

# Issue Brief for Congress

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## **Electricity: The Road Toward Restructuring**

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## Electricity: The Road Toward Restructuring

### SUMMARY

The Public Utility Holding Company Act of 1935 (PUHCA) and the Federal Power Act (FPA) were enacted to eliminate unfair practices and other abuses by electricity and gas holding companies by requiring federal control and regulation of interstate public utility holding companies. Prior to PUHCA, electricity holding companies were characterized as having excessive consumer rates, high debt-to-equity ratios, and unreliable service. PUHCA remained virtually unchanged for 50 years until enactment of the Public Utility Regulatory Policies Act of 1978 (PURPA, P.L. 95-617). PURPA was, in part, intended to augment electric utility generation with more efficiently produced electricity and to provide equitable rates to electric consumers. Utilities are required to buy all power produced by qualifying facilities (QFs) at “avoided cost.” QFs are exempt from regulation under PUHCA and the FPA. Electricity regulation was changed again in 1992 with the passage of the Energy Policy Act (EPACT, P.L. 102-486). The intent of Title 7 of EPACT is to increase competition in the electric generating sector by creating new entities, called “exempt wholesale generators” (EWGs) that can generate and sell electricity at wholesale without being regulated as utilities under PUHCA. This title also provides EWGs with a way to assure transmission of their wholesale power to its purchaser. The effect of this Act on the electric supply system is potentially more far-reaching than PURPA.

On April 24, 1996, the Federal Energy Regulatory Commission (FERC) issued Orders 888 and 889. FERC believed these rules would remedy undue discrimination in transmission services in interstate commerce and

provide an orderly and fair transition to competitive bulk power markets. Order 2000, issued December 20, 1999, established criteria for forming transmission organizations.

Comprehensive electricity legislation involves three issues. The first is PUHCA reform. Some electric utilities want PUHCA changed so they can more easily diversify their assets. State regulators have expressed concerns that increased diversification could lead to abuses, including cross-subsidization. Consumer groups have expressed concern that a repeal of PUHCA could exacerbate market power abuses in a monopolistic industry where true competition does not yet exist. The second issue is PURPA’s mandatory purchase requirement provisions. Many investor-owned utilities support repeal of these provisions. They argue that their state regulators’ “misguided” implementation of PURPA has forced them to pay contractually high prices for power that they do not need. Opponents of this legislation argue that it would decrease competition and impede development of renewable energy. The third is retail wheeling. It involves allowing retail customers to choose their electric generation supplier. Currently, this is under state jurisdiction, and 24 states and the District of Columbia have moved toward retail wheeling. However, some have argued that the federal government should act as a backstop to ensure that all states introduce retail wheeling, preempting state authority if necessary. In the 107<sup>th</sup> Congress, the Senate-passed version of H.R. 4 contained provisions for electric utility restructuring, but these provisions did not include retail wheeling. The differences between the Senate and House versions were not resolved in Conference.



## MOST RECENT DEVELOPMENTS

*On July 31, 2002, the Federal Energy Regulatory Commission (FERC) issued a Notice of Proposed Rulemaking (NOPR) on standard market design (Docket No. RM01-12-000) [<http://www.ferc.gov/Electric/RTO/Mrkt-Strct-comments/nopr/Web-NOPR.pdf>]. The proposed rulemaking would create a new tariff under which transmission owners would be required to turn over operation of their transmission systems to unaffiliated independent transmission providers.*

*In the 107<sup>th</sup> Congress, conferees on omnibus energy legislation, H.R. 4, met and exchanged proposals on electric utility restructuring provisions. The differences were not resolved. The Senate passed its version of H.R. 4 on April 25, 2002; it included provisions to repeal the Public Utility Holding Company Act (PUHCA), reform the Public Utility Regulatory Policies Act (PURPA), and create an electric reliability organization.*

*On March 4, 2002, the U.S. Supreme Court ruled that FERC has jurisdiction over transmission, including “unbundled” retail transactions.*

*On November 7, 2001, FERC issued an order (Docket No. RM01-12-000) that stated FERC’s goals and process for creating Regional Transmission Organizations [<http://www.ferc.gov/Electric/RTO/rto/issuance/RM01-12.pdf>]. (See also the CRS Electronic Briefing Book on electricity restructuring at [<http://www.congress.gov/brbk/html/ebele1.shtml>].)*

## BACKGROUND AND ANALYSIS

Historically, electricity service has been defined as a natural monopoly, meaning that the industry has (1) an inherent tendency toward declining long-term costs, (2) high threshold investment, and (3) technological conditions that limit the number of potential entrants. In addition, many regulators have considered unified control of generation, transmission, and distribution as the most efficient means of providing service. As a result, most people (about 75%) are currently served by a vertically integrated, investor-owned utility.

As the electric utility industry has evolved, however, there has been a growing belief that the historic classification of electric utilities as natural monopolies has been overtaken by events and that market forces can and should replace some of the traditional economic regulatory structure. For example, the existence of utilities that do not own all of their generating facilities, primarily cooperatives and publicly owned utilities, has provided evidence that vertical integration has not been necessary for providing efficient electric service. (For additional information on Public Power, see also the CRS Electronic Briefing Book on electricity restructuring at [<http://www.congress.gov/brbk/html/ebele12.html>].) Moreover, recent changes in electric utility regulation and improved technologies have allowed additional generating capacity to be provided by independent firms rather than utilities.

