STRANDED INVESTMENT:

WHO PAYS THE BILL?

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I bring an unpleasant message: your battle to stave off the injection of competition will fail; your efforts, to date, to adjust to that inevitability have been inadequate; you are doomed to operate in a world of regulated competition, one that you will find almost unbearable.

There's worse. Whether through the indirect effect of competitive price attrition, or the direct effect of write-offs, the market value of your assets will be reduced so as to align book values more closely with market values; lay-offs will be followed by downward pressure on real wages, perhaps producing industrial action by your trade unions; at least some of you will find yourselves defendants in antitrust cases, either for being uncordial to new entrants or excessively cordial to other incumbents; and the skills that made for successful managers circa the 1980s just won't cut it from here on out.

Worse still, this fate is already sealed. You can control only two things: its timing and -- finally, a ray of hope -- the impact on the viability of your organizations.

Let me explain why I have been driven to these unhappy conclusions.

If recent economic history tells us anything it is that (and I apologize in advance for the breadth of these generalizations):

1. Central planning is not an efficient technique for organizing economic affairs;

2. Regulation is inferior to competition, where the latter is feasible, in
producing a range of reasonably priced goods and services;

3. For reasons we don't yet fully understand, economies of scale are elusive in many industries, either because inefficiencies inherent in large organizations more than offset the benefits of big machines, or because technology is turning big machines and big companies into economic dinosaurs;

4. Vertical integration seems to have less economic justification than it once did, perhaps because computers have improved inventory control techniques sufficiently to make manufacturers more relaxed about relying on outside suppliers, perhaps because we have learned a great deal about creating efficient markets;

5. In an era of such rapid change, recorded accounting values are often mere fictions, whether they purport to tell us the value of a bank's portfolio, the asset value of a company with popular branded products, or the asset value of a company that owns large generating stations.

It is against all of these tides that the utility industry, urged on by its trusty new allies in the environmental movement, now wants to swim. And will most likely drown in the process -- although its historic ability to respond to artificial respiration makes that a less than sure bet.

Like the airline, telecommunications and natural gas industries before it,
the electric utility industry now faces competition for many of the markets it had always assumed were reserved to it by virtue of its franchises. True, some companies always faced franchise competition, but those were considered unfortunate sports who had to pay some price for living in the wonderful Pacific Northwest. The others could concentrate their efforts on persuading regulators to allow rate increases or, in the glory days, defer rate decreases. And on resisting the efforts of environmentalists, at least until the bribes offered for changing sides became so large that it seemed better to join ‘em even if you could beat ‘em.

So things went along quite nicely: the industry was run by central planners, utility dispatchers filling the role played by the Soviet Union’s Gosplan commissars; competition was of little real concern, except in the pages of the trade press, which tend to cover the exceptional rather than the generality; regulators, to be sure, were a mixed bag, but could generally be tolerated. And utility book values had some relation to economic values. Indeed -- and I shall return to this point later -- if anything, book values understated true economic values, as investors anticipated earned returns in excess of the cost of capital, witness the persistence with which stock prices sold at multiples of book value.

Enter, competition. Or, more precisely, try to enter. Emboldened by experience in other industries, swept up by the intellectual elegance of the arguments for deregulation, and mindful that the race seemed to be going to
the swift and flexible, policy makers could see no reason why sauce for the 
airline and gas geese was not sauce for the electric gander. Are they right? In 
order to find out, let's examine some of the objections to introducing as much 
competition as is technically possible into the electric power business.

The first and most vociferously argued point is that, if open competition 
were allowed, and particularly if retail wheeling were mandated, existing utilities 
would be stuck with huge amounts of stranded investment. That would 
happen, I assume, if the new entrants -- and those entrants might be new to 
the industry or merely new to the service territory -- could profitably undercut 
the rates being charged by the incumbent. Since the incumbent's over-all rates 
are generally set to yield a fair return on the depreciated original cost of the 
utility's investment, by lowering those rates the utility would, in effect, be 
writing down the book value of its assets. Unless, of course, it were permitted 
to lower some rates and institute offsetting increases in the rates charged 
customers unable to flee its clutches.

Let me dispose of this latter possibility first. There are two reasons to 
believe that such attempts at recoupment will, in the end, prove unacceptable. 
First, in the case of truly "tied" customers -- those with no competitive 
alternative -- regulators won't allow them to be left holding the bag, a bag full 
of overvalued assets. One can never be certain of regulators' reactions, of 
course, so put that down merely as an educated guess. Second, the base of
tied customers, those available for exploitation, is likely to shrivel rapidly in an era of retail wheeling. Just as few thought we would ever see a battle for the long distance business of the lowly residential telephone customer, so few utilities can envision a world in which residential customers will have a choice of suppliers. Why they should think this I do not know: independent power producers with access to distribution facilities at costs equal to those charged by the distributor to its vertically integrated generating affiliate should be able to compete for almost all customers. That’s why the Washington Utilities and Transportation Commission asked the state’s electric companies to respond to this question: "Will Washington residents be able to one day choose the electric company that provides power to their homes, much the same way they currently select a long-distance carrier for telephone service?"¹ Probable answer: probably. So, even if regulators can be persuaded to provide some cover from competitive fire, incumbent suppliers won’t in the long-run have many other customers on whom to off-load stranded investments. At least, not in significant amounts.

