



How Efficient is your Efficiency Portfolio?

Lessons from the United States on DSM
Portfolio Optimization

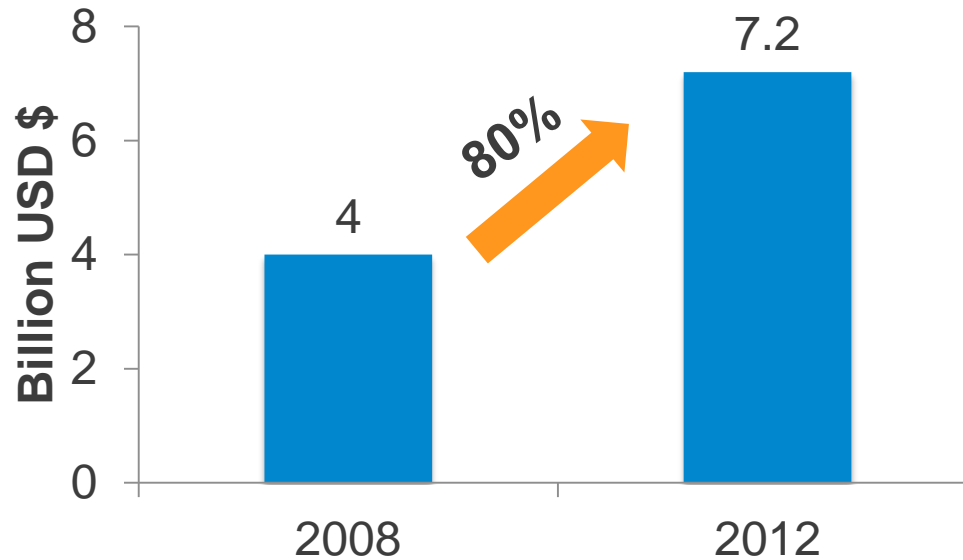
Rachel Kane

Optimizing the efficiency of DSM portfolios

USD\$12 Billion

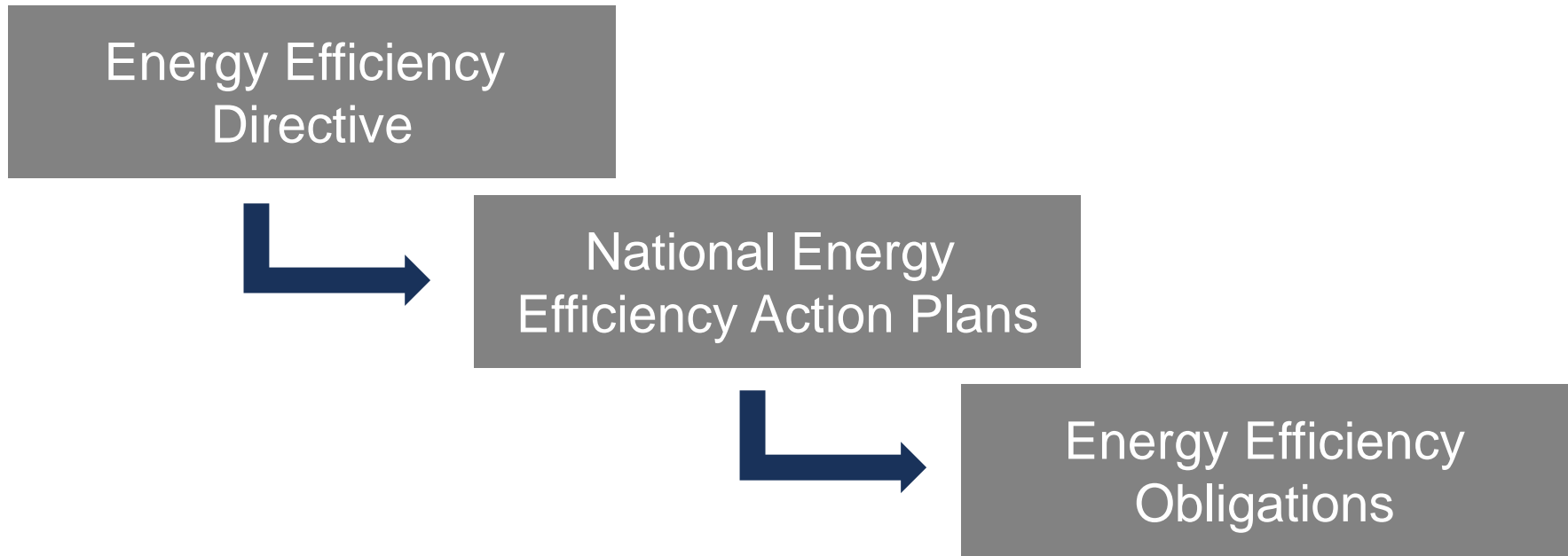
IEA. *Energy Provider-Delivered Energy Efficiency*

