0.523	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.589	0.050	0.029	0.016	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.236	-0.797	0.041	0.025	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.093	0.019	-0.604	0.0	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.129	0.025	0.012	-0.662	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.358	0.056	0.031	0.017	0.028	0.017	0.0	0.0	0.0
NATURAL GAS IND	0.114	-0.387	0.020	0.012	0.018	0.011	0.0	0.0	0.0
DISTILLATE FUEL IND	0.262	0.058	-0.587	0.019	0.027	0.016	0.0	0.0	0.0
RESIDUAL FUEL IND	0.108	0.001	0.027	-0.383	0.025	0.015	0.0	0.0	0.0
LIQUID GAS IND	0.183	0.033	0.026	0.015	-0.482	0.014	0.0	0.0	0.0
COAL IND	0.095	0.017	0.014	0.008	0.013	-0.359	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.090	0.0	0.0	0.0	-0.247	0.0	-0.161
DISTILLATE FUEL TRAN	0.0	0.0	-0.905	0.0	0.0	0.0	0.540	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.212	-0.212
RESIDUAL FUEL TRANS	0.0	0.0	0.192	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPHTHA IND	0.0	0.0	0.0	0.0	-0.069	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.122	0.0	0.0	0.0	-0.337	0.0	0.0
COAL RES&COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.445	0.039	0.038	0.012	0.023	0.009	0.0	0.0	0.073
NATURAL GAS	0.062	-0.439	0.009	0.009	0.001	0.004	0.0	0.0	0.018
DISTILLATE FUEL	0.096	0.009	-0.645	0.002	0.011	0.002	0.136	0.0	-0.482
RESIDUAL FUEL	0.116	0.015	0.023	-0.538	0.010	0.006	0.0	0.0	-0.505
LIQUID GAS	0.088	0.022	0.016	0.006	-0.347	0.006	0.0	0.0	-0.329
OTHER PETROLEUM	0.0	0.0	0.061	0.0	-0.016	0.0	-0.168	0.0	-0.125
OIL	0.041	0.005	-0.136	-0.024	-0.025	0.001	-0.087	-0.008	-0.283
COAL	0.038	0.007	0.005	0.003	0.005	-0.142	0.0	0.0	0.014

TABLE 10 UNSCALED ELASTICITIES FOR DEMAND REGION 6 - 1985

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.503	0.047	0.017	0.0	0.017	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.180	-0.599	-0.001	0.0	-0.003	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.271	0.096	-0.774	0.0	0.025	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.079	0.016	0.003	0.0	-0.523	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.542	0.025	0.012	0.010	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.291	-0.825	0.021	0.017	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.120	0.001	-0.615	-0.003	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.165	0.006	-0.001	-0.666	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.406	0.090	0.026	0.043	0.032	0.007	0.0	0.0	0.0
NATURAL GAS IND	0.120	-0.403	0.018	0.027	0.021	0.006	0.0	0.0	0.0
DISTILLATE FUEL IND	0.209	0.098	-0.592	0.041	0.030	0.007	0.0	0.0	0.0
RESIDUAL FUEL IND	0.147	-0.058	0.025	-0.364	0.030	0.009	0.0	0.0	0.0
LIQUID GAS IND	0.168	0.035	0.022	0.036	-0.476	0.007	0.0	0.0	0.0
COAL IND	0.049	0.016	0.012	0.019	0.014	-0.363	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.090	0.0	0.0	0.0	-0.247	0.0	-0.161
DISTILLATE FUEL TRAN	0.0	0.0	-0.905	0.0	0.0	0.0	0.539	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.212	-0.212
RESIDUAL FUEL TRANS	0.0	0.0	0.192	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPTHA IND	0.0	0.0	0.0	0.0	-0.069	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.058	0.0	0.0	0.0	-0.160	0.0	0.0
COAL RES&COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.467	0.062	0.020	0.023	0.020	0.003	0.0	0.0	0.062
NATURAL GAS	0.123	-0.405	0.014	0.022	0.016	0.004	0.0	0.0	0.051
DISTILLATE FUEL	0.094	0.030	-0.789	0.009	0.010	0.001	0.299	0.0	-0.439
RESIDUAL FUEL	0.114	-0.038	0.063	-0.334	0.020	0.006	0.0	0.0	-0.251
LIQUID GAS	0.020	0.004	0.002	0.003	-0.070	0.001	0.0	0.0	-0.068
OTHER PETROLEUM	0.0	0.0	0.017	0.0	-0.035	0.0	-0.047	0.0	-0.066
OIL	0.033	0.0	-0.060	-0.040	-0.023	0.001	-0.037	-0.008	-0.169
COAL	0.074	0.013	0.010	0.016	0.012	-0.299	0.0	0.0	0.038

TABLE 11 UNSCALED ELASTICITIES FOR DEMAND REGION 7 - 1985

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.537	0.054	0.030	0.0	0.032	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.144	-0.584	0.006	0.0	0.012	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.233	0.062	-0.758	0.0	0.042	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.066	0.020	0.007	0.0	-0.517	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.574	0.055	0.020	0.004	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.255	-0.788	0.031	0.008	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.101	0.016	-0.611	-0.002	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.141	0.026	0.004	-0.667	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.364	0.047	0.031	0.013	0.049	0.015	0.0	0.0	0.0
NATURAL GAS IND	0.113	-0.391	0.020	0.009	0.027	0.010	0.0	0.0	0.0
DISTILLATE FUEL IND	0.256	0.049	-0.587	0.012	0.047	0.014	0.0	0.0	0.0
RESIDUAL FUEL IND	0.104	-0.005	0.027	-0.387	0.034	0.015	0.0	0.0	0.0
LIQUID GAS IND	0.180	0.026	0.026	0.011	-0.467	0.013	0.0	0.0	0.0
COAL IND	0.094	0.014	0.014	0.006	0.020	-0.360	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.090	0.0	0.0	0.0	-0.247	0.0	-0.161
DISTILLATE FUEL TRAN	0.0	0.0	-0.905	0.0	0.0	0.0	0.540	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.212	-0.212
RESIDUAL FUEL TRANS	0.0	0.0	0.192	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPHTHA IND	0.0	0.0	0.0	0.0	-0.069	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.058	0.0	0.0	0.0	-0.160	0.0	0.0
COAL RES&COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.474	0.051	0.028	0.006	0.031	0.006	0.0	0.0	0.065
NATURAL GAS	0.136	-0.499	0.013	0.004	0.014	0.003	0.0	0.0	0.030
DISTILLATE FUEL	0.109	0.025	-0.782	0.001	0.017	0.002	0.257	0.0	-0.479
RESIDUAL FUEL	0.114	0.006	0.023	-0.478	0.021	0.009	0.0	0.0	-0.434
LIQUID GAS	0.090	0.017	0.012	0.004	-0.364	0.005	0.0	0.0	-0.371
OTHER PETROLEUM	0.0	0.0	0.038	0.0	-0.001	0.0	-0.106	0.0	-0.070
OIL	0.040	0.008	-0.120	-0.008	-0.053	0.001	-0.073	-0.008	-0.266
COAL	0.086	0.013	0.012	0.006	0.018	-0.329	0.0	0.0	0.036

TABLE 12 UNSCALED ELASTICITIES FOR DEMAND REGION 8 - 1985

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.558	0.068	0.030	0.0	0.038	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.182	-0.611	-0.004	0.0	0.011	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.131	0.056	-0.643	0.0	0.035	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.064	0.025	0.004	0.0	-0.517	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.575	0.040	0.030	0.010	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.251	-0.807	0.044	0.017	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.105	0.007	-0.606	-0.002	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.144	0.015	0.010	-0.665	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.437	0.043	0.092	0.034	0.043	0.017	0.0	0.0	0.0
NATURAL GAS IND	0.084	-0.390	0.045	0.021	0.025	0.004	0.0	0.0	0.0
DISTILLATE FUEL IND	0.183	0.044	-0.526	0.033	0.041	0.018	0.0	0.0	0.0
RESIDUAL FUEL IND	0.082	0.001	0.049	-0.373	0.032	-0.002	0.0	0.0	0.0
LIQUID GAS IND	0.131	0.025	0.068	0.028	-0.471	0.009	0.0	0.0	0.0
COAL IND	0.069	0.013	0.035	0.015	0.018	-0.362	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.090	0.0	0.0	0.0	-0.247	0.0	-0.161
DISTILLATE FUEL TRAN	0.0	0.0	-0.905	0.0	0.0	0.0	0.540	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.211	-0.211
RESIDUAL FUEL TRANS	0.0	0.0	0.192	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPHTHA IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.105	0.0	0.0	0.0	-0.288	0.0	0.0
COAL RES&COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.524	0.050	0.050	0.015	0.026	0.006	0.0	0.0	0.091
NATURAL GAS	0.161	-0.566	0.017	0.008	0.013	0.001	0.0	0.0	0.039
DISTILLATE FUEL	0.092	0.022	-0.701	0.011	0.018	0.006	0.218	0.0	-0.433
RESIDUAL FUEL	0.103	0.006	0.038	-0.473	0.020	-0.001	0.0	0.0	-0.415
LIQUID GAS	0.078	0.022	0.026	0.010	-0.425	0.003	0.0	0.0	-0.394
OTHER PETROLEUM	0.0	0.0	0.076	0.0	0.0	0.0	-0.208	0.0	-0.135
OIL	0.037	0.008	-0.138	-0.016	-0.034	0.002	-0.065	-0.015	-0.269
COAL	0.048	0.009	0.025	0.010	0.013	-0.252	0.0	0.0	0.047

TABLE 13 UNSCALED ELASTICITIES FOR DEMAND REGION 9 - 1985

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.550	0.114	0.011	0.0	0.003	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.295	-0.730	0.011	0.0	0.001	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.319	0.167	-0.907	0.0	-0.002	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.065	0.035	0.002	0.0	-0.526	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.536	0.034	0.004	0.001	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.304	-0.812	0.010	0.003	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.117	0.003	-0.615	-0.002	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.164	0.009	-0.003	-0.666	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.356	0.049	0.036	0.022	0.032	0.009	0.0	0.0	0.0
NATURAL GAS IND	0.129	-0.406	0.023	0.015	0.021	0.007	0.0	0.0	0.0
DISTILLATE FUEL IND	0.261	0.054	-0.582	0.021	0.030	0.008	0.0	0.0	0.0
RESIDUAL FUEL IND	0.137	-0.040	0.031	-0.379	0.028	0.011	0.0	0.0	0.0
LIQUID GAS IND	0.194	0.017	0.030	0.019	-0.479	0.008	0.0	0.0	0.0
COAL IND	0.102	0.008	0.016	0.010	0.014	-0.362	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.090	0.0	0.0	0.0	-0.247	0.0	-0.161
DISTILLATE FUEL TRAN	0.0	0.0	-0.905	0.0	0.0	0.0	0.340	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.211	-0.211
RESIDUAL FUEL TRANS	0.0	0.0	0.192	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPHTHA IND	0.0	0.0	0.0	0.0	-0.069	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.145	0.0	0.0	0.0	-0.401	0.0	0.0
COAL RESCOM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.476	0.061	0.017	0.008	0.012	0.003	0.0	0.0	0.037
NATURAL GAS	0.201	-0.549	0.017	0.008	0.011	0.004	0.0	0.0	0.036
DISTILLATE FUEL	0.096	0.027	-0.809	0.005	0.007	0.002	0.336	0.0	-0.425
RESIDUAL FUEL	0.060	-0.015	0.122	-0.246	0.011	0.004	0.0	0.0	-0.113
LIQUID GAS	0.111	0.011	0.017	0.011	-0.284	0.005	0.0	0.0	-0.257
OTHER PETROLEUM	0.0	0.0	0.095	0.0	-0.008	0.0	-0.261	0.0	-0.178
OIL	0.021	0.003	-0.037	-0.014	-0.012	0.001	-0.106	-0.035	-0.205
COAL	0.045	0.003	0.007	0.005	0.006	-0.159	0.0	0.0	0.018

TABLE 14 UNSCALED ELASTICITIES FOR DEMAND REGION 10 - 1985

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.697	0.137	0.139	0.0	-0.002	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.294	-0.809	0.091	0.0	0.001	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.288	0.104	-0.812	0.0	-0.004	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.061	0.020	0.020	0.0	-0.526	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.592	0.035	0.046	0.016	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.227	-0.811	0.063	0.026	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.097	0.004	-0.596	-0.001	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.133	0.011	0.024	-0.663	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.416	0.059	0.076	0.042	0.010	0.019	0.0	0.0	0.0
NATURAL GAS IND	0.082	-0.380	0.041	0.025	0.007	0.013	0.0	0.0	0.0
DISTILLATE FUEL IND	0.207	0.059	-0.543	0.040	0.009	0.018	0.0	0.0	0.0
RESIDUAL FUEL IND	0.062	0.014	0.050	-0.368	0.010	0.019	0.0	0.0	0.0
LIQUID GAS IND	0.138	0.039	0.059	0.034	-0.497	0.017	0.0	0.0	0.0
COAL IND	0.072	0.020	0.031	0.018	0.005	-0.358	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.090	0.0	0.0	0.0	-0.247	0.0	-0.161
DISTILLATE FUEL TRAN	0.0	0.0	-0.905	0.0	0.0	0.0	0.540	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.212	-0.212
RESIDUAL FUEL TRANS	0.0	0.0	0.192	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPTHA IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.145	0.0	0.0	0.0	-0.401	0.0	0.0
COAL RES&COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.549	0.081	0.041	0.022	0.004	0.009	0.0	0.0	0.117
NATURAL GAS	0.152	-0.519	0.054	0.016	0.004	0.007	0.0	0.0	0.074
DISTILLATE FUEL	0.148	0.044	-0.733	0.010	0.001	0.005	0.164	0.0	-0.542
RESIDUAL FUEL	0.070	0.010	0.071	-0.403	0.005	0.010	0.0	0.0	-0.327
LIQUID GAS	0.052	0.015	0.021	0.011	-0.225	0.005	0.0	0.0	-0.195
OTHER PETROLEUM	0.0	0.0	0.066	0.0	0.0	0.0	-0.180	0.0	-0.117
OIL	0.048	0.013	-0.151	-0.029	-0.003	0.002	-0.073	-0.024	-0.281
COAL	0.071	0.019	0.030	0.018	0.005	-0.351	0.0	0.0	0.052

TABLE 15 UNSCALED ELASTICITIES FOR DEMAND REGION 1 - 1990

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.933	0.116	0.320	0.0	0.018	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.078	-0.687	0.121	0.0	0.007	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.189	0.104	-0.788	0.0	0.016	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.031	0.022	0.051	0.0	-0.385	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.716	0.034	0.079	0.052	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.240	-0.966	0.100	0.076	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.058	0.019	-0.647	0.016	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.060	0.007	0.053	-0.673	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.405	0.050	0.025	0.066	0.043	0.002	0.0	0.0	0.0
NATURAL GAS IND	0.153	-0.443	0.015	0.022	0.025	0.002	0.0	0.0	0.0
DISTILLATE FUEL IND	0.317	0.048	-0.693	0.066	0.041	0.002	0.0	0.0	0.0
RESIDUAL FUEL IND	0.170	0.035	0.023	-0.491	0.036	0.003	0.0	0.0	0.0
LIQUID GAS IND	0.237	0.038	0.021	0.041	-0.562	0.002	0.0	0.0	0.0
COAL IND	0.118	0.020	0.010	0.021	0.017	-0.412	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.117	0.0	0.0	0.0	-0.280	0.0	-0.163
DISTILLATE FUEL TRAN	0.0	0.0	-1.163	0.0	0.0	0.0	0.769	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.223	-0.223
RESIDUAL FUEL TRANS	0.0	0.0	0.191	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPTHA IND	0.0	0.0	0.0	0.0	-0.069	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.096	0.0	0.0	0.0	-0.230	0.0	0.0
COAL RES&COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.658	0.063	0.127	0.043	0.021	0.001	0.0	0.0	0.189
NATURAL GAS	0.137	-0.684	0.087	0.029	0.010	0.0	0.0	0.0	0.121
DISTILLATE FUEL	0.138	0.067	-0.764	0.007	0.010	0.0	0.056	0.0	-0.687
RESIDUAL FUEL	0.110	0.020	0.043	-0.567	0.017	0.001	0.0	0.0	-0.508
LIQUID GAS	0.141	0.026	0.023	0.023	-0.444	0.001	0.0	0.0	-0.402
OTHER PETROLEUM	0.0	0.0	0.047	0.0	-0.023	0.0	-0.112	0.0	-0.088
OIL	0.079	0.030	-0.229	-0.106	-0.012	0.0	-0.072	-0.007	-0.434
COAL	0.116	0.019	0.010	0.020	0.017	-0.406	0.0	0.0	0.047

TABLE 16 UNSCALED ELASTICITIES FOR DEMAND REGION 2 - 1990

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.544	0.026	0.045	0.0	-0.006	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.116	-0.681	0.081	0.0	0.005	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.174	0.071	-0.727	0.0	0.006	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.053	0.019	0.034	0.0	-0.587	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.648	0.027	0.028	0.041	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.322	-0.977	0.044	0.060	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.054	0.015	-0.637	0.013	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.111	0.006	0.008	-0.679	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.397	0.055	0.039	0.042	0.024	0.015	0.0	0.0	0.0
NATURAL GAS IND	0.143	-0.444	0.023	0.025	0.016	0.011	0.0	0.0	0.0
DISTILLATE FUEL IND	0.328	0.054	-0.679	0.040	0.022	0.014	0.0	0.0	0.0
RESIDUAL FUEL IND	0.138	0.027	0.034	-0.466	0.024	0.018	0.0	0.0	0.0
LIQUID GAS IND	0.233	0.040	0.032	0.034	-0.576	0.014	0.0	0.0	0.0
COAL IND	0.116	0.020	0.016	0.017	0.010	-0.406	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.117	0.0	0.0	0.0	-0.280	0.0	-0.163
DISTILLATE FUEL TRAN	0.0	0.0	-1.163	0.0	0.0	0.0	0.769	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.223	-0.223
RESIDUAL FUEL TRANS	0.0	0.0	0.191	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPTHA IND	0.0	0.0	0.0	0.0	-0.069	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.096	0.0	0.0	0.0	-0.230	0.0	0.0
COAL RES&COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.520	0.037	0.037	0.030	0.007	0.006	0.0	0.0	0.074
NATURAL GAS	0.162	-0.662	0.057	0.018	0.007	0.003	0.0	0.0	0.082
DISTILLATE FUEL	0.143	0.052	-0.747	0.005	0.005	0.001	0.076	0.0	-0.655
RESIDUAL FUEL	0.103	0.009	0.034	-0.573	0.005	0.003	0.0	0.0	-0.533
LIQUID GAS	0.086	0.017	0.018	0.011	-0.307	0.004	0.0	0.0	-0.283
OTHER PETROLEUM	0.0	0.0	0.037	0.0	-0.023	0.0	-0.088	0.0	-0.074
OIL	0.066	0.019	-0.186	-0.089	-0.009	0.001	-0.079	-0.011	-0.383
COAL	0.038	0.007	0.005	0.006	0.003	-0.132	0.0	0.0	0.014

TABLE 17 UNSCALED ELASTICITIES FOR DEMAND REGION 3 - 1990

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.498	0.025	0.003	0.0	-0.010	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.140	-0.680	0.054	0.0	0.007	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.214	0.073	-0.771	0.0	0.008	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.071	0.020	0.015	0.0	-0.587	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.641	0.039	0.032	0.018	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.326	-0.959	0.051	0.031	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.030	0.004	-0.637	-0.002	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.121	0.010	0.010	-0.696	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.335	0.045	0.057	0.034	0.021	0.018	0.0	0.0	0.0
NATURAL GAS IND	0.144	-0.448	0.032	0.021	0.014	0.012	0.0	0.0	0.0
DISTILLATE FUEL IND	0.329	0.044	-0.662	0.031	0.019	0.017	0.0	0.0	0.0
RESIDUAL FUEL IND	0.158	0.025	0.043	-0.470	0.021	0.018	0.0	0.0	0.0
LIQUID GAS IND	0.254	0.033	0.045	0.028	-0.579	0.015	0.0	0.0	0.0
COAL IND	0.116	0.017	0.022	0.014	0.009	-0.405	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.117	0.0	0.0	0.0	-0.280	0.0	-0.163
DISTILLATE FUEL TRAN	0.0	0.0	-1.163	0.0	0.0	0.0	0.769	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.223	-0.223
RESIDUAL FUEL TRANS	0.0	0.0	0.191	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPTHA IND	0.0	0.0	0.0	0.0	-0.069	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL RES&COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.480	0.038	0.037	0.021	0.008	0.009	0.0	0.0	0.066
NATURAL GAS	0.161	-0.586	0.042	0.013	0.008	0.004	0.0	0.0	0.062
DISTILLATE FUEL	0.170	0.037	-0.810	0.007	0.007	0.004	0.183	0.0	-0.599
RESIDUAL FUEL	0.098	0.015	0.071	-0.447	0.010	0.008	0.0	0.0	-0.365
LIQUID GAS	0.105	0.017	0.020	0.011	-0.321	0.006	0.0	0.0	-0.294
OTHER PETROLEUM	0.0	0.0	0.0	0.0	-0.008	0.0	0.0	0.0	-0.008
OIL	0.065	0.013	-0.169	-0.042	-0.012	0.002	-0.073	-0.010	-0.311
COAL	0.030	0.004	0.006	0.004	0.002	-0.102	0.0	0.0	0.012

TABLE 18 UNSCALED ELASTICITIES FOR DEMAND REGION 4 - 1990

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.532	0.016	0.029	0.0	0.005	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.427	-1.005	0.060	0.0	0.037	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.850	0.056	-1.413	0.0	0.024	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.091	0.004	0.009	0.0	-0.586	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.604	0.029	0.014	0.007	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.379	-0.975	0.028	0.015	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.092	0.002	-0.646	-0.004	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.140	0.007	-0.003	-0.700	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.364	0.042	0.030	0.028	0.023	0.018	0.0	0.0	0.0
NATURAL GAS IND	0.155	-0.447	0.019	0.018	0.015	0.013	0.0	0.0	0.0
DISTILLATE FUEL IND	0.361	0.041	-0.688	0.025	0.021	0.016	0.0	0.0	0.0
RESIDUAL FUEL IND	0.143	0.028	0.028	-0.472	0.024	0.022	0.0	0.0	0.0
LIQUID GAS IND	0.254	0.033	0.025	0.024	-0.576	0.016	0.0	0.0	0.0
COAL IND	0.126	0.017	0.012	0.012	0.010	-0.405	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.117	0.0	0.0	0.0	-0.280	0.0	-0.163
DISTILLATE FUEL TRAN	0.0	0.0	-1.163	0.0	0.0	0.0	0.769	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.223	-0.223
RESIDUAL FUEL TRANS	0.0	0.0	0.191	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS CUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPHTHA IND	0.0	0.0	0.0	0.0	-0.069	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.112	0.0	0.0	0.0	-0.268	0.0	0.0
COAL RES&COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.471	0.030	0.027	0.013	0.012	0.008	0.0	0.0	0.052
NATURAL GAS	0.203	-0.533	0.023	0.012	0.014	0.008	0.0	0.0	0.050
DISTILLATE FUEL	0.283	0.021	-1.076	0.004	0.010	0.003	0.372	0.0	-0.653
RESIDUAL FUEL	0.122	0.020	0.048	-0.457	0.016	0.015	0.0	0.0	-0.393
LIQUID GAS	0.111	0.012	0.011	0.008	-0.364	0.005	0.0	0.0	-0.350
OTHER PETROLEUM	0.0	0.0	0.065	0.0	-0.003	0.0	-0.156	0.0	-0.093
OIL	0.068	0.006	-0.118	-0.028	-0.021	0.002	-0.090	-0.017	-0.280
COAL	0.075	0.010	0.007	0.007	0.006	-0.237	0.0	0.0	0.020

TABLE 19 UNSCALED ELASTICITIES FOR DEMAND REGION 5 - 1990

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.641	0.002	0.118	0.0	0.047	0.0	0.0	0.0	0.0
NATURAL GAS RES	-0.067	-0.378	-0.024	0.0	-0.013	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.147	0.003	-0.649	0.0	0.022	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.043	0.039	0.022	0.0	-0.583	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.669	0.065	0.032	0.018	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.288	-0.920	0.050	0.031	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.072	0.009	-0.635	0.0	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.108	0.021	0.012	-0.694	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.400	0.071	0.037	0.018	0.034	0.020	0.0	0.0	0.0
NATURAL GAS IND	0.150	-0.445	0.023	0.012	0.021	0.013	0.0	0.0	0.0
DISTILLATE FUEL IND	0.323	0.071	-0.681	0.016	0.032	0.019	0.0	0.0	0.0
RESIDUAL FUEL IND	0.157	0.015	0.032	-0.481	0.031	0.020	0.0	0.0	0.0
LIQUID GAS IND	0.236	0.046	0.030	0.016	-0.568	0.017	0.0	0.0	0.0
COAL IND	0.118	0.023	0.015	0.008	0.014	-0.405	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.117	0.0	0.0	0.0	-0.280	0.0	-0.163
DISTILLATE FUEL TRAN	0.0	0.0	-1.163	0.0	0.0	0.0	0.769	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.223	-0.223
RESIDUAL FUEL TRANS	0.0	0.0	0.191	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPHTHA IND	0.0	0.0	0.0	0.0	-0.069	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.159	0.0	0.0	0.0	-0.382	0.0	0.0
COAL RES&COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.513	0.054	0.055	0.014	0.030	0.011	0.0	0.0	0.098
NATURAL GAS	0.071	-0.474	0.005	0.009	0.002	0.003	0.0	0.0	0.017
DISTILLATE FUEL	0.129	0.014	-0.769	0.002	0.015	0.003	0.183	0.0	-0.555
RESIDUAL FUEL	0.124	0.018	0.025	-0.594	0.012	0.008	0.0	0.0	-0.554
LIQUID GAS	0.111	0.030	0.019	0.007	-0.391	0.007	0.0	0.0	-0.370
OTHER PETROLEUM	0.0	0.0	0.076	0.0	-0.017	0.0	-0.179	0.0	-0.122
OIL	0.054	0.007	-0.156	-0.027	-0.030	-0.002	-0.086	-0.008	-0.312
COAL	0.051	0.010	0.007	0.003	0.006	-0.171	0.0	0.0	0.016

TABLE 20 UNSCALED ELASTICITIES FOR DEMAND REGION 6 - 1990

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.580	0.060	0.022	0.0	0.020	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.140	-0.618	0.002	0.0	-0.004	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.332	0.076	-0.916	0.0	0.032	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.078	0.020	0.005	0.0	-0.583	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.614	0.035	0.013	0.011	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.364	-0.965	0.026	0.022	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.090	0.003	-0.645	-0.004	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.136	0.010	-0.002	-0.699	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.484	0.135	0.029	0.060	0.035	0.007	0.0	0.0	0.0
NATURAL GAS IND	0.139	-0.447	0.019	0.037	0.023	0.006	0.0	0.0	0.0
DISTILLATE FUEL IND	0.234	0.142	-0.689	0.056	0.033	0.006	0.0	0.0	0.0
RESIDUAL FUEL IND	0.188	-0.037	0.029	-0.447	0.036	0.010	0.0	0.0	0.0
LIQUID GAS IND	0.195	0.070	0.024	0.050	-0.566	0.007	0.0	0.0	0.0
COAL IND	0.097	0.035	0.012	0.025	0.015	-0.410	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.117	0.0	0.0	0.0	-0.280	0.0	-0.163
DISTILLATE FUEL TRAN	0.0	0.0	-1.163	0.0	0.0	0.0	0.769	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.223	-0.223
RESIDUAL FUEL TRANS	0.0	0.0	0.191	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPHTHA IND	0.0	0.0	0.0	0.0	-0.069	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.076	0.0	0.0	0.0	-0.182	0.0	0.0
COAL RES&COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.541	0.091	0.023	0.032	0.023	0.004	0.0	0.0	0.078
NATURAL GAS	0.132	-0.435	0.016	0.030	0.018	0.004	0.0	0.0	0.063
DISTILLATE FUEL	0.114	0.048	-0.956	0.015	0.013	0.002	0.403	0.0	-0.490
RESIDUAL FUEL	0.149	-0.026	0.057	-0.405	0.026	0.007	0.0	0.0	-0.322
LIQUID GAS	0.023	0.008	0.003	0.005	-0.081	0.001	0.0	0.0	-0.076
OTHER PETROLEUM	0.0	0.0	0.020	0.0	-0.037	0.0	-0.047	0.0	-0.065
OIL	0.043	0.005	-0.068	-0.052	-0.026	0.001	-0.029	-0.008	-0.187
COAL	0.083	0.030	0.010	0.022	0.013	-0.349	0.0	0.0	0.045

TABLE 21 UNSCALED ELASTICITIES FOR DEMAND REGION 7 - 1990

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.626	0.075	0.037	0.0	0.037	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.106	-0.599	0.005	0.0	0.008	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.275	0.090	-0.894	0.0	0.053	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.062	0.026	0.008	0.0	-0.577	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.643	0.062	0.023	0.005	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.323	-0.924	0.038	0.010	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.081	0.008	-0.642	-0.003	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.123	0.018	0.003	-0.699	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.420	0.072	0.037	0.015	0.059	0.017	0.0	0.0	0.0
NATURAL GAS IND	0.141	-0.444	0.022	0.011	0.033	0.012	0.0	0.0	0.0
DISTILLATE FUEL IND	0.303	0.072	-0.681	0.014	0.056	0.015	0.0	0.0	0.0
RESIDUAL FUEL IND	0.149	0.016	0.032	-0.484	0.043	0.015	0.0	0.0	0.0
LIQUID GAS IND	0.222	0.047	0.030	0.013	-0.550	0.015	0.0	0.0	0.0
COAL IND	0.111	0.024	0.015	0.007	0.023	-0.405	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.117	0.0	0.0	0.0	-0.280	0.0	-0.163
DISTILLATE FUEL TRAN	0.0	0.0	-1.163	0.0	0.0	0.0	0.769	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.223	-0.223
RESIDUAL FUEL TRANS	0.0	0.0	0.191	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPHA IND	0.0	0.0	0.0	0.0	-0.069	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.076	0.0	0.0	0.0	-0.182	0.0	0.0
COAL RES&COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.538	0.070	0.034	0.008	0.038	0.007	0.0	0.0	0.079
NATURAL GAS	0.131	-0.514	0.014	0.005	0.014	0.004	0.0	0.0	0.033
DISTILLATE FUEL	0.133	0.036	-0.939	0.002	0.023	0.003	0.347	0.0	-0.538
RESIDUAL FUEL	0.137	0.016	0.027	-0.544	0.028	0.012	0.0	0.0	-0.488
LIQUID GAS	0.109	0.028	0.015	0.005	-0.411	0.006	0.0	0.0	-0.412
OTHER PETROLEUM	0.0	0.0	0.048	0.0	-0.002	0.0	-0.114	0.0	-0.068
OIL	0.051	0.013	-0.136	-0.009	-0.062	0.002	-0.066	-0.008	-0.290
COAL	0.103	0.022	0.014	0.006	0.022	-0.377	0.0	0.0	0.042

TABLE 22 UNSCALED ELASTICITIES FOR DEMAND REGION R - 1990

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.654	0.092	0.034	0.0	0.052	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.114	-0.598	-0.001	0.0	0.006	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.197	0.075	-0.798	0.0	0.049	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.060	0.033	0.004	0.0	-0.577	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.642	0.045	0.033	0.012	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.323	-0.949	0.053	0.022	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.081	0.005	-0.638	-0.003	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.123	0.012	0.009	-0.698	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.498	0.062	0.113	0.035	0.051	0.020	0.0	0.0	0.0
NATURAL GAS IND	0.111	-0.446	0.057	0.021	0.029	0.004	0.0	0.0	0.0
DISTILLATE FUEL IND	0.226	0.061	-0.607	0.033	0.048	0.020	0.0	0.0	0.0
RESIDUAL FUEL IND	0.124	0.017	0.067	-0.469	0.040	-0.002	0.0	0.0	0.0
LIQUID GAS IND	0.170	0.041	0.084	0.029	-0.556	0.011	0.0	0.0	0.0
COAL IND	0.085	0.021	0.042	0.014	0.020	-0.408	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.117	0.0	0.0	0.0	-0.280	0.0	-0.163
DISTILLATE FUEL TRAN	0.0	0.0	-1.163	0.0	0.0	0.0	0.769	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.223	-0.223
RESIDUAL FUEL TRANS	0.0	0.0	0.191	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPTHA IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.136	0.0	0.0	0.0	-0.327	0.0	0.0
COAL RES&COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.600	0.065	0.059	0.015	0.033	0.006	0.0	0.0	0.107
NATURAL GAS	0.137	-0.586	0.022	0.009	0.012	0.001	0.0	0.0	0.043
DISTILLATE FUEL	0.118	0.031	-0.829	0.012	0.023	0.008	0.289	0.0	-0.483
RESIDUAL FUEL	0.121	0.015	0.048	-0.549	0.024	-0.001	0.0	0.0	-0.478
LIQUID GAS	0.094	0.031	0.035	0.011	-0.484	0.004	0.0	0.0	-0.443
OTHER PETROLEUM	0.0	0.0	0.097	0.0	0.0	0.0	-0.230	0.0	-0.134
OIL	0.047	0.012	-0.161	-0.017	-0.040	0.003	-0.056	-0.015	-0.294
COAL	0.062	0.015	0.031	0.010	0.015	-0.297	0.0	0.0	0.056

TABLE 23 UNSCALED ELASTICITIES FOR DEMAND REGION 9 - 1990

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.658	0.161	0.013	0.0	0.004	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.303	-0.797	0.013	0.0	0.001	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.284	0.159	-0.923	0.0	-0.001	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.065	0.037	0.002	0.0	-0.586	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.603	0.042	0.005	0.001	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.385	-0.953	0.012	0.004	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.088	0.003	-0.646	-0.002	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.136	0.011	-0.004	-0.699	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.426	0.090	0.042	0.027	0.038	0.010	0.0	0.0	0.0
NATURAL GAS IND	0.153	-0.453	0.026	0.018	0.024	0.008	0.0	0.0	0.0
DISTILLATE FUEL IND	0.294	0.095	-0.677	0.025	0.036	0.009	0.0	0.0	0.0
RESIDUAL FUEL IND	0.184	-0.022	0.037	-0.472	0.036	0.013	0.0	0.0	0.0
LIQUID GAS IND	0.228	0.048	0.034	0.024	-0.564	0.009	0.0	0.0	0.0
COAL IND	0.113	0.024	0.017	0.012	0.016	-0.409	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.117	0.0	0.0	0.0	-0.280	0.0	-0.163
DISTILLATE FUEL TRAN	0.0	0.0	-1.163	0.0	0.0	0.0	0.769	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.223	-0.223
RESIDUAL FUEL TRANS	0.0	0.0	0.191	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPTHA IND	0.0	0.0	0.0	0.0	-0.069	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.190	0.0	0.0	0.0	-0.455	0.0	0.0
COAL RES&COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.551	0.091	0.020	0.010	0.015	0.004	0.0	0.0	0.046
NATURAL GAS	0.223	-0.604	0.019	0.010	0.013	0.004	0.0	0.0	0.043
DISTILLATE FUEL	0.108	0.038	-0.978	0.007	0.010	0.002	0.460	0.0	-0.460
RESIDUAL FUEL	0.082	-0.009	0.120	-0.292	0.015	0.005	0.0	0.0	-0.156
LIQUID GAS	0.129	0.028	0.019	0.013	-0.326	0.005	0.0	0.0	-0.295
OTHER PETROLEUM	0.0	0.0	0.122	0.0	-0.008	0.0	-0.289	0.0	-0.177
OIL	0.026	0.006	-0.039	-0.016	-0.015	0.001	-0.109	-0.034	-0.217
COAL	0.055	0.012	0.008	0.006	0.008	-0.196	0.0	0.0	0.022

TABLE 24 UNSCALED ELASTICITIES FOR DEMAND REGION 10 - 1990

	ELECTRICITY	NATURAL GAS	DISTILLATE	RESIDUAL FUEL	LIQUID GAS	COAL	GAS	JET FUEL	OIL
ELECTRICITY RES	-0.751	0.136	0.146	0.0	-0.003	0.0	0.0	0.0	0.0
NATURAL GAS RES	0.306	-0.890	0.101	0.0	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL RES	0.245	0.101	-0.823	0.0	-0.004	0.0	0.0	0.0	0.0
LIQUID GAS RES	0.050	0.022	0.023	0.0	-0.587	0.0	0.0	0.0	0.0
ELECTRICITY COM	-0.665	0.043	0.051	0.019	0.0	0.0	0.0	0.0	0.0
NATURAL GAS COM	0.293	-0.953	0.076	0.033	0.0	0.0	0.0	0.0	0.0
DISTILLATE FUEL COM	0.071	0.004	-0.627	-0.002	0.0	0.0	0.0	0.0	0.0
RESIDUAL FUEL COM	0.108	0.011	0.023	-0.696	0.0	0.0	0.0	0.0	0.0
ELECTRICITY IND	-0.468	0.088	0.085	0.044	0.011	0.022	0.0	0.0	0.0
NATURAL GAS IND	0.115	-0.434	0.045	0.026	0.007	0.015	0.0	0.0	0.0
DISTILLATE FUEL IND	0.257	0.087	-0.635	0.042	0.010	0.020	0.0	0.0	0.0
RESIDUAL FUEL IND	0.114	0.031	0.059	-0.463	0.012	0.023	0.0	0.0	0.0
LIQUID GAS IND	0.185	0.060	0.065	0.036	-0.587	0.019	0.0	0.0	0.0
COAL IND	0.092	0.030	0.032	0.018	0.005	-0.404	0.0	0.0	0.0
GASOLINE TRANS	0.0	0.0	0.117	0.0	0.0	0.0	-0.280	0.0	-0.163
DISTILLATE FUEL TRAN	0.0	0.0	-1.163	0.0	0.0	0.0	0.769	0.0	0.0
JET FUEL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.223	-0.223
RESIDUAL FUEL TRANS	0.0	0.0	0.191	-0.129	0.0	0.0	0.0	0.0	0.0
ELECTRICITY TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NATURAL GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS COM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS FEEDSTOCK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIQUID GAS RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL RAW MAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAPTHA IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ASPHALT COM	0.0	0.0	0.190	0.0	0.0	0.0	-0.455	0.0	0.0
COAL RESSCOM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAL TRANS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HET COAL IND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELECTRICITY	-0.607	0.094	0.098	0.024	0.004	0.010	0.0	0.0	0.126
NATURAL GAS	0.184	-0.587	0.062	0.016	0.004	0.007	0.0	0.0	0.081
DISTILLATE FUEL	0.151	0.052	-0.826	0.012	0.002	0.006	0.216	0.0	-0.580
RESIDUAL FUEL	0.092	0.020	0.073	-0.466	0.006	0.012	0.0	0.0	-0.386
LIQUID GAS	0.066	0.022	0.023	0.011	-0.250	0.006	0.0	0.0	-0.218
OTHER PETROLEUM	0.0	0.0	0.084	0.0	0.0	0.0	-0.199	0.0	-0.116
OIL	0.052	0.017	-0.167	-0.033	-0.003	0.003	-0.070	-0.023	-0.301
COAL	0.091	0.030	0.032	0.018	0.005	-0.399	0.0	0.0	0.054

LOW AND HIGH OIL AND GAS SUPPLY DATA

The oil and gas data tables for low and high supply are included in this section. Except for a few tables, most entries have changed somewhat from those in the Chapter II tables. The exceptions are TABLES 1, 2, 5, 6, 25, 26 and 27.

TABLES 1, 2, 5 and 6 give the price trajectories for oil wells and gas wells. The fact that the tables remain unchanged under all three scenarios suggests that the height (or prices) of the steps of the supply curve is the same in all three cases. This is not to say that the supply curves for the three scenarios are identical. What is different in the other tables are the production levels, the capital investment required to reach the indicated level of production, and the amount of drilling for each price level. These figures are seen in the oil and gas supply curve tables, TABLES 3, 4, 7 and 8 for each scenario.

TABLES 25, 26 and 27 give the regional breakdown of production by crude type and the regional intrastate splitting factors.

Oil and gas supply tables for the low supply scenario appear first for both 1985 and 1990, followed by the tables for the high supply scenario for 1985 and 1990.

OIL AND GAS SUPPLY DATA
INPUTS TO THE PIES INTEGRATING MODEL
1978 ANNUAL ADMINISTRATOR'S REPORT
LOW SUPPLY FORECAST

III-53

THE PRODUCTION OF CRUDE OIL, NATURAL GAS AND NATURAL GAS LIQUIDS IS REPRESENTED IN THE PIES INTEGRATING MODEL BY A COLLECTION OF SUPPLY CURVES, ONE FOR EACH COMBINATION OF REGION (NPC REGION), TYPE OF WELL (OIL OR GAS), VINTAGE (NEW OR OLD), AND, IN THE CASE OF OIL WELLS, TYPE OF PRODUCTION (PRIMARY, SECONDARY OR TERTIARY). EACH SUPPLY CURVE IS A STEP FUNCTION CONSISTING OF NINE PRICE STEPS, AS SHOWN IN THE FIGURE BELOW, EACH STEP GIVES QUANTITY OF PRODUCTION ASSOCIATED WITH A GIVEN WELL-HEAD PRICE.

A NINE STEP SUPPLY CURVE

HOWEVER, THE ABOVE FIGURE UNDERSTATES THE INFORMATION CONTENT OF EACH STEP. IN FACT, AT EACH STEP PRICES ARE ASSUMED AND QUANTITIES ARE GIVEN FOR EACH OF FOUR PRODUCTS (CRUDE OIL, ASSOCIATED AND DISSOLVED GAS, BUTANE, AND OTHER GAS LIQUIDS), IN THE CASE OF OIL WELLS, AND THREE PRODUCTS (NON-ASSOCIATED GAS, BUTANE AND OTHER GAS LIQUIDS) IN THE CASE OF GAS WELLS. IN ADDITION, EACH STEP ALSO CARRIES WITH IT THE AMOUNT OF DRILLING AND CAPITAL INVESTMENT REQUIRED TO REACH THE INDICATED LEVEL OF PRODUCTION.

THE SUPPLY CURVES ARE GENERATED BY THE PIES OIL AND GAS SUPPLY MODEL. THIS MODEL IS DYNAMIC IN THAT SUPPLY CURVES FOR ALL YEARS FROM 1977 TO 1991 ARE GENERATED SIMULTANEOUSLY USING THE PRICE TRAJECTORIES SHOWN IN TABLES 1 AND 2 FOR OIL WELLS AND IN TABLES 5 AND 6 FOR GAS WELLS. THE SUPPLY MODEL IS RUN ONCE FOR EACH STEP AND GENERATES THE HISTORY OF CAPITAL INVESTMENT, DRILLING, AND PRODUCTION FOR EACH PRODUCT

THAT WOULD RESULT IF WELL-HEAD PRICES WERE TO FOLLOW THE PRICE TRAJECTORIES FOR THE GIVEN STEP. THE PIES SUPPLY CURVES ARE THEN OBTAINED BY SELECTING THE PRICES AND CORRESPONDING QUANTITIES FOR THE YEARS 1995 AND 1990.

THE GAS PRODUCTION PROJECTED BY THE OIL AND GAS SUPPLY MODEL IS DIVIDED BETWEEN THE INTERSTATE AND INTRASTATE MARKETS ACCORDING TO THE FOLLOWING RULES: (1) ALL ALASKAN AND OCS GAS IS INTERSTATE, (2) ALL NEW LOWER 48 ONSHORE GAS IS INTRASTATE AND (3) ALL OLD ONSHORE GAS IS DIVIDED ACCORDING TO REGION SPECIFIC HISTORICAL (1974) PROPORTIONS. IT SHOULD BE MENTIONED THAT THIS A PRIORI DIVISION IS SUBJECT TO REVISION BY THE INTEGRATING MODEL WHICH HAS THE CAPABILITY OF SHIFTING SOME GAS WHICH HAS BEEN DESIGNATED AS INTRASTATE BY THE ABOVE RULES INTO THE INTERSTATE MARKET AS REQUIRED TO KEEP THE INTRASTATE PRICE FROM FALLING BELOW THE INTERSTATE PRICE.

TABLES 3, 4, 7 AND 8 GIVE THE SUPPLY CURVES BY REGION, VINTAGE AND TYPE. THE PRICE STEP IS GIVEN BY THE STEP NUMBER, ALLOWING REFERENCE TO THE PRICE TRAJECTORY TABLES TO FIND ASSUMED PRICES FOR EACH PRODUCT. THESE PRICES ARE NOT USED IN THE INTEGRATING MODEL, HOWEVER, SINCE IT SEES THE INCREMENT IN PRODUCTION FROM ONE STEP TO THE NEXT AS A BUNDLE OF COMMODITIES WHICH IT MUST EITHER PRODUCE OR NOT PRODUCE TOGETHER. THUS A SINGLE PRICE, CALLED THE BUNDLE PRICE, IS ASSIGNED TO EACH STEP. BY DEFINITION, THE BUNDLE PRICE IS THE RATIO OF THE TOTAL VALUE OF THE INCREMENT IN PRODUCTION FROM THE PREVIOUS STEP (INCLUDING ALL FOUR OR THREE PRODUCTS, USING PRICES FROM TABLES 1, 2, 5 AND 6) TO THE QUANTITY OF CRUDE OIL OR NON-ASSOCIATED GAS IN THAT INCREMENT. THIS SOMEWHAT AWKWARD CONVENTION IS NECESSITATED BY THE FACT THAT THE BUNDLE CONTAINS COMMODITIES MEASURED IN DIFFERENT UNITS. NOTE THAT THESE TABLES SHOW NATURAL GAS BROKEN OUT ACCORDING TO WHICH MARKET (INTERSTATE OR INTRASTATE) IT BELONGS.

IT SHOULD BE EMPHASIZED THAT VINTAGE, AS USED IN THIS DOCUMENTATION, MERELY DESCRIBES WHETHER A WELL WAS DRILLED BEFORE OR AFTER 1/1/77, AND, AS SUCH, IS DIFFERENT FROM THE LEGAL CONCEPTS OF OIL AND GAS VINTAGE.

THE ALASKAN NORTH SLOPE AND ELK'S HILL ARE NOT INCLUDED IN THE OIL AND GAS SUPPLY MODEL. ACCORDINGLY ENGINEERING ESTIMATES OF PRODUCTION AND COST ARE USED FOR THESE REGIONS. THESE REGIONS ARE INDICATED IN THE TABLES BY AN '***' IN THE PRICE STEP COLUMN.

THE SCENARIOS WHICH MODEL OIL REGULATION ARE DISTINCTIVE. SINCE WELL-HEAD PRICES ARE CONTROLLED, ONLY ONE PRICE STEP IS USED AND THE QUANTITY OF DOMESTIC CRUDE AVAILABLE IS FIXED. ALSO, THE BUNDLE PRICE IS NOT CALCULATED AND IS LISTED IN THE TABLES AS '***'.

IN GAS REGULATION SCENARIOS THE DISTRIBUTION OF INTER-STATE GAS IS ESSENTIALLY FIXED. THIS DISTRIBUTION AND RESULTING DELIVERIES ARE GIVEN IN TABLES 9-12. THE INTEGRATING

MODEL MAY ALTER THESE DISTRIBUTIONS IN THE FOLLOWING WAYS: (1) A REGION MAY TAKE LESS INTERSTATE GAS THAN IS ASSIGNED TO IT, (2) EXCESS INTERSTATE GAS IN ONE REGION MAY BE REASSIGNED TO ANOTHER REGION AND (3) GAS ORIGINALLY DESIGNATED AS INTRASTATE BUT SHIFTED TO THE INTERSTATE MARKET WILL AUGMENT THE STATED DISTRIBUTION.

TABLES 13-24 SUMMARIZE THE INFORMATION IN THE OIL AND GAS SUPPLY CURVES. TABLES 13 AND 14 AGGREGATE OIL AND GAS PRODUCTION, INVESTMENT AND DRILLING STATISTICS OVER VINTAGE AND TYPE OF PRODUCTION. TABLES 15-22 DO THE SAME FOR GAS WELLS AT ALL PRICE STEPS. THEN TABLES 23 AND 24 COMBINE THE PRODUCTION FROM OIL AND GAS WELLS AND SHOW THE MAXIMUM QUANTITY OF EACH FUEL AVAILABLE TO THE INTEGRATING MODEL.

TABLE 25 SHOWS THE MIX OF CRUDE TYPES ASSUMED FOR EACH NPC REGION. THESE PROPORTIONS ARE APPLIED IRRESPECTIVE OF THE VINTAGE OR TYPE OF PRODUCTION.

TABLES 26 AND 27 PROVIDE SOME INFORMATION REQUIRED BECAUSE OF THE WAY INTRASTATE GAS PRODUCTION AND DISTRIBUTION IS MODELED. ASSOCIATED AND DISSOLVED INTRASTATE GAS IS PRODUCED IN NPC REGIONS BUT IS DISTRIBUTED FROM DOE REGIONS. THIS REQUIRES A LOGICAL SHIFT OF ASSOCIATED INTRASTATE GAS FROM NPC REGIONS TO DOE REGIONS. TABLE 26 GIVES THE FRACTION OF INTRASTATE GAS PRODUCED IN EACH NPC REGION THAT IS SHIFTED TO EACH DOE REGION FOR DISTRIBUTION. SIMILARLY, GAS LIQUIDS FROM INTRASTATE GAS WELLS ARE PRODUCED IN DOE REGIONS BUT DISTRIBUTED FROM NPC REGIONS. TABLE 27 GIVES THE FRACTION OF INTRASTATE GAS LIQUIDS PRODUCED IN EACH DOE REGION THAT IS SHIFTED TO EACH NPC REGION.

ALL DOLLARS ARE CONSTANT 1975 DOLLARS. VOLUMES OF NATURAL GAS ASSUME A HEAT VALUE OF 10.32 BTU/CF. THE ENTRIES UNDER THE COLUMN HEADINGS CAPITAL AND FOOTAGE DRILLED ARE THE CUMULATIVE CAPITAL INVESTMENT AND CUMULATIVE FOOTAGE DRILLED FROM 1977 TO ONE YEAR PRIOR (1984 OR 1989) TO THE TARGET YEAR (1985 OR 1990). THE ABBREVIATIONS USED IN THIS REPORT FOR THE VARIOUS UNITS OF MEASUREMENT ARE AS FOLLOWS:

BBL, MBBL	BARREL, THOUSAND BARRELS
MCF, MMCF	THOUSAND CUBIC FEET, MILLION CUBIC FEET
MM\$	MILLION DOLLARS (1975 DOLLARS)
MMFT	MILLION FEET
D	DAY

TABLE 1
PRICE TRAJECTORIES FOR OIL AND GAS LIQUIDS
(\$/BBL)

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
STEP 1	12.62	11.99	11.39	10.82	10.28	9.77	9.28	8.81	8.37	8.37	8.37	8.37	8.37	8.37	8.37
STEP 2	12.62	12.24	11.87	11.52	11.17	10.84	10.51	10.20	9.89	9.89	9.89	9.89	9.89	9.89	9.89
STEP 3	12.62	12.37	12.12	11.88	11.64	11.41	11.18	10.96	10.74	10.74	10.74	10.74	10.74	10.74	10.74
STEP 4	12.62	12.49	12.37	12.25	12.12	12.00	11.88	11.76	11.65	11.65	11.65	11.65	11.65	11.65	11.65
STEP 5	12.62	12.62	12.62	12.62	12.62	12.62	12.62	12.62	12.62	12.62	12.62	12.62	12.62	12.62	12.62
STEP 6	12.62	12.75	12.87	13.00	13.13	13.26	13.40	13.53	13.67	13.67	13.67	13.67	13.67	13.67	13.67
STEP 7	12.62	12.87	13.13	13.39	13.66	13.93	14.21	14.50	14.79	14.79	14.79	14.79	14.79	14.79	14.79
STEP 8	12.62	13.00	13.39	13.79	14.20	14.63	15.07	15.52	15.99	15.99	15.99	15.99	15.99	15.99	15.99
STEP 9	12.62	13.25	13.91	14.61	15.34	16.11	16.91	17.76	18.65	18.65	18.65	18.65	18.65	18.65	18.65

DATA SOURCES : OUTPUT FROM THE PIES OIL & GAS SUPPLY MODEL DERIVED FROM
AVERAGE REFERENCE ACQUISITION COSTS, TRANSPORTATION COSTS,
AND OTHER RELEVANT COSTS AND PRICES. ALSO PLATT'S OILGRAM, WASHINGTON, D.C.
A WEEKLY PUBLICATION.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY
SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 2
PRICE TRAJECTORIES FOR ASSOCIATED AND DISSOLVED GAS
(\$/MCF)

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
STEP 1	2.17	2.06	1.96	1.86	1.77	1.68	1.60	1.52	1.44	1.44	1.44	1.44	1.44	1.44	1.44
STEP 2	2.17	2.11	2.04	1.98	1.92	1.86	1.81	1.75	1.70	1.70	1.70	1.70	1.70	1.70	1.70
STEP 3	2.17	2.13	2.08	2.04	2.00	1.96	1.92	1.88	1.85	1.85	1.85	1.85	1.85	1.85	1.85
STEP 4	2.17	2.15	2.13	2.11	2.08	2.06	2.04	2.02	2.00	2.00	2.00	2.00	2.00	2.00	2.00
STEP 5	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17
STEP 6	2.17	2.19	2.21	2.24	2.26	2.28	2.30	2.33	2.35	2.35	2.35	2.35	2.35	2.35	2.35
STEP 7	2.17	2.21	2.26	2.30	2.35	2.40	2.44	2.49	2.54	2.54	2.54	2.54	2.54	2.54	2.54
STEP 8	2.17	2.24	2.30	2.37	2.44	2.52	2.59	2.67	2.75	2.75	2.75	2.75	2.75	2.75	2.75
STEP 9	2.17	2.28	2.39	2.51	2.64	2.77	2.91	3.05	3.21	3.21	3.21	3.21	3.21	3.21	3.21

DATA SOURCES : OUTPUT FROM THE PIES OIL & GAS SUPPLY MODEL DERIVED FROM
AVERAGE REFERENCE ACQUISITION COSTS, TRANSPORTATION COSTS,
AND OTHER RELEVANT COSTS AND PRICES. ALSO PLATT'S OILGRAM, WASHINGTON, D.C.
A WEEKLY PUBLICATION.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY
SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE-3
OIL SUPPLY CURVES FOR 1985

	PRICE STEP	CRUDE OIL (MGBL/E)	INTERSTATE GAS (MMCF/D)	INTRASTATE GAS (MMCF/D)	BUYANE (MGBL/D)	GAS LIQUIDS (MGBL/D)	BUNDLE PRICE (\$/GBL OIL)	CAPITAL (MM\$)	FOOTAGE DRILLED (MMPT)
NPC REGION-SOUTH ALASKA									
NEW PRIMARY	5	240.20	99.63				**	1286.99	5.98
NEW SECONDARY	5	16.90	7.12				**	48.00	
OLD PRIMARY	5	47.50	19.71				**		
OLD SECONDARY	5	14.90	6.30				**	73.00	
NPC REGION-PACIFIC COAST									
EXCLUDING ELK'S HILL									
NEW PRIMARY	5	214.60		75.20	1.78	.88	**	2783.00	117.99
NEW SECONDARY	5	44.60		15.61	.40	.20	**	64.00	
OLD PRIMARY	5	335.10		131.96	3.08	1.57	**		
OLD SECONDARY	5	29.50		10.40	.20	.10	**	71.00	
OLD TERTIARY	5	40.70					**	350.00	
ELK'S HILL									
NEW PRIMARY	*	175.00					**	728.44	
NPC REGION-PACIFIC OCEAN									
NEW PRIMARY	5	44.10	60.51		1.60	1.20	**	453.00	6.00
NEW SECONDARY	5	.50	.82				**	2.00	
OLD PRIMARY	5	105.90	153.86		4.89	3.70	**		
OLD SECONDARY	5	58.60	80.76		2.20	1.70	**	247.00	
NPC REGION-WEST ROCKIES									
NEW PRIMARY	5	117.90		113.62	2.59	2.30	**	1264.01	57.99
NEW SECONDARY	5	16.10		15.33	.40	.30	**	14.00	
OLD PRIMARY	5	41.80	29.29	13.37	1.40	1.00	**		
OLD SECONDARY	5	105.80	70.98	32.40	2.79	2.09	**	180.00	

VINTAGE (OLD, NEW) INDICATES WHETHER OIL WELLS DRILLED BEFORE OR AFTER 1/1/77 (NOTE DIFFERENCE FROM LEGAL DEFINITION OF OIL VINTAGE).

A * IN THE PRICE STEP COLUMN INDICATES DATA FOR THAT REGION ARE ENGINEERING ESTIMATES.

BUNDLE PRICE = (TOTAL VALUE OF ALL PRODUCTS IN INCREMENT OVER PREVIOUS PRICE STEP)/(QUANTITY OF OIL IN THAT INCREMENT).

A ** IN BUNDLE PRICE COLUMN INDICATES BUNDLE PRICE NOT CALCULATED FOR OIL REGULATION SCENARIOS WITH POINT ESTIMATES OF SUPPLY.

CAPITAL INVESTMENT AND DRILLING STATISTICS ARE CUMULATIVE FROM 1977 TO 1984.

TABLE 3
(CONTINUED)
OIL SUPPLY CURVES FOR 1985

		PRICE CRUDE OIL STEP	INTERSTATE GAS (MMCF/D)	INTRASTATE GAS (MMCF/D)	BUTANE (MMBBL/D)	GAS LIQUIDS (MMBBL/D)	BUNDLE PRICE (\$/BBL OIL)	CAPITAL (MM\$)	FOOTAGE DRILLED (MMFT)
NPC REGION-EAST ROCKIES									
	NEW PRIMARY	5	171.70		106.49	6.70	2.20	**	1269.00
	NEW SECONDARY	5	19.70		12.59	.80	.30	**	19.00
	OLD PRIMARY	5	155.80	47.71	37.70	4.39	1.50	**	
	OLD SECONDARY	5	183.10	61.63	48.69	6.68	2.20	**	335.99
NPC REGION-W. TEX./E. N. MEX.									
	NEW PRIMARY	5	224.10		198.49	12.68	4.68	**	2366.99
	NEW SECONDARY	5	43.80		38.88	2.70	1.00	**	49.00
	OLD PRIMARY	5	748.80	421.50	536.66	43.71	16.17	**	
	OLD SECONDARY	5	307.80	119.95	152.73	15.48	5.69	**	586.97
	OLD TERTIARY	5	333.10					**	1296.99
NPC REGION-GULF COAST									
	NEW PRIMARY	5	415.00		468.99	29.17	9.17	**	3304.98
	NEW SECONDARY	5	5.40		6.02	.40	.10	**	6.00
	OLD PRIMARY	5	716.90	423.04	418.17	56.20	17.78	**	
	OLD SECONDARY	5	910.60	515.49	509.48	64.20	20.22	**	1740.98
	OLD TERTIARY	5	40.20					**	242.00
NPC REGION-GULF OF MEXICO									
	NEW PRIMARY	5	302.70	343.59		8.38	5.18	**	1604.98
	NEW SECONDARY	5	10.70	12.32		.20	.10	**	10.00
	OLD PRIMARY	5	236.70	263.64		8.50	5.18	**	
	OLD SECONDARY	5	50.40	56.40		1.70	1.10	**	113.00

TABLE 3
(CONTINUED)
OIL SUPPLY CURVES FOR 1985

		PRICE CRUDE OIL STEP	(MBBL/D)	INTERSTATE GAS (MMCF/D)	INTRASTATE GAS (MMCF/D)	BUTANE (MBBL/D)	GAS LIQUIDS (MBBL/D)	BUNDLE PRICE (\$/BBL OIL)	CAPITAL (MM\$)	FOOTAGE DRILLED (MMFY)
NPC REGION-MIDCONTINENT										
	NEW PRIMARY	5	171.80		276.24	3.80	2.28	**	3523.00	268.99
	NEW SECONDARY	5	57.80		93.09	1.29	.80	**	79.00	
	OLD PRIMARY	5	213.10	205.39	188.30	3.39	2.89	**		
	OLD SECONDARY	5	135.40	114.12	104.62	2.90	1.79	**	426.00	
	OLD TERTIARY	5	27.00					**	128.00	
NPC REGION-MI. B. / INT. / APP.										
	NEW PRIMARY	5	172.00		73.91			**	1701.99	147.99
	NEW SECONDARY	5	21.30		9.58			**	21.00	
	OLD PRIMARY	5	70.30	12.52	18.41			**		
	OLD SECONDARY	5	65.50	11.19	16.46			**	121.00	
	OLD TERTIARY	5	10.80					**	24.00	
NPC REGION-ATLANTIC COAST										
	NEW PRIMARY	5	191.60		83.21	3.99		**	490.99	33.99
	NEW SECONDARY	5	8.10		3.83	.20		**	7.00	
	OLD PRIMARY	5	4.50	.09	1.00	.10		**		
NPC REGION-ATLANTIC OCEAN										
	NEW PRIMARY	5	267.00	202.87		9.80		**	704.99	5.98
	NEW SECONDARY	5	6.80	5.20		.20		**	57.00	
NPC REGION-NORTH SLOPE										
PRUDHOE BAY										
	NEW PRIMARY	*	1600.00	2755.84				**	6976.00	6256.00
BEAUFORT SEA										
	NEW PRIMARY	*	112.00	79.28				**	1372.96	779.52
NORTH SLOPE OTHER										
	NEW PRIMARY	*	720.00	332.64				**	5745.60	5018.40

TABLE 4
OIL SUPPLY CURVES FOR 1990

		PRICE CRUDE OIL STEP (MBBL/D)	INTERSTATE GAS (MMCF/D)	INTRASTATE GAS (MMCF/D)	BUTANE (MUBBL/D)	GAS LIQUIDS (MBBL/D)	BUNDLE PRICE (\$/BBL OIL)	CAPITAL (MM\$)	FOOTAGE DRILLED (MMFT)
NPC REGION-SOUTH ALASKA									
	NEW PRIMARY	5	707.00	292.91			**	1962.00	9.97
	NEW SECONDARY	5	42.40	17.52			**	280.00	
	OLD PRIMARY	5	22.00	9.03			**		
	OLD SECONDARY	5	9.80	4.11			**	91.00	
NPC REGION-PACIFIC COAST									
	EXCLUDING ELK'S HILL								
	NEW PRIMARY	5	380.70		136.59	3.19	1.59	**	6304.01
	NEW SECONDARY	5	113.70		39.97	.90	.49	**	327.99
	OLD PRIMARY	5	204.30		89.24	2.08	.98	**	
	OLD SECONDARY	5	36.50		12.87	.30	.10	**	147.00
	OLD TERTIARY	5	49.80					**	585.00
	ELK'S HILL								
	NEW PRIMARY	*	150.00				**	630.00	
NPC REGION-PACIFIC OCEAN									
	NEW PRIMARY	5	74.10	96.37		2.59	1.99	**	900.00
	NEW SECONDARY	5	1.60	1.92		.10		**	11.00
	OLD PRIMARY	5	64.60	93.63		3.00	2.20	**	
	OLD SECONDARY	5	50.30	67.35		1.90	1.40	**	330.00
NPC REGION-WEST ROCKIES									
	NEW PRIMARY	5	199.30		180.96	4.78	3.59	**	2777.01
	NEW SECONDARY	5	35.00		31.48	.80	.60	**	87.00
	OLD PRIMARY	5	17.20	12.02	5.49	.60	.40	**	
	OLD SECONDARY	5	79.10	51.07	23.31	1.99	1.49	**	273.00

VINTAGE (OLD, NEW) INDICATES WHETHER OIL WELLS DRILLED BEFORE OR AFTER 1/1/77 (NOTE DIFFERENCE FROM LEGAL DEFINITION OF OIL VINTAGE).

A * IN THE PRICE STEP COLUMN INDICATES DATA FOR THAT REGION ARE ENGINEERING ESTIMATES.

BUNDLE PRICE = (TOTAL VALUE OF ALL PRODUCTS IN INCREMENT OVER PREVIOUS PRICE STEP)/(QUANTITY OF OIL IN THAT INCREMENT).

A ** IN BUNDLE PRICE COLUMN INDICATES BUNDLE PRICE NOT CALCULATED FOR OIL REGULATION SCENARIOS WITH POINT ESTIMATES OF SUPPLY.

CAPITAL INVESTMENT AND DRILLING STATISTICS ARE CUMULATIVE FROM 1977 TO 1989.

TABLE 4
(CONTINUED)
OIL SUPPLY CURVES FOR 1990

	PRICE STEP	CRUDE OIL (MBBL/D)	INTERSTATE GAS (MMCF/D)	INTRASTATE GAS (MMCF/D)	BUTANE (MBBL/D)	GAS LIQUIDS (MBBL/D)	BUNDLE PRICE (\$/BBL OIL)	CAPITAL (MM\$)	FOOTAGE DRILLED (MMFT)
NPC REGION-EAST ROCKIES									
NEW PRIMARY	5	296.00		202.85	12.28	4.68	**	2694.99	208.00
NEW SECONDARY	5	44.90		31.21	1.90	.60	**	115.00	
OLD PRIMARY	5	73.60	22.48	17.76	2.10	.70	**		
OLD SECONDARY	5	146.50	52.61	41.56	5.70	1.89	**	511.99	
NPC REGION-W. TEX./E. N. MEX.									
NEW PRIMARY	5	386.20		341.94	21.47	7.88	**	5058.98	369.98
NEW SECONDARY	5	105.60		93.62	6.00	2.20	**	224.00	
OLD PRIMARY	5	390.90	319.76	407.12	37.37	13.80	**		
OLD SECONDARY	5	181.50	70.69	90.01	9.29	3.48	**	650.99	
OLD TERTIARY	5	429.70					**	2996.00	
NPC REGION-GULF COAST									
NEW PRIMARY	5	693.50		796.14	49.93	15.74	**	7078.97	458.96
NEW SECONDARY	5	12.80		14.78	.90	.30	**	23.00	
OLD PRIMARY	5	359.60	235.43	232.70	31.07	9.89	**		
OLD SECONDARY	5	765.40	437.66	432.60	54.57	17.30	**	2702.93	
OLD TERTIARY	5	60.20					**	745.00	
NPC REGION-GULF OF MEXICO									
NEW PRIMARY	5	411.10	477.74		10.07	6.17	**	2521.97	52.99
NEW SECONDARY	5	17.70	21.08		.40	.30	**	51.00	
OLD PRIMARY	5	102.70	114.44		3.70	2.29	**		
OLD SECONDARY	5	21.90	24.37		.70	.50	**	113.00	

TABLE 4
(CONTINUED)
OIL SUPPLY CURVES FOR 1990

		PRICE CRUDE OIL STEP	INTERSTATE GAS (MMCF/D)	INTRASTATE GAS (MMCF/D)	BUTANE (MBBL/D)	GAS LIQUIDS (MBBL/D)	BUNDLE PRICE (\$/BBL OIL)	CAPITAL (MM\$)	FOOTAGE DRILLED (MMPT)	
NPC REGION-MIDCONTINENT										
	NEW PRIMARY	5	293.90		463.77	6.08	3.79	**	7670.99	573.99
	NEW SECONDARY	5	83.70		132.24	1.80	1.10	**	148.00	
	OLD PRIMARY	5	106.90	155.60	142.73	2.99	1.89	**		
	OLD SECONDARY	5	114.00	94.97	87.07	2.39	1.49	**	542.99	
	OLD TERTIARY	5	78.00					**	383.00	
NPC REGION-MI. B. / INT. / APP.										
	NEW PRIMARY	5	293.40		139.63	.09		**	3778.99	315.99
	NEW SECONDARY	5	48.90		23.55			**	111.00	
	OLD PRIMARY	5	32.50	6.87	10.10			**		
	OLD SECONDARY	5	67.30	12.52	18.41			**	228.00	
	OLD TERTIARY	5	10.50					**	32.00	
NPC REGION-ATLANTIC COAST										
	NEW PRIMARY	5	291.70		169.74	8.20		**	309.99	71.99
	NEW SECONDARY	5	19.20		11.77	.60		**	23.00	
	OLD PRIMARY	5	1.70	.05	.50			**		
NPC REGION-ATLANTIC OCEAN										
	NEW PRIMARY	5	320.90	243.66		11.68		**	1063.98	8.99
	NEW SECONDARY	5	14.10	10.68		.50		**	124.00	
NPC REGION-NORTH SLOPE										
	PRUDHOE HAY									
	NEW PRIMARY	*	1021.00	2206.50				**	7117.39	6258.73
	BRANFORD SEA									
	NEW PRIMARY	*	619.00	723.67				**	5274.37	4326.81
	NORTH SLOPE OTHER									
	NEW PRIMARY	*	573.00	323.23				**	6910.38	6898.92
	NAVAL PETROLEUM RESERVE A									
	NEW PRIMARY	*	685.00					**		

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.
CAPITAL FIGURES ARE DERIVED FROM DATA GATHERED BY THE AMERICAN PETROLEUM INSTITUTE ANNUAL PUBLICATION, "JOINT ASSOCIATION SURVEY OF THE U.S. OIL AND GAS PRODUCING INDUSTRY FOR 1975". THESE DATA ARE USED AS INPUT TO THE PIES OIL AND GAS MODEL.
FOOTAGE DRILLED DATA FROM SECTION 1, DRILLING COSTS OF THE U.S. OIL AND GAS PRODUCING INDUSTRIES PUBLISHED IN THE JOINT ASSOCIATION AMERICAN PETROLEUM COUNCIL, THE AMERICAN GAS ASSOCIATION, AND VARIOUS OTHER ENERGY RELATED INDUSTRIES. THE DATA IS INPUT TO THE PIES OIL AND GAS MODEL AND THE

ABOVE FIGURES ARE CALCULATED THERE. OTHER SOURCES INCLUDE "QUARTERLY REVIEW OF DRILLING STATISTICS", AMERICAN PETROLEUM INSTITUTE, WASHINGTON, D.C.
FOR INITIAL EXPLORATORY FOOTAGE AND "U.S. ENERGY OUTLOOK- OIL AND GAS AVAILABILITY", WASHINGTON, D.C., 1973.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY
SOURCE ANALYSIS, APPLIED ANALYSTS, ETC.

