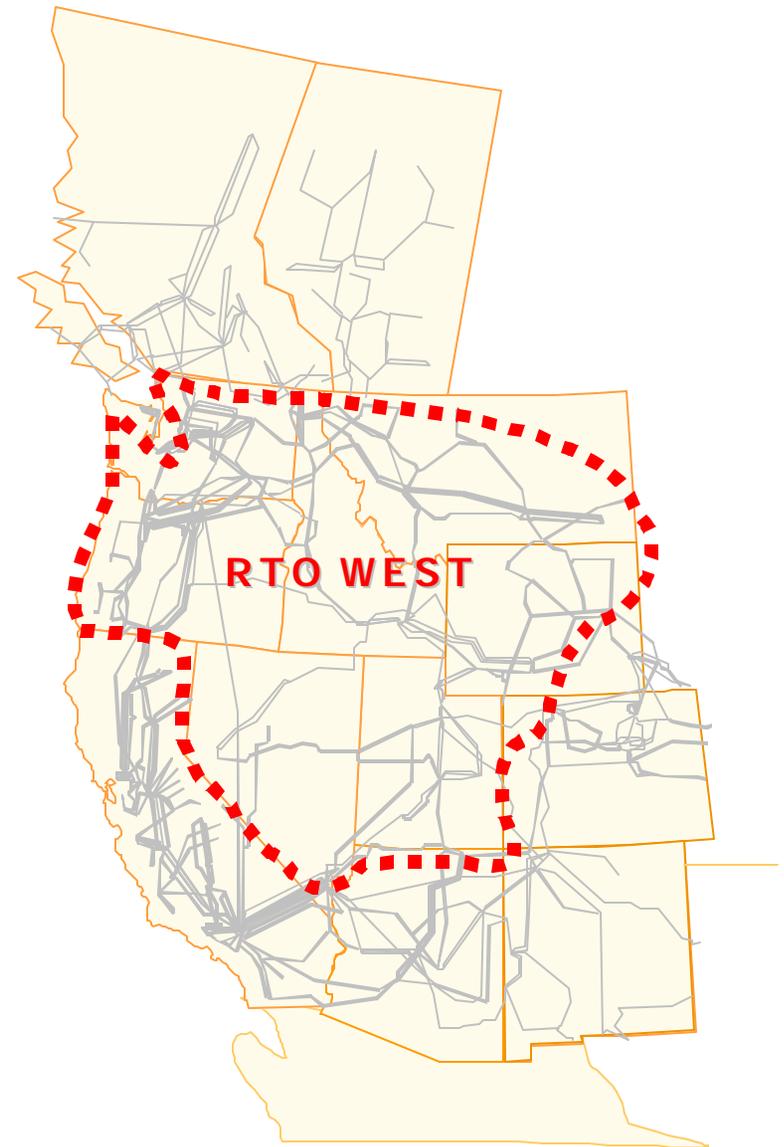




***Overview of RTO WEST
CONGESTION MANAGEMENT***





RTO Development Drivers

- A “Light” RTO meeting FERC Requirements
- Minimize RTO presence in energy and ancillary service markets
 - Encourage external markets
- Effects:
 - No Power Exchange
 - RTO cannot set power prices (No LMP)
 - Physical Rights model for Congestion Management



Congestion Paths and Zones

RTO West Manages Commercially Significant Congested Paths

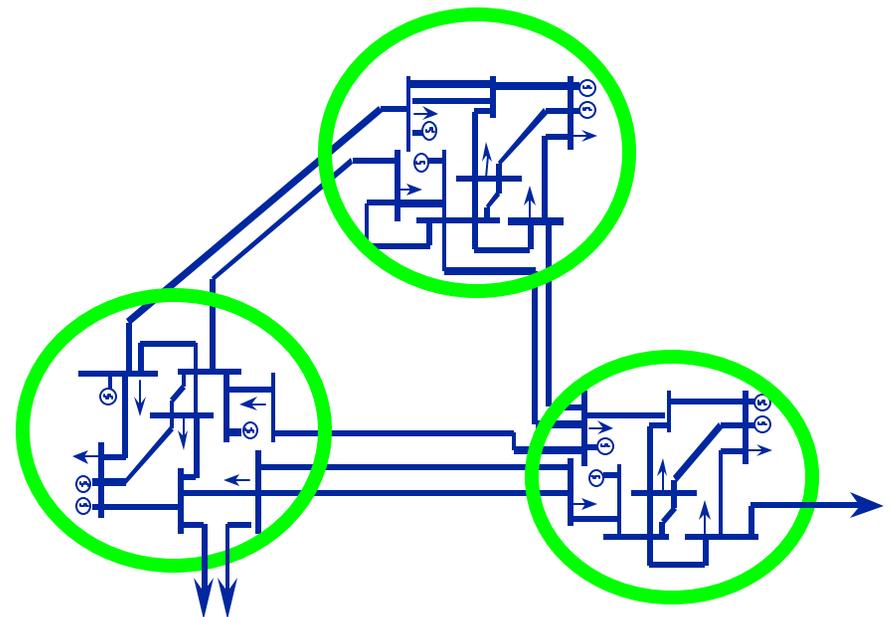
- Transmission Rights are either Issued or obtained from Auction
- Transmission Rights required to Schedule

