



# SCRIPT

## RECAP OF 2020 ACTIVITIES

*Helping our members work together to keep the lights on... today and in the future.*



# 2020 RECAP OVERVIEW

- Held 11 meetings in 2020 beginning with an October 2<sup>nd</sup> kickoff meeting
- Provided six education sessions covering 1) overview of planning processes & cost allocation, 2) Integrated Transmission Planning process, 3) generator interconnection process, 4) transmission services processes, 5) cost allocation methods, 6) decision quality concepts and application, 7) modeling
- Facilitated three ideation sessions covering the six topics of consolidation, services, optimization, transfers, decision quality and cost allocation
- Finished with a summary of Ideations and preview of straw proposal development

# KEY LEARNINGS FROM EDUCATION SESSIONS

- Overview of planning processes & cost allocation
  - Tariff provides for 7 different planning process
  - The ITP, TS and GI processes are SPP's most used processes and have driven 70% of upgrade costs in SPP's current active project portfolio
  - Several processes may be concurrently executed and could drive multiple upgrades in sub-optimal ways
  - Project needed in multiple processes is cost assigned to customers involved in the earliest process to complete although others may benefit

# KEY LEARNINGS FROM EDUCATION SESSIONS

- **Integrated Transmission Planning process**
  - Considers reliability, economic and public policy needs
  - Varying amounts of prospective new generation are included in studied futures with siting based on member input and consideration of the GI queue
  - APC savings reflect the largest benefit associated with ITP portfolios, typically ranging from 65-80% of total benefits
  - APC savings is the only benefit considered when selecting economic projects for inclusion in recommended portfolios
  - Unassigned/non-firm resources may impact LMPs used in determination of APC, but are not considered in regional APC savings used to select projects
  - Multiple sensitivity analyses are performed in the ITP process to validate performance of recommended project portfolios under varying factors
  - Recent improvements are resulting in better recognition and resolution of persistent operational issues
  - Costs of ITP upgrades are allocated to load-serving zones using the highway/byway method

# KEY LEARNINGS FROM EDUCATION SESSIONS

- Generator interconnection process
  - Reliability analysis only is performed with focus on least-cost solutions
  - Current queue backlog remains large and unwieldy under current process, with over 130 GW of generation in queue as of July 2020
  - Customers' ability to withdraw from process usually results in need for restudy of remaining customers which induces iterative process and uncertain results, currently taking 4-5 years to finalize results
  - Typically customers withdraw due to high network upgrade costs that are directly assigned, historically about 70-80% of submitted capacity has been withdrawn

# KEY LEARNINGS FROM EDUCATION SESSIONS

- Transmission services processes
  - Includes aggregate transmission service, delivery point addition, and delivery point transfer studies
  - Reliability analysis only is performed with focus on least-cost solutions
  - Aggregate Transmission Service Study process can be completed in 6 months due to customers' required pre-determination of cost assignment appetite
  - Have observed an uptick in usage of delivery point addition studies beginning in 2018
  - Upgrade costs are allocated to load-serving zones using highway/byway cost allocation, up to safe harbor limits

# KEY LEARNINGS FROM EDUCATION SESSIONS

- Cost allocation
  - Cost recovery of investment not directly assigned occurs under Schedule 9 for member-initiated projects and Schedule 11 for regionally planned projects
  - Currently have 18 FERC-approved, either via formula or stated rate, transmission rate zones used in both schedules, 9 of which contain multiple TOs
  - Current cost allocation methods available for regionally planned projects include 1) highway/byway, 2) balanced portfolio, and 3) direct assignment
  - Balanced portfolio applied for one portfolio of projects approved in 2009
    - Includes zonal to regional ATRR transfers in order to preserve 1.0 B/C for each zone
    - Transfers are based on initial benefit forecast, thus only considers changes in costs over 10 years
  - Other alternative cost allocation methods have been historically considered but desire has been to “keep it simple”
  - RCAR process designed to deal with potential non-commensurate benefit outcome of H/B process

# KEY LEARNINGS FROM EDUCATION SESSIONS

- Decision quality concepts and application
  - DQ consists of a deliberate evaluative process involving six dimensions: 1) problem framing, 2) consideration of alternatives, 3) use of relevant/reliable information, 4) identifying clear values and tradeoffs, 5) use of sound reasoning, and 6) committing to action.
  - Each of these dimensions are deployed to at least some extent in ITP process, but to a lesser extent in other planning process
  - More DQ is needed but barriers include added time and complexity of studies, disconnects between current processes, and conflicting interests.

