



Sustainability and Sustainable Development

**Presentation for the
Clean Environment Commission
Keeyask Generation Project Hearings**

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Agenda

- **Introduction**
 - Focus of this Presentation
- **Background – Sustainability and Sustainable Development**
 - Definitions
 - Approaches
 - Topics
 - Sustainable Project Framework
- **Manitoba – Sustainability and Sustainable Development**
 - Act, Principles, Guidelines, Strategy, Code of Practice, Financial Management Guidelines and Procurement Guidelines
 - Framework, and the Strategy, Principles and Guidelines
- **Manitoba Hydro Sustainable Development Policy**
- **Keeyask Generation Project**
 - Methods
 - Results (Frequency Counts and Topics)
 - Weaknesses – based on Response to EIS Guidelines, Chapter 9
 - Framework and the Keeyask Generation Project
- **Recommendations and Conclusions**



Introduction

CEC Terms of Reference set out on November 14th, 2012 the following instruction for the Clean Environment Commission:

“The Commission’s recommendation shall incorporate, where appropriate, the Principles of Sustainable Development and Guidelines for Sustainable Development as contained in Sustainable Development Strategy for Manitoba.”

(Minister of Conservation and Water Stewardship, Manitoba, 2012, p. 3)





Introduction - Purpose

- Report fits Manitoba's sustainable development Principles and Guidelines into broader, emerging context of sustainable development
- Begins to evaluate proponent's EIS against provincial legislation for sustainable development through a **sustainable project framework**
- Conducts a scan of EIS and Joint Keeyask Development Agreement documents for **terms "sustainability" and "sustainable development"**
- **Reviews Chapter 9 of Response to EIS Guidelines**
- Not an evaluation of the EIS as a whole, or judgment of the merits of proposed undertaking.
- Intention is to inform CEC (given Terms of Reference)



Background – Sustainability and Sustainable Development

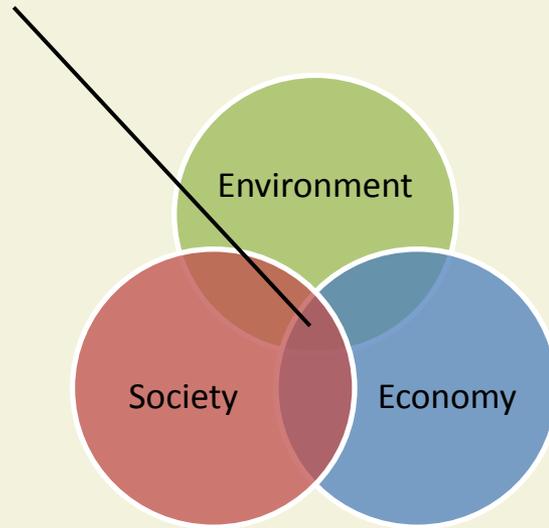
- Commonly agreed-upon **definition** of sustainable development from World Commission on Environment and Development (WCED):
 - “...development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” (WCED, 1987, p. 43)
 - “Inter-generational equity” and “Intra-generational equity”
 - Present generation must stay within ecological limits in order for future needs to be met
- **Sustainable development is the journey while sustainability is the final goal**
- Terms generally explained by **three considerations**:
 - Environmental
 - Social
 - Economic



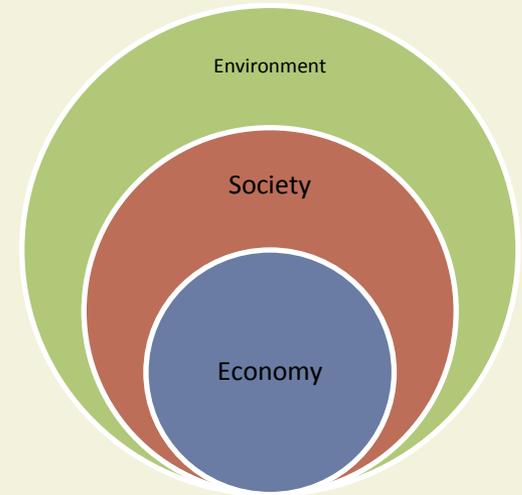


Figure 1: Visual Representations of Sustainable Development and Sustainability

Sustainable development



Sustainability





Ecological Limits

- For **renewable resources**, extraction must be kept to sustainable yields
- For **non-renewable resources**, it depends on the source and how recyclable the materials are
 - Recyclable materials should be kept in circulation
 - Non-recyclable “one-use” resources should be phased out





