WestTEC
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Regional Engagement Committee Meeting

October 10, 2024

Agenda

- Updates and announcements
- Report out from Donald Williams on tribal coordination
- Scenario development sub-team update
- Timeline review/recap
- Public comment

Updates & Announcements-Funding

- A funding gap for WestTEC project work was identified late this summer
  - $2.15 million funding gap, $870K needed by October 2024
- Many answered the funding call and as of today, WestTEC funding needs for 2024 have been meet and exceeded
- WestTEC extends heartfelt thanks to all that contributed
  - Special thanks to BPA who provided more than was requested and Clean Grid Initiative who contributed significant funding
- Several entities made commitments for 2025 and the latest information on needs for 2025 funding will be discussed in November

Updates and Announcements-State Engagement

- WestTEC actively considering a strategy to ensure meaningful outreach to states
- CREPC-TC is an excellent avenue for outreach, but there may be additional outreach that could be beneficial to reach state energy offices, other state agencies etc.
- WestTEC welcomes feedback from the public on whether additional state outreach would be beneficial and what this might look like

Tribal Coordination Update/Remarks

Scenario Development Process

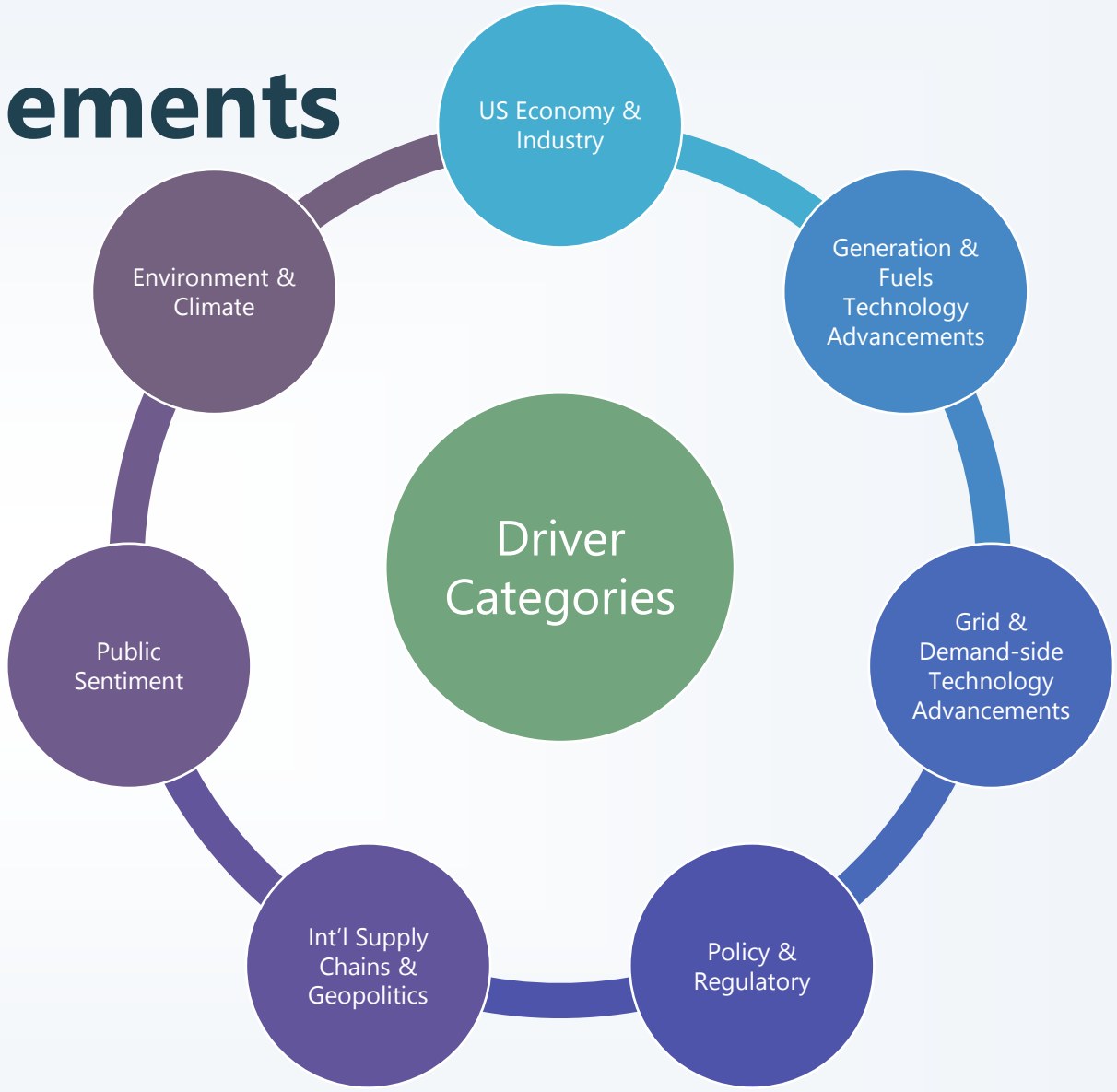
Scenario Development Process

