WECC

Western Interconnection System Inertia

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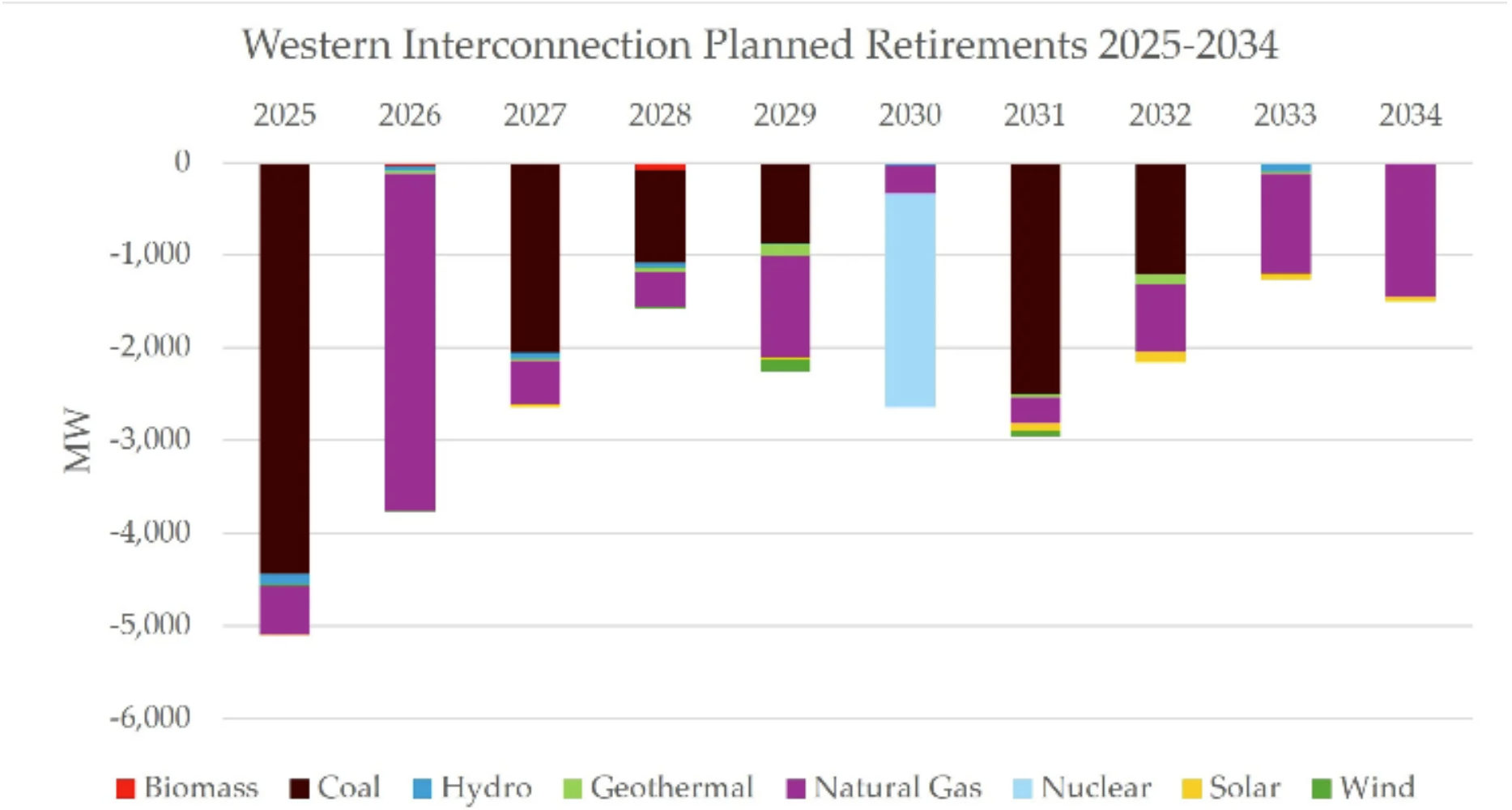
Grid Transformation

