June 21, 2001

It's Time for a National Energy Policy Reality Check

A review of the current energy policy debate from a taxpayer and consumer perspective

Contents

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Attached Charts:

#1 US Average Prices in Constant 2000$ for Residential Natural Gas & Heating Oil and Motor Gasoline: 1980-2000

#2 Comparison of Changes since 1973 in US Real GDP & Energy Consumption

#3 US Energy Consumption by Energy Source (in quadrillion Btu) & Energy Sources for US Electricity Production (in kilowatt-hours): 1999 Actual and EIA Forecast for 2020

#4 US Average Wellhead Natural Gas Prices in Current and Constant 2000$: 1980-2000

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Executive Summary

The people of America, the politicians and the media are now talking more about energy than they have in a decade or more. The new interest is due largely to high gasoline, heating oil, diesel fuel and natural gas prices after a long downward trend, California's electricity supply shortages, and the "energy crisis" atmosphere in Washington, DC.

Even though "energy" has become a hot topic and dozens of proposed actions have been proposed by the President, members of Congress and state officials, very little sound, objective information has been provided that would answer three key questions:

- Are the proposals really desirable from a national and public interest point of view?
- Are the proposals likely to be adopted and, if so, will they be effective?
- What will be the impact of the proposals on the people who end up paying the bill; i.e., America's consumers and taxpayers?

This paper has been prepared to *begin* answering the above questions. The paper is prepared from the perspective of consumers and taxpayers because these are the two "interest groups" that are least well represented in Washington DC. Their interests are often ignored as the better represented interests battle things out "inside the Beltway."

The paper reviews the contribution and outlook for eight major areas of the current national energy policy debate. In summary, it explains that:

- Price controls demanded by many political leaders are likely to be counterproductive and that state officials, if they wished to do so, could act almost immediately to give some relief to consumers facing high monthly energy bills.
- Energy conservation and energy efficiency cannot be expected to reduce significantly the need for new energy supplies and that mandated appliance energy efficiency standards deserve little of the credit for the substantial progress made in reducing energy intensity in the US economy.
- "Renewable" energy sources are niche technologies that will do little to relieve the necessity for the nation to continue relying on "traditional" energy sources – coal, oil, natural gas, and nuclear energy for virtually all its energy requirements.
- Heavy dependence on imported oil will continue and the US options are largely limited to increasing oil exploration in the US and other non-OPEC nations and maintaining our

military capability to help assure other oil-dependent nations and ourselves that international oil trade is not interrupted.

- We should hope for continued and increased contribution from nuclear energy but recognize that that the industry faces serious problems and obstacles.
- We should also hope for increased contributions from coal but recognize that opposition to coal use from environmental advocates, increasing tight EPA and state environmental requirements will impede growth.
- The rather bleak outlook for the foregoing energy sources virtually assures that the nation will have to continue its increased dependence on natural gas until technologies not yet close to real commercialization – or not yet known – become readily available at reasonable cost.
- The US probably will continue "throwing" tax dollars at "energy R&D" despite DOE's inability to manage its R&D spending effectively, avoid spending on unworthy projects, or prevent use of the money for activities that do not fit within any realistic definition of scientific research or technology development.

The paper concedes that the hot rhetoric about "energy policy" will continue in Washington and the media as long as energy prices are high, until California digs its way out of the hole it created by assuming that the state did not need to build new electric generating capacity, and the rest of America recognizes that additional energy supplies will be needed to serve a growing economy.

It's Time for a National Energy Policy Reality Check

Introduction

The people of America, the politicians and the media are now talking more about energy than they have in a decade or more. The new interest is due largely to three factors:

- Gasoline, heating oil, diesel fuel and natural gas prices have increased after a long downward trend – with heating bills exacerbated by an unusually cold winter.
- High electricity prices in California due to supply shortages and faulty electric industry "restructuring," with those high electricity prices spreading throughout the west, leading politicians to call for federal "price controls."
- The May 16, 2001 Bush-Cheney "National Energy Plan," which contributed to the current "energy crisis" atmosphere in Washington and provided an opportunity for advocacy groups and political opponents to charge that the Administration was "anti-environment" and dismissive of energy "conservation" and "renewable" energy.

Even though "energy" has become a hot topic and dozens of proposed actions have been proposed by the President, members of Congress and state officials, very little sound, objective information has been provided that would answer three key questions:

- Are the proposals really desirable from a national and public interest point of view?
- Are the proposals likely to be adopted and, if so, will they be effective?
- What will be the impact of the proposals on the people who end up paying the bill; i.e., America's consumers and taxpayers?

Purpose and Content of this Paper

This paper has been prepared to *begin* answering the above questions. The paper is prepared from the perspective of consumers and taxpayers because these are the two "interest groups" that are least well represented in Washington DC. Their interests are often ignored as the better represented interests battle things out "inside the Beltway."

A review of the Bush-Cheney "National Energy Plan" and the more comprehensive energy and tax credit bills introduced by members of Congress show that they have two things in common:

- Each has a few significant but controversial proposals, together with a long "laundry list" of proposals (usually subsidies) put forward by various advocacy groups.
- There is an absence of sound analytical support for the proposals. Instead, the proposals tend to be based largely on presumptions – both about the need for the actions and the effectiveness of those actions.

Clearly, it is not practicable to comment on all of the individual proposals. Instead, this paper will deal more generically by addressing, in turn, each of the following areas of the current energy policy debate:

- Price controls
- Energy conservation and energy efficiency
- Renewable Energy
- Oil
- Nuclear Energy
- Coal
- Natural Gas
- Government-subsidized research and development (R&D)

A guiding assumption for this paper is that, to the extent that the federal or state governments, must act, their objectives should be to:

- Assure that the nation has a fully adequate supply of energy for consumers and for a growing economy at reasonable prices, and
- Provide reasonable protection for the environment while that energy is produced, delivered and used.

Energy Policy Issues and the Outlook for Various Energy Sources

1. The Demand for Price Controls

Anyone who has had freshman Economics has been taught about the relationships between supply, demand and price. Also, anyone who recalls the devastating effects of the price controls and allocation schemes adopted in the early 1970s by the Nixon Administration understands that price controls make matters worse, not better. They do nothing to increase energy supply or reduce demand.

a. **A political response with adverse effects.** Members of Congress, particularly from California and other Western states, undoubtedly are hearing lots of complaints from their constituents about high energy prices, particularly because:

- The demand for natural gas was particularly strong during the period from November 2000 through January 2001 due to cold weather and heavy demand for gas in electric generation. This high demand contributed to higher than normal natural gas prices.
- California's failure to add generating capacity and its faulty restructuring scheme has led to sharply higher electricity prices throughout the western US.
- Constrained refining capacity, environmental requirements and OPEC limits on production have pushed up gasoline prices.

Unfortunately, calling for price controls and an "investigation" of energy companies' practices when prices are high has become a standard practice. Of course, the same politicians remain silent – or perhaps even try to take credit – when prices are low. Few notice when energy suppliers' prices and returns are so low that a) it doesn't make

sense for them to explore, produce, transport, or store gas, and b) their stockholders decide to find a better place to invest their money.

b. **Real energy prices in 2000 are below those of the early 1980s.** It's useful to keep in mind that US national average prices for gasoline and residential natural gas and heating oil -- in real 2000$ terms (i.e., adjusted for inflation) -- are lower than they were in the early 1980s – despite the increases that occurred in 2000. The table below and the attached graph (Attachment #1) show this fact.

US Average Prices for Gasoline and Residential Heating Oil & Natural Gas – in Constant 2000$ (i.e., adjusted for inflation) [1]

	In $ per million Btu		In Common Units of Measure		
Energy Source	1980	2000	Unit	1980	2000
Gasoline (inc. taxes)	20.40	12.60	Gallon	2.55	1.56
Heating Oil (exc. taxes)	14.66	9.45	Gallon	2.03	1.31
Natural Gas (inc. taxes)	7.88	7.93	Thousand cubic feet	7.69	7.71

As detailed later, wellhead prices for natural gas declined sharply from early 1980 levels, reaching a low point in 1995 and presaging a drop in US and Canadian natural gas exploration and production in the late 1990s. Lower production and high natural gas demand led to sharp price increases in 2000, followed by more exploration for gas. Natural gas production is beginning to grow and prices have declined sharply from late 2000 levels – a clear sign, once again, that markets do work if allowed to do so.

The President, Vice President, Secretary of Energy, and Chairman of FERC seem to understand basic economics and oppose price controls. However, California officials and members of Congress are continuing to press for the adoption of price controls on electric generating companies and possibly natural gas companies that sell in California and other states affected by California's failed policies. At present, it seems likely that political expediency will prevail.

c. **State officials could give consumers immediate relief.** There are good reasons to suspect that state political leaders are merely posturing to deflect attention and blame when they call for price controls because *they could give consumers some immediate relief from high bills if they wanted to do so.* Specifically, actions they could take almost immediately include the following:

1) **California could reduce consumers bills by more than a half billion dollars annually by suspending its so-called "Public Purpose Programs" tax. Other states have similar opportunities.** Political leaders in California could reduce their citizens' electricity and natural gas bills by at least $540 million during the next year merely by suspending for a year the so-called "Public Purpose Programs" charges that was imposed when they "restructured" the electric industry. A similar charge was recently added to natural gas bills. Most of the revenue from this "tax" is used to subsidize conservation, renewable and R&D programs that have done virtually nothing to alleviate California's current electricity shortages. However, reducing electricity and natural gas bills by more than a half billion dollars could help consumers during the next year or two.

2) **Other states could suspend so-called "Public Benefit Charges."** Other states have a similar opportunity to give consumers some immediate relief on their monthly electric bills by suspending for a year or two the charges and taxes that are being imposed to pay for energy efficiency and renewable energy programs. The programs will provide little, if any, near term benefit and their long term benefits are open to question. States that are imposing such charges include:

- Massachusetts, which is collecting about $190 million from electric customers during 2001 for "demand side management" and "renewable" energy programs.[2]
- Oregon, which is set to impose a 3% tax on electric bills beginning October 1, 2001 to fund energy efficiency and renewable programs. This new tax would increase electric customers bills by about $75 million per year.[3]
- New York, which apparently expects to collect $233 million for similar purposes during a three year period.[4]

So-called "public benefit charges" are, in effect, taxes on customers' monthly bills. Several states that restructured their electric industries found it politically necessary to add these charges to customers' bills in order to get leaders of energy efficiency and renewable energy advocacy groups to stop blocking restructuring legislation.

3) **States could give up at least temporarily the tax revenue "windfall" that they are receiving as a result of higher electricity and gas prices and use.** Most states add a tax (sometimes referred to as a "fee" or "charge") to customers' monthly electricity and/or natural gas bills. At least 28 states[5] impose a tax that is based on a percentage of a customer's bill (often called a "gross receipts tax"). The practical effect is that the state and/or city gets a tax "windfall" whenever the underlying bill is increased whether due to colder winter weather, hotter summer weather, or higher prices charged by utilities for natural gas or electricity. As a practical matter, this means that high gas and electricity bills are state political leaders' "friends" because they provide more tax revenue without requiring any action that might be detected by consumers and opposed.

The impact of these stealth taxes can be huge. For example, a recent analysis of December 1999 and December 2000 natural gas bills for a residential customer in Washington, DC[6] shows that the customer paid gross receipts tax of:

- $15.83 for December 1999.
- $32.17 for December 2000 (an increase of 103%) because the weather was colder requiring more gas use and gas prices were higher due to tight market conditions.

In addition, the DC government imposed a *new* tax, labeled a "right of way fee," that cost this customer an additional $7.52. Thus the DC government collected a total of $39.69 for December 2000, compared to $15.83 in December 1999 – an increase of 151%.

2. The Outlook for Energy Conservation

Energy conservation advocates, politicians and the media began criticizing the new Administration before its *National Energy Plan* was issued for not giving sufficient attention to energy conservation and energy efficiency, particularly government-imposed energy efficiency standards for motor vehicles, appliances and other products.

Unfortunately, the public and some political leaders seem to have been convinced by the advocacy groups that subsidies and government-imposed energy conservation will virtually eliminate the need for producing new energy supplies for our growing economy. Those who have accepted this view ignore the fact that California's heavy reliance on such measures – while refusing to approve new power plants -- has contributed heavily to California's current energy shortages and high prices.

Quite likely, the President and Vice President understand how little can be achieved by such programs but decided that they had to "do something" to counter the adverse publicity. They responded by including dozens of proposals – tax credits, mandated efficiency standards, etc. – that are much like those favored by the last Administration. The political response is understandable, but the effectiveness of such measures deserves close scrutiny.

Clearly, *we should all be in favor of energy efficiency and conservation when it makes sense for consumers that are paying the bill.* However, we should also understand three facts.

a. **The US has already become much more energy efficient in the use of energy.** US improvements in the use of energy since the 1973-74 oil embargo are shown by the second chart that is attached. This graph compares real growth in US GDP from 1973 to 2000 with energy consumption during the same period. Specifically, US GDP grew by 126% but energy consumption grew by only 30%. Thus, our economy is *much less energy intensive* than in the past.

b. **Most gains in US energy efficiency have been due to three key factors.** Contrary to claims by the US DOE and energy efficiency advocates, government-mandated efficiency standards do not deserve a lot of credit. Instead, much of the credit for lower energy intensity in the US economy is due to three key factors:

   1) Relatively high prices, particularly during the 1970s and early 1980s led many individuals and businesses to focus on their energy costs and find ways to reduce those costs *in ways that made sense for them.* For example, they found ways to reduce energy losses, change equipment and processes to reduce energy requirements, and reduce energy-intensive activities.

   2) Improved *energy efficiency has occurred as an unplanned byproduct* of adoption of new technologies. Examples include computerization, telecommunications and new lighter weight materials. New technologies have *permitted increased productivity and required less energy* than the equipment and activities that were replaced. For example, computers using small amounts of electricity have replaced multiples of electric typewriters, adding machines, calculators, and cash registers. Also, information and data moving electronically has replaced documents that would have required energy to produce paper, electricity to run presses, and motor fuel to move the documents. Lighter materials have meant that

the total weight of goods and things (e.g., automobiles) moving from one place to another requires less energy than in the past.

3) The make up of the US economy has changed significantly, resulting in a higher proportion of less energy-intensive manufacturing and services. Some of the more energy intensive activities have moved to other countries. In addition, the new activities that have been added to US economic activity tend to be less energy intensive than in the past. For example, an increasing share of the nation's economic activity is accounted for by "intellectual property-based" activities (e.g., software) that are less energy intensive.

c. **Government-mandated energy efficiency standards for appliances save little energy.** Contrary to the claims made by those favoring government-mandated efficiency standards for home appliances, *those standards save very little energy*. For example, DOE has claimed that its recently issued standards for clothes washers would save "5.52 Quads of energy over 27 years (2004-2030)."[7] That figure sounds impressive. However, based on EIA's latest forecast of US energy consumption[8] the nation will be using about 3,400 Quads of energy during that period. Thus, DOE's 5.52 Quad estimate equals about 16/100 of 1% of US energy consumption during *the entire 27-year period*, a truly trivial reduction.

DOE claimed that its proposed efficiency standards for central air conditioners and heat pumps would save 3.4 quads of energy *over 25 years*.[9] That turns out to equal 11/100 of 1% of the projected energy consumption during that 25-year period.

d. **Energy conservation cannot eliminate the need for new energy supplies.** Note that these small claimed reductions would occur over 25 or 27 years. *They are dwarfed by the increases in energy supply that is required to maintain economic growth in the US.* Consider, for example, the increase in US electricity use since 1989:

Annual Increases In US Electricity Use[10]

Year	Million Kilowatt-hours (MkWh)	% Increase over prior year
1989	2,747,239	
1990	2,816,746	2.53%
1991	2,873,045	2.00%
1992	2,885,140	0.42%
1993	2,988,353	3.58%
1994	3,075,472	2.92%
1995	3,162,443	2.83%
1996	3,250,055	2.77%
1997	3,294,593	1.37%
1998	3,424,049	3.93%
1999	3,500,931	2.25%
2000	3,606,518	3.02%

The annual average growth in electricity use since 1989 has been 2.1%.[11] Interestingly, the forecast underlying the Bush-Cheney National Energy Plan assumes that electricity use will increase by only 1.8% per year over the next 20 years, but only in the years where there was little or no economic growth did US electricity use grow less than 2%.

3. **The Outlook for Increased Reliance on "Renewable" Energy Sources**

Before their National Energy Plan was announced, the President and Vice President were also criticized for not relying more on renewable energy. The Administration responded by proposing various subsidies, including tax credits, to encourage investments in various renewable energy sources. Most were identical to those advanced by the Clinton-Gore Administration and already introduced in various bills by members of Congress.

Millions of tax dollars have already been spent by the Department of Energy (DOE) on R&D, "studies," "analyses" and "reports" to promote "renewable" energy sources. Additional millions of dollars have been provided in tax shelters (tax credits and accelerated depreciation) to developers who build high-cost renewable energy facilities such as windmills.

Many people like the sound of getting energy from "renewable" energy but, again, it is necessary to be realistic and *look at the facts.*

a. **Hydropower is the only significant source of economical renewable energy.** Advocates of "renewable" energy do not like hydropower despite the fact that it is the one "renewable" energy source that is providing a significant amount of useful energy – in fact nearly 8% of the nation's electricity. They favor *only* the "non-hydro" renewables."

Furthermore, the potential for an increased contribution from hydropower is limited because of opposition to expansion and the very real possibility that the contribution from hydropower could be reduced in the future. Reductions could come from diversion of water around dams to serve other needs (e.g., fish, recreation), breaching dams in some areas, and the slow pace of re-licensing of existing hydropower projects.

b. **Non-hydro "renewables" will provide little useable energy.** The non-hydro renewables – wind, solar, geothermal, biomass (including wood and wood wastes) and municipal solid wastes[12] are, essentially, niche resources and niche technologies that are not likely to *ever* make a significant contribution towards supplying US energy requirements.

DOE has spent hundreds of millions in tax dollars on renewable energy R&D during the last 20 years, and millions more have been allowed in tax credits. However, as shown in the third chart that is attached, non-hydro renewables are making only a very small contribution to overall US energy requirements and to electric generation. For example, the chart shows that all non-hydro renewables combined supplied only:

- 3.4% of US overall energy requirements in 1999 and are not expected to reach a 4% contribution by the year 2020.
- 2.1% of US electricity generation in 1999 and are not expect to reach a 3% contribution by the year 2020.

In summary, the *facts* make clear that the US will be continuing to rely on the more conventional energy resources -- oil, coal, nuclear energy, hydropower and natural gas -- for the foreseeable future.

c. **Tax credits and other subsidies for "renewables" shift costs from renewable developers and hide them in tax bills and consumers' monthly utility bills.** Tax credits, which seem particularly popular with the current Administration and Congress, shift tax burden from owners of "renewable" energy projects to remaining taxpayers. Also, direct subsidy payments to encourage use of "renewables" are paid from tax revenue, and add to the tax burden. "Renewable Portfolio Standards," adopted by some states that have restructured electric utilities, are an indirect subsidy. They set minimum shares of electricity that must be produced from "renewable" sources. When the costs are higher than "traditional" energy sources, electricity generators and/or distributors are, in effect, forced to "hide" the higher costs in the monthly bills that are sent to all customers – a "backdoor" tax.[13]

4. **The Outlook for Oil**

Oil supplied 39.6% of overall US energy demands in 1999 and 3% of the energy used to generate electricity.

The US uses a lot of oil -- about 19.5 million barrels per day with net imports of 10 million barrels per day. Oil has played a critical role in the nation's development and in the freedom, economic opportunity, and increased standard of living enjoyed by millions of Americans. Oil has made it possible for millions to move from place to place to advance their education, expand their job opportunities and enjoy their leisure time.

The freedom to move about via automobiles is especially important in those regions that do not enjoy the subsidized mass transit facilities enjoyed in Washington, DC and other metropolitan areas that were built at the expense of taxpayers throughout the country, many of whom have no access to such facilities.

Nearly 69% of US oil consumption is used in transportation, nearly 24% by industry (including chemical feedstock) and the rest for home and commercial heating and small amounts for electric generation. About 45% of our imports come from Canada, Mexico and South America and about 22% from the Persian Gulf.

Until some alternative energy source is available for transportation, we will remain heavily dependent on imports. OPEC, together with Mexico and Norway, has demonstrated during the past year that they can limit oil production enough to push up prices.

With respect to oil, the most practical alternatives for the US are largely limited to:

- Doing what we can to encourage increased oil production in the US and other countries outside OPEC,
- Adding refinery capacity in the US, and
- Maintaining our military capability to help assure other oil-dependent nations and ourselves that international oil trade is not interrupted.

The Bush-Cheney Plan calls for steps to increase US oil production. However, they are facing fierce opposition to their proposal to open a small portion of the Alaska National Wildlife Refuge (ANWR) to exploration or allowing exploration in new offshore areas and onshore areas that have been placed off-limits by previous administrations. The Democrat

take-over of the US Senate virtually assures that any proposal to gain access to these areas that requires congressional approval will go nowhere.

Continuing to restrict access to government controlled areas apparently is quite acceptable to opponents of increased US oil production because constrained supplies helps insure high gasoline prices and high prices discourages energy use. Those favoring high energy prices seem not to be concerned about the impact on people at the lower ends of the income scale.

5. **The Outlook for Increased Use of Nuclear Energy**

Nuclear energy supplied 8.1% of total US energy demand in 1999 and nearly 20% of the energy used for electric generation.

The Bush-Cheney Plan calls for attempts to increase the output from existing generating plants and revive the nuclear industry so that new plants -- using new technology – can be built.

We should all wish the nuclear industry well because the country will continue to need electricity that is produced by nuclear plants. However, at the same time we need to recognize that the industry faces some serious problems and obstacles.

a. **The long-term management of commercial nuclear wastes remains a serious problem.** Perhaps the most vexing problem is the critical need to provide long term storage and management of highly radioactive waste embodied in the spent fuel rods from commercial nuclear reactors. The US Department of Energy has contract obligations to take possession of this waste but has no place to put it.

DOE has already spent billions of dollars in an attempt to build a long-term storage facility for high level nuclear waste deep under Yucca Mountain in Nevada. However that project is way behind schedule and many of the people of Nevada are opposed to it. Again, a federal law overriding Nevada's objections seems unlikely, particularly in the Senate that is now controlled by the Democrats, many of whom oppose the project.

Meanwhile, spent nuclear fuel assemblies are piling up around the country. At the end of 1998, DOE data[14] show that:

- 135,972 spent fuel assemblies with an initial uranium content totaling 38,413.7 metric tons at various storage sites.
- 97% of these assemblies (131,780) were stored at nuclear reactor sites and the other 4,192 were stored at away-from-reactor sites.
- Of the 131,780 fuel assemblies stored at nuclear plant sites, 126,854 assemblies were in wet ("swimming pool" type) storage facilities and the remaining 4,926 were in dry cask storage.

On-site storage for spent nuclear fuel assemblies has been filled at a few sites, necessitating construction of additional facilities. Obtaining state and local approval for the construction of additional storage at nuclear plants can be extremely difficult.

At the end of 1998:

- The storage capability at all US nuclear plants that were licensed could accommodate 234,129 spent fuel assemblies.

- The storage capacity for 211,179 of these is already in place.
- Of the facilities already in place at the end of 1998 at nuclear plant sites, 62% were already filled.
- The number of spent fuel assemblies requiring storage is growing at more than 5,000 per year.

In one attempt to deal with the commercial nuclear waste problem, the Bush-Cheney Plan calls for reconsideration of the idea of reprocessing spent fuel elements so that useful remaining uranium and plutonium can be recovered and the volume of waste reduced. However, earlier attempts to construct and license reprocessing facilities in the US were killed during the last half of the 1970s.

Nuclear waste will continue to be a problem. Unless some entirely new and effective approach to nuclear waste management is found, alternatives are limited to the possibility of approval of a government owned long-term storage facility, increasing on-site storage capacity at existing nuclear plant sites, or undertaking reprocessing of spent fuel to recover useable material and reduce the volume of waste that must be managed.

b. **Existing plants face re-licensing and significant capital costs.** Nuclear power plants have licenses from the Nuclear Regulatory Commission (NRC) for specific time periods (some as long as 30 years from their startup). When plants near the end of their license periods, the plant owner must decide whether it makes economic sense to spend the money that will be necessary to bring the plant up to then-current licensing requirements. In many cases, major expenditures would be required, such as replacement of steam generators or other major components, with costs running into many millions of dollars.

The DOE data show that, at the end of 1998, of the 119 commercial nuclear plants that had been licensed:

- 16 plants were already retired.
- Current operating license expiration dates for the 103 plants that are still operating are as follows:

Number of plants	Period when license expires
9	2000 - 2010
51	2011 - 2020
42	2021 – 2030
2	After 2030

c. **Energy Plan proposals face obstacles.** The Bush-Cheney Energy Plan contemplates:

- Increasing generating capacity at existing nuclear generating plants.
- Extension of the Price Anderson Act which sets limit on a plant owners liability in the event of a major nuclear accident and provides that liability of that level will be assumed by the federal government. The Act expires soon and therefore would not cover any plants constructed after the expiration date.

- Encouraging the construction of new nuclear plants using new technology.

All of these actions are controversial. It now seems unlikely that any new commercial nuclear plants would be constructed for some time to come. Except for potential short-term increases in output from some plants, the contribution from nuclear power will decline if existing plants are retired rather than relicensed.

6. The Outlook for Increased Use of Coal

In 1999, coal supplied 22.3% of the nation's energy and 51% of the energy used to generate electricity.

The Bush-Cheney Plan calls for increased production of electricity from coal, including:

- "Greater regulatory certainty relating to coal electric generation," which seems directed toward allowing modifications of existing coal-fired generating plants that would permit increased output.
- An additional $2 billion in tax dollars over 10 years for subsidies for "Clean Coal Technology" R&D.

We should also wish the coal industry well because the nation will need to rely on coal for a large share of its electricity. However, coal also faces some serious obstacles.

a. **What can be expected from more "Clean Coal" technology R&D?** Improving technologies for the use of coal is not a new idea for the federal government. Specifically:

- The federal government has, since the 1970s, spent billions of dollars subsidizing coal R&D and demonstration projects, including attempts to commercialize synthetic fuels (liquids and gas) from coal. However, with the exception of the uneconomic Great Plains Gasification Project in North Dakota, all major demonstration plant projects were abandoned in the early 1980s.
- The US Department of Energy (DOE) continued to subsidize coal R&D at lower levels and then embarked on a major R&D effort in cooperation with private industry called the "Clean Coal Technology Demonstration Program." By the end of June 2000, over $5 billion had already been spent on this program with $1.74 billion in tax dollars via DOE and $3.45 billion from industry sources.[15]

While this program undoubtedly has made some contributions to improved technology for the use of coal, it seems that few of the projects reached the economic, technical and environmental goals that promoters of the various technologies had claimed. Additional money had been appropriated for "clean coal" projects but some of the appropriations have been rescinded because projects were abandoned or, apparently, because worthy projects were not found.

Whether there are additional projects that warrant spending an additional $2 billion in tax dollars remains to be seen.

b. **Objections to coal use.** Meanwhile, existing coal fired generating plants and newer technologies now available continue to be plagued by:

- Continuing opposition to coal use from environmental advocates who are opposed to the impacts of mining and to emissions of sulfur dioxide, nitrogen oxides, particulates, carbon dioxide and mercury.
- Efforts by the US EPA and state environmental regulators to tighten restrictions on all emissions from existing generating plants and inhibit improvements that would permit increased output.

c. **Emissions from coal-fired powerplants.** Data from the US Environmental Protection Agency (EPA)[16] and the US Energy Information Administration (EIA)[17] in the table below show the trends in emissions of sulfur dioxide (SO_2), nitrogen oxides (NO_x) and carbon dioxide (CO_2) from electric utilities' coal-fired generating plants and from all other sources in the US. SO2 and NOx emissions from coal-fired powerplants have been decreasing while CO2 has been increasing.

Emissions in the US from Coal-fired Powerplants & Other Sources – in Short Tons			
	1990	1994	1998
Sulfur dioxide (SO_2)			
◦ Electric utilities' coal-fired powerplants	15,220,000	14,313,000	12,426,000
◦ All other sources	8,440,000	7,557,000	7,221,000
Nitrogen oxides (NO_x)			
◦ Electric utilities' coal-fired powerplants	5,642,000	5,636,000	5,395,000
◦ All other sources (over 65% from transportation)	18,407,000	19,736,000	19,059,000
Carbon dioxide (CO_2) in tons of carbon equivalent			
◦ Electric utilities coal-fired powerplants	453,700,000	474,200,000	524,300,000
◦ All other sources (over 45% from transportation)	1,035,000,000	1,093,800,000	1,137,400,000

Significant emissions come from sources other than coal-fired powerplants. However, environmental agencies tend to focus emission reduction requirements on electric generating plants because:

- They are large sources and, therefore, more efficient "targets," and
- The costs and the impact of controls are not as visible to consumers as they would be if applied to automobiles (The costs are hidden in monthly electric bills).

It seems clear that the coal and electric generating industries will continue to face opposition to increased coal use even though electricity produced from existing plants is contributing to the relatively low monthly electricity bills enjoyed in many parts of the country.

d. **Coal-fired generating plant capital and O&M costs and conversion efficiencies.** While many existing coal-fired generating stations are producing low cost electricity, the outlook for significant new capacity is hampered by several factors, including the adamant opposition of many environmental advocates to increased coal use.

In addition, a generating company must consider four key factors when choosing the technology and fuel source for new generating capacity. These are the capital costs, O&M costs, conversion efficiency (i.e., Btu required for each kilowatt-hour of electricity produced) and expectations about the delivered cost of the fuel for the generating unit.

At present, the only alternative energy sources for adding significant generating capacity are coal and natural gas. Coal typically has a significant delivered fuel cost advantage in many locations and, when natural gas prices are high, in most locations where new coal-fired generating units might be considered (i.e., outside of California and New England).

However, capital costs, O&M costs and conversion efficiencies tend to favor natural gas, as shown in the table below that is based on data from the US Energy Information Administration. When viewing the table, keep in mind that:

- Capital costs vary widely among plant locations, whether the generating unit would be added at an existing or at a "greenfield" location, and whether suppliers of plant and equipment have full order books.
- Conversion efficiencies (often called "heat rate) also vary among generating units and depending upon the generating load (e.g., a unit running at full capacity tends to have higher efficiency than at half capacity.)
- O&M costs (referred to in the table as Variable O&M and Fixed O&M) tend to be higher for coal-fired generating units than for gas-fired units.

EIA Estimates of Cost (in 1999$) and Conversion Efficiencies of Coal & Gas-fired Generating Unit Technologies for New Projects Initiated in 2000[18]

Technology	Size in Mega-watts	Lead time (yr.)	Overnight Cost* in $ per kWh	In cents per kWh		Heat Rate (Btu per kWh)
				Variable O&M**	Fixed O&M**	
Coal						
Conventional Pulverized Coal	400	4	$1,092	.0330	.2285	9,419
Integrated Coal Gasif. Comb. cycle	428	4	$1,305	.0078	.3189	7,969
Natural Gas/Oil						
Conventional Combined Cycle	250	3	$ 445	.0051	.1524	7,687
Advanced Combined Cycle	400	3	$ 576	.0051	.1412	6,927
Conventional Combustion Turbine #	160	2	$ 331	.0010	.0630	11.467
Advanced Combustion Turbine #	120	2	$ 462	.0010	.0894	9,133

*Overnight capital costs includes contingency factor but excludes interest charges ** Operation and Maintenance
For use during periods of peak electricity demand.

Of course, emissions of sulfur dioxide (SO_2), nitrogen oxides (NO_x) and carbon dioxide are significantly higher from coal-fired generating units than from gas-fired units. Emissions vary widely among both coal-fired and gas-fired units, depending on the age of the units, emission control equipment and specifications of the fuel used. Gas use results in virtually no sulfur dioxide emissions. In new generating units, NO_x emissions tend to be roughly one-third of those from a coal-fired unit. CO_2 emissions from gas are 55% to 60% lower than from coal.

7. The Outlook for Increased Use of Natural Gas

Undoubtedly, President Bush and Vice President Cheney are serious about assuring that the nation has an adequate supply of energy at reasonable prices for our growing economy. However, all who share those objectives should be sobered by the limited potential for government-mandated efficiency standards and "renewable" energy sources, concerns about over-reliance on imported oil and obstacles to increased use of coal and nuclear energy.

Specifically, a "reality check" suggests that natural gas remains the energy source that the nation will be forced to count on to supply a very large share of the increased demand for energy, particularly for generating electricity.

However, the Administration's Plan and the more comprehensive energy bills introduced by members of Congress give little attention to natural gas and seem to reflect some "nervousness" about the adequacy of the natural gas supplies to meet rapidly growing demand. Both factors suggest the need in this "reality check" to review:

- Recent changes in the role of natural gas.
- Prospects for increased supply and demand, particularly for electricity generation.
- Actions that may be needed to assure that gas supplies will be available.

a. Recent increases in natural gas production, imports, and deliveries to consumers and consumers served. A low point in natural gas production was reached in the early 1980s due to government policies that assumed the nation was running out of natural gas. Since then, as the following table shows, there have been increases in production, imports and deliveries of gas and in the number of consumers served. Note that gas deliveries to non-utility electric generating companies are shown in the industrial category – not in the electric utility category.

Natural Gas Production, Imports & Deliveries & Number of Customers Served [19]

	1985	1990	1995	1999	2000
	In Billion Cubic Feet (Tcf)				
Production (dry)	16,580	17,932	18,599	18,623	19,256
Imports (net)	894	1,447	2,687	3,422	3,533
Deliveries to Customers – Total #	15,811	16,819	19,660	19,890	20,843
Residential	4,433	4,391	4,847	4,720	4,929
Commercial	2,432	2,623	3,034	3,050	3,133
Industrial **	5,901	7,018	8,580	9,001	9,560
Electric Utilities **	3,044	2,786	3,197	3,113	3,035
Vehicle fuel	na	*	3	6	7
	Number of Customers Served – In Thousands				
Residential	46,331	50,187	54,322	58,201	na
Commercial	3,837	4,236	4,637	5,007	na
Industrial	189	218	209	230	na

* Less than .5 Bcf. # Does not include gas used on leases or as pipeline fuel.
** Non-utility electric generation is included in Industrial. na = not available

b. **Natural gas wellhead prices.** Natural gas prices at the wellhead dropped sharply from 1984 to 1987 and then trended generally downward until reaching a low point in 1995. Prices then increased somewhat in 1996 and 1997, before dropping again in 1998. US average wellhead prices for gas are shown in both current and constant $ in the attached chart (#4).

US average wellhead prices reached their high point in January 2001 in response to the sharp increases in demand, particularly due to cold weather and the especially strong demand for gas for electric generation in California and other areas that experienced low availability of hydropower. Since January, wellhead prices have declined steadily.[20]

c. **Rotary drilling rigs in operation.** The number of rotary drilling rigs in operation to explore, develop and produce natural gas reflect the changes in wellhead gas prices, dropping in response to low prices and increasing after prices rise. The relationship was demonstrated most recently when the number of rigs dropped to a low of 371 in April 1999, reflecting low prices in 1998, and then rose sharply thereafter to a high of 854 rigs in December 2000, reflecting the rise in prices that began in mid-1999.

d. **Additions to gas pipeline capacity.** The nation's natural gas pipeline capacity has been increased substantially during the past 10 years. The US Energy Information Administration (EIA) has estimated that:

- Interregional capacity on the natural gas pipeline network was increased by 20 billion cubic feet per day during the period from 1990 to 2000, an increase of 27%.[21]
- Total interregional pipeline capacity reached 93,808 MMcf/d by the end of 2000.[22]
- Approximately $4.6 billion was spent on new interregional pipeline and system expansions during the period from January 1999 through December 2000.
- Additional expansions in interregional capacity of 1,019 MMcf/d were scheduled for 2001 and 1,930 MMcf/d were scheduled for 2002.
- "Construction projects by distribution companies totaled $9.7 billion in 1998 and 1999, a 16-percent increase from $8.4 billion in 1996-1997."[23]

e. **Increased gas use immediately ahead.** Leaders of the natural gas industry have spoken of the potential for a 30 trillion cubic feet (Tcf) per year market for gas. While that once seemed doubtful, it no longer appears unrealistic. EIA has forecast that natural gas consumption will reach 30 Tcf by 2012, with the largest increases accounted for by electric generation.

With a few exceptions, all recent additions to generating capacity have been, and those planned for the next few years will be gas-fired. A combination of low capital and O&M costs, low emissions, modularity in design, relatively short construction time and, until recently, low fuel prices has made natural gas the fuel of choice for new electric generating plants. According to data compiled by Energy Ventures Analysis, Inc.:[24]

- During 2000, gas-fired simple-cycle electric generating units totaling 12,057 megawatts and combined-cycle units totaling 11,834 MW came on line.
- Additional units totaling 51,805 MW are scheduled to come on line during 2001
- Capacity additions announced for the period from 2001–2005 total 305,000 MW.
- Coal-fired capacity additions announced for the period 2000-2013 total 20,860 MW.

f. **What government action is needed to assure adequate natural gas supplies?** Perhaps the lack of attention to natural gas in the President's Plan and major bills introduced in Congress is that relatively little in government action is needed. Much is already in place – in terms of the natural gas resource base, the technology for finding and producing gas, efficient technology for using it, and the capability to build safe pipelines to move that gas to customers. Outstanding needs seem to be limited to:

- Reasonable and timely access to the areas where gas lies, both onshore and offshore.
- Timely certifications and permitting for building additional pipeline capacity.
- Market based prices for natural gas at the wellhead and delivered to customers.
- Reasonable rates of return on investment in those segments of the industry that remain regulated.