The Public Utility Holding Company Act (PUHCA) and the Federal Power Act (FPA) of 1935 (Title I and Title II of the Public Utility Act) established a regime of regulating electric utilities that gave specific and separate powers to the states and the federal government (see CRS Report RS20015). A regulatory bargain was made between the government and utilities. In exchange for an exclusive franchise service territory, utilities must provide electricity to all users at reasonable, regulated rates. State regulatory commissions address intrastate utility activities, including wholesale and retail rate-making. State authority currently tends to be as broad and as varied as the states are diverse. At the least, a state public utility commission will have authority over retail rates, and often over investment and debt. At the other end of the spectrum, the state regulatory body will oversee many facets of utility operation. Despite this diversity, the essential mission of the state regulator in states that have not restructured is the establishment of retail electric prices. This is accomplished through an adversarial hearing process. The central issues in such cases are the total amount of money the utility will be permitted to collect and how the burden of the revenue requirement will be distributed among the various customer classes (residential, commercial, and industrial).

Under the FPA, federal economic regulation addresses wholesale transactions and rates for electric power flowing in interstate commerce. Federal regulation followed state regulation and is premised on the need to fill the regulatory vacuum resulting from the constitutional inability of states to regulate interstate commerce. In this bifurcation of regulatory jurisdiction, federal regulation is limited and conceived to supplement state regulation. The Federal Energy Regulatory Commission (FERC) has the principal functions at the federal level for the economic regulation of the electricity utility industry, including financial transactions, wholesale rate regulation, transactions involving transmission of unbundled retail electricity, interconnection and wheeling of wholesale electricity, and ensuring adequate and reliable service. In addition, to prevent a recurrence of the abusive practices of the 1920s (e.g., cross-subsidization, self-dealing, pyramiding, etc.), the Securities and Exchange Commission (SEC) regulates utilities' corporate structure and business ventures under PUHCA.

The electric utility industry has been in the process of transformation. During the past two decades, there has been a major change in direction concerning generation. First, improved technologies have reduced the cost of generating electricity as well as the size of generating facilities. Prior preference for large-scale — often nuclear or coal-fired — powerplants has been supplanted by a preference for small-scale production facilities that can be brought online more quickly and cheaply, with fewer regulatory impediments. Second, this has lowered the entry barrier to electricity generation and permitted non-utility entities to build profitable facilities. Recent changes in electric utility regulation and improved technologies have allowed additional generating capacity to be provided by independent firms rather than utilities.

The oil embargoes of the 1970s created concerns about the security of the nation's electricity supply and led to enactment of the Public Utility Regulatory Policies Act of 1978 (PURPA, P.L. 95-617). For the first time, utilities were required to purchase power from outside sources. The purchase price was set at the utilities' "avoided cost," the cost they would have incurred to generate the additional power themselves, as determined by utility regulators. PURPA was established in part to augment electric utility generation with more efficiently produced electricity and to provide equitable rates to electric consumers.

In addition to PURPA, the Fuel Use Act of 1978 (FUA, P.L. 95-620) helped qualifying facilities (QFs) become established. Under FUA, utilities were not permitted to use natural gas to fuel new generating technology. QFs, which are by definition not utilities, were able to take advantage of abundant natural gas as well as new generating technology, such as combined-cycle plants that use hot gases from combustion turbines to generate additional power. These technologies lowered the financial threshold for entrance into the electricity generation business as well as shortened the lead time for constructing new plants. FUA was repealed in 1987, but by this time QFs and small power producers had gained a portion of the total electricity supply.

This influx of QF power challenged the cost-based rates that previously guided wholesale transactions. Before implementation of PURPA, FERC approved wholesale interstate electricity transactions based on the seller's costs to generate and transmit the power. As more non-utility generators entered the market in the 1980s, these cost-based rates were challenged. Since non-utility generators typically do not have enough market power to influence the rates they charge, FERC began approving certain wholesale transactions whose rates were a result of a competitive bidding process. These rates are called market-based rates.

This first incremental change to traditional electricity regulation started a movement towards a market-oriented approach to electricity supply. Following the enactment of PURPA, two basic issues stimulated calls for further reform: whether to encourage nonutility generation and whether to permit utilities to diversify into non-regulated activities.

The Energy Policy Act of 1992 (EPACT, P.L. 102-486) removed several regulatory barriers to entry into electricity generation to increase competition of electricity supply. Specifically, EPACT provides for the creation of entities, called "exempt wholesale generators" (EWGs), that can generate and sell electricity at wholesale without being regulated as utilities under PUHCA. Under EPACT, EWGs are also provided with a way to assure transmission of their wholesale power to a wholesale purchaser. However, EPACT does not permit FERC to mandate that utilities transmit EWG power to retail consumers (commonly called "retail wheeling" or "retail competition"), an activity that remains under the jurisdiction of state public utility commissions. PURPA began to shift more regulatory responsibilities to the federal government, and EPACT continued that shift away from the states by creating new options for utilities and regulators to meet electricity demand. (For additional background on EPACT and PURPA, see CRS Report 98-419.)

