

reached in a Board of Public Utilities-sponsored study which examined the effects of an advanced telecommunications network on New Jersey's economy. The study concluded that an advanced telecommunications network would spur economic development in the State. The Telecommunications Act empowered the Board of Public Utilities to consider alternative regulation requests by local telephone carriers, and declared all long-distance carrier services as competitive, removing them from regulation as to rates, terms and conditions of service. This enables long-distance carriers to change rates quickly and introduce new services on very short notice.

On May 6, 1993, the Board of Public Utilities approved with modification an alternative regulatory proposal by New Jersey Bell which, among other things, freezes the rates for residential local service until the year 2000, absent any exogenous event or Board of Public Utilities-approved revenue neutral restructure. Other rate regulated service rates may experience rate changes according to an index-based mechanism beginning in 1996.

On June 30, 1994, the Board of Public Utilities approved a stipulation of settlement between the State's long-distance companies and Bell Atlantic-New Jersey which allows the long-distance carriers to offer intraLATA toll services to their customers through access codes, ending Bell Atlantic-New Jersey's monopoly on such services. Although the allowance of access code competition has only recently been authorized, it appears that competition is driving prices down and offering more promotional services.

In accordance with its June 30, 1994 ruling, the Board of Public Utilities on January 24, 1995 initiated an investigation and rulemaking proceeding to explore the extent to which competition, on a presubscription basis, should be permitted within the local access transport areas (LATAs) of New Jersey.

Industry restructuring facilitated competition in the telecommunications industry. The advancement of competition in the telecommunications industry was enhanced by the enactment of New Jersey's "Telecommunications Act of 1992" which authorized the Board of Public Utilities to consider alternative forms of regulation and to permit the competitive interexchange telecommunications marketplace to operate without traditional utility regulation. The Board of Public Utilities, in its January 1994 "Response to the

Telecommunications Act of 1992," concluded that the Telecommunications Act has been successful in stimulating the development of an advanced telecommunications network and in limiting regulatory delay for competitive services. The marketplace has been enriched by new services and new options for customers.

Restructuring The Electric Power Industry

The electric power industry has traditionally been guided by cost-of-service regulation. In New Jersey, rate-base/rate-of-return regulation has been employed to determine a utility's revenue requirement, while rates have been based on cost-of-service studies.

Minimal opposition to cost-of-service regulation existed prior to the 1970s. The pre-1970 era represented stable or declining electric rates, increasing productivity and rising utility revenues. One of the primary benefits of cost-of-service regulation was its fairness. All customers paid rates based on the average cost of servicing their particular customer class.

Cost-of-service regulation ties utility earnings to the level of investment in facilities such as generating plants and transmission and distribution lines. This provides an incentive for utilities to invest in capital-intensive projects. Cost-of-service regulation also provides for the flow-through to ratepayers of prudent operating expenses such as operation and maintenance costs. Cost-of-service regulation has been viewed by critics as an impediment to efficient investment and operation in the electric utility industry. Cost-of-service in many ways also fails to align the objectives of ratepayers and shareholders.

From the standpoint of economics, public utilities have traditionally been considered natural monopolies operating in industries in which the product, the utility service, can be supplied most efficiently by one company rather than many providers. Currently, this remains true for the transmission and distribution of electricity; installing duplicate poles and wires to supply the same customers is clearly wasteful. Until relatively recently, it was also believed to be true of the generation function, which through economies of scale typically achieved lower unit costs through the installation of large central generating stations as compared to several smaller, dispersed generating units.

Under the assumption of natural monopoly status for public utilities, regulation was instituted to act as a substitute for competition. That is, in the absence of competing service providers, regulation provides the mechanism for setting the price of utility service, thus protecting consumers from excessive prices and profits that potentially could result from the existence of only one supplier. This view of regulation implicitly recognizes the competitive marketplace as constituting the benchmark against which economic efficiency should be measured.

Ideally, a competitive marketplace is characterized by many suppliers, none of which have sufficient market power to affect the price at which a given "commodity" in this case electricity, is sold. Elsewhere we have noted the factors moving the wholesale generation market to a competitive marketplace, chief of which have been PURPA, the 1992 EPAct, and the policies of the Board of Public Utilities to implement PURPA. As this trend accelerates, the primary benefit of competition would be an expectation of lower prices from expansion of the energy supply marketplace. Additional potential benefits have also been discussed previously, and are summarized below.

In brief, competition should:

- exert downward pressure on prices by expanding the number of suppliers, that is, movement toward "commodity pricing" at the wholesale (generation) level;
- eliminate or reduce the need for costly and time-consuming administrative procedures (rate cases) for setting the price of competitive services;
- encourage utilities to lower costs and operate more efficiently in a way that traditional "cost plus" regulation does not;
- eliminate pricing biases and distortions potentially present in current utility rate structures;
- stimulate the development of a broader array of utility services and prices; and
- transfer generation construction and operating risk from ratepayers to the providers of generation services.

Restructuring of the electric power industry offers the potential to realize the benefits identified above. To that end, several states have implemented proceedings to investigate the restructuring of their electric power industries. Of particular note are the activities in California and Michigan.

By far, the boldest electric power industry restructuring proposal was that initiated in California. On April 20, 1994,

the California Public Utility Commission¹¹ (CPUC) issued an order instituting a rulemaking to consider retail wheeling and other reforms that would significantly alter the way electric utilities are regulated in California. The rulemaking reflects the California Public Utilities Commission's conclusion that traditional and often administratively burdensome and time-consuming rate-of-return regulation is ill-suited to the new competitive environment in which the industry operates. Thus, it should be replaced by a market-based alternative that, together with performance-based regulation of noncompetitive services, should exert downward pressure on electric rates.

Pursuant to the California Public Utility Commission's proposals, direct access or retail wheeling would be allowed for industrial customers effective January 1, 1996, and for all other customers, including residential customers, by January 1, 2002. In each case, customers could choose to purchase electricity directly from nonutility generators or from brokers and marketers. Alternatively, they could continue to receive service from California's regulated utilities.

