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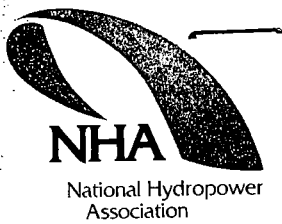
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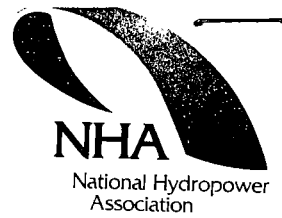
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Issue Brief

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HYDROPOWER: A CLEAN ENERGY SOURCE FOR OUR FUTURE

"... [O]ur most fateful new challenge is the threat of global warming. 1998 was the warmest year ever recorded. Last year's heat waves, floods and storms are but a hint of what future generations may endure if we do not act now. ..."

—President William J. Clinton, State of the Union speech, January 19, 1999

"... [W]e should manage carbon over the long term through a new, sustained research and development effort aimed at avoiding, removing and sequestering carbon emissions. ..."

—Senator Frank H. Murkowski, January 26, 1999

Though they may disagree on the means, political leaders of both parties agree that the U.S. should do more to reduce its emissions of greenhouse gases. In 1996, total U.S. greenhouse gas emissions from electricity generation was 517 million metric tons carbon, or 35 percent of total U.S. emissions.

One strategy to reduce U.S. emissions is to develop low carbon or non-carbon fuel alternatives. A well known, large scale source of emissions-free electricity with extensive development potential is hydropower. Unfortunately, this clean, renewable and reliable source is often overlooked, and sometimes devalued as a solution to the problem of greenhouse gases. It may be that the magnitude of its contribution to avoiding emissions is too little understood.

In 1997, hydropower generated nearly 11 percent of the nation's electricity, or enough power to supply the 37 million homes in California, Texas, New York, Pennsylvania, Ohio, and North Carolina combined. In the Pacific Northwest, hydropower generates up to 70 percent of that region's electricity.

NHA estimates that without hydropower, an additional 83 million metric tons of carbon would have been emitted into the atmosphere from the generation of electricity in 1997. That is equivalent to burning an additional 143 million tons of coal, plus 20 million barrels of oil, and 471 billion cubic feet of natural gas combined.

Put another way, the carbon emissions avoided by the nation's hydroelectric industry are the equivalent of an additional 67 million passenger cars on the road—50 percent more than there are currently.

Other pollutants avoided by the generation of hydropower in 1997 included nearly 2 million tons of sulfur dioxide (SO₂) and 1.3 million tons of nitrogen oxides, both key ingredients in acid rain.

The Obstacles for Hydropower: Hydropower's environmental benefits are crystal clear, yet, due to a complex web of federal regulation, its future is cloudy. An increasing array of statutes, regulations, agency policies and court decisions have made the hydroelectric licensing process costly, arbitrary and time-consuming. A typical hydropower project takes 8 to 10 years to find its way through the licensing process. By comparison, a natural gas fired plant which emits significant carbon dioxide (CO₂) gases, can typically be sited and licensed in 18 months.

Recent trends indicate that relicensing results in an average 8 percent loss in generation due to new constraints imposed on operation. In the thirty years preceding passage of the Electric Consumers Protection Act of 1986, net summer capability at hydroelectric projects nearly tripled. Since 1986, that capacity has declined by 17.8 percent.

Given this uncertain climate, few investors are willing to risk their capital on new hydropower development. Furthermore, some project owners and operators contemplate abandonment of their projects rather than proceeding with relicensing.

If the regulatory process is not reformed and hydro projects continue to be rendered uneconomic, it is the environment, not just the American energy consumer that stands to lose.

A Sustainable Energy Future: But it does not have to be that way. Nor do we have to choose one natural resource over another. It is possible to expand the use of hydropower with little or no environmental impact.

A recent U.S. Department of Energy hydropower resource assessment found that, after screening for environmental, legal and institutional obstacles, there are 29.8 Gigawatts of potential hydroelectric capacity at 5,677 sites. The assessment considers such values as wild/scenic protection, threatened or endangered species, cultural values and other non-power issues. If all of this potential were to be developed, an additional 31.7 million metric tons of carbon could be avoided.

And of that amount, 72 percent, or 21.3 GW, can be developed without the construction of a new dam. By adding generation to these existing dams or at projects that already have hydropower generation but are not developed to their full potential, 22.7 million metric tons of carbon could be avoided.

A Time for Action: If we are serious about supporting clean energy sources as national policy, the obstacles to hydropower development must be overcome. Today, the hydropower industry stands at a crossroads: we can do nothing and lose the many benefits of this emissions-free and renewable source of power, or we can act affirmatively to change the regulatory playing field and let the power of falling water meet both environmental and energy needs of our nation.

Now is the time for Congress and the administration to act. As the nation's number one renewable energy source, hydropower must be allowed to take a leading role in a U.S. strategy for sustainable energy in the 21st Century.

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Hydropower: Indisputably Renewable

Hydropower is, by definition, a renewable energy resource. It is our nation's oldest and most significant renewable energy source accounting for 81 percent of U.S. renewable energy generation. Like wind, solar, geothermal and biomass, hydropower's fuel—water—is essentially infinite and is not depleted in the production of energy. The cycle of evaporation and condensation, known as the hydrologic cycle, re-charges rivers, providing an endless supply of water to run through electricity generating turbines.

Some national policy leaders would leave hydro out of renewable policies to favor “emerging” renewable technologies—those that are not fully commercially viable. By erroneously limiting the definition of “renewable” to emerging technologies, these policymakers send the wrong signal to newly developing green power markets, thereby potentially eroding hydro's ability to compete. At a time when the utility industry is going through monumental changes in a newly competitive electricity marketplace, these policies set a dangerous precedent.

This is particularly disturbing as hydropower emits no greenhouse gases and deserves recognition for its role in offsetting hundreds of millions of tons of carbon dioxide each year. It is uniquely a clean, reliable and renewable source of power that should enjoy a substantial role in the competitive marketplace.

What is overlooked while encouraging some renewable sources of energy, but not hydropower, is that hydro faces significant market disadvantages of its own—losing, on average, up to 8 percent of generation as projects go through relicensing. While not the same as those encountered by the wind and solar industries, these disadvantages hold equal merit—and demand similar counter-measures in policies designed to encourage environmentally benign sources of power.

Also, while hydropower is an “existing” technology rather than an “emerging” one, it is a mistake, as some policymakers do, to consider the industry as “mature,” or having no ability to gain new market share. This characterization fails to recognize the nearly 30,000 MW of hydropower potential identified by the Department of Energy that are absent environmental and legal obstacles. Under present circumstances, none of this clean, renewable power will likely be developed primarily due to the faulty relicensing process.

Calling hydro “mature” also fails to recognize new development that could occur with advances in turbine technology and biological sciences that help minimize project impacts to fisheries.

Finally, there are a few organizations that argue that a river's health determines the "renewability" of an energy resource. This argument, at best, confuses the issue of renewability with a river's health. If the concern is about a river's health, then the issue should be addressed.

Though not well understood, hydropower can, and does protect endangered species, improve fisheries and enhance the enjoyment of outdoor experiences to tens of millions of Americans. While projects do impact riverine ecosystems, healthy rivers and hydropower can coexist. The best way to address hydropower's negative impacts is to invest in new technology improvements, environmental enhancements and mitigation efforts. Rhetorical arguments only serve to confuse the issue.

In the interest of truth, accuracy and environmental protection, sound public policy must define hydropower as a renewable source of energy.



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FACTS YOU SHOULD KNOW ABOUT HYDROPOWER

Hydropower is a clean, renewable and reliable energy source which serves the nation's environmental and energy policy objectives. Hydropower converts kinetic energy from falling water into electricity without consuming more water than is produced by nature.

Since 1880, when 16 brush-arc lamps were powered using a water turbine at the Wolverine Chair Factory in Grand Rapids, MI, hydropower has played a vital role in the U.S. energy mix. Here are some facts about hydropower:

HYDROPOWER — A MAJOR SOURCE OF ENERGY

- The United States is one of the largest producers of hydropower in the world, second only to Canada.
- Currently, hydropower ranges between 10 and 12 percent of U.S. electrical generation or enough electricity to supply the 37.8 million homes in California, Texas, New York, Pennsylvania, Ohio, and North Carolina.
- In the Pacific Northwest, up to 70 percent of electricity is generated from hydropower.
- Of the 75,187 existing dams in the U.S., less than 3 percent are used for hydroelectric generation.
- Non-federal, licensed conventional hydroelectric capacity equals 40.0 Gigawatts (GW) at 2,162 sites in the U.S. The federal government owns another 38.2 GW at 165 sites. Total U.S. hydroelectric capacity is 103.8 GW when you add pumped storage.
- Throughout the world, about one-fifth of electricity is generated from hydropower.

HYDROPOWER — CLEAN AND RENEWABLE

- In 1997, hydropower avoided the release of an additional 83 million metric tons of carbon equivalent into the atmosphere. Without hydropower, the U.S. would have to burn an additional 143 million tons of coal, plus 20 million barrels of oil, and 471 billion cubic feet of natural gas combined.
- The carbon avoided by hydropower is equivalent to an additional 67 million passenger cars on the road—50 percent more than there are currently.

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- Like wind, solar, geothermal and biomass, hydropower is a renewable source of electricity. Water, its “fuel”, is essentially infinite, replenished by the hydrologic cycle which is powered by the sun.
- Hydropower is the nation’s leading renewable energy source. It accounts for 81 percent of the nation’s total renewable electricity generation.

HYDROPOWER — A SOUND ENVIRONMENTAL CHOICE

- Hydroelectric projects can enhance wetlands and support healthy fisheries. Wildlife preserves can be created around reservoirs which, in some cases, provide stable habitats for endangered or threatened species.
- A recent U.S. resource assessment shows there are 29.8 GW of potential hydropower capacity at 5,677 sites that have been screened for favorable environmental, legal and institutional conditions. Seventy two percent of this potential—21.3 GW—can be developed without the construction of a new dam.
- Of the 765 hydro projects licensed by the federal government during the 1980’s, 91 percent did not involve the construction of a new dam.
- There were a total of 81 million recreation user days provided at FERC licensed hydropower projects in 1990. Boating, skiing, camping, picnic areas and boat launch facilities are all supported by hydropower.

HYDROPOWER — RELIABLE, EFFICIENT AND SECURE

- Today’s hydropower turbines are capable of converting 90 percent of available energy into electricity—that is more efficient than any other form of generation. Even the best fossil fuel power plant is only about 50 percent efficient.
- The efficiency of hydropower, while impressive, can be further improved simply by refurbishing existing equipment. Increasing the efficiency of hydropower machinery in the existing system by only one percent would increase the United States’ annual generation of electricity by about 3.3 billion kilowatt-hours, supplying more than 300,000 households.
- Hydropower’s operational flexibility – its unique ability to change output quickly – is highly valued, and will become even more so in a deregulated market. Its unique voltage control, load-following and peaking capabilities help maintain the stability of the electric grid ensuring economic growth and a high quality of life.

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- Hydroelectricity adds to our national security. Water from rivers is a purely domestic resource that is not subject to disruptions from foreign suppliers, production strikes or transportation issues.

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8 MYTHS ABOUT HYDROPOWER

PRODUCED BY THE NATIONAL HYDROPOWER ASSOCIATION

Myth #1: The nation's rivers should be left in their natural, free-flowing state.

While no one would argue the merits of preserving pristine rivers in their natural state, it is a fact of modern life that our rivers provide many social and economic benefits and help maintain our standard of living.

A better proposition, albeit a more difficult one is: 'We can maximize a river's benefit to human activity by making sound choices that balance all competing values, including its existence value.'

A river's existence value – because it exists undeveloped whether anyone sees it or not – is one way to appreciate a river. Recreation, scenic beauty, and fish and wildlife habitat are some other ways to value rivers. We also value drinking water, irrigation and navigation, and, at another level, local economies, meaningful employment, flood management, and of course a river's ability to generate clean, renewable electrical power. In fact, hydropower's unique electrical attributes are especially valuable for maintaining the stability of the electric grid and that helps the entire nation.

We can't ignore any of these benefits, and fortunately it is not an 'either-or' choice. Rather it is a question of degree. Dams and healthy rivers can, and do readily co-exist. Hydropower projects support fish and wildlife habitats, scenic areas and diverse species.

It is easy to be seduced by literature that describes undeveloped rivers as 'free', but policymakers must remain pragmatic in their approach to river management. Just as there is a need for free-flowing rivers, so too is there a need for working rivers.

Myth #2: Hydropower does not qualify as renewable energy because it leaves rivers in 'poor health'.

In policy debates, the word "renewable" is sometimes attached to technologies we like and denied those we don't like. This is poor basis for decision making. For years there has been an accepted definition of "renewable energy" -- a fuel source that is not depleted in the production of energy. Wind, solar, geothermal, biomass and hydro all meet that definition.

Powered by the sun, the hydrologic cycle, which re-charges rivers, is essentially infinite. Hydropower converts falling water in rivers into electricity without using more water than is produced by nature. Hence, by definition hydropower is renewable.

If the concern is about the river's health, then the debates should be on the river's health and not on rhetorical arguments. Hydropower has the ability to enhance or detract from a

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river's health. The best ways to address policy issues is to talk about impacts, positive and negative, and about mitigation.

Myth #3: Dam owners do not care about the environment and they do not produce reliable science. Their only concern is to pump out megawatts.

Megawatts, plus hydropower's unique ability to change output quickly, are vital to our electricity supply. Still, hydropower owners accept their stewardship role and recognize their use of public waterways demands collaboration with other river stakeholders and the general public. That stewardship has long been a part of the law and has long since become part of the culture of hydro operators.

The industry employs hundreds, if not thousands of dedicated biologists, life scientists and ecologists, all of whom work to better coordinate hydropower operations with fish and habitat needs. Substantial resources are spent on mitigation, environmental enhancements, and improving public access to waterways for recreation. More often than not, a licensee's efforts, which are documented in a license record, show that projects enhance wetlands, support healthy fisheries and create wildlife habitats on lands surrounding projects.

Myth #4: The Federal Energy Regulatory Commission (FERC) is a 'rubber stamp' for industry. The environment has no voice in licensing decisions.

Today, if anything, FERC is a 'rubber stamp' for resource agency licensing conditions. The Federal Power Act (FPA) vests FERC with exclusive jurisdiction over the licensing and regulation of non-federal hydroelectric facilities. Yet, as the law is currently interpreted, state and federal resource agencies have virtual *carte blanche* to impose conditions upon a hydroelectric license. FERC has no discretion regarding those mandatory license conditions proposed under Section 4(e) of the FPA, fishways prescribed under Section 18 of the FPA, and conditions of a Section 401 water quality certification (Clean Water Act).

In 1986, Congress amended the FPA with the passage of the Electric Consumers Protection Act (ECPA), Pub.L.No.99-495. The law directed FERC to give "equal consideration" to environmental and energy interests. Yet, instead of balancing considerations, FERC, for the most part, accepts agency recommendations. Since 1986, FERC has accepted agency recommendations 95 percent of the time according to the Commission. A recent study commissioned by the Department of Energy shows nearly two-thirds of all hydropower projects lost generation in relicensing since 1986 due to mandatory operational changes. In 1996, fully 90 percent of all projects lost some generation capacity.

Sound public policy dictates that hydropower regulations balance competing claims on the nation's public waterways. That resource agencies have broad, if not absolute, discretion to dictate the conditions under which a hydroelectric project will operate, without a commensurate level of accountability, distorts this premise.

Myth #5: Dams damage river ecosystems. They flood and silt-in natural stream areas and deplete oxygen from the water. Their reservoirs are deadwater or slackwater pools whose water is hostile to native fish species. Downstream, they create alternating periods of no water followed by powerful surges that erode soil and vegetation.

All dams change river ecosystems, not just the three percent that produce electricity. These new ecosystems are not 'unhealthy', just different. The change can be viewed as positive or negative based on value judgements. It is necessary to evaluate each project individually, using sound science and without preconceived bias or prejudice.

The reservoirs behind dams are often teeming with life, including both anadromous fish and the resident fish populations that depend on the reservoir for survival. These dams provide more bio-diversity, not less. Anglers place great value on these lakes because they often provide blue-ribbon fisheries. Wildlife preserves are often created around reservoirs which, in some cases, provide stable habitats for endangered or threatened species.

Most hydropower projects are 'run-of-river' and do not have the extreme downstream effects mentioned. Often, 'peaking plants' that store and release water, can benefit downstream riverine systems. For instance they may raise dissolved oxygen levels, control water temperatures, or provide increased recreational opportunities. Those storage projects whose effects are not so benign can be managed to lessen their impact.

Myth #6: Dams block the migration of anadromous fish and are the cause of species' declines.

The hydropower industry has taken extensive steps and spent hundreds of millions of dollars to minimize the impact dams have on aquatic life. The industry has been careful, where possible, to install systems with proven capabilities to move fish both upstream and downstream in all phases of their life cycle.

Typically, turbines already successfully pass between 85 and 95 percent of fish migrating downstream on major rivers. This percentage can be further improved using advanced turbine systems. Scientific applications of spillways, fish screens and other collection and diversion techniques have greatly improved downstream migration. For upstream passage, lifts, bypass canals and ladders that simulate natural waterfalls have proven to be successful.

But dams cannot account for diminished runs prior to dam construction. Nor do they explain why undeveloped rivers experience similar trends in salmon counts as rivers with dams.

We will always be frustrated with efforts to restore fish populations to the rivers if societies efforts focus only on dams. There are a multitude of factors that contribute to the ultimate failure of species to return to their spawning grounds during their life cycle. Often ignored are the harmful effects of: legal and illegal harvesting that occurs both in-river and in the ocean; hatcheries that cause disease to native species and increased harvests; habitat degradation caused by mining, logging, agricultural run-off, road construction and urban development; not to mention the effect of climate conditions like, most recently, El Niño which warms the ocean currents and may disrupt fish migration patterns.

Myth #7: Hydropower in general, or a particular plant, contributes only a small amount of energy to the nation/region, therefore it is unimportant.

Hydropower is unique among generation sources for its operational flexibility --- it can be switched on almost instantaneously. While a particular plant may be small in terms of megawatts, its ability to provide peaking power, spinning reserves and voltage and frequency control is highly prized, especially in a deregulated market.

Nationally, hydropower makes up between 10 and 12 percent of the nation's energy mix. In the Pacific Northwest, 70 percent of that region's electricity is supplied by hydro.

When considering the value of any single project, one must ask how that power will be replaced. Will it be replaced with other forms of renewable energy or conservation, or will the excess capacity of the existing fossil fuel mix make up the difference? More likely, it will fall to the regional power pool to make up the difference, with negative consequences to our air quality in the form of increased levels of CO₂, NO_x and SO_x. So the choice is not hydro project or nothing, it is, more likely, hydropower or fossil fuel/nuclear.

Taken as a whole, U.S hydropower generation avoided an additional 83 million metric tons of carbon from being emitted into the atmosphere in 1997. That is equivalent to removing 67 million passenger cars from the road—50 percent of the current fleet.

Myth #8: Solar or wind energy, plus conservation, are the answers to our nation's energy needs.

As the largest renewable energy source—accounting for 81 percent of renewable electricity generation—hydropower has a vital role to play in our energy future. Wind and solar energy are intermittent sources of electricity and must be coupled with another generation source for system stability. The environmental benefits of intermittent renewable sources are reduced when combined with fossil fuel generation. Whereas hydropower, because of its storage capacity, provides an excellent backbone to a cleaner and more renewable electric grid.

Conservation and energy efficiency play an important role in environmental protection, but they cannot account for all future demand plus the replacement of retiring generation sources.

When considering energy policy, it's important to know the whole story. Few sources of electricity have as many economic, social and environmental benefits as hydropower. In addition to clean energy, hydropower projects can provide drinking water, flood management, irrigation, transportation, fisheries and outdoor recreation. A policy that promotes all sources of clean and renewable power and energy efficiency will do the most for maintaining a high quality of life and sustainable economic growth.

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Issue Brief

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WHY HYDROPOWER LICENSING IMPROVEMENT IS NECESSARY

What's Wrong With the Hydropower Relicensing Process? A multitude of statutes, regulations, agency policies and court decisions has made the hydroelectric relicensing process time-consuming, arbitrary and costly.

- A typical hydro project can take from eight to 10 years to weave its way through the licensing process—some have taken as long as 28 years. In comparison, gas fired plants which emit large amounts of CO₂ gas can typically be sited and licensed in 18 months.
- Federal agencies are allowed to set conditions on licenses without regard to their effects on project economics, energy benefits and values protected by other statutes or regulations.
- There is no referee that can resolve conflicts between agencies or reconcile inconsistent demands. Often, the result is license conditions that have nothing to do with project impacts.
- Hydropower licensees have no recourse to appeal, or even question, the basis of mandatory conditions set by the agencies, except through litigation.
- Relicensing consistently results in higher costs, loss of operational flexibility, and lost generation due to new constraints imposed on operations.

Accordingly, some hydro project owners and operators are contemplating abandonment of their projects. The loss of a hydro project means more than the loss of clean, efficient, renewable electric power. It hurts the U.S. ability to meet global climate change/CO₂ goals. Hydro projects provide water, flood control, fish and wildlife habitat, irrigation, transportation and recreation benefits. Also, due to its unique load-following capability, peaking capacity and voltage stability attributes, hydropower plays a critical role in maintaining reliable electric service.

Why Does Congress Need to Legislate on This Issue Now? Over half of all non-federal hydroelectric capacity is scheduled to be relicensed in the next 15 years. If Congress does not act now to improve the relicensing process, our nation's hydropower resource will be seriously eroded, to the detriment of consumers, the environment, our energy mix and our economy.

What Does the Proposed Legislation Do? The Hydroelectric Relicensing Process Improvement Act of 1999 (S.740/H.R.2335), introduced by Senator Larry Craig (R-ID) and Congressman Edolphus Towns (D-NY), would amend the Federal Power Act by requiring the FERC to set a date-certain of no more than one year of intra-agency review. This would assure the timely submission of conditions based on consideration of all relevant factors by resource agencies.

Does the Legislation Repeal Agency Mandatory Conditioning Authority? The legislation does not repeal mandatory conditioning authority. Rather, the proposal would give these agencies the responsibility to consider, and be accountable for, the full effects of their actions before imposing

mandatory conditions on a hydro license. The absolute power accorded to resource agencies must be coupled with an equal level of responsibility and accountability.

Does the Legislation Seek to Repeal or Modify Any Environmental Laws Involved With the Hydropower Licensing Process? No, the legislation does not propose repeal or modification of environmental laws. Rather, the bill calls for the reasonable implementation of these laws, to achieve a balance that will protect the environment while ensuring a viable hydroelectric industry.



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HYDROPOWER LICENSING REFORM PRINCIPLES

Prepared by the Industry Coalition for Hydropower

Hydropower is one of the most economical electric power resources available currently and is the nation's leading renewable energy resource, representing approximately 81 percent of all renewable electricity generation and 10 percent of the total generation in the United States. Benefits from this clean, reliable and domestic energy include recreation, irrigation, flood control and water supply. Hydropower is also emissions-free, displacing 327 million tons of carbon dioxide in 1996 alone.

Today, however, due to layers upon layers of regulatory burdens and costs associated with the federal licensing process, many hydropower projects face uncertain futures. A recent Department of Energy study reports that hydropower projects consistently lose generation as a result of federal relicensing. A typical hydro relicensing can take 10 years and cost up to \$10 million in process alone. Considering that over half of all non-federal hydroelectric capacity is scheduled to be relicensed in the next fifteen years, if Congress does not act to reverse this trend, our nation's hydropower resource will be seriously eroded to the detriment of consumers, the environment, our energy mix and our economy.

Industry Principle: The guiding principle behind the hydropower industry's legislative strategy is to ensure recognition of the value of the hydro resource in the nation's energy supply portfolio. The industry has worked with the Federal Energy Regulatory Commission (FERC) to administratively improve regulations governing hydropower licensing and operation within the current statutory regime. But administrative remedies alone do not address the root of the problem. The industry now seeks to address problems in the underlying statutes that unduly hinder hydropower's ability to compete on its merit and serve the energy needs of consumers. Our efforts are intended to eliminate duplicative permit authority, reduce costly and time-consuming litigation, and support a responsible balance between economic and environmental concerns. The hydropower industry does not advocate the dismantling of environmental laws that protect the nation's natural resources. Rather, the industry calls for the reasonable implementation of these laws, to achieve a balance that will protect the environment while ensuring a viable hydroelectric industry.

The Problem: The role of FERC as the responsible agency has become weakened and, in some cases, stymied by process inefficiencies, resource agency conflicts and delays, and the inability to balance resource agencies' mandatory conditions with project economics. The industry recognizes that the licensing of a hydroelectric facility involves a commitment of our nation's natural resources. Accordingly, state and federal resource agencies have a significant role to play in licensing decisions. However, sound public

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policy dictates that a single agency be responsible for balancing the competing beneficial uses of a waterway, and act as the final arbiter of the public interests associated with hydropower development. Traditionally, that role has been reserved to FERC and its predecessor the Federal Power Commission.

Unfortunately, as currently interpreted, federal resource agencies' conditioning authority under sections 4(e) and 18 of the Federal Power Act (FPA) limits FERC's ability to act as the final arbiter of whether, and under what conditions, a hydroelectric facility will be licensed. Unlike FERC's comprehensive development mandate under the FPA, the resource agencies' focus is on a single, or extremely limited, resource or activity and does not consider the broader public interests at stake. Thus, resource agencies are free to impose conditions upon hydroelectric licenses with no consideration given to the impact on the economic viability of a project, or on other competing public uses and national interests. Furthermore, other than litigation, hydropower licensees have no recourse to appeal, or even question, the basis of the conditions set by the agencies. Coupled with other process inefficiencies -- uncoordinated environmental reviews, lack of enforceable deadlines and little consideration of project economics -- this has made the licensing process extraordinarily burdensome for licensees and fraught with gridlock and litigation.