TABLE 5
PRICE TRAJECTORIES FOR NONASSOCIATED GAS
(\$/MCF)

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
STEP 1	1.63	1.61	1.58	1.56	1.53	1.51	1.49	1.47	1.44	1.44	1.44	1.44	1.44	1.44	1.44
STEP 2	1.63	1.61	1.60	1.58	1.57	1.55	1.53	1.52	1.50	1.50	1.50	1.50	1.50	1.50	1.50
STEP 3	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63
STEP 4	1.63	1.65	1.66	1.68	1.70	1.71	1.73	1.75	1.76	1.76	1.76	1.76	1.75	1.76	1.76
STEP 5	1.63	1.66	1.70	1.73	1.76	1.80	1.84	1.87	1.91	1.91	1.91	1.91	1.91	1.91	1.91
STEP 6	1.63	1.68	1.73	1.78	1.83	1.89	1.95	2.00	2.06	2.06	2.06	2.06	2.06	2.06	2.06
STEP 7	1.63	1.69	1.76	1.83	1.91	1.98	2.06	2.14	2.23	2.23	2.23	2.23	2.23	2.23	2.23
STEP 8	1.63	1.71	1.80	1.89	1.98	2.08	2.18	2.29	2.41	2.41	2.41	2.41	2.41	2.41	2.41
STEP 9	1.63	1.74	1.87	2.00	2.14	2.29	2.45	2.62	2.80	2.80	2.80	2.80	2.80	2.80	2.80

DATA SOURCES : OUTPUT FROM THE PIES OIL & GAS SUPPLY MODEL DERIVED FROM
AVERAGE REFERENCE ACQUISITION COSTS, TRANSPORTATION COSTS,
AND OTHER RELEVANT COSTS AND PRICES. ALSO PLATT'S OILGRAM, WASHINGTON, D.C
A WEEKLY PUBLICATION.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY
SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 6
PRICE TRAJECTORIES FOR NATURAL GAS LIQUIDS
(\$/BBL)

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
STEP 1	9.48	9.33	9.19	9.06	8.92	8.79	8.66	8.53	8.40	8.40	8.40	8.40	8.40	8.40	8.40
STEP 2	9.48	9.38	9.29	9.20	9.10	9.01	8.92	8.83	8.74	8.74	8.74	8.74	8.74	8.74	8.74
STEP 3	9.48	9.48	9.48	9.48	9.48	9.48	9.48	9.48	9.48	9.48	9.48	9.48	9.48	9.48	9.48
STEP 4	9.48	9.57	9.67	9.76	9.86	9.96	10.06	10.16	10.26	10.26	10.26	10.26	10.26	10.26	10.26
STEP 5	9.48	9.67	9.86	10.06	10.26	10.46	10.67	10.89	11.10	11.10	11.10	11.10	11.10	11.10	11.10
STEP 6	9.48	9.76	10.05	10.36	10.67	10.99	11.32	11.66	12.00	12.00	12.00	12.00	12.00	12.00	12.00
STEP 7	9.48	9.86	10.25	10.66	11.09	11.53	11.99	12.47	12.97	12.97	12.97	12.97	12.97	12.97	12.97
STEP 8	9.48	9.95	10.45	10.97	11.52	12.09	12.70	13.33	14.00	14.00	14.00	14.00	14.00	14.00	14.00
STEP 9	9.48	10.14	10.85	11.61	12.42	13.29	14.22	15.22	16.28	16.28	16.28	16.28	16.28	16.28	16.28

DATA SOURCES : OUTPUT FROM THE PIES OIL & GAS SUPPLY MODEL DERIVED FROM
AVERAGE REFERENCE ACQUISITION COSTS, TRANSPORTATION COSTS,
AND OTHER RELEVANT COSTS AND PRICES. ALSO PLATT'S OILGRAM, WASHINGTON, D.C
A WEEKLY PUBLICATION.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY
SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 7
GAS SUPPLY CURVES FOR 1985

PRICE STEP		NATURAL GAS (MMCF/D)	BUTANE (MMBBL/D)	GAS LIQUIDS (MMBBL/D)	BUNDLE PRICE (\$/MCF GAS)	CAPITAL (MM\$)	DRILLING (MMFT)
NPC REGION-SOUTH ALASKA INTERSTATE GAS							
	NEW GAS	1	162.90		1.44	205.99	.99
		2	249.42		1.50	319.98	.99
		3	316.77		1.63	418.98	1.99
		4	498.83		1.76	670.97	2.97
		6	502.93		2.06	674.97	2.97
		8	507.31		2.41	676.97	2.97
	OLD GAS	1	262.83		1.44		
NPC REGION-PACIFIC OCEAN INTERSTATE GAS							
	NEW GAS	1	51.20	.40	.60	1.61	29.00
		2	53.39	.50	.60	1.90	29.30
		3	53.94	.50	.60	1.63	30.00
		6	54.76	.50	.60	2.06	31.30
		7	55.03	.50	.60	2.23	31.00
		8	55.85	.50	.60	2.41	31.30
		9	56.95	.50	.60	2.80	32.00
	OLD GAS	6	15.61		2.06		
NPC REGION-WEST ROCKIES INTERSTATE GAS							
	OLD GAS	1	663.31	1.06	.66	1.47	
NPC REGION-EAST ROCKIES INTERSTATE GAS							
	OLD GAS	1	243.60	3.73	2.53	1.66	
NPC REGION-W. TEX./E. N. MEX. INTERSTATE GAS							
	OLD GAS	1	332.64		1.44		

VINTAGE (OLD, NEW) INDICATES WHETHER GAS WELLS DRILLED BEFORE OR AFTER 1/1/77 (NOTE DIFFERENCE FROM LEGAL DEFINITION OF GAS VINTAGE).
ALL QUANTITIES (PRODUCTION, INVESTMENT AND DRILLING) ARE CUMULATIVE OVER PRICE STEPS.
PRICE STEPS WITH NO ADDITIONAL PRODUCTION OVER PREVIOUS STEP ARE OMITTED.
BUNDLE PRICE = (TOTAL VALUE OF ALL PRODUCTS IN INCREMENT OVER PREVIOUS PRICE STEP)/(QUANTITY OF NATURAL GAS IN THAT INCREMENT).
CAPITAL INVESTMENT AND DRILLING STATISTICS ARE CUMULATIVE FROM 1977 TO 1984.

TABLE 7
(CONTINUED)
GAS SUPPLY CURVES FOR 1985

PRICE STEP	NATURAL GAS (MMCF/D)	BUTANE (MMBBL/D)	GAS LIQUIDS (MMBBL/D)	BUNDLE PRICE (\$/MCF GAS)	CAPITAL (MM\$)	DRILLING (MMFT)
NPC REGION-GULF COAST INTERSTATE GAS						
OLD GAS 1	2498.20	49.21	38.97	1.74		
NPC REGION-GULF OF MEXICO INTERSTATE GAS						
NEW GAS 1	2656.20	17.00	21.78	1.57	1551.75	25.77
2	2658.94	17.10	21.78	1.82	1552.75	25.77
6	3068.24	19.76	25.26	2.25	1650.74	27.73
7	3068.78	19.76	25.26	2.23	1651.74	27.73
9	3069.88	19.76	25.26	2.80	1651.74	27.73
OLD GAS 1	3639.70	37.85	29.85	1.60		
NPC REGION-MIDCONTINENT INTERSTATE GAS						
OLD GAS 1	1513.00	15.43	10.14	1.59		
NPC REGION-MI. BASIN AND INT. INTERSTATE GAS						
OLD GAS 1	.15	.00		1.46		
NPC REGION-APPALACHIA INTERSTATE GAS						
OLD GAS 1	317.11	6.06	3.33	1.69		
NPC REGION-ATLANTIC OCEAN INTERSTATE GAS						
NEW GAS 1	404.10	7.68	3.19	1.67	228.96	1.98
4	407.39	7.68	3.29	2.08	235.96	1.99
5	409.58	7.78	3.29	2.42	240.96	1.98
7	411.49	7.88	3.29	2.91	242.96	1.98
DOE REGION-N.Y./N.J. INTRASTATE GAS						
OLD GAS 1	2.13	.04	.02	1.69		

TABLE 7
(CONTINUED)
GAS SUPPLY CURVES FOR 1985

	PRICE STEP	NATURAL GAS (MMCF/D)	BUTANE (MMBBL/D)	GAS LIQUIDS (MMBBL/D)	BUNDLE PRICE (\$/MCF GAS)	CAPITAL (M\$)	DRILLING (MMFT)
DOE REGION-MID-ATLANTIC INTRASTATE GAS							
OLD GAS	1	123.98	2.37	1.30	1.69		
DOE REGION-SOUTH ATLANTIC INTRASTATE GAS							
NEW GAS	1	144.54	1.76	2.25	1.60	94.38	4.09
	2	152.51	1.86	2.38	1.75	100.59	4.36
	3	154.09	1.88	2.40	1.90	102.10	4.40
	4	157.05	1.92	2.45	2.05	104.85	4.50
	5	160.80	1.96	2.51	2.22	107.93	4.62
	6	163.88	2.00	2.55	2.40	110.92	4.73
	7	165.63	2.02	2.58	2.59	112.48	4.79
	8	167.87	2.05	2.62	2.80	114.66	4.86
	9	171.64	2.10	2.68	3.25	118.33	4.98
OLD GAS	1	73.46	1.43	.99	1.72		
DOE REGION-MIDWEST INTRASTATE GAS							
OLD GAS	1	92.84	.84	.41	1.56		
DOE REGION-SOUTHWEST INTRASTATE GAS							
NEW GAS	1	20112.00	263.47	275.53	1.67	13680.18	607.38
	2	21029.12	274.93	288.10	1.73	14423.59	641.22
	3	21164.91	276.51	290.07	1.88	14541.31	644.17
	4	21427.77	279.61	293.67	2.03	14786.25	654.29
	5	21750.39	283.32	298.19	2.20	15052.99	664.58
	6	22040.73	286.69	301.96	2.36	15315.31	673.09
	7	22197.36	288.38	304.17	2.56	15449.95	678.65
	8	22485.32	291.05	307.13	2.68	15735.69	691.03
	9	22976.04	295.52	312.43	3.13	16221.39	711.25
OLD GAS	1	5303.40	71.60	54.63	1.64		

TABLE 7
(CONTINUED)
GAS SUPPLY CURVES FOR 1985

	PRICE STEP	NATURAL GAS (MMCF/D)	BUTANE (MBBL/D)	GAS LIQUIDS (MBBL/D)	BUNDLE PRICE (\$/MCF GAS)	CAPITAL (MM\$)	DRILLING (MMFT)
DOE REGION-CENTRAL INTRASTATE GAS							
NEW GAS	1	1043.20	11.79	10.33	1.62	729.51	36.41
	2	1087.03	12.24	10.72	1.67	765.81	38.29
	3	1089.55	12.24	10.72	1.63	769.57	38.29
	4	1104.90	12.39	10.85	1.95	783.87	39.04
	5	1118.28	12.50	10.95	2.08	797.03	39.60
	6	1131.78	12.58	11.00	2.18	808.69	39.98
	7	1140.12	12.65	11.06	2.44	815.47	40.35
	8	1150.63	12.71	11.11	2.56	826.37	40.73
	9	1179.31	12.93	11.32	3.05	852.90	41.86
OLD GAS	1	335.85	3.43	2.25	1.59		
DOE REGION-NORTH CENTRAL INTRASTATE GAS							
NEW GAS	3	149.48	1.69	1.49	1.83	156.98	7.00
	4	321.69	3.58	3.29	1.99	343.97	15.99
	5	429.56	4.78	4.48	2.16	462.96	21.98
	6	616.00	6.87	6.37	2.32	675.95	31.98
	7	697.59	7.77	7.26	2.52	771.95	35.97
	8	884.76	9.68	8.97	2.68	995.09	47.11
	9	1091.74	11.79	10.97	3.13	1249.63	59.63
OLD GAS	1	308.25	3.95	2.68	1.63		
DOE REGION-WEST INTRASTATE GAS							
NEW GAS	1	63.24	.50	.80	1.62	85.00	3.00
	2	133.06	1.09	1.69	1.69	137.00	5.99
	3	200.68	1.69	2.49	1.83	209.00	8.99
	4	237.37	1.99	2.89	1.96	250.00	9.99
	5	277.89	2.38	3.49	2.18	294.99	11.98
	6	329.91	2.78	4.09	2.30	352.99	14.98
	7	347.98	2.98	4.29	2.52	373.99	14.98
	8	391.24	3.28	4.88	2.70	425.98	16.98
	9	454.21	3.87	5.68	3.16	499.98	20.98
OLD GAS	1	208.62			1.44		

TABLE 8
GAS SUPPLY CURVES FOR 1990

	PRICE STEP	NATURAL GAS (MMCF/D)	BUTANE (MMBL/D)	GAS LIQUIDS (MMBL/D)	BUNDLE PRICE (\$/MCF GAS)	CAPITAL (MMS)	DRILLING (MMPT)

NPC REGION-SOUTH ALASKA INTERSTATE GAS							
NEW GAS	2	309.65			1.50	150.99	.99
	3	703.35			1.63	408.98	1.98
	4	1107.18			1.76	824.96	2.94
	5	1363.44			1.91	1100.95	4.98
	6	1368.09			2.06	1104.95	4.94
	8	1368.64			2.41	1104.95	4.94
OLD GAS	1	233.53			1.44		
NPC REGION-PACIFIC OCEAN INTERSTATE GAS							
NEW GAS	1	135.79	1.19	1.70	1.62	56.99	.99
	3	139.08	1.29	1.70	1.92	56.99	.99
	6	145.65	1.29	1.70	2.06	57.99	.99
	7	148.66	1.29	1.80	2.66	57.99	.99
	9	153.04	1.29	1.80	2.80	60.99	.99
OLD GAS	5	9.86			1.91		
NPC REGION-WEST ROCKIES INTERSTATE GAS							
OLD GAS	1	459.25	.73	.46	1.47		
NPC REGION-EAST ROCKIES INTERSTATE GAS							
OLD GAS	1	160.47			1.44		
NPC REGION-W. TEX./E. N. MEX. INTERSTATE GAS							
OLD GAS	1	125.84			1.44		

VINTAGE (OLD, NEW) INDICATES WHETHER GAS WELLS DRILLED BEFORE OR AFTER 1/1/77 (NOTE DIFFERENCE FROM LEGAL DEFINITION OF GAS VINTAGE).

ALL QUANTITIES (PRODUCTION, INVESTMENT AND DRILLING) ARE CUMULATIVE OVER PRICE STEPS.

PRICE STEPS WITH NO ADDITIONAL PRODUCTION OVER PREVIOUS STEP ARE OMITTED.

BUNDLE PRICE = (TOTAL VALUE OF ALL PRODUCTS IN INCREMENT OVER PREVIOUS PRICE STEP)/(QUANTITY OF NATURAL GAS IN THAT INCREMENT).

CAPITAL INVESTMENT AND DRILLING STATISTICS ARE CUMULATIVE FROM 1977 TO 1989.

TABLE 8
(CONTINUED)
GAS SUPPLY CURVES FOR 1990

	PRICE STEP	NATURAL GAS (MMCF/D)	BUTANE (MMBL/D)	GAS LIQUIDS (MMBL/D)	BUNDLE PRICE (\$/MCF GAS)	CAPITAL (MM\$)	DRILLING (MMPT)
NPC REGION-GULF COAST INTERSTATE GAS							
	OLD GAS 1	1278.10	25.18	19.94	1.74		
NPC REGION-GULF OF MEXICO INTERSTATE GAS							
	NEW GAS 1	4249.60	27.20	34.85	1.57	2404.95	38.67
	2	4250.14	27.20	34.85	1.50	2404.85	38.67
	4	4263.29	27.30	34.95	1.92	2404.85	38.67
	5	4393.32	28.09	35.93	2.23	2459.84	39.66
	7	4394.42	28.19	36.03	4.60	2461.84	39.66
	OLD GAS 1	1946.80	20.25	15.96	1.60		
NPC REGION-MIDCONTINENT INTERSTATE GAS							
	OLD GAS 1	809.27	8.25	5.42	1.59		
NPC REGION-MI. BASIN AND INT. INTERSTATE GAS							
	OLD GAS 1	.06			1.44		
NPC REGION-APPALACHIA INTERSTATE GAS							
	OLD GAS 2	196.22	3.77	2.10	1.77		
NPC REGION-ATLANTIC OCEAN INTERSTATE GAS							
	NEW GAS 1	638.74	7.28	2.94	1.58	308.36	1.98
	2	648.60	7.28	2.94	1.50	332.96	1.98
	4	667.21	7.38	2.94	1.82	356.96	2.99
	5	681.45	7.38	2.94	1.91	377.96	2.98
	7	688.29	7.48	2.94	2.42	385.96	2.98
	8	704.72	7.48	2.94	2.41	410.96	2.98
DOE REGION-N.Y./N.J. INTRASTATE GAS							
	OLD GAS 2	1.32	.03	.01	1.77		

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TABLE 8
(CONTINUED)
GAS SUPPLY CURVES FOR 1990

PRICE STEP		NATURAL GAS (MMCF/D)	BUTANE (MMBL/D)	GAS LIQUIDS (MMBL/D)	BUNDLE PRICE (\$/MCF GAS)	CAPITAL (MM\$)	DRILLING (MMPT)
-----		-----	-----	-----	-----	-----	-----
DOE REGION-MID-ATLANTIC INTRASTATE GAS							
OLD GAS	2	76.72	1.47	.82	1.77		
DOE REGION-SOUTH ATLANTIC INTRASTATE GAS							
NEW GAS	1	136.34	1.66	2.13	1.68	126.59	5.45
	2	159.63	1.95	2.49	1.75	142.34	6.10
	3	167.84	2.05	2.62	1.90	150.20	6.40
	4	179.06	2.19	2.79	2.05	161.64	6.84
	5	189.62	2.31	2.96	2.22	172.87	7.27
	6	201.71	2.46	3.14	2.40	186.29	7.77
	7	207.17	2.53	3.23	2.59	192.67	8.01
	8	217.88	2.66	3.40	2.80	205.07	8.45
	9	233.32	2.85	3.64	3.25	224.33	9.13
OLD GAS	1	21.98	.43	.34	1.74		
	2	40.85	.80	.54	1.77		
DOE REGION-MIDWEST INTRASTATE GAS							
OLD GAS	1	22.11			1.44		
	2	46.28	.46	.26	1.77		
DOE REGION-SOUTHWEST INTRASTATE GAS							
NEW GAS	1	17874.00	227.00	241.30	1.67	18011.63	800.76
	2	20558.90	260.02	277.54	1.73	20065.57	890.16
	3	22153.90	280.76	297.96	1.88	21224.34	937.53
	4	23459.60	296.30	315.20	2.02	22552.10	992.63
	5	24648.70	310.45	331.13	2.19	23825.27	1044.12
	6	26059.29	327.66	349.61	2.37	25387.50	1107.03
	7	26683.65	335.09	357.97	2.56	26106.64	1136.07
	8	28039.75	350.14	374.79	2.74	27728.13	1202.24
	9	30018.65	372.30	398.73	3.18	30213.22	1303.56
OLD GAS	1	2687.80	37.09	28.22	1.65		

TABLE 4
(CONTINUED)
GAS SUPPLY CURVES FOR 1990

	PRICE STEP	NATURAL GAS (MMCF/D)	BUTANE (MMBL/D)	GAS LIQUIDS (MMBL/D)	BUYER PRICE (\$/MMCF GAS)	CAPITAL (MM\$)	DRILLING (MMPT)
DOE REGION-CENTRAL INTRASTATE GAS							
NEW GAS	1	923.73	9.24	8.13	1.60	973.15	48.68
	2	1042.59	10.22	8.98	1.64	1076.22	53.57
	3	1116.80	10.77	9.45	1.76	1123.44	55.82
	4	1184.31	11.29	9.94	1.92	1198.11	59.20
	5	1242.66	11.74	10.33	2.07	1263.56	62.21
	6	1311.21	12.26	10.77	2.24	1342.75	65.78
	7	1342.57	12.50	10.98	2.42	1380.18	67.47
	8	1405.71	12.97	11.39	2.60	1458.31	70.85
	9	1503.35	13.72	12.04	3.04	1590.66	76.68
OLD GAS	1	179.63	1.83	1.20	1.59		
DOE REGION-NORTH CENTRAL INTRASTATE GAS							
NEW GAS	3	182.61	1.99	1.90	1.33	227.99	10.99
	4	410.39	4.59	4.29	1.39	520.96	24.98
	5	567.54	6.38	5.88	2.15	727.94	33.97
	6	845.97	9.47	8.77	2.32	1109.92	51.95
	7	973.28	10.86	10.07	2.51	1290.92	60.94
	8	1271.68	13.96	12.97	2.69	1730.22	81.83
	9	1630.58	17.59	16.38	3.12	2290.21	108.86
OLD GAS	1	204.91	.06	.02	1.45		
DOE REGION-WEST INTRASTATE GAS							
NEW GAS	2	37.51	.30	.40	1.67	67.00	3.00
	3	235.45	1.30	2.49	1.83	218.98	9.99
	4	292.12	2.48	3.69	2.00	293.97	12.98
	5	355.09	2.97	4.49	2.14	377.97	15.98
	6	439.42	3.67	5.49	2.31	494.96	20.97
	7	471.45	3.97	5.88	2.51	540.96	22.97
	8	551.40	4.67	6.98	2.71	656.95	26.97
	9	668.30	5.66	8.38	3.15	832.93	34.96
OLD GAS	1	129.22			1.44		

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.
CAPITAL FIGURES ARE DERIVED FROM DATA GATHERED BY THE AMERICAN PETROLEUM INSTITUTE ANNUAL PUBLICATION, "JOINT ASSOCIATION SURVEY OF THE U.S. OIL AND GAS PRODUCING INDUSTRY FOR 1975". THESE DATA ARE USED AS INPUT TO THE PIES OIL AND GAS MODEL.
FOOTAGE DRILLED DATA FROM SECTION 1, DRILLING COSTS OF THE U.S. OIL AND GAS PRODUCING INDUSTRIES PUBLISHED IN THE JOINT ASSOCIATION AMERICAN PETROLEUM COUNCIL, THE AMERICAN GAS ASSOCIATION, AND VARIOUS OTHER ENERGY RELATED INDUSTRIES. THE DATA IS INPUT TO THE PIES OIL AND GAS MODEL AND THE

ABOVE FIGURES ARE CALCULATED THERE. OTHER SOURCES INCLUDE "QUARTERLY REVIEW OF DRILLING STATISTICS", AMERICAN PETROLEUM INSTITUTE, WASHINGTON, D.C.
FOR INITIAL EXPLORATORY FOOTAGE AND "U.S. ENERGY OUTLOOK- OIL AND GAS AVAILABILITY", WASHINGTON, D.C., 1973.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSTS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, ETC.

TABLE 9
DISTRIBUTION OF INTERSTATE GAS IN 1985
(MMCF/D)

NPC REGION	DOE REGION									
	NEW ENG.	NY/NJ	MID-ATL.	S.-ATL.	MIDWEST	S.-WEST	CENTRAL	N.-CNTRL	WEST	N.-WEST
PACIFIC COAST										
PACIFIC OCEAN										
WEST ROCKIES						27		174	349	40
EAST ROCKIES					27		44	267	6	8
W. TEX./E. N. MEX.				18	131	142	126	9	445	
GULF COAST	106	343	460	852	1044	536	93			
GULF OF MEXICO	258	823	1095	1492	2636	620	49			
MIDCONTINENT		22	31	37	743	225	624	109	38	
MI. BASIN AND INT.					12					
APPALACHIA		88	118	23	99					
ATLANTIC COAST										
ATLANTIC OCEAN	50	177	224	165						
NORTH SLOPE	17	119	158	249	721	134	114	22	606	42
SOUTH ALASKA									894	

QUANTITIES GIVEN DO NOT SHOW EFFECT OF TRANSPORTATION LOSSES.

STATED DISTRIBUTION OF NORTH SLOPE GAS TO THE EAST COAST REPRESENTS NET EFFECT OF DISPLACEMENT.

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 10
INTERSTATE GAS DELIVERIES IN 1985

	DOE REGION									
	NPW ENG.	NY/NJ	MID-ATL.	S.-ATL.	MIDWEST	S.-WEST	CENTRAL	N.-CNTRL	WEST	N.-WEST
<hr/>										
LOWER 48 AND S. ALASKA										
QUANTITY DELIVERED (MMCF/D)	385	1369	1836	2516	4493	1520	918	548	2096	45
AVERAGE PRICE (\$/MCF)	1.59	1.44	1.35	1.12	1.16	.86	.69	.65	1.40	1.05
<hr/>										
ALASKAN NORTH SLOPE										
QUANTITY DELIVERED (MMCF/D)	34	108	145	235	667	129	107	21	577	40
DELIVERED PRICE (\$/MCF)	3.05	3.01	2.94	2.76	2.89	2.61	2.81	2.69	2.68	2.52

STATED DISTRIBUTION OF NORTH SLOPE GAS TO THE EAST COAST REPRESENTS NET EFFECT OF DISPLACEMENT.

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 11
DISTRIBUTION OF INTERSTATE GAS IN 1990
(MMCF/D)

	DOE REGION									
NPC REGION	NEW ENG.	NY/NJ	MID-ATL.	S.-ATL.	MIDWEST	S.-WEST	CENTRAL	N.-CNTRL	WEST	N.-WEST
PACIFIC COAST										
PACIFIC OCEAN									408	
WEST ROCKIES						19		119	356	28
EAST ROCKIES					18		30	178	4	5
W. TEX./E. N. MEX.				11	78	84	75	5	263	
GULF COAST	60	895	261	483	593	304	53			
GULF OF MEXICO	253	808	1075	1465	2588	609	48			
MIDCONTINENT		13	18	21	430	130	361	64	22	
MI. BASIN AND INT.					10					
APPALACHIA		55	74	14	62					
ATLANTIC COAST										
ATLANTIC OCEAN	76	268	340	250						
NORTH SLOPE	41	131	174	274	793	147	126	24	667	46
SOUTH ALASKA									1920	

QUANTITIES GIVEN DO NOT SHOW EFFECT OF TRANSPORTATION LOSSES.

STATED DISTRIBUTION OF NORTH SLOPE GAS TO THE EAST COAST REPRESENTS NET EFFECT OF DISPLACEMENT.

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 12
INTERSTATE GAS DELIVERIES IN 1990

	DOE REGION									
	NEW ENG.	NY/NJ	MID-ATL.	S.-ATL.	MIDWEST	S.-WEST	CENTRAL	N.-CNTRL	WEST	N.-WEST
LOWER 48 AND S. ALASKA										
QUANTITY DELIVERED (MMCF/D)	364	1267	1691	2188	3520	1123	554	359	2731	31
AVERAGE PRICE (\$/MCF)	1.82	1.67	1.59	1.37	1.41	1.07	.73	.65	1.68	1.05
ALASKAN NORTH SLOPE										
QUANTITY DELIVERED (MMCF/D)	37	118	159	258	733	142	117	23	635	44
DELIVERED PRICE (\$/MCF)	2.58	2.54	2.48	2.31	2.44	2.18	2.46	2.35	2.33	2.18

STATED DISTRIBUTION OF NORTH SLOPE GAS TO THE EAST COAST REPRESENTS NET EFFECT OF DISPLACEMENT.

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 13
OIL WELL DRILLING, INVESTMENT AND PRODUCTION
SUMMARY FOR 1985

NPC REGION	CRUDE OIL (MMBBL/D)	INTERSTATE GAS (MMCF/D)	INTRASTATE GAS (MMCF/D)	CAPITAL 1977-1984 (MM\$)	DRILLING 1977-1984 (MMPT)
SOUTH ALASKA	319	133		1408	6
PACIFIC COAST	839			3996	118
PACIFIC OCEAN	209	296		702	6
WEST ROCKIES	202	100		1458	58
EAST ROCKIES	530	109		1624	98
W. TEX./E. N. MEX.	1658	541		4300	173
GULF COAST	2088	939		5294	215
GULF OF MEXICO	600	676		1728	35
MIDCONTINENT	605	320		4156	269
MT. B./ INT./ APP.	340	24		1868	148
ATLANTIC COAST	204			498	34
ATLANTIC OCEAN	274	208		762	6
NORTH SLOPE	2432	3168		13795	12054
DOE REGION					
NEW ENGLAND					
N.Y./N.J.			1		
MID-ATLANTIC			65		
SOUTH ATLANTIC			117		
MIDWEST			37		
SOUTHWEST			2993		
CENTRAL			126		
NORTH CENTRAL			239		
WEST			233		
NORTHWEST					
NATIONAL TOTAL	10381	6513	3812	41589	13220

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.

CAPITAL FIGURES ARE DERIVED FROM DATA GATHERED BY THE AMERICAN PETROLEUM INSTITUTE ANNUAL PUBLICATION, "JOINT ASSOCIATION SURVEY OF THE U.S. OIL AND GAS PRODUCING INDUSTRY FOR 1975". THESE DATA ARE USED AS INPUT TO THE PIES OIL AND GAS MODEL.

FOOTAGE DRILLED DATA FROM SECTION 1, DRILLING COSTS OF THE U.S. OIL AND GAS PRODUCING INDUSTRIES PUBLISHED IN THE JOINT ASSOCIATION AMERICAN PETROLEUM COUNCIL, THE AMERICAN GAS ASSOCIATION, AND VARIOUS OTHER ENERGY RELATED INDUSTRIES. THE DATA IS INPUT TO THE PIES OIL AND GAS MODEL AND THE ABOVE FIGURES ARE CALCULATED THERE.

OTHER SOURCES INCLUDE "QUARTERLY REVIEW OF DRILLING STATISTICS", AMERICAN PETROLEUM INSTITUTE, WASHINGTON, D.C.

FOR INITIAL EXPLORATORY FOOTAGE AND "U.S. ENERGY OUTLOOK- OIL AND GAS AVAILABILITY", WASHINGTON, D.C., 1973.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 14
OIL WELL DRILLING, INVESTMENT AND PRODUCTION
SUMMARY FOR 1990

NPC REGION	CRUDE OIL	INTERSTATE GAS	INTRASTATE GAS	CAPITAL	DRILLING
	(MMBL/D)	(MMCF/D)	(MMCF/D)	1977-1989 (MM\$)	1977-1989 (MMFT)
SOUTH ALASKA	781	324		2333	10
PACIFIC COAST	943			8094	252
PACIFIC OCEAN	191	259		1241	11
WEST ROCKIES	331	63		3137	123
EAST ROCKIES	561	75		3322	208
W. TEX./E. N. MEX.	1494	390		8930	370
GULF COAST	1891	673		10550	459
GULF OF MEXICO	553	638		2685	53
MIDCONTINENT	676	251		8745	574
MT. B./INT./APP.	453	19		4150	316
ATLANTIC COAST	313			933	72
ATLANTIC OCEAN	335	254		1183	9
NORTH SLOPE	2894	3253		19302	17484
DOE REGION					
NEW ENGLAND					
N.Y./N.J.			2		
MID-ATLANTIC			105		
SOUTH ATLANTIC			222		
MIDWEST			59		
SOUTHWEST			3258		
CENTRAL			157		
NORTH CENTRAL			339		
WEST			279		
NORTHWEST					

NATIONAL TOTAL 11420 5200 4422 74611 19941

DATA SOURCES: PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.

CAPITAL FIGURES ARE DERIVED FROM DATA GATHERED BY THE AMERICAN PETROLEUM INSTITUTE ANNUAL PUBLICATION, "JOINT ASSOCIATION SURVEY OF THE U.S. OIL AND GAS PRODUCING INDUSTRY FOR 1975". THESE DATA ARE USED AS INPUT TO THE PIES OIL AND GAS MODEL.

FOOTAGE DRILLED DATA FROM SECTION 1, DRILLING COSTS OF THE U.S. OIL AND GAS PRODUCING INDUSTRIES PUBLISHED IN THE JOINT ASSOCIATION

AMERICAN PETROLEUM COUNCIL, THE AMERICAN GAS ASSOCIATION, AND VARIOUS OTHER ENERGY RELATED INDUSTRIES. THE DATA IS INPUT TO THE PIES OIL AND GAS MODEL AND THE ABOVE FIGURES ARE CALCULATED THERE. OTHER SOURCES INCLUDE "QUARTERLY REVIEW OF DRILLING STATISTICS", AMERICAN PETROLEUM INSTITUTE, WASHINGTON, D.C.

FOR INITIAL EXPLORATORY FOOTAGE AND "U.S. ENERGY OUTLOOK- OIL AND GAS AVAILABILITY", WASHINGTON, D.C., 1973.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY
SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 15
NON-ASSOCIATED INTERSTATE GAS
PRODUCTION SUMMARY
IN 1985
(MMCF/D)

NPC REGION	PRICE STEP								
	1	2	3	4	5	6	7	8	9
SOUTH ALASKA	426	512	580	762	762	766	766	770	770
PACIFIC OCEAN	51	53	54	54	54	70	71	71	73
WEST ROCKIES	663	663	663	663	663	663	663	663	663
EAST ROCKIES	244	244	244	244	244	244	244	244	244
W. TEX./E. N. MEX.	333	333	333	333	333	333	333	333	333
GULF COAST	2498	2498	2498	2498	2498	2498	2498	2498	2498
GULF OF MEXICO	6296	6299	6299	6299	6299	6708	6708	6708	6710
MIDCONTINENT	1513	1513	1513	1513	1513	1513	1513	1513	1513
HI. BASIN AND INT.									
APPALACHIA	317	317	317	317	317	317	317	317	317
ATLANTIC OCEAN	404	404	404	407	410	410	411	411	411
NATIONAL TOTAL	12745	12836	12904	13090	13092	13522	13524	13530	13532

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 16
NON-ASSOCIATED INTERSTATE GAS
PRODUCTION SUMMARY
IN 1990
(MMCF/D)

NPC REGION	PRICE STEP								
	1	2	3	4	5	6	7	8	9
SOUTH ALASKA	234	543	937	1341	1597	1602	1602	1602	1602
PACIFIC OCEAN	136	136	139	139	149	156	159	159	163
WEST ROCKIES	459	459	459	459	459	459	459	459	459
EAST ROCKIES	160	160	160	160	160	160	160	160	160
W. TEX./E. N. MEX.	126	126	126	126	126	126	126	126	126
GULF COAST	1278	1278	1278	1278	1278	1278	1278	1278	1278
GULF OF MEXICO	6196	6197	6197	6210	6210	6340	6341	6341	6341
MIDCONTINENT	809	809	909	809	809	809	809	809	809
MT. BASIN AND INT.									
APPALACHIA		196	196	196	196	196	196	196	196
ATLANTIC OCEAN	639	649	649	667	681	681	688	705	705
NATIONAL TOTAL	10037	10554	10951	11386	11667	11809	11819	11836	11840

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL
WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL
GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974",
AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY
SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 17
NON-ASSOCIATED INTRASTATE GAS
PRODUCTION SUMMARY
IN 1985
(MBCF/D)

DOE REGION	PRICE STEP								
	1	2	3	4	5	6	7	8	9
N.Y./N.J.	2	2	2	2	2	2	2	2	2
MID-ATLANTIC	124	124	124	124	124	124	124	124	124
SOUTH ATLANTIC	218	226	228	231	234	237	239	241	245
MIDWEST	93	93	93	93	93	93	93	93	93
SOUTHWEST	25415	26333	26468	26731	27054	27344	27501	27789	28279
CENTRAL	1379	1423	1425	1441	1454	1468	1476	1486	1515
NORTH CENTRAL	308	308	458	630	738	924	1006	1193	1400
WEST	272	342	409	446	487	539	557	600	663
NATIONAL TOTAL	27812	28850	29207	29697	30185	30731	30997	31528	32321

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 1R
NON-ASSOCIATED INTRASTATE GAS
PRODUCTION SUMMARY
IN 1990
(MMCF/D)

DOE REGION	PRICE STEP								
	1	2	3	4	5	6	7	8	9
N.Y./N.J.		1	1	1	1	1	1	1	1
MID-ATLANTIC		77	77	77	77	77	77	77	77
SOUTH ATLANTIC	158	200	209	220	230	243	248	259	274
MIDWEST	22	46	46	46	46	46	46	46	46
SOUTHWEST	20562	23247	24842	26147	27336	28747	29371	30728	32706
CENTRAL	1103	1222	1296	1364	1422	1491	1522	1585	1683
NORTH CENTRAL	205	205	308	615	772	1051	1178	1477	1835
WEST	124	167	365	421	484	569	601	681	798
NATIONAL TOTAL	22180	25165	27223	28892	30370	32224	33045	34853	37421

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 19
CAPITAL INVESTMENT SUMMARY FOR GAS WELLS
FROM 1977 THRU 1984
(MM\$)

NPC REGION	PRICE STEP								
	1	2	3	4	5	6	7	8	9
SOUTH ALASKA	206	320	419	671	671	675	675	677	677
PACIFIC OCEAN	29	29	30	30	30	31	31	31	32
GULF OF MEXICO	1552	1553	1553	1553	1553	1651	1652	1652	1652
ATLANTIC OCEAN	229	229	229	236	241	241	243	243	243
DOR REGION									
SOUTH ATLANTIC	94	101	102	105	108	111	112	115	118
SOUTHWEST	13680	14424	14541	14786	15053	15315	15450	15736	16222
CENTRAL	730	766	770	784	797	809	815	826	853
NORTH CENTRAL			157	344	463	676	772	995	1250
WEST	85	137	209	250	295	353	374	426	500
NATIONAL TOTAL	16605	17558	18010	18759	19211	19862	20124	20700	21546

DATA SOURCES: CAPITAL FIGURES ARE DERIVED FROM DATA GATHERED BY THE AMERICAN PETROLEUM INSTITUTE ANNUAL PUBLICATION, "JOINT ASSOCIATION SURVEY OF THE U.S. OIL AND GAS PRODUCING INDUSTRY FOR 1975". THESE DATA ARE USED AS INPUT TO THE PIES OIL AND GAS MODEL.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 20
CAPITAL INVESTMENT SUMMARY FOR GAS WELLS
FROM 1977 THRU 1989
(MM\$)

NPC REGION	PRICE STEP								
	1	2	3	4	5	6	7	8	9
SOUTH ALASKA		151	409	825	1101	1105	1105	1105	1105
PACIFIC OCEAN	57	57	57	57	57	58	58	58	61
GULF OF MEXICO	2405	2405	2405	2405	2405	2460	2462	2462	2462
ATLANTIC OCEAN	309	333	333	357	378	378	386	411	411
DOE REGION									
SOUTH ATLANTIC	127	142	150	162	173	186	193	205	224
SOUTHWEST	18012	20066	21224	22552	23925	25388	26107	27728	30213
CENTRAL	973	1076	1123	1190	1264	1343	1380	1459	1591
NORTH CENTRAL			228	521	728	1110	1291	1730	2290
WEST		67	219	294	378	495	541	657	833
NATIONAL TOTAL	21882	24297	26149	29371	30300	32522	33522	35815	39190

DATA SOURCES: CAPITAL FIGURES ARE DERIVED FROM DATA GATHERED BY THE AMERICAN PETROLEUM INSTITUTE ANNUAL PUBLICATION, "JOINT ASSOCIATION SURVEY OF THE U.S. OIL AND GAS PRODUCING INDUSTRY FOR 1975". THESE DATA ARE USED AS INPUT TO THE PIES OIL AND GAS MODEL.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 21
DRILLING SUMMARY FOR GAS WELLS
FROM 1977 THRU 1984
(MMPT)

NPC REGION	PRICE STEP								
	1	2	3	4	5	6	7	8	9
SOUTH ALASKA	1	1	2	3	3	3	3	3	3
GULF OF MEXICO	26	26	26	26	26	28	28	28	28
ATLANTIC OCEAN	2	2	2	2	2	2	2	2	2
DOE REGION									
SOUTH ATLANTIC	4	4	4	5	5	5	5	5	5
SOUTHWEST	607	641	644	654	665	673	679	691	711
CENTRAL	36	38	38	39	40	40	40	41	42
NORTH CENTRAL			7	16	22	32	36	47	60
WEST	3	6	9	10	12	15	15	17	21
NATIONAL TOTAL	680	719	733	755	773	797	807	833	871

SOURCE: FOOTAGE DRILLED DATA FROM SECTION 1, DRILLING COSTS OF THE U.S. OIL AND GAS PRODUCING INDUSTRIES PUBLISHED IN THE JOINT ASSOCIATION AMERICAN PETROLEUM COUNCIL, THE AMERICAN GAS ASSOCIATION, AND VARIOUS OTHER ENERGY RELATED INDUSTRIES. THE DATA IS INPUT TO THE PIES OIL AND GAS MODEL AND THE ABOVE FIGURES ARE CALCULATED THERE. OTHER SOURCES INCLUDE "QUARTERLY REVIEW OF DRILLING STATISTICS", AMERICAN PETROLEUM INSTITUTE, WASHINGTON, D.C. FOR INITIAL EXPLORATORY FOOTAGE AND "U.S. ENERGY OUTLOOK- OIL AND GAS AVAILABILITY", WASHINGTON, D.C., 1973.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 22
DRILLING SUMMARY FOR GAS WELLS
FROM 1977 THRU 1983
(MMPT)

NPC REGION	PRICE STEP								
	1	2	3	4	5	6	7	8	9
SOUTH ALASKA	1	1	2	3	5	5	5	5	5
PACIFIC OCEAN	1	1	1	1	1	1	1	1	1
GULF OF MEXICO	39	39	39	39	39	40	40	40	40
ATLANTIC OCEAN	2	2	2	3	3	3	3	3	3
DOE REGION									
SOUTH ATLANTIC	5	6	6	7	7	8	8	8	9
SOUTHWEST	801	890	938	993	1044	1107	1136	1202	1304
CENTRAL	49	54	56	59	62	66	67	71	77
NORTH CENTRAL			11	25	34	52	61	82	109
WEST		3	10	13	16	21	23	27	35
NATIONAL TOTAL	897	995	1064	1142	1211	1302	1344	1439	1582

SOURCE: FOOTAGE DRILLED DATA FROM SECTION 1, DRILLING COSTS OF THE U.S. OIL AND GAS PRODUCING INDUSTRIES PUBLISHED IN THE JOINT ASSOCIATION AMERICAN PETROLEUM COUNCIL, THE AMERICAN GAS ASSOCIATION, AND VARIOUS OTHER ENERGY RELATED INDUSTRIES. THE DATA IS INPUT TO THE PIES OIL AND GAS MODEL AND THE ABOVE FIGURES ARE CALCULATED THERE. OTHER SOURCES INCLUDE "QUARTERLY REVIEW OF DRILLING STATISTICS", AMERICAN PETROLEUM INSTITUTE, WASHINGTON, D.C. FOR INITIAL EXPLORATORY FOOTAGE AND "U.S. ENERGY OUTLOOK- OIL AND GAS AVAILABILITY", WASHINGTON, D.C., 1973.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 23
OIL AND GAS SUPPLY AT THE HIGHEST PRICE STEPS
IN 1985

NPC REGION	CRUDE PETROLEUM (MGBL/D)	INTERSTATE GAS (MMCF/D)	INTRASTATE GAS (MMCF/D)	BUTANE (MGBL/D)	OTHER GAS LIQUIDS (MGBL/D)
SOUTH ALASKA	319	903			
PACIFIC COAST	839			9	8
PACIFIC OCEAN	209	369		9	7
WEST ROCKIES	282	764		27	25
EAST ROCKIES	530	353		34	19
W. TEX./E. N. MEX.	1658	874		170	123
GULF COAST	2088	3437		366	253
GULF OF MEXICO	600	7386		76	67
MIDCONTINENT	605	1833		135	122
MI. B./ INT./ APP.	340	341		10	6
ATLANTIC COAST	204			5	1
ATLANTIC OCEAN	274	620		18	3
NORTH SLOPE	2432	3168			
DOE REGION					
NEW ENGLAND					
N.Y./N.J.			3		
MID-ATLANTIC			189		
SOUTH ATLANTIC			363		
MIDWEST			130		
SOUTHWEST			31273		
CENTRAL			1641		
NORTH CENTRAL			1639		
WEST			896		
NORTHWEST					
NATIONAL TOTAL	10381	20045	36133	861	635

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 24
OIL AND GAS SUPPLY AT THE HIGHEST PRICE STEPS
IN 1990

NPC REGION	CRUDE PETROLEUM (MMBBL/D)	INTERSTATE GAS (MMCF/D)	INTRASTATE GAS (MMCF/D)	BUTANE (MMBBL/D)	OTHER GAS LIQUIDS (MMBBL/D)
SOUTH ALASKA	781	1926			
PACIFIC COAST	943			12	11
PACIFIC OCEAN	191	422		9	7
WEST ROCKIES	331	522		30	28
EAST ROCKIES	561	236		35	19
W. TEX./E. N. MEX.	1494	516		181	138
GULF COAST	1891	1951		348	257
GULF OF MEXICO	553	6979		63	61
MIDCONTINENT	676	1060		139	134
MI. B./ INT./ APP.	453	216		7	5
ATLANTIC COAST	313			9	1
ATLANTIC OCEAN	335	959		20	3
NORTH SLOPE	2898	3253			
DOE REGION					
NEW ENGLAND					
N.Y./N.J.			3		
MID-ATLANTIC			182		
SOUTH ATLANTIC			496		
MIDWEST			106		
SOUTHWEST			35965		
CENTRAL			1840		
NORTH CENTRAL			2175		
WEST			1076		
NORTHWEST					
NATIONAL TOTAL	11420	18040	41843	853	665

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY
SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 25
BREAKDOWN OF REGIONAL PRODUCTION BY CRUDE TYPE
(FRACTION OF REGIONAL CRUDE PRODUCTION)

	NPC REGION												
CRUDE TYPE	1S	2	2A	3	4	5	6	6A	7	8-10	11	11A	1N
SOUTH ALASKAN	1.00												
WEST COAST LIGHT		.39											
PACIFIC OFFSHORE			1.00										
WYOMING MIX				.80	.86								
LOUISIANA ONSHORE							.49						
LOUISIANA OFFSHORE								1.00					
TEXAS GULF COAST							.40						
EAST TEXAS MIX							.10						
WEST TEXAS MIX				.20		1.00	.02		.07				
PAD III HEAVY CRUDE					.14								
PAD II INDIGENOUS										.91			
OKLAHOMA MIX									.93				
PAD I INDIGENOUS										.09	1.00	1.00	
WEST COAST HEAVY		.61											
ALASKAN NORTH SLOPE													1.00

DATA SOURCES : OIL AND GAS JOURNAL, PETROLEUM ENCYCLOPEDIA FOR 1975.
OFFICE RESPONSIBLE : OIL & GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS,
APPLIED ANALYSIS, DOE

TABLE 26
SPLITTING FACTORS FOR INTRASTATE ASSOCIATED
AND DISSOLVED GAS

NPC REGION	DOE REGION						
	NY/NJ	MID-ATL.	S.-ATL.	MIDWEST	S.-WEST	CENTRAL	N.-CNTRL WEST
PACIFIC COAST							1.00
WEST ROCKIES					.81	.19	
EAST ROCKIES						1.00	
W. TEX./E. N. MEX.					1.00		
GULF COAST			.01		.99		
MIDCONTINENT					.81		.19
MT. B./INT./APP.	.01	.55	.13	.31			
ATLANTIC COAST			1.00				

DATA SOURCES : DOE ANALYSIS
OFFICE RESPONSIBLE : OIL & GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE
ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 27
SPLITTING FACTORS FOR INTRASTATE CO-PRODUCTS

DOE REGION	NPC REGION						
	PACIFIC COAST	WEST ROCKIES	EAST ROCKIES	W. TEXAS/ E. N. MEX.	W. GULF BASIN	MIDCON- TINENT	MI. D./I./ APPLACHIA ATLANTIC COAST
N.Y./N.J.							1.00
MID-ATLANTIC							1.00
SOUTH ATLANTIC				.49			.33
MIDWEST							1.00
SOUTHWEST		.04	.26	.45	.25		
CENTRAL					1.00		
NORTH CENTRAL		.26				.74	
WEST	.39	.01					

DATA SOURCES : DOE ANALYSIS

OFFICE RESPONSIBLE : OIL & GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE
ANALYSIS, APPLIED ANALYSIS, EIA.

OIL AND GAS SUPPLY DATA
INPUTS TO THE PIES INTEGRATING MODEL
1978 ANNUAL ADMINISTRATOR'S REPORT
HIGH SUPPLY FORECAST

III-91

THE PRODUCTION OF CRUDE OIL ,NATURAL GAS AND NATURAL GAS LIQUIDS IS REPRESENTED IN THE PIES INTEGRATING MODEL BY A COLLECTION OF SUPPLY CURVES, ONE FOR EACH COMBINATION OF REGION (NPC REGION), TYPE OF WELL (OIL OR GAS), VINTAGE (NEW OR OLD), AND, IN THE CASE OF OIL WELLS, TYPE OF PRODUCTION (PRIMARY, SECONDARY OR TERTIARY). EACH SUPPLY CURVE IS A STEP FUNCTION CONSISTING OF NINE PRICE STEPS. AS SHOWN IN THE FIGURE BELOW, EACH STEP GIVES QUANTITY OF PRODUCTION ASSOCIATED WITH A GIVEN WELL-HEAD PRICE.

A NINE STEP SUPPLY CURVE

HOWEVER, THE ABOVE FIGURE UNDERSTATES THE INFORMATION CONTENT OF EACH STEP. IN FACT, AT EACH STEP PRICES ARE ASSUMED AND QUANTITIES ARE GIVEN FOR EACH OF FOUR PRODUCTS (CRUDE OIL, ASSOCIATED AND DISSOLVED GAS, BUTANE, AND OTHER GAS LIQUIDS), IN THE CASE OF OIL WELLS, AND THREE PRODUCTS (NON-ASSOCIATED GAS, BUTANE AND OTHER GAS LIQUIDS) IN THE CASE OF GAS WELLS. IN ADDITION, EACH STEP ALSO CARRIES WITH IT THE AMOUNT OF DRILLING AND CAPITAL INVESTMENT REQUIRED TO REACH THE INDICATED LEVEL OF PRODUCTION.

THE SUPPLY CURVES ARE GENERATED BY THE PIES OIL AND GAS SUPPLY MODEL. THIS MODEL IS DYNAMIC IN THAT SUPPLY CURVES FOR ALL YEARS FROM 1977 TO 1991 ARE GENERATED SIMULTANEOUSLY USING THE PRICE TRAJECTORIES SHOWN IN TABLES 1 AND 2 FOR OIL WELLS AND IN TABLES 5 AND 6 FOR GAS WELLS. THE SUPPLY MODEL IS RUN ONCE FOR EACH STEP AND GENERATES THE HISTORY OF CAPITAL INVESTMENT, DRILLING, AND PRODUCTION FOR EACH PRODUCT

THAT WOULD RESULT IF WELL-HEAD PRICES WERE TO FOLLOW THE PRICE TRAJECTORIES FOR THE GIVEN STEP. THE PIES SUPPLY CURVES ARE THEN OBTAINED BY SELECTING THE PRICES AND CORRESPONDING QUANTITIES FOR THE YEARS 1985 AND 1990.

THE GAS PRODUCTION PROJECTED BY THE OIL AND GAS SUPPLY MODEL IS DIVIDED BETWEEN THE INTERSTATE AND INTRASTATE MARKETS ACCORDING TO THE FOLLOWING RULES: (1) ALL ALASKAN AND OCS GAS IS INTERSTATE, (2) ALL NEW LOWER 48 ONSHORE GAS IS INTRASTATE AND (3) ALL OLD ONSHORE GAS IS DIVIDED ACCORDING TO REGION SPECIFIC HISTORICAL (1974) PROPORTIONS. IT SHOULD BE MENTIONED THAT THIS A PRIORI DIVISION IS SUBJECT TO REVISION BY THE INTEGRATING MODEL WHICH HAS THE CAPABILITY OF SHIFTING SOME GAS WHICH HAS BEEN DESIGNATED AS INTRASTATE BY THE ABOVE RULES INTO THE INTERSTATE MARKET AS REQUIRED TO KEEP THE INTRASTATE PRICE FROM FALLING BELOW THE INTERSTATE PRICE.

TABLES 3, 4, 7 AND 8 GIVE THE SUPPLY CURVES BY REGION, VINTAGE AND TYPE. THE PRICE STEP IS GIVEN BY THE STEP NUMBER, ALLOWING REFERENCE TO THE PRICE TRAJECTORY TABLES TO FIND ASSUMED PRICES FOR EACH PRODUCT. THESE PRICES ARE NOT USED IN THE INTEGRATING MODEL, HOWEVER, SINCE IT SEES THE INCREMENT IN PRODUCTION FROM ONE STEP TO THE NEXT AS A BUNDLE OF COMMODITIES WHICH IT MUST EITHER PRODUCE OR NOT PRODUCE TOGETHER. THUS A SINGLE PRICE, CALLED THE BUNDLE PRICE, IS ASSIGNED TO EACH STEP. BY DEFINITION, THE BUNDLE PRICE IS THE RATIO OF THE TOTAL VALUE OF THE INCREMENT IN PRODUCTION FROM THE PREVIOUS STEP (INCLUDING ALL FOUR OR THREE PRODUCTS, USING PRICES FROM TABLES 1, 2, 5 AND 6) TO THE QUANTITY OF CRUDE OIL OR NON-ASSOCIATED GAS IN THAT INCREMENT. THIS SOMEWHAT AWKWARD CONVENTION IS NECESSITATED BY THE FACT THAT THE BUNDLE CONTAINS COMMODITIES MEASURED IN DIFFERENT UNITS. NOTE THAT THESE TABLES SHOW NATURAL GAS BROKEN OUT ACCORDING TO WHICH MARKET (INTERSTATE OR INTRASTATE) IT BELONGS.

IT SHOULD BE EMPHASIZED THAT VINTAGE, AS USED IN THIS DOCUMENTATION, MERELY DESCRIBES WHETHER A WELL WAS DRILLED BEFORE OR AFTER 1/1/77, AND, AS SUCH, IS DIFFERENT FROM THE LEGAL CONCEPTS OF OIL AND GAS VINTAGE.

THE ALASKAN NORTH SLOPE AND ELK'S HILL ARE NOT INCLUDED IN THE OIL AND GAS SUPPLY MODEL. ACCORDINGLY ENGINEERING ESTIMATES OF PRODUCTION AND COST ARE USED FOR THESE REGIONS. THESE REGIONS ARE INDICATED IN THE TABLES BY AN '*' IN THE PRICE STEP COLUMN.

THE SCENARIOS WHICH MODEL OIL REGULATION ARE DISTINCTIVE. SINCE WELL-HEAD PRICES ARE CONTROLLED, ONLY ONE PRICE STEP IS USED AND THE QUANTITY OF DOMESTIC CRUDE AVAILABLE IS FIXED. ALSO, THE BUNDLE PRICE IS NOT CALCULATED AND IS LISTED IN THE TABLES AS '***'.

IN GAS REGULATION SCENARIOS THE DISTRIBUTION OF INTER-STATE GAS IS ESSENTIALLY FIXED. THIS DISTRIBUTION AND RESULTING DELIVERIES ARE GIVEN IN TABLES 9-12. THE INTEGRATING

MODEL MAY ALTER THESE DISTRIBUTIONS IN THE FOLLOWING WAYS: (1) A REGION MAY TAKE LESS INTERSTATE GAS THAN IS ASSIGNED TO IT, (2) EXCESS INTERSTATE GAS IN ONE REGION MAY BE REASSIGNED TO ANOTHER REGION AND (3) GAS ORIGINALLY DESIGNATED AS INTRASTATE BUT SHIFTED TO THE INTERSTATE MARKET WILL AUGMENT THE STATED DISTRIBUTION.

TABLES 13-24 SUMMARIZE THE INFORMATION IN THE OIL AND GAS SUPPLY CURVES. TABLES 13 AND 14 AGGREGATE OIL AND GAS PRODUCTION, INVESTMENT AND DRILLING STATISTICS OVER VINTAGE AND TYPE OF PRODUCTION. TABLES 15-22 DO THE SAME FOR GAS WELLS AT ALL PRICE STEPS. THEN TABLES 23 AND 24 COMBINE THE PRODUCTION FROM OIL AND GAS WELLS AND SHOW THE MAXIMUM QUANTITY OF EACH FUEL AVAILABLE TO THE INTEGRATING MODEL.

TABLE 25 SHOWS THE MIX OF CRUDE TYPES ASSUMED FOR EACH NPC REGION. THESE PROPORTIONS ARE APPLIED IRRESPECTIVE OF THE VINTAGE OR TYPE OF PRODUCTION.

TABLES 26 AND 27 PROVIDE SOME INFORMATION REQUIRED BECAUSE OF THE WAY INTRASTATE GAS PRODUCTION AND DISTRIBUTION IS MODELED. ASSOCIATED AND DISSOLVED INTRASTATE GAS IS PRODUCED IN NPC REGIONS BUT IS DISTRIBUTED FROM DOE REGIONS. THIS REQUIRES A LOGICAL SHIFT OF ASSOCIATED INTRASTATE GAS FROM NPC REGIONS TO DOE REGIONS. TABLE 26 GIVES THE FRACTION OF INTRASTATE GAS PRODUCED IN EACH NPC REGION THAT IS SHIFTED TO EACH DOE REGION FOR DISTRIBUTION. SIMILARLY, GAS LIQUIDS FROM INTRASTATE GAS WELLS ARE PRODUCED IN DOE REGIONS BUT DISTRIBUTED FROM NPC REGIONS. TABLE 27 GIVES THE FRACTION OF INTRASTATE GAS LIQUIDS PRODUCED IN EACH DOE REGION THAT IS SHIFTED TO EACH NPC REGION.

ALL DOLLARS ARE CONSTANT 1975 DOLLARS. VOLUMES OF NATURAL GAS ASSUME A HEAT VALUE OF 1032 BTU/CF. THE ENTRIES UNDER THE COLUMN HEADINGS CAPITAL AND FOOTAGE DRILLED ARE THE CUMULATIVE CAPITAL INVESTMENT AND CUMULATIVE FOOTAGE DRILLED FROM 1977 TO ONE YEAR PRIOR (1984 OR 1989) TO THE TARGET YEAR (1985 OR 1990). THE ABBREVIATIONS USED IN THIS REPORT FOR THE VARIOUS UNITS OF MEASUREMENT ARE AS FOLLOWS:

BBL, MBBL	BARREL, THOUSAND BARRELS
MCF, MMCF	THOUSAND CUBIC FEET, MILLION CUBIC FEET
M\$	MILLION DOLLARS (1975 DOLLARS)
MMFT	MILLION FEET
D	DAY

TABLE 1
PRICE TRAJECTORIES FOR OIL AND GAS LIQUIDS
(\$/DBL)

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
STEP 1	12.62	11.99	11.39	10.82	10.28	9.77	9.28	8.81	8.37	8.37	8.37	8.37	8.37	8.37	8.37
STEP 2	12.62	12.24	11.87	11.52	11.17	10.84	10.51	10.20	9.89	9.89	9.89	9.89	9.89	9.89	9.89
STEP 3	12.62	12.37	12.12	11.88	11.64	11.41	11.18	10.96	10.74	10.74	10.74	10.74	10.74	10.74	10.74
STEP 4	12.62	12.49	12.37	12.25	12.12	12.00	11.88	11.76	11.65	11.65	11.65	11.65	11.65	11.65	11.65
STEP 5	12.62	12.62	12.62	12.62	12.62	12.62	12.62	12.62	12.62	12.62	12.62	12.62	12.62	12.62	12.62
STEP 6	12.62	12.75	12.87	13.00	13.13	13.26	13.40	13.53	13.67	13.67	13.67	13.67	13.67	13.67	13.67
STEP 7	12.62	12.87	13.13	13.39	13.66	13.93	14.21	14.50	14.79	14.79	14.79	14.79	14.79	14.79	14.79
STEP 8	12.62	13.00	13.39	13.79	14.20	14.63	15.07	15.52	15.99	15.99	15.99	15.99	15.99	15.99	15.99
STEP 9	12.62	13.25	13.91	14.61	15.34	16.11	16.91	17.76	18.65	18.65	18.65	18.65	18.65	18.65	18.65

DATA SOURCES : OUTPUT FROM THE PIES OIL & GAS SUPPLY MODEL DERIVED FROM
AVERAGE REFERENCE ACQUISITION COSTS, TRANSPORTATION COSTS,
AND OTHER RELEVANT COSTS AND PRICES. ALSO PLATT'S OILGRAM, WASHINGTON, D.C
A WEEKLY PUBLICATION.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY
SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 2
PRICE TRAJECTORIES FOR ASSOCIATED AND DISSOLVED GAS
(\$/MCF)

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
STEP 1	2.17	2.06	1.96	1.86	1.77	1.68	1.60	1.52	1.44	1.44	1.44	1.44	1.44	1.44	1.44
STEP 2	2.17	2.11	2.04	1.98	1.92	1.86	1.81	1.75	1.70	1.70	1.70	1.70	1.70	1.70	1.70
STEP 3	2.17	2.13	2.08	2.04	2.00	1.96	1.92	1.88	1.85	1.85	1.85	1.85	1.85	1.85	1.85
STEP 4	2.17	2.15	2.13	2.11	2.08	2.06	2.04	2.02	2.00	2.00	2.00	2.00	2.00	2.00	2.00
STEP 5	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17
STEP 6	2.17	2.19	2.21	2.24	2.26	2.28	2.30	2.33	2.35	2.35	2.35	2.35	2.35	2.35	2.35
STEP 7	2.17	2.21	2.26	2.30	2.35	2.40	2.44	2.49	2.54	2.54	2.54	2.54	2.54	2.54	2.54
STEP 8	2.17	2.24	2.30	2.37	2.44	2.52	2.59	2.67	2.75	2.75	2.75	2.75	2.75	2.75	2.75
STEP 9	2.17	2.28	2.39	2.51	2.64	2.77	2.91	3.05	3.21	3.21	3.21	3.21	3.21	3.21	3.21

DATA SOURCES : OUTPUT FROM THE PIES OIL & GAS SUPPLY MODEL DERIVED FROM
AVERAGE REFERENCE ACQUISITION COSTS, TRANSPORTATION COSTS,
AND OTHER RELEVANT COSTS AND PRICES. ALSO PLATT'S OILGRAM, WASHINGTON, D.C
A WEEKLY PUBLICATION.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY
SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 3
OIL SUPPLY CURVES FOR 1985

		PRICE CRUDE OIL STEP	INTERSTATE GAS (MMCF/D)	INTRASTATE GAS (MMCF/D)	BUTANE (MGBL/D)	GAS LIQUIDS (MGBL/D)	BUNDLE PRICE (\$/BBL OIL)	CAPITAL (MM\$)	FOOTAGE DRILLED (MMFT)
NPC REGION-SOUTH ALASKA									
	NEW PRIMARY	5	161.10	66.79			**	550.99	3.00
	NEW SECONDARY	5	11.70	4.93			**	34.00	
	OLD PRIMARY	5	47.50	19.71			**		
	OLD SECONDARY	5	14.90	6.30			**	73.00	
NPC REGION-PACIFIC COAST									
EXCLUDING ELK'S HILL									
	NEW PRIMARY	5	175.80		61.86	1.49	.69	**	3144.00
	NEW SECONDARY	5	62.90		22.17	.50	.30	**	90.00
	OLD PRIMARY	5	335.10		131.96	3.08	1.57	**	
	OLD SECONDARY	5	29.50		10.40	.20	.10	**	71.00
	OLD TERTIARY	5	40.70					**	350.00
ELK'S HILL									
	NEW PRIMARY	*	175.00					**	728.44
NPC REGION-PACIFIC OCEAN									
	NEW PRIMARY	5	43.60	59.96		1.60	1.20	**	458.00
	NEW SECONDARY	5	.50	.82				**	2.00
	OLD PRIMARY	5	105.90	153.86		4.89	3.70	**	
	OLD SECONDARY	5	58.60	80.76		2.20	1.70	**	247.00
NPC REGION-WEST ROCKIES									
	NEW PRIMARY	5	80.20		78.30	2.09	1.60	**	1231.00
	NEW SECONDARY	5	19.80		18.89	.50	.40	**	17.00
	OLD PRIMARY	5	41.80	29.29	13.37	1.40	1.00	**	
	OLD SECONDARY	5	105.80	70.98	32.40	2.79	2.09	**	180.00

VINTAGE (OLD, NEW) INDICATES WHETHER OIL WELLS DRILLED BEFORE OR AFTER 1/1/77 (NOTE DIFFERENCE FROM LEGAL DEFINITION OF OIL VINTAGE).

A * IN THE PRICE STEP COLUMN INDICATES DATA FOR THAT REGION ARE ENGINEERING ESTIMATES.

BUNDLE PRICE = (TOTAL VALUE OF ALL PRODUCTS IN INCREMENT OVER PREVIOUS PRICE STEP)/(QUANTITY OF OIL IN THAT INCREMENT).

A ** IN BUNDLE PRICE COLUMN INDICATES BUNDLE PRICE NOT CALCULATED FOR OIL REGULATION SCENARIOS WITH POINT ESTIMATES OF SUPPLY.

CAPITAL INVESTMENT AND DRILLING STATISTICS ARE CUMULATIVE FROM 1977 TO 1984.

