

Annex 6. Prioritisation of the Introduction of Ecodesign Technical Regulations in Ukraine

A6.1. Scope

The scope of products featured under the assignment is detailed in Table A6.1. The source of the scope is the "Strategy for Development of the System of Technical Regulations until 2012", published as Resolution 844 of the Cabinet of Ministers on 19 August 2015, which identified 22 Ecodesign product groups. Table 6.1 also indicates which product groups SAEE either has or intends to introduce an Energy Labelling technical regulation.

Table A6.1: Product scope and the associated regulatory intention

N ^o	Product Group	Ecodesign Implementing Measure	Intention for Energy Labelling Regulation
1	Household refrigerating appliances	(EC) No 643/2009	☑
2	Household washing machines	(EU) No 1015/2010	☑
3	Household dishwashers	(EU) No 1016/2010	☑
4	Non-directional household lamps	(EC) No 244/2009 (EC) No 859/2009 (EU) No 2015/1428	☑
5	Directional lighting: luminaires, reflector lamps and LEDs	(EC) No 1194/2012 (EU) No 2015/1428	☑
6	Tertiary lighting	(EC) No 245/2009 (EU) No 347/2010 (EU) No 2015/1428	☑
7	Standby and network standby	(EC) No 1275/2008 (EU) No 801/2013	N/A
8	Simple set-top boxes	(EC) No 107/2009	N/A
9	External power supplies	(EC) No 278/2009	N/A
10	Electric motors	(EC) No 640/2009 (EU) No 4/2014	N/A
11	Televisions	(EC) No 642/2009	<i>Draft</i>
12	Industrial Fans (125W-500kW)	(EU) No 327/2011	N/A
13	Air conditioners and comfort fans	(EU) No 206/2012	<i>Draft</i>
14	Water pumps	(EU) No 547/2012	N/A
15	Glandless standalone circulators and glandless circulators	(EC) No 641/2009 (EU) No 622/2012	N/A
16	Household tumble driers	(EU) No 932/2012	<i>Draft</i>
17	Computers and computer servers	(EU) No 617/2013	N/A
18	Vacuum cleaners	(EU) No 666/2013	<i>Draft</i>

19	Space and combination heaters	(EU) No 813/2013	<i>Draft</i>
20	Water heaters and hot water storage tanks	(EU) No 814/2013	<i>Draft</i>
21	Domestic ovens, hobs and range hoods	(EU) No 66/2014	<i>Draft</i>
22	Small, medium and large power transformers	(EU) No 548/2014	N/A

SAEE is seeking a prioritised order in which to transpose and adopt the 22 Ecodesign TRs in Table 6.1. This section presents the criteria used to assess the product groups, and the resulting recommended prioritised order for the transposition and adoption of the Ecodesign TRs.

A6.2. Methodology

In discussion and agreement with SAEE, four criteria have been proposed and selected in which to assess and prioritise the 22 Ecodesign product groups featured in Table 6.1. The criteria are presented below in priority order:

1. The Ecodesign product group commitments made within the Action Plan for the Implementation of the Association Agreement¹ in 2014;
2. The complementarity of introducing an Ecodesign TR for a product group that in Ukraine already has an existing Energy Labelling TR;
3. The anticipated level of technical complexity and contentiousness involved within the process to develop, consult, adopt and implement the product specific TRs;
4. The expected energy savings as a result of the implementation of the individual product specific TRs.

The first criterion reflects the Ecodesign product groups specifically identified within the Action Plan for the Implementation of the Association Agreement.

The second criterion reflects the desire from SAEE to complement the product groups in Ukraine which already have an existing Energy Labelling TR with the associated Ecodesign TR.

