

TransCanada's Socio-Economic Impact Assessment Catalogue* Gustavo Mendoza Gutierrez and Stevie Snyman¹

Abstract

As an integral part of TransCanada's Socio-Economic Program, the authors developed a Catalogue for housing, analyzing, and reporting the potential socio-economic impacts of proposed energy infrastructure projects. Given the dynamic regulatory and stakeholder environment for pipeline development in North America, project proponents are challenged to perform increasingly rigorous socio-economic impact assessments (SEIA) to better anticipate and mitigate potential impacts on affected communities. The SEIA Catalogue was developed to assist TransCanada in realizing several benefits including: enhance the accuracy of identifying potential impacts; develop consistent and effective mitigation measures; support more informed stakeholder engagement; ensure efficient use of employee and consultant resources; and promote knowledge sharing. This paper provides an overview of the Catalogue, including its purpose, capabilities and benefits for socio-economic practitioners and the broader oil and gas community.

1. Introduction

TransCanada Corporation² (TransCanada), one of North America's leading energy infrastructure companies, established a Socio-Economic Program (the Program) to ensure a consistent and coordinated approach to managing the potential social and economic risks, effects and benefits to local communities and people from capital projects. The Program supports TransCanada's work to engage stakeholders and Indigenous communities, ensure people's safety and protect the environment adjacent to where we do business.

A key function of the Program is to manage the development of socio-economic impact assessments (SEIA) and related effects mitigation and enhancement measures³ for pipeline and power generation projects. SEIAs are usually required in regulatory application processes across North America, and may play an important role in garnering social acceptance for project development. It is therefore imperative that TransCanada develops robust and consistent impact assessments.

2. Drivers of the SEIA Catalogue

Evolving regulatory requirements and an increased focus on socio-economic effects have created heightened expectations for impact assessments. In Canada, federal and provincial regulators (e.g. the National Energy Board [NEB], the Canadian Environmental Assessment

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¹ Gustavo Mendoza Gutierrez and Stevie Snyman are Socio-Economic Advisors with TransCanada Corporation. Questions or comments may be directed to gustavo_mendoza@transcanada.com.

² More info at <http://www.transcanada.com>.

³ "Enhancement measures" refers to the activities that a project may implement to incent or maximize potential positive socio-economic impacts for local stakeholders and communities.

Agency [CEAA] and the British Columbia Environmental Assessment Office [BC EAO]) are developing new requirements and scrutiny for the assessment and management of socio-economic impacts from energy projects. As a result, companies are being challenged to deliver higher quality socio-economic assessments that accurately identify potential human interactions and propose effective mitigation measures.

Stakeholders, including local and Indigenous communities, municipal governments and agencies, non-governmental organizations, etc., are also challenging project proponents on socio-economic impacts and have higher expectations on the solutions that proponents provide to resolve concerns. This is evident in the increasing participation of community members in public information sessions, regulatory hearings and social media.

The new landscape for SEIAs has resulted in greater challenges for how to manage the significant volume of information contained in these assessments. However, limited tools are available to bring together the effects and mitigation measures across regulatory jurisdictions. This lack of a centralized repository has made it challenging to assess information, identify trends, and ensure consistent best practices.

To address the constraints on the analysis of impact assessments, some regulators and agencies have enacted measures to improve access to information. For example, US's Environmental Protection Agency (EPA) and Canada's NEB have made significant efforts to compile and provide access to impact assessment documents through publically available online databases (EPA 2017 and NEB 2017). Despite these efforts, searching for specific information or conducting research across several impact assessments remains a difficult and time-intensive activity. Moreover, discussion among industry peers has shown that most energy companies, consultants and regulators in Canada do not possess the tools required to conduct analyses of their own historical SEIA data.

Farber (2008) identified the consequences of this gap in analytical capability and the lost opportunities for both environmental and socio-economic effects management. Furthermore, the gap allows for significant variations in the quality and consistency of impact assessments. This, in turn, may impact the ability of regulators and stakeholders to hold proponents accountable for the assessment quality and for mitigation implementation, and places constraints on the capacity of project proponents to make continued progress in the effective development of SEIAs. As a result, there is a distinct need among energy companies, policy makers and regulators for tools that can manage the data provided in impact assessments in a more consistent and effective manner.

3. Purpose

TransCanada developed the SEIA Catalogue as a tool for housing, analyzing and reporting socio-economic assessment data, including potential effects and mitigation measures, on for the company's capital projects. The intent is to support continuous improvement in the quality and

consistency of SEIAs and the effective management of potential socio-economic impacts in affected communities.

The Catalogue was designed for use throughout TransCanada's SEIA development process as potential impacts and mitigation measures are identified and assessed. It also supports analysis on a broader scale to examine trends, identify enhancements and promote knowledge transfer from one project to the next. In addition, the Catalogue enables informed discussions among project proponents, consultants, regulators and community stakeholders regarding the overall methodology and quality of SEIAs, and on questions regarding socio-economic effects and mitigation measures.

