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JOHNSON CONTROLS

April 15, 1996

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Docket No. U-0000-94-165
ARIZONA CORPORATE COMMISSION
1200 WEST WASHINGTON
PHOENIX, ARIZONA 85007

Arizona Corporation Commission
DOCKETED

APR 17 1996

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**RE COMMENTS OF JOHNSON CONTROLS, INC TO ARIZONA ELECTRIC UTILITY
RESTRUCTURING**

Mr. Gary Yaquisto:

Johnson Controls, Inc. is pleased to provide comments of record to the above referenced proceeding.

As the debate moves to the Working Group phase Johnson Controls will be available to participate as necessary to provide additional comments.

We appreciate the opportunity to repond to Arizona electric utility restructuring issues.

Sincerely,

William Ross
Manager Government Affairs
Johnson Controls, Inc.

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A Synopsis of

The Retail Energy Services Company Model For Restructuring the Energy Services Industry

A Customer Focused Approach to Restructuring

Please Contact:

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Designed Around Customers

The sole purpose of restructuring the energy services industry is to improve the delivery of energy services for individual customers and for society as a whole. To get there from here, customers must be given more real choices about services and who provides those services.

Likewise, all retail energy services providers must have comparable access to retail customers and the physical systems needed to serve customers. The delivery of energy efficiency services and renewable energy sources must be increased. Environmental protection standards must be maintained or raised. Finally, the benefits of utility restructuring must extend to customers who are not interested in making retail energy services choices.

Three fundamental principles should guide restructuring of the energy services industry:

Empower the Customers

Give customers choice and control over the energy services they receive and over the providers of these services.

Empower the Retail Energy Services Market

Provide all utility services on a common carrier basis to all retail providers of energy services, and create a retail energy services market that provides a level playing field for all industry providers.

Collect Funds to Support Attainment of Societal Objectives

Establish a distribution access charge to support attainment of societal objectives that the market alone does not attain. These include low-income programs, cleaner air and water, greater energy efficiency and increased use of renewable energy sources.

These principles are embodied in the Retail Energy Services Company Model for restructuring the industry, which Johnson Controls supports. The model delivers retail access comparability for all customers and

retail energy services providers. This document is a condensed version of the Retail Energy Services Company Model report.

A Golden Opportunity

In order to deliver improved energy services for customers -- as well as achieving consumer protection, environmental protection and competitiveness objectives -- fresh approaches to regulation and competition are essential. Restructuring provides a golden opportunity to establish more effective mechanisms for the energy services industry to achieve the full range of customer and societal objectives. Restructuring must extend beyond creating competition in the generation of power, to encompass building the foundation for a fully competitive retail energy services market.

The current approach of depriving customers of the ability to choose their energy services suppliers also deprives the retail energy services market of the benefits of direct customer decision-making input -- and of the entrepreneurial drive to spur the innovations needed to meet customer demands and societal objectives.

Customers are the direct source of information about what they want. Giving customers choice and control will enable them to provide direct input into which retail energy services are provided in the marketplace. Giving customers access to the full spectrum of energy services options allows them to acquire a package of energy services that closely fits their individual needs. If retail energy services companies are allowed to provide the full spectrum of energy services, they will be able to match customer needs better than they can today.

Society Pays the Price

Regardless of how the energy industry is structured, now or in the future, society as a whole will bear the consequences of the summation of all energy services choices made by groups and individuals. As our world shrinks, the consequences of our direct energy

services choices become increasingly unavoidable. While there is some room for hair-splitting over the relative importance of these objectives, we cannot ignore the steady progress of society toward recognizing and addressing the impacts of our direct energy services choices. That's because they become more apparent over time.

Direct customers, society as a whole, and the environment will pay the full price of the chosen approach to restructuring. Consumers will pay for the direct costs via their energy services bills, they will absorb environmental impacts as changes in the quality of life, and they will pay taxes for state/federal efforts to undo any environmental problems that may result from the overall summation of energy services choices. Addressing these issues will remain prominent features of the state, national and international political landscape.

Evaluating Restructuring Proposals

Decision makers contemplating industry restructuring must evaluate how effectively each proposal achieves the full range of societal objectives -- including energy efficiency, renewable energy sources, lower costs, consumer protection and environmental protection.

Consumer and environmental advocacy organizations, as well as regulators serving the public interest, will have significant responsibilities in restructuring decision making. Progressive utilities, generators and energy services companies also have *voluntary* responsibilities to provide leadership in supporting a restructuring plan that serves consumer and environmental interests, along with providing shareholder opportunity.

We're Halfway There

On the road to establishing wholesale power supply competition, the Federal Energy Regulatory Commission cut through more than

50 years of arcane precedents with a simple and powerful concept of *transmission* service comparability:

All transmission services that the transmission owner uses must be available to the transmission service purchaser for the same price.

If the Federal Energy Regulatory Commission sticks to its guns and keeps the definition of comparability at this simple and concrete level, it will eliminate the market power of transmission owners. With this transmission comparability standard, the Federal Energy Regulatory Commission is paving the way for power supply competition.

To create a fully competitive retail energy services market, this comparability standard needs to be extended to include *distribution*:

All distribution services that the distribution owner uses must be available to the distribution service purchaser for the same price.

Achieving Comparability

Both transmission access and distribution access are incorporated in the Retail Access Comparability Standards that define the Retail Energy Services Company Model for industry restructuring. This model begins with a customer focus, and then aligns the interests of all industry players as closely as possible with societal objectives. Following this formula, all segments of the energy services sector where markets can be established are made competitive.

The Retail Access Comparability Standards for implementing this restructuring model also include mechanisms to adjust competitive market outcomes, *where necessary*, to achieve the full range of direct customer and overall societal objectives. This approach empowers direct customers, indirect customers, and the full range of energy services providers.

Retail Access Comparability Standards

The Road Map of Restructuring

<p>1. Give all customers the right to choose their retail energy services providers at the same time.</p>	<p>Giving customers the right to choose their own providers of retail energy services enables them to vote with their pocket books. If they do not like the prices, service or options provided by one supplier, they can shop around. Choice relieves customers of the burden of paying for power supply investments unless they contract for those investments. It is important to give all customers choice <i>at the same time</i> so that cost shifting to any remaining customers without choice does not occur.</p>
<p>2. Use an independently managed, open bidding process to select providers of optional bundled retail energy services packages for customers not interested in choosing energy services suppliers for themselves.</p>	<p>In order to prevent cost shifting, it is important that all customers be given the choice of energy services suppliers at the same time. Some customers, however, will not be motivated to participate actively in the retail energy services market. To bring these customers the benefits of industry restructuring, State Public Utility Commissions will design packages of energy services for these customers -- and select a set of qualified suppliers through open bidding.</p>
<p>3. Provide customers with direct, unbundled price information on the costs of both energy and reliability services.</p>	<p>Customers need to be provided with direct, unbundled information about the costs of the energy services choices they make, including energy costs and reliability costs. Their energy services bills will reflect the impact of changes in energy usage or changes in the effect the customer has on system reliability. These price signals are beneficial to both customers and providers because it will allow them to respond quickly to reliability and cost information.</p>
<p>4. Provide common carrier transmission, distribution, system coordination and reliability services -- using an independent provider, regional transmission and distribution tariffs, and regional planning.</p>	<p>In addition to common carrier basic transmission and distribution services, a number of related services should also be made available on a common carrier basis. These include: transmission coordination, reliability coordination, generation/supply dispatch coordination, and a bidding mechanism for allocating over-subscribed transmission facilities. These common carrier services are necessary to provide the fundamental transmission, distribution, reliability and coordination services that allow wholesale and retail service competition.</p>
<p>5. Allow bilateral electricity trading, with reporting only of physical transactions to the system operator.</p>	<p>Allowing bilateral trading gives buyers and sellers the flexibility to structure these transactions in ways that work best for each participant. Reporting the physical components of the transaction to the system operator is necessary for the system operator to be able to operate the system effectively and to maintain reliability.</p>

