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Mackenzie Valley Environmental Impact Review Board  
200 Scotia Centre  
PO Box 938, 5102-50th Ave  
Yellowknife, NT X1A 2N7

April 26<sup>th</sup>, 2010

**RE: Dézé Energy Response to April 14<sup>th</sup> Information Requests from Parks Canada, Environment Canada, Indian and Northern Affairs Canada, and property owners in the area.**

Please find attached with this letter Dézé Energy's responses to the routing information requests accepted by the Mackenzie Valley Environmental Impact Review Board from Parks Canada, Environment Canada, Indian and Northern Affairs Canada, and property owners in the area.

I can be reached at 867.766.5078 or via email at [dgrabke@ntpc.com](mailto:dgrabke@ntpc.com) should you require any additional information or clarification.

Regards,

A handwritten signature in black ink, appearing to read 'Dan Grabke', written in a cursive style.

Dan Grabke,  
Managing Director  
Dézé Energy Corporation

## TALTSON EXPANSION PROJECT RESPONSE TO ROUTING INFORMATION REQUESTS

IR #	AGENCY	REQUEST
<b>INAC 1</b>	<b>Indian &amp; Northern Affairs Canada</b>	<p>That Dezé provide the following information regarding its efforts to engage with groups and individual that may be potentially affected by the Reliance route adjustment:</p> <ol style="list-style-type: none"> <li>1. A description of community engagement efforts undertaken by the developer, including location, meeting times and dates, individuals and organizations consulted with, mode of communication and topics of discussion;</li> <li>2. Methods used to identify, inform and solicit input from potentially-interested parties and persons;</li> <li>3. A description of any commitments or agreements made in response to issue raised during the community engagements, and how these commitments altered the planning of the proposed development; and</li> <li>4. A description of issues that remain unresolved, as well of any documentation of further efforts to help resolve them.</li> </ol>
<b>INAC 2</b>	<b>Indian &amp; Northern Affairs Canada</b>	<p>That Dezé Energy Corporation provide:</p> <ol style="list-style-type: none"> <li>1. Additional details on the depth and sediment types at the underwater crossing between Maufelly Point and Fairchild Point;</li> <li>2. A description of the rock fracturing that may be required and the methods anticipated to conduct this fracturing and excavation;</li> <li>3. The details associated with the burial of cables at depth, if necessary, and near shore (including the required depth and width of any channelling);</li> <li>4. The methods and material requirements to cover the cables such that ice abrasion, scouring and erosion does not occur during placement and over time; and</li> <li>5. Details on the description of the work and whether machinery will be required to work within the water and near the shoreline.</li> </ol>
<b>Property Owners 1</b>	<b>Various Property Owners</b>	<p>That Dezé Energy provide the following information:</p> <ol style="list-style-type: none"> <li>1. Who will decide the final route for the transmission line crossing of the Lockhart River?</li> <li>2. What role will the proposed routing committee play in relation to that decision and who will sit on the routing committee? Will the decisions of the routing committee be made available to the public?</li> <li>3. Under what circumstances might Dezé reverse its decision not to propose the Reliance Adjustment?</li> <li>4. What criteria will be used to choose the final location for the transmission line crossing of the Lockhart River?</li> <li>5. What is the timing associated with making the final decision on the location of the final location for the transmission line crossing of the Lockhart River?</li> </ol>
<b>EC 1</b>	<b>Environment Canada</b>	<p>For the Proponent to assess the potential impacts that the alternate Reliance adjustment may have on migratory birds (including waterfowl) and/or their habitat, suggest mitigation measures to avoid or lessen impacts, and describe any monitoring that may be required to determine the effectiveness of mitigation and/or identify where further mitigation is required.</p>
<b>EC 2</b>	<b>Environment Canada</b>	<p>For the Proponent to do an assessment of the Reliance Adjustment on Species at Risk and describe any applicable mitigation and monitoring measures, as outlined in the Terms of Reference.</p>

IR #	AGENCY	REQUEST
<b>Parks 1</b>	<b>Parks Canada</b>	<ol style="list-style-type: none"> <li>1. That the Dezé Energy Corporation provide the specific locations (latitude/longitude with datum specified) of the tourist destinations used in the original viewshed analysis, and a GIS file (ESRI shapefile format) of the proposed transmission line route, including the crossing of the Lockhart River identified in the Dezé letter March 26, 2010.</li> <li>2. That the Dezé Energy Corporation confirm that the viewshed analysis presented in the DAR is in reference to this specific transmission line routing.</li> <li>3. That the Dezé Energy Corporation expand the viewshed analysis in the DAR (Table 15.10.5) adding an analysis from the following key viewpoints, as identified by Parks Canada: Tyrell Falls, Pike's Portage near Burr Lake, Parry Falls (Old Lady of the Falls) 100 m upstream, and Old Fort Reliance National Historic Site</li> <li>4. That where Dezé Energy Corporation has access to existing photos from key viewpoints, that these be used to prepare an initial visual graphic to illustrate the proposed transmission line in the proposed East Arm Park area.</li> </ol>
<b>Parks 2</b>	<b>Parks Canada</b>	<p>Dezé is not prepared to conduct a viewshed analysis of the Reliance Adjustment at this time. The alignment illustrated by Dezé the March 26th letter was conceptual, and as such has several deficiencies, including that:</p> <ul style="list-style-type: none"> <li>• there have not yet been engineering investigations to confirm line feasibility from a design perspective,</li> <li>• there have not yet been environmental field investigations to identify local environmental sensitivities,</li> <li>• it has not been screened for overlap with third-party interests (such as land use permits or mineral claims), and</li> <li>• topographic data for that area is very poor, so the results of the viewshed analysis at may be misleading at the small scale of analysis requested.</li> </ul>
<b>Parks 3</b>	<b>Parks Canada</b>	<p>That Dezé Energy Corporation provide an overview of the feasibility of using directional drilling, whereby the transmission line crosses under the Lockhart River. The analysis should refer to technical and economic feasibility, and should also refer to additional biophysical environmental effects from new construction and access requirements, if appropriate.</p>