Utilities would continue to supply transmission and distribution services on a nondiscriminatory basis, but the rates for these services, as well as for generation services if purchased from the utility, would be performance-based, as opposed to cost-based. Performance would be measured against a series of benchmarks, which would not necessarily be the same for each utility, as the California Public Utilities Commission plans to develop its performance-based regulation from proposals previously submitted by the individual utilities.

As to the financial effects of the proposals, the California Public Utilities Commission states that costs previously borne by customers electing to purchase generation from nonutility sources ("direct access" customers) will not be shifted to customers that remain with the utility. That is, direct access consumers will continue to pay their share of costs from past, prudent utility investments, rendered uneconomic in the transition to a competitive market. Moreover, the performance-based regulation will provide utility investors with opportunities to earn returns that are, at a minimum, comparable to opportunities under cost-of-service regulation.

As of the date of the release of this Phase I Report, the California Public Utilities Commission had not taken any final actions concerning its restructuring proposal.

On April 11, 1994, the Michigan Public Service Commission issued an interim order requiring Michigan's two largest utilities, Detroit Edison and Consumers Power, to allow retail wheeling on a five-year trial basis and of an amount approximately equal to 1 percent of each company's peak load, that is 60 MW for Consumer Power and 90 MW for Detroit Edison¹². However, such wheeling is not to begin until the companies' next solicitations of new capacity, which in Detroit Edison's case is not anticipated before the year 2000.

In contrast to California's proposed restructuring, Michigan's approach is a limited experiment intended to test whether and how well retail wheeling would improve effectiveness and efficiency within the existing electric market. If approved permanently, it could be viewed as simply an additional option for meeting or reducing the need for new capacity, and as such could avoid the problem of stranded investment, at least in theory.

On August 26, 1994, Detroit Edison filed a request for a ruling by the U.S. District Court for the Western District of Michigan declaring that the State Commission's authority to permit retail wheeling is pre-empted by the Federal Energy Regulatory Commission, which under provisions of the Federal Power Act has jurisdiction over transmission facilities employed in interstate commerce. Detroit Edison additionally maintained that the Michigan Commission's assertion of jurisdiction conflicts with the supremacy, commerce and contract clauses of the U.S. Constitution, and would result in a taking of the Company's property without just compensation. Moreover, Detroit Edison maintains that the Michigan Commission has not been given the necessary authority to order retail wheeling by the Michigan legislature.

New York, Pennsylvania and Connecticut have also initiated proceedings to investigate the role of competition in the electric utility industry. Pennsylvania's proceeding was initiated to examine the role of competition in the electric utility industry at both the wholesale and retail levels. New York's proceeding will consider issues related to the establishment of a fully efficient wholesale electric power market and pricing reforms necessary to reflect those market efficiencies in retail customer rates; an analysis of whether the divestiture of generating assets by the provider of transmission and distribution services would enhance the transition to a competitive wholesale market; the appropriateness of

full or partial retail wheeling; and the definition and treatment of stranded investment. Neither Pennsylvania nor New York had adopted policies related to these issues as of the release of this Report.

The Connecticut Department of Public Utility Control (DPUC) held a proceeding to investigate retail wheeling. The Connecticut DPUC concluded that retail wheeling is technically feasible and can be legally authorized by the State. However, the Connecticut DPUC found that retail wheeling is not in the best interest of the stockholders, State energy policy and the economy of Connecticut.

California proposed retail wheeling while Connecticut rejected it. New York and Pennsylvania are studying retail wheeling along with other proposed industry structures. While Michigan approved a limited retail wheeling experience, its legal authority to do so is being challenged.

No consensus exists as to the appropriate structure of the electric utility industry, particularly with regard to the need for retail wheeling. Many legal issues remain unresolved, which will have a major impact on New Jersey's ability to restructure its electric utility industry.

A major concern for State regulators is what effect retail wheeling will have on captive or "core" customers. Retail wheeling in the longer term might benefit all customers by imposing pressure on utilities to operate more efficiently and to reduce costs. However, if core customers are required to pay a portion of the cost of stranded investment caused by large customers leaving the system, they might not benefit in the short term. An assessment of the short and long-term costs and benefits should be performed prior to implementing any industry restructuring proposal. While California has indicated it will address the stranded investment issue, to date, it has not put forth a proposal which provides a solution to this difficult issue.

The reaction of the financial rating agencies to the actions of California and New York have been negative. Standard and Poor's states that the California Order may have negative long-term implications for credit worthiness of the three utilities. According to Moody's, the California proposal represents a serious threat to the financial flexibility of California's utilities. Fitch Investors Service stated its belief that market competition cannot be achieved by any one state and must await resolution of interstate transmission and related pricing issues by the FERC.

The independent power industry in New Jersey has ar-

argued that a fair, competitive, wholesale marketplace requires electric utilities to divest their generation assets. However, it is uncertain whether divestiture is necessary under several scenarios, including full retail wheeling or unbundled generation, transmission and distribution.

Assessing the desirability of retail wheeling is a complex task. Legal issues, equity issues, system reliability issues, as well as impacts on both core and bypass customers, must be carefully analyzed.

A general consensus exists that increased competition in the utility industry is inevitable and will ultimately benefit consumers. No consensus exists as to the best method for increasing competition or the industry structure that best maximizes the benefits of competition. Given this uncertainty, the wise course at this time is to proceed cautiously.

Findings:

- Competition has the potential to promote efficiency, reduce regulatory delay and foster productivity and innovation.
- No consensus exists on the appropriate structure of the electric utility industry to maximize the benefits of competition.
- The appropriate structure of the electric utility industry requires a careful assessment of legal issues, equity issues, the treatment of stranded investment, and system reliability issues.
- The Board of Public Utilities' December 1993 "Guidelines for the Further Unbundling of New Jersey's Natural Gas Service" Order and approval of the subsequent compliance filings will provide for a competitive gas supply market for commercial and industrial customers. The local distribution companies will continue to have a monopolistic position with respect to residential customers and the distribution of natural gas.

- As customers have increased supply options, the utility's "obligation to serve" might need to be reassessed.
- Existing traditional gas curtailment policies need to be re-examined in light of the existence of multiple natural gas suppliers.

