Electricity Consumption

National Petroleum Council Assumption: The definition of electricity consumption and sales used in the NPC 1999 study is the equivalent of what EIA calls “sales by utilities” plus “retail wheeling by power marketers.” This total could also be called “sales through the distribution grid.”

Two other categories of electricity consumption tracked by EIA cover on site generation for host use. The first, “nonutility onsite direct use,” covers the traditional generation/cogeneration facilities owned by industrial or large commercial establishments. The second category, “non-utility sales to end users,” is interpreted to be the same thing, except that the generation/cogeneration equipment is owned by a second party and the electricity and thermal energy is sold to the host.

In the NPC projection, all gas use for onsite generation is reported in the appropriate end use sector, mostly industrial or commercial. Only gas used to generate electricity that is sold through the grid is under the “power generation” sector in the NPC tables and figures of results.

Sources: From EIA data in January 2001 *Electric Power Monthly and Monthly Energy Review*. EIA values for 2000 based on applying growth rates of data through October to entire year. Taking into account very cold weather in November/December would yield annual growth in grid sales of about 3.0% instead of 2.65% in 2000.

### EIA Electricity Consumption Estimates

<table>
<thead>
<tr>
<th>(million kWh)</th>
<th>1998</th>
<th>1999</th>
<th>2000 est.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales by Utilities</td>
<td>3,239,818</td>
<td>3,235,899</td>
<td>#N/A</td>
</tr>
<tr>
<td>Retail Wheeling Sales by Power Marketers</td>
<td>24,000</td>
<td>76,188</td>
<td>#N/A</td>
</tr>
<tr>
<td>All Sales Through Distribution Grid</td>
<td>3,264,218</td>
<td>3,212,087</td>
<td>3,399,947</td>
</tr>
<tr>
<td>Non-utility Onsite Direct Use</td>
<td>134,041</td>
<td>147,581</td>
<td>#N/A</td>
</tr>
<tr>
<td>Non-utility Sales to Endusers</td>
<td>25,777</td>
<td>41,683</td>
<td>#N/A</td>
</tr>
<tr>
<td>All Categories</td>
<td>3,424,036</td>
<td>3,501,351</td>
<td>#N/A</td>
</tr>
</tbody>
</table>
Electricity Sales

National Petroleum Council Assumption: Projected electricity sales through the grid grew 2.4% in 1999 and 2.3% in 2000 in the NPC Reference Case.

Market or Public Policy Change Since 1999 Study: Actual growth was lower in 1999 (1.5%), but higher in 2000 (2.7%).

Magnitude of Change: The average growth over the two years for the NPC projection and estimated actuals are nearly the same.

Observations: Despite the fact that the NPC Reference Case underestimated economic growth in the last two years, electricity sales were close to actuals. This means that the economy’s need for electricity per unit of GDP (electricity intensity) was lower than anticipated. By 2000, the U.S. economy was using 3.4% less electricity per unit of output than expected in the NPC Reference Case.

The long-run income elasticity for electricity grid sales assumed by the NPC averaged 0.80 across all regions of the U.S. That is, if the economy grew 2.5% per year, then electricity sales would grow 2.0%. If future growth in the economy continues to be concentrated in low energy-intensive services and high-tech industrial sectors, the overall income elasticity used by NPC may prove to be too high.
Coal Generation

National Petroleum Council Assumption: The Reference Case results were 1,901 billion kWh of coal generation in 2000.

Market or Public Policy Change Since 1999 Study: Actual generation was slightly below this at an estimated 1,894 billion kWh in 2000. (Data for coal and other fuels through October 2000 are from EIA Electric Power Monthly with last two months of 2000 estimated by EIA.)

Observations: The actual capacity utilization rate for the coal units achieved in 2000 was approximately 67% on average. The expectation in the NPC Reference Case was for the average utilization to reach 75%, which would mean generation of about 2,100 billion kWh by 2010 (assuming 320 GW of coal capacity). EPRI reports that coal units have a weighted average Equivalent Availability Factor of 83%. (Generating Unit Statistical Brochure, August 1999) This means that the NPC long-run utilization target is only about 90% of what is hypothetically achievable based on actual unit availabilities. Still, this assumption was seen by many participants as very ambitious, so a sensitivity case of the power sector model was run at lower maximum coal capacity utilization rates. Since maximum coal plant use is now limited by off-peak electricity demand, we won’t know what the coal plants can do until the electricity demand grows to the point where the coal plants will be called on to generate at full load for more hours each day.
Nuclear Generation

National Petroleum Council Assumption: The NPC Reference Case assumed that nuclear plants would generate 673 billion kWh in 1999 and 658 billion kWh in 2000.

Market or Public Policy Change Since 1999 Study: Actual generation was much higher: 728 billion kWh in 1999 and 738 billion kWh in 2000.

Magnitude of Change: The difference between projected and actual nuclear generation in 2000 is 80 billion kWh. At an average heat rate of 10,300 Btu/kWh, this represents the backing out of about 824 trillion Btus of fossil energy use (an equivalent of 800 bcf of natural gas).

Observations: If the high capacity utilization rates recently achieved by nuclear plants can be sustained, the need for fossil fuels to generate electricity for grid sales (all other things being equal) would be lower in the long run than anticipated in the NPC Reference Case.

The recently experienced high gas and electricity prices make nuclear plants more economic to operate. This has lead to high sales prices for nuclear plants and a large number of filed and anticipated requests for license renewals. The pattern for re-licensing, so far, is about as anticipated in the NPC study.

Nuclear Re-licensing

- NPC Reference Case assumed that about 15,000 MW of nuclear capacity retiring before 2015 would be re-licensed, leaving 80,400 MW operating in 2015.
- Since report:
  - 4,200 MW of capacity has been granted 20-year extension
  - 3,800 MW additional has applied for extension
  - 24,000 MW has announced intent to apply for extensions
- If all these apply and are approved, 79,200 MW will be operable in 2015. (Many of the extensions are for the newest units with retirement dates after 2015.)

U.S. Nuclear Generation

(Million kWh)
Hydro and "Other" Generation

National Petroleum Council Assumption: Anticipated hydro generation was 308 billion kWh in 1999 and 2000. This was based on a multi-year average of precipitation patterns that discounted the unusually wet years of 1997 and 1998.

The category "other" includes geothermal, solar and wind generation. These categories were expected to contribute about 10 billion kWh in 2000.

Market or Public Policy Change Since 1999 Study: Actual hydro generation was 300 billion kWh in 1999 and fell significantly to 254 billion kWh due to dry weather in 2000.

Magnitude of Change: The shortfall in hydro occurred throughout the country, but was most significant in the west. The difference of 54 billion kWh between the NPC projection and estimated actuals for 2000, is equivalent to about 556 trillion Btus of energy inputs in fossil power plants (540 Bcf of gas).

Observations: Although the year 2001 is looking to be another dry one, the long-run average hydro expectations in the NPC Reference Case may still be valid, unless environmental concerns limit the use of existing hydro facilities.
Oil and Gas Generation

National Petroleum Council

Assumption: Generation from oil and gas in the NPC 1999 study was expected to be 482 billion kWh in 1999 and 516 billion kWh in 2000.

Market or Public Policy Change Since 1999 Study: The actual generation was close to projections: 474 billion kWh in 1999 and 515 billion kWh in 2000.

Magnitude of Change: Total generation from oil and gas units was very close to NPC Reference Case projections, but the market share for gas was understated in 1999 and even more in 2000. The understatement of gas market share in 2000 was due in large degree to the fact that oil prices turned out to be much higher than expected. Also, although the total oil/gas generation was on target, the actual regional mix saw much more generation in the West, where the existing steam units in California were operated at very high utilization rates in 2000. These units are generally not switchable to oil due to environmental regulations.

Observations: The long-run expectation in the NPC case was that 75% of new gas-fired plants would be switchable to distillate fuel oil. This meant that a substantial portion of their energy use was met with oil. If doesn't happen - either because oil prices are higher than were expected in the NPC study or because oil burning equipment is not installed - gas use in the new units would be higher. However, because of the resulting higher operating costs for the new gas units, coal would become more economic and fewer gas units might be built.
### Total Generation

**Magnitude of Change:** The differences between the 2000 NPC projection and actuals are:

- Coal too high by 7 billion kWh
- Nuclear too low by 81 billion kWh
- Hydro too high by 53 billion kWh
- Oil too high by 56 billion kWh
- Gas too low by 55 billion kWh
- Total too low by 20 billion kWh

**Observations:** The understatement of gas use for power generation in 2000 by 55 billion kWh represents approximately 540 Bcf of gas.

### U.S. Total Generation for Grid

(Million kWh)

<table>
<thead>
<tr>
<th>Year</th>
<th>NPC Ref</th>
<th>Actual (est. from EIA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>3,500,000</td>
<td>3,400,000</td>
</tr>
<tr>
<td>2001</td>
<td>3,300,000</td>
<td>3,200,000</td>
</tr>
<tr>
<td>2002</td>
<td>3,100,000</td>
<td>3,000,000</td>
</tr>
<tr>
<td>2003</td>
<td>2,900,000</td>
<td>2,800,000</td>
</tr>
</tbody>
</table>

### U.S. Electricity Generation: 2000

<table>
<thead>
<tr>
<th>Source</th>
<th>NPC Reference</th>
<th>Actual (est. from EIA)</th>
<th>Percent Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal</td>
<td>1,901,324</td>
<td>1,893,820</td>
<td>-0.4%</td>
</tr>
<tr>
<td>Nuclear</td>
<td>657,572</td>
<td>738,436</td>
<td>11.0%</td>
</tr>
<tr>
<td>Hydro</td>
<td>307,724</td>
<td>254,224</td>
<td>-21.0%</td>
</tr>
<tr>
<td>Oil &amp; Gas</td>
<td>516,130</td>
<td>515,373</td>
<td>-0.1%</td>
</tr>
<tr>
<td>Oil</td>
<td>158,002</td>
<td>102,083</td>
<td>-34.8%</td>
</tr>
<tr>
<td>Gas</td>
<td>358,128</td>
<td>413,290</td>
<td>13.3%</td>
</tr>
<tr>
<td>&quot;Other&quot;</td>
<td>9,975</td>
<td>10,431</td>
<td>4.4%</td>
</tr>
<tr>
<td>Total</td>
<td>3,392,725</td>
<td>3,412,284</td>
<td>0.6%</td>
</tr>
</tbody>
</table>
Recent New Power Plant Construction

National Petroleum Council Assumption: The NPC study assumed that about 30 GW of new gas and oil power plants would be added by 2000. About 9 GW was expected to be combined cycle and the remainder of 22 GW a combination of steam plants (ST), combustion turbines (CT) and internal combustion engines (IC).

Market or Public Policy Change Since 1999 Study: The estimated actual plants totaled about 38 GW. (Data are from EIA's power plant data base and Electric Power Monthly for 1999 and 2000. Values for 2001 are EEA estimate based on many sources.)

Magnitude of Change: The installed capacity of oil and gas power plants for grid sales was approximately 255 GW at the end of 2000. Plants added since 1998 represent about 15% of that total.

Observations: An additional 47 GW of oil and gas power plants are expected to be installed in 2001. This would be an addition of 6.3% to the total installed base for grid sales of 750 GW (all fuel types) at the end of 2000.

The dispatch of these new plants will depend on many factors including total electricity sales, load shape, fuel prices and the availability of hydro and nuclear units.

<table>
<thead>
<tr>
<th>Year</th>
<th>Combined Cycle</th>
<th>ST/CT</th>
<th>All Oil Cycle</th>
<th>ST/CT</th>
<th>All Oil Cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>4,385</td>
<td>12,448</td>
<td>16,833</td>
<td>4,369</td>
<td>9,827</td>
</tr>
<tr>
<td>2000</td>
<td>8,130</td>
<td>21,785</td>
<td>29,915</td>
<td>9,206</td>
<td>29,032</td>
</tr>
<tr>
<td>2001</td>
<td>11,020</td>
<td>29,406</td>
<td>40,426</td>
<td>13,706</td>
<td>71,332</td>
</tr>
<tr>
<td>2005</td>
<td>23,028</td>
<td>58,959</td>
<td>81,987</td>
<td>29,032</td>
<td>85,038</td>
</tr>
<tr>
<td>2010</td>
<td>37,744</td>
<td>88,436</td>
<td>126,180</td>
<td>38,238</td>
<td>14,196</td>
</tr>
</tbody>
</table>
Planned Coal and Other Power Plants

National Petroleum Council Assumption: Only the small number of new coal plants that were planned at the time of the study were assumed to be built before 2010. There were no "unannounced" coal plants in the NPC projection before 2010.

Change Since 1999 Study: Several additional coal plants have actually been announced. If they are all built, the inventory of coal plants will be about 12 GW greater by 2005 than assumed by the NPC (about 332 GW versus 320).

Magnitude of Change: If the 12 GW were operated at 75% capacity utilization and displaced only gas generation, the loss to the gas market would be 550 bcf or more per year.

Observations: If gas price stay high, even more new coal plants likely will be built. The limits to new coal plants are economic and environmental. "Multi-pollutant" power plant limits now being discussed in Washington would create limits on carbon dioxide and other emissions and might reduce the attractiveness of coal.

New Coal Power Plants

- NPC Reference Case:
  - 4,600 MW of new coal plants would be built in the period of 1998 to 2010.
  - Another 15,400 were assumed between 2010 and 2015.
- Through end of 2001, 2,400 MW actually will have been added.
- Due to high gas and electricity prices, several new coal plants have been announced in the last few months.
- Planned coal units after 2001 now total about 12,000 MW

Planned Power Plants

(2002 and later, in MWs)

<table>
<thead>
<tr>
<th>Plant Type</th>
<th>MW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comb. Cycle O&amp;G</td>
<td>30,000</td>
</tr>
<tr>
<td>CT/ST/IC O&amp;G</td>
<td>170,000</td>
</tr>
<tr>
<td>Coal</td>
<td>12,000</td>
</tr>
<tr>
<td>&quot;Other&quot;</td>
<td>12,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>224,000</strong></td>
</tr>
</tbody>
</table>
Gas Balances

Observations: The only comprehensive statistics on U.S. natural gas demand are collected and published by the U.S. Energy Information Administration. Since 1999, the so called "balancing item," which is the difference between estimated demand and supply, has grown significantly.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplemnetals</td>
<td>0.12</td>
<td>0.12</td>
<td>0.12</td>
<td>0.12</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
</tr>
<tr>
<td>Net Imports</td>
<td>2.60</td>
<td>2.62</td>
<td>29.93</td>
<td>2.99</td>
<td>2.84</td>
<td>2.99</td>
<td>3.42</td>
<td>3.50</td>
</tr>
<tr>
<td>Net Storage</td>
<td>0.03</td>
<td>(0.52)</td>
<td>0.19</td>
<td>0.08</td>
<td>0.02</td>
<td>(0.53)</td>
<td>0.17</td>
<td>0.91</td>
</tr>
<tr>
<td>Balancing Item</td>
<td>0.25</td>
<td>(0.17)</td>
<td>(0.18)</td>
<td>(0.19)</td>
<td>0.09</td>
<td>(0.01)</td>
<td>(0.61)</td>
<td>(0.97)</td>
</tr>
<tr>
<td>All Supply</td>
<td>21.90</td>
<td>21.34</td>
<td>22.65</td>
<td>22.89</td>
<td>21.96</td>
<td>21.26</td>
<td>21.70</td>
<td>22.68</td>
</tr>
<tr>
<td>Lease &amp; Plant</td>
<td>1.23</td>
<td>1.24</td>
<td>1.25</td>
<td>1.26</td>
<td>1.20</td>
<td>1.16</td>
<td>1.08</td>
<td>1.25</td>
</tr>
<tr>
<td>Pipeline</td>
<td>0.73</td>
<td>0.71</td>
<td>0.75</td>
<td>0.77</td>
<td>0.75</td>
<td>0.64</td>
<td>0.74</td>
<td>0.74</td>
</tr>
<tr>
<td>Residential</td>
<td>4.97</td>
<td>4.55</td>
<td>5.01</td>
<td>5.32</td>
<td>4.98</td>
<td>4.52</td>
<td>4.73</td>
<td>5.00</td>
</tr>
<tr>
<td>Commercial</td>
<td>3.22</td>
<td>2.96</td>
<td>3.22</td>
<td>3.41</td>
<td>3.22</td>
<td>3.06</td>
<td>3.05</td>
<td>3.38</td>
</tr>
<tr>
<td>Industrial</td>
<td>8.84</td>
<td>8.66</td>
<td>8.82</td>
<td>8.61</td>
<td>8.83</td>
<td>8.69</td>
<td>9.00</td>
<td>9.33</td>
</tr>
<tr>
<td>Electric Utility (2)</td>
<td>2.93</td>
<td>3.22</td>
<td>3.59</td>
<td>3.51</td>
<td>2.97</td>
<td>3.26</td>
<td>3.11</td>
<td>2.97</td>
</tr>
<tr>
<td>Total Consumption</td>
<td>21.92</td>
<td>21.34</td>
<td>22.64</td>
<td>22.88</td>
<td>21.96</td>
<td>21.31</td>
<td>21.70</td>
<td>22.68</td>
</tr>
<tr>
<td>Industrial &amp; Utility</td>
<td>11.77</td>
<td>11.88</td>
<td>12.41</td>
<td>12.12</td>
<td>11.80</td>
<td>11.94</td>
<td>12.11</td>
<td>12.31</td>
</tr>
</tbody>
</table>
An Alternative Balance

Issue: The large balancing items in the EIA consumption suggests that production or imports may be overstated or consumption is understated in 1999 and 2000.

Observations: The balance that EEA is presenting assumes that U.S. production went up only about 200 bcf per year between 1999 and 2000. This is consistent with our review of available production data and our interpretation of announced production by 60 larger U.S. gas producers. EEA's U.S. gas production estimates are higher than EIA values for all years due to methodological differences chiefly related to non-hydrocarbon gas adjustments in the Rockies.

EEA consumption estimates for residential and commercial sectors are nearly identical to EIA: minor differences related to EEA's use of "real time consumption" estimates versus EIA's "as billed" concept.

Biggest differences are in industrial/power generation sectors where EEA shows 300 bcf more consumption in 1999 and 700 bcf more in 2000.

### U.S. Gas Production from EEA60 (Bcf/d)

<table>
<thead>
<tr>
<th></th>
<th>4th Qtr 2000</th>
<th>4th Qtr 1999</th>
<th>Change</th>
<th>Percent Change of Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top 10 Producers</td>
<td>18.5</td>
<td>19.1</td>
<td>-0.6</td>
<td>-3.1</td>
</tr>
<tr>
<td>Next 50 Producers</td>
<td>14.3</td>
<td>13.7</td>
<td>0.7</td>
<td>4.8</td>
</tr>
<tr>
<td>Unsamped U.S. Producers</td>
<td>20.8</td>
<td>19.8</td>
<td>1.0</td>
<td>4.8</td>
</tr>
<tr>
<td>Total U.S. Gas Production</td>
<td>53.6</td>
<td>52.6</td>
<td>1.0</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Notes:
1. EEA60 is a sample consisting of the top 60 U.S. producers.
2. All gas production includes royalty gas.
3. Production change for unsampled producers has been derived by assuming the same percent change as for the Next 50 Producers in EEA60.

### Alternative Gas Balance

<table>
<thead>
<tr>
<th></th>
<th>1997</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Production</td>
<td>19,339</td>
<td>19,181</td>
<td>18,998</td>
<td>19,220</td>
</tr>
<tr>
<td>Net Canada/LNG/Mexico Imports</td>
<td>2,849</td>
<td>3,011</td>
<td>3,332</td>
<td>3,432</td>
</tr>
<tr>
<td>Supplemental Gas</td>
<td>103</td>
<td>102</td>
<td>98</td>
<td>101</td>
</tr>
<tr>
<td>Total Supply</td>
<td>22,291</td>
<td>22,294</td>
<td>22,428</td>
<td>22,753</td>
</tr>
<tr>
<td>Residential</td>
<td>4,983</td>
<td>4,499</td>
<td>4,768</td>
<td>5,093</td>
</tr>
<tr>
<td>Commercial</td>
<td>3,529</td>
<td>2,957</td>
<td>3,116</td>
<td>3,307</td>
</tr>
<tr>
<td>Industrial</td>
<td>8,846</td>
<td>8,741</td>
<td>8,827</td>
<td>8,724</td>
</tr>
<tr>
<td>Power Generation</td>
<td>2,966</td>
<td>3,385</td>
<td>3,589</td>
<td>4,240</td>
</tr>
<tr>
<td>Lease and Plant</td>
<td>1,239</td>
<td>1,238</td>
<td>1,248</td>
<td>1,262</td>
</tr>
<tr>
<td>Pipeline Fuel</td>
<td>767</td>
<td>741</td>
<td>781</td>
<td>775</td>
</tr>
<tr>
<td>Total Gas Consumption</td>
<td>22,030</td>
<td>21,561</td>
<td>22,329</td>
<td>23,401</td>
</tr>
<tr>
<td>Net withdrawals/Injections</td>
<td>31</td>
<td>-520</td>
<td>138</td>
<td>925</td>
</tr>
<tr>
<td>Balancing Item (D-NW-S)</td>
<td>-292</td>
<td>-213</td>
<td>-237</td>
<td>-277</td>
</tr>
</tbody>
</table>
Residential and Commercial Gas Consumption

National Petroleum Council Assumption: Residential gas use was expected to be about 5.0 Tcf in 1999 and 5.3 Tcf in 2000. Commercial use was expected to be about 3.2 and 3.4 Tcf in those two years.