TABLE 3
(CONTINUED)
OIL SUPPLY CURVES FOR 1985

	PRICE CRUDE OIL STEP	(MDBL/D)	INTERSTATE GAS (MMCF/D)	INTRASTATE GAS (MMCF/D)	BUTANE (MGBL/D)	GAS LIQUIDS (MGBL/D)	BUNDLE PRICE (\$/BBL OIL)	CAPITAL (MM\$)	FOOTAGE DRILLED (MMFT)
NPC REGION-EAST ROCKIES									
NEW PRIMARY	5	127.60		77.48	4.70	1.59	**	1257.00	96.39
NEW SECONDARY	5	25.30		16.15	1.10	.40	**	25.00	
OLD PRIMARY	5	155.80	47.71	37.70	4.39	1.50	**		
OLD SECONDARY	5	183.10	61.63	48.69	6.68	2.20	**	335.99	
NPC REGION-W. TEX./E. N. MEX.									
NEW PRIMARY	5	26.70		23.54	1.40	.50	**	154.00	33.00
NEW SECONDARY	5	8.60		7.67	.50	.20	**	10.00	
OLD PRIMARY	5	748.80	421.50	536.66	43.73	16.17	**		
OLD SECONDARY	5	307.80	119.95	152.73	15.48	5.69	**	506.97	
OLD TERTIARY	5	333.10					**	1296.99	
NPC REGION-GULF COAST									
NEW PRIMARY	5	146.20		164.53	10.29	3.29	**	1592.00	111.00
NEW SECONDARY	5	3.20		3.56	.20	.10	**	3.00	
OLD PRIMARY	5	716.90	423.04	418.17	56.28	17.78	**		
OLD SECONDARY	5	910.60	515.49	509.48	64.20	20.22	**	1740.98	
OLD TERTIARY	5	40.20					**	242.00	
NPC REGION-GULF OF MEXICO									
NEW PRIMARY	5	229.30	260.37		6.40	3.90	**	1606.98	34.99
NEW SECONDARY	5	8.30	9.58		.20	.10	**	7.00	
OLD PRIMARY	5	236.70	263.64		8.50	5.18	**		
OLD SECONDARY	5	50.40	56.40		1.70	1.10	**	113.00	

TABLE 3
(CONTINUED)
OIL SUPPLY CURVES FOR 1985

		PRICE CRUDE OIL STEP	INTERSTATE GAS (MMCF/D)	INTRASTATE GAS (MMCF/D)	BUTANE (MBBL/D)	GAS LIQUIDS (MBBL/D)	BUNDLE PRICE (\$/BBL OIL)	CAPITAL (MM\$)	FOOTAGE DRILLED (MMFT)
NPC REGION-MIDCONTINENT									
	NEW PRIMARY	5	66.40		107.32	1.39	.90	**	2007.00
	NEW SECONDARY	5	22.80		36.96	.50	.30	**	36.00
	OLD PRIMARY	5	213.10	205.39	188.30	3.39	2.09	**	
	OLD SECONDARY	5	135.40	114.12	104.62	2.90	1.79	**	126.00
	OLD TERTIARY	5	27.00					**	128.00
NPC REGION-MT. B. / INT. / APP.									
	NEW PRIMARY	5	37.30		15.60			**	546.00
	NEW SECONDARY	5	8.00		3.56			**	8.00
	OLD PRIMARY	5	70.30	12.52	18.41			**	
	OLD SECONDARY	5	65.50	11.19	16.46			**	121.00
	OLD TERTIARY	5	10.80					**	24.00
NPC REGION-ATLANTIC COAST									
	NEW PRIMARY	5	20.60		8.21	.40		**	86.00
	NEW SECONDARY	5	1.80		.92			**	1.00
	OLD PRIMARY	5	4.50	.09	1.00	.10		**	
NPC REGION-ATLANTIC OCEAN									
	NEW PRIMARY	5	260.30	197.67	9.47			**	712.00
	NEW SECONDARY	5	6.50	4.93	.20			**	55.00
NPC REGION-NORTH SLOPE									
	PRUDHOE BAY								
	NEW PRIMARY	*	1600.00	2755.84				**	6376.00
	BEAUFORT SEA								
	NEW PRIMARY	*	112.00	79.28				**	1072.96
	NORTH SLOPE OTHER								
	NEW PRIMARY	*	720.00	332.64				**	5745.60

TABLE 4
OIL SUPPLY CURVES FOR 1990

		PRICE CRUDE OIL STEP	INTERSTATE GAS (MMCF/D)	INTRASTATE GAS (MMCF/D)	BUTANE (MMBBL/D)	GAS LIQUIDS (MMBBL/D)	BUNDLE PRICE (\$/BBL OIL)	CAPITAL (MM\$)	FOOTAGE DRILLED (MMFT)

NPC REGION-SOUTH ALASKA									
	NEW PRIMARY	5	207.10	85.97			**	658.00	2.98
	NEW SECONDARY	5	17.60	7.39			**	135.00	
	OLD PRIMARY	5	22.00	9.03			**		
	OLD SECONDARY	5	9.80	4.11			**	91.00	
NPC REGION-PACIFIC COAST									
EXCLUDING ELK'S HILL									
	NEW PRIMARY	5	142.00		49.83	1.19	.60	**	3315.00
	NEW SECONDARY	5	110.60		38.88	.90	.50	**	354.99
	OLD PRIMARY	5	204.30		89.24	2.08	.98	**	
	OLD SECONDARY	5	36.50		12.87	.30	.10	**	147.00
	OLD TERTIARY	5	49.80					**	685.00
ELK'S HILL									
	NEW PRIMARY	*	150.00					**	630.00
NPC REGION-PACIFIC OCEAN									
	NEW PRIMARY	5	72.30	94.18		2.49	1.89	**	916.00
	NEW SECONDARY	5	1.60	1.92		.10		**	11.00
	OLD PRIMARY	5	64.60	93.63		3.00	2.20	**	
	OLD SECONDARY	5	50.30	67.35		1.90	1.40	**	330.00
NPC REGION-WEST ROCKIES									
	NEW PRIMARY	5	51.50		48.73	1.30	1.00	**	1487.00
	NEW SECONDARY	5	30.70		27.92	.70	.60	**	88.00
	OLD PRIMARY	5	17.20	12.02	5.49	.60	.40	**	
	OLD SECONDARY	5	79.10	51.07	23.31	1.99	1.49	**	273.00

VINTAGE (OLD, NEW) INDICATES WHETHER OIL WELLS DRILLED BEFORE OR AFTER 1/1/77 (NOTE DIFFERENCE FROM LEGAL DEFINITION OF OIL VINTAGE).

A * IN THE PRICE STEP COLUMN INDICATES DATA FOR THAT REGION ARE ENGINEERING ESTIMATES.

BUNDLE PRICE = (TOTAL VALUE OF ALL PRODUCTS IN INCREMENT OVER PREVIOUS PRICE STEP)/(QUANTITY OF OIL IN THAT INCREMENT).

A ** IN BUNDLE PRICE COLUMN INDICATES BUNDLE PRICE NOT CALCULATED FOR OIL REGULATION SCENARIOS WITH POINT ESTIMATES OF SUPPLY.

CAPITAL INVESTMENT AND DRILLING STATISTICS ARE CUMULATIVE FROM 1977 TO 1989.

TABLE 4
(CONTINUED)
OIL SUPPLY CURVES FOR 1990

		PRICE CRUDE OIL STEP	INTERSTATE GAS (MMBBL/D)	INTRASTATE GAS (MMCF/D)	BUTANE (MBBL/D)	GAS LIQUIDS (MMBBL/D)	BUNDLE PRICE (\$/BBL OIL)	CAPITAL (MM\$)	FOOTAGE DRILLED (MMFT)
NPC REGION-EAST ROCKIES									
	NEW PRIMARY	5	87.10		55.03	3.40	1.10	**	1499.00
	NEW SECONDARY	5	41.30		28.47	1.80	.60	**	118.00
	OLD PRIMARY	5	73.60	22.48	17.76	2.10	.70	**	
	OLD SECONDARY	5	146.50	52.61	41.56	5.70	1.89	**	511.99
NPC REGION-W. TEX./E. N. MEX.									
	NEW PRIMARY	5	22.40		19.99	1.20	.50	**	573.00
	NEW SECONDARY	5	14.30		12.59	.80	.30	**	34.00
	OLD PRIMARY	5	390.90	319.76	407.12	37.37	13.80	**	
	OLD SECONDARY	5	181.50	70.69	90.01	9.29	3.48	**	650.99
	OLD TERTIARY	5	429.70					**	2996.00
NEC REGION-GULF COAST									
	NEW PRIMARY	5	106.90		121.28	7.59	2.39	**	2046.00
	NEW SECONDARY	5	5.00		5.75	.40	.10	**	10.00
	OLD PRIMARY	5	359.60	235.43	232.70	31.07	9.89	**	
	OLD SECONDARY	5	765.40	437.66	432.60	54.57	17.30	**	2702.93
	OLD TERTIARY	5	60.20					**	745.00
NEC REGION-GULF OF MEXICO									
	NEW PRIMARY	5	294.20	341.39		7.18	4.38	**	2536.97
	NEW SECONDARY	5	13.40	15.88		.30	.20	**	39.00
	OLD PRIMARY	5	102.70	114.44		3.70	2.29	**	
	OLD SECONDARY	5	21.90	24.37		.70	.50	**	113.00

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TABLE 4
(CONTINUED)
OIL SUPPLY CURVES FOR 1990

	PRICE CRUDE OIL STEP	(M\$BL/D)	INTERSTATE GAS (MMCF/D)	INTRASTATE GAS (MMCF/D)	OUTANE (M\$BL/D)	GAS LIQUIDS (M\$BL/D)	BUNDLE PRICE (\$/BBL OIL)	CAPITAL (MM\$)	FOOTAGE DRILLED (MMFT)
NPC REGION-MIDCONTINENT									
NEW PRIMARY	5	48.30		77.48	1.00	.60	**	2427.00	187.00
NEW SECONDARY	5	15.70		25.19	.30	.20	**	81.00	
OLD PRIMARY	5	106.90	155.68	142.73	2.99	1.89	**		
OLD SECONDARY	5	114.00	94.97	87.07	2.39	1.49	**	542.99	
OLD TERTIARY	5	78.00					**	383.00	
NPC REGION-MI. D. / INT. / APP.									
NEW PRIMARY	5	26.10		11.50			**	562.00	59.00
NEW SECONDARY	5	12.00		6.02			**	32.00	
OLD PRIMARY	5	32.50	6.87	10.10			**		
OLD SECONDARY	5	67.30	12.52	18.41			**	228.00	
OLD TERTIARY	5	10.50					**	32.00	
NPC REGION-ATLANTIC COAST									
NEW PRIMARY	5	11.70		5.48	.30		**	102.00	7.00
NEW SECONDARY	5	2.10		1.09	.10		**	3.00	
OLD PRIMARY	5	1.70	.05	.50			**		
NPC REGION-ATLANTIC OCEAN									
NEW PRIMARY	5	303.30	230.23		11.07		**	1384.99	9.98
NEW SECONDARY	5	13.30	10.13		.50		**	118.00	
NPC REGION-NORTH SLOPE									
PRUDHOE BAY									
NEW PRIMARY	*	1021.00	2206.58				**	7117.39	6258.73
BEAUFORT SEA									
NEW PRIMARY	*	619.00	723.67				**	5274.37	4326.81
NORTH SLOPE OTHER									
NEW PRIMARY	*	573.00	323.23				**	6910.38	6898.92
NAVAL PETROLEUM RESERVE A									
NEW PRIMARY	*	685.00					**		

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.
CAPITAL FIGURES ARE DERIVED FROM DATA GATHERED BY THE AMERICAN PETROLEUM INSTITUTE ANNUAL PUBLICATION, "JOINT ASSOCIATION SURVEY OF THE U.S. OIL AND GAS PRODUCING INDUSTRY FOR 1975". THESE DATA ARE USED AS INPUT TO THE PIES OIL AND GAS MODEL.
FOOTAGE DRILLED DATA FROM SECTION 1, DRILLING COSTS OF THE U.S. OIL AND GAS PRODUCING INDUSTRIES PUBLISHED IN THE JOINT ASSOCIATION
AMERICAN PETROLEUM COUNCIL, THE AMERICAN GAS ASSOCIATION, AND VARIOUS OTHER ENERGY RELATED INDUSTRIES. THE DATA IS INPUT TO THE PIES OIL AND GAS MODEL AND THE

ABOVE FIGURES ARE CALCULATED THERE. OTHER SOURCES INCLUDE "QUARTERLY REVIEW OF DRILLING STATISTICS", AMERICAN PETROLEUM INSTITUTE, WASHINGTON, D.C.
FOR INITIAL EXPLORATORY FOOTAGE AND "U.S. ENERGY OUTLOOK- OIL AND GAS AVAILABILITY", WASHINGTON, D.C., 1973.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY
SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 5
PRICE TRAJECTORIES FOR NONASSOCIATED GAS
(\$/MCF)

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
STEP 1	1.61	1.61	1.58	1.56	1.53	1.51	1.49	1.47	1.44	1.44	1.44	1.44	1.44	1.44	1.44
STEP 2	1.63	1.61	1.60	1.58	1.57	1.55	1.53	1.52	1.50	1.50	1.50	1.50	1.50	1.50	1.50
STEP 3	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63
STEP 4	1.63	1.65	1.66	1.68	1.70	1.71	1.73	1.75	1.76	1.76	1.76	1.76	1.75	1.76	1.76
STEP 5	1.63	1.66	1.70	1.73	1.76	1.80	1.84	1.87	1.91	1.91	1.91	1.91	1.91	1.91	1.91
STEP 6	1.63	1.68	1.73	1.78	1.83	1.89	1.95	2.00	2.06	2.06	2.06	2.06	2.05	2.06	2.06
STEP 7	1.63	1.69	1.76	1.83	1.91	1.98	2.06	2.14	2.23	2.23	2.23	2.23	2.23	2.23	2.23
STEP 8	1.63	1.71	1.80	1.89	1.98	2.08	2.18	2.29	2.41	2.41	2.41	2.41	2.41	2.41	2.41
STEP 9	1.63	1.74	1.87	2.00	2.14	2.29	2.45	2.62	2.80	2.80	2.80	2.80	2.80	2.80	2.80

DATA SOURCES : OUTPUT FROM THE PIES OIL & GAS SUPPLY MODEL DERIVED FROM
AVERAGE REFERENCE ACQUISITION COSTS, TRANSPORTATION COSTS,
AND OTHER RELEVANT COSTS AND PRICES. ALSO PLATT'S OILGRAM, WASHINGTON, D.C.
A WEEKLY PUBLICATION.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY
SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 6
PRICE TRAJECTORIES FOR NATURAL GAS LIQUIDS
(\$/BBL)

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
STEP 1	9.48	9.33	9.19	9.06	8.92	8.79	8.66	8.53	8.40	8.40	8.40	8.40	8.40	8.40	8.40
STEP 2	9.48	9.38	9.29	9.20	9.10	9.01	8.92	8.83	8.74	8.74	8.74	8.74	8.74	8.74	8.74
STEP 3	9.48	9.48	9.48	9.48	9.48	9.48	9.48	9.48	9.48	9.48	9.48	9.48	9.48	9.48	9.48
STEP 4	9.48	9.57	9.67	9.76	9.86	9.96	10.06	10.16	10.26	10.26	10.26	10.26	10.25	10.26	10.26
STEP 5	9.48	9.67	9.86	10.06	10.26	10.46	10.67	10.89	11.10	11.10	11.10	11.10	11.10	11.10	11.10
STEP 6	9.48	9.76	10.05	10.36	10.67	10.99	11.32	11.66	12.00	12.00	12.00	12.00	12.00	12.00	12.00
STEP 7	9.48	9.86	10.25	10.66	11.09	11.53	11.99	12.47	12.97	12.97	12.97	12.97	12.97	12.97	12.97
STEP 8	9.48	9.95	10.45	10.97	11.52	12.09	12.70	13.33	14.00	14.00	14.00	14.00	14.00	14.00	14.00
STEP 9	9.48	10.14	10.85	11.61	12.42	13.29	14.22	15.22	16.23	16.28	16.28	16.28	16.28	16.28	16.28

DATA SOURCES : OUTPUT FROM THE PIES OIL & GAS SUPPLY MODEL DERIVED FROM
AVERAGE REFERENCE ACQUISITION COSTS, TRANSPORTATION COSTS,
AND OTHER RELEVANT COSTS AND PRICES. ALSO PLATT'S OILGRAM, WASHINGTON, D.C.
A WEEKLY PUBLICATION.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY
SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 7
GAS SUPPLY CURVES FOR 1985

	PRICE STEP	NATURAL GAS (MMCF/D)	BUTANE (MMBL/D)	GAS LIQUIDS (MMBL/D)	BUNDLE PRICE (\$/MCF GAS)	CAPITAL (MM\$)	DRILLING (MMFT)

NPC REGION-SOUTH ALASKA INTERSTATE GAS							
NEW GAS	1	35.59			1.44	33.00	
	2	57.77			1.50	52.00	
	3	79.95			1.63	84.99	
	4	95.82			1.76	118.99	1.00
	5	122.66			1.91	160.99	1.00
	6	128.68			2.06	173.99	1.00
	7	152.77			2.23	216.99	1.00
	9	175.77			2.80	257.99	1.00
OLD GAS	1	262.83			1.44		
NPC REGION-PACIFIC OCEAN INTERSTATE GAS							
NEW GAS	1	55.85	.50	.70	1.62	31.00	
	3	58.04	.50	.80	2.06	31.00	
	5	58.59	.50	.80	1.91	31.00	
	8	58.86	.50	.80	2.41	31.00	
	9	85.42	.79	1.20	3.23	35.00	
OLD GAS	6	15.61			2.06		
NPC REGION-WEST ROCKIES INTERSTATE GAS							
OLD GAS	1	663.31	1.06	.66	1.47		
NPC REGION-EAST ROCKIES INTERSTATE GAS							
OLD GAS	1	243.60	3.73	2.53	1.66		
NPC REGION-W. TEX./E. N. MEX. INTERSTATE GAS							
OLD GAS	1	332.64			1.44		

VINTAGE (OLD, NEW) INDICATES WHETHER GAS WELLS DRILLED BEFORE OR AFTER 1/1/77 (NOTE DIFFERENCE FROM LEGAL DEFINITION OF GAS VINTAGE).

ALL QUANTITIES (PRODUCTION, INVESTMENT AND DRILLING) ARE CUMULATIVE OVER PRICE STEPS.

PRICE STEPS WITH NO ADDITIONAL PRODUCTION OVER PREVIOUS STEP ARE OMITTED.

BUNDLE PRICE = (TOTAL VALUE OF ALL PRODUCTS IN INCREMENT OVER PREVIOUS PRICE STEP)/(QUANTITY OF NATURAL GAS IN THAT INCREMENT).

CAPITAL INVESTMENT AND DRILLING STATISTICS ARE CUMULATIVE FROM 1977 TO 1984.

TABLE 7
(CONTINUED)
GAS SUPPLY CURVES FOR 1985

	PRICE STEP	NATURAL GAS (MMCF/D)	BUTANE (MMBL/D)	GAS LIQUIDS (MMBL/D)	BUNDLE PRICE (\$/MCF GAS)	CAPITAL (MM\$)	DRILLING (MMPT)
NPC REGION-GULF COAST INTERSTATE GAS							
	OLD GAS 1	2498.20	49.21	38.97	1.74		
NPC REGION-GULF OF MEXICO INTERSTATE GAS							
	NEW GAS 1	2003.20	12.82	16.43	1.57	1320.91	21.83
	2	2222.77	14.20	18.12	1.63	1508.98	24.82
	3	2400.18	15.39	19.71	1.78	1688.87	27.82
	8	2402.10	15.39	19.71	2.41	1689.87	27.82
	9	2402.37	15.39	19.71	2.80	1689.87	27.82
	OLD GAS 1	3639.70	37.05	29.85	1.60		
NPC REGION-MIDCONTINENT INTERSTATE GAS							
	OLD GAS 1	1513.00	15.43	10.14	1.59		
NPC REGION-MI. BASIN AND INT. INTERSTATE GAS							
	OLD GAS 1	.15	.00		1.46		
NPC REGION-APPALACHIA INTERSTATE GAS							
	OLD GAS 1	317.11	6.05	3.33	1.69		
NPC REGION-ATLANTIC OCEAN INTERSTATE GAS							
	NEW GAS 1	218.20	4.19	1.68	1.67	114.99	.98
	4	221.21	4.29	1.68	2.11	122.99	.98
	5	222.31	4.29	1.68	1.91	127.99	.98
	7	229.15	4.39	1.78	2.61	136.99	.98
	9	230.25	4.39	1.78	2.80	139.99	.98
DOE REGION-N.Y./N.J. INTRASTATE GAS							
	OLD GAS 1	2.13	.04	.02	1.69		

TABLE 7
(CONTINUED)
GAS SUPPLY CURVES FOR 1985

	PRICE STEP	NATURAL GAS (MMCF/D)	BUTANE (MMBL/D)	GAS LIQUIDS (MMBL/D)	BUNDLE PRICE (\$/MCF GAS)	CAPITAL (MM\$)	DRILLING (MMFT)
DOE REGION-MID-ATLANTIC INTRASTATE GAS							
OLD GAS	1	123.98	2.37	1.30	1.69		
DOE REGION-SOUTH ATLANTIC INTRASTATE GAS							
NEW GAS	1	67.85	.83	1.06	1.68	52.33	2.33
	2	73.07	.89	1.14	1.75	56.93	2.53
	3	80.54	.98	1.26	1.89	63.73	2.82
	4	91.25	1.11	1.42	2.05	73.85	3.27
	5	100.79	1.23	1.57	2.22	83.45	3.66
	6	108.60	1.33	1.69	2.40	91.77	4.02
	7	114.14	1.39	1.78	2.59	97.96	4.27
	9	116.35	1.42	1.81	3.26	100.75	4.37
OLD GAS	1	73.46	1.43	.99	1.72		
DOE REGION-MIDWEST INTRASTATE GAS							
OLD GAS	1	92.84	.84	.41	1.56		
DOE REGION-SOUTHWEST INTRASTATE GAS							
NEW GAS	1	10231.00	134.03	138.12	1.67	9173.54	373.43
	2	10778.65	140.98	145.90	1.74	8666.86	395.06
	3	11565.35	150.74	156.75	1.88	9396.37	427.24
	4	12846.45	166.75	174.17	2.03	10634.16	483.99
	5	13942.64	180.56	189.19	2.20	11777.83	533.76
	6	14689.59	189.75	199.80	2.38	12575.12	567.90
	7	15396.60	198.66	209.34	2.57	13381.61	603.17
	8	15443.57	199.22	209.80	2.71	13438.07	604.98
	9	15646.74	201.07	212.16	3.14	13711.66	616.73
OLD GAS	1	5303.40	71.60	54.63	1.64		

TABLE 7
(CONTINUED)
GAS SUPPLY CURVES FOR 1985

	PRICE STEP	NATURAL GAS (MMCF/D)	BUTANE (MMBL/D)	GAS LIQUIDS (MMBL/D)	BUNDLE PRICE (\$/MCF GAS)	CAPITAL (MM\$)	DRILLING (MMPT)
DOE REGION-CENTRAL INTRASTATE GAS							
NEW GAS	1	668.30	7.89	6.95	1.63	539.25	27.40
	2	691.47	8.13	7.16	1.67	560.32	28.53
	3	726.60	8.47	7.46	1.80	593.98	30.03
	4	800.91	9.23	8.13	1.96	666.97	33.79
	5	854.57	9.80	8.62	2.13	724.52	36.61
	6	884.75	10.08	8.86	2.27	756.88	38.11
	7	927.29	10.54	9.28	2.50	806.16	40.55
	8	933.16	10.58	9.31	2.59	813.68	40.74
	9	934.70	10.58	9.31	2.80	816.50	40.74
OLD GAS	1	335.85	3.43	2.25	1.59		
DOE REGION-NORTH CENTRAL INTRASTATE GAS							
NEW GAS	4	84.05	.90	.80	1.97	98.00	4.99
	5	210.81	2.40	2.19	2.16	256.99	11.99
	6	327.99	3.68	3.48	2.33	410.99	18.99
	7	409.03	4.58	4.28	2.50	521.98	24.98
	8	497.74	5.58	5.17	2.71	646.98	30.98
	9	610.31	6.69	6.16	3.11	816.73	39.12
OLD GAS	1	308.25	3.95	2.68	1.53		
DOE REGION-WEST INTRASTATE GAS							
NEW GAS	3	120.46	1.00	1.49	1.83	134.99	6.00
	4	222.85	1.89	2.78	1.99	257.98	11.00
	5	263.10	2.19	3.28	2.13	307.98	12.99
	6	335.10	2.89	4.18	2.33	400.97	16.99
	7	388.22	3.29	4.87	2.50	473.97	19.98
	8	404.37	3.38	5.07	2.67	496.97	19.98
	9	436.95	3.68	5.47	3.15	542.97	21.98
OLD GAS	1	208.62			1.44		

TABLE 8
GAS SUPPLY CURVES FOR 1990

		PRICE STEP	NATURAL GAS (MMCF/D)	BUTANE (MMBL/D)	GAS LIQUIDS (MMBL/D)	BUNDLE PRICE (\$/MCF GAS)	CAPITAL (MM\$)	DRILLING (MMFT)
NPC REGION-SOUTH ALASKA INTERSTATE GAS								
NEW GAS	2		45.17			1.50	19.00	
	3		122.30			1.63	51.99	
	4		178.23			1.76	85.99	1.00
	5		233.54			1.91	127.99	1.00
	6		251.06			2.06	199.99	1.00
	7		302.53			2.23	273.98	1.00
	9		349.35			2.80	349.98	2.00
OLD GAS	1		233.53			1.44		
NPC REGION-PACIFIC OCEAN INTERSTATE GAS								
NEW GAS	1		135.52	1.19	1.69	1.62	61.00	.99
	4		135.79	1.19	1.69	1.76	61.00	.99
	6		138.26	1.19	1.69	2.06	61.00	.99
	8		139.35	1.19	1.69	2.41	61.00	.99
	9		149.48	1.29	1.79	3.12	61.00	.99
OLD GAS	5		9.86			1.91		
NPC REGION-WEST ROCKIES INTERSTATE GAS								
OLD GAS	1		459.25	.73	.46	1.47		
NPC REGION-EAST ROCKIES INTERSTATE GAS								
OLD GAS	1		160.47			1.44		
NPC REGION-W. TEX./E. N. MEX. INTERSTATE GAS								
OLD GAS	1		125.84			1.44		

VINTAGE (OLD, NEW) INDICATES WHETHER GAS WELLS DRILLED BEFORE OR AFTER 1/1/77 (NOTE DIFFERENCE FROM LEGAL DEFINITION OF GAS VINTAGE).

ALL QUANTITIES (PRODUCTION, INVESTMENT AND DRILLING) ARE CUMULATIVE OVER PRICE STEPS.

PRICE STEPS WITH NO ADDITIONAL PRODUCTION OVER PREVIOUS STEP ARE OMITTED.

BUNDLE PRICE = (TOTAL VALUE OF ALL PRODUCTS IN INCREMENT OVER PREVIOUS PRICE STEP) / (QUANTITY OF NATURAL GAS IN THAT INCREMENT).

CAPITAL INVESTMENT AND DRILLING STATISTICS ARE CUMULATIVE FROM 1977 TO 1989.

TABLE 8
(CONTINUED)
GAS SUPPLY CURVES FOR 1990

	PRICE STEP	NATURAL GAS (MMCF/D)	BUTANE (MMBBL/D)	GAS LIQUIDS (MMBBL/D)	BUNDLE PRICE (\$/MCF GAS)	CAPITAL (MM\$)	DRILLING (MMPT)
NPC REGION-GULF COAST INTERSTATE GAS							
	OLD GAS 1	1278.10	25.18	19.94	1.74		
NPC REGION-GULF OF MEXICO INTERSTATE GAS							
	NEW GAS 1	1580.50	10.27	12.96	1.57	1320.82	21.97
	2	2294.53	14.84	18.74	1.63	1611.79	26.97
	3	3216.36	20.83	26.39	1.77	2120.73	34.89
	4	3299.04	21.33	26.99	1.90	2387.73	38.89
	8	3300.96	21.33	26.99	2.41	2388.73	38.89
	OLD GAS 1	1946.80	20.25	15.96	1.60		
NPC REGION-MIDCONTINENT INTERSTATE GAS							
	OLD GAS 1	809.27	8.25	5.42	1.59		
NPC REGION-MI. BASIN AND INT. INTERSTATE GAS							
	OLD GAS 1	.06			1.44		
NPC REGION-APPALACHIA INTERSTATE GAS							
	OLD GAS 2	196.22	3.77	2.10	1.77		
NPC REGION-ATLANTIC OCEAN INTERSTATE GAS							
	NEW GAS 1	236.82	3.69	1.49	1.63	114.98	.99
	2	255.16	3.69	1.49	1.50	123.98	.99
	3	268.31	3.69	1.49	1.63	134.98	.99
	4	284.18	3.79	1.49	1.83	148.97	.99
	5	295.68	3.79	1.49	1.91	165.97	.99
	6	298.97	3.79	1.49	2.06	170.97	.99
	7	311.29	3.89	1.59	2.44	193.97	.99
	9	316.49	3.89	1.59	2.80	207.97	.99
DOE REGION-N.Y./N.J. INTRASTATE GAS							
	OLD GAS 2	1.32	.03	.01	1.77		

TABLE 8
(CONTINUED)
GAS SUPPLY CURVES FOR 1990

	PRICE STEP	NATURAL GAS (MMCF/D)	BUTANE (MGBL/D)	GAS LIQUIDS (MGBL/D)	BUNDLE PRICE (\$/MCF GAS)	CAPITAL (MM\$)	DRILLING (MM\$)
DOE REGION-MID-ATLANTIC INTRASTATE GAS							
OLD GAS	2	76.72	1.47	.82	1.77		
DOE REGION-SOUTH ATLANTIC INTRASTATE GAS							
NEW GAS	1	36.11	.44	.56	1.68	57.23	2.54
	2	53.14	.65	.83	1.75	65.03	2.90
	3	71.47	.87	1.11	1.89	78.99	3.49
	4	84.91	1.04	1.32	2.05	95.53	4.20
	5	96.34	1.18	1.50	2.22	110.59	4.83
	6	106.66	1.30	1.66	2.40	126.47	5.50
	7	114.73	1.40	1.79	2.59	139.11	6.00
	8	117.23	1.43	1.83	2.79	142.28	6.13
	9	124.67	1.52	1.94	3.25	153.94	6.59
OLD GAS	1	21.98	.43	.34	1.74		
	2	40.85	.80	.54	1.77		
DOE REGION-MIDWEST INTRASTATE GAS							
OLD GAS	1	22.11			1.44		
	2	46.28	.46	.26	1.77		
DOE REGION-SOUTHWEST INTRASTATE GAS							
NEW GAS	1	5631.90	74.34	76.03	1.67	8928.24	408.88
	2	7667.60	98.36	102.49	1.72	9809.29	448.98
	3	9881.89	125.60	131.94	1.87	11600.88	528.47
	4	11489.19	145.21	153.32	2.03	13705.96	622.50
	5	12824.69	161.63	171.35	2.20	15577.53	703.96
	6	13803.86	173.48	184.86	2.38	17062.73	768.39
	7	14873.56	186.43	198.98	2.56	18893.09	847.02
	8	15233.16	190.60	203.44	2.75	19407.39	869.17
	9	16137.72	200.64	214.30	3.18	20778.67	928.96
OLD GAS	1	2687.80	37.09	28.22	1.65		

TABLE 4
(CONTINUED)
GAS SUPPLY CURVES FOR 1980

	PRICE STEP	NATURAL GAS (MMCF/D)	BUTANE (MMBL/D)	GAS LIQUIDS (MMBL/D)	BUNDLE PRICE (\$/MCF GAS)	CAPITAL (MM\$)	DRILLING (MMPT)
DOE REGION-CENTRAL INTRASTATE GAS							
NEW GAS	1	377.38	4.49	3.96	1.63	588.90	30.08
	2	498.14	5.44	4.01	1.63	638.93	32.52
	3	603.55	6.31	5.54	1.77	733.35	37.22
	4	694.19	7.12	6.26	1.94	859.56	43.42
	5	762.42	7.73	6.80	2.10	959.31	48.30
	6	800.17	8.05	7.05	2.25	1015.68	51.12
	7	866.76	8.63	7.59	2.45	1137.56	56.95
	8	890.96	8.81	7.75	2.61	1175.56	58.64
	9	933.45	9.11	7.99	3.01	1239.13	61.65
OLD GAS	1	179.63	1.83	1.20	1.59		
DOE REGION-NORTH CENTRAL INTRASTATE GAS							
NEW GAS	4	94.18	1.09	1.00	1.99	128.99	6.00
	5	226.41	2.40	2.29	2.14	342.97	16.00
	6	371.51	4.18	3.79	2.33	582.95	27.98
	7	458.03	5.08	4.78	2.52	731.94	34.98
	8	564.53	6.27	5.77	2.70	928.94	43.98
	9	718.85	7.88	7.29	3.13	1229.98	58.69
OLD GAS	1	204.91	.06	.02	1.45		
DOE REGION-WEST INTRASTATE GAS							
NEW GAS	3	110.33	.89	1.39	1.83	162.99	6.99
	4	217.92	1.88	2.68	1.98	310.97	13.99
	5	272.95	2.28	3.48	2.15	417.97	16.99
	6	345.78	2.88	4.27	2.30	541.96	21.98
	7	413.95	3.48	5.17	2.52	665.96	26.98
	8	440.21	3.78	5.47	2.73	713.96	28.98
	9	496.91	4.17	6.17	3.12	816.96	33.98
OLD GAS	1	129.22			1.44		

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.
CAPITAL FIGURES ARE DERIVED FROM DATA GATHERED BY THE AMERICAN PETROLEUM INSTITUTE ANNUAL PUBLICATION, "JOINT ASSOCIATION SURVEY OF THE U.S. OIL AND GAS PRODUCING INDUSTRY FOR 1975". THESE DATA ARE USED AS INPUT TO THE PIES OIL AND GAS MODEL.
FOOTAGE DRILLED DATA FROM SECTION 1, DRILLING COSTS OF THE U.S. OIL AND GAS PRODUCING INDUSTRIES PUBLISHED IN THE JOINT ASSOCIATION AMERICAN PETROLEUM COUNCIL, THE AMERICAN GAS ASSOCIATION, AND VARIOUS OTHER ENERGY RELATED INDUSTRIES. THE DATA IS INPUT TO THE PIES OIL AND GAS MODEL AND THE ABOVE FIGURES ARE CALCULATED THERE. OTHER SOURCES INCLUDE "QUARTERLY REVIEW OF DRILLING STATISTICS", AMERICAN PETROLEUM INSTITUTE, WASHINGTON, D.C.

FOR INITIAL EXPLORATORY FOOTAGE AND "U.S. ENERGY OUTLOOK- OIL AND GAS AVAILABILITY", WASHINGTON, D.C., 1973.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSTS, EIA.

TABLE 9
DISTRIBUTION OF INTERSTATE GAS IN 1985
(MMCF/D)

	DOE REGION									
NPC REGION	NEW ENG.	NY/NJ	MID-ATL.	S.-ATL.	MIDWEST	S.-WEST	CENTRAL	N.-CNTRL.	WEST	N.-WEST
PACIFIC COAST										
PACIFIC OCEAN									353	
WEST ROCKIES						27		174	520	40
EAST ROCKIES					27		44	267	6	8
W. TEX./E. N. MEX.				18	131	142	126	9	445	
GULF COAST	106	343	460	852	1044	536	93			
GULF OF MEXICO	245	782	1040	1418	2506	590	46			
MIDCONTINENT		22	31	37	743	225	624	109	38	
MI. BASIN AND INT.					12					
APPALACHIA		88	118	23	99					
ATLANTIC COAST										
ATLANTIC OCEAN	34	121	154	113						
NORTH SLOPE	37	119	158	249	721	134	114	22	606	42
SOUTH ALASKA									483	

QUANTITIES GIVEN DO NOT SHOW EFFECT OF TRANSPORTATION LOSSES.

STATED DISTRIBUTION OF NORTH SLOPE GAS TO THE EAST COAST REPRESENTS NET EFFECT OF DISPLACEMENT.

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

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TABLE 10
INTERSTATE GAS DELIVERIES IN 1985

	DOE REGION									
	NEW ENG. NY/NJ	MTD-ATL.	S.-ATL.	MIDWEST	S.-WEST	CENTRAL	N.-CNTRL	WEST	N.-WEST	
LOWER 48 AND S. ALASKA										
QUANTITY DELIVERED (MMCF/D)	358	1277	1715	2394	4367	1490	916	548	1731	45
AVERAGE PRICE (\$/MCF)	1.56	1.40	1.32	1.09	1.13	.84	.68	.65	1.20	1.05
ALASKAN NORTH SLOPE										
QUANTITY DELIVERED (MMCF/D)	34	108	145	235	667	129	107	21	577	40
DELIVERED PRICE (\$/MCF)	3.05	3.01	2.94	2.76	2.89	2.61	2.81	2.69	2.68	2.52

STATED DISTRIBUTION OF NORTH SLOPE GAS TO THE EAST COAST REPRESENTS NET EFFECT OF DISPLACEMENT.

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 11
DISTRIBUTION OF INTERSTATE GAS IN 1990
(MMCF/D)

	DOE REGION									
NPC REGION	NEW ENG.	NY/NJ	MID-ATL.	S.-ATL.	MIDWEST	S.-WEST	CENTRAL	N.-CNTRL	WEST	N.-WEST
PACIFIC COAST										
PACIFIC OCEAN									402	
WEST ROCKIES						19		119	356	28
EAST ROCKIES					18		30	178	4	5
W. TEX./E. N. MEX.				11	78	84	75	5	263	
GULF COAST	50	195	261	483	593	304	53			
GULF OF MEXICO	212	677	901	1228	2170	511	40			
MIDCONTINENT		13	18	21	430	130	361	64	22	
MI. BASIN AND INT.					10					
APPALACHIA		55	74	14	62					
ATLANTIC COAST										
ATLANTIC OCEAN	43	153	195	143						
NORTH SLOPE	41	131	174	274	793	147	126	24	667	46
SOUTH ALASKA									573	

QUANTITIES GIVEN DO NOT SHOW EFFECT OF TRANSPORTATION LOSSES.

STATED DISTRIBUTION OF NORTH SLOPE GAS TO THE EAST COAST REPRESENTS NET EFFECT OF DISPLACEMENT.

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

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TABLE 12
INTERSTATE GAS DELIVERIES IN 1990

	DOE REGION									
	NEW ENG. NY/NJ	MID-ATL.	S.-ATL.	MIDWEST	S.-WEST	CENTRAL	N.-CNTRL	WEST	N.-WEST	
<hr/>										
LOWER 48 AND S. ALASKA										
QUANTITY DELIVERED (MMCF/D)	294	1032	1382	1852	3219	1027	547	359	1517	31
AVERAGE PRICE (\$/MCF)	1.76	1.61	1.52	1.29	1.34	1.00	.72	.65	1.31	1.05
<hr/>										
ALASKAN NORTH SLOPE										
QUANTITY DELIVERED (MMCF/D)	37	118	159	258	733	142	117	23	635	44
DELIVERED PRICE (\$/MCF)	2.58	2.54	2.48	2.31	2.44	2.18	2.46	2.35	2.33	2.18

STATED DISTRIBUTION OF NORTH SLOPE GAS TO THE EAST COAST REPRESENTS NET EFFECT OF DISPLACEMENT.

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 13
OIL WELL DRILLING, INVESTMENT AND PRODUCTION
SUMMARY FOR 1985

NPC REGION	CRUDE OIL	INTERSTATE GAS	INTRASTATE GAS	CAPITAL	DRILLING
	(MMBL/D)	(MMCF/D)	(MMCF/D)	1977-1984 (MM\$)	1977-1984 (MMFT)
SOUTH ALASKA	235	98		658	3
PACIFIC COAST	819			4383	132
PACIFIC OCEAN	209	295		707	6
WEST ROCKIES	248	100		1428	56
EAST ROCKIES	492	109		1618	97
W. TEX./E. N. MEX.	1425	541		2348	33
GULF COAST	1817	939		3678	111
GULF OF MEXICO	525	590		1727	35
MIDCONTINENT	465	320		2597	155
MT. B./ INT./ APP.	192	24		699	49
ATLANTIC COAST	27			87	5
ATLANTIC OCEAN	267	203		767	6
NORTH SLOPE	2432	3168		13795	12054
DOE REGION					
NEW ENGLAND					
N.Y./N.J.			1		
MID-ATLANTIC			30		
SOUTH ATLANTIC			28		
MIDWEST			17		
SOUTHWEST			2275		
CENTRAL			83		
NORTH CENTRAL			207		
WEST			226		
NORTHWEST					

NATIONAL TOTAL 9151 6386 2867 34492 12742

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C. CAPITAL FIGURES ARE DERIVED FROM DATA GATHERED BY THE AMERICAN PETROLEUM INSTITUTE ANNUAL PUBLICATION, "JOINT ASSOCIATION SURVEY OF THE U.S. OIL AND GAS PRODUCING INDUSTRY FOR 1975". THESE DATA ARE USED AS INPUT TO THE PIES OIL AND GAS MODEL. FOOTAGE DRILLED DATA FROM SECTION 1, DRILLING COSTS OF THE U.S. OIL AND GAS PRODUCING INDUSTRIES PUBLISHED IN THE JOINT ASSOCIATION AMERICAN PETROLEUM COUNCIL, THE AMERICAN GAS ASSOCIATION, AND VARIOUS OTHER ENERGY RELATED INDUSTRIES. THE DATA IS INPUT TO THE PIES OIL AND GAS MODEL AND THE ABOVE FIGURES ARE CALCULATED THERE. OTHER SOURCES INCLUDE "QUARTERLY REVIEW OF DRILLING STATISTICS", AMERICAN PETROLEUM INSTITUTE, WASHINGTON, D.C. FOR INITIAL EXPLORATORY FOOTAGE AND "U.S. ENERGY OUTLOOK- OIL AND GAS AVAILABILITY", WASHINGTON, D.C., 1973.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 14
OIL WELL DRILLING, INVESTMENT AND PRODUCTION
SUMMARY FOR 1990

NPC REGION	CRUDE OIL (MMBL/D)	INTERSTATE GAS (MMCF/D)	INTRASTATE GAS (MMCF/D)	CAPITAL 1977-1989 (MMS)	DRILLING 1977-1989 (MMPT)
SOUTH ALASKA	256	106		884	3
PACIFIC COAST	693			5632	159
PACIFIC OCEAN	189	257		1257	11
WEST ROCKIES	178	63		1848	68
EAST ROCKIES	348	75		2129	115
W. TEX./E. N. MEX.	1039	390		4254	42
GULF COAST	1297	673		5504	134
GULF OF MEXICO	432	496		2689	53
MIDCONTINENT	363	251		3394	187
MI. B./ INT./ APP.	149	19		954	59
ATLANTIC COAST	15			105	7
ATLANTIC OCEAN	317	240		1263	10
NORTH SLOPE	2898	3253		19302	17484
DOE REGION					
NEW ENGLAND					
N.Y./N.J.					
MID-ATLANTIC			25		
SOUTH ATLANTIC			21		
MIDWEST			14		
SOUTHWEST			1669		
CENTRAL			63		
NORTH CENTRAL			163		
WEST			191		
NORTHWEST					

NATIONAL TOTAL 8176 5925 2147 49155 18332

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.
CAPITAL FIGURES ARE DERIVED FROM DATA GATHERED BY THE AMERICAN PETROLEUM INSTITUTE ANNUAL PUBLICATION, "JOINT ASSOCIATION SURVEY OF THE U.S. OIL AND GAS PRODUCING INDUSTRY FOR 1975". THESE DATA ARE USED AS INPUT TO THE PIES OIL AND GAS MODEL. FOOTAGE DRILLED DATA FROM SECTION 1, DRILLING COSTS OF THE U.S. OIL AND GAS PRODUCING INDUSTRIES PUBLISHED IN THE JOINT ASSOCIATION AMERICAN PETROLEUM COUNCIL, THE AMERICAN GAS ASSOCIATION, AND VARIOUS OTHER ENERGY RELATED INDUSTRIES. THE DATA IS INPUT TO THE PIES OIL AND GAS MODEL AND THE ABOVE FIGURES ARE CALCULATED THERE. OTHER SOURCES INCLUDE "QUARTERLY REVIEW OF DRILLING STATISTICS", AMERICAN PETROLEUM INSTITUTE, WASHINGTON, D.C. FOR INITIAL EXPLORATORY FOOTAGE AND "U.S. ENERGY OUTLOOK- OIL AND GAS AVAILABILITY", WASHINGTON, D.C., 1971.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 15
NON-ASSOCIATED INTERSTATE GAS
PRODUCTION SUMMARY
IN 1985
(MMCF/D)

NPC REGION	PRICE STEP								
	1	2	3	4	5	6	7	8	9
SOUTH ALASKA	298	321	343	359	385	392	416	416	439
PACIFIC OCEAN	56	56	58	58	59	74	74	74	101
WEST ROCKIES	663	663	663	663	663	663	663	663	663
EAST ROCKIES	244	244	244	244	244	244	244	244	244
W. TEX./E. N. MEX.	333	333	333	333	333	333	333	333	333
GULF COAST	2498	2498	2498	2498	2498	2498	2498	2498	2498
GULF OF MEXICO	5643	5862	6040	6040	6040	6040	6040	6042	6042
MIDCONTINENT	1513	1513	1513	1513	1513	1513	1513	1513	1513
MI. BASIN AND INT.									
APPALACHIA	317	317	317	317	317	317	317	317	317
ATLANTIC OCEAN	218	218	218	221	222	222	229	229	230
NATIONAL TOTAL	11783	12025	12227	12246	12274	12296	12327	12329	12380

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 16
NON-ASSOCIATED INTERSTATE GAS
PRODUCTION SUMMARY
IN 1990
(MMCF/D)

NPC REGION	PRICE STEP								
	1	2	3	4	5	6	7	8	9
SOUTH ALASKA	234	279	356	412	467	485	536	536	583
PACIFIC OCEAN	136	136	136	136	146	148	148	149	159
WEST ROCKIES	459	459	459	459	459	459	459	459	459
EAST ROCKIES	160	160	160	160	160	160	160	160	160
W. TEX./E. N. MEX.	126	126	126	126	126	126	126	126	126
GULF COAST	1278	1278	1278	1278	1278	1278	1278	1278	1278
GULF OF MEXICO	3527	4241	5163	5246	5246	5246	5246	5248	5248
MIDCONTINENT	809	809	809	809	809	809	809	809	809
MI. BASIN AND INT.									
APPALACHIA		196	196	196	196	196	196	196	196
ATLANTIC OCEAN	237	255	268	284	296	299	311	311	316
NATIONAL TOTAL	6966	7940	8952	9107	9183	9207	9271	9274	9336

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 17
NON-ASSOCIATED INTRASTATE GAS
PRODUCTION SUMMARY
IN 1985
(MMCF/D)

DOE REGION	PRICE STEP								
	1	2	3	4	5	6	7	8	9
N.Y./N.J.	2	2	2	2	2	2	2	2	2
MID-ATLANTIC	124	124	124	124	124	124	124	124	124
SOUTH ATLANTIC	141	147	154	165	174	182	188	188	190
MIDWEST	93	93	93	93	93	93	93	93	93
SOUTHWEST	15534	16082	16869	18150	19246	19993	20700	20747	20950
CENTRAL	1004	1027	1062	1137	1190	1221	1263	1269	1271
NORTH CENTRAL	308	308	308	392	519	636	717	806	919
WEST	209	209	329	431	472	544	597	613	646
NATIONAL TOTAL	17416	17992	18941	20494	21820	22795	23684	23842	24194

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 10
NON-ASSOCIATED INTRASTATE GAS
PRODUCTION SUMMARY
IN 1990
(MMCF/D)

DOE REGION	PRICE STEP								
	1	2	3	4	5	6	7	8	9
N.Y./N.J.		1	1	1	1	1	1	1	1
MID-ATLANTIC		77	77	77	77	77	77	77	77
SOUTH ATLANTIC	58	94	112	126	137	148	156	158	166
MIDWEST	22	46	46	46	46	46	46	46	46
SOUTHWEST	8120	10355	12570	14177	15512	16492	17561	17921	18826
CENTRAL	557	678	783	874	942	980	1046	1071	1113
NORTH CENTRAL	205	205	205	299	431	576	663	769	924
WEST	129	129	240	347	402	475	543	569	626
NATIONAL TOTAL	9291	11586	14034	15947	17550	18795	20094	20613	21778

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 19
CAPITAL INVESTMENT SUMMARY FOR GAS WELLS
FROM 1977 THRU 1984
(MM\$)

NPC REGION	PRICE STEP								
	1	2	3	4	5	6	7	8	9
SOUTH ALASKA	33	52	85	119	161	174	217	217	258
PACIFIC OCEAN	31	31	31	31	31	31	31	31	35
GULF OF MEXICO	1321	1509	1689	1689	1689	1689	1689	1690	1690
ATLANTIC OCEAN	115	115	115	123	128	128	137	137	140
DOE REGION									
SOUTH ATLANTIC	52	57	64	74	83	92	98	98	101
SOUTHWEST	8174	8667	9396	10634	11778	12575	13382	13438	13712
CENTRAL	539	560	594	667	725	757	806	814	817
NORTH CENTRAL				98	257	411	522	647	817
WEST			135	258	308	401	474	497	543
NATIONAL TOTAL	10265	10991	12109	13693	15160	16258	17356	17568	18111

DATA SOURCES: CAPITAL FIGURES ARE DERIVED FROM DATA GATHERED BY THE AMERICAN PETROLEUM INSTITUTE ANNUAL PUBLICATION, "JOINT ASSOCIATION SURVEY OF THE U.S. OIL AND GAS PRODUCING INDUSTRY FOR 1975". THESE DATA ARE USED AS INPUT TO THE PIES OIL AND GAS MODEL.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 20
CAPITAL INVESTMENT SUMMARY FOR GAS WELLS
FROM 1977 THRU 1989
(MM\$)

NPC REGION	PRICE STEP								
	1	2	3	4	5	6	7	8	9
SOUTH ALASKA		19	52	86	128	230	274	274	350
PACIFIC OCEAN	61	61	61	61	61	61	61	61	61
GULF OF MEXICO	1321	1612	2121	2388	2388	2388	2388	2389	2389
ATLANTIC OCEAN	115	124	135	149	166	171	194	194	208
DOE REGION									
SOUTH ATLANTIC	57	65	79	96	111	126	139	142	154
SOUTHWEST	8928	9809	11601	13706	15578	17063	18893	19408	20779
CENTRAL	589	639	733	860	960	1016	1138	1176	1239
NORTH CENTRAL				129	343	583	732	929	1230
WEST			163	331	418	542	666	714	817
NATIONAL TOTAL	11071	12329	14945	17805	20152	22149	24484	25286	27226

DATA SOURCES: CAPITAL FIGURES ARE DERIVED FROM DATA GATHERED BY THE AMERICAN PETROLEUM INSTITUTE ANNUAL PUBLICATION, "JOINT ASSOCIATION SURVEY OF THE U.S. OIL AND GAS PRODUCING INDUSTRY FOR 1975". THESE DATA ARE USED AS INPUT TO THE PIES OIL AND GAS MODEL.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 21
DRILLING SUMMARY FOR GAS WELLS
FROM 1977 THRU 1984
(MMFT)

NPC REGION	PRICE STEP								
	1	2	3	4	5	6	7	8	9
SOUTH ALASKA				1	1	1	1	1	1
GULF OF MEXICO	22	25	28	28	28	28	28	28	28
ATLANTIC OCEAN	1	1	1	1	1	1	1	1	1
DOE REGION									
SOUTH ATLANTIC	2	3	3	3	4	4	4	4	4
SOUTHWEST	373	395	427	484	514	568	603	605	617
CENTRAL	27	29	30	34	37	39	41	41	41
NORTH CENTRAL				5	12	19	25	31	39
WEST			6	11	13	17	20	20	22
NATIONAL TOTAL	426	452	495	567	629	676	723	731	753

SOURCE: FOOTAGE DRILLED DATA FROM SECTION 1, DRILLING COSTS OF THE U.S. OIL AND GAS PRODUCING INDUSTRIES PUBLISHED IN THE JOINT ASSOCIATION AMERICAN PETROLEUM COUNCIL, THE AMERICAN GAS ASSOCIATION, AND VARIOUS OTHER ENERGY RELATED INDUSTRIES. THE DATA IS INPUT TO THE PIES OIL AND GAS MODEL AND THE ABOVE FIGURES ARE CALCULATED THERE. OTHER SOURCES INCLUDE "QUARTERLY REVIEW OF DRILLING STATISTICS", AMERICAN PETROLEUM INSTITUTE, WASHINGTON, D.C. FOR INITIAL EXPLORATORY FOOTAGE AND "U.S. ENERGY OUTLOOK- OIL AND GAS AVAILABILITY", WASHINGTON, D.C., 1973.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, ETC.

TABLE 22
DRILLING SUMMARY FOR GAS WELLS
FROM 1977 THRU 1989
(MMPT)

NPC REGION	PRICE STEP								
	1	2	3	4	5	6	7	8	9
SOUTH ALASKA				1	1	1	1	1	2
PACIFIC OCEAN	1	1	1	1	1	1	1	1	1
GULF OF MEXICO	22	27	35	39	39	39	39	39	39
ATLANTIC OCEAN	1	1	1	1	1	1	1	1	1
DOE REGION									
SOUTH ATLANTIC	3	3	3	4	5	5	6	6	7
SOUTHWEST	409	449	528	622	704	768	847	869	929
CENTRAL	30	33	37	43	48	51	57	59	62
NORTH CENTRAL				6	16	28	35	44	59
WEST			7	14	17	22	27	29	34
NATIONAL TOTAL	465	513	613	732	832	917	1014	1049	1133

SOURCE: FOOTAGE DRILLED DATA FROM SECTION 1, DRILLING COSTS OF THE U.S. OIL AND GAS PRODUCING INDUSTRIES PUBLISHED IN THE JOINT ASSOCIATION AMERICAN PETROLEUM COUNCIL, THE AMERICAN GAS ASSOCIATION, AND VARIOUS OTHER ENERGY RELATED INDUSTRIES. THE DATA IS INPUT TO THE PIES OIL AND GAS MODEL AND THE ABOVE FIGURES ARE CALCULATED THERE. OTHER SOURCES INCLUDE "QUARTERLY REVIEW OF DRILLING STATISTICS", AMERICAN PETROLEUM INSTITUTE, WASHINGTON, D.C. FOR INITIAL EXPLORATORY FOOTAGE AND "U.S. ENERGY OUTLOOK- OIL AND GAS AVAILABILITY", WASHINGTON, D.C., 1973.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY
SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 2J
OIL AND GAS SUPPLY AT THE HIGHEST PRICE STEPS
IN 1985

NPC REGION	CRUDE PETROLEUM (MMBL/D)	INTERSTATE GAS (MMCF/D)	INTRASTATE GAS (MMCF/D)	BUTANE (MMBL/D)	OTHER GAS LIQUIDS (MMBL/D)
SOUTH ALASKA	235	536			
PACIFIC COAST	819			9	8
PACIFIC OCEAN	209	396		9	8
WEST ROCKIES	248	764		22	19
EAST ROCKIES	492	353		28	15
W. TEX./E. N. MEX.	1425	874		132	92
GULF COAST	1817	3437		304	202
GULF OF MEXICO	525	6632		70	60
MIDCONTINENT	465	1833		106	93
MI. D./INT./APP.	192	341		10	6
ATLANTIC COAST	27			1	1
ATLANTIC OCEAN	267	433		14	2
NORTH SLOPE	2432	3168			
DOE REGION					
NEW ENGLAND					
N.Y./N.J.			3		
MID-ATLANTIC			154		
SOUTH ATLANTIC			218		
MIDWEST			110		
SOUTHWEST			23225		
CENTRAL			1354		
NORTH CENTRAL			1126		
WEST			872		
NORTHWEST					

NATIONAL TOTAL 9151 18766 27061 706 505

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 24
OIL AND GAS SUPPLY AT THE HIGHEST PRICE STEPS
IN 1990

NPC REGION	CRUDE PETROLEUM (MBBL/D)	INTERSTATE GAS (MMCF/D)	INTRASTATE GAS (MMCF/D)	BUTANE (MGBL/D)	OTHER GAS LIQUIDS (MBBL/D)
SOUTH ALASKA	256	689			
PACIFIC COAST	693			9	8
PACIFIC OCEAN	189	416		9	7
WEST ROCKIES	178	522		17	16
EAST ROCKIES	348	236		19	10
W. TEX./E. N. MEX.	1039	516		110	81
GULF COAST	1297	1951		227	160
GULF OF MEXICO	432	5744		53	50
MIDCONTINENT	363	1060		85	79
MI. B./INT./APP.	149	216		6	4
ATLANTIC COAST	15			1	
ATLANTIC OCEAN	317	557		15	2
NORTH SLOPE	2898	3253			
DOE REGION					
NEW ENGLAND					
N.Y./N.J.			2		
MID-ATLANTIC			102		
SOUTH ATLANTIC			187		
MIDWEST			61		
SOUTHWEST			20894		
CENTRAL			1176		
NORTH CENTRAL			1087		
WEST			417		
NORTHWEST					

NATIONAL TOTAL 8176 15161 23425 552 418

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 25
BREAKDOWN OF REGIONAL PRODUCTION BY CRUDE TYPE
(FRACTION OF REGIONAL CRUDE PRODUCTION)

	NPC REGION												
CRUDE TYPE	1S	2	2A	3	4	5	6	6A	7	8-10	11	11A	1N
SOUTH ALASKAN	1.00												
WEST COAST LIGHT		.39											
PACIFIC OFFSHORE			1.00										
WYOMING MIX				.80	.86								
LOUISIANA ONSHORE							.48						
LOUISIANA OFFSHORE								1.00					
TEXAS GULF COAST							.40						
EAST TEXAS MIX							.10						
WEST TEXAS MIX				.20		1.00	.02		.07				
PAD III HEAVY CRUDE					.14								
PAD II INDIGENOUS										.91			
OKLAHOMA MIX									.93				
PAD I INDIGENOUS										.09	1.00	1.00	
WEST COAST HEAVY		.61											
ALASKAN NORTH SLOPE													1.00

DATA SOURCES : OIL AND GAS JOURNAL, PETROLEUM ENCYCLOPEDIA FOR 1975.
OFFICE RESPONSIBLE : OIL & GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS,
APPLIED ANALYSIS, DOE

TABLE 26
SPLITTING FACTORS FOR INTRASTATE ASSOCIATED
AND DISSOLVED GAS

NPC REGION	DOE REGION						
	NY/NJ	MID-ATL.	S.-ATL.	MIDWEST	S.-WEST	CENTRAL	N.-CNTRL WEST
PACIFIC COAST							1.00
WEST ROCKIES					.81	.19	
EAST ROCKIES						1.00	
W. TEX./E. N. MEX.					1.00		
GULF COAST			.01		.99		
MIDCONTINENT					.81		.19
MI. D./ INT./ APP.	.01	.55	.13	.31			
ATLANTIC COAST			1.00				

DATA SOURCES : DOE ANALYSIS
OFFICE RESPONSIBLE : OIL & GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE
ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 27
SPLITTING FACTORS FOR INTRASTATE CO-PRODUCTS

DOE REGION	NPC REGION						
	PACIFIC COAST	WEST ROCKIES	EAST ROCKIES	W. TEXAS/ E. N. MEX.	GULF BASIN	MIDCON- TINENT	MI. B./I./ ATLANTIC APPLACHIA COAST
N.Y./N.J.							1.00
MID-ATLANTIC							1.00
SOUTH ATLANTIC				.49			.33
MIDWEST							1.00
SOUTHWEST		.04	.26	.45	.25		
CENTRAL					1.00		
NORTH CENTRAL		.26				.74	
WEST	.99	.01					

DATA SOURCES : DOE ANALYSIS

OFFICE RESPONSIBLE : OIL & GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE
ANALYSIS, APPLIED ANALYSIS, EIA.

REFINERY AND OIL AND GAS DATA ASSUMING A 5 PERCENT ANNUAL INCREASE IN REAL WORLD OIL PRICES

The mid-range scenario for refineries assumed no real increase in world oil prices from 1980 through 1990. The refinery tables in this chapter differ only in that a real increase in world oil price is assumed from 1980 through 1990. The format of the tables is identical; only TABLES 3 and 4 change. TABLES 1 and 2 are identical, not only for the different scenarios, but for the different target years as well.

Following the refinery tables are the oil and gas data tables corresponding to the increasing oil price scenario. The comments in the previous section relating to the oil and gas tables also apply here. Data sources are identical.

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1985 REFINERY DATA ASSUMING 5% REAL INCREASE IN WORLD OIL PRICE

GENERATION DATE

TABLE 1: REFINERY COSTS FOR BASE YIELDS (1975 DOLLARS/BARREL)

CRUDE TYPE	REFINERY REGIONS						
	1	2	3	4	5	6	7
ARABIAN LIGHT	2.664	2.664	2.568	2.664	2.664	2.664	2.664
ARABIAN HEAVY	3.297	3.297	3.201	3.297	3.297	3.297	3.297
KUWAITI EXPORT	2.997	2.997	2.901	2.997	2.997	2.997	2.997
IRAQI	2.664	2.664	2.568	2.664	2.664	2.664	2.664
IRANIAN LIGHT	2.529	2.529	2.433	2.529	2.529	2.529	2.529
IRANIAN HEAVY	2.683	2.683	2.587	2.683	2.683	2.683	2.683
MID-EASTERN MIX	2.819	2.819	2.723	2.819	2.819	2.819	2.819
LIBYAN	2.148	2.148	2.052	2.148	2.148	2.148	2.148
ALGERIAN	2.038	2.038	1.942	2.038	2.038	2.038	2.038
NIGERIAN & GABON	2.094	2.094	1.998	2.094	2.094	2.094	2.094
INDONESIAN	2.047	2.047	1.951	2.047	2.047	2.047	2.047
EQUADORIAN	2.350	2.350	2.254	2.350	2.350	2.350	2.350
VENEZUELAN MIX	2.862	2.862	2.766	2.862	2.862	2.862	2.862
MEXICAN	2.664	2.664	2.568	2.664	2.664	2.664	2.664
RUSSIAN EXPORT	2.664	2.664	2.568	2.664	-	2.664	2.664
CHINESE EXPORT	-	-	-	-	2.047	-	-
CANADIAN MIX	2.636	2.636	2.540	2.636	2.636	2.636	2.636
EGYPTIAN/SYRIAN	2.656	2.656	2.560	2.656	2.656	2.656	2.656
ANGOLA/CONGO/ZAIRE	2.047	2.047	1.951	2.047	2.047	2.047	2.047
BOLIVIAN/PERUVIAN	2.038	2.038	1.942	2.038	2.038	2.038	2.038
NORWEGIAN	2.077	2.077	1.981	2.077	2.077	2.077	2.077
SOUTH ASIAN	2.664	2.664	2.568	2.664	2.664	2.664	2.664
TRINIDAD	2.077	2.077	1.981	2.077	2.077	2.077	2.077
UNITED KINGDOM	2.664	2.664	2.568	2.664	2.664	2.664	2.664
SYNTHETIC CRUDE	2.031	2.031	1.935	2.031	2.031	2.031	2.031
ALASKAN NORTH SLOPE	2.448	2.448	2.352	2.448	2.448	2.448	2.448
SOUTH ALASKAN	-	-	-	-	2.139	-	-
WEST COAST LIGHT	-	-	2.442	-	2.538	-	-
WEST COAST HEAVY	-	-	2.517	-	2.613	-	-
PACIFIC OFFSHORE	-	-	2.254	-	2.350	-	-
WYOMING MIX	-	2.428	2.332	2.428	-	-	2.428
SHALE OIL	2.031	2.031	1.935	2.031	-	2.031	2.031
LOUISIANA UNSHORE	2.112	2.112	2.016	2.112	-	2.112	2.112
LOUISIANA OFFSHORE	2.112	2.112	2.016	2.112	-	2.112	2.112
TEXAS GULF COAST	2.081	2.081	1.985	2.081	-	2.081	2.081
EAST TEXAS MIX	2.150	2.150	2.054	2.150	-	2.150	2.150
WEST TEXAS MIX	2.502	2.502	2.406	2.502	-	2.502	2.502
PAD II INDIGENOUS	2.146	2.146	2.050	2.146	-	2.146	2.146
PAD I INDIGENOUS	2.082	2.082	1.986	2.082	-	2.082	2.082
OKLAHOMA MIX	2.179	2.179	2.083	2.179	-	2.179	2.179
PAD V HEAVY CRUDE	-	-	-	-	2.583	-	-
PAD IV HEAVY CRUDE	-	-	-	2.815	-	-	-
PAD III HEAVY CRUDE	-	-	2.580	2.676	-	-	-
PAD II HEAVY CRUDE	-	2.583	-	-	-	-	2.583
NAVAL RESERVE #1 CRUDE	-	-	2.114	-	2.210	-	-

DATA SOURCES : OPERATING COSTS FROM "OIL & GAS JOURNAL," NELSON REFINERY COST INDEX.
CAPACITY COSTS DERIVED FROM "OIL AND GAS JOURNAL," COSTS FOR NEW CATALYTIC CRACKING AND
REFORMING FROM BUNNER & MOORE ASSOCIATES, INC., PROPRIETARY REFINERY AND PETROCHEMICAL
MODELING SYSTEM (RPMS) DATA BASE.

OFFICE RESPONSIBLE : MID-RANGE ANALYSIS DIVISION, OFFICE OF INTEGRATIVE ANALYSIS,
APPLIED ANALYSIS, EIA.

