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ISOs and Transcos: What's at Stake?

The two alternative forms of regional transmission organizations represent fundamentally different approaches. Generally, a transco will create more fertile ground for product and price differentiation and competition, while ISOs will tend to uniform access charges and special rules and markets for addressing competition.

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Regions around the nation are in various stages of designing and implementing regional transmission organizations (RTOs). Some prefer the independent system operator (ISO) approach. Others seek to create a new independent transmission company (transco). The objectives and practices of ISOs and transcos, however, may be very different. Recognizing these differences, the Federal Energy Regulatory Commission's Order 2000 favors flexibility and innovation in designing and implementing RTOs.

Selecting the right choice is particularly daunting for states and

regions that have utilities with quite different ideas about these two basic approaches. Regions with pre-existing power pools seemingly have an easier starting point. Regions with relatively few bottlenecks or little congestion also can move ahead more quickly. The difficulties are most acute when power flows across the region and power exports from within the region are expected to be very significant for at least some generators. Such regions could easily have "winners" and "losers" that require some complex tariff policies to ameliorate these differences.

At the very least, the products and services offered by ISOs and transcos will be different, reflecting different approaches to resolving congestion and reliability problems. Fundamental pricing policies are also likely to be very different under different types of RTOs. Ownership and profit motives will also be different. Consequently, regulators will likely deal with ISOs and transcos in an extremely dissimilar manner. These factors should all be weighed in contemplating an "end state" RTO in any region.

Flexibility and innovation must contend with different regional circumstances, different ownership, different products, different pricing policies and different incentives. The following discussion explores and analyzes these differences.

I. Identifying the General Issues

A. Products, Prices, and Profits

As the regulatory process evolves, three profound questions must be answered regarding RTOs. First, what products will this new entity offer for sale? Second, what prices will the RTO charge for these transmission products? And, third, what role will profits, incentives, and regulation play? The answers to these questions are the ultimate concern of both consumers and generation owners. To complicate matters, the answers to these questions are inextricably intertwined and blurred because there is no one definitive ISO or transco

model, and, indeed, no transco at all yet.

To date, restructuring politics have very nearly obscured these important questions. Nevertheless, specific assumptions and preferences regarding products and pricing actually underlie which structural model is preferred by utilities and regions contemplating wholesale market reforms. At one end of the spectrum, transmission service is viewed as *open access*, where the

Among the profound questions regarding RTOs: What role will profits, incentives, and regulation play?

customer obtains reliability without precise product definitions. Fees are charged for access, much like entrance fees. Congestion relief and reliability are more likely achieved by administrative rules and regulation than by price and, thus, the costs are typically localized. At the other end of the spectrum, transmission products are seen as *reservations of contract rights*, offering certainty and priority of service. Under this approach, both prices and property rights reflect the particular costs of the services rendered.

The various RTO forms also affect the roles played by both

profits and regulation. Here, the central issues are incentives and performance. The ISO is often more like a collective or club where principles of fairness, equal treatment, and nonprofit status are stressed. The transco more often focuses on justified differentiation in pricing, product innovation, and tilts toward economic efficiency to allocate congested resources. The transco approach also leans more toward a for-profit incentive system.

An ISO evokes administrative and regulatory approaches to rationing use and internalizing network externalities. In contrast, a transco seems more likely to rely on contracts, property rights, innovative products, and pricing to internalize network congestion. How each would address dynamic efficiency and new investments is a mostly unresolved, but singularly important, matter.

The services and products offered and the manner in which congestion and reliability issues are handled are likely to be different depending on whether the RTO is a transco or ISO because governance and motivation incentives are likely to be different depending on whether or not profits are stressed. This begins to explain why "fairness" and "efficiency" can become conflicting objectives.

An example will clarify the product/pricing distinction. Consider one company that offers a bus pass allowing the rider to pay a single monthly fee in exchange for unlimited access to all the buses in the system. The rider with

such a pass could ride whenever and to wherever on the system he or she chooses. During rush hour, some routes may become crowded. In such situations, the bus company could effectively ration use in several ways, including longer lines, crowded buses, standing room only, and/or not stopping to pick up passengers at every "scheduled" pick-up point. Alternatively, the bus company could add more service and choose not to ration at all. It could, in the extreme, even hire taxis to pick up and transport passengers who could not get on the bus, assuming the bus company is authorized and/or able to pass on the additional cost to all passengers in the form of higher ticket prices.

Now consider a second bus company that sells a different product that requires riders to purchase advanced tickets to specific destinations with assigned seating. In this world, stand-by or last-minute discounted seating might become available on some routes and/or some of the time.

The first approach rations use by increasing waiting time and other forms of crowd management and control. Queues determine who gets on the bus first. Although waiting time rations access, most people eventually get to where they want to go. The second approach uses different pricing objectives for the different products, reflecting different rights and conditions of service, to ration use of the bus system. If trades are permitted, property rights are also established. As with the first approach, people again get from

their origin to their destination. However, distinct prices, not time, determine priorities.

The important point to take from this example is that congestion can be addressed and resolved under many different approaches. "Non-price" rationing is, most generally, a form of rationing based on quality of service differences. This description is not intended to be pejorative, but seems likely under an ISO open pass access system.¹

A differentiated-rights approach represents an efficient means of rationing what would otherwise be crowded transportation.

A transco differentiated-rights approach represents an economically efficient means of rationing what otherwise would be congested and crowded transportation. In a differentiated-price world, prices and advanced purchases ration use. Off-peak discounts and stand-by service discounts could be combined with premium service to improve load factors and system utilization. These approaches ration use with prices.

Regulation typically recognizes both efficiency and fairness objectives. Markets and competitive firms also recognize both concepts.

Thus, we would expect both ISOs and transcos to be cognizant of both efficiency and fairness. Nevertheless, differences should be expected.

In an ISO open access world, fairness becomes overridingly important. By contrast, efficiency is the primary objective when different "rights" are sold in a transco world. Some would aver that rationing by price to highest bidders is the extreme form of price rationing, and is inherently unfair. This conclusion is too strong. At the other extreme, some would aver "first come, first serve" is the only fair approach, where everyone has an equal opportunity for service and everyone pays the same price. Again, this conclusion is too strong.

Neither the ISO free access nor transco rationing use through different product approaches is unambiguously superior. Aspects of both efficiency and fairness can and are often combined in either form. The central conclusion we reach, however, is that these differences matter to individual circumstances. More important, the type of RTO structure, property rights, different products, prices, and nonprice terms and conditions can and do affect the type of electricity network that emerges. Parties planning these future networks should keep the differences in mind.

The ISO approach works reasonably well when the goal is to avoid cost shifting, because it is relatively easy for each pre-existing system to collect a unique access charge. Some utilities that consider

joining an RTO may be currently earning nonnative load income from their location and/or transmission assets. Avoiding cost shifting morphs into revenue or income neutrality. It is possible to maintain this version of preserving the status quo (i.e., maintaining revenue neutrality) using an ISO approach.

Revenue neutrality, however, introduces the prospect of transmission income. A for-profit transco may be more suitable when transmission income is important. It is relatively easy to adjust ownership shares when assembling the pieces to form a transco. This would accomplish the revenue neutrality purpose up front and/or by assigning different ownership or exchange values in the new venture.

Generally, a transco will create more fertile ground for product and price differentiation and competition. ISOs will tend to uniform access charges and special rules and markets for addressing competition.

B. Loop Flow, Economic Dispatch, and Displacement

Electricity networks have three additional important characteristics that can affect their services. First, electricity has a form of displacement called loop flow. Electricity transmission generally follows the physical path of least resistance unless switches are installed to stop or restrict flows. Throughout most of the United States, such switches have not been installed because network and individual electric utility reli-

ability is significantly enhanced when electricity transmission systems of neighboring utility companies are interconnected.² This reality can yield network externalities that need to be internalized.

