

Commercial Operations Webinar Future Practices & Gap Analysis Results

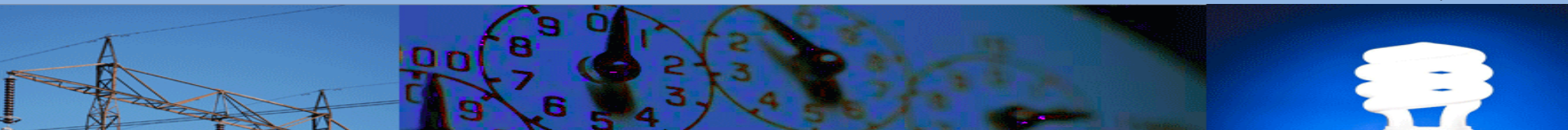
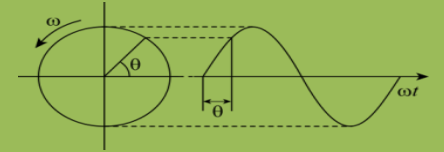
July 13th 1 – 4pm
BPA HQ Rm 122

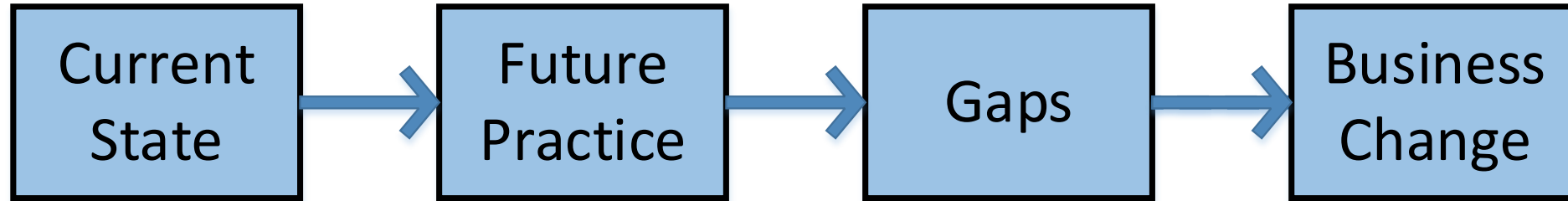
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Bonneville
POWER ADMINISTRATION





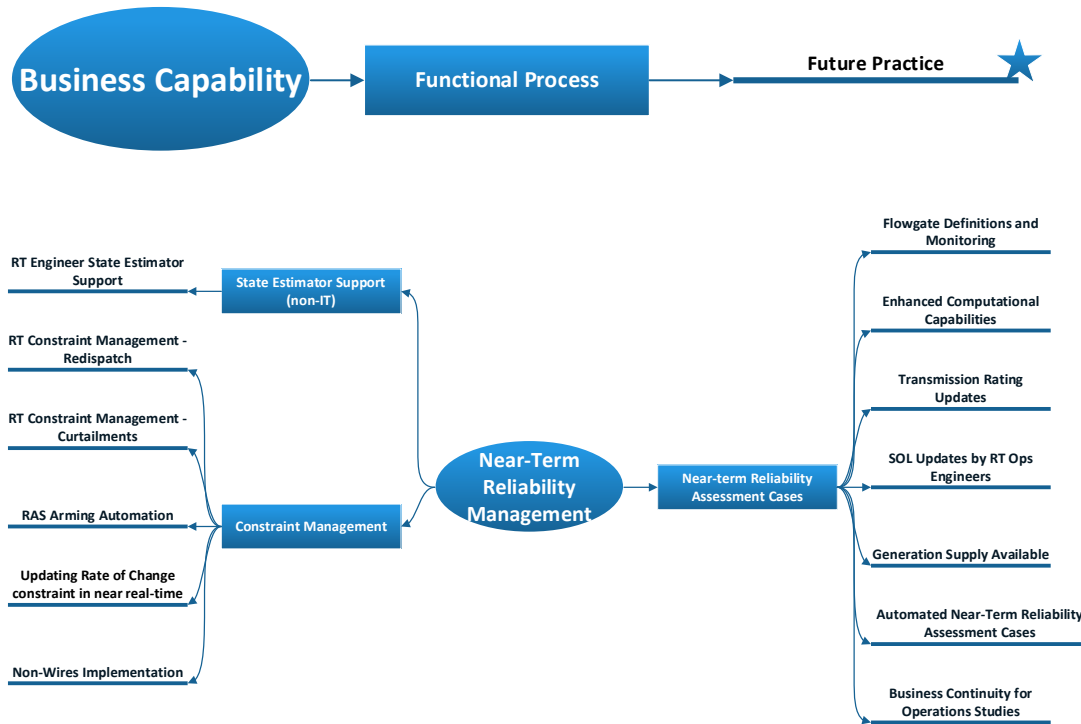
- In January, BPA started a project to develop a roadmap to modernize Commercial Operations in both Transmission and Power.
- This effort is focused on business change crossing business processes, organizational structure and technology.
- The future practices presented in this document represent a combination of BPA specific and standard industry business practices intended to modernize BPAs commercial operations and inform any future decision to participate in an organized market.

- The future practices and gaps are aligned with the direction of BPA moving towards a pro-forma tariff and standardizing operations.
- These future practices and gaps will be revised to align with outcomes of BPA's public processes, like the Transmission Business Model and Pro-Forma Gap Analysis efforts.
- The future practices and gaps identified are the high-level requirements for the business change projects to be developed as part of the Commercial Operations Roadmap.
- Analyzing these future practices with the current state assessments identified the gaps BPA may decide to close that will be addressed in roadmap projects.

- The Commercial Operations Roadmap will consist of prioritized and sequenced high-level business change projects that are intended to close the identified gaps.
- Before adopting the roadmap or initiating any business change projects BPA will share the Commercial Operations Roadmap and discuss customer impacts and involvement.
- The planning phase of approved business change projects will include identification of the specific gaps to be closed and how to best close them.
- Although the target practices reflect the collective desired state for BPA Commercial Operations, some of the gaps may not be closed depending on the cost-benefit assessment as we go through the remainder of the roadmap effort and evaluate each in further detail.

- In parallel with the development of the Commercial Operations Roadmap Transmission Services has working on a Pro Forma/Industry Gap Analysis.
- Team members participating in both efforts have kept the Current State, Future State and Gap Analysis results closely aligned.
- Some of the gaps identified in this presentation will be reviewed and discussed in the upcoming July 18th Pro Forma/Industry Gap Analysis workshop. To participate in this workshop please see:
 - [Transmission Business Model](#)
 - [Pro Forma/Industry Standard Gap Analysis Process and Findings Workshop](#)

- Utilizing a bottom up approach BPA documented the Future Practices that are planned to be implemented through execution of the roadmap projects.



