A multipollutant regulatory strategy should be established for the power generation sector including:
- Gradually phased in reductions.
- Reform/replacement of NSR
- Use of market-based/emission trading programs
- Inclusion of both existing and new plants and equal treatment for both

The last bullet is the critical one to ensure that: a) we encourage the new generation that is required b) we ensure that the new technologies developed through DOE programs can come into the market.

I will follow up with a short statement on above tomorrow. Call me with questions.
warming trend may be underway, and that greenhouse gases emissions from human sources may increase the potential impact of global warming. The IPCC recommended that an international agreement be negotiated setting forth a pathway to limit man-made greenhouse gas emissions, especially energy-related carbon dioxide emissions. In 1992, 160 nations heeded this advise and signed the Rio Agreement on Climate Change, formally known as the “United Nations Framework Convention on Climate Change” (FCCC).

The United States was among the nations to ratify this agreement, which has as its objective stabilizing the atmospheric concentration of greenhouse gases at a level that prevents dangerous anthropogenic interference with the climate system. In ratifying the FCCC, the United States, Europe, Japan and other industrialized countries agreed to take the lead in modifying longer-term trends in anthropogenic emissions, to make best efforts to reduce emissions to 1990 levels by 2000 and to provide technology and funds to developing countries to ensure that emission levels would remain as low as possible—without jeopardizing economic development.

In the months that followed, many U.S. companies, and even entire industry sectors, began to develop programs to increase operating efficiencies, put new technologies in place, and implement business practices aimed at lowering greenhouse gas emissions—while, at the same time, maintaining a growing U.S. economy. These voluntary programs, often in conjunction with government partners, have paid off. Recently, the Department of Energy released a report showing that U.S. greenhouse gas emissions are more than two hundred million tons per year lower than they would be had industry and business not taken these voluntary actions.

A sound long-term climate change policy that complements a sound long-term energy policy must be developed to ensure that the greenhouse gas emissions growth line continues to bend downward while the economic growth curve continues to move upward. Sound climate change policies can make this happen, particularly if these policies:

- Emphasize voluntary action;
- Are cost effective, flexible and focus on long-term solutions that recognize that our economy is built on the availability of reasonably priced energy of all forms;
- Address both cost-effective mitigation actions—such as avoiding emissions through enhanced energy or operating practices—and adaptation to changes that occur for whatever reason;
- Expand research programs that address science, economics and technology development;
- Remove barriers to the deployment of new technologies and encourage rapid deployment through incentives;
- Address the needs of developing nations, including their desire to build their domestic capabilities and grow their economies; and,
- Encourage local action and actions by governments as well as by industry.

Unfortunately, as we enter the 21st Century U.S. climate policy is not based on a long-term strategy. Over the last three years, the US Administration’s strategy has been short term and directed at ratifying and implementing the 1997 Kyoto Protocol. This agreement, concluded in December 1997, would require the U.S. and other developed countries to meet mandatory emission reduction targets by 2008-2012. For the United States, the Kyoto Protocol would mean a reduction of greenhouse gas emissions to a level that is seven percent below 1990 levels with additional, but as yet unidentified reductions, after 2012. To meet the
initial target the U.S. would have to cut its emissions by 30-35 percent below projected levels. Doing so would be very costly. Most analyses show that reaching this target in such a short time period would reduce the U.S. GDP by several percentage points.

To date, the Kyoto Protocol has not been submitted to the U.S. Senate. If it were, it likely would not be ratified, which is a requirement for the United States to be bound by that agreement. The United States is not alone in its concerns about the impact of the Kyoto Protocol. As of January 2001, no developed country has ratified the agreement. Most nations realize that the Protocol would require significant changes in energy, economic and trade policies and would seriously affect the lives of every citizen. Moreover, the European Union has strenuously resisted elements in the Protocol that theoretically could reduce the cost of compliance. These elements include a proposed emissions trading program, the Clean Development Mechanism (directed toward emissions abatement in developing countries) and land use and forestry programs. Such elements are key to offsetting costly short-term mandatory emission reduction targets. To date, nations are looking for reasonable and cost effective approaches to deal with the climate issue. Increasingly, it is appears likely that most nations will concentrate on new technology development, deployment and transfer to limit greenhouse gas emissions.

In the decade ahead, the federal government should seek to meet the commitment expressed in the FCCC by devoting sufficient scientific resources to determine the maximum atmospheric concentration of greenhouse gases that would “prevent dangerous anthropogenic interference with the climate system” (From Article 2 of the FCCC). Additionally, the U.S. should work with other nations, including developing countries, to establish an equitable long-range plan to prevent the exceeding of this unacceptable concentration. This plan should include all market-based measures that contribute to the ultimate goal, including making maximum use of cost-reducing implementation measures. Moreover, governments should work with industry to develop a broad suite of technology options from which energy users could select in order to meet climate change policy goals in 2050, 2075 and 2100.
FOR IMMEDIATE RELEASE

Testimony of
Frank K. Turner, President
American Short Line and Regional Railroad Association

Railroad Infrastructure Policy
House Committee on Transportation and Infrastructure
Subcommittee on Railroads

April 25, 2001

Chairman Quinn and members of the Subcommittee, I am Frank K. Turner, President of the American Short Line and Regional Railroad Association headquartered in Washington, D.C. I appreciate this opportunity to testify about the infrastructure needs of small railroads on behalf of ASLRA's more than 400 short line and regional railroad members.

