**The original documents are located in Box 3, folder: "Memoranda to the President, August 1976" of the Frank Zarb Papers at the Gerald R. Ford Presidential Library.**

INFORMATION

FEDERAL ENERGY ~~ADMINISTRATION~~ OFFICE
WASHINGTON, D.C. 20461

August 2, 1976

OFFICE OF THE ADMINISTRATOR

MEMORANDUM FOR THE PRESIDENT

THRU: ELLIOT RICHARDSON

FROM: FRANK G. ZARB

SUBJECT: Status of Legislation Extending the FEA

The Conference Committee established to resolve House and Senate differences regarding legislation extending the FEA completed its work Friday evening, July 30. Final drafting of the legislation and conference report will not be completed until August 4 or 5, however, and I do not expect to see the bill on your desk prior to the week of August 9.

A number of the highly undesirable aspects of the bills originally passed by the House and Senate were either eliminated in conference or substantially improved; many of the sections sought by the Administration were retained; and several questionable programs or policies still remain. In brief, the bill includes:

- the Bartlett amendment exempting stripper wells from price controls (ca. 70% of domestic wells and 13% of production);

- an additional 1.5% plus (depending upon inflation) increase in the crude price escalator to give greater flexibility in maximizing crude production and phasing out oil price controls;

- two programs requested in the thirteen titles of your original energy program in 1975;

  -- weatherization assistance for low income persons at a slightly higher authorization level than included in your proposal ($200 million vs. $165 million); and

-- thermal efficiency standards for new houses and commercial buildings with less strict sanctions to leverage implementation of such standards by State and local governments than included in your original bill;

. additional items to be included in the State grant program provided in the December energy bill;

. a demonstration program authorized at $200 million to evaluate different methods of creating incentives for homeowners to improve the thermal efficiency of existing housing that will likely not have to be funded if your tax credit is approved;

. a $2.0 billion loan guarantee program for energy conservation investments by industry, business and non-profit institutions that is substantially scaled down from the earlier Senate passed version (e.g. credit elsewhere tests, default limitations, a 50% reduction in authorized guarantee levels, no interest subsidies); and

. other less significant provisions, including some procedural changes to FEA's regulatory program sponsored by Senator Dole.

A full evaluation of the bill's provisions will be prepared and circulated to your advisors for their comments prior to your consideration of the bill. This effort should be completed by August 11.

FEDERAL ENERGY ADMINISTRATION
WASHINGTON, D.C. 20461

August 3, 1976

OFFICE OF THE ADMINISTRATOR

MEMORANDUM FOR THE PRESIDENT

FROM: FRANK G. ZARB F

SUBJECT: UPDATE OF OIL AND GAS DRILLING ACTIVITY

Measures of drilling activity, which are leading indicators of future petroleum production, indicate 1976 will be as good a year as 1975 for domestic exploration and development. A summary picture of two such leading indicators, the number of drilling rigs in operation, and the footage of wells drilled, is shown in the attached chart. Some key points with regard to these two indicators plus two others, the number of wells completed and the number of seismic crews in operation, are:

- The number of rotary rigs in operation in 1976 has been below the 1975 level for the last few months and stands at a level of 1,545 for June 1976. However, the trend in rotary rig activity is closely following the pre-embargo trend (the 1973 pattern on the attached chart) when the number of rotary rigs typically dropped during the first part of the year and then increased during the later part of the year.

- The efficiency of the rigs operating in 1976 is higher than the average for 1975. As a result the number of well completions and the number of feet drilled has increased even though fewer rigs have been in operation.

- Total footage of wells drilled for all months to date in 1976 is higher than that in 1975. Footage of wells drilled in 1976 is running approximately

14 percent above the 1974 level and the expectation is that the total for all of 1976 will exceed that for 1975.

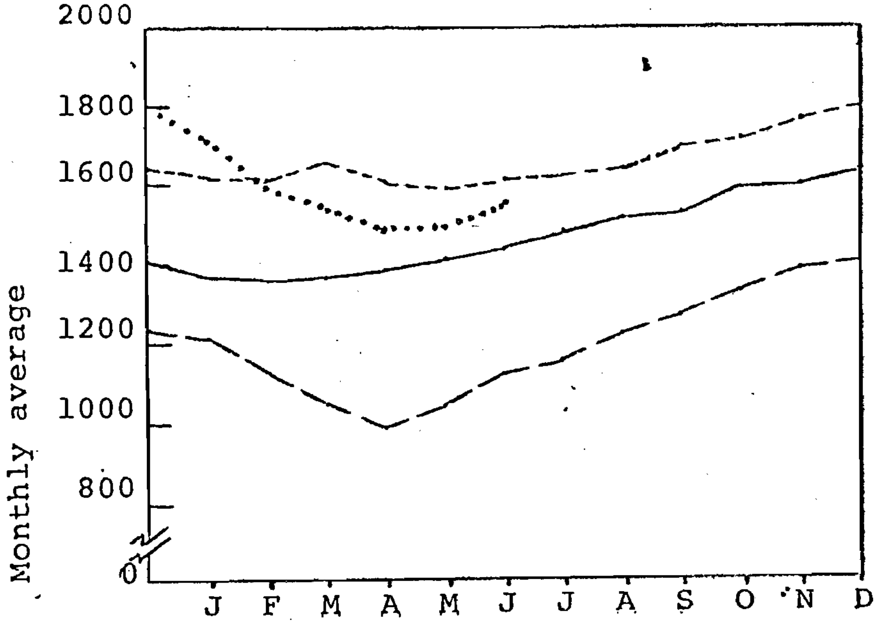
- The number of wells completed in the first five months of 1976 is about 20 percent greater than in the corresponding months in 1975. For the full year the number of well completions is expected to be about 5 percent above the 1975 total of 37,000 wells.

- The number of seismic crews at work during the first six months of 1976 averaged 247, which is less than the monthly average of 283 for 1975, but about the same as the 1973 figure of 250. However, more multiple shootings are now taking place per crew making the crews more productive.

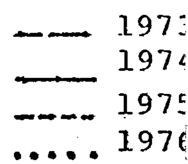
In summary, oil and gas exploration and development activity for the calendar year 1976 is predicted to be slightly higher than in 1975. The seasonal pattern in rotary rig activity appears to be returning to that of the pre-embargo period.

Attachment

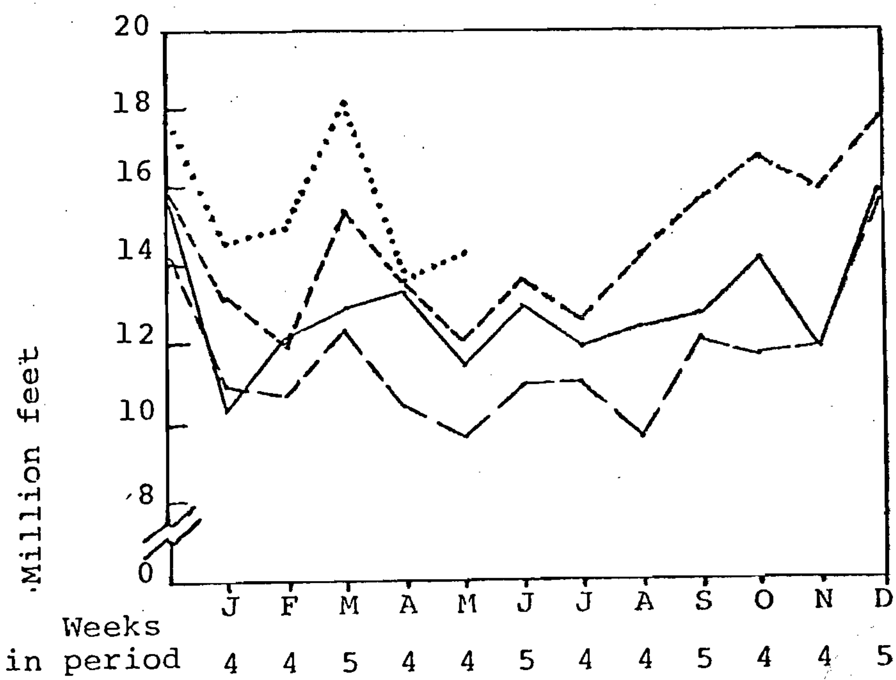
ROTARY RIGS IN OPERATION




Source: HUGHES TOOL CO.



TOTAL FOOTAGE OF WELLS DRILLED




Source: API

Date: 8/3/76

From the desk of The Administrator

To: Arthur Burns

For your information.

Frank

Attachments

Attachments:
8/376 FGZ memo to Pres re Update of Oil Gas
Drilling Activity
7/26/76 FGZ memo to President on Oil Company
Profits
both with the "Memorandum to the President"
whited out

OFFICE
FEDERAL ENERGY ~~ADMINISTRATION~~
WASHINGTON, D.C. 20461
August 5, 1976

OFFICE OF THE ADMINISTRATOR

MEMORANDUM FOR THE PRESIDENT

FROM: FRANK G. ZARB
ADMINISTRATOR

SUBJECT: Decontrol Measures Taken Since Enactment of EPCA

During the two years since the Emergency Petroleum Allocation Act became effective in December 1973, the entire petroleum industry was subject to some of the most extensive regulation ever imposed on American industry. However, enactment of the Energy Policy and Conservation Act last December has now provided a mechanism enabling FEA to take major steps toward the complete removal of these controls.

Under EPCA authority, price and allocation controls were lifted from residual fuel oil effective June 1 and from middle distillates (heating oil and diesel fuel) effective July 1. With the expiration of another Congressional review period yesterday, controls can now also be eliminated from naphthas, gas oils, lubes and greases and many miscellaneous petrochemical feedstocks and specialty products on September 1. Altogether, thousands of refined petroleum products, which account for about 50% of the crude barrel yield, have thus been decontrolled. Only six refined products, which account for the other half of the barrel, remain subject to controls. We are continuing to work actively toward the exemption of these remaining products.

With respect to crude oil, despite a one time price rollback required by EPCA, average domestic crude oil prices have been rising steadily from the initial February $7.66 per barrel average and are now around $8.00 per barrel. Moreover, subsequent to implementation of the EPCA, production from naval petroleum reserves has been completely exempted from controls. The stripper well exemption recently added to the FEA extension bill will also exempt another 13% of domestic production and raise the domestic composite price about 15-20 cents per barrel if that bill is signed into law. Most importantly, however, the EPCA price adjustment mechanism has finally permitted FEA to raise gradually the price of the 57 percent of domestic oil classified as old crude oil. Prior to EPCA, prices for old oil had been frozen at the same level for over two years.

8/5 D.H.

AUG 6 1976

MEMORANDUM FOR THE PRESIDENT

FROM: FRANK G. ZARB Frank G. Zarb

SUBJECT: STATUS OF COAL UTILIZATION PROGRAM

The Federal Energy Administration's Coal Utilization Program is designed to prevent the use of foreign oil and scarce natural gas. Its implementation represents good economics both for the country's balance of payments and the consumer's pocketbook.

While the first investment for a coal-fired base load plant is considerably more than that for an oil-fired plant, the cost of coal is one-third to half that of oil. Over the long term, the coal plant should deliver power that is 35 percent cheaper.

Attached is a summary of achievements to date and future activities of the Coal Utilization Program.

Attachment

Official File
Exec. Sec. (2)
ERD Corr.
Signature File
Read File ✓
Hanfling File
OCU Chron



RETYPED:mmp:8/5/76 KVanzant:rm 6111

Vanzant Kreps Parker Rubin Hanfling Rosenberg

FEDERAL ENERGY ADMINISTRATION
WASHINGTON, D.C. 20461

August 6, 1976

OFFICE OF THE ADMINISTRATOR

INFORMATION

MEMORANDUM FOR THE PRESIDENT

FROM: FRANK G. ZARB F

SUBJECT: STRATEGIC PETROLEUM RESERVE PROGRAM

The Strategic Petroleum Reserve Program is progressing close to the schedule called for in the Energy Policy Conservation Act. Reports to the Congress on our plans for an Early Storage Reserve of 150 million barrels and development of Naval Petroleum Reserve #4 have been submitted; the report due to the Congress on the overall storage program in December is on schedule.

We have identified a number of existing salt dome cavities and mines which can be used to implement the Early Storage Program by the end of 1978. When the Environmental Impact Statement process on these potential sites is completed in December or early January, the Army Corps of Engineers will begin acquiring the sites through an interagency agreement. Construction will begin no later than the end of March and we plan to have 40 million barrels of oil in storage by the end of 1977.

Our budget submission for the fiscal year 1978 will include requests for funds to procure sites and construct facilities to achieve the programs' 325 and 500 million barrel objectives for 1980 and 1982, respectively.

