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Defense in Depth Proposal

ERCOT TAC Workshop on NOGRR 245

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Defense-in-Depth Proposal

- Elevate submitted independent comments on NOGRR 245 (here)
- Recommendation #7 proposed a "defense in depth" approach
  - If decision makers still uncertain regarding level of risk
- Intended to serve as an adequate *bridge strategy* between legacy to preferred that manages both sides' concerns

> 7. With respect to resources signing interconnection agreements between June 2023 and June 2024, if decision makers are still uncertain regarding the level of risk, I propose a "defense in depth" approach where these resources specifically could be subject to a one-time requirement to maximize their ride-through capability to the greatest extent possible within commercial reasonability. This would de-risk the ERCOT system in terms of resource ride-through concerns and also provide a bridge to the long-term solution of IEEE 2800 requirements effectiveness starting in June 2024 (as proposed in the TAC-approved NOGRR). While this approach may not be necessary to secure reliability, in my view, it could represent a reasonable middle ground that would allow rules to be finalized and resolve this period of regulatory uncertainty.

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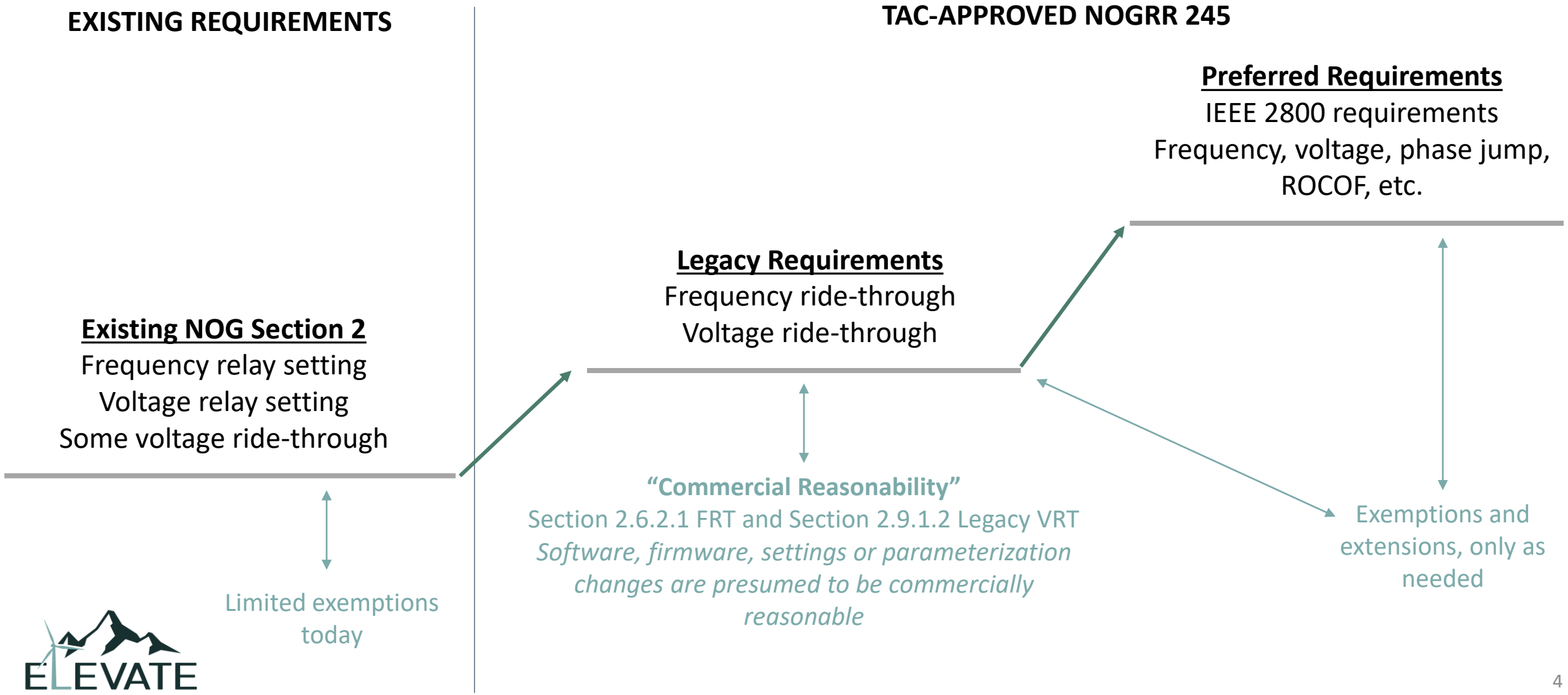
TAC-Approved Version Visualized



