Summary of Public Comments

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An Introduction to the Process

The Comprehensive National Energy Strategy constitutes the 1998 National Energy Policy Plan as required by Section 801 of the Department of Energy Organization Act. The Act requires the President to submit a proposed National Energy Policy Plan to Congress and to —

> seek the active participation by regional, State, and local agencies and instrumentalities and the private sector through public hearings in cities and rural communities and other appropriate means to insure that the views and proposals of all segments of the economy are taken into account in the formulation and review of such proposed Plan. [42 USC 7321 SEC.801 (A)(2)]

The U.S. Department of Energy (DOE) released a draft Comprehensive National Energy Strategy (CNES) to the public on January 30, 1998. DOE followed the release of this document with three public hearings in cities and rural communities in the United States to provide an overview of the draft CNES by DOE officials and to solicit comments on the draft CNES.[1] Information on the dates and venues of the CNES public hearings as well as a solicitation for comments on the draft CNES were made via newspapers, professional and trade newsletters, public notices, and the World Wide Web. DOE received comments on the draft CNES via oral and written testimony, e-mail, fax, and mail. Comments were received during the period from February 1, 1998, to February 27, 1998.

This addendum to the report summarizes the public comments that DOE received in response to the draft CNES.

Methodology

Solicitation of comments for the draft CNES was accomplished by posting announcements, notices, and bulletins in various media, including newspapers, professional and trade newsletters, public notices, and the World Wide Web. A notice was published in the *Federal Register* on January 15, 1998,[2] announcing public hearings on the CNES. A CNES information page was also posted on the DOE Website on February 5, 1998 (http://www.hr.doe.gov/nesp/cnes.html). The page included the *Federal Register* notice, latest information about the hearings, the draft CNES document, and

[1] The Department of Energy convened hearings in Houston, TX, on February 12, 1998; Davis, CA, on February 13, 1998; and Washington, DC, on February 19, 1998. A total of 192 people attended the hearings, and 58 of them spoke.

[2] Notice published in Volume 63, Number 10.

several options for sending comments to DOE.

There were 313 comments received during the comment period on the draft CNES, including 29 comments from the Davis, CA, hearing; 19 comments from the Houston, TX, hearing; 35 comments from the Washington, DC, hearing; and 38 by mail or fax, 42 by e-mail, and 150 responses to a response form published on the CNES information page on the DOE Website. The comments collected were compiled into four comprehensive databases, one of which included all of the Website, e-mail, fax, and mail responses, and three separate databases for oral comments received at each of the public hearings. Except for the hearings, the comments in the databases were organized by goals, objectives, and issues, with the options to sort and query for the purposes of statistical analysis and organization.

Public Hearings — Building on Our Commitment to Openness

Three public hearings were held in February 1998. At these hearings, DOE invited the public to give oral testimony and to submit written comments. The hearings were chaired and convened by the Secretary, Deputy Secretary, and Undersecretary of Energy. They addressed the need for a proactive energy strategy and distinguished the CNES from previous energy policy plans. Senior DOE officials representing the Offices of Fossil Energy, Energy Research, Energy Efficiency and Renewable Energy, and Policy and International Affairs provided an overview of the draft CNES document. The Chair opened the floor for public comments.

Participants in the public hearings included State and local officials, professors, scientists, researchers, managers, educators, technicians, activists, private citizens, utility representatives, private and commercial industry representatives, public-interest groups, environmental organizations, community action organizations, organized labor, specific technology advocates, and other stakeholders and interested parties.

Of the 313 total CNES respondents, 19 percent provided oral testimony at the three public hearings.

Electronic Responses — Linking the Public With Their Government

The CNES information page was posted on the DOE Website. It included the draft CNES document, the *Federal Register* notice, content and logistics information on the hearings, and a comment form (questionnaire).

The Website questionnaire consisted of 12 open-ended questions for soliciting input and general comments on each of the five goals in the CNES document.

Of the 313 respondents, 48 percent provided comments in response to the Internet questionnaire and 13 percent provided comments by e-mail. Of the respondents who indicated how they found out about the Website, 35 percent found out by word of mouth, 16 percent from surfing the Web, 11 percent from professional or trade newsletters, 11 percent from public notices, 2 percent from newspapers and magazines, and 24 percent from other sources. Other sources included personal, group, and bulletin e-mails.

Written Responses

The participants in the public hearings were asked to fill out questionnaires and submit them at the hearing or to mail or fax hardcopy comments to DOE. General written responses were also submitted by mail and fax in response to the information released on the draft CNES. Written responses submitted at the hearings accounted for 8 percent of all responses. Written responses submitted by mail or fax accounted for 12 percent of the submissions.

Public Interest in the CNES

Website respondents were asked, "What portion of the draft CNES interests you most?" The possible responses, corresponding to the five draft CNES Goals, were:

- Improve the efficiency of the energy system.

- Ensure against energy disruptions.
- Promote energy production and use in ways that reflect human health and environmental values.
- Expand future energy choices.
- Cooperate internationally on global issues.
- Other.

Approximately 44 percent of the respondents indicated an interest in two or more of the five draft CNES Goals, and about 56 percent focused their interest on a single Goal. Further, only 20 percent selected "Other," indicating an interest in an energy issue not covered by the draft CNES. Also, Website respondents were asked if they would like a response to their comments, and 78 individuals said "yes."

Overarching Themes — Putting a Human Face on Energy Policy

In reviewing and summarizing the public comments received on the draft CNES, several overarching themes emerged. These were much broader in scope than any of the CNES Goals. These comments reflect fundamental issues and values that respondents believe form the foundation for sound public policy. These overarching themes address questions of ethics, equity, and the role of government.

Ethics

Ethical considerations were included in many of the comments. These considerations focused on the responsibility incumbent upon Americans to consider the welfare of future generations in current policy decisions. Several comments expressed the notion that the draft CNES is too shortsighted. The "long-term" objectives of the document look only 10 to 20 years into the future. Due to the finite nature of many of our energy resources, it is necessary for sound public policy to consider future generations. Conservation of finite resources and research and development of new technologies to allow future generations access to a variety of energy options was particularly noted as an area of concern.

> With no qualifying timeframe, the CNES states that coal, oil, gas, and uranium are abundant in America. This may be true in the near term for some of these fuels, but not for all. Eventually, however, this is not likely to be true for any of them. The latter situation is the basis for conservation of resources beyond our lifetimes that is addressed only by a strong ethical position concerning our responsibilities to future generations far into the future.
>
> — *Carl Walter*

Further, comments advocated consideration of the environmental impacts of our energy choices. The perceived impacts of these choices included degrading the natural environment and losing valuable genetic resources by destroying habitats in our search for conventional energy sources.

> We have to address this energy situation now or the long-term outlook will be a degraded quality of living on the planet … for future generations.
>
> — *Thomas J. McGeachen*

Finally, concerns were raised about our ethical obligation to those beyond our borders. These comments centered on the projected exponential population growth and the low standards of living in many areas of the developing world.

Equity

The concept of equity, while closely tied with ethical considerations, was included in numerous comments. Concern was expressed that energy policy should benefit all Americans, and that the policy instruments and strategies we employ should not have disproportionate adverse effects on any demographic group or region. These concerns about equity included economic, social, and environmental impacts.

> [H]as CNES missed anything? I think our strategies … [are] … missing the people.
>
> — *Elena Vergara, Chicano Family Center*

Equity was considered to be of paramount importance to many respondents. One even volunteered the following language for a sixth CNES Goal to address the issue:

> Ensure the economic and environmental benefits and costs of energy policies are shared equitably (e.g., among different regions, among urban, suburban, and rural environs, between low v. high income and large v. small consumers).
>
> — *Thomas C. Adams, III, North Carolina Department of Commerce*

Those concerned about energy equity among the poor, disadvantaged, elderly, underprivileged, and handicapped recommended that the draft CNES include more information about the effects that the proposed energy strategy would have on these groups of "energy-vulnerable citizens." Comments also suggested the adoption of explicit language that recognizes the vulnerability of low-income households to fluctuations in energy costs, as these costs make up a larger proportion of their household expenditures.

Several individuals expressed concern that the interests of the poor are not adequately considered in the draft CNES. Continuation and improvement of Federal and State assistance programs such as weatherization, assistance in paying utility bills, and support for Tribal utilities was advocated by some, while others voiced concern over the continuation of utility-sponsored public-assistance programs in the wake of electricity restructuring.

