

Ontario Power Generation biodiversity policy



Ontario Power Generation (OPG) is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. OPG's focus is on the efficient production and sale of electricity from its generating assets, while operating in a safe, open and environmentally responsible manner. OPG was established under the *Business Corporations Act* (Ontario) and is wholly owned by the Province of Ontario. At December 31, 2009, OPG's electricity generating portfolio had an in-service capacity of 21,729 megawatts. OPG's electricity generating portfolio consists of 3 nuclear generating stations, 5 thermal generating stations, 65 hydroelectric generating stations, of which 4 are being redeveloped, and 2 wind power turbines.

OPG's perspective on biodiversity

In 1995, Ontario Power Generation's (OPG) predecessor, Ontario Hydro, became one of the first utilities in North America to address formally biodiversity conservation through policy development and implementation. Created in 1999 following the break-up of Ontario Hydro, OPG has carried on and enhanced this policy for the past 10 years and will continue to do so going forward. The policy is responsive to the Convention on Biological Diversity, the Canadian Biodiversity Strategy (Environment Canada 1995), Ontario's Biodiversity Strategy (2005), as well as *Canada's Species at Risk Act* and *Ontario's Endangered Species Act* (2007). It has been well recognized and supported by several external groups including citations in publications from Canada's Federal Biodiversity Convention Office, the World Business Council for Sustainable Development and the Electric Power Research Institute.

The policy commits OPG to planning and managing its activities in a manner that encourages, within a regional context, the continued existence of native species, and the ecosystems upon which they depend. The policy builds upon the following four R's for biodiversity conservation:

- **Retain** (i.e., protect) habitats identified as areas of regional, provincial or national significance.
- **Restore** habitats degraded by OPG operations.
- **Replace** lost habitats where ecologically and economically feasible.
- **Recover** species at risk.

Managing species at risk represents the highest priority for OPG's biodiversity management programs. All of the preceding actions are in addition to ongoing pollution abatement efforts. OPG's Environmental and Biodiversity Policies outline their commitment to the environment, sustainable development and to the conservation of biological diversity.

The policy is responsive to the fact that the generation of electricity can have adverse effects on species and their habitats. Examples include the direct loss of habitat caused during the construction and on-going maintenance of generation facilities, changes in water flow regimes for the generation of hydroelectric power, indirect effects caused by the fragmentation of habitats, or from various air and water emissions, including acid gas and greenhouse gas emissions from thermal generation.

OPG's biodiversity policy

Rationale

OPG's focus is on the efficient production and sale of electricity from its generating assets, while operating in a safe, open and environmentally responsible manner. OPG recognizes that its effects on nature do not stop at the boundaries of its plants, nor do its efforts to protect and restore nature. Accordingly, OPG has invested in significant habitat protection and restoration efforts in the communities where it operates and in strategic locations across southern Ontario, including some of the most biologically imperilled regions in Canada. OPG's carbon sequestration and biodiversity management program is an example of that effort. This woodland habitat restoration program links the need to restore habitat for forest wildlife at risk in the highly fragmented regions of southern Ontario, with the need to sequester carbon, as an offset to OPG's coal-fired generating stations' greenhouse gas emissions. It addresses an important biodiversity issue, while also addressing a climate change mitigation and adaptation issue. The intent is to work with conservation partners to help reconnect the fragmented landscape and to enhance the resiliency of woodland ecosystems to withstand anticipated climate change impacts.

The Biodiversity Policy and its programs are managed by an Environmental Management System (EMS) that is registered through the International Organization for Standardization (ISO) 14001 specification. The EMS is audited both internally by formally trained auditors and externally by certified ISO 14001 Registration auditors in order to retain its registration. It ensures that biodiversity issues are not simply an “add on”, but rather, are addressed as an integral component of on-going operations. Site biodiversity plans are further independently certified and audited through the US-based Wildlife Habitat Council.

The key elements of the Biodiversity Policy include:

- inventory, identification and prioritization of species at risk and sensitive habitats that may be affected by its operations;
- development, implementation and monitoring of management plans to ensure sensitive species and habitats continue to flourish;
- annual review and assessment of performance against established objectives.

Implementation of the policy at the management level has resulted in the development of biodiversity management plans for all of OPG nuclear and thermal plants, as well as for their hydroelectric plant groups. Efforts have been made to restore habitats for species that may be declining regionally, thereby preventing other species from

becoming “at risk”. This is consistent with the Stewardship efforts under the federally proposed Species at Risk Act. Example initiatives include:

- water flow and habitat management for fish spawning, migration and fish passage issues, with notable emphasis on Sturgeon, American Eel and Brook Trout;
- woodland and wetland habitat restoration;
- the establishment of tall grass prairie, a highly threatened ecosystem type, on appropriate sites;
- the management of a critical wetland complex at Lennox which supports one of the largest Black Tern colonies on the Great Lakes.

