

BPA's Public Engagement for Establishing a Policy Direction on Potential Day Ahead Market (DAM) Participation - Workshop 9

November 4th, 2024

Libby Kirby, Market Initiatives Policy Lead

Andy Meyers, Market Initiatives Policy Lead

Matt Hayes, Stakeholder Engagement Lead

Nita Zimmerman, Executive Vice President & Chief Information Officer (acting)

Rachel Dibble, Vice President, Bulk Marketing

Michelle Manary, Vice President, Transmission Marketing and Sales



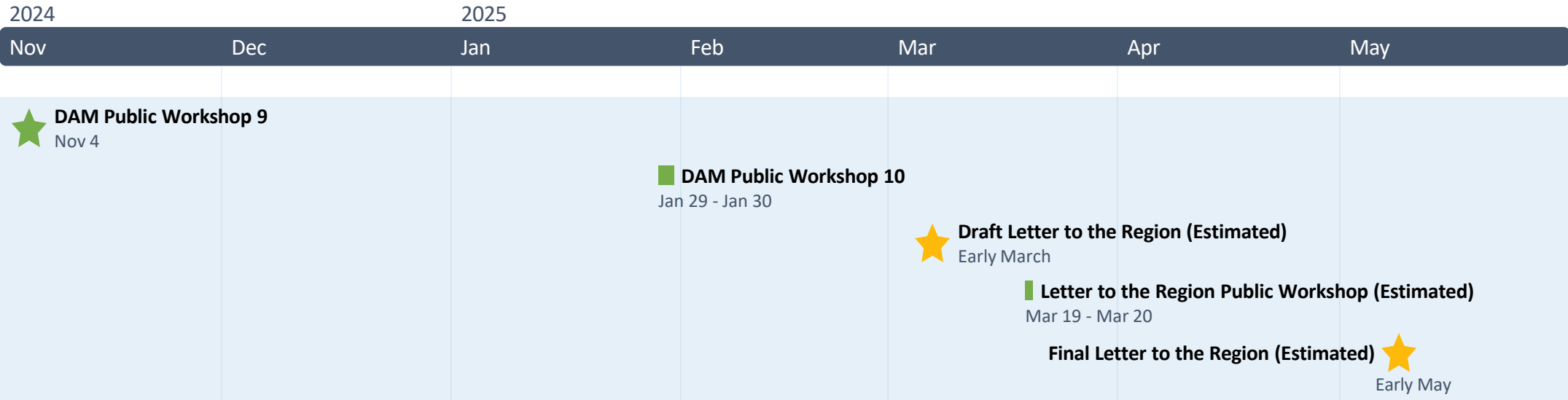
Webex Instructions

- Bonneville has adjusted its public stakeholder virtual engagement approach.
- The Webex format is moving to a “webinar” style.
 - Webex attendees can no longer mute/unmute themselves or enable their webcam.
- The all-chat feature is disabled. Attendees can only message panelists.
 - To participate, attendees must raise their hand (Bonneville will unmute you to enable your participation) or send a question to panelists in the chat.
- If you are Webex by phone only: press *3 to request to be unmuted.
- Moderators will continue to address raised hands in the order received.
 - Please continue to state your name and affiliation.
- As necessary, Bonneville may evolve these procedures and take other measures at its discretion to prevent future disruptions.

Key dates for CY 2025

- DAM Public Workshop 10 - January 29th & 30th
- BPA plans to release the Draft DAM Policy Letter in early March 2025
 - BPA will provide a 30-day formal comment period, seeking comments specifically on the proposed policy
 - BPA plans to hold a workshop in mid-March to walk through the Draft DAM Policy Letter
- The final DAM Policy and Record of Decision will be released in early May 2025.

What is BPA's DAM Decision timeline for CY24?





Update on Markets+ FERC Filing



Update on Markets+ FERC Filing

- SPP received a deficiency letter on July 31, 2024 from FERC regarding the Markets+ tariff filing, requesting that SPP submit clarifications on various aspects of market design.
- SPP submitted responses to the FERC Deficiency Letter on September 20, 2024.
- FERC is currently reviewing all submitted comments.
- The Markets+ tariff process is on track and still aligned with the overall Markets+ timeline.
- SPP requested that FERC issue an order accepting the Markets+ tariff by November 20, 2024.



Update on EDAM Engagement



BPA EDAM Engagement

- BPA continues to monitor and engage with CAISO on their EDAM development following the tariff approval.
- BPA has been actively participating in both Portland General Electric and PacifiCorp EDAM implementation processes.
- BPA remains actively engaged in the Pathways efforts.



Transmission Update



Transmission Product and Services

- At the [June 3, 2024 workshop](#), BPA shared its overview of congestion revenue in Markets+.
- At the [July 18, 2024 workshop](#), BPA shared its initial evaluation of DAM transmission design elements and identified its potential impacts on BPA transmission products and services.
- If BPA adopts a policy direction towards DAM participation, BPA will need to address implementation issues, including, but not limited to rates, tariff, and business practices:
 - Transmission Service Provider (TSP) review/approval process for transmission opt-out
 - Transmission made available to the market (Transmission constraints/limits)
 - Congestion management
 - Congestion rent sub-allocation
 - Short-term product availability
 - Reserving transmission and scheduling
 - Ancillary Services
- BPA would discuss potential changes in future stakeholder meetings and in future rate and tariff pre-proceeding workshops.

Transmission Revenue

- If BPA joins a DAM:
 - BPA will need to recover potential revenue reductions from decreased Short-Term Firm (STF) and Non-Firm (NF) transmission sales that are not mitigated by DAM participation.
 - Both EDAM and Markets+ recognize a reduction of STF and NF revenue for TSPs and will have revenue recovery mechanisms for TSPs to recover costs.
 - These revenue reductions may occur due to reductions in Wheeling Revenue or Long-Term Firm (LTF) renewals as well.
 - BPA would monitor impacts on transmission sales and advocate for market design changes as appropriate.
 - BPA would be monitoring for any potential cost shifts between customer classes (i.e. Point-To-Point and Network Integration Transmission).
- This topic will be discussed in more detail at a future workshop, as well as addressed in the Draft DAM Policy Letter.

