OUTLOOK ON TASKS 6 & 7

2nd Stakeholder Meeting, Ecodesign Preparatory Study for Lifts

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ISR-University of Coimbra
Waide Strategic Efficiency
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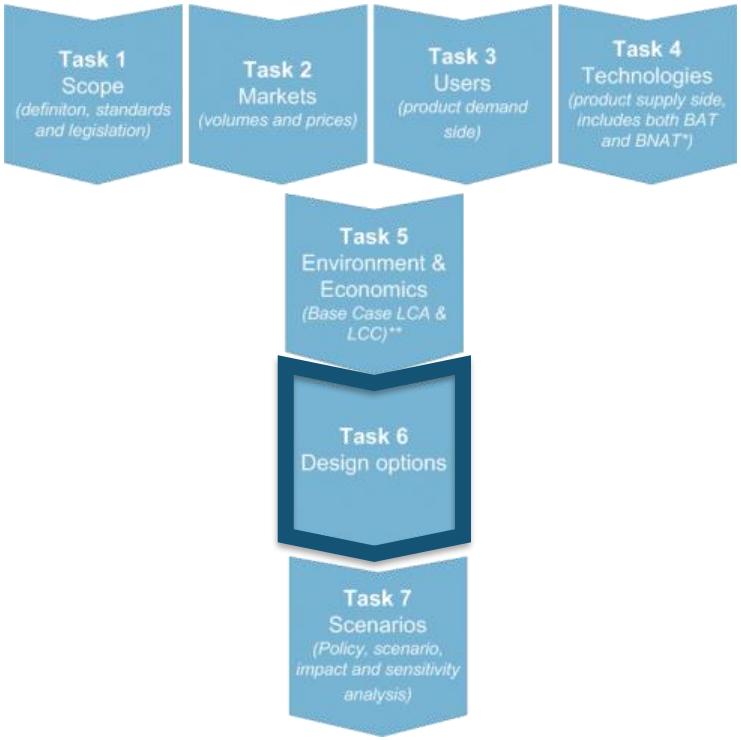
TASK 6 : OVERVIEW

Project team members involved in Task 6 preparation

- Responsibles: Fraunhofer ISI (S. Hirzel, A. Durand)
- Main contribution: ISR Coimbra (J. Fong)
- Review: P. Waide (Waide Strategic Efficiency)



Structure:

- Subtask 6.1 – Identification of design options and assessment of their impacts
- Subtask 6.2 – Costs
- Subtask 6.3 – Analysis of BAT and LLCC
- Subtask 6.4 – Long term potential (BNAT) & systems analysis

Background: Ecodesign Directive 2009 / 125 / EC

Article 15 2) c) related to "Implementing measures" mentions:

2. The criteria referred to in paragraph 1 are as follows:

(a) the product shall represent a significant volume of sales and trade, indicatively more than 200 000 units a year within the Community according to the most recently available figures;
(b) the product shall, considering the quantities placed on the market and/or put into service, have a significant environmental impact within the Community, as specified in the Community strategic priorities as set out in Decision No 1600/2002/EC; and

(c) **the product shall present significant potential for improvement in terms of its environmental impact without entailing excessive costs**, taking into account in particular:

(i) the absence of other relevant Community legislation or failure of market forces to address the issue properly; and

(ii) a wide disparity in the environmental performance of products available on the market with equivalent functionality.

