

EVALUATION ROADMAP			
TITLE OF THE EVALUATION/FC	Evaluation of effectiveness of the EU Energy Star programme		
LEAD DG RESPONSIBLE UNIT	ENER.C.3	DATE OF THIS ROADMAP	April 2016
TYPE OF EVALUATION	Interim Evaluation	PLANNED START DATE	May 2016
		PLANNED COMPLETION DATE	October 2016
		PLANNING CALENDAR	http://ec.europa.eu/smart-regulation/evaluation/index_en.htm
<i>This indicative roadmap is provided for information purposes only and is subject to change.</i>			

A. Purpose
(A.1) Purpose
<p>Purpose of this evaluation is to provide informed support in light of a possible renewal of the Energy Star Agreement between the EU and the US, expiring in 2018. The Agreement, initially signed in year 2000, has been implemented in 2003 and was renewed twice (in 2008 and in 2013), "to maximise energy savings and environmental benefits by stimulating the supply of and demand for energy-efficient products"¹.</p> <p>According to the Commission's Better Regulation Guidelines of 19 May 2015, effectiveness, efficiency, relevance, coherence and EU added value of the programme, including also quantification of cost and cost/benefit, simplification potential and SME aspects, will be addressed, among others, in respect to the objectives as outlined in art. 13 of Regulation (EU) No 174/2013 (see next point).</p> <p>This evaluation will strictly cover the EU Energy Star programme.</p>
(A.2) Justification
<p>The US-EPA Energy Star Agreement will end on 20 February 2018. Before the end of it, Article 13 "Review and revision" of Regulation (EU) No 174/2013, requires the Commission to "evaluate the effectiveness of the Energy Star programme in improving the energy efficiency of office equipment, in creating new jobs and in providing market opportunities for manufacturers, and assess alternative policy options such as those provided by Union legislation, in particular the Ecodesign Directive 2009/125/EC and the Energy Labelling Directive 2010/30/EU. The results of such an evaluation and assessment shall be reported to the European Parliament and to the Council at least two years before the expiry of the Agreement."</p> <p>The "assessment of alternative policy options" is outside the scope of this evaluation and will be part of a future exercise in the form of an IA. The results of the evaluation will be included in a report to the European Parliament and to the Council.</p>

¹ Agreement available from [http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:22001A0626\(01\)](http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:22001A0626(01)) and from <http://www.state.gov/documents/organization/108846.pdf>

B. Content and subject of the evaluation

(B.1) Subject area

The US Energy Star programme is a voluntary labelling scheme for a number of different energy-related products (from lighting and white goods to buildings) placed on the US market².

The Energy Star EU-US Agreement provides the basis for collaboration between the US-Environmental Protection Agency (US-EPA) and the European Commission on setting common energy efficiency requirements on energy-related products. Although the US-EPA programme covers a number of products, the EU-US agreement has been limited to certain office equipment namely computers, servers, displays, imaging equipment and uninterruptible power supplies (UPS).

The evaluation should verify if the Agreement, over 15 years later, is still fit-for-purpose and relevant in the context of other voluntary and mandatory EU measures implemented or available to improve the energy and resource use efficiency of electronic and ICT equipment. The evaluation will assess, in addition to the criteria spelled out above in (A.1), whether the experience of using a label of one of our trading partners was cost-effective and resulted in "maximising energy savings and environmental benefits by stimulating the supply of and demand for energy-efficient products" and "in creating new jobs and in providing market opportunities for manufacturers".

(B.2) Original objectives of the intervention

The EU-US Energy Star Agreement was signed in the context of actions to mitigate the climate change and improve energy efficiency. [Regulation \(EC\) No 2422/2001](#)³ on a Community energy efficiency labelling programme for office equipment, referred to the [UNFCCC Protocol agreed in Kyoto](#) on 10 December 1997 with the commitments to ensure for the Community 8 % GHG reduction during the period 2008 to 2012. The regulation refers to [Decision No 2179/98/EC](#) of 24 September 1998, indicating the labelling of appliances as a key priority, and to the [Council Resolution of 7 December 1998 on energy efficiency](#), calling as well for the increased use of labelling of appliances and equipment.