Reliability and Operational Impacts

Complexity in Western Electricity Coordinating Council (WECC) and the Pacific Northwest (PNW)

- The WECC consists of 38 Balancing Authority Areas (BAA) and over 30 TSPs
- In the PNW, many BAAs are non-contiguous with loads and resources pseudo-tied across multiple TSPs and geographic zones, often relying on BPA Transmission.
- BPA's BAA is non-contiguous, located in six states, and adjacent to 18 BAAs (~360 ties) and 15 TSPs
- BPA's service territory covers eight states and operates over 15,000 miles of High Voltage Transmission
- Careful planning, coordination, protocols, and processes have evolved over many decades to help ensure regional reliability

Reliability and Operational Impacts

Reliability and Operational Impacts

- BPA continues to evaluate reliability and operational impacts of DAMs
- The creation of multiple DAMs and real-time markets will change existing market and Reliability Coordinator footprints in the PNW which will introduce new seams on top of those that already exist.
- BPA will continue to prioritize reliability and minimize operational risks as part of its DAM evaluation.
- This topic will be discussed in more detail at a future workshop, as well as addressed in the Draft DAM Policy Letter.



BPA's Continued Decision Process



BPA's DAM Participation Staff Recommendation

- BPA released a staff letter recommending DAM participation on April 4, 2024:
 - Staff recommended pursuing participation in Markets+
 - Participation was evaluated based on the following principles: Statutes, Reliability, Business, Strategy, Governance, Customer Impact, and Greenhouse Gas
 - Staff also considered Firmness of Power Supply, Certainty of Delivery and Environmental Attributes based on stakeholder feedback
 - Full slides discussing the recommendation from the [May 8, 2024 workshop](#) can be found at [BPA.gov](#).

Principles

- Statutes – Bonneville meets its statutory, regulatory, and contractual obligations.
- Reliability – Bonneville maintains efficient, economical and reliable delivery of power and transmission service to its customers.
- Reliability – Market design includes resource sufficiency and/or resource adequacy frameworks that ensure reliability.
- Business – Bonneville’s participation is supported by a sound business rationale.
- Strategy – Bonneville’s participation is consistent with Bonneville’s 2024-2028 Strategic Plan.
- Governance – The market has durable, effective, and independent governance structure which provides fair representation to all market participants and stakeholders. Decision-making and stakeholder engagement occurs in a transparent and inclusive manner.
- Customers – Bonneville’s evaluation of DAM participation includes transparent consideration of the commercial and operational impacts on its products and services.
- Greenhouse Gas – Bonneville will evaluate how participation will impact greenhouse gas emissions attributed to the federal system and customers’ ability to comply with state carbon programs. Participation must maintain the value of the low-carbon nature of the federal system to the extent possible.

BPA's Continued Decision Process

- Bonneville staff continues to review and assess information that impacts the analysis of our principles.
- Bonneville staff continues to analyze changing information, such as governance developments, footprint changes based on DAM declarations, further economic modeling, operational impacts, and market design development.



Evaluation of Market Governance Developments



Bonneville's Governance Principles

- Governance – The market has durable, effective, and independent governance structure which provides fair representation to all market participants and stakeholders. Decision-making and stakeholder engagement occurs in a transparent and inclusive manner.
- This includes:
 - Independent board of professionals with no undue influence from a single state/entity.
 - Governance structure that is independent from any market participant or participating balancing authority area.
 - Transparent decision-making process that addresses both majority and minority recommendations.
 - No one entity/participant has veto power.
 - Stakeholder process that is transparent, stakeholder-driven and not limited by decisions of the market operator.
 - Meaningful representation for all participants and stakeholders.

Overview of Pathways Step 2 Proposal

- Creation of a Regional Organization with “full governance authority over market rules, with sole Section 205 rights, and ultimate authority over the associated business practice manual provisions.”
- “Market operations will continue to be performed and overseen on a day-to-day basis by the CAISO within the scope of its existing corporate authority, with varying levels of input from the Regional Operator (RO).”
- “The RO and CAISO rules will remain in a single integrated tariff.”
- “CAISO staff will retain emergency operational authority under FERC oversight, during actual emergency conditions in the market”
- “The Launch Committee recommends that the RO consider a transition toward Option 2.5, or a similar structure, over a defined period as guided by a feasibility study by the RO Board with stakeholder input.”
- Step 2 proposal includes specific recommendations for stakeholder engagement and protection of the public interest.

Source: [Pathways-Step-2-DRAFT-Proposal -FINAL.pdf \(westernenergyboard.org\)](#), page 4

Bonneville's Interest in Pathways

- Bonneville supports the development of two viable day ahead market options in the West and sees Pathways as enabling EDAM development.
- Regardless of the outcome of BPA's DAM decision process, Bonneville will be a Western Energy Imbalance Market (WEIM) participant for the foreseeable future and wants Western Energy Market (WEM) governance to be as independent as possible.
- One of the reasons Bonneville delayed its decision-making process was to allow Pathways to develop its Step 2 Proposal so its proposed governance structure could be evaluated in the decision-making process.

Bonneville Assessment of Pathways Step 2 Draft Proposal Against Its Governance Principles

Bonneville believes that the Step 2 proposal does not achieve fully independent governance due to the continued intertwining with the CAISO.

Step 2 proposes an independent Regional Organization with independent board. However, it does not achieve independent market operations, independent contracts, and an independent tariff.

Bonneville acknowledges and appreciates the efforts of Pathways to create a more stakeholder-driven, transparent stakeholder process.

Bonneville Comments Summary

- Concern that the RO would not have independent oversight of market operations. Instead, the market would be operated, and administered, by the CAISO with its continuing balancing area authority obligations. This could be particularly impactful in emergency situations.
- Step 2 proposed a single combined tariff, which limits the RO's authority over the shared sections of the tariff.
- The CAISO would remain the counterparty on contracts with other market participants. This creates conflicts if the CAISO interprets the contract differently than the RO.
- Concern with the proposed approach of starting with option 2.0 with no certainty of a future transition to option 2.5 or beyond.

Bonneville Recommendations to Pathways

- Bonneville recommends that the Pathways Launch Committee design from the desired outcome of Option 4, basing the implementation timeline and budget evaluation from that benchmark rather than from a benchmark of Option 2.0 or 2.5.
- Bonneville recommends estimating the budget for Option 4 to demonstrate the cost of Option 4 relative to the desired independence.
- Bonneville recommends that Pathways reconsider the membership of the Formation Committee. The Formation Committee should be an intentionally designed group with representation from across sectors, chosen by the members of that sector, and across areas of expertise, such as finance, human resources, governance and legal.