Nor, I submit, should they. And here I enter, first, the murky area of equity, one generally ceded by economist to lawyers, who feel competent to decide such matters. Utilities generally argue that the to-be-stranded

investments were made pursuant to their obligation to serve the customers who now want to flee them in order to benefit from the lower cost of new entrants; that these investments were made pursuant to a set of rules that should not be changed *ex post*; that regulators had approved these investments as prudent; and that the magnitude of the stranded or, more precisely, now uneconomic investment is so great -- write-downs equivalent to perhaps 75% - 200% of the industry’s book equity are being bandied about -- that writing these assets down to market value would be tantamount to bankrupting the entire industry.

I have some visceral sympathy for these arguments. But I wonder, first, whether "stranded investment" is a new phenomenon, unforeseeable and therefore a risk for which investors have not been compensated. After all, utility investors always were exposed to what I believe Charlie Curtis has called "load mobility" -- plant closings, relocations and switches to self-generation. Second, no one who suffered through hearings in which state commissions calmly excluded from rate base billions of dollars of investment in facilities they had urged utilities to build, can fail to shed a tear for the utilities’ current plight.

But that experience was a warning to all save the deaf and blind of the vagaries of the regulatory process, of the inability of a commission to bind its successor, even of its unwillingness to bind itself from one rate case to another. Surely, investors singed in the fires of prudence reviews can’t now credibly argue that they were unaware of the risk of lurches in regulatory policy. Since
it is no longer politically correct to note the historic name of "Frailty", I assume it is permissible to say, "Frailty, thy name is regulation", using "frailty," as Shakespeare did, to mean how little some persons’ "vows,...tenders of affection, are to be trusted."² This is something every utility executive has always known, and many have loudly proclaimed, and every intelligent investor has factored into the return he would demand for exposing his capital to the tender mercies of Huey Long’s successors in the regulatory profession.

So I’m not sure how far the "you-can’t-change-the-rules-in-mid-investment" argument carries the case that shareholders should be held harmless from the effect of competition on the value of their investments. Is it not equally plausible to argue that investors were on notice that regulatory rules change, they made their investments forewarned of that possibility and that they have in the past been compensated for the risks for such changes? After all, utility shares more often than not sell at a multiple of book value, meaning that shareholders put a higher economic value on the earnings potential of a utility’s assets than is indicated by the book value of its depreciated investment. So in the swings and roundabouts of regulation -- lean years, fat years -- it is arguable that investors have received rewards that have been ample to compensate them for their current plight -- if, indeed, their plight

²J. Dover Wilson, What Happens In Hamlet. Cambridge University Press, 1951, p. 331.
is as dire as utility managers, would like regulators -- but not utility analysts -- to believe. For are we certain that competition is as imminent, or as certain to be destructive, as we are told? A topic for another day.

Let us assume, for the moment, that the gap between utility book value and economic value in a competitive environment is as massive as the industry and "the Street" say it is. Should society worry about the consequences of a competitive regime, and even the bankrupting of a good portion of the industry? I think not.

First, there will be winners as well as losers in the universe of investors. Indeed, those winners are likely to include some of the investors in existing utilities -- in those utilities with costs so low that they can successfully invade markets outside of their traditional franchise areas.

Second, bankrupt utilities don’t go away. They continue to operate -- perhaps beyond the reach of regulators. Customers continue to be served; suppliers get paid, as do workers, although the latter may be unable to maintain the wage rates they could extract when labor costs could be passed on, automatically, to captive electric customers. Shareholders lose, as may bond holders. But so did investors in airlines. In short, competition would result in a transfer of wealth from some utility investors to other investors, and to consumers. I see nothing intrinsically evil or unfair in that, although I certainly understand that market incumbents might see things differently.
Does not such as approach represent a massive repudiation of the so-called regulatory bargain -- utilities invest in facilities to provide service to all comers, in return for.... In return for what? The regulated industries with which I have been associated have always contended that they did not have a guaranteed fair rate of return, but merely the opportunity to earn such a return. If they are efficient, as that term is ordinarily understood, they still have such an opportunity if the introduction of competition is coupled with appropriate regulatory reform -- a subject to which I will turn in a moment.

