



**United Nations Framework  
Convention on Climate Change**

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**Workshop on Energy Efficiency, May 15<sup>th</sup>**

***White Certificates Scheme in France :  
a working process.***

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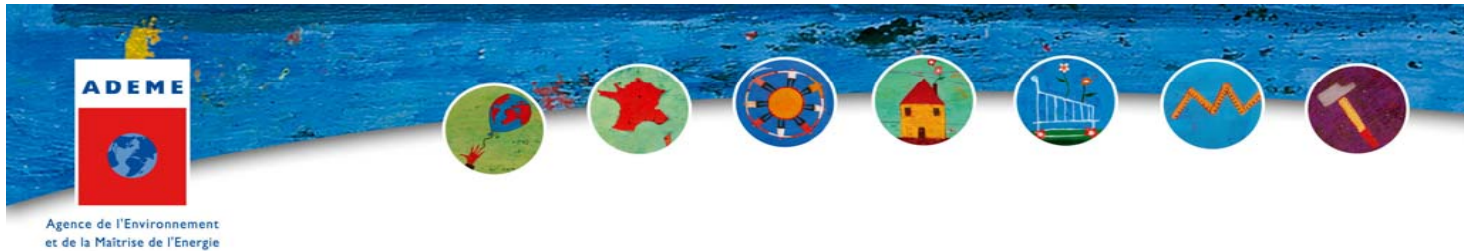
**Agency for Environment and Energy Management**

**Paris, France**



# ***White Certificates Scheme in France***

- **Principles**
- Implementation
- First results



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## ***French WC scheme main principles***

- **Energy suppliers, « obligated bodies », have to meet a target of energy savings, or pay a penalty**
- **They can implement programs or buy certificates**
- **« Eligible bodies », as local communities, building owners, or companies can implement savings and get certificates.**
- **WC is a « projects and baselines » scheme, with obligation of result (on implemented projects)**



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## ***The main objectives***

- **Implementing energy savings at consumer's level :  
« diffuse targets »**
- **Financing part of energy savings investments by  
energy suppliers (1<sup>st</sup> period level : circa 150 M€/y)**
- **Promoting energy saving actions at least marginal  
cost**
- **Implementing and testing an « Obligation market  
driven » new instrument for energy (and later climate)  
policies**

## ***A new Unit for energy savings : «cumac-kWh»***

- It refers to cumulated and discounted (4% annual discount rate) saved final energy during time life equipment or action benefit.
- Saved energy is calculated with reference to average existing devices (additionality principle)
- *Example :*
  - *A 18W LCB save 49 kWh per year (800h/y)*
  - *70% of sold LCB replace incandescent bulbs*
  - *Time of life is 7.5 years (discount factor .88)*
  - *Energy saving is  $49 \cdot 7 \cdot 7.5 \cdot .88 = 230$  cumac-kWh*





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## ***Obligations for suppliers***

- **Global obligation : 54 TWh cumac for 1<sup>st</sup> period (2006-2009)**
  - Corresponds to evaluated saving actions potential at costs < 1ct€ / cumac-kWh
- **Obligated suppliers are :**
  - Electricity, natural gas and heat & cool, supplied energy > 400 GWh/year
  - LPG : supplied energy > 100 GWh/year
  - Domestic fuel : no supplied energy threshold
- **No obligations on other petroleum products suppliers (industry, cars), nor coal suppliers**
- **Global obligation is shared among suppliers using 2005 market share**
- **A penalty of 2cts€ per cumac-kWh is applied if target not achieved end of 1st period**



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## ***Eligibles actions***

- **Additionality rule based on actual market baseline**
- **Targets of energy saving actions : anywhere, but not EETS concerned industries**
- **Renewable energies actions : only for heat generation**
- **93 « standard » methodologies already published**
  - 25 more will be published this summer
- **Non standard methodologies :**
  - Proposed by obligated or eligible bodies
  - Validated by Ministry of Industry (<6 months)



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## ***Eligible bodies***

- **Threshold : at least 1 cumac GWh saving volume**
- **Every obligated body is eligible**
- **Other companies, only if :**
  - Energy saving action not related to main activity
  - Energy saving action induce no direct income
- **Every local community is eligible (if over threshold)**
- **Link between obligated and eligible : market or direct sale contracts**
- **Market organization : register facility on implementation**





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## ***WC French scheme : legal framework***

- **Energy Orientation Law (2005/07/13) : WC principles (obligation, additionality, RES acceptance, penalty)**
- **Three WC decrees (2006/05/23) : main rules**
  - « obligation decree » , « certificates decree » and « register decree »
- **Five sub-decrees : implementation**
  - Cumac kWh definition, eligible bodies conditions : 2006/05/30
  - 93 standardized actions methodologies : 2006/06/19 and 2006/12/19
  - Administrative certificates obtention rules : 2006/06/19
  - List of obliged bodies (2,350) and individual obligation : 2006/09/26

## ***Implemented obligations, by energy***

<b>Electricity</b>	<b>31.0 cumac-TWh</b>	<b>57%</b>
<b>Natural Gas</b>	<b>13.9 cumac-TWh</b>	<b>26%</b>
<b>Domestic fuel</b>	<b>6.8 cumac-TWh</b>	<b>13%</b>
<b>LPG</b>	<b>1.5 cumac-TWh</b>	<b>3%</b>
<b>Heat &amp; Cool</b>	<b>0.7 cumac-TWh</b>	<b>1%</b>
<b><i>TOTAL</i></b>	<b><i>54 cumac-TWh</i></b>	<b><i>100%</i></b>