The Solution: The hydropower industry recommends that reform legislation contain the following points:

- Achieve the objective of relicensing projects with a high environmental standard at the lowest possible power cost.
- Require that an agency exercising its mandatory conditioning authority must demonstrate and document it has given due consideration to power and non-power values.
- Limit the scope of mandatory conditioning authority to address only specific project induced impacts within agencies' defined jurisdiction and authority.
- Require FERC, after incorporating mandatory conditions from state and federal agencies, to issue a licensing order that seeks to ensure both environmental protection and an economically viable project.
- Require state and federal conditioning agencies in setting mandatory conditions to: 1) be subject to appropriately substantiated scientific review; 2) give licensees an opportunity to respond to conditions before they are submitted to FERC; and 3) establish an administrative appeal process via an independent party, such as an arbitration or mediation board.
- Require and enforce a coordinated NEPA process, with FERC as lead NEPA agency, as the chief environmental review for hydropower licensing.

- Establish FERC's authority to impose binding procedural deadlines for state and federal agencies in order to discipline and expedite the relicensing process.
- Affirm hydropower as an irreplaceable source of clean, economic, renewable energy with unique capabilities to support reliable electric service while improving environmental quality.

Congressional action in these areas will make a major difference in providing consumers with the continuing benefits of hydropower and placing hydro on an equal footing with other generation sources. Conversely, if the importance of ensuring a viable hydropower industry continues to be discounted, the nation will be in serious risk of losing the economic, reliability and air quality benefits of our country's most significant renewable energy resource.



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HYDROPOWER AND ELECTRICITY RESTRUCTURING LEGISLATION

Hydropower's value in a deregulated market: Hydropower, an important source of domestic power generation, provides emissions-free, renewable and reliable electric power, as well as a variety of other public benefits such as water supply, recreation, and flood control. Yet, in the debate over electric market restructuring, the impact of competition on the nation's hydropower resources is often overlooked.

Currently, several Members of Congress are developing legislation that would open up the retail electricity market to competition nationwide. However, most of these proposals ignore the fact that rising regulatory costs and changing market conditions now confront many hydropower projects with an increasingly marginal economic situation. This misguided omission threatens to place our country's most successful renewable energy resource in serious peril as competition comes to the electricity industry.

Furthermore, last year the Department of Energy released its own proposal to offer consumers their choice of energy provider and to spur competition in the electric utility market. Their plan sought to reduce emissions of greenhouse gases by creating incentives for electricity generated from renewable energy sources. Unfortunately, the administration excluded hydropower from its renewable portfolio standard (RPS) - completely ignoring the air quality benefits of hydro.

Besides being emissions-free and renewable, hydropower possesses electric benefits that maintain the reliability and security of the electric system. Hydro's ability to peak, load follow and provide frequency control protects against potential system failures that could lead to the damage of mechanical equipment and even brown or black-outs. Hydro's technical advantages mean that it can provide enhanced value to the electric system in the form of efficiency, security, and most importantly, reliability. The electric benefits offered by the nation's hydroelectric resources are of vital importance to the successful culmination of our national experiment to deregulate the electric industry.

NHA's proposal: The National Hydropower Association strongly believes restructuring legislation should fully consider the importance of hydropower to the nation's energy mix.

First, it should acknowledge the need to address impediments to hydropower's ability to compete in a new electricity market, including the costly, inefficient and jurisdictionally duplicative relicensing process.

(over)

National Hydropower Association

Secondly, any restructuring plan that contains a RPS provision should:

- make small hydro eligible for credits under a RPS since it is especially burdened by the “fixed costs” associated with hydropower relicensing; and at a minimum
- exempt all hydropower from any RPS requirement.

If policy makers continue to discount the importance of ensuring hydropower’s ability to compete, the nation will be in serious danger of losing the economic, air quality and reliability benefits of our country’s most significant renewable energy resource.

HYDROPOWER LICENSING IMPROVEMENT

AMERICAN
HYDROPOWER

TONGOUR GROUP, L.L.C.

227 Massachusetts Avenue, NE, Suite 1, Washington, DC 20002

Phone: (202) 544-7600

Fax: (202) 544-6770

David Kane

TO: Roger Ballentine Attn: Angie

COMPANY:

FAX: 456-1736

PAGES (Including Cover): 13

DATE: 12/7/99

FROM: Mike Tongour

RE: Meeting on 12/9/99

Am faxing

- 1) 1 page Mission Statement
- 2) Why Hydro Licensing reform is necessary
- 3) Excerpts from recent Senate hearing
- 4) Water Power Membership List
Includes CFA
IBEW
Clean Air Conservancy
Am Farm Bureau
Bunch of Licensees)

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WaterPower

The Clean Energy Coalition

MISSION STATEMENT

Hydropower – electricity generated from the kinetic energy of falling water – is a clean, dependable, efficient energy source that is vital to our nation's environmental and energy policy objectives. Hydropower...

...is low cost and efficient. American consumers benefit from hydropower – one of the cheapest energy sources. Hydropower is capable of converting 90 percent of available energy into electricity, more efficient than any other form of generation.

...is reliable, renewable and secure. Water from rivers is a purely domestic resource that is free from disruptions by foreign suppliers or transportation bottlenecks; and the "fuel" is renewed each time it rains or snows.

...is a sound environmental choice. Emissions-free hydropower helps our nation meet its clean air goals. In 1997, hydropower displaced the equivalent of burning 143 million tons of coal, 20 million barrels of oil, and 471 billion cubic feet of natural gas combined, preventing the emission of 336 million tons of carbon dioxide. This is the equivalent of removing 67 million passenger cars—or 1/2 of the current fleet—from the roadway today.

... provides Americans with abundant recreational opportunities. Hydro projects provide enormous opportunities for camping, hiking, fishing, swimming, picnicking, boating, whitewater rafting, and water skiing, as well as flood control, irrigation, and numerous other benefits.

Hydropower is also a resource at risk. Due to the overwhelming regulatory burdens and costs associated with the federal hydropower relicensing process, many hydropower projects are losing generation and facing uncertain futures. A typical hydro license application can take from eight to 10 years to weave its way through the licensing process—some have taken more than 20 years. According to a recent U.S. Department of Energy report, hydropower regulatory actions since 1980 have cost the country more than \$7 billion in license processing, mitigation and other costs. Indeed, this report found that two thirds of all hydro projects relicensed since 1986 lost generation as a result of the relicensing process. If current trends continue, our country could lose a number of hydropower projects and, with them, enormous clean energy benefits. Moreover, consumers could face increased energy replacement costs.

With over half of all non-federal hydroelectric capacity scheduled to be relicensed in the next 15 years, **WaterPower: The Clean Energy Coalition** calls on Congress to improve the hydropower licensing process. We support implementation of our nation's environmental laws to achieve a balance that will protect the environment while ensuring a viable hydroelectric industry.

WHY HYDROPOWER LICENSING IMPROVEMENT IS NECESSARY

What's Wrong With the Hydropower Relicensing Process? A multitude of statutes, regulations, agency policies and court decisions has made the hydroelectric relicensing process time-consuming, arbitrary and costly.

- A typical hydro project can take from eight to 10 years to weave its way through the licensing process—some have taken as long as 28 years. In comparison, gas fired plants can typically be sited and licensed in 18 months.
- Federal agencies are allowed to set conditions on licenses without regard to their effects on project economics, energy benefits and values protected by other statutes or regulations.
- All too frequently, there is no referee that can resolve conflicts between agencies or reconcile inconsistent demands. Often, the result is license conditions that have nothing to do with project impacts.
- Hydropower licensees have no recourse to appeal, or even question, the basis of mandatory conditions set by the agencies, except through litigation.
- Relicensing consistently results in higher costs, loss of operational flexibility, and lost generation due to new constraints imposed on operations.
 - A recent U.S. Department of Energy report found that two thirds of all hydro projects relicensed since 1986 lost generation as a result of the relicensing process¹.
 - In another government report, five of our nation's national laboratories found that relicensing results in an average 8% loss in hydropower generation.²
 - In its annual Energy Outlook report, the Energy Information Administration – the Department of Energy's statistical agency – for the first time projects that hydropower generation will decline through 2020, "as regulatory actions limit capacity at existing sites..."³

¹ "Hydropower Resources at Risk: The Status of Hydropower Regulation and Development – 1997"; Idaho National Engineering Laboratory, U.S. Department of Energy; September, 1997

² "Scenarios of U.S. Carbon Reductions: Potential Impacts of Energy Technologies by 2010 and Beyond"; Interlaboratory Working Group on Energy-Efficient and Low-Carbon Technologies, Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy; September, 1997

³ "Annual Energy Outlook 2000", Energy Information Administration, U.S. Department of Energy; November, 1999
December 1, 1999

Accordingly, Some Hydro Owners and Operators are Contemplating Abandonment of Their Projects. The loss of a hydro project means more than the loss of clean, efficient, renewable electric power. Hydro projects provide water, flood control, fish and wildlife habitat, irrigation, and transportation benefits. Also, due to its unique load-following capability, peaking capacity and voltage stability attributes, hydropower plays a critical role in maintaining reliable electric service. Moreover:

Emissions-free hydropower helps our nation meet its clean air goals:

- In 1997, hydropower displaced the equivalent of burning 143 million tons of coal, 20 million barrels of oil, and 471 billion cubic feet of natural gas combined.
- Absent hydropower, the nation would emit another 1,000,000 tons of NO_x, 1.78 million tons of Sox, and 340 million tons of carbon dioxide every year. In terms of acid rain alone, hydropower prevents over \$7 billion in environmental and health damage.⁴
- Americans need to ask themselves: What is being burned to replace the 8% average capacity lost in relicensing?

Hydropower projects provide enormous recreational benefits:

- Hydropower projects often encompass large amounts of land and water that support a multitude of outdoor recreational activities, including: camping, hiking, fishing, swimming, picnicking, boating, whitewater rafting, and water skiing.
- There were a total of 81 million recreation user days provided at FERC-licensed hydropower projects in 1990.
- Many recreational opportunities and enhancements, including a large number of lakes and reservoirs themselves, would simply not exist without hydropower projects.

⁴ The Clean Air Conservancy, 1999

Hydro is one of the most affordable energy sources for the American electrical consumer and is more efficient than any other form of generation.

- In 1996, hydropower ranged from less than one cent to just over two cents per kilowatt-hour to generate.
- Today's hydropower turbines are capable of converting 90 percent of available energy into electricity—that is more efficient than any other form of generation. Even the best fossil fuel power plant is only about 50 percent efficient.
- Hydropower's operational flexibility – its unique ability to change output quickly – is highly valued in maintaining the stability of the electric grid.
- Water from rivers is a purely domestic resource that is not subject to disruptions from foreign suppliers or transportation issues – a key factor in ensuring its low cost value to consumers.

Why Does Congress Need to Legislate on This Issue Now? Over half of all non-federal hydroelectric capacity is scheduled to be relicensed in the next 15 years. If Congress does not act now to improve the relicensing process, our nation's hydropower resource will be seriously eroded, to the detriment of consumers, the environment, our energy mix and our economy.

WHAT PEOPLE ARE SAYING ABOUT THE HYDROPOWER RELICENSING PROCESS

Excerpts from Oversight Hearing on the Federal Hydroelectric Licensing Process
Senate Energy and Natural Resources Subcommittee on Water and Power
Thursday, October 28, 1999

"I think it is important to reflect on our experience over the last decade, that demonstrates in very real terms that the FERC [hydro licensing] process really does not work very well."

-Senator Frank Murkowski (R-AK) - Chairman, Senate Energy and Natural Resources Committee

"We need to establish reasonable deadlines for the submission of license conditions and we should also have as our goal ensuring that hydropower facilities remain economically viable."

-Senator Gordon Smith (R-OR), Chairman, Water and Power Subcommittee, Senate Energy and Natural Resources Committee

"Some agencies retain mandatory conditioning authorities, and these trump cards ensure that FERC is obligated to accept those conditions... without modification even if the conditions render the entire project uneconomic. It just does not make a lot of sense to me that there is no middle ground or some common sense approach to the relicensing."

-Senator Conrad Burns (R-MT)

"If it [a licensing condition] came in the form of a mandatory condition... we would not have the ability to say no. ...The resource agency gets to make the decision."

-Douglas W. Smith, General Counsel, Federal Energy Regulatory Commission

"The Commission itself rarely addresses issues about is it cost effective, is a mandatory condition cost effective, is there substantial evidence, etc., in a Commission order, because we have concluded that it is a mandatory condition."

-Douglas W. Smith, General Counsel, Federal Energy Regulatory Commission

"Licensees have no recourse to appeal or even question the basis of mandatory conditions set by the agencies except to go to court. Somehow, that does not make very good sense... . You either take it or you leave it and go to court."

-Senator Larry Craig (R-ID)

"Under our decommissioning policy statement, the licensee [who decides not to accept a relicense that renders the project uneconomic] may be obligated to pay for decommissioning. ...[But] there may be a judgment which is that taking the license is a less bad alternative than rejecting the license."

-Douglas W. Smith, General Counsel, Federal Energy Regulatory Commission

"... There is a bit of a Catch-22 here. ... It becomes a decision on the part of the operator... do we continue to operate at a loss, or do we withstand a decommissioning cost that could run hundreds of millions of dollars... Is that really a way to balance the issues at hand?"

-Senator Larry Craig (R-ID)

"... It is somewhat frustrating for the Commission [FERC] to be trying to administer a process that has so many influences, some of which we attempt to balance, some of which are outside of our control to even attempt to balance. ... Are there frustrations associated with it? I think the answer to that is yes."

-Douglas W. Smith, General Counsel, Federal Energy Regulatory Commission

"I and a good many other of my colleagues both in the House and the Senate view a definable, predictable process as being critically important to the relicensing of this phenomenal resource for our country."

-Senator Larry Craig (R-ID)

"In his 1997 testimony... [FERC] Chairman Hoecker expressed support for legislation confirming the Commission's authority to establish reasonable deadlines for the submission of conditions or recommendations by the resource agencies."

-FERC October 27, 1999 response to pre-hearing Water and Power Subcommittee questions

"Because of your oversight hearings... we have started a series of structured discussions among the Federal agencies and with the [FERC] to see how we can improve our processes."

-David J. Hayes, Deputy Secretary, U.S. Department of the Interior

"... I am not going to criticize the good faith efforts that you have made, but there are those of us who think that we ought to put that good faith effort within the law and then administrations and Congresses can come and go over the next 20 years, but it will keep the agencies well focused and well directed on what their responsibilities are in the relicensing process."

-Senator Larry Craig (R-ID)

"We can no longer ignore the importance of hydropower in our Nation's energy mix. No responsible citizen can question its contribution as a reliable source of electrical power and its value as a significant integral part of a clean air strategy."

-Senator Larry Craig (R-ID)

"The administration does not even consider hydroelectric to be renewable. I find that to be an incredible application of inconsistency. ... For an administration that is concerned about global warming... I find their views on hydroelectric curious, to say the least."

-Senator Frank Murkowski (R-AK) - Chairman, Senate Energy and Natural Resources Committee

"Hydropower is very important as a resource to the United States, there is no question about that. It also is absolutely true that hydropower has global warming positives associated with it, and we need to and we are committed to make hydropower-licensing work."

-David J. Hayes, Deputy Secretary, U.S. Department of the Interior

"...I compliment Senator Craig for his efforts to come to some conclusions about the national [hydro licensing] policy we should pursue. ... We really are approaching a period where we need to focus in on what our national policy is going to be and what the tradeoffs are... ."

-Senator Jeff Bingaman (D-NM), Ranking Member, Full Committee

WaterPower

The Clean Energy Coalition

Total = 428

Membership List as of December 1, 1999

Abrasive Blasting & Coating, Vallejo, CA
 Accusonic Technologies, Inc., E. Falmouth, MA
 Acres International, Seattle, WA
 AEHydro, Boise, ID
 Aftermarket Business Consultants Inc.,
 Waukesha, WI
 Air Diffusion Systems, A John Hinde Co.,
 Lake Bluff, IL
 Alaska Rural Electric Cooperative Association,
 Anchorage, AK
 Alachua, City of, Alachua, FL
 Almira Farmers Whse. Company, Almira, WA
 Alta Irrigation District, Dinuba, CA
 Alta Manzana Ranch, Chelan, WA
 AmerenUE—Osage Plant, Eldon, MO
 American Babbitt Bearing, Inc., Huntington, WV
 American Ductile Iron Pipe, Birmingham, AL
 American Electric Power, Columbus, OH
 American Energy Insurance Services, Concord, CA
 American Farm Bureau Federation, The,
 Washington, DC
 American Hydro Corporation, York, PA
 American Public Power Association, Washington, DC
 Amherst Industrial Services, Inc., Amherst Jct, WI
 Anaheim Chamber of Commerce, Anaheim, CA
 Antelope Valley Board of Trade, Lancaster, CA
 Antelope Valley-East Kern Water Agency,
 Palmdale, CA
 Aquenergy Systems, Inc., Greenville, SC
 ARC Technology, Pacific, WA
 Arkansas Electric Cooperative Corporation,
 Little Rock, AR
 Armona Community Services District, Armona, CA
 Arroyo Seco Mgt. Co, Montrose, CA
 Asotin County Public Utility District, Clarkston, WA
 Barton Village Electric Department, Barton, VT
 Bartow, City of, Bartow, FL
 Battery Power Systems, Inc., Pacific, WA
 Bay State Subsurface Investigation, Inc., Boston, MA
 Bear Valley Mutual Water Company, Redlands, CA
 Beaver Valley Power Co., Beaver Falls ID
 Benton County Public Utility District, Kennewick, WA
 Black Chamber of Orange County, Santa Ana, CA
 Bob Feil Boats & Motors, Inc., East Wenatchee, WA
 Boise Metro Chamber of Commerce, Boise, ID
 Boott Hydro Company, Lowell, MA
 BP Hydro Associates, Twin Falls, ID
 Brak Systems Inc., Portland, ME
 Brazos River Authority, Waco, TX
 Brooks & Associates, Seatac, WA
 Bushnell, City of, Bushnell, FL
 California Crusaders News, Inglewood, CA
 Camara de Comercio Latina Del Valle de Pomona,
 Pomona, CA
 Carolina Power & Light Co., Raleigh, NC
 Celesco Transducer Products Inc, Canoga Park, CA
 Central Lincoln People's Utility District,
 Newport, OR
 Central Nebraska Public Power & Irrigation District,
 Holdrege, NE
 Cerritos Valley Bank, Huntington Park, CA
 Chattahoochee, City of, Chattahoochee, FL
 Chelan Public Utility District, Wenatchee, WA
 CHI Energy, Inc., Stamford, CT
 Chilton County Chamber of Commerce, Clanton, AL
 Chino Basin Water Conservation District,
 Montclair, CA
 Chino Valley Chamber of Commerce, Chino, CA
 Cochrane Foundry, Inc., York, PA
 Christensen Associates, Inc., San Rafael, CA
 City of Hart Board of Power and Light, Hart, MI
 Clallam County Public Utility District,
 Port Angeles, WA
 Clark Public Utilities, Vancouver, WA
 Clatskanie People's Utility District, Clatskanie, OR
 Clean Air Conservancy, The, Cleveland Heights, OH
 Clewiston, City of, Clewiston, FL
 Clifton Corp., The, Spartanburg, SC
 Columbia Basin Development League, Royal City, WA
 Columbia Grain Int. Inc., Clarkston, WA
 Columbia River People's Utility District, St. Helens, OR
 Consolidated Hydro Southeast, Inc., Greenville, SC
 Consolidated Water Power Company,
 Wisconsin Rapids, WI
 Consumers Coalition, Redondo Beach, CA
 Consumer Federation of America, Washington, DC
 Cool Insuring Agency, Inc., Latham, NY
 Cordele-Crisp Chamber of Commerce, Cordele, GA
 Core Services, LLC, Myrtle Beach, SC
 Corona Manufacturers Council, Corona, CA

Total = 428

Costa Mesa Chamber of Commerce, *Costa Mesa, CA*
 Cowlitz County Public Utility District, *Longview, WA*
 Cretex Companies, The, *Elk River, MN*
 Crofton Industries/Crofton Diving Corporation,
Portsmouth, VA
 Crystal Falls, City of, *Crystal Falls, MI*
 Crites Moscow Growers Inc., *Moscow, ID*
 Cudahy Chamber of Commerce, *Cudahy, CA*
 Cudahy Youth Foundation, *Cudahy, CA*
 DB Consulting, *La Feria, TX*
 D&B Orchards, *Chelan, WA*
 DeLucia & Associates Inc., *Cambridge, MA*
 Diamond Contract Services, Inc., *Pasadena, CA*
 Division of Power & Light, City of Danville, *VA*,
Danville, VA
 Dix Corporation, *Spokane, WA*
 DMD Division - Dresser Equipment Group, *Bradford, PA*
 Dolphin Associates, Inc., *Baltimore, MD*
 Double Seal Ring Co., *Fort Worth, TX*
 Downey Chamber of Commerce, *Downey, CA*
 Duke Engineering & Services, Inc., *Portland, ME*
 Duke Power Company, *Charlotte, NC*
 Earth Day Coalition, *Cleveland, OH*
 E• PRO, *Augusta, ME*
 Edison Electric Institute, *Washington, DC*
 East Indies Consulting Services, Inc., *Chicago, IL*
 El Paso Electric Company, *El Paso, TX*
 Electromechanical Engineering Associates, Inc.,
Pittsburgh, PA
 Emerald Paint & Coating, *Mount Vernon, WA*
 Emerald People's Utility District, *Eugene, OR*
 Energy Insurance & Bonds, *Bountiful, UT*
 Energy Northwest, *Richland, WA*
 Enosburg Falls, Inc. Water & Light Department,
Enosburg Falls VT
 Environmental Resources Management, *Annapolis, MD*
 Ess Bros & Sons, Inc., *Loretto, MN*
 Essex Power Services, Inc., *Boston, MA*
 Ferry County Public Utility District, *Republic, WA*
 FirstEnergy Corporation, *Akron, OH*
 Florida Municipal Electric Association
Tallahassee, FL
 Florida Power and Light Company, *Miami, FL*
 FOB Partners, *Chelan, WA*
 Fort Meade, City of, *Fort Meade, FL*
 Fort Pierce Utilities Authority, *Fort Pierce, FL*
 Franklin County Public Utility District, *Pasco, WA*
 Gateway Chambers Alliance, *Montebello, CA*
 Geokon, Inc., *Lebanon, NH*
 George F. Brocke & Sons, Inc., *Kendrick, ID*
 Georgia Association of RV Parks & Campgrounds,
Marietta, GA
 Georgia-Pacific Corporation, *Atlanta, GA*
 GO USA, *Wenatchee, WA*
 Goosetail Orchard, *Chelan, WA*
 Granite State Hydropower Association, *Boston, MA*

Grant County Public Utility District, *Ephrata, WA*
 Grays Harbor County Public Utility District,
Aberdeen, WA
 Great Lakes Region, Pulp & Paperworkers' Resource
 Council, *Brainerd, MN*
 Greater Corona-Norco Hispanic Chamber, *Corona, CA*
 Greater Tulare Chamber of Commerce, *Tulare, CA*
 Green Cove Springs, City of, *Green Cove Springs, FL*
 Greiner Industries, *Mount Joy, PA*
 Grimm Trophy and Gifts, *York, PA*
 H & M Engineering, Inc., *Columbia, MD*
 Hanford Chamber of Commerce, *Hanford, CA*
 Harrison Equipment Co., Inc, *Kent, WA*
 Havana Electric, *Havana, FL*
 Hawthorn Chamber of Commerce, *Hawthorn, CA*
 HCI Publications, *Kansas City, MO*
 Heffernan Consulting, Inc., *Missoula, MT*
 Helwig Carbon Products, Inc, *Seattle, WA*
 Hemet/San Jacinto Valley Chamber of Commerce
Hemet, CA
 Hexeco, Inc., *Berlin, WI*
 Hispanic Business Women of Orange County,
Cypress, CA
 Hispanic Chamber Org. Co., *Santa Ana, CA*
 Hispanic Outreach Taskforce, *Whittier, CA*
 Hispanic Youth Task Force Committee, *Pomona, CA*
 HL Turner Group, Inc, The, *Concord, NH*
 Hoffman Pattern, Inc., *Hanover, PA*
 Homestead, City of, *Homestead, FL*
 Huffman Group, The, *Hawthorne, CA*
 Human Services Association, *Bell Gardens, CA*
 Hutton Communications, *Woodinville, WA*
 Hydro Development Group, Inc., *Dexter, NY*
 Hydro Info Systems, *Fairfield, NJ*
 Hydroacoustic Technology, Inc., *Seattle, WA*
 Hydropower Turbine Systems, Inc., *Richmond, VA*
 Idaho Falls Electric Division, City of, *Idaho Falls, ID*
 Idaho Power Company, *Boise, ID*
 Idaho Water Users Association, Inc., *Boise, ID*
 Image Up Advertising, *Mission Viejo, CA*
 In-Place Machining Company, *Milwaukee, WI*
 Industrial Piping Systems, Inc., *York, PA*
 Industrial Repair Service, *Farmington, NM*
 Industry Manufacturers Council, *City of Industry, CA*
 Inland Empire Utility Agency, *Fontana, CA*
 Inland Valley Economic Development Corp, *Pomona, CA*
 Inland Valley Manufacturers' Council,
San Bernadino, CA
 International Brotherhood of Electric Workers,
Washington, DC
 Interstate Coatings, Inc., *Seattle, WA*
 Irvine Chamber of Commerce, *Irvine, CA*
 Iseley Enterprises, Inc., *Greer, SC*
 ITW Philadelphia Resins, *Montgomeryville, PA*
 Jacksonville Beach, City of, *Jacksonville Beach, FL*
 James Leffel & Co., The, *Springfield, OH*

