

SPP in action: Tender for green electricity – Ville de Lorient

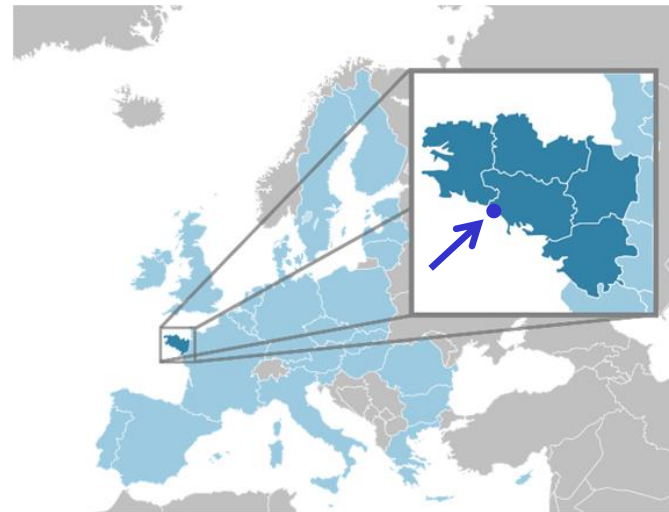




RGO: the local network, a great added value for cities who want to implement sustainable public procurement.

This document is a synthesis of the work of the "Energy" group of the R.G.O. The aim of this guide is to propose an overall methodological framework for the integration of sustainable development into the purchase of energy within public entities.





62%

european
energy award

Cit'ergie
European Energy Award®

Lorient

57 000 inhabitants (conurbation ~200 000)

- Energy consumption (municipal buildings ~300 000m², public lighting ~9000 lamps, vehicles): 33,5GWh (2014) / 32,6GWh (2015)
- Electricity consumption (municipal buildings): 7,3GWh (2014) / 6,7GWh (2015)
- Electricity bills (municipal buildings): 1 327 000€ (2014) / 900 000€ (2015) (→ due to the strong decrease of electricity prices)

Climate Action Plan: « 3x30 » by 2020 on municipal buildings / public lighting / vehicles
-30% CO₂ emissions (baseline = 1990) (only -300t / 2014: here we are!)

30% energy efficiency (-8GWh / 2014 : long way to go...)

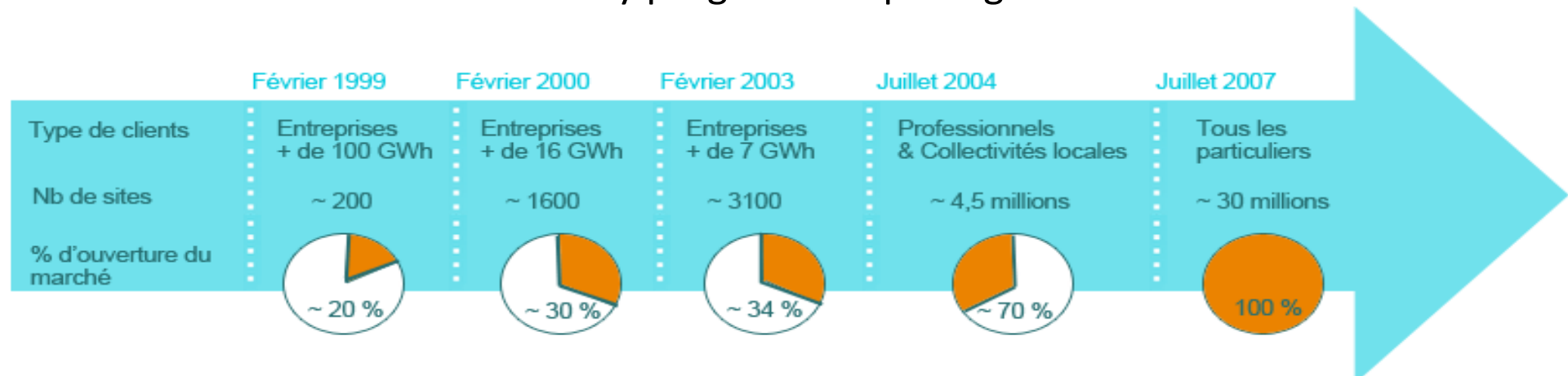
50% renewable energy (and 50% renewable heat on buildings) → wood and solar energy



L'ouverture des marchés de l'électricité et du gaz

The opening of the electricity and gas markets

A very progressive opening...



