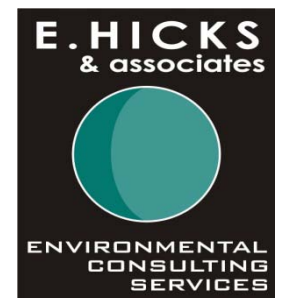


# BIPOLE III TRANSMISSION PROJECT

Socio-Economic Effects Assessment  
Overview



# Outline of Presentation

1. Overview
2. Riel Converter Station & Associated Facilities
3. Bipole III Line
4. Keewatinoow Converter Station & Associated Facilities
5. Summary: Residual Environmental Effects

# Overview

# Socio-Economic Impact Assessment (SEIA)

- Examines effects of project on people who are part of existing socio-economic environment in vicinity of project.
- Changes in physical & biophysical environment can affect well-being of people, lands & resources they use, & ways of life.
- Direct project effects can also occur as a result of project expenditures including employment & business opportunities.

# Socio-Economic Valued Environmental Components (VECs)

- VECs valued by people & help characterize effects of project.
- VECs not specific to individual groups of people – they characterize concerns/issues of importance, & potential effects of the project on people.

# 21 Socio-Economic VECs Selected

## **Land Use (6 VECs)**

- Land Tenure & Residential Development
- Private forestlands
- Aboriginal Lands
- Designated Protected Areas & Protected Areas Initiatives
- Infrastructure
- Agricultural Land Use/ Productivity

## **Economy (1 VEC)**

- Economic Opportunities

## **Culture & Heritage Resources (2 VECs)**

- Culture
- Heritage Resources

## **Resource Use (7 VECs)**

- Commercial Forestry
- Commercial Fishing
- Mining/ Aggregates
- Trapping
- Wild Rice Harvesting
- Recreation & Tourism
- Domestic Resource Use

## **Services (2 VECs)**

- Community Services
- Travel & Transportation

## **Personal, Family & Community Life (3 VECs)**

- Public Safety
- Human Health
- Aesthetics

# Site & Route Selection

- Careful routing/siting of transmission facilities key to avoidance/minimization of potential adverse effects.
- Range of issues & related impacts vary for different project components (HVdc line, northern & southern converter stations) & for specific areas (i.e., northern resource areas versus southern agricultural lands).

# Site & Route Selection Cont'd.

- Further management/mitigation assured through:
  - Suitable design & construction standards/practices;
  - Use of local & Traditional Knowledge; and
  - Environmental Protection Plans & Access Management Plans that outline management measures during construction & through the life of project.



# Health Impact Assessment & Human Health Risk Assessment

- Given nature of development, mitigation measures & short-term duration of construction, Health Impact Assessment not required.
- No pathways to effects – project will not have health effects on local communities/residents.
- Human Health Risk Assessment not required – Health Canada has identified criteria necessary for projects that pose potential risks to human health.
- Three criteria identified – “potential for emissions or the release of contaminants of concern (COPC), potential human receptor(s) and existing pathway(s) for human exposure to COPCs”.
- Occurrences would be contingency events which are not expected to occur.

# Riel Converter Station & Associated Facilities

# Riel Converter Station

- Property for converter station obtained for development of Riel Station (Riel Reliability Improvement Initiative).
- Adjacent private properties & residences also purchased.
- Converter station footprint established through construction of Riel Station.
- Construction related effects expected to be small.

# Riel Converter Station & Associated Facilities – Land Use

- No residual effects on land use with construction of converter station.
- Section of land required for ground electrode with electrode ring sited at centre of property.
- Portion of site for electrode permanently removed from land base – lands outside ring can remain in agricultural production.
- Anticipated that two residences in section will be removed and sold.

# Riel Converter Station & Associated Facilities – Resource Use

- No issues of concern with respect to resource use.

# Riel Converter Station & Associated Facilities - Economy

- Construction employment estimated at approximately 640 person years not including contractor supervisory/management staff & Manitoba Hydro staff.
- Workforce will ramp up & taper off gradually – peak estimated at about 350.
- Effects on economy during construction positive.

# Riel Converter Station & Associated Facilities - Services

## Community Services:

- Given proximity to Winnipeg & relatively small workforce, effects on community services expected to be small.