Increasing investments into ratepayer funded DSM programs



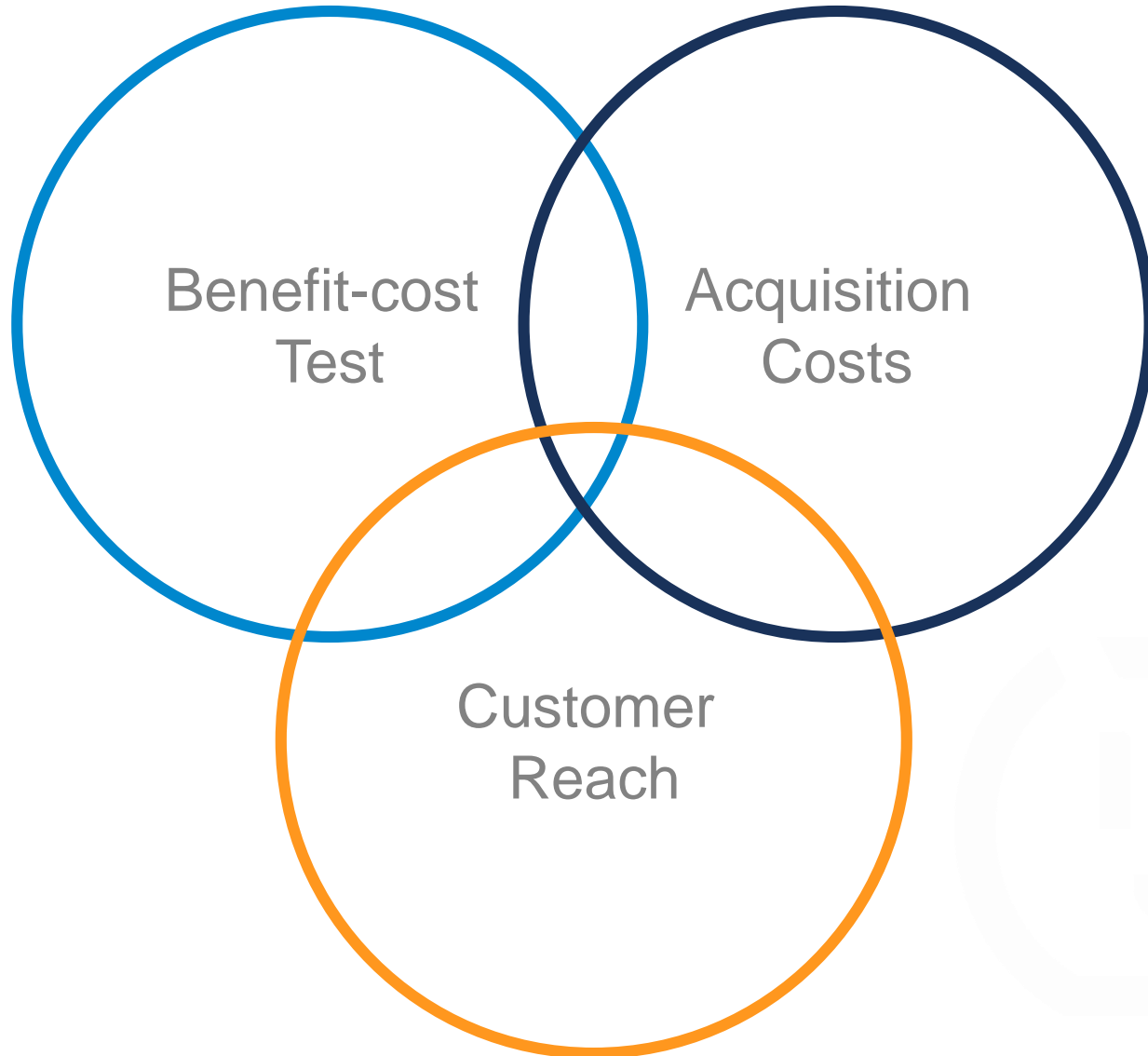
Imperative that programs be run efficiently and produce the greatest public benefit

