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The "Regulatory Compact" and Implicit Contracts: Should Stranded Costs Be Recoverable?

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Abstract

Progress toward electricity market deregulation has brought controversy over whether or not utilities are entitled to compensation for “stranded costs,” i.e., costs utilities will not be able to recover due to the advent of competition in their markets. This paper uses a legal and economic analysis of contracts to address the desirability of utility cost recovery. First, underlying principles of law are reviewed to determine whether or not there is a legal presumption of recovery. Then, the analysis considers whether or not an implicit “regulatory compact” between utilities and regulators follows from principles in the economic analysis of law, particularly theories of efficient breach and implicit contracts. The paper concludes that recovery should occur in only a proscribed set of circumstances and that, when called for, compensation should be partial, rather than full.

JEL Classification Nos.: L43, L94, K12

Key Words: stranded costs, deregulation, contracts, electric utilities

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The “Regulatory Compact” and Implicit Contracts: Should Stranded Costs Be Recoverable?

James Boyd¹

I. INTRODUCTION

As progress is made toward electricity market deregulation there is a simmering controversy over whether or not utilities are entitled to compensation for so-called stranded costs. Stranded costs are costs arising from investments made during past decades that will be unrecoverable, or “stranded,” by the advent of competition.² Examples include undepreciated costs associated with high-cost power plants and costs associated with long-term, often government-mandated, contracts. In total, the magnitude of such unrecoverable costs is estimated to be as high as \$200 billion.³

The significant amounts at stake imply that the disposition of stranded costs will have a significant impact on those ultimately forced to bear them, whether shareholders, taxpayers, or electricity consumers. As a consequence, a lively debate has ensued with numerous voices speaking both for and against recovery. Those in favor of utility cost recovery argue that utility rates of return did not compensate them for the risk of future competition, prudence

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² The beginnings of electricity deregulation can be traced to the 1978 Public Utility Power Regulatory Policies Act (PURPA) which fostered, and demonstrated the feasibility of, independent power generation. PURPA led to the 1992 Energy Policy Act (EPAct), which ordered the Federal Energy Regulatory Commission (FERC) to open utility transmission grids to independent generators. In 1996, FERC issued Order 888 to implement this mandate.

³ E. Hirst and L. Baxter, “How Stranded Will Electric Utilities Be?” *Public Utilities Fortnightly* (Feb. 15, 1995): 30–32.

reviews by regulators ensured that utility investments were proper, and that investment in the industry would be discouraged if cost recovery is not allowed.⁴ Those opposed argue that utilities have never been insulated from losses due to changes in policy;⁵ most stranded costs are the result of poor management, not regulatory, decisions;⁶ and compensation rewards poor managerial decisions and penalizes utilities that have already written off costs.⁷

This paper contributes to the debate by offering an analysis based on the legal and economic analysis of contracts.⁸ The paper's overall goal is to determine whether there is a legal duty to compensate utility shareholders for costs stranded in the move to competitive electricity supply. First, the analysis reviews underlying principles of law to determine whether or not there is a legal presumption of recovery. Then, the analysis addresses whether or not an implicit "regulatory compact" between utilities and regulators follows from principles in the economic analysis of law, particularly theories of efficient breach and implicit contracts. From an efficiency perspective, the interpretation of implicit contractual obligations following an unspecified contingency should consider which party can best adapt to or insure against risks

⁴ For a particularly good exposition of this side of the argument see W. Baumol and G. Sidak, "Stranded Costs," *Harvard Journal of Law and Public Policy* 18 (1995): 835-49.

⁵ I. Stelzer, "What Happens When The Rules are Changed and the Plug is Pulled on Electric Utilities?" *The American Enterprise* 5 (Nov./Dec., 1994): 76-84, esp. 81.

⁶ C. Studness, "The Flawed Case for Stranded Cost Recovery," *Public Utilities Fortnightly* (Feb. 1, 1995): 38-40.