## Travel & Transportation:

- Traffic generated by construction within design capacity of roads.
- Mitigation measures:
  - Notify agencies/infrastructure operators regarding schedules for equipment/material deliveries.
  - Flagpersons/warning devices at railway crossing along PTH15.
  - Movements subject to regulations for road restrictions & transport of dangerous goods.
  - Further discussions with RM of Springfield & Manitoba Infrastructure & Transportation.

# Riel Converter Station & Associated Facilities – Personal, Family & Community Life

## Public Safety:

- Station security infrastructure such as fencing & security building at entrance to site installed as part of development of Riel Station.
- Remote controlled gate & vehicle barriers located at primary station entrance.
- Video cameras will be used to monitor site activity.
- Station has a site lighting system for safety & security.



# Riel Converter Station & Associated Facilities – Personal, Family & Community Life Cont'd.

## Human Health (Noise, Vibration & Dust):

- Site preparation for converter station part of development of Riel Station.
- Location of ground electrode in centre of section will minimize effects.
- Effects short-term, temporary & intermittent.
- Noise generated from construction will typically fall within provincial noise level guidelines.
- Mitigation measures:
  - Relevant by-laws & regulations re. noise will be observed where possible.
  - If implosives are used for splicing conductors, advance notice will be given to adjacent property owners, & local authorities at the start of the activity and will involve an air horn being sounded every time a charge is set off, as well as posting of signs to advise travellers on PR207.
  - Dust control measures applied as required.

# Riel Converter Station & Associated Facilities – Operations

- Once commissioned, converter station will operate 24 hours a day, year round & have permanent Manitoba Hydro staff on site.
- Total operations & maintenance staff for converter station & associated facilities estimated to be 45 persons.

# Riel Converter Station & Associated Facilities – Operations

## Aesthetics:

- Purchase of adjacent properties minimizes visual effect of converter station.
- Overall appearance minimized through:
  - Site lighting design focuses on site;
  - Earth filled berms planted with native grasses & planting of trees around perimeter of site to break site lines & serve as noise barrier; and
  - 230 & 500 kV switchyards removed from PR207.
- Ground electrode buried & in centre of a section of land.

# Riel Converter Station & Associated Facilities – Residual Environmental Effects

- SEIA did not identify any VECs with significant adverse effects.
- With mitigation measures, adverse residual effects not expected to be significant from a regulatory perspective.
- Facilities will result in positive effects on economy during construction.

# Bipole III Line

# Bipole III Line – Land Use

## Land Tenure & Residential Development:

- Route selected to avoid rural residences to maximum extent possible.
- One residence located within 100 m of route.
- Mitigation measures:
  - Subject to detailed engineering analysis, tower spotting used to reduce effects;
  - Municipal protocols/by-laws & appropriate methods applied to comply with regulatory standards; and
  - Care taken not to impact neighbouring properties.
- Compensation policy for land acquisition for residences within 75 m of the centre of the ROW.

# Bipole III Line – Land Use Cont'd.

## Private Forestlands (Managed Private Woodlots & Shelterbelts):

- Direct impact limited to 3 of 837 (0.36%) registered woodlot management plans – total area 21.24 ha.
- Approximately 19 ha of shelterbelts affected.
- Mitigation measures:
  - Meetings with each landowner to discuss mitigation measures such as replanting; and
  - Locations identified in EnvPPs to avoid additional damage.

# Bipole III Line – Land Use Cont'd.

## Designated Protected Areas/Protected Areas Initiative (PAI):

- Route does not cross any designated protected areas.
- Crosses through 1 ASI (Stephens Lake) for approximately 76 km.
- Although WMAs not formally protected, route crosses 14 km of Churchill & 50 km of Tom Lamb WMAs.
- With respect to Churchill WMA, Manitoba Conservation indicated plans for the portion crossed by route to be excluded from any restrictions.
- Through Tom Lamb WMA, route parallels existing rail line/transmission line for 20 km.
- Route crosses through proposed Red Deer WMA for 27 km & proposed Summerberry RMA for approximately 46 km, of which approximately 17 km be protected.



# Bipole III Line – Land Use Cont'd.

## Designated Protected Areas/PAI – Mitigation Measures:

- Discussions with Manitoba Conservation re. structure placement;
- Construction in winter to protect site-specific features;
- No off ROW activities within unique terrain/soil features;
- Movement of equipment within unique terrain/soil features limited to minimize disturbance; and
- Existing access routes utilized & machinery won't operate outside Project areas within unique terrain/soil features.

