

Budget Pricing

To: Algoma Power Inc

Date: December 8, 2011

Re: Installation of a new 230 /34.5 kV Transformer with OLTC at Echo River T.S.

Attn: Greg Beharriell

Please find attached budgetary pricing for the installation of a new transformer at Echo River T.S.

Budget Price includes however is not limited to the following items:

- **Project and Safety management costs**
- **Design engineering costs**
- **Site mobilization and demobilization**
- **Site facilities (trailers, washrooms, etc)**
- **Regulatory requirements (SIA, CIA, ESA, IESO facility registration, MOE, etc)**
- **Supply / install and commission 1 new 34/47/62 MVA- 230/34.5 kV transformer with OLTC**
- **Supply / install and commission new transformer pad complete with oil containment**
- **Supply / install and commission 1 - 245 kV dead tank breaker**
- **Supply / install and commission 1 – 34.5 kV SF6 breaker**
- **Supply / install and commission 1 - 245 kV MOAB**
- **Supply / install and commission 1 – 245 kV disconnect switch**
- **Supply / install and commission 2 – 34.5 al-duti rupter load break disconnect switches**
- **Supply / install and commission 1 – 34.5 kV manual operated disconnect switch**
- **Supply and install all associated bus work and support insulators**
- **Supply and installation of all civil works associated with the breakers, disconnect switches and associated equipment, includes but not limited to; concrete works, crushed stone application, steel structures etc.**
- **Supply and install ground grid where applicable**
- **Supply and install new cable trench system**
- **Supply and install all new P&C and ancillary cables for associated equipment**
- **Fabrication of protection and control racks, complete with wiring and relays**
- **Installation of P&C racks**
- **Installation of P&C cabling marshalling rack in control room**
- **Terminate and test new protection and control cables**
- **Commissioning of P&C equipment (relay settings, logic, etc)**
- **Installation of facilities required for AC /DC supply (tech cable, 120 V AC/DC breakers, tywraps, cable markers etc)**
- **Create / revise drawings as required**

Budget Pricing

<u>Budget Price – Breakdown</u>		
Material Total-	-	\$ 2,900,000
Labor-	-	\$ 1,650,000
<u>BUDGET TOTAL</u>	-	\$ 4,550,000

NOTE: THIS BUDGETARY ESTIMATE HAS AN ACCURACY OF +- 25%.

Great Lakes Power Transmission (GLPT) & Market Participant Stakeholder Meeting Agenda

Date: March 3, 2016
Time: 2PM – 3:30pm
Location: GLPT – St Mary's Room

Attendees

Great Lakes Power Transmission LP	API
Jim Tait	Tim Lavoie
Jennifer Watling	Dan Richards
Phil Johnston	
Matt Baker	
Kim Irvine	

1. Introductions

Jim explained the adjustment from a presentation format to an agenda with action items to have better follow up communication going forward.

Jim explained the sale of our company to Hydro One should be finalized within 6-9 months. We will be moving forward with our Rate Application as Brookfield.

2. Review and approval of meeting agenda – N/A

3. Organizational Overview and exchange of org charts

4. Approval of last Meeting Minutes (If applicable)

5. Review Action Items closed since the previous meeting (If applicable)

6. Transmission Connection Agreement

a) TCA – Complete and up to date

b) Connection Status – New Mine Connection

- i. Overall Project Status- “Gone silent”. They may be re-evaluating before moving forward. Greg will update us when he is able.

c) Review to Schedule

- i. Operations Contacts – Jim reviewed contacts that will need to be updated on both sides.

7. Other Agreements

- a) Joint Use - Current
- b) Access Agreements – In place
- c) Jen is currently working on getting our land easements up to date. If API assets are near these areas, API would like to work with us or be notified of how it all gets worked out.
- d) Shared ROW – Is it in our best interest to clarify shared areas before the sale transition is finalized? This is something we should turn our minds to.

8. Customer Delivery Point Performance\Forced Outages

A delivery point is interrupted whenever its requisite supply is interrupted as a result of a forced outage of one or more of GLPT components causing load loss. Interruptions caused by GLPT's customers are recorded but not charged against the reliability performance for the customer initiating the interruption, but are charged against the reliability performance for other interrupted customers.

Outlier Triggers

Performance Measures	Delivery Point Performance Standards (Based on a Delivery Point's Total Average Station Load)							
	0 to 15MW		>15 to 40MW		>40 to 80MW		>80MW	
	Standard (Average Performance)	Minimum Standard of Performance	Standard (Average Performance)	Minimum Standard of Performance	Standard (Average Performance)	Minimum Standard of Performance	Standard (Average Performance)	Minimum Standard of Performance
DP Frequency of Interruptions (Outages/yr)	4.1	9.0	1.1	3.5	0.5	1.5	0.3	1.0
DP Interruption Duration (min/yr)	89	360	22	140	11	55	5	25

When the three year rolling average of DP performance falls below the minimum standard of performance ("Outlier"), GLPT will initiate technical and financial evaluations to determine root cause and if any remedial action is required.

