

## *Ten-year programming plan on sustainable forms of consumption and production*

In the Grenelle 1 Law, strong commitments were made in particular on sustainable consumption and production, with the ambition of acting simultaneously on both, throughout the lifecycle of the product or service by involving all actors and anticipating social concerns. However, because of this need to operate a change of paradigm, stronger emphasis was placed on sustainable consumption, with citizen information and education acting as the lever at the heart of the mechanism.

### **Acting on consumption**

#### *Instruments for sustainable consumption*

##### Awareness raising programmes and campaigns concerning sustainable consumption and responsible behaviour

The Environment Grenelle strengthened France's commitment to access for all citizens to environmental information. A web portal providing environmental information<sup>1</sup> [www.toutsurlenvironnement.fr](http://www.toutsurlenvironnement.fr), suggested in the Grenelle 1 Law, was launched in June 2009. It tends **towards information, documents and data concerning the environment, which are available free of charge on existing public portals and sites.**

Broad dissemination of information is essential to bring change to the consumption habits of our citizens. It is for this reason that France has committed to this initiative, in particular through pioneering actions such as the **Sustainable Development Week**<sup>2</sup>, in place since 2003. This large scale awareness raising campaign, led jointly by the Ministry of Energy, Ecology, Sustainable Development and the Sea (MEEDDM) and France's National Environment and Energy Control Agency (ADEME) seeks to raise citizens' awareness as to the challenges of sustainable development through TV and radio spots and events and operations with the private and associative sectors.

On behalf of the State, the ADEME is coordinating other awareness raising operations on themes linked to eco-responsible behaviour, via the written press, TV, radio and posters. In particular, it is responsible for national commitment campaigns which take place every three years on precise themes. The main ones are "**Économies d'énergies: faisons vite, ça chauffe!**"<sup>3</sup> ("Energy savings: we need to act quickly, things are hotting up!") and "**Réduisons vite nos déchets, ça déborde!**"<sup>4</sup> ("We need to cut down on waste fast, it's overflowing!"). The ADEME's website also provides several rapid calculation tools to assess the impact of our different items of consumption (transport, heating, food, etc.) and proposes solutions in an attempt to reduce this impact.

In order to provide information directly to the citizen, the ADEME has set up nearly 200 "**Info-energy points**" throughout France, where each and every citizen can find advice to make energy savings and have their homes audited for energy consumption. At regional level, this action is reinforced by "show house" operations,

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<sup>1</sup> G1 Article 52

<sup>2</sup> [www.semainedudeveloppementdurable.gouv.fr](http://www.semainedudeveloppementdurable.gouv.fr)

<sup>3</sup> [www.faisonsvite.fr](http://www.faisonsvite.fr)

<sup>4</sup> [www.reduisonsnosdechets.fr](http://www.reduisonsnosdechets.fr)

led in association with the MEEDDM, which seek to “develop a complementary tool which allows us to mobilise public opinion to act immediately and every day in reducing the quantity of waste generated by citizens”<sup>5</sup>. Initiated as part of the national campaign “Réduisons vite nos déchets, ça déborde!”, the “show house” operation, modelling homes of different socio-professional categories, sizes and regions presents waste prevention measures in our everyday actions and waste weighing to assess actual impact.

In order to supplement this mechanism, and accompany as many citizens as possible on the road to sustainable development, MEEDDM also proposes actions, events and information and education programmes on the environment and sustainable development, for all types of audiences. As of 2005, the Ministry has published booklets targeting children, such as “Babar le P’tit Écolo” (“Babar the little ecologist”) detailing eco-responsible attitudes in our day-to-day lives and a pamphlet entitled “Le P’tit Écolo et ses mille-et-un gestes de l’Été” (“The Little Ecologist and his 1001 Summer Habits”) dedicated to the summer holiday period in particular and distributed primarily at motorway tolls. More recently, the Ministry set up a partnership around a programme for the creation of a series of educational strip cartoons “VINZ et LOU veillent au grain”<sup>6</sup> (“Vinz and Lou keep an eye on things”), which targets children specifically as future citizens and responsible actors of tomorrow. Its initial objective is to help as many young people as possible to understand that they too have a role to play, and to give them ideas for their day-to-day lives with their families and with their friends, and all this with an entertaining pitch. Also of note is MEEDDM’s summer launch, as part of the Sea Grenelle, of a campaign targeting families: “J’apprends la Mer, les lacs et les rivières”<sup>7</sup> (“I’m learning about the Sea, lakes and rivers”).

### Control of consumer information

Consumer protection policy commitments taken as part of the Environment Grenelle emphasise the need to deliver reliable information to the public<sup>8</sup>.