8. **Energy R&D: Doubtful Effectiveness of Everyone's Favorite Energy Policy "Answer"**

Virtually every technology that makes a significant contribution in finding, producing, transporting and using energy:

- Has been developed by organizations in the private sector using funds they earned in the market place, or
- Is a "spin-off" from R&D sponsored by Defense Department agencies (e.g., gas turbines that were advanced by aircraft engine R&D and materials research).

Commercial nuclear reactors are a possible exception but those benefited heavily from R&D undertaken initially for nuclear weapons purposes and for nuclear reactors for US Navy vessels. Furthermore, the long-term contribution of commercial nuclear power remains to be seen.

Despite the voluminous evidence about the real sources of energy technologies that prove to be commercially competitive, spending tax dollars for "energy R&D" has been political leaders and advocacy groups' "all purpose" energy policy answer. This has been particularly true since the mid-1970s. Spending tax dollars on energy R&D is something that every trade association, other advocacy group and lobbyist can agree on because it costs their members and employers nothing. The bill goes to the nation's taxpayers.

The political attractiveness of "energy R&D" is quite understandable, but the benefits achieved by spending billions of tax dollars for energy research, development and demonstration projects are far from clear. In summary:

- It is hard to find objective evidence of real benefits from DOE funded R&D.
- DOE lacks the capability to manage R&D programs. Instead, it appears that recipients of those funds have more power than DOE officials.

- Neither the Department of Energy, others in the Executive Branch, or the Congress has the capability to evaluate the effectiveness of existing and proposed DOE-funded energy R&D.
- Some activities carried on by DOE, National Laboratories, and other DOE contractors, grantees and subcontractors using energy R&D funds are highly questionable and cannot reasonably be considered scientific research or technology development.

a. **Politicians' faith in "energy R&D" is understandable, even if misplaced.** Perhaps it is necessary to forgive our political leaders if they believe that virtually any amount of tax dollars spent for "energy R&D" will somehow assure that the nation will always have an adequate supply of energy at reasonable prices. After all, it is quite clear that advances in scientific knowledge and the development of new technologies have produced quite amazing results for the US economy and our standard of living.

Unfortunately, the *possibility* that R&D might result in new knowledge and technology is not an adequate basis for the expensive, unabashed confidence that any money given to DOE for energy R&D will provide benefits justifying this use of tax dollars.

b. **Fundamental problems with DOE Energy R&D Program management.** In real 2000$ terms, DOE and its predecessor agencies have spent well over $100 billion on energy research, development and demonstration (RD&D) programs. Successive Administrations and members of Congress keep the tax dollars flowing for energy R&D even though several fundamental problems with the DOE programs are evident. For example:

1) There is little *objective* evidence that the programs have produced significant benefits or that the benefits that have resulted would not have resulted from energy R&D paid for by private sector organizations. All too often, DOE energy R&D programs are "evaluated" by Congress and others on the basis of the number of dollars spent (inputs) rather than the results achieved (outputs).

2) The ultimate objective of most DOE energy R&D is to provide technologies that can eventually survive in the private, competitive economy. Government agencies are notorious for their inability to identify technologies that will be commercial "winners."

3) Money appropriated for DOE energy R&D is used for activities that cannot be considered either scientific research or development of technology; i.e., those pursuits that the public, media and political leaders should expect from organizations called "National Laboratories." Such activities include the preparation and publicizing of "studies," "analyses" and "reports" that lack objectivity and that are little more than self-serving documents calling for more tax dollars for programs conducted by DOE, its labs and other contractors. Two examples include:

   - *Scenarios for a Clean Energy Future*, prepared by an "Interlaboratory Working Group" consisting of staff from Oak Ridge National Laboratory (ORNL), Lawrence Berkeley National Laboratory (LBNL), National Renewable Energy Laboratory (NREL), Argonne National Laboratory (ANL),

and Pacific Northwest National Laboratory (PNNL) and released in November 2000.

- *Scenarios of U.S. Carbon Reductions*, prepared by a similarly constituted group and released in 1997.

Apparently both of these reports were released to the public without an adequate peer review. Instead the "external groups" that reviewed the reports consisted almost entirely of people known by their own work as supportive of the views and objectives of the reports authors.

Apart from the highly questionable use of tax dollars intended for R&D, reports such as these have contributed to public, media and congressional misperceptions about the potential contribution of the energy efficiency technologies and policies toward reducing growth in US energy demand favored by the National "Laboratories"

Furthermore, some of the analyses are based on unrealistic assumptions about the availability of proposed new technologies, changes in human behavior, adoption of far reaching new government policies and new energy taxes. One report assumes adoption of fundamentally different ways in which the people of America would pay for automobile insurance without any objective evaluation of that radical idea.

4) Officials of organizations receiving tax dollars via DOE energy R&D contracts, grants and subcontracts are part of the "army" of lobbyists that press the Congress to provide more funds for DOE programs. They have contributed to the unrealistic expectations for mandated efficiency standards and renewable energy (probably a violation of the spirit if not the letter of the Anti-Lobbying Act).

5) Some funds appropriated to DOE for energy R&D funds are used for activities that might more appropriately be called "social engineering" than scientific research and technology development. For example, Lawrence Berkeley National Laboratory (LBNL) officials were instrumental in creating a Washington, DC based "non-profit" organization, American Council for an Energy Efficient Economy (ACEEE). This organization lobbies for tighter DOE efficiency standards for appliances and other products and is a supporter of more funds for DOE energy R&D programs conducted by the laboratory.

   Officials of LBNL, Oak Ridge National Laboratory (ORNL), Pacific Northwest National Laboratory (PNNL), National Renewable Energy Laboratory (NREL) continue to serve on ACEEE's Board of Directors and provide funding support for ACEEE – presumably from the tax dollars that flow to them via DOE.

6) Neither DOE nor others in the federal government have made effective arrangements for competent and objective evaluation of existing or proposed DOE energy R&D projects.

   - DOE program managers, National Labs and other contractors, grantees and subcontractors receiving the R&D money are willing providers of information and arguments to justify continued spending. However, they cannot be counted on to provide candid information about scientific, technical,

environmental, economic or market factors that are likely to prevent their R&D projects from making a useful contribution.

- Capability does *not* exist elsewhere in DOE, in the Executive Branch or the Congress to make the *objective* evaluations of existing or proposed DOE energy R&D.
- When Congressional Committees or DOE make arrangements for what are purported to be independent evaluations of R&D, the groups doing the evaluations often include former DOE program managers or current or former employees of the organizations that receive DOE R&D money via contracts, grants or subcontracts. The information they use often comes from DOE program managers and recipients of funds for the programs that are supposed to be evaluated and is accepted without truly independent evaluation of DOE claims. Even though the "evaluations" lack credibility, they are cited as evidence that some DOE programs provide benefits that justify the costs.

7) DOE officials are not at fault for all the unproductive spending on energy R&D and the launching or continuation of R&D projects that have little or no promise. Some are mandated by powerful members of Congress and committees that "earmark" appropriations, leaving DOE no alternative but to write the checks.

c. **Taxpayers have reasons to expect, but few reasons to hope, that DOE, the Administration and the Congress will be prudent with energy R&D spending.** As indicated earlier, spending more money for energy R&D is everyone's favorite energy policy answer. Once energy R&D projects are undertaken by DOE, they tend to continue well beyond the time when its is clear that little if any benefit will result. Delays in terminating such projects waste tax dollars. Private sector organizations are better able to discontinue expenditures on R&D when it becomes clear that they will be unproductive.

DOE appears unable or unwilling to discontinue funding for R&D programs that are recognized as unproductive or that compete with private sector R&D efforts because *strong constituencies demand that Congress continue funding for the programs or projects*. Some constituencies probably are encouraged by DOE and its contractors to protect against budget reductions and project terminations. The makeup of constituency groups vary by program but often include DOE program managers, managers and staff of DOE laboratories or other contractors, associations and coalitions representing such contractors, representatives from communities where the R&D is conducted, members of Congress and Congressional staff with jurisdiction over the programs.

The outlook for prudent use of tax dollars being "thrown" at energy R&D is not bright.

oncluding Comment

ndoubtedly, the hot rhetoric about "energy policy" will continue in Washington and the media s long as energy prices are high and until California digs its way out of the hole it created by ssuming that the state did not need to build new electric generating capacity and the rest of merica recognizes that additional energy supplies will be needed to serve a growing economy.

National Energy Policy
Weekly Check Chart /
2095

US Average Prices in Constant 2000$ for Residential Natural Gas & Heating Oil and Motor Gasoline: 1980-2000

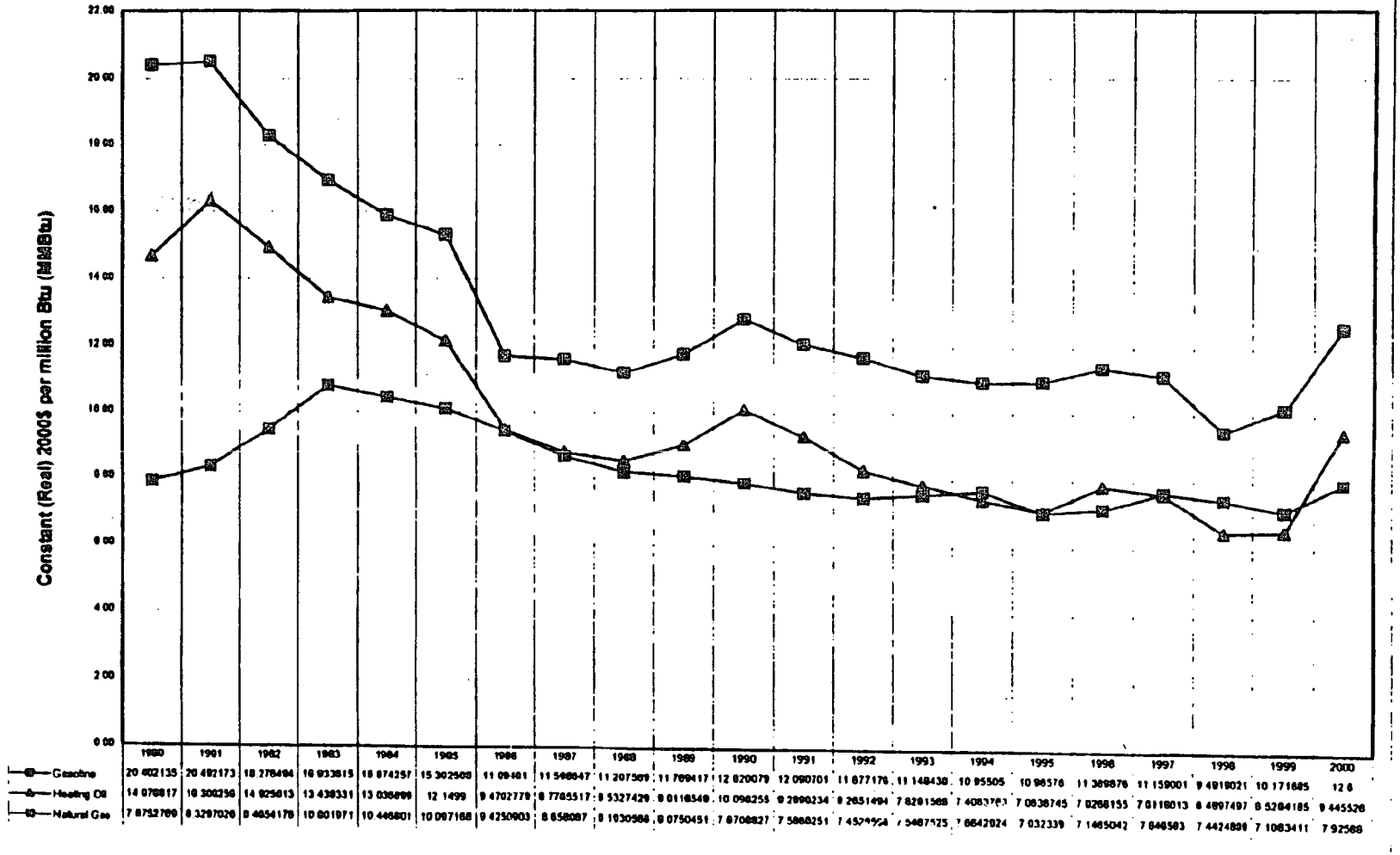
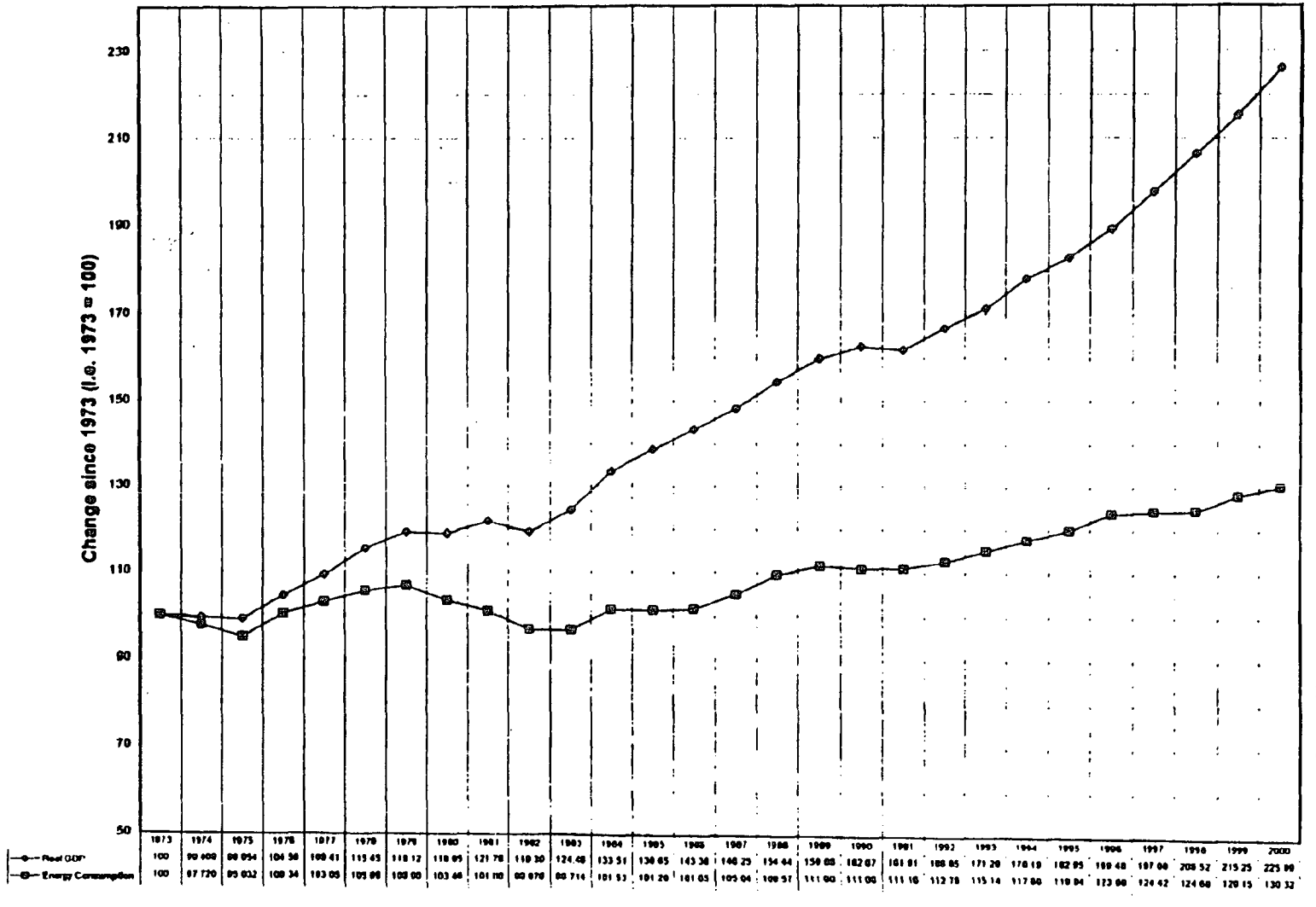


Chart 2

Chart #2

Comparison of Changes since 1973 in US Real GDP & Energy Consumption



Data Sources: US Energy Information Administration, Monthly Energy Review, Table 1.4; Economic Report of the President

Chart #3

US Energy Consumption by Energy Source: 1999 Actual; EIA Forecasts for 2020 - In Quadrillion Btu

Energy Source	Actual 1999 Quad Btu	Actual 1999 % of Total	EIA Forecase 2020 Quad Btu	EIA Forecase 2020 % of Total
"Traditional" Sources				
Petroleum Products	38.03	39.56%	50.59	39.83%
Natural Gas	21.95	22.83%	35.57	28.00%
Coal	21.43	22.29%	26.20	20.63%
Nuclear Power	7.79	8.10%	6.13	4.83%
Hydropower	3.35	3.48%	3.24	2.55%
Other	0.34	0.35%	0.23	0.18%
Sub Total - Traditional	92.89	96.62%	121.96	96.01%
Non-hydro Renewables				
Geothermal	0.38	0.40%	0.77	0.61%
Wood, wood waste & biomass	2.55	2.65%	3.63	2.86%
Municipal Solid Wastes	0.25	0.26%	0.46	0.36%
Solar Thermal	0.01	0.01%	0.03	0.02%
Solar Photovoltaic	0.00	0.00%	0.00	0.00%
Wind	0.05	0.05%	0.13	0.10%
Sub Total -Non-hydro Renew.	3.24	3.37%	5.02	3.95%
Total	96.14	100%	127.03	100%

Data Source: EIA, Annual Energy Outlook 2001, Tables A1 and A18

Energy Sources for US Electricity Production: 1999 Actual and EIA Forecasts for 2020 - In Kilowatthours

Energy Source	Actual 1999 Billion kWh	Actual 1999 % of Total	EIA Forecase 2020 Billion kWh	EIA Forecase 2020 % of Total
"Traditional" Sources				
Coal	1,879.36	50.89%	2,350.28	44.35%
Nuclear	729.79	19.76%	574.26	10.84%
Natural Gas	576.88	15.62%	1885.72	35.59%
Petroleum	109.50	2.97%	28.58	0.54%
Other *	8.23	0.22%	12.63	0.24%
Hydropower	312.00	8.45%	302.35	5.71%
Sub Total - Traditional	3,615.76	97.91%	5,153.82	97.26%
Non-Hydro Renewables				
Geothermal	13.07	0.35%	25.83	0.49%
Wood, wood waste & biomass	36.57	0.99%	65.67	1.24%
Municipal Solid Wastes	22.08	0.60%	37.99	0.72%
Solar Thermal	0.89	0.02%	1.37	0.03%
Solar Photovoltaic	0.05	0.00%	2.11	0.04%
Wind	4.46	0.12%	13.10	0.25%
Sub Total -Non-hydro Renew.	77.12	2.09%	146.07	2.76%
Total	3,693.00	100%	5,299.00	100%

Data Source: EIA, Annual Energy Outlook 2001, Tables A8 and A17.

Chart 4

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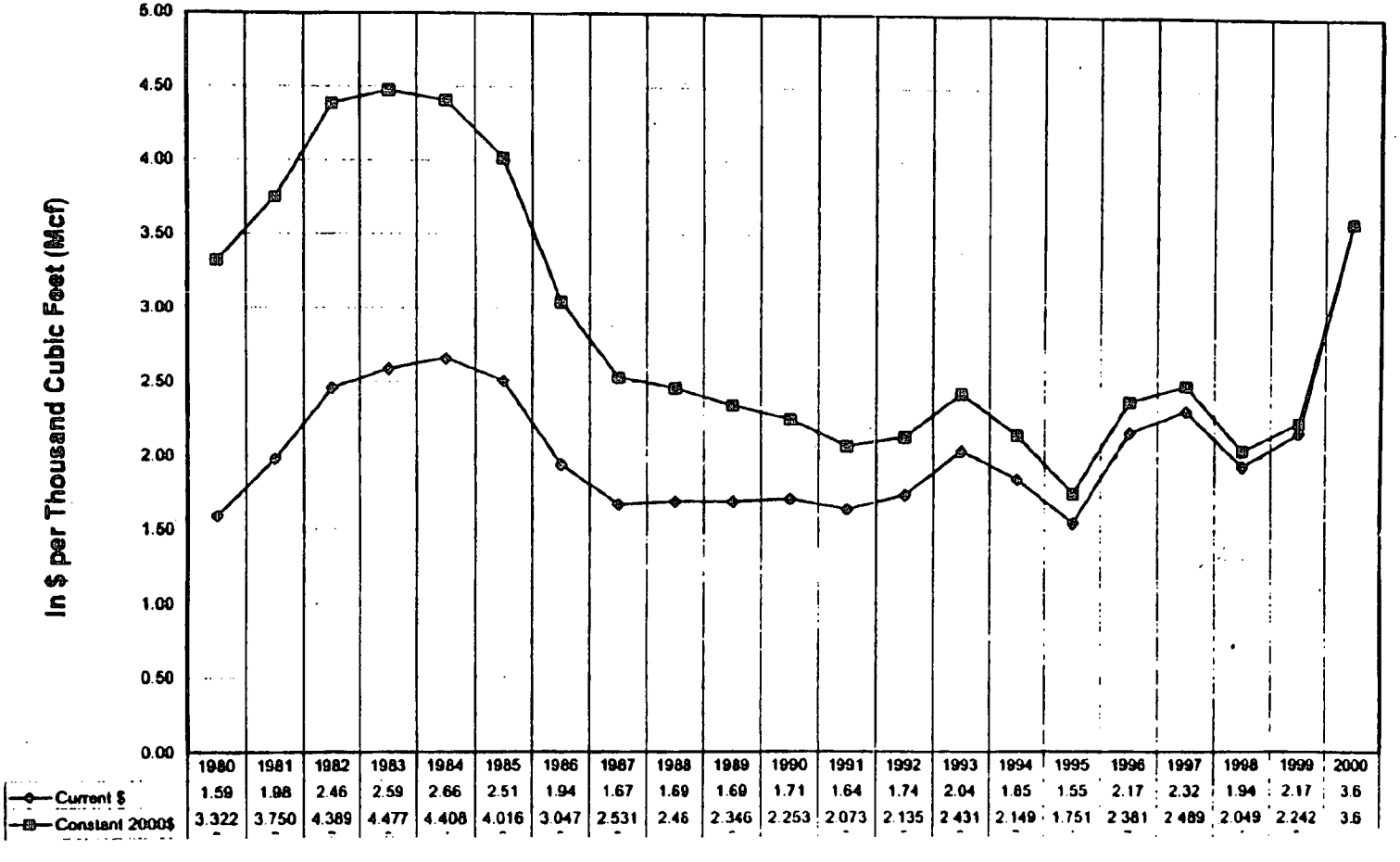
Chart #4

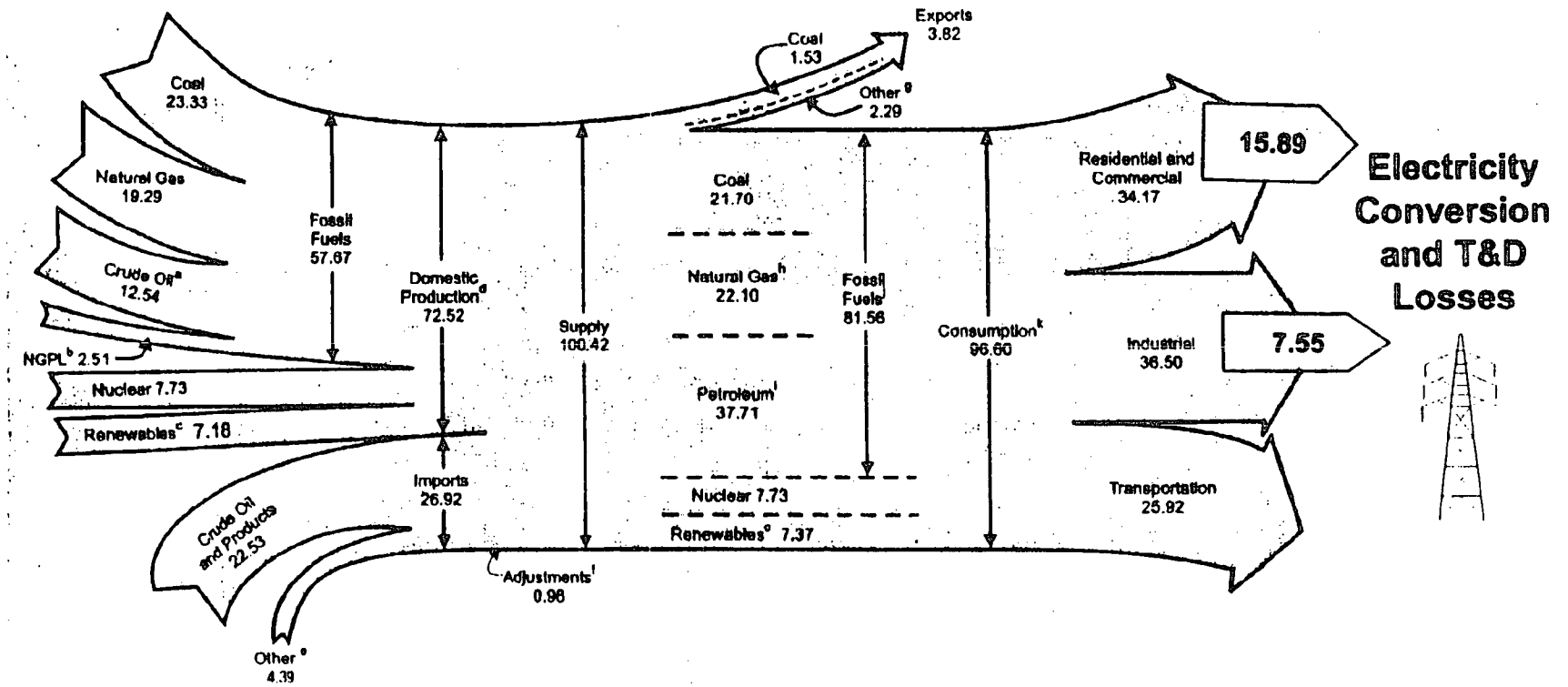
US Average Wellhead Prices in Current and Constant 2000$: 1980 - 2000



	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Current $	1.59	1.98	2.46	2.59	2.66	2.51	1.94	1.67	1.69	1.69	1.71	1.64	1.74	2.04	1.85	1.55	2.17	2.32	1.94	2.17	3.6
Constant 2000$	3.322	3.750	4.389	4.477	4.408	4.016	3.047	2.531	2.46	2.346	2.253	2.073	2.135	2.431	2.149	1.751	2.381	2.489	2.049	2.242	3.6

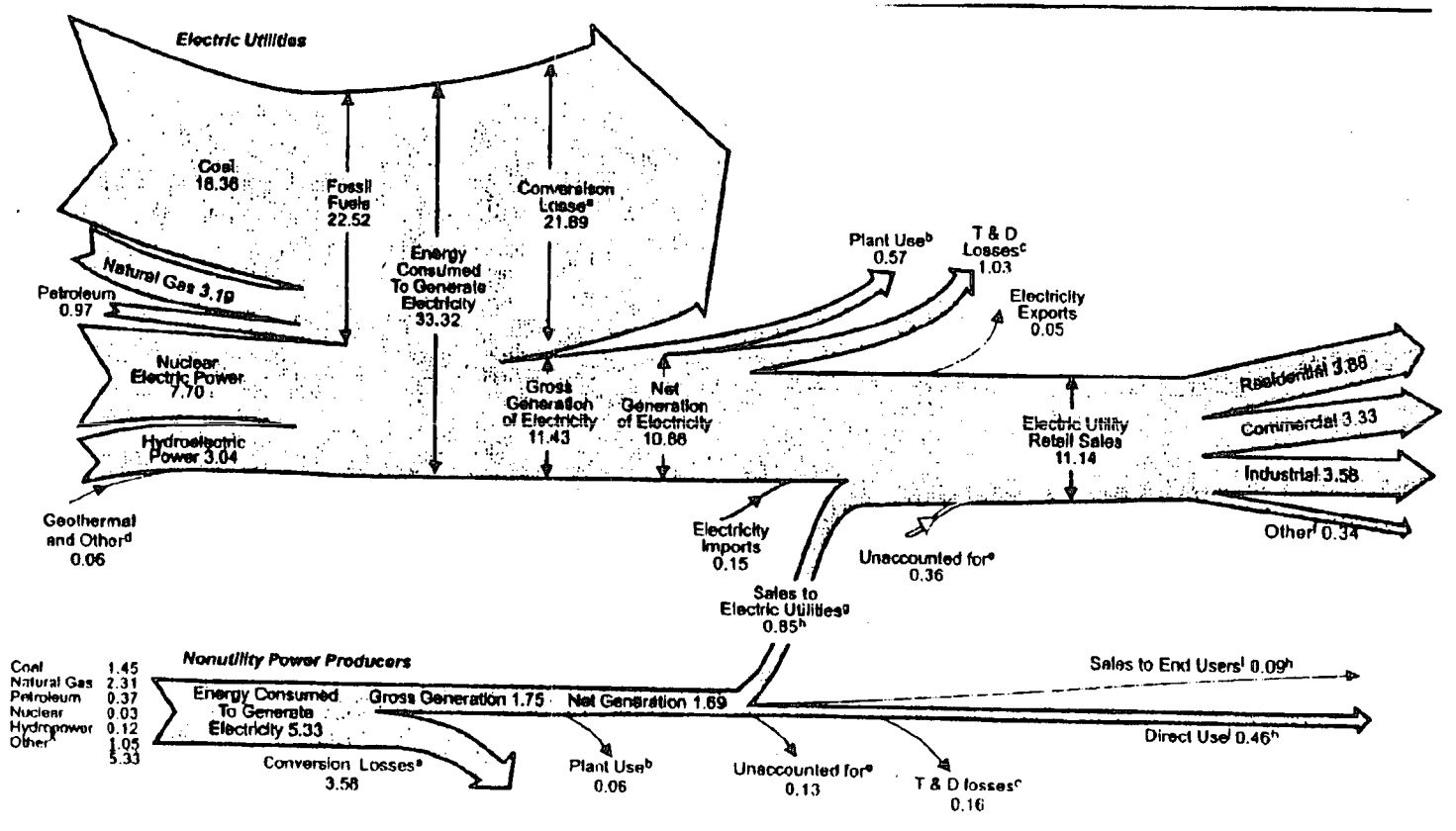
Data Sources: US Energy Information Administration, Monthly Energy Review, Table 9.11. Prices converted to constant 2000$ using CPI-U data from Tables B-62 and B-63 of the Presidents' Economic Report.

Typical Energy Flows in the U.S.



Source: U.S. DOE/EIA *Annual Energy Review 1999*

Typical Electricity Losses



Source: U.S. DOE/EIA *Annual Energy Review 1999*

Energy security gap slide (March revised).ppt

Release

18366

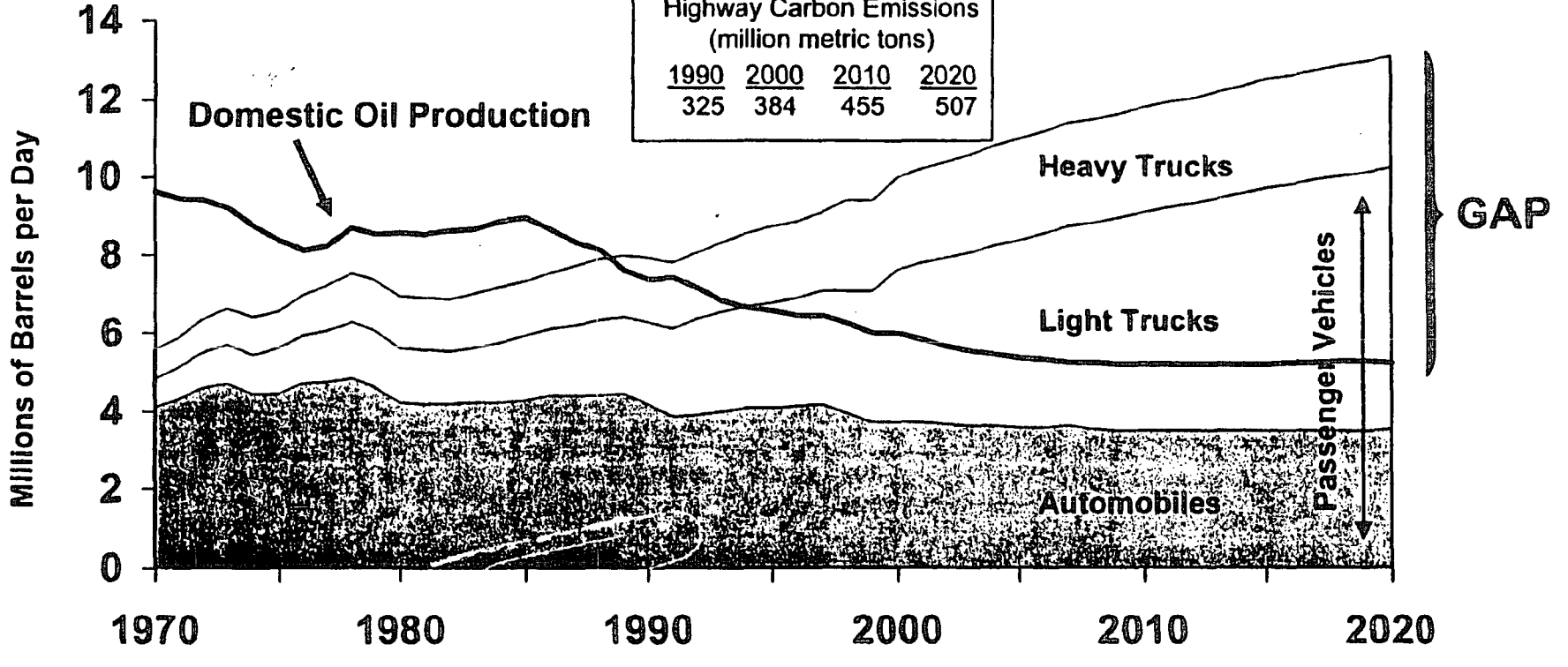
ENERGY

Strength Through Science

Office of Transportation Technologies

Key Driver – Energy Security

Highway Carbon Emissions (million metric tons)			
1990	2000	2010	2020
325	384	455	507



Source: Transportation Energy Data Book: Edition 19, DOE/ORNL-6958, September 1999, and EIA Annual Energy Outlook 2000, DOE/EIA-0383(2000), December 1999

DOE019-0333

11

12

Release

26 pgs

Market Failures and Barriers as a Basis for Clean Energy Policies[1]

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ABSTRACT

This paper provides compelling evidence that large-scale market and failures and barriers prevent consumers in the United States from obtaining energy services at least cost. Assessments of numerous energy policies and programs suggest that public interventions can overcome many of these market obstacles. By articulating these barriers and reviewing the literature on ways of addressing them, this paper provides a strong justification for the policy portfolios that define the "Scenarios for a Clean Energy Future," a study conducted by five National Laboratories. These scenarios are described in other papers published in this special issue of *Energy Policy*.

Keywords: market failures, efficiency gap, clean energy,

1. BACKGROUND

Examination of energy trends following the 1973-74 oil embargo has highlighted the great strides in energy efficiency that have made the U.S. economy much less energy intensive today than it was in 1970. Nevertheless, numerous engineering-economic studies have identified many potential investments in energy efficiency that appear to be cost-effective, but which remain unexploited (Interlaboratory Working Group, 2000; Office of Technology Assessment, 1991; National Academy of Sciences, 1992; Tellus Institute, 1997). This would not be surprising if a relatively small number of such investments were identified, or if only a small portion of future energy growth were to be prevented by making these investments. However, a large number of analyses indicate the continued existence of a sizeable untapped reservoir of highly cost-effective investments that could have a significant impact on U.S. energy use and greenhouse gas emissions.

[1] Several individuals provided valuable comments on this paper and Chapter 2 in the CEF study, which is summarized here. These include: Mary Beth Zimmerman (U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy), Marty Schweitzer and Dave Bjornstad (Oak Ridge National

If energy-efficient technology is cost-effective, why doesn't more of it just happen? If individuals or businesses can make money from energy efficiency, why don't they all just do so? Assuming the empirical data show that a significant proportion of truly cost-effective and efficient technologies are not adopted, why does their cost-effectiveness fail to propel them to commercial success? Conversely, if consumers and businesses are not taking actions to bring about energy efficiency, then perhaps these reports of widespread untapped energy efficiency opportunities are exaggerated. Is it possible that these opportunities carry liabilities (e.g., different labor skill requirements) and costs (e.g., greater maintenance or program administration costs) that are simply hidden or are difficult to quantify? Are other characteristics (other than cost) more important?

Energy markets are not unique in their imperfections. Other products and services face obstacles that hinder their adoption, even when their consumer economics appear to be favorable. Conditions hindering cost-effective investments in energy efficiency and clean energy resources have received considerable attention because of their widespread environmental, national security, and macroeconomic repercussions. The motivation behind the re-examination presented in this paper was to provide a foundation for the *Scenarios for a Clean Energy Future* (CEF) Study (Brown, et al., 2001; Interlaboratory Working Group, 2000). The CEF study is a comprehensive assessment of policy opportunities to accelerate the market penetration of efficient and clean energy technologies. Understanding the barriers to this penetration was essential to defining potentially effective policies.

This paper provides evidence that sizeable cost-effective opportunities for energy efficiency improvements exist in the economy. First we look at individual technology case studies that present compelling evidence of an efficiency gap. Next we describe a range of market failures and institutional barriers that explain the existence of this gap. Then we characterize sector differences in market failures and barriers. This lays the groundwork for discussing the government's role and the rationale for clean energy policies and programs.

2. THE EFFICIENCY GAP

Laboratory), Jon Koomey (Lawrence Berkeley National Laboratory) and Skip Laitner (Environmental Protection Agency). Their insights are greatly appreciated.

The term "efficiency gap" refers to the difference between the actual level of investment in energy efficiency and the higher level that would be cost-beneficial from the consumer's (i.e., the individual's or firm's) point of view. The existence of this gap has been documented in many case studies.

