



WESTERN AREA POWER ADMINISTRATION TRANSMISSION INFRASTRUCTURE PROGRAM UPDATE

MAY 2011



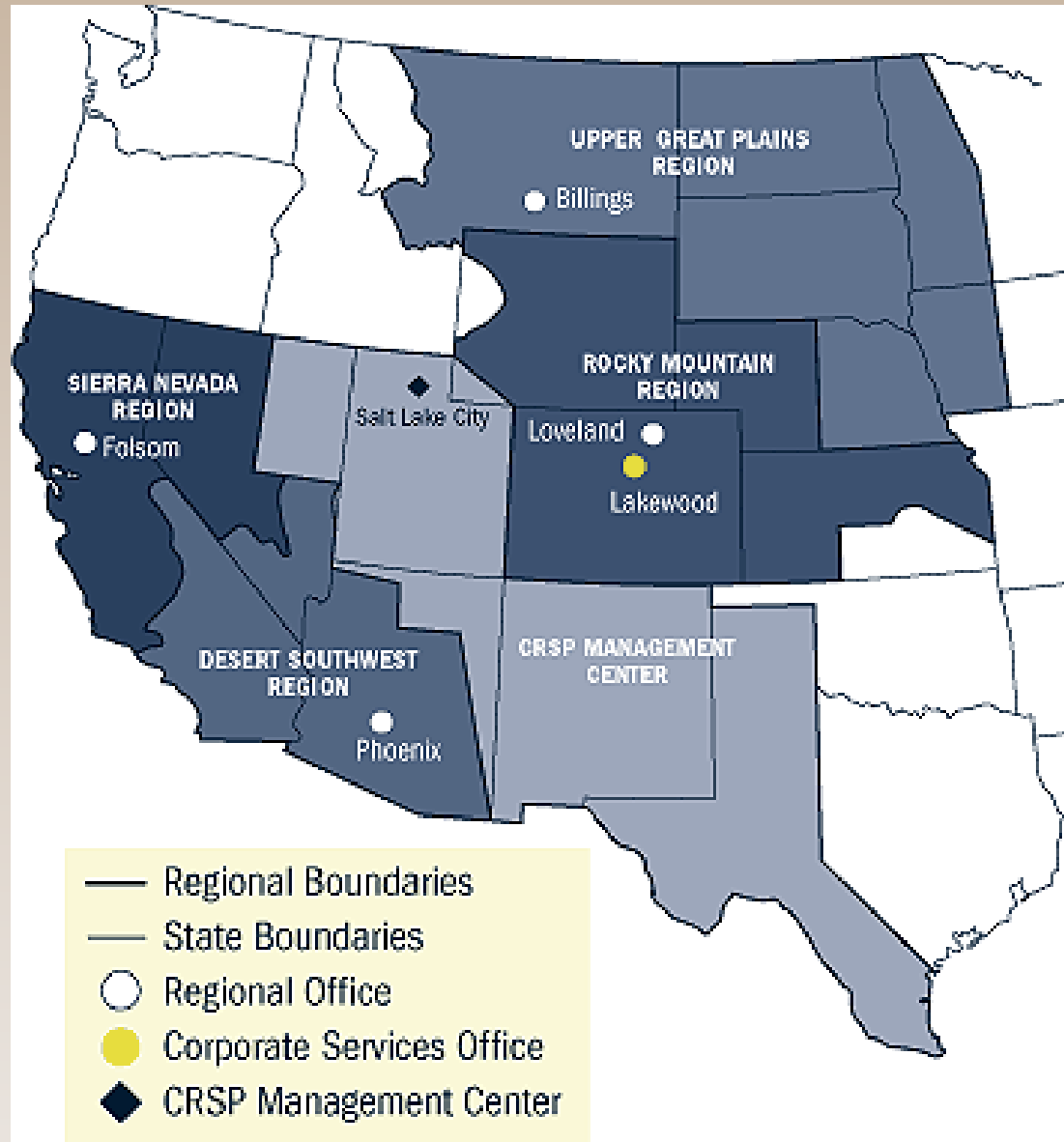


TOPICS

- **Western**
- **TIP**
- **TIP Projects - MATL**
- **Proposals Under Discussion**
- **Projects Expected to Borrow Next**