FEDERAL ENERGY ADMINISTRATION
WASHINGTON, D.C. 20461

August 6, 1976

OFFICE OF THE ADMINISTRATOR

INFORMATION

MEMORANDUM FOR THE PRESIDENT

FROM: FRANK G. ZARB

SUBJECT: STRATEGIC PETROLEUM RESERVE PROGRAM

The Strategic Petroleum Reserve Program is progressing close to the schedule called for in the Energy Policy Conservation Act. Reports to the Congress on our plans for an Early Storage Reserve of 150 million barrels and development of Naval Petroleum Reserve #4 have been submitted; the report due to the Congress on the overall storage program in December is on schedule.

We have identified a number of existing salt dome cavities and mines which can be used to implement the Early Storage Program by the end of 1978. When the Environmental Impact Statement process on these potential sites is completed in December or early January, the Army Corps of Engineers will begin acquiring the sites through an interagency agreement. Construction will begin no later than the end of March and we plan to have 40 million barrels of oil in storage by the end of 1977.

Our budget submission for the fiscal year 1978 will include requests for funds to procure sites and construct facilities to achieve the programs' 325 and 500 million barrel objectives for 1980 and 1982, respectively.

FEDERAL ENERGY ADMINISTRATION
WASHINGTON, D.C. 20461

August 12, 1976

OFFICE OF THE ADMINISTRATOR

MEMORANDUM FOR THE PRESIDENT

THRU: ELLIOT RICHARDSON

FROM: FRANK ZARB /S

SUBJECT: H. R. 12169/S. 2872: ENERGY CONSERVATION AND PRODUCTION ACT (FEA EXTENSION)

## BACKGROUND

The House and Senate conferees have now completed action on the FEA extension and a bill has been sent to you.

As you recall, you proposed a simple 39-month extension of FEA in January. The Senate and House initially passed bills which extended FEA for a shorter period of time (15-18 months, respectively) and contained numerous amendments, many of which were extremely objectionable. The bill ultimately reported by the conferees, however:

- contains some highly desirable changes, sponsored by Senator Bartlett, to the EPCA pricing provisions for crude oil;
- authorizes two more of the original 13 titles of your own energy program;
- includes several questionable or undesirable conservation programs, albeit considerably improved from versions originally passed by the Senate.

This memorandum provides a description of the major provisions of the bill, provides an analysis of its various impacts (on oil production, the economy and the budget), states the reasons for signing and vetoing the bill, and records the recommendations of your various advisors.

MAJOR PROVISIONS IN THE BILL

The major provisions of the bill are outlined below:

- Federal Energy Organization

  - Extends the Federal Energy Administration until December 31, 1977.

  - Extends the Energy Resources Council until September 30, 1977.

  - Requires the ERC to prepare a plan for the reorganization of the Federal Government's activities in energy and natural resources by December 31, 1976 and revised plan by April 15, 1977.

  - Establishes an Office of Energy Information and Analysis in FEA with certain authorities independent from the Administrator. While such an Office now exists in FEA, it is not required by statute and will have some additional responsibilities.

- Domestic Oil Pricing

  - Exempts first sale of domestic stripper well crude oil from price controls.

  - Changes the 3% production incentive factor for crude oil mandated in the Energy Policy and Conservation Act to the difference between the 10% rate and the rate of inflation; thus, the crude price escalator would be 10% regardless of the inflation rate. In 1976, the escalator would be approximately 1 1/2% greater than is currently the case. Requires that tertiary recovery and California gravity crude differential problem be given first priority in utilizing added pricing flexibility. To obtain this provision, the FEA agreed to provide no more production incentive factor adjustments until March, 1977.

o <u>Conservation</u>

- Requires HUD to develop and promulgate mandatory thermal efficiency standards for all new residential and commercial buildings. This provision is less stringent than proposed in your original legislation in that the sanctions cannot be implemented until a proposal to do so has been approved through a concurrent resolution of Congress.

- Authorizes FEA to provide $200 million in grants over a three year period for the insulation of homes of low-income and elderly persons, and Indian tribes. This measure is similar to your own weatherization program, but with the following major differences:

  -- Increases authorization levels by a total of $35 million over the three year period.

  -- Expands eligibility by lowering age minimum to people over 60 years old.

  -- Sets $400 maximum grant per dwelling, which is considerably higher than Administration's concept.

- Establishes a $200 million <u>demonstration program</u>, administered by HUD, to test various mechanisms (grants, low interest loans, interest subsidies, etc.) for encouraging energy conservation improvements or use of renewable resources, such as solar heating and cooling, in existing residential buildings. The amount of the grants cannot exceed $400 for any energy conservation measure or $2000 for any renewable resource measure. It requires a report to Congress before implementation of any program, and a final report within two years.

- Authorizes up to $2 billion in obligation guarantees for conservation investments by industry, small businesses, and non-profit institutions (including State and local governments). The bill requires that applicants for guarantees satisfy a credit elsewhere test and show that conservation investments would be repaid. The bill has no requirements for Treasury approval of the issuance of obligations guaranteed under the proposal, although such approval is not precluded and consultation with Treasury is required.

- Supplements the State energy conservation program contained in the EPCA by authorizing $105 million in the next three years; allows States to make energy audits available to homeowners at no cost.

- Provides a statutory authorization of $13 million for FEA's existing electric utility rate demonstration programs to test innovative rate structures and load management techniques, to intervene in State utility commission rate making proceedings, and requires FEA to submit a report to Congress on utility rate designs.

- Authorizes up to $2 million in State grants to help establish or fund consumer offices to assist consumers in their presentations before State commissions.

o <u>Other Provisions</u>

- Requires the ERC to prepare an annual report on national energy conservation beginning July 1, 1977.

- Authorizes $3 million for a solar commercialization and utilization program.

## SUMMARY IMPACTS OF THE BILL

The bill will affect the domestic energy situation, consumer prices, oil industry revenues, and the budget. The major impacts are summarized below.

o <u>Impacts on Domestic Energy Situation</u>

The pricing amendments, which exempt stripper well oil from price controls and increase production incentives will have a beneficial impact. It is anticipated that these provisions will stimulate application of expensive enhanced oil recovery techniques. The effect of the stripper well provision is to allow oil from stripper wells to sell at the free market price, thus freeing 70% of the nation's wells (10-13% of production) from crude oil price controls.

The pricing and conservation provisions could reduce oil imports by about 150,000 barrels per day in 1977 and about 500,000 barrels per day in 1979. Most of this reduction is due to the stimulation of tertiary recovery projects by removing price controls and by reducing uncertainties caused by government regulation. In the long-term, the increased incentives for tertiary recovery could be an important factor in expanding domestic production (potential of over one million barrels per day by 1985).

The conservation measures in the bill are expected to have a small impact initially on energy demand in buildings, utilities, and industry, but could save over 250,000 barrels per day in the early 1980's.

o <u>Impacts on Prices and the Economy</u>

The effects of this bill on domestic prices will be minimal and will take some time to be felt in the marketplace. All domestic crude oil prices will increase about 3% a year above EPCA levels for the remainder of the 40-month price control program. This increase would affect petroleum product prices initially by about one-third of a penny per gallon. If the entire increase were passed through to the consumer, average household expenditures for petroleum would go up about $10 next year. However, past experience indicates that full pass-throughs will not likely occur.

Oil industry revenues are likely to increase by about $1 billion in 1977 and $1.5 billion in 1978. Some of these increased revenues will stimulate production and exploration and provide greater tax revenues.

The macroeconomic effects of the bill will be very small. Real GNP would be virtually unchanged, as any increase in price could be offset by the multiplier effects of greater investments in domestic production. Unemployment rates would not be measurably affected and inflation would increase, after two years, by about 0.3%.

o <u>Potential Budget Impacts</u>

The total expenditures <u>authorized</u> in this bill amount to about $600 million over a three year period, excluding FEA authorization and assuming no more than the $60 million default limitation occurs (see Table 1 for authorizations). FEA is authorized to charge a fee of up to 1% of the loan guarantees. In addition, there would be costs associated with the personnel needed to administer these programs (estimated number of additional people is 300-800 in FY 1977 and 400-900 in 1979). The wide range in the personnel figures is due to uncertainty about the level of funding, if any, of some of these programs. Actual appropriations could, and likely would be considerably below these authorized amounts.

<u>REASONS TO ACCEPT THE CONFERENCE BILL</u>

- The pricing provisions will accomplish a number of objectives:

  -- remove controls from all stripper wells (about 70% of all U.S. wells and 10-13% of crude production); thus relieving over 350,000 operators of substantial regulatory burdens and reversing the rollback in prices they experienced after last December's energy act.

  -- provide increased revenues to industry of about $1 billion in 1977 and $1.5 billion in 1978 which can be used to increase production and exploration.

  -- give FEA the flexibility to provide incentives for high cost production (such as tertiary recovery) and to fix some inequities in current systems (such as California heavy oil problem).

  -- will move domestic price closer to world oil prices at the end of price controls, increasing the chance for decontrol.

-- pricing provisions could reduce imports by as much as 150,000 barrels per day in 1977 and a half million barrels per day in 1979.

-- achieve price increases and production incentives without a significant economic impact (prices would rise by less than half a cent per gallon).

-- puts Congress on record for approving 10% price escalator, just six months before it has to vote on whether to let the production component of the escalator continue throughout the period of controls.

- The conservation measures contained in the bill include two components of your original energy program -- building standards and weatherization -- in largely the same form you sent them to Congress. With enactment of these provisions, 7 of the 13 titles of your original Energy Independence Act will be law.

- The conservation provisions, would demonstrate action on a popular issue, even though several have a variety of problems.

- The bill has considerable bipartisan support and is supported by many oil state Congressmen as well as Northern Congressmen.

- Achieves an extension of FEA and removes the temporary FEO from the Executive Office of the President.

<u>REASONS TO REJECT THE CONFERENCE BILL</u>

Major reasons for rejecting the conference bill include the following:

- Some of the conservation measures in the bill add further bureaucracy and regulations, while achieving fairly small energy savings. The HUD demonstration program, in particular, will be difficult to administer if funded at authorized levels and could overlap with pending tax legislation.

- The budget implications of the bill's conservation measures are several hundred million dollars in funds and up to $2 billion in guarantees. Further, the Treasury is not required to approve issuance of obligations.

- The pricing provisions (other than stripper well exemption) mean little if the GNP deflator rises above 7%.

- In addition to several questionable or marginal conservation programs, the bill includes other undesirable measures, such as the $2.0 million authorization to provide States with grants to fund consumer groups to intervene in State regulatory commission hearings (could result in Federal funds being used to subsidize actions against State agencies and contrary to objectives of Administration's utility programs); and a statutorily separate Information and Analysis Office in FEA.

- Some members of the public will review the extension of FEA as an example of temporary agencies staying in existence forever.

RECOMMENDATIONS OF ADVISORS

The views of your advisors are indicated below:

Advisors Favoring Signing

(1) Richardson
(2) Zarb
(3) Seidman
(4) Kissinger
(5) Kleppe
(6) Cannon
(7) Train
(8) Scowcroft
(9) Marsh
(10) Friedersdorf

Advisors Favoring a Veto

Other Opinions

While recognizing that there may be good reasons for signature, Secretary Simon has reservations concerning a number of aspects of the bill -- i.e., the conservation provisions will be ineffective and, from a technical standpoint, are not consistent with normal USG loan guarantee programs; the provisions dealing with public utility rates may make it more difficult to introduce rate structures reflecting the actual cost of producing energy; and additional regulations and personnel will be needed at both the state and federal level to administer the Bill.

Secretary Hills has been unavailable; her vote will be forwarded when received.

TABLE 1
EXPENDITURES AUTHORIZED IN THIS BILL
(Millions of Dollars)

| Category | FY77 | FY78 | FY79 | No Year |
|---|---|---|---|---|
| Electric utility rate design initiatives | 13 | -- | -- | |
| Grants for consumer services offices | 2 | -- | -- | |
| Grants for energy conservation standards for new buildings | 5 | -- | -- | |
| Weatherization assistance 1/ | 55 | 65 | 80 | |
| State conservation plans | 25 | 40 | 40 | |
| Homeowners incentives demonstration program | -- | -- | -- | 200 |
| Industrial obligation guarantee (defaults) 2/ | -- | -- | -- | 60 |
| Administrative costs | | | | |
| $ | 10-22 | 11-25 | 11-25 3/ | |
| (personnel) | (350-800) | (400-900) | (400-900) | |
| Total | 110-122 | 116-130 | 131-145 | 260 |

1/ An additional $100-200 million may be necessary to carry out this program fully because of liberalized eligibility and $400 of assistance per dwelling permitted by statute.

2/ If the $2 billion guarantee program is fully committed and default rates resemble those of comparable Small Business Administration guarantee programs, costs could increase by $60-100 million. Costs could be offset partially by charging a fee.

3/ The higher personnel level assumes full funding of the HUD demonstration program and industrial loan guarantee program.

