

WILLIAM ALTIMAS

ENERGY AND POWER SPECIALIST


PRESENTATION TO THE BAPE ON, MAY 17, 2016,
315-25KV ST JEAN SUBSTATION &
SUPPLY TRANSMISSION LINE

326 P NP DM16


Projet de construction du poste Saint-Jean
à 315-25 kV et d'une ligne d'alimentation à 315 kV
à Dollard-Des Ormeaux

6211-09-067

CONTENT OF PRESENTATION

- Objectives Presentation
 - Presenter's Relevant Background
 - Key Concerns: Presenter on the Project
 - Key Concerns: W. I. Stakeholders - Assessment
 - Conclusions & Recommendations
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OBJECTIVES IN PRESENTATION TO THE BAPE


- To provide inputs on items that have not been voiced
 - To provide independent expertise review and comment on the information presented by West Island Stakeholders & HQ;
 - That our money as owners of Hydro Quebec not be misspent;
 - That the project not be delayed any further;
 - To ensure that H Q Transenergie Trans. Line and substation procedures are properly followed.
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RELEVANT EXPERIENCE & EXPERTISE - OF WILLIAM ALTIMAS, (1 OF 2)

Education

1. B. SC. (Civil Eng.), Queen's 1973,
2. Post Grad. Dip. in Hydraulic Eng., Delft, Netherlands, 1976
3. MBA, McGill, 1981 (Specializing in Economics, Accounting, Finance)

Companies

- SNC Lavalin – (1990-2015) 25 years
 - Montreal Engineering – (1973-1990) 17 years
 - Rideau Canal System – Internship Engineering Student, summers of 1971 and 1972
 - Dept of Highways of Ontario – Internship Engineering student, summer of 1970
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RELEVANT EXPERIENCE & EXPERTISE - OF WILLIAM ALTIMAS, (2 OF 2)

POWER SECTOR EXPERIENCE

- 20+ years of power sector experience in all areas: Generation, Transmission, Distribution
- Worked as **engineer** on projects in Alberta, Ontario, Quebec, PEI and Newfoundland
- Worked as **engineer** and lived overseas in Bolivia, Zambia and Madagascar,
- Worked as Independent Engineer for the World Bank in monitoring IFC loans, investments, and in reviewing and monitoring the CAPEX and OPEX of the electric utility of Cameroon 2008-2015
- Energy Panel Specialist at McGill Des Hautel Business Conference on Sustainability (DBCS) - Energy Panel for Renewable Energy for the future – 2016.

PLANNING, FINANCE, TARIFFS & REGULATION

- 20+ years of planning, economics, financial analysis, tariffs, and regulatory work
- Worked as economist, financial advisor in the power sectors of Manitoba, New Brunswick, PEI
- Worked as economist, financial planner advisor in the power sector and lived in overseas in India, Nepal, Indonesia, and Honduras while carrying out the studies.
- Worked and provided consulting assistance in power sector in more than 30 countries round the world.
- Have assisted in the set up of the Electricity Regulators for Honduras 1994, and in India with Central Regulator Authority in 1999
- Have assisted at regulatory hearings in New Brunswick and PEI
- Have provided regulatory consulting assistance to the regulators of Kerala, Madhya Pradesh, and Chattisgarh in India, Saudi Arabia, Nepal, and Honduras.

AFGHANISTAN AND PROTEST FOR 500 KV LINE



AFGHANISTAN AND PROTES OF TRANSMISSION LINE

The Guardian, May 16, 2016

Thousands of demonstrators from Afghanistan's Hazara minority have marched through Kabul to protest against the planned route of a multimillion-dollar power transmission line, posing a major challenge to the government of Ashraf Ghani.

Some protesters threw stones and tried to climb over shipping containers stacked up to block the streets into Kabul's government and diplomatic areas but no significant violence was reported by mid-morning on Monday.

The demonstrators are demanding that the planned route for the 500kV transmission line linking Turkmenistan with Kabul be changed to pass through two provinces with large Hazara populations, an option the government says would cost millions and delay the badly needed project by years.



KEY CONCERNS OF PRESENTER

KEY CONCERNS OF PRESENTER (1 OF 4)

Concern	The problem	Implications/Risk	Recommendation
Delay in Project	Existing Station is now 60 years old. New project is slipping and with on line in 2019/2020	Existing substation may not handle the growing load on WI. Power quality and reliability on WI will deteriorate over next 5 years.	Important for BAPE to keep this in mind and to move the project forward in timely manner
Concerns of the 10,000 customers, (40,000 People served by this substation	All the consideration is being given to the neighbors bordering the transmission corridor.	What about the 40,000 persons, commercial and light industry being served by the substation. Will the existing substation be able to carry the load through to 2019/20.	Important for the BAPE to ensure that the existing substation does not break down affecting the lives and businesses of 40,000 persons on the WI

KEY CONCERNS OF PRESENTER (2 OF 4)

