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10-Year Regional Transmission Plan
PESD Conference
September 15, 2011

Glossary

- ECC** – Enhanced Curtailment Calculator
- EDTTRS** – Efficient Dispatch Toolkit Technical Review Subcommittee
- EIM** – Energy Imbalance Market
- EDT** – Efficient Dispatch Toolkit
- FERC** – Federal Energy Regulatory Commission
- IRP** – Integrated Resource Plan
- FOA** – Funding Opportunity Announcement
- MIC** – Market Interface Committee
- NERC** – North American Electric Reliability Corporation
- NGO** – non-profit, Non-governmental Organization
- RPS** – Renewable Portfolio Standard
- RTEP** – Regional Transmission Expansion Planning Project (activities funded by the DOE grant)
- SCED** – Security Constrained Economic Dispatch
- SCG** – Subregional Coordination Group (group of SPGs)
- SPG** – Subregional Planning Group
- SPSG** – Scenario Planning Steering Group (WECC multi-constituency steering group)
- SPSC** – State and Provincial Steering Committee (State steering group)
- TEPPC** – Transmission Expansion Planning and Policy Committee
- TSS** – WECC Technical Studies Subcommittee
- VGS** – Variable Generation Subcommittee
- WGA** – Western Governors' Association
- WIEB** – Western Interstate Energy Board
- WREZ** – Western Renewable Energy Zone



RTEP

What have we been asked to do?

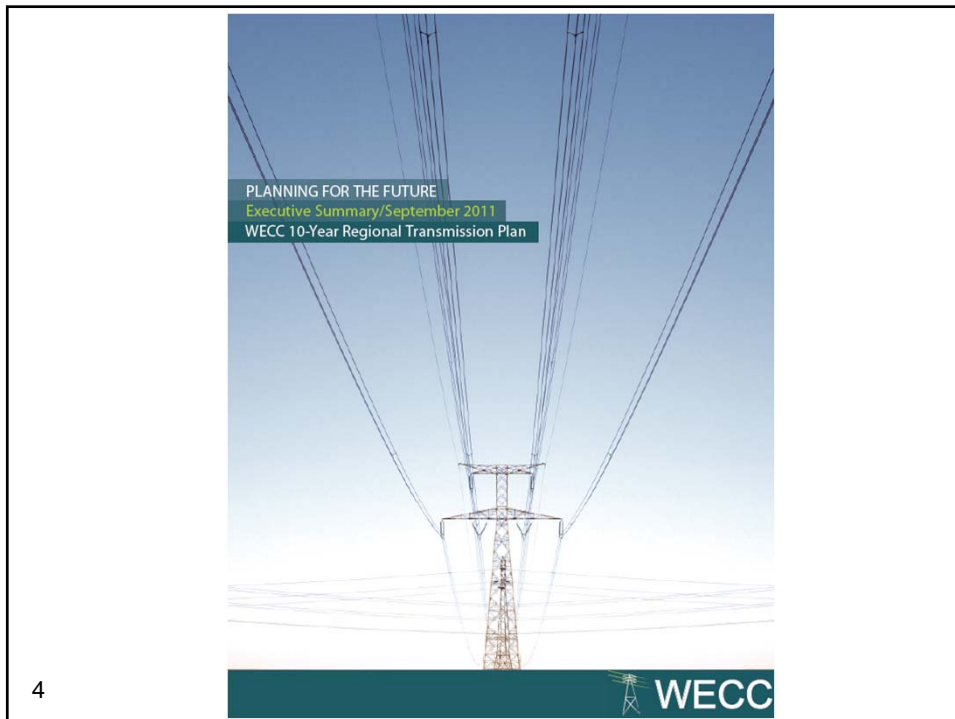
Regional Transmission Expansion Planning (RTEP)

Expand the breadth and depth of WECC's existing Regional Transmission Planning processes under TEPPC.

•2011 Deliverables

- Create a multi-constituency Steering Group
- **10-Year Regional Transmission Plan**
- Acquire new long-term planning tools
- Create educational materials