I know that in this room, I'm probably preaching to the choir when it comes to pointing out all the good reasons there are for keeping freight on the rails. Railroads help to address this Nation's growing congestion problems by keeping freight off the highways, and when it comes to moving freight, railroads are cost effective, burn less fossil fuel and emit less air pollution per ton-mile than trucks.

Small railroads are doing a big job of relieving highway congestion. More than one-quarter of the carloads of rail freight in this country originate or terminate on a short line or regional railroad. If these small railroads weren't there, this freight would move in trucks - - many of them on rural roads that are not equipped to handle this influx of freight. Public money, and lots of it, will be used to repair the damage all that extra truck traffic creates. Transportation rates in these areas of the country, particularly for bulk commodities such as grain, stone and forest products, will increase because it is more expensive to move these commodities by truckload than by trainload.

Today, the contribution that small railroads make to our national transportation system is threatened by the condition of their infrastructure. In one sense this problem has always been with us. These are light density lines that don't generate enough revenue to make up for the years of deferred maintenance they inherited from their Class I owners. Because of their lower cost structure and their ability to deal with individual shippers in a more flexible way than the Class I's, they have been able to turn money losing lines into marginally profitable lines. They have made enough money to get by, but not enough to make the kind of one-time capital expenditures needed to remain an efficient feeder system for the national rail network.

Today, this problem is coming to a head because of a new element that is completely outside the control of the short line industry - that is the introduction of the heavier 286,000-lb. freight cars that have become the standard for the Class I industry. These cars cause significantly more stress and wear and tear on rail track and bridges. To handle these cars efficiently, light density lines can no longer put off major capital expenditures. If they don't find the money for that investment their lines and their shippers will be effectively disconnected from the nation's main line railroad system.

How Large Is the Problem and How Should Congress Confront It?

A recent study by ZETA-TECH Associates concluded that investment in track and structures
needed to handle 286,000-pound cars will approach $7 billion on small railroads. ASLRA and the
Federal Railroad Administration funded the ZETA-TECH study jointly under a cooperative agreement.
It validated the scope of the "286" problem that had been established in an earlier survey of short lines
by the Standing Committee on Rail Transportation of AASHTO (the American Association of State
Highway and Transportation Officials).

How should Congress confront this pressing issue? There are two solutions that I would like to
discuss today. One involves loans, and the other involves grants. Both are desperately needed. The first
is the Railroad Rehabilitation and Improvement Financing Program, commonly referred to as "the RRIF
Loan Program." The RRIF Loan Program already exists, but steps need to be taken as soon as possible
to make this program work the way Congress intended. The second is H.R. 1020, which would
authorize grants of $350 million per year for three years for small railroad infrastructure projects.

1. Implementation of the RRIF Loan Program

Congress enacted the RRIF Loan Program as Section 7203 of the Transportation Equity Act for the 21st Century (TEA-21). The program authorizes the Secretary of Transportation to provide up to
$3.5 billion in direct loans and loan guarantees for railroads projects. Of this amount, at least $1 billion
is reserved for small railroad projects.

The loan program has been on the books since June of 1998. It took the Administration more
than two years to produce implementing regulations. Since the regulations took effect in September of
2000, over a dozen railroad applications have been presented to the Federal Railroad Administration.
Not a single one has been approved. This innovative infrastructure financing tool has not yet begun to
perform in the way Congress intended.

You have heard from the FRA on this subject and I do not question their good intentions with
regard to this program. But the fact is that somehow and somewhere this program is stuck. Somebody
in the Department of Transportation needs to get it unstuck.

2. Enactment of H.R. 1020

On March 14th of this year, Congressmen Jack Quinn (R-NY), Bob Clement (D-TN) and
Spencer Bachus (R-AL) introduced H.R. 1020, the Railroad Track Modernization Act of 2001. In
addition to this strong support from the leadership of this Subcommittee, for which we are grateful, the
bill has been sponsored by full Committee Chairman Don Young, by four of the six Subcommittee
Chairman and by three of the six Subcommittee ranking Democratic Members.

The bill authorizes General Fund appropriations of $350 million per year for three years for
capital grants to rehabilitate, preserve or improve track (including roadbed and bridges) of Class II and
Class III railroads. The grants are intended for projects to allow safe and efficient rail operations,
particularly when handling 286,000-lb. freight cars. In addition, H.R. 1020 specifically allows grants to
be used to supplement the RRIF loan program, to pay credit risk premiums, lower interest rates, or
provide a "holiday" on principal payments.

Enactment of H.R. 1020 is a "Win-Win" for Railroads, Employees, Shippers and States.

Certainly the large railroads will benefit from passage of the bill and stabilization of light density
rail infrastructure. One way to think of the more than 500 short line and regional railroads in this
country is as a very big customer to the mega-carriers. We market business, gather traffic from remote
locations and tender it to the AAR member Class I railroads. Our share of the revenues of the traffic we
generate and terminate each year is about $3 billion. Theirs is much greater. If we fail, that traffic will
be lost to the highways and waterways. At the very least it will move great distances over rural and
secondary road systems at great cost to the taxpayers.