Recommendations:

- ▲ The Board of Public Utilities should initiate a proceeding to investigate the long-term structure of the electric power industry. Consistent with the Vision of the Future section included herein, the investigation should assess ways to further a policy that provides that:
 - Where effective competition exists and ongoing regulation becomes unnecessary to provide consumer protections, the State should allow the marketplace to determine the quality and price of service.
 - In those markets where competition does not exist, but where increased competition could benefit consumers, the State should take actions to facilitate the development of a competitive marketplace.
 - Where competition does not exist and it is determined that consumers are best served by continued regulation, the State should continue regulating the quality and price of services.
- ▲ The Board of Public Utilities' investigation should include an assessment of the following:
 - the appropriateness of direct access or retail wheeling;
 - the actions necessary to establish a fully efficient, competitive wholesale electric power marketplace for both new and existing generating facilities;
 - whether divestiture of electric utility generation assets is necessary for an efficient wholesale electric power market.

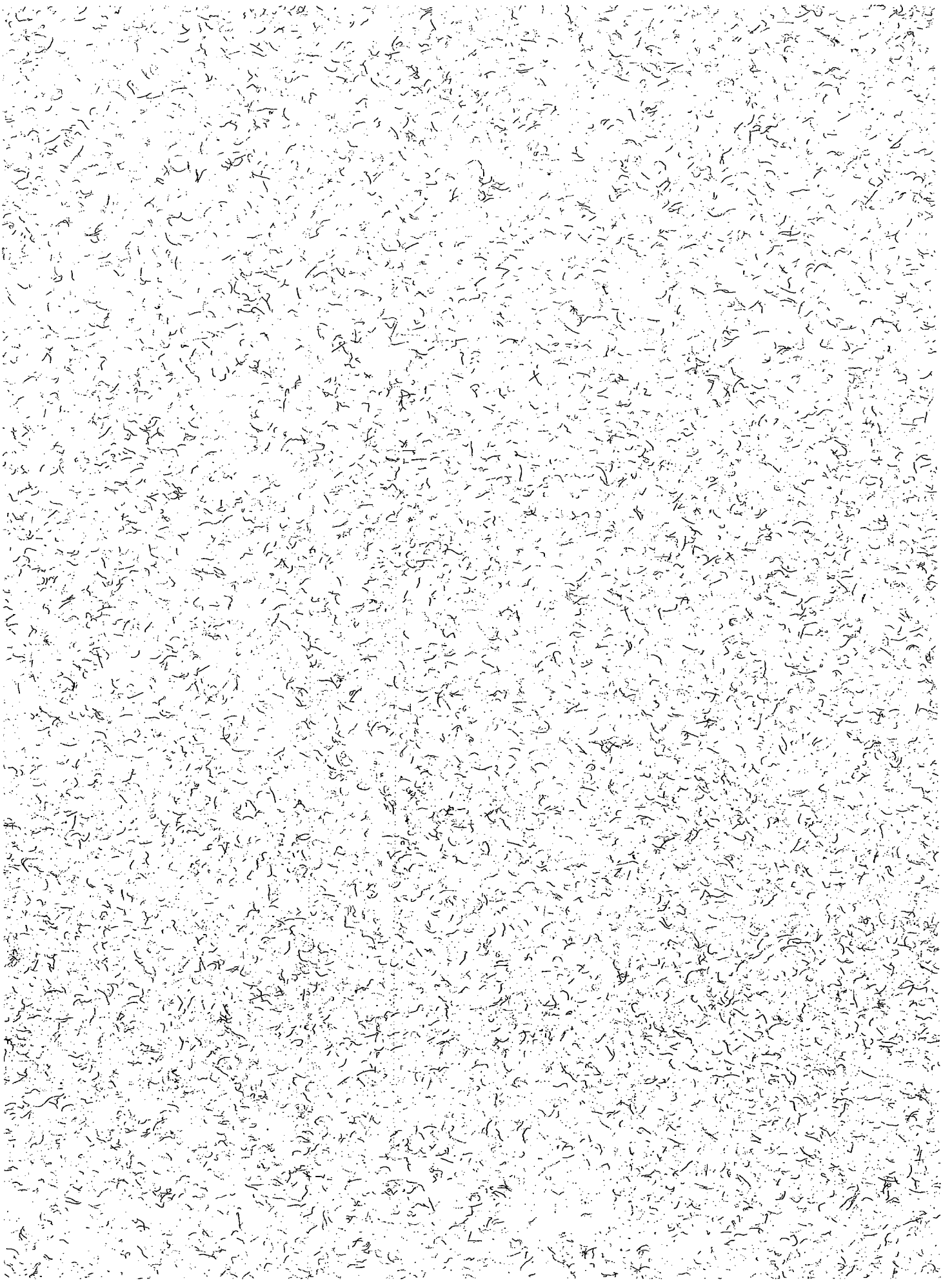
- the need for retail wheeling or direct access if an efficient, competitive wholesale electric power market is achieved, and
- the definition of, and equitable treatment of, stranded investment.

▲ The Board of Public Utilities' investigation must consider that while expanded competition has the potential to provide benefits compared to continued regulation, regulation must continue to ensure:

- continued universal access to safe, adequate and reliable service at a reasonable cost;
- nondiscriminatory access to transmission and distribution service;
- that the State's environmental and energy efficiency goals are met;
- system reliability; and
- the protection of consumers.

▲ The transition to a more competitive market must be carefully managed to avoid incurring greater costs than necessary to ensure a reliable electric system and to protect ratepayers without access to competitive markets. The policies ultimately adopted by the Board of Public Utilities must ensure that societal goals such as environmental quality, health standards and economic development are not sacrificed by a system which focuses on short-term costs.

- The Board of Public Utilities should establish a long-term strategy and timetable for the continued deregulation of the gas supply industry in the State.
- The Board of Public Utilities should re-examine the existing natural gas utility curtailment plans in light of the unbundling process.
- The Board of Public Utilities should consider benefits that might accrue through increased interutility coordination. Such areas could include interutility emergency curtailment arrangements and gas pipeline and supply planning.



