

# Mapping Software as a Program Management and Evaluation Tool

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## Introduction

Mapping software has been used to illustrate the distribution of program benefits for policymakers and, to a limited extent, the penetration of specific programs in the target market. Many utilities are also using mapping software to analyze grid characteristics and locate stressed transmission lines or site power generation facilities (both renewable and nonrenewable sources). The potential of the GIS (Geographic Information System) to aid in energy efficiency program tracking and evaluation has largely been underutilized, but in future evaluations could prove to be a valuable visual aid, revealing spatial patterns that are not easily recognized through traditional data analysis.

Geographically displaying program data can illustrate the distribution of current program benefits (i.e. program funding or energy and demand impacts), as well as identifying areas where significant energy efficiency potential remains. It can also be used to track program progress and to analyze market penetration of certain measure types. Program data combined with census data, energy use data, or other readily available information, can characterize regions and define spatial relationships between variables in order to obtain greater insight into a program's impacts. This poster demonstrates how GIS can support program tracking and evaluation efforts by using data from two utility programs as examples.

## Example 1: Agricultural Program (Efficient Dairy Equipment)

The agricultural program began in June 2005 and offers financial incentives to encourage the installation of energy efficient equipment at dairies. Program data are combined with USDA Census Data to illustrate the distribution of program benefits (energy and demand impacts) throughout the utility's service area. This example illustrates how GIS can be used as a program tracking tool to ensure the program is reaching areas where target customers are located, and to evaluate marketing strategies by monitoring demographic trends in program impacts.

## Example 2: Low-Income CFL Program

The low-income CFL program distributed CFLs to qualified residents as they applied for energy bill assistance through social service agencies. The distribution of CFLs was mapped and layered over the U.S. Census data for low-income neighborhoods to illustrate the penetration of program services in low-income neighborhoods within the utility's service areas. This analysis also indicates which social service agencies were most effective in distributing CFLs to low-income customers.