This bill is supported by the largest rail union, the UTU. As you have heard, it is opposed by the
transportation trades department of the afl-cio, on behalf of its other rail union members. as i understand that opposition, it is based on the fact that many of today's short line railroads began operation as non-union companies and as such the over 25,000 people we employ today do not merit the attention of the federal government. i want to address that issue head on.

first, i served as president of one of the very first spin-off railroads, the midsouth, during the 1990's. it was fully unionized. i inherited some of the most dilapidated railroad track in the state of mississippi, track that was well on its way to abandonment. fortunately we had some profitable segments and we invested every dollar we could from those segments into upgrading those poor segments. we saved the line and we saved the jobs.

second, while one may argue about why or how short line railroads were originally formed, the fact of the matter is they are increasingly unionized. i have attached to my testimony a copy of the facts as they relate to that matter. today, 66 percent of small railroad employees are represented by a union. eight two percent of small railroads with 50 or more employees have a union on the property. one hundred percent of all class ii railroads have at least one union on the property. the trend is clear. as small railroads grow their employees tend to unionize. this legislation will help small railroads grow and prosper and it seems counterproductive to oppose that opportunity in the name of a perceived inequity that occurred twenty years ago.

third, the railroad unions told you today that preserving the financial stability of railroad retirement is one of their most important priorities. every small railroad worker, whether they are unionized or not, pays into the railroad retirement system. together small railroad employees contribute approximately $206 million annually to the tier ii system. that is not an insignificant amount of money, and everyone that is interested in preserving railroad retirement should be interested in preserving and growing this financial contribution to the system.

fourth, and finally, the short line association has spent considerable time working with the unions, including the ttd in trying to accommodate rail labor's concerns. the sections in the legislation concerning labor protection, davis-bacon requirements and disallowing the use of the money for new spin-offs were all included in the bill at the request of rail labor. not all my members are supportive of these provisions, particularly taking away this funding opportunities for yet to be created short line railroads. but we want to work with rail labor on this legislation and we have tried hard to do so.

finally, mr. chairman, our shippers and the communities in which they are located are beneficiaries of this legislation. without small railroads our shippers lose their connection to the national railroad system. our communities lose an important economic development tool. our states are faced with increasing highway congestion and repair costs.

meeting the challenge of infrastructure

the purpose of the infrastructure program aslrra is advocating is to provide a one-time fix for light density railroads so they can meet the new requirements of the 21st century. the need exceeds $7 billion over the next decade. our railroads can raise part of the money needed, but they are not big enough or wealthy enough to raise it all for the major rehabilitation that is required to meet the heavy car challenge.

there will be many projects with low returns that will not be suitable for loan financing under the rrif program. h.r. 1020 provides the missing piece of the puzzle. we believe the quinn-clement-bachus grant program leveraging federal loan funds and state assistance, together with private capital, will help to fix the problem.

if this problem is not fixed, then these railroads will gradually lose their business as their shippers are forced to move to truck or relocate. once that occurs, these lines will deteriorate and ultimately be abandoned and no amount of federal funding will be able to bring them back. thousands of current rail shippers will close their doors or put their goods on the highway.
Enactment of H.R. 1020 will be a "win-win" for railroads, employees, shippers and communities across America. I urge your support and prompt passage of this important legislation.

Thank you.

* ASLRA is a non-profit trade association incorporated in the District of Columbia. ASLRA represents the interests of its more than 400 short line and regional railroad members in legislative and regulatory matters. Short line and regional railroads are an important and growing component of the railroad industry. Today, they operate and maintain 29 percent of the American railroad industry's route mileage (approximately 50,000 miles of track), and account for ten percent of the rail industry's freight revenue and twelve percent of railroad employment (based on statistics for calendar year 1999).
STATEMENT SUBMITTED
BY THE
UNITED STATES NUCLEAR REGULATORY COMMISSION
TO THE
SUBCOMMITTEE ON ENERGY AND AIR QUALITY
OF THE
COMMITTEE ON ENERGY AND COMMERCE
U.S. HOUSE OF REPRESENTATIVES

CONCERNING

THE U.S. NATIONAL ENERGY POLICY: NUCLEAR ENERGY

SUBMITTED BY
DR. WILLIAM D. TRAVERS
EXECUTIVE DIRECTOR FOR OPERATIONS

Submitted: March 27, 2001
Introduction

Mr. Chairman, members of the Subcommittee, I am pleased to submit this testimony on behalf of the U.S. Nuclear Regulatory Commission (NRC) regarding the NRC's perspective on how nuclear energy fits into the U.S. National Energy Policy. As the Subcommittee knows, the Commission's mission is to ensure the adequate protection of public health and safety, the common defense and security, and the environment in the application of nuclear technology for civilian use. The Commission does not have a promotional role - - the agency's role is to ensure the safe application of nuclear technology if society elects to pursue the nuclear energy option.

The Commission recognizes, however, that its regulatory system should not establish inappropriate impediments to the application of nuclear technology. Many of the Commission's initiatives over the past several years have sought to maintain or enhance safety while simultaneously improving the efficiency and effectiveness of our regulatory system. The Commission also recognizes that its decisions and actions as a regulator influence the public's perception of the NRC and ultimately the public's perception of the safety of nuclear technology.

