Cypress Creek RENEWABLES

ERCOT Batch Load Study Process Withdrawal Risks

3/30/2026

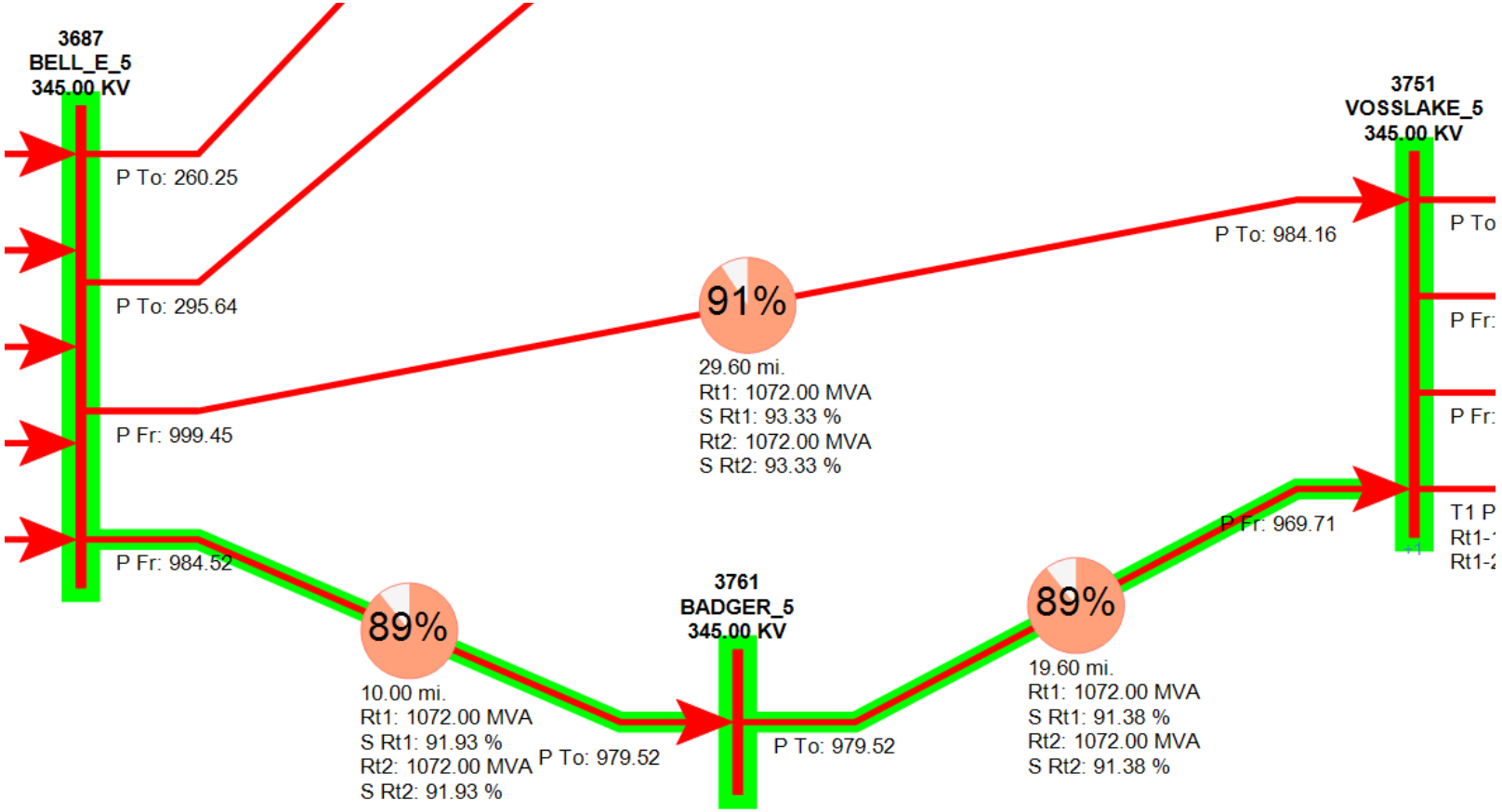
CCR's Concern

- CCR's concern relates to the refinement study phase, where ERCOT is currently proposing not to adjust MW allocations / LCP.
- We see a fundamental risk in this approach: once a load commits and executes an IA, its MW allocation will be fixed, even if other Large Loads drop. Without a re-study to validate updated system conditions, ERCOT may face a scenario where an approved load is unable to receive its allocated MW without causing reliability violations, particularly if new network upgrades are identified during the refinement period.