PART IV

Managing the Transition to Competition

Natural Gas and Electric Resource Planning

Currently, the petroleum, coal and propane industries in New Jersey are sufficiently competitive. In the natural gas industry, the foundation has been laid and the transition to a competitive retail marketplace is underway. The previous section of this Phase I Report includes a recommendation that the Board of Public Utilities initiate a proceeding to determine the long-term structure of the electric power industry. The long-term structure of the electric power industry must include an assessment of direct access or retail wheeling, divestiture and the treatment of stranded investment.

The achievement of the long-term goal of increased competition may lessen or even obviate the need for ongoing regulatory oversight. However, the transition of the gas and electric energy sectors from industries dominated by regulated monopolies to industries where market principles and competition become increasingly dominant requires strong regulatory oversight. The State, to ensure that the changing nature of the regulatory environment benefits all customers, should continue regulation of the natural gas and electric power industries. Such regulation, however, should be transformed to reflect the increasing ability of the marketplace to provide incentives to capture the benefits of competitive forces.

This section outlines several proposals intended to continue the transition to more competitive energy markets. Each is intended as an interim step, not as an alternative to the long-term restructuring ultimately required.

The interim proposals are necessary tools for achieving the energy goals and objectives of the State. These short and intermediate term proposals are intended to provide utilities with incentives to reduce costs to a competitive level without compromising customer service or safety. At the end of

the transition period, utilities will be unable to rely on regulatory protection to insulate them from competitive forces.

Therefore, utilities with uneconomic assets or high costs must develop plans for reducing costs to competitive levels and to reflect such cost reductions in their prices. Finally, the proposed interim policies are intended to give utilities pricing flexibility to respond to increased competition from other utilities and nonutility generators during this transition period.

The electric power industry, traditionally stable and predictable, has been undergoing incremental change since the 1970s. These changes came in the wake of nuclear power plant cost overruns, fossil fuel supply interruptions and price spikes, rapid inflation and high interest rates.

The principal changes have occurred in the wholesale or bulk electric power market. The previous section discussed how the Public Utilities Regulatory Policies Act (PURPA) and the Energy Policy Act of 1992 (EPAct) facilitated the development of a competitive wholesale electric power marketplace. Today, the wholesale electric power market is characterized by flourishing competition where buyers are no longer captive to one supplier, but are, instead, presented with a multitude of supply choices. Sellers, too, have the option to sell to customers at distant locations in other utility service territories. This flourishing competition is exemplified by Jersey Central Power & Light's (JCP&L) recent solicitation wherein JCP&L received 115 proposals representing over 7,000 MW of capacity to fill its needs of several hundred MW.

The current State regulatory procedures for review and approval of the acquisition of electric power resources by the regulated utilities can be characterized as a patchwork of different and sometimes conflicting policies. This is not a criticism of these various laws, regulations and policies, as each evolved on an ad hoc basis as a legitimate response to real world experience and incremental changes in the electric utility industry. The array of procedures currently in place for the various alternative electric resource options includes the Certificate of Need for new utility projects which exceed 100 MW of incremental capacity; competitive bidding for nonutility projects; prudency reviews litigated at the Office of Administrative Law for power purchases from other utilities; base rate cases for utility repowerings or construction that does not require a Certificate of Need; and a collaborative process

ENERGY

for demand-side management or energy conservation programs. Each of these review processes is governed by a separate set of governmental regulations, laws or policies.

While such a piecemeal approach might have made sense in the past, it can no longer be deemed consistent with the State's desire to have smarter, more efficient and more streamlined governmental processes. Nor are the current procedures consistent with the rapidly growing competitive nature of the electric power industry and our desire to rely more on market forces, and less on stringent regulatory oversight to achieve reliable and affordable electric service for our State's residents and businesses.

Given the evolving competition in the wholesale electric power markets and in recognition of the existing patchwork of laws and policies governing power supply, the Board of Public Utilities formed an Advisory Council on Electricity Planning and Procurement which commenced meeting in July 1992. The Advisory Council, which was chaired by Board of Public Utilities Commissioner Carmen J. Armentani, discussed a number of issues related to the development of a streamlined regulatory process which allows ratepayers to realize the benefits of a competitive wholesale electric power marketplace.

The Advisory Council on Electricity Planning and Procurement issued its final report in July of 1993.¹³ A basic two-step process was identified in the Advisory Council's final report that promises to both streamline and render more efficient the planning and regulatory review process, and to facilitate a transition towards a greater reliance on market forces. The enhanced efficiency of the planning function can be achieved by the implementation of an integrated resource planning (IRP) process. IRP creates a forum for assessing the long-term costs to New Jersey's economy and environment from the various resource options, and is intended to replace the existing piecemeal approach with one integrated review process.

The transition to a greater reliance on market forces can be achieved through the timely implementation of a competitive supply procurement process to obtain new sources of power. The IRP, combined with a competitive supply-side procurement process, is intended as a short-term or interim step to provide ratepayers benefits from additional competition in the wholesale power marketplace, while the Board of Public Utilities investigates the appropriate, long-term structure of the electric power industry.

Integrated Resource Planning

Integrated resource planning (IRP) is a process for determining the appropriate mix of demand-side and supply-side resources which are expected to provide long-term, reliable service to utility customers at the lowest reasonable cost, and which otherwise maximize benefits to the State. The development, evaluation and approval of integrated resource plans is not based solely on financial or lowest cost considerations, although this certainly remains a major factor. The objective of IRP is to ensure the overall welfare of the State of New Jersey. This will require consideration of the impacts of the various resource options on prices, system reliability, the financial stability of the utility, environmental quality, economic development, fuel efficiency and diversity, energy efficiency and the development of renewable resources. The IRP process should identify and assess the various demand and supply-side options available to the utility and present a flexible plan for each utility to fulfill its capacity and energy needs.

Electric Integrated Resource Planning

Electric utility supply planning involves two major functions:

1. load and energy forecasts for determining levels of generating capacity and energy production to meet demand; and
2. capacity and energy plans to ensure that supply meets the forecasted demand, plus a required reserve margin.

Six primary options exist for utilities to match supply with demand: construction of new capacity; purchase of capacity and/or energy from other utilities; purchase capacity and/or energy from nonutility generators such as cogenerators or small power producers, which are Public Utility Regulatory Policy Act Qualifying Facilities (PURPA QFs) or Exempt Wholesale Generators (EWGs); implementation of conservation or demand-side management (DSM) programs; purchase of DSM implemented by third parties; rehabilitation or upgrading of existing utility facilities; or any combination of the above.