The question now is whether further federal legislative action is desirable to encourage competition in the electric utility sector and if so at what speed this change would occur. Currently, 24 states and the District of Columbia have either enacted legislation or issued regulatory orders to implement retail access. Six states, Arkansas, Montana, Nevada, New Mexico, Oklahoma and West Virginia, have delayed implementation of retail access. The map later in this issue brief shows the current status of each state's restructuring efforts. Issues discussed in this brief include repeal or alteration of both PUHCA and PURPA; transmission access and FERC's Orders 888, 889 and 2000; environmental impact; and issues related to utility diversification.

## Transmission Issues

In addition to creating a new type of wholesale electricity generator, Exempt Wholesale Generators (EWGs), the Energy Policy Act (EPACT) provides EWGs with a system to assure transmission of their wholesale power to its purchaser. However, EPACT did not solve all of the issues relating to transmission access. As a result of EPACT, on April 24, 1996, FERC issued Orders 888 and 889. In issuing its final rules, FERC concluded that these Orders will "remedy undue discrimination in transmission services in interstate commerce and provide an orderly and fair transition to competitive bulk power markets."

Under Order 888, the Open Access Rule, transmission line owners are required to offer both point-to-point and network transmission services under comparable terms and conditions that they provide for themselves. The Rule provides a single tariff providing minimum conditions for both network and point-to-point services and the non-price terms and conditions for providing these services and ancillary services. This Rule also allows for full recovery of so-called stranded costs with those costs being paid by wholesale customers wishing to leave their current supply arrangements. The rule encourages but does not require creation of Independent System Operators (ISOs) to coordinate intercompany transmission of electricity.

Order 889, the Open Access Same-time Information System (OASIS) rule, establishes standards of conduct to ensure a level playing field. The Rule requires utilities to separate their wholesale power marketing and transmission operation functions, but does not require corporate unbundling or divestiture of assets. Utilities are still allowed to own transmission, distribution, and generation facilities but must maintain separate books and records.

On December 20, 1999, FERC issued Order 2000 that described the minimum characteristics and functions of regional transmission organizations (RTOs) [<http://www.ferc.gov/news/rules/pages/RM99-2A.pdf>]. The required characteristics of an RTO are: the RTO must be independent from market participants; it must serve a region of sufficient size to permit the RTO to perform effectively; an RTO will be responsible for operational control; and it will be responsible for maintaining the short-term reliability of the grid. The required functions of an RTO outlined in Order 2000 are: it must administer its own transmission tariff; it must ensure the development and operation of market mechanisms to manage congestion; it must address parallel flow issues both within and outside its region; it will serve as supplier of last resort for all ancillary services; it must administer an Open Access Same-time Information System; it must monitor markets to identify design flaws and market power and propose appropriate remedial actions; it must provide for interregional coordination; and an RTO must plan necessary transmission additions and upgrades.

Order 2000 does not require RTO participation, set out RTO boundaries, or mandate the acceptable RTO structure. RTOs will be able to file with FERC as an independent system operator (ISO), a for-profit transmission company (transco), or another type of entity that has not yet been proposed. Although RTO participation is voluntary under Order 2000, FERC built in guidelines and safeguards to ensure independent operation of the transmission grid. RTOs are required to conduct independent audits to ensure that owners do not exert undue influence over RTO operation.

FERC Order 2000 required the existing ISOs to submit to FERC by January 1, 2001, a plan to describe whether their transmission organization meets the criteria established in the RTO rulemaking. Electric utilities not currently members of an ISO had to file plans with FERC by October 1, 2000. The Order does not mandate RTO formation, but if an individual utility opts not to join an RTO, the utility is required to prove why it would be harmed by joining such an entity.

On July 12, 2001, FERC issued several orders requiring utilities to enter into talks to form four Regional Transmission Organizations. Even though FERC Order 2000 did not set out RTO boundaries, in effect the July 12, 2001, order does. On September 17, 2001, FERC's Administrative Law Judge Mediator H. Peter Young filed his report (Docket No. RT01-99-000) [<http://www.ferc.gov/Electric/RTO/rto/issuance/RT01-991-9-17.pdf>] that presented a blueprint for creating a single RTO in the Northeast.

FERC has granted RTO status to three entities. On December 20, 2001, FERC granted RTO status [Docket No. RT01-87-000] to the Midwest Independent Transmission System Operator (MISO). On September 18, 2002, FERC approved the RTO West proposal [<http://ferc.gov/Electric/rto/RT01-35-005-09-18-02.pdf>]. RTO West includes all, or part of, Washington, Idaho, Montana, Oregon, Nevada, Wyoming, Utah and a small part of northern California near the Oregon border. FERC granted PJM RTO status on December 19, 2002 [<http://ferc.gov/Electric/rto/pjm-12-19-02.pdf>]. PJM manages the grid in parts of Ohio, West Virginia, Pennsylvania, New Jersey, Delaware, Maryland, Virginia and the District of Columbia. Other RTOs have received conditional approval from FERC. Most recently, FERC conditionally approved SeTrans RTO and WestConnect RTO on October, 9, 2002 [Docket Nos. EL02,101-000, RT02-1-000 and EL02-9-000]. SeTrans includes utilities in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, South Carolina and Texas. WestConnect RTO will operate in parts of Arizona, Colorado, New Mexico and Utah.