Total = 428

James Walker Mfg, Glenwood, IL
 JEA, Jacksonville, FL
 Jeffco Painting & Coating, Inc., Vallejo, CA
 Kaiser Aluminum, Spokane, WA
 Kamatics Corporation, Bloomfield, CT
 Kansas Municipal Utilities, McPherson, KS
 Kaukauna Electric & Water Department,
 Kaukauna, WI
 Keena Communications, Mission Viejo, CA
 Key West City Electric System, Key West, FL
 Keystone Tool Crib, Inc., Jacobus, PA
 Kings County, Hanford, CA
 Kings County Economic Development Corporation,
 Hanford, CA
 Kings County Farm Bureau, Hanford, CA
 Kings River Conservation District, Fresno, CA
 Kingsbury, Inc., Hatboro, PA
 Kingsbury, Inc. Repair & Service Division, Hatboro, PA
 Kissimmee Utility Authority, Kissimmee, FL
 Kittitas County Public Utility District, Ellensburg, WA
 Kleinschmidt Associates, Pittsfield, ME
 Klickitat County Public Utility District,
 Goldendale, WA
 Kline Industrial Tool, York, PA
 L & M Ligum Vitae, Hewitt, NJ
 L & S Electric, Schofield, WI
 La Verne Chamber of Commerce, La Verne, CA
 Lake Worth, City of, Lake Worth, FL
 Lakeland, City of, Lakeland, FL
 Lakeside Irrigation Water District, Hanford, CA
 Lakewood Chamber of Commerce, Lakewood, CA
 Lancaster Chamber of Commerce, Lancaster, CA
 Lawrence Hydro Associates, Lawrence, MA
 Leesburg, City of, Leesburg, FL
 Lewis County Public Utility District, Chehalis, WA
 Lift-It Manufacturing Co., Inc, Los Angeles, CA
 Lincoln Cristi, Inc., Vancouver, WA
 Lindsay-Strathmore Irrigation District, Lindsay, CA
 LG&E Energy Corporation, Louisville, KY
 Lockhart Power Company, Lockhart, SC
 Lovejoy Steel, York, PA
 Loveman Steel Corp, Bedford Heights, OH
 Lower Tule River Irrigation District, Porterville, CA
 M & M Productions, East Wenatchee, WA
 Magnolia Metal Corporation, Omaha, NE
 Main-Tane Contracting, Inc., Mechanicville, NY
 Malibu Chamber of Commerce, Malibu, CA
 Manzana Ranch, Chelan, WA
 Marcear Orchards, Inc, Chelan, WA
 Marshall, City of, Marshall, MI
 Mason County Public Utility District No. 1, Shelton, WA
 Mason County Public Utility District No. 3, Shelton, WA
 McCullough Sales Corporation, Chester Springs, PA
 MCM Enterprises Ltd., Bellevue, WA
 Mead & Hunt, Inc., Madison, WI
 Merimil Limited Partners, Cumberland, ME
 Michigan Municipal Electric Association, Lansing, MI
 Microcut, Inc, York, PA
 Mid American Natural Resources, Inc., Erie, PA
 Midwest Hydro Users Group, Wausau, WI
 Milk Producers Council, Ontario, CA
 Müller-Hefele Pump, King of Prussia, PA
 Minnesota Power, Inc., Duluth, MN
 Mississippi Consulting Engineers Council, Jackson, MS
 Moore Haven, City of, Moore Haven, FL
 Mount Dora, City of, Mount Dora, FL
 Municipal Electric Systems of Oklahoma,
 Oklahoma City, OK
 Municipal Electric Utilities of Wisconsin, Sun Prairie, WI
 NW Pipe Co., Portland, OR
 National Hydropower Association, Washington, DC
 National Marine Manufacturers Association,
 Washington, DC
 Nebraska Public Power District, Columbus, NE
 Nevada Irrigation District, Colfax, CA
 New Smyrna Beach Municipal Utility,
 New Smyrna Beach, FL
 Newberry, City of, Newberry, FL
 New York Power Authority, Albany, NY
 Norco Economic Development Business Advisory
 Council, Norco, CA
 North American Hydro, Inc., Neshkoro, WI
 North Central Educational Service District,
 Wenatchee, WA
 NorthBrook Energy, Chicago, IL
 Northeast Region, Pulp and Paper Workers Council,
 Rumford, ME
 Northern California Power Agency, Roseville, CA
 Northern Lights, Inc., Sandpoint, ID
 Northern Pine Region, Pulp & Paperworkers' Resource
 Council, Ticonderoga, NY
 Northern States Power Company, Eau Claire, WI
 Northern Wasco County People's Utility District,
 The Dalles, OR
 Norwalk Chamber of Commerce, Norwalk, CA
 NSW Corporation, Roanoke, VA
 Ocala Electric Utility, Ocala, FL
 Oconto Electric Co-Op, Oconto Falls, WI
 Ohio Municipal Electric Association, Columbus, OH
 Okanogan County Public Utility District,
 Okanogan, WA
 Olson Electric Development Company, Methuen, MA
 Ontario Chamber of Commerce, Ontario, CA
 Orange County Taxpayers Association,
 San Juan Capistrano, CA
 Oregon Arms Collectors, Portland, OR
 Oregon People's Utility District Association, Salem, OR
 Orlando Utilities Commission, Orlando, FL
 Ossberger Turbines, Inc., Richmond, VA
 Otter Tail Power Company, Fergus Falls, MN
 Ottumwa Water & Hydro, Ottumwa, IA
 P. J. Schwalbenberg & Associates, Spruce Head, ME

Total = 428

Pacific County Public Utility District No. 2,
Raymond, WA
 Pacific Energy Control, *Milwaukie, OR*
 Pacific Northwest Generating Cooperative, *Portland, OR*
 Pacific Northwest Waterways Association,
Vancouver, WA
 PacifiCorp, *Portland, OR*
 Packaging Corporation of America, *Tomahawk, WI*
 Palmdale Chamber of Commerce, *Palmdale, CA*
 Palmdale Water District, *Palmdale, CA*
 Pamela Corante Communications, *Redondo Beach, CA*
 Paymaster Sales and Service, *Spokane, WA*
 Pend Oreille Public Utility District,
Newport, WA
 Phelps Dodge Corporation, *Phoenix, AZ*
 Pico Rivera Chamber of Commerce, *Pico Rivera, CA*
 Pierce Atwood, *Portland, ME*
 Pixley Irrigation District, *Pixley, CA*
 Placentia Chamber of Commerce, *Placentia, CA*
 Port of Benton, *Richland, WA*
 Port of Brookings Harbor, *Brookings, OR*
 Port of Camas Washougal, *Washougal, WA*
 Port of Columbia, *Dayton, WA*
 Port of Whitman, *Colfax, WA*
 Port of Woodland, *Woodland, WA*
 Portland General Electric Company, *Portland, OR*
 Potato Growers of Idaho, Inc., *Blackfoot, ID*
 Potlatch Corporation, *Spokane, WA*
 PowerHouse Systems, *Jefferson, NH*
 Powerwheel Associates, *Woodside, CA*
 Premier Materials Technology, Inc., *Minneapolis, MN*
 Pre-Mach. Inc., *York, PA*
 Presnell Gage Accounting & Consulting,
Lewiston, ID
 Prime Power Inc, *Richland, MO*
 Process Systems Engineering Group, *Lancaster, PA*
 Public Utility District No.1 of Douglas County,
East Wenatchee, WA
 Public Utility District No. 1 of Jefferson County,
Port Townsend, WA
 Public Utility District No. 1 Kitsap County,
Port Orchard, WA
 Puente Hills Chamber of Commerce, *La Puente, CA*
 QRS, Inc., *Las Vegas, NV*
 Quality Resource & Services, Inc., *Spokane, WA*
 Quincy, City of, *Quincy, FL*
 Randolph Sheet Metal Inc., *Pasco, WA*
 Resolutions, *Moreno Valley, CA*
 Rio Hondo Boys & Girls Club, *Commerce, CA*
 Rocky Mountain Region, Pulp & Paperworkers' Resource
 Council, *Lewiston, ID*
 Roctest, Inc., *Plattsburg, NY*
 Sabine River Authority of Texas, *Orange, TX*
 Sacramento Municipal Utility District, *Sacramento, CA*
 Safe Harbor Water Power Corporation, *Conestoga, PA*
 Santee Cooper/South Carolina Public Service Authority,
Moncks Corner, SC
 Save Our Dams, *Ephrata, WA*
 SCANA Corp., *Columbia, SC*
 SGL Technic, Inc. Polycarbon Division,
Valencia, CA
 Sitka Electric Department, City & Borough of,
Sitka, AK
 Skagit County Public Utility District,
Mount Vernon, WA
 Skamania County Public Utility District, *Carson, WA*
 Slothower Machine Shop, Inc., *York, PA*
 Smith-Blair, Inc., *Texarkana, AR*
 Smith Mountain Lake Policy Advisory Board,
Moneta, VA
 Smith Mountain Lake Pressure Cleaning, *Hardy, VA*
 Snohomish County Public Utility District, *Everett, WA*
 Soboda Band of Mission Indians, *San Jacinto, CA*
 Soiltest Farm Consultants, Inc., *Moses Lake, WA*
 South County Septic, *Mattawa, WA*
 South Orange County Regional Chambers of Commerce,
Mission Viejo, CA
 Southeast Region, Pulp & Paperworkers' Resource
 Council, *Dixon Mills, AL*
 Southern California Edison, *Rosemead, CA*
 Southern Pine Region, Pulp and Paper Workers Resource
 Council, *McGehee, AR*
 Southwest Riverside County Manufacturers' Council,
Temecula, CA
 Specialty Diving, Inc., *Hammond, LA*
 St. Cloud, City of, *St. Cloud, FL*
 St. Joseph County Parks, *South Bend, IN*
 Stanly County Chamber of Commerce, *Albermarle, NC*
 Starke, City of, *Starke, FL*
 Stevens County Public Utility District No. 1,
Colville, WA
 Stoodly Company, *Bowling Green, KY*
 Strabala Ramirez & Associates, Inc., *Irvine, CA*
 Structure Guard, Inc., *Warren, ME*
 Superbolt, Inc., *Carnegie, PA*
 Superior Asphalt & Concrete Co, *Yakima, WA*
 Swain County Chamber of Commerce, *Bryson City, NC*
 Swanton Village Electric Department, *Swanton, VT*
 Synergics, Inc., *Annapolis, MD*
 T. H. Nelson & Associates, *Portland, OR*
 Tacoma Power, *Tacoma, WA*
 Tallahassee, City of, *Tallahassee, FL*
 Tenmat Inc., *Newark, DE*
 Teviston Community Services District, *Pixley, CA*
 Thurston County Public Utility District,
Olympia, WA
 Tillamook People's Utility District, *Tillamook, OR*
 Time Insurance Agency, Inc., *Austin, TX*
 Titan Abrasive Systems, Inc., *Pitman, PA*
 Touchet Valley Seeds, Inc., *Dayton, WA*
 Town of Hardwick Electric Department, *Hardwick, VT*

Total = 428

Town of Stowe Electric Department, *Stowe, VT*
 Trans Mountain Consulting Company, *Golden, CO*
 Traverse City Light and Power, *Traverse City, MI*
 Tri-Cities Youth Leadership Council, *Cudahy, CA*
 Tri-Dam Project, *Pinecrest, CA*
 Trola Industries, Inc., *York, PA*
 Trola-Dyne, Inc., *York, PA*
 Turbine Generation, N.W., Inc., *Columbia City, OR*
 Tulare, City of, *Tulare, CA*
 Tulare County Farm Bureau, *Visalia, CA*
 Turlock Irrigation District, *Turlock, CA*
 Turner's Building, Inc., *Union Hall, VA*
 Twin Falls Hydro Company, Inc., *Bellevue, WA*
 Twin Falls Canal Company, *Twin Falls, ID*
 Unaflex, Inc., *Pompano, FL*
 Union County Development Board, *Union, SC*
 Unit Process Co, *Royal City, WA*
 United American Energy Corp., *Woodcliff Lake, NJ*
 United Water Conservation District, *Santa Paula, CA*
 Universal Electric Power, *Akron, OH*
 Upper Yampa Water Conservancy District,
 Steamboat Springs, CO
 VA Tech Voest MCE Corporation, *Salisbury, NC*
 Valley-Wide Recreation and Park District,
 San Jacinto, CA
 Vent-Print, *Bell Gardens, CA*
 Vermont Marble Power Division of OMYA, Inc.,
 Proctor, VT
 Vermont Public Power Supply Authority,
 Waterbury Center, VT
 Vero Beach, City of, *Vero Beach, FL*
 Village of Hyde Park, Inc., *Hyde Park, VT*
 Village of Jacksonville, *Jacksonville, VT*
 Village of Ludlow Electric Light Department,
 Ludlow, VT
 Village of Lydonville Electric Department,
 Lydonville, VT

Village of Morrisville Water & Light, *Morrisville, VT*
 Village of Northfield Electric Department,
 Northfield, VT
 Village of Orleans, Inc., *Orleans, VT*
 Virginia Power, *Glen Allen, VA*
 Visalia Chamber of Commerce, *Visalia, CA*
 Voith Hydro Inc., *York, PA*
 Wahiakum County Public Utility District,
 Grays River, WA
 Walls Inspection Company, Inc., *Lake Elsinore, CA*
 Warminster Fiberglass Co., *Southampton, PA*
 Warren County Chamber of Commerce, *Warren, PA*
 Washington Growers Clearing House Association,
 Wenatchee, WA
 Washington PUD Association, *Seattle, WA*
 Washington State Potato Commission, *Moses Lake, WA*
 Waters & Faubel, Inc., *Newport Beach, CA*
 Wauchula, City of, *Wauchula, FL*
 Wausau-Mosinee Paper, *Mosinee, WI*
 Wenatchee Valley Clinic, *Wenatchee, WA*
 Western Region, Pulp and Paper Workers Resource
 Council, *Camas, WA*
 Weyerhaeuser Company, *Tacoma, WA*
 Whatcom County Public Utility District,
 Ferndale, WA
 White Hydropower Company, *Bettendorf, IA*
 Whittier Chamber of Commerce, *Whittier, CA*
 Williston, City of, *Williston, FL*
 Wilson-Ramseur, Inc., *Raleigh, NC*
 Windstream Power Systems, Inc., *Burlington VT*
 Wisconsin River Power Company,
 Wisconsin Rapids, WI
 Wolfe Tool & Machine Company, *York, PA*
 Yuba County Water Agency, *Marysville, CA*
 York Welding Supply, Inc., *York, PA*

SECTION BY SECTION ANALYSIS OF H.R. 2335 THE HYDROELECTRIC LICENSING PROCESS IMPROVEMENT ACT OF 1999

Section 1: *Short Title.* The legislation may be referred to as the Hydroelectric Licensing Process Improvement Act of 1999.

Section 2: *Findings.* Hydropower is a vital renewable energy resource, providing clean, economic and reliable electricity. Hydropower projects also provide recreation, irrigation, flood control, water supply and fish and wildlife benefits. The bulk of all non-Federal hydro projects are coming up for relicensing by the Federal Energy Regulatory Commission (FERC) in the next 15 years. The hydroelectric licensing process does not produce optimal decisions, because agencies participating in the process fail to consider the full effects of mandatory and recommended license conditions. The process is inefficient, in part because of delays in the submission of mandatory and recommended conditions, and environmental reviews are uncoordinated. As a result, the process is burdensome for all participants, and prone to litigation. While alternative licensing procedures are available and can lead to the collaborative resolution of issues in some relicensings, they are not appropriate in all circumstances, and are not a substitute for needed statutory reform.

Section 3: *Purpose.* The purpose of the legislation is to achieve the objective of relicensing hydroelectric power projects to maintain high environmental standards while preserving low cost power. This purpose will be achieved through statutory reforms to improve the licensing process by 1) requiring agencies to consider key factors, and document their consideration of those factors, when developing mandatory and recommended license conditions; 2) requiring FERC to set deadlines for the submission of agency conditions; and 3) making other process improvements.

Section 4(a): *Process for Consideration by Federal Agencies of Conditions to Licenses.* The legislation would create a new section 32 of the Federal Power Act (FPA), specifying the process for consideration by Federal agencies of conditions to hydroelectric project licenses.

Definitions: New FPA section 32(a) would define "condition" and "consulting agency" as used in section 32. "Condition" refers to conditions for projects on Federal reservations determined under FPA section 4(e) and fishway prescriptions determined under FPA section 18. "Consulting agencies" are the agencies with authority to determine conditions under sections 4(e) and 18.

Factors to be Considered: New FPA section 32(b) would require consulting agencies to consider the impact of conditions on: economic and power values; electric generating capacity and system reliability; air quality, including impacts on greenhouse gas emissions; and drinking, flood control, irrigation, navigation or recreation water supply. In addition, agencies would be required to consider the compatibility of their conditions with other conditions that will be included in the license, including, if available, mandatory conditions of other agencies. Further, agencies would be required to consider means to ensure that conditions address only direct project environmental impacts, and do so at the lowest cost to the project. Agencies must create written documentation

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of their consideration of these issues, and submit the documentation to FERC along with the condition.

Scientific Review: New FPA section 32(c) would require that each condition be subjected to appropriately substantiated scientific review based on current empirical data or field-tested data and subjected to peer review.

Relationship to Impacts on Federal Reservation: New FPA section 32(d) would require that conditions determined under FPA section 4(e) be directly and reasonably related to the impacts of the project within the Federal reservation.

Administrative Review: New FPA section 32(e) would require that proposed conditions be provided to applicants at least 90 days prior to the deadline for filing a license application. Prior to submitting proposed conditions to the Commission, consulting agencies must offer the license applicant an opportunity to obtain administrative review of the condition before an administrative law judge or other independent reviewing body. The administrative review would consider the reasonableness of the proposed condition, in light of its effects on the energy and economic values of the project, and the agency's compliance with the requirements imposed in section 32. Administrative review must be completed within 180 days of a request for review from the applicant. If it is not, the Commission is authorized to treat the condition as a recommendation is treated under FPA section 10(j). If an agency reviewing body decides that a proposed condition is unreasonable or that the requirements of the new FPA section 32 are not met, it must explain its decision and remand the matter to the agency for further action. The reviewing body may recommend curative actions. Finally, the consulting agency, following administrative review, would be required to either withdraw the condition, formulate a condition that follows the recommendations of the administrative reviewing body, or otherwise comply with section 32. When the condition is submitted to the Commission, the consulting agency would be required to include any record on administrative review and documentation of any action taken after administrative review.

Submission of Final Condition: After a license application is filed, new FPA section 32(f) would require FERC to establish a deadline for the submission to the Commission of final conditions. The deadline would be no later than one year after the date on which the Commission gives notice that the license application is ready for environmental review (subject to one 30 day extension by FERC). If the consulting agency fails to comply with the deadline, the agency would not have authority to recommend or establish a condition. The legislative language restates FERC's current authority under its regulations to propose or establish license conditions in place of the defaulting agency in such a situation.

Analysis by the Commission: New section 32(g) would require FERC to conduct an economic analysis of conditions to determine whether a condition would render the project uneconomic. In addition, in exercising its authority under section 10(j) to reject a recommendation that is inconsistent with the Federal Power Act, the Commission would be required to consider whether

10(j) recommendations are consistent with the provisions of sections 32 (b) and (c) (consideration of factors and scientific review).

Commission Determination on Effect of Conditions: New section 32(h) would require the Commission, if requested on rehearing by a license applicant, to make a written determination on whether a condition 1) is in the public interest (measured by the impact of the condition on the energy, economic and resource considerations enumerated in section 32(b); 2) was subject to scientific review as required in section 32(c); 3) relates to direct project impacts within the reservation (if applicable); 4) is reasonable; 5) is supported by substantial evidence; and 6) is consistent with the Federal Power Act and other license terms and conditions.

Section 4(b): *Conforming and Technical Amendments:* This section makes certain technical changes in FPA sections 4(e) and 18 to reflect the new requirements of section 32.

Section 5: *Coordinated Environmental Review Process:* A new section 33 would be added to the Federal Power Act to confirm the FERC's responsibilities as the lead agency for environmental reviews of hydroelectric projects under the National Environmental Policy Act.

Lead Agency Responsibility: New FPA section 33(a) would confirm FERC's responsibility to conduct a single, consolidated environmental review for each project or, if appropriate, for multiple projects located in the same area. This language assures that the legislation does not preclude a single environmental review being done for multiple projects.

Consulting Agencies: New FPA section 33(b) would impose a limitation on consulting agencies seeking to perform a separate environmental review for conditions submitted in accordance with new FPA section 32. This language is designed to avert agency reviews that would duplicate the consolidated environmental review conducted by FERC.

Deadlines: New FPA section 33(c) would require the Commission to set deadlines that provide opportunity for input on environmental reviews by federal, state and local agencies.

Section 6: *Study of Small Hydroelectric Projects.* Within 18 months of the date of enactment, FERC must complete a study of the feasibility of establishing a separate licensing procedure for small hydroelectric projects. The study would be submitted to the Senate Energy and Natural Resources and House Commerce Committees. The term "small hydroelectric project" would be defined by FERC, and shall include projects with generating capacity of 5 megawatts or less.

WATERPOWER MEMBERS BY STATE (a/o December 1, 1999)

National Associations

American Public Power Association
Consumer Federation of America
Edison Electric Institute
International Brotherhood of Electrical Workers
National Hydropower Association
National Marine Manufacturers Association

Alabama

American Ductile Iron Pipe (Birmingham)
Chilton Co. Chamber of Commerce (Clanton)
Southeast Region, PPRC (Dixon Mills)

Alaska

Alaska Rural Electric Cooperative Association
(Anchorage)
City & Borough of Sitka Electric Department (Sitka)

Arizona

Phelps Dodge Corporation (Phoenix)

Arkansas

Arkansas Electric Cooperative Corporation (Little Rock)
Smith-Blair, Inc. (Texarkana)
Southern Pine Region, PPRC (McGehee)

California

Abrasive Blasting & Coating (Vallejo)
Alta Irrigation District (Dinuba)
American Energy Insurance Service (Concord)
Anaheim Chamber of Commerce (Anaheim)
Antelope Valley Board of Trade (Lancaster)
Antelope Valley-East Kern Water Agency (Palmdale)
Armona Community Services District (Armona)
Arroyo Seco Management Co (Montrose)
Bear Valley Mutual Water Company (Redlands)
Black Chamber of Orange County (Santa Ana)
California Crusaders new (Inglewood)
Camara de Comercio Latina del Valle de Pomona (Pomona)
Celesco Transducer Products, Inc. (Canoga Park)
Cerritos Valley Bank (Huntington Park)
Chino Basin Water Conservation District (Montclair)
Chino Valley Chamber of Commerce (Chino)
Christensen Associates, Inc. (San Rafael)
Consumers Coalition (Redondo Beach)
Corona Manufacturer's Council (Corona)
Costa Mesa Chamber of Commerce (Costa Mesa)
Cudahy Chamber of Commerce (Cudahy)
Cudahy Youth Foundation (Cudahy)

Diamond Contract Services Inc. (Pasadena)
Downey Chamber of Commerce (Downey)
Gateway Chambers Alliance (Montebello)
Greater Corona-Norco Hispanic Chamber (Corona)
Greater Tulare Chamber of Commerce (Tulare)
Hanford Chamber of Commerce (Hanford)
Hawthorne Chamber of Commerce (Hawthorne)
Hemet/San Jacinto Valley Chamber of Commerce (Hemet)
Hispanic Business Women of Orange County (Cypress)
Hispanic Chamber Org. Co. (HCOC) (Santa Ana)
Hispanic Outreach Task Force (Whittier)
Hispanic Youth Task Force Committee (Pomona)
The Huffman Group (Hawthorne)
Human Services Association (Bell Gardens)
Image Up Advertising (Mission Viejo)
Industry Manufacturers Council (City of Industry)
Inland Valley Econ Dev Corp (Pomona)
Jeffco Painting & Coating, Inc. (Vallejo)
Keena Communications (Mission Viejo)
Kings Co. Farm Bureau (Hanford)
Kings County (Hanford)
Kings County Economic Development Corporation (Hanford)
Kings River Conservation District (Fresno)
La Verne Chamber of Commerce (La Verne)
Lakeside Irrigation Water District (Hanford)
Lakewood Chamber of Commerce (Lakewood)
Lancaster Chamber of Commerce (Lancaster)
Lift-It Manufacturing Co., Inc (Los Angeles)
Lindsay-Strathmore Irrigation District (Lindsay)
Lower Tule River Irrigation District (Porterville)
Malibu Chamber of Commerce (Malibu)
Milk Produces Council (Ontario)
Nevada Irrigation District (Colfax)
Norco Economic Development Business Advisory Council (Norco)
Northern California Power Agency (Roseville)
Norwalk Chamber of Commerce (Norwalk)
Ontario Chamber of Commerce (Ontario)
Orange County Taxpayers Association (San Juan Capistrano)
Palmdale Chamber of Commerce (Palmdale)
Palmdale Water District (Palmdale)
Pamela Corante Communications (Redondo Beach)
Pico Rivers Chamber of Commerce (Pico Rivers)
Pixley Irrigation District (Pixley)
Placentia Chamber of Commerce (Placentia)
Powerwheel Associates (Woodside)
Puente Hills Chamber of Commerce (La Puente)

Resolutions (Moreno Valley)
Rio Hondo Boys & Girls Club (Commerce)
Sacramento Municipal Utility District (Sacramento)
SGL Technic, Inc. Polycarbon Division (Valencia)
SMUD (Sacramento)
Soboba Band of Mission Indians (San Jacinto)
South Orange County Regional Chambers of
Commerce (Mission Viego)
Southern California Edison (Rosemead)
Southwest Riverside County Manufacturers' Council
(Temecula)
Strabala Ramirez & Associates, Inc. (Irvine)
Teviston Community Services District (Pixley)
Tri-Cities Youth Leadership Council (Cudahy)
Tri-Dam Project (Pinecrest)
Tulare County Farm Bureau (Visalia)
Tulare, City of (Tulare)
Turlock Irrigation District (Turlock)
United Water Conservation District (Santa Paula)
Valley-Wide Recreation and Park District (San
Jacinto)
Vent-Print (Bell Gardens)
Visalia Chamber of Commerce (Visalia)
Walls Inspection Company, Inc. (Lake Elsinore)
Waters & Faubel, Inc. (Newport Beach)
Whittier Chamber of Commerce (Whittier)
Yuba County Water Agency (Marysville)

Colorado

Trans Mountain Consulting Company (Golden)
Upper Yampa Water Conservancy District
(Steamboat Springs)

Connecticut

CHI Energy, Inc. (Stamford)
Kamatics Corporation (Bloomfield)

Delaware

Tenmat Inc. (Newark)

Florida

Alachua, City of (Alachua)
Bartow, City of (Bartow)
Bushnell, City of (Bushnell)
Chattahoochee, City of (Chattahoochee)
Clewiston, City of (Clewiston)
Florida Municipal Electric Association (Tallahassee)
Florida Power and Light Company (Miami)
Fort Meade, City of (Ft. Meade)
Fort Pierce Utilities Authority (Fort Pierce)
Green Cove Springs, City of (Green Cove Springs)
Havana Electric (Havana)
Homestead, City of (Homestead)

