

### Introduction

Existing demand response initiatives typically reward buildings that can shed loads or switch to stored energy during peak demand. Buildings with favorable GridOptimal ratings would immediately establish themselves as being ready and eager to participate in this kind of program.

But you don't have to wait for GridOptimal to establish your building as demand response-ready. In fact, the sooner you embrace smart grid technology, the more resilient and efficient your building will be. These technologies will both prepare you for becoming grid-interactive and save you money (and headaches) in the meantime:

Source: <https://www.buildings.com/news/industry-news/articleid/21-624/title/smart-grid-rating>

### Current Benefits

- Reduced peak demand charges from drawing on energy storage, resulting in a direct savings on your utility bills starting immediately
- Reduced energy consumption from the use of renewables, stored energy and efficient building systems
- Avoided overcharges from more accurate smart meters
- Increased resilience and avoiding the costs of power interruption during peak demand periods, storms and other common causes of outages

### Grid-interactive Technologies

- Battery storage that buildings can draw from during peak demand times, allowing the building to avoid costly demand charges
- Thermal energy storage that can supplement mechanical heating and cooling
- Smart electric vehicle charging
- Smart controls and appliances, such as grid-interactive water heaters, programmable thermostats and controls for high-thermal mass buildings
- Passive HVAC and lighting systems to lower the building's energy demand
- Renewable energy generation to constantly top up the energy storage and supplement grid electricity
- Peak load management
- Smart metering that enables buildings and the utility to communicate back and forth

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Not published yet.  
Last updated 30th September, 2018.  
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