★ Indicates customer impacting future practice

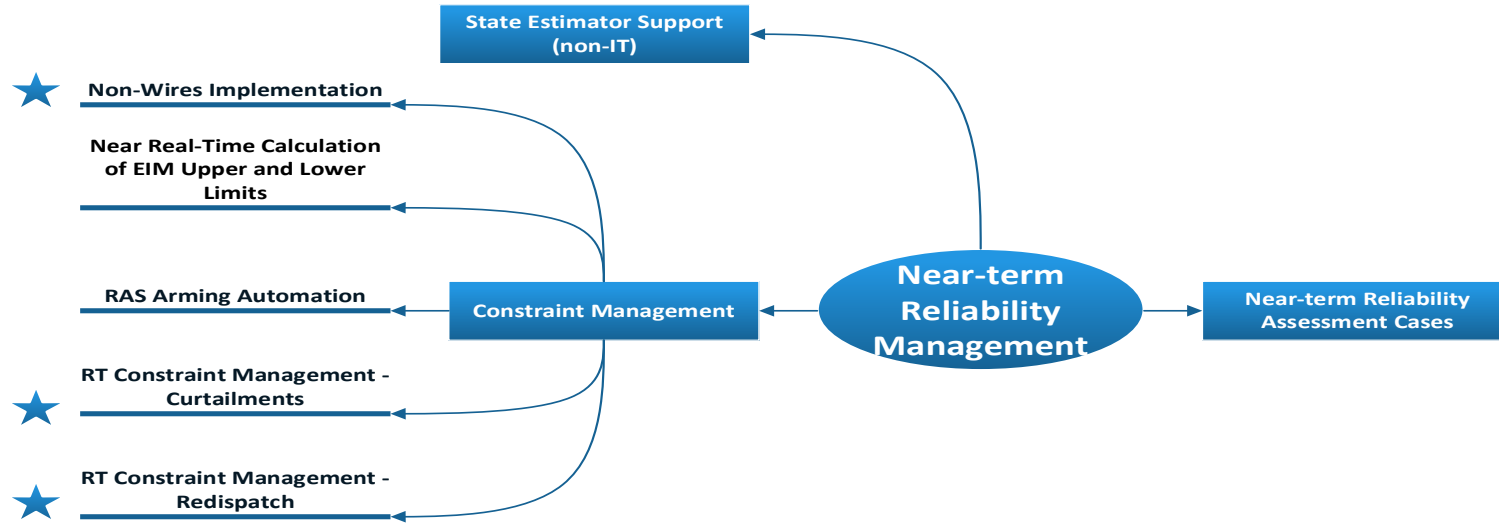
- These Future Practices were further grouped into Business Capabilities and Processes.

Circle	Gap Definition
	No Gap
	Small Impact Gap
	Medium Impact Gap
	Medium/Large Impact Gap
	Large Impact Gap

- The gaps from Current State to Future Practice were identified and categorized.

Near-term Reliability Management

Business Capability	Summary
Near-Term Reliability Management	Ability to assess the available generation capacity and deliverability on the transmission system for the period from real-time through next day operations and take corrective actions to maintain reliability when necessary.




Functional Process	Summary	Customer Benefit
Constraint Management	Comprehensive mechanisms to manage the constraints on the transmission system in real-time and near-term when necessary.	Maintains the reliability of the transmission system at a high level while mitigating constraints through the most fair, efficient and cost-effective means available.
State Estimator Support (non-IT)	Ensuring the State Estimator for the system is solving consistently to meet defined metrics and NERC reliability standards.	Maintains the reliability of the transmission system at a high level providing the base state estimator case for the near-term assessments.
Near-Term Reliability Assessment Cases	The studies performed to assess the reliability of the transmission system in current and near-real time frame with the latest available information and on a continuous basis.	Maintains the reliability of the transmission system at a high level while maximizing usage.

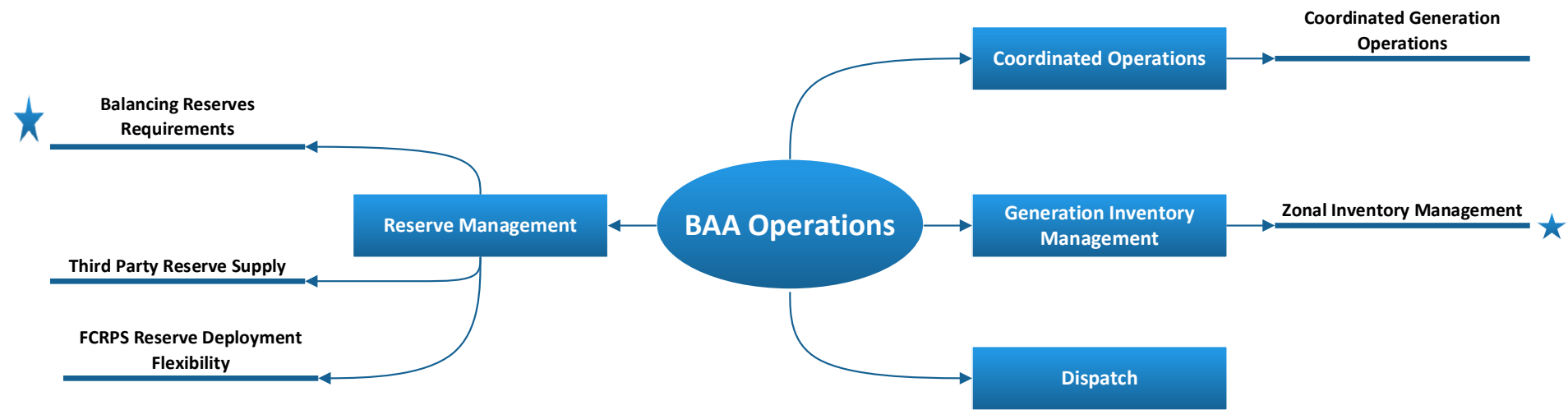


Future Practice	Description
Real-Time Constraint Management – Curtailments	Real-Time constraint management should be performed using an equitable impact and priority based schedule curtailment process. Any tool should be informed by both the Coordinating Transmission Agreement (CTA) controls and Enhanced Curtailment Calculator (ECC) and also acknowledge BiOp constraints.
Real-Time Constraint Management – Redispatching	Provide redispatch to alleviate the scheduled impacts in lieu of or in addition to curtailments for more efficient constraint management.
RAS Arming Automation	RAS schemes for post-contingency protection have be defined and arming processes are automated based on latest known generation and network topology.
Near Real-Time Calculation of EIM Upper and Lower limits	Any constraints imposed on a market should be able to have the limits updated in near real-time. This includes upper and lower limits that inform the CAISO rate of change constraints in the Energy Imbalance Market.
Non-wires Implementation	Proposing mitigating actions for projected transmission constraints, other than curtailment of schedules, should be under the duties of the Operations Studies and/or Real-time Engineers.

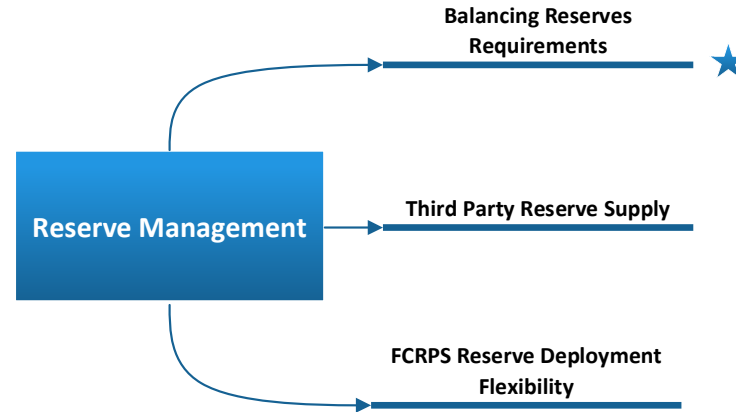
Near Term Reliability Management

Functional Process	Gap: Process	Gap: Technology	Gap: Personnel	Gap Level
Constraint Management	<ul style="list-style-type: none"> • Need to determine possible redispatch mechanisms • Dynamic Transfer Capability and EIM upper and lower limit Constraint analysis does not take into account the current or near-term projected state of the Network. These need to be assessed in Real-time. • Once variable transfer limit studies are developed, the resulting dynamic transfer capability of the flowgates can be allocated among EIM Entities and others. The EIM Entity allocation of that would then be submitted to CAISO as the Rate of Change Constraint. • Need to move remaining main grid manual RAS arming process to an automated process 	<ul style="list-style-type: none"> • Need to ensure the models behind the shift factors for curtailments are consistently derived from the same cases used by the RT Ops Engineers. • Need to build new non-federal redispatch mechanisms. • Where possible, RAS Automation project needs to be completed to base the arming on real-time information. • Dynamic Transfer Capability and upper and lower limits constraints need to be evaluated in real-time or near real-time to provide more accurate results. • Allocation mechanism for Variable Transfer Limit and DTC needs to be developed and automated. 	<ul style="list-style-type: none"> • Roles and responsibilities for Non-wires solutions that will need advance decisions and notification to participants still need to be fully vetted. Believe these decisions fall primarily to the Real-time Ops Engineers and RT Dispatchers but there will be additional support roles. 	

