

# FEDERAL ENERGY REGULATORY COMMISSION

## 1999 ANNUAL REPORT



*Cover photo courtesy of Idaho Power Company*

# FEDERAL ENERGY REGULATORY COMMISSION

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# TABLE OF CONTENTS

Members of the Federal Energy Regulatory Commission	2
Letter from the Chairman	3
Overview	4
Energy Markets	10
Energy Projects	19
Hydroelectric Power Table	30

## MEMBERS OF THE FEDERAL ENERGY REGULATORY COMMISSION



Vicky A. Bailey  
Commissioner



William L. Massey  
Commissioner



James J. Hoecker  
Chairman



Linda K. Breathitt  
Commissioner



Curt L. Hebert, Jr.  
Commissioner

# LETTER FROM THE CHAIRMAN

To the Senate and House of Representatives:

I am pleased to submit to the Congress the Federal Energy Regulatory Commission's annual report, covering the fiscal year from October 1, 1998, through September 30, 1999.

This is the 79th report issued by the Commission and its predecessor, the Federal Power Commission. As an independent agency, the Commission oversees key operating functions of the natural gas, electric utility, hydroelectric power, and oil pipeline transportation industries.

This Annual Report is unique. The agency now operates at the crossroads of a new energy economy. As this report indicates, Fiscal Year 1999 was a period in which the Commission was preparing to change its organization, regulatory approaches, and management culture to permit it to be more responsive to fundamental changes in all regulated industries. For the first time, the annual report is organized according to the agency's two key regulatory processes, around which its staff has been reconfigured: developing and maintaining competitive energy markets and authorizing and overseeing energy projects in the public interest. The Commission's strategic direction is to maintain strong environmental and safety regulation and economic regulation that will be sufficiently strong until the competitive market can evolve to assume much of that responsibility.

For fiscal year 1999, Congress appropriated \$167.5 million to support Commission activities. Under the authority of the Omnibus Budget Reconciliation Act of 1986 and other laws, the Commission recovers all of its costs from regulated industries through fees and annual charges. Revenues generated from these sources completely offset congressional appropriations and therefore result in a net cost to the treasury of zero dollars. As a result, the users and beneficiaries of the Commission's services—not the general taxpayers—pay its operating costs.

The Commission remains dedicated to protecting the economic welfare of American consumers of energy and to ensuring a healthy, competitive, and efficient energy industry.

Respectfully,



James J. Hoecker  
Chairman

# OVERVIEW

The Federal Energy Regulatory Commission (FERC) administers numerous laws and regulations involving key energy issues. These include: transportation of natural gas in interstate commerce; transportation of oil by pipeline in interstate commerce; transmission and wholesale sales of electric energy in interstate commerce; licensing and inspection of private, municipal, and state hydroelectric projects; and oversight of related environmental matters. The law requires the Commission's economic regulatory activity because the transmission of electricity, natural gas and oil is often a natural monopoly.

Preparing the Commission to meet the challenges of the 21st Century means adapting to new energy market conditions and information technologies, and improving processes for greater productivity and cost control. Where possible, the Commission now promotes market competition as a substitute for command-and-control regulation. It is undergoing a major reengineering as it prepares to take on the new challenges.

Under its FERC First reengineering, the Commission is changing its core approach to regulation and revamping its working environment as well as undertaking internal restructuring. In Fiscal '99, it moved from the design phase to implementation, which is due to be completed in 2000.

The Commission considers communication with its wide range of constituents (e.g., landowners, utility industries, environmentalists, etc.) to be critical. The Commission has undertaken a systematic effort to enhance relationships with Congress, federal and state agencies, and other stakeholders, to improve overall coordination and communication.

As the fiscal year ended, Y2K issues were a key concern. The Oil and Gas Sector Working Group, headed by Chairman Hoecker and sponsored by the President's Council on Year 2000 Conversion, was a model of cooperation between industry and government, working to address the Y2K issues at a national level and reaching out to individual companies.

Meantime, the industries the Commission regulates are rapidly changing their structures, operations, and investment strategies, reflecting a continuing evolution toward greater competition and a convergence of natural gas and electric power markets. All the while, the public is placing more value on environmental accountability, causing tension between the need for energy supplies, with the complex supporting infrastructures, and the need for a healthy environment. As a result, other government agencies, industry participants, and the public are becoming increasingly active in Commission proceedings and the Commission is actively engaged in balancing these competing public values.

## FERC MISSION STATEMENT

THE COMMISSION REGULATES KEY INTERSTATE ASPECTS OF THE ELECTRIC POWER, NATURAL GAS, OIL PIPELINE, AND HYDROELECTRIC INDUSTRIES. THE COMMISSION CHOOSES REGULATORY APPROACHES THAT FOSTER COMPETITIVE MARKETS WHENEVER POSSIBLE, ASSURES ACCESS TO RELIABLE SERVICE AT A REASONABLE PRICE, AND GIVES FULL AND FAIR CONSIDERATION TO ENVIRONMENTAL AND COMMUNITY IMPACTS IN ASSESSING THE PUBLIC INTEREST OF ENERGY PROJECTS.

## Natural Gas and Electric Markets

**Expanding Competition.** Natural gas commodity markets are competitive, and electricity as a commodity is increasingly sold at market rates. In both industries, competition to supply the basic commodity has required a new regulatory infrastructure. The Commission's challenge: to formulate a regulatory approach that promotes competition while protecting customers from residual market power.

Support in Congress and successive administrations for expanding competition in the natural gas, oil pipeline, and electric power industries has also been a force for change. The Commission's policies, such as open access to the electric transmission and natural gas transportation systems, have contributed significantly to this growth in competition. The result has been vastly increased competition in both natural gas and electricity commodity markets and increasing competition in natural gas transportation services.

**New Market Institutions.** The Commission's open access policies have led to greater variety in regulated services and also to the existence of a well-functioning market that serves as a platform for a number of nontraditional services. Market and technology demands are creating a need for regionalization. In electricity, regional transmission organizations (RTOs) promise to provide more efficient pricing. Futures markets in both natural gas and electricity have provided price transparency and a basis for hedging risk. These and other innovative services have provided shippers and other market participants with substantial savings.

**Industry Structure Changes.** As with many other industries undergoing regulatory transformation, the natural gas and electric industries are realigning themselves. In some cases this means restructuring along functional lines. For example, in the electric industry there is a tendency for companies to separate vertically so that generation and transmission are handled by different companies. Then, within each sector, there is a natural tendency toward consolidation. This consolidation can raise competitive issues by reducing the number of energy providers. The significance of mergers and affiliate issues is greater than in the past, especially for generation, as the country relies more on competition to protect customers from market power.

Both mergers and divestitures have increased since the Commission issued its open access policies. By law, the Commission reviews changes in ownership or control of electric transmission facilities. The Commission must first decide whether particular mergers are in the public interest and then monitor for overly concentrated markets and undue exercises of market power.

**Growing Electronic Commerce.** Electronic commerce is redefining the nature of the natural gas and electric business transactions. Transactions are increasingly completed on the Internet. Both natural gas and electricity companies are moving from using electronic bulletin boards to Internet websites. In addition, the electric industry is moving from manual to electronic tagging of transactions. Electronic commerce is particularly important for the natural gas and electricity industries. Natural gas and electric prices change very rapidly in response to quickly changing market conditions. Electronic commerce promises to give more customers more control over their energy use and the prices they pay to use it. This will allow greater efficiency and may help dampen price volatility.

# OVERVIEW

**Convergent Industries.** A significant and increasing convergence between the natural gas and electric industries raises significant opportunities and challenges for both the industries and the Commission. For example, in some cases, natural gas pipelines and electric transmission services may begin to compete with each other. At the same time, consolidation mergers that bring natural gas and electric companies together could reduce competition. Natural gas companies also may attempt to leverage the value of natural gas by developing the electric power side of their businesses. Part of the broader trend toward restructuring businesses includes other forms of diversification, such as joint energy-telecommunications ventures.

## Competing Interests in Projects

As environmental issues are more forcefully advocated in the Commission's proceedings and as international competition increases, the Commission's responsibility to accommodate competing interests becomes difficult and highly charged. There is a greater need for collaborative decision making among all affected parties and for increased cooperation among involved agencies.

**Hydropower Licensing.** Because hydropower is economical, clean, renewable, and flexible, it is a valuable part of the nation's energy mix. The Commission strives to maintain sustainable hydropower. But projects are capital intensive, and the measures needed to bring them into environmental and safety compliance can be costly. Projects must be economically viable, and development must be responsive to environmental needs and sensitive to other water use demands.

New environmental issues arise whenever projects licensed 30 to 50 years ago come up for license renewal. Interest in the environmental effects of hydropower operations increases every year. The Commission must share with numerous state and federal agencies its authority to condition licenses. New licenses tend to include additional requirements as a result of heightened environmental concerns and the need to comply with environmental laws, so each relicensing case leads to an additional, ongoing monitoring effort throughout the life of the license. Issues arising after licensing can be contentious, making resolution and decisions difficult.

**Natural Gas Pipeline Certification.** Growing demand for natural gas in New England, the Mid-Atlantic, and the Midwest will continue to drive an increase in applications for major pipeline extensions and new pipelines. Meanwhile, wholesale customers have become responsible for their own gas supply acquisition, and they have demanded more flexible arrangements. The Commission expects more applications for storage development and liquefied natural gas facilities to provide peaking capability and supply flexibility. As the national pipeline grid ages, the Commission anticipates a significant number of applications for upgrading facilities in the interests of safety and future growth.

Pipelines are facing increased opposition from landowners as new projects are proposed in more heavily populated areas. In these cases, the Commission must balance the benefits of new or competing supplies of natural gas against the environmental impacts of a project and the potential market impacts of additional capacity. Landowners increasingly question the right of pipelines to use eminent domain in cases where the market determines the need for the project. Also, pipelines have concerns about the timely receipt of various environmental permits. As the certificate cases become more con-

tentious, the Commission must devise ways to issue certificates and address the intervening parties' concerns.

## Better Processes

**Information Technology (IT) and Electronic Filing.** In June 1999, the Commission amended its rules to permit participants in proceedings to voluntarily serve documents on one another electronically. The change was an important step in the Commission's plan to convert to a broad-based electronic policy. In the next fiscal year, the Commission will expand this initiative to allow additional electronic filing under a pilot program.

The Commission is constantly improving the stability and reliability of its local and wide area networks. Increased network reliability increases individual productivity and helps reduce the cost to those outside the Commission that rely on the Commission's information technology infrastructure to conduct business.

**Revised Complaint Procedures.** In FY 1999, the Commission revised its procedures for handling complaints. The changes will ensure that all complaints will be handled in a timely, efficient and fair manner in light of the significant, market-driven changes occurring in the industries that the Commission regulates. The revised procedures provide an early warning system for identifying potential market problems and enable the Commission to respond more effectively to activities in the marketplace. Timely response to complaints also helps protect the interests of aggrieved parties.

## FERC VISION AND VALUES STATEMENT

### VISION

PROMOTING COMPETITIVE MARKETS  
PROTECTING CUSTOMERS  
RESPECTING THE ENVIRONMENT  
SERVING AND SAFEGUARDING THE PUBLIC

### VALUES

**EMPLOYEES**—PEOPLE ARE OUR MOST VALUED ASSET. WE PROVIDE THE SUPPORT NEEDED FOR ALL EMPLOYEES TO EXCEL.

**INTEGRITY**—WE MAINTAIN THE HIGHEST LEVEL OF PROFESSIONALISM AND AN ENVIRONMENT OF FAIRNESS, TRUST, RESPECT, AND HONESTY.

**DIVERSITY**—WE VALUE DIVERSITY IN PEOPLE AND IDEAS.

**WORKING TOGETHER**—WE CLEARLY COMMUNICATE EXPECTATIONS, ENCOURAGE COOPERATION AND TEAMWORK, AND SHARE RESPONSIBILITY.

**PROGRESS AND INNOVATION**—WE ARE CREATIVE AND FLEXIBLE, AND SEEK OUT OPPORTUNITIES TO IMPROVE.

**ACTION**—PROMPT AND FAIR RESOLUTION OF MATTERS BEFORE THE COMMISSION IS ESSENTIAL TO OUR MISSION.

**REACHING OUT**—TWO-WAY COMMUNICATION WITH THE PUBLIC IS KEY TO OUR EFFECTIVENESS.

**PUBLIC SERVICE**—OUR ULTIMATE OBJECTIVE IS TO PROVIDE VALUED SERVICES TO THE PUBLIC.

# OVERVIEW

## **FERC First: Retooling Work Processes**

In FY 1997, the Commission leadership acknowledged that it would need to fundamentally reexamine and, if warranted, change most of the Commission's existing work processes if it was going to maintain the value and relevance of its mission, control its costs, and meet the challenges posed by changes in regulated industries.

**Why Reengineer?** The Commission was beginning to replace command-and-control regulation with market-responsive approaches. These approaches increasingly focus on whole natural gas, oil, or electric markets and regional issues as well as the rates and services of individual companies. They also will rely more heavily on market monitoring and complaint processes rather than more traditional casework. The Commission also saw the need for more collaboration with other entities—government agencies, reliability councils, and market institutions, as well as traditional parties. Greater outreach became essential. These changes required new business processes, new organizational structures, and a new leadership culture. Nothing short of a complete review and retooling would allow the Commission to adapt fully to the new challenges.

**Review of Existing Processes.** FERC First, a comprehensive analysis of how the agency currently does business and how it must change to meet the demands of the future, was undertaken at the direction of the Chairman. FERC First reviewed, among other things, process coherence and coordination, priority setting, layers of review, staff competencies, IT requirements, speed of IT implementation, and communication.

FERC First also identified broad trends in the external business, technology, and energy use environments. Trends impacting the Commission's economic regulation include increasingly competitive markets, greater reliance on market institutions, industry consolidation, and converging industries. Trends that affect regulation of energy projects are growing environmental accountability, overlapping responsibilities, and greater reliance on consensual decision making. The Commission also solicited the views of external constituents.

**Planning Phase.** An initial response to this comprehensive review was the development of a coherent vision, mission, and values statement that builds continuous improvement and outreach into what the Commission intends to achieve in its work with industry, customers, Congress, intervening and other interested entities, and the general public. Key focuses for the future also were identified: Anticipation of restructuring, focus on market power, development of new and innovative approaches to traditional regulation, early resolution of disputes, reevaluation of facilities and projects consistent with the changing market structure, and a focus on markets, not just companies. Other identified focuses were improving regulations to encourage competitive markets and renewing the Commission's focus on environmental responsibility as part of its regulatory obligation.

FERC First defined seven major process initiatives, covering most of the Commission's work. Each of these initiatives is leading to a key innovation in the way the Commission does its work. Together these innovations represent an integrated package that will enable the Commission to meet the challenges it faces in the new century (see box on page 7).

**Change Implementation.** During FY 1999, the Commission has been implementing these initiatives. Milestones have included the creation of the Office of Administrative Litigation, combining legal and technical staff to handle litigation; creation of the Dispute Resolution Service, a service-oriented center of alternative dispute resolution (ADR) to promote the consensual resolution of disputes; instituting employee and management development plans; and finalizing organization plans for the Office of Strategy and Organizational Management, the Office of Markets, Tariffs, and Rates, and the Office of Energy Projects.

