

A RESPONSE TO:  
“The State of U.S. Electricity Restructuring”  
Electricity Journal, June 2002

In the June 2002 issue of the Electricity Journal, Ms. Sally Hunt of the National Economic Research Associates presents one of the most cogent discussions I have yet seen on the steps necessary to move the United States toward a competitive electricity market. Precisely because it is so cogent, however, it is also the best case I have seen yet why we should stop the relentless forward push of federal initiatives and re-evaluate. Ms. Hunt concludes that: “What is required is to develop the conceptual framework, make a plan, and to implement the institutional changes necessary to make it happen.” These are the requirements to answer the question: “Can we do this?” I believe the more pertinent question is: “Should we do this?” A high likelihood exists that we will not get where we want to go – to fully competitive production markets – and that, if we did through the changes Ms. Hunt persuasively identifies, we will not like where we would be. In this article, I discuss why I reach these dramatically different conclusions, using Ms. Hunt’s line of reasoning as my responsive framework.

A caveat is necessary before I begin. I know best my state – Oregon – and the region it is in – the Northwest. The facts I cite, the values I identify, and the conclusions I reach are grounded in my experience in Oregon and the Northwest. These facts, values and conclusions may not fit the experience of those in other parts of the country. This caveat, however, is at the heart of my concern. Ms. Hunt, and the FERC, urge actions that would eliminate local, state and regional variation in the provision of electricity services in favor of one national market design and, presumably, one national market,

notwithstanding some physical issues with that goal. It is time to ask why we are doing this.

#### I. The Function of the Industry: Some Responsive Facts

It is always tempting in arguing a case to choose the facts most helpful to one's desired outcome. Ms. Hunt's brief history of the United States electric industry is no exception to this rule. She identifies the general organization of the industry as vertical integration and the usual service to customers as bundled. She further explains that most propose competition only for production, wholesaling, and retailing; transmission, distribution, and system operations would remain monopolies. As I reach my opposite conclusions, I will add two points and an observation to her brief discussion.

First, I must contradict her generalization that: "The integrated companies built to serve their own customers, and had to build enough to serve them all, at all times." The "utility as island" analogy certainly bolsters a conclusion that anything would be more efficient. The analogy is inapt, however, for the Northwest or the West. In the Northwest, we have a long history of contractual arrangements for power. PGE and other Northwest utilities presently purchase power from the public utility district owners of four hydroelectric projects on the Columbia River under contracts ranging in duration from \_\_\_ years to \_\_\_ years. The Northwest also has resources under joint ownership, such as the Boardman and Colstrip coal plants. Moreover, since the construction of the AC Intertie in \_\_\_\_, the Northwest has shared resources with California and the Southwest. This sharing took the forms of long-term power sales, seasonal exchanges, capacity contracts, and short-term transactions. Sensible pricing policies developed by the FERC

enabled these transactions, particularly the share-the-benefit policy active in the 1980s<sup>1</sup> and the WSPP price cap<sup>2</sup> approved in \_\_\_\_.

This history aptly demonstrates the four reasons<sup>3</sup> why transmission gets built in the first place. The first, and most compelling circumstance is when it is impossible, either physically or financially, to move the fuel. We do not move water to a dam; we put the dam in the water and move the power. The second reason, and one more subject to assumptions that could change, is that it is less expensive to move the power than the fuel. The West has a mixture of mine-mouth and non-mine mouth coal projects. I am not aware if anyone has ever studied, over the long term, whether it is less expensive to move coal or electricity. Recently developed natural gas-fired plants tend to optimize access to a pipeline and existing transmission infrastructure. If forced to choose, however, I suspect most would conclude that it is easier and less expensive to move gas than to move power.

The third reason to move power is the one that drove the construction of the Intertie. The Northwest and California/Southwest had predictably different system peaks, enabling resources built to serve peak in one region (e.g., the Northwest's winter space heating load) to reliably serve peak in the other region (e.g., the California/Southwest summer air conditioning load). The compelling economics of this allowed several states to set aside the parochial interests Ms. Hunt laments and prompted numerous utilities –

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<sup>1</sup> Under this pricing mechanism, the selling utility would receive and the buying utility would pay half of the difference between its and the buyers variable costs of generating power. This formula benefited the buyer by lowering its variable cost of production and benefited the seller through a contribution to the fixed cost of the generating resource.