For this reason, the Commission's primary performance goals also include increasing public confidence.

The Commission's primary focus is on safety. The Commission nonetheless recognizes that the quality, predictability, and timeliness of its regulatory actions bear on licensee decisions related to construction and operation of nuclear power plants.
Background

Currently there are 104 nuclear power plants licensed by the Commission to operate in the United States in 31 different states. As a group, they are operating at high levels of safety and reliability.

*NRC Performance Indicators: Annual Industry Averages, 1987-1999*

- **Automatic Scrams While Critical**
  - Average number of reaction scrams

- **Safety System Activations**
  - Average number of activations

- **Significant Events**
  - Average number of significant events

- **Safety System Failures**
  - Average number of failures

*Calendar year values used for 1986 through 1995. Fiscal year values are used beginning in 1996.*

**The hatched areas represent additional data that resulted from reclassification of safety system failures.***
These plants have produced approximately 20% of our nation's electricity for the past several years and are operated by about 40 different companies. In 2000, these nuclear power plants produced a record 755-thousand gigawatt-hours of electricity.

![Graph: Net Generation of U.S. Nuclear Electricity, 1977-1999](image)

**Improved Licensee Efficiencies (Increased Capacity Factors)**

The nation's nuclear electricity generators have worked over the past 10 years to improve nuclear power plant performance, reliability, and efficiency. According to the Nuclear Energy Institute, the improved performance of the U.S. nuclear power plants since 1990 is equivalent to placing 23 new 1000-MWe power plants on line. The average capacity factor1 for U.S. light water reactors was 86 percent in 1999, up from 63 percent just 10 years ago. The Commission has focused on ensuring that safety has not been compromised as a result of these industry efforts. The Commission will continue to carry out its regulatory responsibilities in an effective and efficient manner so as not to impede industry initiatives appropriately.

1Capacity factor is the ratio of electricity generated, for the period of time considered, to the amount of energy that could have been generated at continuous full-power operation during the same period.
### U.S. Commercial Nuclear Power Reactor Average Capacity Factor and Net Generation

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Reactors Licensed to Operate</th>
<th>Average Annual Capacity Factor (Percent)</th>
<th>Thousands of Gigawatthours</th>
<th>Percent of Total U.S.</th>
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</thead>
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<tr>
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<td>109</td>
<td>63</td>
<td>528</td>
<td>19.0</td>
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<td>111</td>
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<td>71</td>
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<td>1999</td>
<td>104</td>
<td>86</td>
<td>727</td>
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</tr>
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</table>

**Electric Industry Restructuring**

As the Subcommittee is aware, the nuclear industry has undergone a period of remarkable change. The industry is in a period of transition in several dimensions, probably experiencing more rapid change than in any other period in the history of civilian nuclear power. As deregulation of electricity generation proceeds, the Commission is seeing significant restructuring among the licensees and the start of the consolidation of nuclear generating capacity among a smaller group of operating companies. In part, this change is due to an industry that has achieved gains in both economic and safety performance over the past decade and thus has been able to take advantage of the opportunities presented by industry restructuring. The Commission has established a regulatory system that is technically sound, that is fair, predictable, and reaches decisions with reasonable dispatch.
Initiatives in the Area of Current Reactor Regulation

License Transfers

One of the more immediate results of the economic deregulation of the electric power industry has been the development of a market for nuclear power plants as capital assets themselves. As a result, the Commission has seen a significant increase in the number of requests for approval of license transfers. These requests increased from a historical average of about two or three per year, to 20 - 25 in the past two years.

The Commission has assured that our reviews of license transfer applications, which focus on adequate protection of public health and safety, are conducted efficiently. These reviews sometimes require a significant expenditure of talent and energy by our staff to ensure a high quality and timely result. Our legislative proposal to eliminate foreign ownership review could help to further streamline the process. To date, the Commission believes that it has been timely in these transfers. For example, in CY 2000, the staff has reviewed and approved transfers in periods ranging from four to eight months, depending on the complexity of the applications. The Commission will strive to continue to perform at this level of proficiency even in the face of continued demand.

License Renewals

Another result of the new economic conditions is an increasing interest in license renewal that would allow plants to operate beyond the original 40-year term. That term, which was established in the Atomic Energy Act (AEA), did not reflect a limitation that was determined by engineering or scientific considerations, but rather was based on financial and antitrust concerns. The Commission now has the technical bases and experience on which to base judgments about the potential useful life and safe operation of facilities and is addressing the question of extensions beyond the original 40-year term.
The focus of the Commission's review of applications is on maintaining plant safety, with the primary concern directed at the effects of aging on important systems, structures, and components. Applicants must demonstrate that they have identified and can manage the effects of aging so as to maintain an acceptable level of safety during the period of extended operation.

The Commission has now renewed the licenses of plants at two sites for an additional 20 years: Calvert Cliffs in Maryland, and Oconee in South Carolina, comprising a total of five units. The thorough reviews of these applications were completed ahead of schedule, which is indicative of the care exercised by licensees in the preparation of the applications and the planning and dedication of the Commission staff. Applications for units from three additional sites – Hatch in Georgia, ANO-1 in Arkansas, and Turkey Point in Florida – are currently under review. As indicated by our licensees, many more applications for renewal are anticipated in the coming years.

