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Interviewed Experts

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For this country study, the following experts were interviewed in 2014-2015:

- Fabrice Cassin, CGR Legal (Law firm)
- Fabien Lebrun, CGR Legal (Law firm)
- Sylvain Roland, Enerplan (French syndicate of solar energy professionals)
- Edwige Porcheyre-Gautier, Enerplan (French syndicate of solar energy professionals)

The French RES-E Sector

Support scheme

In France, electricity from renewable sources is promoted on the national level through feed-in tariffs, the publication of tenders and tax benefits.

As far as the feed-in tariff (FIT) is concerned, electricity suppliers and distribution grid operators are obliged to purchase electricity from renewable energy sources at a price fixed by order, upon conclusion of a purchase agreement with the plant operator. Moreover, the French Regulatory Authority publishes calls for tenders in order to support the development of large renewable energy projects, such as photovoltaic plants or offshore wind farms. Finally, several tax incentives are also available, such as income tax credits for investments in renewable energy plants, or a reduced VAT rate for the installation of photovoltaic systems on buildings (RES LEGAL Europe Database).

Barriers to the electricity sector

Political and economic framework

The majority of barriers reported under the category “political and economic framework” relates to the existence and reliability of a renewable energy strategy and support scheme. In the previous report finalised in February 2014, one of the major barriers was **the lack of stable and durable support for renewable energies**, particularly affecting onshore wind energy and solar energy. Whereas the situation for solar energy has not significantly evolved, some important changes were observed in the wind energy sector. In fact, after three years of continuously decreasing yearly installed capacity since 2011, the wind energy sector finally witnessed an upward trend, with almost 1000 MW of installed capacity in 2014 (Cassin, Lebrun, CGR Légal). This growth is the result of several measures implemented in the last months. On the one hand, the publication in April 2013 of the so-called “Brottes” law¹, which abolished the rule of minimum five masts per wind farm and removed the development areas for wind energy, fostered the development of wind energy. On the other hand, the publication of a new tariff order also contributed to restore confidence among the stakeholders of the wind energy sector. As a matter of fact, the wind energy sector in France long suffered from the uncertainty regarding the future of the feed-in tariff. Following the preliminary question raised by the State Council on 15 May 2012, the Court of Justice of the European Union concluded on 19 December 2013 that the French mechanism of purchase obligation of electricity from wind energy, financed through state resources, was a competitive advantage for electricity producers. Therefore, the purchase obligation was considered as state aid and should have been notified as such to the European Commission. This negligence from the French State led to legal uncertainty contrary to the interests of the industrial sector and undermining investors’ confidence. After the cancellation of the FiT for wind energy by the State Council in May 2014, the Minister of

¹ Loi n° 2013-312 du 15 avril 2013 visant à préparer la transition vers un système énergétique sobre et portant diverses dispositions sur la tarification de l'eau et sur les éoliennes

Energy Ségolène Royal managed to notify rapidly a new tariff order to the Commission, which was published on 1 July 2014 with the same conditions as the previous one. The government thus avoided the wind energy sector to experience a legal vacuum which would have had devastating effects on wind energy development. Nevertheless, the judicial serial is not over yet, since the order was subject to an action for annulment, brought on 2 September 2014 by the Association Vent de colère, together with two other associations, and whose outcome is still unknown (Cassin, Lebrun, CGR Légal).

As far as solar energy is concerned, the photovoltaic sector was subject in the past years to **retroactive measures undermining the confidence of investors and developers**. On 7 January 2013, a decree was adopted introducing a reduction by 20% of the FiT for PV installations with an installed capacity between 100 kWp and 12 MWp for all projects which had asked grid connection after 1 October 2012 (re-frame.eu Database). The year 2014 further shattered the confidence of stakeholders through the entry into force of two measures, namely the removal of PV installations' eligibility to the tax credit from 1 January 2014 and the suppression of the bonus of up to 10% on top of the FiT for PV equipment produced in the EU from 9 May 2014² (Roland, Enerplan).