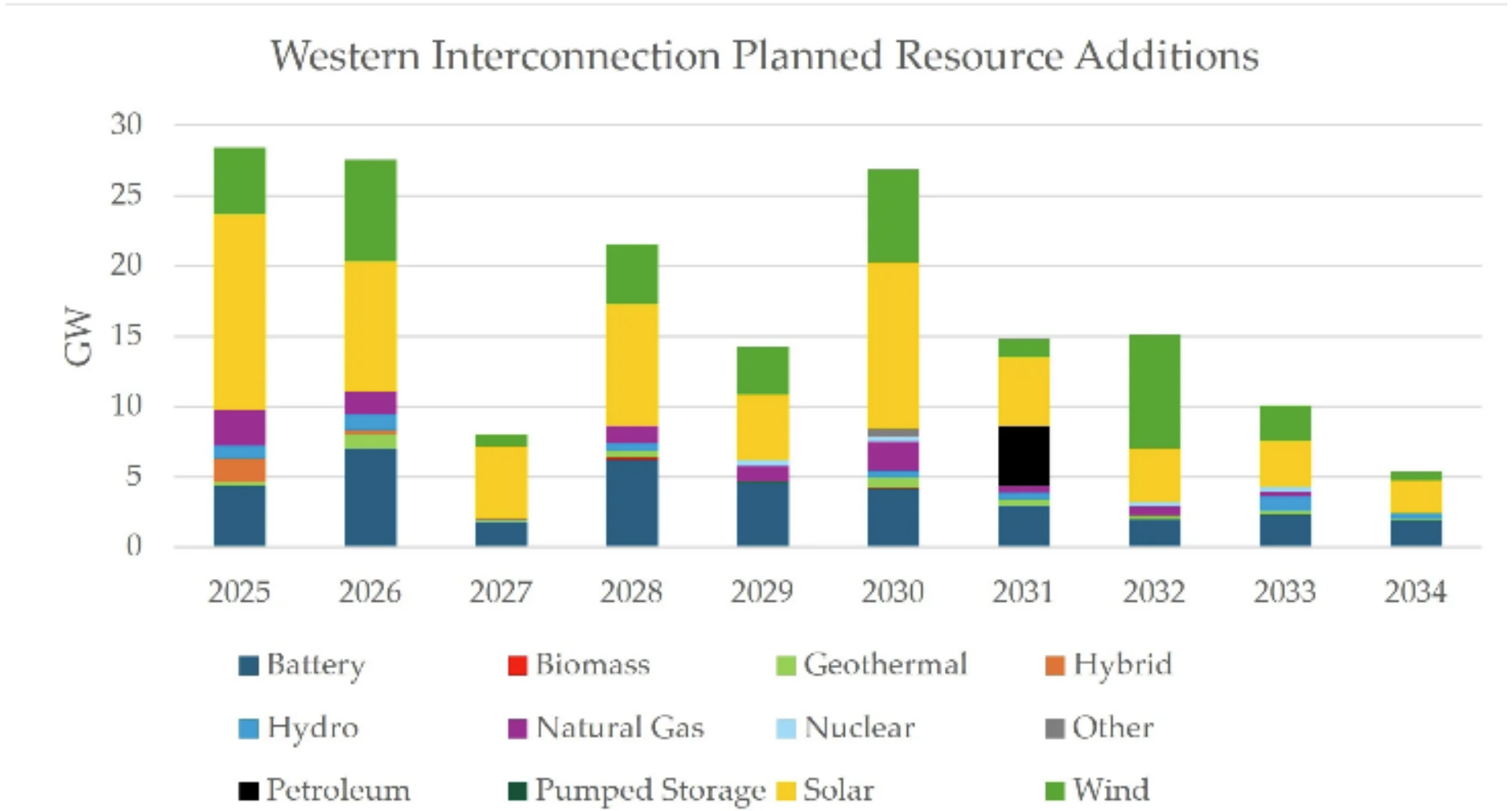
- The resource portfolio in the Western Interconnection is in transition
- The current forecasts show a significant shift from synchronous generation to non-synchronous generation in the Western Interconnection from mandates such as Renewable Portfolio Standards, Clean Air Acts, etc.
- Forecasts show in the Western Interconnection substantial retirements for the current synchronous generation fleet (WECC Western Assessment of Resource Adequacy—L&R Data Request)
  - 28.5GW by 2034—which includes baseload generation, such as coal, natural gas, and nuclear
- Forecasts show substantial additions for non-synchronous generation—141 GW (82% of the 172 GW of planned resources in the next 10 years)
  - Solar—35 GW (2023) to 93GW (2034) (increase of 68 GW)
  - Wind—37 GW (2023) to 77GW (2034) (increase of 40GW)
  - Battery Energy Storage System (BESS)—10 GW (2023) to 37 GW (2034)
  - Hybrid—PV/BESS, Wind/BESS