The new FERC will communicate better with constituents, have clear strategic direction and technological sophistication, and make faster decisions. Internal operations will make greater and more effective use of teams, fewer layers of review, and consensus-based resolution of issues. The Commission will improve staff competencies through strategic planning, improving leadership skills, making use of new methods for encouraging learning and sharing of knowledge, and giving greater recognition to employee responsibility and empowerment.

The Commission's reengineering effort will prepare it for the 21st Century and represents a comprehensive response to both the letter and the spirit of the 1993 National Performance Review and the Government Performance and Results Act of 1993.

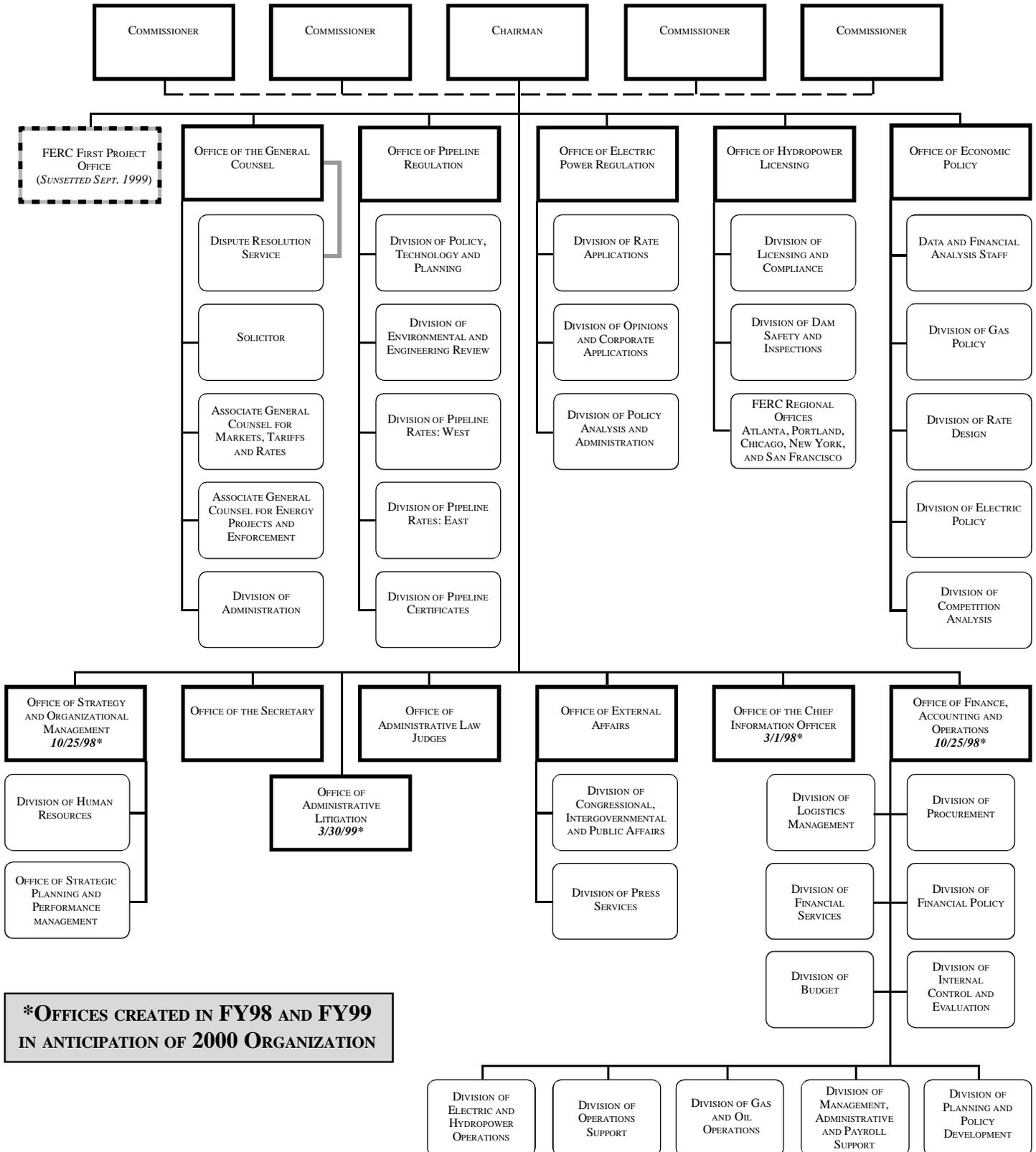
# OVERVIEW

## FERC FIRST INITIATIVES AND INNOVATIONS

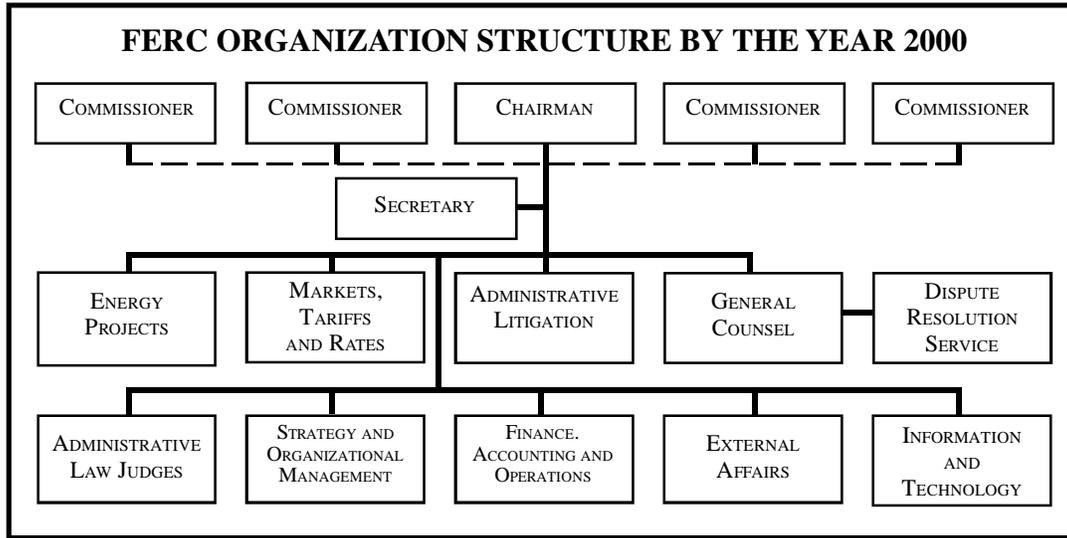
◆ <b>Initiatives</b>	❖ <b>Key Strategies</b>
◆ Promoting competitive markets	❖ Combining economic regulation of gas, electric, and oil industries in a new Office of Markets, Tariffs and Rates to focus on monitoring market activities and identifying potential competitive problems
◆ Authorizing and monitoring energy projects	❖ Integrating licensing and certification activities, including coordinated analysis of environmental impacts, for sustainable energy projects, both gas and hydropower, in a new Office of Energy Projects
◆ Resolving disputes	❖ Promoting early resolution of contested matters and complaints by consensual decision making, focusing on ADR and the imposition of time limits for decisions, in the new Office of Administrative Litigation and a new Dispute Resolution Service
◆ Building bridges	❖ Engaging in systematic efforts to build relationships with Congress, federal and state agencies, and other stakeholders spearheaded by the Office of External Affairs
◆ Strategic planning	❖ Employing a more robust process for managing strategically, developing and updating the Commission's strategic plan, and establishing performance measurements for assessing success in reaching agency goals in a new Office of Strategy and Organizational Management
◆ Managing information technology	❖ Implementing a largely paper-free regulatory environment with electronic filing, workflow management, and document posting in a strengthened Office of the Chief Information Officer
◆ Developing employees	❖ Aligning FERC's human resources efforts, hiring, promotion, and employee development, with its strategic plan and objectives, also within the Office of Strategy and Organizational Management

# OVERVIEW

## FEDERAL ENERGY REGULATORY COMMISSION (FERC)



# OVERVIEW



## Target 2000 Organization

The Commission began to implement the Target 2000 organization proposed by FERC First. While the existing organization's offices are segregated by industry, the new offices bring together the experts needed to handle each work process from beginning to end. Further adaptations to the organizational design may occur as the recommendations of FERC First reach full implementation in FY 2000. The new offices include:

**Office of Markets, Tariffs and Rates.** The Commission is integrating its economic regulation of the natural gas and electric industries to ease resolution of issues arising from the convergence of the two industries and maximize the realization of economic benefits. A comprehensive energy markets program will consider natural gas and electric industries together and look at short and long term markets together.

**Dispute Resolution Service.** This office will lead the effort to increase the use of alternative dispute resolution throughout the Commission and provide ADR services to the industry.

**Office of Energy Projects.** The energy projects office will bring together the environmental and engineering resources of both hydropower licensing and natural gas certification to address developmental, nondevelopmental, and safety issues related to energy projects.

**Office of Administrative Litigation.** The new Office of Administrative Litigation will consolidate technical and legal trial staff for more efficient handling of cases set for hearing.

**Office of Strategy and Organizational Management.** This new office will coordinate future management review and change initiatives, and will align human resources with strategic planning.

**Office of Information and Technology.** The office was created to oversee all Information Technology applications with the express goal of reducing regulatory burdens, cutting processing times, simplifying filing processes, and generating better information for use by industries and the public.

## New Chapters in This Annual Report

The 1999 Annual Report is organized by energy markets and energy projects rather than according to the electric, natural gas, oil pipeline and hydroelectric industries, as in the past. The new chapters contain the following:

- ◆ **Energy Markets:** Functions associated with economic regulatory issues of competition, well-functioning markets, and mitigating market power. This includes regulation of electric and natural gas rates, corporate mergers, and other aspects of energy markets.
- ◆ **Energy Projects:** Functions associated with environmental, cultural, economic, and engineering issues related to energy projects. This includes hydropower licensing and dam safety, certification of natural gas pipeline construction, and environmental review of hydropower and natural gas projects.

## GOALS

The Commission's goals are:

- ◆ To promote competitive, well-functioning markets, eliminating market power while ensuring reliability
- ◆ To protect customers

### Competitive, Well-Functioning Markets

Where market forces in the electric power, natural gas, and oil pipeline industries can discipline prices and behaviors, market-based approaches can generally be relied on to fulfill Commission goals.

Not all competitive goals can be met simply by identifying areas where market forces can be allowed to work with little or no explicit regulatory guidance. As long as some aspects of the industries are insufficiently competitive, regulatory action may be needed to ensure overall well-functioning markets for electric power, natural gas, and oil. In many cases, regulatory action is necessary to develop the institutions needed for markets to function competitively. In electric power, a transmission information system, the Open Access Same-time Information System (OASIS), was designed to provide information needed to ensure comparable access to transmission. In natural gas, the Commission fostered the development of a secondary market for pipeline capacity by structuring a program for release of capacity.

As the size of the unregulated portion of competitive energy markets increases, the Commission must pay increasing attention to how its own regulations impact on, or are circumvented by, these changing competitive market forces. This need will be particularly important in the coming years, as the competitive environment becomes more fully realized. Even in areas that do not yet appear competitive, it is important to consider how regulation in these areas affects the functions of areas that are competitive. For example, in examining short-term natural gas markets, the Commission is exploring how more flexible approaches to regulating short-term natural gas transmission will enhance the performance of natural gas markets generally.

### Protecting Customers

Although competition has evolved rapidly, key aspects of these industries continue to exhibit monopoly characteristics and may entail disproportionate market power. They therefore require regulation under the Federal Power Act (FPA), the Energy Policy Act of 1992 (EPAct), the Natural Gas Act (NGA), the Wellhead Decontrol Act (WDA), and the Interstate Commerce Act (ICA).

**Constraints on Market Power.** The Commission retains responsibility for ensuring just and reasonable rates for oil pipelines and for transmission and sales for resale of natural gas and electric power. By continuing to apply traditional regulatory approaches to transmission and monitoring markets where necessary, the Commission can protect customers from the exercise of market power. However,

the Commission is actively promoting competition, thus rendering traditional regulation less necessary. In its place, the Commission will monitor markets to ensure that market-based regulatory strategies remain effective.

**Grid Reliability.** System reliability is critical to the success of a competitive electric industry. Currently, no clear federal authority exists to establish reliability standards for the bulk power transmission grid or to enforce such standards. Regulators and industry participants have relied on voluntary industry organizations such as the North American Electric Reliability Council (NERC) and its regional reliability councils to establish rules and standards to maintain the security of the grid. However, compliance with those standards has been neither mandatory nor applicable to all market participants.

As the electric market becomes highly competitive, the number of market participants and the volume of transactions that affect the operational demands on the system are expanding. This has created a situation where reliability standards need to be mandatory and enforced to protect the integrity of the bulk power system.

**Resolving Disputes.** In resolving disputes effectively and fairly, the Commission uses a variety of processes, including hearings before administrative law judges, litigation teams to represent the public interest, orders and rehearings, and appellate advocacy should a case go to court.

In addition, the Commission's accounting staff undertakes certain accounting actions and audits. The Commission's Enforcement Hotline provides an informal toll-free call-in service, 1-877-303-4340, to its customers, in an attempt to resolve disputes in the most cost-effective and timely manner possible.

The Commission has also established a service center of excellence, the Dispute Resolution Service, for alternative dispute resolution to promote an environment in which the affected entities can achieve consensual resolution of their disputes. The service can be reached by calling toll-free 1-877-337-2237. In addition, the Office of Administrative Law Judges has maintained a "settlement judge on-call" service for two years and appoints judges to serve as settlement judges and mediators to resolve disputes more expeditiously.

**Communicating Effectively.** The Commission is undertaking a systematic effort through its Ombudsman to build relationships with Congress, federal and state agencies, and other stakeholders. The Commission is committed to open and continuous communication with all interested parties in its formulation of generic policy. For example, as part of the RTO Notice of Proposed Rulemaking (NOPR), the Commission moved beyond the normal comment procedures to include staff-level conferences targeted at various segments of the market and the issues they face. These outreach efforts take many forms, such as Commission conferences, staff technical conferences, Congressional staff meetings, and pre-filing meetings. Thirteen RTO meetings with Commissioners were held at locations around the United States. The story is much the same with the natural gas initiative where the Commission has conducted informal outreach meetings with industry groups. The Commission has also held a series of industry-wide conferences on topics such as state unbundling of natural gas services and projected gas and pipeline capacity demands for the Northeast.

## Working Toward the Goals Every Day

### Electric Issues

**Market-Based Rates.** Recent new entrants into wholesale electric markets include nontraditional sellers, such as independent power producers and power marketers. They are usually permitted to charge market-based rates because they lack market power in generation and transmission.

Growing reliance on market-based regulation would place the Commission in a more responsive, as opposed to command-and-control, regulatory posture, making the collection of real-time market data critical for future consumer protection under the FPA and

NGA. Under traditional cost-based regulation, where the Commission establishes a cost-based rate for a particular public utility, the Commission requires the utility to file periodically cost-based information useful to the rate-setting process. Under market-based pricing, certain cost-based data may become less important to the Commission.

However, under market-based pricing, the Commission must still ensure that market participants do not exercise market power. The Commission will therefore need to increase its monitoring of the market for wholesale power and refine its capabilities to handle complaints of market manipulation. With lighter handed regulation, there is a need for immediate information to understand markets in real-time. The Commission is increasing its market surveillance, and has established an interdisciplinary price monitoring team that now watches the market.