Besides, the degressive revision of the FiT every 3 months for photovoltaic installations is perceived as an **additional factor of instability**, since it allows very little visibility regarding the amount to be granted. In fact, the development of a project can be easily delayed due to lengthy administrative procedures (see below), which results into the allocation of a lower FiT for the project (Bescond, FNSEA). Moreover, in practice, it appears that the decrease of the FiT does not correlate with the actual number of projects connected to the grid. According to the legislation, the reduction of the FiT is calculated based on the number of connection requests submitted during the previous quarter. However, according to statistics provided by the distribution system operator ERDF, only 40% to 50% of the projects that submitted an application for connection are actually commissioned. Therefore, the FiT decreases more rapidly than it should (Roland, Enerplan).

The report of the Court of Auditors on renewable energy policies in France also casts **doubt on the support to solar energy**, which is deemed too expensive and inefficient. These conclusions gave rise to public debates on whether or not to focus on the promotion of more cost effective technologies such as wind energy, to the detriment of more expensive technologies such as photovoltaic energy. This debate hampers the development of solar energy and misrepresents the photovoltaic technology. In fact, there are some areas in France where the use of photovoltaic systems makes more sense than other technologies (Bescond, FNSEA).

A further barrier refers to the **shortcomings of the current support scheme** for renewable energies. Stakeholders namely warn against the negative effects of the allocation of production capacity by tendering processes. The tender procedure does not guarantee the sufficient development of installed capacity, since some tenders do not reach their targets in terms of installed capacity. For example, the call for tenders published in 2004 aiming at installing 500 MW of onshore wind energy only led to the construction of 278 MW in total, thus reaching only 56% of the initial objective

² Arrêté du 25 avril 2014 portant diverses dispositions relatives aux installations utilisant l'énergie radiative du soleil telles que visées au 3° de l'article 2 du décret n° 2000-1196 du 6 décembre 2000 fixant par catégorie d'installations les limites de puissance des installations pouvant bénéficier de l'obligation d'achat d'électricité

defined by the tender (re-frame.eu Database). Altogether, the total installed capacity of offshore wind parks allocated so far through the two national calls for tenders amounts to 3,000 MW, whereas the decree on multiannual planning of capital expenditure of 2009³ foresees a total installed capacity of 6,000 MW for offshore wind energy. This results into a lack of visibility of project developers, also creating a lack of project developments during 3-5 years (Cassin, CGR Légal).

Aside from not reaching its targets, the tendering system is also a **source of uncertainty** for project developers on the long term, since they cannot anticipate when the next call for tender will be published by the government. So far, tenders for PV installations over 250 kWp were published in September 2011, March 2013 and November 2014, for a total capacity of 1,200 MW. Not only is there no pattern for the publication of tenders, but also the specifications and evaluation criteria are modified for each new tender. As far as PV installations between 100 kWp and 250 kWp are concerned, the tendering specifications remained almost identical, yet only two tenders were published so far, namely in August 2011 and in March 2013 (Roland Enerplan).

Moreover, stakeholders point out the **instability of the legal framework for wind energy**. In fact, the frequency of successive reforms slows down the development of the sector. Yet industry players and investors need a reliable legal stability to commit to expensive and long-term wind energy projects. In this regard, the government has shown its willingness to simplify administrative procedures by introducing a new authorisation scheme in order to replace the currently complex legal framework. On 5 May 2014, a decree on the experimentation of a single environmental permit entered into force, which first only applies to certain regions of France⁴. This single permit is based on the ICPE authorisation⁵ (operating permit for installations classified for environmental protection) and stands as authorisation for other permits. As of January 2015, the little feedback from administrations and project developers made it difficult to confirm whether the single permit actually simplified the legal and administrative framework for wind energy installations. For now, project developers rather report that the procedural change leads to additional administrative burdens, since they had to review the content of application files which were already ready for submission (Cassin, Lebrun, CGR Légal). Despite the lack of feedback confirming the effectiveness of the single permit, the government intends to extend the experimentation to all regions. This change of regime could increase the fears of investors facing a new and unproven regulatory framework (Cassin, Lebrun, CGR Légal).