Market or Public Policy Change Since 1999 Study: Actual gas in residential sector was a little over 0.2 Tcf lower in each year. Commercial use was about 0.1 Tcf lower. In both instances, warmer than expected weather is the main cause.

Observations: The EIA estimate of commercial gas use in 2000 is unexpectedly large given weather patterns. The EEA estimate is smaller and looks more like the residential year-to-year changes. If it turns out that the EIA data for 2000 are correct, it would be worthwhile figuring out what's causing this increase in commercial gas use.
Industrial & Powerplant, Total Demand

National Petroleum Council Assumption: The gas use in industrial and power plant sectors was expected to be 12.4 Tcf in 1999. With the anticipated increase in gas prices (in an environment of low oil prices) in 2000, consumption was expected to fall to 12.1 Tcf.

Market or Public Policy Change Since 1999 Study: Actual demand (per EEA) in 1999 was very close to the NPC projection. Because of the higher than expected oil prices in 2000 and the fact that much of the increased energy demand for power generation was in relatively unswitchable California plants, the expected switching to fuel oil did not take place and demand was 0.9 Tcf higher than the NPC projection.

Total projected NPC demand for all end use sectors plus lease & plant use and pipeline use was about 0.3 Tcf too high in 1999 (primarily due to warm weather impacts in the residential and commercial sector) in the NPC projection. In contrast, total demand was about 0.5 Tcf too low in 2000. Roughly speaking, this difference in 2000 is made up of an underestimation of 0.9 Tcf in the industrial and power plant sectors and an overestimation of 0.3 in the residential and commercial sectors.
Weather

National Petroleum Council Assumption: For all forecast months, the NPC assumed the NOAA official "normal" weather, that is, the population weighted average for each region over the years 1960 to 1990.

Market or Public Policy Change Since 1999 Study: The winters of 98/99 and 99/00 were both substantially warmer than normal. The winter of 00/01 started out much colder than normal.

Magnitude of Change: These differences in HDDs subtract about 200 bcf off of residential and 100 bcf off of commercial demand in calendar year 1999. This was essentially all of the difference between the NPC projection and "actuals" for the two sectors.
December 2000

National Petroleum Council Assumption: Due to time and budget limitations, the NPC study did not conduct weather scenarios to look at impacts of weather on electricity and gas demand or changes to hydro power.

Observations: Based on the average temperatures in the three years 1997 to 1999, a demand level of about 80 Bcf/d would have been expected for December 2000. The unusually dry weather reduced hydro generation and added about 1 Bcf/d to gas demand. The unusually cold weather added another 15 Bcf/d, bringing total potential demand to about 96 Bcf/d.

Even with large storage withdrawals, gas supplies only totaled 90 Bcf/d from all sources, including extra ethane and propane left in plant residue gas. Extremely high prices were needed to shed 6 Bcf/d of load from power plant and industrial sectors so as to bring total consumption in line with available supply.

December 2000; "The Perfect Storm"

- Following a cold November, December was over 20% colder than normal.
- Going into December, gas prices were already above oil product prices.
- Supply/demand balance was tight even as end-users that could switch to oil easily had already done so.
- To bring the market into balance, prices had to rise to levels that cause less price sensitive customers to reduce gas consumption.
- Ammonia and methanol plants shut down.
- Industrial production slowed at least in part because of high production costs.

December 2000

"The Perfect Storm"

- Gulf Coast gas prices rose to more than $8.00 per MMBtu
  - almost four times higher than the previous year
- Southern California prices averaged more than $25 per MMBtu
- Average New York prices approached $13 per MMBtu

US Residential and Commercial Sector
Gas Consumption (Bcf/day)

<table>
<thead>
<tr>
<th>Normal</th>
<th>Dec-98</th>
<th>Dec-99</th>
<th>Dec-00</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>10</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
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<tr>
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</tr>
<tr>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
</tr>
</tbody>
</table>

- Commercial
- Residential
December 2000 (continued)

U.S. Gas Balance (Bcfd)

<table>
<thead>
<tr>
<th></th>
<th>4th Qtr 2000</th>
<th>4th Qtr 1999</th>
<th>Change</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Gas Supply</td>
<td>72.3</td>
<td>65.8</td>
<td>6.5</td>
<td>9.9</td>
</tr>
<tr>
<td>U.S. Dry Gas Production</td>
<td>53.5</td>
<td>52.6</td>
<td>0.9</td>
<td>1.7</td>
</tr>
<tr>
<td>Net Imports</td>
<td>9.7</td>
<td>8.6</td>
<td>1.1</td>
<td>12.8</td>
</tr>
<tr>
<td>Net Storage Withdrawals</td>
<td>8.7</td>
<td>4.3</td>
<td>4.4</td>
<td>102.3</td>
</tr>
<tr>
<td>Supplemental Gas</td>
<td>0.3</td>
<td>0.3</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Ethane Rejection^1</td>
<td>0.1</td>
<td>0.0</td>
<td>0.1</td>
<td>NA</td>
</tr>
<tr>
<td>Total Gas Demand</td>
<td>72.2</td>
<td>65.2</td>
<td>7.0</td>
<td>10.7</td>
</tr>
<tr>
<td>Residential Sector</td>
<td>21.2</td>
<td>16.3</td>
<td>4.9</td>
<td>29.8</td>
</tr>
<tr>
<td>Commercial Sector</td>
<td>12.6</td>
<td>10.2</td>
<td>2.4</td>
<td>23.6</td>
</tr>
<tr>
<td>Industrial Sector</td>
<td>23.4</td>
<td>24.8</td>
<td>-1.4</td>
<td>-5.8</td>
</tr>
<tr>
<td>Power Generation</td>
<td>9.2</td>
<td>8.1</td>
<td>1.1</td>
<td>13.6</td>
</tr>
<tr>
<td>Lease and Plant Gas</td>
<td>3.5</td>
<td>3.5</td>
<td>0.0</td>
<td>1.2</td>
</tr>
<tr>
<td>Pipeline Fuel</td>
<td>2.2</td>
<td>2.2</td>
<td>0.0</td>
<td>0.7</td>
</tr>
<tr>
<td>Imbalance (S-D)</td>
<td>0.1</td>
<td>0.6</td>
<td>-0.5</td>
<td>-78.7</td>
</tr>
</tbody>
</table>

^1 Volume of ethane and propane retained in gas. Normally, these hydrocarbons are removed from the gas stream, but some ethane and propane are not removed when natural gas prices increased to over $7/MMBtu during December 2000.

Observations

Observations on Demand Milestones

- Oil Prices
- Economic Activity vs. Energy Use
- New Power Plant Capacity
- Fuel Switchability in O/G Power Plants
- Resurgence of Coal in Power Generation
- Sustainability of Nuclear's High Utilization Rates
- Weather Effects
- Quality of Gas Consumption Data

Electricity Use by Office and Network Equipment

- U.S. electricity sales grew 2.3% per year between 1996 and 1999, on tract for 2.7% growth between 1999 and 2000 (Electric Power Monthly, January 2000)
- Office and network equipment electricity use estimated at 74 billion kWh in 1999 (June 2000 LBL study)
- Annual Energy Outlook 2001 projections, 1999-2020
  - Residential and Commercial PC-related electricity use: 4.3% average annual growth (additional 70 billion kWh/year to 2020)
  - Other commercial office equipment electricity use: 4.1% annual growth (additional 116 kWh by 2000)
DOE Workshop: Surveying the Milestones

Supply Review

Vello Kuuskraa and Jeffrey Eppink
Advanced Resources International, Inc.

Outline of Presentation

- Natural Gas Resource Base
- Domestic Gas Production
- Gas Imports and Exports
- Technology Progress
- Access to Resources
- Financial Requirements
- References
Natural Gas Resource Base

National Petroleum Council Assumption: 1,466 Tcf Total Remaining Resources in Lower-48; 313 in Alaska and 667 in Canada based on assessments developed by the Supply Task Group of the NPC. Alaskan resources were not independently evaluated in the 1999 NPC 1999 Study, but USGS estimates were used.

Market or Public Policy Change Since 1999 Study: The MMS and USGS continue to update previous assessments. MMS' 2000 assessment of Gulf of Mexico resources has nearly tripled in size relative to its previous 1995 assessment. No other significant changes have occurred to date.

The USGS is currently performing assessments of technically recoverable oil and gas resources in selected basins (Uinta-Piceance, Appalachian, San Juan, Permian, San Joaquin, Alaska and Gulf Coast). These assessments are scheduled to be completed during the current FY through FY 2004 and are generally expected to increase the resource base.

Magnitude of Change: Sensitivity analyses from the NPC 1999 Study indicate Larger and Smaller Resource Bases (+/- 250 Tcf nominally) had the greatest impact on gas production and wellhead price of any of ten sensitivity cases evaluated. For example, in the Larger Resource Base sensitivity, Lower-48 gas production in 2010 is 1.8 Tcf higher than the reference case and Henry Hub natural gas prices (1998$) are $0.96 per MMBtu lower in 2010.

Context/Observations:

- Experience shows that estimates of the size of the undiscovered resource base increase with successive assessments, a phenomenon that occurs at national and regional (Slide S1) as well as play levels. The Council's 1999 Study identified increases in undiscovered resources (30% and 28% in reserves growth and new fields, respectively) 1992 compared to 1999. Lower-48 Remaining Resources of 1,466 Tcf in the NPC 1999 Study represent a 13.2% (171 Tcf) increase from the 1,295 Tcf of the 1992 Study.

- As more is learned about domestic gas resources — deep gas in onshore formations, basin center and other unconventional gas in the Rockies, the size and productivity of deepwater fields in the Gulf of Mexico, and how already discovered fields can be more intensely developed — the Nation will gain confidence that sufficient natural gas resources will exist well into this century. The critical issue is converting these resources, found in increasingly complex and challenging settings, into reserves and readily available productive capacity.
Domestic Gas Production

National Petroleum Council Assumption: Production in the year 2000 in the NPC Reference Case is 19.9 Tcf (Slide S2). Market or Public Policy Change Since 1999 Study: With increasing commodity prices, industry activity has rebounded from the 1998/99 slump, resulting in increased drilling operations.

Magnitude of Change: Onshore conventional production and GOM are less than the NPC Reference Case; in contrast, unconventional production is greater than the NPC Reference Case by 6% (Slide S2). For unconventional gas, tight gas production shows an increase of 6% over the NPC Reference Case, while CBM production is a robust 18% greater than the NPC Reference Case (Slide S3). In the GOM, shallow water production is in decline (7% less than the NPC Reference Case), while deepwater production is on track (Slide S4). Although industry activity has increased (drilling is ahead of the NPC Reference Case by about 10%, Slide S5), production for the year 2000 lags the NPC Reference Case by about 4%.

Context/Observations:

- U.S. drilling activity has clearly increased in the past year (Slide S6). The reasons for the production response lag are unclear, but could represent a transitory time lag, a mix of drilling (infill, step-outs versus exploration wells) or, of more consequence, a poorer quality remaining undiscovered resource base than anticipated, especially for areas such as the shallow GOM.

- A poorer quality resource base could be manifested by accelerated depletion. A recent study by DOE on this topic concluded that accelerated depletion can lead to lower production and higher prices as, over time, adding reserves becomes increasingly difficult. The study further indicates that a combination of faster development of technology and increased access to unconventional gas resources in the Rocky Mountains could be expected to ameliorate the effects of accelerated depletion.
Domestic Gas Production (continued)

- Is the domestic rig fleet reaching capacity (onshore and offshore, Slide 57) and, if so, will the industry make the necessary investments in new drilling systems? The NPC Reference Case shows that the number of oil and gas wells drilled annually will double to an estimated 48,000 by 2015. Discovered resources from areas that are not currently part of the supply chain could come onstream in the medium term from such areas as the North Slope Alaska and the MacKenzie Delta (35¹ and 9¹ Tcf, respectively).

- The NPC 1999 study notes that impending shortages of qualified personnel are expected to hinder the ability of the producing sector to find and develop required gas supplies and shows a decline of about 50% in U.S. employees in oil and gas extraction activities 1996 to 1996. According to a recent O&G Journal article⁶, a survey of companies indicated that 70% expressed concern over a lack of equipment to carry out their drilling programs and a substantial majority was concerned about the availability of qualified personnel.
Domestic Gas Production (continued)

U.S. Gas Drilling Activity Levels

Domestic Onshore and Offshore Rig Fleet

Slide S6

Slide S7
Gas Imports and Exports

National Petroleum Council Assumption: U.S. natural gas imports from Canada in the NPC Reference Case are 3 Tcf in year 2000 (Slide S8). Exports to Mexico were assumed to be 47 Bcf in 2000. Net LNG import were assumed to be about 50 Bcf in 2000.

Market or Public Policy Change Since 1999 Study: The Alliance pipeline became operational December 2000, increasing Canada's future export capacity by 1.3 Bcf/day. With increased gas prices and more competitive LNG costs, LNG facilities in Boston Harbor MA, Lake Charles, LA, Cove Point, MD, and Elba Island, GA, are being expanded or recommissioned. These modest expansions could total 4.5 Bcf/d send-out capacity. Prospects for increased natural gas development in Mexico (30 Tcf reserves) may be improving considering discussions between presidents Bush and Fox. The tariff on Mexican imports of U.S. natural gas was eliminated in mid-1999, which could act to encourage continued and growing volumes of imports in the future.

Magnitude of Change: Actual imports from Canada in 2000 were 3.5 Tcf, 17% greater than the NPC Reference Case. In 1999, U.S. Imports of LNG nearly doubled from the previous ear to 163 Bcf from 85 Bcf. Mexico is currently a small net importer of U.S. natural gas (-50 Bcf/yr)

Context/Observations:

- The performance of the natural gas industry in Canada will have a significant impact on U.S. supply. The Western Canadian Sedimentary Basin (WCSB) dominates the natural gas supply for Canada. Light oil production is declining in the WCSB while heavy oil production is ramping up; this situation will affect Canadian gas supply as associated gas production declines and gas usage by the heavy oil industry increases. Increasing amounts of gas are being supplied to the U.S. from the Scotia Shelf developments, where export is expected to increase to 1 Bcf/d to New England by 2010. Capital requirements, access, deeper wells and pipeline gathering/processing will continue to affect the ability of Canadian producers to meet expert demand.
  - Pemex plans to increase Mexican-U.S. border infrastructure and capacity, and to focus more on natural gas exploration activities. A consortium of Sempra, PG&E, and Mexico's Proxima Gas plans to build a 400 Mcf/d pipeline by 2003 connecting the U.S. and Mexican natural gas grids. El Paso NG has proposed installation of an LNG terminal in Baja Mexico to service the California market. Located in northeastern Mexico, the Burgos Basin, is expected to contain massive volumes of largely non-associated, recoverable natural gas resources.
  - The U.S. currently exports small amounts of LNG to Asia (-65 Bcf/yr)
Technology Progress

National Petroleum Council Assumption: Fundamental technology progress can be attributed to changes in exploration success rates and drilling efficiency (footage drilled per rig per year). Exploration success rates were assumed to improve at an annual rate of 1.5% annually (Slide S9). Drilling efficiency was assumed to improve 1.25% annually for onshore and shallow GOM and 1.5% for deepwater GOM (Slide S10).

Market or Public Policy Change Since 1999 Study: Rates of R&D funding appear to be declining, lead by major producers, whose funding declined by more than 50% in the 1990s (Slide S11). GRI/GTI has ceased to be a major source of R&D (Slide S12). DOE natural gas R&D funding has been increasing modestly over the past three years (from $25 to $33 million) but faces an uncertain future.

Magnitude of Change: Exploration success rates have declined slightly relative to the NPC Reference Case increase of 1%. Drilling efficiency has declined by 2% relative to the NPC Reference Case increase of 3% (1997 through 1999). Sensitivity analyses from the Council's 1999 Study for technology progress (Slides S13 and S14) assumed faster and slower technology changes in advancement rates (generally ±50%). In 2010, faster technology advancement in the NPC Sensitivity Case resulted in an increase in production of 600 Bcf and a reduction in gas prices to consumers of $0.33 per MMBtu. Conversely, slower technology advancement in the NPC Sensitivity Case resulted in a decrease in production of 550 Bcf and an increase in gas prices to consumers of $0.27 per MMBtu.
Technology Progress (continued)

Context/Observations:

- The NPC 1999 Study assumed a portion of the increased natural gas supply was based on anticipated increases in the efficiency of the drilling fleet, increases in exploration efficiency and improved reserves per well, all due to anticipated advanced in E&P technology. While the data are still preliminary, the performance of the rig fleet shows little or no gain. Are decreases in drilling efficiency transitory in nature (i.e., a function of inherent inefficiency related to a rapidly-expanded rig utilization) or are longer-term technological inefficiencies being manifested?

- Accelerated depletion poses technology and resource questions as to its root causes and how best to mitigate its effects. Progressive pursuit of more complex gas reservoirs, such as fractured formations and deep gas, will place new challenges on future exploration success rates.

- The NPC 1999 Study assumed expected technological advances based on recent levels of R&D funding and the general effectiveness of those efforts. Can reduced funding by major producers, GRI/GTI and, potentially, the DOE be borne by service companies (which operate under a "tech service" mandate), R&D consortia and technology transfer from other industries (e.g., IT, space program, tomography, laser, biotech)?

R&D Expenditures by Producers for Oil and Gas Recovery Have Fallen by More Than 50% Since 1992

GRI/GTI Gas Supply Research Budgets are Declining
Technology Progress (continued)

Technology Sensitivities – Production Differences

Technology Impact on Projected Henry Hub Prices
Access to Resources

National Petroleum Council Assumption: All scheduled MMS lease sales (including Sale 181 in the Gulf of Mexico (GOM)) would occur as scheduled in the Reference Case. All existing regulatory and restriction requirements are honored. The NPC Reference Case shows 137 Tcf restricted in the Rocky Mountains and 24 Tcf restricted in the GOM (Slide S15), the two major areas of contention.

Market or Public Policy Change Since 1999 Study: Forest Service "Roadless Areas" have been designated, some of which have significant resources associated with them. Lease Sale 181 is scheduled for December 2001, but opposition to the sale exists.

Magnitude of Change: In the Rocky Mountains, eliminating access in roadless areas would increase restricted resources by 7 Tcf and decrease accessible resources by 9.4 Tcf, by a significant 32% (Slide S16). Cancellation of Lease Sale 181 would decrease accessible resources by 9 Tcf (Slide S17). Sensitivity analyses from the Council's 1999 Study for access (Slide S18), which assumed increased and decreased access restrictions in the Rocky Mountains, Eastern GOM and, in the Increased Access Sensitivity Case, Pacific and Atlantic development, showed ±500 Bcf production in 2010.

Context/Observations: Approximately one-half of the remaining untapped natural gas resource base underlies federally owned land. In the Lower-48 states, a total of about 225 Tcf are restricted. Excessive restrictions on development of otherwise accessible areas and marketable domestic gas supplies impairs the ability of natural gas to effectively compete for market share, especially for power and industrial sectors. Removing impediments is necessary to support national economic as well as environmental goals. Although excluded from the NPC Reference Case, the potential reserves of 2.6 Tcf in Destin Dome in the eastern GOM continues to be blocked from development by the federal government. ANWR, included for access in the current Senate energy bill, is thought to contain about 10 BBoe and undetermined natural gas resources, although the Fold belt and Eastern Thrust Belt plays contain an estimated 1 Tcf of resources.
Access to Resources (continued)

Potential Changes in Access to Undiscovered Resources
1998-2001 (Relative to NPC Reference Case)

<table>
<thead>
<tr>
<th></th>
<th>Technically Recoverable Resources (Tcf)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rocky Mountain Roadless Areas</td>
<td>(9.4)*</td>
</tr>
<tr>
<td>Eastern Gulf of Mexico Sale 181</td>
<td>(9.0)**</td>
</tr>
<tr>
<td>Total</td>
<td>(18.4)</td>
</tr>
</tbody>
</table>

*Resource Recovery estimates
**NPC 1994 Study

Effect of Access Restrictions on U.S. Gas Production

Slide S17

Slide S18
Financial Requirements

National Petroleum Council Assumption: The NPC 1999 Study estimated that $33 billion and $24 billion would be spent by the industry in 1998 and 1999 (Slide S19).