Although the Commission has met the projected schedules for the first reviews, it would like the renewal process to become as effective and efficient as possible. The extent to which the Commission is able to sustain or improve on our performance depends on the rate at which applications are actually received, the quality of the applications, and the ability to staff the review effort. The Commission recognizes the importance of license renewal and is committed to providing high-priority attention to this effort. As you know, the Commission encourages early notification by licensees, in advance of their intentions to seek renewals, in order to allow adequate planning so as not to create unmanageable demands on staff resources.
Reactor Plant Power Uprates

In recent years, the Commission has approved numerous license amendments that permit its licensees to make relatively small power uprates (approximately 2-7 percent increases in the output of a facility). Collectively, these uprates supplied the electricity equivalent to that from two large power plants (approximately 2,000 MWe). The Commission has received applications for several substantial uprates, and anticipates more within the near term. In addition, some nuclear generators have requested Commission safety review of increasing fuel burnup, thereby extending the operating cycle between refueling outages and thus increasing nuclear plant capacity factors. Such approvals are granted only after a thorough evaluation by Commission staff to ensure that safe operation and shutdown can be achieved at the higher power and increased fuel burnup.

High Level Waste Storage/Disposal (Spent Fuel Storage)

In the past several years, the Commission has responded to numerous requests to approve spent fuel cask designs and independent spent fuel storage installations for onsite dry storage of spent fuel. These actions have provided an interim approach pending implementation of a program for the long-term disposition of spent fuel. The ability of the Commission to review and approve these requests has provided the needed additional onsite storage of spent nuclear fuel, thereby avoiding plant shutdowns as spent fuel pools reach their capacity. The Commission anticipates that the current lack of a final disposal site will result in a large increase in on-site dry storage capacity during this decade.

The Commission is currently reviewing an application for an Independent Spent Fuel Storage Installation on the reservation of the Skull Valley Band of Goshute Indians in Utah.

Certain matters also need to be resolved in order to make progress on a deep geologic repository for disposal of spent nuclear fuel. The Energy Policy Act of 1992 requires the Environmental
Protection Agency (EPA) to promulgate general standards to govern the site, while the Commission has the obligation to implement those standards through its licensing and regulatory process. The Commission has concerns about certain aspects of EPA's proposed approach and is working with EPA to resolve these issues.

Risk-Informing the Commission’s Regulatory Framework

The Commission also is in a period of dynamic change as the Agency moves from a prescriptive, deterministic approach towards a more risk-informed and performance-based regulatory paradigm. Improved probabilistic risk assessment techniques combined with over four decades of accumulated experience with operating nuclear power reactors have led the Commission to recognize that some regulations may not serve their intended safety purpose and may not be necessary to provide adequate protection of public health and safety. Where that is the case, the Commission has determined it should revise or eliminate the requirements. On the other hand, the Commission is prepared to strengthen our regulatory system where risk considerations reveal the need.

Perhaps the most visible aspect of the Commission’s efforts to risk-inform its regulatory framework is the new reactor oversight process. The process was initiated on a pilot basis in 1999 and fully implemented in April 2000. The new process was developed to focus inspection effort on those areas involving greater risk to the plant and thus to workers and the public, while simultaneously providing a more objective and transparent process. While the Commission continues to work with its stakeholders to assess the effectiveness of the revised oversight process, the feedback received from industry and the public is favorable.

Future Activities

Scheduling and Organizational Assumptions Associated with New Reactor Designs

While improved performance of operating nuclear power plants has resulted in significant increases in electrical output, significant increased demands for electricity will need to be addressed by construction of new generating capacity of some type. Serious industry interest in
new construction of nuclear power plants in the U.S. has only recently emerged. As you know, the Commission has already certified three new reactor designs pursuant to 10 CFR Part 52. These designs include General Electric’s advanced boiling water reactor Westinghouse’s AP-600 and Combustion Engineering’s System 80+. Because the Commission has certified these designs, a new plant order may include one of these approved designs. However, the staff is also conducting a preliminary review associated with other new designs.

In addition to the three already certified advanced reactor designs, there are new nuclear power plant technologies, such as the Pebble Bed Modular Reactor, which some believe can provide enhanced safety, improved efficiency, lower costs, as well as other benefits. To ensure that the Commission staff is prepared to evaluate any applications to introduce these advanced nuclear reactors, the Commission recently directed the staff to assess the technical, licensing, and inspection capabilities that would be necessary to review an application for an early site permit, a license application, or construction permit for a new reactor unit. This will include the capability to review the designs for generation III+ or generation IV light water reactors including the Westinghouse AP-1000, the Pebble Bed Modular Reactor, and the International Reactor Innovative and Secure (IRIS) designs. In addition to assessing its capability to review the new designs, the Commission will also examine its regulations relating to license applications, such as 10 CFR Parts 50 and 52, in order to identify whether any enhancements are necessary.

In order to confirm the safety of new reactor designs and technology, the Commission believes that a strong nuclear research program should be maintained. A comprehensive evaluation of the Commission’s research program is underway with assistance from a group of outside experts and from the Advisory Committee on Reactor Safeguards. With the benefit of these insights, the Commission expects to undertake measures to strengthen our research program over the coming months.