Base Case

- SSWG base case: "25SSWG_2029_SUM1_Final_07082025.raw"
- Study area: Transmission system between Bell E (3687) and Voss Lake (3751) 345 kV
- Rationale: 345 kV lines have high N-0 % loading
- NOTE: Analysis presented is restricted to N-0 conditions to illustrate the **concept** of load withdrawal triggering new reliability violations, it is not representative of a full study
- Note: The Transmission Planner from CCR who prepared the power flow slides is unable to join today.

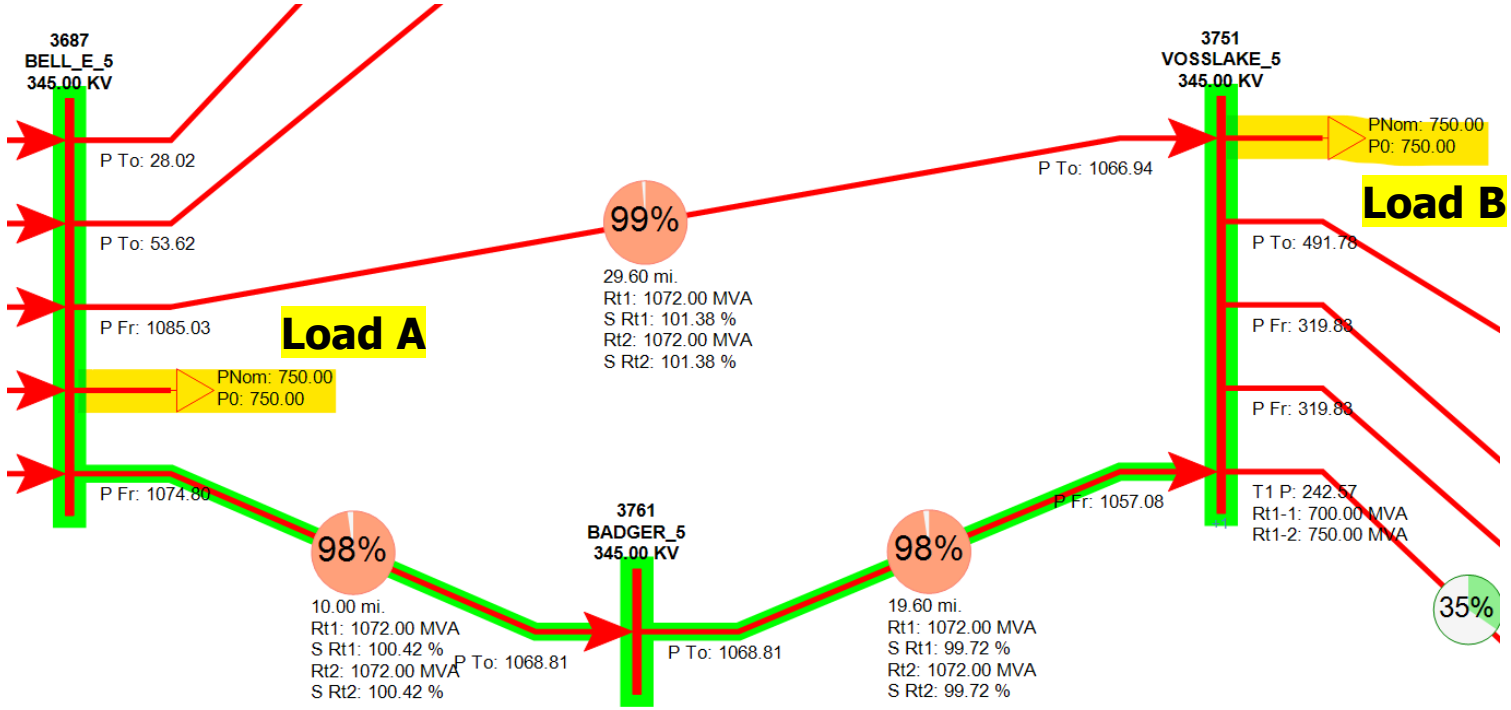
Pre-Batch N-0 Loadings



Batch Study - Base Case Modifications

- Add a 750 MW unity PF (Load A) at Bell E 345 kV (3687)
- Add a 750 MW unity PF (Load B) at Voss Lake 345 kV (3751)
- Solve base case

Batch Study: N-0 Loadings



No Overloads!

LCP – Batch Study Results

Year	Load A	Load B	Network Upgrades
2028	750	750	None
2029	750	750	None
2030	750	750	None
2031	750	750	None
2032	750	750	None
2033	750	750	None

Neither Load A nor Load B is required to provide security for Network Upgrades.