## INFORMATION REQUEST # INAC-1

### Source

Indian and Northern Affairs Canada

### Request

That Dézé provide the following information regarding its efforts to engage with groups and individual that may be potentially affected by the Reliance route adjustment:

5. A description of community engagement efforts undertaken by the developer, including location, meeting times and dates, individuals and organizations consulted with, mode of communication and topics of discussion;
6. Methods used to identify, inform and solicit input from potentially-interested parties and persons;
7. A description of any commitments or agreements made in response to issue raised during the community engagements, and how these commitments altered the planning of the proposed development; and
8. A description of issues that remain unresolved, as well of any documentation of further efforts to help resolve them.

### Response

Dézé has been engaged in consultations with parties having an interest in the Project since 2003. For example, the Taltson Hydroelectric Expansion Project Consultation History and Plan, dated May 2007 was filed in connection with the Preliminary Screening of the Project and has since been place on the Public Registry for this proceeding.

### Question 1

Dezé confirms the following information with respect to consultation with groups and individuals that may be potentially affected by the Reliance Adjustment:

Community / Stakeholder	Meeting/Consultation Particulars	Mode of Communication	Discussion Topics
LKDFN	March 25, 2010.	In person meeting.	<ul style="list-style-type: none"> <li>• Project outline;</li> <li>• Crossing locations and methods;</li> <li>• Compensation;</li> <li>• Timing;</li> <li>• Construction methods;</li> <li>• Business and Employment opportunities.</li> </ul>
Roger Catling	February 11, 2010.	In person meeting.	<ul style="list-style-type: none"> <li>• Project outline;</li> <li>• Crossing locations and methods;</li> <li>• Water depths;</li> <li>• Timing;</li> <li>• Sensitive areas;</li> <li>• Wildlife;</li> <li>• Employment opportunities;</li> <li>• Construction methods.</li> </ul>
Ray and Spencer Decorby	March 26, 2010	In person meeting.	<ul style="list-style-type: none"> <li>• Project outline;</li> <li>• Crossing locations and methods;</li> <li>• Timing;</li> <li>• Sensitive areas;</li> <li>• Wildlife;</li> <li>• Construction methods;</li> <li>• Other alternatives.</li> </ul>

### Question 2

Dezé engaged in a variety of methods to identify, inform and solicit input from potentially-interested parties and persons. E-mails providing a general description of the proposed adjustment, and an offer to meet and discuss it, were sent out to local property owners and users in the Reliance area (DeCorbys, Finlayson, Catling and Olesens) on February 4 to 9, 2010. Further, as noted on the Public Registry, the Board provided notices by phone or e-mail to the DeCorbys, Finlayson, Catling and the Olesens in early February, 2010.

### **Question 3**

Dezé confirms that a number of commitments were made in response to issues raised during its consultation activities with respect to the Reliance Adjustment, as set forth below:

- Marine cable crossing between Maufelly Point and Fairchild Point;
- Strive to locate termination structures and transmission line on north sides of points to minimize view from properties;
- using lower profile wood poles or weathering steel structures that may have less of an aesthetic impact; and
- Curving the transmission line routing with topography to find the most innocuous alignment.

### **Question 4**

As of the current time, Dézé confirms that the following issues remain unresolved with respect to the Reliance Adjustment:

- Precise location of marine crossing and terminal structures;
- archaeological assessment of the transmission line and construction access routes;
- raptor nest surveys along the route;
- engineering studies for detailed design;
- traditional knowledge gathering;
- consultation with existing users of the area, including Trophy Lodge; and
- discussions with parties, including but not limited to LKDFN and Parks Canada.

### **References**

INAC Letter to MVEIRB, Feb. 18, 2010, p.2.

Dezé Closing Statement, Feb. 24, 2010, pp 9-10.

Dezé Letter to MVEIRB – Final Position on Crossing the Lockhart River, March 26, 2010, p.2.