**Human Capital**

Linked to these technical and regulatory assessments, the Commission is reviewing its human capital to assure that the appropriate professional staff is available for the Commission to fulfill its
traditional safety mission, as well as any new regulatory responsibilities in the area of licensing new reactor designs.

In some important offices within the Commission, nearly 25 percent of the staff are eligible to retire today. In fact, the Commission has six times as many staff over the age of 60 as it has staff under 30.

And, as with many Federal agencies, it is becoming increasingly difficult for the Commission to hire personnel with the knowledge, skills, and abilities to conduct the safety reviews, licensing, research, and oversight actions that are essential to our safety mission. Moreover, the number of individuals with the technical skills critical to the achievement of the Commission's safety mission is rapidly declining in the Nation and the educational system is not replacing them. The Commission's staff has taken steps to address this situation, and as a result, is now seeking systematically to identify future staffing needs and to develop strategies to address the gaps. It is apparent, however, that the maintenance of a technically competent staff will require substantial effort for an extended time.

As the Commission is currently challenged to meet its existing workload with available resources, additional resources would be necessary to respond to increased workload which could result from some of the initiatives discussed in this testimony.
NRC Age Demographics by Category Data

Obtained and made public by the Natural Resources Defense Council, March / April 2002
Implications of a National Energy Policy

The Commission has a stake in a national energy policy and has identified areas where new legislation would be helpful to eliminate artificial restrictions and to reduce the uncertainty in the licensing process. These changes would maintain safety while increasing flexibility in decision-making. Although those changes would have little or no immediate impact on electrical supply, they would help establish the context for consideration of nuclear power by the private sector without any compromise of public health and safety or protection of the environment.

Legislation will be needed to extend the Price-Anderson Act. The Act, which expires on August 1, 2002, establishes a framework that provides assurance that adequate funds are available in the event of a nuclear accident and sets out the process for consideration of nuclear claims. Without the framework provided by the Act, private-sector participation in nuclear power would be discouraged by the risk of large liabilities.

Several other legislative changes would be helpful. For example, Reorganization Plan No. 3 of 1970 could be revised to provide the Commission with the sole responsibility to establish all generally applicable standards related to Atomic Energy Act (AEA) materials, thereby avoiding dual regulation of such matters by other agencies. Along these same lines, the Nuclear Waste Policy Act of 1982 could be amended to provide the Commission with the sole authority to establish standards for high-level radioactive waste disposal. These changes would serve to provide full protection of public health and safety, provide consistency, and avoid needless and duplicative regulatory burden.

Commission antitrust reviews could also be eliminated. As a result of the growth of Federal antitrust law since the passage of the AEA, the Commission’s antitrust reviews are redundant of the reviews of other agencies. The requirement for Commission review of such matters, which are distant from the Commission’s central expertise, should be eliminated.

Elimination of the ban on foreign ownership of U.S. nuclear plants would be an enhancement since many of the entities that are involved in electrical generation have
foreign participants, thereby making the ban on foreign ownership increasingly anachronistic. The Commission has authority to deny a license that would be inimical to the common defense and security, and thus an outright ban on all foreign ownership is unnecessary.

With the strong Congressional interest in examining energy policy, the Commission is optimistic that there will be a legislative vehicle for making these changes and thereby for updating the AEA.

Summary

The Commission has long been, and will continue to be, active in concentrating its staff's efforts on ensuring the adequate protection of public health and safety, the common defense and security, and the environment in the application of nuclear technology for civilian use. Those statutory mandates notwithstanding, the Commission is mindful of the need to: 1) reduce unnecessary burdens, so as not to inappropriately inhibit any renewed interest in nuclear power; (2) maintain open communications with all its stakeholders, in order to seek to ensure the full, fair, and timely consideration of issues that are brought to our attention; and (3) continue to encourage its highly qualified staff to strive for increased efficiency and effectiveness, both in our dealings with all the Commission's stakeholders and internally within the agency.

I look forward to working with the Committee, and I welcome your comments and questions.
The Subcommittee on Railroads

Hearing on

Railroad Infrastructure Policy

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PURPOSE

The Subcommittee will conduct a hearing on the infrastructure policies affecting the nation's railroads on Wednesday, April 25, 2001, at 10:00 a.m. in Room 2167, Rayburn House Office Building. The Subcommittee will hear testimony both on the implementation of the direct and guaranteed rail and rail-intermodal infrastructure loan program enacted in the 1998 Transportation Equity Act for the 21st Century (TEA 21) and on H.R. 1020, legislation to address smaller railroads' infrastructure needs.

BACKGROUND

Smaller railroads are generally labeled Class II or Class III rail carriers, using Surface Transportation Board (formerly Interstate Commerce Commission) size thresholds based on total annual revenues. Class III carriers each have $20.8 million or less in annual revenues, while the limit for Class II carriers is $259.4 million. Although some smaller railroads have existed for decades, hundreds of new short-line and regional railroads were created following the enactment of the Staggers Rail Act of 1980.