As part of this objective, France has created a new **Advertising Control Authority** (ARPP), which replaces the former Advertising Verification Bureau (BVP). It now comprises joint consultation bodies including environmental protection and consumer defence associations in its operations and in defining its principles. The objective is to ensure the proper foundation and pertinence of commercial claims – and environmental claims in particular –, and systematic control prior to dissemination of all forms of advertising.

After 16 months (September 2009), ARPP results have been positive<sup>9</sup>: whilst the number of adverts using environment claims continues to increase, the percentage of adverts which do not comply with prevailing ethical rules is in decline (annual ARPP-ADEME survey). The Grenelle 2 Law, currently going through the Senate, should allow criteria for the judgement of commercial claims on products to be assessed in even greater detail, including environmental and sustainable development components, by explaining the complex notions of substantial impacts on products and service lifecycles<sup>10</sup>.

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<sup>5</sup> [reduisonsnosdechets.fr/html/agir\\_foyer.asp#](http://reduisonsnosdechets.fr/html/agir_foyer.asp#)

<sup>6</sup> [www.developpement-durable.gouv.fr/\\_v12.php3](http://www.developpement-durable.gouv.fr/_v12.php3)

<sup>7</sup> [www.japprenslamer.fr/japprenslamer](http://www.japprenslamer.fr/japprenslamer)

<sup>8</sup> G1 Article 54

<sup>9</sup> [www.developpement-durable.gouv.fr/article.php3?id\\_article=5862](http://www.developpement-durable.gouv.fr/article.php3?id_article=5862)

<sup>10</sup> Article 85 of the Grenelle 2 Bill, completing article L.214-1 of the Consumer Code, by: “requirements of

## Preparation of educational programmes

In order to create the conditions required for a change of paradigm in favour of sustainable forms of consumption, citizen education and training is required. It is for this reason that, since September 2004, education in sustainable development is one of the integral parts of initial training for pupils from primary school to upper secondary. The new programmes, launched at the beginning of the 2009/2010 school year, apply the principle according to which education in sustainable development is included “*in all disciplines and integrated into the day-to-day operations of schools*”<sup>11</sup>. In order to support this spread, both inside and outside schools, the “**L'École agit! Pour le développement durable**”<sup>12</sup> campaign (“Schools are acting in favour of sustainable development”), launched in 2008, is intended as a global platform for resources and funding to support school projects.

In agricultural schools, particular emphasis is placed on learning techniques which respect the environment. Generally speaking, basic vocational training efforts target the integration of principles of sustainable development into educational programmes adapted to each profession. Vocational training is also at the heart of these considerations. On the one hand, the **commitment to territories and professional sectors involved in green growth, announced in October 2009 by the government**, provides for vocational training mechanisms dedicated to sustainable development. Also, the Grenelle 1 Law paves the way for the creation of a high-level institute to train decision makers and top managers in the various aspects of sustainable development.

Higher education establishments are also involved in a sustainable development approach. In this respect, for the new school year of 2009/2010, they were asked to draw up a “Green Plan” for their campuses. Universities and *Grandes Ecoles* will be able to apply for label status on the basis of sustainable development criteria<sup>13</sup>.

## ***An exemplary State in terms of sustainable consumption: Public contracts which respect the environment***

Given the importance of public procurement in the nation's GDP (around 10%) and the knock-on effect it has on the market, numerous measures and initiatives have been taken in France over recent years to ensure that attention is paid to sustainable development in public procurement.

Since August 1<sup>st</sup> 2006, the **Public Contracts Code (CMP)** explicitly integrates sustainable development according to article 6 of the Constitutional Charter for the Environment. This reform in the CMP is part of transposition of the European directive of March 31<sup>st</sup> 2004, many of whose provisions allow the integration of environmental and social criteria to be included at the key stages of the public procurement process (definition of needs, specifications and conditions of execution, information required of applicants as to their know-how and bid selection).

The updating of the National Sustainable Development Strategy (SNDD) in 2006 also made this principle of exemplary behaviour of the State a cornerstone, and prepared

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*precision, verification and accountability of substantial elements of product lifecycles in the preparation of claims of an environmental nature or using the term 'sustainable development' or its synonyms when these claims are presented on products intended for sale to consumers or as part of their marketing in the form of references on packaging, publications, advertising, telemarketing or insertions in digital and electronic publications.”*

<sup>11</sup> Article 55 of the Grenelle 1 Law

<sup>12</sup> [www.lecoleagit.fr](http://www.lecoleagit.fr)

<sup>13</sup> G1 Article 55

the adoption of a **National Action Plan for sustainable public procurement** in March 2007. The objective of the plan was to make France one of the most committed European countries to the implementation of sustainable development in the public procurement process by 2009.

