

# CHP Location Assessment Using Geographic Information System (GIS) Technology

---



Austin Fisher  
Applied GIS, Inc.  
137 Jay Street

Schenectady, New York 12305

[afisher@appliedgis.com](mailto:afisher@appliedgis.com)

---

***Combined Heat and Power in New York State***

***June 20 –21, 2002***

# Project Objectives

- Identify geographically significant considerations
- Develop/acquire representative GIS data layers
- Build GIS-based site evaluation model

# Geographically Significant Considerations

- Demand for Energy / Candidate Sites
  - Based on industry type (NYS DOL data, commercial listings) / Applicants requesting CHP funding
- Infrastructure & Support (Access to Fuel)
  - Natural gas / alternate fuel sources (e.g., landfills)
- Societal Benefits
  - Empire Development Zones /Load Pockets
- Constraints
  - Wetlands / Floodplains / Neighborhood Profiles (e.g., mainly residential)

# Site Analysis Model

**Candidate Sites**  
(point layer of potential locations)



**Score Each Candidate**  
(based on designated geospatial analysis)



**Output Ranked List**

# Model Features

- Based on ArcView 8.x (ArcGIS)
- Custom extension written in ArcObjects
- Contains a set of geographic analysis functions
- Uses a straight-forward scoring and weighting scheme
- Multiple models can be developed, edited, and reused against different sets of candidates
- Can easily incorporate newly available data

# Demonstration

# Summary

- Primary limitations are data-related (quality and availability)
- Some creative techniques can be used to overcome some of these data limitations
- Geographic criteria may not be the only or most important considerations in CHP siting
- However, this model should be of value in proactively identifying suitable CHP sites and reactively evaluating site already being considered