As a result, an electric generator at point A may wish to send electricity to supply load or demand at point B. Both points may be on that utility's transmission grid. However, the unrestricted path of least resistance may be over a neighbor-

A transco will create more fertile ground for product and price differentiation and competition.

ing utility's wires. This flow can cause unintentional adverse consequences on the neighboring utility. Depending upon the extent of interconnection, the "neighbor" may even be several utility companies away from the generator that created the externality or third-party effect. Similar externalities can be associated with changes in demand or load.

A second unintended transmission usage effect is that the economic dispatch order (i.e., the optimal mix of generation sources used to supply load in a region at any particular time) could be affected if transmission reliability

is a regional objective. Redispatch for reliability is complicated when a wholesale power exchange sets the dispatch order. With redispatch, some generation that successfully bid into the power exchange could be removed from use (dispatch); other generation not in operation could be required to supply electricity; and load could also be displaced or shut down due to reliability problems.

Accordingly, FERC expects an RTO to design terms, conditions, prices, and products to arrange for an economically efficient and fair compensation system when RTOs need to purchase services to maintain system reliability. These include, but are not limited to, must-run "call" payments and contracts, redispatch control, and spinning reserves.

Restructuring focuses on introducing competitive market solutions to allocate resources and set prices. Nevertheless, some RTO reliability activities are based on must-run system management activities that can reintroduce cost-of-service pricing and regulatory control. Regardless of the inconsistency, it is important to recognize that reintroducing regulation to secure reliability will tend to prolong the very circumstances that require such actions in the first place. Market solutions would, instead, send clear price signals for new entry and/or encourage entrepreneurs to create new energy/reliability products.

Exaggerated locational market power concerns are causing a cautious and neo-regulatory approach to reliability. Nonprofit

ISOs might find such policies compatible. For-profit transcos are virtually inconsistent with such regulatory approaches for achieving reliability.

A third characteristic of most products shipped on a network is that they are often physically homogeneous. This means that inputs or products injected into the network are usually not tagged or otherwise distinguished as belonging to a particular shipper designated to a particular destination. (Telephone calls are an exception, but their physical routing is still very often quite indirect.) Products such as electricity, natural gas, water, and petroleum may be placed into the system at point A for delivery to point B. These physical inputs may, in fact, never get to point B because some other producer may be injecting an identical product at point C for delivery to point D. The physical network might find that the laws of physics cause A's products to go to D, while C's products go to B. This probably does not matter if all shipments are identical or homogeneous. However, sorting out cost causation and related prices take a quantum jump in complexity when displacement exists.³

C. Internalizing Economic Externalities

Both congestion and third-party effects are forms of economic externalities. Prices, sharing, or allocating nonprice property rights, and various protocols (terms and conditions) can be used to internalize these effects. The RTO is an independent entity

tasked to do such things. FERC recognizes that different structures or associations can be organized to accomplish these objectives. Ownership matters. Product choices are central. Rationing access, controlling congestion, and achieving reliability are the specific aspects that determine how users value the electric network. Now that the issues have been identified, the specific differences



between ISOs and transcos, and how these differences will affect the products and services offered by each, will be examined.

II. Exploring the Specific Differences

ISOs are RTOs where the incumbent, formerly vertically integrated utilities retain transmission ownership while ceding operational control. Thus, transmission ownership and operational control are effectively severed. Transcos are formed by divesting assets from formerly vertically integrated utilities and effectively merging those

assets into a separate RTO. In a transco, ownership and operational control are vested in the same entity.

ISOs are usually nonprofit organizations that operate like regional clubs or associations. Transcos are separate for-profit businesses. Both entities seem to require some degree of outside regulation in terms of rules, access, terms, tariffs, and other issues.

Different structures/ownerships are likely to define and sell different products. How each RTO invests and evolves will also depend upon its structure and regulated/market incentives. These concepts are best understood after first considering a prototypical ISO and a for-profit transco.

A. A Typical ISO Approach

A competitive wholesale power market requires both nondiscriminatory open access to the transmission network and associated reliability. Similar access and nonpreferential treatment is also required to achieve the equal grid access necessary for retail competition and customer choice. An ISO is, by definition, functionally and operationally distinct from its various owners. In the near term, operational independence breaks the vertical integration between the competitive generation, regulated transmission, regulated distribution, and competitive retail marketing/customer choice segments.

Three obstacles are significant: (1) an independent system operator must be formed, (2) the ISO must be relatively large from a geographic perspective, and (3) a

common purpose must be established. Each of these obstacles are discussed in turn.

1. Forming an ISO. To establish a truly open access, nondiscriminatory transmission entity, it is necessary to create an independently operated system. This can be accomplished while continuing incumbent utility ownership. The ISO would collect fees for system usage and pay the utility owners a form of rent to provide a return "on" and "of" their fixed transmission investments.

There will inevitably be concern over an ISO's "independence" as new competitors seek a high degree of assurance that a truly level playing field is being created. New institutional and regulatory protocols will be necessary to address congestion, reliability, loop flows, and operating decisions for a wide range of direct and ancillary matters. Special attention is required for "must-run" plants, re-dispatching, scheduled and emergency operations, maintenance, and repairs.

Regulators are forced to establish rules, protocols, and new regulations for ISOs. They must often serve as referees and seek to balance competing interests. These immediate tasks are daunting. Sometimes a nonprofit ISO may perform these functions for itself under a system that might be called regulation-lite. If ISOs preserve pre-existing access charge differences, cost-shifting problems would initially be minimal. Most ISOs would, however, find it difficult to achieve system expansion and congestion relief. To date,

most ISOs defer such matters, which cause system expansion and policies for reliability upgrades to become key components in a very long "to do" list. These actions also exacerbate must-run re-regulation and reliability re-dispatch problems.

2. The Right Geographic Size. In order for wholesale power markets to be competitive, the new transmission entity has to be relatively



large geographically. This often means that a number of small states need to work through their particular issues and combine to form a regional multi-state transmission entity. Voluntary ISO formation often pushes fairness to the forefront.

States with utilities that are already part of a relatively tight power pool have distinct advantages, primarily because the incumbents have previously resolved issues concerning pricing, reliability, loop flow, coordination, re-dispatch, and have sometimes even formulated expansion rules and protocols. These regions can

and often do give efficiency more weight. In such cases, there still remains the challenging task of adding new members and making these various rules, protocols, and pricing very transparent. These tasks are not easy to achieve, but they usually start from a functioning regional transmission entity (i.e., the existing tight power pool).

States without tight power pools have much to do before they get to a similar point. There are also often good reasons to create regional power markets that are larger than the existing tight power pool. Further, it is often less difficult for neighboring systems to join or be added to an existing tight power pool than it is for them to form a new ISO starting with a blank piece of paper.

3. The ISO's Purpose. Utility companies can, and often do, differ in terms of their views about a transmission network's purpose. Those utilities that prefer a network that will provide open—albeit congested at times—free access in exchange for an access fee that does not depend on usage will tend to form ISOs. Unless congestion is present, the generation and load location would not affect access fees and network use. However, when congestion is present, the ISO is tasked with devising and implementing solutions to these problems that are consistent with its overriding free open access philosophy.

4. Summary. This U.S.-based ISO model is often described as functional or operational divestiture of the transmission system. Several neighboring or adjacent

transmission systems are often combined in a larger network, which is sometimes called a regional ISO. Although an ISO sounds like a fairly specific institution without much room for variation or differences across the nation, nothing could be less true.

There is nothing like a standard ISO. There are no significant institutional norms that pertain to an ISO, unless perhaps the focus is on the word "independence." Further, we could even debate that simple conclusion. ISOs can vary greatly.

Among these differences are:

- (1) Who pays for the fixed costs? Customers, generators, or both?
- (2) How is congestion administratively reduced and/or how are prices set to eliminate congestion?
- (3) How are owners compensated for their past investments?
- (4) How does the ISO determine future transmission investment requirements, who invests, and how are they compensated?
- (5) When does the ISO provide ancillary services, and how are prices established for these services?
- (6) After the ISO redispatches the generators, who compensates whom?
- (7) How are transactions across or through a particular ISO treated when there are intentional or unintentional flows?