Grid Transformation—Resource Retirements



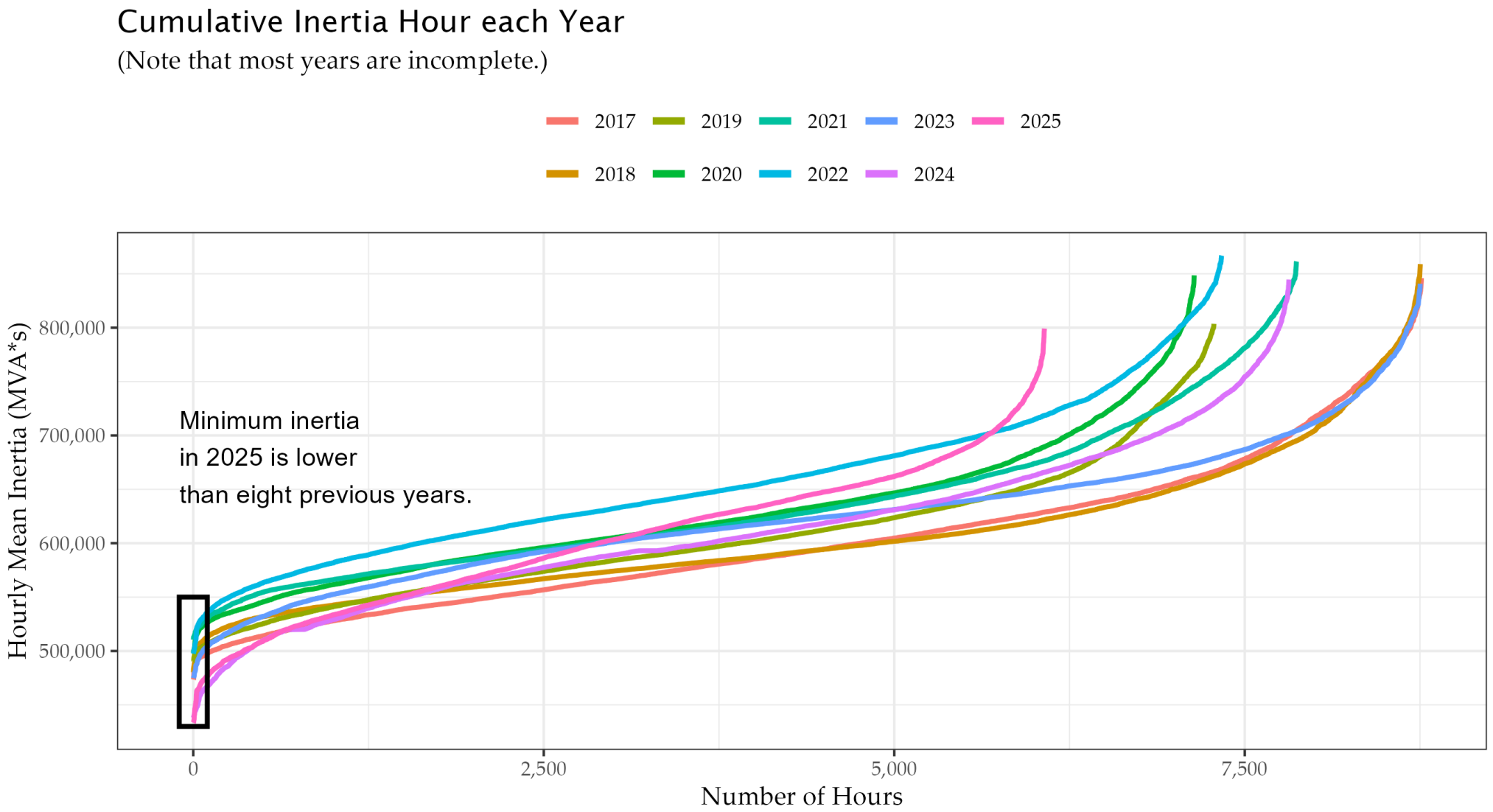
* 2025 WECC WARA

Grid Transformation—Resource Additions

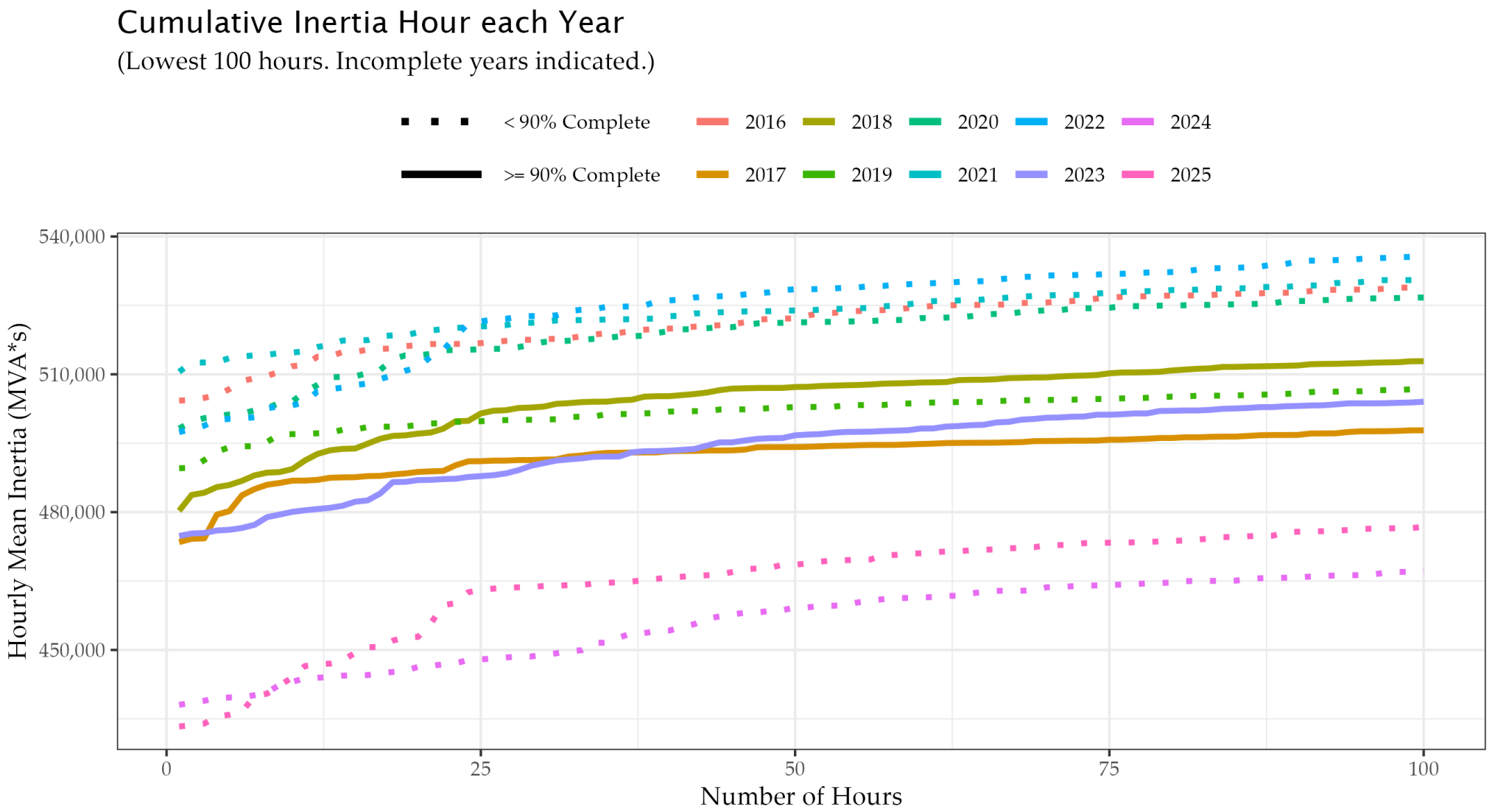


