Power Plants and Communities

Rethinking the relationship

By Dave Hardy

Following the break-up of Ontario Hydro in the late '90s, provincial energy policy migrated to the Premier's office. This, tightly centralized decision-making is reminiscent of the circumstances almost a century earlier when Sir Adam Beck led protests at Queen's Park. Beck's cry for 'Power for the People' was a demand that an independent body take into account broad public interest when deciding provincial energy policy. Whether it is a wind, solar, nuclear, biomass or natural gas plant, energy facility plant developers and local communities compete for political decisions that will favour their interests.

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Land-use and environmental planners play a significant role in the review and approval of electric power plants for most sources of generation. Their involvement can include completing environmental assessments as experts and reviewers, site selection, site plan approval, land use approvals and advising councils regarding the appropriateness of power plants as a land use. Over the last few years, policy, legislation and regulations pertaining to power plant siting have shifted.

Challenge of current relationships

As a proposed land use, all forms of energy generation pose challenges. While municipal approval requirements have largely been removed for wind and solar projects under amendments to the *Green Energy Act*, public concerns have not abated for some proposed developments. Traditional fossil and nuclear plants require approval under a range of municipal, provincial and federal acts and regulations and many Ontario planners appear as expert witnesses at tribunals, ranging from the Canadian Nuclear Safety Commission to the Ontario Energy Board.

As a land-use and environmental planning issue, the gas plants opposed by communities in York Region, Mississauga and Oakville and a waste-to-energy plant in Durham Region have been particularly challenging. Local communities oppose the plants, based on concerns about emissions, noise, traffic, aesthetics, dust, health and social effects, and their envisioned degree of impact.

Yet, the reality of an operating energy facility can be much different and, in some instances, can result in very positive and beneficial effects for local communities.

Across Ontario, several operating power plants have provided a different example of how the interaction between a power plant and a local community can develop. One is located in the Town of Atikokan and the other along Toronto's waterfront.

In the 1980s in the northwestern Town of Atikokan, for example, the development of a coal-fired plant resulted in the town receiving a wide range of socio-economic benefits. The town signed a Community Impact Agreement that resulted in a transfer of significant funds to the host community as well as additional support in terms of the power plant management funding consultant studies, providing infrastructure grants for a new road, new water treatment plant, and expanded library and social services facilities.

Portlands Energy Centre

What is interesting to planners is that the Portlands Energy Centre, located in the City of Toronto's central waterfront, offers an alternative model of the relationship between power plants and their communities. While owned by TransCanada Energy and Ontario Power Generation centre functions as an independent entity.

Among the natural gas plants, the 550 MW Portlands Energy Centre was no exception as it faced community opposition during the environmental assessment and approval process. When the announcement was made that the centre would be located beside the old Hearn coal-fired generating station, extensive opposition focused on the proximity to Toronto's waterfront, which had just been designated for revitalization, environmental concerns (e.g., emissions/greenhouse gas, noise) and aesthetic issues. The Portlands Energy Centre received approval, was constructed and began producing energy in 2009. As part of its Certificate of Approval it was required to establish a Community Liaison Committee. What makes it different is, instead of just producing electricity and meeting or surpassing all environmental standards; the management saw a different future for the role of a power plant in a community.

According to the centre's general manager Curtis Mahoney, "We see a power plant as more than machines producing energy. As a local neighbour we see ourselves as having a strong role to play in having beneficial impact on local residents' quality of life and in the ecosystem in which we are situated."

Today the local East York and Riverdale communities, Toronto and Region Conservation Authority and waterfront lands and ecosystems are realizing benefits from their relationship with the power plant.

First, the centre staff developed an activist vision for how they wanted the relationship to evolve. Ecological sustainability became the highest priority involving continual community engagement. With the centre's flexibility and resources community initiatives and ecosystem programs can be funded and implemented directly. For most initiatives, the centre doesn't require government funding or approvals. Furthermore, the centre PEC can help to open doors on behalf of grassroots social and ecosystem initiatives.

Second, the centre realized that if staff and the community

were to understand and enhance its ecological footprint, it needed specialized expertise beyond the support of its environmental consulting firms. As a result, the Portlands Energy Centre created an Ecological Sustainability Committee. In addition to the participation of community members, ecological researchers, academics from five colleges and universities (U of T, York, Guelph, Ryerson and Seneca, King Campus), TRCA members and centre staff are members of the committee.

Third, the Ecological Sustainability Committee developed the following five pronged ecosystem strategy that focuses on four environments: aquatic, atmospheric, terrestrial and avian.

IMAGE COURTESY OF THE AUTHOR

Portlands Energy Centre and bee hives

1. Undertake site-related demonstration projects on ecological sustainability

It was suggested that the centre sponsor a demonstration project to profile the potential of pit and mound restoration as the first step toward bringing back the original Carolinian forest on the 21 hectares of land around the site and serve as an example of how to rehabilitate other gravel-based and brownfield sites.

The centre is located beside Tommy Thompson Park and Lake Ontario Park. The former is undergoing considerable development as a new natural area and pollinators (bees) are required to support the ecosystem restoration. The security fencing around the centre offered protection for six large bee hives and the bees in turn pollinate flora in the new park areas. The honey is harvested by a centre-sponsored bee keeper and is sold as a locally grown product at the St. Lawrence farmers' market.

The centre is required to monitor water quality and have an E. Coli mitigation program. With the City of Toronto and Ministry of Environment, the centre has implemented a program to reduce E. Coli and thus reduce potential beach closures.

2. Make constant environmental performance improvement in plant operations

The centre regularly monitors air emissions, which are consistently better than Ministry of Environment requirements. In addition to replacing coal-fired generation the plant contributes to 0.75 per cent of all the Greenhouse Gas across Ontario, while supplying 25 per cent of Toronto's electricity.

3. Highlight the centre's current ecological sustainability activities

Centre staff and associates participate in community meetings where their successes and failures at ecological sustainability can be shared. They publish a quarterly newsletter to keep the community informed of ongoing activities at both on site and in the wider community.

The centre has sponsored a capstone project with University of Guelph students to develop a framework for a Greenhouse Gas inventory to begin to quantify the centre's carbon footprint.

4. Share information on ecosystem sustainability and learn from others

The Portlands Energy Centre supports community-based environmental initiatives, such as Toronto's Atmospheric Fund and the South Riverdale Air Quality Study.

In November 2012, with Ryerson's Centre for Urban Energy as a co-sponsor, the centre brought together academics, researchers, North American utility representatives from Bonneville Power Administration and Southern California Edison and members of the South Riverdale community through a colloquium to address the question: What would North America's Greenest Power Plant look like?

5. Lead community dialogue on ecological sustainability

Quarterly meetings of the combined Community Liaison and Ecological Sustainability committees are held either in the Riverdale community or on site. The meetings function as a cross-disciplinary, cross-academic and community report-in on ecological issues and research.

Conclusion

Controversies about power plants as community land uses are not expected to subside soon. However, there are a few examples where the relationship has been re-thought and a mutually beneficial relationship with local communities has developed. When this occurs, the power plant, local community and wider ecosystem all benefit.

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