

Interim Hourly Firm AFC Project

TIPSC

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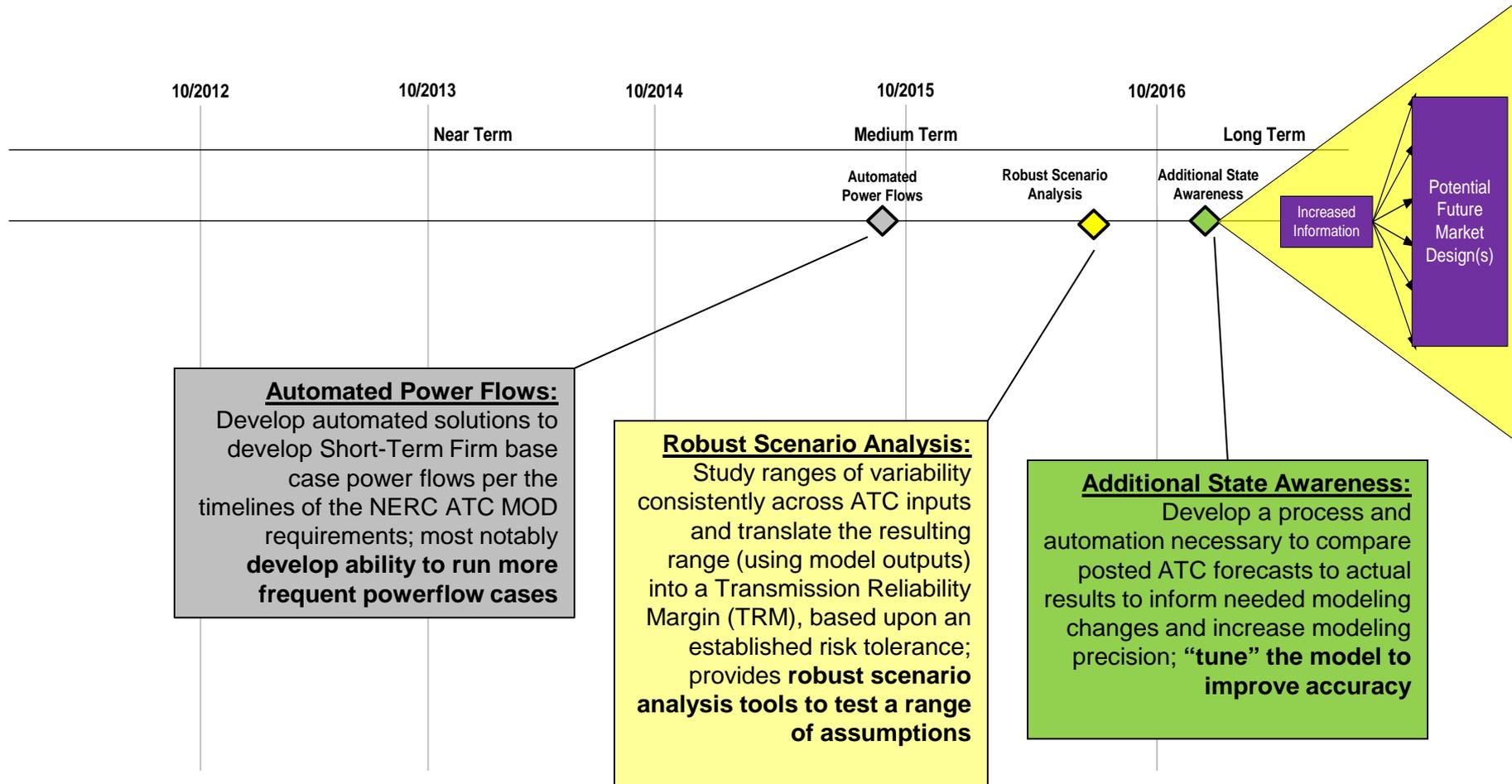
Interim Hourly Firm AFC Project

- Goal: to manage Hourly Firm sales on the network flowgates according to updated Firm AFC values

