Introduction

Q. Please state your name and business address.

A. Scott Hempling, Attorney at Law, 417 St. Lawrence Dr., Silver Spring MD 20901.

Q. Please state your educational background and professional qualifications.

A. I received a B.A. cum laude in Economics and Political Science from Yale College. I received a J.D. magna cum laude from Georgetown University Law Center. I am a member of the Bars of the District of Columbia and Maryland.

I am the principal in a law practice which provides legal and policy advice related to regulated industries. I have advised the state commissions of Arkansas, Arizona, Connecticut, District of Columbia, Indiana, Kansas, Massachusetts, Michigan, Missouri, Nevada, New Hampshire, Oklahoma, Rhode Island and Virginia; the consumer counsels of Connecticut, Indiana, Nevada, New Jersey, Pennsylvania and Texas; the legislatures of South Carolina and Vermont; municipal systems in Connecticut and Iowa; associations of competitive generators, consumer representatives and public power entities; and public interest organizations. I have authored articles which have appeared in The Electricity Journal and Public Utilities Fortnightly.

I have presented testimony to committees of the U.S. House of Representatives and the U.S. Senate on many occasions; to committees of the state legislatures of California, Maryland, Minnesota, Nevada, North Carolina, South Carolina and Vermont; and to the state commissions of Illinois, North Carolina, Rhode Island, Texas, Vermont and Wisconsin. I am a frequent lecturer at professional conferences and training sessions, including sessions sponsored by the U.S. Department of Energy and the National

Association of Regulatory Utility Commissioners.

More detail on my professional background appears in Ex. ___ (SH-1).

Q. On whose behalf are you testifying?

A. The Indiana Office of Utility Consumer Counselor ("OUCC").

Q. What is the purpose of your testimony?

A. NIPSCO asks the Commission to apply the statutory requirement of "fair value" by setting the rate base at fair market value. I explain that this approach:

1. commits the error of circularity;

2. does not bear a logical relationship to the regulator's obligation to shareholders;

3. if applied consistently over the life of a utility asset, leads to price volatility and uncertainty harmful to customers and the utility;

4. could require the ratepayers to pay the utility for values associated with hypothetical nonutility businesses while denying them any benefits from those businesses; and

5. is unnecessary to rectify problems which NIPSCO associates with ratemaking approaches based on embedded cost.

Q. Do you offer an interpretation of Indiana's fair value statute?

A. No. Counsel has instructed me to assume that Indiana law neither requires the Commission to use, nor prohibits the Commission from using, a specific type of rate base when setting rates. Counsel further has instructed me to assume, as a corollary to the first instruction, that the statutory phrase "fair value" is not synonymous with the economic phrase "fair market value." Given this assumption of statutory flexibility, counsel has instructed me to discuss the logic and implications of NIPSCO's proposal to establish a rate base equal to the fair market value of the assets owned by the utility.

Q. Do you advise, or have you advised, the Commission in other proceedings?

A. Yes. I assisted the Commission in the workshops held in Cause No. 41736, relating to the reliability of the Indiana electric system. In addition, I presently advise the Commission in Cause Nos. 42027 (Midwest Independent System Operator) and 42032 (Alliance Regional Transmission Organization), concerning the requests of various Indiana utilities to transfer transmission operations to one or more regional transmission organizations. I have inquired of counsel, and have been informed, that this simultaneous work is not inconsistent with any state or federal legal principle. I have not discussed, and will not discuss during the pendency of this case, any substantive issue relating to the instant case with any member of the Commission or its advisory Staff or any advisor thereto. With respect to the MISO and ARTO cases, I have not discussed them, and will not discuss them during their pendency, with any staff member of or advisor to the OUCC (or any other party).

I.
The Reasoning Used to Support a Fair Market Value Rate Base Is Circular.

Q. Please explain your view that the reasoning underlying a fair market value rate base is circular.

A. NIPSCO attempts to assign a fair market value to its rate base. In any company, regulated or unregulated, value to the owner depends on the expected income stream and the expected appreciation. In a regulated company, both the income stream and the appreciation depend on the rates established by regulators. It is those very rates which the Commission is deciding in this case. To know the fair market value, therefore, one must know the rates; but NIPSCO seeks to use fair market value to determine the rates.

This problem of circularity affects Dr. Lewellen's reasoning at several points. For example, he asserts (Direct at 19) that assets can have a higher value than their installed cost. He wishes to use that higher "value" as a polestar to set rates, but in a regulated environment the rates determine the market value. Similarly circular is Dr. Lewellen's statement (Direct at 19) that "original, or historical, cost is in almost all cases a very poor measure of the value of the assets..." The value depends on the rates; the value is not independent of the rates.

Implicit in NIPSCO's position is this principle: the goal of regulatory rate-setting is to assure that the shareholder realizes the fair market value of his property. This principle itself is circular, since the fair market value of the property depends on the regulated rates.

II.
A Fair Market Value Rate Base Policy Does Not Bear a Logical Relationship to the Regulator's Obligation to Shareholders.

Q. Do you believe that a fair market value rate base policy bears a logical relationship to the regulator's obligation to shareholders?

A. No. As I discuss in Part II.A below, NIPSCO reverses the relationship between setting rates and determining market value. Rates determine market value, not the other way around.

I then address several NIPSCO arguments founded on the assumption, with which I disagree, that shareholder expectations and obligations in an unregulated competitive market are comparable to those in a regulated monopoly market. In Part II.B, I explain that Dr. Lewellen's attempt to reason from shareholder's opportunity cost of capital to a fair market value rate base is based on an incorrect application of competitive market expectations to a regulated monopoly market. In Part II.C, I argue that the insurance and

real estate analogies offered by NIPSCO's witnesses incorrectly transfer to the regulated setting factual assumptions appropriate to an unregulated setting. In Part II.D., I discuss how generation sales in an unregulated, competitive market are not appropriate proxies for the value of assets which are subject to an obligation to serve in a regulated, noncompetitive market.

