SUPERIOR DURABILITY AT LOWER COST:
Key Benefits of Carbon PEM Fuel Cell Bipolar Plates

For effective design and performance of PEM fuel cells, selecting the most appropriate material for bipolar plates is critical.

Here’s why carbon bipolar plates are the superior choice:

- **SAVE $3**<sup>KW</sup> * FOR PASSENGER CAR FUEL CELLS
- **SAVE $5**<sup>KW</sup> * FOR MEDIUM DUTY VEHICLES

*USD Compared to metal, at high manufacturing volumes, according to cost study by Strategic Analysis, Inc.

- **FUEL CELLS STACKS USING CARBON PLATES**
  - **30,000+ HOURS** OF BUS OPERATION

- **10,000’s BALLARD FUEL CELL STACKS**
- **10,000’s HOURS PER STACK**

**BALLARD’S TECHNICAL ACHIEVEMENTS:**

- **STACK POWER**: >100kW
- **POWER DENSITY**: >3.5kW/L
- **PLATE THICKNESS**: < 1.0mm (TWO PLATE ASSEMBLY)

**WE TAILOR PLATE DESIGNS AND MATERIALS FOR:**

- **HIGH DURABILITY**
- **HIGH POWER DENSITY & LOWER WEIGHT**