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Electric Power Supply Association

Advocating the **power** of competition

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AZ CORP COMMISSION
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Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

Re: Electric Competition:

Generic Docket for Electric Restructuring)
Electric Competition Rules)
AISA)
APS Request for A Variance)

E-00000A-02-0051
E-01345A-01-0822
E-00000A-01-0630
E-01933A-02-0069
E-01933A-02-0071

Enclosed please find one original and ten copies for filing in the above referenced proceeding.

Respectfully submitted,

Samantha M. Slater
Samantha M. Slater
Manager of State & Regional Affairs

Arizona Corporation Commission
DOCKET

FEB 25 2002

DOCKETED BY	
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**STATE OF ARIZONA
BEFORE THE
ARIZONA CORPORATION COMMISSION**

Re: Electric Competition:)	
Generic Docket for Electric Restructuring)	Docket No. E-00000A-02-0051
Electric Competition Rules)	Docket No. RE-00000C-00-0275
AISA)	Docket No. E-00000A-01-0630
APS Request for A Variance)	Docket No. E-01345A-01-0822

COMMENTS OF THE ELECTRIC POWER SUPPLY ASSOCIATION

INTRODUCTION

The Electric Power Supply Association (EPSA)¹ appreciates the opportunity to respond to the Arizona Corporation Commission's (ACC or Commission) request for comments on issues related to the Commission's discussion of the state's electric competition rules. EPSA is the national trade association representing competitive power suppliers, including independent power producers, merchant generators and power marketers. These suppliers, who account for more than a third of the nation's installed generating capacity, provide reliable and competitively priced electricity from environmentally responsible facilities serving global power markets. EPSA seeks to bring the benefits of competition to all power customers.

¹ The comments contained in this filing represent the position of EPSA as an organization, but not necessarily the view of any particular member with respect to any specific issue.

EPSA believes that all consumers should have a choice of electricity suppliers. Competition is the most effective tool to enhance reliability, bolster economic development and provide new services to consumers. While acknowledging that every state is unique, EPSA believes that every consumer nationwide can and will benefit from having a choice of electricity suppliers.

In November 2000, EPSA published a revised version of its white paper, *Retail Competition: Getting It Right!* This document includes detailed recommendations regarding the issues encountered by states that have already implemented retail electricity competition. Among its conclusions, EPSA recommends that states ensure and sustain a "date certain" when competition will begin; create effective customer choice through the unbundling of utility services; guarantee the full recovery of all legitimate, verifiable, immitigable, prudently-incurred, net (eligible) stranded costs; provide open and fair access to the transmission and distribution system for all suppliers; establish regional transmission organizations (RTOs); and eliminate barriers to participation in a competitive market. A copy of the white paper is enclosed for the Commission's consideration.

For ease of reading, EPSA's comments track the identification of issues in the Commission's notice. Given that EPSA represents competitive power suppliers nationwide, we will not respond to every question in the Commission's notice, but will instead discuss several issues on a broader basis. Some EPSA member companies will submit comments in greater detail in their filings with the Commission.

I. Identification of Retail Electric Products and Services for Which Competition Could Bring Benefits

Generation

Competition in the wholesale electric generation business is quickly becoming the principal way to meet the incremental demand for electricity across the country. The competitive supplier share of installed capacity has increased almost four-fold in less than five years, rising from 70.3 Gigawatts (GW) in 1997 to 319.5 GW in 2001. During 1997-2001, the amount of competitive generation has grown from 8.5 percent of total U.S. capacity in 1997, to 35.6 percent of the total in 2001. Merchant power plants have become the dominant source of new power generation throughout the U.S. Competitive power suppliers are responsible for more than 90 percent of the capacity additions that have been made to the grid since 1997. Several EPSC members, including Allegheny Energy Supply, Calpine Corp., Duke Energy North America, PG&E National Energy Group, PPL Global, Reliant Energy and TECO Energy have power projects either in operation, under construction or in development in Arizona totaling approximately 9,000 MW. (Source: U.S. Energy Information Administration, Edison Electric Institute and EPSC data)

Merchant plants are designed to compete in the wholesale and retail markets, as well as to help maintain and enhance the reliability of regional electricity systems. Regulators and legislators must develop rules that: (1) encourage consistent, fair, non-discriminatory and workable interconnection policies; (2) ensure fair and open access to

transmission and distribution systems for all market participants on an equivalent basis; and, (3) control and mitigate market power problems. Adopting rules and policies that promote the development of merchant power plants provides numerous benefits, ranging from lower costs, environmental improvements, as newer facilities replace older generation assets, minimizing incumbent utilities' vertical and horizontal market power, and providing the liquidity needed to support robust wholesale trading. Furthermore, market signals are much faster than regulatory processes, so market incentives are a more efficient means of ensuring that sufficient capacity exists to meet demand on the system.

Generating facilities that competitive power suppliers construct are built at their stockholder's risk. This shifting of risk from the incumbent utilities' ratepayers to merchant power investors indicates that, with respect to development projects financed by new entrants, certificates of need are obsolete. Experience with the emerging markets has demonstrated that the competitive pressures of supply and demand are an effective substitute for a regulatory certification process, particularly where private investors, not ratepayers, are at-risk. In light of the availability and willingness of competitive power suppliers to meet the nation's growing electricity needs, there is no reason to require utility ratepayers to continue to bear the risks associated with utility investment in power generation when other market participants can insulate consumers from those risks. Enclosed is a copy of EPSA's recent publication entitled "*Merchant Power for 21st Century America.*"

Role of Power Marketers

Power marketers play a valuable role in competitive wholesale power markets by providing both products and services that improve reliability and performance while reducing risk in competitive markets. Marketers are keenly interested in the costs and value of supply for customers and constantly strive to increase options, provide better alternatives and decrease costs. Marketers' products are transaction-based and often guarantee product quality; their services establish performance standards and price stability. These products and services are essential in a fully competitive market, since they furnish customers with an intermediary that can supply the appropriate products and services that fit with each customer's needs and risk tolerances. The contribution of these products and services to the market is the cornerstone of market liquidity, a necessity in a fully competitive market. Power marketers are pivotal in enabling the movement of power across the West, resulting in a more efficient operation of the Western Systems Coordinating Council system and providing load-serving entities and end use customers access to lower cost energy that otherwise would not be available.

Interconnection

To obtain the benefits of competitive generation, merchant power plant developers must be able to reach consumers with their service. Thus, it is essential to promote policies that provide for consistent, fair and workable interconnection rules and

procedures. The Federal Energy Regulatory Commission (FERC) is currently engaged in a Notice of Proposed Rulemaking process designed to ensure standardized and fair generation interconnection procedures. However, EPSA encourages state regulatory commissions to require their state's jurisdictional utilities to develop clear and consistent interconnection policies, with definitive timelines for action, confidentiality guidelines and standardized interconnection agreements to meet their regional needs. Clear and efficient interconnection procedures are critical to developing, maintaining and enhancing competitive electric power markets. Uniform business practices allow generation developers, many of whom are national companies, to develop more efficient, streamlined procedures for their project development efforts. There is no reason for these requirements to vary from transmission provider to transmission provider in an arbitrary, inequitable manner.

Competitive Bidding for Generation Capacity

Absent a competitive bidding process, there is no reason to believe that consumers will receive optimal benefits from a utility's construction of additional rate-based facilities. A competitive marketplace routinely leads to an efficient allocation of resources and the highest possible level of economic well-being for society as a whole. Open, transparent competitive bidding overseen by an independent entity ensures customers, regulators and market participants that electricity is being provided at the most affordable, prudent price, and that new technologies and environmental improvements are appropriately considered in the process. A January 1991 study by the National Regulatory Research Institute, "*Implementing A Competitive Bidding*

Program for Electric Power Supply,” noted that as early as March 1990, competitive bidding programs were being operated by utilities and/or public utility commissions in 26 states.

One of the most important aspects of independent power development is that competitive power developers, not utility ratepayers, bear the risks of providing the electricity. Given the availability and willingness of competitive power suppliers to meet the electricity needs of the ultimate consumers in Arizona, there is simply no rational reason to require utility ratepayers to bear the risks associated with a utility or its affiliate’s investment in power generation facilities, when other market participants can insulate consumers from just such concerns. The history of cost-plus regulation has shown a tendency for utilities to overpay for generation facilities. A lack of market discipline has led to inefficiency and poor performance on the part of many electric utilities. The Commission has a responsibility to Arizona standard offer customers to not allow utilities or their affiliates to force consumers to pay for questionable economics and poor public policy decisions, especially during a time of robust investment by independent developers in the state and region.

Market power is a significant concern in a competitive market. The dominant incumbent companies may be able to control prices and exclude market entrants, thereby severely limiting new entry and reducing the likelihood that there will ever be the sufficient number of both buyers and sellers necessary for workably competitive markets. New market entrants, such as EPSA’s members, will also be placed at a

serious disadvantage if they must compete against these “super-competitors” whose capital costs are recovered from captive ratepayers and who also can sell some of the power in competitive off-system markets.

EPSA is also concerned about the utilities’ ability to use their generation market dominance in conjunction with their ownership and control of regional transmission assets in the wholesale market to the detriment of new power suppliers and other market participants. Despite the Federal Energy Regulatory Commission’s open access rules, competitive power suppliers are still finding that some transmission facilities’ owners have the motive, opportunity and incentive to use their pre-existing control of transmission to favor their own or affiliates’ generation assets. Increasing their generation portfolio only increases the potential for utilities and their affiliates to use their control over their transmission system to favor their own assets at the expense of other market participants and, ultimately, the consumers of Arizona.

Aggregation Services

There is every indication that residential customers can benefit significantly from competition. Residential customers can benefit directly from all the cost efficiencies and service gains competition will deliver. The aggregation of residential and small business customers’ needs could result in additional savings. Aggregation provides opportunities for small customers, who may not otherwise be the target of marketing efforts by retail energy suppliers, to participate in and benefit from the competitive market. Through aggregation, small customers are able to pool their purchasing power

and wield the same influence, as much larger customers. As the competitive retail market evolves, aggregators may also be able to secure valuable services, such as consolidated billing, energy management services, and energy use analysis for smaller-use customers. Aggregation is an increasingly effective tool for maximizing savings and mitigating risk in the competitive power market. For instance, Green Mountain Energy was selected in February 2001 to serve more than 400,000 electricity customers in Ohio in the nation's largest-ever energy aggregation contract to-date. The Northeast Ohio Public Energy Council formed the electricity-buying group to serve nearly 100 communities in the state.

Price Benefits

A study commissioned by EPSA and conducted by Craig Roach, Ph.D., principal of Boston Pacific Co., "*Assessing the 'Good Old Days' of Cost-Plus Regulation,*" analyzed sales data for 60 of the nation's investor-owned utilities during 1985-1999, when traditional cost-plus rate regulation began evolving toward a more competitive environment. During the 1985-1999 period, according to the analysis, inflation-adjusted electricity prices decreased an average 30 percent for residential customers and 36 percent for industrial/commercial customers. This reduction in real electricity prices can be attributed to the onset of competition combined with lower fuel prices, slowing inflation, and the depreciation of high-cost plants. As the nation moved toward wholesale competition, consumer prices for electricity steadily declined. This stands in stark contrast to 1984 when Arizona Public Service Co. filed a request at the Commission for a 55% retail rate increase in order to rate-base Palo Verde units 1, 2

and 3. The resulting rate shock produced a massive, expensive and multi-year regulatory prudence audit and eventual disallowance.

Additional proof of success on pricing can be seen in states such as Pennsylvania, where the statewide “customer choice” program has saved employers and families nearly \$4 billion; up to 1 million people have cumulatively shopped for power; and nearly 600,000 are currently shopping. Furthermore, Pennsylvanians are currently paying electric rates that are 1 percent below the national average. Before competition, they were paying rates 15 percent above the national average.

III. Relationship of the Current Regulatory Regime to Competition

Price Caps

Price controls prevent demand-side response to rising prices. For competitive markets to flourish, supply and demand must interact freely to determine the price, thereby allowing market participants to make intelligent resource allocation decisions. At just the time when we need to attract capital for new generation and to expand and improve the electrical system’s infrastructure, price controls create uncertainty that will discourage and delay this much-needed investment. This narrow speculation regarding demand-side responsiveness amounts to a high stakes gamble that consumers are harmed more by short-lived, infrequent price spikes than by long-term delays in generation investment needed for reliability purposes. Rather than speculative short-

term outcomes, the wiser approach to both price spikes and reliability concerns is to utilize free market forces and the investment capital they attract to opportunities.

Finally, price controls divert policymakers from making the structural changes necessary to assure a fully competitive market that offers competitive prices, low risk, high reliability and superior environmental performance. Policymakers should concentrate on developing market-oriented solutions to any remaining market flaws.

Customer Switching Rules

There are several aspects of switching rules that are critical to the successful development of retail markets. Uniform business rules for switching customer accounts are necessary for a properly functioning competitive marketplace. High exit fees are a significant barrier to competitive suppliers in developing markets, since high customer acquisition costs discourage participation in retail markets. Lengthy notice periods, and cumbersome authorization requirements, before consumers can switch to a new electricity supplier also pose a threat to the competitiveness of new market entrants. When a customer initiates contact with its distribution company to authorize the switch, and provides identifying information, additional barriers to finalize this transaction should not be imposed. The distribution company's only obligation should be to record the change for billing purposes. Customers who are solicited by a supplier to switch should not be switched until the new supplier obtains authorization in one of three methods: oral verification by an independent third-party, electronic verification or written authorization.

Competitive Bidding for Standard Offer Service

The importance of standard offer service issues to the development of competitive markets cannot be overstated. In the transition to a fully competitive market, legislators, regulators and consumer advocates have been understandably concerned about ensuring small customers receive continued generation service at a reasonable price. Customers should be assured a continuous source of electricity, even if they do not choose a new supplier. In addition to those customers who choose not to choose, other customers who must also be assured access to electricity include: (1) customers who need standard offer service because they are unable or unqualified to obtain service from a competitive power supplier, and (2) customers whose service has, for whatever reason, been terminated by their supplier and who need “backstop” service. State regulators must decide who will provide the electricity service to these customers. It is important that policymakers design standard offer service programs to maximize customers’ choice, and minimize the number of customers who take standard offer service.

Allowing new market entrants (including competitive utility affiliates) to bid to provide standard offer service is essential. If customers can, by not choosing, remain with the incumbent utility, then the incumbent utility has gained a significant competitive advantage. Competitive suppliers will have a tremendous struggle to enter this market, which may discourage them from doing so.

IV. Retail Generation Competition

Transmission Infrastructure

The development of a seamless regional transmission systems where all transmission usage is accorded fully-comparable treatment is vitally important to the growth of a competitive electric power industry. The establishment and enhancement of RTOs represents an important step towards that end. Properly structured, and with an efficient standard market design, RTOs can ensure non-discriminatory access to and efficient usage of the transmission system. As FERC notes in Order No. 2000, transmission-owning utilities have an inherent conflict of interest that often leads to preferential treatment for their own or their affiliates' customers, to the detriment of third-party transmission customers. Policing these abuses is difficult and expensive. The prospect of real wholesale and retail competition continues to be threatened by, among other things, the manifest lack of comparability between certain wholesale and retail transmission pricing and access policies -- resulting from the discriminatory exemption of all native load from open access rules.

Today, the wholesale markets and the transmission system have evolved to form regional electricity markets. Electrons moving along the transmission grid do not recognize state boundaries, nor can they be differentiated between those designated for wholesale and retail service. Thus, rules designed to protect native load in a particular state often have the effect of adversely impacting retail customers in an adjacent system. Further, such rules often favor incumbent utilities, denying wholesale customers, including municipals and cooperatives that also buy power for *their* native

load customers, the benefits of being able to choose an alternative suppliers who might otherwise better serve their needs. Clearly, consistent and nondiscriminatory rules are needed to protect *all* electricity customers.

Ultimately, the elimination of residual discrimination will occur only when all uses of the transmission grid are placed under the same rate schedules, terms and conditions. With actual comparability, the transmission owner's interest would be to operate the grid as a stand-alone business and maximize throughput, rather than to use transmission position to increase the return on its investment in power generation, marketing and sales. Thus, comparability is critical if competitive power markets are to achieve their full potential.

In order to reflect true comparability, all transmission service must be reserved and provided pursuant to the same, system-wide tariff. RTO open access tariffs should be revised to incorporate this requirement. The "single tariff model" outlined in the FERC Staff's December 19, 2001, White Paper, designed to develop consistent regional rules for the use of the transmission system, is critical to the efficient operation of the electricity market.

Only when all uses of the transmission service occur under the same tariff will continuing incentives for discrimination be eliminated. Only full comparability will assure that retail customers of all states, whether traditional utilities or new market entrants serve them, receive the same service. Without full comparability, individual states will retain the opportunity, incentive and motive to disadvantage each other, while individual utilities will retain the opportunity, incentive and motive to disadvantage other

market participants. A single, system-wide transmission tariff will allow all load-serving entities, whether they are the current incumbents or new market entrants, access to the lowest cost supplies to meet their customers' needs.