Approaches to Sustainable Development

- Over years, sustainable development has been adapted to **different contexts**
 - Example: sustainable community plans, sustainable business strategies, sustainable moose plans, etc.
- **Engineers** tend to focus on sustainable development in relation to a project.
- **Planners** tend to focus on the process.
 - Bellagio Principles for Assessment developed in 1996; updated in 2008
 - Ensure that different scales, time horizons and perspectives are incorporated in sustainability assessments
- **Business** tend to focus on the product and service, from a life cycle perspective
 - Extraction stage, manufacturing stage, retail stage, waste/recycle stages
 - Consider sustainability at each stage of the life cycle





Sustainable Development Topics

- **Depends on context** – combination of social, environmental and economic considerations will vary
- As an example, sustainable community topics in Gillam could consist of topics such as:
 - Energy
 - Land use
 - Transportation
 - Water (quality and quantity)
 - Waste
 - Air quality
 - Food security
 - Ecological diversity
 - Climate change (mitigation and adaptation)
 - Housing
 - Social infrastructure
 - Education
 - Health
 - Employment
 - Environmental governance
 - Local economy





Sustainable Development Topics (continued)

- **2009 Sustainability report for Manitoba considers:**
 - *Natural environment indicators*
 - Biodiversity and habitat conservation, fish, forests, air, water, climate change
 - *Economic indicators*
 - Economic performance, agricultural sustainability, mining, energy efficiency and conservation, consumption and waste, employment, education
 - *Social indicators*
 - Demographics, equity and rights, community and culture, governance, health, justice

(Province of Manitoba, 2009)





Sustainable Project Framework

Scale used to define companies and activities

- Low end of scale includes:
 - Companies simply meeting legal requirements
- Middle of scale includes:
 - Companies aiming for continual improvement, but not for sustainability
- High end of scale includes:
 - Companies involving both internal and external stakeholders
 - Companies considering short-term and long-term ecological impacts
 - Examples : Aim for ‘zero waste’ and ‘Net positive contribution’ instead of mitigation of negative impacts

Two approaches used to define high end of scale:

- Defined by leading edge practices in a specific sector
- Defined by standard to show what sustainability should look like (reflects development aiming for sustainability)



Sustainable Development Scale Applied to Keeyask Generation Project

Table 1: Sustainable Project Framework

Low End (Obeying the Law = doing less harm)		High End (Sustainable development = doing more good)	
			
<p>Compliance</p> <p>Ensuring regulations are met.</p>	<p>Mitigation</p> <p>Preventing negative impacts on the environment, society or economy.</p>	<p>Sustainable Project Design</p> <p>Ensuring the project has no negative environmental, social or economic impacts in its design, and that it has positive impacts for those directly involved.</p>	<p>Sustainable Development</p> <p>Creating positive social, economic and environmental impacts for internal stakeholders (e.g., Manitoba Hydro, and the Keeyask Cree Nations), and for external stakeholders (e.g., the Town of Gillam, City of Thomson, and province of Manitoba) both in the present and in the future. Ensuring there are no ongoing negative environmental, social or economic impacts (local, provincial or global).</p>



Manitoba – Sustainability and Sustainable Development

- **Sustainable development legislation in Province of Manitoba**
 - Ongoing for 20 years
- **Within Manitoba, legislative initiatives:**
 - Sustainable Development Act (including Principles and Guidelines)
 - Sustainable Development Strategy
 - Sustainable Development Code of Practice
 - Sustainable Development Financial Management Guidelines
 - Sustainable Development Procurement Guidelines





Manitoba Sustainable Development Act

- Foundation of sustainable development at provincial level
- *“The purpose of this Act is to create a framework through which sustainable development will be implemented in the provincial public sector and promoted in private industry and in society generally”*
- *“The Sustainable Development Act applies to all Departments of the Manitoba Government, including Agencies, Boards, Commissions and Committees that report to the executive branch of government. The Act also applies to **Crown Corporations**, and the broader public sector, referred to as the MASH Sector which includes local authorities (municipalities), school divisions, universities, colleges, health authorities and hospitals”*





