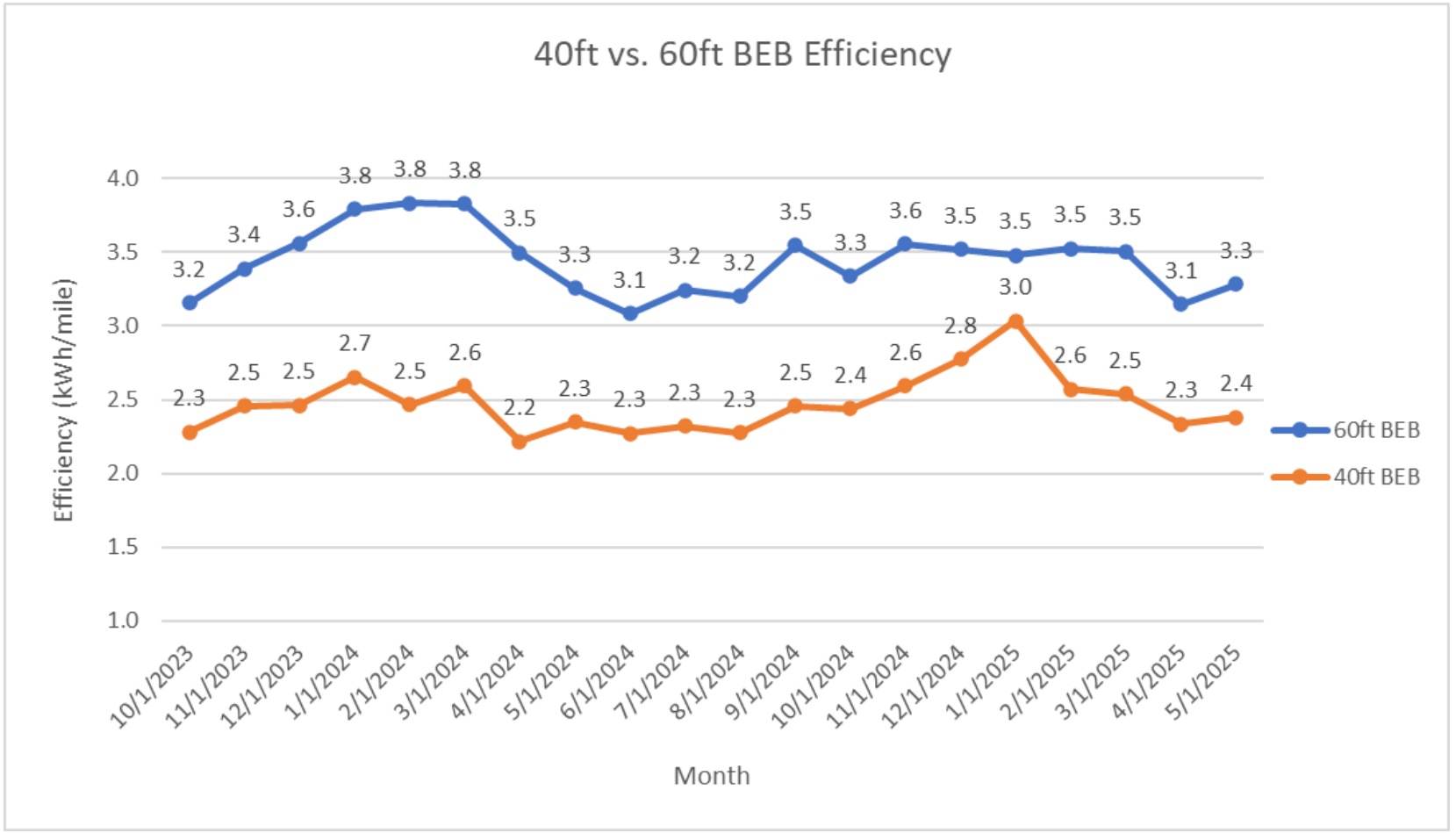
ZEB Program Performance Report

July 2023 – May 2025

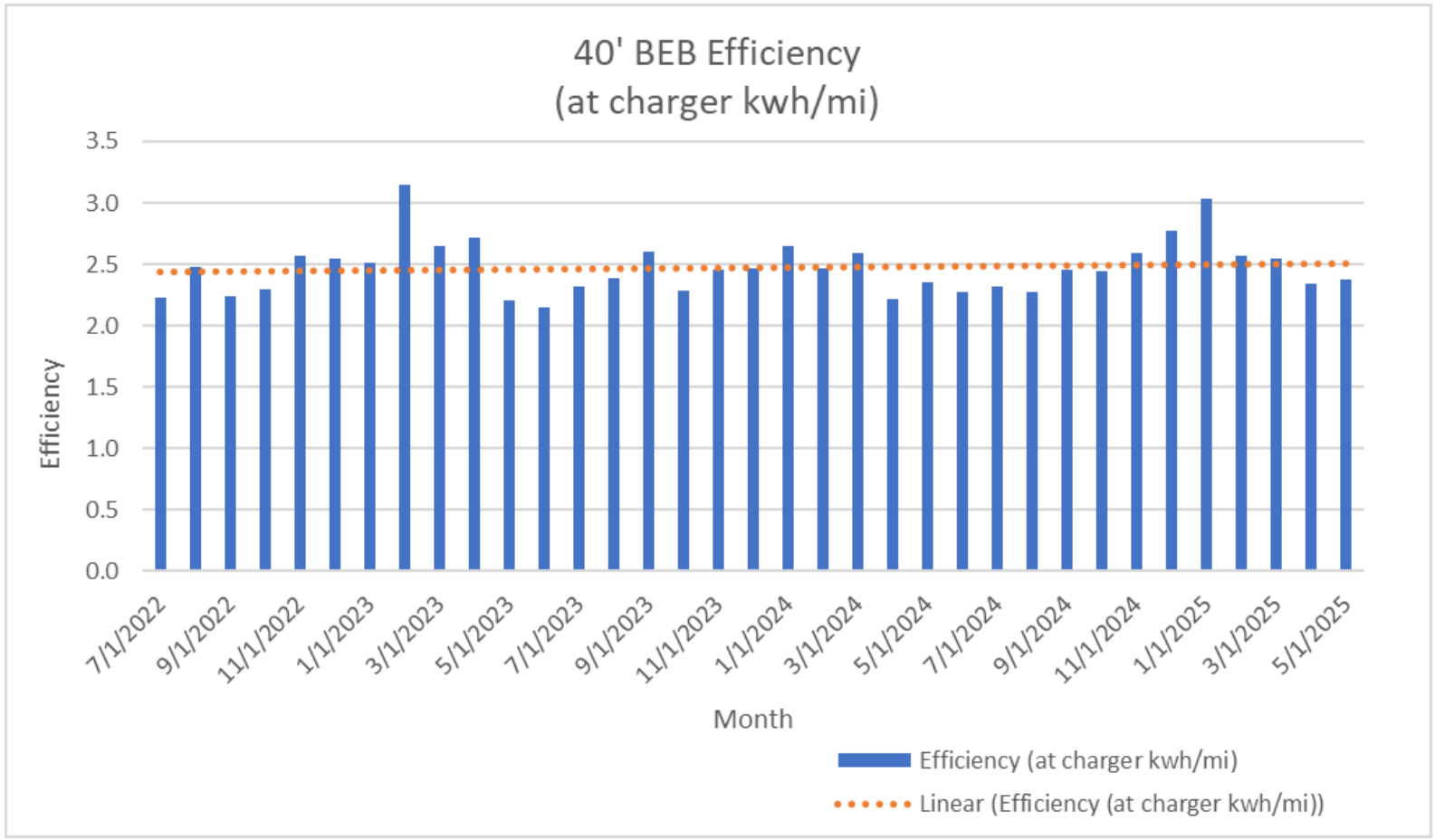
Monthly Fleet Efficiency (Total Miles)



Notes:

- **BEB Bus type efficiency**
  - **40’ Avg = 2.5 kWh/Mile (Since July 2022)**
  - **60’ Avg = 3.4 kWh/Mile (Since October 2023)**
  - **Fleet Avg = 2.7 kWh/Mile**
- **80% battery utilization**

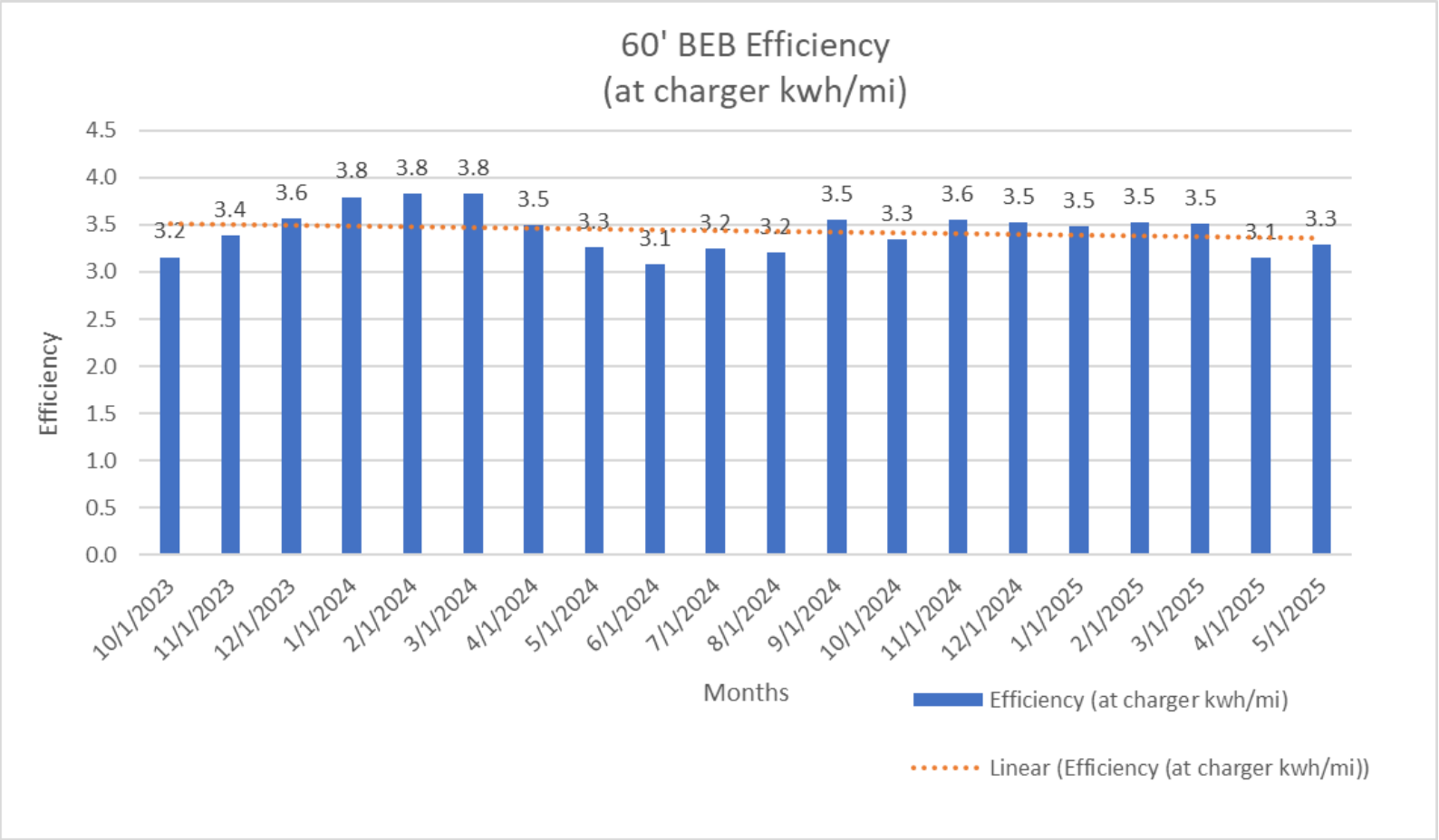
Monthly Fleet Efficiency (Total Miles)



Notes:

- **2.5 Avg kwh per mile**
- **466 kw (New Flyer) and 444 kw (Gillig) on board storage**
- **80% battery utilization**
- **Scheduled Range: 130 Miles**

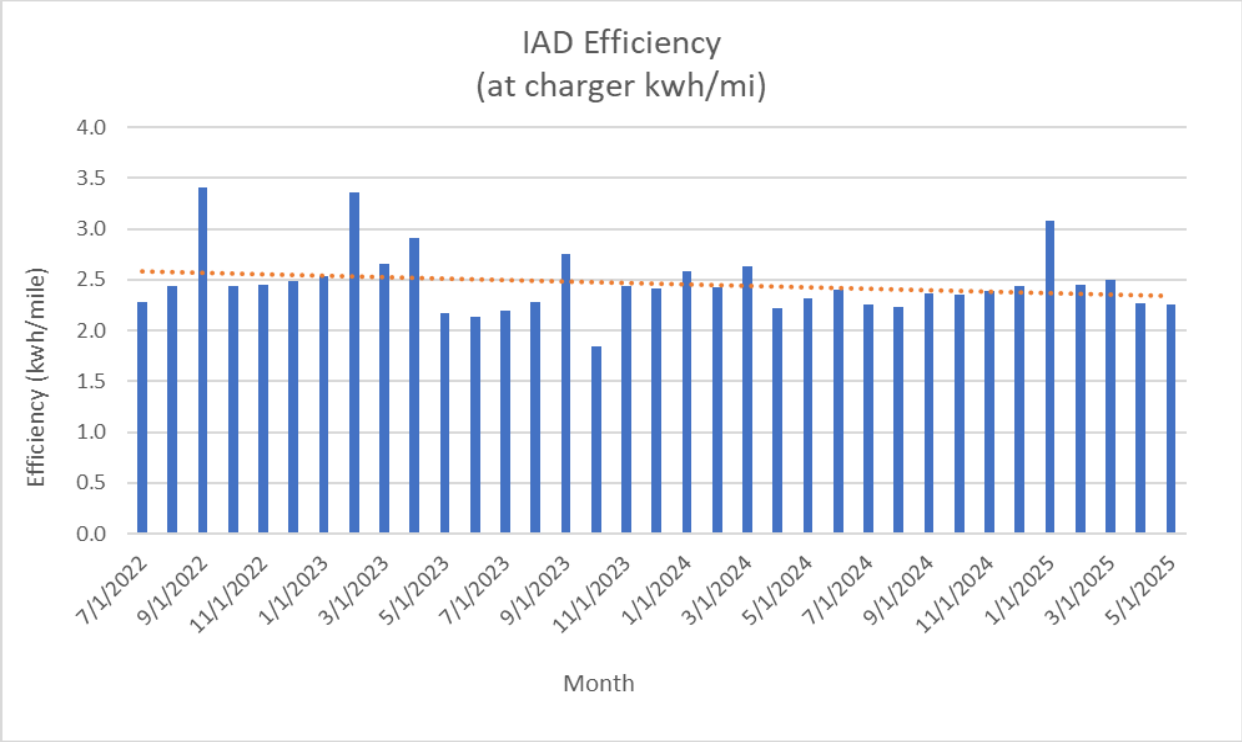
Monthly Fleet Efficiency (Total Miles)

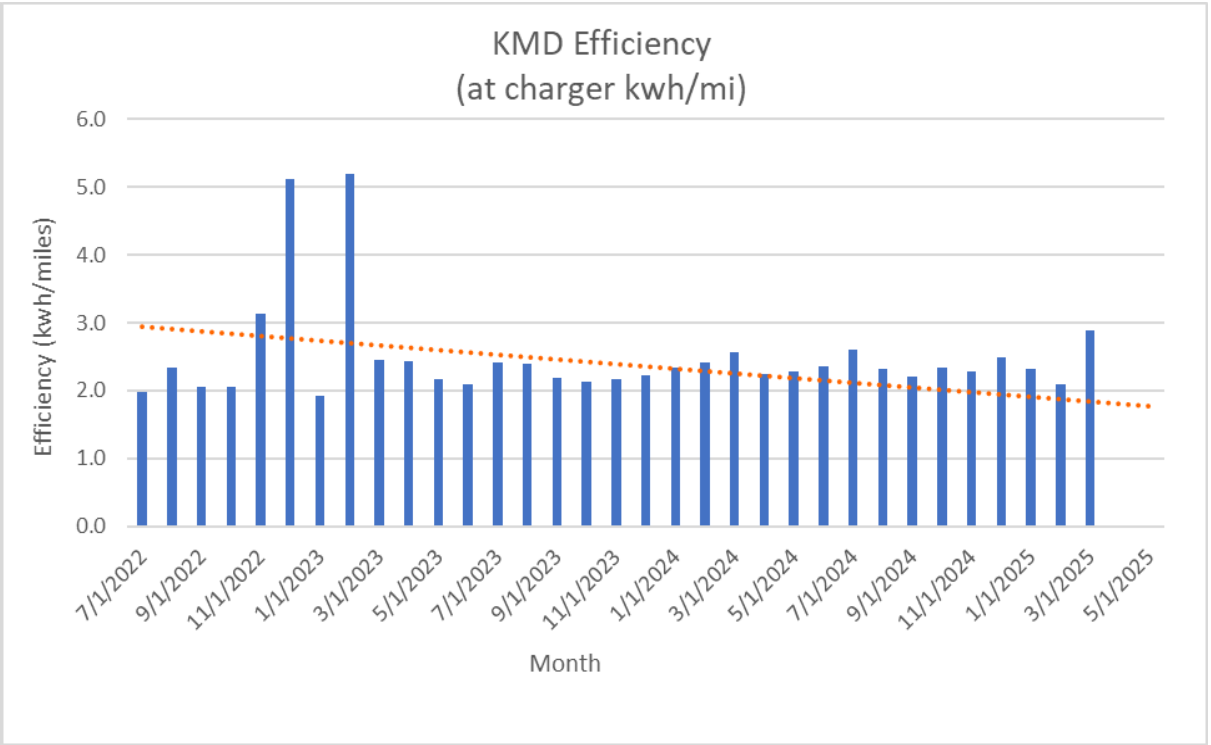


Notes:

- **Avg 3.4 kwh per mile**
- **610 kw on board storage**
- **80% battery utilization**
- **Scheduled Range: 130 Miles**

Monthly Fleet Efficiency by Division(Total Miles)





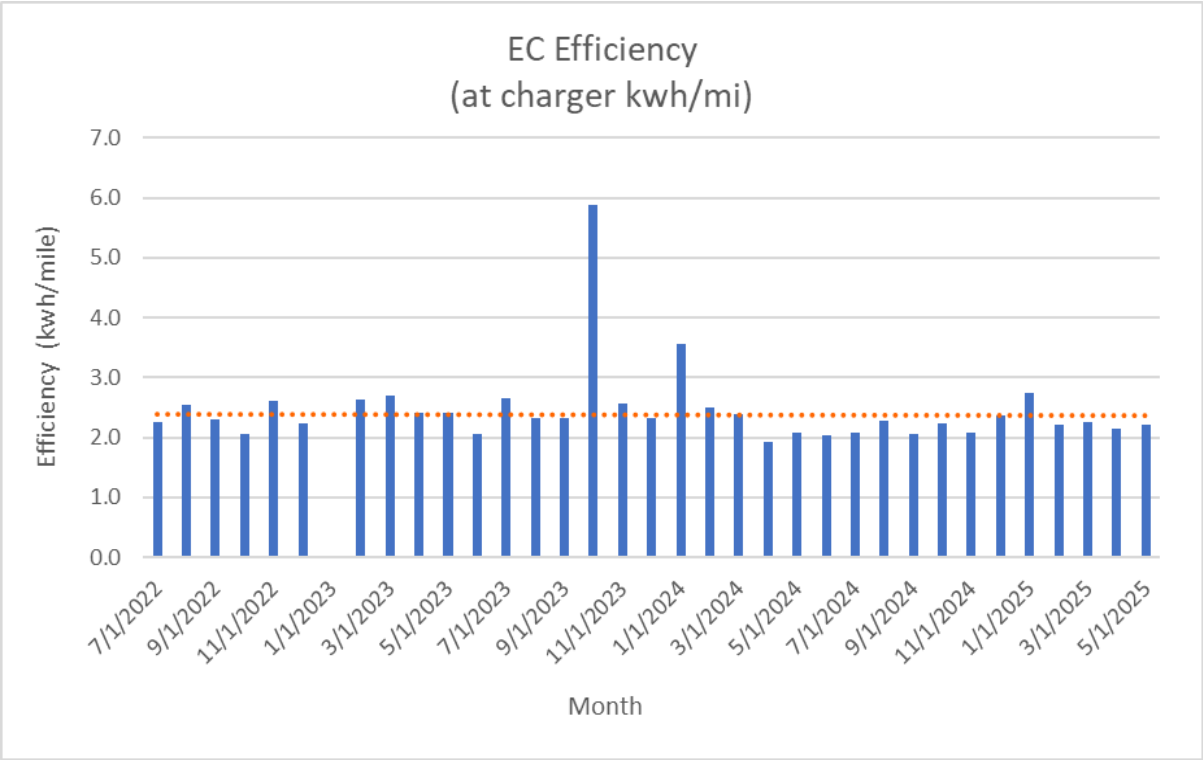
IAD Efficiency (kWh/mile) FY Comparison

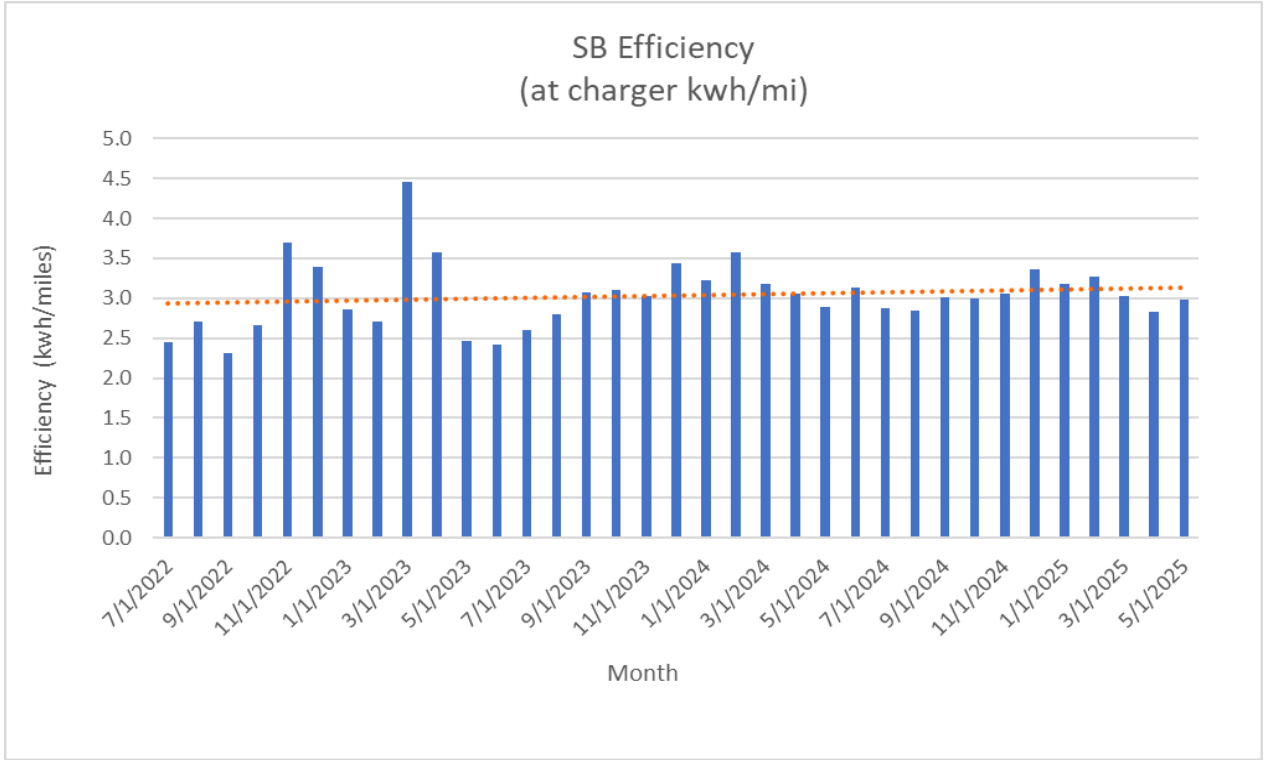
- **FY23: 2.5**
- **FY24: 2.4**
- **FY25: 2.4**