API 2015-2013 (3 year rolling average) reliability performance

Delivery Point	3Year Average Interruption Duration (2013-2015) (min)	3Year Average Interruption Frequency (2013-2015)	2015 Interruption Duration (min)	2015 Interruption Frequency
Northern Ave 34.5kV	0	0	0	0
Northern Ave 12kV	3749.33	0.67	0	0
Echo River	61.33	2	0	0
Batchawana	354.00	2.67	482	4
Goulais	392.00	3	276	4
Mackay	0	0	0	0
Andrews	1089.33	3	20	1

Watson	2.33	0.33	0	0
No.4 Circuit	122.67	1.33	357	3

New Inlier Triggers (currently being evaluated)

Delivery Points	Load Category	10 year Average Frequency (2004-2013)	Standard Deviation	Inlier Standard for DP
API DIST (NA 34.5 kV)	(0-15 MW)	0.30	0.48	0.78
API DIST (NA 12kV)	(0-15 MW)	0.90	0.88	1.78
API DIST (ER)	(0-15 MW)	2.80	2.04	4.84
API DIST (BATCH)	(0-15 MW)	2.00	2.40	4.40
API DIST (GOULAIS)	(0-15 MW)	1.80	2.10	3.90
API DIST (MACKAY)	(0-15 MW)	0.60	1.26	1.86
API DIST (ANDREWS)	(0-15 MW)	1.80	2.86	4.66
API DIST (WATSON - No.1 & No.2 Wawa)	(0-15 MW)	1.40	1.51	2.91
API DIST (No. 4 Circuit)	(0-15 MW)	2.80	1.75	4.55

Delivery Points	Load Category	10 year Average Duration (2004-2013)	Standard Deviation	Inlier Standard for DP
API DIST (NA 34.5 kV)	(0-15 MW)	160	348	508
API DIST (NA 12kV)*	(0-15 MW)	56	76	132
API DIST (ER)	(0-15 MW)	138	211	349
API DIST (BATCH)	(0-15 MW)	214	296	509
API DIST (GOULAIS)	(0-15 MW)	178	228	406
API DIST (MACKAY)	(0-15 MW)	50	98	147
API DIST (ANDREWS)*	(0-15 MW)	52.4	135.44	187.84
API DIST (WATSON - No.1 & No.2 Wawa)	(0-15 MW)	41	56	97
API DIST (No. 4 Circuit)	(0-15 MW)	201	295	496

DP performance that is worse than either baseline trigger (frequency and duration) is 2 consecutive years will be a candidate for remedial action.

a) Transmission Caused Outages

- i. 3 Outages on No.3 Sault causing interruptions to Batchawana and Goulais TS
- ii. 1 Outage at Batchawan TS
- iii. 3 Outages on No.4 Cct (Hollingsworth Root cause analysis)

b) Market Participants Caused Outages

9. System planning update

a) 2016 Details

- i. Wood Structure Replacements – Majority of Hollingsworth 115kV Structures and single replacements on Andrews and Steephill 115kV.
- ii. Anjigami TS Civil Work (Summer)
- iii. Watson TS T2 Line Side Breaker (Summer)
- iv. Magpie CT Replacement (Late Fall)

b) 5 Year Planned items of impact to generation

- i. 2017-2019 Wood Structure Replacements – P21\22G, Andrews 115kV
- ii. 2017 Mackay T1 Replacement
- iii. 2017-2020 Protection upgrades – Anjigami TS, Watson TS, Hollingsworth TS, Mackay TS
- iv. 2017-2019 Third Line TS T2 Replacement (Options to utilize old transformer as spare)
- v. 2018 – 2021 New Station – Replacement of Batchawana and Goulais.
- vi. No. 3 Sault Upgrade 2018-2021

10. Planned outages that could impact the Connection.

a) Transmission Plans

i. GLPT Outage Schedule

- May – October, Hollingsworth 115kV Structure Replacement – requirement to have both Anjigami 44kV and Hollingsworth 115kV cct out of service in some scenarios. Investigating the possibility of islanding the No.4 cct with Hollingsworth GS.
- April Watson TS, Bus work planned – Reduced to 1 Wawa circuit at a time during maintenance work.
- April 6, Black Start exercise – Echo River to be fed radially from Third Line for the day as NASCC and H1 complete their annual line energization test.
- TBD, Andrews 115kV cct – structure replacements
- TBD, Batchawana – testing and placing spare xformer on pot.

b) Market Participant Plans

i. Maintenance and Downtime Schedule?

11. Additional Items

API Trout Creek Crossing in Wawa – API is looking to put in a permanent bridge. There would be three parties needing access.

In general, Tim appreciated the efforts that have been made to work together. We will be looking to solidify issues to be supportive of both parties going forward.

- Transformer Contingency Planning
 - Mackay T1
 - Third Line Replacement T2
 - New Station

12. Review Action Items

Action No	Agenda Item	Subject	Action	Assigned To	Due Date
1	6	Load data	GLPT will require load data shortly from API		
2	6	Stakeholder meeting	In the next few months, we should be able to set up a meeting with our stakeholders and IESO		

13. Schedule next meeting

14. Adjourn Meeting

Time: 3:20pm

Beharriell, Greg

From: Jim A Tait <JTait@glp.ca>
Sent: Wednesday, December 21, 2016 10:22 AM
To: Degilio, Michael
Cc: Richards, Dan; Beharriell, Greg; Jennifer Forde-Watling
Subject: Re: Echo River TS - 2nd Transformer

Michael,

Yes, I am looking forward to the Holiday's! Happy Holiday's to you as well!

