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The input of EUROBAT on the Public Consultation on the Preparation of a new Renewable Energy Directive for the period after 2020[1]

Q: To what extent has the RED been successful in helping to achieve the EU energy and climate change objectives?

EUROBAT reply: Overall, the RED has been successful in increasing the share of renewables in the European energy mix and achieve the EU energy and climate change objectives. Besides, it represented a clear driver for investments in the renewable sector.

Additional efforts should be undertaken in the new RED to overcome the intrinsic limits of renewables and ensure a proper integration of renewables into the grid. For instance, demand response and storage technologies such as battery energy storage at generation, transmission, distribution and consumer level should be supported in the new RED.

Q: The Energy Union Framework Strategy sets the ambition of making the European Union the global "number one in renewables". What legislative and non-legislative measures could be introduced to make/strengthen the EU as the number one in renewables? Has the RED been effective and efficient in improving renewable energy industrial development and EU competitiveness in this sector?

EUROBAT reply: We agree with the Energy Union Framework Strategy when it states that to become number one in renewables "it must lead on the next generation or renewable technologies as well as to storage solutions". For instance, batteries can store energy from on-peak renewable energy and discharge it when it is more needed, offering also grid services like voltage control and frequency regulation, maintaining grid stability and flexibility. Overall, batteries can foster the use of renewables in Europe, as well as its energy efficiency, sustainability, independence and security.

However, energy storage is seriously hampered by legislative barriers and disincentives at EU and member state level. From lack of definition to double fee imposition, from curtailment to ownership, Europe today has an extremely unfriendly environment for battery energy storage. To take full advantage of storage technologies, these legislative barriers should be overcome and the new RED should contribute to this goal, together with the new proposals on new energy market design and the new deal for energy consumers.

[1] https://ec.europa.eu/energy/en/consultations/preparation-new-renewable-energy-directive-period-after-2020

Q: How would you rate the importance of the following barriers for consumers to produce and self-consume their own renewable energy?

	Very important barrier	*Important barrier*	*Not very important barrier*	*Not important barrier*	*No opinion*
Self-consumption or storage of renewable electricity produced onsite is forbidden	*X*				
Surplus electricity that is not self-consumed onsite cannot be sold to the grid		*X*			
Surplus electricity that is not self-consumed onsite is not valued fairly	*X*				
Appliances or enabler for thermal and electrical storage onsite are too expensive		*X*			
Complex and/or lengthy administrative procedures, particularly penalising small self-consumption systems	*X*				
Lack of smart grids and smart metering systems at the consumer's premises		*X*			
The design of local network tariffs		*X*			
The design of electricity tariffs	*X*				

EUROBAT reply: In a future energy mix with increasing shares of renewables, energy storage at every level of the grid will be needed to ensure a stable and secure system. The cost of storage system is projected to be increasingly cost-competitive: for instance, Roland Berger estimates that PV + storage system will reach grid parity in Germany in 2016. However, bottlenecks should be addressed at EU level to deploy energy storage systems. Electricity prices and tariffs reflecting scarcity represent an important market signal for demand-response, smart appliances (including electric vehicles) and storage solutions like batteries and overall will be crucial tools to ensure flexibility.

Double grid fees for energy storage systems should be avoided. Energy storage is today often defined as generating facility, but in some cases storage systems are also treated as end consumers, resulting in double fee imposition. Direct additional taxation on energy stored for self-consumption should also be avoided, as it represents a strong dis-incentive to the deployment of energy storage,

while energy storage do not actually pose a burden to the grid. Energy storage systems are important tools to stimulate demand-response. By storing their self-produced energy, prosumers can significantly increase their self-consumption levels, shifting demand to off-peak hours. Flexibility is a key market signal to kick-start storage and demand-response and should be properly rewarded. The new RED should include a clear framework for renewable self-consumption, storage and generation. A definition of renewable self-generators and self-consumers and the right to self-generate, store and consume renewable energy should be included.

Q: Please rate the appropriateness of stronger EU rules in the following areas to remove barriers that may be specifically hampering the further deployment of renewable energy projects at the local level:

	Very appropriate	*Appropriate*	*Not very appropriate*	*Not appropriate*	*No opinion*
Promoting the integration of renewable energy in local infrastructure and public services		*X*			
Supporting local authorities in preparing strategies and plans for the promotion of renewable energy		*X*			
Facilitating cooperation between relevant actors at the local or municipal level		*X*			
Facilitating access to targeted financing	*X*				
EU-wide right to generate, self-consume and store renewable electricity	*X*				
Measures to ensure that surplus self-generated electricity is fairly valued	*X*				
Harmonized principles for network tariffs that promote consumers' flexibility and minimise system costs	*X*				

EUROBAT reply: An EU-wide right to generate, self-consume and store renewable electricity is a key requisite to overcome the limits of renewables and ensure its deployment at household, district and community level.

Q: 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*
Regulatory measures to enable thermal, electrical and chemical storage	*X*				
Enshrine the right of consumers to participate in the market through demand response	*X*				

Q: 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?

EUROBAT reply: The exemption of generators of renewable energies from balancing responsibilities, in conjunction with the uncertain ownership landscape for TSOs and DSOs, is a measure preventing the deployment of storage systems, while storage can clearly help producers to cope with balancing responsibilities. The revised RED should therefore include a timeline to assign clear balancing responsibilities to the producers of renewable energy, but their value should be recognized and rewarded.