This plan and the Environment Grenelle workgroup entitled "Adopting sustainable production and consumption modes: agriculture, fisheries, agro-foods, distribution, forests and sustainable use of territories" were the origin of the December 3<sup>rd</sup> 2008 circular on State exemplarity in respect of sustainable development in the activities of its services and public establishments. Based on the idea that the State must "*use its own operational means to strengthen and promote the emergence of more sustainable forms of production and consumption*", the circular presents 20 fact sheets with orientations relating to each product family in order to allow public procurement agents to integrate sustainable development criteria into their purchase specifications.

The circular also involves the implementation of a "bonus-malus" mechanism for Ministry spending. An overall budget of 100 million Euros will be held back from their budgets and reserved to the most parsimonious amongst them. The implementation circular for this mechanism will be published at the end of 2009. An extension to the measure, to include devolved services and public establishments, will operate as of 2010.

France is seeking to go further in its sustainability criteria for the operation of its administration, and in particular in the construction and transport sectors. In the construction sector, the Prime Minister's circular of January 16<sup>th</sup> 2009 on the nation's real estate policy includes a renovation programme which meets the Environment Grenelle objectives. It primarily concerns energy audits and combining several types of actions to reduce energy consumption by at least 40% and greenhouse gas emissions in State buildings by at least 50% within the next ten years (see part 2 § 2.1.3). In the transport sector, article 44 of the Grenelle 1 Law announces that "*in line with Community law, the State will examine the means of exploiting the opportunities opened up by the public procurement code to take the environmental impact of products and services linked to transport into account*".

In order to facilitate this approach, information tools have been made available to public-sector purchasers, and in particular a website dedicated to eco-responsibility<sup>14</sup>, along with a series of eco-responsible purchasing guides published by the Permanent Market Survey Group entitled "Sustainable Development, Environment", under the responsibility of the Ministry of the Economy, Industry and Employment.

The introduction of these sustainability criteria into public procurement offers a powerful lever to heighten consideration for the environment and sustainable development by companies on the basis of State exemplarity, introducing lifecycle and overall cost approaches into public spending patterns.

## **Sustainable consumption and production in national priority areas: matching up supply and demand**

### [The implementation of an ecological bonus-malus system](#)

One of the key measures of France's voluntary sustainable consumption policy is undoubtedly the launch of the *eco-pastille* on January 1<sup>st</sup> 2008, also referred to as

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<sup>14</sup> [www.ecoresponsabilite.environnement.gouv.fr](http://www.ecoresponsabilite.environnement.gouv.fr)

the ecological bonus-malus scheme, for the purchase of new vehicles. This mechanism reduces or increases the cost of acquisition of CO<sub>2</sub>-emitting vehicles in application of the polluter-pays principle<sup>15</sup>. The objective is to promote the acquisition of less-polluting vehicles through a “price signal” mechanism. Since January 1<sup>st</sup> 2009, for the most polluting vehicles, part of the malus is repaid annually, and not only at the time of purchase. And the mechanism will become stricter over time: as of 2010, sanction thresholds of CO<sub>2</sub> emissions will be decreased each year to maintain the emission reduction effort. This measure is a real success since it has switched over 40% of the automobile market to more environmentally “respectful” cars, which of course encourages manufacturers to be more inventive than their competitors in creating lower-emission vehicles.

Furthermore, with the launch of the “hybrid and electric vehicles” plan, a super-bonus of 5,000 Euros will allow French people to acquire hybrid and electrical vehicles at more reasonable prices.

### Environmental product information

Environment information on products and services is one of the key projects resulting from the Environment Grenelle and one of the action triggers most promoted by France. The major objective under the Grenelle 1 Law is to “*generalise environmental information displayed on products and services*”<sup>16</sup>. It provides for the development of “*mention of environmental impacts of products and services in addition to price display*”. The consumption code is to be modified accordingly<sup>17</sup>.

In order to accompany professionals in the implementation of this measure, an ADEME-AFNOR platform<sup>18</sup> has been set up by the ministry responsible for sustainable development (MEEDDM), with the creation of ten or so workgroups per type of product, piloted by voluntary professional federations. The purpose of this participative process, bringing together over 500 contributors, is to draw up a methodological guide for the calculation of the carbon equivalent content in a product or service, thereby mutualising the costs of implementing this measure and identifying other pertinent environmental impacts for each group of products concerned and methods used to calculate them.

These calculations will serve as a reference for the preparation of displays providing environmental information and in particular the carbon content of products. As of January 2011, the decrees will require environmental displays to be based on these reference sets. Finally, companies having carried out more in-depth lifecycle analyses may be allowed to use them, but will be invited to make them public.