First off, Contingency Planning is our priority with respect to reliability and our ability to response quickly to emergency scenarios. Through the local needs identified in the Regional planning process and our own continuous improvement initiatives we have triggered a system level contingency planning initiative and have identified needs through out our system which have been incorporated into our short and medium term capital plans with some of these projects complete, or in progress.

With respect to Echo River we had mentioned in past meetings that our intention for contingency planning would be to procure a transformer to replace T2 at Third Line TS, the intend of the project is to result in a usable spare for emergency purposes. This plan would considerably reduce the time required to replace the transformer at Echo River TS to what we believe to be a reasonable level if a failure were to occur and keeping in mind value to the rate payer. Although this project is out a few years, as you know we are now part of the Hydro One family which provides us with additional options and resources in the short term, we are planning to start discussions on emergency response and available resources in the new year and will share the options once we get a better understanding of what is available to us.

To formally respond to your request I think it would be more suitable to have a meeting to discuss the project you are proposing since there a many other items which we would need to overcome and work thru in order to determine the best way forward.

Just a few things to consider and clarify during the meeting;

1.
 1. Current level of Service - Reliability concerns
 2. Project Trigger - Sustainment vs. Enhancement (Increased Capacity or change in level of reliability from original design)
 3. Project Type - connection vs. network
 4. Project Scope - primary plan and alternatives
 5. Customer Connection Process - Submission of Connection Modification application and steps required (Feasibility, SIA, CIA...etc.)
 6. Cost responsibility - Transmitter or Distributor (Capital Contribution)
 7. Work Type based on intended scope - Contestable vs non-contestable

Please suggest a time to meet in the new year and we will work with you to ensure we provide the required support to come up with the best solution.

Have a great Holiday and look forward to working with you in the new year!

Regards,
Jim Tait
Director of Operations
Great Lakes Power Transmission
Phone: 705.941.5652
Mobile: 705.542.8316
Fax: 705.759.6110

From: "Degilio, Michael"
To: Jim A Tait ,
Cc: "Richards, Dan" , "Beharriell, Greg"
Date: 12/20/2016 08:36 AM
Subject: Echo River TS - 2nd Transformer

This is an EXTERNAL email. STOP. THINK before you CLICK links or OPEN attachments

Good Morning Jim,

I hope that you are doing well and are geared up for the holidays.

API has included in its 2014 COS Rate application the intention of adding a second transformer unit at the Echo River TS to improve reliability under contingency scenarios and potential future load growth. API is intending to commence the planning in 2017 with potential purchase and installation in 2018.

As such, API is requesting that GLPT provide API with a formal response regarding their intention for contingency improvements at the Echo River TS through the installation of a second transformer unit. It would be appreciated if you could provide a formal response by **Jan. 10th/2016**.

If you require any clarification or further information, please do not hesitate to contact me by phone or email.

Thank you and Kind regards,
Michael

*Michael Degilio, EIT
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that any use, dissemination, distribution, or copying of this communication is strictly prohibited. If you have received this communication in error, notify us immediately by telephone and (i) destroy this message if a facsimile or (ii) delete this message immediately if this is an electronic communication. Thank you.

**Hydro One SSM & Algoma Power Inc.
Stakeholder Meeting Minutes**

Date: June 28, 2016
Time: 3PM
Location: Algoma Power Office

Attendees

<u>Hydro One SSM</u>	<u>API</u>
Arnold Parcels	Mike Degilio
Brad Colden	Jennifer Rose
Matt Baker	Dan Richards
Steve Dale	
Kim Irvine	

1. Introductions
2. Review and approval of meeting agenda
 - Approved as a group
3. Organizational Overview and exchange of org charts
 - Brad shared the HOSSM Organizational Chart with API and requested one in return.
4. Transmission Connection Agreement
 - a) TCA
 - Through HOSSM's transition and name change process, the TCA will be updated with full sign off.
 - Emergency Response should temporarily be filtered through Dan Richards.
 - b) Review to Schedule
 - i. Operations Contacts
 - TCA contacts from API will need to be updated. Ex. Jennifer needs to be added as a contact
5. Other Agreements
 - a) Joint Use
 - Current
 - b) Access Agreements
 - HOSSM will provide Jen with an updated list of those individuals with access rights
 - API should be aware that when they are calling in after hours, they may be directed to the Barrie OGCC and not to our System Control employees.
 - c) Shared ROW
 - Historically this has been an informal process. Cost sharing has been working as is since it is mutually beneficial for all parties. However, this is a people dependant process which has the potential to develop issues in the

future.

- Possible access agreement to be discussed for API to have access to Echo River. Jen will send contact of who they are working with from Hydro One.

6. Customer Delivery Point Performance\Forced Outages

A delivery point is interrupted whenever its requisite supply is interrupted as a result of a forced outage of one or more of GLPT components causing load loss.

