

## RTOWest

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Just under ten years ago, the Energy Policy Act began the process of opening the nation's high-voltage electricity transmission system to competitive market forces, taking the first steps toward a "highway" for commerce in wholesale electricity. A few sentences in this statute have led to reams of regulations, as the Federal Energy Regulatory Commission (FERC) in Washington, D.C. has written the "rules of the road" to accommodate competition. In the Northwest, privately owned utilities such as Portland General Electric (PGE) and PacifiCorp, as well as the federal Bonneville Power Administration (BPA), have voluntarily opened their previously private transmission grids to wholesale trading in electrical power. This has effectively eliminated the ability of any one utility to favor the movement of its own supplies of bulk power along its transmission lines.

The main vehicle for eliminating such favoritism is the "open-access tariff"—a common set of rules governing the use of transmission lines. Tariffs have been in place since the mid-1990s and have led to an explosion in bulk power commerce. For example, before open access, the fed-

eral transmission grid in the region handled a few hundred transactions per day; under open access, daily transactions have increased to over 2,500.

Many utilities and generators, as well as FERC, believe that these changes are not enough—that wholesale markets are prevented from reaching their full potential by the patchwork nature of ownership of the high-voltage grid. Despite the tariffs, a shipment of bulk power from, say, British Columbia to California, must apply for and purchase segments of the grid along the way to connect the power's source to its destination. FERC sees other problems: the grid is not open enough, competitive electricity markets are not developing quickly enough, market power—the ability to manipulate prices because the market is not truly competitive—remains, and planning and expansion of the system are not proceeding quickly enough.

#### RTOs to the Rescue?

To address such perceived deficiencies, FERC has decided

# RTOs: An Idea Whose Time Has Not Yet Come

by Lon Peters

that the power industry needs new institutions to promote common standards for commerce across the country. These new institutions are called Regional Transmission Organizations, commonly referred to as RTOs. The "regions" are quite large: FERC has ordered market participants in the Northeast to engage in mandatory mediation, with the goal of creating a single RTO stretching from Washington, D.C. to the northern tip of Maine. Similar orders were issued for the Southeast and Midwest regions of the country, and FERC has clearly stated that its ultimate goal for the West is to form a single RTO for the entire western third of the country—perhaps even extending into western Canada.

What would a Western RTO actually do? The answer to this question depends on continuing negotiations in the West (*See John*

*Carr's article in this issue for a list of participants -ed.*) as well as what FERC will require of RTOs generally. Over time, certain functions currently performed by regional utilities (such as PGE) would probably shift to the RTO, along with some personnel. These functions might include transmission planning, oversight of system security and reliability, emergency operations, tariff administration, billing and payments, and default provision of "ancillary services" (which are actually produced by generators but are essential to the reliable operation of the transmission system). There would also be new functions for the RTO, such as the monitoring of power and transmission markets to deter monopolistic behavior, and the supervision of new dispute-resolution procedures. The most important new functions would be "congestion management" and the construction of new transmission capacity—two areas where the uncertainties and risks of an RTO trigger major concerns. (*Please see author's side bar "Wire Rules" -ed.*)

#### Reassigning Property Rights

Any new congestion management system would begin by defining a new form of contractual property right in the transmission grid—"shares" in the grid—followed by encouraging or perhaps requiring all holders of existing contract rights to exchange them for the new kind of rights.

An example from outside the power industry is useful to fully understand the impact of such a drastic change. Suppose that the state mandated that all current forms of property leases (short- and long-term, residential and commercial) were to be replaced by new, uniform long-term leases.

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Current leaseholders would probably wonder whether the new set of rights would be comparable to their existing rights. They might also reasonably ask whether the economic value of the properties they occupy would rise or fall, and whether they could afford to do business or remain at their current locations. Advocates of the new system might respond to these concerns by saying, “Hey, don’t worry; there will be a marketplace in which you can trade the new lease rights if the set we give you doesn’t work.” Without knowing how that new marketplace is going to work, however, leaseholders are likely to be very skeptical of such promises.

In the electricity industry, we have seen that attempts to force new types of property rights (including new ways to set prices for transmission, energy, and other services) sometimes fail. California is the best example, but there have been similar though less significant problems all across the country. Critics of the current system point to the failures and shortcomings of traditional forms of pricing regulation and rules that govern access to the transmission grid. (*See John Carr’s article -ed.*) On the other hand, so-called “free markets” can fail and serve mainly to transfer wealth and income from one group in society (e.g., electricity consumers in California) to another (e.g., Canadian and Texan energy marketing firms). When markets are poorly designed, they do not improve the efficiency of electricity consumption or allow competition to determine the price of a particular megawatt-hour at a given location.

In addition to such uncertainties, there is the risk that construction of new transmission capacity would be delayed because investors would be unwilling to commit funds while property rights are being redefined. Another example from outside the power industry is helpful here. If residential and commercial developers expected the mandatory conversion of all their current contracts with tenants to some new and undefined form of lease, would they be willing to invest in new apartment or office buildings? If those investors were to think, “I’d better wait until the dust settles on the new or uncertain rules to build anything new,” apartments and office space would become more scarce and prices would rise accordingly, in

part to cover the risks associated with the new rules.

