CHAMBER OF COMMERCE
OF THE
UNITED STATES OF AMERICA

THOMAS J. DONOHUE
President and
Chief Executive Officer

November 7, 2001

The Honorable Richard B. Cheney
Vice President of the United States
Eisenhower Executive Office Building
Washington, DC 20501

Dear Mr. Vice President:

The U.S. Chamber of Commerce, the world's largest business federation representing more than three million businesses and organizations of every size, sector, and region, respectfully requests that revisions to the New Source Review (NSR) program be proposed as expeditiously as possible. The current NSR program is unnecessarily complex and uncertain. Further, the program as implemented by EPA impedes increased domestic electricity production, fuel production, and energy efficiency.

As part of the May 16, 2001 Report, Reliable, Affordable, and Environmentally Sound Energy for America's Future, the National Energy Policy Development Group recommended that the President direct the Administrator of the U.S. Environmental Protection Agency (EPA), in consultation with the Secretary of Energy and other relevant agencies, to review NSR regulations and interpretations. This report was due to the President on August 17. The New Source Review program has been the source of much uncertainty and litigation. EPA has sued several electric utility companies and has challenged refineries for allegedly avoiding air quality requirements. These enforcement actions, however, typically rely on a recently changed EPA interpretation of a key Clean Air Act permitting requirement. Thus, EPA attempts to retroactively penalize companies for facility operations over the last two decades.

EPA could rapidly issue a proposal that lists the problems with the NSR program and proposes administrative solutions. EPA has been considering this issue for the last decade. For example, in a 1997 White Paper, EPA suggested that certain specified changes to facility operations could be approved in advance as part of the Clean Air Act operating permit. It is essential that EPA quickly clarify the scope of the NSR program for energy, fuel, and manufacturing companies.
The Honorable Richard B. Cheney  
November 7, 2001  
Page Two

The NSR program, as presently constituted, is also a severe impediment to increasing domestic energy supply. Electric generating plants cannot make even minor changes to their operations without running the risk of ruinous enforcement actions that impose huge fines and enormous compliance costs on their facility. National energy policy, indeed national security, requires the removal of every administrative and regulatory obstacle to increased domestic energy and fuel production.

Revisions to the NSR program have become entangled, unnecessarily, with the Administration's forthcoming multi-pollutant strategy for old power plants. The requisite amendments to the Clean Air Act will require substantial debate. Defining what is and what is not a new source is not related to which and how much power plant emissions are to be controlled. In contrast, improvements in the NSR program would immediately benefit energy production, fuel production, and energy efficiency improvements independent of any emission policy review. Reducing the problems with the NSR program is vital, and such efforts should remain at the top of the Administration's regulatory and administrative reform agenda.

Accordingly, the U.S. Chamber concludes that immediate NSR administrative reform is needed. We request your efforts to ensure a prompt response from EPA, DOE, and other relevant agencies.

Thanks and best wishes.

Sincerely,

Thomas J. Donohue

cc: The Honorable Spencer Abraham  
The Honorable John Ashcroft  
The Honorable Thomas Ridge  
The Honorable Christine Todd Whitman  
Mr. Lawrence Lindsey  
Mr. Andrew D. Lundquist

10865  
DOE016-0617

Obtained and made public by the Natural Resources Defense Council, March/April 2002
Vice President Richard B. Cheney
The Office of the Vice President
The White House
Washington, D. C. 20501
Fax: (202) 456-1606

Dear Mr. Vice President:

I am writing to express concerns about the growing impact on energy reliability resulting from reinterpretations of the New Source Review Program (NSR) under the Clean Air Act, and the specific threats to energy reliability in my community due to fears about making routine maintenance and repairs at electric utilities.