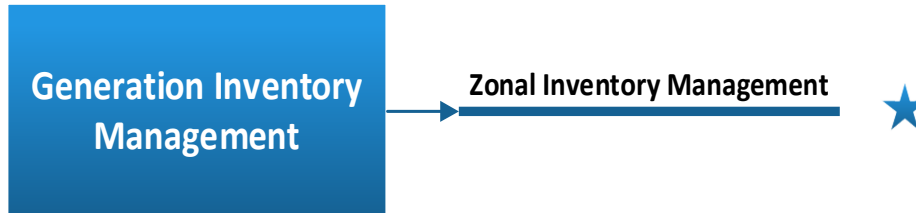
Business Capability	Summary
BAA Operations	Capabilities that enable the operation of a Balancing Authority Area as defined by North American Electric Reliability Commission.





Functional Process	Summary	Customer Benefits
Reserve Management	Functions, processes, and tools used for the determination of reserve requirements and deployment of reserves.	All reductions in reserve capacity without risk to reliability may provide customers with a reduction in costs related to carrying reserves.
Generation Inventory Management	Activities related to the management of the total generation inventory supply for the Balancing Authority Area.	Improvements in dispatch management can increase reliability and stability in the grid.
Dispatch	Processes and tools for handling dispatch instructions and generation operation.	Irrespective of EIM, BPA expects to obtain additional secondary revenue from access to real-time markets (i.e. regulation).
Coordinated Operations	Communication tools and processes related to coordinating impacted and dependent generation resources with other generation operators.	Increases in efficiency through better coordination between generation operators has the potential to increase reliability for all customers.



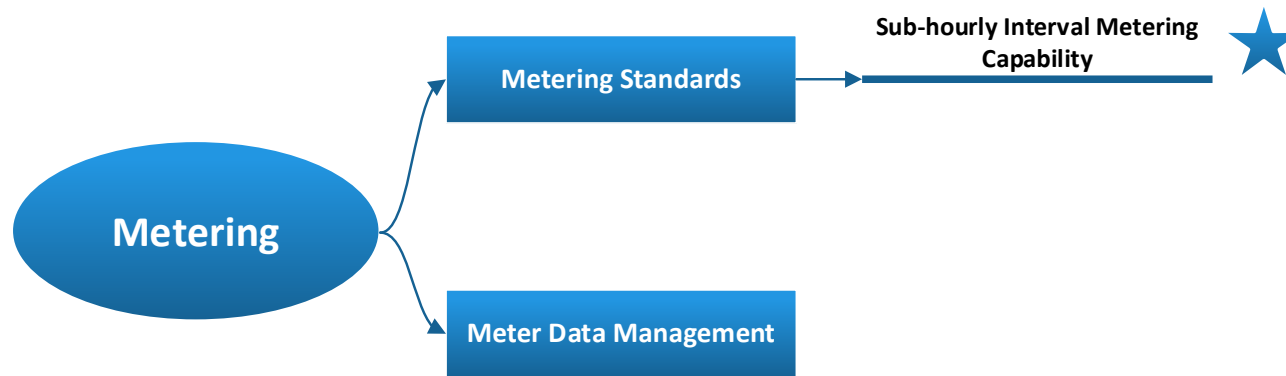
Future Practice	Description
Balancing Reserves Requirements	Balancing reserves requirements are BA specific to maintain sufficient generation to meet NERC BAL standards and preserve the reliability of the system by balancing generation against load and interchange as well as respond to frequency deviations.
Third Party Reserve Supply	Optimize and automate the day ahead third party supply of balancing reserves.
FCRPS Reserve Deployment Flexibility	Reserve designations should be project specific, distinguishing deployment priority and magnitude for both upward and downward dispatchable capacity and separate from Contingency Reserve designations.



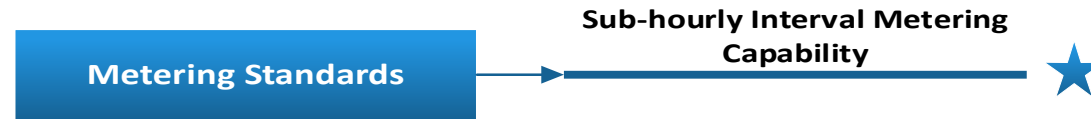
Future Practice	Description
Zonal Inventory Management	Manage, schedule, and track multiple generation resource zones within the BAA. This includes transmission capability and resource inventory per zone and between zones. Transmission capability must include amount of firm reservations, non-firm reservations, and remaining transmission capacity.

Functional Process	Gap: Process	Gap: Technology	Gap: Personnel	Gap Level
Balancing Reserve Management	<ul style="list-style-type: none"> Balancing reserves requirements should be calculated based on expected load magnitude, expected load change, non-variable generation forecast, renewable generation magnitude and renewable generation forecasts in the operating horizon rather than conservative monthly fixed quantities . Need to determine process for allocating upward and downward regulating resources. 	<ul style="list-style-type: none"> The AGC component of EMS needs to accommodate up and down regulation assignment separately for each regulating capable resource. Reg Up will provide upward regulation from Setpoint and also be dispatched downward to Setpoint before Down Reg resources are dispatched downward from Setpoint and vice versa. Adjustments to R3T tool may be necessary. 	None.	
Zonal Inventory Management	<ul style="list-style-type: none"> Current system inventory management practices limit the flexibility in the system (FCRPS), requiring more conservative constraints and obligations than are necessary. Transmission constraints, reserve capacity, plant operations coordination, Mid-C and Slice coordination, and outage coordination are all impacted by this practice. 	<ul style="list-style-type: none"> All systems not currently modeling multiple generation resources will be impacted. 	<ul style="list-style-type: none"> Extensive training on new method for handling multiple generation sources. No impact to FTEs. 	


Business Capability	Summary
Metering	Establishing appropriate technology and processes to collect and validate accurate, revenue quality accumulated MWh values for generation, interties and loads at any determined interval for the appropriate market structure.



