

Proposed Stress Test for EAL Change Proposals

July 2024

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Summary

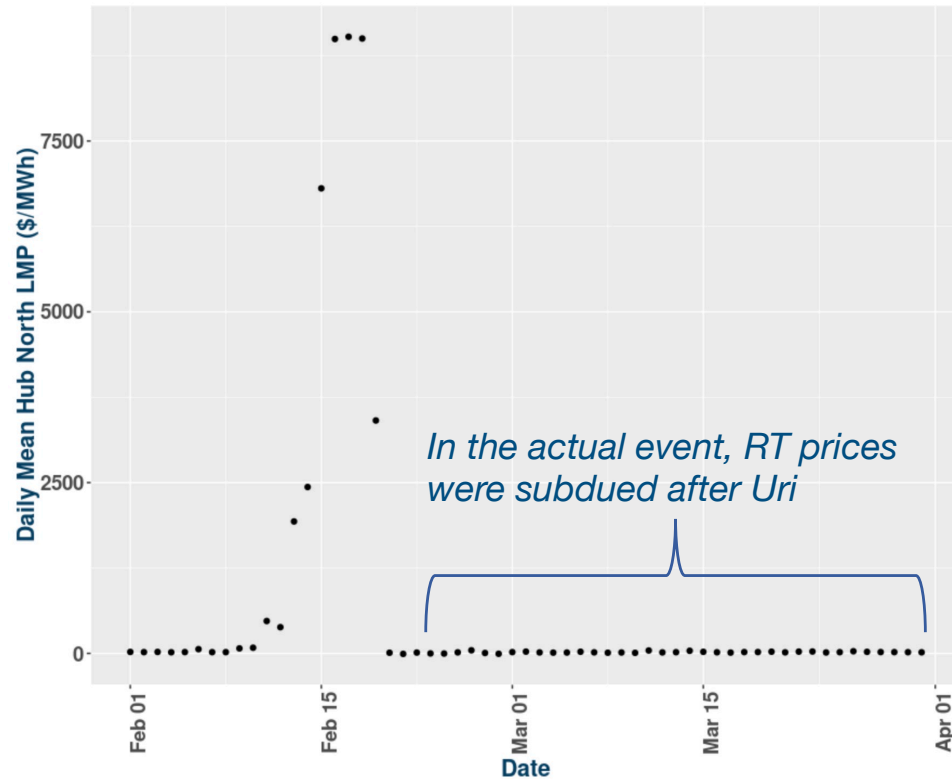
- **Discussions and modeling of potential improvements to the EAL formula have focused on outcomes using prices as they actually occurred**
 - Current approach can result in sudden spikes as well as a “double top”
 - This “double top” behavior is caused by a temporal misalignment of the max(RTLE) and the HRSAP component of RFAF
- **DC Energy is concerned that substantially larger “double top” spikes than have been shown in the backtests can be reasonably expected to occur**
 - The sequence of events driving such an outcome are an extreme volatility event (e.g., heat wave or cold snap) followed by a period of normalcy and then even just the forecast of a second extreme volatility event that drives futures (ICE) prices up in anticipation
 - This could result in EAL requirements for the market that are many multiples above what has been modeled (and importantly, well above what is needed)
- **We propose including a hypothetical stress test in ERCOT EAL backtests that include two winter storms over a short period**
 - Example: running the EAL calculations as if February 2021 (Uri) was followed by January 2024
- **We think this will allow the group to better evaluate various proposals, and highlight a weakness in the existing method**



