



Demand Side Management Implementation

Columbia Water & Light

Demand Side Management Defined



Supply



Demand

Cost efficient DSM programs reduce the need to acquire supply side resources by working with customers on the 'demand side' of the marketplace

Demand Side Management Defined



Supply



Demand

Demand Side Programs reduce:

Energy - measured in Kilowatt-Hours (KWH)

and

Peak Demand - measured in Kilowatts (KW)

DSM Programming

High Cost Energy ↔ Mixed (both) ↔ Peak Demand Savings

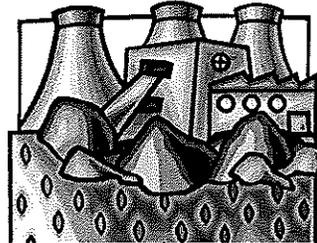
CFL Replacement
Furnace Replace
Educational programs

Insulation
AC Replacement
Business Lighting

Load Management
Load Shedding
Peak Warning

Water and Light DSM Overview

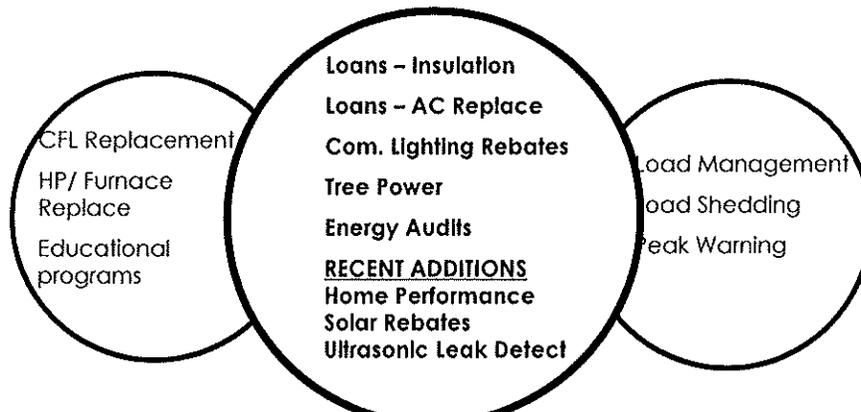
Current DSM programs reduce peak demand by 16 MW each year



16 MW comprises approximately 6% of annual peak load

Programming Focus

High Cost Energy AND Peak Demand Reduction



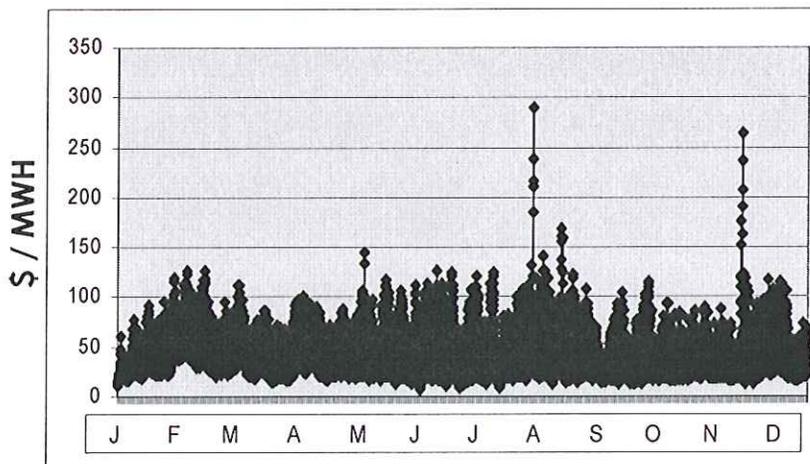
Water and Light DSM Overview



The MISO 'Day Ahead Market' started in 2006

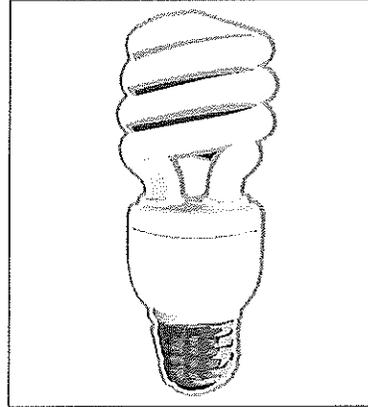
Market is based on fluctuating hourly energy costs.

