

PRESS RELEASE

Turboden Commissions the first waste heat to power ORC Plant at Strathcona's Orion SAGD¹ Facility

Brescia, October 22, 2025 – Turboden S.p.A., a Mitsubishi Heavy Industries Group company, is proud to announce the **successful commissioning** of North America's first waste heat to power project in steam-assisted gravity drainage (SAGD) facility; the solution is based on Turboden Organic Rankine Cycle (ORC) power plant at the Orion steam-assisted gravity drainage (SAGD) facility operated by Strathcona Resources Ltd. (Strathcona) in Cold Lake, Alberta, Canada: the recovered heat is converted into **carbon-free electricity**, enabling the facility to **offset up to approximately 80% of its current grid electricity consumption**.

This milestone marks a **breakthrough in the application of low-temperature waste heat to power** within the SAGD industry—demonstrating that innovative ORC solutions can **deliver meaningful energy savings and emissions reductions** while operating within an oil sands facility.

*“This project is a clear example of how proven technology can be successfully applied in complex industrial environments,” said **Paolo Bertuzzi, CEO & Managing Director of Turboden**. “Although Turboden has traditionally focused on renewable energy, we consider the optimization of industrial processes—through efficient heat to power solutions— a key area to create value for the **Oil and Gas sector** while reducing carbon emission. We envisage several similar projects will follow”.*

At the heart of the project is a **19 MW single-shaft ORC system**, custom-designed by Turboden to recover **low-grade heat (~150°C)** from a mix of **produced steam and non-condensable gas**, previously dissipated to atmosphere through aerial coolers. The recovered heat is converted into **carbon-free electricity**, enabling the facility to **offset up to approximately 80% of its current grid electricity consumption**.

This not only drives **significant operational cost savings** but also enables **on-site zero-emission power generation** while providing the cooling capacity required in a SAGD facility.

Strathcona, one of North America's fastest-growing pure play heavy producers, is focused on **thermal oil and enhanced oil recovery in Alberta and Saskatchewan**. With an innovative approach to growth and a commitment to sustainability, Strathcona identified the need to:

- Improve **energy efficiency**
- Lower **operating costs**
- Achieve **emissions reductions**

¹ SAGD stands for Steam-Assisted Gravity Drainage, a technique for extracting heavy crude oil and bitumen from deep underground deposits. It works by injecting steam into an upper horizontal well to heat the oil and reduce its viscosity; the heated oil and condensed steam then flow by gravity into a lower horizontal well, from which they are extracted.

Turboden delivered a **flexible and efficient ORC solution** that addressed all these needs—while reinforcing the viability of **waste heat recovery and waste heat to power in SAGD environments**.

This landmark project was developed through a strategic collaboration between Strathcona, Turboden and the **Federation Group Inc.**, who served as the **owner's engineering, procurement and construction (EPC) partner for the project**. The collaboration resulted in efficient project execution and a replicable blueprint for future installations. The project was also recognized by the **Government of Canada with funding from Environment and Climate Change Canada's Low Carbon Economy Fund**.

"This project demonstrates what's possible when industrial innovation meets sustainable mindset," said Ilaria Peretti - Senior Sales & Business Development Manager Biomass, Waste to Energy, and SAGD at Turboden America, LLC. "We're proud to support Strathcona in reducing emissions while improving efficiency—and we look forward to continuing our partnership on future initiatives."

This project is not just a first—it's a model. With the **capacity potential to offset an estimated 50,000 tonnes per year of GHG emissions** (equivalent to removing approximately 11,000 cars per year from the road), the Orion ORC installation underscores the **economic and environmental viability** of waste heat recovery in oil and gas.

It also positions Turboden as a **technology leader in the North American oil and gas sector**, expanding the role of ORC in **high-temperature, high-throughput** industrial processes.

Following this successful commissioning, the ORC solution is now fully operational, setting the stage for future replication across other SAGD facilities.

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About Turboden

Turboden S.p.A., an Italian company part of Mitsubishi Heavy Industries, provides technological solutions for power generation and heat electrification to industries and to utilities. Its offer ranges from Organic Rankine Cycle (ORC) plants to large heat pumps, and gas expanders. Since 1980, Turboden has been a pioneer in the energy transition. Having established itself as a world leader in ORC technology, with over 460 plants in more than 50 countries, Turboden is now one of the dependable technology partners for optimized solutions to decarbonize processes. For more information, www.turboden.com

About Strathcona

Strathcona is one of North America's fastest growing pure play heavy oil producers with operations focused on thermal oil and enhanced oil recovery. Strathcona is built on an innovative approach to growth achieved through the consolidation and development of long-life assets. Strathcona's common shares (symbol SCR) are listed on the Toronto Stock Exchange (TSX). For more information about Strathcona, visit www.strathconaresources.com