Other measures taken during the year 2014 even have a negative impact on the development of wind energy in the country. Such is the case of the decree of 14 May 2014 regarding foreign investments subject to prior authorisation.⁶ According to stakeholders of the wind energy sector, the provisions of this decree resulted into **complicated procedures** for the sale of wind farms to foreign investors (Cassin, Lebrun, CGR Légal).

³ Loi n° 2009-967 du 3 août 2009 de programmation relative à la mise en œuvre du Grenelle de l'environnement et l'arrêté du 15 décembre 2009 relatif à la programmation pluriannuelle des investissements de production d'électricité

⁴ Décret n° 2014-450 du 2 mai 2014 relatif à l'expérimentation d'une autorisation unique en matière d'installations classées pour la protection de l'environnement

⁵ ICPE stands for « Installation Classée pour la Protection de l'Environnement »

⁶ Décret n° 2014-479 du 14 mai 2014 relatif aux investissements étrangers soumis à autorisation préalable

Last but not least, industry stakeholders express their concerns about the **guidelines of the European Commission** of 9 April 2014 on State aid for environmental protection and energy for the period 2014-2020, which came into force on 1 July 2014.⁷ These guidelines foresee among others that from 1 January 2016 “aid is granted as a premium in addition to the market price (premium) whereby the generators sell its electricity directly in the market”. As a result, the guidelines foresee the removal of the mechanism of purchase obligation of electricity from renewable energies and the limitation of the duration of support to 10 years. The proposed reform will necessarily give rise to numerous barriers to the development of renewable energies by imposing a new and unproven support mechanism (Cassin, Lebrun, CGR Légal).

Grid regulation & infrastructure

Barriers reported under this category mostly deal with the cost and duration of grid access. Since April 2012, grid reinforcement plans were introduced for the enhanced connection of renewable energy installations to the grid.⁸ However, the implementation of these plans is sometimes problematic. They namely foresee for each renewable energy plant the allocation of a defined connection point. Yet some assigned connection points can be located very far from the renewable energy installation. Therefore, this solution is **not deemed as cost effective**, all the more considering that project developers have to bear the costs of the electricity transmission infrastructure from the installation to the grid connection point. Moreover, the decree establishing the grid reinforcement plans foresees shared grid connection costs between producers and grid operators during ten years. However, in the 10 plans developed until now, 82% of the grid reinforcement costs are only borne by the producers. This current **unfair distribution of costs for grid reinforcement** leads to an average 22% increase in the grid connection costs of wind energy developers and thus jeopardises the economic feasibility of their projects (Cassin, CGR Légal). During the year 2014, no measures were taken to balance the connection costs between producers and grid operators. It even seems that no solution will be found in this regard on the short term. In fact, in a deliberation of 20 January 2014, the regulatory authority CRE has stated that "provisions, such as those regulating the scope of the regional plans [for the connection of renewable energy installations to the grid], which define the boundary between the costs borne by producers and those borne by grid operators, have not resulted in a consensus".⁹

Another measure regarding the cost of grid access is problematic for large RES installations. According to the regional plans for the connection of renewable energy installations to the grid, RES installations over 100 kW are subject since late 2013 to the payment of a financial contribution to support grid reinforcement. This contribution corresponds to a defined share, proportional to the installed PV capacity, whose amount is specific to each administrative region. The share is determined for each region based on the amount of work needed on the electricity grid in order to ensure the achievement of the RES targets set by the regions for 2020. The amount of the share

⁷ Guidelines on State aid for environmental protection and energy 2014-2020 (2014/C 200/01)

⁸ Schémas régionaux de raccordement au réseau des énergies renouvelables (S3REnR)

⁹ Délibération du 30 janvier 2014 portant avis sur le projet de décret modifiant le décret n° 2012-533 du 20 avril 2012 relatif aux schémas régionaux de raccordement au réseau des énergies renouvelables, prévus par l'article L. 321-7 du code de l'énergie

varies by region and can reach up to € 70 per kW of installed capacity. The share thus represents an additional financial burden for project developers on top of the grid connection cost (Roland, Enerplan).