2.1 Case Studies of Individual Technologies

Many different case studies could be cited showing that consumers and businesses often choose not to purchase highly cost-effective energy technology. The technologies in these examples were clearly superior to the technologies being replaced and no significant "hidden costs" to the consumer could be identified.

Efficient magnetic ballasts for fluorescent lighting were commercially available as early as 1976. They were a well-tested technology, with performance characteristics equal to or better than standard ballasts by the early 1980s. By 1987, five states—including California and New York—had prohibited the sale of standard ballasts. But the remaining three-quarters of the population chose standard ballasts over efficient ballasts by a ratio of 10-to-1, even though the efficient magnetic ballast paid back its investment in less than two years for virtually all commercial buildings (Koomey, Sanstad, and Shown, 1996). The time required to establish retail distribution service networks and to gain consumer confidence are typical causes of slow innovation diffusions such as this. (Since 1990, federal standards have prohibited the sale of the standard ballast.)

In a more general study of efficient lighting investments using data from EPA's Green Lights Program, DeCanio (1998) has shown that there is a large potential for profitable energy-saving investments in **lighting** that is not being realized because of impediments that are internal to private and public-sector organizations. While economic forces play a role, economics alone cannot explain the level of investments made in energy-efficient lighting projects. Impediments to these investments include capital rationing and lack of organizational rewards for energy managers who reduce utility bills.

Meier and Whittier (1983) studied a case in which consumers were given a choice in stores throughout the United States of two **refrigerators** that were identical in all respects except two: energy efficiency and price. The energy-efficient model (which saved 410 kilowatt hours per

year, more than 25% of energy usage) cost $60 more than the standard model. The energy-efficient model was highly cost-effective in almost all locations of the country. In most regions, it provided an annual return on investment of about 50%. In spite of these favorable economics, which were easily observed by the purchaser, more than half of all purchasers chose the inefficient model. The higher purchase price of the efficient model was presumably the principal barrier to its purchase.

To enable the use of remote controls for **televisions** in the early 1990s, it became necessary for televisions to consume some amount of power continuously. Typical televisions with remote controls at that time used 5 to 7 watts of standby power for that purpose. The Energy Star television program was able to reduce these power losses by requiring that televisions qualifying for the Energy Star label must reduce standby power to three watts or less, a savings of roughly 50%. The resulting price increase had a payback period of 1 to 2 years for consumers. Because this savings was no more than a few dollars a year per television, there was no public outcry for manufacturers to deliver the improvement. At the same time, the aggregate savings to the nation of widespread market penetration was significant. Through the labeling program, the lack of consumer interest could be overcome. About ten major manufacturers now offer such televisions, and several of them have reduced standby losses to 0.5 watts (Interlaboratory Working Group, 2000, Chapter 4).

Industrial motor systems represent the largest single end use of electricity in the American economy—23% of U.S. electricity consumption—and they present a very substantial energy-efficiency potential. The results of a recent market assessment involving on-site surveys of 265 industrial facilities document that technologies offering a simple payback of 3 years or less can typically save businesses 11% to 18% of the energy used to drive motors (Xenergy, Inc., 1998). DOE's Motor Challenge program conducts audits, demonstrations and technical assistance to encourage the use of proven, cost-effective technologies to improve industrial motor systems. Monitoring and validation of energy use data from these activities confirm the profitability of these investments, underscoring the large gap between current practice and potentially economically smart investments. Limited information, expertise, and capital all contribute to the existence of this gap.

2.2 What Accounts for the Energy Efficiency Gap?

Numerous market failures and barriers contribute to the efficiency gap (Table 1). "Market failures" occur when there is a flaw in the way markets operate. They are conditions of a market that violate one or more neoclassical economic assumptions that define an ideal market for products or services such as rational behavior, costless transactions, and perfect information. Market failures can be caused by (1) misplaced incentives; (2) distortionary fiscal and regulatory policies exist; (3) unpriced costs such as air pollution; (4) unpriced goods such as education, training, and technological advances; and (5) insufficient and incorrect information (Jaffe and Stavins, 1994; IPCC, 1996). By failing to account for such market imperfections, assessments of energy policies and climate mitigation options based on neoclassical economic models underestimate their full range of potential benefit (Laitner, DeCanio, and Peters, 2000).

It is widely by neoclassical economists argued that the existence of market failures is a prerequisite for market intervention. However, the existence of such failures is also seen as an insufficient justification for government involvement. Feasible, low-cost policies must be available that can eliminate or compensate for these market failures.

"Market barriers" refer to obstacles that are not based on market failures but which nonetheless contribute to the slow diffusion and adoption of energy-efficient innovations (Jaffe and Stavins, 1994, Hirst and Brown, 1990, Levine et al., 1995, and U.S. Department of Energy, Office of Policy and International Affairs, 1996b). To the extent that it is in society's best interest to use its energy more efficiently and to reduce emissions from fossil fuel combustion, it is important to understand the full range of obstacles to clean energy technologies. These include: (1) the low priority of energy issues among consumers, (2) capital market imperfections, and (3) incomplete markets for energy-efficient features and products.

Table 1. Market Failures and Barriers Inhibiting Energy Efficiency

Market Failures	Market Barriers
Misplaced incentives	Low priority of energy issues
Distortionary fiscal and regulatory policies	Capital market barriers
Unpriced costs	Incomplete markets for energy efficiency
Unpriced benefits	
Insufficient and inaccurate information	

The following sections discuss each of these failures and barriers.

2.3 Market Failures

Misplaced incentives inhibit energy-efficient investments in each sector of the economy, This is typically labeled the "principal-agent problem" in the economics literature. This problem occurs when an agent has the authority to act on behalf of a consumer, but does not fully reflect the consumer's best interests. Examples of this failure are numerous. Architects, engineers, and builders, who generally seek to minimize first costs, select the energy technologies that homeowners and apartment dwellers must use. In this case, the consumer's best interest would be better met by selecting technologies based on life-cycle costs. Similarly, industrial buyers choose the technologies that are used in the production process and are mainly concerned with availability and the known dependability of standard equipment. Specialists write product specifications for military purchases that limit access to alternatives. Fleet managers select the vehicles to be used by others.

Lovins (1992) describes how typical fee structures for engineers and architects cause incentives to be distorted, thereby penalizing efficiency. Interviews with more than fifty design professionals and analysts showed that the prevailing fee structures of building design engineers are based on a percentage of the capital cost of the project. Such fee structures are pernicious because additional first costs are typically needed to enable the installation of superior heating, ventilation, and air-conditioning systems that reduce operating costs. These additional expenditures beyond the typical "rule-of-thumb" equipment sizing used by most engineers result in a net penalty for designers of efficient systems. Even though this type of fee structure has been strongly discouraged in the United States since the early 1970s, both the designer and procurer of design services still generally base their fee negotiation on percentage-of-cost curves.

The involvement of intermediaries in the purchase of energy technologies limits the ultimate consumer's role in decision making and leads to an under-emphasis on life-cycle costs (DOE, 1996b). For example, new car purchasers have a dominant influence on the design decisions of automakers and are not representative of the driving public, many of whom purchase their vehicles secondhand. In particular, new car purchasers are substantially wealthier than average

drivers, which skew their purchase preferences away from fuel economy and towards ride quality, power, and other vehicle qualities.

Another example of misplaced incentives is the landlord-tenant relation in the buildings sector. If a landlord buys the energy-using equipment while the tenants pay the energy bills, the landlord is not incentivized to invest in efficient equipment unless the tenants are aware of and express their self-interest. Thus, the circumstance that favors the efficient use of equipment (when the tenants pay the utility bills) leads to a disincentive for the purchase of energy-efficient equipment. The case that favors the purchase of efficient equipment (when the landlord pays the utility bills) leads to a disincentive for the tenants to use energy efficiently. About 90% of all households in multifamily buildings are renters, which makes this barrier particularly problematic in this segment of the market.

Distortionary fiscal and regulatory policies can also restrain the use of efficient and clean energy technologies. A range of these distortionary policies was recently identified in an analysis of 65 projects aimed at installing distributed generation (Alderfer, Eldridge, and Starrs, 2000). Distributed generation is modular electric power located close to the point of use. It includes environmentally-friendly renewable energy technologies such as wind turbines and photovoltaics, as well as fossil-fuel technologies such as reciprocating engines, gas turbines, and fuels cells. Regulatory barriers identified in this survey include prohibitions against uses of distributed energy resources (other than emergency backup when disconnected from the grid) and state-to-state variations in environmental permitting requirements that result in significant burdens to project developers. Tariff barriers include buyback rates that do not provide credit for on-peak production and backup and standby charges that can be excessive.

An example of a distortionary fiscal policy is the tax treatment of capital versus operating costs. U.S. tax rules require capital costs for commercial buildings and other investments to be depreciated over more than 30 years, whereas operating costs can be fully deducted from taxable income. Since efficient building technologies typically cost more than standard equipment on a first-cost basis, this tax code penalizes efficiency (Lovins, 1992). Similarly, many states are uneven in their sales tax policies. In 1990, twelve states charged sales taxes on residential energy-saving devices but not on residential fuels and electricity; only one state did the opposite (Koomey, 1990).

Electricity pricing policies of State legislatures and regulatory commissions also prevent markets from operating efficiently and subdue incentives for energy efficiency. The price of electricity in most retail markets today is not based on time of use. It therefore does not reflect the real-time costs of electricity production, which can vary by a factor of ten within a single day (Hirst and Kirby, 2000). Because most customers buy electricity as they always have – under time-invariant prices that are set months or years ahead of actual use – consumers are not responsive to the price volatility of wholesale electricity. Time-of-use pricing would encourage customers to use energy more efficiently during high-price periods. Metering, communications, and computing technologies are needed to support such dynamic pricing and voluntary-load-reduction programs. The cost of designing and installing this infrastructure represents another potential barrier to real-time pricing. While this might be cost prohibitive for some customers, the cost of this infrastructure would likely not be a barrier to many larger retail customers.

Unpriced costs include a range of negative impacts from the discovery, extraction, production, distribution, and consumption of fuels and power. A strong case can be made that energy fuels are underpriced, because market prices do not take full account of a variety of social costs associated with fuel use. Fossil energy using today's conversion technologies produces a variety of unpriced costs (or negative externalities) including greenhouse gas emissions; air, water, and land pollution; and oil supply vulnerabilities associated with the need to import oil and the uneven geographic distribution of petroleum resources within the United States. As a result of these unpriced costs, more fossil energy is consumed than is socially optimal.

Negative externalities associated with fossil energy combustion can be "internalized" through policy interventions. Domestic carbon trading is one example of such a policy. The idea of the carbon trading system is to create fossil fuel prices that better reflect the full cost of fossil fuel consumption, causing consumers to make decisions that take into account the full cost of the resource. These higher prices should cause consumers to use less fossil fuel. At the same time, the government-collected carbon permit revenues can be recycled to consumers, as modeled in the CEF study.

Existing environmental control costs are embedded in some energy costs. For instance, the U.S. Environmental Protection Agency regulations enforcing the Clean Air Act and other Federal legislation impose control costs on the marginal emitter of criteria pollutants like SO_2 and NO_x. However, not all existing fossil generators incur operating costs penalties. Furthermore, there are

several emissions produced by fossil fuel combustion that are not capped today. These include carbon, mercury, and smaller particulates (2.5 micron). No costs are currently included to account for damages from these pollutants. Because energy prices do not include the full cost of environmental externalities, they understate the societal cost of fossil energy use based on today's combustion technologies.

Unpriced goods also dampen the energy productivity of the economy. A public good is a good or service that has two principal characteristics. First, one person's consumption of it does not reduce the amount of it available for other people to consume. This characteristic is called "inexhaustibility." Second, once such a good is provided, it is difficult to exclude other people from consuming it, a characteristic called "nonexcludability." These market imperfections can be addressed through public policies and programs that bring market choices more fully in line with full costs and benefits.[2]

Because public goods are unpriced, markets tend to under produce them. Economists have long noted that private-sector investments in R&D are insufficient from a public perspective because they do not reflect societal benefits. (See the following section on externalities and public goods.) There is little disagreement about these statements in principle; at the same time, there is considerable disagreement about the magnitude of external costs and whether or how they should be incorporated into energy markets.

The public goods nature of education, training, and research is an important rationale for government support. Investments by employers in creating a well educated, highly trained workforce, for instance, are dampened because of the firm's inability to ensure that the employee will work long enough for that firm so as to repay its costs. The difficulties of selecting and installing new energy-efficient equipment compared to the simplicity of buying energy may prohibit many cost-effective investments from being realized. This is a particularly strong barrier for small and medium-sized enterprises (Reddy, 1991). In many firms (especially with the current trend towards *lean* firms) there is often a shortage of trained technical personnel (OTA, 1993). Government programs that pay university engineering faculty and students to conduct energy

[2] Externalities are goods or services that people consume as byproducts of other people's activities. They are called externalities because they are "external" to market transactions and are therefore unpriced. When the externalities are "positive," people benefit from their consumption without having to pay. As a result, positive externalities tend to be under-produced. When the externalities are negative, the individual's well-being is compromised and, from a societal perspective, too much is produced.

audits of industrial plants can overcome this barrier by training the next generation of energy professionals while delivering energy diagnostics and audit recommendations to plant managers (Martin, et al., 1999).

R&D often results in benefits that cannot be captured by private entities. Although benefits might accrue to society at large, individual firms cannot realize the full economic benefits of their R&D investments. Further, companies that absorb the market risk of introducing new technologies are generally unable to reap the full benefits of their trailblazing. (Sometimes referred to as "early adopter" public benefits.) The payback from advances in energy-efficient and clean energy technologies is not only experienced by the sponsoring company, but also flows to the public, to the company's competitors, and to other parts of the economy. The problem is especially pronounced when an industry is as fragmented as the construction and homebuilding industries (Brown, 1997; Oster and Quigley, 1977). Fragmentation is also a problem in the commercial buildings sector, with the design and engineering of buildings split between many small design firms.

The risk of innovation leakage and exploitation by competing firms puts pressure on firms to invest for quick returns (Mansfield, 1994). Technology innovation is typically a longer-term investment fraught with risks to the investor. The result is an under-investment in R&D from the standpoint of overall benefits to society. The problem is particularly difficult in the newly restructured electric sector, where R&D funding has decreased dramatically. Companies will not fund the optimal societal level of basic R&D of new technologies, since many of the benefits of such research will flow to their competitors and to other parts of the economy. This is true of many industries, and is one of the main rationales for government-funded long-term, pre-competitive research in industries that have a vital role in the U.S. economy.

A report by the Council of Economic Advisers (CEA, 1995) estimated that the private returns from RD&D are 20 to 30%, while social returns (including energy security and environmental benefits) are 50% or higher. This gap limits the extent to which the private sector can supplant a government role in maintaining nationally beneficial RD&D. Generally the uncaptured social returns are greatest in fragmented industries such as construction. With the development of international markets, fragmentation is growing and industry's priorities are shifting further away from basic and applied research and toward near-term product development and process enhancements. Business spending on applied research has dropped to 15% of overall company

R&D spending, while basic research has dropped to just 2%. In addition, corporate investments in energy RD&D, in particular, are down significantly (DOE, 1996a, p. 2).

Suboptimal investments in energy efficiency often occur as the result of **insufficient and incorrect information.** Market efficiency assumes free and perfect information, although in reality information can be expensive and difficult to obtain – in the energy sectors as elsewhere. The time and cost of collecting information is part of the transaction costs faced by consumers. Where the consumer is not knowledgeable about the energy features of products and their economics (for any of a large number of reasons, including technical difficulties and high costs of obtaining information), investments in energy efficiency are unlikely (OTA, 1993; Levine et al., 1995).

For example, residential consumers get a monthly electricity bill that provides no breakdown of individual end-uses. This is analogous to shopping in a supermarket that has no product prices; if you get only a total bill at the checkout counter, you have no idea what individual items cost. Supermarkets, of course, have copious price labeling; household utility bills, in contrast, do not.

Similarly, the price paid for different levels of vehicle fuel economy is buried in base prices or in the price of complete subsystems such as engines. Further, efficiency differences are coupled with substantive differences in other critical consumer attributes such as acceleration performance, level of luxury, and vehicle handling. Reliable information on the marginal cost of fuel economy may be obtainable, but the effort required for an individual consumer to secure such information could be prohibitive.

Decision-making complexities are another source of imperfect information that can confound consumers and inhibit "rational" decision-making. Even while recognizing the importance of life-cycle calculations, consumers often fall back to simpler first-cost rules of thumb. While some energy-efficient products can compete on a first-cost basis, many of them cannot. Properly trading off energy savings versus higher purchase prices involves comparing the time-discounted value of the energy savings with the present cost of the equipment – a calculation that can be difficult for purchasers to understand and compute. This is one of the reasons builders generally minimize first costs, believing (probably correctly) that the higher cost of more efficient equipment will not be capitalized into a higher resale value for the building. The complexities of decision making is one form of transaction cost.

Note, however, that if consumers were extremely concerned about life-cycle energy savings and determined to base their purchasing decisions on them, product manufacturers would have a strong incentive to provide consumers with better information about energy efficiency and with clearer tradeoffs. It can be argued that the lack of such information and choices is simply the consequence of consumer disinterest in using energy efficiently...the first of several market barriers discussed below.

2.4 Market Barriers

Energy efficiency is not a major concern for most consumers because energy costs are not high relative to the cost of many other goods and services. In addition, the negative externalities associated with the U.S. energy system are not well understood by the public. The result is that the public places a low priority on energy issues and energy efficiency opportunities. In turn, this reduces producer interest in providing energy-efficient products.

In most cases, energy is a small part of the cost of owning and operating a building, a factory, or a car. Of course, there are exceptions. For low-income families, the cost of utilities to heat, cool, and provide other energy services in their homes can be a very significant part of their income – averaging 15% compared to 4% for the typical U.S. citizen (Berry, Brown, and Kinney, 1997). For energy-intensive industries such as aluminum and steel, energy can represent 10-25% of their production costs. In these cases, energy costs may be a major concern, but other constraints tend to be more important barriers to promoting energy efficiency.

Since energy costs are typically small on an individual basis, it is easy (and rational) for consumers to ignore them in the face of information gathering and transaction costs. However, the potential energy emissions savings can be important when summed across all consumers. This is one reason why government agencies like EPA and DOE work directly with manufacturers to improve the efficiency of their products. A little work to influence the source of mass-produced products can pay off in significant efficiency improvements and emissions reductions that rapidly propagate through the economy due to falling production costs as market shares increase (Arthur, 1990).

Capital market barriers can inhibit efficiency purchases. Different energy producers and consumers have varying access to financial capital, and at different rates of interest. In general, energy suppliers can obtain capital at lower interest rates than can energy consumers – resulting in an "interest rate gap." Differences in these borrowing rates may reflect differences in the knowledge base of lenders about the likely performance of investments as well as the financial risk of the potential borrower. At one extreme, electric and gas utilities are able to borrow money at low interest rates. At the other extreme, low-income households may have essentially no ability to borrow funds, resulting in an essentially infinite discount rate for valuing improvements in energy efficiency.

The broader market for energy efficiency (including residential, commercial, and industrial consumers) faces interest rates available for efficiency purchases that are also much higher than the utility cost of capital (Hausman, 1979; Ruderman et al, 1987; Ross, 1990; Levine et al., 1995). DeCanio (1993) has shown that firms typically establish internal hurdle rates for energy efficiency investments that are higher than the cost of capital to the firm. Information gaps, institutional barriers, short time horizons, and non-separability of energy equipment all contribute to this gap, and each is amenable to policy interventions that could move the rates down towards auto-loan, mortgage, and opportunity costs. Energy prices, as a component of the profitability of an investment, are also subject to large fluctuations. The uncertainty about future energy prices, especially in the short term, seems to be an important barrier (Velthuijsen, 1995). Such uncertainties often lead to higher perceived risks, and therefore to more stringent investment criteria and a higher hurdle rate (Hassett and Metcalf, 1993; Sanstad et al., 1995). An important reason for high hurdle rates is capital availability. Capital rationing is often used within firms as an allocation means for investments, leading to hurdle rates that are much higher than the cost of capital, especially for small projects (Ross, 1986).

Incomplete markets for energy efficiency are often a serious obstacle. Energy efficiency is generally purchased as an attribute of a product intended to provide some other service. Fuel economy in automobiles, for example, is one of a large number of features that come in a package for each make and model. If higher fuel economy were treated as an optional item, available at a higher price, then consumers would have a choice of efficiency levels. But such a separate option does not presently exist. Circumstances often constrain choices of efficiency. For example, the complexity of design, construction, and operation of commercial buildings provide powerful disincentives to producing an efficient building (Lovins, 1992).

As a result of this host of market failures and barriers, the discount rate that consumers appear to use in making many energy efficiency decisions is higher than the interest rate at which consumers could borrow money. This discount rate gap has been widely observed in the literature and is reflected in some key energy models such as the National Energy Modeling System.

2.5 Sectoral Differences in Market Failures and Barriers

Each end-use sector functions differently in the U.S. energy marketplace. One of the reasons for this variation is the distinct market structure for delivering new technologies and products in each sector. Residential and commercial building technology is shaped by thousands of building contractors and architectural and engineering firms, whereas the automotive industry is dominated by a few manufacturers. As a result, the principal causes of energy inefficiencies in manufacturing and transportation are not the same as the causes of inefficiencies in homes and office buildings, although there are some similarities (Hirst and Brown, 1990.)

For example, in the manufacturing sector, investing in cost-effective, energy-efficiency measures (which cut operating costs and therefore increase profits) is hampered by a common preference to invest resources to increase output and market share as a preferred route to expanding profits (Ross, 1990 and Sassone and Martucci, 1984). In the building sector, information gaps prevent all the energy-efficient features of buildings from being capitalized into real estate prices. This is partly due to the lack of widely adopted building energy rating systems (Brown, 1997). These information gaps are less characteristic of the transportation sector, where fuel economy is well understood in terms of miles per gallon. Of course, filling an information gap does not necessarily change purchasing behavior.

The end-use sectors also differ in terms of their ability to respond to changing energy prices. This is partly due to the varying longevity of the equipment that are used. For example, cars, lighting, and air conditioners turn over more quickly than industrial boilers. There are also differences in fuel flexibility. The U.S. transportation system today is relatively fuel-inflexible, being primarily dependent on petroleum, while portions of the buildings and industrial sectors have multiple fuel choices.

The vast differences in the R&D capability of the sectors also influence their ability to respond quickly to changing energy prices and market signals. The private sector as a whole spends more than $110 billion per year on R&D, dwarfing the government expenditure on all non-defense technology R&D (National Science Foundation, 1997). Of the private-sector R&D expenditure, the automobile manufacturers stand out – Ford alone spends more than $8 billion per year in R&D. Next comes the rest of the industrial sector. Here manufacturers account for a majority of R&D expenditures. In the buildings sector, the construction industry has virtually no indigenous R&D. The Council on Competitiveness in 1992 estimated that the construction industry spends less than 0.2 percent of its sales on R&D, far less than the 3.5% that other industries spend on average.

Finally, each of the sectors is distinct in terms of the primary societal benefits from improved energy efficiencies. Fuel economy in transportation is essential to improving air quality and protecting against oil price volatility. Energy productivity in the industrial sector is essential to economic competitiveness and pollution prevention. Energy efficiency in the buildings sector makes housing more affordable on a life-cycle basis, and is critical to reducing SO_2, NOx, and particulate matter since most of the energy consumed in buildings is fossil-generated electricity. This is yet one more reason why the public policies and programs examined in the *Scenarios for a Clean Energy Future* are customized specifically to meet the needs of each sector.

3.0 THE GOVERNMENT ROLE

The existence of market failures and barriers that inhibit socially optimal levels of investment in energy efficiency is the primary reason for considering public policy interventions. In many instances, feasible, low-cost policies can be implemented that either eliminate or compensate for market imperfections and barriers, enabling markets to operate more efficiently to the benefit of society. In other instances, policies may not be feasible; they may not fully eliminate the targeted barrier or imperfection; or they may do so at costs that exceed the benefits.

To foster energy efficiency, reducing transaction costs is particularly important. For clean energy supply technologies, addressing public externalities and public goods is especially critical. For each of the four major sectors of the economy, the CEF study describes the market imperfections

and barriers that prevent efficient and clean energy technologies, and links these to sector-specific public policies and programs. Some of these linkages are illustrated below.

Several of the problems we have discussed, particularly those related to information, can be viewed as transaction costs associated with energy decision making. Examples include the costs of gathering and processing information, making decisions, and designing and enforcing contracts relating to the purchase and installation of energy-using technology. These costs are real, in the sense that they must be borne by the consumer and should be included in the cost of the energy efficiency measure. A key question is whether there are institutional interventions that can reduce these costs for individual consumers. For example, the time and effort required to find a refrigerator with the maximum cost-effective level of energy efficiency could be significant.

Information programs (e.g., product ratings and labeling) and technical assistance (e.g., industrial energy assessments) can help make up for incomplete information by reducing the consumer's cost of acquiring and using needed information. They can also simplify decision making and can help consumers focus on energy issues which may seem small to an individual consumer but which can be large from a national perspective.

Weatherization assistance directly addresses the lack of access of low-income households to capital. Programs that support financing through energy services companies and utilities also address this barrier. More indirectly, but just as important, technology demonstrations provide financial markets with evidence of performance in the field, which is critical to reducing the cost of capital. For instance, electric utility companies in many regions have demonstrated the value of advanced lighting technologies through various incentive programs that have subsequently led to the widespread acceptance of these products (Levine and Sonnenblick, 1994) and the increased availability of financing through mechanisms such as energy-saving performance contracts.

The public goods nature of R&D can be addressed through direct government funding. Great potential exists for public-private RD&D partnerships to produce scientific breakthroughs and incremental technology enhancements that will produce new and improved products for the marketplace. U.S. industry spends approximately $180 billion per year on all types of RD&D. These expenditures are much larger than the $24 billion spent by the federal government on industrial R&D (NSF, 2000) and they dwarf the U.S. government's energy-related RD&D appropriations. If public policies reorient even a tiny fraction of this private-sector expenditure

and capability to address the nation's energy-related challenges, it could have an enormous impact. One way to reorient private-sector investments is through industry-government RD&D alliances that involve joint technology roadmapping, collaborative priorities for the development of advanced energy-efficient and low-carbon technologies, and cost sharing.

4. PAST ENERGY POLICY AND PROGRAM SUCCESSES

Many different types of policies and programs comprise the policy implementation pathways that are analyzed in "Scenarios for a Clean Energy Future." They include:

- public-private RD&D partnerships;
- voluntary, information and technical assistance programs;
- regulatory policies; and
- financing, investment enabling, and fiscal policies.

Some indication of the potential cost-effectiveness of these policies can be gleaned from experiences to date. The following sampling of policy successes provides further evidence that energy-use decisions are not made in efficient markets. Further, they verify that policy mechanisms exist that can eliminate, reduce, or compensate for market imperfections.

From fiscal years 1978 through 1994, DOE spent less than $10 billion on energy-efficiency RD&D and related deployment programs. Estimates of the benefits of several dozen projects supported by this funding were published in DOE/SEAB (1995). In response to a detailed review of these estimates by the General Accounting Office (GAO, 1996), DOE concluded that five technologies developed with the support of DOE funding produced cumulative energy savings of $28 billion (in 1996$) from installations through 1996. Annualized consumer cost savings were estimated to be $3 billion in 1996[3], and annual greenhouse gas emissions reductions to be 16 MtC equivalent (Table 2).

Recent case studies of **public-private RD&D partnerships** are documented in DOE/EE (2000), Geller and Thorne (1999), and Geller and McGaraghan (1996). For example, DOE/EE (2000)

[3] Annualized consumer cost savings are the energy bill savings in 1996 minus the annualized cost premiums for better equipment.

describes 11 public-private RD&D partnerships that are estimated to have saved 5,050 trillion Btu of energy to date, or about $30 billion (1998$) in energy costs. These savings are approximately enough to meet the energy needs of all of the citizens, businesses, and industries located in the states of New York, Connecticut, and New Mexico for one year. Examples of technologies that have benefited from these partnerships are ozone-safe refrigerants, compact-fluorescent torchieres, lightweight automotive materials, diesel engine technologies, and geothermal heat pumps. It is important to note that DOE does not take full credit for the entire stream of benefits produced by these technologies. Most of these accomplishments have involved partnerships with many stakeholders contributing in important ways. However, the success stories are numerous and diverse, and they suggest that the potential for future accomplishments is great.

Table 2. Cumulative Net Savings and Carbon Reductions from Five Energy-Efficient Technologies Developed with DOE Funding

Energy-Efficient Technology	Net Present Value of Savings[a] (billions of 1996$)	Annualized Consumer Cost Savings in 1996 (billions of 1996$)	Annual Carbon Reductions in 1996 (MtC equivalent)
Building Design Software	11.0	0.5	8
Refrigerator Compressor	6.0	0.7	3
Electronic Ballast	3.7	1.4	1
Flame Retention Head Oil Burner	5.0	0.5	3
Low-Emissivity Windows	3.0	0.3	1
Totals	28	3.4	16

[a]Savings for the refrigerator compressor and flame retention head oil burner are through 1996 only; the remainder are savings from products in place by the end of 1996 and include estimated energy savings from the product's years in operation beyond 1996.

Government-run **voluntary and technical assistance programs** have strongly stimulated the adoption of many cost-effective, energy-efficient technologies, thereby narrowing the efficiency gap. The voluntary programs of the Environmental Protection Agency (EPA) have amassed detailed evaluation data documenting the investments in energy efficiency that their programs have stimulated (EPA, 1999). Levine et al. (1995) cite examples of energy-saving features in computers that are highly cost-effective but were not adopted by manufacturers until EPA

launched the Energy Star Program. (This program is now operated jointly with the U.S. Department of Energy.) In 1992, manufacturers producing almost all computers and laser printers agreed to manufacture products with low standby losses. In January 1998, as a result of new efforts of the Energy Star Program, manufacturers agreed to reduce standby losses in TVs and VCRs.

In addition to working with manufacturers, voluntary and technical assistance programs have also transformed markets for energy efficiency by publicizing trendsetting consumers. Using a "share capture" model, Horowitz, et al. (2000) estimate that 40% of the rapid growth of electronic ballasts in the 1990's can be attributed to EPA's Green Lights Partnerships and other market transformation programs. These programs encourage building owners and operators to install high-efficiency lighting products by certifying the performance of the technology and publicizing the "green" choice made by program partners.

There are also examples of successful **regulatory policies**. For instance, the promulgation of national appliance efficiency standards in the late 1980s provides a clear example of efficiency gains stimulated by regulation. Standards enforce the elimination of the worst practices and products in the market, and, given a continuous modification related to technical progress, they can provide dynamic innovation incentives. An in-depth analysis of the effects of appliance standards, as compared to a case in which market forces alone determined the energy efficiency of consumer products, showed a net benefit of standards enacted through 1994 of about $45 billion (Levine et al., 1995). Estimates of the costs of the standards, completed prior to their being promulgated, showed them to be highly cost-effective. Another retrospective study found the price of appliances to be unaffected by the issuance of new standards (Greening et al., 1997).

Many of the programs operated by Bonneville Power Administration and California's investor-owned utilities in the late 1980's and early 1990's provide compelling examples of effective **financing and investment-enabling policies** (Brown, 1993; Brown and Mihlmester, 1995a and b). Information outreach in combination with rebates and low-interest loans proved successful in many utility-operated demand-side management (DSM) programs (Parfomak and Lave, 1997). Additional examples of successful DSM programs can be found in the proceedings of the biennial National Energy Program Evaluation Conference (1999).

The policies and programs used here to illustrate past successes have been described primarily in terms of their energy benefits. Results reported in Elliott et al. (1997), Romm (1994, 1999) and Laitner and Finman (2000) indicate that the total benefits – including both energy and non-energy savings – that accrue from so-called "energy-saving" projects can be much greater than those from the energy savings alone. In fact, based on a review of 25 manufacturing case studies, Laitner and Finman (2000) conclude that the average non-energy benefits received from "energy-saving" projects in industry are typically equivalent to the value of the energy savings alone. As a result, the average payback from these investments falls from four years when only energy savings are included in the analysis, to less than two years when both energy and non-energy savings are included. Non-energy "co-benefits" include public health benefits from cleaner air and water (Romm and Ervin, 1996) as well as improved comfort of building occupants and increased labor productivity. Because many non-energy impacts are difficult to monetize they are often excluded from cost/benefit calculations.

5. CONCLUSIONS

Homes, offices, factories, cars, and trucks are rarely built to use energy efficiently, despite the sizeable costs that inefficient designs impose on consumers and the nation. The evidence of this efficiency gap is compelling, and the reasons for it are numerous. Statistical analysis and case studies underscore the widespread existence of this gap and the array of different market obstacles that cause it. By improving our understanding of these obstacles, it may be possible to design more effective policy interventions and to explain their rationale to the public. Past policy successes show that at least some of the energy-efficiency gap can be successfully addressed by policy initiatives. This optimism is the basis of the *Scenarios for a Clean Energy Future*, which examines the impacts of more than 50 public policies and programs designed to accelerate the penetration of energy-efficient and clean energy technologies. The considerable breadth and depth of the policies modeled in the CEF study reflect the wide-ranging diversity of market imperfections and barriers that hinder energy efficiency throughout the economy.

