

PMD 13-P1.1U

File / dossier : 8.01.07
Date: 2013-08-27
Edocs: 4191182

Supplementary Information

**Presentation from
Ontario Power Generation Inc.**

**On
Socio-economic Issues**

In the Matter of

Ontario Power Generation Inc.

Proposed Environmental Impact Statement
for OPG's Deep Geological Repository
(DGR) Project for Low and Intermediate
Level Waste

Joint Review Panel

September 16 to October 12, 2013

Renseignements supplémentaires

**Présentation d'
Ontario Power Generation Inc.**

**Sur
Les questions socioéconomiques**

À l'égard de

Ontario Power Generation Inc.

Étude proposée pour l'énoncé des incidences
environnementales pour l'Installation de
stockage de déchets radioactifs à faible et
moyenne activité dans des couches géologiques
profondes

Commission d'examen conjoint

Du 16 septembre au 12 octobre 2013

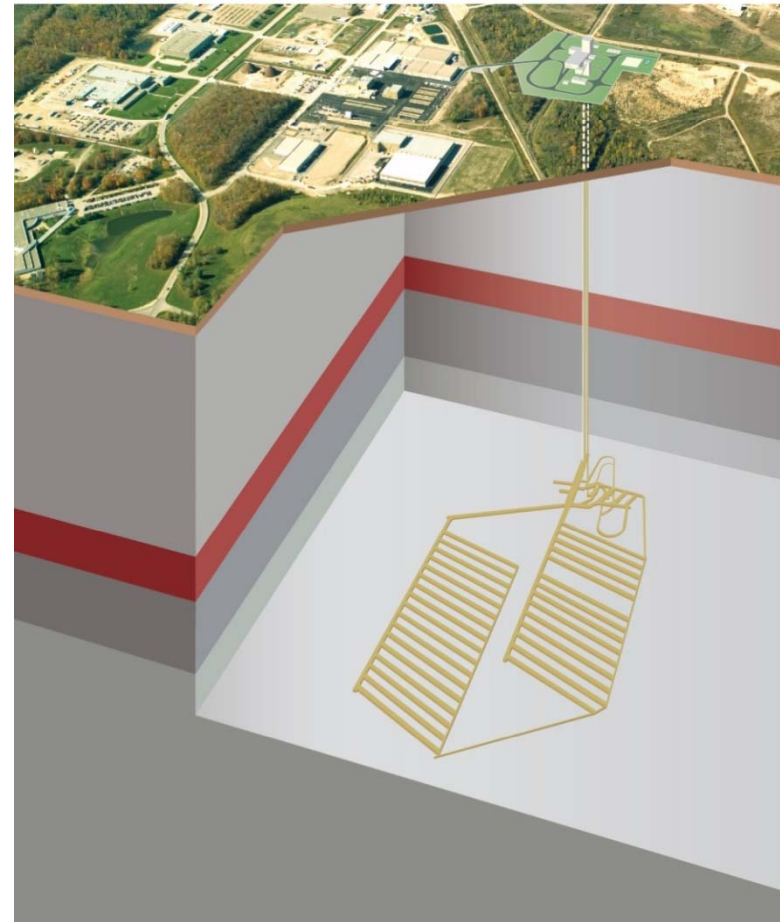
OPG's DEEP GEOLOGIC REPOSITORY PROJECT

For Low & Intermediate Level Waste

OPG's L&ILW DGR Joint Review Panel Hearing

Socio-economic Issues

October 9, 2013

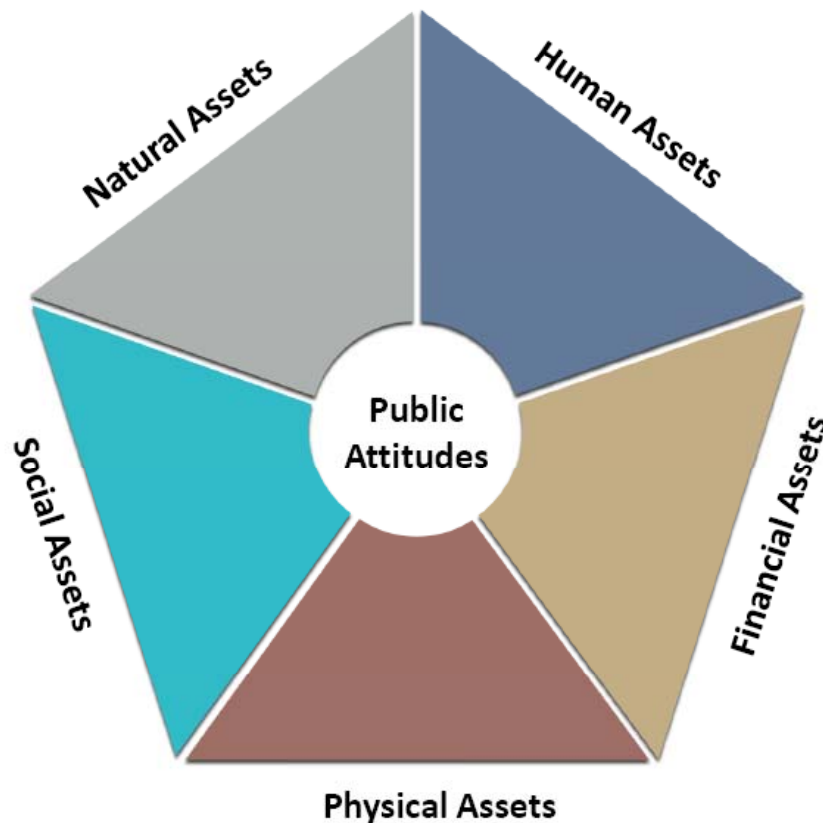


ONTARIOPOWER
GENERATION

Presentation Outline

- Community Well-Being Approach
- Study Methods (including Public Attitude Research and Economic Modelling)
- Valued Ecosystem Components
- Existing Conditions
- Consideration of Stigma
- Context for Economic Modelling and Effects Assessment
- Assessment of Likely Effects
- Conclusions