Within Congestion Zones

- Transmission Rights not required
- Any redispatch required by RTO cost handled via uplift charges

Source to Sink Schedules

- RTO West assigns flowpaths





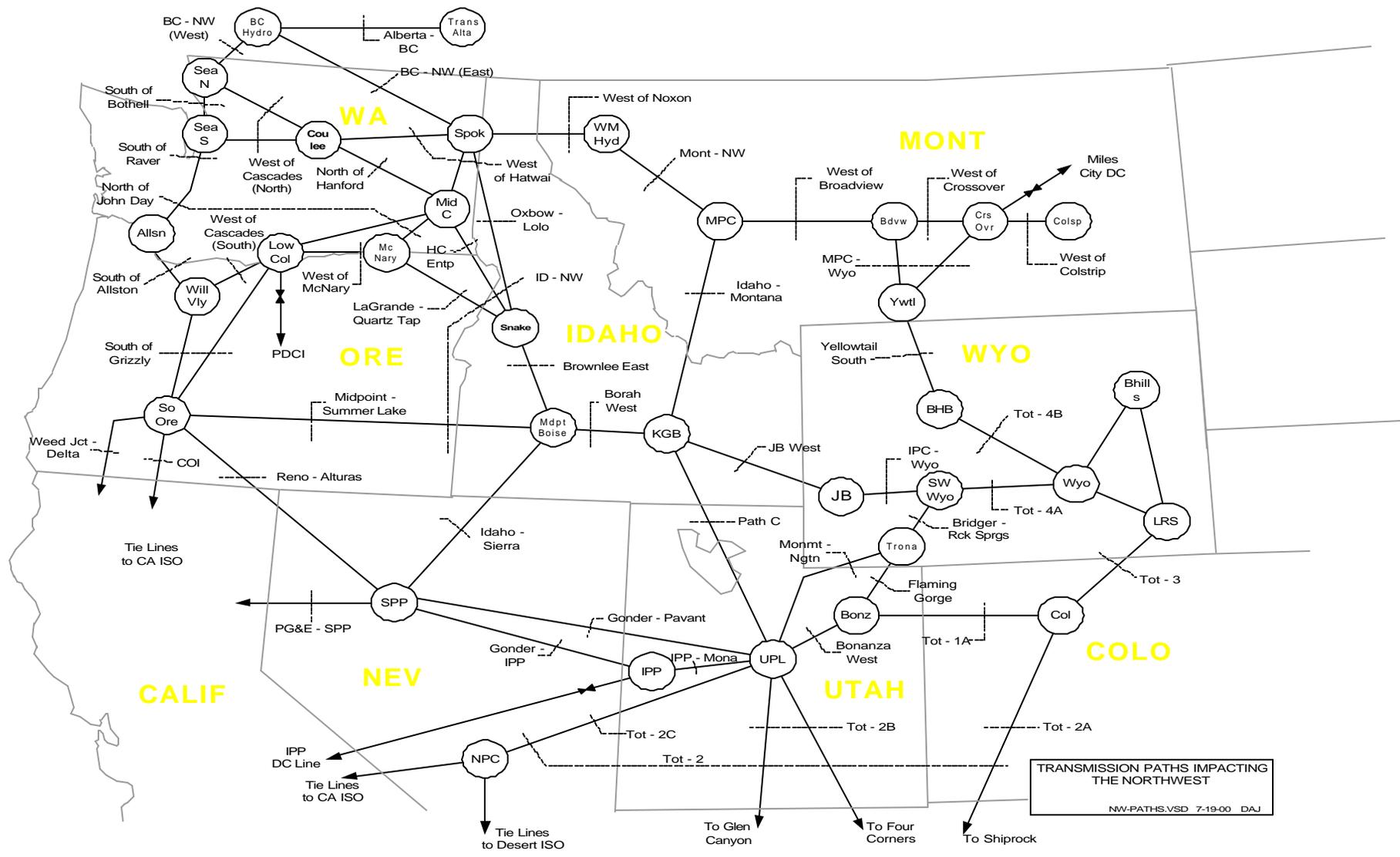
Flowpaths

- **Flowpaths** (also called flowgates or cutplanes) are transmission facilities that experience commercially significant amounts of congestion.
- **Congestion Zones** are regions where incremental injections (or withdrawals) have substantially similar impacts on power flows across the flowpaths.
- Commercially significant amounts of congestion was defined by CAISO as congestion for which the cost of relief over some period (12 months), is greater than some threshold (5%) of the average access charge on a per MW basis.
- Many key paths and their ratings have been established through the WSCC process.



Flowpaths (continued)

- Western Interconnection Biennial Plan (6/00) lists paths with operational procedures or system redispatch.
- Identified a candidate set of 14 - 40 flowpaths for RTO West.
- Objective is to strike a reasonable balance between:
 - Trading model simplicity to enhance trading and liquidity.
 - Reasonably small amounts of congestion costs treated as uplift.
 - Consistency of the commercial and operations models.
- Since congestion data is *not* readily available, judgement will be required to establish the initial set of flowpaths.
- A process will be developed to add or remove flowpaths in the future. This should involve specific triggers and adequate opportunity for stakeholders to participate in the decision.





PCO Translation Process

- Many PCOs, particularly those that predate the Open Access Transmission Tariff, have unique terms and conditions such as curtailment priority, flexibilities and use limits.
 - It will not be possible to translate all the details into the RTO realm.
 - The objective should be to find equivalent value.
- PCO rights are typically described as either point-to-point service on a contract path basis or as network service.
- PCO existing rights/obligations will be translated to flowpath specific allocation of rights (FTRs) using flow distribution factors.