These questions are not intended to be exhaustive. However, they do prove the point that no one should be allowed to say simply that they favor an ISO approach over some other RTO approach. Similarly, no one should be permitted to say that they would form an ISO, implying there is some standard entity called an ISO. ISOs can come

in a variety of sizes and shapes. The principal ISO concept is usually fairness. When there is congestion, the ISO is operated to relieve congestion and achieve reliability using a combination of administrative rules that stress fairness. Congestion pricing, while possible, is neither the norm nor an easy policy to implement.

There is no standardized ISO that emerges to permit compari-



sons with other RTO approaches. Instead, ISOs have multiple and often quite inconsistent personalities and attributes. This has caused FERC to stress flexibility in its Order 2000. Regions taking the ISO approach must agree to work together. The devilish details remain in the future and invite regulatory preemption and stakeholder disputes. In the midst of all this, we note that the word profit is scarcely heard.

B. A Typical Transco Approach

A second approach to creating an open access, nondiscriminatory transmission entity is to create a

truly separate, independent, usually for-profit, transmission entity, the transco. This entity often acquires and/or retains all the transmission and reliability assets necessary to provide transmission and network services. Independent ownership, coupled with full operational autonomy from all the generation owners, reduces concern about special treatment, inside information, etc., that are typically concerns with ISOs.

Transco ownership interests most likely would not be derived from pre-existing cost-of-service, or rate-base, values. A new firm that purchased divested transmission systems to form a transco would expect to pay competitive market values for each piece acquired. Similarly, if pre-existing transmission assets are merged to create a new transco, some type of imputed market value would be used to determine respective ownership shares or exchange values. Current and expected income from transmission, synergy, location, and control are among the many factors that would determine a for-profit transco ownership structure. The resulting transco would have a tariff structure and product offerings different than most nonprofit ISOs.

Independent ownership also converts the system expansion issues and investments in improvements into more typical owner/regulatory matters by removing any concerns that arise due to multiple transmission owners overlapping with affiliated generation owners. Independent ownership would also probably

prefer to define and sell very discrete products. This often causes proponents of independent transcos to prefer "contract path" rather than "open access" pricing. However, this pricing protocol is not inevitable.

In many ways, operational and investment issues are simplified by an independently owned transmission company. However, to date, attempts to form transcos have been frustrated by additional organizational problems, disputes, and delays. This is causing some regions to prefer a two-step RTO process: (1) form an ISO, and (2) evolve into a transco. This two-step combination is not, however, necessary. An ISO is *not* initially required in order to form a transco.

A principal dispute is between free, unrestricted use, and contract path proponents. The various transco proposals, therefore, often evoke a debate over the type of transmission service or financial product offering (i.e., free access, contract path, or a variety of financial commodities). This product differentiation can complicate the multi-state regional issues. The result is that the independently owned, for-profit transco concept is usually neither understood nor fully discussed. And, such proposals are often incorrectly seen as obstacles, rather than different means to perhaps a better end game for consumers who seek relative price certainty and a well-defined product to purchase. This discrete product preference is also strongly held by generation owners who seek to make direct retail sales and bypass any central-

ized power exchange. Institutional choices create controversy and debate. Consequently, delays are often inevitable.

1. Contract Path Approach. The contract path product and pricing approach is a transmission system that begins with a direct focus on pricing a specific, well-defined transmission service. As with all regulatory pricing matters, there are two primary objectives:



(1) yielding a fair and reasonable return to investors or owners; and, (2) sending economically efficient price signals to transmission users. Customers usually seek to know in advance what they are purchasing and what it will cost.

Transmission service is complicated by the fact that transmission users or customers may think that they are purchasing one service, while the actual physical service, or path, provided and used may be quite different. Recall our previous discussion on loop flow and displacement.

Contract path transmission pricing is based on a specific economic

product that seeks to achieve reliability and efficiency across the integrated network through a very specific contract that explicitly specifies property rights and subsequently defines the transmission product that is being sold. To further complicate matters, the transmission product can vary significantly across RTOs. It is also likely to vary at different times and locations. Some transmission products are indefinite and uncertain. However, these are not fatal flaws. These complications can, however, result in tariff design complications due to congestion, loop-flow pricing and future-expansion battles.

The contract approach defines a specific product that establishes tradable property rights. We would expect a system of tariffs to emerge that reflects intended use. Regardless of the operational aspects of the network, transmission products could be sold as a specific, albeit virtual, "contract path." Simultaneously, the network would freely permit and encourage a substitute path or displacement to be used instead of the specific contracted path. Where the electricity flows over a path that is different from that contracted for, the excess money collected is allocated to the winners (the utility companies whose wires are actually used) and the losers (other utilities whose generators experience either additional costs or lost opportunities as a result of the loop-flow).

2. Competitive Energy Markets.

Competitive markets for energy could emerge in which intertem-

poral and geographic differences in supply and demand are embodied in financial transactions that treat electricity as a commodity. Congestion, reliability, ancillary service values, etc., could each be reflected in such competitive commodity markets. Uncertainty could be hedged.

Such markets would move quickly away from the mostly pure sunk wires' cost recovery and beyond the contract path, congestion pricing worlds. Doubtless, different transcos will have different ownership, objectives, products, and regulatory oversight requirements. There is no best approach. These differences, however, need to be understood and addressed.

More important, stressing a near-perfect end game is often allowed to become the enemy of the good, delaying transco formation. Perfecting long-term institutions can, and does, result in forgoing the efficiency gains from instituting and improving competition and customer choice in the near term. The dilemma for regulators is compounded by timing, customer desires, and the value of efficient network operations.

Transco organizers cannot be expected to assume these difficult tasks without a profit incentive.

Justice Brandeis once referred to the various states as laboratories of democracy.⁴ He was right. Furthermore, as FERC recognizes, one size surely does not fit all. The states, with federal guidance, need to muddle forward. They are doing so. Conflicting ideas require time and attention. Short

attention spans and impatience are not the hallmarks of good public policy. Worse, when unforeseen forces hit the market, the blame game is played. Least likely to be named are the myriad restrictions imposed on the market and regional transmission organizations.

Often, choosing a transco will mean upfront delays. Conversely, the ISO choice means deferring



important matters and constant regulatory tinkering, oversight, and uncertainty.

C. Reviewing the Basic Differences

Again, an analogy helps to illuminate the basic difference between an ISO and a transco. In certain amusement parks, entry is free and the visitor pays for the use of each ride or activity selected. Other amusement parks charge a significant entry fee and permit free open access to all rides and activities. Both types of amusement parks ration use by congestion, or waiting time.

Doesn't it seem that the waiting lines are longer at the parks that provide free, open-access than at pay-as-you-go or choose-to-use facilities, especially on the most popular rides?

This analogy is readily applied to electricity grid regionalization. ISOs are often predicated on entrance fee pricing and free unrestricted use, coupled with congestion or reliability management. These markets contemplate pricing and specific terms and conditions such as redispatch and must-run rules. Tariffs are designed to fully recover sunk cost. Alternatively, an RTO organized more like a pay-as-you-ride amusement park (the transco model) works more like a financial market in which hedging services, bilateral rights, and dynamic decisions evolve more naturally, and in response to competitive market conditions. Here markets would permit users to design their own product and require users to pay as they go.

ISOs most likely would tend to collect different locational access charges that reflect incumbent cost-of-service prices. This would tend to prevent cost shifting. However, revenue neutrality is an additional factor for incumbent transmission owners that currently earn nonnative income on their transmission assets. Most such utilities would use any such income to avoid raising regulated prices. Accordingly, preserving this income source (i.e., revenue neutrality) is likely to emerge as an issue in certain regions that are forming RTOs.

Native load retail and wholesale customers currently pay bundled prices that include their respective allocated cost-of-service shares for transmission service. Access charges could readily collect these same dollars. Some ISOs will probably collect their access fees from end-users rather than generators or a combination of the two. It is unlikely that any lost revenue from nonnative generators could be added to access fees collected solely from end-users. Accordingly, ISOs that form with significant prior pass-through transmission revenue would need to design tariffs that seek revenue from more than current end-users.

