

Coal-to-Gas Unit Conversion NO_x Emission Standard Agreement: Consensus Advice to the Government of Alberta from the Clean Air Strategic Alliance (CASA)

Approved by CASA Board of Directors December 13, 2017.

In October 2017 the Deputy Minister of Alberta Environment and Parks, Andre Corbould, asked CASA to convene a multi-stakeholder working group to develop a recommendation to the Government of Alberta (GoA) for a NO_x emission standard for electricity generation units that convert their fuel source from coal to gas (CTG). The timeline for completion was to be December 31, 2017. This two-page document is the consensus recommendation that was approved at the December 13, 2017 CASA board meeting. A more detailed report will also be provided to Deputy Minister Corbould. That report will provide more rationale and reflects the perspectives of working group members but has not been approved by consensus. Neither this recommendation nor the report will be made publicly available by CASA until such release is approved by the GoA. The working group members and CASA's Board of Directors agree by consensus to provide the GoA with the following advice.

Overarching Concept

Stakeholders agree with the benefits of and need for coal-to-gas conversion in terms of transitioning to cleaner electricity generation as well as the need to provide investment clarity for operators with regard to environmental performance and regulatory certainty.

For Subcritical Units

Benchmark

- Emission intensity benchmark to be the NO_x Baseline Emission Rate per unit.

NO_x emission standard for a CTG unit conversion

- Compliance limit of 50% NO_x emission reduction below the benchmark.

Technology requirements for a CTG unit conversion

- Design target of 55% NO_x emission reduction below the benchmark.
- How the operator intends to achieve this will be documented in the amendment application.

Allowable lifespan

- Operational life is aligned with federal greenhouse gas regulation for converted coal units.
- Once converted, the above coal-to-gas NO_x emission standard will be maintained until the proposed federal end of life for that converted coal unit

For Supercritical Units

- The pre-existing NO_x emission standard will continue to apply until federal end of life for that converted unit.

- Relative to subcritical units, supercritical units are already low NO_x emitters.

Reporting for Subcritical and Supercritical Units

Reporting Obligation

- All coal-to-gas unit conversions will continue to report NO_x emissions to demonstrate emission reductions achieved.

Annual NO_x Mass Emission Performance Reporting Obligation

- Annual performance reporting obligation is based on 50% of benchmark emission intensity (kg/MWh) x NET MCR (MW) x 8760 hours
 - Net MCR – Maximum Continuous Rating as reported by AESO
- If an exceedance is identified in the annual performance reporting obligation, it will require an explanation and what can be done to prevent it from re-occurring.
- Start/Stop annual mass emissions = annual mass emissions for periods ramping up to the minimum stable load reported by AESO, and down from minimum stable load to off-line.
- Total annual mass emissions = start/stop annual mass emissions + annual performance reporting obligation.
- The performance obligation is meant to show, on an annual basis the environmental improvements achieved by a coal-to-gas unit conversion, and is to be used for reporting purposes only.

Further Details of a NO_x Emission Standard for Coal-to-Gas Converted Units

Annual Emission Intensity Compliance Test

- Conduct an annual test to show compliance with emission intensity using a manual stack survey or existing CEMS equipment under optimal operating conditions at or near MCR.
- Determine compliance through an annual emission intensity compliance test. Compliance is applied in accordance with the [Compliance Assurance Program](#).

Commissioning Period

- The compliance emission intensity limit will come into effect approximately one year after the coal-to-gas unit conversion to allow for the commissioning, tuning and optimizing of the unit.
- Criteria
 - Commissioned: the unit is fully commissioned, meets performance guarantee and is safe and reliable for commercial operation.
 - First test is completed within 12 months of the commissioned date then annually thereafter. Commissioned date is established during the amendment process and will appear in the EPEA Approval.