



Ecodesign Preparatory Study – DG Energy Lot 24
Professional washing machines, dryers and dishwashers
Task 8: Scenario, Policy, Impact and Sensitivity Analysis

Final Stakeholder Meeting on Washing machines and Dryers
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*A study being conducted for DG Energy by Öko-Institut and
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■ Task 8: Scenario, Policy, Impact and Sensitivity Analysis

8.1. Introduction

8.2. Policy and scenario analysis

Analysis of LLCC and BAT scenarios to 2025

Policy recommendations

8.3. Impact analysis

Impacts on manufacturers, consumers, society, etc.

8.4. Sensitivity analysis

Check the consistency of the results

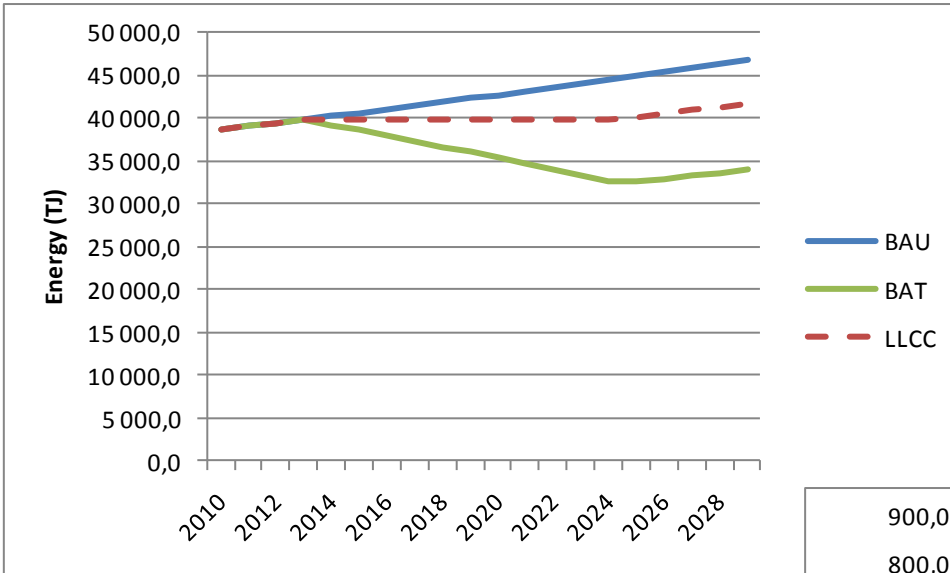
Scenarios:

Development of a tool that will be available on the website for transparency:
Stakeholders will be able to see the results of scenarios they choose

Base-Case	LLCC Improvement option	BAT Improvement option
WM 1	T 1.3 Integrated automated weighting system	T 1.5 Wash process with lower temperature
WM 2	T 1.3 Integrated automated weighting system	T 1.5 Wash process with lower temperature
WM 3	T 1.3 Integrated automated weighting system	T 1.3 Integrated automated weighting system
WM 4	T 1.3 Integrated automated weighting system	BA product
WM 5	T 1.3 Integrated automated weighting system	T 1.3 Integrated automated weighting system
WM 6	T 1.3 Integrated automated weighting system	T 1.3 Integrated automated weighting system
WM 7	T 1.12 Waste water heat recovery	T 1.11 Heat exchanger
D 1	BA product	T 2.2 Heat pump
D 2	BA product	T 2.2 Heat pump
D 3	BA product	BA product
D 4	I 2.1 Gas operated heating	I 2.1 Gas operated heating
D 5	I 2.1 Gas operated heating	I 2.1 Gas operated heating
D 6	I 2.1 Gas operated heating	I 2.1 Gas operated heating
D 7	BA product	BA product

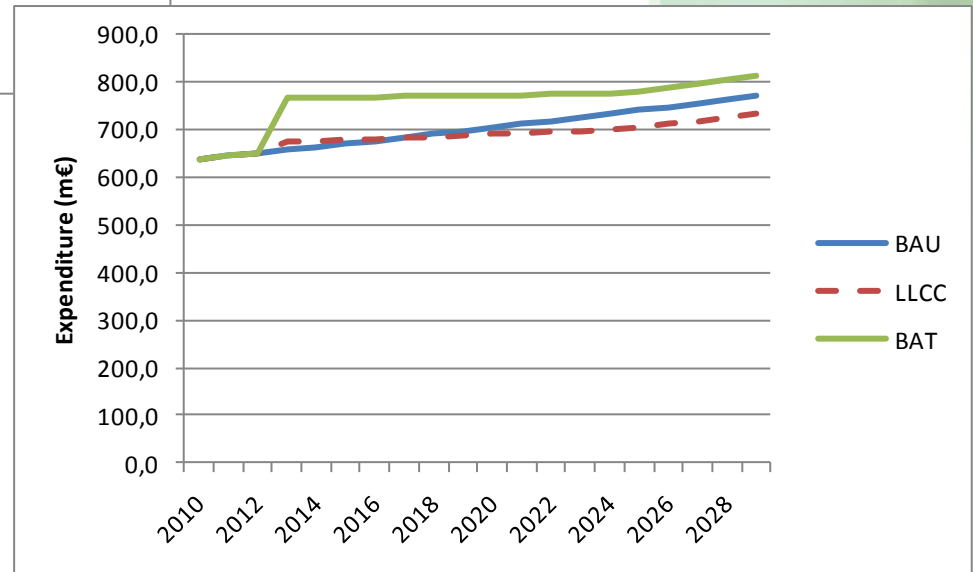
In 2013, the options described in the table become compulsory performance level requirements.