So I would urge you not to lean too heavily on complaints about the inequity (if not the iniquity) of a dramatic change in regulatory policy. First, regulatory policies change, sometimes creating values for incumbents (pollution rights, added broadcast frequencies) sometimes destroying values (refineries incapable of producing environmentally acceptable gasoline, cigarette manufacturing facilities). My conservative friends argue that many such changes constitute unconstitutional "taking", although with less enthusiasm in the case of repeal than in the case of enactment of regulations. But I leave that argument to the lawyers.

Second, regulation of electric utilities, as traditionally understood, always had as one of its goals what Alfred Kahn describes as "to employ regulation to
preserve the most effective competition possible in this industry...

Third, investors must certainly have been aware that competition in one form or another -- from municipals seeking access to pooled power or to equity positions in nuclear plants, to competitors seeking access to transmission facilities -- was a threat to which their capital was exposed. Perhaps not as great a threat as retail wheeling, but surely that is a difference in magnitude, not in kind.

So I see little hope for those who would have the loss in value of utility assets borne by tied customers, and the shareholders held harmless. But neither do I foresee an immediate balance sheet blood bath. For, fortunately for the utility industry, it has two important allies -- strange bedfellows, but marriages of convenience often produce strange bedfellows: state regulators and environmentalists.

State regulators are eager to limit competition -- competition they favored when they thought they could control its nature and magnitude -- because they fear that only large customers will be able to seek out competitively priced power, leaving the politically more numerous retail customers as potential

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5This was written in reference to The City of Colton and Shrewsbury decisions concerning access by municipals to pooled power. See Kahn's The Economics of Regulation, Principles and Institutions. New York: Wiley & Sons, Inc. 1971, Vol II "Institutional Issues", p. 332.
bearers of the burden of stranded investment. My own guess is, that faced with the choice of loading these costs onto investors or small customers, regulators will in the end lean towards saddling investors with the stranded investment. But they will resist the hard choices imposed by "stranding" as long as they can, thereby buying time for the industry. And if ever time was money, now is that time. For every year that passes is another year in which one-day-to-be-stranded assets can be depreciated.

Environmentalists are even more eager to nip competition in the bud. If customers are free to flee the costs of uneconomic demand-side management programs, who will be left to bear them? If integrated resource planning has become a Christmas tree laden with gimmicks paid for by unaware or helpless consumers, what will become of it when more efficient alternatives are available to customers? Not surprising, then, that one public interest advocate opposes allowing "any departure [from the system] which increased the per-unit costs to the remaining customers of implementing the approved, integrated resource plan...". And if competition drives electricity prices down, won't consumers use more, thereby restoring the growth in electricity demand to levels that environmentalists find unacceptable?

So these allies should help the industry to postpone the day of

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4See The Energy Daily, March 14, 1994, p. 3.
competitive reckoning -- a non-trivial triumph. But successful rear guard actions
do not always prove to be a Dunkirk -- a prelude to ultimate victory. Only right
eventually makes might in markets, and the "stranded investment" argument
for resisting retail wheeling is not right -- from a public policy point of view.
True, there are good private reasons for resisting retail wheeling. And a rear
guard action that provides time to adjust asset values is worth fighting with
vigor, if necessary using as cannon fodder such academics as come to hand.
But it is important that the time be used not only to chalk up depreciation
dollars, but to revamp the retreating army into something resembling a viable,
competitive fighting force.

But, you may ask, even if the don’t-leave-us-with-stranded-assets
argument fails to win your heart, doesn’t the argument that this complicated
industry requires "coordination" win your mind? And will that need not be met
if dog-eat-dog competition is allowed? I don’t know the answer to that
question, but because everyone says there is a problem lurking here, I would
like to take the "no" side of the case -- to see where it leads. I know that Bill
Hogan and others have done some seminal and interesting work on the question
of transmission pricing. Indeed, one of the things in which I take some pride
is that I believed was the first to direct the Hogan intellectual laser beam at the
problem of transmission access and pricing of transmission services. And I
share many of his conclusions: that the generating market can be competitive,
with the market allowing customers to replace regulators in determining price-quality trade-offs; that access to transmission is "a necessary support for the full competitive market"; and that there are sufficient natural monopoly elements in electricity markets to warrant continued regulation.⁵

But I wonder whether all of the effort being made to determine just how electricity markets would work in an era of open access isn't a feckless enterprise. All central planners have always defended their roles by saying that free market advocates can't predict the results of eliminating planning. Of course they can't. And it is precisely because they can't that they should prevail -- consumers will let the players know, soon enough, just what prices they are willing to pay for which services.

