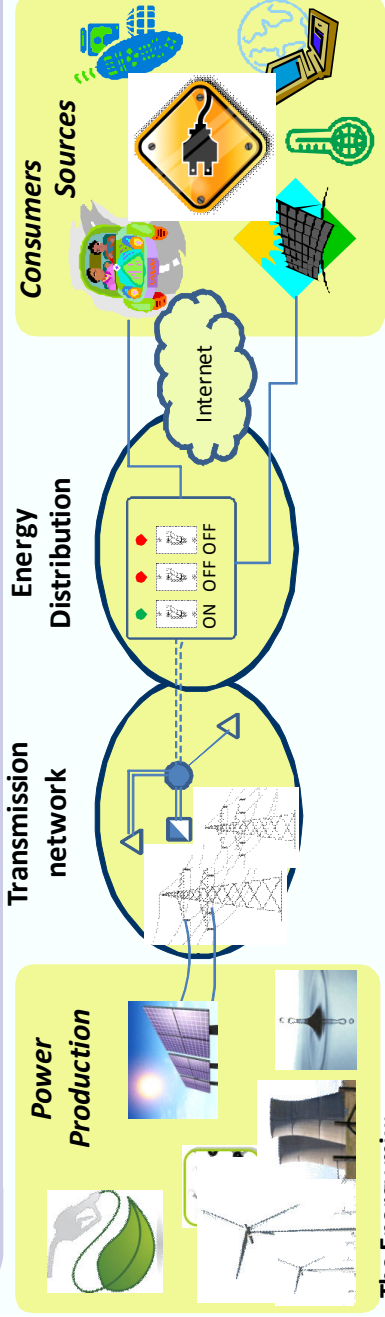


# Smart energy (grid): Application of cognitive/autonomic management technologies



**The Energy mix:**

- Renewables (solar, wind, hydro, biomass, geothermal, hydrogen)
- Nuclear
- Fossil (coal, oil, natural gas, LNG)

Vehicles, electricity, smart homes, heating, computing

## Objectives

- High demand
- Sharing and exploitation of available renewable resources

- Find minimal cost allocation of energy production resources, minimise outages
- Decrease the environmental cost of production and transferring

## Energy generation

- Renewable and legacy energy resources

## Technical Approach

### Distribution network

- From resources

### Transmission network

- To end users/ consumers

### Consumers

- Information extraction from Grid Infrastructure
- Telecommunication networks and managed functionality for transferring extracted information
- Processing computing of optimal decisions