As far as the duration of grid access is concerned, the procurement of grid connection permits is often slowed down due to **long waiting periods** between the file request, the sending of the technical and financial grid connection proposition¹⁰ and the grid connection and commissioning contract.¹¹ This waiting time may be explained by several reasons, including missing application documents or a work overload of the distribution system operator regarding contract processing (re-frame.eu Database). In addition, the grid connection procedure is often hindered by **technical constraints due to lacking grid capacity** in some areas. For example, if the installation is too far from the grid, or if the grid is overloaded, the distribution system operator (DSO) has to undertake specific works before being able to connect the installation to the grid. This procedure can be time consuming and have serious financial consequences (Cassin, CGR Légal).

Finally, stakeholders report a **lack of transparency from DSOs** regarding costs and duration of connection proposals. Costs and time-lag for connection are also non-negotiable. This issue is all the more important in view of the fact that most of the renewable energy projects are connected to the French distribution system operator. In this regard, it is to be underlined that the distribution system operator, contrary to the transport system operator, is not regulated by the French energy regulatory authority (re-frame.eu Database).

Administrative processes

The main barrier belonging to the category of administrative processes results from **multi-layered legislation and permits**, which are dissuasive for project developers, especially in the wind energy sector. Formerly, the wind energy sector was mainly subject to a planning permission and to a building permit, whose lengthy procedure already affected the development of the sector. In fact, between 6 and 8 years were often necessary to develop wind parks in France. Despite these existing administrative procedures, a further legislative layer was added for wind turbines in 2011, with the operating permit for installations classified for environmental protection.¹² This permit implies a heavy administrative procedure normally restricted to the most polluting facilities, such as petrol stations or chemical factories. Thus, it is considered that wind turbines are likely to impair environmental protection and should therefore be authorised by prefectural order after being subject to a detailed environmental study. Apart from being discriminatory, this new requirement further hinders the deployment of wind energy (re-frame.eu Database). Moreover, there is a **lack of coordination between the competent authorities involved in planning and permitting procedures**, since both permitting procedures require different time schedules and are delivered by different authorities.¹³ Whereas the building permit can be refused after one year of time, the acquisition of

¹⁰ „Proposition technique et financière”

¹¹ „Convention de raccordement”

¹² « Installation Classée pour la Protection de l'Environnement »

¹³ The competent authorities are the departmental directorates (direction départementale des territoires) and the regional directorates (directions régionales de l'environnement, de l'aménagement et du logement)

the ICPE authorisation can take more than 18 months (re-frame.eu Database). As a result of such administrative hurdles, the development of wind energy experienced a sharp slowdown between 2011 and 2013 with only 753 MW installed in 2012 against 1,100 MW in 2010 (re-frame.eu Database).

Furthermore, the **multiplicity of appeal proceedings** represents an additional administrative barrier and a source of insecurity. In this regard, stakeholders particularly reported this issue for the wind energy industry. In fact for wind energy installations, between 3 and 6 legal permits are delivered by the prefect, each of them being potentially subject to lawsuits (planning permit, operating permit for installations classified for environmental protection, electric authorisation, derogation regarding protected species etc.). In 2011, 31% of the building permits granted for wind turbines were challenged on appeal, 78% of which were confirmed. These figures highlight the intensive use of such legal processes on the part of wind energy opponents. As an example, building and operations permits for wind turbines are often attacked by opponents on the grounds that the simultaneous visibility of a historic monument and of a wind farm is considered as unacceptable. The resulting court proceedings can last several years and the interpretation of the competent administration in order to protect heritage is deemed excessive. On 19 August 2013, an order came in force limiting legal recourses against planning permits. This measure has been welcomed by the wind energy industry. However, the multiplicity of permits currently needed for wind energy installations in France still offers numerous opportunities for wind energy opponents to challenge the legality of wind energy installations and delay or even block their commissioning (re-frame.eu Database).

Other

One of the most important barriers under this category refers to the taxing regime applying to renewable energies. Wind and solar energy installations with an installed capacity over 100 kW are subject to a **flat-rate tax on grid businesses** called IFER¹⁴, which currently amounts to € 7,210 per MW. The amount of the tax is adjusted every year. The IFER tax was introduced in 2010 to level out the amount of a previously existing local business tax.¹⁵ Initially the amount of the tax was set for all energy sources at € 2,900 per MW. In 2011 it was increased exclusively for solar and onshore wind installations to € 7,210 per MW. Therefore, the tax load is unduly high on wind and solar power compared to conventional power (re-frame.eu Database).