# KEY LEARNINGS FROM EDUCATION SESSIONS

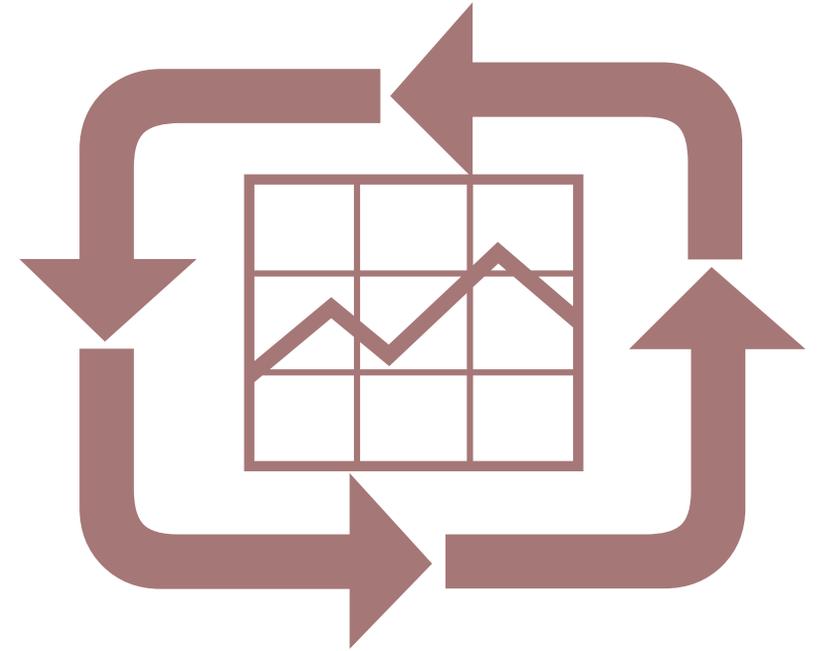
- Model Building Processes
  - Performed annually to build 79 models for reliability and economic planning usage by both SPP and members
  - Relies on significant stakeholder collaboration with highly complex interaction
  - NERC and Tariff requirements drive need for certain models
  - Model reductions have been considered but challenging to satisfy the 35 SPP and external groups being supported

# DECISION QUALITY

CASEY CATHEY

# DECISION QUALITY: SCRIPT SCOPE OF WORK

The SCRIPT will develop policy recommendations that result in utilization of processes and information needed to ensure decisions being made about future investment in transmission infrastructure are made with a high degree of confidence and quality.



# SOME IDEAS WE HAVE FOR DECISION QUALITY

- Optimize and align different planning processes
- Increase flexibility in the process and schedules
- Use process that addresses multiple needs simultaneously (i.e., load *and* generation, or reliability *and* economics)
- Facilitate data sharing among local planning groups
- Create more consistent approach for cost estimates
- Improve interregional coordination
- Improve measure of risk, probability and possible futures
- Increase benefit thresholds

# **COST-SHARING**

CHARLES LOCKE

# **COST-SHARING: SCRIPT SCOPE OF WORK**

The SCRIPT will develop policy recommendations that result in improved cost sharing among users of the transmission system that appropriately recognizes causers and beneficiaries of transmission investment decisions.



