

EREF

European Renewable Energies Federation

As a federation of national renewable energy associations from EU Member States, EREF represents all renewable energy sectors such as wind, solar, small hydro, bio-energy, tidal, wave, and geothermal sources, at EU institutions. Its objective is to promote the interests of independent power, fuel and heat production from renewable sources and to establish non-discriminatory access to the European energy market. EREF strives to create, maintain and further develop stable and reliable framework conditions for renewable energy sources.

Reply to the European Commission's public consultation on a new Energy Market Design

6 October 2015

The European Renewable Energies Federation (EREF) welcomes the Commission's communication launching the public consultation process on a new energy market design¹, notably its aim of setting the necessary framework conditions for a flexible and efficient market that can fully integrate increasing shares of renewables. A new market design, which puts renewable energy at its core, will guarantee security of supply, minimize costs and enable innovation and sustainability.

The European energy system is undergoing significant changes. A new market design presents the opportunity to set the foundation for a future-oriented system, based on high shares of renewable energy and energy efficiency, to incentivize much-needed investments in flexible capacity and interconnections and to spur innovation and competition between different flexibility options.

In its framework strategy for a resilient Energy Union with a forward-looking climate change policy², the Commission stressed the need to transform the existing centralized and conventionally-fuelled energy system into one "fit for renewables". It is therefore essential that the Commission maintain its strong position against the creation of national capacity markets and that it supports Member States to reduce inflexible fossil or nuclear generation capacity which distorts the market, blocks sustainability and hampers the integration of renewable energy and the development of a fully integrated and flexible European energy market.

¹ [COM\(2015\) 340 final](#).

² [COM\(2015\)080 final](#).

In our view, the new market design should serve as an opportunity for the Commission and Member States to eliminate these barriers preventing the implementation of the internal energy market and increase integration and regional cooperation.

EREF welcomes the strong emphasis put on regional coordination of Member States' policy making. Cooperation, such as within the Pentalateral Forum, paves the way to achieving the European and national climate and energy targets cost-effectively, while strengthening security of energy supply. Furthermore, it is especially important to concentrate on the short-term and the long-term development of markets, a balance that the Commission's communication strikes well.

This paper focuses on view of EREF Members, national renewable energy associations from EU Member States, on the design of the future energy market along the questions included in the consultation document.

Short-term Markets

1. Would prices which reflect actual scarcity (in terms of time and location) be an important ingredient to the future market design? Would this also include the need for prices to reflect scarcity of available transmission capacity?

EREF strongly supports the existence of scarcity pricing in a future market design.

Prices reflecting actual scarcity and rewarding flexible production/consumption are therefore key ingredients of the market design. On the production side, flexibility should be rewarded for those renewables that are dispatchable. On the demand side, providing advice on the offers, tariffs, financial liabilities and tools to 'buffer' demand (heat storage, battery...) should be foreseen, also as a way to empower consumers. This also includes the need to reflect scarcity of available transmission capacity, to better manage transmission congestion and better identify the needs for investment.

The price quoted on the power exchange is the point where supply and demand intersect and should be the main driver for investment, competition and innovation.

Nevertheless, the current overcapacity on the European power markets, often due to unwillingness of the incumbent industry to change their portfolio away from inflexible and polluting baseload neither allows for refinancing investments, nor provides incentives for flexibility options. The main challenge is to reduce the fossil-nuclear overcapacity in order for prices on the power market to be able to fulfil their role of balancing generation and

consumption and thus guarantee security of supply. The latter cannot be guaranteed by sufficient capacity alone. Furthermore, in the next decade most Member States will most probably only need to partly replace old capacities with renewables and efficiency measures.

At wholesale level, day-ahead, intraday and balancing markets already express scarcity on very short time slot levels (hourly and even less to 15 minutes.) At retail level, in many markets customers are not yet exposed to the short term scarcity. However, scarcity signals give an essential incentive for market-based demand response, which is an essential part of the future market design. For this, suppliers should be allowed to develop such offers and short-term metering (which help of smart meters or advanced meters reading).

