



Western Electricity Coordinating Council

Regional Transmission Planning in the Western Interconnection

NARUC Electricity Committee

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Scott Cauchois, Chair

Transmission Expansion Planning Policy Committee

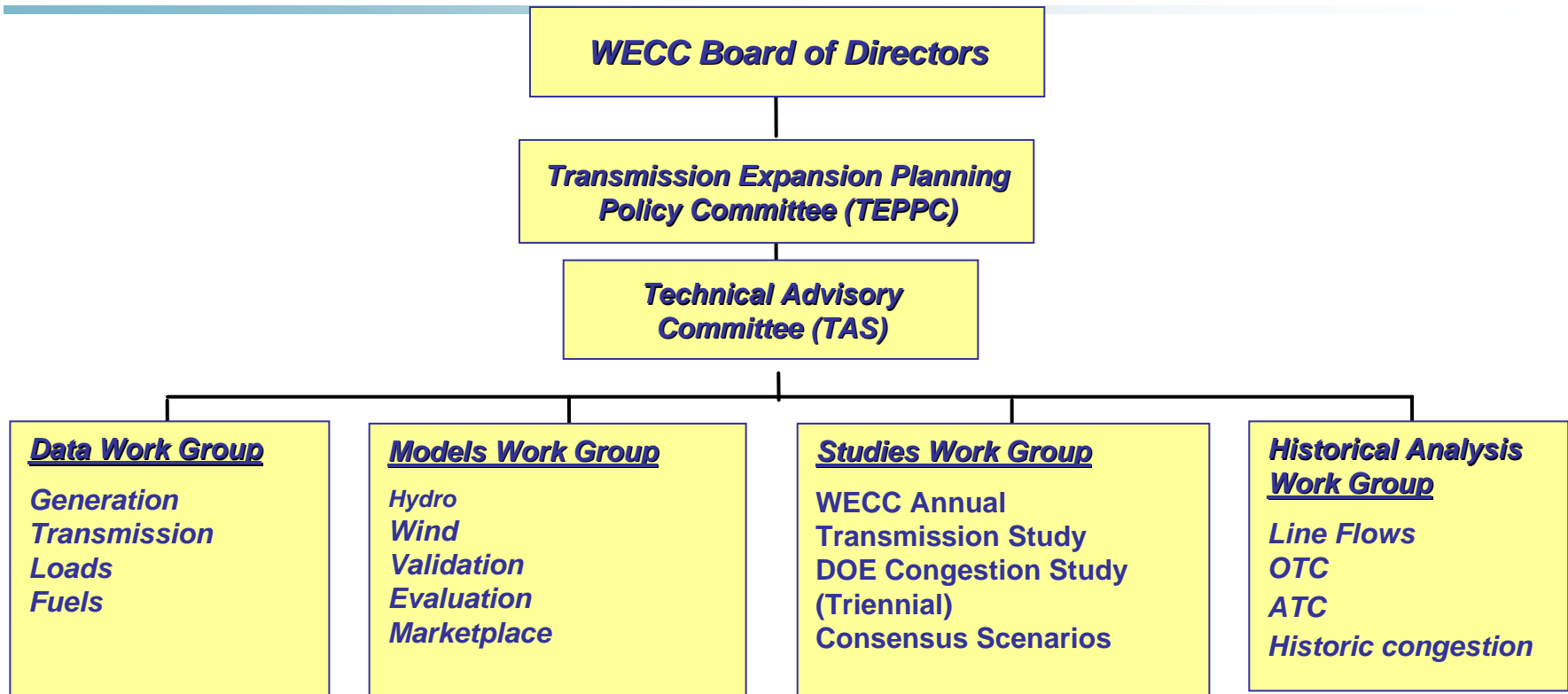
Topics

- **Describe TEPPC**
- **Outline trends in transmission planning & policy environment**
- **Advances in regional & subregional coordination and planning**
- **Next steps in planning evolution**

TEPPC Charter ***(estbl. 2006)***

- **Within interconnection:**
 - **Oversee production cost & other data management**
 - **Develop & implement expansion planning policies and processes in coordination with the WECC Planning Coordination Committee and subregional planning groups (SPGs)**
 - **Guide/improve economic analysis & modeling of interconnection**

Organizational Structure



Membership

- **19 members -- WECC Board, subregional planning groups (SPGs), state regulators, state/provincial energy offices, transmission owners, load serving entities, generation owners, consumer advocates, IRP experts, wholesale market experts and environmental interests.**
- **TAS and work group membership are open to any party**

Stakeholders

- **All of the above including in-kind contributions of expertise and analysis from members**
- **Regional entities: western governors (WGA), WIEB, CREPC, industry organizations**
- **Federal: DOE, Labs, FERC**

