



December 18, 2023

Cost Recovery Mechanisms for DSM & EE

Structure, rationale & examples from other states.

Funded by the US Dept. of Energy & Lawrence Berkley National Labs

Shawn Enterline
senterline@raponline.org
Regulatory Assistance Project

AGENDA

1. PURPOSE

- Review cost recovery mechanisms for DSM & EE in other states.

2. HIGH LEVEL

- Cost recovery
- Rationale for incentives

3. INCENTIVES & METRICS

- Incentive categories
- Performance metric categories

4. MECHANISMS IN OTHER STATES

- AR, AZ, MI, MO, VT
- Observations

5. QUESTIONS TO CONSIDER

6. SUPPLEMENTAL SLIDES

- Presented only if useful & time permits.

HIGH LEVEL UTILITY COST RECOVERY

Questions for DSM/EE Cost Recovery



1. Objective
Reliability

2. Performance Metrics
SAIFI & CAIDI

3. Recovery Mechanism
COS + ROR on Capital

1. Objective

- What objective(s) is/are motivating investment in DSM & EE?

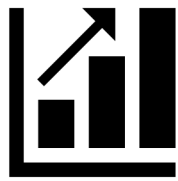
2. Perf. Metrics (PIs)

- What metrics measure the objective(s)?

3. Incentive & Recovery Mechanism

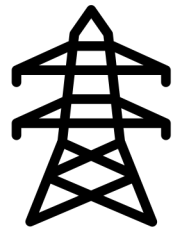
- What incentive is tied to each metric?
- Does the mechanism reward performance in proportion to its value? (aka 'benefits')

RATIONALE FOR UTILITY INCENTIVES



1. To Address the Throughput Incentive

- Using a lost revenue adjustment mechanism /or a decoupling mechanism.
- Incentives can compensate for revenue erosion due to efficiency programs.



2. To Address the Emphasis on Capital Investments

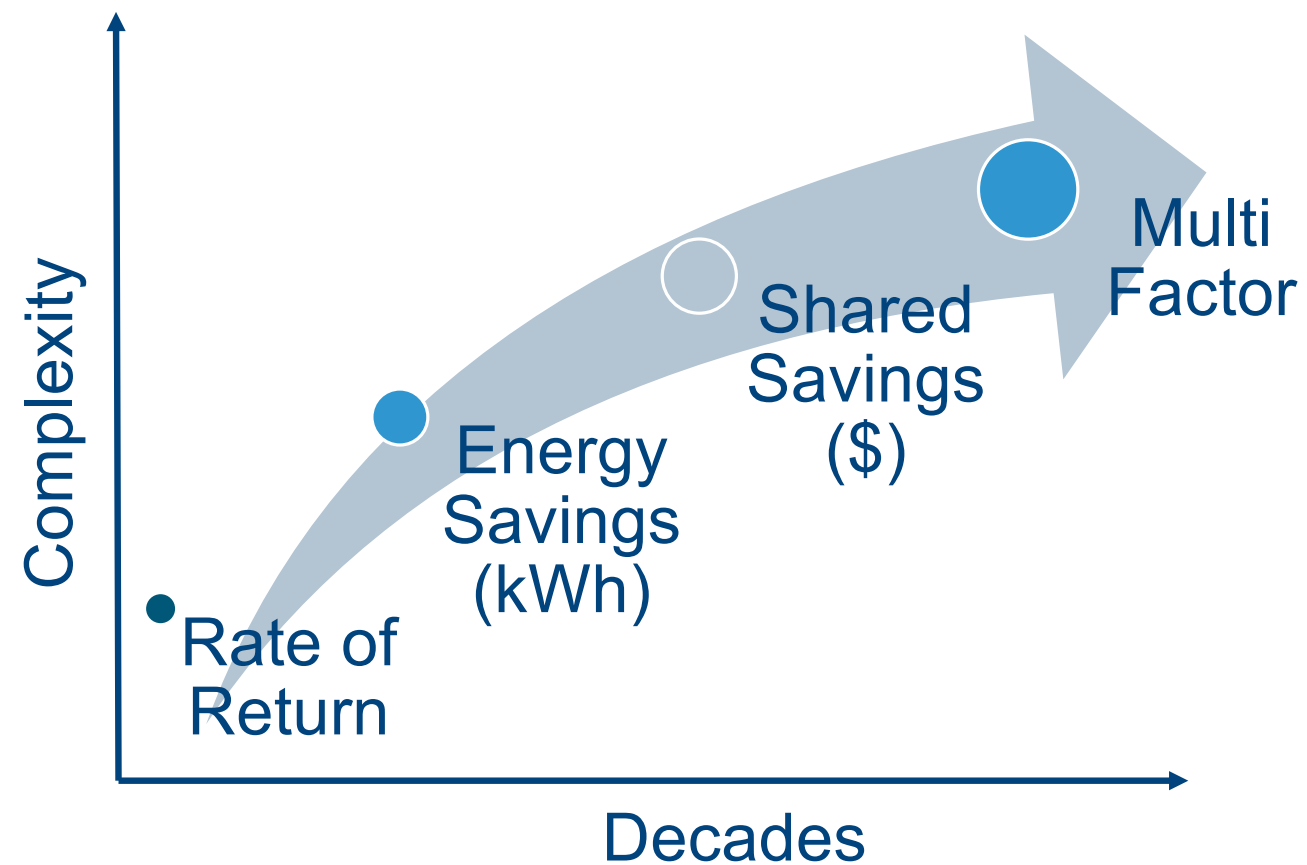
- Compared to expenses.
- Incentives can reward spending on EE just as they do for capital expenditures.



