North American SynchroPhasor Initiative
NASPI & NERC
Update and Initiatives

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March 30, 2011

Overview
NASPI & NERC Initiatives

- NASPI intro
- NASPI & NERC priorities and initiatives
- NASPI and DOE cooperation
- Meetings

NASPI Intro

- NASPI is a voluntary collaboration between the electric bulk power system community (industry, vendors, academics, consultants), NERC and DOE to advance the deployment and use of synchrophasor technology.
- NASPI priorities are set and executed by industry volunteers
- NERC funds the NASPI PM, meetings, and Grid Protection Alliance work on phasor infrastructure development
- DOE funds phasor research projects and support to NASPI Task Teams by National Lab staff and CERTS program contractors
- NIST funds some of the standards development work
- NASPI organization
  - Working Group (150+ members)
  - Task Teams (Data & Network Management, Ops & Training, Performance & Standards, Planning, Research)
  - Leadership Team
  - Executive Steering Group
  - Project Manager

Long-Term NASPI Priorities

- Accelerate convergence toward and development of technical standards for phasor technology
  - PSTT standards and guideline development integrated with NIST PAP-13
  - DNMTT on NASPInet architecture
  - SGIG awardee reports on system design, device functionalities, applications
  - Cyber-security integrated into architecture, standards and implementation
- Educate and grow awareness of value and successful uses of phasor technology to improve grid reliability and economics
  - NASPI meetings on success stories, SGIG deployments, vendor shows
  - NERC RAPIR report, OC and PC presentations
  - PITT work on model validation and FIDVR
  - OITT work on operator training
- Stay ahead of emerging issues (e.g., emerging architecture requirements, data access, data quality, device capabilities)
  - Grid Protection Alliance work on needed phasor system infrastructure pieces
  - PITT-OITT-GPA-EPG work on phasor data quality and availability
  - Technology and applications roadmapping
- Support DOE and SGIG awardees

Current NASPI Priorities

- Complete first batch of technical interoperability standards, guidelines and protocols for phasor technology
- Assure that meeting technical content is focused and high quality, to serve community needs and priorities (e.g., phasor data availability and quality)
- Get new Executive Steering Group engaged and giving guidance to remove roadblocks to phasor technology use and promote NASPI participation by industry volunteers
- Help GPA get effective PMU Registry design and implementation up and in use by all PMU owners
- Update roadmaps for phasor technology and applications
- Expand recognition of value, role of phasor technology
  - Help DOE get broad metrics on phasor use and impact
  - Improve website (www.naspi.org)
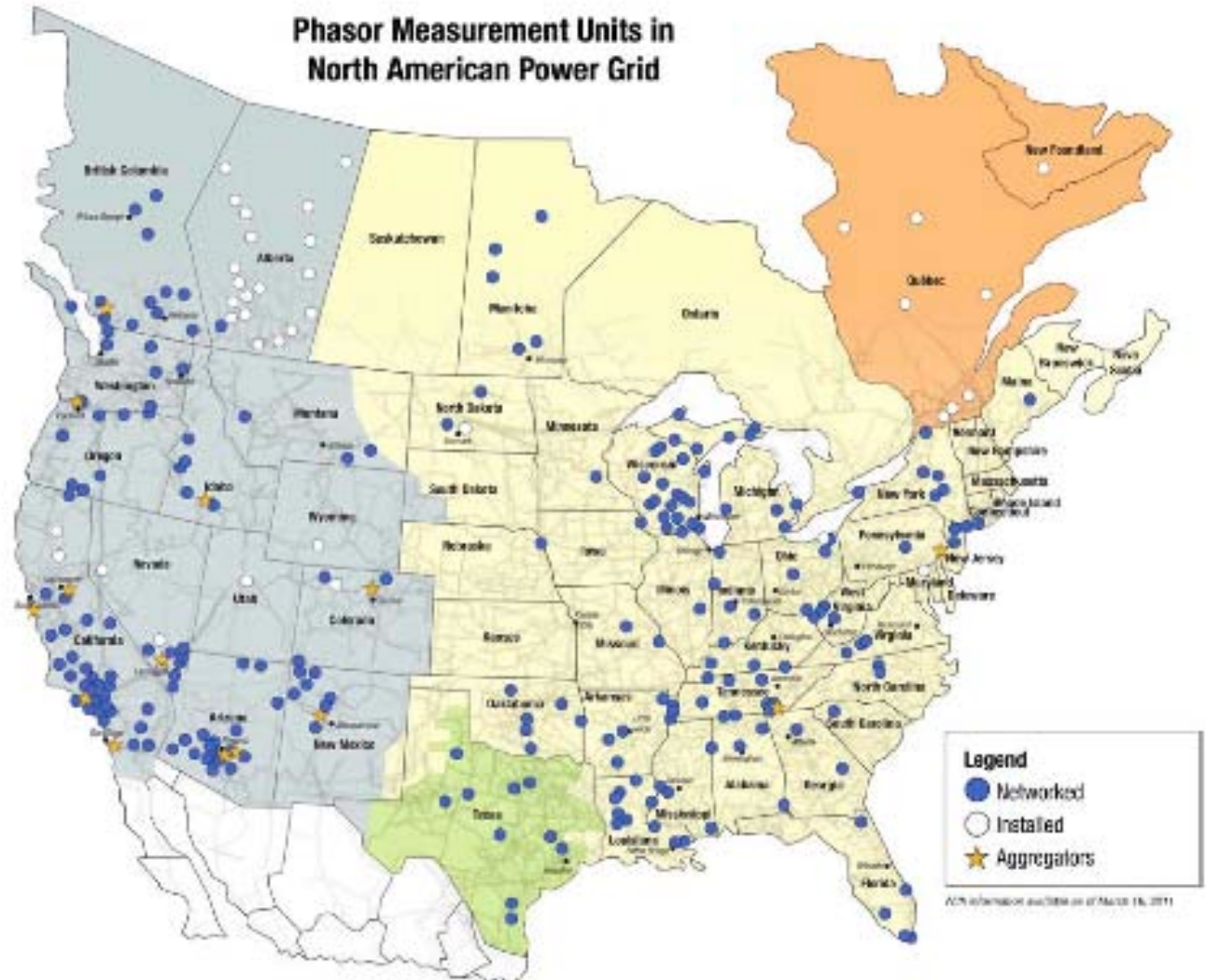 - OC-PC and other presentations and boilerplate