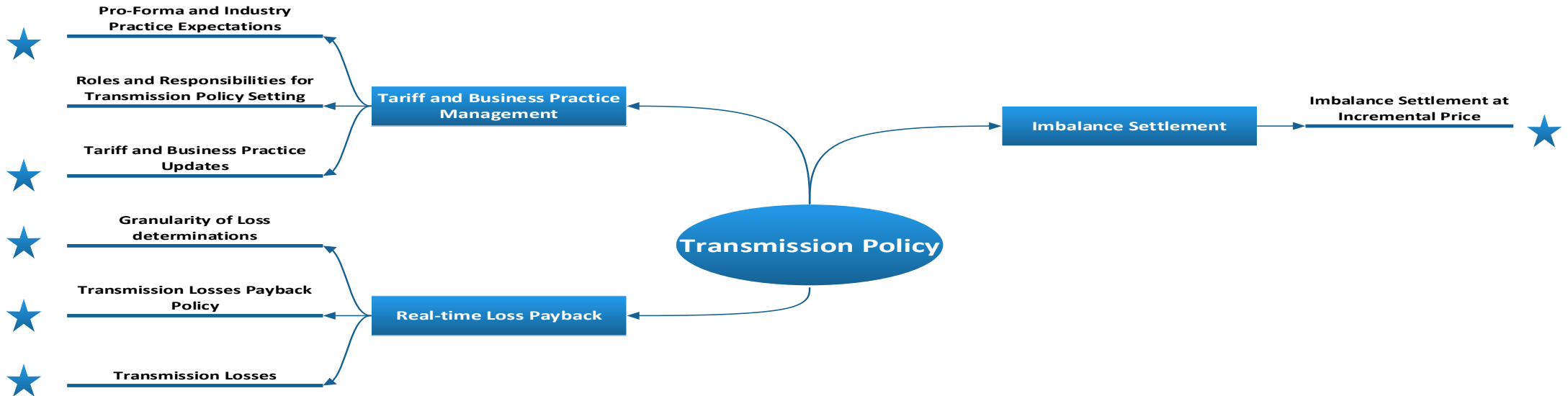
Functional Process	Summary	Customer Benefit
Metering Standards	Establishing standards for the meters and associated metering equipment for all generators, interties and loads	Improved accuracy of metering for settlements.
Meter Data Management	Processes and Technology to receive meter data from the field, validate and potentially edit when necessary to ensure the most accurate data for any settlement purposes	Improved accuracy of metering for settlements.



Future Practice	Description
Sub-hourly Interval Metering Capability	<p>There should be clear ownership of the metering responsibilities to ensure operational and business needs for the future best practices are met. Metering capabilities are moving toward sub hourly accumulation to support the emerging electric energy markets. Meters should be capable of 5-minute interval metering. The plan will include an update of the BPA Metering Guideline document to define the standards that meters should meet. Following that update, a full assessment of the meter capabilities for Intertie meters, Generation meters, Revenue meters for load and metering related components such as potential and current transformers and communications capabilities will be performed to identify gaps in meeting those guidelines. Based on the assessment, meters and other equipment replacement will then be prioritized, budgeted and incorporated into the overall maintenance plan to ensure all meters meet the guideline.</p>

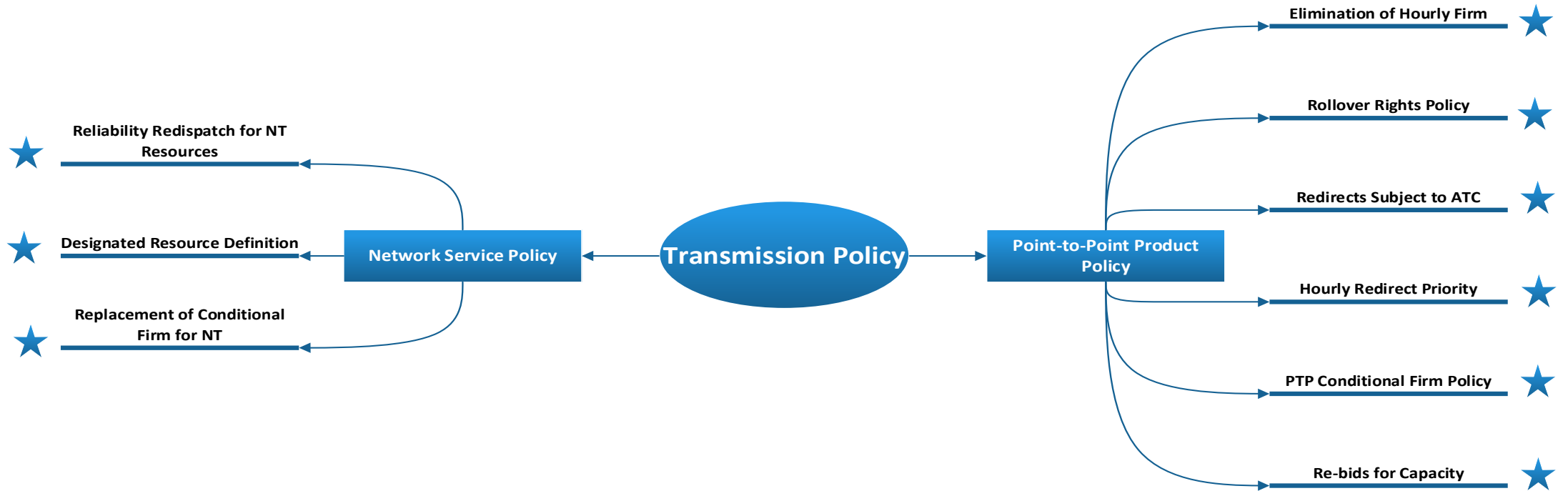
Functional Process	Gap: Process	Gap: Technology	Gap: Personnel	Gap Level
Metering Standards	<ul style="list-style-type: none"> Markets will be dispatched and settled on a 5-minute basis. Interval metering for Generation resources and Interties should be captured on a 5-minute interval basis as well. Meters for Load customers should also be captured with 5-minute interval meters if possible since BPA has all wholesale loads. However, that is not necessarily a requirement. Distribution of EIM charges might be more accurate with 5-minute load metering. The BPA Metering Guidelines should be updated to reflect the higher standards where applicable. 	<ul style="list-style-type: none"> In order to provide 5-minute, revenue quality metered quantities, the meters and relevant supporting metering equipment (potential transformers, current transformer, RTUs, communications capabilities) should all be reviewed to ensure they meet the standards necessary to capture and communicate the values in an automated manner for settlements purposes on either an hourly interval or 5-minute interval as necessary. Upgrades will need to be budgeted, prioritized and installed. 	<ul style="list-style-type: none"> This will require resources to perform an adequate on-site review. 	

Business Capability	Summary
Transmission Policy	Setting the commercial policies around transmission sales and marketing for BPA.

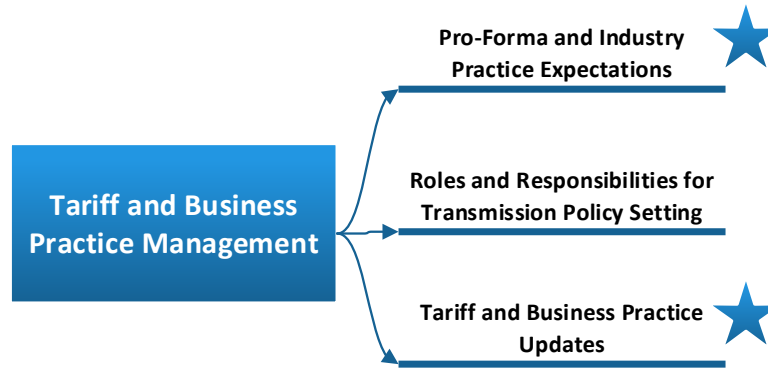


Functional Process	Summary	Customer Benefit
Tariff and Business Practice Management	Management of policy change processes for the BPA Tariff and associated Business Practices used to manage the Tariff for the sale and scheduling of transmission services.	Improved efficiencies in transparency and involvement in the policy making process at BPA. Policies and processes more aligned with Pro Forma and/or industry best practices.
Real-time Loss Payback	Policy for transmission customers to compensate for losses incurred on the transmission system when scheduling their service.	More accurate loss determination and elimination of processes to payback at a future timepoint.
Imbalance Settlement	Settlement of deviation between scheduled and actual energy amounts.	Settlement of Imbalance energy at the most appropriate price for the interval.