The third criterion is a more subjective assessment of the Ecodesign product groups based upon the level of *technical complexity* and *contentiousness* involved in introducing the proposed Ecodesign TRs. The concept of utilising parameters such as technical complexity and contentiousness in the context of preparing and adopting Ecodesign product regulations was proposed by Hans-Paul Siderius a respected Standards and Labels International expert, based at the Netherlands Enterprise Agency². *Technical complexity* is defined as a product with a large variation of product types, user options, operating modes, features, interdependent subsystems, for which it is complicated to set an efficiency metric or for which it is not easy to measure performance. *Contentiousness* refers to the political sensitivity of addressing the efficiency of the product, including the likelihood of industry, consumer and social objections to banning certain product variants, or the measure having a significant effect on certain performance parameters or influence on energy infrastructure. The

¹ Approved by Resolution of the Cabinet of Ministers of Ukraine #847, 17 September 2014

² *Speeding up adoption of Ecodesign and Energy Label Measures*, ECEEE 2013 (Hans-Paul Siderius)

resulting assessment is based upon ICF International's first-hand experience of witnessing the progress over the last 10 years of the EU Ecodesign preparatory and adoption process from delivering Ecodesign technical support services to the UK Government's Energy using Products Programme. This has for example included considerable difficulty and delay (primarily because of technical complexity) related to the development of the space and combination heaters regulation, along with legal challenge from industry, and considerable adverse media coverage related to the vacuum cleaners regulation.

The fourth criterion considers the amount of energy projected to be saved as a result of introducing the regulatory measure. The figures are sourced directly from the EC's Impact Assessments, which are conducted as part of the regulatory adoption process. The outputs are therefore based on potential energy savings in the EU-28. However this method could be used as a proxy indicator of the relative contribution that each product specific TR could make to energy savings in Ukraine. This method provides some guidance in the absence of a detailed national picture of the stock of ErPs in residential and non-residential buildings, of the ownership rates, the annual sales figures, the product lifetime, their energy consumption and how the products are used in real-world settings (i.e. user behaviour). Clearly there exists a risk in taking the projected energy savings for the EU-28 and utilising them within a discussion on how much energy could be saved in Ukraine, because the context (especially on energy and product pricing) and available technologies are different. This risk should be remembered when considering the projected energy savings as a proxy indicator for Ukraine.

A6.3. Results

A6.3.1 Criterion 1 – Prioritisation by Commitments within the Action Plan for the Implementation of the Association Agreement

The Association Agreement between Ukraine and the EU was ratified by the Parliament of Ukraine in September 2014, which includes the creation of a DCFTA³. As part of the Association Agreement, a number of commitments were made with respect to the Ecodesign Framework Directive and its Implementing Measures for transposing into Ukrainian law. These commitments were detailed within the proceeding Action Plan on the Implementation of the Association Agreement which specified that the Framework Directive (2009/125/EC) and the following implementing measures be adopted into Ukrainian Law by August 2017:

- Standby/off-mode horizontal measure, EC Regulation N° 1275/2008;
- Simple set top boxes, EC Regulation N° 107/2009;
- Non-directional household lamps, EC Regulation N° 244/2009;
- Tertiary lighting, EC Regulation N° 245/2009; and
- External power supplies, EC Regulation N° 278/2009.

Therefore, in order for SAEE to fulfil and comply with the Resolution of the Cabinet of Ministers, these five product groups will each carry the number 1 priority for introducing the corresponding

³ <http://ec.europa.eu/trade/policy/countries-and-regions/countries/ukraine/>

Ecodesign TR in Ukraine.

A6.3.2 Criterion 2 – Prioritisation by Complementing product groups in Ukraine which already have an existing Energy Labelling Technical Regulation with an Ecodesign Technical Regulation

Table A6.1 listed the six product groups which already have a corresponding Energy Labelling TR adopted in Ukraine. These are:

- Household refrigerating appliances
- Household washing machines
- Household dishwashers
- Non-directional household lamps
- Directional lighting: luminaires, reflector lamps and LEDs
- Tertiary lighting

In addition, there are a further seven product groups which have a draft Energy Labelling TR either in development or going through the inter-ministerial approval process for TRs – these are listed below:

- Televisions
- Air conditioners and comfort fans
- Household tumble driers
- Vacuum cleaners
- Space and combination heaters
- Water heaters and hot water storage tanks
- Domestic ovens and range hoods

The six product groups with an existing adopted Energy Labelling TR will be attributed a value of 1 in the proceeding prioritisation assessment. The further seven product groups which are currently going through the process of preparing and adopting an Energy Labelling TR will be attributed a value of 0.5. The remaining product groups will be attributed a value of 0.