V. Industry Events External to Arizona

The California Experience

During the summer of 2000, the California energy market fell victim to a confluence of circumstances: inadequate generation, lack of demand-side programs, lethargic siting approvals, low hydroelectricity due to severe drought conditions, significant load growth throughout the West, the inability of load-serving entities to hedge risks, masked price signals to retail customers and poorly-functioning retail markets that resulted in blackouts and price volatility. To avoid a similar experience, we urge the Commission here to learn from California's mistakes and: (1) encourage new generation, (2) develop effective demand-response programs; (3) expand transmission infrastructure and improve interconnection procedures; (4) provide credit assurances; (5) increase natural gas pipeline capacity; (6) avoid price caps and other price controls; and, (7) stimulate retail services by allowing more customer choices. A copy of EPSA's "*California: After the Storm*" is enclosed.

Enron Bankruptcy

Although Enron was closely associated with the move to open U.S. energy markets to competition, the company's collapse is unrelated to the industry restructuring

now underway. Financial analysts, economists and regulators agree that Enron's fall was the result of investors and financiers pulling back after they lost confidence in the company's financial disclosures and debt levels, not because of problems in competitive energy markets. U.S. Secretary of Energy Spencer Abraham is among those making this point. "In the face of Enron's collapse, the largest bankruptcy in U.S. history, there were no price spikes, no trading panics, no electricity outages and no gas shortages," Abraham said. "... there is no indication that the energy side of Enron's business was the cause of its collapse."

Energy marketing and trading continued without interruption in Enron's wake. Ironically, the competition that Enron helped establish ensured that the company's departure did not become a crisis in terms of energy supply – as trades were picked up by other companies, energy supplies were undisturbed, power flowed from generators to utilities to consumers, and prices remained stable.

Supplemental Questions

Divestiture or Corporate Separation

Many states are now working to create opportunities for wholesale markets and for merchant generators to build new power plants and sell wholesale electricity to their states' and regions' utilities. As part of this progression toward a more competitive electric marketplace, some states, such as Pennsylvania, Massachusetts and Illinois, have encouraged utilities to auction their generation assets to the highest bidder. Other

states, such as Maryland and Texas, have allowed the transfer of utility assets to unregulated affiliates at book value. If the latter is joined with the functional separation of competitive and non-competitive services, and a strong code of conduct, EPSA believes both of these actions, coupled with the removal of any barriers to entry for merchant generation, are positive first steps toward an ultimate goal of a fully-restructured market.

Merchant Power Plants and the Environment

Merchant power plants are inherently friendly to the environment. Most run on clean natural gas and are highly-efficient, meaning they use less fuel to produce the same amount of electricity. Most new merchant power plants use cleaner-burning natural gas. This allows them to be built quicker and to operate with reduced emissions of carbon and nitrogen in comparison to existing, older, less-efficient facilities. An increasing number of merchant power plants are being planned and built using clean, alternative energy sources, including wind power and geothermal heat under the competitive market model.

Because they are competitively-driven, merchant power plants employ the newest and most productive technologies. These systems pollute much less than older technologies because they burn natural gas and need less fuel to operate. As private businesses backed by considerable investments, merchant power plants have both the incentive and the wherewithal to invest in the best technology, a distinct improvement over power plants tied to the traditional vertically-integrated utility model.

Because profitability requires a careful and accurate assessment of the market, merchant power plants are invariably sited efficiently. This minimizes the need for additional plants or the sort of duplication that could burden the environment. The very flexibility of merchant power plants means that they can be small and sited within existing industrial complexes, minimizing the magnitude of land disruption. And because they are profit-driven and well-financed, merchant power plants can and do invest in newer, cleaner, more efficient technologies.

CONCLUSION

As a result of federal and state initiatives, the power industry is being transformed from a landscape of inefficient monopolies to more responsive and competitive businesses. Over time, this will result in a far more efficient supply than was possible under the vertically-integrated utility model. Now is the time for the Commission to stay the course and continue moving forward to bring the benefits of increased wholesale and retail competition to Arizona.

EPSA commends the Commission for its initiative and thanks the Commission for this opportunity to express its views on some of the issues that have been presented. EPSA hopes that its Comments will assist the Commission in its determinations about how to proceed on these important issues. If you have any additional questions regarding these issues, please don't hesitate to contact us. We

are happy to be an ongoing information resource for you and your staff, and to serve as a liaison with our membership.

Enclosures

February 25, 2002

Respectfully submitted,

A handwritten signature in cursive script that reads "Samantha M. Slater". The signature is written in black ink and is positioned above a solid horizontal line.

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CERTIFICATE OF SERVICE

I hereby certify that I have served a copy of the foregoing document upon each person designated on the official service list compiled by the Clerk in this proceeding.

Dated at Washington, D.C. this 25th day of February, 2002.

A handwritten signature in cursive script that reads "Samantha M. Slater". The signature is written in black ink and is positioned above the printed name.

Samantha M. Slater

2001 EDITION

RETAIL ELECTRIC
COMPETITION:

Getting it Right!



Electric Power Supply Association
*Advocating the **power** of competition*

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INTRODUCTION

Across the country, state and federal legislators and regulators are engaged in a spirited debate on the issues surrounding the move to competition in the electric power industry.

As some states move forward with customer-choice programs and others prepare to open their markets during the next few years, more and more *policy-makers are convinced of the benefits associated with competition. Competitive suppliers in the electricity industry stand poised to bring innovation, savings and the benefits of full competition to all consumers, while enhancing the reliability we have all come to expect from our electricity system. Competition forces suppliers to offer better products at a better price or risk losing customers to other competitors — a new paradigm in an industry that historically has offered only standard services and little consumer choice.*

The U.S. Department of Energy (DOE) has projected that full retail competition will save consumers about \$20 billion a year. This means a decrease of \$232 from the average annual electric utility bill for a family of four, which is the equivalent of a 5 percent tax cut. DOE's projections are consistent with the experiences in other newly competitive industries. Within the natural gas, airline, telecommunication, trucking and railroad industries, competition brought real customer savings of 12 to 45 percent within five years and 25 to 60 percent within 10 years of restructuring.

Three years after electricity competition came to Pennsylvania, prices are lower, new suppliers have entered the market, power plants are being built, and the overall economy of the state is stronger. Furthermore, the benefits of competition will continue, according to a report issued by the Pennsylvania Department of Revenue.¹ Electricity prices will help create 36,400 more jobs, \$1.4 billion more in personal income, will add \$1.9 billion to the

gross state product by the year 2004, and will save consumers nearly \$3 billion by 2001, according to the study.

Competition brings other benefits, as well. It will stimulate economic development by reducing manufacturing costs, it will free up federal and state tax revenue now spent on electricity at federal facilities and it will give customers a choice in the selection of power suppliers and usage options — just as they enjoy with other products and services. Improvements in customer service, technical innovation and creative products are some of the other potential benefits for consumers. Telephones were once limited to black, rotary dial models, and phone service was limited to basic local and long-distance. Today, we have a wide variety of telecommunication options, from telephone sets to match any décor, to such services as call waiting, call forwarding, voice mail, Internet phone service and much more. Similar changes will occur in the electricity industry, with customers able to choose from a range of services — some of which we cannot even begin to imagine — and pricing options that best meet their needs. Already, customers in California, Pennsylvania, Rhode Island, Massachusetts, New Jersey and New York can choose new “green energy” suppliers and support a cleaner mix of power.

Competition also brings indirect benefits, helping states to attract power-generation investment and retain businesses. These, in turn, build the local tax base and enhance economic growth.

Revamping the laws and regulations that govern the electric power industry today is the necessary first step to ushering in competitive electricity

¹ “Electricity Generation Customer Choice and Competition: A Report to Governor Ridge and the General Assembly,” by the Pennsylvania Department of Revenue, Aug. 1, 2000.

markets and the consumer benefits they will bring. The benefits of competition are far too compelling to let well enough alone or to pass on this unique opportunity to benefit all consumers within your state. It is important, however, to “get it right” and get it done soon. While the details may vary from state to state, if the structural and transition issues associated with moving to a competitive market are handled improperly or left to chance, the benefits of competition will be dissipated or delayed.

As you move forward to design retail competition programs in your state, it is clear that numerous implementation issues need to be addressed. The public policy issues surrounding electricity industry restructuring, while important and sometimes complex, are not insurmountable. The issues need to be approached thoughtfully and with a clear goal of creating workable competitive markets. In this white paper, the Electric Power Supply Association (EPSA) offers state policymakers a road map of the issues and solutions that need to be considered.

EPSA is not a neutral observer in the discussion. Its members are competitive power suppliers, both generators and marketers. They are the new market participants, committed to the benefits that competition brings. Like many policymakers and consumer groups, EPSA firmly believes that all customers should have a choice of electricity suppliers and that competition can and should be structured to bring benefits to all customer classes.

While recognizing that each state is unique, this paper provides (1) an overview of the issues and choices that you are facing as state policymakers and (2) a pro-competitive framework for addressing those issues. EPSA certainly does not claim that it has the answer to every difficult question a state may face. However, as competitive power suppliers doing business throughout the country, EPSA’s members have had the unique opportunity to participate firsthand in the unfolding of retail competition in numerous jurisdictions. EPSA has developed and updated this paper based on its members’ experiences in various states. Each state may be a

separate “laboratory” for competition, but there is no reason that each state cannot improve on the experiences of those states that preceded it.

In addition, EPSA is able to offer a competitive framework for the state discussion on restructuring. In many instances, states will face a variety of options on various policy issues. The exact details of the solution for a state are less consequential than that the solution adheres to certain competitive principles. On each issue, states need to ensure that their policies do not favor incumbents or create barriers for market entrants. The policies adopted need to further the goal of fair, open, robust markets that allow competition to flourish. Merely authorizing competition is not enough. States must also ensure that the markets develop in a manner that brings the benefits of competition to their consumers.

Summer 2000 saw retail customers in some parts of the country bearing the burden of a prolonged transition to true competition in the electricity market. During the transition to full competition in California, a combination of a supply shortage, lack of sufficient price signals to prompt statewide conservation and regulations that either precluded or discouraged the utilities from buying power outside of the spot market resulted in unnecessary wholesale market volatility. California must take steps immediately to correct the structural problems that are keeping the system from working as efficiently as possible.

A key transition issue will be addressing the market power of incumbent utilities. Currently, incumbent utilities control the vast majority of the generation, all of the transmission and distribution, all of the transmission import capability and virtually all of the retail customers. As new market entrants gain market share, incumbent market power will decrease, leading to a more robust competitive market.

Another key job for legislators and regulators will be to ensure that there is consistency and standardization in the implementation of policies

across utility service territories, within a state and among states within a region. Standardized implementation will promote consistency in operating rules and policies.

In supporting the goal of full competition, this paper addresses key issues concerning the design of a competitive market structure, how to protect consumers from the risks associated with the transition to competition, how to protect the environment in a competitive electricity industry and how to treat transition costs incurred to meet obligations of the past.

We start with the “big picture” issues that must be addressed, such as (1) what competition really means, (2) why wholesale competition alone will not provide the benefits that full retail competition can provide and (3) the continuing role of state regulation.

We also get down to the details. For example, some states have wrestled with the issue of whether metering, billing and customer-care services are an essential part of electricity industry restructuring. We examine this issue, explaining why competition for metering and billing services is an important part of industry restructuring. We also explain why complete unbundling of the rates for competitive services is necessary, and we spell out the pitfalls of setting the “price to beat” artificially low. Provider-of-last-resort service is another important issue that we analyze from a pro-competitive perspective, urging use of a competitive process for the treatment of last-resort customers, who should not simply be “defaulted” to the utility.

Next, we discuss transition issues, including incumbent market-power concerns, divestiture and the importance of honoring past commitments. On each of these issues, legislators and regulators must make important choices that have significant impact on the workability of competitive programs. Creating competition is different than letting already robust markets continue to flourish. Regulators will have to address issues related to the built-in market advantages enjoyed by incumbent

utilities and will have to be vigilant regarding affiliate code-of-conduct issues. Likewise, failing to address past commitments in a manner that is fair to all market participants will unduly disrupt and delay the introduction of competition.

Another section addresses consumer protection issues, including reliability and resource planning, seller registration, assistance for low-income households and consumer education. Restructuring must be done properly to ensure that there is no adverse impact on important social programs embedded in the current electric delivery system.

The next section addresses environmental issues, such as renewable sources of energy and energy efficiency. The powerful efficiency incentives brought by competition can yield significant environmental benefits, as can increased demand for renewable energy.

The last section contains EPSA’s conclusions, setting forth the key steps needed to meet the shared goal of efficient, vibrant and robust competitive markets.

We trust you will find this analysis helpful. As the debate on retail electricity competition unfolds, EPSA will strive to be a valuable resource for legislators, regulators and other policy-makers. Additional supporting information and related background papers are available upon request.

EPSA is committed to the successful creation of workably competitive wholesale and retail markets, which will bring the benefits of new and better choices to all consumers. ⚡

To help realize the benefits of competition, state legislators and regulators will need to develop a common understanding of the “big picture.” First, it is important to understand the wide range of significant benefits that competition brings. Second, we explain why “wholesale-only” competition is a misnomer. Third, it is important to share a common understanding of what “competition” means in the electricity industry. Fourth, we explain why a “date certain” is needed to minimize uncertainty. Fifth, the new roles for state regulators, which are very different than in the past but equally important, must also be recognized.

The Electricity Industry Consensus: Competition Makes Sense

For decades, the U.S. electric utility industry has built an unmatched reputation for reliable electricity service. Why, then, is it necessary or desirable to embark on a major restructuring of the utility industry? The answer is that customers increasingly have recognized that the traditional integrated utility model of power plant construction and operation, electricity delivery, customer service and cost-of-service ratemaking has created relatively high costs. In addition, there has been little discernible development of innovative products or services.

A well-established principal of law and economics is that “natural monopolies” require government oversight. But, where these natural monopolies do not (or no longer) exist, an open marketplace produces more efficient results. Historically, providing electricity service has been considered a natural monopoly, governed by extensive federal and state regulations. Such regulation, though, is not without costs, including the cost of missed opportunities for increased efficiencies and service enhancements. During the past 20 years, technological developments, operational improvements and economies of scale have all combined to make it increasingly apparent that many aspects of traditional utility service no longer fit within the definition of a natural monopoly.

Notably, the experience of the past 10 years, with the development of an independent power-generation industry, has demonstrated that competitive forces in power generation have dramatically reduced the cost of

siting, permitting, constructing and operating power plants. This phenomenon has not been lost on customers. As a result, a broad-based, customer-driven effort to introduce competition to other parts of the power industry is under way at both the federal and state levels. The reasons for completing the move to a competitive electricity market are straightforward:

- to put downward pressure on costs, thereby providing consumers with the lowest possible prices for electricity;
- to give all customers a choice in their power supplier and a wide range of services, just as they have in virtually every other purchase decision;
- to provide incentives for the creation and development of innovative products and services;
- to enhance supply reliability by creating a competitive market structure that provides power plant developers and owners with the necessary economic incentives to ensure that additional generating facilities will be planned and built when and where they are needed;
- to assign the risk for power plant construction and operation to private developers rather than captive utility ratepayers;
- to attract new business development, retain existing businesses and enhance overall economic growth; and
- to provide competitive, market-driven incentives for greater environmental protections.

Introducing competition into the electricity industry can create significant benefits for electricity customers and the national economy if it is properly implemented. Competition drives suppliers to become more efficient, thus lowering costs and bringing competitive prices to consumers. Competition also spurs the creation of products tailored for specific market niches as the result of customer demand, providing a greater range of choice. While retail competition was once unthinkable in the electricity industry, there is now a broad consensus among regulators, legislators and market participants that competition at the retail level will provide a host of benefits. While not all states are moving forward on the same schedule, many states are taking positive steps to bring the benefits of competition to their residents.

Competition in electricity markets will make prices “transparent,” allowing suppliers to better respond to demand and consumers to shop for the lowest prices and for services that best meet their needs. Customers will have a chance to understand how much of their bill is for generation and how much is for other services, and to

find alternative suppliers offering better prices. They will learn what times of the day are the best times to use electricity. They will use this crucial product more efficiently and it will be produced more efficiently to meet their needs. In short, competition is the most efficient way to ensure adequate supplies at reasonable prices for all consumers.

The indirect benefits of competition are equally significant. Lower electricity costs contribute to states' economic growth. Industries and businesses that use large amounts of electricity will become more competitive worldwide. Lower electricity prices will allow these businesses to expand their operations or, in some cases, simply keep their doors open in the face of relentless global competition. Business expansion, in turn, means more jobs and a higher tax base. Other indirect benefits include innovative products and services, which will materialize once entrepreneurs are allowed to reap the rewards of their creative efforts. The introduction of competition in telecommunications, for example, resulted in a host of new products and services, including cellular phones, pagers, caller ID and call-waiting. The introduction of competition in the electricity industry should produce similar technological and service-oriented breakthroughs.