Each of these options have different impacts on rates, revenue requirements, and the financial health of the utility and each exposes ratepayers and shareholders to different levels of risks. Factors such as environmental impacts, reliability, economic development, fuel supply and diversity and technology diversity must be considered when determining a mix of supply and demand-side options that best serves

the needs of ratepayers, utility shareholders, and the State.

The IRP is intended to be a fully integrated process which evaluates the various resource options on a comparable and comprehensive basis, and increases regulatory efficiency by replacing the existing patchwork of piecemeal review procedures with a comprehensive integrated review.

This can result in a streamlined review of specific projects if such projects are consistent with an approved integrated resource plan. Further, issues which are reviewed and resolved by the Board by virtue of its approval of a utility's integrated resource plan should be considered pre-approved in the review of specific projects, to the extent that the projects are consistent with the approved plan and that assumptions used in developing the plan remain valid.

The integrated resource planning process identifies specific utility supply needs, both energy and capacity, and determines the appropriate amount of supply-side and demand-side resources to meet these needs. As such, IRP maintains the public policy objective of determining need, as required in the Electric Facility Need Assessment Act. In addition to identifying the appropriate level of energy conservation or DSM and the block size of supply resources to be procured, the IRP can be used as a tool for evaluating preferences for specific fuels or technologies, the role of renewable energy, and risk profiles associated with supply portfolios consisting of different mixes of short-term, medium and long-term resources.

A well-designed IRP process will provide for an open public forum for debating the costs and benefits of the various supply-side and demand-side options. IRP typically provides for the formation of public working groups to provide input into the development of a utility's IRP and requires public hearings on draft IRPs. IRP allows for public input on resource decisions before such decisions are made. Further, the IRP process allows State decision-makers to provide guidance on the appropriate balancing of economic, environmental and energy factors in resource decisions.

Recently, questions have been raised as to whether a planning process such as IRP is consistent with an increasingly competitive industry. This is a legitimate point of inquiry as specific IRP rules are debated. However, appropriately structured, IRP can co-exist with competition. Electric utilities, even in an industry structure where the production function is divested, will need to assess their existing resource base and long-term projections for core customer

power needs, and plan accordingly to ensure that adequate resources are in place to serve those needs. The IRP process acts as a tool to render this planning process more efficient and comprehensive. A key focus for the Board of Public Utilities in promulgating and implementing effective IRP rules will be to ensure that IRP enhances the utilities' ability to tap into the competitive market in a timely fashion to benefit ratepayers, rather than hinder those efforts.

The integrated resource planning rules, combined with a competitive supply-side procurement process, can offer a more efficient alternative to the existing patchwork of regulatory review processes, while preserving the public policy objectives of each.

Gas Integrated Resource Planning

The Energy Policy Act (EPAcT) of 1992, 15 U.S.C. §3203 (a), requires that each State regulatory agency provide public notice of and conduct a public hearing regarding integrated resource planning (IRP) for natural gas utilities by October 24, 1994. The implementation of natural gas IRP, however, is not mandated by the EPAcT. Such implementation is left to the prudent discretion of each regulatory agency. Gas IRP is defined in the EPAcT as "the use of any standard, to compare demand-side management measures and the supply of gas to minimize life-cycle costs of adequate and reliable utility service to gas customers".

In compliance with EPAcT, the Board of Public Utilities, in BPU Docket Number GX94020042, opened a proceeding to consider the appropriateness of gas integrated resource planning. Two public hearings were held.

As a result of testimony at these hearings and subsequent written comments, the Board of Public Utilities determined in its Order dated December 9, 1994 that natural gas IRP standards should not be implemented at this time. The Board of Public Utilities concluded that: "In the Board's view, additional formalized natural gas IRP requirements, at this time, are unwarranted and would run counter to the path on which the industry is headed..." and "... We believe it would be better to further review this issue after additional experience with FERC Order 636 and the unbundling of in-state natural gas services."

As the Board of Public Utilities recognized, the electric and gas industries are different in terms of capital structure and deregulation. Due to the unique differences between the gas and electric industries in New Jersey, IRP requirements

should be considered separately for each industry. The electric industry is capital intensive while the gas industry is commodity intensive. The electric industry is vertically integrated with a planning horizon of approximately 30 years, while the gas industry is composed of many parts with a much shorter planning horizon, typically 3-5 years. Also, New Jersey's LDCs are purely distribution companies. The LDCs do not produce natural gas. They only distribute or transport it. Therefore, modifications on the supply side are extremely limited.

The natural gas industry is unlike the electric industry where supply options include utility-owned or purchased power, and where each option is further subdivided by fuel choice and operating characteristics. Additionally, the gas industry in New Jersey has evolved to the point where all commercial and industrial customers, as of January 1, 1995, have competitive supply options available. This level of competition does not currently exist in the electric industry.

Prospectively, optimization of the supply-side function is being fostered in New Jersey, not with additional regulation, but rather with increased competition. With FERC Order 636 and implementation of the Board of Public Utilities' December 1993, "Guidelines for Further Unbundling of New Jersey's Natural Gas Services," Docket Number GX93110516, commercial and industrial natural gas customers are able to purchase gas from sources other than the LDC, taking some of the responsibility for supply and capacity planning from the LDCs and placing it with marketers and individual customers. The resulting increase in competition will provide an incentive for New Jersey's natural gas utilities to develop and implement services for their customers at the lowest possible cost. As more customers choose to purchase gas supplies apart from the traditional LDC, any potential benefits of gas IRP will continue to diminish. As the Board of Public Utilities' "Guidelines" Order implies, residential transportation may be on the horizon. It is not unimaginable, therefore, that at some point the natural gas supply-side function may be deregulated. Under this type of scenario, implementation of IRP requirements appears unwarranted and even counterproductive.

While natural gas utilities should be encouraged to continue to incorporate IRP principles in their corporate planning and practices, any formal requirements should await the Board of Public Utilities' further review of this issue in the fall of 1996.