<sup>2</sup> [describe WSPP price cap]

<sup>3</sup> A fifth reason arguably exists: because objections of residents preclude siting generation close to load – the NIMBY syndrome. Presumably smaller-sized, cleaner, quieter generation could lessen these objections and, in any event, the objections to new transmission are as strong if not stronger.

federal, investor-owned, and publicly-owned – to cooperate in its construction and operation. Has it been without issues? No. Has it delivered benefits? Yes.

A fourth reason exists that is waning in validity. For many decades, we thought that bigger was better in generation technology and that economies of scale required large plants. Rarely (at least in the West) was one area's load sufficient to consume the entire output of such large plants and the cost to transmit the power to other load centers was more than offset by the savings from the scale of the generation. As smaller and smaller generating technologies become efficient and/or valuable, however, it is becoming easier to size generation to nearby load. Of course, the transmission capacity built to support large central-station generation remains and, to a point, can be treated as a sunk cost making distributed generation less attractive. But one lesson every student of the electric service business must learn is that cheap lasts only as long as the existing capacity. At the margin, whether in generation or transmission, are higher costs and likely siting problems.

It is an extrapolation on the third reason that appears to be driving current federal policy. If it is good to share temporarily excess generation between regions in some instances, such as the Intertie, then it will be better to share it all the time, over as broad an area as possible. The difficulty with this reasoning is that, even under circumstances that make the benefits highly predictable, the nature of the key drivers – loads and variable costs of production – are uncertain enough that it is difficult to conclude that the benefits will outweigh the costs of the transmission project. Even assuming no siting issues, transmission is not cheap. If we construct enough transmission so that every plant in a given region can reach any load, is there enough range in the variable costs of

production and potential loads to cover the costs of the transmission? And, of course, since the market model is that short-term purchases “clear” at the cost of the most expensive unit running, will consumers even see this value? It is a nightmare to imagine that consumers (load) will pay the cost of the transmission through transmission pricing policies but never see the benefits of the differences in the variable costs of production because of short-term market pricing policies.

I am also compelled to add a brief comparison of electricity to natural gas to Ms. Hunt’s overview of the industry. While Ms. Hunt only mentions the natural gas deregulation experience in passing, the FERC has relied heavily on the similarities of the natural gas industry to the electric “industry” in promoting its electric restructuring initiatives. To expose the lack of support in this analogy, I would like to focus briefly on the dissimilarities between these two industries.

Let’s start with production. Generally, natural gas production has always been private and under federal jurisdiction. After the federal government struggled with cost of service ratemaking for gas production for several decades, the Natural Gas Policy Act permanently deregulated wellhead gas production in 197\_. In contrast, electric production is spread across federal, local government/publicly-owned utilities, and private owners. Private owners are under state cost-of-service regulation. A variety of policies and practices apply to the federally- and publicly-owned generation, all of which place substantial autonomy in the owner. This difference means that deregulation of electricity production must affect not only the producing entities, but deeply-held notions of private versus public ownership and state versus federal power.

But perhaps the difference more profound than ownership and regulatory jurisdiction is the physical one: natural gas is where you find it and nowhere else and, while the technologies vary depending on how deep the gas is found, its always a matter of pumping it out of the ground. It is possible to produce electricity through a variety of technologies, almost anywhere.

It is this physical production difference that produces a huge difference in the transmission function in each industry. While a few exceptions may exist, rarely can you move the natural gas use to the source; pipelines<sup>4</sup> must move natural gas from where it is to where people use it. As discussed above, electricity requires a much more complex analysis: What are my fuel choices? Can I move the fuel? Can I move the load?<sup>5</sup> The promise of distributed generation is that, increasingly over time, we can put the generation close to the load and simply move fuel around without sacrificing efficiency.

I will conclude this discussion of natural gas and electricity differences with a point about consumption. Other differences exist and some are important. But to a retail electric utility perhaps none is as important as understanding the difference in how the public perceives gas and electricity. Gas is a choice. Electricity is a necessity. If your gas goes out, you can heat your home and cook your food other ways. This is much more difficult when it is the electricity that is out. This perception difference drives an important political difference. It is noteworthy that the hot topic regarding the natural gas price spikes of 2000/01 has been the effect of that gas cost on electricity production, not

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<sup>4</sup> In the case of liquified natural gas (LNG), ships and trucks – along with conversion facilities – substitute in part for pipelines.