In addition to these issues of economic equity, concern over the impact of pollution from energy generation was expressed.

Role of Government

Concerns over the government role in determining energy policy and strategy were included in many comments. Several diverse views were expressed regarding whether there should be an energy policy, who within government should set energy policy priorities, and the types of activities that should be undertaken to implement or encourage these priorities.

Some comments recommended that there should be no energy policy and that market forces should drive energy choices. Other commenters suggested the dissolution of the Department of Energy. Some comments advocated a limited energy policy. These comments favored a role for government that includes establishing fair rules and regulations and letting market forces drive energy choices and policy.

Several comments advocated a more comprehensive approach to energy policy and strategy. Some recommended restructuring the Department of Energy to include only civilian energy programs and relegating all defense-related programs to a separate organization. Others recommended the appointment of an "Energy Czar" to coordinate energy policy across Federal agencies. Finally, others recommended direct intervention in markets and command and control measures to dictate energy policy to the Nation.

No consensus was expressed about who within the Government should determine energy policy. Comments ranged from support for significant Federal involvement to State control to local-level decision authority. Some comments even supported energy planning and policy at a global level. Many commenters advocated collaboration among several levels of government to ensure that policy meets the needs of every community.

Those who advocated a Federal role in energy policy expressed divergent views about the types of activities that the Gov-

ernment should undertake. Some supported central energy planning, while others supported a regulatory role. Many encouraged the Government to act in the "public good," pursuing various objectives like supporting research and development, promoting public education about energy-related issues, and enacting policies to protect citizens. Many comments suggested that the Federal Government and the Department of Energy should lead by example.

> The Federal role is to provide long-term support and regulatory consistency so that private investments can be made under a predictable environment.
>
> — *James E. Quinn*

> [The United States should] support research with a 20–50 year payoff period that will really solve energy, national security, and environmental problems...
>
> — *David Hammer*

> [I]nternational competition has long recognized the importance of government guidance and funding in both general and energy research and development. They are growing in leaps and bounds where we are floundering, especially in regards to new nuclear energy production sites.
>
> — *Hamilton T. Hunter*

Summary of Responses by Goal and Objective

Many respondents to DOE's request for comments on the draft CNES addressed specific goals and objectives included in the document. Several comments, however, held implications for multiple goals. To accurately and fairly reflect the comments received, the summary responses have been organized by CNES goal and objective and have been repeated as they apply to each new goal.

Due to the sheer volume of comments received, it was necessary to qualitatively group and summarize issues. This required that the responses be grouped by common theme. Specific recommendations, especially those regarding programmatic decisions and funding levels, have been incorporated thematically in the summary, but are not explicitly stated in this document.

Goal I

Improve the efficiency of the energy system — making more productive use of energy resources to enhance overall economic performance while protecting the environment and advancing national security.

Objective 1. Support competitive and efficient electric systems.

Several comments indicated that economic efficiency and energy efficiency are often not the same. It is important, according to these comments, that economic good sense be used in determining the desirable level of energy efficiency. These comments suggested that the CNES should not recommend use of energy-efficiency technologies that are exorbitantly priced and realize only marginal improvements.

> [P]ortions of the draft strategy appear to confuse the concept of energy efficiency and that of economic efficiency. The most energy-efficient technology is not necessarily the most economically efficient. This is a matter for markets to sort out, not government.
>
> — *Dr. Len Bower*

Deregulation of Electricity. Comments regarding the deregulation and the restructuring of the electric utilities expressed divergent opinions. The key issues raised in this discussion included who should institute reforms, the appropriate type of reforms, and what the impacts of these reforms would be. Most comments on this issue recommended that the Federal Government address deregulation in a cautious and well thought-out manner, considering all of the implications of their actions. Much attention

was given to the issue of recovering stranded costs and honoring prior agreements.

Advocates of Federal deregulation legislation commented on the need for a firm date by which all restructuring would be completed. Additional comments encouraged DOE to move the Administration to create a comprehensive bill that would ensure reciprocity for electricity suppliers to sell power across State lines.

> This pursuit of a fully competitive power market is an absolutely appropriate and timely goal…. Progress will depend on the meaningful actions of the Department. As we all know, a statement in a planning document, no matter how important that document is, is not equivalent to leadership. And leadership is what this issue demands…. If the Administration believes in competition, then it needs to act like it.
>
> — *Eugene F. Peters*

Advocates of State-initiated reforms argued that each State must have the latitude to institute reforms on its own time schedule and to the extent that is appropriate for that State. Comments also explicitly declared the need for legislation at the Federal level to grandfather the actions taken already at the State level.

> Retail customers should also have the ability to choose among providers and services under restructuring programs developed and implemented at the State level. Accordingly, the Federal Government should afford States the flexibility to determine retail energy policies, including the content, extent, and pace of restructuring.
>
> — *Margaret Welsh, Executive Director of the National Association of Regulatory Utility Commissioners (NARUC)*

The mechanics of restructuring were also a key issue in many of the comments on the draft CNES. Many commenters advocated fully competitive power markets; in contrast, other comments advocated a power market that reflects social values. Proponents of fully open competitive markets raised issues regarding real unbundling of generation and transmission systems and the tax preferences given to municipal power companies through tax-free bonds.

Another commenter noted that the draft CNES probably did not address electric cooperatives for political reasons. The commenter stated that the Federal Government offers low-interest loans to cooperative electric utilities under a rural electrification program that largely completed its mission decades ago.

Some proponents of an open system advocated a fuel-neutral policy that would allow the market to select the fuel mix. They argued that cheap energy is key to our domestic economy. An independent petroleum producer's representative noted that an increase in electricity rates would hurt their production due to electricity's large share of their production costs.

> [Making our] energy cheaper and more abundant than any other country's is what will make the difference in keeping the U.S. economically viable.
>
> — *George Larson*

Other comments advocated a less open approach to deregulation. These comments addressed the need for total cost pricing for fuels and reflecting social values in fuel sources. These advocates of "green pricing" supported targeting environmentally friendly technologies in the fuel mix. One commenter from a municipal utility district indicated that, based on a survey of customers, there was support for green pricing even though it marginally tended to increase electricity costs.

Concerns over possible impacts from electricity restructuring included loss of universal service, loss of utility-sponsored public-assistance programs, negative environmental impacts, inequity in cost savings, and decreased system reliability.

Adequate planning by DOE and others was called for to ensure that deregulation does not undermine the reliability of the U.S. electric power system. Several comments supported the formation of an independent reliability commission. Some comments supported the formation of a "self-regulating reliability organization," while others recommended formation of regional organizations.

Universality of service and equity of savings was raised as another key concern. Many commenters expressed the need for any deregulation legislation to guarantee continued electric service at affordable rates. One commenter indicated that the focus for deregulation should not be on low rates, but on the total bill an individual receives each month for service. With large consumers able to bargain with producers for low rates, individual consumers may bear the burden of higher electric costs.

> Allow free market competition, but set baseline requirements that all competing energy providers must meet in order to operate.
>
> — *Public Hearings*

The perceived environmental impacts of deregulation were addressed in several comments. With the advent of a cost-driven selection of fuel and generation facilities, several commenters were concerned that there would be an increase in the utilization of older, less environmentally friendly generation facilities. In fact, several comments noted that electricity with the lowest cost per kilowatthour is generated at old coal-fired plants, several of which do not have to meet Clean Air Act standards due to grandfathering clauses. On the other hand, a number of comments expressed the concern that Federal restructuring legislation not be used as a vehicle to carry out environmental agendas.

Concern was expressed over the unbundling of natural gas from electricity in the wake of opening electricity markets. It was noted that 98 percent of our public gas systems are served by one pipeline, and while market forces are good, they only work when there is competition. Stakeholders recommended that DOE continue to regulate natural gas supplies to public gas systems and that only local authorities should decide whether to unbundle gas and electric rates.

> Electric and gas consumers should have access to adequate, safe, reliable, and efficient energy services at fair and reasonable prices at the lowest long-term cost to society. At the same time, we believe that consumers must have the ability to choose their providers and the services those providers will give.
>
> — *Margaret Welsh, NARUC*

Coal. A variety of opinions was expressed regarding the improvement of efficiency and the reduction in environmental impacts of existing coal-fired plants. These opinions ranged from closing the current plants to continuing current operations. Pollution from burning coal was of concern to many of those responding.