Current Practice

- Sell Hourly Firm & Non-Firm to ATC limits on MOD-29 paths (Paths other than flowgates)
 - SOLs updated in commercial systems in PreSchedule & Real Time
 - Congestion is mitigated next-hour and in-hour as needed
- Currently, do not manage Hourly Firm & Non-Firm sales on MOD-30 paths (Network Flowgates)
 - PTDFs updated once daily in commercial systems
 - SOLs populated in commercial systems prior to PreSchedule not updated
 - HF & HNF TSRs are analyzed for AFC impacts, but on Network flowgates are not currently denied for lack of AFC
 - Congestion on network flowgates is mitigated in-hour only, except NOEL pilot mitigates next-hour (based on “predicted flow”) and in-hour as needed
- “Stop Hourly Sales” may be used on Network flowgates when Dispatch determines critical conditions exist

Future State Vision



Operational Issues

- Concerns with unmanaged hourly firm sales on network flowgates:
 - Post September 8, 2011, increased WECC RC engagement and oversight of congestion mitigation
 - Unmanaged hourly firm sales increases the potential for real-time Firm curtailments.
 - Customers with long-term firm reservations are curtailed pro rata with customers who purchase hourly firm reservations as late as prior to the delivery hour – fairness issue.

2010 – 2013 Firm Curtailments

- May 2010 West of Cascades North flowgate curtailment events
 - Multiple firm transmission curtailments and Stop hourly firm and non-firm transmission sales limits
 - West of Cascades North (WOCN) Lessons Learned report recommended developing an hourly ATC Methodology to manage hourly network sales.
 - A July 2011 status noticed that BPA's hourly ATC Methodology would be phased in and full implementation would take several years.
- Since 2010
 - July 2011– firm curtailment on the Raver Paul flowgate
 - 2012 -- four firm curtailment events:
 - two on West of McNary Flowgate
 - two on North of Hanford (S>N) Flowgate
 - 2013 -- firm curtailment events:
 - 3/19 West of McNary
 - 4/14 NOEL
 - 4/25 NOEL

Congestion Management

- Stop Hourly Sales back up congestion management tool
 - Raver-Paul – 6/4/2013
 - NOEL – 4/26/2013
 - SOA – 4/17/2013
 - North of Hanford – 10/2/2012
 - Raver-Paul – 7/24/2011
 - Cross Cascade North – 5/18/2010 - 5/19/2010
 - SOA, NOHANF, MEL in 2009

2010 – 2013 Firm Curtailments

- Preliminary analysis
 - Ratio Hourly Firm Reservations to Long Term Firm Reservations: .61 : 1
 - 93 % of curtailed Hourly Firm reservations are Redirects

Timing

- System Operations seeks capability to manage network flowgate hourly firm sales by the beginning of the Fall outage season, starting September 2013
- No decision on start date
- Implementation subject to addressing:
 - Internal resources
 - system requirements
 - process and procedural changes
 - customer coordination

Process Changes

- Activate the Hourly Firm validation in webTrans
- Update Hourly Firm AFC components more frequently:
 - PTDFs
 - SOLs