<sup>5</sup> In the Northwest, a number of our large aluminum plants sit on the banks of the Columbia right next to the hydroelectric projects because that was most efficient.

on the consumers of natural gas. Another recent excellent Electricity Journal article<sup>6</sup> posed the fundamental question: do we believe electricity is a right or a commodity? I refer readers to his analysis and state for the record here my own conclusion: in the United States, electricity is a right and we will not in the foreseeable future allow markets to allocate it such that, at any given time, someone is not being served.

Various tools have been employed to address this political difference, including providers of last resort, federal Department of Energy orders to produce, and the inclusion of a reserve margin standard in the FERC's standard market design. Natural gas markets generally required none of these extraordinary measures.<sup>7</sup> Indeed, natural gas did not require a "standard market design," with federally-mandated markets developed and maintained by large organizations. All are inconsistent with the notion of a "competitive market," which requires, among other things, freedom of entry and exit. If the success of natural gas deregulation is the predictor of success in electricity deregulation, where is the analysis explaining why these necessary changes to the competitive market model for electricity will not interfere with realizing the same benefits?

A concluding observation on reviews of the electric industry's history is necessary. While we commonly use historical experience as the point of comparison for a newly envisioned future, the value of this comparison weakens the further back the history is and the more change has occurred in the meantime. In other words, to argue that virtually any market model would be better than the nuclear power plant cost

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<sup>6</sup> Details on the article

<sup>7</sup> Some state natural gas retail choice programs do include a provider of last resort.

disasters of the 1980s is colorful but does not justify anything.<sup>8</sup> Indeed, even a comparison of industry conditions today and an envisioned future is a bit unfair. The true comparison is between alternate futures and simply assuming that everyone will make 20-year old mistakes in an alternate future is good argument but poor analysis. It is in this context, that I consider Ms' Hunt's case for competition.

## II. The Case for Competition – Some Other Considerations

Ms. Hunt makes the case for competition in terms of long-term benefits in production. Many of us reached the conclusion that long-term benefits would accrue, however, ten to twenty years ago. Time marches on, circumstances change, and it is perhaps time to ensure that our conclusion remains valid. There are at least two ways in which one should engage in such review. First, one can look forward to the circumstances that will likely exist when the policies you are promoting finally take hold. Second, one can look backward to ask whether the problems that prompted the solution still exist and whether other solutions have emerged in the meantime. I will do both.

One technology has come to dominate new generating decisions in the last few years, whether the entity deciding is an investor-owned utility, independent power producer (IPP), publicly-owned utility, or even federal power marketing agency. That technology is, of course, natural gas.<sup>9</sup> This dominating factor, then, can form the core for

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<sup>8</sup> During the 1980s, virtually all states adopted least cost planning to guide resource decisions with both strong analysis and collaborative process. Load forecasting improved dramatically. Even independent generators, however, are capable of over-estimating demand, as the current surpluses in parts of the country demonstrate.

<sup>9</sup> Certainly, in some areas of the country, a handful of utilities discuss coal and nuclear. But no new nuclear plants are even in the siting process [check whether any coal are]. As with my opening question, however, the real issue here might be: "Should we all be building additional gas-fired resources?" It is this question that underlies the efforts to enact a national renewable resource portfolio standard and the inclusion in a number of state restructuring programs of centralized funding for both energy efficiency and renewable resources.

our risk analysis whether competition to build and operate new gas-fired generation will produce benefits. The risks are primarily four:

- Decision risk: is the plant needed? It is true that IPPs can decide to build a plant without knowing whether it is needed or not, although in the latter case, financing may be difficult. Assuming a utility remains responsible for meeting an uncertain load, however, it and its customers face risk regardless whether the IPP or the utility builds the new resource. Moreover, utility resources that are “excess” one day have a way of becoming largely-depreciated, low-cost resources in the future. Last, as a non-economist, I cannot resist a chance to use the famous saying: “There is no free lunch.” If IPPs invest billions in unneeded generation, utility consumers will not directly pay this cost. But would anyone argue we are better off? Can anyone argue we are all better off with the billions of value lost in the telecom/fiber markets because of over-investment?<sup>10</sup> There is no free lunch. Lost value is lost value and competitive markets don’t always do a wonderful job “managing” this.
- Construction risk: is the plant on time and on budget? During the inflation-plagued 1970s and early 1980s, any delay could cost millions. Coupled with “create it from scratch” nuclear plants, this caused a disaster. Neither circumstance, however, exists today. We all plan to use the same EPC (engineering, procurement, and construction) contractors. The designs are

