



REPORT FROM THE FRENCH AUTHORITIES

Subject: Response from the French authorities to requests for information on the Renewable Energy Action Plan

The French authorities would like to respond as follows to the questions raised by the Commission.

Table 2

- *Why is the figure for point "(A) Share of energy from renewable energy sources (RES) in gross final consumption of energy in 2005 (%)" indicated at 9.6 % in the action plan although it is 10.3 % in the Directive? This should be corrected.*

The difference between the percentages given for 2005 by the national action plan and by the Directive is explained by the **revision of the statistical data used**.

The table in Annex 1 to the Directive comes from the draft Directive proposed by the Commission in January 2008: the figure of 10.3 % has therefore been calculated by the European Commission on the basis of the data provided by France before 2008, and clearly prior to the definition of the calculation method to be used by the Directive. In addition, as for all statistical data, the data relating to the consumption of renewable energy have been updated and corrected since that date, which explains the new percentage of 9.6 % presented in the action plan.

In particular, **the domestic consumption of dendroenergy has been revised**. This was based on a survey carried out every five years. The data for 2005 used for the calculation for the percentage in the Directive come from an estimation carried out on the basis of the results of the survey for the year 2001. The following survey, relating to the year 2006 and carried out in 2007, enabled an update of the actual consumption for 2005 in spring 2009. The updated consumption levels, used for drawing up the action plan, therefore show a reduction of 0.85 Mtoe compared to previous estimations, which represents around 0.5 % of the final gross energy consumption for France in 2005.

These remarks have already been communicated to the Commission during the Eurostat meetings.

Nevertheless, in order to ensure accuracy and to reflect the reality of French energy consumption, and in compliance with the calculation method adopted by the Directive¹, France wishes to retain the percentage of 9.6 % in its action plan. This percentage may continue to develop in line with the corrections which will be made to the calculation for the consumption of final renewable energy for France in 2005, or modifications to the official methodology, for example for the standardised hydraulic production of mixed pumping stations.

While this adjustment of the starting point has obliged France to develop a more strict action plan, the final target of 23 % in 2020 remains unchanged.

¹ It is in fact only possible to measure the progress using a constant methodology: it is necessary that the starting point in 2005 and the annual stages of French trends between 2005 and 2020 are calculated using the same methodology.

Table 3

- *The figures for minimum trajectories (% as well as ktoe) do not correspond to the calculation by the Commission services, probably due to an incorrect figure used for the share of energy from RES in the gross final consumption of energy in 2005 (%) (9.6 % in NREAP, 10.3 % in RED). This calculation should be corrected.*

As previously indicated, France estimates that it is essential to work on actual and adjusted data, thereby conserving in its action plan the figure of 9.6 % for the share of energy produced from RES in the final gross energy consumption for 2005, a figure which results from the latest verified statistics. In this context, the minimal trajectories presented in the action plan are correct.

Table 4a:

- *The value for 2018 of "(G) Expected RES consumption adjusted for target (D) -(E) + (F)" is incorrect. This should be corrected.*

The error has been corrected in the attached action plan. It did not affect the other tables, which do not therefore require correction.

Authorisation procedures (Q4.2.1)

- *In Annex 1, the plan refers to the future Grenelle II law, which will make some wind energy projects subject to the ICPE authorisation regime. The Commission is aware that this law was passed in July 2010. Please provide justifications for making wind projects subject to the ICPE authorisation regime, which is an authorisation procedure designed for installations that present risks for the environment or to human health.*

At the current time, the procedure in advance of the commissioning of wind-turbines essentially rests on the procedure for planning permission. This is already a complete authorisation (permission) procedure. The issuing of the latter by the prefect is preceded by an impact study and a public inquiry for wind-turbines of more than 50 metres. This procedure has proved to be the source of much litigation - to the disadvantage of the project sponsors.

