

Interactions Between ARRA-Funded and Utility Customer-Funded Energy Efficiency Programs

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Outline

- Study Approach & Scope
- Potential Lasting Impacts
- Innovation and Coordination
 - 12 case study states
- Case Study Examples
- Challenges
- Recommendations

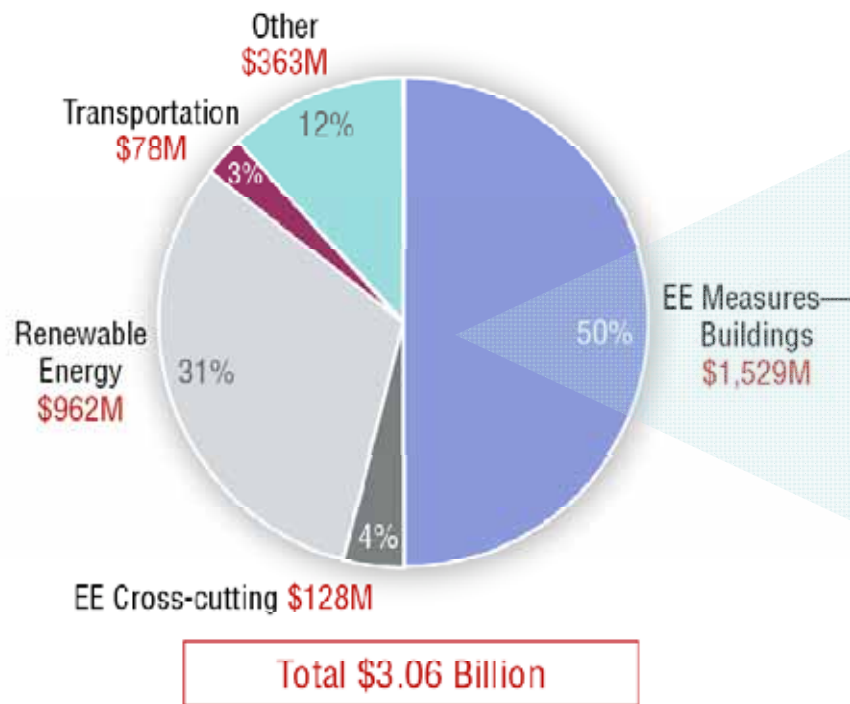


Approach & Scope

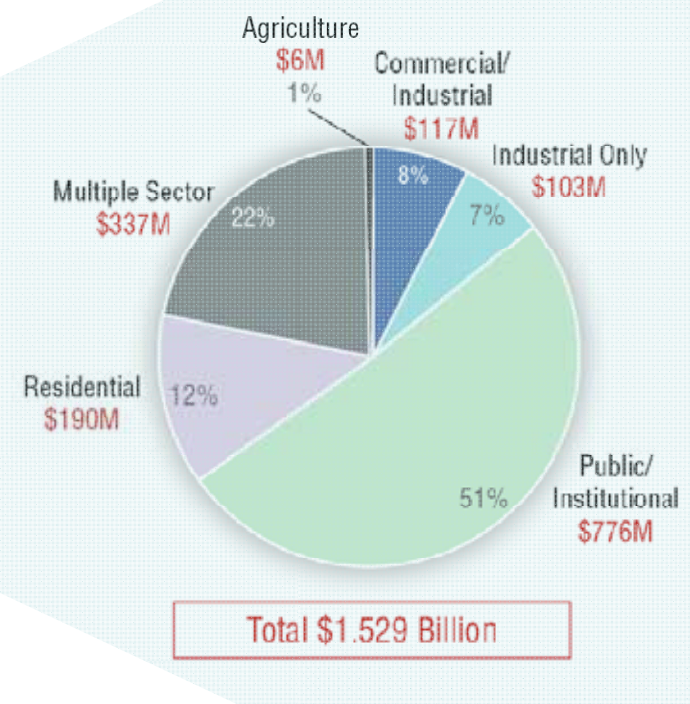
- Why this study?
 - Short-term infusion of \$ billions for EE to state & local governments
 - Insight into world of multiple EE program administrators and funds
- Key questions
 - What impacts did these two types of program administrators have on each other's program planning and design?
 - What implications might these interactions have for the future of energy efficiency?
- Focus on SEP, EECBG, and SEEARP programs
- 12 case studies
 - California, Colorado, Florida, Hawaii, Maine, Massachusetts, Michigan, Minnesota, New York, North Carolina, Oregon, and Wisconsin
- Interviews with more than 80 EE actors



