The Future Of Incentive Regulation In The Electric Utility Industry

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OLD STYLE AND NEW STYLE REGULATION OF ELECTRICS: 
THE INCENTIVE CONNECTION

Remarks by

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at a conference on
The Future of Incentive Regulation in
the Electric Utility Industry

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I. INTRODUCTION

I sometimes suspect that I'm invited to participate in a conference dealing with regulatory innovation so that at least a few notes of moderate skepticism are sounded. Of course a less charitable description could be thought of, including the "reactionary labels," but I'd prefer to think of my remarks as more traditionalist in nature and presenting a cautionary view from the regulatory vantage point.

My remarks are organized in the following way. Some general observations about old style disincentive regulation and new style incentive regulation; next a sketch of what's going on at commissions around the country as to type and number of incentive systems; then a brief discussion of seven downside considerations to incentive regulation as currently practiced (everyone knows the presumed upsides); and finally some commentary on the outlook for incentive regulation in the near to mid-term.

II. OLD STYLE DISINCENTIVE AND NEW STYLE INCENTIVE REGULATION

It is not entirely true, as is sometimes claimed, that incentive regulation is a totally new alternative to traditional rate of return, rate base regulation. As we know, there have been occasional examples of incentive schemes in electric regulation since at least the 1920s. More recently, in the late 1970s and early 1980s a few ill-starred ones come to mind in the cases of New Mexico and Michigan. More importantly, what I'm calling old style disincentive regulation is itself a type of incentive system—it just was predicated on sticks and not carrots.
I believe that old style regulation was characterized by reasonably workable, though unpleasant, disincentives for utility misbehavior. These importantly included cost disallowance, prudence reviews, employment of regulatory lag, occasional ordering of management audits, making invidious comparisons with other utilities, selective public jawboning, and of course direct shaving of the allowed rate of return. Admittedly, these were of the primitive variety and operated in an ex post fashion with the commission stance being a reactive one. But the idea was that regulators would largely abstain from intruding, that managers of public utility firms are both legally obligated and widely expected to operate these companies as efficiently as possible, and that "reasonable returns, under honest, efficient, and economical management" were all that utilities were entitled to. Reasonably assured earnings, an exclusive franchise, one-for-one cost recovery, considerable risk protection, and legal preferences like eminent domain were thought to be positive incentives enough. Nor does this suggest a "barebones" approach to profitability or instantly capturing for ratepayers any additional earnings resulting from efficiency improvements.

New style incentive regulation faces another way. The earnings lid is off, the price/cost link is loosened, the focus is on behavioralism, and the new mechanisms are all carrots with an ex ante focus. For their part, commissions become activist and participatory. This last presents a notable paradox. The "management prerogatives" argument would seem to be further eroded away as commissions become partners in, say, rolling prudence arrangements or parties to divvying up gains of various kinds. It is an oddity of the first order that as regulation is "relaxed," commissions find themselves busier and more involved than ever in utility operations.
In all events it is not the old style regulation to which I refer that occupies us here.

III. WHATS GOING ON

A recent NERA report indicated that about three-fifths of the states have experimented with some kind of incentive regulation. Perhaps seventy-five incentive programs have been in place in electric utilities with about eighteen having been discontinued in fourteen jurisdictions as of a few years ago. The numbers are often changing in both directions as various schemes are proposed and tried. By far the type of incentive programs most frequently seen (over half) are those applying to generating unit capacity factor and availability changes and to generating unit heat rate improvements. Next come fuel cost incentive programs and then construction cost caps. Note that these programs have the characteristic of being susceptible to measurement and tracking and are generally of the engineering cost variety.

I would say that there was particular interest in the late 1970s and early 1980s in power plant productivity-type improvements; a waning of interest with the advent of excess capacity situations and the termination of the New Mexico and Michigan incentive regulation experiments; but a renewed interest in the 1990s occasioned partly by the much discussed introduction of incentive regulation in the sister telecommunications sector. We ourselves at NRRI have done perhaps a dozen reports on incentive regulation over the period. Several of these were on power plant productivity, three were on FAC/PGA mechanisms, others were on measurement of demand side management gains, on integrated least-cost planning, and on gas
incentive systems for LDCs. We've published two reports in the telecommunications sector on incentive regulation. And, of course, several other research centers have done as much or more on the subject.

What has been less widely seen are responsible studies evaluating how particular incentive mechanisms are working out. An exception to this may be the operation of fuel adjustment clauses that several economists have written about. In the case of generating plant incentives we do have a 1991 study by Berg and Jeong, "An Evaluation of Incentive Regulation for Electric Utilities," which incidentally, did not find any improved overall operating cost performance had resulted. Cowing, Joskow, and others have contributed to various aspects of the subject.

More work is needed, though, and since academics, industry members, and government analysts alike are among the proponents of incentive regulation schemes, it is almost certain that more appraisals will be forthcoming.

IV. THE DOWNSIDES OF INCENTIVE REGULATION (AS CURRENTLY PRACTICED)

A short tour of the downsides to incentive regulation as currently practiced involves seven "stops."

The first is the limitations of fadism. What may apply in one sector may not in another--more of the same is not necessarily better.
Here the analytical question is, Is the application of incentive regulation (read relaxed regulation) to the electric sector a "natural extension" of its earlier employment in the transport, banking and investment, natural gas and communications sectors? Or is it a forced fit that may not work or work differently? If the application is merely ideological or opportunistic, or a theoretical favorite of a particular school of economics, the effort loses a good deal of its attractiveness.

