



SOUTHWEST POWER POOL TRANSMISSION PLANNING

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*Working together to responsibly and economically
keep the lights on today and in the future.*



SouthwestPowerPool



SPPorg



southwest-power-pool

WHO IS SPP?

501(c)(6) nonprofit corporation

One of 9 regional grid operators

110 member companies in 14 states

“Air traffic control” for high-voltage grid

Balance supply and demand across region

Maintain reliable grid operations

Operate wholesale energy market

Plan future transmission needs



BALANCING ELECTRIC SUPPLY AND DEMAND

SUPPLY/GENERATION

- **101,310 MW** Nameplate Capacity
- **62,164 MW** Accredited Capacity (*as of Summer 2023*)

DEMAND/LOAD

- **56,184 MW** all-time coincident peak load (8/21/23)
- **47,157 MW** Winter peak (12/22/22)

Generation
In Study



83,285 MW

148%
of Peak Load

CURRENT-DAY SPP TRANSMISSION PLANNING PROCESS

Stakeholder-Driven Member-Funded

Integrated Transmission Planning

- Annual cycle
- Near-and long-term needs
- Economic & reliability needs
- Public Policy
- Operational

Interregional Projects

- Collaborate with neighboring regions on joint projects

Customer-Initiated Customer-Funded

Generation Interconnection Studies

- Determines transmission needed to connect new generation to grid
- Shares costs of studies and new transmission

Aggregate Transmission Service

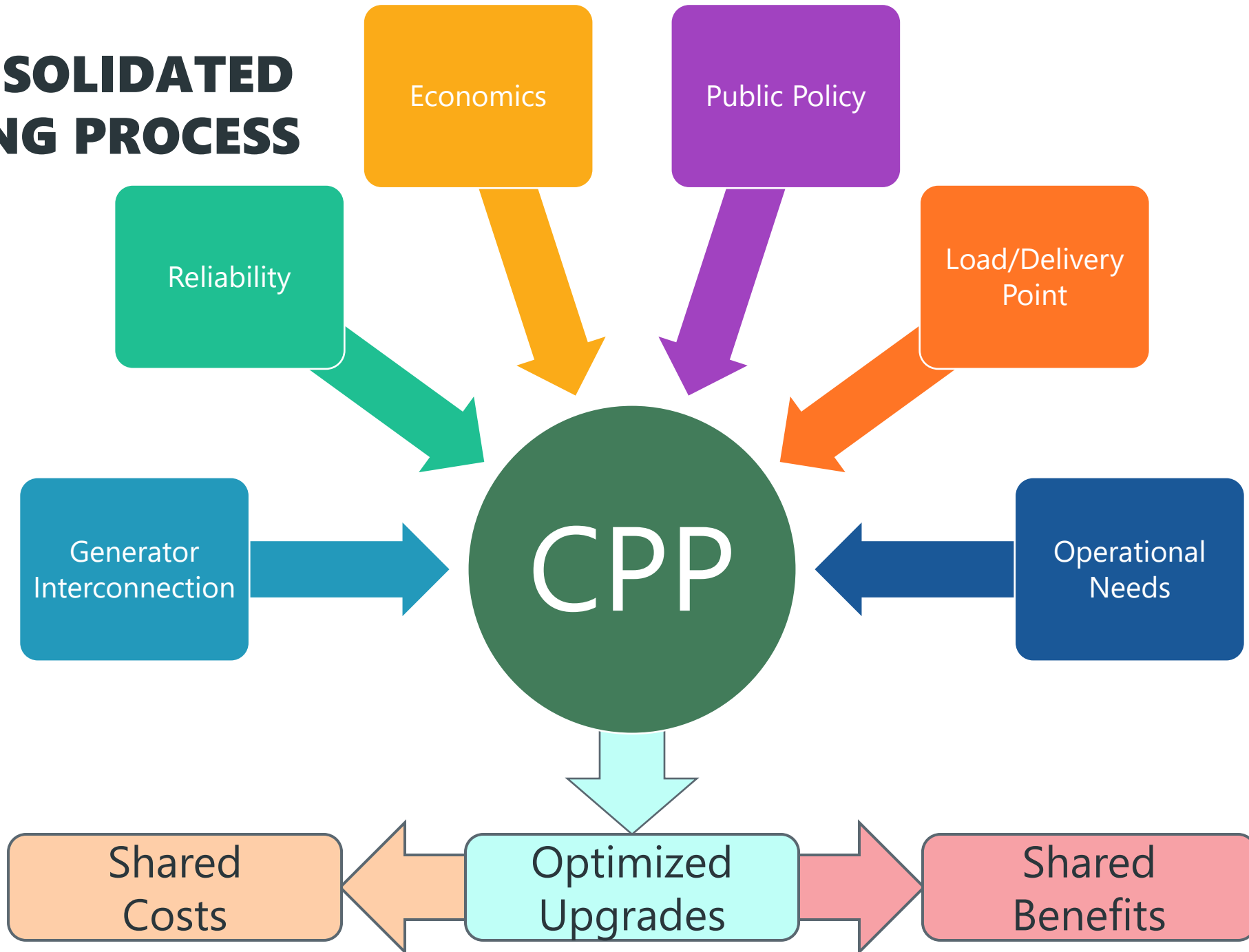
- Determines transmission needed to connect new demand to grid
- Shares costs of studies and new transmission