- Phase 1: Develop list of drivers/future conditions (September-Jan)
  - Sub-team will develop initial list of drivers with Energy Strategies, which will then be revised based on feedback of all WestTEC committees
  - Public workshop will be held to gather feedback on drivers
  - Separate meeting with CREPC-TC and Tribes, as requested, to gather input
- Phase 2: Develop scenarios that bundle together drivers and specific conditions (Jan-March)
  - Sub-team will develop an initial proposal for scenarios with Energy Strategies support, which will be revised based on feedback of all WestTEC committees
  - Public workshop held to gather feedback on scenarios
  - Separate meeting with CREPC-TC and Tribes, as requested, to gather input
- *Key goal* is for the sub-team process to ensure transparency and substantively engage all WestTEC committees
- WATT will have the final say to move drivers and scenarios forward to Steering and Steering will hold final approval

Driver Categories & Elements

(Presented to the Sub-Team on 9/18)

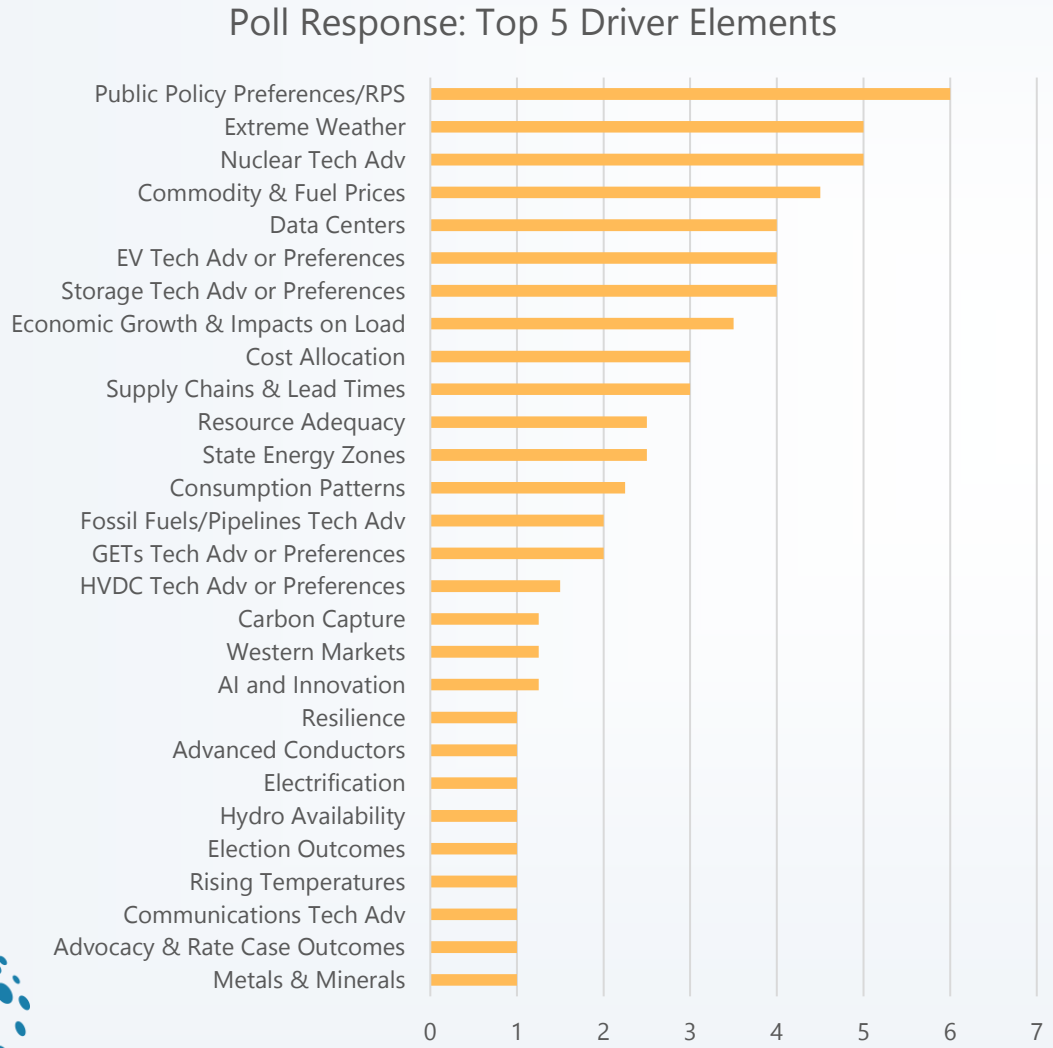
- **US Economy & Industry:** Economic Growth, Interest Rates, Domestic Manufacturing, Data Centers, Cryptocurrency, Population Growth, Migration, Workforce Availability, Workforce Training, Innovation
- **Generation & Fuels Tech Adv:** Alternative Fuels, Storage, Geothermal, Fossil Fuels, Nuclear, Turbine/Generator Efficiency, IBRs, Carbon Capture, Advanced Materials, Pipelines, Mining & Extraction, Fuel Transportation
