



Edmonton 2009 | Planning
Edmonton
Alberta
Population: 730,372

Getting Certified to ISO 14001 Standard

Proud to be
ISO 14001 CERTIFIED



Summary

The ISO 14001 standard represents the strongest possible commitment to environmental management, and few municipalities in the world have applied it as broadly to their operations as the City of Edmonton. Although the Federation of Canadian Municipalities has promoted this standard to its members for many years, it is a daunting task to implement and then become certified to the ISO 14001 standard. Between 2004 and 2008, the city's seven most environmentally high-risk branches were certified to the ISO standard by outside auditors through the city's EnvISO program. The city is on track in its plans to have other high-risk departments meet the standard by the end of 2010. The city has also produced an Environmental Construction Operations (ECO) Plan Framework for new construction. By becoming certified to the ISO 14001 standard, the City of Edmonton has reduced the environmental impacts of its operations while also implementing hundreds of changes to improve operations throughout the corporation.

Background

Nestled in a valley of the North Saskatchewan River, Alberta's capital city is home to over 730,000 people. In the last decade, the City of Edmonton has developed a reputation for environmental sustainability and stewardship. In fact, it is a leader in reducing energy consumption, minimizing the use of harmful pesticides and building efficient public transportation systems to reduce greenhouse gas emissions. Edmonton has also established itself as a North American leader in developing, commercializing and providing training in sustainable waste management technologies.

Building on its already sterling record, Edmonton City Council adopted a policy in 2004 to implement environmental management systems based on the ISO 14001 standard.

Developed by the International Organization for Standardization (ISO) in Switzerland following the 1992 United Nations Conference on Environment and Development, the ISO 14001 standard was established in 1996. Since then, it has become the most popular environmental management system in the world, with about 100,000 registrations to the standard in 113 countries. In some parts of the world, ISO 14001 registration is a prerequisite for doing business.

In 2004, researchers at the University of Moncton surveyed 547 Canadian corporations that had implemented an ISO 14001 environmental management system. A majority said their experience was positive, with benefits exceeding costs.

Project Development

In May 2004, city council adopted Policy C505, calling for the implementation of an environmental management system built on the ISO 14001 standard. The goal was to have all environmentally high-risk departments within the city comply with the standard by the end of 2008.

The program was branded "EnvISO" (pronounced "en-vī-zō"). In October 2004, the city hired an EnvISO manager to work in the deputy city manager's office of environment and energy.

Because ISO 14001 is a prescriptive standard with more than 100 detailed requirements, the city needed to communicate its expectations to staff. In May 2005, the city manager's office produced a three-page brochure outlining the initiative.

The city designed and implemented the system in a way that would empower managers — not imprison them. A "core team" approach was adopted within each of the seven branches identified as having environmentally high-risk operations. The city hired environmental managers to work with managers and staff in these seven key branches.

Project Implementation

The city followed the standard steps involved in achieving an ISO standard. The first step is implementation, which involves building all systems to the ISO standard and typically takes 18 months to two years. The second step is registration (or certification). When a department or branch has the required system in place, it hires an independent auditing firm to review the system's implementation. If the auditors determine that the system meets ISO standards, they will recommend that the department or branch be registered (another name for "certified") to the standard. In Canada, the ISO member body that oversees all certification is the Standards Council of Canada.

To introduce city employees to the EnvISO program, the city prepared two key products:

- A 270-page [Environmental Management System Handbook](#) provided staff with a step-by-step guide to the program. Produced by the City of Edmonton, the handbook was adapted from one originally produced by the United States Environmental Protection Agency (EPA).
- A 15-minute [EnvISO training video](#) provided an overview of the system's main points.

Two departments within the City of Edmonton led the way to ISO 14001 compliance. The drainage services and waste management branches in the department of asset management and public works were registered in January 2005 and early 2006, respectively. Both were considered "higher risk" operations from an environmental perspective. Their implementation program, like those later adopted by other city departments, included eight key elements:

- Establish a governing environmental policy. (This took the form of Policy C512, the City of Edmonton's Environmental Policy, adopted in May 2006.)
- Identify how activities, products and services interact with and impact the environment, and decide which are significant.
- Set environmental objectives and targets and establish well-managed programs.
- Determine competency requirements for workers whose actions could have significant environmental impacts, and ensure that these requirements are met and records kept.
- Manage environmental documents and records to a very exacting standard.
- Develop operational controls in areas associated with significant environmental aspects.
- Develop environmental emergency preparedness and response plans.
- Put in place a wide range of feedback mechanisms to update managers on the environmental performance and effective functioning of the system.