A. NIPSCO's fair market value argument reverses the relationship between setting rates and determining market value.

Q. Please explain how NIPSCO reverses the relationship between setting rates and determining market value.

A. The regulatory obligation to shareholders is to set rates which assure an opportunity to earn a reasonable return on capital committed by the utility to the public enterprise. That return should be commensurate with what the investors would earn had they committed that same capital to other businesses with comparable risks.

Dr. Lewellen appears to endorse this formulation of the regulatory obligation:

1. He states that "shareholders and creditors of the utility should be allowed to realize a yield on their investments which is commensurate both with the risks they bear and with competitive yields available elsewhere in the capital market on comparable alternative investment opportunities. Direct at 7 l.11-19 (emphasis added).

2. He states that his "concern" is with the "*investment return* which must be provided to the shareholders and creditors of NIPSCO who have supplied its capital. Direct at 9 l.2-3 (italics in original; underlining added).

3. He focuses on the "'opportunity cost': the earnings rates available if the capital were employed elsewhere in an investment of similar risk." Direct at p.9 l.11-12 (emphasis added).

4. He focuses on the return "which must be expected to be earned by a firm on its asset investments." Direct at p.10 l.25-26 (emphasis added).

5. Again at p. 12 l.2 to p. 13 l.9 (emphasis added):

> The only way a corporation -- whether it is a public utility or not -- can reliably attract new capital to support its operating activities is to generate an income stream which is adequate both to discharge comfortably its fixed financing obligations on borrowings and preferred stock, and to offer common equity investors a return commensurate with the risks of the residual-claim position to which they are exposed. If fixed-charge coverage is maintained at a sufficient level consistently over time, financial integrity is achieved and future borrowing power is preserved; if equity yields compensate properly for the risks borne by shareholders, they will be treated fairly for their investment in the firm and -- when necessary -- a reliable supply of new equity capital to support growth will also be forthcoming.

This "residual-claim position" cited by Dr. Lewellen refers, I assume, to the shareholders' residual claim on the assets purchasd with the capital committed to the public enterprise. It is this capital which requires recovery and on which the shareholders need a return. The "yields" refer, I assume, to yields on the investment actually made to perform the public service obligations. The focus on "their investment in the firm" is the correct focus; "their investment" being the capital they contributed to the firm.

Dr. Lewellen's reference to "opportunity cost" (p.13 l. 13) has similar effect. The opportunity cost discussed there refers, I assume, to the opportunity cost to a shareholder of contributing capital to the public enterprise in light of other alternatives.

Similarly, Dr. Lewellen refers to the "risks" to which equity investors are exposed. Direct at p.14 l.13 through p. 17. He mentions reduced usage, "competition from providers of other energy forms," customer self-generation options, operating costs, regulatory risk (including regulatory lag), and the risk of leverage. These are the risks associated with the shareholder's specific investment: the risk that he will not recover his investment, and the risk that the return he receives on this investment will be lower than the return he could have received from some other investment of comparable risk.

If the regulatory responsibility to the shareholder is to allow recovery of and return on the capital committed to the enterprise, the question becomes, what is the relevance of the value of the rate base? The market value of the utility's assets is the end result of the interaction between the original investment, rate decisions, other regulatory decisions, management efforts, customer behavior, weather and external factors. But NIPSCO reverses this relationship, so that market value is the starting point. Its method assumes a successful result, and then sets rates to produce that result. Of course, to be symmetrical, in times of disappointingly low market value the method would have to assume that unsuccessful result and then set rates accordingly. This treatment produces a volatility whose detrimental effects I discuss further in Part III below.

B. Dr. Lewellen's attempt to reason from shareholder's cost of capital to a market value rate base is based on an incorrect application of competitive market expectations to a regulated monopoly market.

Q. Please discuss your concerns with Dr. Lewellen's reasoning.

A. As noted in Part II.A above, I believe that Dr. Lewellen describes the regulatory obligation to the shareholder as the obligation to establish rates that allow an opportunity for recovery of and return on the capital committed to the enterprise. Yet he argues for a rate base consisting not of the capital committed to the enterprise, but of a higher amount reflecting other NIPSCO's witnesses' judgment as to the market value of the assets owned by the utility. Because these two concepts -- capital committed to the enterprise and the NIPSCO-computed market value of the assets -- are different, Dr. Lewellen must establish a link between the two. He must show that the regulatory obligation to shareholders, which he initially described as an obligation related to the capital committed, requires use of a fair market value rate base. I believe that his effort to link these two concepts is

unpersuasive, and in fact demonstrates the defects in NIPSCO's approach.

Specifically, the portion of Dr. Lewellen's testimony concerning the regulatory obligation concerning capital committed appears at pp. 7-17. The portion of his testimony concerning the use of fair market value rate base appears thereafter. I believe the link between these two portions, where he seeks to reason from capital committed to fair market value, apppears in the following passage:

> Briefly stated, Professor Tobin argued that the most appropriate measure of the value of the investment in a firm is the current replacement cost of its assets, since that cost effectively represents the extant value of the scarce resources committed to the firm's operations. Replacement cost thereby is the realizable value if the assets were sold and deployed to other uses by other firms. In essence, replacement cost is a measure of "opportunity cost" in the same sense that I described earlier as the basis for identifying competitive investment rates of return.

Direct at p.20, l.15-22.