TABLE 2: BARRELS OF REFINERY PRODUCTS PRODUCED PER BARREL OF CRAUDE CONSUMED

CRUDE TYPE	REFINERY REGION 1								TOTAL REFINERY PRODUCT
	LIQUIDIFIED PETROLEUM GASSES	GASOLINE	NAPHTHA	JET FUEL	DISTIL-LATES	RESIDUAL	OTHER PETROLEUM PRODUCTS	STILL GAS	
ARABIAN LIGHT	.0286	.4248	.0169	.0324	.2666	.1260	.1106	.0360	1.042
ARABIAN HEAVY	.0272	.4037	.0109	.0221	.2157	.1735	.1528	.0360	1.042
KUWAITI EXPORT	.0291	.4320	.0166	.0272	.2149	.1533	.1328	.0360	1.042
IRAQI	.0286	.4248	.0169	.0324	.2666	.1260	.1106	.0360	1.042
IRANIAN LIGHT	.0274	.4067	.0210	.0385	.2836	.1225	.1063	.0360	1.042
IRANIAN HEAVY	.0279	.4137	.0147	.0263	.2408	.1499	.1326	.0360	1.042
MID-EASTERN MIX	.0281	.4165	.0218	.0314	.2547	.1358	.1177	.0360	1.042
LIBYAN	.0323	.4800	.0211	.0323	.2543	.0985	.0875	.0360	1.042
ALGERIAN	.0324	.4804	.0269	.0312	.2467	.1004	.0880	.0360	1.042
NIGERIAN & GABON	.0369	.5479	.0165	.0346	.2213	.0765	.0722	.0360	1.042
INDONESIAN	.0303	.4492	.0080	.0209	.2554	.1255	.1166	.0360	1.042
ECUADORIAN	.0355	.5267	.0277	.0281	.1772	.1112	.0996	.0360	1.042
VENEZUELAN MIX	.0276	.4098	.0122	.0256	.1818	.1865	.1624	.0360	1.042
MEXICAN	.0286	.4248	.0169	.0324	.2666	.1260	.1106	.0360	1.042
RUSSIAN EXPORT	.0286	.4248	.0169	.0324	.2666	.1260	.1106	.0360	1.042
CANADIAN MIX	.0301	.4465	.0170	.0255	.2232	.1399	.1237	.0360	1.042
EGYPTIAN/SYRIAN	.0281	.4172	.0150	.0267	.2415	.1473	.1302	.0360	1.042
ANGOLA/CONGO/ZAIRE	.0303	.4492	.0080	.0209	.2554	.1255	.1166	.0360	1.042
BOLIVIAN/PERUVIAN	.0324	.4804	.0269	.0312	.2467	.1004	.0880	.0360	1.042
NORWEGIAN	.0345	.5127	.0122	.0302	.2274	.0985	.0903	.0360	1.042
SOUTH ASIAN	.0286	.4248	.0169	.0324	.2666	.1260	.1106	.0360	1.042
TRINIDAD	.0345	.5127	.0122	.0302	.2274	.0985	.0903	.0360	1.042
UNITED KINGDOM	.0286	.4248	.0169	.0324	.2666	.1260	.1106	.0360	1.042
SYNTHETIC CRAUDE	.0356	.5280	.0022	.0374	.3050	.0493	.0484	.0360	1.042
ALASKAN NORTH SLOPE	.0335	.4969	.0108	.0246	.1899	.1315	.1188	.0360	1.042
SHALE OIL	.0356	.5280	.0022	.0374	.3050	.0493	.0484	.0360	1.042
LOUISIANA ONSHORE	.0302	.4488	.0084	.0311	.3003	.0963	.0904	.0360	1.042
LOUISIANA OFFSHORE	.0302	.4488	.0084	.0311	.3003	.0963	.0904	.0360	1.042
TEXAS GULF COAST	.0274	.4063	.0087	.0429	.3483	.0901	.0822	.0360	1.042
EAST TEXAS MIX	.0350	.5188	.0256	.0282	.2129	.0971	.0885	.0360	1.042
WEST TEXAS MIX	.0334	.4955	.0210	.0347	.2605	.0844	.0764	.0360	1.042
PAD II INDIGENOUS	.0310	.4603	.0287	.0327	.2500	.1084	.0948	.0360	1.042
PAD I INDIGENOUS	.0310	.4600	.0150	.0311	.2816	.0978	.0895	.0360	1.042
OKLAHOMA MIX	.0318	.4726	.0161	.0364	.2851	.0865	.0773	.0360	1.042

(CONTINUED)

TABLE 2: BARRELS OF REFINERY PRODUCTS PRODUCED PER BARREL OF CRUDE CONSUMED

CRUDE TYPE	REFINERY REGION 2								
	LIQUIFIED PETROLEUM GASSES	GASOLINE	NAPHTHA	JET FUEL	DISTIL-LATES	RESIDUAL	OTHER PETROLEUM PRODUCTS	STILL GAS	TOTAL REFINERY PRODUCT
ARABIAN LIGHT	.0192	.4807	.0132	.0455	.2512	.0856	.1125	.0350	1.043
ARABIAN HEAVY	.0187	.4687	.0086	.0314	.2050	.1187	.1568	.0350	1.043
KUWAITI EXPORT	.0196	.4912	.0131	.0385	.2039	.1055	.1361	.0350	1.043
IRAQI	.0192	.4807	.0132	.0455	.2512	.0856	.1125	.0350	1.043
IRANIAN LIGHT	.0183	.4597	.0164	.0541	.2674	.0838	.1083	.0350	1.043
IRANIAN HEAVY	.0188	.4710	.0116	.0374	.2296	.1030	.1366	.0350	1.043
MID-EASTERN MIX	.0188	.4704	.0172	.0445	.2422	.0939	.1209	.0350	1.043
LIBYAN	.0210	.5272	.0166	.0456	.2408	.0672	.0895	.0350	1.043
ALGERIAN	.0211	.5298	.0211	.0439	.2333	.0689	.0898	.0350	1.043
NIGERIAN & GABON	.0236	.5915	.0129	.0484	.2079	.0502	.0733	.0350	1.043
INDONESIAN	.0207	.5190	.0062	.0288	.2361	.0807	.1165	.0350	1.043
EQUADORIAN	.0232	.5809	.0217	.0394	.1668	.0747	.1013	.0350	1.043
VENEZUELAN MIX	.0188	.4700	.0097	.0366	.1746	.1298	.1685	.0350	1.043
MEXICAN	.0192	.4807	.0132	.0455	.2512	.0856	.1125	.0350	1.043
RUSSIAN EXPORT	.0192	.4807	.0132	.0455	.2512	.0856	.1125	.0350	1.043
CANADIAN MIX	.0201	.5045	.0134	.0361	.2117	.0955	.1267	.0350	1.043
EGYPTIAN/SYRIAN	.0189	.4739	.0119	.0379	.2302	.1011	.1341	.0350	1.043
ANGOLA/CONGO/ZAIRE	.0207	.5190	.0062	.0288	.2361	.0807	.1165	.0350	1.043
BOLIVIAN/PERUVIAN	.0211	.5298	.0211	.0439	.2333	.0689	.0898	.0350	1.043
NORWEGIAN	.0225	.5630	.0095	.0423	.2136	.0654	.0916	.0350	1.043
SOUTH ASIAN	.0192	.4807	.0132	.0455	.2512	.0856	.1125	.0350	1.043
TRINIDAD	.0225	.5630	.0095	.0423	.2136	.0654	.0916	.0350	1.043
UNITED KINGDOM	.0192	.4807	.0132	.0455	.2512	.0856	.1125	.0350	1.043
SYNTHETIC CRUDE	.0226	.5670	.0017	.0520	.2844	.0314	.0488	.0350	1.043
ALASKAN NORTH SLOPE	.0221	.5546	.0084	.0346	.1790	.0881	.1210	.0350	1.043
WYOMING MIX	.0223	.5580	.0178	.0384	.2022	.0716	.0976	.0350	1.043
SHALE OIL	.0226	.5670	.0017	.0520	.2844	.0314	.0488	.0350	1.043
LOUISIANA ONSHORE	.0202	.5058	.0065	.0430	.2795	.0622	.0907	.0350	1.043
LOUISIANA OFFSHORE	.0202	.5058	.0065	.0430	.2795	.0622	.0907	.0350	1.043
TEXAS GULF COAST	.0179	.4493	.0068	.0604	.3290	.0605	.0839	.0350	1.043
EAST TEXAS MIX	.0227	.5697	.0200	.0396	.2008	.0650	.0901	.0350	1.043
WEST TEXAS MIX	.0216	.5403	.0165	.0488	.2459	.0570	.0779	.0350	1.043
PAD II INDIGENOUS	.0203	.5097	.0226	.0463	.2372	.0746	.0972	.0350	1.043
PAD I INDIGENOUS	.0205	.5142	.0116	.0434	.2633	.0645	.0904	.0350	1.043
OKLAHOMA MIX	.0207	.5180	.0126	.0512	.2685	.0584	.0787	.0350	1.043
PAD II HEAVY CRUDE	.0194	.4859	.0103	.0812	.1773	.2339	.0350	-	1.043

(CONTINUED)

TABLE 2: BARRELS OF REFINERY PRODUCTS PRODUCED PER BARREL OF CRUDE CONSUMED

CRUDE TYPE	REFINERY REGION 3								TOTAL REFINERY PRODUCT
	LIQUIFIED GASOLINE PETROLEUM GASSES	NAPHTHA	JET FUEL	DISTIL- LATES	RESIDUAL	OTHER PETROLFUM PRODUCTS	STILL GAS		
ARABIAN LIGHT	.0108	.3729	.1048	.0734	.2356	.1176	.0770	.0350	1.027
ARABIAN HEAVY	.0108	.3730	.0713	.0528	.2007	.1713	.1120	.0350	1.027
KUWAITI EXPORT	.0111	.3837	.1039	.0625	.1922	.1449	.0936	.0350	1.027
IRAQI	.0108	.3729	.1048	.0734	.2356	.1176	.0770	.0350	1.027
IRANIAN LIGHT	.0100	.3463	.1261	.0846	.2431	.1101	.0718	.0350	1.027
IRANIAN HEAVY	.0108	.3716	.0931	.0611	.2176	.1434	.0944	.0350	1.027
MID-EASTERN MIX	.0103	.3574	.1316	.0695	.2199	.1232	.0801	.0350	1.027
LIBYAN	.0119	.4122	.1277	.0716	.2197	.0894	.0595	.0350	1.027
ALGERIAN	.0116	.4014	.1582	.0672	.2073	.0879	.0582	.0350	1.027
NIGERIAN & GABON	.0139	.4807	.1022	.0782	.1952	.0714	.0502	.0350	1.027
INDONESIAN	.0122	.4211	.0532	.0506	.2412	.1267	.0868	.0350	1.027
ECUADORIAN	.0128	.4416	.1637	.0608	.1495	.0974	.0662	.0350	1.027
VENEZUELAN MIX	.0109	.3749	.0786	.0605	.1674	.1818	.1178	.0350	1.027
MEXICAN	.0108	.3729	.1048	.0734	.2356	.1176	.0770	.0350	1.027
RUSSIAN EXPORT	.0108	.3729	.1048	.0734	.2356	.1176	.0770	.0350	1.027
CANADIAN MIX	.0115	.3966	.1064	.0586	.1906	.1322	.0871	.0350	1.027
EGYPTIAN/SYRIAN	.0108	.3738	.0949	.0617	.2178	.1404	.0925	.0350	1.027
ANGOLA/CONGO/ZAIRE	.0122	.4211	.0532	.0506	.2412	.1267	.0868	.0350	1.027
BOLIVIAN/PERUVIAN	.0116	.4014	.1582	.0672	.2073	.0879	.0582	.0350	1.027
NORWEGIAN	.0134	.4634	.0776	.0705	.2068	.0956	.0647	.0350	1.027
SOUTH ASIAN	.0108	.3729	.1048	.0734	.2356	.1176	.0770	.0350	1.027
TRINIDAD	.0134	.4634	.0776	.0705	.2068	.0956	.0647	.0350	1.027
UNITED KINGDOM	.0108	.3729	.1048	.0734	.2356	.1176	.0770	.0350	1.027
SYNTHETIC CRUDE	.0144	.4959	.0146	.0906	.2881	.0523	.0361	.0350	1.027
ALASKAN NORTH SLOPE	.0133	.4576	.0700	.0585	.1760	.1298	.0868	.0350	1.027
WEST COAST LIGHT	.0120	.4137	.0221	.0248	.1008	.2535	.1650	.0350	1.027
WEST COAST HEAVY	.0133	.4600	.0725	.0514	.1376	.1543	.1027	.0350	1.027
PACIFIC OFFSHORE	.0128	.4416	.1637	.0608	.1495	.0974	.0662	.0350	1.027
WYOMING MIX	.0126	.4333	.1380	.0606	.1856	.0965	.0653	.0350	1.027
SHALE OIL	.0144	.4959	.0146	.0906	.2881	.0523	.0361	.0350	1.027
LOUISIANA ONSHORE	.0119	.4123	.0544	.0737	.2782	.0955	.0659	.0350	1.027
LOUISIANA OFFSHORE	.0119	.4123	.0544	.0737	.2782	.0955	.0659	.0350	1.027
TEXAS GULF COAST	.0106	.3654	.0553	.0996	.3152	.0872	.0586	.0350	1.027
EAST TEXAS MIX	.0127	.4388	.1524	.0615	.1812	.0860	.0593	.0350	1.027
WEST TEXAS MIX	.0123	.4241	.1267	.0766	.2242	.0762	.0518	.0350	1.027
PAD II INDIGENOUS	.0110	.3805	.1673	.0698	.2079	.0934	.0621	.0350	1.027
PAD I INDIGENOUS	.0118	.4082	.0936	.0713	.2515	.0926	.0630	.0350	1.027
OKLAHOMA MIX	.0120	.4133	.0993	.0823	.2509	.0807	.0536	.0350	1.027
PAD III HEAVY CRUDE	.0112	.3855	.0991	.0639	.1587	.1656	.1070	.0350	1.027
NAVAL RESERVE #1 CRUDE	.0160	.5537	.0553	.0674	.1823	.0681	.0491	.0350	1.027

(CONTINUED)

TABLE 2: BARRELS OF REFINERY PRODUCTS PRODUCED PER BARREL OF CRUDE CONSUMED

CRUDE TYPE	REFINERY REGION 4								TOTAL REFINERY PRODUCT
	LIQUIFIED PETROLEUM GASES	GASOLINE	NAPHTHA	JET FUEL	DISTIL- LATES	RESIDUAL	OTHER PETROLEUM PRODUCTS	STILL GAS	
ARABIAN LIGHT	.0097	.3999	.0061	.0652	.3327	.0989	.0854	.0270	1.025
ARABIAN HEAVY	.0096	.3971	.0041	.0460	.2777	.1418	.1218	.0270	1.025
KUWAITI EXPORT	.0101	.4182	.0062	.0565	.2763	.1249	.1057	.0270	1.025
IRAQI	.0097	.3999	.0061	.0652	.3327	.0989	.0854	.0270	1.025
IRANIAN LIGHT	.0091	.3784	.0075	.0766	.3502	.0948	.0813	.0270	1.025
IRANIAN HEAVY	.0096	.3961	.0054	.0542	.3069	.1211	.1047	.0270	1.025
MID-EASTERN MIX	.0095	.3939	.0080	.0640	.3220	.1083	.0921	.0270	1.025
LIBYAN	.0108	.4455	.0077	.0658	.3212	.0784	.0684	.0270	1.025
ALGERIAN	.0109	.4503	.0099	.0639	.3133	.0805	.0692	.0270	1.025
NIGERIAN & CAMBON	.0123	.5085	.0061	.0709	.2815	.0617	.0569	.0270	1.025
INDONESIAN	.0105	.4353	.0029	.0420	.3183	.0989	.0900	.0270	1.025
ECUADORIAN	.0123	.5103	.0105	.0593	.2319	.0928	.0807	.0270	1.025
VENEZUELAN MIX	.0097	.4036	.0046	.0542	.2383	.1556	.1319	.0270	1.025
MEXICAN	.0097	.3999	.0061	.0652	.3327	.0989	.0854	.0270	1.025
RUSSIAN EXPORT	.0097	.3999	.0061	.0652	.3327	.0989	.0854	.0270	1.025
CANADIAN MIX	.0104	.4297	.0063	.0529	.2865	.1139	.0983	.0270	1.025
EGYPTIAN/SYRIAN	.0096	.3987	.0055	.0548	.3077	.1189	.1028	.0270	1.025
ANGOLA/CONGO/ZAIRE	.0105	.4353	.0029	.0420	.3183	.0989	.0900	.0270	1.025
BOLIVIAN/PERUVIAN	.0109	.4503	.0099	.0639	.3133	.0805	.0692	.0270	1.025
NORWEGIAN	.0116	.4811	.0045	.0619	.2887	.0792	.0709	.0270	1.025
SOUTH ASIAN	.0097	.3999	.0061	.0652	.3327	.0989	.0854	.0270	1.025
TRINIDAD	.0116	.4811	.0045	.0619	.2887	.0792	.0709	.0270	1.025
UNITED KINGDOM	.0097	.3999	.0061	.0652	.3327	.0989	.0854	.0270	1.025
SYNTHETIC CRUDE	.0113	.4688	.0008	.0733	.3705	.0368	.0364	.0270	1.025
ALASKAN NORTH SLOPE	.0116	.4806	.0040	.0515	.2462	.1086	.0954	.0270	1.025
WYOMING MIX	.0116	.4814	.0085	.0568	.2762	.0871	.0764	.0270	1.025
SHAPE OIL	.0113	.4688	.0008	.0733	.3705	.0368	.0364	.0270	1.025
LOUISIANA ONSHORE	.0100	.4156	.0030	.0611	.3666	.0735	.0682	.0270	1.025
LOUISIANA OFFSHORE	.0100	.4156	.0030	.0611	.3666	.0735	.0682	.0270	1.025
TEXAS GULF COAST	.0087	.3595	.0030	.0828	.4165	.0666	.0609	.0270	1.025
EAST TEXAS MIX	.0119	.4930	.0096	.0586	.2746	.0797	.0706	.0270	1.025
WEST TEXAS MIX	.0110	.4558	.0076	.0703	.3271	.0667	.0594	.0270	1.025
PAD II INDIGENOUS	.0104	.4313	.0106	.0670	.3173	.0868	.0745	.0270	1.025
PAD I INDIGENOUS	.0103	.4276	.0054	.0621	.3482	.0759	.0685	.0270	1.025
OKLAHOMA MIX	.0104	.4305	.0058	.0727	.3525	.0668	.0592	.0270	1.025
PAD IV HEAVY CRUDE	.0109	.4526	.0039	.0607	.2822	.0995	.0880	.0270	1.025
PAD III HEAVY CRUDE	.0102	.4205	.0060	.0588	.2322	.1463	.1241	.0270	1.025

(CONTINUED)

TABLE 2: BARRELS OF REFINERY PRODUCTS PRODUCED PER BARREL OF CRUDE CONSUMED

CRUDE TYPE	REFINERY REGION 5								TOTAL REFINERY PRODUCT
	LIQUIFIED GASOLINE PETROLEUM GASSES		NAPHTHA	JET FUEL	DISTIL- LATES	RESIDUAL	OTHER PETROLEUM PRODUCTS	STILL GAS	
ARABIAN LIGHT	.0173	.4000	.0160	.1596	.1612	.1703	.0695	.0470	1.041
ARABIAN HEAVY	.0162	.3730	.0107	.1133	.1355	.2454	.0998	.0470	1.041
KUWAIT EXPORT	.0177	.4079	.0156	.1339	.1295	.2062	.0832	.0470	1.041
IRAQI	.0173	.4000	.0160	.1596	.1612	.1703	.0695	.0470	1.041
IRANIAN LIGHT	.0164	.3771	.0194	.1859	.1602	.1614	.0655	.0470	1.041
IRANIAN HEAVY	.0173	.3985	.0139	.1305	.1463	.2038	.0837	.0470	1.041
MID-EASTERN MIX	.0173	.3996	.0202	.1524	.1516	.1799	.0729	.0470	1.041
LIBYAN	.0207	.4781	.0190	.1519	.1468	.1249	.0525	.0470	1.041
ALGERIAN	.0206	.4754	.0244	.1479	.1436	.1288	.0532	.0470	1.041
NIGERIAN & GABON	.0235	.5415	.0144	.1572	.1235	.0920	.0419	.0470	1.041
INDONESIAN	.0177	.4079	.0084	.1142	.1711	.1935	.0812	.0470	1.041
ECUADORIAN	.0221	.5105	.0250	.1324	.1025	.1416	.0599	.0470	1.041
VENEZUELAN MIX	.0167	.3860	.0113	.1242	.1082	.2471	.1005	.0470	1.041
MEXICAN	.0173	.4000	.0160	.1596	.1612	.1703	.0695	.0470	1.041
CHINESE EXPORT	.0177	.4079	.0084	.1142	.1711	.1935	.0812	.0470	1.041
CANADIAN MIX	.0187	.4309	.0160	.1260	.1351	.1894	.0778	.0470	1.041
EGYPTIAN/SYRIAN	.0175	.4028	.0142	.1316	.1463	.1995	.0820	.0470	1.041
ANGOLA/CONGO/ZAIRE	.0177	.4079	.0084	.1142	.1711	.1935	.0812	.0470	1.041
BOLIVIAN/PERUVIAN	.0206	.4754	.0244	.1479	.1436	.1288	.0532	.0470	1.041
NORWEGIAN	.0218	.5038	.0111	.1435	.1324	.1267	.0546	.0470	1.041
SOUTH ASIAN	.0173	.4000	.0160	.1596	.1612	.1703	.0695	.0470	1.041
TRINIDAD	.0218	.5038	.0111	.1435	.1324	.1267	.0546	.0470	1.041
UNITED KINGDOM	.0173	.4000	.0160	.1596	.1612	.1703	.0695	.0470	1.041
SYNTHETIC CRUDE	.0230	.5308	.0020	.1743	.1744	.0607	.0288	.0470	1.041
ALASKAN NORTH SLOPE	.0209	.4821	.0100	.1195	.1131	.1746	.0736	.0470	1.041
SOUTH ALASKAN	.0230	.5315	.0228	.1256	.1217	.1178	.0516	.0470	1.041
WEST COAST LIGHT	.0157	.3639	.0032	.0517	.0660	.3519	.1425	.0470	1.041
WEST COAST HEAVY	.0202	.4669	.0105	.1064	.0897	.2119	.0883	.0470	1.041
PACIFIC OFFSHORE	.0221	.5105	.0250	.1324	.1025	.1416	.0599	.0470	1.041
PAD V HEAVY CRUDE	.0145	.3353	.0395	.0568	.3904	.1574	.0470	-	1.041
NAVAL RESERVE #1 CRUDE	.0262	.6048	.0073	.1278	.1088	.0803	.0387	.0470	1.041

(CONTINUED)

TABLE 2: BARRELS OF REFINERY PRODUCTS PRODUCED PER BARREL OF CRUDE CONSUMED

CRUDE TYPE	REFINERY REGION 6								
	LIQUIFIED GASOLINE		NAPHTHA	JET FUEL	DISTIL- LATES	RESIDUAL	OTHER PETROLEUM PRODUCTS	STILL GAS	TOTAL REFINERY PRODUCT
	PETROLEUM GASSES								
ARABIAN LIGHT	.0286	.4248	.0169	.0324	.2666	.1260	.1106	.0360	1.042
ARABIAN HEAVY	.0272	.4037	.0109	.0221	.2157	.1735	.1528	.0360	1.042
KUWAITI EXPORT	.0291	.4320	.0166	.0272	.2149	.1533	.1328	.0360	1.042
IRAQI	.0286	.4248	.0169	.0324	.2666	.1260	.1106	.0360	1.042
IRANIAN LIGHT	.0274	.4067	.0210	.0385	.2836	.1225	.1063	.0360	1.042
IRANIAN HEAVY	.0279	.4137	.0147	.0263	.2408	.1499	.1326	.0360	1.042
MID-EASTERN MIX	.0281	.4165	.0218	.0314	.2547	.1358	.1177	.0360	1.042
LIBYAN	.0323	.4800	.0211	.0323	.2543	.0985	.0875	.0360	1.042
ALGERIAN	.0324	.4804	.0269	.0312	.2467	.1004	.0880	.0360	1.042
NIGERIAN & GABON	.0369	.5479	.0165	.0346	.2213	.0765	.0722	.0360	1.042
INDONESIAN	.0303	.4492	.0080	.0209	.2554	.1255	.1166	.0360	1.042
ECUADORIAN	.0355	.5267	.0277	.0281	.1772	.1112	.0996	.0360	1.042
VENEZUELAN MIX	.0276	.4098	.0122	.0256	.1818	.1865	.1624	.0360	1.042
MEXICAN	.0286	.4248	.0169	.0324	.2666	.1260	.1106	.0360	1.042
RUSSIAN EXPORT	.0286	.4248	.0169	.0324	.2666	.1260	.1106	.0360	1.042
CANADIAN MIX	.0301	.4465	.0170	.0255	.2232	.1399	.1237	.0360	1.042
EGYPTIAN/SYRIAN	.0281	.4172	.0150	.0267	.2415	.1473	.1302	.0360	1.042
ANGOLA/CONGO/ZAIRE	.0303	.4492	.0080	.0209	.2554	.1255	.1166	.0360	1.042
BOLIVIAN/PERUVIAN	.0324	.4804	.0269	.0312	.2467	.1004	.0880	.0360	1.042
NORWEGIAN	.0345	.5127	.0122	.0302	.2274	.0985	.0903	.0360	1.042
SOUTH ASIAN	.0286	.4248	.0169	.0324	.2666	.1260	.1106	.0360	1.042
TRINIDAD	.0345	.5127	.0122	.0302	.2274	.0985	.0903	.0360	1.042
UNITED KINGDOM	.0286	.4248	.0169	.0324	.2666	.1260	.1106	.0360	1.042
SYNTHETIC CRUDE	.0356	.5280	.0022	.0374	.3050	.0493	.0484	.0360	1.042
ALASKAN NORTH SLOPE	.0335	.4969	.0108	.0246	.1899	.1315	.1188	.0360	1.042
SHALE OIL	.0356	.5280	.0022	.0374	.3050	.0493	.0484	.0360	1.042
LOUISIANA ONSHORE	.0302	.4488	.0084	.0311	.3008	.0963	.0904	.0360	1.042
LOUISIANA OFFSHORE	.0302	.4488	.0084	.0311	.3008	.0963	.0904	.0360	1.042
TEXAS GULF COAST	.0274	.4063	.0087	.0429	.3483	.0901	.0822	.0360	1.042
EAST TEXAS MIX	.0350	.5188	.0256	.0282	.2129	.0971	.0885	.0360	1.042
WEST TEXAS MIX	.0334	.4955	.0210	.0347	.2605	.0844	.0764	.0360	1.042
PAD 11 INDIGENOUS	.0310	.4603	.0287	.0327	.2500	.1084	.0948	.0360	1.042
PAD 1 INDIGENOUS	.0310	.4600	.0150	.0311	.2816	.0978	.0895	.0360	1.042
OKLAHOMA MIX	.0318	.4726	.0161	.0364	.2851	.0865	.0773	.0360	1.042

(CONTINUED)

TABLE 2: BARRELS OF REFINERY PRODUCTS PRODUCED PER BARREL OF CRUDE CONSUMED

CRUDE TYPE	REFINERY REGION 7								
	LIQUIFIED PETROLEUM GASES	GASOLINE	NAPHTHA	JET FUEL	DISTIL-LATES	RESIDUAL	OTHER PETROLFUM PRODUCTS	STILL GAS	TOTAL REFINERY PRODUCT
ARABIAN LIGHT	.0192	.4807	.0132	.0455	.2512	.0856	.1125	.0350	1.043
ARABIAN HEAVY	.0187	.4687	.0086	.0314	.2050	.1187	.1568	.0350	1.043
KUWAITI EXPORT	.0196	.4912	.0131	.0385	.2039	.1055	.1361	.0350	1.043
IRAQI	.0192	.4807	.0132	.0455	.2512	.0856	.1125	.0350	1.043
IRANIAN LIGHT	.0183	.4597	.0164	.0541	.2674	.0838	.1083	.0350	1.043
IRANIAN HEAVY	.0188	.4710	.0116	.0374	.2296	.1030	.1366	.0350	1.043
MID-EASTERN MIX	.0188	.4704	.0172	.0445	.2422	.0939	.1209	.0350	1.043
LIBYAN	.0210	.5272	.0166	.0456	.2408	.0672	.0895	.0350	1.043
ALGERIAN	.0211	.5298	.0211	.0439	.2333	.0689	.0898	.0350	1.043
NIGERIAN & GABON	.0236	.5915	.0129	.0484	.2079	.0502	.0733	.0350	1.043
INDONESIAN	.0207	.5190	.0062	.0288	.2361	.0807	.1165	.0350	1.043
EQUADORIAN	.0232	.5809	.0217	.0394	.1668	.0747	.1013	.0350	1.043
VENEZUELAN MIX	.0188	.4700	.0097	.0366	.1746	.1298	.1685	.0350	1.043
MEXICAN	.0192	.4807	.0132	.0455	.2512	.0856	.1125	.0350	1.043
RUSSIAN EXPORT	.0192	.4807	.0132	.0455	.2512	.0856	.1125	.0350	1.043
CANADIAN MIX	.0201	.5045	.0134	.0361	.2117	.0955	.1267	.0350	1.043
EGYPTIAN/SYRIAN	.0189	.4739	.0119	.0379	.2302	.1011	.1341	.0350	1.043
ANGOLA/CONGO/ZAIRE	.0207	.5190	.0062	.0288	.2361	.0807	.1165	.0350	1.043
BOLIVIAN/PERUVIAN	.0211	.5298	.0211	.0439	.2333	.0689	.0898	.0350	1.043
NORWEGIAN	.0225	.5630	.0095	.0423	.2136	.0654	.0916	.0350	1.043
SOUTH ASIAN	.0192	.4807	.0132	.0455	.2512	.0856	.1125	.0350	1.043
TRINIDAD	.0225	.5630	.0095	.0423	.2136	.0654	.0916	.0350	1.043
UNITED KINGDOM	.0192	.4807	.0132	.0455	.2512	.0856	.1125	.0350	1.043
SYNTHETIC CRUDE	.0226	.5670	.0017	.0520	.2844	.0314	.0488	.0350	1.043
ALASKAN NORTH SLOPE	.0221	.5546	.0084	.0346	.1790	.0881	.1210	.0350	1.043
WYOMING MIX	.0223	.5580	.0178	.0384	.2022	.0716	.0976	.0350	1.043
SHALE OIL	.0226	.5670	.0017	.0520	.2844	.0314	.0488	.0350	1.043
LOUISIANA ONSHORE	.0202	.5058	.0065	.0430	.2795	.0622	.0907	.0350	1.043
LOUISIANA OFFSHORE	.0202	.5058	.0065	.0430	.2795	.0622	.0907	.0350	1.043
TEXAS GULF COAST	.0179	.4493	.0068	.0604	.3290	.0605	.0839	.0350	1.043
EAST TEXAS MIX	.0227	.5697	.0200	.0396	.2008	.0650	.0901	.0350	1.043
WEST TEXAS MIX	.0216	.5403	.0165	.0488	.2459	.0570	.0779	.0350	1.043
PAD II INDIGENOUS	.0203	.5097	.0226	.0463	.2372	.0746	.0972	.0350	1.043
PAD I INDIGENOUS	.0205	.5142	.0116	.0434	.2633	.0645	.0904	.0350	1.043
OKLAHOMA MIX	.0207	.5180	.0126	.0512	.2685	.0584	.0787	.0350	1.043
PAD II HEAVY CRUDE	.0194	.4859	.0103	.0812	.1773	.2339	.0350	-	1.043

SOURCE : REFINERY AND PETROCHEMICAL MODELLING SYSTEM (RPMS) DATA BASE, OWNED BY KONNER & MOORE ASSOCIATES, INC., WASHINGTON, D.C.

OFFICE RESPONSIBLE : MID-RANGE ANALYSIS DIVISION, OFFICE OF INTEGRATIVE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 3: RELATIVE PRODUCT PRICING RELATIONSHIPS

MINIMUM PRICE DIFFERENTIAL	PRODUCT PRICE COEFFICIENT	PRODUCT PRICE OF	PRODUCT PRICE COEFFICIENT	PRODUCT PRICE OF	VOLUME COST COEFFICIENT	VOLUME DEVIATION COSTS	MAXIMUM PRICE DIFFERENTIAL
.090	<= (1.000 X	GASOLINE)	- (1.000 X	NAPHTHA)			<= .190
.090	<= -(1.000 X	NAPHTHA)	+ (1.000 X	GASOLINE)			<= .190
1.229	<= (1.000 X	GASOLINE)	- (.942 X	JET FUEL)	+ (.058 X	VOL. COST)	<= 1.326
1.305	<= -(1.000 X	JET FUEL)	+ (1.061 X	GASOLINE)	+ (.062 X	VOL. COST)	<= 1.408
2.373	<= (1.000 X	GASOLINE)	- (.901 X	DISTILLATE)	+ (.099 X	VOL. COST)	<= 2.469
2.634	<= -(1.000 X	DISTILLATE)	+ (1.109 X	GASOLINE)	+ (.110 X	VOL. COST)	<= 2.740
4.345	<= (1.000 X	GASOLINE)	- (.835 X	RESIDUAL)	+ (.165 X	VOL. COST)	<= 4.437
5.205	<= -(1.000 X	RESIDUAL)	+ (1.197 X	GASOLINE)	+ (.198 X	VOL. COST)	<= 5.315
2.443	<= (1.000 X	GASOLINE)	- (.875 X	OTHER)	+ (.125 X	VOL. COST)	<= 2.537
2.793	<= -(1.000 X	OTHER)	+ (1.143 X	GASOLINE)	+ (.143 X	VOL. COST)	<= 2.901
4.341	<= (1.000 X	GASOLINE)	- (.875 X	STILL GAS)	+ (.125 X	VOL. COST)	<= 4.435
4.963	<= -(1.000 X	STILL GAS)	+ (1.143 X	GASOLINE)	+ (.143 X	VOL. COST)	<= 5.071
1.089	<= (1.000 X	NAPHTHA)	- (.942 X	JET FUEL)	+ (.058 X	VOL. COST)	<= 1.186
1.156	<= -(1.000 X	JET FUEL)	+ (1.061 X	NAPHTHA)	+ (.062 X	VOL. COST)	<= 1.259
2.233	<= (1.000 X	NAPHTHA)	- (.901 X	DISTILLATE)	+ (.099 X	VOL. COST)	<= 2.328
2.479	<= -(1.000 X	DISTILLATE)	+ (1.109 X	NAPHTHA)	+ (.110 X	VOL. COST)	<= 2.584
4.205	<= (1.000 X	NAPHTHA)	- (.835 X	RESIDUAL)	+ (.165 X	VOL. COST)	<= 4.297
5.038	<= -(1.000 X	RESIDUAL)	+ (1.197 X	NAPHTHA)	+ (.198 X	VOL. COST)	<= 5.148
2.303	<= (1.000 X	NAPHTHA)	- (.875 X	OTHER)	+ (.125 X	VOL. COST)	<= 2.397
2.633	<= -(1.000 X	OTHER)	+ (1.143 X	NAPHTHA)	+ (.143 X	VOL. COST)	<= 2.741
4.201	<= (1.000 X	NAPHTHA)	- (.875 X	STILL GAS)	+ (.125 X	VOL. COST)	<= 4.295
4.803	<= -(1.000 X	STILL GAS)	+ (1.143 X	NAPHTHA)	+ (.143 X	VOL. COST)	<= 4.911
1.165	<= (1.000 X	JET FUEL)	- (.957 X	DISTILLATE)	+ (.043 X	VOL. COST)	<= 1.263
1.218	<= -(1.000 X	DISTILLATE)	+ (1.045 X	JET FUEL)	+ (.045 X	VOL. COST)	<= 1.320
3.258	<= (1.000 X	JET FUEL)	- (.886 X	RESIDUAL)	+ (.114 X	VOL. COST)	<= 3.353
3.676	<= -(1.000 X	RESIDUAL)	+ (1.128 X	JET FUEL)	+ (.128 X	VOL. COST)	<= 3.783
3.254	<= (1.000 X	JET FUEL)	- (.929 X	STILL GAS)	+ (.071 X	VOL. COST)	<= 3.351
3.504	<= -(1.000 X	STILL GAS)	+ (1.076 X	JET FUEL)	+ (.077 X	VOL. COST)	<= 3.608

(CONTINUED)

TABLE 3: RELATIVE PRODUCT PRICING RELATIONSHIPS

MINIMUM PRICE DIFFERENTIAL	PRODUCT PRICE COEFFICIENT	PRODUCT PRICE OF	PRODUCT PRICE COEFFICIENT	PRODUCT PRICE OF	VOLUME COST COEFFICIENT	VOLUME DEVIATION COSTS	MAXIMUM PRICE DIFFERENTIAL
1.239 1.334	<= (1.000 <= -(1.000	X JET FUEL) X OTHER)	- (.929 + (1.076	X OTHER) X JET FUEL)	+ (.071 + (.077	X VOL. COST) X VOL. COST)	<= 1.335 <= 1.438
2.138 2.308	<= (1.000 <= -(1.000	X DISTILLATE) X RESIDUAL)	- (.927 + (1.079	X RESIDUAL) X DISTILLATE)	+ (.073 + (.079	X VOL. COST) X VOL. COST)	<= 2.235 <= 2.412
.028 .029	<= (1.000 <= -(1.000	X DISTILLATE) X OTHER)	- (.971 + (1.030	X OTHER) X DISTILLATE)	+ (.029 + (.030	X VOL. COST) X VOL. COST)	<= .126 <= .130
2.134 2.198	<= (1.000 <= -(1.000	X DISTILLATE) X STILL GAS)	- (.971 + (1.030	X STILL GAS) X DISTILLATE)	+ (.029 + (.030	X VOL. COST) X VOL. COST)	<= 2.233 <= 2.300
2.124 2.226	<= (1.000 <= -(1.000	X OTHER) X RESIDUAL)	- (.954 + (1.047	X RESIDUAL) X OTHER)	+ (.046 + (.048	X VOL. COST) X VOL. COST)	<= 2.222 <= 2.228
2.120 2.120	<= (1.000 <= -(1.000	X OTHER) X STILL GAS)	- (1.000 + (1.000	X STILL GAS) X OTHER)			<= 2.220 <= 2.220
.046- .048-	<= (1.000 <= -(1.000	X STILL GAS) X RESIDUAL)	- (.954 + (1.047	X RESIDUAL) X STILL GAS)	+ (.046 + (.048	X VOL. COST) X VOL. COST)	<= .052 <= .054

DATA SOURCE : COSTS AND PRICE RELATIONSHIPS ARE OUTPUT FROM THE REFINERY CONVERSION
SUB-MODEL IMBEDDED IN PIES.

OFFICE RESPONSIBLE : MID-RANGE ANALYSIS DIVISION, OFFICE OF INTEGRATIVE ANALYSIS,
APPLIED ANALYSIS, EIA.

TABLE 4: REFINERY CAPACITY DATA

REFINERY REGIONS	EXISTING CAPACITY	BUILD LIMITS	BUILD COSTS
	(THOUSANDS OF BARRELS PER CALENDAR DAY)	(THOUSANDS OF BARRELS PER CALENDAR DAY)	(1975 DOLLARS PER THOUSANDS OF BARRELS)
REFINERY REGION 1 - PAD 1A	1467	348	.6062
REFINERY REGION 2 - PAD 2A	2596	221	.5563
REFINERY REGION 3 - PAD 3	6644	-	.5013
REFINERY REGION 4 - PAD 4	523	46	.5415
REFINERY REGION 5 - PAD 5	2660	207	.5512
REFINERY REGION 6 - PAD 1B	250	175	.6062
REFINERY REGION 7 - PAD 2B	1201	124	.5563

DATA SOURCE : CAPACITY ROUNDS BASED ON DATA PUBLISHED IN FEA'S "TRENDS IN REFINERY CAPACITY AND UTILIZATION", BY E.L. PEER AND F.V. MARSIK, OFFICE OF OIL & GAS, FEA, 1975. CAPACITY COSTS DERIVED FROM REFERENCES IN "OIL & GAS JOURNAL".

OFFICE RESPONSIBLE : MID-RANGE ANALYSIS DIVISION, OFFICE OF INTEGRATIVE ANALYSIS, EIA.

1990 REFINERY DATA ASSUMING 5% REAL INCREASE IN WORLD OIL PRICE

GENERATION DATE

III-142

TABLE 1: REFINERY COSTS FOR BASE YIELDS (1975 DOLLARS/BARREL)

CRUDE TYPE	REFINERY REGIONS						
	1	2	3	4	5	6	7
ARABIAN LIGHT	2.664	2.664	2.568	2.664	2.664	2.664	2.664
ARABIAN HEAVY	3.297	3.297	3.201	3.297	3.297	3.297	3.297
KUWAITI EXPORT	2.997	2.997	2.901	2.997	2.997	2.997	2.997
IRAQI	2.664	2.664	2.568	2.664	2.664	2.664	2.664
IRANIAN LIGHT	2.529	2.529	2.433	2.529	2.529	2.529	2.529
IRANIAN HEAVY	2.683	2.683	2.587	2.683	2.683	2.683	2.683
MID-EASTERN MIX	2.819	2.819	2.723	2.819	2.819	2.819	2.819
LIBYAN	2.148	2.148	2.052	2.148	2.148	2.148	2.148
ALGERIAN	2.038	2.038	1.942	2.038	2.038	2.038	2.038
NIGERIAN & GABON	2.094	2.094	1.998	2.094	2.094	2.094	2.094
INDONESIAN	2.047	2.047	1.951	2.047	2.047	2.047	2.047
ECUADORIAN	2.350	2.350	2.254	2.350	2.350	2.350	2.350
VENEZUELAN MIX	2.862	2.862	2.766	2.862	2.862	2.862	2.862
MEXICAN	2.664	2.664	2.568	2.664	2.664	2.664	2.664
RUSSIAN EXPORT	2.664	2.664	2.568	2.664	-	2.664	2.664
CHINESE EXPORT	-	-	-	-	2.047	-	-
CANADIAN MIX	2.636	2.636	2.540	2.636	2.636	2.636	2.636
EGYPTIAN/SYRIAN	2.656	2.656	2.560	2.656	2.656	2.656	2.656
ANGOLA/CONGO/ZAIRE	2.047	2.047	1.951	2.047	2.047	2.047	2.047
BOLIVIAN/PERUVIAN	2.038	2.038	1.942	2.038	2.038	2.038	2.038
NORWEGIAN	2.077	2.077	1.981	2.077	2.077	2.077	2.077
SOUTH ASIAN	2.664	2.664	2.568	2.664	2.664	2.664	2.664
TRINIDAD	2.077	2.077	1.981	2.077	2.077	2.077	2.077
UNITED KINGDOM	2.664	2.664	2.568	2.664	2.664	2.664	2.664
SYNTHETIC CRUDE	2.031	2.031	1.935	2.031	2.031	2.031	2.031
ALASKAN NORTH SLOPE	2.448	2.448	2.352	2.448	2.448	2.448	2.448
SOUTH ALASKAN	-	-	-	-	2.139	-	-
WEST COAST LIGHT	-	-	2.442	-	2.538	-	-
WEST COAST HEAVY	-	-	2.517	-	2.613	-	-
PACIFIC OFFSHORE	-	-	2.254	-	2.350	-	-
WYOMING MIX	-	2.428	2.332	2.428	-	-	2.428
SHALE OIL	2.031	2.031	1.935	2.031	-	2.031	2.031
LOUISIANA UNSHORE	2.112	2.112	2.016	2.112	-	2.112	2.112
LOUISIANA OFFSHORE	2.112	2.112	2.016	2.112	-	2.112	2.112
TEXAS GULF COAST	2.081	2.081	1.985	2.081	-	2.081	2.081
EAST TEXAS MIX	2.150	2.150	2.054	2.150	-	2.150	2.150
WEST TEXAS MIX	2.502	2.502	2.406	2.502	-	2.502	2.502
PAD II INDIGENOUS	2.146	2.146	2.050	2.146	-	2.146	2.146
PAD I INDIGENOUS	2.082	2.082	1.986	2.082	-	2.082	2.082
OKLAHOMA MIX	2.179	2.179	2.083	2.179	-	2.179	2.179
PAD V HEAVY CRUDE	-	-	-	-	2.583	-	-
PAD IV HEAVY CRUDE	-	-	-	2.815	-	-	-
PAD III HEAVY CRUDE	-	-	2.580	2.676	-	-	-
PAD II HEAVY CRUDE	-	2.583	-	-	-	-	2.583
NAVAL RESERVE #1 CRUDE	-	-	2.114	-	2.210	-	-

DATA SOURCES : OPERATING COSTS FROM "OIL & GAS JOURNAL" NELSON REFINERY COST INDEX.
CAPACITY COSTS DERIVED FROM "OIL AND GAS JOURNAL" COSTS FOR NEW CATALYTIC CRACKING AND
REFORMING FROM BUNNER & MOORE ASSOCIATES, INC., PROPRIETARY REFINERY AND PETROCHEMICAL
MODELING SYSTEM (RPMS) DATA BASE.

OFFICE RESPONSIBLE : MID-RANGE ANALYSIS DIVISION, OFFICE OF INTEGRATIVE ANALYSIS,
APPLIED ANALYSIS, EIA.

TABLE 2: BARRELS OF REFINERY PRODUCTS PRODUCED PER BARREL OF CRUDE CONSUMED

CRUDE TYPE	REFINERY REGION 1								TOTAL REFINERY PRODUCT
	LIQUIFIED PETROLEUM GASSES	GASOLINE	NAPHTHA	JET FUEL	DISTIL-LATES	RESIDUAL	OTHER PETROLEUM PRODUCTS	STILL GAS	
ARABIAN LIGHT	.0286	.4248	.0169	.0324	.2666	.1260	.1106	.0360	1.042
ARABIAN HEAVY	.0272	.4037	.0109	.0221	.2157	.1735	.1528	.0360	1.042
KUWAITI EXPORT	.0291	.4320	.0166	.0272	.2149	.1533	.1328	.0360	1.042
IRAQI	.0286	.4248	.0169	.0324	.2666	.1260	.1106	.0360	1.042
IRANIAN LIGHT	.0274	.4067	.0210	.0305	.2836	.1225	.1063	.0360	1.042
IRANIAN HEAVY	.0279	.4137	.0147	.0263	.2408	.1499	.1326	.0360	1.042
MID-EASTERN MIX	.0281	.4165	.0218	.0314	.2547	.1358	.1177	.0360	1.042
LIBYAN	.0323	.4800	.0211	.0323	.2543	.0985	.0875	.0360	1.042
ALGERIAN	.0324	.4804	.0269	.0312	.2467	.1004	.0880	.0360	1.042
NIGERIAN & GABON	.0369	.5479	.0165	.0346	.2213	.0765	.0722	.0360	1.042
INDONESIAN	.0303	.4492	.0080	.0209	.2554	.1255	.1166	.0360	1.042
ECUADORIAN	.0355	.5267	.0277	.0281	.1772	.1112	.0996	.0360	1.042
VENEZUELAN MIX	.0276	.4098	.0122	.0256	.1818	.1865	.1624	.0360	1.042
MEXICAN	.0286	.4248	.0169	.0324	.2666	.1260	.1106	.0360	1.042
RUSSIAN EXPORT	.0286	.4248	.0169	.0324	.2666	.1260	.1106	.0360	1.042
CANADIAN MIX	.0301	.4465	.0170	.0255	.2232	.1399	.1237	.0360	1.042
EGYPTIAN/SYRIAN	.0281	.4172	.0150	.0267	.2415	.1473	.1302	.0360	1.042
ANGOLA/CONGO/ZAIRE	.0303	.4492	.0080	.0209	.2554	.1255	.1166	.0360	1.042
BOLIVIAN/PERUVIAN	.0324	.4804	.0269	.0312	.2467	.1004	.0880	.0360	1.042
NORWEGIAN	.0345	.5127	.0122	.0302	.2274	.0985	.0903	.0360	1.042
SOUTH ASIAN	.0286	.4248	.0169	.0324	.2666	.1260	.1106	.0360	1.042
TRINIDAD	.0345	.5127	.0122	.0302	.2274	.0985	.0903	.0360	1.042
UNITED KINGDOM	.0286	.4248	.0169	.0324	.2666	.1260	.1106	.0360	1.042
SYNTHETIC CRUDE	.0356	.5280	.0022	.0374	.3050	.0493	.0484	.0360	1.042
ALASKAN NORTH SLOPE	.0335	.4969	.0108	.0246	.1899	.1315	.1188	.0360	1.042
SHAPE OIL	.0356	.5280	.0022	.0374	.3050	.0493	.0484	.0360	1.042
LOUISIANA ONSHORE	.0302	.4488	.0084	.0311	.3008	.0563	.0904	.0360	1.042
LOUISIANA OFFSHORE	.0302	.4488	.0084	.0311	.3008	.0563	.0904	.0360	1.042
TEXAS GULF COAST	.0274	.4063	.0087	.0429	.3483	.0901	.0822	.0360	1.042
EAST TEXAS MIX	.0350	.5188	.0256	.0282	.2129	.0971	.0885	.0360	1.042
WEST TEXAS MIX	.0334	.4955	.0210	.0347	.2605	.0844	.0764	.0360	1.042
PAD II INDIGENOUS	.0310	.4603	.0287	.0327	.2500	.1084	.0948	.0360	1.042
PAD I INDIGENOUS	.0310	.4600	.0150	.0311	.2816	.0970	.0895	.0360	1.042
OKLAHOMA MIX	.0318	.4726	.0161	.0364	.2851	.0865	.0773	.0360	1.042

(CONTINUED)

TABLE 2: BARRELS OF REFINERY PRODUCTS PRODUCED PER BARREL OF CRUDE CONSUMED

CRUDE TYPE	REFINERY REGION 2							
	LIQUIFIED GASOLINE PETROLEUM GASSES	NAPHTHA	JET FUEL	DISTIL- LATES	RESIDUAL	OTHER PETROLEUM PRODUCTS	STILL GAS	TOTAL REFINERY PRODUCT
ARABIAN LIGHT	.0192	.4807	.0132	.0455	.2512	.0856	.1125	1.043
ARABIAN HEAVY	.0197	.4697	.0086	.0314	.2050	.1187	.1568	1.043
KUWAITI EXPORT	.0196	.4912	.0131	.0385	.2039	.1055	.1361	1.043
IRAQI	.0192	.4807	.0132	.0455	.2512	.0856	.1125	1.043
IRANIAN LIGHT	.0183	.4597	.0164	.0541	.2674	.0838	.1083	1.043
IRANIAN HEAVY	.0188	.4710	.0116	.0374	.2296	.1030	.1366	1.043
MID-EASTERN MIX	.0188	.4704	.0172	.0445	.2422	.0939	.1209	1.043
LIBYAN	.0210	.5272	.0166	.0456	.2408	.0672	.0895	1.043
ALGERIAN	.0211	.5298	.0211	.0439	.2333	.0689	.0898	1.043
NIGERIAN & GABON	.0236	.5915	.0129	.0404	.2079	.0502	.0733	1.043
INDONESIAN	.0207	.5190	.0062	.0288	.2361	.0807	.1165	1.043
ECUADORIAN	.0232	.5809	.0217	.0394	.1668	.0747	.1013	1.043
VENEZUELAN MIX	.0188	.4700	.0097	.0366	.1746	.1298	.1685	1.043
MEXICAN	.0192	.4807	.0132	.0455	.2512	.0856	.1125	1.043
RUSSIAN EXPORT	.0192	.4807	.0132	.0455	.2512	.0856	.1125	1.043
CANADIAN MIX	.0201	.5045	.0134	.0361	.2117	.0955	.1267	1.043
EGYPTIAN/SYRIAN	.0189	.4739	.0119	.0379	.2302	.1011	.1341	1.043
ANGOLA/CONGO/ZAIRE	.0207	.5190	.0062	.0288	.2361	.0807	.1165	1.043
BOLIVIAN/PERUVIAN	.0211	.5298	.0211	.0439	.2333	.0689	.0898	1.043
NORWEGIAN	.0225	.5630	.0095	.0423	.2136	.0654	.0916	1.043
SOUTH ASIAN	.0192	.4807	.0132	.0455	.2512	.0856	.1125	1.043
TRINIDAD	.0225	.5630	.0095	.0423	.2136	.0654	.0916	1.043
UNITED KINGDOM	.0192	.4807	.0132	.0455	.2512	.0856	.1125	1.043
SYNTHETIC CRUDE	.0226	.5670	.0017	.0520	.2844	.0314	.0488	1.043
ALASKAN NORTH SLOPE	.0221	.5546	.0084	.0346	.1790	.0881	.1210	1.043
WYOMING MIX	.0223	.5580	.0178	.0384	.2022	.0716	.0976	1.043
SHALE OIL	.0226	.5670	.0017	.0520	.2844	.0314	.0488	1.043
LOUISIANA ONSHORE	.0202	.5058	.0065	.0430	.2795	.0622	.0907	1.043
LOUISIANA OFFSHORE	.0202	.5058	.0065	.0430	.2795	.0622	.0907	1.043
TEXAS GULF COAST	.0179	.4493	.0068	.0604	.3290	.0605	.0839	1.043
EAST TEXAS MIX	.0227	.5697	.0200	.0396	.2008	.0650	.0901	1.043
WEST TEXAS MIX	.0216	.5403	.0165	.0488	.2459	.0570	.0779	1.043
PAD II INDIGENOUS	.0203	.5097	.0226	.0463	.2372	.0746	.0972	1.043
PAD I INDIGENOUS	.0205	.5142	.0116	.0434	.2633	.0645	.0904	1.043
OKLAHOMA MIX	.0207	.5180	.0126	.0512	.2685	.0584	.0787	1.043
PAD II HEAVY CRUDE	.0194	.4859	.0103	.0812	.1773	.2339	.0350	1.043

(CONTINUED)

TABLE 2: BARRELS OF REFINERY PRODUCTS PRODUCED PER BARREL OF CRUDE CONSUMED

CRUDE TYPE	REFINERY REGION 3								
	LIQUIFIED PETROLEUM GASSES	GASOLINE	NAPHTHA	JET FUEL	DISTIL-LATES	RESIDUAL	OTHER PETROLEUM PRODUCTS	STILL GAS	TOTAL REFINERY PRODUCT
ARABIAN LIGHT	.0108	.3720	.1048	.0734	.2356	.1176	.0770	.0350	1.027
ARABIAN HEAVY	.0108	.3730	.0713	.0528	.2007	.1713	.1120	.0350	1.027
KUWAITI EXPORT	.0111	.3837	.1039	.0625	.1922	.1449	.0936	.0350	1.027
IRAQI	.0108	.3720	.1048	.0734	.2356	.1176	.0770	.0350	1.027
IRANIAN LIGHT	.0106	.3463	.1261	.0846	.2431	.1101	.0718	.0350	1.027
IRANIAN HEAVY	.0108	.3716	.0931	.0611	.2176	.1434	.0944	.0350	1.027
MID-EASTERN MIX	.0103	.3574	.1316	.0695	.2199	.1231	.0801	.0350	1.027
LIBYAN	.0119	.4122	.1277	.0716	.2197	.0894	.0595	.0350	1.027
ALGERIAN	.0116	.4014	.1582	.0672	.2073	.0879	.0582	.0350	1.027
NIGERIAN & GABON	.0139	.4807	.1022	.0782	.1952	.0714	.0502	.0350	1.027
INDONESIAN	.0122	.4211	.0532	.0506	.2412	.1267	.0868	.0350	1.027
ECUADORIAN	.0128	.4416	.1637	.0608	.1495	.0974	.0662	.0350	1.027
VENEZUELAN MIX	.0109	.3749	.0786	.0605	.1674	.1818	.1178	.0350	1.027
MEXICAN	.0108	.3729	.1048	.0734	.2356	.1176	.0770	.0350	1.027
RUSSIAN EXPORT	.0108	.3729	.1048	.0734	.2356	.1176	.0770	.0350	1.027
CANADIAN MIX	.0115	.3966	.1064	.0586	.1996	.1322	.0871	.0350	1.027
EGYPTIAN/SYRIAN	.0108	.3738	.0949	.0617	.2178	.1404	.0925	.0350	1.027
ANGOLA/CONGO/ZAIRE	.0122	.4211	.0532	.0506	.2412	.1267	.0868	.0350	1.027
BOLIVIAN/PERUVIAN	.0116	.4014	.1582	.0672	.2073	.0879	.0582	.0350	1.027
NORWEGIAN	.0134	.4634	.0776	.0705	.2068	.0956	.0647	.0350	1.027
SOUTH ASIAN	.0108	.3729	.1048	.0734	.2356	.1176	.0770	.0350	1.027
TRINIDAD	.0134	.4634	.0776	.0705	.2068	.0956	.0647	.0350	1.027
UNITED KINGDOM	.0108	.3729	.1048	.0734	.2356	.1176	.0770	.0350	1.027
SYNTHETIC CRUDE	.0144	.4959	.0146	.0906	.2881	.0523	.0361	.0350	1.027
ALASKAN NORTH SLOPE	.0133	.4576	.0700	.0585	.1760	.1298	.0868	.0350	1.027
WEST COAST LIGHT	.0120	.4137	.0221	.0248	.1008	.2525	.1650	.0350	1.027
WEST COAST HEAVY	.0133	.4600	.0725	.0514	.1376	.1543	.1027	.0350	1.027
PACIFIC OFFSHORE	.0128	.4416	.1637	.0608	.1495	.0974	.0662	.0350	1.027
WYOMING MIX	.0126	.4333	.1380	.0606	.1856	.0965	.0653	.0350	1.027
SHALE OIL	.0144	.4959	.0146	.0906	.2881	.0523	.0361	.0350	1.027
LOUISIANA OFFSHORE	.0119	.4123	.0544	.0737	.2782	.0955	.0659	.0350	1.027
LOUISIANA OFFSHORE	.0119	.4123	.0544	.0737	.2782	.0955	.0659	.0350	1.027
TEXAS GULF COAST	.0106	.3654	.0553	.0996	.3152	.0872	.0586	.0350	1.027
EAST TEXAS MIX	.0127	.4388	.1524	.0615	.1812	.0860	.0593	.0350	1.027
WEST TEXAS MIX	.0123	.4241	.1267	.0766	.2242	.0762	.0518	.0350	1.027
PAD II INDIGENOUS	.0110	.3805	.1673	.0698	.2079	.0934	.0621	.0350	1.027
PAD I INDIGENOUS	.0118	.4082	.0936	.0713	.2515	.0926	.0630	.0350	1.027
OKLAHOMA MIX	.0120	.4133	.0993	.0823	.2509	.0807	.0536	.0350	1.027
PAD III HEAVY CRUDE	.0112	.3855	.0991	.0639	.1587	.1656	.1079	.0350	1.027
NAVAL RESERVE #1 CRUDE	.0160	.5537	.0553	.0674	.1823	.0681	.0491	.0350	1.027

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(CONTINUED)

TABLE 2: BARRELS OF REFINERY PRODUCTS PRODUCED PER BARREL OF CRUDE CONSUMED

CRUDE TYPE	REFINERY REGION 4							
	LIQUIFIED PETROLEUM GASSES	GASOLINE	NAPHTHA	JET FUEL	DISTIL- LATES	RESIDUAL	OTHER PETROLEUM PRODUCTS	TOTAL REFINERY PRODUCT
ARABIAN LIGHT	.0097	.3999	.0061	.0652	.3327	.0989	.0854	1.025
ARABIAN HEAVY	.0096	.3971	.0041	.0460	.2777	.1418	.1218	1.025
KUWAITI EXPORT	.0101	.4182	.0062	.0565	.2763	.1249	.1057	1.025
IRAQI	.0097	.3999	.0061	.0652	.3327	.0989	.0854	1.025
IRANIAN LIGHT	.0091	.3784	.0075	.0766	.3502	.0948	.0813	1.025
IRANIAN HEAVY	.0096	.3961	.0054	.0542	.3069	.1211	.1047	1.025
MID-EASTERN MIX	.0095	.3939	.0080	.0640	.3220	.1083	.0921	1.025
LIBYAN	.0108	.4455	.0077	.0658	.3212	.0784	.0684	1.025
ALGERIAN	.0109	.4503	.0099	.0639	.3133	.0805	.0692	1.025
NIGERIAN & GABON	.0123	.5085	.0061	.0709	.2815	.0617	.0569	1.025
INDONESIAN	.0105	.4353	.0029	.0420	.3183	.0989	.0900	1.025
EQUATORIAN	.0123	.5103	.0105	.0593	.2319	.0928	.0807	1.025
VENEZUELAN MIX	.0097	.4036	.0046	.0542	.2383	.1556	.1319	1.025
MEXICAN	.0097	.3999	.0061	.0652	.3327	.0989	.0854	1.025
RUSSIAN EXPORT	.0097	.3999	.0061	.0652	.3327	.0989	.0854	1.025
CANADIAN MIX	.0104	.4297	.0063	.0529	.2865	.1139	.0983	1.025
EGYPTIAN/SYRIAN	.0096	.3987	.0055	.0548	.3077	.1189	.1028	1.025
ANGOLA/CONGO/ZAIRE	.0105	.4353	.0029	.0420	.3183	.0989	.0900	1.025
BOLIVIAN/PERUVIAN	.0109	.4503	.0099	.0639	.3133	.0805	.0692	1.025
NORWEGIAN	.0116	.4811	.0045	.0619	.2887	.0792	.0709	1.025
SOUTH ASIAN	.0097	.3999	.0061	.0652	.3327	.0989	.0854	1.025
TRINIDAD	.0116	.4811	.0045	.0619	.2887	.0792	.0709	1.025
UNITED KINGDOM	.0097	.3999	.0061	.0652	.3327	.0989	.0854	1.025
SYNTHETIC CRUDE	.0113	.4688	.0008	.0733	.3705	.0368	.0364	1.025
ALASKAN NORTH SLOPE	.0116	.4806	.0040	.0515	.2462	.1086	.0954	1.025
WYOMING MIX	.0116	.4814	.0085	.0568	.2762	.0871	.0764	1.025
SHALE OIL	.0113	.4688	.0008	.0733	.3705	.0368	.0364	1.025
LOUISIANA ONSHORE	.0100	.4156	.0030	.0611	.3666	.0735	.0682	1.025
LOUISIANA OFFSHORE	.0100	.4156	.0030	.0611	.3666	.0735	.0682	1.025
TEXAS GULF COAST	.0087	.3595	.0030	.0828	.4165	.0666	.0609	1.025
EAST TEXAS MIX	.0119	.4930	.0096	.0586	.2746	.0797	.0706	1.025
WEST TEXAS MIX	.0110	.4558	.0076	.0703	.3271	.0667	.0594	1.025
PAD II INDIGENOUS	.0104	.4313	.0106	.0670	.3173	.0868	.0745	1.025
PAD I INDIGENOUS	.0103	.4276	.0054	.0621	.3482	.0759	.0685	1.025
OKLAHOMA MIX	.0104	.4305	.0058	.0727	.3525	.0668	.0592	1.025
PAD IV HEAVY CRUDE	.0109	.4526	.0039	.0607	.2822	.0995	.0880	1.025
PAD III HEAVY CRUDE	.0102	.4205	.0060	.0588	.2322	.1463	.1241	1.025

(CONTINUED)

TABLE 2: BARRELS OF REFINERY PRODUCTS PRODUCED PER BARREL OF CRUDE CONSUMED

CRUDE TYPE	REFINERY REGION 5							
	LIQUIFIED PETROLEUM GASSES	GASOLINE	NAPHTHA	JET FUEL	DISTIL- LATES	RESIDUAL	OTHER PETROLEUM PRODUCTS	TOTAL REFINERY PRODUCT
ARABIAN LIGHT	.0173	.4000	.0160	.1596	.1612	.1703	.0695	1.041
ARABIAN HEAVY	.0162	.3730	.0107	.1133	.1355	.2454	.0998	1.041
KUWAITI EXPORT	.0177	.4079	.0156	.1339	.1295	.2062	.0832	1.041
IRAQI	.0173	.4000	.0160	.1596	.1612	.1703	.0695	1.041
IRANIAN LIGHT	.0164	.3771	.0194	.1859	.1682	.1614	.0655	1.041
IRANIAN HEAVY	.0173	.3985	.0139	.1305	.1463	.2038	.0837	1.041
MID-EASTERN MIX	.0173	.3996	.0202	.1524	.1516	.1799	.0729	1.041
LIBYAN	.0207	.4781	.0190	.1519	.1468	.1249	.0525	1.041
ALGERIAN	.0206	.4754	.0244	.1479	.1436	.1288	.0532	1.041
NIGERIAN & GABON	.0235	.5415	.0144	.1572	.1235	.0920	.0419	1.041
INDONESIAN	.0177	.4079	.0084	.1142	.1711	.1935	.0812	1.041
ECUADORIAN	.0221	.5105	.0250	.1324	.1025	.1416	.0599	1.041
VENEZUELAN MIX	.0167	.3860	.0113	.1242	.1082	.2471	.1005	1.041
MEXICAN	.0173	.4000	.0160	.1596	.1612	.1703	.0695	1.041
CHINESE EXPORT	.0177	.4079	.0084	.1142	.1711	.1935	.0812	1.041
CANADIAN MIX	.0187	.4309	.0160	.1260	.1351	.1894	.0778	1.041
EGYPTIAN/SYRIAN	.0175	.4028	.0142	.1316	.1463	.1995	.0820	1.041
ANGOLA/CONGO/ZAIRE	.0177	.4079	.0084	.1142	.1711	.1935	.0812	1.041
BOLIVIAN/PERUVIAN	.0206	.4754	.0244	.1479	.1436	.1288	.0532	1.041
NORWEGIAN	.0218	.5038	.0111	.1435	.1324	.1267	.0546	1.041
SOUTH ASIAN	.0173	.4000	.0160	.1596	.1612	.1703	.0695	1.041
TRINIDAD	.0218	.5038	.0111	.1435	.1324	.1267	.0546	1.041
UNITED KINGDOM	.0173	.4000	.0160	.1596	.1612	.1703	.0695	1.041
SYNTHETIC CRUDE	.0230	.5308	.0020	.1743	.1744	.0607	.0288	1.041
ALASKAN NORTH SLOPE	.0209	.4821	.0100	.1195	.1131	.1746	.0736	1.041
SOUTH ALASKAN	.0230	.5315	.0228	.1256	.1217	.1178	.0516	1.041
WEST COAST LIGHT	.0157	.3630	.0032	.0517	.0660	.3519	.1425	1.041
WEST COAST HEAVY	.0202	.4669	.0105	.1064	.0897	.2119	.0883	1.041
PACIFIC OFFSHORE	.0221	.5105	.0250	.1324	.1025	.1416	.0599	1.041
PAD V HEAVY CRUDE	.0145	.3353	.0395	.0568	.3904	.1574	.0470	1.041
NAVAL RESERVE #1 CRUDE	.0262	.6048	.0073	.1278	.1088	.0803	.0387	1.041

(CONTINUED)

TABLE 2: BARRELS OF REFINERY PRODUCTS PRODUCED PER BARREL OF CRUDE CONSUMED

CRUDE TYPE	REFINERY REGION 6								
	LIQUIFIED GASOLINE PETROLEUM GASSES		NAPHTHA	JET FUEL	DISTIL- LATES	RESIDUAL	OTHER PETROLEUM PRODUCTS	STILL GAS	TOTAL REFINERY PRODUCT
ARABIAN LIGHT	.0286	.4248	.0169	.0324	.2666	.1260	.1106	.0360	1.042
ARABIAN HEAVY	.0272	.4037	.0109	.0221	.2157	.1735	.1528	.0360	1.042
KUWAITI EXPORT	.0291	.4320	.0166	.0272	.2149	.1533	.1328	.0360	1.042
IRAQI	.0286	.4248	.0169	.0324	.2666	.1260	.1106	.0360	1.042
IRANIAN LIGHT	.0274	.4067	.0210	.0385	.2036	.1225	.1063	.0360	1.042
IRANIAN HEAVY	.0279	.4137	.0147	.0263	.2408	.1499	.1326	.0360	1.042
MID-EASTERN MIX	.0281	.4165	.0218	.0314	.2547	.1358	.1177	.0360	1.042
LIBYAN	.0323	.4800	.0211	.0323	.2543	.0985	.0875	.0360	1.042
ALGERIAN	.0324	.4804	.0269	.0312	.2467	.1004	.0880	.0360	1.042
NIGERIAN & GABON	.0369	.5479	.0165	.0346	.2213	.0765	.0722	.0360	1.042
INDONESIAN	.0303	.4492	.0080	.0209	.2554	.1255	.1166	.0360	1.042
ECUADORIAN	.0355	.5267	.0277	.0281	.1772	.1112	.0996	.0360	1.042
VENEZUELAN MIX	.0276	.4098	.0122	.0256	.1818	.1865	.1624	.0360	1.042
MEXICAN	.0286	.4248	.0169	.0324	.2666	.1260	.1106	.0360	1.042
RUSSIAN EXPORT	.0286	.4248	.0169	.0324	.2666	.1260	.1106	.0360	1.042
CANADIAN MIX	.0301	.4465	.0170	.0255	.2232	.1399	.1237	.0360	1.042
EGYPTIAN/SYRIAN	.0281	.4172	.0150	.0267	.2415	.1473	.1302	.0360	1.042
ANGOLA/CONGO/ZAIRE	.0303	.4492	.0080	.0209	.2554	.1255	.1166	.0360	1.042
BOLIVIAN/PERUVIAN	.0324	.4804	.0269	.0312	.2467	.1004	.0880	.0360	1.042
NORWEGIAN	.0345	.5127	.0122	.0302	.2274	.0985	.0903	.0360	1.042
SOUTH ASIAN	.0286	.4248	.0169	.0324	.2666	.1260	.1106	.0360	1.042
TRINIDAD	.0345	.5127	.0122	.0302	.2274	.0985	.0903	.0360	1.042
UNITED KINGDOM	.0286	.4248	.0169	.0324	.2666	.1260	.1106	.0360	1.042
SYNTHETIC CRUDE	.0356	.5280	.0022	.0374	.3050	.0493	.0484	.0360	1.042
ALASKAN NORTH SLOPE	.0335	.4969	.0108	.0246	.1899	.1315	.1188	.0360	1.042
SHALE OIL	.0356	.5280	.0022	.0374	.3050	.0493	.0484	.0360	1.042
LOUISIANA ONSHORE	.0302	.4488	.0084	.0311	.3008	.0963	.0904	.0360	1.042
LOUISIANA OFFSHORE	.0302	.4488	.0084	.0311	.3008	.0963	.0904	.0360	1.042
TEXAS GULF COAST	.0274	.4063	.0087	.0429	.3483	.0901	.0822	.0360	1.042
EAST TEXAS MIX	.0350	.5188	.0256	.0282	.2129	.0971	.0885	.0360	1.042
WEST TEXAS MIX	.0334	.4955	.0210	.0347	.2605	.0844	.0764	.0360	1.042
PAD II INDIGENOUS	.0310	.4603	.0287	.0327	.2500	.1084	.0948	.0360	1.042
PAD I INDIGENOUS	.0310	.4600	.0150	.0311	.2816	.0978	.0895	.0360	1.042
OKLAHOMA MIX	.0318	.4726	.0161	.0364	.2851	.0865	.0773	.0360	1.042

(CONTINUED)

TABLE 2: BARRELS OF REFINERY PRODUCTS PRODUCED PER BARREL OF CRUDE CONSUMED

CRUDE TYPE	REFINERY REGION 7							
	LIQUIFIED PETROLEUM GASES	GASOLINE	NAPHTHA	JET FUEL	DISTIL-LATES	RESIDUAL	OTHER PETROLFIUM PRODUCTS	STILL GAS
								TOTAL REFINERY PRODUCT
ARABIAN LIGHT	.0192	.4807	.0132	.0455	.2512	.0856	.1125	.0350
ARABIAN HEAVY	.0187	.4687	.0086	.0314	.2050	.1187	.1568	.0350
KUWAITI EXPORT	.0196	.4912	.0131	.0385	.2039	.1055	.1361	.0350
IRAQI	.0192	.4807	.0132	.0455	.2512	.0856	.1125	.0350
IRANIAN LIGHT	.0103	.4597	.0164	.0541	.2674	.0838	.1083	.0350
IRANIAN HEAVY	.0188	.4710	.0116	.0374	.2296	.1030	.1366	.0350
MID-EASTERN MIX	.0186	.4704	.0172	.0445	.2422	.0939	.1209	.0350
LIBYAN	.0210	.5272	.0166	.0456	.2408	.0672	.0895	.0350
ALGERIAN	.0211	.5298	.0211	.0439	.2333	.0689	.0898	.0350
NIGERIAN & GABON	.0236	.5915	.0129	.0484	.2079	.0502	.0733	.0350
INDONESIAN	.0207	.5190	.0062	.0288	.2361	.0807	.1165	.0350
ECUADORIAN	.0232	.5809	.0217	.0344	.1668	.0747	.1013	.0350
VENEZUELAN MIX	.0188	.4700	.0097	.0366	.1746	.1298	.1685	.0350
MEXICAN	.0192	.4807	.0132	.0455	.2512	.0856	.1125	.0350
RUSSIAN EXPORT	.0192	.4807	.0132	.0455	.2512	.0856	.1125	.0350
CANADIAN MIX	.0201	.5045	.0134	.0361	.2117	.0955	.1267	.0350
EGYPTIAN/SYRIAN	.0189	.4739	.0119	.0379	.2302	.1011	.1341	.0350
ANGOLA / CONGO/ZAIRE	.0207	.5190	.0062	.0288	.2361	.0807	.1165	.0350
BOLIVIAN/PERUVIAN	.0211	.5298	.0211	.0439	.2333	.0689	.0898	.0350
NORWEGIAN	.0225	.5630	.0095	.0423	.2136	.0654	.0916	.0350
SOUTH ASIAN	.0192	.4807	.0132	.0455	.2512	.0856	.1125	.0350
TRINIDAD	.0225	.5630	.0095	.0423	.2136	.0654	.0916	.0350
UNITED KINGDOM	.0192	.4807	.0132	.0455	.2512	.0856	.1125	.0350
SYNTHETIC CRUDE	.0226	.5670	.0017	.0520	.2844	.0314	.0488	.0350
ALASKAN NORTH SLOPE	.0221	.5546	.0084	.0346	.1790	.0881	.1210	.0350
WYOMING MIX	.0223	.5580	.0178	.0384	.2022	.0716	.0976	.0350
SHALE OIL	.0226	.5670	.0017	.0520	.2844	.0314	.0488	.0350
LOUISIANA ONSHORE	.0202	.5058	.0065	.0430	.2795	.0622	.0907	.0350
LOUISIANA OFFSHORE	.0202	.5058	.0065	.0430	.2795	.0622	.0907	.0350
TEXAS GULF COAST	.0179	.4493	.0068	.0604	.3290	.0605	.0839	.0350
EAST TEXAS MIX	.0227	.5697	.0200	.0396	.2008	.0650	.0901	.0350
WEST TEXAS MIX	.0216	.5403	.0165	.0488	.2459	.0570	.0779	.0350
PAD II INDIGENOUS	.0203	.5097	.0226	.0463	.2372	.0746	.0972	.0350
PAD I INDIGENOUS	.0205	.5142	.0116	.0434	.2633	.0645	.0904	.0350
OKLAHOMA MIX	.0207	.5180	.0126	.0512	.2685	.0584	.0787	.0350
PAD II HEAVY CRUDE	.0194	.4859	.0103	.0812	.1773	.2339	.0350	-

SOURCE : REFINERY AND PETROCHEMICAL MODELLING SYSTEM (RPMS) DATA BASE, OWNED BY BONNER & MOORE ASSOCIATES, INC., WASHINGTON, D.C.