Jacksonville Beach, City of (Jacksonville Beach)
JEA (Jacksonville)
Key West Electric System (Key West)
Kissimmee Utility Authority (Kissimmee)
Lake Worth, City of (Lake Worth)
Lakeland, City of (Lakeland)
Leesburg, City of (Leesburg)
Moore Haven, City of (Moore Haven)
Mount Dora (Mount Dora)
New Smyrna Beach Municipal Utility (New Smyrna
Beach)
Newberry, City of (Newberry)
Ocala Electric Utility (Ocala)
Orlando Utilities Commission (Orlando)
Quincy, City of (Quincy)
St. Cloud, City of (St. Cloud)
Starke, City of (Starke)
Tallahassee, City of (Tallahassee)
Unaflex (Pompano)
Vero Beach, City of (Vero Beach)
Wauchula, City of (Wauchula)
Williston, City of (Williston)

Georgia

Cordele-Crisp Chamber of Commerce (Cordele)
Georgia Association of RV Parks & Campgrounds
(Marietta)
Georgia-Pacific Corporation (Atlanta)
Prime Power Inc. (Mableton)

Idaho

AEHydro (Boise)
Boise Metro Chamber of Commerce (Boise)
BP Hydro Associates (Twin Falls)
City of Idaho Falls Electric Division (Idaho Falls)
Crites Moscow Growers Inc (Moscow)
George F. Brocke & Sons, Inc. (Kendrick)
Idaho Power Company (Boise)
Idaho Water Users Association, Inc (Boise)
Northern Lights, Inc. (Sandpoint)
Potato Growers of Idaho, Inc. (Blackfoot)
Presnell Gage Accounting & Consulting (Lewiston)
Rocky Mountain Region, PPRC (Lewiston)
Twin Falls Canal Company (Twin Falls)

Illinois

Air Diffusion Systems--A John Hinde Co. (Lake
Bluff)
East Indies Consulting Service, Inc. (Chicago)
James Walker Mfg (Glenwood)
NorthBrook Energy (Chicago)

Indiana

St. Joseph County Parks (South Bend)

Iowa

Ottumwa Water & Hydro (Ottumwa)

White HydroPower (Bettendorf)

Kansas

Kansas Municipal Utilities, Inc. (McPherson)

Kentucky

LG&E Energy Corporation (Louisville)

Stoody Company (Bowling Green)

Louisiana

Specialty Diving, Inc. (Hammond)

Maryland

Dolphin Associates Inc. (Baltimore)

Environmental Resources Management (Annapolis)

H&M Engineering, Inc. (Columbia)

Synergics, Inc. (Annapolis)

Maine

Duke Engineering & Services, Inc. (Portland)

E-PRO (Augusta)

Kleinschmidt Associates (Pittsfield)

Merimil Limited Partners (Cumberland)

Northeast Region, PPRC (Rumford)

P.J. Schwalbenberg & Assoc (Spruce Head)

Pierce Atwood (Portland)

Structure Guard, Inc. (Warren)

Massachusetts

Accusonic Technologies, Inc. (E. Falmouth)

Bay State Subsurface Investigation, Inc (Boston)

Boott Hydro Company (Lowell)

deLucia and Associates Inc. (Cambridge)

Essex Power Services Inc. (Boston)

Granite State Hydropower Association (Boston)

Lawrence Hydro Associates (Lawrence)

Olson Electric Development Company (Methuen)

Michigan

City of Crystal Falls (Crystal Falls)

City of Hart Board of Power and Light (Hart)

Marshall, City of (Marshall)

Michigan Municipal Electric Association

Association (Lansing)

Traverse City Light and Power (Traverse City)

Minnesota

Ess Bros & Sons Inc (Loretto)

Great Lakes Region, PPRC (Brainerd)

Minnesota Power, Inc. (Duluth)

Otter Tail Power Company (Fergus Falls)

Premier Materials Technology, Inc. (Minneapolis)

The Cretex Companies (Elk River)

Mississippi

Mississippi Consulting Engineers Council (Jackson)

Missouri

AmerenUE--Osage Plant (Eldon)

HCI Publications (Kansas City)

Montana

Heffernan Consulting Inc. (Missoula)

Northern Lights (Lincoln County)

Nebraska

Central Nebraska Public Power & Irrigation
(Holdrege)

Magnolia Metal Corporation (Omaha)

Nebraska Public Power District (Columbus)

Nevada

QRS, Inc. (Las Vegas)

New Hampshire

Geokon, Inc. (Lebanon)

PowerHouse Systems (Jefferson)

The HL Turner Group Inc. (Concord)

New Jersey

Hydro Info Systems (Fairfield)

L&M Ligum Vitae (Hewitt)

United American Energy Corporation (Woodcliff
Lake)

New Mexico

Industrial Repair Service (Farmington, NM)

New York

Cool Insuring Agency, Inc. (Latham)

Hydro Development Group, Inc. (Dexter)

Main-Tane Contracting, Inc. (Mechanicville)

New York Power Authority (Albany)

Northern Pine Region, PPRC (Ticonderoga)

Roctest, Inc. (Plattsburg)

North Carolina

Carolina Power and Light Company (Raleigh)

Duke Power (Charlotte)

Stanly County Chamber of Commerce (Albemarle)

Swain County Chamber of Commerce (Bryson City)

VA TECH VOEST MCE Corporation (Salisbury)
Wilson-Ramseur, Inc. (Raleigh)

Ohio

American Electric Power (Columbus)
Clean Air Conservancy, The (Cleveland Heights)
FirstEnergy Corporation (Akron)
James Leffel & Co., The (Springfield)
Loveman Steel Corp (Bedford Heights)
Ohio Municipal Electric Association (Columbus)
Universal Electric Power (Akron)

Oklahoma

Municipal Electric Systems of Oklahoma (Oklahoma City)

Oregon

Brake Systems Inc. (Portland)
Central Lincoln People's Utility District (Newport)
Clatskanie People's Utility District (Clatskanie)
Columbia River People's Utility District (St. Helens)
Emerald People's Utility District (Eugene)
Northern Wasco County People's Utility District (The Dalles)
NW Pipe Co (Portland)
Oregon Arms Collectors (Portland)
Oregon People's Utility District Association (Salem)
Pacific Energy Control (Milwaukie)
Pacific Northwest Generating Cooperative (Portland)
PacifiCorp (Portland)
Port of Brookings Harbor (Brookings)
Portland General Electric Company (Portland)
TH Nelson & Associates (Portland)
Tillamook People's Utility District (Tillamook)
Turbine Generation, NW Inc. (Columbia City)

Pennsylvania

American Hydro Corporation (York)
Beaver Valley Power Company (Beaver Falls)
Cochrane Foundry Inc. (York)
DMD Division-Dresser Equipment Group (Bradford)
Electromechanical Engineering Associates, Inc. (Pittsburgh)
Greiner Industries (Mount Joy)
Grimm Trophy & Gifts (York)
Hoffman Pattern Inc (Hanover)
Industrial Piping Systems Inc. (York)
ITW Philadelphia Resins (Montgomeryville)
Keystone Tool Crib Inc. (Jacobus)
Kingsbury Inc, Repair and Service Division (Hatboro)
Kinsbury, Inc. (Hatboro)
Kline Industrial Tool (York)

Lovejoy Steel (York)
McCullough Sales Corporation (Chester Springs)
Microcut, Inc. (York)
Mid American Natural Resources, Inc. (Erie)
Miller-Hefele Pump (King of Prussia)
Pre-Mach Inc. (York)
Process Systems Engineering Group (Lancaster)
Safe Harbor Water Power Corporation (Conestoga)
Slothower Machine Shop, Inc. (York)
Superbolt, Inc. (Carnegie)
Titan Abrasive Systems, Inc. (Pitman)
Trola Industries, Inc. (York)
Trola-Dyne Inc (York)
Voith Hydro Inc. (York)
Warminster Fiberglass Co. (Southampton)
Warren County Chamber of Commerce (Warren)
Wolfe Tool & Machine Company (York)
York Welding Supply, Inc. (York)

South Carolina

Aquenergy Systems, Inc. (Greenville)
The Clifton Corp. (Spartanburg)
Consolidated Hydro Southeast, Inc. (Greenville)
Core Services LLC (Myrtle Beach)
Iseley Enterprises, Inc. (Greer)
Lockhart Power Company (Lockhart)
Santee Cooper/ So. Carolina Public Service Authority
SCANA Corp (Columbia)
Union County Development Board (Union)

Tennessee

Carolina Power & Light Company (Newport, TN)

Texas

Brazos River Authority (Waco)
DB Consulting (La Feria)
Double Seal Ring Co (Fort Worth)
El Paso Electric Company (El Paso)
Enron Corporation (Houston)
Sabine River Authority of Texas (Orange)
Time Insurance Agency, Inc (Austin)

Utah

Energy Insurance & Bonds (Bountiful)

Vermont

Barton Village Electric Department (Barton)
Enosburg Falls, Inc. Water & light Department (Enosburg Falls)
Swanton Village Electric Department (Swanton)
Town of Hardwick Electric Department (Hardwick)
Town of Stowe Electric Department (Stowe)

Vermont Public Power Supply Authority (Waterbury Center)
Village of Hyde Park, Inc. (Hyde Park)
Village of Jacksonville (Jacksonville)
Village of Lyndonville Electric Department (Lyndonville)
Village of Morrisville Water & Light (Morrisville)
Village of Northfield Electric Department (Northfield)
Village of Orleans, Inc. (Orleans)
Village of Ludlow Electric Light Department (Ludlow)
VT Marble Power Division of OMYA, Inc. (Proctor)
Windstream Power Systems, Inc. (Burlington)

Virginia

Crofton Industries/Crofton Diving Corporation (Portsmouth)
Division of Power & Light, City of Danville, VA (Danville)
Hydropower Turbine Systems, Inc. (Richmond)
NSW Corporation (Roanoke)
Ossberger Turbines, Inc. (Richmond)
Smith Mountain Lake Policy Advisory Board (Moneta)
Smith Mountain Lake Pressure Cleaning (Hardy)
Turner's Building Inc. (Union Hall)
Virginia Power (Glen Allen)

Washington

Acres International (Seattle)
Almira Farmers Whse. Co (Almira)
Alta Manzana Ranch (Chelan)
ARC Technology (Pacific)
Asotin County Public Utility District (Clarkston)
Battery Power Systems, Inc. (Pacific)
Benton County Public Utility District (Kennewick)
Bob Feil Boats & Motors, Inc. (East Wenatchee)
Brooks & Associates (Seatac)
Chelan Public Utility District (Wenatchee)
Clallam County Public Utility District (Port Angeles)
Clark Public Utilities (Vancouver)
Columbia Basin Development League (Royal City)
Columbia Grain International Inc. (Clarkston)
Cowlitz County Public Utility District (Longview)
D&B Orchards (Chelan)
Dix Corporation (Spokane)
Emerald Paint & Coatings (Mount Vernon)
Energy Northwest (Richland)
Ferry County Public Utility District (Republic)
FOB Partners (Chelan)
Franklin County Public Utility District (Pasco)
Go USA (Wenatchee)

Goosetail Orchard (Chelan)
Grant County Public Utility District (Ephrata)
Grays Harbor County Public Utility District (Aberdeen)
Harrison Equipment Co, Inc. (Kent)
Helwig Carbon Products, Inc. (Seattle)
Hutton Communications (Woodinville)
Hydroacoustic Technology Inc. (Seattle)
Interstate Coatings, Inc. (Seattle)
Kaiser Aluminum (Spokane)
Kittitas County Public Utility District (Ellensburg)
Klickitat County Public Utility District (Goldendale)
Lewis County Public Utility District (Chehalis)
Lincoln Cristi Inc. (Vancouver)
M & M Productions (East Wenatchee)
Manzana Ranch (Chelan)
Marcear Orchards, Inc. (Chelan)
Mason County Public Utility District No. 1 (Shelton)
Mason County Public Utility District No. 3 (Shelton)
MCM Enterprises Ltd. (Bellevue)
North Central Educational Service District (Wenatchee)
Okanogan County Public Utility District (Okanogan)
Pacific County Public Utility District No. 2 (Raymond)
Pacific Northwest Waterways Association (Vancouver)
Paymaster Sales & Service (Spokane)
Pend Oreille Public Utility District (Newport)
Port of Benton (Richland, Washington)
Port of Camas Washougal (Washougal)
Port of Columbia (Dayton)
Port of Whitman (Colfax)
Port of Woodland (Woodland)
Potlatch Corporation (Spokane)
Public Utility District No. 1 of Douglas County (East Wenatchee)
Public Utility District No. 1. Of Jefferson County (Port Townsend)
Public Utility District No. 1 of Kitsap County (Port Orchard)
Quality Resource & Services, Inc. (Spokane)
Randolph Sheet Metal Inc. (Pasco)
Save Our Dams (Ephrata)
Skagit County Public Utility District (Mount Vernon)
Skamania County Public Utility District (Carson)
Snohomish County Public Utility District (Everett)
Soiltest Farm Consultants Inc. (Moses Lake)
South County Septic (Mattawa)
Stevens County Public Utility District No. 1 (Colville)
Superior Asphalt & Concrete Co. (Yakima)
Tacoma Power (Tacoma)

Thurston County Public Utility District (Olympia)
Touchet Valley Seeds, Inc. (Dayton)
Twin Falls Hydro Company, Inc. (Bellevue)
Unit Process Co (Royal City)
Wahkiakum County Public Utility District (Grays
River)
Washington Growers Clearing House Association
(Wenatchee)
Washington Public Utility District Association
(Seattle)
Washington State Potato Commission (Moses Lake)
Wenatchee Valley Clinic (Wenatchee)
Western Region, PPRC (Camas)
Weyerhaeuser Company (Tacoma)
Whatcom County Public Utility District (Ferndale)

West Virginia

American Babbitt Bearing, Inc. (Huntington, WV)
American Electric Power (Bluefield, WV)

Wisconsin

Aftermarket Business Consultants Inc. (Waukesha)
Amherst Industrial Services, LLC (Amherst Jct)
Consolidated Water Power Company (Wisconsin
Rapids)
Hexeco, Inc. (Berlin)
In-Place Machining Company (Milwaukee)
Kaukauna Electric & Water Department (Kaukauna)
L&S Electric (Schofield)
Mead & Hunt, Inc. (Madison)
Midwest Hydro Users Group (Wausau)
Municipal Electric Utilities of Wisconsin (Sun
Prairie)
North American Hydro, Inc. (Neshkoro)
Northern States Power Company (Eau Claire)
Oconto Electric Cooperative (Oconto Falls)
Packaging Corporation of America (Tomahawk)
Wausau-Mosinee Paper (Mosinee)
Wisconsin River Power Company (Wisconsin
Rapids)

106TH CONGRESS
1ST SESSION

H. R. 2335

To amend the Federal Power Act to improve the hydroelectric licensing process by granting the Federal Energy Regulatory Commission statutory authority to better coordinate participation by other agencies and entities, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

JUNE 24, 1999

Mr. TOWNS (for himself, Mr. GILLMOR, Mr. HALL of Texas, Mr. BURR of North Carolina, Mr. BISHOP, and Mr. HASTINGS of Washington) introduced the following bill; which was referred to the Committee on Commerce

A BILL

To amend the Federal Power Act to improve the hydroelectric licensing process by granting the Federal Energy Regulatory Commission statutory authority to better coordinate participation by other agencies and entities, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Hydroelectric Licens-
5 ing Process Improvement Act of 1999”.

1 **SEC. 2. FINDINGS.**

2 Congress finds that—

3 (1) hydroelectric power is an irreplaceable
4 source of clean, economic, renewable energy with the
5 unique capability of supporting reliable electric serv-
6 ice while maintaining environmental quality;

7 (2) hydroelectric power is the leading renewable
8 energy resource of the United States;

9 (3) hydroelectric power projects provide mul-
10 tiple benefits to the United States, including recre-
11 ation, irrigation, flood control, water supply, and
12 fish and wildlife benefits;

13 (4) in the next 15 years, the bulk of all non-
14 Federal hydroelectric power capacity in the United
15 States is due to be relicensed by the Federal Energy
16 Regulatory Commission;

17 (5) the process of licensing hydroelectric
18 projects by the Commission—

19 (A) does not produce optimal decisions, be-
20 cause the agencies that participate in the proc-
21 ess are not required to consider the full effects
22 of their mandatory and recommended condi-
23 tions on a license;

24 (B) is inefficient, in part because agencies
25 do not always submit their mandatory and rec-
26 ommended conditions by a time certain;

1 (C) is burdened by uncoordinated environ-
2 mental reviews and duplicative permitting au-
3 thority; and

4 (D) is burdensome for all participants and
5 too often results in litigation; and

6 (6) while the alternative licensing procedures
7 available to applicants for hydroelectric project li-
8 censes provide important opportunities for the col-
9 laborative resolution of many of the issues in hydro-
10 electric project licensing, those procedures are not
11 appropriate in every case and cannot substitute for
12 statutory reforms of the hydroelectric licensing proc-
13 ess.

14 **SEC. 3. PURPOSE.**

15 The purpose of this Act is to achieve the objective
16 of relicensing hydroelectric power projects to maintain
17 high environmental standards while preserving low cost
18 power by—

19 (1) requiring agencies to consider the full ef-
20 fects of their mandatory and recommended condi-
21 tions on a hydroelectric power license and to docu-
22 ment the consideration of a broad range of factors;

23 (2) requiring the Federal Energy Regulatory
24 Commission to impose deadlines by which Federal

1 agencies must submit proposed mandatory and rec-
2 ommended conditions to a license; and
3 (3) making other improvements in the licensing
4 process.

5 **SEC. 4. PROCESS FOR CONSIDERATION BY FEDERAL AGEN-**
6 **CIES OF CONDITIONS TO LICENSES.**

7 (a) IN GENERAL.—Part I of the Federal Power Act
8 (16 U.S.C. 791a et seq.) is amended by adding at the end
9 the following:

10 **“SEC. 32. PROCESS FOR CONSIDERATION BY FEDERAL**
11 **AGENCIES OF CONDITIONS TO LICENSES.**

12 “(a) DEFINITIONS.—In this section:

13 “(1) CONDITION.—The term ‘condition’
14 means—

15 “(A) a condition to a license for a project
16 on a Federal reservation determined by a con-
17 sulting agency for the purpose of the first pro-
18 viso of section 4(e); and

19 “(B) a prescription relating to the con-
20 struction, maintenance, or operation of a
21 fishway determined by a consulting agency for
22 the purpose of the first sentence of section 18.

23 “(2) CONSULTING AGENCY.—The term ‘con-
24 sulting agency’ means—

1 “(A) in relation to a condition described in
2 paragraph (1)(A), the Federal agency with re-
3 sponsibility for supervising the reservation; and

4 “(B) in relation to a condition described in
5 paragraph (1)(B), the Secretary of the Interior
6 or the Secretary of Commerce, as appropriate.

7 “(b) FACTORS TO BE CONSIDERED.—

8 “(1) IN GENERAL.—In determining a condition,
9 a consulting agency shall take into consideration—

10 “(A) the impacts of the condition on—

11 “(i) economic and power values;

12 “(ii) electric generation capacity and
13 system reliability;

14 “(iii) air quality (including consider-
15 ation of the impacts on greenhouse gas
16 emissions); and

17 “(iv) drinking, flood control, irriga-
18 tion, navigation, or recreation water sup-
19 ply;

20 “(B) compatibility with other conditions to
21 be included in the license, including mandatory
22 conditions of other agencies, when available;
23 and

1 “(C) means to ensure that the condition
2 addresses only direct project environmental im-
3 pacts, and does so at the lowest project cost.

4 “(2) DOCUMENTATION.—

5 “(A) IN GENERAL.—In the course of the
6 consideration of factors under paragraph (1)
7 and before any review under subsection (e), a
8 consulting agency shall create written docu-
9 mentation detailing, among other pertinent
10 matters, all proposals made, comments received,
11 facts considered, and analyses made regarding
12 each of those factors sufficient to demonstrate
13 that each of the factors was given full consider-
14 ation in determining the condition to be sub-
15 mitted to the Commission.

16 “(B) SUBMISSION TO THE COMMISSION.—

17 A consulting agency shall include the docu-
18 mentation under subparagraph (A) in its sub-
19 mission of a condition to the Commission.

20 “(c) SCIENTIFIC REVIEW.—

21 “(1) IN GENERAL.—Each condition determined
22 by a consulting agency shall be subjected to appro-
23 priately substantiated scientific review.

24 “(2) DATA.—For the purpose of paragraph (1),
25 a condition shall be considered to have been sub-

1 jected to appropriately substantiated scientific review
2 if the review—

3 “(A) was based on current empirical data
4 or field-tested data; and

5 “(B) was subjected to peer review.

6 “(d) RELATIONSHIP TO IMPACTS ON FEDERAL RES-
7 ERVATION.—In the case of a condition for the purpose of
8 the first proviso of section 4(e), each condition determined
9 by a consulting agency shall be directly and reasonably
10 related to the impacts of the project within the Federal
11 reservation.

12 “(e) ADMINISTRATIVE REVIEW.—

13 “(1) OPPORTUNITY FOR REVIEW.—Before sub-
14 mitting to the Commission a proposed condition, and
15 at least 90 days before a license applicant is re-
16 quired to file a license application with the Commis-
17 sion, a consulting agency shall provide the proposed
18 condition to the license applicant and offer the li-
19 cense applicant an opportunity to obtain expedited
20 review before an administrative law judge or other
21 independent reviewing body of—

22 “(A) the reasonableness of the proposed
23 condition in light of the effect that implementa-
24 tion of the condition will have on the energy
25 and economic values of a project; and

1 “(B) compliance by the consulting agency
2 with the requirements of this section, including
3 the requirement to consider the factors de-
4 scribed in subsection (b)(1).

5 “(2) COMPLETION OF REVIEW.—

6 “(A) IN GENERAL.—A review under para-
7 graph (1) shall be completed not more than 180
8 days after the license applicant notifies the con-
9 sulting agency of the request for review.

10 “(B) FAILURE TO MAKE TIMELY COMPLE-
11 TION OF REVIEW.—If review of a proposed con-
12 dition is not completed within the time specified
13 by subparagraph (A), the Commission may
14 treat a condition submitted by the consulting
15 agency as a recommendation is treated under
16 section 10(j).

17 “(3) REMAND.—If the administrative law judge
18 or reviewing body finds that a proposed condition is
19 unreasonable or that the consulting agency failed to
20 comply with any of the requirements of this section,
21 the administrative law judge or reviewing body
22 shall—

23 “(A) render a decision that—

24 “(i) explains the reasons for a finding
25 that the condition is unreasonable and may

1 make recommendations that the adminis-
2 trative law judge or reviewing body may
3 have for the formulation of a condition
4 that would not be found unreasonable; or

5 “(ii) explains the reasons for a finding
6 that a requirement was not met and may
7 describe any action that the consulting
8 agency should take to meet the require-
9 ment; and

10 “(B) remand the matter to the consulting
11 agency for further action.

12 “(4) SUBMISSION TO THE COMMISSION.—Fol-
13 lowing administrative review under this subsection, a
14 consulting agency shall—

15 “(A) take such action as is necessary to—

16 “(i) withdraw the condition;

17 “(ii) formulate a condition that fol-
18 lows the recommendation of the adminis-
19 trative law judge or reviewing body; or

20 “(iii) otherwise comply with this sec-
21 tion; and

22 “(B) include with its submission to the
23 Commission of a proposed condition—

24 “(i) the record on administrative re-
25 view; and

1 “(ii) documentation of any action
2 taken following administrative review.

3 “(f) SUBMISSION OF FINAL CONDITION.—

4 “(1) IN GENERAL.—After an applicant files
5 with the Commission an application for a license, the
6 Commission shall set a date by which a consulting
7 agency shall submit to the Commission a final condi-
8 tion.

9 “(2) LIMITATION.—Except as provided in para-
10 graph (3), the date for submission of a final condi-
11 tion shall be not later than 1 year after the date on
12 which the Commission gives the consulting agency
13 notice that a license application is ready for environ-
14 mental review.

15 “(3) DEFAULT.—If a consulting agency does
16 not submit a final condition to a license by the date
17 set under paragraph (1)—

18 “(A) the consulting agency shall not there-
19 after have authority to recommend or establish
20 a condition to the license; and

21 “(B) the Commission may, but shall not be
22 required to, recommend or establish an appro-
23 priate condition to the license that—

24 “(i) furthers the interest sought to be
25 protected by the provision of law that au-

1 thorizes the consulting agency to propose
2 or establish a condition to the license; and
3 “(ii) conforms to the requirements of
4 this Act.

5 “(4) EXTENSION.—The Commission may make
6 1 extension, of not more than 30 days, of a deadline
7 set under paragraph (1).

8 “(g) ANALYSIS BY THE COMMISSION.—

9 “(1) ECONOMIC ANALYSIS.—The Commission
10 shall conduct an economic analysis of each condition
11 submitted by a consulting agency to determine
12 whether the condition would render the project un-
13 economic.

14 “(2) CONSISTENCY WITH THIS SECTION.—In
15 exercising authority under section 10(j)(2), the Com-
16 mission shall consider whether any recommendation
17 submitted under section 10(j)(1) is consistent with
18 the purposes and requirements of subsections (b)
19 and (c) of this section.

20 “(h) COMMISSION DETERMINATION ON EFFECT OF
21 CONDITIONS.—When requested by a license applicant in
22 a request for rehearing, the Commission shall make a writ-
23 ten determination on whether a condition submitted by a
24 consulting agency—

1 “(1) is in the public interest, as measured by
 2 the impact of the condition on the factors described
 3 in subsection (b)(1);

4 “(2) was subjected to scientific review in ac-
 5 cordance with subsection (c);

6 “(3) relates to direct project impacts within the
 7 reservation, in the case of a condition for the first
 8 proviso of section 4(e);

9 “(4) is reasonable;

10 “(5) is supported by substantial evidence; and

11 “(6) is consistent with this Act and other terms
 12 and conditions to be included in the license.”.

13 (b) CONFORMING AND TECHNICAL AMENDMENTS.—

14 (1) SECTION 4.—Section 4(e) of the Federal
 15 Power Act (16 U.S.C. 797(e)) is amended—

16 (A) in the first proviso of the first sentence
 17 by inserting after “conditions” the following: “,
 18 determined in accordance with section 32,”; and

19 (B) in the last sentence, by striking the pe-
 20 riod and inserting “(including consideration of
 21 the impacts on greenhouse gas emissions)”.