The purpose of the passage appears to be to establish a logical connection from (1) the unobjectionable premise that the shareholder is entitled to “opportunity cost” to (2) NIPSCO's position that opportunity cost requires a fair market value rate base. The passage seeks to apply Professor Tobin's conclusions about the replacement cost of assets to the regulatory inquiry into the opportunity cost of capital. The passage fails because it applies a competitive market concept to a regulated entity.

As I understand the structure of the passage, the first two sentences summarize Tobin's conclusions that the value of company is related to the replacement cost of its assets. The third sentence states Dr. Lewellen's conclusion that this same value should be used to determine the opportunity cost of capital committed to the firm. I say “opportunity cost of capital committed to the firm” because the third sentence, in using the

term “opportunity cost,” uses it “in the same sense that [Dr. Lewellen] described earlier as the basis for identifying competitive investment rates of return.” Dr. Lewellen’s “earlier” discussion, as I suggested in Part II.A above, did focus on the investor’s return on the capital he committed to the utility.

The focus of the first two sentences therefore differs from the focus of the third sentence. Whereas the first two sentences focus on the oppportunity cost associated with the assets of the firm, the third sentence focuses (as did the portion of the Dr. Lewellen's discussion preceding the quoted passage), on the opportunity cost of the capital committed to the firm. For the first two sentences to be a basis for the third, the assumption underlying the first two must be consistent with the assumption underlying the third. Put another way, the two opportunity costs have to be the same: the opportunity cost of the assets has to be the same as the opportunity cost of the committed capital.

That consistency does not exist. With respect to the assets addressed in the first two sentences, the context assumes an unregulated market. The third sentence, in contrast, draws a conclusion about the regulated utility market. This difference matters. In an unregulated market, assets are free to migrate to whatever market will compensate them the most, subject to any contractual constraints. Contrast the regulated market, where assets are likely to have a long term obligation attached, because the utility has accepted a responsibility to meet the long-term load of its service territory. When committing capital to these two different sectors, investors will have different expectations.

This difference is disregarded in the above-quoted passage, which seeks to equate the market value of assets in the unregulated sector with the opportunity cost of committed

capital in the utility sector. The passage divorces the utility's assets from their purpose. The public utility obligation is not an obligation to use the assets for the public for only as long as the utility wishes, and then to shift them to some other market with higher value and higher risk. The public utility obligation is to retain the assets for use in meeting the load of the service territory. That is why the focus in regulation is on obtaining for shareholders recovery of and return on the capital committed to the utility's service territory business, rather than obtaining for shareholders the changing value of the assets obtained with the committed capital.

Where a utility has purchased a long-term coal supply to serve its customers, the regulator would limit the utility's recovery to the actual costs of the contract purchases. The regulator would not raise the rates each time the market value of coal rose merely because the utility might want to take the coal purchased at the contract price and sell it at a higher current market price. Yet this utility, by virtue of its regulatory obligation to serve its ratepayers, would be foregoing an opportunity to sell it elsewhere at a higher price.

Dr. Lewellen further asserts (at 21) that other economists have relied on "Tobin's market-value-to-replacement-cost standard as tests for the existence of firms' sustainable competitive advantage, the effect of insider ownership on firm value, and the valuation gains or losses from corporate diversification -- among other economic phenomena...." But none of these items helps determine what the appropriate return on investment is for a company providing a regulated service under a government obligation to serve and under government protection from competition for the right to fulfill this obligation.

C. NIPSCO's insurance and real estate analogies do not capture details relevant to a regulatory relationship.

Q. Please discuss your concerns with NIPSCO's insurance and real estate analogies.

A. To support its argument for a market value rate base, NIPSCO uses a homeowner analogy. For example, Mr. Brehm asserts (Direct at 12) that since a homeowner's equity reflects market value, not book value, he would insure the house for market value, not book value. He then analogies this situation to the utility's rate base. The analogy is both inapplicable and circular.

The homeowner bought the property expecting that it would provide a homestead benefit and an appreciation benefit, and that both these benefits would be his to enjoy exclusively. He also knew that he had a right at any time, without asking anyone's permission, to realize the appreciation by selling the house. The price he was willing to pay for the property reflected his valuation of those benefits.

Having bought the property with the expectation of realizing both the homestead value and the appreciation value, the homeowner then buys insurance to protect that specific expectation. Should the property be destroyed, the insurance would give him a sum equal to the market value at the time of destruction; that market value being the equivalent of the homestead value and the appreciation value.

The utility asset situation is different. The magnitude of appreciation value in the utility property, and whether that appreciation value is the entitlement of the the utility shareholder rather than the ratepayer, is affected by the regulator's decision on rates, which is the very purpose of the present inquiry. In the context of utility property, the shareholder's expectation as to stream of earnings and appreciation value depends on the ratemaking process, not the other way around. Therefore the regulator first must determine the appropriate ratemaking policies. Based on those policies, the shareholder

develops expectations. To assume rates which produce an appreciation value is to assume the matter in question.

Dr. Lewellen similarly offers a real estate analogy (Direct at p.30 l.16):

> Accordingly, if the firm's assets appreciate or depreciate in value over time, it is the common stockholders who enjoy or suffer from those changes -- just as the owner of a house enjoys or suffers from changes in the market value of the house, not the lender who has provided the mortgage financing for the property.

This analogy does not apply well to a regulated electric company which has, by law, an exclusive relationship with retail customers. The regulator must set rates high enough to provide shareholders a reasonable opportunity to recover, and earn a reasonable return on, their investment. In return for receiving reliable service from the assets purchased with the shareholders' investment, the customer will be obligated to pay rates which satisfy this standard, regardless of changes in the market value of the utility's stock. An individual shareholder might "enjoy or suffer from" from changes in market value, depending on the price that the shareholder paid for his stock, but the stock purchaser would have factored in that potential volatility when choosing whether, when, how much and at what price to buy. From the utility's perspective, in contrast, aside from the problem of regulatory lag, the ratepayer's obligation to maintain the utility's financial integrity means that the utility's income stream should not be affected by changes in the market value of its stock.