Simons note 8-12

While recognizing there are good reasons to sign - has reservations (see note)

FEDERAL ENERGY ADMINISTRATION
WASHINGTON, D.C. 20461

August 12, 1976

MEMORANDUM FOR THE PRESIDENT

FROM: FRANK G. ZARB

SUBJECT: MID-YEAR ENERGY STATUS REPORT

The energy situation continues to change. I believe it may be informative for you to be briefed on the latest assessment of progress and problems in moving towards energy independence.

In preparation for such a briefing, I have attached charts depicting our current supply, demand and import situation, along with a narrative description of these charts.

Attachment

## ENERGY SITUATION

Energy trends over the past year show increasing imports and a steadily rising consumption rate in the United States. Even with sharp increases in energy prices following the Arab embargo, the use of energy per dollar GNP has remained relatively stable. Domestic oil production, which has been declining since 1970, will continue to do so, but at a rate less than that experienced prior to the 1973-1974 embargo. Production will stabilize and then increase in the next few years as approximately 1.6 million barrels per day of Alaskan oil is transported to the Lower 48 States.

### PETROLEUM IMPORTS AND DOMESTIC PRODUCTION

- o While a reduction in total imports was experienced in 1974 and 1975, imports rose early in 1976 as the economic condition of the country improved. The Arab OPEC share of oil imports has risen to 37% from 22% before the embargo, and all of OPEC is now contributing 82% of our import needs compared to 70% prior to the embargo. Average daily domestic crude oil output reached the lowest level in more than a decade (8.1 million barrels per day) in March, with a reversal not expected until late 1977. (CHART 1)

- o The combination of declining domestic production and rising demand has led to a rapid growth in imports:

  - From 1.8 MMB/D, or 19% of consumption, in 1960.
  - To 3.4 MMB/D, or 23% of consumption, in 1970.
  - To 6.0 MMB/D, or 37% of consumption, in 1975.
  - To 7.0 MMB/D, or 41% of consumption projected for 1976.

  (CHART 2)

- o Estimated total 1976 imports will cost $35 billion, based upon forecasts of lower domestic crude production coupled with increased demand. This compares to about $27 billion last year. (CHART 3)

PETROLEUM EXPLORATION

o Although 1976 has shown a decline in the actual number of rotary drilling rigs in operation due to the crude oil price rollback mandated in EPCA, lack of natural gas deregulation and removal of the depletion allowance, total footage of wells drilled has risen. The decline in rigs follows pre-embargo seasonal trends, and is normal for the beginning of the year because of a combination of adverse weather and the end of the tax year. (CHART 4)

PETROLEUM CONSUMPTION

o Domestic oil consumption fell in 1974 and in 1975. Fully two-thirds of this reduction can be attributed to the slow-down in the economy with higher prices and conservation activities accounting for most of the remainder. Recent 1976 trends show a 4.1% increase in petroleum product demand through the 2nd Quarter over the corresponding period in 1975, with demand for motor gasoline alone increasing over 4.8% for the same period. Total United States refinery capacity appears to be sufficient to handle increasing demand of gasoline and other refined petroleum products. (CHART 5)

GASOLINE PRICES

o When adjusted for inflation, gasoline, selling at about 57 cents per gallon for the first quarter of 1976, reflects little change from the average selling price of gasoline in 1967 -- about 34 cents per gallon. During the second quarter of this year, gasoline prices increased on the average of 2 cents per gallon due to higher priced crude oil and normal seasonal factors. (CHART 6)

AUTOMOBILE EFFICIENCY

o New car average efficiency increased 12% from model year 1974 to model year 1975 and is projected to increase from 6% to 13% in 1976. The efficiency of the entire fleet was forecast to remain the same in 1975, and is projected to increase about 2% in 1976. (CHART 7)

NATURAL GAS PRODUCTION AND CURTAILMENTS

- Natural gas production will continue to decrease during the next few years, and then could increase to 22.3 Tcf in 1985 if prices are deregulated (this compares with 20.1 Tcf in 1975). Under current FPC regulation, natural gas production could decline to 17.9 Tcf in 1985; although the recently announced FPC price of $1.42 per Mcf would increase production to over 21 Tcf in 1985. (CHART 8)

- In 1970-71, when the FPC began compiling data on gas curtailments, 12 of the 48 major interstate pipelines experienced curtailments. By the 1975-76 heating season, 31 of the 48 pipelines were projecting curtailments. FPC projections estimate natural gas curtailments for major interstate natural gas pipeline companies for the 12 month period April 1976 through March 1977 will be more than 3.6 Tcf, compared to an actual curtailment of 2.8 Tcf for the same period last year. The brunt of these curtailments will be felt in the Mid-Atlantic and Mid-West areas. (CHART 9)

COAL PRODUCTION AND CONSUMPTION

- Coal production has remained level during the past five years. Production in 1974 was 603 million tons, rose to about 640 million tons in 1975, and is expected to reach about 675 million tons in 1976. (CHART 10)

ELECTRIC POWER

- Production of electricity showed an annual 7 percent rise until 1973 when higher prices and the economic slowdown resulted in a leveling off of production. It started to grow again in 1975 at a rate of 2 percent and is accelerating in 1976. (CHART 11)

- In 1966, market value for electric utility stocks averaged 2.05 times book value. This ratio declined through 1974 and reached its low point of .67 times book value during that year. By the end of 1975, and continuing into 1976, the market had recovered sufficiently to raise the average market to book ratio to .89. (CHART 12)

NUCLEAR POWER

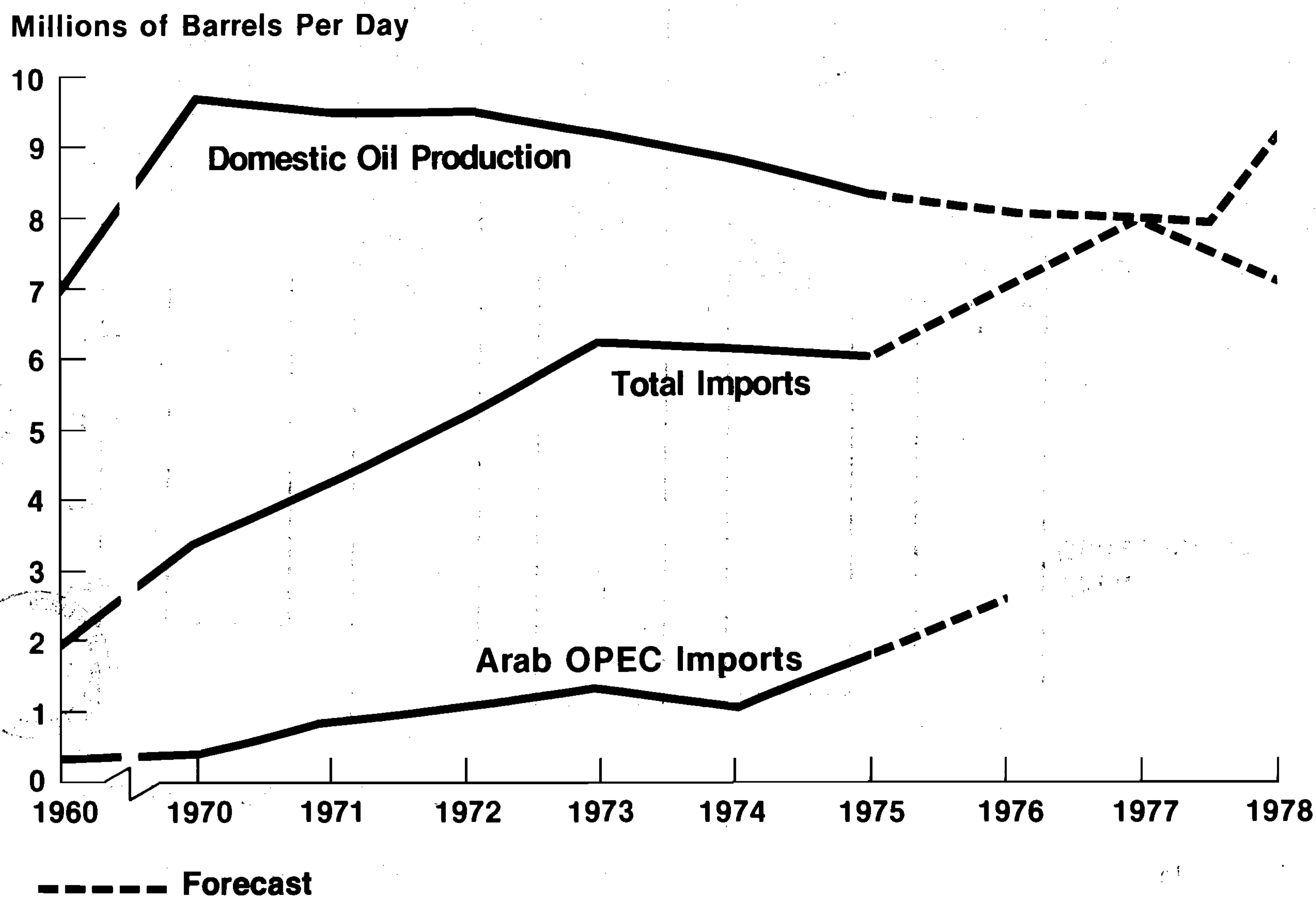
o Projected nuclear and fossil fuel power capacity additions have been subject to repeated slippage due to safety, environmental, and financial considerations. Currently, the U.S. has 58 nuclear powerplants on line. Projected total plants for 1985 are presently 170, as compared to projections of 202 last year and 209 in 1974. (Chart 13)

STATUS OF ENERGY LEGISLATION

o Of the numerous legislative proposals in the President's energy program, 5 have been enacted into law; 7 have passed at least one House and 9 await Congressional action. (Charts 14 and 15)