Office automation and penetration rate of office equipment has been increasingly relevant within the EU in terms of energy demand during the 90ies and the first decade of 2000, both in the tertiary and in the residential sectors. Although energy efficiency has been steadily improving in new products placed on the market in previous years, new features have been added and new use-opportunities have been implemented and increasing the overall energy use of these products. Consequently, the share of energy use of office equipment in the EU's total energy use is expected to increase in the next years⁴.

In December 2000, due to the lack of measures or programmes at European level tackling the labelling of energy efficiency of office equipment and considering that such equipment was traded world-wide, an Agreement⁵ was concluded with the aim of adopting the US-EPA Energy Star voluntary labelling specifications for office equipment, including coordination on the updating of requirements with the legislation at EU level⁶. The ultimate goal was "to encourage and support procurers and consumers to purchase energy efficient devices and to use the equipment efficiently"⁷.

² <http://www.energystar.gov/>

³ OJ L 332 , 15/12/2001 P. 0001 - 0006

⁴ 8% of total energy use in the EU-25 in 2005, projected to be 10.5% by 2020 ([Bio study for DG INFSO, Tender CPP 16A-2007/S68-082361](#))

⁵ [OJ L 172, 26.06.2001](#), p. 3

⁶ [/* COM/2006/0140 final */](#).

⁷ Ibid.

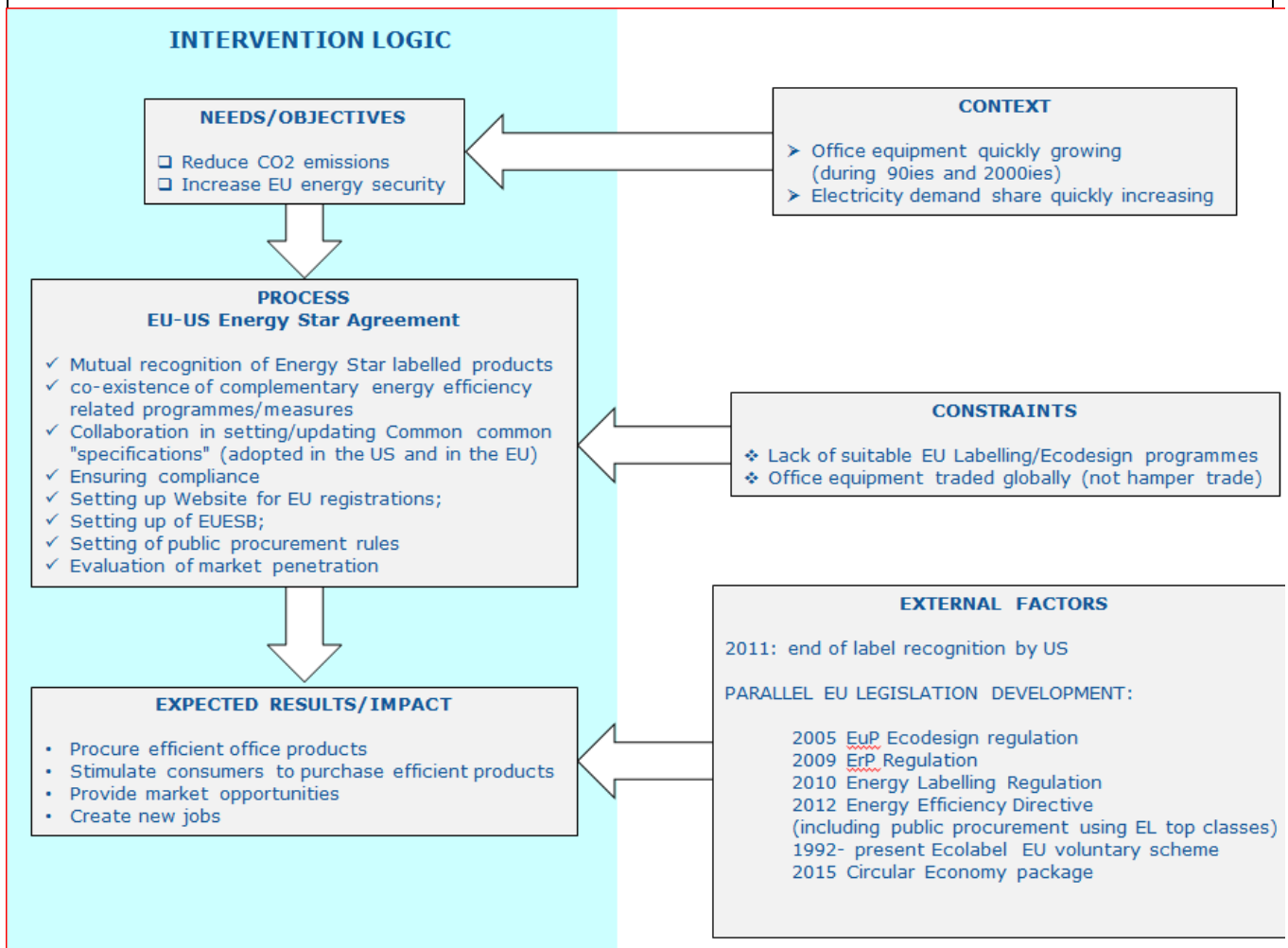
The Agreement was expected also to stimulate international trade of office equipment by facilitating the procedures the office equipment market actors to participate in the Energy Star programme.