<p>6. Provide common carrier services for customer billing, customer metering and customer energy use information -- using independent providers -- and also allow competitors to provide these services.</p>	<p>Many services that are presently included in regulated utility activities are not inherently monopoly services. These services include customer billing, customer metering and customer energy use information. Allowing competing entities to market these services and making these services available on an unbundled, common carrier basis from a provider of last resort will provide two important benefits: (1) Ensure that there is a provider of last resort available in the marketplace. (2) Help support a vigorously competitive retail energy services market by allowing focused providers of energy services to easily assemble a comprehensive bundle of services to meet customers' needs.</p>
<p>7. Use an independently managed open bidding process for any acquisition of increased energy efficiency measures, renewable energy sources or emission reduction.</p>	<p>Current programs for acquisition of increased energy efficiency, renewable energy sources or emission reduction are frequently open only to the utility managing the program -- or, if there is a bidding process, it is usually managed by the utility. In the competitive retail energy services marketplace, this approach would give unfair market power to the utility, and it would create a self-dealing relationship. These problems can be avoided if the providers of increased energy efficiency, renewable energy sources or emission reduction are selected through an open bidding process - with the selection process run by an unaffiliated party that is not participating in the bidding.</p>
<p>8. Collect distribution connection fees from all users to fund bidding programs for acquisition of increased energy efficiency measures, renewable energy sources and emission reduction, as well as to fund low-income programs.</p>	<p>The distribution connection fees will include an uplift charge to fund bidding programs to obtain increased delivery of energy efficiency, renewable energy sources and emission reduction. Also included in the connection fee will be an uplift charge to fund low-income programs such as weatherization and winter shut-off moratoriums. These connection fees will be applied to all voltage levels so they are unavoidable for all retail energy services recipients.</p>
<p>9. Effectively address market power, self dealing and cost shifting issues so that utility generation companies and utility retail services companies have the opportunity to compete on a level playing field in retail markets without being encumbered by unnecessary regulation.</p>	<p>An important part of restructuring is mitigating the potential of negative impacts on retail energy services markets by market power, self dealing or cost shifting by regulated monopoly service providers. This is important for two reasons: (1) Without this, utility generation companies and utility retail energy services companies could not compete on a level playing field in retail markets without being encumbered by unnecessary regulation. (2) These potential negative impacts on retail energy services markets need to be prevented to protect customers.</p>

Implementing the Retail Energy Services Company Model provides an approach to restructuring the energy services industry that will satisfy key societal objectives, including increased levels of energy efficiency, renewable energy sources, emission reduction and consumer protection -- along with delivering lower prices and improved energy services to customers through competition. The Model incorporates a smooth transition strategy. The full report is available through the Performance Contracting Group of Johnson Controls, Inc. (414-274-4592) or from Arcadia Resources, Inc. (608-250-0400).

White Paper on

**The Retail Energy Services Company Model
For Restructuring the Energy Services Industry**

A Customer Focused Approach to Restructuring

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Executive Summary

Restructuring the energy services industry represents a significant opportunity to satisfy key societal objectives, including increased levels of energy efficiency, renewable energy sources and emission reduction -- along with lower prices for customers through competition. By focusing on customers, the most beneficial approaches to restructuring will be developed.

Three fundamental principles should guide restructuring of the energy services industry:

(1) Empower the Customers

Give customers choice and control over the energy services they receive and over the providers of these services.

(2) Empower the Retail Energy Services Market

Provide all utility services on a common carrier basis to all retail providers of energy services, and create a retail energy services market that provides a level playing field for all industry providers.

(3) Collect Funds to Support Attainment of Societal Objectives

Establish a distribution access charge to support attainment of societal objectives that the market alone does not attain. These include low-income programs, cleaner air and water, greater energy efficiency and increased use of renewable energy sources.

These principles are embodied in the Retail Energy Services Company Model for Restructuring. This model delivers retail access comparability for all customers and retail energy services providers.

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3. Provide customers with direct, unbundled price information on the costs of both energy and reliability services
4. Provide common carrier transmission, distribution, system coordination and reliability services -- with an independent provider, regional transmission and distribution tariffs, and regional planning
5. Allow bilateral electricity trading, with reporting only of physical transactions to the system operator
6. Provide common carrier services for customer billing, customer metering and customer energy use information -- with independent providers -- and also allow competitors to provide these services
7. Use an independently managed open bidding process for any acquisition of increased energy efficiency measures, renewable energy sources or emission reduction
8. Collect distribution connection fees from all users to fund bidding programs for acquisition of increased energy efficiency measures, renewable energy sources and emission reduction, as well as to fund low-income programs

9. Effectively address market power, self dealing and cost shifting issues so that utility generation companies and utility retail services companies have the opportunity to compete on a level playing field in retail markets without being encumbered by unnecessary regulation

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Background Issues

Introduction

In order to deliver improved energy services for customers -- as well as achieving consumer protection, environmental protection and competitiveness objectives -- fresh approaches to regulation and competition are essential. Restructuring provides a golden opportunity to establish more effective mechanisms for the energy services industry to achieve the full range of customer and societal objectives. Restructuring must extend beyond creating competition in the generation of power, to encompass building the foundation for a fully competitive retail energy services market.

The current approach of depriving customers of the ability to choose their energy services suppliers also deprives the retail energy services market of the benefits of direct customer decision-making input -- and the entrepreneurial drive to spur the innovations needed to meet customer demands and societal objectives.

The Retail Energy Services Company Model for restructuring the industry (defined by the Retail Access Comparability Standards) provides an approach to restructuring the energy services industry that will satisfy both direct customers and societal objectives.

Criteria for Evaluating Restructuring Proposals

There are two basic criteria for evaluating restructuring proposals:

- * Does the proposed restructuring improve the delivery of energy services by effectively addressing the full range of objectives for customers and for society as a whole?
- * How efficiently does the proposed restructuring accomplish these objectives?

Any proposal to restructure the electric utility industry is incomplete unless it explicitly includes mechanisms for delivering improved energy services to direct customers and for achieving societal objectives. The challenge for all stakeholders in the energy services industry is to bring forward and jointly refine restructuring proposals until they meet these criteria.

Consumer and environmental advocacy organizations, as well as regulators serving the public interest, will have significant responsibilities in restructuring decision making. Progressive utilities, generators and energy services companies also have *voluntary* responsibilities to provide leadership in supporting a restructuring plan that serves consumer and environmental interests, along with providing shareholder opportunity.

These responsibilities arise because direct consumers, society as a whole, and our environment will pay the full price of the chosen approach to restructuring. Consumers will pay for the direct costs via their energy services bills, they will absorb environmental impacts as changes in the quality of life, and they will pay taxes for state/federal efforts to undo any environmental problems that may result from the overall summation of energy services choices.

Decision makers contemplating industry restructuring must evaluate this model and others on how convincingly each proposal achieves the full range of societal objectives -- including energy efficiency, renewal energy sources, lower costs, consumer protection and environmental protection.

Addressing Direct Customer Objectives

Customers are the direct source of information about what they want. Giving customers choice and control will enable them to provide direct input into which retail energy services are provided in the marketplace. Giving customers access to the full spectrum of energy services options allows them to acquire a package of energy services that closely fits their individual needs. If retail energy services companies are allowed to provide the full spectrum of energy services, they will be able to match customer needs better than they can today.

Addressing Societal Objectives

In a restructured world, customers will be offered many more choices regarding energy services. Society as a whole will bear the consequences of these decisions. Decision makers contemplating industry restructuring must evaluate how effectively each proposal achieves the full range of societal objectives -- including energy efficiency, renewal energy sources, lower costs, consumer protection and environmental protection. Table 1 lists the objectives of both the direct customer and indirect customer (society as a whole).

These objectives reflect the fact that as our world shrinks, the consequences of our direct energy services choices become increasingly unavoidable. While there is some room for hair-splitting over the relative importance of these objectives, we cannot ignore the steady progress of society toward recognizing and addressing the consequences of our direct energy services choices. That's because they become more apparent over time. Addressing these consequences will remain features of the state, national and international political landscape.