Utility managers are unsure of how to proceed with routine maintenance and repairs at their fossil-fuel electricity generation plants. Under EPA's new reinterpretation of NSR, EPA has alleged that all but the very simplest of repairs and routine maintenance cannot be made without triggering costly and unfair retrofit controls to reduce pollutants. As a result, utility managers are discouraged from making important maintenance, safety and performance improvements to their plants. This uncertainty could impact how a utility responds to electricity outages or in making seasonal repairs. Failure to undertake these activities could be a danger to the reliability of electricity supply, to the facility employees and the community.

In light of these repair problems, I am concerned about energy reliability in my state—for residential, commercial, and industrial customers. Given our current economic and international situation, I urge you to break the ten-year logjam with the U.S. EPA on simplification and reform of this program.

There is a straightforward solution that would allow for immediate repair and maintenance activities to move forward in the short-term while the U.S. Environmental Protection Agency works on the larger issues contained in the NSR program. The utility industry needs a simple cost test to enable routine maintenance and repair decisions to be made without confusion or delays which could lead to reliability problems. This cost test should not discriminate between investor-owned electric utilities, publicly owned electric utilities or cooperatively owned electric utilities. All energy sources are needed as we face the winter of 2002 with growing international demands on domestic energy supplies.
I urge your office to communicate the immediate need for a cost test on NSR to the U. S. EPA.

Thank you for your attention to this very important matter.

Sincerely,

George A. Gant
Mayor
City of Kissimmee

cc: Administrator Christine Todd Whitman
U. S. EPA
1200 Pennsylvania Avenue, NW
Washington, D. C. 20460

Secretary Spencer Abraham
Secretary of Energy
Room 7A-257 Forrestal Building
1000 Independence Avenue, NW
Washington, D. C. 20585

Obtained and made public by the Natural Resources Defense Council, March/April 2002
Vice President Richard Bruce Cheney
The White House
Washington, D.C.

Dear VP Cheney:

Let me start by indicating my delight at our new administration, and your new VP position. I have supported you and President Bush, and have been pleased at the material received from you and the President thanking me for my support.

My reason for this letter is to provide important information for you as head of the new energy task force. My topic involves the need to reestablish nuclear energy in this country. As you can see from the brief enclosed biography, I am knowledgeable about the subject. I should note that I have no personal reason to support nuclear energy except for the welfare of the nation, the world, and my children and grandchildren.

Before the Arab oil boycott of 1973, energy in this country was doubling every ten years and nuclear energy was being supported by the environmental movement because of need, and concern over the detriments of the other available energy sources. After the boycott, energy growth slowed to a doubling every 35 years; and because of the orders placed before 1973 there has until recently been a surplus of energy plants in this country. The environmental movement since 1973 has been against all new energy plants; and because of the surplus, it has not mattered until recently. But for the past couple of years there have been shortages, and, in particular, California is now under deep trouble from lack of needed electricity.

Mr. Cheney, the situation will get much worse with time. The Energy Information Agency predicts an increase of 30-40% of energy use in this country in the next two decades. More troublesome is the increase in the third world population, and because of the average increase in per person energy use worldwide, it is projected that world energy use will double to quadruple in the next fifty years. This will put a major problem on the cost and availability of gas and oil, which is predicted to be depleted in this century (coal next century). Furthermore, increased use of fossil fuels is projected to lead to global warming catastrophes. If the above concerns are real, there is only one available means to mitigate or eliminate these problems, and that is with a major increase in the use of nuclear energy, worldwide. Advanced nuclear power has the capacity to provide clean world energy for thousands of years.

In this country nuclear power has been dying; primarily from lack of need; and from resulting US government impediments, which caused new nuclear plants to be uneconomic because it took 10 to 20 years to build them here. Overseas, US companies build plants in an economic 4 or 5 years. The Nuclear Regulatory Commission recognized its licensing impediments and has recently adopted new procedures which are intended to allow new plants to be built here economically.
The problem is that these new procedures have not been demonstrated to be workable, considering the anti-nuclear suits likely to be filed. Thus, to provide the ability to revive nuclear power here, and to lead the world on a sensible means to utilize non-greenhouse gas nuclear power, we should be demonstrating that we can now build nuclear plants efficiently here. With the increased price of gas, nuclear energy can be the lowest cost energy source available. In this country and the west, it has been the safest.