## **SOME IDEAS WE HAVE FOR COST-SHARING**

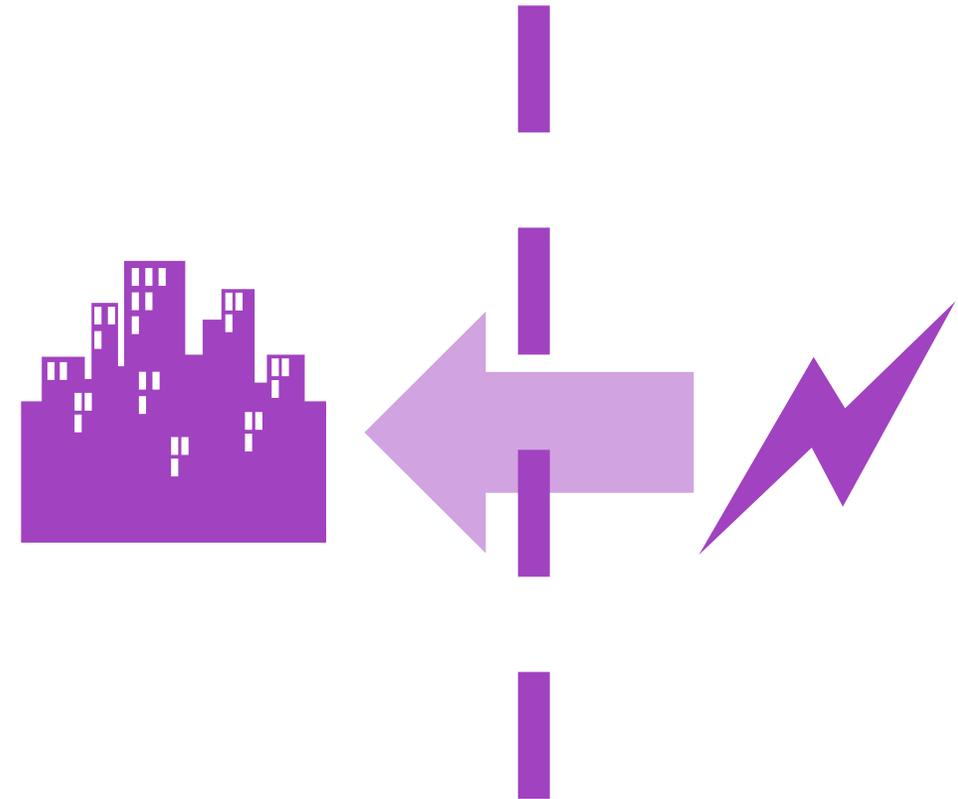
- Quantifying costs and benefits at the zonal level
- Include both loads and generators in calculations
- Coordinate cost-sharing across different processes
- Improve interregional planning, postage stamp across RTOs
- Expand what works in highway-byway
- Examine way to align costs with results (not just projections)
- Include more than peak load in rates
- Examine methods for partial/collaborative project sponsorship

# TRANSFERS

DAVID KELLEY

# TRANSFERS: SCRIPT SCOPE OF WORK

The SCRIPT will develop policy recommendations that result in the development of transmission capacity needed to facilitate generation transfers that will provide future benefits to the SPP region



# **SOME IDEAS WE HAVE FOR TRANSFERS**

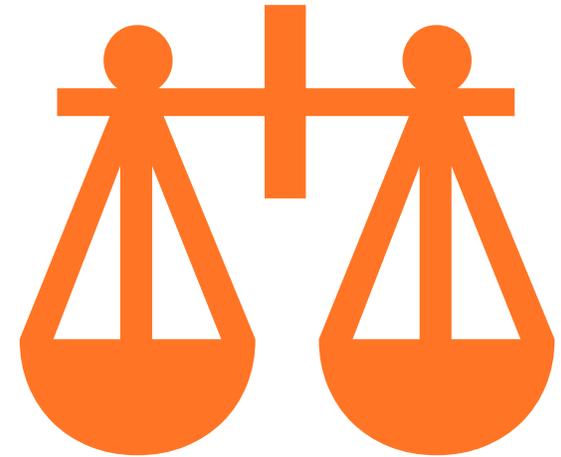
- Improve coordination of interregional markets / dispatch
- Create cost-sharing structure for inter-zonal projects
- Eliminate pancaking and other hurdles for transfers
- Facilitate transfer of excess renewables to where it is needed
- Examine congestion hedging for transfer purchasers
- Develop interregional customer forums
- Seek opportunities for publically subsidized interregional transmission expansion

# OPTIMIZATION

ANTOINE LUCAS

# OPTIMIZATION: SCRIPT SCOPE OF WORK

The SCRIPT will develop policy recommendations that result in optimization of the existing and planned transmission network to most cost effectively meet future needs while providing maximum value to the region



# SOME IDEAS WE HAVE FOR OPTIMIZATION

Find ways to use existing system better before expanding:

- Consider regional needs and solutions in aggregate
- Consider multiple drivers for project value
- Solve needs across economic, reliability, policy, local, regional