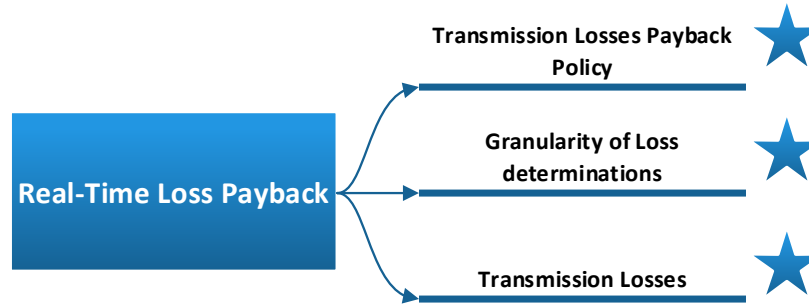
Business Capability	Summary
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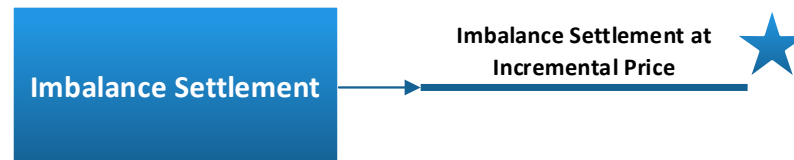
Functional Process	Summary	Customer Benefit
Point-to-Point Transmission Service Policy	Policies surrounding the reservation and usage of Point-to-Point Transmission Service	Policies and processes more aligned with Pro Forma and/or industry best practices.
Network Integrated Transmission Service Policy	Policies surrounding the reservation and usage of Network Integration Transmission Service	Policies and processes more aligned with Pro Forma and/or industry best practices.



Future Practice	Description
Pro-Forma and Industry Practice Expectations	Staying as close to Pro-Forma and Best Practices as possible for transmission service design will allow for easier implementation of tools since software products are designed to meet those standard offerings. Product development should be structured around Pro-Forma framework for fairness and ease of implementation, but should have statistical analysis and customer input to make sure transmission policy meets the needs but remain consistent with Pro Forma and Industry practices.
Roles and Responsibilities for Transmission Policy Setting	Policy development must have clear ownership, authority, responsibility and accountability. Roles, responsibilities and governance structure to be drafted for each organization with governance and clear authorities outlined.
Tariff and Business Practice Updates	Transmission Tariff and Business Practices follow strict revision request processes that naturally facilitate the appropriate internal and external review and approval. The process will need to be designed to get customer/stakeholder buy-in as much as possible up front.



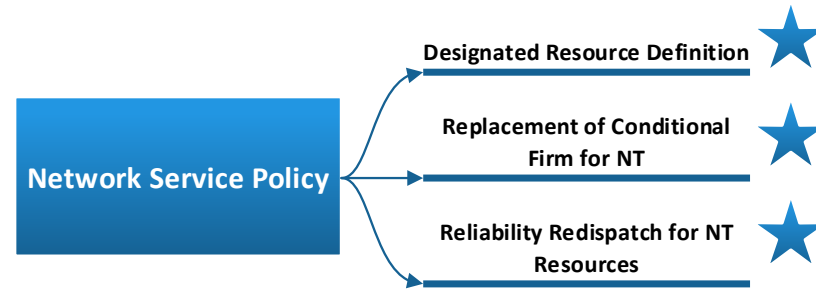
Future Practice	Description
Transmission Losses Payback Policy	Transmission Losses should be paid back either financially, or provided in real-time. Include tracking of paybacks
Granularity of Loss determinations	For either loss payback mechanism, better assessment than annual average losses should be utilized. This could be seasonal or monthly loss estimates for each path or even based on loss projections from real-time or near-term study models. The latter option provides better accuracy to recover the losses, however, it also provides the customer with less up front certainty.
Transmission Losses	Ensure accurate compensation for transmission losses, by determining whether physical or financial is more appropriate.



Future Practice	Description
Imbalance Settlement at Incremental Price	Develop mechanism to settle Energy and Generator Imbalance at incremental price instead of index price.



Future Practice	Description
Elimination of Hourly Firm	Hourly Firm service is not a standard offering by most providers and should be removed.
Hourly Redirect Priority	Redirects of Firm PTP service on anything less than a day should be using Secondary POR and POD priority service.
Redirects Subject to ATC	Redirects of any duration should be subject to standard firm or non-firm ATC methodology assessment, whichever is applicable.
PTP Conditional Firm Policy	Align PTP conditional firm processes with Pro Forma and offer as part of the study process only if requested.
Re-bids for Capacity	Allow for Re-bids of lower capacity amount if full requested amount is unavailable.
Rollover Rights Policy	Align Rollover rights with Pro Forma and require 5-year minimum term.



Future Practice	Description
Designated Resource Definition	Designated Resources should always be from Firm Capacity purchases or owned Resources. Hub locations without Firm Capacity should not be allowed as a DNR. Attestation must have firm Capacity agreements behind them for NT service. No Seller's Choice contracts for DNR.
Replacement of Conditional Firm for NT	Conditional Firm NT product should be eliminated and features incorporated into NT service. NT customers must have Firm deliverable capacity to meet the Network load in order to qualify for Firm NT service.
Reliability Redispatch for NT Resources	To the extent possible, all designated capacity resources for NT service should be eligible for reliability redispatch for something near incremental/avoided cost. Include as part of the Network Integrated Transmission Service Agreement, aka Network Operating Agreement.