Renewable Energy in Integrated Resource Planning

Long-range energy planning focuses on the future overall health and welfare of the public, as well as the stability, reliability and security of energy generation and distribution. Currently, demand-side management, with its emphasis on conservation and energy efficiency, can significantly reduce our reliance on imported fossil fuels, lower our fuel bills, and limit the public's exposure to energy-generated pollutants. Renewable energy technologies also have the potential to offer many of these benefits.

Potential benefits, however, must be weighed against additional cost, if any, in determining the appropriate level of those technologies in the State's fuel mix. Integrated resource planning provides a forum for assessing the costs and benefits of the various resource options, including energy conservation, renewables and alternative technologies.

Renewable sources of energy and other alternatives to fossil and nuclear energy generation will be considered within the context of integrated resource planning during Phase II of the Energy Master Plan. Targets or specific goals for conservation efforts and reliance on renewable or recoverable fuels cannot be set until a comprehensive assessment is completed that considers both the benefits and the costs of these alternatives. The evaluation must include rate impacts, environmental benefits, economic development considerations including job creation, revenue requirement impacts, risk profiles to customers, developers and the utility or energy generator, technology diversity and maturity, flexibility, fuel diversity, fuel cost risk, and system impacts deemed necessary to further the State's various planning initiatives.

Concomitantly, the evaluation of specific alternative energy generation projects will be evaluated during integrated resource planning. The IRP process during Phase II will allow for the assessment of the unique attributes of the individual project and the resultant costs, benefits and impacts, and coordinate energy policy-making with the State's economic, environmental, transportation and land-use planning. The endorsement of any energy generation project or target setting depends on this type of comprehensive evaluation.

Supply-Side Procurement

It should be emphasized that IRP is primarily a planning tool designed to facilitate a holistic and efficient approach to the assessment of diverse resource alternatives. Once the re-

source needs have been identified through IRP and priorities have been established to ensure that the utilities' power procurement policies are consistent with the State's energy, environmental and economic development policies and goals, a procurement process must be employed that enables market forces to work for consumers.

A reliance on the bulk power market is not meant to immediately end the vertically configured electric utility or utility-based power plant construction programs. There is no inherent reason that a utility-constructed power plant cannot compete with nonutility generators or power marketers. However, it should not be assumed that utility projects are the preferred option. Policies should not be adopted which simply opt for nonutility power to the exclusion of utility construction; nor should policies be adopted which continue to permit utilities to embark on major power plant construction programs, such as repowerings, without first "market testing" such projects. Reliance on after-the-fact prudency reviews of such projects can no longer be justified as being in the best interests of the State. Of central importance is the development of a system whereby proposed utility power projects compete directly with the market to determine the best alternative for the State and its ratepayers.

Three basic models have been proposed which allow utilities to compete directly with nonutility generators in the wholesale electric power market. The first requires a utility to divest or spin off its generation assets into an entity, separate from its transmission and distribution functions. The second prohibits the native utility from competing to provide incremental generation needs to its customers, but allows utilities to compete in other utility service territories. The third allows the native utility to compete to provide incremental generation to its customers through a competitive bidding process and requires the State's utility commission to act as judge in such a process.

Divestiture will be assessed during Phase II of the Energy Master Plan to determine its necessity in the long-term development of a fully competitive wholesale electric power market. Divestiture, however, must be considered in the context of the overall structure of the electric power industry. As such, many legal, technical and policy questions remain. Until these issues are resolved, divestiture is not a realistic option at this time. Further, even if it is determined that divestiture is the appropriate option, a transi-

tion period will most likely be necessary.

Historically, utility management has been responsible for making resource decisions, subject to approval by the Board of Public Utilities. As the wholesale electric power market becomes more competitive, utility management faces an inherent conflict of interest as it becomes both a potential seller of power in a competitive market and the buyer of power. The conflict arises in that the selection of its own project may be best for the utility, but not for its ratepayers.

Two approaches can be used to solve the conflict of interest problem. One solves it by banning utilities from providing incremental power to their customers while the other solves it by shifting responsibility for the selection of winning bidders to the Board of Public Utilities.

The primary utility option for maintaining existing capacity levels identified in recent New Jersey utility capacity plans involves repowering of existing utility generating plants. Banning utilities from participating in their own service territory could result in eliminating the lowest cost option for new capacity. Of course, utility repowerings should only proceed if shown to be the lowest cost by market testing through a fair, competitive bidding process.

Banning a utility from participating in its own service territory restricts competition and, therefore, runs counter to the goal of maximizing competition. Given that divestiture is not a realistic option for the short-term, the best option for New Jersey's near future is allowing utilities to bid in their own service territory and eliminating the conflict of interest issue by having the Board of Public Utilities select winning projects. It should be noted that pursuant to existing Certificate of Need requirements, the Board of Public Utilities must compare utility proposals to other options and "select" the best option. A process that allows the Board to compare proposals in a direct competitive solicitation, rather than in a litigated proceeding as is now the case, offers a more straightforward, streamlined method for comparing proposals. It is important to reiterate that the supply-side model proposed is the next step in the transition to a fully competitive market, not a long-term solution.

The Board of Public Utilities should develop a supply-side procurement model which permits the native utility to participate in the wholesale power market in its own service territory and eliminates the conflict of interest by having the Board of Public Utilities select the winning bidders. Extensive discussions concerning this approach took place during

ENERGY

the meetings of the Advisory Council on Electricity Planning and Procurement and subsequent to the issuance of the Advisory Council's final report. While no consensus has been reached, based on comments provided both in that process and through the Energy Master Plan Advisory Council process, the Board of Public Utilities should initiate a process for investigating the appropriateness of a supply-side procurement model with the following significant features:

- a utility's specific need for additional resources is identified in an integrated resource plan approved by the Board of Public Utilities;
- a streamlined procurement process for short-term purchases of less than four years;
- if a native utility project is selected, the Board of Public Utilities will require an independent audit of the utility's books to ensure there is no cross-subsidization and that all costs associated with the project are booked to the project;
- the supply-side procurement process should have a term of six years which is equivalent to two cycles of IRP;
- if the native utility wins the bid, the Board of Public Utilities should be permitted to consider a contract rate as an alternative to rate-base/rate-of-return regulation;
- competitive solicitations must assess both price and nonprice factors including environmental impacts;
- if the native utility is participating in a competitive solicitation, the Board of Public Utilities will oversee the bidding process, including both the development of requests for proposals and the selection of bidders;
- the Board of Public Utilities should use private sector consultants that report directly to the Board to assist in overseeing a bidding process in which the native utility is a participant. The cost of such consultant services should be reimbursed via bidding fees;
- if the native utility is not proposing a project, the native utility will oversee the bidding process since no conflict of interest exists. Standards will be required to ensure utilities do not use information received to their benefit in future bids; and
- if the native utility proposes participating in a competitive solicitation, the Board of Public Utilities shall develop standards to ensure that it is in the public interest to permit the utility to bid and if selected, receive a contract rate as opposed to developing the facility pursuant to rate-base/rate-of-return regulation.

