Summary of the Department of Energy's (DOE) June, 2015 evaluation of the Energy Efficiency and Conservation Block Grant Program (EECBG) funded by the American Reinvestment and Recovery Act (ARRA)

Background:

DOE, hired DNV GL with supervision by the Oak Ridge National Laboratory, to evaluate the impact of $2.7B, disbursed to 2,187 jurisdictions through EECBG.

The evaluation focused on six Broad Program Areas (BPAs), which comprised 80% of the total funding through EECBG. The six BPAs were: Energy Efficiency Retrofits, Financial Incentives (loans, rebates, financing), Buildings and Facilities (architecture, design and engineering activities), Lighting (traffic and street lighting retrofits), and Energy Efficiency and Conservation Strategy (project covering a wide range of efficiency and renewable energy technologies).

The primary metrics developed by the evaluation included: energy savings and renewable energy generation, labor impacts, avoiding carbon emissions and bill savings, and cost-effectiveness.

Findings:

1) Energy Impacts
    - The program total energy savings was 409 million MMBtu.
    - 57% of savings was attributed to the financial incentives BPA, with 17% of savings associated with both the energy efficiency retrofits and lighting BPAs.
2) Labor Impacts
    - There were 62,902 job years created by the program – at a ratio of one job per $36,260 of program funding.
    - The Energy Efficiency Retrofits lead the BPAs with job creation at 31,151 jobs.
3) Avoided carbon emissions and avoided social cost
    - The program total avoided carbon emissions were 25.7 MMTCE, with the vast majority derived from energy savings. Only 0.9 MMTCE was avoided due to renewable generation.
    - The avoided social cost of carbon from the program totaled $1.78B.
4) Bill savings and cost-effectiveness
    a. Total lifetime program bill savings was $5.2B, with financial incentives, lighting, and energy efficiency BPAs accounting for the most savings respectively.
    b. The evaluation utilized the Recovery Act Cost (RAC) test, which solely accounts for energy saved (MMBtu) per $1,000 of program expense. The evaluation established a threshold of 1:10 for assessing whether a BPA was cost-effective. Under this test, three out of five BPAs passed as cost-effective.