

Offering Fuel-Price Stability in Utility Green Power Products

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Why Offer Fuel-Cost Protection to Green Power Customers?

Some arguments for

- Most renewable energy projects have known and stable generation costs
 - Renewable generation costs are primarily a function of capital and O&M costs, not of fuel costs.
- The stable-price characteristic of renewables generation is an attribute that should be conveyed to purchasing customers.
- Customers value fuel-price stability/predictability.

Some arguments against

- Some renewables have variable output (hourly, seasonal, annual) and thus utilities must maintain sufficient back-up generation capability to accommodate these fluctuations. If fuel prices rise, so does the cost of providing this reliability.
- Utilities price power as a system average and not from individual generation sources.
- Utilities take on supply risk when procuring renewable generation for green power customers.

Providing Fuel-Cost Protection to Green Power Customers

- Adjust the green power premium to reflect changes in renewable energy costs vis-à-vis conventional supplies (or “avoided cost”)
- Exempt green power customers from fuel-related rate adjustments
 - Green power customers receive a credit for the fuel-cost adjustment on their bills
- Substitute a separate rate (“green rate”) for the energy rate on customer bills
 - Requires an “unbundled” rate structure
 - Utility might want longer-term customer purchase commitment to balance risks.

Who Offers Green Premium Adjustments?

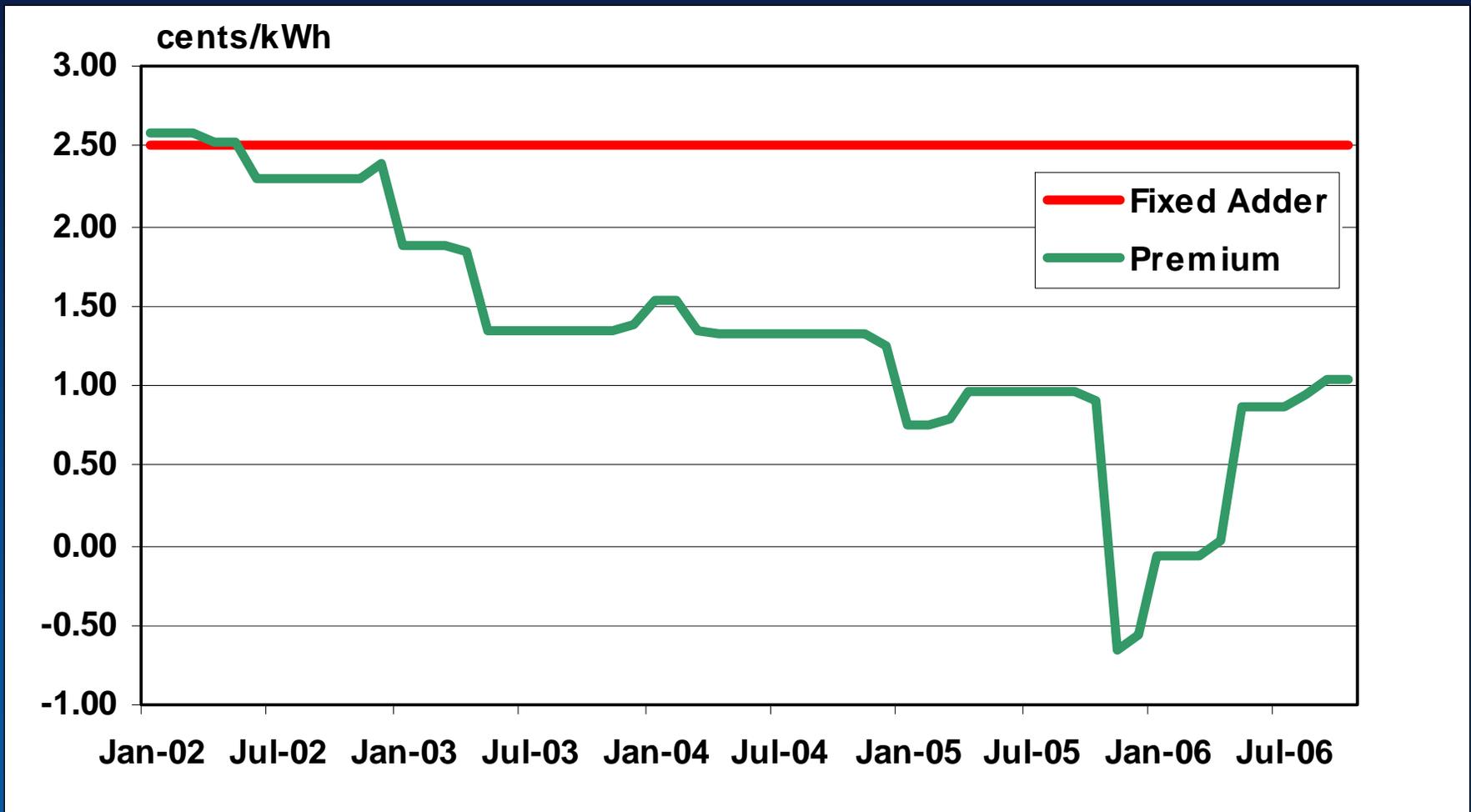
Out of ~130 distinct U.S. utility green pricing programs:

- 14 utilities have lowered their green pricing premiums (some more than once)
- 7 utilities provide exemption from fuel-price adjustments
- 4 utilities offer a stable-rate green pricing product

[Several utilities also offer lower premiums for bulk purchases by larger customers.]

Fuel-Price Adjustment Example

Xcel Energy (Colorado) *Windsource* Program

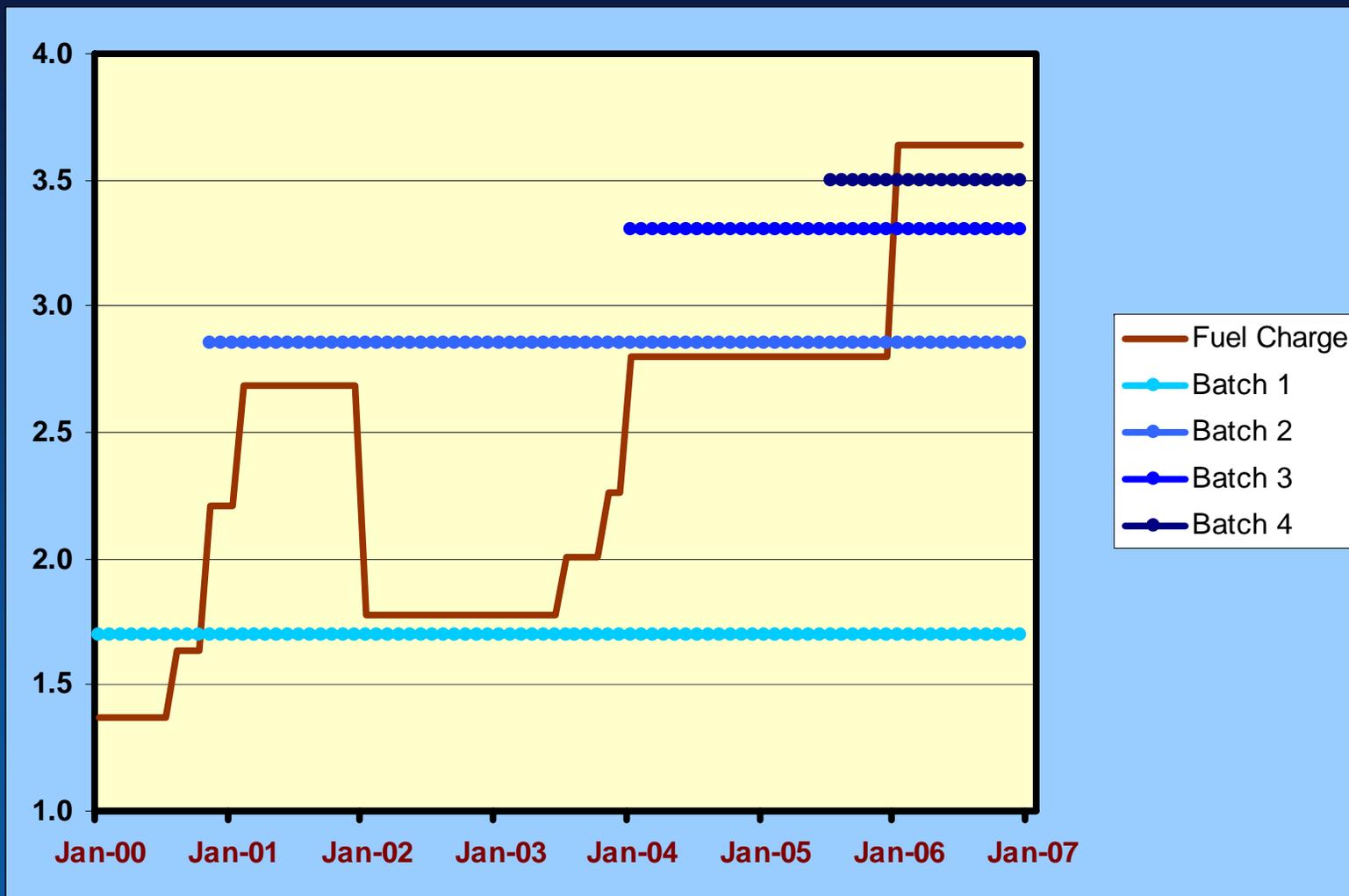


Problem with Most Fuel-Cost Adjustments

Fuel-cost adjustments are typically established as a short-term revenue collection mechanism between major rate cases. If higher fuel costs become embedded in base rates, green power customers lose their relative cost benefits.

Fixed-Rate Example

Austin Energy *GreenChoice* Program



Austin Energy

How Do They Do It?

- Utility signs 10-year fixed-price power purchase contracts and requires customers to commit to the *GreenChoice* product for the same contract length.
 - Reduces risk of stranded investment.
- Green rate includes renewable power cost, ancillary services and congestion management fees, allocation for spot market purchases when necessary, and marketing costs.

Fixed-Rate Example

Eugene Water and Electric Board

**Effective Premium for EWEB Windpower by Residential Energy Consumption Tier
(as of November 2006)**

Energy Consumption Tier	Windpower Charge	Energy Charge	Windpower Premium
First 800 kWh	5.274	4.068	1.206
Next 900 kWh summer Next 2,200 kWh winter	5.274	5.742	-0.468
Over 1,700 kWh summer Over 3,000 kWh winter	5.274	6.983	-1.709

Does it Really Matter?