Since 2004, possibility of having contracts of supply in market offer (Lorient was one of the few cities to switch since 2004),

Since 2016, supply by market offer is mandatory for public buyers.

The European Energy Award (eea) is a quality management and certification system for municipalities and regions. It supports local authorities in establishing interdisciplinary planning approaches and implementing effective energy and climate policy measures. The success of the eea is based on 4 pillars:

Accelerator of national and supranational energy strategies

The eea translates national goals effectively into local policy recommendations. These provide guidance for municipalities in allocating their resources to achieve optimum efficiency in their measures.

For municipalities by municipalities

The eea has been continually developed by municipalities and experts on the local level since 1988. Careful consideration of the regional context forms an integral part of the programme.

Specific activity programmes

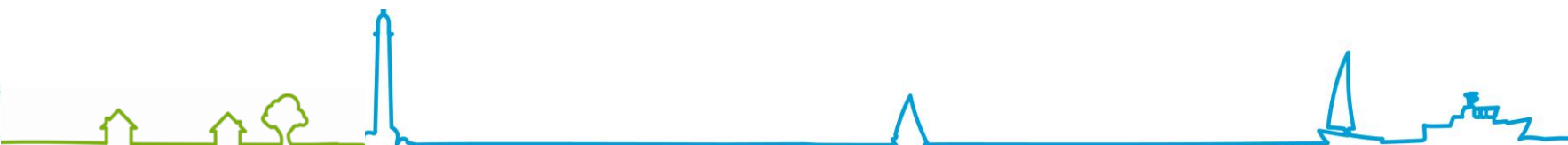
eea municipalities implement customised activity programmes with a long-term view. Action plans are evaluated and adjusted every 4 years with the assistance of accredited experts.

International benchmark

Municipalities' efforts are assessed with regard to their individual scope of action. This allows a comparison of different municipalities and the establishment of an international benchmark.

The European Energy Award in figures

- ... 25 years of experience
- ... 1,397 municipalities participating
- ... total population of 46 million involved
- ... largest municipality participating:
Lyon Metropolis (FR, 1.34 m inhabitants)
- ... smallest municipality participating:
Chamois (IT, 103 inhabitants)



« Environmental additionality »

european
energy award

Cit'ergie
European Energy Award®
LE LABEL ÉNERGIE
DES COMMUNES & INTERCOMMUNALITÉS

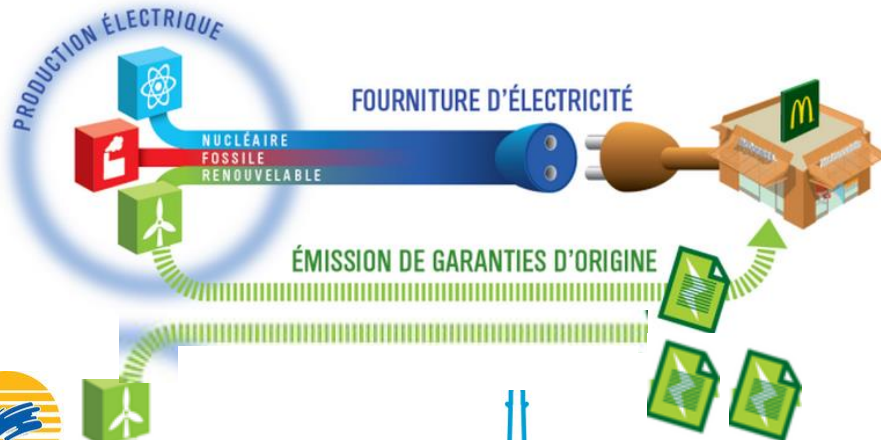
"Environmental additionality" means that purchased renewable energy introduces into the power grid a new renewable energy that would not have been made without the project or in the context of a "business as usual" scenario

Lorient was until 2014 buying green electricity with « REN certificates of guarantee of origin ».
EEA rules made it worthless: REN CGO doesn't imply that additional REN electricity was produced.

