

NASPI Update -- 2015 and beyond

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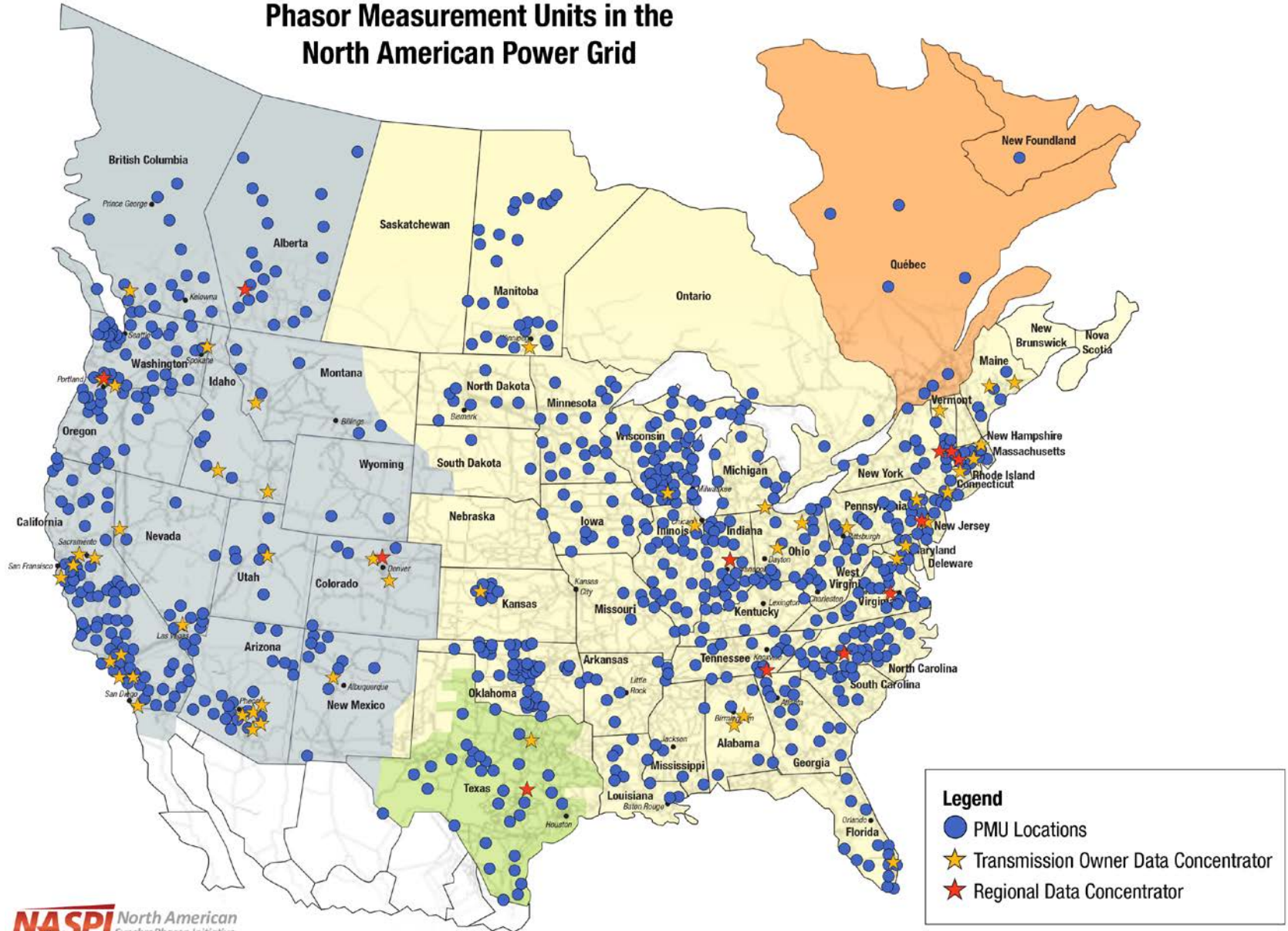


Overview

- What's NASPI?
- More PMUs installed
- Networking update
- What's next for NASPI?