Mr. Cheney, the point of this letter is bring forth the major need for nuclear energy in the US and the world in the future; and the need to move now in the US to take away unnecessary impediments, and to demonstrate that we can be world leaders in the needed nuclear expansion. If we had built new nuclear plants in this country we might have avoided our present energy problem; should we wait for the new disasters before moving?

I hope the material above will be of use to you. I have previously written to Sec. Abraham, and will also communicate with Sec. Norton, Mr. Vice President; if I can be of further aid to you please contact me. I would be pleased to come to Washington if you think it would be of help.

cc: Sec Abraham; Sec Norton

I am appending a brief biography; and a copy of a recent Op-Ed piece that was published in the LA Times.
Dr. Bertram Wolfe is a pioneer in the development of peaceful nuclear energy. He is presently an independent Consultant in the fields of business, energy, and nuclear energy. He has been on the Boards of Directors of Houston Industries and Houston Lighting and Power Co.; and is on the Boards of Urenco Inc. and Urenco Investments Inc. He is also on a number of industry and academic advisory committees. These activities follow a career of over thirty five years with General Electric, from which he retired in 1992 as a Vice President and General Manager of GE's Nuclear Energy Business.

Dr. Wolfe received a BA in physics from Princeton U and a Ph.D. in Nuclear Physics from Cornell U. He joined GE in 1955; has since worked in almost all technical phases of peaceful Nuclear Power and has had responsibility for a number of successful nuclear reactor projects. In 1987 he was appointed a Vice President of GE and Manager of its Nuclear Energy Division.

Dr. Wolfe was elected to the National Academy of Engineering in 1988 and has served on several NAE Boards. He was elected President of the American Nuclear Society in 1986-7; was the recipient of the Walter Zinn technical accomplishment award in 1990; was honored with the Henry DeWolf Smyth nuclear statesman award in 1992; and was presented with the Tomamy Thompson Nuclear Safety Award in 1997. He is a fellow of the American Nuclear Society, and a Professional Engineer in the state of California. He has been a member of a number of electric power industry advisory boards; has written well over a hundred publications on energy and nuclear energy; and is well known as a spokesman on energy and nuclear energy.
Commentary

State's Energy Problem Has Roots Nationwide

By BEETRICE WOLFE and CHAUNCEY STARR

Why is California now suffering from a lack of affordable electricity? The answer is that California and the nation have not looked responsibly to the future.

In the late 1960s and early '70s, the United States was doubling its electricity use every 10 years. To meet coming needs, utilities were placing major orders for new generating plants. In 1973 the situation changed. The Arab oil boycott and the resulting higher energy costs slowed the growth of electricity use to a doubling in 35 years. As a result, the new plants ordered before 1973 that were subsequently built led to a surplus of electrical supply.

That nationwide surplus, which is now gone, is what California officials were counting on when deregulation was approved in 1986—a robust, competing market of wholesale electrical supply from generating companies outside the state. That expectation failed. Why?

Before 1973, the Sierra Club supported nuclear power. Since then, the influential "environmental" organizations have opposed oil, gas, coal and nuclear plants, as well as dams, and geothermal plants. They argue for solar and wind power, which on a large scale are impractical because of their immense land use and their intermittent availability; indeed, on such a scale they are environmentally detrimental. However, with a surplus of energy supply, it didn't matter.

But, the electrical surplus has vanished. In the U.S. we now need new energy capacity to meet our present and future needs. A world bank population in the next 50 years is projected to increase from 4 billion to 5 billion. If the average per person energy use reaches only one-third of what it is today, world energy use will triple. Thus, we have faced serious near-term national and coming world energy problems.