WESTERN'S SERVICE TERRITORY





OUR ROLES IN ENERGY



Glen Canyon Dam, Arizona

- Market clean hydropower at cost-based rates
- Transmit it to customers, 17,000+ miles transmission
- Control parts of the energy grid
- Manage interties
- Provide open access to transmission



TIP PROGRAM PRINCIPLES

Program Principles

- Encourage broad-based participation
- Uses Project revenue as the only source of revenue for:
 - Repayment of loan for project
 - Payment of ancillary service and O&M expenses
- Maintain controls for accounting and repayment - projects under this authority are separate and distinct
- Ensure project beneficiaries repay project cost



TIP PROJECT PRINCIPLES

Project Principles

- Must be in the Public Interest
- Must not impair system reliability or statutory obligations
- Have reasonable expectation of repayment of principal and interest of Treasury loan and associated project costs on a stand alone basis – costs cannot be integrated into existing projects
- Use a public process to set rates for new facilities
- Must independently obtain and arrange for the delivery of generation-related ancillary services

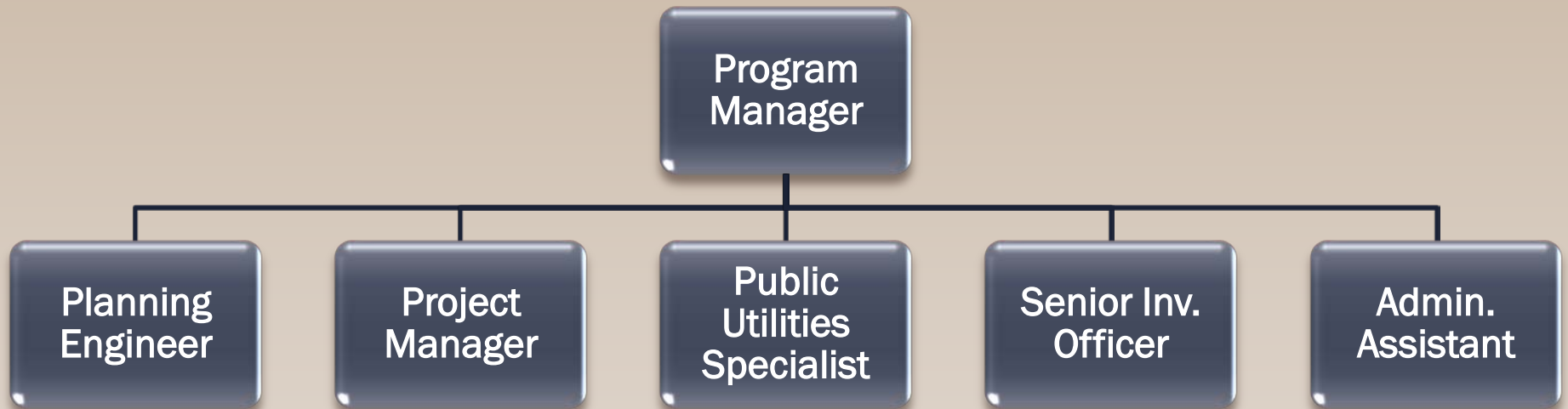


PROJECT EVALUATION CRITERIA

- Facilitate delivery of renewable energy to market
- Public interest
- No adverse impact to system reliability
- Project will generate enough revenue to repay costs
- At least one terminus in Western's territory
- Economic benefits, including jobs
- Satisfies Western's OATT
- Technically feasible
- Partners' financial stability and capability
- Project readiness
- Participation in region-wide and/or interconnection-wide transmission planning