22 (2) SECTION 18.—Section 18 of the Federal
 23 Power Act (16 U.S.C. 811) is amended in the first
 24 sentence by striking “prescribed by the Secretary of
 25 Commerce” and inserting “prescribed, in accordance

1 with section 32, by the Secretary of the Interior or
2 the Secretary of Commerce, as appropriate”.

3 **SEC. 5. COORDINATED ENVIRONMENTAL REVIEW PROCESS.**

4 Part I of the Federal Power Act (16 U.S.C. 791a
5 et seq.) (as amended by section 3) is amended by adding
6 at the end the following:

7 **“SEC. 33. COORDINATED ENVIRONMENTAL REVIEW PROC-**
8 **ESS.**

9 “(a) **LEAD AGENCY RESPONSIBILITY.**—The Commis-
10 sion, as the lead agency for environmental reviews under
11 the National Environmental Policy Act of 1969 (42 U.S.C.
12 4321 et seq.) for projects licensed under this part, shall
13 conduct a single consolidated environmental review—

14 “(1) for each such project; or

15 “(2) if appropriate, for multiple projects located
16 in the same area.

17 “(b) **CONSULTING AGENCIES.**—In connection with
18 the formulation of a condition in accordance with section
19 32, a consulting agency shall not perform any
20 environmental review in addition to any environmental
21 review performed by the Commission in connection with
22 the action to which the condition relates.

23 “(c) **DEADLINES.**—

24 “(1) **IN GENERAL.**—The Commission shall set a
25 deadline for the submission of comments by Federal,

1 State, and local government agencies in connection
2 with the preparation of any environmental impact
3 statement or environmental assessment required for
4 a project.

5 “(2) CONSIDERATIONS.—In setting a deadline
6 under paragraph (1), the Commission shall take into
7 consideration—

8 “(A) the need of the license applicant for
9 a prompt and reasonable decision;

10 “(B) the resources of interested Federal,
11 State, and local government agencies; and

12 “(C) applicable statutory requirements.”.

13 **SEC. 6. STUDY OF SMALL HYDROELECTRIC PROJECTS.**

14 (a) IN GENERAL.—Not later than 18 months after
15 the date of enactment of this Act, the Federal Energy
16 Regulatory Commission shall submit to the Committee on
17 Energy and Natural Resources of the Senate and the
18 Committee on Commerce of the House of Representatives
19 a study of the feasibility of establishing a separate licens-
20 ing procedure for small hydroelectric projects.

21 (b) DEFINITION OF SMALL HYDROELECTRIC
22 PROJECT.—The Commission may by regulation define the
23 term “small hydroelectric project” for the purpose of sub-
24 section (a), except that the term shall include at a min-

- 1 inum a hydroelectric project that has a generating capac-
- 2 ity of 5 megawatts or less.



H.R. 2335

The Hydroelectric Licensing Process Improvement Act of 1999

Sponsor: **Edolphus Towns (D-NY)**

Cosponsors as of December 1, 1999

Sanford Bishop (D-GA)
John Boehner (R-OH)
Richard Burr (R-NC)
Jim DeMint (R-SC)
Calvin Dooley (D-CA)
Paul Gillmor (R-OH)
Lindsey Graham (R-SC)
Ralph Hall (D-TX)
Doc Hastings (R-WA)
Rick Hill (R-MT)
Peter Hoekstra (R-MI)
Sue Myrick (R-NC)
George Nethercutt (R-WA)
Michael Oxley (R-OH)
Collin Peterson (D-MN)
John Peterson (R-PA)
Mike Simpson (R-ID)
Albert Wynn (D-MD)

Bold = House Commerce Committee Member

To sign up as a cosponsor of H.R. 2335, or to obtain further information, Members and staff should call Alex Beckles of Representative Town's office at 225-5936.

CONSTITUTIONAL
MEMBER OF CONGRESS
10TH DISTRICT, NEW YORK

ENERGY AND COMMERCE
HEALTH AND THE ENVIRONMENT
FINANCE AND HAZARDOUS
MATERIALS
ENERGY AND POWER

GOVERNMENT OPERATIONS
RANKING MEMBER
HUMAN RESOURCES AND
INTERGOVERNMENTAL RELATIONS

Congress of the United States
House of Representatives
Washington, DC 20515-3210

H.R. 2335 DEAR COLLEAGUE

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RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515
(202) 226-5936

BROOKLYN OFFICES:
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BROOKLYN, NY 11241
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STORE 5
BROOKLYN, NY 11207
(718) 272-1176

1670 FULTON STREET
BROOKLYN, NY 11219
(718) 774-6882

Dear Colleague,

Please join us in cosponsoring H.R. 2335, the "Hydropower Licensing Process Improvement Act of 1999" – legislation that will help preserve the future viability of hydropower, an emissions-free, low cost source of energy and our nation's largest renewable resource.

Despite all its many benefits, hydropower has become a resource at risk. A multitude of statutes, regulations, agency licensing and policy decisions and court decisions has made the hydroelectric relicensing process costly, arbitrary and time-consuming. Under this regime, several federal agencies are allowed to set conditions on licenses without regard to the effects of these conditions on project economics, energy benefits and values protected by other statutes or regulations. Far too often, we have agencies fighting agencies and issuing inconsistent demands. The unfortunate result is that hydro projects often become uneconomic, threatening the viability of the projects themselves and their resources.

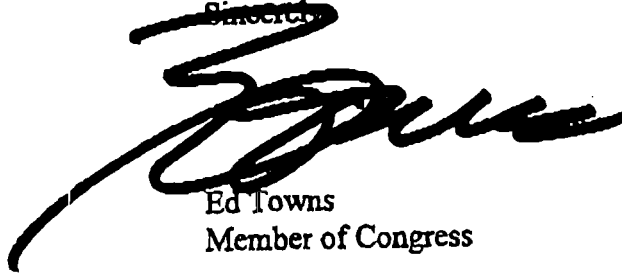
The current hydro licensing process works for no one, least of all the ultimate electric consumers, our constituents, who must bear the costs of a regulatory process gone amuck. This issue is especially urgent considering that over the next 15 years, over half of all non-federal hydroelectric capacity is scheduled to be relicensed.

A remedy is needed to ensure that this important renewable resource continues to operate in a cost-effective and environmentally compatible manner. The loss of a hydro project means more than the loss of clean, efficient, renewable electric power. Hydro projects provide drinking water, flood control, fish and wildlife habitat, irrigation, transportation, environmental enhancement funding and recreation benefits. Also, due to its unique load-following capability, peaking capacity and voltage stability attributes, hydropower plays a critical role in maintaining our nation's reliable electric service.

H.R. 2335 would amend the Federal Power Act to ensure timely action by Federal agencies in the relicensing process. It will not change or modify any existing environmental laws, nor remove regulatory authority from the various agencies; rather, it will give these agencies the responsibility to consider, and be accountable for, the full effects of their actions before imposing mandatory conditions on a hydro license.

I encourage you to cosponsor this important legislation. To add your name as a cosponsor of H.R. 2335, or if you have any questions, please call Alex Beckles 5-5936..

Sincerely,

A large, stylized handwritten signature in black ink, appearing to read 'Ed Towns', is written over the word 'Sincerely,'.

Ed Towns
Member of Congress

Congress of the United States

Washington, DC 20515

Support Clean, Renewable Hydroelectric Power Cosponsor HR 2335

October 20, 1999

Dear Colleague,

Please join us in cosponsoring **H.R. 2335, the Hydropower Licensing Process Improvement Act of 1999**. This legislation will help protect the future viability of hydropower, our nation's largest renewable energy resource.

The Federal Power Act gives the Federal Energy Regulatory Commission (FERC) the authority to issue licenses and relicenses for non-federally-owned hydropower projects. Yet, a multitude of statutes, regulations, agency policies and court decisions have made the hydroelectric relicensing process so time-consuming, arbitrary and costly that some hydro project owners and operators are contemplating abandonment of their projects.

The loss of a hydro project means more than the loss of clean, efficient, renewable electric power. Hydro projects provide water, flood control, fish and wildlife habitat, irrigation, transportation and recreation benefits. Hydropower also plays a critical role in maintaining reliable electric service due to its unique load-following capability, peaking capacity and voltage stability attributes.

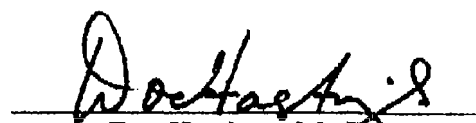
With over half of all non-federal hydropower capacity facing relicensing in the next 15 years, Congress must work now to fix the licensing process. H.R. 2335 will do just that. The bill will amend the Federal Power Act to ensure timely action by Federal agencies in the relicensing process. It will not change or modify any existing environmental laws, nor remove regulatory authority from the various agencies; rather, it will give these agencies the responsibility to consider, and be accountable for, the full effects of their actions before imposing mandatory conditions on a hydro license.

We encourage you to cosponsor this important legislation. To add your name as a cosponsor of H.R. 2335, or if you have any questions, please call Aleix Jarvis at 5-5301.

Sincerely,



Lindsey O. Graham, M. C.



Doc Hastings, M. C.

HYDROPOWER

A KEY COMPONENT OF OUR “COMPREHENSIVE NATIONAL ENERGY STRATEGY”

Source:

Comprehensive National Energy Strategy—National Energy Policy Plan Pursuant to Section 801 of the Department of Energy Organization Act. Washington, D.C.

Approved by Clinton Administration and Transmitted to Congress, April 1998

A Changing Energy World

Growing populations and rising standards, economies in transition to market-based systems, and increasing globalization of energy markets demand greater flexibility and creativity in government economic, environmental, foreign, and national security policies. Energy policies, too, must be reevaluated in the wake of the experiences of the 1990s. Three preeminent challenges emerge: how to maintain energy security in global energy markets; how to successfully harness competition in electricity markets; and how to respond to the threat of climate change. (Pg. 5)

Goal III

➤ Promote energy production and use in ways that respects health and environmental values—improving our health and local, regional and global environmental quality. (page 18)

- **Objective 1:** Increase domestic energy production in an environmentally responsible manner (page 18)

- **Strategy 3:**

Develop renewable electric energy technologies...and maintain the viability of existing hydropower sources. (page 19) [emphasis added]

POLITICS & POLICY

Hydroelectric Dams Generate a Flood of Controversy

By JOHN J. FIALKA

Staff Reporter of THE WALL STREET JOURNAL

POTLATCH, Wash. — When the two-dam complex known as the Cushman Project took shape 70 years ago, promotion of hydroelectric power was a major federal policy. Before a crowd of admiring school children, President Coolidge flipped a switch in the White House, opening floodgates here to start Cushman's mighty turbines whirling.

Built by the city of Tacoma, Wash., the dams' cheap, clean electricity ended chaotic brownouts. They also meant more jobs and new industries that Tacoma lured to enjoy what it called America's "Electric City."

Those turbines still spin, generating about 20% of the city's power. But for hydroelectric dams, the political world has turned upside down. The Cushman Project is under fire from environmental groups and more than a dozen state and federal agencies over allegations ranging from harming the region's wildlife to damaging the culture of a nearby Indian tribe. The Federal Energy Regulatory Commission deliberated the issues for 24 years. Last year, it decreed that Cushman may have a new license to operate but only after adopting expensive fish-protecting measures that the city says would result in an annual \$2.5 million loss for the project.

Future in Doubt

Today's federal policy puts the future of scores of such dams in doubt. In place of President Coolidge, there is Bruce Babbitt, secretary of the Interior Department, who has begun taking a sledgehammer to various dams deemed no longer useable, giving them a televised tap before the wrecking crews arrive. In his dam-busting forays, which often leave the dams replaced by fast-running rivers, Mr. Babbitt has said he senses a "deep, widespread understanding that Americans overshot the mark in our dam-building frenzy." Mr. Babbitt celebrated another dam deconstruction yesterday, saying that PacifiCorp's decision to tear down a small hydroelectric dam on the White Salmon River in Washington state was an "excellent outcome."

The Cushman case, which Tacoma is taking to the U.S. Court of Appeals in Washington, D.C., "is a real concern for our industry," says Linda Church Ciocci, head

of the National Hydro-power Association, which represents owners of the nation's hydroelectric dams. "They see it as an indication of where things are going." The economic worth of goods produced by the dams, which include clean electricity, flood control and water for irrigation, she says, are being outweighed in the licensing process by environmental claims.

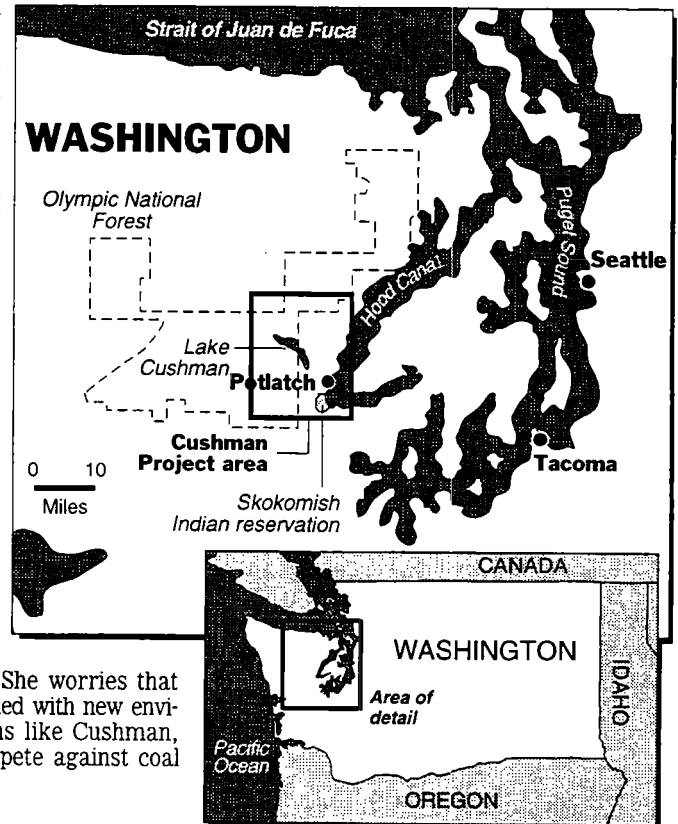
Within the next 15 years, she says, 284 hydro-dam owners, or roughly two-thirds of those not operated by the federal government, are heading for the same rough FERC relicensing gauntlet. She worries that many projects, burdened with new environmental restrictions like Cushman, won't be able to compete against coal and gas-fired plants.

No Air Pollutants

From an environmental point of view, that might seem odd. Plants powered by fossil fuel create tons of air pollutants including carbon dioxide, which many scientists claim is overheating the Earth's climate by creating an atmosphere that traps more of the sun's heat. Dams, which generate about 11% of the nation's power, emit no air pollutants.

But in the current Rodney Dangerfield climate, that doesn't generate much respect. And the big federal power dams, which aren't regulated by the FERC, face an even tougher gauntlet. Under the U.S. Endangered Species Act, federal agencies that protect wildlife can issue "mandates" requiring the dams to change activities deemed harmful to animals.

That the dams don't produce carbon dioxide doesn't factor into this, explains Brian Gorman, a spokesman for the Commerce Department's National Marine Fisheries Service. "Our obligation is purely a biological one. We will look only at the



biology of the fish and only at endangered salmon."

Among the opposition to dams is American Rivers, a Washington, D.C., environmental group. Begun in 1973, its specialty is intervening in FERC relicensing cases, such as Cushman, to demand more environmental protection. Its role was enhanced after it lobbied for a 1986 change in the Federal Power Act that requires the FERC to weigh environmental factors on the same footing as power and safety issues.

Keeping Score

Rebecca Wodder, president of American Rivers, says the group is working on a scorecard that would measure how dams are protecting the environment. The scorecard doesn't weigh in that dams don't produce air pollution, she says, because it is focused on changes in river environments. "The U.S. is No. 1 in the world in many kinds of aquatic species," she says.

(over please)

But many "are more endangered than birds. It's a significant issue."

The U.S. Department of Energy believes another significant issue is the need for "green" or renewable energy. Its proposed bill for restructuring the utility industry would require utilities to produce 7.5% renewable power by 2010. But while hydroelectric dams operate with a clean, renewable source of energy, they are excluded from the DOE's definition of "green."

A senior DOE official explains that environmental groups lobbied heavily against dams. Only power derived from solar, wind, geothermal and biomass sources qualifies. (Biomass includes power generated from organic wastes.) "These are growing industries, and we wanted to give them a bit of a push," the official says.

Green-Power Quota

For Steven Klein, superintendent of Tacoma Public Utilities, which operates the Cushman Project, that means he may soon have to buy some solar energy to meet his quota for green power that will not be met by the water flowing through the city's turbines. "It is absolutely insane to have hydro projects out there buying credits for renewable technology," argues Ms. Ciocci of the National Hydropower Association.

So far, Interior Secretary Babbitt hasn't shown up here with his sledgehammer, but Mr. Klein wonders whether it is just a matter of time. Since the late 1980s, when Mr. Klein took over the marathon Cushman case to renew its license from the FERC, he has battled claims from the Interior Department's bureaus of Indian Affairs, Reclamation and the Fish and Wildlife Service. "They all came in with their wish lists: flood control, fish, Indian culture. They don't care if they conflict. Nobody cares about anybody else. There's

just no compromise." In the midst of all this, Interior's National Park Service declared that Cushman's two elegant, high-ceilinged powerhouses must be included in the nation's Register of Historic Places and Landmarks.

Skokomish Struggle

The Cushman Project's struggle with the Skokomish Tribe, meantime, seems never ending. While the FERC ordered Tacoma to install an expensive fish passageway that may improve the tribe's fishing prospects, it ignored the tribe's larger claim that the two dams have destroyed its 10,000-year-old culture.

Some of Cushman's land was originally bought in the 1920s from tribal members. In the 1930s, the tribe's leaders tried to block completion of the dam, but their suit was thrown out of court. After that the tribe's major business, fishing, shrank when Cushman's engineers redirected most of the north fork of the Skokomish River down three pipes leading to the project's second powerhouse.

Now the tribe is preparing a second suit. They want Tacoma to pay \$5.8 billion. "This is not just for the Skokomish people; it's for all people," says Denny Hurtado, chairman of the tribe, which has 800 members. Mr. Hurtado said he might settle if Tacoma simply gave him the dam, which he said the tribe would run to maximize flowing water for salmon.

At times, tribal leaders have called the Cushman dams a "rogue project" and have even claimed it is "evil." The latter definition brings a weary smile to Mr. Klein's face as he burrows through the refrigerator-size pile of documents that has grown in his Tacoma office since the fight over Cushman began.

"Evil? Look, we're municipally owned. We can't afford to be evil."

WHAT PEOPLE ARE SAYING ABOUT THE HYDROPOWER RELICENSING PROCESS

Excerpts from Oversight Hearing on the Federal Hydroelectric Licensing Process
Senate Energy and Natural Resources Subcommittee on Water and Power
Thursday, October 28, 1999

“I think it is important to reflect on our experience over the last decade, that demonstrates in very real terms that the FERC [hydro licensing] process really does not work very well.”

-Senator Frank Murkowski (R-AK) – Chairman, Senate Energy and Natural Resources Committee

“We need to establish reasonable deadlines for the submission of license conditions and we should also have as our goal ensuring that hydropower facilities remain economically viable.”

-Senator Gordon Smith (R-OR), Chairman, Water and Power Subcommittee, Senate Energy and Natural Resources Committee

“Some agencies retain mandatory conditioning authorities, and these trump cards ensure that FERC is obligated to accept those conditions... without modification even if the conditions render the entire project uneconomic. It just does not make a lot of sense to me that there is no middle ground or some common sense approach to the relicensing.”

-Senator Conrad Burns (R-MT)

“If it [a licensing condition] came in the form of a mandatory condition... we would not have the ability to say no. ...The resource agency gets to make the decision.”

-Douglas W. Smith, General Counsel, Federal Energy Regulatory Commission

“The Commission itself rarely addresses issues about is it cost effective, is a mandatory condition cost effective, is there substantial evidence, etc., in a Commission order, because we have concluded that it is a mandatory condition.”

-Douglas W. Smith, General Counsel, Federal Energy Regulatory Commission

“Licensees have no recourse to appeal or even question the basis of mandatory conditions set by the agencies except to go to court. Somehow, that does not make very good sense... . You either take it or you leave it and go to court.”

-Senator Larry Craig (R-ID)

"Under our decommissioning policy statement, the licensee [who decides not to accept a relicense that renders the project uneconomic] may be obligated to pay for decommissioning. ...[But] there may be a judgment which is that taking the license is a less bad alternative than rejecting the license."

-Douglas W. Smith, General Counsel, Federal Energy Regulatory Commission

"...There is a bit of a Catch-22 here. ...It becomes a decision on the part of the operator...do we continue to operate at a loss, or do we withstand a decommissioning cost that could run hundreds of millions of dollars... Is that really a way to balance the issues at hand?"

-Senator Larry Craig (R-ID)

"...It is somewhat frustrating for the Commission [FERC] to be trying to administer a process that has so many influences, some of which we attempt to balance, some of which are outside of our control to even attempt to balance. ...Are there frustrations associated with it? I think the answer to that is yes."

-Douglas W. Smith, General Counsel, Federal Energy Regulatory Commission

"I and a good many other of my colleagues both in the House and the Senate view a definable, predictable process as being critically important to the relicensing of this phenomenal resource for our country."

-Senator Larry Craig (R-ID)

"In his 1997 testimony...[FERC] Chairman Hoecker expressed support for legislation confirming the Commission's authority to establish reasonable deadlines for the submission of conditions or recommendations by the resource agencies."

-FERC October 27, 1999 response to pre-hearing Water and Power Subcommittee questions

"Because of your oversight hearings...we have started a series of structured discussions among the Federal agencies and with the [FERC] to see how we can improve our processes."

-David J. Hayes, Deputy Secretary, U.S. Department of the Interior

"...I am not going to criticize the good faith efforts that you have made, but there are those of us who think that we ought to put that good faith effort within the law and then administrations and Congresses can come and go over the next 20 years, but it will keep the agencies well focused and well directed on what their responsibilities are in the relicensing process."

-Senator Larry Craig (R-ID)

"We can no longer ignore the importance of hydropower in our Nation's energy mix. No responsible citizen can question its contribution as a reliable source of electrical power and its value as a significant integral part of a clean air strategy."

-Senator Larry Craig (R-ID)

“The administration does not even consider hydroelectric to be renewable. I find that to be an incredible application of inconsistency. ... For an administration that is concerned about global warming... I find their views on hydroelectric curious, to say the least.”

-Senator Frank Murkowski (R-AK) – Chairman, Senate Energy and Natural Resources Committee

“Hydropower is very important as a resource to the United States, there is no question about that. It also is absolutely true that hydropower has global warming positives associated with it, and we need to and we are committed to make hydropower licensing work.”

-David J. Hayes, Deputy Secretary, U.S. Department of the Interior

“...I compliment Senator Craig for his efforts to come to some conclusions about the national [hydro licensing] policy we should pursue. ... We really are approaching a period where we need to focus in on what our national policy is going to be and what the tradeoffs are... .”

-Senator Jeff Bingaman (D-NM), Ranking Member, Full Committee

WHY HYDROPOWER LICENSING IMPROVEMENT IS NECESSARY

What's Wrong With the Hydropower Relicensing Process? A multitude of statutes, regulations, agency policies and court decisions has made the hydroelectric relicensing process time-consuming, arbitrary and costly.

- A typical hydro project can take from eight to 10 years to weave its way through the licensing process—some have taken as long as 28 years. In comparison, gas fired plants can typically be sited and licensed in 18 months.
- Federal agencies are allowed to set conditions on licenses without regard to their effects on project economics, energy benefits and values protected by other statutes or regulations.
- All too frequently, there is no referee that can resolve conflicts between agencies or reconcile inconsistent demands. Often, the result is license conditions that have nothing to do with project impacts.
- Hydropower licensees have no recourse to appeal, or even question, the basis of mandatory conditions set by the agencies, except through litigation.
- Relicensing consistently results in higher costs, loss of operational flexibility, and lost generation due to new constraints imposed on operations.
 - A recent U.S. Department of Energy report found that two thirds of all hydro projects relicensed since 1986 lost generation as a result of the relicensing process¹.
 - In another government report, five of our nation's national laboratories found that relicensing results in an average 8% loss in hydropower generation.²
 - In its annual Energy Outlook report, the Energy Information Administration – the Department of Energy's statistical agency - for the first time projects that hydropower generation will decline through 2020, "as regulatory actions limit capacity at existing sites..."³

¹ "Hydropower Resources at Risk: The Status of Hydropower Regulation and Development – 1997"; Idaho National Engineering Laboratory, U.S. Department of Energy; September, 1997

² "Scenarios of U.S. Carbon Reductions: Potential Impacts of Energy Technologies by 2010 and Beyond"; Interlaboratory Working Group on Energy-Efficient and Low-Carbon Technologies, Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy; September, 1997

³ "Annual Energy Outlook 2000", Energy Information Administration, U.S. Department of Energy; November, 1999

Accordingly, Some Hydro Owners and Operators are Contemplating Abandonment of Their Projects. The loss of a hydro project means more than the loss of clean, efficient, renewable electric power. Hydro projects provide water, flood control, fish and wildlife habitat, irrigation, and transportation benefits. Also, due to its unique load-following capability, peaking capacity and voltage stability attributes, hydropower plays a critical role in maintaining reliable electric service. Moreover:

Emissions-free hydropower helps our nation meet its clean air goals:

- In 1997, hydropower displaced the equivalent of burning 143 million tons of coal, 20 million barrels of oil, and 471 billion cubic feet of natural gas combined.
- Absent hydropower, the nation would emit another 1,000,000 tons of NO_x, 1.78 million tons of Sox, and 340 million tons of carbon dioxide every year. In terms of acid rain alone, hydropower prevents over \$7 billion in environmental and health damage.⁴
- Americans need to ask themselves: What is being burned to replace the 8% average capacity lost in relicensing?

Hydropower projects provide enormous recreational benefits:

- Hydropower projects often encompass large amounts of land and water that support a multitude of outdoor recreational activities, including: camping, hiking, fishing, swimming, picnicking, boating, whitewater rafting, and water skiing.
- There were a total of 81 million recreation user days provided at FERC-licensed hydropower projects in 1990.
- Many recreational opportunities and enhancements, including a large number of lakes and reservoirs themselves, would simply not exist without hydropower projects.

