Concurrent Loss Return Service Customer Workshop

March 30, 2022

Agenda

- Overview
- Review Customer Feedback
- Staff Proposals (Steps 5 & 6)
  - Dynamic Transfers and Pseudo-Tie Transactions
  - Invalid Loss Returns
  - Real-time and after-the-fact loss return imbalance
- Policy Discussion
- Next Steps/Request for Feedback
  - BPA has flagged areas throughout the presentation where we are seeking customer feedback

What BPA Has Heard

- Need more time to discuss the features of the alternatives
- Capacity charge is not acceptable
- Like to better understand the schedule timing
- Would like to better understand how customer comments are being considered in the features
- Questions on the principles

What BPA Is Doing

- Throughout the presentation you will see a different format that will discuss how we considered customer comments.
- We are reviewing the losses data and will share with you our proposal at the April workshop if a capacity charge would be needed and the reasoning.
- We heard from you and recognize that more time is needed to discuss the features of concurrent loss return service, so we scheduled one more workshop and added it to our implementation plan.
- BPA shared with customers the principles on how we will make policy decisions. These were reviewed by Executives and we have affirmed these are the principles staff will use to make decisions in order to meet the concurrent losses implementation deadline in the BP-22 Rates Settlement.

Principles

1. Meet BPA's commitment in the BP-22 settlement.
2. Informed by what has been implemented by other utilities.
3. As simple as possible and minimizes administrative burden for BPA and customers, where possible.
4. Cost efficient implementation for BPA through minimization of custom changes to systems.
5. Losses returned the same hour as the schedule.
6. Minimizes unintended impacts on other policies and is auditable.

Implementation Stages

Stage 1: Policy Development

Dec 2021-Jun 2022

- Customer workshops on policy development, which will follow the six-step Engaging the Region Process
- Update Business Practice(s)

Stage 2: System Implementation

Jun 2022-Sept 2023

- Finalize system requirements based on policy
- Develop/integrate systems
- Testing

Go Live!

No later than start of BP-24 rate period

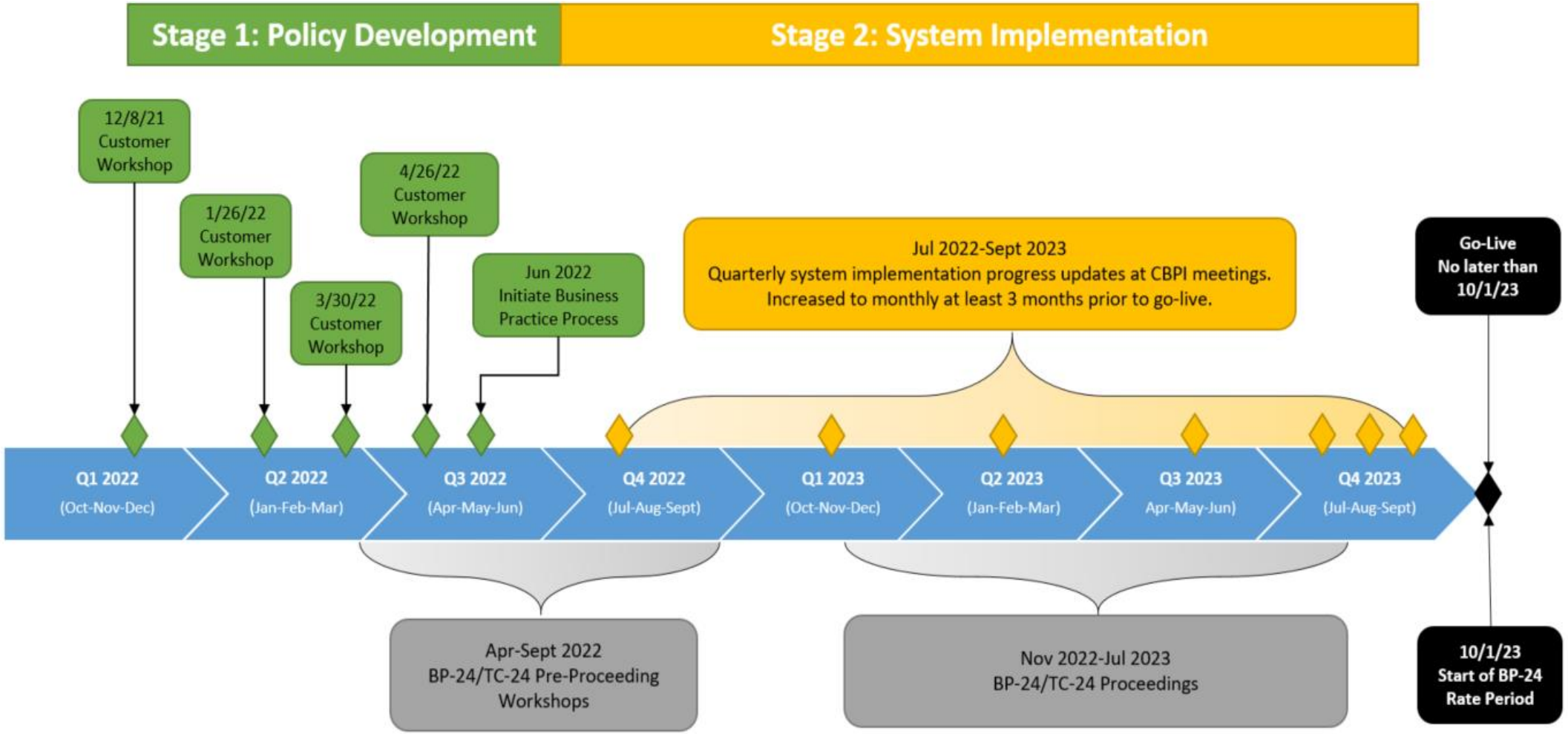
- No later than the start of the BP-24 rate period (Oct 1, 2023), concurrent loss return service offered as a way for customers to return their real power loss obligation.