- Steve Dale reviewed data of Outlier and Inlier triggers to the group.

Interruptions caused by HOSSM's customers are recorded but not charged against the reliability performance for the customer initiating the interruption, but are charged against the reliability performance for other interrupted customers.

Outlier Triggers

Performance Measures	Delivery Point Performance Standards (Based on a Delivery Point's Total Average Station Load)							
	0 to 15MW		>15 to 40MW		>40 to 80MW		>80MW	
	Standard (Average Performance)	Minimum Standard of Performance	Standard (Average Performance)	Minimum Standard of Performance	Standard (Average Performance)	Minimum Standard of Performance	Standard (Average Performance)	Minimum Standard of Performance
DP Frequency of Interruptions (Outages/yr)	4.1	9.0	1.1	3.5	0.5	1.5	0.3	1.0
DP Interruption Duration (min/yr)	89	360	22	140	11	55	5	25

When the three year rolling average of DP performance falls below the minimum standard of performance ("Outlier"), GLPT will initiate technical and financial evaluations to determine root cause and if any remedial action is required.

API 2016-2014 (3 year rolling average) reliability performance

Delivery Point	3Year Average Interruption Duration (2014-2016) (min)	3Year Average Interruption Frequency (2014-2016)	2016 Interruption Duration (min)	2016 Interruption Frequency
Northern Ave 34.5kV	0	0	0	0
Northern Ave 12kV	0	0	0	0
Echo River	31.0	1.33	7	1
Batchawana	190.33	2.33	75	2
Goulais	206.00	2.67	43	2
Mackay	0	0	0	0
Andrews	0	0	0	0
Watson	2.33	0.33	0	0
No.4 Circuit	177.00	1.67	148	2

New Inlier Triggers (currently being evaluated)

Delivery Points	Load Category	10 year Average Frequency (2007-2016)	Standard Deviation	Inlier Standard for DP
API DIST (NA 34.5 kV)	(0-15 MW)	0.3	0.458	0.758
API DIST (NA 12kV)	(0-15 MW)	0.5	0.806	1.306
API DIST (ER)	(0-15 MW)	2.7	2.00	4.7
API DIST (BATCH)	(0-15 MW)	1.5	1.28	2.78
API DIST (GOULAIS)	(0-15 MW)	1.6	1.28	1.88
API DIST (MACKAY)	(0-15 MW)	0.6	1.2	1.80
API DIST (ANDREWS)	(0-15 MW)	1.1	2.34	3.44
API DIST (WATSON - No.1 & No.2 Wawa)	(0-15 MW)	1.3	1.42	2.72
API DIST (No. 4 Circuit)	(0-15 MW)	2.4	1.8	4.2

Delivery Points	Load Category	10 year Average Duration (2007-2016)	Standard Deviation	Inlier Standard for DP
API DIST (NA 34.5 kV)	(0-15 MW)	129	349	497
API DIST (NA 12kV)*	(0-15 MW)	26	47	73
API DIST (ER)	(0-15 MW)	144	204	348
API DIST (BATCH)	(0-15 MW)	137	204	341
API DIST (GOULAIS)	(0-15 MW)	173	206	379
API DIST (MACKAY)	(0-15 MW)	48	96	144
API DIST (ANDREWS)*	(0-15 MW)	7	20	27
API DIST (WATSON - No.1 & No.2 Wawa)	(0-15 MW)	24	29	53
API DIST (No. 4 Circuit)	(0-15 MW)	133	127	260

DP performance that is worse than either baseline trigger (frequency and duration) is 2 consecutive years will be a candidate for remedial action.

a) Transmission Caused Outages

- i. April 9th
 - Response time to forced outage was delayed due to heavy fog conditions in the area and also the IESO decided to delay switching due to weather system.
- ii. May 24th tripped #4 circuit
 - HOSSM has received the signed report regarding the Brookfield resonance conditions. The report identifies actions to eliminate the condition. The customer has also been reminded to contact HOSSM System Control prior to any switching.

b) Market Participants Caused Outages

- i. May 2nd – Northern Ave (reason?)
 - API will provide HOSSM with a detailed report of this incident

7. System planning update

- Brad shared Outage Schedule and Capital plan list with API

- i. 2017 Details
- ii. 5 Year Planned items of impact to API
 - Mackay Transformer - scheduled to be replaced between mid Sept/mid Oct.
 - Sault #3 – upgrade
 - Echo River TS contingency risk - API is considering the purchase of a 2nd transformer to control peak load to Northern Ave. API is looking for a formal plan from HOSSM on this API request.
 - Goulais TS – Transformer replacement planned for 2018. API is hoping there will be a study done this year if possible. This should show up on 5 year plan. Brad to provide more details

8. Planned outages that could impact the Connection.

a. Transmission Plans

- i. Hydro One SSM Outage Schedule

b. Market Participant Plans

- i. Maintenance and Downtime Schedule (ex. Andrews 6hr restraint)
 - There is a known customer expectation that there should be a maximum of 6 hours for these outages. This is more of a practise than a policy. However, at times, HOSSM may need to extend this time frame to complete their work. It was agreed that planning meetings are

to occur quarterly to ensure that sufficient outage windows can be secured.