In this country we must decide how to meet our energy needs. The Energy Information Administration projects a continued U.S. increase of electricity needs of 6% in the next 10 years, and the needed replacement of 25% of our current capacity.

There are problems that must be addressed. The price of natural gas has quadrupled in the past year. New gas-fueled electricity plants, which were the least expensive source of electricity, are now the most expensive. Natural gas supply will remain light for the foreseeable future, with accompanying price volatility depending on weather and import availability from Canada and Mexico. Oil is subject to serious overseas political problems, and costs that have gone up and down. Coal, which is among the most plentiful and least costly energy sources, has environmental problems large emissions of CO2 and other pollutants, including small particles.

Nuclear energy, which has no significant emissions, can also be among the least-cost energy sources, but it has political barriers to overcome. The 103 existing nuclear plants (ordered before 1973) remain a vital, safe, electricity source in California and in the U.S. But since 1973 it has taken an unprofitable 10 to 20 years to build the previously ordered nuclear plants in this country, whereas U.S. firms build nuclear plants abroad (and used to build them economically in Four or five years). Similarly, as nuclear forces have unnecessarily delayed the construction of repositories for nuclear wastes.

The electricity trap in which California now finds itself is a consequence of the national energy fiasco that continues today. Weather has increased demand in the Western U.S., so California cannot depend on lower-cost electricity purchases from neighboring states. The political response has so far been Brown-Adair power, which do not tackle the root issue of making California a friendly state for long-term investment by electricity generators.

The one available solution is a major increase in the utilization of nuclear energy. We must work to solve the near-term problem. But we should also not wait for the future national and world energy disasters to come before we act in multiple—and hopefully elegant—ways.

Beatrice Wolfe, a former vice president of General Electric, is an independent consultant and a fellow and past president of the American Nuclear Society. Chauncey Starr, dean of the UCLA School of Engineering and Applied Sciences from 1967 to 1977, is president emeritus of the Electric Power Research Institute, of which she was a founder.
January 31, 2001

Ms. Majida Dandy
US Department of Energy
1000 Independence Avenue
Washington, DC 20585

Dear Ms. Dandy:

Attached is a letter with support material addressed to Mr. Spencer Abraham. The subject areas are solutions to the energy crisis. TRD professionals are applying these solutions on a small scale. We wish to make our experiences and software available to the US Department of Energy for national exposure.

A copy of this letter has been sent to Vice President Richard Cheney, who is heading an energy task force.

Your name was given to me as the person who can assure that this letter will come to the attention of Mr. Abraham before he possibly may be contacted by Vice President Cheney in this matter.

Thank you for your kind assistance.

Sincerely,

[Signature]

Walter A. Hans
President

Enclosures
January 31, 2001

Mr. Spencer Abraham, Secretary of Energy
US Department of Energy
Washington, DC 20585

Dear Mr. Secretary:

Electricity supply and price problems can be solved swiftly and competition among energy providers can be enhanced by eliminating barriers to free market forces and informing consumers how to use energy cost-effectively.

Industrial plants alone can reduce electrical peak loads sufficiently throughout the nation to prevent power shortages. The combined load reduction capacity of industrial plants is more than 45,000 megawatts. A large portion of this reduction is accessible immediately through market driven incentives and does not require any capital investment.

The above mentioned load reduction is equivalent to approximately 7 percent of the total 1999 net summer generation capacity in the US and more than the planned capacity additions for the years 2000 through 2004. This reduction is being accomplished through energy usage and source flexibility, mainly through operational adjustments and/or the use of on-site generation (see “Solving the Energy Crisis with Market Driven Incentives”).

For over 20 years, TRD professionals have developed and tested methodologies and tools for improving the overall technical operating efficiency and enhancing energy usage and source flexibility in industrial plants.

TRD wishes to make its expertise and software available to the US Department of Energy.

