Impact of New Large Load (NLL) Additions on ERCOT Transmission Cost of Service (TCOS) and Residential Billing Using 12 Coincident Peak Method (12CP)

Final Results

July 30, 2026

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Scope of Report

Determine the Minimum Billing Demand (MBD) and Obligation Period for New Large Loads (NLLs) to hold other customers harmless from the planned build-out of the ERCOT transmission system based on a 12CP allocation method*. Estimate the corresponding impact of various MBDs on Residential rates.

Analysis sourced from publicly available information on projected load growth and transmission build.

* ERCOT currently relies on the 4CP summer allocation method

Assumptions

- **Base Case Load/Cost** – 2025 ERCOT Long Term Forecast; Historical Regression
- **NLL Case Load/Cost** – ERCOT RPG* Projects; 53 giga-watts (GW) of new load; $37 billion of transmission investment
- **TCOS Growth Case:**
  - Depreciation – 50-Year Asset Life
  - Cost of Capital** – 9.8% Return on Equity; 4.7% Cost of Debt; Equity = 45% of Total Capital
  - Operations and Maintenance – 1.7% of Investment
  - Property Tax and Insurance – 1% of Investment
  - Federal Income Tax Rate – 21%
- **Regulatory Lag** – Same in-service/rate effective dates
- **TCRF** – Zero over-/under-collection; No regulatory lag

* RPG – ERCOT's Regional Planning Group, https://www.ercot.com/committees/other/rpg

** Effective cost of capital – actual cost of capital for each RPG project varies by utility.

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Minimum Billing Demand

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Process

1. **Develop Base Case and NLL Cases: 2026 - 2035**
   - ERCOT-wide 12CP Demand
   - ERCOT-wide Transmission Cost of Service (TCOS)

2. **Determine the Minimum Billing Demand for NLLs that results in an ERCOT-wide Postage Stamp Rate that is no higher than the Base Case.**

ERCOT Postage Stamp Rate = $\frac{\text{TCOS}}{\text{12CP}}$

- **Where:**
  - TCOS is the sum of each Transmission Service Provider's Transmission Cost of Service.
  - 12CP is the ERCOT-wide average of each month's peak demand of the year.
- **Assumption: The Postage Stamp Rate remains a proxy for retail transmission rates (as it currently is under 4CP).**
  - Each utility's share of the ERCOT-wide TCOS is based on the utility's load as a percent of ERCOT-wide 12CP *(i.e.,* the 12CP Method).
  - Each utility would continue to file Transmission Cost Recovery Factor (TCRF) filings at the PUCT wherein retail transmission rates are derived to recover allocated TCOS.
  - Each retail customer class's share of the utility TCOS would continue to be based on percent of 12CP (adjusted for prior-period balances).

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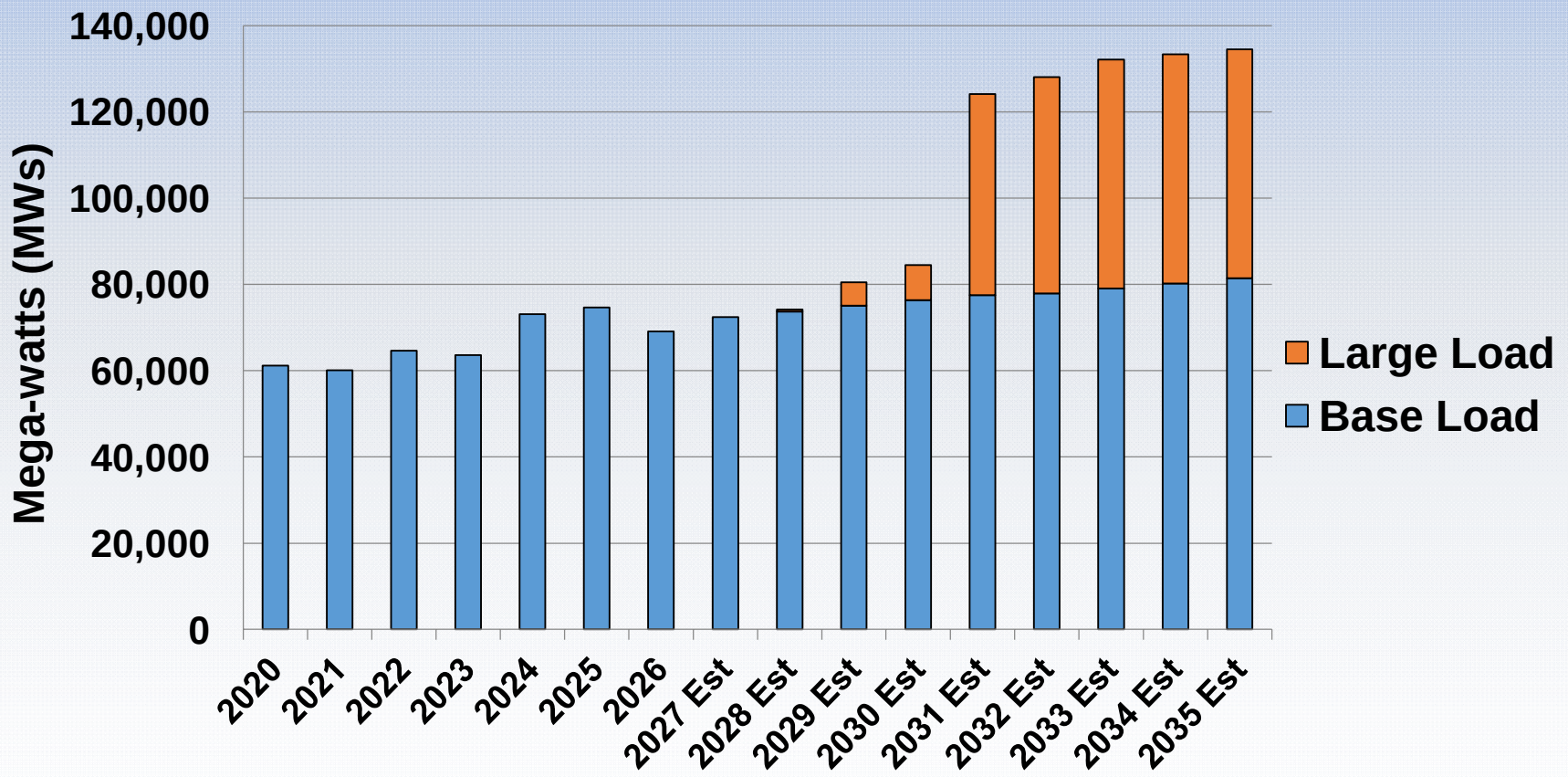
Projected ERCOT-Wide 12CP Load Growth



- **Base Load** growth is sourced from ERCOT projections through 2031, then extrapolated through 2035.
- **Large Load** growth of 53 GW sourced from ERCOT Regional Planning Group submissions.

Source: Derived from ERCOT historical actuals; *ERCOT Long-Term Hourly Peak Demand and Energy Forecast*, April 8, 2025; and Regional Planning Group projects, https://www.ercot.com/committees/other/rpg.

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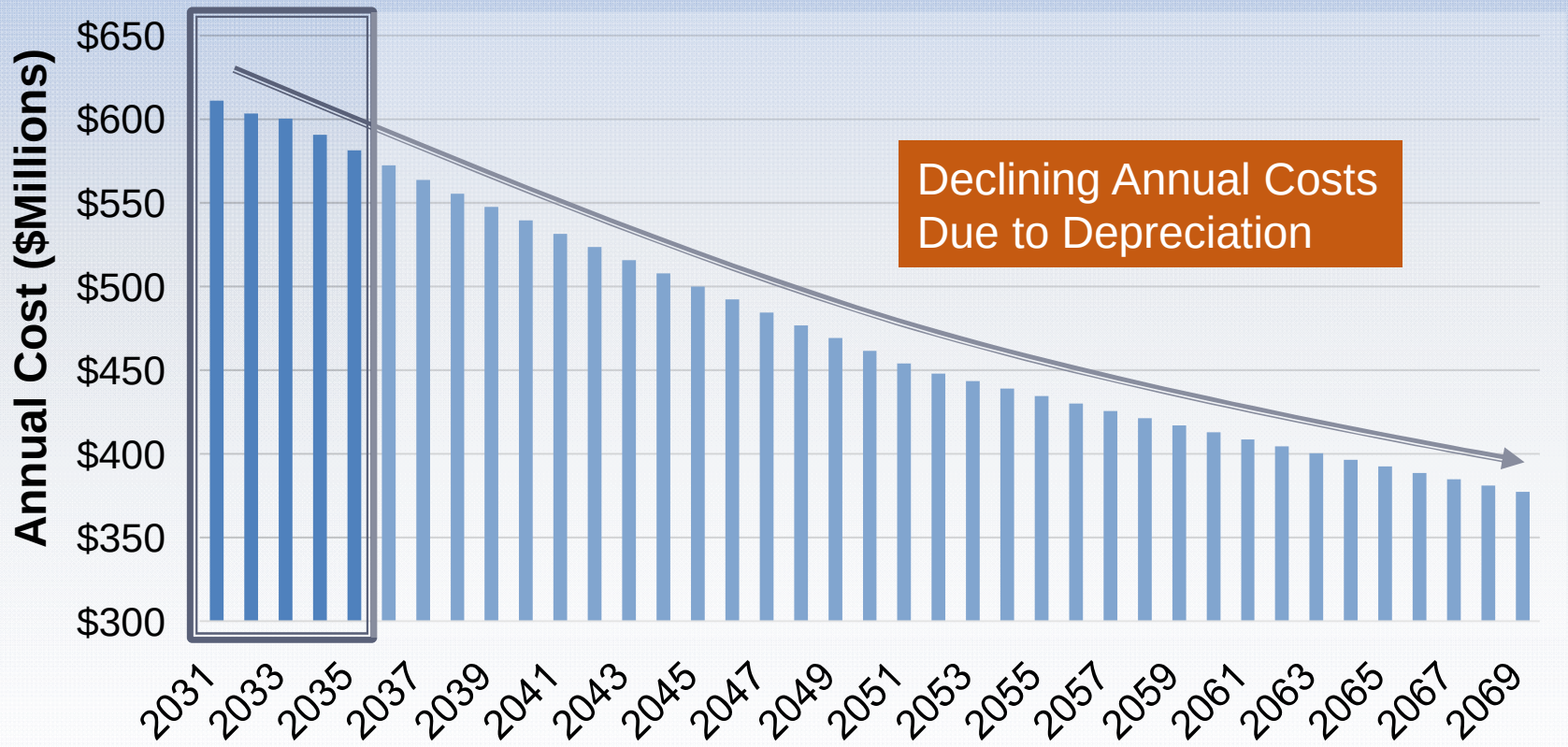
Annual Cost of NLL-Related Transmission Projects