Community Well-Being Approach



“A state of *Human, Financial, Physical, Social and Natural Assets* possessed or desired by a community which enable its residents, organizations and institutions to support each other in performing all the functions of life and in developing their maximum potential”

Study Methods - Background Research and Other Studies

- ❑ Collection and analysis of secondary source information
- ❑ Literature and case study reviews
- ❑ Stage 1 and Stage 2 Archaeological Assessments conducted on the Bruce nuclear site conducted between 2007 to 2009
- ❑ Traffic analyses undertaken for key intersections in 2008
- ❑ Visual analysis of the DGR Project completed in 2010
- ❑ Review of other TSD findings
- ❑ Review of OPG and NWMO engagement efforts

Study Methods – Surveys and Interviews

- ❑ Tourist / Day User Survey of 122 participants in Inverhuron and McGregor Provincial Parks and local Conservation Areas in 2009
- ❑ Stakeholder interviews involving 76 participants in 2009
- ❑ Community Leader Survey involving 23 participants in 2009
- ❑ Site Neighbour Survey administered to 13 households with 6 respondents in 2009 and 2010

Study Methods – Public Attitude Research

- ❑ Public Attitude Research (PAR) in 2009 – 401 respondents in LSA and 408 in RSA
- ❑ Results of a previous PAR study at the Western Waste Management Facility (WWMF) in 2003
- ❑ PAR Objectives:
 - Identify people's attitudes towards and perceptions of their community
 - Identify resident activities conducted near OPG's WWMF
 - Gauge awareness of the existing WWMF
 - Gauge potential effects on people's attitudes and daily activities as a result of the DGR Project



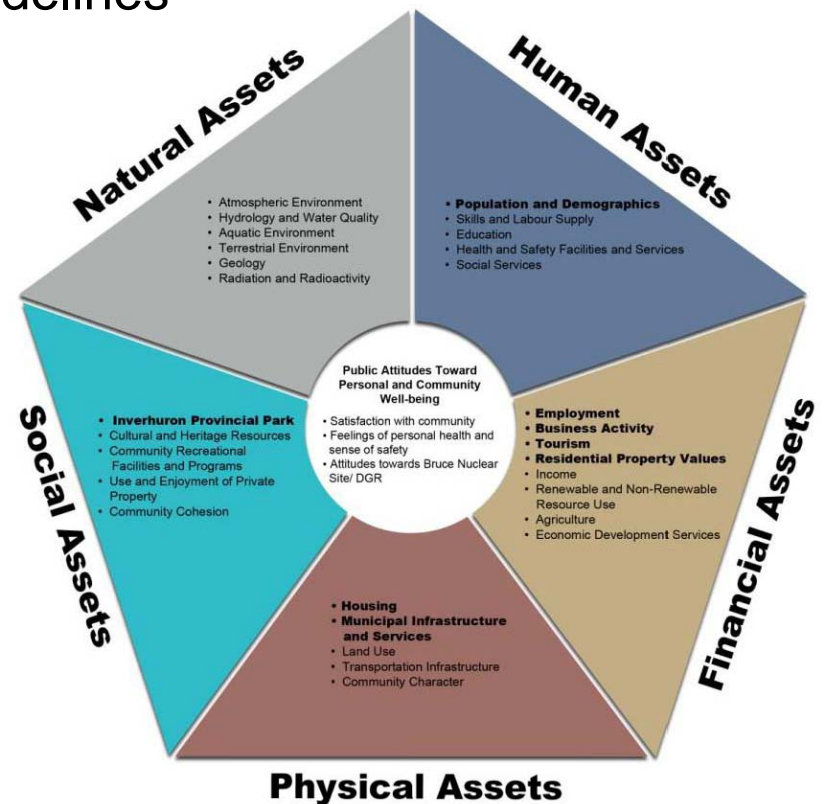
Study Methods – Economic Modelling

- ❑ Quantitative evaluation of socio-economic parameters in the LSA and RSA
- ❑ Uncertainty in the model calculations are managed by:
 - Thorough model testing during build and calibration
 - Internal peer review by qualified specialists
- ❑ The economic model provides estimates of project effects based on current and projected socio-economic conditions