⁷ R. Michaels, "Stranded Investment Surcharges: Inequitable and Inefficient," *Public Utilities Fortnightly* (May 15, 1995): 21, 24-25.

⁸ For a more general discussion of the economic issues surrounding stranded cost recovery see T. Brennan and J. Boyd, "Stranded Costs, Takings, and the Law and Economics of Implicit Contracts," mimeo, (Washington, DC: Resources for the Future, 1996).

due to a costly future contingency.⁹ The interpreter also should consider the possibility of “moral hazard.” The possibility of moral hazard makes it desirable to assign liability for costs to the party best able to reduce the likelihood of a negative contingency arising.¹⁰ These analyses of how courts and policy makers should interpret the duties embodied in the franchise relationship between utilities and regulators do not lead to the automatic conclusion that stranded costs should be fully recovered. Quite the contrary. As is shown, both an analysis of expectations based on precedent and a economic analysis of the optimal contracting indicate that recovery should occur in only a proscribed set of circumstances. Moreover, in cases where an efficiency-based contract analysis calls for compensation, partial, rather than full, compensation is generally called for. It is important to note at the outset that the paper does not address the merits of particular methods to raise revenues for cost recovery (e.g., transmission surcharges).

II. CONTRACT ECONOMICS AND THE “REGULATORY COMPACT”

Resolution of the stranded cost controversy requires the interpretation of duties created between regulators and utilities in the course of granting profit-controlled electricity franchises. Those in favor of utility compensation for stranded costs interpret the regulatory franchise as a

⁹ C. Goetz and R. Scott, “The Mitigation Principle: Toward a General Theory of Contractual Obligation,” *Virginia Law Review* 69 (1983): 967-1025, reprinted in part in V. Goldberg, *Readings in the Economics of Contract Law* (Cambridge: Cambridge University Press, 1989): 61-68; R. Posner, *Economic Analysis of Law* (Boston: Little, Brown and Co. 1992): 102-09.

¹⁰ R. Cooter and T. Ulen, *Law and Economics* (New York: Harper Collins, 1988): 277-88, 304-16; A. Edlin and S. Reichelstein, “Holdups, Standard Breach Remedies, and Optimal Investment,” *American Economic Review* 86 (1996): 478-501.

long-term contract, primarily between state public utility commissions (PUCs) and utilities, that implies PUC obligations following the opening of generation markets to competition.¹¹ For instance, the franchise relationship between PUCs and utilities is interpreted to guarantee either that the utility not face competition (e.g., by having the exclusive right to supply electricity within some area) or that the utility receive some payment if competition is allowed. In contrast, those opposing stranded cost recovery interpret the lack of contractual guarantees as evidence that compensation is not required.

It is worth emphasizing that if there were pre-existing, contractual agreements that guaranteed utilities compensation for value lost in a transition to competition, then the government would unambiguously be required to honor them.¹² However, it is precisely because franchise agreements do not explicitly assign liability for stranded costs that the issue is so contentious. Without the straightforward resolution that an explicit contract would afford, attention turns to whether or not there was an “implicit contract” between PUCs and utilities mandating cost recovery in the event of competition. References by proponents of recovery to a “regulatory compact,” hint at the existence of such an “implicit contract.”¹³ The issue is an open one, however. In fact, opponents of recovery can plausibly claim that the *inability* to recover costs is just as implicit in franchise agreements.

¹¹ The bulk of electricity transactions and investments fall with state jurisdictions. By its own estimates, only about 9% of stranded assets come under the jurisdiction of the federal regulator FERC.

¹² For a recent affirmation of the government’s duty to honor contractual obligations, see *United States v. Winstar Corp.*, 1996 U.S. Lexis 4266.

¹³ According to Michaels, *supra* n. 18, the first instance of the term “regulatory compact” in regulatory or court decisions appears in 1983.

