

Yukon Conservation Society (YCS) Information Requests ATCO Electric Yukon (YECL) 2016-2017 GRA

July 11, 2016

YCS-YECL-1

“reduce environmental impacts...”

1a) Please describe how “ATCO Electric Yukon is committed to working with governments, First Nation communities and customers to reduce the environmental impact of power generation in the Yukon.” (12-1 lines 20-22) Thank you for sharing specific examples and broad company objectives.

1b) Please describe what ATCO Electric Yukon understands the environmental impact of power generation to be.

1c) Please explain whether ATCO Electric Yukon believes that its fossil fuel substitution of LNG for diesel will reduce the environmental impact of power generation in the Yukon.

YCS-YECL-2

“eliminate dependence on diesel... with renewable clean energy.”

“Prime Minister Justin Trudeau and the provincial and territorial Premiers announced they would take action to eliminate the dependence on diesel in Indigenous, remote and northern communities with renewable, clean energy.”
(12-1 lines 13-16)

2a) How does ATCO Electric Yukon believe that a significant investment (\$5million for two phases in Watson Lake) in infrastructure to burn another fossil fuel, LNG, with diesel helps meet or support the objective to eliminate the dependence on diesel in remote communities with renewable, clean energy?

2b) Does ATCO Electric Yukon consider LNG to be renewable and/or clean energy?

2c) What other strategies, programs or technologies has ATCO Electric Yukon proposed or implemented to reduce the environmental, climate and financial costs of burning diesel in off grid communities in the last ten years including efforts to reduce demand such as LED streetlights?

2d) Because fossil fuel consumption is problematic for many reasons, presumably the First Ministers were not only referring to electricity generation when they committed to

eliminating the dependence on diesel in remote communities. What strategies will ATCO Electric Yukon investigate and employ to replace diesel and other fossil fuels in space heating and transportation with renewable electricity?

2e) Does ATCO Electric Yukon see any market, business and growth potential and value in displacing fossil fuels in the communities it currently serves with diesel?

YCS-YECL-3

Renewable and Alternative Energy Study

3a) Please describe how ATCO Electric Yukon defines “renewable energy” and “alternative energy” including the generation sources that it would include in those definitions.

3b) Please provide details of the scope, methodology, timeline and researchers proposed to complete a Renewable and Alternative Energy Study for each of ATCO’s off grid communities.

3c) When will the Renewable and Alternative Energy Studies for each of ATCO Electric Yukon’s off-grid communities be made available to the public?

3d) What kind of demand side management, load management and fossil fuel displacement technologies will be included in the studies?

3e) What options around energy storage technology will be investigated?

3f) What is ATCO Electric Yukon’s perspective on electric thermal storage in its off-grid communities to both maximize integration of intermittent renewables and displace fossil fuels in space heating?

YCS-YECL-4

LNG Boil Off Gas

Appendix 3 page 2 reads:

“Without refrigeration, LNG naturally begins to vaporize over time as it slowly gains energy from the ambient atmosphere, making long term storage expensive. Continuous operation mitigates the challenge of long term storage, as the LNG is consistently drawn down and replenished, keeping the system cool. The addition of another LNG storage tank will ensure there is sufficient onsite storage of fuel during operations in Phase 2 and an offload pump will be necessary to increase the speed of transfer of the LNG from the shipper to the storage tanks.”

4a) Please explain what will happen with LNG storage issues when ATCO or an IPP develops renewable energy for Watson Lake, and the existing diesel and proposed LNG/diesel generating facility becomes backup, not baseload.

Even if the supply of LNG will be consistently drawn down and replenished for continuous baseload generation, boil off gas in the LNG tanks will result.

4b) What volume of boil off gas does ATCO Electric Yukon predict will result from LNG storage?

4c) What is ATCO Electric Yukon’s plan for utilization of boil off gas?

4d) Can boil off gas be burned in the modified generators, or will a different end use need to be established as is the case at Yukon Energy’s LNG plant?

YCS-YECL-5

Renewable energy v. fossil fuel generation

5a) What would be ATCO Electric Yukon’s motivation or reason for developing renewable energy once significant investments in LNG modifications and infrastructure at diesel generating stations are made in Watson Lake and/or other off-grid communities?

5b) How does ATCO Electric Yukon currently participate in the development of renewable energy in off grid communities?

5c) How does or will ATCO Electric Yukon fit renewable energy development into its business plan when it is part of the ATCO Group of Companies that is largely in the business of natural gas transmission, distribution and infrastructure development, not renewable energy development?

5d) What assurances do Yukon people have that ATCO will support the goals and desires of governments and communities to displace fossil fuel electricity generation, and build renewable energy generation (or support IPPs to do so)?

“Business Drivers and Benefits

Meeting Federal and Yukon Goals

The Federal and Yukon governments have indicated a strong desire to reduce or eliminate dependence on diesel fuel in northern and remote communities. The implementation of the Watson Lake Bi-Fuel meets this goal while allowing for future renewable power generation.” (Appendix 3 page 7)

5e) Please explain how ATCO believes that investment in LNG/diesel generation will allow for future renewable power generation, not be a barrier to it.

“LNG is currently transported through the Yukon for power generation by Yukon Energy Corporation in Whitehorse and the Northwest Territories Power Corporation in Inuvik. Increasing the volume of consumption could offer further advantages to customers through economies of scale.” (Appendix 3 page 8)

5f) Please explain what is meant by further advantages of increasing the volume of consumption of LNG through economies of scale.

5g) In ATCO Electric Yukon’s Business Case Appendix 3, Evaluation of Viable Alternatives, only status quo or fossil fuel options are described. Please explain why no renewable energy options to reduce diesel reliance are discussed.

YCS-YECL-6

LNG/methane/natural gas infrastructure creep

6a) What is ATCO’s plan for LNG in other communities it currently serves by burning diesel?

6b) What assurance does the public have that ATCO Electric Yukon and or ATCO Gas will not use the proposed LNG storage tanks in Watson Lake as a starting point to distribute natural gas?

6c) Does ATCO Electric Yukon or ATCO Gas have plans or intentions to distribute or sell LNG or natural gas in the community of Watson Lake or other Yukon communities for purposes other than electricity generation?

YCS-YECL-7

Air emissions monitoring

Air emissions from burning diesel with LNG will be different from those resulting from burning exclusively diesel.

7a) Please describe the air emissions monitoring system and program (including technology, reporting and costs) that ATCO will have in place for Phase 1 Watson Lake Bi-Fuel Project.