# Bipole III Line – Resource Use

## Trapping:

- Route crosses 45 registered traplines.
- Mitigation measures:
  - Ongoing discussions with directly affected registered trapline holders;
  - Prior to clearing & construction, registered trapline holders notified regarding schedules; and
  - Registered trapline holders notified to remove trapping equipment as required.
- Compensation will be paid to registered trapline holders.

# Bipole III Line – Resource Use Cont'd.

## Recreation & Tourism:

- No lodges in immediate proximity to route – closest about 2.3 km away.
- Route crosses 20 Game Hunting Areas – 99 outfitters operating in them.
- Winter construction, which is planned for northern part of line, will limit effects on outfitters.
- Adventure travel & eco-tourism activities in project area limited.
- Route also adjacent to or crosses designated snowmobile trails.

# Bipole III Line – Resource Use Cont'd.

## Recreation & Tourism – Mitigation Measures:

- Lodge owners & recreational resource users notified in advance re. construction schedule;
- Information signs/warning markers to identify where ROW intersects recreational trails;
- If specific issues of concern arise, where possible, minor route adjustments or maintaining a buffer of trees between a trail/site & ROW;
- EnvPPs & Access Management Plans.

# Bipole III Line – Resource Use Cont'd.

## Domestic Resource Use:

- Importance of domestic resource use to Aboriginal people identified by a number of First Nation communities, Northern Affairs communities and MMF.
- Effects can arise from direct impact on the resource as a result of construction or through undesired access by other parties.
- Areas of concern identified through the ATK process.

# Bipole III Line – Resource Use Cont'd.

## Domestic Resource Use – Mitigation Measures:

- Winter construction in northern Manitoba;
- Where construction not in winter, disturbances to plants identified through ATK will be minimized;
- Existing trails, roads & cut lines used whenever possible;
- Hunting & fishing by project personnel prohibited, & firearms prohibited in work camps;
- Manitoba Hydro will work with communities that identified important resources that are in close proximity to minimize effects; and
- Where access is important to a community, Manitoba Hydro will work with directly affected communities to prepare Access Management Plans prior to construction.

# Transmission Lines - Economy

- Construction will include personnel of varying skill levels.
- Economic opportunities from contracting & other business & employment opportunities, & indirectly through provision of goods/services to workforce.
- Total project transmission line employment (Project direct in Manitoba) estimated to be 4,819 person years during construction.
- Effects on economy during construction positive.

# Bipole III Line – Services

## Community Services:

- Workers may be housed in mobile construction camps along the ROW or, where feasible & practical, in accommodations in local communities.
- Regional Health Authorities & RCMP detachments have advised they have the capacity to handle potential temporary increases in demands for health, emergency & policing services.



# Bipole III Line – Services Cont'd.

## Travel & Transportation:

- Development of the line will generate additional traffic on an extensive area of the provincial road network.
- Use of mobile camps will reduce number of trips on surrounding road network.
- Roads likely to notice an increase in traffic those used to transport materials.
- Only PTH10, between PTH60 & PR268, likely to experience marginal volumes in excess of design capacity.
- MIT planning to upgrade older sections of PTH10 – if completed prior to construction, design capacity likely not exceeded.

# Bipole III Line – Personal, Family & Community Life

## Public Safety:

- Access to ROW limited to those who need to be there and will be closely monitored.
- Anyone coming to construction site will require an orientation, and must check in and out at the start/end of every day.
- Protection measures include use of information signs & placement of warning markers to identify ROW.

# Bipole III Line – Personal, Family & Community Life Cont'd.

## Human Health (Noise, Vibration & Dust):

- Construction can result in noise & disturbance effects to people in vicinity of the ROW.
- Avoidance of First Nation Reserve Lands, communities and residences key in route selection process.
- Much of northern portion of route in areas that are fairly isolated with limited developments.
- Noise generated temporary/intermittent, & will typically fall within provincial noise level guidelines.
- In built-up areas and other areas where noise & vibration may create undue stress, work limited to daylight hours.

# Transmission Lines - Operations

- Transmission lines designed to operate continuously.
- Inspections of transmission lines annually either by ground or air.
- Non-scheduled patrols, by ground or air, may be conducted should unexpected repairs be required.
- Average annual workforce for operations & maintenance of the lines approximately 11.5 persons.