## INFORMATION REQUEST # INAC-2

### Source

Indian and Northern Affairs Canada

### Request

That Dezé Energy Corporation provide:

6. Additional details on the depth and sediment types at the underwater crossing between Maufelly Point and Fairchild Point;
7. A description of the rock fracturing that may be required and the methods anticipated to conduct this fracturing and excavation;
8. The details associated with the burial of cables at depth, if necessary, and near shore (including the required depth and width of any channelling);
9. The methods and material requirements to cover the cables such that ice abrasion, scouring and erosion does not occur during placement and over time; and
10. Details on the description of the work and whether machinery will be required to work within the water and near the shoreline.

### Response

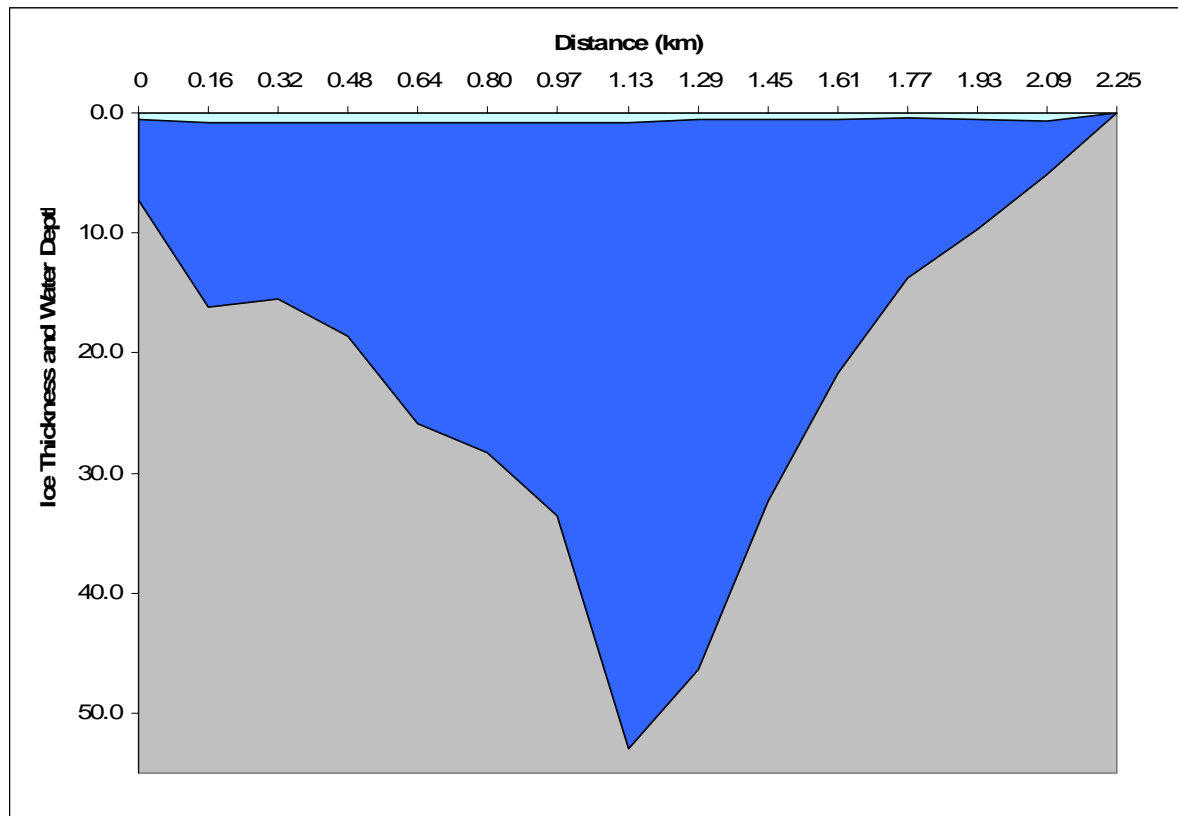
Dezé Energy submitted to the MVEIRB the preferred and proposed route option, which crosses over the Lockhart River, dismissing the Maufelly Point crossing. However, Dezé recognizes that Parties may still have outstanding questions in regard to the Maufelly Point crossing, therefore provides the requested information below.

The marine cable was proposed to be laid on the lake bottom; therefore, preliminary crossing location depth and cross-sectional information was gathered in March 2010 and is shown in figures 1 and 2 below.

**Figure 1. Water and Ice Measurement Transect – March 2010**



**Figure 2. Ice and Water Depth along Transect (from Maufelly Point to Fairchild Point)**



Based on the preliminary depth measurements, the crossing location depths are amiable for placement of an underwater cable. As the works would be conducted according to the Fisheries and Oceans Canada, Northwest Territories Operational Statement: Underwater Cables (V.3), effects to fish and fish habitat would be mitigated. This would include water quality associated with bottom sediment conditions and machine use in near-shore environments, among others. In addition, the DFO Operational Statement also requires that.

- cable trenching is limited to near shore areas and is to be no greater in width than that required to accommodate the cable, and
- any near shore excavation to bury the cable extends a maximum total of 10 metres measured horizontally from the ordinary high water mark (HWM).