CHART 1

# Domestic Oil Production and Imports



# Imports' Share of Consumption

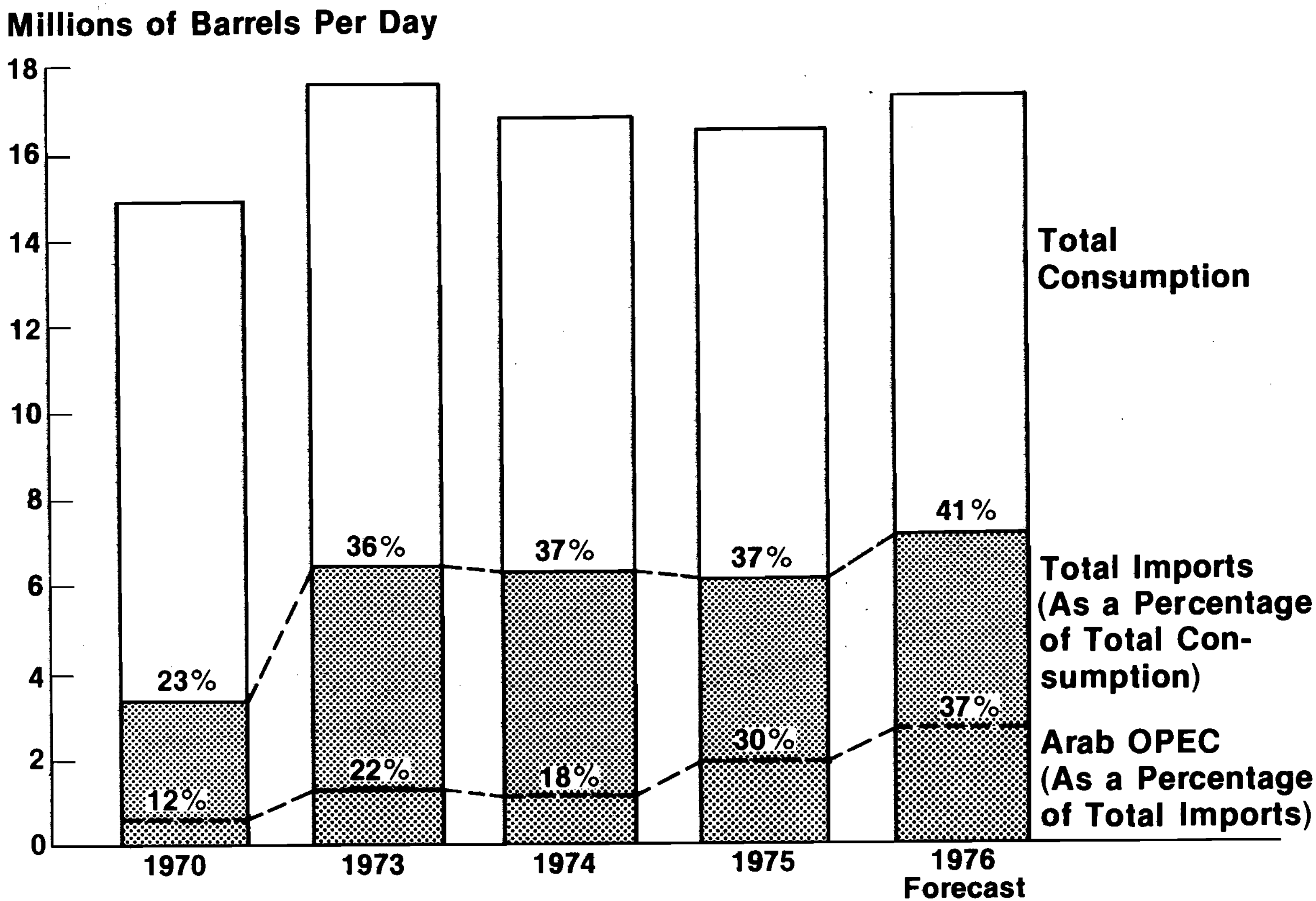
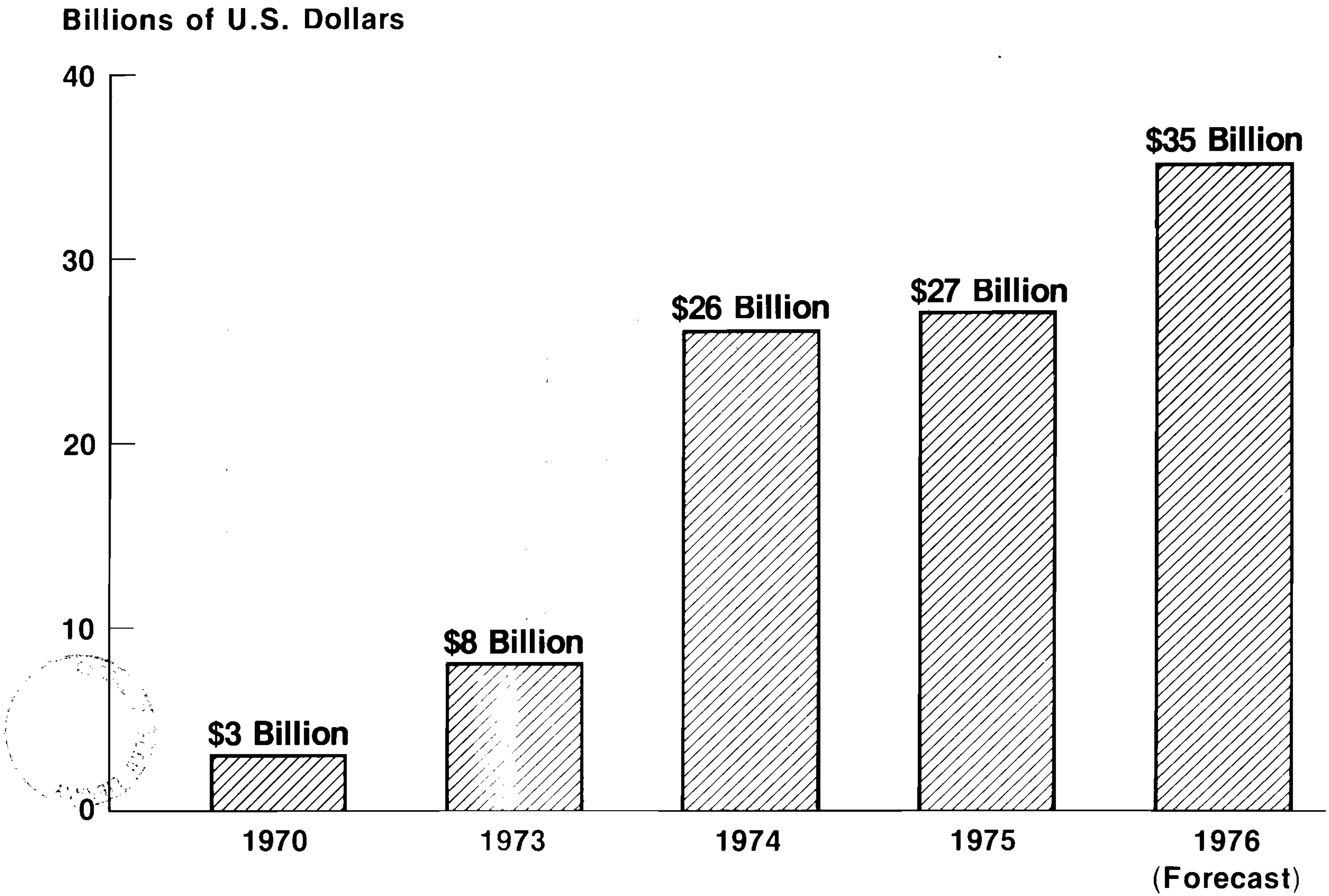



CHART 2

CHART 3

## U.S. Annual Payments for Petroleum Imports

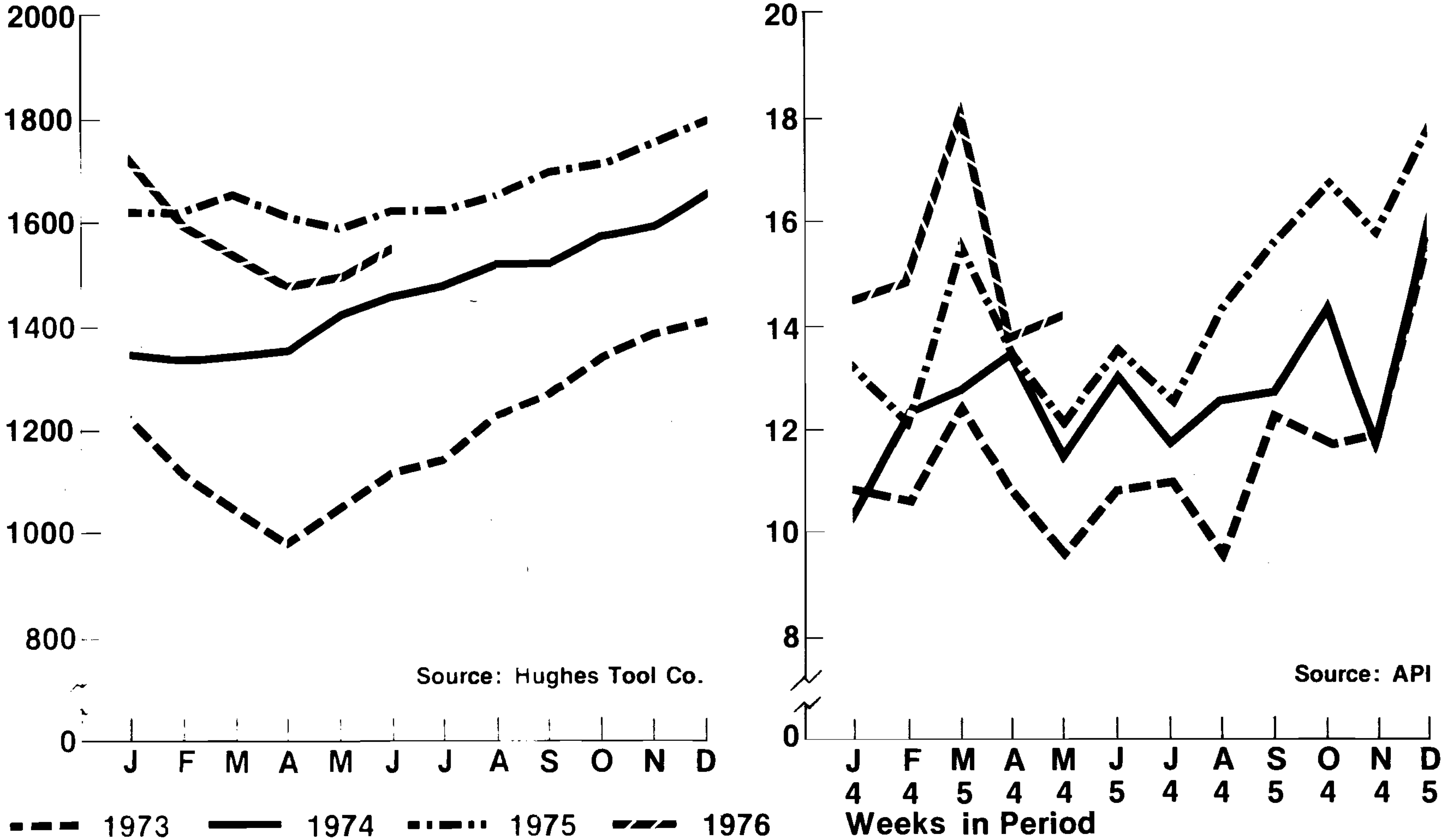


# Oil and Gas Exploration

CHART 4

**Rotary Rigs in Operation**
Monthly Average

**Total Footage of Wells Drilled**
Million Feet



# Domestic Petroleum Consumption

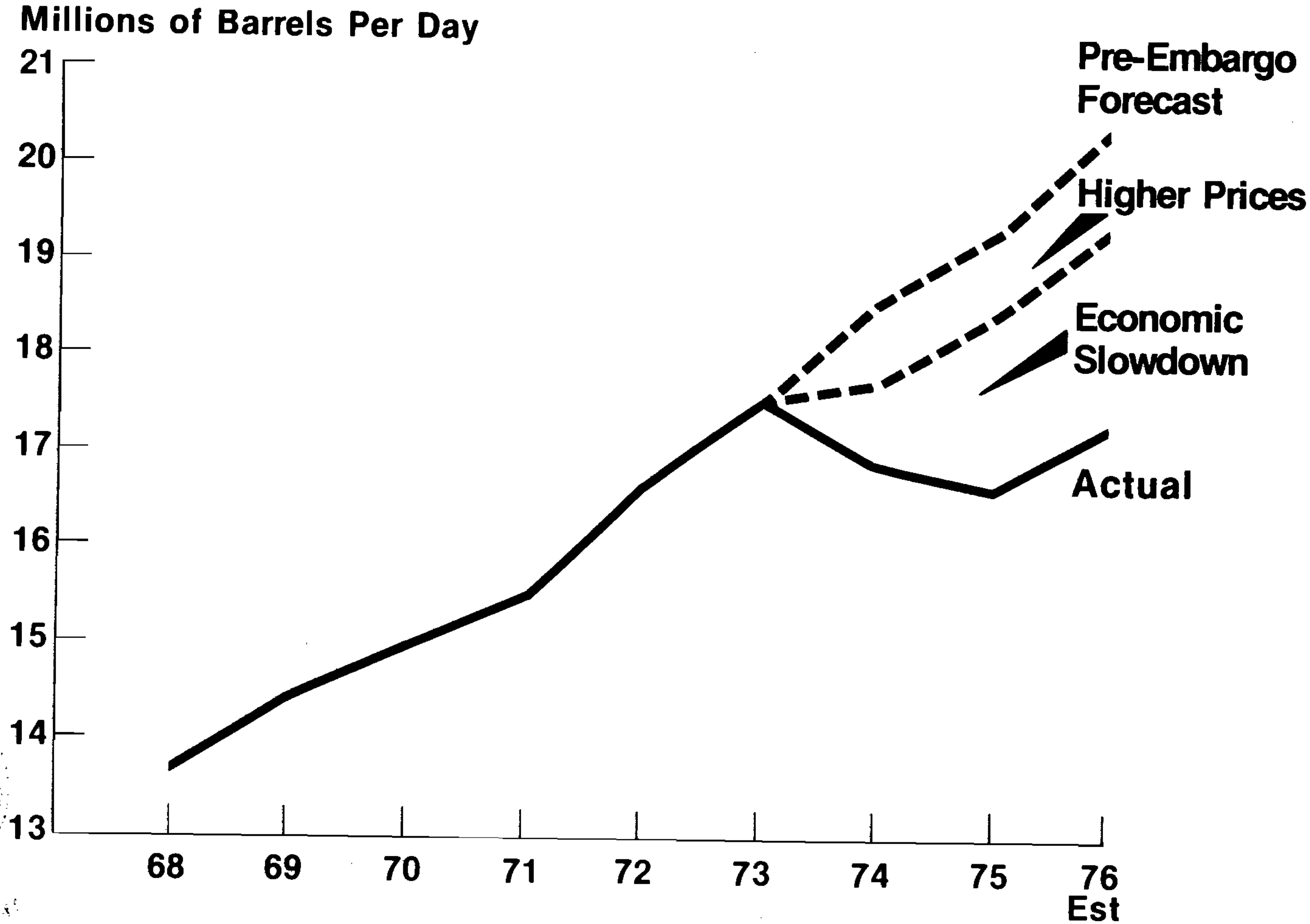
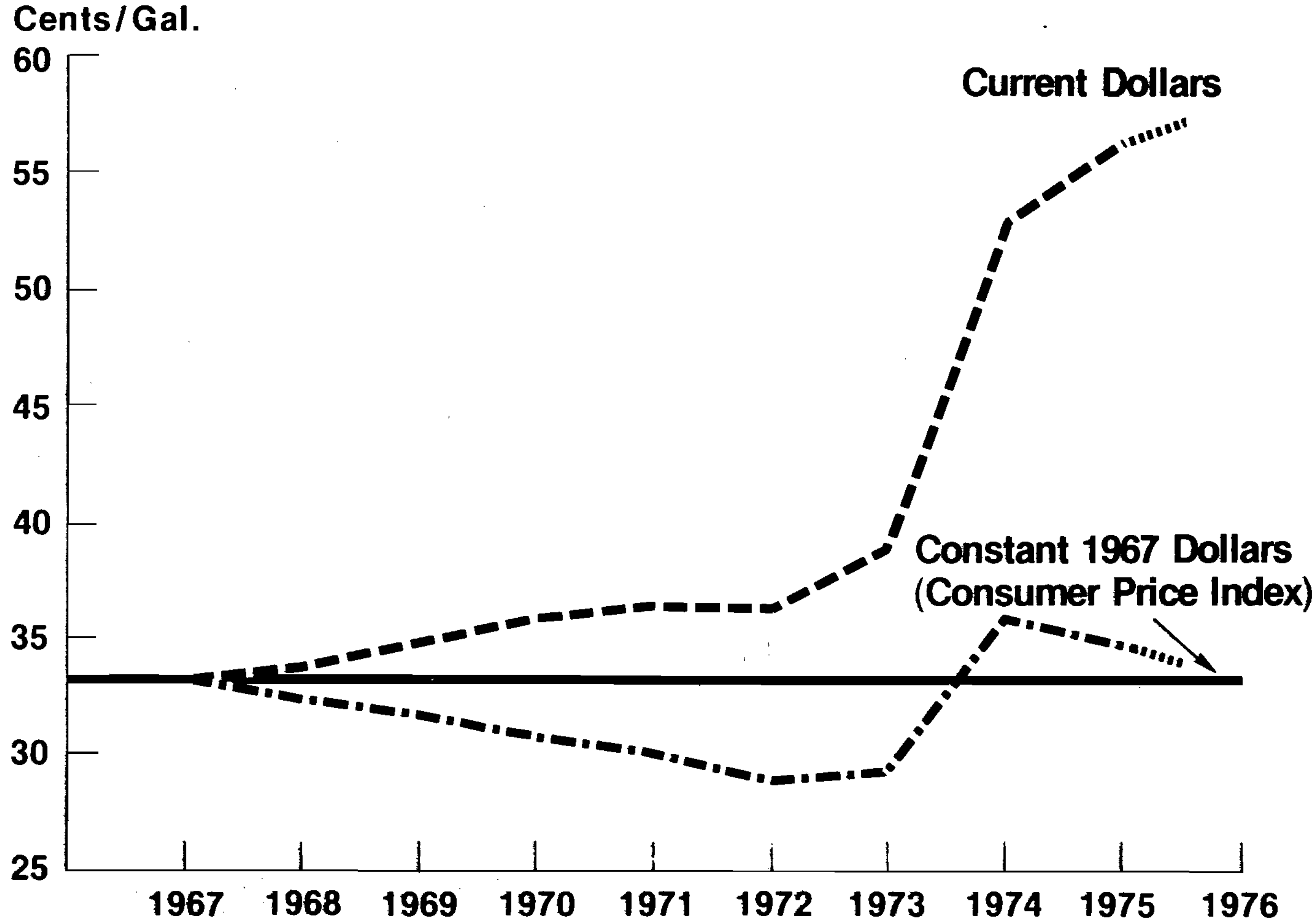



