

ECO-INDUSTRIAL SOLUTIONS LTD

SUSTAINABLE INDUSTRIES PERFORMANCE INDICATORS

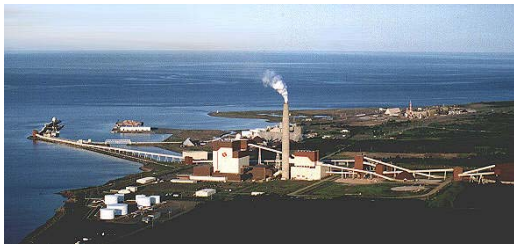
EIN PERFORMANCE MEASUREMENT

CANADA

Project Background & Goal

Sound decision-making depends on our ability to measure our performance, allowing us to learn and adapt from our successes (and failures). Performance indicators help us to measure our performance in a systematic, consistent, and rigorous way.

One of the largest barriers to successful EIN implementation is the lack of standard performance indicators and related data, which prevents the establishment of rigorous baselines and targets, and limits performance monitoring and the generation of measurable results. This in turn deters investment or funding for these innovative projects.



New Brunswick Power Thermal Generating Station, Courtesy of the Village of Belladune, N.B.



Maplewood Industry, District of North Vancouver, B.C. Photo Courtesy of Michael Von Hausen

Industry Canada's Sustainable Technologies and Service Industries Branch retained Eco-Industrial Solutions Ltd to develop a **sustainable industries performance indicators framework**. The framework brings together and adapts business and community sustainability indicators (e.g. eco-efficiency; SmartGrowth; corporate sustainability indicators) so that they can be applied to geographically bounded areas with intense light, medium, and/or heavy industrial activity, such as industrial or business parks.

Work Completed To Date

The sustainable industries performance indicators framework has been developed, with a focus on indicators that would allow for the comparison of industrial sites in any region or even nationally. The framework comprises 72 indicators in the following categories:

- Overall Production / Financial (4)
- Energy (14)
- Materials (7)
- Water – Potable, Non-Potable, Storm, Wastewater (8)
- Land Use and Transportation Infrastructure (13)
- Corporate and Municipal Governance (11)
- Eco-Industrial Networking Specific (10)
- Community (5)

The framework includes a list of data needed to calculate the indicator, as well as potential sources for the data. Only indicators for which data would be practically available were included.

SNAPSHOT



Courtesy of Corporation of Delta

PROJECT SCALE

- Industrial Parks
- Canada-wide

CLIENT

Industry Canada - Sustainable Technologies and Service Industries Branch. STISIB promotes the growth of a dynamic and innovative economy through the development of sustainable technologies and service industries that will contribute to greater industrial and urban sustainability, business growth, increased productivity and market share, job creation and confidence in a fair and efficient marketplace

PARTNERS

- Industry Canada
- Holland Barrs Planning Group

TECHNIQUE / TECHNOLOGY

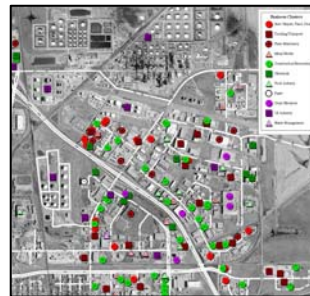
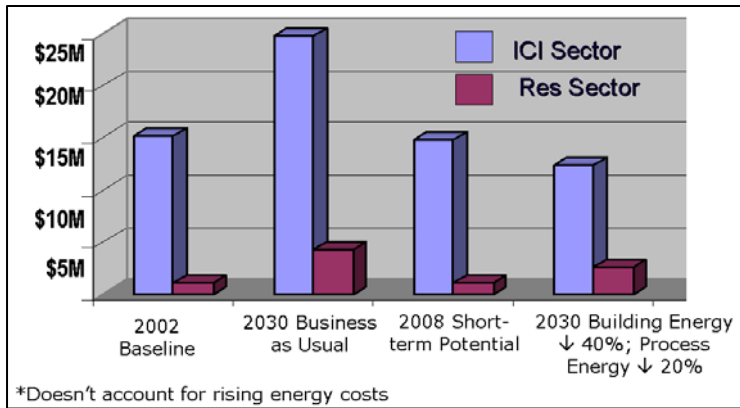
- A framework that supports rigorous baseline assessments and performance monitoring

Achievements

This is the first time anywhere that performance indicators have been developed to measure the sustainability performance of industrial sites. Canada is poised to lead the world in measuring the success of EIN and related initiatives.

The Sustainable Industries Performance Indicators Framework should help to **better demonstrate the direct link between environmental and social performance and the fiscal bottom line**. It will support a more rigorous approach to eco-industrial and related projects, thereby building more support and ensuring *quantitative performance measurement*.

Performance measurement enhances profitability, competitiveness, and innovation. A set of standardized, rigorous measures will facilitate the tracking of costs and benefits of innovative solutions. While anecdotal evidence and descriptions of the benefits of EIN are motivational, quantitative, demonstrable benefits are more effective for engaging the business community and for securing financing to implement EIN. A consistent performance indicator framework will also lead to more adaptive management and "learning by doing", which will in turn lead to further innovation.



Business clusters in Ross Industrial Park

Potential energy savings in Maplewood.

Next Steps

The next step in the development of the sustainable performance industries indicators would be to pilot the indicators at one site. The objective of the pilot will be to **apply the framework and calculate a baseline at one or more pilot sites**. This will help to confirm that the data required is indeed available, and that businesses and local governments support the framework.

Once the performance indicator framework has been piloted and refined, then the next step would be to **determine baselines for a number of representative Canadian industrial areas (benchmarking)**. This would create a resource that would allow sites to benchmark their performance and to set realistic targets. A benchmarking project should also include an evaluation of sites that appear to be performing better than others to determine why they are performing better. This information could help other sites to develop action plans and targets to increase their progress towards sustainability.

Indicators are bits of information that highlight what is happening in a larger system. They are small windows that together provide a glimpse of the "bigger picture".

Sustainable Seattle – Indicators of Sustainable Community

WHAT IS ECO-INDUSTRIAL NETWORKING (EIN)?

EIN embraces a systems approach and lessons from nature. In practice, EIN creates collaborative relationships (networks) between businesses, governments, and communities to more efficiently and effectively use resources, such as materials and energy, but also including land, infrastructure, and people.

In practice, this results in:

- "Waste = food" synergies
- Multi-objective infrastructure systems (utilities / services)
- Sustainable economic development;
- More efficient land use planning
- Green buildings, technologies & practices
- Greater returns for capital investment
- Leveraged partnerships between public and private organizations; and
- Integral consideration of ecological, social, and economic impacts