Other commenters expressed that additional research and development (R&D) should be funded to increase the efficiency of the extraction process and reduce environmental effects from coal extraction and consumption. It was suggested that DOE should work to deploy and encourage clean coal technologies abroad, where older technologies are currently used, thereby reducing emissions. Ethanol co-firing was suggested to reduce environmental impacts and greenhouse gas emissions. One individual noted that the CNES should include more discussion concerning better methods of using coal in existing utility and industrial boilers. One viewpoint was expressed that coal can reduce dependence on imported oil.

> The recent focus on global climate change studies has shown that fossil fuels, and especially coal, will continue to be used in the future. And we ask that, given the role of coal, the Department should not just admit or accept but actively champion a vigorous R&D program in the use of coal in an environmentally friendly manner.
>
> — *Richard Bajura, Director of the National Research Center for Coal and Energy at the University of West Virginia*

Additional comments suggested that an extensive emission trading approach to environmental regulation could reduce emissions of many pollutants.

Natural Gas. Several individuals made comments similar to the following: natural gas "is both abundant and clean burning. Government should do all it possibly can to encourage industrial users as well as citizens to switch from coal and heating oil to natural gas. Producers of natural gas should be encouraged to explore for natural gas" and "[a]uto manufacturers should be encouraged to produce autos which run on natural gas through tax incentives."

Other commenters felt that the United States should "open natural gas markets into cities. The differential between natural gas sold in the marketplace and the price it is sold to the consumer is too high."

A new natural gas technology that recaptured most gases was mentioned. Increased funding for R&D in alternative energy technologies, diversified fuel sources, and increased environmental constraints was suggested. It was also suggested that natural gas could be used to generate electricity without forming common pollutants through a "green power system."

Hydroelectric. Many respondents addressed the issue of hydroelectric energy. Most comments mentioning hydroelectric power felt that it was a relatively cheap and environmentally friendly form of power. Comments noted that if we are to increase the efficiency of hydropower facilities by 2010, the CNES needs to state that it is done with the involvement of the facility customers.

Some commenters felt that the number of hydroelectric sites should be increased in the United States, while others felt that hydroelectric facilities should not be built because of expense and environmental damage. The issue of licensing and relicensing hydropower facilities was raised by several respondents. Some felt that, due to the unpredictability of licensing and relicensing requirements, it would be difficult to attract the capital to develop new hydro facilities.

Nuclear Energy. Many responses "for" and "against" nuclear energy were received. Several of those responding felt that the draft CNES did not include enough reference to nuclear energy, especially as a long-term goal (see Goal IV). Most scientists and researchers that responded supported nuclear energy and stated that the United States needs to develop a strong nuclear policy in regard to facility life, safety, waste disposal and control, and supply. One commenter urged that the CNES should include more references to the nuclear power industry. Another emphasized that the Federal Government needs to reduce the impediments to the construction of new nuclear powerplants. One suggested that the move to nuclear energy should be a means of building a nuclear-based "hydrogen economy" where nuclear energy is used to dissociate water into hydrogen and oxygen.

One commenter explained that nuclear energy can help meet clean-air commitments and has a lower environmental impact than other energy sources. He recommended that DOE renew its nuclear program. Without this action, nuclear energy's share of U.S. generated electricity will fall from 20 percent today to just 9 percent in 2020.

Advocates of nuclear energy pressed for additional DOE-funded R&D of new reactor technology and improvement in the licensing process for current facilities and construction of new nuclear reactors. Nuclear energy was presented as one of the only viable solutions to growing world energy

demand that would not contribute significantly to environmental problems. It was noted that good results were achieved in DOE's Fuel Recycling Program before funding was cut, and continuation of the program was recommended.

Many comments maintained that there was a contradiction in Administration policy with regard to continued use of existing nuclear facilities. Some observed that while DOE had a legal obligation to accept nuclear waste in January 1998, it had not yet made arrangements to do so, possibly causing several plants to close because they have no remaining storage capacity onsite. It was recommended that DOE develop an interim storage facility.

A concern was expressed that the United States is losing its technical advantage in the nuclear field through declining educational infrastructure. It was recommended that DOE provide funding for the development of the next generation of nuclear facilities.

Several individuals opposed the continuation of nuclear energy. The focus of these comments was related to the dangers imposed on the public by nuclear energy technology. Many commenters, who advocated the phasing out of all nuclear energy technology, cited the nuclear waste issue and stated that subsidies for nuclear energy and fossil energy should be funneled into renewable energy technology R&D. Concerns about the transport of spent nuclear fuel were also expressed.

Some commenters suggested that exploring other nonnuclear forms of energy and improving the current technologies would be a wise strategy. Nuclear issues are further discussed in Goals III and IV.

Objective 2. Significantly increase energy efficiency in the transportation, industrial, and buildings sectors by 2010.

Most comments related to this objective tended to focus on how the objective would be best achieved. On the regulatory side, several commenters recommended mandating higher mileage ratings for vehicles, setting higher codes and standards (presumably for buildings and consumer appliances), and taxing low-efficiency goods. Suggested market-based strategies included providing incentives to manufacturers, sellers, and consumers of very high-efficiency products, encouraging cogeneration, and promoting, rewarding, or funding efforts to improve efficiency and develop alternative fuels. Commenters felt that the government should be promoting use of mass transit, bicycles, and walking as alternative forms of transportation.

Transportation. DOE was encouraged to continue support for the development of alternative fuels to meet transportation demands, citing goals set under the Energy Policy Act in 1992.

Several individuals suggested that tax incentives for industry and private individuals could be used to accomplish this objective. Specifically, tax benefits could be extended to the auto industry to promote advancements in energy efficiency and pollution control. Commenters also suggested that individuals who carpool to work could receive a tax credit as an incentive to reduce fuel consumption. Individuals also suggested that tax incentives or economic-assistance packages could be developed to encourage domestic oil production because it is currently "more economic to purchase foreign oil."

The Administration was criticized for a perceived elimination of the natural gas vehicle program. It was strongly recommended that DOE work to revise the draft CNES to include substitution of nonpetrol fuels for vehicles, expand the Partnership for a New Generation of Vehicles, correct problems with the Federal fleet, deny petition for 80-percent petroleum fuels to be considered alternative, and work with legislators to introduce meaningful incentives for alternative-fuel vehicle development.

> … the Administration's most significant vehicle development program, the Partnership for a New Generation of Vehicles, has announced that it will focus on gasoline and diesel technologies. In fact, natural gas has been dropped from this program, even though the use of natural gas and other alternative fuels and advanced hybrid and fuel-cell vehicles would reduce reliance on imported oil and provide substantially greater environmental benefits.
>
> — *Gilbert Sperling, General Counsel for the National Gas Vehicle Coalition*

It was stated that education is a key issue in changing attitudes about transportation technologies. Another suggestion was made for a higher gasoline tax to pay for more consumer energy education programs. One commenter stated they would "like to see the DOE address the strategic implications of our automobile-based transportation system." The commenter also stated that "it seems … that a lot of energy usage, monetary expenditures, and environmental damage can be attributed to the operation of personal automobiles and the maintenance and building of our highway system."

One viewpoint was expressed that electric vehicles (EVs) could assist in achieving all of the draft CNES goals. Increased Federal fleet purchases of EVs, increased tax credits for EVs, establishment of financial incentives for EVs, and hybrid vehicle development with grid connectability were all advocated. Several speakers encouraged DOE to work on the development, deployment, and commercialization of electric and other alternative-fuel vehicles.

It was noted that the goals of the Energy Policy Act have not been met. "Our Federal fleet has been sadly lagging in its adoption of alternative-fuel vehicles of all kinds, but most notably the electric and hybrid vehicle." This commenter felt that DOE should have a moral obligation to at least influence other Federal agencies in the use of alternative-fuel vehicles. It was strongly urged that part of the policy statement should be a revitalized effort to bring the Federal fleet into compliance with the goals of the Energy Policy Act. Specifically noted was a $90 million infrastructure development effort established through the Energy Policy Act that has not been appropriately funded.

Alternative Fuels. Individuals from the scientific and research community would be interested in seeing the Federal "[G]overnment come to the forefront in the search for alternative electric energy sources outside of the mainstream arena, and fund those areas that show promise." They also suggested that the United States move away from fossil fuels and into renewable energy. Commenters felt that the government should provide subsidies or incentives for alternative energy sources such as renewable energy.

