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EUGINE CONTRIBUTION
to the Preparation of a new renewable energy directive for the period after 2020

(This paper does only list those questions EUGINE contributed to.)

3. Please rate the importance of the following elements being included in Member States' national energy and climate plans with respect to renewable energy in ensuring that the plans contribute to reaching the objectives of at least 27% in 2030.					
	Very important	Important	Not very important	Not important	No opinion
Long term priorities and visions for decarbonisation and renewable energy up to 2050					
In relation to national/regional natural resources, specific technology relevant trajectories for renewable energy up to 2030					
Overview of policies and measures in place and planned new ones					
Overview of renewable energy trajectories and policies to 2050 to ensure that 2030 policies lie on the path to 2050 objectives					
Qualitative analysis					
Trajectories for electricity demand including both installed capacity (GW) and produced energy (TWh)					
Measures to be taken for increasing the flexibility of the energy system with regard to renewable energy production	X				

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Plans for achieving electricity market coupling and integration, regional measures for balancing and reserves and how system adequacy is calculated in the context of renewable energy					
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[Box: Please explain. Max 500 words]

Electricity produced by wind and solar is by nature variable, depending on whether the sun is shining and the wind is blowing. With growing shares of power generated from Variable Renewable Energy Sources (V-RES), balancing of production and consumption of electricity in real time is becoming a real challenge. In order to meet and counter this challenge, the power system of the future requires increased flexibility. Unfortunately, the current electricity systems and market mechanisms were not designed to handle the growing unpredictable variations in electricity supply. Therefore it is of utmost importance that the Member States' national energy and climate plans consider the various existing flexibility solutions and plan concrete actions to increase the flexibility of the energy systems with high shares of V-RES in order to ensure security of supply at all time.

9. Please assess what kind of complementary EU measures¹ would be most important to ensure that the EU and its Member States collectively achieve the binding at least 27% EU renewable energy target by 2030:

	Very important	Important	Not very important	Not important	No opinion
EU-level incentives such as EU-level or regional auctioning of renewable energy capacities					
EU-level requirements on market players to include a certain share of renewables in production, supply or consumption					
EU-level financial support (e.g. a guarantee fund in support of renewable projects)					
EU-level support to research, innovation and industrialisation of novel renewable energy technologies					
Enhanced EU level regulatory measures					

[Box: Any other ideas or comments, please explain. Max 500 words]

The EU and National Governments should consider the advantages that an improved Energy Only Market (EOM) will have in expediting the transition of the electricity system to one that is predominantly supplied by renewables balanced with a diverse range of flexible resources. An improved EOM provides efficient entry and exit signals while creating stronger incentives

¹ Without prejudice of the actual funding mechanism, where required, of the complementary EU measures

for the right type of capacity required by the market to integrate the growing shares of renewable energy sources. It also eliminates the need for political involvement and the administrative burden associated with designing, implementing and running a CM (with recent experience in the UK providing a case in point). This makes an EOM more efficient compared to a CM, resulting in improved system efficiency and lower electricity costs to EU consumers and industry, without jeopardising security of supply.

Given these advantages, we believe that EU and national governments should implement the improved EOM without delay.

16. Please rate the importance of the following barriers in hampering the deployment of renewable heating and cooling in the EU:

	Very important barrier	Important barrier	Not very important barrier	Not important barrier	No opinion
Real or perceived incoherence in existing EU policies (such as RED, EED and EPBD)					
Lack of administrative capacity and/or expertise/ knowledge/information at the national and local level					
Lack of energy strategy and planning at the national and local level	X				
Lack of physical space to develop renewable heating and cooling solutions					
Lack of requirements in building codes and other national or local legislation and regulation to increase the share of energy from renewable sources in the building sector					
Heating and cooling equipment installers lack sufficient knowledge or information to offer renewable energy alternatives when asked to replace fossil fuel heating and cooling equipment					
Lack of targeted financial resources and financing instruments					
Lack of definition and recognition of renewable cooling					
Lack of electricity market design supporting demand response, decentralised energy and self-consumption and thermal storage in buildings and district systems	X				
Lack of mapping tools to identify the resources potential at regional					