State Energy Program Budgets – National Trends



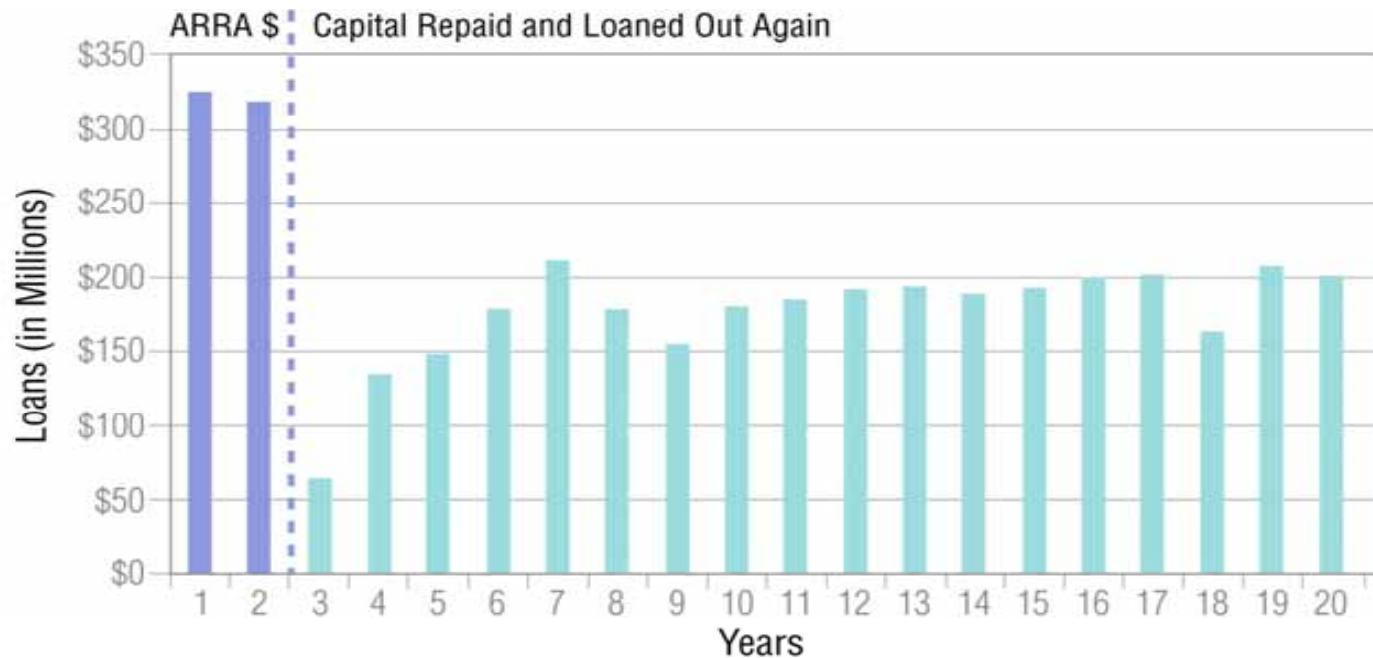
**U.S. ARRA SEP Budget Breakdown
50% for EE in Buildings**



**Half of SEP Buildings EE Budgets
to Public/Institutional Sector**

Potential Lasting Impacts

- Revolving Loan Funds (RLF)
 - 35 states: over \$650M
 - Could finance \$150-\$200M annually over 20 years



Innovation in Markets & Technologies

States targeted EE programs towards new markets, technologies, and geographic regions:

New Sectors	New Geographic Areas	New Program Actors	New Technologies & Policies
<ul style="list-style-type: none"> • HI (hospitality) • NY, NC (nonprofits) • HI, ME (transit planning) 	<ul style="list-style-type: none"> • CA, CO (rural areas) • HI (non-IOU territory) 	<ul style="list-style-type: none"> • CA (regional entities, counties) • MI (local governments) • MN (cities, local government authority) • NY(cities) • WI (small towns) 	<ul style="list-style-type: none"> • HI (deep seawater air conditioning) • ME, MA, MI (multi-fuel retrofits) • NY (reprogramming utility software for on-bill financing) • NC (new manufactured housing)