3. To Address the Emphasis on Short-Term Results

- Compared to a long-term results.
- Incentives can reward programs that have longer measure lives.

SPECTRUM OF UTILITY INCENTIVES



- **Rate of Return / Cost-of-Service**
 - Common prior to mid 1990's.
 - EE costs included in the revenue requirement.
- **Energy Savings (kWh)**
 - More common after retail competition began.
 - Incentive is based on volume savings.
- **Net Shared Savings (\$)**
 - More common after retail competition began.
 - Incentive is based on dollar savings.
- **Multi Factor**
 - Increasingly common today.
 - Incentive is based on multiple, policy-driven factors.

PERFORMANCE METRIC CATEGORIES

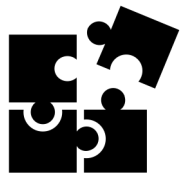
kWh	1 st Year Savings	<ul style="list-style-type: none"> • Metric = 1st Year kWh • Pros/Cons: Simple. Short-term emphasis. Ignores long-term and \$ savings.
	Cumulative Annual Savings	<ul style="list-style-type: none"> • Metric = Sum of annual savings that persist in the last year of a period. • Pros/Cons: Simple, with mid-term emphasis. Ignores \$ savings.
	Lifetime Savings	<ul style="list-style-type: none"> • Metric = Lifetime kWh • Pros/Cons: Simple. Long-term emphasis. Less about short-term & \$ savings.
\$	Net Benefits	<ul style="list-style-type: none"> • Metric = Dollar Savings net of Program Costs • Pros/Cons: Maximizes \$ savings. Less emphasis on volume savings.
Σ	Multi Factor	<ul style="list-style-type: none"> • Metrics = Lifetime kWh savings, annual kWh savings, customer class kWh savings, total \$ savings, geotargeted \$ savings, kW savings • Pros/Cons: Balance of multiple policy goals. More complex.

MECHANISMS IN OTHER STATES



■ Two Cost Recovery Approaches

- Rate Case, Tariff Rider/Surcharge



■ Three Performance Metric Categories

- Volume-based, Dollar-based, Multi Factor



■ Four Incentive Categories

- ROR, Energy Savings, Shared Savings, Multi Factor

STATE BY STATE COMPARISON

	AR	AZ	MI	MO	VT
PROGRAM ADMINISTRATOR	Utility (IOU)	Utility (IOU)	Utility (IOU)	Utility (IOU)	3rd Party
STRUCTURE	Vertically Integrated	Vertically Integrated	Retail Competitive	Retail Competitive	Vertically Integrated
RECOVERY MECHANISM					
Mechanism	Rate Case and Riders	Rider	IRP-based + Surcharge	Rider (resets at rate case)	Surcharge
Term	1-yr (contemporaneous)	1-yr (contemporaneous)	5-year or at rate case	1-yr (contemporaneous)	1-yr (contemporaneous)
Cost Allocation	Program Level / Cust. Class	Program Level / Cust. Class	Program Level / Cust. Class	Program Level / Cust. Class	Program Level / Cust. Class
PERFORMANCE METRICS					
Volume-based	X	X	X	X	X
Dollar-based	X	X	X	X	X
Multi-factor	X	X	X	X	X
INCENTIVES					
Rate of Return Based	X (DSM only)		Capitalization not allowed.		N/A
Energy Savings Based (kWh)	X	X	X	X	X
Dollar Savings Based (\$)	X	X	X	X	X
Multi Factor	X	X	X	X	X
Incentive Description	10% of program net benefits capped at 5-7% of program costs. Contingent on meeting energy savings (kWh) goal.	0% - 8% of program net benefits capped at 16% of program costs. Contingent on meeting energy savings (kWh) goal.	15-20% of program spending, contingent on meeting 1.0-1.5% of retail sales.	About 20% of program budget for meeting 8 different performance metrics.	About 4% of prog. budget for meeting 17 different performance indicators.