In addition to their role of balancing generation and consumption, price signals should also reflect the scarcity of available transmission generation. When considering a higher degree of market coupling and increased energy trading, the Commission and Member States should strive for a stronger connection between transmission capacity and power trading. Unfortunately, the existing information about the allocation of transmission capacity is not sufficiently transparent to allow for an in-depth assessment of the situation.

Wholesale scarcity is already expressed at bidding zone level. Price spreads between bidding zones actually express the scarcity of transmission capacity between the bidding zones. A “copper plate” is usually assumed inside each bidding zone. TSOs have to address potential internal congestions by re dispatch or by investments (in the long run).

The CACM guidelines provide for a review process of the bidding zones. Some important aspects have to be considered before reviewing the bidding zones. Bidding zones should be as large as possible, and they might encompass (geographical parts) of several countries. Small bidding zones have less liquidity and this is creating a more uncertain and less attractive investment climate. To accommodate large bidding zones, re dispatching (including cross-border aspects) should be more developed. However, large zones should not be created if it means that internal congestions are moved to the borders to other bidding zones. Moreover, bidding zones should be as stable as possible. CACM guidelines provide that ACER assesses every 3 years the bidding zone efficiency with a possible consequent review of the size: this is too frequent and it also has to be considered that there needs to be sufficient time (at least 3 years) from decision of changing bidding zones to implementation. Each investment (lines, conventional plants, connection of off-shore wind farms, support schemes changes leading to a change in the RES investment climate) might substantially impact the congestion situation, and may result in a review of the bidding zone. Given the current context of energy transition, a too frequent review of bidding zones might lead to additional uncertainty and prevent further investments. If deemed necessary, additional measures to mitigate the impact of this review should be implemented (e.g. long

term transmission rights to be offered to newly invested power plants and/or consumption plants).

At retail level, DSOs should procure flexibility for their congestion management within the market, locally as needed. Flexibility services should be provided by retailers, third party flexibility providers and other commercial parties directly engaging with the customer. However, customers, particularly larger ones, should be allowed to offer flexibility services directly to the local markets managed by the DSO.

An optimised power market which allows undistorted price signals (such as price peaks) to reach market participants will incentivize investments, drive the development of flexibility options and suffice for strengthening supply security. Capacity markets are not needed. They represent a significant market distortion with consequences that are difficult to predict, thus diminishing the overall acceptance and also the feasibility of the energy system transformation. They furthermore lead to unwanted overcapacity – the costs of which will lie with consumers, and the lock-in of inflexible and polluting generation. EREF suggests examining if Capacity market mechanisms as used by some Member states are not in effect a rescue aid for ailing, unprofitable and inflexible coal and nuclear power plants. If Member States want to develop a programme of phasing out of these old assets they should do so in an authorised structural policy approach and not hide behind a capacity market myth. Any mechanisms for the sake for security and stability of supply which does not allow demand side mechanisms do bid for such security calls on equal terms should not be authorised

The future energy system, with high shares of renewable energy at its core, will require a high degree of flexibility. Setting up capacity markets hampers the development and the competition of the technologies supposed to provide this flexibility, such as demand response, storage or flexible generation. A large number of flexibility options are available and economically viable already today, or they will become so through continuous technological development. Price signals on the power market drive the use of the existent cost-efficient flexibility options in the short-run and stimulate investment and their innovation in the long run.

2. Which challenges and opportunities could arise from prices which reflect actual scarcity? How can the challenges be addressed? Could these prices make capacity mechanisms redundant?

An optimized power market that allows scarcity pricing will make the market develop demand and supply-based solutions while rewarding flexibility. And it is sufficient for delivering security of supply, as peak prices address the need to secure additional remuneration of power plants and incentivize investments in capacity. Power plants, storage and demand side management have a number of refinancing possibilities within the energy market, such as on the spot market, the forward market or on the balancing markets. The new market design should allow the energy market to address existing challenges in a secure and cost-effective manner, not create artificial and over-regulated instruments that lead to an increase in overcapacity and hinder development.