- A separate cost analysis was conducted for each NLL-related transmission project.
- Total annual NLL cost is the sum of each project's annual TCOS.
- Because cost recovery is front-loaded, the largest rate impacts occur immediately after a project is placed in service.

Note: Example trend illustrates assets placed into service in 2031 with a 50-year depreciation.

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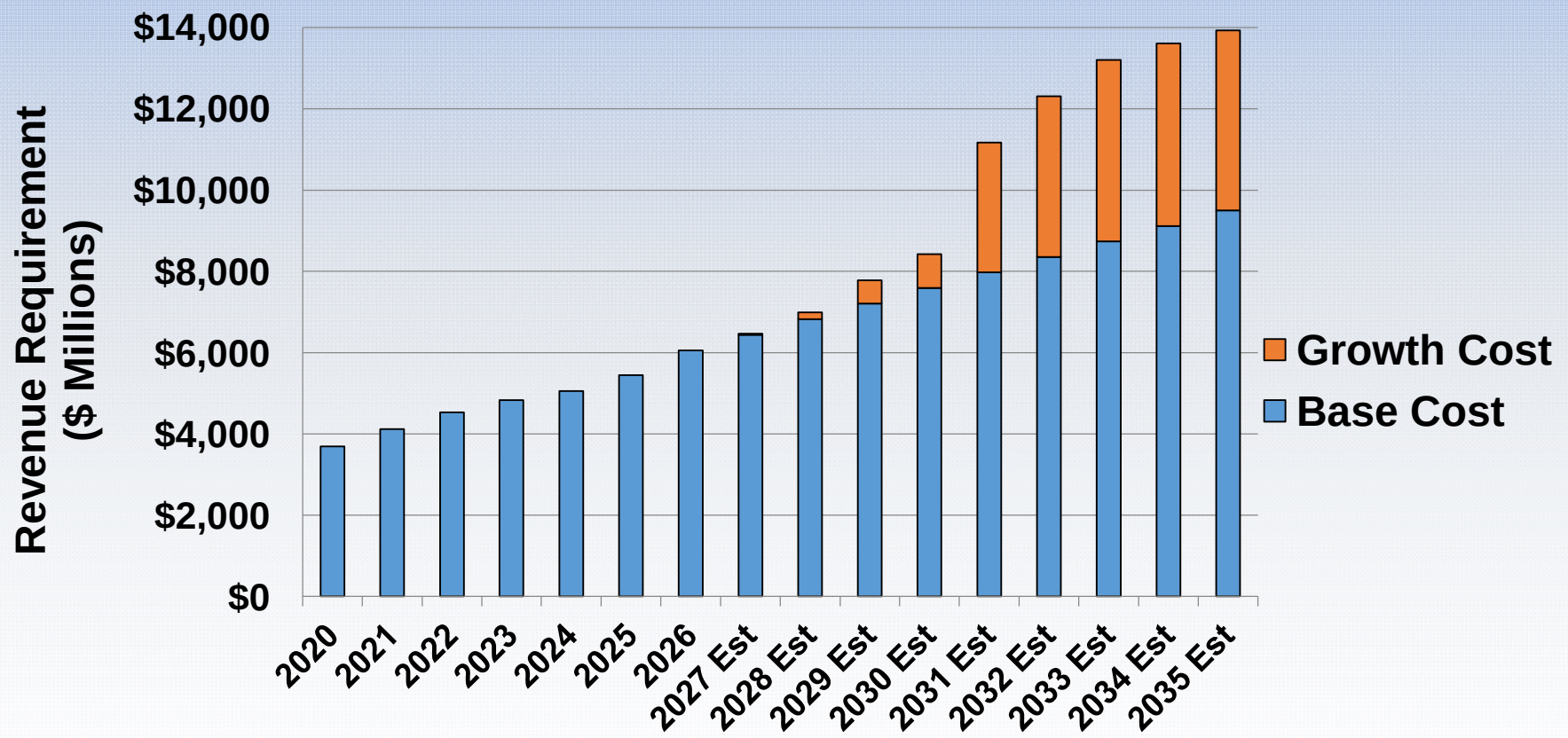
Projected ERCOT-Wide Transmission Cost of Service (TCOS)



- Base Case reflects historical trends and project additions.
- $37 Billion of growth projects identified based on ERCOT Regional Planning Group submissions.
- Capital investments converted to annualized cost assuming 50-yr depreciation.

Source: Derived from ERCOT historical actuals; *ERCOT Long-Term Hourly Peak Demand and Energy Forecast*, April 8, 2025; and Regional Planning Group projects, https://www.ercot.com/committees/other/rpg.

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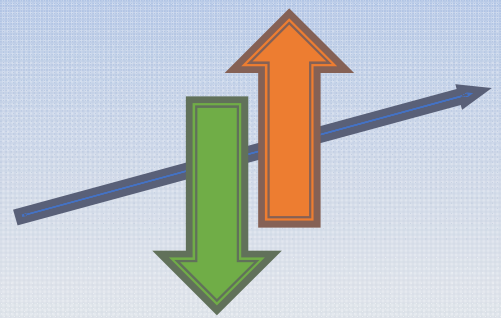
Postage Stamp Rate and New Large Loads

- By comparing Postage Stamp Rates with and without NLL additions, we can identify the impact of large loads on the Postage Stamp Rate.
- In addition, we can simulate the impact on Postage Stamp Rates if large load investments are made but the growth fails to show up by decreasing large load demand but keeping the cost constant.
- Thus, we can identify the minimum percentage of large load demand that needs to show up to avoid shifting costs to other customers.



$$\text{Rate} = \frac{\text{Cost}}{\text{Demand}}$$

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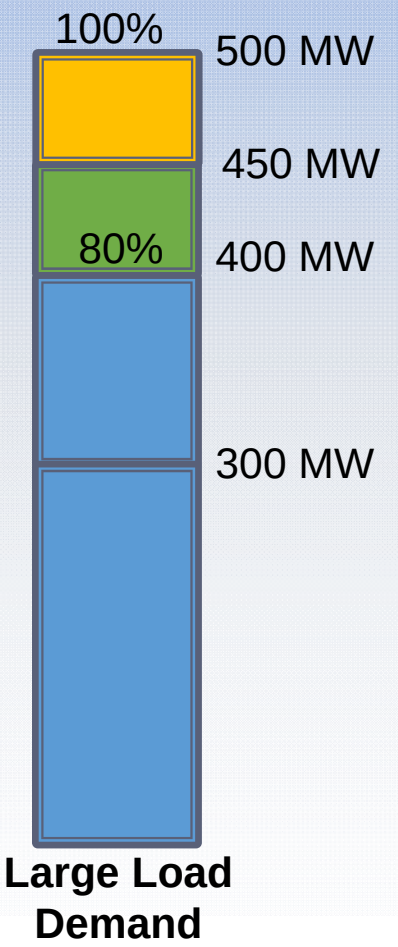
Minimum Demand Charge

- **<u>Minimum Demand Charge</u> –** the percentage of contract demand multiplied by the utility's rate that a NLL would be required to pay.
- **Establishing a minimum demand charge sets a minimum level of expected revenues associated with NLLs.**
- **For example, if a 500 MW Load was subject to an 80% minimum demand charge:**
  - At 300 MW, the load would pay 400 MW of transmission charges.
  - At 450 MW, the load would pay 450 MW of transmission charges.