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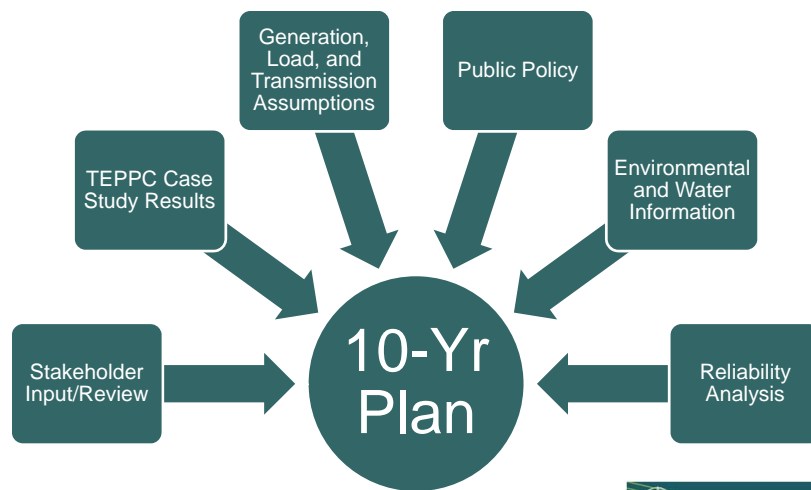
10-Year Regional Transmission Plan Plan Status

- The Plan was approved by TEPPC at their August 10 meeting
- The Plan will be considered by the WECC Board on September 21-22
 - The final draft will be posted on September 1

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10-Year Regional Transmission Plan Process Inputs



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10-Year Regional Transmission Plan Documentation Package

- Part 1 – Executive Summary Brochure
 - High-level document with the major observations, recommendations, and overview of the Western Interconnection.
- Part 2 – Plan Summary Brochure
 - Details on the study approach, process, caveats, observations, recommendations, and related information
- Part 3 – Plan Study Report – electronic-only
 - 2019 and 2020 Study Reports
 - Path Reports
 - EDTF Report
- Links to related documents by other organizations

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10-Year Regional Transmission Plan Key Messages

- The Plan is an regional perspective
 - Expected future network
 - Alternatives
 - Other insights
- The Plan is stakeholder-driven
 - Assumptions, studies, results
- This is the first-time for this product

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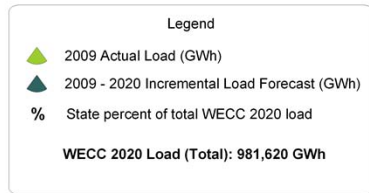
Expected Future Network

- Based on stakeholder-provided assumptions regarding loads, generation, and transmission
- The generation mix is a significant departure from the past
- The transmission network, including assumed additions, enabled energy to flow without significant congestion except in two areas

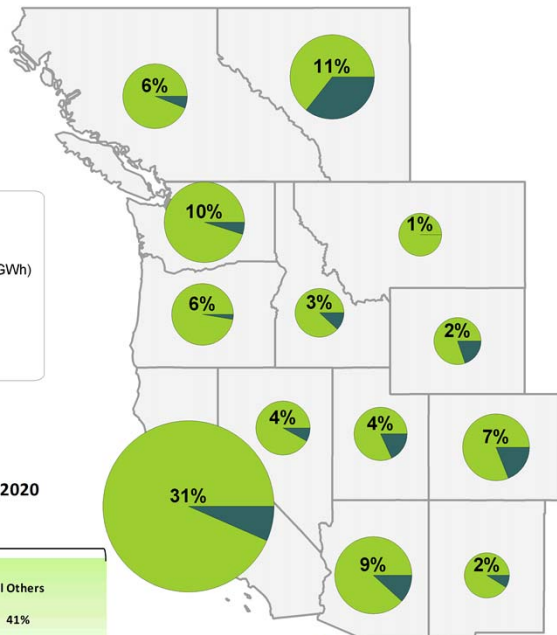
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2020 Load Forecast by State in Annual Energy

