

Conservation Market Price Adder

Wally Gibson
Power Committee
Web meeting
May 19, 2009



May 19, 2009

Overview

- Market price does not equal the cost of avoided resource
- Market price is still relevant for resource choices
- Conservation market price adder
 - Not the same as the 10% credit in the Act
 - Not the source of the surplus
 - Allows going further up the conservation supply curve
 - Captures difference between market and cost of avoided resource
 - Not the same as PURPA avoided cost
 - Does not have major dollar impacts on consumers



Market Price Not Equal to Cost of Avoided Resource

- They were assumed roughly equal in mid-90s
 - Deregulation model
 - Developers (not utilities) build resources and offer into market, if market price justifies cost of building
 - Utilities purchase at market price (= cost of building)
 - Model not apply when most of cost recovered elsewhere
 - Fifth Plan adopted longer-term average of market prices
 - Addressed stop/start pattern of utility action based on market price fluctuations
 - Market price adder roughly addressed difference between short-term and long-term market price

Market Price Not Equal to Cost of Avoided Resource – 2

- This rough equivalence will not work in the future
 - RPS requirements create systematic surpluses, driving down market price below long-term cost of new resources
 - Market price is used as a standard in RPM and Aurora ©
 - Using market price as a standard requires some adjustment because of this problem

Market Price Still Relevant for Resource Choice

- The short-term market still represents a viable resource with economic effects that RPM captures
 - Source of short-term and emergency purchases
 - Sink for short-term surpluses that can help to reduce cost

Conservation Market Price Adder

- The market price adder not the same as the Act's 10% credit
 - The credit is calculated into the cost of the conservation in the supply curve using the market price
 - E.g., \$50/MWh average market price would allow a \$55/MWh conservation measure to go into supply curve at \$50/MWh
 - Cost of next avoided resource is ~ \$90-\$100/MWh
 - Cost difference between maximum conservation cost on supply curve and cost of avoided resource effectively made up by market price adder

Conservation Market Price Adder – 2

- RPM is an economic model, not an adequacy model
 - Tries to get to lowest cost plans, not limited by adequacy need as a ceiling on resource choice
 - Calculates the adder as needed to fill out conservation supply curve up to cost of avoided resource
 - High adder not needed for discretionary conservation because penetration limited by imposed ramp rate
 - Can always go back and get it later as well
 - Adders that are too high and too low increase costs and are not chosen by the model

Conservation Market Price Adder – 3

- Market price adder is not the driver for the surplus
 - Surplus driven by cost minimization and risk mitigation
 - Conservation is just a cheaper way to do this
 - Does not produce carbon emissions
 - Can displace higher cost gas units
 - Provides surplus to sell into market in moderate price periods to help cost recovery
 - Much of it is cheaper than market price and has zero variable cost

Conservation Market Price Adder – 4

- Market price adder extends the available conservation from the supply curve, bringing in about 300 MWh more in the least-cost plan
 - The amount and cost of the rest of the conservation is unchanged
 - Has a relatively low cost impact on consumers
 - Market price adder does not have same effects as avoided cost under PURPA
 - PURPA avoided cost calculations require paying the higher PURPA price for the entire amount of the resource, no matter what the cost