Planning efficiently for the EU Directive



- » 5 countries have **EEOs** and 11 countries are developing them
- » Need to determine the best method and **metrics for planning and prioritizing** consumer energy efficiency programs

Utilizing a combination of metrics for a comprehensive assessment

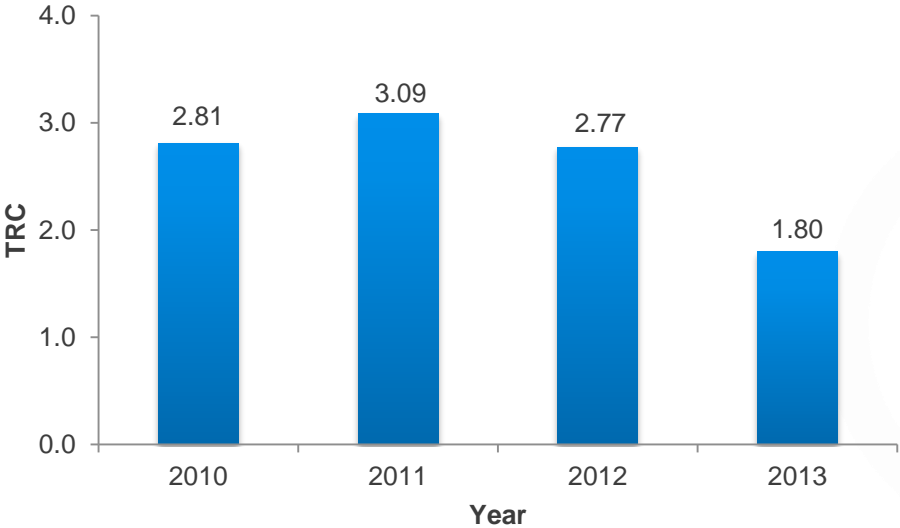
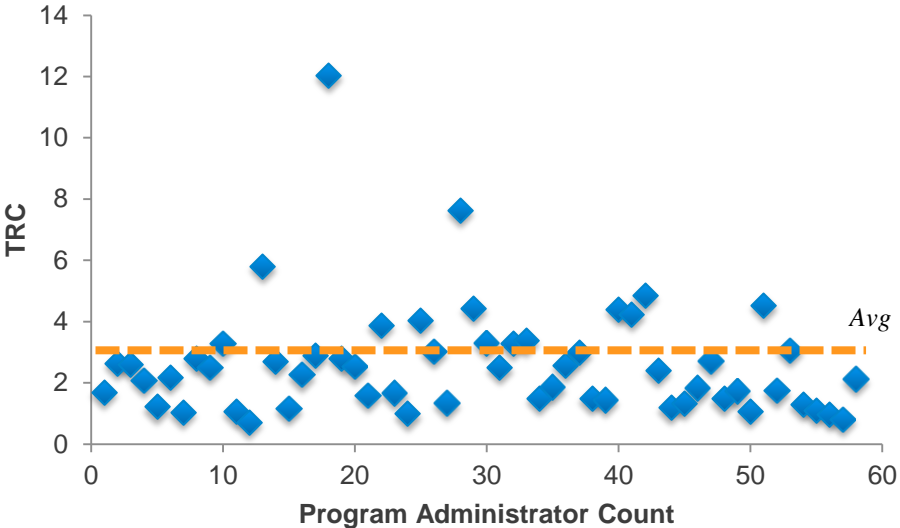


Benefit-cost tests establish a threshold for cost-effectiveness

Do the benefits outweigh the costs of delivering savings?

Benefit-Cost Test	Overview
Participant cost test (PCT)	Compares costs and benefits of the customers participating in program
Program administrator cost test (PACT)	Compares costs and benefits of the program administrator
Ratepayer impact measure test (RIM)	Assesses the effect of a program on customers' bill and rates
Total resource cost test (TRC)	Compares the total costs and benefits of a program
Societal cost test (SCT)	Similar to the TRC but include societal costs and benefits