Wind farms are likely to provoke nuisance in their immediate environment (for example: disruption of aerial navigation monitoring radar and meteorological observation radars, noise, effects on aerial fauna, ejection of ice, disruption of television reception, etc.). To deal in a more proportionate fashion with these potential nuisances and to reassure the citizen as to the acceptability of these wind-turbines, it is justified to apply to wind farms the legislation for the Installations Classified for the Protection of the Environment (ICPE).

The Environmental Code (Art. L511-1) provides that: "*The provisions of this article apply to factories, workshops, depots, work sites and, in general, to all installations operated or owned by any public or private person or entity, which might present hazards or **inconveniences** for the **well-being of the surrounding area**, or for public health and safety, or for agriculture, or for **the protection of nature** and the environment, or for the **conservation of sites** and monuments or elements of the archaeological heritage.*"

The ICPE legislation therefore provides a proven legal context, which in particular enables the definition, for establishment and operation, of prescriptions of a regulatory nature, whether general or specific to a given wind-farm, clarifying the conditions for the development of projects, and rendering the authorisations issued legally more robust - to the benefit of project sponsors, particularly in respect to the strong increase in litigation.

When wind-turbines are effectively subject to the ICPE legislation (on the entry into force of the nomenclature decree), planning permission will be assessed as regards compliance with the provisions of the planning regulations, and will be relieved of numerous technical studies which will from that point be carried out in the context of the ICPE authorisation. The authorisation procedure, comprised of the ICPE authorisation with technical studies and the simplified planning

permission, will therefore substitute almost entirely for the current planning permission procedure which involves the technical studies.

- *The procedures described for obtaining permits and authorisation point to the involvement of a large number of different administrative bodies, and in particular those responsible for planning, for the issuing of environmental permits, and municipalities etc. It is not explained in the plan how coordination between the different authorities could be improved. An explanation should be provided, as should answers to sub-questions (k), (l) and (m) regarding fees, guidance and training.*

Territorial planning and the definition of regional strategies are independent of the procedures for obtaining permits and authorisation.

At a regional level, strategic documents are developed in consultation with all stakeholders and local and regional authorities concerned: the Regional Climate, Air and Energy Plans (les schémas régionaux climat-air-énergie) (SRCAE).

At a municipal level, the planning documents and operational planning documents (in particular the local town plan - PLU) are developed in association with the State, which in the context of the notification of the public ("porter à connaissance") ensures taking into account of the various existing and therefore known servitudes; the State carries out an a posteriori legality check on these same documents. These planning documents (together with the ZACs - urban development zones (zone d'aménagement concerté), are under the responsibility of the mayors and are regulatorily subject to public inquiry - all concerned stakeholders, individuals, companies, professionals in the renewable energy sector and associations may submit their comments on the draft planning document, either through the register made available to the public or by letter to the members of the enquiry commission or to the investigating commissioner.

For each procedure for obtaining a permit or authorisation, the deposit of a single application is required, and the instructing service of the request transmits it to the different authorities concerned, including those in charge of planning.

As an example, in the context of the ICPE legislation, which will soon apply to wind-turbine installations, the prefecture of the department is the sole location where the applicant must deposit their application. After checking the completeness of the file, the instructing service of the State will request the opinions of the different bodies concerned (commission for nature conservation and the protection of landscape and historical monuments [commission Nature, Paysage et Sites], the air force, civil aviation, Meteo-France, etc.) and will deliver a memorandum to the prefect, who will take the decision.

- *k) Where is the fee scale associated with applications for authorisation/licences/permits for new installations published? Are the fees related to the administrative costs for granting such permits? Is there any plan to revise these fees?*

No administrative fees (Article 13.1.e²) are paid by the applicants for an authorisation/licence/permit: there is therefore no fee scale associated with the different procedures, nor, therefore, a requirement for publication of these fee scales.