*Pipeline construction. (Photo courtesy of Iroquois Gas Transmission System.)*

**Utility Restructuring.** The Commission continues to see a significant increase in the number and types of proposed corporate reorganizations. In addition to unprecedented numbers of mergers involving combinations of electric utilities, the Commission is receiving a number of proposals for “convergence mergers”—electric utilities merging with natural gas pipelines and distributors. Convergence mergers raise many new and difficult market power issues. Some independent system operator (ISO) proposals are developed as a result of proposed mergers, and others are at the direction of state public utility commissions’ initiatives on retail choice. Finally, the Commission expects that the transformation to competitive electric markets may also cause utilities to create separate transmission, generation, and distribution entities to replace the existing vertically integrated corporate structure. Reorganizations along functional business lines, in turn, may include further consolidations in each functional area with new regional organizations.

**Mergers.** The Commission must ensure that no significant increase in market dominance will result from a merger or other corporate restructuring. The Commission must also ensure that ratepayers will be protected from any negative effects of the merger. When the merger involves a registered public utility holding company, the Commission must know that the merged entity will abide by the Commission’s inter-company policies designed to protect ratepayers from affiliate abuse. The Commission employs the Department of Justice/Federal Trade Commission’s merger guidelines for these purposes. The Commission also examines barriers to entry of new competitors into the market. Such entry is important in mitigating adverse effects of the corporate mergers.

Merger applications are often contested and extremely complex. For example, competitors who view proposed business combinations as imposing greater barriers to market entry or eroding their relative market share may vigorously oppose mergers and acquisitions. The Commission expects the number of corporate applications filed, including mergers, to increase sevenfold between FY 1995 and FY 2001. This increase, combined with the complexity of these cases resulting from the competitive dynamics of electricity markets, including cases set for hearing, has created a significant workload burden.

**OASIS.** Order No. 889 requires electric transmission providers to use the Internet-based OASIS to inform potential customers of the price and availability of service and other related information. OASIS works to ensure that transmission providers and their affiliates do not have an unfair advantage in selling and reserving transmission capacity.

**Market Monitoring.** Some areas to be monitored are: market failures, shortages, reliability congestion, price spikes, market design, affiliate/sales function preference and other discrimination issues, information collection requirements and burdens, and forecast evaluations.

In March 1999, the Commission approved, with modifications, a market monitoring plan proposed by the Pennsylvania-New Jersey-Maryland Interconnection (PJM). Under the plan, PJM will establish a market monitoring unit (MMU) with a broad range of responsibilities to ensure competition and prevent any undue influence by participating members. The MMU will monitor all electric power transactions to ensure participants’ compliance with PJM’s standards and procedures.

**Qualifying Facilities and Public Utility Regulatory Policies Act (PURPA) Issues.** PURPA authorizes the Commission to certify small power production and cogeneration facilities as qualifying facilities (QFs) and, in certain cases, to exempt them from some federal and state regulations. PURPA regulations require electric utilities to buy electricity from QFs at a rate that does not exceed the utility’s cost of producing the electricity itself or acquiring it elsewhere (i.e., the “avoided cost”).

An on-going issue concerns purchasing utilities challenging the QF status of generators seeking to invalidate contracts. The Commission expects to see the continued filing of complaints involving allegations of QF noncompliance. Other PURPA-related workload will continue at the current level over the next several years.

## Natural Gas Issues

**Initial Services.** To capitalize on economies of scale and to minimize unnecessary, duplicative construction, the Commission regulated natural gas pipeline companies as monopolies. With the restructuring of the natural gas industry, pipelines have shifted from being commodity merchants and transporters of natural gas to being transporters only. The sale of natural gas has been unbundled from its transportation, allowing many new and varied competitors to enter the market. Thus, a market served by a single natural gas pipeline may be competitive if competitors have access to the pipeline capacity and offer services that compete with those offered by the pipeline.

The work done by the Commission to authorize initial services in large part improves the range of suppliers by bringing new services and suppliers to a market. For example, new natural gas pipeline projects, including pipeline expansions, offshore pipelines, and import projects, can provide competitive alternatives for existing markets. Storage projects can provide supply flexibility for existing markets. Many major projects serve both new and existing markets.

In addition, the Commission expects to continue to receive filings in response to its policy allowing natural gas pipelines to acquire capacity on other pipelines under certain circumstances. Where the costs of new construction and the related environmental impact render construction uneconomic, the policy makes available capacity on upstream or downstream pipelines attractive to markets.

**Negotiated Rates.** Under the negotiated/recourse rate program, the Commission allows a pipeline and shipper to negotiate mutually acceptable rates. If a shipper prefers, however, it will still be entitled to continue with service under the existing cost-of-service rate (the recourse rate). Negotiating different rates for individual shippers allows individually tailored seasonal rates or short-term transactions to meet customers’ special needs. The resulting array of rate options offers the potential to increase market responsiveness in pipeline services without protracted disputes regarding pipelines’ market power.

**Open Access and State Restructuring.** The Commission has encouraged an environment that will allow state commissions and local distribution companies to implement retail unbundling in a manner that also accommodates the Commission’s goals for the pipeline grid. An example of this policy involves Atlanta Gas Light Company. The Commission has issued the authorizations necessary to

# ENERGY MARKETS

enable Atlanta Gas Light Company to implement the interstate capacity assignment provisions of its retail customer choice program. The Commission also fosters communication with state and industry participants regarding the relationship between the federal regulation of interstate natural gas pipelines and the unbundling of retail natural gas service at the state level.

**Natural Gas Industry Standardization.** The Commission's ongoing work with the Gas Industry Standards Board (GISB) is a prime example of how the Commission has encouraged a healthy gas market by implementing standardized business practices. As a voluntary organization composed of representatives of many segments of the industry, GISB developed and adopted standardized business practices aimed at simplifying the process of transacting business across the interstate natural gas pipeline grid. The Commission reviews and adopts those standards and subsequently reviews indi-

vidual filings by natural gas pipeline companies to comply with those standards. By standardizing business practices, transacting business with multiple pipelines and suppliers should be easier for customers. If transactions are easier and less costly, customers should also have more flexibility. As part of its effort to make business transactions easier and less costly, the Commission requires, by June 1, 2000, that natural gas pipelines conduct all business transactions over the public Internet through a dual communication system using standardized interactive web sites and computer-to-computer file transfers.

**Flexible Service Regulation.** The Commission also authorizes pipeline-specific proposals to implement many new, innovative services. The Commission is receiving and approving pipeline filings for flexible services and negotiated rates to increase capacity use and to meet individual customer needs. For example, the Commission has



*Power house on the Pit River in California. (Photo courtesy of Pacific Gas and Electric Company.)*

# ENERGY MARKETS

authorized an hourly firm transportation rate schedule, limited availability services for niche markets, and volumetric and seasonal rates. In particular, specialized tariff services are enabling natural gas pipelines to serve electric generation markets. The Commission also authorizes an increasing array of new services such as parking and lending and market hub services that meet the needs of individual customers.

**Monitoring the Natural Gas Industry.** To learn how well the natural gas market is functioning, the Commission has increased its monitoring effort as an integral part of its market-oriented approach to regulating the market. While the Commission monitors the marketplace to fulfill its statutory obligations to protect against undue discrimination and the exercise of market power, monitoring is also important to foster competition. The Commission requires pipelines to file various reports and to post information on Internet sites. Current data collections provide the Commission and the public with an array of financial, accounting and other data that helps the public, other market participants, and the Commission monitor the market.

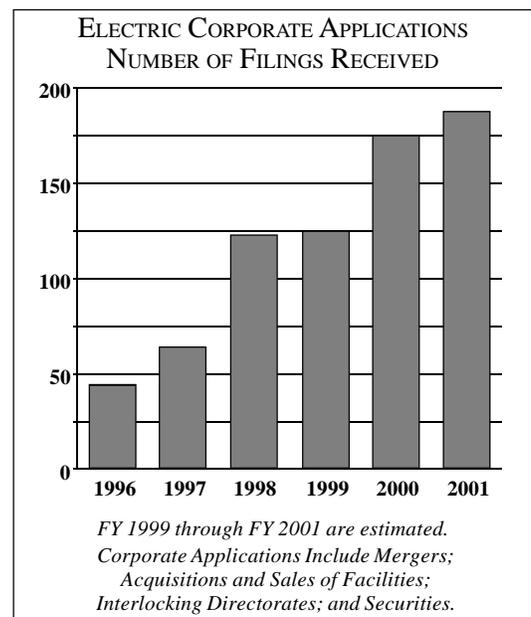
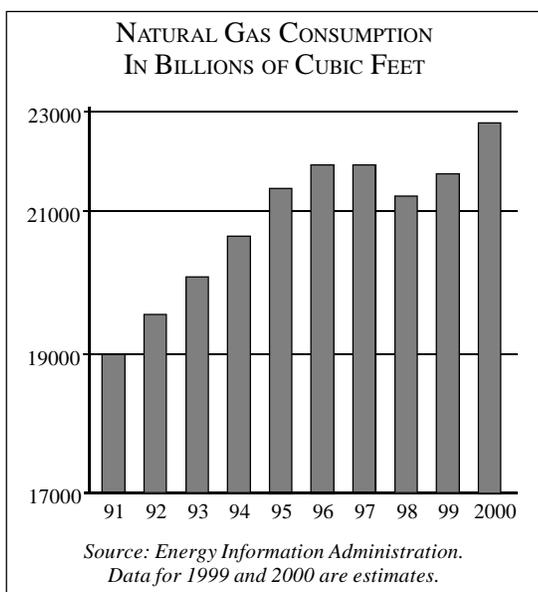
**Gas Research Institute.** The funding for research, development, and demonstration in the natural gas industry has been obtained through traditional regulated rates. However, it became a contentious issue after open access and competition hampered the pipelines' ability to collect the current Gas Research Institute (GRI) surcharge. After exploring long-term funding issues including the funding for a voluntary noncore program with GRI and industry participants, the Commission approved a settlement agreement in FY1998 that results in the continued funding of GRI for a core program that would provide for research and development for the general benefit of the gas-consuming public. The settlement provides for the phase-in to fully voluntary funding as opposed to a mandatory surcharge on pipeline rates by the end of its seven-year term.

**Service Terms and Conditions.** Another important aspect of the Commission's traditional workload is service terms and conditions. The Commission reviews proposals to implement or modify natural gas and oil pipeline services to ensure that those services contribute to a competitive, well-functioning market. The Commission limits service discrimination against captive customers by ensuring that certain customers not receive special services and that all services are published in rate schedules.

**Cost-Based Rates.** In the natural gas commodity market, prices are set by the market. However, in transportation services, where the markets are not fully competitive, the Commission ensures that rates reasonably reflect the cost of providing the service. By maintaining a price cap on pipeline capacity, cost-based rates restrain a natural gas pipeline's ability to charge monopoly prices during peak periods. By permitting discounting, the Commission's cost-based rate regulation also supports a competitive market by allowing efficient allocation of capacity at rates below the maximum tariff-based rate.

## Oil Pipelines

Since the Commission began more market-driven regulation for the oil pipeline industry, regulations have established filing requirements for market-based studies to guide the industry in using this methodology as an alternative to traditional cost-of-service based regulation. While still relatively more burdensome than the light-handed indexing methodology, several oil pipelines have chosen this alternative for charging rates, to enable them to respond to market forces. The number of oil pipelines requesting market-based determinations annually is some 70% greater than the total for the entire previous ten-year period.



## MAJOR ACHIEVEMENTS FOR 1999

### Electric Issues

**Regional Transmission Organizations (RTOs).** In September 1998, the Secretary of Energy delegated to the Commission authority to act under Section 202(a) of the FPA. This section grants authority to delineate regional districts across the country to promote interconnection and coordination within and between regions.

The Commission is encouraging pricing and operational innovations in regional market arrangements. In May 1999, the Commission issued a NOPR on RTOs. RTOs would address competitive market issues in the open access environment of Order No. 888, while stressing the need to enhance the reliability of the transmission grid. The proposed rule suggests at least four characteristics for successful RTOs:

- ◆ independence;
- ◆ appropriate scope and regional configurations;
- ◆ adequate operational authority; and
- ◆ responsibility for short-term reliability.

In addition, the NOPR prescribes several RTO functions, such as tariff administration and design, that would allow a single transaction tariff for an entire regional grid. The proposed rule relies on flexibility and open architecture rather than specific boundaries or organizational formats. Through its electric policy initiative, the Commission is promoting innovations that will foster well-functioning markets. Regionally, markets will enable the industry to price and plan better, ensure reliability, remove opportunities for discriminatory practices, and reduce residual market power.

Over the past year, the Commission has issued orders authorizing the establishment of the Midwest ISO and the restructuring of the New York Power Pool, the New England Power Pool, and the Pennsylvania-New Jersey-Maryland Interconnection. A major concern with each of these proposals is that both members and non-members are treated comparably and pancaked rates are eliminated. The Commission also approved various market rules for ISOs, including rules on how ISOs will determine market prices for various products.

**Utility Combinations with Foreign Companies.** In June 1999, the Commission cleared the way for the first utility combinations with foreign companies. ScottishPower received permission to acquire PacificCorp. PacificCorp is a public utility serving about 1.4 million customers in six western states. The Commission also approved the purchase of the New England Electric System (NEES) by NGG (part of Britain's National Grid Group). NEES is made up of 6 companies in the New England area and serves about 1.3 million customers in Massachusetts, New Hampshire and Rhode Island. The NGG is the owner and operator of the electric transmission network in England and Wales.

**Ancillary Services.** In May 1999, the Commission developed a new policy to balance the advantages of a competitive market with the need to guard against potential anticompetitive behavior. The policy allows companies with market-based rate authority for power (and for energy) also to sell ancillary services at flexible rates, if they establish an Internet-based site. The Commission believes that the market for ancillary services – the back-up and support services for reliable operation of the electric transmission grid – is just beginning to develop. Thus it is sometimes difficult for companies to obtain the information necessary for a complete market analysis for ancillary service markets. The Internet site, which would include such information as service availability and prices, would help guard against potential anticompetitive behavior through market monitoring.

**Technical Conference on Capacity Benefit Margins.** In May 1999, the Commission held a technical conference on capacity benefit margins (CBM). The North American Electric Reliability Council (NERC) defines CBM as “that amount of transmission transfer capability reserved by load serving entities to ensure access to generation from interconnected systems to meet generation reliability requirements.” Variations in defining and calculating CBM, and its impact on available transmission capacity for open access transmission, prompted the Commission to hold the conference. This matter has been raised in several individual filings at the Commission. Some customers are concerned that some utilities may be manipulating CBM to disadvantage competitors. Utilities generally support recognition of CBM as necessary to maintain service to customers in case of emergencies.

In July 1999, the Commission issued an order which provides much needed clarification on the computation of Available Transmission Capacity (ATC) and its critical component, CBM, and goes a long way to ensuring that ATC calculations are clear, transparent, understandable and verifiable. The order requires transmission providers to post their CBM figures; provide clear explanations as to their CBM practices; update their CBM set-asides to capture the benefit of better information as to load, temperature and contingencies; identify precisely what entities can use CBM during generation emergencies; and clarify that CBM is available to any transmission customer on a nonfirm basis. The order also directs transmission providers, working through NERC, to develop a standardized CBM methodology.