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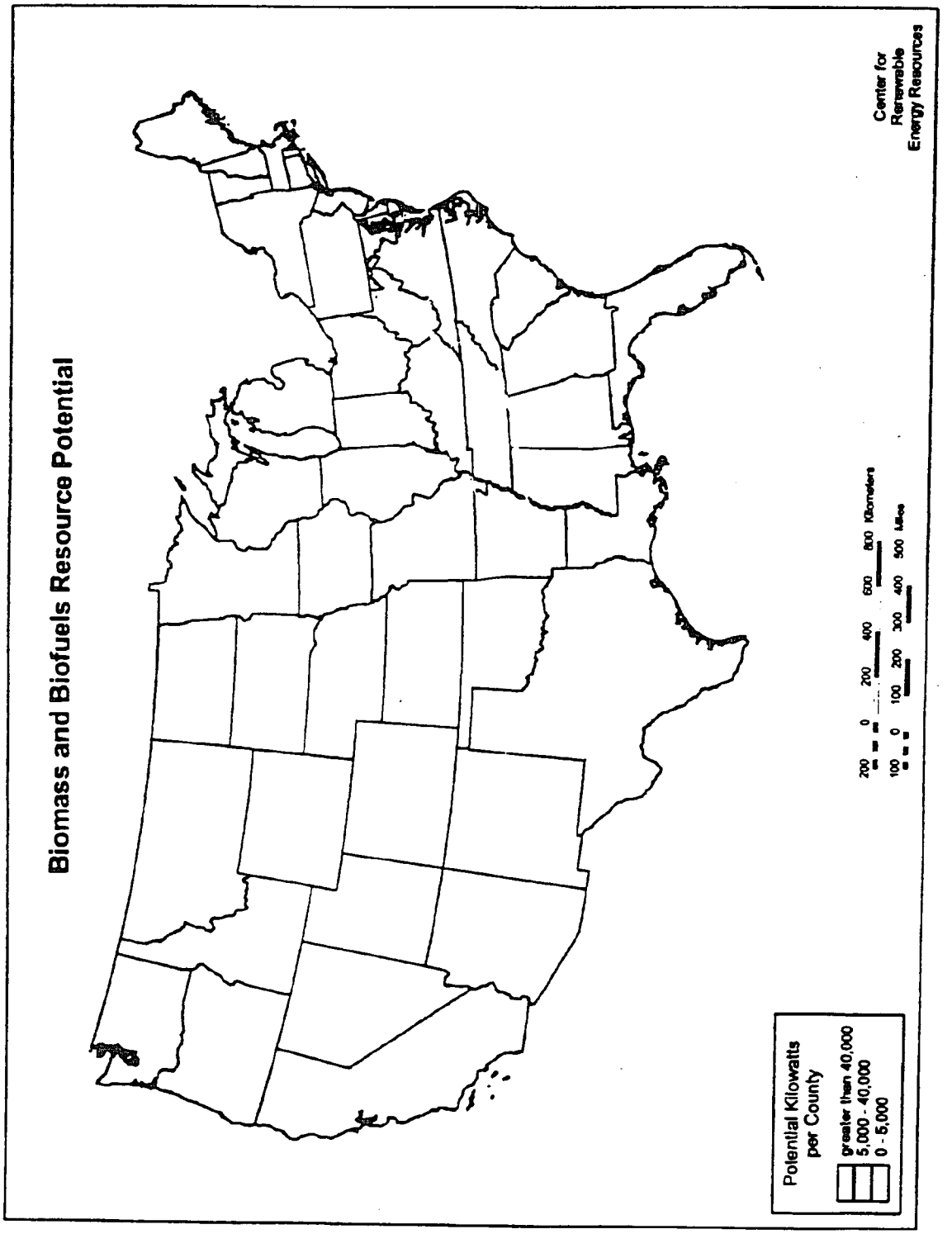
51

Wind, Bio, Solar, Geo.ppt
(Recovered)

5 pgs



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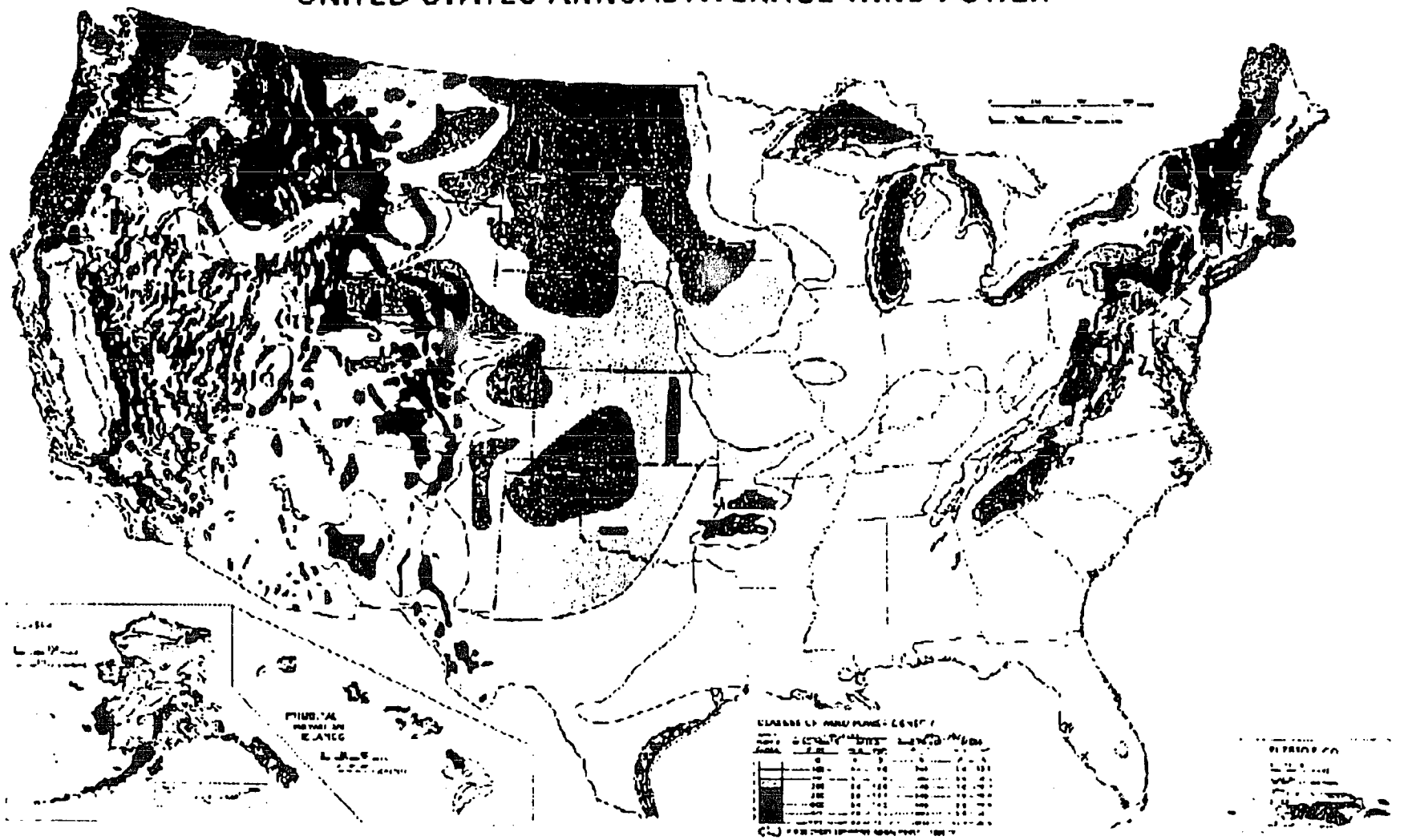
Solar Insolation Resource

Source: National Renewable Energy Lab Center for Renewable Energy Resources

UNITED STATES ANNUAL AVERAGE WIND POWER



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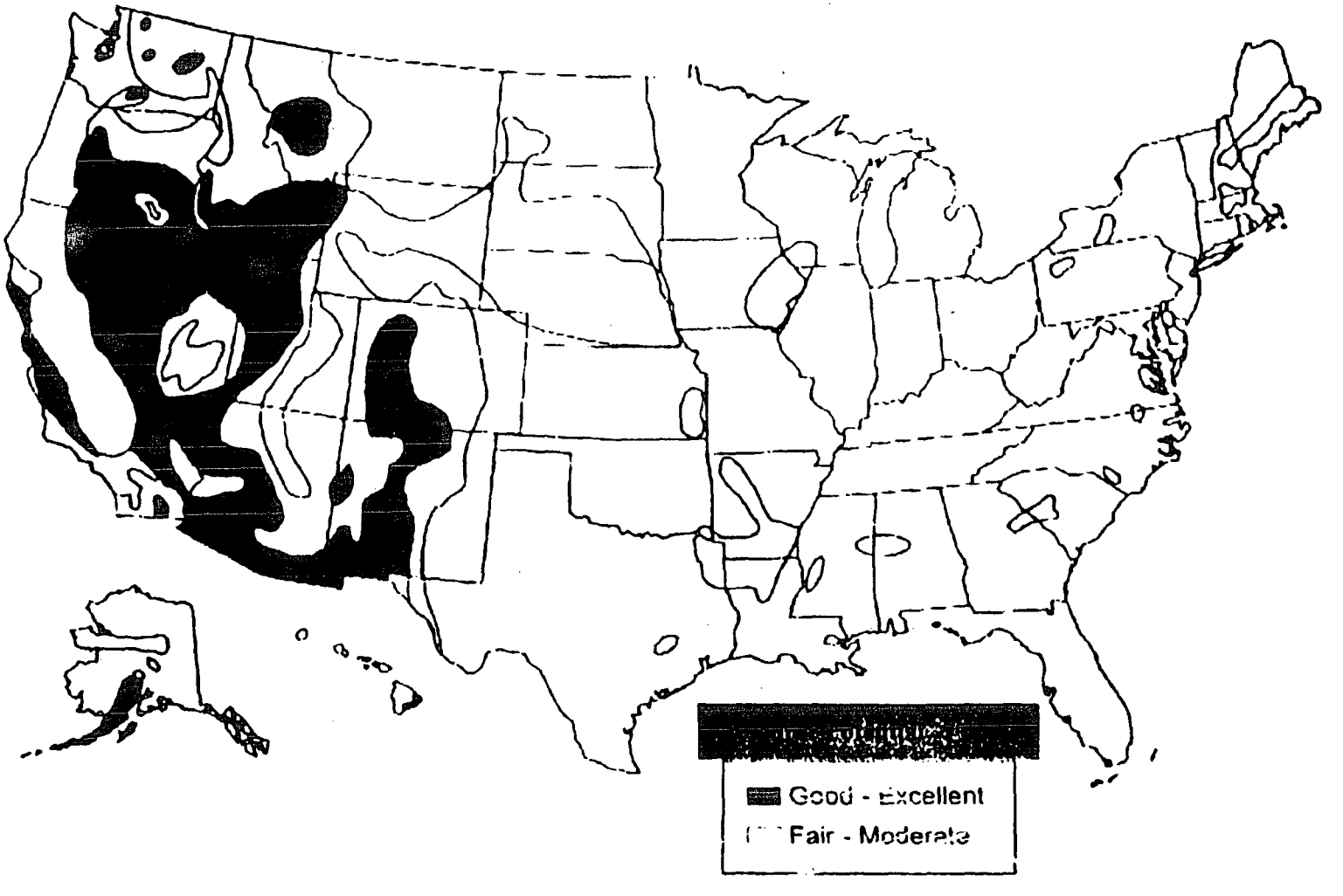

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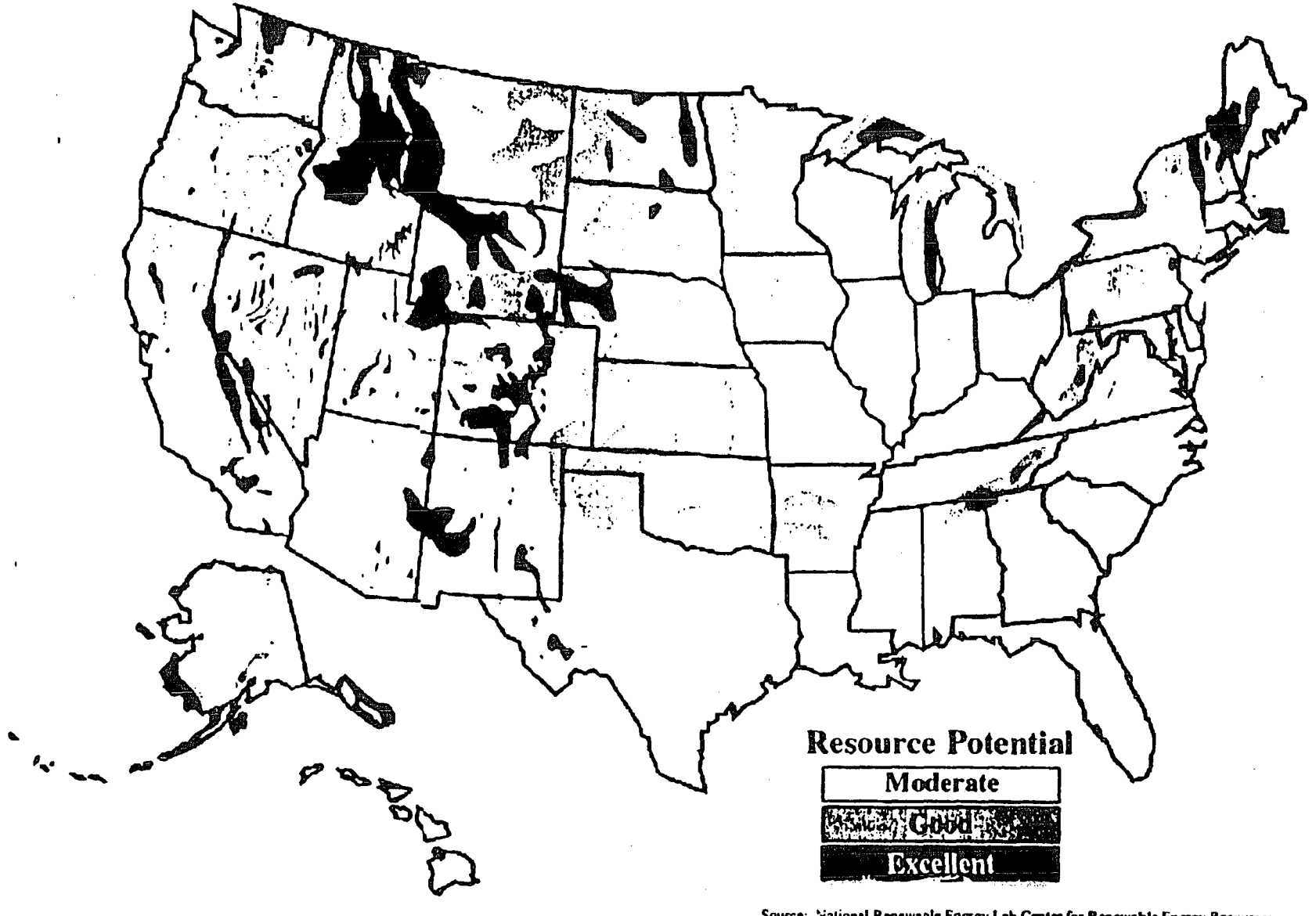
Wind Resources



Source: National Renewable Energy Lab Center for Renewable Energy Resources

55

Pulte- NET 1 of 7

50% more energy efficient homes!

Pulte Homes southwest division has utilized technical assistance from DOE's Building America program to create what one residential expert calls "the best production house in the world," which won the 2001 National Association of Home Builders Energy Value Award. In Tucson, Phoenix and Las Vegas, Pulte Homes has worked with DOE to redesign the energy features of its basic models. Using advanced insulation techniques, highly efficient equipment and windows, and right-sized heating and cooling systems, the homes look the same but perform so well they use half the energy for heating and cooling at virtually *no increase in construction costs*. The whole building, systems engineering approach used in Building America allows the builder to add more insulation and more efficient windows while reducing the size of the heating and cooling equipment. The trade-off means no added cost to the builder, better value for the buyer, reduced electric load for the utility, and improved affordability.

For more information, you may contact Randy Foltz or Dave Beck at Pulte Homes (702 256-7900).

Lead Entity	Programs/ Initiatives Impacted	Description of Impacted Program/ Initiative	Sector Comments
All			
NEDP			
DOE			
DOE			
DOE			
DOE			

All			
DOE, State, Commerce			
DOE, State, Commerce			
DOE, USTR, Commerce			
DOE, State, Commerce			

DOE, State, Commerce			
All			
DOE			
DOE, Interior			
Treasury			
EPA, DOE, DOA			

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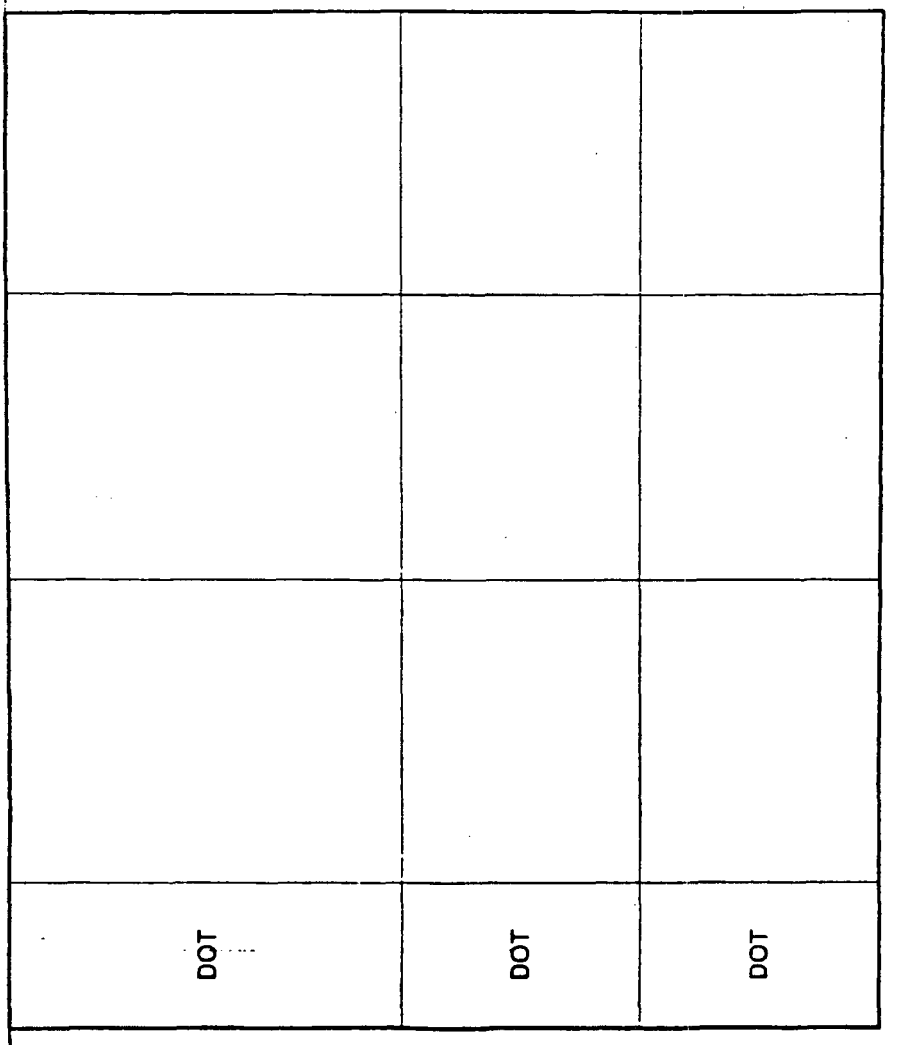
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DOE, State, Commerce			
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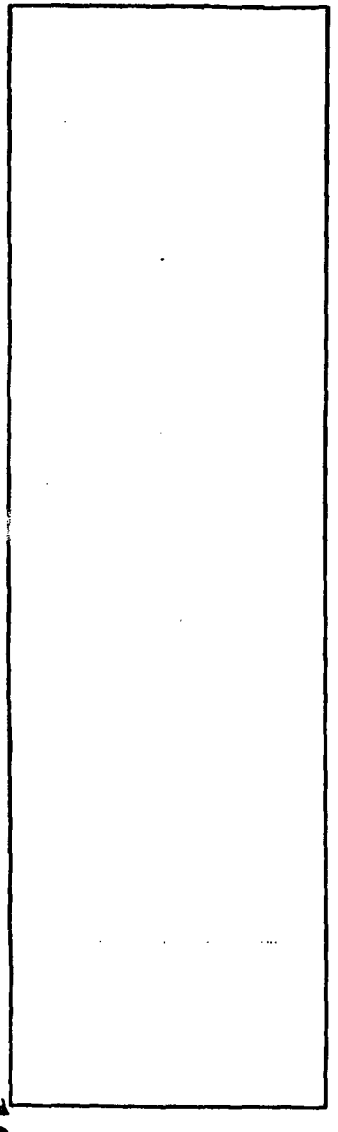
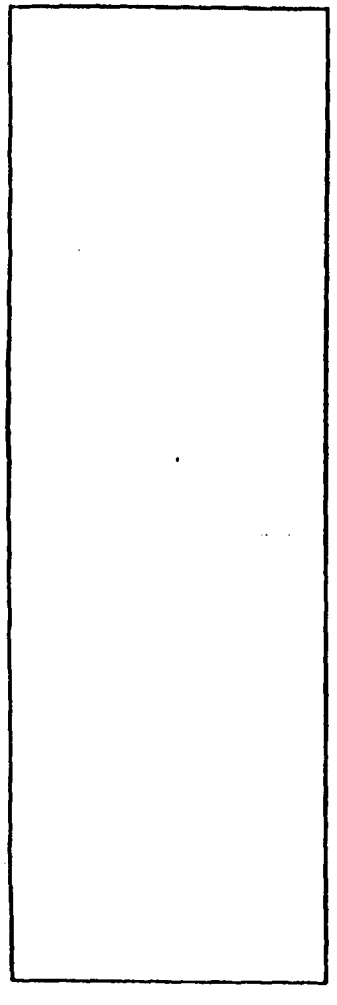
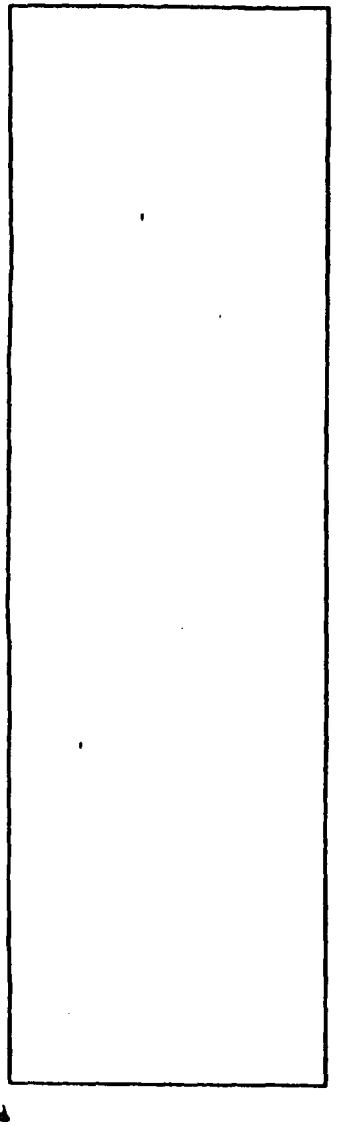
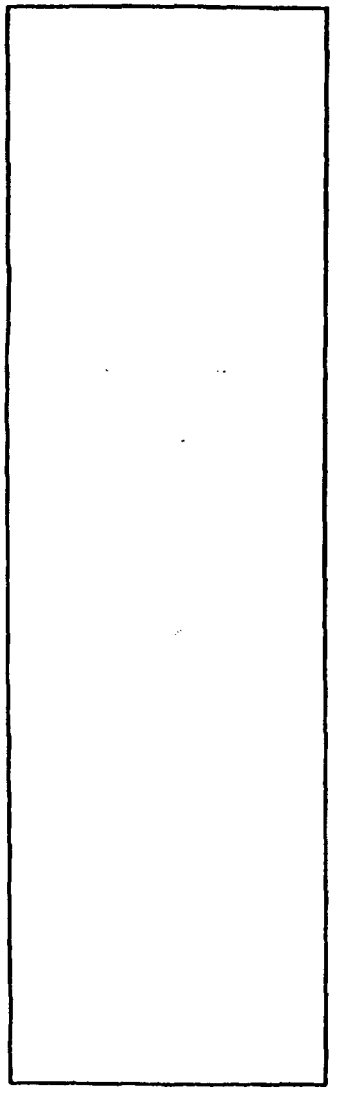
Treasury			