Les certificats de garantie d'origine (GO)



Fonctionnement du registre national des garanties d'origine



The system of guarantees of origin is criticized by some market players who believe that it is akin to a means of making a consumer believe that the energy it consumes is green even though the original guarantee issued relates to another MWh of electricity and that the supplier may not be supplied by a producer of renewable energy.

Indeed, the separation between the original guarantee and the initially concerned MWh may allow suppliers to propose "green" offers because they are backed by guarantees of origin, even though all the electricity purchased by the supplier comes from a non-green source

Labels!



Union Européenne



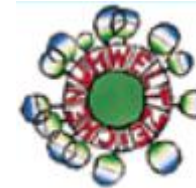
Union Européenne



Italie



Allemagne



Autriche



Pays Bas



Bra Miljöval
Suède



Finlande



Allemagne



Allemagne

No french label... but some very interesting european one (german especially).

Great help of « Buy Sart+ » outputs.

www.buy-smart.info/media/file/2043.Labels_Electricite.pdf

Grüner Strom-Label

Criteria List 2015



1 PURPOSE OF THE GRÜNER STROM LABEL CERTIFICATION

- 1.1 The goal of Grüner Strom Label e.V. (The "Green Electricity Label registered association") (Hereinafter "GSL") is to create transparency for the consumers by certifying recommendable Green Electricity offered on the market for green electricity in accordance with the criteria following hereinafter. ¹ Certified are Electricity Products delivered to customers entirely produced from renewable energy and for which, in addition to the foregoing, a fixed amount per kilowatt-hour (kWh) is invested in the ecologically sustainable development of renewable energy. They provide impulses and spur the increased use of renewable energy resources, which meet highest environmental standards.

To GSL, financial contributions and financing are essential and the most efficient ways to promote facilities, installations and plants (hereinafter "facilities"), which generate electricity from renewable energy. In addition, innovative measures in support of the necessary infrastructure will be promoted, which move the energy transformation towards 100 % renewable energy supply.

<http://www.gruenerstromlabel.de>

"To ensure Brittany's energy future, the signatories propose solutions that can reduce this electrical fragility through the development and implementation of a Breton electricity pact.

Advocated by the Regional Prefect and the President of the Regional Council at the BretagneEnergy Conference that they co-chair, this pact aims to secure the electric future of Brittany by proposing solutions around a "tripod "Of complementary actions:

- significant efforts to control demand for electricity;
- an ambitious development of the production of renewable energies;
- the indispensable security of the power supply (production and networks).

The present pact was drawn up on the basis of a quantified analysis of the existing situation and a forecasting of the different themes shared in the working groups organized at the Breton Energy Conference. "

Tender procedure – additional REN electricity procurement

Article 6: SOURCE OF ELECTRICITY

This market concerns the supply of green electricity with high environmental value. The challenge is in particular to respect the recommendations of the Electric Breton Pact.

This pact, carried by the Prefecture and the Brittany Region, explicitly asks: **1 / significant efforts to control demand for electricity, 2 / an ambitious development of the production of renewable energies and 3 / essential security of the power supply (production and networks).**