KMD Efficiency (kWh/mile) FY Comparison

- **FY23: 2.2**
- **FY24: 2.3**
- **FY25: 2.4**

Monthly Fleet Efficiency by Division(Total Miles)





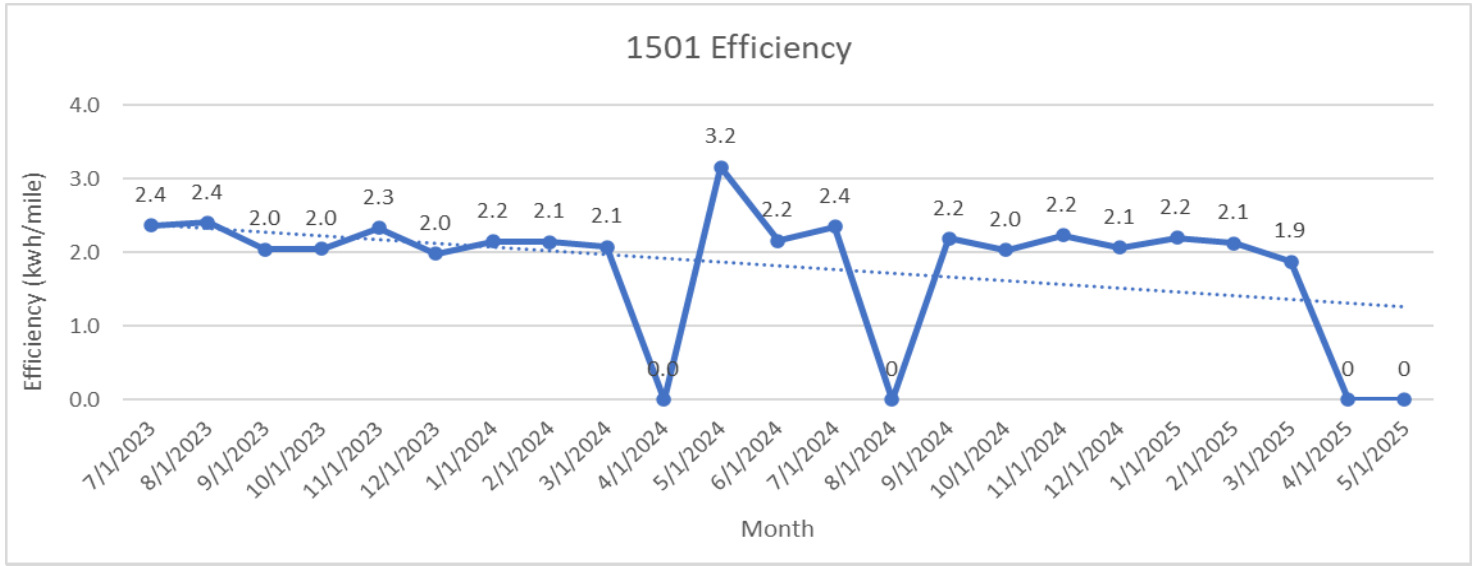
EC Efficiency (kWh/mile) FY Comparison

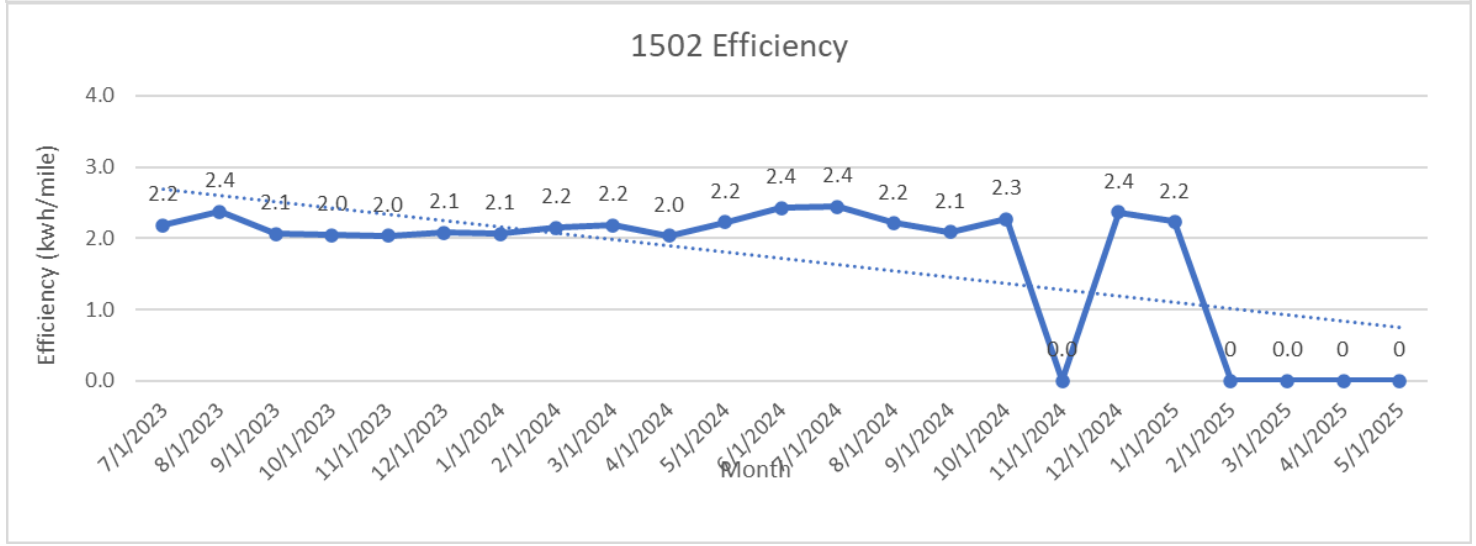
- **FY23: 2.4**
- **FY24: 2.5**
- **FY25: 2.2**

SB Efficiency (kWh/mile) FY Comparison

- **FY23: 2.7**
- **FY24: 3.2**
- **FY25: 3.0**

Individual Bus Efficiency: 1500s

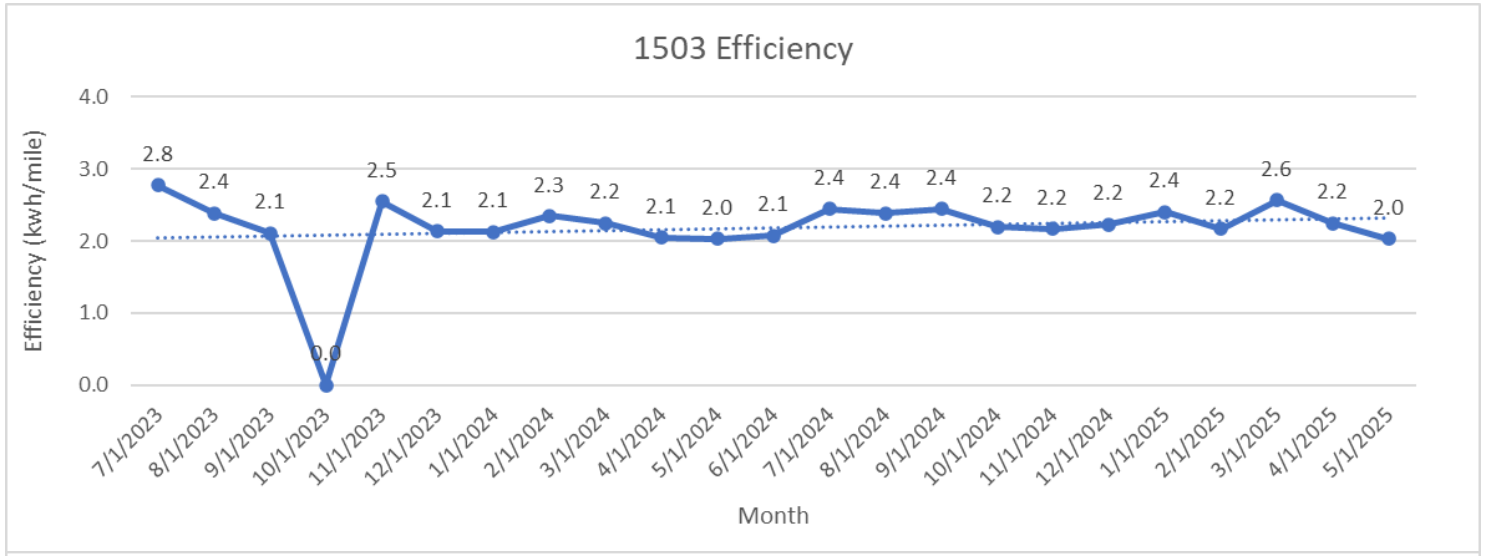


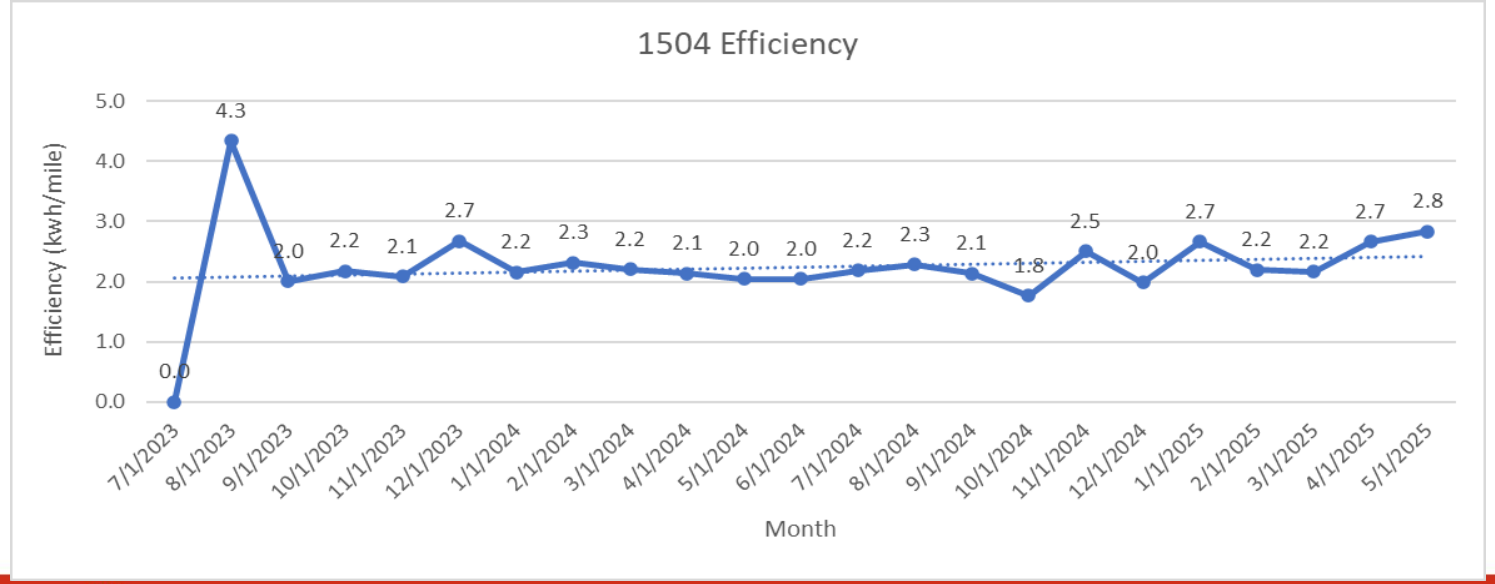


Notes:

- Zero (0) efficiency = no data from that month
- All data pulled from ViriCiti

Individual Bus Efficiency: 1500s





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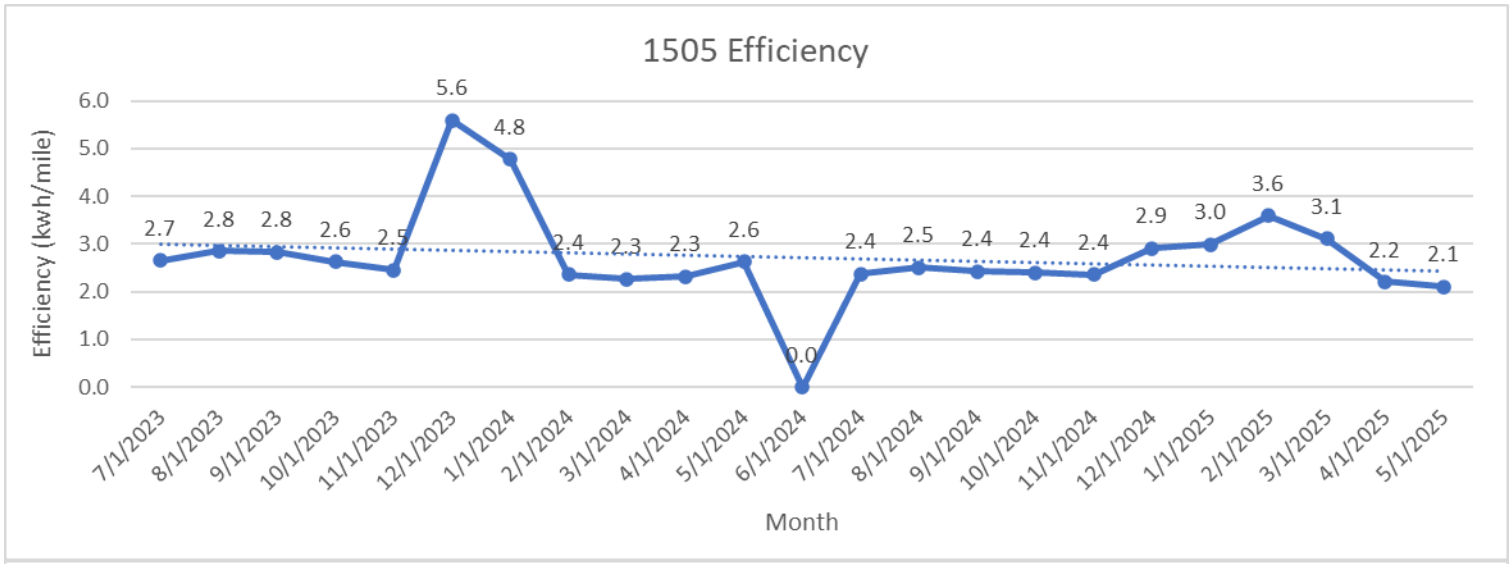

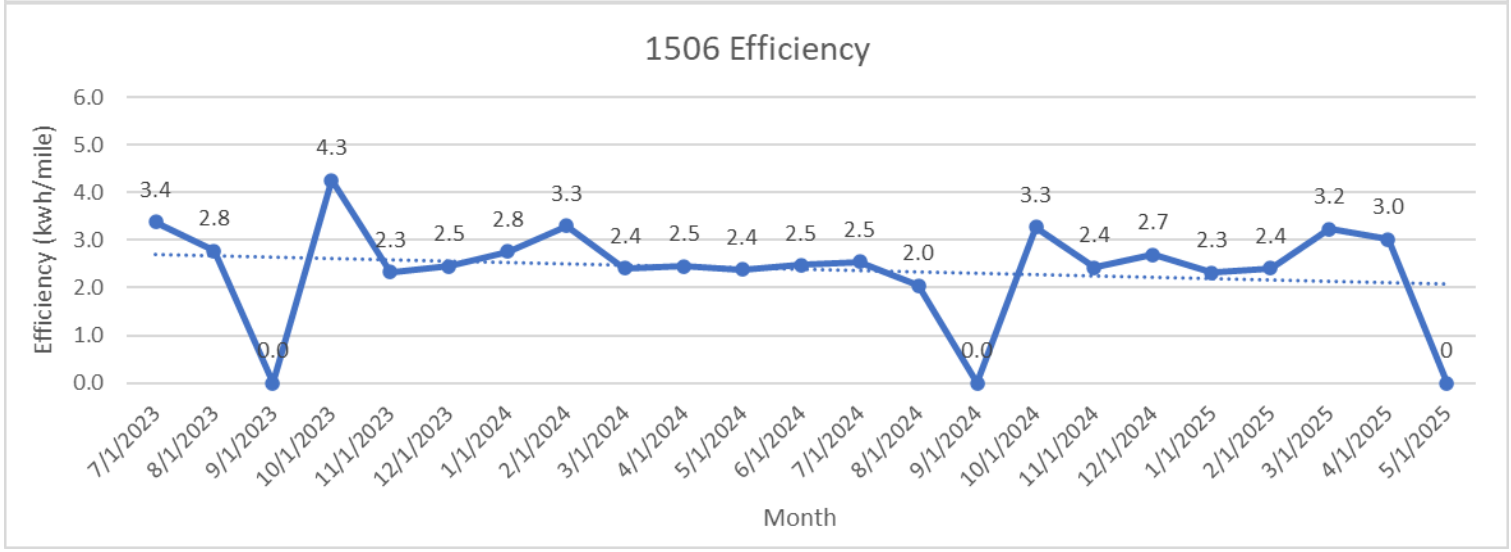

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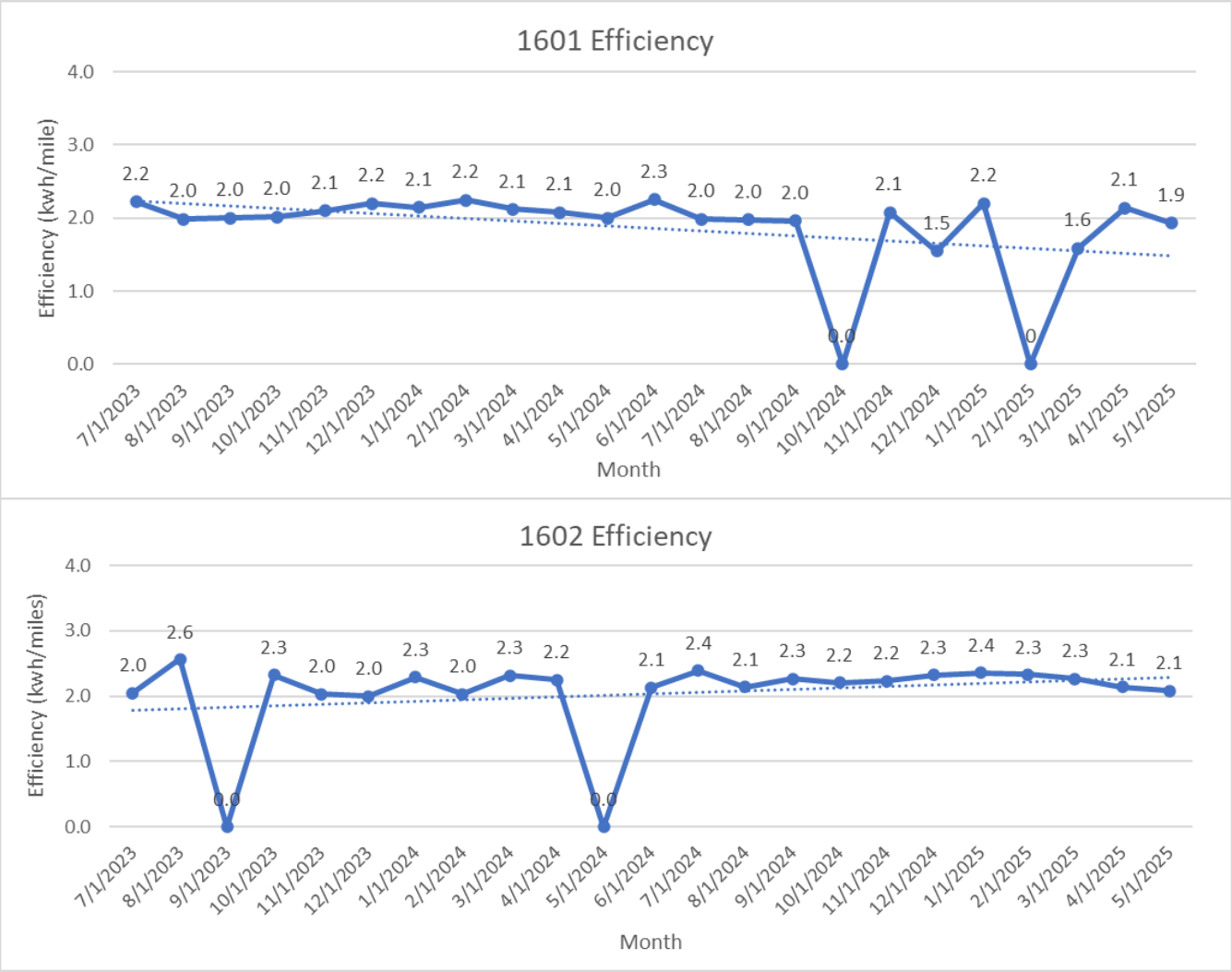
Individual Bus Efficiency: 1600s