QUESTIONS TO CONSIDER

- **Objective**

- What objective(s) is/are motivating investment in DSM & EE?

- **Performance Metrics**

- What metrics measure the objective(s)?

- **Incentives**

- What incentive is tied to each metric?

- **Mechanism**

- As a whole, does the mechanism reward performance in proportion to its value? (aka 'benefits')



State Summaries & Supplemental Slides

ARKANSAS

■ DSM Programs

- Administrator: Utilities
- Recovery Mechanism:
 - Mechanism: Rate Case & Tariff Riders
 - Recovery Term: Varies with the mechanism.
 - Cost Allocation: None identified.
- Performance Metrics:
 - None identified.
- Incentives:
 - None identified.

■ Energy Efficiency Programs

- Administrator: Utilities
- Recovery Mechanism:
 - Mechanism: Tariff Rider (resets at next rate case)
 - Recovery Term: 1 year (contemporaneous)
 - Cost Allocation: Customer class
- Performance Metrics:
 - Energy & demand savings (kWh, kW)
- Incentives:
 - Shared Net Benefits, Lost Contr. to Fixed Costs (LCFC),
 - In practice, a formula rate plan has displaced the LCFC.
 - 10% of shared net benefits capped at 5-7% of program cost. Contingent on achieving 80-120% energy savings (kWh).

ARIZONA

■ DSM Programs

- Administrator: Utilities
- Recovery Mechanism:
 - Mechanism: Tariff
 - Recovery Term: 1 year (contemporaneous)
 - Cost Allocation: Using GAAP principles.
- Performance Metrics:
 - Energy savings (kWh) tied to the EERS.
- Incentives:
 - % of net benefits tied to EERS kwh savings levels→
 - Capped at 16% of program costs.
 - Lost-revenue recovery is permitted by statute, but explicit examples of it being used were not found.

■ EE Programs: Included in DSM.

Achievement Relative to the Energy Efficiency Standard	Performance Incentive as % of Energy Efficiency Net Benefits	Performance Incentive Capped at % of Energy Efficiency Program Costs
< 85%	0%	0%
85% to 95%	6%	12%
96% to 105%	7%	14%
> 105%	8%	16%

MICHIGAN

■ DSM Programs

- Administrator: Utilities
- Recovery Mechanism:
 - Mechanism: IRP + Rate Case + Reconciliation
 - Recovery Term: 5-years and between rate cases.
Deferral with ROE.
 - Cost Allocation: Not identified.
- Performance Metrics:
 - Not identified.
- Incentives:
 - Not identified. (ROE)

■ Energy Efficiency Programs

- Administrator: Utilities, 3rd Party for Low Inc.
- Recovery Mechanism:
 - Mechanism: Surcharge (per kWh or per meter)
 - Recovery Term: 2-years.
 - Cost Allocation: Customer class
- Performance Metrics:
 - Lifetime energy savings (kWh), % of retail sales
 - Low-income program spending and measures
- Incentives:
 - 15-20% of program spending for exceeding 1-1.5% of sales.
 - No capitalization of program costs.

MISSOURI

■ DSM Programs (Included in EE)

The eight metrics used in the earnings opportunities:

- 1) Average Percent Energy Savings Per Property for Multifamily Low-Income Program;
- 2) Average Percent Energy Savings Per Property for Single Family Low-Income Program;
- 3) Energy Savings of HER Program;
- 4) Energy Savings of Residential Lighting Program;
- 5) Subtotaled Portfolio Energy Savings for energy efficiency programs;
- 6) Subtotaled Coincident Peak Demand Savings from Measures <10 Year Useful Life;
- 7) Subtotaled Coincident Peak Demand Savings from Measures ≥10 Year Useful Life; and
- 8) Cumulative Demand Response Capability for demand response programs.

■ Energy Efficiency Programs

- Administrator: Utilities
- Recovery Mechanism:
 - Mechanism: Tariff Rider (resets at next rate case)
 - Recovery Term: 1-year (contemporaneous)
 - Cost Allocation: Customer class
- Performance Metrics:
 - ← Eight different metrics are used in Ameren's current plan.
- Incentives:
 - Direct, Lost Revenue, & "Earnings Opportunity"
 - The earnings opportunity equates to about 20% of program costs in 2022 and 2023.