Engaging the Region

- Policy items will be presented according to the following six-step process at workshops (multiple steps might be addressed in a single workshop):

Approach Development	Evaluation	Proposal Development
Step 1: Introduction & Education Step 2: Description of the Issue	Step 3: Analyze the Issue Step 4: Discuss Alternatives	Step 5: Discuss Customer Feedback Step 6: Staff Proposal
Dec. 8, 2021 Workshop	**Jan. 26 & Mar. 30, 2022 Workshop**	**Mar. 30 & Apr. 26, 2022 Workshop**

Project Timeline



Pre-decisional. For Discussion Purposes Only.

CUSTOMER FEEDBACK

Topic: Concurrent Losses

Customer Comment

- Failed to provide justification for transition to concurrent loss returns
- Unpersuaded as to the merits & viability of concurrent loss returns
- Implementation challenges may outweigh benefits

BPA Response

- BPA recognizes that transitioning to current loss returns is challenging.
- BP-22 Rates Settlement Agreement identified the intent to retire delayed losses and transition to concurrent losses.
- BPA continues to follow the BP-22 Rates Settlement Agreement and intends to implement concurrent losses no later than 10/1/23.
- BPA appreciates continued customer engagement and dialogue as we work toward implementation of concurrent losses.

Topic: Principles

Customer Comment

- How did BPA established the principles?
- Have customers been given time to provide input on these?
- Concern over principle #5 “Concurrent = Same Hour”
- BPA should include as one of its Principles language to the effect of: “Preservation of customer optionality in the in-kind settlement of loss returns.”

BPA Response

- Concurrent Losses team members developed the principles and shared them internally with project sponsors.
- BPA executives were made aware of the concern over principle #5 “Concurrent = Same Hour.”
- Executive direction remains that concurrent losses must be delivered to BPA in the same hour as the customer’s use of the transmission system.
- BPA continues to pursue in-kind and financial settlement options for returning losses.

Topic: kW Remainders

Customer Comment

- Some customers favor financial settlement for all kW remainders and imbalances using the EIM LMP price
- Some customers had a leaning towards Option 2 - Financially settle loss obligations less than 0.5 MW
- No strong preference for rounding, but prefer to settle all of the remainder financially
- Request to address & implement carryforward of KW remainders in BP-26
  - BPA to absorb KW remainder costs during BP-24

BPA Response

- BPA appreciates the customer's recognition that because of the nature of how customers do business with BPA, there is an issue with rounding that results in the need to seek some compensation for the losses the federal system would need to supply during the hour of flow.
- BPA appreciates this feedback and the team continues to analyze the data. We will share with customers our proposal on kW remainders at the April workshop.

Topic: Slice

Customer Comment

- Intent to preclude Slice/Block customers from continuing to utilize a reduction to their RTP is unacceptable
- Retain Slice settlement method
  - at T-75 to provide customers with final RTP number

BPA Response

- BPA continues to work closely with our Slice customers with a goal to arrive at a compromise in order to allow for retention of their Right to Power functionality, while still ensuring that the approach adheres to the principles of concurrent losses.

Pre-decisional. For Discussion Purposes Only.

Topic: Penalty for Invalid Loss Returns

Customer Comment

- Concern with rigidity & strict application of penalties
- Be aware of the tight scheduling timelines impact on customer's ability to be successful with returning concurrent losses
- Allow for one off circumstances to penalty waivers.
- Consider +/- MW quantity or % for bands
- Consider "strikes" and subsequently transition repeat offenders to Financial settlement

BPA Response

- BPA recognizes customer concern around implementing a penalty structure. The proposed solution later in this presentation will show that BPA is pursuing an approach that only penalizes actions that are within the customers control and includes a scheduling window that provides customers the ability to return accurate losses based on the BPA posted loss obligations.

- BPA will continue to have an established formal dispute process for penalties and will treat each case with careful consideration of the circumstances involved. We realize there may be unforeseen system issues with concurrent losses that will need to be taken into account.

Topic: Posting of Obligations

Customer Comment

- Accustomed to using CDE
- Maintain API access
- Maintain the same or similar manner and format as today to minimize IT effort.
- Prefer customer portal to display loss obligations

BPA Response

- BPA is continuing to explore adding a new screen to the BPAT Customer Portal to post the calculated loss obligation and loss return data.
- BPA recognizes the customer needs of providing an API to allow for the automated pull of this data into customer systems.
- BPA also recognizes the necessity of providing a solution that will ensure the system can be updated in a timely manner.

Topic: Scheduling & Timing

Customer Comment

- Need further discussion of flow and timing
- Asking for 15 minutes instead of the 10 we are offering.

BPA Response

- Bonneville is aware of the challenges around posting obligations in conjunction with numerous other demands on scheduling staff during the hourly Real Time horizon.
- We will have a thorough discussion about scheduling and timing during today's workshop.
- We are working on removing customer-sensitive information from the loss data and plan to share it before the April workshop.