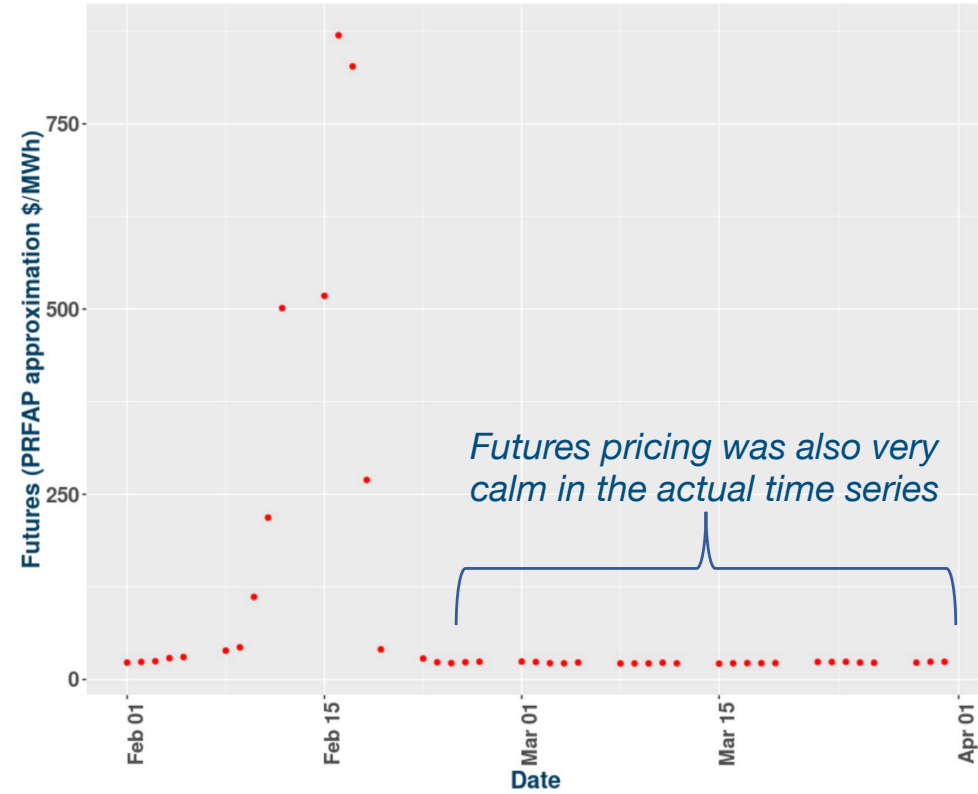
The actuals of an individual extreme event like Uri (or Elliott) has been used in our backtested modeling