A further barrier lies in the **lack of information exchange between the relevant stakeholders**. While developing wind projects, developers namely face many difficulties due to the lack of communication between grid operators, regional and departmental directorates, landowners etc. Developers have to coordinate all stakeholders during the development phase of the project, which can easily discourage them from continuing their efforts. Several developers thus sold their projects in France, such as Iberdrola, EON or Vattenfall (Cassin, CGR Légal).

Last but not least, **public perception of renewable energies** is negatively affected by lighting provisions for wind turbines. While an IPSOS poll published in December 2012 showed that 68 % of

¹⁴ IFER stands for « Imposition Forfaitaire sur les Entreprises de Réseau »

¹⁵ Taxe professionnelle

respondents are willing to accept wind turbines in their town, the installation of wind farms remains problematic in France. In particular, lighting provisions regarding wind farms impair their social acceptance. Unlike other European and international legislation, the French legislation requires specific output values for flashing lights for each and every wind turbine (2000 cd red at night and 20,000 cd white during the day). The lighting must be visible within a radius of 360° and have autonomy of at least 12 hours in case of network failure. However, those requirements disturb numerous residents who frequently lodge complaints about abnormal troubles of the neighbourhood. In addition, most Regional Climate, Air quality and Energy plans¹⁶ as well as numerous individual permits are sued. The wind energy industry is thus very concerned by these too systematic complaints, which often result into legal proceedings in court (re-frame.eu Database).

¹⁶ Schémas régionaux du climat, de l'air et de l'énergie (SRCAE)

The French RES-H&C Sector

Support scheme

In France the production of heat from renewable energy sources is promoted through several support instruments:

- A Heat Fund was implemented in 2008 in order to support the production of heat through renewable energy plants for non-domestic schemes. The Heat Fund allows the yearly publication of a national call for tenders for the development of large biomass plants. On the other hand, it provides financial support to smaller renewable energy projects on a regional level (RES LEGAL Europe Database). This incentive applies to projects in the agricultural, industrial and tertiary sectors. Regional discrepancies can take place within the implementation of the scheme. For instance, each region decides on the number of calls for tenders and the deadlines for their submission.
- On the domestic market, the National Agency for Housing provides support to low-income households in the thermal renovation of their buildings in order to limit energy losses. Within this framework, the use of renewable energies for heating purposes is subsidised (RES LEGAL Europe Database).
- Several tax incentives are also available for private households, such as income tax credits¹⁷ for investments in renewable energy plants, or a reduced VAT rate for the installation of renewable heat production systems (RES LEGAL Europe Database).
- Since 2009, households investing in refurbishment with the aim of improving the energy performance of their homes, have been eligible for an interest-free loan, allowing the financing of works with no need for a deposit (RES LEGAL Europe Database).

Barriers to the heating and cooling sector

Political and economic framework

One of the main barriers identified hindering the development of renewable energies in the French heating and cooling sector is the **competition with electric heating appliances** (Claustre, CLER). In fact, over 30% of the existing individual and collective housing in France are equipped with electric heating systems. In 2009, 80% of the new residential buildings were equipped with electric heating (ADEME 2014). Several reasons explain this situation. First of all, the price per kWh is less volatile than the price of fossil fuels. Furthermore, the lower initial investment and convenience of implementation encourage owners to turn to electric heating systems (ADEME 2014). As far as new buildings are concerned, the thermal regulation “RT 2012” currently in force requires the mandatory use of a renewable source of energy, primarily for heating production. However, this regulation has only been in force since 1 January 2013 and only applies to new buildings.

¹⁷ Crédit d’Impôt Développement Durable

In addition, one reports a lack of stability regarding support schemes for the production of heat from renewable energy sources, which affects among others the investment policies of manufacturers. As an example, the Heat Fund, which is used for the financing of call for tenders, is renewed every year and thus results into a lack of visibility of the sector as regards the content of the tenders from one year to the next (Claustre, CLER). Moreover, the **lack of stability and visibility of the incentive policies** hinders investments in research and development activities that could foster innovations at technical level. As far as the solar thermal sector is concerned, no significant innovation has been brought to the market over the past 20 years (ADEME).

