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Getting [illegible] Quality

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In this issue . . .

Its intention seemed unimpeachable in the realm of equity: The Environmental Protection Agency adopted its new Cross-State Air Pollution Rule to remedy significant interstate power plant contributions to air quality problems. But, as **Brian H. Potts** argues in his compelling essay, the rule is fraught with practical, legal, and equitable problems. In essence, the rule's design seems to over-regulate some states, while under-regulating others, in violation of the Clean Air Act. It makes for a sober opening article in this month's *Electricity Journal*.

Given the great interest being garnered by feed-in tariffs as a means of incenting the transition to alternative energy sources, it is constructive to zero in on one ground-level example of where the tariffs are being employed to examine the implications of the mechanism. **Mehrdad Pirnia, Jatin Nathwani** and **David Fuller** take us on an exploration of FITs in Ontario, and their overall impact on the social welfare. Their conclusion? If unbounded, existing FIT tariffs would have a large negative impact on consumer welfare, with an overall net loss on total social welfare. They offer some ideas on controlling the negative impacts of FITs, mainly by controlling the quantities.

Saumen Majumdar and **Deb Chattopadhyay** similarly take a close look at a micro market in order to explore the macro implications of a significant trend – in this case, the debt crunch, and its impact on baseload investment, emissions, and prices. The authors review studies of the Australian context to offer some insights into the issue. Policy uncertainty, they warn, is one of the key issues today that is contributing to investor nervousness, especially when it comes to baseload generation investment.

Next in this issue, **Tarjei Kristiansen** examines the system in Germany to offer what effectively is a primer on how electricity is analyzed and traded by professional analysts and traders. He describes the most commonly used trading and hedging strategies and explains how stack models as a decision support tool can help the global trading community respond efficiently to rapid change.

This month the *Journal* borrows from the online world to offer an unusual take on the issue of decoupling, compiling an elaborate set of frequently asked questions, and their answers, thanks to Natural Resources Defense Council's **Dylan Sullivan, Devra Wang** and **Drew Bennett**. With their answers, the trio attempts to clear up many misconceptions about decoupling using case studies, previous research, regulatory filings, and the authors' own extensive experience in utility regulation.

Wei Tian, Mohammad Shahidehpour and **Zuyi Li employ** the WINS simulation tool to analyze large-scale wind energy integration in the Eastern Interconnection. The simulation suggests that such integration will have a major impact on the hourly commitment and dispatch of gas and coal units, especially at off-peak load hours.

Next, **J. Robert Malko** and **Vicki M. Baldwin** attempt to offer a thoughtful framework for prudence review as a regulatory tool that can balance risk sharing between electric utility investors and utility ratepayers, especially in this era of increasingly complex corporate restructurings.

Finally, **David C. Lineweber** turns to consumer research data to offer some ways of understanding residential customer support for – and opposition to – Smart Grid investments. The issue, he argues, is less one of educating consumers about the promised downstream benefits than reassuring them on why they can and should trust the promises made to them by their utility on these issues.

RICHARD COHEN
GERRY KHERMOUCH

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Prudence Review and Traditional Revenue Requirement Regulation: Some Thoughts

Prudence review is an important regulatory tool and should be applied in an informed and reasonable manner to address and balance risk sharing between electric utility investors and utility ratepayers especially in this era of increasingly complex corporate restructurings. The proposed framework in this paper will hopefully add value to efforts in applying prudence review to a range of issues facing regulatory commissions.

J. Robert Malko and Vicki M. Baldwin

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I. Introduction

Regulatory tools that are currently being applied by state regulatory commissions within the framework of revenue requirement regulation include prudence review, the used and useful standard, regulatory planning, and limited incentives.[1] Prudence review and the used and useful standard are the more traditional regulatory tools and have had a relatively long history of discussion and application in the regulation of electric utilities.[2] If costs or expenditures are found to be imprudent by a regulatory commission, then these specific costs are clearly not "just and reasonable" and are excluded from the approved revenue requirement. The primary purpose of this article is to present a prudence review

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application framework of evaluation criteria for a range of issues in the regulation of electric utilities.[3] In this era of increasingly complex corporate restructurings in the electric utility industry, effective use of prudence review is an important tool for regulators to address a range of issues facing the regulated electric utility subsidiary.

II. Some Principles for Determination of a Reasonable Revenue Requirement

Prudence is included in the overall basic business standards and practices that energy utilities are required to follow, commonly referred to as "good utility practice."[4] The Federal Energy Regulatory Commission (FERC) defines "Good Utility Practice" for regulated electric utilities in the following manner:

> Any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.[5]

Basic business standards and practices in this FERC definition are consistent with and reflected in the definition of prudence found in many state regulatory commission statutes.