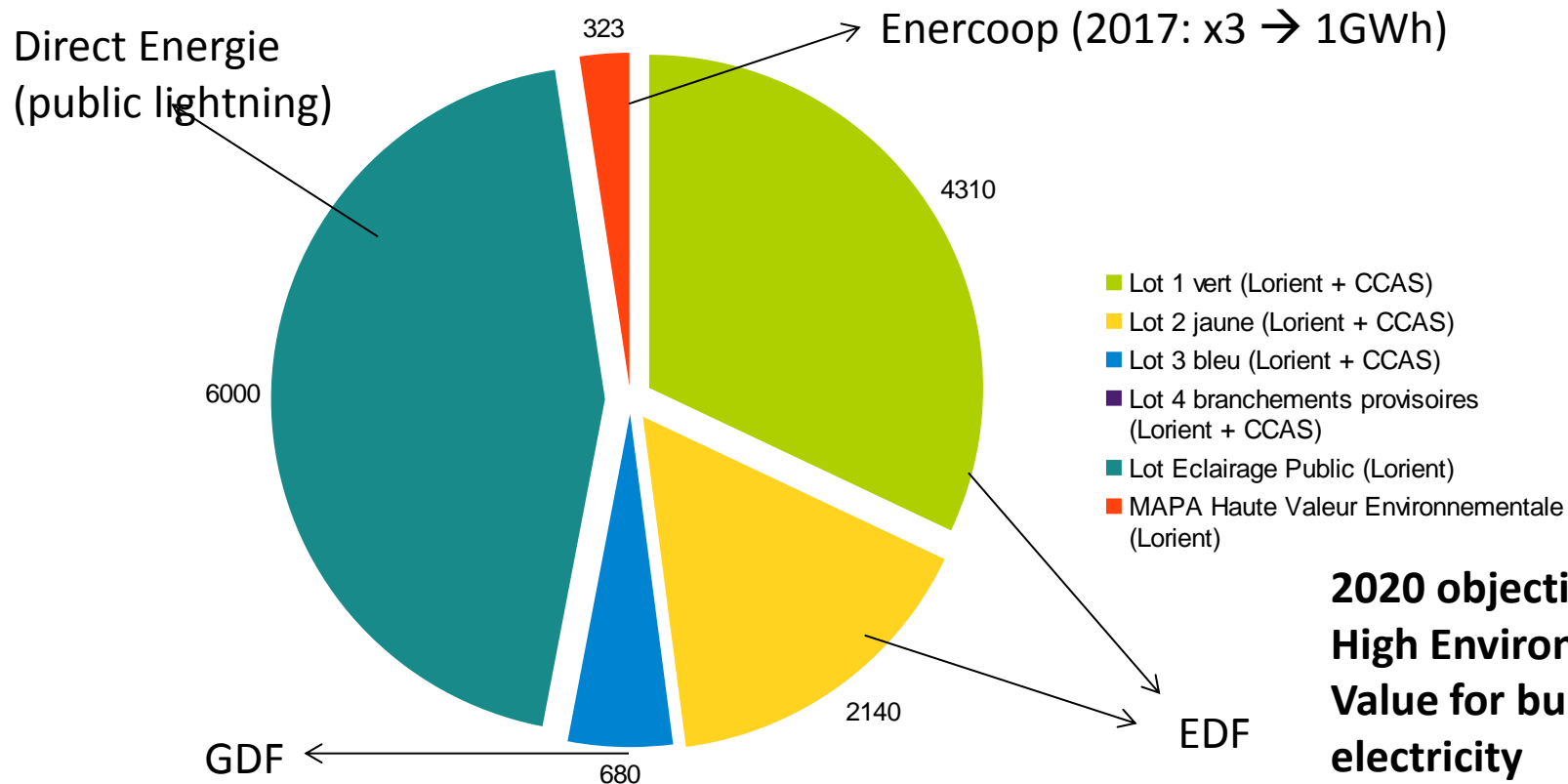
So :

- 100% green electricity content must be guaranteed.
- A technical note specifying the criteria for the additionality of this electricity must be provided with the tender: in the evaluation of the tenders, not only the production technology will be taken into account, but also **the share of new investments** and the use of supply remuneration to obtain "environmental additionality".