CHART 5

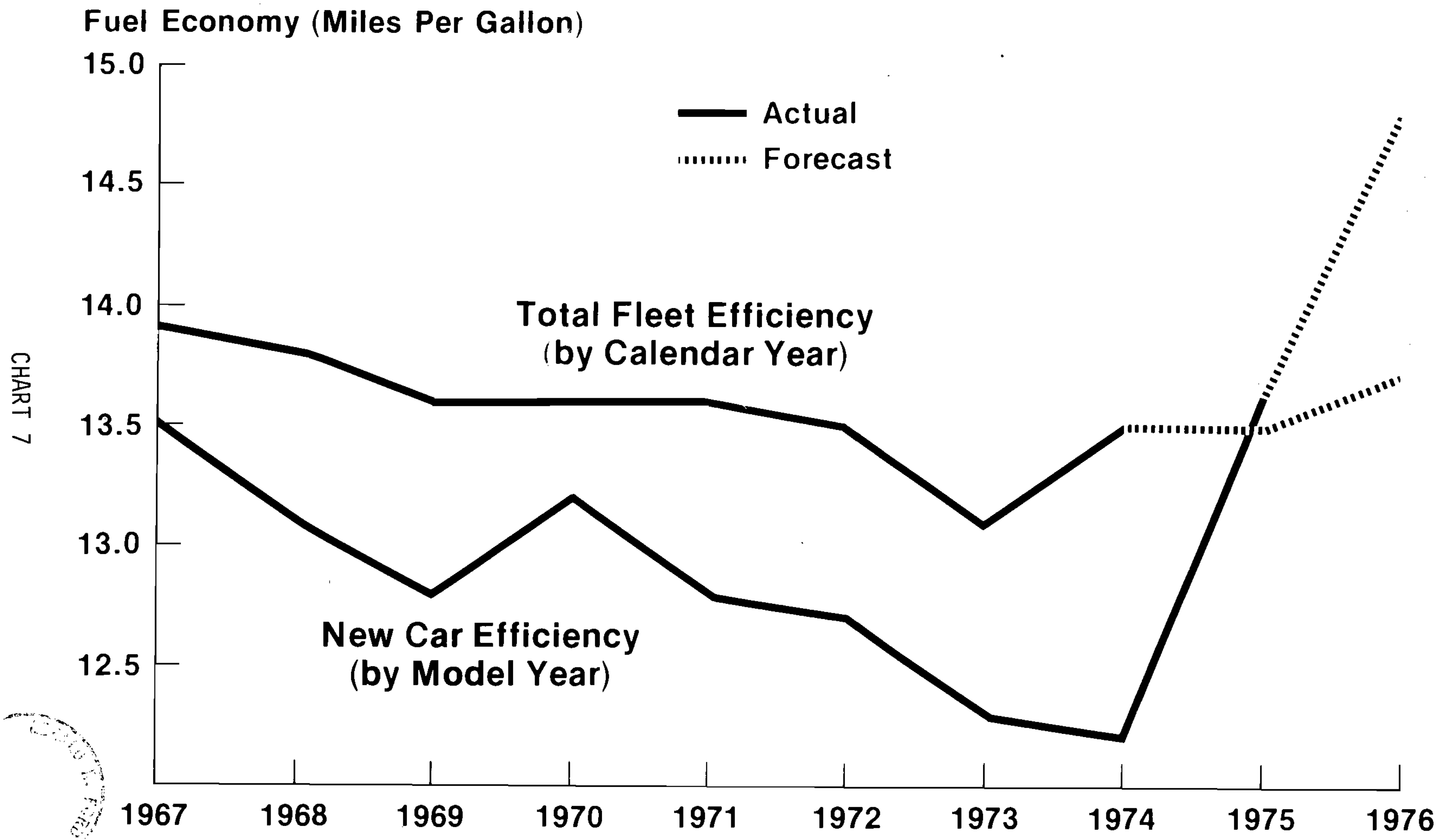
# Average Annual Retail Prices of Motor Gasoline



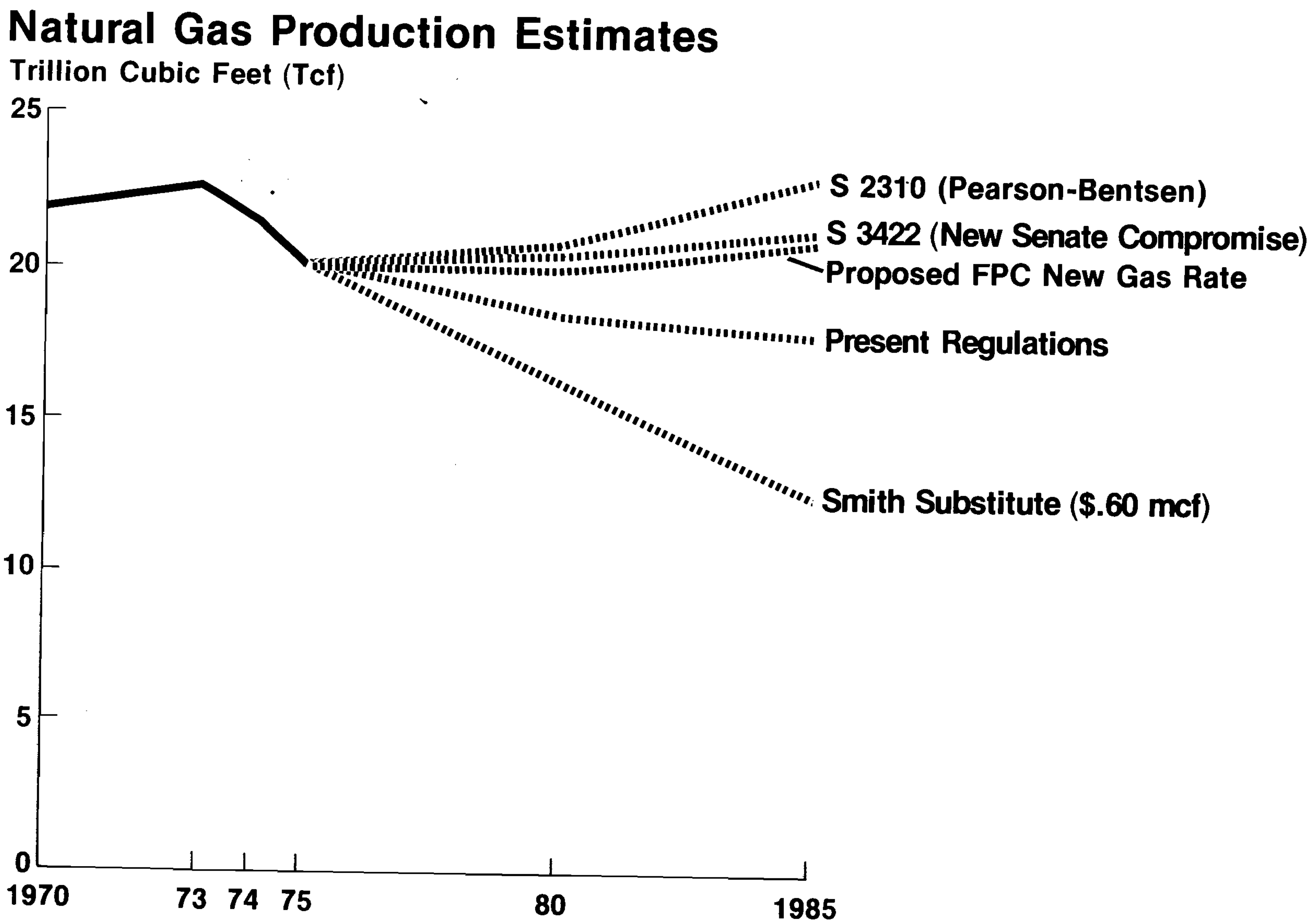

--- Monthly data from January—May 1976.

CHART 6

# Automobile Fuel Efficiency




NOTE: EPA test data for new cars is about 15% higher than actual driving experience.