Evaluation of Markets+ Governance

- Independent governance by the Markets+ Independent panel. Bonneville is comfortable with one MIP seat occupied by an SPP board member, recognizing that SPP board members are themselves independent.
- Markets+ operations are wholly independent of the SPP RTO operations.
- Markets+ tariff is independent of any other tariff.
- Stakeholder-led market development process, decision process and market initiative prioritization with representation of market participants and stakeholders.
- Demonstrated capability to foster collaboration among stakeholders and states.

Where We Are Today

- Markets+ independent governance is established and ready for implementation. The FERC order approving the Markets+ tariff has been requested by mid-November.
- Pathways Step 2 final proposal has opportunity to improve independent operations beyond what was proposed in the draft proposal.
- Much depends on scope and timing of California legislation and capability of Regional Organization to allow greater independence in governance and operational authority.
- Bonneville's draft decision letter and final decision letter will consider the status of Markets+, EDAM and Pathways at the time of the decision.



BPA's Supplemental Production–Cost Analysis



BPA's Supplemental Production – Cost Analysis

- This section of the presentation is for E3's supplemental analysis.
- The full slides from this section can be found on [BPA.gov](https://www.bpa.gov).



How is Bonneville interpreting these results?



E3 Analysis - Key Takeaways

The production cost model (PCM) based portion of BPA's evaluation favors EDAM over Markets+ by \$65-\$221 M per year*

Drivers:

- EDAM has more load, a larger footprint, and higher prices
- Benefit differences heavily impacted by BPA's expected surplus energy position
- Transactional friction (hurdle rates) increases price separation between markets
 - Increased coordination (reduced friction) increases BPA benefit because can sell to CA
- Increased transmission capabilities between the NW and SW improve benefits to BPA in Markets+
- Benefits erode over time; erosion is larger in EDAM Bookend so potentially more volatile, but ending point is still better than Markets+; erosion/volatility is not significant in the 2NV case
- Similarly, EDAM Bookend benefits have larger delta (so potentially more volatility in a low hydro scenario) but ending point is still better; again, volatility is not significant in 2NV case
- 2026 to 2035 EDAM studies show a larger portion of revenue is derived from Congestion Revenue, as Generation Revenue declines from larger battery build-outs, which partially flatten intra-day prices differences.

*Range calculated comparing Westwide Market to Alt Split 4A in 2026 scenarios. The range would be narrowed and likely reduced by increased market coordination or a different footprint (such as Alt Split 2NV).

DAM Analysis Additional Context

- PCM analysis does not attribute material benefit deltas to market design differences:
 - GHG treatment
 - Fast-start pricing
 - Scarcity pricing
 - Bid Caps
 - Market power mitigation
 - Out-of-market actions
- Pricing magnitude during stressed events is not reflected in PCM, the financial impacts of such events are not fully incorporated into the DAM analysis
- Various factors (qualitative benefits) offset expected financial deltas between markets, but assigning dollar values to these factors is complicated
- PCM analysis does not consider changes to market rules (or lack thereof) which are influenced by a given market's governance
 - Structural differences in price formation, which determine the transparency of prices, and influence market outcomes are also difficult to convey with market design
- Qualitative factors notwithstanding, Markets+ sees lower Location Marginal Prices (LMPs) overall
 - Entities negatively impacted by lower prices tend to be surplus energy and/or capacity
 - ***Across multiple PCMs, scenarios, and footprints, Markets+ consistently shows lower average LMPs for load***
 - Main reason is the significant volume of load in California and the large volume of surplus hydro in the PNW, rather than the differences in market design



Market Design Assessment



Market Experiences and Equity Concerns

- Utilities expressing support for Markets+ development have extensive experience with the impacts of market design and governance:
 - During stressed market conditions, the curtailments of wheel-throughs are a concern
 - Lack of transparency (out-of-market actions impacting price formation)
 - Unbalanced value proposition from intertie transmission
 - Subjective product procurement which obscures market value (procuring fewer ancillary services when supply becomes scarce or expensive)
 - Operational approaches and challenges (RS/RA vs WRAP, Emergency Alerts, Transmission Priority)

Governance & Stakeholder Process

- BPA's prioritization of independent governance in its DAM evaluation has not changed.
 - Governance: The market has durable, effective, and independent governance structure which provides fair representation to all market participants and stakeholders. Decision-making and stakeholder engagement occurs in a transparent and inclusive manner.
- Markets+ independent governance is established and ready for implementation.
- Pathways Step 2 final proposal has opportunity to improve independent operations beyond what was proposed in the draft proposal.
- For CAISO governance, much depends on scope and timing of California legislation and capability of Regional Organization to allow greater independence in governance and operational authority.
- Bonneville's draft decision letter and final decision letter will consider the status of Markets+, EDAM and Pathways at the time of the decision.

Ensuring Adequate Supply

- BPA will continue to plan for its load service obligations
- BPA prefers the Markets+ design which requires all Load Responsible Entities to be WRAP participants, and leverages WRAP in the sufficiency design

Price Formation, Market Power Mitigation (MPM) and Fast-Start Pricing (FSP)

- BPA's perspective on these market design considerations have not changed since the April 4th letter was released.
 - Markets+ incorporates Fast-Start-Pricing (FSP) into the methodology for price setting. This issue has been well-documented and supported by FERC, while CAISO is the only organized market without FSP.
 - FSP is incorporated into the economic modeling
 - MPM assessments vary between designs, with similar methodologies for mitigated offer curves for hydro. BPA's concerns with some of the foundational challenges regarding pivotal supplier assessment in CAISO remain.
 - Generally, BPA is supportive of the CAISO efforts to review issues in the Price Formation initiatives, but these issues have not been resolved through CAISO stakeholder process, despite importance to PNW entities.

Transmission Design and Congestion Rent

- BPA's perspective on these market design considerations have not changed since the April 4th letter was released.
 - Generally, overall transmission design is similar between EDAM and Markets+; the primary difference is physical congestion modeling and congestion rent design.
 - BPA supports the common congestion rent design across the entire footprint, where rents are allocated to transmission rights holders and NT peak load, leverages the OATT design, and is paid through the Market Operator on a constraint-by-constraint basis.
 - Markets+ leverages a common allocation of congestion revenue, handled by the MO and consistent across all BAs.