Concern	The problem	Implications/Risk	Recommendation
Costs	Burrying the Transmission Line adds considerable costs \$ 59mill\$ vs 14 mill.	<p>This is spoken as if it is nothing</p> <p>Hydro Quebec has all kinds of money. This is our money.</p> <p>What do we do with all the other above transmission lines. Should these also be buried</p>	<p>Important for BAPE to realize that burrying this line is costly and sets the precedent for future and even existing projects. Maybe they should be taken down and burried as well. What is the cost of this.</p>
Turning in Circles	The same points seem to be discussed and discussed for about two years and possibly even more.	These delays are costing money to Hydro Quebec (us), the BAPE (us) and the Quebec Gov't (us) and the Stakeholders (us)	Important for the points be closed and for BAPE and government to make the correct decision.

KEY CONCERNS OF PRESENTER (3 OF 4)

Concern	The problem	Implications/Risk	Recommendation
Underground Transmiss. Line	<p>This is Transmission Corridor and has been Transmission Corridor since 1957.</p> <p>It is a nice corridor and is well maintained. Consequently people think it is parc</p>	<p>Putting an Underground Transmission Line which is significantly higher on capital and operating costs will set a risky and costly precedent for future transmission Lines in Quebec in the future</p>	<p>Important for BAPE to keep this in mind</p>
Properties and property values on East Side of substation	<p>New substation has an expansion going east and north.</p> <p>The north will be an expansion into the transmission corridor, while the east expansion will go all the way to the properties on rue des Pins.</p>	<p>The six houses on Pine street will now butt up against the substation. A high sound barrier wall is needed (may already be part of HQ plans).</p> <p>Only property values of these six houses will be affected – Not the whole neighborhood.</p>	<p>Compensation may be considered for these five homes</p>

KEY CONCERNS OF PRESENTER (4 OF 4)

Concern	The problem	Implications/Risk	Recommendation
Listening and Accomodating	Stakeholders claiming Hydro Quebec is not listening and responsive	Makes for unproductive Sessions. The truth gets lots in all the noise.	BAPE will need to sort through it all smoke and noise to come up with the proper recommendations
Tone of Meetings	Tone of Meetings is very confrontational and disrepectful	Makes it difficult for the parties to effectively communicate and listen to each other.	Same recommendation as above

**CONCERNS OF WEST ISLAND
STAKEHOLDERS – REVIEW
AND EVALUATION**

KEY CONCERNS OF WI STAKEHOLDERS (1 OF 7)

Concern	WI Stakeholder Opinion	Independent View Point	Recommendation
Health risks, Elecetric Magnetic Field – (EMF) and impact on nearby residents	Stakeholders belief that the EMF will affect the health of nearby residents.	<p>H Q and the Stantech Env. Report present simulations analysis showing that the EMF outside the corridor are within the acceptable limits.</p> <p>Are the residents on south side of corridor sufficiently far away from the 315 kV line that the EMF are below the acceptable limits.</p>	<p>BAPE to ensure that HQ models are correct.</p> <p>BAPE to ensure that HQ and Stantech are confident on this.</p>
Noise of Transmission Line	WI Stakeholders believe that the line will be noisy.	Stantech Report says that they will be the same level of ambient background noise, caused by road traffic. It is not an issue.	No Issue

KEY CONCERNS OF WI STAKEHOLDERS (2 OF 7)

Concern	Opinion	Independent View Point	Recommendation
Impact on Property Values for properties adjacent to the Transmission Corridor	Believe that property values are being affected.	<p>Transmission Corridor has been there since 1957. Market values of homes near corridor have this already taken into account. They likely sell at a slight discount to similiar homes in the neighborhood</p> <p>Virtually all persons owning their homes have bought post 1957</p> <p>Thus TL and Corridor are taken into account .</p>	<p>There is no basis to be talking property values and compensation.</p> <p>These houses along corridor have always been at a discount.</p> <p>Not a factor in deciding on project.</p>

KEY CONCERNS OF WI STAKEHOLDERS (3 OF 7)

Concern	Opinion	Independent View Point	Recommendation
Cost of Underground Line is not major	<p>HQ has 3.3 billion \$ profit in 2012/13.</p> <p>HQ has a lot of profits and so can afford to spend more on the project</p>	<p>This is not an argument for undertaking project in an uneconomic manner.</p> <p>HQ has profit, but what is it's ROI. It is within the region that allows it to raise money for investments</p> <p>What about similiar projects. Should they also be buried underground.</p> <p>HQ is mandated to under projects in an economic manner and to spend our money wisely.</p>	BAPE to recognize that this argument is not valid.