A transco would probably address these matters differently. First, a transco would most likely acquire transmission asset ownership. The price paid or transco ownership exchanged for the acquired transmission assets would reflect the net present value of the income stream expected under cost-of-service regulation, including any nonnative customer revenue.

A transco would most likely be a for-profit firm. Consequently, a transco would be more likely to design tariffs that make good business and economic sense. User fees, congestion fees, and access fees for generators and customers are some of the pricing options a transco could reasonably consider. Regardless, it is unlikely that a transco would attempt to maintain license plate pricing based on historic cost for very long.

In effect, the incumbent owner

has been compensated for these transmission assets. These previous transmission owners are, therefore, indifferent to the new transco tariff. Consumers and regulators concerned with cost-shifting and revenue neutrality would have more at stake. Nevertheless, transco tariffs could be designed to redress any such effects either temporarily or permanently.

A for-profit transco's principal



interests are earning a reasonable return on its investment, designing new products and services, and growing the business, including new sales and investments. An ISO is somewhat simpler in that it would maintain current transmission ownership. A plan to charge different customer-based access charges is relatively simple to organize. This is especially the case when revenue neutrality is not a major concern. However, simplicity in organization would mean balkanized access tariffs.

A transco, most likely, would be more difficult to organize. Nevertheless, its tariffs would

tend to be nondiscriminatory (i.e., similar users are treated equally in terms of price and other matters). Other regulatory concerns, such as preserving the previous incumbent price differences could, however, be accommodated with tariff modifications. This would be accomplished while keeping tariffs simple and encouraging new products and services that would permit end-users and generators to select unique options that would permit these simple tariffs to evolve into a world with more unbundling and more service options for end-users, generators and other market participants.

III. What's At Stake

The previous discussion suggests that, regardless of the RTO type, congestion and reliability should be internalized by an RTO. Stakeholders and the resulting market will be affected by how this is accomplished. Differences in structure matter and the range of choices is wide. Different regional conditions are the norm. Accordingly, different solutions are both likely and useful. This section explains what is at stake and why the exact method matters.

The public policy challenge is that deregulation is as much a political process as it is a competitive one. Mixing competition and regulation, micromanaging market restructuring, handicapping incumbents, settling for a static solution with good intentions to right the dynamic wrongs in the

future, are just some of the real-world problems that the electricity industry and its regulators should seek to avoid. Although restructuring in the United States is well underway, the process is not over. And some of these wrongs are creeping into the process virtually everywhere.

There have been other industries that have, to varying degrees, undergone a similar process of "deregulating." Important lessons can be gleaned from these past experiences. Good intentions have not been enough. Collaboration, while often necessary, has been oversold. Markets and competition generally trump regulation. These industries help to provide the backdrop for this discussion.

Two such lessons are most important. First, incumbent regulated suppliers have often been excessively constrained under the transition to managed competition. To help new entrants, incumbent firms have often been kept out of much of the competitive product market. This means that when new competitive products emerge, such as financial hedging, incumbents are sometimes excluded from the market. Consequently, new players have often emerged as the winners in this newly competitive market.

Second, it is much more difficult to fix "short-term" solutions in a political atmosphere when the competitive market is changing the target. Unintended dynamic problems have been created in other newly deregulated industries because potential

incumbent market power was exaggerated. For example, initially, it was relatively easy to impose rigid restrictions and conditions on natural gas pipeline owners. Relaxing these initial restrictive decisions has proven to be much more difficult.

There exists a regulatory phobia that produces some reluctance to rely on market forces to set prices. Regulators seem to



want to insure that competition lowers prices. Markets are, however, built on the premise that demand and supply will both lower and raise prices to ration products efficiently. Two particularly bad examples serve to illustrate this tendency. First, incumbents are often overly and unreasonably regulated to favor new entrants. Second, hometown referees can often be expected to favor noncompetitive results if they believe that such re-regulation would lower prices. Neither policy would permit competitive markets to do their job. Accordingly, innovation suf-

fers, entry lags, and consumers would, ironically, pay more than they should.

State regulators often view regulation's central purpose as helping to keep electricity affordable for consumers and businesses. High-priced states sign on for restructuring to gain new low-cost entry, using competition to lower prices and reduce high fixed-cost burdens placed on their consumers. Lower-priced states are adopting "price to beat" or transition rate caps that insure that prices cannot increase under competition.

There are profound inconsistencies between these often-merged competitive and regulatory solutions. An RTO's goals are to maintain reliability, relieve congestion, and eventually address questions about network expansion. The basic questions regarding grid ownership, product offerings, and tariff policy are daunting. Flexibility is important, but it allows room for procrastination and internal conflicts, as well as innovation and experimentation.

With an ISO structure, governance issues will be handled primarily by stakeholders. Regulation seems inevitable, continuous, and pervasive. With a transco structure, governance issues will be handled primarily by regulators. However, since discrete products probably would be sold by a transco, the market and efficiency will play more important roles.

We have avoided taking sides in the ISO versus transco debate. However, many would

embrace the “make it up as you go along” school of competitive markets. This means continual regulatory involvement in the RTO. Potential market power and congestion externality concerns are important policy matters. These concerns often lead “deregulators” or political “restructurers” to micromanage new institutions to determine their structure, pricing, and terms (i.e., rights); and, therefore, the products supplied. Regardless of the neutral position we take on the ISO/transco debate, we are emphatic in stressing that managing markets, except possibly for externalities, is neither wise nor efficient. Markets mean higher prices when demand exceeds supply. This is a significant economic signal because new entrants would rush to supply the needed product, thereby eliminating the shortage and reducing prices.

IV. Synthesizing the Choices and Conclusions

One size does not fit all. Flexibility and innovation are worthy goals. It is commonplace for people who discuss policy and business concepts to organize their thoughts and insights into various options and well-defined choices.

Designing a specific RTO involves multiple dimensions or characteristics. There is little doubt that independence is mandatory and relatively unambiguous. Effectively, incumbent utility ownership would eventually be relegated to a bondholder-like status. As we have discussed,

there are four primary choices that will define whether an RTO will be an ISO or a Transco. These are (1) governance and strategy, (2) property rights and terms, (3) products sold and pricing, and (4) investment decisions to relieve congestion and improve reliability.

The central idea behind the ISO approach is to design tariffs that collect money to compensate transmission owners (revenue



requirement recovery) while permitting free network use, regardless of intended paths, unless either transmission congestion or third-party generator opportunity costs are present. Different protocols or proposals for resolving these likely outcomes are found in the various ISOs that are being discussed across the country. No single answer is emerging for the various ISOs. The basic choice is between rationing and adjusting operations based on complex prices or use restrictions. When the latter is used, there are issues of who and what determines the outcome and tradeoffs. And, some

ISOs would change matters across time and space.

The most obvious ISO problem is that free use means congestion and reliability problems. These problems require more ISO activity, not less. ISOs will mostly be operated and controlled by a broad array of stakeholders. Such governance should lead to light-handed regulation so long as no group becomes entrenched or seeks concessions based upon unreasonable posturing. FERC will likely make broad policy and monitor results. However, this is likely to mean constant tinkering and regulatory oversight, even if it is light-handed.

Where there is growing interest in possible end-game strategies, a distinct, independent, for-profit (but regulated by FERC) transco would be formed. The transco could operate, maintain, plan, design, construct, and sell transmission service for the integrated network. The contract path approach does not eschew efficient operations or reliability; however, a product very different from that sold by the ISO is defined and sold by the Transco. That product might be based on “contract paths” or some other approach closer to access fees and separate congestion charges. As an independently owned business, most transcos would be less likely to be based on products that are created by the club-like or egalitarian atmosphere of measured ISO use pricing.