# Bipole III Line – Operations

## Aesthetics:

- Portions of the northern part of line cross through lands with limited development.
- Route parallels existing infrastructure in number of areas (about 300 km).
- Subject to detailed engineering analysis, tower spotting used to reduce effects on sensitive land uses in proximity to ROW.
- Manitoba Hydro will discuss site-specific circumstances or tower placement preferences with landowners.

# Bipole III Line – Residual Environmental Effects

- SEIA did not identify any VECs with potentially significant effects.
- With mitigation measures & monitoring, adverse residual effects not expected to be significant from a regulatory perspective.
- Facilities will result in positive effects on economy during construction.

# Keewatinoow Converter Station & Associated Facilities

# Keewatinoow Converter Station & Associated Facilities – Land Use

- Converter station & associated facilities not located on & do not cross any existing First Nation Reserve lands or Federal lands.
- Ongoing discussions with Fox Lake Cree Nation respecting the facilities will continue.



# Keewatinoow Converter Station & Associated Facilities – Resource Use

## Trapping:

- One registered trapline directly affected by converter station.
- Routes for northern ac collector lines & construction powerline cross two registered traplines.

# Keewatinoow Converter Station & Associated Facilities – Resource Use

## Cont'd.

### Mitigation Measures for Trapping:

- Ongoing discussions with directly affected registered trapline holders;
  - Prior to clearing & construction, registered trapline holders notified regarding schedules; and
  - Registered trapline holders notified to remove trapping equipment as required.
- Compensation will be paid to registered trapline holders.

# Keewatinoow Converter Station & Associated Facilities – Resource Use Cont'd.

## Domestic Resource Use:

- Construction of construction camps & converter station will remove land from use.
- As a result of plant loss, Aboriginal people may have to travel further to find sites with suitable quality plants.
- Increase in people in area during construction and, as a result, potential for increased harvest of wildlife and fish.

# Keewatinoow Converter Station & Associated Facilities – Domestic Resource Use Cont'd.

## Domestic Resource Use – Mitigation Measures:

- Keewatinoow camp rules prevent workers from having firearms on site and limit them from exiting the camp to harvest resources;
- Development/implementation of Keewatinoow Access Management Plan in conjunction with Fox Lake Cree Nation; and
- Development/implementation of environmental reclamation/rehabilitation measures.

# Keewatinoow Converter Station & Associated Facilities - Economy

- Construction employment estimated at approximately 920 person years not including contractor supervisory/management staff and Manitoba Hydro staff.
- Workforce will ramp up and taper off gradually – peak estimated at about 350.
- Effects on economy during construction positive.

# Keewatinoow Converter Station & Associated Facilities – Community Services

## Emergency Medical and Ambulance Services:

- During construction of main camp, workers housed at start-up camp.
- Workers with moderate & serious injuries brought to Gillam hospital – camp will have ambulance service and fire truck.
- Gillam hospital likely to experience increase in emergency care but situation should be manageable as services currently not strained.

# Keewatinoow Converter Station & Associated Facilities – Community Services Cont'd.

## Emergency Medical and Ambulance Services:

- Main camp will have first aid building & ambulance.
- Will limit need to use Gillam hospital to severe and/or multiple injuries.
- Existing resources at hospital should be able to handle these cases.
- Coordination system will be established between the camp, Gillam & other emergency services in the area (e.g., Henday Converter Station).

# Keewatinoow Converter Station & Associated Facilities – Community Services Cont'd.

## Policing Services:

- Existing police services may not be able to meet the needs of the detachments service area – RCMP may need to assign additional staff.
- Mitigation measures:
  - Visits to Gillam by workers reduced;
  - Transportation provided to workers to & from construction site;
  - Camp security will be trained to deal with impaired driving/intoxication;
  - Camp behavioural/disciplinary policy established; and
  - Enforcement for impaired driving implemented between camps and Gillam.



# Keewatinoow Converter Station & Associated Facilities – Community Services Cont'd.

## Housing:

- Only a small number of workers might choose to live in Gillam – likely Hydro employees.
- Majority of workers not expected to live in Gillam because:
  - Daily commute to & from site about 2 hours;
  - Reduced time off due to long work days & daily commuting time;
  - Room and board at camp free; and
  - As most jobs short term in duration, impractical to relocate families to Gillam.