In the past, utilities and some state utility commissioners have argued against large RTOs, stating that currently the expertise is not available to integrate a large geographic region with multiple control centers and power pools. On February 26, 2002, FERC released a report [[http://www.ferc.gov/electric/rto/mrkt-strct-comments/rtostudy\\_final\\_0226.pdf](http://www.ferc.gov/electric/rto/mrkt-strct-comments/rtostudy_final_0226.pdf)] that assessed the potential economic costs and benefits of RTOs. The study concluded the annual savings from RTO formation could range from \$1- \$10 billion. However, the study did not find significant differences in savings between larger and smaller RTOs.

Those in favor of large RTOs argue that the most efficient operations of the transmission system would take place with large RTOs. On November 7, 2001, FERC issued an order (Docket No. RM01-12-000) [<http://www.ferc.gov/Electric/RTO/rto/issuance/RM01-12.pdf>] that stated FERC's goals and process for creating Regional Transmission Organizations. Omnibus energy legislation now in House-Senate conference, H.R. 4, does not contain provisions mandating RTO membership for electric utilities.

On May 14, 1999, the U.S. Court of Appeals for the Eighth Circuit ruled in a case between FERC and Northern States Power. The court held that the Commission overstepped its authority when it ordered Northern States Power Company to treat wholesale customers the same as it treats native load customers in making electricity curtailment decisions. This



decision raised federal-state jurisdictional questions, particularly a state's right to guarantee system reliability.

On October 3, 2001, the U.S. Supreme Court heard arguments in a case (New York et al. v. Federal Energy Regulatory Commission) that challenges FERC's authority under Order 888 to regulate transmission for retail sales if a utility unbundles transmission from other retail charges. In states that have opened their generation market to competition, unbundling occurs when customers are charged separately for generation, transmission, and distribution. Nine states, led by New York, filed suit, arguing that the Federal Power Act gives FERC jurisdiction over wholesale sales and interstate transmission and leaves all retail issues up to the state utility commissions. Enron argued that FERC clearly has jurisdiction over all transmission and FERC is obligated to prevent transmission owners from discriminating against those wishing to use the transmission lines. On March 4, 2002, the U.S. Supreme Court ruled in favor of FERC and held that FERC has jurisdiction over transmission including unbundled retail transactions. The ruling is available at: [<http://a257.g.akamaitech.net/7/257/2422/04mar20021030/www.supremecourtus.gov/opinions/01pdf/00-568.pdf>].

In the 107<sup>th</sup> Congress, five bills, the Senate-passed H.R. 4, H.R. 312, H.R. 3406, S. 172, S. 388, and S. 597, would have provided for an Electric Reliability Organization to prescribe and enforce mandatory reliability standards.

**Standard Market Design.** On July 31, 2002, FERC issued a Notice of Proposed Rulemaking (NOPR) on standard market design (SMD) (Docket No. RM01-12-000)[<http://www.ferc.gov/Electric/RTO/Mrkt-Strct-comments/nopr/Web-NOPR.pdf>]. FERC's stated goal of SMD requirements in conjunction with a standardized transmission service is to create "seamless" wholesale power markets that allow sellers to transact easily across transmission grid boundaries. The proposed rulemaking would create a new tariff under which each transmission owner would be required to turn over operation of its transmission system to an unaffiliated independent transmission provider (ITP). The ITP, which could be an RTO, would provide service to all customers and run energy markets. Under the NOPR, congestion would be managed with locational marginal pricing. The NOPR comment period originally was 75 days (November 15, 2002), but the comment period has been extended to January 10, 2003, for the following issues: 1) market design for the Western Interconnection; 2) transmission plan in pricing, including participant funding; 3) Regional State Advisory Committees and state participation; 4) resource adequacy; and 5) Congestion Revenue Rights and transition issues.

Under the NOPR, FERC asserts jurisdiction over all power transmission, including service to bundled retail customers. Commissioners from 15 states (Alabama, Arkansas, California, Georgia, Idaho, Kentucky, Louisiana, Mississippi, New Hampshire, North Carolina, South Carolina, Oregon, South Dakota, Washington, and Wyoming) are planning to fight FERC's proposed changes on the grounds that FERC usurps state authority. On August 15, 2002, state regulators from 22 states and the District of Columbia (Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Montana, North Dakota, Ohio, Oklahoma, Texas, Wisconsin, Delaware, the District of Columbia, New Jersey, New York, Pennsylvania, West Virginia, Connecticut, Maine, Massachusetts, New Hampshire, and Rhode Island) released a statement that "voiced support for FERC's ongoing effort to remedy undue discrimination in the use of the nation's interstate high voltage transmission system

in order to create a truly competitive bulk power market.” In general, the industry has been in favor of FERC’s SMD proposal, but some industry groups have voiced concerns about the implementation of SMD.

**Market Transparency.** Some have argued that the transmission and wholesale power markets cannot be competitive without additional market transparency. In the 107<sup>th</sup> Congress, S. 1231 and the Senate-passed H.R. 4 would have required FERC to issue rules establishing an electronic information system to provide information about the availability and price of wholesale electric energy and transmission services to FERC, state commissions, buyers and sellers of wholesale electric energy, users of transmission services, and the public.