Scenarios analysis by base case

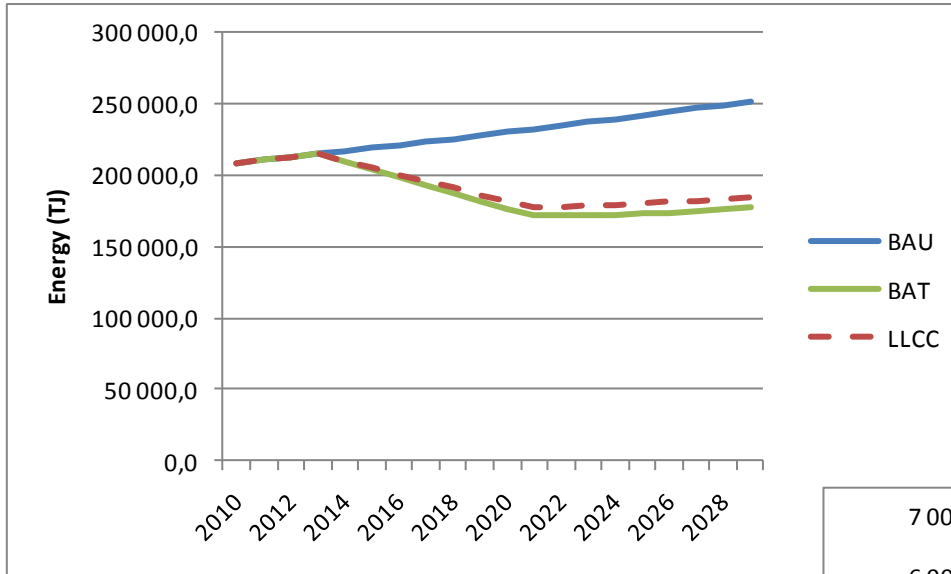


Total energy consumption
 (example chart)

Total expenditure
 (example chart)



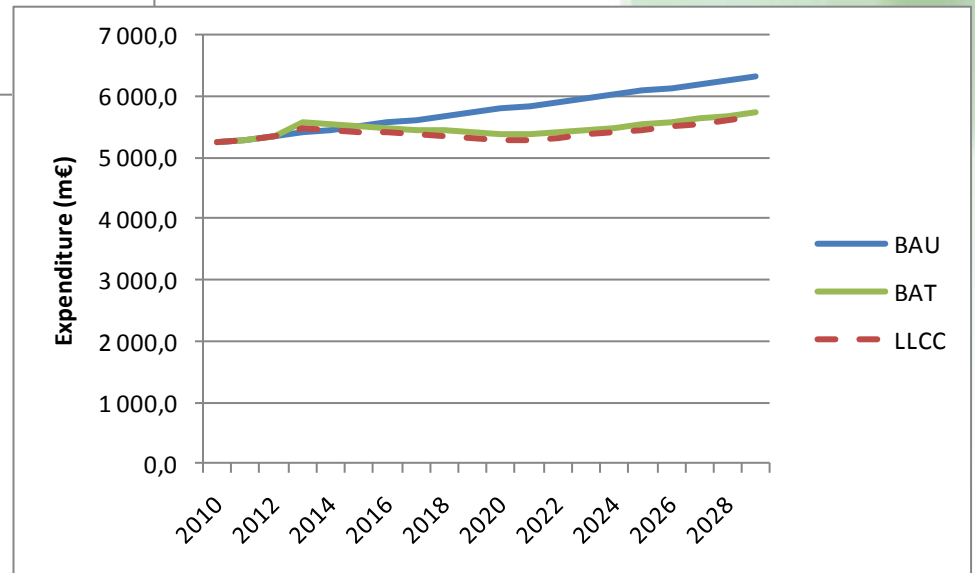
Scenarios analysis: totals



Total energy consumption
(example chart)

Estimation of annual savings in 2025 and cumulative savings over 2010-2025 for LLCC and BAT scenarios, in comparison with BAU.