Why did utilities and regulators fail to explicitly assign liability for stranded costs? And how does the absence of explicit contractual provisions affect the way in which we interpret the duties implied by the regulator-utility relationship? To help explain why stranded cost liability might not be explicitly accounted for it is helpful to first distinguish between complete and incomplete contracts. A complete contract defines the responsibilities of the contracting parties across a “complete” set of circumstances. At the time they agree, the parties find it in their joint interest to be strictly bound by such a contract. Failure to observe explicit contract language in a complete contract setting is not uncommon. For instance, the parties may be relying on underlying principles of law and feel no need to explicitly restate the presumptive allocation of liability. Liability is eventually assigned in reference to the common law or statutory remedy to the anticipated circumstance.¹⁴ In the absence of explicit contractual language, the stranded cost question thus becomes one of precedent: is there a reasonable expectation of cost recovery given underlying and applicable principles of law? Section III addresses this question and concludes that there is little basis in precedent for a broad-based recovery of costs.

Another possibility is that the transition to competition was unaccounted for contractually because it was an unforeseen contingency. Given this interpretation, it is necessary to view the franchise relationship as an incomplete contract. Incomplete contracts

¹⁴ It is possible to “contract around” the common law, but in the absence of explicit language to that effect, it is assumed that common law standards hold. A similar issue arises in the law’s reliance on the concept of community “custom.” Common in accidental injury or property damage cases, court determinations of customary practice are often used to define standards that are not explicitly defined contractually. See R. Epstein, “The Path to the T.J. Hooper: The Theory and History of Custom in the Law of Tort,” *Journal of Legal Studies* 21 (1992): 1-38.

are those in which all possible contingencies cannot be identified at the time of the agreement. Given the parties' response to an unspecified contingency, it is left to the courts to decide whether or not a contract breach has occurred and specify damages if one has.¹⁵ To resolve these issues, courts rely on general principles of contract law. In particular, the court will assign liability in a way consistent with the broader, long-term public interest -- such as its precedential impact on the value of similar, future social contracts. Following a normative, economic approach, liability is determined by deriving the rule that would have maximized the contract's expected joint benefits at the time it was created. Section IV applies this framework to the analysis of stranded costs.

As will be argued, it is unlikely that the possibility of competition was an unforeseen contingency by utilities or regulators. Therefore it is also unlikely that compensation should be based on an *ex post* determination of what the optimal contract should have been. Nevertheless, even if this approach is taken, the case for general cost recovery is weak.

¹⁵ In a contracting model, Hermalin and Katz argue that judicial interpretation, beyond mandating specific performance, will not improve the efficiency of outcomes expected at the time contracts are written when contracting parties have symmetric information regarding each other's valuations of performance. B. Hermalin and M. Katz, "Judicial Modification of Contracts Between Sophisticated Parties: A More Complete View of Incomplete Contracts and their Breach," *Journal of Law, Economics, and Organization* 9 (1993): 230–55. Their model finesses the cost of specifying contingencies, however, by assuming that "sophisticated parties" can always define a "catch-all" contingency that includes arbitration by an outside party, e.g., a court, as one of the actions that would take place. It consequently appears that the need for outside determination of what to do about stranded costs, assuming competition was an unanticipated contingency, is theoretically justified, as well as required in practice.

III. DO UNDERLYING PRINCIPLES OF LAW SUGGEST AN IMPLICIT RIGHT TO RECOVERY?

The root cause of the stranded cost controversy is the advent of competitive alternatives to the existing, regulated, vertically integrated power generation system. Competition from lower-cost or higher-quality goods and services is a risk faced by most producers in a competitive economy. Having said that, however, it is also true that price-regulated firms are required to perform services that they would not be required to perform were they unregulated. The provision of universal service, for instance, is not required of unregulated firms. In return for providing such services, regulated utilities can justifiably claim the right to compensation of some form. The question, however, is whether or not stranded cost recovery is an implicitly guaranteed form of that compensation.