The transco would likely be viewed as a natural monopoly. The transco’s purpose would be to develop and supply real-time financial services products, much

like a commodities or futures market. Market participants and rules that eliminate insider trades and other activities would seem to be important. Market participation regulation, along with policy and monitoring regulation, are also likely to be necessary. Viewed as a monopolist, a transco is likely to be subjected to heavy-handed regulation, at least initially. However, traditional cost-of-service regulation should not be any more necessary than it is now perceived to be in highly competitive stock, bond, and commodity markets. Thus, in the long run, regulating transcos may prove less encompassing than the light-handed regulation imposed on ISOs.

The political and policy challenges for regulators are to let the competitive markets work, evolve, and function. Monitoring and, when necessary, preemptive interjections, are key. While micro-managing the formation, operation, and evolution are tempting regulatory tasks, these should be eschewed as inconsistent and inefficient.

In regions where these various alternative approaches are being debated, there are often some that prefer the ISO club, even if access charges vary. There are also others that seek to become the eventual owners of a new independent transmission company. This means selling discrete products, not free unrestricted access. If ownership was all that was at stake, these differences might be less important. Alas, as discussed and explained in this article, there is much more that drives the debate.

Some consumers seek simplicity

and others seek relative certainty. Some generators seek to make direct retail sales, called bilateral transactions, and others are quite willing to bid their generation into a well-organized power exchange. A transco has some natural advantages for addressing most of these matters. However, this transco approach has thus far proven to be difficult to organize and slow to gain political acceptance.



These comments are not intended to resolve which groups in the state-by-state debate have the best facts or the best arguments. Instead, the purpose is to explain how different products and property rights could emerge under different RTO approaches. Different products mean different types of tariffs. Differences in how systems would expand are also likely.

The facts, not the conceptual arguments, will determine whether any refinements in the initial RTO are required. Different structures will also alter the mix. Resolving these matters at the out-

set would be better than prolonged regulatory battles in the future. Facts and compromise should be valued and used. Flexibility is valuable. But the singularly most important concept to take from this discussion is that there are essentially no bad ideas—just significantly different options. ■

Endnotes:

1. Several ISOs have adopted the taxicab approach, socializing the additional costs because these ISOs effectively set their own access prices. This can mean that some customers pay for congestion that they do not cause. It can also mean a cost adjustment that increases the cost of admission.
2. Telecommunication routing is also based upon least cost, including congestion. The user wants a specific connection: placing a call from point A to point B. Displacement is not feasible. However, specific routing is virtually unimportant as long as the origin and destination are correctly connected. Telephone networks are designed with complex switching gears and devices to guarantee the telephone connection of a specific origin and destination. Routing, as long as it stays on a single network or networks designed to support one another, is unimportant.
3. This sort of divergence does not matter for natural gas because, regardless of whether the product shipped is moved along the contract path or shipped via displacement, the same product is delivered: pipeline-quality natural gas. For crude oil, matters are a bit more complex because crude oil is not as homogeneous as natural gas. Shippers, therefore, design compensation protocols that result in payments to compensate shippers who put in a high-quality crude and receive a lower-quality delivery. Shippers that receive a higher-quality crude than they ship pay a charge to compensate the losers. This practice is often called a "quality bank." FERC regularly has approved such quality banks for oil pipelines.
4. *New State Ice Co. v. Liebman*, 285 U.S. 262,311 (1932).

Politics as Usual: A Roadmap to Backlash, Back tracking, and Re-regulation

Utility reform gone wrong—tales from FERC, Florida, Wisconsin, and California. By Charles J. Cicchetti, Ph.D. and Colin M. Long, J.D.

MARKETS OR MANAGEMENT? NO ONE has yet conducted a fully satisfactory political debate on the relative advantages of competition vs. regulation for meeting the nation's energy needs. No matter. Lacking confidence in one or the other, regulators have simply split the difference. They have combined the two ideas—neither choosing nor rejecting either in its entirety. In the process, they have created a hodgepodge of distrust, subsidies, incentives, and handicaps that is likely to fail and lead opponents to go searching for a scapegoat.

This “restructuring” is neither deregulation nor competition. Yet politicians continue to favor the term, because it gives them room to retreat if disaster strikes. And strike it has.

Recent events in California have pushed the competition vs. regulation

issue to the political forefront. Here we will discuss the reaction of the California Public Utilities Commission (CPUC) to recent blackouts in San Francisco and price spikes in San Diego. And it was not enough for Gov. Gray Davis to order regulators to slash prices in San Diego. As this issue went to press, the California Legislature passed a bill that includes a retail price cap of 6.5 cents per kilowatt-hour coupled with a balancing account to track distribution company revenue shortfalls. These reactions signal a desire to return to the “good old days” of regulation.

And California isn't the only battleground—it's just the most visible one.

Even where regulation still holds full sway, such as Florida (electricity) and Wisconsin (natural gas), examples are rampant of how regulators and consumers are being duped by proponents by what is best described as “pseudo competition.” Even at the federal level, at the Federal Energy Regulatory Commission (FERC) all is not well. As will be shown, recent FERC rulings on electric reliability and transmission congestion relief imply a certain lack of intestinal fortitude in Order 2000.

To our alarm, these errors are copied all over the country. The list of mistakes includes—

- **PRICE CAPS.** They are designed to mitigate the presumed “market power” of generators. Such controls only hurt the consumers they intend to protect.
- **GUARANTEES FOR RELIABILITY.** Regulators guarantee payments for certain “must-run” resources deemed essential for the government’s definition of “reliability.” In a market setting, such payments nullify potential improvements in efficiency.
- **THE MISMANAGED GRID.** Onerous restrictions in transmission markets that handicap incumbents and withhold incentives for investment.
- **DISTRUST OF ADVANTAGE.** A misguided assumption that true locational pricing advantages are anti-competitive.
- **SUBSIDIES TO COMPETITORS.** Encouraging new entry in a way that undermines incumbents, forcing consumers to pay more for energy.
- **COMPROMISES FOR INCUMBENTS.** Using retail competition restructuring to invite political compromises, not competition, in a new round of special interest neo-regulation. “What is the value of reliability?” That is a good question.

When regulators answer, they generally set the bar at a level applicable to all, and therein lie the seeds of failure.

Recall the general wisdom that regulation would afford the same vanilla-flavored service to all customers. Pundits asserted that markets would not be so limited, providing many additional services in addition to the traditional vanilla offering. Left alone, competitive markets with tariff unbundling would offer various new services to customers, including reliability services—all designed to meet each customer’s specific needs.

In competitive markets, supply shortages naturally trigger price spikes. That is the normal order and to be expected. If truly competitive energy markets existed, these prices simultaneously would signal the value of new supply-side investments and cause customers to search for substitutes on the demand side. Both responses initially would ameliorate price spikes. They also would work to restore long-run dynamic competitive market efficiency through new investments. Competitive markets would recognize that different customers have different tolerances for interruption and reliability, and would price various reliability services in response to these differences. That would give consumers with different reliability needs and sensitivities options.

Nevertheless, the burgeoning restructured market and its new institutions seem incapable of accepting such competitive outcomes. There is growing evidence that regulators and “regulators-lite” (e.g., some independent system operators, or ISOs) do not trust markets to do their job.¹

Most experienced hands know that the devil is in the details when it comes to public policy. Few would be surprised that self-serving arguments are being foisted on the restructuring process. Current policies and results are everything but competition and economic efficiency. The hybrids that have been devised are likely to fail. Sadly, when they do, markets and “competition” will be the handy scapegoat. Not only is this blame misplaced, but it could cause regulators to stage a full-scale retreat from the brink of actually letting competitive markets determine efficient prices and quantities. If such a retreat occurs, it is not likely that we will again reach this historic point in the near future. Regulation will become more entrenched than ever, and competitive markets will not develop. That would be truly unfortunate.

Price Caps: The Wrong Signals

Beginning this spring, and continuing through this past summer, the nation heard the cries to install price caps to “protect” consumers from high demand and tight supply. Think about that: A price cap ameliorates or even negates the signal for consumers to curtail demand or seek out substitutes. Price caps cause producers to look to other markets in the short run, and reduce investments in new capacity in the long run. That is exactly opposite what a competitive market would do if left to its own devices. There is not much benefit for consumers.