The prudence of utility managerial decisions should be evaluated and judged based on the reasonableness at the time that these business decisions were made *and* based on the information that was available at that time. Prudence review is clearly not an exercise in the application of hindsight regulation. A prudent business decision reflects a reasonable policy decision made by a business manager who considers the information and uses the analytical tools reasonably available at the time of this decision.

In this era of increasingly complex corporate restructurings in the electric utility industry, effective use of prudence review is an important tool for regulators.

In determining a reasonable revenue requirement, economic regulation should also be seriously considered. The role of economic regulation of a monopoly is to produce the results, in a reasonable manner, of a workably competitive market concerning prices and earnings. Regulatory ratemaking is certainly not a cost reimbursement scheme and should not insulate the regulated electric utility from the risks of conducting business. Economic regulation of a monopoly electric utility is focused on encouraging efficient behavior and efficient outcomes, which are consistent with the activities of a prudent business manager.

Risk sharing and risk balancing between the regulated electric utility and its customers is also an important aspect of economic regulation. To meet public interest concerns, regulatory commissions needs to ensure that there is reasonable risk sharing and balancing when addressing a range of economic issues. As pointed out by former Chairman Myron B. Katz of the Oregon Public Utility Commission, "The principal objective of utility regulation is to protect consumers from the lack of competition. It cannot be repeated often enough."[6]

III. Evaluation Criteria

By combining the concepts of good utility practice and economic regulation, the following specific evaluation criteria for prudence review are proposed:

(1) apply regulatory statutes, rules, standards, and policies;

(2) avoid hindsight;

(3) apply the reasonable business standard, not a hypothetical ideal;

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(4) evaluate management's awareness of and response to important changes in business risks; and

(5) evaluate management's awareness of relevant policies and practices of other energy utilities.

These proposed criteria are based upon, and extensions of, concepts presented in the generally accepted public utility economics literature.[7] They reflect concepts of fairness, efficiency, and risk. Moreover, these criteria provide a workable framework for regulators to make a reasonable prudency determination and determine if a proposed expense should be included in the revenue requirement or excluded from the revenue requirement. **Table 1** presents a diagram of the prudence review framework.

Table 1: Prudence Review Framework.

Criteria
- (1) Commission statutes, rules, standard, policies
- (2) Foresight, not hindsight
- (3) Reasonable business standards
- (4) Changing business risks
- (5) Other utility practices

Application of criteria to specific issues
- (1) Construction costs
- (2) Operating expenses

Commission decision
- (1) Prudent; included in revenue requirement or
- (2) Imprudent; excluded from revenue requirement

It is important to consider the following when conducting a prudence review:

> The crux of the difference between regulatory responsibility and managerial duty is the matter of initiative. Utility management is expected to initiate action on the economic activities which it directs. It is expected to take the necessary steps to provide the service, to raise the capital, and to file the rates.
>
> This statement does not mean that the regulatory commission has no influence over such action. It may review and (if necessary) revise, but not direct or supervise, the original action. It also means that inaction, inappropriate action, or refusal to act automatically passes the initiative along to the commission, which then has authority to take corrective action under the law. Furthermore, past policies and decisions of the commission also affect and govern present and future action by utility managements."[8]

In short, energy utility management decides, but regulatory commissions oversee.

Concerning the first evaluation criteria, state regulatory commissions typically have relevant regulatory statutes, rules, standards, and policies concerning regulatory prudence review for rate cases. For example, Title 54, Section 54-4-4(4)(a) of the Public Service Commission of Utah statutes sets forth the standards for this regulatory commission to conduct a prudence review.

(4)(a) If, in the commission's determination of just, reasonable, or sufficient rates, the commission considers the prudence of an action taken by a public utility or an expense incurred by a public utility, the commission shall apply the following standards in making its prudence determination:

(i) ensure just and reasonable rates for the retail ratepayers of the public utility in this state;

(ii) focus on the reasonableness of the expense resulting from the action of the public utility judged *as of the time the action was taken;*

(iii) determine whether a reasonable utility, *knowing what the utility knew or reasonably should have known at the time of the action,* would reasonably have incurred all or some portion of the expense, in taking the same or some other prudent action; and

(iv) apply other factors determined by the commission to be relevant, consistent with the standards specified in this section.

(b) The commission may find an expense fully or partially prudent, up to the level that a reasonable utility would reasonably have incurred. (Emphasis added.)

