

Transmission Business Model

Pro Forma/Industry Standard Gap Analysis:
Available Transmission Capability (ATC)



Study Process

- Reflecting Customer Choice in System Impact Study
- Study Process for Long-Term Alternatives for SOA
- Study Follow Through
- Intertie Studies

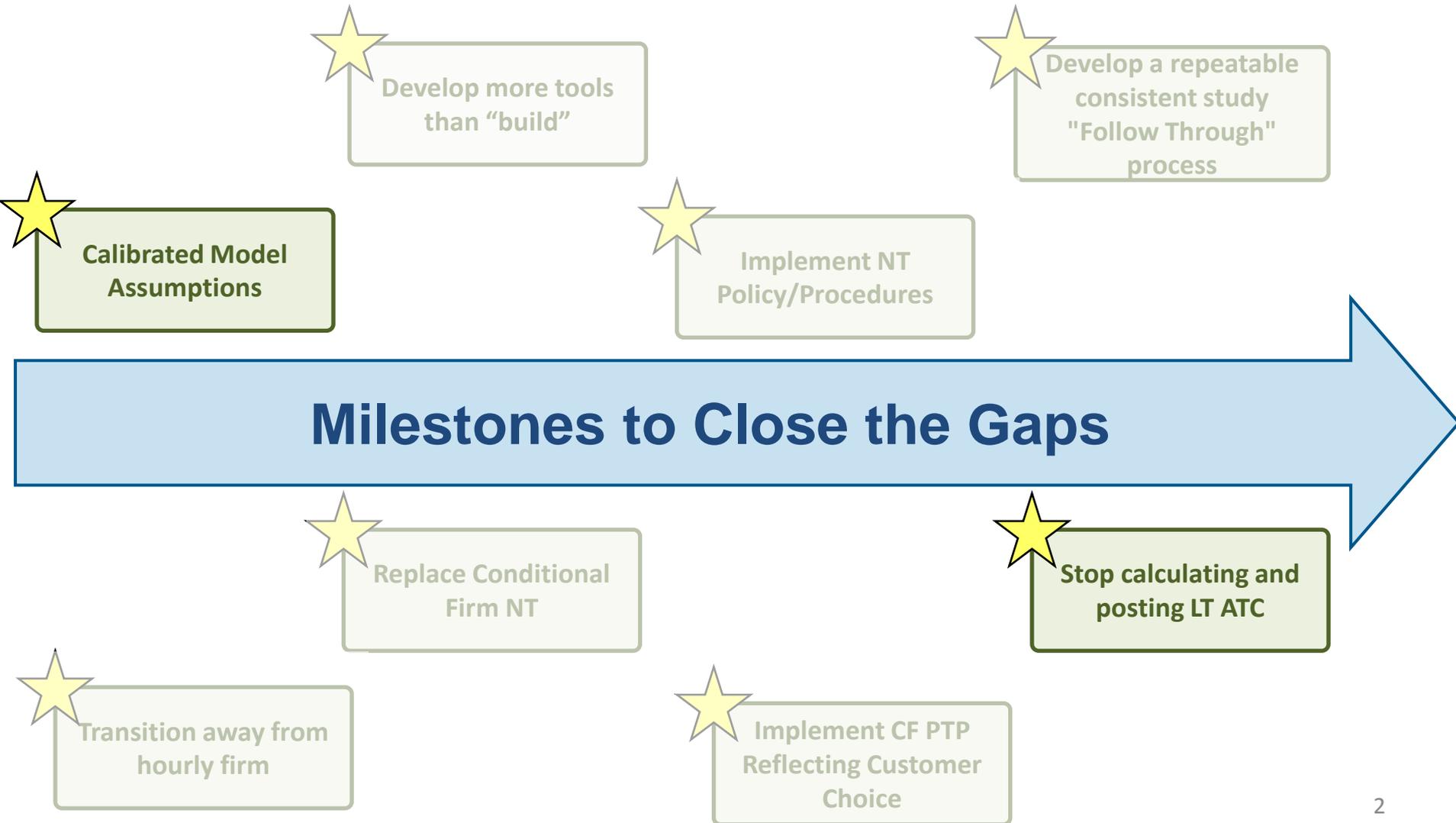
NT Scope

- Managing BPA/Customer NT Relationships
- One point of contact for load and resource forecasts
- Managing Load Growth