⁴ The Clean Air Conservancy, 1999

Hydro is one of the most affordable energy sources for the American electrical consumer and is more efficient than any other form of generation:

- In 1996, hydropower ranged from less than one cent to just over two cents per kilowatt-hour to generate.
- Today's hydropower turbines are capable of converting 90 percent of available energy into electricity—that is more efficient than any other form of generation. Even the best fossil fuel power plant is only about 50 percent efficient.
- Hydropower's operational flexibility – its unique ability to change output quickly – is highly valued in maintaining the stability of the electric grid.
- Water from rivers is a purely domestic resource that is not subject to disruptions from foreign suppliers or transportation issues – a key factor in ensuring its low cost value to consumers.

Why Does Congress Need to Legislate on This Issue Now? Over half of all non-federal hydroelectric capacity is scheduled to be relicensed in the next 15 years. If Congress does not act now to improve the relicensing process, our nation's hydropower resource will be seriously eroded, to the detriment of consumers, the environment, our energy mix and our economy.

WHAT'S WRONG WITH THE HYDROPOWER RELICENSING PROCESS?

REAL-LIFE EXAMPLES

Two-thirds of all federally-regulated hydroelectric capacity -- 284 projects in 39 states, representing 28,917 megawatts of electricity generation -- is due to be relicensed by FERC in the next fifteen years. An inefficient relicensing process that is time-consuming, arbitrary, and costly places all of these projects, and the future of hydropower as a clean, renewable energy source, at risk.

The following examples, taken from hydro projects around the nation, illustrate some of the many problems associated with the current hydropower relicensing process.

EXCESSIVE LENGTH OF PROCESS/ JUDICIAL CALL FOR LEGISLATIVE IMPROVEMENTS

In March, 1997, the Eugene Water & Electric Board (EWEB) received a new FERC license for two projects (23.2 MW combined) on the McKenzie River in Oregon. In the license, FERC incorporated certain fishery conditions prescribed by federal resource agencies under Section 18 of the Federal Power Act (FPA) -- at a cost to EWEB of \$14,000,000 -- but rejected several conditions because they did not meet the requirements of the FPA for "fishway prescriptions."

Despite the \$14,000,000 of project improvements, several interest groups and agencies requested an administrative rehearing of the license before FERC; upon denial of the requests, the parties challenged the license before the U.S. Court of Appeals for the Ninth Circuit. Among other claims, the parties contended the FPA does not authorize FERC to refuse to accept any condition prescribed under Section 18. In other words, the parties asked the court to rule that the resource agencies had absolute power to dictate license conditions under the FPA whether they met the intent of the FPA for a fishway prescription or not.

In its August, 1999 decision, the court did just that -- concluding the FPA denied FERC the authority to modify, reject, or reclassify prescriptions submitted by resource agencies under Section 18, even while noting FERC's observation that the resource agencies "do not concern themselves with the delicate economic versus environmental balancing required in every license." The court went on to acknowledge Congressional "failure" to require agencies to develop improved "regulations, procedures or standards for implementing Section 18." The court noted that, absent Congressional action, the court was powerless to rewrite the statute. "Our task," the opinion stated, "is to apply the statute's text, not to improve upon it." The court's decision means that currently only a federal court of appeals has the authority to determine whether a fishery condition offered by a federal resource agency and required to be included in a license meets the requirements for a "fishway prescription" under the FPA.

With its hands thus tied, the court's decision will mean a remand of the license back to FERC to be re-written once the appeal is completed -- 8 years after EWEB first submitted its license application; with only the Ninth Circuit then having the authority to decide whether any condition prescribed by a resource agency meets the FPA requirements for "fishway prescriptions."

CONDITIONS MAKING PROJECT UNECONOMIC/ ARBITRARY NATURE OF PROCESS/INSUFFICIENT IMPACT ANALYSIS

In 1996, during the relicensing of the Edwards Dam near Augusta, Maine, the US Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) prescribed a fishway system on the dam to safeguard a few species of fish. The fishery agencies estimated this fishway system would cost approximately \$9 million dollars while the licensee estimated the cost at \$12 million - both of these estimates effectively rendered the project uneconomic. Lacking the authority to amend the prescription or otherwise balance it against the energy or other resource values of the project, FERC instead ordered the removal of the dam in November 1997.

During the relicensing process, the USFWS and NMFS also recommended that flows of 4,500 cubic feet per second be released annually in July into a deep hole below the dam they determined was a spawning and nursery habitat for the Atlantic sturgeon. This flow recommendation had severe economic implications on the project since it would force the project to forgo power generation completely in July most years. This deep hole was located just below the area where the dam was eventually breached and this once-important spawning and nursery habitat is now assumed to be filled with rubble.

The US Department of Interior and segments of the environmental community have hailed FERC's decision as a means of restoring a 17-mile stretch of the Kennebec River to its "natural condition". Moreover, certain environmental groups are now claiming that the simple act of removing the dam has successfully restored this section of the river yet no comprehensive studies are being planned to actually measure the success of this dam removal on the restoration of the river ecosystem.

DUPLICATIVE NATURE OF PROCESS

The Energy Policy Act of 1992 specifically prohibits federal land managing agencies from requiring an existing hydropower project to obtain a Special Use Permit. However, in a number of licenses, the Forest Service has taken the standard Special Use Permit terms and included them in the conditions submitted to FERC under section 4(e) of the Federal Power Act. In turn, FERC has had no choice but to impose these conditions on the project license. These Special Use Permit conditions are designed to allow the Forest Service to regulate the project in the same manner that FERC administers the licensed project. Thus, despite the Energy Policy Act prohibition, the Forest Service is duplicating FERC's legislative mandate to administer federally licensed hydropower projects.

November 22, 1999

**ARBITRARY NATURE/
EXCESSIVE LENGTH OF PROCESS**

In an ongoing relicensing of a 35.5 MW facility in New York State, arbitrary fishway prescriptions have been proposed by the USFWS, at a cost of over \$2 million. Why arbitrary?

- The blueback herring, the primary species on which the prescriptions were premised, is not native to the river where the project is situated.
- With an 80-foot waterfall blocking upstream fish passage, there would be no migration without the man-made lock system adjacent to the project.
- The project (and other hydro facilities on the river) have operated without fishways for several decades – and during that time the fish population has grown to over 100 million annually.

Pre-filing consultation started on this project in 1986, and a final license order still has not been issued. If the fishway prescription is included in the license along with other resource protection measures, the project would become economically unviable.

**ARBITRARY NATURE OF PROCESS/
FERC APPROVAL OF INAPPROPRIATE CONDITIONS**

In a recent relicensing of a Western project, the U.S. Forest Service imposed numerous conditions, including one that required the project owner to annually send the Forest Service a set payment, expected to cover all operation and maintenance costs associated with existing campgrounds in the project vicinity. The owner pursued an administrative appeal of this condition at the Forest Service, arguing that the Forest Service failed to demonstrate that most of the campgrounds' use was related to the project. Furthermore, the Forest Service did not attempt to justify the amount of the annual payment for the operation and maintenance costs it sought from the licensee.

Nonetheless, FERC included the condition in the project license, concluding that it lacked the authority to even consider if a relationship between the condition and the project justified the Forest Service condition. Similarly, FERC was unable to reject an instream flow release imposed upon the project by the Bureau of Land Management, even though FERC summarily dismissed as inappropriate and unsupported the same exact amount of instream flow release recommended by the California Department of Fish and Game.

After FERC issued the new license for the project, containing the contested condition, the owner challenged the condition at FERC and took the case before the U.S. Court of Appeals. Just prior to the case being heard and five years after the first of the two administrative appeals were filed with the Forest Service, the Forest Service decided that the operation and maintenance costs were indeed inappropriate and accepted an owner-proposed method for reimbursement of only those campground operation and maintenance costs related to the project – approximately 1.25% of the amount originally demanded by the Forest Service.

FERC APPROVAL OF CONDITIONS
THAT RESULT IN "NO QUANTIFIABLE BENEFIT"/
EXCESSIVE LENGTH OF PROCESS

After FERC asserted jurisdiction over a 70 year old, 1.2 MW project in New England, the project owner reached agreement with one state agency on the level of minimum flows to be released from the project. However, a resource agency from an adjacent state and the USFWS prescribed a minimum flow that was nearly twice the agreed upon level. In its final environmental assessment for the project, FERC concluded that the owner's minimum flow could be provided with existing project equipment and that there was no "quantifiable benefit" from requiring the USFWS flow level rather than the level proposed by the owner.

However, because the recommendation was made under section 10(j) of the FPA, and because the recommendation appeared "consistent with the FPA," FERC incorporated the higher minimum flow requirement in the license. FERC's rubber stamp approval of the USFWS 10(j) recommendation, along with other conditions imposed on the project, had the effect of reducing net revenue from the project by 60%, making the project economically marginal at best. (Note: Issuance of the license for this small project took more than 8 years.)

CONDITIONS MAKING PROJECT UNECONOMIC

In 1997, six years after the licensee filed its initial plan, FERC issued an order approving a mitigation and management plan for the 170 MW Kerr Project in Montana. The FERC plan incorporated conditions submitted by the Department of the Interior requiring a variety of non-operational measures, including: a fish and wildlife implementation strategy to be funded through a one-time payment of \$12.5 million and annual payments of \$1.27 million, a fish stocking plan, the acquisition of 6,800 acres to serve as replacement wildlife habitat, the construction of five islands to serve as waterfowl habitat and construction of erosion control structures.

The FERC environmental impact statement (EIS) on the mitigation and management plan concluded that the conditions imposed by Interior would "eliminate the project's positive economic benefits." The EIS found that the project's current annual net benefits were approximately \$9 million, but that with Interior's conditions, the annual net benefits would be a negative \$2.7 million. Not even Interior disputed that the conditions would reduce the project's net annual benefits by many millions of dollars. However, the Commission noted that "any economic analysis of the impact of Interior's conditions is of at best tangential relevance to our decision," since FERC was obligated to impose the Interior conditions.

**CONDITIONS MAKING PROJECT UNECONOMIC/
INSUFFICIENT IMPACT ANALYSIS/
ARBITRARY NATURE OF PROCESS/LITIGATION AS ONLY RECOURSE**

The 700kw Yaleville project in upstate New York is one of the smallest hydro facilities operated by Niagara Mohawk Power Corporation. In pre-filing consultation in connection with the 1988 licensing of the project, the USFWS raised the issue of fish passage. The agency recommendation was to provide for downstream passage of freshwater non-migratory resident species, namely bass and walleye. This, despite:

- spillage over the dam provided natural passage of fish at least 85% of the time;
- despite decades of hydro project operation, an abundance of bass and walleye was evident on the river both above and below the project; and
- the \$400,000 price tag for the agency-recommended fishway was prohibitive for such a small project.

Niagara Mohawk disputed the agency recommendation in its license application and FERC, in its 1991 draft Environmental Assessment (EA) for the project, agreed with the owner and recommended a lower cost fish protection alternative. USFWS, after failing to sway FERC away from its position in dispute resolution proceedings, responded by prescribing the downstream passage fishway under its Section 18 mandatory conditioning authority.

FERC denied the fishway prescription in its 1992 license order because it did not meet the day's definition of "fishway" [at the time, a fishway had to serve the purpose of passing fish whose life cycle depended entirely on migration past the hydro facility -- which was not the case with the Yaleville bass and walleye.] A broader "fishway" definition was established with the passage of the Energy Policy Act of 1992; accordingly, FERC had to rescind its prior denial and require Niagara Mohawk to install the fishway -- despite the lack of biological basis and the fact that its cost would negate the economic operation of the project.

Niagara Mohawk promptly appealed the FERC order. Negotiations with USFWS ultimately led to an agreement to install a less expensive fishway design (at a cost one-tenth of that originally prescribed.) If the owner had not pursued an aggressive litigation action, USFWS would likely never have agreed to negotiate. Litigation, in this case, spawned reason; but only after more than 8 years of licensing process and a cost to the owner of nearly \$300,000.

CONDITIONS MAKING PROJECT UNECONOMIC

In 1997, FERC issued a license for a 70 MW project in Washington state. In the text of the license itself, FERC noted that the prescribed resource agency conditions would result in a yearly operating loss of over \$6.5 million for the project owner. Indicating that the project as licensed would not be "economically beneficial", FERC issued the license with the conditions, leaving it to the owner to "make the business decision whether [to operate the facility] in view of what appear to be the net economic costs."

November 22, 1999

HYDROELECTRIC LICENSING IMPROVEMENT

MYTHS AND REALITIES

Myth #1: *H.R.2335/S.740 would undercut key environmental protections in federal licensing of hydropower dams.*

Reality: H.R.2335/S.740 makes no changes to existing environmental law; rather it calls for the reasonable implementation of these laws, to achieve a balance that will protect the environment while ensuring a viable hydroelectric industry.

Myth #2: *H.R.2335/S.740 is a “wolf in sheep’s clothing” and seeks to take away a resource agency’s mandatory conditioning authority.*

Reality: H.R.2335/S.740 does absolutely nothing to remove or weaken a resource agency’s right to impose mandatory conditions on a hydroelectric license. What it does do is require a resource agency to consider, and be accountable for, the full effects of the conditions before imposing them on the licensee.

Myth #3: *H.R.2335/S.740 would overburden resource agencies with new procedural, process, and oversight requirements.*

Reality: Is it “overburdensome” for a resource agency to consider the costs and benefits of a condition before imposing it on a licensee?. H.R.2335/S.740 may very well require additional commitments of agency time and resources; but smarter, balanced decision-making demands greater agency responsibility.

***Myth #4:** Legislation is being pressed by elements of the hydropower industry who want to make up their own rules.*

Reality: Under the current system, it is the federal resource agencies that make up the rules and hold all the cards, imposing hydro license conditions without licensee recourse to appeal, or even question, decisions except through litigation. H.R.2335/S.740 will ensure that resource agency conditions reflect informed, knowledgeable consideration of all factors.

***Myth #5:** H.R.2335/S.740 requires agencies to balance the public interests of healthy fisheries and federal lands management against the private economic interests of power generation.*

Reality: This issue is not about private, economic interests. Preserving the viability of hydropower as a clean energy resource is a matter of significant public interest. The loss of a hydro project means the loss of clean, efficient, renewable electric power. Hydro helps the U.S. meet its clean air goals. Hydro projects provide water, flood control, fish and wildlife habitat, irrigation, transportation and enormous recreation benefits. Hydropower is one of the lowest-cost energy sources for the American consumer. Also, due to its unique load-following capability, peaking capacity and voltage stability attributes, hydropower plays a critical role in maintaining reliable electric service.

***Myth #6:** Dam owners are not at risk as they claim. Relicensing over the past 6 years resulted in average loss in generation of only 1%.*

Reality: According to a recent U.S. Department of Energy report, two thirds of all hydro projects relicensed since 1986 lost generation as a result of the relicensing process¹. In another government report, five of our nation's national laboratories found that **relicensing results in an average 8% loss in hydropower generation**.² The often-cited 1% figure masks this reality by factoring in the few projects that managed to add hydropower generation capacity as a result of the licensing process.

¹ "Hydropower Resources at Risk: The Status of Hydropower Regulation and Development – 1997"; Idaho National Engineering Laboratory, U.S. Department of Energy; September, 1997

² "Scenarios of U.S. Carbon Reductions: Potential Impacts of Energy Technologies by 2010 and Beyond"; Interlaboratory Working Group on Energy-Efficient and Low-Carbon Technologies, Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy; September, 1997

Myth #7: The hydropower industry consistently resists efforts by the environmental community to find a common solution to the hydro licensing issue.

Reality: Over the last 10 years, the hydropower industry has worked hard to engage the environmental community in dialogue over how best to improve the hydropower licensing process. Whether seeking a legislative compromise on fish passage definitions in 1991 or floating the initial concept for what has become FERC's new alternative license process, the hydropower industry has always tried to find common ground with environmental interests. Certainly, these efforts are not always successful, but not for lack of industry effort.

Myth #8: Improvements to the hydro licensing process can be made through non-legislative means.

Reality: The hydropower industry supports the alternative licensing process (ALP) and the use of settlement agreements. However, as FERC itself has acknowledged, ALP will not work in all cases, nor has it been shown that it will work in most cases.

Collaboration only works when all parties have a common interest in balancing competing interests and negotiating a fair and responsible resolution. The fact that the resource agencies have such a powerful tool as mandatory conditioning authority upsets this balance and serves as a disincentive for them to fully commit to a collaborative process.

To be clear: the industry is not calling for the repeal of mandatory conditioning authority. However, sound public policy dictates that the exercise of such absolute or mandatory authority must come with an equal level of responsibility and accountability. H.R.2335/S.740 will ensure just that.

FACTS YOU SHOULD KNOW ABOUT HYDROPOWER

Hydropower is an emissions-free and renewable energy source which serves the nation's environmental and energy policy objectives. Hydropower converts kinetic energy from falling water into electricity without consuming more water than is produced by nature.

Since 1880, when 16 brush-arc lamps were powered using a water turbine at the Wolverine Chair Factory in Grand Rapids, MI, hydropower has played a vital role in the U.S. energy mix. Here are some facts about hydropower:

HYDROPOWER — A KEY SOURCE OF ENERGY

- Currently, hydropower ranges between 10 and 12 percent of U.S. electrical generation.
- The United States is one of the largest producers of hydropower in the world, second only to Canada.
- Domestically, hydropower is capable of generating more than 90,000 megawatts of electricity per year. That's enough to provide electricity to 33.2 million consumers nationwide, or all the homes in California, Florida, New York, Pennsylvania, Ohio and North Carolina combined.
- In the Pacific Northwest, hydropower generates up to 70 percent of that region's electricity.
- Throughout the world, about one-fifth of electricity is generated from hydropower.

HYDROPOWER — A SOUND ENVIRONMENTAL CHOICE

- Hydropower is nation's leading renewable energy source. It accounts for 81 percent of the nation's total renewable electricity generation.
- Like wind, solar, geothermal and biomass, hydropower does not deplete its fuel source in the production of electricity – hence, it is completely renewable. Powered by the sun, the hydrologic cycle re-charges rivers and is essentially infinite. Hydropower converts falling water into electricity without using more water than is produced by nature.
- In 1996, hydropower made it possible to avoid burning 140 million tons of coal, 18 million barrels of oil, and 437 billion cubic feet of gas. As a result, 327 million tons of carbon dioxide was kept from being emitted into the air.
- Of the 75,187 existing dams in the U.S., less than 3 percent are used to generate electricity.

- There is an additional 21,000 megawatts of hydroelectric capacity at sites with an already existing dam. In all, there is nearly 30,000 megawatts of potential hydropower capacity at 5,677 sites that have been screened by the Department of Energy for environmental, legal and institutional constraints.
- Of the 765 hydro projects licensed by the federal government during the 1980's, 91 percent did not involve the construction of a new dam.
- Dams can enhance wetlands and support healthy fisheries. Wildlife preserves can be created around reservoirs which, in some cases, provide stable habitats for endangered or threatened species.
- There were a total of 81 million recreation user days provided at FERC licensed hydropower projects in 1990. Boating, skiing, camping, picnic areas and boat launch facilities are all supported by hydropower.

HYDROPOWER — EFFICIENT AND INEXPENSIVE

- Today's hydropower turbines are capable of converting 90 percent of available energy into electricity—that is more efficient than any other form of generation. Even the best fossil fuel power plant is only about 50 percent efficient.
- Hydroelectricity is one of the lowest cost forms of energy for the American electricity consumer. In 1996, hydropower ranged from less than one cent to just over two cents per kilowatt-hour to generate.
- The efficiency of hydropower, while impressive, can be further improved simply by refurbishing existing equipment. Increasing the efficiency of hydropower machinery in the existing system by only one percent would increase the United States' annual generation of electricity by about 3.3 billion kilowatt-hours, supplying more than 300,000 households.

HYDROPOWER — RELIABLE AND SECURE

- Hydropower's operational flexibility – its unique ability change output quickly – is highly valued in maintaining the stability of the electric grid.
- Water from rivers is a purely domestic resource that is not subject to disruptions from foreign suppliers or transportation issues.

WaterPower

The Clean Energy Coalition

MISSION STATEMENT

Hydropower – electricity generated from the kinetic energy of falling water – is a clean, dependable, efficient energy source that is vital to our nation's environmental and energy policy objectives. Hydropower...

...is low cost and efficient. American consumers benefit from hydropower -- one of the cheapest energy sources. Hydropower is capable of converting 90 percent of available energy into electricity, more efficient than any other form of generation.

...is reliable, renewable and secure. Water from rivers is a purely domestic resource that is free from disruptions by foreign suppliers or transportation bottlenecks; and the "fuel" is renewed each time it rains or snows.

...is a sound environmental choice. Emissions-free hydropower helps our nation meet its clean air goals. In 1997, hydropower displaced the equivalent of burning 143 million tons of coal, 20 million barrels of oil, and 471 billion cubic feet of natural gas combined, preventing the emission of 336 million tons of carbon dioxide. This is the equivalent of removing 67 million passenger cars—or 1/2 of the current fleet—from the roadway today.

... provides Americans with abundant recreational opportunities. Hydro projects provide enormous opportunities for camping, hiking, fishing, swimming, picnicking, boating, whitewater rafting, and water skiing, as well as flood control, irrigation, and numerous other benefits.

Hydropower is also a resource at risk. Due to the overwhelming regulatory burdens and costs associated with the federal hydropower relicensing process, many hydropower projects are losing generation and facing uncertain futures. A typical hydro license application can take from eight to 10 years to weave its way through the licensing process—some have taken more than 20 years. According to a recent U.S. Department of Energy report, hydropower regulatory actions since 1980 have cost the country more than \$7 billion in license processing, mitigation and other costs. Indeed, this report found that two thirds of all hydro projects relicensed since 1986 lost generation as a result of the relicensing process. If current trends continue, our country could lose a number of hydropower projects and, with them, enormous clean energy benefits. Moreover, consumers could face increased energy replacement costs.

With over half of all non-federal hydroelectric capacity scheduled to be relicensed in the next 15 years, **WaterPower: The Clean Energy Coalition** calls on Congress to improve the hydropower licensing process. We support implementation of our nation's environmental laws to achieve a balance that will protect the environment while ensuring a viable hydroelectric industry.

Membership List as of December 1, 1999

Abrasive Blasting & Coating, *Vallejo, CA*
Accusonic Technologies, Inc., *E. Falmouth, MA*
Acres International, *Seattle, WA*
AEHydro, *Boise, ID*
Aftermarket Business Consultants Inc.,
Waukesha, WI
Air Diffusion Systems, A John Hinde Co.,
Lake Bluff, IL
Alaska Rural Electric Cooperative Association,
Anchorage, AK
Alachua, City of, *Alachua, FL*
Almira Farmers Whse. Company, *Almira, WA*
Alta Irrigation District, *Dinwba, CA*
Alta Manzana Ranch, *Chelan, WA*
AmerenUE--Osage Plant, *Eldon, MO*
American Babbitt Bearing, Inc., *Huntington, WV*
American Ductile Iron Pipe, *Birmingham, AL*
American Electric Power, *Columbus, OH*
American Energy Insurance Services, *Concord, CA*
American Farm Bureau Federation, The,
Washington, DC
American Hydro Corporation, *York, PA*
American Public Power Association, *Washington, DC*
Amherst Industrial Services, Inc., *Amherst Jct, WI*
Anaheim Chamber of Commerce, *Anaheim, CA*
Antelope Valley Board of Trade, *Lancaster, CA*
Antelope Valley-East Kern Water Agency,
Palmdale, CA
Aquenergy Systems, Inc., *Greenville, SC*
ARC Technology, *Pacific, WA*
Arkansas Electric Cooperative Corporation,
Little Rock, AR
Armona Community Services District, *Armona, CA*
Arroyo Seco Mgt. Co, *Montrose, CA*
Asotin County Public Utility District, *Clarkston, WA*
Barton Village Electric Department, *Barton, VT*
Bartow, City of, *Bartow, FL*
Battery Power Systems, Inc., *Pacific, WA*
Bay State Subsurface Investigation, Inc., *Boston, MA*
Bear Valley Mutual Water Company, *Redlands, CA*
Beaver Valley Power Co., *Beaver Falls ID*
Benton County Public Utility District, *Kennebec, WA*
Black Chamber of Orange County, *Santa Ana, CA*
Bob Feil Boats & Motors, Inc., *East Wenatchee, WA*
Boise Metro Chamber of Commerce, *Boise, ID*
Boott Hydro Company, *Lowell, MA*
BP Hydro Associates, *Twin Falls, ID*
Brak Systems Inc., *Portland, ME*
Brazos River Authority, *Waco, TX*
Brooks & Associates, *Seatac, WA*
Bushnell, City of, *Bushnell, FL*
California Crusaders News, *Inglewood, CA*
Camara de Comercio Latina Del Valle de Pomona,
Pomona, CA
Carolina Power & Light Co., *Raleigh, NC*
Celesco Transducer Products Inc, *Canoga Park, CA*
Central Lincoln People's Utility District,
Newport, OR
Central Nebraska Public Power & Irrigation District,
Holdrege, NE
Cerritos Valley Bank, *Huntington Park, CA*
Chattahoochee, City of, *Chattahoochee, FL*
Chelan Public Utility District, *Wenatchee, WA*
CHI Energy, Inc., *Stamford, CT*
Chilton County Chamber of Commerce, *Clanton, AL*
Chino Basin Water Conservation District,
Montclair, CA
Chino Valley Chamber of Commerce, *Chino, CA*
Cochrane Foundry, Inc., *York, PA*
Christensen Associates, Inc., *San Rafael, CA*
City of Hart Board of Power and Light, *Hart, MI*
Clallam County Public Utility District,
Port Angeles, WA
Clark Public Utilities, *Vancouver, WA*
Clatskanie People's Utility District, *Clatskanie, OR*
Clean Air Conservancy, The, *Cleveland Heights, OH*
Clewiston, City of, *Clewiston, FL*
Clifton Corp., The, *Spartanburg, SC*
Columbia Basin Development League, *Royal City, WA*
Columbia Grain Int. Inc., *Clarkston, WA*
Columbia River People's Utility District, *St. Helens, OR*
Consolidated Hydro Southeast, Inc., *Greenville, SC*
Consolidated Water Power Company,
Wisconsin Rapids, WI
Consumers Coalition, *Redondo Beach, CA*
Consumer Federation of America, *Washington, DC*
Cool Insuring Agency, Inc., *Latham, NY*
Cordele-Crisp Chamber of Commerce, *Cordele, GA*
Core Services, LLC, *Myrtle Beach, SC*
Corona Manufacturers Council, *Corona, CA*