OFFICE RESPONSIBLE : MID-RANGE ANALYSIS DIVISION, OFFICE OF INTEGRATIVE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 3: RELATIVE PRODUCT PRICING RELATIONSHIPS

MINIMUM PRICE DIFFERENTIAL	PRODUCT PRICE COEFFICIENT	PRODUCT PRICE OF	PRODUCT PRICE COEFFICIENT	PRODUCT PRICE OF	VOLUME COST COEFFICIENT	VOLUME DEVIATION COSTS	MAXIMUM PRICE DIFFERENTIAL
.320	<= (1.000	X GASOLINE)	- (1.000	X NAPHTHA)			<= .420
.320	<= -(1.000	X NAPHTHA)	+ (1.000	X GASOLINE)			<= .420
1.286	<= (1.000	X GASOLINE)	- (.942	X JET FUEL)	+ (.058	X VOL. COST)	<= 1.383
1.365	<= -(1.000	X JET FUEL)	+ (1.061	X GASOLINE)	+ (.062	X VOL. COST)	<= 1.468
2.604	<= (1.000	X GASOLINE)	- (.901	X DISTILLATE)	+ (.099	X VOL. COST)	<= 2.699
2.890	<= -(1.000	X DISTILLATE)	+ (1.109	X GASOLINE)	+ (.110	X VOL. COST)	<= 2.996
4.774	<= (1.000	X GASOLINE)	- (.835	X RESIDUAL)	+ (.165	X VOL. COST)	<= 4.866
5.719	<= -(1.000	X RESIDUAL)	+ (1.197	X GASOLINE)	+ (.198	X VOL. COST)	<= 5.829
2.786	<= (1.000	X GASOLINE)	- (.875	X OTHER)	+ (.125	X VOL. COST)	<= 2.879
3.185	<= -(1.000	X OTHER)	+ (1.143	X GASOLINE)	+ (.143	X VOL. COST)	<= 3.292
4.684	<= (1.000	X GASOLINE)	- (.875	X STILL GAS)	+ (.125	X VOL. COST)	<= 4.777
5.355	<= -(1.000	X STILL GAS)	+ (1.143	X GASOLINE)	+ (.143	X VOL. COST)	<= 5.462
.916	<= (1.000	X NAPHTHA)	- (.942	X JET FUEL)	+ (.058	X VOL. COST)	<= 1.012
.973	<= -(1.000	X JET FUEL)	+ (1.061	X NAPHTHA)	+ (.062	X VOL. COST)	<= 1.075
2.234	<= (1.000	X NAPHTHA)	- (.901	X DISTILLATE)	+ (.099	X VOL. COST)	<= 2.329
2.480	<= -(1.000	X DISTILLATE)	+ (1.109	X NAPHTHA)	+ (.110	X VOL. COST)	<= 2.585
4.404	<= (1.000	X NAPHTHA)	- (.835	X RESIDUAL)	+ (.165	X VOL. COST)	<= 4.496
5.276	<= -(1.000	X RESIDUAL)	+ (1.197	X NAPHTHA)	+ (.198	X VOL. COST)	<= 5.386
2.416	<= (1.000	X NAPHTHA)	- (.875	X OTHER)	+ (.125	X VOL. COST)	<= 2.509
2.762	<= -(1.000	X OTHER)	+ (1.143	X NAPHTHA)	+ (.143	X VOL. COST)	<= 2.869
4.314	<= (1.000	X NAPHTHA)	- (.875	X STILL GAS)	+ (.125	X VOL. COST)	<= 4.407
4.932	<= -(1.000	X STILL GAS)	+ (1.143	X NAPHTHA)	+ (.143	X VOL. COST)	<= 5.039
1.349	<= (1.000	X JET FUEL)	- (.957	X DISTILLATE)	+ (.043	X VOL. COST)	<= 1.447
1.410	<= -(1.000	X DISTILLATE)	+ (1.045	X JET FUEL)	+ (.045	X VOL. COST)	<= 1.513
3.653	<= (1.000	X JET FUEL)	- (.886	X RESIDUAL)	+ (.114	X VOL. COST)	<= 3.747
4.122	<= -(1.000	X RESIDUAL)	+ (1.128	X JET FUEL)	+ (.128	X VOL. COST)	<= 4.226
3.558	<= (1.000	X JET FUEL)	- (.929	X STILL GAS)	+ (.071	X VOL. COST)	<= 3.654
3.831	<= -(1.000	X STILL GAS)	+ (1.076	X JET FUEL)	+ (.077	X VOL. COST)	<= 3.935

(CONTINUED)

TABLE 3: RELATIVE PRODUCT PRICING RELATIONSHIPS

MINIMUM PRICE DIFFERENTIAL	PRODUCT PRICE COEFFICIENT	PRODUCT PRICE OF	PRODUCT PRICE COEFFICIENT	PRODUCT PRICE OF	VOLUME COST COEFFICIENT	VOLUME DEVIATION COSTS	MAXIMUM PRICE DIFFERENTIAL
1.542	<= (1.000 X	JET FUEL)	- (.929 X	OTHER)	+ (.071 X	VOL. COST)	<= 1.639
1.660	<= -(1.000 X	OTHER)	+ (1.076 X	JET FUEL)	+ (.077 X	VOL. COST)	<= 1.765
2.358	<= (1.000 X	DISTILLATE)	- (.927 X	RESIDUAL)	+ (.073 X	VOL. COST)	<= 2.454
2.545	<= -(1.000 X	RESIDUAL)	+ (1.079 X	DISTILLATE)	+ (.079 X	VOL. COST)	<= 2.649
.152	<= (1.000 X	DISTILLATE)	- (.971 X	OTHER)	+ (.029 X	VOL. COST)	<= .250
.156	<= -(1.000 X	OTHER)	+ (1.030 X	DISTILLATE)	+ (.030 X	VOL. COST)	<= .258
2.258	<= (1.000 X	DISTILLATE)	- (.971 X	STILL GAS)	+ (.029 X	VOL. COST)	<= 2.356
2.326	<= -(1.000 X	STILL GAS)	+ (1.030 X	DISTILLATE)	+ (.030 X	VOL. COST)	<= 2.427
2.222	<= (1.000 X	OTHER)	- (.954 X	RESIDUAL)	+ (.046 X	VOL. COST)	<= 2.320
2.328	<= -(1.000 X	RESIDUAL)	+ (1.047 X	OTHER)	+ (.048 X	VOL. COST)	<= 2.431
2.119	<= (1.000 X	OTHER)	- (1.000 X	STILL GAS)			<= 2.219
2.119	<= -(1.000 X	STILL GAS)	+ (1.000 X	OTHER)			<= 2.219
.053	<= (1.000 X	STILL GAS)	- (.954 X	RESIDUAL)	+ (.046 X	VOL. COST)	<= .151
.055	<= -(1.000 X	RESIDUAL)	+ (1.047 X	STILL GAS)	+ (.048 X	VOL. COST)	<= .158

DATA SOURCE : COSTS AND PRICE RELATIONSHIPS ARE OUTPUT FROM THE REFINERY CONVERSION
SUB-MODEL IMBEDDED IN PIES.

OFFICE RESPONSIBLE : MID-RANGE ANALYSIS DIVISION, OFFICE OF INTEGRATIVE ANALYSTS,
APPLIED ANALYSIS, EIA.

TABLE 4: REFINERY CAPACITY DATA

REFINERY REGIONS	EXISTING CAPACITY (THOUSANDS OF BARRELS PER CALENDAR DAY)	BUILD LIMITS (THOUSANDS OF BARRELS PER CALENDAR DAY)	BUILD COSTS (1975 DOLLARS PER THOUSANDS OF BARRELS)
REFINERY REGION 1 - PAD 1A	1467	1224	.6062
REFINERY REGION 2 - PAD 2A	2596	369	.5563
REFINERY REGION 3 - PAD 3	6644	-	.5013
REFINERY REGION 4 - PAD 4	523	76	.5415
REFINERY REGION 5 - PAD 5	2660	530	.5512
REFINERY REGION 6 - PAD 1B	250	377	.6062
REFINERY REGION 7 - PAD 2B	1201	205	.5563

DATA SOURCE : CAPACITY ROUNDS BASED ON DATA PUBLISHED IN FEA'S "TRENDS IN REFINERY CAPACITY AND UTILIZATION", BY E.L. PEER AND F.V. MARSIK, OFFICE OF OIL & GAS, FEA, 1975. CAPACITY COSTS DERIVED FROM REFERENCES IN "OIL & GAS JOURNAL".

OFFICE RESPONSIBLE : MID-RANGE ANALYSIS DIVISION, OFFICE OF INTEGRATIVE ANALYSIS, EIA.

OIL AND GAS SUPPLY DATA
INPUTS TO THE PIES INTEGRATING MODEL
1978 ANNUAL ADMINISTRATOR'S REPORT
HIGH OIL PRICE FORECAST

III-154

THE PRODUCTION OF CRUDE OIL, NATURAL GAS AND NATURAL GAS LIQUIDS IS REPRESENTED IN THE PIES INTEGRATING MODEL BY A COLLECTION OF SUPPLY CURVES, ONE FOR EACH COMBINATION OF REGION (NPC REGION), TYPE OF WELL (OIL OR GAS), VINTAGE (NEW OR OLD), AND, IN THE CASE OF OIL WELLS, TYPE OF PRODUCTION (PRIMARY, SECONDARY OR TERTIARY). EACH SUPPLY CURVE IS A STEP FUNCTION CONSISTING OF NINE PRICE STEPS. AS SHOWN IN THE FIGURE BELOW, EACH STEP GIVES QUANTITY OF PRODUCTION ASSOCIATED WITH A GIVEN WELL-HEAD PRICE.

A NINE STEP SUPPLY CURVE

HOWEVER, THE ABOVE FIGURE UNDERSTATES THE INFORMATION CONTENT OF EACH STEP. IN FACT, AT EACH STEP PRICES ARE ASSUMED AND QUANTITIES ARE GIVEN FOR EACH OF FOUR PRODUCTS (CRUDE OIL, ASSOCIATED AND DISSOLVED GAS, BUTANE, AND OTHER GAS LIQUIDS), IN THE CASE OF OIL WELLS, AND THREE PRODUCTS (NON-ASSOCIATED GAS, BUTANE AND OTHER GAS LIQUIDS) IN THE CASE OF GAS WELLS. IN ADDITION, EACH STEP ALSO CARRIES WITH IT THE AMOUNT OF DRILLING AND CAPITAL INVESTMENT REQUIRED TO REACH THE INDICATED LEVEL OF PRODUCTION.

THE SUPPLY CURVES ARE GENERATED BY THE PIES OIL AND GAS SUPPLY MODEL. THIS MODEL IS DYNAMIC IN THAT SUPPLY CURVES FOR ALL YEARS FROM 1977 TO 1991 ARE GENERATED SIMULTANEOUSLY USING THE PRICE TRAJECTORIES SHOWN IN TABLES 1 AND 2 FOR OIL WELLS AND IN TABLES 5 AND 6 FOR GAS WELLS. THE SUPPLY MODEL IS RUN ONCE FOR EACH STEP AND GENERATES THE HISTORY OF CAPITAL INVESTMENT, DRILLING, AND PRODUCTION FOR EACH PRODUCT

THAT WOULD RESULT IF WELL-HEAD PRICES WERE TO FOLLOW THE PRICE TRAJECTORIES FOR THE GIVEN STEP. THE PIES SUPPLY CURVES ARE THEN OBTAINED BY SELECTING THE PRICES AND CORRESPONDING QUANTITIES FOR THE YEARS 1985 AND 1990.

THE GAS PRODUCTION PROJECTED BY THE OIL AND GAS SUPPLY MODEL IS DIVIDED BETWEEN THE INTERSTATE AND INTRASTATE MARKETS ACCORDING TO THE FOLLOWING RULES: (1) ALL ALASKAN AND CCS GAS IS INTERSTATE, (2) ALL NEW LOWER 48 ONSHORE GAS IS INTRASTATE AND (3) ALL OLD ONSHORE GAS IS DIVIDED ACCORDING TO REGION SPECIFIC HISTORICAL (1974) PROPORTIONS. IT SHOULD BE MENTIONED THAT THIS A PRIORI DIVISION IS SUBJECT TO REVISION BY THE INTEGRATING MODEL WHICH HAS THE CAPABILITY OF SHIFTING SOME GAS WHICH HAS BEEN DESIGNATED AS INTRASTATE BY THE ABOVE RULES INTO THE INTERSTATE MARKET AS REQUIRED TO KEEP THE INTRASTATE PRICE FROM FALLING BELOW THE INTERSTATE PRICE.

TABLES 3, 4, 7 AND 8 GIVE THE SUPPLY CURVES BY REGION, VINTAGE AND TYPE. THE PRICE STEP IS GIVEN BY THE STEP NUMBER, ALLOWING REFERENCE TO THE PRICE TRAJECTORY TABLES TO FIND ASSUMED PRICES FOR EACH PRODUCT. THESE PRICES ARE NOT USED IN THE INTEGRATING MODEL, HOWEVER, SINCE IT SEES THE INCREMENT IN PRODUCTION FROM ONE STEP TO THE NEXT AS A BUNDLE OF COMMODITIES WHICH IT MUST EITHER PRODUCE OR NOT PRODUCE TOGETHER. THUS A SINGLE PRICE, CALLED THE BUNDLE PRICE, IS ASSIGNED TO EACH STEP. BY DEFINITION, THE BUNDLE PRICE IS THE RATIO OF THE TOTAL VALUE OF THE INCREMENT IN PRODUCTION FROM THE PREVIOUS STEP (INCLUDING ALL FOUR OR THREE PRODUCTS, USING PRICES FROM TABLES 1, 2, 5 AND 6) TO THE QUANTITY OF CRUDE OIL OR NON-ASSOCIATED GAS IN THAT INCREMENT. THIS SOMEWHAT AWKWARD CONVENTION IS NECESSITATED BY THE FACT THAT THE BUNDLE CONTAINS COMMODITIES MEASURED IN DIFFERENT UNITS. NOTE THAT THESE TABLES SHOW NATURAL GAS BROKEN OUT ACCORDING TO WHICH MARKET (INTERSTATE OR INTRASTATE) IT BELONGS.

IT SHOULD BE EMPHASIZED THAT VINTAGE, AS USED IN THIS DOCUMENTATION, MERELY DESCRIBES WHETHER A WELL WAS DRILLED BEFORE OR AFTER 1/1/77, AND, AS SUCH, IS DIFFERENT FROM THE LEGAL CONCEPTS OF OIL AND GAS VINTAGE.

THE ALASKAN NORTH SLOPE AND ELK'S HILL ARE NOT INCLUDED IN THE OIL AND GAS SUPPLY MODEL. ACCORDINGLY ENGINEERING ESTIMATES OF PRODUCTION AND COST ARE USED FOR THESE REGIONS. THESE REGIONS ARE INDICATED IN THE TABLES BY AN '*' IN THE PRICE STEP COLUMN.

THE SCENARIOS WHICH MODEL OIL REGULATION ARE DISTINCTIVE. SINCE WELL-HEAD PRICES ARE CONTROLLED, ONLY ONE PRICE STEP IS USED AND THE QUANTITY OF DOMESTIC CRUDE AVAILABLE IS FIXED. ALSO, THE BUNDLE PRICE IS NOT CALCULATED AND IS LISTED IN THE TABLES AS '***'.

IN GAS REGULATION SCENARIOS THE DISTRIBUTION OF INTER-STATE GAS IS ESSENTIALLY FIXED. THIS DISTRIBUTION AND RESULTING DELIVERIES ARE GIVEN IN TABLES 9-12. THE INTEGRATING

MODEL MAY ALTER THESE DISTRIBUTIONS IN THE FOLLOWING WAYS: (1) A REGION MAY TAKE LESS INTERSTATE GAS THAN IS ASSIGNED TO IT, (2) EXCESS INTERSTATE GAS IN ONE REGION MAY BE REASSIGNED TO ANOTHER REGION AND (3) GAS ORIGINALLY DESIGNATED AS INTRASTATE BUT SHIFTED TO THE INTERSTATE MARKET WILL AUGMENT THE STATED DISTRIBUTION.

TABLES 13-24 SUMMARIZE THE INFORMATION IN THE OIL AND GAS SUPPLY CURVES. TABLES 13 AND 14 AGGREGATE OIL AND GAS PRODUCTION, INVESTMENT AND DRILLING STATISTICS OVER VINTAGE AND TYPE OF PRODUCTION. TABLES 15-22 DO THE SAME FOR GAS WELLS AT ALL PRICE STEPS. THEN TABLES 23 AND 24 COMBINE THE PRODUCTION FROM OIL AND GAS WELLS AND SHOW THE MAXIMUM QUANTITY OF EACH FUEL AVAILABLE TO THE INTEGRATING MODEL.

TABLE 25 SHOWS THE MIX OF CRUDE TYPES ASSUMED FOR EACH NPC REGION. THESE PROPORTIONS ARE APPLIED IRRESPECTIVE OF THE VINTAGE OR TYPE OF PRODUCTION.

TABLES 26 AND 27 PROVIDE SOME INFORMATION REQUIRED BECAUSE OF THE WAY INTRASTATE GAS PRODUCTION AND DISTRIBUTION IS MODELED. ASSOCIATED AND DISSOLVED INTRASTATE GAS IS PRODUCED IN NPC REGIONS BUT IS DISTRIBUTED FROM DOE REGIONS. THIS REQUIRES A LOGICAL SHIFT OF ASSOCIATED INTRASTATE GAS FROM NPC REGIONS TO DOE REGIONS. TABLE 26 GIVES THE FRACTION OF INTRASTATE GAS PRODUCED IN EACH NPC REGION THAT IS SHIFTED TO EACH DOE REGION FOR DISTRIBUTION. SIMILARLY, GAS LIQUIDS FROM INTRASTATE GAS WELLS ARE PRODUCED IN DOE REGIONS BUT DISTRIBUTED FROM NPC REGIONS. TABLE 27 GIVES THE FRACTION OF INTRASTATE GAS LIQUIDS PRODUCED IN EACH DOE REGION THAT IS SHIFTED TO EACH NPC REGION.

ALL DOLLARS ARE CONSTANT 1975 DOLLARS. VOLUMES OF NATURAL GAS ASSUME A HEAT VALUE OF 1032 BTU/CF. THE ENTRIES UNDER THE COLUMN HEADINGS CAPITAL AND FOOTAGE DRILLED ARE THE CUMULATIVE CAPITAL INVESTMENT AND CUMULATIVE FOOTAGE DRILLED FROM 1977 TO ONE YEAR PRIOR (1984 OR 1989) TO THE TARGET YEAR (1995 OR 1990). THE ABBREVIATIONS USED IN THIS REPORT FOR THE VARIOUS UNITS OF MEASUREMENT ARE AS FOLLOWS:

BBL, MBBL	BARREL, THOUSAND BARRELS
MCF, MMCF	THOUSAND CUBIC FEET, MILLION CUBIC FEET
M\$	MILLION DOLLARS (1975 DOLLARS)
MMFT	MILLION FEET
D	DAY

TABLE 1
PRICE TRAJECTORIES FOR OIL AND GAS LIQUIDS
(\$/BBL)

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
STEP 1	12.62	11.99	11.39	10.82	10.28	9.77	9.28	8.81	8.37	7.95	7.56	7.18	6.82	6.48	6.15
STEP 2	12.62	12.24	11.87	11.52	11.17	10.84	10.51	10.20	9.89	9.59	9.31	9.03	8.75	8.49	8.24
STEP 3	12.62	12.37	12.12	11.88	11.64	11.41	11.18	10.96	10.74	10.52	10.31	10.11	9.90	9.71	9.51
STEP 4	12.62	12.49	12.37	12.25	12.12	12.00	11.88	11.76	11.65	11.53	11.41	11.30	11.19	11.07	10.96
STEP 5	12.62	12.62	12.62	12.62	12.62	12.62	12.62	12.62	12.62	12.62	12.62	12.62	12.62	12.62	12.62
STEP 6	12.62	12.75	12.87	13.00	13.13	13.26	13.40	13.53	13.67	13.80	13.94	14.08	14.22	14.36	14.51
STEP 7	12.62	12.87	13.13	13.39	13.66	13.93	14.21	14.50	14.79	15.08	15.38	15.69	16.01	16.33	16.65
STEP 8	12.62	13.00	13.39	13.79	14.20	14.63	15.07	15.52	15.99	16.47	16.96	17.47	17.99	18.53	19.09
STEP 9	12.62	13.25	13.91	14.61	15.34	16.11	16.91	17.76	18.65	19.58	20.56	21.58	22.65	23.80	24.99

DATA SOURCES : OUTPUT FROM THE PIES OIL & GAS SUPPLY MODEL DERIVED FROM
AVERAGE REFERENCE ACQUISITION COSTS, TRANSPORTATION COSTS,
AND OTHER RELEVANT COSTS AND PRICES. ALSO PLATT'S OILGRAM, WASHINGTON, D.C
A WEEKLY PUBLICATION.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY
SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 2
PRICE TRAJECTORIES FOR ASSOCIATED AND DISSOLVED GAS
(\$/MCF)

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
STEP 1	2.17	2.06	1.96	1.86	1.77	1.68	1.60	1.52	1.44	1.37	1.30	1.23	1.17	1.11	1.06
STEP 2	2.17	2.11	2.04	1.98	1.92	1.86	1.81	1.75	1.70	1.65	1.60	1.55	1.51	1.46	1.42
STEP 3	2.17	2.13	2.08	2.04	2.00	1.96	1.92	1.88	1.85	1.81	1.77	1.74	1.70	1.67	1.64
STEP 4	2.17	2.15	2.13	2.11	2.08	2.06	2.04	2.02	2.00	1.98	1.96	1.94	1.92	1.90	1.89
STEP 5	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17
STEP 6	2.17	2.19	2.21	2.24	2.26	2.28	2.30	2.33	2.35	2.37	2.40	2.42	2.45	2.47	2.49
STEP 7	2.17	2.21	2.26	2.30	2.35	2.40	2.44	2.49	2.54	2.59	2.65	2.70	2.75	2.81	2.86
STEP 8	2.17	2.24	2.30	2.37	2.44	2.52	2.59	2.67	2.75	2.83	2.92	3.00	3.09	3.19	3.28
STEP 9	2.17	2.28	2.39	2.51	2.64	2.77	2.91	3.05	3.21	3.37	3.54	3.71	3.90	4.09	4.30

DATA SOURCES : OUTPUT FROM THE PIES OIL & GAS SUPPLY MODEL DERIVED FROM
AVERAGE REFERENCE ACQUISITION COSTS, TRANSPORTATION COSTS,
AND OTHER RELEVANT COSTS AND PRICES. ALSO PLATT'S OILGRAM, WASHINGTON, D.C
A WEEKLY PUBLICATION.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY
SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 3
OIL SUPPLY CURVES FOR 1985

		PRICE CRUDE OIL STEP	(MBBL/D)	INTERSTATE GAS (MMCF/D)	INTRASTATE GAS (MMCF/D)	BUTANE (MBBL/D)	GAS LIQUIDS (MBBL/D)	BUNDLE PRICE (\$/BBL OIL)	CAPITAL (MM\$)	FOOTAGE DRILLED (MMFT)
NPC REGION-SOUTH ALASKA										
	NEW PRIMARY	5	236.80	98.27				**	1284.00	5.99
	NFW SECONDARY	5	16.70	6.84				**	47.00	
	OLD PRIMARY	5	47.50	19.71				**		
	OLD SECONDARY	5	14.90	6.30				**	73.00	
NPC REGION-PACIFIC COAST										
EXCLUDING ELK'S HILL										
	NEW PRIMARY	5	199.60		69.98	1.70	.80	**	2345.18	124.81
	NEW SECONDARY	5	52.70		18.61	.40	.19	**	75.00	
	OLD PRIMARY	5	335.10		131.96	3.08	1.57	**		
	OLD SECONDARY	5	29.50		10.40	.20	.10	**	71.00	
	OLD TERTIARY	5	40.70					**	350.00	
ELK'S HILL										
	NEW PRIMARY	*	175.00					**	728.44	
NPC REGION-PACIFIC OCEAN										
	NEW PRIMARY	5	43.80	59.96		1.60	1.20	**	454.00	6.00
	NEW SECONDARY	5	.50	.82				**	2.00	
	OLD PRIMARY	5	105.90	153.86		4.89	3.70	**		
	OLD SECONDARY	5	58.60	80.76		2.20	1.70	**	247.00	
NPC REGION-WEST ROCKIES										
	NEW PRIMARY	5	117.70		113.73	3.12	2.34	**	1452.83	65.88
	NFW SECONDARY	5	18.80		17.79	.50	.30	**	16.00	
	OLD PRIMARY	5	41.80	29.29	13.37	1.40	1.00	**		
	OLD SECONDARY	5	105.80	70.98	32.40	2.79	2.09	**	180.00	

VINTAGE (OLD, NEW) INDICATES WHETHER OIL WELLS DRILLED BEFORE OR AFTER 1/1/77 (NOTE DIFFERENCE FROM LEGAL DEFINITION OF OIL VINTAGE).

A * IN THE PRICE STEP COLUMN INDICATES DATA FOR THAT REGION ARE ENGINEERING ESTIMATES.

BUNDLE PRICE = (TOTAL VALUE OF ALL PRODUCTS IN INCREMENT OVER PREVIOUS PRICE STEP)/(QUANTITY OF OIL IN THAT INCREMENT).

A ** IN BUNDLE PRICE COLUMN INDICATES BUNDLE PRICE NOT CALCULATED FOR OIL REGULATION SCENARIOS WITH POINT ESTIMATES OF SUPPLY.

CAPITAL INVESTMENT AND DRILLING STATISTICS ARE CUMULATIVE FROM 1977 TO 1984.

TABLE 3
(CONTINUED)
OIL SUPPLY CURVES FOR 1985

	PRICE STEP	CRUDE OIL (MBBL/D)	INTERSTATE GAS (MMCF/D)	INTRASTATE GAS (MMCF/D)	BUTANE (MBBL/D)	GAS LIQUIDS (MBBL/D)	BUNDLE PRICE (\$/BDL OIL)	CAPITAL (MM\$)	FOOTAGE DRILLED (MMFT)
NPC REGION-EAST ROCKIES									
	NEW PRIMARY	5	224.10		137.87	8.56	2.85	**	1864.98
	NEW SECONDARY	5	19.50		12.59	.80	.30	**	19.00
	OLD PRIMARY	5	155.80	47.71	37.70	4.39	1.50	**	
	OLD SECONDARY	5	183.10	61.63	48.69	6.68	2.20	**	335.99
NPC REGION-W. TEX./E. N. MEX.									
	NEW PRIMARY	5	161.90		143.61	8.94	3.37	**	2054.15
	NEW SECONDARY	5	27.10		24.09	1.70	.60	**	30.00
	OLD PRIMARY	5	748.80	421.50	536.66	43.73	16.17	**	
	OLD SECONDARY	5	307.80	119.95	152.73	15.48	5.69	**	586.97
	OLD TERTIARY	5	343.10					**	1335.93
NPC REGION-GULF COAST									
	NEW PRIMARY	5	317.00		357.73	22.32	7.07	**	2970.70
	NEW SECONDARY	5	4.60		5.20	.30	.10	**	5.00
	OLD PRIMARY	5	716.90	423.04	418.17	56.28	17.78	**	
	OLD SECONDARY	5	910.60	515.49	509.48	64.20	20.22	**	1740.98
	OLD TERTIARY	5	40.20					**	242.00
NPC REGION-GULF OF MEXICO									
	NEW PRIMARY	5	268.10	304.16		7.48	4.58	**	1604.98
	NEW SECONDARY	5	9.60	11.22		.20	.10	**	9.00
	OLD PRIMARY	5	236.70	263.64		8.50	5.18	**	
	OLD SECONDARY	5	50.40	56.40		1.70	1.10	**	113.00

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TABLE 3
(CONTINUED)
OIL SUPPLY CURVES FOR 1985

	PRICE CRUDE OIL STEP	(MBBL/D)	INTERSTATE GAS (MMCF/D)	INTRASTATE GAS (MMCF/D)	BUTANE (MBBL/D)	GAS LIQUIDS (MBBL/D)	BUNDLE PRICE (\$/BBL OIL)	CAPITAL (MMS)	FOOTAGE DRILLED (MMFT)
NPC REGION-MIDCONTINENT									
NEW PRIMARY	5	149.90		241.65	3.22	2.02	**	3542.66	272.32
NEW SECONDARY	5	51.40		82.91	1.08	.72	**	74.81	
OLD PRIMARY	5	213.10	205.39	188.30	3.39	2.09	**		
OLD SECONDARY	5	135.40	114.12	104.62	2.90	1.79	**	426.00	
OLD TERTIARY	5	27.00					**	128.00	
NPC REGION-MI. B. / INT. / APP.									
NEW PRIMARY	5	113.70		48.17			**	1283.88	112.68
NEW SECONDARY	5	14.30		6.30			**	14.00	
OLD PRIMARY	5	70.30	12.52	18.41			**		
OLD SECONDARY	5	65.50	11.19	16.46			**	121.00	
OLD TERTIARY	5	10.80					**	24.00	
NPC REGION-ATLANTIC COAST									
NEW PRIMARY	5	91.40		38.34	1.88		**	294.49	19.75
NEW SECONDARY	5	6.00		2.74	.10		**	5.00	
OLD PRIMARY	5	4.50	.09	1.00	.10		**		
NPC REGION-ATLANTIC OCEAN									
NEW PRIMARY	5	263.20	199.85		9.58		**	702.98	5.97
NEW SECONDARY	5	6.70	5.20		.20		**	56.00	
NPC REGION-NORTH SLOPE									
PRUDHOE BAY									
NEW PRIMARY	*	1600.00	2755.84				**	6976.00	6256.00
BEAUFORT SEA									
NEW PRIMARY	*	112.00	79.28				**	1072.96	779.52
NORTH SLOPE OTHER									
NEW PRIMARY	*	720.00	332.64				**	5745.60	5018.40

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TABLE 4
OIL SUPPLY CURVES FOR 1990

		PRICE CRUDE OIL STEP	(MBBL/D)	INTERSTATE GAS (MMCF/D)	INTRASTATE GAS (MMCF/D)	BUTANE (MBBL/D)	GAS LIQUIDS (MBBL/D)	BUNDLE PRICE (\$/BBL OIL)	CAPITAL (MMS)	FOOTAGE DRILLED (MMFT)
NPC REGION-SOUTH ALASKA										
	NEW PRIMARY	5	678.90	201.40				**	1969.96	9.98
	NEW SECONDARY	5	41.10	16.97				**	272.00	
	OLD PRIMARY	5	22.00	9.03				**		
	OLD SECONDARY	5	9.80	4.11				**	91.00	
NPC REGION-PACIFIC COAST										
EXCLUDING ELK'S HILL										
	NEW PRIMARY	5	393.00		138.10	3.26	1.61	**	7563.85	311.37
	NEW SECONDARY	5	112.10		39.41	.39	.49	**	337.59	
	OLD PRIMARY	5	204.30		89.24	2.38	.98	**		
	OLD SECONDARY	5	36.50		12.87	.30	.10	**	147.00	
	OLD TERTIARY	5	49.80					**	685.00	
ELK'S HILL										
	NEW PRIMARY	*	150.00					**	630.00	
NPC REGION-PACIFIC OCEAN										
	NEW PRIMARY	5	73.80	96.09		2.60	1.90	**	907.00	11.00
	NEW SECONDARY	5	1.60	1.92		.10		**	11.00	
	OLD PRIMARY	5	64.60	93.63		3.00	2.20	**		
	OLD SECONDARY	5	50.30	67.35		1.90	1.40	**	330.00	
NPC REGION-WEST ROCKIES										
	NEW PRIMARY	5	234.50		215.18	5.72	4.24	**	4112.99	184.93
	NEW SECONDARY	5	38.80		35.20	.69	.67	**	101.75	
	OLD PRIMARY	5	17.20	12.02	5.49	.60	.40	**		
	OLD SECONDARY	5	79.10	51.07	23.31	1.69	1.49	**	273.00	

VINTAGE (OLD, NEW) INDICATES WHETHER OIL WELLS DRILLED BEFORE OR AFTER 1/1/77 (NOTE DIFFERENCE FROM LEGAL DEFINITION OF OIL VINTAGE).

A * IN THE PRICE STEP COLUMN INDICATES DATA FOR THAT REGION ARE ENGINEERING ESTIMATES.

BUNDLE PRICE = (TOTAL VALUE OF ALL PRODUCTS IN INCREMENT OVER PREVIOUS PRICE STEP)/(QUANTITY OF OIL IN THAT INCREMENT).

A ** IN BUNDLE PRICE COLUMN INDICATES BUNDLE PRICE NOT CALCULATED FOR OIL REGULATION SCENARIOS WITH POINT ESTIMATES OF SUPPLY.

CAPITAL INVESTMENT AND DRILLING STATISTICS ARE CUMULATIVE FROM 1977 TO 1989.

TABLE 4
(CONTINUED)
OIL SUPPLY CURVES FOR 1990

		PRICE CRUDE OIL STEP	(MBBL/D)	INTERSTATE GAS (MMCF/D)	INTRASTATE GAS (MMCF/D)	BUTANE (MBBL/D)	GAS LIQUIDS (MBBL/D)	BUNDLE PRICE (\$/DBL OIL)	CAPITAL (MM\$)	FOOTAGE DRILLED (MMFT)

NPC REGION-EAST ROCKIES										
	NEW PRIMARY	5	470.60		316.71	19.34	6.45	**	5236.69	404.29
	NEW SECONDARY	5	64.20		44.29	2.69	.84	**	170.19	
	OLD PRIMARY	5	73.60	22.48	17.76	2.10	.70	**		
	OLD SECONDARY	5	146.50	52.61	41.56	5.70	1.89	**	511.99	
NPC REGION-W. TEX./E. N. MEX.										
	NEW PRIMARY	5	342.20		303.26	19.06	6.98	**	5714.59	417.48
	NEW SECONDARY	5	80.70		71.50	4.54	1.76	**	180.47	
	OLD PRIMARY	5	390.90	319.76	407.12	37.37	13.80	**		
	OLD SECONDARY	5	181.50	70.69	90.01	9.29	3.48	**	650.99	
	OLD TERTIARY	5	489.70					**	3114.33	
NPC REGION-GULF COAST										
	NEW PRIMARY	5	624.00		714.11	44.87	14.16	**	7964.98	519.79
	NEW SECONDARY	5	10.20		11.92	.69	.23	**	19.48	
	OLD PRIMARY	5	359.60	235.43	232.70	31.07	9.89	**		
	OLD SECONDARY	5	765.40	437.66	432.60	54.57	17.30	**	2702.93	
	OLD TERTIARY	5	60.20					**	745.00	
NPC REGION-GULF OF MEXICO										
	NEW PRIMARY	5	354.60	411.76		8.69	5.28	**	2526.98	52.98
	NEW SECONDARY	5	15.60	18.62		.40	.20	**	45.00	
	OLD PRIMARY	5	102.70	114.44		3.70	2.29	**		
	OLD SECONDARY	5	21.90	24.37		.70	.50	**	113.00	

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TABLE 4
(CONTINUED)
OIL SUPPLY CURVES FOR 1990

	PRICE CRUDE OIL STEP	INTERSTATE GAS (MMCF/D)	INTRASTATE GAS (MMCF/D)	BUTANE (MMBBL/D)	GAS LIQUIDS (MMBBL/D)	BUNDLE PRICE (\$/BBL OIL)	CAPITAL (MM\$)	FOOTAGE DRILLED (MMFT)
	(MMBBL/D)							
NPC REGION-MIDCONTINENT								
NEW PRIMARY	5	300.80		476.29	6.32	1.82	**	9688.82
NEW SECONDARY	5	92.90		147.45	2.00	1.20	**	186.20
OLD PRIMARY	5	106.90	155.68	142.73	2.99	1.89	**	
OLD SECONDARY	5	114.00	94.97	87.07	2.39	1.49	**	542.99
OLD TERTIARY	5	78.00					**	383.00
NPC REGION-MI. B./ INT./ APP.								
NEW PRIMARY	5	230.00		107.13			**	3600.90
NEW SECONDARY	5	34.90		16.62			**	82.19
OLD PRIMARY	5	32.50	6.87	10.10			**	
OLD SECONDARY	5	67.30	12.52	18.41			**	228.00
OLD TERTIARY	5	10.50					**	32.00
NPC REGION-ATLANTIC COAST								
NEW PRIMARY	5	156.10		86.17	4.12		**	740.62
NEW SECONDARY	5	10.00		5.90	.29		**	12.74
OLD PRIMARY	5	1.70	.05	.50			**	
NPC REGION-ATLANTIC OCEAN								
NEW PRIMARY	5	315.30	239.53		11.48		**	1066.97
NEW SECONDARY	5	13.80	10.40		.50		**	122.00
NPC REGION-NORTH SLOPE								
PRUDHOE BAY								
NEW PRIMARY	*	1021.00	2206.58				**	7117.39
BEAUFORT SEA								
NEW PRIMARY	*	619.00	723.67				**	5274.37
NORTH SLOPE OTHER								
NEW PRIMARY	*	573.00	323.23				**	6910.38
NAVAL PETROLEUM RESERVE A								
NEW PRIMARY	*	685.00					**	

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.
CAPITAL FIGURES ARE DERIVED FROM DATA GATHERED BY THE AMERICAN PETROLEUM INSTITUTE ANNUAL PUBLICATION, "JOINT ASSOCIATION SURVEY OF THE U.S. OIL AND GAS PRODUCING INDUSTRY FOR 1975". THESE DATA ARE USED AS INPUT TO THE PIES OIL AND GAS MODEL.
FOOTAGE DRILLED DATA FROM SECTION 1, DRILLING COSTS OF THE U.S. OIL AND GAS PRODUCING INDUSTRIES PUBLISHED IN THE JOINT ASSOCIATION
AMERICAN PETROLEUM COUNCIL, THE AMERICAN GAS ASSOCIATION, AND VARIOUS OTHER ENERGY RELATED INDUSTRIES. THE DATA IS INPUT TO THE PIES OIL AND GAS MODEL AND THE

ABOVE FIGURES ARE CALCULATED THERE. OTHER SOURCES INCLUDE "QUARTERLY REVIEW OF DRILLING STATISTICS", AMERICAN PETROLEUM INSTITUTE, WASHINGTON, D.C.
FOR INITIAL EXPLORATORY FOOTAGE AND "U.S. ENERGY OUTLOOK- OIL AND GAS AVAILABILITY", WASHINGTON, D.C., 1973.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, BIA.

TABLE 5
PRICE TRAJECTORIES FOR NONASSOCIATED GAS
(\$/MCF)

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
STEP 1	1.63	1.61	1.58	1.56	1.53	1.51	1.49	1.47	1.44	1.44	1.44	1.44	1.44	1.44	1.44
STEP 2	1.63	1.61	1.60	1.58	1.57	1.55	1.53	1.52	1.50	1.50	1.50	1.50	1.50	1.50	1.50
STEP 3	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63
STEP 4	1.63	1.65	1.66	1.68	1.70	1.71	1.73	1.75	1.76	1.76	1.76	1.76	1.76	1.76	1.76
STEP 5	1.63	1.66	1.70	1.73	1.76	1.80	1.84	1.87	1.91	1.91	1.91	1.91	1.91	1.91	1.91
STEP 6	1.63	1.68	1.73	1.78	1.83	1.89	1.95	2.00	2.06	2.06	2.06	2.06	2.06	2.06	2.06
STEP 7	1.63	1.69	1.76	1.83	1.91	1.98	2.06	2.14	2.23	2.23	2.23	2.23	2.23	2.23	2.23
STEP 8	1.63	1.71	1.80	1.89	1.99	2.08	2.19	2.29	2.41	2.41	2.41	2.41	2.41	2.41	2.41
STEP 9	1.63	1.74	1.87	2.00	2.14	2.29	2.45	2.62	2.80	2.80	2.80	2.80	2.80	2.80	2.80

DATA SOURCES : OUTPUT FROM THE PIRS OIL & GAS SUPPLY MODEL DERIVED FROM
AVERAGE REFERENCE ACQUISITION COSTS, TRANSPORTATION COSTS,
AND OTHER RELEVANT COSTS AND PRICES. ALSO PLATT'S OILGRAM, WASHINGTON, D.C
A WEEKLY PUBLICATION.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY
SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 6
PRICE TRAJECTORIES FOR NATURAL GAS LIQUIDS
(\$/BRL)

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
STEP 1	9.48	9.33	9.19	9.06	8.92	8.79	8.66	8.53	8.40	8.40	8.40	8.40	8.40	8.40	8.40
STEP 2	9.48	9.38	9.29	9.20	9.10	9.01	8.92	8.83	8.74	8.74	8.74	8.74	8.74	8.74	8.74
STEP 3	9.48	9.48	9.48	9.48	9.48	9.48	9.48	9.48	9.48	9.48	9.48	9.48	9.48	9.48	9.48
STEP 4	9.48	9.57	9.67	9.76	9.86	9.96	10.06	10.16	10.26	10.26	10.26	10.26	10.26	10.26	10.26
STEP 5	9.48	9.67	9.86	10.06	10.26	10.46	10.67	10.89	11.10	11.10	11.10	11.10	11.10	11.10	11.10
STEP 6	9.48	9.76	10.05	10.36	10.67	10.99	11.32	11.66	12.00	12.00	12.00	12.00	12.00	12.00	12.00
STEP 7	9.48	9.86	10.25	10.66	11.09	11.53	11.99	12.47	12.97	12.97	12.97	12.97	12.97	12.97	12.97
STEP 8	9.48	9.95	10.45	10.97	11.52	12.09	12.70	13.33	14.00	14.00	14.00	14.00	14.00	14.00	14.00
STEP 9	9.48	10.14	10.85	11.61	12.42	13.29	14.22	15.22	16.28	16.28	16.28	16.28	16.28	16.28	16.28

DATA SOURCES : OUTPUT FROM THE PIRS OIL & GAS SUPPLY MODEL DERIVED FROM
AVERAGE REFERENCE ACQUISITION COSTS, TRANSPORTATION COSTS,
AND OTHER RELEVANT COSTS AND PRICES. ALSO PLATT'S OILGRAM, WASHINGTON, D.C
A WEEKLY PUBLICATION.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY
SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 7
GAS SUPPLY CURVES FOR 1985

	PRICE STEP	NATURAL GAS (MMCF/D)	BUTANE (MMBL/D)	GAS LIQUIDS (MMBL/D)	BUNDLE PRICE (\$/MCF GAS)	CAPITAL (MM\$)	DRILLING (MMPT)
NPC REGION-SOUTH ALASKA INTERSTATE GAS							
NEW GAS	1	122.10			1.44	142.90	.99
	2	160.98			1.50	192.98	.99
	3	229.42			1.63	289.97	.99
	4	421.61			1.76	568.35	1.99
	5	530.85			1.91	751.95	2.98
	7	531.67			2.23	751.95	2.98
	9	536.06			2.80	755.95	2.98
OLD GAS	1	262.83			1.44		
NPC REGION-PACIFIC OCEAN INTERSTATE GAS							
NEW GAS	1	55.30	.50	.70	1.63	30.00	
	4	57.22	.60	.70	2.30	31.00	
	6	58.59	.60	.70	2.06	31.00	
	7	59.68	.60	.70	2.23	31.00	
	8	61.60	.60	.70	2.41	32.00	
OLD GAS	6	15.61			2.06		
NPC REGION-WEST ROCKIES INTERSTATE GAS							
OLD GAS	1	663.31	1.06	.66	1.47		
NPC REGION-EAST ROCKIES INTERSTATE GAS							
OLD GAS	1	243.60	3.73	2.53	1.66		
NPC REGION-W. TEX./E. N. MEX. INTERSTATE GAS							
OLD GAS	1	332.64			1.44		

VINTAGE (OLD, NEW) INDICATES WHETHER GAS WELLS DRILLED BEFORE OR AFTER 1/1/77 (NOTE DIFFERENCE FROM LEGAL DEFINITION OF GAS VINTAGE).

ALL QUANTITIES (PRODUCTION, INVESTMENT AND DRILLING) ARE CUMULATIVE OVER PRICE STEPS.

PRICE STEPS WITH NO ADDITIONAL PRODUCTION OVER PREVIOUS STEP ARE OMITTED.

BUNDLE PRICE = (TOTAL VALUE OF ALL PRODUCTS IN INCREMENT OVER PREVIOUS PRICE STEP)/(QUANTITY OF NATURAL GAS IN THAT INCREMENT).

CAPITAL INVESTMENT AND DRILLING STATISTICS ARE CUMULATIVE FROM 1977 TO 1984.

TABLE 7
(CONTINUED)
GAS SUPPLY CURVES FOR 1985

	PRICE STEP	NATURAL GAS (MMCF/D)	BUTANE (MMBL/D)	GAS LIQUIDS (MMBL/D)	BUNDLE PRICE (\$/MCF GAS)	CAPITAL (MM\$)	DRILLING (MMFT)
NPC REGION-GULF COAST INTERSTATE GAS							
	OLD GAS 1	2498.20	49.21	38.97	1.74		
NPC REGION-GULF OF MEXICO INTERSTATE GAS							
	NEW GAS 1	2442.90	15.88	20.03	1.57	1550.75	25.89
	2	2445.91	15.88	20.13	1.79	1551.75	25.89
	5	2581.15	16.68	21.12	2.06	1551.75	25.89
	6	2583.34	16.68	21.12	2.06	1551.75	25.89
	8	2583.89	16.68	21.12	2.41	1551.75	25.89
	OLD GAS 1	3639.70	37.85	29.95	1.60		
NPC REGION-MIDCONTINENT INTERSTATE GAS							
	OLD GAS 1	1513.00	15.43	10.14	1.59		
NPC REGION-MI. BASIN AND INT. INTERSTATE GAS							
	OLD GAS 1	.15	.00		1.46		
NPC REGION-APPALACHIA INTERSTATE GAS							
	OLD GAS 1	317.11	6.06	3.33	1.69		
NPC REGION-ATLANTIC OCEAN INTERSTATE GAS							
	NEW GAS 1	395.34	7.59	3.08	1.67	221.98	1.98
	3	402.46	7.69	3.18	1.90	233.98	1.98
	5	407.39	7.79	3.18	2.14	243.98	1.98
	6	413.68	7.89	3.28	2.45	258.98	1.98
	9	436.95	8.39	3.38	3.22	302.98	1.98
DOE REGION-N.Y./N.J. INTRASTATE GAS							
	OLD GAS 1	2.13	.04	.02	1.69		

TABLE 7
(CONTINUED)
GAS SUPPLY CURVES FOR 1985

	PRICE STEP	NATURAL GAS (MMCF/D)	BUTANE (MBBL/D)	GAS LIQUIDS (MBBL/D)	BUNDLE PRICE (\$/MCF GAS)	CAPITAL (M\$)	DRILLING (MMFT)
DOE REGION-MID-ATLANTIC INTRASTATE GAS							
OLD GAS	1	123.98	2.37	1.30	1.69		
DOE REGION-SOUTH ATLANTIC INTRASTATE GAS							
NEW GAS	1	101.16	1.23	1.58	1.68	71.06	3.14
	2	108.15	1.32	1.69	1.75	76.70	3.37
	3	118.19	1.44	1.84	1.89	85.29	3.73
	4	132.32	1.62	2.06	2.05	98.09	4.26
	5	137.00	1.67	2.14	2.22	102.88	4.44
	6	143.94	1.76	2.24	2.40	110.30	4.72
	7	149.71	1.83	2.34	2.60	116.26	4.94
	8	153.92	1.98	2.40	2.80	121.23	5.10
	9	164.86	2.01	2.57	3.26	134.27	5.54
OLD GAS	1	73.46	1.43	.99	1.72		
DOE REGION-MIDWEST INTRASTATE GAS							
OLD GAS	1	92.84	.84	.41	1.56		
DOE REGION-SOUTHWEST INTRASTATE GAS							
NEW GAS	1	15022.00	198.29	204.30	1.67	10905.97	491.22
	2	15820.28	208.35	215.40	1.74	11570.05	520.29
	3	17024.78	223.65	231.66	1.89	12629.41	565.45
	4	18679.18	244.49	254.32	2.04	14163.20	631.95
	5	19190.45	250.37	261.07	2.18	14665.23	651.43
	6	20036.38	261.03	272.41	2.38	15551.42	687.21
	7	20702.32	268.49	280.86	2.54	16270.17	717.51
	8	21517.00	277.45	290.07	2.72	17187.58	755.80
	9	23418.00	300.26	313.45	3.20	19434.94	849.57
OLD GAS	1	5303.40	71.60	54.63	1.64		

TABLE 7
(CONTINUED)
GAS SUPPLY CURVES FOR 1985

	PRICE STEP	NATURAL GAS (MMCF/D)	BUTANE (MMBL/D)	GAS LIQUIDS (MMBL/D)	BUNDLE PRICE (\$/MCF GAS)	CAPITAL (MM\$)	DRILLING (MMPT)
DOE REGION-CENTRAL INTRASTATE GAS							
NEW GAS	1	823.67	9.47	8.32	1.63	609.93	30.81
	2	863.01	9.89	8.69	1.68	644.16	32.50
	3	921.21	10.48	9.20	1.81	696.38	34.94
	4	1004.84	11.33	9.94	1.96	776.39	38.89
	5	1035.90	11.59	10.19	2.09	808.55	40.21
	6	1074.73	11.93	10.48	2.26	849.93	42.08
	7	1100.68	12.13	10.67	2.43	880.59	43.43
	8	1159.70	12.69	11.16	2.66	945.29	46.22
	9	1278.66	13.84	12.14	3.09	1087.30	52.61
OLD GAS	1	335.85	3.43	2.25	1.59		
DOE REGION-NORTH CENTRAL INTRASTATE GAS							
NEW GAS	4	316.49	3.48	3.29	1.99	361.97	17.00
	5	447.08	4.97	4.69	2.16	520.96	24.99
	6	567.81	6.36	5.98	2.33	674.94	31.98
	7	693.13	7.57	7.07	2.47	840.51	40.12
	8	899.39	9.68	8.99	2.68	1124.31	53.84
	9	1141.92	12.10	11.29	3.12	1485.75	71.13
OLD GAS	1	308.25	3.95	2.68	1.63		
DOE REGION-WEST INTRASTATE GAS							
NEW GAS	2	86.24	.70	1.10	1.69	116.00	4.99
	3	197.67	1.69	2.49	1.83	212.98	8.98
	4	309.92	2.59	3.88	1.98	344.98	13.98
	5	366.32	3.08	4.58	2.15	412.97	16.97
	6	423.54	3.58	5.28	2.32	483.97	19.97
	7	468.17	3.98	5.88	2.52	543.97	21.97
	8	558.24	4.77	6.97	2.70	666.97	26.97
	9	653.52	5.56	8.17	3.14	803.97	32.96
OLD GAS	1	208.62			1.44		

TABLE 8
GAS SUPPLY CURVES PCR 1990

	PRICE STEP	NATURAL GAS (MMCF/D)	BUTANE (MMBBL/D)	GAS LIQUIDS (MMBBL/D)	BUNDLE PRICE (\$/MCF GAS)	CAPITAL (MM\$)	DRILLING (MMFT)
NPC REGION-SOUTH ALASKA INTERSTATE GAS							
NEW GAS	2	196.57			1.43	69.00	
	3	473.91			1.63	254.98	1.00
	4	897.72			1.85	701.97	2.99
	5	1158.36			2.11	1046.95	3.98
	6	1269.79			2.39	1162.95	4.97
	7	1271.16			2.71	1162.95	4.97
	9	1273.90			3.93	1162.95	4.97
OLD GAS	1	233.53			1.34		
NPC REGION-PACIFIC OCEAN INTERSTATE GAS							
NEW GAS	1	134.97	1.19	1.69	1.51	59.00	1.00
	4	140.17	1.19	1.79	2.06	60.30	1.00
	6	144.28	1.19	1.79	2.39	62.00	1.00
	8	150.85	1.29	1.89	3.62	63.99	1.00
OLD GAS	5	9.86			2.11		
NPC REGION-WEST ROCKIES INTERSTATE GAS							
OLD GAS	1	459.25	.73	.46	1.36		
NPC REGION-EAST ROCKIES INTERSTATE GAS							
OLD GAS	1	160.47			1.34		
NPC REGION-W. TEX./E. N. MEX. INTERSTATE GAS							
OLD GAS	1	125.84			1.34		

VINTAGE (OLD, NEW) INDICATES WHETHER GAS WELLS DRILLED BEFORE OR AFTER 1/1/77 (NOTE DIFFERENCE FROM LEGAL DEFINITION OF GAS VINTAGE).
ALL QUANTITIES (PRODUCTION, INVESTMENT AND DRILLING) ARE CUMULATIVE OVER PRICE STEPS.
PRICE STEPS WITH NO ADDITIONAL PRODUCTION OVER PREVIOUS STEP ARE OMITTED.
BUNDLE PRICE = (TOTAL VALUE OF ALL PRODUCTS IN INCREMENT OVER PREVIOUS PRICE STEP) / (QUANTITY OF NATURAL GAS IN THAT INCREMENT).
CAPITAL INVESTMENT AND DRILLING STATISTICS ARE CUMULATIVE FROM 1977 TO 1989.

TABLE 8
(CONTINUED)
GAS SUPPLY CURVES FOR 1990

	PRICE STEP	NATURAL GAS (MMCF/D)	BUTANE (MMBL/D)	GAS LIQUIDS (MMBL/D)	BUNDLE PRICE (\$/MCF GAS)	CAPITAL (MM\$)	DRILLING (MMPT)
NPC REGION-GULF COAST INTERSTATE GAS							
	OLD GAS 1	1278.10	25.18	19.94	1.61		
NPC REGION-GULF OF MEXICO INTERSTATE GAS							
	NEW GAS 1	3861.10	25.10	31.66	1.45	2401.60	39.00
	2	3864.39	25.10	31.66	1.43	2404.60	39.00
	4	3938.85	25.60	32.26	2.01	2404.60	39.00
	OLD GAS 1	1946.80	20.25	15.96	1.48		
NPC REGION-MIDCONTINENT INTERSTATE GAS							
	OLD GAS 1	809.27	8.25	5.42	1.47		
NPC REGION-MI. BASIN AND INT. INTERSTATE GAS							
	OLD GAS 1	.06			1.38		
NPC REGION-APPALACHIA INTERSTATE GAS							
	OLD GAS 2	196.22	3.77	2.10	1.68		
NPC REGION-ATLANTIC OCEAN INTERSTATE GAS							
	NEW GAS 1	504.50	6.86	2.78	1.49	242.00	1.97
	2	540.99	6.86	2.78	1.43	244.00	1.97
	3	569.19	7.06	2.78	1.70	278.99	1.97
	4	586.44	7.06	2.78	1.85	337.99	1.97
	5	607.25	7.26	2.78	2.23	369.99	2.97
	6	635.45	7.36	2.87	2.49	417.99	2.97
	7	643.11	7.36	2.87	2.71	444.99	2.97
	8	665.29	7.36	2.87	3.07	487.99	3.96
	9	731.00	7.96	3.07	4.21	531.99	3.96
DOE REGION-N.Y./N.J. INTRASTATE GAS							
	NEW GAS 9	5.14	.08	.05	4.55	11.18	.73
	OLD GAS 2	1.32	.03	.01	1.68		

TABLE 8
(CONTINUED)
GAS SUPPLY CURVES FOR 1990

	PRICE STEP	NATURAL GAS (MMCF/D)	BUTANE (MBSL/D)	GAS LIQUIDS (MBSL/D)	BUNDLE PRICE (\$/MCF GAS)	CAPITAL (MM\$)	DRILLING (MMFT)
DOE REGION-MID-ATLANTIC INTRASTATE GAS							
	NEW GAS 9	298.71	4.93	3.17	4.55	650.05	42.45
	OLD GAS 2	76.72	1.47	.82	1.68		
DOE REGION-SOUTH ATLANTIC INTRASTATE GAS							
	NEW GAS 1	83.31	1.02	1.30	1.56	88.96	3.90
	2	96.78	1.18	1.51	1.66	98.18	4.30
	3	117.72	1.44	1.83	1.90	116.09	5.04
	4	142.49	1.74	2.22	2.16	145.53	6.23
	5	157.02	1.92	2.44	2.45	163.74	6.94
	6	176.69	2.16	2.75	2.78	190.93	7.96
	7	191.40	2.34	2.99	3.16	211.66	8.73
	8	207.01	2.53	3.22	3.57	236.63	9.64
	9	299.88	3.98	4.30	4.55	440.25	21.52
	OLD GAS 1	21.98	.43	.34	1.61		
	2	40.85	.80	.58	1.68		
DOE REGION-MIDWEST INTRASTATE GAS							
	NEW GAS 9	231.54	3.64	3.59	4.64	422.77	29.36
	OLD GAS 1	22.11			1.34		
	2	46.28	.46	.26	1.68		
DOE REGION-SOUTHWEST INTRASTATE GAS							
	NEW GAS 1	11604.00	149.69	156.65	1.55	13464.11	605.73
	2	13778.00	176.43	184.05	1.64	14747.42	663.12
	3	16263.50	208.00	218.10	1.88	17095.96	765.28
	4	19274.90	244.74	254.15	2.13	20851.48	926.39
	5	21058.80	266.14	281.52	2.42	23122.03	1021.29
	6	23447.89	294.57	312.58	2.74	26499.49	1159.62
	7	25343.99	316.19	336.28	3.09	29412.28	1279.07
	8	27674.59	342.52	364.01	3.49	33470.78	1450.14
	9	30519.69	372.97	396.73	4.44	40145.95	1718.15
	OLD GAS 1	2687.80	37.09	28.22	1.53		

TABLE H
(CONTINUED)
GAS SUPPLY CURVES FOR 1990

	PRICE STEP	NATURAL GAS (MMCP/D)	DIFFER (MMBL/D)	GAS LIQUIDS (MMBL/D)	BUNDLE PRICE (\$/MCP GAS)	CAPITAL (MM\$)	DRILLING (MMPT)
DOE REGION-CENTRAL INTRASTATE GAS							
NEW GAS	1	615.03	6.73	5.91	1.49	760.83	38.36
	2	765.11	7.77	6.82	1.56	821.20	41.36
	3	859.87	8.69	7.55	1.79	942.52	47.38
	4	1013.28	9.88	8.68	2.03	1143.39	56.97
	5	1109.63	10.64	9.34	2.29	1275.44	63.17
	6	1222.67	11.53	10.12	2.60	1435.50	70.32
	7	1318.05	12.25	10.76	2.90	1602.34	77.65
	8	1446.17	13.31	11.69	3.35	1847.23	88.74
	9	1610.09	14.68	12.89	4.29	2243.54	106.04
OLD GAS	1	179.63	1.83	1.20	1.47		
DOE REGION-NORTH CENTRAL INTRASTATE GAS							
NEW GAS	4	383.02	4.29	3.98	2.09	529.98	24.97
	5	576.31	6.47	5.97	2.38	814.97	38.97
	6	868.12	9.57	8.86	2.68	1280.30	61.29
	7	1128.24	12.17	11.29	3.02	1734.35	82.57
	8	1495.75	15.81	14.81	3.42	2449.78	117.33
	9	2115.71	21.94	20.45	4.37	3874.32	186.46
OLD GAS	1	204.91	.06	.02	1.34		
DOE REGION-WEST INTRASTATE GAS							
NEW GAS	2	7.12	.10		1.55	116.30	5.00
	3	209.17	1.80	2.59	1.83	287.98	11.99
	4	350.65	3.08	4.48	2.09	504.37	20.99
	5	452.83	3.87	5.69	2.37	645.97	26.99
	6	589.99	4.97	7.37	2.68	875.96	35.99
	7	701.14	5.96	8.76	3.05	1082.94	43.98
	8	867.32	7.36	10.85	3.45	1414.92	57.97
	9	1159.44	9.84	14.53	4.41	2032.90	81.95
OLD GAS	1	129.22			1.34		

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.
CAPITAL FIGURES ARE DERIVED FROM DATA GATHERED BY THE AMERICAN PETROLEUM INSTITUTE ANNUAL PUBLICATION, "JOINT ASSOCIATION SURVEY OF THE U.S. OIL AND GAS PRODUCING INDUSTRY FOR 1975". THESE DATA ARE USED AS INPUT TO THE PIES OIL AND GAS MODEL.
FOOTAGE DRILLED DATA FROM SECTION 1, DRILLING COSTS OF THE U.S. OIL AND GAS PRODUCING INDUSTRIES PUBLISHED IN THE JOINT ASSOCIATION AMERICAN PETROLEUM COUNCIL, THE AMERICAN GAS ASSOCIATION, AND VARIOUS OTHER ENERGY RELATED INDUSTRIES. THE DATA IS INPUT TO THE PIES OIL AND GAS MODEL AND THE ABOVE FIGURES ARE CALCULATED THERE. OTHER SOURCES INCLUDE "QUARTERLY REVIEW OF DRILLING STATISTICS", AMERICAN PETROLEUM INSTITUTE, WASHINGTON, D.C. FOR INITIAL EXPLORATORY FOOTAGE AND "U.S. ENERGY OUTLOOK- OIL AND GAS AVAILABILITY", WASHINGTON, D.C., 1973.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 9
DISTRIBUTION OF INTERSTATE GAS IN 1965
(MMCF/D)

NPC REGION	DOE REGION								
	NEW ENG.	NY/NJ	MID-ATL.	S.-ATL.	MIDWEST	S.-WEST	CENTRAL	N.-CNTRL	WEST N.-WEST
PACIFIC COAST									
PACIFIC OCEAN									352
WEST ROCKIES						27		174	520
EAST ROCKIES					27		44	267	6
W. TEX./E. N. MEX.				18	131	142	126	9	445
GULF COAST	106	343	460	852	1044	536	93		
GULF OF MEXICO	253	807	1074	1464	2586	609	48		
MIDCONTINENT		22	31	37	743	225	624	109	38
MT. BASIN AND INT.					12				
APPALACHIA		88	118	23	99				
ATLANTIC COAST									
ATLANTIC OCEAN	49	174	221	162					
NORTH SLOPE	37	119	158	249	721	134	114	22	606
SOUTH ALASKA									827

QUANTITIES GIVEN DO NOT SHOW EFFECT OF TRANSPORTATION LOSSES.
STATED DISTRIBUTION OF NORTH SLOPE GAS TO THE EAST COAST REPRESENTS NET EFFECT OF DISPLACEMENT.
DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL
WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL
GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974",
AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY
SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 10
INTERSTATE GAS DELIVERIES IN 1985

	DOE REGION									
	NEW ENG.	NY/NJ	MID-ATL.	S.-ATL.	MIDWEST	S.-WEST	CENTRAL	N.-CNTRL	WEST	N.-WEST
LOWRE 48 AND S. ALASKA										
QUANTITY DELIVERED (MMCF/D)	380	1352	1813	2406	4445	1509	918	518	2039	45
AVERAGE PRICE (\$/MCF)	1.58	1.43	1.34	1.11	1.15	.85	.68	.65	1.38	1.05
ALASKAN NORTH SLOPE										
QUANTITY DELIVERED (MMCF/D)	34	108	145	235	667	129	107	21	577	40
DELIVERED PRICE (\$/MCF)	3.05	3.01	2.94	2.76	2.89	2.61	2.81	2.69	2.68	2.52

STATED DISTRIBUTION OF NORTH SLOPE GAS TO THE EAST COAST REPRESENTS NET EFFECT OF DISPLACEMENT.

