

## Alt-FEMP Executive Summary

Company	Program start	Program end	# of sites
Enhance Energy Inc.	April 30, 2021	April 30, 2023	16

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](http://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](mailto:methane.reduction@ aer.ca).

### Summary

Enhance Energy Inc. (Enhance) will implement an alternative fugitive emission management program (alt-FEMP) in the Red Deer region using continuous measurement system. This system can detect new leaks on timescales of hours to days. Continuous measurement systems therefore have significant potential to (1) accurately characterize emissions patterns at each facility and (2) respond immediately to leaks, reducing time-integrated fugitive emissions to near zero.

The proposed pilot alt-FEMP will cover 16 Enhance sites in the Red Deer region already regulated under section 8 of *Directive 060*. Systems will be deployed at each of these sites to measure continuously for CH<sub>4</sub>, H<sub>2</sub>S, NO<sub>2</sub>, CO, and VOCs. For this pilot, close-range follow-up inspections will be scheduled as soon as a defined detection event is confirmed.

To ensure that the pilot is a success, the following measures will be incorporated: (1) use of independent optical gas imaging (OGI) camera surveys to validate system results; (2) intermittent use of portable organic vapour analyzers in accordance with the US Environmental Protection Agency's Method 21 by the proponent to verify emissions sources; (3) the deployment of more devices than is likely required; (4) the adoption of conservative deployment distances; and (5) the use of third-party run LDAR-Sim modelling to estimate program performance and support the proposal submission.

The supporting modelling that was conducted demonstrated that emissions remain much lower when leaks are quickly resolved as opposed to waiting between annual or triannual OGI surveys. The model resulted estimate total methane emissions over two years to be 27 734 kg under the baseline scenario and 13 397 kg under the regulatory OGI program. Total program emissions for the alternative program range from 3774 kg to 10 720 kg, depending on the deployment date.

Finally, if anomalous emissions from venting or incomplete combustion are identified, Enhance will consider additional mitigation efforts.