- **Grid & Demand-Side Tech Adv:** Advanced Conductors, Transformers, HVDC, GETs, VPPs, Prosumers, Smart Homes, Demand Response, Load Shift, Energy Efficiency, EV Charging Stations, Public Transportation, Appliance Electrification,
- **Policy & Regulatory:** Tax Credits, Subsidies, State Policies/RPS, Western Markets, FERC/NERC, State Energy Zones, EPA, Regulatory Barriers, Election Outcomes, Court Decisions, Regional Coordination, Cross-Interconnection Interties, Cost-Allocation, Reliability, Resource Adequacy, Utility Financials, Clean Energy Goals, Reserve Sharing, Advocacy & Rate Case Outcomes, Fire Risks, Lawsuits
- **Int'l Supply Chains & Geopolitics:** Supply Chains & Lead Times, Tariffs, Commodity & Fuel Prices, Metals & Mineral Availability, Manufacturing & Processing, Shipping Costs, Int'l Demographics & Economies, Globalization, Fuel Security, Military Influence, Cyber & Physical Security
- **Public Sentiment:** Technology Preferences, Policy Preferences, Consumption Patterns, EV Adoption, Tribal Lands & Preferences, Land & Viewshed Conservation, Landowners, Rural Communities, Recreation, National & State Parks, Historical & Heritage Sites
- **Environment & Climate:** Hydro Availability, Temperature, Extreme Weather, Resilience, Wind/Solar Resource Quality, Air Quality, Water Quality, Wildlife, Vegetation

