Briefing on the Better Buildings Neighborhood Program Evaluation

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Edward Vine, Lawrence Berkeley National Laboratory
with Evergreen Economics, Nexant, and NMR Group

June 24, 2015
BBNP Evaluation Team and Reviewers

- Independent Evaluation Team
  - Research Into Action led the teams and process evaluation research
  - Evergreen Economics conducted the analysis of economic impacts, the billing regression analysis of program savings, and worked with Nexant to verify program savings
  - Nexant led the impact evaluation, conducted project measurement and verification (M&V) activities, and verified program savings
  - NMR Group led the market effects assessment
- DOE Project Manager, Jeff Dowd, EERE
- LBNL Project Managers Edward Vine & Yaw Agyeman, providing technical oversight
- BTO POC, Dale Hoffmeyer

External peer reviewers
- Marian Brown
- Phil Degens
- Lauren Gage
- Ken Keating
- Lisa Petraglia*
- John “Skip” Laitner*

Internal reviewers
- Jeff Dowd
- Dale Hoffmeyer
- Danielle Sass Byrnett**
- Claudia Tighe**
- Bill Miller**

* Reviewed economic analysis
** Reviewed preliminary evaluation
Agenda

- BBNP overview and timeline
- Evaluation findings
  - Bottom line (goal/objective attainment)
  - Energy and CO$_2$e impacts
  - Program implementation lessons learned
  - Market effects finding
  - Recommendations for DOE
- Additional material
  - Reporting
  - Methodology
BBNP Overview and Timeline
What is BBNP?

- **Purpose**
  - Demonstrate self-sustaining efficiency retrofit programs
  - Innovate for comprehensive upgrades in local markets

- **$508 million in grants to 41 grantees and 24 subgrantees – governments and nonprofits**
  - Implemented whole building energy upgrade programs in 34 states and one territory
  - All sectors: residential, low income, multifamily, commercial, public, industrial, and agricultural buildings
Better Buildings Neighborhood Program

- July 5, 2010: Kick-off
  - Originally called Retrofit Ramp-Up
- Leverage $508 million in Recovery Act (ARRA) and FY10 funding
- $445.2 million spent between 2010 and September 2013
  - Program elements extended through September 2014 for a 4-year total expenditure of $508 million
- Spur nationwide energy efficiency program innovation
  - Target urban, suburban, and rural environments (all building sectors)
  - Encourage industry partnerships and investment
  - Emphasize sustainability beyond the grant
  - Capitalize on economies of scale
- Learn what is effective and replicable
BBNP and Evaluation Timeline

**Pre-Award**
- 10/09: Funding Opportunity Announcement (FOA) for EECBG Competitive Grants issued [revised 11/20/09]
- 04/10: Grants Announced
- 07/10: Workshops
- 09/10: Program Launches

**Award**
- 11/11: Grant Recipients assigned to Account Managers; Grant period begins
- 04/10: Funding Opportunity Announcement
- 07/10: Grants Announced
- 09/10: Workshops
- 10/11: Program Launches

**Post-Award**
- 4/12: Evaluation Contracted
- 6/12: Preliminary Evaluation Plan Approved
- 10/12: Preliminary Data Collection
- 12/12: Preliminary Evaluation Reports Submitted
- 4/13: Grant period of performance ends
- 12/13: Final Evaluation Plans Approved
- 4/14: Final Impact Data Collection
- 10/14: Final Process & Market Data Collection
- 3/15: Draft Final Reports Submitted to Peer Review
Evaluation and Program Time Periods

- BBNP performance period ended December 2013
- BBNP evaluation period ended September 2013
- Extension enables grantees’ financing components to continue generating upgrade projects through September 2014
- BBNP grantees given time to provide data and wrap-up projects through December 2014
- ARRA fund close-out June 30, 2015
- Evaluation verifies accomplishments through September 2013 (not fourth year)
Evaluation Findings