Manitoba Principles and Guidelines of Sustainable Development

- **Seven principles of sustainable development:**
 - Integration of Environmental and Economic Decisions
 - Stewardship
 - Shared Responsibility and Understanding
 - Prevention
 - Conservation and Enhancement
 - Rehabilitation and Reclamation
 - Global Responsibility
- **Included in the content of the principles**
 - Integrated economic, environmental, human health and social considerations
 - Inter-generational equity and intra-generational equity
 - Precautionary approach
 - Ecological integrity
 - Scale (thinking globally, nationally and locally)





Manitoba's Principles and Guidelines of Sustainable Development

- **Six guidelines of sustainable development:**
 - Efficient Use of Resources
 - Public Participation
 - Access to Information
 - Integrated Decision-Making and Planning
 - Waste Minimization and Substitution
 - Research and Innovation
- **Included in the content of the guidelines**
 - Full cost accounting
 - Attention to proper resource pricing, and demand management
 - Public participation and transparency
 - Inter-generational perspective in decision-making
 - Reducing, reusing, recycling, and recovering the products of society
 - Innovation





Sustainable Development Strategy for Manitoba

Implementing Sustainable Development for Future Generations: Manitoba's Sustainable Development Strategy

- Four page letter from Hon. Oscar Lathlin (Minister of Conservation in 2000)
- COSDI report accepted as the first step in the Strategy

Report of the Consultation on Sustainable Development Implementation (COSDI)

- Report of a multi-stakeholder consultation initiative to make recommendations on how government can best implement sustainable development principles and guidelines into decision-making





Sustainable Development Strategy for Manitoba

COSDI content relevant to Keeyask Generation Project:

- *“Require integrated sustainable development planning on a large area basis, such as watersheds”*
- *“Require all **municipalities** to review and adopt development plans that reflect the components of sustainable development”*
- *“Provide opportunity for effective and meaningful **public participation** and consultation processes at all levels of planning, significant resource allocation and effects assessment and review”*
- *“Work in **partnership with Aboriginal peoples** to develop a cooperative protocol to ensure effective involvement of Aboriginal peoples where land use and resource planning, significant resource allocation, environmental licensing and regulatory mechanisms, including effects assessment affect Aboriginal peoples and their lands or their ability to exercise their treaty and Aboriginal rights”*





Sustainable Development Strategy for Manitoba

COSDI content relevant to Keeyask Generation Project:

- *“Broaden the concept of assessment from the environmental impact assessment as set out in The Environment Act, to **an effects assessment** to include the assessment and review of all of the **sustainability factors** of a development. The effects assessment process would culminate in an approval (through the issuance of a license, usually with terms and conditions) or rejection of the proposal. An effects assessment would include the assessment and review of any combination of the following elements:*
 - *... an analysis of the alternatives to the project and alternative means for the project, in each case including the "do nothing" alternative*
 - *need (examined in connection to alternatives)*
 - *... **description of cumulative and interdependent effects***
 - *... project sustainability”*





Other Key Manitoba Sustainable Development Regulation

Manitoba's Provincial Sustainable Development Code of Practice

Manitoba's Sustainable Development Financial Management Guidelines

Manitoba's Sustainable Development Procurement Guidelines

- Manitoba's Sustainable Development Procurement Guidelines for procurement decisions and include:
 - Promoting Environmental Sustainable Economic Development
 - Conserving Resources
 - Conserving Energy
 - Promoting Pollution Prevention, Waste Reduction and Diversion
 - Evaluating Value, Performance and Need
- Manitoba's Policy on Green & Sustainable Procurement





Manitoba Hydro Sustainable Development Policy

- Created in 1993, Manitoba Hydro has its own sustainable development principles, which also apply to the Keeyask Generation Project

“The policy and 13 principles represent a guiding influence for Manitoba Hydro’s decisions, actions and day-to-day operations. The general partner of the Partnership will operate within the Manitoba Hydro principles and guidelines of sustainable development.”