## **Environmental Questions and Proposed Responses**

The electric industry is a major source of air pollution as well as of greenhouse gases. Therefore, changes underway in the industry are being closely examined for their potential environmental effects. At issue is whether proposed legislation to restructure the industry should include environmental protections.

The Clean Air Act regulates emissions of conventional air pollutants from electric utilities. While it has historically focused on new construction in applying its most stringent standards, several current and prospective regulations would significantly increase controls on existing coal-fired facilities. These controls may diminish the attractiveness of renovating older, more polluting facilities, but the effectiveness of the regulations in coping with a restructured industry remains to be seen. In addition, greenhouse gas emissions are not regulated, so any increases in carbon dioxide would not be controlled under existing authorities.

Thus the environmental effects of restructuring depend on whether, for conventional air pollutants, the existing regulatory regimen will work effectively as the industry structure changes. For some pollutants, such as sulfur oxides, a nationwide emissions "cap" seems secure; but for others, particularly nitrogen oxides, the state-led implementation process may have difficulty coping with regional disparities in emissions. For carbon dioxide, any controls would be contingent on future ratification of the Kyoto Agreement to curtail emissions and on domestic legislation.

Several bills that deal with these environmental issues were introduced in the 107<sup>th</sup> Congress. For a summary of these bills and legislative action, see CRS Report RL31326.

## **Calls for Additional Electric Regulatory Reform**

### **PUHCA**

One argument for additional PUHCA reform has been made by electric utilities that want to further diversify their assets. Currently under PUHCA, a holding company can acquire securities or utility assets only if the SEC finds that such a purchase will improve the economic efficiency and service of an integrated public utility system. It has been argued

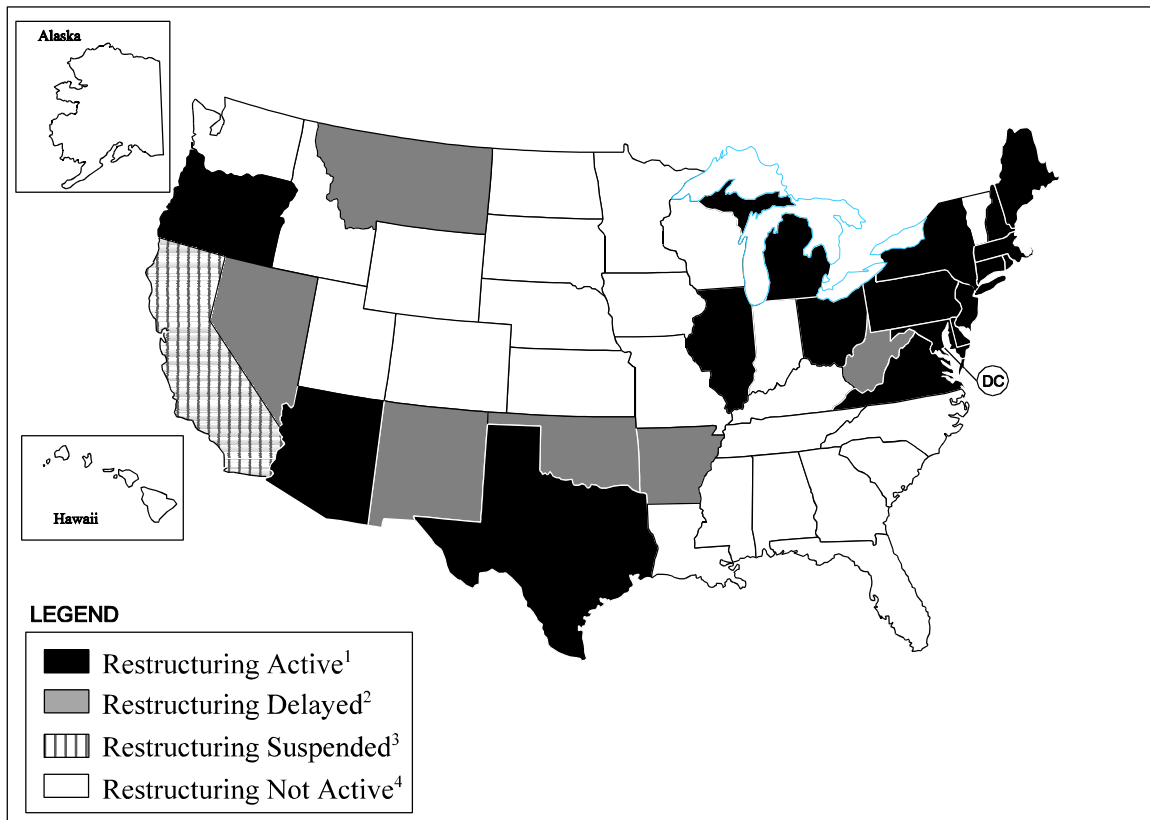
that reform to allow diversification would improve the risk profile of electric utilities in much the same way as in other businesses: The risk of any one investment is diluted by the risk associated with all investments. Utilities have also argued that diversification would lead to better use of under-utilized resources (due to the seasonal nature of electric demand). Utility holding companies that have been exempt from SEC regulation argue that PUHCA discourages diversification because the SEC could repeal exempt status if exemption would be “detrimental to the public interest.”

