

Air

Mandate

The committee will support industry's desire for shared research development to develop credible and relevant information to address knowledge gaps in the understanding and management of high priority environmental and social matters. Our goal is to initiate credible research projects, both fundamental and applied, on existing and emerging environmental issues to support both development of new regulatory requirements and industry best practices.

This collaborative approach will engage subject matter experts, from industry, government, and academia, to identify, prioritize, and manage knowledge gaps resulting in research projects. These research projects will help in development of smart regulations, and best practices, and identification of potential technologies to find cost effective approach in managing and mitigating environmental footprint.

Focus

This committee works on high priority environmental and social matters related to methane emissions, air quality indicators, air emission inventories and stationary combustion.

2018 Public Policy Issues and Knowledge Gaps with Associated Projects

Public Policy Issue	Description	Associated Knowledge Gap(s)
Methane Emissions	<p>Contributing 43 per cent of Canada's national methane emissions, those industries involved in the production, processing, and storage of oil and gas resources in Canada are under scrutiny to further reduce methane emissions where able to do so. In many cases, regulatory action being deliberated is at a provincial, national, and international level.</p> <p>Note: PTAC will be issuing detailed Request for Proposals (RFPs) to address specific identified gaps in early 2021.</p>	<p>Methane emissions abatement options are highly source and process specific in nature, making it difficult to offer generic solutions for the affected industry. In order to address methane emissions more urgently, the oil and gas sector requires better and more innovative ready-to-deploy solutions to take action to reduce methane emissions in a technically achievable and economically sustainable manner.</p>
Air Quality Indicators	<p>Ambient air quality objectives are continuously being reviewed and updated, and industry is being required to meet more stringent targets. To determine the impact of such policy changes, it is important for industry to understand the contribution that upstream oil and gas facilities have to the substances being reviewed.</p>	<p>An accurate understanding of the potential release of substances subject to new or revised air quality objectives from the UOG industry is required. Additionally, if the substance is being released in quantities that may be subject to regulatory requirements, reasonable and cost-effective emission control options would need to be developed.</p>

<p>Air Emission Inventories</p>	<p>Air emissions inventories are becoming an increasingly important method of monitoring and reporting on industry emissions, for the public, governments, and individual companies. Further, governments are using these emissions inventories to negotiate international treaties, establish air emissions policy measures and targets, and develop emission forecasts. As such, it is important that upstream oil and gas operators report facility emissions using standardized methodologies and realistic emission factors with low uncertainty, and also have access to a wide variety of effective emissions monitoring technologies. Inaccurate and/or overly conservative emissions factors can result in an inaccurate portrayal of the emissions profile of the oil and gas industry. This in turn can lead to unnecessary or ineffective regulatory requirements, and additional public scrutiny.</p>	<p>The development of technically defensible and effective emission management policies and regulations is reliant upon good quality emissions data in order to both identify potential opportunities for emission reductions and to determine industry performance and emissions reductions in future years. There are opportunities to address this knowledge gap by investigating potential improvements to the certainty of quantification (emission factors and measurement technologies and methodologies), monitoring, data management, and reporting of emissions from the upstream oil and gas sector.</p> <p>Condensable PM emission from upstream oil and gas combustion equipment is identified as a potential knowledge gap.</p>
<p>Stationary Combustion</p>	<p>Conservation requirements in the upstream oil and gas industry have become more stringent over time due to both air quality and greenhouse gas issues. Industry is being asked to improve performance through the entire resource development process.</p>	<p>For industry to evaluate the impact of potential policy measures to control air pollutants and greenhouse gases, they need to assess emerging technologies that have not yet been proven for commercial use. To assess the suitability of the technology, industry requires knowledge of the overall reduction potential and cost effectiveness. To that end, there needs to be a broad understanding of the trade-offs and full environmental life-cycle of each technology (i.e., increased collateral emissions; specifically GHGs, carbon monoxide and unburned hydrocarbons, and additional fuel usage; when using natural gas fired reciprocating engines, etc.) so that a net environmental benefit is achieved through broad technological deployment.</p>