Topic: Capacity Charge

Customer Comment

- If BPA chooses a capacity fee for imbalance, if that results in a credit, then the credit should have a capacity component as well
- Delayed loss returns
- If we over deliver losses, BPA should allow for an additional credit to cover the over delivery
- Should not include an additional capacity charge

BPA Response

- BPA is analyzing the losses data to determine if we will propose a capacity component for settling imbalance and will share results at the April workshop.
  - Areas of focus:
    - Average/Total Obligation changes between T-30/T-67 and T+170 that could result in Loss Imbalance
    - Assessment of kWh of remainders as of T-30 that could result in Loss Imbalance
    - Obligation changes after T-67 that result from Reliability Events
    - Obligation changes after T-30 that results from Dynamic/Pseudo-Tie eTag adjustments
  - Preliminary results: so far data not showing significant impacts but we continue to review.

Topic: Dynamic Tags

Customer Comment

- Support for option 2, which allows customers to return some or all their loss obligations, and any remaining imbalances are settled financially after the fact
- Against Option 1 for handling of losses related to this topic

BPA Response

- BPA intends to include Dynamic Transfers in the computation of loss obligations; more discussion on this later in the presentation.
- Due to the nature of Dynamic Transfers, imbalances in loss obligations will be proposed to be calculated at T+170 and settled financially.

BPA's Current Position

- BPA continues to proceed forward with our proposal to have customers return their aggregated/posted loss obligation during the hour of flow for which the loss obligation was calculated.

- Following customer request, BPA continues to offer two choices to return loss obligation:
  1. Concurrent in-kind loss returns
  2. Financial loss returns

STAFF PROPOSALS (STEPS 5 & 6)

- Dynamic Transfers & Pseudo Tie Transactions
- Invalid Loss Returns
- Real-Time and After-the-Fact Loss Return Imbalance

Loss Obligation will Include Energy Profile from Dynamic Transfer & Pseudo-Tie Transactions

Objective: Determine how to account for the loss obligations for Dynamic Transfer and Pseudo-Tie transactions.

Options Considered: 1) Exclude the energy profile from the physical loss obligation and financially settle the full amount of loss returns for these transactions, or 2) Include the energy profile of these transactions to determine the amount of physical return.

Analysis/Customer Feedback: In written feedback, customers asked that they be allowed to return losses for these transactions physically. This is consistent with BPA's desire to maximize the physical return of losses.

Staff Proposal
Staff proposes to include Dynamic Transfer and Pseudo-Tie transactions when calculating a customer's Loss Obligation, using the same timing requirements as Normal type eTags.

Because in-hour and ATF adjustments are expected for these tag types, the resulting impacts to the calculated Loss Obligation between T-30 and T+170 will be considered Loss Imbalance and settled financially.

Consistent with feedback BPA received, BPA will monitor the accuracy of the use of the energy profile compared to actual loss obligation. The results will inform possible changes in the future.

BPA will Assess a Penalty Charge on Invalid Loss Returns

Objective: Determine whether to assess a penalty for invalid loss returns (over or under deliveries).

Options Considered: 1) A penalty charge would be assessed to customers who do not submit valid loss returns by the final submission window (T-20), or 2) Customers who do not submit valid loss returns (over or under schedule) are not assessed a penalty.

Analysis/Customer Feedback: Customer expressed concern around implementing a penalty structure and preserving a waiver process.

BPA needs to establish a strong incentive for customers to return accurate loss returns by the final submission window is necessary to successfully implement concurrent loss return service.

Staff Proposal
BPA proposes to assess a penalty charge on invalid loss returns.

Customers who do not return accurate losses by the final submission window (T-20) will be assessed a penalty charge, which will be proposed in the BP-24 rate case.

In-hour or after-the-fact adjustments that change the loss obligation are not assessed a penalty. A process for customers to request a waiver or reduction in penalty will be provided and we discuss what would be considered when assessing a penalty later in the presentation.

Concurrent Loss Return Imbalance due to Real-Time or After-the-Fact Changes to a Transmission Schedule

Objective: Determine how BPA will manage concurrent loss return imbalances that occur due to real-time or after-the fact changes to a customer's Transmission schedule

Options Considered: Given that losses must be returned the same hour as the associated transmission and no loss obligations will be carried forward to a future hour once concurrent loss return service is implemented, staff believes the only path forward to accurately account for loss return imbalance due to real-time events or after-the-fact adjustments is to financially settle all loss return imbalance that is a result of real-time events or after-the-fact adjustments.

Analysis/Customer Feedback: Any adjustment to the Transmission schedule leading up to and during the hour of flow may result in an imbalance of loss returns when compared to the expected return

Staff Proposal
BPA proposes that loss return imbalance occurring as a result of real-time events or after-the-fact adjustments be settled financially. This will require a BP-24 rate proposal.

POLICY DISCUSSION

- Loss Obligation Posting Timing Windows
- Loss Return Timing Windows
- Reliability Events
- No-Charge Reservations
- Loss Suffixes
- Slice

Loss Obligation Posting Timing Windows

PreSchedule

- PreSchedule Posting Frequency – Updated every 1 hour, showing all hours in the RealTime Day + 5 days out
- PreSchedule Posting Start/Stop – 12:00AM PPT (Open of the PreSchedule window) to 10:53PM PPT, allowing 67 minutes prior to the start of the RealTime day for Loss Return tagging.

RealTime

- RealTime Posting Frequency – Updated once per minute, showing Next Hour + 2 additional hours
- RealTime Posting Start/Stop – 10:53PM PPT (67 minutes prior to the start of the RealTime day) to T-30 (Final Loss Obligation Posting), allowing 10 minutes prior to the close of the FERC RealTime window for Loss Return tagging.