The French incentive policy for the promotion of heat through renewable energy is subject to further shortcomings, especially regarding **the design of existing incentive schemes**. In France, the main part of renewable heat consumption comes from low capacity installations. Yet, two important support mechanisms, namely the Heat Fund and the tendering processes of the French energy regulatory authority, do not address low capacity installations. In fact, the calls for tenders of the regulatory authority favour large operators through the tendering of large heat production capacities and the high complexity of the required administrative procedures (Douard, ITEBE). As for the Heat Fund, it benefits non-domestic project only: mainly collective housing and businesses in the industrial, service or agricultural sectors. Moreover, the output threshold required to be eligible for the Heat Fund makes it only accessible to large projects and therefore penalises projects carried out by individuals.

Apart addressing only a limited number of installations, **the Heat Fund does not take into account all the specificities and capacities of certain technologies**. For example, the productivity thresholds defined in the requirements of the Heat Fund do not depend on the technology used. Furthermore, the ceilings determined for eligible investments are not adjusted according to the size of the installation. Also, the Heat Fund does not foresee the financial support of investments needed for the supply of boilers, meaning the wood transport and delivery from the forests to the heating plant (Letz, Ines). Investors considering a project pertaining to technologies that are not included within the scope of the Heat Fund can apply for a funding from the NTE (Emerging New Technologies) fund, which is also managed by the ADEME agency (Porcheyre-Gautier, Enerplan).

Further barriers related to the existing support schemes include the **eligibility criteria of CHP plants to the feed-in tariff**, which is only granted for installations over 5MW. On the grounds of productivity, the government thus rather promotes CHP plants producing a lot of electricity. However from a heating production point of view, one observes that large CHP plants induce a significant waste of heat. Nevertheless, some calls for tenders, such as those of the energy regulatory authority, design calls for tenders for CHP plants based on their electricity production, regardless of the heat requirement of the site. Consequently, such installations have a very low energy efficiency of 50% to 60% (Douard, Bioenergy International). By adopting a contrary approach, i.e. adapting the thermal output to the heat requirements of the site and then modulating the electricity production of the CHP plant, installations could reach an energy efficiency of between 65% and 80% (Cousin, CIBE).

Finally, a significant barrier related to the existing renewable energy strategy is the **rivalry between solar thermal and other energy efficiency measures**. Since heating is their largest source of energy consumption, households first tend to undertake refurbishment works in order to reduce their

heating bill. Insulation works, the replacement of windows or of the heating system will thus be carried out in priority before installing devices for the production of hot water (ADEME). This trend is reinforced by the fact that the purchasing costs of solar thermal systems is higher than conventional systems fueled by gas or electricity, especially for refurbishment works (ADEME).

Administrative processes

The **complexity of administrative procedures** represent additional shortcoming of the Heat Fund. In fact, the project must first comply with the scoring model set by the Heat Fund, depending on the type of project developer, the size of the installation. The project shall also meet productivity and competitiveness requirements as well as maximum investment constraints. In addition, the project is subject to adjustments regarding the compliance with Community rules and the price spread between the heat produced from renewable energy sources and the heat produced from conventional energy sources (Letz, Ines).

Other

"In mainland France, the thermal solar market has been stagnating since 2009 at around 250,000 m² per year, which corresponds to 175 MW per year" (Loyen, Enerplan). This figure was down to around 190 000 m² in 2013 and decreased further in 2014 (Porcheyre-Gautier, Enerplan). One of the main barriers hindering the development of the solar thermal sector is the **lack of communication and information regarding the benefits of solar thermal technologies** in new and existing buildings. This applies for example to the use of individual solar water heaters when replacing old boilers (Loyen, Enerplan). "Quite often, installers do not put forward the option of solar thermal facilities, due to a lack of experience, the higher complexity of installation or the need for installers to come back to the installation site to check the proper functioning of the installation" (ADEME). In addition, the solar thermal sector has been suffering from a negative image among households and the non-domestic sector alike, resulting from bad experiences as well as from a confusion between solar thermal and photovoltaic technologies, since the moratorium for photovoltaic installations at the end of 2010. Furthermore, the equipment and installation cost of individual solar thermal devices is still too high. In fact, the high level of tax credit for sustainable development has contributed to maintain the high costs of facilities (ADEME).