- *l) Is official guidance available to local and regional administrative bodies during the planning, design, construction and refurbishment of industrial and residential areas regarding the installation of equipment and systems using renewable energy sources in the sectors of electricity and of heating and cooling, and in particular as regards district heating and cooling? If such official guidance is not available or is insufficient, how and when will this need be addressed?*

² "In particular, the Member States take the measures appropriate to ensure that: (...) the administrative fees paid by consumers, developers, architects, contractors and installers and suppliers of equipment and systems are transparent and calculated as a function of costs;"

Article 13(3) of the Directive requires that Member States recommend "*that all involved parties, and in particular local and regional administrative authorities, ensure the installation of equipment and systems using electricity, heating and cooling resulting from renewable energy sources and the installation of district heating and cooling equipment and systems during the planning, design, construction and renovation of industrial or residential spaces.*"

In order to meet these requirements, the French State recommends and follows the development of these renewable energies in planning operations:

- by regulatory measures.

The territorialisation of the targets of the Grenelle Environment Forum, and in particular the development of renewable energies, is based on the territorial planning procedures described in the plan (Regional Climate, Air and Energy Plans, Territorial Climate Plans), for which the MEDDTL or ADEME provide support to local and regional authorities (circulars, guides, financial assistance where appropriate, assistance by the decentralised State services: see below).

At the most local level of redevelopment operations, the Grenelle I law has made it compulsory to conduct a feasibility study on the development of renewable energies, including a "heating network" aspect, for all new redevelopment actions or operations subject to an impact study. Introduced in Article L.128-4 of the Town Planning Code, this provision has been applicable since July 2009; a guide intended for developers is being prepared by the MEDDTL (publication expected late 2011).

- by the provision of information - guides, educational factsheets on heating networks (Centre technique de l'Équipement de l'Ouest - CETE³), or training - ADEME training on the Environmental Approach to Planning intended for project owners and managers.
- by financial assistance: EcoQuartier calls for projects, Ecocité process, heat funds (development of heating networks).

Regarding the issue of "official" assistance, the decentralised State services (DREAL, DDT(M) in particular) are responsible for helping local and regional authorities with their plans, programmes and projects regarding the environment (decree no. 2009-1484 of 3 December 2009 relating to inter-ministerial departmental directorates, decree no. 2009-235 of 27 February 2009 relating to the organisation and missions of regional directorates of the environment, development and housing). The regional directorates of the ADEME also provide help to local and regional authorities. Finally, the Councils for Architecture, Town Planning and the Environment [Conseils d'Architecture, d'Urbanisme et de l'Environnement] (CAUE) are the departmental bodies created on the initiative of the Regional Councils in the context of Law no. 77-2 of 3 January 1977 on architecture and vested with a public service mission. The CAUEs are intended to promote architectural quality, both in urban and rural environments, and their missions are:

- informing and increasing the awareness of the public in the field of architecture, planning and the environment,
- training project owners and professionals,
- informing and advising individuals who wish to construct or renovate, in order to ensure the architectural quality of the constructions and their correct integration into the surrounding site,
- advising local authorities on their planning, architecture and environmental projects.

However, in the context of the General Review of Public Policies (RGPP), the decentralised State services no longer provide local authorities with competitive engineering services; a share of the

³ Public body for research and development, innovation and engineering. The CETE de l'Ouest has been recognised as a centre of competence and innovation in the fields of sustainable development and heating networks.

resources thereby liberated will be reallocated to new missions or those in growth linked with the Grenelle Environment Forum and sustainable development. Nevertheless, numerous engineering consultants and some government-owned industrial and commercial bodies (EPICs) such as the Building Research Institute [Centre Scientifique et Technique du Bâtiment] offer to local and regional authorities services of assistance with project management which integrate the problems of sustainable development for the planning, design, construction and renovation of industrial and residential spaces.

- *m) Are there specific training courses for those responsible for the authorisation, certification and licensing procedures for renewable energy installations?*

Various specific training courses are made available to the agents responsible for the instruction of the various applications by the State. The range of these courses evolves according to the needs of these agents; some are recent, others have been offered for several years.

The MEDDTL offers, in 2010 and 2011, various short training courses on the themes of the climate and renewable energies to agents of central and decentralised services. As an example,⁴, the training course "Controlling energy demand - Decentralised production of electricity" has been offered for several years to agents of the decentralised State services and central administration in charge of these areas.