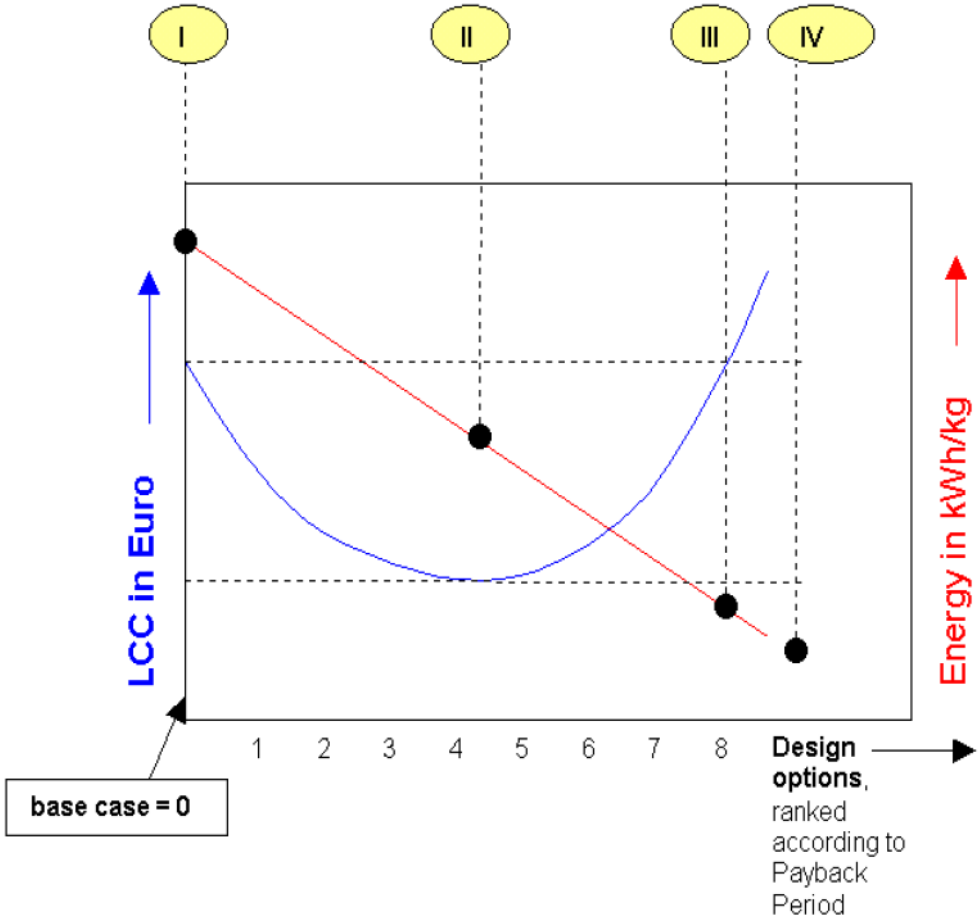
Remark: Article 15 2) c) is not referring to any single product placed on the market

Objective & Methodology

Based on the previous Tasks, especially Tasks 4 and 5:

- Identify design options
- Estimate their monetary consequences in terms of Life Cycle Cost for the user, their economic and possible social impacts,
- Define the solution with the **Least Life Cycle Costs (LLCC)** and the **Best Available Technology (BAT)**.

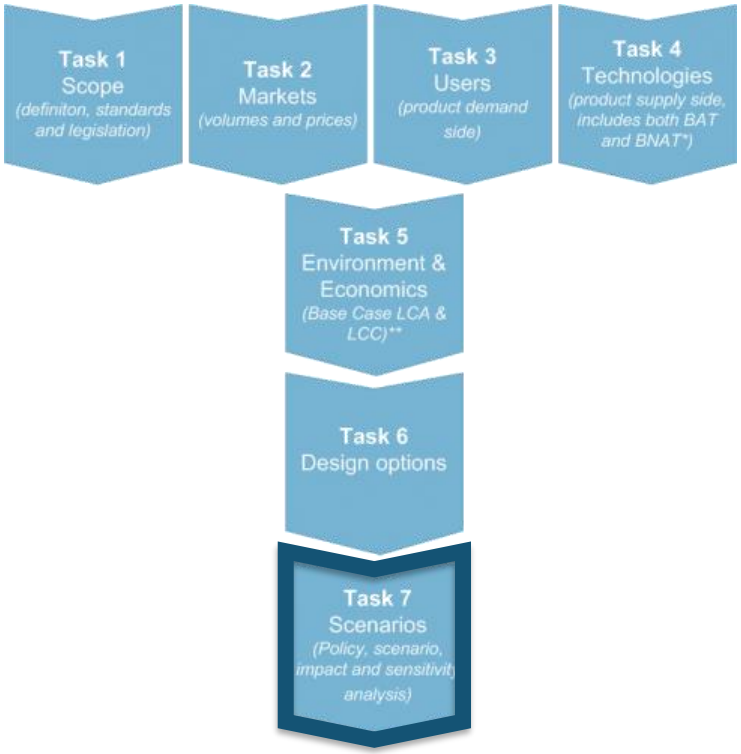
I: BaseCase | II: Least LCC | III: Break-even point | IV: BAT point