TAC-Approved Version Visualized

EXISTING REQUIREMENTS

TAC-APPROVED NOGRR 245

Preferred Requirements

Existing NOG Section 2

Legacy Requirements

"Commercial Reasonability"

Section 2.6.2.1 FRT and Section 2.9.1.2 Legacy VRT

Software, firmware, settings or parameterization changes are presumed to be commercially reasonable

Limited exemptions today

ERCOT has expressed concern with the "20-30 GW" of resources with an SGIA executed between June 2023 to June 2024 only meeting the new performance-based legacy requirements

Is it a real risk? We don't know…

- More evidence-based, quantitative simulation results are needed.

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EXISTING REQUIREMENTS

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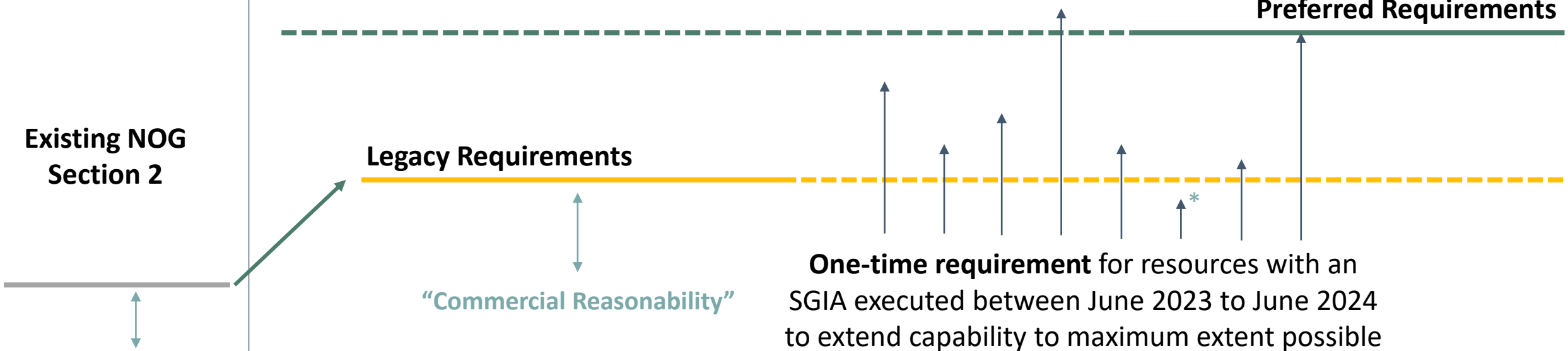

One-time requirement for resources with an SGIA executed between June 2023 to June 2024 to extend capability to maximum extent possible within technical and economic reason ***(software/firmware fixes)***

*Exemptions and extensions still apply

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Additional Context

- **What is this achieving?**
  - All IBR Resource Entities required to extend capability to maximum technically and commercially feasible, not to minimum requirement
  - Additional assurance of ride-through performance *above* requirements for the 20-30 GW of resources under ERCOT concern
  - Possibly wider VRT ride-through capability and wider FRT ride-through capability
  - Entities are already identifying capability under TAC-approved NOGRR 245
- **How is this different from simply enforcing preferred requirements?**
  - Minimizes exemptions, benefiting ERCOT staff loading
  - Minimizes possible back-and-forth between Resource Entities and ERCOT
  - Fair and reasonable rather than retroactive and potentially infeasible (particularly for resources still under development/construction)
- **Why is this proposed?**
  - Reasonable compromise, particularly since there are essentially no reliability studies to justify enforcement of stricter requirements
  - Opportunity for a ***"win-win"*** situation among all parties
  - One-time requirement that serves as a bridge to IEEE 2800 for future resources
  - Mainly focused on software/firmware upgrades that fix the vast majority of potential risks

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References

- Existing Nodal Operating Guide Section 2
- TAC-Approved NOGRR 245 Version
  - 245NOGRR-69 Joint Commenters 2 Comments 032224 (here)
- ERCOT-Proposed Revision
  - 245NOGRR-76 ERCOT Comments 041524 (here)
- Elevate Energy Consulting Comments on NOGRR245
  - 245NOGRR-75 Elevate Energy Consulting Comments 041524 (here)
- Market Notice for IBR Ride-Through Improvement Request
  - M-C050124-01 (here)

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