The depth of any cable channeling in near-shore areas would be determined by a qualified engineer during the design stage, in consideration of specific site conditions. Near-stream or in-stream construction works would follow the mitigation measures presented in the DAR, and specifically the Sediment and Erosion Control Plan.

Rock fracturing would likely be required in the near-shore area. This would be conducted through a combination of explosives and machinery use. Blasting activities would be conducted as per other near-stream works presented in the DAR, including use of water resistant explosives or emulsions among other mitigation measures.



Excavation would be required to bury the cables in the near-shore environment. Methods and material requirements to cover cables such that ice abrasion, scouring and erosion do not occur, would be determined by a qualified engineer during detailed design. The materials and methods may include the use of appropriate bedding and cover material within the trench, if required, and appropriate infill material at recommended compaction densities or rock diameter to provide adequate protection from environmental forces.

As noted in the DFO Operational Statement, the placement of underwater cables is preferable to using unconfined open trench methods, which bury the cables within the substrate at the bottom of the waterbody. Placing cable on the bottom avoids the need for machinery use in the water and typically generates less sediment. As the marine cable would be placed, the substrate conditions would be considered during the design process.

### **References**

Fisheries and Oceans Canada, Northwest Territories Operational Statement: Underwater Cables, Version 3.0. URL: <http://www.dfo-mpo.gc.ca/regions/central/habitat/os-eo/provinces-territoires-territoires/nt/os-eo19-eng.htm>. Accessed April 19, 2010.

## INFORMATION REQUEST # PROPERTY OWNERS -1

### Source

Raymond Decorby, Spencer Decorby and Wallace Finlayson, property owners potentially affected by the Reliance Adjustment

### Request

That Dézé Energy provide the following information:

1. Who will decide the final route for the transmission line crossing of the Lockhart River?
2. What role will the proposed routing committee play in relation to that decision and who will sit on the routing committee? Will the decisions of the routing committee be made available to the public?
3. Under what circumstances might Dézé reverse its decision not to propose the Reliance Adjustment?
4. What criteria will be used to choose the final location for the transmission line crossing of the Lockhart River?
5. What is the timing associated with making the final decision on the location of the final location for the transmission line crossing of the Lockhart River?

### Response

#### Question 1

As Dézé is the proponent of the Project, it makes decisions with respect to all aspects of the Project, including a crossing at the Lockhart River. Dézé confirms that the inland crossing of the Lockhart River set out in the DAR is the proposed and preferred alignment.

The final location of the river crossing will be determined by Dézé after taking into account the following information:

1. The recommendations (if any) made by a stakeholder routing committee on crossing locations and methods;
2. The recommendations of approval (if any) issued by the Board;
3. The recommendations (if any) issued by other regulators issuing approvals for the Project;
4. The results of any required follow up and confirmatory studies;
5. Review and confirmation of final design and construction plans; and
6. Review and confirmation of final project economics.

#### Question 2

The scope, role and composition of Dézé's routing committee is under consideration and will be determined in due course. However, Dézé expects that the routing committee for an inland crossing will provide recommendations with respect to crossing locations and methods, and will be composed of representatives from the LKDFN, Parks Canada, Environment Canada, DFO, and INAC.



Until the routing committee is struck, and parties agree on the committee's members, scope, terms and conditions of engagement, and framework, Dézé cannot confirm whether the decisions of the committee would be made available to the public or not.

### **Question 3**

Dézé does not expect that it would reverse its decision on the location of the final location for the transmission line crossing of the Lockhart River under any circumstances, should it receive an approval from the Board of its preferred and proposed crossing, and the Minister's approval under Section 130 of the *Mackenzie Value Resource Management Act* of the Board's report and recommendations.

### **Question 4**

The criteria to be used and chosen for the final location of the river crossing will be established after the completion of the receipt and review by Dézé of the information noted above. However, Dézé can confirm that the following criteria will be incorporated into evaluating any potential final locations:

- recommendation of routing committee;
- conditions of regulatory approvals; and
- design and construction considerations.

### **Question 5**

The timing of a final decision on the final crossing location is expected to be made following the receipt and review by Dézé of the information noted above in the response to Question 1.

**Reference:** *Final Position on Crossing the Lockhart River* (Dézé Letter: March 26, 2010)

## INFORMATION REQUEST # EC-1

### Source

Environment Canada

### Request

For the Proponent to assess the potential impacts that the alternate Reliance adjustment may have on migratory birds (including waterfowl) and/or their habitat, suggest mitigation measures to avoid or lessen impacts, and describe any monitoring that may be required to determine the effectiveness of mitigation and/or identify where further mitigation is required.

### Response

Relative to the preferred alignment, the Reliance Adjustment is likely to have a greater impact on migratory birds because of its closer proximity to key open water areas where large numbers of waterfowl aggregate annually each spring. Both the preferred alignment and the Reliance Adjustment would lead to similar amounts of terrestrial habitat loss, and both would use similar construction methods, timing windows and mitigation. Effects to terrestrial habitat from either alignment are thus expected to be similar.