In my opinion, the US Government is the only body that can initiate an immediate promotion of the energy usage and source flexibility concept on a national basis and issue guidelines for individual states to remove regulatory barriers that impair full benefits for the consumer.

I am prepared to provide further details and make a presentation about the subject to your agency. Please have me contacted personally.

Sincerely,

Walter A. Hans
President

(Enclosures)

cc. Vice President Richard Cheney

Phone: [856] 667-3342 Fax: [856] 667-8168
E-Mail: TROCORP@AOL.COM
P.O. Box 2820 – Cherry Hill, NJ 08032-0246

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DOE016-0625

Obtained and made public by the Natural Resources Defense Council, March/April 2002
Solving the Energy Crisis with Market Driven Incentives

Industrial plants alone can reduce electrical peak loads sufficiently throughout the nation to prevent power shortages for years to come. The combined load reduction capacity of industrial plants is more than 45,000 megawatts. A large portion of this reduction is accessible immediately through market driven incentives and does not require any capital investment.

The above mentioned load reduction is equivalent to approximately 7 percent of the total 1999 net summer generation capacity in the US and more than the planned capacity additions for the years 2000 through 2004.

Similar results can be achieved in the commercial sector. Educational tools are being developed by TRD to make curtailment of electricity usage during peak load conditions financially attractive in the residential sector.

The Peak Load Reduction Potential

The reduction of the peak load by 45,000 megawatts in industrial facilities alone was based on the assumption that 25 percent of all industrial operations in the US will convert to energy usage and source flexibility (see attached table “Potential Electricity Peak Load Reduction”).

Energy usage and source flexibility is a combination of load reductions, load shifting and on-site generation, used to reduce electricity usage during peak load conditions and control energy costs.

Some industrial plants with critical operations and many institutional facilities, such as hospitals and banking centers, have standby generation equipment already in place.

The California power crisis will accelerate the trend toward power self-sufficiency for those operations that suffer consequential losses from power outages, which includes almost all industrial plants.

Facilities with full standby generation capacity can reduce their electricity usage to zero during peak load conditions without incurring any significant expenses. To the contrary, market driven incentives offer large benefits.

Many of these facilities do not participate in load reduction programs, offered by utilities, because of unrealistic requirements, poor incentives, penalties for non-compliance and penalties for intensified electricity usage after a load reduction. The use of load reduction programs for price control purposes, which is becoming more frequent, is quickly reducing participation.

One of TRD’s main accomplishments is simplifying the way complex interrelations, such as energy flows in large industrial plants, are viewed and managed. TRD’s optimization tools make energy flows visible, understandable and therefore easily manageable.
Energy flows are shown in energy units as well as dollar values. Financial and technical management can now communicate by looking at data that is meaningful to both.

One of the optimization tools, TRD's Energy Flow Model, is available as software. It computes instantly and accurately the total energy costs of all types of energy used in a facility, in hourly, daily, monthly or yearly intervals, for any number of variables inside a facility and in the energy market.

The simplicity of TRD's software, which quickly and accurately projects potential financial gains, capital investment requirements and clearly identifies the effect of regulatory barriers, will almost guarantee the immediate participation in energy usage and source flexibility by some. Others will be forced to follow in order to stay competitive.

The newly developed software also enables TRD to quickly train consultants and client management in the application of energy usage and source flexibility. Therefore, a national distribution of these tools will provide a realistic basis for the projections made.

Electricity Price and Supply Pattern

The attached chart "Localized Marginal Pricing (LMP) of Electricity" shows inter-utility trade prices in Delaware during July 1999, the hottest month within the last 10 years. High prices (yellow) represent high power grid loads, and low prices (black) low loads. It should be noted that prices went as low as $0.00 (red) during night hours.

The chart "Annual LMP Averages 1999" shows hourly price averages for the entire year of 1999 in Delaware, a critical supply area in the Mid Atlantic region.