Market or Public Policy Change Since 1999 Study: No significant change.

Magnitude of Change: Industry spending in 1998 and 1999 was at levels indicated by the NPC 1999 Study. (Actual spending estimates are unavailable for 2000 at this time).

Observations/Context: Industry expenditures appear to be on track with levels anticipated by the NPC 199 Study. Future financial requirements for the industry are great, however, and the NPC 1999 Study indicates that a substantial increase in capital expenditures will be required. Total capital expenditures for 1999 to 2015 are expected to be $785 billion. Companies will need to balance short-term performance demands with long-term planning to achieve needed growth. While much of the required capital will come from reinvested cash flow, capital from outside the industry will be essential to continued growth. Those outside capital requirements will need to compete with other investment opportunities, including the technology sector. Can the oil and gas industry effectively compete for necessary capital?
References for the Supply Review

Information based on the NPC 1999 Study unless otherwise annotated on slides or with endnotes listed below.

3. USGS National Oil and Gas Assessment Project Summary
4. EIA Accelerated Depletion Study: (http://www.eia.doe.gov/oiaf/sectorreport/depletion/index.html)
6. Liberty Consulting Group estimate
7. Oil and Gas Journal Article, Jan. 8, 2001
8. Alliance Pipeline press release: (http://www.alliance-pipeline.com/)
10. EIA Natural Gas Issues and Trends
11. EIA Natural Gas Issues and Trends
12. EIA Natural Gas Issues and Trends
14. EIA Natural Gas Issues and Trends
15. Gas Research Institute / Gas Technology Institute
17. Advanced Resources International estimate
18. Oil and Gas Journal Article, Dec. 7, 2000
DOE Workshop:
Surveying the Milestones

Transmission and Distribution Review

Kevin Petak
Energy and Environmental Analysis, Inc.

Pipeline Projects Completed During 1999-2000

- NPC assumed that over 5.2 Bcf/d of new capacity would be built in 1999-2000, compared to over 7.7 Bcf/d of actual additions.
  - NPC conservatively projected new pipeline capacity based mostly on economics.
- NPC did not include Vector and BC Southern Crossing, projects that were poorly defined when the NPC study commenced in early 1999.
- NPC did not explicitly include numerous smaller expansions aimed at de-bottlenecking new gas supply.

<table>
<thead>
<tr>
<th>Project</th>
<th>Actual Capacity (MMBbl/d)</th>
<th>Estimated Capacity (MMBbl/d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deepwater GOM Projects</td>
<td>0.00</td>
<td>1.217</td>
</tr>
<tr>
<td>Minco Capacity</td>
<td>0.00</td>
<td>0.20</td>
</tr>
<tr>
<td>Minco and Wind River Basins</td>
<td>0.00</td>
<td>0.27</td>
</tr>
<tr>
<td>TransCanada Stream Exp</td>
<td>11/99</td>
<td>175</td>
</tr>
<tr>
<td>Minco and Northeast</td>
<td>12/99</td>
<td>370</td>
</tr>
<tr>
<td>Southeast Expansions</td>
<td>9/99</td>
<td>468</td>
</tr>
<tr>
<td>BC Southern Crossing</td>
<td>12/00</td>
<td>230</td>
</tr>
<tr>
<td>Alliance</td>
<td>12/00</td>
<td>1,325</td>
</tr>
<tr>
<td>Vector Phase I</td>
<td>12/00</td>
<td>750</td>
</tr>
<tr>
<td>Total of Major Projects Above</td>
<td>5,333</td>
<td>5,810</td>
</tr>
<tr>
<td>Total of All Capacity Added</td>
<td>7.717</td>
<td>6.214</td>
</tr>
</tbody>
</table>

Locations Where Recent Basis May Justify New Gas Transmission Capability

- Monthly basis into California from the Rockies and Canada has averaged over $4 per MMBtu in the last 4 months.
- Monthly basis from major downstream receipt points into eastern New York has spiked over $3 per MMBtu during cold periods over the last two years.
- Monthly basis from Henry Hub to Florida has increased to over 50 cents per MMBtu during summer peak.
- Monthly basis between Opal and Henry Hub averages over $1 per MMBtu during summer peak.

NPC Transmission Expenditures

- No pipe or storage added before 2005.
- NPC builds variants of Market Link, Enacheer, Millennium, and Cross Bay over the next five years.
- NPC assumed expansions into Florida throughout the projection.
- NPC assumed expansions east out of the Rockies throughout the projection.
**LNG Imports**

**LNG Imports in Bcf**

<table>
<thead>
<tr>
<th>Year</th>
<th>NPC</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>164</td>
<td>163</td>
</tr>
<tr>
<td>2000</td>
<td>185</td>
<td>224</td>
</tr>
</tbody>
</table>

- NPC assumed that all capacity at existing facilities would be fully utilized by 2015, with annual LNG imports of 844 Bcf. No new LNG facilities were assumed.
- Current expectations are that all existing LNG import capacity will be fully used by 2010.
- Plans have been announced for seven new LNG import facilities over the next five years, each costing roughly $300 million.

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**MacKenzie Delta/Alaskan Gas**

- NPC assumed MacKenzie Delta capacity to the Lower-48 of 1.5 Bcfd in 2009.
  - Current pipeline planned for MacKenzie Delta includes 1,200 miles of pipe at a cost of $3-6 billion (US).
  - Current expectations are that MacKenzie Delta will begin production between 2007 and 2009, reaching 1.5 Bcfd before 2010.
- NPC assumed that Alaska gas would flow to Canada/Lower-48 after 2015.
  - Alaskan producers are currently planning for Alaska gas to penetrate Canada/Lower-48 between 2007 and 2012. Most projections assume a 4 Bcfd pipe with transmission charges over $2.00 per MMBtu (US) into the U.S.

---

**Eastern Canadian Offshore Gas**

- NPC assumed that Maritimes and Northeast (M&N) capacity of 440 MMcfd to the Lower-48 would come on line in November 2000. NPC assumed that M&N would continue to expand up to 1.0 Bcfd by 2010 and 1.2 Bcfd by 2015.
  - M&N Phase 1 and 2 at 540 MMcfd to Canada, telescoping down to 350 MMcfd to the Lower-48 came on line in December 1999.
  - Compression could expand current M&N pipe up to 800 MMcfd in Canada by 2004.
  - Deep Panuke and 11 Sable Island satellite fields could increase gas production from Eastern Canada Offshore by 100 MMcfd by 2004.
  - Recent projections for Eastern Canada Offshore production and pipeline capacity range from 1.5 to 2.5 Bcfd by 2010. There are currently 18 fields discovered offshore of Newfoundland.
- Bottom Line: NPC's projection for Eastern Canadian Offshore production and pipeline may be conservative.

---

**Frontier Pipeline Projects**

- NPC investigated three major frontier areas for natural gas:
  - Eastern Canada Offshore
  - MacKenzie Delta
  - Alaska
- NPC included flows from Eastern Canada offshore and MacKenzie Delta to the Lower-48 before 2015, but assumed that Alaskan gas would flow after 2015.
Alaska Projects Under Review

- Alaska Highway (ANGTS) - 2,000 miles into Alberta of 3-5 Bcf/d pipe at a cost of $6-10 billion ($US).
- Alaska North Slope to MacKenzie Delta (2 possible routes; Over the Top and Under the Top) - 1,650 miles into Alberta of 1-5 Bcf/d pipe at a cost $5-8 billion ($US).

Pipeline Costs

- NPC assumed that pipeline costs would grow by less than inflation (1.5%/year versus inflation rate of 2.5%/year).
- Driven by higher right of way costs and other factors during the last two years, nominal pipeline costs have grown at 3%/year, exceeding inflation. This growth rate is more consistent with the "High Pipeline Cost Sensitivity" run by NPC.
Compressor Cost Trends

- Compressor capacity added in 1999 was 234,000 HP, and in 2000, 254,000 HP (FERC data).
- NPC expected a 251,000 HP per year average for the U.S. between 1999 and 2004.
- Compressor costs reported to FERC in 1999 and 2000 were $1,372 and $1,371 per HP (nominal dollars), slightly below the cost factor applied by NPC ($1,390 per HP in 1998$).

Recent Activity Regarding New Pipeline Services

- A number of pipelines have made proposals to offer new services aimed principally at power generation markets.
  - hourly firm transportation service
  - electronic nomination and scheduling
  - seasonal and monthly differentiation of long-term contract MDQ
- Existing shippers have expressed concerns that new tariff services and capacity contracted to new customers could degrade the quality of existing services.
  - reduced delivery pressure
  - reduced hourly flexibility
  - more operational flow orders

U.S. Storage Working Gas Capacity (Bcf)

<table>
<thead>
<tr>
<th></th>
<th>NPC</th>
<th>Est. Actual (EEA)</th>
</tr>
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<tbody>
<tr>
<td>1999</td>
<td>3,797</td>
<td>3,758</td>
</tr>
<tr>
<td>2000</td>
<td>3,810</td>
<td>3,801</td>
</tr>
<tr>
<td>2010</td>
<td>4,210</td>
<td></td>
</tr>
</tbody>
</table>

- The outlook for storage working gas capacity has not changed significantly since the NPC study was completed.
- In the short term, the cost of new storage capacity has increased due to higher cost of base gas.
- As gas costs decline, the expected cost of storage capacity will return to levels projected in the NPC study.

Recent Activity regarding New Pipeline Services (continued)

- FERC continues to reject negotiated terms and conditions of service.
- Order 637 required the reporting of additional data to improve market transparency and improve the efficient use of existing tariff services.
- FERC continues to monitor the evolution of gas and electric markets to determine whether its regulation fulfills statutory requirements.
  - affiliate behavior
  - California market
- FERC has received petitions to restrain gas prices and the market value of gas transportation capacity.
Pipeline Access to Right of Way

- Excepting the roadless policy in U.S. Forest Service lands, there has been no significant change in policies that affect pipeline access to land needed to expand capacity.
- Interventions and protests filed by land owners and environmental groups are a continuing concern for regulators.
- However, FERC rejected a petition to withdraw the Certificate of Public Convenience and Necessity for Market Link filed by land owners and New Jersey.

Natural Gas Prices

By

James Kendell

Energy Information Administration
Average Wellhead Prices Currently Exceed the Highest Level Over the Past 20 Years

Current Natural Gas Spot Prices: Well Above the Recent Price Range

Natural Gas Spot Prices: Base Case and 95% Confidence Interval

Questions

- Will these high prices and/or price volatility affect future demands for natural gas, particularly from electric generators?
- What do we do about all those angry people whose gas bills doubled this winter?
- In the face of such high gas prices, why didn't gas production bounce back more quickly?
- Have the high gas prices changed the industry's price expectations for project development purposes?
- Have the prices made it any easier to raise capital?
From: Kelliher, Joseph
Sent: Tuesday, March 13, 2001 11:19 AM
To: Anderson, Margot
Subject: RE: 3/15 testimony

---Original Message---
From: Anderson, Margot
Sent: Tuesday, March 13, 2001 10:58 AM
To: Kelliher, Joseph
Subject: 3/15 testimony

Joe,

Margot
FYI...the Treasury Peer Review Meeting is now scheduled for 5:00 p.m. on Wednesday, March 14. Thanks, Kjersten

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 2B3 OEOB so we'll need to get you cleared in with security.

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

Message Sent
To: [List of email addresses]

joseph.kelliher@hq.doe.gov @ inet
kjm@osec.doc.gov @ inet
dina.ellis@do.treas.gov @ inet
sue_ellen_wooldridge@ios.do.gov @ inet
keith.collins@usda.gov @ inet
joseph.glauber@usda.gov @ inet
gallo@state.gov @ inet
mcmanusmt@state.gov @ inet
michelle.poche@ost.dot.gov @ inet
patricia.stahlschmidt@fema.gov @ inet
brenner.rob@epa.gov @ inet
symons.jeremy@epa.gov @ inet
beale.john@epa.gov @ inet
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Mark A. Weatherly/OMB/EOP/EOP
robert.c.mcnally@opd/eop
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william.bettenberg@ios.doi.gov @ inet
tom_fulton@ios.doi.gov @ inet
kjersten_drager@ovp.eop.gov @ inet
mleblanc@ceq.eop.gov @ inet
margot.anderson@hq.doe.gov @ inet
bruce.baughman@fema.gov @ inet
charles.m.hess@usace.army.mil @ inet
akeeler@cea.eop.gov @ inet
commcoll@aol.com @ inet
karen.e.keller@omb@eop@eop
sandra.l.via@omb@eop@eop
megan.d.moran@ovp@eop@eop
Andrew D. Lundquist@OVPEOP@EOP
karen.y.knutson@ovp@eop@eop
charles.m.smith@ovp@eop@eop
kevin.kolevar@hq.doe.gov @ inet
Margot:

Of course you're right - infrastructure is DOT's.

Charlie
The next NEPD Working Group Meeting will be held on Friday (March 16th) at 1:00pm in the Vice President's Ceremonial Office.

John Fenzel
Really weird, but looks like the graphics do not e-mail!

> ---Original Message---
> From: McManus, Matthew T
> Sent: Tuesday, March 13, 2001 6:17 PM
> To: 'John Fenzel, Task Force/Special Forces'; 'Kjersten Drager at OVP'
> Cc: 'Margot Anderson at DOE'; 'Karen Knutson at OVP'
> Subject: Version with Graphics
> 
> << File: 03-8-01 Steve's NEPD draft IN PROGRESS.doc >> Just FYI, note
> some of the draft graphics we have placed into the text (same text, this
> one w graphics.) More to be suggested.
What's your fax number? I have info on the report issued by the State of Washington today.
The schedule for the peer review meetings tomorrow, Tuesday, March 20th, and Wednesday, March 21st, is:

Tuesday - 3:00 State; 4:00 Transportation; and 5:00 Treasury

Wednesday - 9:00 DOE

Please let me know ASAP if you plan to attend any or all of these meetings.

Thanks.
From: Anderson, Margot  
Sent: Wednesday, March 21, 2001 12:49 PM  
To: Karpoff, Peter  
Cc: Conti, John; Breed, William; Friedrichs, Mark; Kelliher, Joseph  
Subject: Thanks for helping on the NEP!!

Peter,

Margot
Joe, here's what I've got on your question yesterday asking how many additional megawatts would be subject to the waste-to-energy tax credit in the year 2011.

As you know, we estimate that the tax credit would stimulate 200 megawatts of additional electricity. However, we estimate that it would be five years before any of this electricity is available. Furthermore, the full 200 megawatts would not be available immediately in the fifth year; additional production would grow to 200 megawatts over a period of time.

For purposes of a rough calculation, we assume that the credit becomes effective in FY 2002 and that no electricity eligible for the credit is generated for 5 years, i.e., until FY 2006. We further assume that for the next 4 years, from FY 2007-2010, the amount of electricity eligible for the credit increases incrementally, by 50 megawatts per year. As a result, the full 200 megawatts of electricity is being produced in FY 2010 through 2012.

If you accept our estimate that the cost of the credit is $27 million per year (assuming 200 megawatts/yr), then the cumulative cost of the credit through the year FY 2012 is something around $121.5 million (which is the sum of $6.75m + $13.5m + $20.25m + $27m + $27m +$27m). Of course, this number will vary if assumptions are different concerning how quickly the tax credit stimulates new production.

On the question of equivalent barrels of oil, Katie advises that IWSA has done an estimate showing that 200 megawatts of electricity displaces, on a Btu basis, 2.8 million barrels of oil per year. She says she's got the mathematical proofs if you want 'em!

I think I mentioned to you in an earlier phone message that Mike Pate from my office took IWSA in to visit with Treasury Department folks yesterday afternoon. Katie was in that meeting if you have questions. Hope this is helpful.
Joe,

I'm glad to hear that. Please remind me--did I send you the full set of policy recommendations (about 12) that we put together, or just a few selected ones? If only a few, I will send you the complete set. Also, did I send you our new report on "Using Targeted Energy Efficiency Programs to Reduce Peak Electrical Demand" by Nadel et al?

Please let me if you would like to meet to go over any of this, and last but not least (as I mentioned over the phone), I really hope the Administration does not proceed in proposing a major cut in energy efficiency and renewable energy R&D and deployment programs for FY02. This is not only a bad idea, but it would be severely criticized by folks like us and I believe it would tarnish the overall effort to advance a broad, balanced set of energy policy initiatives.

Howard

Reply Separator

Subject: national energy policy
Author: "Kelliher Joseph". <Joseph.Kelliher@hq.doe.gov> at internet-mail
Date: 02/27/2001 1:39 PM

Howard, thanks for the information you sent me. I just wanted to restate our interest in your specific recommendations on energy efficiency elements for incorporation in the Administration's national energy policy.
Martin, Adrienne

From: Anderson, Margot
Sent: Tuesday, March 27, 2001 1:54 PM
To: York, Michael
Subject: FW: NEP issues

Michael,

Help. I've sent MB a few e-mails and called but maybe she isn't in. Can you guys tell me where you are on the following? WH is cranking it up. Thanks.

Margot

--- Original Message ---
From: Anderson, Margot
Sent: Tuesday, March 27, 2001 9:08 AM
To: Zimmerman, MaryBeth
Subject: NEP issues

MB,

No pressure but...can I get a sense of what you will be providing and when?
Joe Kelliher: Attached is a short document which includes NPRA's current thinking as to what changes in national energy policy are needed to help the refining sector.

I would like specifically to highlight three:

One. We believe that the Administration is missing an important opportunity to improve energy policy by not addressing the onroad diesel sulfur rule. This rule will have a greater adverse supply impact than any other in the next five years and should be reviewed. Instead of requiring essentially 100% of onroad diesel output to be reduced from 500 ppm to 15 ppm sulfur by mid-2006, at a cost of $8 billion, the Administration could move the required supply date back to 2008-9 and provide a reduction in the excise tax for 15ppm sulfur diesel sold in advance of the 2008 date. This could provide all the necessary supply for new trucks which need the diesel in 2006-7 (probably only 5% of demand). There are no environmental benefits from using the new diesel in old truck engines, so the program in its current form constitutes massive waste, since those trucks aren't a sufficient force in the market until 2008 at the earliest. This change will help prevent loss of diesel supply and refinery closures which will take place under the rule in its current form. The overall benefits of the program are not reduced. We would like to talk with you more on this.

Two. The EPA's enforcement campaign against U.S. refineries should be halted and reexamined. As you know, it is impossible to build new refineries, so the industry has had to add capacity at existing sites in an attempt to maintain an adequate supply of products for consumers in the past twenty years. Even at that, the industry has been able to keep U.S. capacity only flat over the past decade, so new demand has been met by increased imports of refined products. The Browner EPA launched an extensive and coordinated campaign against the industry, alleging that capacity additions during the past twenty years were not appropriately permitted. This despite the fact that refinery improvements were made with the knowledge of both state and federal environmental agencies and in permitting requirements as they were understood at that time. The...
has sent section 114 requests, in effect blanket subpoenas, to most refiners, and many are now facing notices of violation and legal action. A few have settled because they believe that it is easier to pay a fine, ign a consent decree and move forward than resist. All this comes at a time when federal and state authorities have urged the industry to continue its herculean efforts to produce product all-out to avoid shortages. EPA's actions are really nothing more than an attempt to discredit the industry and collect tribute in the form of fines in order to allow refiners to get on with their business. We believe that everyone in the industry should obey the law, and we believe that they do, often under difficult circumstances. But this activity goes far beyond the pale of reasonable enforcement activity and should cease.

Three. The Unocal patents, recently upheld by a federal court of appeals in a decision that the Supreme Court let stand, provide no real benefit to the industry or consumers. The huge royalties granted by a California District Court-- 5.3/4 cents/gallon--are far in excess of the cost of even the reformulated gasoline program and may well cost consumers over $200 million per year when implemented. The existence of the patents will increase the cost of gasoline, reduce supply, and eliminate all of the incentive for overcompliance with environmental regulations. The patent will also make it even harder to use ethanol in gasoline where ozone problems exist during e summer months (e.g. Chicago and Milwaukee). The Administration should study this issue and take steps to put any royalty collections on hold. Otherwise, this situation will affect Midwestern and East Coast gasoline supplies adversely this summer, as it did last year.