What Competition Really Means

Today, virtually all electricity consumers buy "bundled" electricity services under a single basic rate. The principal components of this service are generation, transmission, distribution, metering, billing and customer care, and communications. Of these, only the transmission and distribution of electricity remain "natural monopolies."

Under the present industry structure, the utility controls the transmission and distribution system and acts as the monopoly merchant of electricity. With regulatory oversight, the utility also determines the array of products, the pricing plans, the credit and shut-off policies, the types of facilities to build and when, and a host of other items that affect consumers daily. Most consumers face a "take it or leave it" proposition to fulfill one of their most basic needs. Would they so readily accept a single grocery store or department store? No. Consumers believe in competition.

In a competitive market, no one company receives special benefits, protection or endorsement from the government. The transmission and distribution system —

the essential, nonduplicable highway of commerce — will still be regulated and will be open to all on fair, equal terms. Numerous sellers and buyers of electricity services will emerge, as will customer preferences — such as preferences for the source of power, pricing plans and the packaging of electricity with such other products as gas, telephone, cable and Internet service. In response to those preferences, suppliers will vie for customers with new products. The cycle will continue as both buyers and sellers redefine relationships that, in turn, will create a more efficient industry.

For example, some customers may want regular, detailed information on their usage patterns. That information might lead to innovation and cost reductions in metering technology. Other new services may include energy management and efficiency packages; power from cleaner sources; combinations of electricity service with other fuel services, such as natural gas or oil; and combinations of electricity services with other wire services, such as cable television, interactive television, Internet services and "smart" buildings. "Time-of-use" pricing, also known as "real-time" pricing, alone will lead to significant changes in the way consumers use electricity. Today, most utility customers pay an average price for electricity, regardless of when they use it. In a competitive market, time-of-use pricing will encourage customers to use less electricity during peak demand periods, when electricity is most expensive to produce. This allows customers to reduce their energy costs while also encouraging more efficient electricity generation.

Competition also will produce diverse transactions and groupings. For example, individual customers will have the option of aggregating and using their combined buying power to obtain better deals. Brokers and aggregators will be able to assemble packages of services tailored to meet the needs of individual customers or groups of customers, using power from a variety of sources.

Wholesale-Only Competition Is Not Sufficient

Some people have argued that retail competition is not necessary because wholesale competition, often perceived as competition among generators who sell to the monopoly retail utility, will bring customers all the benefits of full competition. This argument is misguided. Under this vision of wholesale competition, for each

service territory there is only one purchaser — the utility.

There may be many wholesale sellers, but for each area there is only one buyer. That is not real competition. Lost is the concept that individual consumers have individual needs and preferences for price, quality, management style, other product features and the overall purchase experience. Lost is the concept that retail customers should have effective ways to pursue their preferences, most emphatically, with their individual pocketbooks. Substituted for all the wisdom of millions of individuals and businesses is the premise that one entity — a utility regulated by the government — can identify these myriad preferences and translate them into signals sent to a wholesale market. Unfortunately, this premise is just not supportable. Time and again in other industries, this thinking has collapsed against the weight of individual consumer demand.

In fact, “wholesale-only” competition is a misnomer. Wholesale and retail markets are two sides of the same coin. A healthy wholesale market is a critical component of a well-functioning retail market. If wholesale markets don’t work, retail suppliers can’t provide customers with products that meet their needs. On the other hand, poorly functioning retail markets disconnect load from price signals and deprive customers of the protection against wholesale price volatility afforded by risk-management products. In a properly-functioning competitive electric market, wholesale competition will manage the supply curve, and retail competition will manage the demand curve. It is the job of load-serving entities to effectively manage risk through bilateral agreements and other mechanisms. While California got a great deal of attention a few years ago for being the first state to open its retail markets, in fact, restructuring in California has been largely at the wholesale level. This summer, the lack of effective retail competition exacerbated and magnified the problems in the wholesale market.²

While wholesale competition has already brought about benefits to consumers, they are not yet reaping the full benefits of a fully efficient wholesale market, in part because retail competition is not yet in place. Further, only about 20 percent of the electricity sold today goes

through the wholesale market. Fully 80 percent of all electricity is generated by utilities for their captive customers. Thus, for customers to receive the benefits of competition, there needs to be competition for their business.

A number of state commissions have already undertaken the task of addressing this issue. In a 1995 report, one state commission addressed this matter concisely, noting that this argument, that wholesale competition can substitute for retail competition, fails for a simple reason: The products available in wholesale competition are very different from the products available through retail competition.

In the electricity industry, the products available in the “wholesale” electricity market are largely commodity products: blocks of capacity, energy schedules, and various combinations of capacity and energy, all usually taken at high voltages. Real customer needs are likely to be overlooked by the market if customers are required to buy a pre-set, uniform package of rate design, pricing, demand-side management and generation mix, rather than a mix that has been tailored by competitors for a customer’s individual needs.

A “wholesale-only” model also means continued retail monopolies, supervised by regulators. This supervision brings its own problems in the form of high regulatory transaction costs. Also, as one experienced utility analyst has explained: “While it might be possible to develop a wholesale competition model that moderates regulatory transaction costs, a fundamental problem would remain — the model would extend the boundary of regulation to the generation sector with respect to the distribution utility’s management of its generation contract portfolio. This is a significant extension of regulation into a potentially competitive industry, which could have a significant effect on the robustness of the generation market.”³

A wholesale-only model is not economically or politically sustainable in the long run because more assertive retail customers will find a way to organize themselves as wholesale customers. Municipalization is one example.

In addition to the clear need for workable retail

² While this paper is not intended to provide a critique of the California situation, EPSA has prepared a situational analysis, *California: The Real Story*, available on our website or from EPSA.

³ W. Olson, “From Monopoly to Markets: Milestones Along the Road,” (Occ. Paper #25, Nat’l. Reg. Research Inst. August 1998) at 50-51.

markets, policy-makers cannot overlook the fact that wholesale markets are not working as efficiently as they can or should. Problems in the wholesale markets have enormous implications for successful retail competition. Just as successful wholesale markets need efficient, liquid retail markets, so too do successful retail markets need efficient, liquid wholesale markets.

The Federal Energy Regulatory Commission's (FERC) landmark Order No. 888 mandated open, nondiscriminatory access to the interstate electricity transmission system, a critical step in creating robust wholesale markets. The development of a seamless national transmission system wherein all transmission usage is accorded fully comparable treatment is vitally important to the growth of a competitive power supply industry. Unfortunately, the goals of Order No. 888 have been only partially met, and many of the pre-Order No. 888 barriers to competitive markets still impair competition and restrict market entry. In Order No. 2000, FERC confirmed its authority under the Federal Power Act to remedy continued economic and engineering inefficiencies by encouraging participation in regional transmission organizations (RTOs). For RTOs to take the lead in implementing FERC's open access transmission policy, however, there remains a great deal of work to be done.

Choosing a "Date Certain" and Making It Stick

While the traditional monopoly utility served a local territory defined by the state, electricity markets are becoming multi-state. Multi-state regional markets are less efficient if each state begins retail competition at a different time. For competition to be orderly and fair to all, state restructuring programs should include a definitive date — a "date certain" — by which all consumers can shop for electricity. This date should be as soon as is practical; however, it should be noted that it is quite possible for states to achieve full competition in under three years. Any delay in implementation only adds to the uncertainty faced by parties considering making the large capital commitment to build resources. Delay may lead to further deferral of these decisions

to build. The unintended side effect of uncertainty is a tightening supply of electric power in many areas of the country, with available resources below what is needed to ensure system reliability.

A "date certain" is important to ensure that competition benefits all consumers — large and small, residential, commercial and industrial. With the power to choose, smaller business and residential customers will be able to get the best possible deal from suppliers.

Regardless of whether retail competition is ratified by the U.S. Congress, a state legislature or a state public service commission, states will have many responsibilities in implementing competition. However, as with the starting date, certain standards should be as consistent as possible to ensure an orderly and fair process. Federal legislation can help ensure common standards and address regional or interstate issues.

New Roles for Legislators and Regulators

With changes in the roles of buyers and sellers come changes for legislators and regulators. Historically, policy-makers focused on preventing the utility from abusing its monopoly franchise privilege by establishing a rate of return that also preserved the utility's financial health. The utility was the lone source in terms of power supply and distribution. Policy-makers also delegated to the utility tasks not directly related to the provision of electricity services, including support of environmental objectives, provision of demand-side conservation measures, assistance programs for low-income customers and tax collection. State legislatures are still the appropriate governmental authorities to determine which of these programs benefit society and how they can be managed in the most competitively neutral manner.

The introduction of competition means a permanent change in the way policy-makers regard the incumbent utility. A utility that provides monopoly transmission and distribution services⁴ also may choose to provide competitive services through an affiliate. In such cases, policy-makers play a critical role in ensuring that the competitive affiliate does not have special access to utility

⁴ This need not be a foregone conclusion, as some jurisdictions may offer new companies the opportunity to bid to become the provider of transmission and distribution services.

facilities or information controlled by the monopoly utility. Such access would provide an unwarranted and often insurmountable advantage to the utility affiliate. For this reason, policy-makers must focus on preventing the incumbent utility from misusing its historic advantages in the competitive markets.

This focus will require effort and alertness, both proactive and reactive. On a proactive basis, analysis will be needed to identify and eliminate regulatory treatments or statutory provisions that favor utility affiliates. On a reactive basis, regulators should be prepared to detect and eliminate affiliate behavior that reduces market access by independents, where that behavior flows from the utility's monopoly status rather than its skill or experience.

To create effective customer choice, states will also have to address the fundamental questions of how to unbundle existing utility services to properly identify competitive services and how to price the services that will remain regulated. Setting the "price to beat" artificially low, whether caused by politically mandated rate reductions or credit calculations that fail to accurately capture the full cost of service, dampen, and in some cases could eliminate, the impetus for competition. Prices that are set too low simply preclude participants from entering the market, preventing customers from reaping the benefits of competition. When it adopted its restructuring plan, California's decision to freeze rates without establishing a price to beat to facilitate customer choice was fatal to the development of its retail markets.

Policy-makers have to address other transition issues, as well, including the important issue of recovery of stranded costs. For years, utilities were required to provide adequate generation resources for their customers. Some, but certainly not all, of the commitments made to supply those resources may be above the market price for power once full competition begins. Policy-makers need to design and implement programs that provide a fair opportunity for utilities to recover these stranded costs. This should be done in a manner that fosters, rather than inhibits, the development of robust competitive markets. Certainty on the stranded-cost issue is a critical component in the transition to successful retail competition.

As retail competition unfolds, it will become increasingly important for states to work together to implement retail competition on a regional basis. Otherwise, the result will be a "crazy quilt" patchwork of inconsistent programs that will produce none of the desired efficiencies.⁵ While regional regulation cannot be permitted to add an additional layer of bureaucracy, cost and delay, many aspects of retail competition must be harmonized on a regional basis. The lack of uniform business rules in the state retail markets has become a significant barrier to competition and consumer access to the full range of innovative products and services being developed. The patchwork of varying state programs and policies must be replaced with standardized best practices for such issues as customer switching, enrollment and information, billing and collections, metering, supplier licensing, creditworthiness and dispute resolution. These kinds of uniform business rules would lower administrative and other costs for market participants (and thus consumers), ease market entry and facilitate the development of an efficient national market.

It is important not to view the introduction of competition as a one-time, static event. Restructuring is an ongoing process as both market participants and policy-makers confront evolving issues and challenges. Products or services initially determined to be continuing monopoly services might later be found to function better under a competitive model. The respective roles of various market participants might need to be altered; safeguards against abuse of market power might need to be strengthened or revised. Decisions that are made initially need to be revisited as confidence in the market grows. Legislators and regulators need to ensure that emerging markets are monitored appropriately and that subsequent pro-competitive steps are taken as needed. ⚡

⁵ Indeed, it will be important to standardize as many implementation issues as possible across different utility systems within the state, or even within a geographic region, in order for competition to flourish and provide the most benefits to customers.

The devil, they say, is in the details, but with a common understanding of the big-picture issues, getting the details right will be much more manageable. Allowing competition for all competitive services, unbundling services and rates, and addressing provider-of-last-resort issues are discussed in this section.

Competition for All Competitive Services

Unbundling Allows the Customer to Save Money by Shopping for Alternatives

An important first step in the restructuring process is to separate what can be considered natural monopoly functions from potentially competitive functions, which can be provided by the open market. The process of separating monopoly from competitive costs is known as “unbundling.” Certain services, such as electricity distribution and transmission, will likely remain monopolies. Others, such as electricity generation, metering and certain other administrative functions, can benefit from an open marketplace. In a number of instances, these are services for which utilities already use third-party providers, clearly demonstrating the lack of a natural monopoly. This process will ensure that the utility cannot use the regulatory process to recover costs that it should only be able to recover through the competitive market.

Types of Unbundled or Competitive Services

States that have examined unbundling have focused on three major categories of services.

Generation Services: Power-generation services that should be unbundled include capacity, such as the procurement of capacity, physical plant acquisition, and operation and maintenance; energy, including the procurement of energy supply and provision of fuel; and ancillary services, such as load following, voltage support and reserves. These services lend themselves to a competitive market. Another important service that should be unbundled is aggregation, which is the assembling and managing of resource portfolios.

Metering: Metering services include installation of meters, as well as meter-reading and the distribution of meter information.

Billing and Customer Accounts: Billing and customer accounts services encompass the following:

- account servicing (setting up and closing accounts)
- pricing options
- data processing (e.g., customer profiling)
- payment collection and processing
- uncollectible payments
- customer care

To achieve workable, competitive markets that provide real benefits to consumers, state legislators and regulators should open all of these products and services to competition. Clearly, market entrants must have the same opportunity as incumbent utilities to establish a relationship with their customers through metering, billing and customer care services. Just as robust retail markets require workable wholesale markets, and vice versa, effective competition in commodity markets depends on competitive services for metering, billing and customer services.

Unbundling should be a continuous process. If, for some reason, state legislators or regulators choose to delay competition for a potentially competitive service, that decision should be reexamined on a timely basis. Fully competitive markets for those services should be implemented as soon as possible. Delay in allowing all potentially competitive services to be offered by a wide range of market participants should not be allowed to strengthen the market position of the incumbent utilities. For example, if metering and billing services continue to be regulated, the incumbent utility should not be allowed to be the only entity offering a single-payment option.

Creating Effective Customer Choice

Today, most electric utility customers receive a single bill and pay a bundled rate that includes the cost of all components of their utility service: generation, transmission, distribution, ancillary services, metering, billing, administration, overhead, customer service, and so on. As customers gain the right to choose a different supplier for their electricity, utility bills will need to be unbundled.

Ideally, each component of a bill should be itemized and priced separately. This can be an expensive and time-consuming effort. Therefore, policy-makers in some states have chosen to shorten this process by developing “back-out rates,” “shopping credits” or, as it is being called in Texas, “the price to beat.” The price to beat represents an approximation of, or proxy for, the cost of the competitive components of utility service and often is derived by

“backing out,” or subtracting, the regulated components of service (such as transmission and distribution) from the current total rate.

Encouraging Competition

While these billing options can play a role in opening markets more quickly, successful and efficient competition depends on accurate price signals. If mandated rate reductions force the price to beat to be set too low, customers will not switch suppliers and the incumbent’s market share will be maintained, thus slowing or stopping the development of robust competition. We have seen actual market results confirming this effect in states such as California and Massachusetts. Initially, setting a higher price to beat can provide additional incentives to market entry, hastening the development of such robust competition, as in Pennsylvania.

It is also important not to confuse the wholesale price of generation with the price to beat. The wholesale price, in the context of competitive power markets, is essentially the marginal cost for producing more electricity than is needed to serve retail customers under the utilities’ franchise service obligations. This is largely the variable cost of production, which is predominantly the cost of fuel. It does not reflect the full cost the utility or other supplier actually incurs to generate electricity and supply it to the distribution system. The true cost of providing electricity to customers includes a wide range of components, including capital investment and fixed costs, financing charges, administrative and general expenses, and the costs of metering, billing, collection, customer care, projecting and tracking usage, imbalances, and arranging supply and transportation – not to mention a reasonable profit. If the goal is to encourage a robust competitive market, the price to beat must be set to approximate all the costs an efficient competitor would incur. There are two significant consequences of incorrectly estimating the unbundled costs for competitive services.

First, if the amount backed out of a utility’s rates for competitive services fails to reflect the full cost of providing these services, customers will receive an incorrect and inefficient price signal. This eliminates the major benefit of competition, which is to allow customers to make economic decisions based on price and value. In addition, incumbent utilities will be given an unwarranted competitive advantage, since ratepayers will be

subsidizing part of the utilities’ competitive sales.