A more accurate analogy to the regulated utility would be a landlord whose tenants by law have no choice but to live on the landlord's property, and who are obligated to pay a rental assuring recovery of and return on the capital committed to build the property and for all reasonable operating expenses. In that hypothetical situation, the landlord over the life

of the property will earn a reasonable return on the capital committed, regardless of how the market value of his or other properties vary.

If my analogy is correct, then Dr. Lewellen's separate rental property example (p.45) is incorrect. His example appears to treat the landlord as free to sell the property, unfettered by any obligation to the tenants and unassisted by a reciprocal tenant obligation to pay off the investment. Put another way, when the appraiser referenced by Dr. Lewellen (at p.45 l.25) visits the property, his appraisal would be different were the property subject to an obligation to retain the tenants for as long as the property lasts, and were the tenants to have a reciprocal obligation to cover all reasonable costs.

A. Generation sales in a unregulated, competitive market are not appropriate proxies for the value of assets committed to a regulated, noncompetitive market.

Q. Please discuss your concerns with NIPSCO's use of plant sales in determining fair market values.

A. The error in NIPSCO's insurance and real estate analogies is repeated in its use of plant sales in unregulated markets to determine the fair market value of assets committed to serve a regulated market.

Thus Dr. Lewellen (Direct at 23 l.16) notes that Navigant used as "guidelines" in its replacement cost analysis the "observed recent sales prices of similar utility properties." It is my understanding that these properties included generation assets sold to buyers intending to sell power in unregulated markets.

The phrase "similar utility properties" does not apply well to such assets. An unregulated market has certain characteristics that diverge widely from a regulated market. There are no guaranteed customers. Prices are established by the intersection of industry demand and supply curves, rather than by regulatory analysis of the seller's specific costs.

There is no government commitment to assure the seller's ability to recover its costs and attract capital. There is no cap on prices, and there is no regulatory review of business investments or of proposals to transfer assets. The amount a buyer would pay for a utility plant, if the buyer were free to sell his power into the highest priced unregulated market available, is different from the amount a buyer would pay if he bought the same plant subject to a condition requiring the buyer to sell the output at regulated rates.

Q. But isn't the purpose of regulation to replicate a competitive market?

A. In some respects but not others. I am aware that the Commission has stated, when criticizing proposals for an original cost rate base, as follows:

> Similarly, the cross-examination of ICFUR Witness Baudino provided evidence of the fact that in a competitive market the current value of assets employed for business purposes are far closer to their reproduction costs new than to their net original cost. As this testimony shows, in the real world, in a competitive market which regulation is designed to replicate, no equity holder willingly allows his property to be controlled by the State in such a manner as to limit that property value to net original cost, or to a current cost of capital return on original cost. The cross-examination of Mr. Baudino revealed his prior testimony in support of increased competition in the electric utility business. [Tr.-M-69-70].

Petition of Indiana Michigan Power Company, Cause No. 39314, 1993 Ind. PUC LEXIS 460 (Nov. 12, 1993). Certainly regulation seeks to replicate the accountability of a competitive market. A competitive market pressures a company to operate prudently, implement state-of-the-art management practices and maintain its costs at reasonable levels. In a competitive market, a company that fails to do so will lose its customers to companies who perform better. Regulation thus seeks to replicate this accountability process by setting rates which assume management performance comparable to what would emerge from competitive pressures; otherwise the company's monopoly status and

the legal barrier to competitive entry would subject customers to poor performance and higher rates.

But to the extent the above-quoted passage seeks to extend the competitive market analogy from management accountability to the repeated revaluing of rate base to fair market value, I respectfully disagree. As discussed elsewhere in this testimony, the regulatory system has several features not shared with competitive markets. Not only are customers are not free to shop when rates or performance become unsatisfactory; they are obligated to pay off all reasonable public service costs incurred by management. In return, management should not be free to shift utility assets, historically paid for by ratepayers, to markets paying higher prices. Key characteristics of competitive markets -- customer freedom and asset mobility -- do not exist under monopoly regulation. Thus the notion that a rate base should reflect the value of the assets if those assets were deployed in some other market has no footing in the regulatory system. For this reason, the statement that regulation replicates competition does not apply well to this context.

III.
A Fair Market Value Rate Base Policy, If Applied Consistently in Up and Down Markets, Produces Volatility in Earnings and Rates Inappropriate for a Regulated Utility and its Customers.

Q. Why would a fair market value rate base policy cause volatility in prices and earnings?

A. Assuming the Commission were to use a fair market value rate base, it would have to do so symmetrically for the full life of the assets involved. It would have to set the rate base below book when market value was below book, and above book when market value exceeds book.

In the context of a regulated monopoly, this approach is not wise. The customers

depend on a single company; they cannot go elsewhere if their company deteriorates or fails. Setting prices based on market value when market is below book makes it difficult for the utility to obtain enough funds to pay its operating expenses and debt service, and to attract capital. Because in the monopoly context there is no ready alternative supplier, the Commission would likely feel compelled to raise rates to preserve utility service. Upon raising the rates above the level called for by a strict application of the fair market value rate base, the Commission would have breached the symmetry necessary to the integrity of a fair market value rate base policy.

In a capital-intensive industry like electricity, for a rate base's market value to fall below book would not be a rarity. Additions to plant come in lumps, not precisely matched by additions to load. Lumpiness can yield surplus. Where a capital addition causes surplus (over and above necessary reserves), its market value could be lower than its book cost for the simple reason that customers don't need surplus. Under a fair market value rate base regime, each capacity addition thus would cause the utility financial difficulty because rates, if set at a value below book, would not produce income sufficient for investors to recover their capital.