SOLs

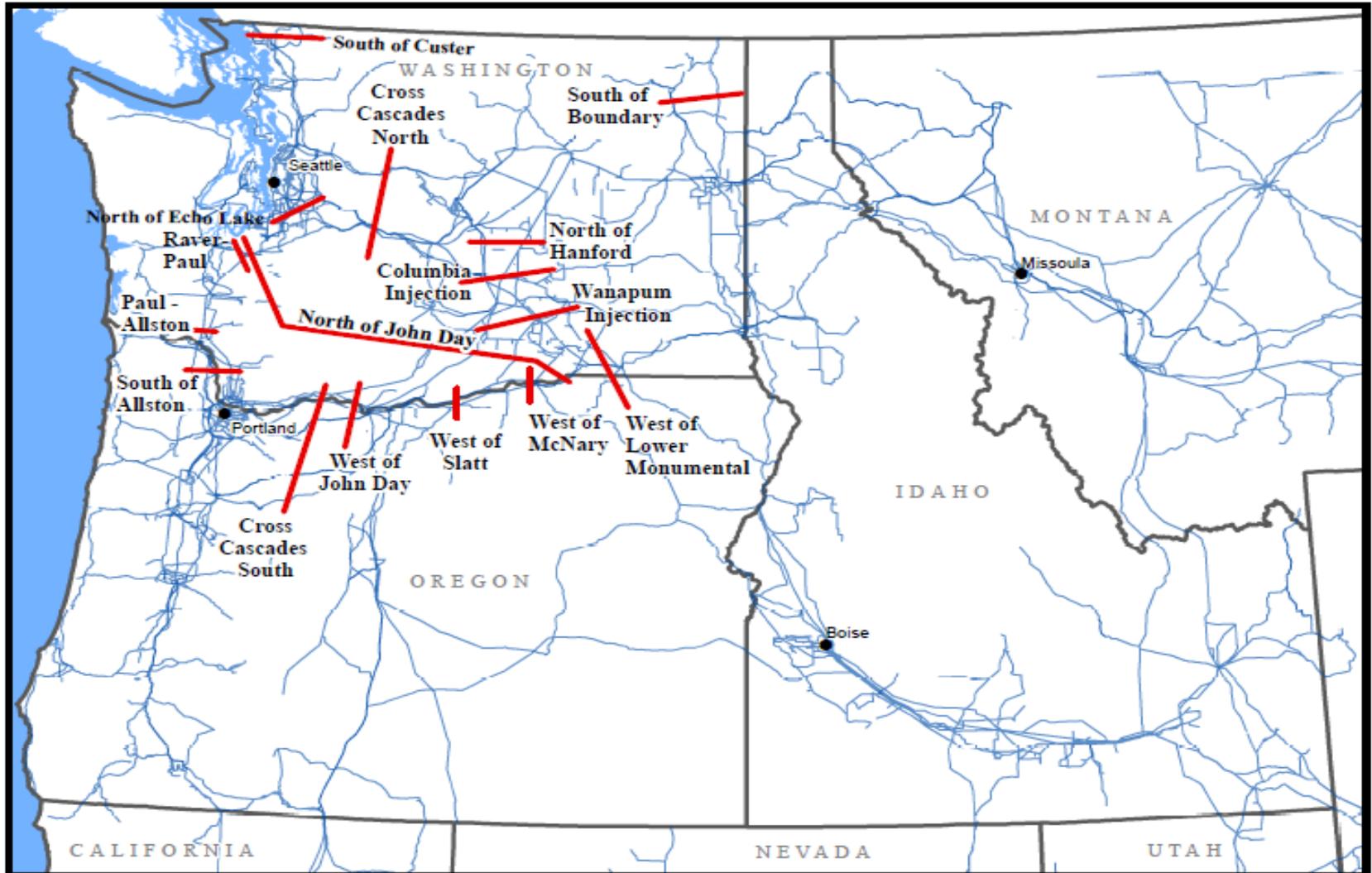
Current Practice

- SOL ranges are set up to 2 weeks before Preschedule
- SOLs are based on forecast conditions and may be set at the low range to accommodate extreme conditions
- SOLs may be updated in response to new unforeseen system conditions