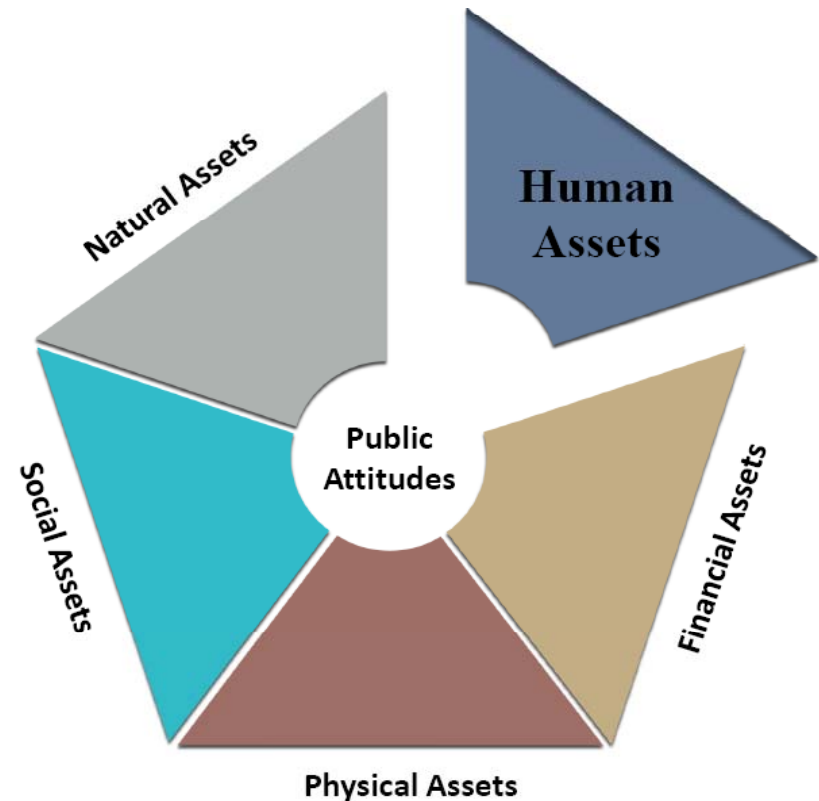
Valued Ecosystem Components

- ❑ Public feedback solicited on socio-economic VECs
- ❑ List of VECs set out in the EA Guidelines
- ❑ Final socio-economic VECs:
 - Population and Demographics
 - Other Human Assets
 - Employment
 - Business Activity
 - Tourism
 - Residential Property Values
 - Municipal Finance and Administration
 - Other Financial Assets
 - Housing
 - Municipal Infrastructure and Services
 - Other Physical Assets
 - Inverhuron Provincial Park
 - Other Social Assets



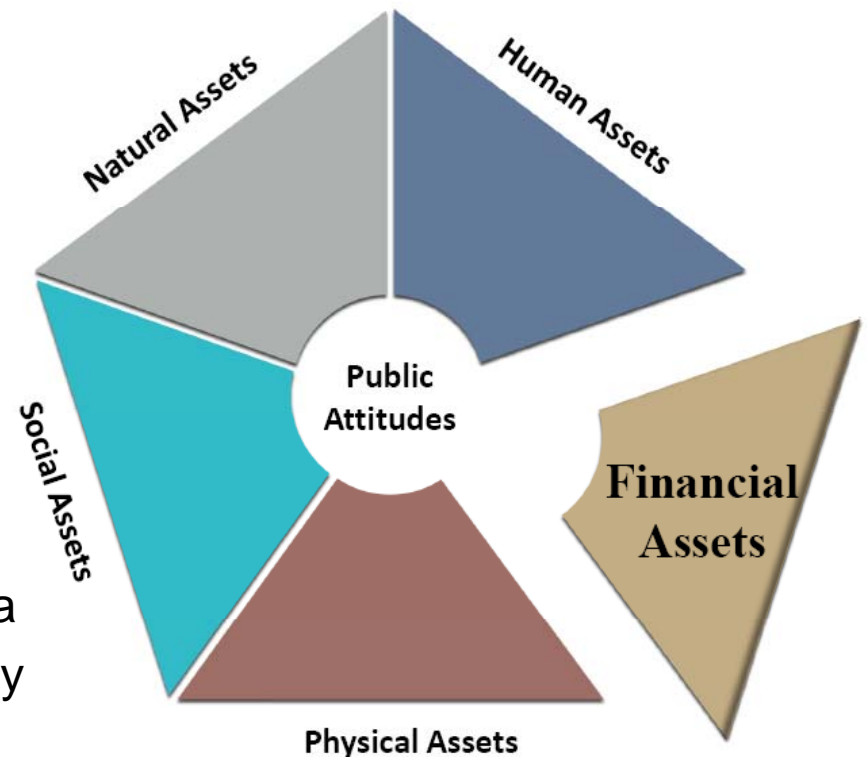
Existing Conditions – Human Assets

- ❑ Since 2001, the Regional Study Area (RSA) population has experienced modest growth (1.6% till 2006)
- ❑ Aging population
- ❑ Experienced labour force resides largely in Kincardine and Saugeen Shores
- ❑ Labour force is dominated by utility workers
- ❑ RSA is served by a wide range of health & safety, educational facilities and social services
- ❑ Demand for health care services is increasing, and schools are below capacity