9. Additional Items

- Use of Power Assist
 - Phone number provided to HOSSM by-passes the que and is a direct line to the Supervisor on call. 24/7 service.
- Load forecast
 - Mike provided copies of the load forecast list to the group.
- Discuss data sharing agreement
 - Exchange of GIS information and communicating LIDAR work being done could be mutually beneficial. Both parties agreed to this. Steve Dale will set up a kick off meeting for this.
- Copper theft awareness
 - Brad discussed the details of the two copper theft incidents that recently occurred at Third Line.

10. Review Action Items

Action No	Agenda Item	Subject	Action	Assigned To	Due Date
1	4b	Update TCA Operations Contacts	Add Jen to contacts and review that all other contacts are accurate	Steve Dale	July 14, 17
2	5a	Where does Joint Use agreement reside?	Dan Richards will provide a copy to Brad Colden	Dan Richards	July 21, 17
3	5b	Update list of individuals with access rights	Brad will provide updated list to Jen	Brad Colden	July 14, 17
4	5c	Possible access agreement to be discussed for API to have access to Echo River	Jen will send contact of who they are working with from Hydro One.	Jen Rose	July 14, 17
5	6	Inlier frequency	To be sent to Dan Richards once available	Steve Dale	July 21, 17
6	6b	Market Participant Incident	Dan Richards will provide Brad Colden with a detailed report of this incident	Dan Richards	July 21, 17

7	7ii	Goulais TS transformer replacement	Should show up on 5 year plan schedule. Brad will provide API with more details on this.	Brad Colden	July 21, 17
8	9	Exchange of GIS information and communicating LIDAR work being done could be mutually beneficial	Steve Dale will set up a kick off meeting for this	Steve Dale	July 21, 17
9		Device Protection coordination	Up to date information and fault studies are to be provided to API	Steve Dale	July 21, 17
10		Relay upgrade		Brad Colden	July 21, 17
11		Outage planning	Outage planning should be reviewed quarterly with API	Brad Colden	July 21, 17

11. Adjourn Meeting

Time: 4:36pm

**Hydro One SSM & API
Customer Engagement Meeting Minutes**

Date: May 16, 2018
Time: 9AM
Location: Algoma Power Office

Attendees

Hydro One SSM	API
Brad Colden - HOSSM	Dan Richards
Steve Dale – HOSSM	Mike Degilio
Kevin Lewis – HOSSM	Jen Rose
Kim Irvine – HOSSM	Phil Johnson
John Blackburn – HONI	
Steve Ritchie – HONI	
Maxine Cooper - HONI	

1. Introductions

Steve Dale began meeting by introducing HONI attendees and starting us off with round table introductions.

2. Review and approval of meeting agenda

Steve asked everyone to quickly review the agenda to ensure all topics to be discussed were addressed. He noted that any additional items could be brought up in the Additional Items section (agenda #11). No additional items were brought up at this time.

3. Organizational overview and exchange of org charts

- Hydro One organization and company status

Kevin Lewis discussed our integration process and gave a high level description of our organization plan. Operational transition to Hydro One still planned for Oct 1st. We will be a stand-alone entity until 2023 and we anticipate no changes to performance for our customers. API will be notified on who points of contact from HONI will be going forward.

4. Transmission Connection Agreement

a) Review to Schedule

- i. Operations Contacts – Schedule A&D to be updated with new contacts and sent to Jen for approval before agreement is finalized.**

5. Other Agreements

As of Oct. 1st, HOSSM plans to adopt HONI policies and practices, but this should not impede on customer business. There will be new contacts and resources made available to API. (John Blackburn & Steve Ritchie)

- a) Joint Use – In effect until Dec 31, 2018**
b) Access Agreements – Names updated for 2018

6. Customer Delivery Point Performance\Unplanned Outages

- Steve Dale reviewed outage charts with the group. We are in good standing with

OEB limits but will still strive to improve where possible.

- Steve Dale provided API with copies of Customer Briefings for the following outages where required. Going forward, when requested from HONI, customer briefings will be prepared within a 10 day window. (provided upon customer request)
- Customer briefings will also be stored on website for customers to view. History of past briefings will also be available there.

Outlier Triggers

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When the three year rolling average of DP performance falls below the minimum standard of performance ("Outlier"), HOSSM will initiate evaluations to determine root cause and if any remedial action is required.