ATC

- Short-Term ATC
- Model and Metrics
- Long-Term ATC

PFGA Milestone Contribution – ATC



BPA Direction: ATC

Short-Term ATC

Model and Metrics

Long-Term ATC

Clear ATC roles

More frequent
Powerflow output
into OATI for
Short-Term ATC

Automate ATC
Powerflow inputs

Calibrated Model
Assumptions

Performance
metrics for ATC
assumptions

Stop calculating
and posting
Long-Term ATC

Problems to Solve

- Strike a better service to risk balance
- Align service award decisions with expected flow to better reflect anticipated system utilization
- No quality-based metrics
- No feedback loop for continuous improvement.
- Dramatically more difficult and expensive to expand the system now

Short-Term ATC

8/29/17

FY 2022

Split ATC into Short & Long-Term Operations

Analyze existing processes

Identify roles and responsibilities

Leverage lessons learned

Determine overall coordination and structure

Automate ATC Powerflow Inputs

Identify all sources of inputs

Powerflow tool evaluation

Data Transformation

Automate Output of Powerflow into OATI

Internal/External Powerflow application benchmarking

Dedicated team for capability development

Increased
Granularity,
Frequency

Objective

Faster and
more
efficient
calculations

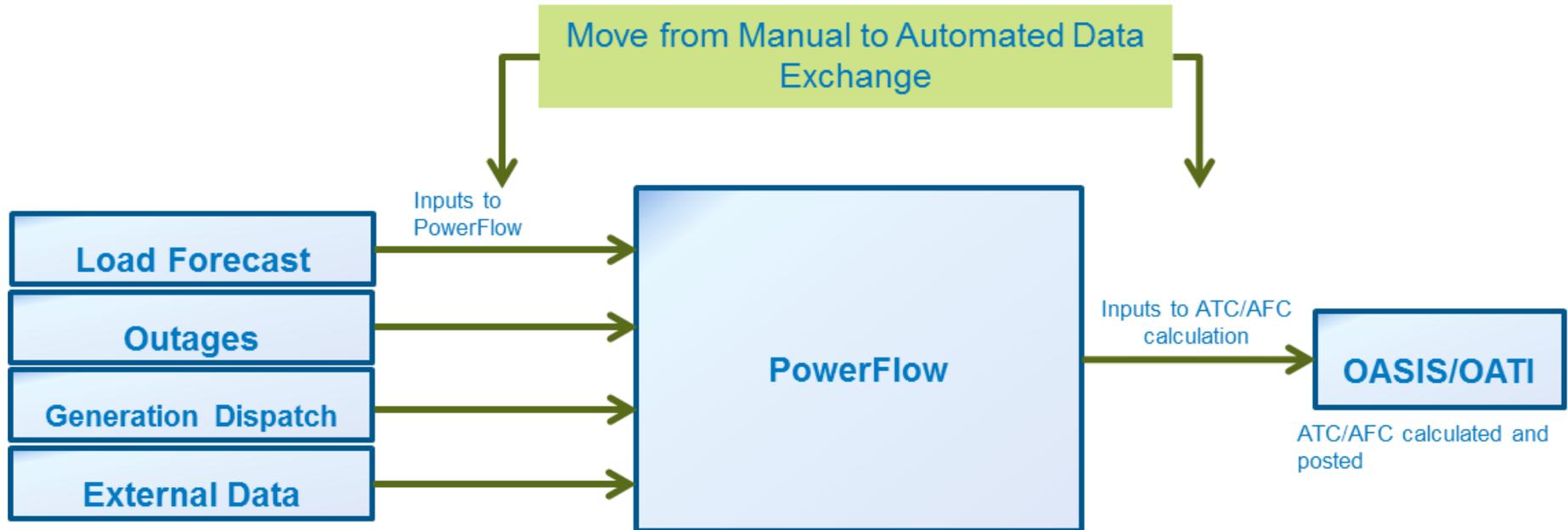
Implementation Considerations

- Better reflection of real constraints
- Paper vs. real congestion
- Organization and Staff changes
- Model inputs/data automation

Short-Term ATC

8/29/17

FY 2022



Benefits

- ATC/AFC can reflect changing conditions
- Input changes incorporated into ATC/AFC more frequently
- New modeling assumptions incorporated into ATC/AFC more quickly
- Reduction in manual work/human error