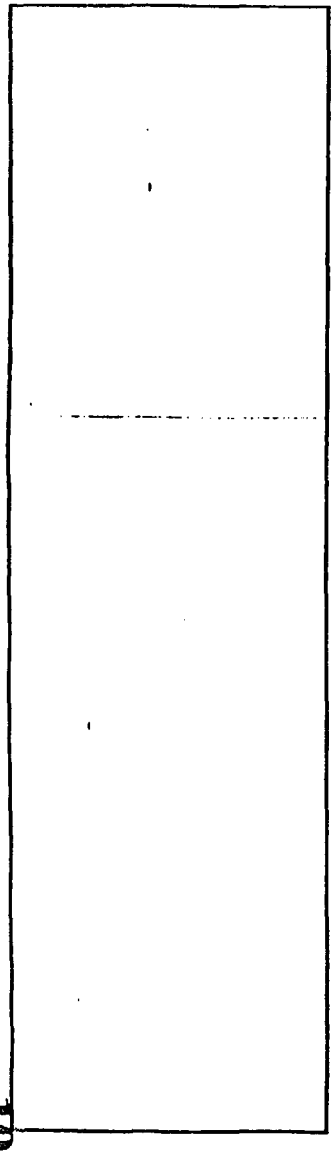
Action Item Comments

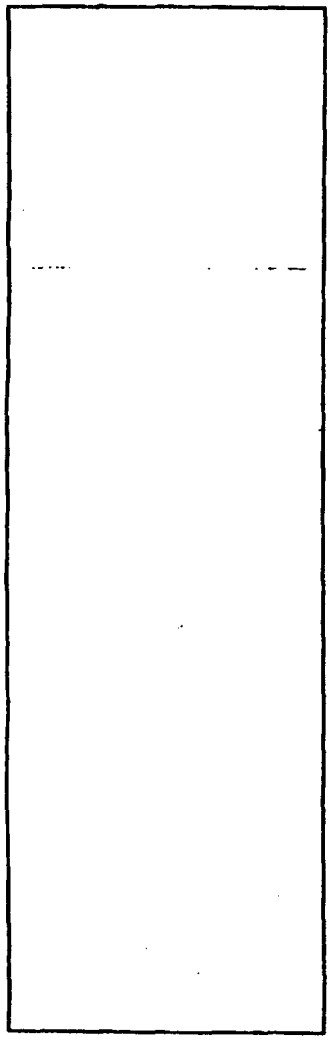


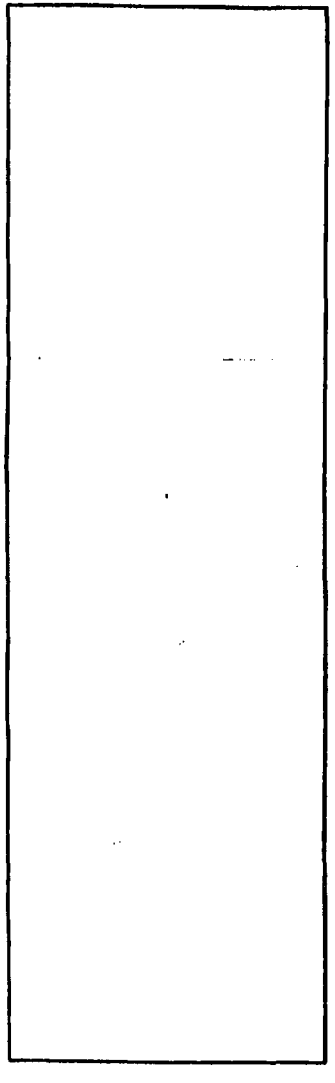


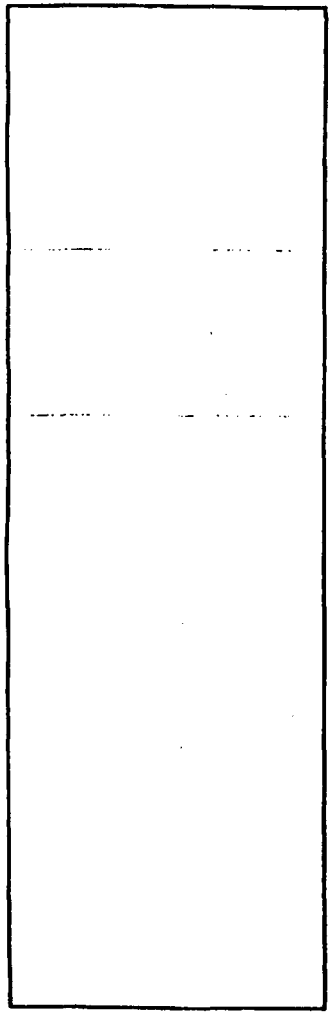


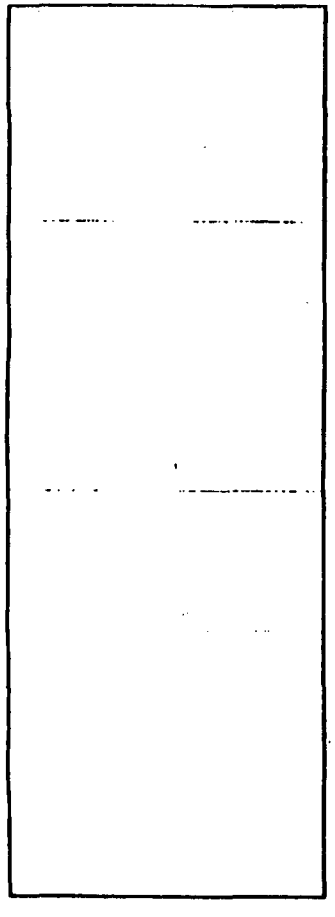


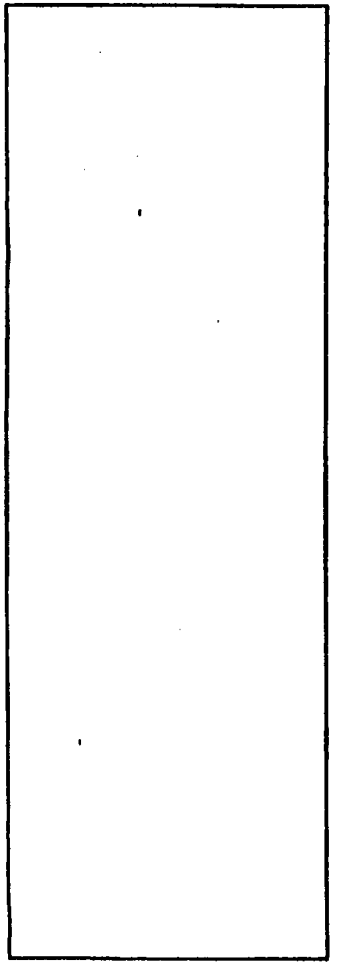


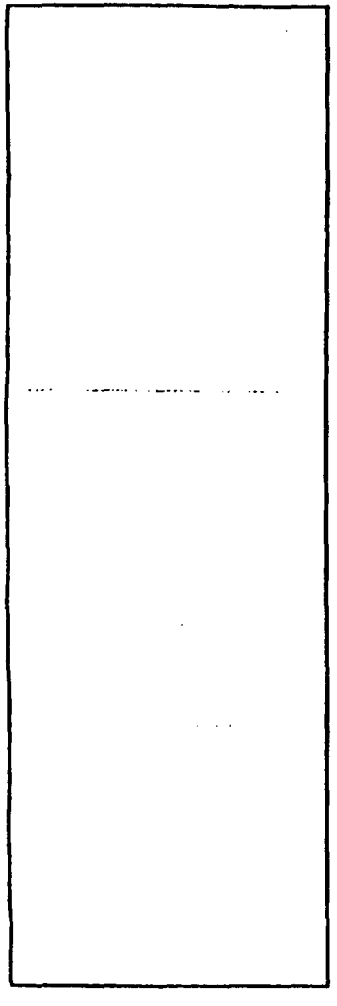


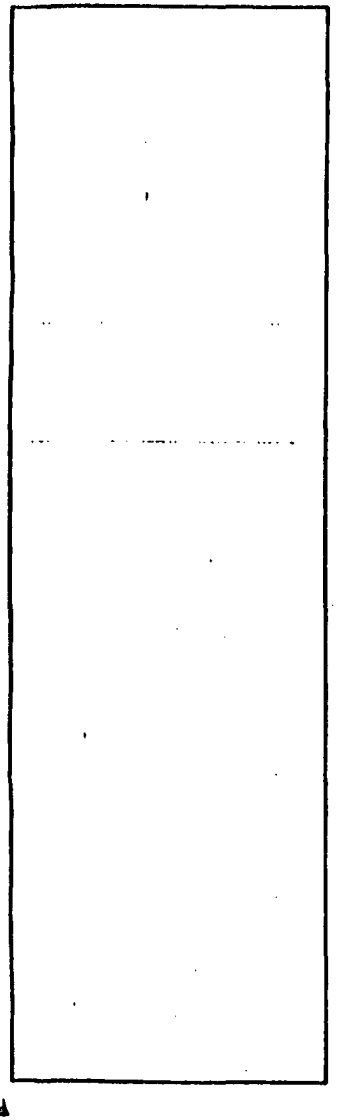


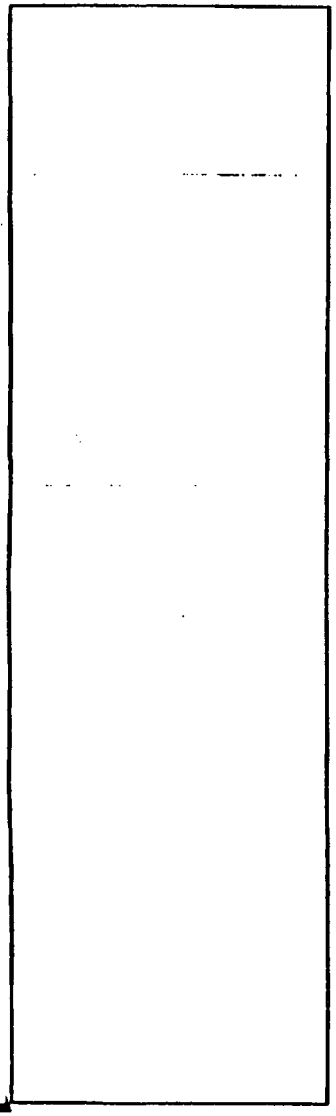


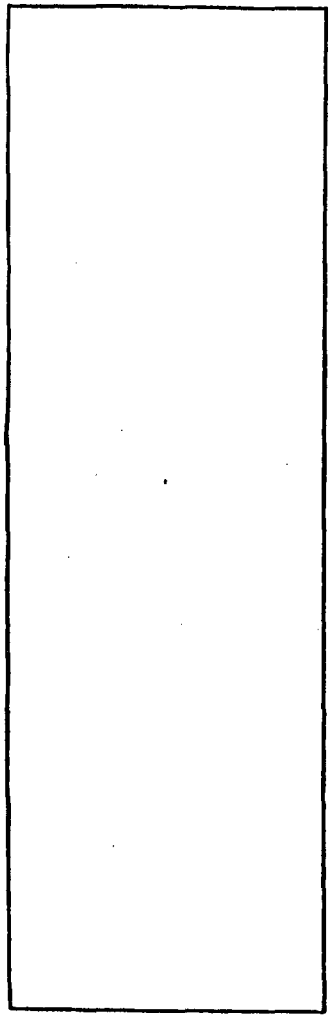


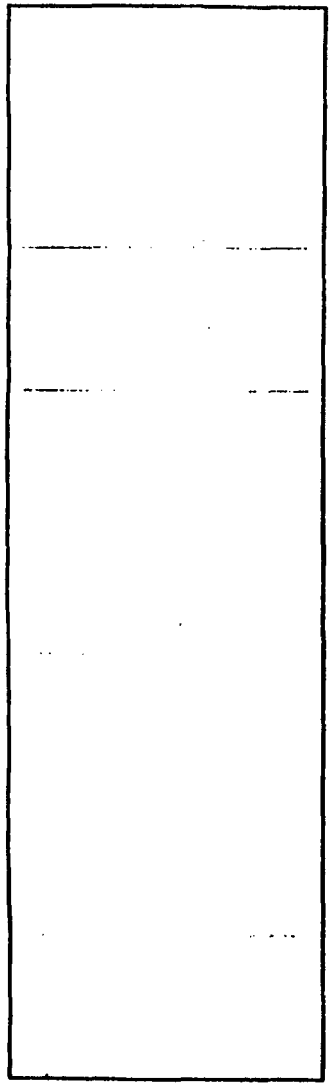


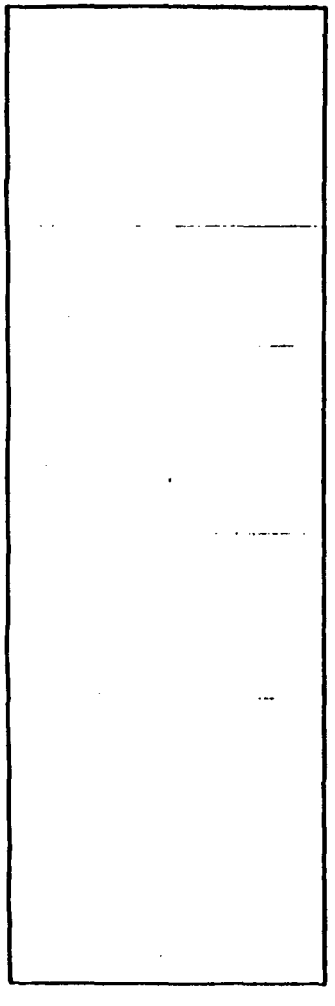


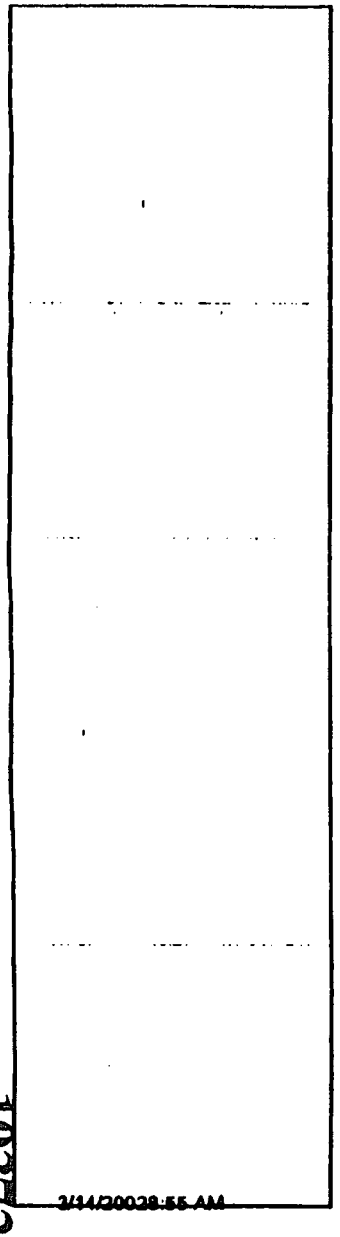


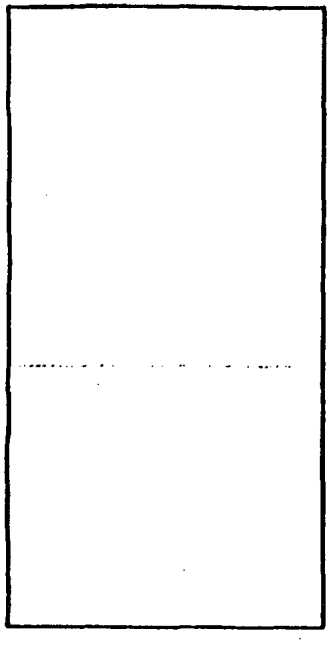


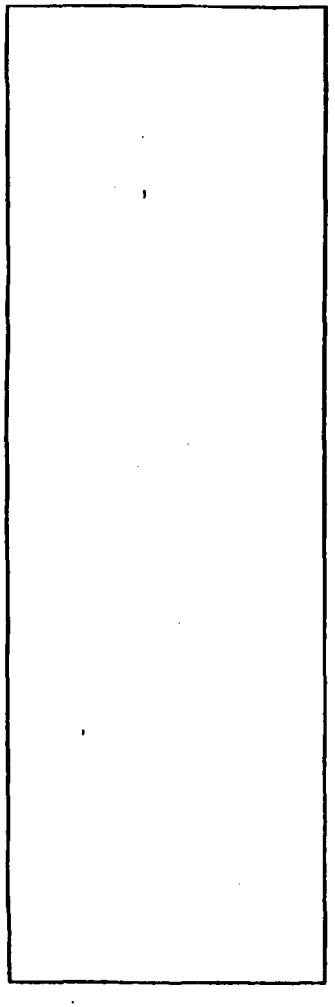


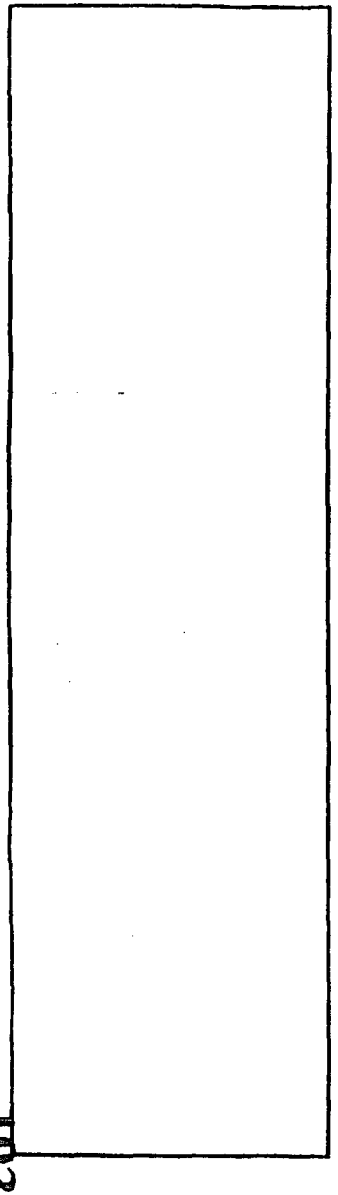


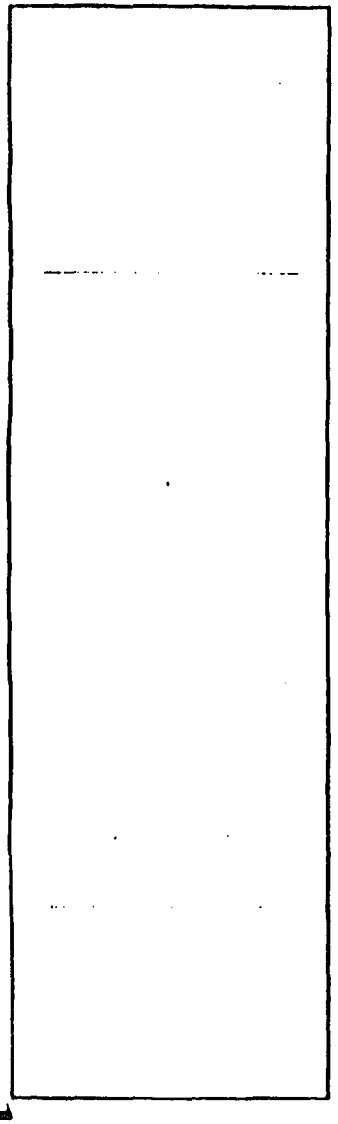


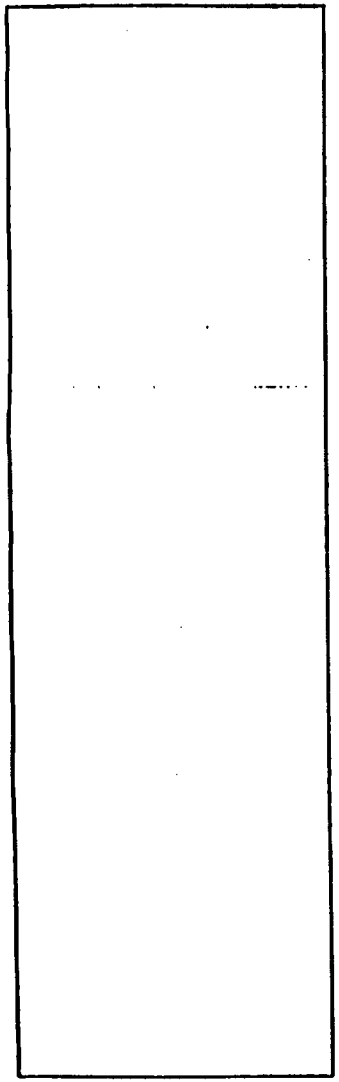


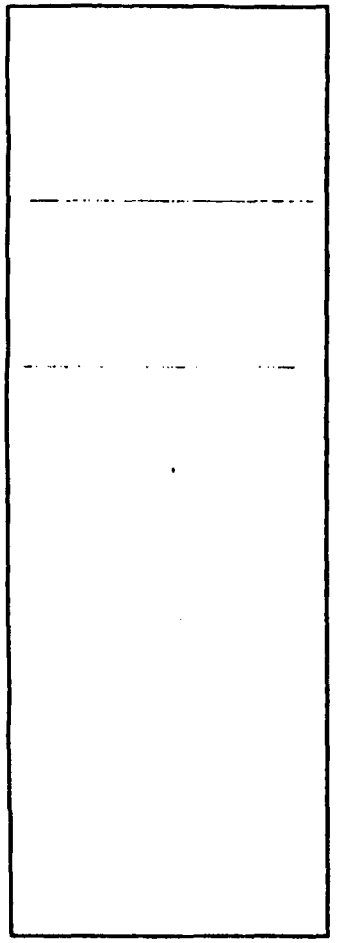


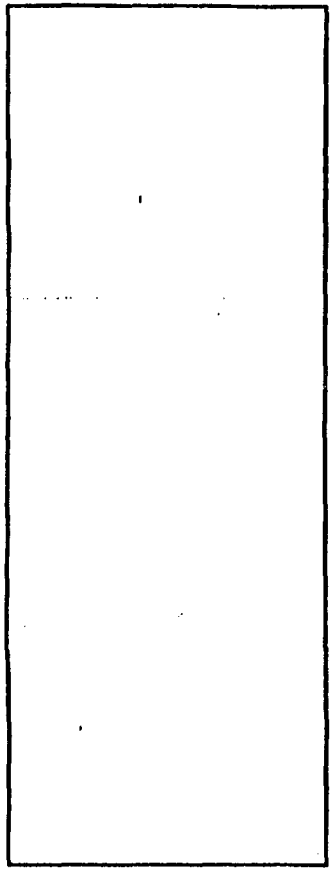




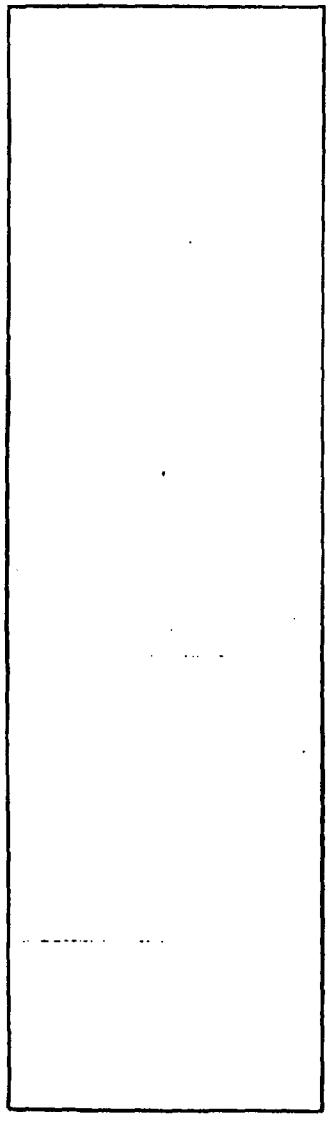


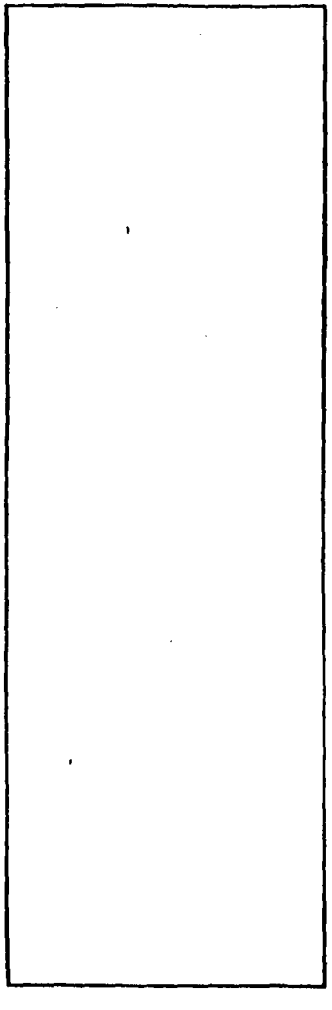


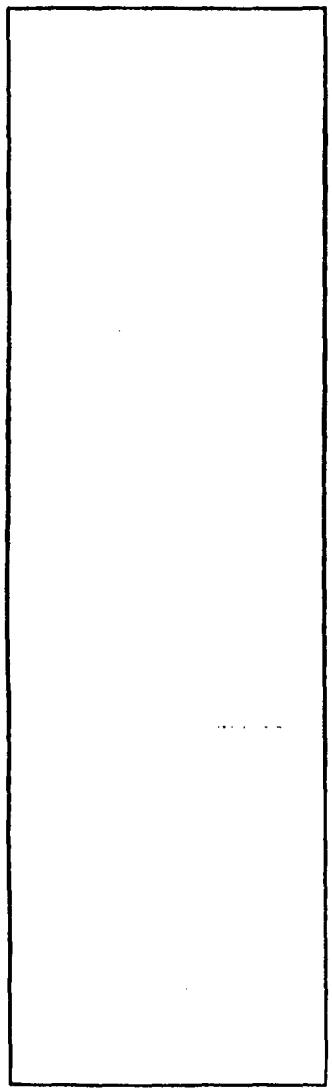


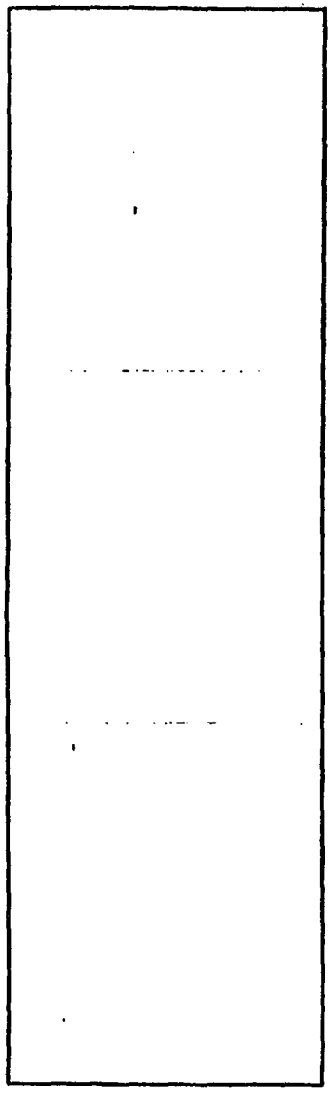


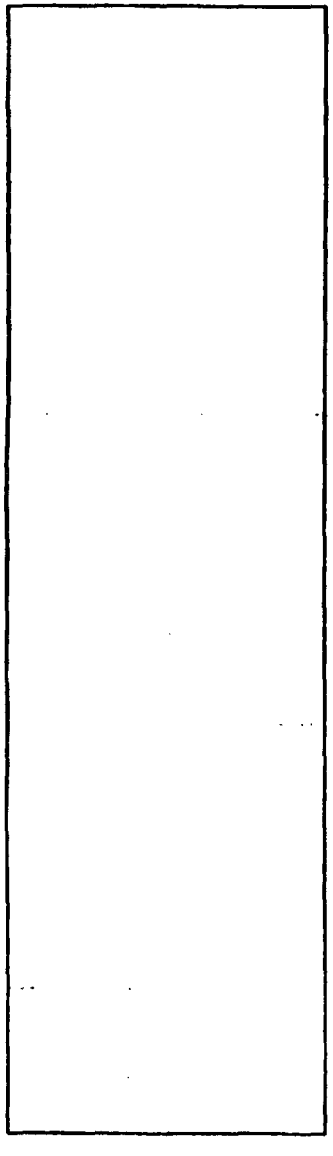
Action Item Comments

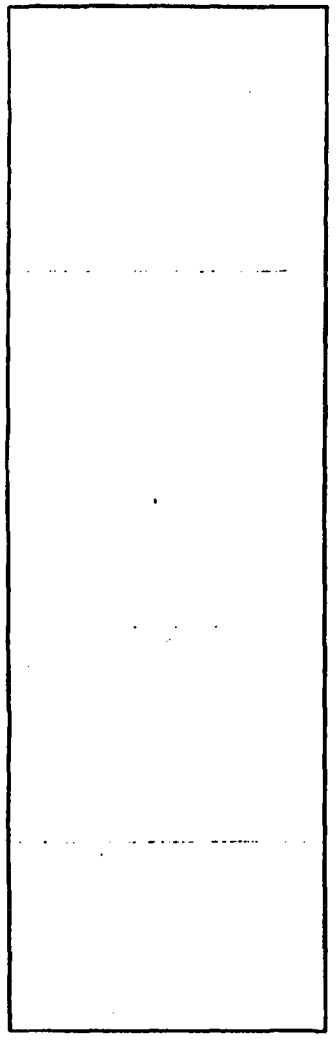


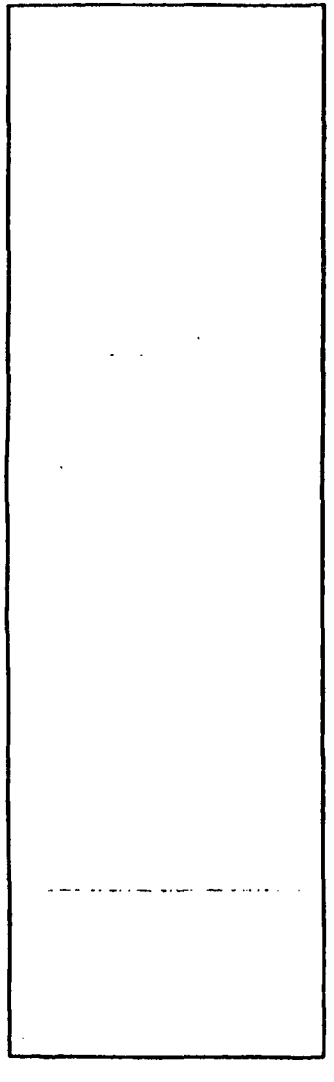


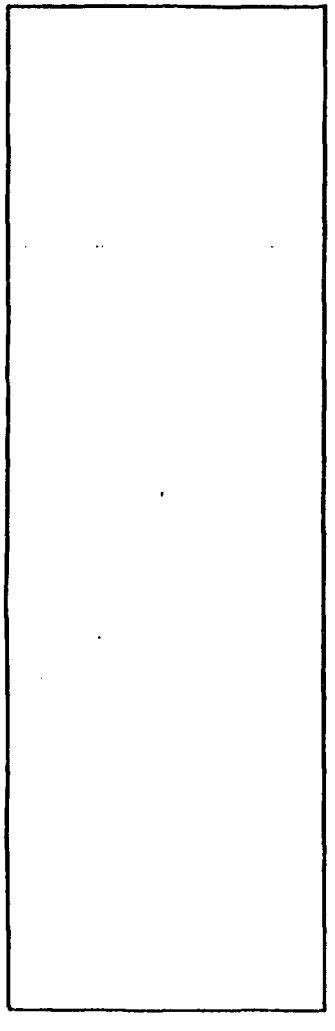


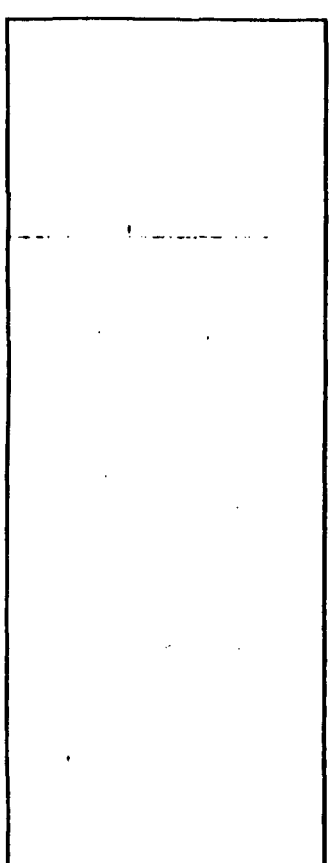


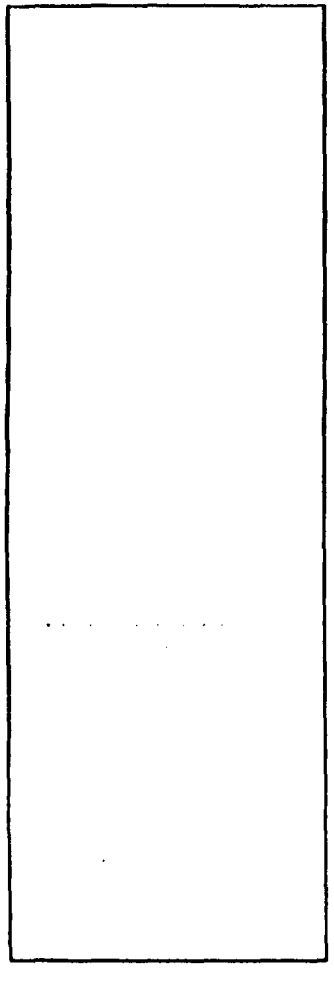


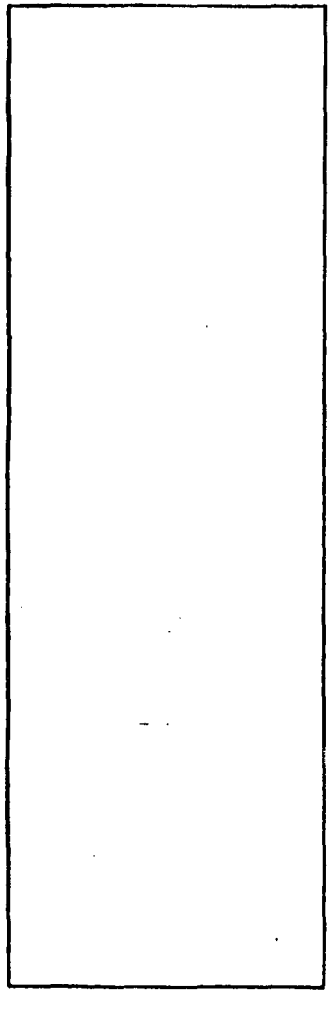


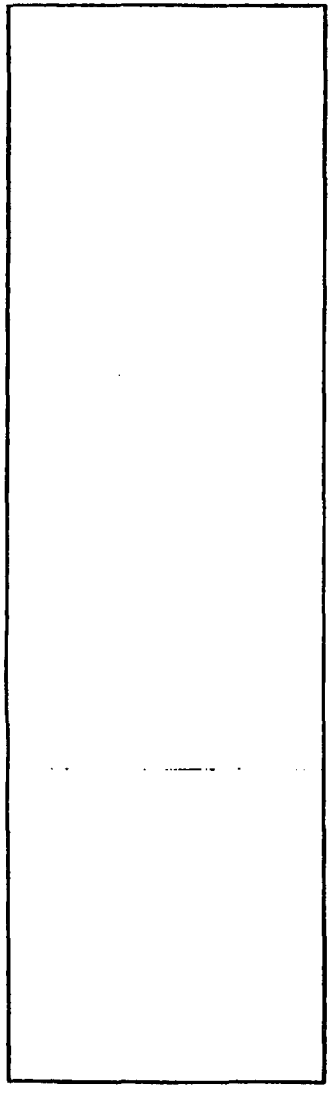


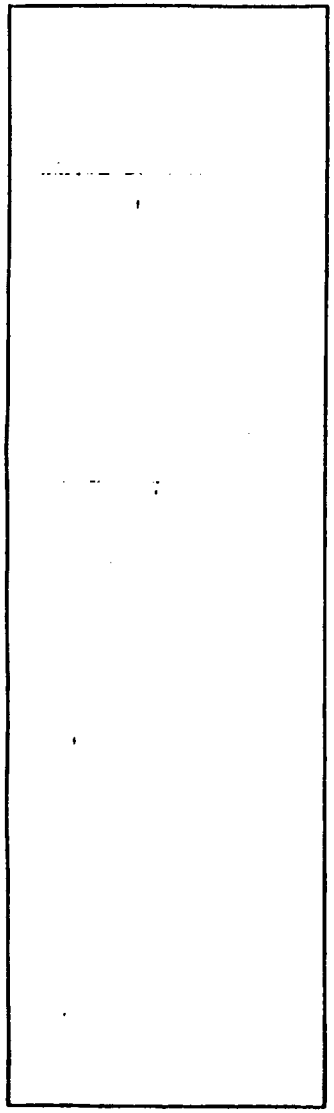


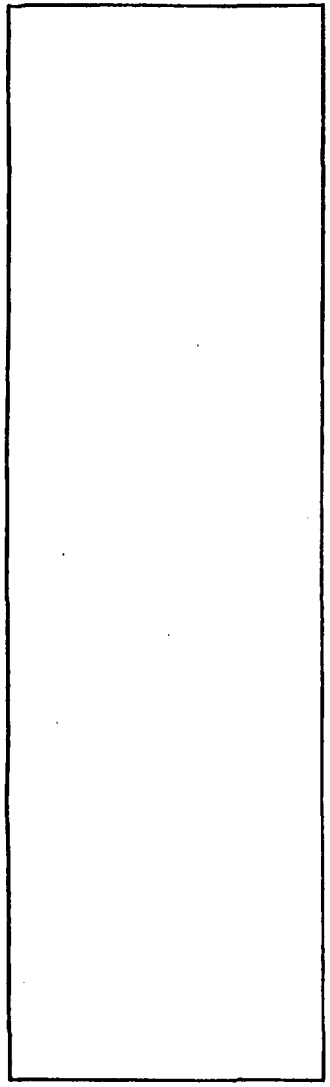


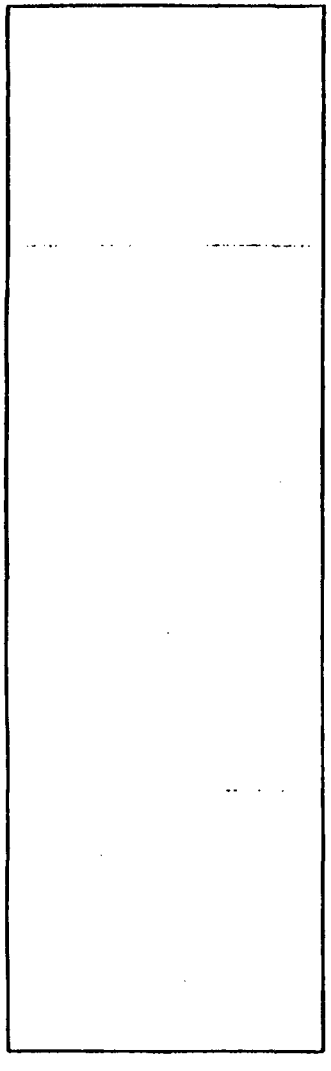


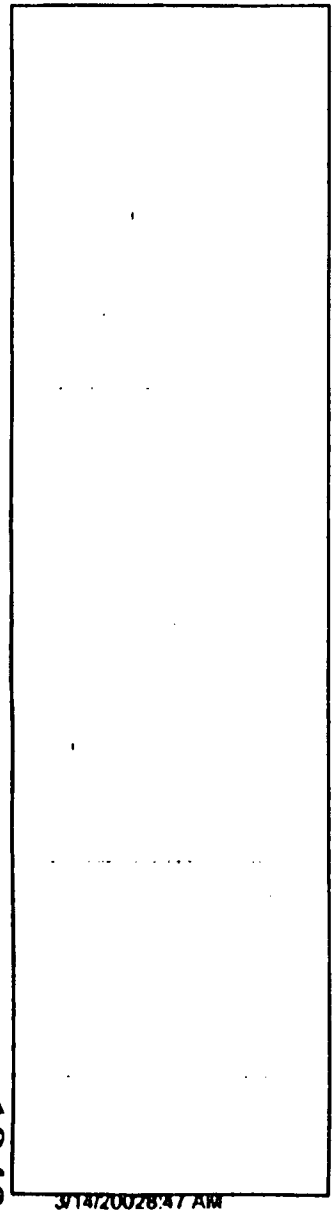


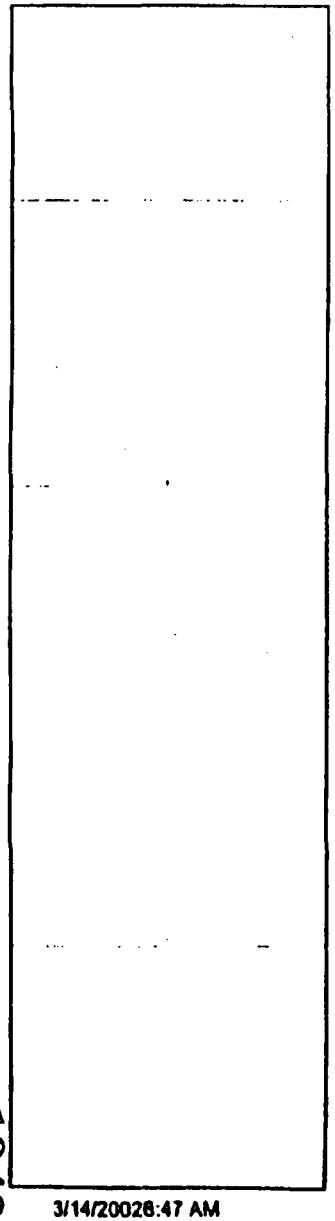


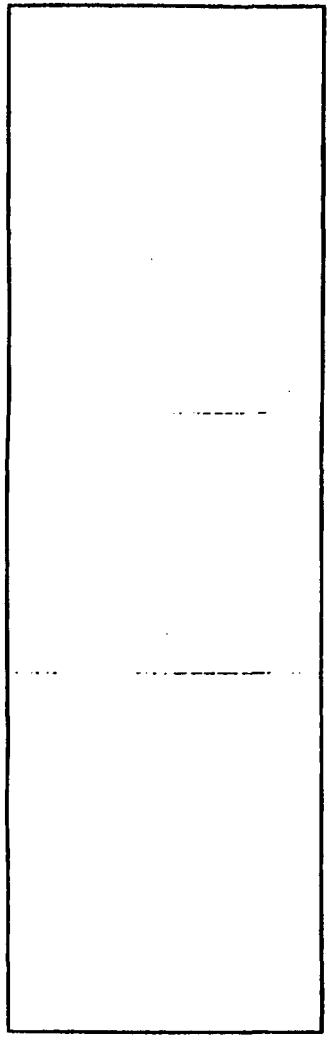


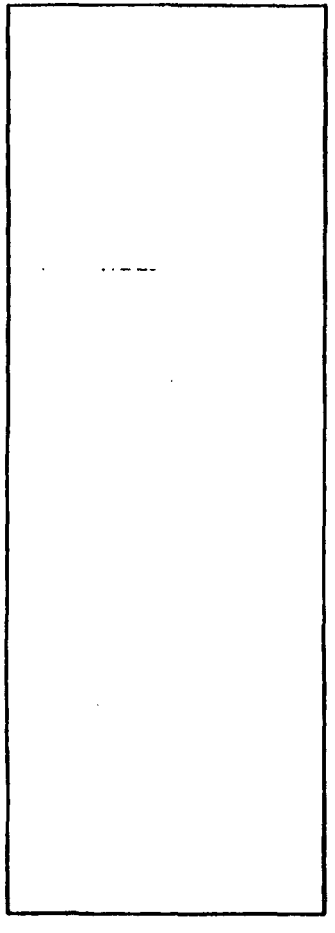


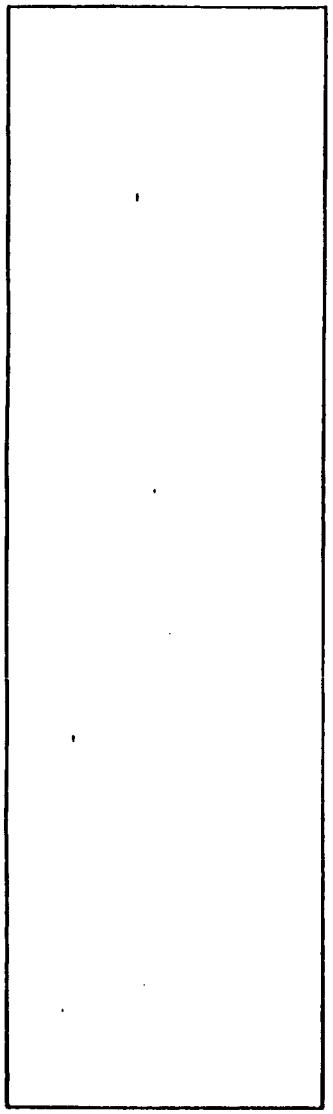


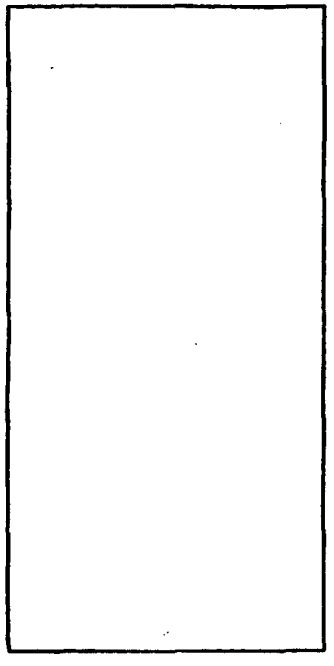


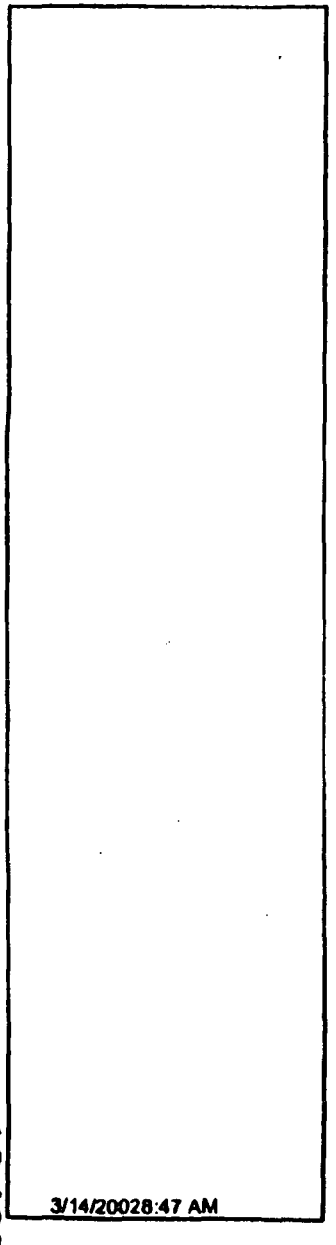


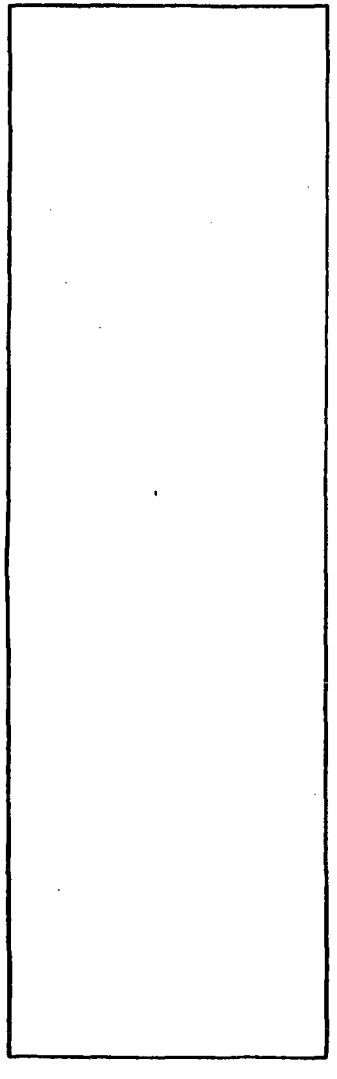


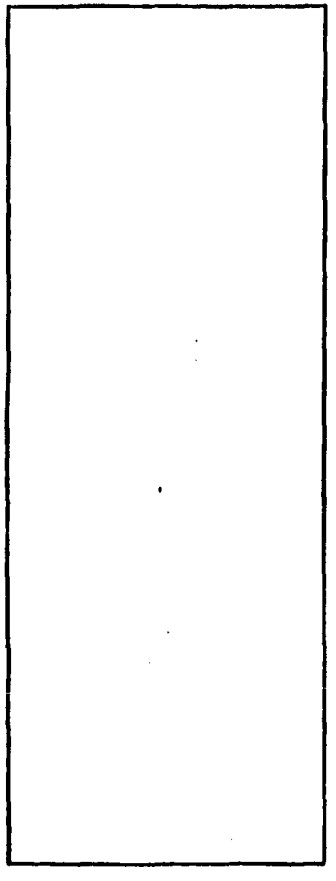


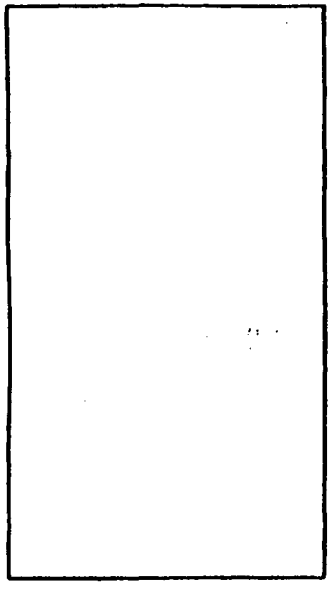












Kelliher, Joseph

105

From: Kripowicz, Robert
Sent: Tuesday, March 20, 2001 7:18 AM
To: Kelliher, Joseph
Cc: Anderson, Margot; Porter, Robert
Subject: RE: clean coal technology

Yes we do. Since I am going to be out most of the day, I will have Bob Porter contact you directly. We have information on

-----Original Message-----
From: Kelliher, Joseph
Sent: Monday, March 19, 2001 8:17 PM
To: Kripowicz, Robert
Cc: Anderson, Margot
Subject: clean coal technology

19547

Kelliher, Joseph

From: Anderson, Margot
Sent: Friday, May 04, 2001 2:25 PM
To: Braitsch, Jay; Carter, Douglas; Cook, Trevor; Magwood, William; Zimmerman, MaryBeth; KYDES, ANDY; Breed, William; Conti, John
Cc: Kripowicz, Robert; Haspel, Abe; PETTIS, LARRY; Kelliher, Joseph; McSlarrow, Kyle
Subject: Urgent , Read me

All,

DOE just received a request from the WH to provide sources for

By 5:00 today. I have just asked the WH to reconsider the deadline and to send the most recent drafts (all I have are the fact-checked versions I sent in this week) WH will not be sending us the latest draft so we have to use the latest version I have. **We need a brief coordination meeting at 3:00 today to figure out where we are going to do this. I'll photocopy everything I'll have and hand it out then.**

Let me know if you can attend this meeting.

19548

Martin, Adrienne 65

From: Anderson, Margot
Sent: Wednesday, February 14, 2001 8:02 AM
To: PETTIS, LARRY; Kelliher, Joseph
Cc: McSlarrow, Kyle
Subject: RE: Briefing for Vice President's Task Force

Larry,

Yes. Can you bring copies to the meeting this morning with Joe?

Margot

-----Original Message-----
From: PETTIS, LARRY
Sent: Tuesday, February 13, 2001 10:12 PM
To: Kelliher, Joseph
Cc: Anderson, Margot; McSlarrow, Kyle
Subject: Briefing for Vice President's Task Force

Karen Knutson of the Vice President's Task Force has asked

which they liked, and today asked her to do a shortened version for the Task Force on Friday.

Let me know if you want a copy of the charts or want to be briefed on them.

Martin, Adrienne

IC5

From: Anderson, Margot
Sent: Thursday, February 15, 2001 9:11 AM
To: Terry, Tracy
Cc: Conti, John
Subject: RE: national energy strategy

Tracy,

John fingered you to help out on the NEP. Did he give you a copy of the outline and guidance? Basically, I need you to

Margot

-----Original Message-----
From: Conti, John
Sent: Thursday, February 15, 2001 7:54 AM
To: Anderson, Margot
Subject: RE: national energy strategy

Margot,

However, we should get EIA involved. They have a lot of expertise in this area.

-----Original Message-----
From: Anderson, Margot
Sent: Wednesday, February 14, 2001 5:33 PM
To: Conti, John; Carrier, Paul; Friedrichs, Mark; Marlay, Robert; Newton, Bill; Breed, William
Subject: national energy strategy

All,

Thanks,

Margot

<< File: NEP organization.doc >> << File: Draft combo outline WH.doc >>

Martin, Adrienne

From: Anderson, Margot
Sent: Thursday, February 15, 2001 9:28 AM
To: Terry, Tracy
Cc: Conti, John
Subject: RE: national energy strategy

Great, thanks.

Margot

-----Original Message-----
From: Terry, Tracy
Sent: Thursday, February 15, 2001 9:22 AM
To: Anderson, Margot
Cc: Conti, John
Subject: RE: national energy strategy

Tracy

-----Original Message-----
From: Anderson, Margot
Sent: Thursday, February 15, 2001 9:11 AM
To: Terry, Tracy
Cc: Conti, John
Subject: RE: national energy strategy

Tracy,

Margot

-----Original Message-----
From: Conti, John
Sent: Thursday, February 15, 2001 7:54 AM
To: Anderson, Margot
Subject: RE: national energy strategy

Margot,

-----Original Message-----
From: Anderson, Margot
Sent: Wednesday, February 14, 2001 5:33 PM
To: Conti, John; Carrier, Paul; Friedrichs, Mark; Marlay, Robert; Newton, Bill; Breed, William
Subject: national energy strategy

All,

Margot

<< File: NEP organization.doc >> << File: Draft combo outline WH.doc >>

Martin, Adrienne

102

From: Anderson, Margot
Sent: Tuesday, March 13, 2001 11:02 AM
To: 'Kjersten_S._Drager@ovp.eop.gov%internet'
Subject: RE: NEPDG "Peer Review" Meetings This Week...

Kjersten,

I will definitely be attending the 3:00 today. Joe is jammed up with the Secretary's testimony. I think you have all my info. (In Andrew's office, right?

Margot

----Original Message----
From: Kjersten_S._Drager@ovp.eop.gov%internet
[mailto:Kjersten_S._Drager@ovp.eop.gov]
Sent: Monday, March 12, 2001 5:49 PM
To: Kelliher, Joseph; Kolevar, Kevin; Anderson, Margot;
kmurphy@osec.doc.gov%internet; dina.ellis@do.treas.gov%internet;
sue_ellen_wooldridge@ios.doi.gov%internet;
keith.collins@usda.gov%internet; joseph.glauber@usda.gov%internet;
galloglysj@state.gov%internet; mcmanusmt@state.gov%internet;
michelle.poche@ost.dot.gov%internet;
patricia.stahlschmidt@fema.gov%internet; brenner.rob@epa.gov%internet;
symons.jeremy@epa.gov%internet; beale.john@epa.gov%internet;
mpeacock@omb.eop.gov%internet; Mark_A._Weatherly@omb.eop.gov%internet;
Robert_C._McNally@opd.eop.gov%internet; jhowardj@ceq.eop.gov%internet;
william_bettenberg@ios.doi.gov%internet;
tom_fulton@ios.doi.gov%internet; kjersten_drager@ovp.eop.gov%internet;
mleblanc@ceq.eop.gov%internet; bruce.baughman@fema.gov%internet;
charles.m.hess@usace.army.mil%internet; akeeler@cea.eop.gov%internet;
commcoll@aol.com%internet; Karen_E._Keller@omb.eop.gov%internet;
Sandra_L._Via@omb.eop.gov%internet; Megan_D._Moran@ovp.eop.gov%internet;
Andrew_D._Lundquist@ovp.eop.gov%internet;
Karen_Y._Knutson@ovp.eop.gov%internet;
Charles_M._Smith@ovp.eop.gov%internet
Subject: NEPDG "Peer Review" Meetings This Week...