The pattern of low LMP prices during night hours continued through 2000. It is not likely that this pattern will change. Low prices during night hours are the result of enhanced competition because of low demand.

There is plenty of generation and transmission capacity in place to serve demand during most of the year. The supply is running short mainly during summer days between noon and early evening, in regions that experience extremely high temperatures over consecutive days.

The current crisis in California is the result of coincidental circumstances:

- Poor energy planning, poorly written deregulation rules and poor timing
- Approximately 30% of generation capacity down for overhaul
- Low water levels in hydro-electric facilities
- A surge in the use of electricity for heating purposes because of a cold winter
- Lack of sufficient transmission capacity inside and into California
- High natural gas prices, coupled with insufficient pipe line capacity
- The opportunity to manipulate the market

The real crisis in California may come this summer if temperatures are going to be above normal because capacity reserves, used during peak load periods, have been exhausted for 2001.
Energy Cost Savings Opportunities

Case studies have shown that electricity costs can be reduced by over 50% with energy usage and source flexibility and the application of rates that are based on Localized Marginal Pricing or Real Time Pricing (terms used by Independent System Operators for pricing in the inter-utility trade). The attached chart "Trend of Electricity Costs" demonstrates that concept.

These savings quickly generate the capital for the purchase of on-site generation equipment that may be needed to secure operations during black-outs and brown-outs and to cap electricity costs during periods of high market prices.

Energy usage and source flexibility secures immunity from price peaks in the electricity market by giving the consumers of energy control over their energy cost efficiency through operational adjustments and standby generation.

Energy cost reductions under energy usage and source flexibility are driven by four major factors:

1. Reduction of electricity usage during peak usage hours (usually daytime)
   a. Improvement of equipment efficiencies
   b. Improvement of the overall energy usage efficiency in a facility

2. Shifting of electricity usage to hours of the day when excess generation capacity is available in the market (usually nighttime)
   a. Scheduling of batch type and single shift operations during night hours for 24-hour operations
   b. Changing day shifts to night shifts for single shift operations

3. On-site generation of electricity

4. Sales of excess generation capacity during periods of high market prices, offsetting electricity costs

Over 90% of all conservation efforts, presently made, concentrate on equipment efficiency improvements. The rise in energy prices, as occurring in California and other states, will make the rate of return on investment for these projects appear more favorable. Nevertheless, investment in energy usage and source flexibility can reduce energy costs substantially, below current levels and thereby diminish the rate of return for equipment efficiency projects.

Regulatory Barriers

The removal of regulatory barriers in prevailing electricity tariffs is important in order to guarantee the full success of energy usage and source flexibility. Traditional tariffs, that are still in effect everywhere (even in deregulated areas in form of distribution charges), penalize electricity usage when generation capacity is plentiful during most of the year due to rigid and excessively long on-peak hours.
Interruptible service riders may offer some incentives to reduce electricity usage during supply emergencies but in turn, peak demand charges (part of prevailing tariffs) will penalize the "catch-up need" for electricity usage after a voluntary load reduction.

Some states included penalties for the use of on-site generation in their deregulation rules.

Voltage Reductions - Brown Outs
Voltage reductions have become common practice for balancing the demand and supply in case of temporary supply shortages. Voltage reductions usually precede power outages and there is no system in place to alert consumers. Voltage reductions that are within legal limits at the source can become extreme at the end of the line because of overloading. Distributing utilities have no reliable methods to identify coincidental load accumulations that occur in distribution systems, particularly during peak load conditions.

Voltage reductions put a strain on electrical equipment and therefore reduce its lifetime.

Most consumers are not aware of voltage reductions and do not suspect problems because of the excellent, past performance of the power industry in the US, when brown-outs were uncommon. Few consumers are even equipped to monitor the supply voltage.

It is difficult to assess the extent of damage frequent voltage reductions will cause. On-site generation capability is an effective protection against low voltage conditions.