Second, there is already evidence that incorrect price signals will chill the entry of competitors. If a utility is allowed to continue to offer competitive services, and if the rates for competitive services are set below the cost to provide these services, potential participants will not enter the market because they will be unable to match these below-market prices. This will minimize or eliminate the market entry needed for robust competition to take hold.

These issues raise significant concerns during the transition to more competitive markets. If competitors are discouraged from entering the market, some will argue that competition has “failed,” or at least has failed to provide benefits for residential customers. In turn, artificially low rates incorrectly create a perception that marketers are not interested in competing for residential customers when, in fact, the design of the program has made it impossible. With mandated rate freezes or rate cuts that set the price to beat too low, consumers may see lower rates, but they will not see competitive markets. When the rate freeze ends, consumers may have no choice but to continue to buy the utility’s services because competitors have been frozen out of the market. For competition to flourish and customers to benefit in the longer run, an environment that fosters competition must be established. It is not enough to merely declare that markets are open.

This dilemma was dramatically illustrated in Massachusetts. In the first year of retail choice, the standard offer rate, which set the price to beat, was set below the market rates for power. In Massachusetts, standard offer service is for those customers who have yet to participate in the competitive market. Since the utilities were required to continue providing service at this rate, they ended up losing more than \$100 million. In actuality, this was not a problem – at least for the utilities – because they were able to recoup these losses through special surcharges. Thus, customers were not actually saving any money, despite the politically mandated rate reduction. What customers saved through the rate reduction was actually paid back by them through the special surcharges. Meanwhile, no new competitors can enter the market, since their losses on below-market sales cannot be recovered from their customers. In this case, setting shopping credits too low has produced a double penalty: residential customers are not able to save money, and competitors, who could provide lower rates and

better services in a truly competitive market, are kept out. Competitive suppliers should find the market more appealing over the next few years as the standard offer service rates increase, as required by the state's restructuring law.

In an effort to stimulate the state's competitive generation market, the Massachusetts Department of Telecommunications and Energy, in June 2000, issued an order requiring utilities to charge market-based rates for default service beginning Jan. 1, 2001. Default service in Massachusetts is for customers not receiving either competitive generation or standard offer service. Under these new rules, the state's utilities will set prices based on what they pay for the power on the wholesale market.

The price to beat must include the full cost of providing service. California's effort to transition to competitive markets was doomed when it froze utility customer rates while tying the "back-out" rate for direct access customers to wholesale prices in the California Power Exchange. Backing out only the wholesale market cost of power, while leaving all other costs in the transmission and distribution rate, will also discourage market entrants who must incur those same costs. Competitors will have many of the same costs as the utility for transportation, forecasting, billing, collection and other services. In addition, marketers are likely to incur significant transactional costs as they seek to attract customers who may be unfamiliar with them and the services they offer. The utility, which has the advantage of automatically starting with all non-choosing customers, has no such costs. The price to beat must reflect these expenses, as well.

Ensuring Proper Pricing Signals

Getting price signals right is critical to developing a successful competitive market. While Massachusetts and other states have continued to struggle with the transition issues more than two years after their competitive programs went into effect, more than 550,000 customers in Pennsylvania, representing 20 percent of the load, switched suppliers within the first six months of retail competition. While this difference is due to a number of factors, it is important to note that Pennsylvania adopted some of the most reasonable shopping credits among the states opening their electricity markets to retail competition. Pennsylvania's experience shows the importance of setting the price to

beat at a level that encourages and supports competition.

In some cases, mandated rate reductions ensured that customers saw significant and immediate savings on their electricity bills. In addition, the goal was to get through the transition and recover stranded costs as quickly as possible. The initial structure of these markets, however, was not designed to encourage the wide array of alternative service suppliers necessary to develop a truly competitive marketplace in the short span of 12 months. The result was that alternative suppliers could not match the artificially low price to beat. Thus, the market entry of multiple sellers, necessary to sustain a competitive market and ensure that the benefits of competition are available to all consumers, was slowed. Retail markets need to be designed to eliminate incumbency advantages and assure market entry, customer choice and service options. In California, incumbent utilities were left with overwhelming competitive advantages over new market entrants, including a monopoly on default service. Only over time will the emerging competitive markets in California, Massachusetts, Rhode Island and elsewhere ensure that robust retail competition is fully institutionalized.

Only when a truly competitive market emerges will customers be guaranteed the ultimate consumer protection – the ability to switch suppliers. Customers must be able to choose their electricity supplier based on price, reliability, convenience or special features, such as green power products. Only when a wide array of competitors enter the market, competing for customers in a vigorous competitive environment, can we be sure that the many benefits of competition will be available to all consumers.

Provider of Last-Resort

The transition to competition must accommodate consumers who are unwilling or unable to choose a competitive supplier. There is no reason, however, to presume that the utility should simply inherit these customers. In fact, automatically placing the utility in this role deprives consumers of potential benefits and creates an impediment to full competition.

There are three distinct groups of customers who will require last-resort service:

- "non-choosers," who may desire provider-of-last-resort service either because of indifference or lack of interest;
- "low-pay, no-pay" customers, who need provider-of-last-

resort service because they are unable or unqualified to obtain service from a competitive power supplier; and, •customers whose service has, for whatever reason, been terminated by their supplier and need “backstop” service.

Although the customer circumstances vary, in all cases, last-resort service will prevent unnecessary risks to household health and safety that interruptions in electricity supply could cause. The following objectives should be considered.

The number of non-choosing customers should be minimized, so that the role of the provider of last-resort service is minimized. Market rules should be designed to encourage consumers to exercise their freedom to choose a new electricity supplier.

The existing utility should not necessarily provide last-resort service. Allowing entrants (including unregulated utility affiliates) to compete to provide last-resort service is critical to establishing a competitive market. If customer inaction guarantees continued sales by the vertically integrated utility, it is likely that interest in the competitive market will be undercut. As a result, many customers will not switch to a competitive supplier. The unfortunate outcome is that customers will not realize the benefits of competition.

The right to provide last-resort service should be awarded through a competitive process. Obtaining the right to provide last-resort service will be tremendously valuable to a company, or companies, because it will allow them to avoid the large transaction costs of motivating consumers to switch providers and because it can establish the credibility of the companies in the eyes of consumers. Allowing companies to compete for the right to provide this service also will produce the important customer benefit of lower cost service. Regulators and legislators must be careful, however, to ensure that last-resort service does not simply replace one monopoly supplier with another. Commissions should structure last-resort service in a manner that enhances, rather than impedes competition by, for example, dividing last-resort service into smaller blocks to attract new, but smaller, market participants. In addition, regulators should periodically reassess last-resort service to ensure that competitive goals are being met. Proceeds from such a competitive process can be used in a variety of ways, such as reducing stranded costs.

Implementing Last-Resort Service

For certain customers, last-resort service should be provided indefinitely to ensure universal service. It is critical to consumers’ and policy-makers’ confidence in the competitive market that backstop service be available to all customers who cannot obtain service in the competitive market or whose service has been terminated. Thus, there should not necessarily be a predetermined termination date for last-resort service in these cases. Last-resort service providers should have the responsibility to provide competitively priced, reliable generation service to these customers. Of course, a customer’s ability to maintain last-resort service should be governed by reasonable bill-payment standards.

To help enhance market activity, price discovery and product diversity, the need for last-resort service should be minimized. For instance, every consumer could be required to choose a competitive supplier by the end of the transition to retail competition. Those who fail to choose could be assigned to a competitive supplier selected through an auction process. Once a customer has been assigned to a competitive supplier, there should be no prohibition against the customer selecting another provider. Customers who cannot obtain service from a competitive supplier could remain on last-resort service. Eventually, though, experience may prove that last-resort service can be virtually eliminated. ⚡

To smooth the way to customer choice and competitive markets, lawmakers and regulators must address several key transition issues. First, competitive markets don't "just happen." Incumbent utilities may have market power as a result of their years as regulated monopolies and their continuing control of generation, transmission and distribution resources. Creating effective competition requires regulators to be vigilant on mergers and acquisitions and affiliate codes of conduct, and to consider incentives to encourage divestiture. In addition, honoring past commitments will be a critical issue in the transition to competition. EPSCA urges policy-makers to address these issues fairly and at the beginning of the transition to avoid unnecessary litigation, expense and delay. Finally, tax issues must be addressed to ensure revenue stability and a level playing field for all market participants.

Addressing Incumbents' Market Power

Beginning in the 1980s, as a result of the Public Utility Regulatory Policies Act (PURPA), a new generation of power plant developers began competing to win the right to build generating facilities and supply electricity to utilities. This began the process of restructuring the electric utility industry, culminating today in the evolution of competition and more customer choice.

The benefits of competition are simple: replacing the monopoly with multiple competing sellers will lower costs and increase innovation. But merely authorizing competition does not produce effective competition. Decades of government protection has given utilities the advantages of incumbency. If these advantages have the effect of excluding or disadvantaging competitors, the utilities will continue to have market power, or the ability to skew market prices.

Introduction to Market Power

Market power exists when a firm (or a group of firms acting together) can control the price of its product or

service for a sustained period, undercutting potential competitors or increasing profits without experiencing an unacceptable loss of sales. Courts often define market power as the ability to control prices, preclude market entry, stifle innovation or to exclude competition.⁶

There are two types of market power

— vertical and horizontal.

Vertical market power: Traditional utilities are the only "vertically integrated" members of the electricity industry. This means they are involved in every aspect of the industry: generation, transmission, distribution, metering, billing, customer care and aggregation. Because two of these functions, transmission and distribution, remain monopolies, there is the risk that utilities can leverage their control over monopoly assets to gain advantages in competitive markets. For example, utilities that control the transmission and distribution highways can grant special access to their own products to the detriment of others. This practice is known as the exercise of "vertical market power," because it is facilitated by the utility's vertically integrated structure.

Horizontal market power: A separate problem is that in any one industry sector, such as generation or aggregation, the utility might play a dominant role. In a given region, for example, a utility might own 80 percent of all the generation assets able to operate during a particular hour. This dominance might exist for logical reasons. For example, the utility has had a historical obligation to build sufficient generation to meet its load. However, it can be detrimental to competition for one company to control a large share of the market. This control is known as "horizontal market power" and can enable the generation owner to keep prices above normal, competitive levels. Some people argue that, in time, the incumbent's share of the market might diminish as other entrants build power plants. Yet, because construction takes several years and the success of entry attempts is affected by the incumbent's market power, there is cause for concern.

⁶ See, e.g., *United States v. E.I. du Pont de Nemours & Co.*, 351 U.S. 377, 391-92 (1956).

In the Electric Utility Industry, Market Power Flows from the Utility's Historic, Regulated Advantages

The advantages of incumbency accrue at all levels: control of key physical assets and products, relationships with customers and entry barriers facing competitors.

Transmission-derived market power: Some people argue that transmission owners no longer can favor their own generation facilities because FERC rules now require owners to share their facilities with competitors on a nondiscriminatory basis. This is an oversimplification that too often has been proven untrue. For example, the transmission system was designed to support generation facilities owned by utilities, rather than subsequent facilities built by generation competitors. Similarly, transmission facilities serving an area may be limited so that the entity controlling generation facilities within a constrained area (or load pocket) will have market power.

Power-generation and retail sales: If newcomers to the retail electricity sales market cannot build generation rapidly or obtain a contractual right to generation owned by others, they cannot compete in a retail market. Building plants may take up to a few years and involve practical obstacles, such as limited access to generation sites and time-consuming siting requirements. During this interim period, the incumbent could strengthen its hold on the market.

Brand names and customer information: The risks of market power are not confined to the control of physical facilities. During the decades that government policy excluded competitors, the incumbent utility had an opportunity to build brand name identity and goodwill with customers. Moreover, the incumbent utility has acquired over the years an unmatched knowledge of its customers' consumption patterns.

Competitive generation services and retail sales: Competitive retail services related to the sale of electricity (including metering, billing and customer care) are essential to establishing customer relationships and offering innovative products and services. If the incumbent utility controls access to the customer through continued monopoly provision of these services, the competitive retail market cannot develop.

Solutions to the Market Power Problem

Separate competitive and noncompetitive services: In each market, the incumbent utility has built-in

advantages. To prevent these advantages from distorting future competition, the following conditions, at a minimum, should exist:

- competitive services must be provided by an affiliate that is separate from the provider of noncompetitive services, with no opportunity for preferential treatment of the affiliate;
- the noncompetitive affiliate (such as the transmission or distribution company) should not share essential resources (e.g., personnel or equipment) with its competitive affiliate; and
- the standards of conduct designed to assure fair play must govern the relations and transactions between the monopoly and its competitive affiliates should be adopted and enforced.

In particular, a utility should not be able to share with its affiliate any customer information — gathered during the decades of utility monopoly — unless the information is made available to all (with the customer's permission) on the same terms.

Equip the regulators with the tools to detect and eliminate market power: Like any improper activity, market power does not advertise itself. Detection requires monitoring, and monitoring requires access to data. For example, to guard against the manipulation of commodity prices and availability, regulators might require market participants to supply, on a confidential basis, information on transmission and generation availability during all hours of the year, on hourly and seasonal prices, or on buyers' bids and sellers' offering prices. As is the convention with stock and commodity exchanges, this information must be readily available to regulators and, where appropriate, members of the public. Finally, regulators should have authority to prohibit participation in the market by those with market power and impose limitations on ownership or use of essential resources.

Mergers

Once rare, utility mergers are becoming nearly routine. Yet their effect on retail competition is not well understood. What we do know, however, is that mergers can provide a unique opportunity to assess the competitive implications of industry consolidation on retail competition. State regulators must ensure that their approval of utility mergers enhances rather than inhibits emerging markets.

Careful analysis must replace routine approval: Regulators must pay special attention to the effect of mergers on new retail markets, such as the markets for retail sales, metering and customer service. Some mergers may result in innovative products, such as combined electricity, gas and telecommunications products. Regulators must ensure, however, that merged companies are not allowed to exercise the right to government-created benefits, such as like control of needed transmission or distribution rights-of-way, to the detriment of other market participants.

The Divestiture Option

Divestiture means selling off some portion of a utility's assets to a third-party buyer. Regulatory oversight of divestitures focuses on separating the utility's competitive and noncompetitive services so that the utility cannot use its control of its noncompetitive assets, such as the transmission system, to gain undue advantages for its competitive assets, such as its power plants. The most intense scrutiny has focused on generation divestiture, in which the utility sells some or all of its generating assets but remains in the transmission, distribution and aggregation businesses. Alternatively, a utility could become a generation services company, by divesting its transmission and distribution assets.

While EPSA does not advocate mandatory divestiture of generation assets, it does recognize that divestiture can offer important benefits. These include:

- elimination of vertical market power;
- reduction in horizontal market power by replacing a single generation monopoly with multiple competing generators;
- accurate establishment of a market value for the generation assets for purposes of calculating stranded costs; and,
- potential collection of a sale price in excess of net book value, thereby lowering stranded costs, reducing the transition period and raising the price to beat.

Policy-makers should consider the implementation of appropriate incentives to encourage divestiture.

The divestiture process — fair and open auctions: Since the purpose of divestiture is to stimulate vigorous competition, the divestiture auction process itself must allow for vigorous competition. Regulators must design the auction or other purchasing process so that all potential purchasers have the information vital for

making informed bids. For example, information about plant characteristics, operating history, regional consumer demand, transmission access and pricing, and any nonnegotiable fuel contracts must be available to all potential bidders. For some plants, the purchaser will need access to information about related services, such as fuel-handling facilities, which the incumbent utility controls and which are costly for the purchaser to replicate. In those situations, regulators will need to require, as part of the bidding process, that the selling utility make these services and facilities available at a fair price.

A significant feature in any auction process is how to “package” the generating assets for sale. Options include:

- allowing bidders to bid for all units as a package, but also allowing them to bid for individual units;
- requiring bidders to bid for all units as a package;
- requiring bidders to bid for only one unit at a time; and,
- allowing units to be bid in blocks, thereby providing flexibility to the auction process.

To achieve competitive benefits and minimize stranded costs, regulators should adopt minimal proscriptions and allow for maximum flexibility. The bidding rules can affect the prices bidders offer, as well as the competitiveness of the market after divestiture. A bidder might wish to pay a “premium” to control a large block of capacity in the market or pay less if the bidder is permitted to buy only one unit. On the other hand, if a single entity owns all the generation after divestiture, then any horizontal market power problem is simply transferred from the utility to the purchaser. This concern can be balanced by selling assets in sufficiently sized blocks to provide buyers with economies of scale and operating efficiencies, but not so large as to transfer market power.

Honoring Past Commitments

For many years, utilities had a legal obligation to satisfy the full electricity load in their service territories. To do so, they had to incur significant costs to buy land, build generating units, enter into power purchase agreements with other generators and hire staff to plan, operate and monitor these units. Because these investments were designed to be recovered over long periods of time, often as long as 40 years, regulators required the utilities to recover the related costs

gradually during the lifetime of the investment. Consequently, at any point in time, a utility will have recovered some, but not all, of its investment in these activities.