The rest of our thinking is attached. Thank you for your call yesterday. I'm available to discuss these matters with you at any time.

Bob Slaughter
NPRA 202.457.0480 x 152; home (b)(6)
Stable, reliable and affordable supplies of energy and more efficient energy use are essential to maintaining living standards and supporting economic growth.

Greater emphasis should be placed on diversifying the sources of US energy supplies. Domestic supplies can be enhanced through incentives for improved recovery from existing fields and through improved access to promising acreage.

Energy policy cannot just focus on the "upstream" sector, i.e. exploration and production. There needs to be a clear understanding that local/regional bottlenecks can occur in producing and distributing feedstocks and products. Further, refineries have been operating near maximum capacity and it has been almost twenty years since a new refinery has been built.

Petroleum product pipelines are increasingly challenged by the proliferation of "boutique" (area-specific fuels) due to limits on their ability to handle segregated shipments and availability of adequate storage tank capacity. And, additional constraints may arise from the need to gain regulatory approvals for new facilities or pipelines, e.g., the Longhorn pipeline recently agreed not to carry MTBE products in order to gain approval.

Siting and permitting challenges can seriously delay needed modifications/expansions of existing manufacturing (refining and petrochemical) capacity and constrain additions to downstream infrastructure (e.g. pipelines).

No single action or single fuel can resolve all energy concerns. The nation needs a balanced mix of policies – which fosters a mix of fuels and balances environmental goals and energy supply concerns.

A balanced approach to energy policy should examine both demand and supply. Incentives for greater energy efficiency (e.g. through the use of lighter weight materials in vehicles) can play an important role.

Regulatory programs that distort markets can divert energy supplies from essential (i.e., where there are limited, if any, substitutes) and/or highest valued markets. For example, environmental programs are increasingly drawing natural gas to use in electric generation, thus depriving petrochemical manufacturers of feedstocks or making them so costly that the US petrochemical industry is placed at a competitive disadvantage in global markets.

Both energy and environmental policy should be based on sound science and the best and most current data available. Cost-benefit analyses and reasonable risk assessment are key tools for choosing the most effective policies to achieve national goals. Regulations should:

- take into account the cumulative effect of regulations in that sector;
- set performance goals and avoid mandating specific technologies or setting product specifications;
- provide adequate leadtime and avoid overlapping requirements wherever possible;
- provide flexibility through the use of market-based incentives; explicitly evaluate their impact on energy supplies; and
be fairly and consistently enforced, without retroactive reinterpretation of regulations through enforcement programs.

Potential Energy Policy Improvements

Process

- Require annual study by Secretary of Energy of refining and product distribution infrastructure including assessment of cumulative impact of regulations and specific recommendations for improvements.

- Periodic OMB-led review of supply impact of environmental regulations. Could be included as part of National Energy Policy Plan.

- Require Energy Impact Analysis for new regulations.

- Enhance regulatory certainty, e.g., avoid retroactive reinterpretation of regulations such as in recent EPA NSR enforcement actions.

Incentives

- Accelerated depreciation for clean fuels upgrades.

- Accelerated depreciation for pollution control equipment on stationary sources.

- Tax credits for energy efficiency improvements.

- Investment tax credit for clean fuel capital investments.

- Relief from Alternative Minimum Tax to ensure any incentives offered are not automatically recaptured.

- Excise tax incentives for early introduction of clean fuels, e.g. for low sulfur gasoline and diesel.

Streamlining/Flexibility

- Reasonable guidance on BACT and LAER for Tier 2 gasoline and diesel sulfur programs. Guidance on the emissions level and cost used to determine BACT/LAER requirements. [NOTE: Current draft guidance is not reasonable on this point].

- Allow for trading of credits from mobile source emission reductions with stationary sources.

- Expedited permitting review. Provision of greater certainty that once permits are approved, they will not have to be reopened/renegotiated due to third party intervention.
Linkage between regulatory implementation deadlines and permitting process, e.g., if delay in permitting despite good-faith efforts to comply, the regulatory deadline is adjusted.

Fuels

- Reassess the sequencing of major fuel regulatory programs. Eliminate the overlap in timing between the gasoline sulfur and diesel sulfur requirements.

- Eliminate 1.5% minimum oxygen requirement for RFG.

- No additional product specifications (such as aromatics caps) that will further constrict gasoline supplies. Focus on performance goals not product specs.

- Reassess mobile source air toxics program to allow greater flexibility through trading among refineries. Reevaluate baseline calculation to remove penalty on refiners who are cleaner than average. Reevaluate standard in light of state programs that limit MTBE use (e.g., Connecticut, New York) which could make regulatory requirement unattainable or very expensive.

- National Academy of Sciences study of MTBE to provide a science-based assessment of impact on groundwater and effectiveness of remediation technologies and including assessment of role of MTBE in meeting gasoline demand.

- Determine appropriate sequencing for any future off-road diesel requirements. Avoid overlap with other regulations, set a reasonable standard for sulfur content.
Charlie,

I am quite pleased with the charts and graphs we already have for the first two chapters. Do you have any suggestions for anything else?

Just sent out chapter 3 to you for review. Please circulate.

Margot
From: Anderson, Margot
Sent: Wednesday, March 28, 2001 7:02 PM
To: Conti, John; Breed, William; Friedrichs, Mark
Subject: FW: NEPDG - Treasury Recommendations

---Original Message---
From: Charles_M_Smith@ovp.eop.gov%internet
Sent: Wednesday, March 28, 2001 6:47 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; Gallogly@State.gov%internet;
McManusm@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; Jhoward@ceq.eop.gov%internet;
William_Bettenberg@IOS.DOI.gov%internet;
Tom_fullon@OS.DOI.gov%internet; Kjersten_drager@ovp.eop.gov%internet;
Mieblanc@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; 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;
Margaret_Bradley@OS.DOI.gov%internet;
Jean_M_Russell@opd.eop.gov%internet
Subject: NEPDG - Treasury Recommendations

Attached, for your information, are the Department of the Treasury's recommendations.
Margot,

I will be out Friday and Monday... please respond to both me and Jacob Moss, who I've copied on this e-mail. His phone number is 564-1388.

Jeremy Symons
EPA, Office of Air and Radiation
(202) 564-9301
Fax: (202) 501-0394
Thank you. I recall pretty much the same. Please let us know if Joe moves forward. We would like to participate.

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

Jeremy,

I was never asked to do so. I recall that Andrew stated that he and Joe Kelliher were going to cover this one.

Margot

--- Original Message ---
From: Symons.Jeremy@epamail.epa.gov%internet (mailto:Symons.Jeremy@epamail.epa.gov)
Sent: Thursday, April 05, 2001 3:18 PM
To: Anderson, Margot
Cc: Moss.Jacob@epamail.epa.gov%internet
Subject: Margot,

I will be out Friday and Monday ... please respond to both me and Jacob Moss, who I've copied on this e-mail. His phone number is 564-1388.

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

(See attached file: attumstv.dat)
As we discussed.

--- Original Message ---
From: Kelliher, Joseph
Sent: Friday, February 09, 2001 6:39 PM
To: Anderson, Margot
Subject: RE: National Energy Strategy

Thanks, I was just writing you. Here it is.

--- Original Message ---
From: Anderson, Margot
Sent: Friday, February 09, 2001 12:43 PM
To: Carrer, Paul; 'JAS@bpa.gov'; Conti, John; SCHNAPP, ROBERT; 'CAball@bpa.gov'; Scallingi, Paula; PETTIS, LARRY; GEIDL, JOHN
Cc: Kelliher, Joseph; Whately, Michael
Subject: RE: Summer Electrcity Assessment meeting

All,

Today's meeting will be in 7B-138. CI's conference room. We will circulate a draft prior to the meeting.

Margot
--- Original Message ---
From: Anderson, Margot
Sent: Friday, February 09, 2001 11:42 AM
To: Anderson, Margot; Carrer, Paul; 'JAS@bpa.gov'; Conti, John; SCHNAPP, ROBERT; 'CAball@bpa.gov'; Scallingi, Paula; PETTIS, LARRY; GEIDL, JOHN
Cc: Kelliher, Joseph; Whately, Michael
Subject: RE: Summer Electrcity Assessment meeting

All,

Due to scheduling conflicts, our meeting will be held at 5:00 today instead of 3:30. Thanks. I confirm a room number.

Margot
As we discussed.

-----Original Message-----
From: Symons.Jeremy@epamail.epa.gov%intemet
[mailto:Symons.Jeremy@epamail.epa.gov]
Sent: Thursday, March 29, 2001 6:06 PM
To: Anderson, Margot; Andrew_D._Lundquist@OVP.EOP.Gov%internet
Cc: jhowardj@ceq.eop.gov%internet; Gibson.Tom@epamail.epa.gov%internet;
Brenner.Rob@epamail.epa.gov%internet
Subject: DRAFT Energy efficiency recommendation

Andrew,

-----------------------------
Jeremy Symons
EPA, Office of Air and Radiation
(202) 564-9301
Fax: (202) 501-0394
Here is the draft of the "Impediments" paper as we discussed.

Bob Porter

<< File: impediments.wpd >>
From: Anderson, Margot  
Sent: Friday, March 30, 2001 3:03 PM  
To: Braitsch, Jay  
Subject: FW: Hydraulic Fracturing: Status and Background Information

Jay, Not sure you or your FE guys got this.

---Original Message---
From: Symons.Jeremy@epamail.epa.gov
Sent: Friday, March 30, 2001 2:41 PM  
To: Anderson, Margot; Terry, Tracy; Karen.Y_Knutson@OVP.EOP.Gov; Gibson.Tom@epamail.epa.gov; Brenner.Rob@epamail.epa.gov; Osinski.Michael@epamail.epa.gov
Subject: Hydraulic Fracturing: Status and Background Information

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

3092  
DOE006-0452
From: Symons.Jeremy@epamail.epa.gov%internet [Symons.Jeremy@epamail.epa.gov]
Sent: Monday, March 05, 2001 5:27 PM
To: Anderson, Margot
Subject: chap7 comments

And comments on renewables chapter.

Thanks.

See you tomorrow.

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

--- Forwarded by Jeremy Symons/DC/USEPA/US on 03/05/2001 05:26 PM ---

Kathleen Hogan
03/05/2001 05:17 PM

To: Jeremy Symons/DC/USEPA/US@EPA
cc: 
Subject: chap7 comments
And comments on renewables chapter.

Thanks.

See you tomorrow.

Jeremy Symons
EPA, Office of Air and Radiation
(202) 564 9301
Fax: (202) 501 0394
Nancy, did you send the pictures electronically? Do you have copies for Margo.

Can you cc me on files you sent the WH (NEP with pictures). I am trying to finalize Agency comments and want to make sure I see where the photos are going. Thanks much.

Margot
These look different, not having the 3D effect and all. I hope this is not a problem.
Joe,

What's the NEP schedule for today? Do you need me to go to the 11:00? I figure you are going with S1 to the 10:00. We have a 3:00 here (in 7B-040) to go over the policy options. We have a 4:00 Tuesday to go over the remaining DOE chapters. I don't think we have had any comments on them in over 10 days but I am still checking.

Margot
And comments on renewables chapter.

Thanks.

See you tomorrow.

Jeremy Symons
EPA, Office of Air and Radiation
(202) 564-9301
Fax: (202) 501-0394
And comments on renewables chapter.

Thanks.

See you tomorrow.

-----------------------------------------------------------------
Jeremy Symons
EPA, Office of Air and Radiation
(202) 564-9301
Fax: (202) 501-0394
From: Kelliher, Joseph
Sent: Wednesday, March 07, 2001 8:26 AM
To: Anderson, Margot
Subject: 9:15 meeting
Margot,

Paula is in Sacramento, en route to Salt Lake City. She'll be back in the office on Friday.

I gave her your message over the phone, and her question to you is, What are the time requirements? We (Paula and her staff) can work this over the phone (fax her notes to the hotel, where Paula can write up something this evening, ready for you early Thursday) or, if it can wait until Friday, she can respond when she returns. What's your preference?

Ceil Rogers
U.S. Department of Energy
Office of Critical Infrastructure Protection (SO-50)
1000 Independence Ave, SW
Washington, DC 20585
(202) 586-5137

---Original Message---
From: Anderson, Margot
Sent: Tuesday, March 06, 2001 4:24 PM
To: Scali, Paula
Subject: NEP goals

Paul,

Margot
thanks Margot for the improvements to the talking points and then forwarding them
Margot: yes, you do have the process down right. And I will put you guys (DOE) down for 4:00 on Tuesday. Please e-mail us by Friday afternoon the most recent version of your chapters incorporating any comments received since initially drafted so we can distribute them to the other agencies prior to the Tuesday meeting.

Thanks.
Here are some potential BPA pieces of the puzzle.

> ——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

> <<Policy Options_Infrastructure.doc>>
> Options_Fedl_Hydro.doc
> Options_Conservation.doc
> Options_Renewables.doc
> Options_DistGen.doc
> Options_RTO.doc
When I get an opening, I will pursue your question with him.

----- Original Message -----  
From: Anderson, Margot  
Sent: Thursday, April 12, 2001 12:38 PM  
To: Kripowicz, Robert  
Cc: Braitsch, Jay  
Subject: RE: Climate change  

Bob K,

Whoops. Correction Bob Kane is on the climate group.

Margot

----- Original Message -----  
From: Anderson, Margot  
Sent: Thursday, April 12, 2001 12:33 PM  
To: Kripowicz, Robert  
Cc: Bradley, Richard; Braitsch, Jay  
Subject: FW: Climate change  
Importance: High  

Bob.
From: Kelliher, Joseph
Sent: Sunday, March 11, 2001 1:16 PM
To: Haspel, Abe; Zimmerman, MaryBeth
Cc: Anderson, Margot
Subject: distributed generation demonstration project
Margot

---Original Message---
From: KYDES, ANDY
Sent: Wednesday, April 11, 2001 8:23 PM
To: Anderson, Margot
Cc: HUTZLER, MARY
Subject: RE: need your help

Margot:

Andy

---Original Message---
From: Margot Anderson_at_HQ-EXCH at X400PO
Sent: Wednesday, April 11, 2001 4:16 PM
To: Kydes, Andy
Subject: need your help

Andy,

Thanks.
<table>
<thead>
<tr>
<th>Martin, Adrienne</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>From:</strong> Anderson, Margot</td>
</tr>
<tr>
<td><strong>Sent:</strong> Wednesday, April 11, 2001 4:16 PM</td>
</tr>
<tr>
<td><strong>To:</strong> KYDES, ANDY</td>
</tr>
<tr>
<td><strong>Subject:</strong> need your help</td>
</tr>
</tbody>
</table>

Andy,  

Thanks.  

Margot
From: Keliher, Joseph
Sent: Tuesday, March 13, 2001 11:19 AM
To: Anderson, Margot
Subject: RE: 3/15 testimony

---Original Message---
From: Anderson, Margot
Sent: Tuesday, March 13, 2001 10:58 AM
To: Keliher, Joseph
Subject: 3/15 testimony

Joe
Jean,

The latest version which I think was discussed yesterday at the principal's meeting. I think it's okay to share around but not widely.

Margot

[Attachment: PERMITTING RECOMMENDATION.doc]
Bob,

Margot

---Original Message---
From: Kripowicz, Robert
Sent: Thursday, April 12, 2001 12:01 PM
To: Kolevar, Kevin
Cc: Anderson, Margot; Braitsch, Jay; Carter, Douglas
Subject: Climate change
Importance: High

GMC recommendations
Bob,

A draft of chapter 8 which deals with barriers and challenges to increasing energy supply (does not discuss policy options). This has been shipped out to other Federal agencies on the Task Force for their review. It should not be cited or quoted or distributed. This caveat is indicated on the document. Comments welcome by COB 4/13. Thanks for coordinating. Please acknowledge receipt. My e-mail is acting up.

Margot
Margot,

0313 power plant
impacts-rev.d...
here is Barry's fix for the sentence (#11)

William Breed
Acting Director, Office of Energy Efficiency,
Alternative Fuels, and Oil Analysis (PO-22)
202-586-4763

----- Original Message ----- 
From: McNutt Barry 
Sent: Wednesday, April 25, 2001 1:47 PM 
To: Breed, William 
Subject: Chapter One Assignments.doc---- revised sentences in attachment 

Chapter One Assignments.doc

1

3143

DOE007-0036
From: William_Bettenberg@ios.doi.gov
Sent: Friday, April 13, 2001 4:02 PM
To: Anderson, Margot; geraldine.gerardi@do.treas.gov; Pete_Culp@blm.gov
Cc: Theodore_Heintz@ios.doi.gov
Subject: two tax proposals to encourage enhance production [Virus checked]

(See attached file: twotaxoptions.doc)
Margot -
Martin, Adrienne

From: Tom Kimbis  
Sent: Monday, April 23, 2001 6:14 PM  
To: Anderson, Margot  
Cc: Zimmerman, MaryBeth  
Subject: production note

Hi
Margot -

---Original Message---
From:  Anderson, Margot
Sent:  Friday, April 20, 2001 12:36 PM
To:    Vemet, Jean
Cc:    Carter, Douglas; Conti, John; Kelliher, Joseph
Subject:  RE: NSR

<< File: env't chapter 2-21.wpd >> << File: March 27 DOE comments Chapter 4.doc >>

The last version plus our comments. I have seen no later interactions. Technical editor should be working on it. I'll see if I can get a more recent version. This one is pretty thin.

---Original Message---
From:  Vemet, Jean
Sent:  Friday, April 20, 2001 11:36 AM
To:    Anderson, Margot
Cc:    Carter, Douglas; Conti, John
Subject:  RE: NSR

3. I'm out of town noon today until noon Tuesday, and suggested to Joe that Doug Carter was an NSR and WEPCO expert.

4. Joe said you had the latest environment chapter, and could share it with me (it's difficult to discuss issues with EPA when you haven't seen any version more current than the first.) Thanks.

Jean

--- Original Message ---
From: Anderson, Margot
Sent: Friday, April 20, 2001 9:15 AM
To: Vemet, Jean
Subject: RE: NSR

Thanks. I won't be there. I am swamped with WH orders for the NEP. I called Joe to tell him. Unless he insists, I am tying myself to my computer.

--- Original Message ---
From: Vemet, Jean
Sent: Friday, April 20, 2001 8:55 AM
To: Anderson, Margot
Subject: RE: NSR

See you then.

--- Original Message ---
From: Anderson, Margot
Sent: Friday, April 20, 2001 8:42 AM
To: Vemet, Jean
Subject: RE: NSR

Nope. Just Joe's note.

--- Original Message ---
From: Vemet, Jean
Sent: Friday, April 20, 2001 8:37 AM
To: Anderson, Margot
Subject: RE: NSR

Certainly. Do we have any more info?

--- Original Message ---
From: Anderson, Margot
Sent: Friday, April 20, 2001 8:35 AM
To: Vemet, Jean
Subject: RE: NSR

Can you attend the meeting in Joe's office at 10:00?

--- Original Message ---
From: Vemet, Jean
Sent: Friday, April 20, 2001 7:05 AM
To: Anderson, Margot
Subject: RE: NSR
Importance: High

I'm here.

--- Original Message ---
From: Anderson, Margot
Sent: Thursday, April 19, 2001 5:37 PM
To: Vemet, Jean
Subject: FW: NSR
Importance: High
Jean,

You going to be around in the morning?

Margot

---Original Message---
From: Keliher, Joseph
Sent: Thursday, April 19, 2001 5:35 PM
To: Anderson, Margot
Subject: NSR
Importance: High

Who is our smartest NSR person? Can you and that person (and it may well be you, be frank and admit it if that is the case) be in my office at 10 tomorrow for a conference call with our brothers at EPA on NSR? Let me know. They just called about this. Thanks.
Thanks. I held off sending you Chapter 8 suspecting a few more comments would be forthcoming. I am still waiting for some fixes based on Kripowicz questions, and expect to send you the final version in early afternoon.
We are all busy re-reading this. If you or any of your staff want to give it a quick lookover, I would welcome comments. The Access section is especially exciting.
Sorry, forgot to include you in my last response to Joe.

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

Joe,

Please let me know if you have additional questions.

--- Original Message ---
From: Kelliher, Joseph
Sent: Tuesday, April 17, 2001 1:38 PM
To: Venet, Jean
Cc: Anderson, Margot; Conli, John
Subject: RE: comments/revisions to EPA NSR background document
Importance: High
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, what are the "broader issues in NSR reform" that you reference?

---

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,

The piece provided refers to the latest versions of NEP sections and recommendations I have not seen.