Table 1

Customers and Their Objectives in the Retail Energy Services Market	
Types of Customers	Objectives
Direct energy services customers	Low cost of energy services Desired level of reliability
Society as a whole, which bears the consequences of decisions made by direct energy services customers	Environmental and consumer protection Efficiency of energy use to help stabilize long-term energy supply and energy costs International security and competitiveness

Underpinnings of the Retail Energy Services Company Model for Restructuring

This approach to restructuring grew out of consideration of how more energy services could be delivered to customers more effectively. This approach makes as broad a spectrum of energy services as possible available to customers so they can acquire energy services tailored to their needs. Customers would have the option of compiling an energy services package from scratch or buying a complete package because they do not want to bother with the details. They would also be able to select from a broad spectrum of energy services providers, ranging from single-service suppliers to those who offer a full range of energy services.

By removing the current barriers that restrict customer choices of energy services and energy services providers, the structure will be in place to efficiently achieve the objectives of individual customers and of society as a whole.

Retail Energy Services Company Model for Restructuring

Satisfying Customers and Societal Objectives

The Retail Energy Services Company Model for utility industry restructuring was developed by starting with a focus on customers, then working to align the interests of the industry players as closely as possible with societal objectives. Following this formula, all segments of the energy services sector where markets can be established are made competitive. The Retail Access Comparability Standards for implementing this model include mechanisms to adjust competitive market outcomes, *if necessary*, to achieve the full range of direct customer and overall societal objectives.

This result is a new structure in which both the generation and retail energy services markets are fully competitive (see Table 2). The transmission, distribution, reliability, and system coordination functions are provided by fully regulated companies (UTILCOs) that provide these services to all market participants on a common carrier basis.

Table 2

Spectrum of Retail Energy Services Available to Customers UNDER RESCO MODEL FOR RESTRUCTURING	
1.	Electric Services: Energy, reliability, cost risk management, transportation services and system coordination services
2.	Gas Services: Energy, reliability, cost risk management, transportation services and system coordination services
3	Renewable Energy Services: On-site and off-site renewable energy services
4.	Generation Services: On-site and off-site generation and cogeneration services
5.	Efficiency Services: Energy efficiency equipment and energy management services
6.	Environmental Management Services: On-site and off-site management of environmental impacts
7.	Bundled Energy Services: Acquisition of energy services for customers <i>(This bundles energy services 1 through 6)</i>
8.	Facility Management Services: Acquisition of energy services and management of facilities for customers <i>(This bundles energy services 1 through 7 with facility management services)</i>
9	Facility Management and Energy Capital Improvement Services: Acquisition of energy services, provision of energy capital improvements, and management of facilities for customers <i>(This bundles energy services 1 through 8 with energy capital improvement services)</i>
10.	Chauffage: Initial facility design, equipment selection, facility management and energy capital improvement services, acquisition of energy services, provision of energy capital improvements, and management of facilities for customers <i>(This bundles energy services 1 through 9 with initial facility design and equipment selection services)</i>

Customer Options for Acquiring Energy Services

This approach gives customers as broad a spectrum of options for acquiring energy services as possible (see Table 3). This means offering customers an energy services provider if they do not want to bother with the complexity of choices. This also means enabling customers to exercise full control over their energy services by developing a package of services from the ground up, if they so desire. To accomplish these objectives, customers need to be given a wide range of options for acquiring their energy services. At the same time, energy services companies must have the ability to offer a full spectrum of services in order to best meet customers needs.

Table 3

Customer Options for Acquiring Desired Package of Energy Services UNDER RESCO MODEL FOR RESTRUCTURING	
1.	Sign up for one of the standardized bundles of retail energy services prepared by the State Public Utility Commission and provided by one of the suppliers selected in a bidding process run by the Commission.
2.	Do it for themselves from scratch, bundling the services they need by contracting with multiple Retail Energy Services Companies to piece together exactly the package they want.
3.	Hire several Retail Energy Services Companies to acquire and deliver various sets of energy services that, in combination, make up the package of desired energy services.
4.	Hire one Retail Energy Services Company to acquire and deliver the entire package of desired energy services.

Customer Options in Choosing Energy Services Providers

Giving customers access to as broad a spectrum of energy services providers as possible affords them a better opportunity of finding the ideal mix of providers for their needs. This spectrum of energy services providers will cover the range from single-service suppliers to those that offer a complete package of energy services (see Table 4). By giving energy service companies the opportunity to fill whatever niches they choose, they will be best able to meet varying customers needs.

Table 4

Spectrum of Retail Energy Services Providers UNDER RESCO MODEL FOR RESTRUCTURING	
1.	Single Service Retail Energy Services Companies These provide a <i>single</i> retail energy service either directly to customers or to other companies that bundle packages of services for customers.
2.	Multiple Service Retail Energy Services Companies These provide <i>several</i> retail energy services either directly to customers or to other companies that bundle packages of services for customers.
3.	Super Retail Energy Services Companies (Super-RESCOs) These provide the <i>full range</i> of several retail energy services either directly to customers or to other companies that bundle packages of services for customers.

Empowerment of Customers and Providers

Under the Retail Energy Services Company (RESCO) restructuring model with a fully competitive retail energy services market, RESCOs will be empowered to provide the full spectrum of energy services. RESCOs will provide the retail merchant function of bringing customers together with the bundle of energy services that they want. This merchant function consists of providing customers with the full range of retail energy services, including:

- * All types of retail energy fuels
- * Energy efficiency equipment and services
- * Performance contracting services
- * Acting as the agent for customers in acquiring retail energy services
- * Brokering energy supply services
- * Indoor environment management services
- * Complete facility management services
- * Aggregating retail customers and aggregating the full range of energy services to meet the needs of these customers

This diverse retail market will provide an equally diverse range of opportunities for service suppliers. These RESCOs will include companies that provide one particular service, several services, and Super Retail Energy Services Companies (Super-RESCO) that provide the complete range of energy services. Included among these retail energy services companies will be the utility generation companies (GENCOs) and utility retail services companies that capitalize on the opportunity to compete on a level playing field in retail markets without being encumbered by unnecessary regulation.

Under the RESCO model for restructuring, regulators will no longer need to provide price regulation where competitive markets can be established. However, regulation of monopoly segments of the industry is still desirable and should continue. The regulatory planning process will place greater emphasis on identifying where the market is falling short of achieving the full range of societal objectives -- and establish market mechanisms to make any necessary adjustments.

Regulatory processes also will include setting uplift charges for distribution system connections in order to fund increased levels of energy efficiency improvements and renewable energy sources -- as well as for supervising the bidding processes to acquire these services. Regulators will need to set the uplift charges for distribution system connections to fund low-income services and establish bidding processes for acquiring these services. The regulatory process also will take on functions to help support the development and maintenance of new, vigorously competitive markets.

Retail Access Comparability Standards

Components of Retail Access Comparability

The Retail Access Comparability Standards define the path to implementing the RESCO Restructuring Model for the Energy Services Industry (see Table 5). These standards are designed to create a robustly competitive retail energy services market that addresses the full range of societal objectives efficiently and effectively. At a minimum, these standards should be applied to the electricity sector. However, the more broadly they can be applied to the various energy sectors, the more effective they will be. As a practical first step, these standards could be applied to the eclectic sector and then expanded to cover the gas sector.