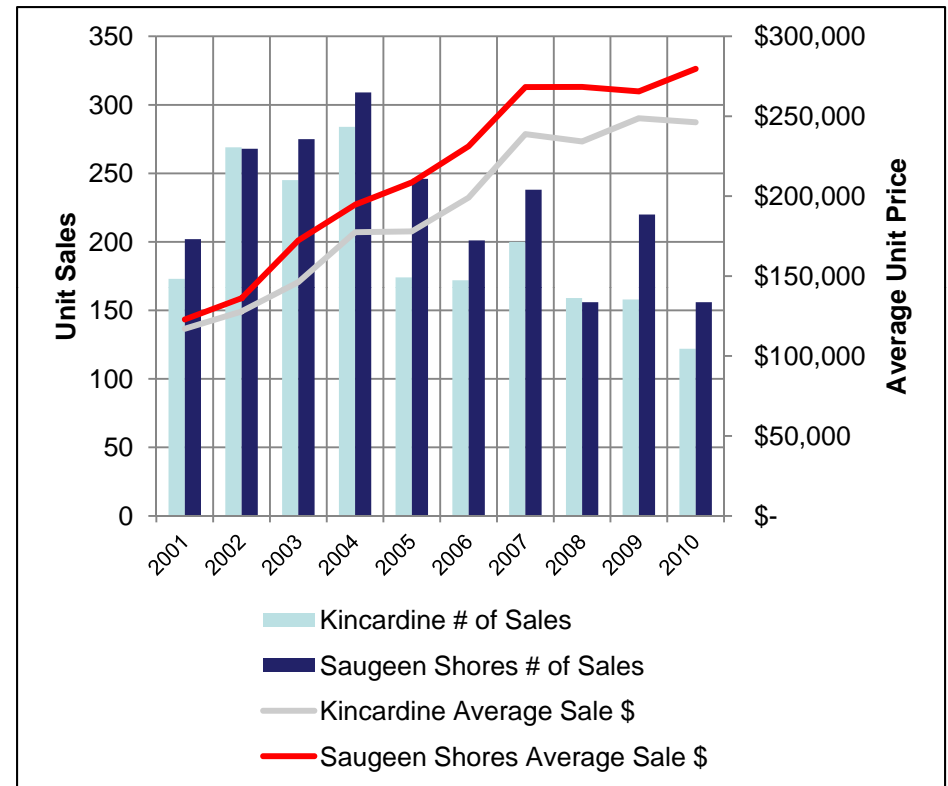
Existing Conditions – Financial Assets

- ❑ Main industries in RSA are energy, government, services, tourism and agriculture
- ❑ Modest employment and income growth since 1996
- ❑ Bruce Power is largest employer
- ❑ Tourism industry employs 1 in 7 people
- ❑ Number of farms decreasing but average size increasing
- ❑ Wind power is developing in the area
- ❑ Average housing prices have steadily increased over time
- ❑ Economic development initiatives focus on diversification and tourism



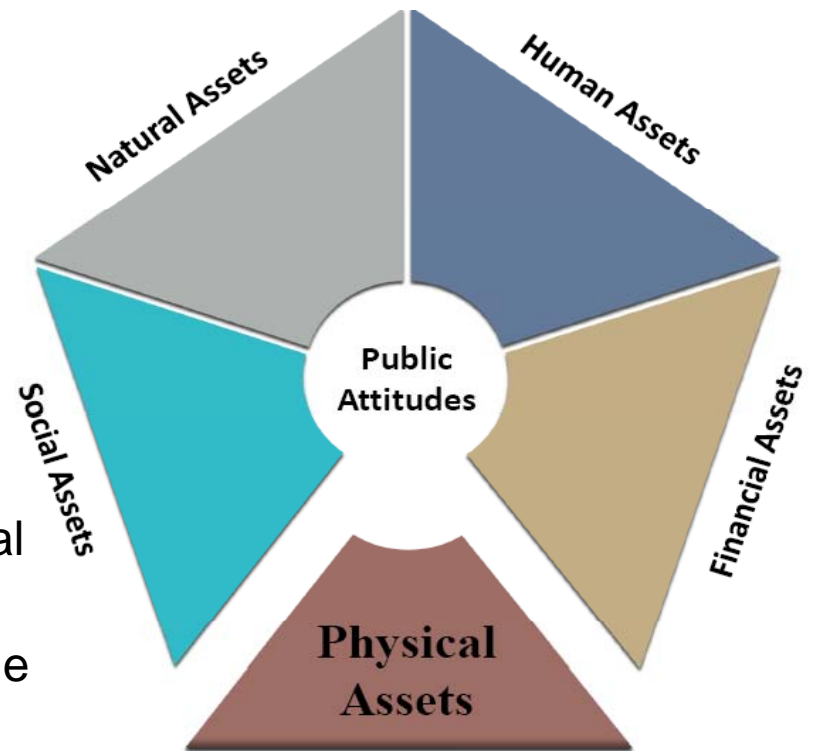
Local Property Values

- Review of residential property value data from the Bruce-Grey Owen Sound Real Estate Board show property value increases between 2001 and 2010:
 - 110% in Kincardine
 - 128% in Saugeen Shores