A first approach is to ask whether or not utilities have traditionally believed in a guarantee of post-competition cost recovery. The terms of contracts signed by utilities are instructive. Were there universal agreement on, or legal guarantees of, the right to recover stranded costs there would be no need for utilities to protect themselves against such costs by having customers agree to termination clauses or minimum contract lengths. Yet these types of contracts are common in the electricity industry. Utility customers, particularly in wholesale markets, have sought competitive supply options for more than two decades.¹⁶ Exposure to self-generation, municipalization, and customer relocations routinely exposes utilities to unrecovered costs. Contracts which stipulate a minimum term over which customers are required to pay for services, or cancellation provisions which involve payment if demand is

¹⁶ *Otter Tail*, *supra* n. 10, for instance, related to the sharing of bottleneck transmission facilities between competing suppliers.

terminated, protect utilities' ability to recover costs. Regulators have traditionally encouraged, and certainly have never prohibited, contracts that insulate utilities from cost recovery concerns.¹⁷ The existence of such contracts is evidence that utilities themselves have felt that cost recovery was not guaranteed.¹⁸

An examination of legal precedent also undermines the idea that there is an implicit right to cost recovery. The deregulation of other industries -- airlines, trucking, and telecommunications -- has not involved generalized cost recovery. While these industries were arguably characterized by less long-lived and capital intensive assets, they provide no precedent for a presumption of recovery. A precedent in favor of recovery is FERC's treatment of stranded costs during the deregulation of the natural gas industry. There, the rebuttable presumption has been that costs related to take-or-pay contracts between pipelines and producers are shared evenly between customers and utility shareholders. Even in this case, however, there is no precedent for a full, blanket recovery of utility costs.

¹⁷ For instance, the following language appears in the Federal Energy Regulatory Commission's Notice of Proposed Rulemaking ("Recovery of Stranded Costs by Public Utilities and Transmitting Utilities") 67 FERC para. 61,394 (June 29, 1994), at 16: "The Commission has always permitted public utilities to include reasonable cancellation provisions in power sales contracts in order to protect themselves from stranded costs and to plan for the future needs of their systems."

Onerous cancellation provisions may not be considered reasonable for antitrust reasons. Penalty clauses for switching can discourage entry and generally limit customers' ability to seek competitive sources of supply. P. Aghion and P. Bolton, "Contracts as a Barrier to Entry," *American Economic Review* 77 (1987): 388-401.

¹⁸ For a detailed analysis of the history of utility-consumer contracts, and a critique of the FERC's stance on recovery and interpretation of contracts, see S. Hempling, K. Rose, and R. Burns, "The Regulatory Treatment for Embedded Costs Exceeding Market Prices: Transition to a Competitive Electric Generation Market," National Regulatory Research Institute, mimeo.

Cost recovery has also received frequent judicial examination. Case law suggests no legal guarantee to cost recovery in the face of competition.¹⁹ A notable recent example is the Supreme Court's ruling in *Duquesne Light Co. v. Barasch*.²⁰ The *Duquesne* case, on appeal from the Pennsylvania Supreme Court, speaks directly to the issue of whether or not full cost recovery should be presumed by price-regulated utilities. In it, the court was called upon to judge the constitutionality of a state law barring the recovery of costs associated with utility investments that are not "used and useful." The Court held that broad discretion is left to the states to determine their own rules for cost recovery and affirmed that failure to recover costs, even for a "prudent" investment, is not evidence of a taking.²¹ Quoting *FPC v. Texaco Inc.*,²² and speaking to the protection offered by the "Takings Clause" of the Fifth Amendment, the court emphasized that "all that is protected against, in a constitutional sense, is that the rates fixed by the Commission be higher than a confiscatory level."