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 >>
Joe,

Please let me know if you have additional questions.

Jean

Joe,

The piece provided refers to the latest versions of NEP sections and recommendations I have not seen.
The piece provided refers to the latest versions of NEP sections and recommendations I have not seen.

Jean

Jean E. Vemet
Office of Policy, PO-21
U.S. Department of Energy
202-586-4755
fax 202-586-5391
Bob

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

Attached is text for inclusion in the climate Science and Technology paper you are preparing (for Kevin?), I included both a Word and WPefect version (the same except Word likes 10pt font). Please call if you have questions.

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

[This email uses 100% recycled electrons.]
Ie.1 text boxes on cogen & CHP. These are written as real-world examples; please let us know if you want more/different with regard to including policy or technology information.

Status: transport items except hybrids call-out box delivered; hybrid coming. I'm checking on whether we can get you the Pulte piece.
From: MaryBeth Zimmerman
Sent: Friday, April 27, 2001 2:20 PM
To: Anderson, Margot
Cc: Ginsberg, Mark; Dion, Jerry; Pollock, Edward; Talbott, John; Baldwin, Sam
Subject: Pulte callout

Pu.Ii-
EP
4-27
a

DOE007-0115
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).
Got some comments from staff. I did a little more editing and took out some suggestions.

Dave
Hybrid Vehicle Text Box

Here is some proposed wording
Sorry for the delay. What is your reaction to this? Please advise. Thanks.

-----Original Message-----
From: Schmidt.Lorie@epamail.epa.gov%internet
[mailto:Schmidt.Lorie@epamail.epa.gov]
Sent: Tuesday, April 24, 2001 12:08 PM
To: Kelliher, Joseph
Cc: Stevenson, Beverley
Subject: NEPD Recommendations

Joe

This is a follow-up to your call last Friday with Rob Brenner, Tom Gibson, and me. Attached is the write up of all of the NSR-related recommendations that EPA believes should be in the NEPD report. If we need to discuss this at a principle's meeting, we would anticipate circulating this plus the NSR background piece that was previously circulated. However, we continue to believe that NSR was appropriately addressed in a previous principle’s meeting.

I believe that Tom and Rob will want to talk to you about this again -- I think we are trying to set up something for Wednesday or Thursday.

I didn’t catch Jean’s last name, so could you please forward this to her?

Thanks,

Lorie Schmidt
564-1681

(See attached file: nsr rec 4-24.wpd)
Martin, Adrienne

From: KYDES, ANDY
Sent: Wednesday, April 25, 2001 8:05 PM
To: Anderson, Margot
Cc: HUTZLER, MARY; PETTIS, LARRY; HOLTE, SUSAN; SITZER, SCOTT; KENDELL, JAMES; COSTELLO, DAVE; KYDES, ANDY
Subject: RE: NEP help on Chapter 1

-----Original Message-----
From: Margot Anderson at HO-EXCH at X400PO
Sent: Wednesday, April 25, 2001 8:42 AM
To: Kydes, Andy
Subject: RE: NEP help on Chapter 1

thanks.

-----Original Message-----
From: KYDES, ANDY
Sent: Wednesday, April 25, 2001 11:23 AM
To: Anderson, Margot
Subject: RE: NEP help on Chapter 1

Yes

-----Original Message-----
Jean and Barry,

From Joe Kelliher: Very fast turnaround one-pagers on two NEP issues, NSR 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
[mailto:Schmidt.Lorie@epamail.epa.gov]
Sent: Monday, April 16, 2001 7:14 PM
To: Kelliher, Joseph; Symons.Jeremy@epamail.epa.gov; Moss.Jacob@epamail.epa.gov; Gibson.Tom@epamail.epa.gov; Spencer.Susan@epamail.epa.gov
Subject: For Review

For review by USDA and DOE, here is the piece on RFG and boutique fuels:
(See attached file: boutique 4-16 01.wpd)

For review by DOE, here's the additional background piece on NSR:
(See attached file: nsr back 4-16.wpd)
Joe,

Margot

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

Lorie

"Vemet, Jean"
[Jean.Vemet@hq.doe.gov]
To: Lorie Schmidt/DC/U.S.EPA/US@EPA
[q.doe.gov]
cc: "Anderson, Margot"
[Margol.Anderson@hq.doe.gov]
04/17/2001 09:05 AM

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.

Jean
Martin, Adrienne

From: Anderson, Margot
Sent: Tuesday, April 17, 2001 12:24 PM
To: Braitsch, Jay
Subject: FW: chapter 8 – hydropower language [Virus checked]

Wait, there's more..........Sorry, Jay

Margot

---Original Message---
From: William Bettenberg@ios.doi.gov
Sent: Tuesday, April 17, 2001 11:48 AM
To: Anderson, Margot
Cc: Knurphy@osec.doc.gov; Charles_M_Smith@ovp.eop.gov
Subject: RE: chapter 8 – hydropower language [Virus checked]

(See attached file: en010416.hydropower narrative for chapter 8.wpd)
Faxing to Jeremy.

---Original Message---
From: Moss.Jacob@epamail.epa.gov%internet
[mailto:Moss.Jacob@epamail.epa.gov]
Sent: Tuesday, April 17, 2001 2:42 PM
To: Anderson, Margot
Subject: RE: For Review

Margot, I believe you forgot the attachment. - Jacob

--- Forwarded by Jacob Moss/DC/USEPA/US on 04/17/01 02:41 PM ---

Jeremy Symons
To: Jacob Moss/DC/USEPA/US@EPA, Don Zinger/DC/USEPA/US@EPA
04/17/01 02:33 PM
Subject: RE: For Review

--- Forwarded by Jeremy Symons/DC/USEPA/US on 04/17/2001 02:33 PM ---

"Anderson, Margot"
Margot.Anderson@hq.doe.gov
To: Jeremy Symons/DC/USEPA/US@EPA, "Kelliher, Joseph"<Joseph.Kelliher@hq.doe.gov>
04/17/2001 02:24
Subject: RE: For Review

Margot

---Original Message---
From: Symons.Jeremy@epamail.epa.gov%internet
[mailto:Symons.Jeremy@epamail.epa.gov]
Sent: Tuesday, April 17, 2001 9:15 AM
To: Kelliher, Joseph, Anderson, Margot
Subject: For Review

Margot/Joe,

You should have received last night the NSR and RFG pieces. Can we please
see the restructuring piece you developed to help us prep the Administrator. Thanks.

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

--- Forwarded by Jeremy Symons/DC/USEPA/US on 04/17/2001 09:13 AM ---

Lorie Schmidt
To: Joseph.Kelliher@hq.doe.gov
04/16/2001     cc: Jeremy Symons/DC/USEPA/US@EPA, Jacob
07:14 PM    Moss/DC/USEPA/US@EPA, Tom Gibson/DC/USEPA/US@EPA,
Susan Spencer/DC/USEPA/US@EPA
Subject: For Review

For review by USDA and DOE, here is the piece on RFG and boutique fuels:
(See attached file: boutique 4 16 01.wpd)

For review by DOE, here's the additional background piece on NSR:
(See attached file: nsr back 4-15.wpd)
(See attached file: altzkta.dat)

3492
DOE007-0385
Martin, Adrienne

From: Anderson, Margot
Sent: Tuesday, April 17, 2001 3:02 PM
To: Symons.Jeremy@epamail.epa.gov%internet
Subject: RE: For Review

On its way.

---Original Message---
From: Symons.Jeremy@epamail.epa.gov%internet
[mailto:Symons.Jeremy@epamail.epa.gov]
Sent: Tuesday, April 17, 2001 2:42 PM
To: Anderson, Margot
Cc: McNutt, Barry; Kelliher, Joseph
Subject: RE: For Review

Margot,

Thanks.

Unfortunately, no attachment comes through.

can you please fax to 501-0394.

Jeremy

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

"Anderson, Margot"
<Margot.Anderson@hq.doe.gov>
To: Jeremy Symons/DC/USEPA/US@EPA, "Kelliher, Joseph" <Joseph.Kelliher@hq.doe.gov>
cc: "McNutt, Barry" <Barry.McNUTT@hq.doe.gov>
04/17/2001 02:24

Jeremy,

Margot

---Original Message---
From: Symons.Jeremy@epamail.epa.gov%internet
[mailto:Symons.Jeremy@epamail.epa.gov]
Sent: Tuesday, April 17, 2001 9:15 AM
To: Kelliher, Joseph; Anderson, Margot
Subject: For Review

Margot/Joe,

You should have received last night the NSR and RFG pieces. Can we please see the restructuring piece you developed to help us prep the Administrator. Thanks.

Jeremy
Martin, Adrienne

From: Anderson, Margot
Sent: Tuesday, April 17, 2001 2:24 PM
To: Symons.Jeremy@epamail.epa.gov; Kelliher, Joseph
Cc: McNutt, Barry
Subject: RE: For Review

Jeremy,

Margot

--- Original Message ---
From: Symons.Jeremy@epamail.epa.gov
Sent: Tuesday, April 17, 2001 9:15 AM
To: Kelliher, Joseph; Anderson, Margot
Subject: For Review

Margot/Joe,

You should have received last night the NSR and RFG pieces. Can we please
see the restructuring piece you developed to help us prep the
Administrator. Thanks.

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

--- Forwarded by Jeremy Symons/DC/USEPA/US on 04/17/2001 09:13 AM ---

Lorie Schmidt
To: Joseph.Kelliher@hq.doe.gov
04/16/2001 07:14 PM
cc: Jeremy Symons/DC/USEPA/US@EPA, Jacob
Moss/DC/USEPA/US@EPA, Tom Gibson/DC/USEPA/US@EPA,
Susan Spencer/DC/USEPA/US@EPA
Subject: For Review

For review by USDA and DOE, here is the piece on RFG and boutique fuels:
(See attached file: boutique 4 16 01.wpd)

For review by DOE, here's the additional background piece on NSR:
(See attached file: nsr back 4-16.wpd)
From: Anderson, Margot
Sent: Wednesday, April 18, 2001 4:54 PM
To: Braitsch, Jay
Subject: chapter 8 figures and graphics

Jay,

These are the figures and graphics that went over for chapter 8 but I think the editor stripped out the figure names so I no longer know which one is figure 3 or 4, etc. Figures and graphics are not to be confused with photos (I do not have the final list of photos you sent over after our conversation two weeks ago Friday).

Margot

[Attached file: chapter 8 graphics, March 24 p...]

3497

DOE007-0390
Charlie and Joan,

Revised chapter 7 (Joan's base plus comments received). Needs another Joan pass. Answers to Joan's comments are attached. I'll be sending over revised (by request) graphics. However, the WORD file maps requested by Joan are attached.

notes to charlie and joan.doc  chapter 7 with JOC edits.DOC  Renewable Energy Maps in a sec...
From: Anderson, Margot
Sent: Thursday, April 19, 2001 4:08 PM
To: Bratsch, Jay
Subject: FW: Chapter 8

My comments are incorporated (highlighted text) in the attached file.

File: ch 8 April 18 w DOI w TECCEA QPA co...

Ed and Barry (you are acting, right)

Margot

We are all busy re-reading this. If you or any of your staff want to give it a quick logover, I would welcome comments.

<< File: ch 8 April 18, w DOI, CEA, EPA comments.doc >>
Martin, Adrienne

From: Anderson, Margot
Sent: Thursday, April 19, 2001 2:45 PM
To: Braitsch, Jay
Cc: Watts, Edward
Subject: RE: Chapter 8

Jay,

Ed Watts took a quick look.

Margot

---Original Message---
From: Watts, Edward
Sent: Thursday, April 19, 2001 2:43 PM
To: Anderson, Margot
Subject: RE: Chapter 8

My comments are incorporated (highlighted text) in the attached file.
<< File: ch 8 April 18 w DOI CEA EPA comments2.doc >>

---Original Message---
From: Anderson, Margot
Sent: Thursday, April 19, 2001 12:47 PM
To: McNutt, Barry; Watts, Edward
Cc: Breed, William; Conti, John
Subject: FW: Chapter 8
Importance: High

Ed and Barry (you are acting, right)

Margot

---Original Message---
From: Braitsch, Jay
Sent: Thursday, April 19, 2001 12:44 PM
To: Anderson, Margot
Subject: Chapter 8
Importance: High

We are all busy re-reading this. If you or any of your staff want to give it a quick lookover, I would welcome comments.

<< File: ch 8 April 18, w DOI, CEA, EPA comments.doc >>
From: Anderson, Margot  
Sent: Thursday, April 19, 2001 11:55 AM  
To: York, Michael  
Subject: FW: renewable energy/biomass

Margot

--- Original Message ---
From: Kliher, Joseph  
Sent: Wednesday, April 18, 2001 5:16 PM  
To: O'Donovan, Kevin; Anderson, Margot; Haspel, Abe; Zimmerman, MaryBeth  
Subject: renewable energy/biomass
Ed and Barry (you are acting, right)
Margot

—Original Message—

From: Bratsch, Jay
Sent: Thursday, April 19, 2001 12:44 PM
To: Anderson, Margot
Subject: Chapter 8
Importance: High

We are all busy re-reading this. If you or any of your staff want to give it a quick lookover, I would welcome comments.

<< File: ch 8 April 18, w DOI, CEA, EPA comments.doc >>
Thanks. This chapter is ancient (well over two months old). We sent in comments several weeks ago (FE's were included). I would wait and see what the next version looks like, although I am not confident it will address all your concerns. I'll ask the WH where chapter 4 stands.

Margot

---Original Message---
From: Carter, Douglas
Sent: Friday, April 20, 2001 1:15 PM
To: Anderson, Margot; Vemet, Jean; Kripowicz, Robert
Cc: Conti, John; Kelliher, Joseph
Subject: RE: NSR

Margot -

---Original Message---
From: Anderson, Margot
Sent: Friday, April 20, 2001 12:36 PM
To: Vemet, Jean
Cc: Carter, Douglas; Conti, John; Kelliher, Joseph
Subject: RE: NSR

<< File: env't chapter 2-21.wpd >> << File: March 27 DOE comments Chapter 4.doc >>

The last version plus our comments. I have seen no later interactions. Technical editor should be working on it. I'll see if I can get a more recent version. This one is pretty thin.

---Original Message---
From: Vemet, Jean
Sent: Friday, April 20, 2001 11:36 AM
To: Anderson, Margot
Cc: Carter, Douglas; Conti, John
Subject: RE: NSR

Jean

---Original Message---
From: Anderson, Margot
Sent: Friday, April 20, 2001 9:15 AM
To: Venet, Jean
Subject: RE: NSR

Thanks. I won't be there. I am swamped with WH orders for the NEP. I called Joe to tell him. Unless he insists, I am tying myself to my computer.

---Original Message---
From: Venet, Jean
Sent: Friday, April 20, 2001 8:55 AM
To: Anderson, Margot
Subject: RE: NSR

See you then.

---Original Message---
From: Anderson, Margot
Sent: Friday, April 20, 2001 8:42 AM
To: Venet, Jean
Subject: RE: NSR

Nope. Just Joe's note.

---Original Message---
From: Venet, Jean
Sent: Friday, April 20, 2001 8:37 AM
To: Anderson, Margot
Subject: RE: NSR

Certainly. Do we have any more info?

---Original Message---
From: Anderson, Margot
Sent: Friday, April 20, 2001 8:35 AM
To: Venet, Jean
Subject: RE: NSR

Can you attend the meeting in Joe's office at 10:00?
I'm here.

---

---Original Message---
From: Andesot, Margot
Sent: Thursday, April 19, 2001 5:37 PM
To: Vemet, Jean
Subject: FW: NSR
Importance: High

Jean,

You going to be around in the morning?

Margot

---Original Message---
From: Kellther, Joseph
Sent: Thursday, April 19, 2001 5:35 PM
To: Andesot, Margot
Subject: NSR
Importance: High

Who is our smartest NSR person? Can you and that person (and it may well be you, be frank and admit it if that is the case) be in my office at 10 tomorrow for a conference call with our brothers at EPA on NSR? Let me know. They just called about this. Thanks.
Tom,

Margot

---Original Message---
From: Tom Kimbis
Sent: Tuesday, April 24, 2001 11:26 AM
To: Anderson, Margot
Cc: Zimmerman, MaryBeth
Subject: RE: production note

Margot

Margot Anderson@HQMAIL on 04/24/2001 11:04:28 AM
To: Tom Kimbis/EE/DOE@DOE@HQMAIL
Cc: MaryBeth Zimmerman/EE/DOE@DOE@HQMAIL
Subject: RE: production note

Tom,

Margot

-----Original Message-----
From: Tom Kimbis
Sent: Monday, April 23, 2001 6:14 PM
To: Anderson, Margot
Cc: Zimmerman, MaryBeth
Subject: production note

Hi
Martin, Adrienne

From: Anderson, Margot
Sent: Tuesday, April 24, 2001 11:04 AM
To: Kimbis, Tom
Cc: Zimmerman, MaryBeth
Subject: RE: production note

Tom,

Margot

——Original Message——
From: Tom Kimbis
Sent: Monday, April 23, 2001 6:14 PM
To: Anderson, Margot
Cc: Zimmerman, MaryBeth
Subject: production note

Hi
From: Shages, John
Sent: Wednesday, March 14, 2001 12:27 PM
To: Anderson, Margot
Cc: Furiga, Richard; Braltsch, Jay
Subject: NEP 2 pagers on SPR
From: Anderson, Margot
Sent: Monday, April 30, 2001 4:46 PM
To: Zimmerman, MaryBeth
Subject: RE: Technology climate piece

MB,

You need to send directly to Kevin. Not clear to me what the next steps are on this.

Margot

---Original Message---
From: MaryBeth Zimmerman
Sent: Monday, April 30, 2001 4:41 PM
To: Anderson, Margot
Cc: Hassel, Abe; Garland, Buddy; Baldwin, Sam
Subject: Technology climate piece
Hi Margot -

Unfortunately I have a conflict and won't be able to make the meeting in the morning for the remaining DOE chapters. I do have a few very minor additions/comments.

Thanks for considering these. I'll call you to follow up. Good luck at the meeting...

-Kevin
From: Anderson, Margot
Sent: Thursday, May 03, 2001 12:10 PM
To: Zimmerman, MaryBeth
Subject: RE: climate questions

Thank you Mary Beth. You holding up down there?

---

Original Message---

From: MaryBeth Zimmerman
Sent: Thursday, May 03, 2001 12:08 PM
To: kieger,jackie@epa.gov@DOE%HQ-NOTES
Cc: Anderson, Margot; Mansuet, Lawrence; Pollock, Edward; Haspel, Abe; York, Michael; Tseng, Philip
Subject: Re: climate questions

Here are our very quick write-ups to meet your noon deadline. Given the quick turn around time, I have not had the opportunity to confirm this information with our program managers. I will pass on any comments I receive from them.

Mary Beth (202/586-7249)
Mary Beth,

For the report you were working on last week (climate initiatives), WH/EPA called looking for:

1 separate para on efficiency standards (not subsumed under building programs)

More complete para on buildings programs that makes it clear what type of program this is (research, grants?)

Also, is the Climate Challenge program still alive?

Need by noon if possible.

Send directly to Jackie Krieger at krieger.jackie@epa.gov

Thanks,

Margot
Martin, Adrienne

From: Anderson, Margot
Sent: Thursday, May 03, 2001 5:00 PM
To: Kimbis, Tom
Subject: RE: Revisions to Renewables Chapter

---Original Message---
From: Tom Kimbis
Sent: Thursday, May 03, 2001 2:11 PM
To: Anderson, Margot
Cc: Mansueti, Lawrence; York, Michael; Zimmerman, MaryBeth; Tseng, Phillip
Subject: RE: Revisions to Renewables Chapter

No problem. This was a team effort by everyone cc:d on the email...

---Original Message---
From: Tom Kimbis
Sent: Thursday, May 03, 2001 1:50 PM
To: Anderson, Margot
Cc: Mansueti, Lawrence; York, Michael; Zimmerman, MaryBeth; Tseng, Phillip
Subject: Revisions to Renewables Chapter
Importance: High

Margot Anderson@HQMAIL on 05/03/2001 01:53:18 PM
To: Tom Kimbis/EE/DOE@DOE@HQMAIL
cc: Lawrence Mansueti/EE/DOE@DOE@HQMAIL, Michael York/EE/DOE@DOE@HQMAIL, MaryBeth Zimmerman/EE/DOE@DOE@HQMAIL, Phillip Tseng/EE/DOE@DOE@HQMAIL
Subject: RE: Revisions to Renewables Chapter

Thanks, Tom. Much appreciate your hard work.