- Bottom line (goal/objective attainment)
- Energy and CO2 impacts
- Program implementation lessons learned
- Market effects findings
- Recommendations to DOE
Bottom Line

- BBNP met all ARRA-defined goals
- BBNP met most program-defined objectives within the first 3 years of operation
- Achievement of 6 of 7 program-defined objectives appears likely for 4 years of operation
- BBNP demonstrated what works
  - Program implementation yielded lessons learned to facilitate sustainability of upgrade programs
### BBNP Met All ARRA-defined Goals

<table>
<thead>
<tr>
<th>GOALS</th>
<th>METRICS</th>
<th>RESULTS</th>
<th>ATTAINED?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create new jobs and save existing ones</td>
<td>Number of jobs created and retained</td>
<td>The evaluation estimated 10,191 net direct and indirect jobs resulting from BBNP</td>
<td>Yes</td>
</tr>
<tr>
<td>Spur economic activity and invest in long-term growth</td>
<td>Dollars of economic activity</td>
<td>BBNP spending of $445.2 million generated more than: • $1.3 billion in net economic activity • $129.4 million in net federal, state, and local tax revenues Estimated net benefit-cost ratio: 3.0</td>
<td>Yes</td>
</tr>
<tr>
<td>Provide accountability and transparency in spending BBNP funds</td>
<td>Evidence of accountability and transparency</td>
<td>Grantees receiving ARRA funding submitted ARRA expenditure reports. Grant expenditure information was available to the public on Recovery.gov BBNP DOE staff developed and maintained a program tracking database for periodic grantees reporting. Staff worked with grantees to increase the quantity and quality of reported data Grantees had access to summary data Evaluator-verified results will be publicly available</td>
<td>Yes</td>
</tr>
</tbody>
</table>
# Met Most BBNP Objectives by Year 3

## Likely Met All Objectives by Year 4

<table>
<thead>
<tr>
<th>OBJECTIVES</th>
<th>METRICS</th>
<th>RESULTS</th>
<th>ATTAINED?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Develop sustainable energy efficiency upgrade programs</strong></td>
<td>Percent of programs planning to continue after funding</td>
<td>84% of grantees reported that their programs or elements thereof would continue after the 3-year evaluation period</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Evidence of continuing effects on the retrofit industry</td>
<td>The evaluation found evidence of early indications of market effects, including increased:</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Activity in the energy efficiency upgrade market</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Adoption of energy efficient building and business practices</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Marketing of energy efficiency</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Availability of financing</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Better Buildings Residential (BBR) Program Solution Center and BBR Network continue to provide examples of replicable comprehensive approaches</td>
<td></td>
</tr>
<tr>
<td><strong>Create or retain 10,000 to 30,000 jobs</strong></td>
<td>Net number of jobs</td>
<td>The evaluation estimated 10,191 net jobs resulting from BBNP during the 3-year evaluation period</td>
<td>Yes</td>
</tr>
</tbody>
</table>
## Objectives Met

<table>
<thead>
<tr>
<th>OBJECTIVES</th>
<th>METRICS</th>
<th>RESULTS</th>
<th>ATTAINED?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upgrade more than 100,000 residential and commercial buildings to be</td>
<td>Number of upgrades</td>
<td>The evaluation verified the grantee-reported 99,071 upgrades for the 3-year evaluation</td>
<td>No 99%</td>
</tr>
<tr>
<td>more energy efficient</td>
<td></td>
<td>Unverified, grantees reported 119,404 upgrades for the 4-year program period</td>
<td>Likely*</td>
</tr>
<tr>
<td>Save consumers $65 million annually on their energy bills</td>
<td>Energy bill savings ($)</td>
<td>Verified energy savings provide $40 million in annual bill savings during the 3-year evaluation period</td>
<td>No 62%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Close to $700 million lifetime energy bill savings expected (based on verified savings)</td>
<td>Unlikely</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Grantees reported:</td>
<td>~ 78%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• $60 million in estimated bill savings during the 3-year evaluation period</td>
<td>(based on 3-year evaluation findings)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• $76 million in estimated bill savings through the 4-year program period</td>
<td></td>
</tr>
</tbody>
</table>