Price caps inflate demand and reduce supply at precisely the wrong time. Markets do not work this way. Those regulators and ISOs that are adopting price caps are falling back to a regulated world, using administrative fiat to control prices. Unfortunately, that sends the wrong signals. Competition is not supposed to rely on advertisements suggesting that consumers should not buy competitively sold energy by turning off their air conditioners during hot weather—that is akin to airlines telling people to avoid traveling at

Christmas. Price signals should be sent, and consumers should make free choices. If most consumers like air conditioning during peak use periods and are willing to pay high prices for this service, a competitive market should allow it. In this way, consumers send signals to investors by paying higher prices. Producers will take note and enter the market. Consequently, there will be more supply, and prices will drop until the market reaches equilibrium.

But when price caps are in place, incorrect price signals are sent. New supply will not respond, and the supply shortage problem that caused regulators to panic will remain unsolved. Price caps today require price caps in the future.

Guaranteed Payments: The Rhetoric of Reliability

Consider a second example of administrative pricing that trumps markets: it's the manner in which the ISOs and the FERC have rules, terms, and prices in electricity markets to assure a governmental vision of "reliability."

The rhetoric here is strong. FERC Order 2000² strongly endorses competitive markets, performance-based incentives, and price signals for the purpose of managing congestion and achieving reliable electricity grids.³ Unfortunately, however, the actual regulatory rulings that address congestion relief and reliability lack the intestinal fortitude of FERC Order 2000.⁴

Exaggerated horizontal market power concerns are often used to create a buyer monopoly that can and does use its reliability-must-run (RMR) authority to avoid zonal pricing, and to mute any reasonable signal for transmission system expansion. For example, in California, congestion is handled by administrative fiat that "manages" reliability and prevents markets from doing the job that they can do best. All of this causes new generation decisions to be made without the checks and benefits of engineering and economic information.

Once again, consumers and producers are not provided with appropriate price signals.

The result is a triumph of institutional bullying and hometown refereeing over both sensible coordinated system planning (the old regulatory order) and competitive market price signals (the new paradigm). Regulators in this neo-regulatory regime promise to come roughly close to market answers. However, they deliver precisely the wrong relief.

It is self-evident that some generators are needed for reliability due to their location, regardless of their running cost. Due to transmission constraints, transmission for these units could be priced according to what the market would bear—exactly what locational rents are supposed to do in the short run in competitive markets. Left to themselves, markets would use locational price differences to send pricing signals that would bring forth new investments and/or shift demand. That is not horizontal market power running unchecked; it is what happens when networks have capacity constraints that create different zones or markets. Regulators' fear of monopoly power abuse causes them to abandon markets, and replace them with monopoly buyers (i.e., ISOs and regional transmission organizations) that, in a manner similar to that of some medical suppliers, set prices and determine need.

Distrust of Advantage: Rejecting Locational Pricing

The California ISO and FERC seem to have rejected comprehensive zonal prices⁵ as a means to address reliability and congestion. Worse, these regulators find it reasonable for reliability suppliers to receive regulated prices for the services they must provide. This policy will maintain itself, and prove unable to relieve transmission constraints efficiently.

This pricing policy sets the administratively determined prices equal to competitive prices outside of the zone, or relevant location, in which the plants generate electricity. In other words, such reliability pricing schemes (1) ignore the value of location; (2) mask appropriate price signals so that the market will not ameliorate transmission constraints that cause locational pricing differences; and (3) sets price equal to competitive prices that occur outside the relevant geographic market. This recipe guarantees continued congestion. As a result, RMR regulation also will continue indefinitely.

The regulatory rhetoric makes it sound as if competition has arrived in California. The practice, however, prevents signals from being sent to eliminate transmission constraints. This approach fails to put a reasonable value or price on reliability. Worse, the California ISO policies reject the use of market prices to relieve congestion. Though not as efficient as allowing competitive markets to do their work, there are

administrative terms and prices that would come closer to a competitive result than current Cal-ISO tariffs. For example, most run units could be dispatched and paid the system lambda of the generator within the constrained zone that clears the market. That could constrain market power, while using intra-zonal price differences (i.e., locational marginal cost pricing).

The Mismanaged Grid: Fear of Profits

There is a growing awareness that owning electricity transmission may be undesirable. There are three reasons for this conclusion. First, transmission ownership often forces vertically integrated utilities to accept onerous customer service/distribution operation restrictions and regulatory handicaps in new competitive markets. Second, owning transmission plays into vertical market power fears, and supports strong efforts to force utilities to divest generation assets. Third, a FERC administrative law judge (ALJ) recently set the authorized return on equity for transmission assets owned by a utility and operated by an ISO at 9.68 percent.⁶ Although the FERC eventually restored Southern California Edison's ROE to the level of when it transferred operational control over its transmission assets to the Cal-ISO, there is no guarantee that future decisions will not be as draconian as the initial decision made by the ALJ.⁷

Under such circumstances, few investors can be expected to upgrade or expand the electricity transmission grid. Growth will bring increased reliability problems and congestion. Existing transmission will become economically scarce and increase in market value. That normally would result in new investments in congested markets, but alas, Cal-ISO practices and tariffs mean that there is insufficient incentive to construct new transmission facilities. The result will be a permanent need for price caps on generation, indefinite reliability must-run status, and, in the near future, new priority/allocation schemes to manage the market. Worse, perceived failures brought about by higher consumer prices eventually will lead to pressure to re-institute comprehensive regulation. With all the anticipated market restrictions already in place, restoring regulation will be relatively easy.

The Cal-ISO and FERC are acting like deer frozen in a car's headlights, only here, the car is a fear of locational horizontal market power that causes them to reject meaningful locational market pricing. Fears of ridiculously low returns on equity and denial of legitimate cost recovery will prevent new investments that could improve reliability and reduce congestion. A fear that market players will profit seems to have driven regulators to use tariffs and rules that reflect the very regulatory principles

restructuring was supposed to replace. These rules and tariffs also cause new problems that require more regulatory tinkering and solutions. Markets do not require micro-management, monitoring, and endless fine-tuning. These problems would be eliminated if regulators would trust the market to send appropriate price signals. Until that happens, neo-regulation will reign and markets will be unable to fully develop.

California Last Summer: The Blame Game

Two events roiled electricity markets in California last summer. First, in June, San Francisco was hit with a series of rolling blackouts. Second, San Diego, the first city in California to pay market prices, faced soaring prices that resulted from a combination of extended hot weather, transmission constraints, and power shortages. Governmental and regulatory reaction has been swift and predictable: Markets were blamed. Gov. Gray Davis called for the CPUC to initiate an immediate investigation into the reasons for the blackouts and price spikes, and to devise a solution that would prevent their recurrence.

In response, the CPUC conducted an investigation and on Aug. 2, released its report to the governor. The report assesses blame and presents various assessments for controlling the problem.

The CPUC asserts that the blackouts and price spikes were driven by "hot weather, aging power plant and transmission infrastructure, and dysfunctional bidding behavior in the wholesale power markets. ..." Then, in classic regulatory fashion, the CPUC report blames past administrations for current problems, alleging that past administrations "traded away the State of California's ability to project, plan for and act to control electricity supply shortages and wholesale and retail price run ups. ... The federal government now regulates California's electric system. Washington, D.C. now controls pricing decisions directly at the wholesale level and indirectly at the retail level."

To further spread the blame, the CPUC points a finger at the Cal-ISO and Power Exchange, raising allegations about conflicts of interest that exist due to the structures of their respective boards of directors, and the presence of stakeholders who might benefit from higher prices. And the CPUC found sufficient evidence of questionable bidding practices to call for the state attorney general to investigate statewide bidding practices.