TASK 7 - OVERVIEW

Project team members involved in Task 7 preparation

- Responsibles: Fraunhofer ISI (S. Hirzel, A. Durand)
- Main contribution: VITO (P. v. Tichelen)
- Review: P. Waide (Waide Strategic Efficiency)

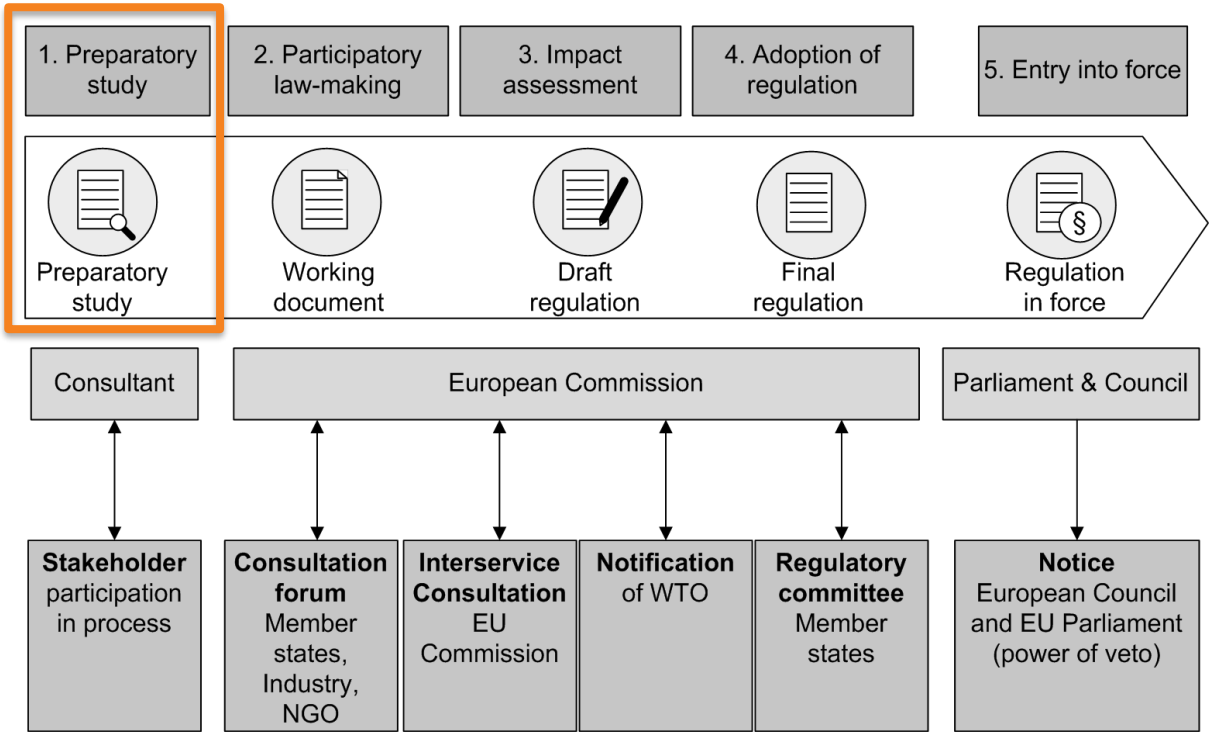


- SUBTASK 7.1 – POLICY ANALYSIS
- SUBTASK 7.2 - SCENARIO ANALYSIS (UNIT STOCK/SALE & ENVIRONMENTAL)
- SUBTASK 7.3 – SOCIO-ECONOMIC IMPACT ANALYSIS
- SUBTASK 7.4 – SENSITIVITY ANALYSIS
- SUBTASK 7.5 - SUMMARY

Objective

Task 7 is a central task in the policy design process:

- ➔ different possible policy options will be formulated, discussed and analyzed
- ➔ it has an impact on the further process: will the process stop here or continue ?