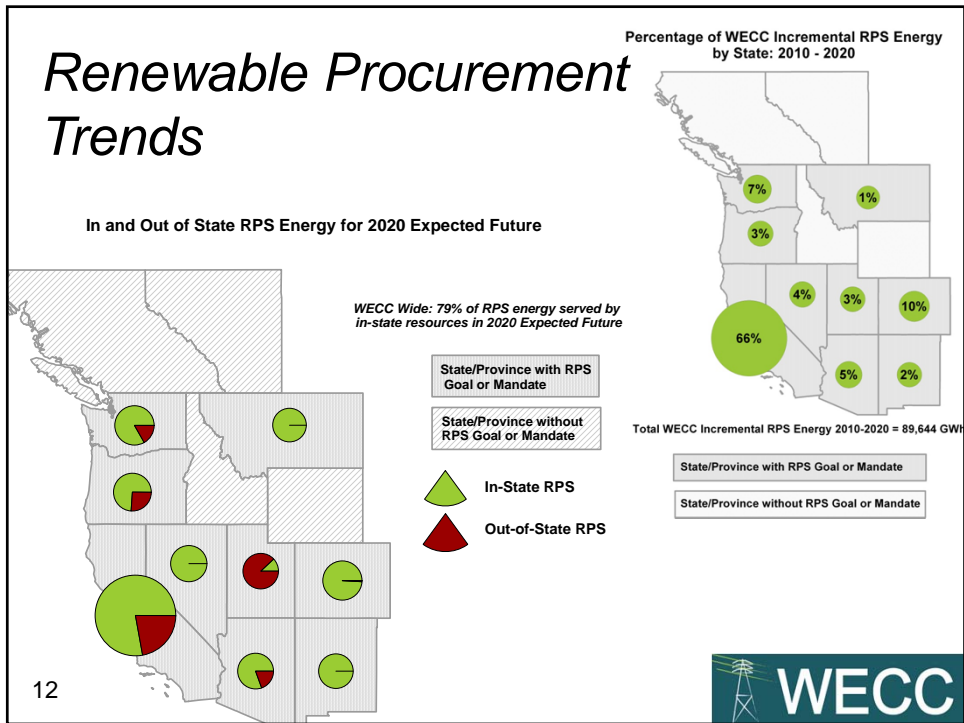
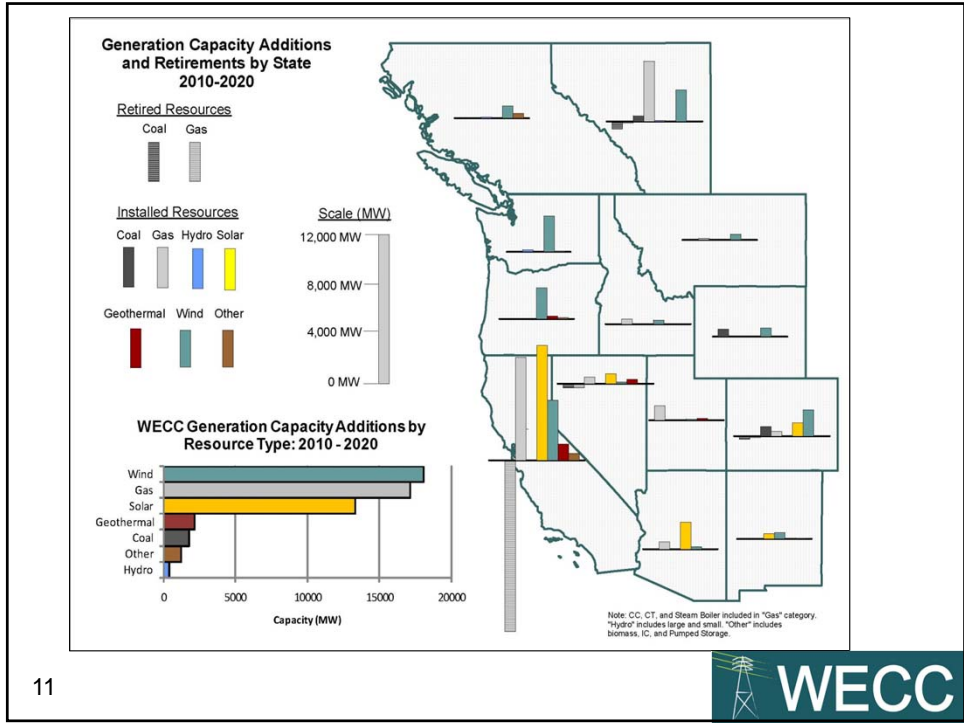