General decrease over time of TRC



Acquisition costs assess the actual monetary spend for energy savings

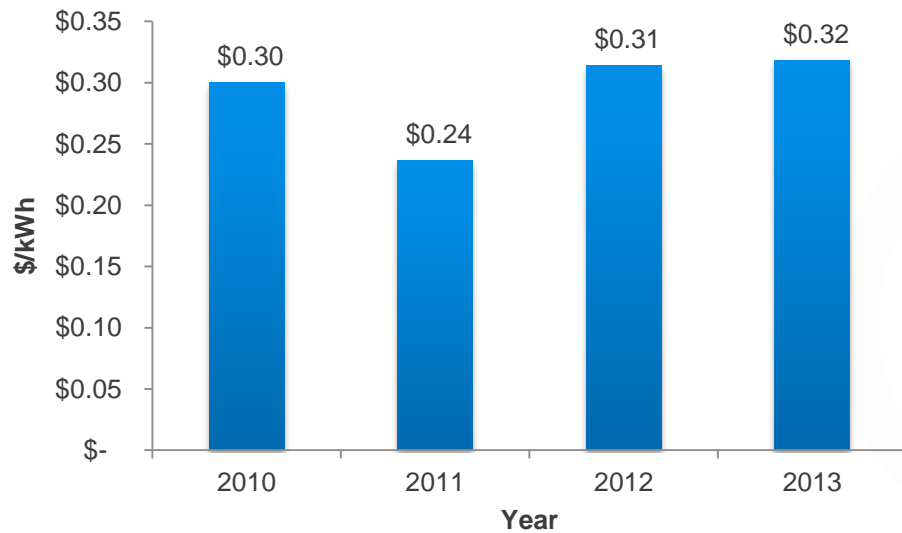
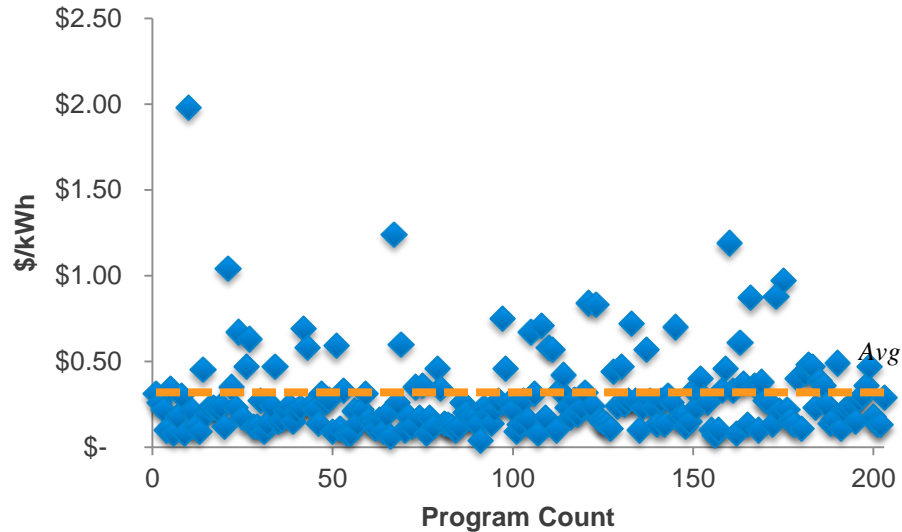
Acquisition Costs

The **cost of acquiring** energy efficiency **savings**

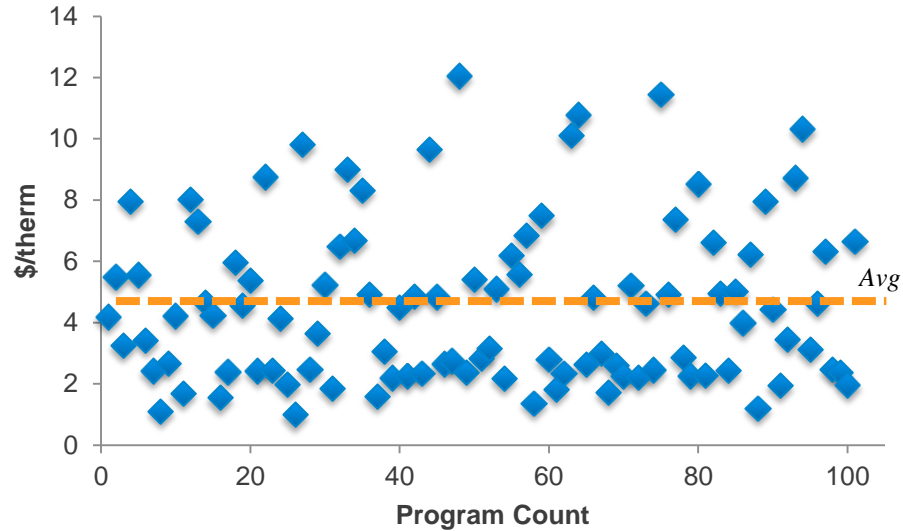
$$\frac{\text{Money spent on program}}{\text{Savings claimed by program}}$$
$$\frac{\$}{\text{kWh/therm}}$$

