

# Recommendations for Smart Appliances

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## Recommendations

... should provide advice for clear actions to be taken to get smart appliances alive:

- Have an addressee
- Ask for a clear action
- Can be checked and followed up
- Might be different for different regions

*Note: The recommendations outlined here are preliminary, as they are still under discussion in the project team.*

## Three categories of actions are recommended:

1. Ad hoc action  
→ For immediate implementation
2. Short-term action  
→ Realisation needs some time for preparation
3. Long-term action  
→ Realisation needs an even longer time for preparation but must be started now

# 1. Ad hoc action

## 1.1 Information of hot water use

- Use of hot water from Renewable Energies (RE) is possible in washing machines and dishwashers (already studied in the Eco-Design directive)
  - No policies so far
  - Information about possible savings should be obligatory
- Appliance manufacturers should include this information in the fiche and instruction manual
- EU commission should investigate further possibilities to include the use of hot water in the energy label

## 1.2 Promote shift of dishwasher operation into the night

- Peak demand in the evening also due to dishwasher operation
  - Reducing peak demand eases the stress on the energy system and asks for less reserve power plants being in standby
- Appliance manufacturers should include an advice in instruction manuals to promote this shifting
- Information of consumers also by energy suppliers

## 2. Short-term action

## 2.1 Off-peak period tariffs

- Off-peak energy more likely from renewable energy sources
  - Utilities should offer off-peak tariffs
  - Consumers should gain benefits for off-peak operations
- ➔ Utilities should be obliged to offer off-peak tariffs together with intelligent power meters

## 2.2 Public signal for availability of RE

- Use of RE also enhanced by individual consumer action
  - Internet based signal can show to everyone how much of RE is available
  - For optimisation: depending on location of consumers
- ➔ EU Commission should launch a project to investigate and develop such a signal

## 2.3 Rebates for smart functions in Energy Efficiency calculation

- Include use of RE in the Eco-Design directive
  - Rebate when appliance has timer function or can be connected to remote energy management system
  - Introduction is fostered by a classification change in the energy label
- EU Commission should launch a specific study regarding this issue

### 3. Long-term action

## 3.1 Cross-sector communication

- Enhance communication between sectors
  - Build up mutual understanding and co-operations
  - Find models for a fair allocation of the benefits
- ➔ EU Commission should start a pan-European scale activity programme developing a roadmap for the introduction of smart appliances into smart grids

## 3.2 Cross-sector standardisation

- Seamless communication of signals between sectors needed
- European or global standards are needed
- ➔ EU Commission should launch a study to investigate existing standards and to outline a potential common communication standard
- ➔ A mandate to develop a joint standard should be given to CEN, CENELEC and ETSI

### 3.3 Allocation of financial benefits

- Financial benefits are generated at the grid level
  - Need to be forwarded to the consumer by special tariffs or subsidies
- ➔ EU Commission and national governments should investigate models to transfer benefits from suppliers to consumers and/or launch procurement programs

## 3.4 Protect privacy of data

- A smart energy system would need information about actual consumer behaviour
  - Protection against misuse needed
- EU Commission and national governments should introduce regulations for data privacy in smart energy systems

## 3.5 Use of washer-dryers

- As washer-dryers are a combination of washing machine and automatic dryer, the energy demand for both machines can be shifted according to the availability of RE
  - When operated during the night, clean and dry textiles are available in the morning
  - Timer mode and operation without disturbing noise and vibration are necessary
- Appliance manufacturers should develop devices which can run at night
- EU Commission should rework Energy labelling directive to promote continuous operation

## 3.6 Enhance the use of hot water by appliances

- Additional options for the use of hot water from RE by domestic appliances are identified in this project (WP2)
  - Need for further research
- EU Commission should investigate these options of hot water usage in a specific study



# Thank you for your attention!

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