**Open Access Transmission.** The Commission continues to administer the open access transmission tariff. This entails reviewing and analyzing numerous requests for new service and monitoring the rates, terms and conditions for the requested services. Among the requests for new service are an increasing number of filings to revise the open access tariff to accommodate retail access programs and to place retail suppliers under the tariff. Throughout the year, the Commission has acted on numerous complaints concerning (1) allegations of excessive open access transmission rates, (2) violations of the functional unbundling requirements under Order No. 888 and standards of conduct under Order No. 889, (3) refusal to offer interconnections, and (4) denial of transmission service. Also, an increasing number of filings involve requests for waiver of Order Nos. 888 and 889 and the filing of new reciprocity and authority over open access tariffs.

**Reliability and Congestion Management.** The Commission's historical responsibility for system reliability has been negligible. Over the past year, however, the Commission was asked by the industry to become more involved. It issued several orders that implement the framework for transmission reliability in response to the NERC initiatives. In an order dated December 16, 1998, the Commission reviewed NERC's transmission line loading relief (TLR) procedures and directed each transmission operating public utility in the Eastern Interconnection to file revised, interim TLR procedures to address parallel flows associated with native load transactions and network service as well as with point-to-point services. Also in that order, the Commission directed those transmission operating public utilities in the Eastern Interconnection that had not already developed regional congestion management programs through their power pools to identify and file interim redispatch solutions, with particular emphasis on solutions that could be implemented by the 1999 summer period. Subsequently, on May 12, 1999, the Commission accepted NERC's interim TLR procedures along with a proposal to modify NERC's procedures to include a transaction contribution factor to separate flows on constrained transmission facilities between point-to-point uses and network uses. Finally, in an order issued May 17, 1999, the Commission approved a Mid-Continent Area Power Pool (MAPP) redispatch proposal similar to the NERC redispatch program. MAPP's redispatch program provides for redispatch of generating units in lieu of curtailment due to constraints of approved firm point-to-point transmission transactions and approved firm network transmission transactions.

In April 1999, the Commission accepted the Western Systems Coordinating Council's (WSCC's) proposed Reliability Management System. The Commission agreed to participate on a limited experimental basis in WSCC's reliability standards by enforcing those standards. The Commission agreed that ADR processes should be used before any disputes are sent to the Commission. The Commission also agreed to assume a role in resolving disputes about violations of the WSCC standards

**OASIS Phase 1-A.** In January 1999, the Commission issued OASIS Phase 1-A, a NOPR that would establish standardized business practices. The NOPR proposes a set of uniform business practices, implementing the Commission's policies on transmission service price negotiation. It also improves interactions between transmission providers and customers over OASIS nodes, and proposes to revise the Commission's current regulations to require compliance with these practices.

**Market Surveillance.** The Commission established an interdisciplinary price monitoring team, a proactive initiative for market surveillance. The team's work will provide information that will help the Commission, state public utility commissions, and other public policy makers make informed decisions on the necessity for any immediate preventative measures or long-term policy initiatives as wholesale power markets complete their move from cost-based rate regulation to market-based competitive pricing.

**QF Re-certifications.** As an increasing number of non-traditional utility entities (e.g., independent power developers) combine with or acquire generating facilities from electric companies, questions arise regarding qualifying facility status of the projects owned by these entities. In December 1998, the Commission addressed its regulations as they apply to situations where an owner of a qualifying facility changes its status from a non-electric utility to an electric utility. In a series of applications, the Commission reiterated that an entity that changes its status to that of an electric utility cannot hold more than a 50 percent equity interest in a QF on a forward-looking basis.

## Natural Gas Issues

**Gas Policy Initiative.** The Commission is undertaking a natural gas policy initiative to improve the efficiency, transparency, and competitiveness of natural gas markets. The growth of vibrant natural gas commodity markets has posed challenges for the Commission's regulation of natural gas transportation. Short-term natural gas markets now offer prices at many points around the grid that imply a value for gas transportation that is independent of traditional regulation. The natural gas initiative recognizes the changing structure of the market and offers a new regulatory strategy for transportation to promote competitive commodity markets and protect customers.

The Commission issued a NOPR as part of the natural gas initiative, designed to maximize competition in short-term natural gas transportation markets, while continuing to mitigate market power. The NOPR proposed:

- ◆ removal of the rate cap for all short-term transportation services;
- ◆ auctions for all short-term transportation capacity; and
- ◆ negotiation of terms and conditions of services.

The Commission simultaneously issued a Notice of Inquiry (NOI) requesting comments on a variety of long-term transportation issues in light of market changes and the regulatory changes proposed in the NOPR. The NOI sought comments on whether the Commission should modify its long-term market pricing policies by moving away from traditional cost-of-service ratemaking or by modifying the current ratemaking methods.

The initiative seeks to foster competitive markets and mitigate residual market power. In selecting regulatory strategies to achieve these goals, subsidiary objectives to be considered are:

- ◆ providing appropriate incentives for pipeline operations, customer choices, and optimal level of construction;
- ◆ monitoring for discrimination and the exercise of market power;
- ◆ minimizing any adverse financial impact from regulatory changes; and
- ◆ using fair and administratively efficient regulatory approaches.

**Natural Gas Industry Outreach.** With the natural gas initiative, the Commission staff has, in FY 1999, conducted about 30 informal outreach meetings with all industry groups to explore issues relating to visions of the future and the regulatory changes that would be required to meet those visions. The Commission has held a series of industry-wide conferences on the following topics: (1) issues relat-

# ENERGY MARKETS

ing to state unbundling of natural gas services and how current regulations facilitate or hinder those efforts; (2) projected gas pipeline capacity demands for the northeastern portion of the United States; and (3) issues relating to revisions to electronic filing requirements.

**Service Terms and Conditions.** The Commission continued to receive and approve pipeline filings for flexible services and negotiated rates to increase capacity utilization and to meet individual customer needs. In FY 1999, these included hourly firm transportation rate schedules, semi-firm rate schedules, limited availability services for niche markets, and volumetric and seasonal rates.

**Gas Industry Standardization.** In FY 1999, the Commission adopted additional standards proposed by GISB. These rules will increase coordination and standardization of gas industry business practices and communications to facilitate natural gas transportation of the interstate pipeline grid.

**Conference on Federal and State Regulation of Natural Gas Services.** The Commission held a conference to discuss the relationship between the federal regulation of interstate natural gas pipelines and the unbundling of retail natural gas service at the state level. The Commission recognized that the relationship between state



*Painting transmission tower on San Francisco Bay, California. (Photo courtesy of Pacific Gas and Electric Company.)*

# ENERGY MARKETS

retail unbundling and federal regulation of the pipeline system has important implications for the smooth functioning of the natural gas pipeline grid. The dialogue among the Commission, state regulatory commissions, and industry representatives helped further the Commission's goal of encouraging an environment that will allow state commissions and local distribution companies to implement retail unbundling in a manner that also accommodates the Commission's goals for the pipeline grid.

## Oil Pipelines

**Oil Pipeline Dispute Resolution and Outreach.** In FY 1999, the Commission promoted the use of alternative dispute resolution procedures by setting four contested oil pipeline tariff disputes for settlement judge procedures rather than sending them directly to hearing. In the area of outreach, Commission staff has provided expert assistance to other governmental agencies, industry groups, private concerns, and foreign governments in resolving oil pipeline related matters. Staff has been involved in many meetings between Russian government officials and members of the Department of Energy; an interagency governmental group concerning crude oil pricing; presentations to the Association of Oil Pipelines to relate information on Commission oil pipeline requirements; and discussions with Congressional staff concerning the possible alternatives for legislation concerning outer continental shelf oil pipeline regulation.

**Indexing Methodology.** The oil pipeline industry continues to face significant change in areas as basic as locations of supply and delivery, as traditional supply sources are replaced by new origin markets. These changes require both construction of new facilities and more innovative use of existing plant to respond to the market's needs. A prime example of this change is the increased use of Canadian crude oil to feed refineries traditionally served by local area indigenous production.

To allow the oil pipeline industry to cope with rapidly changing circumstances, the Commission has established a generally applicable indexing methodology that allows for greater efficiency and ease in filing rate changes while protecting users of the pipelines' services. It has also delineated three alternatives to that methodology: traditional cost-of-service rates; market-based rates; and negotiated or settlement rates. Most pipelines have taken advantage of the new relaxed regulations when filing rate changes under the simplified indexing program. The pipelines are also using the other modified procedures, such as waiver requests for short-notice filings, to streamline filing procedures. Several pipelines also have obtained market-based rates for certain areas of their systems upon showing a lack of market power. As an integral part of the generally applicable indexing methodology, the Commission will conduct a review of the selected index after five years of experience, after July 1, 2000.

# ENERGY PROJECTS

## GOALS

The Commission's goals for hydroelectric and natural gas pipeline projects are:

- ◆ To protect and enhance environmental and public benefits, including hydropower development
- ◆ To balance interests of natural gas customers, applicants, landowners, and the environment
- ◆ To achieve timely, optimal pipeline project construction
- ◆ To ensure the safety of hydropower projects

### Environmental and Public Benefits

Electricity generated from the power of falling water is economic, renewable, available for peak demand, and without emissions – a valuable contribution to, and a significant component of, the nation's energy mix. But because hydropower projects use and affect a variety of important natural resources, they must adjust to increasing concern for the environment and shared jurisdictional authorities, while competing in rapidly changing energy markets.

The public's and congressional concern about the environmental impacts of hydropower operations continues to increase. This heightened concern, reflected in a host of environmental laws, results in many additional requirements in new licenses. The Commission is focusing on resolving the many conflicts over licensing that arise before the filing of an application and is continuing staff involvement through post-licensing. Early and sustained collaboration among diverse participants is effective in finding solutions.

While the Commission's responsibility under the FPA is to strike a balance among the many competing power and nonpower interests, various statutory requirements give other agencies a powerful role in the licensing of projects. The Commission must share its licensing conditioning authority with numerous state and federal agencies. Shared jurisdiction poses unique challenges to the Commission in issuing timely and balanced licenses. The potential for conflicts is reduced by having everyone at the table early in the process and having better communication among agencies.

### Balancing Natural Gas Interests

One area of the natural gas industry that has remained regulated in a traditional way is the authorization of interstate gas pipeline construction projects. Even there, the Commission is looking at significantly different approaches for meeting the time-sensitive needs of the competitive market while properly addressing environmental and landowner concerns.

The Commission expects to respond to a continuing need to construct new pipelines or expand existing facilities to serve growing markets or to compete in existing markets. New market potential is expanding due to higher demand for gas. Getting gas to market will require expansions in the pipeline transportation and storage grid to handle new supplies and changes in the geographic mixes of production and consumption. The Commission will encourage efficient gas pipeline construction to provide individual customers and market entrants with increased choice and reliability of service by giving them multiple supply and delivery options.

At the same time, the Commission will continue to balance and protect the competing interests of pipelines, individuals, organizations, and resources affected by the application of eminent domain for new and replacement construction of natural gas pipeline infrastructures. Greater participation by landowners will require increased efforts by the Commission to address their concerns adequately. The Commission has designed its certificate policies to avoid unnecessary environmental and community impacts and to mitigate necessary ones.

### Optimal Project Construction

The Commission is implementing changes in its regulations and processes to respond more quickly to anticipated market need for additional pipeline facilities. For example, Order No. 603 streamlined the certificate process and clarified filing requirements. This helps applicants to make complete filings, thereby reducing processing time and allowing faster decisions on proposed projects.

### Safety of Hydropower Projects

The Commission's internationally recognized dam safety program ensures that the dams under its jurisdiction are properly constructed, operated and maintained. Because of the increasing number of older dams under the Commission's jurisdiction, continued vigilance is particularly necessary. As engineering technology, tools, and procedures improve, the Commission conscientiously facilitates sharing of knowledge, and it works with licensees, the engineering community, and federal and state agencies to maintain its outstanding dam safety record.

## WORKING TOWARD THE GOALS EVERY DAY

### Hydropower Issues

**Project Licenses.** The Commission's hydropower licensing and post-licensing processes have the multiple intents of maintaining power generation, enhancing and protecting the environment, and enhancing recreational assets of water resources. Integral to these processes is the participation of a myriad of stakeholders, including local citizen groups, power users, Native Americans, environmental organizations, fish and wildlife agencies, and the hydropower companies. Through this participation, the Commission's authorizations address the needs of the stakeholders affected by the hydropower facilities.

Over the next 10 years, more than 220 project licenses will expire. Many of these projects significantly affect regionally important environmental resources. In the relicensing process, the Commission will facilitate participation by the many stakeholders to ensure that the outcome protects and enhances the environment while maintaining project generating capacity. To meet these challenges, the Commission will use the alternative licensing process and monitor benefits to environmental and recreational resources.

# ENERGY PROJECTS

**Project Authorizations.** Nonfederal hydropower projects must obtain Commission authorization if they are on lands or waters subject to Congressional authority. The Commission issues licenses for terms up to 50 years for projects “best adapted to a comprehensive plan” for improving a waterway for beneficial public purposes. Benefits include power generation, irrigation, flood control, navigation, fish and wildlife, municipal water supply, and recreation. Preliminary permits, issued for three years, reserve rights to study the feasibility of hydropower development at a specific site, but do not authorize construction of any hydropower facilities. Exemptions (from licensing), issued in perpetuity, are limited to sites involving existing dams or natural water features, for projects of less than five megawatts. The Commission also issues conduit exemptions for small hydropower facilities on conduits that are not used primarily for generation of electricity.

**Preliminary Permits.** The number of applications for preliminary permits has risen dramatically in the past year. The number of preliminary permit applications filed in FY 1999 is more than 20 times the number filed in FY 1998. These applications are for projects at Army Corps of Engineers or other existing lock and dams and employ new design technology.

The new design involves a faster, cheaper, more environmentally friendly method for installing turbine generators at existing dams. Instead of the conventional design, where the turbine generator is inside the dam or powerhouse, this design installs a turbine generator unit externally, on the face of an existing dam or on a slab built on a river bank next to the discharge area. Using siphons and existing gates and water conduits keeps costs down by minimizing disruption to land and water resources. Installation can take less than eight weeks and construction can be as little as one half of the cost of conventionally designed facilities.

**Alternative Licensing Procedure (ALP).** The number of applications using this alternative approach is increasing each year. The resulting licenses have been issued in less than half the time required for applications that did not use the collaborative approach, and have demonstrated increased consideration for the environment. The ALP gives potential licensees the option of filing a preliminary draft National Environmental Policy Act (NEPA) document with their application. The ALP also promotes early identification of issues, and cooperation and collaboration to resolve issues during the pre-filing consultation phase of hydro licensing.

Working collaboratively with the full range of hydro interests has these benefits:

- ◆ Enhanced opportunities for stakeholder input in shaping the relicensing process;
- ◆ Increased regulatory efficiency through state and federal agency cooperation;
- ◆ Reduction or elimination of unresolved issues at the time license applications are filed; and
- ◆ Early implementation of environmental enhancement measures.