-----Original Message-----
From: Tom Kimbis
Sent: Thursday, May 03, 2001 1:50 PM
To: Anderson, Margot
Cc: Mansueti, Lawrence; York, Michael; Zimmerman, MaryBeth; Tseng, Phillip
Subject: Revisions to Renewables Chapter

Margot:

Here are the corrections that we spoke about (and two that we didn't) for the renewables chapter. (Page and line numbers refer to the combined EIA/EERE document)
Let me know if you have any further questions.

Tom

586.9264
586.7055 - vm

<< File: CHP schematic.ppt >>
Jay Braitsch and Doug Carter will be out on Thursday and Friday so if you need assistance, call me 202-586-6458. Best regards.

Postscript: You may have a separate e-mail from John Shages/Rick Furiga raising possible concerns about at least one SPR paper.
Here are edits to most of the remaining FE papers.

Sequest FE 3-8-01.doc  Power Incentives FE 3-8-01.doc  PowerplantDemo FE 3-8-01.doc  4Pollutant FE 3-8-01.doc
yep.

-----Original Message-----
From: MaryBeth Zimmerman
Sent: Monday, May 07, 2001 11:25 AM
To: Anderson, Margot
Cc: Friedrichs, Mark
Subject: RE: bullets

Margot

-----Original Message-----
From: Friedrichs, Mark
Sent: Monday, May 07, 2001 10:39 AM
To: Zimmerman, MaryBeth; Anderson, Margot; Rypinski, Arthur
Subject: FW: bullets
Importance: High

This is what went. It included that one bullet I added at the last second in the first section.

Let's try for something better 1 pm. Can we have a brown bag together at noon in my office or in our conference room?
-----Original Message-----
From: Friedrichs, Mark
Sent: Monday, May 07, 2001 10:34 AM
To: McMonigle, Joe; Kolevar, Kevin
Subject: PW: bullets
Importance: High

This is the best we can do by 10:30; we will continue be working on a slightly expanded version, that will include macroeconomic impacts.

-----Original Message-----
From: MaryBeth Zimmerman
Sent: Monday, May 07, 2001 10:24 AM
To: Friedrichs, Mark
Subject: bullets
Importance: High

<< File: 1 pger for WH.doc >>

3585
DOE007-0478
This just in from Trevor. Belongs in chapter 5. Can you add? Number 73.

--- Original Message ---
From:        Cook, Trevor
Sent:        Monday, May 07, 2001 3:26 PM
To:          Anderson, Margot
Subject:     an additional fact not checked on friday

its in bright pink... the only pink text in the file. No. 73.
From: Anderson, Margot  
Sent: Tuesday, May 08, 2001 11:21 AM  
To: Braitsch, Jay; Freitas, Christopher; Conti, John; Breed, William; KYDES, ANDY  
Subject: DOT request for Infrastructure chapter  

Importance: High  
Sensitivity: Confidential  

Lot. Man Q1zst J0  
J0n  
7.DOC  

Jay and John,  

I have now officially gone crazy. This just in from DOT asking for help on their Infrastructure chapter. EIA sent in some citations yesterday but DOT needs more, specifically to #1, 3, 44-45, 69-86. I know longer know who wrote what. Can we help? 69-86 are on electricity.  

Let each of us know (by responding to all) which questions you can do, so we don't duplicate effort.

Margot  

—— Original Message ——  

From: Poche, Michelle (mailto:Michelle.Poche@ost.dot.gov)  
Sent: Tuesday, May 08, 2001 10:55 AM  
To: Anderson, Margot; Lawson, Linda; Joost, Elaine (060)RSPA(062); Brigham, Edward (060)RSPA(062); Joost, Elaine (060)RSPA(062); Kellar, Joseph; Moss, Jacob(a)epamail.epa.gov; Murphy(a)osec.doc.gov; Ebersold, Bill (060)MARAD(062); Brown, Manson CAPT(060)USCG(062); Tom(u)Fulton(a)OS.DOI.gov'; 'Sue(u)Ellen(u)Wooldridge(a)OS.DOI.gov';  
Cc: 'Elena(u)S.(u)Melchert(a)ovp.eop.gov'  

Subject: URGENT: National Energy Policy: citations request  
Importance: High  
Sensitivity: Confidential  

URGENT - DEADLINE 3:00 PM TODAY  

Per message below from Office of the Vice President, we need citations to support the statements being developed for the National Energy Policy Report.  

Please provide your information directly to Elena Melchert's email address (see below) with a cc to michelle.poche@ost.dot.gov and linda.lawson@ost.dot.gov  

Margot/Joe (DOE): I understand you already addressed #31-43. Please also address #1, 3, 44-45, 69-86. I assume you might want to coordinate some of those w/EPA, so I've included Jacob Moss on the list of addressees for this email as well.  
Ed/Elaine (OPS): Please address #4, and 6-30.  
Jeanne (FRA/DOT): Please address #5, and 64-68.  
Manson and Bill (USCG/MARAD): Please address #46-63.  
Tom/Sue Ellen (DOI): Please address #88-91.  
Kevin (DOC): Please address #93-94.  

In addition to the attachment listing the numbered statements from which we are working, I am attaching a second document which is an old, outdated version of the chapter in question. This for the sole purpose of providing you with additional context, should you need it. However, keep in mind the statements you're working from reflect edits to the older document. Make no edits to the attachments. Send your citations separately, directly to Elena.  

As always, please treat this information as CONFIDENTIAL.  

Thanks,  
Michelle  

Michelle Poche  
Office of Secretary Norman Y. Mineta  

3593  

DOE007-0486
Michelle: Would you please provide citations for the facts in the attachment? There are almost 100 facts to cite. We want to pin down every fact we can with a specific reference. If in going through, your staff realizes that the fact needs to be corrected, please provide the correct information and the complete citation. If the fact cannot be cited, please so state. We need to know what we've got.

We need this soonest, so send what you have as you get it. No need to wait until the whole list is completed. I did receive cites for #31-43 from DOE.

Please call me if you have any questions.

Thanks for your help on this.

Elena

202/456-5348
Williams, Ronald L

From: Kelliher, Joseph
Sent: Wednesday, March 14, 2001 3:10 PM
To: Carrier, Paul
Cc: Anderson, Margot; Conti, John; Haspel, Abe; Zimmerman, MaryBeth; Mackey, James; DeLaTorre, Gene
Subject: RE: California questions
Importance: High

---Original Message---
From: Carrier, Paul
Sent: Monday, March 12, 2001 3:01 PM
To: Kelliher, Joseph
Cc: Anderson, Margot; Conti, John; Haspel, Abe; Zimmerman, MaryBeth; Mackey, James; DeLaTorre, Gene
Subject: RE: California questions
Importance: High

Joe,

---Original Message---
From: Conti, John
Sent: Monday, March 12, 2001 11:05 AM
To: Kelliher, Joseph; Haspel, Abe; Zimmerman, MaryBeth; Carrier, Paul
Cc: Anderson, Margot
Subject: RE: California questions

Joe.

Paul Carrier, 6-5659

---Original Message---
From: Conti, John
Sent: Monday, March 12, 2001 11:05 AM
To: Kelliher, Joseph; Haspel, Abe; Zimmerman, MaryBeth; Carrier, Paul
Cc: Anderson, Margot
Subject: RE: California questions

Joe.
---Original Message---
From: Keliher, Joseph
Sent: Sunday, March 11, 2001 11:48 AM
To: Haspel, Abe; Cond, John; Zimmerman, MaryBeth
Cc: Anderson, Margot
Subject: California questions
Importance: High
From: Kelliher, Joseph
Sent: Wednesday, March 14, 2001 3:18 PM
To: Zimmerman, MaryBeth
Cc: Conti, John; Haspel, Abe; Garland, Buddy; Sullivan, John; Anderson, Margot
Subject: RE: California questions

Importance: High

Original Message
From: MaryBeth Zimmerman
Sent: Tuesday, March 13, 2001 7:12 PM
To: Kelliher, Joseph
Cc: Conti, John; Haspel, Abe; Garland, Buddy; Sullivan, John
Subject: Re: California questions

Joseph Kelliher@HQMAIL on 03/11/2001 11:48:18 AM
To: Abe Haspel/EE/DOE@HQMAIL, MaryBeth Zimmerman/EE/DOE@HQMAIL, John Conti@HQMAIL
Cc: Margot Anderson@HQMAIL

Subject: California questions

I want to revisit a few matters we discussed a month ago, but did not wrap up:

1
Edits may be the death of me.

Pipeline Permitting FE
3-8-01.d.
Williams, Ronald L

From: Stier, Jeffrey K - KN-DC [kstier@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

Policy Options.DistGen.doc Policy Options.RTO.doc

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.Federal.Hydro.doc>>
> <<Policy Options.Conservation.doc>>
> <<Policy Options.Renewables.doc>>
> 
> <<Policy Options.DistGen.doc>>
> 
> <<Policy Options.RTO.doc>>
Thanks for this suggestion, which is a good one and we'd like to talk to you about it further. I've added some cc:s for the others we are dealing with on preparing these responses. Other thoughts appreciated.
Please get back in touch as soon as possible, and feel free to drop by at your convenience. Thanks.

-----Original Message-----
From: Kelliher, Joseph
Sent: Wednesday, March 14, 2001 3:16 PM
To: Zimmerman, MaryBeth
Cc: Conti, John; Haspel, Abe; Garland, Buddy; Sullivan, John; Anderson, Margot
Subject: RE: California questions
Importance: High

Our FEMP office has provided the following answers to your questions on Federal facilities power resources in California. Some of the attachments may be more information than you were looking for, but they provide context for the answers.

<< OLE Object: Picture (Device Independent Bitmap) >>
Joseph Kelliher@HQMAIL on 03/11/2001 11:48:18 AM
To: Abe Haspel/EE/DOE@DOE@HQMAIL, MaryBeth Zimmerman/EE/DOE@DOE@HQMAIL, John Conti@HQMAIL
From: MaryBeth Zimmerman
Sent: Friday, March 16, 2001 12:46 PM
To: Anderson, Margot
Cc: Haspel, Abe; Garland, Buddy; Baldwin, Sam; Sullivan, John
Subject: NEP 2 pagers

06 High Performance Buildings
07 Factories FINAL.doc
12 government purchasing
13 Consumer Information

15 Tech Assistance for Business
16 Reduce Truck Costs
24 integrated partnership

A start on our two-pagers. Unreviewed beyond me at the moment, but I wanted you to have something to work with. Have you gotten any other guidance as to structure of these documents?
From: Carrier, Paul
Sent: Friday, March 16, 2001 4:02 PM
To: Anderson, Margot
Subject: E-Files for NEP Options

Importance: High
From: Person, George
Sent: Friday, March 16, 2001 4:46 PM
To: Anderson, Margot
Cc: Hart, James; Ward, Gary; Lockwood, Andrea; Skeer, Jeff; Soliman, Moustafa; Price, Robert S; Gale, Barry; Angulo, Veronica; Pumphrey, David
Subject: FW: A new NEP Chapter 10

03-8-01 Steve's NEPb draft IN ...

Observations:

---Original Message---
From: Pumphrey, David
Sent: Wednesday, March 14, 2001 10:06 AM
To: Lockwood, Andrea; Person, George
Cc: Angulo, Veronica
Subject: FW: A new NEP Chapter 10

Can you guys review and get comments from others.

---Original Message---
From: Anderson, Margot
Sent: Tuesday, March 13, 2001 7:17 PM
To: Pumphrey, David; KYDES, ANDY; Bradley, Richard
Subject: A new NEP Chapter 10

David, Andy, and Rick,

A new version of the NEP chapter on international issues.

David: Can you get it reviewed by your folks (not sure who it should go to other than Jim, so I am sending to you).

I haven't looked at it so I don't know if they took our comments (PO, IA, and EIA).

By the end of the week would be good. Thank you.

Margot

---Original Message---
From: McManus, Matthew T [mailto:McManusMT@state.gov]
Sent: Tuesday, March 13, 2001 6:16 PM
To: 'John Fenzel, Task Force/Special Forces'; 'Kjersten Drager at OVP'
Cc: Anderson, Margot; 'Karen Knutson at OVP'
Subject: Version with Graphics
<<03-8-01 Steve's NEPD draft IN PROGRESS.doc>>  Just FYI, note some of the draft graphics we have placed into the text (same text, this one w graphics.) More to be suggested.
I'd like to have 6 graphics edited.
Paul,

Andy said he'd be giving you a heads up. Can you make the following changes in the attached graphics (note that titles might change ans we change the graphic period).

Thanks!

Margot
EIA.ppt
From: Anderson, Margot
Sent: Thursday, March 01, 2001 2:58 PM
To: Terry, Tracy
Subject: RE: california electricity demand

Thanks!

---Original Message---
From: Terry, Tracy
Sent: Thursday, March 01, 2001 2:54 PM
To: Anderson, Margot
Subject: california electricity demand

Tracy
<< File: cal_elec_demand.xls >>
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
Trevor,

Margot

---Original Message---
From: Cook. Trevor
Sent: Tuesday, March 06, 2001 10:02 AM
To: Anderson, Margot
Subject: RE: template

Here is a thought.

Trev.

---Original Message---
From: Anderson, Margot
Sent: Tuesday, March 06, 2001 9:33 AM
To: Cook. Trevor; Rehbein, Abe; Zimmerman, MaryBeth; Lockwood, Andrea; Breed, Patricia; Breed, William; Kydes, Andy; Whitney, Michael; Carter, Douglas; Bratsch, Jay; Helcht, Elena; Cook, Trevor; jsbber@bpa.gov
Cc: Keilker, Joseph

3702

DOE007-0595
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

---Original Message-----
From: Anderson, Margot
Sent: Monday, March 05, 2001 4:55 PM
To: Conti, John; Haspel, Abe; Zimmerman, MaryBeth; Lockwood, Andrea; Breed, Patricia; Breed, William; KYDES, ANDY; Whatley, Michael; Carter, Douglas; Braitsch, Jay; Melcher, Elena; Cook, Trevor; jostier@obpa.gov
Cc: Kelliher, Joseph
Subject: template

<< File: template for policy ideas.doc >>

All,

Comments, please.

Margot
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

--- Original Message ---
From: Anderson, Margot
Sent: Tuesday, March 06, 2001 9:33 AM
To: Confi, 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

--- Original Message ---
From: Anderson, Margot
Sent: Monday, March 05, 2001 4:56 PM
To: Confi, 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: template

<< File: template for policy ideas.doc >>

All,

Comments, please.
Dear Joe and Kevin,

Chapter 3 - 10: Can you meet with Andrew and Karen next week on Tuesday at 4:00 to discuss DOE's 3 chapters? I have latest versions, need to put in edits from other agencies and will send your way. Note to Bev - please put on Joe and Kevin's calendars.

Margot
Bob Kripowicz asked me for a quick review of EIA's December 2000 report on controlling SO2, NOx, and CO2 from power plants (EIA is doing mercury in a follow-on report). That review (1-page) is attached, fyi.

Bob asked that I share these views with you, given your likely involvement in future activities related to climate change and multi-pollutant strategies. Please call if you wish to discuss.

<< File: EIA-3Pol.wpd >>

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

[This email uses 100% recycled electrons.]
From: Anderson, Margot  
Sent: Thursday, March 08, 2001 3:09 PM  
To: Matthew T McManus (E-mail)  
Subject: FW: template

Another set from EIA. Call if questions. 586-2589.

--- Original Message ---
From: KYDES, ANDY  
Sent: Wednesday, March 07, 2001 12:58 PM  
To: Anderson, Margot  
Cc: Hart, James; PETTIS, LARRY; HUTZLER, MARY; KILGORE, CAL; CATO, DERRIEL; SITZER, SCOTT; KENDELL, JAMES; HOLTE, SUSAN; BENNECHE, JOSEPH; MARTIN, PHYLLIS; BUTLER, GEORGE; Gregory Priddy\%hq  
Subject: RE: template

Maront:

--- Original Message ---
From: Margot Anderson at HQ-EXCH at X400PO  
Sent: Tuesday, March 06, 2001 6:27 PM  
To: Kydes, Andy; Andrea Lockwood at HQ-EXCH at X400PO; William Breed at HQ-EXCH at X400PO; Michael Whatley at HQ-EXCH at X400PO; Douglas Carter at HQ-EXCH at X400PO; Jay Bradisch at HQ-EXCH at X400PO; Elena Melchert at HQ-EXCH at X400PO; TREVOR COOK at HQ-EXCH at X400PO; jkstier@bpa.gov at internet at X400PO; Abe Haspel at HQ-NOTES at X400PO; MaryBeth Zimmerman at HQ-NOTES at X400PO; Patricia Breed at HQ-NOTES at X400PO  
Cc: Joseph Kelliher at HQ-EXCH at X400PO  
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

---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; jksier@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

---Original Message---
From: Anderson, Margot
Sent: Monday, March 05, 2001 4:56 PM
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; jksier@bpa.gov
Cc: Kelliher, Joseph
Subject: template

<< File: template for policy ideas.doc >>

All,

Comments, please.

Margot
Another set from EIA. Call if questions. 586-2589.

---Original Message---
From: KYDES, ANDY
Sent: Wednesday, March 07, 2001 12:58 PM
To: Anderson, Margot
Cc: Hart, James; PETTIS, LARRY; HUTZLER, MARY; KILGORE, CAL; CATO; DERRIEL; SITZER, SCOTT; KENDELL, JAMES; HOLTE, SUSAN; BENNECHE, JOSEPH; MARTIN, PHYLLIS; BUTLER, GEORGE; Gregory Priddy%hq
Subject: RE: template

Margot:

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

---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; jksier@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

---Original Message---
From: Anderson, Margot
Sent: Monday, March 05, 2001 4:56 PM
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; jksier@bpa.gov
Cc: Kelliher, Joseph
Subject: template

<< File: template for policy ideas.doc >>

All,

Comments, please.

Margot
First set of EIA comments on chapter 10

---Original Message---
From: KYDES, ANDY
Sent: Thursday, March 08, 2001 11:31 AM
To: Anderson, Margot
Subject: FW: Chapter 10 revision

Margot,

An update to chapter 10 numbers and a correction       See note below.

Thanks. Andy

---Original Message---
From: Benneche, Joseph
Sent: Wednesday, March 07, 2001 8:28 PM
To: Kydes, Andy
Subject: Chapter 10 revision

Andy,

I made corrections on the already corrected version you already sent to Margot.
First set of EIA comments on chapter 10

---Original Message---
From: KYDES, ANDY
Sent: Thursday, March 08, 2001 11:31 AM
To: Anderson, Margot
Subject: FW: Chapter 10 revision

Margot,

An update to chapter 10 numbers and a correction. See note below.

Thanks.
Andy

---Original Message---
From: Benneche, Joseph
Sent: Wednesday, March 07, 2001 8:28 PM
To: Kydes, Andy
Subject: Chapter 10 revision

I made corrections on the already corrected version you already sent to Margot.

4
Martin, Adrienne

From: Anderson, Margot
Sent: Thursday, March 08, 2001 3:07 PM
To: "Matthew T McManus (E-mail)"
Subject: comments on your chapter

Matthew,

Under separate cover I am going to forward comments on chapter 10 from EIA. Am enclosing here comments we made earlier (2/25) which I am not sure you ever saw.

Margot
Thanks, I'll be anxiously waiting.

--- Original Message ---
From: McManus, Matthew T [mailto:McManusMT@state.gov]
Sent: Friday, March 09, 2001 10:09 AM
To: Anderson, Margot
Subject: Stand by for new direction of our chapter

Matthew,

Under separate cover I am going to forward comments on chapter 10 from EIA. Am enclosing here comments we made earlier (2/25) which I am not sure you ever saw:

<<DOE comments chapter 10.doc>>

Margot
Dear Paula,

Margot

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

---Original Message---
From: Scalingi, Paula
Sent: Friday, March 09, 2001 11:54 AM
To: Anderson, Margot
Subject: RE: NEP goals

Margot,

Hi. I'm back.

Paula

---Original Message---
From: Anderson, Margot
Sent: Friday, March 09, 2001 11:43 AM
To: Rogers, Cecelia
Cc: Scalingi, Paula
Subject: RE: NEP goals

Cecelia,

What I really need from Paula are her policy ideas. Due yesterday COB but reprieve granted until today. See 3745

DOE007-0638
e-mail a few days ago which explained this. Thanks! Call if questions. See new e-mail today about meeting on Monday to discuss.

Margot

---Original Message---
From: Rogers, Cecelia
Sent: Thursday, March 08, 2001 5:24 PM
To: Anderson, Margot
Cc: Scallingi, Paula; Kallher, Joseph
Subject: RE: NEP goals
Importance: High

Margot,
Here are Paula's notes:

She will be back in the office tomorrow.
Ceil

---Original Message---
From: Anderson, Margot
Sent: Tuesday, March 06, 2001 4:24 PM
To: Scallingi, Paula
Subject: NEP goals

Paul.