Besides the regulatory risks (linked to the appearance of short-term price spikes) such opportunities are currently stifled by incomplete short-term markets in some parts of EU and commercial opportunities are hampered by regulated end consumer prices in many Member States. Although an integrated cross-border intraday market would allow market parties to react when scarcity prices appear, the current delays in the XBID project and the impact of the Flow-Based algorithm on available cross-border transmission capacity show that well-functioning short-term markets are currently absent in parts of Europe.

Consequently, capacity markets distort the cost-effective integration of renewable energy and hinder the development and competition between flexibility options. Not only at the national level, but also at the European level, capacity mechanisms prevent the full implementation of the internal energy market, especially by limiting the use of cost-effective balancing potential available as European markets continue to grow together.

Energy markets that have been further developed to enable the use of various flexibility potentials. Furthermore, in the rare circumstances where a lack of generation adequacy requires some Member States to take action, a full and transparent generation adequacy assessment – taking grid expansion measures and regional cooperation into account – needs to be conducted. The adopted measures must be temporary and – as a rule – open to cross-border participation, and the Member State in which the measure is implemented should not restrict the cross-border trade of electricity in times of scarcity.

In addition to guaranteeing that pricing remains free for the power market, action will be needed in other areas as well. By implementing 'no regret measures', such as reducing the minimum generation of conventional power plants, reassessing the grid charges regime, or introducing transitional instruments such as a capacity reserve outside of the energy market, Member States can reduce the challenges faced by flexibility options and allow for

price peaks to incentivize the necessary capacity addition to maintain energy supply security.

3. Progress in aligning the fragmented balancing markets remains slow; should the EU try to accelerate the process, if need be through legal measures?

Current products on the balancing markets, defined in blocks of several hours and contracted (very) long in advance, favour conventional, inflexible power production units and do neither help reward new, renewable technologies nor solutions such as demand response and storage.

Well-designed and transparent balancing markets are key counterparts of a new power market based on high shares of renewable energy. They provide a cost-efficient means to integrate renewables into the market and incentivize capacity refinancing via scarcity pricing. Aligning and transforming the balancing markets is a complex process, as their redesign poses additional challenges as compared to intraday and day-ahead markets.

There should be an agreed legal framework to overcome those constraints, to harmonise rules across borders, improve markets' liquidity and to promote the interactions between markets.

It is crucial that the transformation process focuses on setting up reliable quality criteria, which facilitate the integration of renewables, allowing for sufficient time to develop them. As regards balancing markets, compromises for a quick transformation bear the risk of adversely impacting the required quality. The development of the Electricity Balancing Network Code and the implementation of the regional pilot projects are the right instruments to progressively align European balancing markets. Considerable work is still required to fulfil the basic principles of efficient functioning and harmonisation of balancing markets: harmonisation across bidding zones of balancing periods, procured reserve profiles, contract for reserve, imbalance settlement arrangements and imbalance penalties.

In addition, the transformation process should go hand in hand with the reduction of the fossil-nuclear overcapacity and of the minimum generation of conventional power plants. National Governments and the European Commission should work on plans and allocate funds to a structural change in those areas in which the fossil fuel sector still provides many jobs (e.g. coal miners in Romania and Poland).

The design of balancing markets needs to be tailored to allow for competition between flexibility options and for the participation of renewables and new flexibility technologies, such as storage, in the market. Barriers such as long tendering periods or minimum bid sizes need to be revisited and adapted so that they do not discriminate among players.

While it is true that European balancing markets are currently very fragmented, the focus should lie on Member States optimizing their markets to allow for competition among flexibility options and the inclusion of renewables, with market coupling as a future step. We encourage Member States to redesign their balancing markets taking into account available interconnection capacity, as balancing over greater areas reduces costs and the need to introduce distortive national instruments such as capacity markets.