Greenhouse Gas

- Greenhouse Gas Accounting:
 - Bonneville believes that Markets+ design will result in greater assurance that energy from the federal system will be attributed to WA for BPA's contracted customers.
 - The design of Markets+ gives BPA the ability to manage how much energy from the federal system can be attributed to a GHG zone.
 - Markets+ best honors forward contractual commitments for clean energy and affords critical flexibility to market participants.
 - Markets+ has developed and approved a tracking and report program and protocols that provide a GHG accounting framework for all market participants and states



Closeout and Q&A



Wrap Up

- Please submit comments on this workshop by December 6th
- Please send comments to techforum@bpa.gov (with “DAM Participation Evaluation” in the subject heading)
 - All formal feedback received will be posted to the BPA.gov page for BPA’s DAM Participation Evaluation



Appendix





Task Results

Stacked Column Charts

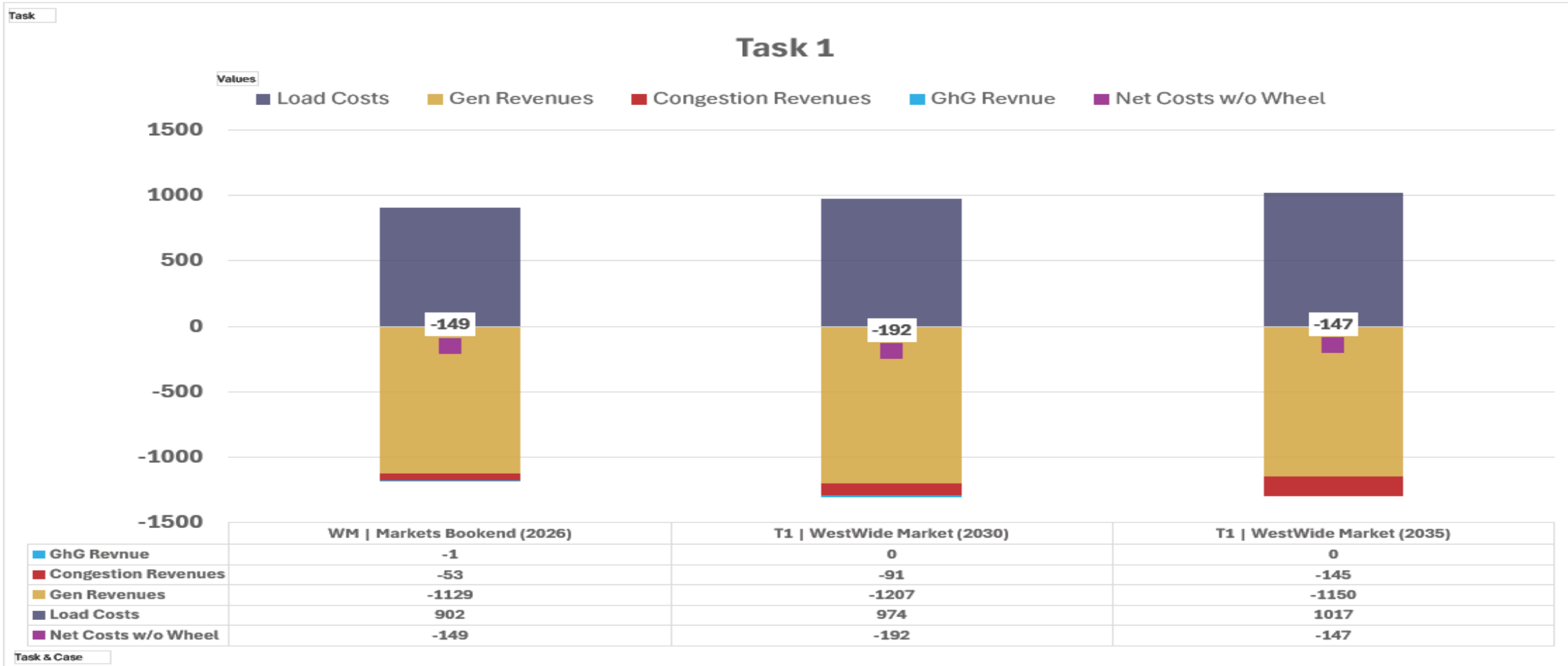


Task List

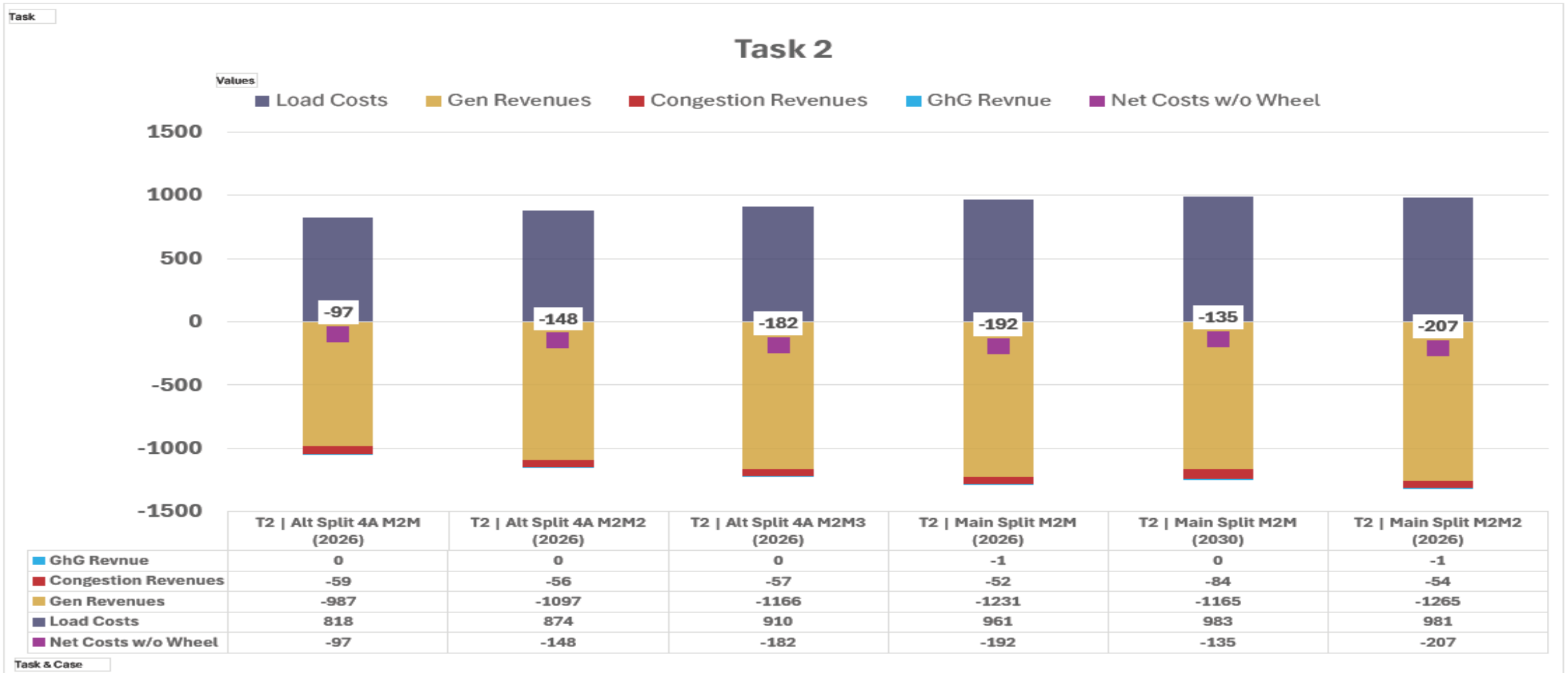
- Task 1. EDAM Bookend (Single Westwide Market) Cases for Future Years: extends cost-benefit results for the years 2030 and 2035
- Task 2. Lower Market to Market (M2M) Hurdle Rates: understand cost-benefit impacts in WMEG cases if hurdle rates on market seams are lowered through improved market-to-market coordination
- Task 3. Low Water Year (+ Stressed Load): simulate reduced hydro conditions and increased peak load
- Task 4. BPA EIM-Only: simulate BPA remaining in the EIM and not joining either EDAM or Markets+.
- Task 5. Additional Transmission Capacity: evaluate the impact of increased transmission capability between the Pacific Northwest and Desert Southwest regions within market footprints
- Task 6. Potential Capacity Value: explore the potential value of regional peak load diversity and impact on capacity
- Task 7. Market comparison in interaction with WRAP*: consider potential difference in ability either market's rules & practices to enable realization of capacity benefits
- Task 8. GHG Regulation Investigation*: Understand impact M+ vs. EDAM rules regarding GHG on import
- Task 9. Alt Split 4A: Cost-benefit results for updated potential footprint (including for 2030 and 2035 years)
- Task 10. Market Seam at CA Border: Model footprint where all non-CA entities (including PacifiCorp) join M+
- Task 11. Alt Split 2NV: Model footprint where Northwest + NV joins EDAM while Southwest joins Market+