**License Surrenders.** Licensees and exemptees may decide to surrender their hydropower authorizations because a project is no longer economical or because natural catastrophes have damaged or destroyed project facilities. To protect the environment and the public, a license or exemption may be surrendered only upon agreement between the licensee or exemptee and the Commission. In recent years, the surrender review process has become more complex, with a corresponding increase in staff involvement, because of increased sensitivity to the environmental implications of ending Commission jurisdiction.

If construction of a licensed project has commenced, the Commission consults resource agencies that provided the original terms and conditions. It seeks input from the public to ensure that local environmental issues are considered in the surrender proceeding. It also prepares an environmental assessment of any need for restoration for public safety and environmental integrity. These measures may range from simply locking a perimeter gate to removing a dam.

**License Transfers.** Electric restructuring is prompting many licensees to reevaluate their generating assets. As a result, the Commission is receiving more applications to transfer hydropower project licenses. For example, Niagara Mohawk Power Corporation plans to sell its 38 jurisdictional projects in FY 2001. Before approving a transfer, the Commission reviews the proposed transferee’s eligibility and considers potential compliance problems. The Commission also works with transferees to ensure they understand their responsibilities under the license or exemption.

**Land Use Issues.** Amendment proposals requesting authorization for commercial development create opportunities for the public to enjoy these reservoirs and enhance local economies. They also present challenges for the Commission to provide for a reasonable balance between developmental interests and wildlife and fishery values of the water resources.

One way to reach this balance is to develop shoreline management plans that consider both economic and environmental resource values. The Commission encourages licensees and, in some circumstances, requires them, to develop shoreline management plans, in cooperation with resources agencies, property owners, local governments, and other interested entities. Licensees typically revise these plans periodically, with the Commission’s approval, to accommodate changes to environmental and economic circumstances.

**Compliance with Authorizations.** The Commission’s post-licensing compliance program includes monitoring, compliance assistance, and penalty assessment under Section 31 of the FPA. The compliance program ensures that licensees observe the terms and conditions of licenses, which are designed to protect and enhance the environment and provide benefits to the public.

**Post-Licensing Monitoring.** Most licenses issued today require post-licensing monitoring. Monitoring the hydropower project provides data on the performance of mitigative measures, such as fish passage facilities, fishery habitat improvements, wildlife benefits, recreational enhancements, and cultural resource protection. It ensures that the measures are implemented, and also determines whether the measures are sufficient for the level of environmental benefits envisioned at the time of licensing. New licenses frequently incorporate performance measures. These licenses identify goals

# ENERGY PROJECTS

for environmental resource protection or enhancement and create a mechanism for measuring whether the goal is achieved.

Cooperative procedures have been helpful in achieving post-licensing monitoring objectives. More performance-based conditions are being developed through the collaborative licensing efforts, as parties to the licensing process recognize the importance and necessity of their role to fine tune environmental conditions and ensure their success.

The Commission will continue to help licensees meet their post-licensing monitoring obligations in partnership with other agencies and participants. Early efforts focused on helping project owners with small projects or recently issued licenses and exemptions.

**Compliance Audits.** In general, compliance audits are on-site field investigations by multi-disciplinary teams. Part of the effort is to anticipate, identify, and solve compliance problems, to focus attention and resources where they are needed most. Compliance audits also provide an opportunity for the licensee's personnel to ask questions of Commission staff and to get to know the people who handle

their problems. These face-to-face meetings always improve communications.

Small projects benefit most from audits, because their financial and personnel resources are often limited. Compliance staff provides them valuable expertise and advice. Most important, compliance assistance can spot problem areas before they become safety and environmental concerns.

**Civil Penalties.** The primary goal of the civil penalty program is to achieve compliance with the terms and conditions in each license, exemption, or permit that protect and enhance environmental resources. The Commission offers technical guidance and support, including several outreach programs. In addition, technical staff meets with industry members and other interested parties to forge solutions to new or complex compliance issues. If all else fails, however, the Commission may initiate a civil penalty proceeding, either to obtain compliance or to penalize for violations having serious public safety or environmental implications.



*Pipe strung out along right-of-way in Ontario, Canada. (Photo courtesy of TransCanada PipeLines.)*

# ENERGY PROJECTS

**Unexpected Contingencies.** Throughout a license term, events occur that require immediate Commission action to arrest environmental problems. These events may be construction problems resulting in fish kills, dam repairs resulting in environmental problems, or project operation endangering recently listed threatened and endangered fish. In each habitat conservation case, the Commission must implement measures to protect affected environmental resources.

With a dramatic increase in the numbers of salmon species on the threatened and endangered species list, conflicts are increasing between operation of existing hydropower facilities and protection of listed species. In this regard, the Commission is currently consulting with the National Marine Fisheries Service and the U.S. Fish and Wildlife Service on operations of several projects in four river basins.

**Other Elements of Hydropower Authorization.** Other hydropower work includes the following.

**Headwater Benefits.** Section 10(f) of the FPA directs that the owners of nonfederal hydropower projects who receive energy benefits from upstream federal storage reservoirs must reimburse the upstream project owners for part of their capital costs. The Commission conducts river basin studies and determines the assessments, which are returned to the U.S. Treasury. Approximately \$6 million is collected annually for benefits received from 116 federal headwater projects throughout the country.

**Federal Lands.** When federal lands are reserved for waterpower purposes, the Commission must review any applications for other uses of those lands. Other uses may include mining claims, oil and gas leases, mineral leases, rights-of-way and revocations under the FPA. The review allows the Commission and the Bureau of Land Management to protect existing licensed projects from adverse impacts from outside parties. It also allows for federal lands not affected by a project to be opened for other beneficial public uses.

## Safety of Hydropower Projects

The Commission is charged with statutory responsibility for the safety of nonfederal hydroelectric projects. Through inspections and studies, the Commission ensures that dams are kept in good shape and monitors them to help prevent unanticipated dam safety incidents. As a second line of defense, emergency action plans make sure that the dam owner and community know how to deal with potential emergencies. Elements of the dam safety program are project inspections, engineering and environmental analyses, safety reviews, and emergency action plan tests.

**Project Inspections.** Inspections verify the structural integrity of dams and compliance with engineering, environmental, and public safety conditions and regulations. They also identify necessary maintenance and remedial modifications. The Commission is responsible for inspecting more than 2,600 dams and related water retention structures. It conducts periodic inspections starting from the receipt of an application for a proposed jurisdictional project, throughout the term of a license. Types of inspections are pre-license, construction, operation, instrumentation, exemption, environmental and public use, safety, and special. The Commission's five regional offices conduct the inspections.

Inspections during project construction ensure that the constructed project complies with the approved design. They also ensure that project construction complies with all applicable federal and state environmental regulations and includes appropriate environmental protection measures, such as erosion control plans and flow monitoring systems. Construction inspections can uncover unexpected conditions (such as unknown foundation features) and any need for design changes.

When the project begins operation, focus shifts to ensuring safe operation and maintenance of the dams. Periodic, on-site operation inspections ensure that dams are maintained for long-term structural integrity of the project works and are repaired if necessary. They also ensure that licensees comply with license provisions. These inspections safeguard the continued operation of projects, as well as downstream lives, property, and environment.

Special inspections occur when special issues arise. These may involve potential dam safety problems, unauthorized projects, complaints about the construction or operation of projects, potential environmental problems, safety concerns, or compliance issues.

The Commission conducts environmental and public use inspections to confirm that licensees comply with the environmental and public use requirements of the license, and to ensure that the licensee appropriately protects the environmental resources. Commission environmental specialists also periodically review construction activities to ensure that dam safety and maintenance-related construction activities are environmentally responsible. In addition, the Commission makes special environmental inspections to investigate environmental compliance problems and environmental damage after flooding or earth or rock slides, and to determine appropriate protective measures.

**Engineering and Environmental Analyses.** The Commission keeps abreast of technological advances in field and laboratory investigative and analytical procedures, including innovative designs for proposed remedial modifications. Keeping abreast of advances in analytical techniques and dam technology is an important prerequisite to analyzing data and recommending modifications. The Commission requires licensees to use these new techniques for quality control. These efforts have typically resulted in cost savings associated with remediation and have sometimes eliminated the need for dam safety modification work.

To provide guidance to its engineering staff, dam owners, their consultants, and the rest of the dam safety community, the Commission publishes Engineering Guidelines for the Evaluation of Hydropower Projects. These guidelines specify the criteria, analytical methods, engineering parameters, and other engineering aspects related to the design, construction, monitoring, and operation of safe dams. The dam safety community widely requests and relies on these guidelines. The Commission updates and expands the guidelines as necessary to ensure consistency with state-of-the-art technology.

As dams age and undergo various stress conditions, such as floods and earthquakes, the Commission increases its monitoring and use of instrumentation data to decide whether the condition of the dams and their appurtenant facilities are changing. This procedure is the key to detecting potential problems before they become serious and deciding whether new remediation is necessary. With monitoring data available, the Commission will require licensees and their consultants to continually evaluate the condition and performance of their dams.

# ENERGY PROJECTS

**Safety Reviews.** The Commission's dam safety program must ensure consistently high safety standards at high and significant hazard potential dams to maintain the lowest probability of failure. In addition to its own periodic visual inspections and evaluations, the Commission requires periodic independent consultant inspections of dams with high hazard potential. These inspections include a complete engineering assessment and inspection of the project works, with a detailed review of the project design and a thorough inspection of project structures. For quality control, Commission dam safety experts approve qualifications of independent consultants. They also thoroughly review all independent consultant inspection reports for validity of the analysis and conclusions and the need for additional studies or remedial measures.

**Emergency Action Plan (EAP) Tests.** All of the inspections, evaluations, remediation, and monitoring, however, cannot guarantee that emergencies will not occur. Therefore, a second line of defense to protect life, property, and the environment is the development, maintenance, and periodic testing of EAPs. These plans specify actions that owners must take, in coordination with federal, state and local preparedness agencies, in case of flood, earthquake, or project facility failure. The Commission is recognized as a national leader in EAPs and regularly shares its expertise with many other federal and state agencies.

## Natural Gas Pipeline Issues

The Commission addresses multiple competing interests and timeliness issues concerning natural gas certificates on an ongoing basis through its casework.

**Pipeline Expansion.** The pipeline industry is aggressively pursuing serving new markets for gas. In the new competitive environment, pipelines are proposing to serve markets already served by other pipelines. Competing pipelines and landowners who question the need for the new projects vigorously contest many of these proposals. Processing these contested proposals requires significant resources.

Increasing availability of Canadian supplies, new deep-water production in the Gulf of Mexico, and the growing market for natural gas in the Northeast will continue to result in large construction projects. The Commission also expects that Canadian gas and oil suppliers will seek additional markets for their products in the U.S., and that producers will explore options to export gas to Canadian and Mexican markets, which may require pipeline construction. Increased competition in these markets and customers' desires for multiple, competing sources of supply will generate more NGA Section 3 filings and related requests for Presidential permits for importing and exporting gas and oil. The Commission will also continue to see projects related to the extensive exploration effort on the offshore outer continental shelf and construction of pipelines to reach significant new gas supplies.

Growing demand in the New England, Mid-Atlantic, Midwest, and Southeast regions of the country will continue to lead to applications for major pipeline extensions and new pipelines to serve these regions. Meeting construction and service time frames will require analyzing contractual arrangements between parties and monitoring interconnection policies to ensure that competing pipelines may obtain access to markets, and that customers have choices

for their gas supply needs. Processing of major construction projects will entail technical conferences and public meetings for environmental scoping and comments on draft documents, as well as the analysis of data responses, comments, protests, and other filings. Where multiple pipelines propose to construct facilities in the same area, either for the same or discrete markets, the Commission may explore options for reducing the cost and environmental impact of the facilities by considering joint facility construction, such as Portland Natural Gas Transmission System and Maritimes and Northeast Pipeline, L.L.C.

**Storage Development.** The Commission expects to continue to receive applications for storage development for peaking capacity and supply flexibility, since customers will continue to be responsible for their own gas supply acquisition. Anticipated storage facilities include depleted gas fields, new leached-salt caverns, and liquefied natural gas (LNG) tanks. Commission review and approval of these projects, many of which will be located near market areas, is likely to generate significant public interest regarding competition, need, and environmental impact. As a result, the Commission may hold technical conferences and public meetings before making decisions about whether these proposals are in the public interest.

**Replacing and Upgrading Facilities.** The Commission anticipates many replacement facilities because of the aging of the national pipeline grid. Replacing aging facilities is necessary for safe pipeline operations. A replacement project may be straightforward, with the pipeline proposing to merely remove old pipe and replace it with new pipe of the same diameter in the old right-of-way. Replacement projects can become much more difficult if the pipeline proposes to replace the old pipe with new pipe of a larger diameter, or to leave the old pipe in place, seal it off, and install new parallel pipe. Order No. 603 has streamlined the procedures for pipelines seeking to replace aging facilities by allowing many replacements to be done under the blanket construction certificate. Some of these projects may be done automatically, and some may require prior notice to the Commission before replacement can commence, but all are subject to the environmental conditions required by the blanket certificate.

**Environmental Analysis.** Protection of the environment remains a top consideration in the processing of certificate applications. Under NEPA, the Commission will continue to perform required environmental analysis of all gas pipeline construction proposals. The purpose of this analysis is to avoid or mitigate adverse effects on water quality, vegetation and wildlife, historic and cultural resources, soils and geological resources, land use, and air and noise quality. The Commission conducts a thorough analysis of each of these areas before any certificate project can proceed.

The Commission will balance the need for thorough analysis with the need to improve processing time. The Commission continues to encourage the use of third-party contractors and applicant-prepared environmental documents. These alternatives have reduced the resources required for this workload area, and they offer the potential for accelerating the review process. However, Commission resources are still required to review the contractors' work to ensure accuracy and compliance with Commission policies.

**Competing Interests.** Environmental concerns play a significant role in the review of certificate construction applications. Pipelines are facing increased opposition from landowners as new projects are proposed in more heavily populated areas. When new pipelines propose to serve markets currently served by existing pipelines, the Commission must balance the benefits of alternative supplies of natural gas with the environmental impact of a new project. Landowners increasingly question the right of pipelines to use eminent domain in cases where the market determines the need for the project. Also, pipelines face timing concerns based on various environmental permitting requirements.

**Other Environmental Considerations.** The Commission will continue its field compliance inspections of projects under construction. The Commission expects this work to increase substantially as the major pipelines discussed above are certificated and built. The Commission will also monitor restoration of rights-of-way on pipelines greater than two miles in length, which were built under the automatic blanket authority, and projects completed under Sections 2.55(b) and 284 of the Commission's regulations. Safety and operational integrity inspections of jurisdictional LNG plants will continue biennially according to an agreement with the Department of Transportation.

## MAJOR ACHIEVEMENTS FOR 1999

### Hydropower Issues

**Interagency Task Force.** To improve relations with federal and state agencies, the Commission is participating in the Interagency Task Force. It consists of five work groups: federal agency coordination; state agency coordination; ex parte; collaborative process; and economics. The goals of these work groups are to improve routine communication, reduce duplication, and find practical ways to work together more efficiently. Thus far, the federal mandates working group has agreed on ways of improving the Commission's noticing procedures and the NEPA process. In addition, the collaborative process work group has developed a set of guidelines for participating in the Commission's alternative licensing process.