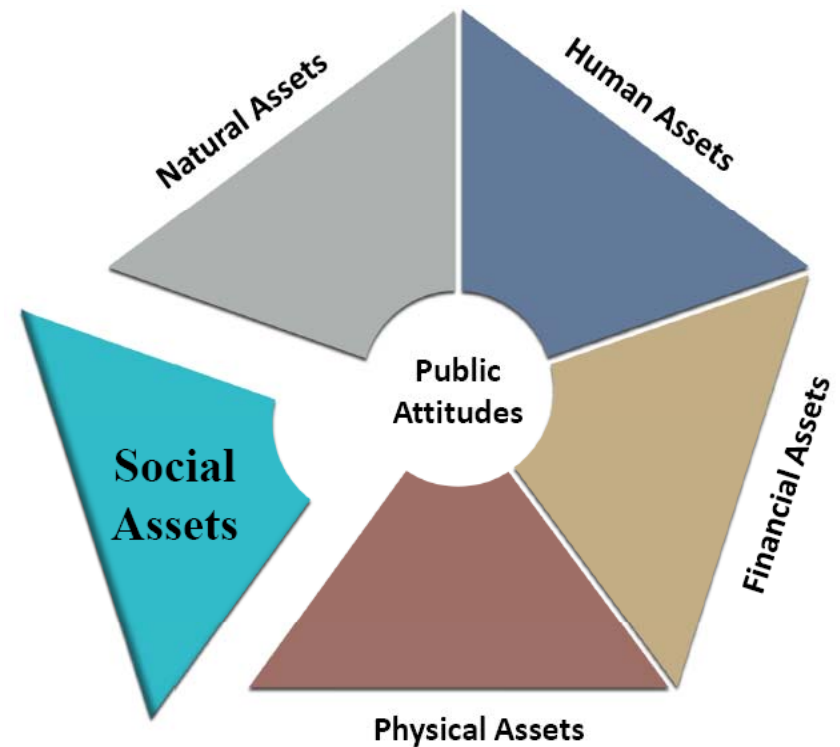
Existing Conditions – Physical Assets

- ❑ Mix of rural land uses and small settlements
- ❑ Inverhuron area is notable for its seasonal residences and cottages
- ❑ Larger settlement areas have water, sewage and waste management services
- ❑ Lake Huron shoreline is the defining feature of the area
- ❑ Bruce nuclear site provides an industrial character to a portion of the shoreline
- ❑ Site is visible from Lake, along shoreline and several points inland
- ❑ Traffic near the Bruce nuclear site is dominated by workers at shift changes



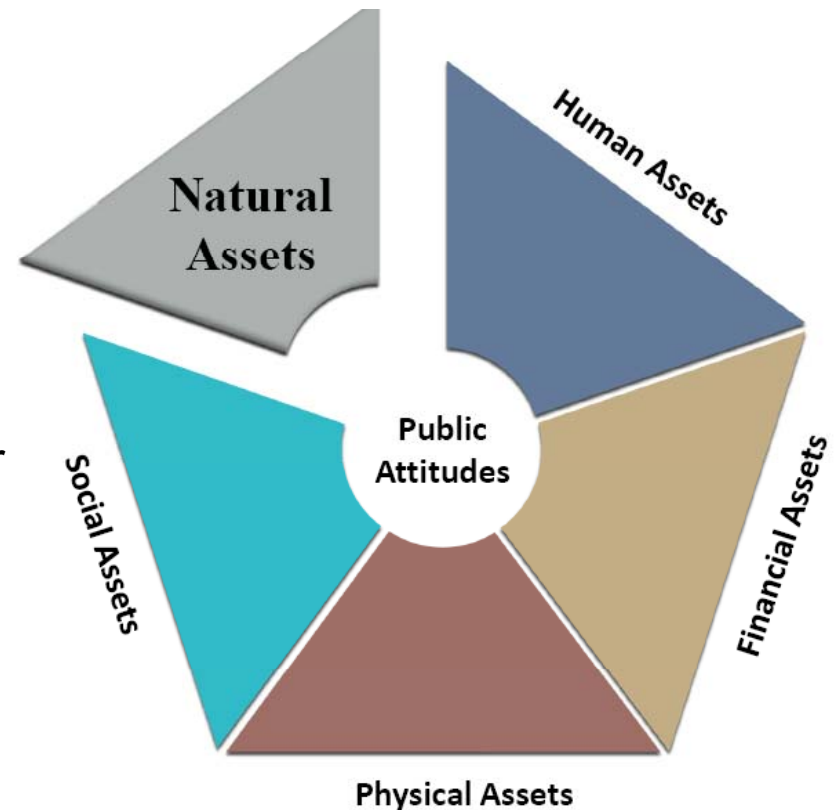
Existing Conditions – Social Assets

- ❑ Area is well served by recreational facilities and features
- ❑ Inverhuron Provincial Park, a neighbour to the Bruce nuclear site, has experienced increased visitation since 2001
- ❑ Bruce nuclear site is an industrial site that contains 4 culturally sensitive areas
- ❑ Communities have long-term residents and a strong complement of community organizations and social events
- ❑ OPG has a long history of community involvement