True, the transmission grid will remain a monopoly facility, capable of turning a deaf ear to customers' demands. But surely regulation that requires equal access and limits aggregate returns to levels sufficient to induce needed new investment can be devised, and perhaps applied to a vertically disintegrated industry should problems of preferential access by integrated suppliers prove insurmountable. I'm confident that Hogan and his colleagues in the academy and the regulatory agencies can solve that problem. And if that

⁵See his "Transmission Pricing In Support of a Competitive Electricity Market", submitted in FERC Docket No. RM93-19-000, June 30, 1993, and the many interesting papers he has produced as he wrestles with the problem of transmission access and pricing.
confidence is not misplaced, do the policy arguments that can be mounted against an open access electric supply system not collapse?

Where does all of this leave the industry? From a public policy point of view it seems clear that efforts to impose on customers the cost of stranded investment would result in major inefficiencies, for they would necessarily involve artificial restrictions on new entrants -- new entrants capable of rendering service at marginal costs below those of incumbents. And I include as an undesirable restriction the levying of exit fees that are not contractually mandated, or access charges disproportionate to the economic value of the service rendered and the facilities used. Such entry restrictions would reduce electricity consumption to sub-optimal levels (to the applause of environmentalists, or many of them); distort the investment of electricity-using industries into more labor-intensive technologies (to the applause of luddites); protect investors who may already have been compensated for the risk of a change in regulatory policy (to the applause of shareholders in utilities, particularly competition-prone inefficient ones); preserve the jobs of those utility managers who might be made redundant by a shrinking of their feifdoms (to the applause of many not in this room); and permit regulators to postpone the day when they will have to seek honest jobs (to the applause of the NARUC hierarchy).

If entry restrictions are not a proper solution, what is? Indeed is there a
principled solution, one that allows customers the benefits of competition, and assigns to investors both the losses and the gains from realigning fictitious book values with current economic values? I’m not certain, but think that perhaps its distant, hazy outlines can be discerned through the economist’s telescope. One ingredient is an old fashioned one -- cost-cutting by incumbents to become as lean as possible. Here, experience in the airline and telephone industries suggests that your industry is merely diddling around the edges of organizations efficiently constructed in another time, but ill-adapted to the emerging future. Another ingredient, and one to which not enough thought has been given, is a series of regulatory reforms:

(1) removing cost burdens borne only by regulated companies;
(2) allowing flexible, competitive rate-making so that existing utilities are not sitting ducks for cream-skimming competitors to shoot at;
(3) making it clear that the utility’s obligation to welcome back a prodigal son extends only to offering contractual terms sufficiently attractive to keep the prodigal, who by definition is in a position to reject such terms, at home;
(4) adjusting allowed rates of return to reflect the greater risks intrinsic in a more competitive market.

Unfortunately, these reforms will be hard to come by. And won’t be won instantaneously. That’s why I began by saying that the world in which
you will find yourself will place unbearably frustrating pressures on you. For the future I see in what I admit is a clouded crystal ball will be one in which all customers will be allowed to buy power from anyone willing to supply them. Not a bad thing. But it will also be one in which legislators, environmentalists and regulators will continue to impose the costs of their chosen social programs on utilities. And in which the struggle to be permitted a competitive response to market incursions will be a difficult one. And, most dangerous of all, the world of the near-term future will be one in which the utilities’ competitors will attempt to achieve an uneconomic combination, one that grafts the new, lower reproduction cost of generating power onto the old, lower depreciated original cost of moving it. Such a combination of economic reality and accounting fiction ignores the replacement cost of transmission and distribution facilities, reducing incentives to expand them, and creates an asymmetry that should be offensive to anyone opposed to stacked decks, loaded dice and the proverbial unlevel playing fields.

Therein lies the industry’s most urgent need: a de jure or de facto write-down of generation assets and a parallel controlled write-up of transmission and distribution assets. What the combined effect of this pricing-to-market would be I have no idea. But it should satisfy investors’ sense of fairness, and set a sound basis for future competition among power suppliers, removing artificial barriers to entry in generation, and placing correct economic values on
electricity transport systems.

Is any such scheme likely to evolve? No more likely than the use of marginal cost pricing was thought to be in the 1970's. Or the internalization of externalities in the 1980's. Or trading in pollution permits in the 1990's. In short, possible. After all, regulatory systems can withstand just so much battering from technological and economic forces before they wither away, as in airlines, or accept radical reform, as I suspect they will in the case of electric utilities.

How to get to a world of symmetrical competitive opportunity and revamped regulation? I leave that to another time. But surely the first steps are being taken at Harvard, the American Enterprise Institute and in fora such as this one. Regulatory change rarely results from a single, blinding insight, suddenly accepted by regulators. Rather, it is a result of an on-going process of interchange between the academy, the regulatory community, intervenors and the industry. Ideas are tried out, rebutted, refined, argued over. Then, and only then, do the necessary changes get adopted. Fortunately, that intellectual debate is underway. Fortunately, too, the contours of a solution are visible: link open access to a process of regulatory adjustment, of unbundling rates, and of bringing the prices of each component -- generation, transmission and distribution -- more closely into line with the current economic cost of providing each service.