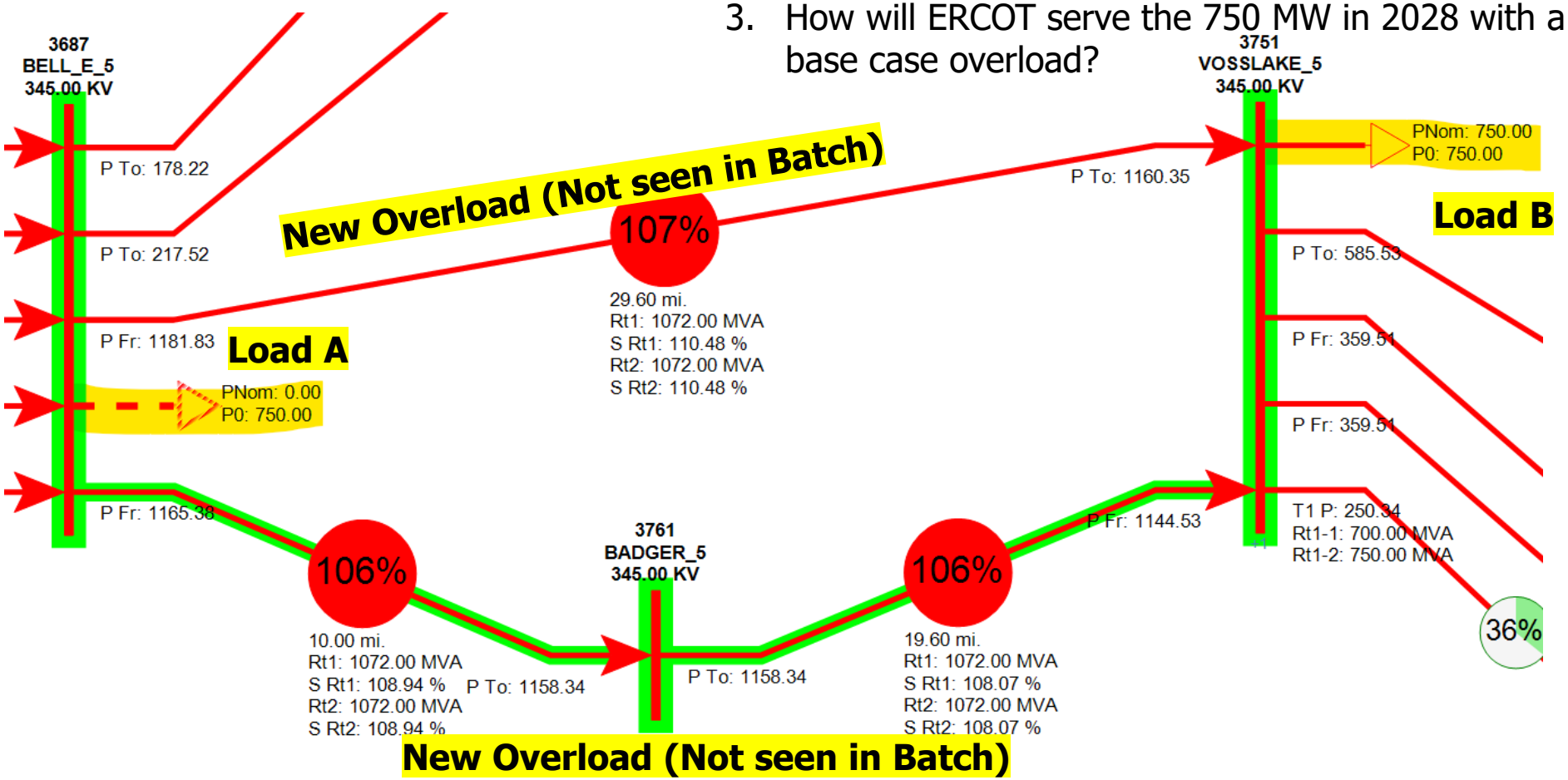
Batch Study: 30 Day Commitment

- Load A does NOT sign IA
- Load B signs IA ($50 k/ MW Non-Refundable + CIAC + Financial Secuirty)
- Next Step: Turn off Load A at Bell E 345 kV
- Solve base case

Batch Study: Refinement Study