* Likely means that the unverified data show a trend suggestive of achievement.
## Objectives Met

<table>
<thead>
<tr>
<th>OBJECTIVES</th>
<th>METRICS</th>
<th>RESULTS</th>
<th>ATTAINED?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achieve 15% to 30% estimated energy savings from residential energy upgrades</td>
<td>Average energy upgrade savings (%)</td>
<td>Verified single family residential savings: 15.1%</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Grantees reported 22% estimated energy savings in single family residential upgrades</td>
<td>Yes</td>
</tr>
<tr>
<td>Reduce the cost of energy efficiency program delivery by 20% or more</td>
<td>Average program delivery cost per year ($/MMBtu)</td>
<td>Delivery cost for BBNP savings (program-wide $/MMBtu) fell each year of the 3-year program by 30% or more</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Third-year program delivery cost was 58% lower than first-year cost</td>
<td>Yes</td>
</tr>
<tr>
<td>Leverage $1 to $3 billion in additional resources</td>
<td>Dollars leveraged</td>
<td>Evaluation interviews with financial institutions corroborated grantee-reported leveraged loan funds of about $460 million</td>
<td>Inconclusive**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Grantees reported leveraged funds from other sources of about $750 million, for an estimated total leveraged funds of about $1.21 billion</td>
<td>Likely</td>
</tr>
</tbody>
</table>

** The evaluation addressed financial leverage amounts only; it did not address other grantee-reported leveraged funds.
# BBNP Energy and CO$_2$e Impacts

## Verified Gross and Net Energy Savings (Q4 2010 – Q3 2013)

<table>
<thead>
<tr>
<th>SECTOR</th>
<th>GROSS VERIFIED SOURCE SAVINGS (MMBTU)</th>
<th>NET VERIFIED SOURCE SAVINGS (MMBTU) (ACCOUNTS FOR PARTICIPATION BEHAVIOR)</th>
<th>NET LIFETIME SOURCE SAVINGS (MMBTU) (18 YEARS)</th>
<th>CO$_2$e REDUCTION (METRIC TONS, NET ANNUAL)</th>
<th>LIFETIME CO$_2$e REDUCTION (METRIC TONS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>2,084,120</td>
<td>1,960,024</td>
<td>36,456,444</td>
<td>207,721</td>
<td>3,863,613</td>
</tr>
<tr>
<td>Multifamily</td>
<td>324,292</td>
<td>322,749</td>
<td>6,003,132</td>
<td>36,842</td>
<td>685,254</td>
</tr>
<tr>
<td>Commercial</td>
<td>1,479,352</td>
<td>1,251,359</td>
<td>14,265,488</td>
<td>234,005</td>
<td>2,667,659</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3,887,764</td>
<td>3,534,131</td>
<td>56,725,063</td>
<td>478,568</td>
<td>7,216,526</td>
</tr>
</tbody>
</table>
Identified How to Aid Success

- Programmatic contributors to grantee success
  - Account managers
  - Workshops and conferences
  - Webinars
  - Peer exchange calls
Identified What Works for Whole Home Programs

- In first-of-its kind research, the evaluation identified:
  - Four factors “proven” through multivariate statistical analysis to drive greater success
    - Offering multiple types of energy audits
    - Directly installing measures during the energy audit
    - Developing large pools of eligible contractors
    - Providing contractor training
Other Supporting Program Elements

- In addition to the 4 primary factors, 8 other factors are associated with greater success
  - Having at least one staff member with 15 or more years of relevant experience
  - Offering financing as a component of the program
  - Offering incentives of around 25% as a component of the program
  - Targeting outreach activities to specific populations (while not restricting participation to narrowly defined populations)
  - Conducting community-based outreach efforts
  - Building strong relationships with participating contractors
  - Providing a flexible approach to home and building owners to conduct comprehensive upgrades, including allowing participants to stage their upgrades
  - Conducting effective QA/QC
Market Effects Findings