To address the definition of what is "confiscatory" the court reviewed the history of cost recovery jurisprudence, beginning with the fair value rule articulated in *Smyth v. Ames*.²³ The *Smyth* test for cost recovery attempted to replicate the incentives created by competitive

¹⁹ "The use of, or failure to obtain, patronage, due to competition, does not justify the imposition of charges that are exorbitant and unjust to the public." *Market Street Railway Co. v. Railroad Commission of California*, 324 U.S. 548, 567 (1945), cited in M. Crew and P. Kleindorfer, *The Economics of Public Utility Regulation* (Cambridge, MA: MIT Press, 1986): 98.

²⁰ 488 U.S. 299 (1989).

²¹ According to the court, "a state scheme of utility regulation does not 'take' property simply because it disallows recovery of capital investments that are not 'used and useful in service to the public.' "

²² 417 U.S. 380 (1974).

²³ 169 U.S. 466, 546 (1898).

markets. Investments yielding positive value were to be granted an above-cost return based on the market, or fair, value of the asset. Bad investments were allowed no return. As Justice Rehnquist argued for the majority in *Duquesne*, the *Smyth* test, while yielding desirable incentives in principle, ultimately proved impractical. The difficulty with a fair value test is that it requires an estimate of market value in a market without competition. An asset's market value can be assessed with confidence only when there is a competitive market where the asset, or ones similar to it, can be bought and sold.

This difficulty led to the abandonment of the fair value test, and movement to a historical cost recovery standard, in *FPC v. Hope Natural Gas Co.*²⁴ Compared to the fair value test, a historical cost standard provides less compensation for good investments. The firm recovers only its costs plus a presumably small margin. However, the historical cost standard also promises some degree of cost recovery for investments that ultimately do not yield positive returns.

Despite the promise of recovery when investments go bad, it is important to emphasize that full cost recovery is by no means guaranteed by a historical cost rule. To guard against inappropriate utility investment decisions, state utility commissions review the prudence of the investment. Prudence reviews are a relatively loose form of oversight and are generally thought to guard against significant abuses of the price regulation system, rather than as an exhaustive examination of the benefits and costs of individual investments. Also, it is important to understand that in most cases, investments classified as prudent are not

²⁴ 320 U.S. 591 (1944).

necessarily guaranteed recovery.²⁵ Quoting Rehnquist, “The loss to utilities from prudent but ultimately unsuccessful investments under such a system is greater than under a pure prudent investment rule [under which all prudent investments are recoverable], but less than under a fair value approach. Pennsylvania’s modification slightly increases the overall risk of investments in utilities over the pure prudent investment rule. Presumably the PUC adjusts the risk premium element of the rate of return on equity accordingly.”

The emphasis placed on the utility’s return to equity signals the court’s approach to determining whether or not non-recovery of costs is constitutionally acceptable. In *Duquesne* the court urges a focus on the “overall effect” of rates, not on details of state recovery decisions. A key factor in finding that confiscation did not occur in *Duquesne* was that the utility’s overall return on equity was adequate given the equity’s risks. The possibility being emphasized by the court is that compensation for apparently unrecovered costs may already have occurred via adjustments to the utilities’ allowed rates of return.²⁶ To quote the majority opinion:

“One of the elements always relevant to setting the rate under *Hope* is the return investors expect given the risk of the enterprise ... it has not been shown that the rate orders ... fail to give a reasonable rate of return on equity given the risks under such a regime. We therefore hold that [the Pennsylvania Act]’s

²⁵ In this regard, it is interesting to note that antitrust immunity can be assumed under state law only if the state’s policy is “clearly articulated” and “actively supervised.” Without clear articulation and active supervision immunity cannot be assumed when the firm acts on its own initiative. The possible analogy here is that utilities should not assume cost recovery unless cost recovery was clearly articulated and investments were actively scrutinized by PUCs. Neither of these conditions holds in the case of typical utility investment decisions.

²⁶ It can be argued that investors should have argued for increases in the rate of return, if they did not, since under *Hope* regulators are legally obligated to set a utility’s rates “to compensate its investors for the risks assumed.”

limited effect on the rate order at issue does not result in a constitutionally impermissible rate.”