The work of the Interagency Task Force will be of significant interest to non-federal participants in the licensing process, such as licensees, Indian Tribes, and non-governmental groups. Accordingly, an advisory committee, sponsored by Chairman Hoecker and Secretary of the Interior Bruce Babbitt, was formed under the Federal Advisory Committee Act to provide a forum for non-federal entities to review and provide comments on the deliberations of the task force.

Some efficiencies have already begun. For example, an immediate benefit is that agencies get involved early in the process. By modifying Commission notices to indicate the involvement of fed-

eral or tribal lands and to specify license expiration dates, agencies are better aware of their responsibilities. This will help ensure full agency participation early in the process.

**Ensuring Safe Projects: Focus on Aging Hydraulic Components.** The proper functioning of the hydraulic components of dams is critical to ensuring dam safety. Without proper functioning of the hydraulic machinery, penstocks, conduits, gates, and spillways, the necessary control of reservoirs can be lost, resulting in dam failure. While the Commission's role and responsibility regarding dam safety are quite different from those of other agencies such as the Corps of Engineers, the Bureau of Reclamation, and the Federal Emergency Management Agency (FEMA), all have common technical dam safety concerns. In addition, the rest of the dam safety community, including dam owners, state dam safety agencies, and engineering consultants, has expertise and a vested interest in technical dam safety issues. The Commission is coordinating within the dam safety community to focus attention on hydraulic component safety problems. The goal is to develop the proper technical approach to assuring the safety and adequacy of aging hydraulic components of dams.

**Alternative Licensing Process.** ALP is an alternative to the traditional licensing process designed to improve communication among affected entities and to be flexible and tailored to the facts and circumstances of a particular proceeding. With ALP successes building on each other, interest in the ALP has continued to increase. The Commission expects that nearly 40 percent of license applications between FY 2000 and FY 2003 will use the ALP.

Recent examples of the benefits of ALP include the collaborative process used for International Paper's Riley-Jay-Livermore and Otis Projects on the Androscoggin River, Maine. There, a collaborative team addressed and resolved a host of complex issues. In addition, members of the collaborative team requested, and the Commission issued, 50-year licenses for these projects, virtually unheard-of in relicensing—a direct result of undertaking and successfully completing an ALP.

Another successfully completed ALP is the Avista Corporation (formerly Washington Water Power) application to relicense the existing Cabinet Gorge and Noxon Rapids projects on the Clark Fork River in Montana and Idaho. Avista's application includes a 27-party settlement agreement, including early implementation of protection, mitigation, and enhancement measures, and adaptive management of project-affected resources.

**Recreational Fishing.** As a member of the National Recreational Fisheries Coordination Council, the Commission developed a plan for enhancing recreational fishing opportunities at its licensed projects, to be implemented by the end of FY 2000. Implementation is ahead of schedule. In FY 1999, the Commission promoted recreational fishing at licensed projects through a brochure and a "Fishing Net" page on the Worldwide Web. In addition, the Commission approved or amended 20 recreation plans in FY 1999. These plans typically require the construction or improvement of facilities that provide fishing access to project waters.

**Guidebook on Preferred Practices.** Commission staff played a key role in developing a hydro licensing "best practices" document. The effort began when the Electric Power Research Institute (EPRI) recognized that common practices and issues could be shared to avoid the necessity for rediscovery with each licensing effort.

# ENERGY PROJECTS

**Tainter Gate Initiative.** This first endeavor in the Commission's initiative to jointly address the aging hydraulic components of dams, required owners of significant and high hazard potential dams to perform comprehensive design review and physical inspection of tainter gates. Owner response to the initiative has been positive. The concerns identified have included needed remediation and modification to routine operation and maintenance procedures.

**Electronic Filing of Inspection Reports.** The Commission has developed and is implementing procedures for electronic submission of all regional office inspection reports, which include digitized photographs. This procedure will allow all parties, public and private, to readily obtain copies of Commission inspection reports through the Internet. An additional benefit is the ability for Commission engineers, using digital cameras in the field during project

safety-related incidents, to promptly submit photographs of on-the-ground conditions for review by engineering teams and supervisors in the office.

**Actions Taken to Improve States' Dam Safety Programs.** Congress established the National Dam Safety Program Review Board to advise the Director of FEMA on implementation of the National Dam Safety Program. The Commission's dam safety expertise was influential in the Board's accomplishments in FY 1999. Accomplishments include establishing procedures for the approval and distribution of federal grants to individual state dam safety offices and distribution of grants. The Board is now concentrating its efforts on its leadership role, and is developing a vision and strategy for successfully accomplishing its mission.



*Hells Canyon Dam on the Snake River in the Pacific Northwest. (Photo courtesy of Idaho Power Company.)*

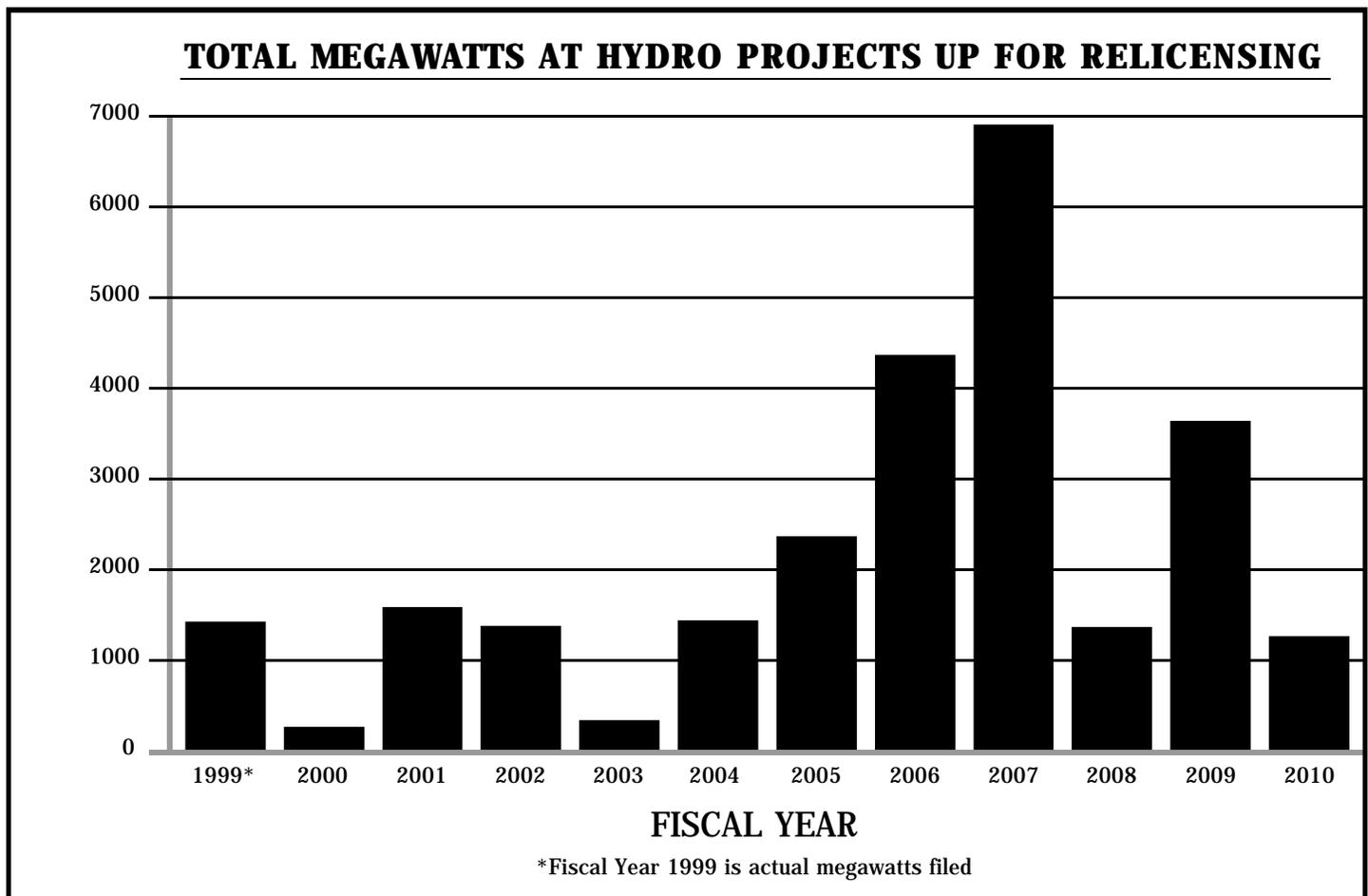
# ENERGY PROJECTS

**Federal Dam Safety Guidelines.** In FY 1999 the Commission helped develop new engineering guidelines as a member of the Interagency Committee on Dam Safety, which advises FEMA on issues affecting dam safety. The following publications were issued in FY 1999: Emergency Action Planning for Dam Owners, Hazard Potential Classification Systems for Dams, and Selecting and Accommodating Inflow Design Floods for Dams. Active participation in the development of these guidelines promotes open communication between the federal and state agencies responsible for dam safety.

**Seismicity in the Southeast.** In FY 1999 the Commission staff reviewed several site-specific seismicity studies and seismic stability analyses for projects in the Southeastern part of the United States. The impact of earthquakes on the safety and stability of FERC licensed dams is an area of concern and requires detailed engineering evaluation. Current studies have focused on earth dams constructed in the 1930's, sometimes over loose foundation materials, or constructed with techniques of that era that produced a loose embankment dam susceptible to drastic strength reductions during seismic shaking. These evaluations indicate significant modifications are required at several projects.

Three projects in the southeast where detailed engineering evaluations have shown that the embankment dam structures will perform poorly during the Maximum Credible Earthquake are: P-516, Saluda Dam, P-2232, Wateree Dam, and P-199, Santee Cooper. All of these structures have a high hazard potential classification, and if they failed they could cause significant loss of life, property damage, and environmental harm. The Commission is considering mitigation measures to minimize any potential problem.

**Seismicity in the Northwest.** In FY 1999, engineering consultants to the Commission conducted several seismicity studies in the Northwest. These studies stem from investigations by federal and state agencies that have revealed that, historically, the Pacific Northwest has been far more seismically active than previously believed. The Commission is requiring that dam owners have their independent consultants perform site-specific seismic evaluations for some Part 12 Reports and revise stability analyses when loading conditions change significantly or when previous methods of analysis are no longer acceptable.



# ENERGY PROJECTS

**Outreach.** In December 1998, the Commission began its second round of outreach sessions in Sacramento, California to provide information on alternative licensing processes and other aspects of the Commission's licensing and post-licensing programs. Earlier outreach efforts informed stakeholders of the availability of the alternative licensing process and other licensing and post-licensing programs. In this round, staff provided 165 federal and state agency representatives, industry representatives, non-governmental organizations, and the public with detailed information on the next step of how to implement a collaborative licensing process. The session resulted in two utilities and one municipality deciding to use the collaborative approach to licensing.

Another result was the formation of the California Hydropower Relicensing Roundtable, consisting of electric utilities, federal agencies, tribal governments, nonprofit organizations, water utilities, local governments, and state agencies. The Roundtable will provide a forum for discussing problems and opportunities associated with California relicensings.

The Commission held issue-focused outreach sessions with the American Fisheries Society, U.S. Forest Service, and stakeholders in Alaska. The objective was to provide the outreach participants with the knowledge necessary to begin to implement the alternative licensing process. The Alaska meeting focused on lessons learned by the Commission and stakeholders, problem-solving, and better coordination between licensing and the coastal zone consistency process.

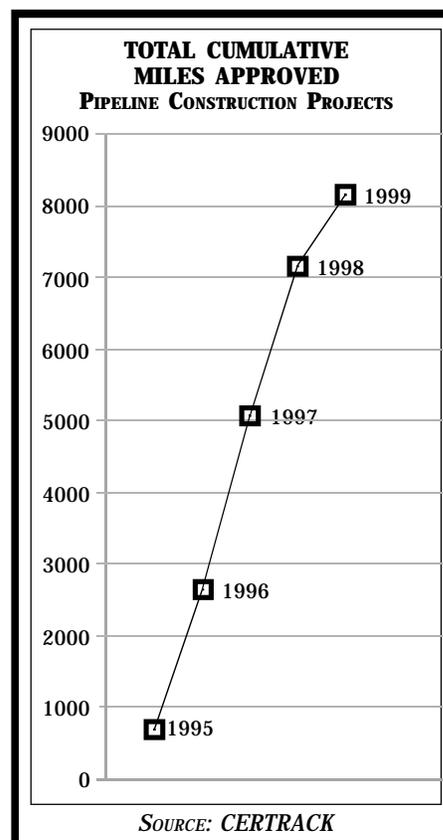
**Interagency Training.** To provide training for those participating in the Commission's hydropower licensing processes, the Commission has helped develop an Interagency Hydropower Licensing Workshop. Other agencies helping to develop the workshop are the U.S. Forest Service, U.S. Fish and Wildlife Service, Bureau of Land Management, National Park Service, and National Marine Fisheries Service. Participants in the workshop include federal and state resource agency personnel and anyone involved with the hydroelectric relicensing process. While attending the workshop, participants work through a fictional case study as interagency team members and discuss issues, based on presentations by staff from the Commission, other federal and state resource agencies, Indian Tribes, hydroelectric industry, and non-governmental organizations. Thus far, three 5-day workshops have been held in West Virginia, Washington, and California, for more than 100 participants. Future workshops are planned for South Carolina and Alaska.

**Expanded Emergency Action Plan Cooperation.** The Commission has made improvements to its Emergency Action Plan Exercise Design Course. The primary objective of the course is to help Commission licensees better prepare for the testing of their emergency action planning process. In this latest improvement, Commission staff emphasizes the importance of the emergency management personnel working closely with the dam owner to complete the emergency action plan test. Strengthening the relationship between the emergency management personnel and the dam owner ensures that their roles mesh and that each function is coordinated with the other.

## Natural Gas Issues

**Streamlining Certification.** Order No. 603 streamlined the gas pipeline certificate process to better fit the unbundled nature of today's pipeline sales and open access transportation services. The order allows better response to changes in competitive market forces by, among other things, expanding the scope of blanket certificates to let pipelines construct, operate, rearrange, replace, and abandon more facilities automatically. Order No. 603 helps protect both customers and the environment by clarifying the specific information needed for a complete application, and expedites the certification process by establishing procedures to reject patently deficient applications for proposed projects before the Commission spends significant resources unnecessarily. The order requires pipelines to file more complete applications and sets a time limit of 10 days for the Commission to issue a notice of the application or reject patently deficient applications.

**The Certificate Policy Statement.** The Certificate Policy Statement, approved by the Commission in September 1999, sets forth the steps the Commission will use to balance the public benefits against the potential adverse consequences of an application for new pipeline construction. The Commission will approve an application for a certificate only if the public benefits from the project outweigh any adverse effects. Under this policy, pipelines are encouraged to submit applications designed to avoid or minimize adverse effects on relevant interests including effects on existing customers of the applicant, existing pipelines serving the market and their captive customers, and affected landowners and communities.