Andrew Lundquist and Karen Knutson of the National Energy Policy Development Group are going to meet with each "lead" agency over the next couple of days to discuss the progress being made on assigned chapters and the preliminary work being done on solutions/recommendations. Also discussed will be what we'll need/are looking for as far as graphics/photos.

You are all invited to ALL of these meetings (hence the name "Peer Review Meetings") but are under no obligation to attend (unless of course you're the lead agency!). While Andrew and Karen will meet with each lead agency either way, YOU need only attend if you are interested in the chapter (s) being discussed and/or you have input/suggestions you want to discuss.

The schedule for the Peer Review Meetings is as follows:

Tomorrow, Tuesday, March 13: DOE @ 3:00.

Wednesday, March 14: EPA @ 10:00; State @11:00; Transportation @ 2:00; and Treasury at either 3:00 or 5:00 (I'll let you know when a time is finalized)

Let me know what meetings you plan to attend, if any. All meetings will be held in 283 OEOB so we'll need to get you cleared in with security.

Thanks and let me know if you have any questions. -Kjersten

19553

(DJS)

Martin, Adrienne

1 of 3

From: Anderson, Margot
Sent: Wednesday, March 14, 2001 1:02 PM
To: Johnson, Nancy
Cc: Braitsch, Jay; Kripowicz, Robert; Coffin, Bob
Subject: RE: Revised FE NEP Papers – Oil and Gas

Received. Thanks.

-----Original Message-----
From: Johnson, Nancy
Sent: Wednesday, March 14, 2001 1:01 PM
To: Anderson, Margot
Cc: Braitsch, Jay; Kripowicz, Robert; Coffin, Bob
Subject: Revised FE NEP Papers – Oil and Gas
Importance: High

Attached are our revised papers. As you requested, all file names remain the same, and appear as a header in each paper.

The title on two papers was changed (see below). And, with limited exception, the Description of Action in each paper was changed to be more descriptive. The crosswalk to your numbering system is as follows:

Jay Braitsch and Doug Carter will be out on Thursday and Friday so if you need assistance, call me 202-586-6456.
Best regards.

<< File: CleanFuels FE 3-8-01.doc >> << File: FederalLands FE 3-8-01.doc >> << File: FrontierOil&Gas FE 3-8-01.doc >> << File: IntlOil&Gas FE 3-8-01.doc >> << File: Oil&GasIncentives FE 3-8-01.doc >> << File: Oil&GasInfrastructure FE 3-8-01.doc >> << File: PipelinePermitting FE 3-8-01.doc >> << File: RefineryRegOption FE 3-8-01.doc >> << File: RegOil&GasStreamlining FE 3-8-01.doc >> << File: SustainO&GProduction FE 3-8-01.doc >>

19554

Martin, Adrienne

From: Anderson, Margot
Sent: Wednesday, March 14, 2001 4:14 PM
To: 'Stier, Jeffrey K - KN-DC'
Subject: RE: Updated Papers

Jeff,

Thanks. Are these file names the same as the ones you previously sent. If not, I'll need to kwno what files these replace (otherwise I can't figure out where they go in my compilation docuements.) Also, did you insert the filename as a header for reach one? Sorry for these nitpicking requests but I am juggling over 80 policy optiosn.

Margot

-----Original Message-----
From: Stier, Jeffrey K - KN-DC [mailto:jkstier@bpa.gov]
Sent: Wednesday, March 14, 2001 3:25 PM
To: Anderson, Margot
Cc: Ball, Crystal A - KN-DC
Subject: FW: Updated Papers
Importance: High

I made some minor modifications in the description of action section, primarily, to make it work better in the short format you adopted. Let me know what more you need. CC Crystal Ball since I'll be out of the office Thurs. and Friday.

> -----Original Message-----
> From: Dinan, Linda - D-7
> Sent: Thursday, March 08, 2001 2:06 PM
> To: Hickok, Steven G - D-7; Stier, Jeffrey K - KN-DC
> Cc: McElhaney, Judy - D-7
> Subject: Updated Papers
> Importance: High
>
> Here are the amended papers, incorporating both Hickok and Stier edits.
>
> <<Policy Options_Infrastructure.doc>> <<Policy
> Options_Fedl_Hydro.doc>> <<Policy Options_Conservation.doc>>
> <<Policy Options_Renewables.doc>>
>
>
>
> <<Policy Options_DistGen.doc>> <<Policy Options_RTO.doc>>

(b)(5)

Martin, Adrienne

185

From: Anderson, Margot
Sent: Thursday, March 15, 2001 6:02 PM
To: 'Charles Smith (E-mail)'
Cc: Kelliher, Joseph
Subject: graphics order for 3/19

Charlie,

In this order:

Margot

19556

DOE021-0010

(b)(5)

106

Martin, Adrienne

From: Anderson, Margot
Sent: Tuesday, March 20, 2001 1:20 PM
To: Porter, Robert
Cc: Kripowicz, Robert; Kelliher, Joseph
Subject: FW: NPC report

Bob Porter,

Can you handle directly? I know that Krip is out much of the day. Thanks.

Margot

-----Original Message-----
From: Kelliher, Joseph
Sent: Tuesday, March 20, 2001 1:07 PM
To: Kripowicz, Robert; Anderson, Margot
Subject: NPC report

-----Original Message-----
From: Kripowicz, Robert
Sent: Monday, March 19, 2001 6:09 PM
To: Kelliher, Joseph; Kolevar, Kevin; Davis, Joseph
Subject: SPR exchange
Importance: High

If you want additional information,please let me know. << File: Sec-SPR.wpd >>

19557

Martin, Adrienne

101

From: Anderson, Margot
Sent: Tuesday, March 20, 2001 9:03 PM
To: Zimmerman, MaryBeth
Cc: Haspel, Abe; Baldwin, Sam; Garland, Buddy; Sullivan, John
Subject: RE: 2 more 2-pagers

MB - I would prefer to wait to include until you are sure this is the way you want it. I do have all your initial suggestions in the combined list. Are you supplying two-pagers for any ideas that are NOT on your initial set?

Margot

-----Original Message-----
From: MaryBeth Zimmerman
Sent: Friday, March 16, 2001 5:07 PM
To: Anderson, Margot
Cc: Haspel, Abe; Baldwin, Sam; Garland, Buddy; Sullivan, John
Subject: 2 more 2-pagers

As with the last set, don't have review beyond me. << File: 11 Transportation management.doc >> << File: 12 government purchasing.doc >>

19558

Martin, Adrienne

From: Anderson, Margot
Sent: Wednesday, March 21, 2001 8:27 AM
To: 'Charles_M._Smith@ovp.eop.gov%internet'
Subject: RE: Chapters from EE

I haven't been able to get a hold of MaryBeth. We will straighten it out and let you know.

-----Original Message-----
From: Charles_M._Smith@ovp.eop.gov%internet
[mailto:Charles_M._Smith@ovp.eop.gov]
Sent: Tuesday, March 20, 2001 7:06 PM
To: Anderson, Margot
Subject: Chapters from EE

Margot:

These are the chapters that I got from MaryBeth Zimmerman last week. Let me know if they are not the correct ones to be thinking about.

Charlie

(b)(5)

Martin, Adrienne

109

From: Anderson, Margot
Sent: Wednesday, March 21, 2001 11:16 AM
To: Braitsch, Jay
Subject: RE: Voluntary GHG Reductions

Thanks, I'll add it in (there already is one but your's might be more detailed). Can you stop by? I need some help on a NEP paper.

-----Original Message-----
From: Braitsch, Jay
Sent: Wednesday, March 21, 2001 9:53 AM
To: Anderson, Margot
Cc: Kripowicz, Robert; Kane, Robert; Rudins, George; Carter, Douglas
Subject: Voluntary GHG Reductions
Importance: High

File: Voluntary Reduction of Greenhouse Gas emissions.doc >>

19560

Martin, Adrienne

(b)(5)

110

From: Anderson, Margot
Sent: Wednesday, March 21, 2001 12:06 PM
To: 'Charles_M._Smith@ovp.eop.gov%internet'
Subject: RE: clean up of interim report

Charlie,

Margot

-----Original Message-----
From: Charles_M._Smith@ovp.eop.gov%internet
[mailto:Charles_M._Smith@ovp.eop.gov]
Sent: Wednesday, March 21, 2001 11:56 AM
To: Anderson, Margot
Subject: clean up of interim report

Margot:

I'd like to get this thing rolling now, before the remaining chapters come rolling in. I'd like to have both the graphics and photograph suggestions by COB Friday, March 23, 2001.

Charlie

Martin, Adrienne

///

From: Anderson, Margot
Sent: Wednesday, March 21, 2001 2:06 PM
To: Cook, Trevor; Zimmerman, MaryBeth; Braitsch, Jay; York, Michael
Subject: little reminder

All,

Margot

19562

(b)(5)

Martin, Adrienne

112

(b)(6)

From: Anderson, Margot
Sent: Wednesday, March 21, 2001 2:17 PM
To: 'Charles_M._Smith@ovp.eop.gov%internet'
Cc: 'Karen Knutson (E-mail)'
Subject: LIHEAP

Charlie,

Margot

-----Original Message-----
From: Charles_M._Smith@ovp.eop.gov%internet
[mailto:Charles_M._Smith@ovp.eop.gov]
Sent: Wednesday, March 21, 2001 1:00 PM
To: Anderson, Margot
Subject: RE: DOI comments on graphics

(b)(6)

Margot:

The attachment was the forwarded message from [redacted] that dealt with additional graphics and perhaps moving some of them around. I'll send it again if needed.

Charlie

19563

Martin, Adrienne

(b)(6)

113

From: Anderson, Margot
Sent: Wednesday, March 21, 2001 3:08 PM
To: 'Charles_M._Smith@ovp.eop.gov%internet'
Subject: RE: LIHEAP

-----Original Message-----
From: Charles_M._Smith@ovp.eop.gov%internet
[mailto:Charles_M._Smith@ovp.eop.gov]
Sent: Wednesday, March 21, 2001 2:39 PM
To: Anderson, Margot
Subject: Re: LIHEAP

Margot:

19564

Tripodi, Cathy

114

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 6:08 PM
To: Tripodi, Cathy
Subject: FW: NEP Policy Options

Predecisional: draft NEP recommendations

—Original Message—
From: Anderson, Margot
Sent: Monday, March 12, 2001 8:43 AM
To: Haspel, Abe; Zimmerman, MaryBeth; Lockwood, Andrea; Breed, William; KYDES, ANDY; Whatley, Michael; Carter, Douglas; Braitsch, Jay; Melchert, Elena; Cook, Trevor; 'jkstier@bpa.gov'; O'Donovan, Kevin; Kolevar, Kevin; Scalingi, Paula
Cc: Kelliher, Joseph
Subject: NEP Policy Options

All,

As of Friday, I received about 65 policy options. I put together the summaries for each (attached) and will have the whole set photocopied to bring to today's 3:00 meeting (7B-040). I need to rearrange these by topic (not everybody identified which policy goal (from the list we put together) the option went with. Right now it is just a listing in the order received. Our goal for today will be to get a sense of what is most important and which ones we might want to go forward with for the WH group on Wednesday.

Short titles.doc

19565

Tripodi, Cathy

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 6:07 PM
To: Tripodi, Cathy
Subject: FW: NEP Policy Options

Predecisional: draft NEP recommendations

-----Original Message-----
From: Anderson, Margot
Sent: Monday, March 12, 2001 5:50 PM
To: Haspel, Abe; Zimmerman, MaryBeth; Lockwood, Andrea; Breed, William; KYDES, ANDY; Whatley, Michael; Carter, Douglas; Braitsch, Jay; Melchert, Elena; Cook, Trevor; 'jkstier@bpa.gov'; O'Donovan, Kevin; Kolevar, Kevin; Scalingi, Paula; Johnson, Nancy
Cc: Kelliher, Joseph
Subject: RE: NEP Policy Options

Revised goal list.

As we discussed, I am continuing to compile and order (by goal). E-me any more ideas. In WORD, please. I can't figure out how to get your the file list of ideas to date, but you have the package with the orginal filenames as headers. If you rewrite one, just rename so it will write over automatically when I save it. One file per idea is great but don't fret about it now - clearly, not all these ideas will move forward and they might get combined and reshaped. Plus the template.

NEP Policy Issues.doc

template for policy ideas.doc

-----Original Message-----
From: Anderson, Margot
Sent: Monday, March 12, 2001 8:43 AM
To: Haspel, Abe; Zimmerman, MaryBeth; Lockwood, Andrea; Breed, William; KYDES, ANDY; Whatley, Michael; Carter, Douglas; Braitsch, Jay; Melchert, Elena; Cook, Trevor; 'jkstier@bpa.gov'; O'Donovan, Kevin; Kolevar, Kevin; Scalingi, Paula
Cc: Kelliher, Joseph
Subject: NEP Policy Options

All,

As of Friday, I received about 65 policy options. I put together the summaries for each (attached) and will have the whole set photocopied to bring to today's 3:00 meeting (7B-040). I need to rearrange these by topic (not everybody identified which policy goal (from the list we put together) the option went with. Right now it is just a listing in the order received. Our goal for today will be to get a sense of what is most important and which ones we might want to go forward with for the WH group on Wednesday.

<< File: Short titles.doc >>

19577

Tripodi, Cathy

55

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 5:57 PM
To: Tripodi, Cathy
Subject: FW: spreadsheet

119

Predecisional: draft NEP recommendations

-----Original Message-----
From: Anderson, Margot
Sent: Thursday, March 22, 2001 9:25 AM
To: Kelliher, Joseph
Cc: Friedrichs, Mark
Subject: spreadsheet

Joe,

Margot

DOE Policy
Proposals by Rec't ..

19580

Tripodi, Cathy

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 5:55 PM
To: Tripodi, Cathy
Subject:

121

-----Original Message-----
From: Anderson, Margot
Sent: Friday, March 23, 2001 7:14 PM
To: Kelliher, Joseph

19613

Tripodi, Cathy

123

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 5:48 PM
To: Tripodi, Cathy
Subject: FW: might be useful

Predecisional: draft NEP recommendation

-----Original Message-----
From: Anderson, Margot
Sent: Monday, March 26, 2001 3:31 PM
To: Kelliher, Joseph
Subject: might be useful

19623

Tripodi, Cathy

125

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 5:46 PM
To: Tripodi, Cathy
Subject:

Predecisional: draft NEP recommendation

-----Original Message-----
From: Anderson, Margot
Sent: Tuesday, March 27, 2001 9:05 AM
To: Kelliher, Joseph
Subject: coal resources on federal lands

You might find this useful

19626

Tripodi, Cathy

127

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 5:44 PM
To: Tripodi, Cathy
Subject: FW: national energy policy

Importance: High

Predecisional: draft NEP recommendations

-----Original Message-----
From: Anderson, Margot
Sent: Tuesday, March 27, 2001 7:08 PM
To: Kripowicz, Robert; Haspel, Abe; Magwood, William; Scalingi, Paula; PETTIS, LARRY
Cc: Breed, William; Conti, John; Carrier, Paul; Friedrichs, Mark; Kelliher, Joseph
Subject: FW: national energy policy
Importance: High

All,

Margot

-----Original Message-----
From: Kelliher, Joseph
Sent: Tuesday, March 27, 2001 6:16 PM
To: Anderson, Margot
Subject: national energy policy
Importance: High

Here it is. Please circulate to program offices.


doepolicyrecs1.doc


energyadd1.doc

Tripodi, Cathy

130

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 5:39 PM
To: Tripodi, Cathy
Subject: FW: energy efficiency one-pager

Predecisional: draft NEP recommendation

-----Original Message-----
From: Anderson, Margot
Sent: Friday, March 30, 2001 5:40 PM
To: 'Symons.Jeremy@epamail.epa.gov'
Cc: Kelliher, Joseph; Kolevar, Kevin
Subject: energy efficiency one-pager

energy efficiency one-pager.wp...

Reviewed/edited by EE, PO. Joe and/or Kevin, Problems?

Jeremy, can you let me know if you get this? I am having problems with your e-mail.

Margot

19639

Tripodi, Cathy

132

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 5:41 PM
To: Tripodi, Cathy
Subject: FW: one pager on 3-pollutant

Predecisional: draft NEP recommendation

-----Original Message-----
From: Anderson, Margot
Sent: Friday, March 30, 2001 1:51 PM
To: Kolevar, Kevin; Kelliher, Joseph
Subject: one pager on 3-pollutant

legislative_3P_rev.
wpd

Margot

Tripodi, Cathy

134

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 5:38 PM
To: Tripodi, Cathy
Subject: FW: energy efficiency one-pager

Predecisional: draft NEP recommendation

-----Original Message-----
From: Anderson, Margot
Sent: Friday, March 30, 2001 6:20 PM
To: Charles Smith (E-mail); Karen Knutson (E-mail)
Cc: Kelliher, Joseph; Kolevar, Kevin
Subject: energy efficiency one-pager

Charlie and Karen,

Margot

19645

Tripodi, Cathy

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 5:38 PM
To: Tripodi, Cathy
Subject: FW: OCS one pager [Virus checked]

en010329.ocs moratorium issue....

Predecisional: draft NEP recommendation

-----Original Message-----
From: Anderson, Margot
Sent: Friday, March 30, 2001 6:32 PM
To: Kelliher, Joseph; Kolevar, Kevin
Subject: FW: OCS one pager [Virus checked]

You guys might want to see this one-pager on OCS. Looks like DOE sent it over to WH. FE and PO provided extensive input.

-----Original Message-----
From: William_Bettenberg@ios.doi.gov%internet [mailto:William_Bettenberg@ios.doi.gov]
Sent: Friday, March 30, 2001 6:25 PM
To: Anderson, Margot
Subject: Re: OCS one pager [Virus checked]

Margot -- Attached is what was sent to Charley. I appreciate the comments
from your crew. Note that this is extensively changed from this morning's
edition, and is a two-page one-pager.

(See attached file: en010329.ocs moratorium issue.wpd)

Tripodi, Cathy

65

138

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 5:16 PM
To: Tripodi, Cathy
Subject:

Predecisional: draft NEP recommendation

-----Original Message-----
From: Anderson, Margot
Sent: Monday, April 09, 2001 3:52 PM
To: Kolevar, Kevin; Kelliher, Joseph
Subject:

Kevin and Joe,

Although you didn't ask, Policy Office put together some

I've shared a version

We could go into detail on any of these if you want.

Margot

19652

Tripodi, Cathy

(40)

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 5:13 PM
To: Tripodi, Cathy
Subject: FW: tax ideas - for your consideration

Predecisional: draft NEP recommendations

-----Original Message-----
From: Anderson, Margot
Sent: Friday, April 13, 2001 3:34 PM
To: Kelliher, Joseph
Subject: tax ideas - for your consideration

NEP Tax ideas.doc

Tripodi, Cathy

65

142

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 4:41 PM
To: Tripodi, Cathy
Subject: FW: Question from Joe

Transportation fuels breakdown...

Predecisional: NEP draft recommendations

-----Original Message-----
From: Anderson, Margot
Sent: Wednesday, May 09, 2001 10:40 AM
To: 'Karen_Y._Knutson@ovp.eop.gov%internet'
Cc: Kelliher, Joseph
Subject: RE: Question from Joe

Karen

Margot

-----Original Message-----
From: Karen_Y._Knutson@ovp.eop.gov%internet
[mailto:Karen_Y._Knutson@ovp.eop.gov]
Sent: Saturday, May 05, 2001 12:22 PM
To: Anderson, Margot
Subject: Question from Joe

19662

DOE021-0116

Tripodi, Cathy

b5 140

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 6:09 PM
To: Tripodi, Cathy
Subject: FW: template

Predecisional: draft NEP recommendations

-----Original Message-----
From: Anderson, Margot
Sent: Tuesday, March 06, 2001 6:27 PM
To: Haspel, Abe; Zimmerman, MaryBeth; Lockwood, Andrea; Breed, Patricia; Breed, William; KYDES, ANDY; Whatley, Michael; Carter, Douglas; Braitsch, Jay; Melchert, Elena; Cook, Trevor; 'jkstier@bpa.gov'
Cc: Kelliher, Joseph
Subject: RE: template

All,

Sorry this took so long. Got jammed up. Here is where we are. I got comments on template and goals and tried to accommodate

Who can meet on Friday afternoon?

Margot

NEP Policy Issues.doc

template for policy ideas.doc

-----Original Message-----
From: Anderson, Margot
Sent: Tuesday, March 06, 2001 9:33 AM
To: Conti, John; Haspel, Abe; Zimmerman, MaryBeth; Lockwood, Andrea; Breed, Patricia; Breed, William; KYDES, ANDY; Whatley, Michael; Carter, Douglas; Braitsch, Jay; Melchert, Elena; Cook, Trevor; 'jkstier@bpa.gov'
Cc: Kelliher, Joseph
Subject: RE: template

All,

I discussed with Kelliher and received comments from PO and EE. Anyone else going to weigh in before I finalize and set some deadlines?

Margot

Tripodi, Cathy

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 6:11 PM
To: Tripodi, Cathy
Subject: FW: policy issues

Predecisional: draft NEP recommendations

-----Original Message-----
From: Anderson, Margot
Sent: Friday, March 02, 2001 2:59 PM
To: Kelliher, Joseph
Subject: policy issues

NEP Policy Issues.doc

This is just a shot at a list of goals (big and small) that we might want to address. Tried to cover the waterfront (based on the President's list) What do you think? Some we have never talked about but figure they are gonna come up.

Margot

Tripodi, Cathy

b5

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 7:12 PM
To: Tripodi, Cathy
Subject:

-----Original Message-----
From: Carter, Douglas
Sent: Tuesday, May 01, 2001 10:26 AM
To: Anderson, Margot; Kelliher, Joseph; Kripowicz, Robert
Cc: Rudins, George
Subject:

Doug

-----Original Message-----
From: Anderson, Margot
Sent: Monday, April 30, 2001 6:19 PM
To: Kelliher, Joseph; Kripowicz, Robert
Cc: Carter, Douglas; DeHoratiis, Guido
Subject:

Joe,

Is this beyond what we already sent them (from FE) a few hours ago? If so, we should ask Doug Carter and/or Guido DeHoratiis to answer (I note that Bob K. is out today). By when?

Margot

-----Original Message-----
From: Kelliher, Joseph
Sent: Monday, April 30, 2001 6:16 PM
To: Kripowicz, Robert
Cc: Anderson, Margot

Tripodi, Cathy

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 6:52 PM
To: Tripodi, Cathy
Subject: FW: Electricity Issue Paper Attached...

15

Predecisional: draft NEP recommendations

-----Original Message-----
From: Andrew_D._Lundquist@ovp.eop.gov%internet
[mailto:Andrew_D._Lundquist@ovp.eop.gov]
Sent: Tuesday, April 17, 2001 8:25 PM
To: Kelliher, Joseph
Subject: RE: Electricity Issue Paper Attached...

Joe, I can't open the document. Andrew

(Embedded
image moved to file: PIC19767.PCX)

"Kelliher, Joseph" <Joseph.Kelliher@hq.doe.gov>
04/17/2001 07:04:05 PM

Record Type: Record

To: See the distribution list at the bottom of this message

cc: See the distribution list at the bottom of this message
Subject: RE: Electricity Issue Paper Attached...

Note: Some recipients have been dropped due to syntax errors.
Please refer to the "$AdditionalHeaders" item for the complete headers.
Revised version of electricity paper

-----Original Message-----
From: Kjersten_S._Drager@ovp.eop.gov%internet
[mailto:Kjersten_S._Drager@ovp.eop.gov]
Sent: Tuesday, April 17, 2001 6:15 PM
To: Kelliher, Joseph; Anderson, Margot;
Juleanna_R._Glover@ovp.eop.gov%internet; Kmurphy@osec.doc.gov%internet;
Dina.Ellis@do.treas.gov%internet;
Sue_Ellen_Wooldridge@IOS.DOI.gov%internet;
Joel_D._Kaplan@who.eop.gov%internet; Keith.Collins@USDA.gov%internet;
Joseph.Glauber@USDA.gov%internet; Gallogly sj@State.gov%internet;
McManusmt@State.gov%internet; Michelle.Poche@OST.DOT.Gov%internet;
Patricia.Stahlschmidt@FEMA.gov%internet; Brenner.Rob@EPA.gov%internet;
Symons.Jeremy@EPA.gov%internet; Beale.John@EPA.gov%internet;

19672

DOE021-0126

MPeacock@omb.eop.gov%internet; Mark_A._Weatherly@omb.eop.gov%internet;
Robert_C._McNally@opd.eop.gov%internet; Jhowardj@ceq.eop.gov%internet;
William_bettenberg@IOS.DOI.gov%internet;
Tom_fulton@IOS.DOI.gov%internet; Kjersten_drager@ovp.eop.gov%internet;
Mleblanc@ceq.eop.gov%internet; Bruce.Baughman@FEMA.gov%internet;
Charles.m.Hess@USACE.army.mil%internet; akeeler@cea.eop.gov%internet;
commcoll@aol.com%internet; Karen_E._Keller@omb.eop.gov%internet;
Carol_J._Thompson@who.eop.gov%internet;
Sandra_L._Via@omb.eop.gov%internet; Megan_D._Moran@ovp.eop.gov%internet;
Janet_P._Walker@opd.eop.gov%internet;
Ronald_L._Silberman@omb.eop.gov%internet;
Lori_A._Krauss@omb.eop.gov%internet; WheelerE@State.gov%internet;
Karen_L._Zent@who.eop.gov%internet; WheelerE@State.gov%internet;
Mark_J._Sullivan@ovp.eop.gov%internet;
James_T._Sims@ovp.eop.gov%internet;
Alice_H._Williams@cea.eop.gov%internet;
Andrew_D._Lundquist@ovp.eop.gov%internet;
Karen_Y._Knutson@ovp.eop.gov%internet;
Charles_M._Smith@ovp.eop.gov%internet;
Charles_D._McGrath_Jr@ovp.eop.gov%internet;
Robert_C._McNally@oa.eop.gov%internet; Cesar_Conda@ovp.eop.gov%internet;
Jennifer_H._Mayfield@ovp.eop.gov%internet;
Mary_J._Matalin@ovp.eop.gov%internet;
Nancy_P._Dorn@who.eop.gov%internet;
Margaret_Bradley@IOS.DOI.gov%internet;
Jean_M._Russell@opd.eop.gov%internet
Cc: Andrew_D._Lundquist@ovp.eop.gov%internet;
Karen_Y._Knutson@ovp.eop.gov%internet; John_Fenzel@ovp.eop.gov%internet;
Charles_M._Smith@ovp.eop.gov%internet;
James_T._Sims@ovp.eop.gov%internet
Subject: Electricity Issue Paper Attached...

(See attached file: ELECTRICITY.doc)
for tomorrow's 10:00 a.m. National Energy Policy Development Group

Thanks, Kjersten

ATTACHMENT

Message Sent
To:

Kjersten S. Drager/OVP/EOP
"Anderson, Margot" <Margot.Anderson@hq.doe.gov>
Juleanna R. Glover/OVP/EOP
"'Kmurphy@osec.doc.gov%internet'" <Kmurphy@osec.doc.gov>
"'Dina.Ellis@do.treas.gov%internet'" <Dina.Ellis@do.treas.gov>
"'Sue_Ellen_Wooldridge@IOS.DOI.gov%internet'"
<Sue_Ellen_Wooldridge@IOS.DOI.gov>
Joel D. Kaplan/WHO/EOP
"'Keith.Collins@USDA.gov%internet'" <Keith.Collins@USDA.gov>
"'Joseph.Glauber@USDA.gov%internet'" <Joseph.Glauber@USDA.gov>
"'Galloglysj@State.gov%internet'" <Galloglysj@State.gov>
"'McManusmt@State.gov%internet'" <McManusmt@State.gov>
"'Michelle.Poche@OST.DOT.Gov%internet'"
<Michelle.Poche@OST.DOT.Gov>
"'Patricia.Stahlschmidt@FEMA.gov%internet'"
<Patricia.Stahlschmidt@FEMA.gov>
"'Brenner.Rob@EPA.gov%internet'" <Brenner.Rob@EPA.gov>
"'Symons.Jeremy@EPA.gov%internet'" <Symons.Jeremy@EPA.gov>
"'Beale.John@EPA.gov%internet'" <Beale.John@EPA.gov>
Marcus Peacock/OMB/EOP
Mark A. Weatherly/OMB/EOP
Robert C. McNally/OPD/EOP
John L. Howard Jr./CEQ/EOP
"'William_bettenberg@IOS.DOI.gov%internet'"
<William_bettenberg@IOS.DOI.gov>
"'Tom_fulton@IOS.DOI.gov%internet'" <Tom_fulton@IOS.DOI.gov>
Kjersten S. Drager/OVP/EOP
Michael R. LeBlanc/CEA/EOP
"'Bruce.Baughman@FEMA.gov%internet'" <Bruce.Baughman@FEMA.gov>
"'Charles.m.Hess@USACE.army.mil%internet'"
<Charles.m.Hess@USACE.army.mil>
Andrew G. Keeler/CEA/EOP
"'commcoll@aol.com%internet'" <commcoll@aol.com>
Karen E. Keller/OMB/EOP
Carol J. Thompson/WHO/EOP
Sandra L. Via/OMB/EOP
Megan D. Moran/OVP/EOP
Janet P. Walker/OPD/EOP
Ronald L. Silberman/OMB/EOP
Lori A. Krauss/OMB/EOP
"'WheelerE@State.gov%internet'" <WheelerE@State.gov>
Karen L. Zent/WHO/EOP
"'WheelerE@State.gov%internet'" <WheelerE@State.gov>
Mark J. Sullivan/OVP/EOP
James T. Sims/OVP/EOP
Alice H. Williams/CEA/EOP
Andrew D. Lundquist/OVP/EOP
Karen Y. Knutson/OVP/EOP
Charles M. Smith/OVP/EOP
Robert C. McNally/OPD/EOP
Cesar Conda/OVP/EOP
Jennifer H. Mayfield/OVP/EOP
Mary J. Matalin/OVP/EOP
Nancy P. Dorn/WHO/EOP

ATTACHMENT

"'Margaret_Bradley@IOS.DOI.gov%internet'"
<Margaret_Bradley@IOS.DOI.gov>
Jean M. Russell/OPD/EOP

Message Copied
To:

Andrew D. Lundquist/OVP/EOP
Karen Y. Knutson/OVP/EOP
John Fenzel/OVP/EOP
Charles M. Smith/OVP/EOP
James T. Sims/OVP/EOP

Tripodi, Cathy

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 6:52 PM
To: Tripodi, Cathy
Subject: FW: nuclear energy paper

15-1


nuclear1.doc


PIC04772.PCX

Predecisional: draft NEP recommendations

-----Original Message-----
From: Andrew_D._Lundquist@ovp.eop.gov%internet
[mailto:Andrew_D._Lundquist@ovp.eop.gov]
Sent: Sunday, April 01, 2001 2:35 PM
To: Kelliher, Joseph
Subject: Re: nuclear energy paper

Thanks Joe. You've been doing more than your duty. You're prolific and I
appreciate it. Talk to you tomorrow. I'll look at this tonight. Also
thanks for the articles. Andrew

(Embedded image moved to file: PIC04772.PCX)

"Kelliher, Joseph" <Joseph.Kelliher@hq.doe.gov>
03/30/2001 07:30:35 PM

Record Type: Record

To: Karen Y. Knutson/OVP/EOP, Andrew D. Lundquist/OVP/EOP, Charles M. Smith/OVP/EOP, "Anderson, Margot" <Margot.Anderson@hq.doe.gov>

cc: "'Symons.Jeremy@epamail.epa.gov'" <Symons.Jeremy@epamail.epa.gov>
Subject: nuclear energy paper

Sorry for the delay, it must be Noon somewhere in the world.
<<nuclear1.doc>>

19680

Tripodi, Cathy

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 6:49 PM
To: Tripodi, Cathy
Subject:

Predecisional: draft NEP recommendation

-----Original Message-----
From: Anderson, Margot
Sent: Tuesday, February 13, 2001 9:22 AM
To: Kelliher, Joseph
Cc: McNutt, Barry

Our expert is Barry McNutt (6,4448).

Margot

19683

DOE021-0137

Tripodi, Cathy

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 7:38 PM
To: Tripodi, Cathy
Subject: FW: CAFE


CAFE statement.doc


PIC17308.PCX

Predecisional: draft NEP recommendation

-----Original Message-----
From: Charles_M._Smith@ovp.eop.gov%internet
[mailto:Charles_M._Smith@ovp.eop.gov]
Sent: Thursday, March 29, 2001 6:57 PM
To: Kelliher, Joseph; Kolevar, Kevin; Anderson, Margot;
Juleanna_R._Glover@ovp.eop.gov%internet; Kmurphy@osec.doc.gov%internet;
Dina.Ellis@do.treas.gov%internet;
Sue_Ellen_Wooldridge@IOS.DOI.gov%internet;
Joel_D._Kaplan@who.eop.gov%internet; Keith.Collins@USDA.gov%internet;
Joseph.Glauber@USDA.gov%internet; Galloglysj@State.gov%internet;
McManusmt@State.gov%internet; Michelle.Poche@OST.DOT.Gov%internet;
Patricia.Stahlschmidt@FEMA.gov%internet; Brenner.Rob@EPA.gov%internet;
Symons.Jeremy@EPA.gov%internet; Beale.John@EPA.gov%internet;
MPeacock@omb.eop.gov%internet; Mark_A._Weatherly@omb.eop.gov%internet;
Robert_C._McNally@opd.eop.gov%internet; Jhowardj@ceq.eop.gov%internet;
William_bettenberg@IOS.DOI.gov%internet;
Tom_fulton@IOS.DOI.gov%internet; Kjersten_drager@ovp.eop.gov%internet;
Mleblanc@ceq.eop.gov%internet; Bruce.Baughman@FEMA.gov%internet;
Charles.m.Hess@USACE.army.mil%internet; commcoll@aol.com%internet;
Carol_J._Thompson@who.eop.gov%internet;
Sandra_L._Via@omb.eop.gov%internet; Megan_D._Moran@ovp.eop.gov%internet;
Ronald_L._Silberman@omb.eop.gov%internet;
Lori_A._Krauss@omb.eop.gov%internet; WheelerE@State.gov%internet
Cc: Andrew_D._Lundquist@ovp.eop.gov%internet;
Karen_Y._Knutson@ovp.eop.gov%internet; John_fenzel@ovp.eop.gov%internet
Subject: CAFE

Attached is the CAFE piece from DOE for your information

19686

Tripodi, Cathy

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 8:35 PM
To: Tripodi, Cathy
Subject: FW: ISSUE PAPERS -PLEASE REPLACE ONE

Predecisional: draft NEP
recommendations

-----Original Message-----
From: Karen_Y._Knutson@ovp.eop.gov%internet
[mailto:Karen_Y._Knutson@ovp.eop.gov]
Sent: Tuesday, April 10, 2001 1:47 PM
To: Charles_M._Smith@ovp.eop.gov%internet
Cc: Kelliher, Joseph; Julieanna_R._Glover@ovp.eop.gov%internet;
kmurphy@osec.doc.gov%internet; dina.ellis@do.treas.gov%internet;
Joel_D._Kaplan@who.eop.gov%internet; keith.collins@usda.gov%internet;
galloglysj@state.gov%internet; michelle.poche@ost.dot.gov%internet;
patricia.stahlschmidt@fema.gov%internet; symons.jeremy@epa.gov%internet;
mpeacock@omb.eop.gov%internet; Mark_A._Weatherly@omb.eop.gov%internet;
Robert_C._McNally@opd.eop.gov%internet; jhowardj@ceq.eop.gov%internet;
william_bettenberg@ios.doi.gov%internet; mleblanc@ceq.eop.gov%internet;
charles.m.hess@usace.army.mil%internet; akeeler@cea.eop.gov%internet;
Karen_E._Keller@omb.eop.gov%internet;
Carol_J._Thompson@who.eop.gov%internet;
Sandra_L._Via@omb.eop.gov%internet;
Janet_P._Walker@opd.eop.gov%internet;
Ronald_L._Silberman@omb.eop.gov%internet;
Lori_A._Krauss@omb.eop.gov%internet; Karen_L._Zent@who.eop.gov%internet;
wheelere@state.gov%internet; Mark_J._Sullivan@ovp.eop.gov%internet;
Andrew_D._Lundquist@ovp.eop.gov%internet;
kjersten_drager@ovp.eop.gov%internet;
Charles_D._McGrath_Jr@ovp.eop.gov%internet;
Cesar_Conda@ovp.eop.gov%internet; James_T._Sims@ovp.eop.gov%internet;
John_M._Bridgeland@opd.eop.gov%internet
Subject: ISSUE PAPERS -PLEASE REPLACE ONE

(See attached file: TAX ISSUES .doc)
Please disregard the tax credit document - the wrong one was attached
(that
list was put together by our volunteer). Pleas use this document for the
tax discussion.

