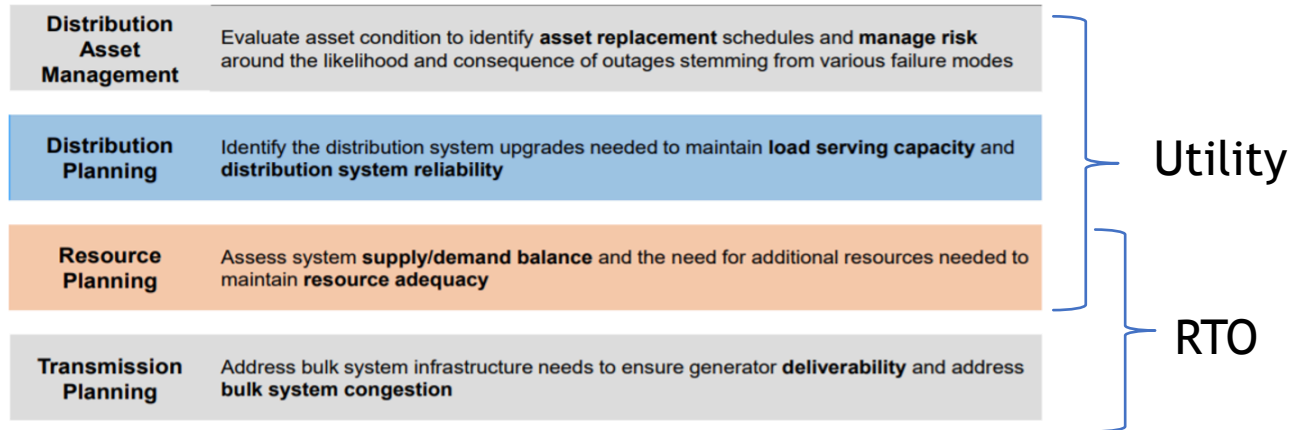


Current Issues in Comprehensive Electricity System Planning

Kelli Joseph, PhD

The Evolving Electricity System Planning Process

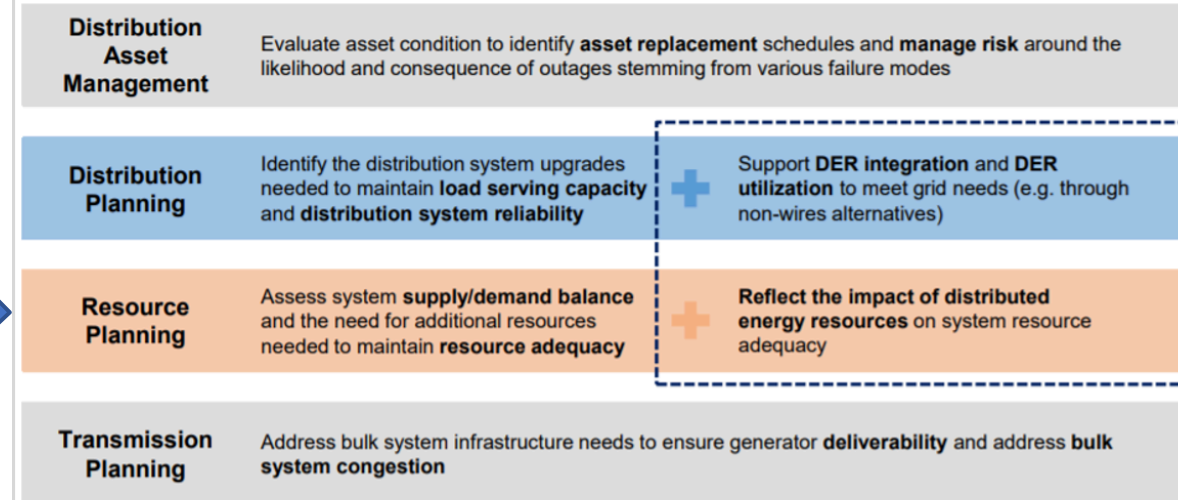
Traditional Planning Processes



Utility AND RTO?