After The Fact

- Updated once per hour between T-30 and T+170 for each hour of flow

Loss Return Timing Windows

Loss Return Deadlines

- PreSchedule: 3:00PM PPT
- RealTime: T-20

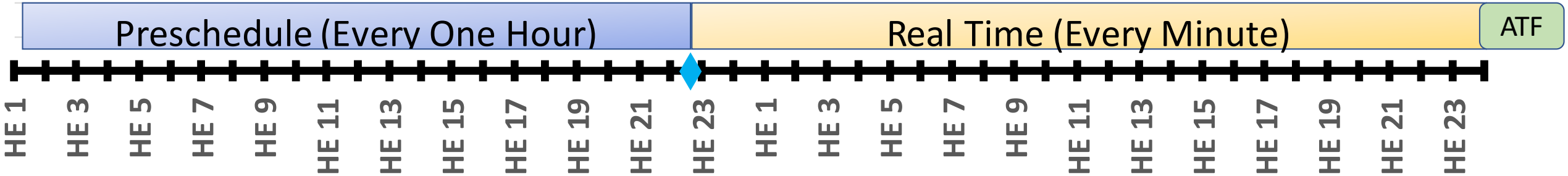
EIM Window

- Loss Return eTags subject to EIM Imbalance charges/credits if submitted between T-57 and T-20

Loss Return Imbalance Window

- Changes to loss obligation between T-30 and T+170 (final eTag Adjustment that impacts the Loss Obligation for the hour) considered real-time loss return imbalance and settled financially

Preschedule to Real Time Loss Obligation Windows



Window	Posting Frequency	Start	Stop
Preschedule	Updated every 1 hour, for all hours in the RealTime Day + 5 days out	12:00AM PPT (Open of the PreSchedule Window)	10:53PM PPT (67 minutes prior to the start of the RealTime day)
Real Time	Updated once per minute for Next Hour + 2 additional hours	10:53PM PPT (67 minutes prior to the start of the RealTime day)	T-30 (Final RealTime Loss Obligation Posting)
After the Fact	Updated every 1 hour for all hours	T-30 (Final RealTime Loss Obligation Posting	T+170 (Final Loss Obligation)

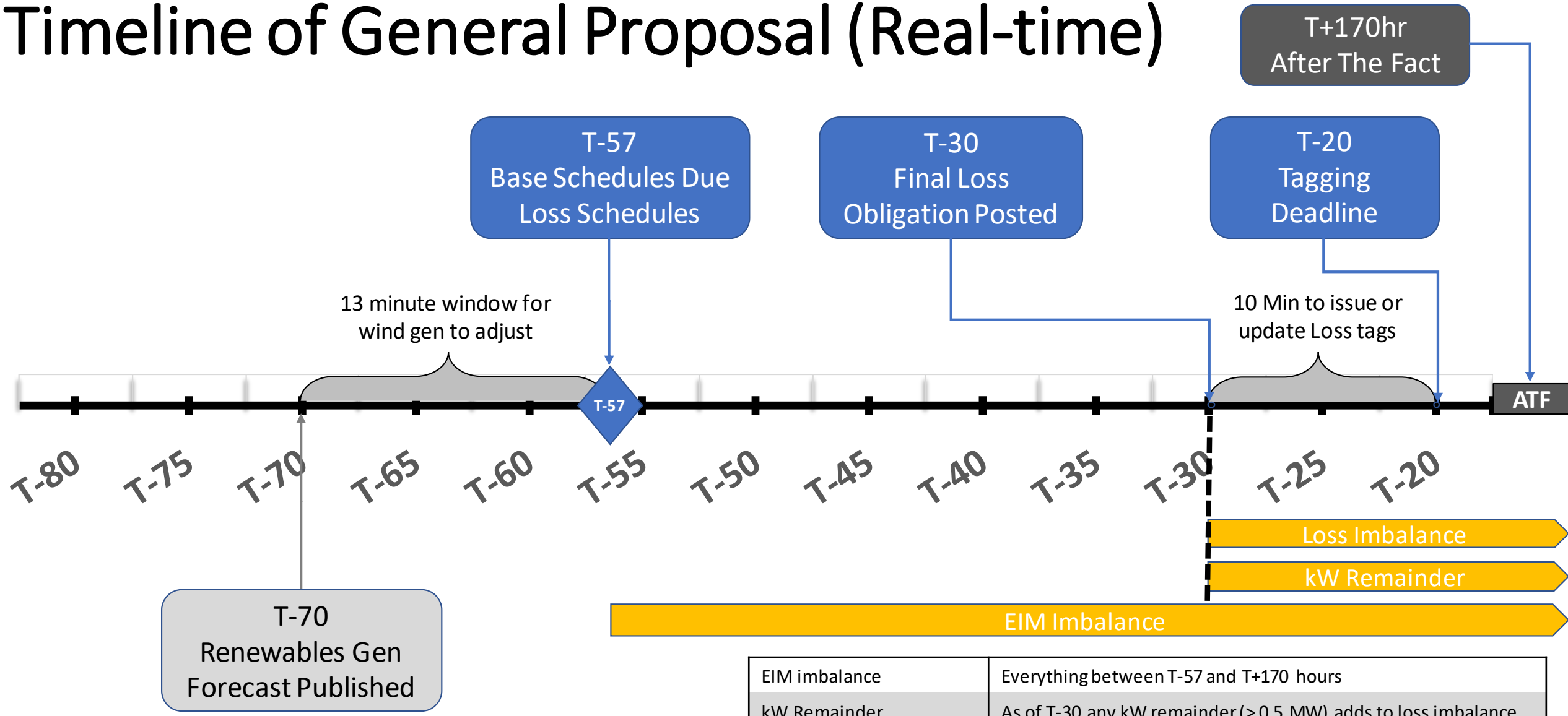
Posting Window Change

- T-67 prior to start of Real Time. Change from 1hr to 1min Loss Obligation Postings