4. What can be done to provide for the smooth implementation of the agreed EU wide intraday platform?

The renewable energy industry welcomes the coupling of intraday markets. Functioning intraday markets are crucial for the efficient and cost effective integration of large amounts of variable energy and for cost efficient system operation. Appropriate design of intraday and balancing markets and much closer cooperation between Member States is required to enable European market integration.

Electricity trading makes the electricity system more efficient and reduces the need for production capacities. Additionally, it requires security of supply to be considered in the European context, and not as a national issue. It is essential that the process continues and that required information such as forecasts and deviations is available in a timely manner, so that the market can react quickly.

Balancing over greater areas not only reduces the need for flexible reserves, but also the system's vulnerability to unforeseen and disruptive events as well as the variability of renewable energy sources. Transmission system operators and power exchanges are key areas where cooperation needs to be increased and rules harmonised to allow for efficient cross-border transmission capacity and congestion management. To this end, the system operators need to improve and intensify regional and cross-border cooperation, for example by following a more proactive approach in balancing market arrangements.

In order to ensure a smooth implementation, the implementation of the Local Implementation Projects by TSOs should be done in parallel of the platform development. ACER could also be given increased oversight responsibilities. Moreover, stronger stakeholder involvement should be ensured throughout the process - it crucial to have market participants at the centre of the discussion as they will be the main users of the system. The target implicit model with an explicit access to cross border capacity could be used as fall-back solution to guarantee that intraday capacity can be used even when the implicit platform is not available. The "quick wins"/clever planning should be implemented locally to allow more cross-border access to intraday capacity, and thus more flexibility to compete in the market in the meantime.

Long-term Markets to Boost Investment

5. Are long-term contracts between generators and consumers required to provide investment certainty for new generation capacity? What barriers, if any, prevent such long-term hedging products from emerging? Is there any role for the public sector in enabling markets for long-term contracts?

Due to the current fossil-nuclear overcapacity and the lack of price peaks, market players do not significantly seek long-term contracts. As the power market transforms, allowing for scarcity pricing, the electricity exchange will increasingly develop these products, especially as they offer additional revenues to flexible consumers and help bringing more investment certainty both for new small-scale, decentralised, and large-scale renewable generation capacity.

EREF advocates against state intervention in the creation and development of long-term contracts, as this bears the risk of strengthening already existing oligopolies and distorting the market. Long-term contracts should be left to the market. Their prices reflect the players' willingness to pay and their assessment of price peaks' frequency. The resulting prices are cost-efficient, and allow a refinancing of generation capacity at the lowest possible price for consumers.

6. To what extent do you think that the divergence of taxes and charges levied on electricity in different Member States creates distortions in terms of directing investments efficiently or hamper the free flow of energy?

The wholesale price constitutes just one part of the electricity costs for end users, as these have to also bear other additional costs such as grid charges, value-added tax and electricity tax. These state-imposed price components weaken or neutralize the effect of the wholesale price, leaving consumers not interested in increasing their flexibility and increasing the overall system costs. Once adopted, there is always a risk that the government increases the level of the tax/levy/charge in question. Moreover, taxes and charges may distort the functioning of the wholesale markets.

There is a huge potential in identifying and removing these barriers at the European level, in order to create a level playing field and eliminate national and protectionist practices. All barriers to self-consumption should be removed and the necessary support for scaling up of renewables through incentivising producers to supply electricity to the grid, by exempting them from paying tariffs, duties and value added taxes should be established. We recommend that administrative constraints are limited to the lowest possible level.

Regulatory barriers as well as disproportionate grid charges and taxes imposed on consumers in some Member States as well as tax exemptions and other advantages for fossil fuels and nuclear power should consequently be removed.