SUBTASK 7.1 – POLICY ANALYSIS

A large set of policy options can be considered in this task

- **MEPS**: Minimum Energy Performance Standards
  - based on established product standards: e.g. min requirement A Class according to ISO 25745-2:2015
  - requirements on specific aspects: e.g. requirement on stand by consumption
  - further non-energy requirements : depending on the analysis of the environmental impacts (e.g. boiler regulation incl. requirements regarding PM emissions)
- **Information requirements:** product fiche...
- **Energy Label**: but limitation due to the Energy Labelling Regulation 2017/1369/EU
- **Other EU policies:** e.g. EPBD (but lifts are not explicitly part of the recent EPBD recast 2018/844/EU)
- **Self regulation:** Voluntary Agreements (assuming the lift sector fulfills some specific requirements) are possible. See: Guidelines for self-regulation measures concluded by industry under Directive 2009/125/EC

VOLUNTARY AGREEMENTS: GUIDELINE

Guideline for self-regulation measures concluded by industry under Directive 2009/125/EC:
https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016H2125&from=EN

- **Openness of Participation**

- **Added Value** : Proposals for self-regulation measures or for revised versions of existing self-regulation measures should be accompanied by an explanatory note explaining how the proposal would meet the ecodesign objectives **more quickly or at lesser expense than mandatory requirements**, supported by evidence.

- **Representativeness:** The self-regulation measure should state the market coverage of its signatories which should be at **least 80 % of units placed on the Union market** and/or put into service of the type of products covered by the measure.

VOLUNTARY AGREEMENTS: GUIDELINE

Guideline for self-regulation measures concluded by industry under Directive 2009/125/EC:
https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016H2125&from=EN

- **Quantified and staged objectives :**
  - Justifications should be provided for any exemptions made.
  - Possibility to measure compliance using clear and reliable indicators.
  - requirements should **apply to at least 90 % of all units** (covered by the self-regulation measure) placed on the market and/or put into service by each signatory.

- **Involvement of civil society:** *Steering Committee, Website, Complaint, Access to data*

- **Monitoring and reporting :** *Independent Inspector, Compliance reporting by signatories , Compliance verification, Testing, Inspections, Reporting by the Independent Inspector*
  ➔ Non-compliance should be subject to a graduated scale of sanctions.

SUBTASK 7.1 – POLICY ANALYSIS

Methodology

The review of:

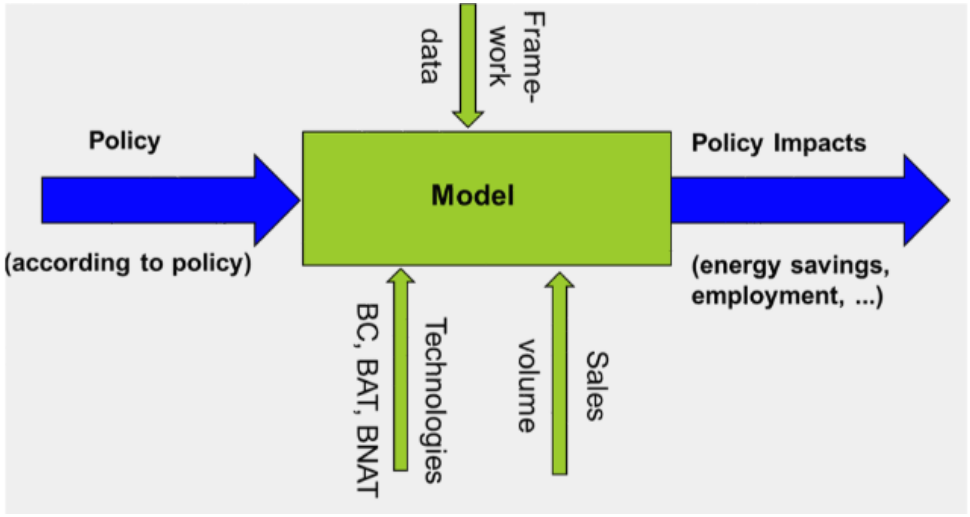
- the policies and standards which have already been implemented (Task 1)
- the position of the Commission
- the position(s) of the main stakeholders

