

Demand response benefits every consumer and lowers the price of electricity

What is demand response?



- Consumers shifting their energy consumption from its peak hours (e.g. nighttime) to off-peak hours
- Consumption is decreased during peak-hours, and increased when there is surplus of renewable energy
- Electricity control can be fully automatic (e.g. smart thermostats) or based on customer's own control actions
- For instance, heating and cooling power, ventilation, and charging of electric vehicles can be controlled automatically, while maintaining comfortability

What are its benefits?



- Ensure the security of supply in power system
- Less production capacity needed, as its requirements are calculated by the maximum consumption
- Emissions are reduced, as the energy sources with the most emissions are taken into use only in the maximum consumption point
 - Lower electricity bills for end-user

Why is it needed?



- Balance between demand and supply in a power system must be maintained at all times
 - Low-carbon generation (solar, wind, nuclear) lacks the necessary flexibility
- To ensure the power balance, also demand side actions are needed

Joustatko? - Demand Response Game



- Making choices on energy consumption during a day
 - Balancing personal energy use
 - Having an impact (positive or negative) on the energy system

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