After The Fact (ATF):

- Updated Loss Obligation once per hour for each hour of flow between T-30 and T+170

Timeline of General Proposal (Real-time)



EIM imbalance	Everything between T-57 and T+170 hours
kW Remainder	As of T-30 any kW remainder (> 0.5 MW) adds to loss imbalance
Loss imbalance	Everything between T-30 and T+170 hours

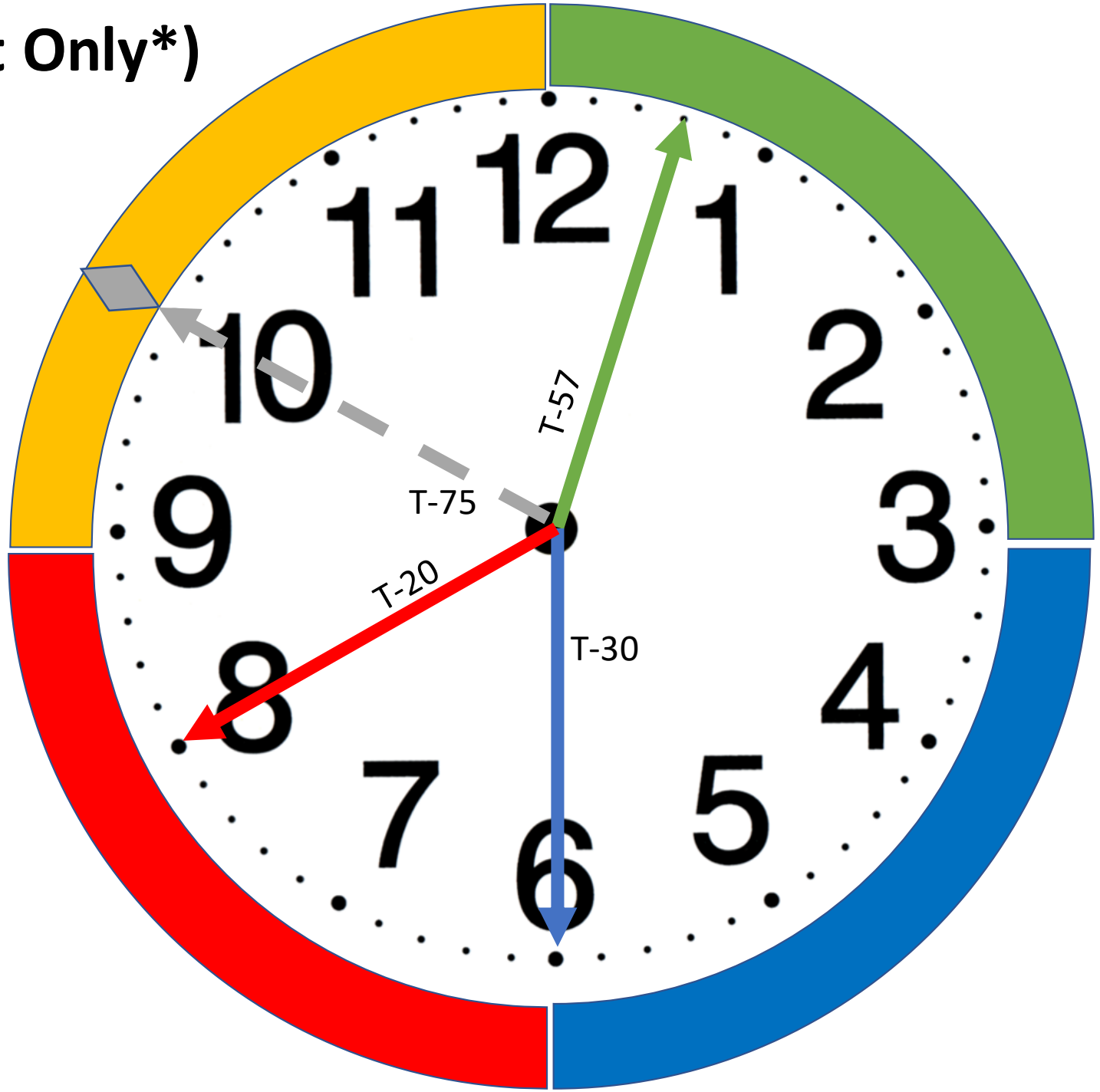
General Proposal (Concurrent Only*)

T-70: Renewables Gen Forecast (posted every minute through T-30)

T-57: Base Schedule Due

T-30: Final Loss Obligation Posted

T-20: Tagging Deadline



* Concurrent-only

- Only applicable to non-SLICE customers
- Loss obligation will be re-checked and re-posted every minute during real time up to T-30
- Any Loss Return tag submitted between T-57 and T-30 will be subject to EIM charges/credits

Scheduling Unabridged (General)