API 2017-2015 (3 year rolling average) reliability performance

Delivery Point	3Year Average Interruption Duration (2015-2017) (min)	3Year Average Interruption Frequency (2015-2017)	2017 Interruption Duration (min)	2017 Interruption Frequency
Northern Ave 34.5kV	0	0.33	0	0
Northern Ave 12kV	0	0	0	0
Echo River	30.33	1.00	84	2
Batchawana	185.67	2.00	0	0
Goulais	106.33	2.00	0	0
Mackay	0	0	0	0
Andrews	0	0.33	0	0
Watson	10.33	0.33	31*	1*
No.4 Circuit	178.00	2.00	3*	1*

a) Transmission Caused Outages

- i. June 11 – P22G trips, trees outside of ROW on circuit
- ii. Sept 13 – Inadvertent trip, Wawa area islanding
- Internal investigation done to determine root cause. *GE employee caused.*
- iii. Sept 24 – CS020 trips and remains open on one phase
- Manufacturer tech rep mitigated problem May 14, 2018. *Weather related*

b) API System Unplanned Interruptions

- i. Jan 23, 2017 – CS020 trips on #2 Bruce Mines protection
- ii. April 9, 2017 – T1 fuses at Goulais TS, lightening in local area
- iii. May 2, 2017 – CB385 trips at Northern Ave. Unknown cause

7. System planning update

a) 2018 Details

- P21G Structure Replacement – 35 structures in 2018
- Algoma 1 Str 28, Algoma 3 Str 32 & Str 33 replacement
- DA Watson TS, 34.5 kV Protection Upgrade

b) 5 Year Planned items

- Sault 3 reconductor and restructure from Goulais TS to Mackay TS
Feasibility study to take place over 3 years
- Batchawana TS / Goulais TS Greenfield Project
API doing study – out for tender.
Completion 2018

8. Planned outages that could impact the connections.

- *Going forward API will have access to a weekly customized report for discussion (sent out on Thursdays)*
- *Hydro One interested in API's schedule to work collaboratively*
- *bundle work to mitigate SAIDI and SAIFI*

a. Transmission Plans

- i. Hydro One SSM Outage Schedule

b. API Plans

- i. Maintenance and Downtime Schedule
- *API will advise of customer outages (mines)*

- If dates are unknown, it can be a place holder in the developing schedule as a reminder to discuss closer to the time.
- 2 SCADA systems at OGCC will be integrated in the Fall. Steve Ritchie invited API to visit Barrie to see OGCC.
- API is looking into an operating role. Communication is an issue (data). They will require ICCP link. API to work with Steve Ritchie on this.

9. Customer Preferences and Needs

- Hydro One wants to understand API's needs and preferences (ex. One longer outage or multiple short outages when possible)
- There are 3 customer briefing options available (formal, email, phone)
- Steve Ritchie will add an API group list to the SANS distribution list *Action created
- Weekly customer newsletter is available as well.
- John has requested "formal, normal, and casual contacts from API for future communication purposes

10. Additional Items

- OGCC is now the controlling authority on a 24/7 basis
- Outage coordination between HOSSM and API - Steve R mentioned that planning relationship is important. You will get to know HONI planners for outages and coordination.
- Response letter addressing DP concerns
- Limer TS project update – John will be point of contact for API
- Hold Off process for underbuild – OGCC should be calling into the Control Room rather than field staff communicating with OGCC. Steve Ritchie will make sure OGCC is clear on the process for contacting us for hold offs. *Action created*
- Load Forecasts – Mike will send updated list to Steve Dale and John Blackburn *Action created*
- Echo River – Redundancy issue – Contingency concern
 - Jenn showed interest in getting Echo River Project put into a 5 year plan. It is a critical item for API.
 - Metsco should be made aware that API has concerns regarding Echo River when study is taking place
 - Cost benefit analysis has been done by API which they will share with HONI for investment planning process.
 - John suggested a meeting be set up to discuss these items further. *Action created*

11. Review Action Items

Action No	Agenda Item	Subject	Action	Assigned To	Due Date
1	4b	Update TCA Operations Contacts	Add Jen to contacts and review that all other contacts are accurate	Steve Dale	Ongoing
2	5a	Where does Joint Use agreement reside?	Dan Richards will provide a copy to Brad Colden	Dan Richards	Expires Dec 31, 2018
4	5c	Possible land access agreement to be discussed for API to have access to Echo River.	Jen will send contact of who they are working with from Hydro One.	Jen Rose	Open
6	9	Exchange of GIS information and communicating LIDAR work being done could be mutually beneficial	Currently working with HONI to investigate progress of HONI implementation	Steve Dale	Open
9		Outage planning	Moving forward API will be receiving all HONI normal correspondence	Brad Colden	Open
9		<i>SANS Distribution List</i>	<i>Add API group to the SANS Distribution List</i>	<i>Steve Ritchie</i>	<i>OPEN</i>
10		<i>Echo River – Contingency concern</i>	<i>John requested a meeting be set up with API to discuss expectations and concerns</i>	<i>API</i>	<i>OPEN</i>
10		<i>Hold off process</i>	<i>Steve Ritchie will communicate proper process to OGCC to make sure everyone is clear</i>	<i>Steve Ritchie</i>	<i>OPEN</i>

10		<i>Load Forecast</i>	<i>Send updated list to Steve Dale and John Blackburn</i>	<i>Mike Gegilio</i>	<i>OPEN</i>
		<i>API Org Chart</i>	<i>To be emailed to Steve Dale</i>	<i>Mike Gegilio</i>	<i>OPEN</i>

12. Schedule next meeting

13. Adjourn Meeting

Time:



March 20, 2018

Hydro One Sault Ste. Marie LP
2 Sackville Rd. Suite B
Sault Ste. Marie, Ontario
P6B 6J6

