



Update on HPX

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**Arizona Corporation Commission
Biennial Transmission Assessment Workshop 1**

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Phoenix, AZ



About the Project

OVERVIEW

The High Plains Express (HPX) initiative is a roadmap for transmission development in the Desert Southwest and Rocky Mountain region to significantly strengthen the eastern portion of the Western grid. It would potentially incorporate the transmission projects already under development within the HPX footprint.

With added North-South and East-West transmission capability, markets for renewable energy would be broadened, system reliability would be enhanced, and the ability to make economic transfers of energy would provide cost-savings opportunities for consumers in the states of Wyoming, Colorado, New Mexico, and Arizona.

What's New

January 2010

[Stakeholder meeting presentation »](#)

January 2010

[New project maps »](#)

April 2009

[Stakeholder Meetings Notes »](#)

Next Meeting

The final stakeholder meeting is being planned for the 3rd quarter of 2010.

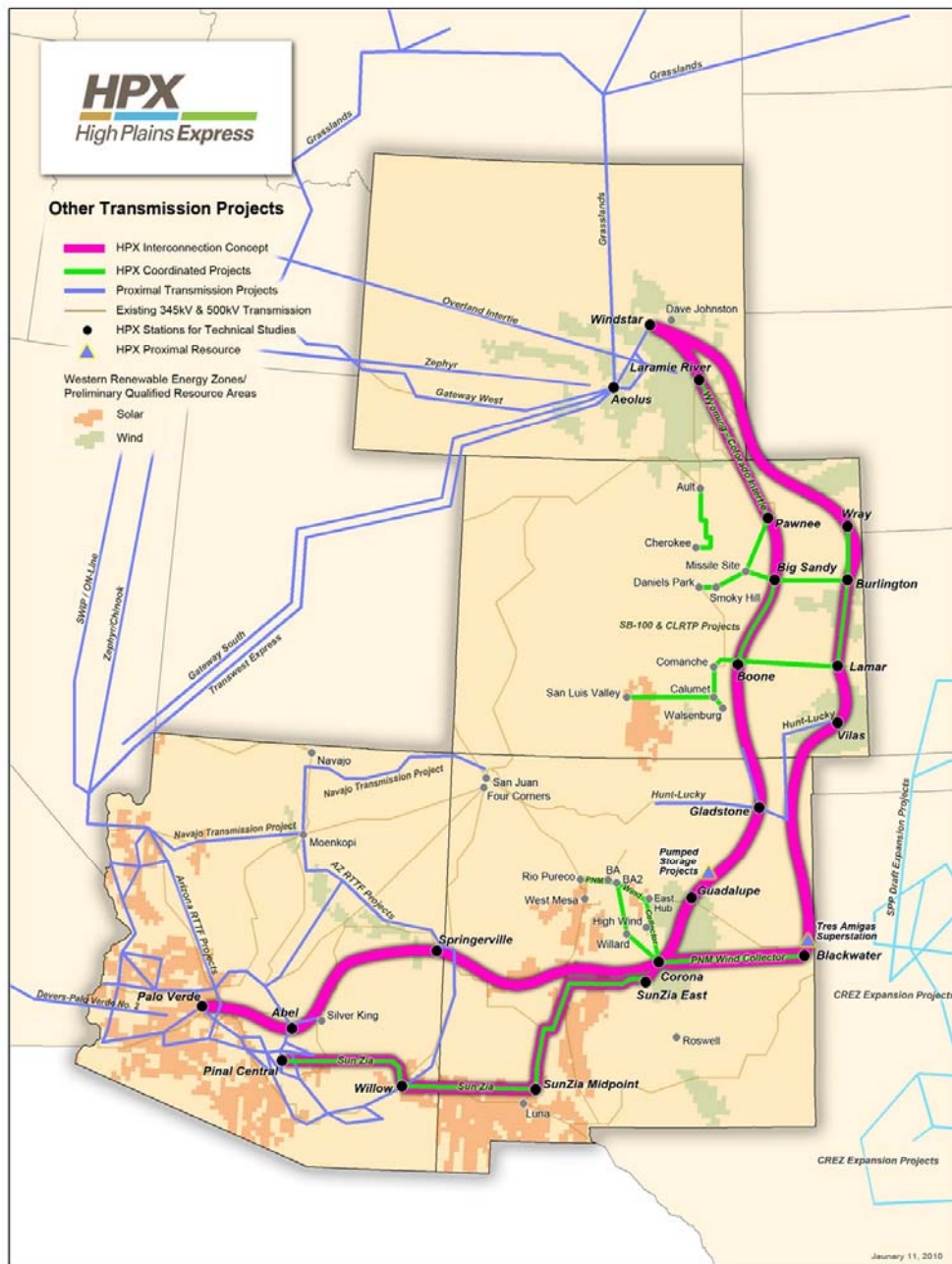
Presentations

April 2009

[Stage 2 Stakeholder Kickoff Meeting](#)

A regional roadmap for transmission expansion

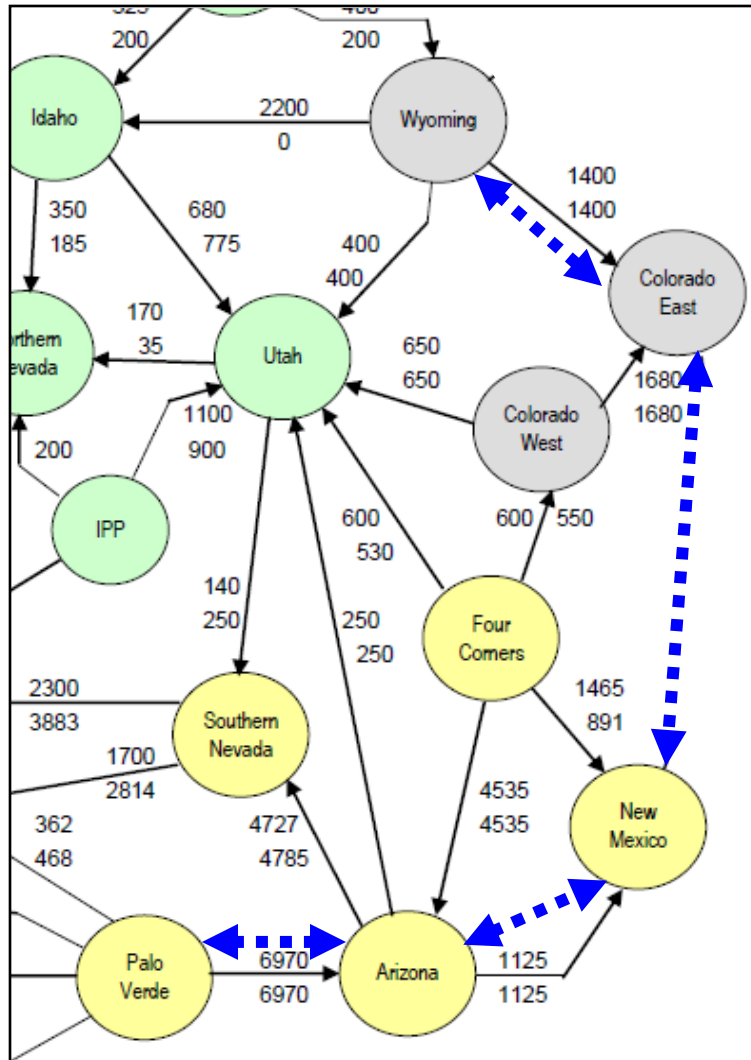
- Two 500 kV AC lines
 - ✓ 3,500 MW - \$5 BB
 - ✓ 1,200 – 1,500 miles
 - ✓ Phased development
 - ✓ Component projects
- Status – Stage 2 Feasibility
- Unprecedented collaboration



Benefits of HPX

- Economics
- Reliability
- Renewables
- Economic Development
- Removing Transmission Constraints
- Off-System Sales (for some participants)
- Public Policy
 - Right-sizing, land use optimization, enabling renewable markets, CO₂ reductions, long-range planning, etc.