Beyond the legislative process, the MEEDDM is also committed to supporting and rewarding individual initiatives in this area. Indeed, within the framework of the implementation of the Environment Grenelle, several leaders from major French retail chains have developed voluntary environmental labelling initiatives for their products.

These initiatives have been supported and rewarded by the State, which has made

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<sup>15</sup> Annual tax of €160 applicable as of January 1<sup>st</sup> 2010 to vehicles emitting over 250g of CO<sub>2</sub> per km, the amended Finance Law of 2008.

<sup>16</sup> G1 Article 54, responding to commitment No. 217 of the Environment Grenelle.

<sup>17</sup> Article 85 of the Grenelle 2 Law: “*As of January 1<sup>st</sup> 2011, the consumer must be informed of the content of equivalent carbon in products and packaging as well as the consumption of natural resources or the impact on the natural environment that are attributable to these products throughout their product lifecycle through marking, labelling, posters or any other appropriate procedure.*”

<sup>18</sup> French normalisation agency

the commitment alongside the professionals from the sector. Thus, several voluntary commitment conventions have been signed as part of the Grenelle<sup>19</sup>, such as that signed between the MEEDDM and the Association of Construction Products Industries (AIMCC) for environmental and sanitary labelling on construction products. A similar convention was signed by the MEEDDM and professionals from the property sector for displaying energy performance in real estate ads.

#### The implementation of a workgroup on social information displayed on products

Beyond environment-related information on product content, France is now looking at social information<sup>20</sup>. A multipartite workgroup financed by the MEEDDM has been set up within the AFNOR to prepare a guide of good practice. This seeks to promote transparency of information on the social and employment conditions under which products are manufactured. The conclusions of this workgroup should be made public at the end of 2009.

#### Extending energy labelling to other product categories

In France, the introduction of energy labelling further to directive 92/75/CEE of the Council of September 22<sup>nd</sup> 1992 created an obligation for most household appliances to be labelled, assessing their energy efficiency on a scale from A (optimal) to G. Appliances concerned are refrigerators and freezers, dishwashers, ovens, domestic air conditioning and electrical bulbs. Because of the success of this labelling programme, which rapidly oriented the market towards the best-performing products, higher performance categories have been added for certain products (A+ and A++), and a specific directive<sup>21</sup> was adopted in 1999 by Europe for energy/CO<sub>2</sub> labelling for cars.

France made energy labelling a key measure of its **2004-2012 Climate Plan** in pursuit of its Kyoto Protocol commitments. Its success is today broadly recognised throughout the European Union since the market has shifted towards the higher labelling categories (A to A++), with industrialists second-guessing the expectations of consumers in terms of energy performance.

France considers that energy labelling is a central instrument of Community policy to make consumption and production attitudes more sustainable and, in this respect, strongly supports a broader scope for the directive which is currently being negotiated to include other products and, where applicable, other relevant essential resources. France believes that environmental labelling tools for products should continue to develop apace. They provide information that consumers are increasingly expecting, and raise awareness as to the environmental and climatic impacts of mass consumption products. This is the interpretation of the conclusions adopted by the Council of Ministers of the Environment of the EU, under the French Presidency of the EU, on December 5<sup>th</sup> 2008, on the theme "Sustainable consumption and production".

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<sup>19</sup> G1 Article 40 of Grenelle 1 Law: » *It is planned to submit construction and furnishing products as well as floor and wall coverings, paints and varnishes and all products intended to or resulting in the emission of substances into the atmosphere to compulsory labelling as of January 2012, in particular for emissions and volatile pollutant content.* »

<sup>20</sup> Social information is defined by the AFNOR as a set of means for communicating social information to the consumer on the product, "the social nature understood in its widest sense, i.e. social, societal and ethical considerations".

<sup>21</sup> 1999/94/EC

### Identifying the 20% most virtuous products through eco-labels

Eco-labels distinguish the most environmentally friendly products and services. Their criteria guarantee low environmental impact throughout their lifecycle whilst ensuring suitable use of products and services. Two eco-labels are issued in France: the NF Environment stamp for the French market and the European Eco-label for the European Union market. The objective is to identify the 20% most virtuous products in each category. Even though only 1% of the most virtuous products are today labelled, the growth in turnover of eco-labelled products<sup>22</sup> confirms a structural success, since the results did not dip with the economic crisis.

### Certification of companies: helping the consumer pick out eco-responsible companies

France is currently leading a reflexion on labelling of eco-responsible companies, as detailed below. Also, the Grenelle 1 Law pays particular attention to environmental certification of agricultural operators. Thus, in article 31, the State positions the objective of involving 50% of farms in this approach by 2012, specifying that *"environmental recommendations will be deliberately integrated into products under information on identification of quality and origin"*.