Prior to the Staggers Act reforms that permitted large (Class I) railroads to abandon unproductive lines more easily, deterioration of the rail network, especially on light-density lines serving smaller towns and rural areas, was widespread. The generally higher operating costs of the Class I carriers, combined with low traffic levels, made most light-density lines money-losing enterprises for the large railroads. Prior to 1980, most such lines were shed by Class I carriers (when the ICC regulatory process permitted) through outright abandonment—removing the lines permanently from the rail network.

After 1980, ICC policies and regulations were revised to permit easier sale or lease of marginal lines by Class I railroads to start-up operations. This led to a boom in the formation of Class II and Class III railroads, which included both union and non-union carriers. Some have succeeded financially, while others have not. In the vast majority of cases, the track, roadbed, and other infrastructure acquired by the new smaller operators was already severely deteriorated by Class I standards, but still sufficiently sound to allow low-density (and often low-speed) freight operations. Besides attracting sufficient revenue, a secondary struggle by the smaller freight railroads involved acquiring sufficient capital to maintain and possibly upgrade the quality of the infrastructure inherited from the former owners of these lines. In the early 1990s, an FRA study of smaller railroads' infrastructure needs showed a severe shortfall in the capital resources of these carriers relative to the state of their infrastructure.

In the last several years, a new burden to the marginal infrastructure of smaller railroads has appeared. Class I railroads have begun to add large numbers of more efficient, but far heavier, 286,000-pound cars to their fleets. This increases the operating stresses and wear and tear on smaller railroads' track systems, and depending on the level of deterioration, could entirely prevent operation of "286" cars on certain light-density lines. If such physical embargos were to become widespread, it could result in a non-interoperable rail network, i.e., a rail system where the same fleet of cars cannot operate in all locations on the
system. Smaller railroads provide approximately 10 per cent of the freight traffic of the major Class I carriers. A recent study, conducted by Zeta-Tech Associates, Inc., under contract to the American Short Line and Regional Railroad Association, concluded that the entire Class II/Class III rail network will require about $6.8 billion in infrastructure upgrades to deal with the heavier rail cars.

H.R. 1020, Railroad Track Modernization Act of 2001

On March 14, 2001, I introduced this bill, with the original cosponsorship of Subcommittee Ranking Member Clement and Mr. Bachus, a Subcommittee Member. Chairman Young has since also cosponsored this legislation, which has been referred to the Transportation and Infrastructure Committee and this Subcommittee.

The bill establishes a program of direct grants to smaller (Class II and Class III) railroads for rehabilitation and improvement of tracks and related structures, to bring the infrastructure up to a level permitting safe and efficient operation, including traffic containing the new heavier 286,000-pound rail cars being adopted as an industry standard by the large railroads. The general fund authorization level is $330 million per year for FY 2002-2004.

Matching contributions are required under an 80/20 federal/non-federal formula. The nonfederal contribution can be from any non-federal source, and may be cash, equipment, supplies, or other in-kind contribution. Generally, a project must have a 1.0 or higher cost-benefit ratio, with DOT Secretary empowered to waive this standard based on public interest. Track to be rehabilitated or improved must have been operated as a Class II or Class III rail property on date of enactment.

Grant funds must be contractually obligated within 3 full fiscal years after the award of grant. Besides direct funding of track rehabilitation and improvement, grants may also be used to supplement TEA 21 rail loans, including paying credit risk premium for loans, lowering rate of interest, or providing principal payment holidays.

Davis-Bacon standards applicable to Amtrak and transit apply to construction work financed by grants. Any rail employee adversely affected by a grant-funded project will receive standard New York Dock labor protection benefits. Under current Surface Transportation Board standards.

DOT is required to conduct a study of future needs of light-density rail lines for federal infrastructure funding, and report to Congress by March 31, 2003.

TEA 21 Rail Infrastructure Loan Program

This program was based on a proposal submitted by the American Short Line and Regional Railroad Association at a 1997 Subcommittee on Railroads hearing (and introduced by Congresswoman Mollinari as H.R. 1939). It was enacted as Section 7203 of the TEA 21 (Pub. L. 105-178), and is now codified as Title V of the Railroad Revitalization and Regulatory Reform ("4R") Act, as amended [45 U.S.C. 821-823, 836].

The new program expanded a predecessor loan program established by Section 511 of the "4R" Act. The TEA 21 program created a permanent, revolving authorization for $3.5 billion (face amount) in direct and guaranteed loans for virtually any form of rail or rail-intermodal equipment or infrastructure. This includes freight rail-port connections, commuter and passenger rail facilities, and rail-truck transloading facilities. Of this $3.5 billion revolving authorization, $1 billion was dedicated to the primary benefit of Class II and Class III railroads. The amended TEA 21 loan program retained the labor protection requirements of the 1976 statute.

The TEA 21 program also created two alternative procedures for obtaining a loan. Prior to TEA 21 and after enactment of the Credit Reform Act of 1990, loans under the predecessor program could be obtained only if the credit risk premium (security deposit) for the loan was appropriated as federal funds. The new program permits either an appropriated credit risk premium or one furnished by public or private non-appropriated sources. Thus the second option created the possibility of loans being made on an off-budget basis without any need to become involved in the appropriations process.