**Task 7 & 8 work still pending for potential discussion in a future workshop*

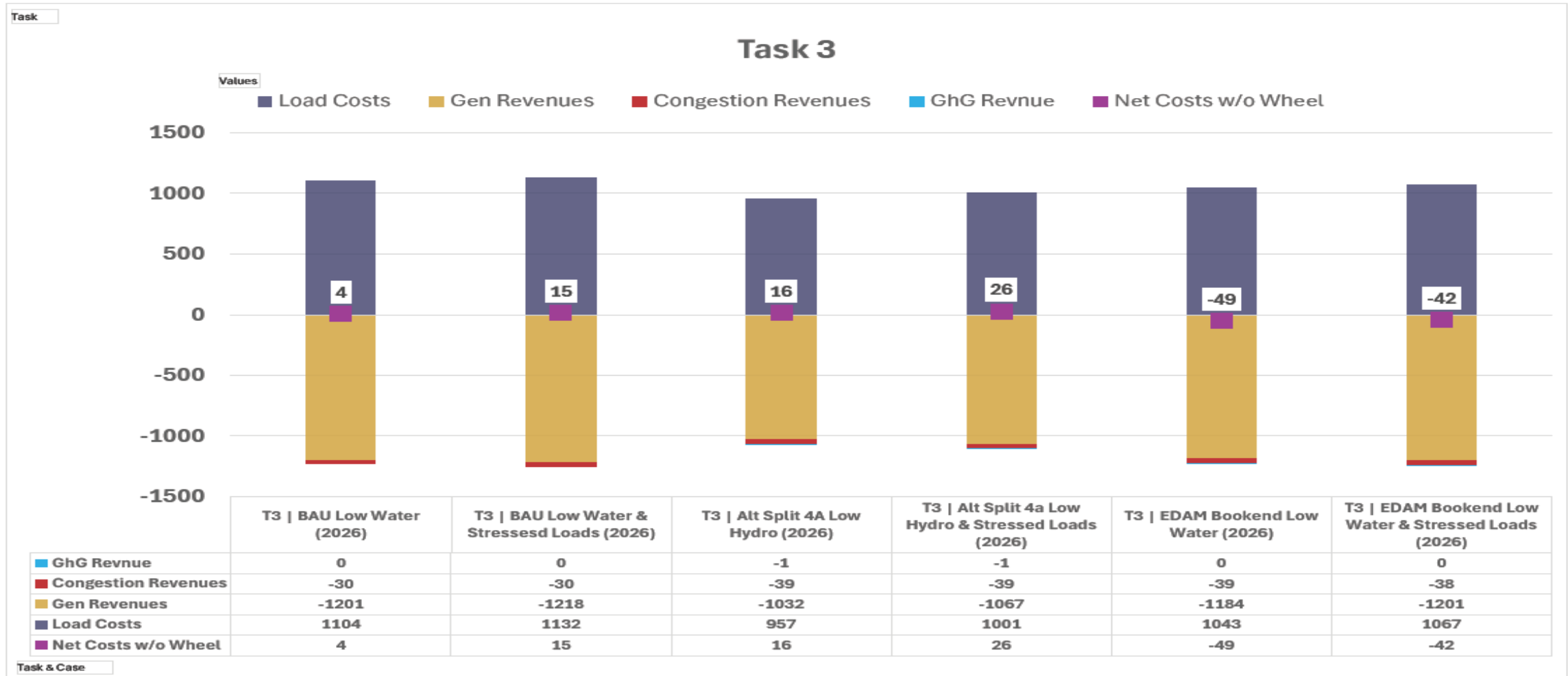
Task 1



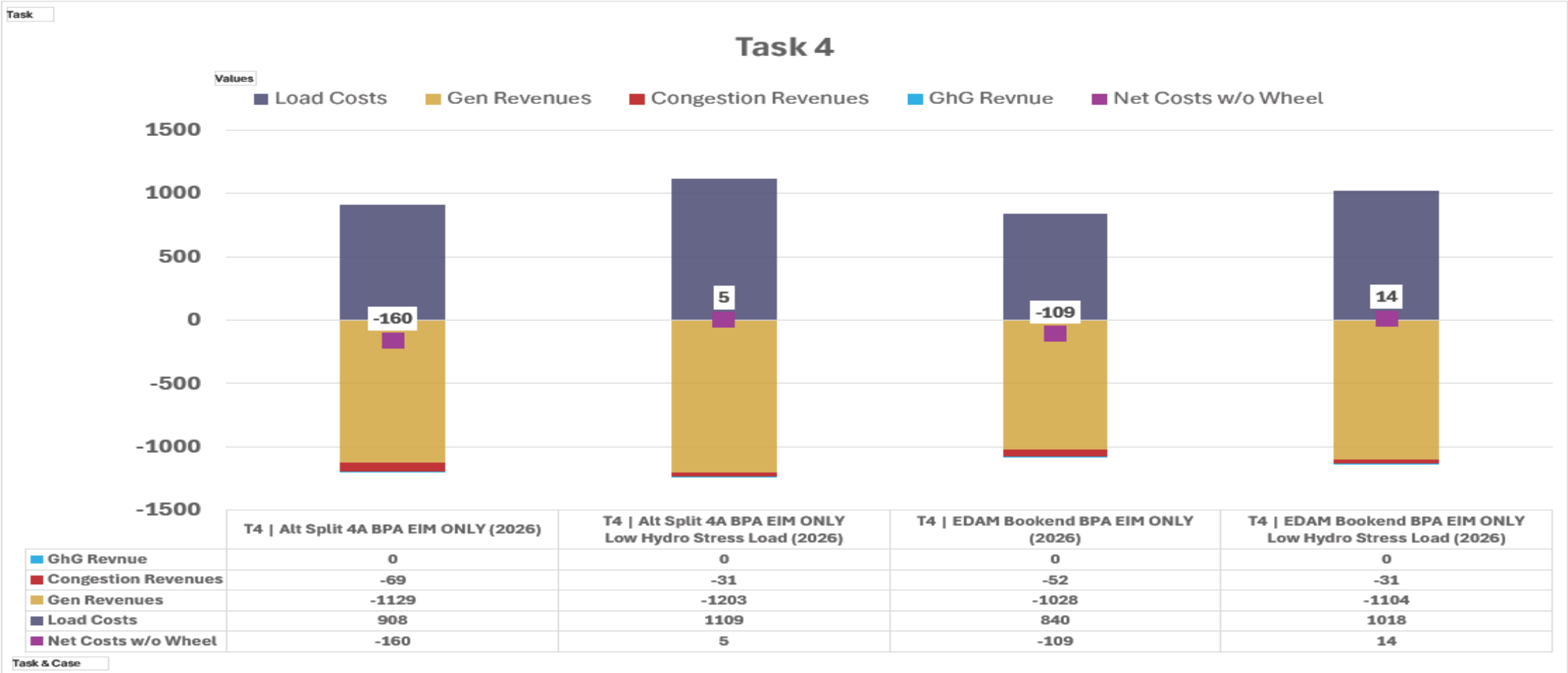
Task 2