Natural Gas Production Estimates
Trillion Cubic Feet (Tcf)
25
20
15
10
5
0
1970
73
74
75
80
1985
S 2310 (Pearson-Bentsen)
S 3422 (New Senate Compromise)
Proposed FPC New Gas Rate
Present Regulations
Smith Substitute ($.60 mcf)


CHART 8

CHART 9

# Major Natural Gas Producing Regions and Pipelines With Significant Curtailments

| | 75-76 | 76-77 Projected |
|---|---|---|
| El Paso | 24% | 33% |
| United | 44% | 51% |
| Transcontinental | 35% | 39% |
| Columbia | 25% | 28% |
| Texas Eastern | 26% | 26% |
| Panhandle | 22% | 26% |

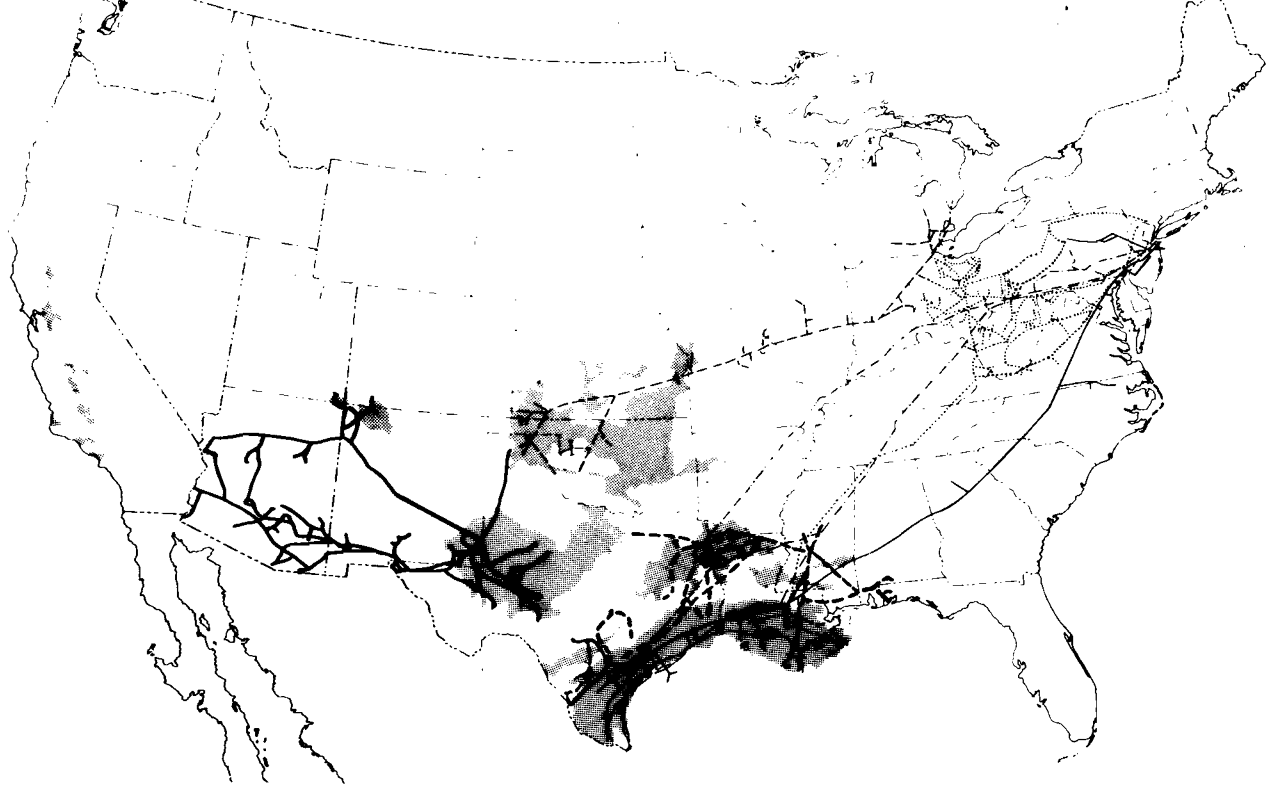


CHART 10

## Coal Production

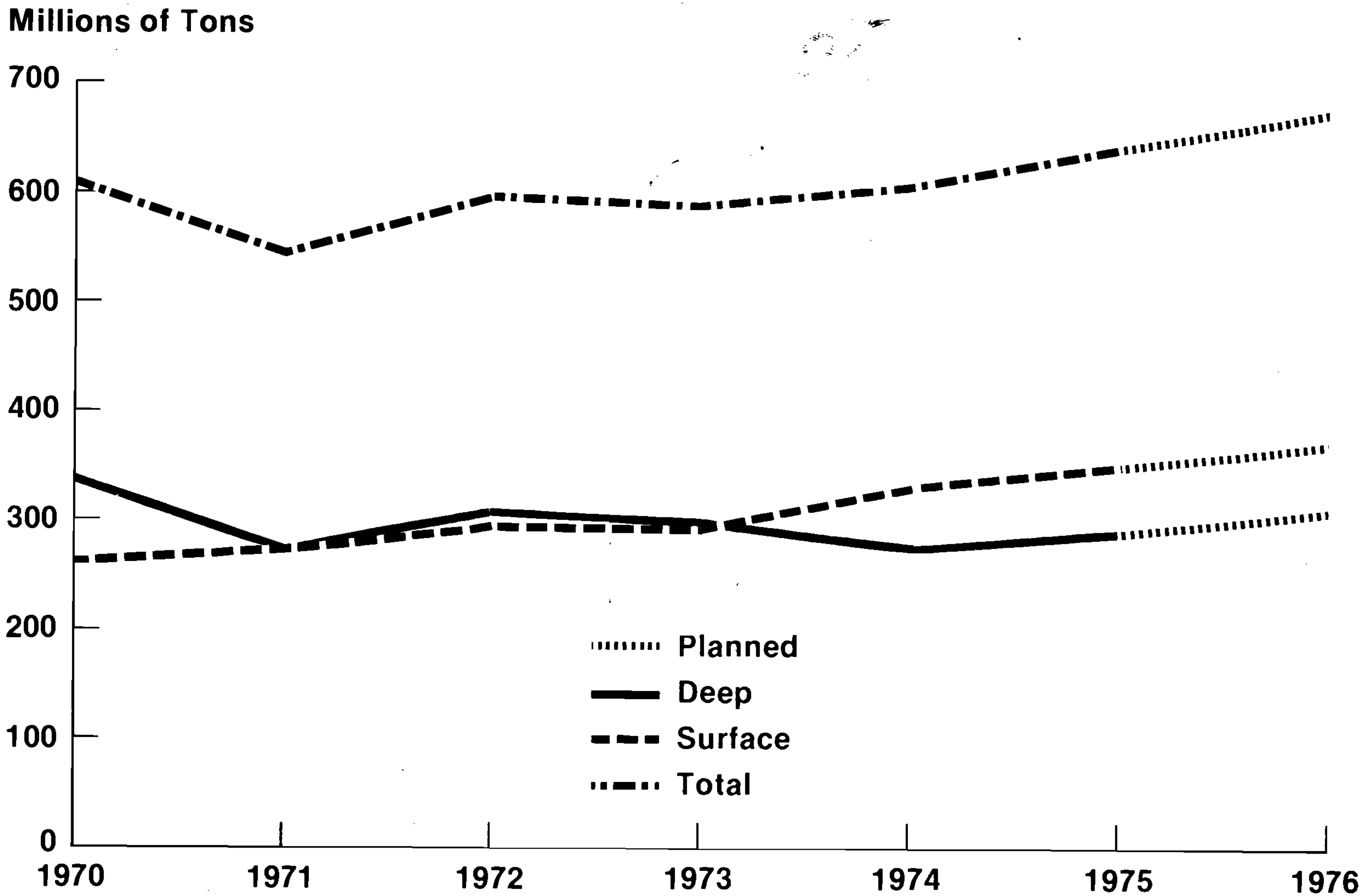


CHART 11

## Annual Production of Electricity

$10^{12}$ Kwh/Yr.