SOL Updates

- What to update
- How to update
- When to update

What to Update

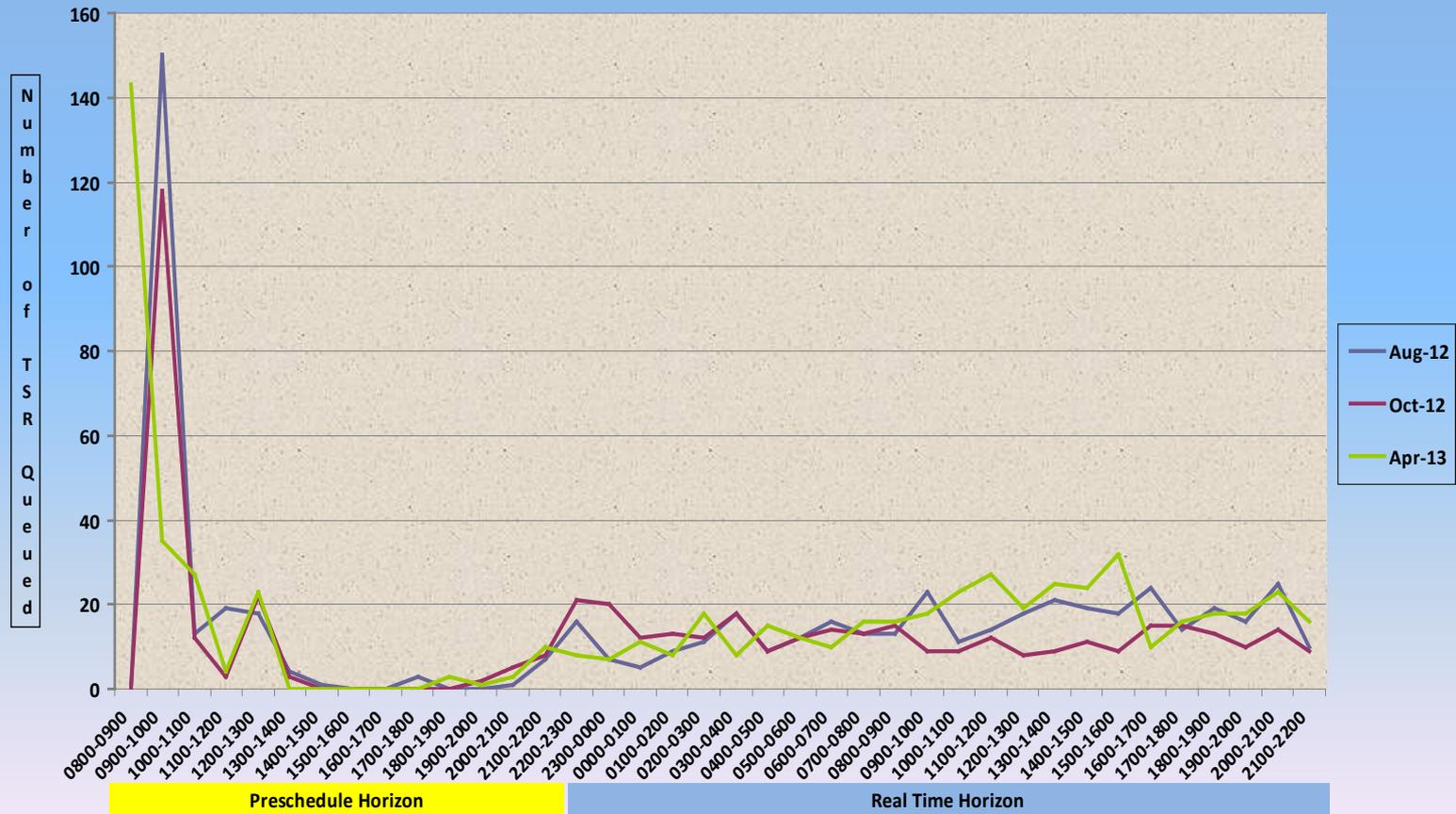


SOL Updates

- How to update
 - Factors affecting SOLs
 - Temperature
 - System Topology
 - Generation Patterns
 - Load Patterns
 - Options?

When to Update SOLs?

Hourly Firm TSR Queued for Start Time Next Day (Preschedule) or Current Day (Real Time)



Out of Scope

- Managing hourly firm network sales (TSRs), but not schedules
- Managing hourly firm sales, but not hourly non-firm sales.
- Managing Hourly Firm sales separate from Pre-emption and Competition project
- STAR project to improve power flow data and scenario analysis and state awareness tools by 2016 on a separate track

Customer Coordination

- Interim Project announced 4/11/2013
customer forum
- Customer kickoff presentation, 4/26/2013
- Comments received 5/31/2013
 - Currently analyzing

Questions?