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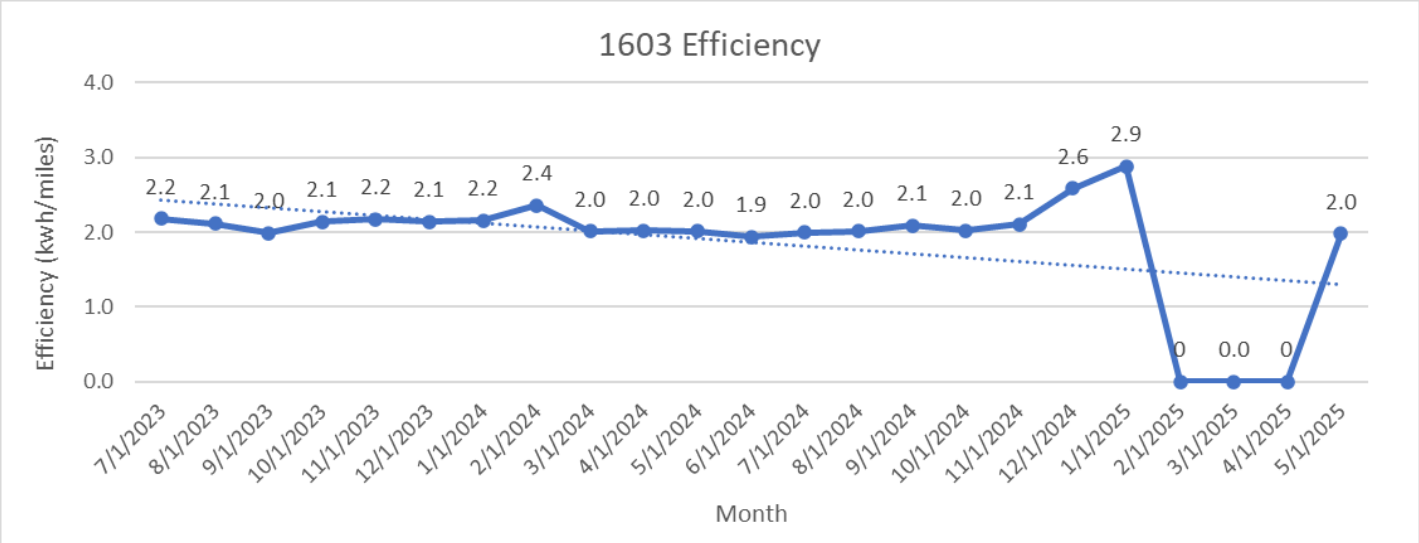
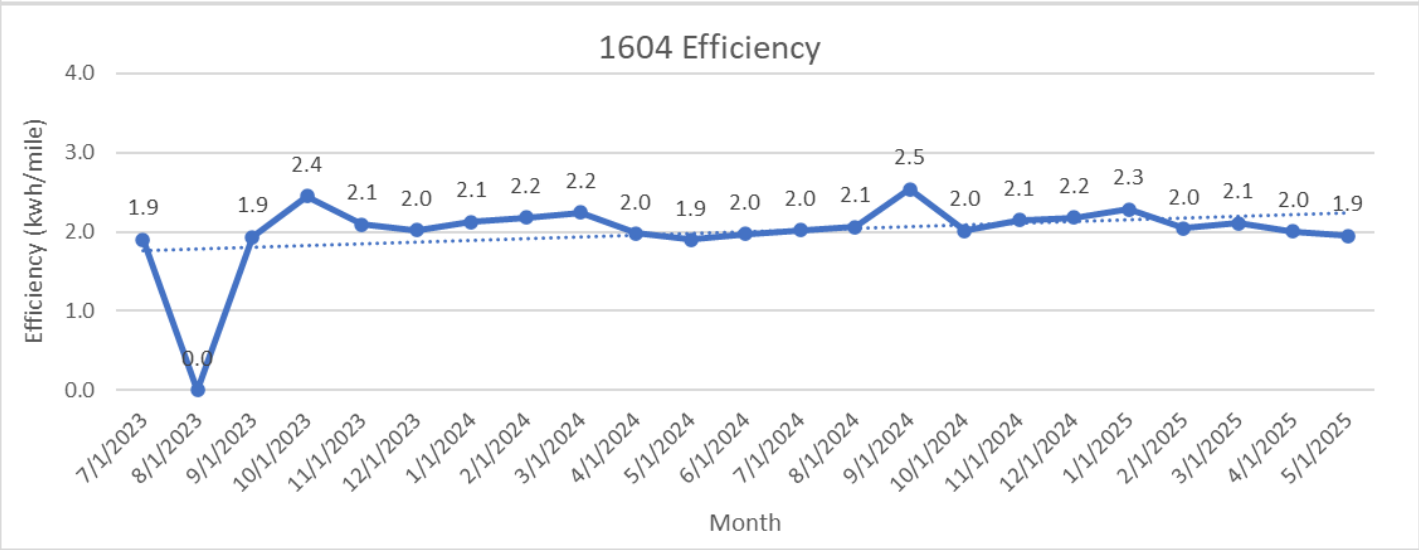
Individual Bus Efficiency: 1600s





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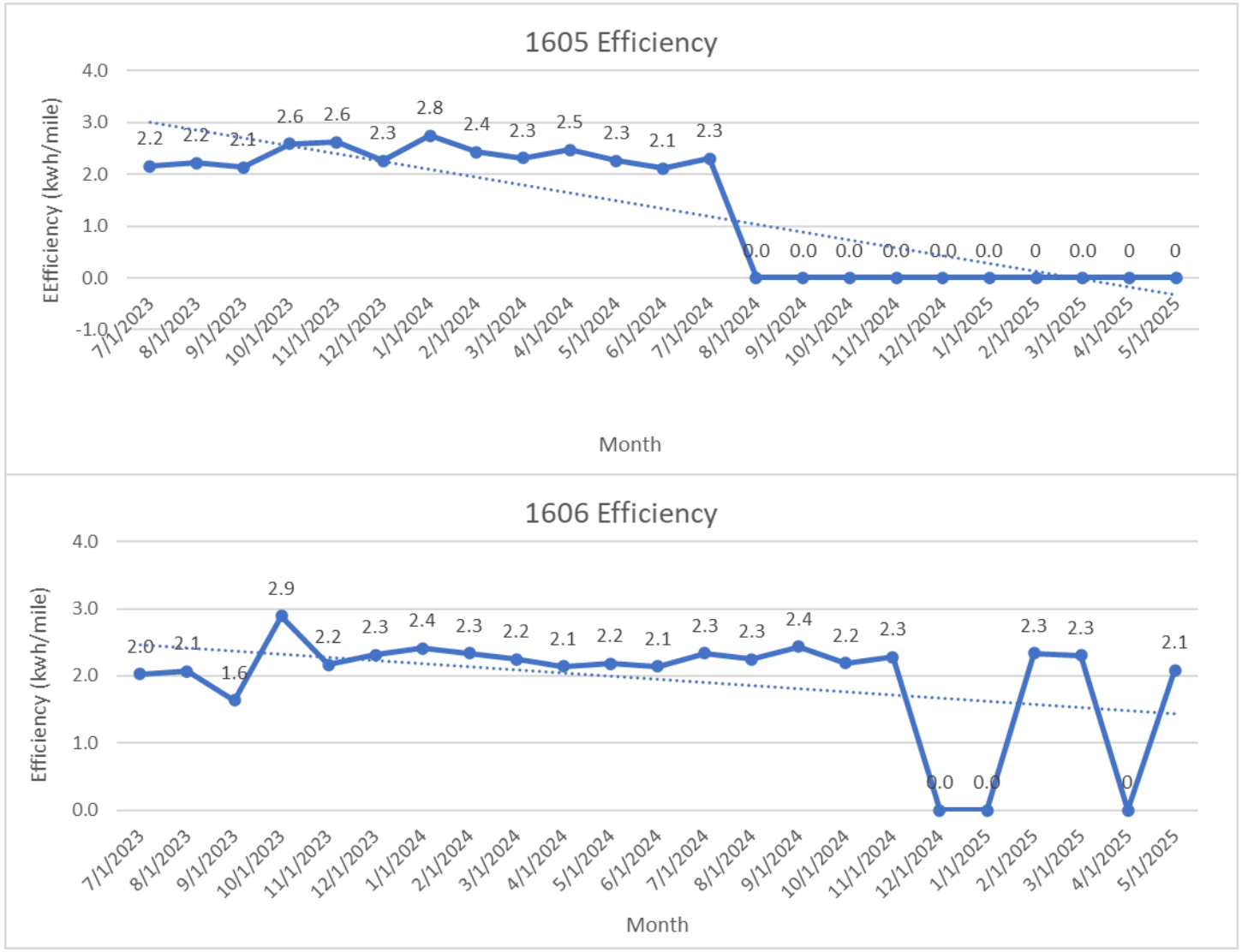
Individual Bus Efficiency: 1600s



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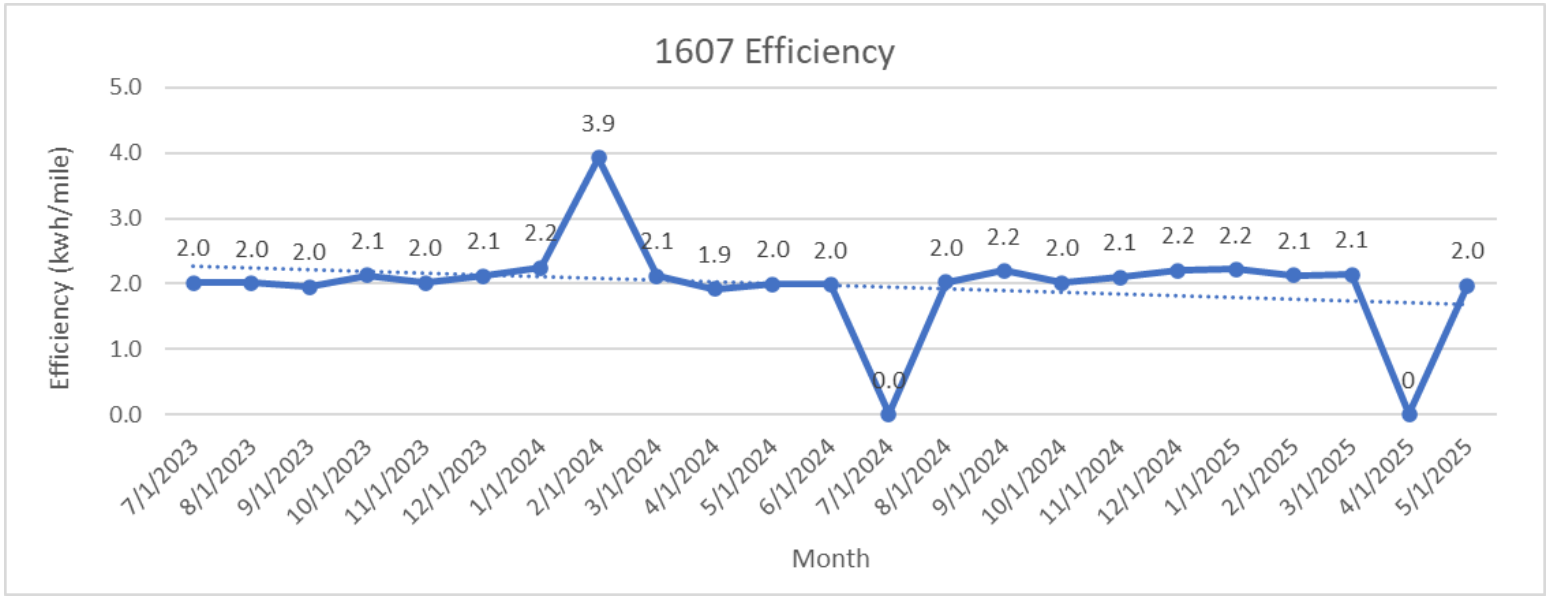
Individual Bus Efficiency: 1600s



Notes:

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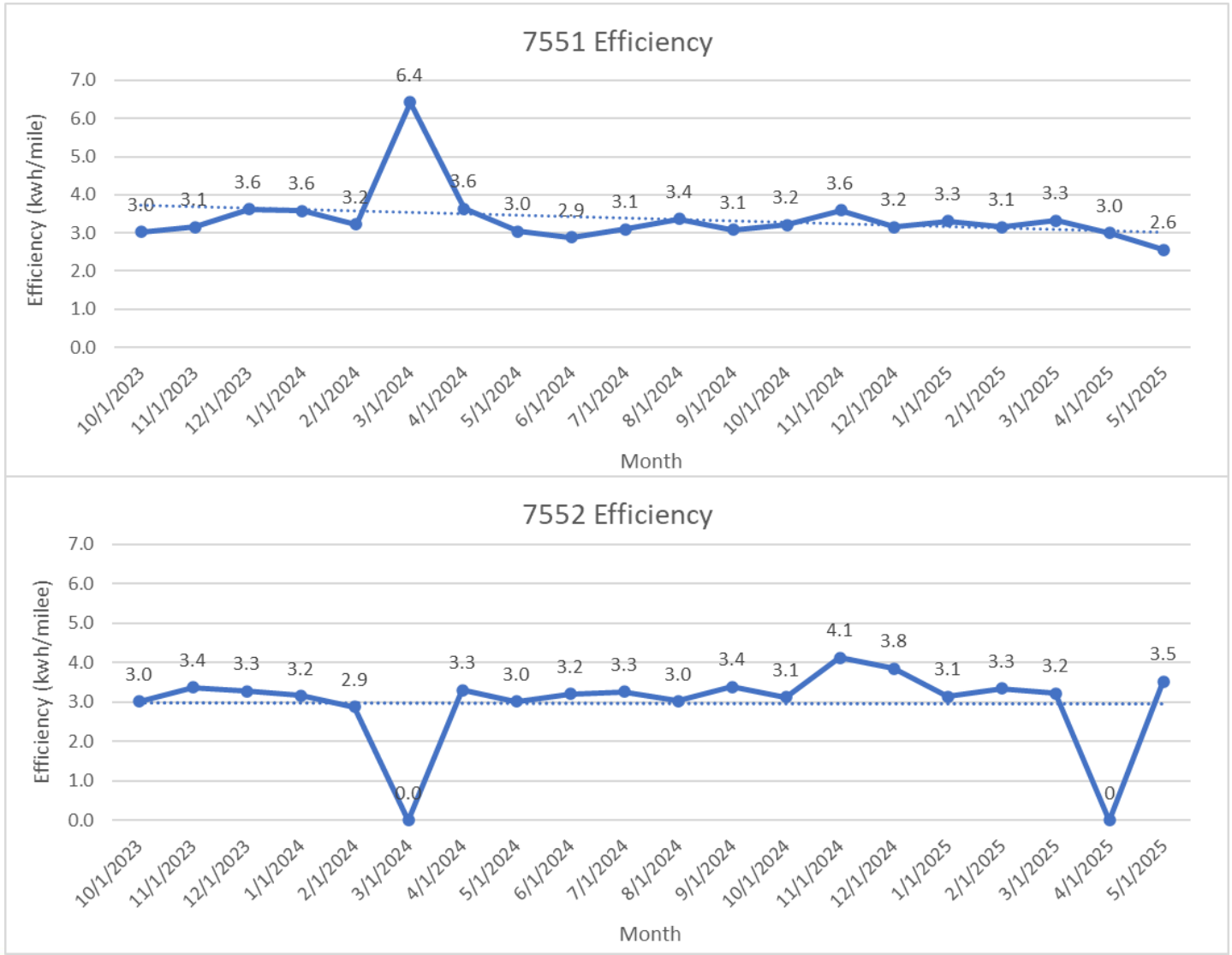
Individual Bus Efficiency: 7500s



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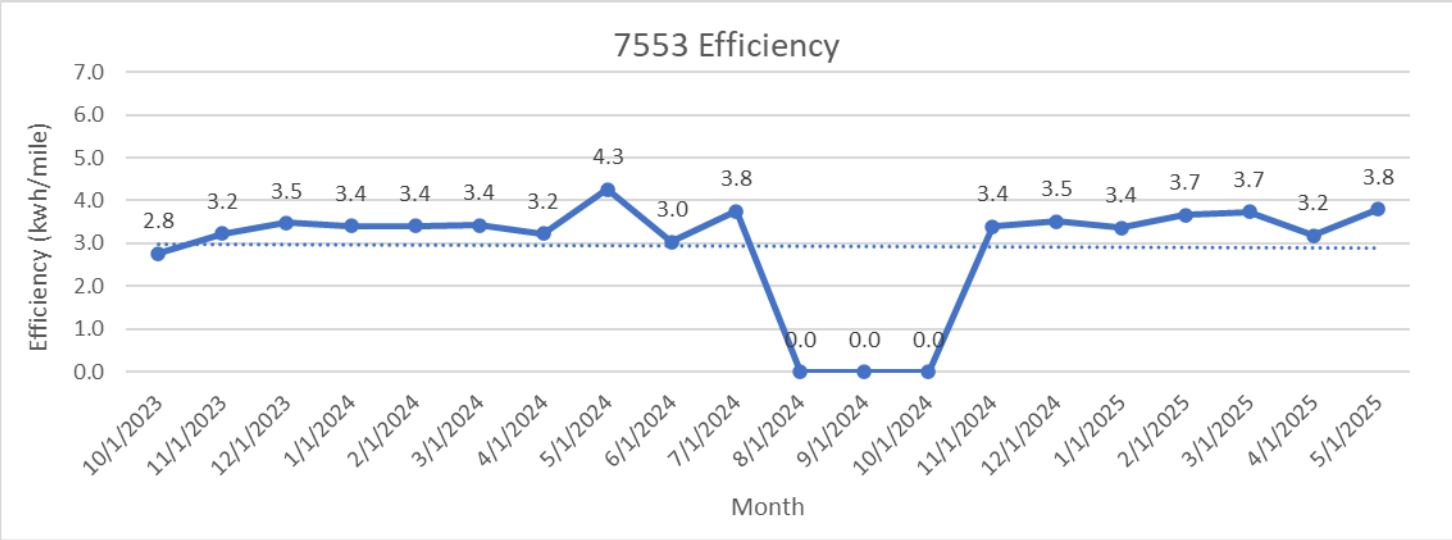

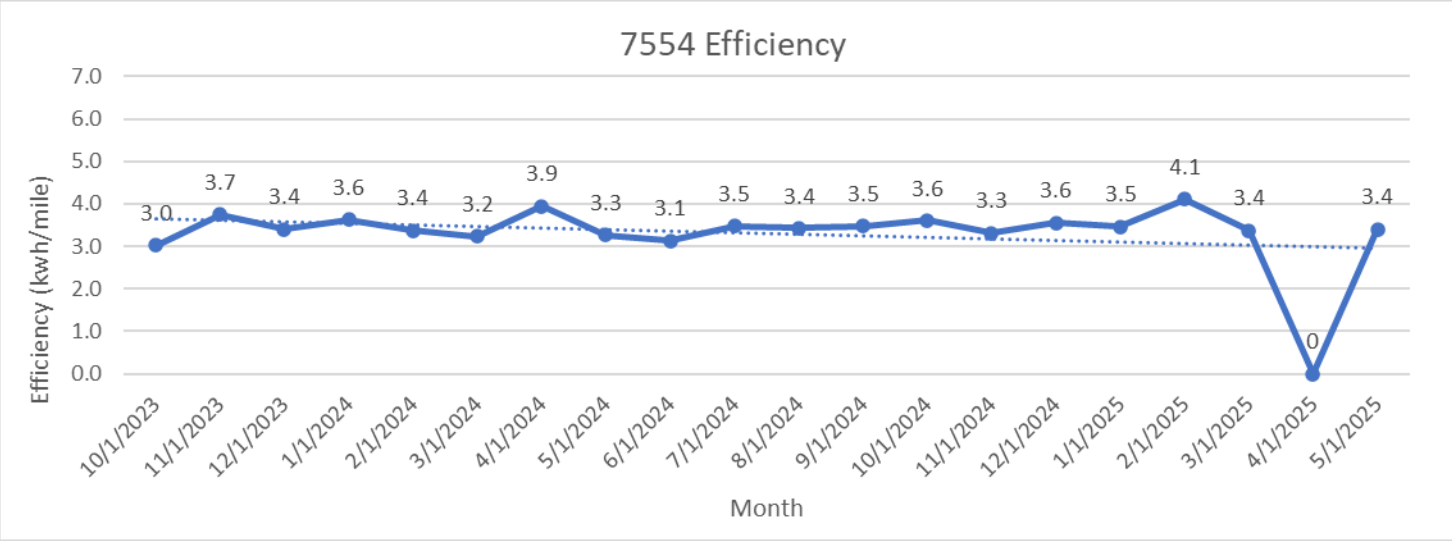

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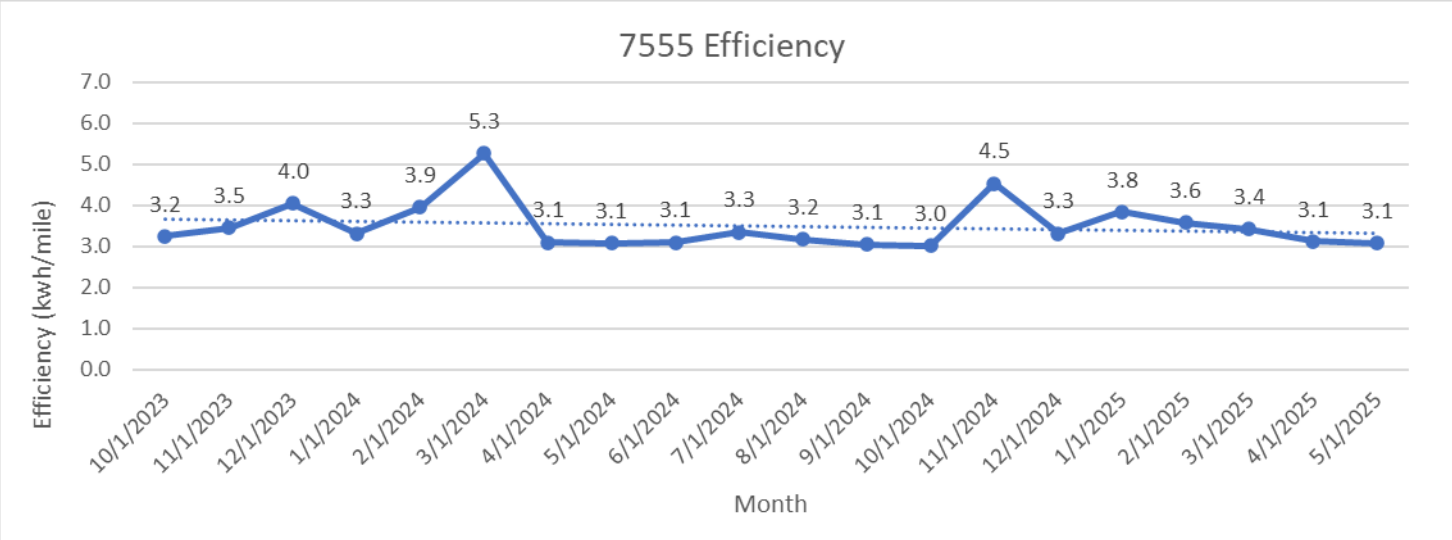