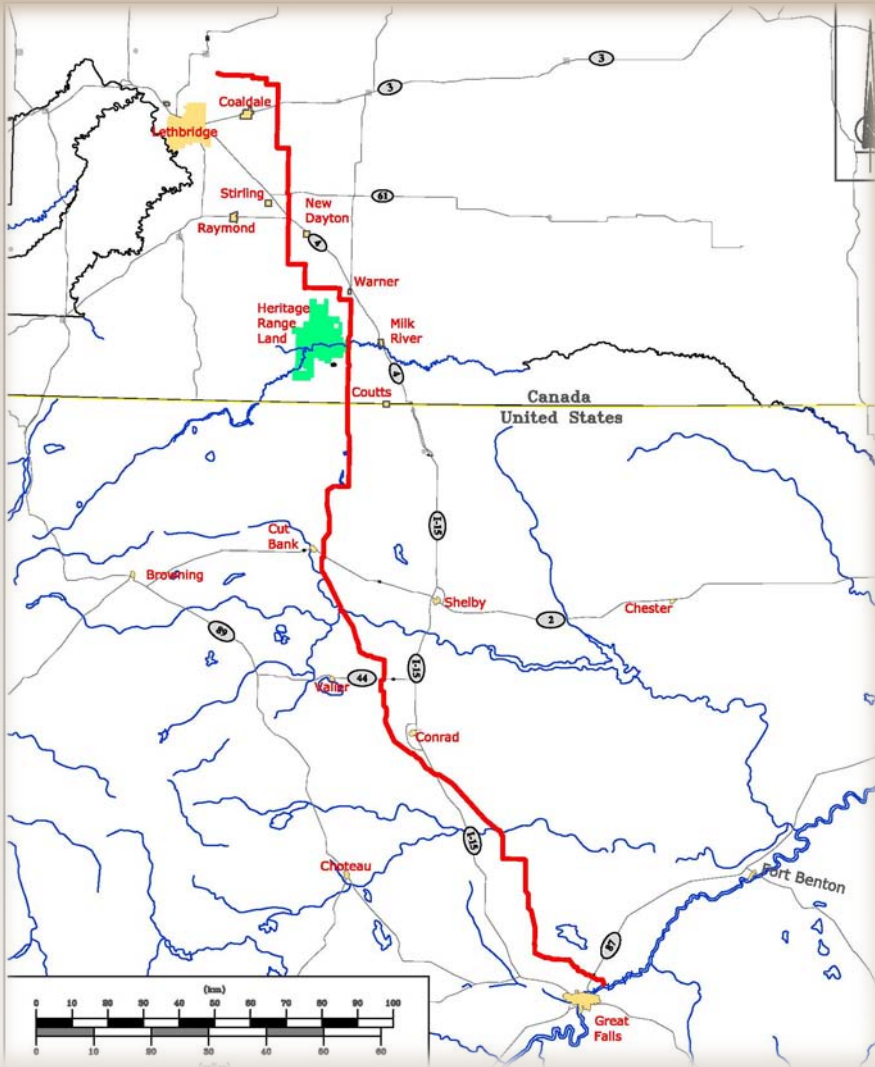
TIP OFFICE



TIP office, created in May 2009, establishes the policies and practices to implement Western's borrowing authority



MATL - SELECTED PROJECT - WESTERN AS FINANCIER



- New 230-kV transmission from Lethbridge, Alberta to Great Falls, Montana
- 300 MW (bi-directional) of wind energy connecting near line's midpoint
- \$161 million in TIP funding, \$213 million project cost
- Substation construction began June 2010
- Transmission construction began August 2010
- Commercial Operation Date Late 2011