In the electricity industry, the prices charged for use of the transmission system are regulated, but private grid owners are increasingly requesting that regulators approve additional incentives—such as capacity accelerated depreciation or higher built-in profit margins—to enable them to build new transmission. Such changes, of course, would mean higher prices for consumers. This applies to a world with or without an RTOWest.

To counteract these expected trends toward delay and higher prices, some utilities advocate giving the RTO more authority to mandate the construction of new grid capacity. This would include the ability to essentially “tax” (i.e., surcharge) electricity transactions to raise the required funds, or to pass through to consumers the costs of the new construction. Another non-power industry example can demonstrate the peril of creating this type of authority.

Imagine that a new agency determined that there are not enough apartment buildings in downtown Portland, and that this agency had the power

### Wire Rules

“Congestion management” refers to the rules that the RTO will administer to ensure that congestion on the transmission grid is handled in the most reliable and economical manner possible. Currently, when there is too much demand for a congested transmission path, rules govern who gets bumped off the grid in what order. Typically, the most recent and shortest-duration transactions are the first to get bumped off. Then, long-run contract claims to the path are bumped off in a pro rata or proportional fashion. For example, assume that 1,200 Megawatts (MW) of power wants to move on a particular transmission path from central Washington to Portland for an hour, including 200 MW of hourly nonfirm transactions and 1,000 MW using long-term contract rights. If the capacity of that path is cut to 500 MW because part of the line fails, the 200 MW of hourly nonfirm deals would be thrown off the path first (“curtailed”), and then the remaining 1,000 MW of long-term rights would each be cut in half. This system works today by forcing those who originally wanted the 1,200 MW to move from central Washington to Portland to find other sources of energy on other paths (the usual consequence), or to go to consumers and buy or force reductions in the use of electricity in Portland. Each user of the path that is curtailed makes his or her own decisions about how to respond to the problem.

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to require everyone renting an apartment or office in the city to pay a surcharge to raise funds to build more. Let's say further that this new agency is headquartered not in Portland, but in Salt Lake City or Los Angeles, and that it draws the members of its governing board from all over the entire western United States. This kind of interference in the real property market is clearly ludicrous on its face. Some advocates of strong RTOs, however, believe that we cannot trust the judgments of individual market participants, and therefore must have an agency with the power to force the construction of new transmission capacity and the power to enable taxes to fund it.

### What does all this mean for Oregon?

If FERC's goal is achieved, power markets in the Northwest will be governed by rules developed by an institution potentially located far from the consumers and producers in the region. Would consumers in Oregon be better off as a result?

Considering what has happened in other parts of the country and the likely effects of a western RTO, it is highly questionable that Northwest consumers would pay lower prices

with a new institution managing transmission. Estimates of the costs of setting up and running RTOWest, although a fraction of what the California Independent System Operator (ISO) costs, run as high as \$75 million per year, which is about what consumers now pay in New England for a similar organization. The labor, hardware, and software costs of

changing the industry's existing business practices would also be substantial.

Those who claim an RTO would provide benefits are relying mainly on speculation to make their points. For example, many proponents of RTOWest want to create a single control area for the region in order to respond to outages more effectively. Control areas are segregated systems in which generators respond instantaneously to changes in demand. Multiple control areas provide a form of redundancy that reduces vulnerability in a catastrophic event, much like having multiple circuit breakers inside your house. Eliminating this redundancy could reduce overall reliability. Finally, the continuing uncertainty about new rules and regulations coming from Washington, D.C. is undercutting the incentive to build additional transmission capacity, which is needed to make sure that the region's generation supplies can actually get to consumers, lights, and motors.

The bottom line on RTOs is the answer to one seemingly simple question: Are RTOs worth the effort and the cost? Unfortunately, the "simple" question is, like an onion, many-layered. The outer

layer has some more specific questions: Would we expect to see lower prices for electricity and fewer outages? Would new sources of generation, whether gas-fired or wind-fueled, find it easier and cheaper to get connected to the grid and reach consumers? Would the new markets in "grid shares" work smoothly, so that anyone wanting to move power could buy the rights to transport it or the insurance to protect against the financial consequences of congestion? Below the outer layer lie more detailed questions, beyond the limits of this article. Even this first layer of uncertainties indicates that moving very slowly and answering all of these questions is the only prudent course of action. We should be convinced that the new system promises to work better than the old before we permit such an important and irreversible change in the power industry.

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## Conservation and RTO West

Some believe the formation of a Regional Transmission Organization (RTO) could relieve the stress on the transmission system in an efficient manner by enabling the "market" to lead. Most larger utilities and marketers, such as Enron, have given their hurrahs to this plan with very little questioning, because they are anxious to participate in wider markets. But there still exists the muffled opposition from many smaller utilities and end users that feel they have little to gain and much to lose from being forced to play with the big boys. After all, the California experiment also worked according to someone's capitalist theory, but as we all know, there can be quite a gulf between theory and practice.

Conservationists believe the strain that exists on our current transmission system could probably be relieved almost entirely through actions such as encouraging consumers and industry to use less energy at peak times—to do laundry later in the evening, rather than at 5pm, for example. This is possible because 30 percent of the region's power infrastructure sits idle, used less than 5 percent of the time, to serve only peak use. So who will determine our course? Will least-cost solutions be pursued? (For more on conservation, please see Margie Gardner's article -ed.)

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