KEY CONCERNS OF WI STAKEHOLDERS (4 OF 7)

Concern	Opinion	Independent View Point	Recommendation
<p>Operating life - Overhead vs Underground Lines</p> <p>Operating and Maintenance</p>	<p>WI Stakeholders question HQ figures of operating life for overhead and underground lines</p> <p>HQ states lives as</p> <ul style="list-style-type: none"> - Overhead: 80 yrs - Buried 40 yrs <p>Is this in the reality? Can we believe HQ?</p>	<p>The literature says that life of overhead lines is 80 years, while underground lines are 40 due to deterioration of cables and insulation.</p> <p>Also Overhead lines are better and less costly to operate and maintain.</p> <p>Clear preference for electric utilities for overhead lines at the transmission level.</p>	<p>BAPE now has the information that overhead lines have longer life and are less costly to operate and maintain.</p>

KEY CONCERNS OF WI STAKEHOLDERS (5 OF 7)

Concern	Opinion	Independent View Point	Recommendation
Buried lines vs Overhead Lines Modernness of Buried Transmission Lines	Buried Trans. Lines are more modern. This is the way to go.	Overhead Transmission Lines are less costly, have a longer life 80 years, are easier to operate and maintain than buried transmission lines. That is why electric utilities prefer overhead lines. The future is not with buried lines. It is only meant for downtown areas with no spaces. (such as downtown Montreal). In the case of low voltage distribution lines, these can be economic in new communities	Keep with the overhead Transmission Line project.

KEY CONCERNS OF WI STAKEHOLDERS – (6 OF 7)


Concern	WI Stakeholder Opinion	Independent View Point	Recommendation
Overhead vs Underground Transmission Line	Belief that the Underground Line is better option in this case due to aesthetics.	<p>Obviously underground line will have better aesthetics.</p> <p>However – This is a transmission corridor designed for Overhead Lines.</p>	BAPE to recognize this is transmission corridor for overhead and not underground transmission lines
Previous 315 kV Line and 1998 ice storm	Not talked about	<p>This Transmission Line was already built to 315 kV standards in 1975, operated at 120 kV.</p> <p>It was taken down in 1998 for emergency reasons (ice storm).</p> <p>Actually if there was no ice storm the 315 kV line would still be there. Why is there an issue if it was already there.</p> <p>The overhead line should be put back in place.</p>	Return the 315 kV overhead line.

KEY CONCERNS OF WI STAKEHOLDERS (7 OF 7)


Concern	Opinion	Independent View Point	Recommendation
Toronto vs Montreal	<p>Lines are buried in Toronto.</p> <p>Why not in Montreal?</p>	<p>Transmission Lines are buried in downtown Toronto, due to space limitation for transmission lines. Elsewhere there are overhead transmission lines.</p> <p>On recent drive to Toronto, there were transmission lines all over Toronto and Mississauga.</p> <p>The same is true for downtown Montreal and Quebec.</p>	<p>Buried Transmission Lines when there is no space in the corridor.</p> <p>This is not the case here.</p>

**CONCLUSIONS AND
RECOMMENDATIONS
TO THE BAPE**

CONCLUSIONS - (1 OF 3)

- Saint Jean 120 kV substation is at the end/or probably past its useful life
 - Quality of and Reliability of Power will continue to deteriorate on the West Island between now and 2019/2020 when the new project comes on line.
 - 10,000 customers, (Residences, Industry, Commercial) on the West Island are served by the St Jean substation. This means upwards of 40,000 persons on the West Island. These persons will be affected if there are problems with substation and transmission line.
 - Concern for reliability of power during cold winter days and peak periods. This may require load shedding or rotating power cuts to the customers on the West Island.
 - Going around in circles on this important substation and transmission line
 - Tone of meetings, disrespect and lack of trust is not contributing to the process
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CONCLUSIONS - (2 OF 3)

- Electro Magnetic Fields are within safe limits
 - Noise levels are at ambient levels of the area
 - Property values along Transmission Line corridor already take into account this Transmission Line
 - Overhead transmission lines have 80 year life versus 40 years for underground lines.
 - Overhead transmission lines are easier to operate and maintain.
 - (Faults are easily found and repaired).
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CONCLUSIONS - (2 OF 3)

- The five houses along Rue des Pine (Pine Ave) that butt up against the expanded substation should be looked at. This is to ensure that they have protection from noise and with solid wall barrier if not already there in HQ plans.
- Finally this is transmission corridor set up for overhead transmission lines.
- There are no reasons to be considering an underground line in this corridor.
- Overhead Transmission Lines are found throughout Montreal, West Island. It is only in downtown Montreal, Quebec, Toronto where space is at a premium that one finds buried transmission lines

RECOMMENDATIONS TO THE BAPE

- To ensure that the process be followed and the everything is considered
 - That the project be implemented and that no more delays creep in. Otherwise our power to many customers on the West Island is at risk
 - That this corridor is appropriate and designed for an overhead Transmission Line and that this is what should be done
 - Very risky precedent for considering and putting in an underground line to serve the Saint Jean substation.
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DEAR BAPE, STAKEHOLDERS

THANK YOU FOR YOUR ATTENTION !!!