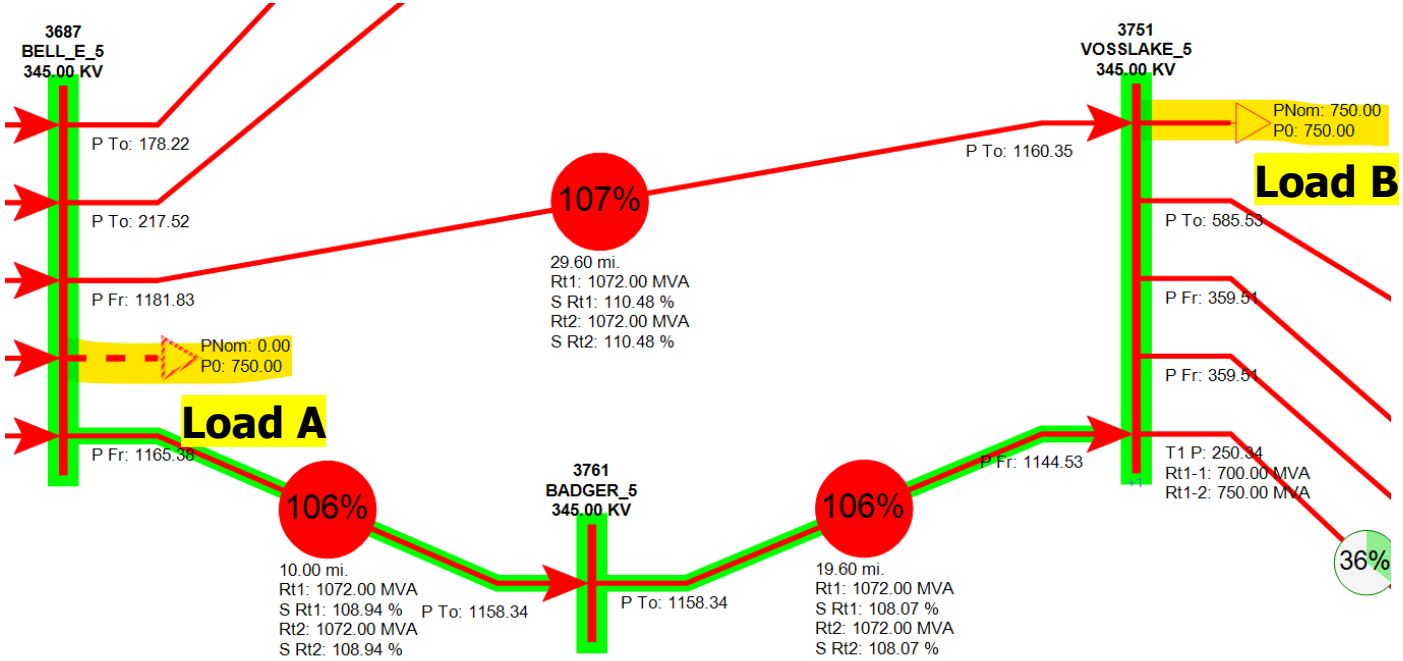
- New overload caused by Load A dropping

1. Will the Refinement Study identify scenarios like this? And propose new Transmission?
2. Who will securitize these upgrades? Load A or B?
3. How will ERCOT serve the 750 MW in 2028 with a base case overload?