The US-EPA has maintained the leading role, with the EU taking part in the definition of product requirements for office equipment⁸ to facilitate coherence with requirements set in the EU legislation on the same products.

Today, however, "office equipment" has probably a less dominant role in the total share of energy use, compared to a number of other consumer electronics, ICT products and telecommunications with "big data" infrastructure (i.e. "the cloud"). Additionally, in the meantime, production of electronic and office automation products have moved almost completely to Asia, whilst remanufacturing, repair and recycling are creating alternative job opportunities and reduce imports of precious or rare materials. Resource efficiency and durability, consequently (not tackled in the Energy Star programme) have gained far more relevance, particularly in some product groups.

(B.3) How the objectives were to be achieved

Energy Star labelling has been used for office/home office products since the implementation of the agreement in 2003, in the absence, at that time, of specific measures under the [Energy Labelling Directive](#)⁹ or the [Ecodesign Directive](#)¹⁰.



⁸ The US-EPA programme has a wider scope, including several of the consumer products covered, in the EU, by ecodesign and/or labelling mandatory measures. Product requirements are "product specifications" in Energy Star jargon.

⁹ Directive 2010/30/EU

¹⁰ Directive 2009/125/EC

Coexistence with other labelling or quality certification arrangements programs at EU level, implemented in the meantime, was considered possible, however Article IX of the Agreement hinders the EU from adopting labelling measures on the same products: "Without prejudice to any other provisions of this Agreement, either Management Entity may run labelling programs with respect to product types not included in Annex C." As a consequence, in case products under EnergyStar would become subject to mandatory EU energy labelling, these products will be removed from the EnergyStar Agreement.

Good coordination was established for the setting of coherent requirements across different schemes, such as those under, [Directive 2009/125/EC](#) (Ecodesign), [Directive 2010/30/EU](#) (Energy Labelling) or [Regulation \(EC\) No 66/2010](#) (EU Ecolabel), however common "levels" of specifications were not possible, because of the different mechanisms put in place¹¹. Coexistence with voluntary energy-efficiency labelling schemes for office equipment products in the Member States was also considered possible¹².

An EU database has been created¹³ where, provided the programme requirements are met, producers and importers can request the qualification of their entitled products and obtain permission to apply the Energy Star label for products placed in the EU market. This database is merged, with a copy from the US-EPA database for products that are also placed on the EU market. Since the US-EPA started requiring third-party testing and certification, EU registered products to be placed on the US market with the Energy Star label must still undergo the full US registration process, including partnership agreements and testing by an entity agreed by US-EPA. For EU registrations, the responsibility of compliance control is on the Commission (as management entity).