The court’s analysis in *Duquesne* serves a number of functions. First, it reminds utilities that cost recovery is not federally guaranteed -- thus undermining the argument that recovery is implicit in the regulator-utility relationship. Second, it highlights the possibility that appropriate compensation for the risks posed by stranded costs may already have been granted in the form of rate of return adjustments. Finally, it proposes a test of whether or not stranded cost recovery should be compelled: specifically, whether or not the returns to the firm’s equity have been adequate given the risks to stockholders. While this implies a firm-by-firm evaluation, it is instructive to note that as a whole, the industry has enjoyed very healthy returns on equity over the last twenty years, particularly when accounting for the relative safety of utility stocks. Between 1977 and 1991 annual total return to investors in a sample of 81 public utilities was 13.3 percent per year, while the return on stocks in the broad Standard & Poor 500 index was 13.2 percent.²⁷

In summary, the case for an implicit regulatory contract guaranteeing utility cost recovery is weak. However, this does not imply that cost recovery should never occur. In cases where a utility was compelled by its franchise agreement to make investments or sign supply contracts that it otherwise would not have, the argument for recovery may be strong.

²⁷ R. Michaels, “Stranded Investments, Stranded Intellectuals,” *Regulation* 1 (1996): 47-51. Also, see P. Bradford, “A Regulatory Compact Worthy of the Name,” *The Electricity Journal* (November, 1995): 12-15 who cites an analysis by the National Association of Regulatory Utility Commissioners indicating similar above-market returns for electricity stocks.

But many, and perhaps most, utility investments do not fall in this category. For this broader class of investments legal precedent does not indicate a reasonable presumption of guaranteed cost recovery.

IV. SHOULD COMPENSATION BE VIEWED AS A PENALTY FOR BREACH?

The argument made above is that competition has always been a foreseeable contingency and utilities were free to contractually guard themselves against the risk of non-recovery. This, together with legal precedent on similar issues, strongly undermines the argument for an automatic utility right to cost recovery. Another approach to the problem, however, is to view the utility-regulator relationship as an incomplete contract. If we do so, the issue of cost recovery can be addressed via a normative contract law analysis. When confronted with an incomplete contract, courts determine liability by asking how the parties would have designed the contract had they accounted for the contingency *ex ante*. The terms are derived by assuming that the parties would have agreed to the contract that maximized their expected joint surplus at the time the contract was signed.²⁸

With this perspective, the question of whether or not there is a right to recovery is addressed in the following way. First, it is necessary to consider the incentives of firms and regulators under a variety of possible compensation rules (contracts). Having done so, the alternative contracts can be compared. The contract to be honored is that which, taking into account the incentives of all parties, would have yielded the greatest overall welfare. Thus, we

²⁸ Courts may also consider the contract's effect on overall social welfare.

ask whether or not the efficient utility-regulator franchise contract would include a right to compensation given the advent of industry deregulation. How would a contract most efficiently allocate risks and provide for adaptation in the event of competition?

It is worth emphasizing that a common characteristic of contracts is that they require the payment of damages in the event of a breach.²⁹ If deregulation can be thought of as an event leading to the breach of franchise agreements, stranded cost compensation can be viewed as a damage payment for that breach.

Now turn to the analysis of incentives and welfare under alternative specifications of “the contract.” Consider first the notion that contracts are designed to allocate liability for future contingencies to the parties who can adapt to or insure against them at least cost. A crucial consideration here is the ability of the parties to predict contingencies -- in this case the advent of competition.³⁰ Adaptability also refers to a firm’s ability to alter investment decisions to reflect changed external conditions. Both of these considerations suggest that utilities should bear the cost of changed conditions. First, the likelihood of competition in power generation depends primarily on technology’s ability to reduce scale economies in generation. Utilities are clearly more expert than regulators in the prediction of technological change in power generation. Second, utilities are in the best position to adjust production

²⁹ Damages for breach can lead parties under an incomplete contract to behave in a way that approximates optimal behavior under a more fully specified contract. See S. Shavell, “Damage Measures for Breach of Contract,” *Bell Journal of Economics*, 11 (1980): 466-490.

