



Funded Projects

Integrating Energy and Water Resources Decision Making

Timeline	2009 - 2011
Project Number	922
Award Amount	\$ 207,000
Team Leader	Victoria Pebbles Tel: 734-665-9135 vpebbles@glc.org
Organization	Great Lakes Commission
Team Makeup	Academic (4), Government (4), Non-Profit (6), Corporation (3), Private (1)
Governors' Priorities	Sustainable use and enhanced value
Project Website	http://www.glc.org/energy/ (http://www.glc.org/energy/)

This team explored how integration of ecological factors into the planning and siting of power production facilities could minimize impacts on aquatic habitats and resources. The team identified watersheds vulnerable to impacts from power generation; developed an interactive energy-water nexus map of the Great Lakes; created a model to predict future water resource impacts from changes in the energy mix; and completed a policy analysis on energy markets, energy planning, and facility siting and operations. The project resulted in a number of important products (links can be found below under Project Files):

- List of most vulnerable watersheds in the basin based on water availability and hydrologic and ecosystem sensitivities.
- An interactive, energy-water nexus map of the Great Lakes (see <http://erie.glin.net/glew/> (<http://erie.glin.net/glew/>))
- A first-of-its-kind model (developed by Sandia National Laboratories and modified for use in the Great Lakes basin) that predicts the long-term water resource impacts associated with changes in the energy mix.
- A policy analysis on the current policy framework for energy markets, integrated energy planning, and facility siting and design.
- A report documenting the results of the team's work titled, Integrating Energy and Water Resources Decision Making in the Great Lakes Basin, an Examination of Future Power Generation Scenarios and Water Resource Impacts.

The work has drawn attention to those watersheds sensitive to water withdrawals, and has resulted in a planning tool to better plan for, and manage, water use by the power production sectors. The results will enable energy planners to make better decisions about the future of energy production within their jurisdiction or watershed(s). This work could better protect rare and unique aquatic habitats from impacts associated with specific power generation technologies. It could also reduce water consumption from the power production sectors in areas sensitive to large-scale water withdrawals.

Project Files

Report: Integrating Energy and Water Resources Decision Making in the Great Lakes Basin: An Examination of Future Power Generation Scenarios and Water Resource Impacts (http://www.glpf.org/sites/default/files/project_files/922%20GLEW-Phase-I-Report-FINAL.pdf)

Report: The Confluence of Power and Water: How Regulation of the Electric Power Grid Affects Water and Other Natural Resources (http://www.glpf.org/sites/default/files/project_files/922%20Confluence-of-Power-and-Water_Moore.pdf)

Report: Great Lakes Energy Facility Siting Environmental Laws and Regulations (http://www.glpf.org/sites/default/files/project_files/922%20Great-Lakes-Energy-Facility-Siting_Schroeck.pdf)

Report: Energy and Water in the Great Lakes (http://www.glpf.org/sites/default/files/project_files/922%20Report%20Energy-and-Water-in-the-Great-Lakes.pdf)