February 1 - March 31, 2021

Daily RT LMPs



Futures Prices

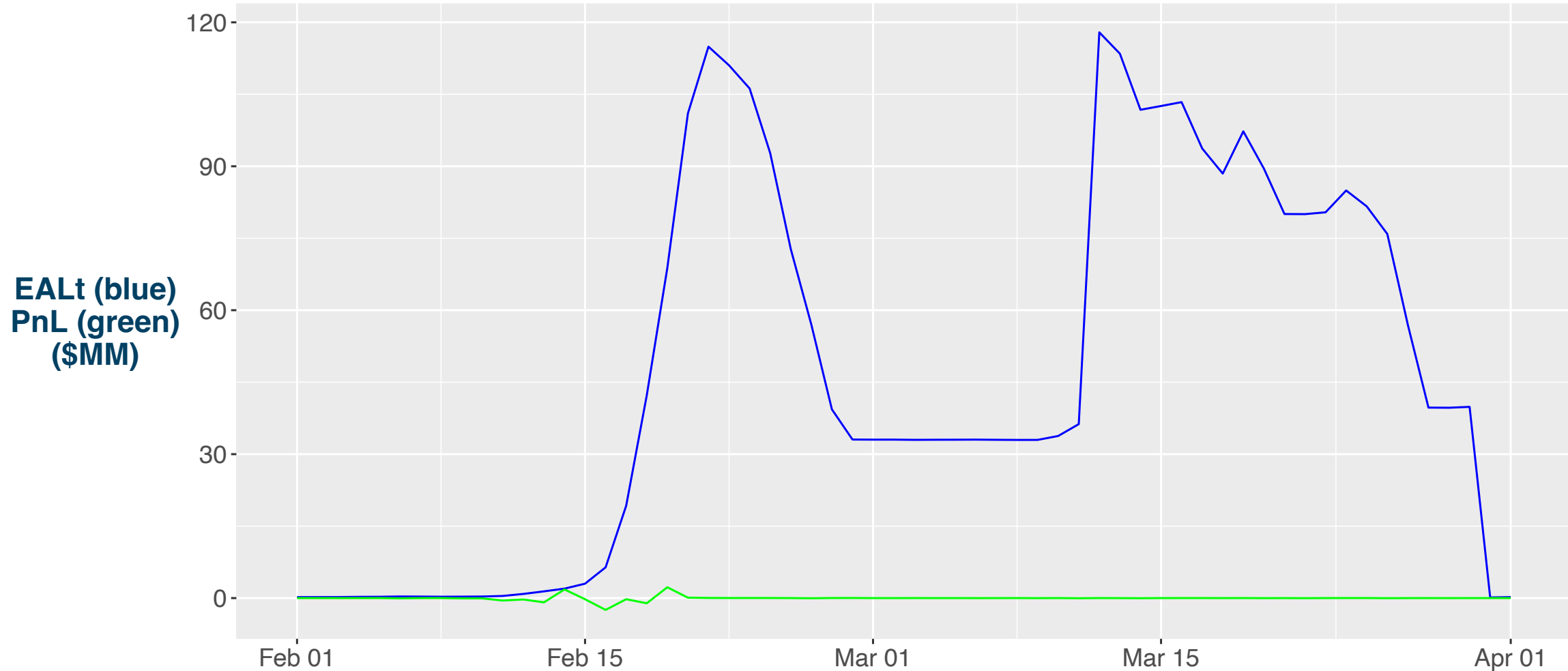




This type of event results in a "double top" effect for an entity following a basic INC approach; this occurs due to misaligned timing in the EAL formula without any change in participant behavior or any indication of volatility as indicated by ICE marks

"Double Top" Effect on EALt: 50 MW INC ATC

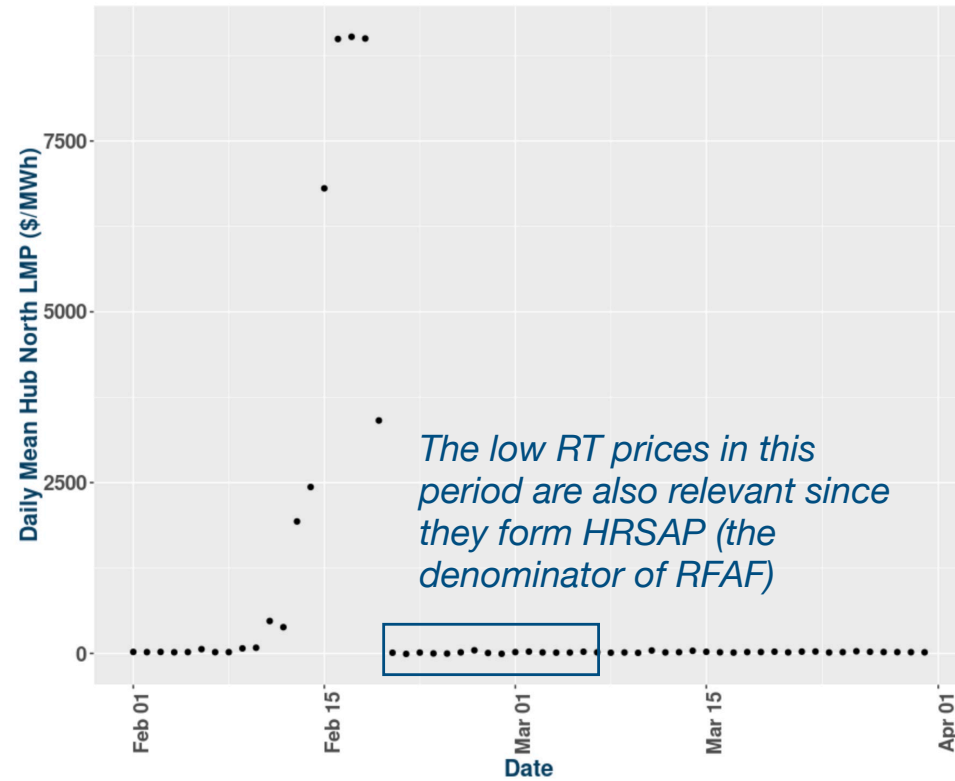
- Actual Prices -
- February - March 2021 -