The EU database was the main tool put in place to implement the programme at EU level. Citizens, the business or public administrations can search in the database for the products qualified as Energy Star. The database can be consulted, among others, by public administrations to verify the declarations of tenders in public procurements, as foreseen by article 6 of Regulation 106/2008 and by Annex III(c) of [Directive 2012/27/EU](#).

C. Scope of the evaluation/FC

(C.1) Topics covered

The evaluation will exclusively cover the five office equipment product groups currently covered by Energy Star EU-US agreement, i.e. computers, servers, electronic displays (excluding televisions), imaging equipment and uninterruptible power supplies, including in relation to the other voluntary and mandatory EU measures implemented or available.

From a geographical perspective, the evaluation should ideally cover all EU-28 MS. However, missing relevant information in the database, such as number of units sold per country (to be compared to total number of units sold), evaluating such a complete geographical scope may result too expensive or unfeasible. Evaluation tenderers will suggest the most representing sample and how to compensate for partially missing information.

From a temporal perspective, the evaluation will cover the period from the last renewal of the agreement (subject to existence of historical data) to the end of 2015. It should be considered that two product groups (servers and UPSs) have been part of the Agreement only since May 2014. The evaluation has to highlight any anomaly in reliability and relevance of historical data due, for

¹¹ Voluntary vs mandatory, binary labelling versus 7-classes labelling, rewarding the best products vs banning the worst ones, time displacement for entering in force, etc.

¹² Article 4 or [Regulation 106/2008](#) as amended by [Regulation 174/2013/EU](#)

¹³ The Internet portal www.eu-energystar.org is online since autumn 2003.

example, to misalignment of requirements between the EU and the US, incorrect US data import by the previous eu-energistar.org provider or similar.

(C.2) Questions/issues to be examined

The evaluation questions listed below concern the application of the measure to the product groups listed above, within the time range of requirements being in force and for the EU-28. They are intended to help and guide the evaluation to be carried out. If possible, the evaluation should highlight potential to modify the current agreement permitting simplification and burden reduction for a comparable result.

Possible negative effects of the programme (such as. e.g. consumers and procurer confusion because of the different energy efficiency measures at EU-level) and possible higher effectiveness, efficiency and coherence of alternative measures, more familiar to EU consumers and procurers, would be assessed building on the results of this evaluation.

Relevance

- a. Extent to which the intervention is still relevant
- b. Awareness of consumers and relevance of this EU intervention to EU citizens:
 - i. Understanding of the labelling dynamics by EU consumers (e.g. grandfathering issues, real ambition of labelled products, transparency)
 - ii. Influence of the label for an informed choice at purchase
- c. Credibility/reliability of the system in light of the compliance control mechanism in place in the EU (resources used, controls by national authorities and/or the EC, etc.) compared to mechanisms in the US
- d. Relevance of the labelling program in public purchase (e.g. tenders requiring Energy Star labelled products, retained EU-registered products in public tenders, etc) and real understanding of the the labelling dynamics by EU procurers
- e. Relevance of the EU-registration programme "for the EU industry"
- f. Relevance of US as export market of office equipment¹⁴ (against impact of non-bi-univocity)
- g. In the context of the new "Circular Economy" Action Plan¹⁵ and its relevance in the EU context, relevance of requirements focusing on energy efficiency aspects (as is the case of Energy Star) neglecting resource efficiency ones (e.g waste reduction for consumables, durability, reparability, remanufacturing and recyclability, components reuse, etc).