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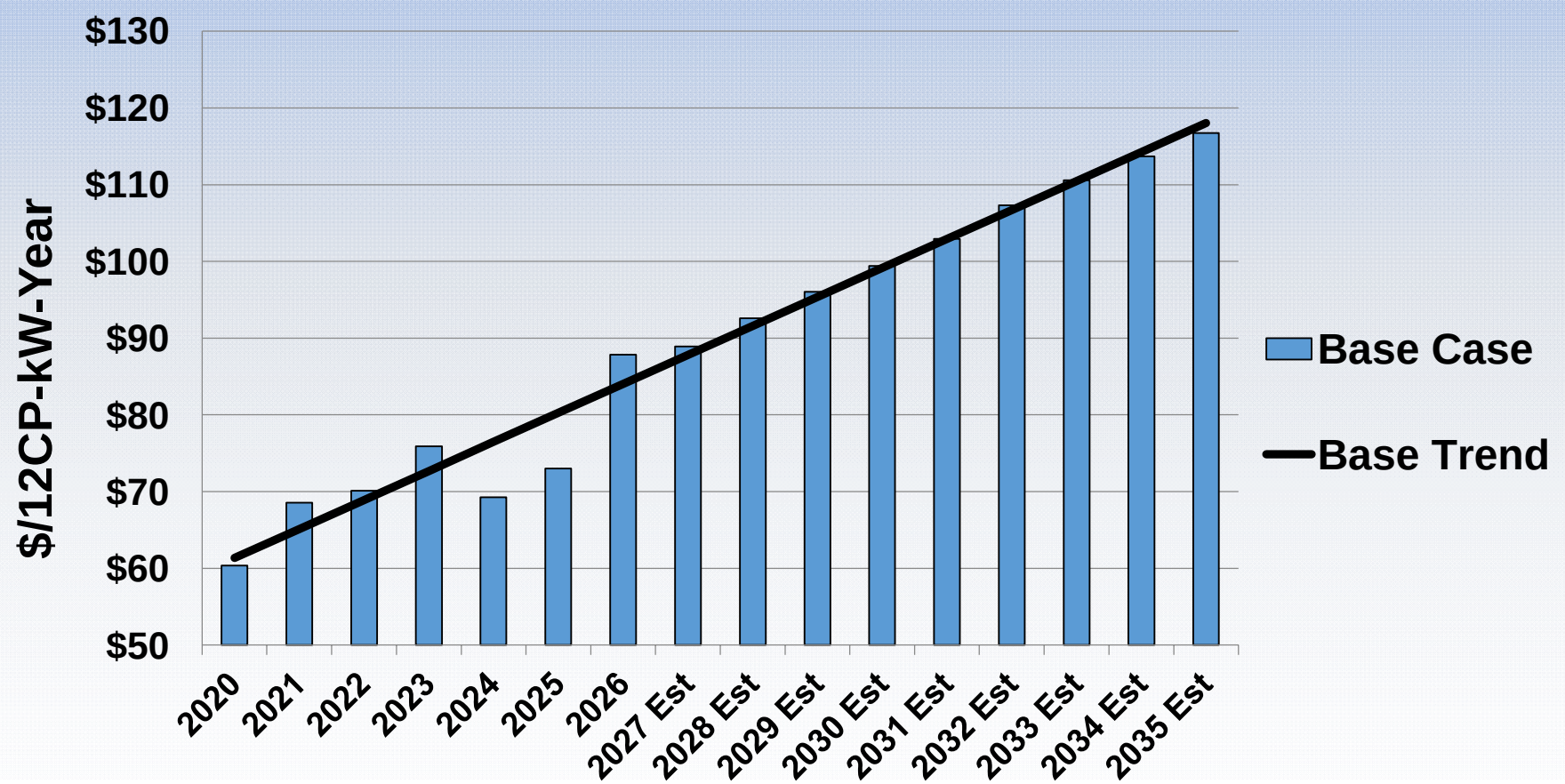
ERCOT 12CP Postage Stamp Transmission Rate
Base Case: No NLLs



- **Step 1:** Derive **Base Case** rate from ERCOT-wide projected TCOS and derived 12CPs excluding NLLs.
- **Step 2:** Regression of **Base Case** to establish **Base Trend**.
- **Conclusion:** 12CP Postage Stamp rates are projected to increase at 3.5% CAGR without NLLs.

$$\text{Rate} = \frac{\text{Cost}}{\text{Demand}}$$

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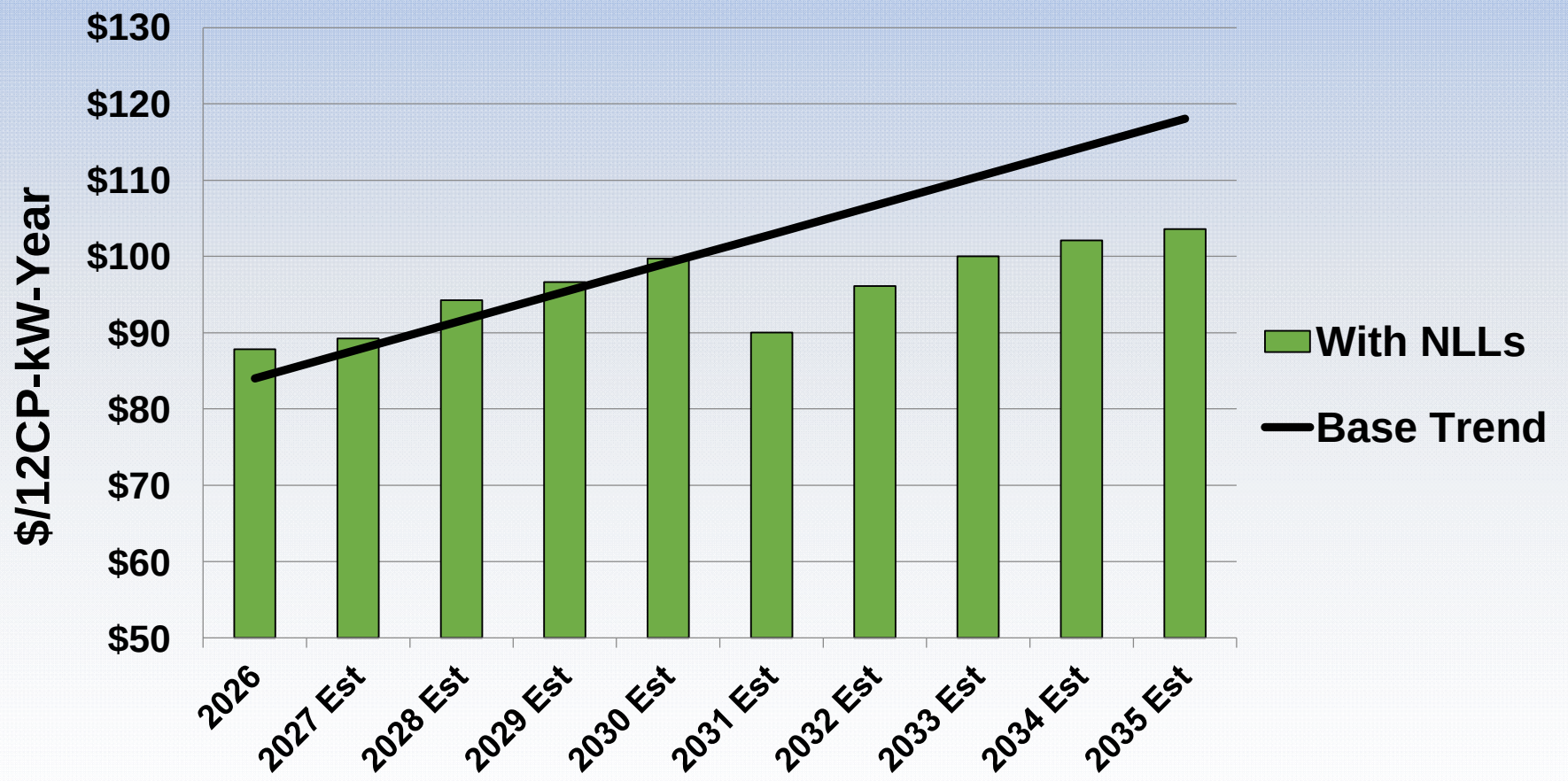
ERCOT 12CP Postage Stamp Transmission Rate
Change Case: NLLs Billed at 100% of Contract Demand



- The **Base Trend** is the 12CP Rate without NLLs (Baseline).
- **With NLLs** included at 100% of contract demand, Postage Stamp rates are at/below the **Base Trend**.
- **Conclusion:** Minimum demand charge at 100% of NLL contract demand reduces rates for existing customers.