PCO Translation Rules (continued)

- The entitlement holding transmission customer may elect to receive either FTRs or the auction revenues associated with those FTRs.
- If conditions outside PTO control reduce OTC below FTRs, and RTO is unable to restore the OTC, then the rights will be reduced prorata.
- For PCOs with flexibility in the Points of Replacement (PORs), two feasible dispatches (on/off peak) for each month (total of twenty four) are used, consistent with PEC and LSO.
- Translation of PCOs may be disputed by RTO West or any party who is materially impacted.



PCO Translation Rules (continued)

- For Network Service, unencumbered FTRs required by annual load growth up to the then existing Total Transfer Capability (TTC) will be allocated to the PEC or LSO rights holder prior to the annual auction.
- For Network Service:
 - FTRs will be determined based on non-coincidental peak loads from 1998-2000.
 - FTRs will be allocated in monthly blocks. The rights holder can sell excess FTRs on the secondary market.



Nonconverted Rights (NCRs)

- The PTO, transmission customer and RTO West must develop a set of NCR Instructions.
- Under rules yet to be determined, RTO West may either:
 - Allocate transmission capacity required to meet the NCR instructions with equivalent FTRs. The party responsible for scheduling the NCR will manage the FTRs; **or**
 - Remove transmission capacity required to schedule the NCR from the available ATC. After the party responsible for scheduling the NCR submits a schedule to the RTO-W, the RTO West releases the unused transmission capacity.



Types of Transmission Rights

- Firm Transmission Rights (FTRs)
 - Firm right to schedule.
- Recallable Transmission Rights (RTRs)
 - FTRs not scheduled in the day ahead schedule process are auctioned by RTO West as a recallable product.
 - RTRs may be recalled up to some point (e.g. 120) minutes before delivery hour.
 - From 120 minutes before delivery hour through the delivery hour FTRs and RTRs are identical.
- Non Firm Transmission Rights (NTRs)
 - Capacity being held for NCRs or reserves, or produced by counterschedules may be auctioned by RTO West as NTRs.
 - NTRs may be recalled at any time.