Table 5

Retail Access Comparability Standards

- 1. Give all customers the right to choose their retail energy services providers at the same time.**
- 2. Use an independently managed, open bidding process to select providers of optional bundled retail energy services packages for customers not interested in choosing energy services suppliers for themselves.**
- 3. Provide customers with direct, unbundled price information on the costs of both energy and reliability services.**
- 4. Provide common carrier transmission, distribution, system coordination and reliability services -- with an independent provider, regional transmission and distribution tariffs, and regional planning.**
- 5. Allow bilateral electricity trading, with reporting only of physical transactions to the system operator.**
- 6. Provide common carrier services for customer billing, customer metering and customer energy use information -- with independent providers -- and also allow competitors to provide these services.**
- 7. Use an independently managed open bidding process for any acquisition of increased energy efficiency measures, renewable energy sources or emission reduction.**
- 8. Collect distribution connection fees from all users to fund bidding programs for acquisition of increased energy efficiency measures, renewable energy sources and emission reduction, as well as to fund low-income programs.**
- 9. Effectively address market power, self dealing and cost shifting issues so that utility generation companies and utility retail services companies have the opportunity to compete on a level playing field in retail markets without being encumbered by unnecessary regulation.**

1. Give all customers the right to choose their retail energy services providers at the same time

Giving customers the right to choose their own providers of retail energy services enables them to vote with their pocket books. If they do not like the prices, service or options provided by one supplier, they can shop around. Choice removes customers from the burden of paying for power supply investments unless they contract for those investments. It is important to give all customers choice *at the same time* so that cost shifting to any remaining customers without choice does not occur. (The pressure to do this would be tremendous.) Providing the benefits of restructuring to customers who do not want to bother with making choices is addressed by the provision for making competitively procured bundled packages of energy services available to all customers (see Standard No. 2 below).

Customer choice gives *retail service providers* a direct incentive to deliver what consumers want, and to develop new and improved services. This gives utilities the opportunity to move/spin off some services from under the restrictive regulated environment into the competitive marketplace -- where they will no longer be confined to a regulated rate of return.

Customer choice frees *state regulators* from the price regulation business wherever competitive markets can be established to discipline prices. Customer choice gives *environmental groups* the opportunity to develop and/or promote retail energy services packages that feature higher levels of efficiency, renewable energy sources and environmental emission reduction. This will allow their members and other consumers to vote directly in the marketplace on "green" issues with their energy services selections and the payments made for those services. Developing products for these customized services represents a new market opportunity for energy services providers.

2. Use an independently managed, open bidding process to select providers of optional bundled retail energy services packages for customers not interested in choosing energy services suppliers for themselves

In order to prevent cost shifting, it is important that all customers be given the choice of energy services suppliers at the same time. Some customers, however, will not be motivated to participate actively in the retail energy services market. To bring these customers the benefits of industry restructuring, State Public Utility Commissions will design packages of energy services for these customers -- and select a set of qualified suppliers through open bidding.

This is a very workable solution since there are currently enough providers of bundled retail energy services to meet all customer needs now (e.g., retail energy services divisions of utilities) and there are many new players that want to enter this business. Public Utility Commissions can develop several packages of bundled retail energy services and put these out for bid periodically to a qualified list of providers. Customers would then be asked to select one of these packages and one of the approved providers. If they still show no interest in making a selection, they would be assigned a package of bundled energy services along with an approved provider (chosen through a competitive bidding process). At any time, of course, customers could choose to enter the marketplace and select energy services providers themselves.

On the other hand, if these customers (primarily small users of energy) are forced to stay with their local utility as the provider of retail energy services -- while larger customers are given choices -- the pressure to shift costs to these small customers will be tremendous.

3. Provide customers with direct, unbundled price information on the costs of both energy and reliability services

Customers need to be provided with direct and unbundled information about the costs of the energy service choices they make, including both the energy costs and reliability costs. This will allow both customers and retail energy service providers to identify packages of energy services that minimize customer costs.

A customer's energy services bill will reflect the impact of changes in energy usage or changes in the effect the customer has on system reliability. Any changes in the system costs of providing service, due to customer choices, also will be directly reflected in energy services bills. These price signals are beneficial to both customers and providers because each can adjust quickly to reliability and cost issues.

Creating this direct linkage between supply-side and demand-side information will allow customers and their retail energy services providers to bring demand into real-time control and real-time dispatch -- just as the supply side is now controlled. This will allow users to effectively bid usage reductions into the energy market just as power suppliers bid supply into the market.

Allowing the demand side to be fully interactive with the supply side is one of the most significant opportunities in the whole restructuring equation. This means that in addition to the supply-side options competing among themselves in the marketplace for the retail customer's business, they also will be competing with the full range of demand-side options.

Making real-time price information available to customers for energy and reliability services will be a gradual process. Customers with significant opportunities to reduce their costs will be motivated to get real-time metering and demand-side control capability rapidly. Making customer metering available as a common carrier service and also allowing new entrants into the customer metering services market will speed the delivery of real-time metering and demand-side control capability to customers.

In the meantime, approximations can be used to give consumers this energy and reliability cost information. For example, customers could be given choices by a RESCO of how many hours per year they would like to bid their full load into the electricity market -- and receive corresponding reductions in the cost of service over the year. A RESCO that aggregates a number of customers could implement this approach with simple customer load control devices.

4. Provide common carrier transmission, distribution, system coordination and reliability services -- with an independent provider, regional transmission and distribution tariffs, and regional planning

In addition to common carrier basic transmission and distribution wheeling services, a number of related services should also be made available on a common carrier basis. These include: transmission coordination, reliability coordination, generation/supply dispatch coordination, and a bidding mechanism for allocation of over-subscribed transmission facilities. These common carrier services are necessary to provide the fundamental transmission, distribution, reliability and coordination services that allow wholesale and retail service competition. These regulated monopoly services need to be available at cost-based prices, and in ways that are easy to understand and use so that customers can capture the benefits of competitive retail markets.

These services need to be available to all customer and retail energy services companies that use transmission and distribution systems. For all of these transmission and distribution system users, these services need to be equally available and according to the same:

- * Rules of use
- * Priorities of service
- * Cost-based rates for services
- * Access to the full range of services
- * Bidding system for allocating use of over-subscribed parts of the transmission system (allocating transmission capacity to the highest economic use and without delivering monopoly rents to transmission owners)
- * Access to system planning and operating information
- * Access to transmission and distribution planning processes to address facility improvement needs

Transmission and Distribution Access

In order facilitate regional power supply competition and the delivery of benefits to customers, regional transmission service tariffs are needed that cover regions conducive to convenient transmission use rather than current utility transmission ownership boundaries.

The present system, with many tariffs each covering a single utility's transmission system, creates a barrier to competition in the energy services industry and to the delivery of the benefits of this competition to customers. This system creates for transmission users the burden of dealing with multiple transmission service providers and using multiple tariffs, even for simple power purchase transactions. In order deliver the benefits of regional power supply competition to customers, all transmission users must pay regional transmission service tariffs covering multiple transmission owner regions that reflect regions of convenient transmission use rather than transmission ownership boundaries. These regional tariffs will greatly simplify power supply transactions and will avoid the pancaking of transmission tariffs that create barriers to economically desirable power supply transactions.

The implementation of improved transmission access that can be used to deliver benefits to customers has been a slow process. Since the Energy Policy Act of 1992 gave the Federal Energy Regulatory Commission the authority to order transmission access, the speed of progress on transmission access policy and implementation have greatly increased. The Federal Energy Regulatory Commission has been leading a spirited march toward open transmission access.

Customers only receive benefits from transmission and distribution access that are actually available and implemented in ways that are easy to use. Strategies for making the benefits of transmission access available to customers need to recognize that open access to transmission and distribution systems is still not generally available in the United States. Currently, distribution access is not available *anywhere* in the country. Transmission tariffs are only on file for approximately 50 of the 150 significant transmission systems. And where access is available, it is only on a utility-by-utility basis. The Federal Energy Regulatory Commission is pushing for transmission access, and progress is being made, but it is not yet in place.

State Public Utility Commissions have an important role to play in ensuring that distribution access is available so that customers can take advantage of the full range of energy services options.

In order to speed delivery of the benefits of access to customers, three implementation steps can be identified in a rough order of priority based on relative benefits made available to customers by each step (see Table 6). All of these steps are important. In some cases, it may be possible to accomplish these steps simultaneously.

The first step is to make sure that access to transmission systems and distribution systems is really available on a practical, easy-to-use basis. Moving from *no access* to *real access* will capture the greatest portion of the potential benefits for customers of open transmission and distribution access. Experience to date has shown that where transmission access has been complicated and hard to use, it frequently was not really available. Ensuring truly open access to the transmission and distribution systems is *required* to create a competitive power supply and competitive retail energy services markets that give customer access to the full range of energy services options.