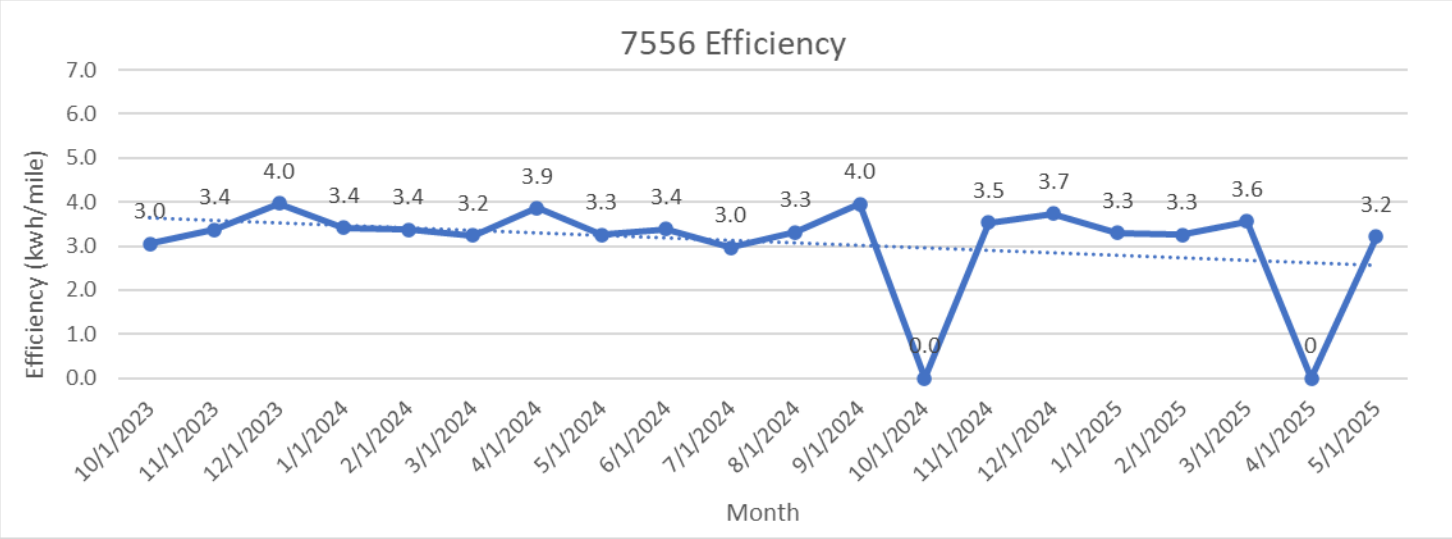

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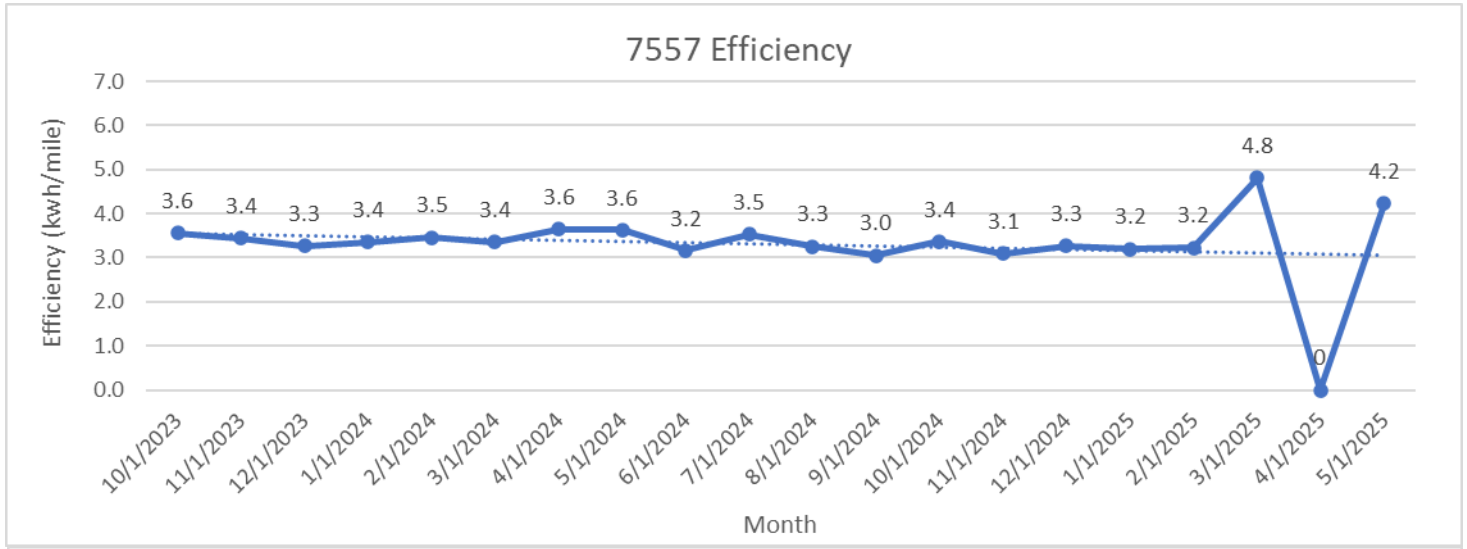

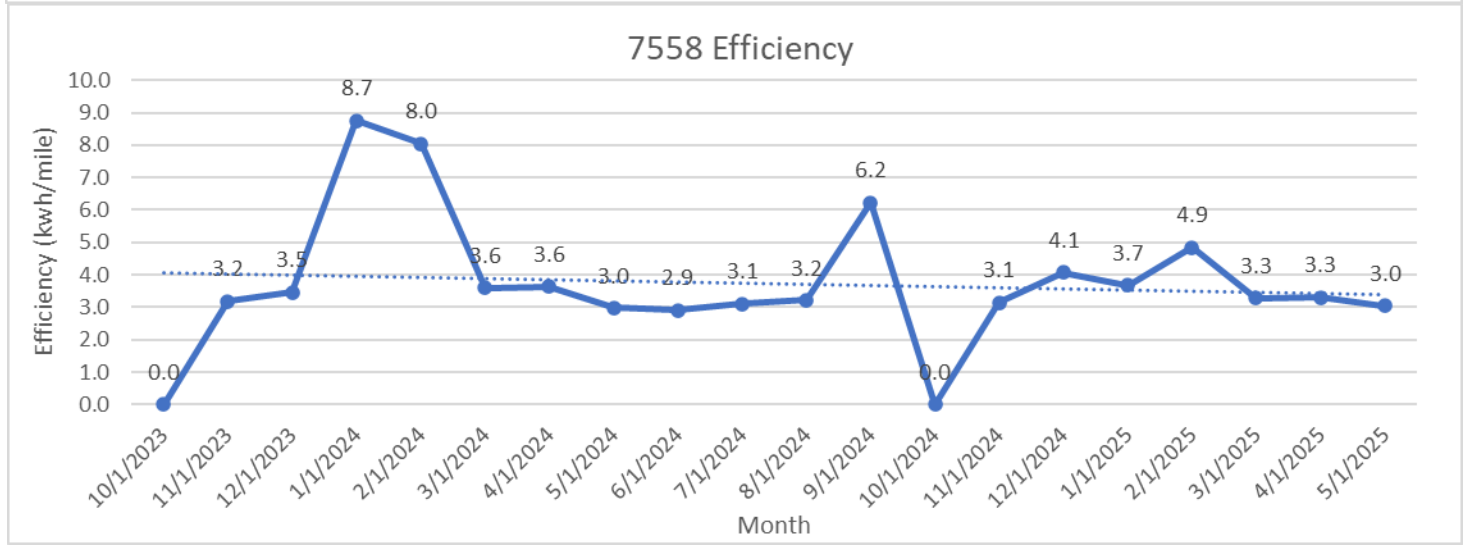

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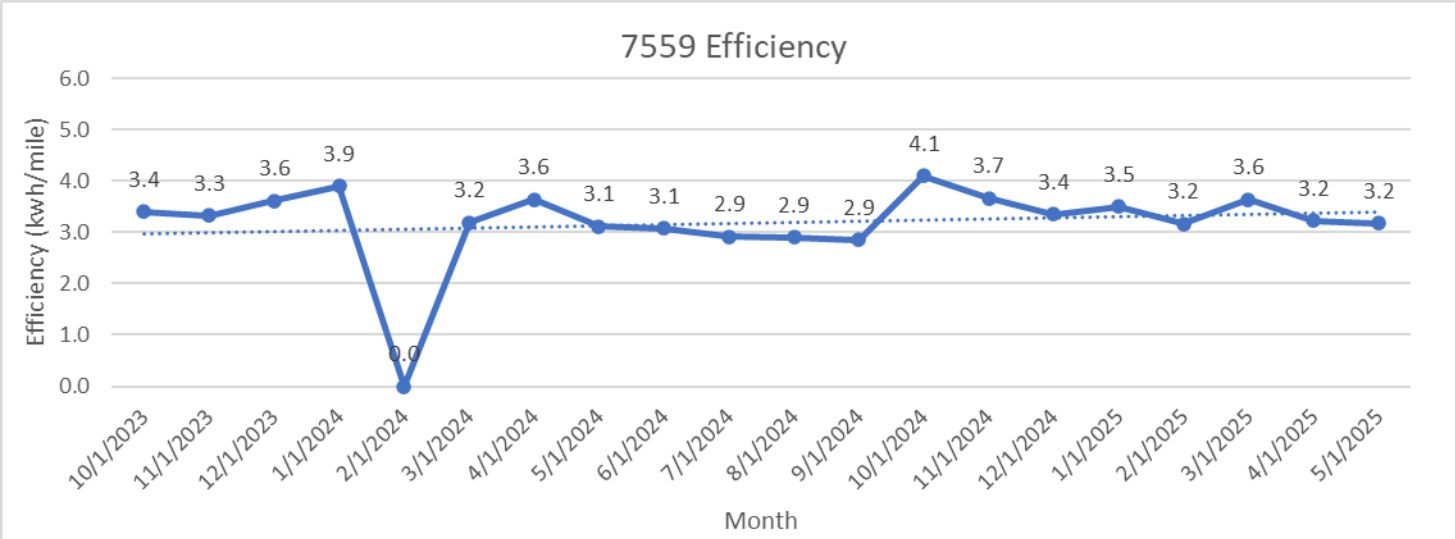

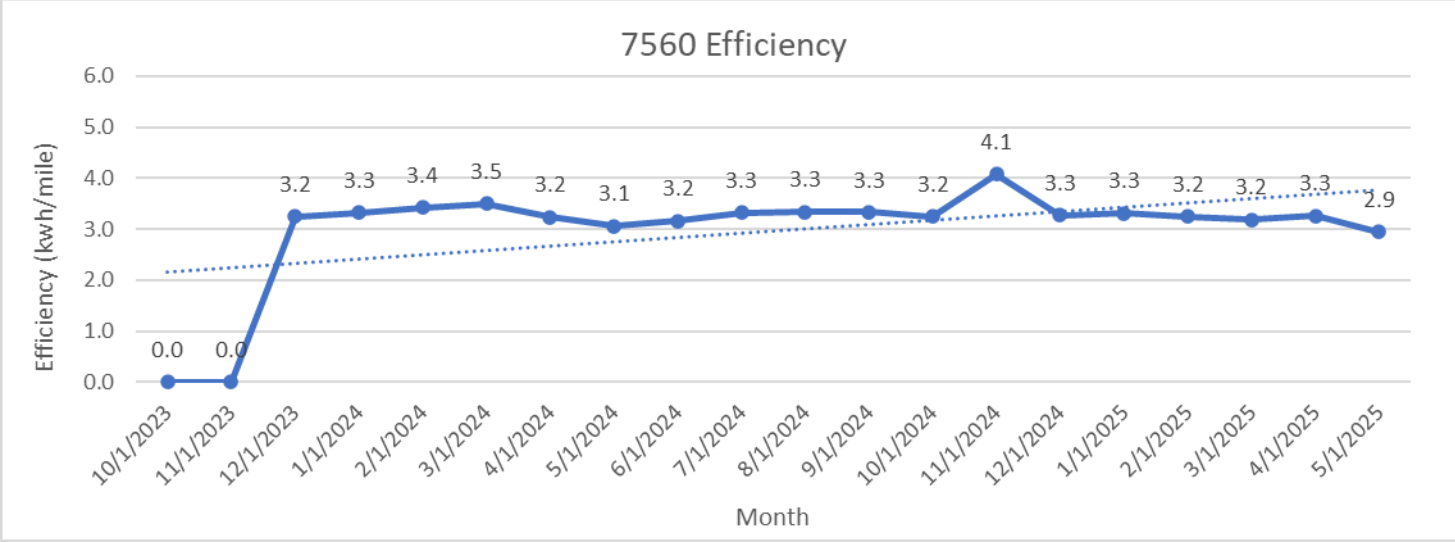

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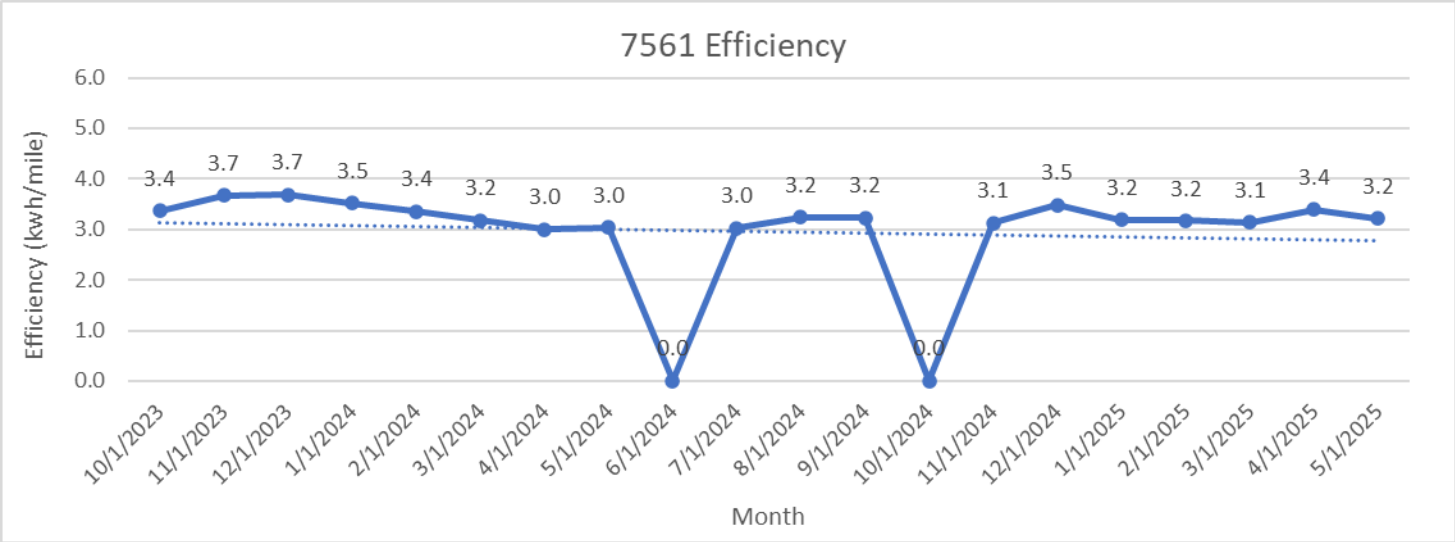

