

Alt-FEMP Executive Summary

Company	Program start	Program end	# of sites
Cenovus Energy	July 25, 2023	December 31, 2024	513

Once an alternative fugitive emissions management program is approved, AER staff draft this executive summary. This is a summary only, published to help interested stakeholders understand what has been approved. These summaries are found on our website, www.aer.ca > Protecting What Matters > Holding Industry Accountable > Industry Performance > Methane Performance > [Alternative Fugitive Emission Management Program Approvals](#). For additional information on these approvals, contact methane.reduction@aer.ca.

Summary

Cenovus Energy is a Canadian-based integrated energy company headquartered in Calgary. We're committed to maximizing value by sustainably developing our assets in a safe, innovative and cost-efficient manner, integrating environmental, social, and governance considerations into our business plans.

We operate in Canada, the United States, and the Asia-Pacific region. Our operations include oil sands projects in northern Alberta, thermal and conventional crude oil and natural gas projects across Western Canada, offshore crude oil production in Newfoundland and Labrador, and offshore natural gas and liquids production in China and Indonesia. Cenovus's downstream operations include upgrading, refining, and marketing operations in Canada and the United States.

Throughout 2020 to 2022, Cenovus implemented leak detection and repair (LDAR) programs in accordance with the approved pilot alternative fugitive emissions management program (alt-FEMP), which was approved by the Alberta Energy Regulator in 2020.

Cenovus will implement a full-scale alt-FEMP at all of its 513 conventional facilities. The full-scale alt-FEMP will operate until December 2024.

The selected full-scale alternative program for this proposal is similar to the pilot alt-FEMP. The proposed alt-FEMP involves performing one OGI survey of all triannual facilities in spring 2023 and deploying aerial-based gas mapping LiDAR (a-LiDAR) screenings twice in 2023 and twice in 2024 throughout the program at all conventional facilities. Fugitive emissions reductions will occur at a fraction of the total sites, selecting those with the highest emissions. In this program, sites refer to legal subdivisions (LSDs). The selected alternative program is estimated to achieve similar fugitive emissions to the *Directive 060* default approach at a significantly decreased cost. This will also decrease safety risk by limiting the number of subcontractor hours in the field, a priority for Cenovus.

The two-year alt-FEMP methodology is as follows:

Step 1	OGI Survey	Conduct one OGI survey of all triannual facilities (per table 4 of <i>Directive 060</i>) in Q2 2023. This step will not be executed in 2024.
Step 2	Repair	All fugitive repairs will be made according to <i>Directive 060</i> timelines once a fugitive leak has been localized.
Step 3	Survey	<p>Conduct site-level screening. The selected alternative program will deploy four screening campaigns throughout the program:</p> <ol style="list-style-type: none"> 1) a-LiDAR screening, July 2023 2) a-LiDAR screening, October 2023 3) a-LiDAR screening, June 2024 4) a-LiDAR screening, October 2024 <p>The screening technology will capture both vented and fugitive emissions. Screening campaigns will occur more than three months apart, and a-LiDAR will be deployed in snow-free months. Before each screening, Cenovus will identify any changes to the list of sites and provide any necessary updates to screening contractor.</p>
Step 4	Rank	<p>Following each screening campaign, all sites (LSDs) will be ranked according to site-level emissions to determine the highest-emitting sites. These will be followed up using OGI technology for leak localization and repair. The list of sites requiring follow-up will include all sites with >500 m³/day of emissions (as required per the overall vent gas limit) and a selection of the sites with the largest emissions below 500 m³/day. The list of sites requiring follow-up will include the specified percentage of the total facility list. The number of sites for follow-up will be chosen such that this requirement is satisfied for each round of follow-up. The selected program has the following follow-up requirements after each screening event:</p> <ul style="list-style-type: none"> • Screening campaign 1 (July 2023): 25% follow-up • Screening campaign 2 (October 2023): 25% follow-up • Screening campaign 3 (June 2024): 25% follow-up • Screening campaign 4 (October 2024): 25% follow-up
Step 5	Follow-Up	Follow-up emissions localization will occur on the ground at the emitting sites (LSDs) outlined in Step 4. Here, fugitive emissions will be differentiated from vented emissions. Fugitive emissions will then be tagged and recorded for repair, while vented emissions will be recorded for potential future reduction programs.
Step 6	Repair	At follow-up sites, all fugitive repairs will be made according to <i>Directive 060</i> timelines once a fugitive leak has been localized.