

ECO-INDUSTRIAL SOLUTIONS LTD

ROSS ECO-INDUSTRIAL PARK PROJECT

EIN & SUSTAINABLE TRANSPORTATION

REGINA, SASKATCHEWAN, CANADA

Project Goal

The objective of the project is to transform one of Regina's largest industrial districts into a high performance eco-industrial park. Ross Industrial Park is home to more than 500 businesses. These businesses comprise more than 7 million ft² of building space, and consume more than 14 million m³ of natural gas, 300,000m³ water, and 71,600 MWh of electricity each year.

Businesses and the City of Regina will see financial, environmental, and social benefits from practicing EIN to reduce resource consumption; share business services; reduce demands on municipal infrastructure; pilot green infrastructure and technologies; support better transportation planning; and use their land and buildings more effectively.



Work Completed To Date

Preliminary EIN Opportunity Assessment Completed in 2003, this study helped to characterize basic (aggregate) resource use across Ross business sectors. Based on a high level analysis of energy and water consumption, as well as land use, several EIN opportunities emerged.

EIN & Sustainable Transportation in Ross Launched in Autumn 2005, local businesses and stakeholders will work to identify and implement EIN opportunities, with a focus on those related to transportation activities and businesses. A detailed resource baseline of the area has been completed. The baseline helps to evaluate opportunities and will ensure that future success is measured. Now, identification and feasibility screening of EIN opportunities is proceeding.

Stakeholder Engagement & Capacity Building Several meetings and a workshop helped to engage Ross businesses, and to identify priorities. Transportation emerged as a top priority, ranging from public transit challenges to rising logistics costs. As a result of this work, several businesses formed the non-profit Regina Eco-Industrial Networking Association to support EIN projects. REINA will be conducting ongoing business-to-business networking sessions and focus groups in the park, focusing on various resource 'themes' such as vehicle fuel and natural gas.

The benefits (are) just networking with other local businesses, what services are available to us, whether its consulting services or manufacturing ... and how we might be able to better utilize the services that are already existing in our local community to try to reduce the impact on the environment," Debra Bradford, Manager, Meter Operations, Schlumberger Leader-Post (Regina) June 26, 2003

SNAPSHOT



PROJECT SCALE

- Industrial Park (500+ businesses)
- Individual corporations

CLIENT

The Regina Eco-Industrial Networking Association (REINA) brings together Regina businesses to support an eco-industrial networking approach to improve businesses' financial performance while minimizing their environmental impact and contributing to a better quality of life in Regina.

PARTNERS

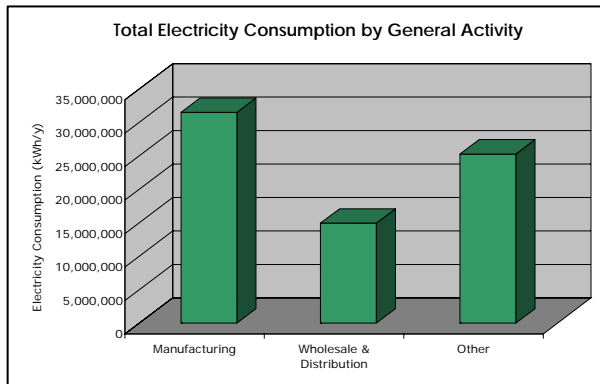
- Transport Canada – Moving on Sustainable Transportation
- Communities of Tomorrow
- Ross Businesses
- City of Regina
- Saskatchewan Environment
- University of Regina

TECHNIQUE / TECHNOLOGY

- Multi-stakeholder process
- Material & Energy Flow Analysis
- Green infrastructure
- Environmentally responsible manufacturing

Achievements

- Keen to get started on the next stage, several businesses formed **Canada's first not-for-profit committed to implementing EIN**: the Regina Eco-Industrial Network Association (REINA). REINA is dedicated to using EIN to make Regina businesses more competitive, profitable, energy-efficient, and environmentally-friendly.
- Ross has become the **first EIN project to receive Transport Canada Moving On Sustainable Transportation (MOST) funding** (\$30,000) as well as **funding from the Regina-based Communities of Tomorrow – Partners for Sustainability** (\$75,000)
- The project team has completed the **detailed resource baseline** of the industrial park. This represents the most rigorous evaluation of resource use in an industrial park in Canada! The baseline incorporates data from the City, private databases, utilities, and surveys. The baseline allowed for the evaluation/measurement of several sustainable industries indicators.
- A customized database was developed to manage the data. This was combined with a customized Geographic Information System (GIS) to produce visual representation of resource and land use in the area.
- For more information about the Ross Project, please contact Robert Hughes, co-chair of REINA at rhughes@waterouspower.com



Electricity and water consumption in Ross Industrial Park.

Next Steps

The data will be further analyzed and EIN opportunities will be identified. Some of these projects might include:

- Collaborative capacitor installations to increase power factors and save businesses more than \$400,000
- Green building and technology retrofits to reduce heat loss and natural gas consumption from warehouses and transportation providers
- Co-ordinated logistics, including exploration of more rail use and shared shipping and receiving
- Wastewater re-use and cascading to reduce potable water consumption at warehouses and transportation providers.
- Multi-partner pilot projects for alternative fuel vehicles e.g., biodiesel purchasing block in the trucking sector
- Co-ordinated commuting and transit (only 15% of businesses are within 400 m of a bus stop)

By improving the sustainability of transportation and related activities in Ross, this project aims to reduce costs for local businesses and the City of Regina and develop and pilot best practices that can be applied elsewhere in Regina and Canada.

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

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