➔ concrete suggestions from the stakeholders are welcome (as soon as possible in order to consider them in Task 7)!

SUBTASK 7.2 - SCENARIO ANALYSIS (UNIT STOCK/SALE & ENVIRONMENTAL)

Methodology

XLS based model to analysis the possible impacts of the policy options



For the policy options analysis, the following scenarios will be calculated:

- a **baseline** scenario
- scenarios reflecting **policy options** as discussed in Task 7.1.
- **BAT** scenario showing the technical potentials which can be tapped, if 100% of the market (new lifts installed) match the BAT level
- **LLCC** scenario characterized by 100% market share with LLCC technology
- **further policies or instruments**

Subtask 7.3 – Socio-economic impact analysis

Impact analysis of the policy options will focus on assessing socio-economic aspects, such as:

- running costs & consumer expenditure
- industry /wholesale/retail revenues
- jobs
- SME share in jobs and revenues.

➔ important to ensure that prospective policy options avoid negative socio-economic impacts.

Subtask 7.4 – Sensitivity analysis

Subtask 7.5 - Summary

THANK YOUR FOR YOUR ATTENTION

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ECODESIGN : INFORMATION REQUIREMENT

MANDATORY INFORMATION REQUIREMENTS ARE POSSIBLE

Ecodesign Directive 2009/125/EC: Art. 2 § 24:

'Ecodesign requirement' means any requirement in relation to a product, or the design of a product, intended to improve its environmental performance, or **any requirement for the supply of information with regard to the environmental aspects of a product**;

Example of information requirements: for solid fuels boilers: (EU) 2015/1189 (quite extensive, since many fuels were possible and emissions were also regulated)

2. **Requirements for product information**

From 1 January 2020 the following product information on solid fuel boilers shall be provided:

(a) in the instruction manuals for installers and end-users, and on the free-access websites of manufacturers, their authorised representatives and importers:

(1) the information included in Table 1, with its technical parameters measured and calculated in accordance with Annex III and showing the number of significant figures indicated in the table;

Model identifier(s)							
Stoking mode: [Manual: the boiler should be operated with a hot water storage tank of a volume of at least x (*) litre/Automatic: it is recommended that the boiler be operated with a hot water storage tank of a volume of at least x (**) litre]							
Condensing boiler: [yes/no]							
Solid fuel cogeneration boiler: [yes/no]		Combination boiler: [yes/no]					
Fuel	Preferred fuel (only one):	Other suitable fuel(s):	η_s [x%]:	Seasonal space heating emissions (****)			
				PM	OGC	CO	NO_x
				[x] mg/m³			
Log wood, moisture content ≤ 25 %	[yes/no]	[yes/no]					
Chipped wood, moisture content 15-35 %	[yes/no]	[yes/no]					
Chipped wood, moisture content > 35 %	[yes/no]	[yes/no]					
Compressed wood in the form of pellets or briquettes	[yes/no]	[yes/no]					
Sawdust, moisture content ≤ 50 %	[yes/no]	[yes/no]					
Other woody biomass	[yes/no]	[yes/no]					
Non-woody biomass	[yes/no]	[yes/no]					
Bituminous coal	[yes/no]	[yes/no]					
Brown coal (including briquettes)	[yes/no]	[yes/no]					
Coke	[yes/no]	[yes/no]					
Anthracite	[yes/no]	[yes/no]					
Blended fossil fuel briquettes	[yes/no]	[yes/no]					
Other fossil fuel	[yes/no]	[yes/no]					
Blended biomass (30-70 %)/fossil fuel briquettes	[yes/no]	[yes/no]					
Other blend of biomass and fossil fuel	[yes/no]	[yes/no]					