For a number of years there has been significant bipartisan congressional support for repealing much of PUHCA. For example, on April 24, 2001, the Senate Committee on Banking, Housing, and Urban Affairs approved S. 206, a bill to repeal the Public Utility Holding Company Act of 1935 and to enact the Public Utility Holding Company Act of 2001 (S.Rept. 107-15). However, as a result of Enron’s recent collapse, Congress may take a somewhat different view toward significantly amending or repealing PUHCA. Even though Enron was not a registered holding company, it is now being argued by some that without PUHCA, Enron’s collapse might have adversely affected many other power companies. (For additional information on Enron, see also the CRS Electronic Briefing Book on electricity restructuring at [<http://www.congress.gov/brbk/html/ebele1.shtml>].)

State regulators have expressed concerns that increased diversification could lead to abuses, including cross-subsidization: a regulated company subsidizing an unregulated affiliate. Cross-subsidization was a major argument against the creation of EWGs and has reemerged as an argument against further PUHCA reform. In the case of electric and gas companies, non-utility ventures that are undertaken as a result of diversification may benefit from the regulated utilities’ allowed rate of return. Moneymaking non-utility enterprises would contribute to the overall financial health of a holding company. However, unsuccessful ventures could harm the entire holding company, including utility subsidiaries. In this situation, utilities would not be penalized for failure in terms of reduced access to new capital, because they could increase retail rates. The Senate-passed H.R. 4 in the 107<sup>th</sup> Congress would have repealed PUHCA and given FERC additional authority over cross-subsidization issues and merger review. The House conferees counteroffer would have repealed PUHCA and eliminated FERC’s merger authority.

Several consumer and environmental public interest groups, as well as state legislators, have expressed concerns about PUHCA repeal. PUHCA repeal, such groups argue, could only exacerbate market power abuses in what they see as a monopolistic industry where true competition does not yet exist. The National Rural Electric Cooperative Association also opposes stand-alone changes to PUHCA. (For further information on PUHCA, see CRS Report RS20015.)

PUHCA repeal legislation was introduced in the 107<sup>th</sup> Congress, but comprehensive electricity restructuring legislation was not. S. 206, S. 388, Senate-passed H.R. 4, H.R. 1101, and H.R. 3406 would have repealed PUHCA and given FERC additional authority.

**Figure 1. Status of State Electric Utility Restructuring as of October 1, 2002**

Adapted by CRS from Magellan Geographix. Used with permission.

1. Arizona, Connecticut, Delaware, District of Columbia, Illinois, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Ohio, Oregon, Pennsylvania, Rhode Island, Texas, and Virginia.
2. Arkansas, Montana, Nevada, New Mexico, Oklahoma, and West Virginia.
3. California.
4. Alabama, Alaska, Colorado, Florida, Georgia, Hawaii, Idaho, Indiana, Iowa, Kansas, Kentucky, Louisiana, Minnesota, Mississippi, Missouri, Nebraska, North Carolina, North Dakota, South Carolina, South Dakota, Tennessee, Utah, Vermont, Washington, Wisconsin, and Wyoming.

Source: Energy Information Administration  
 [http://www.eia.doe.gov/cneaf/electricity/chg\_str/regmap.html]

## PURPA

In the 107<sup>th</sup> Congress, H.R. 381, H.R. 3406, S. 388, S. 552 and Senate-passed H.R. 4 would have prospectively repealed §210 of PURPA, the mandatory purchase requirement provisions. Proponents of such stand-alone bills — primarily investor-owned utilities (IOUs) located in the Northeast and in California — argue that their state regulators’ “misguided” implementation of PURPA in the early 1980s has forced them to pay contractually high prices for power they do not need. They argue that, given the current environment for cost-conscious competition, PURPA is outdated. The PURPA Reform Group, which promotes IOU interests, strongly supports such bills by contending that the current law’s mandatory purchase obligation was anti-competitive and anti-consumer.

Opponents of these types of bills (IPPs, industrial power customers, most segments of the natural gas industry, the renewable energy industry, and environmental groups) have many reasons to support PURPA as it stands. Mainly, their argument is that PURPA introduced competition in the electric generating sector and, at the same time, helped promote wider use of cleaner, alternative fuels to generate electricity. Since the electric generating sector is not yet fully competitive, they argue, repeal of PURPA would decrease competition and impede the development of the renewable energy industry. Additionally, opponents of PURPA repeal argue that it would result in less competition and greater utility monopoly control over the electric industry. The Electric Power Supply Association (EPSA) also wants comprehensive legislation to look at all aspects of electricity regulation. State regulators are concerned that this legislation would prevent them from deciding matters currently under their jurisdiction. The National Association of Regulatory Utility Commissioners has opposed legislation that would allow FERC to protect utilities from costs associated with PURPA contracts.

## **Retail Wheeling**

Many analysts believe the next logical step in restructuring is retail competition. Encouraging competition in the electric supply system is already occurring as some states allow generating utilities to arrange for transmission of electricity from its sources to a retail consumer whether or not this transaction occurs within their service territory. EPACT expressly prevents FERC from ordering retail competition (retail wheeling). Such transactions remain under state regulatory control; FERC's open access Orders address wheeling at the wholesale level only. However, it is clear that FERC hopes that its Orders will pave the way for states to permit retail customers to shop for their electricity needs anywhere they want, rather than being limited to buying electricity from their local utility.

