

**Ballard Power Systems (BLDP)**

**SDG Universe:** SDG 7: Affordable & Clean Energy, SDG 9: Industry Innovation & Infrastructure, SDG 12: Responsible Consumption & Production, SDG 15: Life on Land, SDG 13: Climate Action

**Sector:** Industrials

**Employees:** 1,300+

**Regions:** Ballard is headquartered in Burnaby, British Columbia. China, its largest market, generates over 35% of total sales, while Europe and North America generates the rest. Other major markets include Germany (around 20% of total sales) and the US (more than 15%) Canada, Denmark, Hong Kong, Germany, US



**OVERVIEW** The development and manufacture of fuel cell products, as well as the provision of related after-sale services, are the sole sources of revenue for Ballard Power Systems. Ballard Power Systems Inc. engages in the design, development, manufacture, sale, and service of proton exchange membrane fuel cell products primarily in Canada. The company offers heavy duty modules, marine systems, fuel cell stacks, backup power systems, and material handling products.

**Company contributes significantly to more efficient and environmentally friendly energy systems for industrial applications and public transport, provides services a low-carbon society.**

- Founded by Geoffrey Ballard, Keith Prater and Paul Howard in 1979.
- Global provider of innovative clean energy fuel cell solutions that offer superior performance at a reduced operating cost.
- Ballard Power Systems offers a product and service portfolio that provides significant environmental benefits and supports the transition to a low-carbon society.

**E /** The fuel cell technology developed by Ballard enables the decarbonization of difficult to abate sectors like transportation which represent up to 24% of the global GHG emissions. Fuel Cell Technology has a useful application as a lower emission solution with respect to heavy duty mobility. Hydrogen plays a critical role in the energy transition.

- Their proton exchange membrane (PEM) fuel cells are “built for a long service life: current generation of our products are designed to exceed 30,000 hours of operation. Refurbished and recycled at the end of life: to minimize waste, we rebuild and refurbish fuel cells to recover valuable precious metals”.
- Climate related commitments: Continue to reduce corporate and product carbon footprints, further reduce waste and water consumption, Complete “cradle to grave” life cycle analysis for FCmove™ product, Implement GHG impact assessment in our internal processes.
- Shown commitment to manufacturing material-efficient products with a goal to keep fuel cells out of the landfill and practice responsible lifecycle management. The process for

**MEASURES & MILESTONES**

**57.0%** of revenues estimated from Energy Efficiency products in 2020

**1,000+** Transit Buses & **2,200+** Trucks

Renewable energy powers **96%** of the facilities. Renewable energy is produced from hydroelectric dams, biofuel and wind. The other **4%** of energy is produced from natural gas and oil.

Ballard has delivered over **30,000** fuel cell stacks for bus, material handling, and backup power systems to forward-thinking large fleet operators around the world.

recycling hydrogen fuel cells is well-established, and Ballard has [extensive experience in this area](#).

- In 2019, company announced “Mission Carbon Zero” a promise to reduce the impact of their organization and our products with the goal of being carbon neutral by 2030.

**S /** Company operates in the United States, Canada and Denmark that require relatively high standards on health and safety. MSCI research indicates strong efforts to improve the training and development policies for employees, thus placing it ahead of its peers. In 2018, the company published their Diversity/Inclusion policy.

- Certified with industry-standard strong measures, such as ISO 14001 certification of its facilities, to oversee risks tied to potential toxic emissions and waste.
- Whistleblower policy includes a reporting website and toll-free phone numbers, through a third-party vendor.
- Tuition reimbursement program & annual training.
- Commitment to the environment, particularly “cradle to grave” approach on products represents a highly innovative approach and reduces waste in our natural environment.
- Powering large vehicles with fuel cell technology reduces pollution in our communities.

**G /** Ballard Power Systems' governance structure is designed to ensure the separation of managerial and supervisory functions, majority of independent directors and an independent board chair. In addition, board-level audit, nomination, and remuneration committees have been set up with majority independence. Ballard Power Systems is fully transparent about its compensation policy for executive managers, which includes variable, long-term incentive components that could incentivize sustainable value creation.

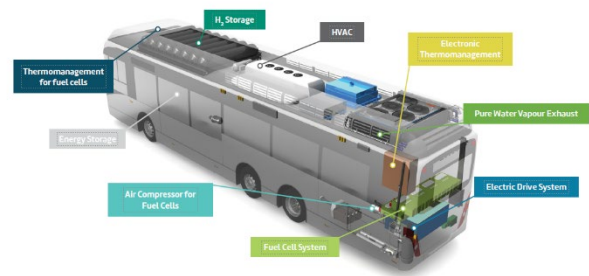
- Female Directors: 30%
- Independent Directors: 90%
- Key global policies: Code of Ethics, Anti-Corruption, Diversity and Inclusion, Environment, Health and Safety and Quality available on website.
- All suppliers must comply with their statement of Supplier Conduct Principles
- Board addresses ESG concerns, there is not a formal committee

#### CASE STUDY

Fuel Cell Zero-Emissions Buses for Aberdeen, Scotland

- The city of Aberdeen, Scotland became the center of Europe’s petroleum industry however downturns in the oil and gas sectors inspired the city to focus on new energy sources.
- City Council implemented the Aberdeen Hydrogen Bus Project to deploy Europe’s largest fleet of hydrogen fuel cell buses, removing ten polluting diesel buses on with zero-emission buses.
- Ballard Fuel Cells power ten buses emitting only water vapor. The buses had travelled more than 730,000 kilometers and carried an average of 36,700 passengers per month, operating six days a week at 90 percent availability. More than 1,600 refueling events had taken place at the hydrogen stations, each taking just five to seven minutes per refueling. With more than 35,000 kilograms of hydrogen dispensed in the first year, the hydrogen refueling station has been extremely reliable, demonstrating 99.99% availability.

**FUTURE ROADMAP** Heavy Duty mobility market is sizeable, and the transport sector represents around 24% of global green house gas emissions.





**RATING STATUS** Ballard Power Systems rating is unchanged at 'AAA' via MSCI.

- Per MSCI: “The company continues to lead peers in tapping opportunities in clean technologies as its product offerings include fuel cell products and related technical solutions services. With a three-year average R&D/sales ratio of 23% (vs an industry average of 3.5% as of October 2020) the company demonstrates focus towards innovation, which could help potentially increase revenues from the clean technology solutions.”

#### BLOOMBERG

|                                                                |                                                   |
|----------------------------------------------------------------|---------------------------------------------------|
| S&P Global ESG Rank: 68<br><i>0-100, 100 is better</i>         | ISS Quality Score: 2<br><i>1-10, 1 is better</i>  |
| Sustainalytics Risk Score: 20.65<br><i>0-100, 0 is better</i>  | CDP Climate Score: n/a<br><i>1-8, 8 is better</i> |
| Bloomberg ESG Disclosure: 44.46<br><i>0-100, 100 is better</i> | MSCI Rating: AAA<br><i>AAA is better</i>          |

**SOURCES:** Public Filings, Company Website & Materials, Bloomberg, ISS, MSCI, Factset