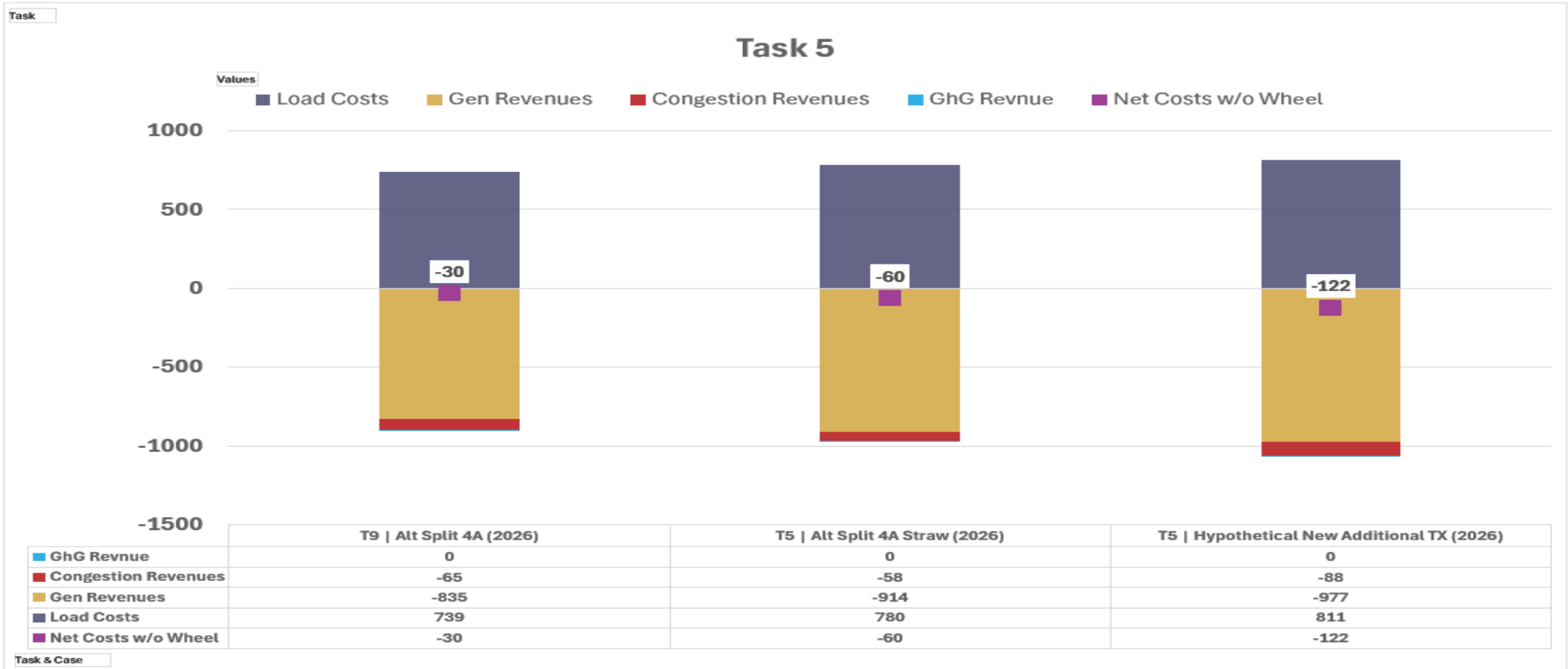
Task 3



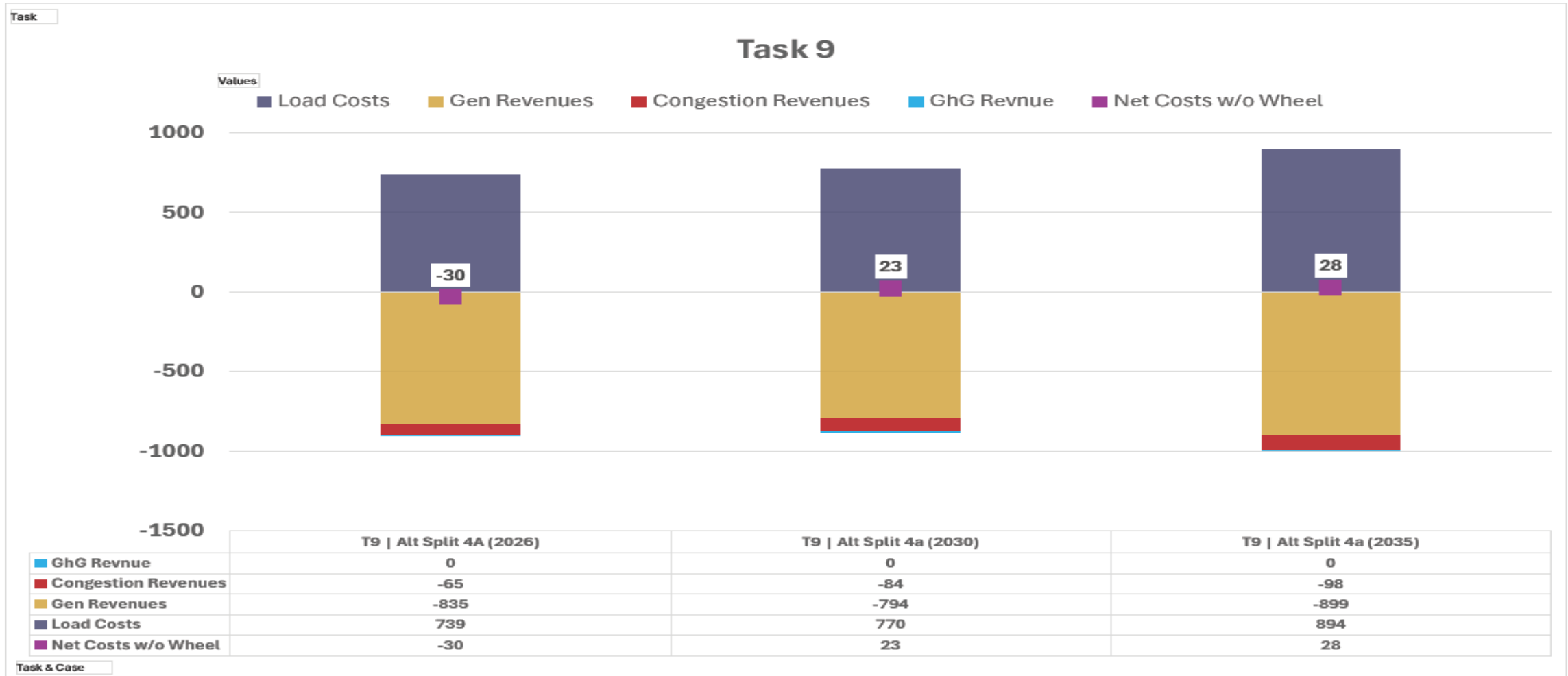
Task 4



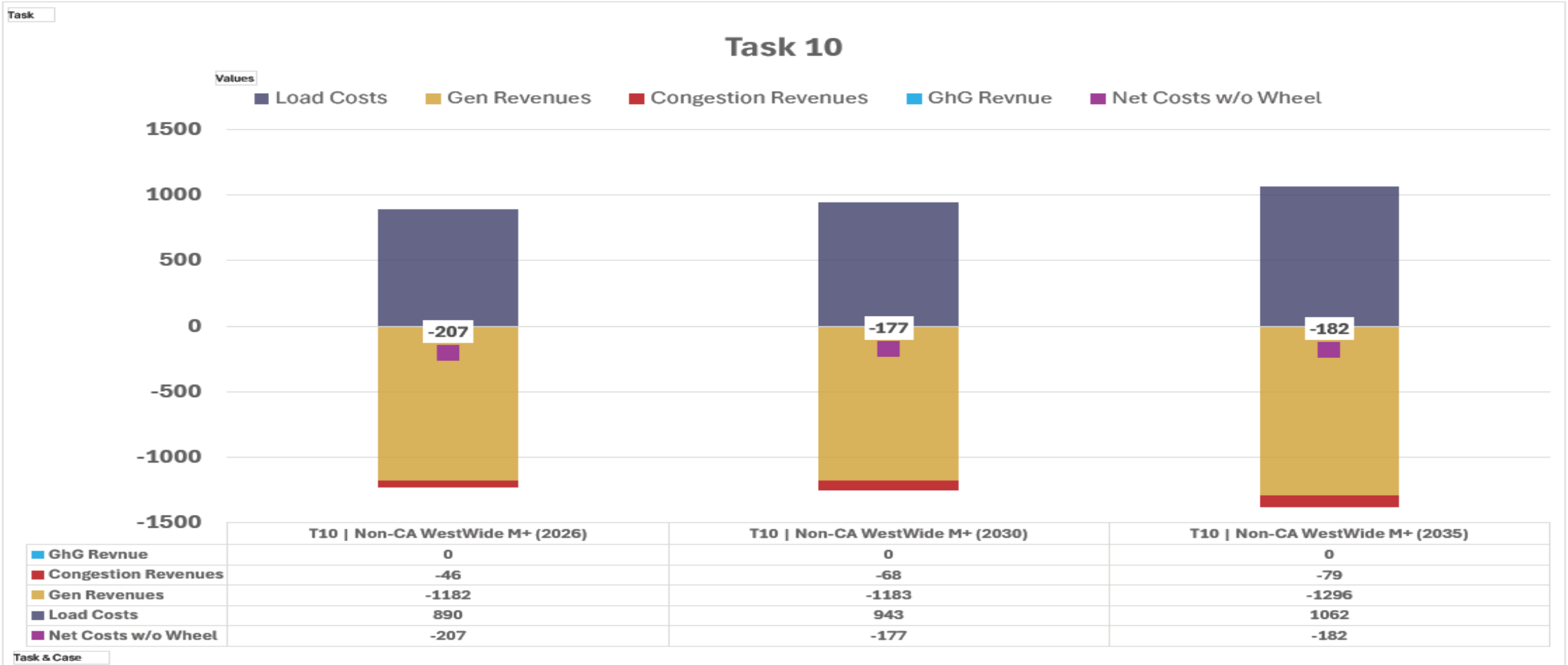
Task 5



Task 9

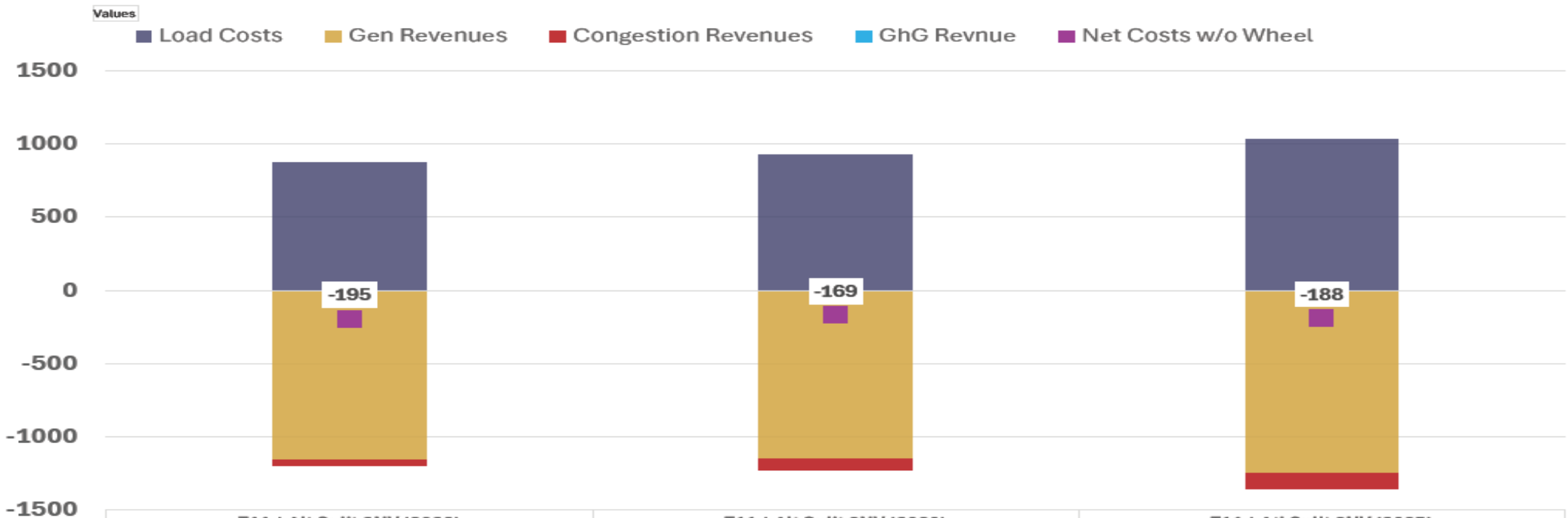