Curtailing energy represents a failure of the system and a waste of energy: grid constraints naturally preventing renewable energy from having priority of dispatch could be addressed through the deployment of BES. Storing electricity in the case of system constrains and releasing it at a later stage allows increasing the amount the renewables into the energy mix and ensuring the security of the system, above all if the stored renewable energy is also granted priority of dispatch. Financial compensation for curtailed energy represents a relevant disincentive for RES producers to install energy storage system; national legislation should not allow it to incentivize the use of storage systems at generation level.

Q: To what extent has the RED been successful in addressing the following EU transport policy objectives?

	Very successful	*Successful*	*Not very successful*	*Not successful*	*No opinion*
Contribute towards the EU's decarbonisation objectives			*X*		
Reduce dependency on			*X*		

oil imports					
Increase diversification of transport fuels			*X*		
Reduce air pollution, particularly in urban areas			*X*		
Strengthen the EU industry and economy competitiveness			*X*		
Stimulate development and growth of innovative technologies				*X*	
Reduce production costs of renewable fuels by lowering the level of investment risk				*X*	
Facilitate fuel cost reduction by integration of the EU market for renewable fuels				*X*	

EUROBAT reply: The RED Directive has not been successful in achieving the 10% target for energy from renewable sources in transport by 2020. The progress report published by the Commission and the EUROSTAT data show that this share reached just 5,3% in 2013 and 5,7% in 2014, considerably far from the 10% target and being mostly met by biofuels. The use of renewable electricity in transport has been insufficiently incentivised by the 'technology neutral' RED sub-target for transport.

The electrification of road transport is an absolute precondition to meet the 2020 and 2030 renewable targets; far from representing a burden, electro-mobility offers important opportunities in terms of decarbonisation, jobs creation potential, growth, health, clean air in urban areas and enhanced energy supply security. Analyses of the European Climate Foundation show that the shift to hybridisation and electrification of cars and vans alone might generate between 501,000 and 1.1 million net jobs in EU by 2030, cut C02 emissions by 64-93% by 2050 as well as NOx (85-95%) and particulates (74-95%).

The electrification of transport should be seen as a clear cornerstone of Europe's overall decarbonisation of transport strategy. The new RED should therefore promote the electrification of transport to achieve the 2020 and 2030 renewable targets.

Q: Please name the most important barriers hampering the development of sustainable renewable fuels and renewable electricity use in transport?

EUROBAT reply: Urban measures such as low emission zones, providing appropriate charging and parking infrastructure and green public procurement improvement are needed, in addition to fostering vehicle-sharing solutions.

The capacity of the electricity system is not a barrier: there is enough capacity to accommodate even a hypothetical share of 100% electric vehicles when these cars charge outside the peak hours. Even a total of about 25 million electric cars by 2035 on Europe's roads would increase electricity demand by just 2.2%.

To create a business model for vehicle-to-grid, several barriers should be addressed, from the lack of storage definition to the unequal participation to the balancing market. Besides, flexibility and ancillary services are today not properly valued and rewarded by the market. Vehicle-to-grid business models should be developed on an equal footing with other sources of flexibility.

Q: Please rate the most effective means of promoting the consumption of sustainable renewable fuels in the EU transport sector and increasing the uptake of electric vehicles:

	Very effective	*Effective*	*Not very effective*	*Not effective*	*No opinion*
Increased use of certain market players' obligations at Member State level		*X*			
More harmonised promotion measures at Member States level		*X*			
The introduction of certain market players' obligations at the EU level		*X*			
Targeted financial support for deployment of innovative low-carbon technologies (in particular to the heavy duty transport and aviation industry)	*X*				
Increased access to energy system services (such as balancing and	*X*				

voltage and frequency support when using electric vehicles)					
Increased access to alternative fuel infrastructure (such as electric vehicle charging points)		*X*			

EUROBAT reply: Europe needs a clear and comprehensive e-mobility policy that combines the decarbonisation, modernisation and competitiveness of transport and energy sectors and addresses public health issues in urban environments. An EU Joint Initiative on electro-mobility to gather the industry and local/regional authorities could offer positive solutions to most of these bottlenecks.

From a technological point of view, there is a clear need for increased support for RDI activities in several sectors related to the electrification of transport, from intermodality and last mile delivery to long distance transportation, from battery improvement to energy management. Smart charging technology solutions and services and vehicle-to-grid applications should also be supported with EU funds.

Legal bottlenecks and uncertainties should be clarified: for instance, there is no legal clarity on which actors can sell energy to private customers and to the grid. A proper definition of energy storage and should be agreed at EU level allowing a coherent approach on energy storage. This includes also the removal of barriers to the participation of small players to the energy and balancing trading markets, together with the development of a coherent framework clarifying roles and responsibilities between the different electro-mobility actors, including aggregators.

Smart charging and vehicle-to-grid solutions should be actively incentivised through smart regulation. The regulatory regimes must incentivise retailers and DSOs to invest in smart charging solutions, allowing DSOs to manage their grids more intelligently and retailers to offer innovative smart charging services to customers when its application is proved to be efficient. Customers should be continuously informed and incentivised to encourage a shift in behaviour.

Rendering EVs a true substitute for ICE cars necessitates targeted fiscal and non-financial incentives, such as exemptions from purchase tax and VAT, parking and charging benefits, more favourable insurance, access restriction schemes and the introduction of congestion charges

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