(Keeyask Hydropower Limited Partnership, 2012, Response to EIS Guidelines, p. 9-11)

13 principles:

- Stewardship of the Economy and the Environment
- Shared Responsibility
- Integration of Environmental and Economic Decisions
- Economic Enhancement
- Efficient Use of Resources
- Prevention and Remedy
- Conservation
- Waste Minimization
- Access to Adequate Information
- Public Participation
- Understanding and Respect
- Scientific and Technological Innovation
- Global Responsibility





The Keeyask Generation Project: Sustainable Development and Sustainability Content Currently in the EIS

Methods:

- Searched following documents for **keywords** “sustainability” and “sustainable development”
 - EIS Scoping Document
 - Response to EIS Guidelines
 - Socio-Economic Supporting Volume
 - Project Description Supporting Volume
 - Aquatic Environment Supporting Volume
 - Terrestrial Environment Supporting Volume
 - Physical Environment Supporting Volume
 - Joint Keeyaak Development Agreement
- Findings analyzed to produce overall results and topic results



Results of Term Searches

Table 3: Frequency of Terms Sustainability and Sustainable Development in the Keyask Generation Project EIS (see list in chart) and Joint Keyask Development Agreement

	Sustainable	Sustainable development	Sustainable Community	Sustainability	Sustainability Plan	Sustainability Program	Sustainability Indicator	Sustainability Assessment Protocol	Totals
EIS Scoping Document	8	8	0	1	0	0	0	0	9
Response to EIS Guidelines	37	22	2	45	13	3	4	1	82
Socio-Economic Supporting Volume	12	2	2	11	1	3	0	0	23
Terrestrial Environment Supporting Volume	5	1	0	12	3	0	0	0	17
Project Description Supporting Volume	3	2	0	4	4	0	0	0	7
Aquatic Environment Supporting Volume	7	0	0	0	0	0	0	0	7
Physical Environment Supporting Volume	2	0	0	1	0	0	0	0	3
Joint Keyask Development Agreement	0	0	0	0	0	0	0	0	0
Totals	74	35	4	74	21	6	4	1	148



Sustainability and Sustainable Development Term Search - Topic Results

- Signposting and Introducing (10)
- Environment (58)
 - Sustainable wildlife plans (44)
 - Sustainability by assessing, planning for, managing natural systems and resources (14)
- Socio-economic (36)
 - Collaboratively assessing and mitigating past, current, and future aboriginal socio-cultural, environmental/resource, and economic effects (22)
 - City of Thompson (14)
- Keeyask Generation Project (31)
 - Keeyask Generation Project alignment with principles of sustainable development and sustainability (31)
- Institutional (13)
 - Manitoba Hydro's commitment to sustainable development (13)





Weaknesses in Keeyask Generation Project EIS

Methods:

- Over half of frequency counts occur in Response to EIS Guidelines; mostly in Chapter 9
- Chapter 9 of Response to EIS Guidelines read and based on content in this section – weaknesses of Keeyask Generation Project EIS were determined

On a positive note:

- Acknowledgement of long-term nature of project, potential positive impacts for northern communities
- Progressive with unique Keeyask Cree Nations partnership
 - Cree Worldview outlined (working with nature, and having a positive impacts)
- Current and future generations mentioned
- Various scales used





Cumulative Effects Assessment and the Keeyask Generation Project EIS

- COSDI report calls for cumulative effects to be part of environmental impact assessment
- Cumulative effects assessment of Keeyask Generation Project would be in relation to other previous hydroelectric developments on Nelson River
- Assessment would also include effects of numerous new and proposed projects in region
- **No mention of cumulative effects assessment in Response to EIS Guidelines, Chapter 9**
- CEA should be completed prior to decision of new project being added, as was also recommended:

“Manitoba Hydro, in cooperation with the Manitoba Government, conduct a Regional Cumulative Effects Assessment for all Manitoba Hydro projects and associated infrastructure in the Nelson River sub-watershed; and that this be undertaken prior to the licensing of any additional projects in the Nelson River sub-watershed after Biopole III Project”