Numerous water birds and waterfowl are regularly observed during spring in the vicinity of the proposed Reliance Adjustment, the most common being Canada, white-front, and snow geese and duck species. Thousands of geese congregate in open water occurring between Maufelly Point and Fairchild Point (S. Decorby, personal communication) and near Charleton Bay (B. Bromley, personal communication). Waterfowl and other aquatic associated birds annually congregate at these open water locations during spring migration because most of the surrounding water in McLeod Bay remains frozen until late May (S. Decorby, personal communication).

The primary impact to migratory birds anticipated from the Reliance Adjustment is bird mortality resulting from collision with transmission towers or lines (assessed in Section 15.4.8.4 of the DAR). Although the risk of collision is likely the same as for other sections of the transmission line, a transmission line near Maufelly Point and Fairchild Point would likely be exposed to more birds.

Some terrestrial habitat within the transmission line right-of-way for the Reliance adjustment would be lost during construction and scheduled maintenance vegetation clearing to prevent line interference during operation (assessed in Section 15.4.8.1 of the DAR). The effects to migratory birds from the Reliance Adjustment are probably similar to the rest of the Taltson transmission line, particularly as the spring migrants are attracted by the open water rather than the terrestrial habitat.

Mitigation can reduce some of these effects. A submarine cable is proposed between Maufelly Point and Fairchild Point, so that there will not be a transmission line spanning the open water. If there are sections of transmission line that are unacceptably close to the staging area, high-



visibility markers are known to reduce the risk of bird collisions (APLIC 2006). Dézé Energy has already committed that construction and right-of-way maintenance activities will be scheduled during winter when migratory birds are absent from the area to reduce impacts to nesting birds (see Section 15.4.8.2.1 of the DAR).

Monitoring to determine the effectiveness of these mitigations has not yet been proposed. Should the Reliance Adjustment go forward, monitoring strategies would be discussed with Environment Canada and presented in the Environmental Monitoring Program.

### **References**

Avian Power Line Interaction Committee (APLIC). 2006. Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006. PIER Final Project Report CEC-500-2006-022. Edison Electric Institute, APLIC, and the California Energy Commission. Washington D.C. and Sacramento, CA.

B. Bromley. Personal communication by telephone. April 19, 2010.

S. Decorby. Personal communication by telephone. April 16, 2010.

## INFORMATION REQUEST # EC-2

### Source

Environment Canada

### Request

For the Proponent to do an assessment of the Reliance Adjustment on Species at Risk and describe any applicable mitigation and monitoring measures, as outlined in the Terms of Reference.

### Response

Effects to species at risk were assessed in Section 15.4 of the DAR. Since DAR submission, the rusty black bird, olive-sided flycatcher, common nighthawk and northern leopard frog have been added to schedule 1 of the Species the Risk Act, and the horned grebe has been assessed as Special concern by COSEWIC (2009). Thus, the updated list of species at risk that may interact with the Taltson Project is provided in Table 1.

**Table 1. Animal Species at Risk in the Project Regional Study Area**

Common Name	COSEWIC Status <sup>1</sup>	SARA Status <sup>2</sup>	GNWT Status <sup>3</sup>	Rationale
Grizzly bear	Special concern	—	Sensitive	Habitat fragmentation Sensitivity to human caused mortality
Wolverine	Special concern	—	Sensitive	Habitat fragmentation Increased harvester access
Whooping crane	Endangered	Schedule 1	At risk	Small population Restricted distribution
Horned grebe	Special concern	—	—	Declining population
Peregrine falcon	Special concern	—	Sensitive	Small population
Short-eared owl	Special concern	Schedule 3	Sensitive	Small, declining population
Rusty blackbird	Special concern	Schedule 1	May be at risk	Population declines
Olive-sided flycatcher	Threatened	Schedule 1	Sensitive	Long-term population declines
Common nighthawk	Threatened	Schedule 1	Secure	Long-term population declines
Northern leopard frog	Special concern	Schedule 1	Sensitive	Limited distribution in NWT Contraction of range nationwide

<sup>1</sup> = Committee on the Status of Endangered Wildlife in Canada 2009

<sup>2</sup> = Species at Risk Act 2009

<sup>3</sup> = Working Group on General Status of NWT Species 2006

Notes: "—" indicates species not listed; NWT = Northwest Territories; COSEWIC = Committee on the Status of Endangered Wildlife in Canada; SARA = Species at Risk Act; GNWT = Government of the Northwest Territories.

The species at risk identified in Table 1 appear to be relevant to the Reliance Adjustment also; no new species at risk would be exposed to the Project by this change. Nor could Dézé identify any new pathways of effect to species at risk from the Reliance Adjustment that are not already discussed in the DAR or in Dézé's Technical Sessions submission (Dézé 2009).