PROJECT PROPOSALS UNDER DISCUSSION





TWE – PUBLIC/PRIVATE PARTNERSHIP

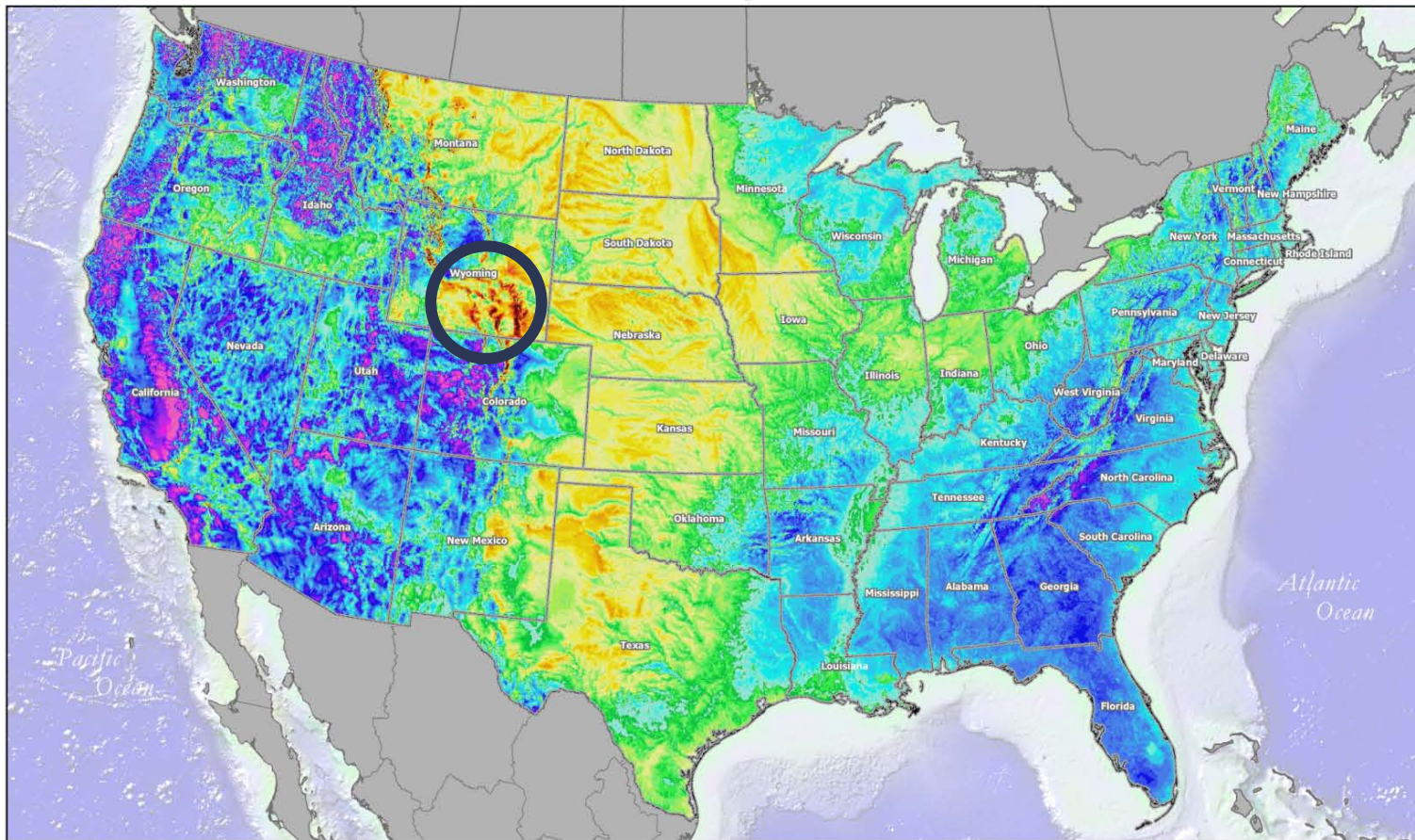
- 3,000 MW capacity
- 600 kV HVDC
- About 725 miles
 - Federal: 434
 - Private: 240
 - State: 51
- 2015 in-service date
- Capable of delivering reliable, cost-effective renewable energy from western Wyoming wind projects
- Western joint lead with BLM on EIS



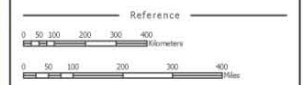
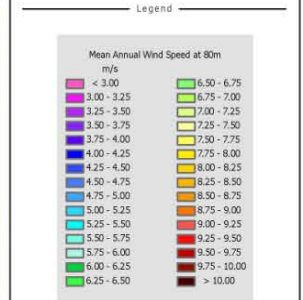
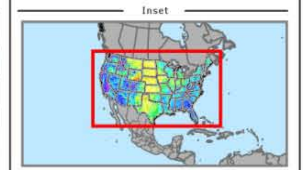


HIGH-QUALITY WYOMING WIND

WIND RESOURCE OF THE UNITED STATES Mean Annual Wind Speed at 80 Meters



windNAVIGATOR[™]
Chart Your Course



Wind Data Resolution: 2.5 km
Coordinate System: N. America Lambert Conformal Conic
Datum: NAD83
Date: June 2008

Disclaimer
This map depicts the approximate annual average wind speed over a 2.5-kilometer (1.6-mile) wide grid square at the indicated height above ground. It was created by AWS Truewind using its advanced atmospheric models and historical weather data and derived from AWS Truewind's high-resolution 200 m MesMap® product. The map is intended to provide a general indication of the wind resource over large areas, and should not be used to design wind projects or to estimate energy production. For further information on services that address wind project design and energy production, please visit the Services section of our website or contact us.