### Conventions on voluntary commitments taken by different professional sectors

As well as these public regulation and labelling initiatives, the Environment Grenelle added a system of recognising voluntary commitments of companies grouped into sectors through conventions signed with the Minister for the environment. The representatives of professional sectors commit to implementing environmental objectives defined by the convention, which is a veritable roadmap for actors from the sector. Through his signature, the Minister recognises voluntary commitments and in turn undertakes to facilitate their execution. More than 20 conventions have been signed to date. The convention on commitments taken by companies from trade and distribution, signed in January 2008, is particularly emblematic of a simultaneous action in favour of sustainability in production and in consumption.

## Acting on production

### *Conventional public policy tools in favour of more environmentally friendly production*

#### Encouraging the setting up of more environmentally friendly production

In order to promote more environmentally friendly forms of production, numerous measures exist at national and Community levels.

First of all, dissuasive measures, such as the **General Tax on Polluting Activities** (TGAP), apply the polluter-pays principle. The TGAP applies to polluting substances emitted into the atmosphere<sup>23</sup> and lubricants<sup>24</sup>.

Secondly, we find incentive measures in favour of companies, such as exceptional

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<sup>22</sup> [www.ecolabels.fr/fr/quelques-chiffres](http://www.ecolabels.fr/fr/quelques-chiffres)

<sup>23</sup> Sulphur dioxide and other sulphurous compounds, hydrochloride acid, protoxide and nitrogen dioxide, non-methane hydrocarbons and total dust in suspension – see Customs Code, 266 section 6.

<sup>24</sup> With the exception of biodegradable, non eco-toxic lubricants and those of renewable origin respecting criteria defined for the Community ecological label on lubricants in Decision 2005/360/EC of the European Commission of April 26<sup>th</sup> 2005 – see Customs Code, 266 section 6

amortisation<sup>25</sup> applicable to anti-pollution, anti-noise and water-savings equipment. Strict regulations concerning production processes have also been taken with a view to encouraging the development and use of green technologies. The European **REACH** regulation requires the chemical industry to review the design and use of chemical products in order to progressively secure a drastic reduction in their quantities.

Along the same lines, in order to act at source on water pollution, the law on water and aquatic environments, promulgated on December 30<sup>th</sup> 2006, provides the administration, territorial authorities and actors involved in the water industry in general, with tools to improve the quality of water, and by 2015, achieve objectives of a good ecological quality established by the European Framework Directive (EFD) of December 22<sup>nd</sup> 2000. The Grenelle adds to this framework law by proposing to improve protection of water capture points against nitrates and other sources of pollution<sup>26</sup>.

Finally, to accompany enterprise, and in particular SMEs, the ADEME is organising conferences, disseminating good practice forms and tools, such as the “**production audit**” software, available online, which allows them to make their own diagnosis of environmental shortcomings in their production processes.

### Promoting social responsibility of companies

The Societal Responsibility of Companies is defined in a 2001 European green paper as “*voluntary integration, by companies, of social and environmental concerns in their commercial activities and relations with their stakeholders*”. Initially, the Societal Responsibility of Companies was, more particularly, sponsored in France by the Employment Ministry, but with the Environment Grenelle, the MEEDDM has been extensively involved in reflexion in this area.

In 2001, France adopted a hitherto unseen regulation on this theme. Law No. 2000-420 of May 15<sup>th</sup> 2001 on **New Economic Regulations** (the NRE Law) made it legally compulsory for French companies listed on a regulated market to report on the social and environmental management of their activity<sup>27</sup> in an annual management report open to public consultation.

To go further, the Grenelle laws introduce several measures and projects to be considered with a view to promoting the Societal Responsibility of Companies<sup>28</sup>. These measures seek to extend this obligation for information to all companies employing more than 500 people<sup>29</sup>. The government is also committing to a communication effort to engage companies in sustainable development. The idea is to encourage professional branches to establish sectoral reference sets and, through suitable labelling, to recognise companies which have good social and environmental practices.

The Grenelle 1 Law also states France’s desire to enact the principle of “responsibility of parent companies in respect of their subsidiaries in the event of serious damage to the environment”<sup>30</sup> both at Community and international levels and to introduce “environmental criteria, and in particular those relating to biodiversity, in the actions

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<sup>25</sup> General Tax Code, article 39, section 5 DA/E/F/FC

<sup>26</sup> G1 article 27

<sup>27</sup> Article 116 of Law No. 2000-420 of May 15<sup>th</sup> 2001 on New Economic Regulations

<sup>28</sup> G1 article 53

<sup>29</sup> article 83 of the “Grenelle 2” Bill

<sup>30</sup> G1 article 53

of international financial, economic and commercial institutions". Thus, France is committing to proposing a "working framework at Community level to create social and environmental indicators which allow a comparison between companies".