The second step is to move from individual utility territory tariffs to regional tariffs. This will provide the next largest increment of the potential benefits to customers of open transmission and distribution access.

Customers benefit from power supply competition that reduces the cost of power production. Power production costs will be minimized if the power supply market operates efficiently on a regional basis. This would require tariffs to remove the barriers to efficient regional transactions. In order to maximize the benefits that the competitive power supply market can deliver, customers must have access to transmission on a regional basis through regional tariffs. Implementing regional tariffs will actually simplify the development of transmission access by reducing the number of proceedings and by making the approach used throughout the region consistent. The time is ripe for the Federal Energy Regulatory Commission to order regional transmission tariffs.

As part of this second step, State Public Utility Commissions and the Federal Energy Regulatory Commission need to define a path for implementing *distribution tariffs* that cuts through jurisdictional issues. It is time to develop standardized, easy-to-use distribution tariffs that include provisions for State Public Utility Commissions to set and collect distribution access charges. These charges would fund increased levels of energy efficiency, renewable energy resources, emission reduction, low-income programs, and any restructuring transition costs that need to be recovered.

The third step is to implement open regional transmission planning processes. These open regional processes will address the needs of all transmission users on an equal basis. The process will develop planning information to a highest common denominator standard that meets the information needs of all affected parties -- including but not limited to, all states within the region, the Federal Energy Regulatory Commission and the transmission users. This will avoid unnecessary rework in the planning, siting and construction of transmission facilities for the ultimate benefit of customers.

The fourth step in the implementation of transmission and distribution access is to optimize use of over-subscribed transmission facilities. This refinement is expected to capture a smaller increment of power supply cost reductions than the previous two steps. A rough cut at this can be achieved by establishing -- in Steps 1 and 2 -- a bidding process to allocate over-subscribed transmission capacity to the highest economic use. This can be implemented in ways that avoid delivering monopoly rents to the transmission owners.

Once basic regional transmission access and tariffs are in place further step toward optimizing transmission system usage is to implement a system of spot pricing for transmission services. Optimizing transmission usage through spot pricing can provide additional benefits to customers where transmission facilities are frequently over-subscribed. Once transmission access has been implemented on a practical and easy-to-use regional basis, refinements to access that optimize the use of the transmission system should be explored wherever opportunities for increase delivery of benefits to customers are identified.

Transmission and Distribution Planning and Siting

Transmission and distribution planning and siting processes are the long-term components of transmission and distribution access. If the necessary facilities are not in place, no one has access. The question of what facilities are necessary is a societal question that involves balancing costs, benefits, environmental impacts and other public concerns with the alternatives available. In the end, society as a whole will bear the costs and environmental impacts of the choices made. Transmission users will bear the cost of facilities constructed. Both society as a whole and transmission users have an interest in seeing that only the necessary facilities are installed.

In order for there to be useful transmission and distribution access, open processes must be in place for deciding which facilities meet the societal tests for need and which do not. To accomplish this, the needs of all transmission and distribution users must get equal treatment in the transmission planning and siting processes. These planning processes must develop planning information to a highest common denominator standard that meets the information needs of all affected parties -- including all states within the region, the Federal Energy Regulatory Commission and the transmission users. This will avoid unnecessary rework in the planning, siting and construction of transmission facilities for the ultimate benefit of customers.

Table 6

**Transmission and Distribution Tariffs
Steps to Implementing Access to Speed Delivery of Benefits to Customers**

Steps	Status	Details
Present Conditions	Limited transmission access available on a one-utility-territory-at-a-time basis. No distribution access.	Patchwork of existing and non-existing tariffs. Some transmission owners have comparable access tariffs in place covering area of system owned.
Steps 1 and 2 Create Proven Transmission and Distribution Access	Simple to use regional transmission tariffs that demonstrate access is actually provided. Distribution access on a uniform basis from all distribution owners.	Regional postage-stamp or simple distance-based transmission tariffs with a bidding process for allocating use of over-subscribed transmission facilities.
Step 3 Create Proven Open Regional Transmission Planning Process	In many parts of the country current transmission planning is not an open regional process that addresses the needs of all the transmission users	Implement open regional transmission planning process that addressed needs of all system users, and uses the highest common denominator planning standards for all states within a region.
Step 4 Improve Transmission and Distribution Access Implementation To Optimize Use of Transmission and Distribution Systems	Add refinements to transmission and distribution tariffs to optimize use of transmission and distribution systems where opportunities for improvement are identified.	Implement refinements that provide benefits to customers. One refinement to be explored is transmission spot pricing.

5. Allow bilateral electricity trading, with reporting only of physical transactions to the system operator

Allowing bilateral trading gives buyers and sellers the flexibility to structure these transactions in ways that work best for each participant. Reporting of the physical components of the transaction to the system operator is necessary for the system operator to be able to operate the system effectively and to maintain reliability.

The system operator will need to be able to cover shortfalls in supply on a real-time basis, which means having callable options in hand to purchase either reductions in energy use or increases in supply. The chief difference between the evolving Voluntary POOLCO Restructuring Model and the Bilateral Restructuring Model is that under the Voluntary POOLCO Model, it is expected that the system operator will be involved in the financial side of more power transactions than in under the Bilateral Model. Either of these models are potentially compatible with the Retail Energy Services Company Restructuring Model if they are implemented in a way that is consistent with the Retail Access Comparability Standards so that a fully competitive retail energy services market is created. A comparison between these restructuring models and the RESCO restructuring model is included in Appendix A.

The important part of this for retail energy services customers and providers is that customers be allowed as much flexibility as possible in how they acquire energy services. The range of transactions that need to be available to provide this flexibility includes:

- * Bilateral transactions where only the physical transaction needs to be reported to the system operator and not the price.
- * Purchases from a central pool or from the system operator.
- * Bilateral contracts for differences relative to the pool price or a central operator's spot price for power.

6. Provide common carrier services for customer billing, customer metering and customer energy use information -- with independent providers -- and also allow competitors to provide these services

Several services that are presently included in regulated utility activities are not inherently monopoly services. These services include customer billing, customer metering and customer energy use information. Encouraging other companies to market these services and making these services available on an unbundled, common carrier basis from a provider of last resort will provide four important benefits:

- * Give customers access to the full range of possible services and choice of providers.
- * Make implementation of real-time metering more rapid.
- * Ensure that there is a provider of last resort available in the marketplace.
- * Help support a vigorously competitive retail energy services market by allowing focused providers of energy services to easily put together a comprehensive bundle of services.

Allowing a utility to provide customer billing, metering and energy use information services without allowing all other retail energy services companies to use these services would give the utility significant market power. At the very least, independent transmission and distribution companies will need to provide these services on a comparable basis to all retail energy services companies. Other competitive providers of these services will be encouraged to market these services. This will allow retail energy services providers to customize their services to meet particular customer needs. These competitive providers will be subject to basic standards such as those needed for system operation and planning, safety and reliability.

A further step is to create a means of establishing competitive prices for the provider of last resort for these common carrier services through an open bidding process. The provider of last resort could not be affiliated with any of the RESCOs they will be serving. A discussion of the impact of restructuring choices on the opportunity for utilities to compete on a level playing field in retail energy services markets without unnecessary regulatory burdens is discussed further in Standard No. 9.

7. Use an independently managed open bidding process for any acquisition of increased energy efficiency measures, renewable energy sources or emission reduction

Current programs for acquisition of increased energy efficiency, renewable energy sources or emission reduction are frequently open only to the utility managing the program -- or, if there is a bidding process, it is usually managed by the utility. In the competitive retail energy services marketplace, this approach would give unfair power to the utility, and it would create a self-dealing relationship. These problems can be avoided if the providers of the increased energy efficiency, renewable energy sources or emission reduction are selected through an open bidding process -- with the selection process run by an unaffiliated party that is not participating in the bidding. This is further discussed in Standard No. 9.