Finally, the original demands in application of the RT 2012 Thermal Regulations have been downgraded, in that the targets to be met in terms of energy per m² have been set at 57,5 kWh/m²/year instead of 50 kWh/m²/year for non-domestic housing. This exemption will now be effective until 1 January 2018 (and not 2015 as originally planned). It is bad news for the solar thermal market, as it does not favour the choice of energy efficient hot water production systems (Porcheyre-Gautier, Enerplan).

Further significant barriers refer to **shortcomings of the taxing regime**, especially regarding wood energy. Currently, the French legislation provides for reduced VAT rates for district heating users as

well as for heat produced from at least 50% renewable energy sources. However, these provisions do not apply to boilers used in public buildings. This severely penalises those public institutions and local authorities which are not served by district heating network but are equipped with their own wood boiler. In this regard, stakeholders also point out a lack of clear definition for eligibility conditions of district heating networks to fiscal benefits. Existing definitions of district heating are numerous and may stem both from various public authorities as well as from heat associations. Consequently, the lack of official definition for the different types of district heating networks may lead to litigation proceedings as to whether or not fiscal benefits apply (CIBE).

Last but not least, shortcomings are reported regarding the tax credit for private individuals owning sub-stations connected to a district heating network and using renewable energy sources. In practice, the sub-station is part of the local authorities' grid infrastructure and is therefore financed and installed by the local authority or their delegate. The user has a grid connection right and is only charged 20% of the cost of the sub-station and connection fees. The tax credit is therefore not effectively designed and should rather apply to the connection fee paid by private users of district heating (CIBE).

The French RES-T Sector

Support scheme

The promotion of biofuels in France is mainly provided through fiscal regulation mechanisms. On the one hand, the lower competitiveness of biofuels compared to conventional fuels is supported through a partial exemption of the domestic consumption tax. On the other hand, the tax on polluting activities foresees higher rates for companies releasing fuel for consumption, in case they do not respect the national quota of biofuels to be blended within conventional fuels, which is defined for each fuel type (RES LEGAL Europe Database).

Barriers to the transport sector

Political and economic framework

Most of the barriers impeding the further development of biofuels are related to the **European institutions' position** on renewable energies in the transport sector. In fact, the failure of the European Commission to provide for a stable support policy for biofuels, combined to the lack of clarity of the existing regulations, both contribute to hold back the growth of the biofuels sector. This scepticism at European level also affects national biofuels policies.

The blending of biofuels in conventional fuels is entirely governed by the EU directives and the national legislation. The directive 2003/30/EC on the promotion of biofuels together with the directive 2009/28/EC on the use of renewable energy have contributed to the enhanced development of biofuels in France. However, the most important barrier to the development of renewable energy in the transport sector remains the **lack of regulatory stability and visibility of support policies in the long term, both at European and national level**. In fact, while the production of biofuels was originally vigorously encouraged, current debates rather tend to discuss their limitation. This lack of visibility is all the more critical since investors of first generation biofuels are the same as those of second generation biofuels, and the means of production for the first generation have not yet been amortised. In other words, investors who experienced bad consequences from the unstable support policy for first generation biofuels may be more reluctant to invest in second generation biofuels (Guizouarn, Sofiprotéol).