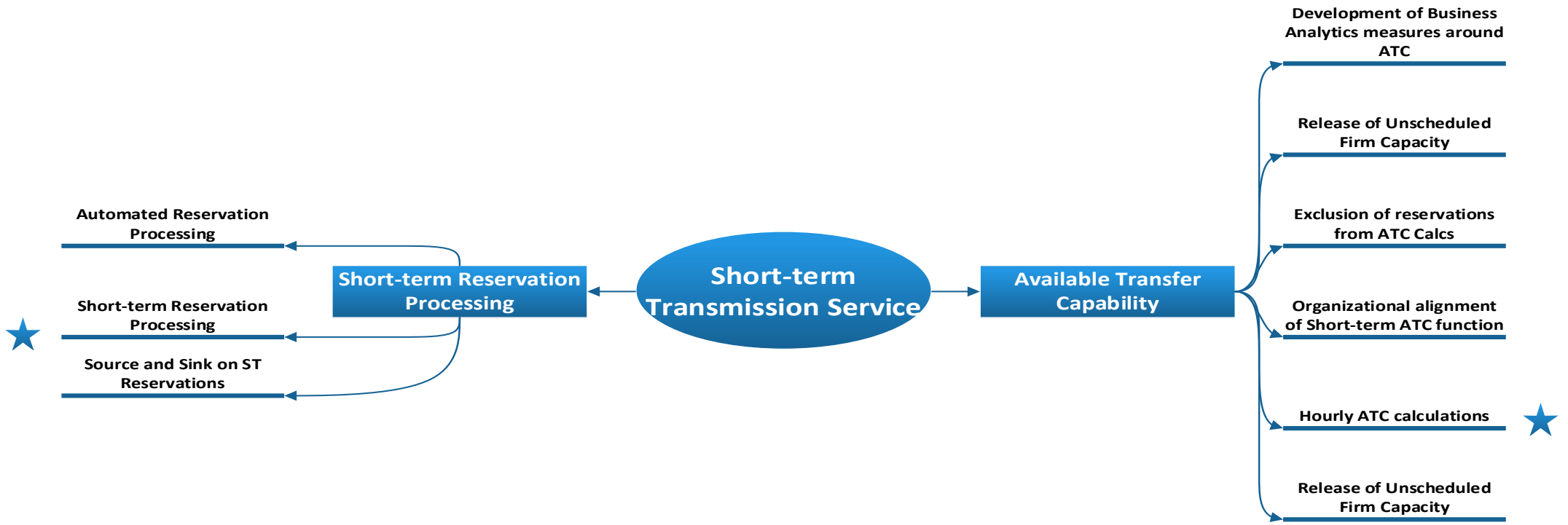


Transmission Policy

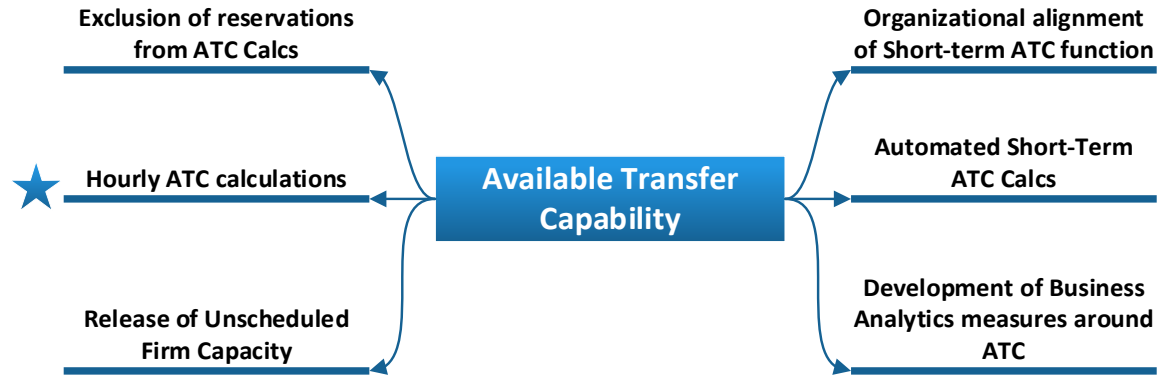
Functional Process	Gap: Process	Gap: Technology	Gap: Personnel	Gap Level
Tariff and Business Practice Management	GAPS TO BE REVIEWED IN PFGA WORKSHOP ON TUESDAY, 7/18			
Point-to-Point Product Policy	GAPS TO BE REVIEWED IN PFGA WORKSHOP ON TUESDAY, 7/18			
Network Service Policy	GAPS TO BE REVIEWED IN PFGA WORKSHOP ON TUESDAY, 7/18			
Real-Time Loss Payback	GAPS TO BE REVIEWED IN PFGA WORKSHOP ON TUESDAY, 7/18			
Imbalance Settlement	GAPS TO BE REVIEWED IN PFGA WORKSHOP ON TUESDAY, 7/18			

Short-term Transmission Service

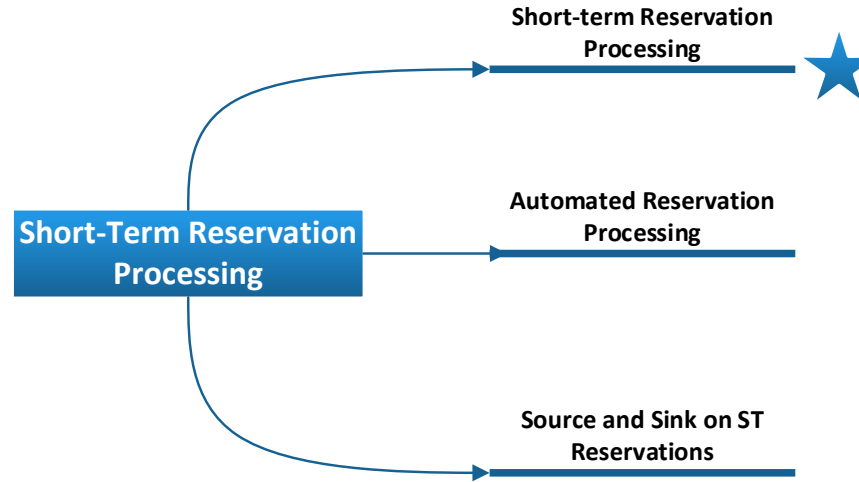
Business Capability	Summary
Short-term Transmission Service	The processing of transmission service reservations for terms of less than 1 year.



Functional Process	Summary	Customer Benefit
Short-term reservation Processing	Validating and processing short-term requests for service.	Efficient processing of all short-term requests.
Available Transfer Capability	Determining the remaining available transmission capacity for sale in the short-term horizon.	Maximizing the availability and use of the transmission system for each of the transmission service products offered by BPA.




Future Practice	Description
Release of Unscheduled Firm Capacity	Unscheduled Firm Service after the day-prior firm scheduling deadline should be released as non-firm service in the ATC calculations.
Hourly ATC calculations	Hourly Non-Firm ATC calculations for the time-horizon following the firm scheduling deadline should utilize schedules and non-firm hourly reservations only, not the longer term reservations to determine impacts. This also assumes that all sales following the Day-ahead Firm Scheduling deadline are non-firm sales, either hourly non-firm or non-firm redirects.
Automated Short-term ATC Calcs	TTC, ETC and ATC calculations in the short-term should be automated to calculate the next 168 hours every hour with weekly and monthly calculations updated once per day. These studies will be executed with the best available data for the period while also implementing the rules identified in the ATC Implementation Document which will address the risk tolerance BPA is willing to accept for determining ATC of each product type in each applicable time horizon.
Exclusion of reservations from ATC Calcs	Exclusion mechanisms are in place in the ETC calculation process if certain approved or pending reservations should not impact available transfer capability due to potential double counting or other factors. This is also described in the ATC Implementation Document where applicable.
Organizational alignment of Short-term ATC function	Short-term ATC process should be managed by System Operations (TO).
Development of Business Analytics measures around ATC	Business Analytics capabilities should be enhanced to support analyzing historical use of the reserved, scheduled and actual impacts to the constraints on the BPA system to provide feedback into the Inventory Management processes for potential adjustment.