Competitive bidding would ensure that these services would be delivered at the lowest additional incremental cost. All energy services providers will be able to evaluate what additional payment would be the incentive necessary for them to deliver more of these services, factoring in other market incentives. This approach also shifts the provision of these services from a burden on utilities to a business opportunity for motivated voluntary providers.

Regulators can design this bidding process to include whatever performance guarantees -- or measurement and verification (M&V) standards -- that they deem necessary because no one will be required to bid. Regulators, however, will need to balance the tightness of performance guarantees against the cost of increased energy efficiency and other services obtained. Finally, the results of these bidding processes will provide market information about the actual prices of incremental increases in the delivery of energy efficiency, renewable energy sources and emission reduction in the marketplace. When planning on how to best achieve long-term societal objectives, this information will be a major improvement over hearing-room estimates of the past.

For these bidding processes to be the most productive, they need to avoid a command-and-control approach that defines the end uses to be addressed and how they should be addressed. Instead, the bidding processes should:

- * Define the ultimate objective, such as more energy efficiency, more renewable energy implemented, or more emission reduction.
- * Define the bid evaluation method to determine relative accomplishment of these objectives per dollar.
- * Allow the creativity of bidders to identify the lowest-cost places to find these energy savings, renewable resources or emission reduction.
- * Make awards to bidders that provide the most at the least cost.

A command-and-control approach will limit the number of bidders and increase the cost of the incremental implementation acquired. An open approach will expand the number of bidders and reduce the cost. In either case, the bids will represent the bidders' statement of what price they must charge to deliver efficiency or renewables. These companies will include in their bids: the transactions costs (including M&V) of participating in the program. If the regulatory commission makes the criteria standards higher than necessary, the increased efficiency will cost more than necessary -- and less can be purchased with the available funds.

8. Collect distribution connection fees from all users to fund bidding programs for acquisition of increased energy efficiency measures, renewable energy sources and emission reduction, as well as to fund low-income programs

The distribution connection fees will include an uplift charge to fund bidding programs to obtain increased delivery of energy efficiency, renewable energy sources and emission reduction. Also included in the connection fee will be an uplift charge to fund low-income programs such as weatherization and winter shut-off moratoriums. These connection fees will be applied to all voltage levels so that it is unavoidable for all retail energy services recipients.

These distribution connection fees should be extended to gas distribution and bypass connections as well -- when the gas retail energy services sector is restructured. When this is accomplished, the competitive retail energy services market will be able to internalize the issue of retail fuel switching between electricity and gas, and make the economically appropriate choices for each customer's situation.

Distribution connection charges will collect funds to cover the same types of costs that have been included in general tariffs in the past. They can be collected on the basis of both a capacity charge and an energy usage charge. Since all costs and societal objectives are unlikely to be fully internalized in the retail energy services market, the summation of individual decisions in a competitive retail energy services market are also unlikely to fully achieve long-term public interest objectives. Therefore, planning mechanisms will be necessary to identify these shortfalls and to fund the appropriate market adjustments. These are suitable activities for State Public Utility Commissions.

Competitive power supply markets are expected to hold down power supply costs, and the competitive acquisition of efficiency measures is expected to drive down acquisition costs. If the uplift charge collects the same amount of money as has been used for efficiency and renewable programs in the past, the overall energy services costs for consumers will be reduced -- and the amount of efficiency delivered will be increased.

9. Effectively address market power, self dealing and cost shifting issues so that utility generation companies and utility retail services companies have the opportunity to compete on a level playing field in retail markets without being encumbered by unnecessary regulation

An important part of restructuring is mitigating the potential of impairing retail energy services markets by market power, self dealing, or cost shifting by regulated monopoly service providers. This is important for two reasons: (1) Without this, utility generation companies and utility retail energy services companies will be deprived of the opportunity to compete on a level playing field in retail markets without being encumbered by unnecessary regulation. (2) These potential impairments of the retail energy services markets need to be prevented to protect the customers.

The problem is created when the same organization or affiliated organizations occupy side-by-side positions in both regulated and non-regulated parts of the business. This situation creates the potential and incentives for:

- * Cost shifting to the regulated part of the business
- * Non-arms-length transactions between the two parts of the business
- * The use of market power by the regulated portion of the business to create advantages for the non-regulated part of the business (relative to other market participants that are only active in the non-regulated sector)

There are two approaches to addressing these issues. One creates unnecessary regulatory burdens on both the utility generation companies and utility retail energy services companies, while the other approach does *not* create these burdens.

If new industry structures are chosen that create the risk of exercising market power, cost shifting, and self dealing by regulated monopoly service providers, then a regulatory regime that strives to protect the customers and other market participants from possible abuses will be needed. This choice will impose regulatory burdens on the utility, the utility generation companies, and the utility retail energy services companies. This choice also will impose on customers and other market participants whatever abuse is not prevented by regulation. If this choice is made in restructuring, utility generation companies and utility retail energy services companies will be deprived of the opportunity to compete on a level playing field in retail markets without being encumbered by unnecessary regulation.

On the other hand, if new industry structures are chosen that do *not* create the risk of exercising market power, cost shifting, and self dealing by regulated monopoly service providers, then a regulatory regime that strives to protect customers and other market participants from possible abuse will be not be necessary. This choice will not impose regulatory burdens on the utility, the utility generation companies, and the utility retail energy services companies.

Utility Industry Specifics

Providers of regulated monopoly services have the potential to exercise market power over retail energy services markets in a variety of ways. The ownership and control of the transmission and distribution system gives transmission owners the potential opportunity to exercise market power in power supply markets and retail energy services markets. Participation by the same organizations or affiliated organizations in both regulated and non-regulated parts of the energy services business creates the potential for cost shifting between the two parts.

Participation in both regulated and non-regulated parts of the energy services sector by the same organization or affiliates creates the potential for the use of services provided by the regulated part of their business that may not be made available to all other market participants -- either at all or, if available, not on the same terms. This would create significant advantages in offering customer billing, customer metering and customer energy use information services. The customer billing services have not been generally available to the utilities' free-market competitors for the collection of payments for energy services. The utilities have significant information about customer energy use that would be very useful to free-market energy service providers in delivering more energy services. The same is true for customer metering services. Generally, these services are not available to competitors of utilities.

Additional examples include real-time price information and billing based on the varying cost of providing energy and reliability services. This excludes non-utility market participants from efficiently identifying and capturing potential cost savings. Also, many energy efficiency and renewable incentive programs have only been open to utilities, as manager of the programs and supplier of the services.

Unless it is mitigated, the potential for abuse of market power, self dealing and cost shifting in retail energy service markets will impair these retail energy services markets -- and the price discipline that restructuring is supposed to provide. Regulation is an imperfect solution because no amount of supervision can police all of the details of these new business relationships. The question for both the regulated and the regulator becomes: What justification is there for the burdens created on the regulated, the regulator and potentially the customer for the imperfect regulatory attempts to prevent abuse in these transactions?

The long-term health of utility generation companies and utility retail energy services companies depends on their ability to compete without having to bear the burden of regulation. For this reason, it is in no one's interest for utilities to be allowed to participate in both regulated and non-regulated activities in the same service territory.

As indicated above, new industry structures can be chosen that impose this unnecessary regulatory burden on utilities and others -- or industry structures can be chosen that do not create the risk of exercising market power, cost shifting, and self dealing by regulated monopoly service providers. The RESCO model includes the latter structure.

The pros and cons of various approaches to preventing distortions of the retail energy services market are shown in Table 7.