Other biodiversity conservation initiatives supported by OPG include:

1. Ducks Unlimited’s wetland habitat restoration at Pigeon Marsh, located along the northeast shoreline of Lake St. Clair and Second Marsh, located on the shores of Lake Ontario, near Oshawa. The 64 hectares Pigeon Marsh is a part of one of the most important wetland complexes on the Great Lakes.
2. Nature Canada’s Important Bird Areas (Niagara River), which is part of an international program to identify and manage areas of exceptional importance to the conservation of birds. The Niagara River, the site of our largest hydroelectric station complex, is an internationally recognized important bird area.
3. World Wildlife Fund Canada’s ecotoxicology program and its Conservation Science and Solutions Fund, which supported the identification, protection and restoration of priority sites for biodiversity conservation within Ontario.
4. Planting of more than 3.8 million native trees and shrubs on more than 1,800 hectares of land since 2000 (2009 data). These plantings have occurred in strategic locations to help “reconnect the fragmented landscape” that characterizes much of southern Ontario. This on-going program links woodland habitat restoration for biodiversity with climate change mitigation and adaptation as an offset to our fossil plant greenhouse gas emissions.

Employee involvement, as well as partnerships with a variety of external conservation organizations, such as Ducks Unlimited Canada, and the Conservation Authorities of Ontario, among others, has been successfully undertaken at various projects, both on and off site. These partnership efforts help to ensure that community interests are recognized and addressed. It has the added advantage of building trust and company image.





The key issues in implementing the Policy were:

1. **Building trust:** industry's commitment to the conservation of biological diversity is often regarded with scepticism by many in the environmental community. Building trust with various stakeholders is a critical step to achieving success. Working collaboratively on issues of mutual concern can help to build positive relations. Independent certification and audits of OPG management plans by the Wildlife Habitat Council have also helped build credibility.
2. **Partnerships:** Partnerships with respected environmental organizations are key to making meaningful progress on biodiversity conservation issues. They can serve to leverage the funding, resource and expertise capabilities of each organization, thereby enabling greater conservation advances than any single organization could otherwise achieve.

The main problems and difficulties encountered in implementing the policy were:

- availability of biodiversity data bases;
 - Success is largely dependent upon the availability of credible and accurate data.
 - Field inventories and monitoring are necessary for the management of significant sites.
- restoration and management needs;
 - Information on the specialized needs of rare species is often unknown.
 - It is difficult to devise effective strategies or management plans for rare species.

Communication/Education

OPG has partnered with Ontario Nature, Bruce Trail Conservancy and Local Enhancement and Appreciation of Forests (LEAF) to help raise public awareness in various Ontario cities of the need to conserve biodiversity and to inform communities about collective biodiversity activities. These partnerships provide hands-on opportunities for families to experience nature and to learn about our dependence upon healthy ecosystems. These biodiversity events are promoted through advertising and through the web (OPGBiodiversity.ca).

OPG is also a participant and invited member of the Ontario Biodiversity Council, Biodiversity Education and Awareness Network and several endangered species recovery teams.

Outcomes

Benefits

Biodiversity

Programs are in place to address any known threats to biodiversity, as well as any enhancement opportunities, both on and off OPG sites. The issue of biodiversity is no longer a mystery to operations managers, nor a cosmetic add-on program. It is now an on-going program that has been effectively integrated into operational activities and managed through the company's environmental management systems.

Economics

It is difficult to monetize the economic value of environmental programs but the loss of community support can, conversely, spell the demise of operations and loss of "community licence to operate".

Lessons learned

1. **Sustain the effort:** Successful programs require a sustained effort. Ecosystems are not restored overnight. Outside organizations are skeptical and probably will not get involved if they feel that there is not a long-term commitment to the program.
2. **Community goodwill and positive brand image:** Conservation efforts need to be in tune with community conservation priorities. The credibility of a program is immediately enhanced through association with respected conservation organizations. Earning this support takes time and genuine, sincere effort from well-conceived programs that resonate with community values.
3. **Link projects to key conservation issues of importance to the community:** Successful programs need to be linked to key biodiversity conservation issues, programs and priorities with those of the conservation community. Viable partnerships can be achieved when the company objectives and mission align with those of conservationists.



Management's benefits

OPG's biodiversity programs have garnered the support of many environmental organizations and have helped the company to earn its unwritten "community license to operate". The formal recognition of OPG achievements through numerous external awards has built pride and credibility and represents a consistent "good news story" for the organization. Pride, broader community support, and ever increasing concerns about biodiversity losses, make these programs increasingly relevant and needed. The benefits are many: biodiversity conservation, reduced ecological footprint, enhanced "license to operate" and enhanced employee morale. Employees have become engaged and feel they are leaving a positive legacy beyond the straight services and products delivered by their business. OPG's biodiversity programs represent a win for nature, a win for public education, a win for community relations and consequently, a win for the company. For a modest investment, they have done much to build a positive reputation amongst environmentalists and government regulators.

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