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<sup>10</sup> The deregulation of natural gas also spurred significant over-investment, although some believe it was the high prices set in the NGPA that initiated the problem. While this “gas bubble” produced very low prices for consumers in the 1990s, the low prices also led to distortions in decision-making that at least arguably contributed to the electricity crisis of 2000/01. During the period of \$1.00/MMBtu gas, investment in demand-side technologies withered and rock bottom spot market prices convinced many utilities to delay or cancel plans for new generation. It appeared safer to rely on the market.

highly similar. Inflation is low. Regulation can protect customers from any unreasonable costs because what is reasonable is easily determinable.

- Operating risk: is the plant run as efficiently as it could be? Again, the standards are clear and benchmarking consultants, or even outsourcing firms, are easy to find. Comparing coal plant operations can be difficult; comparing nuclear plant operations is virtually impossible. But comparing my GE Frame 7 combined cycle combustion turbine to yours is a task most can accomplish.
- Obsolescence risk: will technological improvements make the plant obsolete before the end of the life assumed for purposes of depreciation? This is a real risk for either utilities or independent generators and someone will bear the loss regardless of ownership. It is worth remembering that changing the allocation of a risk does not necessarily change the likelihood or magnitude of the risk. Building generation in smaller sizes, using diversified technologies, would lower the risk of obsolescence; simply requiring utilities to buy all of their generation from independent producers does not.

There is a fifth risk – or, actually, set of risks – that relate to production but which have received little attention in this debate. These are the risks of running a system of resources – contracted and/or owned – to match the output to load and achieve the lowest possible variable costs when both load and production vary. Few IPPs want this set of risks. At least in the West, few marketers want to do this even for the largest retail customers. PGE has recently heard from many IPPs and marketers that would just like to sell us blocks of power and have us manage the variances, and the regulatory frameworks that allocate those variances between the utility and the customers. The less return-

producing generation a utility owns, however, the less financial strength it has to absorb negative variances, which occur more frequently and in greater magnitude than positive variances. Variable cost can drop only to zero; it can rise to thousands of dollars a megawatt-hour as the 2000/01 crisis taught us all.

So where are these long-term benefits of restructuring? At the moment, a utility with a traditional service territory can get capital to build new generation. The capital markets are noticeably skittish about IPPs and, if they provide capital, will likely do so at a higher cost. Will standard market design – particularly the capacity reserve requirement – solve this? The NOPR does not answer this question.

Looking back provides no better of a “case for competition.” Ms. Hunt cites “a highly politicized process of investment, inefficiencies in choice of technology, construction and maintenance, and difficulties in regulation and pricing.” PGE’s most recent generation addition, a CCCT brought on-line in 1995, suffered no such highly-politicized process. The technology we chose remains that of choice. Granted, this is just one example. But I, for one, would feel better if those supporting the benefits of competition could at least stop reciting examples from the 1980s and choose some from the 1990s. Permit that perhaps regulators and utilities learned something from the trauma of the 1980s. Many states adopted least-cost planning processes designed to build consensus support for new resource decisions. The decisions got less difficult as the investment became one of several hundred million, not several billion, dollars and the time to “grow into” a new resources a few years rather than a decade or more. Moreover, I see no basis for concluding that competition will remove those pesky regulation and pricing difficulties, as I explain in section \_\_\_ below.

Ms. Hunt acknowledges that overriding public interest can support a decision to hold a monopoly in check by regulation rather than use a competitive market. She apparently finds, however, no such public interest in electricity service. It is the five changes she deems critical to achieving a competitive market that cause me to pause and consider the public interests at stake here as well as what should be the dominating question: what do electricity consumer want?

### III. The Five Required Changes: Some Questions

Ms. Hunt identifies at least five conditions that ought to be in place before deregulation occurs. Each raises issues of the public interest and consumer desires.

Demand side. Ms. Hunt advocates federal legislation to require hourly metering for most of the consumption and tariff designs that expose customers to the spot price for at least some of their consumption. I cannot resist noting that this second requirement appears inconsistent with what Ms. Hunt notes earlier in her article that customers want: fairly predictable prices. I agree with that few customers want to experience spot electricity prices and therefore see little chance of this “requirement” coming to pass. The San Diego customers that involuntarily faced spot market prices in summer 2000 were less than thrilled. Even customers who have chosen spot pricing under various utility programs in the past have not always been pleased with the outcome. I am comfortable in concluding that spot market pricing is not something most customers want. It remains a favorite among economists, of course.