Second, it is important to worry about when "enough is enough." This is to say that not only should we care about how big the stimulation is in any particular incentive, we need also to worry about compounding incentives, piling one on top of another until overstimulation happens and too much is given away. Effects on risk, risk shifting and profitability are, of course, major concerns here.

Third, especially where ratemaking is involved in the incentive system, regulators must keep their eye on the ball, which means protecting the core customer. The use of incentive rates and economic development rates, for example, may make eminent good sense from the Governor's Office or the state's Development Office, but should not come unduly at the expense of residential and small commercial customers with nowhere else to turn for their power supply.

Fourth, decoupling prices from costs and earnings (as most incentive schemes do) comes at considerable cost in customer understanding and broad based support. The historical linkage between costs and prices (certainly in the power sector where cost-of-service regulation has long predominated over value-of-service pricing) is
something that ratepayers are familiar with and perhaps expect. Moreover, after decades of cost based regulation, we in recent years have just now gotten a fairly good handle on them, e.g., knowing what it really costs to generate and deliver a Kw of electricity.

Fifth, the inherent political constraints on earnings extremes (high and low) must be recognized from the outset of the imposition of incentive mechanisms. If profitability soars to unseemly heights (e.g., the British Telcom early experience), social oversight will intervene to adjust downward; if earnings unexpectedly plummet to precariously low levels (e.g., the New York Bell experience), regulatory agencies will (may) agree to intervene with an upward adjustment. While both actions may be correct, this does suggest that the results of incentive initiatives may widely miss the mark requiring new intervention, and one has to ask if the game is worth the candle.

Sixth, is the problem of asymmetrical information and opportunities for gaming of the PSC by utilities. Regulators know that even with the best of staffs and statutes they are information-starved (especially information of the crucial kind). It seems to me that for utility companies to expect their incentive proposals to be given serious consideration by regulators means that they should be prepared to be considerably more forthcoming with their data than they often are. I recognize that this may actually be somewhat more difficult for them where they face some degree of market competition, but good public policy decisions require it. And this goes as well for the problems of tracking, measuring, verifying performance along the way and "settling up" when the results are in.
Séventh, is the difficulty posed by having incentive systems that are ill-thought-out to begin with, are ambiguous as to their functioning, and unclear about just what improvement they are intended to make. Trite as it is to say, it should be carefully specified what the incentive is for, who is to benefit and in what proportions, and exactly what behavior is sought to be modified. And, of course, incentive arrangements should not be contradictory or conflicting.

V. OUTLOOK AND INLOOK--WHAT I SEE AND WHAT I'D LIKE TO SEE

To identify the downsides of an idea is not to say that experimentation with it shouldn't go on. Incentive regulation in the electric sector may have usefulness with particular utilities and in special circumstances. An eclectic stance is the proper one for regulators: workability is a pretty compelling test.

If incentive regulation initiatives are to be further adopted for electricity, I believe they should be limited in scope and duration, well targeted, carefully designed and closely monitored. Unintended side effects should be watched out for, and commissions should provide for reassertions of their authority with respect to the program involved. The burden should be on the new mechanism to demonstrate its superiority. The trick is to avoid "giving away the store" in the name of improved efficiency--real or imagined.

As with many matters of public policy, good attention to "the four Es" is helpful here--Efficiency, Economy, Effectiveness, and Efficacy. We consider "best cost" solutions to meet the efficiency standard, but incentive devices may distort
management decisions toward inefficient outcomes. Incentive mechanisms sold on
grounds of economy through "streamlining" regulation need careful scrutiny.
Administrative economies are rare that don't involve excessive forebearance. The
effectiveness test goes to the question of whether the incentive mechanism does what
it's supposed to by way of altering utility performance. Given the difficulties of
establishing causality, of measurement, and of verification, it is probably best to
demand that a large gain be demonstrated, lest manipulations and even mischief at
the margin be the determinants of undeserved rewards. For incentive regulation to
be efficacious in the electric sector the above three Es need to be reasonably
satisfied—and all against the backdrop of still another "E" in regulation, Equity.

Finally, I see at least three major developments in the electric sectors that will
accelerate the move to new style incentive regulation. One is the implementation of
the Clean Air Act Amendments. The utility decision to scrub, to burn clean coal, or
to trade for emission allowances will have a lot to do with the incentive arrangements
surrounding the decision. A second is transmission access pricing and construction.
This knotty problem is fairly close to solution if we can just get the pricing incentives
right. The third is the treatment of energy conservation expenditures and their
results. The emergence of DSM and fuel use reduction programs calls for a variety
of incentive devices to make them come about with the speed and effectiveness
desired.

That these developments will be treated by new style incentive regulation is not
to be decried, but neither should this be uncritically celebrated. The task is to find
what does and doesn't work. I believe the time worn concept of "the states as laboratories" has great relevance here. I would like to see commissions selectively experiment with different incentive mechanisms with different utilities, let them play out for awhile, monitor them closely and then tough-mindedly evaluate each to see which should be abandoned, which retained, and which modified. There is no need to rush headlong into incentive arrangements for all utilities and every element of their operations. Indeed, with a chance to watch other experiments in other jurisdictions there is even an advantage to being last.