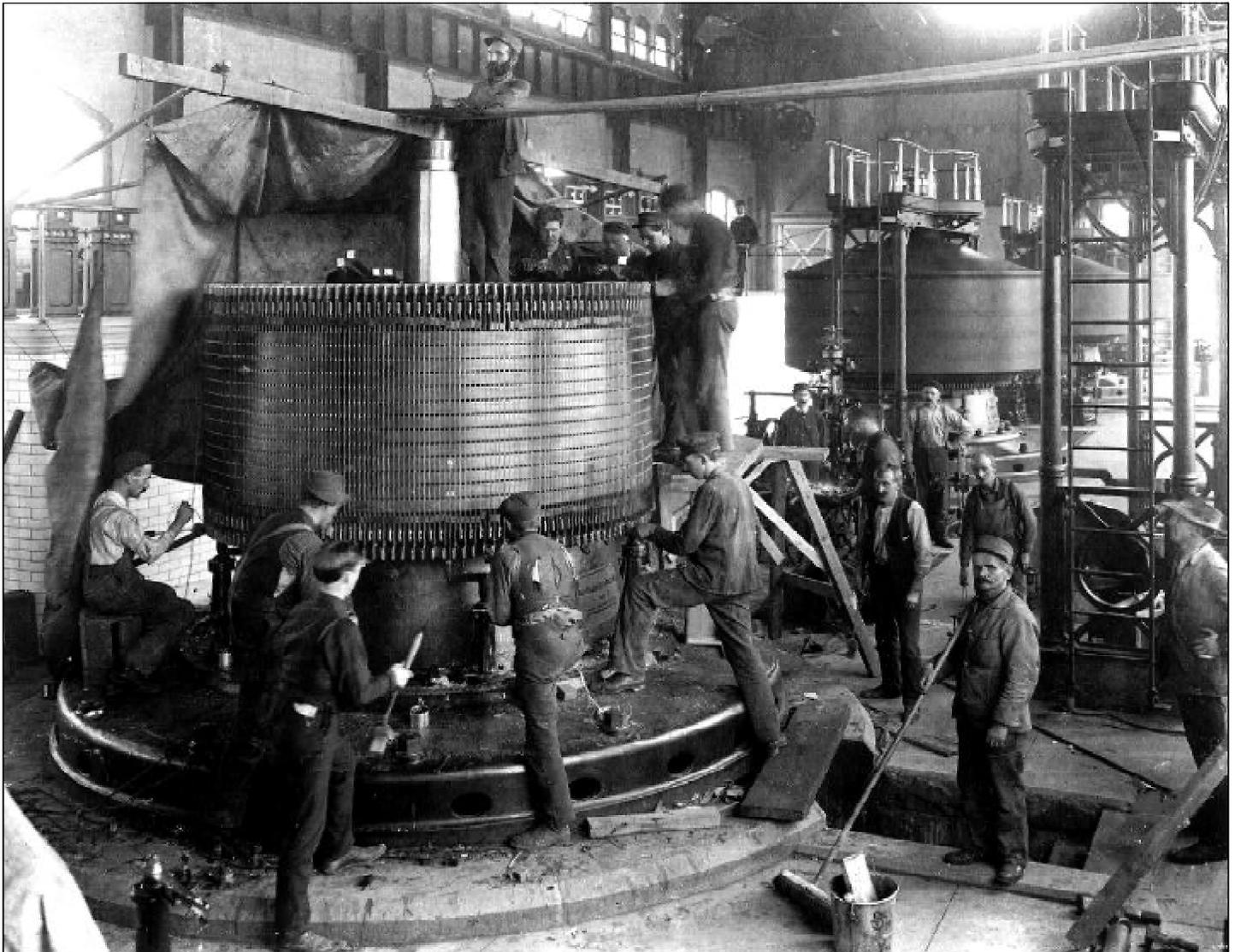


# ENERGY PROJECTS

Key to this policy is the preference of incremental pricing in which construction costs are recovered only from customers that benefit from the new project, over rolled-in-pricing. A threshold requirement for approval, that project sponsors must be prepared to develop the project without relying on subsidization by the sponsor's existing customers, protects all of the relevant interests.

**Collaborative Process.** The Commission has also offered natural gas pipelines the option of engaging in a voluntary collaborative process with the public and Commission staff before filing an ap-

plication for a certificate to construct and abandon new facilities. The goal is to improve communication, expand public participation, and resolve potential conflicts earlier in the filing process. Under the new option, applicants notify the Commission, the public, including landowners, and state and local government officials of their intention to start pre-filing consultations. In addition to resolving disputes at an early stage of the process, applicants also have the option of working with Commission staff and other interested parties to complete environmental studies in advance of a formal filing.



*At the electrical generating station of the Niagara Falls Power Company in 1900, mechanics make final adjustments to the armature of a generator. (Photo courtesy of the Smithsonian Institution.)*

# ENERGY PROJECTS

**Landowner Notification Rule.** In September 1999, the Commission issued a final rule requiring the early notification of landowners who may be affected by the construction of natural gas pipeline projects. The goal is to ensure that landowners have sufficient opportunity to participate in the Commission's certificate process. The timely participation of landowners can result in the resolution of issues and in a more comprehensive record, allowing a faster Commission decision. The Commission offers an easy-to-understand brochure that addresses landowner issues.

**Certification of Major Facilities Construction.** The Commission authorized many major projects, including system expansions of such pipelines as Algonquin Gas Transmission Company, Columbia Gulf Transmission Company, Mississippi Canyon Gas Pipeline L.L.C., Northwest Pipeline Corporation, Southern Natural Gas Company, Tennessee Gas Pipeline Company, Texas Eastern Transmission Corporation, Transcontinental Gas Pipe Line Corporation, and Viking Gas Transmission Company.

The Commission issued a certificate for Phase II of the Maritimes & Northeast Pipeline, L.L.C.'s project authorizing an additional 205 miles of pipeline with a capacity of 360 Mmcf/d. The project will provide natural gas service to consumers in Maine, New Hampshire, Massachusetts and other parts of the Northeast through interconnecting pipelines. The Commission also issued a certificate to Vector Pipeline L.P. for 328 miles of pipeline and a capacity of 1,000 Mmcf/d. This project will provide service to consumers in the eastern United States and Canada.

The Commission granted a certificate of public convenience and necessity to Wyoming Interstate Company, Ltd., for a 150-mile lateral pipeline and compressor station. The pipeline will connect new sources of coalbed gas from the Powder River basin in Wyoming to the pipeline in Colorado.

The Commission approved a settlement involving Pacific Interstate Transmission Company (PITCO), Northwest Alaska Pipeline Company, PG&E Gas Transmission, Northwest Corporation, Transwestern Pipeline Company, Pan-Alberta Gas (U.S.), Inc., and Northwest Pipeline Company. The order allowed the abandonment of all of PITCO's facilities and services, with the other parties acquiring facilities, capacity, and transportation and sales obligations.

The Commission issued Presidential Permits and approved exports and imports for San Diego Gas and Electric Company, Tennessee Gas Pipeline Company, and Canadian-Montana Pipeline Corporation.

The Commission issued certificates for the expansion, establishment of storage boundaries, or modification of wells and facilities for storage fields of Columbia Gas Transmission Corporation, ANR Pipeline Company, CNG Transmission Corporation, and Texas Eastern Transmission Corporation. The Commission also issued a certificate to Transcontinental Gas Pipe Line Corporation for 53 miles of pipeline and compression in the offshore Louisiana area. This project will provide firm transportation capacity for producers and other shippers who want the assurance of firm service for their offshore supplies.

**Initiative for Offshore Facilities.** A NOPR issued in early summer 1999 seeks to impose a more light-handed regulatory approach on the transportation of natural gas from the outer continental shelf to the mainland. The NOPR proposes to implement a regulatory structure for such transportation under the Outer Continental Shelf Lands Act to equalize competition and balance the interests of the marketplace and the consuming public.

**Gas Demand Conference.** As part of its gas industry review, the Commission held a conference on the anticipated demand for natural gas in the Northeast United States. The conference solicited information on growth projections in natural gas markets in the northeast United States over the next one to two decades and on correlations between these projections and existing pipeline capacity. The conference and comments will help shape future Commission policy on pipeline construction.

**Environmental Compliance Monitoring.** The Commission has started a pilot program on third party, independent environmental compliance monitoring and reporting. This pilot program allows more frequent construction inspections and fosters quicker decisions on variances from Commission environmental conditions. Third party compliance monitors, hired by the pipeline but under Commission direction, will perform weekly inspections of each construction spread. The monitors will allow minor variances within 3 days, and variances including expanded work areas within 6 days, with the time duration dependent on supervisory review by the contractors and the Commission. This should speed the construction process and result in more frequent compliance inspections, to the benefit of the environment. To ensure compliance with environmental regulations, the Commission monitored pipeline construction and right-of-way restoration activities on almost 400 compliance trips in FY 1999.

The Commission completed substantial construction compliance work on Portland Natural Gas Transmission System, Northern Border Pipeline Company, and Columbia Gas Transmission Corporation, to allow the start of new natural gas service in the Midwest and Northeast.

On a case-specific basis, the Commission also is implementing a landowner compliance resolution process to improve communication and responsiveness, and to decrease tension related to construction impacts. Also, the Commission is issuing compliance inspection reports, rather than the more time-consuming notification letters, to speed correction of construction problems observed by field inspectors.

**Interagency Agreements.** The Commission has executed Memoranda of Understanding (MOUs) with the Department of Transportation on LNG and natural gas transportation facilities, and with the Environmental Protection Agency on pipeline facilities contaminated with polychlorinated biphenyls (PCBs). MOUs with other agencies are under consideration. The Commission will also reach agreements with other agencies and state historic preservation offices to evaluate the impact of specific natural gas facilities on cultural resources. These agreements will ensure the Commission's compliance with Section 106 of the National Historic Preservation Act.

# HYDROELECTRIC POWER TABLE

(Projects For Which Licenses Will Expire Between January 1, 2000, and December 31, 2005)

License Expiration Date	Licensee	FERC Project No.	State	County	River	Installation (KW)	Facilities Under License	Period of (years)	Subj. Fed.
20000228	PACIFICORP	2659	OR	HOOD	HOOD RIVER	6000	DM PH	20	N
20000229	OCONTO ELECTRIC COOP	1981	WI	OCONTO	OCONTO RIVER	1690	DM PH	50	Y
20000331	LOCKHART POWER CO	2620	SC	UNION	BROAD RIVER	12300	DM PH	20	N
20000331	STURGIS CITY OF	2964	MI	ST JOSEPH	ST JOSEPH RIVER	2720	DM PH	20	N
20000430	INTERNATIONAL PAPER CO	2609	NY	SARATOGA	HUDSON RIVER	58300	DM PH	20	N
20000430	GREAT NORTHERN PAPER INC.	2634	ME	PISCATAQUIS	PENOBSCOT	0	RS	20	N
20000430	DENVER CITY & COUNTY OF	2035	CO	BOULDER	S BOULDER CREEK	0	RS	50	N
20000531	INDIANA MICHIGAN POWER CO	2651	IN	ELKHART	ST JOSEPH RIVER	3440	DM PH	20	N
20000531	CENTRAL VERMONT PUB SERV CORP	2731	VT	ADDISON	OTTER CREEK	3000	DM PH	20	N
20000531	NIAGARA MOHAWK POWER CORP	2047	NY	SARATOGA	SACANDAGA RIVER	30000	DM PH	50	N
20000614	SOUTHERN CALIFORNIA EDISON CO	372	CA	TULUARE	TULE RIVER	2520	DM PH	22	Y
20000630	KETCHIKAN CITY OF	420	AK	KETCHIKAN	KETCHIKAN CREEK	4200	DM PH	18	N
20000630	RHINELANDER PAPER CO	2161	WI	ONEIDA	WISCONSIN RIVER	2120	DM PH	19	Y
20000630	S. CAROLINA ELECTRIC&GAS CO	1895	SC	RICHLAND	BROAD RIVER	10600	DM PH	20	Y
20000630	CONSOLIDATED WATER POWER CO	2192	WI	WOOD	WISCONSIN R	6620	DM PH	20	Y
20000630	NORTHERN STATES POWER CO	2567	WI	CHIPPEWA	CHIPPEWA RIVER	35280	DM PH	20	N
20000630	CENTRAL VERMONT PUB SERV CORP	2737	VT	ADDISON	OTTER CREEK	2250	DM PH	20	N
20000630	PACIFICORP	597	UT	SALT LAKE	BIG COTTONWOOD	1000	DM PH	23	Y
20000630	CONSOLIDATED WATER POWER CO	2110	WI	PORTAGE	WISCONSIN RIVER	3840	DM PH	23	Y
20000731	NORTHBROOK CAROLINA HYDRO L.L.C.	2585	NC	FORSYTHE	YADKIN RIVER	1410	DM PH	20	Y
20000731	KAUKAUNA CITY OF	2588	WI	OUTAGAMIE	FOX RIVER	3300	DM PH	20	N
20000831	GEORGIA-PACIFIC CORP	2660	ME	WASHINGTON	E BRANCH ST. CROIX	0	RS	20	N
20000831	PACIFICORP	2722	UT	WEBER	OGDEN RIVER	5000	DM PH	20	N
20000901	WISCONSIN ELECTRIC POWER CO	2670	WI	CHIPPEWA	CHIPPEWA RIVER	9500	DM PH	20	N
20000929	GEORGIA-PACIFIC CORP	2618	ME	WASHINGTON	ST. CROIX RIVER	0	RS	20	N
20000930	BANGOR HYDRO-ELECTRIC CO	2721	ME	PENOBSCOT	PISCATAQUIS RIVER	1875	DM PH	20	Y
20000930	PACIFIC GAS & ELECTRIC CO	2661	CA	SHASTA	HAT CREEK	20000	DM PH	25	N
20001031	PACIFICORP	696	UT	UTAH	AMERICAN FORK CREEK	950	DM PH	25	N
20001130	IDAHO POWER CO	2055	ID	OWYHEE	SNAKE RIVER	82800	DM PH	50	Y
20001231	NEKOOSA PACKAGING CORP	2902	VA	AMHERST	JAMES RIVER	512	DM PH	20	N
20001231	NORTHERN STATES POWER CO	2056	MN	HENNEPIN	MISSISSIPPI RIVER	28400	DM PH	50	Y
20010125	S D WARREN CO	2942	ME	CUMBERLAND	PRESUMPCOT RIVER	2400	DM PH	20	N
20010125	S D WARREN CO	2931	ME	CUMBERLAND	PRESUMPCOT RIVER	1900	DM PH	21	N
20010125	S D WARREN CO	2932	ME	CUMBERLAND	PRESUMPCOT RIVER	800	DM PH	21	N
20010125	S D WARREN CO	2941	ME	CUMBERLAND	PRESUMPCOT RIVER	1000	DM PH	21	N
20010125	S D WARREN CO	2897	ME	CUMBERLAND	PRESUMPCOT RIVER	1350	DM PH	22	Y
20010131	CONNECTICUT LIGHT & POWER CO	2597	CT	LITCHFIELD	HOUSATONIC RIVER	9000	DM PH	20	N
20010131	NEKOOSA PACKAGING CORP	2901	VA	AMHERST,BEDFORD	JAMES RIVER	1875	DM PH	20	Y
20010131	LYNDONVILLE VILLAGE OF	3090	VT	CALEDONIA	PASSUMPSIC RIVER	350	DM PH	20	N
20010131	VIRGINIA ELECTRIC & POWER CO	2009	NC	HALIFAX	ROANOKE RIVER	278000	DM PH	50	Y
20010131	NIAGARA MOHAWK POWER CORP	2060	NY	TOWN OF COLTON	RAQUETTE RIVER	0	RS	50	Y
20010228	ANTRIM COUNTY	3030	MI	ANTRIM	ELK RIVER	700	DM PH	20	N
20010228	AVISTA	2075	MT	SANDERS	CLARK FORK	466200	DM PH	46	N
20010228	DAIRYLAND POWER COOP	1960	WI	RUSK	FLAMBEAU RIVER	15000	DM PH	50	Y
20010228	AVISTA	2058	ID	BONNER	CLARK FORK RIVER	224550	DM PH	50	Y
20010330	CONSUMERS ENERGY CO	2566	MI	IONIA	GRAND RIVER	3250	DM PH	20	Y
20010430	PACIFICORP	2071	WA	CLARK	LEWIS	134000	DM PH	50	Y
20010731	MARQUETTE CITY OF	2589	MI	MARQUETTE	DEAD RIVER	3900	DM PH	20	Y
20010731	NEW ENGLAND POWER CO	2077	NH	GRAFTON	CONNECTICUT RIVER	291360	DM PH	50	Y
20010830	BLACK RIVER FALLS CITY OF	3052	WI	JACKSON	BLACK RIVER	920	DM PH	20	N
20010831	PACIFICORP	2652	MT	FLATHEAD	SWAN RIVER	4150	DM PH	25	Y
20010831	GREEN MOUNTAIN POWER CORP	2090	VT	WASHINGTON	WATERBURY RIVER	5520	DM PH	47	Y
20010901	INTERNATIONAL PAPER CO	2631	MA	HAMPDEN	WESTFIELD RIVER	2690	DM PH	20	Y
20010930	HAMILTON CITY OF	2724	OH	BUTLER	MIAMI RIVER	1500	DM PH	20	N
20010930	ENTERPRISE MILL, LLC	2935	GA	RICHMOND	AUGUSTA CANAL	1200	DM PH	20	N
20010930	GEORGIA POWER CO	1218	GA	DOUGHERTY	FLINT RIVER	5400	DM PH	22	Y
20010930	AQUENERGY SYSTEMS INC	2416	SC	GREENWOOD	SALUDA RIVER	6200	DM PH	25	Y
20010930	NANTAHALA POWER & LIGHT CO	2694	NC	MACON	QUEENS CREEK	1440	DM PH	25	N
20011001	PACIFICORP	472	ID	FRANKLIN	BEAR RIVER	30000	DM PH	20	Y
20011001	CONNECTICUT LIGHT & POWER CO	2576	CT	FAIRFIELD	HOUSATONIC RIVER	105900	DM PH	20	N
20011001	PACIFICORP	20	ID	CARIBOU	BEAR RIVER	14000	DM PH	23	Y
20011001	PACIFICORP	2401	ID	CARIBOU	BEAR RIVER	40500	DM PH	25	Y
20011031	WISCONSIN ELECTRIC POWER CO	2131	MI	DICKINSON	MENOMINEE RIVER	7200	DM PH	22	Y
20011031	WISCONSIN ELECTRIC POWER CO	2073	MI	IRON	MICHIGAMME RIVER	9600	DM PH	50	Y
20011031	WISCONSIN ELECTRIC POWER CO	2074	MI	IRON	MICHIGAMME RIVER	2800	DM PH	50	Y
20011130	METROPANITAN WATER	2866	IL	WILL	CHICAGO SANITARY	13500	DM PH	20	Y
20011130	NORTH CENTRAL POWER CO INC	2064	WI	SAWYER	CHIPPEWA RIVER	600	DM PH	50	Y
20011231	WISCONSIN ELECTRIC POWER CO	1759	MI	IRON	MICHIGAMME RIVER	19944	DM PH	27	Y
20011231	CENTRAL MAINE POWER CO	2142	ME	SOMERSET	KENNEBEC RIVER	76400	DM PH	47	Y
20011231	TACOMA CITY OF	2016	WA	LEWIS	COWLITZ RIVER	460000	DM PH	50	Y
20011231	PORTLAND GENERAL ELECTRIC CO	2030	OR	JEFFERSON	DESCHUTES RIVER	416100	DM PH	50	Y
20011231	WISCONSIN ELECTRIC POWER CO	2072	MI	IRON	PAINT RIVER	100	DM PH	50	Y
20020131	PUD NO 1 OF PEND OREILLE CNTY	2042	WA	PEND OREILLE	PEND OREILLE	60000	DM PH	50	N
20020131	NIAGARA MOHAWK POWER CORP	2084	NY	ST LAWRENCE	RAQUETTE RIVER	101250	DM PH	50	Y
20020223	PACIFIC GAS & ELECTRIC CO	184	CA	EL DORADO	S FORK AMERICAN	20000	DM PH	22	Y

