

REGULATORY ISSUES IN IPP/PPA DEALS

Independent Power Producers and Power Purchase
Agreements: Frontiers in International Experience

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Introduction

- This lecture is based upon the U.S. regulatory experience and in particular, the experience of The Vermont Public Service Board
- The Board is a quasi-judicial agency charged with the regulation of the electricity, gas, telecommunications, cable and water companies in our state. It has been in practice for over one hundred years.
- The Board regulates twenty-two electric distribution utilities in the state. The Board oversees both the rates and the quality of service of these utilities.
- This lecture will NOT dwell on the role of the government other than as a regulatory body – we have had investor-owned utilities for decades and central government ownership of utilities in the U.S. is limited

Context of Regulatory Actions

- The old paradigm: vertically integrated utilities
 - Owned generation
 - Provided power to customers
 - Regulators set rates based on cost of service including power production costs
- The new paradigm: independent power producers
 - Generation unbundled from transmission/distribution
 - IPPs insulate ratepayers from investment choices of generation owners
 - Vehicle for cost recovery is most often a PPA

Central Tenets of Regulation

- Regulation, in part, is designed as a proxy for competitive markets
- The essential doctrine of regulation is to establish “just and reasonable rates”
- Under this principle, utility actions are deemed to be reasonable unless successfully rebutted
- When a utility’s actions are challenged, the regulator must hear evidence and make legal findings before determining that the costs of a utility investment should no longer be included in rates
- A final regulatory judgment requires balancing the interests of both consumers and the regulated company

Regulator's Role

- Regulators are responsible for reviewing costs of the regulated utilities – usually the distribution companies serving captive customers
- In many areas of the world, purchase power costs are the single largest cost for distribution utilities.
- Unless a country or state has adopted retail choice, consumers have no other option than to purchase power from a regulated distribution utility
- Regulators have an important role in deciding issues related to the pass-through of purchase power costs to captive end-use customers.

Regulatory Review of PPAs

- PPA contracts can come under regulatory review in a number of contexts
 1. *Ex Ante* (prior) or *Ex Post* (after-the-fact) reviews
 2. Administratively set benchmarks
 3. Market-based benchmarks
 4. Mandated competitive procurement

Regulatory Treatment of PPAs in the U.S.

- Historically, PPAs were part of the portfolio of vertically-integrated utilities
- Utilities are supposed to choose the least-cost portfolio of resources; many states require utilities to submit comprehensive plans for their portfolios
- Often states require up-front regulatory approval of PPAs
- When reviewing a PPA regulators look at the terms of the PPA itself and the overall portfolio of the utility

Regulatory Principles Applied to PPA Review

- Possible regulatory actions taken on PPAs
 - Pre-approval
 - Prudence determination
 - Used-and-Useful Analysis
 - Disallowance
- Time frame
 - Pre-approval is an *Ex-Ante* review
 - Prudence and Used-and-Useful determinations, and any consequent disallowance that may result, are *Ex-Post* reviews

Pre-Approval

- Is *NOT* a prudence review
- Does not shield the utility from subsequent prudence or used-and-useful reviews
- Approval can only be based upon what is known at the time the contract is signed
- It cannot presume any facts or actions (including management actions) that might occur in the future
- Obligations of management continue after pre-approval

"If a utility's income were guaranteed, the company would lose all incentive to operate in an efficient, cost-effective manner, thereby leading to higher operating costs and eventual rate increases." – *Vermont Supreme Court, 1983*"

Pre-Approval (cont.)

- Issues considered in a pre-approval:
 1. The least-cost test – is the PPA the least-cost resource available to the distribution utility
 2. Test against demand that could more cost-effectively be met with energy conservation and energy efficiency
 3. Any forms of consideration provided in the contract are examined (commitments to buy future output, for example). Other contract terms are taken into account
 4. The standard of review is set out in statute. A number of economic, environmental and other criteria must be met before approval is granted.
 5. Standard for approval = whether the proposed purchase “will promote the general good of the state.”

Pre-Approval (cont.)

- A prudent utility entering into a PPA must consider:
 - The range of risks presented by the PPA
 - The full range of costs and benefits of the PPA
 - The length and terms of the PPA including possibilities for renegotiation
 - All alternative sources to meet demand, including demand-side management

Prudence

- A utility has an obligation to continually monitor and review its participation in a PPA
 - It must consider the range of all possible alternatives to the PPA
 - It must reasonably manage its participation in the project
 - It must prudently exercise any rights that the contract may provide
 - It must pursue options to improve the cost-effectiveness of the contract and its overall portfolio
- Holds management accountable for its actions

Prudence (cont.)