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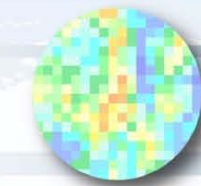
10 km



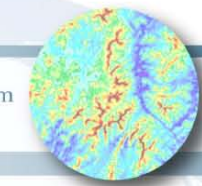
5 km

The Difference Is Clear

Higher resolution means higher confidence. Our emphasis on high-resolution modeling and extensive validation has resulted in products that energy developers and government planners rely upon for siting projects and assessing development potential. With windNavigator you get the accuracy and quality you have come to expect from AWS Truewind with the convenience of an online environment. Chart Your Course[™]



2.5 km



200 m

windNAVIGATOR[™]



TRANSWEST PROJECT PROPOSAL – PUBLIC/PRIVATE PARTNERSHIP

- 2010: TWE and Western enter into non-binding agreement for Western to potentially acquire 50% ownership of the TransWest Express Transmission Project
- 2010-11: TWE and Western continue due diligence and working to define the partnership to construct, operate and maintain TWE Project
- Financing: Western will finance its equity contribution using borrowing authority; funds ultimately will be repaid to U.S. Treasury with interest through its transmission rates



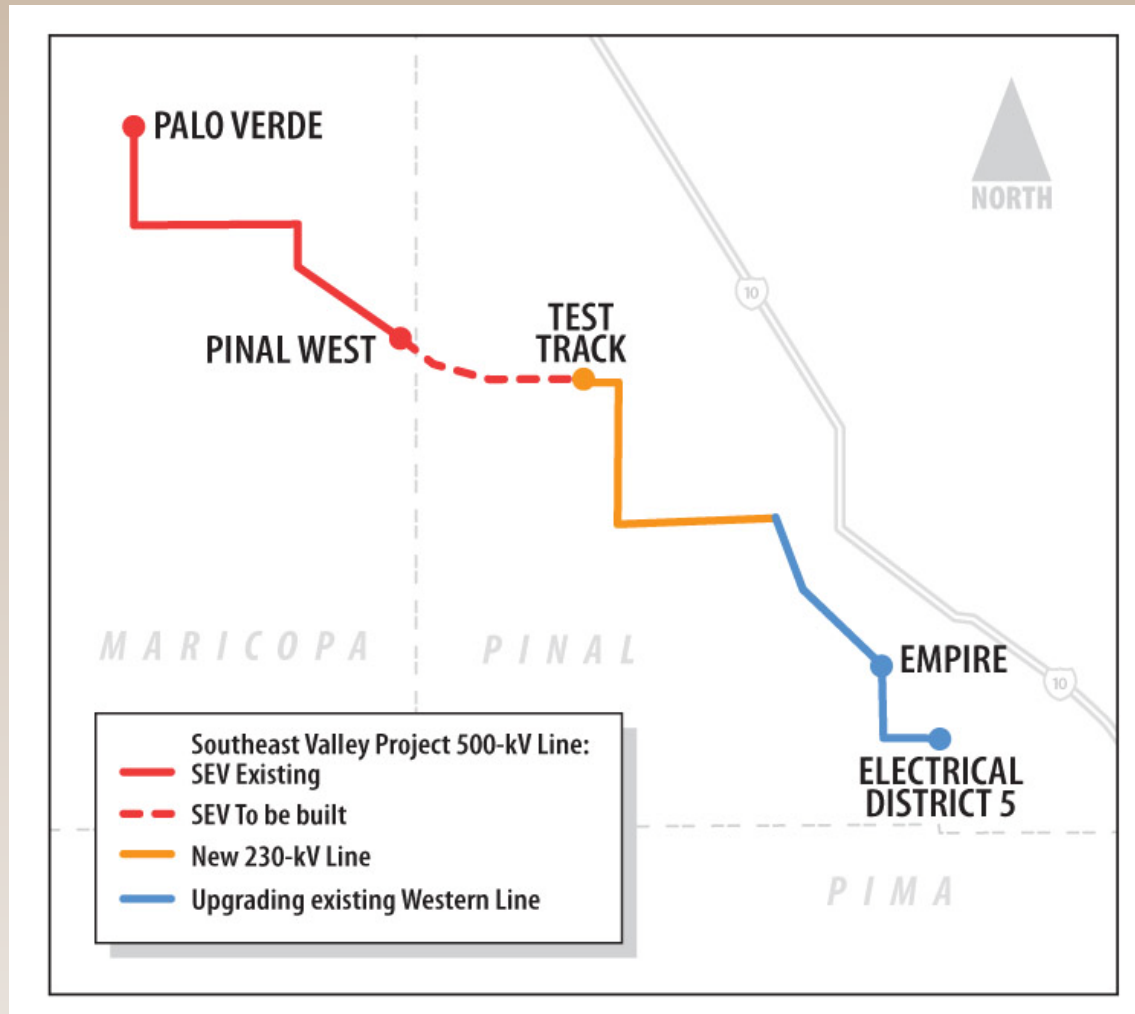
TRANSMISSION INFRASTRUCTURE PROGRAM FIT

- In the public interest
 - Jobs, tax revenue, indirect economic benefits
- Facilitates the delivery of renewable energy to markets