Ms. Hunt does not mention the price tag associated with widespread deployment of hourly meters, nor the software and personnel required to derive meaningful information from the hourly data collected. Numerous others have estimated the price of

such a deployment, however, and the estimate is almost always significant. Perhaps most telling is that decent hourly metering technologies have been available for over a decade now and, except among large industrial customers, the deployment of such meters remains low. The reasons why are simple: compelling benefits do not exist and the technology remains problematic. I have spent some time on the other side of the argument, attempting to persuade utilities and Commissions that, if you acquire the information, uses for it will appear. But metering is not baseball and few have accepted a “Field of Dreams” approach.

Trading Arrangements. Deregulation, according to Ms. Hunt, requires regionally consolidated system operations, that are separate from traders, with trading based on central dispatch and locational energy prices.<sup>11</sup> This is, of course, a highly-abbreviated description of the RTO and SMD initiatives. The use of the term “traders” here is misleading, however. The requirement would be clearer if one said instead “system operations separate from the function of supplying electricity to customers.” Put in this context, and coupled with her requirement that we put all generation under federal regulatory jurisdiction, it becomes clear that the contrast is to today’s arrangements of a serving utility’s dispatch of its resources (owned or contracted) to meet its load, over transmission it owns or purchases, with prices based on the costs of these resources and transmission. Today’s arrangement, while not always satisfactory to everyone, makes

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<sup>11</sup> Trading, of course, doesn’t deliver any kWhs to any consumer. I believe many consumers and policymakers still do not grasp what the obsession with “trading electricity” is all about. To the extent trading enables a set of resources to place the various capabilities and output combinations of those resources with the entities that value each combination the most, one can see how consumers benefit from trading. Generally, anything that matches generation more closely with loads furthers the public interest. The question to ask, however, might whether trading – with its seemingly attendant requirements for a total restructure of the electric industry – is the most efficient way to improve the match of resources to loads. Other possibilities include smaller-sized generation, better load forecasting techniques, and demand-side technologies and approaches.

clear the accountability and the source of an explanation when the resulting reliability and/or cost is not what one would like. Local accountability and control is important to electricity consumers, at least in the West. Such accountability and explanations would appear to be much more difficult if this requirement takes effect, to the dissatisfaction of consumers.

Transmission business model. Ms. Hunt states a preference for regional, for-profit transmission companies to fulfill this requirement. She does not, however, attempt to answer the significant questions about a transmission business model that she poses just one page earlier. Those questions include: “Who will plan for and build for competition?” “What are the right prices?” “What rights do those who built the transmission for their own use retain in the new world?” I might add to the list: “Who pays for transmission capacity stranded by shifts in load or generation patterns?” “How will we win local approval to site new transmission lines that may not relate at all to any local need for power?” It is not encouraging that Ms. Hunt notes the lack of answers to these questions even internationally. Even assuming all questions were answerable and answered, a requirement of a for-profit entity still challenges the beliefs of those in this country who support public power. It is difficult to evaluate whether this requirement implicates the public interest or consumer wants until we know what it is. Moreover, to don an economists hat temporarily, how is it that creating big transmission monopolies (the RTOs) will solve the difficulties of the currently many, dispersed, generation monopolies?

Supply side. The requirements in this category pose some of the greatest challenges to values that at least the Northwest, and its electricity consumers, hold dear.

Ms. Hunt states: “Remove barriers to entry. Buy out of the old regime by valuing assets. . . . [D]ivest utility generation into smaller parcels.” Some Northwest states still cling to “need for power” standards that apply to site license applicants. On a recent drive on Highway 97 in Eastern Oregon, countless signs objected to a proposed merchant power plant in the area. Ownership of existing generation is spread across investor-owned utilities, public utilities, and the federal government. Oregon’s 1990 restructuring law survived the 2001 session only by removal of a sentence allowing the Oregon Commission to consider divestiture.