When competition is introduced, regulators no longer set electricity prices; the competitive market does. Because generating plants coming into the market today tend to be less costly than those planned long ago, it is possible that, in some regions, market prices will be lower than the price a regulator would have established to ensure that the utility could continue to recover the costs of the obligations undertaken when it was a monopoly. This risk of under-recovery is often referred to as the “stranded-cost” problem.

Because most of this investment was incurred by utilities to serve retail customers under an obligation imposed by the state, the chief responsibility for addressing the problem lies with the state. In establishing policies for the implementation of competition, therefore, legislators and regulators will need to devise means to provide utilities with a fair opportunity to recover these investments.

A successful transition to fully competitive electricity markets requires that stranded-cost issues be addressed and resolved at the earliest possible date.

Reasonable Costs Incurred for the Public Should Be Borne by the Public

Utilities should have a reasonable opportunity to recover all of their costs if they meet the following criteria:

- Legitimate:** The utility must have incurred the costs for legitimate purposes in carrying out its public service responsibilities. Costs associated with expansion into foreign markets, failed affiliate ventures, or golden parachutes should not be recoverable. In addition, costs that were not recovered because a customer departed to build a PURPA-qualifying facility might not be legitimate, if self-generation by customers was the type of risk the utility historically bore.
- Verifiable:** The utility must be able to prove that it actually incurred the costs in the past and will not be able to recover them through vigorous action in future competitive markets. The vague argument that “market pressures will keep prices down” does not make a stranded-costs claim verifiable. The utility must provide real evidence of future market prices. (Because of the uncertainty of future market prices, we suggest below

that stranded-cost projections be “trued up” periodically.)

- Prudently incurred:** A utility should recover only those costs that represent PUC-approved least-cost service. Just as a competitive market imposes cost accountability on participants, so must a stranded-investment policy. Otherwise, the utility, when competition begins, would be able to use government-assisted cost recovery to amass cash flow exceeding that of its competitors, while operating less efficiently.

- Non-mitigable:** As a condition of stranded-investment recovery, the utility must take all possible actions to reduce recoverable costs. For example, if the stranded costs include surplus land or plants, the utility must try to find buyers willing to pay a fair price.

- “Net” stranded costs:** The recoverable stranded costs should be net stranded costs. The term “net stranded costs” covers the possibility that, in some regions or for some utility assets, the market value might exceed book value.

For example, if the plant is older and fully depreciated, a utility already will have recovered most of its costs through the regulated rates it charged in the past. If the market value of the power plant is high, the utility might be able to recover more than the book value. This concept is often referred to as “stranded benefits.” Stranded benefits should be assigned to ratepayers, not shareholders, if ratepayers historically bore the costs of the plant. If they bore the risk, they now deserve the reward. Otherwise, utilities could become “super-competitors” because the government would have ensured that the utilities recovered the cost of existing units (a benefit allowed to no other competitor) and that they also could keep all the profits from sales out of those same units. To the extent that the utility also has below-market assets due to nuclear plants or purchased power contracts, the utility should be required to apply the proceeds from any above-market assets to reduce or eliminate those costs.

Types of Costs

- Utility Generation Costs:** These are the costs associated with the physical equipment used to generate power. Prior to construction, these plants were subject to review and approval by state regulatory commissions. These plants often cost hundreds of millions of dollars and serve the public for 30 years or longer. Because these plants were built to meet a public service obligation, it is

reasonable to allow an opportunity to recover the associated capital costs.

Purchased Power Contracts: These include power purchased from other entities. PURPA requires utilities, under certain circumstances, to make these purchases. Utilities also entered into power-purchase agreements with neighboring utilities when it was more economic than building their own generation facilities. Again, because these purchases fulfilled a public service obligation, it is reasonable for the utilities to recover the costs. To deny the utilities an opportunity to recover the costs would signal that contracts entered into reasonably, and often under a legal mandate, can be ignored. Abrogation of contracts would also create a serious disincentive to newcomers considering whether to enter competitive markets that will be built extensively upon contracts.

Ensuring the Accuracy of Methods for Calculating Recovery: Administrative vs. Market-Based

Some utilities argue that their estimates of future revenues under market competition will fall short of their book costs by large amounts. Disputes over utilities' claims are, in part, disputes about the proper technique for determining stranded costs. The techniques fall into two main categories: administrative estimates and market-based assessments.

Administrative estimates require analysts to project future market prices, based on fuel costs, capital costs, costs of environmental compliance and site remediation, as well as less tangible factors, such as changes in technology. Projection of future market prices proved to be an extremely difficult task during the administratively determined avoided-cost proceedings that implemented PURPA. These projections are inherently uncertain, giving rise to a need for "true-up" mechanisms, which are discussed below.

Market-based realizations, either through sales, spin-offs or appraisals, dispense with estimates; they determine the market-value by using actual market data. The generation that is the source of the stranded-investment claim is auctioned at market, to the highest bidder. That bid price establishes the market value for purposes of stranded investment recovery. In making its bid, the purchaser is the one who must analyze and assume the risk of future price changes. It is important to note that experience shows that the marketplace often values

generating assets more highly than an administrative review would indicate. In fact, recent generating asset auctions have netted multiples of the book value of the assets. EPSA strongly urges regulators to require market-based valuations for stranded-cost recovery calculations.

"True Ups"

The administrative calculation of stranded costs requires the regulator to compare the utility's unrecovered book costs with future market prices. When market prices are less than the book costs, the utility has stranded costs, making some means of recovery necessary.

Estimating future market prices accurately is nearly impossible. There are as many estimates of future market prices as there are estimators. These estimates are based on key factors that no one can accurately predict with certainty. For example, the pace and effectiveness of the development of properly structured regional grid management organizations and power exchanges can affect how many newcomers enter the market and what their costs will be. Technological change in generation, transmission, distribution and consumption — all of which can affect future market prices — also is unknowable. Given the number of years remaining in the lives of the generating plants owned by the nation's utilities, many developments are possible.

Given this uncertainty, it is reasonable to start with an estimate of stranded costs for each utility, but to incorporate a "true-up" mechanism that calls for a periodic alteration of the estimate to reflect actual developments, rather than make a one-time calculation. It should be understood that the use of a "true up," as it affects the requirement to pay a competitive transition charge, may delay the onset of competition for many customers because they will not be able to reasonably assess the true cost of using alternative suppliers. While necessary in the context of an administrative calculation of stranded costs, the inherent deficiencies of the best-designed true-up mechanism underscore the need for a market-based valuation of stranded costs.

The Recovery Method Must Promote the Goal of Effective Competition

The method of stranded-cost recovery should be broad-based and nondiscriminatory. It should apply to customers whether they buy from the incumbent utility

or from an alternative supplier. It should last no longer than is necessary to pay off the amount that regulators determine should be recovered. The most common device under discussion is a non-bypassable access charge that is added to the distribution rate. Since most customers need distribution service, whether they are buying power from the incumbent utility or from an alternative supplier, this method does not distort competition.

Taxes

Regulated utilities have traditionally collected various taxes for the state through their customer billing. In addition, utilities themselves pay taxes on corporate income, state or local property taxes and often additional taxes, such as sales taxes, fuel taxes and gross receipts taxes. Utilities generally have been able to recover their tax costs through their rates, which are established by state regulators.

Introducing competition into the electricity industry requires attention to state tax issues to ensure both revenue stability and evenhandedness.

Revenue stability: The primary state and local taxes currently paid by utilities are income and property taxes. The premise of competition is that some sales and profits will shift from utilities to their competitors. If utility profits drop, income tax revenues from utilities may drop. If competition leaves some utility-owned generation underutilized or revalued at market levels that are lower than traditional book-cost levels, property tax payments from utilities may drop also.

Of course, utilities will pay income and property taxes on their market share in the competitive environment, but some of those payments may be going to the states where these competitors are headquartered or where their generating plants are located. Therefore, it is possible that competition will change the level of tax revenue in individual jurisdictions.

In anticipation of such potential shifts, states are considering such solutions as franchise or license fees on all competitors and changes in the methods for valuing generating facilities.

Evenhandedness: In a competitive electricity market, all competitors should be treated alike. In some states, utilities pay special taxes not imposed on other businesses (such as special gross receipts taxes imposed on "utilities"). In addition, non-utilities may face tax rates

exceeding those paid by utilities (for example, if a non-utility's generating plants are taxed as "manufacturing property," while the utility's generating plants are taxed as "utility property"). These inconsistencies can and should be resolved without reducing total tax revenues or maintaining policies that favor one industry participant over another. ⚡

Competition can succeed only if all competitors can use the “highways” or “wires” on the same basis. In the electricity industry, the “highways” include the long-distance transmission facilities, the local distribution facilities, and certain “ancillary services.” Ancillary services, which include voltage support, spinning reserves and load balancing, help the transmission operator ensure that the transmission network is reliable.

Interstate Transmission Services

Just as an airport can have only one air traffic control tower, even though it might have many competing airlines, a regional electricity system works best when it has only one provider of transmission and certain ancillary services. A problem arises if the entity providing those central services is also a competitor of those who need them. Obviously, if one airline ran the control tower, other airlines would be concerned about fair scheduling treatment. The same issue arises in the electricity industry, and regulators will need to pay a great deal of attention to it.

Legal authority over transmission service (except in Alaska, Hawaii and most of Texas) lies with FERC. In 1996, FERC issued an important decision, Order No. 888, requiring owners of transmission systems to provide access to their competitors on the same terms that they themselves use these systems, and at reasonable prices.

Order No. 888 was a landmark order. By itself, however, it has not guaranteed fair access to transmission services. Operating a transmission system involves hundreds of daily decisions. Translating the “open-access” principles of Order No. 888 into operational reality requires much work, particularly if those who operate the transmission systems still have an incentive to favor their own generation.

In December 1999, FERC issued another landmark decision, Order No. 2000. In its order, FERC confirmed its authority under the Federal Power Act to remedy undue discrimination and continuing economic and engineering inefficiencies in transmission operations by requiring RTO participation on a case-by-case basis. The commission concluded in Order No. 2000 that the separation of transmission control from market participation under an RTO “will eliminate the economic incentive and ability for

the transmission provider to act in a way that favors or disfavors any market participant in the provision of transmission service.”

Order No. 2000 endorsed the four minimum characteristics and eight required functions for RTOs. While not proscriptive, the order gives additional guidance on RTO formation. By encouraging flexibility and innovation in RTO formation, the commission left a number of critical issues open for further debate and resolution. Further, the order studiously avoided any preference for the RTO’s institutional form. The commission repeatedly expressed its “neutrality” as to organizational form and its willingness to entertain proposals for for-profit or not-for-profit transmission companies, Independent System Operators, grid companies or hybrid arrangements, requiring “open architecture” to allow further growth and development of the regional institutions.

While many of these issues must be addressed and resolved on a federal or regional basis, state legislators and regulators must be prepared to work with their colleagues to achieve optimal solutions to these important issues.

Local Distribution Service

Incumbent utilities will continue to own and maintain monopoly control over the local distribution system – the wires that carry electricity from the long-distance transmission facilities to homes and businesses. This service must be narrowly defined to include only those services related to the operation and maintenance of the monopoly “poles and wires” infrastructure. Because the distribution owner might also be a competitor making retail sales, state regulators must ensure that distribution facilities, like transmission systems, are operated neutrally. Owners of distribution systems should not be able to favor the generation customers of an affiliate in such areas as outage response, upgrading or expansion of facilities, or rate design. ⚡

There are several aspects of consumer protection that policy-makers must consider in the transition to competition. First, the role of regulators in ensuring continued reliability will be different than in the past. Under competition, the best way to ensure investment in needed generation will be to eliminate regulatory uncertainty and dependence on integrated resource planning. Registration requirements, assistance programs for low-income customers and consumer education also will present new challenges and opportunities for state legislators and regulators.

Reliability and Resource Planning

Reliability has two components: security and adequacy. Security is operational integrity and the ability of the transmission grid to transmit available electricity to serve demand centers. Adequacy is the availability of adequate generation to meet load, plus availability of appropriate reserves.

In competitive markets, security will be provided much the same as it is today: through a broad-based industry organization committed to ensuring that the transmission system remains reliable and secure. The existing North American Electric Reliability Council (NERC), which traditionally has served this role, is in the process of transforming itself into a self-regulating reliability organization for all market participants, to better support the competitive marketplace.

Electricity must be available instantaneously on demand. Achieving that result requires minute-by-minute operational coordination, as well as long-term planning. In the traditional monopoly market, state regulators assisted in ensuring that adequacy was met by:

- imposing on the utilities a legal duty to meet all demand, including a duty to build sufficient generation or buy capacity from other sources;
- giving reasonable assurance to utilities that they could recover from ratepayers the costs associated with meeting these demands;

- requiring utilities to produce information periodically on the future growth in demand and the availability of future supply; and
- supporting utility participation in industry groups devoted to reliability.

In a competitive industry, regulation will continue for transmission and distribution services. But will the government remain in the business of ordering particular companies to build generation? As explained below, EPSA members do not believe that this will be necessary.

In most industries, the government does not play a planning role; price signals lead participants in the competitive market to respond to and meet demand. In the electricity industry, some stakeholders are hesitant to move from a planning-based system to the unknown. However, evidence to date shows that where markets are emerging, generators are responding with substantial investments in new capacity.⁷ The development of merchant facilities (particularly peaking facilities) can take place in a very accelerated time frame in response to signals of market need. However, if extensive state certification proceedings (beyond those serving environmental protection needs) are required, generation developers may take their business elsewhere. Thus, streamlining permit processes and requirements will be in the public interest. If a project developer is willing to assume all financial risk associated with a project based on its assessment of the market, of what value is an administrative determination of need?

Reliance on the market to develop adequate generation is justified, but for regulators not yet fully comfortable with this approach, several alternatives have been proposed. These include:

- authorizing (and paying) regional transmission grid operators to contract for sufficient generation reserves to maintain system stability in the event the "market" does not bring forth sufficient capacity;
- requiring all suppliers to demonstrate ownership of (or a contractual right to) capacity sufficient to serve the customer load signed up by that supplier (plus a reserve); or,
- providing adequate financial assurances in the form of a corporate guarantee, bond or letter of credit.

⁷ EPSA maintains a matrix of Announced Merchant Plants, which shows that more than 219,000 megawatts of non-rate based capacity are being planned as of October 2000. For the latest figures, please contact EPSA or visit our website at www.epsa.org.

Registration of New Sellers

To safeguard consumers and the electricity system, all retail service providers should be registered in the states where they conduct business. Registration requirements should treat all retail providers equally, and should not create anticompetitive barriers to entry into the market. For example, regulators must ensure against “over regulation” of market entrants that subject them to regulatory burdens originally designed for centrally planned, integrated utilities.

Protecting system reliability through registration requirements: State registration procedures should ensure that each registered electricity service provider is technically and financially qualified. Obtaining a registration certificate should be conditioned upon compliance with the regulations of all institutions charged with ensuring the reliability of the electricity system and all technical and financial regulations of the state.

Protecting consumers through registration requirements: Substantial violation of state or federal consumer protection requirements could result in the revocation or suspension of a registration certificate after adequate due process procedures have been followed. State consumer protection requirements specific to the provision of electricity service to small customers might include:

- posting a bond;
- informing consumers of all terms and conditions of the service to be provided prior to the commencement of service;
- setting up prescribed dispute resolution procedures;
- protecting the confidentiality of customer information;
- establishing procedures for switching consumers to another provider, such as independent confirmation to ensure that proper authorization has been obtained; and,
- allowing customers the right to cancel contracts within a short time after requesting a different provider.

Assistance for Low-Income Customers

Assistance programs for low-income households should be fully maintained during and after the transition to competitive retail markets. EPSA supports the development of universal service funds or other programs to ensure that all customers receive electricity service.

Consumer Education

Consumer education is a vital consumer protection tool that can foster the effective functioning of newly competitive retail markets. Consumer surveys indicate that consumers’ knowledge about electricity usage, unit cost and fuel sources, and electricity restructuring is very low. While competitors will provide some education through their marketing efforts, state regulatory commissions and other state and local agencies – not utilities and competitive suppliers – should be the essential source of objective and credible information. State and local agencies are best suited to help consumers understand, and gain confidence in, the new market.

Regulatory requirements should explicitly recognize the significant differences among customers. Large industrial and commercial customers generally have sufficient size, sophistication and access to legal counsel to protect their interests in competitive transactions. Small commercial and residential customers, in contrast, may need governmental assistance to protect them from inappropriate or illegal marketing tactics. Many consumer protection rules clearly distinguish between large and small consumers. Marketers serving large, sophisticated customers should not be subject to regulations designed to protect smaller consumers.

Most states have consumer protection and consumer fraud statutes and regulations already in place. In many respects, electricity service, while an essential service, is no different than any number of other consumer products and services. While states should review their existing consumer protection rules to ensure that the introduction of retail electricity competition will not leave small consumers vulnerable, states also should not rush to weigh down emerging markets with another layer of redundant consumer protection laws.