In short, while one might easily express support for symmetrical treatment in theory, in practice it is difficult to balance the upside with a downside if the downside leaves the utility financially weakened. In a competitive market, consumers can shift their purchases away from a financially weak company that skimps on maintenance or customer service, or that announces it is defaulting on its loans. In a monopoly context the customers have no choice; so the regulator's tendency will be to preserve the utility service rather than watch it deteriorate under the burden of the symmetrical risk. For these

reasons, a fair market value rate base policy is not likely to work well.

IV.
A Fair Market Value Rate Base Policy Could Require the Ratepayers to Pay the Utility for Values Associated with Hypothetical Nonutility Businesses While Denying Them Any Benefits from Those Businesses.

Q. Please explain why a fair market value rate base policy could require the ratepayers to pay the utility for values associated with hypothetical nonutility businesses while denying them any benefits from those businesses.

A. In Part II.D above, I noted that a plant used in an unregulated market is not a good proxy for a plant committed to the utility's public service obligations. This concern has broader implications given the potential multiple uses of utility property. Consider the possibility that technological developments might enable the utility to make dual use of certain assets: once in the traditional utility business of serving franchise customers, and once again in other markets. For example, the utility's transmission corridors might be capable of carrying fiber optic cable. Assume that this fiber optic capability can be realized without diminishing the utility's transmission activities, and that the fiber optic capability increases the fair market value of the corridors. If I understand NIPSCO's fair market value rate base proposal correctly, the Commission would have to establish a higher revenue requirement because of this increase in market value associated with the transmission corridor. I base my understanding on NIPSCO's view, as I understand it, that its opportunity cost is based on the market where the asset is the most valuable regardless of whether the asset is used to provide electric service. I am further assuming that in NIPSCO's proxy group are entities with assets having dual potential uses, where the higher value use is reflected in the fair market value. (While the concerns discussed in this section exist with the application of fair market value in theory, they would not apply to the

present case if the comparables used to establish the rate base did not have the dual characteristics described in the hypothetical.)

If my understanding is correct, several problems arise.

First, if the utility failed to exploit the fiber optic capability, either by renting the space to others or entering the fiber optic business itself, the utility's customers would have to pay for a higher rate base without any off-system revenues to offset the higher cost. The company would have increased its net income for doing nothing; conversely, the ratepayers would be incurring higher costs while receiving nothing.

Second, if the utility did exploit this new value, the Commission would have to decide among at least four options: (1) require ratepayers to pay for the higher rate base while also receiving a revenue offset due to the fiber optic revenues; (2) allow the utility to keep all the fiber optic revenues but allocate the fair market value of the corridor between the core business and the fiber optic business, so that the ratepayers received none of the revenues but also bore none of the cost; (3) require some ratepayer-shareholder sharing of the costs and benefits associated with the higher market value; or (4) allow the utility to keep all the fiber optic revenues while ratepayers bear the cost of the new higher rate base. NIPSCO's reasoning supporting the fair market value rate base does not make clear which of these options would apply, and how the Commission mechanically would carry out the allocation or sharing process required by options (3) and (4). Moreover, assuming the Commission has statutory discretion to choose among these options, in this context NIPSCO's approach would introduce circularity, because the Commission's treatment would itself affect the fair market value to the utility. (For example, if the Commission's rule was that the utility had to pass through to ratepayers all profit from the fiber optic

sales, then there would be no clear reason for an increase in fair market value, from the perspective of the utility, as a result of the fiber optic capability.)

V.
Other Arguments for Fair Market Value Rate Base Are Unpersuasive.

Q. What subjects do you address in this portion of your testimony?

A. In response to five policy arguments made by NIPSCO witnesses in favor of a fair market value rate base, I explain that:

1. Prudent utility performance, by itself, does not justify a fair market value rate base.

2. A fair market value rate base is not necessary to raise capital for the next round of plant additions.

3. A fair market value rate base is not necessary to encourage efficient consumption.

4. A fair market value rate base does not necessarily protect against imprudent resource management.

5. The market factors identified by Mr. Yundt do not require a fair market value rate base.

Q. Does prudent utility performance require a fair market value rate base?

A. Dr. Lewellen supports a fair market value rate base by arguing that it obtains for shareholders the increases in value over book cost resulting from management efforts, such as plant operations or management decisions on what type of power supply to acquire. Direct at 19.

This position rests on a premise that is unstated, unproven and not inherently required by the regulatory relationship. A management action can produce an increase in market value if it increases the net present value of a stream of net income which the market expects the company to earn. This increase in net present value can occur, in turn,

if the market expects the management action to increase the company's net income over that expected in the absence of the action; or if the market expects the management action to cause the net income to occur sooner than it otherwise would.

But in a regulatory regime in which the revenue requirement is constructed to reflect operating expenses and operating revenues, either of these results requires acquiescence by the regulators. Thus for a management action to increase or accelerate the stream of net income, two distinct events must occur: (1) the management action must reduce costs, or increase revenues, relative to the levels expected without the management action, or sooner than expected; and (2) the regulators must decline, at least for some time, to re-set the rate levels to reflect the reduced costs and/or the increased revenues. Only if the regulators decline to re-set the rates will there be an increase in the margin between actual costs and those assumed for ratemaking purposes, or between actual revenues and those assumed for ratemaking purposes, such that net income can increase.

Thus Dr. Lewellen's reasoning depends on the premise that Indiana regulators would allow to develop, between actual costs and assumed costs, or between actual revenues and assumed revenues, a discrepancy sufficiently large to affect the company's market value. That is the premise which is unstated and unproven.

