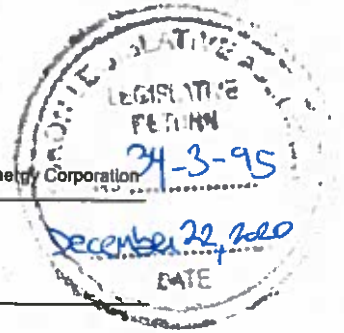


LEGISLATIVE RETURN



SUBMITTED BY: Hon. Mr. Pillai, Minister responsible for the Yukon Development Corporation and the Yukon Energy Corporation

1. On _____, (Member)

- asked the following question during the Oral Question Period at page(s) _____ of *Hansard*
- submitted the following written question – WQ No. _____
- gave notice of the following motion for the production of papers – MPP No. _____

RE: _____

OR

2. This legislative return relates to a matter outstanding from discussion with Mr. Kent, Member for Copperbelt South on December 15, 2020 related to:

Bill No. _____ Second Reading Third Reading

Committee of the Whole: Witnesses: YDL; YEL

Motion No. _____ RE: cost options for the 20 megawatt thermal facility
at page(s) 2410 of *Hansard*.

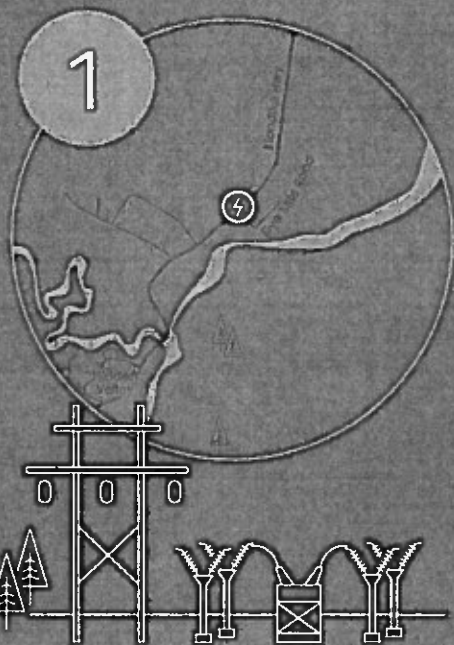
The response is as follows:

Information pieces that show the results of that analysis are included as attachments to this return.

December 17, 2020

Date


Signature



PROPOSED LOCATION 1:

beside Yukon Energy's Takhini substation

we want your input

site characteristics

ENVIRONMENTAL CONSIDERATIONS

- No species at risk
- No rare plants, fish or wildlife
- Some shrub swamp and sedge wetland near the proposed site

SOCIAL CONSIDERATIONS

- Greenfield site
- Located beside existing substation
- Recreation area
- No significant air quality or noise impacts expected

ECONOMIC CONSIDERATIONS

- Site is not vulnerable to climate change
- Site soil and other conditions suitable for construction
- Possible positive impacts on local economy if third-party natural gas depot is constructed
- Site is not subject to municipal taxes

DISTANCE TO NEAREST RESIDENCE

- Approx. 300 metres

TOTAL 40-YEAR COST TO BUILD, OPERATE AND MAINTAIN*

LNG

- Own: \$128.7M
- Rent: \$184M

DIESEL

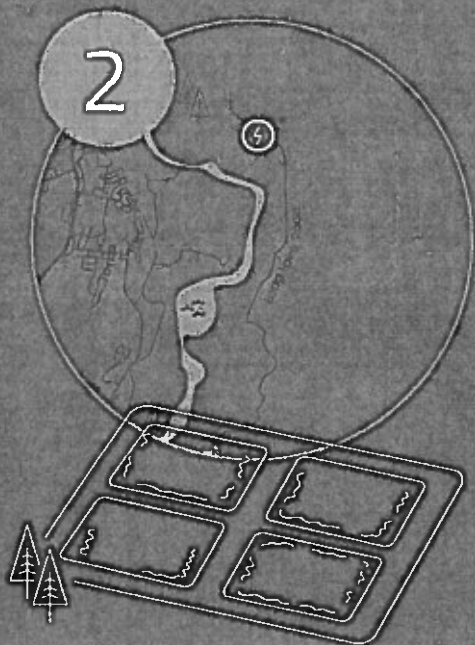
- Own: \$98.1M
- Rent: \$122.4M

NATURAL GAS (only feasible if third-party LNG depot is built)