VERMONT

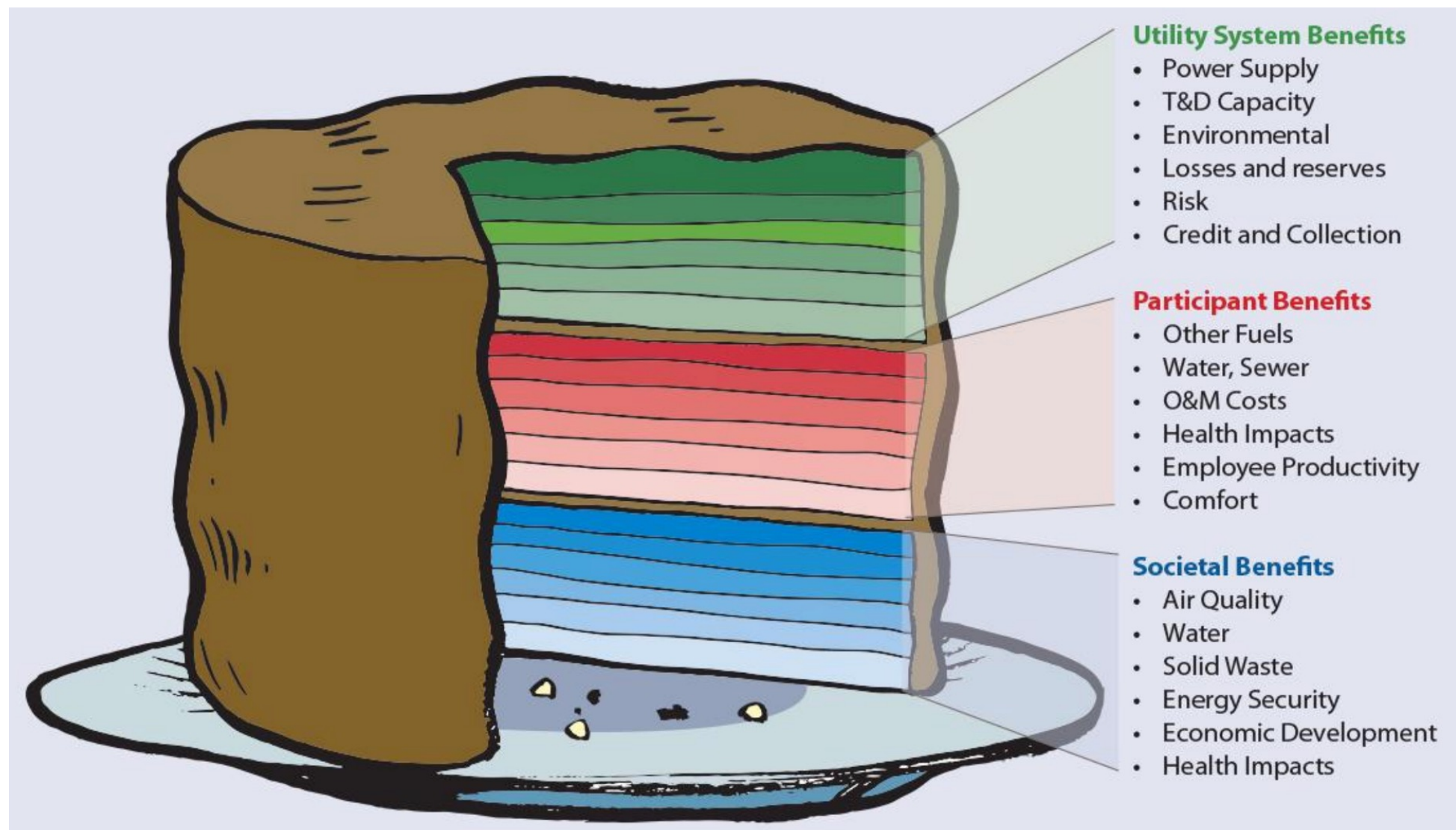
■ DSM Programs

- Administrator: Utilities
- Recovery Mechanism:
 - Mechanism: Rev. req. and an alt. reg. plan.
 - Recovery Term: 4-years
 - Cost Allocation: Customer base
- Performance Metrics:
 - Multi-factor reporting. No explicit goals.
 - Term: 4-years
- Incentives:
 - ROE on capitalized items only. No other incentives.