The IFORE⁵ also offers specific training courses, including one on the conduct of wind-turbine projects (acquisition of in-depth knowledge of wind power and the capacity to follow and instruct the project in compliance with planning and environmental rules).

Provisions regarding information (Q4.2.4)

- *As far as planners and architects are concerned, the plan refers to their own training and information network. Please provide more details on how guidance is made available for developers and architects and describe the responsibilities in this issue [question ff].*

Article 14.5. of the Directive specifies that "*the Member States ensure that guidelines are available for all stakeholders concerned, and in particular developers and architects, in order to enable them to envisage in a meaningful way how to best combine the sources of renewable energy, high energy efficiency technologies and district heating and cooling during the planning, design, construction and renovation of industrial or residential spaces.*"

Regarding redevelopment operations

The implementation of the Sustainable Town - which integrates both the questions of energy sobriety and development of renewable energies, but also the problems of water, waste, biodiversity, mobility, density and urban forms, and eco-construction - constitutes a priority challenge for urban redevelopment. A Sustainable Town action plan was presented on 22 October 2008. The approach adopted by France, and implemented by the MEDDTL, is based on the triptych of education, demonstrative operations and pooling of good practices.

On the scale of the residential quarter, the "ÉcoQuartier" call for projects, which integrates all of the previously mentioned problems, and in particular the questions of energy sobriety and renewable energy, enables the collection of quality projects within an operational club (Club ÉcoQuartier),

⁴ Other training courses concern "New energy technologies", "Energy, climate and territory: the fundamentals", "Resources and their use - Renewable energy: Sobriety and efficiency", "Challenges for renewable energies in France", "Meeting the climate challenge in spatial planning", "Renewable energies: challenges and controversies", "Territorial Climate Energy Plans", etc.

⁵ The Institute for Training and the Environment, created in 2001, is a nationally competent service of the Ministry for the Environment. Among other things it is responsible for organising the initial training of personnel belonging to the staff of the Ministry for the Environment, ensuring the ongoing training of personnel of the public environment service, organising a graduate training scheme for administrators occupying management functions within State services (advanced course in sustainable development) and promoting the taking into account of the environment and of sustainable development in schools and institutions falling under other ministries or local authorities.

their promotion and the dissemination of good practices. The first call for projects was launched in late 2008 for a selection of 28 projects, and the second in late 2010, for a selection of projects in 2011. The call for projects is accompanied by an ÉcoQuartier analysis grid, which enables local and regional authorities to evaluate the quality of their project. This analysis grid is available on the website of the ministry and is accessible to all local and regional authorities and stakeholders of redevelopment projects, including developers and architects with which the local and regional authorities enter into contracts for their redevelopment operations.

On the town scale, France has implemented the ÉcoCité process. Thirteen projects, implemented by local authorities, in partnership with stakeholders from the town in question, have been selected. As symbols for the policy of sustainable development employed by French towns, the ÉcoCités will be offered operational and financial support by the State. The ÉcoCités, offering technological innovations, may be eligible for financial support from the State under France's Future Investments Programme.

Finally, on a European level, France is actively involved in the development of the Reference Framework for "European Sustainable Cities"⁶, for which the IT tool is currently in its test phase.

In addition, the ADEME has put in place the Cit'ergie label, intended for local and regional authorities (municipalities and intercommunalities) wishing to contribute actively to improve their sustainable energy policy in line with climatic targets. The local and regional authorities can benefit from financial support and accompaniment during the process of the assessment for label status, and may become members of the Cit'ergie Club (dedicated collaboration platform, information exchange, etc.) led by the ADEME.

Regarding architects and construction stakeholders

The new thermal regulation RT 2012 obliges recourse to high energy efficiency technologies to achieve a high level performance level of constructions. It encourages or imposes recourse to renewable energies, including to district heating networks fed in the main by renewable energies. Guides are being prepared by the MEDDTL for the use of architects, designers and engineering consultants.