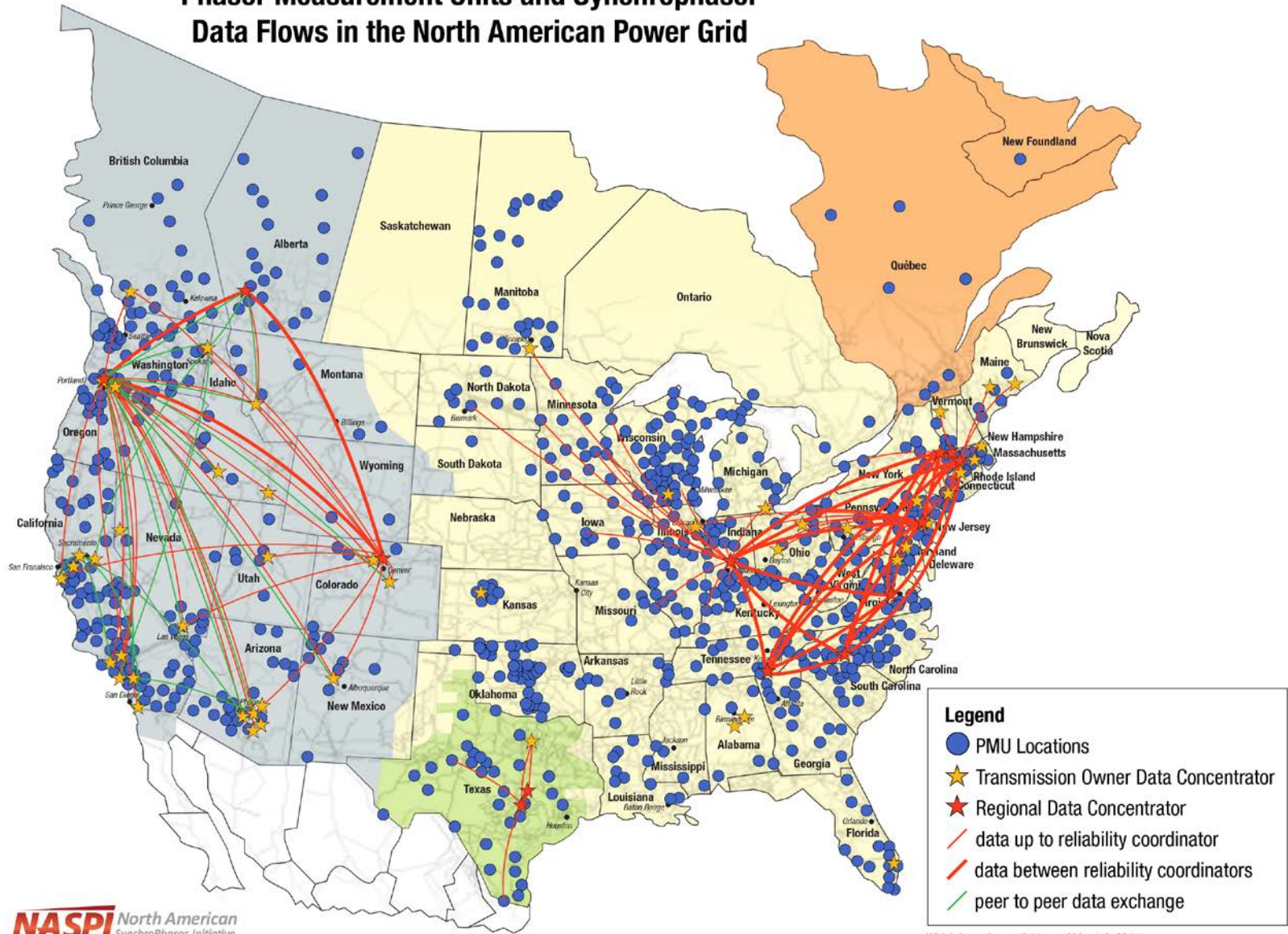
Latest PMU map

Phasor Measurement Units in the North American Power Grid



PMUs and data flows map

Phasor Measurement Units and Synchrophasor Data Flows in the North American Power Grid



What's NASPI, what's next?