- Across multiple indicators, the evaluation found early indications of market effects influenced by BBNP
- BBNP increased activity in the energy efficiency upgrade market
  - Contractors and distributors reported BBNP had a positive influence on their business
  - And reported adopting energy efficient building and business practices
- Both participating and nonparticipating contractors reported that due to BBNP they increased their **marketing of energy efficiency** and took more **efficiency-focused training**
- Evaluation found high levels of consumer awareness of BBNP
Going Forward for DOE

- Continue to facilitate national dialogue
  - Better Building Residential Program Solution Center
  - Better Building Residential Network
  - Workshops and conferences

- When providing funding, use Account Managers
  - Evaluation found them to be important to program success

- Seek additional opportunities for capability building
  - Energy efficiency infrastructure is not built in a day

- Evaluate for long-term effects in 3 to 5 years
Additional Material
## Types of BBNP Evaluations and Objectives

<table>
<thead>
<tr>
<th>TYPES OF BBNP EVALUATIONS</th>
<th>EVALUATION OBJECTIVES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact evaluation</td>
<td>• Estimate MMBTU and CO$_2$e impacts, and economic and job impacts</td>
</tr>
</tbody>
</table>
| Process evaluation        | • Assess degree to which BBNP met its goals related to program processes and grantee program activity  
  • To identify the most effective approaches – including program design and implementation activities – to completing building energy upgrades that support the development of a robust retrofit industry in the U.S. |
| Market effects evaluation | • Identify indications of BBNP effect on the local building improvement markets    
  • Understand how and why energy upgrade contractors and distributors changed their business practices in a way that promotes greater adoption of energy efficiency |
Final Evaluation Reports

- Volume 1 - Evaluation of the BBNP (Final Synthesis Report)
- Volume 2 - Savings and Economic Impacts of the BBNP
- Volume 3 - Drivers of Success in the BBNP - Statistical Process Evaluation
- Volume 4 - Process Evaluation of the BBNP
- Volume 5 - Market Effects of the BBNP
- Volume 6 - Spotlight on Key Program Strategies from the BBNP
  - The evaluation began late 2011 and concluded mid 2015
  - Peer review completed
  - Current status: Preparing final publications
# High Level Overview of Methods Used

## SUITE OF STUDIES

<table>
<thead>
<tr>
<th>Method</th>
<th>Method</th>
<th>Method</th>
<th>Method</th>
<th>Method</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Savings and Economic Impacts (Volume 2)</td>
<td>M&amp;V of a sample of grantees and projects</td>
<td>Billing regression analysis</td>
<td>Realization rates and NTG analysis</td>
<td>Extrapolate the sample findings to overall BBNP population</td>
<td>IMPLAN economic modeling against a base case scenario</td>
</tr>
<tr>
<td>Drivers of Success in BBNP- Statistical Process Evaluation (Volume 3)</td>
<td>Survey sampling</td>
<td>Cluster analysis to cluster grantee/sub-grantee into groups with similar performance on success indicators</td>
<td>Multivariate regression</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Process Evaluation of the BBNP (Volume 4)</td>
<td>Survey sampling</td>
<td>Qualitative descriptions and analysis</td>
<td>Bivariate analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market Effects (Volume 5)</td>
<td>Survey sampling</td>
<td>Descriptive statistics</td>
<td>Estimated order of magnitude energy savings associated with the early market effects</td>
<td>Secondary data analysis of changes in contractor association memberships and certifications</td>
<td></td>
</tr>
<tr>
<td>Spotlight on Key Program Strategies (Volume 6)</td>
<td>Interviews</td>
<td>Qualitative descriptions and analysis</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Data Collection Activities