T-75: EIM Bids Due

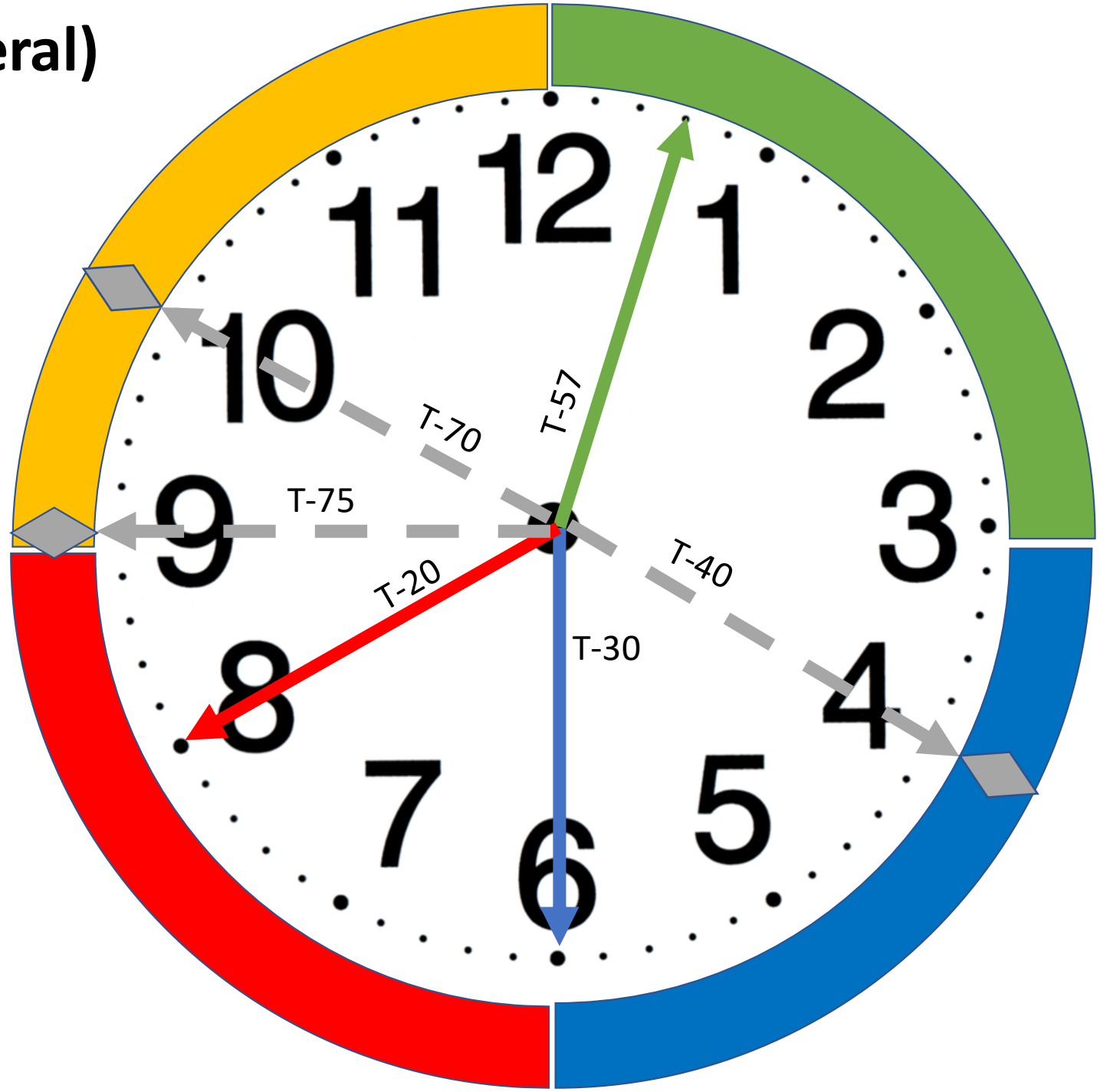
T-70: Renewables Gen Forecast

T-57: Base Schedule Due

T-40: Final EIM Resource Sufficiency Evaluation

T-30: Final Loss Obligation Posted

T-20: Tagging Deadline



Reliability Events: Background

Current State:

For 168-hour delayed in-kind losses, the loss obligation is calculated and posted after all changes to eTags that impact the obligation have been completed. Inherently, changes to the loss obligation resulting from reliability events are accounted for in the posted obligation.

Problem Statement:

Due to the nature of reliability events, when moving to concurrent loss returns there can be instances where customer notification of a reliability event that impacts the calculated loss obligation will not be known in time for the customer to take action on by making the proper adjustments to their loss return eTag(s) within the proposed scheduling window.

Reliability Events: Options

Seeking Customer Feedback on Options Being Considered

- **OPTION 1** – If a reliability event that would impact the customer's loss obligation is first known any time after T-67, the customer will be exempt from any invalid loss return penalties for that hour of flow. All changes in loss obligation or impacts to the loss return eTag resulting from reliability events after T-67 will be treated as real-time loss imbalance and financially settled.

- **OPTION 2** – If a reliability event that would impact the customer's loss obligation is first known any time after T-30, the customer will be exempt from any invalid loss return penalties for that hour of flow. All changes in loss obligation or impacts to the loss return eTag resulting from reliability events after T-30 will be treated as real-time loss imbalance and financially settled.

Reservation Requirements

Current State:

Prior to the close (3pm PPT) of the Preschedule Horizon, customers have the ability to either obtain a Daily Firm or an Hourly Firm no-charge Loss Reservation, used to return the MW amount of the BPA calculated loss obligation.

Problem Statement:

When moving to concurrent loss returns, the customer's loss obligation will be updated up to T-30 of the RealTime day with Loss Return eTag(s) submitted by T-20. Customers may need to acquire additional no-charge Loss Reservation MWs during the RealTime horizon in order to meet their full obligation.

BPA is exploring ways in which we can use existing no-charge reservation products or whether a new product is needed to implement a no-charge reservation for real-time horizon. If a new product is required, a tariff and/or rate proposal may be necessary.