* 2025 WECC WARA

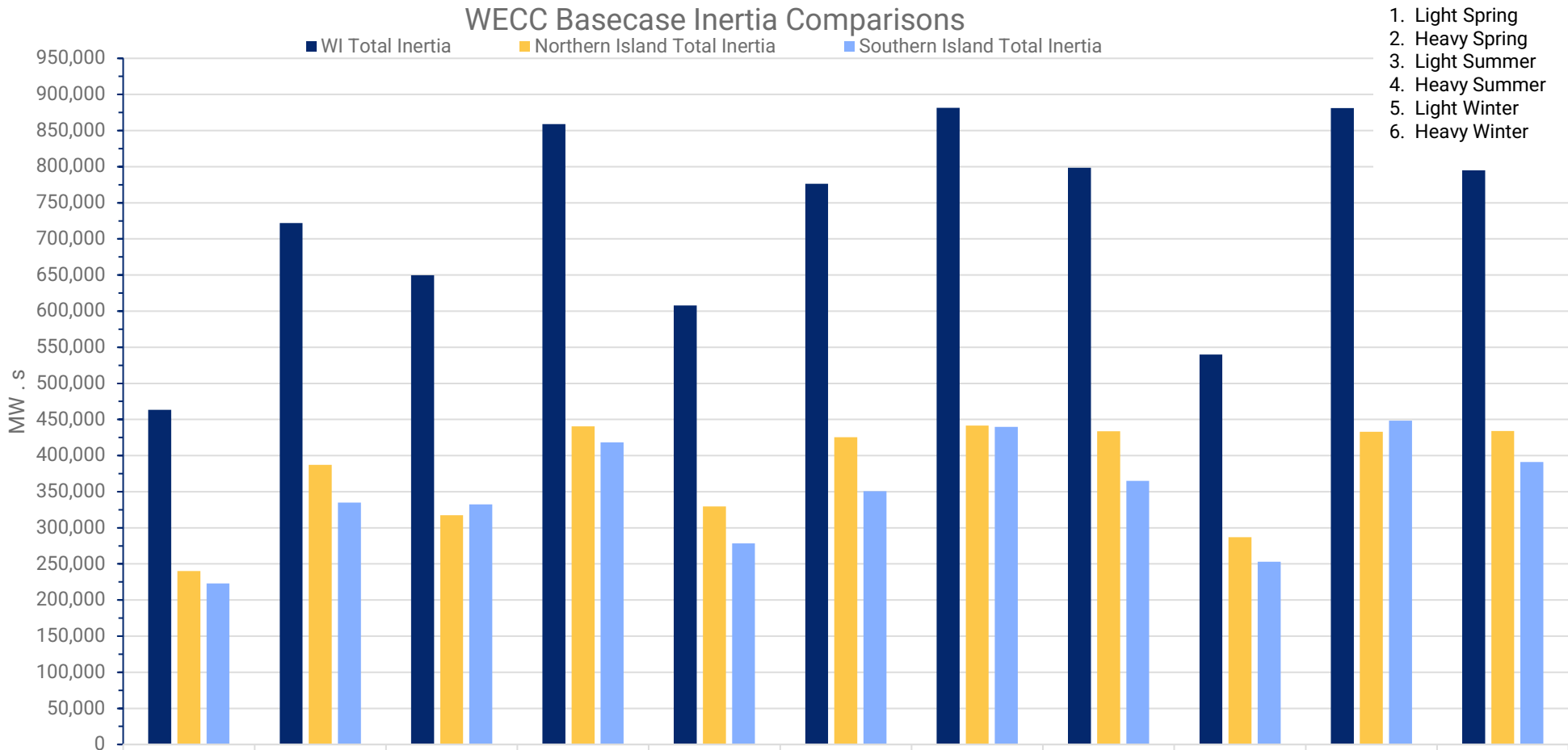
Historical Inertia Levels – 1



Historical Inertia Levels – 2

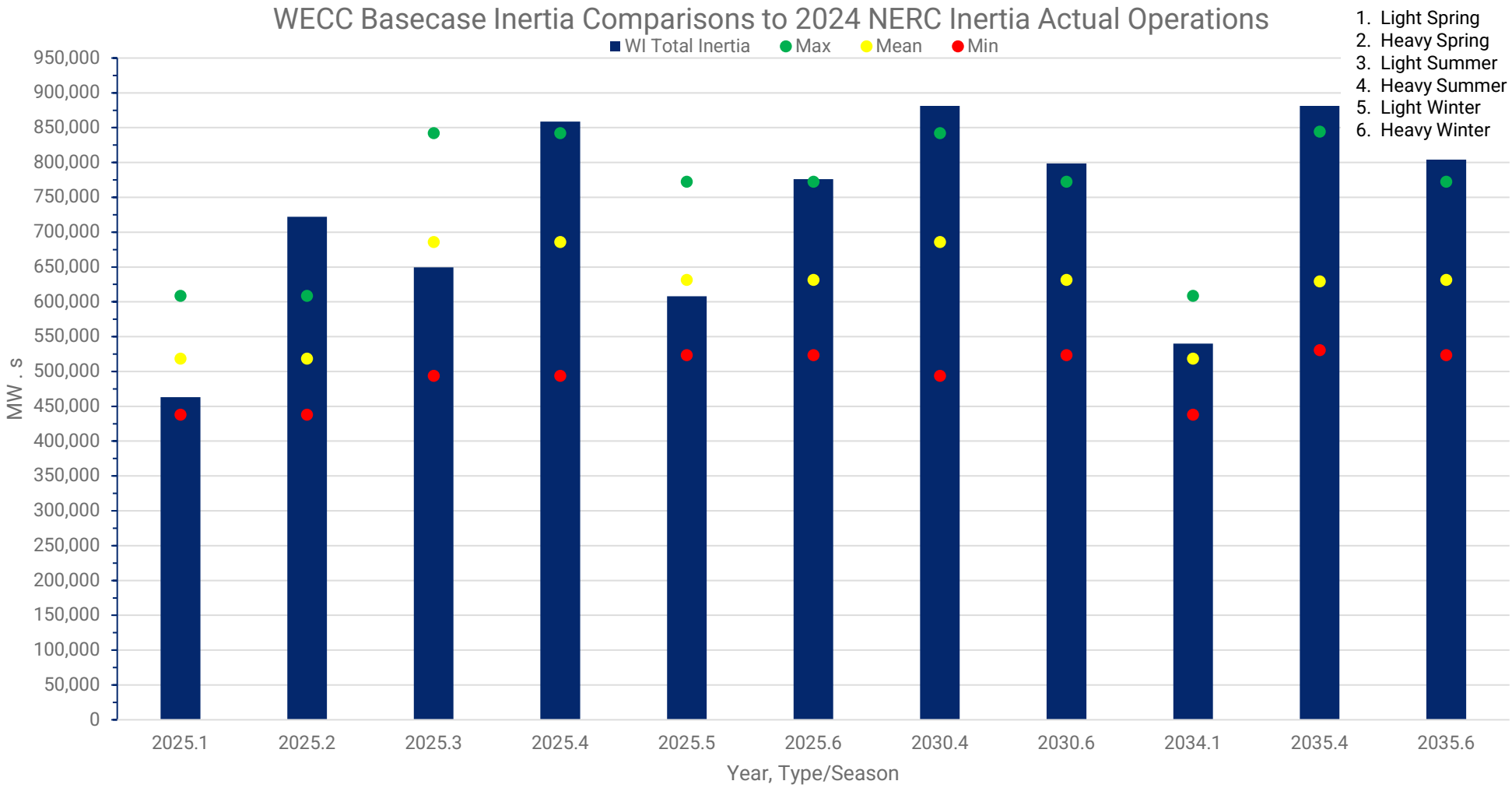


Inertia Base case Analysis



	2025.1	2025.2	2025.3	2025.4	2025.5	2025.6	2030.4	2030.6	2034.1	2035.4	2035.6
WI Total Inertia	463210	722117	649630	858805	607998	776217	881396	798588	539909	881244	825081
Northern Island Total Inertia	240067	387099	317230	440429	329635	425394	441508	433744	286883	432982	434108
Southern Island Total Inertia	223143	335018	332400	418376	278363	350823	439887	364843	253027	448262	390973

