Rocky Mountain RTO

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Eleven Transmission Providers

- IOUs
  - Public Service Company of Colorado
    - Cheyenne Light Fuel and Power
  - Black Hills Power & Light Company
  - West Plains Energy
- Municipality
  - Colorado Springs Utilities

Eleven Transmission Providers

- Coops
  - Tri-State Generation and Transmission Association
  - Basin Electric Power Cooperative
- State Agencies
  - Platte River Power Authority
  - Wyoming Municipal Power Agency

Eleven Transmission Providers

- Federal Agencies
  - Western Area Power Administration
    - Rocky Mountain Region - Loveland
    - Colorado River Storage Project (CRSP)
      - Salt Lake City

Lessons Learned

- Resolve pricing before spending enormous amounts of resources
- Use existing infrastructure to keep costs down
  - OASIS, security coordinator, reserve group, planning, two control areas

Started With Pricing: Goals

- Similar to other RTOs
  - eliminate pancaking
  - minimize cost shifting
  - honor existing uses
  - recover annual revenue requirement
- Distance sensitive, recognize generation sited near load

Started With Pricing

- Transmission Providers met Informally
- Looked at various options
  - Postage stamp - unacceptable cost shift
  - IndeGo model - unacceptable cost shift
  - Zonal Model - quasi distance sensitive postage stamp with recognition of zones with generation near load
  - MW-Mile Access Fee - distance sensitive

To minimize cost shifting

- Postage stamp - unacceptable
  - Rates vary - $1.20 to $4.05/kW-Mo
- IndeGo - two zones - unacceptable
- In Rocky - utilities along the front range made long-term decisions to buy coal over rail - not wire. If required to pay for use of the grid (like IndeGo) - pay rail and wire
- In Rocky - other utilities have built long transmission line. Use of this capacity for importing to the front range is recognized in the zonal model.

Zonal Model

- 8 zones (revenue requirement, loads, and generation of all TP in each zone)
- 3 zones along the front range - dense loads - lost cost
- If loads taking service from generator in same zone - pay zonal rate

OR

- If loads importing energy from generator outside of zone - pay RTO-Wide Rate

Zonal Model

- Other 5 zones - sparse loads and long transmission lines - high cost. Lines used to deliver energy to the front range zones
- Postage stamp rate (RTO-wide rate) for high cost zones and imports into low cost zones
- Loads in high cost zones and imports pay RTO-wide rate

Zonal Model

- Zonal Rate = $\frac{\text{Revenue Requirement}}{\text{Load}}$
- RTO-Wide Rate =

$$\frac{\text{Revenue Requirement of High Cost Zones} + \text{Revenue Requirement of Imports}}{\text{Loads in High Cost Zones} + \text{Import Load} + \text{Exports}}$$

Next

- Recognize that it is time to start the stakeholder process for Rocky
- Some of the Rocky members are participating in the Desert Star RTO
- Resolution of outstanding issues