Neither the governor nor the CPUC seems to get it. It is fruitless to assess "blame" for the bumps in the road that occur as we make the transition from a regulated market to a competitive market. It is unrealistic to think that it will not take time for the market to equilibrate once supply and demand balance. That will never happen unless regulators and politicians allow the market to send appropriate price signals. Unfortunately, that is not what the CPUC suggests in its recommendations to the governor. We fear the CPUC's recommendations signal the start of a full-scale retreat from competitive markets in California.

The CPUC identifies what it considers to be the four components affecting electric reliability and prices. It has recommendations for each.

1. **RETAIL PRICING.** The CPUC asserts that the state must protect consumers from "cartel pricing, collusive behavior, inadequate power plant maintenance and lack of market planning for adequate electricity supplies." The CPUC's primary complaint here is that the Cal-ISO and PX are private, autonomous entities that are not accountable to the state or its consumers. The CPUC sees sinister shadows lurking in the corners, and concludes that somehow, the Cal-ISO and PX are partially responsible for the problems with California's markets. The CPUC wants the state attorney general to investigate.
2. **SUPPLY AND DEMAND.** The CPUC wants policymakers to determine "what constitutes adequate electricity capacity."

Additionally, in the short term, the CPUC wants to focus on reducing electricity demand.

3. **WHOLESALE MARKETS.** The CPUC wants the state and Cal-ISO to speak with one voice and demand that the FERC (1) extend wholesale price cap authority, and (2) find that California wholesale markets are not competitive.
4. **RESOURCE PLANNING.** The CPUC wants to "manage retail price problems until a market develops and is fully functional." To that end, it recommends creating a California Energy Council that would "unify State action to resolve energy problems and to perform integrated energy planning."

Gov. Davis, apparently feeling the political heat, on Aug. 9 ordered the CPUC to slash electricity rates in San Diego by 50 percent. Some California legislators criticized the action not because it signals a retreat from competition, but because it preempted the California legislature, which also is poised to take up the proposed rollback issue. Although the CPUC earlier in the week had rejected mandatory rate reductions, the CPUC president endorsed the governor's actions. It seems that neither politicians nor regulators in California have the courage to withstand this onslaught against competitive markets.

The actions suggested by the CPUC ostensibly are temporary fixes that will be in place until California's wholesale market can develop. But let's get serious for a second. As we have pointed out above, these are exactly the activities that will prevent competitive wholesale markets from developing. These "fixes" should be seen for what they really are: a full-scale retreat from markets and a return to regulation in California.

While the blame game is played, and re-regulation or worse is threatened, new retail marketers are not entering California. But they should be. Data clearly indicates that during eight to 10 months of the year, electricity is in oversupply in California, and competitive prices are below the annual average price. Retail marketers should have aggressively pushed a pricing option that would smooth out these big monthly seasonal price differences of about three to one. Until very recently, however, they didn't. Instead, retail prices this summer doubled what they were at a similar time a year ago, and use increased dramatically in the midst of prolonged heat. Seasonal price and use protection would likely be a welcome product in California, where most consumers do not want to play the price swing game, and prefer that others hedge this risk. There is money to be made here.

But instead, California faces political and regulatory calamity. Politicians order regulators to refund 50 percent of payments to consumers, and threaten re-regulation. Retail

consumers in San Diego pay punishingly high electric rates, and no one seems courageous enough to discuss fall and springtime offsets. New competitive suppliers are still scared off by all this political uncertainty and the attempts to shift blame. The rest of California's retail customers fear that the worst is yet to come.

Solutions are easy, but the political will to adopt them is hard to find. First, California needs to deregulate its competitive markets fully. Price caps must go. Local reliability payments need to be loosened from the grasp of regulatory and parochial interests. Power marketers need to enter the market and offer seasonal price and use protection. Politicians and regulators need to entice and encourage such entry, rather than deter it. Unfortunately, threats to re-regulate and non-sensical proposals for costly universal telemetry such as real-time metering are keeping new competitors out of the market just when they are most needed.

Elsewhere: "No" to Some Competitors, Subsidies to Others

Even in some higher-priced states that have not yet restructured, regulators accept modifications to existing regulatory systems under the guise of competition that would manage entry by new competitors. These new hybrid structures promise bad regulatory results. Worse, this form of neo-regulation will continue to expand transition regulation, and extend transition periods. Few expect the sun to set on these new regulations.

Two recent examples, one from the electricity world and one from the natural gas world, demonstrate the problems inherent in a regulatory-competitive hybrid approach that seeks to encourage entry in a partial regulatory-competitive system.

MERCHANT PLANTS IN FLORIDA. Recently several new merchant plants applied to enter the Florida electricity markets.⁸ Florida is a relatively high-priced state isolated from the rest of the lower 48 states due to its location. Consequently, it suffers from constraints in its electrical transmission system and limited natural gas supplies. Additionally, tremendous growth in Florida is fueling growing demand for electricity. New supply is needed. Merchant plants are anxious to enter the state and prevent incumbent investor-owned utilities from building this needed generation under the traditional cost-of-service regulation that is still in place in Florida.

Florida only recently has begun to explore restructuring its electric industry, and remains entrenched in traditional cost-of-service ratemaking. New entrants attempt to manipulate regulators with arguments that imply the merchant plant owner will assume all risk of entry. Though these arguments may have some merit in a competitive market, in a hybrid

market such as the one developing in Florida where retail customers have no choice and incumbents remain regulated, the merchants seek entry in order to obtain much higher than competitive returns and benefits.

These merchant plant owners have sought regulatory approval to be paid administratively set prices based on the "price stack," or hourly system lambda of the incumbents' generators that clear the dispatch sequence. If approved, the prices paid to new merchants would not reflect wholesale competition among competing generators. There is no such market because the investor-owned utilities are regulated under traditional cost-of-service principles. In other words, a joint dispatch approach is used to achieve operating efficiency, while each utility generator effectively is paid a price equal to its individual running costs rather than a market-clearing price. This regulatory practice means that consumers pay the least cost for electricity.

Merchant plant owners seek administrative prices equal to the highest running cost in each hour, much as a market would do. That would yield extraordinary profits in Florida's non-market hybrid world. These market prices would also greatly exceed the comparable rate-base costs that incumbents would receive if they built the same new units. Consumers would pay more, not less, for electricity under these merchant plant hybrid restructuring proposals, if approved. That is not competition. The only winners are the new entrants that cream-skim, avoid competition, and use the state's fear that, but for the new merchants, the lights would go out in Florida.

The conclusions are unambiguous under current regulation and nascent market conditions in Florida. Entry in competitive wholesale markets needs to be free. California demonstrates that regulatory obstacles are counter-productive and anti-consumer. In Florida, the problem is that the path of proposed entry would be strewn with protective special treatment and seemingly unnecessary subsidies. In all circum-

stances, competition will work best when high prices or operating margins are allowed to encourage new entry to close the gap between supply and demand.

GAS PIPELINES IN WISCONSIN. A second troubling example comes from the natural gas side of the energy market. The FERC seems to recognize that in competitive markets, new interstate natural gas pipeline entrants willing to put their investment at risk should not be required to satisfy the old regulatory requirements for a certificate of need.⁹ That is quite sensible.

However, in Wisconsin, a natural gas pipeline entrant is using this reasonable proposition to pursue rulings that sweeten its deal and harm consumers. The pricing proposals are neither arms-length nor competitive. Instead, they represent vertical market power and affiliated interest abuse.

The story is about as old as recorded regulatory history. In Wisconsin, this proposed new pipeline is partially owned by an affiliate of a natural gas local distribution company (LDC).¹⁰ The new “at risk” regulatory policy would seem to apply, and exaggerated fears of natural gas shortages, coupled with a perceived need for more natural gas to fuel new electricity generation, has pushed state political leaders to endorse and support the new pipeline. This perception of energy shortage seems to have blinded state and federal regulators to the fact that the incumbent pipeline has committed to add new equivalent capacity at significantly lower fixed prices than the new entrant, which is an affiliate of the state’s largest natural gas buyer, and an LDC.