Environmental Considerations
Some thoughts about the environmental impact of energy usage and source flexibility. The total hours per year, when market prices for electricity exceed on-site generation costs and on-site generators will be running, are few. In 1999 there were 178 hours registered in Delaware and in 2000 less than 50 hours.

Load reductions and load shifting reduce the generator capacity needed. Therefore, the use of on-site generation equipment will probably cause less pollution than that caused by generation stations which are used for peak load reduction and are almost exclusively fossil fuel driven.

It should be noted that the planned additions to the generation capacity in the US through 2004 will consist almost exclusively of fossil fuel driven generators.

Energy usage and source flexibility will reduce the peak load on generation equipment and transmission lines throughout the US. This will secure an expansion of the US economy with the equipment in place.

Natural gas will be used by on-site generation equipment during the summer, when gas supplies are plentiful, and this equipment will be shut off during winter when electricity prices are usually low.
Potential Electricity Peak Load Reduction

The Net Summer Generating Capability in the US in 1999 was 639,324 megawatts. Assuming an average national capacity reserve of 10%, the peak summer load would be:

\[ 639,324 \text{ MW} \times 0.9 = 575,392 \text{ MW} \]

The electricity usage by sector in 1999 in 50 states was:

<table>
<thead>
<tr>
<th>Sector</th>
<th>Megawatt Hours</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Sectors</td>
<td>3,235,899</td>
<td>100.00</td>
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<tr>
<td>Industrial</td>
<td>1,017,783</td>
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<tr>
<td>Commercial</td>
<td>970,601</td>
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<tr>
<td>Residential</td>
<td>1,140,761</td>
<td>35.25</td>
</tr>
<tr>
<td>Others</td>
<td>106,754</td>
<td>3.30</td>
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</table>

Assuming that the peak load contribution is distributed equally among all sectors, the peak load contribution of the industrial sector would be:

\[ 575,392 \text{ MW} \times 0.3145 = 180,960 \text{ MW} \]

There were 530,335 industrial consumers of electricity in the US in 1999. If 25 percent of all industrial consumers implement energy usage and source flexibility and reduce electricity usage to zero during peak load periods with a combination of load reductions and on-site generation, the potential electricity peak load reduction will be:

\[ 180,960 \text{ MW} \times 0.25 = 45,240 \text{ megawatts} \]

on a nationwide basis.

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1 Source of all data: DOE Energy Information Administration
<table>
<thead>
<tr>
<th>Delaware, in July - 1999</th>
</tr>
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<tr>
<td>Electriciy Prices in $/Megawatt</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Price</th>
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<tr>
<td>7/01/1999</td>
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<td>0.01</td>
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<tr>
<td>7/02/1999</td>
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<td>0.09</td>
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*Obtained and made public by the Natural Resources Defense Council, March/April 2002*
### Trend of Electricity Costs

**Case Study: Refrigerated Warehouse**

<table>
<thead>
<tr>
<th>Electricity Costs for the Year:</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original Tariff</td>
<td>700</td>
<td>716</td>
<td>950</td>
</tr>
<tr>
<td>RTP 1 - with generation and partial load shifting, without demand control</td>
<td>530</td>
<td>350</td>
<td>320</td>
</tr>
<tr>
<td>RTP 2 - with generation, maximum load shifting and demand control</td>
<td>385</td>
<td>385</td>
<td>385</td>
</tr>
<tr>
<td>RTP 3 - RTP 2 with efficiency improvements</td>
<td>340</td>
<td>340</td>
<td>340</td>
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<tr>
<td>RTP 4 &amp; RTP 5 with areas of excess generating capacity</td>
<td>290</td>
<td>340</td>
<td>340</td>
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</table>

*It was assumed that the summer of 2001 will have several periods of extreme temperatures over consecutive days in the high 90s. Original forecasts were based on a low market price.*

Obtained and made public by the Natural Resources Defense Council, March/April 2002