Costa Mesa Chamber of Commerce, *Costa Mesa, CA*
Cowlitz County Public Utility District, *Longview, WA*
Cretex Companies, The, *Elk River, MN*
Crofton Industries/Crofton Diving Corporation,
Portsmouth, VA
Crystal Falls, City of, *Crystal Falls, MI*
Crites Moscow Growers Inc., *Moscow, ID*
Cudahy Chamber of Commerce, *Cudahy, CA*
Cudahy Youth Foundation, *Cudahy, CA*
DB Consulting, *La Feria, TX*
D&B Orchards, *Chelan, WA*
DeLucia & Associates Inc., *Cambridge, MA*
Diamond Contract Services, Inc., *Pasadena, CA*
Division of Power & Light, City of Danville, VA,
Danville, VA
Dix Corporation, *Spokane, WA*
DMD Division - Dresser Equipment Group, *Bradford, PA*
Dolphin Associates, Inc., *Baltimore, MD*
Double Seal Ring Co., *Fort Worth, TX*
Downey Chamber of Commerce, *Downey, CA*
Duke Engineering & Services, Inc., *Portland, ME*
Duke Power Company, *Charlotte, NC*
Earth Day Coalition, *Cleveland, OH*
E• PRO, *Augusta, ME*
Edison Electric Institute, *Washington, DC*
East Indies Consulting Services, Inc., *Chicago, IL*
El Paso Electric Company, *El Paso, TX*
Electromechanical Engineering Associates, Inc.,
Pittsburgh, PA
Emerald Paint & Coating, *Mount Vernon, WA*
Emerald People's Utility District, *Eugene, OR*
Energy Insurance & Bonds, *Bountiful, UT*
Energy Northwest, *Richland, WA*
Enosburg Falls, Inc. Water & Light Department,
Enosburg Falls VT
Environmental Resources Management, *Annapolis, MD*
Ess Bros & Sons, Inc, *Loretto, MN*
Essex Power Services, Inc., *Boston, MA*
Ferry County Public Utility District, *Republic, WA*
FirstEnergy Corporation, *Akron, OH*
Florida Municipal Electric Association
Tallahassee, FL
Florida Power and Light Company, *Miami, FL*
FOB Partners, *Chelan, WA*
Fort Meade, City of, *Fort Meade, FL*
Fort Pierce Utilities Authority, *Fort Pierce, FL*
Franklin County Public Utility District, *Pasco, WA*
Gateway Chambers Alliance, *Montebello, CA*
Geokon, Inc., *Lebanon, NH*
George F. Brocke & Sons, Inc., *Kendrick, ID*
Georgia Association of RV Parks & Campgrounds,
Marietta, GA
Georgia-Pacific Corporation, *Atlanta, GA*
GO USA, *Wenatchee, WA*
Goosetail Orchard, *Chelan, WA*
Granite State Hydropower Association, *Boston, MA*
Grant County Public Utility District, *Ephrata, WA*
Grays Harbor County Public Utility District,
Aberdeen, WA
Great Lakes Region, Pulp & Paperworkers' Resource
Council, *Brainerd, MN*
Greater Corona-Norco Hispanic Chamber, *Corona, CA*
Greater Tulare Chamber of Commerce, *Tulare, CA*
Green Cove Springs, City of, *Green Cove Springs, FL*
Greiner Industries, *Mount Joy, PA*
Grimm Trophy and Gifts, *York, PA*
H & M Engineering, Inc., *Columbia, MD*
Hanford Chamber of Commerce, *Hanford, CA*
Harrison Equipment Co., Inc, *Kent, WA*
Havana Electric, *Havana, FL*
Hawthorn Chamber of Commerce, *Hawthorn, CA*
HCI Publications, *Kansas City, MO*
Heffernan Consulting, Inc., *Missoula, MT*
Helwig Carbon Products, Inc, *Seattle, WA*
Hemet/San Jacinto Valley Chamber of Commerce
Hemet, CA
Hexeco, Inc., *Berlin, WI*
Hispanic Business Women of Orange County,
Cypress, CA
Hispanic Chamber Org. Co., *Santa Ana, CA*
Hispanic Outreach Taskforce, *Whittier, CA*
Hispanic Youth Task Force Committee, *Pomona, CA*
HL Turner Group, Inc, The, *Concord, NH*
Hoffman Pattern, Inc., *Hanover, PA*
Homestead, City of, *Homestead, FL*
Huffman Group, The, *Hawthorne, CA*
Human Services Association, *Bell Gardens, CA*
Hutton Communications, *Woodinville, WA*
Hydro Development Group, Inc., *Dexter, NY*
Hydro Info Systems, *Fairfield, NJ*
Hydroacoustic Technology, Inc., *Seattle, WA*
Hydropower Turbine Systems, Inc., *Richmond, VA*
Idaho Falls Electric Division, City of, *Idaho Falls, ID*
Idaho Power Company, *Boise, ID*
Idaho Water Users Association, Inc., *Boise, ID*
Image Up Advertising, *Mission Viejo, CA*
In-Place Machining Company, *Milwaukee, WI*
Industrial Piping Systems, Inc., *York, PA*
Industrial Repair Service, *Farmington, NM*
Industry Manufacturerers Council, *City of Industry, CA*
Inland Empire Utility Agency, *Fontana, CA*
Inland Valley Economic Development Corp, *Pomona, CA*
Inland Valley Manufacturers' Council,
San Bernadino, CA
International Brotherhood of Electric Workers,
Washington, DC
Interstate Coatings, Inc., *Seattle, WA*
Irvine Chamber of Commerce, *Irvine, CA*
Iseley Enterprises, Inc., *Greer, SC*
ITW Philadelphia Resins, *Montgomeryville, PA*
Jacksonville Beach, City of, *Jacksonville Beach, FL*
James Leffel & Co., The, *Springfield, OH*

James Walker Mfg, *Glenwood, IL*
 JEA, *Jacksonville, FL*
 Jeffco Painting & Coating, Inc., *Vallejo, CA*
 Kaiser Aluminum, *Spokane, WA*
 Kamatics Corporation, *Bloomfield, CT*
 Kansas Municipal Utilities, *McPherson, KS*
 Kaukauna Electric & Water Department,
 Kaukauna, WI
 Keena Communications, *Mission Viego, CA*
 Key West City Electric System, *Key West, FL*
 Keystone Tool Crib, Inc., *Jacobus, PA*
 Kings County, *Hanford, CA*
 Kings County Economic Development Corporation,
 Hanford, CA
 Kings County Farm Bureau, *Hanford, CA*
 Kings River Conservation District, *Fresno, CA*
 Kingsbury, Inc., *Hatboro, PA*
 Kingsbury, Inc. Repair & Service Division, *Hatboro, PA*
 Kissimmee Utility Authority, *Kissimmee, FL*
 Kittitas County Public Utility District, *Ellensburg, WA*
 Kleinschmidt Associates, *Pittsfield, ME*
 Klickitat County Public Utility District,
 Goldendale, WA
 Kline Industrial Tool, *York, PA*
 L & M Ligum Vitae, *Hewitt, NJ*
 L & S Electric, *Schofield, WI*
 La Verne Chamber of Commerce, *La Verne, CA*
 Lake Worth, City of, *Lake Worth, FL*
 Lakeland, City of, *Lakeland, FL*
 Lakeside Irrigation Water District, *Hanford, CA*
 Lakewood Chamber of Commerce, *Lakewood, CA*
 Lancaster Chamber of Commerce, *Lancaster, CA*
 Lawrence Hydro Associates, *Lawrence, MA*
 Leesburg, City of, *Leesburg, FL*
 Lewis County Public Utility District, *Chehalis, WA*
 Lift-It Manufacturing Co., Inc., *Los Angeles, CA*
 Lincoln Cristi, Inc., *Vancouver, WA*
 Lindsay-Strathmore Irrigation District, *Lindsay, CA*
 LG&E Energy Corporation, *Louisville, KY*
 Lockhart Power Company, *Lockhart, SC*
 Lovejoy Steel, *York, PA*
 Loveman Steel Corp, *Bedford Heights, OH*
 Lower Tule River Irrigation District, *Porterville, CA*
 M & M Productions, *East Wenatchee, WA*
 Magnolia Metal Corporation, *Omaha, NE*
 Main-Tane Contracting, Inc., *Mechanicville, NY*
 Malibu Chamber of Commerce, *Malibu, CA*
 Manzana Ranch, *Chelan, WA*
 Marcear Orchards, Inc, *Chelan, WA*
 Marshall, City of, *Marshall, MI*
 Mason County Public Utility District No. 1, *Shelton, WA*
 Mason County Public Utility District No. 3, *Shelton, WA*
 McCullough Sales Corporation, *Chester Springs, PA*
 MCM Enterprises Ltd., *Bellevue, WA*
 Mead & Hunt, Inc., *Madison, WI*
 Merimil Limited Partners, *Cumberland, ME*
 Michigan Municipal Electric Association, *Lansing, MI*
 Microcut, Inc, *York, PA*
 Mid American Natural Resources, Inc., *Erie, PA*
 Midwest Hydro Users Group, *Wausau, WI*
 Milk Producers Council, *Ontario, CA*
 Miller-Hefele Pump, *King of Prussia, PA*
 Minnesota Power, Inc., *Duluth, MN*
 Mississippi Consulting Engineers Council, *Jackson, MS*
 Moore Haven, City of, *Moore Haven, FL*
 Mount Dora, City of, *Mount Dora, FL*
 Municipal Electric Systems of Oklahoma,
 Oklahoma City, OK
 Municipal Electric Utilities of Wisconsin, *Sun Prairie, WI*
 NW Pipe Co., *Portland, OR*
 National Hydropower Association, *Washington, DC*
 National Marine Manufacturers Association,
 Washington, DC
 Nebraska Public Power District, *Columbus, NE*
 Nevada Irrigation District, *Colfax, CA*
 New Smyrna Beach Municipal Utility,
 New Smyrna Beach, FL
 Newberry, City of, *Newberry, FL*
 New York Power Authority, *Albany, NY*
 Norco Economic Development Business Advisory
 Council, *Norco, CA*
 North American Hydro, Inc., *Neshkoro, WI*
 North Central Educational Service District,
 Wenatchee, WA
 NorthBrook Energy, *Chicago, IL*
 Northeast Region, Pulp and Paper Workers Council,
 Rumford, ME
 Northern California Power Agency, *Roseville, CA*
 Northern Lights, Inc., *Sandpoint, ID*
 Northern Pine Region, Pulp & Paperworkers' Resource
 Council, *Ticonderoga, NY*
 Northern States Power Company, *Eau Claire, WI*
 Northern Wasco County People's Utility District,
 The Dalles, OR
 Norwalk Chamber of Commerce, *Norwalk, CA*
 NSW Corporation, *Roanoke, VA*
 Ocala Electric Utility, *Ocala, FL*
 Oconto Electric Co-Op, *Oconto Falls, WI*
 Ohio Municipal Electric Association, *Columbus, OH*
 Okanogan County Public Utility District,
 Okanogan, WA
 Olson Electric Development Company, *Methuen, MA*
 Ontario Chmaber of Commerce, *Ontario, CA*
 Orange County Taxpayers Association,
 San Juan Capistrano, CA
 Oregon Arms Collectors, *Portland, OR*
 Oregon People's Utility District Association, *Salem, OR*
 Orlando Utilities Commission, *Orlando, FL*
 Ossberger Turbines, Inc., *Richmond, VA*
 Otter Tail Power Company, *Fergus Falls, MN*
 Ottumwa Water & Hydro, *Ottumwa, IA*
 P. J. Schwalbenberg & Associates, *Spruce Head, ME*

Pacific County Public Utility District No. 2,
Raymond, WA
 Pacific Energy Control, *Milwaukie, OR*
 Pacific Northwest Generating Cooperative, *Portland, OR*
 Pacific Northwest Waterways Association,
Vancouver, WA
 PacifiCorp, *Portland, OR*
 Packaging Corporation of America, *Tomahawk, WI*
 Palmdale Chamber of Commerce, *Palmdale, CA*
 Palmdale Water District, *Palmdale, CA*
 Pamela Corante Communications, *Redondo Beach, CA*
 Paymaster Sales and Service, *Spokane, WA*
 Pend Oreille Public Utility District,
Newport, WA
 Phelps Dodge Corporation, *Phoenix, AZ*
 Pico Rivera Chamber of Commerce, *Pico Rivera, CA*
 Pierce Atwood, *Portland, ME*
 Pixley Irrigation District, *Pixley, CA*
 Placentia Chamber of Commerce, *Placentia, CA*
 Port of Benton, *Richland, WA*
 Port of Brookings Harbor, *Brookings, OR*
 Port of Camas Washougal, *Washougal, WA*
 Port of Columbia, *Dayton, WA*
 Port of Whitman, *Colfax, WA*
 Port of Woodland, *Woodland, WA*
 Portland General Electric Company, *Portland, OR*
 Potato Growers of Idaho, Inc., *Blackfoot, ID*
 Potlatch Corporation, *Spokane, WA*
 PowerHouse Systems, *Jefferson, NH*
 Powerwheel Associates, *Woodside, CA*
 Premier Materials Technology, Inc., *Minneapolis, MN*
 Pre-Mach. Inc., *York, PA*
 Presnell Gage Accounting & Consulting,
Lewiston, ID
 Prime Power Inc, *Richland, MO*
 Process Systems Engineering Group, *Lancaster, PA*
 Public Utility District No.1 of Douglas County,
East Wenatchee, WA
 Public Utility District No. 1 of Jefferson County,
Port Townsend, WA
 Public Utility District No. 1 Kitsap County,
Port Orchard, WA
 Puente Hills Chamber of Commerce, *La Puente, CA*
 QRS, Inc., *Las Vegas, NV*
 Quality Resource & Services, Inc., *Spokane, WA*
 Quincy, City of, *Quincy, FL*
 Randolph Sheet Metal Inc., *Pasco, WA*
 Resolutions, *Moreno Valley, CA*
 Rio Hondo Boys & Girls Club, *Commerce, CA*
 Rocky Mountain Region, Pulp & Paperworkers' Resource
 Council, *Lewiston, ID*
 Roctest, Inc., *Plattsburg, NY*
 Sabine River Authority of Texas, *Orange, TX*
 Sacramento Municipal Utility District, *Sacramento, CA*
 Safe Harbor Water Power Corporation, *Conestoga, PA*
 Santee Cooper/South Carolina Public Service Authority,
Moncks Corner, SC
 Save Our Dams, *Ephrata, WA*
 SCANA Corp., *Columbia, SC*
 SGL Technic, Inc. Polycarbon Division,
Valencia, CA
 Sitka Electric Department, City & Borough of,
Sitka, AK
 Skagit County Public Utility District,
Mount Vernon, WA
 Skamania County Public Utility District, *Carson, WA*
 Slothower Machine Shop, Inc., *York, PA*
 Smith-Blair, Inc., *Texarkana, AR*
 Smith Mountain Lake Policy Advisory Board,
Moneta, VA
 Smith Mountain Lake Pressure Cleaning, *Hardy, VA*
 Snohomish County Public Utility District, *Everett, WA*
 Soboda Band of Mission Indians, *San Jacinto, CA*
 Soiltest Farm Consultants, Inc., *Moses Lake, WA*
 South County Septic, *Mattawa, WA*
 South Orange County Regional Chambers of Commerce,
Mission Viejo, CA
 Southeast Region, Pulp & Paperworkers' Resource
 Council, *Dixon Mills, AL*
 Southern California Edison, *Rosemead, CA*
 Southern Pine Region, Pulp and Paper Workers Resource
 Council, *McGehee, AR*
 Southwest Riverside County Manufacturers' Council,
Temecula, CA
 Specialty Diving, Inc., *Hammond, LA*
 St. Cloud, City of, *St. Cloud, FL*
 St. Joseph County Parks, *South Bend, IN*
 Stanly County Chamber of Commerce, *Albermarle, NC*
 Starke, City of, *Starke, FL*
 Stevens County Public Utility District No. 1,
Colville, WA
 Stooddy Company, *Bowling Green, KY*
 Strabala Ramirez & Associates, Inc., *Irvine, CA*
 Structure Guard, Inc., *Warren, ME*
 Superbolt, Inc., *Carnegie, PA*
 Superior Asphalt & Concrete Co, *Yakima, WA*
 Swain County Chamber of Commerce, *Bryson City, NC*
 Swanton Village Electric Department, *Swanton, VT*
 Synergics, Inc., *Annapolis, MD*
 T. H. Nelson & Associates, *Portland, OR*
 Tacoma Power, *Tacoma, WA*
 Tallahassee, City of, *Tallahassee, FL*
 Tenmat Inc., *Newark, DE*
 Teviston Community Services District, *Pixley, CA*
 Thurston County Public Utility District,
Olympia, WA
 Tillamook People's Utility District, *Tillamook, OR*
 Time Insurance Agency, Inc., *Austin, TX*
 Titan Abrasive Systems, Inc., *Pitman, PA*
 Touchet Valley Seeds, Inc., *Dayton, WA*
 Town of Hardwick Electric Department, *Hardwick, VT*

Town of Stowe Electric Department, *Stowe, VT*
 Trans Mountain Consulting Company, *Golden, CO*
 Traverse City Light and Power, *Traverse City, MI*
 Tri-Cities Youth Leadership Council, *Cudahy, CA*
 Tri-Dam Project, *Pinecrest, CA*
 Trola Industries, Inc., *York, PA*
 Trola-Dyne, Inc., *York, PA*
 Turbine Generation, N.W., Inc., *Columbia City, OR*
 Tulare, City of, *Tulare, CA*
 Tulare County Farm Bureau, *Visalia, CA*
 Turlock Irrigation District, *Turlock, CA*
 Turner's Building, Inc., *Union Hall, VA*
 Twin Falls Hydro Company, Inc., *Bellevue, WA*
 Twin Falls Canal Company, *Twin Falls, ID*
 Unaflex, Inc., *Pompano, FL*
 Union County Development Board, *Union, SC*
 Unit Process Co, *Royal City, WA*
 United American Energy Corp., *Woodcliff Lake, NJ*
 United Water Conservation District, *Santa Paula, CA*
 Universal Electric Power, *Akron, OH*
 Upper Yampa Water Conservancy District,
 Steamboat Springs, CO
 VA Tech Voest MCE Corporation, *Salisbury, NC*
 Valley-Wide Recreation and Park District,
 San Jacinto, CA
 Vent-Print, *Bell Gardens, CA*
 Vermont Marble Power Division of OMYA, Inc.,
 Proctor, VT
 Vermont Public Power Supply Authority,
 Waterbury Center, VT
 Vero Beach, City of, *Vero Beach, FL*
 Village of Hyde Park, Inc., *Hyde Park, VT*
 Village of Jacksonville, *Jacksonville, VT*
 Village of Ludlow Electric Light Department,
 Ludlow, VT
 Village of Lydonville Electric Department,
 Lydonville, VT

Village of Morrisville Water & Light, *Morrisville, VT*
 Village of Northfield Electric Department,
 Northfield, VT
 Village of Orleans, Inc., *Orleans, VT*
 Virginia Power, *Glen Allen, VA*
 Visalia Chamber of Commerce, *Visalia, CA*
 Voith Hydro Inc., *York, PA*
 Wahiakum County Public Utility District,
 Grays River, WA
 Walls Inspection Company, Inc., *Lake Elsinore, CA*
 Warminster Fiberglass Co., *Southampton, PA*
 Warren County Chamber of Commerce, *Warren, PA*
 Washington Growers Clearing House Association,
 Wenatchee, WA
 Washington PUD Association, *Seattle, WA*
 Washington State Potato Commission, *Moses Lake, WA*
 Waters & Faubel, Inc., *Newport Beach, CA*
 Wauchula, City of, *Wauchula, FL*
 Wausau-Mosinee Paper, *Mosinee, WI*
 Wenatchee Valley Clinic, *Wenatchee, WA*
 Western Region, Pulp and Paper Workers Resource
 Council, *Camas, WA*
 Weyerhaeuser Company, *Tacoma, WA*
 Whatcom County Public Utility District,
 Ferndale, WA
 White Hydropower Company, *Bettendorf, IA*
 Whittier Chamber of Commerce, *Whittier, CA*
 Williston, City of, *Williston, FL*
 Wilson-Ramseur, Inc., *Raleigh, NC*
 Windstream Power Systems, Inc., *Burlington VT*
 Wisconsin River Power Company,
 Wisconsin Rapids, WI
 Wolfe Tool & Machine Company, *York, PA*
 Yuba County Water Agency, *Marysville, CA*
 York Welding Supply, Inc., *York, PA*

U.S. Non-Federal Hydropower Profile

STATE	TOTAL NON-FEDERAL HYDRO CAPACITY (MW)	CAPACITY TO BE RELICENSED BETWEEN 1999-2015 (MW)
Alabama	1,640	1,367
Alaska	287	30
Arizona	15	3
Arkansas	897	65
California	10,197	4,623
Colorado	413	335
Connecticut	144	117
Delaware	0	0
Florida	14	0
Georgia	1,721	351
Hawaii	0	0
Idaho	1,296	451
Illinois	61	17
Indiana	92	84
Iowa	8	3
Kansas	3	0
Kentucky	348	80
Louisiana	192	0
Maine	722	139
Maryland	513	512
Massachusetts	1,887	53
Michigan	1,963	70
Minnesota	226	68
Mississippi	0	0
Missouri	603	584
Montana	1,041	488
Nebraska	180	48
Nevada	205	0
New Hampshire	594	324
New Jersey	2,381	365
New Mexico	49	0
New York	5,916	3,955
North Carolina	853	698
North Dakota	0	0
Ohio	1,630	2
Oklahoma	497	360
Oregon	2,267	1,920
Pennsylvania	2,007	1,447
Rhode Island	7	0
South Carolina	3,631	1,178
South Dakota	0	0
Tennessee	327	327
Texas	130	86
Utah	107	15
Vermont	157	38
Virginia	2,915	721
Washington	9,649	7,604
West Virginia	1,506	47
Wisconsin	454	110
Wyoming	8	2
TOTAL	59,753 MW	28,687 MW

source: FERC "workload tracking database," December 1998

October 7, 1999

**HYDROELECTRIC DAMS NEEDING RELICENSING
BY STATE AND CONGRESSIONAL DISTRICT**

ALABAMA

Rep. Terry Everett (R-02)

- 2005 Conecuh River (Alabama Electric Coop-- 8250 kw)
- 2007 Jordan (Alabama Power-- 100000 kw)
- 2007 Coosa River (Alabama Power-- 690000 kw)

Rep. Bob Riley (R-03)

- 2004 Chattahoochee (Georgia Power-- 115600 kw)
- 2007 Mitchell (Alabama Power-- 170000 kw)
- 2009 Eagle & Phenix (Eagle & Phenix Hydro Co-- 27660 kw)
- 2013 Martin Dam (Alabama Power -- 154200 kw)
- 2014 Bartletts Ferry (Georgia Power -- 165000 kw)

Rep. Spencer Bachus (R-06)

- 2015 Holt Lock & Dam (Alabama Power -- 40000 kw)

Rep. Robert Aderholt (R-04)

- 2007 John H. Bankhead (Alabama Power-- 202635 kw)

ALASKA

Rep. Don Young (R-AL)

- 2000 Ketchikan Lakes (Ketchikan-- 4200 kw)
- 2004 Blind Slough (City of Petersburg-- 2000 kw)
- 2005 Chignik (Aleutian Dragon Fisheries-- 50 kw)
- 2007 Cooper Lake (Chugach Elec Assn-- 15000 kw)
- 2007 Skagway Dewey (Alaska Power-- 943 kw)
- 2008 Blue Lake (City of Sitka-- 7700 kw)

ARIZONA

Rep. J.D. Hayworth (R-06)

- 2012 Blue Ridge (Phelps Dodge Morenci -- 2800 kw)

ARKANSAS

Rep. Jay Dickey (R-04)

- 2003 Carpenter & Rammel (Arkansas Power-- 65300 kw)

CALIFORNIA

Rep. Wally Herger (R-02)

2000 Hat Creek (PG&E-- 20000 kw)
2003 Pit (PG&E-- 317000 kw)
2003 Poe (PG&E-- 142830 kw)
2004 U N Fork Feather (PG&E-- 342020 kw)
2006 Klamath (PacifiCorp-- 231000 kw)
2007 Feather (CA Dept of Water Resources-- 2165750 kw)
2007 Kilarc & Cow Creek (PGE-- 8880 kw)
2009 South Fork (Oroville-Wyandotte IR District-- 104100 kw)
2010 Fire Mountain Lodge (Ken Willis-- 15 kw)
2011 McCloud-Pit (PG&E -- 340500 kw)

Rep. John Doolittle (R-04)

1996 Murphys (PG&E-- 3600 kw)
2002 El Dorado (PG&E-- 20000 kw)
2004 Stanislaus-Spring Gap (PG&E-- 175800 kw)
2004 Tulloch (Oakdale & S San Stanislaus-- 17100 kw)
2004 Donnels & Beardsley (Oakdale & S San Joaquin Irrigation-- 63990 kw)
2007 Chili Bar (PGE-- 7020 kw)
2007 Upper American (SMUD-- 722259 kw)
2009 Cinnamon Ranch (Richard Moss-- 175 kw)
2013 Drum-Spaulding (PG&E -- 181205 kw)
2013 Middle Fork American River (Placer County Water Agency -- 211153 kw)

Rep. Gary Condit (D-18)

2014 Merced Falls (PG&E -- 3440 kw)

Rep. George Radanovich (R-19)

1999 Big Creek No 4 (So. California Edison-- 91000 kw)
2000 Lower Tule (So. California Edison-- 2000 kw)
2003 Vermilion Valley (So. California Edison -- storage reservoir only)
2005 Portal (So. California Edison-- 10000 kw)
2007 Mammoth Pool (So. California Edison-- 181000 kw)
2009 Big Creek No 3 (So. California Edison-- 177450 kw)
2009 Big Creek No 2A & 8 (So. California Edison-- 480070 kw)
2009 Big Creek No 1 & 2 (So. California Edison-- 225900 kw)
2014 McSwain & New Exchequer (Merced Irrigation District -- 89100 kw)