Indeed, who should determine the pace and boundaries of retail wheeling efforts is a fundamental issue. Electric service is a vital component of a modern economy; thus, national interests are at stake in what direction the restructuring debate takes. Concerns about economic efficiency and the treatment of various participants (such as electric utilities) may suggest to some that the federal government provide direction to current state initiatives. In contrast, others argue that the states, which have traditionally had responsibility over retail electricity issues, have the expertise and experience necessary to handle the situation (more so than the federal government) and that the national interest in electricity supply is neither threatened by state initiatives nor a justification for federal preemption of states' rights. Currently, retail choice is under state jurisdiction, and 24 states and the District of Columbia have moved toward retail competition. Congress may consider whether expanding federal jurisdiction is warranted in the continuing evolution of the electric utility industry or whether a "wait and see" attitude toward state proceedings is more appropriate at this point. No bills addressing retail wheeling were introduced in the 107<sup>th</sup> Congress.

## **Recent Developments in California**

California's experience in 2001 with a marked decrease in reliability of electricity supply as well as retail price spikes in the San Diego region has now been replaced with excess generating supply. The original situation was partly due to California's restructured

electric markets, increased demand, generating plant outages and lack of new transmission and generating capacity. Currently, California has more long-term contracts than it needs to meet demand, and the contracts are locked-in at prices higher than the current market price of electricity. (See also the CRS Electronic Briefing Book on electricity restructuring at [<http://www.congress.gov/brbk/html/ebele1.shtml>].)

## Price Caps

Several bills have been introduced that would impose wholesale price caps in California, a return to cost-of-service wholesale rate regulation or demand-based time-of-use rates. Cost-of-service rate regulation allows for recovery of generating costs plus a reasonable rate of return. Those in favor of price caps argue that competition does not yet exist in California's wholesale generating sector and wholesale prices do not reflect what would be expected in a functional market. In addition, it is argued that generators in California are exerting market power by intentionally withholding generating capacity to increase wholesale prices. Those opposed to price caps, including President Bush, argue that price caps would discourage investment in new generating facilities and would further distort the wholesale electricity market. For further discussion on price controls, see [<http://www.congress.gov/brbk/html/ebele23.html>].

In the 107<sup>th</sup> Congress, H.R. 264, H.R. 268, H.R. 1468, S. 80, and S. 287 would have imposed cost-of-service regulation for wholesale sales of electricity. H.R. 238 and S. 26 would have imposed an interim regional wholesale price cap or cost-of-service based rates. S. 597 and S. 764 would have required either cost-of-service based rates or load-differentiated rates. In addition, H.R. 1941, H.R. 1974, H.R. 2274, H.R. 2757, S. 1068 and Senate-passed H.R. 4 would have given FERC additional wholesale refund authority. This would allow FERC to order wholesalers to provide refunds to consumers if it is determined that unjust and unreasonable rates have been charged. H.R. 3406 would have clarified FERC's existing refund authority and gives FERC authority to order refunds from sellers of electricity and transmission that are normally unregulated whenever they engage in sales of wholesale electricity or transmission to regulated utilities.

On June 18, 2001, FERC extended its price mitigation Order of April 26, 2001, to include the 11 states in the Western System Coordinating Council (WSCC). FERC's Order [<http://www.ferc.gov/electric/bulkpower/el00-95-031-6-19.PDF>] provided for a two-tiered rate structure for the day-ahead and hour-ahead spot market. If California entered a Stage 1 electricity emergency (reserves fall below 7%), the spot market clearing price for California was based on the bid from the least efficient gas-fired plant located in California that was needed by the Independent System Operator (ISO). All sellers into the California ISO spot market received the spot market clearing price. For sellers outside of California, California's spot market clearing price was the maximum price, but sellers could bid and receive less than the spot market clearing price. Generators, but not power marketers, had the ability to justify their cost if it exceeded the established spot market clearing price. When operating reserves were above 7% in California, the maximum price that could be charged was 85% of the spot market clearing price set during the most recent Stage 1 emergency. These price caps were due to expire in September 2002. For a chronological listing of important events in the California electricity situation, see the Chronology in the CRS Electronic Briefing Book at [<http://www.congress.gov/brbk/html/ebele18.html>].

On July 17, 2002, FERC issued a new price mitigation order for the Western markets (Docket Number ER02-1656-000 et al.). Unlike the existing order described above, the new price mitigation plan has no end date, and went into effect October 1, 2002. Unlike the soft cap of \$91.87 per megawatt hour that has been in effect since June 2001, the plan establishes a hard price cap of \$250 per megawatt hour for spot market sales. In addition, the plan creates an automated mitigation procedure (AMP) that will screen all bids that exceed \$91.87 per megawatt hour for possible market abuses.

On September 26, 2002, FERC approved the California Independent System Operator's request to extend through October 30, 2002, the \$91.87/megawatt-hour price cap that was to be replaced with a \$250/megawatt-hour cap on October 1, 2002.