Also, to satisfy the specific needs and difficulties of SMEs in particular, a reflexion is in progress as to the possibility of developing a French platform on the Societal Responsibility of Companies. This project, which is part of the Environment Grenelle conclusions, would seek to help French SMEs to implement the regulations concerning them and to go further still by developing good practice guides and publicising voluntary initiatives.

One of the major levers impacting companies' responsible behaviour is funding. The Socially Responsible Investment (SRI) seeks to integrate social and environmental criteria, as well as financial ones, into the management of funds. The development of SRI is one of the levers identified in the future National Sustainable Development Strategy 2009-2012, which is currently being finalised. As part of the Environment Grenelle, the State has committed to promoting SRI and has included this commitment in the Grenelle 1 Law.<sup>31</sup> Institutional funds, such as the Pension Reserve Fund (FRR) and the Additional Retirement Fund of the Public Function (RAFP), have long term objectives which correspond to sustainable development values. They represent major financial resources which will progressively tend towards SRI.

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<sup>31</sup> G1 article 53

### Favouring eco-design of products in support of companies

In terms of eco-design, progress has been made at the European level through Directive 2005/32/EC on the eco-design of energy using products (EuP), such as electrical and electronic equipment, lamps and heating equipment. This directive, which was amended and extended in 2009 under the French and Czech presidencies, establishes minimal eco-design requirements at European level. For the moment, these requirements are primarily based on the criterion of energy consumption during the period of use of the product. This phase has been identified by lifecycle analyses as being the most important for these product categories. Thus, an energy consuming product must comply with the requirement to obtain access to the European domestic market. More advanced benchmarks exist for industrialists wishing to go further still. A more generic eco-design approach is also promoted through this directive.

In France, support to the implementation of eco-design is primarily covered by the ADEME. The dissemination of information and events on this topic are one of its key action priorities. The agency also proposes eco-design training for professionals as well as personalised aid in eco-design diagnosis, by financing the contribution of a consultant in companies, with the remit of pinpointing progress points and action plans to achieve them.

### Encouraging environmentally respectful agriculture

Certain regulatory and financial measures concern agricultural activities more particularly. The tax on pesticides which are the origin of diffuse pollutions has thereby been progressively increased. The target is to give a price signal to farmers purchasing this type of substance with a view to limiting their use.

The revenues from this tax was designed to finance the Ecophyto 2018 plan, whose objective is to reduce by half the use of phyto-sanitary products, for which there is no substitution, by 2018, whilst respecting Environment Grenelle recommendations (commitment No. 129). This makes the plan one of the levers for the implementation of the Grenelle 1 Law in which the State has established the objective of *"arriving at a level of organic agricultural production which is sufficient to sustainably meet increasing consumer demand and the objective of developing the use of organic products in public canteens or low environmental impact seasonal products, judged on the basis of their conditions of production and distribution"* (article 31). In order to achieve this, several tax incentives have been introduced. Properties growing organic crops can, through a decision of the local authority concerned, be exempt from Land Tax on non-built properties (TFNB) for five years as of January 1<sup>st</sup> 2009. Agricultural concerns can also benefit from a tax credit if at least 40% of their revenues come from agricultural activities associated with organic production.

### ***The green technologies strategy: creating supply and the right conditions for a developing market***

#### Consolidating conventional environmental sectors: water and waste

France is very well placed in these traditional sectors thanks to a national public service concession model involving third party companies in these fields. As part of the Environment Grenelle, France has committed to restoring 2/3<sup>rd</sup> of its water surfaces (rivers) by 2015. Measures have been taken to accelerate the normalisation of water treatment plants and, through technology, to limit the pollution of waterways and water tables: apart from the implementation of the ERU action plan

launched by Jean-Louis Borloo on September 14<sup>th</sup> 2007, two framework conventions on loans were signed with the Caisse des Dépôts et Consignations (1.2 billion Euros for Metropolitan France and 300 million Euros for overseas territories). These loans are major levers which will support water treatment station compliance work and will have a major impact on the ecological quality of our waters.

In terms of waste treatment, the French strategy involves developing technologies which encourage more recycling of waste into “secondary raw materials” (SRM). In 2006, 12 million tons of domestic secondary raw materials were generated, of which 5 million tons of steel (one quarter of production), 5 million tons of paper and cardboard (half of production) and 2 million tons of glass (one third of production). In order to develop their use, the priority is given to the development of industrial facilities capable of using them (steel, metallurgy and paper industries) which will need the suitable technologies.

### Developing renewable energies

The Environment Grenelle established an ambitious objective of 23% of renewable energies in final energy consumption by 2020, based on a scenario of the development of very varied renewable energy activities<sup>32</sup>.