Characteristics when operating with the preferred fuel only:

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Useful heat output				Useful efficiency			
At rated heat output	P_n (***)	x,x	kW	At rated heat output	η_n	x,x	%
At [30 %/50 %] of rated heat output, if applicable	P_p	[x,x/N.A.]	kW	At [30 %/50 %] of rated heat output, if applicable	η_p	[x,x/N.A.]	%
For solid fuel cogeneration boilers: Electrical efficiency				**Auxiliary electricity consumption**			
				At rated heat output	el_{max}	x,xxx	kW
At rated heat output	$\eta_{el,n}$	x,x	%	At [30 %/50 %] of rated heat output, if applicable	el_{min}	[x,xxx/N.A.]	kW
				Of incorporated secondary emission abatement equipment, if applicable		[x,xxx/N.A.]	kW
				In standby mode	P_{SB}	x,xxx	kW

Contact details	Name and address of the manufacturer or its authorised representative.

(*) Tank volume = 45 × P_n × (1 − 2,7/P_n) or 300 litres, whichever is higher, with P_n indicated in kW
(**) Tank volume = 20 × P_n with P_n indicated in kW
(***) For the preferred fuel P_n equals P_n
(****) PM = particulate matter, OGC = organic gaseous compounds, CO = carbon monoxide, NO_x = nitrogen oxides

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ECODESIGN: CALCULATION OF ENERGY EFFICIENCY INDEX

The calculation of EEI is usually based on ISO/ EN standards but can include some additional correction factors (bonus / malus).

See example of ecodesign requirements for local space heaters: (EU) 2015/1188

EEI is defined as the seasonal space heating energy efficiency:

5. **Specific conditions for seasonal space heating energy efficiency**

(a) The seasonal space heating energy efficiency of all local space heaters except commercial local space heaters is defined as:

$$\eta_s = \eta_{s,on} - 10\ \% + F(1) + F(2) + F(3) - F(4) - F(5)$$

Here, the correction factor *F*(2) accounting for a positive contribution to the seasonal space heating efficiency due to adjusted contributions of controls for indoor heating comfort

Correction factor *F*(2)

If the product is equipped with (only one option may apply):	F(2)					
	for electric local space heaters					for local space heaters using gaseous or liquid fuels
	Portable	Fixed	Storage	Underfloor	Radiant	
Single stage heat output, no room temperature control	0,0 %	0,0 %	0,0 %	0,0 %	0,0 %	0,0 %
Two or more manual stages, no temperature control	1,0 %	0,0 %	0,0 %	0,0 %	2,0 %	1,0 %
With mechanic thermostat room temperature control	6,0 %	1,0 %	0,5 %	1,0 %	1,0 %	2,0 %
With electronic room temperature control	7,0 %	3,0 %	1,5 %	3,0 %	2,0 %	4,0 %
With electronic room temperature control plus day timer	8,0 %	5,0 %	2,5 %	5,0 %	3,0 %	6,0 %
With electronic room temperature control plus week timer	9,0 %	7,0 %	3,5 %	7,0 %	4,0 %	7,0 %

NON ENERGY REQUIREMENTS ARE POSSIBLE

Requirements regarding further relevant environmental impacts are possible.

Example of requirements for emissions: for solid fuels boilers: (EU) 2015/1189

2. **Specific ecodesign requirements for emissions**

(a) From 1 January 2018 emissions of nitrogen oxides (NO_x) from liquid and gaseous fuel local space heaters shall not exceed the following values:

(i) emissions of NO_x by open fronted local space heaters and closed fronted local space heaters using gaseous or liquid fuels shall not exceed 130 mg/kWh_{input} based on GCV;

(ii) emissions of NO_x by luminous local space heaters and tube local space heaters shall not exceed 200 mg/kWh_{input} based on GCV.