

1. Project description

Ballard wants to kick start a wide adoption of fuel cells and consumption of zero-emission hydrogen for heavy duty motive applications through a joint IPCEI project stretching from northern Germany through Denmark and the southern part of Norway under the name “Blue Seal”. The project would connect already existing hydrogen projects together and further scale the usage of hydrogen to create a market for zero-emission hydrogen. The project would include >300 hydrogen busses, >50 hydrogen trucks, >hydrogen trains and >10 hydrogen vessels, >50 hydrogen refueling stations and MW fuel cell production capacity to support the Blue Seal project and other IPCEI projects in Europe with heavy duty hydrogen fuel cell solutions. The project would bring together end customers, OEMs, integrators, components suppliers, universities, hydrogen suppliers and public authorities to foster an uptake in the introduction of zero-emission transport solutions utilizing key hydrogen equipment including fuel cells and electrolysis.

Ballard has established production capacity in Denmark for 40 MW of fuel cell systems per year. Ballard wants to further scale its fuel cell module production and sub assembly capacity in Europe to gigawatt scale and set up local service and maintenance centers in Europe to service all these applications.

Ballard is recognized as one of the leading players in the commercial application of LT PEM fuel cell solutions. Ballard has developed and demonstrated fuel cell solutions for both stationary and heavy-duty transport applications these include: Busses, Trucks, Trains, Marine and Backup Power for critical infrastructure.

Ballard can also deliver fuel cell solutions for other proposed IPCEI projects across Europe for heavy-duty motive and stationery applications.

Please select which part of the value chain for hydrogen your project focuses on (select one or more, where applicable):

Production	Transmission	Industrial application	Mobility	Energy	Housing application	Other
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2. Partnerships and spillover effects

Ballard has participated in many hydrogen projects in Europe with partners from Denmark, Germany and Norway including: Everfuel, Green Hydrogen Systems, Hvide Sande Shipyard, OMT, OSK Shiptech, Port of Esbjerg, Nel, Region North Denmark, Greenlab Skive, Hydrogen Valley, Aalborg Municipality, Kolding Municipality, DFDS, Ørsted, MHO & CO, Siemens Gamesa, Banke, HADAG, Westcon, Norled, Mahle, Siemens. Currently Ballard is participating in projects with over 100 fuel cell busses in Europe and 5 vessels. Resulting in the creation of 100% more jobs in the hydrogen industry since 2016. Similar growth rates are expected as a result of the Blue Seal project.

Ballard is seeking a wide range of partners to realize the Blue Seal project these includes:

- OEMs and integrators for busses, trucks, trains and ships.
- Hydrogen providers.
- End customers.
- Universities.
- Overall project manager.

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