Margot
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

<< File: NEP Policy Issues.doc >> << File: template for policy ideas.doc >>

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
All,

Comments, please.

Margot
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; Melcher, Elena; Cook, Trevor;
jkstler@opa.gov; O'Donovan, Kevin; Kolevar, Kevin; Scalosi, Paula
Cc: Kelliher, Joseph
Subject: NEP Policy Options

All,
Paula,

Can I get a title for each of these? I am literally cutting and pasting dozens of these and need to see how you want to characterize them. I have 2-pagers for all the ones so far. If have more information, it would be most helpful. Thanks.

Margot

Cheers,
Paula
Margot

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

---Original Message---
From: Scalingi, Paula
Sent: Friday, March 09, 2001 11:54 AM
To: Anderson, Margot
Subject: RE: NEP goals

Margot,

Hi. I'm back.

Paula

---Original Message---
From: Anderson, Margot
Sent: Friday, March 09, 2001 11:43 AM
To: Rogers, Cecelia
Cc: Scalingi, Paula
Subject: RE: NEP goals

Cecelia,

What I really need from Paula are her Policy ideas. Due yesterday COB but reprieve granted until today. See e-mail a few days ago which explained this. Thanks! Call if questions. See new e-mail today about meeting on Monday to discuss.

Margot

---Original Message---
From: Rogers, Cecelia
Sent: Thursday, March 08, 2001 5:24 PM
To: Anderson, Margot
Cc: Scalingi, Paula; Kelliker, Joseph
Subject: RE: NEP goals
Margot,

Here are Paula's notes:

She will be back in the office tomorrow.

Cell

---Original Message---
From: Anderson, Margot
Sent: Tuesday, March 06, 2001 4:24 PM
To: Scali, Paula
Subject: NEP goals

Paula,

I lost my notes from yesterday and want to recreate your infrastructure goal. Can you provide some language on the primary goal and sub-goals that support it. Thanks.

Margot
David, Andy, and Rick,

A new version of the NEP chapter on international issues.

David: Can you get it reviewed by your folks (not sure who it should go to other than Jim, so I am sending to you).

I haven't looked at it so I don't know if they took our comments (PO, IA, and EIA).

By the end of the week would be good. Thank you.

Margot

---Original Message---
From: McManus, Matthew T [mailto:McManusMT@state.gov]
Sent: Tuesday, March 13, 2001 6:16 PM
To: 'John Fenzel, Task Force/Special Forces'; 'Kjerstan Drager at OVP'
Cc: Anderson, Margot; 'Karen Knutson at OVP'
Subject: Version with Graphics

<<03-8-01 Steve's NEPD draft IN PROGRESS.doc>> Just FYI, note some of the draft graphics we have placed into the text (same text, this one w graphics.) More to be suggested.
Helpful to use redline method if you can.
My apologies. Can you put in a header that puts today's date in (so we can keep track)

--- Original Message ---
From: Michael York
Sent: Wednesday, March 21, 2001 2:44 PM
To: Anderson, Margot
Subject: Re: little reminder

Margot, in our quick discussion at noon today, you had talked of sending down the electronic version of Chapter 7, so that we were all working off of the same product. Is that available?

Michael
Whoops!

---Original Message---
From: Braitsch, Jay
Sent: Wednesday, March 21, 2001 3:23 PM
To: Anderson, Margot
Subject: RE: little reminder

Need electronic version of Chapter 8. Thanks.

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

All,

If you are working on NEP edits, please remember to put in or suggest graphics or photos (not any photos we might have used previously!) plus enter your sources. Thanks.

Margot
All,

'Someone please send to Jeff at BPA - his e-mail is still bouncing back!

Margot
Thank you very much.

Original Message
From: William Bettenberg@ios.doi.gov
Sent: Thursday, March 22, 2001 3:04 PM
To: Anderson, Margot
Subject: Re: help

Bill

"Anderson, Margot"
To: William Bettenberg/PPA/OS/DOI@DOI
q.doe.gov
cc: Subject: help
03/21/2001 04:14 PM

Bill.

Margot
Margot

---Original Message---
From: Ball, Crystal A - KN-DC [mailto:caball@bpa.gov]
Sent: Friday, March 23, 2001 12:35 PM
To: Anderson, Margot; Carrier, Paul
Cc: Stier, Jeffrey K - KN-DC; Seifert, Roger - KN-DC
Subject: RE: BPA DSI information
Importance: High

Please use the revised one-page summary. We received updated information on the amount of remarketing/curtailments due to our agreement with McCook Metals. Thanks!

> <<DSI paul info.doc>> <<McCook pr final.doc>>
All,

This is the environment chapter (reflecting one round of interagency comments. I am unclear about the process on this one. I do know the topic was added in late. Not sure DOE commented on an initial draft). Please take a look and get comments back (sooner is always good, as in Monday COB). You will note that the authors (EPA) put in recommendations. Feel free to comment on them - they duplicate many of the ones you put forward. Recall that DOE is not putting in their proposals until S1 has had an opportunity to review (see last night's note). I'll send out another note before I go today updating you on progress from my end. Thank you everybody who have been crashing on this.

Margot
Crystal,

Margot

Please use the revised one-page summary. We received updated information on the amount of remarketing/curtailments due to our agreement with McCook Metals. Thanks!

> <<DSI paul info.doc>> <<McCook pr final.doc>>
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

II Transportation management.doc
II government purchasing.doc

As with the last set, don't have review beyond me.
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<td>Sent:</td>
<td>Saturday, March 17, 2001 3:15 PM</td>
</tr>
<tr>
<td>To:</td>
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<tr>
<td>Subject:</td>
<td>CEC conservation estimate</td>
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From: Keliher, Joseph
Sent: Sunday, March 18, 2001 10:36 AM
To: Anderson, Margot
Subject: Cal supply and demand
Williams, Ronald L

From: akydes@home.com>hq ["akydes" <SMTP:akydes@home.com>hq]
Sent: Sunday, March 18, 2001 10:55 PM
To: Anderson, Margot
Cc: HUTZLER, MARY; PETTIS, LARRY; "kevin.O'donavan@eia.doe.gov"
<SMTP:kevin.O'donavan@eia.doe.gov> at DOEHQhq; KYDES, ANDY
Subject: Chapter/Section 10 Comments

Margot;
TO: Andy

Copy: Mary
   Susan

SUBJ: Comments on "Economic Impact" Chapter

From: Rose
Here is the material you asked for. On the text in chapter 1, it really needs a good editing.... but in addition, I can't derive some of the numbers.

Some first pass issues/suggestions:
Folks,

NEP: As the request involves several different offices, the best way to coordinate is for us to get together and go through the list. Can we meet at 11:00 in the morning? We can get through the list in an hour. Please let me know if you can attend. 7B-040

Margot
From: Wheeler, Evelyn [WheelerE@state.gov]
Sent: Wednesday, April 04, 2001 4:38 PM
To: Kydes, Andy
Subject: another clarification

I also don't know where this change would go, again, please send the entire para (copy-and-paste)
thanks.

Evelyn Wheeler
EB/ESC/IEC/EPC - Room 3535
Phone: (202) 647-4557
Fax: (202) 647-4037
This message is unclassified under precepts of EO 12958.
you asked us to make a change on
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.

Goals:

Template:

Next steps.

Who can meet on Friday afternoon?

Margot

<< File: NHP Policy Issues.doc >> << File: template for policy ideas.doc >>
All,

Comments, please.

Margot
From: Kelliher, Joseph
Sent: Monday, March 19, 2001 3:16 PM
To: Mackey, James; Carrier, Paul; DL-PO-Emergencies; 'CABall@bpa.gov'; 'Jack@wapa.gov'
Cc: 'Mary Wegner'
Subject: RE: CA Problems Update 3/19/01 1:30 EST: Possible Stage III

Importance: High

Have there been rolling blackouts? Please respond ASAP.

TO ALL ENERGY TASK FORCE MEMBERS

Jim

Jim Mackey
Office of Emergency Operations
U.S. Department of Energy
202-586-8868
james.mackey@hq.doe.gov
TO ALL ENERGY EMERGENCY TASK FORCE MEMBERS

Jim

Jim Mackey
Office of Emergency Operations
U.S. Department of Energy
202-586-8868
james.mackey@hq.doe.gov

TO ALL ENERGY TASK FORCE MEMBERS

Jim

Jim Mackey
Office of Emergency Operations
U.S. Department of Energy
202-586-8868
james.mackey@hq.doe.gov
Subject: CA Problems

Paul
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<td>To:</td>
<td>Kripowicz, Robert</td>
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<tr>
<td>Cc:</td>
<td>Anderson, Margot</td>
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<tr>
<td>Subject:</td>
<td>clean coal technology</td>
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</table>
From: Kelliher, Joseph
Sent: Tuesday, March 20, 2001 9:33 AM
To: Anderson, Margot
Subject: RE: a request

Joe,

Margot
To: Margot Anderson

Re: New Material Forwarded

The following is a summary of our findings, although the document is annotated with all of our suggestions this time.
Cc  Larry Pettis
    Mary Hutzler
    Scott Sitzer
    Jar: vs Kendell
    Susan Holte
All,

Reminder that we will be meeting in room 7B-040 at 1:00 on Monday (3/5) begin the discussion of

Attached is the draft (pdf file) of the interim report that we have been working on (the U.S. energy situation)

Look forward to seeing you on Monday.

Margot
From: Martin, Phyllis
Sent: Tuesday, March 06, 2001 5:37 PM
To: Kydes, Andy; Kendell, James; Benneche, Joseph
Cc: Hutzler, Mary
Subject: RE: Please check the gas portions of this chapter 10 discussion

The following has my comments in red on the natural gas imports section:

2. Natural Gas Imports

---Original Message---
From: Kydes, Andy
Sent: Tuesday, March 06, 2001 5:14 PM
To: Kendell, James; Benneche, Joseph; Martin, Phyllis
Cc: Hutzler, Mary
Subject: Please check the gas portions of this chapter 10 discussion

Jim or whoever is in,

Thanks.

<< File: NEPGSECT-v1.doc >>

Andy

Andy S. Kydes, EI-80
U.S. DOE/EIA
1000 Independence Ave. SW
Washington, D.C. 20585
email: akynes@eia.doc.gov
Tel: (202) 586-2222
fax: (202) 586-3045

Please see our website http://www.eia.doc.gov for access to EIA's energy information and publications. Please call NEIC at (202) 586-8800 or email them at infoctr@eia.doc.gov if you have general questions regarding such information or how to locate it.
Please give me any comments on this by COB Monday. Thanks.

-----Original Message-----
From: Cato, Derriel
Sent: Friday, March 02, 2001 12:57 PM
To: Pettis, Larry; Klur, Larry; Skinner, Bill; Kydes, Andy
Cc: Kilgore, Cal; Feld, Lowell
Subject: FW: National Energy Policy Paper

Larry

How do you want to handle the attached 2nd draft to section 10.

Derriel

-----Original Message-----
From: James HART at HQ-EXCH at X400PO
Sent: Friday, March 02, 2001 12:05 PM
To: Cato, Derriel; Macintyre, Douglas; Kreil, Erik; Feld, Lowell; David Pumphrey at HQ-EXCH at X400PO; Leonard Coburn at HQ-EXCH at X400PO; George PERSON at HQ-EXCH at X400PO; Robert S PRICE at HQ-EXCH at X400PO; Barry GALE at HQ-EXCH at X400PO; John Shages at HQ-EXCH at X400PO
Subject: National Energy Policy Paper

Here is latest version of Section 10 (National Energy Security and
Let's talk about this tomorrow!!!!!!!
Attached are the results of our data checking and review of other chapters we hadn't seen before.
Cc: Larry Pettis
    Mary Hutzler
    Susan Holte
    Scott Sitzer
    James Kendell
To: Margot Anderson (7C 634)
From: Andy S. Kydes
Subject: Error Checking
Date: February 22, 2001

Attached are the results of our data checking and review of other chapters we hadn't seen before.
Cc  Larry Pettis
    Mary Hutzler
    Susan Holte
    Scott Sitzer
    James Kendell
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
All,

Comments, please.

Margot
From: Kelliher, Joseph
Sent: Tuesday, March 20, 2001 9:35 PM
To: Haspel, Abe; Zimmerman, MaryBeth; Anderson, Margot
Subject: Bingamen bill/amendment
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NATIONAL ENERGY STRATEGY  
AND  
BACKGROUND PAPER - 2001
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EXECUTIVE COMMITTEE
2000 - 2001
(As of December 2000)

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Chairman

Alabama Senator Wendell Mitchell
Immediate Past Chairman

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Lori Cameron,
Executive Director
Introduction

The United States of America faces an overwhelming demand for energy. The growth of the nation's economy, especially in the cyber-technology sector, has highlighted our dependence on energy and power. Our society and our economy require reliable power, at stable prices, with ever decreasing environmental impacts.

The good news is that the U.S. has an incredible wealth of varied energy resources. To fully benefit from these resources we must overcome fuel constraints and solve environmental challenges. To do this as a society, we must focus our policy efforts on conservation (maximizing the value of energy), access to develop energy resources, improve transmission and assure generation of power) and energy technology (to improve efficiencies and lessen environmental impacts).

We are strengthened by an integrated North American energy market but diminished by our society's lack of understanding of energy economics and technology. Just as we move to improve efficiency through technology, our political leaders and regulators must be working to improve regulatory efficiencies. Energy education represents a significant challenge for both the public and private sectors.


We hope both the Strategy and the Background Paper are helpful in a thoughtful and thorough national consideration of energy policy.
NATIONAL ENERGY STRATEGY

Goal

It shall be the goal of the United States' energy strategy to provide a stable supply of reasonably-priced energy in an efficient and environmentally-sound manner to meet the needs of its citizens, economy and national security interests. The U.S. shall assure access, improve efficiency and minimize environmental impacts of energy production, transmission and consumption by emphasizing technology and education. Energy independence shall be the long term goal of the United States.

Conservation

It shall be the energy strategy of the United States to promote energy conservation, improving energy efficiency. Conservation measures shall build upon previous efforts including Corporate Average Fuel Efficiency Standards for automobiles; energy efficiency provisions in building codes (including lighting efficiency standards); home appliance, heating and cooling unit efficiency standards; waste recycling or reduction standards for industrial manufacturing and energy conservation education.

The Federal government should provide direct tax-related incentives to consumers making energy efficiency housing or vehicular investments.

The development of economically competitive, energy efficient technology in the power, transportation, industry and building sectors should be a top priority of the federal government, as a partner with industry, states and academia. Partnerships with industries are particularly important if the resulting conservation technology is to be commercially viable. The national laboratories should play a leading role in this technological effort.
Subsequently developed energy conservation technology will not only help domestic productivity but may become a valuable export commodity, as well.

Basic energy conservation research funded by the government shall include superconductivity studies.

**Crude Oil**

It shall be the strategy of the United States to promote the environmentally sound production of domestic energy resources, to ensure the conservation and efficient use of energy resources, and to diversify sources of energy imports.

It shall be the policy of the United States to support and encourage domestic production of crude oil in an environmentally sound manner in order to supply U.S. consumers with a secure source of petroleum, and to provide a stabilizing influence on the world price of crude oil. In this regard, taking the lead of the states, the federal government shall provide tax and tax accounting incentives to oil producers for domestic exploration and development efforts and institute a specific National Marginal Oil and Gas Well Security Program.

Regulatory coordination between state and federal governments is critical and such cooperation shall extend to the management of public lands. An enhanced offshore federal revenue sharing program for coastal states is recommended to assist state and local governments in offsetting the infrastructure demands of offshore development. The federal government is urged to undertake simplification of federal regulations affecting oil and gas exploration and production. Additionally, a comprehensive federal royalty-in-kind program shall be implemented to apply to offshore areas. Further, a federal royalty-in-kind program shall be implemented onshore, to allow states at their option to assume marketing and administrative functions from the federal government.
It shall be the policy of the United States to assure that energy resources are utilized in a manner that recovers the most energy value possible. Similarly, it shall be the strategy of the United States to fund research and development to diversify its source of energy supplies, particularly for the transportation sector and primary modes of personal transportation. Enhanced oil and gas recovery from known reserves shall be promoted, and a research, development, demonstration and commercialization program for unconventional sources of crude oil shall be pursued through a cooperative effort among industry, higher education and the national laboratories.

It shall be the policy of the federal government to encourage diversification of import suppliers, to pursue a Pan American Energy Alliance with Western Hemisphere producing nations, and to open a dialogue with suppliers worldwide. It shall also be the policy of the United States to maintain the Strategic Petroleum Reserve, at least to its present capacity of about 570 million barrels. Any additions to the SPR should be purchased from domestic suppliers.

It shall be the strategy of the United States to support active management for the development of federal lands, public trust lands and Outer Continental Shelf areas in accordance with principles of multiple use and to recognize the potential that public lands hold, particularly in Alaska, for environmentally-sound development of all energy resources.

Natural Gas

It shall be part of the strategy of the United States to promote energy security through the use of clean, efficient natural gas in residential, commercial, industrial, utility and transportation applications. Such use shall include the use of natural gas with other fuels for efficiency and environmental purposes.

The United States shall promote and encourage domestic production of natural gas in an environmentally sound manner by providing tax and tax accounting incentives to producers of natural gas.
The United States government shall join with states and stakeholders to raise public awareness of the benefits of natural gas. Congress and the Administration shall work with the states to resolve access issues for exploration and development, as well as transmission and distribution. Efforts to weigh the advantages of gas use, the specific resource potential, the environmental sensitivities of affected lands and the applicability of high tech/low impact solutions should be encouraged.

The United States shall continue to support and expand research and development efforts to transfer and commercialize technology and expertise to the natural gas workforce through education and training programs coordinated with the private sector.

Federal agencies shall work with state governments, universities, national laboratories, and international partners, as well as the private sector to establish and support long term research goals, including basic and developmental research. Such research shall seek to promote efficiency, safety and environmental stewardship in the exploration, production, transmission, storage, distribution, consumption, and other infrastructure needs of natural gas. Part of this program will be to assure the integrity, safety, protection and efficiency of the nation's natural gas storage and delivery systems.

Coal

Coal is the most plentiful fossil energy resource in the U.S. Coal generates well over half the nation's electricity. It is economically, as well as environmentally, imperative that technology continues to be developed to address coal combustion efficiency, emission concerns and the viability of this resource.
Renewable Energy

Renewable energy sources are characterized by a broad range of technologies, costs, efficiencies and environmental concerns. Recognizing this spectrum of resources, it shall be the strategy of the United States to institute a long range, stable Renewable Energy Development Program that identifies and assists renewable energy sources from research and development through demonstration projects and commercialization in a cooperative effort among industry, higher education and the national laboratories.

Renewable energy resource development must be ranked and funded on the basis of factors including energy efficiency, economic competitiveness, environmental impacts, and technological adaptability. Part of this program, and critical to its success, is federal development of alternative technologies that improve renewable energy efficiencies, cut costs, and assist in integrating renewable energy into existing energy systems.

Electricity

The U.S. electricity sector today is marked by tremendous diversity; for instance, there are differences in existing electric networks, the number and types of customers, access to the interstate grid, rates, environmental considerations and fuel usage.

State and local governing bodies are close to consumers, utilities, industries, and are concerned for the economic well being of their states and local communities. They are in the best position to evaluate consumer needs, questions relative to fuel choice, economic development implications, the best manner in which to implement competition, and system reliability. Therefore, implementation of federal legislation that fails to maintain diversity and overrides state legislative or regulatory directives will harm consumers and the economy.
Electricity research and development efforts shall be intensified with regard to energy efficiency, superconductivity, advanced and reasonable environmental controls in power generation, distributed generation, fuel cells and the development of cost-effective renewable supply technologies. The development of safe and efficient electric vehicles shall also continue to be pursued.

Nuclear power must continue as an essential component of the nation's electricity system, providing reliable, clean-air base load power. Neither deregulation policies nor relicensing regulatory delays should be allowed to impair the ability of domestic nuclear plants to continue to provide the nation with emission-free base load power. Further, the federal tax code should be updated to maintain deductibility of decommissioning expenses.

The Department of Energy shall continue to characterize a repository for the disposal of used nuclear fuel and begin to operate such a repository as quickly as is safely possible. The federal government has a legal responsibility to manage commercial reactor fuel. Congress must assure that payments made by law into the Nuclear Waste Fund for construction and operation of a repository under current Department of Energy milestones be available for such purpose.