A6.3.3 Criterion 3 – Prioritisation by Level of Technical Complexity and Contentiousness

Table 6.2 presents the outputs of the exercise to assess each of the 22 Ecodesign product groups against the parameters of technical complexity and contentiousness, based upon experience of involvement in the EU Ecodesign regulatory process. A scale of 1-5 is used for assessing against each parameter, with 1 being the lowest and 5 being the highest. The two values are then added together creating one total score for each product group.

Table A6.2: Ecodesign Product group assessment according to the technical complexity and contentiousness scale

Measure	Technical Complexity	Contentiousness	Total
Space and combination heaters	5	5	10
Vacuum cleaners	4	5	9
Non-directional household lamps	3	5	8
Computers and computer servers	4	4	8
Standby and network standby	5	3	8
Tertiary lighting	3	4	7
Electric motors	3	3	6
Directional lighting	3	3	6
Air conditioners and comfort fans	4	2	6
Water heaters and hot water storage tanks	3	3	6
Domestic ovens, hobs and range hoods	3	3	6
Televisions	3	2	5
Household refrigerating appliances	3	2	5
Household washing machines	3	2	5
Industrial Fans (125W-500kW)	3	2	5
Household dishwashers	2	2	4
Water pumps	2	1	3
Circulators	2	1	3
Small, medium and large power transformers	2	1	3
Simple set-top boxes	1	1	2
External power supplies	1	1	2
Household tumble driers	1	1	2

A6.3.4 Criterion 4 – Prioritisation by Projected EU Energy Savings by 2020

Table A6.3 presents the outputs from the EC’s projections from the amount of energy saved from the introduction of Ecodesign and Energy Labelling TRs for each of the 22 product groups. The Ukrainian regulatory intention for each product group (i.e. whether or not to introduce both Ecodesign and Energy Labelling TRs) is directly linked to the regulations in existence within the EU. No data were available to the authors on the relative penetration and energy performance of the listed product groups in Ukraine. In the absence (at time of writing) of such data, the value of the energy savings listed in the Commission’s Impact Assessments was chosen as a proxy for the situation in Ukraine. It is likely that there are differences in penetration levels (e.g. for dishwashers and tumble driers), pricing and usage of some product groups in Ukrainian conditions, and so the proposed ranking should be re-considered when suitable Ukrainian data become available to allow local impact assessment. The 22 product groups are ranked in Table 6.3 according to the projected energy savings with the product group delivering the most energy savings ranked first.

Table A6.3: Ranked energy savings in TWh for the 22 Ecodesign product groups

Measure	Reduction in Annual EU Electricity Consumption by 2020 ⁴	Ukrainian Regulatory Intention	Comment on EU Impact Assessment	Rank ⁵
Space and combination heaters	523.35 TWh 45 Mtoe	Ecodesign and Energy Labelling	The Impact Assessment did not separate out Ecodesign but SAEE plans to implement both measures in the long term. The savings were not expressed by the EC in TWh but using an online conversion ⁶ , a figure for converting Million tonnes of oil equivalent into TWh is presented.	1
Electric motors	139 TWh	Ecodesign	The Impact Assessment focused on Ecodesign, which is in line with the plans from SAEE.	2
Industrial Fans (125W-500kW)	54 TWh	Ecodesign	The Impact Assessment focused on Ecodesign, which is in line with the plans from SAEE. This regulation is currently under review in the EU.	3
Simple set-top boxes	47 TWh	Ecodesign	The Impact Assessment focused on Ecodesign, which is in line with the plans from SAEE.	4
Televisions	43 TWh	Ecodesign and Energy	The Impact Assessment focused on Ecodesign and Energy Labelling, which is	5

⁴ As taken from the product specific Impact Assessments http://ec.europa.eu/smart-regulation/impact/index_en.htm

⁵ 10 = highest; 1 = lowest

⁶ <http://www.conversion-website.com/energy/ton-of-oil-equivalent-to-terawatt-hour.html>