Certainly the regulators could allow the discrepancy, either through an explicit policy often described as "performance-based ratemaking," or through an implicit policy in which they allow a substantial lapse of time between rate cases. But they need not and might not allow this discrepancy to last. I am informed by counsel that on this issue, Indiana law grants the Commission substantial discretion: the discretion to determine how closely the revenue requirement must track costs and revenues. I am further

informed by counsel that there is no Indiana legal principle requiring the Commission to assign to shareholders, temporarily or permanently, the benefit of cost reductions in relation to costs assumed for ratemaking purposes. Absent an explicit regulatory promise not to open a rate case for a stated period of time, the regulator is free to re-establish rates to assure a closer tracking of actual costs and assumed costs, subject to statutory limits on the frequency of rate cases.

Since we cannot assume that the Commission would not adjust rates downward to reflect cost savings or revenue increases attributable to a management action, then we cannot assume that such actions would cause an increase in the company's fair market value. Dr. Lewellen's argument on this point thus is circular, because the outcome he suggests assumes a particular regulatory treatment of utility performance, but it is that regulatory treatment which the Commission must determine.

I am aware that on this issue, the Commission has stated that "the Commission may not ignore the fact that property wisely acquired and prudently deployed may further appreciate in value, apart from 'inflation.'" Petition of Indiana Michigan Power Company, Cause No. 39314, 1993 Ind. PUC LEXIS 460 (Nov. 12, 1993). I do not disagree that the Commission must not ignore such appreciation. My position is that such appreciation is attributable, at least in part, to the utility's obligation to manage prudently, in return for which the utility has a relatively secure guarantee of a customer base obligated to pay the costs associated with the utility's prudence. Under these circumstances, to assign to the shareholders the full appreciation associated with performance would be to separate the burden of paying for utility operations (borne by the ratepayers) from the benefits of the associated appreciation (enjoyed by shareholders).

Q. Is a fair market value rate base necessary to raise capital for the next round of plant additions?

A. No. If a utility builds a new plant, it can seek a rate increase reflecting the entry of that new plant into rate base. The new earnings from the increased rate base allow the utility to compensate the lenders and equity holders who initially financed the plant. If, during construction, the utility experiences a cash flow problem because it is charging rates based on older, depreciated plant while paying for the construction of a new plant, regulators can allow recovery of construction work in progress. A fair market value rate base is not necessary to finance new plant.

Q. Is a fair market value rate base necessary to encourage efficient consumption?

A. No. A common criticism of traditional ratemaking is that the consumer sees the same average cost price at all hours of the year, rather than seeing prices which vary according to the costs caused by his consumption. A fair market value rate base does not necessarily solve this problem. Even with a fair market value rate base, a regulator still could establish average cost prices set identically for every hour of the year which do not reflect the actual costs caused by consumption in that hour. Conversely, hourly or other forms of cost-sensitive prices can certainly be implemented using original cost rate base. And if regulators wish rates to exceed original cost, so as to send price signals about long run incremental cost, they can do under either regime, provided they deploy the revenues exceeding those necessary to cover costs and a reasonable profit for some public purpose. A fair market value rate base is not necessary to assure efficient product pricing.

Q. Is a fair market value rate base necessary to protect against imprudent resource management?

A. No. Another frequent criticism of original cost ratemaking is that it is cost-plus

ratemaking: it rewards excess investment in rate base plant. Accepting this criticism for purposes of argument, fair market value rate base is not the necessary solution. Performance-based ratemaking, retail competition, aggregation competition or franchise competition, as well as alert and conscientious prudence review, can limit imprudent behavior. Depending how it is implemented, moreover, a fair market value rate base does not avoid the problem. If each facility of the present utility is treated as eligible for fair market value treatment, then assuming market values exceed book there remains an incentive in the utility to overbuild.

Q. In arguing against a rate decrease, Mr. Yundt asserts (Direct at p.6 line 5) that the (i) "value of utility property has increased nationwide," (ii) a "predicted shortage in electric generation has been widely acknowledged," and that (iii) there will be a need for "substantial new expenditures for environmental regulation." Do you have any comments?

A. I have not reviewed the company's cost of service, and therefore am not able to comment on the appropriateness of a rate decrease or a rate increase. Focusing on the issue I have addressed in this testimony, however, Mr. Yundt's factors do not require adoption of a market value rate base.

Specifically, as discussed elsewhere in this testimony, the focus on "value of utility property" is circular. Rates should determine fair market value, not the other way around. As to electricity generation, as discussed elsewhere in this testimony, a rise in market values for generation free to find the highest priced markets does not determine the value of utility property committed to public service, and legally protected from competition, in Indiana. Concerning costs of environmental regulation, when NIPSCO can demonstrate that these costs are known, measurable and reasonable, it should have rates which provide a reasonable opportunity to recover, and earn a competitive return on, its capital

investment. A market value rate base is not necessary to assure this result.

Q. Mr. Yundt asserts (Direct at p.7 lines 3-5) that in the event of a rate decrease, NIPSCO would "consider a restructuring of its assets in order to provide NIPSCO the opportunity to earn a fair return on the fair value of its electric assets." He then refers to an "active market for the buying and selling of generation assets." What is your comment?

A. Mr. Yundt's statement illustrates the problem with fair market value rate base. In the regulatory system, the utility is not usually free to shift its assets away from ratepayers who have supported them financially, to markets paying higher prices. This mid-stream change separates benefits from burdens in a manner inconsistent with the utility obligation to serve. Thus the company's effort to move its assets to other uses would be inconsistent with its obligations. Because such an act is not appropriate, a valuation of the rate base which obtains for the utility the value associated with such an act is inappropriate as well.