Batch Study: Refinement Study

- ERCOT can no longer guarantee 750 MW for Load B in 2028, as a network upgrade is now required.
- Assuming a 3-year upgrade timeline, the LCP should be updated.
- Load B executed an IA based on the assumption that 750 MW would be available in 2028, which is no longer feasible.

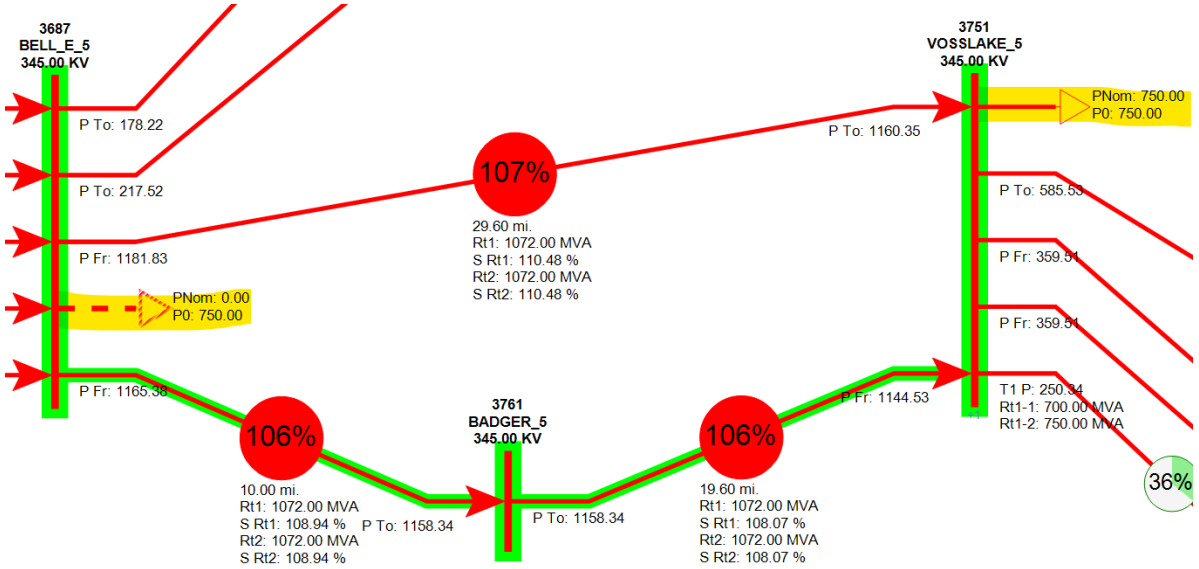


Year	Load A	Load B	Network Upgrades
2028	0	375*	Yes
2029	0	375*	Yes
2030	0	375*	Yes
2031	0	750	None
2032	0	750	None
2033	0	750	None