To be fair, Ms. Hunt notes that this is the heart of the problem. She states that: “It is certainly much easier to start from a situation where the government owns the industry and also has the legal power to change things . . . .” Moreover, the government can then take the loss of past investments not depreciated quickly enough to keep up with technological improvements.<sup>12</sup> She laments the inefficiency of our fragmented system of electric generation ownership and regulation. And, to solve this, she proposes to give the federal government jurisdiction over the entire supply side.

I applaud Ms. Hunt’s honesty about the critical nature of this requirement. FERC has, for the most part, ignored the mixed state of generation ownership and regulation. In the West, federal and public power entities control about 30% of the generation. Investor-owned utilities in non-restructured states control another \_\_\_%. FERC does not discuss the vitality of a market in which a large portion of the “competitors” use generation that sits in a retail rate base, with its fixed costs largely covered by retail customers without choice. Perhaps this makes no difference but, even as a non-

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<sup>12</sup> The US government, however, showed no interest in taking such a loss when, during the mid-1990s, the resources marketed by the Bonneville Power Administration were significantly above market prices.

economist, I have a hard time accepting that it does not. Certainly it is problematic if FERC also has no jurisdiction over the federal and public market participants. At least some of California's issues trace directly to transmission and generation that the ISO could not "see" because it was owned by federal or public utilities and thus beyond the ISO's purview.

What I find objectionable, however, is the facile conclusion that we should abandon this mixed state of ownership and regulation solely for the sake of the value of "efficiency." Efficiency is not the only value, at least in the Northwest. Here, the discussions on the merits of different ownership forms revolve around social and political issues, not so much cost. At heart, the draw of public power is local control: local control to ensure that everyone receives what is a necessity of modern life; local control over how we go about acquiring, distributing, and charging for this necessity. If local control means sacrificing some efficiency, public power advocates would conclude "so be it." Similarly, some Northwest investor-owned utilities and state regulatory commissions would decline an offer to achieve more efficiency if the price was a loss of autonomy and control over the outcome.<sup>13</sup> Both rightly perceive that, in the public's eye, they are responsible for the price of electricity. Severing transmission and placing all generation under federal control with more or less divestiture threatens to leave the utilities and regulators with accountability but no authority.

Retail access. Ms. Hunt's last requirements relate to retail access, for which she notes we need "an extensive settlement mechanism and customer education, and

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<sup>13</sup> There is an element of the following here: "We may have made costly mistakes but they were our mistakes and we remain in control to try to fix them." Similarly, many customers "love to hate" their utilities but have no real desire to shop around for service. Complaints are not an indicator of willingness to expend effort.

decisions about default provision.” I believe this to be an understatement of the needs. I believe we need nothing less than a total re-do of the basic deal for electricity that retail customers have come to expect over the last seven or eight decades.

A deal negotiated so long ago, over so much time bears reiterating every so often, if only to make sure we all still agree. The utility perspective does not require repeating; everyone can recite the obligation to serve, in return for the opportunity to earn a reasonable return on investment made. But the customer side is stated less often and here is how I would say it as a customer:

“You, utility, provide me with as much power as I want, whenever I want it, at a price, generally fixed, that I know in advance. I can start and stop service at will. The price is based on your cost of providing a system to do this for a given geographic area, not on my individual costs. If you are a for-profit entity, some governmental body reviews your costs to assure me that they are just and reasonable.”

In other words, customers have great individual optionality but share in the collective cost of providing this through a system that, ideally, covers enough individuals that most of the individual choices balance out and the sum is less than the total of the parts. Moreover, customers have some assurance that the sum – the cost – is not much more than it needs to be. It is just and reasonable.<sup>14</sup>

Competitive markets threaten to change two components of this deal. First, it is not clear that customers can retain individual optionality, paid for collectively, if

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<sup>14</sup> It may not be “low.” Ms. Hunt’s list of customer wants includes one that I always find bemusing: “low prices.” What is low? Low is a comparative, not an absolute. My low is not your low. A price of five cents a kWh may be low if I am getting excellent service and high if I am getting poor service.

geographic aggregation disappears. The description of current service included above adequately conveys the value of this optionality.

