

# National Action Plan for Energy Efficiency Sector Collaborative on Energy Efficiency

## Case Study Recommendations

### Background

The purpose of developing case studies as part of the NAPEE Sector Collaborative is to help organizations in each of the highlighted sectors achieve greater energy efficiency by showcasing successful and innovative ways that similar organizations have overcome common barriers. While it is anticipated that the vast majority of the case studies will be written with the building manager in mind, there may also be relevant case studies developed that are targeted toward financial decision makers (C-level). Overall, these case studies should 1) drive change by portraying a meaningful business case, and 2) motivate action by high-level decision makers. The case studies will promote the use of cost-effective, low risk technology applications, include compelling financial propositions, and highlight organizational and environmental benefits.

EPA will present the plan for developing case studies during the plenary session on June 27. More detailed discussion will likely occur during the breakout sessions on both June 27 and 28. EPA hopes to identify organizations who wish to participate in the development of the case studies during the workshop.

The three sections below include:

1. **Case Study – Foundation Elements.** This section lists the proposed elements of each case study that will provide the foundation on which the specific activities of each highlighted organization are described. EPA has found that these elements are common to energy efficiency leaders. Some resources and tools are listed below each element.
2. **General Case Study Topics.** This section includes ideas for case study topics that are common across the sectors.
3. **Sector Specific Case Study Recommendations.** This section includes ideas for key barriers that could form the focus of case studies in each sector. Examples of organizations that have overcome these barriers successfully could help others accelerate their energy efficiency programs.
4. **Case Study Structure/Template.** This section includes a proposed outline for the case studies.

### 1. Case Study – Foundation Elements

- ✓ **“C” Level Buy-in:** Making the business case and gaining commitment from executive level for investments in energy efficiency improvement.
  - Financial benefits associated with energy performance improvement projects in an environment of competing investments
  - Financial metrics (i.e. IRR, NPV, ROI)
- ✓ **Comprehensive Approach to Energy Management:** Commitment to allocating staff, resources, and funding for achieving continuous improvement. Establishing an approach which allows for planning, regular assessment of energy performance, and implementation of projects for increased energy efficiency.
  - Developing an energy management plan/goal setting

- ENERGY STAR Guidelines for Energy Management
- ✓ **Benchmarking:** Gathering energy use information for establishing a starting point from which to measure progress over time. Allows for comparison of energy performance at the facility level and helps to identify prioritization of investment for improvements.
  - Proprietary and/or vendor benchmark tools
  - ENERGY STAR Energy Performance Rating Tool

## 2. General Case Study Topics

- ✓ **Building System Integration:** Integration of complex building systems and technologies for energy efficiency improvement.
  - Submetering/smart metering
  - Building automation systems
- ✓ **Customer Education and Staff Training:** Improve staff level participation through training, and engage customer support and participation in energy efficiency initiatives and improvements.
- ✓ **Value of Commissioning and Retrocommissioning:** Ensure the design intent and operational characteristics of new or existing buildings promotes maximum energy efficiency in building system operations.
- ✓ **Operations and Maintenance Programs:** O&M's role in providing no cost/low cost measures to improve and sustain energy efficient buildings.

## 3. Sector Specific Case Study Recommendations

- ✓ **Commercial Real Estate**
  - Overcoming the landlord-tenant **split incentive** that hinders investments in energy efficiency improvement i.e. triple net lease.
- ✓ **Retail**
  - Maintaining a comfortable shopping experience without sacrificing energy efficiency; use of day lighting systems and task lighting among other strategies.
- ✓ **Grocers**
  - Using submetering to understand and improve the interaction of complex operating systems.
- ✓ **Hospitality**
  - Energy performance improvement without sacrificing guest comfort through the use of behind-the-front-desk and in-room energy management systems.
- ✓ **Cities**
  - Utilizing performance contracting to fund building energy efficiency upgrades.

## 4. Case Study Structure/Template

- 1) Title – catchy title to draw in audience

- 2) Executive Summary
  - a) Case study highlights presented at a glance
  - b) Compelling messaging to draw in audience for full read
- 3) Organization Information
  - a) Background information on organization
  - b) Industry and type of business
  - c) Number of employees
  - d) Headquarters location
- 4) Project Overview
  - a) Project team
  - b) How managed
  - c) How financed
- 5) Project Specifics
  - a) Initial benchmarking
  - b) Project goals/milestones
  - c) Barriers and enablers
  - d) Technology implementation
- 6) Project Results
  - a) Investment costs
  - b) Energy savings: electric, gas, other
    - i) Building level
    - ii) Portfolio level
  - c) Financial metrics: simple payback, ROI, IRR, NPV, other
    - i) Building level
    - ii) Portfolio level
    - iii) Relate in terms of compelling business metric
  - d) Environmental benefits
    - i) Reduction in emissions
    - ii) Corresponding number of trees planted, cars taken off the road, other
  - e) Other benefits
    - i) Non-energy benefits
    - ii) Improved productivity
    - iii) Improved safety
    - iv) Bulk purchasing opportunities
- 7) Measuring success, lessons learned and best practice “takeaways”
  - a) Benchmarking results post project
  - b) Brief summary of lessons learned
  - c) Keys to success of project
- 8) Additional Information
  - a) Contact NAPEE for more information
  - b) Additional program messaging