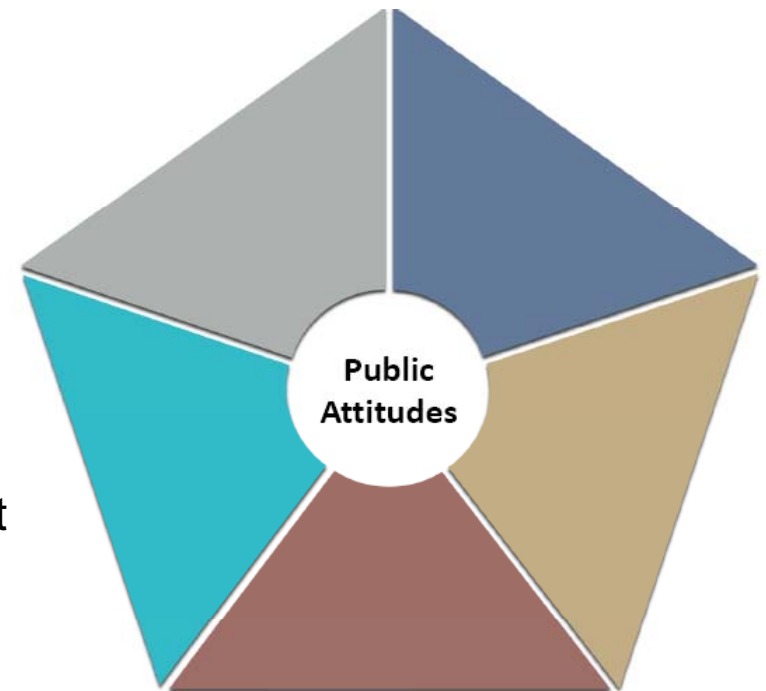
Existing Conditions – Natural Assets

- ❑ Study area supports a wide variety of vegetation communities and wildlife
- ❑ Lake Huron water quality generally meets Provincial standards
- ❑ Variety of fish inhabit the nearshore and open waters of the Lake and in rivers
- ❑ Air quality and noise levels are similar to that of other rural communities in Ontario
- ❑ Noise from the Bruce nuclear site is audible at Baie du Doré and Inverhuron Provincial Park
- ❑ Radiation doses to workers and the public are well below regulatory limits



Existing Conditions – Public Attitudes

- ❑ Nuclear issues are not “top of mind” among LSA or RSA respondents
 - Healthcare is the top issue of concern in the LSA (48%) and economic issues are the top issues of concern in the RSA
- ❑ Very few residents (2%) view nuclear waste as a threat to the well-being of their community
- ❑ 90% of LSA residents are confident in the management of radioactive waste at the WWMF
- ❑ Residents are satisfied living in their community (70%) and are largely committed to staying long-term (69%)

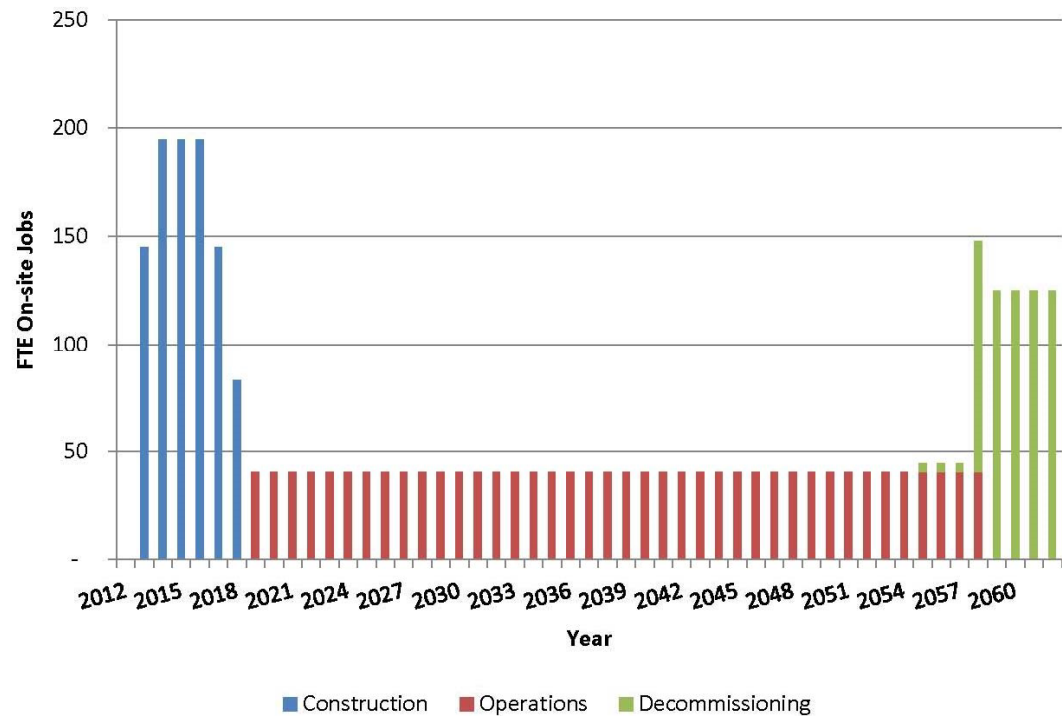


Consideration of Stigma

- ❑ “Stigma” refers to negative images attached to a neighbourhood or community by residents themselves or from others outside the community
- ❑ Pre-requisites for a stigma to occur:
 - There is a “triggering” event that becomes a salient issue
 - People have a high level of awareness, feel threatened by it and are motivated to seek information
 - Information received confirms their beliefs that a threat exists
 - People change their behaviours in response to the threat
- ❑ These features do not currently exist in relation to the WWMF or the Bruce nuclear site
- ❑ Experience in other communities hosting nuclear facilities suggests that the introduction of new facilities (new power generation, storage and waste management facilities) have not been “triggering” events

Context for Economic Modelling and Effects Assessment

- ❑ Peak employment is 200 workers
- ❑ Employment at the Bruce nuclear site has exceeded 4,000 workers
- ❑ Site employment can vary by several 100s depending on status of operations
- ❑ Municipalities are planning for modest population and employment growth