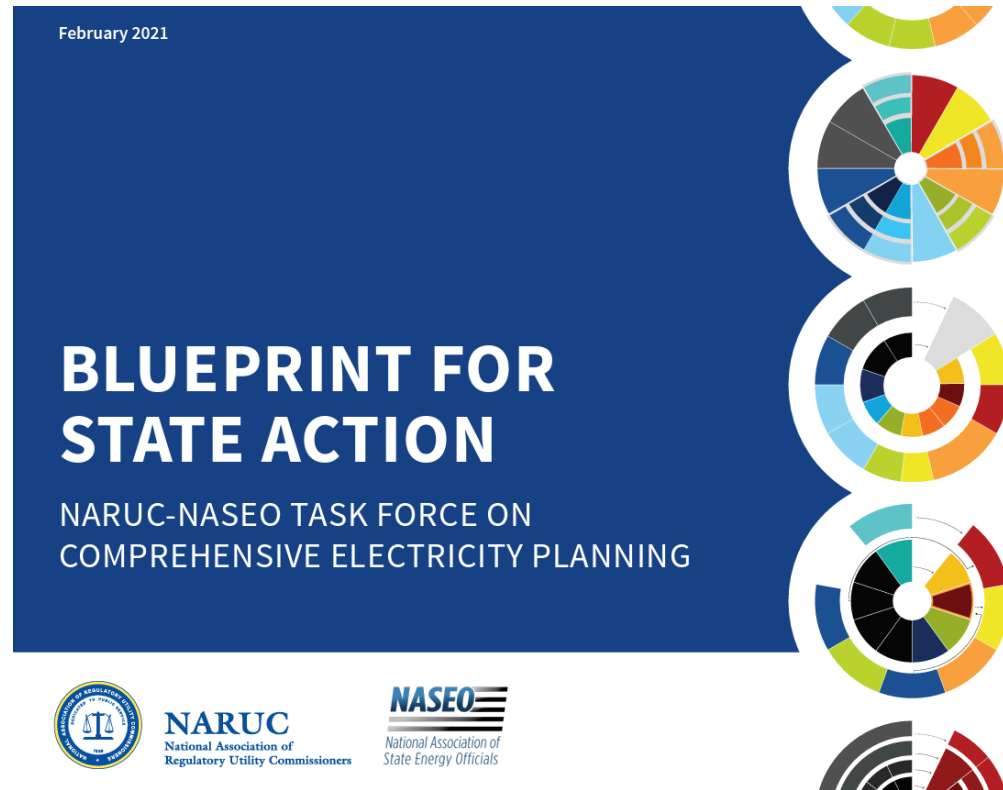
Evolution of Planning



State and Federal Efforts Across the T/D Interface

▶ NARUC/NASEO Task Force (2021)

Aligned Electricity System Planning



▶ Recent FERC Reform Efforts

- ▶ FERC Advanced Notice of Proposed Rulemaking (2021)
Building for the Future Through Electric Regional Transmission Planning and Cost Allocation and Generator Interconnection
- ▶ Federal-State Task Force on Electric Transmission (2021)
- ▶ FERC Order 2222 (2019)
Participation of DER Aggregations in ISO/RTO Markets

NARUC-NASEO Task Force

The Task Force Considered:

- What do planning processes look like under different market structures ?
- Which planning processes could be aligned?
- Specific Recommendations for Utilities within RTOs

COHORT	Amber	Coral	Turquoise	Silver	Jade
REGULATORY STRUCTURE	Utilities own generation assets				Utilities do not own generation assets
MARKET STRUCTURE	Within organized markets	Within organized markets	Outside organized markets	Outside organized markets	Within organized markets
PLANNING PROCESSES ADDRESSED	Focused on aligning distribution, resource, and transmission planning			Focused on aligning distribution and resource planning	Integrated distribution planning (combined with other energy planning and programs)

Actions for Utilities and Regional Transmission Organizations (RTOs)

Likely Challenges	Possible Solutions
Few iterative feedback loops for analysis and communication across generation, distribution, and transmission	<ul style="list-style-type: none"> • Increase engagement between utilities and RTOs to create iterative communication touch points within planning processes • Consider transmission issues in generation and distribution planning processes • Encourage transmission owner participation in utility integrated resource planning/integrated distribution planning processes • Work with RTO to provide data earlier, and more fully consider alternatives to transmission • Leverage or support development of state guidelines for benefit-cost analysis or least-cost best-fit analysis across distribution, generation, and transmission processes • Establish new mechanisms to actively collaborate with state decision-makers, such as narrowly-focused memoranda of understanding (MOUs) between state commissions and RTOs as a tool to facilitate transparency, collaboration, and shared subject matter expertise when addressing specific topics (e.g., modeling, data sharing, etc.); MOUs could be used on a state-by-state basis or regionally (e.g., via Organization of MISO States)

FERC Planning Reform Efforts



FERC ANOPR

- ▶ The focus is on creating a holistic transmission planning process: Across Reliability, Economic, and Public Policy.
 - ▶ Currently, these are considered in isolation, with separate cost allocation mechanisms.
 - ▶ Also considering how to coordinate with generator interconnection
- ▶ Discusses aligned system planning (across Transmission, Distribution, Generation) through an “Independent Transmission Monitor”
 - ▶ Like an Independent Market Monitor for the markets?
- ▶ Would involve states when Non-Wires Alternatives are the most cost effective solution to a regional plan.
 - ▶ Potentially enabling state regulators to approve the NWA through a coordinated regional planning process
- ▶ Which policy efforts? At what point in the process?



Joint Federal State Task Force on Electric Transmission Planning

Topics that the Task Force may consider include the following:

- ▶ Identifying barriers that inhibit planning and development of optimal transmission necessary to achieve federal and state policy goals
- ▶ Exploring potential bases for one or more states to use FERC-jurisdictional transmission planning processes to advance their policy goals, including multi-state goals;
- ▶ Exploring opportunities for states to voluntarily coordinate in order to identify, plan, and develop regional transmission solutions;
- ▶ Reviewing FERC rules and regulations regarding planning and cost allocation of transmission projects and potentially identifying recommendations for reforms;
- ▶ Examining barriers to the efficient and expeditious interconnection of new resources through the FERC-jurisdictional interconnection processes
- ▶ Discussing mechanisms to ensure that transmission investment is cost effective, including approaches to enhance transparency and improve oversight of transmission investment including, potentially, through enhanced federal-state coordination.

FERC Order 2222: DER Aggregations

- ▶ The focus is on market participation and market operations, not aligned system planning.
- ▶ Beginning conversations across the transmission/distribution interface?
 - ▶ The Order only “encourages” a coordination framework. It does not require one.
- ▶ Ongoing compliance filing efforts in RTOs that have not already spent several years developing DER participation models (i.e. all but NYISO and CAISO)

Poll Question

Comprehensive Planning: Aligned System Planning Requires Utilities and RTOs

	Transmission & Generation	Transmission & Distribution	Generation, Transmission, & Distribution	State/Federal Coordination
Task Force	x	x	x	x
FERC ANOPR	x	(x)	(x)	(x)
Federal State Task Force	x			x
FERC Order 2222				(x)

There is significant focus at the Federal level on planning issues.

How do we enable state involvement for aligned system planning?