The term "additionality" means that purchased renewable energy introduces new renewable energy into the power grid that would not have been provided without the project or under a "business as usual" scenario. Green electricity sources will be considered in this context: - Onshore and offshore wind, - Photovoltaic, - Hydraulics from installations with unit powers **less than 20MW**, - Valorisation of biomass (**excluding incineration** of household waste),

Critère 1: Valeur technique	Exemples d'éléments permettant de donner une note élevée
<p>Criterion 1.1: assessment of the additional nature of electricity</p>	<ul style="list-style-type: none"> - Guarantee of all production sites <20MW - Indication of planned production sites with start-up dates: purchase of renewable electricity excluding purchase prices, subsequent production on facilities owned by the supplier - % of earnings reinvested in new means of production and energy management services - existing partnerships with structures for carrying out citizen projects (shared energy type, etc.) - Participation in networks for the development of renewable energies (Taranis type, network "for a sustainable energy and citizen", supported by the CR Bretagne)
<p>Criterion 1.2: conditions for compliance with the Breton Electricity Pact (1 / energy control 2 / ambitious development of renewable energies 3 / securing electricity supply)</p>	<ul style="list-style-type: none"> - awareness-raising actions proposed (example: proposal to raise awareness among school children about energy, the network, the link between production and consumption, awareness of staff around everyday actions for less and better Consuming, etc.) - Development of REN: proposal for reflection on the setting up of photovoltaic production sites on one or more of the sites concerned by the market - Network security: objective of achieving a production / consumption balance on the territory, etc.

Allotment (MWh) - 2016



**2020 objective: 100%
High Environmental
Value for buildings
electricity**

Liste des sites du MAPA "électricité à Haute Valeur Environnementale"		
gamme de puissance	nom du site	consommation annuelle approximative(MWh)
>36 kVA (« Jaune »)	Groupe Scolaire Bois Bissonnet	30
	Groupe Scolaire Kermelo	69
	Groupe Scolaire Keroman	46
	Crèche Bouvet	37
< 36 kVA (« Bleu »)	Pôle enfance Elsa Triolet	19
	Maternelle Jean-Paul Sartre	26
	Gymnase Nouvelle Ville	24
	Serres de Kerdroual	26
	Maternelle Kerentrech	17
	Gymnase Marie le Franc	30

To summarize, some important elements

- Guarantees of Origin: an interesting first step in the search for a certain quality of electricity. Simple to implement.
- High Environmental Value: guarantee that public money develops responsible and "short circuit" power supply projects. Highly recommend !!
- An additional cost of around 30-35% ... constant consumption: **think about the control of energy or even photovoltaic in self-consumption**, solar thermal, etc. In a more global reflection.
- Prefer fixed prices over market durations. Do not complicate the management of markets (evolution of consumption linked to climate rigor + unpredictable evolution of revision formulas)
- Prefer subscriptions reflecting as accurately as possible the only costs of energy delivery. Clarity of presentation to elected officials, ability to see bills down when energy-saving actions are undertaken.

First test of « behind the grid » PV plant: Kermelo school (2014-2015)

City workers



15 kWp / 100 m²

60 pannels of 250 Wp, one micro inverter per pannel

Price :35 000€ (no VAT!), → 2,3€/Wp

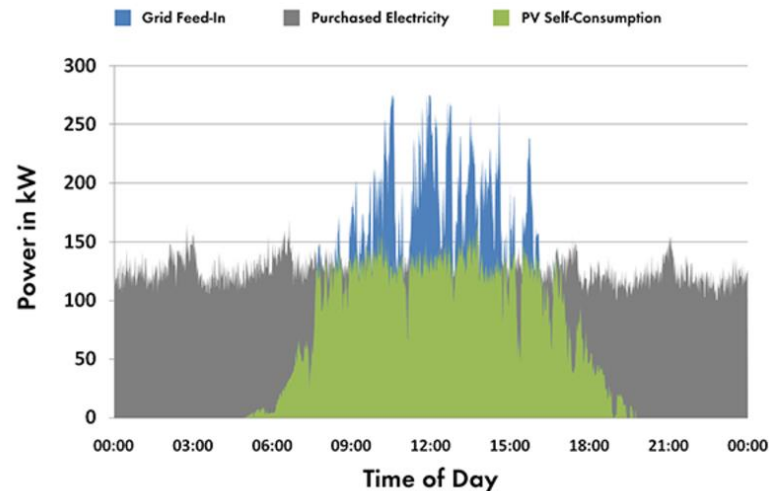
Ballasted supports (***no hole in the roof!***)