- A utility holds a rebuttable presumption that its expenditures are just and reasonable
- If successfully challenged, then those costs are not allowed in rates
- A prudence review occurs once sufficient evidence is produced to challenge the actions of utility management and rebut this presumption
- A prudence review
 - Is based on what the utility knew (or should have known at the time)
 - Is not based on hindsight
 - Is simply an inquiry into the reasonableness of utility management's past decision-making

The Used-and-Useful Standard

- The Used-and-Useful Standard is a two-pronged test – both prongs must be met
 1. In order to be allowed recovery in rates, an asset or purchase must be “used”
 - It must actually be providing service to ratepayers
 - It must be necessary for the provision of service

AND

2. In order to be allowed recovery in rates, an asset or purchase must be “useful”
 - It must be economically sound
 - It must be cost-effective over the life of the contract after evaluation against market-based alternatives

Used-and-Useful (cont.)

- Vermont's application of the Used-and-Useful test:
 - “An investment or purchase decision is not used-and-useful when it is not expected to yield net present benefits, after consideration of non-price benefits, ***over its lifetime.***”
 - “A power purchase contract that ***substantially*** exceeds projected power costs over its lifetime, ***under a range of expected power cost estimates***, is not used and useful”
- The test remains a safeguard so that ratepayers do not have to pay for expenditures for which they receive no discernable benefit
 - The portion of the investment which is determined to be above market is that portion that is uneconomic
- The Board rejected a year-by-year market test for a PPA

Used-and-Useful (cont.)

- Why this standard is an important regulatory tool:
 - Failure to apply the used-and-useful standard to purchase power contracts (as it is applied to other utility investments) would create perverse incentives
 - Utilities would fill portfolios with PPAs simply because this practice would make them less risky, even if alternative resources were available to fill the demand at lower total cost
 - Ratepayers should not have to bear the entire risk of failed investments

Ratemaking Treatment of Disallowance

- Once a prudence or used-and-useful determination has been made, the regulator then has to turn to the matter of disallowance
- The regulator must balance the interests of the ratepayers and those of the utility
- In particular, it must strike a balance between
 - The duty and burden of responsibility of utility management to operate in a prudent manner
 - The right of a utility to earn rates and a return on investment that are sufficient to sustain the utility in business (not confiscatory)
 - The rights of rate payers to service at prices that are just and reasonable
- Often a disallowance is apportioned to both ratepayers and shareholders in equal weight
- ***However, the contract itself is inviolate - it is not directly affected by a disallowance***

Vermont's Experience with Purchase Power Contracts

- ❖ Vermont's two largest utilities have more than 60-70% of their portfolio in PPAs
- ❖ The Vermont Regulatory Commission approved the PPA contracts for these regulated distribution utilities
- ❖ Applied "prudence" and "used-and-useful" determinations to some of those contracts
- ❖ Balanced the interests of utilities, investors, ratepayers, and the public in all cases

Vermont Examples of PPAs

- #1 Vermont applied a prudence review for the early “lock-in” of the HQ contract
 - Results = disallowance
- #2 Vermont applied a used-and-useful determination for the remainder of the above-market portion of the HQ contract
 - Results = disallowance in one rate case
= no disallowance in another rate case
- #3 Vermont approved a recent PPA with market-based benchmarks

Example #1 – Prudence Review

- In 1987, a group of Vermont utilities entered into a thirty-year PPA for purchase of power from Hydro-Quebec (a Canadian company) after soliciting bids
- The PPA was approved in 1990
 - “Take or pay” for up to 340 MW
 - Total cost for 340 MW = \$ 4 Billion over life of contract
- The PPA was a large, long-term, “all or nothing” contract with significant fixed cost components
- In 1991, a number of utilities gave up their right to back out of the contract; some “locked-in” - some did not
- Upon review, the Board found that some utilities were not prudent in making the early “lock-in” decision
- A portion of the contract was disallowed in rates

Example #2 – Used-and-Useful Review

- The “used and usefulness” of the HQ contract became an issue in a number of rate case proceedings
- The time frame was 1998, approximately mid-way through the 30-year contract
- After hearing evidence and applying the “used and useful” standard, the Board found that the above-market portion of the contract was not “used and useful”
- The Board made a disallowance in one rate case (1998)
- It did not make any disallowance in a second rate case ; it determined that the interests of ratepayers and the interests of the utilities were better served with no disallowance (2001)

Example #3 – Market Benchmark

- New PPA for 510 MW of the output of ENVY plant is for 10 years (2002-2012)
- Phase-in for the market risk to the generator
 - Transition period for both investors and ratepayers
 - Generator is insulated from the market for 3 years
 - Phase 1 (2002-2005) provides fixed annual prices
 - Price of power is capped, thus limiting exposure of ratepayers
 - After 3 years (2005) a Low Market Adjuster is applied
 - The Low Market Adjuster is triggered if the market price of power is 5% below the PPA prices
 - Beginning in 2005, ratepayers pay **the lower of** market price (plus 15%) or the fixed price under contract
- Terms to negotiate the purchase of additional power are included should the plant be allowed to increase its output

Example #3 (cont.)