A further major barrier hindering the development of biofuels is the **uncertainty regarding the biofuel incorporation rate** into conventional fuel. Since January 2015, the French regulation limits the blending of biodiesel into conventional diesel oil to 8%¹⁸. Yet according to the mandate submitted to the European Committee for Standardisation in 2006, the European Commission foresees a blending rate of biodiesel amounting to 10% (Guizouarn, Sofiprotéol). However, the blending targets are currently being called into question at European level. Firstly, there have been

¹⁸ Arrêté du 31 décembre 2014 modifiant l'arrêté du 23 décembre 1999 relatif aux caractéristiques du gazole et du gazole grand froid

suggestions to lower the 10% target down to 5% incorporation for first generation biofuels, in order to promote the blending of second generation biofuels. Secondly on 13 June 2014 the EU Council reached a political agreement on the draft directive on indirect land-use change (ILUC) amending the fuel quality (98/70/EC) and renewable energy (2009/28/EC) directives. The draft directive sets a 7% cap for first generation biofuels. However as of February 2015, no final decision has been taken yet. This debate is considered particularly premature and confusing, since second generation biofuels are still at the stage of research and development (Suau, FNSEA). Moreover, to lower the first generation biofuel incorporation rate to 5% would imply a setback for France, which already imposes an incorporation rate of 8%. This would also represent a major challenge for the country to achieve its 2020 targets. In fact, the development of renewable energies in the transport sector mainly relies on the use of biofuels, since the e-mobility sector is currently very limited. The latter is mainly explained by the inertia of the French car fleet during 10 to 15 years, due to the fact that private individuals do not change their cars often (Suau, FNSEA).

In parallel, the European Commission demonstrates **no severity regarding the non-enforcement of its mandate to allow the blending of 10% biofuels**. Although the target of 10 % renewable energy as foreseen in the renewable energy directive is mandatory, its implementation remains very flexible in practice. The failure to apply penalties may thus lead to the failure of member states to fulfil their obligations. As far as France is concerned, stakeholders point out a turnaround of the overall opinion regarding biofuels. In fact, the French Framework Law on Agriculture of 2006 provided for a 10% incorporation of biodiesel into diesel oil. However in September 2012, the Grenelle Environment Forum¹⁹ declared a freeze in the amount of incorporation rate to 7% for first generation biofuels (Guizouarn, Sofiprotéol).

Last but not least, the **lack of clarity of existing regulations regarding the double counting of biofuels** seriously hinders the healthy and sustainable development of the sector. The introduction of double counting of biofuels produced from waste, residues, non-food cellulosic material, and ligno-cellulosic material has been acknowledged by the biofuels' sector. However, its application is not sufficiently regulated at European level, since there is no exact definition of the energy products benefiting from double counting. As a result, applications of double counting are very different from one member state to another, thus causing distortions of competition. **No traceability system was implemented in order to monitor the origin of products** classified as eligible to double counting by the member states. Originally, the possibility of double counting was introduced to support the development of emerging biofuels technologies. However, the lack of clarity of the relevant regulations regarding the definition of double counting led to a dead-weight effect. France being a large producer of biodiesel, the application of strict rules for double counting represents a significant stake for the country. The French biofuels industry therefore calls for an enhanced traceability, a better monitoring as well as a more restrictive registration system for energy products benefitting from double counting, in order to avoid fraud in certain countries. However, governments are currently not entitled to perform such monitoring activities outside their own countries. Thus, French authorities do not have the competency to control certifications of energy products originating from other member states (Guizouarn, Sofiprotéol).

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No relevant evolution of the above-mentioned barriers was observed in 2014.

Market structure

Some countries apply **dumping measures** which seriously affect the national development of biofuels. In fact, each significant fraud implies a substantial involvement of the French biofuels industry in order to launch infringement procedures at the World Trade Organisation. These procedures are very financially demanding and can last up to 3 or 4 years before leading to the concrete application of coercive measures (Guizouarn, Sofiprotéol).

Other

Stakeholders point out that the **sustainability criteria for biofuels are not respected by the Member States**. This is mainly due to the fact that the European Commission has not defined a single enforcement policy for the application of the sustainability criteria to which biofuels are subject, as established by the 2009/28/EC directive. Although penalties are foreseen, they are not enforced by the European Commission when Member States have not transposed the provisions of the directive. In addition, stakeholders deplore the large degree of leeway given to Member States regarding the timeframe for the enforcement of sustainability criteria. This lack of Community scrutiny gives rise to distortions of competition and fraud (Guizouarn, Sofiprotéol).

No relevant evolution of the above-mentioned barriers was observed in 2014.

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