Initial Proposals by the Previous Administration

Since TEA 21 was enacted in the summer of 1998, implementation of the loan program by the Federal Railroad Administration has proceeded very slowly. The Administration's first official statement regarding implementation came in the President's FY 2000 Budget (Appendix, p. 767) where the Administration stated its intention (1) to require market rates of interest on all loans made under the program and (2) to require a prior showing that the DOT loan represented a "loan of last resort" following private sector rejections.

The Transportation Committee leadership (Messrs. Shuster, Oberstar, Petit, and Rahall) wrote to Secretary Slater and OMB Director Leavon April 15, 1999, pointing out that neither of these requirements had any legal basis, and that they would cripple the loan program. The letter also complained of the extremely slow implementation of the program to that point. (Unlike entirely new programs like TIFIA, new railroad loan regulations required only a revision of the rules applicable to the predecessor program.)

FRA Proposed Regulations

Notwithstanding these concerns, no rules were proposed until the summer of 1999 [64 Fed. Reg. 27488 (May 20, 1999)].
The proposed regulations deleted the universal market interest rate requirement, which directly contravened statutory language governing interest rates. Nevertheless, the proposed regulations continued to require a showing of "lender of last resort" status through at least two prior rejections of financing from commercial lenders (proposed 49 C.F.R. 260.23(o), 64 Fed. Reg. 27495).

The Committee again responded, this time with a joint comment in the FRA rulemaking docket, dated June 14, 1999, pointing out this and several other deficiencies. When 1999 ended without any final regulations in place, the Committee leadership again wrote to Secretary Slater, pointing out the urgency of having final regulations, so that loan applications could be processed. The leadership's letter of January 3, 2000, pointed out the immediate need for infrastructure funds to address transportation "choke points" such as intermodal port facilities, as well as the urgent need of smaller railroads for upgraded infrastructure to address the "286" car weight problem. Nevertheless, another half-year elapsed without the issuance of regulations.

Final FRA Regulations

FRA issued its final regulations last summer [65 Fed. Reg. 41838 (July 6, 2000)]. Responding to the Committee leadership's repeated comments pointing out the lack of any legal basis for the proposed "lender of last resort" requirement, FRA stated: While FRA need not be a lender of last resort, it does not intend to replace private funding sources already available to the rail industry. Therefore, in order to establish that private funding on terms necessary to the viability of the applicant's project is not available, FRA will require that railroad applicants provide a letter from a commercial lender denying funding for the project [emphasis added].

This relabeled version of "lender of last resort" is codified at 49 C.F.R. 260.23(o) [65 Fed. Reg. 41844].

Railroad applicants must also submit a copy of application [sic] for financing for the project in the private sector, including the terms requested, from at least one commercial lender, and its response refusing to provide such financing.

Administration delay in promulgating final rules has prevented any loans from being made (including loans that require no appropriation whatever) for more than two and one-half years since enactment of TEA 21.

DOT-OMB Memorandum of Understanding

At a Ground Transportation Subcommittee hearing on July 25, 2000, a memorandum of understanding dated June 23, 2000, between DOT and OMB was made part of the record. In the memorandum, a number of additional requirements were imposed on the loan program. These included (1) not approving any loan over 10 per cent of the annual "cohort" of loans, i.e., holding an early-month application until the entire annual cohort is defined at the end of the year; (2) capping any loan at no more than 6 per cent of the unused authorization, i.e., a constantly declining amount; (3) requiring collateral with a recovery value of 100 per cent of principal and interest, i.e., the equivalent of requiring the collateral for a $100,000 home loan to cover not only the $100,000 loan principal, but the entire 30-year interest stream as well. All of these requirements lack statutory basis, were never subjected to public notice and comment as part of the FRA rulemaking proceeding, and make implementation of the program more difficult. Mr. Rahall has introduced corrective legislation, H.R. 517, to expunge the lender-of-last-resort requirement in the published regulations and the full-recovery collateral requirement in the DOT-OMB memorandum.

On April 6, 2001, Chairman Young, Ranking Member Oberstar, Ranking Subcommittee Member Clement and I wrote to Secretary Mineta, expressing our concern about the complete stagnation of the rail loan program. We urged the Secretary to begin immediately the process of conforming the DOT regulations to the statutory requirements of TEA 21. Not a single loan has been approved under this program since the enactment of TEA 21. The Bush Administration's FY2002 budget proposal (as with all prior Presidential budgets since enactment of TEA 21) includes no funds for appropriated federally provided credit risk premiums to support loans under this program.

WITNESSES
PANEL 1

Mr. Mark Lindsey
Chief Counsel and Acting Deputy Administrator
Federal Railroad Administration
Accompanied by:
Mrs. Joanne McGowan
Chief of Freight Programs Division
Mr. Mark Yachmetz
Associate Administrator
Mr. Joseph Pomponio
Attorney-Advisor
Panel II
Mr. Ed Hamberger
President
Association of American Railroads
(statement, appendices)

Mr. Frank Turner
President
American Short Line & Regional Railroad Association

Mr. Patrick K. Gamble
President & CEO
Alaska Railroad Corporation
Accompanied by Mr. John Binkley
Chairman of the Board
Alaska Railroad Corporation

Mr. William W. Millar
President
American Public Transit Associate

Panel III
Mr. Byron Boyd
President
United Transportation Union

Mr. Donald Griffin
Assistant General Counsel
Brotherhood of Maintenance of Way Employees