Others recommended that DOE support the development of biodiesel, asserting that this domestic energy source could reduce the environmental impacts of the transportation sector while increasing domestic farm income. Still others advocated the development of biomass-based ethanol to replace large amounts of fossil fuels. Commenters noted that agricultural fuels such as ethanol and biodiesel should play an important role in the CNES. They also encouraged DOE to resume R&D support for ethanol. It is believed that the program will only be successful if there is a continuous commitment to alternative fuels and tax credits are assured.

The benefits of fuel cells in meeting U.S. energy needs and not causing environmental damage were mentioned. Increased funding for R&D programs focused on fuel cells and the use of fuel-cell vehicles in the Federal fleet were suggested.

Industrial and Building Efficiency. Many commenters encouraged increased funding to improve the efficiencies of the current power system and machinery and appliances that use that energy. Others encouraged the development of financial mechanisms that would lower the cost of efficiency improvements, so-called "shared savings." Tax breaks

for installing solar energy technologies were also suggested.

A comment that occurred repeatedly was to use R&D and technology to advance efficiencies and to increase funding in the R&D arena. Stronger DOE R&D efforts in the area of infrastructure and transportation research were advocated, as was more research into more efficient power transmission and utility company efficiencies. A commenter also noted that the draft CNES needs to define "efficiency." Another person stated that Goal I, Objective 2 in the draft CNES would not be met without "aggressive policies."

> The objectives and strategies under your Goal I, Mr. Secretary, primarily emphasize supply technologies. We need tangible strategies for the demand side as well. Under Goal I, Objective 2, I recommend a new strategy to … "promote and achieve significantly improved end-use energy efficiency." New energy-efficiency standards for our Nation's buildings, appliances, lighting, heating, ventilation, and air-conditioning systems, [and] industrial motors would prove highly effective …. I notice that in your energy strategy, you have included standards for full-size automobiles under your Goal I, namely that the cars should achieve an 80-mile-per-gallon level by a certain year. And, therefore, we think such an approach could be extended to the appliances and the motors and lighting and all the other areas that I've summarized.
>
> — *Ed Meyers, Commissioner, D.C. Public Service Commission*

In addition to improving energy efficiency in the buildings, transportation, and industrial sectors, many comments suggested using "clean" generation technologies and improving the efficiency of the transmission system through superconductor technology.

Goal II

Ensure against energy disruptions — protecting our economy from external threat of interrupted supplies or infrastructure failure.

Objective 1. Reduce the vulnerability of the U.S. economy to disruptions in oil supply.

Public comment was generally supportive of Objective 1, particularly maintaining and filling the Strategic Petroleum Reserve and guarding against the impact of oil supply disruptions. Several commenters stated that petroleum is a vital energy source for the United States. They explained that it is necessary for DOE to reach out to the petroleum industry in the development of new technologies to mitigate the environmental impacts of petroleum usage and production. Oil producers expressed some dissention. They explained that there are many geographically diverse sources of oil and that it is economically more beneficial to use inexpensive foreign sources than to develop more costly domestic sources.

Disruption Response. One commenter stated that the size and scope of the Strategic Petroleum Reserve should be increased to be "commensurate with current levels of domestic crude oil consumption. At the present time, assets of the Reserve, both storage facilities and stored oil, are being sold to finance the Reserve's operations." The result is that the Reserve is "far less capable of ameliorating disruptions in crude oil imports than it was intended to be when it was originally conceived, and its capacity is continually being eroded, primarily due to budgetary considerations rather than concerns relating to energy policy." A group of independent oil producers recommended that the Strategic Petroleum Reserve be stocked with oil equal to a 90-day supply,

taking advantage of current low oil prices to buy reserves rather than sell them. One commenter stated that there are reasonable oil disruption scenarios that could last one or two years, and that DOE should develop plans to "provide compensatory mechanisms that will reduce the economic and environmental damage should a disruption occur."

Several offered detailed recommendations in support of Objective 1, including finding technologies to recover oil from lower grade sources, such as heavier crudes and tar sands; R&D of in-situ microwave retorting of oil-shale; sponsoring relevant R&D at universities and National Laboratories; continuing to sponsor DOE programs such as the Reservoir Class Demonstration Program and the Advanced Computational Technology Initiative; tax incentives for oil exploration and development; converting the Strategic Petroleum Reserve to private ownership and operation; and the development of an Office of Refining Technologies within DOE to focus on the refining industry. One Member of Congress wrote that the Administration must "lower taxes, reduce regulation, and lower the burden of government on our domestic oil and gas industry."

Expansion of Domestic Oil Supply. One speaker at a public hearing recommended that DOE play a larger role in providing information on oil and gas reserves. He advocated a national repository system for domestic data, explaining that the large oil and gas companies have shifted their focus from domestic to overseas production and that unless DOE steps in, the domestic data they have collected will be lost.

An association of independent oil producers from 33 States stressed that DOE should focus on "preserving the 700 million barrels of annual production from marginal wells" in light of the low current market prices that make much of marginal-well production uneconomic. This association recommended that DOE again review the recommendations of the National Petroleum Council on marginal wells. Another individual commenter suggested that DOE work to create tax credits when crude-oil prices fall to protect this source of domestic production.

Global Concerns. The focus of comments was mostly domestic, as opposed to global. Of those who took a global perspective, a few commenters advocated development of resources and energy trading outside the Middle East, in addition to developing strategic partnerships with friendly Arab nations. Another requested that DOE inform the public on how the Caspian Sea oil deposits can affect the cost of U.S. energy and that it maintain vigilance on resource developments, disruptions, and economic issues globally.

Representing members of the petroleum industry, two commenters pointed out the impact of unilateral economic sanctions against foreign countries on access to promising exploration areas outside the United States, and its hindrance to American global competitiveness. A major petroleum industry trade group recommended that the CNES recognize the potentially adverse treatment of foreign source income (including the restrictions placed on the use of the foreign tax credit) on limiting the global activity of U.S. firms, as well.

Access to Federal Lands. Opinion on access to Federal lands for resource exploration to boost domestic supply was sharply divided. Several commenters were in favor of increasing access to these resources, while several others were opposed. An example of commenters in favor of opening up these lands:

> Access to development of Federal lands in Alaska and the offshore are critical to reversing the decline in domestic oil production and to increasing the Nation's gas supply. These goals are achievable only if the Federal Government reconsiders its current policy pertaining to access of these areas.
>
> — *Independent Petroleum Association of America*

> Failure to acknowledge the critical role of Federal lands to future domestic energy supply prospects compromises the seriousness of the draft strategy document.
>
> — *American Petroleum Institute*

And in support of the opposing position:

> We have four major recommendations. First, the CNES should have as an explicit goal decreasing the threats posed by oil and gas exploration and development to America's most sensitive and environmentally important lands and waters. Second, the CNES should do nothing to promote … development of still pristine Federal lands and waters in the Arctic. Third, the CNES should specifically recommend the permanent protection of the coastal plain of the Arctic National Wildlife Refuge. Fourth, it should acknowledge the importance of the National Petroleum Reserve–Alaska as a 'strategic reserve' that should only be tapped in times of a national energy emergency.
>
> — *Alaska Wilderness League, Natural Resources Defense Council, N. Alaska Environmental Center, U.S. Public Interest Research Group*

One commenter suggested that DOE open the Arctic National Wildlife Refuge, the National Petroleum Reserve–Alaska, and California offshore oil fields for exploration only to private companies who have a "proven record of responsible operation."

A representative of independent petroleum producers took specific issue with the royalty collection program currently being administered by the Minerals Management Service, supporting legislative proposals to switch to a royalty-in-kind system where producers hand over a portion of production from Federal lands as payment.

Technologies to Limit Growth in Oil Demand. Several commenters supported the strategy of developing technologies to limit the growth of oil demand. Nuclear fusion was also advocated by several as an additional energy source to complement renewables in limiting growth in oil demand. Some commenters wanted DOE to increase funding for heavy-oil research to prevent further loss of technological knowhow and that funding for coal or light-oil research could be reduced to compensate.

Additional Input. Opinions also differed on means to meet Objective 1. Some commenters suggested more emphasis on decreasing oil consumption, via use of alternative energy technologies, and less emphasis on increasing production. Another requested that the United States maintain a strong oil and gas industry by reversing policies that currently provide incentives for "major oil companies to move overseas to escape 'punitive' environmental regulations and taxes."

Non-technology solutions to reducing usage were also offered, such as a carbon tax coupled with offsetting reductions in other taxes to make impact revenue neutral, or a tax only on imported oil.

