



European Committee of Manufacturers of Electrical  
Machines and Power Electronics

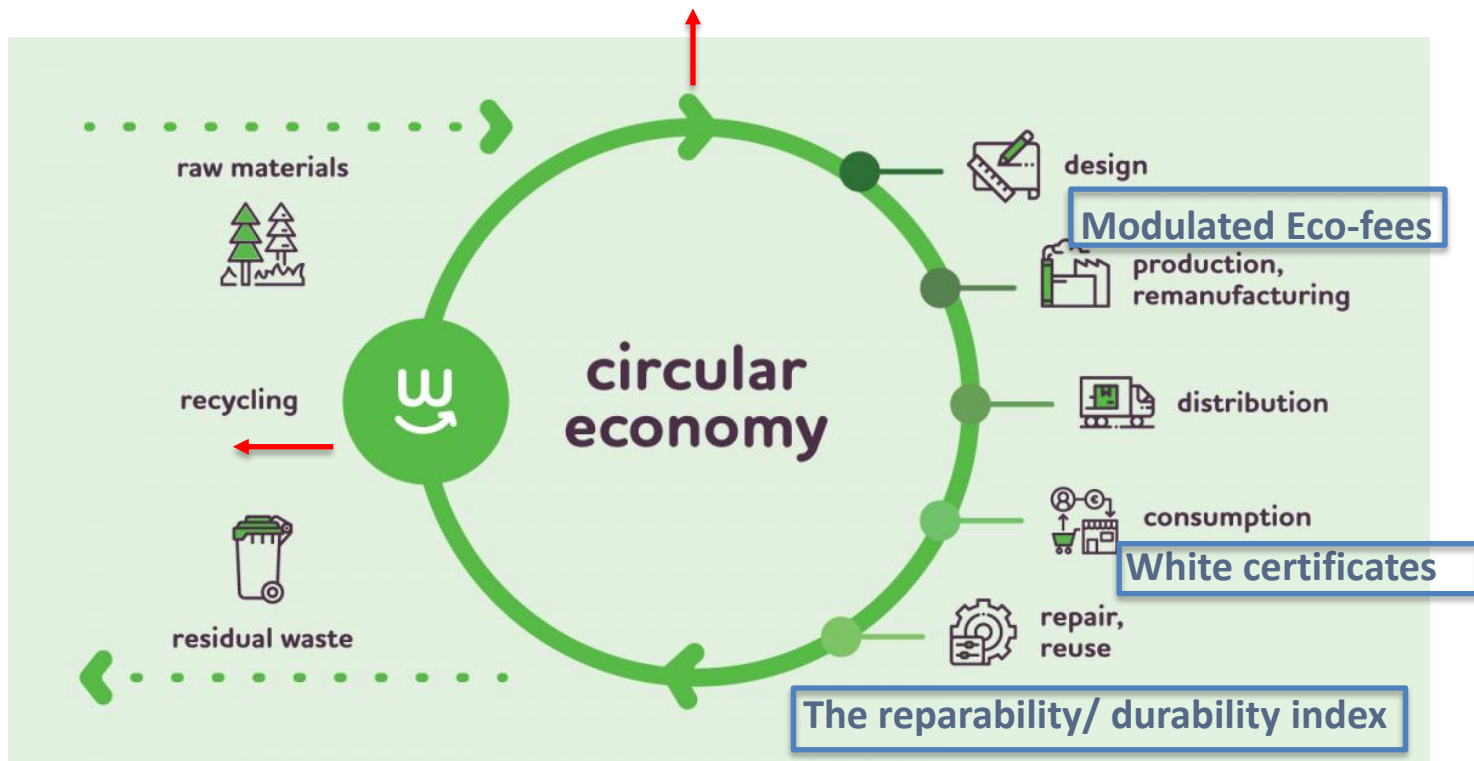
 **02<sup>nd</sup> CEMEP CONFERENCE**

**7<sup>th</sup> and 8<sup>th</sup> July 2022 in Milan, Italy**

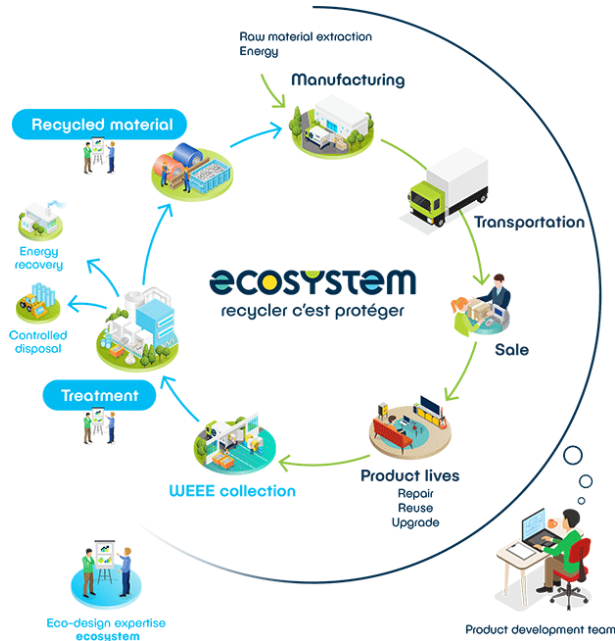
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**« How to implement the principles of the circular economy in France? Focus on the french legislation »**



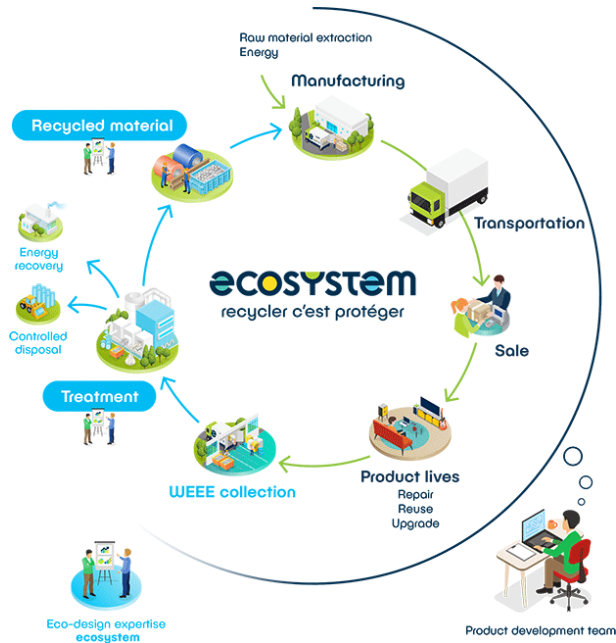
## Modulated Eco-Contribution Scale : a French incentive tool to further promote the development of eco-design



- **Manufacturers must participate in the collection of the equipment's end-of-life.** This is the case for manufacturers of motors with a power of less than 1500V within the framework of the WEEE.
- **This is done through financial contributions "eco-fee" paid by producers to Ecosystem,** a non-profit organisation accredited by the French Public Authorities to collect, decontaminate and recycle waste electrical and electronic equipment (WEEE).

7<sup>th</sup> and 8<sup>th</sup> July 2022 in Milan, Italy

## Modulated Eco-Contribution Scale : a French incentive tool to further promote the development of eco-design



- This “eco-fee” can be modulated according to environmental performance criteria, including :
  - the quantity of material used,
  - the use of recycled material,
  - durability, reparability, recyclability
  - the possibilities of reuse,
  - the absence of ecotoxicity and the presence of hazardous substances that would limit the recyclability or the incorporation of recycled materials or have only an advertising or promotional purpose.

7<sup>th</sup> and 8<sup>th</sup> July 2022 in Milan, Italy

## Modulated Eco-Contribution Scale : a French incentive tool to further promote the development of eco-design



- The aim : encourage the eco-design of electrical equipment.
- The modulation can be a bonus granted by the eco-organization to the producer when the product meets the performance criteria, or a malus owed by the producer to the eco-organization when the product deviates from them.
- This legal measure which exists since 2020 for pro EEE is subject to difficulties :
  - To justify a bonus or a penalty that can go up to 20% of the selling price, manufacturers must **provide the proof on the incorporation of recycled material**, for example. Information that they do not necessarily have on the recyclability of raw materials...

## The reparability/durability index

Indice de réparabilité



- Since January 1st 2021, France is the first country in Europe to have implemented a reparability index on 5 categories of electronic devices. It concern only BtoC product such as : Smartphones, Laptops, Televisions, Washing machines, Lawnmowers.
- The objective of the index is to encourage consumers/customers to choose more repairable products, and manufacturers to improve the reparability of their products.