Subjecting utility proposals to direct competition with both nonutility generators and proposals from other utilities and replacing a patchwork of review processes with a single, integrated review process represents a reasonable next step in the transition to a competitive wholesale electric power marketplace which promises efficiencies and savings for New Jersey's electric consumers. Again, it is important to note that this model is offered as an interim solution while the Board of Public Utilities investigates the appropriate, long-term structure of the industry. Although many details need to be addressed, the Board of Public Utilities should initiate a proceeding to develop a supply-side bidding process consistent with these principles.

Certificate of Need

The Electric Facilities Need Assessment Act¹⁵ requires utilities to obtain a Certificate of Need from the Board of Public Utilities prior to commencing construction of a new generating facility which adds either 100 MW of new capacity or increases the existing capacity of a plant by 25 percent or more. Under this process, utilities are required to demonstrate that no more efficient, economic or environmentally sound option is available.

The process requires utilities to file for a Notice of Intent one year before applying for a Certificate of Need. The statute provides that the application for a Certificate of Need will be transferred to the Office of Administrative Law (OAL) as a contested matter. Under the law, a utility cannot commence construction of a facility for which it is required to obtain a Certificate of Need before receiving it. Also, no State instrumentality can issue relevant permits concerning the proposed power plant prior to the Board of Public Utilities issuing a Certificate of Need. The Notice of Intent process, combined with the Certificate of Need process, is estimated to take approximately three years.

Nonutility generators are not required to obtain a Certificate of Need. Also, other State instrumentalities can issue permits for nonutility generators at any time.

The primary public policy objectives of the Certificate of Need are a finding that the facility is necessary to meet the projected need for electricity in the area to be served, and a demonstration that no more efficient, economic or environmentally sound option is available. These public policy objectives are maintained by the combination of IRP and supply-side bidding.

IRP, combined with a competitive supply-side process, is proposed as a more efficient alternative to the existing processes which includes: prudence reviews of interutility power purchase agreements; competitive bidding and Board of Public Utilities' review of utility power purchase agreements with nonutility generators; base rate case reviews for repowerings and new utility facilities which do not require a Certificate of Need; Certificate of Need requirements for new utility facilities; and the review process for determining the appropriate level of DSM. Pursuant to existing policies, in each of the above processes, the Board of Public Utilities is required to compare the option under review to other available options. IRP, combined with a competitive supply-side process, offers a streamlined process wherein all options are compared in a single integrated process and all supply-side options, both utility and nonutility, are directly compared in a competitive bid.

IRP, combined with a competitive supply-side process, maintains the two primary public policy objectives of the Certificate of Need: a finding that the proposed facility is necessary to meet the projected need for electricity and a determination that no more efficient, economical or environmentally sound alternative is available. It is, therefore, inefficient and duplicative to implement IRP and a competitive supply-side procurement process in combination with the Certificate of Need.

As we strive to develop a competitive wholesale marketplace, consistent standards should be applied to similar facilities. However, under current law, if a utility and, for example, an Exempt Wholesale Generator (EWG) were competing to build identical generating facilities in excess of 100 MW, the utility would be required to obtain a Certificate of Need while the EWG would not. Also, the utility could not receive permits until obtaining a Certificate of Need, while the EWG could. No public policy objective exists which justifies such differential treatment of similar facilities which are differentiated only by ownership.

For these reasons, IRP, combined with a competitive supply-side process, offers a more streamlined alternative to the existing patchwork of review processes, including the Certificate of Need. IRP, combined with a competitive supply-side process, also promotes competition in the wholesale electric power market by providing for direct competition between utility and nonutility facilities.

Therefore, the Board of Public Utilities should propose the

repeal of the Electric Facility Need Assessment Act and the replacement of the Act with legislative standards which permit the Board of Public Utilities to develop alternative processes, such as IRP and a competitive supply-side procurement process, which maintain the public policy objectives of the Act.

Findings:

- IRP combined with a competitive supply side process, offers a streamlined regulatory approach compared to the existing patchwork of review processes.
- IRP combined with a competitive supply side process, promotes competition in the wholesale electric power market.
- IRP combined with a competitive supply side process, provides a forum for assessing the appropriate role of energy conservation and renewable sources of energy in meeting the State's energy needs.
- The Electric Facility Need Assessment Act is incompatible with today's competitive environment.
- It would be duplicative and inefficient to implement IRP combined with a competitive supply side process, in combination with the Electric Facility Need Assessment Act.

Recommendations:

- ▲ The Board of Public Utilities should commence a rulemaking proceeding to adopt integrated resource planning regulations for electric utilities.
- ▲ The Board of Public Utilities should commence a proceeding to adopt an electric power supply-side procurement process which is consistent with the approach outlined in the above Supply-Side Procurement section including:
 - a competitive process for all new resources including purchases, repowerings and

new construction:

- allowing the native utility to bid in its service territory;
- providing for the Board of Public Utilities to act as judge if the native utility is proposing a project; and
- providing for auditing procedures to ensure no cross-subsidization.

▲ The Board of Public Utilities should draft proposed legislation which repeals the Electric Facilities Need Assessment Act and replaces it with a requirement that the Board adopt policies which maintain the public policy objectives of the Act, including a determination that the proposed facility is necessary to meet the projected need for electricity in the area to be served and that no more efficient, economical or environmentally sound alternative is available. Any proposed legislation should also include a requirement that the Board of Public Utilities' policies continue to address the conflict of interest issue. The repeal of the Electric Facilities Need Assessment Act must be timed to coincide with the adoption of IRP rules and the competitive supply-side procurement process to ensure that there is no gap in maintaining the public policy objectives of the Act and to prevent duplicative review processes.