Second, it is not clear that competitive prices will be just and reasonable in the traditional sense of this term. This is a value most competition advocates either severely underestimate or that they acknowledge but assume the concept of just and reasonable can remain valid notwithstanding deregulation. This latter assumption, in particular, clouds current national electricity policy. On the one hand, we have high levels of effort devoted to designing transmission and generation markets that will support a fully “deregulated” power production industry. On the other hand, we have more investigations than I can count stemming from firmly held beliefs that prices in the Western markets during 2000/01 were not “just and reasonable.” FERC’s attempts to conform competitive market prices to “just and reasonable” standards include price caps, imposed before the fact, and refunds, imposed after the fact. FERC has entertained complaints seeking to re-price term contracts absent any evidence of fraud or other illegal conduct on the part of the sellers. Perhaps one could quibble over definitions, but I have heard little evidence that suggests to me the Western markets were not “competitive.” Certainly, many entities were buying and selling.<sup>15</sup> No doubt exists in my mind, however, that the prices that resulted were not “just and reasonable,” particularly if one is

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<sup>15</sup> Much is made of the possibility that certain merchant generators “withheld” generation. Except for the period during which the Department of Energy required that generators sell all of their output, I am not aware of any law that requires a merchant generator to produce. Merchant generators, the central feature of deregulated electricity markets, do not have an obligation to serve. They, as any competitor in any competitive market, can decide on a whim if they please to sell or not sell to any given buyer. We can call this behavior inconsistent with just and reasonable rates and with the notion of a utility, but it is not anti-competitive.

making that judgment based on direct costs and does not include indirect or hard-to-quantify costs, such as risk.<sup>16</sup>

Just and reasonable is an administrative concept. It implies a judgment by a third party, based on some set of criteria, commonly but not exclusively the seller's cost. It is not a concept that applies to a competitive market or competitive prices. Airfares are competitive but I, for one, have no idea whether they are just and reasonable, either to me or to the airlines. The attempt to go forward with a restructuring and deregulation of power production while maintaining a requirement that "rates" be "just and reasonable" is doomed to failure.<sup>17</sup> Neither will occur. And if one must choose, I suspect the weight of public opinion might well land on the side of maintaining the requirement that electricity rates be just and reasonable. Electricity service is essential. Are retail customers willing to accept a competitive price for an essential service, realizing that this price will, at times, be neither low<sup>18</sup> nor "just and reasonable"?

The list of requirements Ms. Hunt provides under this category spark a few additional comments. An extensive settlement mechanism will not be cheap, either to acquire/build in the first place and likely to run. I believe we have seriously

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<sup>16</sup> Pennsylvania and PJM offer an even more recent example of the tension between competitive behavior and the traditional notion of "just and reasonable." PP&L Global took a long position in capacity, noticing that capacity was becoming tight in PJM and that the price for ICAP could rise under some circumstances. The circumstances came to pass and PP&L Global's capacity brought it significant net income. The PPUC has urged FERC to require refunds from PP&L Global, alleging anti-trust. Participants in a competitive market take risks. Some of those risks result in gains; some result in losses. This is expected behavior, not market manipulation or anti-trust. An energy analyst with the PPUC is quoted as saying: "We need a sheriff and deputies with loaded pistols" with respect to what it will take to create "competitive" electricity markets. If that is the case, perhaps we don't need competitive electricity markets.

<sup>17</sup> Indeed, some legislative proposals have included a strengthening of FERC's ability to undo power transactions after the fact if those are found not just and reasonable.

<sup>18</sup> Of course, one can make the price appear low by removing components and placing them elsewhere. The SMD's proposed reserve margin requirement may likely place the cost of capacity on load in a way separate from the cost of the energy (variable cost). Thus, the cost of the energy may appear "cheap," as was the case with spot market prices in the West throughout much of the last half of the 1990s, simply because producers – largely utilities – recovered the fixed costs elsewhere.

underestimated the positions required to run a settlement process, including the final, labor-intensive step, of resolving issues. Identifying the need for customer education highlights the opacity of the benefits here. Customers needed very little education to compare cell phone service to land-line service and make their decisions. Acknowledging the scope of the consumer education need here should cause us to question our path.

Last, perhaps an economist could explain to me how the notion of default service fits with the notion of a competitive market. Competitive markets allocate on price, and competitive market participants are free to discriminate regarding who they serve. Default service, as currently provided in most restructured states, removes both of these features, assuring service at a pre-determined price and precluding discrimination. This is because good substitutes for electricity are few and we have come to view electricity as a right. Given that, why are we attempting to create a competitive market here? Why should not the realization that customers view electricity as a right cause at least to evaluate whether paths other than competition might produce benefits over traditional regulation?

