OVERVIEW OF OIL & GAS PROJECT:

NAME OF COMPANY: Devon Canada Corporation
LOCATION: Various Devon operated wells, batteries and gas plants primarily in the Fort St. John and Fort Nelson regions of British Columbia (BC).
RELEVANT SECTOR OF THE OIL AND NATURAL GAS INDUSTRY: Production
DESCRIPTION OF THE METHANE EMISSION REDUCTION OPPORTUNITY: Pneumatic controllers use a pressurized gas for applications in the oil and gas production industry, to regulate process variables such as pressure, flow rate and liquid level. Pneumatic equipment is used because electricity is not readily available at remote production sites. Most pneumatic controllers are powered by natural gas and designed to discharge natural gas to the atmosphere as a part of normal operations.

ESTIMATED ANNUAL EMISSION REDUCTIONS: 714,000 m$^3$ natural gas / 9,800 TCO$_2$E

PROJECT DETAILS

This project has been implemented; however, monitoring and carbon offset creation activities are ongoing.

Devon has approximately 250 pneumatic controllers in BC that vent gas to the atmosphere. Emission reductions are achieved through the conversion of high bleed controllers to low or no-bleed. Depending on the make and model of the pre-existing controller, this involves either a Mizer valve retrofit or the installation of a new low bleed controller. Gas that is not vented as a result of the project is fuel gas consumed on-site or sales gas.

Devon hired a third party consultant to measure the flow rate from all high and low bleed controllers using a high flow sampler. This work also involved the completion of a detailed controller inventory. This information will be used to refine emission reductions estimates and project economics, and is required to develop and verify the associated offset credits.

The project was partially funded through offset credit revenues and would not have been economic without this revenue, based on current natural gas prices. Devon is working with the Prasino Group and CapOp Energy to develop the carbon offsets as part of an aggregation program. Offsets are currently under development and will be sold to the Pacific Carbon Trust. Validation was completed in December 2012.

PROJECT DEVELOPMENT PLAN

Project was implemented between March 2009 and December 2012. The low bleed controllers that were replaced in 2009 have been successfully operating for several years.

DISCLAIMER: The information and predictions contained within this poster are based on the data provided by the site owners and operators. The Global Methane Initiative cannot take responsibility for the accuracy of this data.
PROPOSED TECHNOLOGIES

ECONOMIC ANALYSIS/BENEFITS (anticipated)

Assumptions:

• Number of pneumatic controllers converted: 256
• Avoided bleed rate: 15 scf/hr/controller
• Cost per low bleed conversion: $1,000-$2,000
• No incremental operating costs
• Discount rate: 10%
• Offsets generated from ~1/3 of conversions and developed through aggregation program to decrease development costs

PROJECT FINANCES

• Projected capital costs: CDN$ 384,000 (for conversion of 256 controllers)
• Projected operation and maintenance costs for fully implemented project: CDN$ 0/year (no incremental costs)

FOR MORE INFORMATION

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