MISO Day Ahead Prices (HRLY) 2007

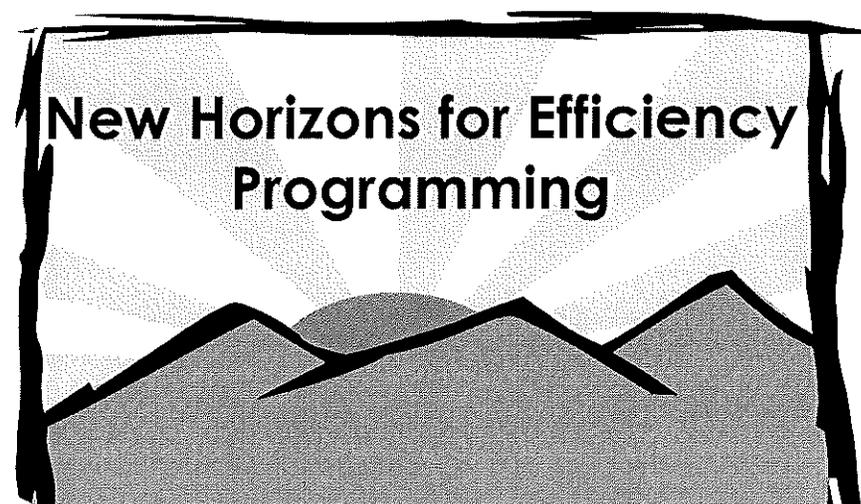


Water and Light DSM Overview

Operating in the MISO Day Ahead Market means that DSM can now benefit the utility even more.



New Horizons for Efficiency Programming



Proposed New Programming

Examples from IRP:

Commercial AC
Commercial Base Load
HVAC Tune - Up
Solar Programming
Early Refrigerator Retire
Reduce Plug Load
Industrial Machine Drive
Industrial Facility HVAC

Strategic DSM Plan

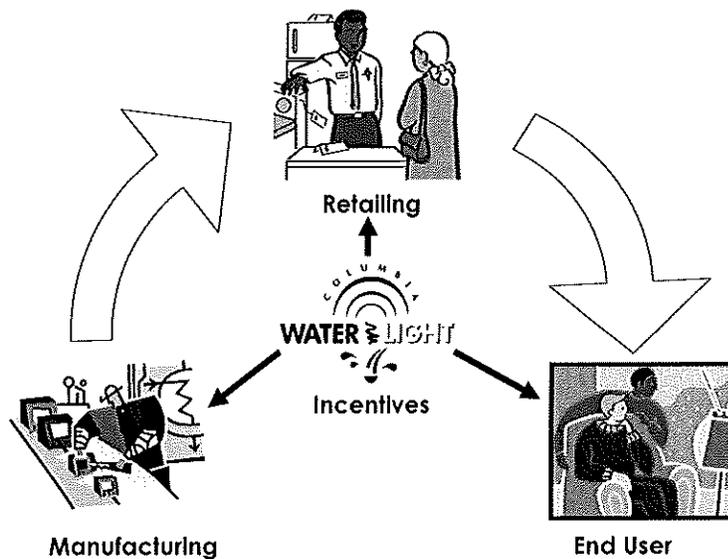
- The IRP details how Supply Side needs can be reduced through aggressive DSM programs
- Benefits that accrue from Demand Side reductions can be used as an incentive for customer participation

Three Components to the Strategic DSM Plan

- Targeting customers with incentives for energy efficiency products based on 50% of Utility Benefit
- Work with Public Works and pertinent Commissions to improve codes for new construction
- Integrate programming with existing appliance markets to accelerate adoption of Energy Star products



