



Challenge Statement/Synopsis:

Suncor's purpose is to provide trusted energy that enhances people's lives while caring for each other and the earth. Our strategy includes a goal to be a net-zero greenhouse gas (GHG) emissions company by 2050 and substantially contribute to society's net-zero goals. By 2030, we expect to reduce GHG emissions by 10 megatonnes per year across our energy value chain. Expanding our renewable energy portfolio and advancing the transition to a low-carbon future supports our strategy.

As part of our **Renewable Liquid Fuels** strategic focus area, Suncor seeks low cost and low energy-intensive solutions to transform industrial and second-generation waste (CO₂, lignocellulosic biomass) into fuel precursors, including syngas, fuels and energy carriers.

Context:

Suncor's **Renewable Liquid Fuels** strategic focus area targets the transformative opportunity of supplying liquid transportation fuels without the use of fossil fuel. Suncor is seeking renewable liquid fuels technology solutions to:

- lower the overall system cost and provide improvements in yield, carbon intensity, and reliability;
- convert 2nd generation feedstocks (municipal solid waste, agricultural and forestry residue); and
- develop CO₂ utilization pathways to produce low-carbon liquid fuels.

Through this challenge, Suncor is not requiring technologies that have already reached commercial scale. Early stage fundamental research is also encouraged. Promising technologies that have been laboratory scale tested and are progressing towards a pilot demonstration are of interest.

We are interested to partner in the technology development process.

Response Criteria:

The challenge aims at:

- The discovery of scalable syngas production pathways achieving best in class conversion rates, at the lowest carbon intensity (gCO₂e/MJ), with a focus on conversion of the following feedstocks:
 - Refinery off-gases (i.e. CO₂, pure and diluted)
 - Lignocellulosic biomass
- Enabling technologies that have the ability to improve the overall efficiency of the syngas production, including but not limited to:
 - Feedstock collection and pretreatment (i.e. sizing/sorting/drying)
- Any technology innovations that offer step change enhancements over current technologies.

The Opportunity:

- Potential to discuss your technology (if selected) with Canada's leading integrated energy company.
- Engage with a company that actively pursues technology and innovation. Suncor invested \$535 million in technology development, deployment, and digitalization in 2020.



- Meet new customers and enter new market with your product.

This type of technology development is carefully managed to ensure it provides economic and environmental benefits to Suncor. It is a key strategy in a world of fast-changing products and services.

About Suncor:

Suncor Energy is Canada's leading integrated energy company, with a global team of over 30,000 people. Suncor's operations include oil sands development, production and upgrading, offshore oil and gas, petroleum refining in Canada and the US, and our national Petro-Canada retail distribution network (now including our Electric Highway network of fast-charging EV stations). A member of Dow Jones Sustainability indexes, FTSE4Good and CDP, Suncor is responsibly developing petroleum resources, while profitably growing a renewable energy portfolio and advancing the transition to a low-emissions future.

***Only non-confidential information should be included in your response ***

