This abstract will be presented during LNG2023 conference on 10-13 July in Vancouver, Canada among many other innovative projects, ideas and outlooks. LNG2023 will provide a unique platform for the global LNG industry and key stakeholders to discuss, debate, and showcase the latest industry developments and opportunities.

LEAD AUTHOR

Mary Lee Safety & Sustainability Manager, Canada Integrated Gas, Shell Canada Ltd.

CO-AUTHORS

Jodie Didow Environment & Regulatory Lead - Canada Integrated Gas, Shell Canada Ltd.
Justine Keenan Environmental Engineer Air GHG - Canada Integrated Gas, Shell Canada Ltd.
Colin Wickenheiser Front End Manager, Canada Integrated Gas Shell Canada Ltd.
Nina Arvanitidis Corporate Relations Manager Shell Canada Ltd.

OPPORTUNITIES AND CHALLENGES TO DECARBONIZE UPSTREAM GAS PRODUCTION

In 2021, Shell launched its Global Powering Progress strategy, to accelerate the transition of our business to net-zero emissions, purposefully and profitably. LNG Canada (40% Shell interest), under construction in Kitimat, B.C., will enable the supply of increasingly lower-carbon and affordable energy by supporting the displacement of coal use in Asia. LNG Canada will have one of the lowest carbon intensities of any large-scale LNG export facility in the world, due to 1) highly efficient gas turbines, 2) renewable power from the BC hydro grid, and 3) lower CO2 composition feed gas from the Montney formation. This paper will highlight the journey towards decarbonizing Shell's upstream Groundbirch field, which will partially supply LNG Canada. Shell is committed to deliver on its target to become a net-zero emissions energy business by 2050. Since 2015, Groundbirch GHG intensity has reduced by 25%, driven by the electrification of the Saturn 1 gas processing facility and replacement of pneumatic devices to reduce methane venting on well sites. The key levers to grow carbon competitive gas supply and achieve further emissions reductions include further electrification of gas processing facilities and further methane abatement opportunities informed through improved methane measurement and reporting as part of Shell's participation in the Oil and Gas Methane Partnership 2.0. Further upstream decarbonization will require stable, predictable government policies and programs, technological innovation, clear pathways to project execution, and collaboration with Indigenous and local communities.