Soon after a restructuring plan has been enacted, consumers should be educated about their choices, rights and responsibilities. An effective consumer education campaign should begin as early as possible and be a collaborative effort among the various stakeholders.

Consumer education should be ongoing. An ongoing education campaign should continue to provide consumers with reliable information for making informed choices. This information should include data that allow consumers to make cost and service comparisons among suppliers.

Information Disclosure

In addition to providing a sound informational basis for consumer choice, in a competitive environment, regulators must also protect competitive firms' confidential business information. This ground has already been covered in other competitive industries, and important lessons have already been learned in electricity markets that have already embraced competition.

In the restructured electric power marketplace, competition for customers is active and aggressive. Disclosure of information about generation sources supports the competitive market by providing a clear basis for customer choice. But certain types of operational, financial and planning data can also be used by market competitors to gain an unfair competitive advantage. The misuse of competitively intelligent information in competitive bidding, contract negotiations and market strategy can unfairly chill market entrance and drive new firms out of their markets or entirely out of business. Many important lessons have been learned:

Disclosure policies should support competitive markets. Disclosure policies should complement, and not compromise, the benefits of competition by providing the information needed for full participation and planning in the competitive market.

Commercially sensitive data should be aggregated when publicly disclosed. Some of the data traditionally reported by electric generators are truly commercially sensitive. For these types of data, as in other industries, the risk of competitive harm from full public disclosure is real and significant. Such information typically relates to capacity management/planning, heat rates, internal load and losses, purchase/sales and contract data and fuel consumption. The sensitivity of these and other data should be carefully and periodically evaluated.

In some cases, commercially sensitive data may be needed by regulators to monitor and forecast market conditions. In such cases, sensitive data should be afforded confidential treatment, by disclosing it only on an aggregated basis or following an appropriate delay. Particular consideration should be given for data that are not otherwise publicly available, or are held as confidential by the company to which they pertain.

Disclosure that fosters market power abuse harms consumers. Information disclosure is, for most purposes, in the public interest. But where the misuse of commercially sensitive information can facilitate abuse of

market power, the resulting costs are borne most heavily by the consumer. Disclosure policy must carefully avoid the potential for market power abuse and recognize that full disclosure of commercially sensitive information may inadvertently and unnecessarily compromise the public interest.

Disclosure requirements should be administratively efficient. As retail competition unfolds, administrative efficiency is critical to both regulators and companies. State and regional regulators should work together to use and simplify reporting media through which information is reported.

Disclosure requirements should be substantively uniform. Interstate and interregional cooperation among regulators will be critical to achieving substantive uniformity across disclosure program requirements. Where informational needs differ among jurisdictions, regulators will definitely benefit by working together to ensure that such differences do not create potential barriers to market entry and competition.

Use information provided under current reporting requirements: Current state and federal reporting requirements are sufficient to meet the needs for disclosure of air emission data and other environmental performance information. However, data collection agencies must protect the commercial confidentiality of certain types of competitively sensitive data by protecting them from full disclosure. For example, because fuel costs are a large part of total operating costs, which allude to a firm's cost and efficiency of production, quantitative fuel-use information can be commercially sensitive. Also, the commercial sensitivity of heat-rate or combustion-efficiency data makes disclosure of that data inappropriate. Disclosing these to the public does not provide data on relevant environmental performance characteristics, but it does risk competitive harm to suppliers as the data will also be accessible by their competitors. ⚡

GETTING ENVIRONMENTAL PROTECTION RIGHT

Driven by market incentives for efficiency at the wholesale level, the competitive power supply industry has brought significant environmental benefits to the power-generation sector during the past 20 years. State and federal regulators can help the industry achieve even greater environmental and energy-efficiency benefits by designing market rules to support the following:

Alignment of environmental and competitive policies: Environmental policies, if designed to reflect and enhance competitive forces, will produce environmental benefits at the lowest cost. Environmental policies should complement the environmental benefits of competition, by being (1) market-based, (2) incentive-driven, (3) equitable to all participants, including new market entrants. Such policies should provide clear price signals for the value of the environmental benefits of newer, cleaner sources of power generation by allowing full participation of all sources in all market-based environmental programs. There are two keys to doing this.

First, firms should not gain a competitive advantage simply because their plants' age or ownership characteristics allow them to escape certain regulatory requirements. Second, emission-trading programs should ensure equitable emission allowance allocations that do not favor older, historically less controlled or any other single "special" class of facilities. Market-based approaches, including emission-trading programs, will be particularly effective where the emission credits or allowances are: (1) allocated or earned in a competitively neutral manner; (2) available to all participants; and (3) freely traded in a robust market.

Fair application of policies: Environmental policies must be applied evenly to all generating facilities. More important, older plants should not be "grandfathered" out of regulatory requirements, as this creates a competitive advantage by unfairly forcing only newer, cleaner plants to bear all of the costs of environmental protection.

Transparent and predictable requirements: Environmental policies should be "transparent," so that the rules are clear to all parties and predictable over time. This will help firms to make confident, informed

investment decisions. This does not preclude the continued evolution of environmental policies with changing needs or new information. Rather, it means that heightened sensitivity is required when altering programs that set the terms under which large capital investments are made.

Renewable Sources of Energy

Customer surveys consistently indicate a preference for electricity produced from renewable sources of energy and a willingness to pay more for it. In the long term, consumer demand for power from "renewables" technologies may obviate the need for top-down, public policy mandates. As competitive markets are established, however, they should be built on policies that encourage a diverse and sustainable fuel supply in power generation markets. Any associated costs to market participants should be as transparent and competitively neutral as possible. Tax policies, portfolio requirements or development funds can be used to promote fuel diversity and allow for transparent and easily evaluated competitive impacts.

Energy security: In addition to their environmental benefits, renewable sources of power can be a valuable insurance policy against newly competitive power markets becoming overly reliant on one or two fuels. The use of indigenous, renewable energy sources also limits U.S. dependence on fuels found mainly overseas. With changing circumstances, a diverse fuel portfolio for electricity generation ensures greater adaptability and flexibility.

Consistency among "renewables" definitions: The definition of "small power producer," adopted in PURPA and refined through subsequent FERC decisions, set the stage for the development of environmentally friendly generation facilities over the past 20 years and should be the foundation for any new renewables policies adopted as part of any legislative or regulatory proposal. In crafting renewables provisions in state restructuring legislation, policy-makers should strive for consistency with the goals and policies established by PURPA that are the basis for our renewables infrastructure and have continuing importance in evolving restructured markets.

Energy Efficiency

Energy-efficiency programs can be supported through a transparent broad-based mechanism, such as a modest systems-benefit charge paid by electricity customers. Energy-efficiency funds should be administered by a state agency, independent private or quasi-governmental institution with oversight by a state agency, rather than by utilities. Funds should be allocated based on competitive bids, with bidding open to all qualified suppliers. These policies should be designed to move energy-efficiency programs into the market as soon as possible. In the end, real-time pricing will boost efficient energy use by providing clear cost information and assisting residential and small commercial customers to manage their energy usage based on hourly prices. ⚡

CONCLUSION AND RECOMMENDATIONS

As states take up restructuring legislation, it is not necessary for new laws to address every detailed aspect of electricity industry restructuring. However, state public utility commissions should be provided the authority to ensure that the following pro-competitive requirements are included:

Benefits for all consumers

Industry restructuring must ensure that all consumers benefit from increased competition. All consumers should be allowed to select their generation supplier, with appropriate consumer safeguards to ensure against unfair practices. EPSA supports the development of universal service funds or other programs to ensure that all customers receive continued reliable service.

A “date certain” when competition will exist for all consumers

A “date certain” ensures that resources are focused on an orderly transition to competition, rather than continued debate about whether competition is appropriate.

Continued reliability

Reliability and competition are entirely compatible. In a competitive generation market, all suppliers will insist on a transmission and distribution system that reliably delivers power to customers. At the same time, the explosive growth of merchant power projects will ensure that generation adequacy is maintained.

Effective customer choice

To create robust and efficient retail markets, both consumers and competitors must have a reason to participate in the newly created markets. Setting the “price to beat” too low will discourage customers from changing suppliers and discourage entrants from seeking customers. Artificial rate cuts or undervaluing the generation component of utility service should be avoided. States should consider properly structured incentives for divestiture of utility generating assets.

Open and fair access to the transmission and distribution system for all competitors

The high-voltage wires (transmission) and low-voltage wires (distribution) form the “highway” through which generation supply reaches customers. Transmission and distribution system owners must make access to the

system available to all market participants on an open and nondiscriminatory basis.

Competition for all competitive services

All competitive services should be offered competitively, including generation, metering, billing and customer accounts services.

Competition for provider-of-last-resort service

Utilities should not automatically inherit all customers who fail to choose their electricity service provider among the providers serving that market, including the incumbent provider. While programs should be designed to encourage customers to choose suppliers, all suppliers, including market entrants, should be eligible to bid to serve those customers who choose not to choose their electricity supplier.

The elimination of barriers to a competitive market

In the competitive generation sector, all market participants should have the same opportunity to build, own and operate generation facilities. While all participants should be subject to appropriate environmental requirements, barriers to entry should be eliminated. These barriers include requirements for certificates of public convenience and necessity, state and federal regulation of power supply costs and other corporate regulation, and exclusive franchise service areas. State and regional siting processes must be open, transparent and fair to all market participants.

Functional separation

The restructured electricity industry will include competitive generation and energy services providers, along with transmission and distribution providers that will remain regulated. To ensure a robust competitive generation market and to guard against cross-subsidization between regulated and unregulated segments of the industry, the monopoly and competitive holdings of the incumbent electric utilities must be divided into separate and functionally distinct subsidiaries. State regulatory commissions must ensure that each electric utility is required to offer each of its monopoly services at nondiscriminatory and unbundled tariff rates.

Safeguards against the abuse of market power and anticompetitive behavior

As the industry moves toward full competition, it will be necessary to ensure that incumbents cannot engage in anticompetitive actions or practices to preserve their market share. Functional unbundling, cost separation, appropriate codes of conduct and rules preventing abuse of affiliate relationships or confidential customer information must be developed and enforced.

Protections to preserve existing power-purchase contracts (contract sanctity)

Retail choice will be based largely on private contracts. Today's contracts must be honored to ensure that tomorrow's contracts can provide the confidence needed for a robust market.

The full recovery of all legitimate, verifiable, non-mitigable, prudently incurred, net (eligible) stranded costs, including PUC-approved regulatory commitments and power purchase contracts

Stranded-cost recovery is a necessary part of the transition to retail competition. Stranded-cost valuation should be accomplished by reference to market mechanisms, such as benchmarks derived from a sale, auction or spin-off. Stranded costs should be collected in a defined time frame and be collected through non-bypassable wire charges or access charges.

Establish regional transmission organizations

Regional transmission organizations, properly structured and governed, are needed to control and operate the transmission system and ensure reliability through monitoring and enforcement of standards.

Ensure information disclosure policies support competitive markets

Regulators must protect competitive firms' confidential business information and provide a sound informational basis for consumer choice in a competitive environment.

Set pro-competitive policies that enhance environmental benefits

Environmental policies, if designed to reflect and enhance competitive forces, will produce improved environmental quality at the lowest cost. Environmental policies should complement the environmental benefits of restructuring.

A continued commitment to renewables technologies

In a restructured environment, programs and policies must specifically recognize the value of generation that relies on renewable resources, such as wind or solar power. Such policies should be consistent with an overall framework of market competition, and any related costs must be transparent and competitively neutral.

To be successful — to “get it right” — retail competition programs must clearly establish policies that encourage customers and competitors to participate, minimize uncertainty, eliminate barriers to entry and address transitional issues.

Consumers with access to competitive power supplies will see lower rates, better service, more convenient billing options, and new and innovative products. Therefore, EPSA's first, and most important, recommendation is that states continue to move forward expeditiously to establish retail competition. Done right, competition offers significant benefits for all consumers. ⚡

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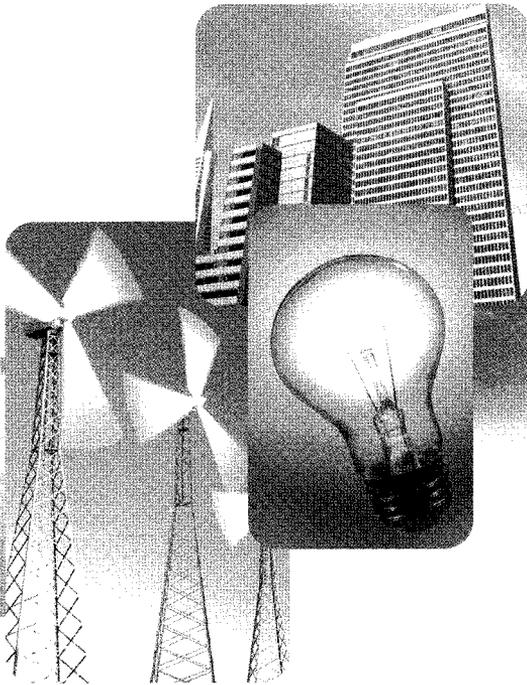
Anthracite Region Independent Power Producers Association
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Electric Power Supply Association
Advocating the **power** of competition

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EPSA is the national trade association representing competitive power suppliers, including independent power producers, merchant generators and power marketers. EPSA members provide reliable, competitively priced electricity from environmentally responsible facilities in U.S. and global power markets. EPSA seeks to bring the benefits of competition to all power customers.



after the
CALIFORNIA
storm



Electric Power Supply Association
*Advocating the **power** of competition*

During the summer of 2000, the California energy market fell victim to what has been labeled “the perfect storm.” It was a confluence of circumstances: inadequate generation, lack of demand-side programs, lethargic siting approvals, low hydroelectricity due to drought conditions, significant load growth throughout the West, the inability of load-serving entities to hedge risks, masked price signals to retail customers and poorly functioning retail markets. To achieve a calm after the storm — for California and states across the country — both short-term and long-term restructuring initiatives must be implemented. While many longer-term solutions can only be accomplished on a regional scale, we urge customers, market participants, regulators, legislators, analysts and commentators to focus on those measures that can reduce demand and bring much-needed additional power onto the system in the near term. To this end, the Electric Power Supply Association (EPSA) submits the following checklist to avoid the storm by ensuring robust and effective competition:

Encourage New Generation

Supply must be added as quickly as possible. New and expanded generation projects will provide this much-needed supply, enhance reliability, promote diversity in products and services offered to the market, mitigate market power, contribute to overall market liquidity, and lower air pollution to the extent they replace older plants.

The regulatory and environmental review process for new plant development must also be streamlined.

- Duplication and conflict among licensing agencies must be avoided.
- Licensing of repowering projects at existing sites should be accelerated.
- Certainty on environmental issues must be provided.

Develop Effective Demand-Response Programs

Customers must see price signals to effectively utilize the demand side of the equation and allow retail markets to be workably competitive.

- To achieve demand response, prices must send accurate signals to customers.
- Innovative rate designs and new technology can help reflect seasonal or hourly values for energy customers.
- Customers should be allowed to employ risk-management strategies to hedge their risks.

Expand Transmission Infrastructure and Improve Interconnection Procedures

New generation alone is not sufficient — power also must be able to flow readily from generation sites to those who need it most.

- Procedures and studies to allow interconnection of new supply to the bulk power system must be streamlined and standardized.
- Long-term rights to inject power into the grid at the point of interconnection must be secured without having to procure transmission service.
- As part of the adoption of utility restructuring proposals, transmission owners should be required to join a regional transmission organization.

Provide Credit Assurances

Credit risks in California have been real and substantial, with many suppliers — qualifying facilities (QFs), merchant generators and power marketers — accruing huge unpaid liabilities.

- All suppliers should be paid in full for all past power sales and for ongoing sales into California.
- Diverse supply portfolios must be encouraged to effectively manage price risk for both customers and utilities.
- If utilities cannot meet their contractual obligations with QFs, the latter must be allowed to provide power to the market at market-based rates, without additional rate filings. They also should be allowed to negotiate sales with third-party buyers under existing interconnection arrangements.

Increase Natural Gas Pipeline Capacity

Limited natural gas availability due to pipeline capacity constraints and the corresponding escalation in price for this primary fuel source for generators has been prominently featured in descriptions of California's energy problems.

- Short-term enhancements of intrastate and interstate natural gas pipelines and storage fields should be encouraged.

Avoid Price Caps & Other Price Controls

Price caps have profoundly serious adverse consequences on longer-term energy prices and the viability of markets. The use of both retail and wholesale price caps will discourage entry of new competitive suppliers, slow the development of risk-mitigation tools, undermine demand-side responses, and discourage building new generation plants.