One of the city's goals in adopting the ISO 14001 standard was to safeguard the legal, economic, ethical, commercial and safety aspects of all activities, products and services that might have an environmental impact.

The city used a "core team" approach to implement the standard. This grassroots strategy engaged many city employees. Led by the recently hired environmental systems managers, each core team was composed of about 12 people from every segment of a given branch. The team's job was to build the system and learn from the experience.

Between 2005 and 2007, several other city branches deemed to have high environmental risk began the journey to ISO registration:

- The Edmonton Transit System (ETS)
- Fire Rescue Services
- Operational Services
- Mobile Equipment Services
- Parks
- Roads Design and Construction
- Transportation Operations

All were successfully registered by the end of 2008.

The electronic systems needed to support the shift to an ISO standard were crucial to the initiative's success. City branches began implementing the ISO standard using an assortment of software and manual tools to control documents and records and to manage the requirements of their systems. Later, the city invested in a commercial software package tailored to ISO 14001. This specialized software allows managers and staff to track and manage their activities, requirements and objectives more effectively.

Monthly meetings bring environmental management system representatives together from across the corporation to coordinate their efforts, share ideas and promote operational and administrative consistency.

Results

- The city's seven most environmentally high-risk branches have been certified to the ISO 14001 standard.
- Hundreds of changes stemming from ISO 14001 certification have affected the way work is carried out on the front lines to manage activities and environmental impacts.
- The city's reporting of environmental releases is now more timely and accurate. During the ISO certification process, the city worked closely with federal and provincial regulators to redesign its procedures for reporting environmental releases. City officials now meet once a year with Alberta Environment to get feedback on how the city is performing.
- New operational control procedures span the entire corporation. One such procedure requires construction contractors to submit plans detailing how they will control the potential environmental impacts of their projects.
- The city collaborated with Alberta Transportation and Infrastructure and the City of Calgary to produce an Environmental Construction Operations (ECO) Plan Framework that provides contractors with guidelines on best practices.
- New emergency preparedness and response procedures span the entire corporation. One procedure provides direction on preventing, responding to and reporting environmental releases.

Lessons Learned

- **HAVE CHAMPIONS.** "Top management needs to champion the cause," says Jim Andrais of Edmonton's office of the environment and energy. "These managers will need to provide the resources to make it happen, and to become a champion, they need to have a clear understanding of the benefits, to believe in the benefits and to internalize them."
- **MAKE A REALISTIC COMMITMENT.** "Don't expect to get there overnight. In their enthusiasm, some municipalities may bite off more than they can chew," says Andrais. "At the start, you have to meet the requirements in a minimal way. You don't have to meet them in an elaborate way. Limit your objectives to one or two. The thing about continual improvement is that by taking small step after small step, you will get where you want to go."
- **EXPECT CHALLENGES.** Edmonton had to rise to the challenge of integrating the environmental management system with the organization's overall management system. "Certain of our systems needed to be enhanced significantly," Andrais says. "In the case of document control, for example, we had procedures in place but they weren't controlled to the degree needed by the ISO standard."

Related and Future Initiatives

During 2009–2010 the city will pursue implementation and certification of any operating branches that have a "lower risk" environmental profile. It will also identify administrative branches that might need to comply with ISO 14001. Some of these branches may include the planning and policy services branch of the planning and development department, the materials management branch of the corporate services department, and the transportation planning branch of the transportation department.

Partners and Collaboration

Internally, the city's branches worked as a team to determine an optimal design for the city's ISO 14001 environmental management systems. This was a collaborative effort that took about six months. "The silo mentality has been broken; we now have excellent communication and exchange right across the corporation," says Jim Andrais.

The city now meets annually with Alberta Environment to get feedback on its performance and receive advice. The city collaborated with Alberta Transportation and Infrastructure and the City of Calgary to produce the EcoPlan Framework — a set of guidelines used by construction contractors working for any of these three organizations.

Contact information

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Photo Information

Photo Caption: Many of the City's vehicles now sport this bumper sticker.

Photo Credit: City of Edmonton