In order to achieve these objectives, the MEEDDM launched the **EnR Plan** (renewable energies) on November 17<sup>th</sup> 2008. The Plan focuses on 50 operational measures taken from the Environment Grenelle with a voluntary policy in all sectors concerned. It is accompanied by a “renewable heat fund” to the tune of one billion Euros for the period 2009-2011. Four hundred million Euros are also earmarked for the creation of a fund dedicated to pre-industrial site setups allowing experimentation with ideas developed through research.

In the different sectors (solar, wind, geothermics, marine energy, etc.), France's renewable energies development strategy involves supporting demand with State guarantees, encouraging the creation of a national supply and establishing regulatory objectives to bolster the creation of such a market.

**In the solar field**, France's ambition is to play a leading role worldwide. In order to activate the French market, accelerate research and build a real solar industry, a call for tenders was announced in May 2009 for the construction of at least one solar power station in each French region by 2011 with total output of 300MW. A tariff support mechanism offering long term visibility is also in place, with very attractive buyback prices. For private individuals, installation formalities have been simplified, including barriers to planning permission. In order to encourage the development of the market, the State is leading the way by planning to install photovoltaic panels on roofs of buildings included in its energy renovation plan.

**In the biomass field**, a third call for tenders was launched in December 2008 by the Energy Regulation Commission for the construction of electricity power stations fuelled from biomass for a total output of 250MW<sup>33</sup>: 106 applications have been filed, representing a total output of 936MW.

**On geothermics**, the objective is to multiply energy production six-fold by 2020 by equipping two million households with heat pumps and a large scale launch of programmes in Ile-de-France, Alsace, Aquitaine, Midi-Pyrénées and Centre. Outside

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<sup>32</sup> Hydraulic, including pumping; “non-renewable” pumping; wind; marine energies; photovoltaic solar; thermal solar; deep geothermics; heat pumps; renewable solid urban waste; energy wood and crop residues; biogas; biofuels; non-renewable solid urban waste.

<sup>33</sup> After the success of the last call for tenders which saw 22 projects being selected for a total power output of 300 MW

Metropolitan France, the Géothermie Bouillante site in Guadeloupe has already seen some success by providing 6% of the island's electricity, with nearly 90% availability at a substantially lower cost than fuel powered power stations.

**On wind power**, the Secretary of State has confirmed an attractive buyback tariff fixed in 2006 (8.2c of €/kWh) and also announced improvements to territorial planning, the regulatory framework and local consultation. The objective is to avoid the fragmentation of territories and limit impact on landscapes, heritage and the quality of life of locals. The development of sea-based wind farms will be facilitated thanks to simplified procedures and the creation of a consultation and planning body per seaboard with all stakeholders.

Efforts **in terms of hydroelectricity**, the biggest source of renewable electrical energy in France (around 12% of electricity production), will focus on modernisation and optimisation of existing equipment as part of a sustainable development approach. Competitive tendering for hydroelectric concessions will be an opportunity to select operators on the basis of the best energy efficiency criteria and ambitious measures for restoring water quality.

Finally, the **Blue Energy Plan** was launched after the Sea Grenelle, at the end of July 2009. The objective is to develop marine energies to the tune of 6,000MW by 2020. The first practical operations will begin in 2012. A development pilot site will be created within each authority of coastlines offering this energy potential. A budget of 50 million Euros will be allocated to financing these initiatives.

To support the development of the renewable energies market, the "sustainable development" **tax credit**, which supports in particular the acquisition of renewable energy equipment by private individuals (solar water heaters, heat pumps, photovoltaic panels, etc.), has been extended through to 2012. Furthermore, powerful new incentive tools, set up to support thermal renovation in buildings (the 0% interest eco-loan, exemption from Land Tax, etc.) will also promote the deployment of renewable energies.

### Promoting emerging high potential sectors

Amongst the emerging sectors, France has particularly invested in the promotion of the technology required to develop decarbonised vehicles, offshore wind energy, solar energy and capture and storage of CO<sub>2</sub>.

The **capture and storage of carbon** is still in its experimental phase. The Environment Grenelle predicts that any construction of a coal fired power station must be designed to be equipped with a carbon dioxide capture and storage facility<sup>34</sup>. Furthermore, mastery of such techniques, and in particular carbon capture through vegetation, has become a sustainable development research priority<sup>35</sup>. France is establishing a solid position for itself in the sector, through the Institut Français du Pétrole (IFP), the National Research Agency (ANR) and the National Scientific Research Centre (CNRS), who are carrying out extensive research on capture, transport and storage of CO<sub>2</sub>. Elsewhere, the IFP is the leading body of the European "Castor" project<sup>36</sup> which targets the geological storage of carbon. Finally, French companies, such as Total, Air-Liquide and Gaz de France, have committed to many storage projects, including one for 120,000 tons on the Lacq site.