In terms of training, the FEEBat programme proposes training courses intended for construction stakeholders; courses centred on the energy performance (energy sobriety but also renewable energies) of renovations within construction. It is financed by the system of energy saving certificates.

Finally, in a general manner, the DREALs have the mission of providing information to inform, train and educate all citizens regarding the challenges of sustainable development.

Development of electricity network infrastructures (Q4.2.6)

- *More detailed information should be given about the concrete measures planned for the development of intelligent networks, information technology-based tools and storage facilities [4.2.6 (c)]. What will be done, when and how?*

Article 16.1 of Directive 2009/28/EC requires Member States to take "*the appropriate measures for the development of the infrastructure of the transport and distribution network, intelligent networks, storage facilities and the electricity network so as to enable the management of the electricity network in complete security and to take into account the progress in the field of electricity production from sources of renewable energy*". In addition, Annex 1 of Directive 2009/72 relating to the internal electricity market provides that Member States ensure the implementation of metering systems which promote the active participation of consumers in the electricity supply market to the extent that these systems are the subject of a favourable cost/benefit evaluation. In this case, the Directive sets out that 80 % of customers will be equipped with new meters in 2020.

⁶ <http://www.rfsustainablecities.eu/>

To this end, France is currently carrying out an **experiment on the new communicating meters**. These meters constitute an essential step in the development of intelligent networks, on which numerous projects may be based. This experiment is carried out under the aegis of the Energy Regulation Commission by the distribution network manager ERDF and is based on 300,000 meters in the Tours and Lyon regions. Decree no. 2010-1022 of 31 August 2010 provides that the decision on the generalisation of new meters will be taken on the basis of the technical-economic assessment which will be carried out at the end of this experiment. The decree also sets out that the deployment of meters will be entrusted to the distribution network managers.

In addition, **several demonstrator projects are planned** in order to promote the emergence of new network solutions using appropriate information and communication technologies. Some of these demonstrators are also coupled to or concentrate specifically on energy storage facilities. These experimental projects in real use conditions are intended to inform the public authorities regarding the relevance of economic models and regulatory arrangements to plan for in the context of the deployment of these technologies.

Several systems have been implemented in order to support these projects, in particular the Future Investment funds, for which the first implementations should be launched in 2011. The Future Investment Intelligent Energy Networks programme is operated by the ADEME on behalf of the Commissariat-General for Investments and has a budget of 250 million euros. To date, the demonstrator projects are undergoing instruction and will be announced in the first half of 2011. The first project, named Reflexe, was selected in November 2010. A new call for expressions of interest should be launched between the second and third quarters of 2011.

Finally, France supports and actively participates in the existing community arrangements such as the EEGI (European Electricity Grid Initiative) and other initiatives of the SET Plan.

- *More information is required on the procedures for connection to the network, especially regarding the measures planned for accelerating them [4.2.6 (e)], and on the coordination of network infrastructure approval and other administrative planning procedures [4.2.6 (f)].*

The law of 12 July 2010 embodying the national commitment for the environment provides for two arrangements to contribute to better coordination and to accelerate the procedures for connections to the networks.

The first provides for the **creation of regional plans for connection to the network** of renewable energies. These plans will enable the definition, on the scale of each French region, of needs in terms of new network infrastructures in a manner coherent with the developments planned in means of production from renewable energies. These plans will enable better coordination between the forecast development of the network and the development of the means of production.

The second arrangement provides for a **principle of pooling of the costs for connection to the network**. The transportation network manager should then dimension the connection infrastructure at a point of the network in such a way as to anticipate future connections at this point. In order to avoid the first facility connected to the network supporting all of the costs of an infrastructure which will also benefit the following facilities, it is planned that the infrastructure cost will be distributed between the different producers who will be connected.

These two arrangements will soon be the subject of a decree made in application of the Grenelle II law.