While EREF advocates eliminating barriers at the European level, we would like to point out that well-designed national support for renewable energy has no negative impact on energy markets. Due to remaining market distortions support will still be necessary. National support for renewable energy derives its legitimacy from the Renewable Energy Directive with the binding European goal of reaching 20% renewable energy in gross final consumption by 2020 and the binding national goals that support it. Furthermore, it is anchored in the need to reach our long-term European climate objectives of 80-95% reduction of greenhouse gas emissions by 2050 as compared to 1990 levels. Therefore, supporting renewables is not a question of selfish national policy, but the national implementation of a European directive and of overall European objectives. In addition, it is motivated by the need to create a level playing field to balance the historic and current subsidies for the existing fossil-nuclear overcapacity.

In a future-oriented energy system, based on renewable energy, flexibility will be key to strengthening energy security. Tapping into the potential of various flexibility options requires a swift and thorough revision of the state-imposed price components, so that price signals of the energy market reach all players, thereby facilitating innovation and competition. Greater information should be made available so that the differences in national markets design and structure can be better understood between Member States. The European Commission and ACER should develop a common understanding of cost reflectivity in view of network charges.

Promoting Renewable Generation

7. What needs to be done to allow investment in renewables to be increasingly driven by market signals?

EREF is in favour of a transformation towards an energy system with renewable energy at its core and highly competitive flexibility options by employing as few additional instruments as possible. This can only be achieved by creating stable and reliable framework conditions for the integration of renewables. This includes reducing the generation of inflexible conventional power plants, fully internalising the negative external costs of fossil-nuclear generation capacity, and removing the direct and indirect subsidies these technologies still receive. Their external costs befall taxpayers and society; and are seldom included in power price calculations.

According to a recent study of the International Monetary Fund Energy Agency (IMF)³, fossil fuel companies are benefitting from global subsidies of \$5.3 trillion (€4.74 tn) per year. The study demonstrates that fossil fuels are not cheap by showing their real costs. An Ecofys study for the European Commission on electricity prices, costs and subsidies⁴ demonstrates that the fossil fuel industry is the biggest beneficiary of public support.

The integration of renewable energy would be facilitated by the existence of a level playing field with conventional generation. Renewables are domestic energy sources and their use reduces dependence on fossil fuels, particularly from politically unstable regions, and contributes to strengthening security of supply. Their deployment must be incentivized by specific measures targeted at their inclusion into balancing markets, strengthening the role of CHP or incentivizing self-consumption.

Crucial awareness, however, is missing in many Member States: By subsidizing nuclear power, like the Hinkley Point C project for example, countries like Great Britain are continuing to bet on expensive and dangerous technologies, which have had decades to prove their competitiveness on the market, but have completely failed to do so. For example, nuclear and fossil based plants need hours or even days to ramp down their production to zero. This is why, in case of network issues, it is allegedly much cheaper and simpler to curtail renewable energy generation than ramping down or curtailing inflexible power plants. Renewables are increasingly driven by market signals. The German market premium and the dynamic depression are contributing already today to the market-based cost reduction of renewables and their market integration.

³ [IMF: How Large Are Global Energy Subsidies?, May 2015](#)

⁴ [Ecofys 2014 by order of: European Commission, Subsidies and costs of EU energy. Final report, November 2014; IMF: How Large Are Global Energy Subsidies?, May 2015.](#)

It is essential that the European Commission and Member States continue to support this integration, by revising and optimizing their energy market design and creating the necessary framework conditions for the development of flexibility options. In this context, the Guidelines on State aid for environmental protection and energy 2014-2020 is a big obstacle. The introduction of mandatory auctions and the lack of remuneration for renewable energy under negative prices represent a massive interference with the market in favour of polluting technologies with higher marginal costs, which is both economically and ecologically imprudent.

EREF would like to point out that an intelligent flexible ceiling, together with a market premium allowing market signals to reach renewable energy producers, as well as a dynamic depression, are the way forward to financing and integrating renewables into the market until they are on a level playing field with conventional generation and the market has been fully optimized.

Extending the geographic size of markets through grid reinforcements and a balanced approach that includes both supply-side and demand-side management will help in this respect.