Further to the Environment Grenelle, a new crossover strategy for the promotion of

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<sup>34</sup> G1 article 19

<sup>35</sup> G1 article 22

<sup>36</sup> [www.co2castor.com](http://www.co2castor.com)

eco-technologies has been set up. The Ecotech 2012 plan<sup>37</sup> was launched in December 2008 by the MEEDDM and functions around several priorities. Firstly, a partnership between the State and companies from the sector was set up to define a public-private strategy for eco-industries in the form of a strategic committee. In the same spirit of consultation, the State has begun an exercise to define a statistical reference set to improve our knowledge of the sector, a prerequisite to structuring it.

In order to support and reinforce innovation in this area, the State has launched a call for research and development (R&D) eco-technological projects, for a value of 30 million Euros over three years, focusing in particular on prevention, measurement and combating local pollution in partnership with Oséo<sup>38</sup> and the ADEME. It will finance 50 research and development projects on the technologies concerned.

### Developing eco-efficiency and energy performance

Energy performance and the sustainable use of resources is an area where eco-technologies can provide substantial improvements. Promoting energy performance and eco-efficiency means acting on the design of products and processes in such a way that they become as economical as possible in energy and raw materials, whether during the manufacturing phase or when in use. It is also about developing technological tools providing better control of energy consumption throughout the product lifecycle. The Environment Grenelle has established ambitious objectives in terms of energy spending control. It is for this reason that research programmes have targeted as particular priorities the most energy consuming sectors.

In practical terms, this has already resulted in the setting up of competitiveness clusters (I-trans, advanced mobility and transport cluster<sup>39</sup>, vehicle of the future cluster<sup>40</sup>, Movéo<sup>41</sup>), bringing together companies, research centres and training organisations in a given locality committed to a partner-based approach designed to engender synergies around joint innovation energy performance and eco-efficiency projects. Research programmes have also been set up, such as PREBAT<sup>42</sup> in the building sector.

The State has introduced measures to incentivise research and use of alternative, more sustainable materials. For example, the 2009 Finance Law<sup>43</sup> doubles the General Tax on polluting activities (TGAP)<sup>44</sup> for extraction equipment. The purpose is to encourage the use of renewable materials or granulates from recycled materials from demolition sites. Companies are also encouraged to review the entire design process of their products. In this respect, ADEME is leading several projects to analyse packaging according to a lifecycle approach and to advise manufacturers on how to modify it. The ADEME is also financing research to support eco-design through calls for R&D projects<sup>45</sup>.

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<sup>37</sup> [www.developpement-durable.gouv.fr/article.php?id\\_article=3487](http://www.developpement-durable.gouv.fr/article.php?id_article=3487)

<sup>38</sup> [www.oseo.fr](http://www.oseo.fr)

<sup>39</sup> [www.pole-mta.com](http://www.pole-mta.com)

<sup>40</sup> [www.vehiculedufutur.com](http://www.vehiculedufutur.com)

<sup>41</sup> [www.pole-moveo.org](http://www.pole-moveo.org)

<sup>42</sup> [www.prebat.net](http://www.prebat.net)

<sup>43</sup> G1 article 29

<sup>44</sup> Increase from €0.10 per ton to €0.20 per ton

<sup>45</sup> Seventeen technological, methodological or socio-economic research projects were selected in 2008.

### Green technologies to accompany the shift in French industry

Beyond the eco-design of products, green technologies can also benefit the manufacturing process itself. Thus, industrial processes can be made greener thanks to the development of specific sectors such as green chemistry. This activity seeks to replace petroleum-based molecules by vegetable-based molecules in everyday products: solvents, plastics and tensio-active products. This makes them biodegradable and as a result less harmful to the environment. The Axelera<sup>46</sup> competitiveness cluster in Lyon is developing the green chemistry segment and knowledge base, in parallel to the industries and agro-resources competitiveness cluster<sup>47</sup> in Picardie.

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<sup>46</sup> [www.sophia-antipolis.org/poles2competitivite/presentation-poles/Chimie-environnement-Lyon.htm](http://www.sophia-antipolis.org/poles2competitivite/presentation-poles/Chimie-environnement-Lyon.htm)

<sup>47</sup> [www.iar-pole.com/fr/index02.php](http://www.iar-pole.com/fr/index02.php)

## ***General conclusion***

With the Environment Grenelle, the French State has engaged with all actors to develop and integrate its sustainable development policy.

This mobilisation is particularly visible in the area of sustainable consumption and production. The Environment Grenelle has mobilised actors, stimulated policies and commitments whilst offering a coherent framework to actions undertaken.