REGULATING GENERATION: WHEN DO WHOLESALE AND RETAIL GENERATION BECOME PART OF THE SAME WHOLE? - HOW VERY ZEN

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ELECTRICITY MARKETS ARE TRANSFORMING

- Solar Technology costs are rapidly dropping resulting in significant market penetrations.
- These intermittent technologies create new operational opportunities and challenges for the Distribution and Transmission Grid.
- Who is responsible for addressing these operational challenges?
- Is the Traditional Split between FERC Wholesale Jurisdiction and State Retail Jurisdiction still relevant?
SOLAR IS A MAJOR ELECTRIC RESOURCE

- State Policy Promoting RPS and Distributed Generation is Expanding Solar Generation which has Impacts on System Operations.
- Ca. RPS= Over 4300 MWs of Solar Wholesale Generation tied into the CAISO.
- Ca. Distributed Generation = 2242 MWs (239,549 projects) of Solar on-line Trending to 5000 MWs by 2017, Governor Brown has goal of 12,000 MWs.
SOLAR AS AN RPS RESOURCE

- Wholesale Solar Facilities are Competitively Bid into Utility RFOs and are selected under “Least Cost- Best Fit”.
- Recent Bids are around 6 cent kWh
- Interconnected to the Transmission System under a CAISO Tariff.
- Contracts with Utilities have Curtailment Provisions.
- Presumed to be a Wholesale Transaction (FERC)
Ca. Solar Initiative, Self-Gen Incentive Program and Ca. Solar Incentive Program are direct incentives for Behind The Meter installations.

Net Energy Metering (NEM)=Customer gets a retail bill credit (based on bundled rate) for energy generated and exported to grid based on Tier and Time-of-Use. Separate payment for net surplus energy.

Interconnected at Distribution Level.

CAISO observes Behind the Meter as load, not dispatchable generation.

Presumed to be Retail Transaction (State).
Solar, both wholesale and distributed is an effective diurnal resource, however, it is weather sensitive, unavailable at night and sometimes Peak.

CAISO observes significant Ramping Needs (13,000MWs >) seasonally by 2020.

Distributed solar is not centrally metered to CAISO and not dispatchable or curtailable.

Daytime Energy Prices drop, gas fleet operates only at Ramps, Peak and at night.

No clear mechanism to keep gas fleet or other technologies available for integrating these resources.

Over-generation on distribution circuits may affect Transmission grid.
LEGAL/JURISDICTIONAL CHALLENGES

- Is NEM “A Sale for Resale” under the Federal Power Act? (Raskin)
- Does PURPA limit NEM Pricing only to the “avoided costs” of energy and not the full Bundled Retail Rate?
- How is the non-use of energy by the Customer under NEM any different than Energy Efficiency?
- There is no “Sale” under NEM, rather only a netting out of electrical services.
- There is no Federal Jurisdiction because the transaction occurs on and never leaves the Distribution System as an Intrastate Transaction under State Jurisdiction. (Lindh)
Grid connected renewables are paid at a lower wholesale rate than Distributed Generation under NEM.

Retail service is based on energy usage; NEM as a bundled retail rate shifts costs to other customers.

PURPA allows for “net metering services” is limited to offsetting “energy” not a Bundled Retail Rate.

Absent PURPA, no requirement for Utility to purchase from distributed generation under the Federal Power Act.

PURPA limits price to a utility’s “Avoided Costs”.

The FERC’s theory limiting a “sale” to net supplier over a month no longer valid because of court decisions invalidating “netting” in determining whether a “sale” has occurred.
The States retain jurisdiction over Distribution Facilities under the FPA.

State’s “organic police powers” allows complete authority to regulate rates, terms and interconnections on the Distribution System.

This power extends to “feed-in tariffs and the development of “micro-grids”.

Sales on the Distribution System rarely migrate to the Transmission Grid because impedance repels any commingling of generation, except when over-generation exceeds demand on a distribution circuit.

“Sales of electric energy occurring solely upon the distribution circuits, isolated both physically and transactionally in intrastate commerce, fall to state jurisdiction, not federal jurisdiction”.

Federal jurisdiction is limited to Interstate Commerce.
EPSA v. FERC – Court of Appeals (D.C.) vacates FERC Order 745: “demand response is not a wholesale sale of electricity; in fact, it is not a sale at all”.

While demand response may affect wholesale markets FERC’s jurisdiction is not unbounded.

FERC’s jurisdiction “...extends only to those matters which are not subject to regulation by the States” (FPA 201).

Absent “clear and specific grant of jurisdiction “ FERC cannot regulate areas left to the states.

“A buyer is a buyer, but a reduction in consumption cannot be a ’wholesale sale’ “.

What is are the implications on NEM? Is it a sale for resale? Or is it more similar to a retail non-use of the wholesale market?
WHEATIES: THE COMMERCE CLAUSE
BREAKFAST OF CHAMPIONS

- Wickard v. Filburn (1942) – Broad Federal power to regulate interstate commerce.
- Federal program limiting the amount of wheat that could be grown in order to stabilize wheat market.
- Farmer Filburn was growing wheat for his own on-farm use. No sale. He claimed no interstate market.
- Supremes reject, reasoning that by home growing his own wheat and not buying in the open market he was effecting interstate commerce.
- Does a NEM customers self generation affect pricing in the wholesale markets or is it more akin to a non-sale retail transaction limited by the FPA?
- If the Federal Government can regulate home grown wheat why can’t it regulate home grown electrons?
New technologies, new products and participants, have blurred traditional distinctions between wholesale and retail jurisdiction.

This is accelerating and will result in significant future disputes because it involves a lot of money.

The nature of electricity technologies, markets and their regulation have always been in flux and subject to evolutionary change.

The FERC and State Regulators will need to refine the distinctions between wholesale and retail activity.

The Federal Power Act will need to be updated.

The Sun expands and destroys the earth in 1 Billion years.

There is plenty of time for Congress to act.


Note: The comments in this presentation are mine, for the moment, and not that of IEP or its member companies.