³⁰ Might we view the movement to competition as an endogenous, rather than exogenous, event? In principle, yes, since the regulator must initiate deregulation in a legal sense. Nevertheless, deregulation is unlikely without the technological changes that allow society to benefit from competition. Thus, exogenous technical change can at least be thought of as a necessary, if not sufficient, condition for deregulation. In the next section we address the notion of endogenous regulatory change in more detail.

choices and investment decisions to these changes. Moreover, the scale and corporate nature of utilities suggests that they can adequately insure against the risks posed by change.³¹

An additional set of considerations arises when the utility made investments that were required by the franchise relationship itself or when regulation prevented it from adapting to potential competition. Investments made to satisfy universal service requirements is one example. Another is that PURPA required utilities to purchase power from high cost renewable energy sources. Financing those sources required that the utilities enter into long term contracts to purchase the power. The "avoidable cost" standard, while reasonable in principle, became in many states equivalent to a "highest cost" pricing standard.³² A utility forced to purchase power at prices above costs ought not be required to absorb those costs if subsequent competition makes their recovery impossible.³³ However, this argument is considerably less compelling for generators constructed by the utilities themselves, unless there is similar evidence that regulators forced them to do so.³⁴

In these type of cases, long-term contracts (which serve to ensure at least partial cost recovery) are likely to be optimal. Without them, utilities would correctly fear customer or

³¹ Theory suggests that large, publicly traded firms should be risk neutral. Because investor risks can be minimized via portfolio diversification alone, risk averse (and thus non-profit-maximizing) management strategies are not valued by shareholders.

³² Brennan et al., *supra* n. 1 at 31.

³³ A similar conclusion would apply to utility expenditures on environmental conservation technologies that they would not have undertaken in the absence of regulatory requirements.

³⁴ A potentially interesting source of evidence would be statements by utility executives at the time of plant construction. If they were advertised as the efforts of farsighted private enterprise rather than compelled by coercive regulators, it is disingenuous to contend that the value of those investments should be insulated from competition.

regulator exploitation once specific investments were made. The requirement that regulators allow utilities a “just and reasonable” return on investment represents a public commitment to prevent opportunistic expropriation of sunk investments by regulated firms. This is particularly true in electricity markets where up-front investments are large, immobile, and long-lived.³⁵ In the language of contracts, these types of investments create issues of reliance. Reliance relates to the situation in which one party takes an action (bears costs) before, and in anticipation of, the final performance of a contract. Following the reliance expenditure, an uncertainty may be resolved that bears on whether or not the contract should be performed. In many instances, even though up-front costs have been sunk, it may ultimately be inefficient for the other party to honor its obligations.

The optimal contract in such a situation must strike a balance. On the one hand, a utility must be given insurance against the opportunism of customers who may prematurely depart despite large utility expenditures made to serve them.³⁶ On the other hand, moral hazard arises if the utility feels that all its expenditures will be compensated, regardless of

³⁵ The problem of opportunism and relationship-specific assets is identified and analyzed in B. Klein, R. Crawford, and A. Alchian, “Vertical Integration, Appropriable Rents, and the Competitive Contracting Process,” *The Journal of Law and Economics* 21 (1978): 297-326, and O. Williamson, “Transaction-Cost Economics: The Governance of Contractual Relations,” *The Journal of Law and Economics* 22 (1979): 233-261. Also, see V. Goldberg, “Regulation and Administered Contracts,” *Bell Journal of Economics* 7 (1976): 426-448. Goldberg argues that in the “natural monopoly sector” contracts protecting the monopoly are likely due to the immobility and long-life of their capital investments. His article also includes the following prescient statement: “If the life of the capital does not coincide with the life of the contract, then when the contract expires (or is prematurely terminated) it will be necessary to determine ... the “fair market value” of the surviving capital ... if it is owned by the provider but must (or ought to) be sold back to the other party or the new provider” (at 444).