Acquisition costs are helpful when comparing relative costs between programs and resources

Electric savings are slowly becoming more expensive



Gas savings are becoming increasingly expensive

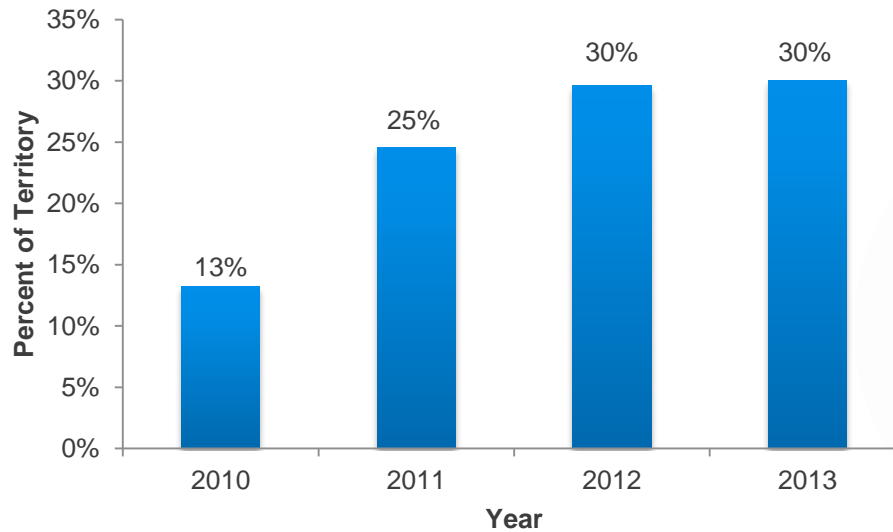
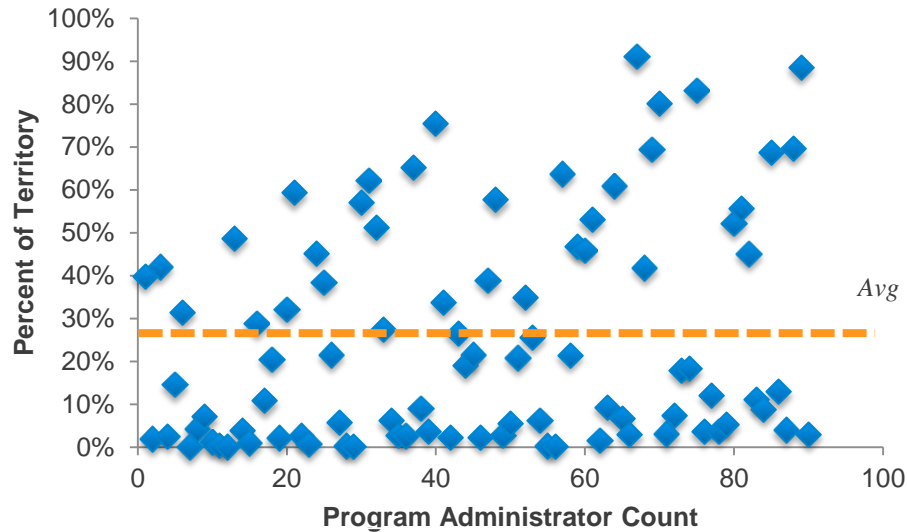


Ensuring equitable distribution of resources through customer reach

% of customers participating in energy efficiency programs



Customer reach has increased over recent years



Useful framework for planning and determining success



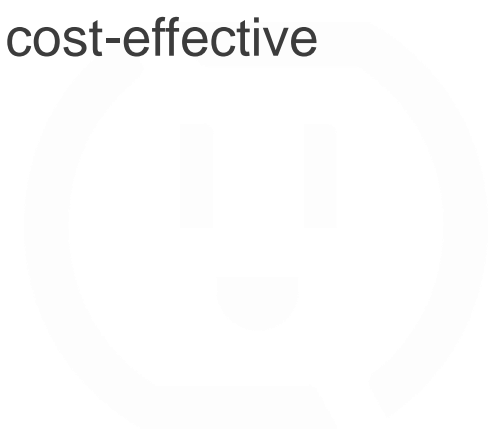
Must balance success across metrics to offer a holistic assessment of program success and optimize the benefits of energy efficiency programs



As residential energy savings become more expensive, increasingly important to optimize effectiveness of available programs



Responsibility to deliver equitable and cost-effective energy efficiency offering





rachel.kane@opower.com