Production / y. → **17,5 MWh**

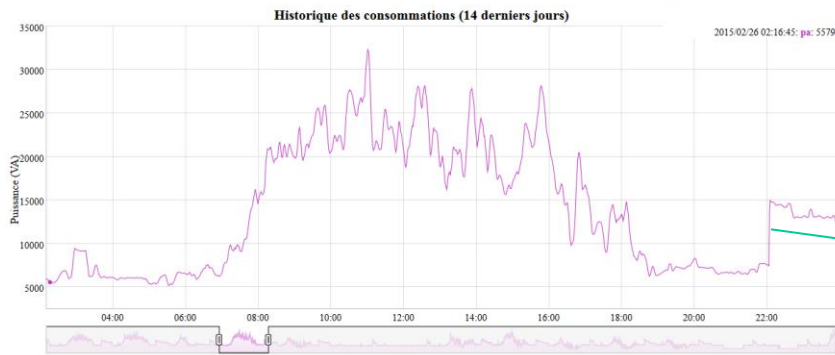
Self consumption : 90%

Covert ratio (PV self consumption / total consumption): **>20 %**

kWh price: **11c€ /kWh**

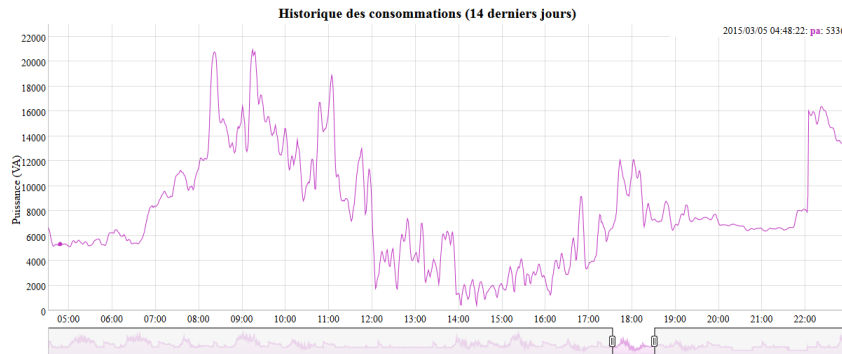


Consumption measurements



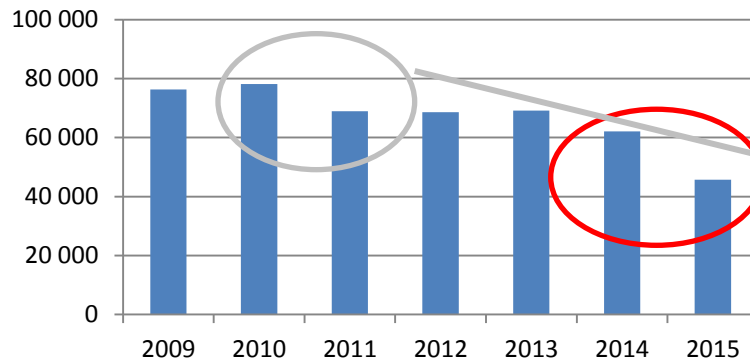
Before PV plant

Electric hot water tank...



After PV plant implementation :
after noon, the school produces nearly all of its own electricity needs

GS Kermélo: electricity purchase (kWh/y)



2009-2015: -40% of
electricity purchase
(1/economy programm
2/PV plant)





MAPA HVE- électricité - RC

- Jugement des offres

Sera effectué en application de l'article 53 du Code des Marchés Publics :

Offre économiquement la plus avantageuse appréciée en fonction :

- Valeur technique : 65 points dont appréciation du caractère additionnel de l'électricité 40 points ; conditions du respect du Pacte Electrique Breton 25 points
- Prix : 35 points

Formule de notation du prix : offre la moins-disante * X note maximale /offre notée*

(* évaluation du cout du terme de quantité sur un an, basé sur les consommations indicatives fournies + terme fixe .)