Cautions by some commenters included:

- Balancing an oil production increase with the goal of the Kyoto accords.
- The downside of increasing U.S. production in peacetime is depletion of domestic resources that may be needed in emergencies. One individual suggested a better strategy might be to develop technology for enhanced oil recovery, but leave the oil in the ground until it is needed for emergencies and use foreign supplies before depleting U.S. supplies.
- Goal II's aim of ensuring against energy disruptions by developing new technologies to increase coal production may conflict with Goal I's effect of reducing the demand for coal and reduce incentives for increased coal production, "despite the fact that it [coal] is the largest fossil fuel reserve in the U.S."

Objective 2. Ensure energy system reliability, flexibility, and emergency response capability.

Commenters were generally positive in their responses to Objective 2, focusing on

recommendations for reducing electrical service disruptions through greater system reliability and the importance of distributed power generation.

In the discussion of electricity restructuring (Goal I), many comments were made regarding ways to ensure the reliability of electricity supply.

Reducing Disruption of Service. A research scientist suggested building more redundancy into the energy network and alternative routes for energy when there is a disruption. One company recommended that Objective 2 should include comprehensive measures to address grid reliability management, technological and institutional issues that will result from restructuring, and existing gaps in system reliability.

An individual also stated that Goal II, Objective 2, should add a new Strategy 4: I*ncrease use of renewable energy and energy efficiency in the U.S.* to help ensure against energy disruptions. Another suggested that a separate strategy be created for distributed power and cogeneration, emphasizing reliability and market niche applications. This latter strategy would encompass technologies for rapid restoration of power in the event of natural or man-made interruptions.

One commenter cautioned DOE to monitor the effects of electricity deregulation on power availability and reliability and be prepared to impose a "moratorium" on deregulation if it threatens the reliability of the grid.

A hydropower industry group asserted that hydropower, under direct U.S. control and not subject to price and availability fluctuations, offers much in maintaining system reliability and should be considered a priority in the CNES.

> The Federal Government has the responsibility to make sure power and energy will be available and uninterrupted through redundancy …
>
> — *Dennis Baker*

Distributed Power Generation. Several commenters explained that through utilization of current distributed generation capacity, the United States could meet much of its growing energy needs. One commenter went as far as recommending that the United States phase out dependency on the centralized power grid completely over the next generation or two.

A few individuals suggested instituting policies to restructure cities to reduce urban sprawl. One person, representing a private company, stated that "load control, load shedding, voltage control, and capacitor control are key to electric utilities being able to respond quickly to emergency situations."

A few individuals advocated the use of micro-turbines to serve the distributed generation niche. In addition, the use of hybrid power systems, and especially fuel cell use in these systems, was advocated. Also mentioned was dispersed generation, with backup generators located at sensitive locations such as hospitals, which would create a higher utilization factor, and the use of hard circuitry to avoid high-tech terrorism.

An individual expressed concern that adequate metering and submetering technologies were needed in Federal facilities to provide accurate numbers for efficiency modeling and to verify energy consumption reductions.

Emergency Response Capability. Several commenters also addressed response to emergencies, with suggestions such as the sharing of manpower resources between States in case of emergency and redundancy built into the energy network so that there are alternative supply routes when disruption occurs in one area.

Goal III

Promote energy production and use in ways that respect health and environmental values — improving our health and local, regional, and global environmental quality.

The scope of Goal III — spanning natural gas, oil, nuclear, and renewable energy technologies; deployment of environmentally friendly technologies; and domestic and international greenhouse gas reduction efforts — contributed to the diversity of comments received on this Goal. An attempt is made below to summarize as much as possible the wide variety of viewpoints and subjects the public addressed in their comments.

An overall comment was offered by one utility: promoting energy production and use in the manner stated in Goal III "will result only if all fuels and energy sources are treated equitably and the scientifically based health and environmental standards are applied to all fuels and uses" to prevent skewed application of environmental requirements and disruption of the free market.

Objective 1. Increase domestic energy production in an environmentally responsible manner.

Most comments were directed toward issues in Objective 1. The concepts of sustainable development and sustainable living were mentioned several times by commenters. Another suggested that stricter enforcement of pollution laws be carried out. One warned that major (energy) construction projects such as dams should not be undertaken unless it can be first proven that alternate sources of energy cannot meet the energy demand. Another commenter recommended that DOE fund long-term scientific research on environmental issues and leave regulation to local authorities.

Mitigation of Environmental Impacts from Energy Production. The specific environmental issues raised included concern over climate change and meeting the challenge set forth for U.S. greenhouse gas emission reductions, and advocacy of environmental regulations which "make sense" for the particular technology and locality. Several speakers raised climate change concerns as they explained why the technology they advocate should play a substantial role in the Nation's energy strategy. Individuals advocated outreach and collaboration with industry in the development and implementation of environmental regulations.

Developing Renewable Electric Generating Technologies. One State's energy commission noted that the renewable energy portfolio standard mentioned in this Objective was a hotly debated issue. Some States have adopted different methods to encourage renewable energy projects, and the commission recommended that the CNES recognize other approaches that advance renewables. A Southern utility holding company noted its opposition to the renewable portfolio standard in the CNES, expressing support for renewables through appropriations and tax credits provided elsewhere in the CNES so electricity producers do not bear the cost burden.

The hydropower industry registered its request that the CNES address hydropower explicitly in Goal III, Objective 1, and lessen the regulatory burdens and costs that are causing renewable energy generated from hydropower to decline.

Developing Renewable Technologies. Many speakers advocated increased R&D spending for renewable energy technologies. Some individuals thanked DOE for its openness in dealing with industry, while others stated that DOE had not spent enough on renewable energy. One commenter highlighted the role renewables can have globally in meeting energy demand and reducing environmental impacts of energy consumption.

Some commenters supported subsidies to renewable resource energy providers and a reduction in subsidies to fossil-fuel burners. Several commenters advocated increased government support of sustainable renew-

able energy, including a mandate that all Federal facilities purchase green power.

Concerns over environmental impacts of energy production focused on the need for improving energy efficiency and increasing use of renewable energy technologies. Two individuals discussed three key points: (1) the need to increase funding for renewable energy technologies research, development, and deployment; (2) the need to improve energy efficiency in order to decrease energy intensity and avoid environmental impacts; and (3) the need to phase out older coal-fired powerplants grandfathered under the Clean Air Act. Through adoption of these three measures, the commenters contended that the United States could regain its technological lead in renewable energy and reduce both economic and environmental costs of energy production and consumption. One individual explained that renewable energy technologies will not be able to supply sufficient generation capacity to meet the Nation's growing energy needs.

Several commenters want to expand R&D and funding in the area of windmills and solar panels for energy production. Commenters would like to see mention in the CNES of solar technologies used in desert regions and particularly Southern states.

Several individuals commented that tax breaks could be given to private citizens for installing energy-saving technologies such as solar panels. One individual was concerned that under current IRS tax laws (Form 3468) he could not earn a tax break for installing a solar-electric power system on the roof of his house. He stated that the system is designed to operate for more than 30 years, costs about $10,000 to install, and has been working "flawlessly" since installation last year. The commenter felt that current tax laws stifle widespread implementation of technologies such as solar-panel systems. Several commenters stated that installing solar and similar systems would help the United States shift from dependence on foreign energy supplies to a more independent posture.

Wilderness/Indian Land Protection and Protection of Natural Resources. One commenter noted that drilling for oil should not take place in wilderness areas (Arctic National Wildlife Refuge) or roadless areas, while a few promoted drilling in offshore areas near California. One individual stated that public land should be for the public and "not for the profit of large companies." Comments were similar in nature to those received for Goal II (discussed above).

Maintaining a Viable Nuclear Energy Option. With regard to Strategy 4 under Objective 1, commenters suggested reducing the impediments to construction of new powerplants and allowing "reasonable" licensing extensions for existing plants. Another suggested an evaluation by the National Academy of Engineering of the current safety of nuclear plants to contribute to public confidence.

As in other goals, the lack of mention of fusion as a viable nuclear option in the draft CNES was noted several times by commenters. Another recommended continued R&D on the liquid metal-cooled breeder reactor.

Several commenters felt that the inability of generators to ship radioactive waste in certain areas or the inability of geologic repositories (that is, Yucca Mountain and the Waste Isolation Pilot Plant) to accept the waste will have a major impact on the U.S. nuclear power industry and research facilities. One commenter recommended that "nuclear waste should be managed … by an entity entirely accountable to the public whose health is at risk … but should be entirely paid for by the nuclear industry…."