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 11
DISTRIBUTION OF INTERSTATE GAS IN 1990
(MMCF/D)

NPC REGION	DOE REGION								
	NEW ENG. NY/NJ	MID-ATL.	S.-ATL.	MIDWEST	S.-WEST	CENTRAL	N.-CNTRL	WEST	N.-WEST
PACIFIC COAST									
PACIFIC OCEAN								408	
WEST ROCKIES					19		119	356	28
EAST ROCKIES				18		30	178	4	5
W. TEX./E. N. MEX.			11	78	84	75	5	263	
GULF COAST	60	195	261	483	593	53			
GULF OF MEXICO	236	752	1001	1365	2411	45			
MIDCONTINENT		13	18	21	430	130	361	64	22
MT. BASIN AND INT.					10				
APPALACHIA		55	74	14	62				
ATLANTIC COAST									
ATLANTIC OCEAN	66	235	298	219					
NORTH SLOPE	41	131	174	274	793	147	126	24	667
SOUTH ALASKA									46
								1467	

QUANTITIES GIVEN DO NOT SHOW EFFECT OF TRANSPORTATION LOSSES.

STATED DISTRIBUTION OF NORTH SLOPE GAS TO THE EAST COAST REPRESENTS NET EFFECT OF DISPLACEMENT.

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 12
INTERSTATE GAS DELIVERIES IN 1990

	DOE REGION									
	NEW ENG. NY/NJ		MID-ATL.	S.-ATL.	MIDWEST	S.-WEST	CENTRAL	N.-CNTRL	WEST	N.-WEST
LOWER 48 AND S. ALASKA										
QUANTITY DELIVERED (MMCF/D)	339	1183	1579	2060	3450	1083	551	359	2325	31
AVERAGE PRICE (\$/MCF)	1.80	1.65	1.56	1.35	1.38	1.04	.73	.65	1.60	1.05
ALASKAN NORTH SLOPE										
QUANTITY DELIVERED (MMCF/D)	37	118	159	258	733	142	117	23	635	44
DELIVERED PRICE (\$/MCF)	2.58	2.54	2.48	2.31	2.44	2.18	2.46	2.35	2.33	2.18

STATED DISTRIBUTION OF NORTH SLOPE GAS TO THE EAST COAST REPRESENTS NET EFFECT OF DISPLACEMENT.

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 13
OIL WELL DRILLING, INVESTMENT AND PRODUCTION
SUMMARY FOR 1985

NPC REGION	CRUDE OIL (MMBBL/D)	INTERSTATE GAS (MMCF/D)	INTRASTATE GAS (MMCF/D)	CAPITAL 1977-1984 (MM\$)	DRILLING 1977-1984 (MMPT)
SOUTH ALASKA	316	131		1404	6
PACIFIC COAST	833			4170	125
PACIFIC OCEAN	209	295		703	6
WEST ROCKIES	284	100		1649	66
EAST ROCKIES	582	109		2220	143
W. TEX./E. N. MEX.	1589	541		4007	151
GULF COAST	1989	939		4959	194
GULF OF MEXICO	565	635		1727	35
MIDCONTINENT	577	320		4171	272
MI. B./ INT./ APP.	275	24		1443	113
ATLANTIC COAST	102			299	20
ATLANTIC OCEAN	270	205		759	6
NORTH SLOPE	2432	3168		13795	12054
DOR REGION					
NEW ENGLAND					
N.Y./N.J.			1		
MID-ATLANTIC			49		
SOUTH ATLANTIC			67		
MIDWEST			28		
SOUTHWEST			2779		
CENTRAL			117		
NORTH CENTRAL			271		
WEST			231		
NORTHWEST					
NATIONAL TOTAL	10022	6468	3542	41305	13189

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.
CAPITAL FIGURES ARE DERIVED FROM DATA GATHERED BY THE AMERICAN PETROLEUM INSTITUTE ANNUAL PUBLICATION, "JOINT ASSOCIATION SURVEY OF THE U.S. OIL AND GAS PRODUCING INDUSTRY FOR 1975". THESE DATA ARE USED AS INPUT TO THE PIES OIL AND GAS MODEL.
FOOTAGE DRILLED DATA FROM SECTION 1, DRILLING COSTS OF THE U.S. OIL AND GAS PRODUCING INDUSTRIES PUBLISHED IN THE JOINT ASSOCIATION AMERICAN PETROLEUM COUNCIL, THE AMERICAN GAS ASSOCIATION, AND VARIOUS OTHER ENERGY RELATED INDUSTRIES. THE DATA IS INPUT TO THE PIES OIL AND GAS MODEL AND THE ABOVE FIGURES ARE CALCULATED THERE. OTHER SOURCES INCLUDE "QUARTERLY REVIEW OF DRILLING STATISTICS", AMERICAN PETROLEUM INSTITUTE, WASHINGTON, D.C.
FOR INITIAL EXPLORATORY FOOTAGE AND "U.S. ENERGY OUTFLOO- OIL AND GAS AVAILABILITY", WASHINGTON, D.C., 1973.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 14
OIL WELL DRILLING, INVESTMENT AND PRODUCTION
SUMMARY FOR 1990

NPC REGION	CRUDE OIL	INTERSTATE GAS	INTRASTATE GAS	CAPITAL	DRILLING
	(MMBBL/D)	(MMCF/D)	(MMCF/D)	1977-1989 (MM\$)	1977-1989 (MMFT)
SOUTH ALASKA	752	312		2333	10
PACIFIC COAST	946			9463	311
PACIFIC OCEAN	190	259		1248	11
WEST ROCKIES	370	63		4488	185
EAST ROCKIES	755	75		5919	404
W. TEX./E. N. MEX.	1485	390		9960	417
GULF COAST	1819	673		11432	520
GULF OF MEXICO	495	569		2685	53
MIDCONTINENT	693	251		10801	736
MI. B./ INT./ APP.	375	19		3943	314
ATLANTIC COAST	168			753	51
ATLANTIC OCEAN	329	250		1189	10
NORTH SLOPE	2898	3253		19302	17484
DOE REGION					
NEW ENGLAND					
N.Y./N.J.			2		
MID-ATLANTIC			84		
SOUTH ATLANTIC			126		
MIDWEST			47		
SOUTHWEST			3167		
CENTRAL			162		
NORTH CENTRAL			473		
WEST			280		
NORTHWEST					
NATIONAL TOTAL	11274	6115	4341	83517	20508

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.
CAPITAL FIGURES ARE DERIVED FROM DATA GATHERED BY THE AMERICAN PETROLEUM INSTITUTE ANNUAL PUBLICATION, "JOINT ASSOCIATION SURVEY OF THE U.S. OIL AND GAS PRODUCING INDUSTRY FOR 1975". THESE DATA ARE USED AS INPUT TO THE PIES OIL AND GAS MODEL.
FOOTAGE DRILLED DATA FROM SECTION 1, DRILLING COSTS OF THE U.S. OIL AND GAS PRODUCING INDUSTRIES PUBLISHED IN THE JOINT ASSOCIATION AMERICAN PETROLEUM COUNCIL, THE AMERICAN GAS ASSOCIATION, AND VARIOUS OTHER ENERGY RELATED INDUSTRIES. THE DATA IS INPUT TO THE PIES OIL AND GAS MODEL AND THE ABOVE FIGURES ARE CALCULATED THERE. OTHER SOURCES INCLUDE "QUARTERLY REVIEW OF DRILLING STATISTICS", AMERICAN PETROLEUM INSTITUTE, WASHINGTON, D.C.
FOR INITIAL EXPLORATORY FOOTAGE AND "U.S. ENERGY OUTLOOK- OIL AND GAS AVAILABILITY", WASHINGTON, D.C., 1973.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY
SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 15
NON-ASSOCIATED INTERSTATE GAS
PRODUCTION SUMMARY
IN 1985
(MMCF/D)

NPC REGION	PRICE STEP								
	1	2	3	4	5	6	7	8	9
SOUTH ALASKA	385	424	492	684	794	794	795	795	799
PACIFIC OCEAN	55	55	55	57	57	74	75	77	77
WEST ROCKIES	663	663	663	663	663	663	663	663	663
EAST ROCKIES	244	244	244	244	244	244	244	244	244
W. TEX./E. N. MEX.	333	333	333	333	333	333	333	333	333
GULF COAST	2498	2498	2498	2498	2498	2498	2498	2498	2498
GULF OF MEXICO	6083	6086	6086	6086	6221	6223	6223	6224	6224
MIDCONTINENT	1513	1513	1513	1513	1513	1513	1513	1513	1513
MT. BASIN AND INT.									
APPALACHIA	317	317	317	317	317	317	317	317	317
ATLANTIC OCEAN	395	395	402	402	407	414	414	414	437
NATIONAL TOTAL	12486	12528	12604	12798	13047	13073	13075	13077	13105

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 16
NON-ASSOCIATED INTERSTATE GAS
PRODUCTION SUMMARY
IN 1990
(MMCF/D)

NPC REGION	PRICE STEP								
	1	2	3	4	5	6	7	8	9
SOUTH ALASKA	234	430	707	1131	1392	1503	1505	1505	1507
PACIFIC OCEAN	135	135	135	140	150	154	154	161	161
WEST ROCKIES	459	459	459	459	459	459	459	459	459
EAST ROCKIES	160	160	160	160	160	160	160	160	160
W. TEX./E. N. MEX.	126	126	126	126	126	126	126	126	126
GULF COAST	1278	1278	1278	1278	1278	1278	1278	1278	1278
GULF OF MEXICO	5808	5811	5811	5886	5886	5886	5886	5886	5886
MIDCONTINENT	809	809	809	809	809	809	809	809	809
MI. BASIN AND INT.									
APPALACHIA		196	196	196	196	196	196	196	196
ATLANTIC OCEAN	505	541	569	586	607	635	643	665	731
NATIONAL TOTAL	9514	9946	10252	10773	11064	11208	11217	11246	11314

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 17
NON-ASSOCIATED INTRASTATE GAS
PRODUCTION SUMMARY
IN 1985
(MMCF/D)

DOE REGION	PRICE STEP								
	1	2	3	4	5	6	7	8	9
N.Y./N.J.	2	2	2	2	2	2	2	2	2
MID-ATLANTIC	124	124	124	124	124	124	124	124	124
SOUTH ATLANTIC	175	182	192	206	210	217	223	227	238
MIDWEST	93	93	93	93	93	93	93	93	93
SOUTHWEST	20325	21124	22328	23983	24494	25340	26006	26820	28721
CENTRAL	1160	1199	1257	1341	1372	1411	1437	1496	1615
NORTH CENTRAL	308	308	308	625	755	876	1001	1208	1450
WEST	209	295	406	519	575	632	677	767	862
NATIONAL TOTAL	22395	23326	24710	26891	27625	28695	29563	30737	33105

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 19
NON-ASSOCIATED INTRASTATE GAS
PRODUCTION SUMMARY
IN 1990
(MMCF/D)

DOE REGION	PRICE STEP								
	1	2	3	4	5	6	7	8	9
N.Y./N.J.		1	1	1	1	1	1	1	6
MID-ATLANTIC		77	77	77	77	77	77	77	375
SOUTH ATLANTIC	105	138	159	183	198	218	232	248	341
MIDWEST	22	46	46	46	46	46	46	46	278
SOUTHWEST	14292	16466	18951	21963	23747	26136	28032	30362	33207
CENTRAL	815	945	1039	1193	1289	1402	1498	1626	1790
NORTH CENTRAL	205	205	205	588	781	1073	1333	1701	2321
WEST	129	136	338	488	582	719	830	997	1289
NATIONAL TOTAL	15568	18014	20817	24539	26721	29672	32050	35058	39607

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 19
CAPITAL INVESTMENT SUMMARY FOR GAS WELLS
FROM 1977 THRU 1984
(MM\$)

PRICE STEP

NPC REGION	1	2	3	4	5	6	7	8	9
SOUTH ALASKA	143	193	290	569	752	752	752	752	756
PACIFIC OCEAN	30	30	30	31	31	31	31	32	32
GULF OF MEXICO	1551	1552	1552	1552	1552	1552	1552	1552	1552
ATLANTIC OCEAN	222	222	234	234	244	259	259	259	303
DOE REGION									
SOUTH ATLANTIC	71	77	85	93	103	110	116	121	134
SOUTHWEST	10906	11570	12629	14163	14665	15551	16270	17188	19435
CENTRAL	610	644	696	776	809	850	881	945	1087
NORTH CENTRAL				362	521	675	841	1124	1486
WEST		116	213	345	413	484	544	667	804
NATIONAL TOTAL	13533	14404	15729	18130	19089	20264	21245	22640	25589

DATA SOURCES: CAPITAL FIGURES ARE DERIVED FROM DATA GATHERED BY THE AMERICAN PETROLEUM INSTITUTE ANNUAL PUBLICATION, "JOINT ASSOCIATION SURVEY OF THE U.S. OIL AND GAS PRODUCING INDUSTRY FOR 1975". THESE DATA ARE USED AS INPUT TO THE PIES OIL AND GAS MODEL.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 20
CAPITAL INVESTMENT SUMMARY FOR GAS WELLS
FROM 1977 THRU 1989
(MM\$)

NPC REGION	PRICE STEP								
	1	2	3	4	5	6	7	8	9
SOUTH ALASKA		69	255	702	1047	1163	1163	1163	1163
PACIFIC OCEAN	59	59	59	60	60	62	62	64	64
GULF OF MEXICO	2402	2405	2405	2405	2405	2405	2405	2405	2405
ATLANTIC OCEAN	242	244	279	338	370	418	445	488	532
DOE REGION									
N.Y./N.J.									11
MID-ATLANTIC									650
SOUTH ATLANTIC	89	98	116	146	164	191	212	237	440
MIDWEST									423
SOUTHWEST	13464	14747	17096	20851	23122	26499	29412	33471	40146
CENTRAL	761	821	943	1143	1275	1436	1602	1847	2244
NORTH CENTRAL				530	815	1280	1734	2450	3874
WEST		116	288	505	646	876	1083	1415	2031
NATIONAL TOTAL	17016	18559	21443	26680	29904	34329	38118	43539	53984

DATA SOURCES: CAPITAL FIGURES ARE DERIVED FROM DATA GATHERED BY THE AMERICAN PETROLEUM INSTITUTE ANNUAL PUBLICATION, "JOINT ASSOCIATION SURVEY OF THE U.S. OIL AND GAS PRODUCING INDUSTRY FOR 1975". THESE DATA ARE USED AS INPUT TO THE PIES OIL AND GAS MODEL.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY
SOURCE ANALYSTS, APPLIED ANALYSIS, EIA.

TABLE 21
DRILLING SUMMARY FOR GAS WELLS
FROM 1977 THRU 1984
(MMPT)

NPC REGION	PRICE STEP								
	1	2	3	4	5	6	7	8	9
SOUTH ALASKA	1	1	1	2	3	3	3	3	3
GULF OF MEXICO	26	26	26	26	26	26	26	26	26
ATLANTIC OCEAN	2	2	2	2	2	2	2	2	2
DOE REGION									
SOUTH ATLANTIC	3	3	4	4	4	5	5	5	6
SOUTHWEST	491	520	565	632	651	687	718	756	849
CENTRAL	31	32	35	39	40	42	43	46	53
NORTH CENTRAL				17	25	32	40	54	71
WEST		5	9	14	17	20	22	27	33
NATIONAL TOTAL	554	590	642	736	769	817	859	919	1042

SOURCE: FOOTAGE DRILLED DATA FROM SECTION 1, DRILLING COSTS OF THE U.S. OIL AND GAS PRODUCING INDUSTRIES PUBLISHED IN THE JOINT ASSOCIATION AMERICAN PETROLEUM COUNCIL, THE AMERICAN GAS ASSOCIATION, AND VARIOUS OTHER ENERGY RELATED INDUSTRIES. THE DATA IS INPUT TO THE PIES OIL AND GAS MODEL AND THE ABOVE FIGURES ARE CALCULATED THERE. OTHER SOURCES INCLUDE "QUARTERLY REVIEW OF DRILLING STATISTICS", AMERICAN PETROLEUM INSTITUTE, WASHINGTON, D.C. FOR INITIAL EXPLORATORY FOOTAGE AND "U.S. ENERGY OUTLOOK- OIL AND GAS AVAILABILITY", WASHINGTON, D.C., 1973.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSTS, EIA.

TABLE 22
DRILLING SUMMARY FOR GAS WELLS
FROM 1977 THRU 1989
(MMBT)

NPC REGION	PRICE STEP								
	1	2	3	4	5	6	7	8	9
SOUTH ALASKA			1	3	4	5	5	5	5
PACIFIC OCEAN	1	1	1	1	1	1	1	1	1
GULF OF MEXICO	39	39	39	39	39	39	39	39	39
ATLANTIC OCEAN	2	2	2	2	3	3	3	4	4
DOE REGION									
N.Y./N.J.									1
MID-ATLANTIC									42
SOUTH ATLANTIC	4	4	5	6	7	8	9	10	22
MIDWEST									29
SOUTHWEST	606	663	765	926	1021	1160	1279	1450	1718
CENTRAL	38	41	47	57	63	70	78	89	106
NORTH CENTRAL				25	39	61	83	117	186
WEST		5	12	21	27	36	44	58	82
NATIONAL TOTAL	690	756	873	1081	1204	1383	1540	1773	2236

SOURCE: FOOTAGE DRILLED DATA FROM SECTION 1, DRILLING COSTS OF THE U.S. OIL AND GAS PRODUCING INDUSTRIES PUBLISHED IN THE JOINT ASSOCIATION AMERICAN PETROLEUM COUNCIL, THE AMERICAN GAS ASSOCIATION, AND VARIOUS OTHER ENERGY RELATED INDUSTRIES. THE DATA IS INPUT TO THE PIES OIL AND GAS MODEL AND THE ABOVE FIGURES ARE CALCULATED THERE. OTHER SOURCES INCLUDE "QUARTERLY REVIEW OF DRILLING STATISTICS", AMERICAN PETROLEUM INSTITUTE, WASHINGTON, D.C. FOR INITIAL EXPLORATORY FOOTAGE AND "U.S. ENERGY OUTLOOK- OIL AND GAS AVAILABILITY", WASHINGTON, D.C., 1973.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 23
OIL AND GAS SUPPLY AT THE HIGHEST PRICE STEPS
IN 1985

NPC REGION	CRUDE PETROLEUM (MBBL/D)	INTERSTATE GAS (MMCF/D)	INTRASTATE GAS (MMCF/D)	BUTANE (MBBL/D)	OTHER GAS LIQUIDS (MBBL/D)
SOUTH ALASKA	316	930			
PACIFIC COAST	833			11	11
PACIFIC OCEAN	209	373		9	7
WEST ROCKIES	284	764		28	25
EAST ROCKIES	582	353		36	20
W. TEX./E. N. MEX.	1589	874		167	122
GULF COAST	1989	3437		361	252
GULF OF MEXICO	565	6859		72	62
MIDCONTINENT	577	1833		136	123
MI. B./ INT./ APP.	275	341		10	6
ATLANTIC COAST	102			3	1
ATLANTIC OCEAN	270	642		18	3
NORTH SLOPE	2432	3168			
DOE REGION					
NEW ENGLAND					
N.Y./N.J.			3		
MID-ATLANTIC			173		
SOUTH ATLANTIC			305		
MIDWEST			121		
SOUTHWEST			31500		
CENTRAL			1732		
NORTH CENTRAL			1721		
WEST			1093		
NORTHWEST					
NATIONAL TOTAL	16022	19572	36647	852	631

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 24
OIL AND GAS SUPPLY AT THE HIGHEST PRICE STEPS
IN 1990

NPC REGION	CRUDE PETROLEUM (MMBBL/D)	INTERSTATE GAS (MMCF/D)	INTRASTATE GAS (MMCF/D)	BUTANE (MMBBL/D)	OTHER GAS LIQUIDS (MMBBL/D)
SOUTH ALASKA	752	1819			
PACIFIC COAST	946			16	18
PACIFIC OCEAN	190	420		9	7
WEST ROCKIES	370	522		32	30
EAST ROCKIES	755	236		46	25
W. TEX./E. N. MEX.	1485	516		177	137
GULF COAST	1819	1951		343	255
GULF OF MEXICO	495	6455		59	56
MIDCONTINENT	693	1060		141	134
MI. B./INT./APP.	375	216		16	12
ATLANTIC COAST	168			5	1
ATLANTIC OCEAN	329	981		20	3
NORTH SLOPE	2898	3253			
DOE REGION					
NEW ENGLAND					
N.Y./N.J.			8		
MID-ATLANTIC			459		
SOUTH ATLANTIC			467		
MIDWEST			325		
SOUTHWEST			36374		
CENTRAL			1952		
NORTH CENTRAL			2794		
WEST			1568		
NORTHWEST					

NATIONAL TOTAL 11274 17429 43948 865 678

DATA SOURCES : PRODUCTION FIGURES ARE TAKEN FROM THE PIES OIL AND GAS MODEL WHICH USES DATA FROM "RESERVES OF CRUDE OIL, NATURAL GAS LIQUIDS, AND NATURAL GAS IN THE UNITED STATES AND CANADA AND CAPACITY AS OF DECEMBER 31, 1974", AMERICAN PETROLEUM INSTITUTE, WASHINGTON D.C.

OFFICE RESPONSIBLE : OIL AND GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 25
BREAKDOWN OF REGIONAL PRODUCTION BY CRUDE TYPE
(FRACTION OF REGIONAL CRUDE PRODUCTION)

	NPC REGION												
CRUDE TYPE	1S	2	2A	3	4	5	6	6A	7	8-10	11	11A	1N
SOUTH ALASKAN	1.00												
WEST COAST LIGHT		.39											
PACIFIC OFFSHORE			1.00										
WYOMING MIX				.80	.85								
LOUISIANA ONSHORE							.48						
LOUISIANA OFFSHORE								1.00					
TEXAS GULF COAST							.40						
EAST TEXAS MIX							.10						
WEST TEXAS MIX				.20		1.00	.02		.07				
PAD III HEAVY CRUDE					.14								
PAD II INDIGENOUS										.91			
OKLAHOMA MIX									.93				
PAD I INDIGENOUS										.09	1.00	1.00	
WEST COAST HEAVY		.51											
ALASKAN NORTH SLOPE													1.00

DATA SOURCES : OIL AND GAS JOURNAL, PETROLEUM ENCYCLOPEDIA FOR 1975.
OFFICE RESPONSIBLE : OIL & GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE ANALYSIS,
APPLIED ANALYSIS, DOE

TABLE 26
SPLITTING FACTORS FOR INTRASTATE ASSOCIATED
AND DISSOLVED GAS

NPC REGION	DOE REGION						
	NY/NJ	MID-ATL.	S.-ATL.	MIDWEST	S.-WEST	CENTRAL	N.-CNTRL WEST
PACIFIC COAST							1.00
WEST ROCKIES					.81	.19	
EAST ROCKIES						1.00	
W. TEX./E. N. MEX.					1.00		
GULF COAST			.01		.99		
MIDCONTINENT					.81		.19
E. B./INT./APP.	.01	.55	.13	.31			
ATLANTIC COAST			1.00				

DATA SOURCES : DOE ANALYSIS
OFFICE RESPONSIBLE : OIL & GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE
ANALYSIS, APPLIED ANALYSIS, EIA.

TABLE 27
SPLITTING FACTORS FOR INTRASTATE CO-PRODUCTS

DOE REGION	NPC REGION						
	PACIFIC COAST	WEST ROCKIES	EAST ROCKIES	W. TEXAS/ E. N. MEX.	W. GULF BASIN	MIDCON- TINENT	MI. B./I./ APPLACHIA ATLANTIC COAST
N.Y./N.J.							1.00
MID-ATLANTIC							1.00
SOUTH ATLANTIC				.49			.33
MIDWEST							1.00
SOUTHWEST		.04	.26	.45	.25		
CENTRAL					1.00		
NORTH CENTRAL		.26				.74	
WEST	.99	.01					

DATA SOURCES : DOE ANALYSIS

OFFICE RESPONSIBLE : OIL & GAS ANALYSIS DIVISION, OFFICE OF ENERGY SOURCE
ANALYSIS, APPLIED ANALYSIS, EIA.

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IV. THE PIES INTEGRATING MODEL REPORT

INTRODUCTION

This chapter describes the solution output obtained from an execution of PIES. The solution appears in the PIES Integrating Model Report, which is referred to in this chapter as the PIES Report.¹

The report is produced for a specified target year, oil import price and scenario. For the sample reproduced at the end of this chapter, the target year is 1985, the oil import price is \$15.32/barrel, and the scenario assumptions are:

1. continuation of existing energy policies, e.g., natural gas regulation
2. medium energy demand growth rate of 3.8 percent
3. mid-range oil and gas production growth rates (1975-1990) of -0.5 percent.

These assumptions correspond to the mid-range projection series of Chapter I.

The PIES Report is produced from the standard tables and the linear programming solution file by a computer program utilizing the MAGEN a matrix report generation language. Data used in creating the PIES standard tables have been documented in Chapter II above.² The data tables correspond to the above-mentioned scenario, target year and oil import price.

ORGANIZATION OF THE PIES REPORT

The PIES Report begins with a title page identifying the set of standard data tables selected for the run. The scenario number, oil import price, file generation dates and other programming information are also given. The second page lists run assumptions concerning Governmental oil and gas policy. The third page is a table of contents for the tables comprising the rest of the report.

¹The PIES Integrating Model Report is known informally as "WONDERCOOKIE" or "COOKIE."

²For a description of the report writer, refer to Volume V of this documentation series, Code Documentation.

The first twenty tables list estimated aggregate quantities of energy supplies and their distribution by region and sector to meet demands. Selected consumption growth rates between 1975 and the target year, 1985, are also given. (The 1975 summary consumption data appear in TABLES 30 to 32.) Natural gas shortage summaries appear because the scenario in our example specifies that natural gas regulation is in effect.³

Tables 21 through 29 report demand sector retail prices and marginal prices in demand, utility, refinery and fossil fuel (oil, gas and coal) regions. Petroleum product prices and natural gas prices are city gate prices; the electricity price is the average delivered price to the industrial sector. The differences between refinery gate prices and the prices to demand and utility regions are the interregional transportation costs.

Tables 30-32 summarize 1975 energy consumption data. Following Table 32 are four tables containing the final prices, quantities, growth rates and gas shortage/displacements that are output each time PIES is executed. The values in these four tables have been formatted for input to additional off line programs and are the same values listed in the previous tables.

EXPLANATION OF THE TABLES

Each table in our sample PIES Report is described individually below, followed by the sample report itself at the end of the chapter. Physical units used in the report are listed in Table IV-1. Full caps are used to refer to table numbers (TABLE 1, TABLE 2, etc.) and to columns or rows within the tables (OIL, GAS, COAL, etc.)

TABLE 1: Executive Data Summary (Standard Physical Units)

TABLE 1 of the PIES Report summarizes energy production, consumption and import projections for 1985. The columns are fuel types, and the rows show distribution of energy fuel among imports, domestic consumption and domestic supply. The units are standard physical units per year, as listed in Table IV-1.

³ Regulations establish artificial market conditions under which an equilibrium level of supply and demand is not always reached. In the PIES Report excess demand in a natural gas region is called a shortage, and excess supply is called a displacement.

TABLE IV-1. PHYSICAL UNITS IN THE PIES REPORT

B	Barrel
BCF	Billion cubic feet
BCF/YR	Billion cubic feet per year
M	Thousand
MB/CD	Thousand barrels per calendar day
MCF	Thousand cubic feet
M.E.Ton	Material equivalent ton of 22.5 million Btu
MKWH	Thousand kilowatt hours
MM	Million (Thousand thousand)
MMB	Million barrels
MMB/CD	Million barrels per calendar day
MMB/YR	Million barrels per year
MMCF/CD	Million cubic feet per calendar day
MMMKWH/YR	Billion kilowatt hours per year
MMST	Million short tons (a short ton is 2000 pounds)
MMST/YR	Million short tons per year
MM\$/YR	Million dollars per year
ST	Short ton
T	Ton
TBTU	Trillion Btu
\$/BBL	(1978) Dollars per barrel
\$/MCF	(1978) Dollars per thousand cubic feet
\$/M.E.Ton	(1978) Dollars per material equivalent ton
MILS/KWH	(1978) Mils per kilowatt hour

The first column summarizes coal data. Indigenous coal supply is given as 1,033.98 MMST/YR, and coal imports are noted as -74.00 MMST/YR. Negatively signed imports represent exports; thus, 74.00 MMST/YR of coal are exported, reducing the amount of coal available for domestic uses to 959.98 MMST/YR, as given in the total supply row.

Oil supply derives from several different sources; 3262.15 MMB/YR of crude is produced within the U.S. Coproducts associated with crude oil production account for 456.11 MMB/YR and shale oil for 17.15 MMB/YR of indigenous OIL supply. Total imports for OIL amount to 4021.28 MMB/YR, of which 2828.99 MMB/YR are crude imports, and 1192.28 MMB/YR are refined petroleum product imports. Total oil supply is thus 7756.69 MMB/YR, which is total indigenous supply plus total imports. A more detailed breakdown of consumption, production and imports of oil and oil products can be found in TABLE 17. The 203.61 MMB/YR volumetric gain indicated in TABLE 1 occurs because the volume of petroleum products produced is greater than the volume of crude entering the refinery.

Indigenous gas supply is derived from gas wells that produce no oil (nonassociated gas) and from oil wells that produce both liquid hydrocarbons and gas (associated and dissolved gas). The nonassociated gas production entry, 13,504.54 BCF/YR is in the COAL, GAS, ELEC. row. The entry for associated dissolved gas is found in the COPRODUCTS/ASSOC.GAS row. Total associated dissolved gas production is given as 3,221.32 BCF/YR. TABLE 5 gives the regional gas production totals.

There are two columns with solar and geothermal references. The column labeled HYDRO, SOLAR, GEOTHERMAL relates to the generation of electrical power by utilities from these sources, which amounts to 395.67 MMMKWH/YR. The 14.35 entry in the DIRECT SOLAR/GEO row represents electricity demand reduction due to the substitution of solar and geothermal resources for electricity. For example, the use of solar heating in a residence to reduce the use of electricity would be represented in this category. The standard transmission line loss of electricity supply from the 410.02 MMMKWH/YR of

electricity from HYDRO, SOLAR, GEOTHERMAL sources is 35.70 MMMKWH/YR. There is no loss associated with direct substitution of solar and geothermal sources for electricity. The SOLAR/GEO FOSSIL SUBST column similarly reflects the reduction of fossil fuel demand resulting from direct solar and geothermal substitution. A sectoral breakout of these numbers appears in the consumption portion of the table.

The column labeled TOTAL ELEC. DISTRIBUTED contains data that also appear in TABLE 20, Electricity Generation Summary, National Total, which summarizes electricity generation and capacity by plant type and fuel type. In TABLE 1, total electricity distributed in 1985 is estimated to be 3042.54 MMMKWH/YR.

Fuel consumption by sector is shown in the lower portion of TABLE 1. These consumption, or demand, sectors include residential, commercial, industrial, transportation, synthetics and electrical generation. To find the amount of coal consumed in the residential sector, we find the entry corresponding to the fuel type column, COAL, and the sector row, RESIDENTIAL; thus 1.03 MMST/YR of coal are consumed in the residential sector. Similarly, .56 MMST/YR of coal are consumed in the commercial sector, and 745.50 MMST/YR are consumed in the generation of electricity. Sectoral consumption amounts for the other fuel types are also obtained by looking down the fuel type column and across the sector row.

Total supply should equal total domestic consumption for each fuel type. A note at the bottom of TABLE 1 explains that slight imbalances between net supply and demand may be due to the convergence criteria used in the equilibration process.

TABLE 2: Executive Data Summary (TBTU)

TABLE 2 is basically a repetition of TABLE 1 in which each entry is reported according to its BTU value, thus allowing direct comparisons between fuel types. A number of summation columns have also been incorporated to aggregate across fuel types.

The SOLAR/GEO FOSSIL SUBST. column of TABLE 1 is not given as a separate column in TABLE 2 because of space limitations. It has been combined with the hydro, solar and geothermal entries, and a footnote gives the fossil fuel substitution amount as 119.86 TBTU. The amount of solar and geothermal substitution is given as 143.50 TBTU.

The fossil fuels (oil, gas and coal) and electricity represent the actual BTU contents of the fuels (see Table IV-2 for conversion factors). Entries for the HYDRO, SOLAR, GEO columns do not represent the actual BTU content but estimate the BTU consumption of an equivalent fossil fuel plant with a heat rate of 10,000 BTU/KWH. This conversion factor is not used for the entries in the DIRECT SOLAR/GEOTHERMAL row. Nuclear entries assume heat rates of 11,000 BTU/KWH.

The column labeled TOTAL FOSSIL FUEL contains the sum of OIL, GAS and COAL for each row. For the CONSUMPTION portion of the table, TOTAL FOSSIL FUEL is shown for each of the six sectors—residential, commercial, industrial, transportation, electrical generation and synthetics.

TABLE IV-2. CONVERSION FACTORS

Item	MMBTU per Indicated Unit
Crude Oil (all) (B)	5.800
Gas Liquids (B)	5.248
Butane (B)	4.010
Coal - High BTU, Medium Sulfur (ST)	23.800
Coal - Medium BTU, Medium Sulfur (ST)	21.800
Coal - High BTU, High Sulfur (ST)	23.800
Coal - Medium BTU, High Sulfur (ST)	21.800
Coal - Low BTU, Low Sulfur (ST)	18.330
Coal - Very Low BTU, Low Sulfur (ST)	13.000
Coal - High BTU, Low Sulfur (ST)	23.800
Coal - Very Low BTU, Medium Sulfur (ST)	13.000
Coal - Low BTU, Medium Sulfur (ST)	18.330
Coal - Medium BTU, Low Sulfur (ST)	21.800
Coal - Metallurgical (ST)	27.000
Electricity (MKWH)	3.412
Gasoline (B)	5.248
Distillate (B)	5.825
Residual (B)	6.287
Other Refined Petroleum (B)	5.000
Natural Gas (MCF)	1.032
Liquid Petroleum Gases (B)	4.010
Jet Fuel (B)	5.318

Adding nuclear, hydro, solar, and geothermal fuels to the fossil fuels gives total fuel. TOTAL 6 SECTOR INPUTS represents the quantity of total fuel consumed in each sector. In the residential sector, 9,360 TBTU/YR are consumed. The value for SYNTHETICS, 196 TBTU/YR represents the net value of synthetic fuels available for consumption. In the synthetics sector, 208 TBTU/YR of coal and 888 TBTU/YR of oil are used to produce 900 TBTU/YR of synthetic gas. Negative consumption entries represent production as in TABLE 1. The TOTAL FOSSIL FUEL and TOTAL 6 SECTOR INPUTS entries are identical for the SYNTHETICS consumption sector, because no consumption or production of synthetic, nuclear, hydro, solar, and geothermal fuel occurs.

GROSS ELECT. INPUTS represents a distribution of the electrical generation (31,563 TBTU/YR and the synthetic fuel (196 TBTU/YR) consumption volumes among the remaining four sectors on the basis of end-use proportions. For example, if the residential sector is assumed to use 60 percent of the electricity generated, the entry under this column and across the RESIDENTIAL row would represent 60 percent of the total input consumed in electrical generation and synthetic fuel production (31,759 TBTU/YR). The first four sectors are chosen because they are end-use consumption sectors. The electrical generation and synthetics sectors provide energy to the remaining four consumption sectors and the GROSS ELECT. INPUTS column shows the distribution of the fuel consumed in generating this energy to the four sectors based on sectoral consumption of electricity.

TOTAL FOUR SECTOR INPUTS in the consumption portion of the table represents both direct fuel consumption and consumption of fuel for the purposes of producing electricity and synthetic fuels and is thus the sum of TOTAL 6 SECTOR INPUTS and GROSS ELEC. INPUTS for the first four sectors. UTILITY ELECTRIC DISTRIB. entries can also be found in TABLE 13 under the respective sector along the ELECT. row, TOTAL column. NET 4 SECTOR INPUTS represents both direct fuel consumption and the direct

consumption of electricity and thus is the sum of UTILITY ELECTRIC DISTRIB. and TOTAL 6 SECTOR INPUTS for the first four sectors only.

TABLE 3: Supply and Consumption Growth Rates from 1975

TABLE 3 is developed from the data in TABLE 2 and the corresponding 1975 data in TABLE 30. To obtain the average yearly growth rate from 1975 to the target year, a simple interest formula is used where the average rate, r , is given by

$$r = (P_x/P_o)^{1/n} - 1;$$

P_x is the energy value for year x (1985 in our case); P_o is the energy value for 1975; and n is the number of years between 1975 and the year x . The rates in TABLE 3 represent annual percentages.

TABLE 4: Import Summary

TABLE 4 shows quantities, prices and 1975 dollar values of imported crude oil, refined petroleum products, natural gas and exported coal. Prices are given in 1975 dollars per standard physical unit and for oil and petroleum products, are based on a fixed, landed east coast price. Thus, the prices at other locations are all functions of the landed east coast price plus appropriate transportation changes.

MET COAL (metallurgical coal) is a mixture of 70 percent premium coal and 30 percent low sulfur bituminous coal. Premium coal is a high quality coking coal with no more than 0.67 lbs of sulfur per million BTU (MMBTU) and at least 26 MMBTU per ton. Steam coal is composed of all the remaining coal types that can be used for export.

TABLE 5: Oil and Gas Production

TABLE 5 summarizes oil and gas production predicted for the target year. Note that the oil entries are per calendar day (CD), while gas entries are per year. The OTHER category under OIL is defined in the first footnote; associated gas is gas produced from oil wells. Intrastate OTHER indicates oil coproducts associated with intrastate gas production.

The rows are divided among DOMESTIC PRODUCTION, IMPORTS and their sum TOTAL SUPPLY. DOMESTIC PRODUCTION is further subdivided among onshore, offshore, interstate (all by NPC regions) gas, intrastate gas and synthetics and shale. For region 8-9-10, the MI BAS, INT, AP is an abbreviation for Michigan Basin, East Interior, Appalachians.

The columns are divided between oil and gas. For domestic oil we have crude oil and other (butane, gas liquids, syncrude and shale). IMPORTS of oil are composed of crude oil, gasoline, distillate, residual, jet fuel, liquid petroleum gas and other petroleum products (see TABLE 4 for more detail on IMPORTS). A footnote indicates that naphtha is exported, although this is not obvious from TABLE 4.

The gas columns are divided into NONASSOCIATED, ASSOCIATED GAS and SYNGAS. New onshore interstate gas is given as 616.8 BCF/YR. This indicates interstate gas which was produced in intrastate regions for modeling convenience and then shifted to the interstate markets and is thus not included in the TOTAL ONSHORE row above, which specifies figures for interstate gas region production only. The amount of SYNGAS predicted for 1985 is 872.2 BCF/YR.

The IMPORTS row contains the same entries as the OIL SUBTOTAL and GAS SUBTOTAL rows of TABLE 4. Note that OIL in TABLE 5 is represented in MB/CD, while in TABLE 4 the units are MMB/YR. (The conversion factor is 2.73973.)⁴ GAS units are unchanged.

TOTAL SUPPLY of OIL in 1985 is shown as 21,251.2 MB/CD and for GAS as 19,446.1 BCF/YR.

⁴The 4021.28 MMB/YR oil subtotal of TABLE 4 gives the 11017.2 MB/CD IMPORTS TOTAL of TABLE 5 when multiplied by 2.73973.

TABLE 6: Domestic Crude Production by Region

TABLE 6 classifies production by region and vintage: new, old and primary, secondary or tertiary. NEW oil is production from reserves discovered since January 1, 1977. OLD production comes from reserves discovered prior to January 1, 1977. National Petroleum Council regions 8, 9, and 10 (Michigan Basin, East Interior, and the Appalachians) are combined into one oil production region.

PRIMARY production is oil extracted under its own pressure; SECONDARY production is achieved through water flooding; TERTIARY production (considered to be enhanced recovery production) is obtained through the use of steam drive, steam cycle, chemical processes, etc.

The entry in the OTHER row is the amount of butane, gas liquids, shale and syncrude from both oil and gas regions.

TABLE 7: Crude Regional Distribution Summary

TABLE 7 describes the distribution of crude oil (first page) and co-products (second page) to the refinery regions. Both pages give the volume of crude in MB/CD transported between districts and refinery regions.

The rows represent domestic supply of crude and co-products and imported crude. The columns represent the seven refinery regions. PAD1A is refinery region 1, where "PAD" is a shortened acronym for Petroleum Administration for Defense District (PADDs) which are defined by the U. S. Navy.⁵

The column SA gives the amount of Alaskan North Slope crude delivered to South Alaska before it is distributed to other regions.

It should be noted that the 47.0 MB/CD of shale oil, which were included in the OTHER category of TABLE 5, SYNTHETICS and SHALE row, are included in the crude oil category of TABLE 7, SHALE row.

⁵ NPC regions, DOE regions and PADDs are discussed in Volume IV of this documentation series.

TABLE 8: Gas Regional Distribution Summary

TABLE 8 shows the distribution of natural and synthetic gas from gas producing regions to demand and utility regions. The coincident demand and utility regions are the ten DOE regions.

The rows of TABLE 8 are similar to those of TABLE 5 - the exceptions being the addition of INTRASTATE REFINERY CONSUMPTION, the deletion of SHALE, and the separation of region 8-9-10 into two regions. The units used in this table are BCF/YR.

The columns are the ten demand/utility/DOE regions. The table entries indicate the shipment of gas to satisfy both the utility and the consumption demand in each DOE region. The refinery consumption of intrastate gas (896.3 BCF/Y) is given as a national total only. For the regional display of refinery consumption, see TABLE 16.

TABLE 9: Gas Regional/Sectoral Demand in BCF/YR

TABLE 9 consists of three pages. The first page presents a forecast of natural gas consumption in each demand region by economic sector. The SHORTAGE section indicates the amount of natural gas demand that must be met by substitute fuels. (For deregulated cases, no SHORTAGE section exists.) TABLE 9 includes only demand region end-use consumption of natural gas, not gas consumption in the refineries, transportation and utilities sectors.

The industrial sector has been divided into industrial - excluding the consumption of gas (INDUSTRIAL EX. RAW MAT.) i.e. as fuel, and its consumption as a raw material (RAW MAT.), so the TOTAL gas demanded (interstate and intrastate) by the industrial sector is the 1004.8 BCF/YR for raw material and 7939.7 BCF/YR for other industrial or 8944.5 BCF/YR total. When the 896.35 BCF/YR refinery sector consumption entry (see footnote to the first page of TABLE 9) is added to this total, 8944.5 BCF/YR, we get the 9840.85 BCF/YR figure for the industrial sector row and gas consumption column entry of TABLE 1 (Executive Summary).

The only gas shortages occur in the CENTRAL, MIDWEST, and N.WEST demand regions for the INDUSTRIAL EX. RAW MAT. sector. The total amount of the shortage equals 1040.1 BCF/YR.

The second page of Table 9 gives a detailed description of the fuels used as substitutes for natural gas. The entries are given in TBTU/YR; however, total BTUs of gas displaced will not necessarily equal total BTUs of the substitute fuels because of different fuel efficiencies. For conversion factors, refer to Table IV-2.

Distillate fuel, residual fuel, liquid gas and coal are all used as substitutes for natural gas. For the CENTRAL demand region the value of these four substitute fuels totals 34.6 TBTU/YR. This amount is used to offset the shortage of 34.1 TBTU/YR for this demand region.

The third page is a summary by fuel type over all sections of the detailed information presented on the second page.

TABLE 10: Coal Regional Production Summary by Mine Type

TABLE 10 summarizes coal production according to sulfur content (low, medium or high), mine type (surface or deep), and Bureau of Mines (BOM) regions. The EAST and WEST division falls roughly along the Mississippi River.

The classes of sulfur are defined as follows:

<u>Class</u>	<u>Pounds Sulfur/MMBTU</u>
Low	Less than .67
Medium	.67 -1.68
High	Over 1.68

Premium coal is a high quality, low sulfur coking coal with an average heat content of 27.00 MMBTU/T.

The growth rates are the average annual growth rates from 1975 and are calculated in the same way as those of TABLE 3. The 1975 totals are provided in the next to the last column.

From the table, we see that the total eastern coal amount for 1985, 678.5 MMST/YR, is greater than that for western coal, 355.4 MMST/YR; however, the average growth rate for the WEST, 13.4 percent, exceeds that for the EAST, 2.3 percent. TOTAL U.S. coal for 1985 is projected at 639.9 MMST/YR with an average growth rate of 4.9 percent for 1975 through 1985. Negative growth rates are projected for regions whose 1975 TOTAL is greater than the 1985 TOTAL.

Table 11: Coal Regional Production Summary by Coal Type

TABLE 11 gives coal production by PIES coal supply region and coal types. The 11 coal types are presented as rows and the 12 coal regions as columns. The average heat content of the coal types is in parentheses beside the row headings. A footnote gives details on the PIES coal supply regions and on coal sulfur content classifications.

The TOTAL PREMIUM coal projection is given as 190.22 MMST/YR. This is equal to the sum of the TOTAL PREMIUM SURFACE and TOTAL PREMIUM DEEP entries from TABLE 10. Corresponding TABLE 10 totals for LOW, MEDIUM, and HIGH can be found by summing across the respective rows of TABLE 11.

TABLE 12: Coal Regional Demand Summary

TABLE 12 gives coal demand by DOE region and sector (residential, commercial, industrial and utility). The ten DOE regions do not coincide with the 12 coal supply regions, so no direct comparison can be made between TABLE 12 and the preceding two tables. Total projected demand for coal, 961.0 MMST/YR, does not equal the projected total supply of coal, 1034.0 MMST/YR, as given in TABLE 10. The difference is the amount of coal exported to other countries.

The SYNTHETICS coal demand includes coal consumed in producing syngas, syncrude and electricity from fuel gas as stated in a footnote. Metallurgical coal (MET COAL) includes 70 percent premium coal and 30 percent bituminous low sulfur coal.

The LOW SULFUR coal used by utilities is a combination of low sulfur bituminous and metallurgical coal types. The HIGH SULFUR coal is a combination of medium and high sulfur bituminous coal. The SUB-BITUM. and LIGNITE coal types include all levels of sulfur content.

The regional totals for 1975 are included as a column. The growth rates are computed the same as for TABLE 3.

TABLE 13: Sectoral/Regional Consumption

TABLE 13 summarizes regional consumption of all fossil fuels and electricity by economic sector. Fuels consumed in refineries or utilities are excluded, as stated in the third and fourth footnotes.

The fourth footnote indicates a slight discrepancy between the coal figures in TABLE 13 and those in TABLE 2 arising from the modeling simplifications employed in the treatment of coal. Due to the wide range of BTU content of the physical coal types (from 13 to 27 BTU per ton), coal demand is consolidated and demands expressed in material equivalent (M.E.) tons of 22.5 BTU per ton. All physical coals produced are converted to M.E. tons for use in the demand and utility regions. The model handles this conversion within the transshipment network, and the complexity associated with tracing real tons from source to destination for reporting purposes introduces a slightly higher degree of reporting error in the case of coal.

TABLE 14: Sectoral/Regional BTU Consumption Growth Rates

TABLE 14 reports the average energy consumption growth ratio in each sector for each demand regions since 1975 as computed from the data displayed in TABLES 13 and 31 (1975 BTU consumption values).

Footnotes indicate that utility and synthetic-fuel consumption values are not included in the table. Refinery coal consumption is included, but not refinery oil or gas consumption.

TABLE 15: Regional Consumption Summary

TABLE 15 aggregates energy consumption by fuel type (without reference to sectoral consumption as in TABLE 13). The entries for this table are obtained from TABLE 13 by summing each fuel type over the energy sectors. Footnotes are the same as those for TABLE 13 and 14.

TABLE 16: Refinery Consumption

TABLE 16 summarizes refinery fuel consumption, production, and gain by refinery regions (see TABLE 7 description for refinery region naming conventions). This table gives detailed information about the refinery process. For this table, the units have been changed from the MMB/YR used in many of the preceding tables to MB/CD. Total natural gas consumption is given in MMCF/CD.

The refinery process is best explained by example. Referring to the TOTAL column, we see that 17,984.6 MB/CD of crude (TOTAL SUPPLY) enter the refinery, and 18,542.4 MB/CD of oil products (TOTAL PRODUCTION) are produced. During this refinery process, there is a TOTAL REFINERY GAIN, which is the net of TOTAL PRODUCTION and TOTAL SUPPLY ($18,542.4 \text{ MB/CD} - 17,984.6 \text{ MB/CD} = 557.8 \text{ MB/CD}$). However, not all products produced in the refinery are available for end-use by other sectors. Some refined fuels are consumed in the refinery, reducing the amount of TOTAL PRODUCTION available for sale. This difference, TOTAL PRODUCTION - TOTAL PRODUCTS SOLD, is the total amount of fuel consumed by the refineries and equals 1280.4 MB/CD. These values are also given for each refinery region.

The TOTAL REFINERY GAIN entry for the nation, 557.8, corresponds to the gain given for OIL in TABLE 1 after the units have been converted.

TABLE 17: Refinery Production Summary

TABLE 17 lists the petroleum products jet fuel, still gas, residual, etc. - that constitute the TOTAL PRODUCTION entries of TABLE 16. The refinery region

production is aggregated to give a DOMESTIC TOTAL, which when added to the IMPORTS entry for the product, gives the SUPPLY TOTAL. The last column gives a ratio for each specific fuel type, of DOMESTIC TOTAL production to the 18543.5 MB/CD volume of the total domestic production. The TOTAL refined petroleum row corresponds to the TOTAL PRODUCTION of TABLE 16.

The crude portion of the TOTAL SUPPLY (CRUDE, GL, BU) row of inputs to the refinery process reported for Table 16 is broken out in the last three rows of Table 17. DOMESTIC CRUDE INPUT and IMPORTED CRUDE INPUT are given for each refinery region. For this scenario, the DOMESTIC CRUDE INPUT OF 8,984.4 MB/CD exceeds the IMPORTED CRUDE INPUT of 7,750.7 MB/CD. Their total, TOTAL CRUDE INPUT, equals 16,735.1 MB/CD. The difference between the TOTAL CRUDE INPUT and the TOTAL SUPPLY (CRUDE, GL, BU) gives the amount of gas liquids and butane that enter the refinery.

TABLE 18: Refinery Production Summary in TBTU per Year

TABLE 18 is the same as TABLE 17 but with different units. DOMESTIC CRUDE INPUT becomes 19,085.5 TBTU/YR and IMPORTED CRUDE INPUT becomes 16,464.7 TBTU/YR for a TOTAL CRUDE INPUT of 35,550.3 TBTU/YR.

TABLE 19: Regional Utility Consumption

TABLE 19 indicates the use of various fuels by the utilities for each region. The units are in TBTU/YR so that comparisons among different fuels can be made. (See Table IV-2 for conversion factors.)

The first two fuels are designated as COAL, ALL HI-S and COAL, ALL LOW-S. Both are bituminous coals. The first is of both medium and high sulfur content, while the second is of low sulfur content. The sum of the four rows of COAL entries (TOTAL column) is equal to the ELECTRIC GENERATION (row), COAL (column) entry of TABLE 2, the Executive Summary Data table in TBTU.

The other rows of TABLE 19 that agree with the TABLE 2 column entries in the ELECTRICAL GENERATION row are: NATURAL GAS, INTRASTATE and the GAS column; DISTILLATE, ALL GRADES plus RESIDUAL ALL GRADES with the OIL column; and, URANIUM FUEL with the NUCLEAR column.

Thus, TABLE 19 gives an expanded view of utility consumption by region and fuel type, while TABLE 2 summarizes utility consumption by major fuel type only.

TABLE 20: Electricity Generation Summary

TABLE 20 consists of 11 pages indicating the amount of electricity generated by plants fueled by various energy sources. This information is presented by national total and by each of the ten utility regions.

There are fossil fuel plants (coal, oil and gas), nuclear, solar, geothermal and hydroelectric power plants. These are categorized as existing (generating electricity as of 1/1/78) and new (built and operated after 1/1/78 to meet the projected demand for 1985).

Since electricity can't be stored, it is produced on demand. There are highly significant daily, weekly, and seasonal variations in the demand for electricity, reflecting business hours, seasonal climate changes, etc. This variation, combined with economic and technological considerations, necessitates the use of diverse types of generating equipment. PIES considers four categories of plants: base, intermediate, daily peak and seasonal peak. TABLE 20 shows the generation from each plant type to meet the associated demand.

It can be seen from TABLE 20 that some plants, for example, gas turbines, distillate turbines and pumped storage, are used to satisfy seasonal peak demand only. These plants, because of cost, are run only intermittently. Base load plants (nuclear, for example) are run continuously.

TOTAL GENERATION for electricity projected for 1985 is 3,042.53 MMMKWH/YR. This agrees with the TOTAL ELEC. DISTRIBUTED entry of TABLE 1.

A footnote to TABLE 20 gives the system capacity factor, load factor, nuclear build limit and reserve margin. Conversion rates of existing plant capacity are given for fuel interchanges. An explanation of abbreviations used in the column headings is also provided.

As stated above, there are ten more pages to TABLE 20: one for each utility region. The row and column headings are identical to those on the first page.

TABLE 21: Price Summary in 1978 \$/Standard Physical Unit

TABLE 21 contains the retail prices of energy products. These prices are given by sector (residential, commercial, raw material, industrial and transportation) and by region (the ten DOE regions). Retail prices are obtained by applying sectoral markups to the delivered prices. Retail price markups are based on historical data. Entries in the TOTAL column are quantity-weighted averages of the regional prices.

TABLE 22: Regional Price Summary in 1978 \$/MMBTU

TABLE 22 is the same as TABLE 21 with all prices converted to 1978 dollars per MMBTU.

TABLE 23: Demand Region Retail BTU Price Growth Rates

The growth rates in this table are computed the same as those of TABLE 3, using the 1978 values of TABLE 22 and the 1975 values of TABLE 32. The entries in TABLE 22 are grouped according to sector, those in TABLE 32 are grouped according to fuel type.

TABLE 24: Demand Region Price Table

The prices in TABLE 24 are forecast prices associated with the quantities for each demand equation and are the shadow prices of linear programming. The shadow price of a product indicates the amount the total cost (objective function value) would change if demand for the product (i.e., demand equation value) were to increase by one physical unit; thus, the shadow price measures the marginal price, or the price consumers would be willing to pay for an additional unit of the product. The figures for the total U.S. are the quantity-weighted averages of the regional values.

TABLE 25: Utility Region Prices

TABLE 25 is similar to TABLE 24 in that it contains the marginal prices per physical unit of the various energy products consumed by the utilities in each utility region. The marginal prices are the final dual values, or shadow prices, for utility region material balance equations in the linear programming output. Prices are not reported in areas where no consumption of the fuel has occurred. The figures for the U.S. are the quantity-weighted averages of the regional values.

TABLE 26: Refinery Region Prices

TABLE 26 is similar to TABLES 24 and 25, except that it gives the marginal prices of the products leaving the refineries and the crude oil entering. The regional figures are the shadow prices of the refinery material balance equations. The U.S. figures are the quantity-weighted averages of the regional values.

TABLE 27: Oil Region Wellhead Prices

TABLE 27 lists the wellhead prices for crude oil in each of the oil supply regions according to crude type. The wellhead prices are the shadow prices of the oil region material balance equations. The PIES oil region headings are the symbols the computer uses internally in place of the NPC region symbols. The relationships between the PIES symbols and the NPC symbols are indicated below the table.

The geographical references in the names of the crude types do not necessarily indicate geographical sources, but rather physical and chemical characteristics that may be common to crudes produced in different regions. Thus, the crude type called West Texas Mix is now produced not only in Texas (NPC region 5) but also in three other regions as well (NPC regions 3, 6, and 7), as indicated by the location of the prices in the table. The price under the O1 column for Alaskan North Slope crude is the delivered price in South Alaska.

TABLE 28: Regional Gas Wellhead Prices

TABLE 28 lists the wellhead prices for intrastate gas. These prices are the shadow prices of the intrastate gas region material balance equations. In PIES, intrastate gas is assumed to originate in a DOE region, and thus special intrastate gas regions were set up to coincide exactly with DOE regions for modeling convenience.

TABLE 29: Coal Region F.O.B. Mine Prices

TABLE 29 gives the free on board (F.O.B.) mine prices for the 11 coal types. These prices are given for each of the 12 coal regions and are the shadow prices of the coal region material balance equation.

The SUB-BITUMINOUS and LIGNITE prices are in general lower than those of the other coal types. This reflects the cleaning and washing costs added to the production costs of PREMIUM, BITUMINOUS and SUB-BITUMINOUS coals plus their higher BTU content.

A footnote identifies the coal regions by name, and another gives the sulfur content range of low, medium, and high sulfur coals.

These prices reflect prices at the points of origin; (the coal supply regions) and not retail prices at the destination points (the demand regions) as given for coal in TABLE 21.

TABLE 30: Executive Data Summary - 1975

TABLE 30 is identical to TABLE 2 in format with the entries indicating actual 1975 amounts rather than projections. The units used are TBTU/YR.

A difference TABLE 30 and TABLE 2 is the absence of synthetics figures in TABLE 30. In 1975, there was neither demand for nor production of synthetic fuels. In 1985, the net annual demand for synthetic fuels is projected as 196 TBTU in the SYNTHETICS row, TOTAL FOSSIL FUEL column, of TABLE 2.

TABLE 31: Sectoral/Regional Consumption Summary

TABLE 31 gives actual 1975 consumption by sector and demand region in TBTU/YR. The format is the same as that of TABLE 13; both tables are used to compute the growth rates of TABLE 14.

TABLE 32: Demand Regional Retail Prices 1975

The rows and columns of TABLE 32 are identical to those of TABLE 23. The entries represent 1975 demand region retail prices in 1978 constant dollars per million BTU. TABLES 32 and 22 are used to compute the growth rates of TABLE 23.

Four unnumbered tables follow TABLE 32; they contain certain values from the equilibrium solution (prices and quantities) to the PIES problem, shortage/displacement figures by demand region and growth rates. These tables are written as they appear on a computer file used as input data to other FORTRAN programs. The tables are of special interest to computer programmers who use the PIES solution for other purposes.

The row and column headings are written in computer notation. This notation takes the form (XX) (YY) for row headings, where XX is the fuel type consumed in sector YY. For example, ELRS refers to electricity consumed in the residential sector. TABLE IV-3 is a list of abbreviations used in these tables.

The first of these last four tables contains a summary of fuel demanded both sectorally and regionally. Regional and sectoral totals are also given in the TOTAL row and the US column, respectively. The demand amounts are given in TBTU/YR. The second table, SHORTAGE/DISPLACEMENTS IN TRILLIONS OF BTUS PER YEAR is a repetition of page 2 of TABLE 9. Negative entries are shortages, and positive entries are displacements. The third table has final prices in dollars per MMBTU, and the last table has regional and sectoral growth rates from 1975 to 1985.

TABLE IV-3. ABBREVIATIONS FOR SECTORAL DEMAND

		<u>FUEL TYPES</u>	
AS	asphalt	LR	liquid gas (refinery)
CB	coal consumed in demand regions		
CC	coal consumption in coal regions (minemouth plants)	MC	metallurgical coal
CL	coal, consumed by utilities	NA	naphtha
DF	distillate fuel	NG	natural gas
EL	electricity	NU	nuclear (uranium) fuel
GS	gasoline	OL	oil
HY	hydro/geothermal/solar	OT	other petroleum
JF	jet fuel	RF	residual fuel
LF	liquid gas (feedstock)	SG	solar/geothermal
LG	liquid gas	SGDR	solar/geothermal fossil fuel and electricity demand replacement
LGFS	liquid gas feedstock for refinery	SY	syngas and syncrude
		<u>SECTORS</u>	
CM	commercial	RF	refinery
HC	household/commercial	RM	raw material
IN	industrial	RS	residential
		TR	transportation
		<u>DEMAND REGIONS</u>	
D1	New England	D6	Southwest
D2	New York/New Jersey	D7	Central
D3	Middle Atlantic	D8	North Central
D4	South Atlantic	D9	West
D5	Midwest	DA	Northwest

S T A R T O F R E P O R T
D. O. E. F I L E S M O D E L R E P O R T

FOR YEAR 1985

S U P P L Y M O D U L E S E L E C T I O N S

G E N E R A T I O N D A T E

R11	REFINERIES REGION 1 CONSTANT	10978
R21	REFINERIES REGION 2 CONSTANT	10978
R31	REFINERIES REGION 3 CONSTANT	10978
R41	REFINERIES REGION 4 CONSTANT	10978
R51	REFINERIES REGION 5 CONSTANT	10978
R61	REFINERIES REGION 6 CONSTANT	10978
R71	REFINERIES REGION 7 CONSTANT	10978
SY1	SYNTHETICS BASE	11278
GR1	GEO-SOLAR BASE	120677
SH1	SHALE BASE	11278
UP1	URANIUM FUEL	121977
IO1	IMPORTS	123077
IM1	IMPORTS	10478
GS1	GAS BASE	10578
OL1	OIL BASE	10578
US1	UTILITY BASE	11378
UT1	UTILITY BASE	11378
UH1	UTILITY BASE	11378
UV1	UTILITY BASE	11378
UR1	UTILITY BASE	11378
UX1	UTILITY BASE	11378
UY1	UTILITY BASE	11378
UZ1	UTILITY BASE	11378
C11	COAL 1 BASE	121977
C21	COAL 2 BASE	121977
C31	COAL 3 BASE	121977
C41	COAL 4 BASE	121977
C51	COAL 5 BASE	121977
C61	COAL 6 BASE	121977
C71	COAL 7 BASE	121977
C81	COAL 8 BASE	121977
C91	COAL 9 BASE	121977
CA1	COAL 10 BASE	121977
CB1	COAL 11 BASE	121977
CC1	COAL 12 BASE	121977

1985 MID-RANGE/TRENDING SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32
RUN DATE: 1.14

DATE OF DEMAND FILE GENERATION: 12.29
TIME OF DEMAND FILE GENERATION: 9.03
DATE OF QUERER GENERATION: 1.14
TIME OF QUERER GENERATION: 16.12
SCENARIO: 11
YEAR: 1985

RUN ASSUMPTIONS

WELLHEAD CAP (F/MCF) : 1.72
N. SLOPE GAS (MMCF/D CONVERTED FROM 1138 TO 1032 BTU/CF) : 2202.30
TOTAL AVAILABLE CANADIAN GAS (MMCF/D) : 2482.19
TOTAL AVAILABLE LIQUIFIED NATURAL GAS (MMCF/D) : 3849.31
OCS LEASE SALES FOLLOW 9/77 BLM SCHEDULE THRU 1981, WITH 4
PER YEAR AT 300000 ACRES PER SALE THEREAFTER
USGS OIL PROBABILITY DISTRIBUTION REPRESENTS 50 % GEOLOGICAL UNCERTAINTY

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*SHORTAGE SUMMARIES APPEAR ONLY IN REGULATE RUNS

TABLE 1

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1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32

RUN DATE: 1.14

EXECUTIVE DATA SUMMARY

UNITED STATES TOTAL GROSS SUPPLY/CONSUMPTION OF ENERGY RESOURCES
ENERGY SOURCES IN STANDARD PHYSICAL UNITS PER YEAR

SECTOR	COAL (MMST)	OIL (MMB)	GAS (BCF)	NUCLEAR (MMKWH)	HYDRO, SOLAR, GEOTHERMAL (MMKWH)	SOLAR/GEOTHERMAL FOSSIL SUBST (BTU)	TOTAL ELEC. DISTRIBUTED (MMKWH)
DOMESTIC SUPPLY:	1033.98	3735.42	16725.86	565.62	410.02	119.86	3042.54
(COAL, GAS, ELEC.)	1033.93		13504.54	565.62	395.67		3042.54
(CRUDE)		3262.15					
(CO-PRODUCTS/ASSOC. GAS)		456.11	3221.32				
(SYNTHETICS)							
(SHALE)		17.15					
(DIRECT SOLAR/GEOT)					14.35	119.96	
IMPORTS:	74.00-	4021.28	1848.07				
(CRUDE)		2828.99					
(PRODUCTS)		1192.28					
(LNG)			942.07				
(CANADIAN/MEXICAN)			906.00				
(COAL)	74.00-						
TOTAL SUPPLY	959.98	7756.69	18573.93	565.62	410.02	119.86	3042.54
GAINS (+) /LOSSES (-)		203.61		46.31-	35.70-		254.14-
CONSUMPTION:							
RESIDENTIAL	1.03	707.45	5251.75		4.46	47.39	941.17
COMMERCIAL	.56	596.96	1941.34		5.09	20.41	695.80
INDUSTRIAL	200.21	2044.22	9840.85		4.80	56.06	1225.44
TRANSPORTATION	.02	1901.61	198.50				4.05
ELECTRICAL GENERATION	745.50	541.31	2085.61				2766.41-
SYNTHETICS	13.66	169.11	872.16-				
TOTAL DOMESTIC CONSUMPTION	960.98	7960.65	18547.89		14.35	119.86	.00

NOTE: OIL IMPORTS IN MMB/CD = 11.02

GAS CONSUMPTION IN THE TRANSPORTATION SECTOR INCLUDES NATURAL GAS TRANSPORTATION LOSSES.

INDUSTRIAL CONSUMPTION INCLUDES REFINERY FUEL CONSUMPTION.

GAINS ARE REFINERY GAINS. LOSSES ARE TRANSMISSION LOSSES.

SUPPLY/DEMAND IMBALANCES MAY BE DUE TO ERRORS WITHIN THE EQUILIBRATION CONVERGENCE TOLERANCE.

TABLE 2

PAGE 2

1985 MID-RANGE/TREND LONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32
RUN DATE: 1.14

EXECUTIVE DATA SUMMARY

UNITED STATES TOTAL GROSS SUPPLY/CONSUMPTION OF ENERGY RESOURCES
ENERGY SOURCES IN TRILLIONS OF BTU'S PER YEAR

SECTOR	COAL	OIL	GAS	TOTAL FOSSIL FUEL	NUCLEAR	HYDRO SOLAR GEO.	TOTAL 6 SECTOR INPUTS	GROSS ELECT. INPUTS	TOTAL 4 SECTOR INPUTS	UTILITY ELECTRIC DISTRIB.	NET FOUR SECTOR INPUTS
DOMESTIC SUPPLY:	21062	21029	17261	61352	6222	4220				10381	
(COAL, GAS, ELEC.)	23062		13937	36999	6222	3957				10381	
(CRUDE)		18986		18986							
(CO-PRODUCTS/ASSOC. GAS)		1944	3324	5268							
(SYNTHETICS)											
(SHALE)		100		100							
(DIRECT SOLAR/GEO)						263					
IMPORTS:	1918-	23190	1907	23179							
(CRUDE)		16465		16465							
(PRODUCTS)		6725		6725							
(LNG)			972	972							
(CANADIAN/MEXICAN)			935	935							
(COAL)	1918-			1918-							
TOTAL SUPPLY	21144	44219	19168	84531	6222	4220	94973			10381	
GAINS(+) /LOSSES(-)		362-								867-	
CONSUMPTION:											
RESIDENTIAL	24	3826	5422	9272		88	9360	9656	19016	2870	12230
COMMERCIAL	13	3560	1900	5473		71	5544	7988	13532	2374	7918
INDUSTRIAL	5016	11302	10156	26474		104	26578	14069	40647	4181	30759
TRANSPORTATION		20954	411	21366			21366	46	21412	14	21380
ELECTRICAL GENERATION	15904	3328	2152	21385	6222	3957	31563			9439-	
SYNTHETICS	208	888	900-	196			196				
TOTAL CONSUMPTION	21166	43857	19141	84164	6222	4220	94605	31759	94606		72287

NOTE: GAS CONSUMPTION IN THE TRANSPORTATION SECTOR INCLUDES NATURAL GAS TRANSPORTATION LOSSES.
INDUSTRIAL CONSUMPTION INCLUDES REFINERY FUEL CONSUMPTION.

LOSSES ARE REFINERY CRACKING LOSSES AND ELECTRICITY TRANSMISSION LOSSES.

NUCLEAR AND HYD/SOL/GEO ENTRIES ESTIMATE BTU CONSUMPTION FOR AN EQUIVALENT FOSSIL FUEL PLANT AT 10000 BTU/KWH.

SUPPLY/DEMAND IMBALANCES MAY BE DUE TO ERRORS WITHIN THE EQUILIBRATION CONVERGENCE TOLERANCE
OR AVERAGE BTU CONVERSION OF AGGREGATES.

