



LEED BD+C: Core and Shell | v3 - LEED 2009

# Demand response

EApC8 | Possible 1 point

Glossary

## Intent

To increase participation in Demand Response technologies and programs that make energy generation and distribution systems more efficient, increase grid reliability, and reduce environmental impacts and greenhouse gas (GHG) emissions.

## Requirements

Design building and equipment to participate in, or have the ability to participate in, Demand Response programs through load shedding or shifting. On-site electricity generation does not meet the intent of this credit.

Note: Only 1 point total is available for the Pilot Credit, though both Options are shown to reflect the credit as it appears in the LEED v4 Rating System.

### Case 1: Existing demand response program available

Participate in an existing Demand Response (DR) program with the following requirements:

- Have in place a system with the capability for real-time, fully-automated DR based on external initiation by a DR Program Provider.
- Enroll in a minimum 1-year DR-Participation Amount Contractual Commitment (DR-PACC) with a qualified DR program provider with the intention of multi-year renewal, for 10% or more of the estimated peak electricity demand, or a minimum of 20kW, whichever is greater.
- Develop a comprehensive plan of how the project will meet the contracted demand reduction commitment during a Demand Response event.
- Peak demand is determined from EA Credit: Optimize Energy Performance.
- Include the DR processes in the scope of work for the commissioning authority, including participation in at least one full test of the DR response plan.

### Case 2: Demand response program not yet available

Provide infrastructure to take advantage of future demand response programs or dynamic/real-time pricing programs. Project team must:

- Develop a comprehensive plan of how to shed at least 10%, or 20kW, whichever is greater, of building estimated peak electricity demand during a Demand Response event.
- Contact local utility representative to discuss interest in, and availability for, participation in future DR programs.
- Peak demand is determined from EA Credit: Optimize Energy Performance.
- Install interval recording meter with communications and ability for BAS to accept an external price or control signal, such as a data logger, external data recorder, or solid state meter, which can accept pulses.
- Include the DR processes in the scope of work for the commissioning authority, including participation in at least one full test of the DR response plan.

## Submittals

### General

[REGISTER FOR THE PILOT CREDIT](#)

- Participate in the [LEEDuser pilot credit forum](#)
- Complete the feedback survey:

[CREDITS 1-14](#)

[CREDITS 15-27](#)

[CREDITS 28-42](#)

[CREDITS 43-56](#)

[CREDITS 57-67](#)

[CREDITS 68-82](#)

[CREDITS 83-103](#)

### Credit specific

1. Demand Response – Participation Amount Contractual Commitment (DR-PACC) (Not Applicable to Option 1, Case 2)  
Submit proof of enrollment in a DR-Participation Amount Contractual Commitment, containing the physical address of the building(s), authorized agents for event notification, utility account numbers associated with each building, terms for earning revenue, terms for revenue sharing, number and duration of events, notification process, monitoring requirements, enrollment periods, minimum size, performance and consequences for non-performance, penalties and renewal options.  
The official evidence of enrollment is the document or other verification issued by the ISO, RTO,

or energy provider after the asset is successfully registered in a specific Demand Response program.

## 2. Demand Response Action Plan

Submit a comprehensive Action Plan, including:

- Potential for Demand Response Participation, such as curtailment of peak demand, and the elected Demand Response value, or schedule of values, in kW\$, to be registered with the DR provider.
- Event notification process for Demand Response events, such as a phone call, an alarm with countdown clock or a signal to a BAS console, depending on the degree of Demand Response program automation, i.e. manual, semiautomated, or automated.
- Detailed procedures and responses to execute the Demand Response program measures consistent with the Demand Response Enrollment Contract and the registered Demand Response Participation Amount, including the notification method, specific actions, the order of execution, the load monitoring process and the post event recovery process.
- Energy Management Team responsible for management of the Demand Response program, and coordination with the Demand Response Program provider, the Facilities Department, and internal Risk Management, including Demand Response event notification and response, revenue settlements, contract administration, assessments, Demand Response action fulfillment, employee awareness training, Demand Response readiness drills, and energy management reporting.
- Description of end use systems which will be impacted, such as HVAC, or lighting, on a stand-alone, or integrated basis, during participation in Demand Response events.

## 3. Demand Response Test Report

(EBOM Only)

Submit evidence of Demand Response test conducted in compliance with the DR Program Provider's test requirements to verify the building's ability to participate in a DR event. The tests can be performed by the building's facility engineer, a 3rd-party engineer, or other qualified parties, such as an energy services company (ESCO), in conformance with the Program Agreement.

## 4. Demand Response Training Program

Submit a training plan and objectives developed for those employees directly responsible for executing the Demand Response action plan that addresses key activities in implementation of the DR Action Plan, including:

- Individual assignments
- Event signals
- Communications protocols
- Recovery
- Reporting
- Clear status

For impacted employees and building occupants, provide training on possible impacts of various Demand Response events, such as shutdown of production lines, or changes in lighting or heating levels, and how to react and proceed during an event. Measures for personal safety, and proper evacuation, if needed, also should be addressed.

## 5. Demand Response Program Financial Analysis

Provide an evaluation of the financial investments required to implement and manage the Demand Response program. Where possible, calculate ROI or Payback, especially in those cases where significant infrastructure or personnel investments are made. Carefully evaluate the investments in personnel and capital equipment required. Key factors include:

- Capital Investment for new equipment or system modifications
- Changes to programming in existing BAS
- Rebates, Incentives, and Tariffs
- Projected revenues
- Energy Efficiency impacts and interactions with Demand Response.