

GAO

## Testimony

Before the Subcommittee on Energy and Air Quality,  
Committee on Energy and Commerce, House of  
Representatives

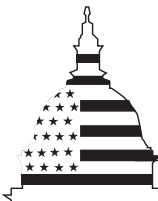
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# LICENSING HYDROPOWER PROJECTS

## Better Time and Cost Data Needed to Reach Informed Decisions About Process Reforms

Statement of Barry T. Hill, Director, Natural Resources and  
Environment



G A O

Accountability \* Integrity \* Reliability

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Mr. Chairman and Members of the Subcommittee:

We are pleased to be here today to (1) discuss our May 2, 2001, report on the process used by the Federal Energy Regulatory Commission (FERC) to issue licenses to construct and to operate nonfederal hydroelectric power (hydropower) projects<sup>1</sup> and (2) provide our preliminary views on FERC's congressionally mandated May 8, 2001, report on hydroelectric licensing policies, procedures, and regulations.<sup>2</sup>

In summary:

- FERC, federal and state land and resource agencies, licensees, environmental groups, and other participants in the licensing process acknowledge that the process to obtain a license is far more complex, time-consuming, and costly today than it was 30 to 50 years ago when FERC issued original licenses to own and operate about 1,000 nonfederal hydropower projects. Today, FERC faces a formidable challenge in issuing a license that is legally defensible, scientifically credible, and likely to protect and enhance fish, wildlife, and other resources while still preserving hydropower as an economically viable energy source.
- Both FERC and we have reported that participants in the licensing process do not agree on the effectiveness of recent reforms to the process or on the need for further reforms to shorten the process or make it less costly. Some within and among the diverse parties believe that the time and money spent on licensing a project reflect the level of complexity of the issues involved and that recent reforms will likely reduce the time and costs needed to obtain a license. Conversely, others believe that recent reforms will do little to reduce time and costs. However, they cannot agree on what further reforms are needed to shorten the process and make it less costly.
- FERC and we do not agree, however, on the need for better time and cost data to reach informed decisions about process reforms. To resolve the disagreement among process participants and to reach informed decisions

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<sup>1</sup> *Licensing Hydropower Projects: Better Time and Cost Data Needed to Reach Informed Decisions About Process Reforms* (GAO-01-499, May 2, 2001).

<sup>2</sup> *Report on Hydroelectric Licensing Policies, Procedures, and Regulations: Comprehensive Review and Recommendations Pursuant to Section 603 of the Energy Act of 2000*, prepared by FERC staff (May 8, 2001).

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on the effectiveness of recent reforms and the need for further administrative reforms or legislative changes, we believe that FERC needs to work with other process participants to develop (1) a system to collect and share complete and accurate data on process-related time and costs by participant, project, and process step and (2) the ability to link the data to projects displaying similar characteristics in order to identify those project, process, and outcome characteristics that can increase the time and costs to obtain a license. Conversely, FERC believes that available data coupled with its “years of experience” with the licensing process are adequate to reach informed decisions on the effectiveness of recent reforms to the licensing process as well as the need for further reforms to the process.

- After reviewing FERC’s May 8, 2001, report, we continue to believe that good data are needed to reach good decisions. Moreover, we believe that both FERC’s five-member Commission and the Congress need to carefully consider the recommendations made by FERC staff. Some of the recommendations appear to be based on inadequate or inappropriate data and some may change the outcomes of the process.

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## Background

About 10 percent of all electricity production in the United States is generated by hydropower projects. Federally owned and operated hydropower projects generate approximately half of this amount, while about 1,000 nonfederally owned and operated hydropower projects, which are licensed by the federal government, generate nearly all of the rest.<sup>3</sup> Hydropower projects can include dams, reservoirs, stream diversion structures, powerhouses containing water-driven turbines, and transmission lines.

Hydropower is an important part of the nation’s energy mix. It offers the benefits of a comparatively inexpensive, emission-free, renewable energy source, the quantity of which can be increased quickly in periods of peak demand. In addition, the reservoirs behind hydropower dams often provide other benefits, including recreation, flood control, irrigation, and a municipal water supply. However, hydropower projects can also have adverse effects on ecosystems and resources, including fish and wildlife. They can change the fundamental chemical, physical, and biological

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<sup>3</sup> About 600 additional small generating capacity hydropower projects are exempted from the federal licensing requirement. “Projects” in this testimony refers to the large, licensed hydropower projects.

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processes of river ecosystems by (1) fluctuating river levels and altering the timing of flows, (2) blocking the downstream flow of nutrients and sediments, (3) changing water temperatures and oxygen levels, (4) impeding fish from migrating up and down streams or killing them as they pass through turbines used to generate power, and (5) drying out sections of streams.