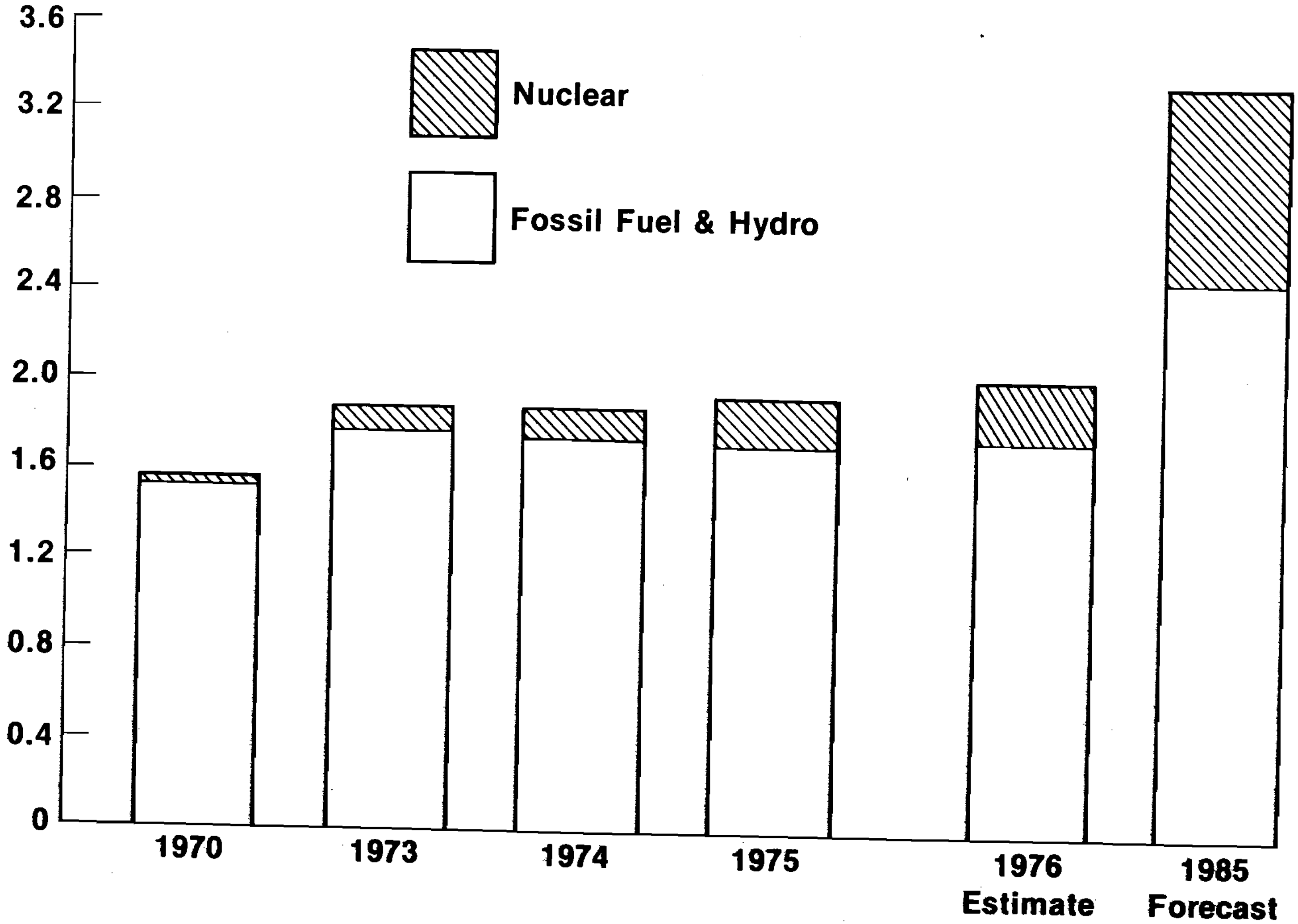


CHART 12

# Ratio of Market Value to Book Value of Electric Utility Stock

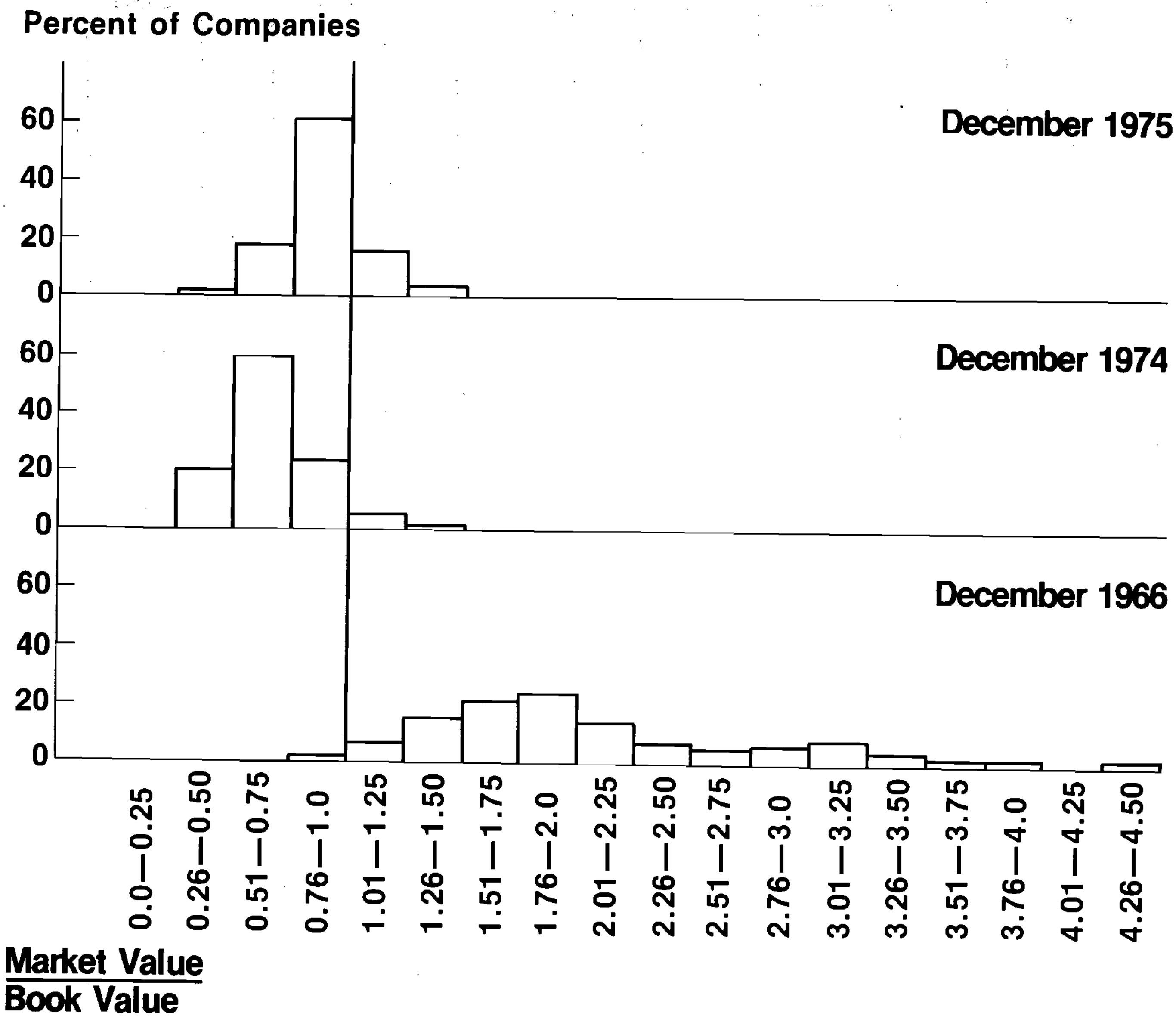
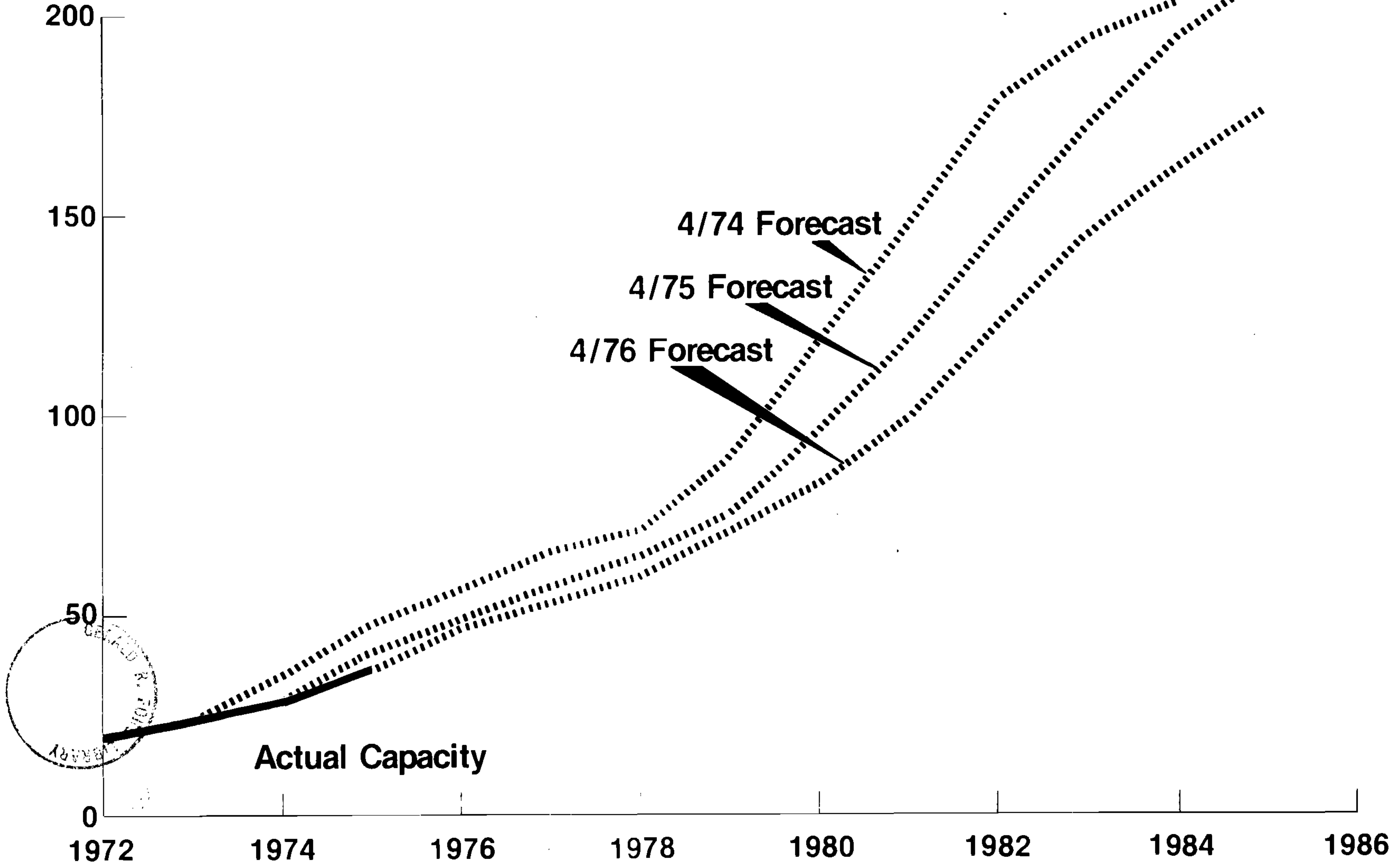


CHART 13

# Nuclear Capacity Forecasts

Capacity in Thousands of MWe



# Status of Energy Legislation

## Enacted Into Law:

- Naval Petroleum Reserves
- Strategic Reserves
- ESECA Extension
- Energy Labeling
- Emergency Standby Authority

CHART 14

## Proposals Passed by One House Or in Conference:

- Natural Gas Deregulation
- Natural Gas Emergency Authorities
- Synthetic Fuels Loan Guarantees
- Building Conservation Standards
- Weatherization Assistance
- Residential Insulation Tax Credit
- Alaskan Gas Transportation

# Status of Energy Legislation

## Awaiting Action:

- Nuclear Licensing
- Nuclear Fuel Assurance
- Clean Air Act Amendments
- Energy Independence Authority
- Energy Facilities Siting
- Electric Utilities Tax Incentives/Regulatory Reform
- Oil Spill Liability
- Commercial Pricing for Uranium Enrichment Services
- Impact Assistance

CHART 15

# ERRATUM

The House of Representatives on Wednesday, August 4, passed H.R. 8401, the Nuclear Fuel Assurance Act of 1975 (see chart 15).

FEDERAL ENERGY ADMINISTRATION
WASHINGTON, D.C. 20461

August 12, 1976

MEMORANDUM FOR THE PRESIDENT

FROM: FRANK G. ZARB

SUBJECT: MID-YEAR ENERGY STATUS REPORT

The energy situation continues to change. I believe it may be informative for you to be briefed on the latest assessment of progress and problems in moving towards energy independence.

In preparation for such a briefing, I have attached charts depicting our current supply, demand and import situation, along with a narrative description of these charts.

Attachment

NATURAL GAS PRODUCTION AND CURTAILMENTS

- Natural gas production will continue to decrease during the next few years, and then could increase to 22.3 Tcf in 1985 if prices are deregulated (this compares with 20.1 Tcf in 1975). Under current FPC regulation, natural gas production could decline to 17.9 Tcf in 1985; although the recently announced FPC price of $1.42 per Mcf would increase production to over 21 Tcf in 1985. (CHART 8)

- In 1970-71, when the FPC began compiling data on gas curtailments, 12 of the 48 major interstate pipelines experienced curtailments. By the 1975-76 heating season, 31 of the 48 pipelines were projecting curtailments. FPC projections estimate natural gas curtailments for major interstate natural gas pipeline companies for the 12 month period April 1976 through March 1977 will be more than 3.6 Tcf, compared to an actual curtailment of 2.8 Tcf for the same period last year. The brunt of these curtailments will be felt in the Mid-Atlantic and Mid-West areas. (CHART 9)

COAL PRODUCTION AND CONSUMPTION

- Coal production has remained level during the past five years. Production in 1974 was 603 million tons, rose to about 640 million tons in 1975, and is expected to reach about 675 million tons in 1976. (CHART 10)

ELECTRIC POWER

- Production of electricity showed an annual 7 percent rise until 1973 when higher prices and the economic slowdown resulted in a leveling off of production. It started to grow again in 1975 at a rate of 2 percent and is accelerating in 1976. (CHART 11)

- In 1966, market value for electric utility stocks averaged 2.05 times book value. This ratio declined through 1974 and reached its low point of .67 times book value during that year. By the end of 1975, and continuing into 1976, the market had recovered sufficiently to raise the average market to book ratio to .89. (CHART 12)