The various renewable energy sources should not be considered in a 'one-size-fits-all' approach. More established renewable technologies for example cannot be treated equally as emerging renewables technologies.

While this not being enough to provide enough investors' certainty, the ETS also needs to adequately make power prices reflect the true cost of CO₂ emissions. Additionally, on the EU level, the RES Directive needs to be revised for the period 2020-2030 to ensure a balance between risk exposure and drive for innovation, on the one hand, and predictability and stability on the other.

The design of the market should make it possible for new actors to participate, in particular citizens and energy cooperatives. Prosumers and cooperatives should be at the heart of the new market design, in which the rights of self-consumption and self-production should be enshrined. Prosumer policies should facilitate the reduction of peaks and unlock demand-side flexibility through specific programmes that could bring new technologies to the market. Behind the counter production and consumption with renewable energy technologies should be recognised as one of the back bones of a modern and sustainable energy market and no longer to be seen as a threat. The market should be organised that the increasing world of auto-production and auto-consumption at household and industry level is an asset also in view of intelligent demand side management and a fact to be counted in, also in view of regulatory and tariff reforms.

Although renewables are already cost-competitive, there are currently too little robust and stable investment conditions in place in the EU Member States to support them. The market design should therefore provide long-term price signals and create the necessary stability to trigger investment in renewables. More importantly, the market should facilitate access and participation for actors like municipalities and citizens which are the backbone of the energy transition. These actors should be at the heart of the new market design. The governance of the new energy market should always include a local player, such as a city representative or a representative from a municipal energy producer.

8. Which obstacles, if any, would you see to fully integrating renewable energy generators into the market, including into the balancing and intraday markets, as well as regarding dispatch based on the merit order?

A full integration of renewable energy into the market should be based on the existence of a level playing field, where all stakeholders and technologies have equal opportunities. Unfortunately, and because of multiple distortions, this level playing field is not yet given. The European Commission, within the framework of the 2001/77/EC Directive on the promotion of renewable electricity as well as in the 2009/28/EC on the promotion of renewable energy outlined as a reason for the necessity for support for renewables the clear distortion of the energy market due to significant subsidies to the incumbent sector.

No nuclear power plant would run today if it were required to take out appropriate insurance policies, neither would any lignite-fired power plant run if the greenhouse gas costs were fully internalized. Furthermore, new power plants compete with already paid-off ones, and technologies already far on the learning curve take on those that still have a long way to go before they are ready for the market.

EREF strongly believes that the first step towards integrating renewables into the market is removing market distortions. Reforming the European emissions trading system to reflect the true costs of greenhouse gas emissions and reducing the fossil-nuclear overcapacity and the minimum generation of conventional power plants are prerequisites for renewables' integration and for the completion of a fully-functioning internal energy market. In addition, balancing markets should be reshaped as to allow the participation of renewables and new flexibility technologies; barriers such as long tendering periods or minimum bid sizes need to be revisited and adapted so that they do not discriminate among players.

Balancing and intra-day electricity markets need to be designed in a way that provides flexibility for renewable energy, opening the markets to more consumers and producers, simplifying and encouraging demand response and storage, and giving faster balancing and

ramping responses. Further, power systems need to allow for reverse flows at the distribution level, which may require grid upgrades.

The 'energy-only' market should be improved through creating a strong regulatory framework moving towards more transparent market prices determined in all time horizons including forward, day-ahead, intraday and real time.

The demand pattern should, as much as possible, be made to match as closely as possible the (variable) renewable production. Therefore, an expansion of demand-side management is needed, including industrial, households and prosumers as well as the roll out of smart grids.

While removing barriers on the one hand the renewables need support on the other hand. Priority access and dispatch for renewables is still very much needed and should be respected. Strong grids, strong transmission lines and network planning with decentralised renewable energy generation in mind are also required. Grid constraints should be - as a matter of priority - lowered by reducing/adapting the demand pattern. This being done, reinforcing the national, regional and EU-wide grid infrastructure according to the adapted needs will also benefit from the additional benefits of larger geographical markets that can help smoothen out variable output of wind energy and demand variations.

