

Life Cycle Approaches in Canada: Meeting of NRT Expert Advisory Committee

September 8, 2011

Discussion Paper

INTRODUCTION

This meeting is the first of two Expert Advisory Committee (EAC) meetings that will help direct and inform the National Round Table on the Environment and the Economy's (NRT) Life Cycle Approach (LCA) project. This first meeting will be instrumental in defining priority areas for action on the uptake of LCA in Canada. The second, tentatively scheduled for early 2012, will focus primarily on recommendations to the Government of Canada (GoC).

This paper sets out the context for the September 8 EAC meeting. It includes questions designed to help in defining priority LCA areas for action for both the Canadian private sector and the federal government, taking into consideration the barriers and opportunities of increasing the uptake of LCA policies and tools along the spectrum of the life cycle of a product, program or policy.

PROPOSED SCOPE AND APPROACH

Through the Minister of the Environment, the GoC requested that the NRT provide a report on the adoption of LCA to support environmental stewardship and economic competitiveness in Canada. The final report is due by March 2012. Three specific questions were identified in the request, which are as follows:

1. "What would be the implications of applying this kind of approach?" (i.e., Life Cycle Approaches to enhance environmental sustainability)
2. "Is the Life Cycle Approach a useful technique for integrating economic and environmental costs so as to recognize the real value of environmental goods and services?"
3. "Is there a way to advance a Life Cycle Approach to environment stewardship in Canada that supports economic competitiveness?"

The NRT will address the Minister's questions and identify policy-related recommendations for priority areas through a combination of research and convening with stakeholders. Advice will be framed around fiscal, regulatory, non-regulatory and voluntary policy levers at the federal government's disposal to spur the uptake of LCA both within the federal government internal operations and decision making, as well as external policies and programs in support of private sector activities. These levers will be examined in the context of environmental benefits and trade-offs associated with the use of LCA concepts, tools and methodologies and the realization of benefits associated with enhanced economic competitiveness and innovation.

The NRT report will present a *tour d'horizon* of LCA priority issues within Canada and include advice on how the Canadian government can best support the uptake of LCAs. The recommendations will help the GoC in the following ways:

- To assess how LCA-based policies and programs could contribute to achieving long-term economic prosperity and environmental sustainability;
- To determine what role the GoC could play to facilitate the successful uptake and implementation of LCA policies and programs; and,
- To explore opportunities for government and private sector collaboration.

The challenge for Canada is to identify priority areas for increasing the uptake of LCA-based policies and programs, while building on existing initiatives and creating opportunities that promote the country's domestic and international interests. The NRT's research will explore this challenge and help inform future policy pathways that could provide the foundation for Canada to move towards a future that is both environmentally sustainable and economically prosperous.

Our advice will be built around the following three themes:

1. Public sector - Use of LCAs in GoC internal operations and decision-making processes;
2. Private sector - Private sector use of LCAs and support of related initiatives through GoC external policies and programs; and,
3. Enabling instruments - A suite of policy instruments to support the increased adoption of LCA tools, concepts and methodologies. These could include regulatory, non-regulatory, market-based, voluntary and fiscal GoC policy levers.

To address these themes, we will conduct internal research and engage external experts in the coming months. Feedback on key findings will be sought during stakeholder engagement sessions planned for later this fall and early winter.

Case studies will be used to illustrate barriers and opportunities to LCA uptake to ground our policy recommendations. The report will provide practical recommendations on policy instruments that the GoC could apply to its internal operations as well as to existing and new policies and programs to support the uptake of LCA in the private sector.

RESEARCH AND CONVENING PROCESS

To date, our research has been informed through conversations and meetings with people working in LCA-related areas, both within and outside of the Government of Canada (GoC). This includes meetings with GoC departments (e.g., Environment Canada, Industry Canada, Agriculture and Agri-Food Canada, and Policy Horizons Canada), as well as conversations with industry groups (e.g., the Canadian Federation of Agriculture). More meetings are planned with other GoC departments (e.g., Foreign Affairs and International Trade, Natural Resources Canada, Fisheries and Oceans, and Public Works and Government Services) which will take place in September and October 2011. Discussions with these groups provide context regarding the existing use of LCA within the public and private sectors, as well as potential opportunities and barriers that exist related to LCA uptake and use in Canada.

In July, the NRT engaged a LCA specialist to further refine the scope of the project and to obtain additional knowledge to supplement NRT's existing understanding of LCA issues within Canada. The consultant's report has been received, the contents of which have been incorporated into the planning of our future research direction and questions.

To ensure that our research is relevant to the needs of the GoC, a meeting with Assistant Deputy Ministers and Director Generals from federal departments with LCA relevant mandates was jointly hosted by NRT and Environment Canada on September 1. The purpose of this meeting was to: (1) provide federal officials with a brief overview of the GoC Ministerial request; (2) provide an overview of the NRT research scope; (3) explore LCA linkages within departmental mandates; and, (4) inform the NRT's research to ensure that it is relevant to the GoC's needs.