<table>
<thead>
<tr>
<th>POPULATION</th>
<th>METHOD</th>
<th>IMPACT</th>
<th>PROCESS</th>
<th>MARKET EFFECTS</th>
<th>COUNTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grantees/Subgrantees</td>
<td>Web Survey</td>
<td>✓</td>
<td></td>
<td></td>
<td>38 grantees; 13 subgrantees</td>
</tr>
<tr>
<td></td>
<td>In-depth Interview (In-person and Phone)</td>
<td>✓</td>
<td></td>
<td></td>
<td>40 grantees; 8 subgrantees</td>
</tr>
<tr>
<td></td>
<td>Utility Billing Data</td>
<td>✓</td>
<td></td>
<td></td>
<td>21 grantees; 7,513 projects</td>
</tr>
<tr>
<td></td>
<td>Leveraging Interview (Phone)</td>
<td>✓</td>
<td></td>
<td></td>
<td>15 grantees</td>
</tr>
<tr>
<td>Participants (all sectors except agriculture)</td>
<td>Desk Review</td>
<td>✓</td>
<td></td>
<td></td>
<td>14 grantees; 305 projects</td>
</tr>
<tr>
<td></td>
<td>Phone Survey</td>
<td>✓</td>
<td></td>
<td></td>
<td>22 grantees; 205 projects</td>
</tr>
<tr>
<td></td>
<td>On-site Visit with Interview</td>
<td>✓</td>
<td></td>
<td></td>
<td>17 grantees; 168 projects</td>
</tr>
<tr>
<td>Participant homeowners</td>
<td>Web Survey</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>24 grantees; 2,399 respondents</td>
</tr>
<tr>
<td>Nonparticipant homeowners</td>
<td>Web-Intercept Survey</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>41 grantees, 2,429 respondents</td>
</tr>
<tr>
<td>Multifamily participants</td>
<td>CATI Survey</td>
<td>✓</td>
<td></td>
<td></td>
<td>14 respondents</td>
</tr>
<tr>
<td>Participating contractors</td>
<td>CATI Survey</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>22 grantees (25 grantee programs); 147 respondents</td>
</tr>
<tr>
<td></td>
<td>In-depth Interview (phone)</td>
<td>✓</td>
<td></td>
<td></td>
<td>10 interviewees</td>
</tr>
<tr>
<td>Nonparticipating contractors</td>
<td>CATI Survey</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>22 grantees (25 grantee programs); 446 respondents</td>
</tr>
<tr>
<td>Distributors</td>
<td>CATI Survey</td>
<td>✓</td>
<td></td>
<td></td>
<td>22 grantees (25 grantee programs); 291 respondents</td>
</tr>
<tr>
<td>Financial Institutions</td>
<td>In-depth Interview (Phone)</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>20 financial partners</td>
</tr>
<tr>
<td>DOE Staff, Contractors, and Stakeholders</td>
<td>In-depth Interview (In-person and Phone)</td>
<td>✓</td>
<td></td>
<td></td>
<td>12 DOE staff; 8 support contractors; 5 nongovernmental stakeholders</td>
</tr>
<tr>
<td>Program-level</td>
<td>Document and Database Review</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>41 grantees</td>
</tr>
<tr>
<td></td>
<td>Pertinent Literature</td>
<td>✓</td>
<td></td>
<td></td>
<td>More than 50 documents</td>
</tr>
<tr>
<td>Contractor association memberships and certifications</td>
<td>Database reviews</td>
<td>✓</td>
<td></td>
<td></td>
<td>Five contractor associations and certification organizations</td>
</tr>
</tbody>
</table>

* CATI = Computer-assisted telephone interviewing
Volume 2 – Energy Savings Methodology

- Measurement and verification (M&V) of savings post-retrofit conditions (ex-post analysis)
  - Onsite inspections and surveys
  - Review of project files and documentation
  - Engineering analysis of projects

- Billing regression analysis of projects for 19 grantees
  - Monthly energy consumption before and after program participation

- Weighted sector realization rates from above (M&V and regression) were used to extrapolate to population

- Net-to-gross analysis
  - Self-reported survey data on free-ridership and spillover by participants and contractors
Volume 2 – Economic Impacts Analysis