The North American SynchroPhasor Initiative is a collaboration between the industry, academia, vendors, and government to advance the capabilities, use and value of synchrophasor technology.

- DOE funds continuing R&D, technical standards acceleration, project manager
- EPRI providing meeting and limited technical support (as of 2014)
- 1000+ members, 200+ people at meetings, international contributions
- Two meetings/year plus technical task team efforts

NASPI mission

Updated mission and focus (2014-2015)

- Accelerate recognition of benefits and value from current synchrophasor system and technology investments, particularly control room solutions
- Continue joint information-sharing and problem-solving efforts, including open-source software, data delivery and quality improvements
- Continued mainstreaming of synchrophasor technology, activity and expertise, cooperating with NERC, IEEE, IEC, and others

Current NASPI priorities

- Outreach
- Document best practices (consolidate learning from SGIG and other synchrophasor projects)
- End-to-end data quality and availability
- NASPInet 2.0 network design and update
- Update the synchrophasor value proposition
- Cyber-security for synchrophasor systems
- Synchrophasor software exchange
- Big data analysis for baselining and pattern recognition
- Data sharing with researchers

What have we done lately?

- New technical reports on high-value synchrophasor uses
 - PMU data for model validation
 - Diagnosing equipment health & mis-operations using PMU data
 - PMU installation costs and considerations
 - Coming soon – synchrophasor maturity model
- Technical workshops
 - State estimation & synchrophasor data (3/15)
 - Oscillation detection & voltage stability tools comparison (10/14)
 - CIGRE-NASPI synchrophasor tutorial (10/14)

NASPI awards

Recognizing excellence in 2014

- Outstanding utilities of the year – Dominion Virginia Power & BPA
- Volunteer of the year (VOTY) – Vahid Madani (PG&E)
- Control Room Solutions Task Team VOTY – Jim Kleitsch (ATC)
- Data & Network Management Task Team VOTY – Bob Braden (USC)
- Engineering Analysis Task Team VOTY – Kyle Thomas (DVP)
- Performance Requirements, Standards & Verification Task Team VOTY – Tony Weekes (Manitoba Hydro)
- Outstanding Graduate Student – Scott Ghiocel (RPI)
- Outstanding Undergraduate Student – Micah Till (UT-Knoxville)

Related accomplishments

- IEEE Standards Association Uniform Test Plan for Evaluating IEEE C37.118.1 Conformance of Synchrophasors for the Power Grid (1/15)
- IEEE-SA & Consumers Energy Test Lab testing of PMUs for C37.118.1 conformance
- NERC Standards Authorization Request update on real-time tools – new SAR committee being selected now

What's next for NASPI?

- Next meeting – October 14-15 2015, in conjunction with CIGRE Grid of the Future meeting. NASPI theme is user success stories with vendor show.
- Growing NASPI Synchrophasor Software Exchange --
<https://www.naspi.org/synchrophasorsoftware>
- More technical papers, best practice documentation and value proposition coming soon

Some useful resources

- www.naspi.org
- Synchrophasor reference list
<https://www.naspi.org/documents>
- NASPI Technical Workshops
<https://www.naspi.org/techworkshops>
- NASPI Work Group meeting presentations
<https://www.naspi.org/meetings>
- NASPI Synchrophasor Software Exchange
<https://www.naspi.org/synchrophasorsoftware>
- NASPI Project Manager -- alisonsilverstein@mac.com

Next meeting – October 14-15, in conjunction with CIGRE-North America Grid of the Future Conference, Chicago