Table 7

Pros and Cons of Various Approaches to Avoiding Damage to the Retail Energy Services Market by Affiliated Transactions and Utility Market Power

Approach	Pros	Cons
<p>Choose an industry structure that does not include the risk of exercising market power, cost shifting, or self-dealing <i>by any provider of regulated utility services</i></p>	<p>Provides customers with access to the full range of energy services and providers.</p> <p>Simple, efficient and effective.</p> <p>Allows utility generation companies and utility retail energy services companies to compete on a level playing field in markets without being encumbered by unnecessary regulation.</p>	<p>Requires regulated portion of utilities to spin off or sell non-regulated portions of their business.</p>
<p>Choose an industry structure that includes the risk of exercising market power, cost shifting, or self-dealing <i>by any provider of regulated utility services</i> and attempt to prevent these negative outcomes by using regulation</p>	<p>Does not require regulated portion of utilities to spin off or sell non-regulated portions of their business.</p>	<p>Limits customers' access to the full range of energy services and providers.</p> <p>Complex, inefficient and only partially effective at best.</p> <p>Creates unnecessary burdens and costs for regulators, utilities and utility affiliates. These burdens and costs will be borne by utility customers unless these costs are made below the line expenses for the utility.</p> <p>Prevents utility generation companies and utility retail energy services companies from competing on a level playing field in markets without being encumbered by unnecessary regulation</p>

Benefits To Stakeholder Groups

Direct Customers

Direct customers will be able to choose their own energy services provider(s) and have a broader array of services at their disposal. Customers will be able to order packages of energy services tailored to their specific needs. They will receive energy and reliability services at a lower cost than is possible in today's regulated environment. They will directly influence the energy services market -- and the products offered -- by choosing the energy services and providers that deliver what they want.

Society: The Indirect Customer

Society as a whole -- the indirect customer -- will benefit through:

- * Lower costs for energy services delivered to customers, which will help U.S. companies compete in the global marketplace.
- * Increased energy efficiency and renewable energy sources.
- * Reduced environmental emissions.

Environmental, Consumer, Renewable Energy and Energy Efficiency Advocates

These advocates will get lower costs for energy services delivered to customers as a result of increased competition. They will also get increased energy efficiency, renewable energy sources and emission reduction.

Reshaped Role of Regulators

Energy industry regulators will continue to play an important role in assuring that the public interest is properly served in a restructured environment. However, some of their current tasks will no longer be necessary, others will change, and they will also be asked to accept new regulatory tasks.

Regulation will still be necessary because the environmental externalities are never likely to be fully internalized in a market-driven energy industry. Some central planning will be necessary to set overall goals for energy efficiency and increased use of renewable energy sources. Regulators will need to set the level of uplift charges to fund bidding programs to achieve these two goals. Bidding programs to acquire these services are overseen by regulators.

Uplift charges also will fund acquisition of desired low-income services such as weatherization and winter shut-off moratoriums. Bidding programs to acquire these services must be developed, and the delivery of these services overseen.

For the parts of the industry that remain under regulation -- such as transmission and distribution services -- regulation can proceed much as in the past. This will include activities such as utility accounting reviews, planning, siting and rate setting. There may be refinements such as the increased use of incentives, but the regulatory responsibilities will be much the same.

Planning for meeting long-term energy efficiency and environmental objectives will be easier to accomplish under the RESCO model than it has been in the past. That's because the market will provide information regarding the true costs and the potential increase in energy efficiency, renewable energy sources and emission reduction.

An example how planning will be easier under the RESCO model is the evaluation of alternatives to a proposed transmission line addition to connect distant generation to loads. Under the present system, the question of whether increased energy efficiency at the receiving end is a lower-cost option considering the environmental impacts of the alternatives is very difficult to investigate. Under the RESCO model, this question will be relatively easy to investigate because the market will have incentives to deliver all the energy efficiency that is cost-effective in the eyes of customers -- and the cost of incremental energy efficiency and renewables will be available from bidding programs run by states in the areas affected.

There will also be new sources of information to use in planning. Market prices for increased levels of efficiency, renewable energy sources and emission reduction will be available from the competitive energy services market. Each state's bidding programs for increasing the implementation of these three societal objectives will produce this information. On the national level, reporting under the voluntary reporting standards of Section 1605(b) of the Energy Policy Act of 1992 will provide significant information on the implementation level of these three objectives that will be available to regulators and the public.

As part of the Energy Fitness Program, the National Association of Energy Service Companies (NAESCO) has made a commitment to encourage its members to report all energy efficiency activities under the 1605(b) voluntary reporting program. The Energy Fitness Program is a partnership between the Department of Energy and NAESCO dedicated to removing barriers to the delivery of energy efficiency services by energy services companies.

Competitive retail markets for energy efficiency and renewable energy sources will reduce the cost of acquiring increased levels of these benefits. The bidders for the provision of increased levels of energy efficiency and renewables will be exposed to all other incentives in the retail marketplace. As a result, the bids received will represent the incremental incentive that bidders determine is necessary to motivate them to bringing efficiency and renewable activities into the process.

Utilities

Utilities will be freed from the constraints of rate-based regulation wherever competitive markets can be established. The primary exceptions will be transmission, distribution and system coordination functions. Utilities that choose to continue providing transmission, distribution and system coordination services will continue to enjoy the regulatory protections granted to monopoly service providers.

Energy Services Companies

Energy services companies will benefit through improved access to customers. They will also be able to provide customers with the full range of energy services. These two changes will create many new opportunities and expand existing opportunities to create and deliver energy services that meet customers needs.

Transition Steps in Restructuring

Overview

The transition from a regulation-heavy to a market-driven energy services landscape can be accomplished quite rapidly -- if other industries are any indication. The Airline Deregulation Act of 1978 contained a phase-out period to last about seven years, but the industry deregulated in one year and airlines quickly pursued competitive opportunities. Within weeks after the divestiture of AT&T in 1984, the Regional Bell Operating Companies began pursuing new competitive markets on a broad scale.

With respect to the energy services industry, a number of steps can smooth the transition to an open marketplace:

For *transmission and distribution services*, much of the needed separation of control from transmission and distribution ownership can be achieved by requiring that transmission and distribution services be provided on a regional basis with regional tariffs -- and under the control of an independent operator. Under such an arrangement, even if the actual ownership remains with the current owners for a transition period, the potential for abuse of monopoly position by any single player would be greatly reduced.

Customer metering, customer billing and customer energy use information services can be provided in accordance with the comparable service standards by the transmission and distribution service providers until a bidding process is established to select independent, non-affiliated providers.

Retail energy services bundles can be developed by Public Utility Commissions and put out to bid so that all customers can receive the benefits of competition at the same time.

A distribution connection fee and open process for acquisition of *increased energy efficiency, renewable energy sources and emission reduction* programs can be implemented today by Public Utility Commissions.

Transition Steps to Retail Access Comparability Standards

1. **Give all customers the right to choose their retail energy services providers at the same time.**

Implement # 1 and # 2 as a package when ready.

2. **Use an independently managed, open bidding process to select providers of optional bundled retail energy services packages for customers not interested in choosing energy services suppliers for themselves.**

Implement # 1 and # 2 as a package when ready.

3. **Provide customers with direct, unbundled price information on the costs of both energy and reliability services.**

Make available for all customer as soon as possible.

4. **Provide common carrier transmission, distribution, system coordination and reliability services -- with an independent provider, regional transmission and distribution tariffs, and regional planning.**

Step 1: Simple-to-use regional tariffs and operation by independent party. No change in ownership.

Step 2: Simple-to-use regional tariffs and operation by independent party. Independent, non-affiliated ownership.

Step 3: Implement regional transmission planning process that addressed needs of all system users, and uses the highest common denominator planning standards for all states within a region.

Step 4: Refine simple regional tariffs to optimize transmission use. Continue operation by independent party with independent, non-affiliated ownership.

5. **Allow bilateral electricity trading, with reporting only of physical transactions to the system operator.**

In effect now for wholesale transactions. Allow for retail transactions when retail access is provided.

6. **Provide common carrier services for customer billing, customer metering and customer energy use information -- with independent providers -- and also allow competitors to provide these services.**

Step 1: Make available on comparable basis by transmission and distribution services providers.

Step 2: Put out for bids to select independent providers.

7. **Use an independently managed open bidding process for any acquisition of increased energy efficiency measures, renewable energy sources or emission reduction.**

Implement now.