- Addresses number of jobs, economic impacts, and tax revenue
- Data from BBNP Grantee Quarterly Summary Reports
- IMPLAN input-output model of direct and indirect impacts
  - Direct impacts:
    - Goods and services purchased
    - Jobs and income for program staff, participating contractors, and energy efficiency equipment manufacturers
  - Indirect impacts:
    - Induced by the direct impacts (supply-chain and consumption-driven spending)
Volume 3 – Statistical Process Evaluation (1)

- Based on BBNP’s objectives, we identified 12 quantifiable performance metrics

- We quantified these 12 metrics for the residential programs of grantees and sub-grantees (n=54)
  - Captured diversity of program business models, outcomes, and market characteristics

- We clustered the grantees on the 12 performance metrics using Latent Profile Analysis
  - Most success (n=12)
  - Average success (n=35)
  - Least success (n=7)
Volume 3 – Statistical Process Evaluation (2)

- Using regression analysis, we explored which programmatic elements predicted membership in the most and least successful clusters.

- Example of four metrics:

<table>
<thead>
<tr>
<th>Metric</th>
<th>Most Successful</th>
<th>Average</th>
<th>Least Successful</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market penetration of program’s upgrades</td>
<td>2.30%</td>
<td>0.76%</td>
<td>0.29%</td>
</tr>
<tr>
<td>Program’s savings-to-investment ratio (SIR)</td>
<td>2.71</td>
<td>1.29</td>
<td>0.41</td>
</tr>
<tr>
<td>Program cost per dollar of work invoiced</td>
<td>$0.67</td>
<td>$0.87</td>
<td>$1,895</td>
</tr>
<tr>
<td>Program cost per MMBtu saved</td>
<td>$134</td>
<td>$234</td>
<td></td>
</tr>
</tbody>
</table>

Higher values equate better performance

Lower values equate better performance
Volume 4 – Process Evaluation Methodology

- **Surveys with**
  - 38 grantees and 13 subgrantees
  - 2,399 participating homeowners
  - 2,429 nonparticipating homeowners

- **In-depth interviews with**
  - 40 grantees and 8 subgrantees
  - 20 financial partners
  - 12 DOE staff, 8 support contractors, 5 NGO stakeholders

- **Literature and database review**
### Volume 5 – Market Effects Methodology

Sought local market effects (not national)

<table>
<thead>
<tr>
<th>Contractor &amp; Equipment Distributor Surveys</th>
<th>Homeowner Intercept Surveys</th>
<th>Financial Institution Interviews</th>
<th>Secondary Data Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Participating contractors = 147</td>
<td>- Participants across 24 grantees = 2,399</td>
<td>- In-depth interviews = 20</td>
<td>- Program documents</td>
</tr>
<tr>
<td>- Non-participating contractors = 446</td>
<td>- Nonparticipants across 41 grantees = 2,429</td>
<td></td>
<td>- Contractor association membership data</td>
</tr>
<tr>
<td>- Distributors = 291</td>
<td></td>
<td></td>
<td>- Certification organization enrollment data</td>
</tr>
</tbody>
</table>
Volume 6 – Spotlight Studies Methodology

- Five studies
  - Four informed by the statistical analyses
    - Offering multiple pathways to participation
    - Offering contractor training
    - Targeting outreach to a subset of the population
    - Engagement with community-based organizations (CBOs)
  - The fifth related to the BBNP goal of comprehensive energy upgrades
    - Encouragement of deep retrofits

- Four to seven grantees interviewed per topic
  - Selected for experience relative to one or more topics
  - Across the full range of programmatic success
Evaluation Release

- Public webinar June 24st
- Post reports on EERE evaluation web page
  http://www1.eere.energy.gov/analysis/pe_plans_reports.html
- Incorporate findings into Residential Programs Solutions Center
- Evaluators will present various evaluation and industry conferences
Contact:

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marjorie.mcrae@researchintoaction.com
elvine@lbl.gov