I am informed by counsel that Indiana law requires the utility to obtain Commission permission before such a shift could occur. In such a proceeding the Commission would be obligated to protect the public. The existence of a Commission review supports my view that the utility is not free simply to transfer the assets at will.

Conclusion

Q. You have offered a series of arguments against a fair market value rate base. Are you saying that the Commission's only choice is set the rate base equal to original cost less book depreciation?

A. No. The statute compels the Commission to evaluate a number of factors in determining the rate base. Recognition of the difficulties with a fair market value rate base should be be an input to that evaluation. With this recognition, the Commission could decide to weight fair market value less than other rate base options. Or the Commission might decide that the disadvantages of fair market value outweigh its advantages and therefore

reject it as an input to rate base.

In any event, focusing only on rate base provides only a partial picture. Rate-setting requires attention to rate of return, depreciation rate and operating expenses as well. Analytical deficiencies in the choice of one component can be ameliorated, in some circumstances, by the structuring of another component. For example, an original cost rate base, by itself, says nothing about the risk of sunk cost recovery (e.g., due to the technological obsolescence, customer self-generation) or about appreciation of the shareholder's investment. To the extent the regulator wishes to compensate utility shareholders for risk and appreciation, the original cost rate base can be coupled with a rate of return that does reflect these factors.

The Commission's analysis does have to start somewhere. The circularity of fair market value, its disconnection from the regulatory purpose, its difficulty of measurement and its tendency toward volatility, make it an inferior starting point. As a starting point, original cost lacks these deficiencies. It causes no circularity because it is a recorded number. It connects directly to the regulatory purpose: it represents the capital committed to the public service, and the regulatory obligation to shareholders is to afford proper treatment to <u>that capital</u>, by setting rates which are sufficient to attract that capital, and to assure a reasonable opportunity to recover and earn a return on that capital. Its stability avoids volatility (although the Commission, if it wishes, can implement time-of-use, cost-sensitive rates in an original cost context).

Thus Mr. Brehm frames the issue incorrectly, when he states (Direct at 15) that "[o]riginal cost ratemaking is a system that arbitrarily equates the current value of utility property to its net book value." The purpose of original cost ratemaking is not to establish

value; it is to assure recovery of and return on the actual capital committed, just as I have interpreted Dr. Lewellen to say regulation should do. Similarly, the assertion that accounting costs are irrelevant accuses original cost of something it does not purport to be: a proxy for value. The market value of the utility is determined by the trading of its shares in public equity markets. That market value is influenced by rates set. But to set rates to assure recovery of and return on capital committed is not to equate original cost with current value.

Q. Does this conclude your testimony?

A. Yes.

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Scott Hempling provides legal representation and policy advice concerning the electric utility industry, with an emphasis on competition, mergers and acquisitions, corporate restructuring, diversification and State-federal jurisdictional issues. He is a frequent witness before Congressional committees and lecturer at industry conferences. Clients include State commissions, independent power producers, municipal power systems, residential consumers and public interest organizations.

EDUCATION

B.A. *cum laude*, Yale University (Economics and Political Science), 1978. Recipient of Continental Grain Fellowship and Patterson Award.

J.D. *magna cum laude*, Georgetown University Law Center, 1984. Recipient of *American Jurisprudence* Award for Constitutional Law; editor of *Law and Policy in International Business*.

PRESENT AND RECENT CLIENTS

State Governmental Bodies

Arkansas Public Service Commission: General advice on federal electricity policy, including mergers, federal-state relations and transmission access.

Arizona Corporation Commission: Advice on electric utility holding company diversification under the Public Utility Holding Company Act (PUHCA).

Connecticut Department of Public Utility Control: Advice on electric industry restructuring.

Connecticut Office of Consumer Counsel: Representation in merger proceeding involving Northeast Utilities and Public Service of New Hampshire, focusing on merger's effects on utility finance costs.

Indiana Utility Regulatory Commission. Assistance in managing workshops on reliability and advice on transfers of utility transmission assets.

Kansas Corporation Commission: General advice on federal electricity policy and representation before FERC; representation of staff in merger proposals involving Kansas utilities.

Massachusetts Department of Public Utilities: Advice on FERC filings related to the New England Power Pool.

Michigan Public Service Commission: Technical advice on proposed amendments to PUHCA.

Missouri Public Service Commission: General advice on federal electricity policy and representation before FERC.

National Association of Regulatory Utility Commissioners: Co-contractor on study of shareholder recovery of historic costs (1994).

Nevada Consumer Advocate: Advice on proposed merger between Sierra Pacific Power and Washington Water Power.

Nevada Public Service Commission: Advice on electric industry restructuring.

New Hampshire Public Utilities Commission: Legal advice on implementation of retail competition.

New Jersey Division of Ratepayer Advocate: Advice on electric restructuring.

North Carolina Utilities Commission: Advice to Public Staff on merger between Duke and PanEnergy.

Ohio Public Utilities Commission: General advice on federal and state electricity matters.

Oklahoma Corporation Commission: Appellate counsel in state Supreme Court case concerning "interim rates"; counsel to Staff in Oklahoma Gas & Electric rate case.

Pennsylvania Office of Consumer Advocate: Advice on proposed acquisition by NUI Corp. of Pennsylvania Gas & Water.

Texas Office of Public Utility Counsel: Advice on electric industry restructuring; witness in utility rate case on accelerated depreciation of “stranded costs.”

Vermont Department of Public Service: Expert witness on the appropriate treatment of utility diversification and interaffiliate transactions.

Vermont Legislature: Advice on electric industry restructuring.

Virginia State Corporation Commission: Advice on electric utility diversification and electric industry restructuring.