# Keewatinoow Converter Station & Associated Facilities – Services Cont'd.

## Travel & Transportation (Traffic):

- Additional traffic during peak construction estimated to be 64 to 78% higher on PR 280 and 175 % on PR 290.
- Total daily volume along both still within daily design capacity.

# Keewatinoow Converter Station & Associated Facilities – Services Cont'd.

- Measures to reduce workers travelling to and from Gillam:
  - Lounge & recreational facilities at camp;
  - Restricted use of company vehicles for leisure;
  - Length of shifts & shift rotations;
  - Controlled entry & exit through staffed security gate; and
  - Shuttle bus to transfer workers to & from Gillam.

# Keewatinoow Converter Station & Associated Facilities – Services Cont'd.

- Additional mitigation measures for traffic:
  - Ongoing monitoring/communication of road/weather conditions at construction camp;
  - Ongoing awareness initiatives regarding safe-driving habits;
  - Traffic signage along the access road;
  - Rigorous enforcement of consequences at camp for impaired driving; and
  - Ongoing awareness initiatives regarding ramifications of impaired driving.

# Keewatinoow Converter Station & Associated Facilities – Services Cont'd.

- Monitoring plan implemented in discussion with First Nations in the vicinity:
  - Tracking of vehicles going through access gate including type of traffic;
  - Tracking of number of vehicle accidents through coordination with Gillam RCMP;
  - Tracking of incidents involving impaired driving, at security gate & through RCMP incident reports; and
  - Implementation of traffic monitoring program.

# Keewatinoow Converter Station & Associated Facilities – Personal, Family & Community Life

- Public Safety (Worker Interaction):
  - Some workers can be expected to visit Gillam during leisure time.
  - Although Bird closest community to project, lacks amenities that workers might be seeking.

# Keewatinoow Converter Station & Associated Facilities – Personal, Family & Community Life Cont'd.

- Worker Interaction - Mitigation:
  - A number of features already incorporated (i.e., recreational facilities at camp, etc.)
  - Preventing undesirable interactions through initiatives targeted at workers & community members;
  - Implementation of Cultural Awareness Training;
  - Assessing the incident when such interaction occurs; and
  - Continued liaison with Fox Lake Cree Nation to identify/implement programs to manage worker influx effects, as well as monitoring & adaptive management plans.

# Keewatinoow Converter Station & Associated Facilities – Personal, Family & Community Life Cont'd.

- Public Safety (Gang and Drug Activities):
  - Concerns raised about influx of workers & increased disposable income of community residents that get jobs could result in increased gang/drug activities.
  - Prospects considered low in Gillam.
  - However, following mitigative measures identified:
    - Number of visits by workers reduced through other measures discussed; and
    - Regular communication between Hydro & Gillam RCMP regarding drug/gang-related issues at camps.



# Keewatinoow Converter Station & Associated Facilities – Personal, Family & Community Life Cont'd.

## Human Health (Noise, Vibration & Dust):

- Noise generated from construction temporary/intermittent & will typically fall within provincial noise level guidelines.
- Given location of facilities, noise & dust levels not expected to be a concern.
- Mitigation measures:
  - Ongoing discussions with Fox Lake Cree Nation;
  - Site will be watered, as required, to keep dust to a minimum; and
  - If implosives used for splicing conductors, advance notice given to stakeholders & local authorities at start of activity.

# Keewatinoow Station & Associated Facilities – Operations

- Once commissioned, converter station will operate 24 hours a day, year round & have permanent Manitoba Hydro staff on site.
- Total operations & maintenance staff for converter station & associated facilities estimated to be 42 persons with about 30 on-site on daily basis.

# Keewatinoow Converter Station & Associated Facilities – Operations

## Aesthetics:

- No residences in proximity to converter station or ground electrode.
- ROW for collector lines crosses through lands with limited development.

# Summary: Residual Environmental Effects

# Summary: Residual Environmental Effects

- SEIA identified three VECs with potentially significant adverse effects (construction phase):
  - Keewatinoow Converter Station & Associated Facilities
    - Community Services;
    - Travel & Transportation (Traffic); and
    - Public Safety (Worker Interaction, Gang & Drug Activities).
- With mitigative measures, & ongoing monitoring & adaptive management, adverse residual effects not expected to be significant from a regulatory perspective.