- New Approach to PPAs in Vermont
- Benefits
 - Ratepayers are protected from market risk as a result of cap
 - Ratepayers can benefit if the market price of power falls
 - The distribution utilities (Green Mountain and Central Vermont) are shielded against high market prices

Results

- Vermont utilities are faring better than other utilities in the U.S.
- Results = higher dividends; rising stock price
 - Central Vermont Public Service has the highest overall returns to investors of all U.S. IOUs over the last 5 years
 - Green Mountain Power has the third highest overall returns in the past 5 years
- Application of the prudence and “used and useful” standards have not harmed the utilities’ financial strength

Results (cont.)

Rank	Company	Return
1	CENTRAL VERMONT PUBLIC SERVICE CORP	205.1
2	MAINE PUBLIC SERVICE CO	198.8
3	GREEN MOUNTAIN POWER CORP	180.9
4	ENTERGY CORP	119.3
5	UNISOURCE ENERGY CORP	102.3
6	PPL CORP	88.0
7	SOUTHERN CO	86.7
8	EXELON CORP	83.5
9	MGE ENERGY INC	81.7
10	ALLETE INC	77.3

EEI Index Rankings for 1/1/99 through 12/31/03, 5-year Total Return

Lessons Learned in Vermont

- Vermont's experience with PPAs
 - A lengthy PPA (30 yrs) with fixed prices lacks flexibility and increases risk
 - No one can predict future events that far in advance
 - Building in adjustments for future events – through benchmarking – protects both ratepayers and investors
 - Consider limiting the term, building in renegotiation options, or including buyout provisions
 - Carefully review and limit step-up provisions
- Align the PPA with ongoing market activities as much as possible
 - Consider all values of IPP output – energy, capacity, and ancillary services
 - Consider any required scheduling or transportation rights
- Balance risks between shareholders and ratepayers

Conclusions

- Regulatory oversight of PPAs is common in U.S.
- Regulatory tools include (1) pre-approval, (2) prudence, and (3) used-and-useful standards
- A strong regulatory regime protects both rate payers and shareholders
- One advantage of these regulatory tools is that utilities will structure PPA contracts with great care since potentially they could bear some of the risk
- Transparency, credibility, & predictability of the regulatory process is critical
- Equitably balancing risk, and the interests of rate payers and investors, is the key to success

Contacts and Resources

- E-Mail: swaldstein@psb.state.vt.us
- Web site: <http://www.state.vt.us/psb>
- Important Vermont decisions on PPAs:
 - <http://www.state.vt.us/psb/orders/2001/files/6107final.pdf>
 - http://www.state.vt.us/psb/orders/2001/files/6460final_june.pdf
 - <http://www.state.vt.us/psb/orders/2002/jun.htm>

Other Resources

- Arizu, B., Maurer, L. Tenenbaum, B., *Pass Through of Power Purchase Costs*, World Bank, 2004.
- Bakovic, T., Tenenbaum, B., Woolf, F., *Regulation by Contract: A New Way to Privatize Electricity Distribution*, World Bank, 2003.
- Clark, R., Virani, S., *Purchasing Power: Liberalization of Electricity Markets Across the Americas and Its Impact on Power Purchase Mechanisms*, OAS, 2002.
- Dobozi, I., *Power Purchase Agreements and Competitive Power Markets: Conflicts and Reconciliation*, Presentation to ERRA 2nd Energy and Regulatory Confererenc, May, 2003.
- Regulatory Assistance Project, *Best Practices Guide: Implementing Power Sector Reform*, USAID, 2000.
- Sarkar, S.K., Sharma, V., *Encouraging Investment in Infrastructure Services, Political and Regulatory Risks*, In, Reforms in the Infrastructure Sectors: Next Steps, Tata Energy Research Institute. 2002.
- Woolf, F., Halpern, J., *Integrating Independent Power Producers into Emerging Wholesale Power Markets*, World Bank, 2001.