$$\text{Rate} = \frac{\text{Cost}}{\text{Demand}}$$

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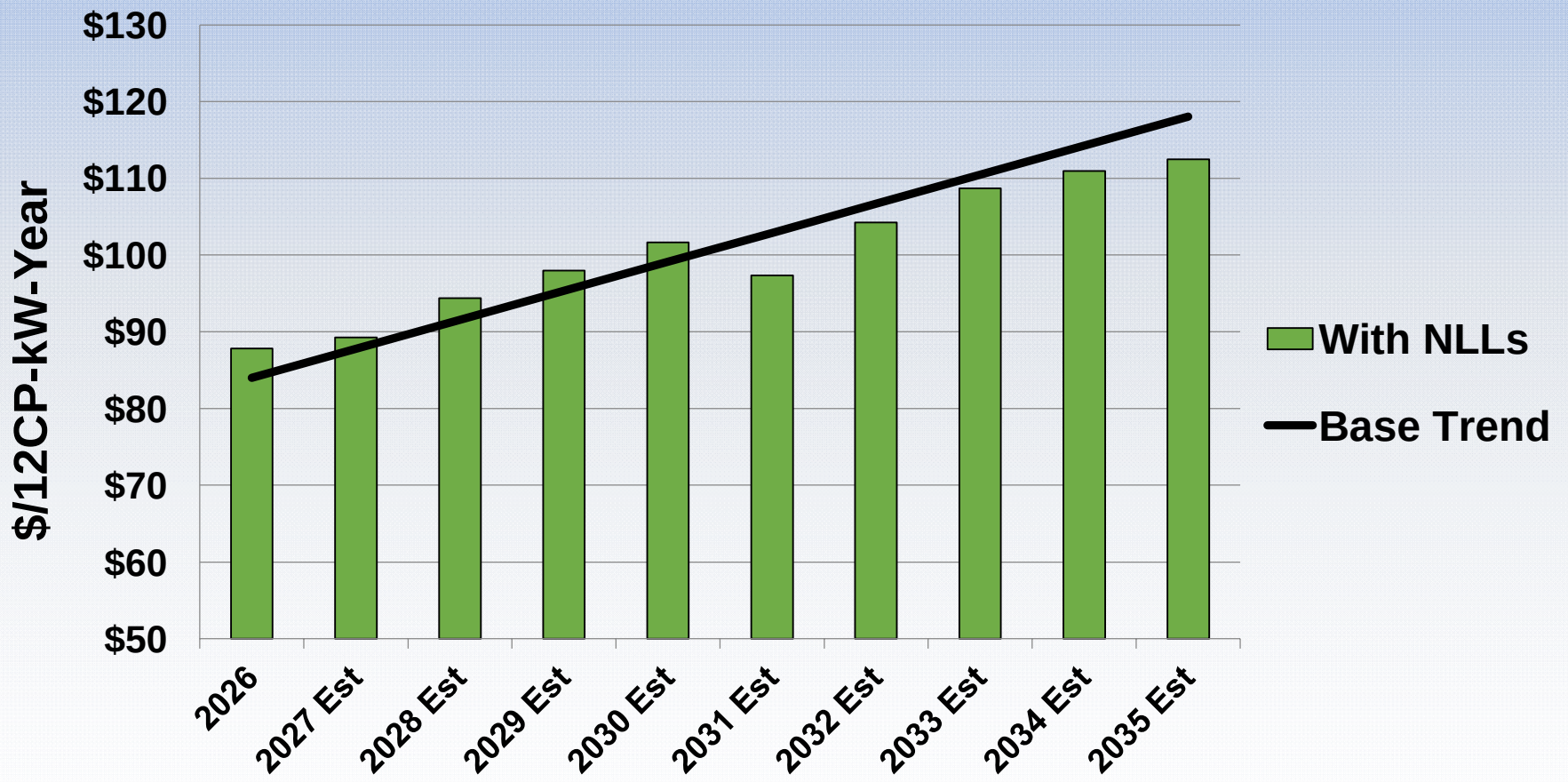
ERCOT 12CP Postage Stamp Transmission Rate
Change Case: NLLs Billed at 80% of Contract Demand



- The **Base Trend** is the 12CP Rate without NLLs (Baseline).
- **With NLLs** included at 80% of contract demand, most Postage Stamp rates are at/below the **Base Trend.**
- **Conclusion:** Minimum demand charge at 80% of NLL contract demand slightly reduces rates for existing customers.

$$\text{Rate} = \frac{\text{Cost}}{\text{Demand}}$$

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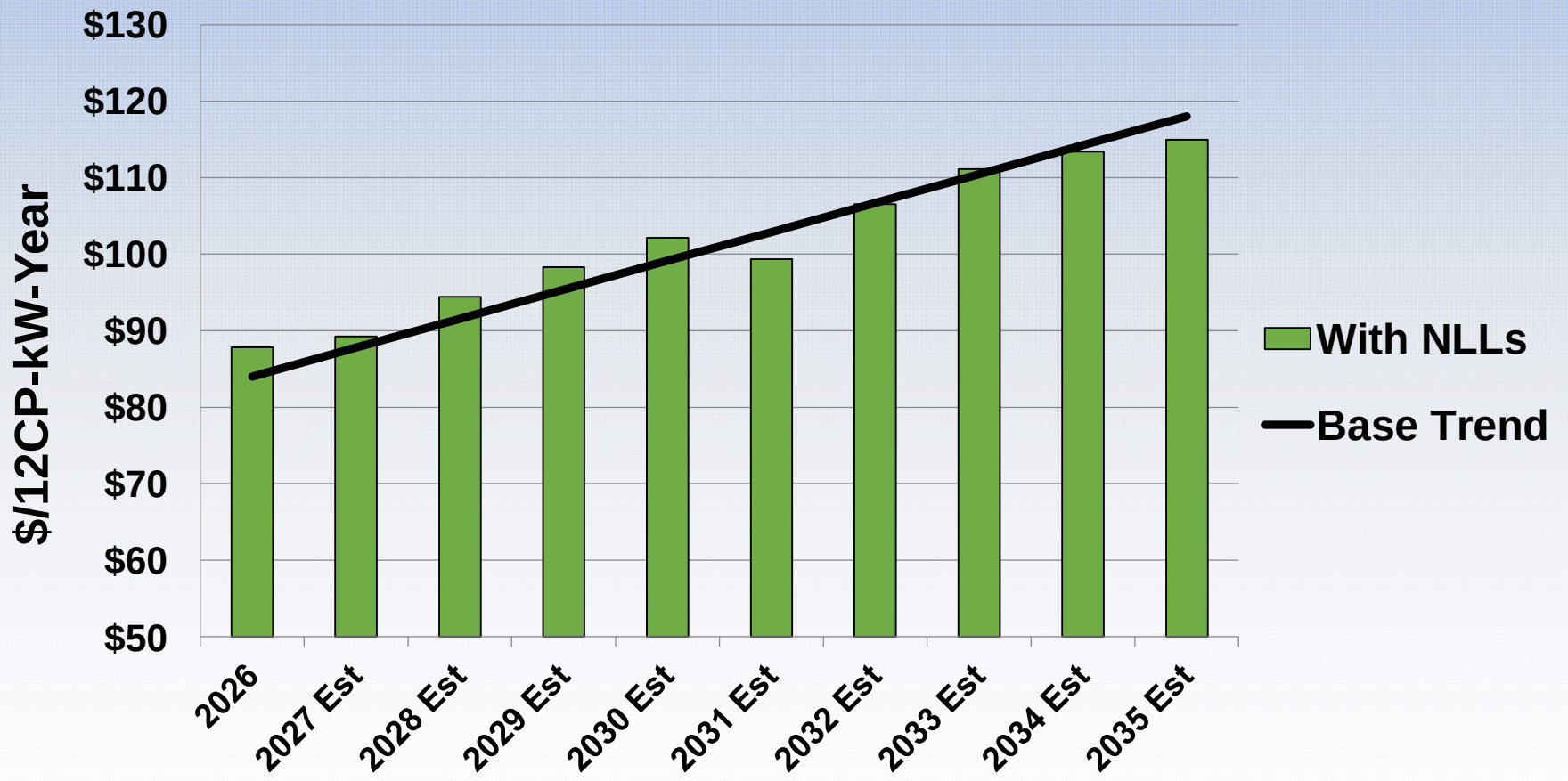
ERCOT 12CP Postage Stamp Transmission Rate
Change Case: NLLs Billed at 75% of Contract Demand



- The **Base Trend** is the 12CP Rate without NLLs (Baseline).
- **With NLLs** included at 75% of contract demand Postage Stamp rates are above/below the **Base Trend**.
- **Conclusion:** Minimum demand charge at 75% of NLL contract demand is rate neutral to existing customers.

$$\text{Rate} = \frac{\text{Cost}}{\text{Demand}}$$

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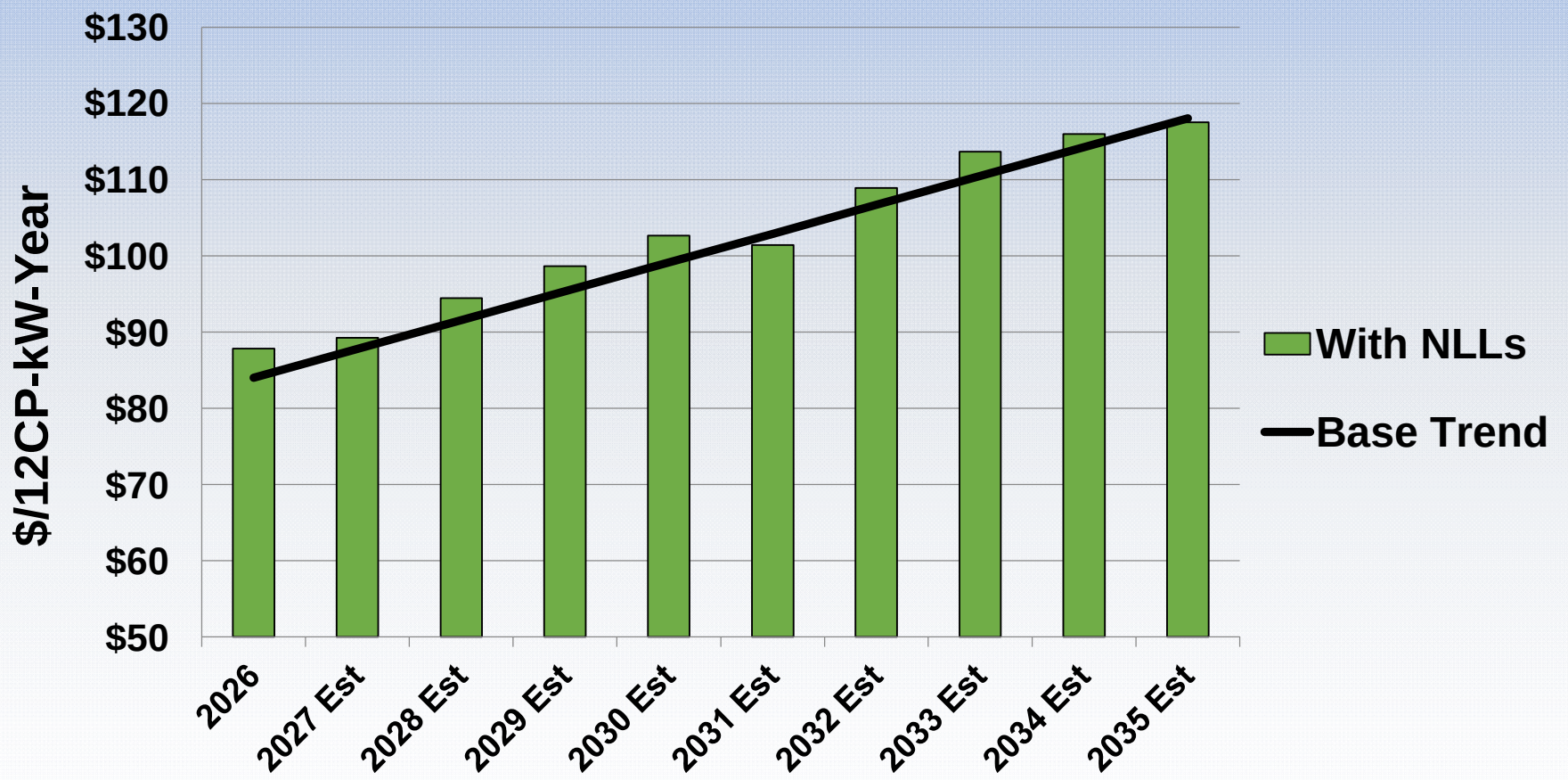
ERCOT 12CP Postage Stamp Transmission Rate
Change Case: NLLs Billed at 70% of Contract Demand