 - Connects high-quality wind resources with populated markets in the Southwest
- Will not adversely affect system reliability or operations
 - Strengthens the Western grid
- Offers reasonable expectation that proceeds will be adequate to meet Western's repayment obligations
 - Development phase approach



ED5-PALO VERDE HUB PROJECT PROPOSAL – CUSTOMER PARTNERSHIP

Maricopa & Pinal Counties, AZ





ED5-PALO VERDE HUB PROJECT PROPOSAL – CUSTOMER PARTNERSHIP

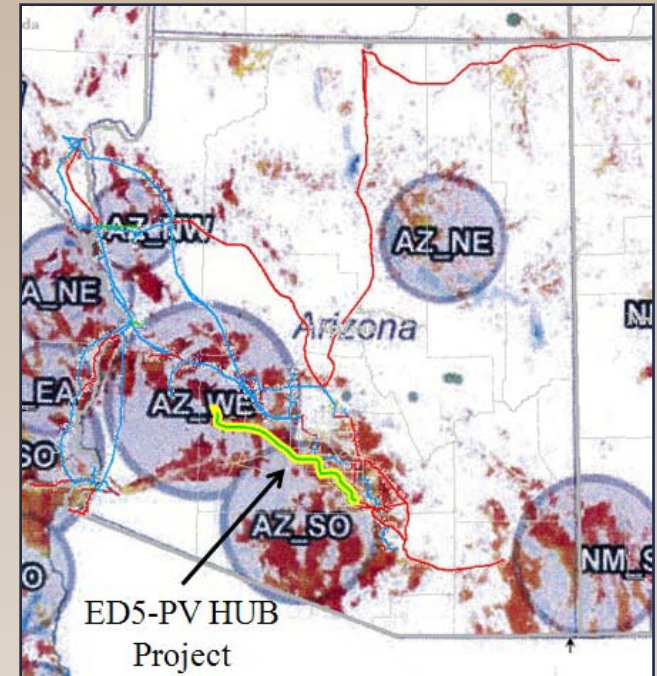
- Western's Desert Southwest Region and the Southwest Public Power Resources Group
- 45 circuit-miles of new and upgraded Western transmission line
- Purchase capacity rights on 66 miles of the Southeast Valley Project (SEV) 500-kV line
- Cost Estimate: \$91 million
- EA: Complete Summer 2011
- In Commercial Operation: 2015





OVERALL ED5-PVH PROJECT BENEFITS

- “Right-sized” to promote renewable energy development in region, especially solar
- Stimulate local economy - jobs
- Upgrading existing lines to add capacity, increase reliability, minimize project impact
- Enhances regional reliability of transmission services
- Partners committed to capacity and will repay principal investment; operating costs and interest through facilities use charge
- Renewable power for up to 15,000 homes



Western Governors'
Association Renewable Energy
Zones



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