scale with local renewable energy					
Lack of tools and information to compare the lifecycle costs of the various alternative heating and cooling alternatives					
Negative public perception					
<p>[Box: Other? Please specify and explain. Max 500 words]</p> <p>The lack of ambitious and pragmatic energy strategy and planning at the national and local levels are among the barriers hampering the development of renewable heating and cooling in the EU: all existing and future opportunities to develop cogeneration units running on biofuels should be carefully considered. Engine-based cogeneration power plants are a good example of ready-to-use technology highly-efficiently generating electricity and heat (and cooling in some cases) from renewable energy sources (all kinds of biofuels, including biogas). Such solutions need to be developed across Europe to rapidly increase the use of renewables in the heating and cooling sector. For doing this, additional measures on the economic framework conditions (e.g. to increase the availability of biomass and biofuels) and the market design are needed.</p>					

17. Please rate the most effective means of addressing these barriers and advancing the decarbonisation of EU heating and cooling supply:					
	Very effective	Effective	Not very effective	Not effective	No opinion
Renewable heating and cooling obligation ²					
Requirement for energy suppliers and/or distributors to inform consumers of the costs of heating and cooling and to offer renewable heating and cooling solutions					
Requirement that all urban and municipal infrastructure upgrades (energy infrastructures, and other relevant infrastructure, such as sewage water, water and waste chains) make it possible and promote the distribution and use of renewable energy for heating and cooling and hot water generation	X				
Measures supporting best practices in urban planning, heat planning, energy master planning, and project development					
Criteria and benchmarks for					

² 'Renewable energy obligation' means a national support scheme requiring energy producers to include a given proportion of energy from renewable sources in their production, requiring energy suppliers to include a given proportion of energy from renewable sources in their supply, or requiring energy consumers to include a given proportion of energy from renewable sources in their consumption.

promoting district heating and cooling taking into consideration the local and regional conditions					
Nearly zero-energy building (NZEB) standards to include a mandatory minimum use of renewable energy					
Including systematically renewable energy production in buildings' energy performance certificates					
The promotion of green public procurement requirements for renewable heating & cooling in public buildings					
Heating and cooling equipment installers should present renewable energy alternatives when asked to replace fossil fuel heating and cooling equipment					
Develop best practices for enterprises, including SMEs, to integrate renewable heating and cooling into their supply chains and operations					
Requirement to consider renewable energy alternatives in subnational, national, regional or EU security of supply risk preparedness plans and emergency procedures					
Targeted financial measures					

[Box: Other? Please specify and explain. How could such measures be designed? How could they build on existing EU rules? Max 500 words]

Engine-based cogeneration power plants installed in sewage treatment plants and landfill sites are highly energy-efficient technological solutions to generate electricity and heat from renewable sources. The roll-out of such technologies could be accelerated through regulatory measures requesting plant operators to assess the opportunity for them to transform biogases into renewable electricity and heat, using a cogeneration power plant. Furthermore, a higher financial support from the European regional funds would help further develop renewables in the heating and cooling sector.

18. In your view, which specific evolutions of the market rules would facilitate the integration of renewables into the market and allow for the creation of a level playing field across generation technologies? Please indicate the importance of the following elements to facilitate renewable integration:

	Very important	Important	Not very important	Not important	No opinion
A fully harmonised gate closure		X			

time for intraday throughout the EU					
Shorter trading intervals (e.g. 15 min)	X				
Lower thresholds for bid sizes		X			
Risk hedging products to hedge renewable energy volatility	X				
Cross border capacity allocation for short-term markets (i.e., some capacity being reserved for intraday and balancing)					X
Introduction of longer-term transmission rights (> 3 years)					X
Regulatory measures to enable thermal, electrical and chemical storage					X
Introduction of time-of-use retail prices					X
Enshrine the right of consumers to participate in the market through demand response					X

[Box: Any other view or ideas? Please specify. Max 500 words]

The draft network code on electricity balancing should be improved in two ways before adoption. On the one hand, the wording of article 42 on balancing energy prices should be modified to make price caps unlawful (delete the mention of TSOs). On the other hand, the key principles of 'balancing responsibility for all market participants' (including producers of electricity from renewable energy sources) and 'cost-reflective imbalance charges' should be enshrined in this regulation. These modifications would create a level playing field across generation technologies, develop real incentives for flexibility investments and ensure security of supply at minimum cost. EUGINE believes that these issues should be solved by the European Commission before the network code on electricity balancing is adopted this year.

