

# Pulsenics leads the Canada-Germany HYER consortium for reducing costs of green hydrogen production

TORONTO, ONTARIO, CANADA, April 2, 2024 /EINPresswire.com/ -- In a

landmark move toward industrializing green hydrogen production, Pulsenics is leading the HYER consortium, a three-year Canada-Germany collaborative initiative poised to transform the green hydrogen landscape. HYER is supported by the Canada-Germany Hydrogen Alliance, a

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*Mariam Awara, Pulsenics COO*

collaboration established by the Canadian and German governments to promote hydrogen energy initiatives, and is funded by the National Research Council of Canada Industrial Research Assistance Program (NRC IRAP).

The HYER consortium is a testament to the power of international collaboration and unites a team of Canadian and German experts dedicated to enhancing electrolyser

efficiencies and lowering the cost of green hydrogen production. Under Pulsenics' leadership, Canadian partners including Natural Resources Canada (NRC), the Université du Québec à Trois-Rivières (UQTR), and the University of Victoria, have joined forces with German partners Segula Technologies GmbH and the University of Bayreuth (UBT), to optimize green hydrogen production operations.

HYER is a significant step toward making green hydrogen production more efficient, focusing on overcoming the economic challenges associated with electrolysis. Utilizing Pulsenics' innovative impedance-based diagnostic solution, project partners will develop a digital twin model that reflects real-time electrolyser degradation data and takes into account the dynamics of renewable energy sources in key geographies.

This approach is novel, as traditionally, acquiring critical degradation data for electrolysers necessitated lengthy and expensive post-mortem analysis. As such, the results of HYER will set new benchmarks for determining the most effective ways to dynamically operate electrolysers, while optimizing both performance and economics.

The collaboration between Canada and Germany serves Canada's strategic goal to become a major green hydrogen producer and exporter, while complementing Germany's ambition to

import renewable hydrogen for the decarbonization of its energy-intensive sectors.

Mariam Awara, Pulsenics COO, notes the impact of this international collaboration: "HYER is more than a technological endeavor; it's a strategic alignment of national goals. Under the Canada-Germany Hydrogen Alliance, the HYER consortium brings together experts in the field of electrolysis, spanning expertise in electrolyser performance monitoring, modeling, and management."

Dr. Essam Elsahwi, Pulsenics CEO, speaks on the importance of the consortium: "HYER represents a meaningful initiative toward setting new industry standards in Canada and Germany. Our collaboration focuses on increasing efficiency and reducing costs, driving significant progress toward decarbonization. This collaboration is a key step toward a carbon-free future, with the potential to substantially impact the sustainable energy sector."



Canadian Prime Minister, Justin Trudeau, and Pulsenics CEO, Dr. Essam Elsahwi, at the Canada-Germany Business Forum, by invitation of the German Federal Ministry for Economic Affairs and Climate Action

HYER is set to meaningfully impact the global transition to clean energy by establishing a new benchmark for operating renewable electrolysis plants. It aims to lead the electrolyser industry in efficiently scaling up green hydrogen production and lowering operational costs, playing a crucial role in the worldwide shift toward sustainable energy solutions.

#### About Pulsenics

Pulsenics is enabling the industrialization of electrochemical technologies with novel spectroscopy and data solutions. By introducing real-time performance diagnostics, Pulsenics is making it possible to monitor the internal conditions of electrochemical systems without the need for shutdown, leading to improved performance and lifetime. As a trusted industrial partner, Pulsenics is paving the way toward a more reliable and efficient electrochemical industry. [www.pulsenics.com](http://www.pulsenics.com)

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