**Attention: Arnie Parcels
General Manager**

RE: Regional Infrastructure Planning (RIP) Process – Reliability Concerns

In response to the stakeholder meeting on June 28, 2017 and with reference to Algoma Power Inc.'s (API) letter to Great Lakes Power Transmission, now Hydro One Sault Ste. Marie (HOSSM) dated January 17, 2014, API is requesting a formal response from HOSSM concerning reliability at the following supply points:

- East of the Sault Ste. Marie 34.5 kV System
- Sault Ste. Marie 12 kV System
- Goulais/Batchewana 12.5 kV System

API looks forward to continuing to work with HOSSM in the RIP process. In light of the concerns noted above, API requests confirmation of standards/expectations for restoration of full capacity following contingency events. This would include timelines for restoration that are acceptable to both parties, as well as discussion of cost responsibility to achieve this level of service at the delivery points mentioned above. If HOSSM believes that any of the abovementioned concerns are better addressed through alternate processes, please do not hesitate to contact me to discuss.

Regards,

A handwritten signature in blue ink, appearing to read "J Rose".

Jennifer Rose
Regional Manager
Algoma Power Inc. (a FortisOntario company)
Phone: (705) 941 5559
Cell: (705) 542-2095
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Algoma Power Inc.
2 Sackville Road, Suite A
Sault Ste. Marie, Ontario
P6B 6J6

**Attention: Jennifer Rose
Regional Manager**

RE: Regional Infrastructure Planning (RIP) Process – Reliability Concerns

In reference to the letter from Algoma Power Inc. (API) dated March 20, 2018 relating to the RIP Process, Hydro One Sault Ste. Marie (HOSSM) proposes the following:

East of the Sault Ste. Marie 34.5 kV System

HOSSM acknowledges the need for a local wire solution to be developed in relation to the restoration of load after a single supply transformer failure. HOSSM also understands that the current contingency plan for a transformer failure at Echo River TS could result in low voltage conditions for API customers east of Sault Ste. Marie. HOSSM is requesting a meeting with API in the next two weeks to review all the API and HOSSM information associated with this issue so a mutually-beneficial plan to move forward can be developed.

Sault Ste. Marie 12 kV System

In regards to the 12 kV system at Northern Ave TS, when the HOSSM transformer failed in 2015 the API load was supplied via the local PUC system in the area. HOSSM will investigate this as a long term back-up solution involving PUC, API and HOSSM, if this is acceptable to API.

Goulais/Batchawana 12.5 kV System

In regards to the 12 kV system at Goulais TS and Batchawana TS, HOSSM is currently in the planning stages of engineering a single greenfield TS that would replace both Goulais TS and Batchawana TS. HOSSM will be working closely with API as this project moves forward, with a target in-service date of 2021.

HOSSM looks forward to continuing to work with API in the RIP process and commits to engaging in regular transparent dialogue in hopes of identifying a solution which will serve to alleviate the concerns raised in your March 20, 2018 letter. If you have any immediate concerns that have not yet been addressed, please do not hesitate to contact me directly to discuss further.

Kind regards,

A handwritten signature in blue ink, appearing to read "KL", with a horizontal line extending to the right.

Kevin Lewis
General Manager
Hydro One Sault Ste. Marie LP
Phone: (705) 759-7605
Cell: (705) 971-5317
Email: klewis@hydroonessm.com

Project/Meeting Name:		Meeting Type	
2019 ELS Regional Planning – Customer Meeting		In person	
Date/Time		Minutes Prepared By:	
Mar 19 th 2019		Perry Ng	
Attendees			
Name	Title	LOB/Company	Contact Number
Perry Ng	Network Management Engineer	Hydro One Networks	
Alessia Dawes	Manager, Transmission Planning	Hydro One Networks	
Lawrence Leung	Senior Network Management Officer	Hydro One Networks	
Sandy Bao	Network Management Engineer	Hydro One Networks	
John Blackburn	Key Account Executive	Hydro One Networks	
Jennifer Rose	Regional Manager	Algoma Power Inc.	
Dan Richard	Supervisor , Distribution Engineering	Algoma Power Inc.	
Michael Degilio	Distribution Engineer, EIT	Algoma Power Inc.	
Greg Beharriell	Manager , Regulatory Affairs	Canadian Niagara Power Inc	
Philip Johnston	Supervisor , Technical Service	Algoma Power Inc.	
Jie Han	VP Operations	Fortis Ontario	

PURPOSE OF MEETING

To further discuss different projects in Sault Ste Marie area that might have customer impact; to provide update for the upcoming Regional Planning cycle

MEETING NOTES - DECISIONS, ISSUES

1. Round table introduction and opening remarks to set the purpose of the meeting.
2. Updates to options for the following stations/topics were provided by HONI :

Echo River Spare Transformers

- 3 options with different level of reliability and cost implications are provided and discussed , including
 - Cold spare Options
 - Hot Spare Option
 - Full DENS Option
- Other options , such as using Hydro One's Mobile Transformer Unit (MTU) , or API building its own Municipal Transformer station are discussed.