- The **Base Trend** is the 12CP Rate without NLLs (Baseline).
- **With NLLs** included at 70% of contract demand Postage Stamp rates are slightly above the **Base Trend**.
- **Conclusion:** Minimum demand charge at 70% of NLL contract demand may slightly increase rates for existing customers.

$$\text{Rate} = \frac{\text{Cost}}{\text{Demand}}$$

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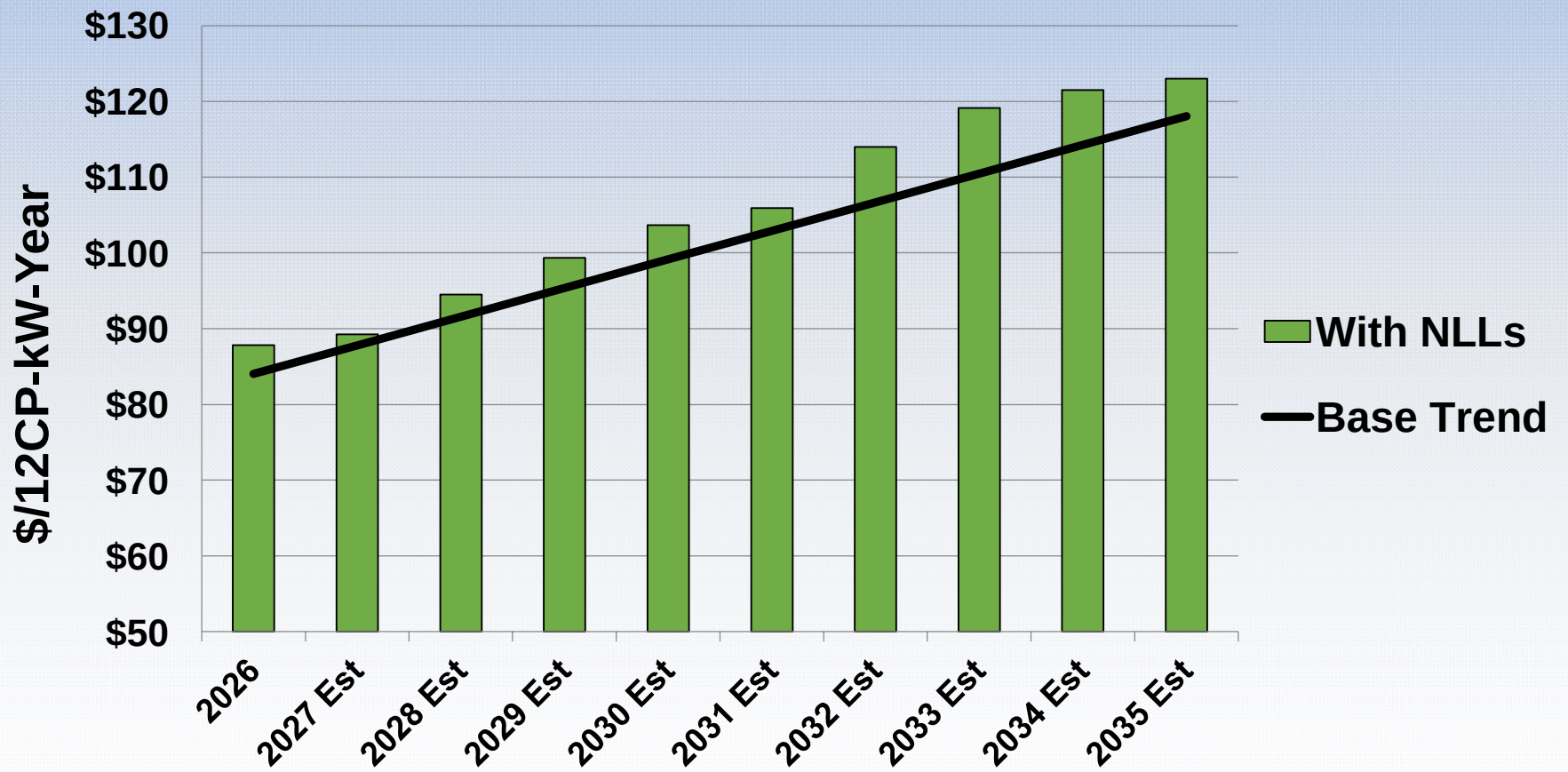
ERCOT 12CP Postage Stamp Transmission Rate
Change Case: NLLs Billed at 60% of Contract Demand



- The **Base Trend** is the 12CP Rate without NLLs (Baseline).
- **With NLLs** included at 60% of contract demand Postage Stamp rates are above the **Base Trend**.
- **Conclusion:** Minimum demand charge at 60% (or lower) of NLL contract demand would likely increase rates for existing customers.

$$\text{Rate} = \frac{\text{Cost}}{\text{Demand}}$$

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Minimum Billing Demand Obligation Period

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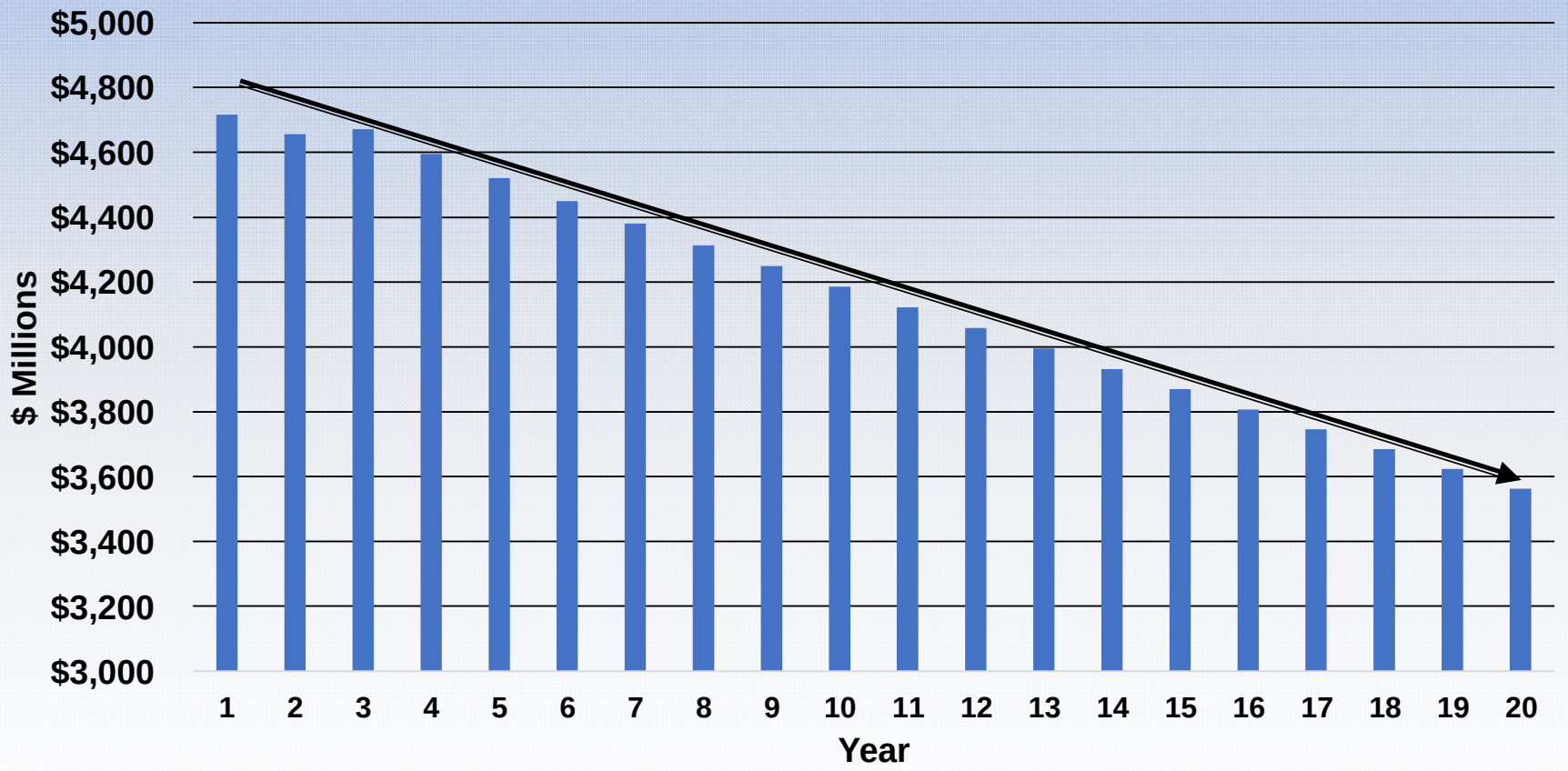
Process

1. **Develop annual NLL Incremental Costs and Revenues.**
   - Annual NLL costs based on $37 billion of NLL investment.
   - Vary NLL at 100%, 80%, 75%, and 70% of contract demand.
   - Quantify the annual revenues recovered from NLLs versus the annual incremental costs for the first 20 years.
2. **Determine when the Cumulative Net Present Value (NPV) NLL Revenues exceeds the Cumulative NPV of the NLL Incremental Costs.**

NLL Incremental Costs



- Assume 53 GW and $37 billion of transmission investment on-line in Year 1.
- Same depreciation rate, cost of capital, O&M, tax, and insurance as used in the Minimum Billing Demand Percentage analysis.
- Costs decline over time due to depreciation.