Effectiveness:

- h. Extent to which the objectives of the measure have been achieved
- i. Extent to which the observed effects correspond to the objectives
- j. New jobs created
- k. New/different market opportunities provided to manufacturers
- l. Effectiveness of the EU system in light of misalignment of requirements (longer approval

¹⁴ "Panorama of European Union Trade - Data 1999-2006" indicated 4 billion euro exports to the US and 6 billion imports to the EU

¹⁵ [COM \(2015\) 614 final](#), Closing the loop - An EU action plan for the Circular Economy

and translation process in the EU for the commonly-agreed requirements)

- m. Capability and suitability of the Boolean¹⁶ labelling system, requiring revision and relabeling every 2-4 years (to rescale a compliance ratio swiftly growing from 25% to almost general compliance) in respect to a discrete multilevel system requiring rescaling every 10 years or more (i.e. effectiveness in tackling dynamism and ambition) and providing more information
- n. Compliance control (as implemented in the EU compared to the US)

Efficiency:

- o. Extent to which the intervention has been cost effective; **efforts will be made to quantify cost and cost/benefit ratio**
- p. Extent to which the costs is still proportionate to the benefits have been achieved and factors influencing any particular discrepancies
- q. Evaluation of the overall programme management cost in respect to the voluntary nature of it: website management, requirements alignment, adoption process, market penetration stakeholder involvement (including the EUESB), revision and compliance verification.
- r. Impact of the Programme on the EU-market

Economy (including impacts on business)

- s. Cost of a dedicated EU-based Energy Star registrar: possibility of simpler and/or cheaper alternatives, such as e.g.:
 - i. Registration by EU-based companies directly in the US registry?
 - ii. Integration with the product registration database proposed under the Energy labelling framework Regulation?
 - iii. Other more cost-effective options?
- t. Double registration issues as result of non-mutual recognition of the Label
- u. Cost of the decision-making process for adoption at EU-level, compared to the voluntary nature of the programme (in light of previous participation in definition of requirements)

Potential simplification and burden reduction, SME aspects

- v. Are there areas where there is potential to reduce inefficiencies, in particular regarding regulatory burden, and to simplify the intervention.
- w. Are there possibly specific issues which might be of particular concern to SMEs?
- x. Alternative options for coordination of the Programme between EU and USA (modifying Annex C), i.e.?
 - i. Adding a new product or
 - ii. just updating specifications
- y. new options maintaining the general aims (facilitating uptake of efficient products in the EU market, enhancing coherence/convergence of requirements measurement/assessment standards between EU and US)
- z. Is the implementation of Article 6 of Regulation 106/2008 (on green procurement) practical for administrations and tenderers?

Coherence

¹⁶ Yes/No, or pass/not pass mechanism, i.e. labelled/not labelled

- aa. Extent to which the intervention is internally coherent, with other EU policies, and with international obligations
- bb. Coherence and univocal recognition of the EU programme, in light of the divergence in compliance control (systematic ex-ante in the US, random ex-post in the EU) and of the consequent end of the bi-univocal recognition.

Complementarity

- cc. Complementarity or overlap of the Programme with existing energy- and resource-use measures at EU level, i.e.:
 - i. Ecodesign
 - ii. Energy Labelling
 - iii. Ecolabel
- dd. Complementarity or overlap of the Programme with existing energy- and resource-use measures at national or international level, e.g.:
 - i. [Der Blaue Engel](#) (DE)
 - ii. [The Nordic Ecolabel](#)
 - iii. [TCO](#) product labelling (Swedish Federation of Salaried Employees)
 - iv. [EPEAT](#) (43 countries worldwide)

EU-added value

- ee. Additional value resulting from the EU intervention, compared to what could be achieved by Member States at national and/or regional levels
- ff. Additional value resulting from the current level of coordination of the Programme at EU-level, compared to alternative management at the level of single MS.

(C.3) Other tasks

D. Evidence base

(D.1) Evidence from monitoring

Periodic Energy Star market penetration reports are prepared by a contractor¹⁷. However they do not cover all products currently under the EU-US Energy Star programme and other elements needed for this general evaluation.

Data quality differs depending on the specific product category. Some relevant quality issues have been highlighted by the contractor for which no simple solution has been identified.

Although the US programme requires participants in the programme to declare sales volume, at EU-level the obligation is not enforced, resulting in evaluation of the penetration only based on commercially available sales data.