19. Currently, some exceptions from the standard balancing responsibilities of generators exist for energy from renewable sources. In view of increasingly mature renewable generation technologies and a growing role of short-term markets, is time ready to in principle make all generation technologies subject to full balancing responsibilities?

- Yes, in principle everyone should have full balancing responsibilities
 No, we still need exemptions

[Box: Please specify: If exemptions remain necessary, please specify if and in which case and why exemptions would still remain necessary (e.g. small renewable producers, non-mature technologies)? Max 500 words]

EUGINE believes in a technology neutral approach of the European energy policy. As technology using renewable energy sources are progressively becoming mature technologies, they should be gradually benefiting from the same rights and duties as the other technologies. In some countries, the standard balancing responsibilities are already successfully applied to all generators (including RES producers). This principle should be

extended to all EU countries. There is no reason to further exempt certain mature RES technologies from general rules applying to the other technologies. In this regard, EUGINE supports the progressive phasing-out of “subsidies and exemption from balancing responsibilities” for projects benefitting from state aids, as foreseen in the ‘Guidelines on state aid for environmental protection and energy 2014-2020’. However, this principle should not only apply to state aid funded projects but to all generation units based on mature technologies.

20. Please assess the importance of stronger EU rules in the following areas to remove grid regulation and infrastructure barriers for renewable electricity deployment:

	Very important	Important	Not very important	Not important	No opinion
Treatment of curtailment, including compensation for curtailment					
Transparent and foreseeable grid development, taking into account renewable development and integrating both TSO and DSO level and smart technologies					
Predictable transparent and non-discriminatory connection procedure					
Obligation/priority of connection for renewables					
Cost of grid access, including cost structure					
Legal position of renewable energy developers to challenge grid access decisions by TSOs					
Transparency on local grid congestion and/or market-based incentives to invest in uncongested areas					

[Box: Comments and other ideas, including whether there are any consideration concerning gas from renewable energy sources, for instance expansion of gas infrastructure, publication of technical rules, please explain. Max 500 words]

Power-to-Gas and Power-to-Power represent a promising way of making use of excess production of electricity from variable renewable energy sources (wind & solar): thanks to electrolysis the surplus of electricity is transformed into CO₂-neutral gas (Power-to-Gas) which is converted back into electricity using highly-efficient cogeneration power plants like engine power plants (Power-to-Power). This technological solution may significantly help solve the RES variability challenge and further deploy renewable electricity in the European energy system. It is therefore of utmost importance that the European Union develops a policy framework supporting Power-to-Gas and Power-to-Power development. The European Union should consider developing a dedicated forward-looking fully-fledged strategy (research, climate and energy policies).

21. Which obstacles, if any, would you see for the dispatching of energy from all generation sources including renewables on the basis of merit order principles? Should there be any exemptions in some specific cases?

- ~~Yes, exemptions are necessary~~
- No, merit order is sufficient**

[Box: Please specify: If yes, in which case and why? What are the lessons from the implementation of RED? Max 500 words]

The merit-order is in principle sufficient. It does not need any exemption. However, if the EU is to meet its emission reduction target, the merit order has to be complemented by a stronger EU emission trading scheme (ETS) providing a meaningful carbon price and thus delivering clear signals for investments in low-carbon technologies, including power production from renewable energy sources and gas technologies. EUGINE supports an ambitious long-term reform for the post-2020 period. A strong ETS would foster investments in renewables on the long run and would progressively make costly national support schemes useless.