The proposed criteria are embodied or reflected in this statute.

As to the second evaluation criteria, it is critical that the application of the prudence review framework not be based on hindsight. Instead, it must be based on whether business decisions at the time they were made were reasonable considering the facts and conditions at that time. According to Prof. James C. Bonbright, prudent investment "must have been prudently incurred in the light of foresight rather than of hindsight."[9]

The third evaluation criteria requires that application of the

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prudence review framework not be based on a perfect or ideal application of known business models to obtain an exact perfect solution to a business problem. On the contrary, the application of the prudence review framework should be based on reasonable knowledge of facts and application of reasonably known and workable business models to a business problem at the time of decision.

The fourth evaluation criteria is based on the reasonable working assumption that efficient utility managers should be aware of and respond to changes in external and internal business risks. To address the interests of both investors and ratepayers, prudent utility managers, as financial agents of the utility, need to recognize and implement policies to respond effectively to changing business risks and associated impacts on revenues and/or costs. The failure by a regulatory commission to use prudence review effectively protects inefficient utility management, but harms captive utility customers and uninformed utility investors.

Finally, the fifth evaluation criteria, is based on the reasonable working assumption that efficient utility managers should make themselves aware of relevant policies and practices of other energy utilities. When addressing specific business problems, prudent utility managers should be aware of relevant experiences at other utilities by networking through professional organizations such as the Electric Power Research Institute and the Edison Electric Institute. Prudent energy utility managers should also clearly learn from the experiences of managers at other utilities including the managers at affiliated utilities.

IV. Summary

Prudence review is an important regulatory tool and should be applied in an informed and reasonable manner to address and balance risk sharing between utility investors and utility ratepayers especially in this era of increasingly complex corporate restructurings.[10] Concerning the issue of "time," the focus of prudence review analysis should always be conducted based on thoughtful and informed foresight at the time of decision and not on ideal and unreasonable hindsight. A prudence review analysis by a regulatory commission is critical to utility ratepayers, who should not pay for imprudent and unreasonable costs, as well as to utility investors, who can use the corporate governance framework to address inefficient behavior by utility managers, the utility's financial agents. The application of prudence review is an effective regulatory tool for risk sharing and risk balancing between customers and investors. The proposed framework in this article will hopefully add value to efforts in applying prudence review to a range of issues facing regulatory commissions.■

Endnotes:

1. J. Robert Malko and Richard J. Williams, *Traditional and New Regulatory Tools*, in REINVENTING ELECTRIC UTILITY REGULATION, Ed. Gregory B. Enholm and J. Robert Malko, Public Utilities Reports, Inc., Vienna, VA, 1995, at 93–98.

2. *See* Jonathan Lesser, *The Economic Used and Useful Test: Its Evolution and Implications for a Restructured Electric Industry*, 23 ENERGY LAW J. 2 (2002), at 349–381; and charles F. Phillips, JR., THE REGULATION OF PUBLIC UTILITIES: THEORY AND PRACTICE, Public Utilities Reports, Inc., Arlington, VA, 1984, at 292–296.

3. These criteria are based on testimony prepared by J. Robert Malko, on behalf of Utah Industrial Energy Consumers, in a Rocky Mountain Power general rate case, before the Public Service Commission of Utah, Docket No. 10-035-124, 2011.

4. Jonathan A. Lesser and Leonardo R. Giacchino, FUNDAMENTALS OF ENERGY REGULATION, Public Utilities Reports Inc., Vienna, VA, 2007, at 40–41.

5. FERC, Pro Forma Open Access Transmission Tariff (OATT), Appendix B, 72 Fed. Reg. 12,266-12,531 (March 15, 2007) (to be codified at 18 C.F.R. pts 35 and 37).

6. See *Public Utilities Reports Guide: Regulation*, published by Public Utility Reports, Inc., Vienna, VA, 1999, at 3–10.

7. Lesser and Giacchino, *supra* note 4, at 39–44; and Malko and Williams, *supra* note 1, at 96–97.

8. See *Public Utilities Reports Guide: Regulation, supra* note 6, at 3–13.

9. James C. Bonbright, PRINCIPLES OF PUBLIC UTILITY RATES (New York: Columbia Univ. Press, 1961) at 174.

10. For a discussion of geographic diversity challenges and problems facing a complex energy utility holding company structure, *see* Charles E. Peterson and J. Robert Malko, *Ring Fencing in Utah*, PUBLIC UTIL. FORTNIGHTLY, June 2008, at 32–35.

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