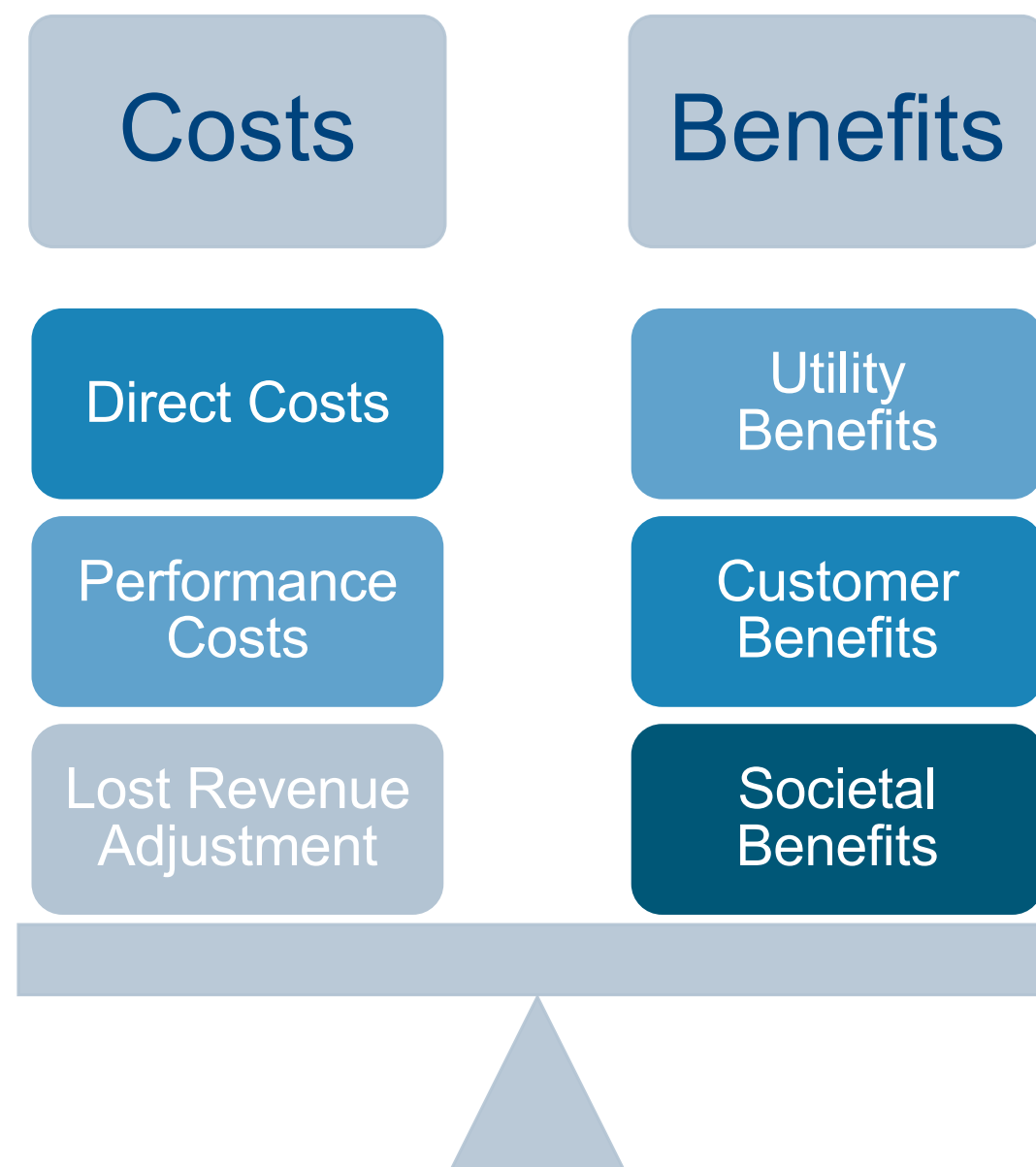
■ Energy Efficiency Programs

- Administrator: 3rd Party
- Recovery Mechanism:
 - Mechanism: Surcharge on electric bills
 - Recovery Term: 1-year (contemporaneous)
 - Cost Allocation: Customer class
- Performance Metrics:
 - Multi-factor tied to incentives, rate classes and counties.
 - Term: Performance and planning are on 3-yr cycles.
- Incentives:
 - Fixed \$ bonus payments tied to program-level PIs.

BENEFITS OF DSM & EE PROGRAMS



BALANCING



RESOURCES

- **Lawrence Berkley National Labs**

- <https://emp.lbl.gov/research/energy-efficiency>

- **Regulatory Assistance Project**

- [https://www.raonline.org/knowledge-center/? sft region=us](https://www.raonline.org/knowledge-center/?sft_region=us)