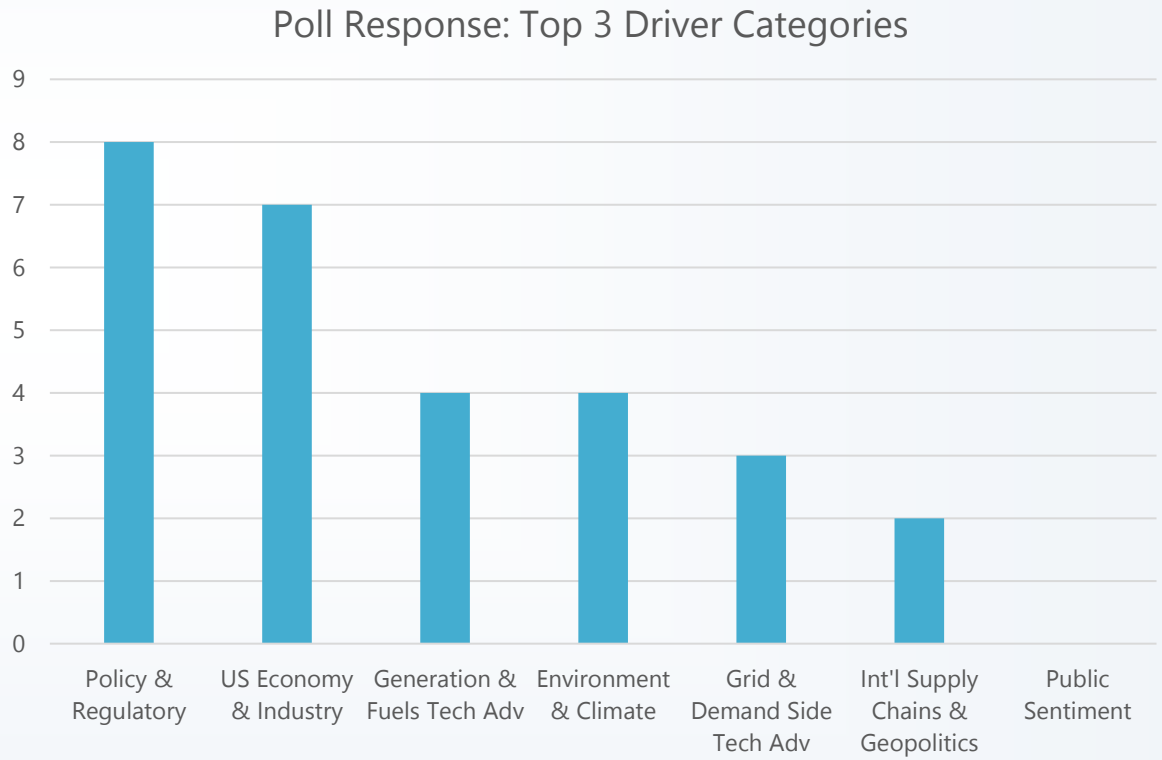


The sub-team defined drivers as important and uncertain trends that may influence power system developments over a 20-year timeframe.

Sub-Team Survey Results

(Survey Responses collected 9/18 - 9/26)





Initial List of Drivers (1/2)

Driver Element	Category	Description	Key Areas of Impact	Range of Outcomes	Possible Impact Parameters
Economic Growth	US Economy & Industry	State of the US economy	Any or All	Growth - Recession	Resource costs, fuel costs, financial assumptions
Data Centers & Manufacturing	US Economy & Industry	Growth in energy-intensive data, compute, or manufacturing facilities	Load	High - Low Growth	Load growth
Storage Tech. Adv.	Fuel & Generation Tech. Adv.	Advancements or efficiency gains in battery storage, pumped storage, and other energy storage technologies	Storage	High - Low Advancements	Availability or cost of storage (incl. long-duration), storage efficiency
Fuels Tech Adv.	Fuel & Generation Tech. Adv.	Advancements or efficiency gains in fuel extraction, processing, transport, or use in generation; carbon sequestration	Gen	High - Low Advancements	Fuel cost, fuel types & availability, fuel emissions
Generation Tech Adv.	Fuel & Generation Tech. Adv.	Advancements or efficiency gains in generator, inverter, or nuclear technologies	Gen	High - Low Advancements	Availability, cost, or timeline of deploying various generation technologies
Grid-Enhancing Tech Adv.	Grid & Demand-Side Tech. Adv.	Advancements or efficiency gains in advanced transmission or distribution conductoring, GETs	Tx	High - Low Advancements	Availability, cost, timeline or capacity of various types of transmission
Supply Chains & Lead Times	Int'l Supply Chains and Geopolitics	International supply chains, materials and manufacturing lead times	Gen & Tx	Constrained - Efficient	Resource costs, project lead times, constraints on capital expansion
Commodity & Fuel Prices	Int'l Supply Chains and Geopolitics	Price of fuel & other commodities used in grid technologies	Gen & Tx	High - Low Prices	Fuel costs, resource capital costs

The sub-team defined drivers as important and uncertain trends that may influence power system developments over a 20-year timeframe.

Initial List of Drivers (2/2)

Driver Element	Category	Description	Key Areas of Impact	Range of Outcomes	Possible Impact Parameters
State Policies	Policy & Regulatory	State policies affecting power system developments including RPS	Any or All	Anything Plausible	RPS or emissions constraints, economic/fuel policies, plant retirement constraints
Regional Coordination	Policy & Regulatory	Willingness of states and jurisdictions to coordinate, fund, and build Infrastructure or systems together	Gen & Tx	Anything Plausible	Multi-owner unit retirements, 10 or 20-year transmission builds or build candidates
Resource Adequacy	Policy & Regulatory	Policy & regulatory approach to resource adequacy	Gen	Anything Plausible	Planning reserve margins, ELCC/firm capacity contribution of renewables
Advocacy & Rate Cases	Policy & Regulatory	Utility rate case outcomes & infuence of advocacy	Gen & Tx	Anything Plausible	Constraints on capital expansion costs, cost of O&M
Technology or Policy Preferences	Public Sentiment	Consumer technology or policy preferences or adoption timelines	Any or All	Anything Plausible	Constraints on resource expansion or technology adoption
EVs & Electrification	Public Sentiment	Consumer preference for electric vehicles or appliances	Load	High - Low Adoption	EV Impacts to load & emissions, load growth, load shape
Extreme Weather	Environment & Climate	Impacts to planning from extreme weather	Any or All	High - Low Impact	Temperature rise, hydro availability, extreme events, wildfires, lawsuits
Wind/Solar Resource Quality	Environment & Climate	Locations with highest wind/solar quality	Gen	High - Low Consideration	Preference of wind & solar resource locations vs. proximity to grid or environmental considerations