## The reparability/durability index

Indice de réparabilité



- **What aspects does the index assess?**
- The calculation of the reparability index for each product model is based on five criteria :
  - **Documentation:** score determined by the producer's commitment to make technical documents available free of charge, in number of years, to repairers and consumers.
  - **Removability and access, tools, fasteners:** score determined by the ease of disassembly of the product, the type of tools required and the characteristics of the fasteners.
  - **Availability of spare parts:** score determined by the producer's commitment to the availability of spare parts and the time it takes to deliver them.
  - **Price of spare parts:** score determined by the ratio between the selling price of the spare parts and the price of the products. Specific: score determined by sub-criteria specific to the product category concerned.
  - The first 4 criteria are the same for all products groups, the 5th criterion looks into product-specific properties. For smartphones, laptops and TVs this includes software aspects.

## The reparability/durability index



- **Who calculates the score?**
  - The manufacturer computes the index by entering all the parameters in a spreadsheet provided by the Ministry of Environment which includes the different categories and possible answers.
  - Sellers are obliged to display the index near the point of sale and should ask the manufacturer for the index to make it available to the consumer. The manufacturer is obliged to make the index available to anyone who requests it.

### How should the index be displayed?

- The index has to be displayed near the product in shops, and online next to the price of the product using the following logo, with the color corresponding to the level of reparability in 2point intervals.
- The manufacturer is free to find additional ways of displaying the index, such as placing the index on the product package or adding a QR code with a link to more information.

- **What about the durability index ? The scope ?**

The reparability index will be replaced by a durability index from 1 January 2024. This durability index would combine both reparability and reliability aspects Further on, the regulation could evolve in order to oblige manufacturers of B2B equipments to display the durability index. .



## The reparability/durability index



- What about the durability index ? The scope ?

The reparability index will be replaced by a durability index from 1 January 2024.. This index could be a source of inspiration for the ESPR

## Standardizing energy saving operations : “White Certificates forms”



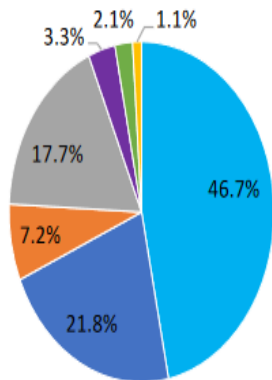
- Tool introduced by the POPE Act in 2005 which obliges energy companies to finance or achieve a defined volume of energy savings for a given period
- **5th period objective:** 2500 TWh of energy savings to be achieved for the period from January 1, 2022 to December 31, 2025 (i.e. +14.7% compared to the 4th period)
- White certificates finance energy performance actions that go beyond regulatory requirements

7<sup>th</sup> and 8<sup>th</sup> July 2022 in Milan, Italy

## Standardizing energy saving operations : “White Certificates forms”

### CEE CL+PE délivrés par secteur (opérations standardisées et spécifiques)

- Bâtiment résidentiel précarité (BAR PR)
- Bâtiment résidentiel autre (BAR CL)
- Bâtiment tertiaire (BAT)
- Industrie (IND)
- Transport (TRA)
- Agriculture (AGRI)
- Réseaux (RES)



The standardized energy saving operations correspond to operations commonly carried out for which a fixed value of white certificates has been defined.

The white certificates are counted in "cumulative and discounted megawatt-hours" or MWh Cumac (MWhc), which correspond to the energy savings over the lifetime of the equipment.

In case of failure to meet the volume, the obliged actors must pay a penalty equal to 15€ per missing MWh cumac