Total expenditure
(example chart)



● Impact analysis

- Implementing minimum performance levels is not expected to be a major problem for EU professional laundry appliance manufacturers. The improvement options presented are already available in production lines and it is a competitive sector. However, the impact on smaller manufacturers requires further assessment.

- Investment costs should be counterbalanced by slightly higher selling prices of more efficient machines. On the other hand, economies of scale may enable manufacturers to have a larger margin and/or drop prices when selling efficient appliances.

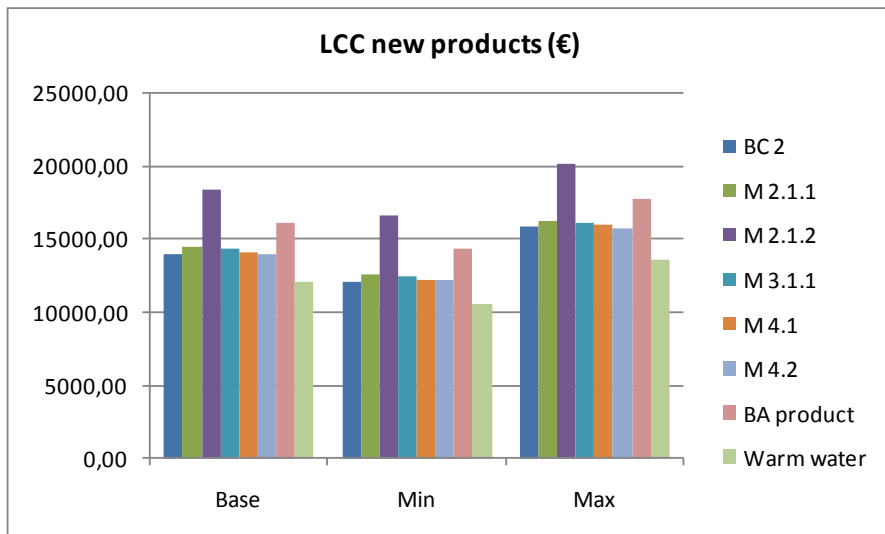
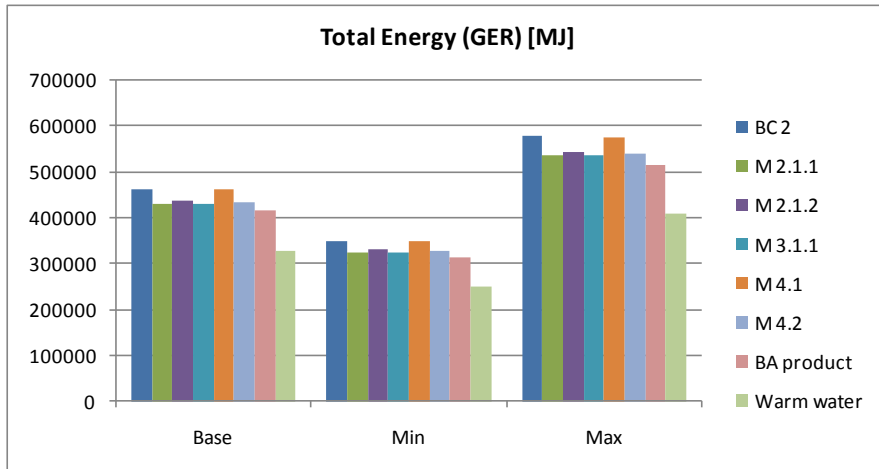
● Sensitivity

➤ Most important parameters:

- Electricity, water and detergent consumption
- User behaviour/intensity of usage
- Lifetime
- Electricity, water and detergent prices
- Product price
- Discount rate

High uncertainty on inputs: 20% error margin

Sensitivity



(example charts showing the influence of product lifetime on environmental impacts and life-cycle costs)

■ Generic Ecodesign requirements

Better labelling, easily available information (in sales brochures, internet) on:

- Standard programme(s), being the most energy and water efficient programme for normally soiled textile. If applicable to the customer, this programme could be set as the default programme.
- Power consumption of the operating modes, left-on modes, off modes, etc.
- Indicative information on the main characteristics of the different programmes available (energy and water efficiency, time, remaining moisture, etc.)

■ Specific Ecodesign requirements

It looks tricky to set minimum levels of performance for the time being:

➤ Need for standards! *What is the time planning of discussions about standards (CENELEC)?*

Relevant parameters:

- washing performance
- drying performance
- energy consumption/efficiency
- water consumption/efficiency
- time
- noise

Because of uncertainty of measurement, tolerance to be discussed.

- Problem with the current Task 7 results as inputs are too weak
- How to consider the differences between electric/gas/steam appliances in standards?

Thanks for your attention!

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