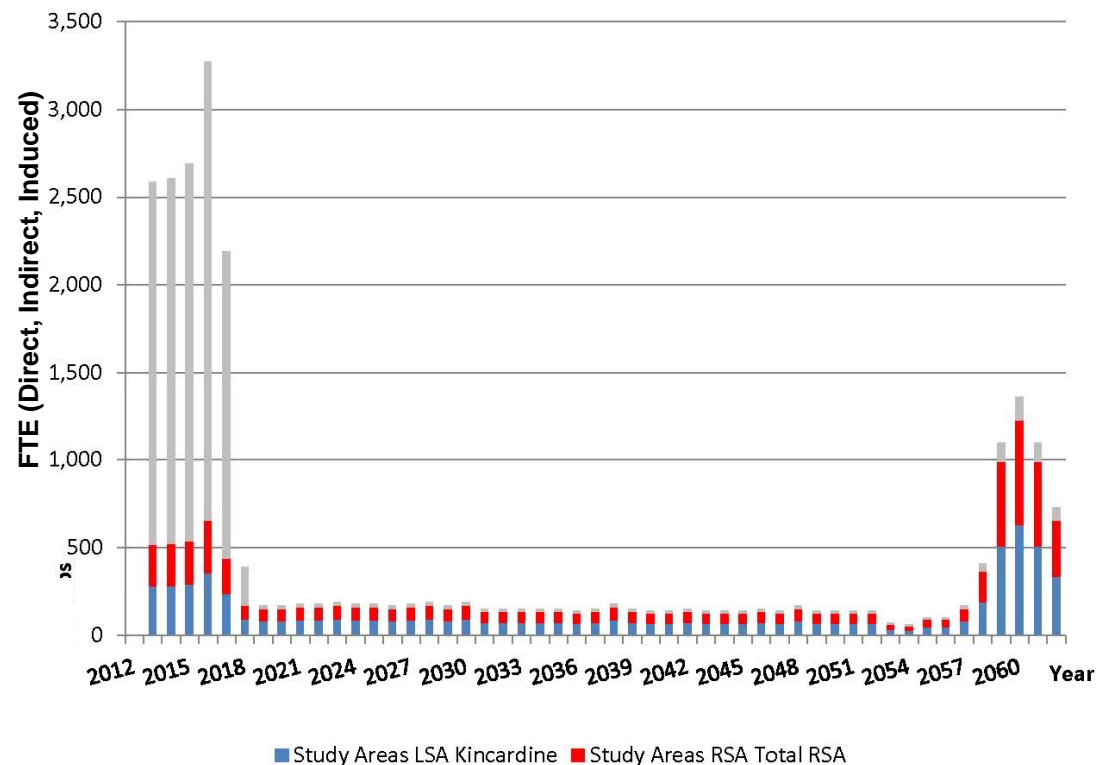


Assessment of Likely Effects - Human Asset VECs

- At peak (2060), DGR project would be linked to 2% of the LSA and RSA population
- Some people might be motivated to move from their communities
- Availability of skills or the supply of labour in the study areas will not be affected
- School enrollment might increase; local schools are well below capacity
- Increased demand for hospital beds, EMS, policing and firefighting staffing is minimal
- No adverse effects on social services

Assessment of Likely Effects - Financial Asset VECs

- ❑ > 24,000 person years of employment representing 0.5% of RSA employment
- ❑ No “boom” or “bust” effects
- ❑ New business activity and municipal revenues
- ❑ Some competition for temporary accommodations
- ❑ No adverse effects on LSA attractions, parks, beaches, trails are expected
- ❑ No anticipated negative changes in property values
- ❑ Property Value Protection Plan in DGR Hosting Agreement



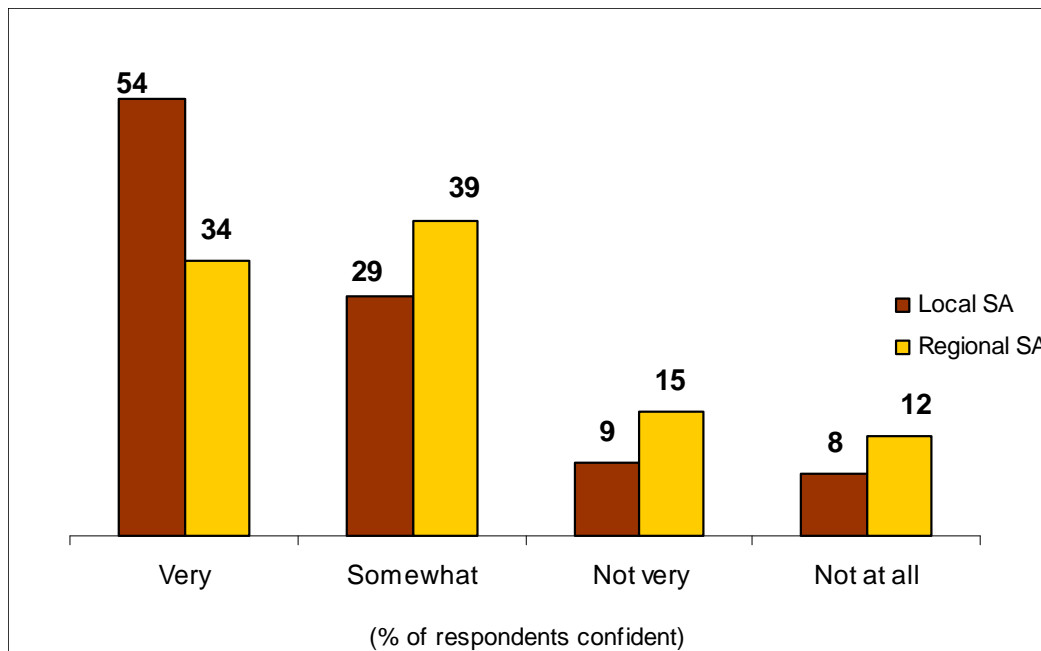
Assessment of Likely Effects - Physical Asset VECs (1)



