

## ELECTRIC VEHICLE COST PARITY

# A reality in progress

A **groundbreaking shift is expected between 2025 and 2035** as battery costs fall and electric vehicles (EVs) reach total cost of ownership (TCO) parity with internal combustion engine (ICE) vehicles. <sup>1</sup>

## TCO parity predictions <sup>2</sup>

Some light-duty vehicle applications have already achieved cost parity, while others are quickly closing the gap, potentially by 2025.



**Light-duty vehicles 2025**

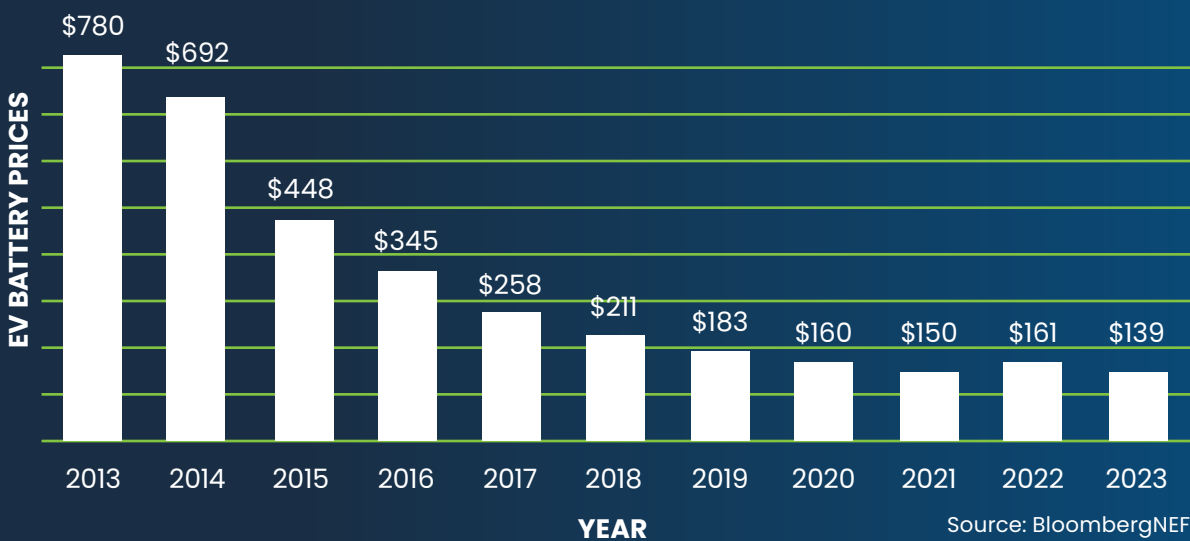
**Medium and heavy-duty vehicles 2027**



## Declining battery prices

Even with a hike in battery prices in **2022**, a decline is projected. By **2030**, costs could reach **\$80/kWh**, a significant drop from **\$139/kWh in 2023**. <sup>3</sup>

## Battery prices from 2015 to 2030



## Unique factors for EV commercial fleets:

1. Added costs for charging infrastructure, driver change management, and potential daytime charging.
2. Importance of a lifecycle cost analysis for determining the most cost-effective vehicle choices.
3. Influence of location and weather on EV performance.



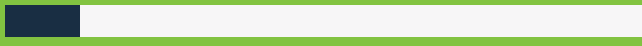
<sup>1</sup> Electric Vehicle Market Update, Environmental Defense Fund (EDF), 2022. <sup>2</sup> EDF, 2022. <sup>3</sup> Lithium-Ion Battery Pack Prices, BloombergNEF, 2023

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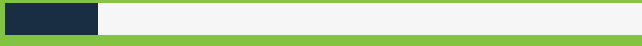
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## Growth in EV sales

Battery electric vehicle (BEV) sales in 2023:



US – 7.6% of total market <sup>4</sup>



Canada – 10.1% of total market <sup>5</sup>

BEV sales are expected to dominate the global market by 2030. <sup>6</sup>



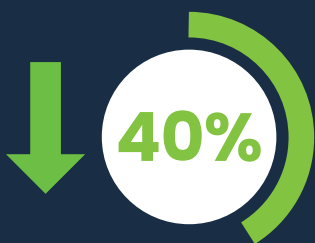
## Government incentives boosting adoption

Canada incentives range from **\$5,000** (light duty) – **\$200,000** (medium and heavy-duty vehicles) <sup>7</sup>

US incentives range from **\$7,500** (light duty) – **\$40,000** (larger vehicles) <sup>8</sup>



## Unique maintenance aspects for EVs



EVs require 40% less maintenance with fewer moving parts. However, auto glass services and collision repairs require more labor hours and longer cycle times leading to more vehicle downtime.



## Higher depreciation rate for EVs

Though EVs currently depreciate faster than ICE vehicles, premium EVs are **performing better in auction sales.**

## Ready to evaluate your fleet's transition to EVs?

Partner with Arc by Element™ to help guide your long-term decarbonization strategy. We can help you make data-driven fleet decisions by analyzing your TCO and emission reduction potential.



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<sup>4</sup> A record 1.2M EVs were sold in the US, COX Automotive, 2024. <sup>5</sup> Automotive Insights – Q3 2023 Canadian EV Information, S&P Global, 2023.

<sup>6</sup> X-Change: Cars, RMI, 2023. <sup>7</sup> iZEV Program, Government of Canada. <sup>8</sup> Commercial Clean Vehicle Credit, IRS.

<sup>9</sup> EV Maintenance Analysis, Element Fleet Management, 2023.