- Fuel-price protection is probably most important in utility systems where prices fluctuate regularly and/or markedly.
 - Where natural gas represents a significant % of generation mix.
- Austin Energy has sold out of its four batches of green power supply, representing 225 MW of power purchase contracts.
 - Commercial customers highly value the fuel-price hedge.
 - Austin program accounts for nearly 20% of green pricing sales nationally.
- Xcel Energy (Colo.) and OGE Electric Services (Okla.) sold out of their remaining green power supply when their green power products became less costly than base rates.
- The top performing utility green power programs often offer a superior value proposition.
 - A greater than average percentage of utilities in NREL's "Top 10" lists for renewable energy sales and customer participation offer fuel-price protection or have adjusted their green power rates over time.

What About Environmental Costs?

- Should avoided environmental costs attributable to green power also be conveyed to purchasing customers?
- Xcel Energy (Colorado) *Windsource* customers are exempt from a 15-year Air Quality Improvement Rider (AQIR) designed to recover the costs associated with air quality improvements (emissions reductions) at three Metro Denver power plants (0.12¢/kWh).
- Carbon?
 - Windsource customers will be exempt from the City of Boulder's (Colo.) new energy/carbon tax (0.22¢/kWh to 0.49¢/kWh).
 - Future utility liabilities?

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