View of DGR from Conc Rd 8

- Housing demand likely to be readily absorbed by existing housing stock and planned additions
- Increased demand on municipal services is minimal in context of existing capacity and planned growth
- DGR Project will generate screened views from off-site area
 - Most direct views are from Baie du Doré and the lake
- Traffic will increase but DGR Project on its own does not require road network improvements

Assessment of Likely Effects - Physical Asset VECs (2)

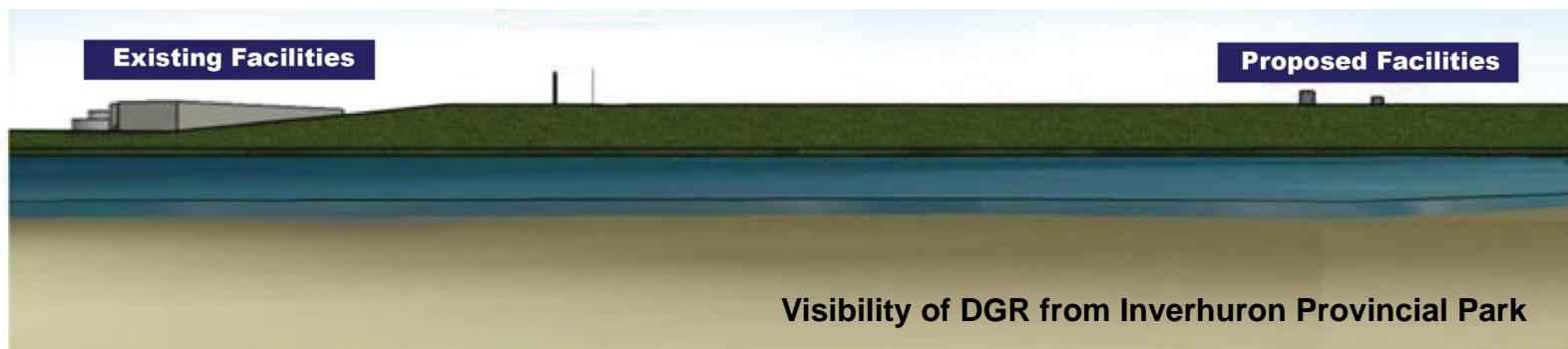


Confidence in the Safety of the DGR

- Community character not likely to be adversely affected and no stigma is anticipated
- No adverse effects on the key community features that are valued by residents
- No stigma currently exists
- “Triggering” events are unlikely
- Most people do not anticipate a change to their feelings or health or sense of safety
- Most people expressed confidence in safety of DGR

Assessment of Likely Effects - Social Asset VECs

- ❑ Inverhuron Provincial Park will remain an important local tourist and recreational feature
 - No measureable changes to visitation are anticipated
- ❑ No measureable changes in demand for community recreational facilities are anticipated
 - Changes to recreational behaviours are minor
- ❑ Increased off-site noise at Baie du Doré may change use and enjoyment of private property at 5 locations
- ❑ No residual adverse effects to community cohesion
 - Positive influences to cohesion will likely be more noticeable than adverse ones



Significance Assessment – Use and Enjoyment of Private Property

Effects Criteria	Effects Level	Rationale
Magnitude	Low	While change in noise levels could be as high as 5 dBA relative to quietest existing hour of the day, with no measurable change during most of the day
Geographic Extent	Low	Effect restricted to small portion of LSA, in the vicinity of Baie du Doré
Timing and Duration	Low	Not evident during operations phase. Only evident during site preparation and construction and decommissioning phases
Frequency	Medium	Conditions/phenomena causing effect occur at regular, although infrequent intervals
Degree of Irreversibility	Medium	After increased noise levels cease, it will take time for people's enjoyment of their home to recover
Overall Significance	Not significant	

Effects Management and Follow-up



□ In-design measures include:

- Continued engagement and communication with municipalities, neighbours and other stakeholders
- Continue with Corporate Citizenship programs and initiatives
- Emergency and fire response plans for the DGR Project, including mine rescue plans
- Noise mitigation measures identified in the EIS
- Establish a Property Value Protection Plan as envisaged in the 2004 Hosting Agreement

□ Additional mitigation measures are:

- Share information schedule and labour force information with local service providers
- Encourage local sourcing of non-salary project expenditures
- As required, work with relevant stakeholders to establish a traffic management plan near the site
- Enhance visual screening through waste rock pile design, berms and vegetation plantings
- Continue to monitor public attitudes toward the DGR Project during implementation
- Curtail work until further assessment if cultural artifacts are encountered

Conclusions

- ❑ DGR is seen as a positive contributor to community well-being overall through increased:
 - Employment opportunities
 - Labour income and business activity
 - Educational opportunities
 - Municipal revenues
- ❑ No significant adverse effects on the socio-economic environment are anticipated that could diminish community well-being