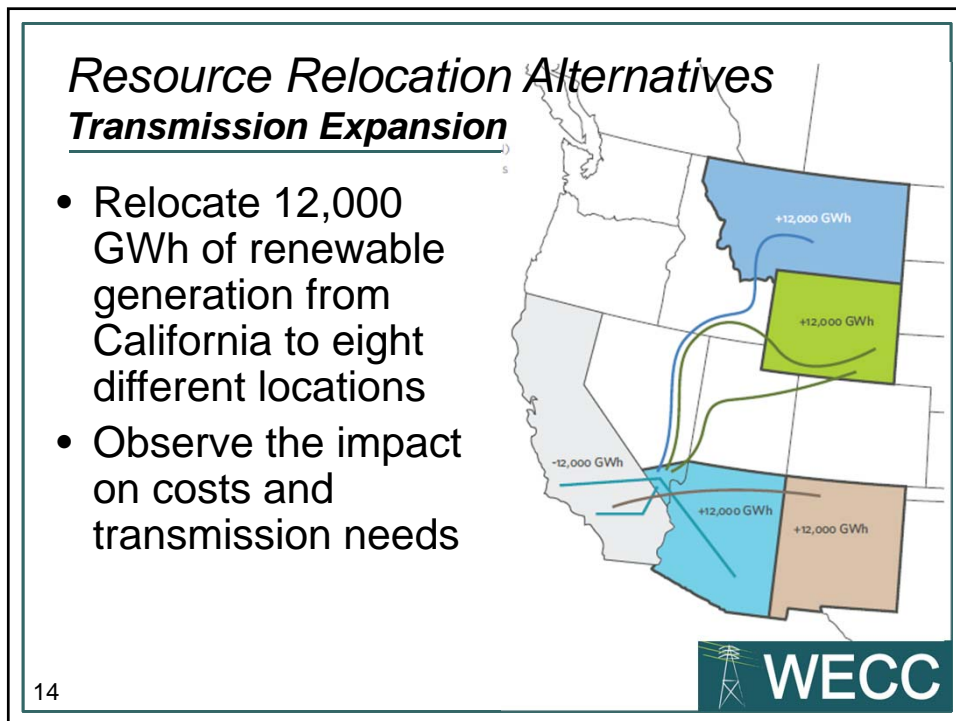
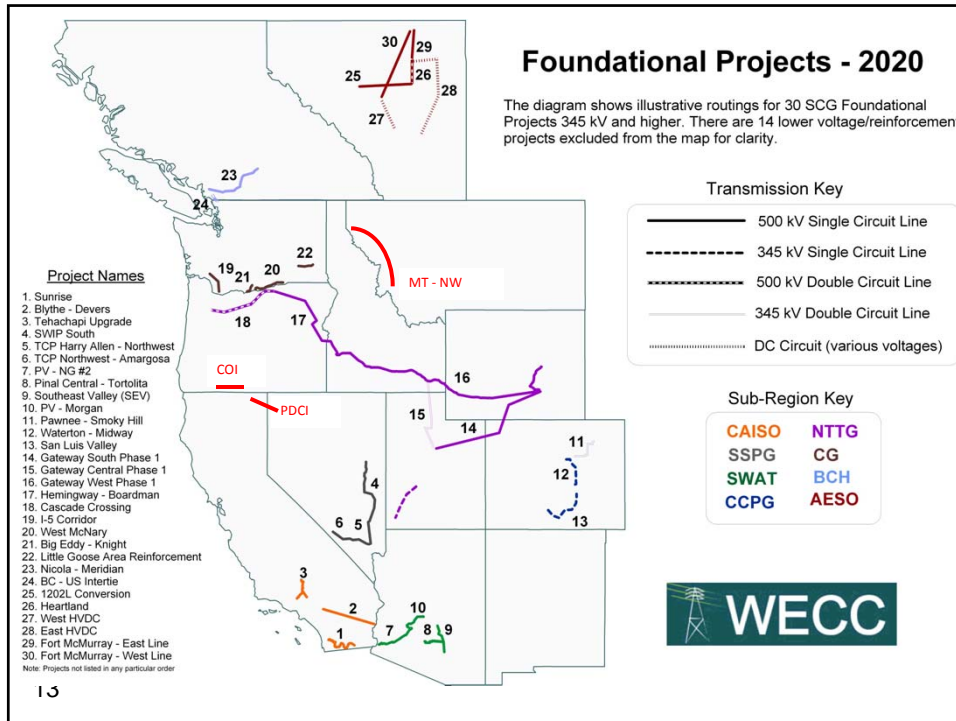
Incremental WECC Load: 2009 to 2020