A potential international collaboration with the European Commission's (EC) Joint Research Centre (JRC) is currently being explored given its role as a leader in LCA. The JRC is the scientific and technical arm of the EC; as such, it provides the scientific advice and technical know-how to support a wide range of European Union policies. The JRC supports sustainable development in the EU through facilitating Life Cycle Thinking and Assessment in businesses and public administrations. One area for potential collaboration is on LCA-related enabling instruments – one of the NRT's three main research themes.

MAIN RESEARCH THEMES

A. USE OF LCA's IN GOVERNMENT INTERNAL OPERATIONS AND DECISION-MAKING PROCESSES

Drivers for the uptake of LCA within Canadian federal government operations and decision-making include improved decision-making and leadership to advance environmental sustainability and economic prosperity. The systems perspective inherent in LCAs can enhance decision-making by bringing complementary data and information, as well as different perspectives, to policy and program development. Through the inclusion of more information and data, the shifting of environmental impacts from one stage of the life cycle to another can be avoided.

Further, the government's leadership role in the promotion of economic prosperity and environmental sustainability in Canada could be in part addressed by promoting the uptake of LCA in the private sector through the inclusion of LCAs in government policies, such as procurement. This could stimulate suppliers to innovate more sustainable products and services, not by picking winners and losers, but rather by providing suppliers with a framework and incentives that will result in the provision of products and services that meet government objectives.

Questions for consideration:

- 1. Are these the correct drivers for LCA in the GoC's internal operations and decision-making? If not, what is missing?*
- 2. Should the GoC use LCA in internal operations and decision-making? If so, where would efforts best be directed?*
- 3. What case studies could be used to illustrate the potential barriers and/or opportunities for LCA uptake in GoC internal operations and decision-making?*

B. PRIVATE SECTOR USE OF LCAs AND SUPPORT OF RELATED INITIATIVES THROUGH GoC EXTERNAL POLICIES AND PROGRAMS

The private sector in Canada is leading in implementing LCAs to address market access, trade and competitiveness issues. There is current and increasing demand (business-to-business) within many sectors (e.g., building and construction, electronics, retail, packaging, food and beverage) for a range of environmental performance data on materials, including those from natural resources (e.g., wood, metals, oil, etc). LCA tools have the ability to provide this information. The potential impact on natural resource sectors in Canada is especially important as these sectors represent a large proportion of our net export profile.

Further, potential trade barriers (business-to-government) could result from governments favouring lower footprint products (e.g., Grenelle 2 law in France), lower footprint natural resources (e.g., California's Low-Carbon Fuel Standard) and European directives with built-in requirements to improve product performance across the life cycle (e.g., Ecodesign Directive). There is a possible competitive advantage if Canadian producers can demonstrate that their materials perform favourably in key areas such as their carbon and water footprint across their life cycle.

The GoC has a responsibility to ensure that LCA-related market access, trade and competitiveness issues are not inhibiting the Canadian private sector. One way that the GoC could fulfill this responsibility is by implementing policies and programs to support the uptake of LCA concepts and tools in the natural resource sectors. For example, a clear GoC policy signal related to the adoption of LCAs would stimulate improvements and innovation within supply chain serviced by these natural resource companies. This could improve the natural resource sector's ability to better understand, improve and communicate their environmental performance to their customers.

Questions for consideration:

- 1. Are these the correct issues driving the need for LCA in Canada from a private sector perspective? If not, what is missing?***
- 2. Which sectors are leading the way and why?***
- 3. Does the private sector need the government's support to use and implement LCAs? If so, what does the private sector need and how can the GoC best respond to this need?***
- 4. What case studies (issue, company, sector) could be used to illustrate the potential barriers and/or opportunities for the GoC to promote LCA uptake in the private sector?***

C. EXAMINATION OF ENABLING INSTRUMENTS GoC COULD IMPLEMENT TO INCREASE THE ADOPTION OF LCA TOOLS, CONCEPTS AND METHODOLOGIES

To facilitate the uptake of LCAs in Canada, a preliminary list of enabling instruments has been identified. Enabling instruments refers to the various fiscal, regulatory, non-regulatory and voluntary policy levers that the GoC could implement to advance and support the uptake of LCA concepts, policies and tools. This list includes, but is not limited to:

- Federal policies and policy decision making processes;
- Guidelines and codes;
- Memorandum of Understanding;
- International Agreements;
- Laws and regulations;
- Data and information (e.g., life cycle inventory databases);
- Standards (e.g., for product labeling);
- Consumer education and awareness (e.g., life cycle aspects of major product categories);
- Fiscal instruments (e.g., GST and accelerated capital depreciation on new technologies);
- Capacity building (e.g., educational courses for public servants on LCAs, providing small and medium-sized enterprises with LCA tools and increased research and development capacity); and,
- Procurement (e.g., consideration of life cycle information of products and services purchased by the government).

Questions for consideration:

1. *What enabling instruments would help the GoC to support the uptake of LCA in the private and public sector to enhance environmental sustainability and economic prosperity?*
2. *What case studies could be used to illustrate the need for the identified enabling instruments?*