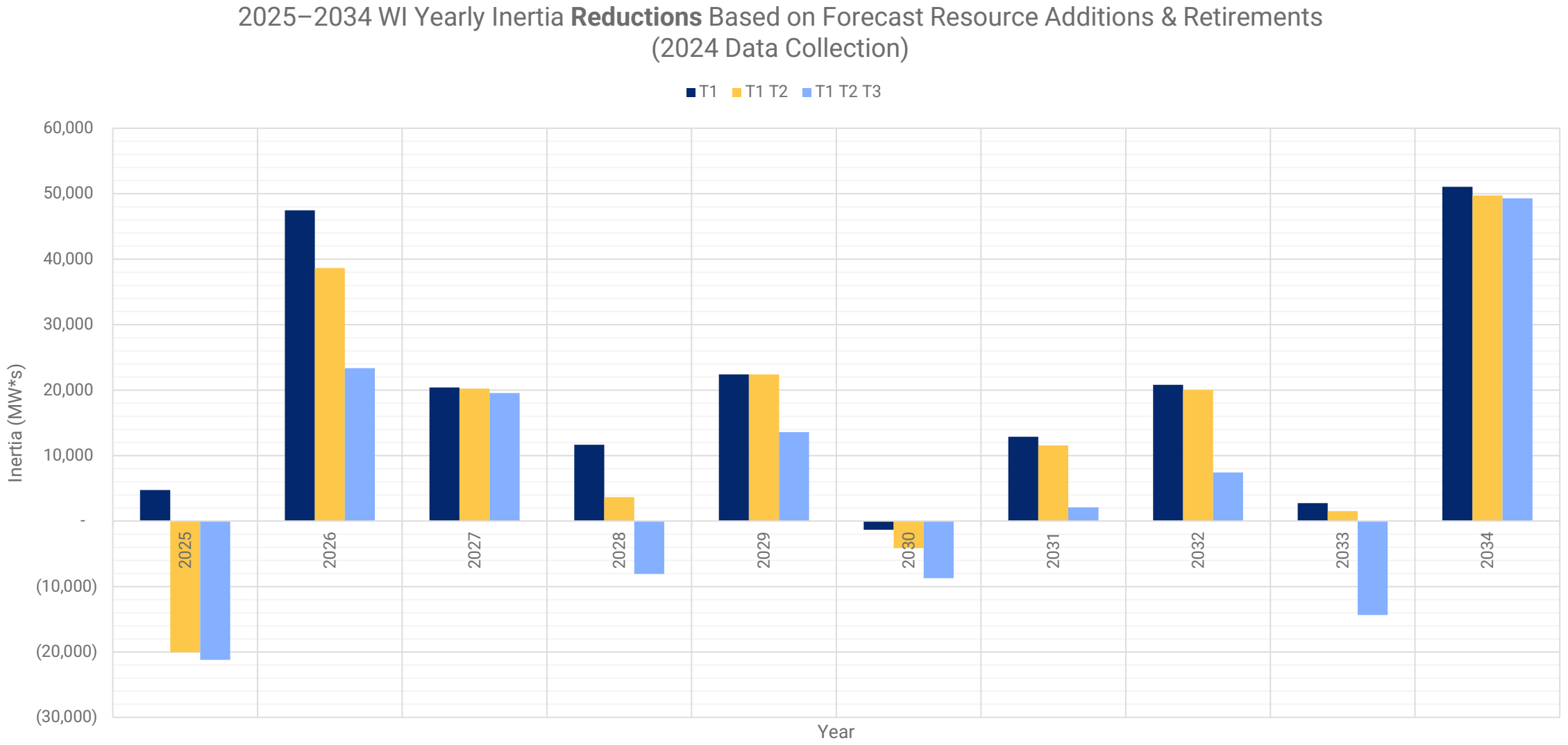
Base case comparison to actual Operations