Rep. William Thomas (R-21)

1996 Kern River (So. California Edison-- 24992 kw)
2000 Lower Tule (So. California Edison-- 2000 kw)
2005 Kern Canyon (PGE-- 11500 kw)
2005 Borel (So. California Edison-- 9200 kw)

Rep. Elton Gallegly (R-23)

2004 Santa Felicia Res (United Wtr Cons Dist-- 1434 kw)

Rep. Jerry Lewis (R-40)

1996 Santa Ana Rivers Nos. 1 and 3 (So. California Edison-- 6900 kw)

1996 Mill Creek (So. California Edison-- 2756 kw)

1996 Lytle Creek (So. California Edison-- 500 kw)

2003 San Geronio No 1&2 (So. California Edison-- 2250 kw)

COLORADO

Rep. Mark Udall (D-02)

2000 Gross (Denver-- ?? kw)

2009 Boulder Canyon (Public Service Co of CO-- 20000 kw)

2014 Cabin Creek (Public Service Co. of Colorado -- 300000 kw)

Rep. Scott McInnis (R-03)

2003 A J Allen (Judith A Burford-- 17 kw)

2003 Woods Lake (Woods Lake Hydro-- 45 kw)

2006 Williams Fork (City of Denver-- 3000 kw)

2010 Ames & Tacoma (Public Service Co. of CO-- 11600 kw)

2010 Ouray (Eric R. Jacobson-- 700 kw)

CONNECTICUT

Rep. Sam Gejdenson (D-02)

2012 Scotland (Connecticut Light & Power -- 20000 kw)

Rep. James Maloney (D-05)

2001 Housatonic (Conn Light & Power-- 151300 kw)

Rep. Nancy L. Johnson (R-06)

2001 Falls Village (Conn Light & Power-- 9000 kw)

GEORGIA

Rep. Sanford Bishop (D-02)

- 2001 Flint River (Georgia Power Co-- 5400 kw)
- 2008 Crisp County (Crisp County Power-- 15200 kw)

Rep. Mac Collins (R-03)

- 2004 Chattahoochee (Georgia Power-- 115600 kw)
- 2009 Eagle & Phenix (Eagle & Phenix Hydro Co-- 27660 kw)
- 2014 Bartletts Ferry (Georgia Power -- 165000 kw)

Rep. John Lewis (D-05)

- 2009 Morgan Falls (Georgia Power Co-- 16800 kw)

Rep. Charlie Norwood (R-10)

- 1997 Sinclair (Georgia Power-- 45000 kw)
- 2001 Enterprise (Graniteville Co-- 1200 kw)
- 2003 Siley Mill (Graniteville Co-- 2475 kw)
- 2009 King Mill (Spartan Mills-- 2050 kw)

IDAHO

Rep. Helen Chenoweth (R-01)

- 1998 Moyie No 1 & 2 (City of Bonners Ferry-- 3950 kw)
- 2000 C J Strike (Idaho Power-- 82800 kw)
- 2001 Cabinet Gorge (Washington Wtr Pwr-- 211500 kw)
- 2010 Hettinger (Mackay Bar Corp-- 12 kw)
- 2010 Swan Falls (Idaho Power Co-- 25000 kw)

Rep. Mike Simpson (R-02)

- 1997 Lower Salmon (Idaho Power-- 60000 kw)
- 1998 Bliss (Idaho Power-- 75000 kw)
- 1999 Upper Salmon (Idaho Power-- 34500 kw)
- 1999 Shoshone Falls (Idaho Power-- 12500 kw)
- 2000 Oneida (PacifiCorp-- 30000 kw)
- 2001 Grace & Cove (PacifiCorp-- 40500 kw)
- 2003 Soda (PacifiCorp-- 14000 kw)
- 2004 Ponds Lodge (Buffalo Hydro-- 250 kw)
- 2004 Malad (Idaho Power Co-- 21770 kw)

ILLINOIS

Rep. Jerry Weller (R-11)

2004 Dayton (Hydro-Op One Associates-- 3680 kw)

Rep. Judy Biggert (R-13)

2001 Lockport (Sanitary Dist of Chicago-- 13500 kw)

INDIANA

Rep. Tim Roemer (D-03)

2000 Elkhart (IN and MI Elec Co-- 3440 kw)

Rep. Baron Hill (D-09)

2011 Markland (PSI Energy -- 81000 kw)

IOWA

Rep. Leonard Boswell (D-03)

2008 Ottumwa (City of Ottumwa-- 3250 kw)

KENTUCKY

Rep. Anne Northup (R-03)

2005 Ohio Falls (Louisville Gas & Electric-- 80320 kw)

LOUISIANA

Rep. Jim McCrery

2013 Toledo Bend (Sabine River Authority, Texas -- 85750 kw)

MAINE

Rep. Thomas Allen (D-01)

1999 Saccarappa (S D Warren Co / Sappi-- 1350 kw)

2000 Little Falls (S D Warren Co / Sappi -- 1000 kw)

2000 Mallison Falls (S D Warren Co / Sappi -- 800 kw)

2000 Gambo (S D Warren Co / Sappi -- 1900 kw)

2001 Dundee (S D Warren Co / Sappi -- 2400 kw)

2004 Eel Weir (S D Warren Co / Sappi -- 1800 kw)

2004 Lockwood (Merimil Ltd Pnsp-- 6770 kw)

2005 Bar Mills (Central Maine Power-- 4000 kw)

Rep. John Baldacci (D-02)

1997 Flagstaff (Central Maine-- ?? kw)
1999 Riley-Jay-Livermore (International Paper-- 19415 kw)
1999 Otis (Otis Co-- 10350 kw)
1999 Medway (Bangor Hydro-- 3440 kw)
2000 Great Northern (Great Northern Paper-- ?? kw)
2000 West Branch (S D Warren Co / Sappi -- ?? kw)
2000 Forest City (Georgia-Pacific-- ?? kw)
2000 Howland (Bangor Electric-- 1875 kw)
2001 Harris (Central Maine Power-- 75000 kw)
2002 Great Works (James River-Norwalk-- 7655 kw)
2004 Anson (Madison Paper-- 9000 kw)
2004 Abenaki (Madison Paper-- 16977 kw)
2012 Brassua (Central Maine Power -- 4180 kw)

MARYLAND

Rep. Wayne Gilchrest (R-01)

2014 Conowingo (Susquehanna Power -- 512000 kw)

Rep. Robert Ehrlich (R-02)

2014 Conowingo (Susquehanna Power -- 512000 kw)

MASSACHUSETTS

Rep. John Olver (D-01)

2001 Woronco (International Paper-- 2690 kw)
2009 Glendale (Joseph Guerrieri-- 350 kw)
2011 Willow Mill (Mead Paper Corp. -- 100 kw)

Rep. Richard Neal (D-02)

1999 Hadley Falls (Holyoke Power-- 42865 kw)
2007 Holyoke No 4 (City of Holyoke-- 744 kw)

Rep. Martin Meehan (D-05)

1999 Aquamac (Aquamac Corp-- 250 kw)

Rep. John Tierney (D-06)

1999 Merrimack (Merrimack Paper-- 1088 kw)

MICHIGAN

Rep. Bart Stupak (D-01)

1998 Big Quinnesec (Wisconsin Power-- 19750 kw)
2001 Elk Rapids (County of Antrim-- 700 kw)
2001 Marquette (City of Marquette-- 3900 kw)
2001 Lower Paint (Wisconsin Electric-- 100 kw)
2001 Michigamme Falls (Wisconsin Electric-- 9600 kw)
2001 Hemlock Falls (Wisconsin Electric-- 2800 kw)
2001 Michigamme (Wisconsin Electric-- 19944 kw)
2004 Sturgeon Falls (City of Norway-- 5636 kw)
2004 Kingsford (Wisconsin Electric-- 7200 kw)
2014 Brown Bridge (City of Traverse City -- 800 kw)

Rep. Peter Hoekstra (R-02)

2002 Hart Lake (City of Hart-- 352 kw)
2010 Calkins Bridge (Consumers Power-- 2550 kw)

Rep. Vern J. Ehlers (R-03)

2001 Webber (Consumers Power Co-- 3250 kw)

Rep. Dave Camp (R-04)

2007 Sanford (Wolverine Power-- 3300 kw)

Rep. Fred Upton (R-06)

2000 Sturgis (City of Sturgis-- 2720 kw)
2003 Mottville (Indiana Michigan Power-- 1680 kw)

Rep. Nick Smith (R-07)

2005 Marshall (City of Marshall-- 319 kw)

Rep. Lynn River (D-13)

2003 Ford Lake (Joint Ypsilanti Rec Orgn-- 1920 kw)

MINNESOTA

Rep. Bruce F. Vento (D-04)

2003 Twin City L&D 1 (Ford Motor Co-- 17920 kw)

Rep. Martin Sabo (D-05)

2000 St Anthony Falls (Northern States Power-- 12400 kw)

Rep. Collin Peterson (D-07)

2003 Blanchard (Minnesota Power-- 18000 kw)

Rep. James Oberstar (D-08)

- 1997 Pillager (Minnesota Power-- 1520 kw)
- 2003 Winton (Minnesota Power-- 4000 kw)
- 2003 Blanchard (Minnesota Power-- 18000 kw)

MISSOURI

Rep. Ike Skelton (D-04)

- 2006 Osage (Ameren-- 176200 kw)

Rep. JoAnn Emerson (R-08)

- 2010 Taum Sauk P/S (Ameren-- 408000 kw)

MONTANA

Rep. Rick Hill (R-AL)

- 1999 Milltown (Montana Power-- 3200 kw)
- 2001 Big Fork (PacifiCorp-- 4150 kw)
- 2005 Noxon Rapids (Washington Water Power-- 460120 kw)
- 2009 Mystic Lake (Montana Power Co-- 10000 kw)
- 2011 Lake Creek (Northern Lights -- 4500 kw)

NEBRASKA

Rep. Bill Barrett (R-03)

- 2014 Loup Canal (Loup River Public Power District -- 4770 kw)

NEW HAMPSHIRE

Rep. Charles Bass (R-02)

- 2001 Fifteen Miles Falls (New England Power-- 291360 kw)
- 2005 Merrimack River (Public Service Co. of NH-- 29700 kw)
- 2014 Monadnock Paper Mills (Monadnock Paper Mills -- 1945 kw)

NEW JERSEY

Rep. Marge Roukema (R-05)

- 2013 Yards Creek (Jersey Central Power -- 364500 kw)

NEW YORK

Rep. Michael McNulty (D-21)

2011 Green Island (Constellation -- 6000 kw)

Rep. John Sweeney (R-22)

2000 Palmer Falls (International Paper-- 58300 kw)

2000 Stewarts Bridge (Niagara Mohawk Pwr-- 30000 kw)

2005 Stuyvesant Falls (Niagara Mohawk Power-- 2800 kw)

Rep. John McHugh (R-24)

2001 Carry Falls (Niagara Mohawk Pwr-- ?? kw)

2002 Raquette (Niagara Mohawk-- 343800 kw)

2002 Fowler No 7 (Hydro Dev Group-- 900 kw)

2002 Rainbow Falls (NY St Elec & Gas-- 2640 kw)

2002 Hailesboro No 4 (Hydro Dev Group-- 1490 kw)

2003 St Lawrence (Power Auth State of NY-- 912000 kw)

2004 Newton Falls (Newton Falls Paper-- 2220 kw)

2005 Piercefield (Niagara Mohawk-- 2 kw)

2006 Saranac (NY State Electric-- 39200 kw)

2006 Macomb (Niagara Mohawk-- 1000 kw)

2012 Emeryville (Hampshire Paper Co. -- 3540 kw)

2012 Oswegatchie River (Constellation -- 28471 kw)

2012 Natural Dam (Fonda Group -- 1020 kw)

2015 Chasm (Constellation -- 3350 kw)

2015 Hogansburg (Constellation -- 485 kw)

Rep. John LaFalce (D-29)

2007 R Moses Niagara (Power Auth State of NY-- 2815500 kw)

Rep. Amory Houghton (R-31)

2003 Keuka Lake (NY St Elec & Gas-- 2000 kw)

NORTH CAROLINA

Rep. Eva Clayton (D-01)

2000 Gaston & Roanoke Rapid (VEPCO-- 277920 kw)

Rep. David Price (D-04)

2015 Bynum Dam (Bynum Hydro Co. -- 600 kw)

Rep. Richard M. Burr (R-5)

2000 Idols (Duke Power Co-- 1410 kw)

Rep. Robin Hayes (R-08)

- 2008 Yadkin Falls (Yadkin Inc-- 202900 kw)
- 2008 Yadkin-Pee Dee (Carolina Power and Light-- 108600 kw)

Rep. Cass Ballenger (R-10)

- 2000 Idols (Duke Power Co-- 1410 kw)

Rep. Charles H. Taylor (R-11)

- 2001 Queens Creek (Nantahala Power-- 1440 kw)
- 2005 Dillsboro (Nantahala Power & Light-- 225 kw)
- 2005 Franklin (Nantahala Power & Light-- 1040 kw)
- 2005 Mission (Nantahala Power & Light-- 1800 kw)
- 2005 Bryson (Nantahala Power & Light-- 980 kw)
- 2006 East Fork (Nantahala Power-- 26175 kw)
- 2006 West Fork (Nantahala Power-- 24600 kw)
- 2006 Nantahala (Nantahala Power-- 43200 kw)

OHIO

Rep. John Boehner (R-08)

- 2001 Hamilton (City of Hamilton-- 1500 kw)

OKLAHOMA

Rep. Tom Coburn (R-02)

- 2005 Markham Ferry (Grand River Dam Authority-- 100000 kw)
- 2015 Salina (Grand River Dam Authority -- 260000 kw)

OREGON

Rep. David Wu (D-01)

- 2004 Willamette (Portland General Electric-- 22500 kw)

Rep. Greg Walden (R-02)

- 1996 Rock Creek (Oregon-- 800 kw)
- 2000 Powerdale (PacifiCorp-- 6000 kw)
- 2001 Round Butte & Pelton (Conf Tribes / Portland-- 398655 kw)
- 2005 Hells Canyon (Idaho Power Co-- 1166500 kw)
- 2005 Prospect 1 2 & 4 (PacifiCorp-- 36760 kw)

Rep. Peter DeFazio (D-04)

- 1997 North Umpqua (PacifiCorp-- 262750 kw)

2008 Trail Bridge & Carmen (City of Eugene-- 124500 kw)

Rep. Darlene Hooley (D-05)

2004 Willamette (Portland General Electric-- 22500 kw)

2004 Bull Run (Portland General Electric-- 21000 kw)

2006 Oak Grove (Portland General Electric-- 51025 kw)

2006 North Fork (Portland General Electric-- 91900 kw)

PENNSYLVANIA

Rep. John Peterson (R-05)

2002 Piney (Penn Elec Co-- 28800 kw)

2015 Kinzua (Pennsylvania Electric -- 451800 kw)

Rep. Donald Sherwood (R-10)

2004 Wallenpaupack (Penn Power & Light-- 40000 kw)

Rep. Joseph Pitts (R-16)

2014 Muddy Run (Philadelphia Electric Co. -- 800000 kw)

2014 Holtwood (Pennsylvania Power & Light -- 107200 kw)

Rep. George W. Gekas (R-17)

2014 York Haven (York Haven Power -- 19600 kw)

Rep. William F. Goodling (R-19)

2014 Muddy Run (Philadelphia Electric Co. -- 800000 kw)

2014 York Haven (York Haven Power -- 19600 kw)

2014 Holtwood (Pennsylvania Power & Light -- 107200 kw)

SOUTH CAROLINA

Rep. Mark Sanford (R-01)

2006 Santee-Cooper (So Carolina PSA-- 134520 kw)

Rep. Floyd Spence (R-02)

2000 Columbia (So Carolina Elec-- 10600 kw)

2007 Saluda (So Carolina Electric-- 207300 kw)

Rep. Lindsay Graham (R-03)

2001 Ware Shoals (Aquenergy Systems-- 6200 kw)

2001 Enterprise (Graniteville Co-- 1200 kw)

2003 Siley Mill (Graniteville Co-- 2475 kw)

2009 King Mill (Spartan Mills-- 2050 kw)

Rep. James DeMint (R-04)

2000 Lockhart (Lockhart Power Co-- 12300 kw)
2012 Riverdale (Inman Mills -- 1240 kw)
2012 Pacolet (Milliken & Company -- 800 kw)

Rep. John Spratt (D-05)

2008 Catawba-Wateree (Duke Power-- 873940 kw)

Rep. James Clyburn (D-06)

2000 Columbia (So Carolina Elec-- 10600 kw)
2006 Santee-Cooper (So Carolina PSA-- 134520 kw)

TENNESSEE

Rep. John Duncan (R-02)

2005 Tallassee (Tapoco Inc-- 326500 kw)

TEXAS

Rep. Jim Turner (D-02)

2013 Toledo Bend (Sabine River Authority -- 85750 kw)

Rep. Henry Bonilla (R-23)

1996 Eagle Pass (Maverick-- ?? kw)

UTAH

Rep. James Hansen (R-01)

2000 Pioneer (Pacifcorp-- 5000 kw)
2003 Red Creek (City Parowan-- 500 kw)
2004 Center Creek (City of Parowan-- 600 kw)
2008 Hyrum (City of Hyrum-- 400 kw)

Rep. Merrill Cook (R-02)

2000 Stairs (Pacifcorp-- 1000 kw)

Rep. Chris Cannon (R-03)

1998 Snake Creek (Heber Light-- 750 kw)
2000 American Fork (Pacifcorp-- 950 kw)
2002 Hobbie Creek (City of Springville-- 2660 kw)
2006 Lower Monroe (City of Monroe-- 250 kw)
2007 Boulder Creek (Garkane Power-- 4200 kw)

VERMONT

Rep. Bernie Sanders (I-AL)

- 1999 Vergennes No 9 (Green Mtn Power-- 2400 kw)
- 2000 Weybridge (Central VT PSC-- 3000 kw)
- 2000 Middlebury Lower (Central VT PSC-- 2250 kw)
- 2001 Waterbury No 22 (Green Mountain Pwr-- 5520 kw)
- 2001 Vail Station (Village of Lyndonville-- 350 kw)
- 2004 Barton Village (Village of Barton-- 1400 kw)
- 2009 Canaan (Public Service Co of VT-- 1100 kw)
- 2012 Otter Creek (Omya, Inc. -- 18130 kw)
- 2015 Morrisville (Village of Morrisville -- 5100 kw)

VIRGINIA

Rep. Virgil Goode (D-05)

- 2010 Smith Mountain (Appalachian Power-- 583750 kw)

Rep. Robert Goodlatte (R-06)

- 2000 Big Island (Nekoosa Packaging-- 512 kw)
- 2001 Holcomb Rock (Nekoosa Packaging-- 1875 kw)
- 2008 Cushaw (VEPCO-- 7500 kw)

Rep. Rick Boucher (D-09)

- 2011 Claytor (Appalachian Power -- 75000 kw)

WASHINGTON

Rep. Jack Metcalf (R-02)

- 2006 Baker (Puget Sound Power-- 324800 kw)
- 2011 Henry Jackson (Sultan) (PUD #1 of Snohomish County -- 11800 kw)

Rep. Brian Baird (D-03)

- 2001 Yale (Pacifcorp-- 108000 kw)
- 2001 Mayfield & Mossyrock (City of Tacoma-- 460000 kw)
- 2006 Swift No 2 (Cowlitz Co PUD-- 70000 kw)
- 2006 Swift No 1 (Pacifcorp-- 204000 kw)
- 2009 Merwin (Pacifcorp-- 136000 kw)
- 2010 Packwood Lake (Wash Pub Pwr Supp Sys-- 26125 kw)

Rep. Doc Hastings (R-04)

- 2002 Trinity (Trinity Conservancy-- 240 kw)
- 2004 Chelan (Chelan Co PUD-- 48000 kw)

- 2005 Priest Rapids (Grant Co PUD 2-- 1877800 kw)
- 2006 Rocky Reach (Chelan Co PUD-- 1213150 kw)
- 2012 Wells (PUD #1 of Douglas County -- 774250 kw)

Rep. George Nethercutt (R-05)

- 2002 Waneta (Cominco American-- ?? kw)
- 2002 Box Canyon (Pend Oreille Co PUD-- 60000 kw)
- 2007 Spokane River (Washington Water Power-- 121550 kw)
- 2008 Sullivan Lake (Pend Oreille Co PUD-- ?? kw)
- 2011 Boundary (City of Seattle -- 1024000 kw)

WEST VIRGINIA

Rep. Bob Wise (D-02)

- 2003 Dam No 4 (Potomac-- 1900 kw)
- 2003 Dam No 5 (Potomac-- 1120 kw)
- 2014 Winfield (Appalachian Power -- 14760 kw)
- 2014 London & Marmet (Appalachian Power -- 28800 kw)

WISCONSIN

Rep. Ron Kind (D-03)

- 2001 Cedar Falls (Northern States Power-- 6000 kw)
- 2001 Black River Falls (City of Black River Falls-- 920 kw)
- 2005 Menomonie (Northern States Power-- 5400 kw)

Rep. Thomas E. Petri (R-06)

- 1998 Petenwell-Castle Rock (Wisconsin Power-- 35000 kw)
- 2000 Little Chute (City of Kaukauna-- 3300 kw)

Rep. David Obey (D-07)

- 1998 Holcombe (Northern States-- 34000 kw)
- 2000 Wissota (Northern States Power-- 35280 kw)
- 2000 Dells (Northern States Power-- 9500 kw)
- 2000 Stevens Point (Consolidated Water-- 3840 kw)
- 2000 Rhinelander (Rhinelander Paper-- 2120 kw)
- 2000 Biron No 2 (Consolidated Water-- 3300 kw)
- 2001 Flambeau (Dairyland Power Coop-- 15000 kw)
- 2001 Winter (North Central Power-- 600 kw)
- 2003 Grandmother (Packaging Corp of America-- 3000 kw)
- 2004 Mosinee (Mosinee Paper Mills-- 3050 kw)
- 2004 Alexander (Wisconsin PSC-- 4200 kw)
- 2007 Danbury (Northwestern WI Electric-- 1076 kw)

2007 Clam River (Northwestern WI Electric-- 1200 kw)

Rep. Mark Green (R-08)

2000 Stiles (Oconto Elec Coop-- 1000 kw)
2004 Nicolet Paper (International Paper-- 1122 kw)
2004 Sturgeon Falls (City of Norway, Michigan -- 5636 kw)
2004 Kingsford (Wisconsin Electric-- 7200 kw)
2005 Middle Appleton (Fox Valley Corp.-- 1290 kw)
2015 Menominee & Park Mill (N.E.W. Hydro -- 4615 kw)
2015 Weed Dam (Village of Gresham -- 620 kw)

WYOMING

Rep. Barbara Cubin (R-AL)

1999 Strawberry Creek (Lower Valley Power-- 1500 kw)

FACTS YOU SHOULD KNOW ABOUT HYDROPOWER

Hydropower is an emissions-free and renewable energy source which serves the nation's environmental and energy policy objectives. Hydropower converts kinetic energy from falling water into electricity without consuming more water than is produced by nature.

Since 1880, when 16 brush-arc lamps were powered using a water turbine at the Wolverine Chair Factory in Grand Rapids, MI, hydropower has played a vital role in the U.S. energy mix. Here are some facts about hydropower:

HYDROPOWER — A KEY SOURCE OF ENERGY

- Currently, hydropower ranges between 10 and 12 percent of U.S. electrical generation.
- The United States is one of the largest producers of hydropower in the world, second only to Canada.
- Domestically, hydropower is capable of generating more than 90,000 megawatts of electricity per year. That's enough to provide electricity to 33.2 million consumers nationwide, or all the homes in California, Florida, New York, Pennsylvania, Ohio and North Carolina combined.
- In the Pacific Northwest, hydropower generates up to 70 percent of that region's electricity.
- Throughout the world, about one-fifth of electricity is generated from hydropower.

HYDROPOWER — A SOUND ENVIRONMENTAL CHOICE

- Hydropower is nation's leading renewable energy source. It accounts for 81 percent of the nation's total renewable electricity generation.
- Like wind, solar, geothermal and biomass, hydropower does not deplete its fuel source in the production of electricity – hence, it is completely renewable. Powered by the sun, the hydrologic cycle re-charges rivers and is essentially infinite. Hydropower converts falling water into electricity without using more water than is produced by nature.
- In 1996, hydropower made it possible to avoid burning 140 million tons of coal, 18 million barrels of oil, and 437 billion cubic feet of gas. As a result, 327 million tons of carbon dioxide was kept from being emitted into the air.
- Of the 75,187 existing dams in the U.S., less than 3 percent are used to generate electricity.

- There is an additional 21,000 megawatts of hydroelectric capacity at sites with an already existing dam. In all, there is nearly 30,000 megawatts of potential hydropower capacity at 5,677 sites that have been screened by the Department of Energy for environmental, legal and institutional constraints.
- Of the 765 hydro projects licensed by the federal government during the 1980's, 91 percent did not involve the construction of a new dam.
- Dams can enhance wetlands and support healthy fisheries. Wildlife preserves can be created around reservoirs which, in some cases, provide stable habitats for endangered or threatened species.
- There were a total of 81 million recreation user days provided at FERC licensed hydropower projects in 1990. Boating, skiing, camping, picnic areas and boat launch facilities are all supported by hydropower.

HYDROPOWER — EFFICIENT AND INEXPENSIVE

- Today's hydropower turbines are capable of converting 90 percent of available energy into electricity—that is more efficient than any other form of generation. Even the best fossil fuel power plant is only about 50 percent efficient.
- Hydroelectricity is one of the lowest cost forms of energy for the American electricity consumer. In 1996, hydropower ranged from less than one cent to just over two cents per kilowatt-hour to generate.
- The efficiency of hydropower, while impressive, can be further improved simply by refurbishing existing equipment. Increasing the efficiency of hydropower machinery in the existing system by only one percent would increase the United States' annual generation of electricity by about 3.3 billion kilowatt-hours, supplying more than 300,000 households.

HYDROPOWER — RELIABLE AND SECURE

- Hydropower's operational flexibility – its unique ability change output quickly – is highly valued in maintaining the stability of the electric grid.
- Water from rivers is a purely domestic resource that is not subject to disruptions from foreign suppliers or transportation issues.