Objective 2. Accelerate the development and market adoption of environmentally friendly technologies.

Environmentally Friendly Technologies. A commenter offered that such technologies have value only if driven by "the artificial force of Federal regulation," and that DOE should examine the extent to which

Objective 2 would meet the quantitative goals for reducing greenhouse gases (presumably under the Kyoto Protocol).

A geothermal energy public-private partnership stressed the inclusion of geothermal in equipment tax credits. On a related note, the partnership expressed a concern that all tax credits may be too high, possibly inciting a boom-bust cycle such as the one witnessed with the solar tax credits of the 1970s.

Similarly, a fuel cell trade association pointed out the benefits of fuel cells in terms of lower carbon dioxide emissions, and their recyclable nature, and requested that DOE continue funding the Direct Fuel Cell stack technology development and demonstrations in government installations.

Climate Change. Many speakers expressed concern over climate change. One person explained that the market should drive energy choices and that energy markets and the technology focus necessary to meet Kyoto obligations are at odds. Several commenters were opposed to the Kyoto Protocol while many others were in favor of it. Some comments indicated that DOE should focus on developing an energy policy and not on meeting Kyoto Protocol objectives. One suggested that the Protocol was adopted using unproven assumptions and deserves further study.

> The electric utility industry was very disturbed by the inequitable treatment which the U.S. was able to negotiate in the Kyoto treaty on climate change. There are a number of technology transfer and international trading and joint implementation programs that would create positive incentives for all parties. The command and control approach, which was negotiated in Kyoto, is unequitable and unworkable. All countries should be active participants in any global climate treaty….
>
> — *Texas Utilities Services, Inc.*

Other comments dealt with greenhouse gas trading or greenhouse gas reduction in the United States or internationally: through carbon dioxide trading, incentives for new energy technologies that greatly improve local public health, and minimizing local, regional, and global pollution. One State's energy commission recommended that a separate CNES be devoted to developing the science of climate change as a basis for devising sound solutions.

Another commenter supported DOE's efforts to combat climate change and encouraged promotion of voluntary programs, with agencies working as equal partners in identifying and implementing voluntary measures in the public sector as well. He also recommended that participants in these programs be given credit for early actions. In contrast, a university environmental policy center noted that limitations of voluntary greenhouse gas reduction programs may require mandatory greenhouse gas reductions throughout industries to ensure that all companies are on a level playing field.

Another commenter supported action to mitigate the effects of climate change. In his opinion, only nuclear energy will be able to meet demand without increasing greenhouse gas emissions. One commenter felt the draft CNES placed too much emphasis on greenhouse gas.

Commenters noted that the United States needs to work together with other countries to keep pollution standards high and to form international partnerships. One responder would like to see the United States "make significant contribution to improving energy generation methods for all countries if we want to improve the global environment."

> The most important thing government can do is to ensure that technology is freely shared globally.
>
> — *Roger Altobelli*

Finally, one commenter felt that Goal III, Objective 2, Strategies 4 and 5 (participating in negotiations with developing countries, and international joint greenhouse gas reduction efforts) might be more appropriately placed in Goal V.

Goal IV

Expand future energy choices — pursuing continued progress in science and technology to provide future generations with a robust portfolio of clean and reasonably priced energy sources.

Some commenters suggested that costs for R&D and future energy expansion should be shared by the Federal Government and private industry because industry directly benefits from government research. One commenter felt that the draft CNES should place emphasis on "power production" research rather than just general "scientific" research. A few commenters also felt that research should support efforts in areas of unconventional or nontraditional research; they urged DOE and the Federal Government to be "open-mined" when it considers funding innovative energy projects.

Objective 1. Maintain a strong national knowledge base as the foundation for informed energy decisions, new energy systems, and enabling technologies of the future.

One commenter suggested that Goal IV, Objective 1, Strategy 1 be modified to include the phrase "fusion energy research," after "renewable technologies." Several commenters stated that National Laboratories should be doing high-risk R&D driven by an industrial advisory committee as has been previously proposed. One person would like to create centers of excellence in the National Laboratories to allow continuity of work — given adequate funding — while another would like to see the National Laboratories made more efficient and competitive. One person stated that bureaucracy and huge overheads stifle the Laboratories.

Another commenter suggested that Goal IV, Objective 1, Strategy 3 be modified to read, "Research into the properties of matter in extreme states can feed into future innovation in energy technologies." Several people noted that fusion is important in light of "President Clinton's recent speech at the AAAS meeting in which he highlighted fusion energy as one of the key future benefits of scientific research. Fusion is also an important element of the recent report from the President's Council of Advisors on Science and Technology."

A commenter noted that Objective 1, Strategy 2 should include a review of the status of knowledge about the effects of greenhouse gases by a prestigious body, such as the National Academy of Sciences.

Several commenters stated that Objective 1 should also mention increased basic education for children and the general public. A few commenters stated that Goal IV, Objective 1, Strategy 4 should mention more universities and private industry to conduct research instead of the National Laboratories that tend to be more costly. In addition, commenters recommended that DOE partner with universities to develop technology and use a streamlined "unsolicited proposal" approach to accelerated R&D funding.

Objective 2. Develop technologies that expand long-term energy options.

Commenters were generally supportive of the range of conventional and alternative energy options. Numerous commenters noted that DOE should add "fusion" to Goal IV, Objective 2 as a long-term energy option. Various commenters supported funding more research on fusion and cooperation with Japan and Europe. Commenters realize that fusion is a "cleaner" way of producing electricity than standard fission reactors.

> [T]he ability to conduct long-term research in the area of power has been severely hampered at a time where such an effort is needed most.
>
> — *Fernando Alvarado*

> The fact that the nuclear power system is being downplayed or ignored in this country as compared with other countries that have used it to full advantage has left us behind. Not being able to successfully address waste disposal issues from this power source is not advancing our country's energy independence. Fusion power should be strongly supported as well as any other methods that appear possible. Without broadening our base through research now will cost the next generations that will have to develop these alternatives. The government should be much more proactive on this issue.
>
> — *George Larson*

Other specific suggestions included increased support for R&D and a cooperative arrangement with industry and utilities on hydrogen-electric automotive systems. Restoration of funding magnetic fusion, including the International Thermonuclear Experimental Reactor (ITER) and support to the Princeton Plasma Physics Laboratory for Tokamak Fusion Test Reactor upgrades was also mentioned. One commenter suggested high-risk R&D at National Laboratories driven by industrial advisory committees. A commenter noted that DOE should "develop a broad portfolio" of energy-related R&D activities. On the dissenting side, one commenter noted that "looks to me that there is an uncritical worship of technology in this proposal, it looks like this document expects miracles from research."

Many speakers and commenters advocated continued or expanded R&D in a variety of areas. Generally these comments focused on the particular technology an individual advocated. One commenter recommended that DOE look into zero-point energy and referred to a specific technology for harnessing this energy source called the "N" machine. He challenged the Secretary of Energy to fully investigate this technology and let the American public know about it.

Another commenter encouraged DOE to form an office for emerging technologies. The commenter explained that truly new groundbreaking technologies would emerge only when an office is established to engage scientists and researchers who are on the fringe of technology. The commenter explained that much of the research that is currently done in DOE is mainstream and these fringe researchers need an environment in which their work is taken seriously to flourish and publicize their achievements.

Goal V

Cooperate internationally on global issues — developing the means to address global economic, security, and environmental concerns.

Objective 1. Promote development of open, competitive international energy markets, and facilitate the adoption of clean, safe, and efficient energy systems.

Of the total number of comments, concern over open and competitive international markets received the fewest. Most of these comments stemmed from the petroleum industry and are captured in the Goal III discussion of embargoes and foreign tax credits.

Other comments included support for the transfer of environmentally sound technologies to the developing world. A representative of the coal industry advocated the export of clean coal technologies to large coal users, like China, to help reduce global levels of pollutants. Similar environmental technology transfer suggestions were made in regard to other fuel sources.

Several commenters suggested that the United States increase international cooperation in research of future energy sources. Other commenters noted that a "World Wide Web" of electricity or a global energy network should be included in the draft CNES. This approach is described as using electricity generated anywhere on the globe, allowing increased access to renewable energy resources, to meet world energy demand. The commenters noted that this approach would allow peak demand for electricity to be spread more evenly due to time-zone differences.

