





Special Issue Reprint

# **Demand-Response in Smart Buildings**

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This book represents the Special Issue of Energies, entitled "Demand-Response in Smart Buildings", that was published in the section "Energy and Buildings". This Special Issue is a collection of original scientific contributions and review papers that deal with smart buildings and communities. Demand response (DR) offers the capability to apply changes in the energy usage of consumers—from their normal consumption patterns—in response to changes in energy pricing over time. This leads to a lower energy demand during peak hours or during periods when an electricity grid's reliability is put at risk. Therefore, demand response is a reduction in demand designed to reduce peak load or avoid system emergencies. Hence, demand response can be more cost-effective than adding generation capabilities to meet the peak and/or occasional demand spikes. The underlying objective of DR is to actively engage customers in modifying their consumption in response to pricing signals. Demand response is expected to increase energy market efficiency and the security of supply, which will ultimately benefit customers by way of options for managing their electricity costs leading to reduced environmental impact.





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