***Scale of size : Assuming a mean life time of 10 years for actions, these 54 cumac-TWh correspond to an annual saving of circa 2 TWh/y. Current final energy consumption trend in France (all energies, all sectors) is circa 10-12 TWh/y.***



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## ***Implemented obligations, by supplier***

***2,350 obligated companies, from wich 2,300 domestic fuel suppliers***

<b>EDF</b>	<b>electricity</b>	<b>30,018 cumac GWh</b>
<b>Gaz De France</b>	<b>natural gas</b>	<b>13,457 cumac GWh</b>
<b>EcoFioul</b>	<b>domestic fuel</b>	<b>2,050 cumac GWh</b>
<b>Butagaz Sas</b>	<b>LPG</b>	<b>427 cumac GWh</b>
<b>Electricité De Strasbourg</b>	<b>electricity</b>	<b>377 cumac GWh</b>
<b>Antargaz</b>	<b>LPG</b>	<b>372 cumac GWh</b>
<b>Totalgaz</b>	<b>LPG</b>	<b>349 cumac GWh</b>
<b>Bollere Energie</b>	<b>Dom. Fuel / H&amp;C</b>	<b>339 cumac GWh</b>
<b>Cpcu</b>	<b>Heat&amp;Cool</b>	<b>297 cumac GWh</b>
<b>Primagaz</b>	<b>LPG</b>	<b>282 cumac GWh</b>
<b><i>TOTAL 10 biggest suppliers</i></b>	<b><i>(89%)</i></b>	<b><i>47,968 cumac GWh</i></b>



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## ***The 93 standard methodologies records approved (01/01/2007)***

<b>Housing (39)</b>	<b>Insulation : 6      Thermics (heaters, coolers,...) : 29</b> <b>Services (formation) : 1      Appliances : 3</b>
<b>Commercial Buildings (33)</b>	<b>Insulation : 7      Thermics (heaters, coolers,...) : 16</b> <b>Services (formation) : 1      Elec. equipments : 8</b>
<b>Grids (8)</b>	<b>Heat and cool grids : 4</b> <b>Public lighting : 4</b>
<b>Industry (9)</b>	<b>Industrial buildings : 5</b> <b>Process and utilities : 5</b>
<b>Transport (4)</b>	<b>Equipments (inter-modal units, bus tires) : 2</b> <b>Services (formation) : 2</b>





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## **Example : the 16 commercial buildings thermic methodologies**

BAT-TH-1	Chaudière de type Basse température
BAT-TH-2	Chaudière de type Condensation
BAT-TH-3	Plancher chauffant à eau basse température
BAT-TH-4	Robinet thermostatique
BAT-TH-5	Radiateur à chaleur douce pour un chauffage central à combustible
BAT-TH-6	Isolation d'un réseau hydraulique de chauffage
BAT-TH-7	Chaufferie biomasse
BAT-TH-8	Programmateur d'intermittence pour un chauffage central à combustible
BAT-TH-9	Optimisateur de relance en chauffage central à combustible
BAT-TH-10	Récupérateur de chaleur à condensation
BAT-TH-11	Chauffe-eau solaire collectif
BAT-TH-12	Système de variation électronique de vitesse sur un moteur
BAT-TH-13	Pompe à chaleur de type eau/eau
BAT-TH-14	Pompe à chaleur de type air/eau
BAT-TH-15	Climatiseur de classe A (DOM)
BAT-TH-16	Système de gestion technique du bâtiment pour chauffage électrique



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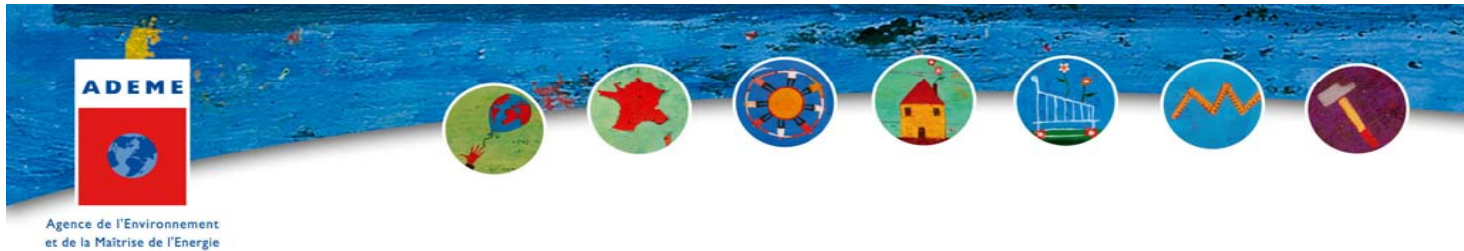
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## ***Last evolutions (on March, 2007)***

- **Registered actions on 01/01/2007 : 0.5 cumac-TWh**
  - **Actions programs need 9-15 months to be shaped : end 2007 results will be significative.**
- **Certificates register operationnal on July 1st, 2007.**
  - **Granted by Ministry of Industry to Local System International (implementation and management )**
- **Obligated bodies' own programs and bi-lateral contracts will predomine. Market should be marginal.**
- **Local communities are most active of eligible bodies.**



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## ***WC Scheme and Climate Change***

- **WC scheme : energy savings, not emissions mitigation**
  - A saved kWh of gas has the same « value » than a kWh of coal

***But ....***

- **CO2 emission reductions should be between .5 and 1.5 MtCO<sub>2</sub>/y, at end of 1st period**
  - Depending of final savings energy mix (electricity, gas, fuel)
- **Overseas departments cumac kWh get a factor 2 bonus**
  - due to predominant part of fossil fuels in electricity generation.
- **On 2nd period 2009-2012, cumac kWh's could be weighted with CO2 emission factors.**