Mitigation proposed in the DAR to reduce effects from the transmission line included the possible use of bird flight diverters in selected areas of high waterfowl densities and limited use of ground wires to reduce collisions, a minimum design span of 2.8 m between lines to reduce electrocutions, and management of construction activities occurring with 1.5 km of active raptor nests (see DAR Table 15.4.5 and subsequent summary of commitments, Dézé 2010). Proposed monitoring for species at risk included the recording and reporting of observations of listed species. As stated in Section 5.2.4.2 of the Draft Environmental Monitoring Program, it is expected that results from this monitoring will be unable to assess effects to species at risk because low abundance in the regional study area. A survey for raptor activity within 200 m of the transmission line right-of-way is proposed to schedule construction in a way that reduces disturbance to nesting raptors.

As the Reliance Adjustment only represents a change to one component of the Project, we believe the assessment, monitoring and mitigation plan for species at risk is still applicable. The Reliance adjustment would pass near isolated areas of open water used by high densities of migrating waterfowl and these areas exist for approximately two weeks until ice break-up in McLeod Bay occurs (S. Decorby, personal communication, see Information Request EC-01). However, it is unknown whether horned grebes would be present in these same areas and be exposed risk of collision. Regardless, the proposed use of high-visibility markers would likely reduce collisions (APLIC 2006) and a submarine transmission cable between Maufelly Point and Fairchild Point would not lead to collisions. As well, a raptor survey for reducing effects from transmission line construction is expected to be equally effective along either the preferred alignment or Reliance Adjustment.

It is therefore Dézé's conclusion that although there have been changes to the species at risk since the DAR and subsequent submissions, the Reliance Adjustment would not introduce new pathways or species not already assessed. Further, the assessment of effects to species at risk in the DAR are also relevant to the Reliance Adjustment.

## References

Avian Power Line Interaction Committee (APLIC). 2006. Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006. PIER Final Project Report CEC-500-2006-022. Edison Electric Institute, APLIC, and the California Energy Commission. Washington D.C. and Sacramento, CA.

Committee on the Status of Endangered Wildlife in Canada (COSEWIC). 2009. COSEWIC assessment and status report on the Horned Grebe *Podiceps auritus*, Western population and Magdalen Islands population, in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 42 pp. ([www.sararegistry.gc.ca/status/status\\_e.cfm](http://www.sararegistry.gc.ca/status/status_e.cfm)).



Dézé Energy. 2009. Taltson Hydroelectric Expansion Project Commitments 2009. Commitments arising from the MVRB technical sessions. Submitted to the Review Board Public Registry on November 2, 2009.

Dézé Energy. 2010. Table of Commitments. Submitted to the Review Board Public Registry on January 29<sup>th</sup>, 2010.

Species at Risk Act (SARA). 2009. Species at Risk Public Registry. [https://www.registrelep-sararegistry.gc.ca/sar/index/default\\_e.cfm](https://www.registrelep-sararegistry.gc.ca/sar/index/default_e.cfm). Accessed, April 19, 2010.

S. Decorby. Personal communication by telephone. April 16, 2010



## INFORMATION REQUEST # PARKS -1

### Source:

Parks Canada

### Request

5. That the Dézé Energy Corporation provide the specific locations (latitude/longitude with datum specified) of the tourist destinations used in the original viewshed analysis, and a GIS file (ESRI shapefile format) of the proposed transmission line route, including the crossing of the Lockhart River identified in the Dézé letter March 26, 2010.
6. That the Dézé Energy Corporation confirm that the viewshed analysis presented in the DAR is in reference to this specific transmission line routing.
7. That the Dézé Energy Corporation expand the viewshed analysis in the DAR (Table 15.10.5) adding an analysis from the following key viewpoints, as identified by Parks Canada: Tyrell Falls, Pike's Portage near Burr Lake, Parry Falls (Old Lady of the Falls) 100 m upstream, and Old Fort Reliance National Historic Site
8. That where Dézé Energy Corporation has access to existing photos from key viewpoints, that these be used to prepare an initial visual graphic to illustrate the proposed transmission line in the proposed East Arm Park area.

### Response

First, we would like to reiterate the reasoning behind the current location of the Lockhart River crossing by the transmission line. Dézé intended to form a committee to select the site of the transmission line crossing of the Lockhart River. Dézé has been unable to do so as of yet, but the option remains. Regardless, the current crossing location was selected using four criteria, all intended to avoid sensitive areas and reduce aesthetic effects, and that are met by the preferred route. The criteria were:

- the transmission line should be far from Great Slave Lake,
- it should be far from any important areas, particularly from Parry Falls,
- it should remain within forested areas, to reduce visibility,
- it should be as straight as possible, to reduce the amount of linear disturbance within a future Park, and
- it should cross the Lockhart at an un-navigable section.

The results of the viewshed analysis are shown in Figure 1, and Table 1. The analysis assumed a transmission tower height of 25 m, and an observer height of 2 m. The effect of trees in reducing visibility was not incorporated into the model. The viewshed analysis is also limited by the detail of the topographic information in the East Arm region. In these situations, the model has a tendency to even out local variations in topography, and over-estimate the extent of the viewscape. Also, the final engineering and tower placement has not yet been conducted. The model shows only the line of sight from an observer to the transmission line, and does not consider whether the transmission line can actually be seen with the naked eye from that distance. In practice, transmission lines are probably difficult to see at distances of more than 5 km.