Use holistic and cost-effective evaluation of future expansion:

- Favor projects that can be modified in future to meet future needs
- Evaluate all transmission system issues concurrently
- Take into account all benefits from all planning *and* services
- Coordinate between local and regional planning
- Align futures used in interregional and regional planning

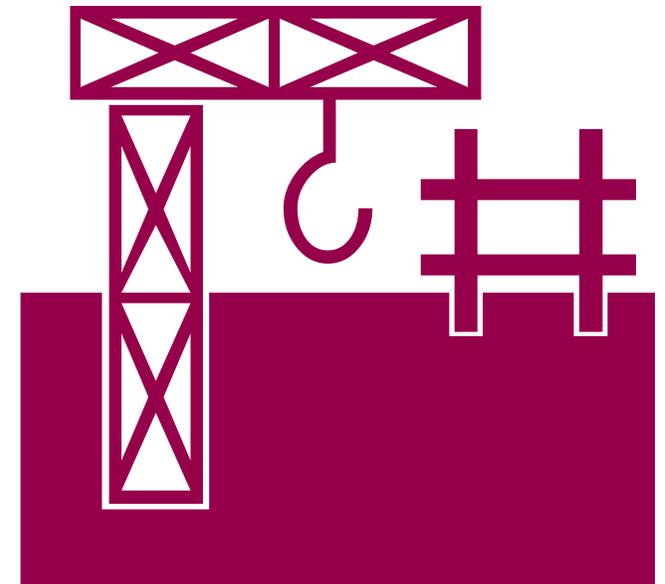
# SERVICES

STEVE PURDY

# SERVICES: SCRIPT SCOPE OF WORK

The SCRIPT will develop policy recommendations that:

- Improve responsiveness and outcome certainty of studies needed to provide customer-requested service
- Reduce dependence on queue-driven studies, with consideration given to development of proactive processes that identify and make transparent underutilized transmission capacity



# SOME IDEAS WE HAVE FOR SERVICES

## Near-term solutions

- Reduce complexity: model reduction and simplified data
- Identify existing capacity for new load and gen
- Streamline GI models, implement backlog plan, and add staff/resources

## Longer-term solutions

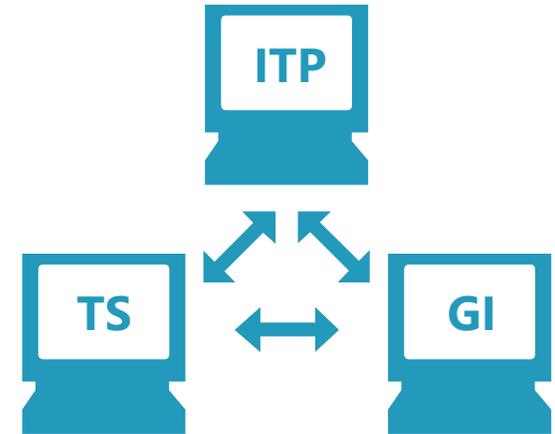
- Simplify, align and consolidate GI and TS with ITP processes
- Improve analysis and cost sharing between processes
- Create fast-track for GI projects that could satisfy planning needs
- Improve cost thresholds, min/max, allocation and recovery
- Prioritize projects that are pre-approved, or willing to bear risk
- Incentivize co-located and/or flexible generation and load

# CONSOLIDATION

LANNY NICKELL

# CONSOLIDATION: SCRIPT SCOPE OF WORK

- Appropriate consolidation of SPP's transmission planning and study processes, including ITP, GI, and Transmission Service studies to:
  - Develop more optimal solutions that meet a broader set of customer needs
  - Synergize analysis so that beneficiaries and cost-causers can be identified in a holistic, uniform fashion
  - Improve planning efficiency, effectiveness and timeliness
  - Reduce the number of model sets needed
  - Reduce reliance on customer-requested, queue-driven studies



# SOME IDEAS WE HAVE FOR CONSOLIDATION

## Reduce complexity

- Use more timely data from consistent and collaborative sources
- Reduce the number of models, assumptions, and scopes
- Incorporate infrequently used processes into others

## Align processes

- Create a single study for multiple services (combine GI, TS, others)
- Incentivize participation in regional planning over iterative queue
- Align SPP's planning model with market practices/rules