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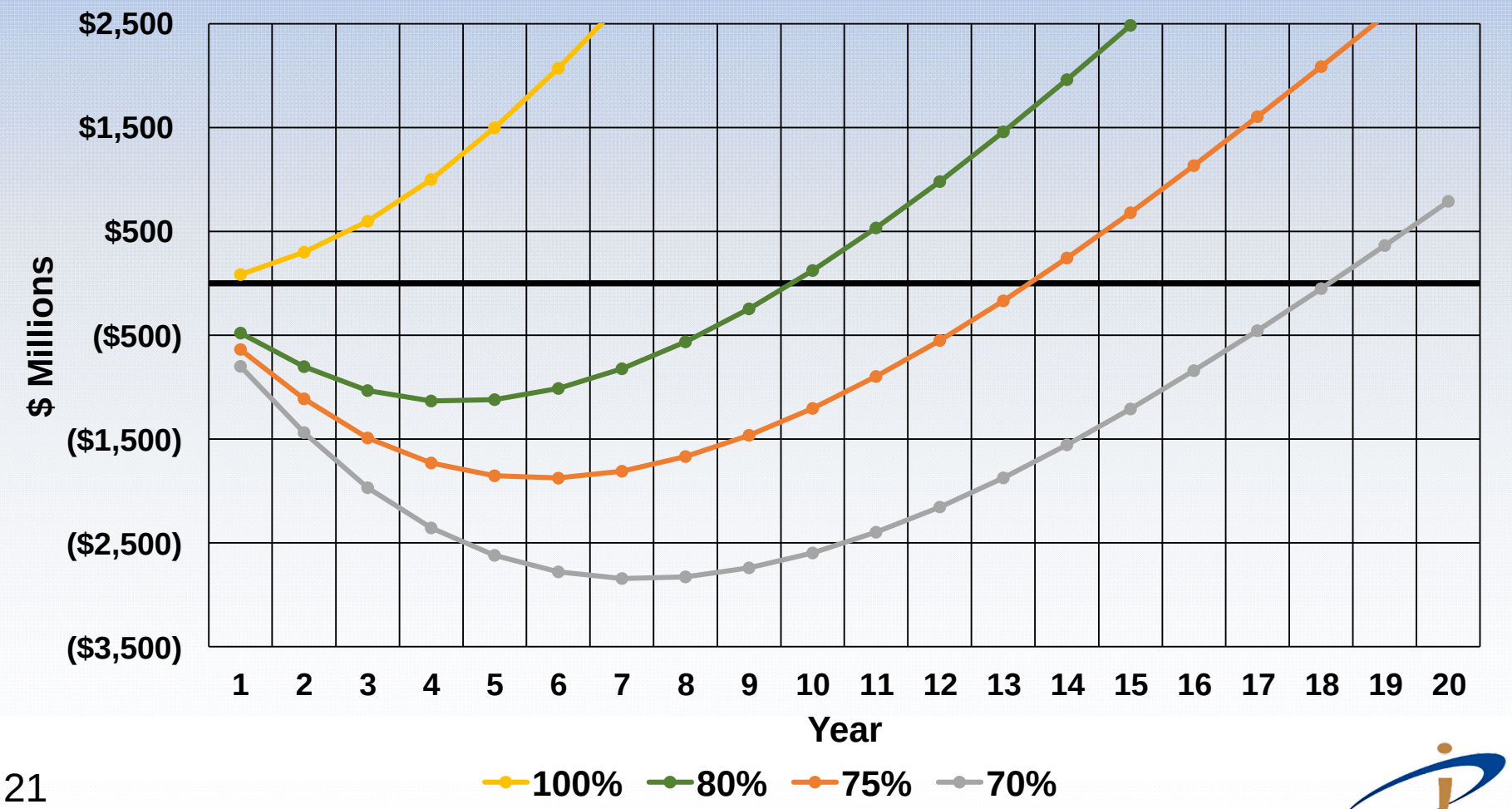
Cumulative NPV Revenues vs. Incremental Costs

100%, 80%, 75%, 70% of Contract Demand



- Cumulative NLL Revenue compared to Investment Cost at 100%, 80%, 75%, and 70% of Contract Demand (CD).
- NLL Revenue exceeds Investment Cost in:
  - Year 1 at 100% of CD
  - Year 10 at 80% of CD
  - Year 14 at 75% of CD
  - Year 19 at 70% of CD

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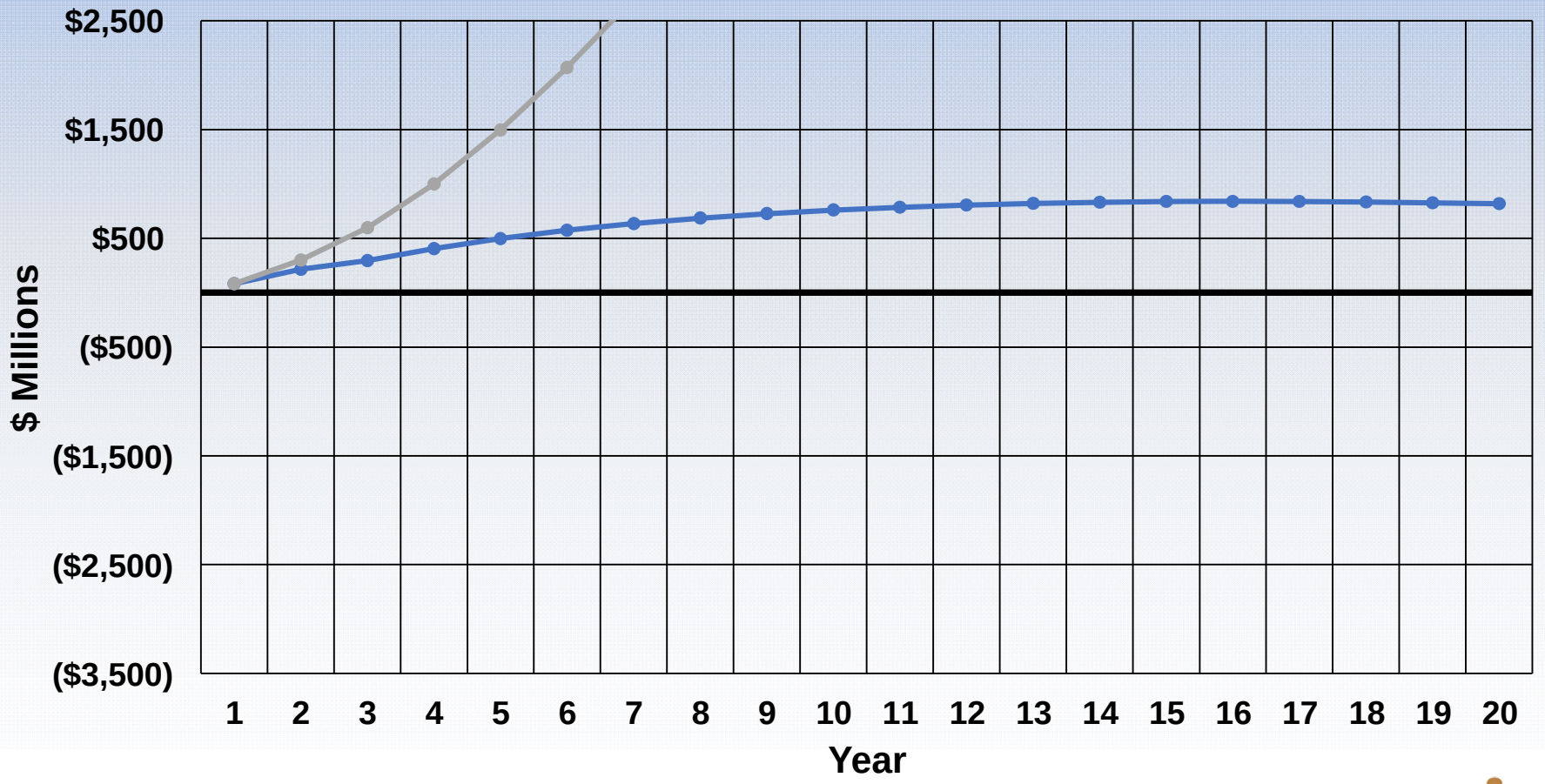
Cumulative NPV Revenues vs. Incremental Costs

100% of Contract Demand



- Incremental Revenues exceed Incremental Cost in Year 1.
- Cumulative Revenues exceed Incremental Cost in Year 1.
- Indicative of No Obligation Period at 100% MBD.