Loss Obligation Posting Location

Current State:

BPA currently posts loss obligation and loss return data to the OATI CDE Loss screens. This data is calculated and posted from the OATI Loss Module on the day prior to the preschedule day of which the loss returns are due 168 hours after being incurred.

Problem Statement:

BPA has several non-OATT contracts that require the retention of a 168 hour in-kind loss return option and is therefore choosing to leave the existing OATI CDE functionality as is for their continued use. BPA is seeking a solution to provide a new concurrent loss obligation screen for those customers who elect Concurrent Loss Return service.

BPA received comments expressing interest in having the loss obligation posted to CDE or the new Customer Portal. As we explore our options where we can post the data, we will consider the following:

- The system performance ability to provide consistent loss data posting intervals
- An ability to programmatically query the data to allow for customer automation via an API
- The ability to manage accessibility and user rights to allow for third-party loss suppliers

Loss Suffixes

Current State:

Per the Real Power Loss Return Business Practice, when returning losses customers must specify one of the following loss-related tag suffixes within the OASIS field of the loss return eTag; L2, L3, L7, L9, LP, LR. These tag suffixes were created for categorization purposes required by a legacy BPA system that is no longer in use.

Staff Proposal:

When moving to concurrent loss returns, discontinue the required specification of loss-related tag suffixes on loss return eTags.

SLICE

Current State:

Slice customers who elect to settle loss obligations via “Slice” simply schedule less (by the hourly loss obligation) than their BPA allocated energy.

Options Considered

1) Retire “Slice” settlement method and transition to scheduling and tagging in-kind concurrent returns
2) Maintain “Slice” settlement for in-kind concurrent losses

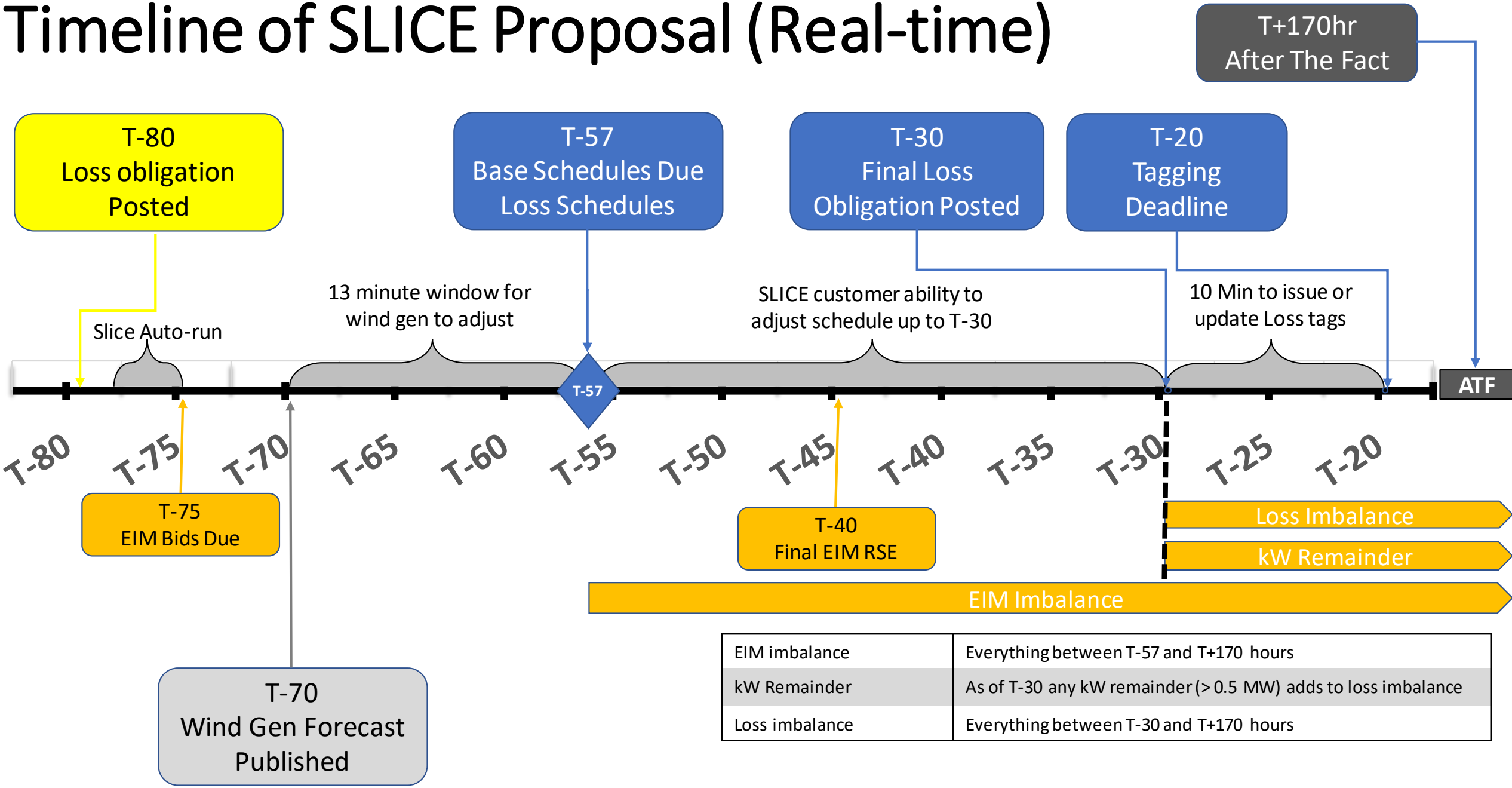
Status:

BPA staff and Slice customers continue to collaborate on a concurrent losses implementation that would maintain a similar use of Slice for settlement of loss obligations.