Sponsored Upgrades

- Provides a path for new transmission facilities not identified in any other planning processes

FUTURE

**SPP CONSOLIDATED
PLANNING PROCESS
(CPP)**



Inputs

Outputs



FUTURE **SPP CONSOLIDATED PLANNING PROCESS (CPP)**

Key Focus Areas:

1. Increase utilization of the long term (20 year) assessment to predict transmission needs and costs
2. Increase information availability to service customers
3. Collect firm commitments from service customers before finalizing transmission for construction in annual regional studies
4. Maintain a balanced cost allocation approach

1. Pre-Application & Open Window

Identifies readily available information, long term assessment, and identify current study customers

3. Commitment

Firm commitment and readiness to move into regional planning process

5. Post Assessment

Execute agreements and consideration of future maintenance needs



2. Initial Assessments

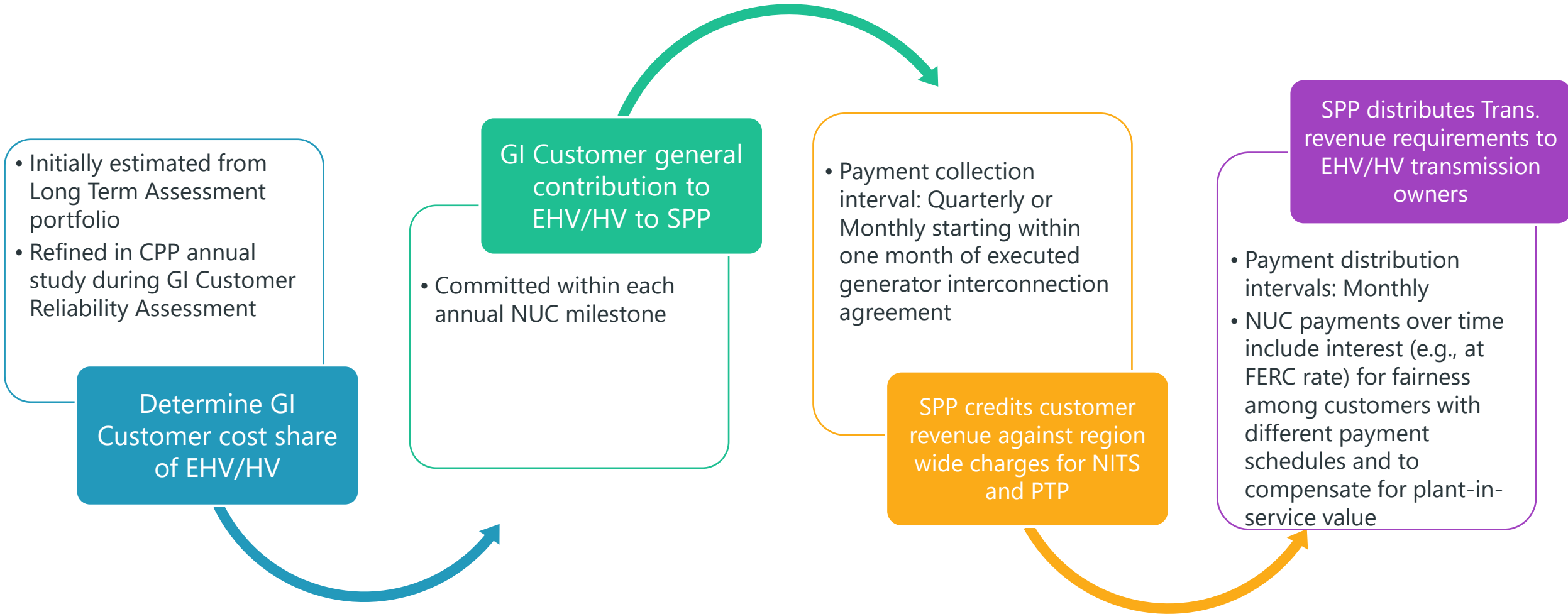
Provides updated estimation of all in costs based on an assessment