The [eu-energystar website](#) provides additional links and the data itself about all product models placed on the EU market with an EnergyStar label.

(D.2) Previous evaluations and other reports

The Agreement has been renewed twice and the previous evaluations are part of the following

¹⁷ The reports have never been published but will be become available.

communications:

[/* COM/2006/0140 final */](#) Communication from the Commission to the Council and the European Parliament on the implementation of the Energy Star programme in the European Community in the period 2001-2005

[/* COM/2011/0337 final */](#) Communication from the Commission on the implementation of the ENERGY STAR programme in the European Union in the period 2006 – 2010

The evaluation can build on the final study report "Energy Star Programme impact assessment and market penetration survey" of June 2015 (contract ENER/C3/2010-410).

A Voluntary Agreement with EU industry (as an alternative measure to an Ecodesign Regulation¹⁸) currently covers the imaging equipment and is based on Energy Star compliance rates¹⁹. Annual compliance reports are produced by an inspector, based on self-declarations of VA signatories.

(D.3) Evidence from assessing the implementation and application of legislation (complaints, infringement procedures)

Compliance statistics are available for some of the products covered by EU-Energy Star.

Printers²⁰ are covered by an on-going compliance verification project ([EEPLIANT](#)).

Two petitions for EU citizens have been addressed to the EP:

- [Petition 0424/2013](#) asking mandatory requirements to mitigate energy use in computers (the issues raised have been mostly tackled by an Ecodesign Regulation)
- [Petition 0425/2013](#), asking mandatory measures to enable remanufacturing/refilling of printers cartridges and reduce consumer expenditure for consumables by banning killer chips (aspects not tackled at all in Energy Star requirements)

(D.4) Consultation

A public consultation will be part of the evaluation process and announced in the planning²¹. Targeted stakeholders will include, in particular industry stakeholders (dealing with the 5 product groups covered by the Agreement), consumer associations, public administrations (because of public tendering interest). Industry associations "not" interested by the Agreement, but that would have a stake if alternative/complementary regulation, such as the EU Ecodesign and EU Energy labelling was in force, may provide relevant contributions.

Relevant stakeholders, to be consulted, include:

- Consumer associations
- Environmental NGOs
- European industry associations
- Member state representatives, including compliance control authorities and centralised purchase agencies for the public sector
- Members of the EUESB (Energy Star Board)

Information gaps:

- Level of awareness of the Agreement and Programme

¹⁸ Article 7, par. 9 of Directive 2012/27/EU

¹⁹ [Industry Voluntary Agreement To Improve The Environmental Performance Of Imaging Equipment Placed On The European Market](#)

²⁰ Part of the "imaging equipment" included in Annex C of the Agreement

²¹ http://ec.europa.eu/yourvoice/consultations/docs/planned-consultations_en.pdf.

- Understanding of the ENERGY STAR label
- The extent to which the EU ENERGY STAR database is really used for procurement and consumer information purposes.
- Levels of ENERGY STAR compliance claimed by manufacturers for their product ranges, over and above those products registered on the EU ENERGY STAR database.

Timeframe:

- Written online consultation along 12 weeks (e.g. March-May 2016)

(D.5) Further evidence to be gathered

Building on the market share periodic reports, the evaluation should in particular estimate "additional" energy savings and CO2 emissions reduction in respect to complementary measures at EU level, where existing.

E. Other relevant information/ remarks

The results of this evaluation should contribute to a more general IA covering not only office equipment but a wider range of ICT products. The IA should gather the evidence from the different initiatives, current regulatory tools available and help determine the most critical product categories in terms of energy and resource use, technology, market trends and potential for direct savings and for associated ones (i.e. by "smartening" products, systems, supporting behaviours/habits changes, etc). The IA will also compare the existing regulatory tools, spot existing redundancies, unnecessary or obsolete regulatory measures, consider appropriateness of current legislative tools, and identify sectors with relevant potential for savings or risk of uncontrolled increase of demand.