Ballard Power Systems Inc.

News Release

Ballard launches 9th generation high-performance fuel cell engine for heavy-duty vehicles at ACT Expo 2024

For Immediate Release – May 20, 2024

VANCOUVER, CANADA and LAS VEGAS, NEVADA – Ballard Power Systems (NASDAQ: BLDP; TSX: BLDP) today unveils its 9th generation, high-performance fuel cell engine, the FCmove®-XD, at the Advanced Clean Transportation (ACT) Expo at the Las Vegas Convention Center. Ballard is exhibiting at Booth 1821 from May 20-23, 2024.

"We are laser focused on strengthening the economic value proposition for heavy-duty mobility customers," said Mircea Gradu, Ballard's Chief Engineering Officer. "With the unveiling of our 9th generation of fuel cell engine – the FCmove®-XD – we continue to push the boundaries and are once again raising the bar and re-setting the industry standard for PEM fuel cell engine performance. Our innovative FCmove®-XD delivers significant improvements in reliability, durability, efficiency, power density, scalability, serviceability, and total cost of ownership."

[ADD XD PICTURE / IMAGE (will be uploaded to the newswire as a separate file)]

The FCmove®-XD delivers the highest volumetric power density in the industry for heavy-duty applications, featuring an engine volumetric power density of 0.36 kW/L and gravimetric power density of 0.48 kW/kg. The scalable 120 kW fuel cell engine integrates DC/DC regulated output, enabling up to three modules to operate as one system with a single interface, capable of delivering a combined 360 kW of zero-emission power output.

With a design life of 30,000+ hours of operation - or over one million miles in truck operation at typical duty cycles - the FCmove®-XD engine is developed to deliver class-leading durability and low total cost of ownership.

Enabled by an innovative "open architecture" design and other new design advances, the powerful and compact FCmove®-XD enables several important performance improvements (as compared to our prior-generation engine), including:

- 120 kW power output from our latest high-performance single stack;
- 33% reduction in total parts count, significantly improving reliability and reducing costs;
- Ultra-high peak system efficiency at >60%, enabling improved fuel consumption (lower total cost of ownership) and efficient heat rejection;
- Wide operating temperature range, up to 95°C;
- Integrated power controller incorporates DC/DC converter, air compressor inverter, and a power distribution unit, along with proprietary software controls, enables improved engine operation and efficiency;
- Rapid up and down transient times, with an innovative hot stand-by mode enabling rapid power increase;
- Improved manufacturability with >50% assembly time reduction;
- Easier access to parts for faster and lower-cost field maintenance;
- Compliance with applicable safety codes and standards;

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"The power and performance requirements of the highly-segmented truck market are particularly demanding due to various use cases, including high vehicle utilization rates and payload requirements," said Silvano Pozzi, Vice President, Product Line Management. "One of the compelling features of our new FCmove®-XD is scalability based on modularity. We can offer customers efficient integration of 120 kW, 240 kW, and 360 kW solutions dependent on truck class, use case, and duty cycle. For example, two engines, totalling 240 kW of power output, can be easily installed in the engine compartment of a typical Class 8 heavy-duty truck, enhancing standardization and redundancy."

Mr. Gradu concluded, "In addition to our in-house FCmove®-XD innovations and design improvements over the past 3 years, we have enjoyed strong collaboration with our maturing supply chain on new balance of plant component designs and related non-recurring engineering, and we also made important investments in certain production tooling. Collectively, these integrated and parallel work streams have resulted in a category leader, boasting higher performance on all key metrics with significantly lower capital cost and operating costs for customers and end users. Initial pre-launch customer engagement has been very exciting."

Ballard plans to initially manufacture the FCmove®-XD at its Oregon facility, enabling "*Buy America*" compliance starting in 2025, with future high-volume manufacturing expected at *Ballard Rockwall Giga 1*, Ballard's recently announced 3 gigawatt Gigafactory planned to be built in Rockwall, Texas.

About Ballard Power Systems

Ballard Power Systems' (NASDAQ: BLDP; TSX: BLDP) vision is to deliver fuel cell power for a sustainable planet. Ballard zero-emission PEM fuel cells are enabling electrification of mobility, including buses, commercial trucks, trains, marine vessels, and stationary power. To learn more about Ballard, please visit www.ballard.com.

This release contains forward-looking statements concerning the specifications and performance of the FCmove®-XD fuel cell engine, its uses, planned volume manufacturing and scale of market adoption . These forward-looking statements reflect Ballard's current expectations as contemplated under section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Any such forward-looking statements are based on Ballard's assumptions relating to its financial forecasts and expectations regarding its product development efforts, manufacturing capacity, and market demand.

These statements involve risks and uncertainties that may cause Ballard's actual results to be materially different, including general economic and regulatory changes, detrimental reliance on third parties, successfully achieving our business plans and achieving and sustaining profitability. For a detailed discussion of these and other risk factors that could affect Ballard's future performance, please refer to Ballard's most recent Annual Information Form. Readers should not

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place undue reliance on Ballard's forward-looking statements and Ballard assumes no obligation to update or release any revisions to these forward-looking statements, other than as required under applicable legislation.

Further Information

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