The results of the viewshed analysis indicate that the preferred route of the transmission line would be within the line of sight from the Lockhart River outflow (i.e. the last set of rapids on the Lockhart River before Great Slave Lake), Old Fort Reliance, the Reliance Camp, and from North of Reliance (a point on Great Slave Lake, but over 9 km from the transmission line, see Figure 1). The analysis indicated that the transmission line would not be within the line of sight from either end of Pike Portage, Parry Falls (and upstream of Parry Falls by 100 m), Tyrell Falls, or Trophy Lodge.

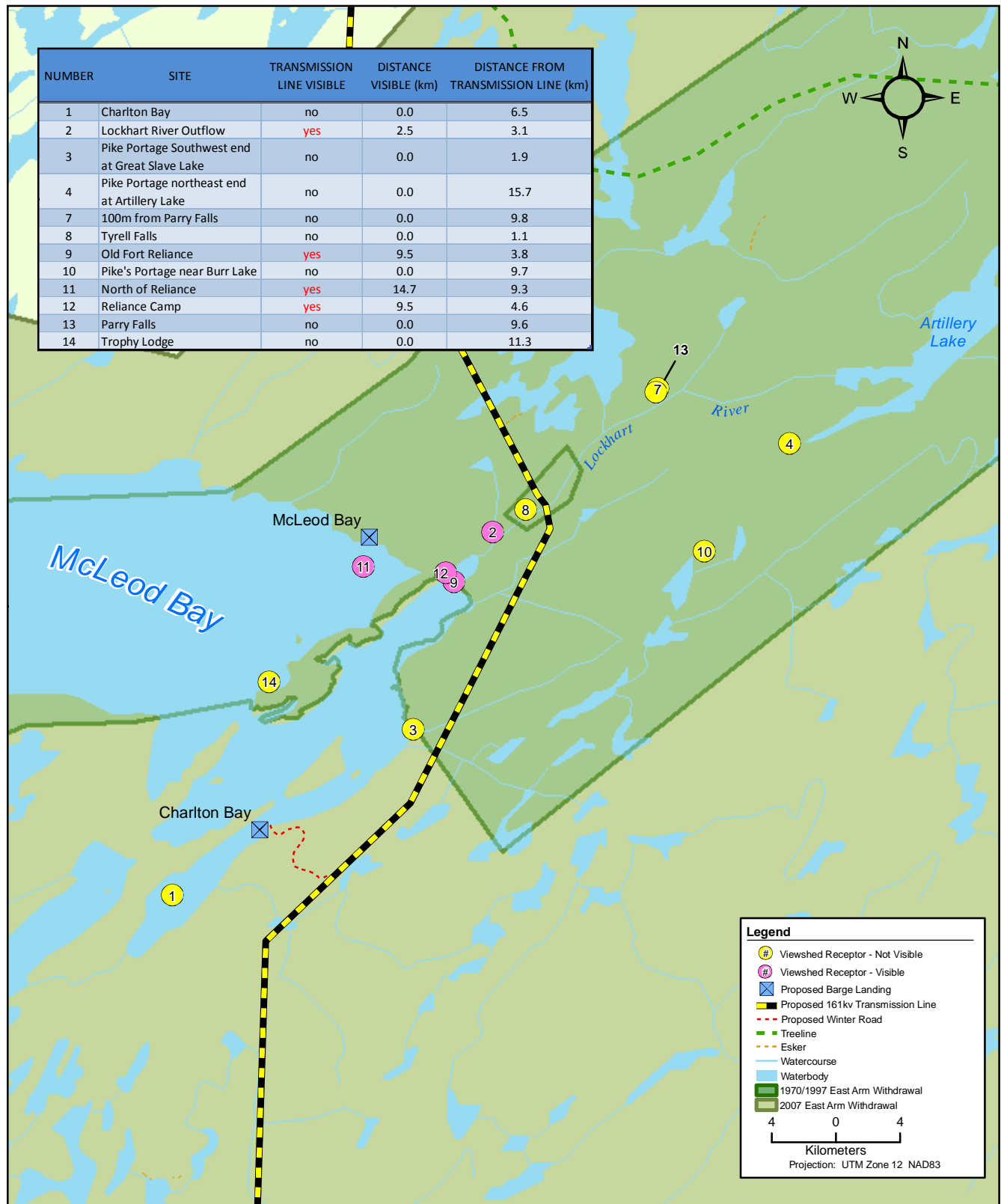
**Table 1. Viewshed Analysis Results**

Viewpoint	Visible?	Distance to transmission line (km)	Length of transmission line visible (km)
Tyrell Falls	no	1.1	0.0
Pike Portage at Great Slave Lake	no	1.9	0.0
Lockhart River outflow	yes	3.1	2.5
Old Fort Reliance	yes	3.8	9.5
Reliance Camp	yes	4.6	9.5
Charlton Bay	no	6.5	0.0
North of Reliance	yes	9.3	14.7
Parry Falls	no	9.6	0.0
Parry Falls upstream	no	9.8	0.0
Pike Portage near Burr Lake	no	9.7	0.0
Trophy Lodge	no	11.3	0.0
Pike Portage at Artillery Lake	no	15.7	0.0

Unfortunately, Dézé has not yet collected the necessary data and photographs to prepare the photomontage with a superimposed transmission line, as requested by Parks Canada. Collecting the required data is not easily accomplished, and was not initiated during the summer of 2009 because changes were anticipated to the transmission line alignment over the Lockhart River.