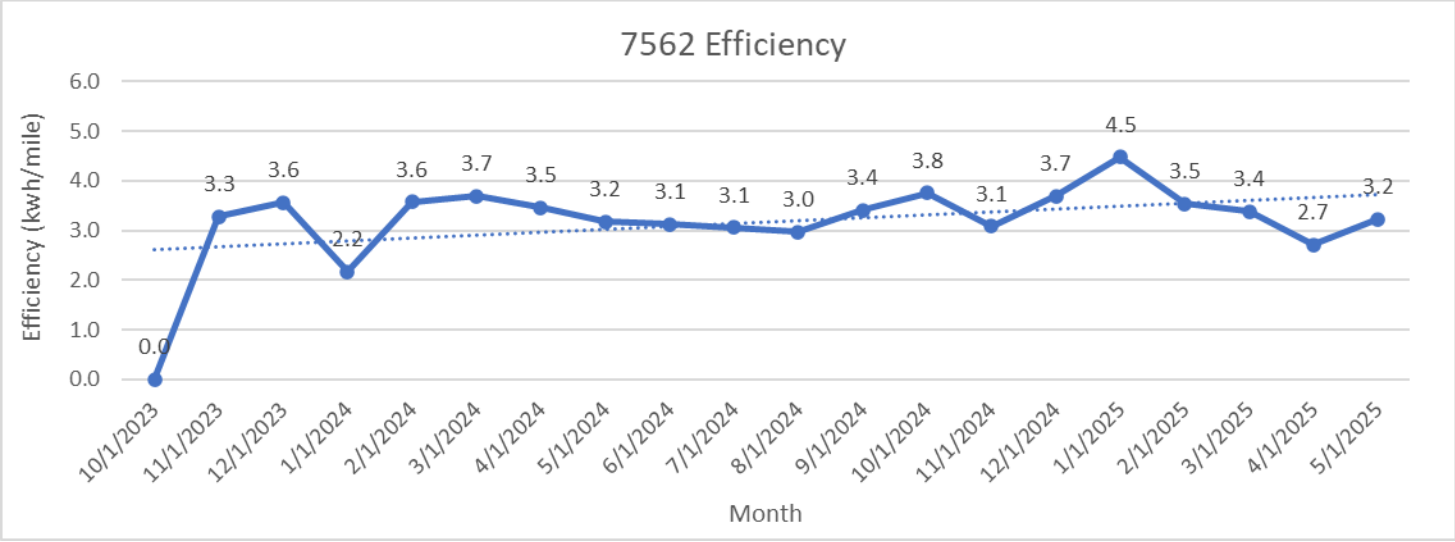

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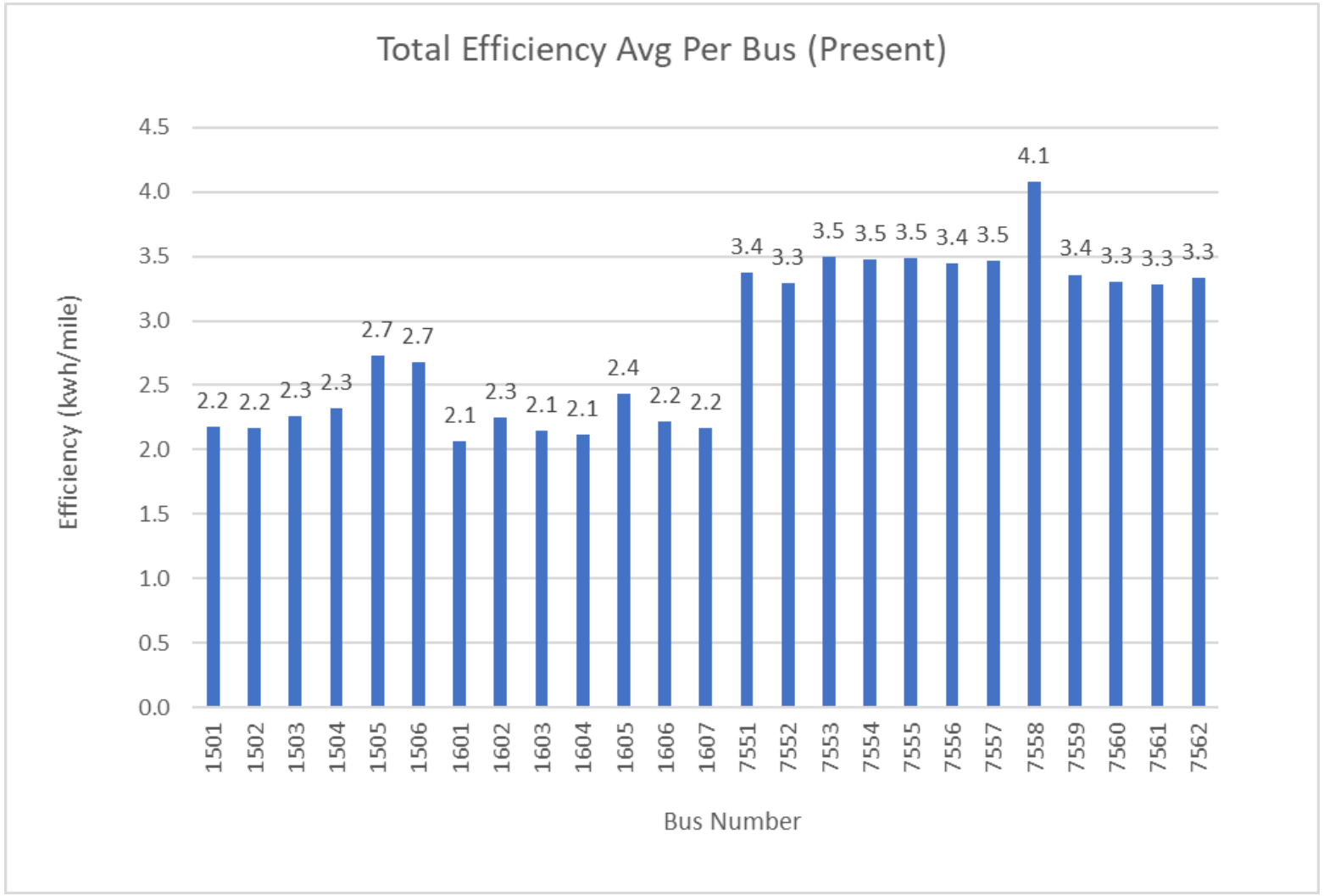
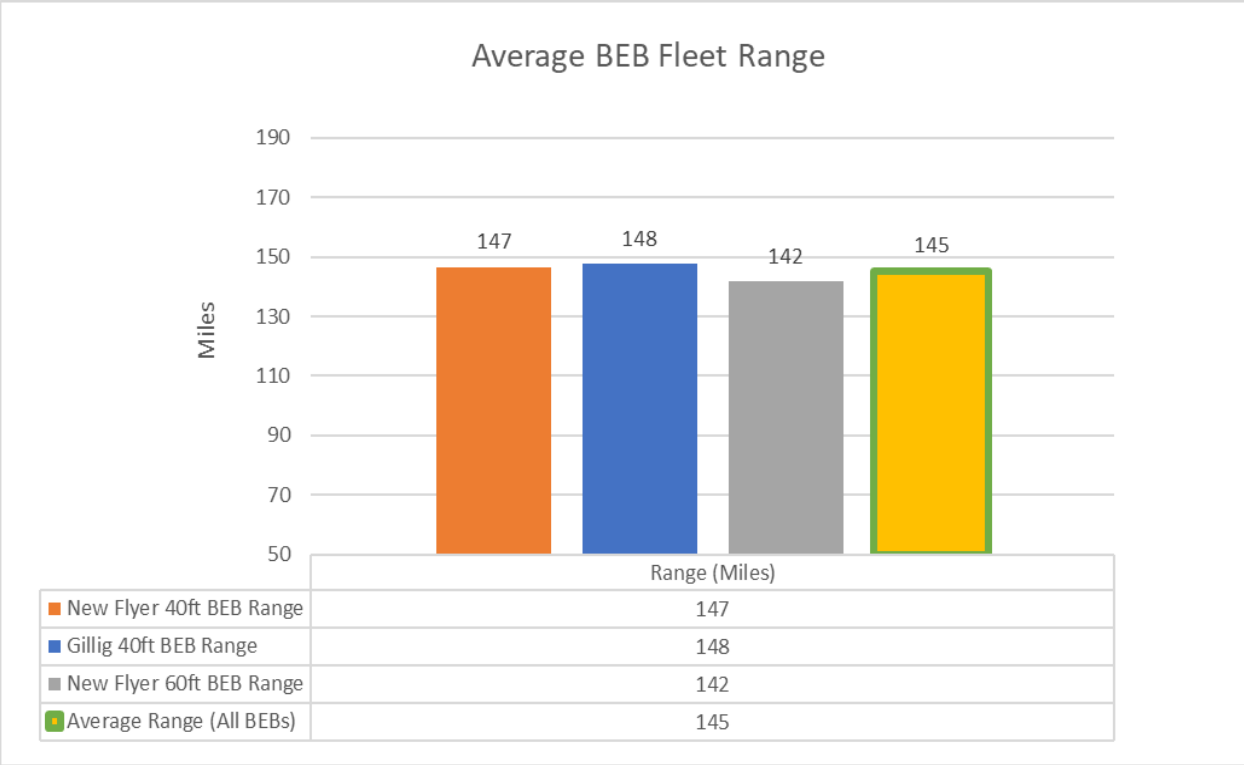
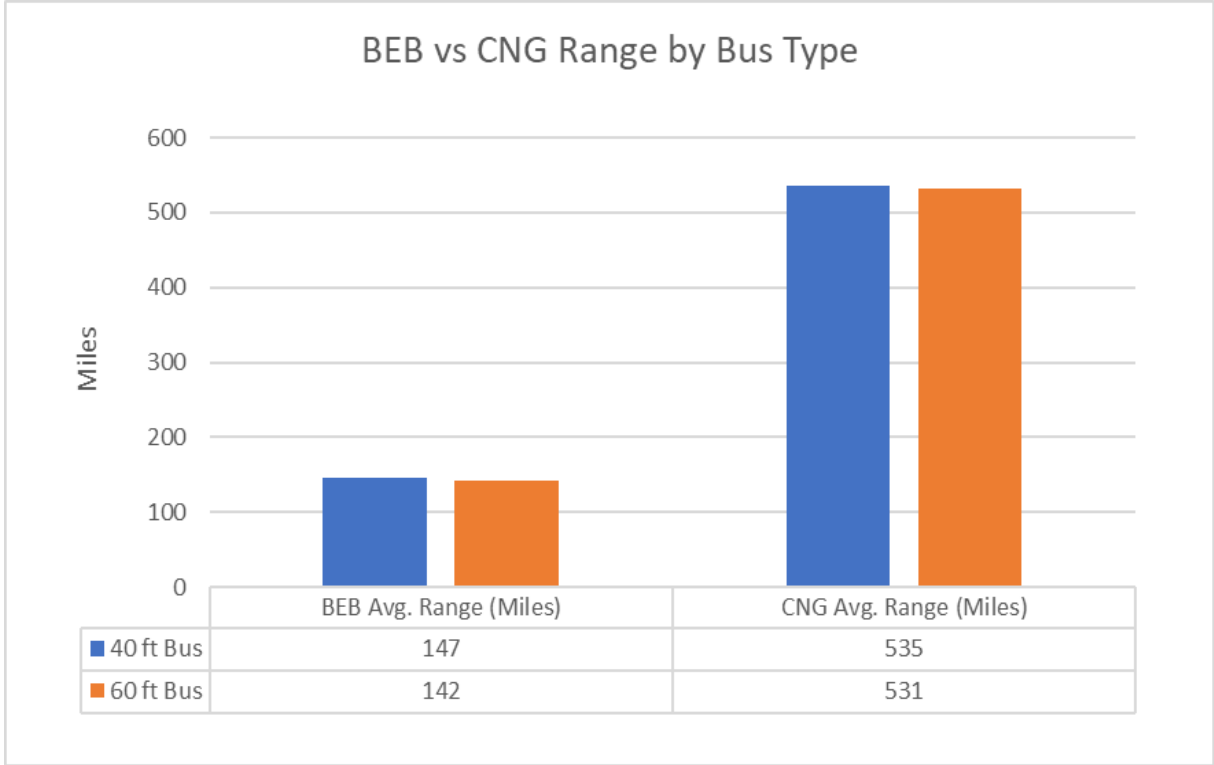
Average for Individual Bus Efficiency

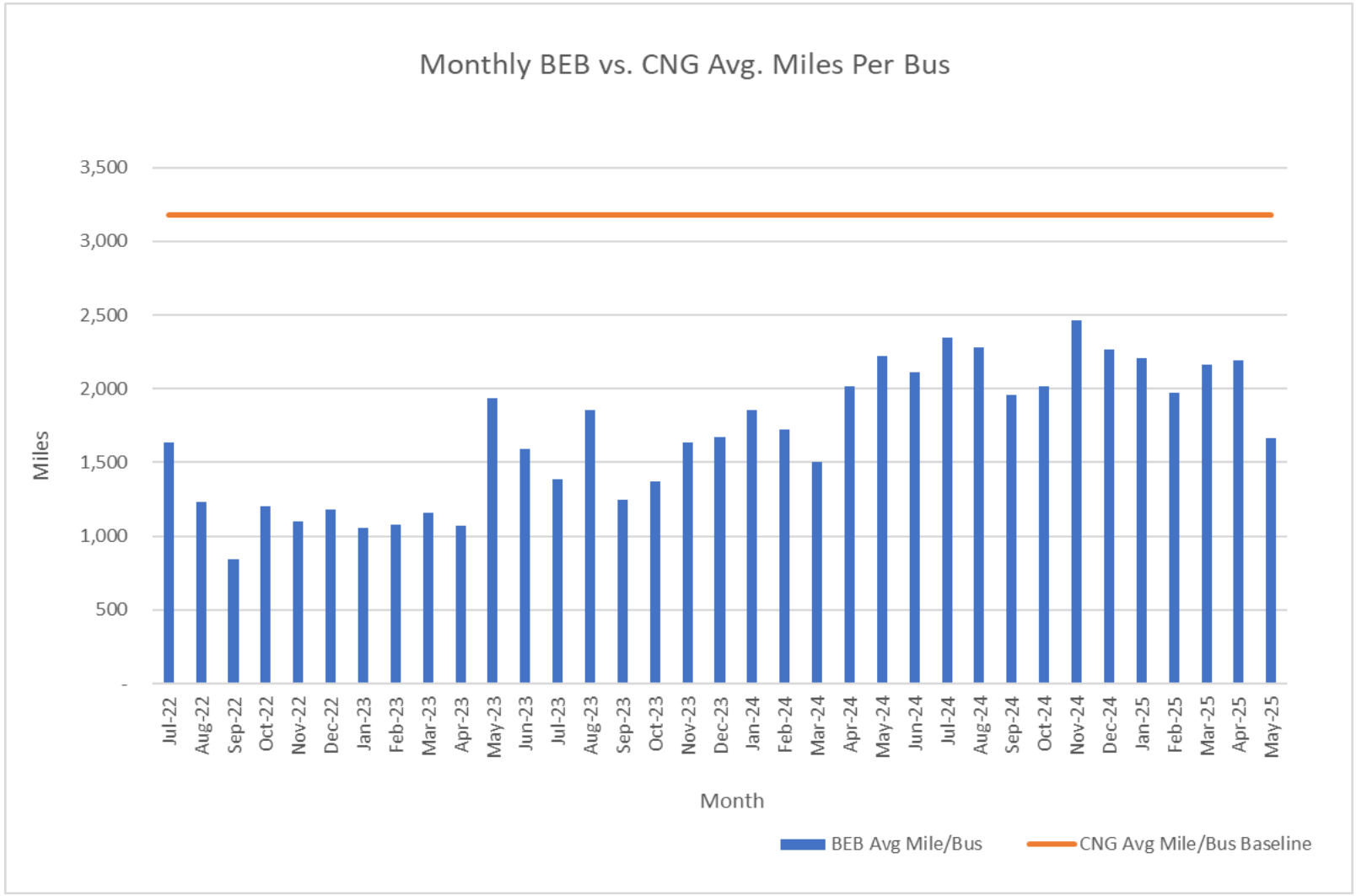


Average BEB vs CNG Range (Present)





CNG vs. ZEB Monthly Mileage/Bus

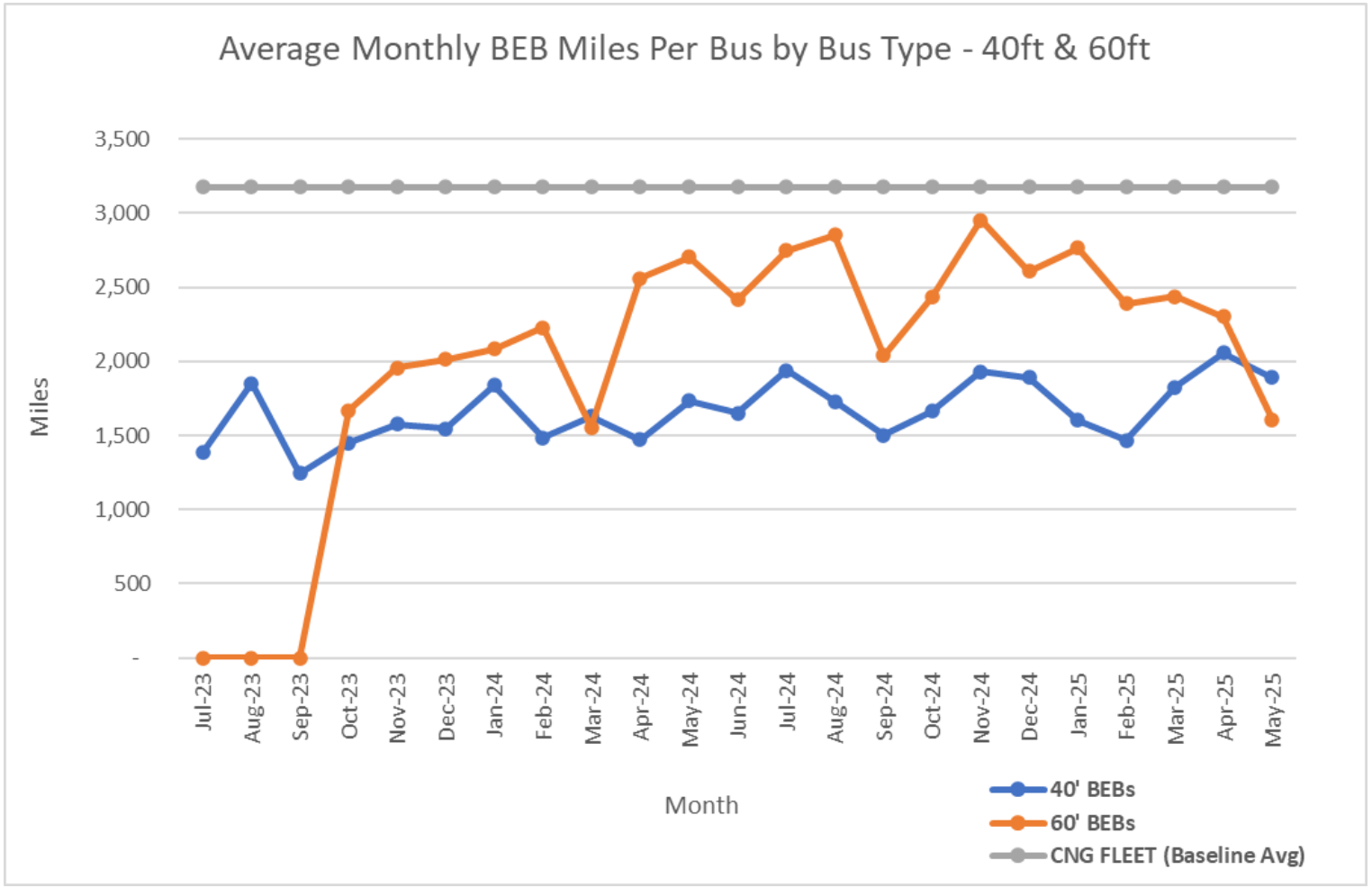


Avg. CNG	**3,177**
Avg. BEB (Since July 2022)	**1,692**

Note:

- Not 1 for 1 Replacement
- BEB Avg monthly miles/bus
  - FY24 – 1,716 miles/bus
  - FY25 – 2,138 miles/bus

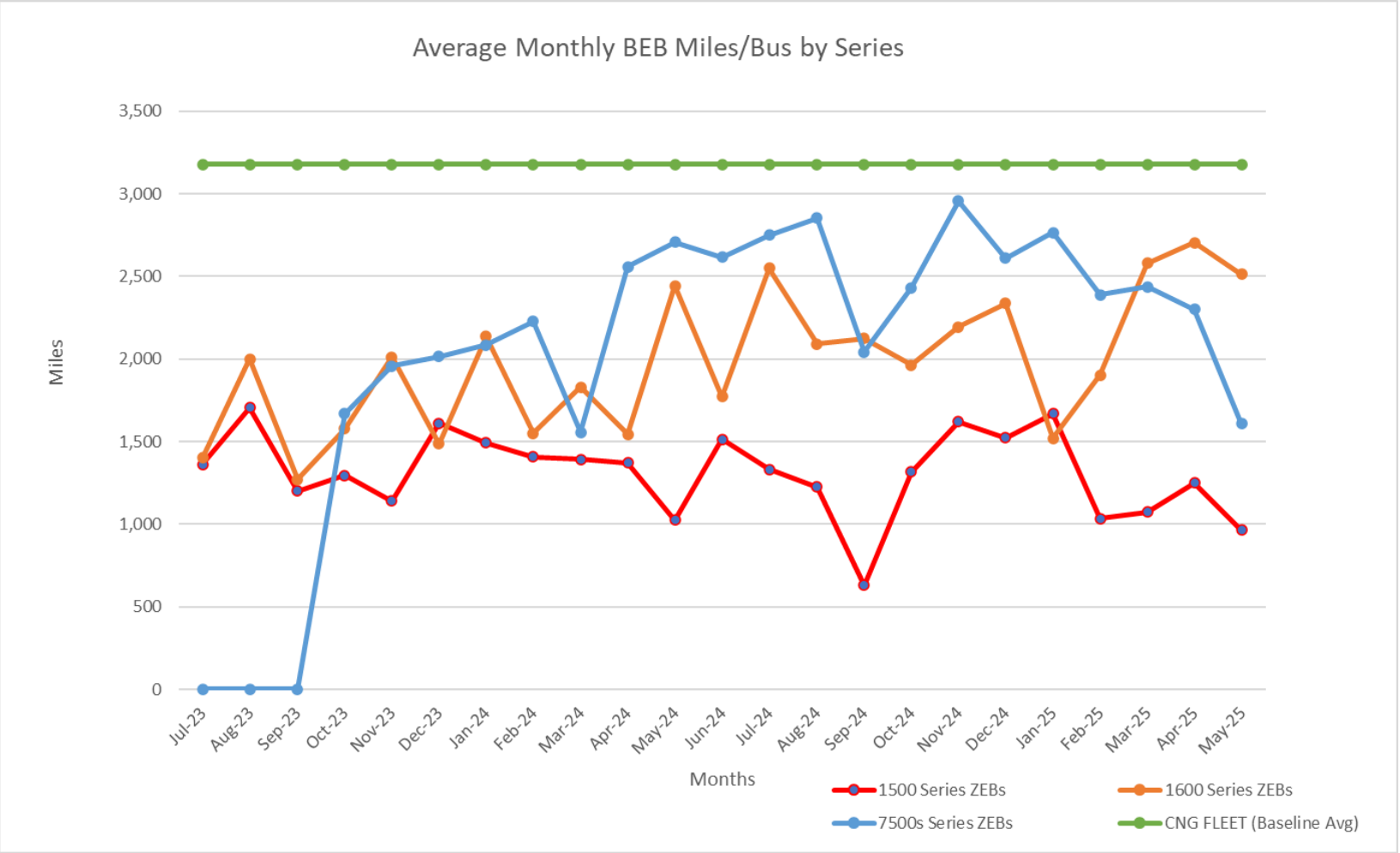
Avg Monthly BEB Mileage/Bus - 40ft vs 60ft BEBs



Notes:

- **60ft BEBs average more miles per bus in a month than 40’ BEBs thus far, since going into service in October 2023.**
  - **However, they have been on a gradual decline since November 2024**

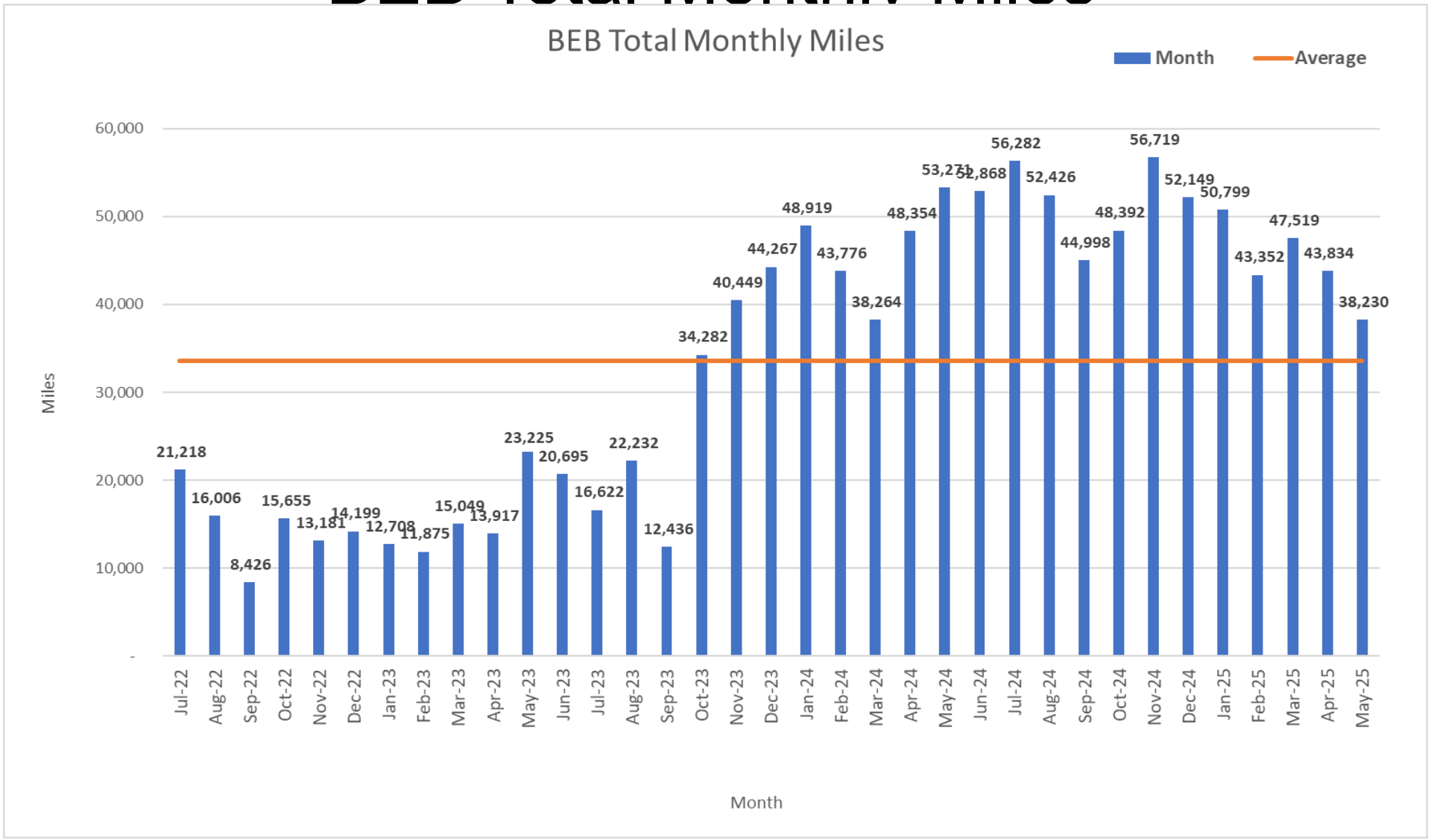
Avg Monthly BEB Mileage/Bus – By Series



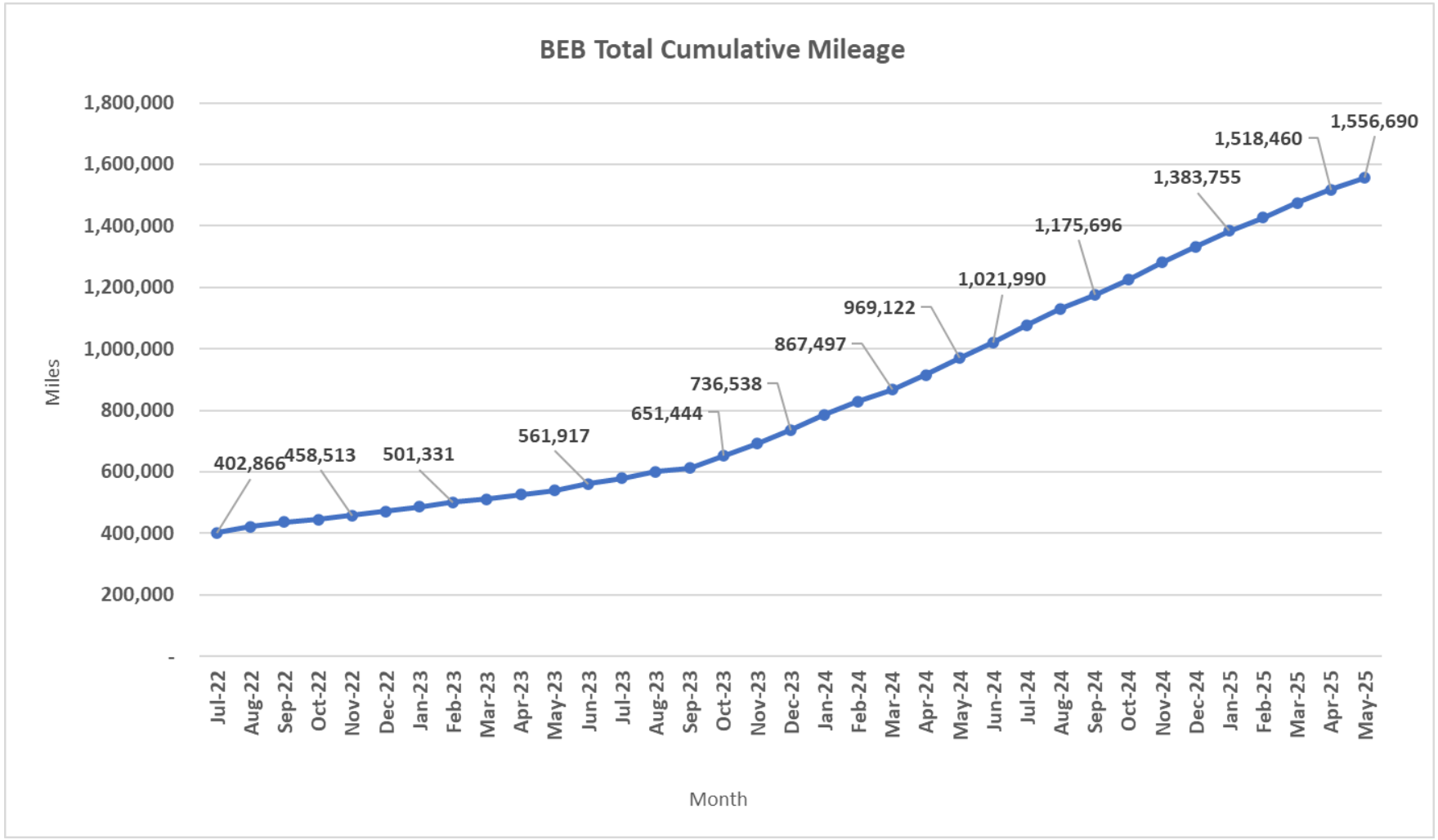
Notes:

- **7500s BEBs gradual decline in their mile/bus since November 2024**
- **1600s have seen a sharp mile/bus increase since January. Overall continued gradual increase in miles/per bus over its lifetime**
- **1500s appeared to have had gradual decline since November 2024**

BEB Total Monthly Miles



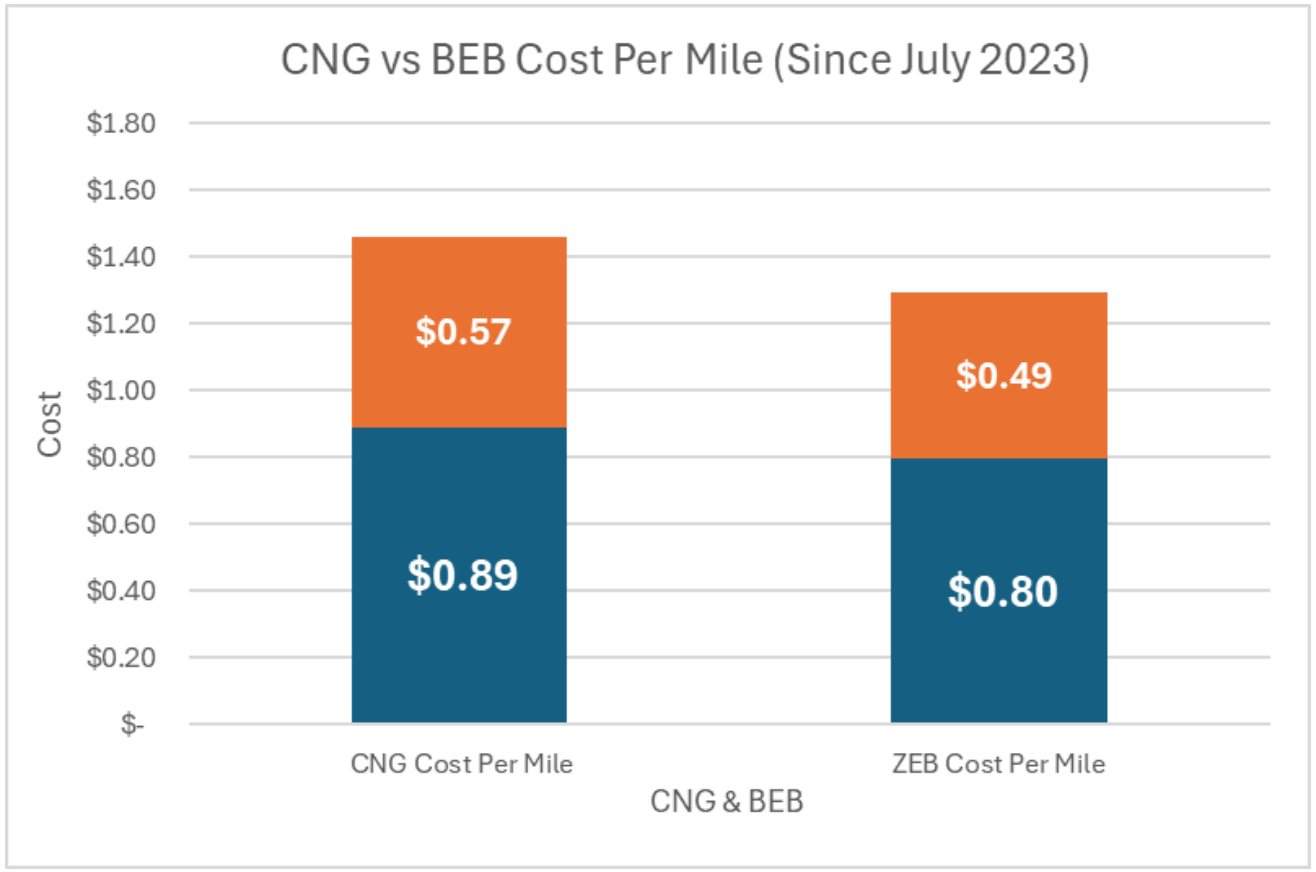
BEB Cumulative Mileage



Notes:

- **Projected to be near 1.6 million miles by the close of FY25**
  - **Doesn't include the 13 incoming BEBs mileage**

CNG vs. BEB Fuel & Maintenance

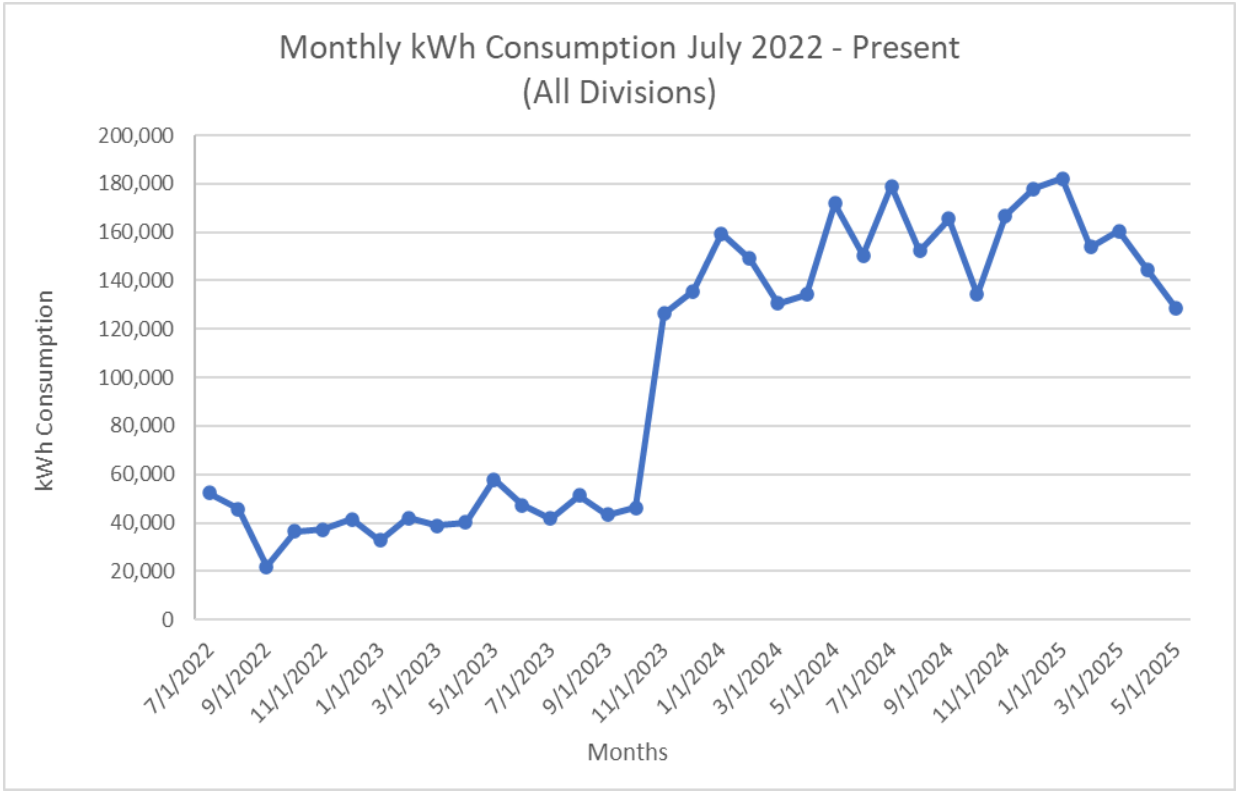


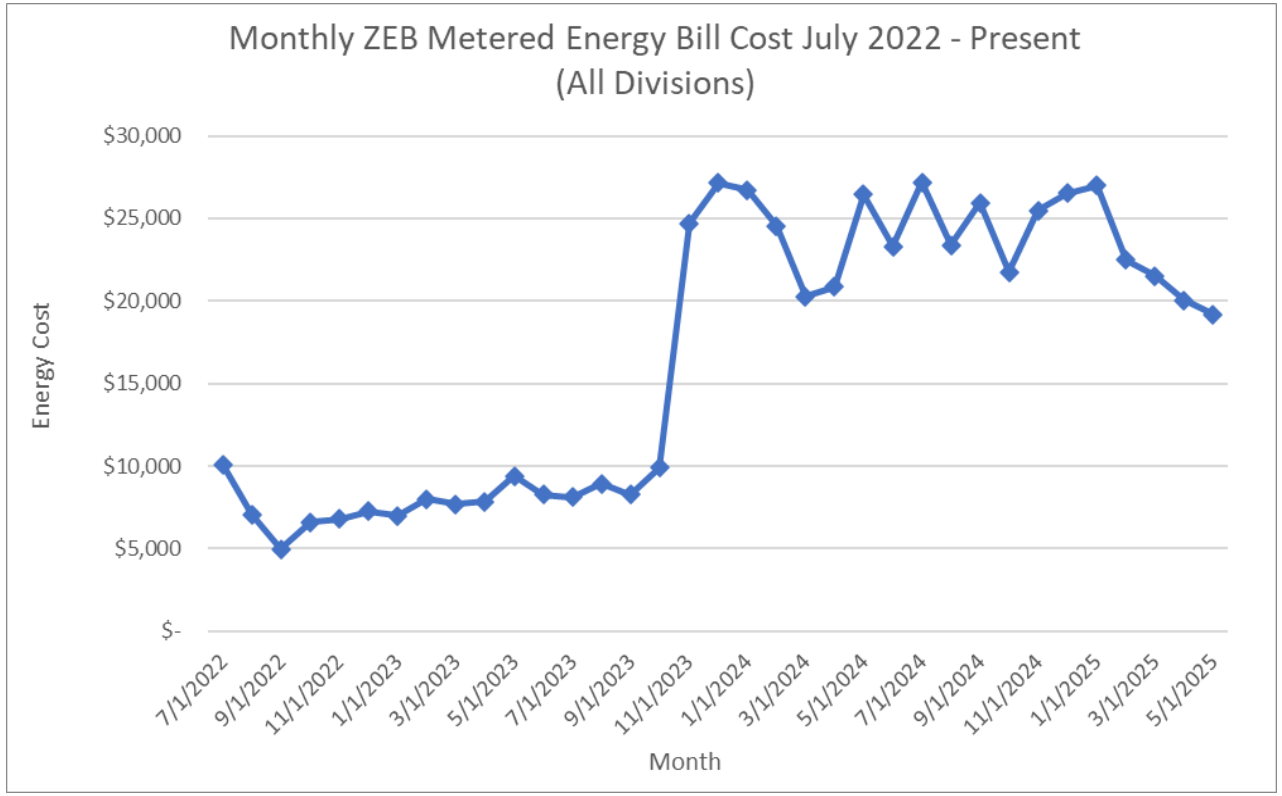
Cumulative	Maintenance Cost Per Mile	Energy/Fuel Cost Per Mile	Total Cost Per Mile
CNG Cost Per Mile	$ 0.89	$ 0.57	$ 1.46
BEB Cost Per Mile	$ 0.80	$ 0.49	$ 1.29

Notes:

- Data from MTS & Transdev
- Maintenance cost/mile includes work order costs only
- Data from (July 2023 – Present)

Monthly ZEB kWh Consumption and Energy Bill Cost

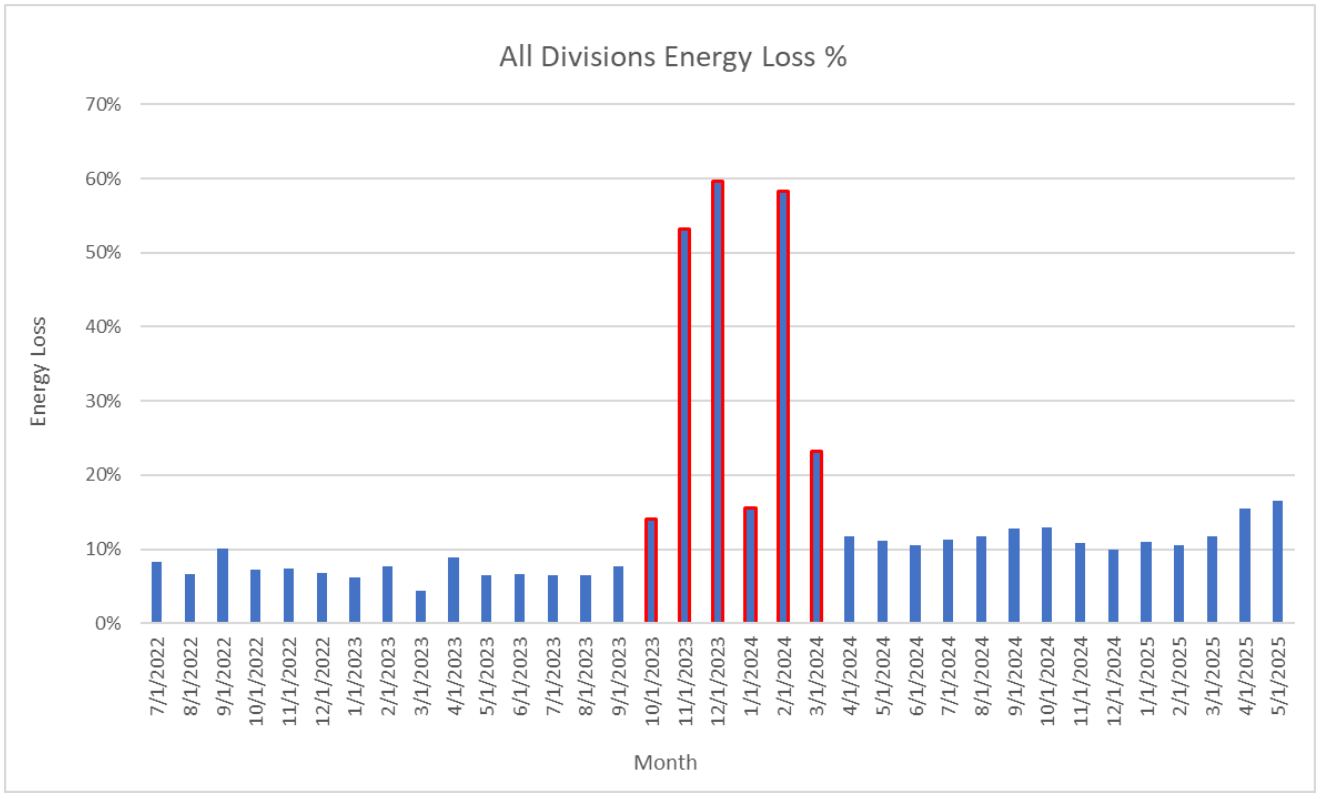




Approximate SDG&E ZEB meter bill costs totals

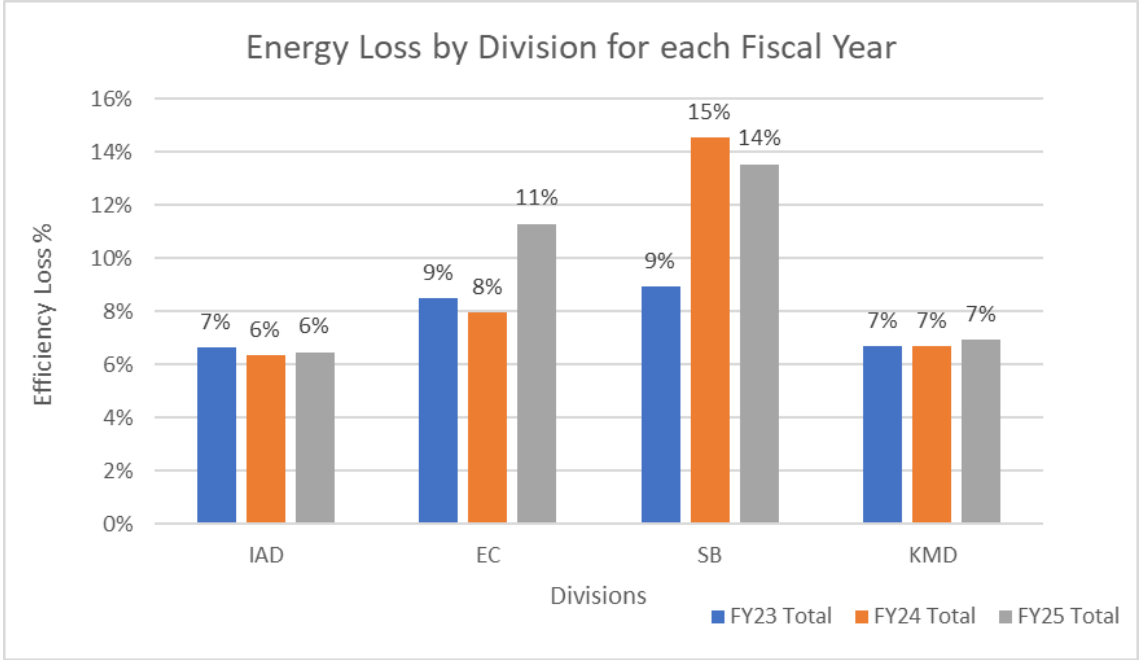
- **FY23 – $91,000 (495,000 kWh)**
- **FY24 – $229,000 (1.3 million kWh)**
- **FY25 - $260,545 (1.7 million kWh through May 2025)**

Energy Loss



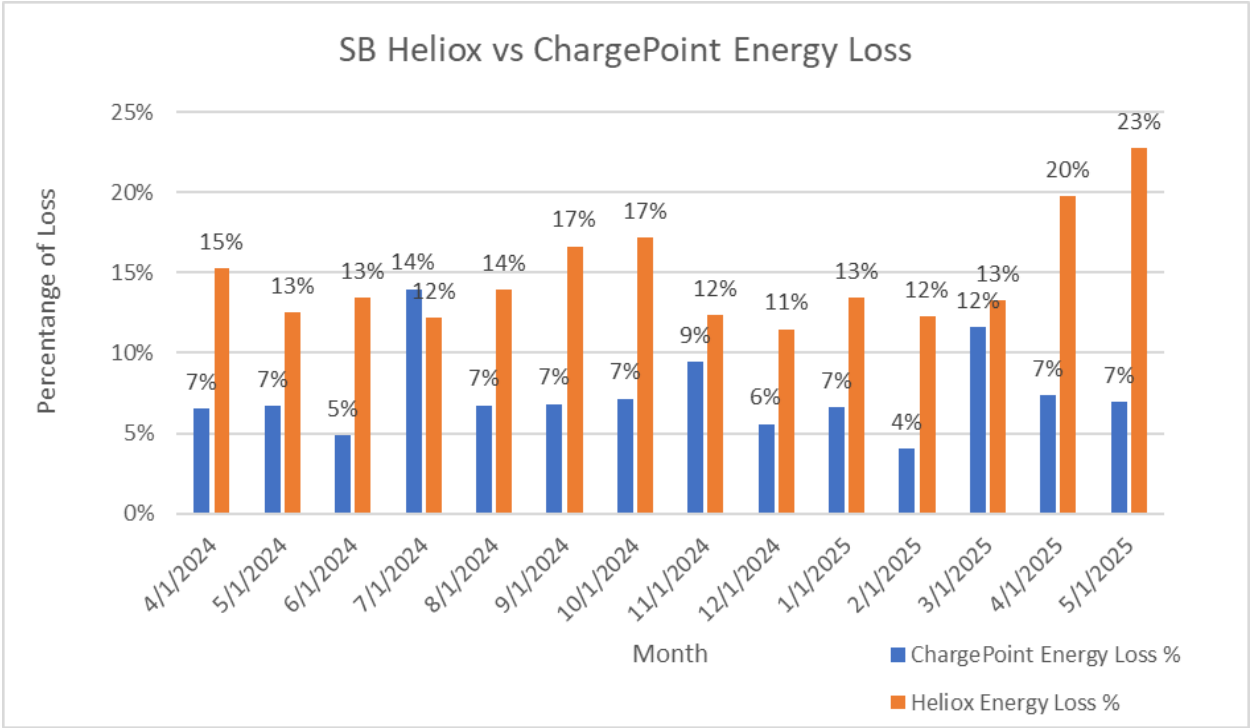
Notes:

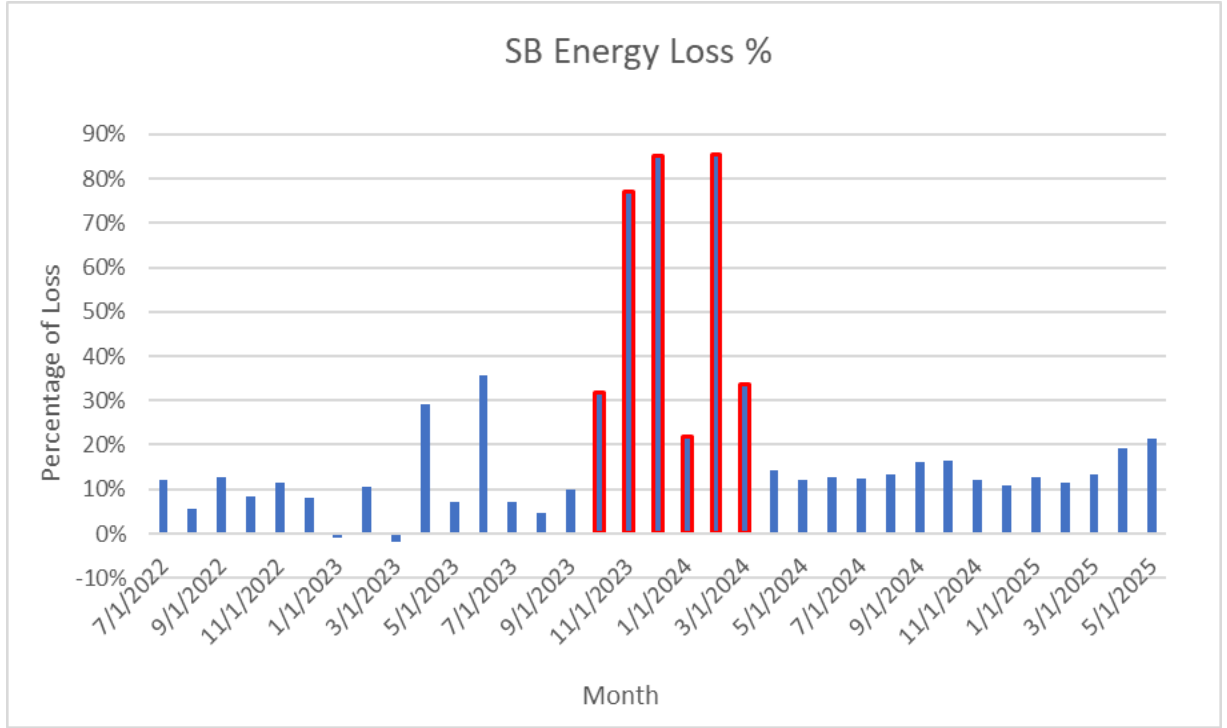
- **Missing Data and data discrepancies during initial months**
  - **During charger commissioning and data integration periods with BP Pulse**



Excludes data discrepancy months @ SB

South Bay Energy Loss





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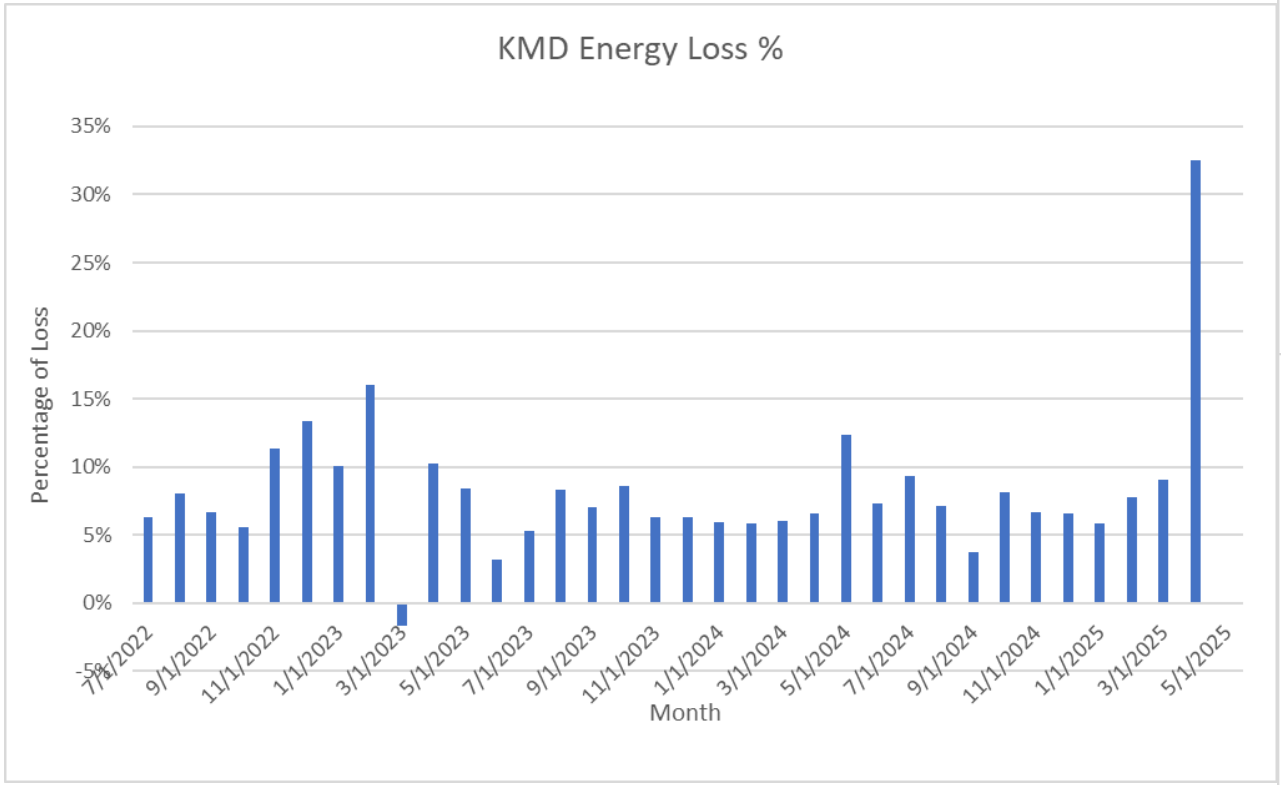
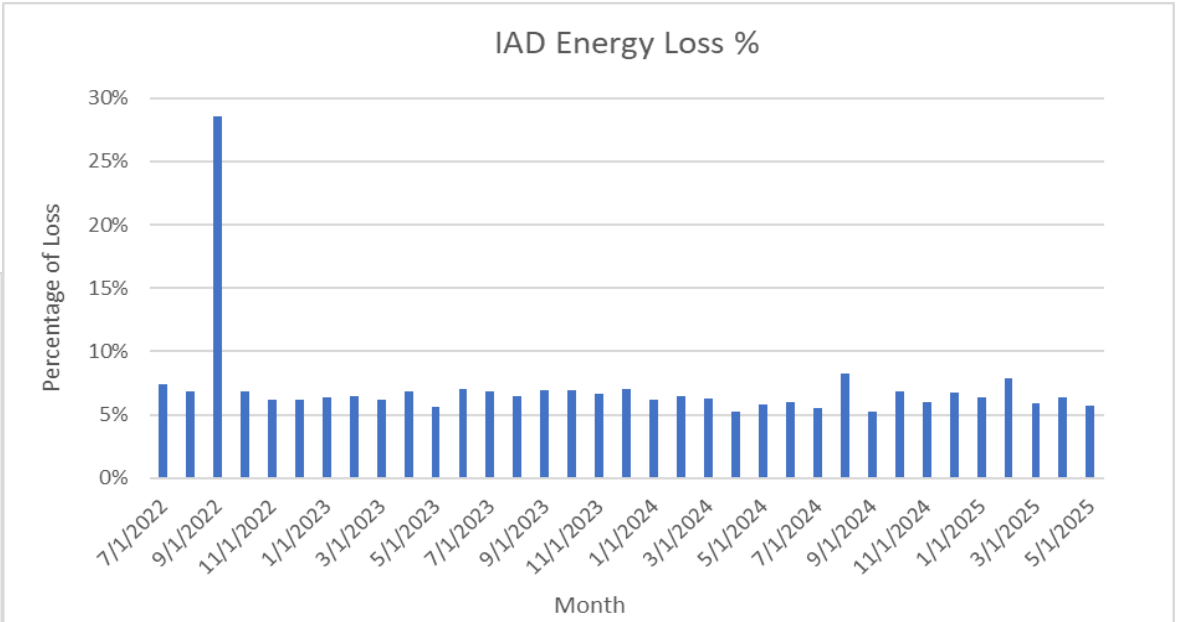
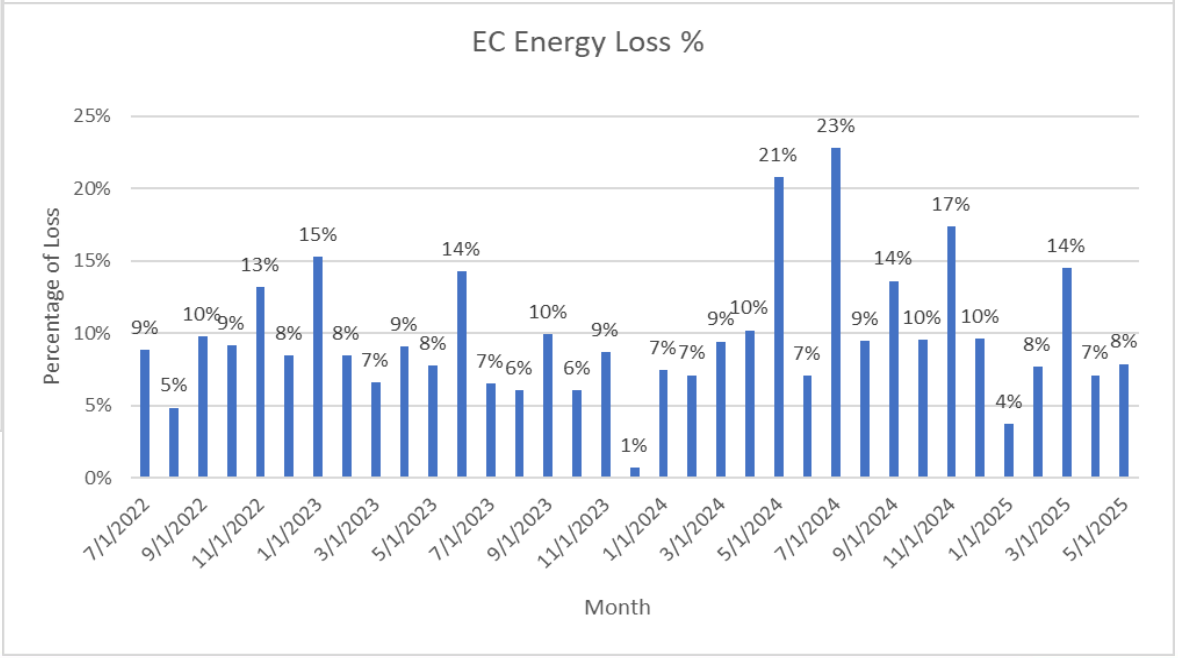
  - **During charger commissioning and data integration periods with BP Pulse**

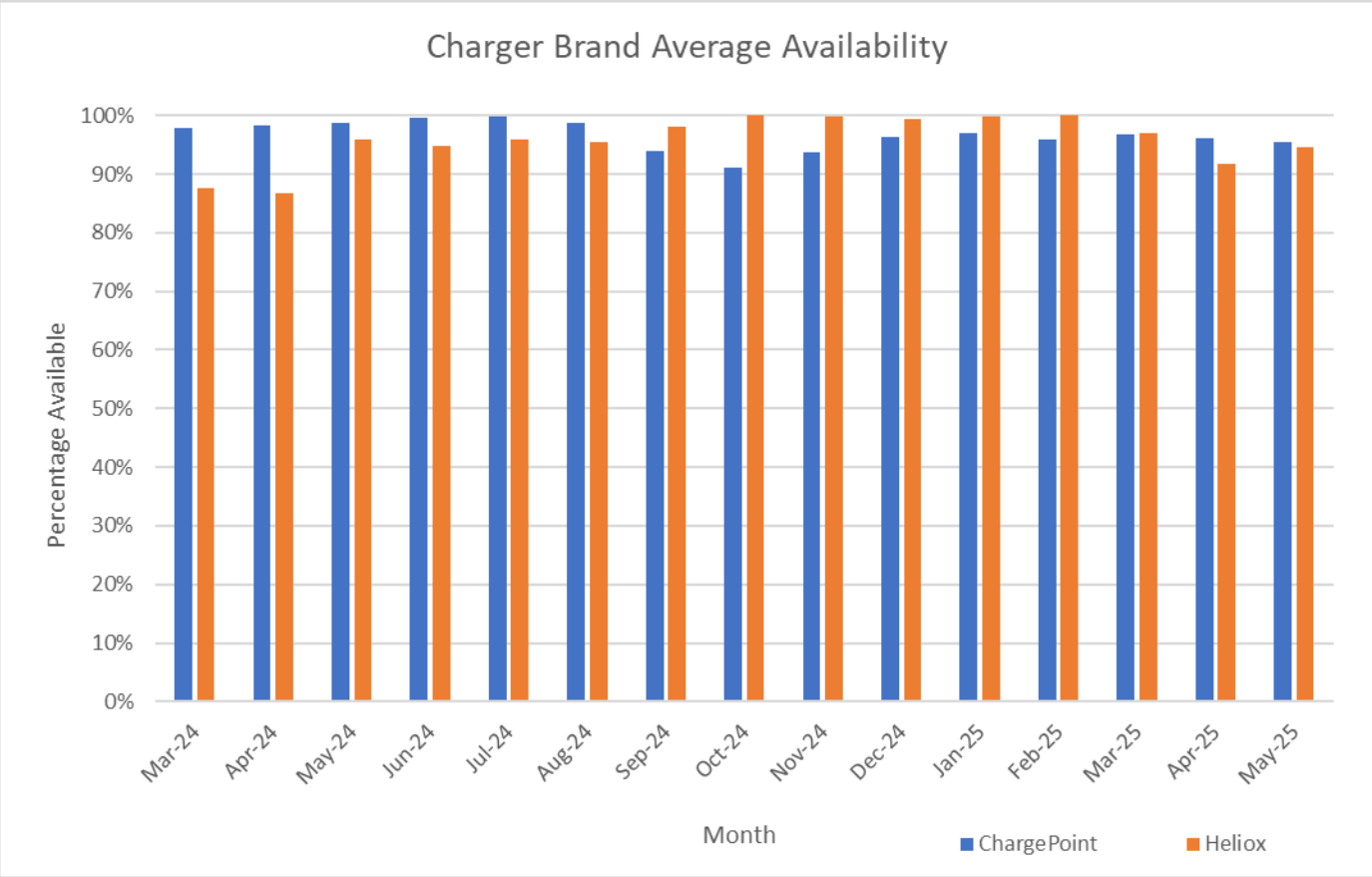
Energy Loss By Division





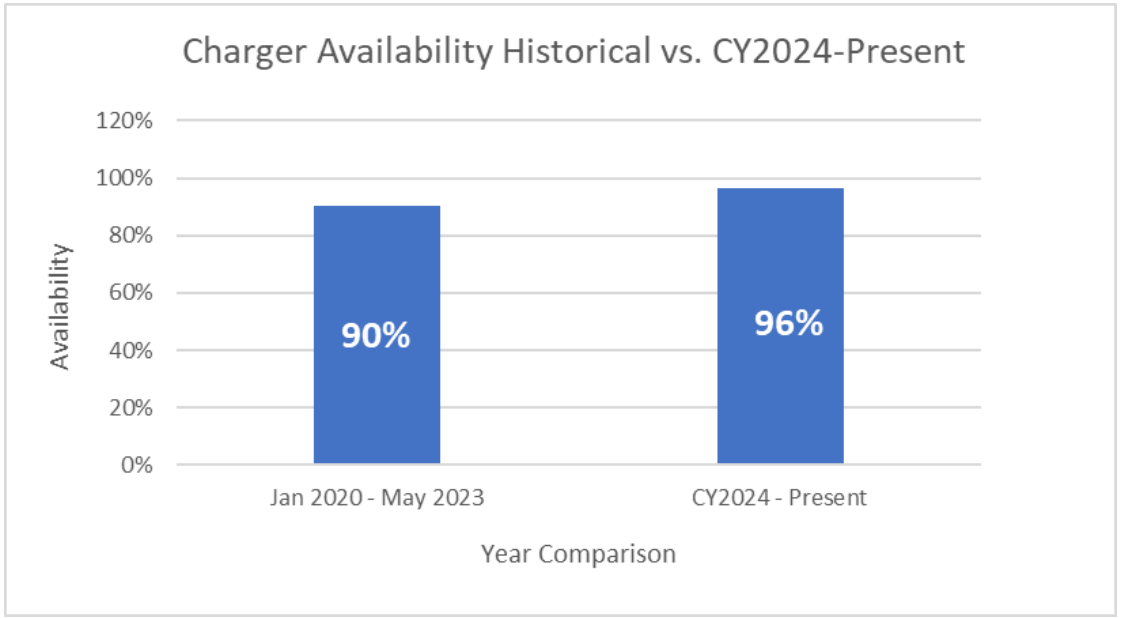


Charger Availability

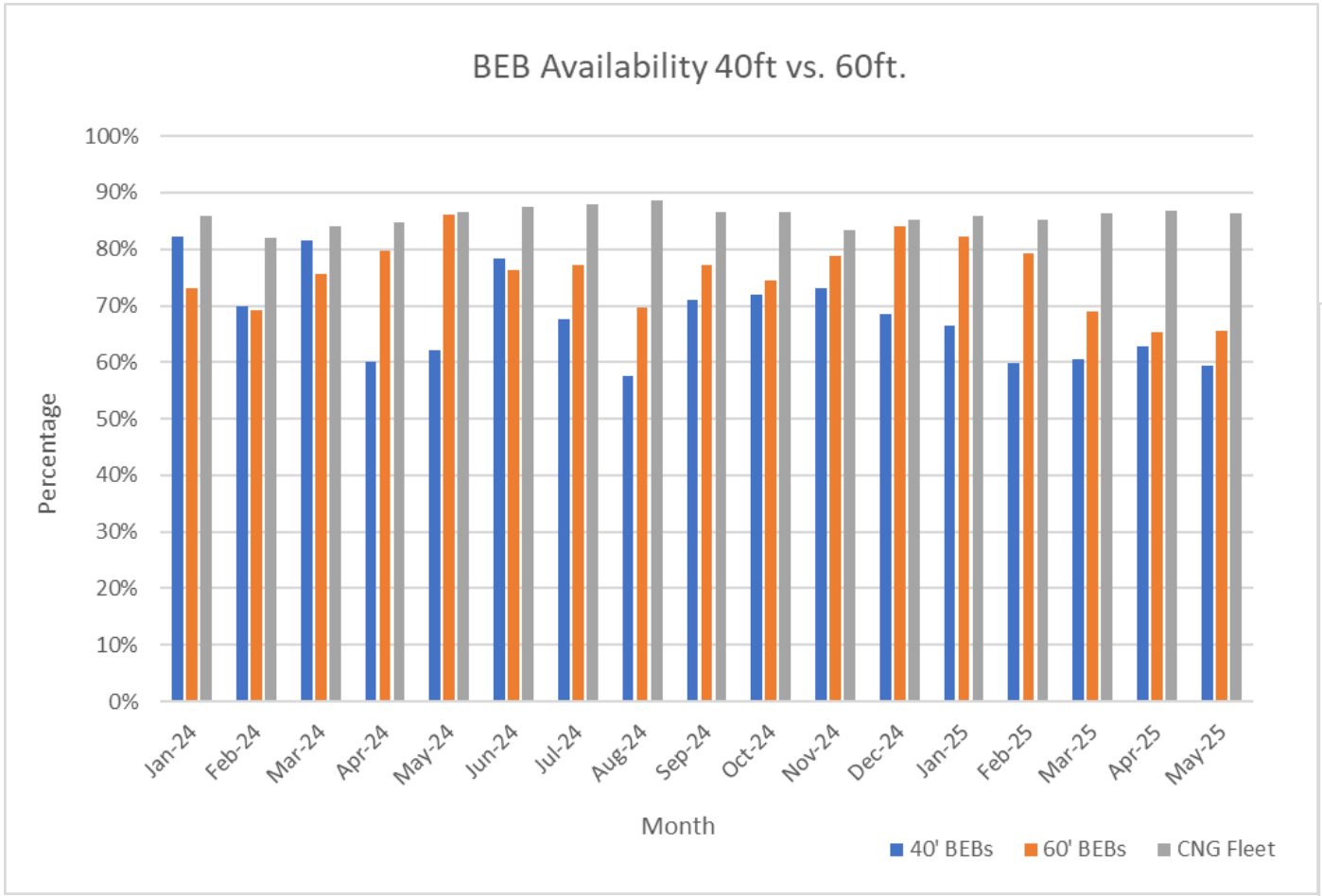


Notes:

- **No major breakdowns with all chargers**
- **More frequent minor downtime issues with ChargePoint chargers vs. Heliox chargers**