One speaker suggested that an increase of U.S.-Mexico energy trade (importing oil from Mexico to the United States) would help stem the tide of migration into the American Southwest by providing employment in Mexico.

> [D]eveloped and third-world nations [should] commit to a goal of increased energy efficiency and reduced pollution.
>
> — *Thomas J. McGeachen*

One individual made the point that in the current atmosphere of environmental concern, environmental policy would become the de facto energy policy if a clear energy policy was not defined. He explained that with the outcome of the Third Conference of the Parties to the United Nations Framework Convention on Climate Change in Kyoto and its significant implications for the energy sector in the United States, it is imperative that DOE define an energy policy which ensures energy security and diversity.

A commenter also stated that the CNES should acknowledge that excess fissile material from the United States and Russia could have an impact on energy resources and the energy market.

Several commenters expressed an interest in seeing DOE cooperate and support international fusion development research. Some of these commenters would like to see the United States build the International Thermonuclear Experimental Reactor (ITER) project for fusion research, preferably in the United States, and felt that building the ITER would assist with fighting global warming by implementing a clean energy source internationally.

Objective 2. Promote foreign regional stability by reducing energy-related environmental risks in areas of U.S. security interest.

Several commenters noted that Goal V, Objective 2 is actually foreign policy and belongs in a State Department document, not a DOE document. One comment cautioned that global cooperation under no circumstances is basis for weakening, waiving, or authorizing exemptions for U.S. Federal, State, or local environmental regulations.

On the environmental security side, commenters recommended International Atomic Energy Agency monitoring of nuclear reactors to insure that no diversion of strategic nuclear materials takes place, ratifying the Kyoto Protocol, and requiring developing countries to abide by regulations set for industrial countries.

General Comments

Process

On balance, respondents were pleased with the variety of ways input was solicited for the draft CNES. There were two key criticisms of the process. Several comments indicated that the review period for the draft CNES was too short. In order to provide a careful technical review of the document, a longer review period would be needed. Additional comments were received that indicated that the public should be given more advance notice of hearings.

Document

Again, comments received about the document were generally favorable. Several comments complimented the concise readability of the document and its "framework" structure. Some comments about the document were negative. These included remarks that the document was light on analysis and specifics. Others characterized the document as blindly optimistic. Several other comments were critical of the document, implying that the reliance on technology to solve grave problems is not realistic. Several comments focused on the need to provide rationale for the specific targets set by the document. Some commenters offered practical advice on technical matters, including the units of measure used for calculations.

Miscellaneous Comments

The most important energy-related activities the Federal Government should pursue? A wide variety of recommendations was re-

ceived in response to this question, including: strong support for renewable energy; development of hydrogen-based vehicle technology; reducing environmental regulations so that new generating plants and oil refineries can be built; a national Net Energy Billing policy; increased vehicle gasoline mileage efficiency requirements and nationwide vehicle emission controls; and to go slow on utility deregulation.

Any other comments on the draft CNES? Similar to the previous question, a variety of responses emerged. They included: subsidies to renewable energy providers and reduced subsidies to fossil-fuel consumers; specific targeting of hydrogen as a fuel; load-control switches; pursuing magnetized target fusion (MTF).

Energy Conservation by Adopting a 4-Day Work Week. One commenter noted that energy conservation could be accomplished by adopting a 10-hour a day, 4-day work week. Adoption of such a policy saves energy by reducing the electrical power used at the business place, reduces travel to and from work, and reduces frequency of emissions from vehicles.

Commenters also suggested reprioritizing DOE funding to support (1) subsidies for alternative energy sources, (2) basic research on oil recovery and geothermal and field testing of new technologies, (3) R&D in energy efficiency, (4) energy management projects in Federal agencies, or (5) focusing more of the DOE budget to Goal I and less on defense-related missions.

Commenters stated that alternative technologies should be nonpolluting and affordable. Many comments focused on why a specific technology should be included in the draft CNES. They included advocates of coal, nuclear energy, fuel cells, electric vehicles, hydrogen fuels, fusion technologies, distributed generation, the "N" machine, renewable energy technologies, petroleum, and natural gas. Most of these speakers recommended that DOE continue to work collaboratively with industry and fund research efforts for technology development and pollution mitigation.

Several commenters felt that the draft CNES should contain more information related to the demand side of energy. Another commenter felt that the draft CNES was a DOE energy strategy and not a national energy strategy; the commenter also noted that the draft CNES should take into account cooperation with other Federal agencies, including the Environmental Protection Agency, the Departments of Commerce, Housing and Urban Development, Transportation, et al.

Others recommended that the United States provide more support through existing institutions such as the Agency for International Development and grants to other nations, and support the United Nations, the International Energy Agency, the International Atomic Energy Agency, and the Nuclear Energy Agency.

One former assistant secretary of energy stated: "The draft CNES prepared by DOE is inadequate and totally unacceptable. In short, it is irresponsible, it should be considered a 'religious tract' rather than a realistic and enduring plan for our national critical supply of reliable energy at reasonable prices."

Other miscellaneous comments included one person noting that it is difficult to pursue efficiency and equity issues at the same time. Sometimes two programs are needed rather than one.

Public Comments Database Summary

Name	*Organization*
Greg Ashley	Cutler-Hammer
Richard Bajura	National Research Center for Coal and Energy at West Virginia University
Bud Beebe	Sacramento Municipal Utility District
Steven Bloxham	Compressor Control
Dorothy Brownold	Private Citizen, Peace Activist
Paul Craig	Sierra Club
Winifred Detwiler	Sacramento-Yolo Peace Action
Stephen Doyle	Clean Energy Systems
William Keese	California Energy Commission
Daniel Kramer	California Independent Petroleum Association
Julee Malinoski-Bell	California Electric Transportation Coalition
Tsvi Meidav	TransPacific Geothermal Corporation
Todd O'Connor	Edison Technology Solutions
Alan Pasternak	Lawrence Livermore National Laboratory
Catherine Reheis	Western States Petroleum Association (WSPA)
Carl Walter	Professional Engineer
Robert Wichert	Breakthrough Technologies Fuel Cells 2000
David C. Williams	Private Citizen
Bertram Wolfe	Consultant
Dr. Ali	Allison Engine Company
Richard Bajura	Director of the National Research Center for Coal and Energy
Len Bower	American Petroleum Institute
Bob Cave	American Public Gas Association
Douglas Durante	Clean Fuels Development Coalition
Dave Goldstein	Electric Vehicle Association
Charles Goodman	
Burl Haigwood	Clean Fuels Foundation
Adam Kolton	Alaska Wilderness League
Richard Lawson	National Mining Association
John Lichtblau	Petroleum Industry Foundation
Ed Meyers	D.C. Public Service Commission
Marcus Milling	American Geological Institute
Eugene F. Peters	Electric Power Supply Association
Richard Schulze	Alliance for Sound Nuclear Policy
Ron Simard	Nuclear Energy Institute
Megan Smith	American Bioenergy Association
Gilbert Sperling	National Gas Vehicle Coalition
David Swanson	Edison Electric Institute
William Thomas	Proposition One
Thomas Valone	Integrity Research Institute
Leroy Watson	National Biodiesel Board
Margaret Welsh	NARUC
Marc Yaker	Electricity Consumer Resource Council
Maria Abarca	AAMA
Pete Altman	Sustainable Energy and Economic Development Coalition
Don Demoore	Houston Independent School Systems
Steve Layton	Equinox Oil Company, National Stripper Well Associations
Greg Lucero	IBEW
Fred McGuire	
Cathy Minceberg	Houston Independent School Systems
Darrell Rangnow	Valero Energy
Joe Rubio	Neighborhood Center, Incorporated
Richard Shaw	Harris County AFL-CIO
Tom Smith	I Am A Public Citizen
John Stauffacher	NGC Corporation
Bob Stout	Mitchell Energy, Domestic Petroleum Council
Elena Vergara	Chicano Family Center
Rube Williams	Texas A&M University
Donald Fontenot	Private company
Fawn A. Boyd Vigil	
Robin Tyner	U.S. Navy
Charles DeLuca	Private company
Louis M. Castanier	University
Kuenzli Nino, MD, PhD	University
T J Gilmartin	
Dave A. Merrill	Private company

Public Comments Database Summary (continued)