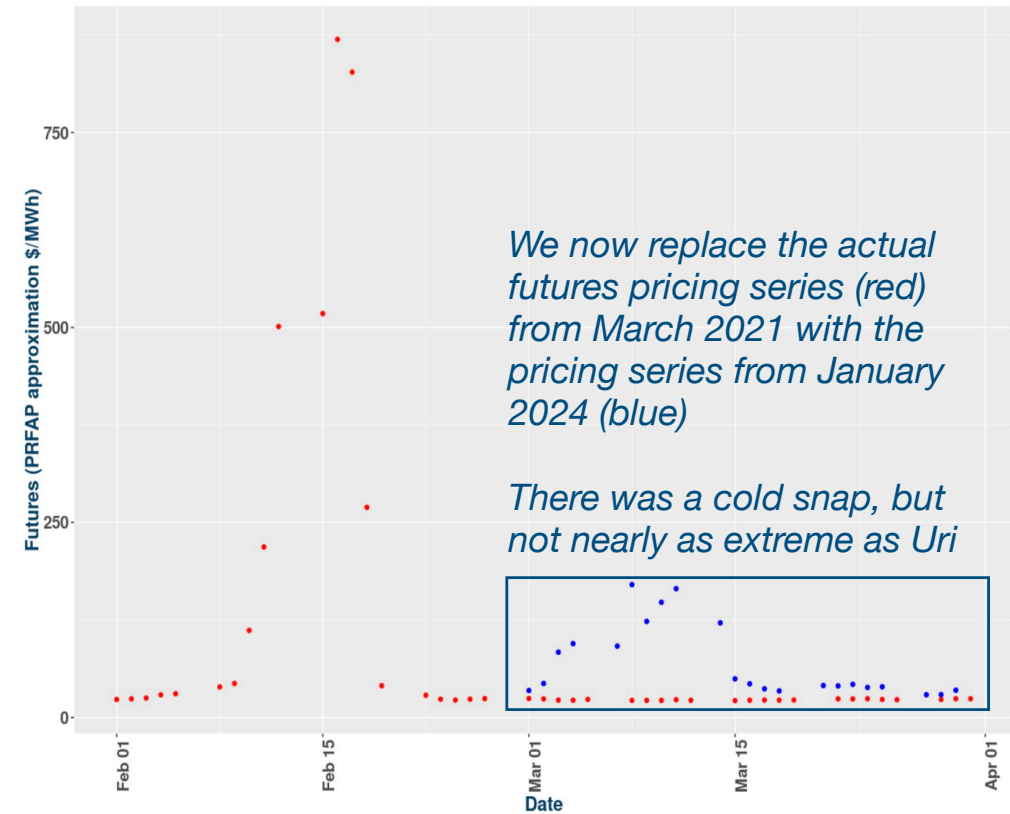


Hypothetical Scenario (Uri followed by January 2024 Futures)