- Own: \$101.4M
- Rent: \$157.3M

*-15% / + 50%





PROPOSED LOCATION 2:

near the Whitehorse sewage lagoon

we want your input

site characteristics

ENVIRONMENTAL CONSIDERATIONS

- No species at risk
- No rare plants, fish or wildlife
- Olive-sided Flycatchers may be in the area
- Moose may be in the area during winter
- Near the Laberge/Carcross caribou herd range

SOCIAL CONSIDERATIONS

- Existing domestic wastewater disposal and treatment site
- Not near property developments or recreation areas
- Increased heavy fuel-truck traffic on Riverdale Bridge, Hospital Road, Wickstrom Road and Long Lake Road
- New substation will be required
- Road upgrades will be required
- No significant air quality or noise impacts expected

ECONOMIC CONSIDERATIONS

- Site is not vulnerable to climate change
- Site soil and other conditions suitable for construction

DISTANCE TO NEAREST RESIDENCE

- Approx. 2,200 metres

TOTAL 40-YEAR COST TO BUILD, OPERATE AND MAINTAIN*

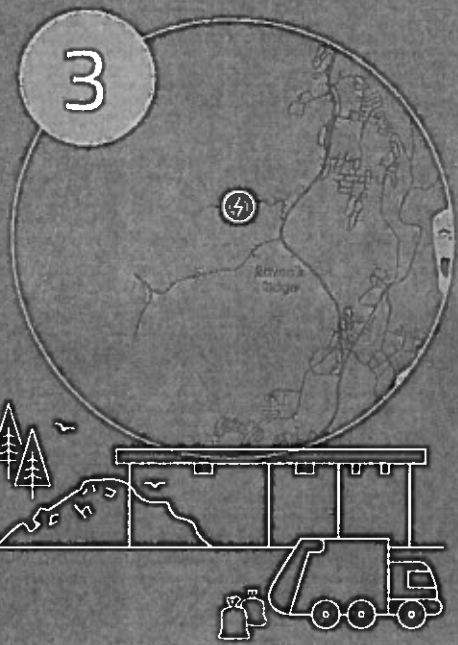
LNG

- Own: \$146.9M
- Rent: \$195.38M

DIESEL

- Own: \$107.7M
- Rent: \$127.9M

*-15% / + 50%



PROPOSED LOCATION 3:

at the Whitehorse landfill

we want your input

site characteristics

ENVIRONMENTAL CONSIDERATIONS

- No species at risk
- No rare plants, fish or wildlife
- Olive-sided Flycatchers may be in the area

SOCIAL CONSIDERATIONS

- Existing industrial site
- Not near property developments or recreation areas
- No significant air quality or noise impacts expected

ECONOMIC CONSIDERATIONS

- Site is not vulnerable to climate change
- Site soil and other conditions suitable for construction

DISTANCE TO NEAREST RESIDENCE

- Approx. 1,500 metres

TOTAL 40-YEAR COST TO BUILD, OPERATE AND MAINTAIN*

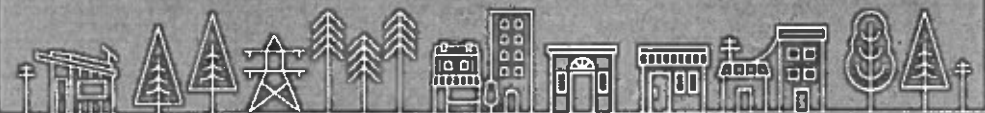
LNG

- Own: \$144.6M
- Rent: \$193.4M

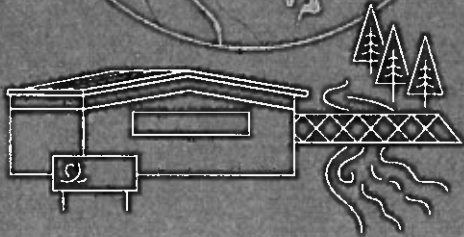
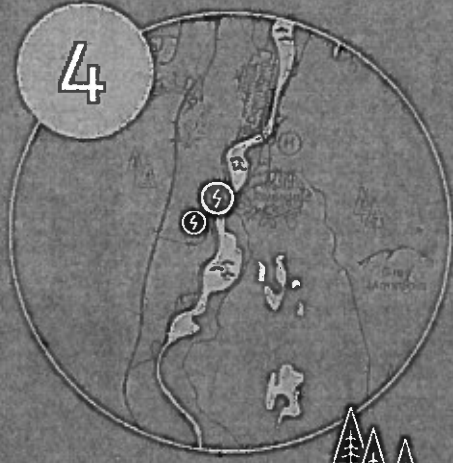
DIESEL