*Load reduction is needed to solve reliability violation

Batch Study: ERCOT proposal / Refinement Study

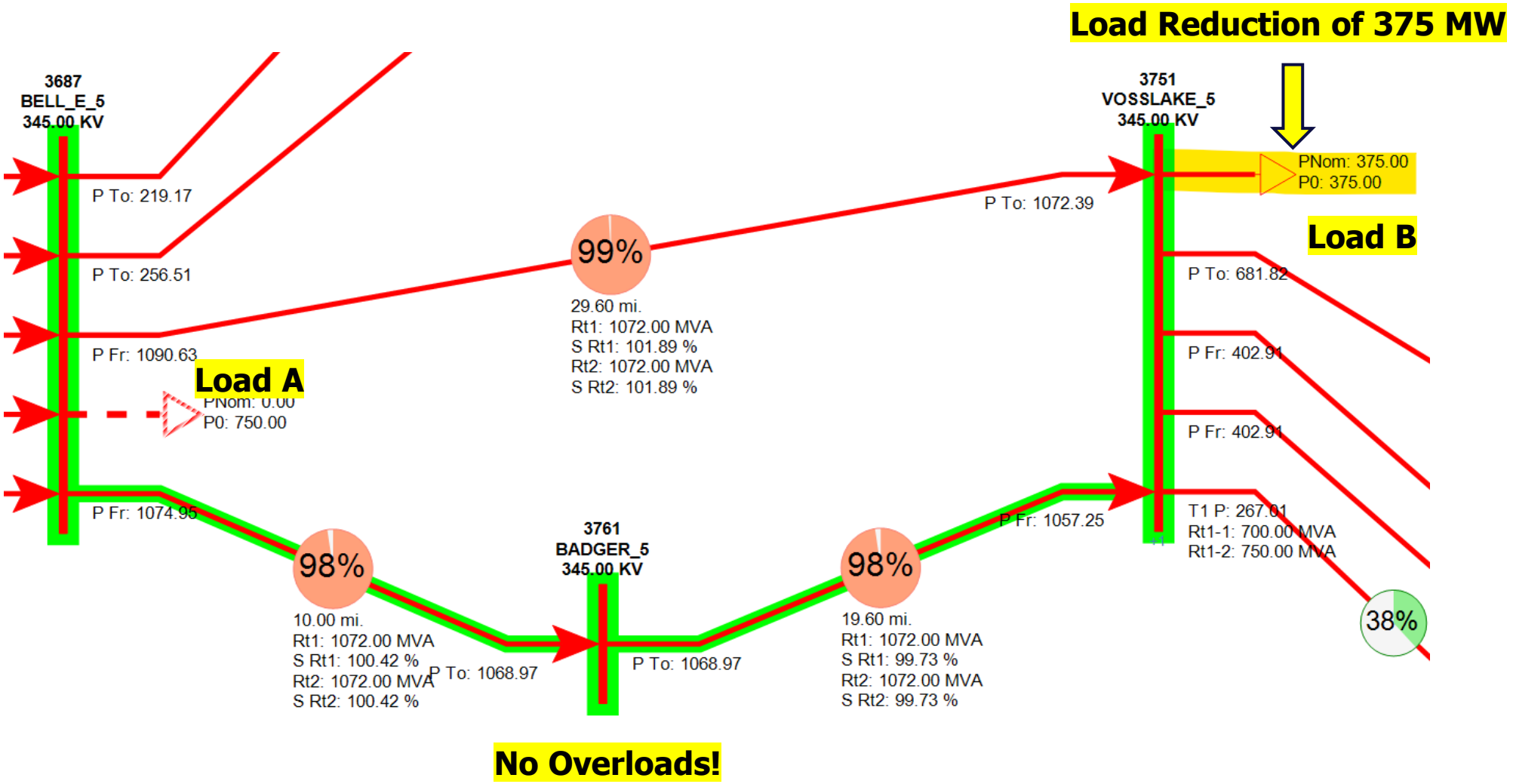
- Loads should be aware that executing an IA with "firm" deliverability may still carry risk if network upgrades are required to serve that load. If these conditions happen in real time—and no generation solution exists—ERCOT may need to declare a transmission emergency and curtail load to maintain system reliability.