NERC Priorities

- Accelerate adoption and use of phasor technology for bulk power system reliability
- Expedite development of phasor infrastructure pieces needed for consistent, successful implementation
  - Grid Protection Alliance work includes PMU Registry, openPDC, openPG (phasor gateway), openHistorian, PMU Connection Tester, PDC Test Bench, openDSR – all open source software with built-in cyber-security
  - Get multiple phasor data hubs established across continent
  - GPA support to TVA for Eastern Intercon phasor data collection, archiving, and distribution
  - NASPI Project Manager and meetings
- Mainstream phasor technology and NASPI role out of NERC management into industry around 2013

NASPI and DOE Cooperation

- NASPI organizes meeting content to help awardees and vendors work through SGIG project deployment needs

- NASPI October meetings as venue for SGIG project and research progress reporting

- NASPI community accomplishments (e.g., technical standards development, RAPIR report) becoming integrated into DOE SGIG build and impact metrics

- DOE-funded research enabled phasor technology deployment and supports technology trajectory (e.g., NASPInet, baselining research, FIDVR, new analytical tools, PMU assessment)

- DOE supports NASPI task teams with National Labs and CERTS staff

- DOE-funded NIST Smart Grid standards efforts accelerating and funding parts of PSTT and IEEE and IEC work on key phasor technology standards

More PMUs in North America

East -- 124 PMUs

WECC -- <100 PMUs

ERCOT -- 10 PMUs

(Networked, 3/11)

Phasor Measurement Units in North American Power Grid

Legend
- Networked
- Installed
- Aggregators

NASPI Meetings

- June 8-9, 2011
  - Toronto Airport Marriott, in conjunction with NERC OC-PC-CIPC meetings
  - Synchrophasor success stories

- October 12-13, 2011
  - City undetermined
  - SGIG reports (projects and research awards)

Past meeting presentations posted at
http://www.naspi.org/meetings/workgroup/workgroup.stm

More information?

- See www.naspi.org
- Join NASPI listserv at http://www.naspi.org/contact.stm
- Contact Alison Silverstein at alisonsilverstein@mac.com

Thank you!