# Natural Gas Production Estimates

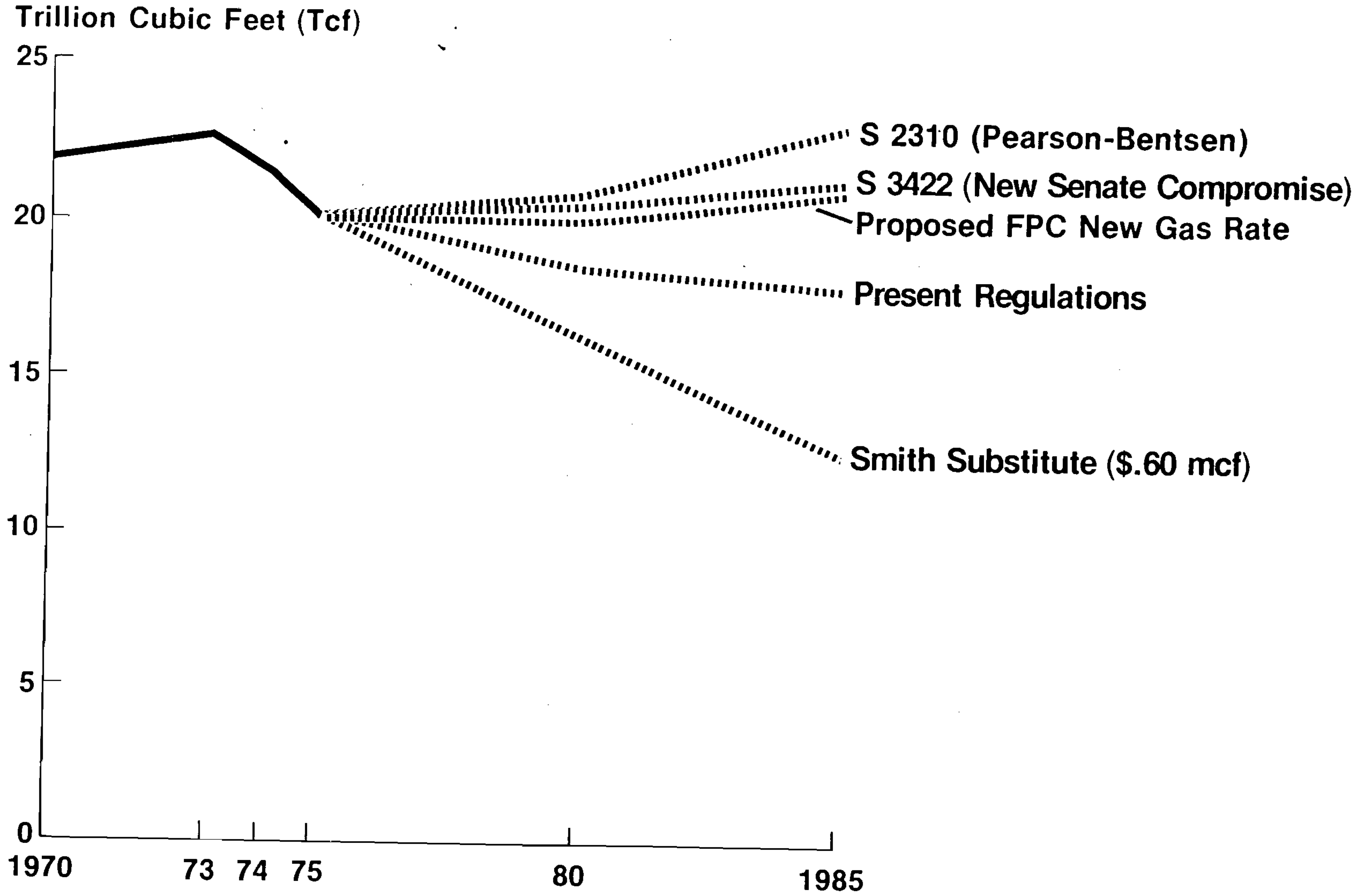



CHART 8

# Major Natural Gas Producing Regions and Pipelines With Significant Curtailments

| | 75-76 | 76-77 Projected |
|---|---|---|
| El Paso | 24% | 33% |
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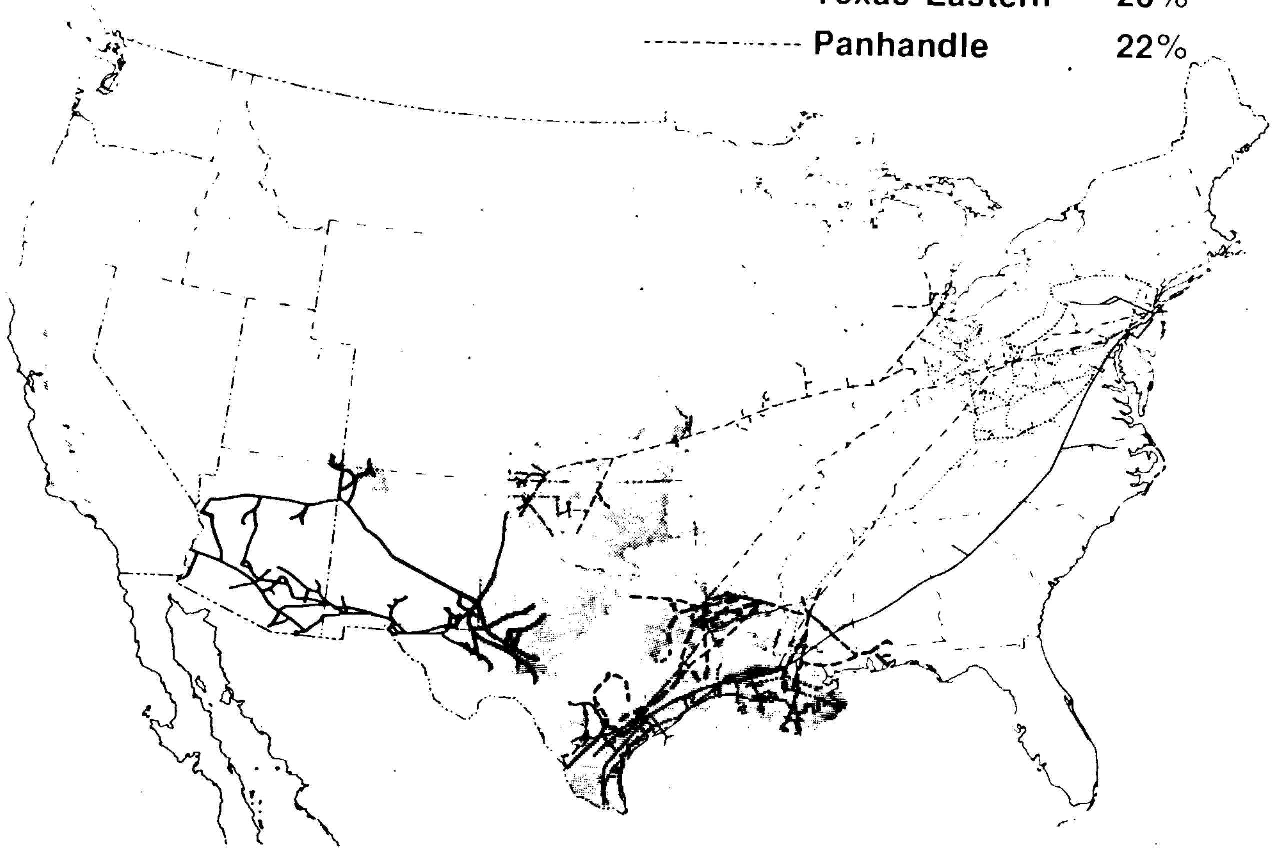


CHART 9

by signed

# FEDERAL ENERGY ADMINISTRATION

AUG 26 1976

FORD, G.

MEMORANDUM FOR THE PRESIDENT

FROM: FRANK G. ZARB

SUBJECT: MOTOR GASOLINE PRICES AND AUTOMOBILE FUEL EFFICIENCY

I believe you may be interested in the attached charts illustrating recent trends in motor gasoline prices and automobile fuel efficiency.

Through the first quarter of 1976, retail prices of gasoline averaged 57 cents per gallon. Interestingly, if this price is adjusted for the effects of inflation, it reflects little change from the average selling price of gasoline in 1967 (which was about 34 cents per gallon).

Price increases for gasoline during the second quarter of 1976 averaged 2 cents per gallon; by the end of July, the average selling price reached 59.6 cents per gallon. These increases are due to higher priced crude oil and normal seasonal factors.

The second chart shows a dramatic improvement in new car fuel efficiency. The average gas mileage for new cars declined by about 13% for the ten model years preceding 1975. New car average efficiency increased 12% from model year 1974 to model year 1975 and is projected to increase from 6% to 13% in 1976. Although new car efficiency has increased substantially, the efficiency of the entire fleet is projected to increase about 2% in 1976 (since new cars are a small part of the existing fleet). I also anticipate that auto manufacturers should be able to meet the 1980 standards of 20 miles per gallon.

Attachment

Prep by: C.RATHKOPF:pc
8/17/76
cc: Exec. Sec. (2)/Pasternack/Rathkopf chron

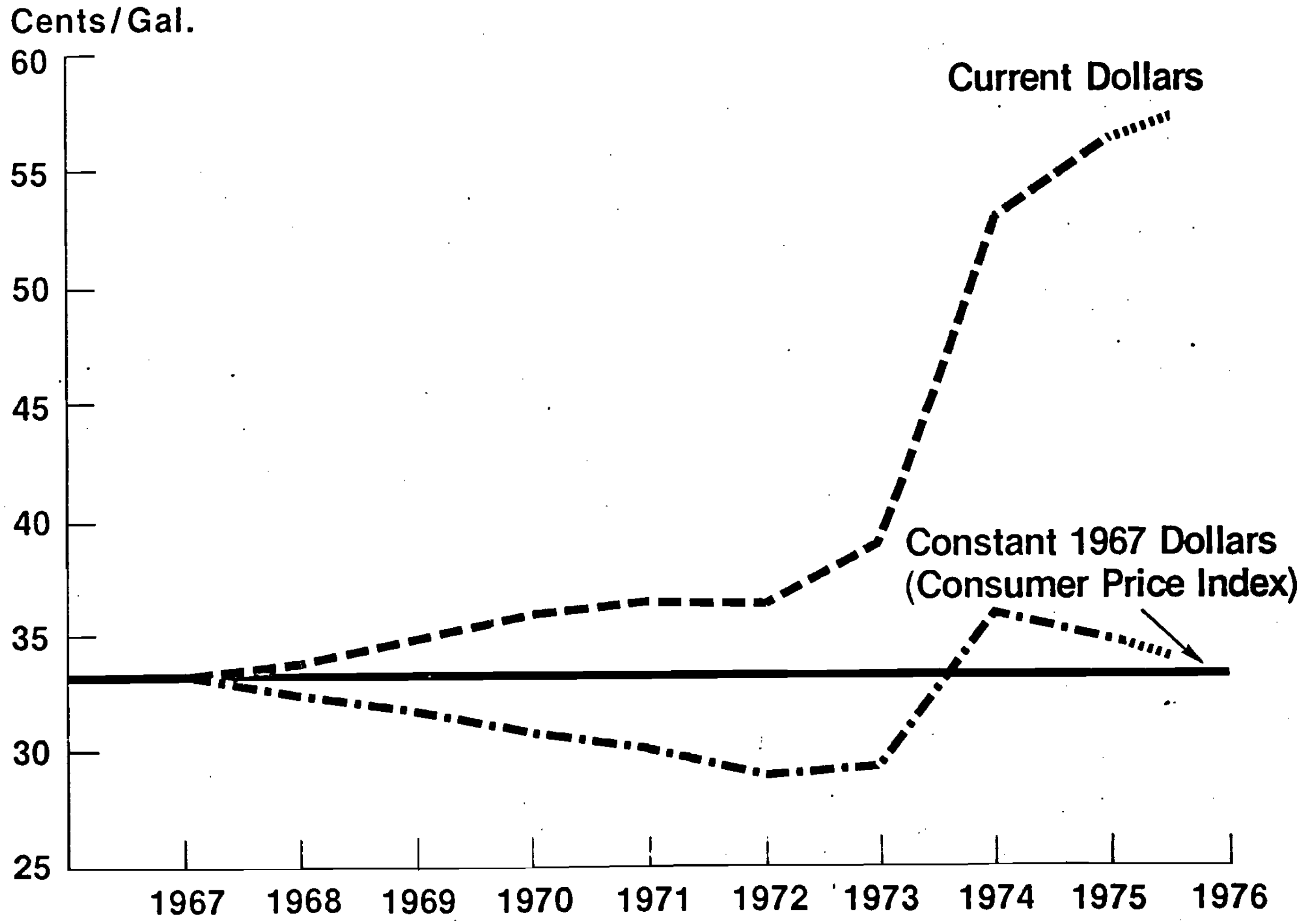


CONCURRENCES

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SYMBOL | P&PE | | | | SJ Gutchill | | | | |
| SURNAME | CLR | RAP | RHemphill | [illegible] | 23 Aug 76 | [illegible] | [illegible] | | [illegible] |
| DATE | 8/17/76 | 8/19/76 | 8/24/76 | | | 8/23 | | | |

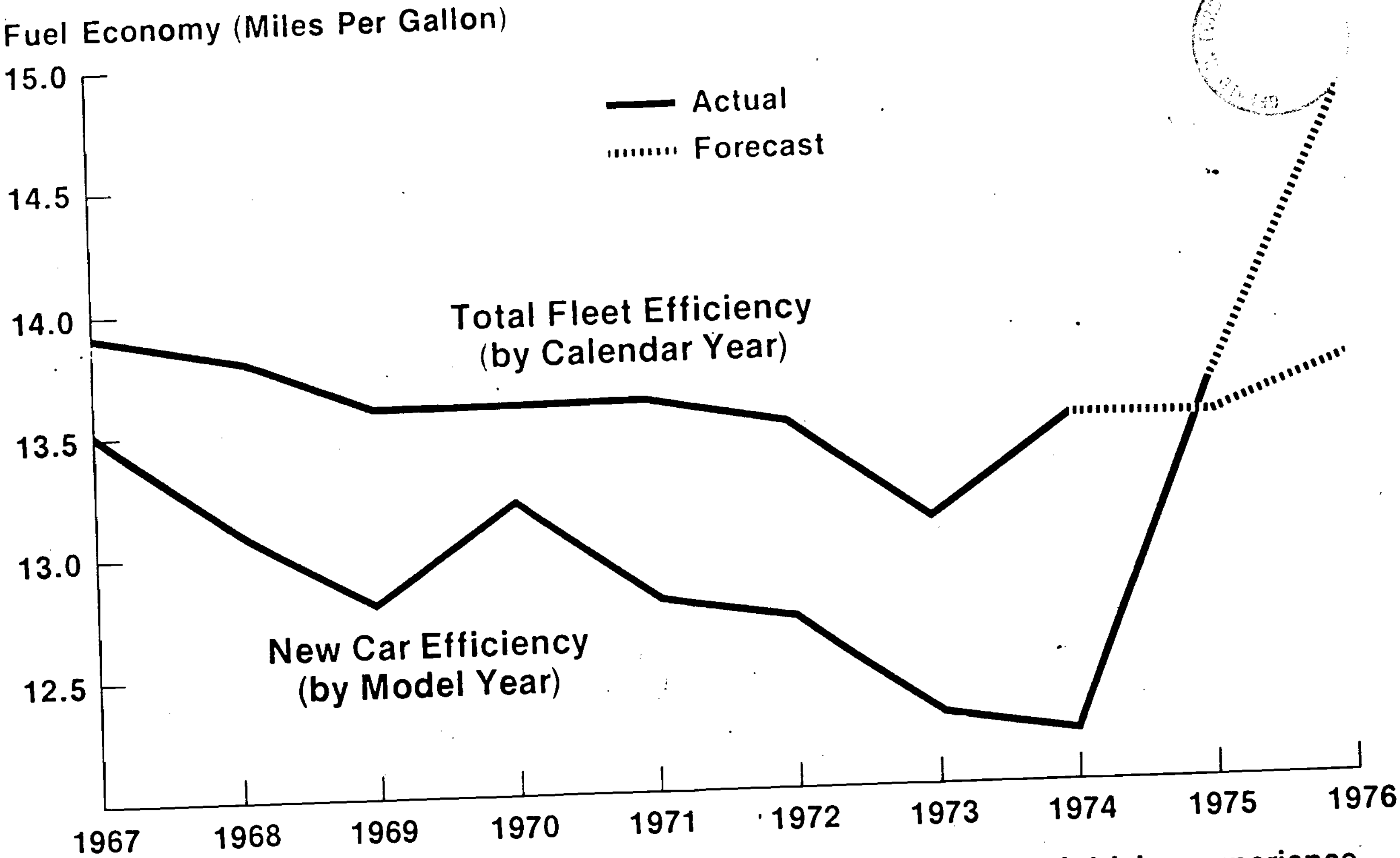
FEA-F-47 also cleared last sentence with Hemphill ...2-088 OFFICIAL FILE COPY

## Average Annual Retail Prices of Motor Gasoline




--- Monthly data from January—May 1976.

## Automobile Fuel Efficiency




NOTE: EPA test data for new cars is about 15% higher than actual driving experience.