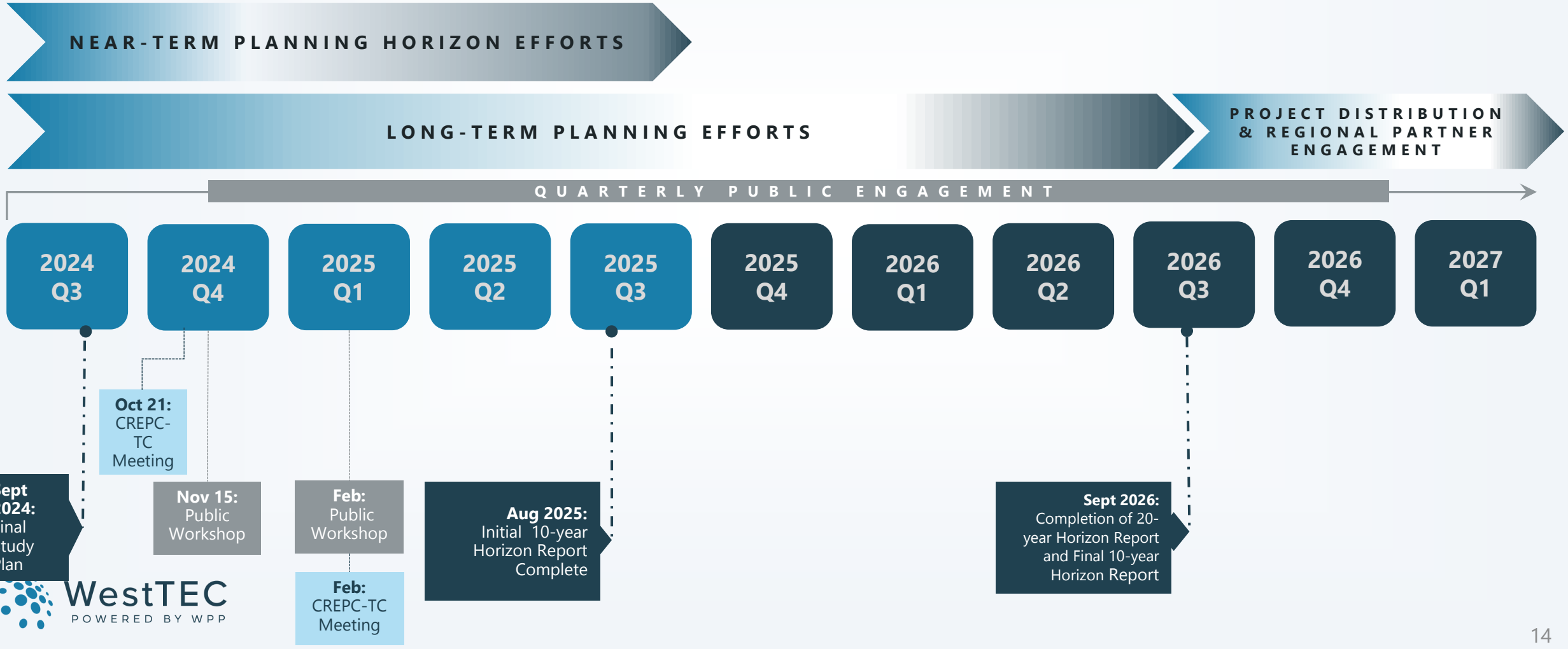
The sub-team defined drivers as important and uncertain trends that may influence power system developments over a 20-year timeframe.

Scenario Sub-Team Next Steps

- Sub-team presented the initial list of drivers to REC, WATT and Steering on 10/8
- Feedback received to refine this list—possibly making the categories higher level/fewer and consider how they will be used in different scenarios
- Sub-team working to refine this list over the next week, next step will be share drivers with CREPC-TC for their input at October 21st meeting
- A public workshop will be held on November 15th to discuss drivers; registration/announcement will be made soon
- Drivers will be finalized at in-person all committees meeting on November 19th in Salt Lake City

Overall WestTEC Project Timeline

WestTEC Project Timeline



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Public Comment