Based on the design of the concurrent implementation, BPA staff continue to work to identify necessary IT changes and resources needed to implement the ability to maintain a “Slice” settlement method.

BPA staff plan to share details of the implementation and expected IT impacts with executive sponsors.

Timeline of SLICE Proposal (Real-time)



EIM imbalance	Everything between T-57 and T+170 hours
kW Remainder	As of T-30 any kW remainder (> 0.5 MW) adds to loss imbalance
Loss imbalance	Everything between T-30 and T+170 hours

SLICE Proposal @ T-80

T-80: Loss Obligation Posted for SLICE

T-70: Wind Gen Forecast (posted every minute through T-30)

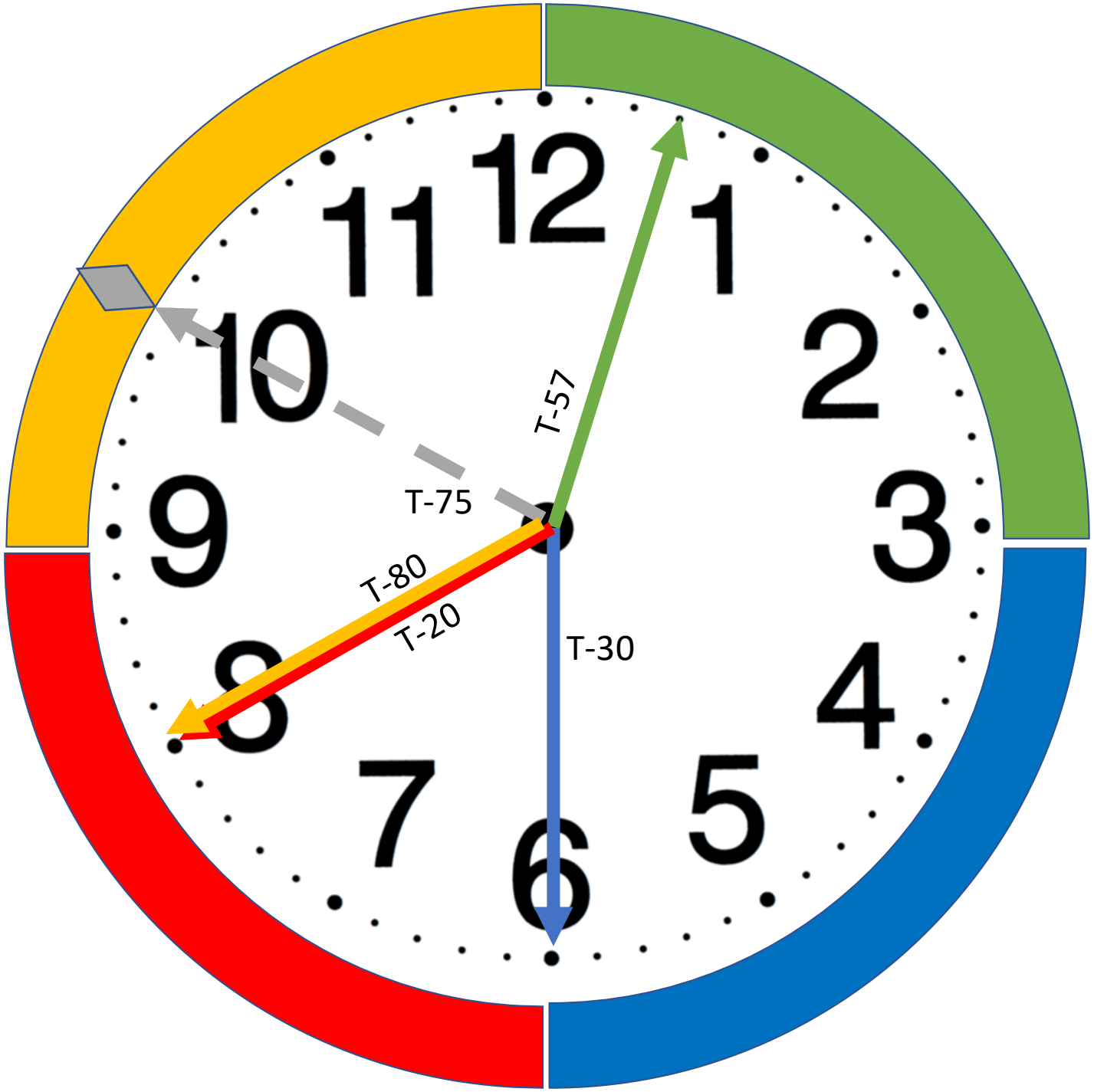
T-57: Base Schedule Due

T-30: Final Loss Obligation Posted

T-20: Tagging Deadline

Slice version at T-80

- SLICE only!
- Last opportunity to right to power for SLICE
- Loss obligation will be re-checked and re-posted every minute during real time up to T-30
- Any Loss Return tag submitted between T-57 and T-30 will be subject to EIM charges/credits



Next Steps

- Final workshop is April 26, 2022.
- Please submit feedback to techforum@bpa.gov by **Apr 13**, with a cc to your Transmission Account Executive (AE).
- Specifically, we are looking for feedback including support, concerns, or preference on:
  - Reliability events in relation to loss return submission deadlines for assessing invalid loss return penalties.
  - System/operational impacts to loss obligation posting and eTag timing proposal.
- BP-24 Pre-Proceeding Workshops start in April – look for concurrent loss return rate discussions/proposals in the coming months.
- Business Practice Process expected in June.