Municipal Power Systems

Connecticut Municipal Electric Energy Cooperative: Counsel before FERC and the SEC in proceedings concerning Northeast Utilities' proposed acquisition of Public Service Company of New Hampshire (1990-91); general electric advice.

Iowa Association of Municipal Utilities: Advice on electric industry restructuring.

Public Interest Organizations

American Association Retired Persons: Representation in case before the California Public Utilities Commission in "performance-based" rate case.

American Public Power Association, Consumer Federation of America: Preparation of *amicus* brief to the U.S. Supreme Court in *Arcadia, et al. vs. Ohio Power Company*, involving interpretations of PUHCA.

Energy Foundation: Draft study on implementation of integrated resource planning concepts by FERC.

Environmental Action Foundation: General advice on electricity policy; representation before FERC, the SEC and the U.S. Courts of Appeals.

Independent Power Producers

National Independent Power Producers: Advice and representation in Wisconsin proceedings involving relations between utilities and independent power producers; authorship of study of defects in wholesale generation markets (1994).

EnerTran Technology Company: Advice and representation in Wisconsin proceedings.

Trigon Engineering: Advice on gaining transmission paths for independent generation project.

LEGISLATIVE TESTIMONY

United States Senate

Committee on Energy and Natural Resources, May 1993 (analyzing bill to transfer PUHCA functions from SEC to FERC).

Committee on Banking and Urban Affairs, U.S. Senate, Sept. 1991 (analyzing proposed

amendment to PUHCA).

Committee on Energy and Natural Resources, U.S. Senate, March 1991 (analyzing proposed amendment to PUHCA).

Committee on Energy and Natural Resources, U.S. Senate, Nov. 1989 (analyzing proposed amendment to PUHCA).

United State House of Representatives

Subcommittees on Energy and Power and Telecommunications and Finance, Commerce Committee, U.S. House of Representatives, Oct. 1995 (regulation of public utility holding companies)

Subcommittee on Energy and Power, Energy and Commerce Committee, U.S. House of Representatives, July 1994 (analyzing future of the electric industry).

Subcommittee on Energy and Power, Energy and Commerce Committee, U.S. House of Representatives, May 1991 (analyzing proposed amendment to PUHCA).

Subcommittee on Environment, Energy and Natural Resources, Government Operations Committee, U.S. House of Representatives, Oct. 1990 (assessing electric utility policies of FERC).

Appropriations Subcommittee on Commerce, Justice, State and the Judiciary, U.S. House of Representatives, Apr. 1989 (discussing proposals to increase staff administering PUHCA).

Subcommittee on Energy and Power, U.S. House of Representatives, Sept. 1988 (discussing "independent power producers" and PUHCA).

State Legislatures

Committee on Energy and Public Utilities, California Senate (December 1989) (discussing relationships between electric utilities and their non-regulated affiliates).

Interim Committee on Electric Restructuring, Nevada Legislature (1995-97) (discussing options for structuring the electric industry).

Committees on General Affairs, Finance, Vermont Senate (February-March 1997) (discussing options for structuring the electric industry).

Task Force to Study Retail Electric Competition, Maryland General Assembly (October 1997).

PUBLICATIONS

Is Competition Here? An Evaluation of Defects in the Market for Generation (National Independent Energy Producers, Jan. 1995) (co-author).

The Regulatory Treatment of Embedded Costs Exceeding Market Prices: Transition to a Competitive Electric Generation Market (Nov. 1994) (with Kenneth Rose and Robert E. Burns).

"Depolarizing the Debate: Can Retail Wheeling Coexist with Integrated Resource Planning?" *The Electricity Journal (Apr. 1994*).

Reducing Ratepayer Risk: State Regulation of Electric Utility Expansion (American Association of Retired Persons 1993).

"'Incentives' for Purchased Power: Compensation for Risk or Reward for Inefficiency?" *The Electricity Journal* (Sept. 1993).

"Making Competition Work," *The Electricity Journal* (June 1993).

"Confusing 'Competitors' With 'Competition,'" *Public Utilities Fortnightly* (March 15, 1991).

"The Retail Ratepayer's Stake in Wholesale Transmission Access," *Public Utilities Fortnightly* (July 19, 1990).

"Preserving Fair Competition: The Case for the Public Utility Holding Company Act," *The Electricity Journal* (Jan./Feb. 1990).

"Opportunity Cost Pricing," *Wheeling and Transmission Monthly* (Oct. 1989).

"Corporate Restructuring and Consumer Risk: Is the SEC Enforcing the Public Utility Holding Company Act?" *The Electricity Journal* (July 1988).

"The Legal Standard of 'Prudent Utility Practices' in the Context of Joint Construction Projects," *NRECA/APPA Newsletter Legal Reporting Service* (Dec. 1984/Jan. 1985) (co-author).

OTHER ACTIVITIES

Lecturer

Regulatory Studies Program, National Association of Regulatory Utility Commissioners.

Member

Research Advisory Committee, National Regulatory Research Institute (1994-present).
Roster of Experts, U.S. Dept. of Energy National Electricity Forum (1994).
Editorial Advisory Board, *The Electricity Journal*.

Conference Speaker

American Bar Association
American Power Conference

American Public Power Association
American Wind Energy Association
Electric Power Research Institute
Electric Utility Week
Electricity Consumers Resource Council
Energy Daily
Executive Enterprises
Exnet
Federal Energy Bar Association
Infocast
Management Exchange
National Association of Regulatory Attorneys
Midamerica Association of Regulatory Commissioners
National Association of Regulatory Utility Commissioners
National Association of State Utility Consumer Advocates
National Independent Energy Producers
New England Conference of Public Utility Commissioners
New England Public Power Association
Southeastern Association of Regulatory Utility Commissioners
U.S. Department of Energy Forum on Electricity Issues