Spectrum of Coordination

Broad spectrum of coordination between SEOs and utility customer-funded program administrators

- Engaged in **consultation** with utility customer-program administrators but decided not to coordinate their programs
- **Complementary** Recovery Act-funded programs were designed as enhancements, extensions or enablers of utility customer programs
- Administrators tried **full collaboration** in designing and implementing joint programs

Communication or consultation on programs	Complementary programs	Full collaboration
FL, MN, NC, NY, WI, CA	CA, CO, FL, HI, MA, ME, MI, MN, NC, NY, OR	HI, CA, ME, MA, MN

Decision Factors for Coordination

Utility Customer-Funded Program Administrators

- ↑ Credit for savings
- ↑ Leverage of funds & savings
- ↑ Manage market confusion
- ↑ Relief from CE constraints
- ↔ Narrow objectives
- ↔ Interpersonal/interagency relations
- ↓ Autonomy/compromise
- ↓ Federal requirements/uncertainty

State ARRA-Funded Program Administrators

- ↑ Leverage of other funds, expertise & infrastructure
- ↑ Program sustainability
- ↔ Broad objectives
- ↔ Interpersonal/interagency relations
- ↓ Autonomy/Compromise
- ↓ Delays in resolving federal requirements vs. deadlines for spending

- ↑ Favors coordination ↓ Does not favor coordination
↔ Depends - Could go either way

Colorado: New Markets and Scaled Incentives

- Coordinators worked with rural utilities to develop new programs
- Complementary incentives— parties negotiated
 - Market boost of modest existing incentives
 - SEO created cap formula & adjusted own incentives
 - Statewide tracking system



Minnesota: Creative RLF Use in Industrial EE

Commercial/Industrial Revolving Loan Fund

- Trillion BTU program enlisted an experienced finance program administrator: St. Paul Port Authority
- Leverages funds from largest IOU and local economic development agencies
 - Utility heavily subsidizes audits and engineering studies
 - Projects designed to create immediate positive cash flow for companies
- Diverse portfolio of projects
 - E.g., foundries, hospitals, office towers



Hawaii: Mutual Benefits & Objectives

Hawaii State Energy Office (HSEO)

- Staff: ~12
- SEO sought 3rd-party administrator expertise, delivery infrastructure
- RP admin wanted to manage market impacts
- Joint programs took work
- Fridge recycling: >200 units/day
- Solar Hot Water Heater Financing
- Customer Behavioral Feedback



Challenges

- Varying objectives
- Short-term cash infusion may not support long-term market transformation
- Time and capacity limits
- Uncertainty over ARRA statutory requirements limited coordination
- Attribution of savings



Recommendations

- Current Programs
 - Track and share the performance of RLFs
 - Assist SEOs in re-targeting RLFs on more credit-challenged markets (e.g., residential, small business)
- Future Programs
 - Consider and leverage existing infrastructure
 - Find ways to continue to fund exploration and innovative approaches to EE program design and delivery
 - Continued support could establish SEOs as test beds, trying out new programs for adoption into utility customer-funded portfolios



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Extra Slides



RLF Cash Flow Model Assumptions

- Interest rate of 5% (paid annually to simplify the model)
- Average loan term of 5 years
- Total loss rate of 5% of the interest and principal payments due each year
- Annual admin costs 1% of the initial fund amount (i.e. 1% of \$650M or \$6.5M)
- Initial loans from RLFs created with ARRA funds are made over a 2-year period with 50% of loan \$ committed in the 1st year and 50% in the 2nd year
- Loans are not paid off early
- Capital returned is immediately loaned out again for new projects



Observed Divisions of Labor

Utility Customer-Funded Program Administrators

- Rebates
- On-bill financing
- Retail vendor partnerships
- Manufacturer & distributor partnerships
- Marketing & outreach: state & service territory
- Access to customer bills
- EM&V
- Workforce training/development

SEO ARRA-Funded Program Administrators

- Credit enhancements
 - Loan loss reserves
 - Interest-rate buy downs
- Revolving loan funds & other financing
- Marketing & outreach: state & local
- Innovation & exploration of new or underserved markets
- Workforce training/development