Finally, Dézé provided the requested GIS files to Parks Canada on April 13<sup>th</sup>, 2010.

**Figure 1. Viewshed Analysis Results, East Arm Area**



## INFORMATION REQUEST # PARKS-2

### Source

Parks Canada

### Request

That Dézé Energy Corporation conduct the viewshed analysis for the Reliance Adjustment (marine cable from Maufelly Point to Fairchild Point) using the same key viewpoints for the preferred route (inland Lockhart River Crossing).

### Response

Dézé is not prepared to conduct a viewshed analysis of the Reliance Adjustment at this time. The alignment illustrated by Dézé the March 26th letter was conceptual, and as such has several deficiencies, including that:

- there have not yet been engineering investigations to confirm line feasibility from a design perspective,
- there have not yet been environmental field investigations to identify local environmental sensitivities,
- it has not been screened for overlap with third-party interests (such as land use permits or mineral claims), and
- topographic data for that area is very poor, so the results of the viewshed analysis at may be misleading at the small scale of analysis requested.

Considering these limitations, Dézé is concerned that the requested viewshed analysis may produce misleading results. However, Dézé is comfortable stating that the Reliance Adjustment would be much more exposed than the preferred alignment, and as such the aesthetic effects measured from the viewshed receptor points would be likely greater even though low profile or low visibility transmission towers were proposed to reduce aesthetic effects. As stated earlier, the Reliance Adjustment would be within the line of sight of McLeod Bay, Charlton Bay, Old Fort Reliance Trophy Lodge and the trailhead to Pike Portage. The preferred alignment was designed with aesthetic effects in mind, while the Reliance Adjustment was proposed in an attempt to mitigate effects to spiritual areas.

## INFORMATION REQUEST # PARKS-3

### Source

Parks Canada

### Request

That Dézé Energy Corporation provide an overview of the feasibility of using directional drilling, whereby the transmission line crosses under the Lockhart River. The analysis should refer to technical and economic feasibility, and should also refer to additional biophysical environmental effects from new construction and access requirements, if appropriate.

### Response

Dézé Energy discussed the feasibility of Horizontal Directional Drilling (HDD) under the Lockhart River with DBS Energy Services Inc. Their advice was that it would be challenging, at best. The concerns are based on a reduced life expectancy, increased risk of outage, longer repair time following an outage and difficult construction logistics, as compared to an overhead line.

While HDD would avoid a visible aerial crossing of the Lockhart River, there would still be overhead transmission lines leading to and leaving from the general area of the crossing. There would be significantly more ground disturbance involved in the HDD process on either side of the river as compared to an overhead line pole installation. This would involve temporary drill pad sites for site characterization before the HDD could be initiated, construction areas for welding and pipe preparations, and waste storage areas. Long-term ground disturbances would be required for additional equipment-housing structures on either side. Cables would need protected enclosures and barriers for the risers to enter the termination structure area. There would also be significant waste (estimated at 140 to 160 truck loads) that would need to be transported for off-site disposal.

Underground HDD cables have a life expectancy of 25 to 30 years, compared to that of an overhead installation in the order of 50 to 75 years. If an outage/failure were to occur, the length of time to restore the system would be significant (i.e. potentially more than 6 months if spares are not readily available). The spare parts required would be specialized, and very different from the rest of the transmission line. Additionally, the system would be less reliable, as the terminations and splices (required on either end of the underground cable) are often leading failure points in cable systems.

HDD machinery and pipeline equipment is very large and heavy, requiring ground access to both sides of the crossing site. This would require winter roads to the sites on either side of the Lockhart River, a feature not required for overhead line construction.

Contingency plans would be required for drilling fluids spills, stuck drill stem, early winter breakup or delayed construction schedules and collapsed holes. While these items are generally relatively rare occurrences, they would have considerable construction and project implications. Also, a backup plan would be required if for any reason the HDD installation fails, including an

alternative crossing site or method. Finally, the much higher cost of HDD as compared to overhead lines would be challenging for the Project to absorb.

Figure 1 below shows the general area of the current potential crossing site of the Lockhart River. Dézé proposes that the final crossing location be determined by a routing committee representing the various stakeholder interests.

**Figure 1. Potential Crossing Site Lockhart River**



In consideration of the need for ground access to both sides of the Lockhart River crossing, the longer and more intensive construction phase, and the additional long-term site disturbances, Dézé is of the opinion that a routing committee can find an overhead crossing site that is preferable to the underground cable option.