## Standardizing energy saving operations : White Certificates

Référence	Intitulé de l'opération standardisée	%
IND-UT-117	Système de récupération de chaleur sur un groupe de production de froid	20,04%
BAR-EN-101	Isolation de combles ou de toitures	9,07%
BAR-TH-160	Isolation d'un réseau hydraulique de chauffage ou d'eau chaude sanitaire	7,19%
BAR-EN-103	Isolation d'un plancher	7,13%
BAR-TH-104	Pompe à chaleur de type air/eau ou eau/eau	4,31%
BAR-EN-102	Isolation des murs	4,19%
BAR-TH-106	Chaudière individuelle à haute performance énergétique	3,19%
AGRI-TH-104	Système de récupération de chaleur sur un groupe de production de froid hors tanks à lait	2,81%
BAT-TH-146	Isolation d'un réseau hydraulique de chauffage ou d'eau chaude sanitaire	2,57%
IND-UT-129	Presse à injecter tout électrique ou hybride	2,56%
BAT-EN-103	Isolation d'un plancher	2,08%
IND-UT-121	Matelas pour l'isolation de points singuliers	2,07%
IND-UT-116	Système de régulation sur un groupe de production de froid permettant d'avoir une haute pression flottante	1,91%
IND-UT-102	Système de variation électronique de vitesse sur un moteur asynchrone	1,51%
BAT-TH-139	Système de récupération de chaleur sur un groupe de production de froid	1,48%
IND-BA-112	Système de récupération de chaleur sur une tour aéroréfrigérante	1,40%
RES-CH-108	Récupération de chaleur fatale pour valorisation sur un réseau de chaleur ou vers un tiers (France métropolitaine)	1,38%
BAT-TH-134	Système de régulation sur un groupe de production de froid permettant d'avoir une haute pression flottante (France métropolitaine)	1,26%

*Top 15 whites certificates for the 4th era (2018-2021)*

7<sup>th</sup> and 8<sup>th</sup> July 2022 in Milan, Italy

## Standardizing energy saving operations : White Certificates



Certificats d'économies d'énergie  
Opération n° IND-UT-102

**Système de variation électronique de vitesse sur un moteur asynchrone**

**1. Secteur d'application**  
Industrie.

**2. Dénomination**  
Mise en place d'un système de variation électronique de vitesse (VEV) sur un moteur asynchrone existant dépourvu de ce système, ou neuf de puissance nominale inférieure ou égale à 3 MW.

Est exclu de l'opération standardisée tout moteur IE2 défini par le règlement (CE) n°640/2009 de la Commission du 22 juillet 2009 modifié par le règlement (UE) n°4/2014 de la Commission du 6 janvier 2014, acheté :  
- entre le 1<sup>er</sup> janvier 2015 et le 31 décembre 2016 si sa puissance nominale est comprise entre 7,5 kW inclus et 375 kW inclus ;  
- à partir du 1<sup>er</sup> janvier 2017 si sa puissance nominale est comprise entre 0,75 kW inclus et 375 kW inclus.

**3. Conditions pour la délivrance de certificats**  
La mise en place est réalisée par un professionnel.  
La preuve de la réalisation de l'opération mentionne la mise en place d'un système de variation électronique de vitesse.  
À défaut, la preuve de réalisation de l'opération mentionne l'installation d'un équipement avec ses marque et référence et elle est complétée par un document issu du fabricant indiquant que l'équipement de marque et référence installé est un système de variation électronique de vitesse.

**4. Durée de vie conventionnelle**  
15 ans.

**5. Montant de certificats en kWh cumac**

Application	Montant en kWh cumac par kW	x	P
Pompage	12 400		
Ventilation	12 200		
Compresseur d'air	11 900		
Compresseur frigorifique	7 100		
Autres applications	5 500		

- The creation of white certificates for a product is the subject of a concerted effort in which GIMELEC's members play a key role in :
  - The definition of the application sector
  - Denomination of the operation
  - Conditions for the delivery of certificates
  - The method to identify the energy saving allowed by the operation

7<sup>th</sup> and 8<sup>th</sup> July 2022 in Milan, Italy

## Standardizing energy saving operations : White Certificates

Whites certificates	Energy savings generated since the creation of the white certificate (GWh cumac)	Since ...
Electronic variable speed drive system on an asynchronous motor	<b>16 420</b>	22/12/2014 (revised in 2015)
IE2 class high efficiency motor	<b>30</b>	22/12/2014 (revised in 2021)
Synchronous motor drive with permanent magnets or reluctance	<b>2260</b>	22/12/2014 (revised in 2017)
IE3 class - premium motor	<b>190</b>	22/12/2014
IE4 class - asynchronous motor	<b>50</b>	26/07/2017
Motor-regulated system	<b>3 050</b>	31/07/2019

**Thanks for the attention!**

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