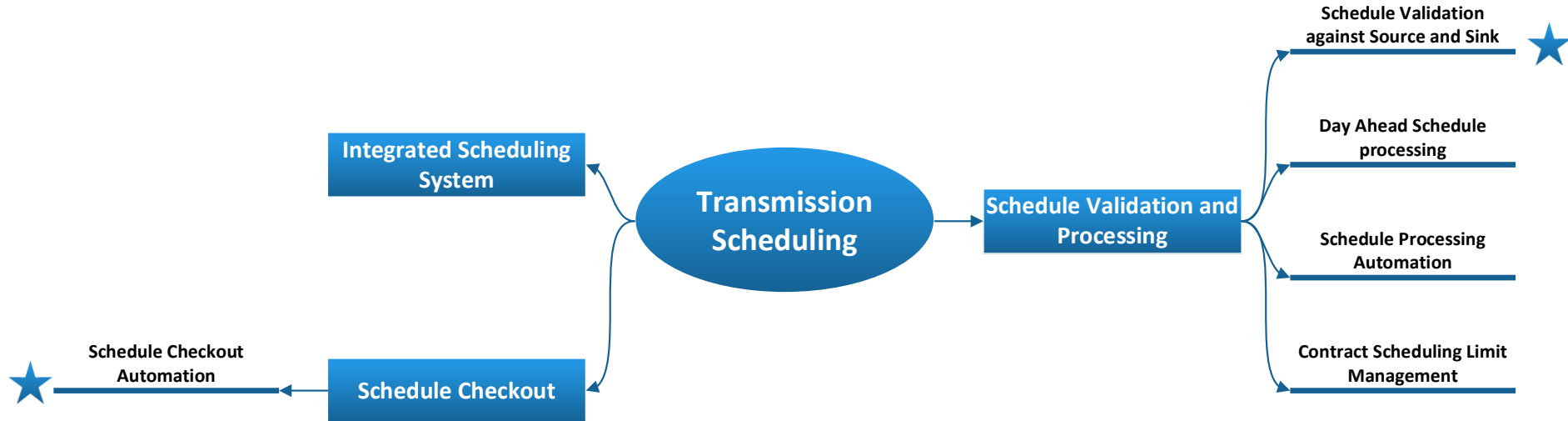


Future Practice	Description
Short-term Reservation Processing	Short-term Reservations that fail ATC should be designed for auto-denial. System capability should be added that is switchable (on/off) to turn off auto-denial and allow Scheduling to take to the final state if necessary. This may be Real-time Schedulers or Pre-Schedulers depending on timing requirements. Rules to override auto-denial for short-term are not study-based and can usually be processed by the Schedulers quickly.
Automated Reservation Processing	A fully automated system is developed to receive Short-term reservation requests on OASIS and then process them against the Available Transfer Capability.
Source and Sink on ST Reservations	Require Short-term Service to have identified source and sink on OASIS reservation in order to be considered a complete request. PORs and PODs will also be defined as sources and sinks.

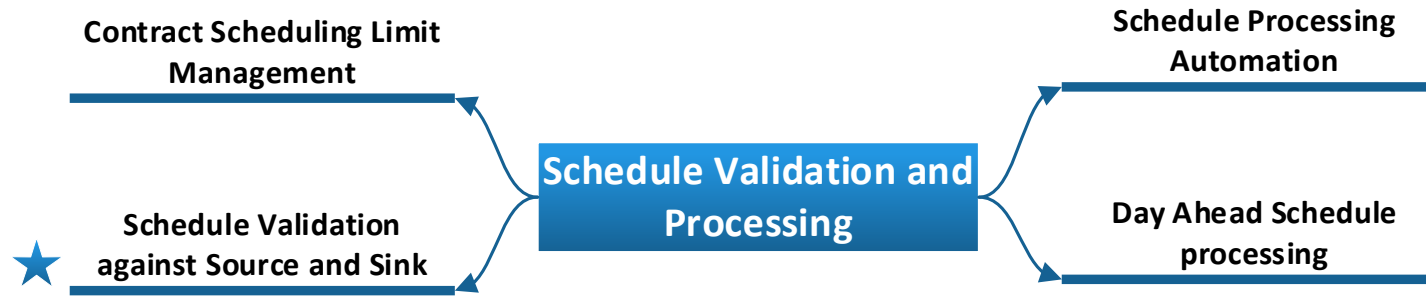
Short-term Transmission Service

Functional Process	Gap: Process	Gap: Technology	Gap: Personnel	Gap Level
Short-Term Reservation Processing	<ul style="list-style-type: none"> Once ATC is relied upon for the evaluation and unlimited hourly practices are removed, they may need the capability to override a denial. 	<ul style="list-style-type: none"> System needs to be able to allow for an override or hold a reservation for manual denial by the operator. This feature can be turned off but should be available if needed due to calculation issues. Sounds like tool is capable, but just not turned on. 	<ul style="list-style-type: none"> Schedulers may need some training when ability to override ATC denials is available. 	
Available Transfer Capacity	<p>GAPS TO BE REVIEWED IN PFGA WORKSHOP ON TUESDAY, 7/18</p>			

Business Capability	Summary
Transmission Scheduling	Scheduling the usage of reserved transmission services.





Functional Process	Summary	Customer Benefit
Integrated Scheduling System	The systems used to process schedules are tightly integrated with the reservation systems and other applications	Efficient schedule processing
Schedule Validation and Processing	Processing the schedules when received and validating required tag data against the reservation information, loss requirements and for completeness	Efficient Schedule processing
Schedule Checkout	Checking out the actual energy against the schedule between the parties after the fact.	Accurate energy accounting and inadvertent calculations



Future Practice	Description
Contract Scheduling Limit Management	Schedulers manage any contractual scheduling limitations, although these are also generally automated components of the ATC and TTC calculations and Tag Validations. TTCs are still established for the paths and reservations and schedules are processed with 1:1 impact on the path.
Schedule Validation against Source and Sink	Schedules should be evaluated for consistent impact with reservations. Established trading hubs, like Northwest Hub or MidC Remote, may be the exception. However, schedules with source to sink impact on a constrained flowgate without a reservation should be disallowed and required to re-direct.
Schedule Processing Automation	With the exception of a handful of emergency type schedules, all validations performed by the TP and BA function are fully automated. Schedulers may override certain validations, but all of the checks, including losses evaluations, scheduling limits, reservation usage, etc. are all auto-validated.
Day Ahead Schedule processing	All Daily and longer schedules submitted prior to the Day-ahead scheduling deadline are reviewed. These same personnel are also responsible for any After the Fact corrections or follow up with counter party BAs if there are differences at checkout.

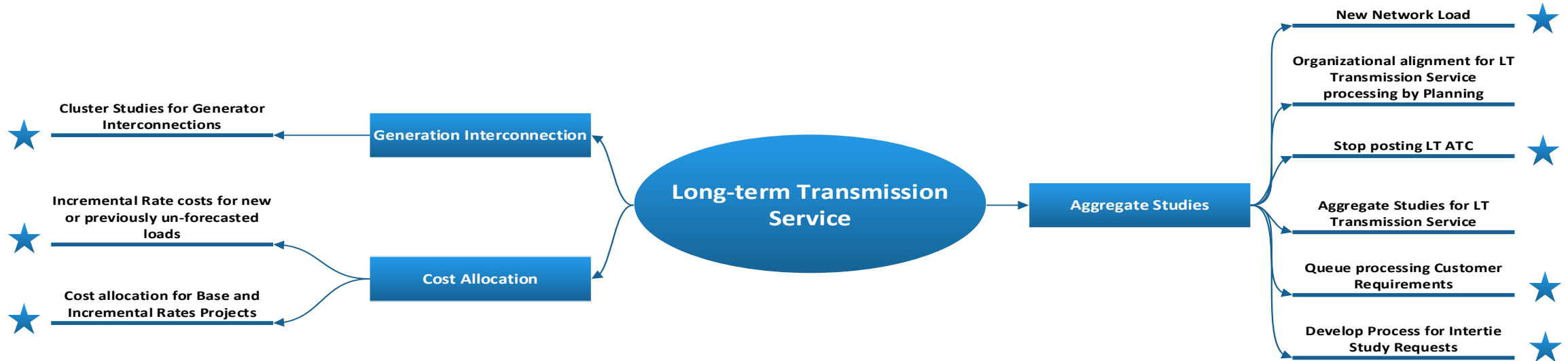


Future Practice	Description
Schedule Checkout Automation	Checkout processes, both pre-schedule and ATF, should be automated to the extent possible with the automated process flagging any discrepancies. However, phone calls are still utilized in many instances where both parties do not have a common mechanism.