Daily RT LMPs



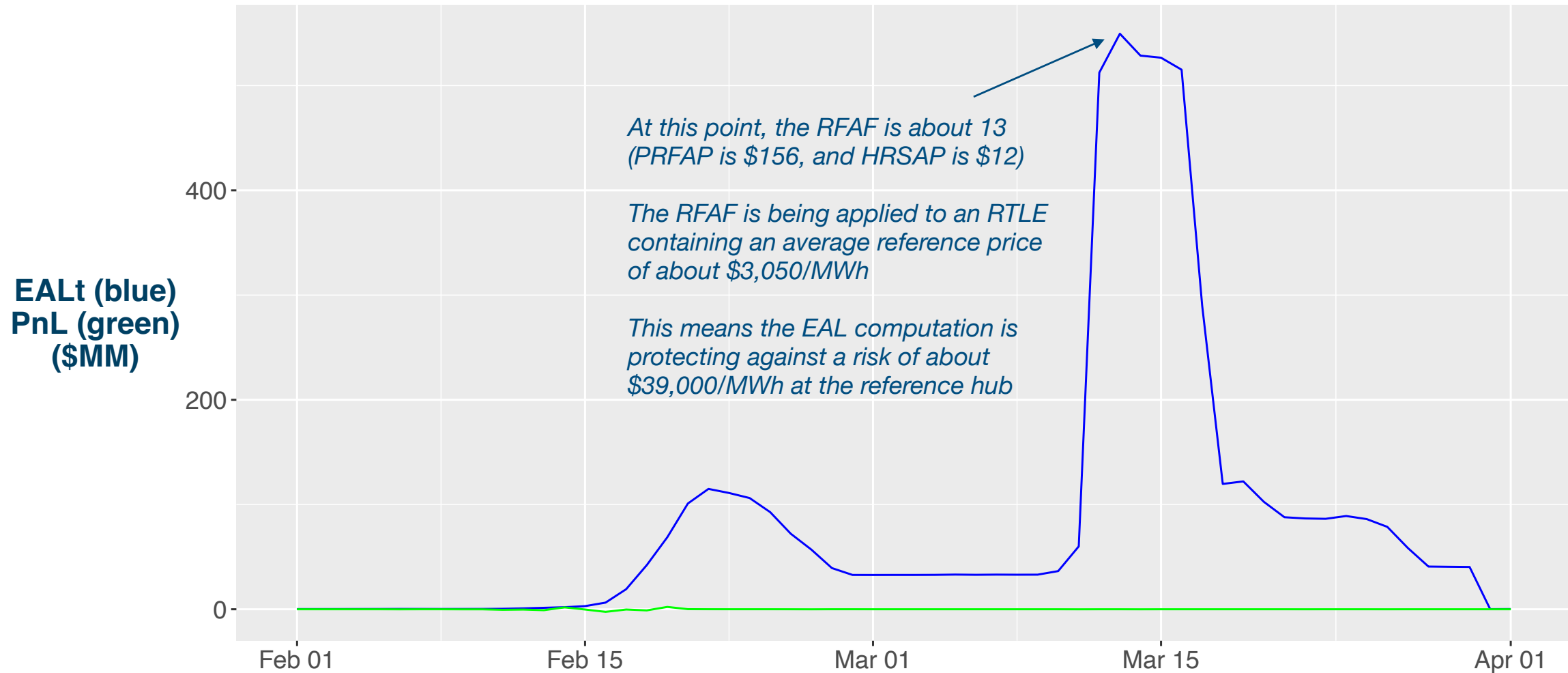
Futures Prices





"Double Top" Effect on EALt: 50 MW INC ATC

- January 2024 ICE Marks applied to March 2021 -
- Hypothetical Scenario -





Preliminary Proposals to Address Issue

- **Create a “pause button” that allows market participants to voluntarily cut-off their access to the Day-Ahead Market; these MPs are not able to transact, so not posing a risk to the market, and, therefore, should not have to post collateral beyond meeting current obligations**
 - This solution works best for “elastic” market participants that can choose to not participate in the market for a period of time
 - However, mitigating unnecessary defaults of MPs who can halt participation benefits the entire market
 - ERCOT can and has exercised discretion to effect an outcome like this (e.g., during Uri), but more formal policy would be beneficial
- **Reform EAL to prevent excessive "double-top" collateral requirements that may increase rather than decrease the risk of a financial default**
 - Align max(RTLE) and the HRSAP component of RFAF



Proposed Next Steps

- **Run the current calculation and S1a, S1b, S2 proposals through this scenario**
 - Develop a view as to the magnitude of this effect on the market as a whole as well as its impact on Load & Gen vs. others
- **Summarize pros & cons of the current method and proposals for the backtest as well as hypothetical scenario**
 - Negative gaps: which gap periods are the most relevant? Elliott? Summer? Aggregate across all time periods?
 - Positive gaps: How large of a positive gap is reasonable? Can we quantify the cost of these positive gaps in a simple manner?
- **Decide how to reform the EAL calculation at the CFSG and take the proposal through the NPRR process**