Increase in Transfer Capacity



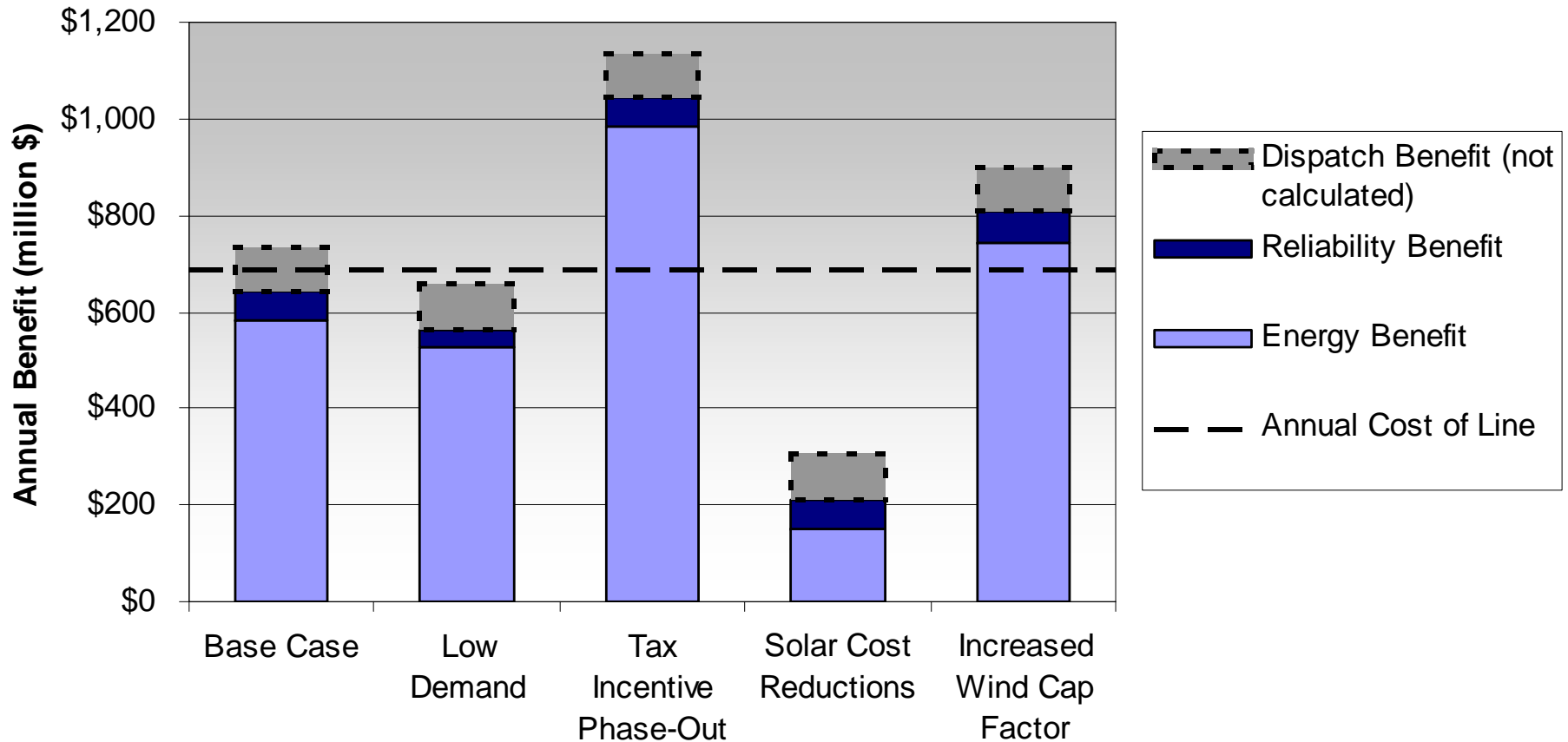
- Existing paths are fully committed
- HPX would materially increase the transfer capacity between regions
- New WECC report quantifies the lack of firm ATC

 **HPX Route with ~3,500 MW of potential transfer capacity**

Legend
 For each pair of numbers, the top or left number is the transfer capacity (MW) in the direction of the arrow. The bottom or right number is the transfer capacity in the opposite direction of the arrow. Values in bold or yellow highlighting signify upgraded paths. External ties are ignored as indicated by the dashed lines.