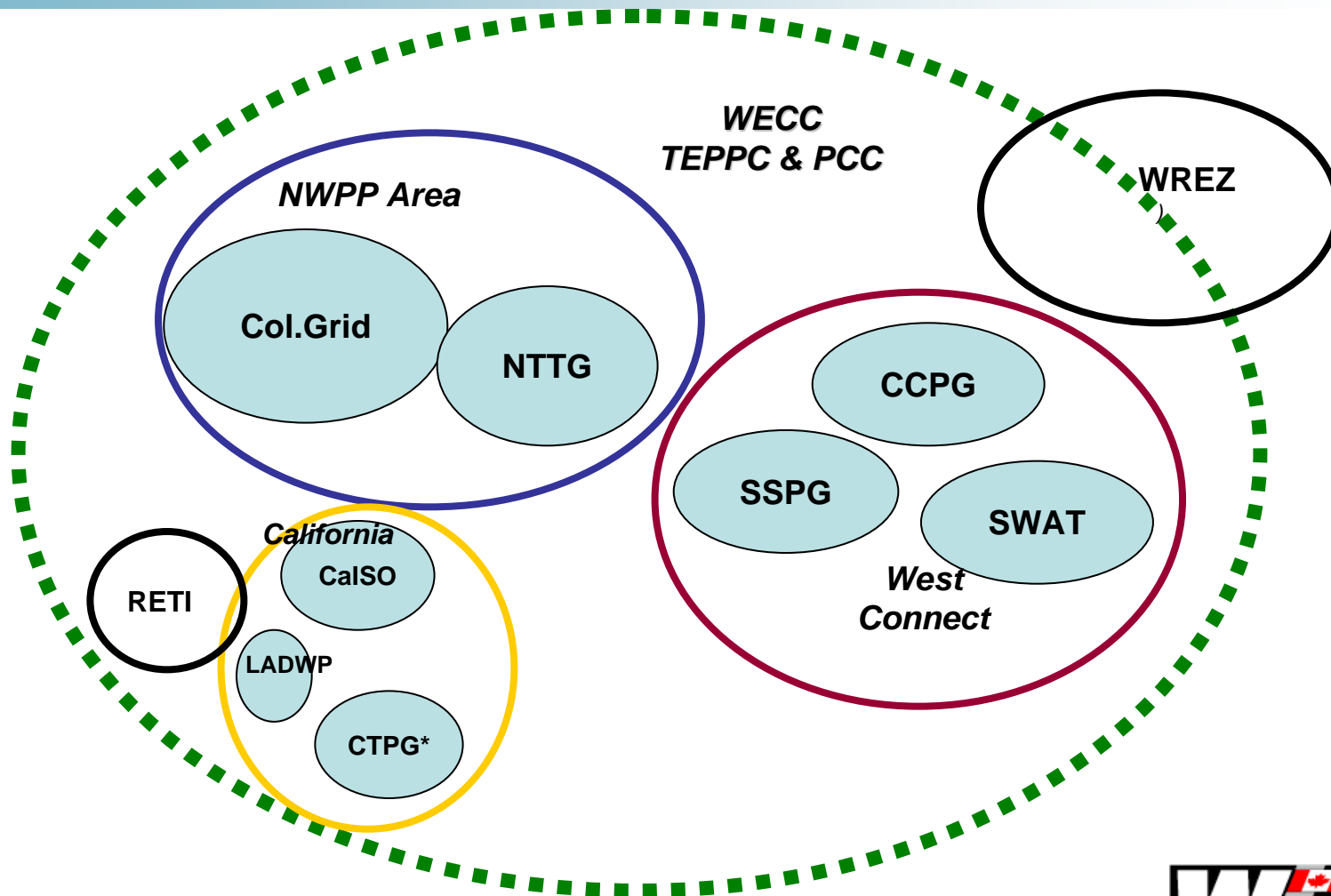
Changing Environment

- **Regional planning started as new transmission needed to serve load and need to coordinate among RTOs**
- **DOE 2006 congestion study and NIETCs**
- **FERC Order 890 (9 principles)**
- **State RPS statutes/policies**
- **Climate change/greenhouse gas reduction**
- **Need for, and requirements for a coordinated approach**

Planning Evolution

- **SPGs reorganize, new ones form; very few TOs in west which *do not* belong**
- **Coordination among SPGs increases significantly and between SPGs and TEPPC**
- **TEPPC's annual study cycle takes in study requests in open season, adopts study plan, executes studies, publishes annual report identifying significant congestion – high level look at possible transmission needs**
- **SPGs have annual or biennial cycles taking requests from member TOs**

Planning at subregional level



Renewables/Carbon Emissions Focus

- **State & regional initiatives**
- **Renewable energy zones**
 - **WREZ (west-wide)**
 - **RETI - California**
 - **AZ, CO, NM, NV**
 - **Utah**
 - **BPA open season**
 - **Columbia Gorge**
 - **DOI solar zones**

Renewable Zone Studies

- **Identify areas of significant potential (location, location, location)**
- **Seek cost-effective, environmentally sensitive solutions with feasible technologies**
- **Identify conceptual transmission needs**
- **Additional studies: Labs (NREL meso-scale study), BPA, Columbia Grid**

Renewable penetration/location/carbon emissions reduction

- **Dominate study requests to TEPPC**
- **Energy efficiency/demand response catching up**
 - **Required by Order 890 comparability principle**
 - **Western governors' initiatives**
 - **Reflected in LSE IRPs**

Regional Modeling Challenges

- **Reflect renewables location, output potential and profile, (operating characteristics)**
- **In the west, same for hydro**
- **Increasingly for energy efficiency and demand response**
- **Understand congestion historically to provide context for forecasts**

Next Steps

- **Short-term, medium-term, & long-term (20 yr.) analysis**
- **More sophisticated scenario analysis**
- **Delivered costs**
- **Better characterization of technology options; more supply & demand-side options to consider; storage; EHV transmission**
- **Capture operational and integration issues around variable generation, hydro, storage**
- **Examine transmission solutions from identified projects and conceptual projects**

Next Steps, contd.

- **Reliability impacts of scenarios**
- **More coordination in data acquisition and studies across transmission planning, resource adequacy, contingency studies focused on reliability under different conditions**
- **Continued advances in coordination among SPGs with regard to assumptions, timing of studies, interpretation of results with regard to entire interconnection**

Next Steps, contd.

- **ARRA – Stimulus Bill: funds supporting regional transmission will accelerate the trends outlined**
- **Facilitate more stakeholder involvement, especially non-traditional**
- **Enable regions to “buy-in” to robust transmission plans; take policy actions**
- **React to additional federal energy legislation**

Questions



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