Batch Study Results				Refinement Study			
Year	Load A	Load B	Network Upgrades	Load A	Load B	Network Upgrades	Reliability Violations
2028	750	750	N/A	0	750?	Yes	Yes, P0
2029	750	750	N/A	0	750?	Yes	Yes, P0
2030	750	750	N/A	0	750?	Yes	Yes, P0
2031	750	750	N/A	0	750	N/A	No
2032	750	750	N/A	0	750	N/A	No
2033	750	750	N/A	0	750	N/A	No

This can only be known after the refinement study, after Load B executes an IA and commits

Reduced Voss Lake 345 kV Load Serving Capacity: 375 MW

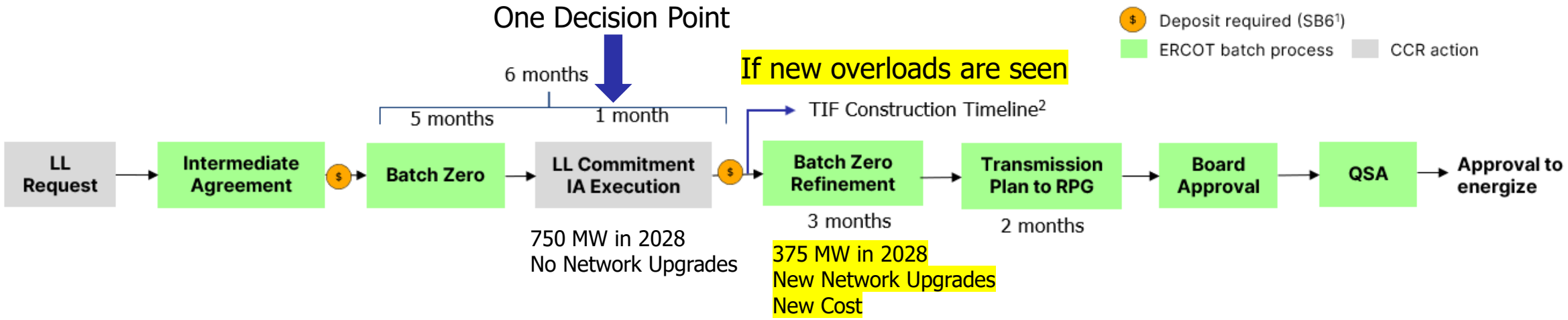


No Overloads!

Caveats

- As stated earlier, the intention of this example is to illustrate the potential for this to occur, not to provide a real world example of actual study results
- Analysis was limited to N-0 to demonstrate the potential, but this risk occurs for all contingency types and withdrawal permutations that could impact distribution of power flow on transmission system

Solution



- **<u>There is no perfect solution</u>**. All other markets address this through re-studies—not by choice, but by necessity—since it is the only way to ensure that no new violations arise when a project drops.
- No market in the US has eliminated it this problem except ERCOT with its connect and manage approach for Generation
- **<u>How has ERCOT's Batch proposal solved the re-study problem</u>**? By having one decision point where loads execute an IA and commit and get their allocated capacity regardless if other projects drop out?
- This approach may not work. As seen in earlier slides, ERCOT cannot guarantee MW, timelines nor cost if new violations arise due to other loads withdrawing.
- We cannot assume re-studies are not needed
- **<u>Large Loads should NOT sign an IA that claims to guarantee their MW capacity if further reliability violations due to withdrawals require additional network upgrades to provide firm load service</u>**

THANK YOU

Cypress Creek
RENEWABLES

Appendix

8.2. Load Shed Events

On 09/01/2020 at 15:00 ERCOT issued a Transmission Emergency, procured 160 MW of emergency energy from CENACE, deployed a Load Resource of 0.3MW of RRS and between 15:28 and 16:23, ERCOT instructed approximately 16.1 MW of load to be shed in the Rio Grande Valley due to base case overloads on the North Edinburg 345/138 kV Autotransformer and the Magic Valley Burns – Rio Hondo 138 kV line.

9.4. Emergency Notices

Date and Time	Message
September 1 2020 15:00 CPT	ERCOT issued a Transmission Emergency for the Rio Grande Valley due to a Basecase overload.

If Gen Re-dispatch is the answer

- NERC TPL 001-5.1 Only allows for Generation Re-dispatch for N-1-1 (P3 and P6)
- For P0, P1, P2, P4, P5, and P7, the generation dispatch before taking an outage cannot be modified post contingency to mitigate reliability violation
- How is ERCOT verifying compliance with NERC standards if potential future violations are not being evaluated?