- API expressed concerns on restoration time frame for cold spare option and potential clearance issue on existing 34.5kV tower for Hot spare option during maintenance.
- API indicated that their decision to invest in Echo River would be considered in conjunction with any potential savings related to replacing/expanding their 34.5kV feeder from Northern Ave TS, including cost of land permit and avoided first nation relationships concerns.
- 1/3 of API's customer have expressed concerns that a 4 hour outage closer to Echo Bay area would be problematic because customers there heavily depends on electric heating and electrical system to keep water systems operational.
- General discussion about reliability criteria for this local area. Issues related to load by-pass cost discussed if API were to have a new facility instead.
- Hydro One will provide a summary table to compare cost and restorations time frame for different options that were discussed. API

Greenfield TS

- HONI provided updates on site selection and asset condition based on site visits conducted on March 18th. Hydro One discussed with API about the pros and cons between "like for like replacements" and "Greenfield TS" options.
- HONI communicated to API that the immediate asset need is limited to replacing end of life transformers at both sites. Other equipment are in acceptable conditions.
- HONI has been looking into two proposed site locations. During the March 18th site visit, Location 1 is not preferred due to its terrain. HONI was unable to access Location 2 before the meeting.
- HONI continues to work in parallel with its internal real estate group, Environmental Services and indigenous Relation to assess feasibility of Location 2.
- HONI communicated potential impact to API if the Greenfield Options is adapted, such as relocation or expansion of existing API's 12/25kV step up transformer, low voltage feeder and structures. API might not be able to maximize the benefit by going after a Greenfield options because there are only limited ties between API's Batchawana LV network with its Goulais LV network.
- API communicated to HONI that they have engaged SNC Lavalin to conduct Dx load studies. They expect that the result of this study would be available in 6 weeks from this meeting. The outcome of the study could further inform the effect of "like for like replacement" vs "Greenfield TS" option.
- General discussion related to load by-pass cost if API were to have a new facility instead.

Proposed Limer TS

- IESO estimated that the cost to re-start would be \$10K -\$15K.
- API to advice HONI if their customer wants to proceed.
- API is interesting in knowing if API were to build, own, operate the new proposed TS, what would the load by-pass cost be?

Regional Planning

- HONI communicated that the kick off timeline would be early April. HONI will send out a few date/time proposals and pick the best that works for most participants
- API is interested in having a planning status letter.
- Restoration plans for Batchawana , Goulais and Echo River TS is suggested as part of the Need Assessment.

ACTION ITEMS

Action	Assigned To	Due Date	Open/Closed
Provide a summary table to compare cost and restorations time frame for different options @Echo River TS	Perry		

Beharriell, Greg

From: PerryPakKai.Ng@HydroOne.com
Sent: Tuesday, April 2, 2019 12:43 PM
To: Lawrence.Leung@HydroOne.com; Sandy.Bao@HydroOne.com; Rose, Jennifer; Richards, Dan; Degilio, Michael; Beharriell, Greg; Johnston, Phillip; John.Blackburn@HydroOne.com; Alessia.Dawes@HydroOne.com
Subject: RE: Mom - ELS regional planning , March 19th 2019.

This message originated from outside FortisOntario's email server

Hi all,

As a follow up on our meeting, Hydro One is to provide a summary table of different options as well as its estimated cost and estimated restoration timeline. Please refer to below table for the summary.

Hydro One is in the process of looking into the estimated cost and restoration timeframe for option 5.

Option	Option Description	Estimated Capital Cost from API (\$M)	Estimated Restoration Timeframe
1	Status quo	0	5-6 months
2	Cold Spare @ Echo River	2 - 3	6-8 weeks
3	Hot Spare @ Echo River	6 - 9	24-48 hours
4	DENS	12 - 18	<4 hours
5	Dedicated MTU	To be determined by hydro one	To be determined by hydro one
6	Customer own station	To be determined by API	To be determined by API

Regards

Perry Ng , B.ASc, M.Eng, P.Eng

Network Management Engineer

Transmission Planning | Hydro One Networks Inc.

Tel : 416-345-6446

Email: Perry.Ng@HydroOne.com

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From: NG Perry Pak Kai

Sent: Tuesday, March 26, 2019 11:47 AM

To: DAWES Alessia <Alessia.Dawes@HydroOne.com>; BLACKBURN John <John.Blackburn@HydroOne.com>; LEUNG Lawrence <Lawrence.Leung@HydroOne.com>; BAO Sandy <Sandy.Bao@HydroOne.com>; Rose, Jennifer <Jennifer.Rose@algomapower.com>; Richards, Dan <Dan.Richards@algomapower.com>; 'Degilio, Michael' <michael.degilio@algomapower.com>; Beharriell, Greg <greg.bharriell@cnpower.com>; Johnston, Phillip <Phillip.Johnston@algomapower.com>

Subject: Mom - ELS regional planning , March 19th 2019.

Hi all,

Apologize for the delay. Please see attached draft minutes of meeting from our meeting on March 19th, 2019.

I would appreciate any comments by April 2nd.

Thanks.

Regards

Perry Ng , B.ASc, M.Eng, P.Eng

Network Management Engineer

Transmission Planning | Hydro One Networks Inc.

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