#### IV. So What To Do?

Ms. Hunt repeats the now familiar refrain of “we can’t put the genie back in the bottle.” She says: “But while it might be instructive to consider the problems of regulation and how competition will ameliorate them, that is no longer the issue.” Indeed. We’ve spent much of the last decade attempting to determine how we were going to unwind and de-structure this 100-year old industry. Exactly why is it that we

cannot determine how we would unwind the changes put in place in the last decade, if necessary?

The Congressional mandate to FERC in 1992 was fairly limited: you may order a public utility to provide transmission services if you make certain findings. FERC didn't pause long at that step, however, before jumping to Order 888 and its mandated open access transmission tariffs. FERC paused an even shorter time at 888 before moving to Order 2000, FERC's voluntary requirement that utilities place their transmission assets in an RTO. Regulatory actions can be reversed. So can laws, for that matter. Not even that something is in the Constitution should stop us from continually examining whether what we are doing is achieving the results we want, albeit the bar may be high for a decision to change.

My first suggestion is that we pause, perhaps at least long enough to finish all of FERC's investigations into the 2000/01 Western markets.<sup>19</sup> Moving quickly on RTOs or SMD is not going to save independent generators who over-committed capital in anticipation of strong demand and now face less demand because of economic conditions and other changes. The state of the nation's transmission system may well be a concern but shorter-term fixes are likely available and it is unclear that RTOs and SMD will provide the clarity necessary to support investment sooner than other alternatives.<sup>20</sup>

My second suggestion is that we take advantage of one of the things our country's structure of government offers: regional/state diversity. If the Northeast is ready to

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<sup>19</sup> FERC perhaps does not comprehend the situation for western utilities, many of whom continue to carry huge accounts receivable from California and some of whom are still slicing and re-slicing data from the period 1999 through 2001. It is hard to devote time to assessing the consequences and designing the systems of a new market structure when you are still neck-deep in the last go-around.

<sup>20</sup> At least in the West, it appears that some of the need for massive new transmission investment has evaporated along with high spot power prices. Moreover, for much of the West, utilities remain vertically

proceed with its RTO, or even with SMD, then that is fine. We will all learn from the experience.

We all know that you cannot go back to the past, physically or virtually. That is no reason, however, to refuse to consider how approaches and solutions of the past might adapt to today's environment. The decade in which an idea appeared does not prejudice its usefulness. The concerns about cost of service regulation and monopoly utilities are real. But, increasingly, structural solutions such as electric deregulation are failing to meet customers needs.<sup>21</sup> While we perceive structural solutions as both quick and easy, they are neither. Business literature is replete with stories of company reorganizations and mergers that failed to achieve their goals. The more complex the service proposed for a structural solution, and the more interwoven institutions involved in it, the higher the likelihood restructuring will fail to produce the results desired. Indeed, those advocating a structural solution often fail to articulate fully the results desired and to establish the ways and times they will check to see whether they are on path to the goal.

While we have been exploring the possibility of competition in the electric industry over the last decade, a quiet evolution has occurred in the size of generating technology. Smaller and smaller-sized generation is economic. Demand-side technologies continue to improve.<sup>22</sup> These improvements offer real solutions to the power production risks I described in section \_\_, rather than just re-allocating those risks. Distributed generation is the electric equivalent of cell phones. It will fundamentally

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integrated and state commissions can encourage transmission investment through traditional means: by removing the regulatory risk and pre-approving necessary projects.

<sup>21</sup> Some customers who consume large amounts of electricity have the capability to serve as their own "utility" or achieve a meaningful substitute – self-generation. I do not quibble that traditional regulation and traditional aggregation of these industrial or large commercial customers does not satisfy their needs. I am unconvinced, however, that complete industry restructuring is necessary to improve their satisfaction.

change the industry. It is, most likely, still one generation of new power plants (that is, 20 to 30 years) away. But, is it worth the enormous investment and disruption adopting FERC's path to competitive wholesale markets will require for just one more generation of new power plants? If we devote the necessary attention to designing systems for competitive wholesale markets, will we have any time left over to consider how we accommodate and integrate distributed generation? These are the question I suggest we consider as we pause. Our current efforts may not only be attempts to solve yesterday's problems but may leave us for behind in identifying and working on tomorrow's challenges.

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<sup>22</sup> A recent article noted that nano-technology should reduce world-wide use of electricity for lighting by 10% over \_\_\_\_.