Charles M. Smith
04/10/2001 01:38:28 PM

Record Type: Record

To: See the distribution list at the bottom of this message

cc: See the distribution list at the bottom of this message

19688

DOE021-0142

Subject: April 11, 2001, Principals Meeting - Issue Papers

~~Charlie~~

(See attached file: Tax Credit Recommendations.doc)(See attached file: Hydropower Licensing recommendation.doc)(See attached file: PERMITTING RECOMMENDATION.doc)(See attached file: Coastal Zone Management Act recommendation.doc)

Message Sent
To:

Julieanna R. Glover/OVP/EOP@EOP
Joseph.Kelliher@HQ.DOE.gov @ inet
Kmurphy@osec.doc.gov @ inet
Dina.Ellis@do.treas.gov @ inet
Joel D. Kaplan/WHO/EOP@EOP
Keith.Collins@USDA.gov @ inet
Galloglysj@State.gov @ inet
Michelle.Poche@OST.DOT.Gov @ inet
Patricia.Stahlschmidt@FEMA.gov @ inet
Symons.Jeremy@EPA.gov @ inet
MPeacock@OMB.EOP.gov @ inet
Mark A. Weatherly/OMB/EOP@EOP
Robert C. McNally/OPD/EOP@EOP
Jhowardj@ceq.EOP.gov @ inet
William_bettenberg@ios.doi.gov @ inet
Mleblanc@ceq.eop.gov @ inet
Charles.m.Hess@USACE.army.mil @ inet
akeeler@cea.eop.gov @ inet
Karen E. Keller/OMB/EOP@EOP
Carol J. Thompson/WHO/EOP@EOP
Sandra L. Via/OMB/EOP@EOP
Janet P. Walker/OPD/EOP@EOP
Ronald L. Silberman/OMB/EOP@EOP
Lori A. Krauss/OMB/EOP@EOP
Karen L. Zent/WHO/EOP@EOP
WheelerE@state.gov @ inet
Mark J. Sullivan/OVP/EOP@EOP

Message Copied
To:

Andrew D. Lundquist/OVP/EOP@EOP
Karen Y. Knutson/OVP/EOP@EOP
Kjersten_drager@ovp.eop.gov @ inet
Charles D. McGrath Jr/OVP/EOP@EOP
Cesar Conda/OVP/EOP@EOP
James T. Sims/OVP/EOP@EOP

Tripodi, Cathy

166

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 7:30 PM
To: Tripodi, Cathy
Subject: FW: April 11, 2001, Principals Meeting - Issue Papers

Predecisional: draft NEP recommendations

-----Original Message-----
From: Charles_M._Smith@ovp.eop.gov%internet
[mailto:Charles_M._Smith@ovp.eop.gov]
Sent: Tuesday, April 10, 2001 1:39 PM
To: Kelliher, Joseph; Juleanna_R._Glover@ovp.eop.gov%internet;
Kmurphy@osec.doc.gov%internet; Dina.Ellis@do.treas.gov%internet;
Joel_D._Kaplan@who.eop.gov%internet; Keith.Collins@USDA.gov%internet;
Galloglysj@State.gov%internet; Michelle.Poche@OST.DOT.Gov%internet;
Patricia.Stahlschmidt@FEMA.gov%internet; Symons.Jeremy@EPA.gov%internet;
MPeacock@omb.eop.gov%internet; Mark_A._Weatherly@omb.eop.gov%internet;
Robert_C._McNally@opd.eop.gov%internet; Jhowardj@ceq.eop.gov%internet;
William_bettenberg@ios.doi.gov%internet; Mleblanc@ceq.eop.gov%internet;
Charles.m.Hess@USACE.army.mil%internet; akeeler@cea.eop.gov%internet;
Karen_E._Keller@omb.eop.gov%internet;
Carol_J._Thompson@who.eop.gov%internet;
Sandra_L._Via@omb.eop.gov%internet;
Janet_P._Walker@opd.eop.gov%internet;
Ronald_L._Silberman@omb.eop.gov%internet;
Lori_A._Krauss@omb.eop.gov%internet; Karen_L._Zent@who.eop.gov%internet;
WheelerE@State.gov%internet; Mark_J._Sullivan@ovp.eop.gov%internet
Cc: Andrew_D._Lundquist@ovp.eop.gov%internet;
Karen_Y._Knutson@ovp.eop.gov%internet;
Kjersten_drager@ovp.eop.gov%internet;
Charles_D._McGrath_Jr@ovp.eop.gov%internet;
Cesar_Conda@ovp.eop.gov%internet; James_T._Sims@ovp.eop.gov%internet
Subject: April 11, 2001, Principals Meeting - Issue Papers

Charlie

(See attached file: Tax Credit Recommendations.doc)(See attached file:
Hydropower Licensing recommendation.doc)(See attached file: PERMITTING
RECOMMENDATION.doc)(See attached file: Coastal Zone Management Act
recommendation.doc)

19701

Tripodi, Cathy

65

171

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 9:16 PM
To: Tripodi, Cathy
Subject: FW: energy efficiency one-pager

tmp.htm

Predecisional: draft NEP recommendation

-----Original Message-----
From: Symons.Jeremy@epamail.epa.gov%internet
[mailto:Symons.Jeremy@epamail.epa.gov]
Sent: Monday, April 02, 2001 10:27 AM
To: Kelliher, Joseph
Cc: Kolevar, Kevin; Anderson, Margot
Subject: RE: energy efficiency one-pager

Early e-mail from same.

Jeremy Symons
EPA, Office of Air and Radiation
(202) 564-9301
Fax: (202) 501-0394

"Kelliher, Joseph" <Joseph.Kelliher@hq.doe.gov>
03/30/2001 06:31 PM

To: "Anderson, Margot" <Margot.Anderson@hq.doe.gov>, Jeremy Symons/DC/USEPA/US@EPA
cc: "Kolevar, Kevin" <Kevin.Kolevar@hq.doe.gov>
Subject: RE: energy efficiency one-pager

> -----Original Message-----
> From: Anderson, Margot
> Sent: Friday, March 30, 2001 5:40 PM
> To: 'Symons.Jeremy@epamail.epa.gov'
> Cc: Kelliher, Joseph; Kolevar, Kevin
> Subject: energy efficiency one-pager
>
> << File: energy efficiency one-pager.wpd >>

19710

> Reviewed/edited by EE, PO. Joe and/or Kevin, Problems?
>
> Jeremy, can you let me know if you get this? I am having problems with
> your e-mail.
>
> Margot
>

Tripodi, Cathy

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 9:19 PM
To: Tripodi, Cathy
Subject: FW: Coal/RR DOE/EIA writeup

177

COALRA~1.WPD

Predecisional: draft NEP recommendation

-----Original Message-----
From: Tripodi, Cathy
Sent: Wednesday, May 02, 2001 9:06 AM
To: BONSKOWSKI, RICHARD
Cc: Kelliher, Joseph
Subject: Coal/RR DOE/EIA writeup

-----Original Message-----
From: BONSKOWSKI, RICHARD
Sent: Wednesday, May 02, 2001 11:28 AM
To: Tripodi, Cathy
Subject: RE: write up for cathy

Here is the write up I did. I was not able to put in some info I intended
because of the STB website being down. Also, had a mishap near the end that
erased part of the document, so I had to try to reconstruct it late in the
process. Let me know if you have questions.

Rich Bonskowski
Geologist, Coal Information Team
Tel. 202-287-1725; fax 202-287-1934

19712

Tripodi, Cathy

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 9:21 PM
To: Tripodi, Cathy
Subject: FW: National Monument Survey

174

Predecisional: draft NEP recommendation

—Original Message—
From: Tripodi, Cathy
Sent: Tuesday, March 27, 2001 6:57 PM
To: Kelliher, Joseph
Subject: National Monument Survey

Tripodi, Cathy

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 9:22 PM
To: Tripodi, Cathy
Subject: FW: Revisions to NEP Paper on Streamlining Permitting

Predecisional: draft NEP recommendation

-----Original Message-----
From: Vernet, Jean
Sent: Monday, April 09, 2001 11:14 AM
To: 'schmidt.lorie@epa.gov'; 'symons.jeremy@epa.gov'
Cc: Kelliher, Joseph; Kolevar, Kevin; Anderson, Margot; Conti, John; Johnson, Nancy; Silva, Robert; McCabe, Michael; Haspel, Abe; Braitsch, Jay
Subject: Revisions to NEP Paper on Streamlining Permitting

Lorie/Jeremy,

Regards,

Jean

Jean E. Vernet
Office of Policy, PO-21
U.S. Department of Energy
202.586.4755

EPA Regulatory
Streamlining re...

fax 202.586.5391

19720

DOE021-0174

Tripodi, Cathy

178

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 7:50 PM
To: Tripodi, Cathy
Subject:

Importance: High

Predecisional: draft NEP recommendations

-----Original Message-----
From: Cook, Trevor
Sent: Friday, April 13, 2001 12:12 PM
To: Kelliher, Joseph
Cc: Magwood, William
Subject:
Importance: High

Joe,

Trevor.

#82036 v1 - tax initiatives.do...

19724

Tripodi, Cathy

130

From: Kelliher, Joseph
Sent: Tuesday, July 03. 2001 7:49 PM
To: Tripodi, Cathv
Subject:

Predecisional: draft NEP recommendation

-----Original Message-----
From: Cook, Trevor
Sent: Tuesday, May 01, 2001 10:04 AM
To: Kelliher, Joseph; Anderson, Margot
Cc: Magwood, William
Subject:

attached is a MS word file with the requested text.

nuclear safety.doc

19726

Tripodi, Cathy

65

182

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 7:49 PM
To: Tripodi, Cathy
Subject: FW: reprocessing paper

Importance: High

Predecisional: draft NEP recommendation

-----Original Message-----
From: Cook, Trevor
Sent: Tuesday, May 22, 2001 9:21 AM
To: Kelliher, Joseph
Cc: Magwood, William
Subject: reprocessing paper
Importance: High

Joe,

Here is the paper, its just over a page.

Trevor.

ONE PAGER ON REPROCESSING.doc

-----Original Message-----
From: Kelliher, Joseph
Sent: Monday, May 21, 2001 3:15 PM
To: Magwood, William; Cook, Trevor
Subject: hearing prep: reprocessing

19728

Tripodi, Cathy

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 8:19 PM
To: Tripodi, Cathy
Subject: FW: additional MTBE related info

187

Predecisional: draft NEP recommendation

----Original Message----
From: Holtzman, Jill
Sent: Thursday, February 22, 2001 6:29 PM
To: Kelliher, Joseph
Subject: FW: additional MTBE related info

----Original Message----
From: McNutt, Barry
Sent: Thursday, February 22, 2001 11:01 AM
To: Holtzman, Jill
Subject: additional MTBE related info


ethanolmtbeQ&A 4,11,00.wpd


mtbetestimony3,2, 00R6.wpd

Statement of

Mark J. Mazur

Director
Office of Policy

U.S. Department of Energy

Before

Committee on Commerce

Subcommittee on Health and the Environment

United States House of Representatives

March 2, 2000

Mr. Chairman, members of the Subcommittee, I am pleased to be here and give this testimony on the Federal reformulated gasoline program, gasoline markets, and the role oxygenates like methyl tertiary butyl ether (MTBE) and ethanol, play in this program and in gasoline supply more generally.

Over the last decade DOE has assisted the Environmental Protection Agency (EPA) in the developing and implementing the RFG program and subsequent clean fuel rulemakings including, most recently, the Tier II low sulfur gasoline program. The Department has done detailed analyses of the costs and refinery operational impacts of the various product quality regulations as well as broader fuel supply and pricing issues. More specific to this hearing, we have spent considerable time over the last year working with EPA and the Blue Ribbon Panel on Oxygenates examining the possible consequences of restricting the use of MTBE and modifying the oxygenate requirements for the RFG program.

In addition to these specific, focused analyses, the Department has the lead within the Administration for gathering and disseminating energy markets data, as well as producing analysis and forecasts of energy markets through our Energy Information Administration. As you are well aware, Secretary Richardson and the rest of the Department, particularly the Energy Information Administration and the Office of Policy, have been intensely involved in trying to help states, consumers and fuel suppliers respond to the problems caused by the heating oil and diesel fuel price spikes recently experienced in the Northeast. We are, at the same time, paying careful attention to the gasoline market and are concerned, as was explained in testimony by EIA last week, that we could experience very tight gasoline supplies this year.

In addition to the work we do within the Department and the comments and analyses we have provided to EPA, we have asked the National Petroleum Council (NPC), a federal advisory committee to the Secretary of Energy, to examine various issues related to environmental regulations and petroleum product markets. For example, in 1991, we asked the NPC to look at the impacts of environmental regulations on the refining industry with specific attention to the RFG program that was still being developed at that time. In 1997, the NPC examined the role that crude oil and petroleum product inventories play in the supply system and in affecting price volatility. The NPC is now finishing a third study in this area which addresses the cumulative impacts of several product quality regulations, including changing the role of oxygenates in reformulated gasoline, on refinery viability and product deliverability.

This brings me to the subject of this hearing which is the operation of the RFG program, the role of oxygenates in RFG production, and the potential impact on gasoline markets of limitations on MTBE use. The reformulated gasoline program has been an air quality success with very few negative impacts on gasoline markets. Phase I of the program started in 1995 and provided important reductions in VOC and toxic emissions. Phase II is underway now with the crucial start of production of summer, ozone-control season gasoline (with lower VOC and NOx emission potential) beginning later this month at refineries around the country. Phase II gasoline will be lower in sulfur and have a lower vapor pressure, providing additional VOC reductions and significant NOx reductions. Toxic emissions are required to be lower but most of the Phase I gasoline already met the Phase II toxic performance standards.

This program also has been a market success for consumers in that there were adequate supplies

of RFG and its price was only slightly higher than conventional gasoline. There are several reasons for this. These include the relatively small fraction of gasoline production represented by RFG (about 25% of the total outside California) and the large number of refineries (about half of east coast, gulf coast and mid-west refineries) and importers participating in the production of RFG. Another very important reason is the fungible nature of the gasoline, which allows the gasolines produced at the different refineries and going to different states to be mixed and exchanged. Finally, refiners have significant flexibility to formulate the gasoline in many different ways to match their refining capacity. While the mandate to use certain amounts of oxygenate in RFG has been controversial, refiners have adapted to this and integrated that oxygenate use into the economic production of their total gasoline pool.

Our analysis, and that of others, indicates that the current level of oxygenate use is not far from the level of use that refiners would choose, at today's gasoline and oxygenate prices, even if there were no specific oxygenate mandate. This is largely because oxygenates like MTBE and ethanol are valuable blendstocks for producing clean, high performing gasolines. Under these circumstances, simply removing the oxygenate mandate would have little effect on oxygenate use other than allow some additional flexibility in where, within a refiner's total gasoline pool, these oxygenates are used.

As refiners face additional requirements to meet even tighter environmental standards for their gasoline, like the recently promulgated standards for Tier II low sulfur gasoline or possible additional toxic emission control requirements for conventional gasoline, they will find oxygenates such as MTBE even more necessary and valuable to make up for lost volume, octane

and other property changes. The availability of oxygenates also provides valuable immediate gasoline blending flexibility to refiners trying to meet tight product specifications; the oxygenates are aromatic-free, high octane, virtually sulfur-free blendstocks that can be put in almost any shipment of gasoline to offset performance shortfalls in other parts of the refinery. This is particularly true for MTBE which can be blended at the refinery, shipped in pipelines and which has little negative impact on vapor pressure. The effect of being able to readily blend even small amounts of MTBE into gasoline is to help assure product deliverability, reliable supplies and affordable gasoline prices to consumers.

We share the concerns expressed by many over the impact of MTBE on water quality. Reducing or eliminating the use of specific oxygenates like MTBE, to help protect water may prove to be necessary but will need to be phased in over a period of time to minimize impacts on gasoline production, gasoline supplies and prices. While the estimates vary somewhat, we believe there is general agreement that the refining industry outside California will have to spend $1 to $2 billion in capital investments to continue producing acceptable quality gasoline at the same volumes if MTBE use is eliminated. This is in addition to the more than $1 billion estimated capital investments required in California refineries to make gasoline without MTBE. The capital investments vary little whether or not the oxygenate mandate for RFG is eliminated because of the need to replace MTBE's volume, octane, and other valuable properties. Recovering this investment will add to the cost of gasoline, as will various operating costs including the need for additional crude oil to replace the lost gasoline volume and the purchase of other oxygenates like ethanol. As I mentioned earlier, the Department has done extensive analysis of these refinery impacts and gasoline costs changes through our Oak Ridge National Laboratory, and I would

like to submit this information for the record.

Predicting the impacts of a MTBE phase-down, or phase-out, on gasoline supplies and on market operation is more difficult. Phasing MTBE out of gasoline is equivalent in its impact on gasoline supplies to losing, over whatever the phase-out period is, some 400,000 barrels a day of gasoline production capacity or to closing four to five large refineries. A phase-out that ultimately leads to a ban on MTBE may also affect the ability of the US gasoline market to draw gasoline supplies from Europe, the major source of our price-sensitive gasoline imports, since those refiners count on the use of MTBE to some degree as well.

State-by-state restrictions on MTBE could have essentially the same volume impacts as a national ban if refiners were forced to take MTBE out of all gasoline to protect the fungibility of the gasoline distribution system. Alternatively, gasolines with and without MTBE could continue to be produced but with less flexibility and exchange opportunities in the distribution system. If there were a regional refinery or distribution supply problems, this could easily lead to regional gasoline shortfalls and longer periods of price volatility as markets struggle to re-balance on a state-by-state basis, rather than a national basis.

Given enough time, the fuel supply industry can respond to the possible loss of MTBE. Clearly, increased use of ethanol will play an important role. However, what is not so clear is the speed and degree to which refiners can or will make up the loss in volume and quality of gasoline given all the other demands for improved environmental quality of gasoline and diesel fuel, the uncertain market conditions, and the continuing growing demand for all petroleum products.

Resolving the role of all oxygenates in gasoline will be important to the refinery planning and construction process that is starting to take place as refiners prepare for the Tier II low sulfur gasoline program, potential new gasoline toxic control requirements and other fuel quality changes for diesel fuel. However, if MTBE must be reduced or eliminated in the same time frame, refiners will be faced with additional demands for capital and engineering resources that they may not be capable of meeting. The outcome of this could be a significant further tightening of gasoline supplies, price increases and price volatility that are not predicted in the cost analyses we and others have done.

Obviously, the serious problem of MTBE contamination of water supplies must be addressed. Short of eliminating MTBE from gasoline, there may be other options for dealing with this issue. In addition to doing our best to reduce the leaking of gasoline from underground storage tanks, the primary source of MTBE reaching water supplies, and the spilling of gasoline containing MTBE, reducing the amount of MTBE allowed in any given gallon of gasoline (i.e. its allowable concentration) and increasing the flexibility of the oxygenate requirement in RFG are possible approaches for mitigating the problem, particularly in the short term. Our examination of these options, included in the refinery analyses performed by our Oak Ridge National Laboratory that I am submitting for the record, indicates that the cost and potential market impacts of a phase-down in allowable level of MTBE would be significantly less, about half the per gallon cost, than a phase-out of MTBE from the entire national gasoline pool.

We do not know what the right answer is at this point but we are prepared to work with EPA, Congress, the States, and the fuel supply industry to develop an approach that fully addresses the

water quality problems and still assures adequate supplies of gasoline at reasonable prices.

Thank you for the opportunity to present this testimony. I will be glad to answer any questions you may have.

Tripodi, Cathy

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 8:19 PM
To: Tripodi, Cathy
Subject: FW: Revised MTBE Background piece

187

Predecisional: draft NEP recommendation

-----Original Message-----
From: Holtzman, Jill
Sent: Thursday, February 22, 2001 6:29 PM
To: Kelliher, Joseph
Subject: FW: Revised MTBE Background piece

More on MTBE...

mtbe backgroundR1.wpd

19743

Tripodi, Cathy

189

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 8:13 PM
To: Tripodi, Cathy
Subject: FW: ANWR Info

Importance: High

Predecisional: draft NEP recommendations

-----Original Message-----
From: Garrish, Ted
Sent: Thursday, May 03, 2001 11:50 AM
To: Kelliher, Joseph
Cc: 'kjersten_s._drager@ovp.eop.gov'
Subject: ANWR Info
Importance: High

Here's the ANWR info.

19746

Tripodi, Cathy

191

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 8:14 PM
To: Tripodi, Cathy
Subject: FW: ANWR Paper

Predecisional: draft NEP recommendations

-----Orginal Message-----
From: Garnish, Ted
Sent: Wednesday, March 28, 2001 5:16 PM
To: McSlarrow, Kyle; McMonigle, Joe
Cc: Kolevar, Kevin; Kelliher, Joseph; Davis, Joseph
Subject: ANWR Paper

Here is a first draft of the ANWR paper for your consideration.

AKBRF1.wpd

Tripodi, Cathy

b5

193

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 4:34 PM
To: Tripodi, Cathy
Subject: FW: FW: national goals

NEP: Draft Recommendations

-----Original Message-----
From: Abe Haspel
Sent: Monday, April 16, 2001 5:10 PM
To: Kelliher, Joseph
Cc: Dixon, Robert; Sisson, Barbara; Zimmerman, MaryBeth
Subject: Re: FW: national goal;

Abe

Joseph Kelliher@HQMAIL on 04/16/2001 12:09:50 PM

To: Abe Haspel/EE/DOE@DOE@HQMAIL, Margot Anderson@HQMAIL
cc:

Subject: FW: national goals

From: Karen_Y._Knutson@ovp.eop.gov%internet
[mailto:Karen_Y._Knutson@ovp.eop.gov]
Sent: Monday, April 16, 2001 11:11 AM
To: Kelliher, Joseph; McSlarrow, Kyle
Subject: national goals

---------- Forwarded by Karen Y. Knutson/OVP/EOP on 04/16/2001 11:09 AM ----------

John L. Howard Jr.
04/16/2001 10:38:44 AM

Record Type: Record

To: Karen Y. Knutson/OVP/EOP@EOP

cc:
Subject: national goals

national goals
kelliher.wpd

Kelliher, Joseph

b5

From: Abe Haspel
Sent: Monday, April 16, 2001 5:10 PM
To: Kelliher, Joseph
Cc: Dixon, Robert; Sisson, Barbara; Zimmerman, MaryBeth
Subject: Re: FW: national goals

national goals
kelliher.wpd

B 5

Joe: I have attached a table that provides information regarding three national energy programs/goals. Detailed data regarding the status of each goal is provided. Governors and Members of Congress have widely embraced these three national energy goals----they have been very active in helping us reach or exceed the goals.

b5

[

d

]

c:

Abe

Joseph Kelliher@HQMAIL on 04/16/2001 12:09:50 PM

To: Abe Haspel/EE/DOE@DOE@HQMAIL, Margot Anderson@HQMAIL
cc:

Subject: FW: national goals

See below. What was the experience on these goals? Was there a seriou effort to achieve them, or were they ignored like the energy efficiency goal in EPAct? Apparently there is interest in setting new goals, and the WH wants to know the track record -- good and bad -- of past efforts in the same vein.

-----Original Message-----
From: Karen_Y._Knutson@ovp.eop.gov%internet
[mailto:Karen_Y._Knutson@ovp.eop.gov]
Sent: Monday, April 16, 2001 11:11 AM
To: Kelliher, Joseph; McSlarrow, Kyle
Subject: national goals

APparetnly, Clinton set some national goals - we were thinking of doing the same. Can you ask your people how those goals were developed, what progress has been made, etc. Of ccurse, we are crashing over here....
---------- Forwarded by Karen Y. Knutson/OVP/EOP on 04/16/2001

11:09 AM ----------

John L. Howard Jr.
04/16/2001 10:38:44 AM

Record Type: Record

To: Karen Y. Knutson/OVP/EOP@EOP

cc:
Subject: national goals

Kelliher, Joseph

65
127

From: Abe Haspel
Sent: Wednesday, April 04, 2001 11:32 AM
To: Kelliher, Joseph
Subject: Re: energy efficiency

Joseph Kelliher@HQMAIL on 04/03/2001 05:52:14 PM

To: Abe Haspel/EE/DOE@DOE@HQMAIL
cc:

Subject: energy efficiency

Fact question.

19761

Tripodi, Cathy

65

198

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 4:35 PM
To: Tripodi, Cathy
Subject: FW: energy efficiency

NEP draft recommendations

-----Original Message-----
From: Abe Haspel
Sent: Wednesday, April 04, 2001 1:57 PM
To: Kelliher, Joseph
Subject: RE: energy efficiency

Joe:

Joseph Kelliher@HQMAIL on 04/04/2001 12:39:20 PM

To: Abe Haspel/EE/DOE@DOE@HQMAIL
cc:

Subject: RE: energy efficiency

-----Original Message-----
From: Abe Haspel
Sent: Wednesday, April 04, 2001 11:32 AM
To: Kelliher, Joseph
Subject: Re: energy efficiency

19762

Joseph Kelliher@HQMAIL on 04/03/2001 05:52:14 PM

To: Abe Haspel/EE/DOE@DOE@HQMAIL
cc:

Subject: energy efficiency

Fact question:

Tripodi, Cathy

65

199

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 4:34 PM
To: Tripodi, Cathy
Subject: FW: energy efficiency

NEP: Draft recommendations

----Original Message----
From: Abe Haspel
Sent: Thursday, April 05, 2001 1:37 PM
To: Kelliher, Joseph
Subject: RE: energy efficiency

Joe:

Joseph Kelliher@HQMAIL on 04/04/2001 06:54:46 PM

To: Abe Haspel/EE/DOE@DOE@HQMAIL
cc:

Subject: RE: energy efficiency

-----Original Message-----
From: Abe Haspel
Sent: Wednesday, April 04, 2001 1:57 PM
To: Kelliher, Joseph
Subject: RE: energy efficiency

Joe

Joseph Kelliher@HQMAIL on 04/04/2001 12:39:20 PM

To: Abe Haspel/EE/DOE@DOE@HQMAIL
cc:

Subject: RE: energy efficiency

19764

-----Original Message-----
From: Abe Haspel
Sent: Wednesday, April 04, 2001 11:32 AM
To: Kelliher, Joseph
Subject: Re: energy efficiency

Joseph Kelliher@HQMAIL on 04/03/2001 05:52:14 PM

To: Abe Haspel/EE/DOE@DOE@HQMAIL
cc:

Subject: energy efficiency

Fact question.

Tripodi, Cathy

b5

200

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 8:27 PM
To: Tripodi, Cathy
Subject: FW: Energy Education Language

Energy Education.doc

Predecisional: draft NEP recommendation

-----Original Message-----
From: John_Fenzel@ovp.eop.gov%internet [mailto:John_Fenzel@ovp.eop.gov]
Sent: Wednesday, May 02, 2001 9:21 AM
To: Kelliher, Joseph; McSlarrow, Kyle
Subject: Energy Education Language

(See attached file: Energy Education.doc)

Per Andrew's request, I am emailing this to you as a recommendation. Andrew will talk to you if you have questions. It is an effort to create a

Please get back to us as soon as possible with a response.

Many Thanks,

John Fenzel

Tripodi, Cathy

b5

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 8:44 PM
To: Tripodi, Cathy
Subject: FW: Air rules / coal impacts

Importance: High

Predecisional: draft NEP recommendation

-----Original Message-----
From: Kripowicz, Robert
Sent: Monday, March 26, 2001 5:48 PM
To: Kelliher, Joseph
Cc: Carter, Douglas
Subject: FW: Air rules / coal impacts
Importance: High

The best we can do in a limited time. Feel free to contact Doug directly if you need clarification.

Bob

-----Original Message-----
From: Carter, Douglas
Sent: Monday, March 26, 2001 5:41 PM
To: Kripowicz, Robert
Subject: Air rules / coal impacts

Bob -

CleanAir.wpd

Doug Carter (FE-26)
US DOE
Washington, DC 20585
202-586-9684

[This email uses 100% recycled electrons.]

19768

DOE021-0222

Tripodi, Cathy

b5

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 8:43 PM
To: Tripodi, Cathy
Subject: FW: marginal wells and SPR

J.03

Importance: High

Predecisional: draft NEP recommendation

-----Original Message-----
From: Kripowicz, Robert
Sent: Friday, March 30, 2001 4:59 PM
To: Kelliher, Joseph
Cc: Anderson, Margot; Braitsch, Jay; Shages, John; Furiga, Richard
Subject: marginal wells and SPR
Importance: High

Joe:

Call if you have any questions.

NEP-marginal SPR.wpd

Thanks.

19772

Tripodi, Cathy

k=
205

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 8:43 PM
To: Tripodi, Cathy
Subject: FW: Railroad issues

Predecisional: draft NEP recommendation

-----Original Message-----
From: Kripowicz, Robert
Sent: Tuesday, April 03, 2001 5:24 PM
To: Kelliher, Joseph
Cc: Carter, Douglas
Subject: FW: Railroad issues

The attachment is a cogent description of rail issues.

Bob

-----Original Message-----
From: Carter, Douglas
Sent: Tuesday, April 03, 2001 4:50 PM
To: Kripowicz, Robert
Cc: Rudins, George; Grahame, Thomas
Subject: Railroad issues

Bob -

Potential Railroad Issues.doc

Doug Carter (FE-26)

19774

Tripodi, Cathy

hc

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 8:42 PM
To: Tripodi, Cathy
Subject: FW:

207

Importance: High

Predecisional: draft NEP recommendations

—Original Message—
From: Kripowicz, Robert
Sent: Tuesday, April 03, 2001 5:33 PM
To: Kolevar, Kevin
Cc: Anderson, Marcot; Kelliher, Joseph; Braitsch, Jay
Subject:
Importance: High

Kevin – Based on previous e-mails I offer the following:

Voluntary
:duction of Greenho

NewCoalPower FE
3-8-01.doc

Sequest FE #2.doc

19777

.ClimateChangePlan.
doc

Tripodi, Cathy

h5
212

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 8:42 PM
To: Tripodi, Cathy
Subject: FW: EPA NSR proposal

Predecisional: draft NEP recommendation

-----Original Message-----
From: Kripowicz, Robert
Sent: Tuesday, April 17, 2001 11:07 AM
To: Kelliher, Joseph; Anderson, Margot
Cc: Carter, Douglas
Subject: RE: EPA NSR proposal

Bob

Joe-NSR.wpd

-----Original Message-----
From: Kelliher, Joseph
Sent: Tuesday, April 17, 2001 10:39 AM
To: Anderson, Margot; Kripowicz, Robert
Subject: EPA NSR proposal

19786

Tripodi, Cathy

b5

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 8:42 PM
To: Tripodi, Cathy
Subject:

a14

Importance: High

Predecisional: draft NEP recommendation

-----Original Message-----
From: Kripowicz, Robert
Sent: Monday, April 16, 2001 1:29 PM
To: Kelliher, Joseph
Cc: Carter, Douglas; DeHoratiis, Guido; Pyrdol, John
Subject:
Importance: High

19789

Tripodi, Cathy

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 8:39 PM
To: Tripodi, Cathy
Subject: FW: Draft Hydro Licensing Recs

217


Hydro Draft Recs.wpd

Predecisional: draft NEP recommendation

-----Original Message-----
From: KMurphy@doc.gov%internet [mailto:KMurphy@doc.gov]
Sent: Monday, April 09, 2001 7:26 PM
To: Kelliher, Joseph
Subject: Draft Hydro Licensing Recs

Joe -
My apologies for not putting you on the earlier distribution list (Paul and
Lawrence attended the interagency meeting on this, so I emailed them). I'd
be interested in your comments.
-Kevin

----- Forwarded by Kevin Murphy/HCHB/Osnet on 04/09/01 07:23 PM -----

Kevin Murphy
04/09/01 06:18 PM

To: karen_y._knutson@ovp.eop.gov, andrew_d._lundquist@ovp.eop.gov
cc: paul.carrier@hq.doe.gov, lawrence.mansueti@hq.doe.gov, william_bettenberg@ios.doi.gov, michael.r.walsh@wrc01.usace.army.mil, charles.m.hess@hq02.usace.army.mil, darrell.g.nolton@wrc01.usace.army.mil, mjanopaul@fs.fed.us, keith.collins@usda.gov, Jane.S.Hannuksela@noaa.gov, Craig.R.O'Connor@noaa.gov, dcohen1@doc.gov
Subject: Draft Hydro Licensing Recs

Latest draft of hydro recs. Thanks to everyone for their comments. Please review.

(See attached file: Hydro Draft Recs.wpd)

(See attached file: Hydro Draft Recs.wpd)

19804

WH

Tripodi, Cathy

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 8:39 PM
To: Tripodi, Cathy
Subject: FW: Draft CZMA Recs

219

CZMA Draft Recs 2.wpd

Predecisional: draft NEP recommendation

-----Original Message-----
From: KMurphy@doc.gov%internet [mailto:KMurphy@doc.gov]
Sent: Monday, April 09, 2001 7:41 PM
To: karen_y._knutson@ovp.eop.gov%internet;
andrew_d._lundquist@ovp.eop.gov%internet
Cc: Carrier, Paul; Mansueti, Lawrence; Kelliher, Joseph;
charles.m.hess@usace.army.mil%internet; David.Kaiser@noaa.gov%internet;
Craig.R.O'Connor@noaa.gov%internet; dCchenl@doc.gov%internet;
mjanopaul@fs.fed.us%internet; keith.collins@usda.gov%internet;
william_bettenberg@ios.doi.gov%internet;
michael.r.walsh@wrc01.usace.army.mil%internet;
darrell.g.nolton@wrc01.usace.army.mil%internet
Subject: Draft CZMA Recs

19807

Tripodi, Cathy

WH

254

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 8:38 PM
To: Tripodi, Cathy
Subject: FW: Electricity Paper with Edits Attached

ELECTRICITY.doc

Predecisional: draft NEP recommendation

-----Original Message-----
From: Kjersten_S._Page:@ovp.eop.gov%internet
[mailto:Kjersten_S._Dra:er@ovp.eop.gov]
Sent: Tuesday, Apr. 17, 2001 4:56 PM
To: Kelliher, Jose:
Subject: Electricity Paper with Edits Attached

(See attached file: ELECTRICITY.doc)

Please call Andrew ASAP so we can get this out. He doesn't want me to send
it out until you guys talk. Thanks, Kjersten

WH

Tripodi, Cathy

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 8:37 PM
To: Tripodi, Cathy
Subject: FW: Electricity Issue Paper Attached...

031

ELECTRICITY.doc

Predecisional: draft NEP recommendation

-----Original Message-----
From: Kjersten_S._Drager@ovp.eop.gov%internet
[mailto:Kjersten_S._Drager@ovp.eop.gov]
Sent: Tuesday, April [illegible] 2001 6:[illegible] PM
To: Kelliher,_Joseph; [illegible]derson, Margot;
Juleanna_R._Glover[illegible]ovp.eop.gov%internet; Kmurphy@osec.doc.gov%internet;
Dina.Ellis@do.trea[illegible]nternet;
Sue_Ellen_Wooldridge@[illegible].DOI.gov%internet;
Joel_D._Kaplan@who.eop.[illegible]ov%internet; Keith.Collins@USDA.gov%internet;
Joseph.Glauber@USDA.go[illegible]nternet; Galloclysj@State.gov%internet;
McManusmt@State.gov%in[illegible]rnet; Michelle.Roche@OST.DOT.Gov%internet;
Patricia.Stahlschmidt[illegible]A.gov%internet; Brenner.Rob@EPA.gov%internet;
Symons.Jeremy@EPA.gov[illegible]ternet; Beale.John@EPA.gov%internet;
MPeacock@omb.eop.gov[illegible]rnet; Mark_A._Weatherly@omb.eop.gov%internet;
Robert_C._McNally@who[illegible].gov%internet; Thowarduj@ceq.eop.gov%internet;
William_bettenberg@DO[illegible]I.gov%internet;
Tom_fulton@IOS.DOI.gov[illegible]nternet; Kjersten_drager@ovp.eop.gov%internet;
Mleblanc@ceq.eop.gov%i[illegible]rnet; Bruce.Baughman@FEMA.gov%internet;
Charles.m.Hess@USACE.a[illegible].mil%internet; akeeler@cea.eop.gov%internet;
commcoll@aol.com%inte[illegible]; Karen_E._Keller@omb.eop.gov%internet;
Carol_J._Thompson@who[illegible].gov%internet;
Sandra_L._Via@omb.eop.[illegible]%internet; Megan_D._Moran@ovp.eop.gov%internet;
Janet_P._Walker@opd.e[illegible]ov%internet;
Ronald_L._Silberma[illegible]op.gov%internet;
Lori_A._Krauss@omb.eop[illegible]v%internet; WheelerE@State.gov%internet;
Karen_L._Zent@who.eop.[illegible]internet; WheelerE@State.gov%internet;
Mark_J._Sullivan[illegible]vp.e[illegible].gov%internet;
James_T._Sims@ovp.eop.[illegible]%internet;
Alice_H._Williams@cea.[illegible].gov%internet;
Andrew_D._Lundquist@ov[illegible].eop.gov%internet;
Karen_Y._Knutson@omb.[illegible].gov%internet;
Charles_M._Smith@omb.[illegible].gov%internet;
Charles_D._McGra[illegible]..eop.gov%internet;
Robert_C._McNally@wa[illegible].gov%internet; Cesar_Conda@ovp.eop.gov%internet;
Jennifer_H._Mayfield@o[illegible].eop.gov%internet;
Mary_J._Matalin@omb.eo[illegible].gov%internet;
Nancy_P._Dorn@who.eop.[illegible]%internet;
Margaret_Bradley@IOS.D[illegible].gov%internet;
Jean_M._Russell@opd.e[illegible]ov%internet
Cc: Andrew_D._Lundq[illegible]vp.eop.gov%internet;
Karen_Y._Knutson@omb.[illegible]gov%internet; John_Fenzel@ovp.eop.gov%internet;
Charles_M._Smith@omb.[illegible].gov%internet;
James_T._Sims@ovp.eop.[illegible]internet
Subject: Electricity Issue Paper Attached...