4. Design and Capabilities

Using Microsoft Excel (Microsoft 2010) and macro programming, the Catalogue was developed with accessibility and efficiency in mind; it needed to be flexible and easy to use for socio-economic assessment data analysis (see Appendix A for a couple visuals on the SEIA Catalogue and its structure). The Catalogue consists of three main components:

a. Manual and references

Tools and information designed to guide and assist the practitioner on using the Catalogue including an instruction manual, dictionary of terms, and a list of references such as regulatory documents and socio-economic management plans.

b. SEIA data

Assessment data from a wide selection of TransCanada SEIAs, representing various regions, regulatory jurisdictions and project types. The data is entered into the Catalogue on an ongoing basis as projects are developed to reflect new or revised assessments.

c. Analysis tools

Tools that enable efficient data analysis and customized reporting including pre-built common queries, key-word searches and pivot tables. The pivot tables have been built to conduct specific queries based on key variables such as the socio-economic valued component, baseline indicators, type of socio-economic effect, project name, and mitigation measure.

Currently, the scope of the Catalogue includes SEIA data for TransCanada project applications submitted to the NEB and the BC EAO. Over time, the Catalogue will be expanded to include socio-economic data from different kinds of TransCanada projects across North America.

The Catalogue includes relevant data presented in a SEIA, as per the guidelines set forth by regulators (e.g. CEEA 2012, BC EAO 2013, MDDELCC 2016 and NEB 2016). This includes information on baseline conditions, the effects assessment, proposed mitigation or enhancement measures, residual effects assessment and significance assessment (Figure 1).

This comprehensive approach enables impact assessment practitioners to compare the thoroughness and consistency of SEIAs, identify commonalities and gaps, and inform best practices going forward.

Figure 1. Components or variables captured in the SEIA Catalogue



For example, the Catalogue can assist in resolving a question from a landowner or a community member on how TransCanada mitigates potential effects to road traffic, or on what are the enhancement measures that the company’s projects usually take to incent local employment. To resolve these questions the practitioner could use the key-word search tool or the pre-built pivot tables for the variables described in Figure 1, and look for the mitigation implemented for the issues or effects of interest. With the SEIA Catalogue, the practitioner is able to develop an accurate and fast response to questions on the mitigation implemented for TransCanada’s projects.

5. Benefits

The design and practical use of the Catalogue provides the following benefits for the assessment of socio-economic impacts:

- a. **User-friendly access to SEIA information:** The Catalogue was developed in Microsoft Excel and structured in a standard format that allows the user to export the information to other data management software packages such as SPSS, STATA and SAS. By using macro programming, the Catalogue offers pre-built analysis tools that are user-friendly and provide instant information on socio-economic effects and mitigation (e.g. baseline conditions, project effects, etc.). As a result, the user is not required to program macros or create new commands to be able to conduct complex searches and queries. The Catalogue also offers the flexibility to create additional macros and analysis tools depending on the user needs.
- b. **Capacity to analyze and enhance SEIAs:** The analysis tools developed within the Catalogue enable impact assessment practitioners to search, organize and report data from a variety of SEIAs across different projects and regulators. For example, the Catalogue can be used to search a specific term of interest (e.g. traditional hunting, employment, water quality, etc.) and generate a report indicating in which projects, baseline conditions and mitigation measures that particular term occurred.

Furthermore, the practitioner is able to ensure that their assessment is consistent with past projects, while also supporting the identification of gaps and inclusion of additional mitigation as required.

- c. Quality improvements of mitigation and enhancement measures:** The Catalogue can provide learnings on the variation and evolution of the mitigation and enhancement measures implemented across different projects. By supporting the tracking of mitigation effectiveness, the tool can help practitioners identify what has worked in past projects and support quality improvements. Having this capacity also enables companies to develop standard mitigation measures that are meaningful for communities, reduce potential risks and are aligned with industry best practice.
- d. Support for stakeholder engagement:** When a stakeholder or community raises concerns about the human interactions of project development, the Catalogue can be used to quickly analyze and communicate information around project effects and proposed mitigation measures to reduce the concern around the effect raised. It also provides practitioners with access to a variety of mitigation options for consideration with affected communities or stakeholders.
- e. Efficient resource management:** The structure and capabilities of the Catalogue enable the efficient upload, search and analysis of SEIA data, reducing the resources required to develop robust and consistent impact assessments. This can create substantial savings for proponents in the development and review of assessments, as well as reducing the need for corrective measures.
- f. Knowledge sharing:** The Catalogue is a tool that supports knowledge sharing across the organization on the development and review of SEIAs. Moreover, it can assist in training new practitioners on socio-economic assessment and raise awareness regarding the information included in SEIAs.

6. Future Development Opportunities

The Catalogue's design and capabilities create the possibility for further development of the tool. For example, while the Catalogue has been developed specifically for socio-economic assessment data, its structure and tools could also be used to store and analyze environmental assessment information (e.g. biophysical valued components). Moreover, its compatibility with other tools such as collaborative online work sites, advanced databases and mobile devices offers the possibility for new ways of using the Catalogue.

Overall, the SEIA Catalogue provides the opportunity for greater intra-industry collaboration and information sharing regarding best practices around impact assessment, mitigation measures and stakeholder engagement on socio-economic impacts. In addition, the Catalogue could be used to enhance the regulatory review processes and the policies and guidelines around impact assessment.

7. Conclusion

The Catalogue is a dynamic tool for housing, analyzing and reporting information from SEIAs. It has improved the efficiency of TransCanada's development and review process for SEIAs, and has enhanced the quality and consistency of these assessments. The capabilities of the Catalogue can help project proponents, regulators, consultants and stakeholders better understand the information contained in impact assessments and inform stakeholder engagement and regulatory analysis.

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Appendix A SEIA Catalogue Pictures

