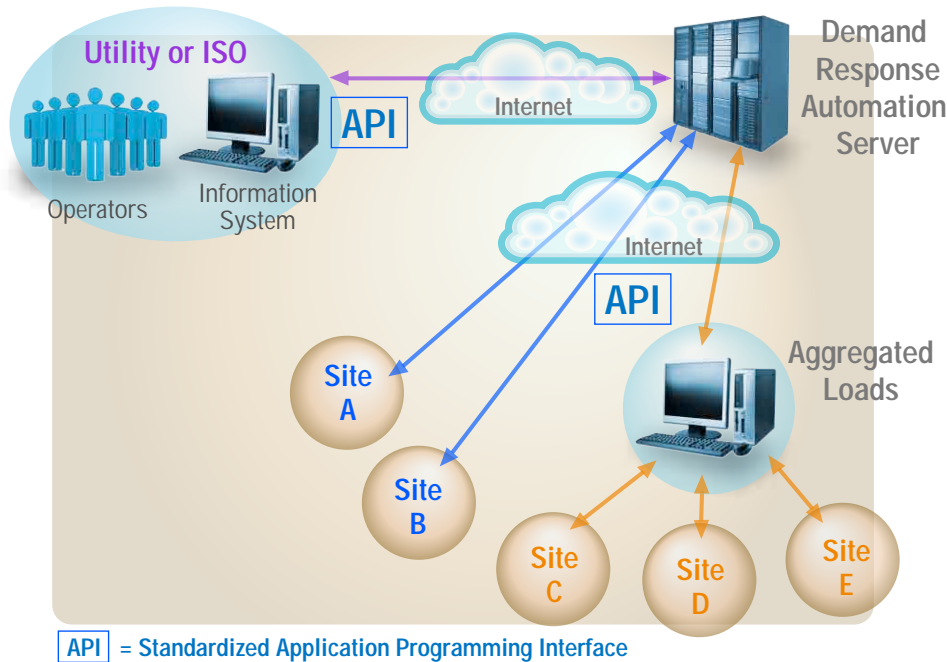


# Open Automated Demand Response Standards and Commercialization: Bringing Technology from Laboratory to Market

The Lawrence Berkeley National Laboratory's Demand Response Research Center (DRRC) worked with California and the nation to develop an open communications specification to automate demand response (DR), known as Open Automated Demand Response, or as OpenADR. OpenADR facilitates reliable and cost-effective automation of both electricity price and electric grid reliability signals for demand response.



Demand response (DR) is a set of actions taken to reduce electric loads when systems wide grid contingencies occur that threaten the supply demand balance or market conditions occur that raise electricity costs. Automating demand response allows facility managers to pre-set their response using existing control systems, providing electricity cost savings with minimal effort. The LBNL DRRC worked with California and the nation to develop an open communications specification to automate DR, known as Open Automated Demand Response, or as OpenADR. OpenADR facilitates reliable and cost-effective automation of both electricity price and system grid reliability signals for demand response (DR).

After seven years of development the OpenADR specification was published in April 2009. In May 2010 OpenADR became one of the first 16 Smart Grid Standards supported by the U.S. Department of Energy the National Institute of Standards and Technology Smart Grid Interoperability Standards effort.

**Figure 1.** Standardized OpenADR communications between electricity service providers and consumers

