Media Release

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Innovative solutions for sustainable oil

Canada's Oil Sands Innovation Alliance releases 2020 Annual Report

Calgary, AB, Canada – Investing in innovation and continuing to improve environmental performance is an imperative that the oil sands industry fully embraces. Since Canada's Oil Sands Innovation Alliance (COSIA) was formed in 2012, industry members have invested a total of **$1.8 billion** in these efforts**.**

In 2020, **233 active projects** were underway at a total investment of **$531 million** in our four Environmental Priority Areas: Greenhouse Gases (GHGs), Land, Tailings and Water.

In all, COSIA members have supported a total of **1,143** contributed clean technologies since 2012. Some of these successes are highlighted in our 2020 Annual Report *Innovative solutions for sustainable oil*.

Harnessing the power of collaboration from across Canada and around the world has allowed COSIA to tackle tough challenges in the oil sands, including emissions reduction, through innovation. These efforts are paying off, improving and shortening the trajectory of sustainable oil sands development.

In bringing together leading thinkers from industry, government, academia and the wider public to develop, test, and implement clean technologies, COSIA makes it possible for industry to go farther faster to address climate-related risks and minimize environmental impact, while also meeting global energy demand. Year over year, COSIA and its members continue to make gains in environmental performance as our annual Performance Numbers show.

- COSIA mining operators have reduced net water use intensity from the Athabasca River and its tributaries by **25 per cent**, down to **1.4 barrels** of Athabasca River water per barrel of oil produced (from **2.2 barrels** in 2012).

- COSIA in situ operators have reduced freshwater use by **46** per cent, down to **0.19** barrels of water per barrel of oil produced (from **0.36 barrels** in 2012).

- COSIA members have reduced the operating footprint intensity of in situ operations by **6 per cent** since 2012.

- Since 2013, the production weighted average upstream GHG intensity of the oil sands has been reduced by **14 per cent** for mining operations and **8 per cent** for in situ operations.

COSIA Chief Executive Wes Jickling says that Canada's oil sands have a long track record of clean technology innovation that continues to move the needle. "One question I'm frequently asked in conversation is: 'Can the oil sands be part of a low-carbon future in Canada?' My answer is always, 'yes, absolutely,'" Jickling says. "This work of enhancing the sustainability of one of Canada's major natural resources, while enabling economic opportunity has never been as important as it is now – as Canada looks to embark on a sustainable recovery."

Some examples of the innovation that takes place through COSIA include:

- Sandbar willows took on star quality in this **outdoor growing trial** which used native plants to remove water from tailings (leftover mining materials). The goal was to turn tailings into a denser material that could be used in land reclamation. Sandbar willows outperformed other plant species with the help of some microscopic friends.

- The Once Through Steam Generator **(OTSG) lab** at SAIT is forging a path to cleaner steam from oil sands boilers to minimize GHG emissions and reduce water usage. A third test boiler unit was added in 2020 that allows scientists to study boiler erosion and corrosion – research that can benefit other industries with steam processes too.

- A **new research chair** at the University of Calgary will help oil sands companies measure the success of ongoing wetland reclamation. Leading wetlands scientist Jan Ciborowski, brings his passion for solving big environmental questions to the NSERC COSIA Industrial Research Chair in Oil Sands Wetland Reclamation.

- COSIA has been investigating the potential application of Small Modular Reactors (SMRs) in the oil sands, especially for bitumen recovery, mine extraction and bitumen upgrading. **Two feasibility assessments** found SMRs checked all the boxes except one, they were not yet cost-competitive.

Canada is already among the most responsible of the major oil producing countries. It ranks #1 for its environmental, social, and governance practices among the world's top oil reserve holders, and #2 overall among the largest 20 oil producing countries (BMO Capital Markets Report March 2020). Meeting Canada's climate targets is going to take collaborative effort from government, industries and academia to ensure we set the right policy, regulatory, and technological foundations for a reliable and affordable energy transition. Canada has a ready partner in the oil sands industry to take on the challenge. COSIA is proud to be an enabler and a means to achieving that goal sooner.

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About COSIA:
Canada's Oil Sands Innovation Alliance (COSIA) is a unique alliance of oil sands producers focused on accelerating environmental performance in Canada's oil sands. COSIA enables collaboration and innovation between thinkers from industry, government, academia and the wider public to improve measurement, accountability and performance in the oil sands across our environmental priority areas of greenhouse gases, land, water and tailings. COSIA members search the world for solutions to our toughest problems. And we have some of the best minds on the planet working on technologies to enable further responsible and sustainable development.

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