- *Regarding capacity limitations for new connections [4.2.6 (h)] what measures are planned to resolve these problems? What is the timetable for these measures?*

The connection of production facilities is one of the missions of the network managers. The latter have seen a considerable increase in the requests for connections, particularly from photovoltaic facilities before the definition of new feed-in tariffs in March 2011. To meet this demand, the capacities for the management and handling of connection requests implemented by the network managers have considerably increased over recent months. Thus, in 2009, around 1000 MW of

wind-turbines were connected to the network and 200 MW of photovoltaic facilities. In 2010, around 1000 MW of wind-turbines and 700 MW of photovoltaic facilities were connected. For 2011 and 2012, an annual average flow of connections of around 1000 MW for wind-turbines and 1000 to 1500 MW for photovoltaic facilities are expected.

Sustainability criteria for biofuels (Q4.2.10):

- *More information should be provided on the institutional framework/national authority/national body responsible for monitoring compliance with the sustainability criteria. Failing this, specify when the establishment of a body of this type is expected.*

The Ministers for the Ecology, Budget, Agriculture and Energy are currently studying the possibility of calling on an appropriate structure which would be responsible in particular with the overall surveillance of compliance with the criteria for the sustainability of biofuels and bioliquids in compliance with the requirements of Directives 2009/28/CE and 2009/30/CE.

Support schemes in the electricity sector (Q4.3)

- *Current levels of support seem to match costs and promote growth for wind, biogas, biomass and photovoltaic energy. Are there projections for the expenditure under the support scheme? In other words, is there an understanding of the quantities of energy that will be produced from the different technologies as a result of the support scheme? Do these figures correspond to or differ from your projected production plans for each technology?*

For the obligation to purchase, when producing our long-term cost projections, we have assumed that all of the additional renewable electricity production by 2020 will benefit from the obligation to purchase.

In addition, the Energy Regulation Commission provides annually estimations of expenses for the following year.

Biofuel support schemes (Q4.5)

- *Since some of the support measures are scheduled to end in 2011, details should be provided on the support measures envisaged after 2011.*

Article 138 of Law no. 2010-1657 of 29 December 2010 on finance for 2011 sets the amounts of tax exemption granted respectively to bioethanol and biodiesel and produced in approved production units at €14/hl and €8/hl until 2013.

- *The concrete obligations or targets per year (by fuel or by technology) should be provided for the period until 2020, which is the reference period for the action plan covered by the national renewable energies action plan.*

Directive 2003/30/EC⁷ regarding the promotion of the use of biofuels or other renewable fuels in transport set for the Member States an inclusion target of 5.75 % LHV⁸ of biofuels in fuels for 2010. In the context of the French biofuels plan, the European target for the inclusion of 5.75 % LHV has been advanced to 2008 and raised to 7 % LHV in 2010 in Law No. 2005-781 of 13 July 2005⁹ of the programme setting the guidelines for French energy policy.

In order to take into account the environmental impacts and any problems with use conflicts, the trajectory proposed in the national renewable energy action plan provides for stabilising at 7 % LHV the inclusion targets for the period 2010-2012, a moderate progression over the intermediate period and a more sustained progression at the end of the period. A part of the progression will be permitted for the use of "waste and residues", which will already permit the production of biofuels provided for by Article 21.2 of the Directive, without it being possible to quantify precisely the

⁷ Replaced by Directive 2009/28/EC

⁸ Energy percentage

⁹ Modified by Law No. 2006-11 of 5 January 2006 on agricultural guidelines.

impact of the implementation of "double counting" of this type of biofuels. Biofuels resulting from non-food cellulosic material and ligno-cellulosic material being still at the R&D stage, the trajectory retains their progressive introduction from 2017.

By sector, the targets are not very different. An economic optimisation may conduct to the introduction of a share of fungibility between the two sectors.

Biomass supply (Q4.6.1)

- *Table 7 and 7a: According to the model for the national action plans adopted by the Commission, waste from the agri-foodstuffs industries must be integrated into category C1 and the biogas produced within industrial wastewater treatment plants must be included in category C3.*

Methanisation facilities in the agri-foodstuffs sector represent the largest share of the 86 industrial methanisation facilities in 2008, the other industrial sectors being the chemical sector and that of paper making. These methanisation facilities make up part of the industrial effluent treatment plants. The production of the corresponding available primary energy of 24 ktoe in 2006 has therefore been displaced from line B) 2 to line C) 3 in tables 7 and 7a) in the new version of the attached plan.

