

Institution Overview

The Players

- Investor Owned Utilities (IOUs)
 - BIG
 - Holding companies with multiple subsidiaries.
 - Sister companies with common parent.
- Public
 - Muni – City owned
 - PUD – Own district with boards
 - Co-ops – Private non-profit (rural)

Types of Players

- Vertically integrated – $G + T (>115\text{kV}) + D (<35\text{kV})$
 - They own some of each but buy some too.
 - Often D is all them.
- Distribution Only – D
 - Don't own T or D but buy on the market.
 - Look at restructured states for this.
 - SDG&E recently said they were interested.
- Note that T is open access, like a toll road with posted prices.

Multiple Jurisdictions for Siting

These overlap:

- EPA, BLM and others have some say.
- FERC handles most Federal
 - If Hydro or Nuke siting the FERC
- If other type off generation then local PUC.

General Pattern

If you can make it work with a well designed market – do it.

If you can't – cost of service regulation.

Modern trend to incentive regulation.

Federal Power is Odd

- BPA is classic
 - The army corp of engineers runs the dams.
 - BPA (Power Marketing Agency) sells the power.
- Generally
 - Sell to local D or G/T/D company
 - Have other G + T resources

G Only

- Often called merchant power
- or IPP
- or non-utility generator

Public Owned

Tend to be G only but:

- Our local PUDs do own generation.
- Most power is from contract purchase
- BPA is often the supplier for the co-ops.

Do Customers Have Choice?

A: Sometimes

- Large customers
 - Billed for D by local utility
 - Purchase G on contract
 - Pay for T bundled with G or by OASIS posted prices.
- Residential and Others
 - In fully deregulated yes
 - Often the old local was default, exception Texas
 - Often marketing costs exceed profit so not done.
- Community Choice, big groups choosing G, is the next big wave.

Transmission

- The interconnects are in sync but not with each other.
- Still exchange power by DC connects.
- FERC covers rates and service standards for this.
 - Access via OATT/OASIS. OASIS is implementation of part of OATT.
 - OATT has a lot in it. Prices are only part.

Managing Transmission

- FERC delegated a lot of reliability to North American Electric Reliability Council (NERC).
- ISO/RTO voluntary but characteristics created by FERC
 - Plan, operate, dispatch and provide OASIS.
 - Notice OWN is not on the list.
 - Control area for their region
- Others operate control areas outside ISO/RTO territory
 - BPA
 - Our local IOUs
- ISO/RTO run markets
 - Ancillary services
 - Power Markets

Expanding ISO/RTO

- CAISO has plans for expanding
 - PGE and Pacific Power are tentatively on board
- Energy Imbalance Markets
 - Power market outside bounds of ISO

The Locals

- OPUC is governor appointed
- COUs and Co-ops are by vote
 - Sometimes per person (COU)
 - Sometimes per meter (Co-ops)
 - Rules for Co-ops vary.

What they Do

- Revenue requirement
- Allocate costs
- Design prices
- Quality Standards
- Check IOU finances
- Be a judge in disputes.

Consumer advocate is sometimes in or separate agency and sometimes separate. Oregon CUB is separate.