DIRECT SOLAR/GEO SUPPLY INCLUDES FOSSIL FUEL DEMAND REPLACEMENT IN TBtus OF 119.86

AND ELECTRICITY DEMAND REPLACEMENT AT 16000 BTUS/KWH OF DEMAND IN TBtus OF 143.50

TOTAL SUPPLY QUADS NET OF REFINERY CRACKING LOSS: 94.61

TOTAL GROSS QUADS CONSUMED: 94.61

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32

RUN DATE: 1.14

EXECUTIVE DATA SUMMARY

UNITED STATES TOTAL GROSS SUPPLY/CONSUMPTION OF ENERGY RESOURCES
BTU GROWTH RATES FROM 1975

SECTOR	COAL	OIL	GAS	TOTAL FOSSIL FUEL	NUCLEAR	HYDRO SOLAR GEO.	TOTAL 6 SECTOR INPUTS	GROSS ELECT. INPUTS	TOTAL 4 SECTOR INPUTS	UTILITY ELECTRIC DISTRIB.	NET FOUR SECTOR INPUTS
DOMESTIC SUPPLY:	4.46	.46	1.36-	1.14	13.14	3.07				4.73	
(COAL,GAS,ELEC.)	4.46		1.21-	1.97	13.14	2.40				4.73	
(CRUDE)		.70		.70							
(CO-PRODUCTS/ASSOC. GAS)		2.02-	1.99-	2.90-							
(SYNTHETICS)											
(SHALE)											
(DIRECT SOLAR/GEO)											
IMPORTS:	.89	6.36	11.19	7.33							
(CRUDE)		6.60		6.60							
(PRODUCTS)		5.79		5.79							
(LNG)			69.37	69.37							
(CANADIAN/MEXICAN)			3.62	3.62							
(COAL)	.89			.89							
TOTAL SUPPLY	4.86	3.09	.65-	2.47	13.14	3.07	2.93			4.73	
GAINS (+) /LOSSES (-)		6.12								3.95	
CONSUMPTION:											
RESIDENTIAL	14.29-	3.18	.65	1.50			1.59	3.30	2.48	3.68	2.04
COMMERCIAL	14.29-	1.53	3.05-	.42-			.29-	3.34	1.71	3.75	.75
INDUSTRIAL	3.13	7.62	1.31	3.92			3.96	5.92	4.46	6.36	4.25
TRANSPORTATION		1.57	3.73-	1.43			1.43	.96-	1.51	.55-	1.43
ELECTRICAL GENERATION	5.53	.27	4.03-	3.09	13.14	2.40	4.31			4.79	
SYNTHETICS											
TOTAL CONSUMPTION	4.88	3.06	.16-	2.46	13.14	3.07	2.92	4.37	2.91		2.55

NOTE: GAS CONSUMPTION IN THE TRANSPORTATION SECTOR INCLUDES NATURAL GAS TRANSPORTATION LOSSES.

INDUSTRIAL CONSUMPTION INCLUDES REFINERY FUEL CONSUMPTION.

LOSSES ARE REFINERY CRACKING LOSSES AND ELECTRICITY TRANSMISSION LOSSES.

NUCLEAR AND HYD/SOL/GEO ENTRIES ESTIMATE BTU CONSUMPTION FOR AN EQUIVALENT FOSSIL FUEL PLANT AT 10000 BTU/KWH.

TOTAL SUPPLY QUADS NET OF REFINERY CRACKING LOSS: 2.92

TOTAL GROSS QUADS CONSUMED: 2.91

1975 VALUES USED IN COMPUTING GROWTH RATES APPEAR IN TABLE 26.

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32

RUN DATE: 1.14

IMPORT SUMMARY
ALL FOREIGN LOCATIONS
(IN STANDARD PHYSICAL UNITS PER YEAR)

	TOTAL IMPORTS	PRICE PER UNIT (IN 1978 DOLLARS)	EXPENDITURE (MMB/YR)
EAST COAST CRUDE (MMB/YR)	678.13	15.56	10554.38
GULF COAST CRUDE (MMB/YR)	2041.36	15.26	31146.11
WEST COAST CRUDE (MMB/YR)	73.00	15.74	1149.06
CANADIAN CRUDE (MMB/YR)	36.50	15.56	568.08
GASOLINE (MMB/YR)	62.78	21.90	1375.04
DISTILLATE (MMB/YR)	137.24	18.26	2506.27
RESIDUAL (MMB/YR)	612.10	16.64	10208.84
OTHER* (MMB/YR)	37.96	16.81	638.21
JET FUEL (MMB/YR)	78.64	15.63	1232.63
LIQUID PET. GASSES (MMB/YR)	243.65	13.10	3192.17
NAPHTHA (MMB/YR)	49.71	18.96	373.71
OIL SUBTOTAL (MMB/YR)	4021.24	15.65	62944.52
LNG (BCF/YR)	942.07	3.41	3217.01
CANADIAN (BCF/YR)	906.00	2.10	1900.04
GAS SUBTOTAL (BCF/YR)	1848.07	2.77	5117.04
NET COAL** (MMST/YR)	56.24-	44.57	2506.56-
STEAM COAL (MMST/YR)	17.76-	44.57	791.55-
COAL SUBTOTAL (MMST/YR)	74.00-	44.57	3298.11-
			64763.39
			TOTAL EXPENDITURE

*OTHER INCLUDES ASPHALT AND OIL RAW MATERIAL.

**NET COAL INCLUDES 70% PREMIUM COAL AND 30% BITUMINOUS LOW SULFUR COAL.

TABLE 5

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1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32

RJN DATE: 1.14

NOTE: OIL UNITS IN MB/CD
GAS UNITS IN BCF/YR

OIL AND GAS REGIONAL PRODUCTION SUMMARY IN
STANDARD PHYSICAL UNITS

NPC REGION**	OIL		TOTAL (MB/CD)	GAS			TOTAL (BCF/YR)
	CRUDE OIL (MB/CD)	OTHER* (MB/CD)		NONASSOCIATED (BCF/YR)	ASSOCIATED GAS (BCF/YR)	SYNGAS (BCF/YR)	
DOMESTIC PRODUCTION (INCLUDING ONLY INTERSTATE GAS)							
1S SOUTH ALASKA	315.9		315.9	254.0	47.9		301.9
1N NORTH SLOPE	1600.0		1600.0		803.8		803.8
2 PACIFIC COAST	831.3	8.0	839.3				
3 W. ROCKY MTNS.	271.8	14.7	286.5	241.5	36.6		278.1
4 E. ROCKY MTNS.	491.9	28.9	520.8	88.6	39.9		128.5
5 W. TEX. & N. MEX.	1527.3	91.8	1619.1	120.3	197.6		317.9
6 W. GULF BASIN	1949.1	272.6	2221.7	910.7	342.6		1253.3
7 MIDCONTINENT	543.6	41.6	585.2	551.0	116.6		667.6
8-9-10 MI. BAS. INT. AP	250.7	9.4	250.7	115.5	8.7		124.1
11 ATLANTIC COAST	112.3	2.3	114.6		.0		.0
TOTAL ON-SHORE	7893.9	469.2	8363.1	2281.5	1593.7		3875.2
2A PACIFIC OCEAN	208.8	16.5	225.3	20.7	107.8		128.5
6A GULF OF MEXICO	564.8	134.3	699.1	2264.3	231.9		2496.2
11A ATLANTIC OCEAN	269.9	20.6	290.5	146.4	74.8		221.3
TOTAL OFF SHORE	1043.5	171.4	1214.9	2431.4	414.6		2845.9
NEW INTERSTATE ONSHORE				616.8			616.8
INTRASTATE		609.0	609.0	8174.9	1213.0		9387.9
SYNTHETICS + SHALE		47.0	47.0			872.2	872.2
TOTAL DOMESTIC PRODUCTION	8937.4	1296.6	10234.0	13504.5	3221.3	872.2	17598.0
IMPORTS	7750.7	3266.5	11017.2	1848.1			1848.1
TOTAL SUPPLY	16688.1	4563.2	21251.2	15352.6	3221.3	872.2	19446.1

*INCLUDES BUTANE, GAS LIQUIDS, SYNCRUDE (FROM COAL REGIONS) & SHALE FOR DOMESTIC PRODUCTION;
GASOLINE, DISTILLATE, RESIDUAL, JET FUEL, LPG, AND OTHER FOR IMPORTS AND NAPHTHA FOR EXPORTS.

** NPC REGION 8-9-10 INCLUDES 2 GAS REGIONS: 8-9 MI. BASIN, INT. AND 10 APPALACHIANS.

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32

RUN DATE: 1.14

DOMESTIC CRUDE REGIONAL PRODUCTION IN THOUSAND BARRELS PER CALENDAR DAY

NPC REGION	-----NEW-----		TOTAL NEW	-----OLD-----			TOTAL OLD	TOTAL
	PRIMARY	SECONDARY		PRIMARY	SECONDARY	TERTIARY		
15 SOUTH ALASKA	236.8	16.7	253.5	47.5	14.9		62.4	315.9
1N NORTH SLOPE	1600.0		1600.0					1600.0
2 PACIFIC COAST	373.3	52.7	426.0	335.1	29.5	40.7	405.3	831.3
3 W. ROCKY MTNS.	105.4	18.8	124.2	41.8	105.8		147.6	271.8
4 R. ROCKY MTNS.	133.5	19.5	153.0	155.8	183.1		338.9	491.9
5 W.TEX.&E.N.MEX.	110.5	27.1	137.6	748.8	307.8	333.1	1389.7	1527.3
6 W. GULF BASIN	276.8	4.6	281.4	716.9	910.6	40.2	1667.7	1949.1
7 MIDCONTINENT	125.5	42.6	168.1	213.1	135.4	27.0	375.5	543.6
8-9-10 MI.BAS.INT.AP	89.8	14.3	104.1	70.3	65.5	10.8	146.6	250.7
11 ATLANTIC COAST	101.8	6.0	107.8	4.5			4.5	112.3
TOTAL ON-SHORE	3153.4	202.3	3355.7	2333.8	1752.6	451.8	4538.2	7893.9
2A PACIFIC OCEAN	43.8	.5	44.3	105.9	58.6		164.5	208.8
6A GULF OF MEXICO	268.1	9.6	277.7	236.7	50.4		287.1	564.8
11A ATLANTIC OCEAN	263.2	6.7	269.9					269.9
TOTAL OFF-SHORE	575.1	16.8	591.9	342.6	109.0		451.6	1043.5
TOTAL CRUDE PRODUCTION	3728.5	219.1	3947.6	2676.4	1861.6	451.8	4989.8	8937.4
OTHER*								1296.6
TOTAL OIL PRODUCTION	3728.5	219.1	3947.6	2676.4	1861.6	451.8	4989.8	10234.0

*INCLUDES GAS LIQUIDS, BUTANE, SHALE AND SYNCRUDE FROM BOTH OIL AND GAS REGIONS.

OLD OIL IS PRODUCTION FROM RESERVES PROVED PRIOR TO 1/1/77. NEW PRODUCTION IS FROM RESERVES PROVED SINCE 1/1/77.

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32
FUN DATE: 1.14

CRUDE REGIONAL DISTRIBUTION SUMMARY IN THOUSAND BARRELS PER CALENDAR DAY

NPC REGION	SA	PAD1A	PAD1H	PAD2A	PAD2B	PAD3	PAD4	PAD5	TOTAL
DOMESTIC CRUDES:									
1S SOUTH ALASKA				89.4				1826.5	1915.9
1N NORTH SLOPE	1600.0								
2 PACIFIC COAST						240.1		591.2	831.3
3 W. ROCKY MTS.					241.8		30.3		271.8
4 E. ROCKY MTS.							491.9		491.9
5 W. TEX. & E. N. MEX.				443.7	1083.6				1527.3
6 W. GULF BASIN				1244.6		704.5			1949.1
7 MIDCONTINENT				543.6					543.6
8-9-10 MI. BAS. INT. AP				250.7					250.7
11 ATLANTIC COAST			112.3						112.3
TOTAL ON-SHORE			112.3	2572.0	1325.4	944.6	521.9	2417.7	7894.9
2A PACIFIC OCEAN								208.8	208.8
6A GULF OF MEXICO						564.8			564.8
11A ATLANTIC OCEAN		269.9							269.9
TOTAL OFF-SHORE		269.9				564.8		208.8	1043.5
SHALE							47.0		47.0
SYNCRUDE									
TOTAL DOMESTIC CRUDE		269.9	112.3	2572.0	1325.4	1509.4	568.9	2626.5	8984.4
IMPORTED CRUDE		1545.0	312.9	245.4		5447.4		200.0	7750.7
TOTAL CRUDE		1814.9	425.2	2817.4	1325.4	6956.8	568.9	2826.5	16735.1

NOTE: ALASKA NORTH SLOPE CRUDE IS DELIVERED FIRST TO SOUTH ALASKA WHERE IT IS COMBINED WITH SOUTH ALASKAN CRUDE DISTRIBUTION

TABLE 7

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32
RUN DATE: 1.14

CRUDE REGIONAL DISTRIBUTION SUMMARY IN THOUSAND BARRELS PER CALENDAR DAY (CONTINUED)

NPC REGION		PAD1A	PAD1B	PAD2A	PAD2B	PAD3	PAD4	PAD5	TOTAL
CO-PRODUCTS:									
1S	SOUTH ALASKA								
1N	NORTH SLOPE								
2	PACIFIC COAST					15.4			15.4
3	W. ROCKY MTNS.				21.7	5.9	12.6		40.2
4	E. ROCKY MTNS.						38.6		38.6
5	W. TEX. & E. N. MEX.				139.8	95.0			234.8
6	W. GULF BASIN					523.1			523.1
7	MIDCONTINENT			13.3	110.2	82.8			206.4
8-9-10	MT. BAS. INT. AP			16.4					16.4
11	ATLANTIC COAST		3.4						3.4
TOTAL ON-SHORE			3.4	29.7	271.7	722.2	51.3		1078.3
2A	PACIFIC OCEAN							16.5	16.5
6A	GULF OF MEXICO					134.3			134.3
11A	ATLANTIC OCEAN	20.6							20.6
TOTAL OFF-SHORE		20.6				134.3		16.5	171.4
TOTAL DOMESTIC CO-PRODUCTS		20.6	3.4	29.7	271.7	856.5	51.3	16.5	1249.6
CO-PRODUCTS TOTAL INCLUDES 735.16 MB/CD BUTANE AND 514.47 MB/CD GAS LIQUIDS.									

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32
RUN DATE: 1.14

GAS REGIONAL DISTRIBUTION SUMMARY IN BILLION CUBIC FEET PER YEAR

NPC REGION	CONSUMPTION*										TOTAL
	NW-ENG.	NY/NJ	MID-ATL	S.-ATL	MIDWEST	S.-WEST	CENTRAL	N-CENTRAL	WEST	N.-WEST	
INTERSTATE PRODUCTION											
1N NORTH SLOPE	13.7	43.4	57.7	90.9	263.2	48.9	41.6	8.0	221.2	15.3	803.8
1S SOUTH ALASKA									301.9		301.9
2 PACIFIC COAST											
3 W. ROCKY MTS.						10.0		63.5	189.8	14.7	278.1
4 E. ROCKY MTS.					9.8		16.2	97.5	2.2	2.8	128.5
5 W.TEX.&E.N.MEX.				6.7	47.8	51.8	46.0	3.2	162.4		317.9
6 W. GULF BASIN	38.7	125.2	157.9	311.0	381.1	195.6	33.8				1253.3
7 MIDCONTINENT		8.0	11.4	13.4	271.2	82.1	227.8	39.8	14.0		667.6
8-9 MI. BASIN, INT.					4.5						4.5
10 APPALACHIANS		32.2	43.1	8.4	36.0						119.6
11 ATLANTIC COAST	.0	.0	.0	.0							.0
TOTAL ON-SHORE											
	52.3	208.9	280.0	430.3	1013.5	383.5	365.4	212.0	891.5	32.9	3875.2
2A PACIFIC OCEAN									128.5		128.5
6A GULF OF MEXICO	92.3	294.6	392.0	534.4	943.9	222.3	16.8				2496.2
11A ATLANTIC OCEAN	18.0	63.5	80.7	59.1							221.3
TOTAL OFF SHORE											
	110.3	358.1	472.7	593.5	943.9	222.3	16.8		128.5		2845.9
NEW INTERSTATE ONSHORE											
	7.8	35.1	47.3	74.2	171.5	87.3	81.4	15.9	95.0	1.2	616.8
INTRASTATE REFINERY CONSUMPTION											896.3
INTRASTATE--OTHER											8491.5
SYNTHETICS	52.3	178.0	218.9		274.0	.5		37.1	111.3		872.2
TOTAL DOMESTIC PRODUCTION											
	222.7	781.1	1051.0	1199.1	2445.8	7886.4	999.2	566.7	1515.5	34.1	17598.0
IMPORTS											
	112.8	66.9	128.7	302.2	595.5				428.9	213.1	1848.1
TOTAL SUPPLY											
	335.5	848.0	1179.6	1501.3	3041.4	7886.4	999.2	566.7	1944.4	247.1	19446.1

*INCLUDES DISTRIBUTION TO BOTH UTILITY AND DEMAND REGIONS.
ALASKAN GAS HAS BEEN CONVERTED TO STANDARD MCPS (1.012 BTUS).
NORTH SLOPE GAS SHOWN AS DISTRIBUTED TO EAST COAST GAS REGIONS REPRESENTS DISPLACEMENTS

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32
RUN DATE: 1.14

GAS REGIONAL /SECTORAL DEMAND SUMMARY IN BCF
PER YEAR**

	DEMAND REGION										TOTAL
	NW-ENG.	NY/NJ	MID-ATL	S.-ATL	MIDWEST	S.-WEST	CENTRAL	N-CENTRAL	WEST	N.-WEST	
INTERSTATE	324.7	819.5	1102.9	1178.9	2929.7	597.9	464.2	261.2	1595.4	244.1	9718.6
(RESIDENTIAL)	166.4	444.1	468.0	289.6	1757.4	597.9	464.2	261.2	558.0	100.3	5107.2
(COMMERCIAL)	77.0	159.3	172.8	205.3	597.2				187.9	47.9	1447.5
(RAW MATERIAL)	4.0	8.4	61.3	161.5	69.8				42.5	35.0	382.5
(INDUSTRIAL EX. RAW MAT.)	77.3	207.7	400.7	722.5	505.2				807.0	60.9	2781.3
INTRASTATE			.0	60.1		5489.9	475.4	295.5			6321.0
(RESIDENTIAL)			.0			89.2	3.7	53.6			146.5
(COMMERCIAL)			.0			192.7	128.4	72.7			393.8
(RAW MATERIAL)						526.4	87.3	8.6			622.3
(INDUSTRIAL EX. RAW MAT.)			.0	60.1		4681.6	256.1	160.6			5158.4
TOTAL	324.7	819.5	1102.9	1439.1	2929.7	6087.8	939.6	556.8	1595.4	244.1	16039.6
(RESIDENTIAL)	166.4	444.1	468.0	289.6	1757.4	687.1	467.9	314.8	558.0	100.3	5253.7
(COMMERCIAL)	77.0	159.3	172.8	205.3	597.2	192.7	128.4	72.7	137.9	47.9	1941.3
(RAW MATERIAL)	4.0	8.4	61.3	161.5	69.8	526.4	87.3	8.6	42.5	35.0	1004.8
(INDUSTRIAL EX. RAW MAT.)	77.3	207.7	400.7	782.7	505.2	4681.6	256.1	160.6	807.0	60.9	7939.7
*SHORTAGE						891.9	33.0			115.2	1040.1
(RESIDENTIAL)											
(COMMERCIAL)											
(RAW MATERIAL)											
(INDUSTRIAL EX. RAW MAT.)						891.9	33.0			115.2	1040.1

**FIGURES DO NOT INCLUDE THE FOLLOWING:

REFINERY CONSUMPTION OF 896.35
TRANSPORTATION CONSUMPTION OF 398.50
UTILITY CONSUMPTION OF 2065.61

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES, C)
WITH NATURAL GAS REGULATION -

OIL IMPORT PRICE: 15.32
RUN DATE: 1.14

SECTORAL/REGIONAL SHORTAGE/DISPLACEMENT SUMMARY IN TRILLIONS OF BTUS PER YEAR

SECTOR (FUEL)	DEMAND REGIONS							TOTAL
	NW-ENG.	NY/NJ	MID-ATL	S.-ATL	MIDWEST	S.-WEST	CENTRAL	
INDUSTRIAL GAS SHORTAGE								
DISPLACEMENTS								
DISTILLATE								
RESIDUAL								
LIQUID GAS								
COAL								
TOTAL IND. DISPLACEMENT								
TOTAL DISPLACEMENT								
TOTAL SHORTAGE								

*OTHER INCLUDES ASPHALT AND OIL RAW MATERIAL.

THE FOLLOWING REGION(S) HAD GAS SURPLUSES: REGION AMOUNT

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32
RUN DATE: 1.18

REGIONAL SHORTAGE/DISPLACEMENT SUMMARY IN TRILLIONS OF BTUS PER YEAR

FUEL	DEMAND REGIONS							TOTAL
	NW-ENG.	NY/NJ	MID-ATL.	S.-ATL	MIDWEST	S.-WEST	CENTRAL N-CENTRAL	
NATURAL GAS SHORTAGE					920.4-		34.1-	118.9- 1073.3-
DISTILLATE					202.4		7.1	52.7 262.1
RESIDUAL					95.7		2.5	31.6 129.9
LIQUID GAS					166.4		12.6	3.8 182.8
COAL					490.0		12.4	29.7 532.1
TOTAL DISPLACEMENT					954.5		34.6	117.8 1106.9

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32
RUN DATE: 1.14

COAL REGIONAL PRODUCTION SUMMARY IN MILLION SHORT TONS PER YEAR (BY MINE TYPE)

REGION	LOW SULFUR		MEDIUM SULFUR		HIGH SULFUR		PREMIUM		TOTAL			1975	GROWTH
	SURFACE	DEEP	SURFACE	DEEP	SURFACE	DEEP	SURFACE	DEEP	SURFACE	DEEP	TOTAL	TOTAL	RATE
NORTHERN APPLACHIAN	.5	.3	24.5	16.1	50.9	47.9	2.9	21.7	78.8	86.0	164.9	180.0	.9-
CENTRAL APPLACHIAN	14.2	10.4	18.5	53.0	2.7	16.0	50.8	105.9	86.2	185.2	271.4	189.4	3.7
SOUTHERN APPLACHIAN		1.8	10.5	6.2			1.4	1.4	11.9	9.3	21.1	22.4	.6-
MIDWEST		.3	6.4	14.6	102.7	97.1			109.2	112.0	221.1	137.1	4.9
TOTAL EAST	14.7	12.8	59.9	89.8	156.3	160.9	55.1	129.0	286.0	392.5	678.5	538.9	2.3
CENTRAL WEST		.1	.7		7.6	1.8	.4	.4	8.8	2.2	11.0	10.0	1.0
GULF			51.9						51.9		51.9	11.0	15.8
N.E. GREAT PLAINS	7.4		24.3						31.8		31.8	9.0	13.4
N.W. GREAT PLAINS	166.1	.4	17.8						183.9	.4	184.4	45.6	15.0
ROCKIES	6.4	9.4	2.4	.8				5.2	8.8	15.4	24.2	14.9	5.0
SOUTHWEST	26.7		17.8	1.0			.2		44.7	1.0	45.7	16.0	11.1
NORTHWEST	5.7								5.7		5.7	3.7	4.4
ALASKA	.8								.8		.8	.8	.3-
TOTAL WEST	213.1	9.9	115.0	1.8	7.6	1.8	.6	5.6	336.4	19.1	355.4	101.0	13.4
TOTAL U.S.	227.8	22.7	175.0	91.6	164.0	162.7	55.7	134.5	622.4	411.6	1034.0	639.9	4.9

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32
RUN DATE: 1.14

COAL REGIONAL PRODUCTION SUMMARY IN MILLION SHORT TONS PER YEAR (BY COAL TYPE)

COAL TYPES	SUPPLY REGIONS*											TOTAL	
	C1	C2	C3	C4	C5	C6	C7	C8	C9	CA	CB		CC
PREMIUM (27 MMBTU/TON)	24.68	156.64	2.72		.79				5.19	.20			190.22
BITUMINOUS (23.80 MMBTU/TON)	116.02	114.80	18.40	51.91	3.46			26.79	10.11	3.80	5.70		451.01
LOW SULFUR	.78	24.60	1.76		.08			26.79	7.74	2.85	5.70		79.29
MEDIUM SULFUR	40.43	71.48	16.64	17.26	.75				2.38	.95			149.90
HIGH SULFUR	74.82	18.72		34.65	2.64								130.82
MID-BITUMINOUS (21.80 MMBTU/TON)	24.16			169.21	6.76			33.43	8.87	41.71			289.15
LOW SULFUR				.32				15.59	8.12	23.80			47.83
MEDIUM SULFUR	.19			3.75				17.84	.76	17.91			40.45
HIGH SULFUR	23.97			165.14	6.76								135.87
SUB-BITUMINOUS (19.33 MMBTU/TON)								124.14				.78	124.92
LOW SULFUR								124.14				.78	124.92
MEDIUM SULFUR													
LIGNITE (13.00 MMBTU/TON)						51.90	31.79						83.69
LOW SULFUR							7.44						7.44
MEDIUM SULFUR						51.90	24.35						76.24

*SUPPLY REGIONS

C1	NORTHERN APPLACHIAN
C2	CENTRAL APPLACHIAN
C3	SOUTHERN APPLACHIAN
C4	MIDWEST
C5	CENTRAL WEST
C6	GULF
C7	N.E. GREAT PLAINS
C8	N.W. GREAT PLAINS
C9	ROCKIES
CA	SOUTHWEST
CB	NORTHWEST
CC	ALASKA

SULFUR CONTENTS

LOW	LESS THAN .67 LBS./MMBTU (PREMIUM IS LOW SULFUR)
MEDIUM	.67 TO 1.68 LBS./MMBTU
HIGH	MORE THAN 1.68 LBS./MMBTU

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32

RUN DATE: 1.14

COAL REGIONAL DEMAND SUMMARY IN MILLION SHORT TONS PER YEAR

DOE REGION	UTILITY					RES., CON., IND.				1975 TOTAL	GROWTH RATE
	LO SULFR	HI SULFR	SUB-BITUM.	LIGNITE	TOTAL	1975 NET COAL*	NON-NET	TOTAL	TOTAL		
NW-ENG.	2.2	7.2			9.3	1.5	.0	.1	9.4	1.5	20.2
NY/NJ	8.5	24.3			32.8	8.3	5.8	3.0	41.6	14.2	11.3
MID-ATL	1.5	83.2			84.7	71.8	37.4	13.4	135.5	113.0	1.8
S.-ATL	40.7	144.4			185.0	115.3	9.0	12.9	206.9	132.0	4.6
MIDWEST	6.6	148.4	45.5	9.4	210.0	153.5	37.0	51.6	298.5	213.0	3.4
S.-WEST	4.4		42.1	51.9	98.4	16.3	.8	4.3	103.5	18.0	19.1
CPNTRAL	6.9	27.3	25.8		60.0	29.1	.3	5.5	65.8	31.5	7.6
N-CNTRL	5.0	6.7	25.8	12.2	49.6	17.0	1.4	9.7	62.7	29.0	8.0
WEST	8.6	4.1			12.7	8.6	2.2	2.0	16.9	11.0	4.4
N.-WEST			3.0		3.0	4.2	.0	3.5	6.5	5.0	2.6
SYNTHETICS**		3.5		10.2	13.7				13.7		
TOTAL	84.4	449.0	142.1	73.5	759.2	424.7	95.8	106.0	201.8	568.0	5.4

*NET COAL INCLUDES 70% PREMIUM COAL AND 30% BITUMINOUS LOW SULFUR COAL.

**SYNTHETICS COAL DEMAND INCLUDES COAL USED IN PRODUCING SYNGAS, SYNCRUDE AND ELECTRICITY.

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32
RUN DATE: 1.14

SECTORAL/REGIONAL CONSUMPTION SUMMARY IN TRILLIONS OF BTUS PER YEAR****

SECTOR (FUEL)	DEMAND REGIONS										TOTAL
	NW-ENG.	NY/NJ	MID-ATL	S.-ATL.	MIDWEST	S.-WEST	CENTRAL	N-CENTRAL	WEST	N.-WEST	
RESIDENTIAL	792.5	1475.7	1135.0	1478.0	3390.5	1257.9	852.3	527.9	804.7	425.7	12140.2
(ELECT.)	91.0	203.0	261.3	836.7	468.2	338.4	150.5	109.5	191.2	220.0	2869.8
(DIST.)	506.9	786.7	354.9	221.0	929.4	101.1	103.9	33.9	32.6	98.7	3173.1
(LG)	22.9	26.9	26.7	116.4	168.7	109.2	114.4	59.4	5.0	2.4	652.6
(COAL)	.0	.7	5.0	5.0	10.5	.0	.6	.3	.0	.5	22.7
(NG)	171.7	458.3	483.0	298.9	1813.7	709.1	482.9	324.9	575.9	103.5	5421.9
COMMERCIAL	720.5	1126.4	750.6	1001.8	1786.0	805.3	394.1	327.9	600.1	332.6	7846.2
(ELECT.)	102.6	247.0	234.1	445.0	414.6	299.1	116.4	118.0	256.6	130.6	2374.1
(DIST.)	287.8	246.2	164.5	97.7	311.4	74.9	57.8	54.3	25.2	65.5	1385.3
(RESID.)	213.7	387.4	89.6	55.6	180.1	69.6	11.9	19.3	7.1	27.2	1061.5
(LG)	1.9	2.4	2.6	11.6	15.9	8.4	9.4	5.2	.7	.1	58.3
(COAL)	.0	.4	2.7	2.7	5.7	.0	.3	.1	.0	.3	12.2
(ASPHALT)	35.1	78.7	78.7	177.4	242.0	155.5	65.7	55.9	106.5	59.2	1054.6
(NG)	79.4	164.4	178.4	211.9	616.4	198.9	132.5	75.1	193.9	49.5	1900.3
RAW MATERIAL*	38.8	121.4	205.0	429.7	414.6	2986.1	210.6	48.0	165.2	134.6	4755.1
(LG)	21.5	55.0	71.5	139.4	191.1	2321.9	84.2	14.2	78.0	14.8	2991.6
(OIL)	13.2	57.7	70.2	123.7	151.4	121.0	36.4	25.0	44.4	83.6	726.6
(NG)	4.1	8.6	63.3	166.6	72.1	543.3	90.1	8.9	43.8	36.1	1036.9
INDUSTRIAL***	484.1	950.0	2628.2	2894.7	4831.8	6678.4	798.1	769.1	1443.6	656.9	22134.7
(ELECT.)	104.7	247.0	456.7	1031.8	960.5	559.3	189.1	108.9	219.3	276.0	4181.3
(DIST.)	25.5	67.5	212.5	165.2	460.6	178.8	67.5	116.3	94.0	139.1	1527.2
(RESID.)	204.6	110.0	155.2	223.6	221.5	544.7	24.5	33.9	75.7	85.4	1679.0
(LG)	48.8	33.9	55.8	108.0	381.5	206.4	119.2	40.5	30.1	10.1	1084.3
(COAL)	2.8	70.0	312.2	307.1	1178.8	95.3	122.9	212.1	45.3	83.1	2429.7
(MET COAL**)	.0	157.2	1038.6	241.7	998.4	20.5	8.9	91.7	60.1	.0	2587.2
(NAPHTHA)	17.9	50.1	13.7	9.5	101.1	241.9	1.8	.0	16.1	.0	452.2
(NG)	79.8	214.4	413.5	807.7	521.4	4831.4	264.3	165.8	832.9	62.4	8193.8
TRANSPORTATION	955.4	1809.4	2065.8	1929.3	4033.8	2891.6	1231.8	799.1	2830.6	832.3	21379.1
(ELECT.)	.1	7.9	3.6	.0	1.2	.0	.1	.0	.9	.0	13.9
(DIST.)	65.6	120.8	234.9	485.2	494.9	446.6	194.9	135.4	258.6	111.3	2548.7
(RESID.)	17.4	73.7	92.2	61.0	9.9	203.8	1.0	1.2	118.4	21.3	600.0
(LG)	.1	.9	.6	2.0	1.9	12.3	1.0	1.2	.9	.3	21.2
(GASOLINE)	777.6	1320.4	1532.1	2936.6	3155.5	1886.9	946.3	564.0	1825.4	547.1	15491.7
(JET FUEL)	82.5	249.8	161.9	410.8	271.0	254.1	72.9	89.2	549.2	150.0	2292.4
(NG)	12.2	36.0	40.5	33.5	97.4	88.0	15.5	9.1	77.1	1.8	411.3
TOTAL CONSUMPTION	2991.3	5482.8	6784.5	9733.4	14456.6	14620.3	3486.9	2472.0	5845.2	2382.1	68255.2

*LIQUID GAS IN THE RAW MATERIAL SECTOR INCLUDES LIQUID GAS FEEDSTOCK.

**MET COAL INCLUDES 70% PREMIUM COAL AND 30% BITUMINOUS LOW SULFUR COAL.

***DOES NOT INCLUDE REFINERY OIL PRODUCT CONSUMPTION OF 2840.78 AND REFINERY GAS CONSUMPTION OF 925.03
INCLUDES REFINERY COAL CONSUMPTION.

**** THIS REPORT DOES NOT INCLUDE UTILITY FUEL CONSUMPTION OR SYNTHETICS FUEL CONSUMPTION.

COAL FIGURES DIFFER SLIGHTLY FROM THOSE IN TABLE 2 DUE TO DISCREPANCIES IN THE BTU CONVERSION OF AGGREGATES.

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

GIL IMPORT PRICE: 15.32

RUN DATE: 1.14

SECTORAL/REGIONAL BTU CONSUMPTION GROWTH RATES FROM 1975****

SECTOR(FUEL)	DEMAND REGIONS										TOTAL
	NW-ENG.	NY/NJ	MID-ATL.	S.-ATL.	MIDWEST	S.-WEST	CENTRAL	N-CENTRAL	WEST	N.-WEST	
RESIDENTIAL	2.3	1.9	.8	2.7	1.9	3.2	2.1	4.3	1.4-	4.0	2.0
(ELECT.)	.1	3.2	2.5	6.2	2.0	3.6	3.1	8.5	.2	5.5	3.7
(DIST.)	3.0	3.1	1.7	2.5	6.1	4.3	5.6	.2-	4.1	5.2	3.8
(LG)	3.6	4.6	1.1	.1-	.6	.1	1.1	5.1	11.2-	7.3-	.8
(COAL)	23.1-	19.0-	18.0-	10.6-	13.7-	10.2-	15.0-	22.6-	10.7-	11.1-	14.8-
(NG)	1.7	.3-	.1	2.0-	.7	3.5	1.5	3.7	2.0-	1.4	.6
COMMERCIAL	2.7	1.3	.5	1.7	.1	.8	1.9-	.8	1.1-	1.3	.7
(ELECT.)	3.3	3.6	3.7	5.1	3.3	3.7	3.5	8.1	1.3	4.7	3.8
(DIST.)	4.2	2.4	2.7	4.6	4.1	3.0	5.4	4.6	4.1	2.7	3.6
(RESID.)	1.5	.9	2.2-	.5	1.8	6.7	1.6-	2.1-	9.2-	1.2-	.9
(LG)	.4	2.2	.2-	1.2-	1.0-	3.6-	1.8-	2.6	9.2-	6.7-	1.4-
(COAL)	22.5-	18.9-	18.0-	10.6-	13.7-		15.1-	22.4-		10.9-	14.8-
(ASPHALT)	.8-	.7	1.1-	.4	.3-	.0		2.1	.4	1.7	.1
(NG)	2.2	1.3-	1.3-	2.3-	2.8-	3.1-	6.5-	6.0-	4.2-	4.3-	3.0-
RAW MATERIAL*	7.0	8.0	5.9	6.2	6.1	7.8	5.5	7.0	6.2	5.1	7.1
(LG)	10.2	12.3	9.1	9.1	8.8	8.6	8.1	12.7	9.0	11.7	8.7
(OIL)	3.4	5.5	3.8	3.6	3.8	4.0	3.6	5.7	3.6	4.8	4.1
(NG)	6.1	5.6	5.5	6.3	5.2	5.8	4.3	4.4	4.7	3.8	5.5
INDUSTRIAL***	5.8	4.5	2.5	3.4	2.0	5.1	1.7	4.4	3.4	3.5	3.5
(ELECT.)	5.0	5.7	6.5	7.2	6.4	9.3	8.3	9.4	3.8	6.4	6.7
(DIST.)	5.8	8.7	14.1	8.3	17.1	9.8	12.6	12.9	7.5	14.6	12.4
(RESID.)	6.5	4.1	2.3	4.0	8.2	17.4	15.1	1.0-	5.2	8.8	7.8
(LG)	12.9	13.1	9.8	9.1	19.6	9.4	12.5	15.3	11.0	26.0	13.2
(COAL)	5.1-	.5	.6-	3.8	7.4	9.9	5.0	15.7	17.9	12.5	5.7
(NET COAL**)		5.2	1.9	.9	.2	2.4-	1.7	1.1	1.8		1.2
(NAPHTHA)	3.7	5.2	3.9	4.9	4.1	5.4	4.2		4.1		4.9
(NG)	3.5	2.5	.3-	.4-	10.3-	3.8	4.9-	3.7-	2.0	11.5-	.3
TRANSPORTATION	1.8	1.3	1.5	2.1	1.5	.5	.6	1.7	1.7	1.4	1.4
(ELECT.)	.0-	.5-	.5-		.8-		.0-		1.0-		.6-
(DIST.)	.6	.0-	.4	1.7	1.0	.3	1.2	.2	1.0	.2	.8
(RESID.)	.8-	1.4-	1.3-	2.2-	4.5-	2.8-	5.9-	5.7-	1.4-	.9	2.0-
(LG)	3.9-	8.1	2.0	.7	1.2	1.6	.5-	5.4	1.3	11.3	1.8
(GASOLINE)	1.7	1.3	1.7	2.3	1.5	1.6	1.4	2.0	1.9	1.9	1.7
(JET FUEL)	2.6	1.9	3.0	4.3	1.9	1.6	2.1	3.1	1.9	2.1	2.4
(NG)	35.2	26.6	.6	11.5-	6.2	8.5-	17.5-	3.7-	7.2	20.6-	3.7-
TOTAL CONSUMPTION	2.6	1.9	1.6	2.5	1.4	2.7	.8	2.9	1.0	2.2	1.9

*LIQUID GAS IN THE RAW MATERIAL SECTOR INCLUDES LIQUID GAS FEEDSTOCK.

**NET COAL INCLUDES 70% PREMIUM COAL AND 30% BITUMINOUS LOW SULPHUR COAL.

***DOES NOT INCLUDE REFINERY OIL AND GAS CONSUMPTION. INCLUDES REFINERY COAL CONSUMPTION.

**** THIS REPORT DOES NOT INCLUDE UTILITY FUEL CONSUMPTION OR SYNTHETICS FUEL CONSUMPTION.

1975 VALUES USED IN COMPUTING GROWTH RATES APPEAR IN TABLE 27.

1985 MID-RANGE/TRENDLONS SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32
RUN DATE: 1.14

REGIONAL CONSUMPTION SUMMARY IN TRILLIONS OF BTUS PER YEAR****

FUEL	DEMAND REGIONS										TOTAL
	NW-ENG.	NY/NJ	MID-ATL	S.-ATL	MIDWEST	S.-WEST	CENTRAL	N-CENTRAL	WEST	N.-WEST	
ELECTRICITY	299.3	705.0	955.6	2313.5	1852.5	1196.8	456.0	336.5	698.1	626.7	9439.1
GASOLINE	777.6	1320.4	1532.1	2936.6	3155.5	1886.9	946.3	564.0	1325.4	547.1	15491.7
DISTILLATE	885.8	1221.2	970.8	969.1	2196.3	801.5	424.1	339.8	410.4	415.3	8634.4
RESIDUAL	435.7	571.1	337.1	340.3	411.4	818.1	37.4	54.4	201.2	134.0	3340.5
JET FUEL	82.5	249.8	161.9	410.8	273.0	254.1	72.9	88.2	549.2	150.0	2292.4
ASPHALT	35.1	78.7	78.7	177.4	242.0	155.5	65.7	55.9	106.5	59.2	1054.6
NAPHTHA	17.9	50.1	13.7	9.5	101.1	241.9	1.8	.0	16.1	.0	452.2
OIL-RAW MATERIAL SECTOR	13.2	57.7	70.2	123.7	151.4	121.0	36.4	25.0	44.4	80.6	726.6
NATURAL GAS	347.3	881.7	1178.7	1518.7	3120.9	6370.6	985.2	583.7	1723.6	253.8	16964.1
LIQUID GAS	95.1	119.0	157.2	377.4	759.1	2658.1	328.2	120.5	164.7	28.5	4807.9
COAL	2.9	71.0	320.2	314.8	1195.0	95.3	123.9	212.5	45.4	84.0	2465.0
MET COAL**	.0	157.2	1009.6	241.7	998.4	20.5	8.9	91.7	60.1	.0	2587.2
TOTAL***	2991.3	5482.8	6784.8	9733.5	14456.6	14620.3	3486.9	2472.0	5845.2	2382.1	68255.6

**MET COAL INCLUDES 70% PREMIUM COAL AND 30% BITUMINOUS LOW SULFUR COAL.

***DOES NOT INCLUDE REFINERY OIL PRODUCT CONSUMPTION OF 2940.78 AND REFINERY GAS CONSUMPTION OF 925.03
INCLUDES REFINERY COAL CONSUMPTION.

**** THIS REPORT DOES NOT INCLUDE UTILITY FUEL CONSUMPTION OR SYNTHETICS FUEL CONSUMPTION.

COAL FIGURES DIFFER SLIGHTLY FROM THOSE IN TABLE 2 DUE TO DISCREPANCIES IN THE BTU CONVERSION OF AGGREGATES.

TABLE 16

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1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32

EUN DATE: 1.14

REFINERY CONSUMPTION SUMMARY IN THOUSANDS OF BARRELS PER CALENDAR DAY

MATERIAL	PAD1A	PAD1B	PAD2A	PAD2B	PAD3	PAD4	PAD5	TOTAL
DISTILLATE, ALL GRADES	5.3	1.2	5.6	2.6	13.9	1.1	11.2	41.1
RESIDUAL, ALL GRADES	74.8	17.1	86.7	40.7	20.9	23.1	112.4	375.6
OTHER REFINED PETROLEUM	26.7	6.1	41.9	19.7	83.5	7.9	36.5	222.3
STILL GAS	57.0	13.0	109.0	51.2	264.4	20.3	126.4	641.3
TOTAL FUEL CONSUMPTION	163.8	37.5	243.2	114.2	382.6	52.5	286.6	1280.4
TOTAL PRODUCTS SOLD	1766.0	413.2	2720.6	1509.9	7617.3	575.4	2661.3	17262.0
TOTAL PRODUCTION	1929.7	450.7	2963.8	1623.1	8000.0	627.9	2947.9	18542.4
TOTAL SUPPLY (CRUDE, GL, DU)	1835.5	428.6	2847.1	1597.1	7813.3	620.2	2843.0	17984.6
TOTAL REFINERY GAIN*	94.2	22.1	116.7	26.1	186.7	7.7	104.9	557.8
TOTAL NG CONSUMPTION (MMCF/CD)					2455.7			2455.7
TOTAL COAL CONSUMPTION**								

*VOLUME GAIN = PRODUCTION - SUPPLY

**COAL CONSUMPTION IS IN THOUSAND M.E. TONS (22.5 MILLION BTU TONS) PER CALENDAR DAY.

TABLE 17.

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1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32
RUN DATE: 1.14

REFINERY PRODUCTION SUMMARY IN THOUSANDS OF BARRELS PER CALENDAR DAY

MATERIAL	PAD1A	PAD1D	PAD2A	PAD2B	PAD3	PAD4	PAD5	DOMESTIC TOTAL	IMPORTS	SUPPLY TOTAL	RATIO TO TOTAL (DOMESTIC)
GASOLINE, ALL GRADES	851.4	189.9	1179.9	761.5	3199.9	294.4	1238.6	7915.5	172.0	8087.5	.43
JET FUEL/ JET A			107.7	62.4	353.9	43.4	343.8	911.1	216.0	1127.1	.05
LIQUID PET. GASSES	63.5	13.8	60.9	129.3	226.3	16.1	63.2	573.2	667.5	1240.7	.03
DISTILLATE, ALL GRADES	660.5	153.2	726.1	316.4	1711.4	167.4	435.6	4170.6	376.0	4546.6	.22
RESIDUAL, ALL GRADES	74.3	17.1	356.3	57.0	159.5	46.8	481.4	1193.0	1677.0	2870.0	.06
STILL GAS	57.0	13.0	109.0	51.2	264.4	20.3	126.4	641.3		641.3	.03
NAPHTHA	147.6	21.1	182.1	179.0	1581.7	7.4	88.2	2207.1	54.0	2261.1	.12
OTHER REFINED PETROLEUM	75.0	42.5	41.9	66.3	503.2	32.0	170.6	931.7	104.0	1035.7	.05
TOTAL	1929.8	450.7	2963.3	1623.2	8000.3	627.9	2947.9	18543.5	3266.5	21810.0	1.00
DOMESTIC CRUDE INPUT	269.9	112.3	2572.0	1325.4	1509.4	568.9	2626.5	8984.4		8984.4	
IMPORTED CRUDE INPUT	1545.0	312.9	245.4		5447.4		200.0		7750.7	7750.7	
TOTAL CRUDE INPUT	1814.9	425.2	2817.4	1325.4	6956.8	568.9	2826.5	8984.4	7750.7	16735.1	

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32

RUN DATE: 1.14

REFINERY PRODUCTION SUMMARY IN TRILLIONS OF BTUS PER YEAR

MATERIAL	PAD1A	PAD1B	PAD2A	PAD2B	PAD3	PAD4	PAD5	DOMESTIC TOTAL	IMPORTS	SUPPLY TOTAL	RATIO TO TOTAL (DOMESTIC)
GASOLINE, ALL GRADES	1630.9	363.7	2643.0	1458.7	6129.4	564.0	2372.5	15162.3	329.5	15491.7	.41
JET FUEL/ JET A			219.0	126.9	719.8	88.2	699.2	1853.1	439.3	2292.4	.05
LIQUID PET. GASSES	93.0	20.2	39.2	189.2	331.4	23.6	92.5	839.1	977.3	1816.4	.02
DISTILLATE, ALL GRADES	1404.3	325.7	1543.7	672.7	3638.7	355.8	926.2	8867.1	799.4	9666.5	.24
RESIDUAL, ALL GRADES	171.6	39.3	817.7	130.8	366.0	107.5	1104.3	2737.6	3848.3	6585.9	.07
STILL GAS	124.7	28.6	238.7	112.1	578.9	44.5	276.9	1404.5		1404.5	.04
NAPHTHA	282.7	40.5	148.8	342.9	3029.7	14.2	169.3	4227.8	103.4	4331.3	.11
OTHER REFINED PETROLEUM	164.2	93.2	41.8	145.3	1102.0	70.1	373.7	2040.3	227.8	2268.1	.05
TOTAL	3871.5	911.1	5992.0	1178.7	15895.9	1267.9	6014.8	37131.9	6725.0	43856.8	1.00
DOMESTIC CRUDE INPUT	573.3	239.6	5463.7	2815.5	3206.5	1208.5	5579.4	19085.5		19085.5	
IMPORTED CRUDE INPUT	3282.0	664.7	521.3		11571.8		424.9		16464.7	16464.7	
TOTAL CRUDE INPUT	3855.4	903.2	5985.0	2815.5	14778.3	1208.5	6004.3	19085.5	16464.7	35550.3	

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32
RUN DATE: 1.14

REGIONAL UTILITY CONSUMPTION SUMMARY IN TRILLIONS OF BTUS PER YEAR

FUEL	UTILITY REGIONS										TOTAL
	NW-ENG.	NY/NJ	MID-ATL	S.-ATL	MIDWEST	S.-WEST	CENTRAL	N-CENTRL	WEST	N.-WEST	
COAL,ALL HI-S	170.7	578.8	1966.4	3338.0	3292.2		600.5	145.4	92.4		10184.2
COAL,ALL LO-S	58.1	229.0	40.8	1041.2	156.0	98.5	163.5	109.5	199.2		2095.8
COAL,ALL SUB-BITUMINOUS					934.4	822.9	472.6	472.2		66.0	2668.0
COAL,ALL LIGNITE					122.7	674.9		158.3			955.9
NATURAL GAS,INTRASTATE		1.1	32.7	41.2	43.8	1678.1	56.7	3.3	295.6		2152.3
DISTILLATE,ALL GRADES	59.9	106.0	45.7	189.9	96.2	111.5	45.5	13.7	72.9	3.6	944.9
RESIDUAL,ALL GRADES	384.1	502.4	136.5	641.3	207.4				511.7		2383.4
URANIUM FUEL	263.0	576.2	945.9	1704.2	1448.3	466.2	197.9	20.7	389.6	209.7	6221.8
TOTAL	935.7	1991.5	3164.0	7155.7	6201.1	3852.1	1536.7	923.0	1561.4	274.3	27606.4

TABLE 20

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1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32

RUN DATE: 1.14

ELECTRICITY GENERATION SUMMARY

NATIONAL TOTAL

RESOURCE	CAPACITY IN GIGAWATTS										TOTAL GENERATION (MMKWH/YR)	
	-----BASE-----		-INTERMEDIATE-		--DAILY PEAK--		-SEASONAL PEAK-		-----TOTAL-----			
	EX	NEW	EX	NEW	EX	NEW	EX	NEW	EX	AV*	NEW	
NUCLEAR	46.07	53.26							46.07	46.07	53.26	565.62
RESIDUAL (OIL-STEAM)	10.19	1.45	15.48	.69	22.37	2.34			52.03	82.01	4.46	227.47
BITUMINOUS HI SULFUR	5.92	3.99	17.37	5.85					23.29		9.83	160.95
BITUMINOUS LO SULFUR	5.96	20.75	.21	11.26	1.43				7.60	30.89	32.00	206.91
ACCEPTBL SULFUR COAL	143.93		4.09						148.03	148.03		837.99
SUB-BITUMINOUS	21.84	19.28	3.39	1.48	.36				25.58	25.58	20.76	256.86
LIGNITE	6.96	8.73							6.96	6.96	8.73	89.36
DISTILLATE TURBINES							15.75	48.19	15.75	31.73	48.19	45.93
COMBINED CYCLE		2.71		4.49	3.36				3.36	5.06	7.20	52.26
GAS TURBINES							9.95		9.95	12.47		7.14
GAS STEAM	15.96	.84	11.02		15.24				43.02	66.17	.84	196.36
HYDRO	18.15	8.35	21.25	1.42	8.92	.07	13.17	.01	61.49	61.49	9.85	362.30
PUMPED STORAGE							10.35	10.71	10.35	10.35	10.71	16.06
GEOTHERMAL		2.30									2.30	16.12
SOLAR		.34									.34	1.20
TOTAL	274.98	122.01	77.62	25.18	51.67	2.41	49.22	58.91	453.49	526.82	208.51	3042.53

NOTE: SYSTEM CAPACITY FACTOR = .472
LOAD FACTOR = .600
NUCLEAR BUILD LIMITS ARE 53.42
RESERVE MARGIN=20%

THE FOLLOWING CONVERSIONS OF EXISTING PLANT CAPACITY (IN GIGAWATTS) OCCURRED:

OIL TO GAS INTERCHANGE 4.18
DISTILLATE TO GAS 5.81
GAS TO COAL CONVERSION .69
OIL TO COAL CONVERSION 15.94
GAS TO OIL INTERCHANGE 1.76

EX=EXISTING CAPACITY WHICH INCLUDES THAT PORTION OF 1/1/78 CAPACITY AFTER RETIREMENTS WHICH WAS OPERATED IN THE MODEL RUN.

*AV INDICATES AVAILABLE EXISTING CAPACITY AFTER SCHEDULED RETIREMENTS AND AFTER CONVERSIONS WHICH EITHER CONTRIBUTES TO RESERVE. BITUMINOUS HI SULFUR IS AN EXCEPTION IN THAT THE CAPACITY IS INCLUDED IN BITUMINOUS LO SULFUR

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32
RUN DATE: 1.14

ELECTRICITY GENERATION SUMMARY

NW-ENG.

RESOURCE	CAPACITY IN GIGAWATTS										TOTAL GENERATION (MMKWH/YR)	
	-----BASE-----		-INTERMEDIATE-		--DAILY PEAK--		-SEASONAL PEAK-		-----TOTAL-----			
	EX	NEW	EX	NEW	EX	NEW	EX	NEW	EX	AV*		NEW
NUCLEAR	4.20								4.20	4.20		23.91
RESIDUAL (OIL-STEAM)	1.67	.60	4.10		1.57				7.34	7.64	.60	37.37
BITUMINOUS LO SULFUR	1.01								1.01	1.01		5.74
ACCEPTBL SULFUR COAL	2.97								2.97	2.97		16.89
DISTILLATE TURBINES								.56		1.26	.56	.40
COMBINED CYCLE		.98			.17				.17	.17	.98	7.32
HYDRO			.69				.61	.01	1.30	1.30	.01	4.40
PUMPED STORAGE							1.61		1.61	1.61		1.22
SOLAR		.07									.07	.25
TOTAL	9.84	1.65	4.79		1.74		2.22	.57	18.59	20.15	2.22	97.51

NOTE: SYSTEM CAPACITY FACTOR = .492
LOAD FACTOR = .590
NUCLEAR BUILD LIMITS ARE
RESERVE MARGIN=20%

THE FOLLOWING CONVERSIONS OF EXISTING PLANT CAPACITY (IN GIGAWATTS) OCCURRED:
OIL TO COAL CONVERSION 2.49

EX=EXISTING CAPACITY WHICH INCLUDES THAT PORTION OF 1/1/78 CAPACITY AFTER RETIREMENTS WHICH WAS OPERATED
IN THE MODEL RUN.

*AV INDICATES AVAILABLE EXISTING CAPACITY AFTER SCHEDULED RETIREMENTS AND AFTER CONVERSIONS WHICH EITHER OPERATES OR
CONTRIBUTES TO RESERVE. BITUMINOUS HI SULFUR IS AN EXCEPTION IN THAT THE CAPACITY IS INCLUDED IN BITUMINOUS LO SULFUR

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32
RUN DATE: 1.14

ELECTRICITY GENERATION SUMMARY

NY/NJ

RESOURCE	CAPACITY IN GIGAWATTS										TOTAL GENERATION (MMKWH/YR)	
	-----BASE-----		-INTERMEDIATE-		--DAILY PEAK--		-SEASONAL PEAK-		-----TOTAL-----			
	EX	NEW	EX	NEW	EX	NEW	EX	NEW	EX	AV*		NEW
NUCLEAR	6.13	3.07							6.13	6.13	3.07	52.38
RESIDUAL (OIL-STEAM)		.85	7.26		2.92				10.18	14.02	.85	47.07
BITUMINOUS LO SULFUR	1.58	2.40							1.58	1.58	2.40	22.64
ACCEPTBL SULFUR COAL	9.68								9.68	9.68		55.14
DISTILLATE TURBINES							.30	3.52	.80	8.33	3.52	3.10
COMBINED CYCLE		.92			.90				.90	.90	.92	8.87
GAS TURBINES							.10		.10	.13		.07
GAS STEAM										.05		
HYDRO	3.88		1.31						5.19	5.19		36.34
PUMPED STORAGE							1.53	1.00	1.63	1.63	1.00	2.00
SOLAR		.07									.07	.25
TOTAL	21.27	7.31	8.57		3.84		2.52	4.52	36.19	47.63	11.83	227.86

NOTE: SYSTEM CAPACITY FACTOR = .525
LOAD FACTOR = .630
NUCLEAR BUILD LIMITS ARE 3.07
RESERVE MARGIN=20%

THE FOLLOWING CONVERSIONS OF EXISTING PLANT CAPACITY (IN GIGAWATTS) OCCURRED:
OIL TO COAL CONVERSION 6.82

EX=EXISTING CAPACITY WHICH INCLUDES THAT PORTION OF 1/1/78 CAPACITY AFTER RETIREMENTS WHICH WAS OPERATED IN THE MODEL RUN.

*AV INDICATES AVAILABLE EXISTING CAPACITY AFTER SCHEDULED RETIREMENTS AND AFTER CONVERSIONS WHICH EITHER OPERATES OR CONTRIBUTES TO RESERVE. BITUMINOUS HI SULFUR IS AN EXCEPTION IN THAT THE CAPACITY IS INCLUDED IN BITUMINOUS LO SULFUR

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32
RUN DATE: 1.14

ELECTRICITY GENERATION SUMMARY

MID-ATL

RESOURCE	CAPACITY IN GIGAWATTS										TOTAL GENERATION (MMMKWH/YR)
	-----BASE-----		-INTERMEDIATE-		---DAILY PEAK---		-SEASONAL PEAK-		-----TOTAL-----		
	EX	NEW	EX	NEW	EX	NEW	EX	NEW	EX	AV*	NEW
NUCLEAR	6.11	8.99							6.11	6.11	8.99
RESIDUAL (OIL-STEAM)					5.08				5.08	9.05	
BITUMINOUS HI SULFUR			3.23	2.08					3.23		2.08
BITUMINOUS LO SULFUR				.88						3.23	.88
ACCEPTBL SULFUR COAL	26.61		4.09						30.70	30.70	
DISTILLATE TURBINES							4.04	.40	4.04	4.04	.40
COMBINED CYCLE					.20				.20	.20	
GAS TURBINES							.80		.80	.80	
GAS STEAM			.44		.00				.44	.44	
HYDRO			.34				.77		1.10	1.10	
PUMPED STORAGE							1.43	3.20	1.43	1.43	3.20
TOTAL	32.72	8.99	8.10	2.95	5.28		7.04	3.61	53.14	57.11	15.55

NOTE: SYSTEM CAPACITY FACTOR = .465
LOAD FACTOR = .600
NUCLEAR BUILD LIMITS ARE 8.99
RESERVE MARGIN=20%

THE FOLLOWING CONVERSIONS OF EXISTING PLANT CAPACITY (IN GIGAWATTS) OCCURRED:

OIL TO GAS INTERCHANGE .44
DISTILLATE TO GAS .39
OIL TO COAL CONVERSION 4.06

EX=EXISTING CAPACITY WHICH INCLUDES THAT PORTION OF 1/1/78 CAPACITY AFTER RETIREMENTS WHICH WAS OPERATED IN THE MODEL RUN.

*AV INDICATES AVAILABLE EXISTING CAPACITY AFTER SCHEDULED RETIREMENTS AND AFTER CONVERSIONS WHICH EITHER OPERATES OR CONTRIBUTES TO RESERVE. BITUMINOUS HI SULFUR IS AN EXCEPTION IN THAT THE CAPACITY IS INCLUDED IN BITUMINOUS LO SULFUR

TABLE 20

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1985 MID-RANGE/TREND LONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32
RUN DATE: 1.14

ELECTRICITY GENERATION SUMMARY

S.-ATL

RESOURCE	CAPACITY IN GIGAWATTS										TOTAL GENERATION (MMKWH/YR)	
	-----BASE-----		-INTERMEDIATE-		--DAILY PEAK--		-SEASONAL PEAK-		-----TOTAL-----			
	EX	NEW	EX	NEW	EX	NEW	EX	NEW	EX	AV*		NEW
NUCLEAR	12.84	14.37							12.84	12.84	14.37	154.93
RESIDUAL (OIL-STEAM)			8.12	.69	7.85				15.97	15.97	.69	61.14
BITUMINOUS HI SULFUR	5.92	2.90							5.92		2.90	50.23
BITUMINOUS LO SULFUR		14.79		4.51						5.92	19.30	104.53
ACCEPTBL SULFUR COAL	50.18								50.18	50.18		285.75
DISTILLATE TURBINES							3.54	18.96	3.58	7.84	18.96	16.19
COMBINED CYCLE				4.49	.61				.61	.61	4.49	25.89
GAS TURBINES							.65		.65	2.40		.46
GAS STEAM					1.20				1.20	1.20		2.87
HYDRO			4.51	.82	2.99		2.94		10.44	10.44	.82	41.16
PUMPED STORAGE							.92	2.51	.92	.92	2.51	2.62
TOTAL	68.94	32.07	12.63	10.50	12.66		8.08	21.48	102.31	108.34	64.05	745.77

NOTE: SYSTEM CAPACITY FACTOR = .500
LOAD FACTOR = .600
NUCLEAR BUILD LIMITS ARE 14.37
RESERVE MARGIN=20%

THE FOLLOWING CONVERSIONS OF EXISTING PLANT CAPACITY (IN GIGAWATTS) OCCURRED:
OIL TO COAL CONVERSION 1.79
GAS TO OIL INTERCHANGE 1.76

EX=EXISTING CAPACITY WHICH INCLUDES THAT PORTION OF 1/1/78 CAPACITY AFTER RETIREMENTS WHICH WAS OPERATED IN THE MODEL RUN.

*AV INDICATES AVAILABLE EXISTING CAPACITY AFTER SCHEDULED RETIREMENTS AND AFTER CONVERSIONS WHICH EITHER OPERATES OR CONTRIBUTES TO RESERVE. BITUMINOUS HI SULFUR IS AN EXCEPTION IN THAT THE CAPACITY IS INCLUDED IN BITUMINOUS LO SULFUR

IV-52

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32
RUN DATE: 1.14

ELECTRICITY GENERATION SUMMARY

MIDWEST

RESOURCE	CAPACITY IN GIGAWATTS								TOTAL			TOTAL GENERATION (MMKWH/YR)
	-----BASE-----		-INTERMEDIATE-		--DAILY PEAK--		-SEASONAL PEAK-		-----TOTAL-----			
	EX	NEW	EX	NEW	EX	NEW	EX	NEW	EX	AV*	NEW	
NUCLEAR	11.39	11.73							11.39	11.39	11.73	131.67
RESIDUAL (OIL-STEAM)					4.95	2.34			4.95	9.37	2.34	17.49
BITUMINOUS HI SULFUR		1.08	14.14	3.77					14.14		4.85	86.82
BITUMINOUS LO SULFUR				3.35						14.14	3.35	15.08
ACCEPTBL SULFUR COAL	40.59								40.59	40.59		231.12
SUB-BITUMINOUS	11.84		1.43	1.48					13.26	13.26	1.48	80.48
LIGNITE	.14	1.89							.14	.14	1.89	11.55
DISTILLATE TURBINES							3.87	6.40	3.87	3.87	6.40	7.37
COMBINED CYCLE					.22				.22	.22		.58
GAS TURBINES							3.71		3.71	3.71		2.66
GAS STEAM					.10				.10	1.03		.24
HYDRO					1.15	.97	.29		1.44	1.44	.07	3.68
PUMPED STORAGE							1.98		1.98	1.98		1.51
SOLAR		.07									.07	.25
TOTAL	63.96	14.77	15.57	8.60	6.41	2.41	9.84	6.40	95.78	101.13	32.18	590.49

NOTE: SYSTEM CAPACITY FACTOR = .512
LOAD FACTOR = .630
NUCLEAR BUILD LIMITS ARE 11.73
RESERVE MARGIN=20%

THE FOLLOWING CONVERSIONS OF EXISTING PLANT CAPACITY (IN GIGAWATTS) OCCURRED:

DISTILLATE TO GAS 2.61
OIL TO COAL CONVERSION .66

EX=EXISTING CAPACITY WHICH INCLUDES THAT PORTION OF 1/1/79 CAPACITY AFTER RETIREMENTS WHICH WAS OPERATED IN THE MODEL RUN.

*AV INDICATES AVAILABLE EXISTING CAPACITY AFTER SCHEDULED RETIREMENTS AND AFTER CONVERSIONS WHICH EITHER OPERATES OR CONTRIBUTES TO RESERVE. BITUMINOUS HI SULFUR IS AN EXCEPTION IN THAT THE CAPACITY IS INCLUDED IN BITUMINOUS LO SULFUR

TABLE 20

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1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32
RUN DATE: 1.14

ELECTRICITY GENERATION SUMMARY

S.-WEST

RESOURCE	CAPACITY IN GIGAWATTS										TOTAL GENERATION (MMMKWH/YR)	
	-----BASE-----		-INTERMEDIATE-		--DAILY PEAK--		-SEASONAL PEAK-		-----TOTAL-----			
	EX	NEW	EX	NEW	EX	NEW	EX	NEW	EX	AV*	NEW	
NUCLEAR	.85	6.59							.85	.85	6.59	42.39
RESIDUAL (OIL-STREAM)										3.62		
BITUMINOUS LO SULFUR		1.75									1.75	9.98
SUB-BITUMINOUS	3.29	10.89							3.29	3.29	10.89	80.71
LIGNITE	4.78	6.51							4.78	4.78	6.51	64.29
DISTILLATE TURBINES							.43	13.91	.43	.43	13.91	10.30
COMBINED CYCLE										1.10		
GAS TURBINES							1.88		1.88	1.88		1.15
GAS STEAM	12.56	.55	11.38		10.59				14.52	54.23	.55	160.41
HYDRO	1.17	.03					.83		2.00	2.00	.03	9.59
PUMPED STORAGE							.30		.30	.30		.23
SOLAR		.09									.09	.32
TOTAL	22.65	26.41	11.38		10.59		3.45	13.91	48.06	72.48	40.32	379.56

NOTE: SYSTEM CAPACITY FACTOR = .357
LOAD FACTOR = .540
NUCLEAR BUILD LIMITS ARE 6.59
RESERVE MARGIN=20%

THE FOLLOWING CONVERSIONS OF EXISTING PLANT CAPACITY (IN GIGAWATTS) OCCURRED:
DISTILLATE TO GAS .11

EX=EXISTING CAPACITY WHICH INCLUDES THAT PORTION OF 1/1/78 CAPACITY AFTER RETIREMENTS WHICH WAS OPERATED IN THE MODEL RUN.

*AV INDICATES AVAILABLE EXISTING CAPACITY AFTER SCHEDULED RETIREMENTS AND AFTER CONVERSIONS WHICH EITHER OPERATES OR CONTRIBUTES TO RESERVE. BITUMINOUS HI SULFUR IS AN EXCEPTION IN THAT THE CAPACITY IS INCLUDED IN BITUMINOUS LO SULFUR

IV-54

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32
RUN DATE: 1.14

ELECTRICITY GENERATION SUMMARY

CENTRAL

RESOURCE	CAPACITY IN GIGAWATTS										TOTAL GENERATION (MMMKWH/YR)
	-----BASE-----		-INTERMEDIATE-		--DAILY PEAK--		-SEASONAL PEAK-		-----TOTAL-----		
	EX	NEW	EX	NEW	EX	NEW	EX	NEW	EX	AV*	NEW
NUCLEAR	2.01	1.15							2.01	2.01	1.15
RESIDUAL (OIL-STEAM)										1.08	
BITUMINOUS LO SULFUR			.21	2.52	1.43				1.64	1.64	2.52
ACCEPTBL SULFUR COAL	10.05								10.05	10.05	
SUB-BITUMINOUS	1.23	5.16	1.96						3.19	3.19	5.16
DISTILLATE TURBINES							3.04	1.99	3.04	3.31	1.99
COMBINED CYCLE					.07				.07	.07	
GAS TURBINES										.69	
GAS STEAM					2.00				2.00	4.18	
HYDRO			.27	.03	.36				.64	.64	.03
PUMPED STORAGE							.41	1.19	.41	.41	1.19
TOTAL	13.29	6.31	2.45	2.55	3.86		3.45	3.19	23.04	27.27	12.05

NOTE: SYSTEM CAPACITY FACTOR = .458
LOAD FACTOR = .550
NUCLEAR BUILD LIMITS ARE 1.15
RESERVE MARGIN=20%

THE FOLLOWING CONVERSIONS OF EXISTING PLANT CAPACITY (IN GIGAWATTS) OCCURRED:

GAS TO COAL CONVERSION .68
OIL TO COAL CONVERSION .05

EX=EXISTING CAPACITY WHICH INCLUDES THAT PORTION OF 1/1/78 CAPACITY AFTER RETIREMENTS WHICH WAS OPERATED IN THE MODEL RUN.