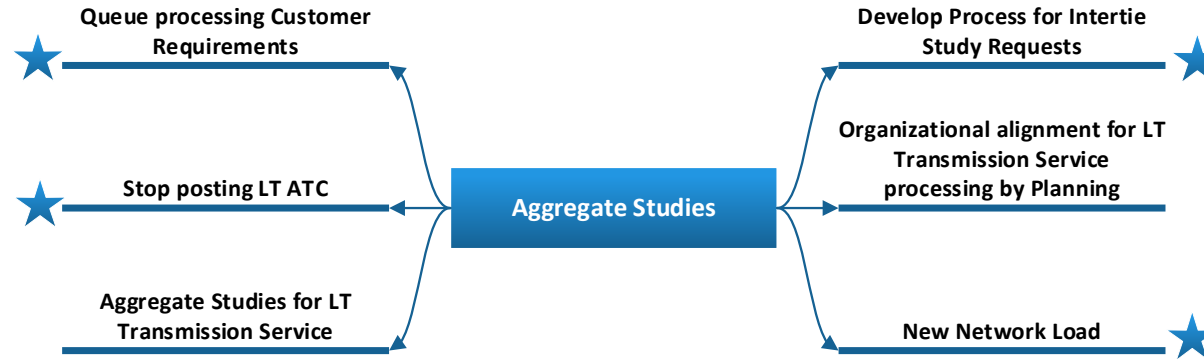
Functional Process	Gap: Process	Gap: Technology	Gap: Personnel	Gap Level
Schedule Validation and Processing	<ul style="list-style-type: none"> • Need to review manual scheduling tasks for potential automation. This could help reduce the staffing need but will need to evaluate that following all policy and technology changes that will have an impact on scheduling. • Ultimate schedule impacts due to source and sink may be very different due to path “chaining” that is often performed in the western interconnection. If source sink impact as determined at schedule time is significantly different to affected flowgates that were affected by source and sink on the reservation, then the schedule should be refused and require a redirected or new reservation. 	<ul style="list-style-type: none"> • Scheduling will be significantly impacted by policy and technology changes coming out of the roadmap. Several customizations will be reviewed to see if they are still necessary and align with the move toward Pro Forma and/or Industry Best Practices. • Manual process need to be reviewed to see if they can be automated. In some cases, these have not been automated due to other customizations. Again, wholesale review needs to occur to identify the necessary changes that can streamline scheduler activities. • Schedule Validation software from OATI will need to be able to perform source to sink checks at schedule time. • Source/Sink evaluation will require source/sink equivalent table 	<ul style="list-style-type: none"> • Training on updated automation processes and business practices. 	
Schedule Checkout	<ul style="list-style-type: none"> • Move toward all checkout being automated versus phone calls. 	<ul style="list-style-type: none"> • Need to establish automated mechanism for all checkout activities, including internal schedules. 	<ul style="list-style-type: none"> • N/A 	

Long-Term Transmission Service

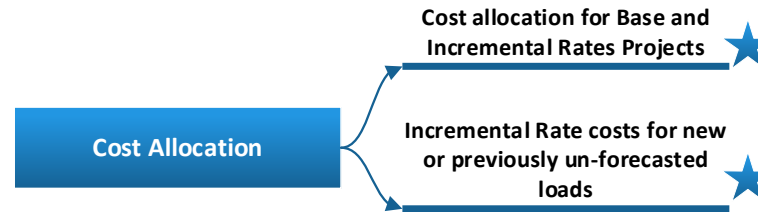
Business Capability	Summary
Long-Term Transmission Service	The processing of transmission service reservations for terms greater than 1 year.



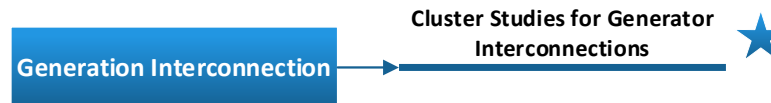
Functional Process	Summary	Customer Benefit
Generation Interconnection Studies	Studies performed to determine if any additional transmission facilities are necessary to interconnect new transmission facilities.	Timely studies conducted as a cluster to identify upgrades necessary and process the Generation Interconnection queue more efficiently.
Aggregate Studies	Studies performed to determine if any additional transmission facilities are necessary to approve long-term point-to-point and NITS transmission service	Timely studies conducted as an aggregate to identify upgrades necessary for transmission service requests and process the queue more efficiently
Cost Allocation	Process of determining how the necessary upgrade costs should be allocated. Whether costs should be part of the base rate for recovery or under incremental rates to customers.	Distribute costs for those projects with more global benefit to all customers through the base rate while upgrades that are not determined necessary for economic expansion are incremental to those benefiting.



Future Practice	Description
Queue processing Customer Requirements	Strict policies for customers to accept or deny the required costs for upgrades must be defined in order for the request to be accepted or declined in an expeditious manner or to accept partial service that is available without expansion. Any remainder amount would have to follow with a subsequent request.
Stop posting LT ATC	Long-term ATC should only be derived through the aggregate study process, not calculated and posted similar to short-term.
Aggregate Studies for LT Transmission Service	Utilize Aggregate Study techniques to simultaneously evaluate the expansion needs to Transmission system to meet the currently queued requests for long-term firm and network service over the 10-year out horizon. Requests will be queued through an open season period and studied together with each request having its impact to constrained facilities identified along with cost assessments to address the issue. Studies will be conducted at least annually, if not every 6 months.
Develop Process for Intertie Study Requests	Develop a study process aligned with other boundary TPs to process Intertie Studies for requests on the interties.
Organizational alignment for LT Transmission Service processing by Planning	Long-term transmission service availability process managed by Transmission Planning wholly. Not just the running of the studies. End-to-end Long-term queue management should be covered by Transmission Planning.
New Network Load	Develop a policy to distinguish between normal load growth and incremental new loads for existing NT customers. Incremental New load will be competing for transmission capacity with new PTP customers.



Future Practice	Description
Cost allocation for Base and Incremental Rates Projects	Costs to meet PTP requests or changes in forecast load beyond previous 10-year forecast expectations of a Network Service customer that are not addressed by projects outlined through the integrated planning studies, may be allocated to those customers on a shared basis for all requests that affect particular constraints needing transmission facility expansion to mitigate an identified constraint.
Incremental Rate costs for new or previously un-forecasted loads	Cost Allocation procedures are developed to address potential overlap of reliability-based upgrades and long-term service upgrades to determine the appropriate breakdown of incremental rate costs vs costs to be absorbed through the general rate process. In general, EHV facilities are weighted more heavily for sharing among all customers while lower kV localized facilities are more prone to be assigned to those benefitting.



Future Practice	Description
Cluster Studies for Generator Interconnections	Generation Interconnection processes should also employ cluster studies in order to evaluate the ability of resources to supply energy to the transmission system. Similar to the aggregate study process, this allows for simultaneous assessment of multiple resources to evaluate and potentially share infrastructure cost allocations among those requesting access.



Long-Term Transmission Service

Functional Process	Gap: Process	Gap: Technology	Gap: Personnel	Gap Level
Aggregate Studies	GAPS TO BE REVIEWED IN PFGA WORKSHOP ON TUESDAY, 7/18			
Cost Allocation	GAPS TO BE REVIEWED IN PFGA WORKSHOP ON TUESDAY, 7/18			
Generation Interconnection	GAPS TO BE REVIEWED IN PFGA WORKSHOP ON TUESDAY, 7/18			

Appendix Materials

Additional BPA Business Capabilities Focused On Internal Future Practices