Calibrated Model Assumptions

8/29/17

FY 2022

Steps

Identify current state assumptions

Determine what can/cannot be changed from baseline

Define goals for long-term request processing/commitments/sales

Improved
ATC, risk
informed
assumptions

Objective

More accurate
and efficient
ATC calculation

Potential Goals

- Worst case vs. adequacy approach – determine a certain amount of risk to be acceptable
- Align decisions about awarding transmission service to our defined risk tolerance
- Meet regional transmission needs at lowest risk-adjusted cost
- Clarify the level of curtailment risk more (outside of outages)
- Provide clear signals on the effective location to interconnect new generation or new load
- Balance the cost of congestion management with the cost of congestion prevention

Performance Metrics for ATC Assumptions

8/29/17

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Steps

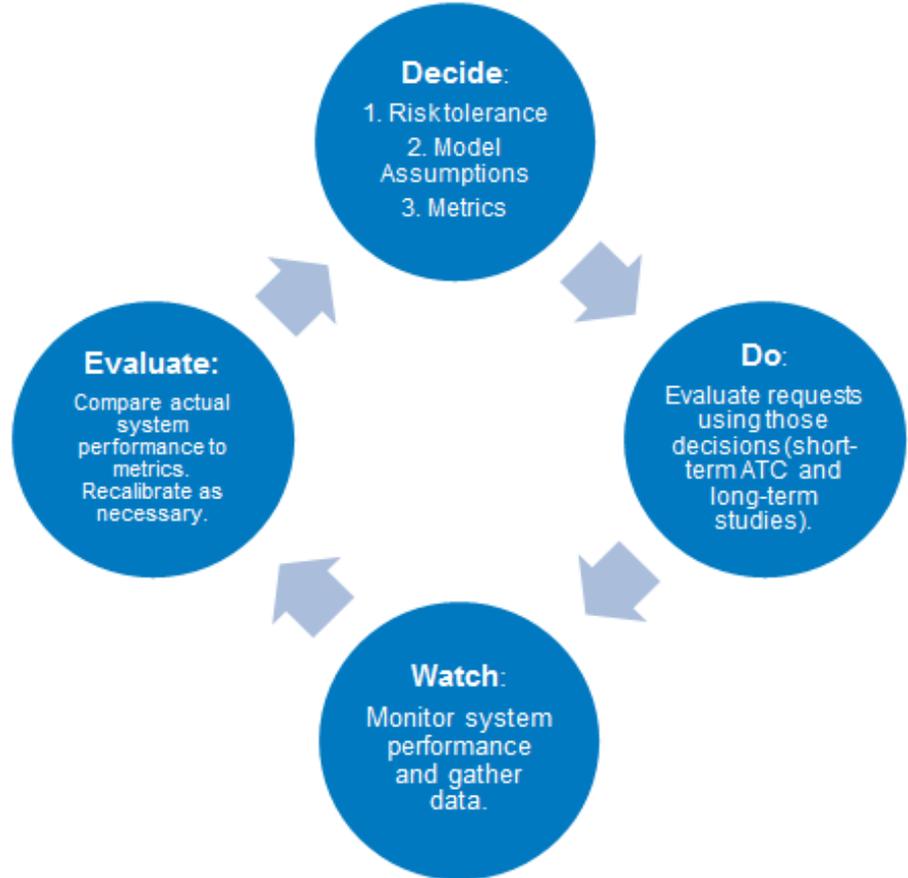
Develop process/measures to monitor and make adjustments

Refine process and/or metrics based on performance



Objective

Calibrated Model Assumptions



- ### Implementation Considerations
- Balancing Rates vs. Congestion Risk
 - Continuous lifecycle - evolution
 - People, Process and Technology
 - Don't let perfect be the enemy of good
 - Degree of customer involvement
 - Congestion Forecast/Management tools

Stop Calculating and Posting Long-Term ATC

8/29/17

FY 2022

Steps

Heat map or proactive studies for ideal locations for new generation and loads

Communication process for customers to engage with BPA (replace 'what if' ATC scenarios)

Transition plan: current state to future state ATC

Seams plan between short and long-term processes

Conditional Firm Policy

Address
misalignment
between ATC
and
Powerflows

Objective

Better
market
signals

Implementation Considerations

- One of the last steps
- Depends on Calibrated Model Assumptions
- Proactive dialogue with customers
- Conditional Firm policy reflects risk tolerances
- Evaluate customer tool options
- Dynamic Heat Map

**When looking at
calibrating the models,
what considerations
should we address that
are important to you?**

**Is there a need for
customer engagement in
Short-Term ATC internal
process changes?**

Do you believe a more frequent request study process and heat map are adequate replacements for long-term ATC?

**What are your thoughts
on the 2022 timeline for
eliminating Long-Term
ATC?**