19025

Tripodi, Cathy

From: [illegible]
Sent: [illegible] 2001 8:35 PM
To: [illegible]
Subject: FW: Permitting Recommendation

Permit Rec 1-pgr 4-5.wpd PIC[illegible]72.P.

[illegible] all: draft NEP recommendation

-----Original Message-----
From: Karen_Y._Kn[illegible]
[mailto:Karen_Y._[illegible].eop[illegible]
Sent: Friday, Ap[illegible]
To: Kelliher, Jo[illegible]
Subject: Permitt[illegible]

I wanted to make [illegible] this. JK
---------- Forwarded by Karen Y. Knutson/OVP/EOP on 04/06/2001
03:36 PM ---------

(Embedded image moved to file: PIC27372.PCX)

Record Type: R[illegible]

To: Andrew D. [illegible] Karen Y. Knutson/OVP/EOP, Charles M. Smith/OVP/E[illegible]

cc: Beale.John [illegible] [illegible].Jeremy@epamail.epa.gov
Subject: Permit[illegible]

Tripodi, Cathy

65

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 8:46 PM
To: Tripodi, Cathy
Subject: FW: solar tax credits

235

Predecisional: draft NEP recommendation

-----Original Message-----
From: Lawrence Mansueti
Sent: Wednesday, April 18, 2001 11:04 AM
To: Kelliher, Joseph
Cc: Anderson, Margot; Dixon, Robert; Haspel, Abe; Zimmerman, MaryBeth; York, Michael
Subject: Re: solar tax credits

larry mansueti
office of power technologies, EE-10
EERE
6-2588

---------- Forwarded by Lawrence Mansueti/EE/DOE on 04/18/2001 08:59 AM ----------

Robert Dixon
04/17/2001 07:40 PM

To: Lawrence Mansueti/EE/DOE@DOE
cc: Don Richardson/EE/DOE@DOE

19833

Subject: Re: solar tax credits

Larry

Please respond directly to Joe Kelliher in my absence tomorrow (April 18). Abe Haspel is also away. Please copy us both on your response. Thank you.

Bob

---------- Forwarded by Robert Dixon/EE/DOE on 04/17/2001 11:56 AM ----------

Abe.Haspel@ee.doe.gov on 04/17/2001 08:24:53 AM

To:	Robert Dixon/EE/DOE@DOE
cc:	
Subject:	solar tax credits

Bob: FYI. Any info you want to share? Abe

Joseph Kelliher@HQMAIL on 04/16/2001 07:20:28 PM

To: Abe Haspel/EE/DOE@DOE@HQMAIL, MaryBeth Zimmerman/EE/DOE@DOE@HQMAIL, Margot Anderson@HQMAIL
cc:

ATTACHMENT.TXT

[am not sure about that.]

Tripodi, Cathy

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 8:56 PM
To: Tripodi, Cathy
Subject: FW: Request for additional information on tax proposals

230

Predecisional: draft NEP recommendation

—Original Message—
From: Michael York
Sent: Friday, April 20, 2001 5:15 PM
To: Kelliher, Joseph
Cc: Zimmerman, MaryBeth; Garland, Buddy
Subject: Request for additional information on tax proposals

Joe, I work for Mary Beth Zimmerman in EERE and she asked that I send this response to you. The attachment addresses your tax questions relayed to us in e-mails on 4/17 and 4/18. This has not been reviewed by senior staff in EERE. However, we wanted to get this to you so that you would be able to proceed with your work. We will have a more formal response to you as soon as possible.

Kelliher answers for 42001.doc...

19835

Kelliher, Joseph

h5

238

From: Poche, Michelle [Michelle.Poche@ost.dot.gov]
Sent: Monday, April 30, 2001 5:02 PM
To: Kelliher, Joseph
Subject: RE: energy policy: pipeline safety

We have a winner!!!
I shall forward to Charlie et al

-----Original Message-----
From: Kelliher, Joseph [mailto:Joseph.Kelliher@hq.doe.gov]
Sent: Monday, April 30, 2001 3:43 PM
To: Poche, Michelle
Subject: RE: energy policy: pipeline safety

Michelle, how about the attachment? The recommendations are generally written in this kind of style. The background would be a para in the body of the report that tees up the recommendation.

<< File: piperec1.doc >>

-----Original Message-----
From: Poche, Michelle [mailto:Michelle.Poche@ost.dot.gov]
Sent: Monday, April 30, 2001 2:40 PM
To: Kelliher, Joseph
Subject: RE: energy policy: pipeline safety

-----Original Message-----
From: Kelliher, Joseph [mailto:Joseph.Kelliher@hq.doe.gov]
Sent: Monday, April 30, 2001 11:40 AM
To: Poche, Michelle
Subject: RE: energy policy: pipeline safety

Sure, that would help.

-----Original Message-----
From: Poche, Michelle [mailto:Michelle.Poche@ost.dot.gov]
Sent: Monday, April 30, 2001 11:18 AM
To: Kelliher, Joseph
Cc: Joost, Elaine (060)RSPA(062)
Subject: RE: energy policy: pipeline safety

-----Original Message-----
From: Kelliher, Joseph [mailto:Joseph.Kelliher@hq.doe.gov]

-----Original Message-----
From: Poche, Michelle [mailto:Michelle.Poche@ost.dot.gov]
Sent: Monday, April 30, 2001 10:56 AM
To: Kelliher, Joseph
Subject: RE: energy policy: pipeline safety

-----Original Message-----
From: Kelliher, Joseph [mailto:Joseph.Kelliher@hq.doe.gov]
Sent: Monday, April 30, 2001 10:24 AM
To: Poche, Michelle
Subject: energy policy: pipeline safety
Importance: High

Kelliher, Joseph

From: Poche, Michelle [Michelle.Poche@ost.dot.gov]
Sent: Monday, April 30, 2001 2:40 PM
To: Kelliher, Joseph
Subject: RE: energy policy: pipeline safety

-----Original Message-----
From: Kelliher, Joseph [mailto:Joseph.Kelliher@hq.doe.gov]
Sent: Monday, April 30, 2001 11:40 AM
To: Poche, Michelle
Subject: RE: energy policy: pipeline safety

Sure, that would help.

-----Original Message-----
From: Poche, Michelle [mailto:Michelle.Poche@ost.dot.gov]
Sent: Monday, April 30, 2001 11:18 AM
To: Kelliher, Joseph
Cc: Joost, Elaine (060)RSPA(062)
Subject: RE: energy policy: pipeline safety

From: Kelliher, Joseph [mailto:Joseph.Kelliher@hq.doe.gov]
Sent: Monday, April 30, 2001 11:18 AM
To: Poche, Michelle
Subject: RE: energy policy: pipeline safety

-----Original Message-----
From: Poche, Michelle [mailto:Michelle.Poche@ost.dot.gov]
Sent: Monday, April 30, 2001 10:56 AM
To: Kelliher, Joseph
Subject: RE: energy policy: pipeline safety

—Original Message—

From: Kelliher, Joseph [mailto:Joseph.Kelliher@hq.doe.gov]
Sent: Monday, April 30, 2001 10:24 AM
To: Poche, Michelle
Subject: energy policy: pipeline safety
Importance: High

Kelliher, Joseph

65

From: Poche, Michelle [Michelle.Poche@ost.dot.gov]
Sent: Monday, April 30, 2001 11:18 AM
To: Kelliher, Joseph
Cc: Joost, Elaine (060)RSPA(062)
Subject: RE: energy policy: pipeline safety

-----Original Message-----
From: Kelliher, Joseph [mailto:Joseph.Kelliher@hq.doe.gov]
Sent: Monday, April 30, 2001 11:18 AM
To: Poche, Michelle
Subject: RE: energy policy: pipeline safety

-----Original Message-----
From: Poche, Michelle [mailto:Michelle.Poche@ost.dot.gov]
Sent: Monday, April 30, 2001 10:56 AM
To: Kelliher, Joseph
Subject: RE: energy policy: pipeline safety

Joe.

Thanks,
Michelle

-----Original Message-----
From: Kelliher, Joseph [mailto:Joseph.Kelliher@hq.doe.gov]
Sent: Monday, April 30, 2001 10:24 AM
To: Poche, Michelle
Subject: energy policy: pipeline safety
Importance: High

Kelliher, Joseph

b5

From: Poche, Michelle [Michelle.Poche@ost.dot.gov]
Sent: Monday, April 30, 2001 10:56 AM
To: Kelliher, Joseph
Subject: RE: energy policy: pipeline safety

Joe

Thanks,
Michelle

-----Original Message-----
From: Kelliher, Joseph [mailto:Joseph.Kelliher@hq.doe.gov]
Sent: Monday, April 30, 2001 10:24 AM
To: Poche, Michelle
Subject: energy policy: pipeline safety
Importance: High

Kelliher, Joseph

KS

From: Tripodi, Cathy
Sent: Thursday, April 26, 2001 1:37 PM
To: Kelliher, Joseph
Subject: FW: Clean Coal Successes

-----Original Message-----
From: Porter, Robert
Sent: Thursday, April 26, 2001 1:35 PM
To: Tripodi, Cathy
Cc: Kripowicz, Robert; Rudins, George
Subject: Clean Coal Successes

Cathy –
In response to your request to Bob Kripowicz, here is a suggestion (in the message text and in the attached WordPerfect document – both are the same). Let me know if this is what you and Joe are looking for.

Bob Porter
Office of Fossil Energy

P-5

Kelliher, Joseph

65

From: Vernet, Jean
Sent: Tuesday, April 17, 2001 2:39 PM
To: Kelliher, Joseph
Subject: RE: comments/revisions to EPA NSR background document

-----Original Message-----
From: Kelliher, Joseph
Sent: Tuesday, April 17, 2001 1:51 PM
To: Vernet, Jean
Subject: RE: comments/revisions to EPA NSR background document

-----Original Message-----
From: Vernet, Jean
Sent: Tuesday, April 17, 2001 1:38 PM
To: Kelliher, Joseph
Cc: Anderson, Margot; Conti, John
Subject: RE: comments/revisions to EPA NSR background document
Importance: High

Joe.

Please let me know if you have additional questions.

Jean

-----Original Message-----
From: Kelliher, Joseph
Sent: Tuesday, April 17, 2001 1:01 PM
To: Vernet, Jean
Subject: RE: comments/revisions to EPA NSR background document
Importance: High

From: Vernet, Jean
Sent: Tuesday, April 17, 2001 10:57 AM
To: Kelliher, Joseph
Cc: Anderson, Margot; Conti, John; Carter, Douglas
Subject: comments/revisions to EPA NSR background document
Importance: High

Joe,

Attached is a redline/strikeout version of the edited piece. significant omissions in the piece EPA sent over, the biggs

Jean

Jean E. Vernet
Office of Policy, PO-21
U.S. Department of Energy
202.586.4755
fax 202.586.5391

<< File: nsr back 4-16rev redline.wpd >>

Kelliher, Joseph

65

244

From: Vernet, Jean
Sent: Tuesday, April 17, 2001 1:38 PM
To: Kelliher, Joseph
Cc: Anderson, Margot; Conti, John
Subject: RE: comments/revisions to EPA NSR background document

Importance: High

Joe,

Some of the broader (i.e., not limited to energy sources) issues in NSR include:

Jean

-----Original Message-----
From: Kelliher, Joseph
Sent: Tuesday, April 17, 2001 1:01 PM
To: Vernet, Jean
Subject: RE: comments/revisions to EPA NSR background document
Importance: High

Jean,

-----Original Message-----
From: Vernet, Jean
Sent: Tuesday, April 17, 2001 10:57 AM
To: Kelliher, Joseph
Cc: Anderson, Margot; Conti, John; Carter, Douglas
Subject: comments/revisions to EPA NSR background document
Importance: High

Joe,

Attached is a redline/strikeout version of the edited piece.

19850

Jean

Jean E. Vernet
Office of Policy, PO-21
U.S. Department of Energy
202.586.4755
fax 202.586.5391

<< File: nsr back 4-16rev redline.wpd >>

Tripodi, Cathy

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 8:50 PM
To: Tripodi, Cathy
Subject: FW: made a small change

Importance: High

Predecisional: draft NEP recommendation

-----Original Message-----
From: Magwood, William
Sent: Friday, April 20, 2001 5:17 PM
To: Kelliher, Joseph
Subject: made a small change
Importance: High

Joe,

I made a small change to the graphic. Please use this verison.

reprocessing attachment.doc

WDM

19852

Tripodi, Cathy

241

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 8:51 PM
To: Tripodi, Cathy
Subject: FW: vitrification and reprocessing

Importance: High

Predecisional: draft NEP recommendation

-----Original Message-----
From: Magwood, William
Sent: Friday, April 20, 2001 4:59 PM
To: Kelliher, Joseph
Cc: Cook, Trevor
Subject: vitrification and reprocessing
Importance: High

Joe,

Here is the paper you asked for. We are working on an attachment that has a flow diagram and a picture. I'll send that in a few minutes.

reprocessing.doc

WDM

19854

Tripodi, Cathy

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 9:10 PM
To: Tripodi, Cathy
Subject: FW: For Review


boutique 4 16 01.wpd


nsr back 4-16.wpd

Predecisional: draft NEP recommendation

-----Original Message-----
From: Schmidt.Lorie@epamail.epa.gov%internet [mailto:Schmidt.Lorie@epamail.epa.gov]
Sent: Monday, April 16, 2001 7:14 PM
To: Kelliher, Joseph
Cc: Symons.Jeremy@epamail.epa.gov%internet; Moss.Jacob@epamail.epa.gov%internet; Gibson.Tom@epamail.epa.gov%internet; Spencer.Susan@epamail.epa.gov%internet
Subject: For Review

19859

Tripodi, Cathy - 65

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 8:55 PM
To: Tripodi, Cathy
Subject: FW: EPA materials

boutique 4 17 01R1.wpd

Predecisional: draft NEP recommendation

-----Original Message-----
From: McNutt, Barry
Sent: Tuesday, April 17, 2001 10:30 AM
To: Anderson, Margot; Kelliher, Joseph
Cc: Vernet, Jean; White, Thomas
Subject: RE: EPA materials

Joe-

Barry

-----Original Message-----
From: Anderson, Margot
Sent: Tuesday, April 17, 2001 8:32 AM
To: Vernet, Jean; McNutt, Barry
Subject: FW: EPA materials

Jean and Barry,

From Joe Kelliher: Very fast turnaround one-pagers on two NEP issues, NSF and RFG. Can you take a look and get comments directly to Joe. Involved anybody you need to. cc me.

Margot

-----Original Message-----
From: Kelliher, Joseph
Sent: Monday, April 16, 2001 7:19 PM
To: Anderson, Margot; Kripowicz, Robert
Subject: EPA materials

Please circulate. We will need to turn around quickly.

-----Original Message-----
From: Schmidt.Lorie@epamail.epa.gov%internet
[mailto:Schmidt.Lorie@epamail.epa.gov]
Sent: Monday, April 16, 2001 7:14 PM
To: Kelliher, Joseph
Cc: Symons.Jeremy@epamail.epa.gov%internet;
Moss.Jacob@epamail.epa.gov%internet;

19860

Gibson.Tom@epamail.epa.gov%internet;
Spencer.Susan@epamail.epa.gov%internet
Subject: For Review

WH 353

Tripodi, Cathy

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 9:03 PM
To: Tripodi, Cathy
Subject: FW: Recommendation One-Pagers for 4/3/01 Principals Meeting

cafe final.doc

Predecisional: draft NEP recommendation

-----Original Message-----
From: Poche, Michelle [mailto:Michelle.Poche@ost.dot.gov]
Sent: Monday, April 02, 2001 6:22 PM
To: Kelliher, Joseph; Anderson, Margot; Kolevar, Kevin; Poche, Michelle;
'Charles(u)M.(u)Smith(a)ovp.eop.gov';
'Juleanna(u)R.(u)Glover(a)ovp.eop.gov'; 'Kmurphy(a)osec.doc.gov';
'Dina.Ellis(a)do.treas.gov'; 'Sue(u)Ellen(u)Wooldridge(a)ios.doi.gov';
'Joel(u)D.(u)Kaplan(a)who.eop.gov'; 'Keith.Collins(a)USDA.gov';
'Joseph.Glauber(a)USDA.gov'; 'Galloglysj(a)state.gov';
'McManusmt(a)state.gov'; 'Patricia.Stahlschmidt(a)Fema.gov';
'Brenner.Rob(a)EPA.gov'; 'Symons.Jeremy(a)EPA.gov';
'Beale.John(a)EPA.gov'; 'MPeacock(a)omb.eop.gov';
'Mark(u)A.(u)Weatherly(a)omb.eop.gov';
'Robert(u)C.(u)McNally(a)opd.eop.gov'; 'Jhowardj(a)ceq.eop.gov';
'William(u)bettenberg(a)ios.doi.gov'; 'Tom(u)fulton(a)ios.doi.gov';
'Kjersten(u)drager(a)ovp.eop.gov'; 'Mleblanc(a)ceq.eop.gov';
'Bruce.Baughman(a)Fema.gov'; 'Charles.m.Hess(a)USACE.army.mil';
'commcoll(a)aol.com'; 'Carol(u)J.(u)Thompson(a)who.eop.gov';
'Sandra(u)L.(u)Via(a)omb.eop.gov'; 'Megan(u)D.(u)Moran(a)ovp.eop.gov';
'Ronald(u)L.(u)Silberman(a)omb.eop.gov';
'Lori(u)A.(u)Krauss(a)omb.eop.gov'; 'WheelerE(a)state.gov';
'Mark(u)J.(u)Sullivan(a)ovp.eop.gov'
Cc: 'ndrew(u)D.(u)Lundquist(a)oa.eop.gov';
'Karen(u)Y.(u)Knutson(a)ovp.eop.gov'; 'John(u)fenzel(a)ovp.eop.gov'
Subject: RE: Recommendation One-Pagers for 4/3/01 Principals Meeting

-----Original Message-----
From: Poche, Michelle
Sent: Monday, April 02, 2001 4:17 PM
To: 'Charles_M._Smith@ovp.eop.gov'; Juleanna_R._Glover@ovp.eop.gov;
Joseph.Kelliher@HQ.DOE.gov; Kmurphy@osec.doc.gov;
Dina.Ellis@do.treas.gov; Sue_Ellen_Wooldridge@ios.doi.gov;
Joel_D._Kaplan@who.eop.gov; Keith.Collins@USDA.gov;
Joseph.Glauber@USDA.gov; Galloglysj@state.gov; McManusmt@state.gov;
Poche, Michelle; Patricia.Stahlschmidt@Fema.gov; Brenner.Rob@EPA.gov;
Symons.Jeremy@EPA.gov; Beale.John@EPA.gov; MPeacock@omb.eop.gov;
Mark_A._Weatherly@omb.eop.gov; Robert_C._McNally@opd.eop.gov;
Jhowardj@ceq.eop.gov; William_bettenberg@ios.doi.gov;
Tom_fulton@ios.doi.gov; Kjersten_drager@ovp.eop.gov;
Mleblanc@ceq.eop.gov; Margot.Anderson@HQ.DOE.GOV;
Bruce.Baughman@Fema.gov; Charles.m.Hess@USACE.army.mil;
commcoll@aol.com; Carol_J._Thompson@who.eop.gov;
Sandra_L._Via@omb.eop.gov; Megan_D._Moran@ovp.eop.gov;
Ronald_L._Silberman@omb.eop.gov; Lori_A._Krauss@omb.eop.gov;
WheelerE@state.gov; Kevin.Kolevar@hq.doe.gov;

Mark_J._Sullivan@ovp.eop.gov
Cc: ndrew_D._Lundquist@oa.eop.gov; Karen_Y._Knutson@ovp.eop.gov;
John_fenzel@ovp.eop.gov
Subject: RE: Recommendation One-Pagers for 4/3/01 Principals Meeting

-----Original Message-----
From: Charles_M._Smith@ovp.eop.gov [mailto:Charles_M._Smith@ovp.eop.gov]
Sent: Monday, April 02, 2001 1:26 PM
To: Juleanna_R._Glover@ovp.eop.gov; Joseph.Kelliher@HQ.DOE.gov;
Kmurphy@osec.doc.gov; Dina.Ellis@do.treas.gov;
Sue_Ellen_Wooldridge@ios.doi.gov; Joel_D._Kaplan@who.eop.gov;
Keith.Collins@USDA.gov; Joseph.Glauber@USDA.gov; Galloglysj@state.gov;
McManusmt@state.gov; Poche, Michelle <OST>;
Patricia.Stahlschmidt@Fema.gov; Brenner.Rob@EPA.gov;
Symons.Jeremy@EPA.gov; Beale.John@EPA.gov; MPeacock@omb.eop.gov;
Mark_A._Weatherly@omb.eop.gov; Robert_C._McNally@opd.eop.gov;
Jhowardj@ceq.eop.gov; William_bettenberg@ios.doi.gov;
Tom_fulton@ios.doi.gov; Kjersten_drager@ovp.eop.gov;
Mleblanc@ceq.eop.gov; Margot.Anderson@HQ.DOE.GOV;
Bruce.Baughman@Fema.gov; Charles.m.Hess@USACE.army.mil;
commcoll@aol.com; Carol_J._Thompson@who.eop.gov;
Sandra_L._Via@omb.eop.gov; Megan_D._Moran@ovp.eop.gov;
Ronald_L._Silberman@omb.eop.gov; Lori_A._Krauss@omb.eop.gov;
WheelerE@state.gov; Kevin.Kolevar@hq.doe.gov;
Mark_J._Sullivan@ovp.eop.gov
Cc: ndrew_D._Lundquist@oa.eop.gov; Karen_Y._Knutson@ovp.eop.gov;
John_fenzel@ovp.eop.gov
Subject: Recommendation One-Pagers for 4/3/01 Principals Meeting

Attached are the subject one-pagers

(See attached file: 3-pollutant standard.doc)(See attached file:
Corporate
Average Fuel Economy.doc)(See attached file: Energy Efficiency.doc)(See
attached file: Nuclear Energy.doc)(See attached file: Outer Continental
Shelf Leasing Moratoria.doc)

WM 355

Tripodi, Cathy

From: Kelliher, Joseph
Sent: Tuesday, July 03, 2001 9:03 PM
To: Tripodi, Cathy
Subject: FW: CAFE once more

cafedotdoe.doc

Predecisional: draft NEP recommendation

-----Original Message-----
From: Poche, Michelle [mailto:Michelle.Poche@ost.dot.gov]
Sent: Tuesday, April 03, 2001 11:24 AM
To: Kelliher, Joseph; Anderson, Margot; Kolevar, Kevin; Poche, Michelle;
'Charles(u)M.(u)Smith(a)ovp.eop.gov';
'Juleanna(u)R.(u)Glover(a)ovp.eop.gov'; 'Kmurphy(a)osec.doc.gov';
'Dina.Ellis(a)do.treas.gov'; 'Sue(u)Ellen(u)Wooldridge(a)ios.doi.gov';
'Joel(u)D.(u)Kaplan(a)who.eop.gov'; 'Keith.Collins(a)USDA.gov';
'Joseph.Glauber(a)USDA.gov'; 'Galloglysj(a)state.gov';
'McManusmt(a)state.gov'; 'Patricia.Stahlschmidt(a)Fema.gov';
'Brenner.Rob(a)EPA.gov'; 'Symons.Jeremy(a)EPA.gov';
'Beale.John(a)EPA.gov'; 'MPeacock(a)omb.eop.gov';
'Mark(u)A.(u)Weatherly(a)omb.eop.gov';
'Robert(u)C.(u)McNally(a)opd.eop.gov'; 'Jhowardj(a)ceq.eop.gov';
'William(u)bettenberg(a)ios.doi.gov'; 'Tom(u)fulton(a)ios.doi.gov';
'Kjersten(u)drager(a)ovp.eop.gov'; 'Mleblanc(a)ceq.eop.gov';
'Bruce.Baughman(a)Fema.gov'; 'Charles.m.Hess(a)USACE.army.mil';
'commcoll(a)aol.com'; 'Carol(u)J.(u)Thompson(a)who.eop.gov';
'Sandra(u)L.(u)Via(a)omb.eop.gov'; 'Megan(u)D.(u)Moran(a)ovp.eop.gov';
'Ronald(u)L.(u)Silberman(a)omb.eop.gov';
'Lori(u)A.(u)Krauss(a)omb.eop.gov'; 'WheelerE(a)state.gov';
'Mark(u)J.(u)Sullivan(a)ovp.eop.gov'
Cc: 'ndrew(u)D.(u)Lundquist(a)oa.eop.gov';
'Karen(u)Y.(u)Knutson(a)ovp.eop.gov'; 'John(u)fenzel(a)ovp.eop.gov'

-----Original Message-----
From: Poche, Michelle
Sent: Monday, April 02, 2001 6:22 PM
To: Poche, Michelle; 'Charles_M._Smith@ovp.eop.gov';
'Juleanna_R._Glover@ovp.eop.gov'; 'Joseph.Kelliher@HQ.DOE.gov';
'Kmurphy@osec.doc.gov'; 'Dina.Ellis@do.treas.gov';
'Sue_Ellen_Wooldridge@ios.doi.gov'; 'Joel_D._Kaplan@who.eop.gov';
'Keith.Collins@USDA.gov'; 'Joseph.Glauber@USDA.gov';
'Galloglysj@state.gov'; 'McManusmt@state.gov';
'Patricia.Stahlschmidt@Fema.gov'; 'Brenner.Rob@EPA.gov';
'Symons.Jeremy@EPA.gov'; 'Beale.John@EPA.gov'; 'MPeacock@omb.eop.gov';
'Mark_A._Weatherly@omb.eop.gov'; 'Robert_C._McNally@opd.eop.gov';
'Jhowardj@ceq.eop.gov'; 'William_bettenberg@ios.doi.gov';
'Tom_fulton@ios.doi.gov'; 'Kjersten_drager@ovp.eop.gov';
'Mleblanc@ceq.eop.gov'; 'Margot.Anderson@HQ.DOE.GOV';
'Bruce.Baughman@Fema.gov'; 'Charles.m.Hess@USACE.army.mil';
'commcoll@aol.com'; 'Carol_J._Thompson@who.eop.gov';

19868

DOE021-0322

'Sandra_L._Via@omb.eop.gov'; 'Megan_D._Moran@ovp.eop.gov';
'Ronald_L._Silberman@omb.eop.gov'; 'Lori_A._Krauss@omb.eop.gov';
'WheelerE@state.gov'; 'Kevin.Kolevar@hq.doe.gov';
'Mark_J._Sullivan@ovp.eop.gov'
Cc: 'ndrew_D._Lundquist@oa.eop.gov'; 'Karen_Y._Knutson@ovp.eop.gov';
'John_fenzel@ovp.eop.gov'
Subject: RE: Recommendation One-Pagers for 4/3/01 Principals Meeting

-----Original Message-----
From: Poche, Michelle
Sent: Monday, April 02, 2001 4:17 PM
To: 'Charles_M._Smith@ovp.eop.gov'; Juleanna_R._Glover@ovp.eop.gov;
Joseph.Kelliher@HQ.DOE.gov; Kmurphy@osec.doc.gov;
Dina.Ellis@do.treas.gov; Sue_Ellen_Wooldridge@ios.doi.gov;
Joel_D._Kaplan@who.eop.gov; Keith.Collins@USDA.gov;
Joseph.Glauber@USDA.gov; Galloglysj@state.gov; McManusmt@state.gov;
Poche, Michelle; Patricia.Stahlschmidt@Fema.gov; Brenner.Rob@EPA.gov;
Symons.Jeremy@EPA.gov; Beale.John@EPA.gov; MPeacock@omb.eop.gov;
Mark_A._Weatherly@omb.eop.gov; Robert_C._McNally@opd.eop.gov;
Jhowardj@ceq.eop.gov; William_bettenberg@ios.doi.gov;
Tom_fulton@ios.doi.gov; Kjersten_drager@ovp.eop.gov;
Mleblanc@ceq.eop.gov; Margot.Anderson@HQ.DOE.GOV;
Bruce.Baughman@Fema.gov; Charles.m.Hess@USACE.army.mil;
commcoll@aol.com; Carol_J._Thompson@who.eop.gov;
Sandra_L._Via@omb.eop.gov; Megan_D._Moran@ovp.eop.gov;
Ronald_L._Silberman@omb.eop.gov; Lori_A._Krauss@omb.eop.gov;
WheelerE@state.gov; Kevin.Kolevar@hq.doe.gov;
Mark_J._Sullivan@ovp.eop.gov
Cc: ndrew_D._Lundquist@oa.eop.gov; Karen_Y._Knutson@ovp.eop.gov;
John_fenzel@ovp.eop.gov
Subject: RE: Recommendation One-Pagers for 4/3/01 Principals Meeting

Will send final copy out

-----Original Message-----
From: Charles_M._Smith@ovp.eop.gov [mailto:Charles_M._Smith@ovp.eop.gov]
Sent: Monday, April 02, 2001 1:26 PM
To: Juleanna_R._Glover@ovp.eop.gov; Joseph.Kelliher@HQ.DOE.gov;
Kmurphy@osec.doc.gov; Dina.Ellis@do.treas.gov;
Sue_Ellen_Wooldridge@ios.doi.gov; Joel_D._Kaplan@who.eop.gov;
Keith.Collins@USDA.gov; Joseph.Glauber@USDA.gov; Galloglysj@state.gov;
McManusmt@state.gov; Poche, Michelle <OST>;
Patricia.Stahlschmidt@Fema.gov; Brenner.Rob@EPA.gov;
Symons.Jeremy@EPA.gov; Beale.John@EPA.gov; MPeacock@omb.eop.gov;
Mark_A._Weatherly@omb.eop.gov; Robert_C._McNally@opd.eop.gov;
Jhowardj@ceq.eop.gov; William_bettenberg@ios.doi.gov;
Tom_fulton@ios.doi.gov; Kjersten_drager@ovp.eop.gov;
Mleblanc@ceq.eop.gov; Margot.Anderson@HQ.DOE.GOV;
Bruce.Baughman@Fema.gov; Charles.m.Hess@USACE.army.mil;
commcoll@aol.com; Carol_J._Thompson@who.eop.gov;
Sandra_L._Via@omb.eop.gov; Megan_D._Moran@ovp.eop.gov;
Ronald_L._Silberman@omb.eop.gov; Lori_A._Krauss@omb.eop.gov;
WheelerE@state.gov; Kevin.Kolevar@hq.doe.gov;
Mark_J._Sullivan@ovp.eop.gov
Cc: ndrew_D._Lundquist@oa.eop.gov; Karen_Y._Knutson@ovp.eop.gov;
John_fenzel@ovp.eop.gov
Subject: Recommendation One-Pagers for 4/3/01 Principals Meeting

Attached are the subject one-pagers

(See attached file: 3-pollutant standard.doc)(See attached file: Corporate
Average Fuel Economy.doc)(See attached file: Energy Efficiency.doc)(See attached file: Nuclear Energy.doc)(See attached file: Outer Continental Shelf Leasing Moratoria.doc)

Kelliher, Joseph b5

From:	Faulkner, Doug
Sent:	Tuesday, March 27, 2001 11:58 AM
To:	Kelliher, Joseph
Cc:	Kolevar, Kevin; Hutto, Chase
Subject:	per your request by noon: suggested language for epdg re: civilian energy R&D

Note: kevin and i discussed before sending to you.

19873

Kelliher, Joseph

From: Geraldine.Gerardi@do.treas.gov%internet [Geraldine.Gerardi@do.treas.gov]
Sent: Wednesday, April 18, 2001 5:22 PM
To: Kelliher, Joseph
Subject: RE:

-----Original Message-----
From: Kelliher, Joseph [mailto:Joseph.Kelliher@hq.doe.gov]
Sent: Wednesday, April 18, 2001 2:51 PM
To: 'Geraldine.Gerardi@do.treas.gov%internet'
Subject: RE: DOE's tax proposals

Please let me know what additional information you need.

-----Original Message-----
From: Geraldine.Gerardi@do.treas.gov%internet,
[mailto:Geraldine.Gerardi@do.treas.gov]
Sent: Wednesday, April 18, 2001 1:29 PM
To: Kelliher, Joseph
Subject: DOE's tax proposals

Thank you for your help.

Kelliher, Joseph

b5

From: Geraldine.Gerardi@do.treas.gov%internet [Geraldine.Gerardi@do.treas.gov]
Sent: Tuesday, April 17, 2001 9:17 AM
To: Kelliher, Joseph; Dina.Ellis@do.treas.gov%internet
Subject: RE

-----Original Message-----
From: Ellis, Dina
Sent: Tuesday, April 17, 2001 9:06 AM
To: Gerardi, Geraldine
Subject: FW: renewable tax credits
Importance: High

do you know the anwer to this?

-----Original Message-----
From: Kelliher, Joseph [mailto:Joseph.Kelliher@hq.doe.gov]
Sent: Tuesday, April 17, 2001 9:07 AM
To: 'Dina.Ellis@do.treas.gov'
Subject: renewable tax credits

19875

Kelliher, Joseph

b5

260

From:	Abe Haspel
Sent:	Tuesday, April 17, 2001 2:50 PM
To:	Kelliher, Joseph
Cc:	Garland, Buddy
Subject:	RE: national goals

Joe: In answer to your questions --

Hope this helps.
Abe

Kelliher, Joseph

b5

From: Abe Haspel
Sent: Tuesday, March 27, 2001 11:45 AM
To: Kelliher, Joseph
Cc: Anderson, Margot; Zimmerman, MaryBeth; Garland, Buddy; Luczak, Joann; Ginsberg, Mark
Subject: Re: weatherization

Joseph Kelliher@HQMAIL on 03/27/2001 09:55:06 AM

To: Abe Haspel/EE/DOE@DOE@HQMAIL, MaryBeth Zimmerman/EE/DOE@DOE@HQMAIL
cc: Margot Anderson@HQMAIL

Subject: weatherization

19877

Kelliher, Joseph

b5

From: Anderson, Margot
Sent: Monday, April 30, 2001 6:19 PM
To: Kelliher, Joseph; Kripowicz, Robert
Cc: Carter, Douglas; DeHoratiis, Guido
Subject: RE

Joe,

Is this beyond what we already sent them (from FE) a few hours ago? If so, we should ask Doug Carter and/or Guido DeHoratiis to answer (I note that Bob K. is out today). By when?

Margot

-----Original Message-----
From: Kelliher, Joseph
Sent: Monday, April 30, 2001 6:16 PM
To: Kripowicz, Robert
Cc: Anderson, Margot
Subject: clean coal

19878

Kelliher, Joseph

b5

263

From: Anderson, Margot
Sent: Tuesday, April 17, 2001 1:11 PM
To: Kelliher, Joseph
Subject: FW: fact check

Joe,

Late but you may still need this information.

Margot

—Original Message—
From: Carrier, Paul
Sent: Tuesday, April 17, 2001 12:48 PM
To: Anderson, Margot
Subject: RE: fact check

Margot,

Paul

—Original Message—
From: Anderson, Margot
Sent: Monday, April 16, 2001 12:01 PM
To: Carrier, Paul
Subject: FW: fact check

Paul,

We got the answer to the natural gas question, can you answer the electricity question?

Margot

—Original Message—
From: Kelliher, Joseph
Sent: Thursday, April 12, 2001 2:42 PM
To: Anderson, Margot; Kripowicz, Robert
Subject: fact check

19879

Kelliher, Joseph

b5 264

From: Anderson, Margot
Sent: Tuesday, April 17, 2001 10:50 AM
To: Kelliher, Joseph
Subject: more on NSR

Margot

-----Original Message-----
From: Schmidt.Lorie@epamail.epa.gov%internet
[mailto:Schmidt.Lorie@epamail.epa.gov]
Sent: Tuesday, April 17, 2001 10:25 AM
To: Vernet, Jean
Cc: Anderson, Margot
Subject: Re:

Jean and Margot

"Vernet, Jean"
<Jean.Vernet@hq.doe.gov>
04/17/2001 09:05 AM

To: Lorie Schmidt/DC/USEPA/US@EPA
cc: "Anderson, Margot" <Margot.Anderson@hq.doe.gov>
Subject:

Lorie -

I have not seen anything except the background nsr piece I was just provided
for review: nsr back 4-16.wpd

Are related pieces with the recommendations available? Thanks.

19880

Jean

Kelliher, Joseph WH bs 265

From: Anderson, Margot
Sent: Monday, April 16, 2001 12:47 PM
To: Kelliher, Joseph
Subject: RE: national goals

Joe,

A quick answer that I can follow-up on later.

Margot

-----Original Message-----
From: Kelliher, Joseph
Sent: Monday, April 16, 2001 12:10 PM
To: Anderson, Margot; Haspel, Abe
Subject: FW: national goals

-----Original Message-----
From: Karen_Y._Knutson@ovp.eop.gov%internet
[mailto:Karen_Y._Knutson@ovp.eop.gov]
Sent: Monday, April 16, 2001 11:11 AM
To: Kelliher, Joseph; McSlarrow, Kyle
Subject: national goals

04/16/2001
11:09 AM ----------

John L. Howard Jr.
04/16/2001 10:38:44 AM

Record Type: Record

To: Karen Y. Knutson/OVP/EOP@EOP

19882

DOE021-0336

cc:
Subject: national goals

Kelliher, Joseph

b5

From: Anderson, Margot
Sent: Monday, April 02, 2001 3:57 PM
To: Kolevar, Kevin; Kelliher, Joseph
Subject: RE:

Kevin and Joe,

Margot

-----Original Message-----
From: Kolevar, Kevin
Sent: Monday, April 02, 2001 3:33 PM
To: Anderson, Margot; Kelliher, Joseph
Cc: Braitsch, Jay
Subject: RE: CO2 in the NEP

-----Original Message-----
From: Anderson, Margot
Sent: Monday, April 02, 2001 2:35 PM
To: Kolevar, Kevin; Kelliher, Joseph
Cc: Braitsch, Jay
Subject: CO2 in the NEP

Joe and Kevin

Margot

19884