(p. 130, Report on Public Hearings, Bipole III Transmission Project, June 2013)





Assessment of Sustainability Factors and the Keeyask Generation Project EIS

- CEC terms of reference direct CEC to consider sustainability and sustainable development as outlined by Manitoba's sustainable development Principles and Guidelines
- COSDI report asks that EIA includes assessment of sustainability factors
 - Report also defines sustainability factors to be assessed as environmental, economic, social, cultural and human health
- Manitoba Principles and Guidelines aim for high end of sustainability scale – true sustainable development
 - **Social, cultural, human health mentioned in Response to EIS Guidelines – Chapter 9 but was more ad hoc and not regional and comprehensive**





Social Sustainability Considerations and the Keeyask Generation Project EIS

- Chapter 9 of the Response to EIS Guidelines focuses on sustainability in terms of Manitoba's Principles and Guidelines of Sustainable Development
 - However, focus is primarily environmental and somewhat economic
 - Social considerations (health, housing education, infrastructure) given substantially less attention and are combined into socio-economic which detracts from social aspect
- How will project impact (positively or negatively) on public health system, existing educational institutions, housing challenges social equity within communities?
 - Per-capita underfunding of education on First Nations reserves compared to funding off-reserve schools receive
- Without viable education to help students achieve grade 12, training programs will be less effective
 - Only training people for construction jobs may not be sustainable for communities
 - Are jobs intended for communities building long-term employment skills that will match long-term local opportunities?
- Social assessment would consider regional impacts (positive and negative) of the project on social infrastructure and on local people





Thompson, Gillam and Other FN Communities' Sustainability and the Keeyask Generation Project EIS

- **No mention of city of Thompson; almost no mention of Gillam in Response to EIS Guidelines, Chapter 9**
 - Two short points about helping increase population of Gillam
 - No mention of addressing core issues that Gillam has identified for itself
- Thompson's Community Sustainability Plan has identified 11 priorities for community (AECOM, 2010)
 - Does this project help Thompson achieve its goals?
- Gillam Development Plan identified three major issues that are impacting future development:
 - 1- A lack of a sense of community for all citizens
 - 2- Lack of choice in housing
 - 3- Lack of land for development
 - Does Keeyask Generation Project help address issues or does it exacerbate them?
- **No mention of communities in Chapter 9 content on public participation**
- Sustainable development considers 'external' stakeholders as well as 'internal' stakeholders



Green Procurement, Green Building Design, Waste Management and the Keeyask Generation Project EIS

- **Section on waste in Chapter 9 of the Response to EIS is particularly weak**
 - *“While opportunities to recycle wastes in remote northern areas are limited, waste generated by the Project will be minimized and waste materials will be recycled to the extent practical and the remaining waste will be disposed of in accordance with license and regulatory requirements.” -*
- Some indication that efforts will be made to reduce amount of waste generated, but indication that it will rely on whether waste management systems are in place
 - **Intention to rely on public waste management to handle waste from workers and facility?**
- Section 2B.8 in Physical Environment Supporting Volume offers Manitoba Hydro’s Green Procurement Practices.
- Manitoba also has **green procurement** regulation
- Full cost accounting should also take green procurement, green building design and waste management into consideration.





Relevance of Sustainable Project Framework to Keeyask Generation Project

- Allows for an initial mapping of the results (topics) and the weaknesses (from Response to Guidelines, Chapter 9) on the Framework
- Does content in EIS aim towards sustainability *through* sustainable development?
- ‘Missing content’ is not considered in framework





Recommendations and Conclusions

- In conclusion, EIS (based on what I read) contains some true sustainable development (thereby aiming towards sustainability) – but this is inconsistent
- Number of key considerations that CEC should take note of in order to have more comprehensive sustainability analysis
 1. **The process should consider Regional Cumulative Effects**
 2. **EIS should include assessment of all sustainability factors**
 3. **Social considerations need more attention**
 4. **Keeyask Generation Project should contribute to Thompson and Gillam's (and other FN's) community sustainability; and**
 5. **Plans for Green Procurement, green building design and waste management**
- Goal should not just sustainable project design, but sustainable development
- Current content does not even achieve sustainable project design in all topics.