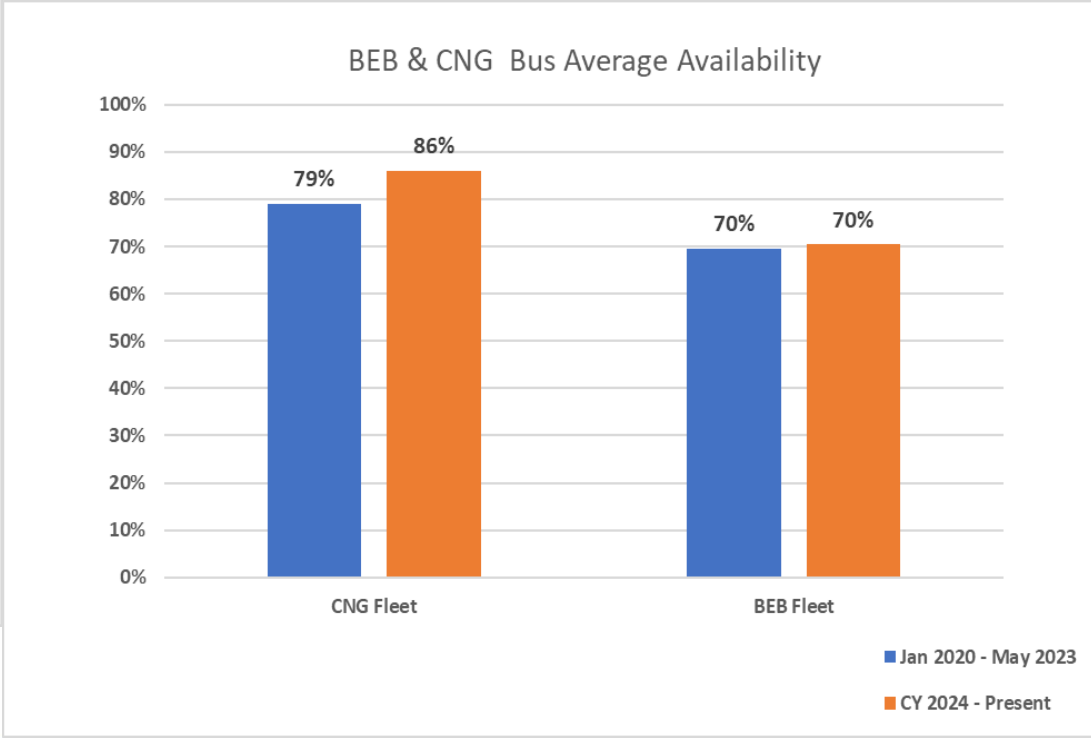


BEB Availability

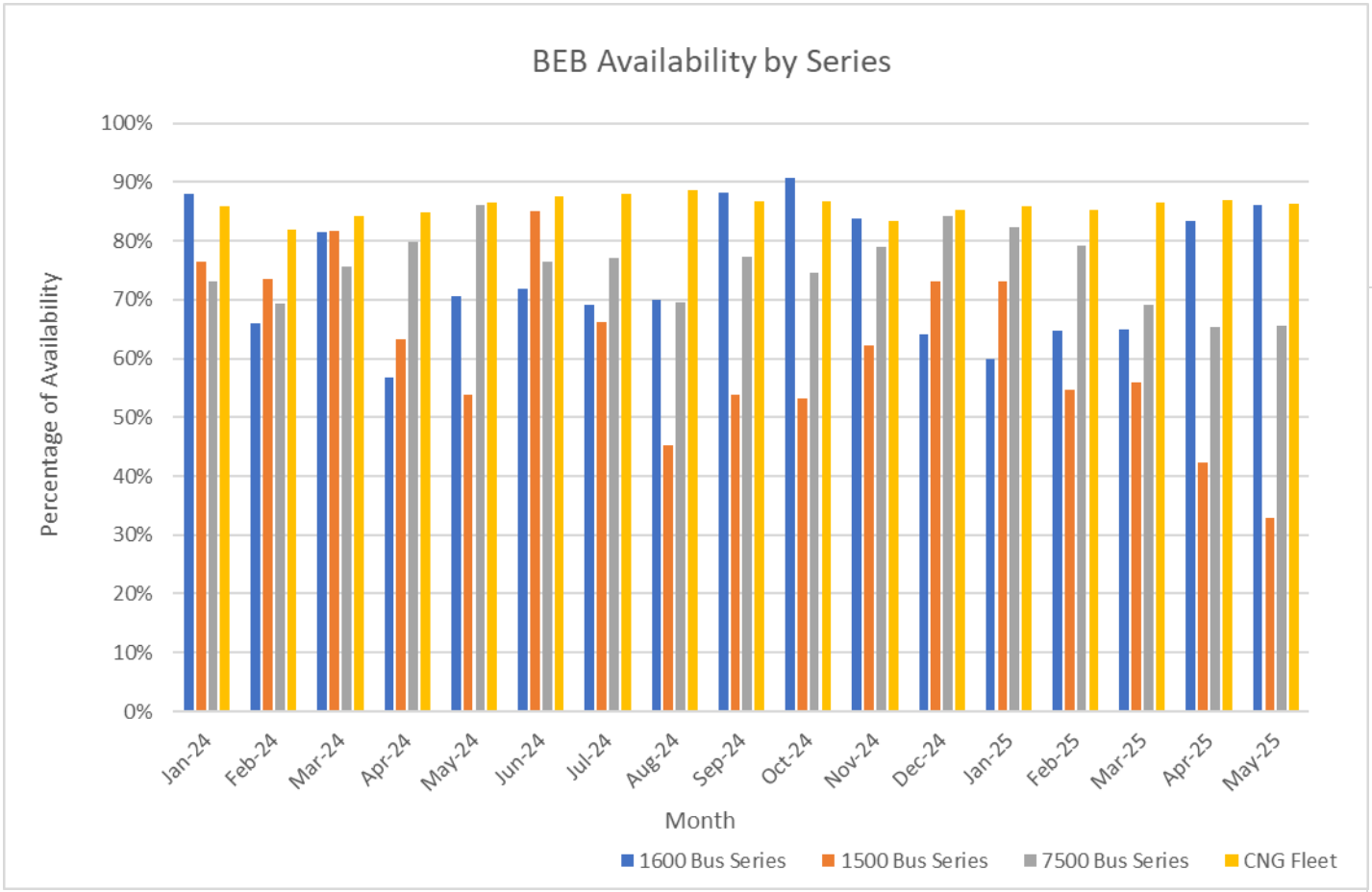


Notes:

- **60’ BEBs so far have been slightly better availability than 40’ BEBs**
- **BEBs to this point do not have the availability rate as CNGs.**

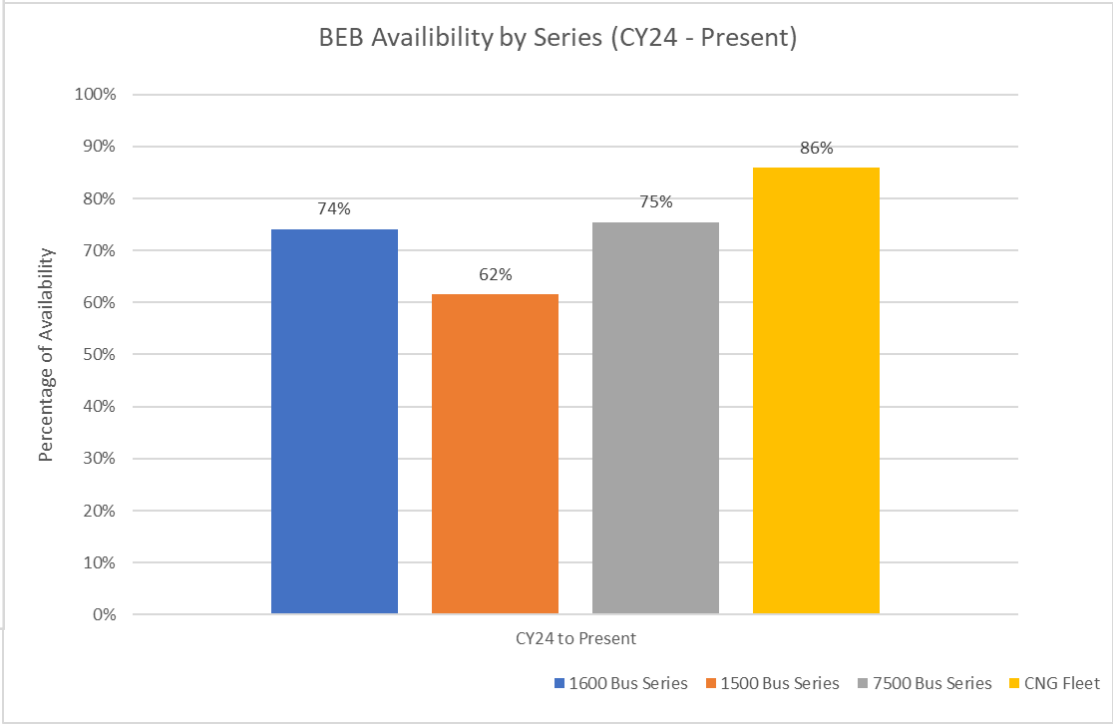


BEB Availability by Series

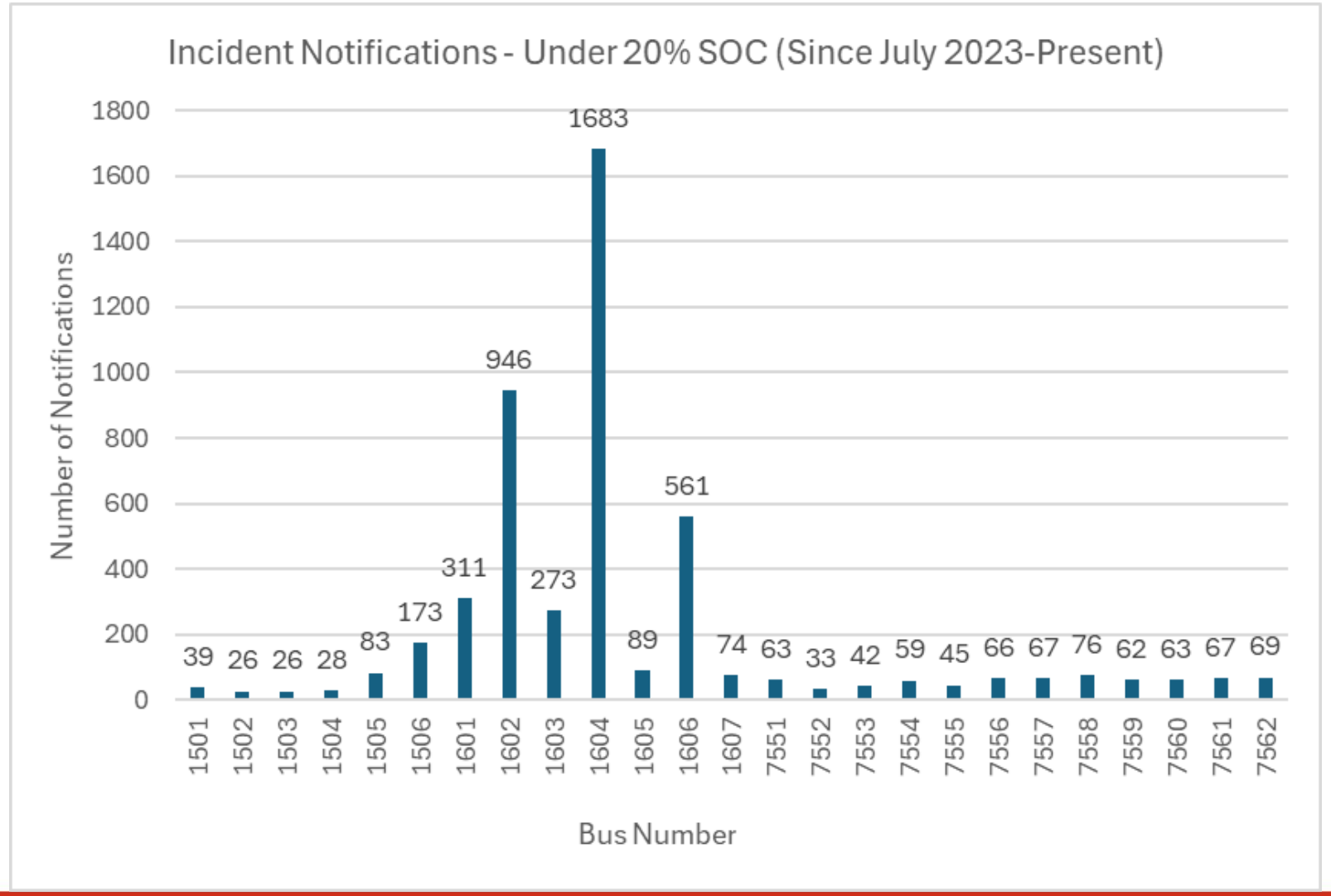


Notes:

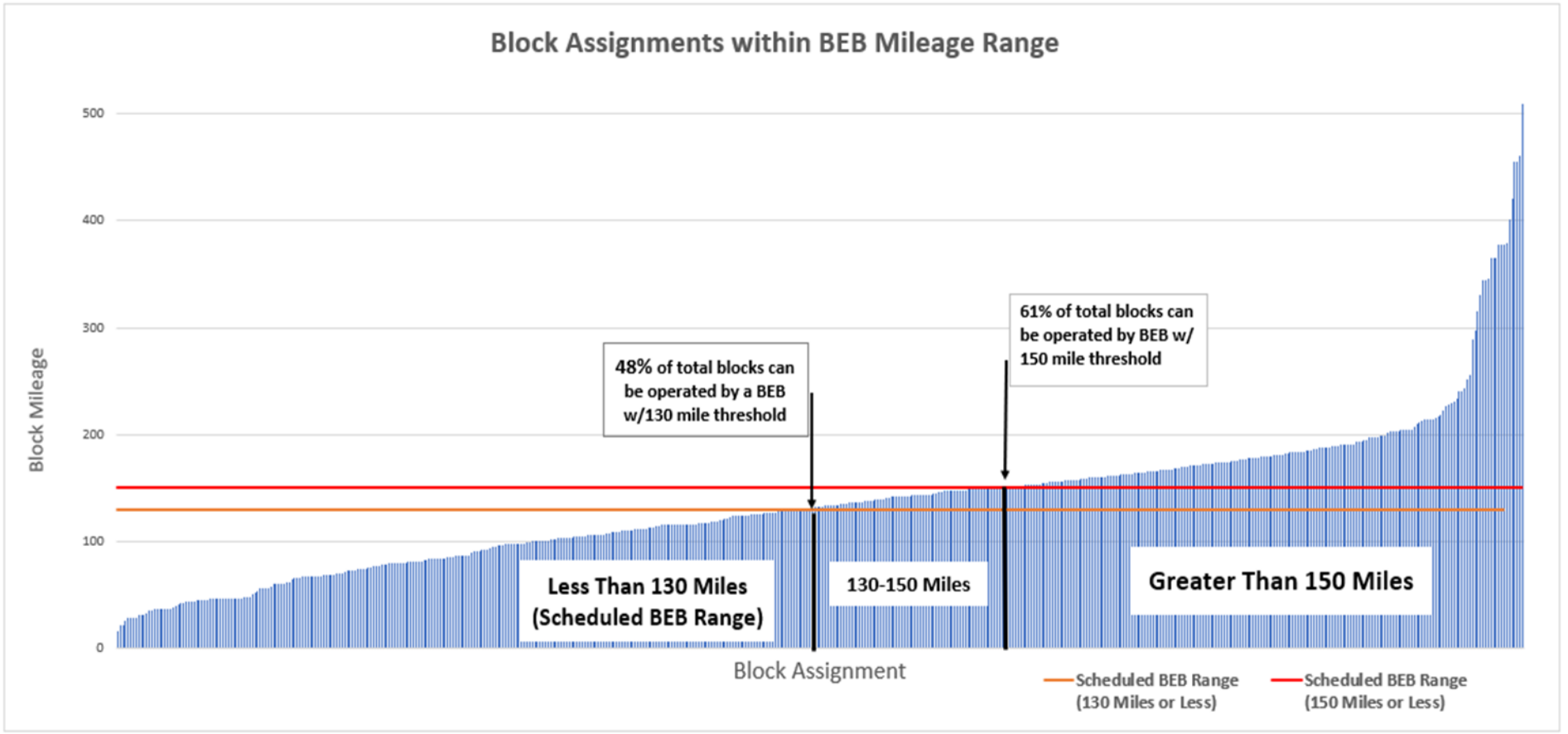
- **CNG Fleet has the most consistent availability**
- **Availability for each series fluctuates from month to month**
- **7500s have best availability out of BEB fleet**



SOC Incident Notifications from ViriCiti



Block Limitations



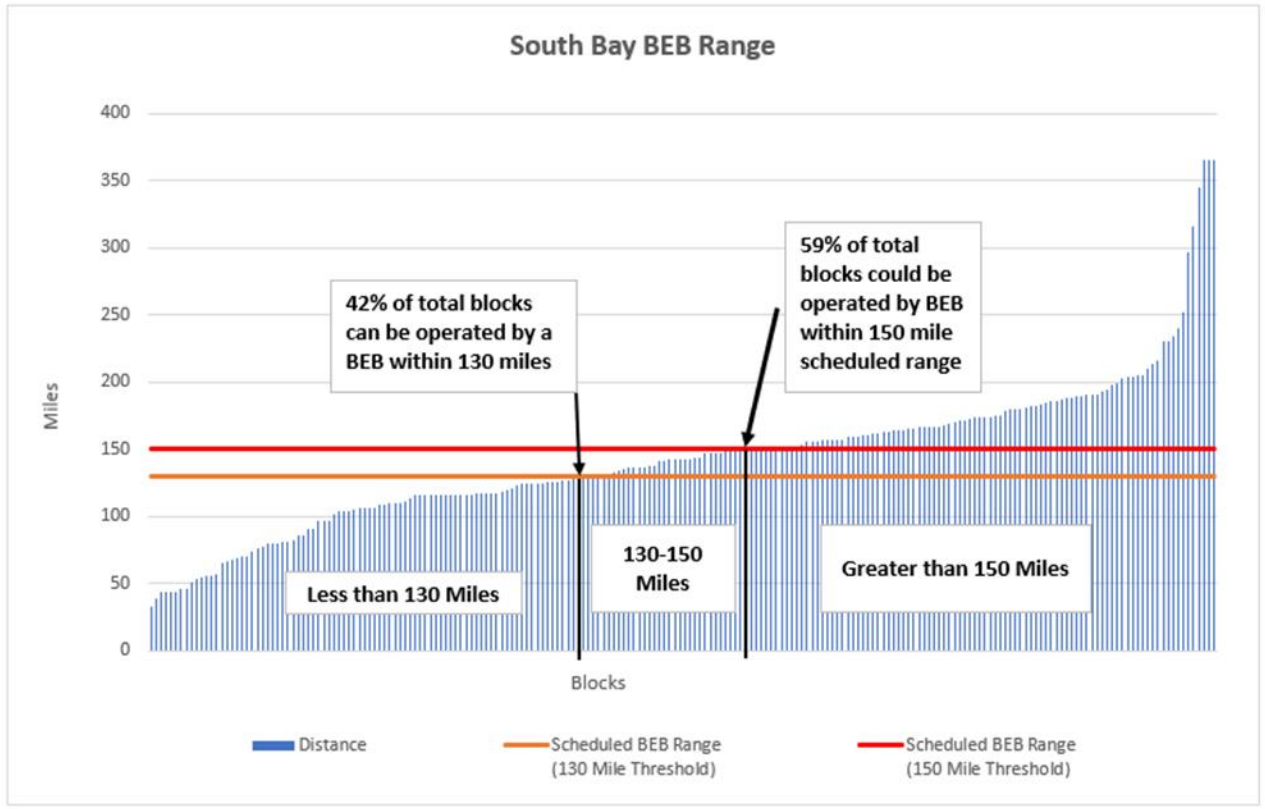
130 Mile Scheduled BEB Range

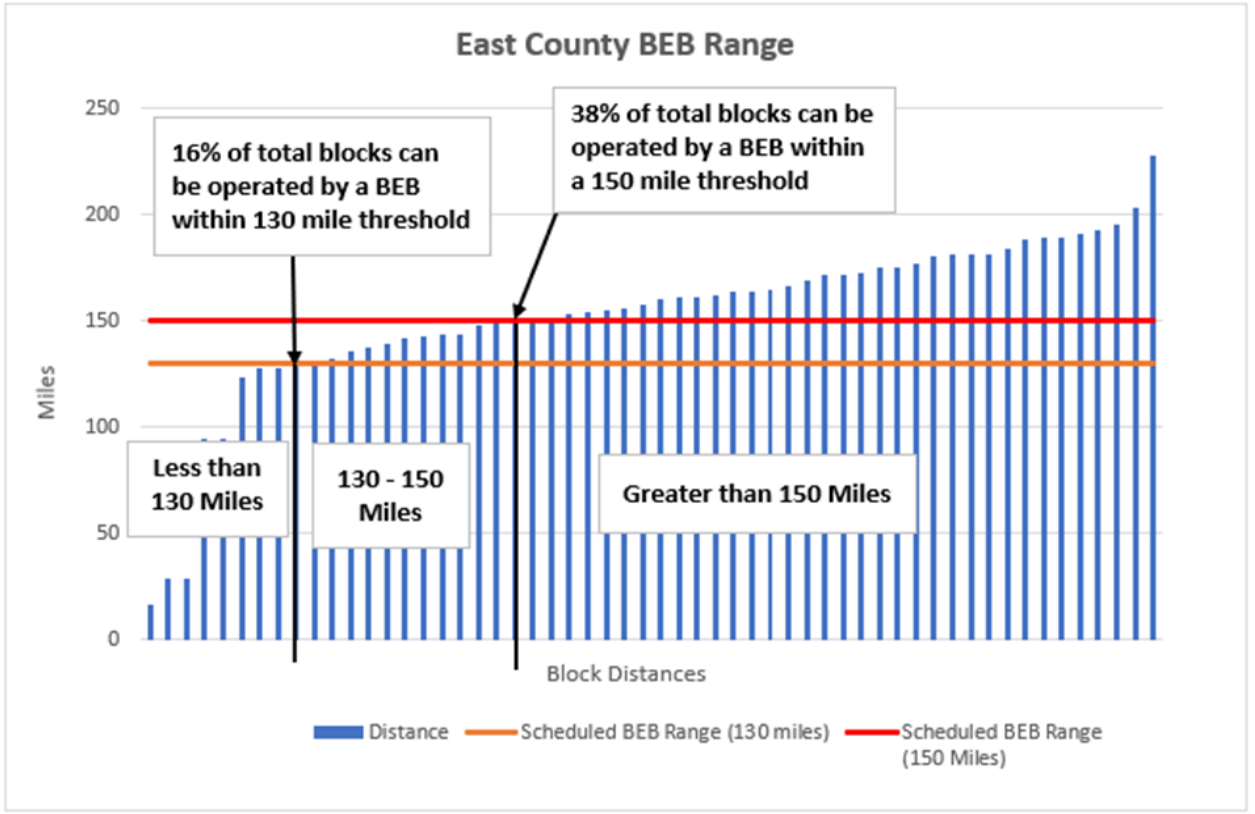
- **48% of total block assignments within BEB range**
- **255 total blocks**

150 Mile Scheduled BEB Range

- **61% of total block assignments within the BEB range**
- **325 total blocks**
- **Assumes newer model BEBs have range of 170 miles**

Block Limitations by Division





Block Limitations by Division