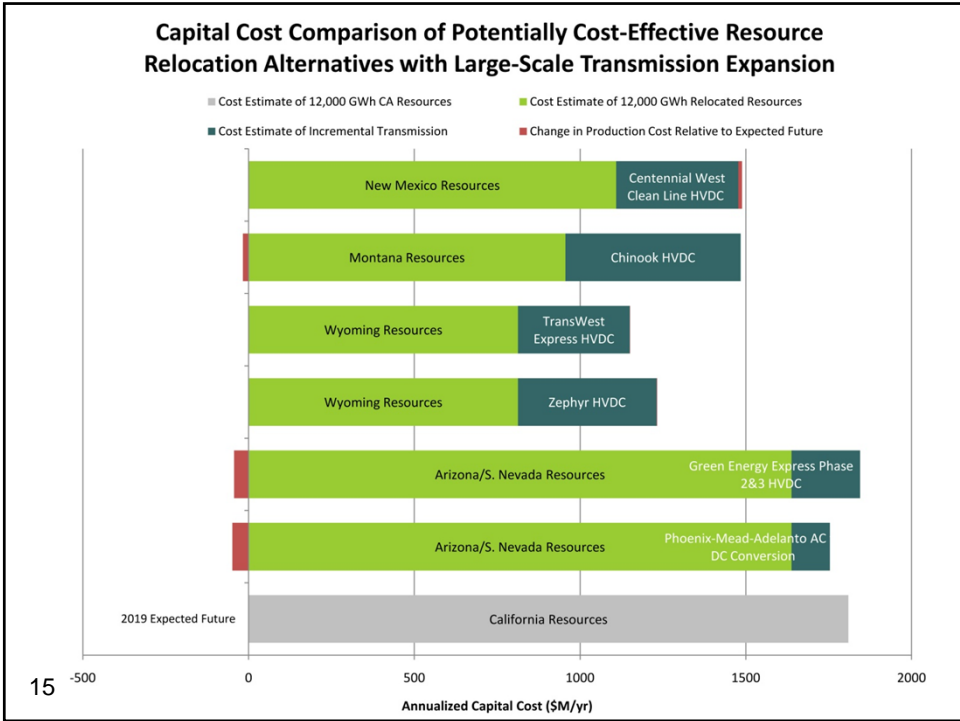


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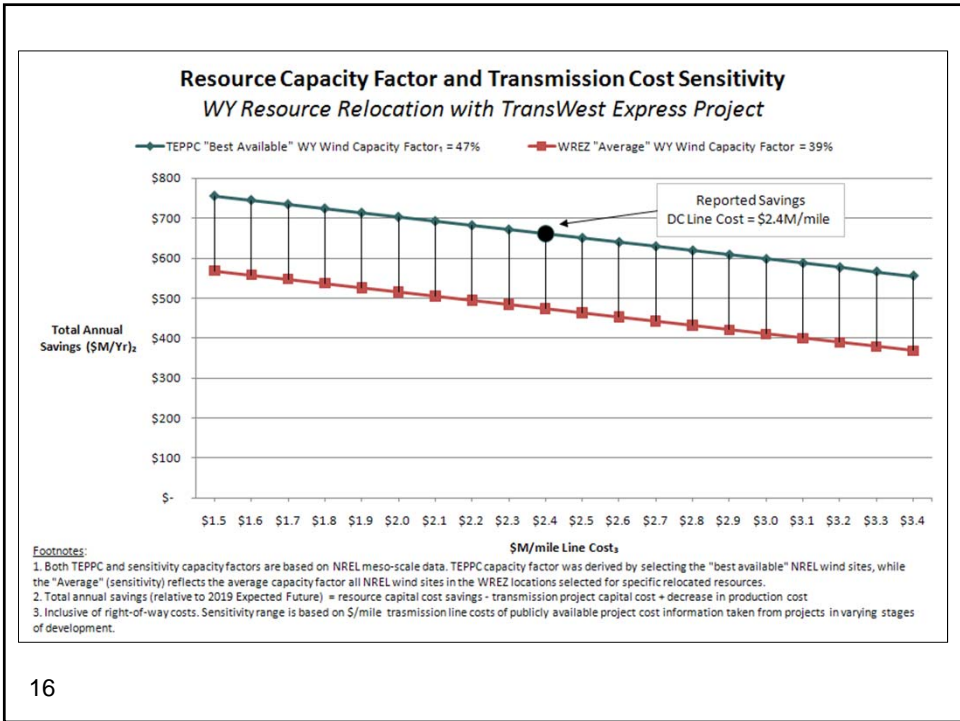








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10-Year Regional Transmission Plan Observations & Recommendations

1. Cost-effective remote renewable resources
2. Montana to Northwest (Path 8)
3. Pacific Tie Paths (Paths 65, 66)
4. Operational impacts of variable generation
5. Planning cooperation
6. Environmental and cultural considerations in future transmission planning processes
7. Water resource impacts on the future generation mix
9. Gaps in regional transmission planning processes

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What has been Accomplished

- Forum and process for discussing and analyzing regional planning topics
- Process leadership from all types of stakeholders
- First-ever interconnection-wide perspective on transmission in the West

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Looking Forward

- Process Improvements
 - Long-term capital planning tools
 - Scenario-driven planning
 - Inclusion of water & environmental factors
 - Operational and reliability impacts
- Things we won't realize by this process
 - Quantification of impacts on specific ratepayers
 - Cost allocation
 - Permitting or siting

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Questions

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All information on the RTEP project can be found on the WECC website at <http://www.wecc.biz/Planning/TransmissionExpansion/RTEP/Pages/default.aspx>

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