The Federal Power Act (FPA) authorizes FERC to issue licenses to construct and to operate nonfederal hydropower projects. FERC—an independent five-member commission appointed by the President and confirmed by the Senate—issues licenses valid for periods up to 50 years, after which the projects must be relicensed in order to continue operations.

FERC issued original licenses for most of the about 1,000 nonfederal hydropower projects decades ago. It now issues few licenses to construct and operate new hydropower projects. Therefore, most of FERC's licensing activities relate to the relicensing of projects with licenses currently nearing their expiration dates.

Between January 1, 1993, and December 31, 2000, the licenses for 395 of these projects expired. Many of these were small projects that do not generate much power. According to FERC, over the next 15 years, the licenses for another 238 projects will expire. The 238 projects, many of which are large, combine to generate over half of the nation's nonfederal hydropower.

In recent years, some licensees and other participants in the licensing process have expressed concern that obtaining a license now takes too long and costs too much. Responding to these concerns, FERC established an alternative licensing process, and other federal agencies have introduced reforms intended to make the licensing process more efficient and less costly. However, these reforms did not quell the concerns. As a result, in November 2000, the Congress directed FERC to conduct a comprehensive review of the policies, procedures, and regulations relating to the licensing of nonfederal hydropower projects to determine how to reduce the time and costs associated with obtaining a license. FERC reported its findings on May 8, 2001.

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## The Licensing Process Is More Complex, Lengthy, and Costly Than It Was 30 to 50 Years Ago

FERC and other participants in the licensing process acknowledge that the process is far more complex, time-consuming, and costly today than it was when FERC issued the approximately 1,000 original hydropower licenses 30 to 50 years ago. Since 1986, the Commission has been required to give “equal consideration” to, and make tradeoffs among, hydropower generation and other competing resource needs, including protecting and enhancing fish and wildlife.

Moreover, FPA authorizes federal and state agencies other than FERC to influence license terms and conditions, and in some instances, precludes FERC from altering license conditions imposed by other agencies. Environmental and land management laws—enacted primarily during the 1960s and 1970s—have placed additional requirements on these agencies to address specific resource needs, including protecting endangered species, achieving clean water, and preserving wild and scenic rivers.

In addition, section 401 of the Clean Water Act—added in 1972—requires anyone seeking a license or permit for a project that may affect water quality to seek approval from the relevant state water quality agency. States have begun to use section 401 to influence license terms and conditions.

The regulations adopted by FERC under FPA also require FERC to involve the public in the licensing process. Public values toward hydropower have changed and now reflect a growing concern about the environmental impacts of hydropower projects.

Changing public values, coupled with requirements to give equal or greater consideration to environmental concerns than to hydropower generation, have resulted in new license conditions intended to protect and enhance fish, wildlife, and other resources. For example, in an effort to reduce the risk to fish resources, new licenses may include conditions that require licensees to change minimum streamflows, construct fish-passage facilities, install screens and other devices to prevent fish from being injured or killed, limit the amount or timing of reservoir drawdowns, or purchase or restore lands affected by a project.

Attempts to balance and make tradeoffs among competing economic and environmental interests and to improve the environmental performance of projects, while preserving hydropower as an economically viable energy source, have lengthened the process and made it more costly.

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## Participants Cannot Agree on the Need for, and Type of, Reforms to the Licensing Process

FERC, federal and state land and resource agencies, licensees, environmental groups, and other participants in the licensing process do not agree on whether further reforms are needed to reduce process-related time and costs.

Some participants believe that the time and money spent on project licensing reflect the level of complexity of the issues involved. They consider the process to be worthwhile as long as it results in a new license that is legally defensible, scientifically credible, and more likely to protect and enhance resources over the term of the license. Some of these participants also believe that recent reforms will likely reduce the time and costs associated with obtaining a new license and that additional reforms may not be necessary. For example, they believe that, when compared with projects using the traditional licensing process, projects using FERC's relatively new alternative licensing process are more likely to obtain licenses before their old ones expire and less likely to have their license decisions delayed as a result of administrative and judicial reviews.

Other participants in the licensing process believe that recent reforms will do little to reduce the time and costs to obtain a new license. For example, they believe that licensees and other participants will not use FERC's alternative licensing process for projects that involve contentious issues or when participants have conflicting values and concerns. They also believe that, while the alternative licensing process may shorten the time required to obtain a new license, it may also be more costly than the traditional licensing process. However, these participants cannot agree on what further administrative reforms or legislative changes are needed to shorten the process and make it less costly.

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## FERC Needs Better Time and Cost Data to Reach Informed Decisions on the Effectiveness of Recent Reforms and the Need for Further Reforms to the Licensing Process

To reach informed decisions on the effectiveness of recent reforms to the licensing process as well as the need for further reforms to the process, FERC must accomplish two tasks.