# HYDROELECTRIC POWER TABLE

License Expiration Date	Licensee	FERC Project No.	State	County	River	Installation (KW)	Facilities Under License	Period of (years)	Subj. Fed.
20020331	FORT JAMES OPERATING COMPANY	2312	ME	PENOBSCOT	PENOBSCOT RIVER	7655	DM PH	39	Y
20020731	COMINCO AMERICAN INC	2103	WA	PEND O'REILLE	CEDAR CREEK	0	RS	50	N
20020903	SPRINGVILLE CITY OF	2031	UT	UTAH	BARTHOLOMEW CR	2000	DM PH	50	N
20020930	HART CITY OF	3516	MI	OCEANA	PENTWATER RIVER	352	DM PH	20	N
20021012	GPU GENERATION, INC.	309	PA	CLARION	CLARION RIVER	28800	DM PH	23	Y
20021031	HYDRO DEVELOPMENT GROUP INC	6059	NY	ST LAWRENCE	OSWEGATCHIE RIVER	900	DM PH	20	N
20021101	TRINITY CONSERVANCY INC	719	WA	CHELAN	PHELPS CREEK	240	DM PH	23	N
20021201	NEW YORK STATE ELEC & GAS CORP	2835	NY	CLINTON	AUSABLE RIVER	2640	DM PH	20	Y
20021231	HYDRO DEVELOPMENT GROUP INC	6058	NY	ST LAWRENCE	OSWEGATCHIE RIVER	1490	DM PH	20	N
20030131	WOODS LAKE HYDRO CO	3410	CO	EAGLE	LIME CREEK	45	DM PH	20	N
20030228	NEW YORK STATE ELEC & GAS CORP	2852	NY	STEUBEN	MUD CREEK	2000	DM PH	20	Y
20030228	ENTERGY, ARKANSAS, INC.	271	AR	HOT SPRINGS	OUACHITA	65300	DM PH	23	Y
20030331	AVONDALE MILLS INC	5044	GA	RICHMOND	AUGUSTA CANAL	2475	DM PH	20	N
20030426	SOUTHERN CALIFORNIA EDISON CO	344	CA	SAN BERNARDINO	SAN GORGONIO RIVER	2250	DM PH	20	Y
20030430	PAROWAN CITY CORP	2782	UT	IRON	RED CREEK	500	DM PH	25	N
20030606	FORD MOTOR CO	362	MN	RAMSEY	MISSISSIPPI RIVER	17920	DM PH	23	Y
20030630	PCA HYDRO INC	2180	WI	LINCOLN	WISCONSIN RIVER	3000	DM PH	26	Y
20030731	BURFORD JUDITH A	6418	CO	EAGLE	EAST BRUSH CREEK	11	DM PH	20	N
20030824	MINNESOTA POWER & LIGHT CO	346	MN	MORRISON	MISSISSIPPI RIVER	18000	DM PH	23	Y
20030831	SOUTHERN CALIFORNIA EDISON CO	2086	CA	FRESNO	MONO CREEK	0	RS	50	N
20030918	INDIANA MICHIGAN POWER CO	401	MI	ST. JOSEPH	ST JOSEPH RIVER	1750	DM PH	25	Y
20030930	CHARTER TOWNSHIP OF YPSILANTI	5334	MI	WASHTENAW	HURON RIVER	3413	DM PH	20	N
20030930	PACIFIC GAS & ELECTRIC CO	2107	CA	BUTTE	NORTH FORK FEATHER	142830	DM PH	50	N
20031031	PACIFIC GAS & ELECTRIC CO	233	CA	SHASTA	PIT RIVER	317000	DM PH	22	Y
20031031	MINNESOTA POWER & LIGHT CO	469	MN	LAKE	KAWISHIWI	4000	DM PH	22	Y
20031031	NEW YORK POWER AUTHORITY	2000	NY	ST LAWRENCE	ST LAWRENCE RIVER	912000	DM PH	50	N
20031231	POTOMAC EDISON CO	2516	WV	BERKELY	POTOMAC RIVER	1900	DM PH	27	N
20031231	POTOMAC EDISON CO	2517	WV	BERKELY	POTOMAC RIVER	1210	DM PH	27	N
20040131	NEWTON FALLS INC.	7000	NY	ST LAWRENCE	OSWEGATCHIE RIVER	2220	DM PH	20	Y
20040331	S D WARREN CO	2984	ME	CUMBERLAND	PRESUMPSCOT	1800	DM PH	20	Y
20040331	PUD NO 1 OF CHELAN COUNTY	637	WA	CHELAN	CHELAN RIVER	48000	DM PH	30	Y
20040410	MIDWEST HYDRO, INC	287	IL	LASALLE	FOX RIVER	3680	DM PH	24	Y
20040430	MADISON PAPER INDUSTRIES	2364	ME	SOMERSET	KENNEBEC RIVER	16977	DM PH	40	Y
20040430	MADISON PAPER INDUSTRIES	2365	ME	SOMERSET	KENNEBEC RIVER	9000	DM PH	40	Y
20040430	MERIMIL LTD PARTNERSHIP	2574	ME	KENNEBEC	KENNEBEC RIVER	6770	DM PH	40	Y
20040430	UNITED WATER CONSERVATION DIST	2153	CA	VENTURA	PIRU CREEK	1420	DM PH	50	Y
20040630	WISCONSIN PUBLIC SERVICE CORP	1979	WI	LINCOLN	WISCONSIN RIVER	4200	DM PH	30	Y
20040731	NORWAY CITY OF	2720	MI	DICKINSON	MENOMINEE RIVER	5636	DM PH	20	Y
20040731	IDAHO POWER CO	2726	ID	GOODING	BIG WOOD RIVER	21770	DM PH	25	Y
20040930	BARTON VILLAGE INC	7725	VT	ORLEANS	CLYDE RIVER	1300	DM PH	20	N
20040930	PENNSYLVANIA POWER & LIGHT CO	487	PA	WAYNE	LACKAWAXEN RIVER	40000	DM PH	30	Y
20041031	BUFFALO HYDRO L.C.	1413	ID	FREMONT	BUFFALO RIVER	250	DM PH	25	N
20041031	PACIFIC GAS & ELECTRIC CO	2105	CA	PLUMAS	NORTH FORK FEATHER	342628	DM PH	50	Y
20041112	PETERSBURG CITY OF	201	AK	WRANGELL	CRYSTAL CREEK	2000	DM PH	30	Y
20041116	PORTLAND GENERAL ELECTRIC CO	477	OR	CLACKAMAS	SANDY RIVER	21000	DM PH	25	Y
20041130	INTERNATIONAL PAPER CO	4914	WI	BROWN	FOX RIVER	1078	DM PH	20	N
20041230	PAROWAN CITY CORP	1273	UT	IRON	CENTER CREEK	600	DM PH	30	N
20041231	MOSINEE PAPER CORP	2207	WI	MARATHON	WISCONSIN RIVER	3050	DM PH	30	Y
20041231	MONTANA POWER CO	2543	MT	MISSOULA	CLARK FORK	3200	DM PH	40	Y
20041231	OAKDALE & SAN JOAQUIN IRR DIST	2005	CA	TUOLUMNE	MID FORK STANISLAUS	63990	DM PH	50	Y
20041231	OAKDALE & SAN JOAQUIN IRR DIST	2067	CA	TUOLUMNE	STANISLAUS RIVER	17100	DM PH	50	Y
20041231	PACIFIC GAS & ELECTRIC CO	2130	CA	TUOLUMNE	STANISLAUS	87900	DM PH	50	Y
20041231	GEORGIA POWER CO	2177	GA	HARRIS	CHATTAHOOCHEE RIVER	115600	DM PH	50	Y
20041231	PORTLAND GENERAL ELECTRIC CO	2233	OR	CLACKAMAS	WILLAMETTE RIVER	16800	DM PH	50	Y
20050228	SOUTHERN CALIF EDISON CO	382	CA	KERN	KERN RIVER	12,000	DM PH	25	Y
20050228	TAPOCO INC	2169	TN	MONROE	LITTLE TENNESSEE R	326,500	DM PH	50	Y
20050331	WISCONSIN ELECTRIC POWER	2697	WI	DUNN	RED CEDAR RIVER	6,000	DM PH	25	Y
20050331	SOUTHERN CALIF EDISON CO	2174	CA	FRESNO	RANCHERIA CR,BIG CR	10,800	DM PH	50	Y
20050331	WISCONSIN ELECTRIC POWER	2181	WI	DUNN	RED CEDAR RIVER	5,400	DM PH	50	Y
20050430	PACIFIC GAS & ELECTRIC CO	178	CA	KERN	KERN RIVER	11,500	DM PH	25	Y
20050430	ALABAMA ELECTRIC COOP INC	2586	AL	CRENSHAW	CONECUH RRIVER	8,250	DM PH	25	N
20050531	MARSHALL, CITY OF	6514	MI	CALHOUN	KALAMAZOO RRIVER	319	DM PH	20	N
20050531	GRAND RIVER DAM AUTH	2183	OK	MAYES	NEOSHO RIVER	100,000	DM PH	50	Y
20050630	N. E. W. HYDRO INC ET AL	7264	WI	OUTAGAMIE	FOX RIVER	1,390	DM PH	20	Y
20050630	PACIFICORP	2630	OR	JACKSON	N FK ROGUE RIVR	36,760	DM PH	25	Y
20050630	FPL ENERGY MAINE HYDRO LLC	2194	ME	YORK	SACO RIVER	4,000	DM PH	50	Y
20050730	NANTAHALA PWR AND LT CO	2601	NC	SWAIN	OCONALUFTEE RIVER	980	DM PH	25	Y
20050730	NANTAHALA PWR AND LT CO	2602	NC	JACKSON	TUCKASEGEE RIVER	225	DM PH	25	Y
20050730	NANTAHALA PWR AND LT CO	2603	NC	MACON	LITTLE TENNESSEE R	1,040	DM PH	25	Y
20050731	NANTAHALA PWR AND LT CO	2619	NC	CLAY	HIWASSEE RIVER	1,800	DM PH	25	Y
20050731	IDAHO POWER CO	1971	OR	BAKER	SNAKE RIVER	1,166,500	DM PH	50	Y

\*Includes types of facilities at each project, but not total number of each type (e.g. A project may consist of multiple powerhouses or dams.). DM Dam, RS Reservoir, CL Canal, TU Tunnel, FM Flume, PI Pipeline, PK Penstock, PH Powerhouse, TR Turbine, GN Generator(s), TC Tailrace, TL Transmission Line or connection thereto.

For Additional Information Contact:  
Federal Energy Regulatory Commission  
Office of External Affairs  
888 First Street, NE  
Washington, DC 20426  
202/208-0004

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