*AV INDICATES AVAILABLE EXISTING CAPACITY AFTER SCHEDULED RETIREMENTS AND AFTER CONVERSIONS WHICH EITHER OPERATES OR CONTRIBUTES TO RESERVE. BITUMINOUS HI SULFUR IS AN EXCEPTION IN THAT THE CAPACITY IS INCLUDED IN BITUMINOUS LO SULFUR

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32
RUN DATE: 1.14

ELECTRICITY GENERATION SUMMARY

N-CNTRL

RESOURCE	CAPACITY IN GIGAWATTS										TOTAL GENERATION (MMKWH/YR)
	-----BASE-----		-----INTERMEDIATE-----		---DAILY PEAK---	---SEASONAL PEAK---		-----TOTAL-----			
	EX	NEW	EX	NEW	EX	NEW	EX	AV*	NEW		
NUCLEAR		.33								.33	1.88
RESIDUAL (OIL-STEAM)								.33			
BITUMINOUS LO SULFUR	1.17	.60					1.17	1.17	.60		10.07
ACCEPTED SULFUR COAL	2.28						2.28	2.28			12.99
SUB-BITUMINOUS	4.55	3.23					4.55	4.55	3.23		44.32
LIGNITE	2.04	.34					2.04	2.04	.34		13.53
DISTILLATE TURBINES						1.77		.62	1.77		1.27
GAS TURBINES						.36		.36			.26
GAS STEAM								.25			
HYDRO	.70		2.59	.58	1.02		.98	5.39	.58		27.50
PUMPED STORAGE							.33	.33	.20		.41
SOLAR		.02							.02		.07
TOTAL	10.73	4.52	2.69	.58	1.02		1.67	16.12	7.07		112.23

NOTE: SYSTEM CAPACITY FACTOR = .500
LOAD FACTOR = .600
NUCLEAR BUILD LIMITS ARE .33
RESERVE MARGIN=20%

THE FOLLOWING CONVERSIONS OF EXISTING PLANT CAPACITY (IN GIGAWATTS) OCCURRED:

DISTILLATE TO GAS .31
OIL TO COAL CONVERSION .07

EX=EXISTING CAPACITY WHICH INCLUDES THAT PORTION OF 1/1/79 CAPACITY AFTER RETIREMENTS WHICH WAS OPERATED IN THE MODEL RUN.

ALL COAL IS SCRUBBED IN REGIONS 8, 9, AND 10.

*AV INDICATES AVAILABLE EXISTING CAPACITY AFTER SCHEDULED RETIREMENTS AND AFTER CONVERSIONS WHICH EITHER OPERATES OR CONTRIBUTES TO RESERVE. BITUMINOUS HI SULFUR IS AN EXCEPTION IN THAT THE CAPACITY IS INCLUDED IN BITUMINOUS LO SULFUR

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32
RUN DATE: 1.14

ELECTRICITY GENERATION SUMMARY

WEST

RESOURCE	CAPACITY IN GIGAWATTS										TOTAL GENERATION (MMKWH/YR)	
	-----BASE-----		-INTERMEDIATE-		--DAILY PEAK--		-SEASONAL PEAK-		-----TOTAL-----			
	EX	NEW	EX	NEW	EX	NEW	EX	NEW	EX	AV*		NEW
NUCLEAR	1.41	4.81							1.41	1.41	4.81	35.42
RESIDUAL (OIL-STEAM)	8.52								8.52	20.71		52.22
BITUMINOUS LO SULFUR	2.21	1.20							2.21	2.21	1.20	19.39
ACCEPTRL SULFUR COAL	1.58								1.58	1.58		8.97
DISTILLATE TURBINES								.20		1.08	.20	.14
COMBINED CYCLE		.81			1.19				1.19	1.19	.81	9.86
GAS TURBINES							2.46		2.46	2.46		1.76
GAS STEAM	3.40	.29			1.36				4.76	4.76	.29	25.92
HYDRO	1.03	.97	6.84		1.13		1.13		10.13	10.13	.97	57.98
PUMPED STORAGE							1.65	2.40	1.65	1.65	2.40	3.09
GEOTHERMAL		2.30									2.30	16.12
SOLAR		.02									.02	.07
TOTAL	18.14	10.40	6.84		3.68		5.24	2.60	33.89	47.16	13.01	229.95

NOTE: SYSTEM CAPACITY FACTOR = .461
LOAD FACTOR = .630
NUCLEAR BUILD LIMITS ARE 4.81
RESERVE MARGIN=20%

THE FOLLOWING CONVERSIONS OF EXISTING PLANT CAPACITY (IN GIGAWATTS) OCCURRED:

OIL TO GAS INTERCHANGE 3.74
DISTILLATE TO GAS 2.40

EX=EXISTING CAPACITY WHICH INCLUDES THAT PORTION OF 1/1/78 CAPACITY AFTER RETIREMENTS WHICH WAS OPERATED IN THE MODEL RUN.

ALL COAL IS SCRUBBED IN REGIONS 8, 9, AND 10.

*AV INDICATES AVAILABLE EXISTING CAPACITY AFTER SCHEDULED RETIREMENTS AND AFTER CONVERSIONS WHICH EITHER OPERATES OR CONTRIBUTES TO RESERVE. BITUMINOUS HI SULFUR IS AN EXCEPTION IN THAT THE CAPACITY IS INCLUDED IN BITUMINOUS LO SULFUR

1995 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32

RUN DATE: 1.14

ELECTRICITY GENERATION SUMMARY

N.-WEST

RESOURCE	CAPACITY IN GIGAWATTS										TOTAL GENERATION (MMKWH/YR)
	BASE EX	NEW	INTERMEDIATE EX	NEW	DAILY PEAK EX	NEW	SEASONAL PEAK EX	NEW	TOTAL EX	AV* NEW	
NUCLEAR	1.13	2.22							1.13	1.13	19.06
RESIDUAL (OIL-STEAM)										.20	
SUB-BITUMINOUS	.93				.36				1.29	1.29	6.13
DISTILLATE TURBINES							.47			.96	.34
COMBINED CYCLE										.61	
GAS TURBINES										.05	
GAS STEAM										.03	
HYDRO	11.38	7.35	4.60		2.27		5.61		23.86	23.86	176.41
PUMPED STORAGE							.10	.20	.10	.10	.23
TOTAL	13.45	9.56	4.50		2.63		5.71	.67	26.38	28.24	202.17

NOTE: SYSTEM CAPACITY FACTOR = .517
LOAD FACTOR = .620
NUCLEAR BUILD LIMITS ARE 2.37
RESERVE MARGIN=20%

THE FOLLOWING CONVERSIONS OF EXISTING PLANT CAPACITY (IN GIGAWATTS) OCCURRED:

EX=EXISTING CAPACITY WHICH INCLUDES THAT PORTION OF 1/1/78 CAPACITY AFTER RETIREMENTS WHICH WAS OPERATED IN THE MODEL RUN.

ALL COAL IS SCRUBBED IN REGIONS 8, 9, AND 10.

*AV INDICATES AVAILABLE EXISTING CAPACITY AFTER SCHEDULED RETIREMENTS AND AFTER CONVERSIONS WHICH EITHER OPERATES OR CONTRIBUTES TO RESERVE. BITUMINOUS HI SULPHUR IS AN EXCEPTION IN THAT THE CAPACITY IS INCLUDED IN BITUMINOUS LO SULPHUR

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32
RUN DATE: 1.14

DEMAND REGION RETAIL PRICE SUMMARY IN 1978 \$/ STANDARD PHYSICAL UNIT

SECTOR (FUEL)	DEMAND REGIONS										TOTAL
	NW-ENG.	NY/NJ	MID-ATL	S.-ATL	MIDWEST	S.-WEST	CENTRAL	N-CENTRAL	WEST	N.-WEST	
RESIDENTIAL											
(ELECT.)	45.42	54.27	47.39	37.69	40.96	40.50	43.32	32.92	43.21	19.91	39.97
(DIST.)	22.64	23.11	24.21	24.63	22.08	22.73	21.48	22.54	22.40	22.40	22.86
(LG)	15.62	16.08	17.33	17.33	15.99	15.73	15.69	16.32	15.80	15.80	16.21
(COAL)	46.56	43.89	41.32	44.29	39.48	36.59	37.79	30.84	39.39	39.68	40.93
(NG)	4.68	4.27	3.69	3.25	3.21	2.47	2.17	2.33	3.46	3.76	3.19
COMMERCIAL											
(ELECT.)	45.10	60.37	45.40	38.14	40.87	38.42	42.41	30.01	39.97	19.82	40.98
(DIST.)	21.21	21.61	21.90	21.92	20.99	21.22	20.45	21.18	20.77	20.77	21.30
(RESID.)	18.01	18.61	20.55	18.22	19.64	18.66	19.49	18.95	18.35	17.91	18.81
(LG)	13.10	13.10	13.10	13.10	13.99	13.10	13.88	13.93	13.10	13.10	13.54
(COAL)	46.56	43.89	41.32	44.29	39.48	36.59	37.79	30.84	39.39	39.68	40.93
(ASPHALT)	19.08	19.08	19.08	19.00	19.19	18.75	18.88	19.13	18.42	18.42	18.93
(NG)	3.98	3.64	3.21	2.72	2.86	2.54	3.57	3.23	2.92	3.15	3.04
RAW MATERIAL*											
(LG)	18.96	18.96	18.94	18.81	18.82	18.56	18.48	18.67	18.08	18.08	18.59
(OIL)	19.08	19.08	19.08	19.00	19.19	18.75	18.88	19.13	18.42	18.42	18.91
(NG)	3.39	2.92	2.77	2.26	2.52	2.23	3.20	2.73	2.52	2.44	2.41
INDUSTRIAL***											
(ELECT.)	37.42	32.30	37.44	32.07	31.45	32.64	36.00	24.91	33.99	13.16	31.70
(DIST.)	21.20	21.51	22.46	22.40	20.97	21.12	20.40	21.41	20.77	20.77	21.35
(RESID.)	18.37	19.26	20.04	18.01	19.49	18.60	19.30	18.61	13.33	18.68	18.79
(LG)	14.67	15.01	15.82	15.89	15.31	14.85	15.07	15.46	14.81	14.81	15.20
(COAL)	46.56	43.89	41.32	44.29	39.48	36.59	37.79	30.84	39.39	39.68	39.51
(NET COAL**)	58.90	56.06	53.30	56.66	54.43	57.25	52.73	59.63	69.80	73.02	54.85
(NAPHTHA)	18.96	18.96	18.94	18.81	18.82	18.56	18.48	18.67	18.08	18.08	18.68
(NG)	3.39	2.92	2.77	2.31	2.52	2.23	3.20	2.73	2.52	2.44	2.39
TRANSPORTATION											
(ELECT.)	42.43	48.63	42.13	35.26	36.19	36.29	40.05	29.30	38.80	16.91	45.10
(DIST.)	27.88	28.19	29.14	29.08	27.65	27.80	27.08	28.09	27.45	27.45	28.07
(RESID.)	19.37	19.26	20.04	18.01	19.49	18.60	19.30	18.61	18.33	18.68	18.80
(LG)	13.10	13.10	13.10	13.10	13.99	13.10	13.88	13.93	13.10	13.10	13.27
(GASOLINE)	31.76	32.92	31.63	31.19	31.30	30.07	30.59	30.83	31.54	31.61	31.30
(JET FUEL)	22.99	23.57	25.04	25.29	22.55	23.19	21.91	23.18	22.85	22.85	23.51

*LIQUID GAS IN THE RAW MATERIAL SECTOR INCLUDES LIQUID GAS FEEDSTOCK.

**NET COAL INCLUDES 70% PREMIUM COAL AND 30% BITUMINOUS LOW SULFUR COAL.

***INDUSTRIAL SECTOR HERE DOES NOT INCLUDE REFINERIES.

1995 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

GIL IMPORT PRICE: 15.32
FUN DATE: 1.14

DEMAND REGION AVERAGE RETAIL PRICE SUMMARY IN 1978 \$/MILLION BTUS

SECTOR (FUEL)	DEMAND REGIONS										TOTAL
	NW-ENG.	NY/NJ	MID-ATL	S.-ATL	MIDWEST	S.-WEST	CENTRAL	N-CENTRAL	WEST	N.-WEST	
RESIDENTIAL	5.11	5.66	5.14	7.87	4.56	5.20	4.41	4.10	5.59	4.02	5.39
(ELECT.)	13.31	15.91	13.89	11.05	12.00	11.87	12.70	9.65	12.66	5.83	11.71
(DIST.)	3.89	3.97	4.16	4.21	3.79	3.90	3.69	3.87	3.85	3.05	3.93
(LG)	3.90	4.01	4.32	4.32	3.99	3.92	3.91	4.07	3.94	3.94	4.04
(COAL)	2.07	1.95	1.84	1.97	1.75	1.63	1.68	1.37	1.75	1.76	1.82
(NG)	4.53	4.13	3.58	3.15	3.11	2.39	2.11	2.26	3.35	3.65	3.09
COMMERCIAL	4.78	6.45	6.45	6.65	5.15	6.02	6.05	5.26	6.85	4.22	5.85
(ELECT.)	13.22	17.69	13.31	11.18	11.98	11.26	12.43	8.80	11.71	5.81	12.01
(DIST.)	3.64	3.71	3.76	3.76	3.60	3.64	3.51	3.64	3.56	3.56	3.66
(RESID.)	2.87	2.96	3.27	2.90	3.12	2.97	3.10	3.01	2.92	2.85	2.99
(LG)	3.27	3.27	3.27	3.27	3.49	3.27	3.46	3.47	3.27	3.27	3.38
(COAL)	2.07	1.95	1.84	1.97	1.75	1.63	1.68	1.37	1.75	1.76	1.82
(ASPHALT)	3.18	3.18	3.18	3.17	3.20	3.13	3.15	3.19	3.07	3.07	3.15
(NG)	3.86	3.53	3.11	2.63	2.78	2.46	3.46	3.13	2.83	3.05	2.94
RAW MATERIAL*	3.43	3.35	3.18	2.92	3.25	3.27	3.28	3.20	3.08	2.92	3.22
(LG)	3.61	3.61	3.61	3.58	3.59	3.54	3.52	3.56	3.44	3.44	3.54
(OIL)	3.18	3.18	3.18	3.17	3.20	3.13	3.15	3.19	3.07	3.07	3.15
(NG)	3.29	2.83	2.69	2.19	2.44	2.16	3.10	2.65	2.44	2.37	2.33
INDUSTRIAL***	4.86	4.54	3.92	4.98	3.88	2.98	4.79	3.16	3.95	3.28	3.79
(ELECT.)	10.97	9.47	10.97	9.40	9.37	9.57	10.55	7.30	9.96	3.86	9.29
(DIST.)	3.64	3.64	3.86	3.85	3.60	3.53	3.50	3.69	3.56	3.56	3.67
(RESID.)	2.92	3.06	3.19	2.87	3.10	2.96	3.07	2.96	2.92	2.97	2.99
(LG)	3.66	3.74	3.95	3.96	3.82	3.70	3.76	3.85	3.69	3.69	3.79
(COAL)	2.07	1.95	1.84	1.97	1.75	1.63	1.68	1.37	1.75	1.76	1.76
(NET COAL**)	2.18	2.08	1.97	2.10	2.02	2.12	1.95	2.21	2.59	2.70	2.03
(NAPHTHA)	3.61	3.61	3.61	3.58	3.59	3.54	3.52	3.56	3.44	3.44	3.56
(NG)	3.29	2.83	2.69	2.24	2.44	2.16	3.10	2.65	2.44	2.37	2.31
TRANSPORTATION	5.74	5.79	5.67	5.63	5.67	5.22	5.52	5.49	5.38	5.42	5.55
(ELECT.)	12.44	14.25	12.35	10.33	10.61	10.64	11.74	8.59	11.37	4.96	13.22
(DIST.)	4.79	4.84	5.00	4.99	4.75	4.77	4.65	4.82	4.71	4.71	4.82
(RESID.)	2.92	3.06	3.19	2.87	3.10	2.96	3.07	2.96	2.92	2.97	2.99
(LG)	3.27	3.27	3.27	3.27	3.49	3.27	3.46	3.47	3.27	3.27	3.31
(GASOLINE)	6.05	6.27	6.03	5.94	5.96	5.73	5.83	5.87	5.01	6.02	5.96
(JET FUEL)	4.12	4.23	4.49	4.54	4.05	4.16	4.93	4.16	4.10	4.10	4.22
AVERAGE PRICE	5.16	5.62	5.08	5.76	4.67	3.83	5.01	4.40	5.11	4.42	4.82

*LIQUID GAS IN THE RAW MATERIAL SECTOR INCLUDES LIQUID GAS FEEDSTOCK.

**NET COAL INCLUDES 70% PREMIUM COAL AND 30% BITUMINOUS LOW SULPHUR COAL.

***INDUSTRIAL SECTOR HERE DOES NOT INCLUDE REFINERIES.

TABLE 23

PAGE 23

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32

RUN DATE: 1.14

DEMAND REGION RETAIL BTU PRICE GROWTH RATES FROM 1975

FUEL (SECTOR)	DEMAND REGIONS										
	NW-ENG.	NY/NJ	MID-ATL	S.-ATL	MIDWEST	S.-WEST	CENTRAL	N-CENTRAL	WEST	N.-WEST	U. S.
<hr/>											
ELECTRICITY											
RESIDENTIAL SECTOR	1.55-	.95-	.57	1.36	.49	2.45	1.93	.01-	.87	1.54	.56
COMMERCIAL SECTOR	1.36-	.06	.88	1.00	.69	3.30	2.49	.79	1.82	1.35	.94
INDUSTRIAL SECTOR*	.11-	.06-	2.48	4.21	3.08	6.71	4.68	5.23	2.94	7.15	3.43
<hr/>											
NATURAL GAS											
RESIDENTIAL SECTOR	2.32	3.45	4.63	6.01	5.59	4.18	3.24	5.08	6.40	4.01	4.67
COMMERCIAL SECTOR	2.58	3.96	4.81	6.60	6.21	8.65	11.71	10.49	5.74	5.14	6.67
INDUSTRIAL SECTOR*	2.64	4.76	7.76	8.65	6.95	4.34	14.67	14.11	7.66	6.32	6.16
<hr/>											
DISTILLATE											
RESIDENTIAL SECTOR	1.62	1.97	2.78	3.16	2.27	2.85	1.91	1.50	1.44	1.55	2.12
COMMERCIAL SECTOR	2.23	2.33	2.80	2.98	2.71	2.65	2.53	2.05	1.93	1.93	2.48
INDUSTRIAL SECTOR*	2.22	2.28	3.06	3.21	2.70	2.60	2.51	2.16	1.93	1.93	2.54
<hr/>											
RESIDUAL											
COMMERCIAL SECTOR	.96	2.16	3.02	2.67	2.51	4.45	3.36	5.07	4.74	4.48	2.36
INDUSTRIAL SECTOR*	1.16	2.51	2.76	2.55	2.43	4.42	3.26	4.88	4.72	4.92	2.82
<hr/>											
LIQUID GAS											
RESIDENTIAL SECTOR	.17	1.51	3.34	3.95	3.67	3.20	3.39	2.84	1.83	2.16	3.29
INDUSTRIAL SECTOR*	.93	1.83	3.01	3.87	3.85	3.39	3.69	3.02	2.04	2.33	3.23
<hr/>											
COAL											
INDUSTRIAL SECTOR*	4.33	5.60	7.73	6.62	5.40	2.06-	2.72	3.43	.98-	4.43	5.29
<hr/>											
TRANSPORTATION SECTOR											
GASOLINE	1.22	1.34	1.20	1.22	.83	.87	.67	.68	.87	1.11	1.01
JET FUEL	1.42	1.84	2.46	3.17	2.32	2.68	1.74	1.48	1.43	1.43	.61
DISTILLATE	1.65	1.70	2.29	2.38	1.98	1.92	1.83	1.61	1.43	1.43	1.83
RESIDUAL	1.16	2.51	2.76	2.55	2.43	4.42	3.26	4.88	4.72	4.92	3.61
<hr/>											
AVERAGE SECTOR PRICES											
RESIDENTIAL SECTOR	.06-	1.52	2.58	3.96	2.86	3.04	2.98	3.45	3.82	2.40	2.72
COMMERCIAL SECTOR	.41	1.76	2.62	2.50	3.24	4.52	6.80	5.88	3.28	2.68	2.96
INDUSTRIAL SECTOR*	.12	.91	2.98	6.09	5.10	5.49	9.85	7.85	4.68	7.11	4.92
TRANSPORTATION SECTOR	1.20	1.41	1.46	1.39	.95	1.37	.80	.81	.98	1.08	1.18

*INDUSTRIAL SECTOR HERE DOES NOT INCLUDE REFINERIES.

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32

RUN DATE: 1.14

PIES DEMAND REGION PRICE TABLE
(IN 1978 DOLLARS)

MATERIAL	SW-ENG.	NY/NJ	MID-ATL	S.-ATL	MIDWEST	S.-WEST	CENTRAL	N-CENTRAL	WEST	N.-WEST	U. S.
CB COAL, INDUSTRIAL	46.56	43.89	41.32	44.29	39.43	34.59	37.79	30.84	39.39	39.60	39.53
GA GASOLINE, ALL GRADES	19.76	19.63	19.63	19.50	19.49	19.25	19.15	19.45	18.75	18.75	19.37
DS DISTILLATE, ALL GRADES	18.77	18.66	18.66	18.53	18.71	18.28	18.37	18.64	17.95	17.95	18.55
OT OTHER REFINED PETROLEUM	19.08	19.09	19.09	19.09	19.19	18.75	18.88	19.13	18.42	18.42	18.92
NA NAPHTHA	18.96	18.96	18.94	18.81	18.82	18.56	18.48	18.67	18.08	18.08	18.65
RS RESIDUAL, ALL GRADES	16.86	16.86	16.86	16.86	17.63	16.86	17.32	17.45	16.74	16.74	16.96
LG LIQUID PET. GASSES	13.10	13.10	13.10	13.10	13.99	13.10	13.88	13.93	13.10	13.10	13.53
JP JET FUEL/ JET A	19.18	19.18	19.18	19.05	19.20	18.81	18.86	19.15	18.47	18.47	18.89
NG NATURAL GAS	4.38	4.38	4.38	4.38	4.38	4.17	2.94	3.89	4.38	4.38	4.29
EL ELECTRICITY	42.43	48.63	42.13	35.26	36.19	36.29	40.05	29.30	38.80	16.91	36.56
DG NATURAL GAS, INTRASTATE	3.04	2.57	2.41	2.61	2.65	1.88	2.85	2.38	2.17	2.81	1.98
CM COAL, METALLURGICAL	58.90	56.06	53.30	56.66	54.43	57.25	52.73	59.63	69.80	73.02	54.85

PRICES ARE MEASURED AT THE FOLLOWING PLACES:

COAL--DELIVERED INDUSTRIAL PRICE

OIL PRODUCT--AT THE FRONT OF THE TERMINAL (CITY GATE)

ELECTRICITY--AVERAGE DELIVERED PRICE

NATURAL GAS--CITY GATE

PRICE UNITS ARE AS FOLLOWS:

COAL--\$/M.E.TON (STANDARD 22.5 MMBTU TON)

PETROLEUM PRODUCTS--\$/BBL

NATURAL GAS--\$/MCF

ELECTRICITY--\$/KWH

NG (NATURAL GAS) PRICES ARE QUANTITY WEIGHTED AVERAGES OF THE RES. CG, MG & IG BOLLED-IN SECTORAL PRICES.

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32
RUN DATE: 1.14

PIES UTILITY REGION PRICE TABLE
(IN 1978 DOLLARS)

MATERIAL	NW-ENG.	NY/NJ	MID-ATL	S.-ATL	MIDWEST	S.-WEST	CENTRAL	N-CENTRL	WEST	N.-WEST	U. S.
DS DISTILLATE, ALL GRADES	18.77	18.66	18.66	18.53	18.71	18.28	18.37	18.64	17.95	17.95	18.50
RS RESIDUAL, ALL GRADES	16.86	16.86	16.86	16.86	17.63				16.74		16.90
UF URANIUM FUEL	6.80	6.80	6.80	6.80	6.80	6.80	6.80	6.80	6.80	6.80	6.80
EL ELECTRICITY	53.94	55.42	42.66	47.33	43.00	39.32	46.17	41.04	39.66	37.47	45.04
E1 ELEC BASE	36.53	39.23	30.79	32.28	31.55	29.24	28.54	24.12	36.12	21.99	31.28
E2 ELEC INTER	40.27	44.12	36.04	36.75	36.59	30.53	32.93	26.15	39.00	23.94	35.79
E3 ELEC PPAK	118.26	145.84	109.74	85.44	118.43	97.56	97.20	82.38	118.76	78.00	102.11
E5 ELEC CYCLE 2	51.33	58.22	44.88	44.28	52.75	35.70	49.03	34.85	51.34	32.31	45.31
DG NATURAL GAS, INTRASTATE		3.14	2.41	2.61	2.66	2.41	2.85	2.38	2.64		2.46
CA COAL, ALL HI-S	32.50	29.82	27.04	29.86	25.64		23.54	18.96	26.61		27.44
CL COAL, ALL LO-S	41.23	38.86	36.56	39.36	33.86	31.25	31.77	23.88	33.37		36.54
CP COAL, ALL SUB-BITUMINOUS					30.05	30.53	27.55	17.75		30.25	27.58
CT COAL, ALL LIGNITE					17.88	17.73		17.30			17.68

ALL PRICES ARE MARGINAL DELIVERED TO OR SHIPPED FROM UTILITY REGIONS.

PRICE UNITS ARE AS FOLLOWS:

COAL--\$/M.E.TON (STANDARD 22.5 MMBTU TON)

PETROLEUM PRODUCTS--\$/BBL

NATURAL GAS--\$/MCF

ELECTRICITY--\$/MKWH

URANIUM FUEL--\$/MKWH

U.S. PRICES FOR E5-ELEC CYCLE 2 ARE INCLUDED IN THE U.S. PRICES FOR E2-ELEC INTER.

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32
RUN DATE: 1.14

PIES REFINERY REGION PRICE TABLE (1978 \$/BBL)

MATERIAL	PAD1A	PAD1B	PAD2A	PAD2B	PAD3	PAD4	PAD5	U. S.
GA GASOLINE, ALL GRADES	19.57	19.34	19.44	19.09	19.16	19.23	18.69	19.18
DS DISTILLATE, ALL GRADES	18.60	18.35	18.66	18.31	18.18	19.43	17.89	18.31
OT OTHER REFINED PETROLEUM	19.02	18.79	19.21	18.82	18.66	13.92	18.36	18.65
NA NAPHTHA	18.90	18.63	18.76	18.42	18.47	18.45	18.32	18.50
RS RESIDUAL, ALL GRADES	17.13	16.90	17.51	17.03	16.74	17.15	16.52	16.96
LG LIQUID PET. GASSES	13.24	13.17	13.93	13.82	13.46	13.72	13.04	13.52
JP JET FUEL/ JET A	19.14	18.83	19.14	18.80	18.71	19.94	18.42	18.67
GL GAS LIQUIDS	17.53	17.25	17.11	16.85	17.07	16.93	16.45	17.06
BU BUTANE	14.47	14.24	14.29	14.09	14.23	14.08	13.60	14.17
OG NATURAL GAS, INTRASTATE					1.86		2.61	
SO SHALE OIL	15.59	15.28	14.83	14.50	14.67	14.53		14.53
W1 WEST COAST LIGHT					13.63		13.27	13.63
W2 WEST COAST HEAVY					13.75		13.38	13.38
H2 HEAVY CRUDE, PAD2			14.00	13.69				
H3 HEAVY CRUDE, PAD3					14.73	13.63		13.63
H4 HEAVY CRUDE, PAD4						13.53		
H5 HEAVY CRUDE, PAD5							13.11	13.11
SY SYNTHETIC CRUDE	14.82	15.23	14.78	14.50	15.43	15.39	16.20	
LO LOUISIANA OFFSHORE	14.82	14.62	14.68	14.92	14.35	15.34		14.15
ET EAST TEXAS MIX	15.09	14.89	14.63	14.93	14.36	15.31		14.36
WT WEST TEXAS MIX	14.67	14.47	14.20	13.91	13.94	13.94		14.00
OK OKLAHOMA MIX	15.32	15.12	14.56	14.28	14.53	14.88		14.56
AS ALASKAN SO. BROOKS RANGE							14.10	14.10
WO PACIFIC OFFSHORE					14.77		13.82	13.81
AN ALASKAN NORTH SLOPE	16.03	15.89	14.25	13.96	14.00	18.19	13.64	13.67
TG TEXAS GULF	15.10	14.90	14.64	14.94	14.37	15.32		14.48
NP NAVAL PETROL REG1					14.46		14.10	14.10
I1 INDIGENOUS I1	14.66	14.66	14.67	15.00	14.97	15.47		14.66
I2 INDIGENOUS I2	15.13	15.03	14.59	14.92	15.23	15.39		14.59
SG STILL GAS	16.46	16.23	16.72	16.32	16.12	16.42	15.81	
WM WYOMING MIX			14.28	14.00	14.16	14.02		14.01
LN LOUISIANA ONSHORE	15.09	14.89	14.63	14.93	14.35	15.32		14.63
REFINERY ACQUISITION COST*	14.34	14.07	14.44	13.93	13.99	14.31	13.70	14.05

*REFINERY ACQUISITION COSTS ARE QUANTITY WEIGHTED AVERAGES OF THE REFINERY REGION MARGINAL PRICES OF ALL DOMESTIC AND FOREIGN CRUDE TYPES.

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32
RUN DATE: 1.14

PIES OIL REGION WELLHEAD PRICE TABLE (1978 \$/BBL)

CRUDE TYPE	PIES OIL REGIONS												
	01	00	02	04	05	06	07	09	0A	0B	03	08	0C

ALASKAN NORTH SLOPE*	14.28												
ALASKAN SO. BROOKS RANGE	11.92												
PACIFIC OFFSHORE											11.97		
LOUISIANA ONSHORE							12.78						
LOUISIANA OFFSHORE												12.51	
OKLAHOMA MIX								12.61					
TEXAS GULF							12.78						
EAST TEXAS MIX							12.77						
WEST TEXAS MIX				11.76		12.19	12.36	12.24					
WYOMING MIX				11.85	12.43								
HEAVY CRUDE, PADD3					12.05								
HEAVY CRUDE, PADD5			11.53										
NAVAL PETROL REG1			12.51										
INDIGENOUS I1									12.92	12.96			12.78
INDIGENOUS I2									12.84				
WEST COAST LIGHT			11.68										
WEST COAST HEAVY			11.80										

OIL REGION

PIES	NPC	
01	1S	SOUTH ALASKA
00	1N	NORTH SLOPE
02	2	PACIFIC COAST
04	3	W. ROCKY MTS.
05	4	E. ROCKY MTS.
06	5	W. TEX. & N. MEX.
07	6	W. GULF BASIN
09	7	MIDCONTINENT
0A	8-9-10	MI. BAS. INT. AP
0B	11	ATLANTIC COAST
03	2A	PACIFIC OCEAN
08	6A	GULF OF MEXICO
0C	11A	ATLANTIC OCEAN

*DELIVERED PRICE TO VALDEZ, SOUTH ALASKA.
ENTITLEMENT TO LOWER 48 OIL IN \$/BBL: 1.47-
ENTITLEMENT TO ALASKAN OIL IN \$/BBL: 1.36
ENTITLEMENT TO IMPORTED OIL IN \$/BBL: 1.36

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32
RUN DATE: 1.14

PIES GAS REGION WELLHEAD PRICE TABLE (1978 \$/MCF)

DOE REGION	INTRASTATE GAS PRICE
NW-ENG.	2.89
NY/NJ	2.99
MID-ATL	2.27
S.-ATL	2.46
MIDWEST	2.51
S.-WEST	1.74
CENTRAL	2.70
N-CNTRL	2.24
WEST	2.49
N.-WEST	

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32
RUN DATE: 1.14

COAL REGION P.O.B. MINE PRICE SUMMARY IN 1978 \$/TON

COAL TYPES	SUPPLY REGIONS*											
	C1	C2	C3	C4	C5	C6	C7	C8	C9	CA	CB	CC
PREMIUM (27 MMBTU/TON)	39.09	38.58	40.74		41.18				45.28	45.16		
BITUMINOUS (23.80 MMBTU/TON)	23.51	25.61	26.60	23.60	23.61			20.30	19.20	17.99	29.67	
LOW SULFUR	34.90	33.32	35.48		30.65			20.30	20.39	20.00	29.67	
MEDIUM SULFUR	23.43	23.50	25.66	23.67	25.32				15.35	11.96		
HIGH SULFUR	23.43	23.50		23.57	22.92							
MID-BITUMINOUS (21.80 MMBTU/TON)	21.02			20.47	20.82			15.57	17.81	13.79		
LOW SULFUR				11.73				17.64	18.21	17.05		
MEDIUM SULFUR	21.02			21.14				13.76	13.44	9.45		
HIGH SULFUR	21.02			20.43	20.82							
SUB-BITUMINOUS (18.33 MMBTU/TON)								8.97				13.00
LOW SULFUR								8.97				13.00
MEDIUM SULFUR												
LIGNITE (13.00 MMBTU/TON)						9.57	8.98					
LOW SULFUR							8.98					
MEDIUM SULFUR						9.57	8.98					

*SUPPLY REGIONS

C1	NORTHERN APPLACHIAN
C2	CENTRAL APPLACHIAN
C3	SOUTHERN APPLACHIAN
C4	MIDWEST
C5	CENTRAL WEST
C6	GULF
C7	N.E. GREAT PLAINS
C8	N.W. GREAT PLAINS
C9	ROCKIES
CA	SOUTHWEST
CB	NORTHWEST
CC	ALASKA

SULFUR CONTENTS

LOW	LESS THAN .67 LBS./MMBTU (PREMIUM IS LOW SULFUR)
MEDIUM	.67 TO 1.68 LBS./MMBTU
HIGH	MORE THAN 1.68 LBS./MMBTU

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32
RUN DATE: 1.14

EXECUTIVE DATA SUMMARY

UNITED STATES TOTAL GROSS SUPPLY/CONSUMPTION OF ENERGY RESOURCES
1975 ACTUAL IN TRILLIONS OF BTU'S PER YEAR

SECTOR	COAL	OIL	GAS	TOTAL FOSSIL FUEL	NUCLEAR	HYDRO SOLAR GEO.	TOTAL 6 SECTOR INPUTS	GROSS ELECT. INPUTS	TOTAL 4 SECTOR INPUTS	UTILITY ELECTRIC DISTRIB.	NET POWER SECTOR INPUTS
DOMESTIC SUPPLY:	14910	20090	19800	54800	1810	3120				6541	
(COAL,GAS,ELEC.)	14910		15740	30450	1810	3120				6541	
(CRUDE)		17706		17706							
(CO-PRODUCTS/ASSOC. GAS)		2384	4060	6444							
(SYNTHETICS)											
(SHALE)											
(DIRECT SOLAR/GEO)											
NET IMPORTS:	1755-	12520	660	11425							
(CRUDE)		8690		8690							
(PRODUCTS)		3830		3830							
(LNG)			5	5							
(CANADIAN/MEXICAN)			655	655							
(COAL)	1755-			1755-							
TOTAL SUPPLY	13155	32610	20460	66225	1810	3120	71155			6541	
GAINS(+) /LOSSES(-)		200-								589-	
CONSUMPTION:											
RESIDENTIAL	113	2797	5082	7991			7391	6981	14881	2000	9991
COMMERCIAL	61	3058	2589	5707			5707	5751	11417	1641	7349
INDUSTRIAL	3684	5424	8913	18020			18020	7916	26275	2257	20278
TRANSPORTATION		17938	602	18540			18540	51	18422	15	18554
ELECTRICAL GENERATION	9287	3240	3248	15775	1810	3120	20705			5913-	
SYNTHETICS											
TOTAL CONSUMPTION	13144	32456	19456	66033	1810	3120	70963	20700	70994		56171

NOTE: INDUSTRIAL OIL INCLUDES STILL GAS AND PETROLEUM COKE

NOTE: GAS CONSUMPTION IN THE TRANSPORTATION SECTOR INCLUDES NATURAL GAS TRANSPORTATION LOSSES.
INDUSTRIAL CONSUMPTION INCLUDES REFINERY FUEL CONSUMPTION.

LOSSES ARE REFINERY CRACKING LOSSES AND ELECTRICITY TRANSMISSION LOSSES.

NUCLEAR AND HYD/SOL/GEO ENTRIES ESTIMATE BTU CONSUMPTION FOR AN EQUIVALENT FOSSIL FUEL PLANT AT 10000 BTU/KWH.

TOTAL SUPPLY QUADS NET OF REFINERY CRACKING LOSS: 70.95

TOTAL GROSS QUADS CONSUMED: 70.99

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32
RUN DATE: 1.14

1975 SECTORAL/REGIONAL CONSUMPTION SUMMARY IN TRILLIONS OF BTUS PER YEAR****

SECTOR (FUEL)	DEMAND REGIONS										TOTAL
	NW-ENG.	NY/NJ	MID-ATL.	S.-ATL.	MIDWEST	S.-WEST	CENTRAL	N-CENTRL	WEST	N.-WEST	
RESIDENTIAL	628.9	1224.3	1046.7	1127.7	2795.9	914.1	691.1	347.8	927.6	287.3	9991.3
(ELECT.)	89.8	147.7	204.8	458.1	385.3	238.6	110.8	48.6	187.1	129.2	2000.0
(DIST.)	377.0	582.4	304.6	172.3	515.1	66.5	60.3	34.4	21.7	59.4	2193.7
(LG)	16.0	17.2	23.9	117.7	158.6	108.6	132.1	36.2	16.5	6.6	603.4
(COAL)	.6	5.6	36.5	15.2	45.9	.1	3.3	3.6	.1	1.7	112.5
(NG)	145.5	471.4	476.9	364.4	1691.0	500.3	414.6	225.0	702.2	90.4	5081.7
RAW MATERIAL*	19.8	56.1	115.4	235.4	230.3	1412.7	123.4	24.4	91.5	82.0	2391.1
(LG)	8.1	17.2	29.8	58.4	82.2	1020.7	38.7	4.3	32.8	4.9	1297.1
(OIL)	9.4	33.9	48.5	86.5	104.6	81.7	25.6	14.3	31.1	52.2	487.9
(NG)	2.3	5.0	37.1	90.5	43.5	310.3	59.1	5.8	27.6	24.9	506.1
COMMERCIAL	551.9	985.5	714.1	843.5	1768.6	741.9	475.4	303.5	670.8	292.1	7348.5
(ELECT.)	73.8	174.0	163.1	269.5	298.5	208.6	82.5	54.2	234.5	82.6	1641.3
(DIST.)	190.9	193.3	125.9	62.5	208.0	55.7	34.3	34.7	16.9	50.4	972.6
(RESID.)	183.3	352.7	112.3	52.9	150.4	36.1	13.9	23.9	18.6	30.9	975.1
(LG)	1.8	1.9	2.7	13.1	17.6	12.1	11.3	4.0	1.8	.7	67.0
(COAL)	.3	3.0	19.6	8.2	24.7		1.8	1.9		.9	60.6
(ASPHALT)	38.0	73.2	87.5	170.7	249.3	155.4	72.1	45.3	131.9	49.8	1343.2
(NG)	63.8	187.4	203.0	266.6	820.1	273.8	260.5	139.5	297.1	76.9	2588.7
INDUSTRIAL***	276.3	612.9	2046.2	2066.1	3950.4	4041.4	671.8	500.0	1015.7	463.8	15665.2
(ELECT.)	64.4	141.6	244.0	514.5	518.8	253.1	85.4	44.3	164.7	148.3	2179.1
(DIST.)	14.6	29.3	57.0	74.4	94.6	70.3	20.6	34.6	45.6	35.0	476.4
(RESID.)	109.1	73.3	124.0	150.5	100.6	109.2	6.0	37.4	45.7	36.0	793.4
(LG)	14.5	9.9	21.9	45.0	63.8	83.7	36.8	9.8	28.3	1.9	314.6
(COAL)	4.7	66.3	332.7	211.4	578.8	37.2	75.5	49.5	8.7	25.7	1390.5
(NET COAL**)		94.3	833.0	221.2	978.7	26.3	7.5	92.5	30.2		2293.7
(NAPHTHA)	12.4	30.3	9.4	5.9	67.6	143.2	1.2		10.8		280.8
(NG)	56.6	167.9	424.2	843.2	1547.5	3318.4	438.8	241.9	631.7	216.4	7936.7
TRANSPORTATION	798.7	1593.4	1783.6	3199.9	3475.5	2764.4	1164.8	677.9	2381.6	724.5	18553.7
(ELECT.)	.1	8.3	3.8		1.3		.1		1.0		14.6
(DIST.)	61.5	121.0	226.1	409.8	448.0	433.8	172.7	132.6	235.1	110.9	2350.5
(RESID.)	18.8	84.8	105.2	75.9	15.7	271.2	1.9	2.2	136.3	19.6	731.3
(LG)	.1	.4	.5	1.9	1.7	10.5	1.1	.7	.8	.1	17.8
(GASOLINE)	653.8	1157.9	1298.8	2328.4	2728.8	1617.4	823.0	464.0	1542.9	453.9	13028.9
(JET FUEL)	63.8	207.6	121.0	269.8	226.4	216.7	59.4	65.1	456.9	122.1	1809.0
(NG)	.6	3.4	39.2	114.1	53.6	214.8	106.6	13.2	38.6	18.6	601.6
TOTAL CONSUMPTION	2305.5	4552.8	5816.6	7626.0	12533.2	11251.9	3207.3	1875.4	5236.0	1918.2	55303.2

*LIQUID GAS IN THE RAW MATERIAL SECTOR INCLUDES LIQUID GAS FEEDSTOCK.

**NET COAL INCLUDES 70% PREMIUM COAL AND 30% BITUMINOUS LOW SULFUR COAL.

***DOES NOT INCLUDE REFINERY OIL AND GAS CONSUMPTION.

**** THIS REPORT DOES NOT INCLUDE UTILITY FUEL CONSUMPTION OR SYNTHETICS FUEL CONSUMPTION.

TABLE 32

PAGE 32

1985 MID-RANGE/TRENDLONG SCENARIO (SERIES C)
WITH NATURAL GAS REGULATION

OIL IMPORT PRICE: 15.32
RUN DATE: 1.14

1975 DEMAND REGION RETAIL PRICE SUMMARY IN 1978 \$/ MILLION BTUS

FUEL (SECTOR)	DEMAND REGIONS										U. S.
	NW-ENG.	NY/NJ	MID-ATL	S.-ATL	MIDWEST	S.-WEST	CENTRAL	N-CENTRL	WEST	N.-WEST	
ELECTRICITY											
RESIDENTIAL SECTOR	15.56	17.50	13.13	9.65	11.43	9.32	10.49	9.66	11.62	5.01	11.07
COMMERCIAL SECTOR	15.16	17.59	12.19	10.12	11.18	8.14	9.73	8.13	9.78	5.23	10.90
INDUSTRIAL SECTOR*	11.09	9.52	9.59	5.22	6.92	5.00	6.68	4.38	7.46	1.93	6.63
NATURAL GAS											
RESIDENTIAL SECTOR	3.61	2.95	2.27	1.76	1.90	1.59	1.53	1.38	1.80	2.46	1.96
COMMERCIAL SECTOR	2.99	2.39	1.94	1.39	1.52	1.07	1.14	1.15	1.47	1.85	1.54
INDUSTRIAL SECTOR*	2.53	1.78	1.27	.98	1.26	1.41	.79	.71	1.17	1.21	1.27
DISTILLATE											
RESIDENTIAL SECTOR	3.31	3.26	3.16	3.10	3.03	2.95	3.05	3.33	3.33	3.30	3.18
COMMERCIAL SECTOR	2.92	2.95	2.85	2.80	2.76	2.80	2.73	2.97	2.95	2.95	2.86
INDUSTRIAL SECTOR*	2.92	2.95	2.85	2.80	2.75	2.80	2.73	2.97	2.95	2.95	2.85
RESIDUAL											
COMMERCIAL SECTOR	2.60	2.39	2.43	2.23	2.44	1.92	2.23	1.84	1.84	1.84	2.37
INDUSTRIAL SECTOR*	2.60	2.39	2.43	2.23	2.44	1.92	2.23	1.84	1.84	1.84	2.26
LIQUID GAS											
RESIDENTIAL SECTOR	3.83	3.45	3.11	2.93	2.78	2.86	2.80	3.08	3.29	3.18	2.92
INDUSTRIAL SECTOR*	3.33	3.12	2.93	2.71	2.62	2.65	2.62	2.86	3.02	2.93	2.76
COAL											
INDUSTRIAL SECTOR*	1.35	1.13	.87	1.04	1.04	2.00	1.28	.98	1.93	1.14	1.05
TRANSPORTATION SECTOR											
GASOLINE	5.36	5.49	5.35	5.27	5.49	5.25	5.46	5.49	5.51	5.40	5.40
JET FUEL	3.58	3.52	3.52	3.32	3.22	3.19	3.31	3.59	3.56	3.56	3.97
DISTILLATE	4.06	4.09	3.99	3.95	3.90	3.95	3.89	4.11	4.09	4.09	4.02
RESIDUAL	2.60	2.39	2.43	2.23	2.44	1.92	2.23	1.84	1.84	1.84	2.10
AVERAGE SECTOR PRICES											
RESIDENTIAL SECTOR	5.14	4.87	4.76	5.34	3.44	3.85	3.29	2.92	3.84	3.81	4.12
COMMERCIAL SECTOR	4.58	5.42	4.98	5.20	3.75	3.86	3.13	2.97	4.96	3.74	4.37
INDUSTRIAL SECTOR*	4.70	4.15	2.92	2.76	2.36	1.74	1.87	1.48	2.44	1.65	2.34
TRANSPORTATION SECTOR	5.09	5.03	4.90	4.90	5.16	4.56	5.10	5.07	4.88	4.87	4.94

*INDUSTRIAL SECTOR HERE DOES NOT INCLUDE REFINERIES.

FINAL QUANTITIES IN TRILLIONS OF BTUS PER YEAR

	D1	D2	D3	D4	D5	D6	D7	D8	D9	DA	DS
ELRS	90.96	203.04	261.30	836.67	468.25	338.37	150.46	109.55	191.20	220.03	2869.94
NGRS	171.72	458.31	492.99	298.91	1813.66	709.11	482.00	324.86	575.86	103.55	5421.86
DFRS	506.91	786.70	358.95	221.03	929.45	101.14	103.92	33.82	32.57	98.65	3173.14
LGRS	22.89	26.92	26.71	116.42	168.65	109.23	114.40	59.43	5.02	2.94	652.61
ELCH	102.60	247.03	234.06	445.01	414.59	299.14	116.42	118.00	266.63	130.59	2374.07
NGCM	79.42	164.40	178.38	211.90	616.35	198.87	132.48	75.06	193.91	49.47	1900.26
DFCM	297.76	246.19	164.49	97.69	311.37	74.92	57.82	54.32	25.23	65.52	1385.30
RFCM	213.70	347.44	89.64	55.61	180.05	59.57	11.47	19.28	7.10	27.22	1061.47
ELIN	104.69	247.03	456.69	1031.80	968.46	559.33	189.05	108.91	239.34	276.04	4181.34
NGIN	79.76	214.37	413.53	807.70	521.37	831.37	264.26	165.76	832.84	62.83	8193.79
DFIN	25.55	67.50	212.50	165.16	460.59	178.82	67.47	116.27	94.03	139.33	1527.22
RFIN	204.61	109.95	155.16	223.63	221.46	544.74	24.48	33.88	75.67	85.44	1679.03
LGIN	48.81	33.85	55.77	108.00	381.52	206.38	119.19	40.53	80.13	10.09	1084.29
CLIN	2.78	69.98	312.23	307.14	1178.94	95.28	122.91	212.07	45.30	83.14	2429.65
GSTR	777.57	1320.36	1532.06	2936.64	3155.45	1886.89	946.29	564.01	1825.37	547.11	15491.74
DFTR	65.58	120.79	234.90	485.20	494.89	446.59	194.93	135.38	258.62	111.83	2548.70
JPTR	82.48	249.77	161.88	410.84	273.03	254.09	72.91	88.20	549.21	149.95	2292.36
RFTR	17.38	73.73	92.25	61.02	9.92	203.75	1.03	1.23	118.83	21.30	600.04
ELTR	.10	7.90	3.60	.00	1.20	.00	.10	.00	.90	.60	13.80
NGRM	4.15	8.64	63.31	166.62	72.06	543.26	90.05	8.89	43.85	36.10	1036.94
LGCM	1.88	2.36	2.64	11.58	15.89	8.36	9.38	5.18	.69	.35	58.39
LSTR	.07	.87	.61	2.05	1.91	12.26	1.04	1.19	.91	.29	21.19
LGFS	.00	.00	28.10	75.44	108.64	2280.56	63.83	.00	33.23	.00	2589.80
LGRM	21.47	55.04	43.20	63.95	82.45	41.34	20.33	14.16	44.77	14.85	401.75
OLRM	13.17	57.71	70.20	123.70	151.40	120.98	38.39	24.98	44.40	83.64	726.58
NAIN	17.86	50.09	13.71	9.51	101.15	241.94	1.81	.00	16.14	.00	452.21
ASCM	35.13	78.66	78.66	177.35	242.05	155.47	65.75	55.86	106.48	59.18	1054.59
CLHC	.07	1.05	7.71	7.65	16.17	.05	1.00	.43	.05	.81	34.98
CLTR	.01	.01	.28	.01	.01	.01	.01	.01	.01	.01	.35
MCIN	.01	157.20	1008.59	241.73	998.41	20.54	8.90	81.56	60.13	.01	2587.18
CLCU	228.70	807.80	2007.18	4379.18	4405.29	1596.27	1236.63	885.35	291.62	65.97	15904.01
NGCU		1.09	32.70	41.18	43.78	1678.10	56.66	3.27	295.56		2152.35
DFCU	59.89	106.00	45.74	389.89	96.23	111.46	45.47	13.65	72.90	3.64	944.88
RFUC	384.11	502.35	136.51	641.27	207.43				511.69		2383.37
NUCU	239.09	523.85	859.91	1549.28	1316.68	423.86	179.93	18.79	354.22	190.62	5656.22
HYCU	58.78	385.93	60.31	437.76	54.39	191.35	39.63	279.71	772.49	1766.41	3956.77
NGRP			64.75			860.28					925.03
DFRP	.11	5.34	8.14	3.27	11.84	10.08	2.65	2.68	19.60	4.30	87.30
RFRP	1.72	80.64	123.01	22.77	186.32	97.51	44.38	57.76	211.49	46.42	862.01
LGRP											
SGRP	1.25	58.63	89.44	61.24	223.69	590.00	53.28	50.10	227.07	49.84	1404.55
OTRP	.58	27.48	41.92	21.10	86.03	189.87	20.49	19.46	65.59	14.40	486.93
LRRP											
WSTR	12.23	35.96	40.47	33.52	97.43	88.02	15.54	9.10	77.15	1.85	411.26
CLSY											
OLSY											
NGSY	53.97	183.71	225.95		282.80	.51		38.30	114.83		900.07
OTSY	59.83	203.66	250.83		313.51				60.02		887.51
CCSY											75.90
SGDR											263.36
TOTL	3673.06	7296.86	9258.52	15031.69	19265.85	19091.78	4710.02	3428.05	7914.54	3897.07	93906.63

CCSY INDICATES COAL CONSUMPTION IN COAL REGIONS FOR SYNGAS + SYNCRUDE PRODUCTION.
SGDR INDICATES SOLAR/GEOTHERMAL FOSSIL FUEL AND ELECTRICITY DEMAND REPLACEMENT.

SHORTAGE/DISPLACEMENTS IN TRILLIONS OF BTUS PER YEAR

	D1	D2	D3	D4	D5	D6	D7	D8	D9	DA	DS
NGRS											
NGCM											
NGRM											
NGIN					920.40-		34.07-			118.87-	1073.33-
ELRS											
ELCM											
DSRS											
DSCM											
DSIN					202.39		7.09			52.65	262.13
RSCM											
RSIN					95.70		2.54			31.64	129.89
LGRS											
LGCM											
LGIN					166.44		12.55			3.80	182.79
LRRM											
LFDM											
CBCM											
CBIN					490.00		12.41			29.71	532.13
OLRM											

FINAL PRICES IN 1978 \$/MILLION BTUS

	D1	D2	D3	D4	D5	D6	D7	D8	D9	DA	DS
ELRS	13.31	15.91	13.69	11.05	12.00	11.87	12.70	9.65	12.66	5.83	11.71
NGRS	4.53	4.13	3.58	3.15	3.11	2.39	2.11	2.26	3.35	3.65	3.09
DFRS	3.89	3.97	4.16	4.23	3.79	3.30	3.69	3.87	3.85	3.85	3.93
LGRS	3.90	4.01	4.32	4.32	3.99	3.92	3.91	4.07	3.94	3.94	4.04
FLCM	13.22	17.69	13.31	11.18	11.98	11.26	12.43	8.80	11.71	5.81	12.01
NGCM	3.86	3.53	3.11	2.63	2.78	2.46	3.46	3.13	2.83	3.05	2.94
DFCM	3.64	3.71	3.76	3.76	3.60	3.64	3.51	3.64	3.56	3.56	3.66
RFCM	2.87	2.96	3.27	2.90	3.12	2.97	3.10	3.01	2.92	2.85	2.99
FLIN	10.97	9.47	10.97	9.40	9.37	9.57	10.55	7.30	9.96	3.86	9.29
NGIN	3.29	2.83	2.69	2.24	2.44	2.16	3.10	2.65	2.44	2.37	2.31
DFIN	3.64	3.69	3.86	3.85	3.60	3.63	3.50	3.68	3.56	3.56	3.67
RFIN	2.92	3.06	3.19	2.87	3.10	2.96	3.07	2.96	2.92	2.97	2.99
LGIN	3.66	3.74	3.95	3.96	3.82	3.70	3.76	3.85	3.69	3.69	3.79
CLIN	2.07	1.95	1.84	1.97	1.75	1.63	1.68	1.37	1.75	1.76	1.76
GSFR	6.05	6.27	6.03	5.94	5.96	5.73	5.83	5.87	6.01	6.02	5.96
DFTR	4.79	4.84	5.00	4.99	4.75	4.77	4.65	4.82	4.71	4.71	4.82
JFTR	4.12	4.23	4.49	4.54	4.05	4.16	3.93	4.16	4.10	4.10	4.22
RFTR	2.92	3.06	3.19	2.87	3.10	2.96	3.07	2.96	2.92	2.97	2.99
PLTR	12.44	14.25	12.35	10.33	10.61	10.64	11.74	8.59	11.37	4.96	13.22
HGRM	3.29	2.83	2.69	2.19	2.44	2.16	3.10	2.65	2.44	2.37	2.33
LSCM	3.27	3.27	3.27	3.27	3.49	3.27	3.46	3.47	3.27	3.27	3.38
LGTR	3.27	3.27	3.27	3.27	3.49	3.27	3.46	3.47	3.27	3.27	3.31
LGPS	3.61	3.61	3.61	3.58	3.59	3.54	3.52	3.56	3.44	3.44	3.54
LGRM	3.61	3.61	3.61	3.58	3.59	3.54	3.52	3.56	3.44	3.44	3.54
OLRM	3.18	3.18	3.18	3.17	3.20	3.13	3.15	3.19	3.07	3.07	3.15
NAIN	3.61	3.61	3.61	3.58	3.59	3.54	3.52	3.56	3.44	3.44	3.56
ASCM	3.18	3.18	3.18	3.17	3.20	3.13	3.15	3.19	3.07	3.07	3.15
CLHC	2.07	1.95	1.84	1.97	1.75	1.63	1.68	1.37	1.75	1.76	1.82
CLTR	2.07	1.95	1.84	1.97	1.75	1.63	1.68	1.37	1.75	1.76	1.82
MCIN	2.18	2.08	1.97	2.10	2.02	2.12	1.95	2.21	2.59	2.70	2.03
CLFU	1.54	1.44	1.21	1.43	1.19	1.12	1.16	.83	1.39	1.34	1.25
NGFU	2.83	3.04	2.33	2.53	2.58	2.34	2.76	2.31	2.55	2.53	2.39
DFEU	3.22	3.20	3.20	3.18	3.21	3.14	3.15	3.20	3.08	3.08	3.18
RFEU	2.68	2.68	2.68	2.68	2.80	2.68	2.76	1.36	2.66	2.66	2.69
MURU	.62	.62	.62	.62	.62	.62	.62	.62	.62	.62	.62

RETAIL DTU PRICE GROWTH RATES FROM 1975

	D1	D2	D3	D4	D5	D6	D7	D8	D9	DA	US
PLRS	1.55-	.95-	.57	1.36	.49	2.45	1.93	.01-	.87	1.54	.56
ELCH	1.36-	.06	.88	1.00	.69	3.30	2.48	.79	1.82	1.05	.98
ELIN	.11-	.06-	2.48	4.21	3.08	6.71	4.68	5.23	2.94	7.15	3.43
NGRS	2.32	3.45	4.63	6.01	5.59	4.18	3.24	5.08	6.40	4.01	4.67
NGCM	2.58	3.96	4.81	6.60	6.21	9.65	11.71	10.48	6.74	5.14	6.67
NGIN	2.64	4.76	7.76	8.65	6.85	4.34	14.67	14.11	7.66	6.92	6.16
DFRS	1.62	1.97	2.78	3.16	2.27	2.95	1.91	1.50	1.44	1.55	2.12
DFCM	2.23	2.33	2.80	2.99	2.71	2.65	2.53	2.05	1.93	1.93	2.48
DFIN	2.22	2.28	3.06	3.21	2.70	2.60	2.51	2.16	1.93	1.93	2.54
RFCM	.96	2.16	3.02	2.67	2.51	4.45	3.36	5.07	4.74	4.48	2.36
RFIN	1.16	2.51	2.76	2.55	2.43	4.42	3.26	4.88	4.72	4.92	2.82
LGRS	.17	1.51	3.34	3.95	3.67	3.20	3.39	2.84	1.83	2.16	3.29
LGIN	.93	1.83	3.01	3.87	3.85	3.39	3.69	3.02	2.04	2.33	3.23
CLIN	4.33	5.60	7.73	6.62	5.40	2.06-	2.72	3.43	.98-	4.43	5.29
GSTR	1.22	1.34	1.20	1.22	.83	.37	.67	.68	.87	1.11	1.01
JFTR	1.42	1.84	2.46	3.17	2.32	2.58	1.73	1.48	1.43	1.43	.61
DFTR	1.65	1.70	2.28	2.38	1.98	1.32	1.83	1.61	1.43	1.43	1.83
RFTR	1.16	2.51	2.76	2.55	2.43	4.42	3.26	4.89	4.72	4.92	3.61

APPENDIX. DEFINITIONS

Base load - Component of demand for electricity characterized by an essentially unvarying level for all hours of the year.

Capacity factor - A measure of utilization of capacity defined in the electric utilities industry to be the ratio of kwh production for the year divided by 8760 hours and the design capacity in kw.

CEASPIRIT A Data Resources, Inc. macroeconomic projection of Spring 1977 of relatively high GNP Growth.

Combined cycle plants - A two-stage electricity generating plant with the first stage composed of combustion turbines and the second stage a waste-heat steam generator system which operates with the exhaust heat of the first stage.

Cycling load - Components of demand for electricity that varies above base load levels or by time of day.

Daily peak - Component of demand for electricity that occurs above cycling load and occurs a few hours per day.

Department of Energy Regions-Ten regions organized by states as follows:

<u>Region 1</u> Connecticut Maine Massachusetts New Hampshire Rhode Island Vermont	<u>Region 4</u> Alabama Florida Georgia Kentucky Mississippi North Carolina South Carolina Tennessee	<u>Region 7</u> Iowa Kansas Missouri Nebraska
<u>Region 2</u> New Jersey New York	<u>Region 5</u> Illinois Indiana Michigan Minnesota Ohio Wisconsin	<u>Region 8</u> Colorado Montana North Dakota South Dakota Utah Wyoming
<u>Region 3</u> Delaware District of Columbia Maryland Pennsylvania Virginia West Virginia	<u>Region 6</u> Arkansas Louisiana New Mexico Oklahoma Texas	<u>Region 9</u> Arizona California Hawaii Nevada
		<u>Region 10</u> Alaska Idaho Oregon Washington

Dispatch - The commitment of a utility's generating units to generate electricity to meet demand in a fashion determined to be most efficient by the system controllers.

Distillate Fuel Oil - The lighter fuel oils distilled off during the refining process. Included are products known as ASTM grades Nos. 1 and 2 heating oils, diesel fuels, and No. 4 fuel oil. The major uses of distillate fuel oils include heating, fuel for on and off highway diesel engines, and railroad diesel fuel. Minor quantities of distillate fuel oils produced and/or held as stocks at natural gas processing plants are not included in this series.

Elasticity - A measure of the percentage impact of a change in one economic variable on another. Own elasticity measures the percentage change in the quantity of a product demanded with respect to a change in the same product's price. Cross elasticity measures the percentage change in one product's quantity with respect to a change in some other products price.

Energy consumption - The amount of energy consumed in the form in which it is acquired by the user. The term excludes electrical generation and distribution losses. Also called net energy consumption.

Enhanced recovery - (enhanced oil recovery) - Increased recovery of crude oil (and natural gas in the case of enhanced gas recovery) from a reservoir, which is achieved by the external application of physical or chemical processes that supplement naturally occurring or simple fluid injection processes.

Feedstock - A raw material. For example, petroleum distillates used for producing petrochemicals are referred to as petrochemical feedstocks.

F.O.B. - An abbreviation for free on board, i.e., the price of fuel loaded prior to transit.

High sulfur coal - In PIES, coal with sulfur content of greater than 1.68 pounds of sulfur per million Btu is considered high sulfur coal.

Interstate gas - Natural gas which enters interstate commerce and hence is subject to Federal price controls. Natural gas sold to pipelines under the jurisdiction of the FERC (Federal Energy Regulatory Commission).

Intrastate gas - Natural gas which is both produced and consumed within the same state. It is not subject to Federal (FERC) price controls.

Jet Fuel - Includes both naphtha-type and kerosene-type fuels meeting standards for use in aircraft turbine engines. Although most jet fuel is used in aircraft, some is used for other purposes, such as for generating electricity in gas turbines.

Lignite - A low Btu brownish coal. Significant amounts can be found in Texas and North Dakota.

Links - A connection between an origin and destination along which movement of an energy material is defined. A link contains information on origin, destination, transport mode, and cost.

Liquefied natural gas - Natural gas which has been cooled to about - 160°C for storage or shipment as a liquid in high pressure cryogenic containers.

Load factor - A measure of electric utility system efficiency. Specifically, it is the ratio of the system average demand to the highest or "peak" system demand.

Load management - Techniques applied to electric utility customers to improve the utility's load factor.

Low sulfur coal - In PIES, coal with a sulfur content of less than 0.67 pounds of sulfur per million Btu is considered to be low sulfur coal.

Metallurgical coal - Coal used to produce metallurgical coke, a primary input in the production of steel. Such coal is characterized by high Btu content, low sulfur and low ash content and high volatility. In PIES, metallurgical coal is a distinct product.

Mode - Facilities for transporting energy fuels by rail, barge, pipeline, tanker, transmission lines and nuclear transport.

Natural gas, associated-dissolved - Gas occurring in the form of a gas cap associated with an oil zone, or in solution with the oil.

Natural gas liquids - Those portions of reservoir gas which are liquefied at the surface in lease separators, field facilities, or gas processing plants. Includes ethanes, propanes, butanes, pentanes, and natural gasoline.

Natural gas, nonassociated - Free gas not in contact with crude oil in a reservoir.

Naval Petroleum Reserves (NPR) - Federally owned petroleum reserves in California (NPR-1, 2), Wyoming (NPR-3), Utah, Colorado, and Alaska (NPR-3). Most of current and projected production comes from NPR-1, Elk Hills. Management of the reserves was recently transferred from the Navy to DOE and, in the case of Alaska, to the Department of the Interior.

Network - A collection of links.

Nuclear fuel cycle - The generic term for all stages of nuclear fuel processing from uranium exploration through radioactive waste disposal.

Nuclear fuel reprocessing - The chemical separation of spent (used) nuclear fuel into salvageable fuel material and radioactive waste.

"Off peak" - A period of the day specified under a time of day electricity pricing scheme where usually cheaper rates are charged for electricity.

Price tier - The tiers refer to classes of crude oil production established for pricing purposes.

- (i) Third Tier - New discoveries after April 20, 1977, as proposed in the National Energy Plan, which are a specified distance and depth from previous wells. (Energy production and Conservation Act)
- (ii) Lower Tier - Under EPCA provisions, refers to quantities of oil under production in a pre-embargo base period.
- (iii) Upper Tier - Oil produced in excess of the lower tier base period, but not a new discovery.

- (iv) Incremental tertiary - Incremental oil produced using tertiary methods after April 20, 1977.
- (v) Naval Petroleum Reserves - Oil production from Naval Petroleum Reserves.
- (vi) Stripper - Oil produced from wells producing under 10 barrels per day.
- (vii) North Slope - Oil produced from the Prudhoe Bay field on the North Slope of Alaska.

Production function - A mathematical relationship between inputs of the factors of production (labor, capital, etc.) and output.

Projection Series - The combination of demand and supply scenarios used by EIA to conditionally project equilibrium energy levels for the target years.

Prudhoe Bay Field - The reservoirs located on Alaska's North Slope, proved in 1970, and currently in production. This includes reserves of 9.6 billion barrels of oil and 26 Tcf of associated-dissolved gas.

Pumped Storage - Hydroelectric facilities with two reservoirs. Excess off peak electricity is used to pump water from the lower to higher reservoir from which it is released to generate peak load electricity.

Quad - Quadrillion Btu (10^{15} Btu).

Real income - Current dollar income corrected for price level changes relative to some base period as measured by a suitable price index, or the Implicit GNP Deflator. Also termed "constant dollar" income.

Refinery gate - The point at which oil or natural gas enters or leaves refinery facilities via pipeline, ship, truck, rail, or other transport mode.

Reserves - Identified deposits of minerals known to be recoverable with current technology under present economic conditions.

Categories of reserves are:

- Measured Reserves (or Proved Reserves): Identified sources from which an energy commodity can be economically extracted with existing technology, and whose location, quality, and quantity are known on the basis of geologic evidence supported by engineering evidence.
- Indicated Reserves: Reserves that include additional recoveries in known reservoirs (in excess of the measured reserves) which engineering knowledge and judgment indicate will be economically available by application of fluid injection, whether or not such a program is currently installed (API, 1974).
- Inferred Reserves: Reserves based on broad geological knowledge for which quantitative measurements are not available. Such reserves are estimated to be recoverable in future years as a result of extensions, revisions, and additional drilling in known fields.

- Extensions: Reserves credited to a reservoir because of enlargement of its proved area, generally due to additional drilling activity.
- Revisions: Changes in earlier proved reserve estimates, either upward or downward, resulting from new information, not necessarily from additional drilling.

Residual Fuel Oil - The heavier oils that remain after the distillate fuel oils and lighter hydrocarbons are boiled off in refinery operations. Included are products known as ASTM grades Nos. 5 and 6 oil, heavy diesel oil, Navy special oil, Bunker C oil, and acid sludge and pitch used as refinery fuels. Residual fuel oil is used for the production of electric power, for heating, and for various industrial purposes.

Resources - Concentrations of naturally occurring solid, liquid, or gaseous materials in or on the earth's crust in such form that economic extraction of a commodity is currently or potentially feasible.

Routes - A series of interconnected links from origin to final destination.

Scenarios - A set of assumptions used in making energy supply and demand forecasts.

Scrubber - Equipment used to remove sulfur from flue gas emissions.

Seam - A layer of mineral matter, for example, coal seams.

Seasonal peak - That demand for electricity occurring during extreme weather conditions (winter heating, summer cooling).

Strip mining - One of the two principal methods for mining coal. Materials above the coal bed (overburden) are removed by mechanical shovels in order to expose the coal.

Sub-bituminous coal - Coal with a heat content of 8,300-13,000 Btu/ton.

Synthetic natural gas - Gas manufactured from coal, petroleum, or biological waste that can be interchanged with pipeline quality gas.

Tertiary recovery - (See Enhanced recovery).

TRENDLONG - A Data Resources, Inc. macroeconomic projection as of September 1977 of relatively moderate GNP growth.

Wellhead - The point at which oil or natural gas is transferred from the well to pipeline or other nonwell facility. This term is used to refer to "wellhead price," which is the price received by the producers of oil and natural gas.