- *Table 7: The total quantity of energy resulting from the biomass indicated (13,591 ktoe) differs from the quantity of raw energy resulting from biomass reported by France in the "Eurostat "Energy" questionnaire for 2006. According to the analyses by the Commission, the difference is 2,900 ktoe. Please provide explanations for this observed difference.*

The difference observed is principally due to lines A1 and A2 of table 7 which have been completed with the assistance of data declared by France in 2006 in the context of the Joint Wood Energy Enquiry, or JWEE.

This enquiry was developed by the United Nations Economic Commission for Europe (UNECE) and the United Nations Food and Agriculture Organisation (FAO) in cooperation with the International Energy Agency (IEA). It is intended to collect data on the use of wood for the production of energy. **France has chosen to use this enquiry to be in alignment with the title of the first column of table 7 "quantity of national resources"**. The production of primary energy then follows from the application of the different coefficients for conversion indicated on page 81.

In France, the collection of data necessary to supply this enquiry has been led jointly by the Minister for Agriculture (enquiry of biomass holders) and the FCBA (Technological Institute for Cellulose, Construction Timber and Furniture).¹⁰ The latter has been made responsible for ensuring the validity of the different conversion factors used.

This enquiry identifies the different products and by-products resulting from forestry production which are used for energy production purposes.

As for the method used by Eurostat, it is based on the consumption of energy by different sectors using biomass.

These are therefore very different statistical methods. In consequence, France is committed to carry out by the summer of 2011 an in-depth verification of the data transmitted to closely assess the sources of difference on three points¹¹:

1. evaluation of the quantities of biomass available for the production of energy and evaluation of the final energy uses
2. re-examination of the conversion factors used in the two types of enquiry

¹⁰ Industrial technical centre in the sense of Article L. 342-2 of the Research Code which covers French professionals in the timber industry.

¹¹ This verification will be carried out by the statistical service of the Ministry for Agriculture (JWEE enquiry) jointly with the Observation and Statistics Office responsible for the response by France to the Eurostat "Energy" questionnaire

3. re-examination of the taking into account of the import and export data (which do not differentiate well between the final uses of different forestry products).

At this stage, to achieve coherence with the request of the Commission, which is based on the "resources" (and not on the consumption), France wishes to retain the figures resulting from the JWEE enquiry which have been used as the basis for the calculation of the targets and trajectories. At the end of the comparison work between the two statistical sources, France is committed to giving all useful explanations to the Commission.

Finally, a part of the observed difference (142 ktoe) results from a misprint on line B1 of table 7, where the total net quantity of biomass resulting from agriculture and fishing has been reused in line B1 for the quantity of biomass for biofuels. The correction made in the attached action plan modifies the quantity of energy resulting from biofuels but does not modify in any way the 2020 target nor the biofuel trajectory.

- *It would seem to follow from the figures in Tables 7 and 7a that the average conversion factor for the "direct supply of wood biomass for energy generation" for the years 2006, 2015 and 2020 are respectively 0.219 toe/m³ and 0.223 toe/m³. These values seem in excess of what is theoretically possible. These figures should be substantiated*

The conversion factor used (1 toe for 4.5578 m³ RWE (round wood equivalent), or 0.22 toe/m³) corresponds to the most strongly represented species in France (hardwoods): this assumes that a toe equates to 2.326 tonnes of anhydrous wood. The weighted average anhydrous density of wood in France is 0.51 tMS/m³. From this it can be deduced that 1.96 m³ of fresh wood is required for 1 tonne of anhydrous wood. Therefore 1 toe is equivalent to 2.326 * 1.96, or 4.5578 m³ RWE.