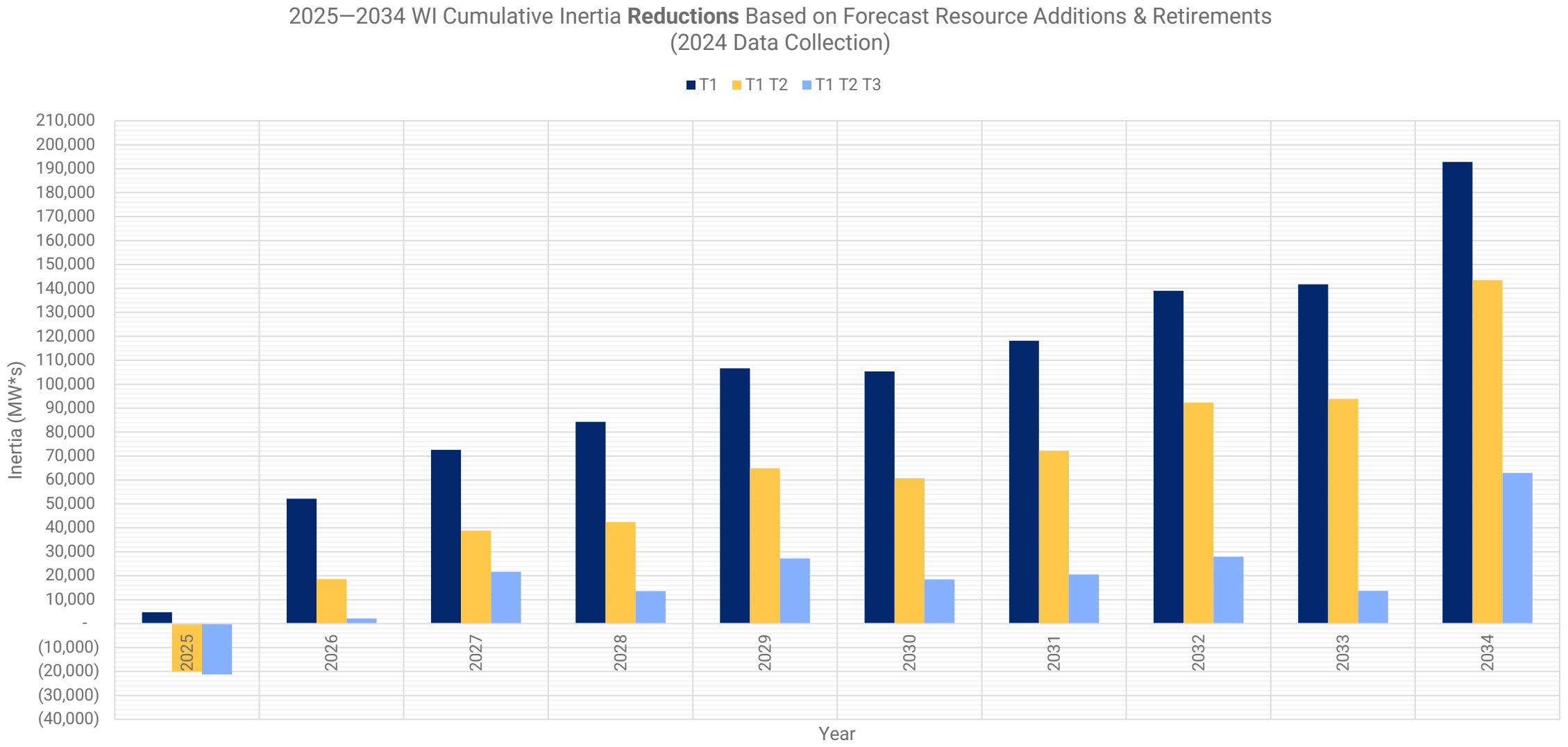
Resource Tier Additions Assumptions

- **Tier 1**: Resources that are under construction and expected to be complete and available for the year being studied.
- **Tier 2**: Resources that are under contract but have yet to begin construction. These resources may be operational by the year being studied.
- **Tier 3 Generic**: Generic placeholder resources that an entity has less certainty about.
- **Tier 3 Specified**: These Tier 3 resources may include capacity, type, and location information, but other unit characteristics and specific commission date are not known, and the project hasn't been started.

Yearly Inertia Reductions



Yearly Cumulative Inertia Reductions



Going Forward

- Proposed RAC Questions:
  - The following questions are for the RAC members—
    - Is this potentially a reliability issue shared by entities?
      - If so, what are the reliability concerns?
    - Do Base Case Modelers work with Resource Planning (L&R Data Submitters)?
      - If not, should they?
    - Should the Resource Planning forecast match what is submitted in the Base Case?
      - If not, why shouldn't they?
    - What is the approach for representing new resources in Base Cases?
- Follow up with an email request for responses
- Summary report out at the February 2026 RAC meeting

Thank you

I would be happy to answer any questions or have further discussion.

WECC

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