4. Regional Assessment

Determine transmission upgrades for construction

FUTURE

CPP NETWORK UPGRADE CONTRIBUTION (NUC) – COLLECTION AND DISTRIBUTION FLOW



FUTURE CPP GI CUSTOMER FRAMEWORK

Invest, Connect and Manage (ERIS) or Deliver (NRIS)

Invest

(Regional & Subregional Entry Fee)

Identify contribution from GI customers to holistic long-term transmission expansion needs of the system

Proactive facilitation of prospective customer needs

Cost-sharing of transmission needed for load and GI customers across multiple studies

Connect

(Direct Assigned)

Identify transmission needs of specific interconnection customers to connect to the system

Manage

(ERIS)

Maintain operational reliability

Invest and connect contributions to transmission expansion facilitate reliable and more efficient system usage

Deliver

(NRIS)

Identify transmission needs of specific interconnection customers to deliver to load within each deliverability area

PUBLIC POLICY PLANNING PROCESS OVERVIEW

"Needs driven by public policy arise if the economic simulations identify conditions on the system that keep a utility from meeting its regulatory or statutory mandates and goals as defined by the renewable policy review and/or future specific public policy assumptions identified in the study scope." --ITP Manual Version 2.16

Determine which Utility by State requires a renewable mandate/goal per the Renewable Policy Review

Determine which renewable units can be applied to each Utility by State based on ownership percentage and state

Determine how much renewable energy can be applied to the Utility by State renewable mandate/goal as determined by the Curtailment Report

Ensure each Utility by State is meeting renewable energy requirement by renewable type as defined in the Renewable Policy Review

PUBLIC POLICY PLANNING PROJECT DEVELOPMENT

The ITP uses a **similar process** to determine projects that address **economic** and **policy** needs

Public policy projects are ranked based on their **APC benefit** in relation to their **conceptual/study cost***

The highest-ranked project for each need will be selected for a grouping and tested individually within the policy grouping to ensure there is no redundancy of need mitigation within the set of projects*

- **Cost effective:** Solutions with the lowest cost with respect to the congestion relief they provide on individual flowgates will be selected*
- **Highest net APC benefit:** Solutions with the highest difference between one-year APC benefit and one-year project cost will be selected*
- **Multi-variable:** Top-ranking projects in the other two groupings, as well as qualitative benefits that the other groupings may not capture, will be considered when selecting projects*

* [ITP Manual Version 2.16](#)



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