		Labelling	in line with the plans from SAEE. This regulation is currently under review in the EU.	
Non-directional household lamps	39 TWh	Ecodesign and Energy Labelling	Note that the implementation of stage 6 of EC Regulation N° 244/2009 has been delayed by 2 years to 2018, thus ensuring these savings are not fully realised by 2020 as originally intended. The Impact Assessment did not separate out Ecodesign from labelling. SAEE also plans to introduce the Ecodesign TR alongside the existing Energy Labelling TR. This regulation is currently under review in the EU. A more comprehensive 'light sources' regulation is anticipated in late 2016.	6
Tertiary lighting	38 TWh	Ecodesign and Energy Labelling	The Impact Assessment did not separate out Ecodesign from labelling. SAEE also plans to introduce the Ecodesign TR alongside the existing Energy Labelling TR. This regulation is currently under review in the EU. A more comprehensive 'light sources' regulation is anticipated in late 2016.	7
Standby and network standby	35 TWh	Ecodesign	The Impact Assessment focused on Ecodesign, which is in line with the plans from SAEE. This regulation is currently under review in the EU.	8
Glandless standalone circulators and glandless circulators	26.6 TWh	Ecodesign	The Impact Assessment focused on Ecodesign, which is in line with the plans from SAEE.	9
Directional Lamps, LED Lamps and related equipment	24.7 TWh	Ecodesign and Energy Labelling	The Impact Assessment did not separate out Ecodesign from labelling. SAEE also plans to implement the Ecodesign measure alongside the existing Energy Labelling TR. This regulation is currently under review in the EU. A more comprehensive 'light sources' regulation is anticipated in late 2016.	10
Water heaters and hot water storage tanks	19 TWh	Ecodesign and Energy Labelling	The Impact Assessment did not separate out Ecodesign from labelling, but SAEE plans to implement both measures.	11
Vacuum cleaners	18.8 TWh	Ecodesign and Energy Labelling	The Impact Assessment did not separate out Ecodesign from labelling, but SAEE plans to implement both measures.	12
Computers and computer servers	16.3 TWh	Ecodesign	The Impact Assessment focused on Ecodesign as there is no corresponding Energy Labelling regulation, which is in	13

			line with the plans from SAEE.	
Small, medium and large power transformers	16.2 TWh*	Ecodesign	*Note that this saving is calculated to 2025 given tier II requirements only enter into force in 2021 (to allow time for development of amorphous core technology). The Impact Assessment focused on Ecodesign as there is no corresponding Energy Labelling regulation, which is in line with the plans from SAEE.	14
Household Tumble Dryers	12.9 TWh	Ecodesign and Energy Labelling	The Impact Assessment did not separate out Ecodesign from labelling, but SAEE plans to implement both measures.	15
Air conditioners and Comfort Fans	11 TWh	Ecodesign and Energy Labelling	The Impact Assessment did not separate out Ecodesign from labelling, but SAEE plans to implement both measures.	16
External power supplies	9 TWh	Ecodesign	The Impact Assessment focused on Ecodesign, which is in line with the plans from SAEE. Note this regulation is currently being reviewed in the EU to consider alignment with US regulations.	17
Domestic ovens, hobs and range hoods	7.5 TWh	Ecodesign and Energy Labelling	The Impact Assessment did not separate out Ecodesign from labelling, but SAEE plans to implement both measures. The savings were not expressed by the EC in TWh but using an online conversion ⁷ , a figure for converting PJ into TWh is presented.	18
	27 PJ			
Water Pumps	4.6 TWh	Ecodesign	The Impact Assessment focused on Ecodesign, which is in line with the plans from SAEE.	19
Household refrigerating appliances	4 TWh	Ecodesign and Energy Labelling	The Impact Assessment did not separate out Ecodesign from labelling. SAEE also plans to introduce the Ecodesign TR alongside the existing Energy Labelling TR. Note that because of the long lifetime of refrigerating appliances, there is an inertia in the realisation of the savings. The savings increase to 12 TWh by 2025. This regulation is currently under review in the EU.	20
Household dishwashers	1.7 to 2 TWh	Ecodesign and Energy Labelling	The Impact Assessment did not separate out Ecodesign from labelling. SAEE also plans to introduce the Ecodesign TR	21

⁷ <http://www.conversion-website.com/energy/gigajoule-to-terawatt-hour.html>

			alongside the existing Energy Labelling TR. This regulation is currently under review in the EU.	
Household washing machines	1.2 to 1.5 TWh	Ecodesign and Energy Labelling	The Impact Assessment did not separate out Ecodesign from labelling, SAEF also plans to introduce the Ecodesign TR alongside the existing Energy Labelling TR. This regulation is currently under review in the EU.	22

A6.3.5 Prioritisation

Calculation Method

The method for combining the individual criteria is summarised in Figure 6.1 below:

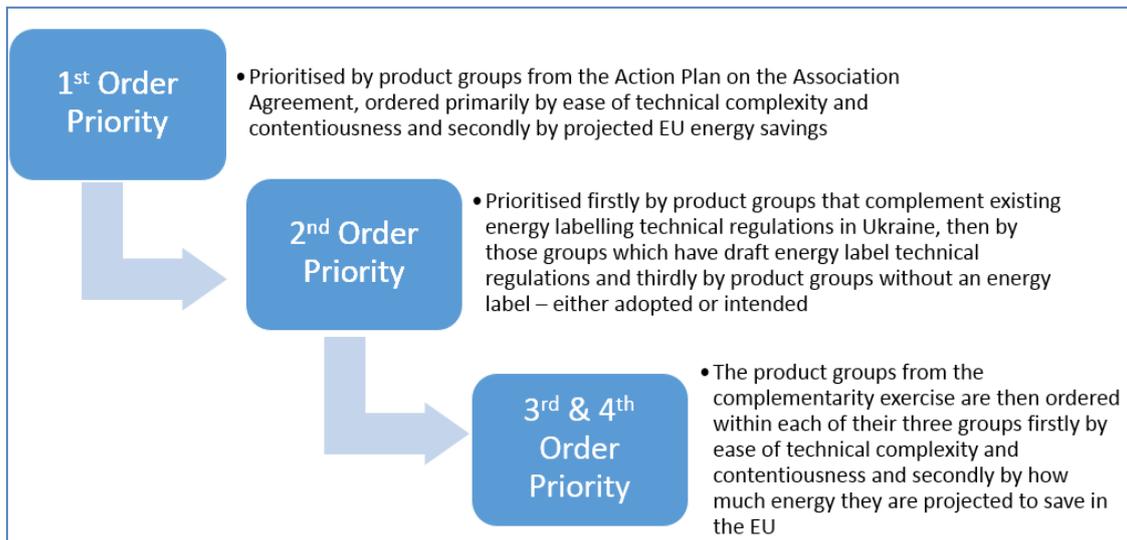


Figure 6.1: Method for integrating the 4 criteria to produce the prioritised list

Prioritised Order

The summation of the outputs from the four criteria and the resulting prioritised order are presented in Table A6.4 below.

Table A6.4: Prioritisation order for the preparation and adoption of the 22 Ecodesign technical regulations in Ukraine

	Criterion 1 Action Plan on Association Agreement Resolution 847	Criterion 2 Complementarity with Existing ELs in Ukraine	Criterion 3 Technical Complexity & Contentiousness	Criterion 4 EU Energy Saving Projections
Criterion & Scoring				
Prioritised Order of Ecodesign Product Groups 1 = Highest Priority / 22 = Lowest Priority	1 = in the Action Plan 0 = not in the Action Plan	1 = EL Reg Adopted 0.5 = EL Reg in-progress 0 = no EL Reg adopted or intended	Score out of 10 2 = least complex / contentious 10 = most complex and contentious	Ranking of 1-22 1 = most energy saved 22 = least energy saved
1 Simple Set Top Boxes	1	N/A	2	4
2 External Power Supplies	1	N/A	2	17
3 Tertiary Lighting	1	N/A	7	7
4 Non-directional Household Lamps	1	N/A	8	6
5 Standby/Off-mode	1	N/A	8	8
6 Household dishwashers	0	1	4	21
7 Household refrigerating appliances	0	1	5	20
8 Household washing machines	0	1	5	22
9 Directional lighting: luminaires, reflector lamps and LEDs	0	1	6	10
10 Household tumble driers	0	0.5	2	15
11 Televisions	0	0.5	5	5
12 Water heaters and hot water storage tanks	0	0.5	6	11
13 Air conditioners and comfort fans	0	0.5	6	16
14 Domestic ovens, hobs and range hoods	0	0.5	6	18
15 Vacuum cleaners	0	0.5	9	12
16 Space and combination heaters	0	0.5	10	1
Circulators	0	0	3	9
Small, medium and large power transformers	0	0	3	14
Water pumps	0	0	3	19
Industrial Fans (125W-500kW)	0	0	5	3
Electric motors	0	0	6	2
Computers and computer servers	0	0	8	13