Stimulate Retail Services By Allowing More Customer Choices

Robust, efficient and effective competition requires retail markets. Retail customers must be permitted to exercise supply and service choices, i.e. real-time metering, conservation audits, etc., among competing alternatives. Retail competition also provides liquidity, market depth and price visibility essential for robust wholesale competition, effective risk management and desirable capital deployment.

A Storm-Warning Checklist:

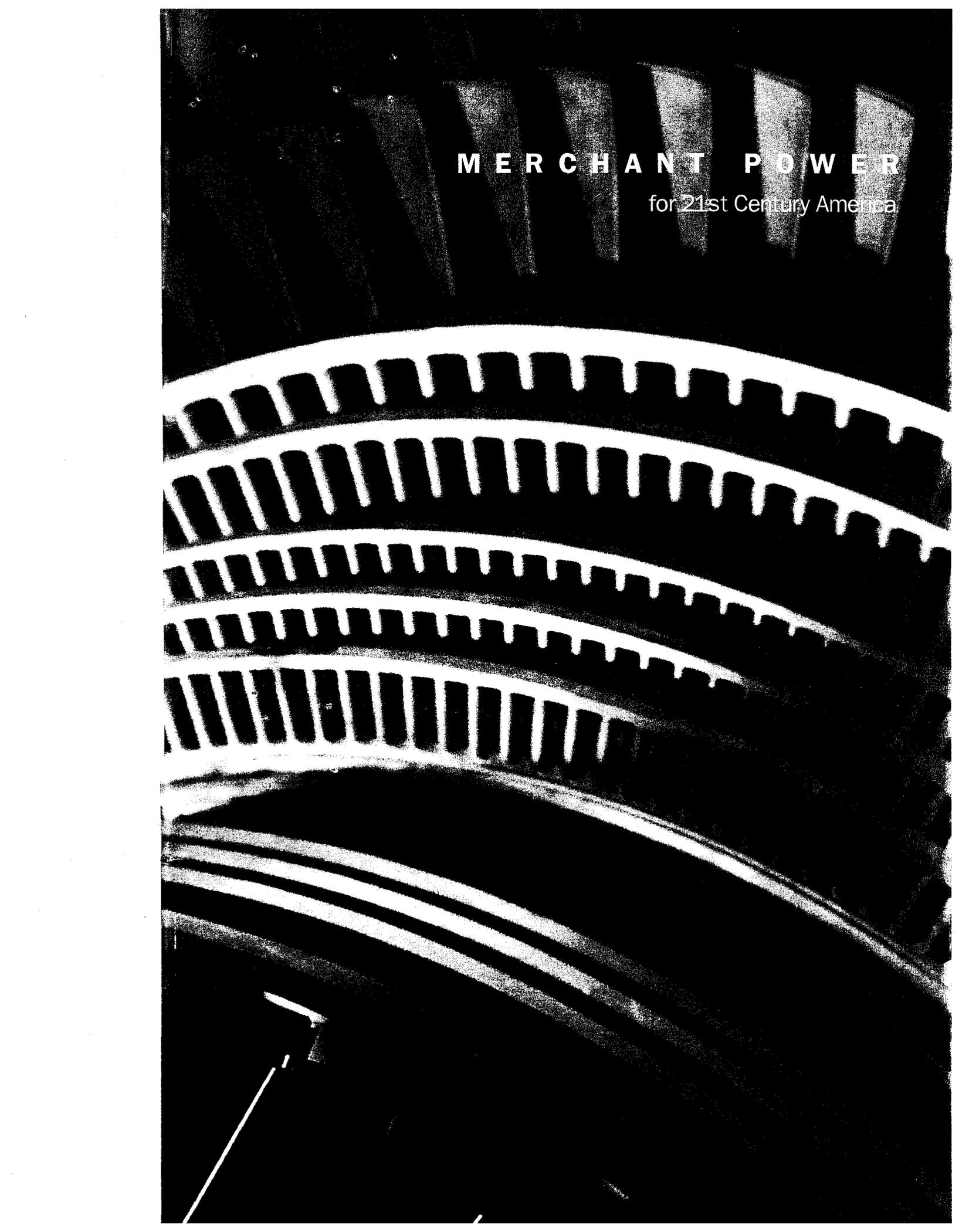
- Encourage New Generation
- Develop Effective Demand-Response Programs
- Expand Transmission Infrastructure and Improve Interconnection Procedures
- Provide Credit Assurances
- Increase Natural Gas Pipeline Capacity
- Avoid Price Caps & Other Price Controls
- Stimulate Retail Services by Allowing More Customer Choices



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*Advocating the **power** of competition*

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MERCHANT POWER

for 21st Century America

The restructuring of the American electricity market is creating an **opportunity** for economic growth and energy security. Merchant power plants — competitive, market-driven energy suppliers — provide the best way to expand America's power capacity and prevent shortages.

**Power
Generation for
21st Century
America**

Electricity is a basic part of nature, a defining element of modern life, and one of our most widely used forms of energy.

The average American consumes about 12 kilowatt-hours (kWh) of electricity each day or 4,241 kWh a year. A megawatt (MW) of power capacity serves about 1,000 residential customers.*

Coal is the largest single primary source of energy used to generate electricity in the U.S., accounting for more than half. Nuclear power (20 percent) and natural gas (16 percent) also are major sources.*

As a result of federal and state initiatives, the U.S. power industry is being transformed. Where once there were a few highly regulated, and often inefficient, monopolies that provided customers with electric service, there increasingly are a multitude of competitive businesses in each segment of the market.

This restructuring has occurred just within the last 20 years and has led to spectacular increases in electricity production, fueling expansion of our GNP, job creation, trade growth, and the housing boom.

Almost half of the U.S. has restructured its power industry, adopting retail and wholesale generating companies to promote competition.

These newly competitive markets already are encouraging the construction of additional generating capacity to meet the growing needs of customers.

Merchant power plants will provide the lion's share of this new generating capacity. A relatively recent phenomenon, merchant power plants have no guaranteed rate of return. The market risk is borne by shareholders and entails considerable amounts of capital for construction, fuel, and maintenance. A changing regulatory environment adds to the risk, as do the carried-over costs from the old monopoly system.

Because they are market-driven, merchant power plants are often built quickly and close to customers. This minimizes the need for additional investments in larger transmission grids, while lowering reliance on out-of-state suppliers.

Merchant power plants are inherently friendly to the environment and use the latest, cleanest technologies.

Most new merchant power plants use clean-burning natural gas as their energy source and “combined-cycle systems” to generate additional electricity.

The owners of merchant power plants may seek out a long-term buyer for their power or may sell their output on the open market. Some plants employ a combination of these strategies and are known as “hybrid” operations.

Some merchant power plants guarantee a “baseload” of power, helping large suppliers ensure a reliable flow to their customers. Others operate as part of a regional power pool, while some are “peakers,” coming online only when the need is greatest.

Because they respond to market needs, merchant power plants can be built in almost any size, from as small as 40 MW to as large as 2,000 MW.

Merchant power plants will play a central role in resolving California’s problems, and they hold the key to a stable energy future for the rest of the country. Merchant power plants are particularly useful in addressing the problems that exacerbated California’s poorly planned restructuring, such as land-use issues that prevented new construction and reliance on out-of-state suppliers that strained grids and boosted prices.

Electricity is a basic part of nature, a defining element of modern life, and one of our most widely used forms of **energy**. In a practical sense, electricity is simply the movement of electrons to do work.

**Electricity —
The Power
that Drives
the Economy**

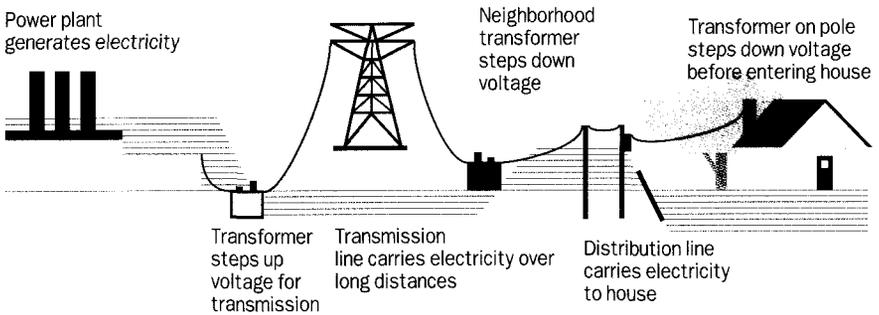
Electric power is considered a secondary energy source because we get it from the conversion of primary resources, such as coal, oil, natural gas, and nuclear energy.

An electric generating station uses a turbine, engine, water wheel, or other similar machine to drive an electric generator or a device that converts mechanical or chemical energy to electricity. Steam turbines, internal combustion engines, gas combustion turbines, water turbines, and wind turbines are the most common methods to generate electricity.

Thomas Edison's original electrical system used direct current (DC), which could not send electricity over long distances. In the mid-1880s, George Westinghouse licensed the patents of Nikola Tesla and developed the high-voltage, single-phase, alternating current (AC) system, using devices called transformers. Transformers allowed electricity to be efficiently transmitted on a regional scale.

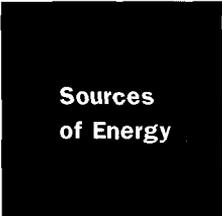
Transformers are located in substations near electric generating plants. From the transformers, heavy lines on towers carry electricity in much the same way that long hoses carry water under great pressure. Electricity travels at nearly the speed of light, arriving at a destination at almost the same moment it is produced.

Transporting Electricity



Electricity is measured in units of power called watts. A single watt is a very small amount of power. A kilowatt-hour (kWh) is equal to the energy of 1,000 watts working for one hour. The amount of electricity a power plant generates or a customer uses over a period of time is measured in kWh. For example, if you use a 40-watt light bulb 5 hours a day, you have used 200 watts of power, or .2 kWh hours of electrical energy. Based on total residential energy consumption divided by population, the average American consumes about 12 kWh hours of energy each day or 4,241 kWh hours a year.

An electric generator is a device for converting mechanical energy into electrical **energy**. An electric utility power station uses either a turbine engine, water wheel, or other similar machine to drive an electric generator. Most of the electricity in the U.S. is produced in steam turbines.



Sources of Energy

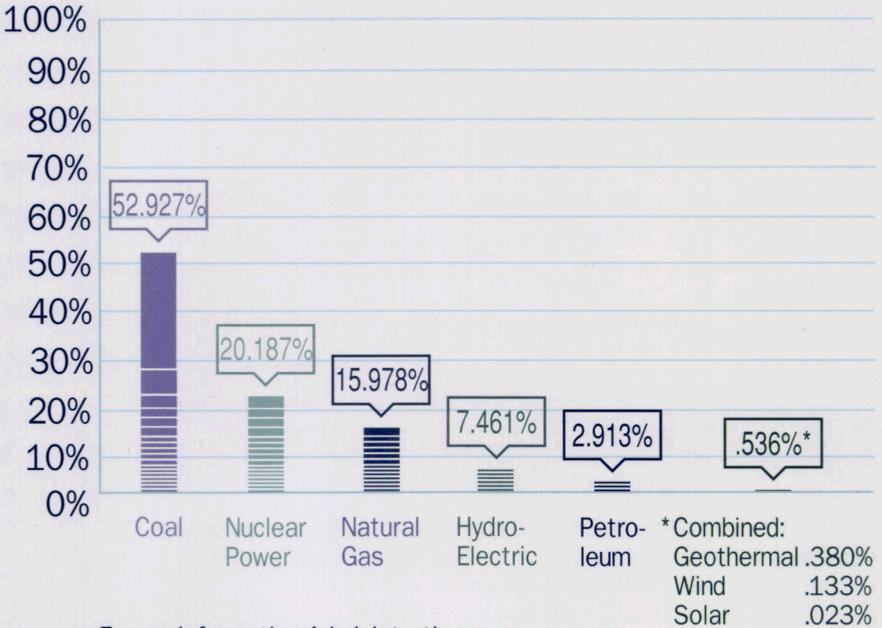
Coal, petroleum (oil) and natural gas are burned in large furnaces to make steam that pushes on the blades of a turbine.

Coal is the largest single primary source of energy used to generate electricity in the United States. In 2000, more than half (52.9 percent) of the country's 3.8 trillion kWh of electricity used coal as the source of energy.

Natural gas, in addition to being burned to heat water for steam, also can produce hot combustion gases that pass directly through the blades of a turbine to generate electricity. In 2000, 16 percent of the nation's electricity was fueled by natural gas.

Petroleum also can be used to make steam to turn a turbine. Residual fuel oil, a product refined from crude oil, often is the petroleum product used in electric plants that use petroleum to make steam. Petroleum was used to generate

Energy Sources: USA 2000



Energy Information Administration,
Monthly Energy Review (July 2001), Table 7.2

2.9 percent of all electricity generated in U.S. electricity plants in 2000.

Solar power. Photovoltaic conversion generates electric power directly from the light of the sun in a photovoltaic (solar) cell. Solar-thermal electric generators use the radiant energy from the sun to produce steam to drive turbines. Less than 1 percent of the nation's electricity comes from solar power.

Hydro-electric power, the source for 7.5 percent of U.S. electricity generation, is a process in which flowing water is used to spin a turbine connected to a generator.

Nuclear power is a method in which steam is produced by heating water through nuclear fission. Nuclear power is used to generate 20.2 percent of all the country's electricity.

Wind power is derived from the conversion of kinetic energy in wind into electricity. Wind power, like solar, currently is an expensive way of producing electricity and is used for less than 1 percent of the nation's electricity. However, wind particularly is becoming less expensive as technology advances. A wind turbine is similar to a typical windmill.

Geothermal power comes from heat energy buried beneath the surface of the earth, usually in the form of super-heated water or steam. This energy source generates less than 1 percent of the electricity in the country.

As a result of federal and state initiatives, the U.S. power industry is transitioning from regulated and often inefficient monopolies to **competitive** businesses.

Today's
Electricity
Industry —
The New
Competitive
Model

This restructuring has occurred just within the last 20 years and has led to spectacular increases in electricity production, fueling expansion of our GNP, job creation, trade growth, and the housing boom. Almost half of the states have restructured their power industry, adopting retail competition and encouraging utilities to sell off power plants to promote competition and marketing among generating companies. Problems such as access to transmission grids and the “stranded costs” from traditional utilities still must be addressed, but new generating capacity is moving rapidly off the drawing board.

As with every other monopoly, the lack of market discipline led increasingly to inefficiency and poor performance on the part of many electric utilities. As a response, electricity production in the U.S. has been opened to competition during the past two decades. This has had a profound and positive effect on how power is produced and marketed. Rather than relying totally on inefficient regulated monopolies, there are now more than 2,000 nonutility power producers in the U.S. that have added their capacity to that of the traditional utilities.

In 1978, the U.S. Congress laid the groundwork for this electric utility restructuring and competition by opening wholesale power markets to nonutility producers of electricity. This has led to spectacular increases in electricity production, without which the U.S. economy could not have grown as it has. Expansion of our GNP, job creation, trade increases, the housing boom – none of these would have been possible without the electricity produced by competitive power suppliers.

Private competitive power plants take varied forms that include:

Merchant power producers that produce and sell electricity on the wholesale market at non-state regulated rates but do not have franchised service territories. Most are exempt wholesale generators under the Energy Policy Act of 1992 (EPACT);

Renewable facilities that qualify under the Public Utility Regulatory Policies Act of 1978 (PURPA); or

Cogeneration facilities that produce steam and electricity but are engaged in business activities other than the sale of electricity.

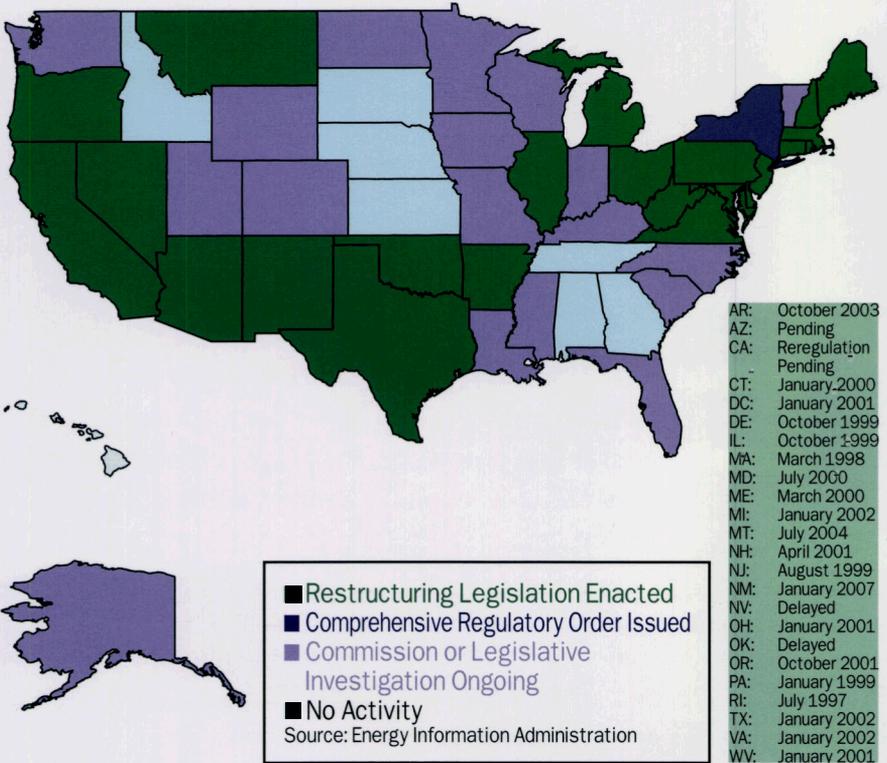
As a result of federal and state initiatives, the power industry is transitioning from highly regulated and inefficient monopolies to more responsive and competitive businesses. These new businesses are building power production facilities in response to the demands of the open market. Over time, this will result in a far more efficient supply than was possible under the monopoly model. Under the competitive model, transmission and distribution services will remain regulated.