Similar to retail electric customers in Florida, retail natural gas customers in Wisconsin do not have the ability to choose their natural gas supplier. This lack of retail competition invites market entrants to request new subsidies and regulatory protection from the competition of incumbents. Of course, these requests need to be masked. In Wisconsin, the new pipeline entrant sought administrative or regulatory approval to build a new source of supply in exchange for higher regulated prices that would be

paid by captive retail consumers. In Wisconsin, as in Florida, the entrant makes competitive price claims and avers consumer benefits that are based neither on fact nor common sense. Regulators want more supply and energy security. However, they also need to consider other alternatives, especially when the market entrant does not participate in an arms-length negotiation with the LDC. That is not competition; it is bad regulation.

In the Wisconsin case, the higher-priced solutions will benefit a vertically connected affiliate. Under strict regulation, that would not seem plausible. However, invoking the mantra of competition and market entry appears to be all that is necessary to obtain political endorsement and regulatory approval. Under this mixed regulatory-competitive hybrid, entrants seem able to obtain outrageous subsidy payments if they exploit fears of shortages and play the competitive purposes/free market card. Unfortunately, consumers typically pay more for this subsidy-masking pseudo competition than they would have paid under traditional regulation.

Playing to Special Interests: Compromises and Bad Deals

As practiced in the utility industry, restructuring brings special interests out of the woodwork, seeking to rewrite regulations to shift the battlefield in their favor. Here is where the compromise game is played. The result is often a hybrid—neither market nor regulation—that discourages real competition. And without competition to iron out the inefficiencies, these favors to special interest just emasculate the process and produce negative results.

MITIGATION ADJUSTMENTS. This sort of compromise can take various forms, but the primary purpose is to reduce stranded cost estimates. In general, mitigation means that considerably less than 100 percent of a utility’s stranded costs would be recovered. The largest energy consumers push this policy to gain a swift, cheap exit strategy.

Undoubtedly, some utility companies have inefficiencies that the market would uncover and weed out. The mitigation process attempts to use regulation and administrative proceedings to accomplish this task. The results to date typically have been heavy-handed and designed to implement the results that regulators allegedly should have forced utilities to achieve under rate base regulation.

MORE PRUDENCE FIGHTS. Many states with nuclear generation experienced the first “prudence” wars during the 1970s and 1980s. These battles were fought in an attempt to prevent utilities from including in the rate base all their nuclear power plant construction costs. Restructuring often brings a second prudence fight. Arguments addressed and resolved years ago

resurface, but, along with mitigation proposals, they are nothing more than an attempt to rewrite the past, reduce rates, and accelerate the move to competition. Not all bad, perhaps. In practice, however, much of this is irrational, duplicates the past, and is likely to result in the adoption of offsetting "bads," as self-interested participants seek advantages over incumbents, rather than common-sense solutions.

If these real restructuring purposes were articulated and pursued explicitly, few would question the end result. Instead, regulators and others hide behind the shields of "mitigation" and "prudence" to pursue their other agendas. That provides clever special interests an opportunity to seek advantages not available under sensible regulation or real competition. When the inevitable problems surface, there will be no basis for understanding what and why things were done. If regulators and politicians instead articulate explicitly their purposes and rationale, many problems will be easier to resolve.

INCUMBENT HANDICAPS. Restructuring is typically presented as a political process in which new entrants need some special protection. Therefore, new entrants argue that incumbent electric utilities need to be heavily controlled and handicapped. But that is not how competition works. Under competition, investors take risks with no downside protection or upside caps. The hallmark of most state restructuring proceedings is to seek political and regulatory guarantees and new subsidies. None of this is explicit. Nevertheless, the game is well played and ubiquitous. But make no mistake; it is not competition. **F**

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- 1 Worse, new institutions such as the California ISO seem to believe falsely that their actions will not have serious spillover effects outside their immediate jurisdictional concerns. Electric utilities in neighboring states know that they indeed are affected by Cal-ISO pricing policy and terms of service.
- 2 *Regional Transmission Organizations*, 18 CFR Part 35, Docket No. RM 99-2-000, Order No. 2000, 89 FERC ¶61,285 (issued Dec. 20, 1999).
- 3 While emphasizing that it intended to be flexible in reviewing congestion pricing proposals, the commission reemphasized that "markets that are based on locational marginal pricing and financial rights for transmission provide a sound

framework for efficient congestion management" (FERC *Stats. And Regs.* ¶32,541 at 33,742). Again, reemphasizing its comments in the NOPR, the FERC stated that congestion pricing proposals should "ensure that the generators that are dispatched in the presence of transmission constraints must be those that can serve system loads at least cost, and limited transmission capacity should be used by market participants that value that use most highly" (*Id.* At 33,754-55).

- 4 Recent FERC actions in the Northeast may prove this wrong. See *ISO New England Inc.*, Docket Nos. EL00-62-000-002; ER00-2052-000, 002, and 003; *New England Power Pool*, Docket No. ER00-2016-000, *Central Maine Power Co., et al. v. New England Power Pool and ISO New England Inc.*, Docket Nos. EL00-59-000 and ER00-2005-000, 91 FERC ¶61,311. These comments definitely apply to California, however.
- 5 See for example *Pacific Gas & Electric Co.*, Docket Nos. ER98-494-000, ER98-1614-000, ER98-2145-000, and ER99-3603-000 (issued June 7, 2000). In this case, the administrative law judge was charged with ascertaining the appropriate charges for RMR service at three power plants in the San Francisco area. The ALJ recognized that the RMR plants were a hybrid, and that cost-based rates for the RMR services were a vestige of cost-based ratemaking. Nevertheless, the ALJ noted that RMR status was necessary to mitigate any locational market power the generator might have, and that net incremental cost compensation was adequate to reimburse the generator for all costs associated with RMR unit obligations.
- 6 *Southern California Edison*, Docket No. ER97-2355 *et al.* (March 31, 1999).
- 7 FERC also refused to allow \$23 million in administrative and general costs, reasoning that these costs were a CPUC issue. However, although the CPUC previously had allowed SCE to recover these costs, it stopped doing so April 1, 1998, assuming that these costs were now a FERC issue. SCE has requested that the CPUC allow these A&G costs, but as things stand, neither the CPUC nor FERC is assuming jurisdiction over the issue. SCE could lose more on the issue of A&G costs than it would have under the ruling for low ROE.
- 8 See, for example, *In Re: Joint Petition for Determination of Need for an Electrical Power Plant in Volusia County by the Utilities Commission, City of New Smyrna Beach, Florida, and Duke Energy New Smyrna Beach Power Company Ltd. LLP, before the Florida PSC*, Docket No. 981042-EM; *In Re: Petition for Determination of Need for an Electrical Power Plant in Okeechobee County by Okeechobee Generating Co. LLC, before the Florida PSC*, Docket No. 991462-EU; *In Re: Petition for Determination of Need for an Electrical Power Plant in St. Lucie County by Panda Midway Power Partners L.P., before the Florida PSC*, Docket No. 000289-EU. Recently, these cases were abated subsequent to the Florida Supreme Court ruling that the Florida PSC has exceeded its jurisdiction in granting the need petition in the Smyrna Beach docket. See *Tampa Electric Co., et al. vs. Joe Garcia, et al. as the Florida Public Service Commission, et al.*, 25 Fla. Law W. 5294; 2000 Fla. Lexis 772 (April 20, 2000).
- 9 See *Certification of New Interstate Natural Gas Pipelines, Statement of Policy*, 88 FERC ¶61,227 (Sept. 15, 1999); *Order Clarifying Statement of Policy*; 90 FERC ¶ 61,128 (Feb. 9, 2000).
- 10 *Application of Guardian Pipeline LLC for Certificates of Public Convenience and Necessity*, FERC Docket Nos. CP00-36-000, CP00-37-000, and CP00-38-000; *Wisconsin Gas Co., Requests for Approval of Application to Construct and Operate Natural Gas Lateral Line Facilities, Public Service Commission of Wisconsin*, Docket No. 6650-CG-194.