Les certificats de garantie d'origine (GO)

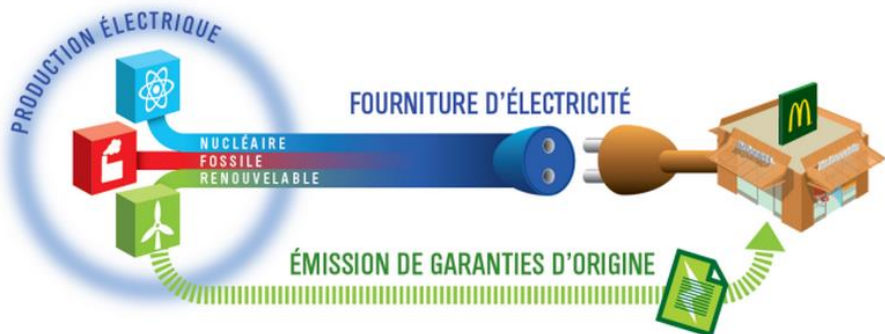


Fonctionnement du registre national des garanties d'origine



Un fournisseur qui souhaite prouver à un consommateur que l'électricité qui lui est vendue est d'origine renouvelable peut:

- acheter directement de l'électricité à un producteur vert (dans un tel cas, l'électricité est vendue en même temps que la garantie d'origine)
- acheter l'électricité nécessaire à l'approvisionnement de son client en utilisant tout moyen possible et, séparément, acheter à un producteur d'énergie verte une garantie d'origine (étant établi que, dans un tel cas, le producteur d'énergie verte revendra son énergie comme de l'énergie non verte).



Les certificats de garantie d'origine (GO)



Fonctionnement du registre national des garanties d'origine



Il est possible d'enregistrer une installation de production :

- si vous en êtes le propriétaire **et que la production ne bénéficie pas de l'obligation d'achat**,
- si vous êtes l'acheteur de son électricité dans le cadre de l'obligation d'achat,
- ou si vous détenez un mandat vous liant avec le producteur de cette installation pour l'émission de garanties d'origine.

Installations renouvelables soumises à obligation d'achat → pas de garanties d'origine pour les consommateurs finaux

HVE- électricité – Procédure marché public

Seuils de procédure applicables du 1er janvier 2014 au 31 décembre 2015 (montants hors taxes)

	Pas de procédure imposée	Procédures adaptées	Procédures formalisées
Fournitures et services	jusqu'à 15 000 €	Procédures adaptées Marchés compris entre 15 000 € et les seuils de procédures formalisées	<ul style="list-style-type: none"> à partir de 80 000 € si AO en // (ne pas dépasser 20% du total du marché) art. 27 CMP à partir de 207 000 € pour les collectivités et les établissements publics de santé à partir de 134 000 € pour l'État et ses établissements public autres que ceux ayant un caractère industriel ou commercial
Besoin approximatif (75€/MWh) (attention, marché de 1 an)	<200 MWh	< 1066 MWh (AO en //) < 2760 MWh (collectivités) < 1786 MWh (Etat + établissements)	> 2760 MWh (collectivités) > 1786 MWh (Etat + établissements)

Seuils de publicité pour les marchés des collectivités territoriales et des établissements publics de santé (montants hors taxes)

	Publicité non obligatoire	Publicité adaptée Modalité au libre choix de la personne publique	Publicité au BOAMP ou dans un JAL + profil d'acheteur + presse spécialisée, si nécessaire	Publicité au BOAMP + JOUE + profil d'acheteur
Fournitures et services	en dessous de 15 000 €	à partir de 15 000 € et jusqu'à 89 999,99 €	de 90 000 € à 206 999,99 €	à partir de 207 000 €
Besoin approximatif (75€/MWh) (Attention, marché de 1 an)	<200 MWh	< 1200 MWh	< 2760 MWh	> 2760 MWh