To date, almost half of the states have passed major legislation and/or regulations to restructure their power industry (see map on next page). In addition, some state restructuring laws have either required or encouraged the divestiture of power generation assets, such as gas-, coal-, nuclear- and oil-fired power plants and dams. This has been designed to create and encourage competition among generating companies. It also prevents a few companies from dominating the marketplace and creating a new monopoly.

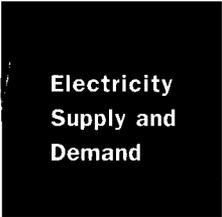
Whatever the obstacles, the quickening pace of restructuring is moving new merchant power plants off the drawing board, increasing America's generating capacity and its reserve ability to meet the peak demands of a growing economy.

Status of State Electric Industry Restructuring Activity

As of October 2001



The industry is now in a significant transition as it moves toward a competitive environment in both the wholesale and retail markets. Competitive markets already have encouraged significant investment in new electric generating **capacity** to meet growing customer needs.

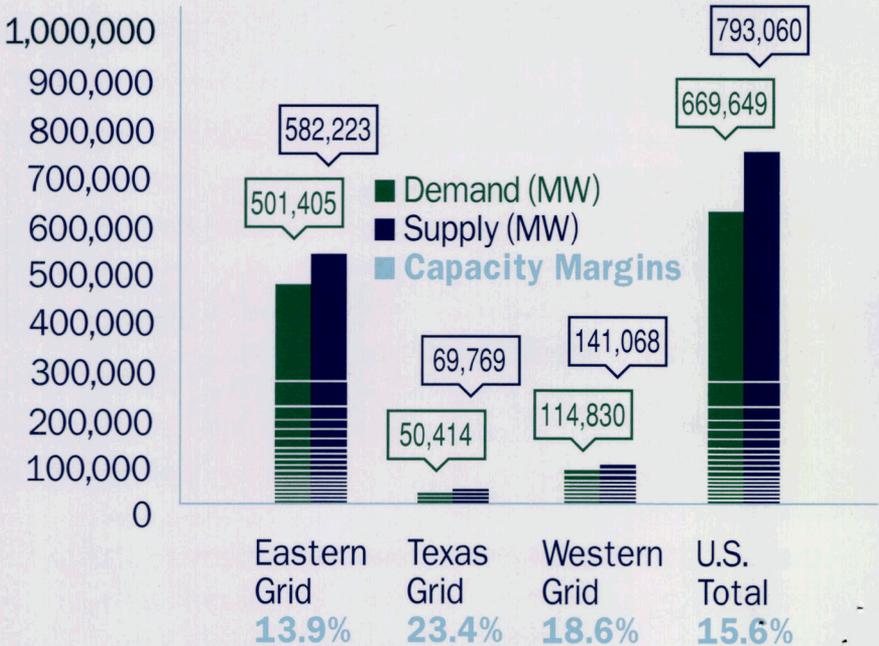


Electricity
Supply and
Demand

These evolving markets also are expected to ensure that there will be sufficient capacity beyond projected peak demand. This extra capacity is needed to act as a buffer against unexpected increases in customer demand and loss of generating supply due to equipment outages — events that might otherwise cause blackouts and brownouts. Only a competitive, market-based model can respond to demand in such an efficient and effective manner.

Operating under the new competitive model permits producers to forecast how to supply enough power to a region, even considering equipment failure and unanticipated demand. Extreme weather conditions, for example, can cause both of these to happen at once and without substantial warning.

Projected U.S. Capacity Margins: Winter 2001



Source: "Energy Information Administration/Electric Power Annual, 1999 Vol. II (Winter)."

Electricity demand is projected to reach 709.6 gigawatts (GW) by 2004. Under the new competitive model, the national capacity margin is expected to reach a comfortable 18.4 percent during the same period, with electric generating capacity expected to reach 870 GW.

Unlike traditional utilities, **merchant power plants** compete for customers, so they must respond to market needs. Merchant power plants fill different niches; some provide steady supplies to a power grid, while others fire up only when demand is highest.

**What is a
Merchant Power
Plant?**

Other merchant power plants have been converted from facilities divested by utilities; some are built to serve a single customer like an industrial park. Out of necessity, merchant power plants operate in an environmentally friendly manner. Most new generators are sited close to their customers and use cleaner-burning natural gas and efficient, combined-cycle systems.

In its simplest form, a merchant power plant is a generating facility that sells its electrical output on the open market. Merchant power plants are a product of restructuring of the electricity industry. In the past, utilities owned their own generating facilities or contracted with an independent power producer (IPP) to buy its electrical output on a long-term basis. As states have opened up their electricity markets to competition, the process of generating and marketing electricity has become a separate business with its own economics and opportunities. Merchant power plants compete to produce and sell electricity in a wholesale marketplace. In so doing, they help assure that power is produced at the lowest cost, with the newest technology, with the greatest efficiency, and in locations where it is needed most.

Merchant power plants have no guaranteed rate of return. The market risk is borne by the investors and/or shareholders. As such, merchant power plants are an evolving phenomenon. Their structure and operations are affected by the pace and extent of competition, a continuing process that differs by state and region. In areas where legislatures have directed public utilities to sell a percentage of their generating capacity, more than 300 plants have been auctioned off or put up for sale. Many of these have been converted into merchant power plants by their new owners, often with contracts to continue serving the utility and its customers. In areas where the need for more electricity is clear and where there are no major obstacles to building new plants, companies are erecting merchant power plants and attracting customers. Many merchant power plants are hybrids; they sell part of their output on the open market and part to specific customers under long-term contracts.

Because merchant power plants respond to opportunities in an open market, they can assume a variety of functions. Some merchant power plants enter into contracts in which they guarantee a “baseload” – a minimum amount of power over a given period of time – delivered at a steady rate. This helps large suppliers ensure a reliable flow of power for their customers. Merchant power plants may enter into agreements with regional power pools. By committing all or part of their output to a multi-state transmission system with many customers, the plants increase reliability of the power supply for the entire region. Older, less efficient plants that have been divested may be converted into “peaker” plants that go into operation only when demand is greatest. Many new, more efficient peaker plants also are being built. Finally, an increasing number of merchant power plants are being built “inside the fence,” serving the needs of a single user, such as an industrial park or a refinery.

Each of these uses responds to a particular prime market need. This flexibility is the greatest strength of merchant power plants and a justification for restructuring.

As a matter of practicality, most new merchant power plants burn natural gas to generate energy. Natural gas is efficient and clean, and plants that use it can be sited and constructed quicker than oil- or coal-fired plants. Most new plants are “combined-cycle” operations. They produce electricity directly; their exhaust gases are recycled through special turbines to generate additional electricity; and they create steam, which may also be used to create electricity or may be used by nearby factories and heating facilities. Combined-cycle systems are more efficient and can be more economical than traditional “simple-cycle” plants.

Because they are competitively driven, merchant power plants employ the newest and most productive technologies, including heavy-duty gas turbines. These systems pollute much less than their older counterparts because they burn natural gas and need less fuel to operate. As private businesses backed by considerable investments, merchant power plants have both the incentive and the wherewithal to invest in the best technology, a distinct improvement over power plants tied to a traditional utility.

Merchant power plants span the spectrum in terms of productive capacity. They can be as small as 40 MW or as large as 2,000 MW. Most new merchant power plants produce between 250 MW-400 MW; new turbine designs are raising the standard to beyond 400 MW. Because merchant power plants are designed to meet the projected needs of a particular market, they can be constructed in whatever size is most efficient. This minimizes the need for investment capital and helps bring merchant power plants online quickly and where they are needed most.

Building and operating a merchant power plant requires hundreds of millions of dollars. Variable costs like the price of fuel and fixed costs like construction debt must be carefully accounted to ensure **profitability**.

The Economics of Merchant Power Plants

Most merchant power plants sell some of their power under long-term contracts and some on the open market; this is called a hybrid arrangement. Operators must deal with additional risks, such as unforeseen regulatory changes, access to transmission grids, and the shared burden of debts left by traditional utilities. Because they are profit-driven and well-financed, merchant power plants can and do invest in newer, cleaner, more efficient technologies.

Building and operating a merchant power plant is a considerable undertaking, involving many variables and millions of dollars. A rough estimate of construction costs is \$500,000 per MW or \$250 million for a 500 MW plant.

To succeed, a merchant power plant must generate and sell power profitably. Building a merchant power plant requires a large investment in design, engineering, and construction. Because merchant power plants generally lack long-term supply contracts, reliability and conservative design increase the chance that the plant will hold its customers and earn a profit. In the case of divested facilities that have been transformed

into merchant power plants, operators must establish special reserves to maintain and upgrade these facilities.

Because most new merchant power plants are gas-fired, operating expenses are tied to the price and availability of natural gas. Before commencing construction, owners often work out arrangements to buy a fixed amount of gas at a guaranteed price. Merchant power plant owners use their operating income to pay for variable costs — fuel (the largest variable cost), operating and maintenance costs, and income taxes — and for fixed costs — debt service, debt retirement, and property taxes. Because merchant power plants often cannot count on long-term supply contracts, both their construction and operation demand greater cash reserves than conventional facilities.

These factors force the owners of merchant power plants to make detailed projections about the market they plan to serve, its future needs and likely customers. Operators must consider structural risks, including legal, regulatory, and financing constraints. A regulatory environment, such as exists now, creates both opportunities and threats. Unforeseen changes by legislatures or government agencies can have a dramatic impact on the ability of a merchant power plant to ever earn a profit. Whether a new plant can access an existing transmission grid or join a power pool profitably also is a structural risk.

The issues of utility stranded costs for past investments and distributed costs for upgrading regional capacity to handle the additional power produced by this plant and others also are structural risks. These issues are especially pertinent for divested facilities that have been converted into merchant power plants.

To lessen risk, many merchant power plants enter into long-term contracts to sell all or part of their output. The length of these contracts often is tied to the amount of time needed to retire the construction or conversion debt. An increasing number of hybrid merchant power plants commit part of their output to long-term clients and retain part to sell on the wholesale market, thus hoping to maximize return while retaining flexibility to meet the changing needs of their customers.

New merchant power plants may seek an “anchor” contract with a large industrial customer or utility before construction commences. Many divested merchant power plants finance their operations through buy-back agreements with the utility that once owned them. An increasing number of merchant power plants include additional revenue-producing functions in their design. For instance, the very first merchant power plant, the Sweeny Cogeneration facility near Houston, includes an integrated water treatment plant that serves a refinery.

The same restructuring process that created the market for merchant power plants has also

spawned a wholesale power market for the electricity they produce. Wholesale energy trading and marketing is a multibillion dollar business. With their operational efficiencies and lower costs, an increasing number of merchant power plants are being built with the intention to sell their output on the open market, primarily through regional power brokers. In areas where barriers to entry have been lowered, and where new capacity is needed, merchant power plants can prosper, even without long-term contracts. Spot market sales can help retail utilities ensure a steady supply, or satisfy needs during peak usage periods.

There is one more facet of merchant power plant financing that should be considered: merchant power plants are inherently friendly to the environment. Most run on clean natural gas and are highly efficient, meaning they use less fuel. Retrofitted merchant power plants, divested by utilities, invariably operate cleaner. Divestiture itself allows the “recycling” of power plants, decreasing new construction. Because profit ability requires a careful (and accurate) assessment of the market, merchant power plants are invariably sited efficiently. This minimizes the need for additional plants or the sort of duplication that could burden the environment. The very flexibility of merchant power plants means that they can be small and sited within existing industrial complexes, minimizing land use. And

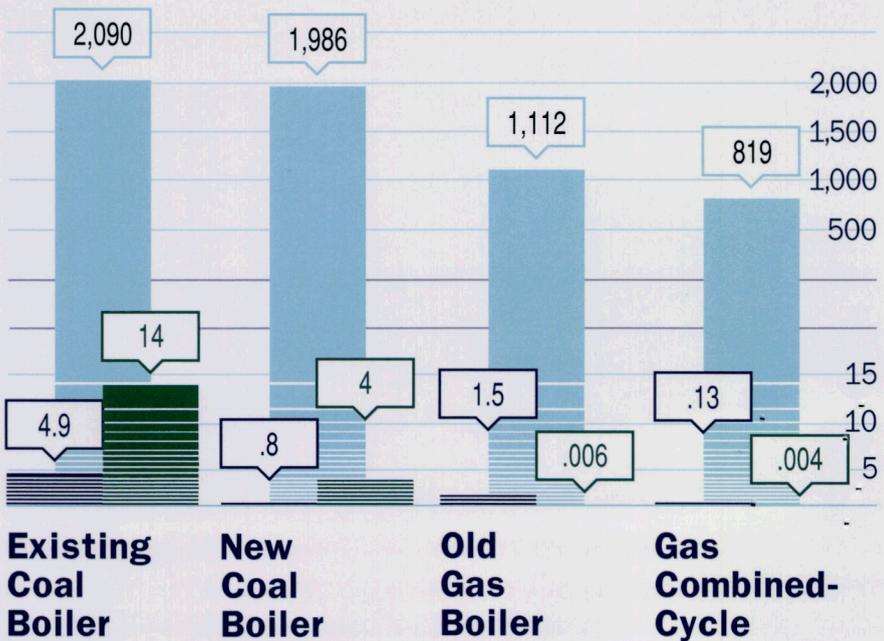
because they are profit-driven and well-financed, merchant power plants can and do invest in newer, cleaner, more efficient technologies.

2000 NO_x CO₂ SO₂ Emissions (lb/MWh)

■ NO_x Emissions

■ SO₂ Emissions

■ CO₂ Emissions



Source: Enron compiled data from U.S. EPA and DOE statistics.

National attention has focused on California, where a poorly planned restructuring of the state energy market has produced higher prices and power shortages. California's situation is unique, but it contains **lessons** that can be applied to energy markets throughout the U.S.

**Building New
Merchant Power
Plants Can Help
Resolve the
Nation's Energy
Challenges**

Certainly, merchant power plants will play a central role in resolving California's problems, and they hold the key to a stable energy future for the rest of the country:

Local objections and land use issues prevented any new plants from being built in California for more than a decade. Merchant power plants are environmentally friendly and can be built within existing industrial areas. Because they are low-impact, they can be sited close to urban customers. These factors help resolve land use concerns and other objections.

Merchant power plants respond to the market. In a situation where there is a clear need for additional generating capacity, companies that want to build merchant power plants can readily find financing and customers, enabling them to move quickly from planning to construction. Merchant power plants can come online quickly, expanding power supplies for the entire region.

With customers assured, merchant power plants can negotiate longer-term contracts with their fuel suppliers, thus helping to insulate the local market from price spikes and shortages.

Because they are attuned to market needs, merchant power plants can be sited close to their customers, promising an early resolution of power shortages within high use areas, such as cities and industrial parks.

Merchant power plants can be readily built to serve specific customers. This means that industries that are critical to the local economy can acquire the power they need, thus protecting jobs and tax revenues within the community.

Siting merchant power plants within the state and in the areas where the need is greatest decreases the burden on transmission grids. This lessens the need for additional construction and maintenance, a multibillion dollar concern.

Building merchant power plants lessens a state's dependence on out-of-state energy suppliers. This, in turn, helps energy markets stabilize, easing price pressure for consumers.

Most new merchant power plants use cleaner-burning natural gas. This allows them to be built quicker and to operate with reduced emissions of carbon and nitrogen unlike plants using other fuels.

To be competitive, merchant power plants that are created from older generating facilities are retrofitted with newer, clean-running technologies. The merchant model allows older facilities to contribute while ensuring that their output of pollutants is much lower and conforms to environmental standards.

An increasing number of merchant power plants are being planned using clean, alternative energy sources, including wind power and geothermal heat.

For more information on energy, visit the Energy Information Administration's Web page at www.eia.doe.gov. For more information on merchant power, read "Merchant Power: A Basic Guide" by Ann Chambers.

In essence, merchant power plants can provide the additional generating reserves that the nation needs now and in the **future**. They are a modern, market-based answer to many of the problems that now confront the nation.



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