Market Transformation

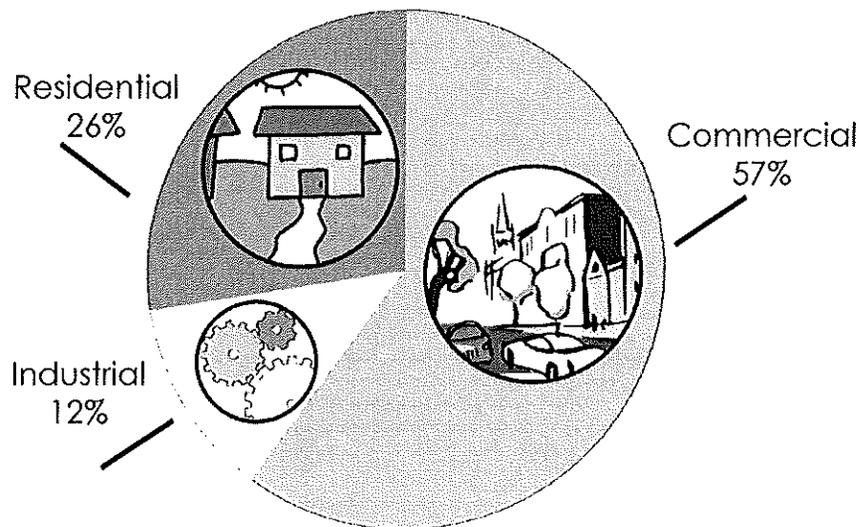


Targeting Customer Improvement

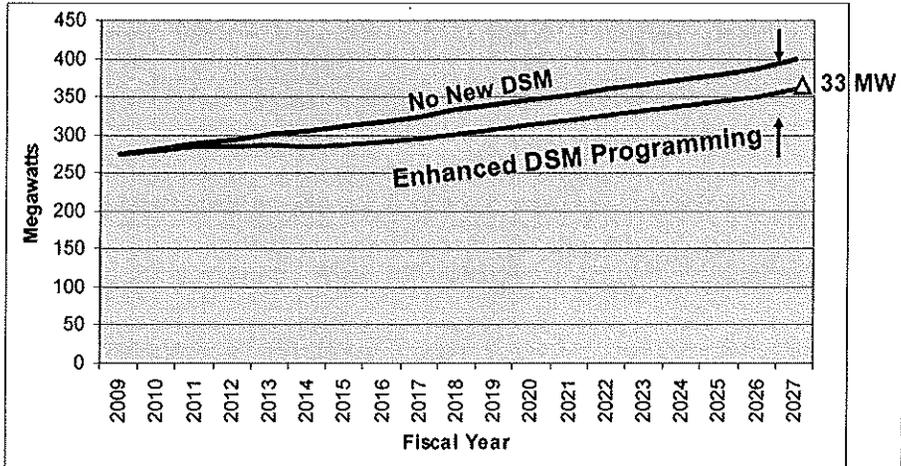
Commercial AC
Commercial Base Load
HVAC Tune – Up
Solar Programming
Early Refrigerator Retire
Reduce Plug Load
Industrial Machine Drive
Industrial Facility HVAC



**Our Goal: Reduce peak demand by
33 MW or 150,000 MWH of savings / yr**

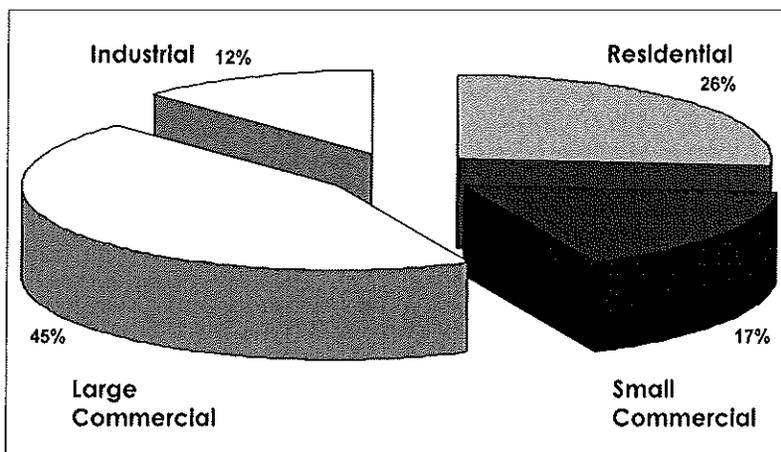


Alternative Capacity Requirements

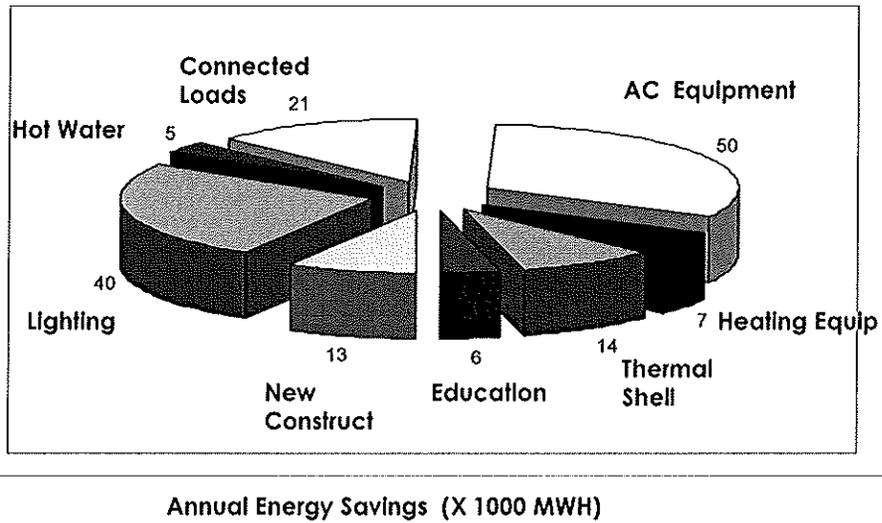


Peak Demand reduced 33 MW through DSM

Energy Savings by Customer Class

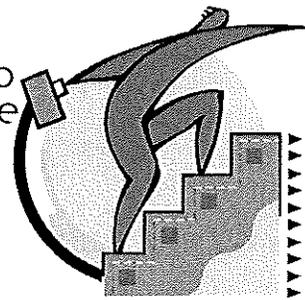


Estimated Energy Savings by Project Type



Strategic DSM Plan

- 1) Coordinate with IRP to develop DSM assessment tools for future project implementation
- 2) Acquire software to evaluate, monitor and validate DSM programs
- 3) Develop DSM program plan detailing goals, benefits, and costs of each project (from IRP)
- 4) Launch program



Timeline for FY 2009