Economic Studies (E3)

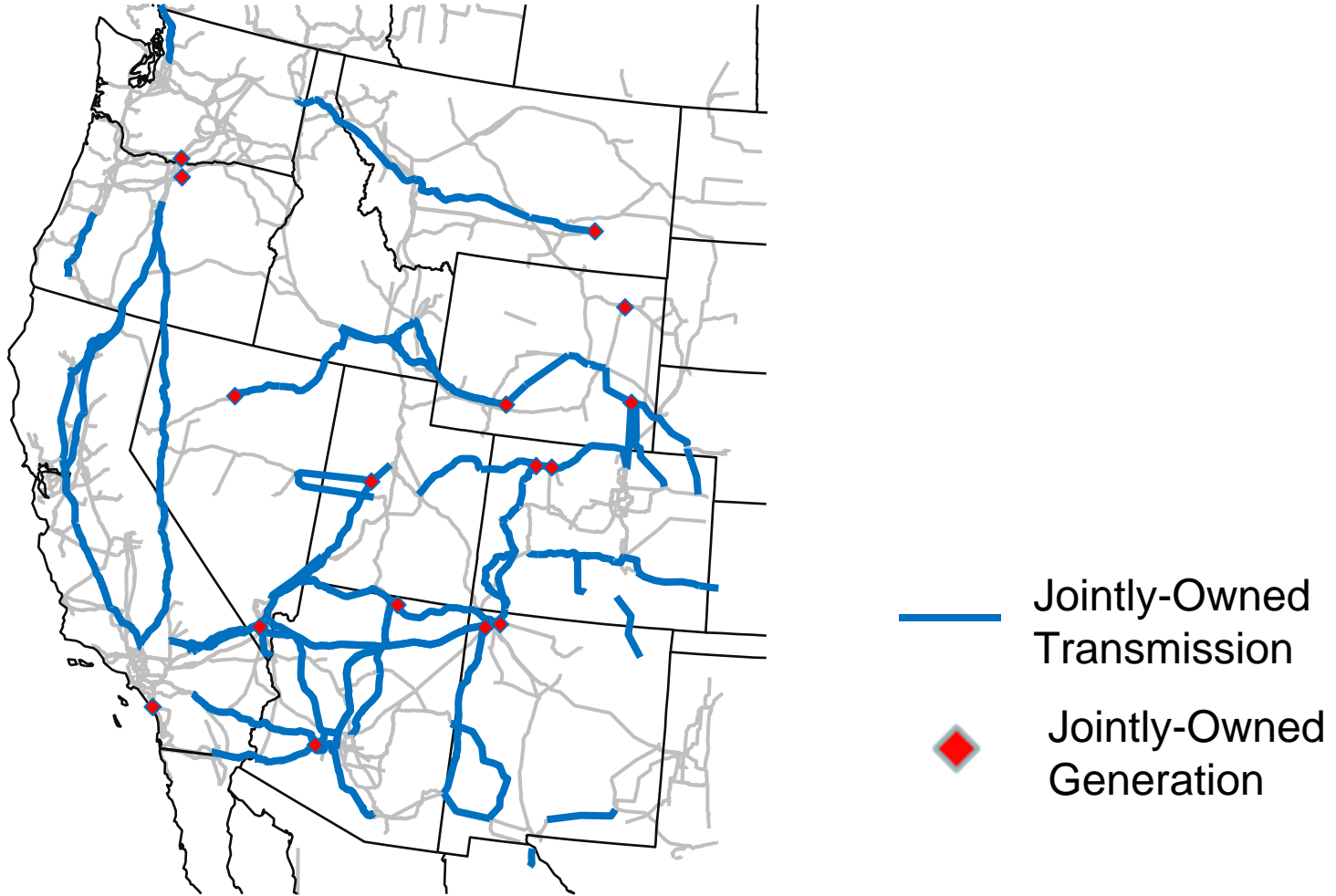
**Annual Benefits of HPX Line
(Parallel 500kV Line Configuration Scenarios)**



Stage 2 Activities & Events

- Technical
 - Staged development
 - Single-circuit vs. double-circuit
- Commercial
 - Joint participation project
 - Cost recovery drives investment: traditional & public policy
 - Tariff design
- Routing/Permitting
 - Tetra Tech
- Communications
 - Stakeholder meeting in the Fall of 2010
- Public Policy
 - SW Renewable Energy Transmission Conference
 - NREL's Western Wind & Solar Integration Study
 - WGA's Western Renewable Energy Zones (WREZ) Initiative

Jointly-Owned Facilities in WECC



Source: Presentation by Arizona utilities at a recent ACC-sponsored conference