Name	*Organization*
Gary Lehnertz	Private company
Bernie Miller	Private company
Sharron Brown	Private company
Russell Stein	Private company
Donald Fontenot	Private company
Jo Ann Coulter Wientjes	Government Contracor
Hugh Bahar	University
Terry R. Galloway	Private company
George Larson	Private company at government site
Matt Bjork	Lawrence Berkeley National Laboratory
Tony Bartoletti	Lawrence Livermore National Laboratory
Mike McMorris	
Hamilton T. Hunter	Federal government
Robert Marsh	Retired
Ellis M. LeBouef	Private company
Roger Blanchard	University
Ronald C. Kirkpatrick	University
Robert Bourque	
John Oberlatz	
Kevin Eber	Non-profit organization
Wanda McMurray	Non-profit organization
Brian Bowman	Private company
Richard L. "Scott" McKie	Private company
Roger Blanchard	University
Mark Haynes	
Leo D. Campbell	Tribal Utilities
Marge Wood	University
R. Tomlinson	Private company
Ronald C. Kirkpatrick	
Ned R. Sauthoff	University
Tom Smith	
Robert Wichert	Private company
James C. Liles	Private company
Rube B. Williams	University
Ellen Thomas	Non-profit organization
Roger Altobelli	Management Canada
Tom Brand	Federal government
Robert J. Goldston	University
National Research Center for Coal and Energy	National Research Center for Coal and Energy
Fermin Viteri	Clean Energy Systems
Edison Technology Solutions	Edison Technology Solutions
Carl E. Walter, P.E.	
Fernando L. Alvarado	University
Donald Beeler	Private company
Bard Jackson	Federal government
Fernando Alvarado	University
M. J. Plodinec	University
W. Heidbrink	University
Charles Skinner	University
James E Quinn	Retired
Jeffrey Harris	University
William Becker	Federal government
Mike I. Green	Lawrence Berkeley National Laboratory
Peter Smith	Private company
Wayne Evelo	Federal government
George Holz	Private company
Nancy Christopher	Private company
Dennis Baker	University
David L. Brimberry	Private company
Thomas J. McGeachen	University
W. Kenneth Davis	
Michael Powers	
Tony Bartoletti	
Stephen O. Dean	
Anna R. Mosqueda	
Hank	
Judy Jordan	Non-profit organization
Chris Toussaint	Private company
Michael E. Frankle	Private company
N7THQ	Private company
Frederick J. Sparber	Retired
Dennis C. Lee	Private company
Michael Randall	Private company
Ed Wall	Federal government
Greg Swift	GO CO national lab
Akira Kawasaki	Private company
Robert Horst	Private company
Marilyn Dinger	Self-employed
Chris Sakata	Private company
Christian Steffek	Non-profit organization
A. Melchizedek	Private company
Glen Wurden	Federal government
David Mikkelsen	University
Edmund J. Synakowski	University
David Hammer	Private company
Jerry Levine	University
William B. Harrison, III	University
Allan Reiman	University
Mike Beer	University
Roy Little	Private company
David Akers	Private company
Marlin E. Schmidt	Fed. Govt. Contractor
Kathryn Houser, Ph.D.	Private company
Integrity Res. Institute	Integrity Res. Institute
M. Breazeale	Private company
David Crockett Williams	
Lawrence Goldstein	PIRINC
John Hughes	Utility

Public Comments Database Summary (continued)

Name	*Organization*
C. Boardman	
W. Guyker	Utility
Coalition 21	Coalition 21
Jim Gay	Natl. Biodiesel Bd.
John Lichtblau	PIRINC
David L. Swanson	EEI
Gil Sperling	NGVC
Marcus Milling	AGI
Edward Meyers	PSC of DC
Keith Rule	National laboratory
Joe Rubio, Ph.D.	NCI
C. Hansen	IOGCC
Thos. C. Adams, III	N. Carolina State government
League of Women Voters of Oregon	League of Women Voters of Oregon
T. Rhodes	University
Craig Cox	Private company
Morris Altschuler	Retired
Martin F. Huebner P.E.	Non-profit organization
Charles S. Federle	Private company
Pastor D. C. Curtright	Clergy
Gary L. Troyer	DOE Contractor
John J. Wollan	Private company
A. Kearns	
Mohammad A. Chowdhry	
Peter Meisen	GENI
Ed Wall	
Brett E. Chapman	University
Douglas Durante	CFDC
Edwin D. Sayre	Retired
Gerald R. Grow, Met. E.	
Mitchell Swartz	Private company
Mark Corley	Private company
Princeton Plasma Physics Laboratory	Princeton Plasma Physics Laboratory
Fisher, Sheehan & Colton	Fisher, Sheehan & Colton
Daman Walia, Artech Inc.	Private company
Thos. Valone	Integrity Research Institute
Morris Altschuler	Retired
Edw. A. Reid, Jr.	American Gas Cooling Ctr
Dennis Baker	
Walter Epp	
W. Thomas	
Doug McCune	Princeton Plasma Phy. Lab
Colorado Springs Utilities	Colorado Springs Utilities
Walter Epp	
State of Wisconsin	State of Wisconsin
Clark D. Harrison	CQ Inc.
Dan Fiscus	University
Gary W. Scronce	

Name	*Organization*
Dennis Baker	DOE Contractor
Richard Lawson	Natl. Mining Assn.
Canadian Assoc. of Petroleum Producers	Canadian Assoc. of Petroleum Producers
American Superconductor Corp.	American Superconductor Corp.
State of Hawaii	State of Hawaii
Natural Resources Defense Council	Natural Resources Defense Council
Union of Concerned Scientists	Union of Concerned Scientists
Martha Diane Wilhelm	
Thos. Dugan	Dugan Production Corp
Tsvi Meidav	Trans-Pac. Geothermal Corp.
Bruce Bentley	
D. Boneau	Yates Petroleum Corp.
Raymond L. Murray	
Ronald L. Holton	
Daniel S. Richmond	Uplands Resources Inc.
Brent Schkade	
Dan A. Sanchez	
Patrick Bailey	
Curt McClymond	
Joe Iannucci	
Paul Moroz	
George McKee	University
Natural Gas Supply Assn.	Natural Gas Supply Assn.
Ctr. for Energy & Envi. Policy, U. of Del.	Ctr. for Energy & Envi. Policy, U. of Del.
New York Mercantile Exchange	New York Mercantile Exchange
Texas Utilities Services, Inc.	Texas Utilities Services, Inc.
Alaska Wilderness League, et al.	Alaska Wilderness League, et al.
American Forest & Paper Assn., Inc.	American Forest & Paper Assn., Inc.
Alaska Forum for Envi. Responsibility	Alaska Forum for Envi. Responsibility
Independent Petroleum Assn. of America, et al.	Independent Petroleum Assn. of America, et al.
Natl. Hydropower Assn.	Natl. Hydropower Assn.
Dan Kramer	Calif. Ind. Petrol. Assn.
Western Interstate Energy Board	Western Interstate Energy Board
Assn. of Home Appliance Mfgrs.	Assn. of Home Appliance Mfgrs.
Independent Petro. Assn. of Mtn. States	Independent Petro. Assn. of Mtn. States
California Energy Commission	California Energy Commission
F. McGuire	Houston Industries Inc

Public Comments Database Summary (continued)

Name	*Organization*	*Name*	*Organization*
American Petroleum Institute	American Petroleum Institute	CellNet Data Systems, Inc.	CellNet Data Systems, Inc.
Alaska Wilderness League, et al.	Alaska Wilderness League, et al.	American Nuclear Society	American Nuclear Society
Natl. Assn. of Regulatory Util. Commissioners	Natl. Assn. of Regulatory Util. Commissioners	Exxon Co. USA	Exxon Co. USA
Edison Electric Institute	Edison Electric Institute	Leo A. Schrider	Belden & Blake Corp.
Calif. Public Utility Commission	Calif. Public Utility Commission	Hal Fox	Journal of New Energy
Natural Gas Vehicle Coalition	Natural Gas Vehicle Coalition	Paul Liepe	Geothermal Heat Pump Consortium
Cinergy Corp.	Cinergy Corp.	Chas. Goodman	Southern Co
American Public Power Power Assn.	American Public Power Assn.	Gary L. Troyer	
Geothermal Energy Assn.	Geothermal Energy Assn.	Matthew D. Diehl, PE	
Process Gas Con. Group & AISI	Process Gas Con. Group & AISI	Bertram Wolfe	
		Eugene F. Peters	Elec. Power Supply Assn.
		Francis C. Fogarty	
		Rick Lewandowski	
		George Freund	
		Joy Myers	
		Shelly And Jenny	
		Bob Hulse	