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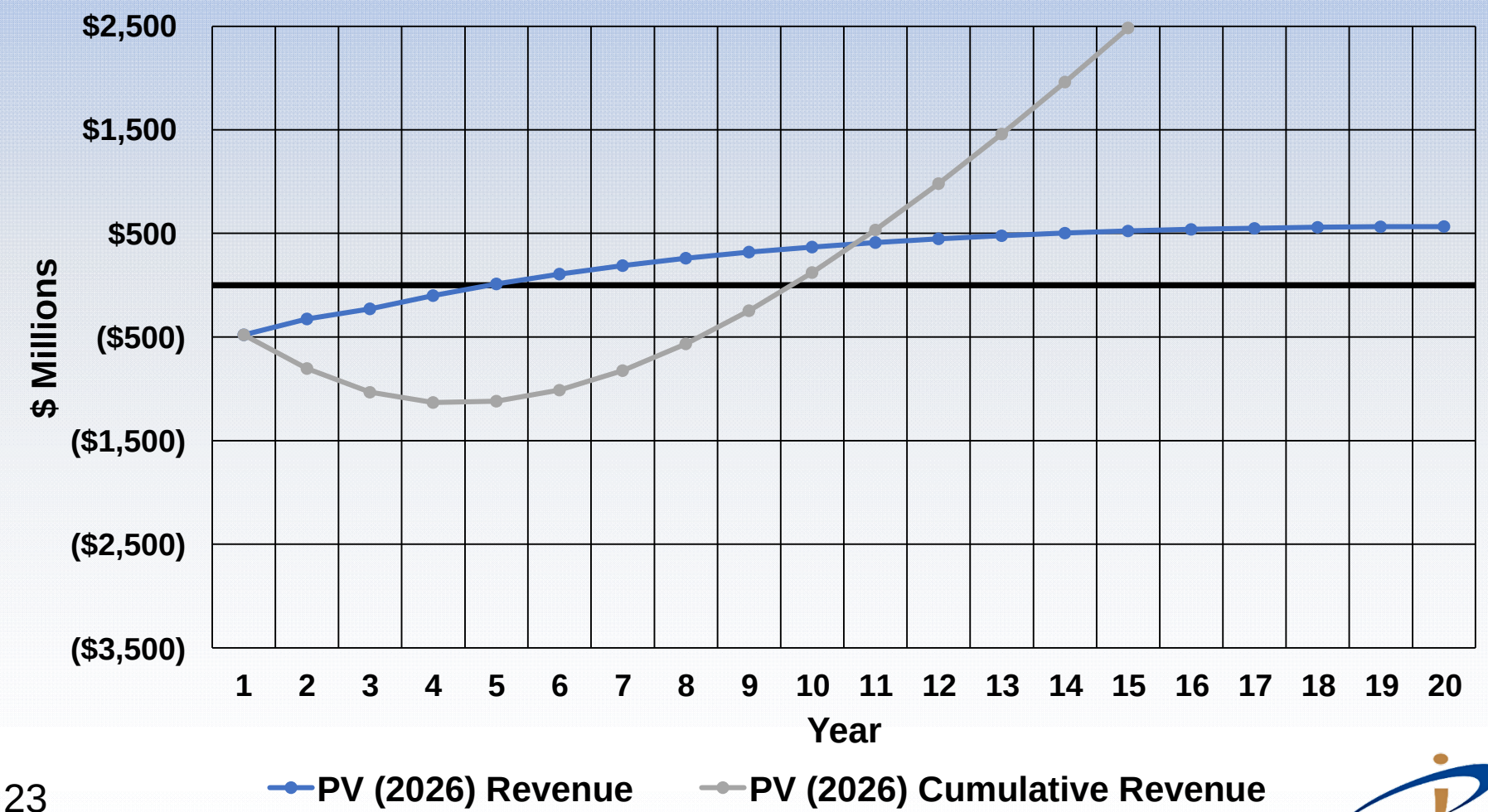
Cumulative NPV Revenues vs. Incremental Costs

80% of Contract Demand



- Incremental Revenues exceed Incremental Cost in Year 5.
- Cumulative Revenues exceed Incremental Cost in Year 10.
- Indicative of a 9-year Obligation Period at 80% MBD.

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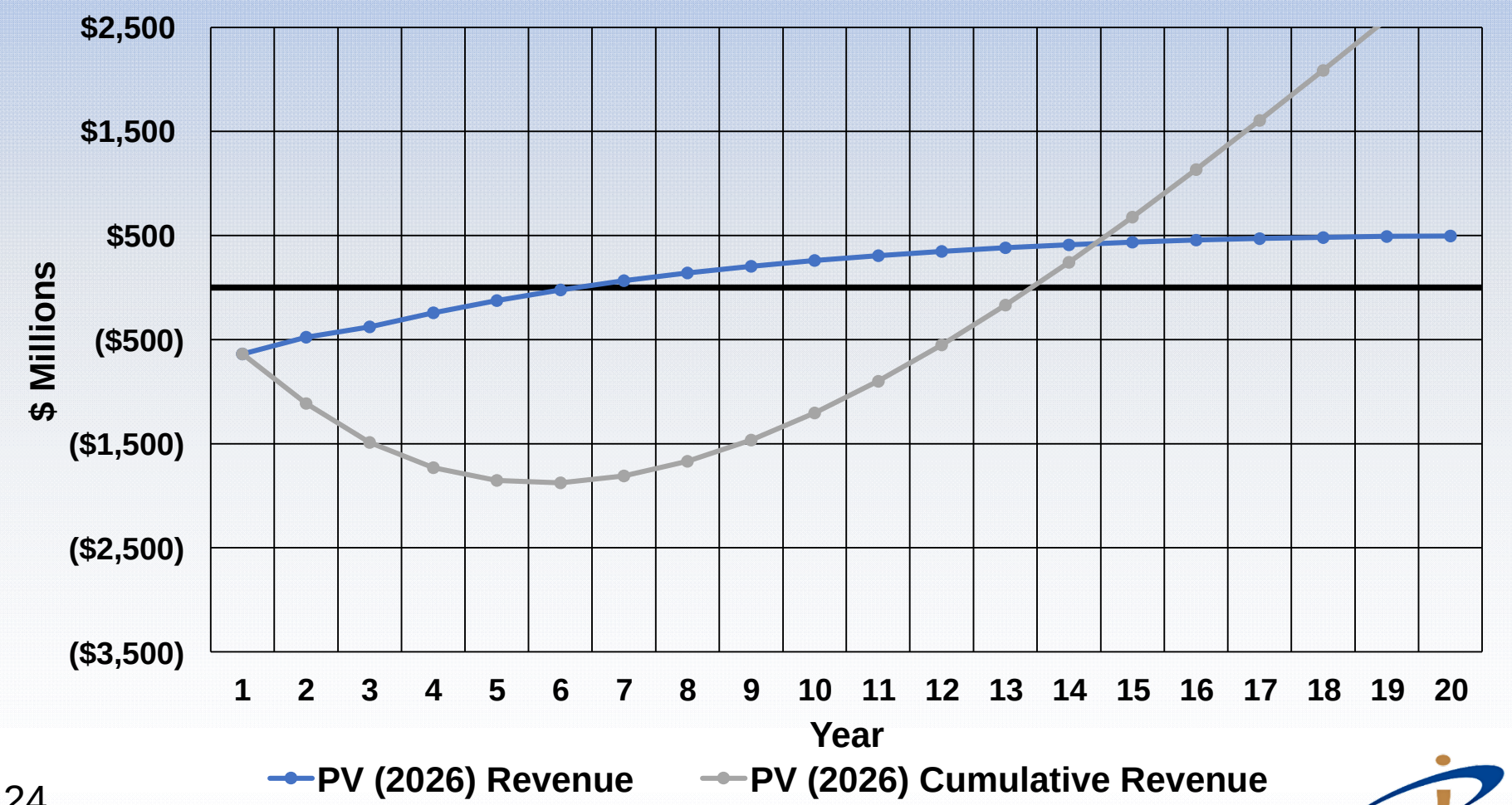
Cumulative NPV Revenues vs. Incremental Costs

75% of Contract Demand



- Incremental Revenues exceed Incremental Cost in Year 7.
- Cumulative Revenues exceed Incremental Cost in Year 14.
- Indicative of a 13-year Obligation Period at 75% MBD.