Rate Flexibility and Alternative Regulation

Certain retail customers of the State's regulated natural gas and electric utilities have, to varying degrees, choices concerning their source of gas or electric. The Board of Public Utilities' natural gas unbundling order, previously described, allows the State's commercial and industrial customers to purchase gas from other than the local distribution company. While the retail electric markets have not yet been restructured in a manner similar to the natural gas markets, electric utilities do face competition for retail customers.

(Perhaps the most direct form of electric retail competi-

tion is on-site generation. The best-known example of this phenomenon is the construction by a third party of an unregulated cogeneration facility at the site of a large industrial customer, with the facility serving as the primary source of electricity and process steam for the manufacturing entity. Thereby, retail electric sales can be lost to the local electric utility, and Gross Receipts and Franchise Tax (GRFT) revenues lost to the State and, ultimately, to the State's municipalities. Such arrangements are attractive at energy-intensive manufacturing facilities, where the host industrial customer can significantly reduce its operating costs and the nonutility generator can sell enough power and steam to realize an acceptable return on investment.

Other than on-site generation, the principal competitive threat currently facing the electric utilities is that of business relocation or curtailment. To wit, the retail electricity prices and other costs of doing business in New Jersey are higher relative to many neighboring states, and even more so when the comparison is expanded nationwide. As such, the specific threat facing the State's utilities is that businesses in New Jersey can and do relocate to other states or even overseas where power is less expensive, or shift production from in-state facilities to out-of-state plants. In this global economy, power costs can be a key, contributing or merely incidental variable in such decisions. Of course, for most residential customers and many business customers, on-site generation or relocation in order to garner less expensive electricity prices is neither feasible nor practical.

Due in part to the accelerating globalization of the economy and slower world economic growth, U.S. industry, as well as other business sectors, have come under a heightened degree of competitive pressure. Demands by energy-intensive manufacturers for lower energy prices in an attempt to reduce production costs have created pressures for new ways to accommodate these demands. Rate flexibility, whereby prices are set more on a market-driven basis rather than the traditional average embedded cost-of-service approach, is one tool which has been applied recently to address competitive concerns and enhance the State's economic development goals. In a number of states, such as California and Michigan, retail wheeling and other programs are being explored as a means of addressing the demands of business for less expensive electricity. Under a retail wheeling program, retail customers would have a multi-

tude of suppliers of electric power generation to choose from, similar to the structure which has in recent years emerged on the wholesale level and in the natural gas industry. Such a scheme would subject electric utilities to a much greater degree of direct competition for the sale of electric generation to their retail customers.

Given the somewhat limited, but growing, retail competition already being faced by the natural gas and electric utilities industry, and the prospect of heightened competition and perhaps retail wheeling on the horizon as business and economic development pressures mount, the financial rating agencies have already begun re-evaluating the degree of business and regulatory risk to which utilities are exposed. This re-evaluation has resulted in lower financial ratings for many gas and electric utilities. Some of the key factors which can negatively impact the perceived future financial performance of an electric utility are high-cost production, a large proportion of industrial loads that are targeted by competitors, high-cost excess capacity, uneconomic plant investment and high-cost power purchase contracts. The specific cause for the potential devaluation of many utilities in the face of heightened competition is the difference between the actual generation costs of a particular utility and the market price for power. Unfortunately, due to a number of economic and environmental factors, New Jersey's electric utilities generally do not fare well in such a comparison due to relatively high production costs. This should be cause for some concern and careful thought as the State considers how to best address the emerging competition issues. Moreover, it is expected that nearby states which currently enjoy lower energy costs, in part due to less stringent environmental emissions standards, will also be implementing policies to assist their utilities and businesses to compete with New Jersey's.

It is expected that over time, the unleashing of the competitive forces in the wholesale power market, as furthered by the proposed IRP/Supply-Side model, will gradually bring down the average electric production costs experienced by the State's utilities. This, in turn, should assist the utilities to control their retail prices and otherwise become more competitive in the retail marketplace.

However, these changes and benefits are not expected to occur overnight. The immediate question is what the State and its utilities can do in the short term to permit the State's utilities the flexibility to compete for their at-risk customers

and otherwise offer pricing incentives to promote economic development, while at the same time providing utilities with incentives to control and reduce their costs and rates in order to become more competitive.

Rate Flexibility

Over the past two years, as a result of individual competitive threats or in response to economic development concerns, the Board of Public Utilities has approved a number of tariffs or service agreements which have effectuated or created the opportunity for price discounts for individual customers. Such actions include the New Jersey Steel service agreement, the Bayway refinery contract, and the economic development tariffs for the State's electric and gas utilities. Even more recently, in January 1995, the BPU approved JCP&L's request for rate flexibility in order to implement discounts for its high-volume, residential electric heating customers. Such initiatives have been adopted by the Board of Public Utilities on a case-by-case basis, after extensive and time-consuming regulatory reviews.

While these actions have been taken under current law as embodied in Title 48, several concerns have arisen which question the ability of the utilities and the regulatory process to react in a timely fashion to competitive threats and emerging economic development opportunities. Specifically, while the Board of Public Utilities has asserted its ability to approve such tariffs or service agreements under current law, the continued prospect of legal challenges to that ability casts a cloud over such transactions. Specific enabling legislation will dispel any uncertainty and facilitate the execution of such transactions, ultimately benefiting the State's economic development, as well as the utilities and their customers.

It is therefore appropriate that the Board of Public Utilities develop and propose such enabling legislation to specifically permit the Board of Public Utilities to approve the implementation of rate flexibility by electric and gas utilities. Such legislation will include or provide for the establishment by the Board of Public Utilities of standards to govern such rate flexibility programs. In this manner, all parties will know in advance the conditions for the offering of price discounts and, subject to meeting the prescribed standards, utilities will be able to swiftly negotiate and effectuate such transactions without awaiting the results of a lengthy and complex regulatory review.