Responsibility for reliability and long range planning shall be established. Aging infrastructure and access for construction of new infrastructure shall be addressed. Maintaining reliability of the U.S. electricity system shall be a primary goal of policy makers and industry participants, alike.
Energy conservation is an essential part of any energy strategy. The efficient use of energy saves money, prevents waste, stretches the resource base, and reduces emissions associated with the use of energy.

Energy conservation has been a success story in the United States over the last few decades and the nation is poised to make further progress. Figure 1.1, "Energy consumption and GDP, 1970-1999", illustrates recent efficiency gains by comparing energy use to significant increases in U.S. gross domestic product (GDP).

Figure 1.1
Energy Consumption and GDP, 1970-1999

Source: Annual Energy Review 1999, DOE/EIA-0381(99) (pg 12)
However, in terms of total energy usage, a growing population and robust economy have
overwhelmed the productivity improvements so that both total consumption and per capita
consumption of energy have increased. Overall, the U.S. spends a half trillion dollars a year on
energy; consequently, even small increments of conservation amount to large financial savings
for consumers and taxpayers.

The U.S. energy efficiency program focuses on four major areas of energy use: transportation,
buildings, industry and the federal government.

The energy efficiency challenge in terms of transportation is not only to make vehicles more
fuel-efficient but also to find ways to decrease demand for travel. Relative to fuel efficiency, the
country's Corporate Average Fuel Efficiency (CAFE) standards have led the country to more
efficient automobiles. However, changing consumer preferences for light trucks and sports
utility vehicles, which are not held to the same efficiency standard as automobiles, have meant
increasing fuel consumption overall in the U.S. transportation sector.

The problem of increasing energy use despite energy conservation gains is demonstrated in
Figure 1.2, "Motor Vehicle Efficiency." Although the fuel rate (miles per gallon) has increased
remarkably since the 1970s and fuel consumption (gallons per vehicle) has decreased, mileage
(miles per vehicle) has increased, as has the total number of vehicles (not illustrated).
Mileage per vehicle has increased at a steady rate of more than 3 percent per year over the last 40 years. Factors affecting vehicular mileage include population growth, regional population switches, declining costs of driving and declining use of alternatives to driving.

One bright spot is change in work patterns attributable to the telecommunications revolution, which permits an increasing number of people to office at home. However, traffic congestion in urban areas continues to cause inefficient consumption of energy.
The U.S. Department of Energy's Partnership for a New Generation of Vehicles (PNGV) is a government-industry cooperative research effort to develop more efficient, commercially viable vehicle technology. Such a partnership approach assures that industry concerns about commercial viability may be answered as the project proceeds rather than requiring a separate dissemination process to "sell" the new technology after it has been developed. Government participation in other cooperative agreements like the U.S. Advanced Battery Consortium have allowed companies to pool technical knowledge and funding in addressing industry-wide challenges to energy efficiency technologies.

Government-directed industry energy conservation efforts have focused on nine industries which account for 75 percent of the energy used in industry. (The nine industries are forest products, steel, aluminum, metal casting, chemicals, petroleum refining, agriculture, mining and glass.) The federal program, "Industries of the Future", is focused on developing technologies that assist these sectors in becoming more resource efficient and economically competitive, while producing less waste.

Energy conservation efforts for buildings focus on construction, renovation and operation efficiencies. Federal and state governments work together with the building industry on building code projects, as well as research and development projects to improve lighting, heating, cooling and ventilation processes.

Weatherization programs for low-income residential energy consumers promote energy conservation through state administered programs. Appliance standards for energy efficiency, federally promulgated in the 1980s have also proved successful in promoting energy conservation at the consumer level.
The nation's largest energy user, the U.S. government, has made some impressive strides in energy efficiency over the last decade. Between fiscal year (FY) 1985 and FY 1996, the overall real cost of energy consumption of the Federal government has fallen from $14.6 billion to $7.7 billion. In terms of building efficiency, the Federal Energy Management Program (FEMP) expects to reach a 20 percent reduction in energy consumption in federal buildings in 2000, on a per square foot basis, from a 1985 baseline.

Recently emerging energy management technologies have led to the development of an energy service industry. Consumers are provided tools to manage energy consumption in a more efficient and cost effective manner. Consequently, consumers are positively impacted and energy providers are better able to utilize existing energy infrastructure.
CONSERVATION STRATEGY STATEMENT

It shall be the energy strategy of the United States to promote energy conservation, improving energy efficiency. Conservation measures shall build upon previous efforts including: Corporate Average Fuel Efficiency Standards for automobiles; energy efficiency provisions in building codes (including lighting efficiency standards); home appliance, heating and cooling unit efficiency standards; waste recycling or reduction standards for industrial manufacturing and energy conservation education.

The Federal government should provide direct tax-related incentives to consumers making energy efficiency housing or vehicular investments.

The development of economically competitive, energy efficient technology in the power, transportation, industry and building sectors should be a top priority of the federal government, as a partner with industry, states and academia. Partnerships with industries are particularly important if the resulting conservation technology is to be commercially viable. The national laboratories should play a leading role in this technological effort.

Subsequently developed energy conservation technology will not only help domestic productivity but may become a valuable export commodity, as well. Basic energy conservation research funded by the government shall include superconductivity studies.
Crude oil occupies a special place in U.S. energy policy. In the 1970s, the connection between oil and the U.S. economy was clearly illustrated. The Arab oil embargo and the Iranian revolution dramatically increased world oil prices and the U.S. economy went into recessionary tailspins. The strategic importance of oil was demonstrated dramatically early in this decade when Middle Eastern oil supplies were threatened and the U.S. went to war in Operation Desert Storm/Desert Shield in 1991.

Crude oil accounts for about 40 percent of the U.S. energy supply. Nearly 58 percent of that amount is imported and the sources of those imports are becoming increasingly diverse. However, it is the nation's extraordinary dependence on petroleum to fuel the U.S. transportation sector (97 percent) which makes crude oil a resource which significantly affects national security.

Table 2.1 illustrates trends in U.S. crude oil reserve, production, import and consumption levels since 1972. The level of proven reserves in the U.S. has dropped by 38 percent over the last 26 years.

**TABLE 2.1**

| U.S. Crude Oil Reserves, Production, Net Imports, and Consumption*, 1972-1999 |
|------------------|------------------|------------------|------------------|------------------|
| Crude Oil Reserves (Bilion Bbls) | 36.3  | 27.9  | 23.7  | 22.5  | 22.5  |
| Crude Oil and Condensate Production (MMBbl/Day) | 11.9  | 11.0  | 10.1  | 9.4  | 9.6  |
| Net Imports (Crude oil and Products) (MMBbl/Day) | 4.5  | 4.3  | 6.9  | 9.2  | 9.9  |
| Petroleum Consumption (MMBbl/Day) | 16.4  | 15.3  | 17.0  | 18.6  | 19.5  |

* Includes refinery volume gains and stock draws.

In the midst of falling U.S. reserves and declining production, it is easy to forget that the U.S. is the number two producer of crude oil in the world, second only to Saudi Arabia. Table 2.2 presents the top crude oil producers of 1998.

### TABLE 2.2

**Top Crude Oil Producers, 1998**

(Millions Barrels per Day)

<table>
<thead>
<tr>
<th></th>
<th>MMBL/d</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Saudia Arabia</td>
<td>8.4</td>
<td>12.5</td>
</tr>
<tr>
<td>2. United States</td>
<td>6.4</td>
<td>9.5</td>
</tr>
<tr>
<td>3. Russia</td>
<td>5.9</td>
<td>8.8</td>
</tr>
<tr>
<td>4. Iran</td>
<td>3.6</td>
<td>5.3</td>
</tr>
<tr>
<td>5. Venezuela</td>
<td>3.2</td>
<td>4.8</td>
</tr>
<tr>
<td>6. China</td>
<td>3.2</td>
<td>4.8</td>
</tr>
<tr>
<td>7. Mexico</td>
<td>3.0</td>
<td>4.5</td>
</tr>
<tr>
<td>8. Norway</td>
<td>3.1</td>
<td>4.6</td>
</tr>
<tr>
<td>9. United Kingdom</td>
<td>2.6</td>
<td>3.9</td>
</tr>
<tr>
<td>10. United Arab Emirates</td>
<td>2.2</td>
<td>3.3</td>
</tr>
<tr>
<td>11. Nigeria</td>
<td>2.4</td>
<td>3.6</td>
</tr>
<tr>
<td>12. Kuwait</td>
<td>2.1</td>
<td>3.1</td>
</tr>
<tr>
<td>13. Canada</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>14. Indonesia</td>
<td>1.5</td>
<td>2.3</td>
</tr>
<tr>
<td>15. All Others</td>
<td>17.4</td>
<td>26.0</td>
</tr>
</tbody>
</table>

**MMB/d** = Millions Barrels per Day

Source: US DOE, Energy Information Administration, 2000

However, while U.S. production is declining, global oil production is increasing. By 2010, world production is expected to increase by almost 20 percent, while U.S. production is forecast to drop seven percent. In fact, U.S. production has dropped 20 percent over the last 25 years.

Although U.S. production has declined, exploration productivity has improved dramatically, especially in the last ten years. The exploration productivity (additions to proven reserves divided by the total number of exploratory wells) has increased from a 1987 average of 100,000 barrels a day to about 400,000 barrels a day in 1997. Moreover, a new barrel of reserves in the U.S. that cost about $15 to find in 1977 (inflation adjusted price) costs less than $5 to find today.
Advanced computer-based technology, often supported by government-assisted research, as well as increasing corporate efficiency efforts, are major factors in this trend.

In fact, new technologies have impacted drilling outcomes in every producing area of the U.S. However, nowhere is the impact of changing technology more evident than in the Deep Water U.S. Outer Continental Shelf. In terms of oil, projects in the Deep Water Gulf of Mexico, together with onshore projects in Alaska dominated new field discoveries in the U.S. in 1999. Over 80 percent of new field discoveries came from the Gulf of Mexico and, overall, 95 percent of total new discoveries were made in the Gulf of Mexico and Alaska. As exciting as they are, even these technologies are not enough to overcome the low exploration and production (E&P) cost advantage of some areas of the globe like the Middle East.

Although it is the bright spot for U.S. production, the boom in the Deep Water Gulf of Mexico is straining the infrastructure of coastal areas adjacent to the Gulf. New or improved roads and other government services are necessary. Coastal areas are often environmentally fragile and require special care in their development in order to protect other uses like fisheries and recreation. Federal royalty revenues may be the key to providing much needed revenue to assure protection of these valuable coastal environments.

Federal-state revenue sharing formulas related to energy production from federal lands vary. Onshore states generally receive royalties from production on federal lands within their boundaries. Coastal states receive significantly less federal royalties on offshore production three miles beyond the state/federal boundary. Beyond this three-mile royalty-sharing zone, the states currently receive no part of the federal royalties.

A recent report of the Outer Continental Shelf Policy Committee presented recommendations for federal OCS revenue sharing with thirty states and five territories (including those on the Great Lakes) as an entitlement program utilizing existing Department of Interior administrative mechanisms. This report is the basis of legislation proposed in Congress. The Coastal Assistance legislation is the kind of program that makes domestic oil and gas production a win-win proposition for the U.S.
Another proposed form of federal/state cooperation is a royalty-in-kind program. The valuation of crude oil production from federal lands for royalty purposes has proven to be a contentious matter, involving costly litigation and causing ill will among producers, states and the federal government. A federal royalty-in-kind program could eliminate valuation disputes, significantly decrease federal administrative costs and provide an opportunity for enhanced value from the marketing of oil. It could also reduce producer costs and risks of litigation, making production from federal lands a more attractive investment. Alberta's program is one example of a successful royalty-in-kind program.

Development of oil and gas resources from federal lands is a critical component of U.S. energy policy. Indeed, any discussion of domestic energy production must consider federal lands and the potential for future discoveries and development. There are more than 700 million acres in the U.S. that are owned by the federal government. That is approximately one in three acres or 32 percent of the nation's land mass.

Much of that land is in Alaska, as are much of the nation's oil, natural gas and coal reserves. In fact, 87 percent of the state of Alaska is owned by the federal or state governments. Recently, progress has been made on leasing limited areas of the National Petroleum Reserve - Alaska (NPR-Alaska) for exploration, subject to detailed environmental restrictions.

Renewed leasing of the NPR - Alaska holds great promise for sustaining domestic energy production from Alaska. This is significant since in 1999 Alaska produced 22 percent of the nation's oil. However, federal exploration and development moratoria, onshore and offshore, hobble the search for domestic energy resources from Alaska to the Atlantic offshore.

Finally, a discussion of domestic oil production would be incomplete without recognition of the role that marginal production plays in this nation. The United States has more than 500,000 marginal oil wells that produce almost one-third of the lower 48 states' onshore production. All wells are subject to depletion and may eventually be designated as marginal on the basis of economics or as stripper wells on the basis of low production (generally less than 10 barrels a day).
In Oklahoma, a state with a high number of marginal wells, the average daily production is 2.3 barrels per well per day. Marginal well activity (employment, royalties and tax revenues) plays an important role in the economies of many oil and gas producing states. The positive impact is particularly felt in rural communities that provide workforce and maintenance for mature production.

As marginal wells are plugged and abandoned, the reserves accessed by those wells may be counted as lost, since it is unlikely that partially depleted reservoirs will be redrilled. On the other hand, dramatic advances have been made in low cost enhanced recovery technologies, which are extending the productive lives and economic benefits of marginal wells. The Petroleum Technology Transfer Council, a public/private cooperative effort, and state programs like Oklahoma’s Commission on Marginally Producing Oil and Gas Wells, assure that technological, administrative, and well servicing information is made available to smaller operators throughout the country.

States have also taken an active role in regulating the plugging and abandonment of wells that have ceased operation. Many states have programs that provide for the proper closure of orphaned wells and the clean up of the surrounding well sites, as well. These activities are generally funded by an assessment on current oil and gas activity.

Since neither state governments, the federal government, nor the oil and gas industry set worldwide oil prices, the solution to preserving marginal wells involves close attention to production costs including taxes, royalties and other costs controlled by the public sector.

Because of declining production in the U.S., imported oil plays an important role in the nation’s energy mix. Oil is the only energy resource imported in significant amounts. The amount of oil imported to the United States has more than doubled in the last 25 years. Imported oil as a percentage of total U.S. consumption has risen from 28 percent in 1972 to 58 percent of consumption today.
The big change over the last decade has been in the mix of import sources. In the early 1970s, Middle Eastern members of the Organization of Petroleum Exporting Countries (OPEC) dominated as suppliers of foreign crude to the U.S. Today the import mix is decidedly Western Hemispheric. Termed "short-haul" crude, imports from Canada, Mexico and Venezuela dominate today. The only Middle Eastern country among the top four foreign suppliers is Saudi Arabia.

The U.S. Canadian Free Trade Agreement and the subsequent North American Free Trade Agreement (NAFTA) have played a significant role in assuring the integration of the North American energy market. Consumers in the U.S. are now assured secure access to Canadian energy supplies. Efforts to support cross border energy trade with Mexico are being encouraged.

In the Energy Council's 1988 National Energy Strategy proposal, the Council recommended a Pan American Energy Alliance. Later, in 1991, the Council welcomed Alberta, Canada's principal energy province, as an international affiliate. In 1997, Venezuela became the second international member of the Energy Council. These relationships have forged an informal alliance among energy producing interests in the Western Hemisphere, allowing for dialogue and better understanding with our important energy trade partners.

Another notable trend over the previous ten years has been the globalization of energy markets. U.S. companies have moved in unprecedented numbers to explore for and produce oil overseas. Concurrently, foreign companies have increasingly become involved in the U.S., internationally integrating the oil industry.

For instance, Venezuela's wholly owned subsidiary, Citgo, has significant refining interests in the U.S. Citgo's marketing agreements with Seven-11 also give it a tremendous number of retail gasoline outlets throughout the country. Saudi Arabia's arrangement with Texaco gives that nation a refining position in the U.S., and Shell, whose parent company is Royal Dutch Shell, has been a long-term player in this country. BP (formerly British Petroleum) continues to expand its presence in the U.S. by acquiring companies like Amoco and the non-Alaskan assets of Arco.
In addition to relying on the global integration of the oil industry to lend stability to world markets, the U.S. has an oil “insurance policy”. It was the interruption of oil imports during the 1973 Arab oil embargo, which led to the creation of the U.S. Strategic Petroleum Reserve (SPR). Filled between 1977 and 1994, the SPR is at its current fill level of 570 million barrels, which is roughly the equivalent of 57 days of imports. Reserves from the SPR were sold in 1991 to stabilize oil prices during the Gulf War. However, questions about the role of the SPR remain (e.g. Is it an insurance policy against supply disruptions? Against price changes?).

Another insurance policy is the International Energy Agency’s (IEA) multi-national agreements to address global oil disruptions. In fact, the IEA was founded in the 1970s as consumer nations sought to mitigate the effects of oil embargoes.

Petroleum consumption in the U.S. has varied over the last 25 years in response to price and legislated efficiency efforts. Consumption reached 18.9 million barrels per day (MMbbl/d) in 1978, prior to the Iranian revolution, which led to price increases in 1979.

Subsequently during the early 1980s, the consumption rate fell to 15.2 MMbbl/d, a decline of 20 percent. However, since then, consumption has slowly risen to 19.5 MMbbl/d. At this level, U.S. oil consumption is roughly 26 percent of the world total.

The U.S. outlook for oil through the year 2010, according to the DOE, is for decreasing production, increasing consumption, relatively stable prices, and an increase in imports. Crude oil production declines in the U.S. will be mitigated, but not offset, by technological advances in exploration and production, as well as increases in natural gas liquids production.

Consumption of petroleum products is expected to increase by 19 percent from 1998 to 2010. Efficiency gains will be offset by economic growth and increases in travel. The DOE outlook calls for oil prices to increase by only about five percent by 2010. Price increases are expected to be moderated by production increases by OPEC and non-OPEC countries alike.
Consequently, given declines in domestic production and increases in consumption, oil imports to the U.S. will increase. The DOE forecast is for a 16 percent increase in imports of crude oil and petroleum products to the U.S. by 2010. This increase would place imports at about 53 percent of U.S. consumption.

The security risk that this higher level of imports implies may be mitigated to some extent by the integration of the global market, increasing diversity of imported supplies and energy supply diversity, as well as the SPR and the IEA. For instance, risk has been mitigated by the secure energy relationship between the U.S. and Canada. As more Canadian oil production comes online, the U.S. will have the opportunity to seek contracts for additional amounts on a non-discriminatory basis.
CRUDE OIL STRATEGY STATEMENT

It shall be the strategy of the United States to promote the environmentally sound production of domestic energy resources, to ensure the conservation and efficient use of energy resources, and to diversify sources of energy imports.

It shall be the policy of the United States to support and encourage domestic production of crude oil in an environmentally sound manner in order to supply U.S. consumers with a secure source of petroleum, and to provide a stabilizing influence on the world price of crude oil. In this regard, taking the lead of the states, the federal government shall provide tax and tax accounting incentives to oil producers for domestic exploration and development efforts and institute a specific National Marginal Oil and Gas Well Security Program.

Regulatory coordination between state and federal governments is critical and such cooperation shall extend to the management of public lands. An enhanced offshore federal revenue sharing program for coastal states is recommended to assist state and local governments in offsetting the infrastructure demands of offshore development. The federal government is urged to undertake simplification of federal regulations affecting oil and gas exploration and production. Additionally, a comprehensive federal royalty-in-kind program shall be implemented to apply to offshore areas. Further, a federal royalty-in-kind program shall be implemented onshore, to allow states at their option to assume marketing and administrative functions from the federal government.

It shall be the policy of the United States to assure that energy resources are utilized in a manner that recovers the most energy value possible. Similarly, it shall be the strategy of the United States to fund research and development to diversify its source of energy supplies, particularly for the transportation sector and primary modes of personal transportation. Enhanced oil and gas recovery from known reserves shall be promoted, and a research, development, demonstration and commercialization program for unconventional sources of crude oil shall be pursued through a cooperative effort among industry, higher education and the national laboratories.
It shall be the policy of the federal government to encourage diversification of import suppliers, to pursue a Pan American Energy Alliance with Western Hemispheric producing nations, and to open a dialogue with suppliers worldwide. It shall also be the policy of the United States to maintain the Strategic Petroleum Reserve, at least to its present capacity of about 570 million barrels. Any additions to the SPR should be purchased from domestic suppliers.

It shall be the strategy of the United States to support active management for the development of federal lands, public trust lands and Outer Continental Shelf areas in accordance with principles of multiple use and to recognize the potential that public lands hold, particularly in Alaska, for environmentally-sound development of all energy resources.