First, it needs complete and accurate data on process-related time and costs by participant, project, and process step. Currently, FERC does not systematically collect much of these data. For example, because it has not provided clear guidance to the other agencies on what costs they should report, FERC cannot identify other federal agencies' actual costs to participate in the licensing process.<sup>4</sup> In addition, FERC does not request, and states generally do not report, their process-related licensing costs. Similarly, although some licensees have voluntarily reported their process-related licensing costs to FERC, FERC does not request licensees to report these costs.

Second, FERC needs to identify (1) why certain projects or groups of projects displaying similar characteristics take longer and cost more to license than others do and (2) why the time and costs to complete certain process steps vary by project or group of similar projects. Similar characteristics may be project-related, such as whether the project is on federal land; process-related, such as whether FERC had to resolve a dispute during the process between the licensee and a federal or state agency; or outcome-related, such as whether the terms and conditions of a new license compromise the project's economic viability or environmental performance.

Our May 2, 2001, report contained recommendations that, if implemented, would allow informed decisions on the effectiveness of recent reforms to the licensing process as well as the need for further reforms to the process. In its written comments on a draft of our report, FERC agreed that it does not systematically collect complete and accurate data on process-related time and costs by participant, project, and process step. However, it believed that it did not need these data to make recommendations on further reforms to the licensing process. Rather, its May 8, 2001, report is based on the limited data that were available as well as FERC's "years of experience" with the licensing process.

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<sup>4</sup> *Hydropower Relicensing: Federal Costs Are Not Being Recovered* (GAO/RCED-00-107, June 30, 2000).

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## Observations on FERC's May 2001 Report and Recommendations

Mr. Chairman, if FERC, federal and state land and resource agencies, licensees, environmental groups, and other participants in the licensing process agreed on whether further reforms are needed to reduce process-related time and costs, then the importance of good data to reach good decisions would be diminished. However, as FERC states in its May report, "the areas of agreement tend to be overshadowed by disagreements" among process participants. As a result, the recommendations in FERC's report reflect only the views of its staff on how to make the process more efficient.

We believe that both the Commission and the Congress need to carefully consider the recommendations made by FERC staff. Some of the recommendations appear to be based on inadequate or inappropriate data and some may change the outcomes of the process. For example:

- The report states that the "most effective way to reduce the cost and time of obtaining a hydropower license would be for Congress to make legislative changes necessary to restore the Commission's position as the sole federal decisional authority for licensing conditions and processes." However, FERC and its independent predecessor (the Federal Power Commission) have never had the "sole federal decisional authority for licensing."<sup>5</sup> Thus, FERC staff are asking the Congress to restore an authority that the Commission has never had.
- The report states that changes to regulations and policies "are not an adequate substitute for legislative reform." However, the report notes that a 1993 FERC policy to issue draft environmental analyses for comment added about 6 months to the relicensing process. Thus, it appears that there are opportunities to reduce time and costs within the existing legislative framework.
- FERC's report states that it "focuses on relicensing of existing hydropower projects, as relicenses comprise the great majority of licensing proceedings currently and for the foreseeable future." However, 14 of the

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<sup>5</sup> Prior to 1930, the Commission (then known as the Federal Power Commission) was comprised of three Cabinet officials, the Secretaries of Agriculture, the Interior, and War. 42 Stat. 1063 (1920). In 1930, the Commission was reorganized as a five-person body independent of the Secretaries. 46 Stat. 797 (1930). Throughout its history, the Commission's licensing authority has been subject to the mandatory condition provisions of what are now sections 4(e) and 18 of the Federal Power Act. *See* 42 Stat. 1065, 1073 (1920). Accordingly, FERC and its independent predecessor have never had the "sole federal decisional authority for licensing."



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16 projects that it uses to “illustrate vividly how the dispersal of decisional authority can work to paralyze a licensing proceeding” are for original licenses to construct new projects, not to relicense existing ones.

- The scope of FERC’s review was limited to reducing process-related time and costs. However, its recommendation to establish “one-stop shopping” at FERC could affect the emphasis given to protecting and enhancing fish, wildlife, and other resources. Thus, any potential gains in efficiency from establishing “one-stop shopping” at FERC would need to be weighed against the policy reasons that led to separating the responsibility for licensing hydropower projects from the responsibility for ensuring regulatory compliance with environmental and other laws.

Mr. Chairman, this concludes my formal statement. I will be pleased to respond to any questions that you or other Members of the Subcommittee may have.

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## Contact and Acknowledgments

For future contacts regarding this statement, please contact Barry Hill on (202) 512-3841. Individuals making key contributions to this testimony were Erin Barlow, Charles Cotton, David Goldstein, and Richard Johnson.