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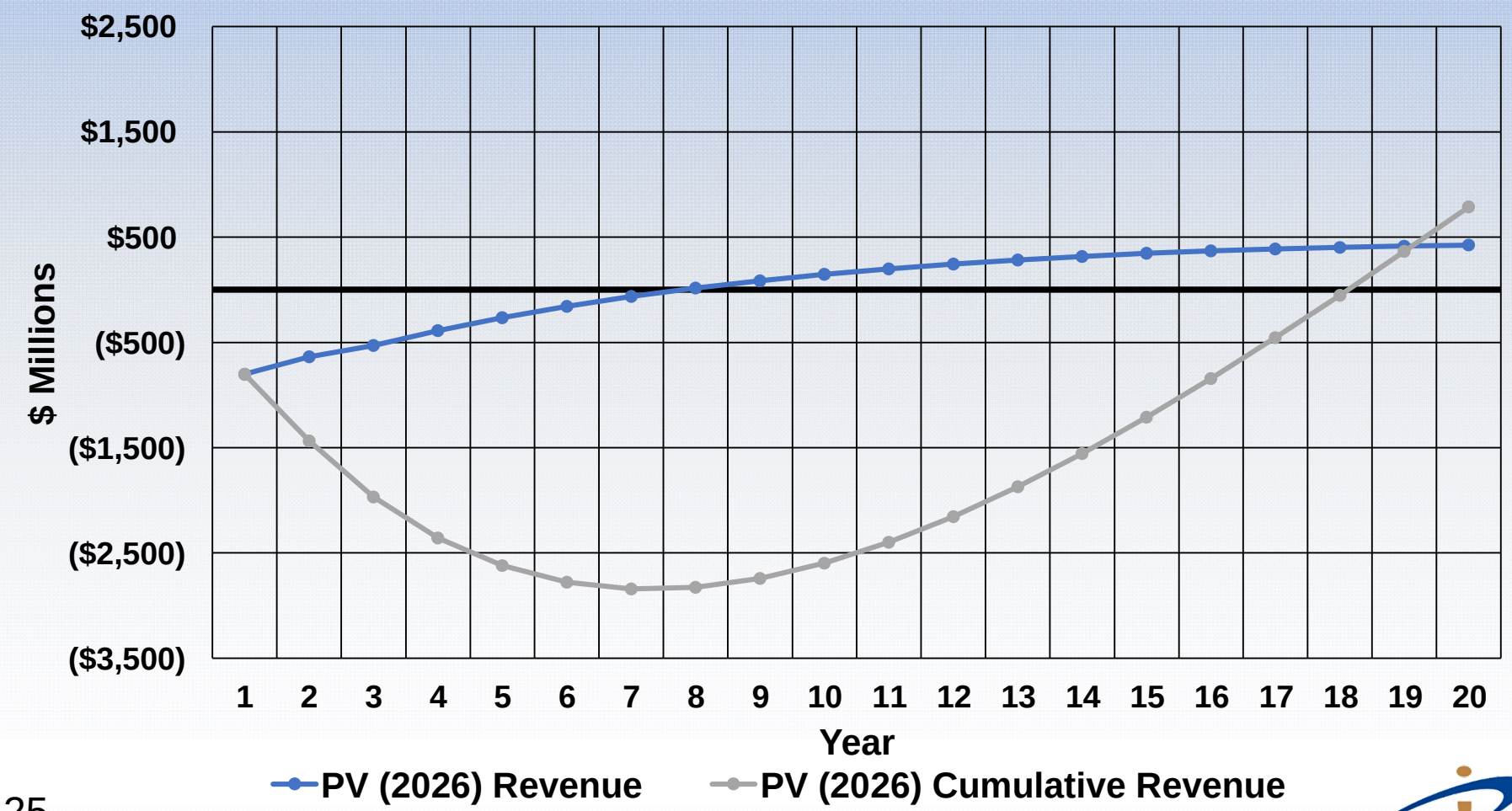
Cumulative NPV Revenues vs. Incremental Costs

70% of Contract Demand



- Incremental Revenues exceed Incremental Cost in Year 8.
- Cumulative Revenues exceed Incremental Cost in Year 19.
- Indicative of an 18-year Obligation Period at 70% MBD.

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Residential Rate Impact

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Process

1. **Develop example of a monthly residential billing at various MBDs.**
   - Oncor 2026 residential TCRF rates as a Baseline.
   - Escalate Baseline to 2035.
   - Vary NLL at 100%, 80%, 75%, and 70% of contract demand.
   - Quantify TCRF billing at various NLL's compared to Baseline.
2. **Quantify indicative TCRF billing at various NLL's compared to Baseline.**

Sample Residential Transmission Billing Impact

Indicative 2035 TCRF Rates; Oncor as a Proxy; 12CP Allocation Method

	TCRF Rate (¢/kWh)	TCRF Billing[1] ($/Yr)	Delta to 2035 Base Billing
Baseline	2.66¢	$478.86 / yr	0.0%
With NLLs			
70% MBD	2.68¢	$482.15 / yr	0.7%
75% MBD	2.62¢	$471.60 / yr	-1.5%
80% MBD	2.56¢	$461.50 / yr	-3.6%
100% MBD	2.36¢	$425.08 / yr	-11.2%

[1] Transmission Cost Recovery Factor (TCRF). Residential billing is approximately 16.8% transmission-related. Costs are recovered through the TCRF charge. Remaining non-transmission costs such as energy, distribution, and customer/meter charges are not shown.

- **Baseline** is the projected 2035 Residential TCRF Rate without NLLs.
- **With NLLs** included at a 75% MBD (and higher), the Residential TCRF Rates are at/below the **Baseline**.
- **Conclusion:** Minimum demand charge of at least 75% of NLL contract demand would not increase residential rates.

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Conclusions

1. 12CP Transmission Postage Stamp rates for existing customer classes are projected to increase under the Base Case, even in the absence of new large loads.

2. If new large loads show up fully in the NLL Case, 12CP transmission rates overall will be lower than in the Base Case.

3. A minimum demand charge between 75% of contract demand for 13 years and 80% for 9 years would hold existing customers harmless.

Additional Refinements

- Consider the impact of regulatory lag on the timing of costs and revenues.
- Consider the interaction between minimum billing demand obligations, collateral, and termination fees to manage tail risk.
- Conduct sensitivity testing to key assumptions (*e.g.* asset lives, cost of capital, inflation, 4CP/12CP/Energy allocation).

Questions?

Regulatory Matters

Strategy

Assessments

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Appendix

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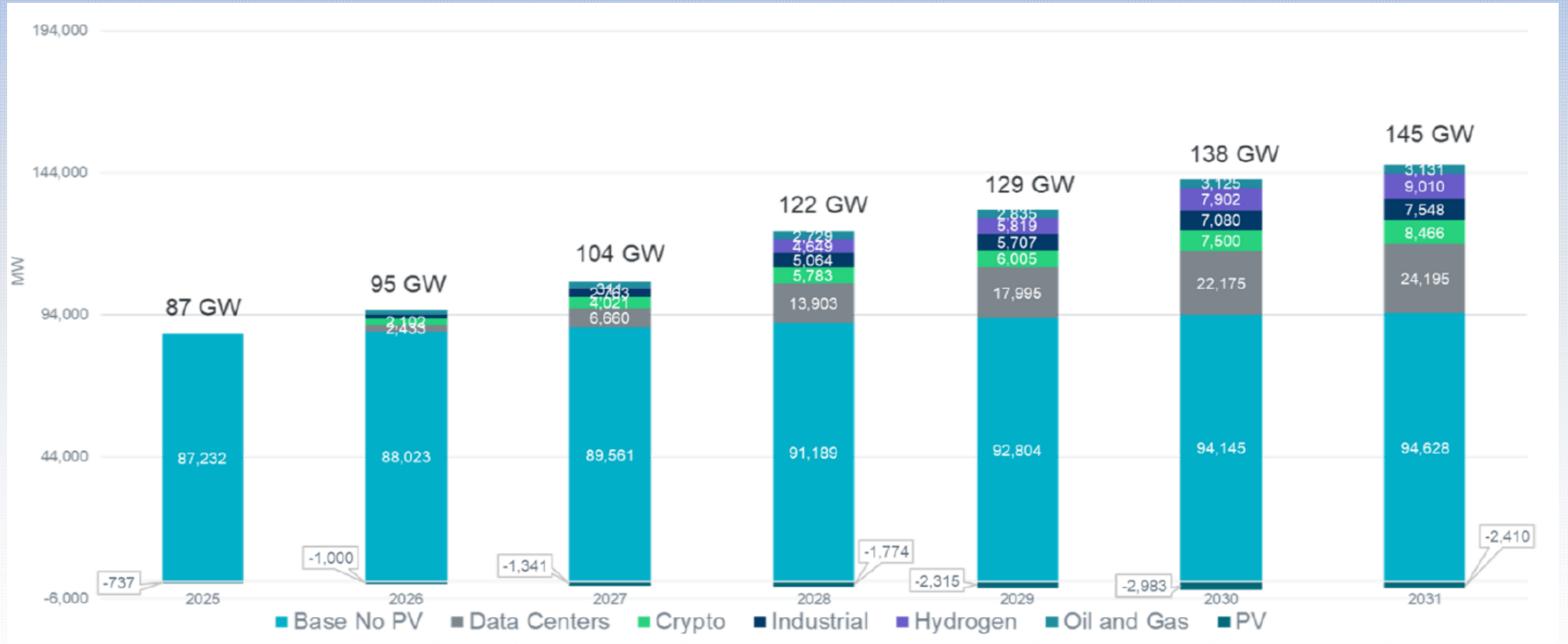
ERCOT Regional Planning Group Projects In-Service Dates 2029-2033

Project	Load Growth (MW)	Investment (Millions)
AEP | 345	25,000	$11,485
ONCOR | 765/345		$5,870
AEP | 345/138	11,000	$4,870
AEP | 765	3,560	$4,100
AEP | 765/345	2,904	$2,886
BTU | 345/138	2,500	$1,831
ONCOR | 345/138		$1,702
ONCOR, AEP | 765		$742
Centerpoint | 138	476	$545
Centerpoint | 345	2,987	$511
CNP, LCRA | 765/345	980	$492
CTT | 765/345	637	$424
ONCOR | 345/138	483	$382
ONCOR, WETT | 345/138		$306
ONCOR, LCRA | 345/138	377	$272
STEC | 345	2,100	$256
TNMP | 69	65	$225
	53,069	**$36,898**

 Source: https://www.ercot.com/committees/other/rpg.

2025 ERCOT Load Growth Forecast (Adjusted)



Source: Figure 4, *2025 ERCOT System Planning, Long-Term Hourly Peak Demand Energy Forecast,* Electric Reliability Council of Texas, Inc., April 8, 2025.

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