³⁶ It may also be possible that utility rates of return are used to compensate shareholders, as noted in the previous section. If so, allowed returns might act as an independent inducement for reliance expenditures.

whether they were appropriate or not. In other words, the utility may *over-rely* on the contract if reimbursed for all its costs. In general, joint surplus is maximized by a contract that can be breached if conditions -- such as the possibility of competition -- warrant, subject to the payment of partial compensation for reliance expenditures.³⁷

The possibility of regulatory opportunism clearly creates a rationale for cost recovery. Note, however, that it does not provide a rationale for full cost recovery. Full compensation maximizes utility moral hazard. For this reason, it is very unlikely that a promise of full compensation would have maximized the utility-regulator contract *ex ante*. Even when cost recovery is indicated this should not be interpreted to imply full cost recovery. The optimal percentage of cost recovery can only be determined by a case-by-case analysis.

The analysis of stranded cost recovery as a contract issue leads to the conclusion that cost recovery should not be assumed by default. First, underlying principles of regulatory and case law do not point toward recovery. Second, even when it appears clear that firms made investments to serve franchise obligations, compensation may already have occurred via rate of return adjustments. The most favorable case for recovery assumes that competition was unanticipated and that utility expenditures should be viewed as reliance investments. Even here, however, contract theory implies that compensation should only be partial. Moreover,

³⁷ See Shavell, *supra* n. 37. Also S. Masten and K. Crocker, "Efficient Adaptation in Long-Term Contracts: Take-or-Pay Provisions for Natural Gas," *The American Economic Review* 75 (1985): 1083-1093. They analyze "take or pay" contracts which require purchasers to pay for a minimum level of a good or service even if they do not ultimately use it or take delivery. They show that this mechanism mimics an incomplete contract with a partial penalty for contract breach.

Contract breach can be efficient when unanticipated contingencies arise. Properly designed, a contract penalty allows for breach only when breach is efficient, thus counteracting the tendency once resources are committed for the purchaser to opportunistically renege on the agreement.

advocates of compensation must still explain why utilities failed to secure explicit contractual cost recovery guarantees. And to do so they must argue that the likelihood of competition at the time franchises were granted was too small to be worth the cost of explicitly including it in contracts.

V. CONCLUSIONS

The outcome of the stranded cost controversy will undoubtedly be influenced in large degree by the interplay of political forces at both the state and federal level. However, legal and economic analysis, if called upon, can contribute significantly to a socially desirable resolution of the debate. The paper has shown that legal and economic analysis is helpful in clarifying both (1) whether or not there was an implicit commitment to cost recovery and (2) whether such a commitment would have been in the broad social interest *ex ante*. The clarification of these issues, in turn, speaks directly to the question of whether or not utility stranded costs should be compensated during the process of deregulation. An analysis of legal precedent and normative contract theory yields little in the way of rationale for full cost recovery. There is no precedent for the broad claims to recovery that are being advocated by utility interests. Moreover, the ability to adapt to contingencies, insure against them, and the desire to avoid moral hazard all point away from a right to full recovery.

The argument in favor of compensation is stronger in situations that carry the possibility of regulatory opportunism. Regulatory law should, and does, prevent regulators from exploiting utilities that make irreversible investments in the service of the public, rather than their private, interest. Investments made to satisfy universal service requirements or those

explicitly mandated by regulators, such as inefficient power purchase contracts, are most likely to fall in this category. Even this argument for cost recovery, however, assumes that utilities have not already been compensated via rate of return adjustments. Taken together, these arguments suggest that opponents of recovery have a strong legal and economic basis for their position. The burden of proof properly resides, on a case by case basis, with the advocates of cost recovery.