- Own: \$105.5M
- Rent: \$125.7M

*-15% / + 50%



4



PROPOSED LOCATION 4:

at Yukon Energy's Whitehorse diesel plant

site characteristics

ENVIRONMENTAL CONSIDERATIONS

- No species at risk
- No rare plants, fish or wildlife
- Close to the Yukon River

SOCIAL CONSIDERATIONS

- Existing industrial site with more than 50 years of similar operations
- Not near property developments or recreation areas

ECONOMIC CONSIDERATIONS

- Site is not vulnerable to climate change
- Site soil and other conditions suitable for construction

DISTANCE TO NEAREST RESIDENCE

- Approx. 200 metres

TOTAL 40-YEAR COST TO BUILD, OPERATE AND MAINTAIN*

DIESEL

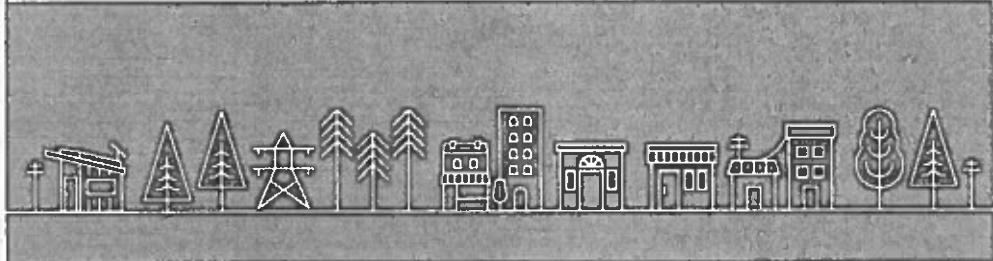
- Own: \$116.3M

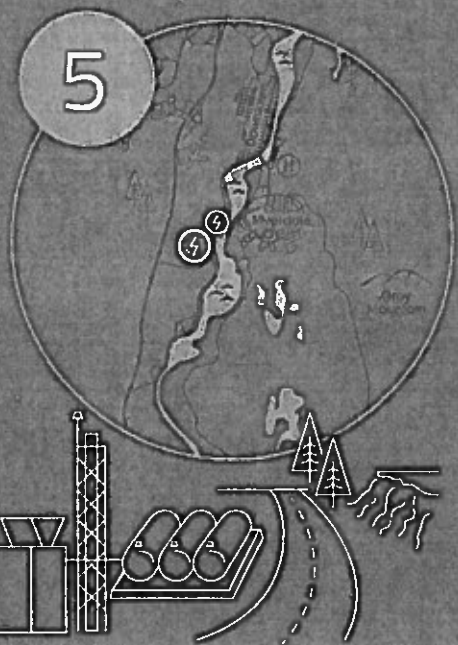
DUAL-FUEL

- Own: \$123M

*-15% / + 50%

we want your input





PROPOSED LOCATION 5:

across from our LNG generating facilities

we want your input

site characteristics

ENVIRONMENTAL CONSIDERATIONS

- No species at risk
- No rare plants, fish or wildlife
- Olive-sided Flycatchers may be in the area

SOCIAL CONSIDERATIONS

- Exhaust plume in flight-path to the Whitehorse International Airport
- Not near property developments or recreation areas
- Rezoning required

ECONOMIC CONSIDERATIONS

- Site is not vulnerable to climate change
- Site soil and other conditions suitable for construction
- On Ta'an Kwäch'än Council Settlement Land
- Opportunity for First Nations land development

DISTANCE TO NEAREST RESIDENCE

- Approx. 900 metres

TOTAL 40-YEAR COST TO BUILD, OPERATE AND MAINTAIN*

LNG

- Own: \$143.8M
- Rent: \$192.7M

DIESEL

- Own: \$104.8M
- Rent: \$125M

*-15% / + 50%