The "*Biomass Energy Europe*" project quoted refers to the wood qualities of participating States; France did not participate in this project. The conversion factors used by France correspond to the "mix" of French species, which contain hardwood, and which is denser, contrary to the project sponsor countries of the BEE.

- *The import question is not addressed sufficiently. It should be answered more specifically in terms of the estimated role of biomass imports up to 2020, specifying the expected quantities (ktoe) and indicating possible countries of origin.*

The action plan provides for the achievement of the target of 23 % set by Directive 2009/28/EC using renewable production methods and resources installed on national territory. The support measures for renewable energy production facilities do not include any support (or prohibition) criteria for imports of biomass energy.

Taking into account the potential availability of biomass on the territory, recourse to import should remain marginal. If necessary, in addition to the support measures for renewable energy production facilities mentioned above, systems for accompaniment could be considered to allow an additional mobilisation of French forest biomass.

The imports which will nonetheless take place by 2020 not being the subject of any specific support, only the market will determine the quantities and countries of origin of the biomass imported. It is in consequence extremely difficult to predict the quantities imported and their provenance.

Biomass mobilisation (Q4.6.2)

- *(f): The plan refers to two decrees which "should appear" in January 2010. These references must be updated.*

On pages 92 and 93, various measures aimed at promoting the mobilisation of biomass are listed. Among them is a measure aimed at developing the producer organisations and a measure aimed at encouraging management through the conditionality of support (support by means of subsidies or fiscal aid). The first measure is implemented by decree no. 2010-196 of 25 February 2010 regarding the economic organisation in the forestry sector, and the second by decree no. 2010-523 of 19 May

2010 taken in application of item 3 of section 1 and item 2 of section 2 of Article 793 and Article 885 H of the General Tax Code and regarding the implementation of the sustainable management documents provided for in Article L. 4 of the Forestry Code in compliance with Article L. 8 of this code. The plan has been updated with these references.

Impacts on other sectors

- *Provide a response to question (b): What type of development expected in other sectors based on agriculture and forestry may have an impact on use for energy purposes? (For example, can improvement of the efficiency or productivity lead to an increase or reduction in sub-products available for energy purposes?)*

Various developments in the sector of agriculture and forestry would have an impact on the use for energy purposes of biomass. Among these developments, we can distinguish those which would have an impact limiting the recourse to biomass for energy purposes from those which would have an incentive impact.

Due to the joint action of the increase in the world population and the resulting demand for food, and public policies promoting recourse to biomass for material uses or in the context of bio-sourced chemistry, use conflicts regarding arable land may multiply in the coming years. Article 31 of the law of 3 August 2009 (Grenelle I law) provides that *"the first and priority vocation of agriculture is to answer the dietary needs of the population, in an increased fashion for the decades to come. Climate change, with its vagaries and rapidity, imposes on agriculture to adapt, diversify and contribute to the global reduction in greenhouse gas emissions. To do this, it is essential to preserve agricultural surfaces, particularly by limiting their consumption and artificialisation."*

These preoccupations have been expressed in the context of the operational committees of the Grenelle Environment Forum and summarised in the form of a commitment to be respected, the "use hierarchy". This means that arable land should principally be used for food production, then for biomaterial and bio-sourced chemical uses, and finally for energy purposes. Nevertheless, the following developments would have the effect of increasing recourse to biomass for energy purposes:

- The availability of bio-waste will soon be increased by public policies which will organise the selective collection of this waste and enable better recovery. This means that the inscription of the respect of the use hierarchy in the context of the circular economy will enable a single primary resource to be recovered first, and as a priority, for human and animal food production, while its by-products, residues and bio-wastes will be used and/or recycled for biomaterial and bio-sourced chemical purposes, then for energy, and finally recovered through a return to the soil.
- The technological advances expected, particularly in the field of biofuels synthesised from waste and residues which are today unused and those in products made from ligno-cellulosic and seaweed sources will have the effect of increasing the recourse to biomass for energy purposes. In addition, agricultural crops and the processes of transformation should produce increased yields, which will have the consequence of increasing the availability of biomass and products resulting from biomass for energy purposes.