Task 10



Task 11

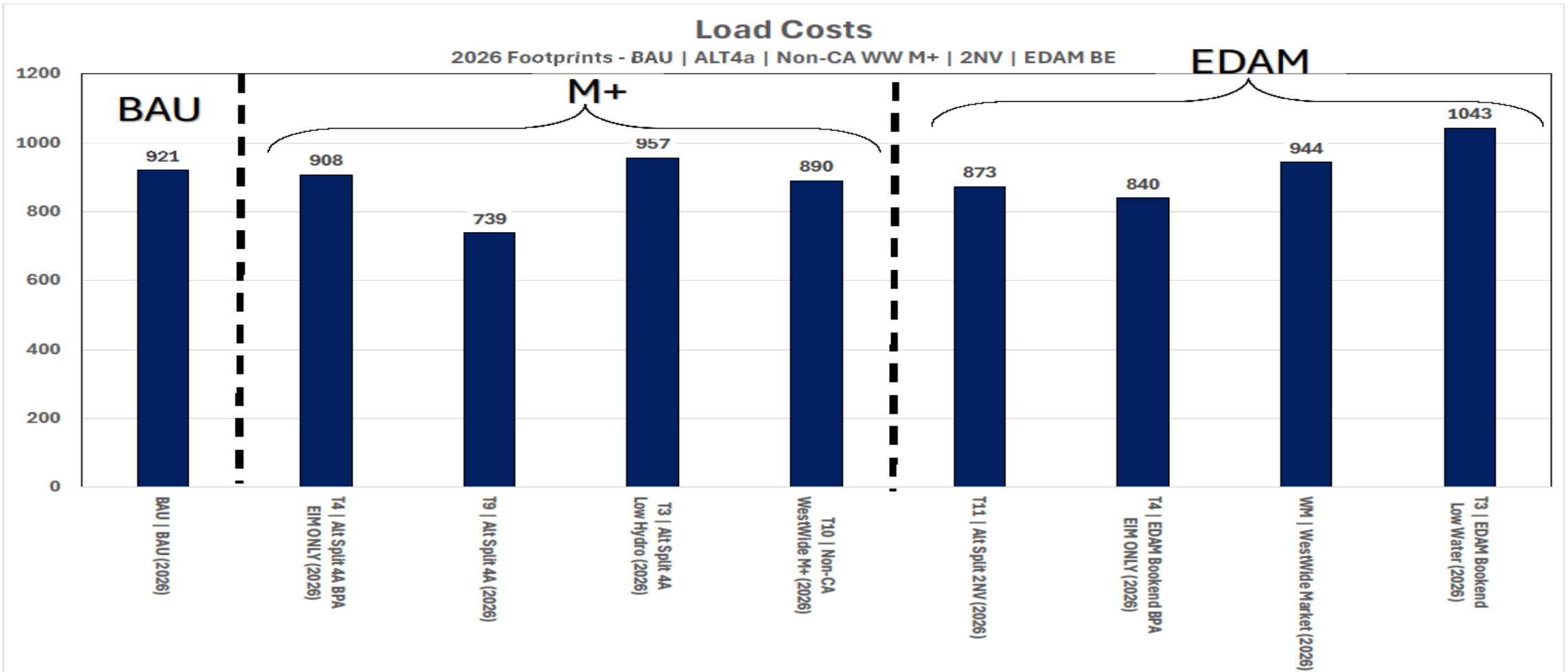
Task 11



	T11 Alt Split 2NV (2026)	T11 Alt Split 2NV (2030)	T11 Att Split 2NV (2035)
GhG Revenue	0	0	0
Congestion Revenues	-44	-70	-102
Gen Revenues	-1155	-1154	-1251
Load Costs	873	924	1034
Net Costs w/o Wheel	-195	-169	-188

Task & Case

Load Costs – 2026



Gen Rev & Congestion Rev Costs – 2026