## Legislative Activity

The electric utility crisis in California in early 2001 shifted the focus of electricity restructuring legislation away from comprehensive bills that dominated the electric utility restructuring debate in the 106<sup>th</sup> Congress. In the 107<sup>th</sup> Congress, the majority of electric utility legislation introduced related to reliability in wholesale rate-making. Six bills, H.R. 312, H.R. 2814, H.R. 3406, S. 172, S. 388, and S. 597, would have provided for an Electric Reliability Organization (ERO) to prescribe and enforce mandatory reliability standards. In addition, Amendment No. 2917 to S. 517 (the Senate floor vehicle for debate on omnibus energy legislation, H.R. 4) would have required the Federal Energy Regulatory Commission to prescribe and enforce reliability standards. However, H.R. 4 as passed by the Senate would have given an electric reliability organization the primary authority to develop reliability standards.

FERC is moving to require transmitting utilities to join a Regional Transmission Organization (RTO). H.R. 3406 would have required transmitting utilities to join an RTO. In addition, H.R. 3406 would have dictated standards for RTO structure. H.R. 2814 would have given FERC authority to develop voluntary RTOs.

Reacting to the price spikes in the Western United States in early 2001, most rate-making legislation in the 107<sup>th</sup> Congress focused on a return to cost-of-service based regulation. H.R. 264, H.R. 268, H.R. 1468, S. 80, and S. 287 would have imposed cost-of-service regulation for wholesale sales of electricity. H.R. 238 and S. 26 would have imposed an intra regional wholesale price cap or cost-of-service based rates. S. 597 and S. 764 would have required either cost-of-service based rates or load-differentiated rates. Load-differentiated rates reflect differences in the demand for electric energy during various times of day, months, seasons, or other time periods.

H.R. 268, H.R. 1941, H.R. 1974, H.R. 3406, H.R. 2274, H.R. 2757, S. 80, S. 1068 and Senate-passed H.R. 4 would have given FERC wholesale refund authority. In most cases, this allows FERC to order wholesalers to provide refunds to consumers if it is determined that unjust and unreasonable rates have been charged. In addition, S. 2716 would have increased civil penalties for violations under the Federal Power Act.

Some have argued that the transmission and wholesale power markets cannot be competitive without additional market transparency, or access to market information. In the

107<sup>th</sup> Congress, S. 1231 and Senate-passed H.R. 4 would have required FERC to issue rules establishing an electronic information system to provide information about the availability and price of wholesale electric energy and transmission services to FERC, state commissions, buyers and sellers of wholesale electric energy, users of transmission services, and the public.

Legislation to repeal the Public Utility Holding Company Act was introduced in the 107<sup>th</sup> Congress. S. 206, S. 388, Senate-passed H.R. 4, H.R. 1101, and H.R. 3406 would have repealed PUHCA and given FERC additional authority. H.R. 381, H.R. 3406, S. 388, and S. 552 would have prospectively repealed Section 210 of the Public Utility Regulatory Policies Act, the section that requires utilities to purchase power produced by certain small and renewable electric generators. The Senate-passed H.R. 4 would have prospectively repealed Section 210 of PURPA if FERC finds that a competitive market exists.

Several bills were introduced in the 107<sup>th</sup> Congress to require net metering. Net metering allows residential and small commercial distributed generation facilities to produce electricity for their own use and sell excess electricity to the local distribution company. H.R. 954, H.R. 3089, S. 1403 and Senate-passed H.R. 4 would have required local distribution companies to provide net metering services for certain small electric generating systems using fuel cells or renewable energy resources. H.R. 1045 and S. 933 would have required local distribution companies to provide interconnection for distributed generation.

**Senate Debate.** On April 25, 2002, the Senate passed the Energy Policy Act of 2002 (its version of H.R. 4). This included Senator Thomas' amendments to S.Amdt. 2917 that affected the electricity provisions (S.Amdt. 3000, S.Amdt. 3001, S.Amdt. 3002, S.Amdt. 3003, S.Amdt. 3004, S.Amdt. 3012 and S.Amdt. 3006). These amendments were agreed to by the Senate by voice vote on March 13 and 14, 2002. In general, Senator Thomas' amendments would have: given FERC additional review authority over certain electric utility mergers; required FERC to apply cost-of-service rates when market-based rates are unjust, unreasonable, unduly discriminatory or preferential; required an electric reliability organization to develop and enforce mandatory reliability standards; provided access to the transmission system for certain intermittent generators; and given states the authority to prescribe and enforce laws regarding the application of the Consumer Protection Subtitle. S.Amdt. 3917 also was included in the Senate-passed H.R. 4, that would have maintained the §210 mandatory purchase requirement of PURPA until FERC determines that qualifying facilities have access to a competitive market.

In meetings of the Conference Committee, the House offered a counter-proposal to the Senate-passed H.R. 4 electricity provisions. The House proposal would have, in part, created an electric reliability organization, required FERC to issue rules on market transparency, created federal transmission siting authority, created incentives for utilities to join RTOs, repealed PUHCA with federal and state access to books and records, prospectively repealed the mandatory purchase requirement of PURPA, and repealed FERC's merger review authority.

For a complete description of H.R. 4, see CRS Report RL31427, *Omnibus Energy Legislation: H.R. 4 Side-by-side Comparison*. For a listing of electric utility restructuring legislation in the 107<sup>th</sup> Congress, see CRS Report RL31210, *Electric Utility Restructuring Legislation in the 107<sup>th</sup> Congress*.