8. **Collect distribution connection fees from all users to fund bidding programs for acquisition of increased energy efficiency measures, renewable energy sources and emission reduction, as well as to fund low-income programs.**

Implement now.

9. **Effectively address market power, self dealing and cost shifting issues so that utility generation companies and utility retail services companies have the opportunity to compete on a level playing field in retail markets without being encumbered by unnecessary regulation.**

Take positive steps now and select industry structure to achieve.

Restructuring Transition Costs

The issue of transition costs will need to be addressed in restructuring. These costs will include both stranded investments and stranded customer benefits that may result from restructuring. Any such transition costs that are allowed should be collected through a separate distribution access charge for this purpose. This will minimize the impact of such charges on delivering the benefits of restructuring to customers. Using a transmission charge, on the other hand, to fund transition costs would reduce the ability to lower costs to customers because it would create a barrier to efficient generation dispatch for the entire regional system.

The ultimate decision of how much stranded investment exists and how much should be recovered will be based on the circumstances of each utility -- and how the investment risks were balanced between ratepayers and stockholders along the way. Since the decisions about construction, the prudence of investments in facilities, rates and risk sharing were made primarily at the state level, the information about these decisions resides at the state level. For these reasons, the decisions about the size and recovery of transition costs including stranded investment should be made primarily at the state level.

The appropriate level of these transition costs will likely vary from utility to utility and from region to region. In determining the appropriate level of transition costs to allow, all assets of a utility will need to be considered, except those that will remain monopoly services -- such as transmission, distribution and coordination facilities.

In the end, many utilities may decide that their own competitive interests are better served by writing off part or all of any stranded investments they face.

Restructuring Decision Making: A Public Process

In order to design a restructuring approach that furthers the public interest, all of the affected parties must be actively involved in the planning process. Regulators, consumer advocates and environmental advocates have an important responsibility to make sure that the public interest objectives are fully addressed. By following their self interests, utilities and other retail energy services companies (RESCOs) will help ensure that the barriers to competition are removed wherever possible so that everyone has the opportunity to compete in an open retail energy services market. While some utilities will focus on preserving their captive customer base, others will join existing and new RESCOs in promoting a restructuring deal that provides access to customers in the service territories of other utilities.

Conclusion

On the road to establishing wholesale power supply competition, the Federal Energy Regulatory Commission cut through more than 50 years of arcane precedents with a simple and powerful concept of *transmission service comparability*:

All transmission services that the transmission owner uses must be available to the transmission service purchaser for the same price.

If the Federal Energy Regulatory Commission sticks to its guns and keeps the definition of comparability at this simple and concrete level, it will eliminate the market power of transmission owners. With this transmission comparability standard, the Federal Energy Regulatory Commission is paving the way for power supply competition.

To create a fully competitive retail energy services market, this comparability standard needs to be extended to include *distribution*:

All distribution services that the distribution owner uses must be available to the distribution service purchaser for the same price.

Both transmission access and distribution access are incorporated in the Retail Access Comparability Standards that define the Retail Energy Services Company Model for industry restructuring. The Retail Access Comparability Standards also encompass mechanisms for:

- * Empowering customers to choose the energy services and providers they want.
- * Empowering all retail energy services providers, including utilities, to compete in the retail energy services market.
- * Funding and achieving societal objectives, including increased levels of energy efficiency, renewable energy sources, emission reduction and low-income services.

Implementing the Retail Access Comparability Standards will pave the way for a vigorously competitive retail energy services market that can deliver the full range of societal objectives, including environmental protection, consumer protection and vigorous competition.

The Retail Energy Services Company Model for Restructuring (defined by the Retail Access Comparability Standards) is built around the most desirable outcomes for energy consumers. The competing interests of all players in the delivery of energy services have been taken into consideration and, in the end, aligned with the larger objectives of our society.

Appendix A

Comparison of RESCO Restructuring Model with Other Restructuring Models

The RESCO Model for restructuring starts at the energy services customer level and works up from there to build an industry structure that is focused on improving delivery of a full range of energy services to customers. The other predominant models for restructuring -- the POOLCO Electric Industry Model championed by Professor Hogan of Harvard and of NERA, and the Bilateral Trading Electric Industry Model championed by Professor Tabors of MIT and of Tabors Caramanis and Associates -- are supply-oriented restructuring models that start with electric generation and work their way down to the energy services customer level. This is not to say that these models are incompatible with the RESCO model, but rather to say that due to the energy supply orientation they have not yet addressed some of the specifics of creating a competitive retail energy services market for the full range of energy services.

Comparison of RESCO Restructuring Model with other Restructuring Models

Components of RESCO Restructuring Model	RESCO Restructuring Model	Bilateral Trading Restructuring Model	POOLCO Restructuring Model
1. Give all customers the right to choose their retail energy services providers at the same time.	YES	Not yet, but it could be	Not yet, but it could be
2. Use an independently managed, open bidding process to select providers of optional bundled retail energy services packages for customers not interested in choosing energy services suppliers for themselves.	YES	Not yet, but it could be	Not yet, but it could be
3. Provide customers with direct, unbundled price information on the costs of both energy and reliability services.	YES	YES	YES
4. Provide common carrier transmission, distribution, system coordination and reliability services -- with an independent provider, regional transmission and distribution tariffs, and regional planning.	YES	Not yet, but it could be	Not yet, but it could be
4.a Implementation Step 1: Simple-to-use regional tariffs and operation by independent party. No change in ownership.	YES	Not yet, but it could be	Not yet, but it could be
4.b Implementation Step 2: Simple-to-use regional tariffs and operation by independent party with independent, non-affiliated ownership.	YES	Not yet, but it could be	Not yet, but it could be

<p>4.c Implementation Step 3: Implement regional transmission planning process that addressed needs of all system users and that uses the highest common denominator planning standards for all states within a region.</p>	YES	Not yet, but it could be	Not yet, but it could be
<p>4.d Implementation Step 4: Refine simple regional tariffs where necessary to address any problems identified through experience, and continue operation by independent party with independent, non-affiliated ownership.</p>	YES	YES	YES
<p>5. Allow bilateral electricity trading, with reporting only of physical transactions to the system operator.</p>	YES	YES	YES
<p>6.a. Provide independent common carrier services for customer billing, and allow competitors to provide these services.</p>	YES	Not yet, but it could be	Not yet, but it could be
<p>6.b. Provide independent common carrier services for customer metering, and allow competitors to provide these services.</p>	YES	Not yet, but it could be	Not yet, but it could be
<p>6.c. Provide independent common carrier services for customer energy use information, and allow competitors to provide these services.</p>	YES	Not yet, but it could be	Not yet, but it could be
<p>7. Use an independently managed open bidding process for any acquisition of increased energy efficiency measures, renewable energy sources or emission reduction.</p>	YES	Not yet, but it could be	Not yet, but it could be
<p>8. Collect distribution connection fees from all users to fund bidding programs for acquisition of increased energy efficiency measures, renewable energy sources and emission reduction, as well as to fund low-income programs.</p>	YES	Not yet, but it could be	Not yet, but it could be
<p>9. Effectively address market power, self dealing and cost shifting issues so that utility generation companies and utility retail services companies have the opportunity to compete on a level playing field in retail markets without being encumbered by unnecessary regulation.</p>	YES	Not yet, but it could be	Not yet, but it could be
<p>9.a Implementation: If Retail Access Comparability Measures 1-8 are implemented, utility generation companies and utility retail energy services companies can provide services in their own service territory with the same regulation as other retail energy services providers.</p>	YES	Not yet, but it could be	Not yet, but it could be

End Notes

1. "Unbundling the US Electric Power Industry: A Blueprint for Change" , Tabors Caramanis and Associates, March 1995. This is a white paper on restructuring that develops the Bilateral Trading Model for restructuring that was prepared for ENRON by Tabors Caramanis and Associates. Authors: Professor Tabors of Massachusetts Institute of Technology, et al.
2. Based on description of POOLCO Model prepared for New York Utilities Group by Professor Bill Hogan of Harvard University and NERA.