In some Member States, renewables are competing on the market already today. In Germany, the market premium encourages a market-based generation pattern, where market signals reach generators and determine their behaviour. This has led, among other things, to negative prices occurring significantly less often and being less high than in previous years and will continue incentivizing renewables' integration as more flexibility options develop and become part of the market.

Access to the grid is a key priority for local energy actors such as municipalities and communities and needs to be a key principle of the new market design. This means that priority access and dispatch for local renewable energy should be maintained. Renewable electricity from wind or the sun is produced at almost zero marginal costs and should therefore be the first one sold onto the market. There should be a binding obligation for grid operators to allow local renewable energy projects to have access to the grid, enshrined in Member States' law and imposed through the new Renewable Energy Directive.

In line with many actors in this field, EREF is of the opinion that it is foremost technical and market barriers preventing energy consumers to be ready to lower or shift their behaviour pattern when it comes to consumption of energy versus stability needs. Also in this context, priority access and dispatch for renewable energies are crucial to be maintained in order to secure the grid enforcement planning and to encourage flexible consumption behaviour.

Municipal and community renewable energy projects have often difficulty in obtaining accurate information on the grid connection process, such as timetables for processing requests and establishing a connection. Furthermore, grid connection processes are often long, complicated and overly costly for municipal and community renewable energy projects. Grid connection costs in member states like France are unequally shared between the local renewable energy producers and grid operators, which significantly increases grid connection costs for their projects. Grid connection costs are also high for municipal and community renewable energy projects because they do not have the option to locate their locally bound project to the most suitable point where the grid is not constrained. In other cases, the assigned connection points for local renewable energy projects is very far from the installation, which increases grid connection costs. Moreover, some grid operators in member states refuse municipal and community renewable energy projects grid access with the excuse of lack of capacity. In the Czech Republic for instance, even small-scale photovoltaic installations are refused their connection approval because of insufficient grid capacity. In Poland, there is no priority and guaranteed connection to the grid for local renewable energy projects.

Administrative and authorization procedures are overly complex and lengthy for municipal and community renewable energy projects as they have to acquire permits and licenses from many different administrative bodies. In Malta for instance, it may take up to several years until a local renewable energy project has obtained all permits and licenses and can connect to the grid.

In order to fully integrate local renewable energy generators such as municipalities and communities into the market, several actions are needed. Firstly, grid infrastructure throughout the member states should be upgraded to smart grids, which can provide the additional capacity needed for allowing grid access for local renewable energy projects. Secondly, one-stop shops should be established in each member state which bring together all administrative procedures needed to establish a local renewable energy project and quickens their access to the energy market. Thirdly, grid connection costs between local renewable energy producers and grid operators have to be equally shared, with local renewable energy producers having to bear less of the costs, the further away the assigned grid connection point is from their installation.

9. Should there be a more coordinated approach across Member States for renewables support schemes? What are the main barriers to regional support schemes and how could these barriers be removed (e.g. through legislation)?

A sustainable approach needs to include similar renewables' expansion targets at a regional level and the adaptation of support schemes and investment conditions towards a more uniform framework. It is essential that this adaptation is subject to high quality standards, and not Member States agreeing on the lowest common denominator.

Regional cooperation could be very beneficial in identifying and removing administrative barriers (for example in France, where foreign investors are sometimes discriminated against) or preventing damaging stop-and-go policies and retroactive changes (as in Spain or various Eastern European countries) and thus in removing market distortions.

It also reinforces the Commission's approach of fostering more regional cooperation (including the definition of cooperation mechanisms in the RES Directive 2009/28/CE) and prevents the artificial splitting of markets. Regional cooperation should build on a coordinated regional policy planning, joint projects between Member States as well as joint research activities and co-funding for innovative technologies (for example second-wave renewable energy technologies). Given the overlap between the five Energy Union dimensions, a regional approach should prioritise issues of common relevance namely power system management, spatial planning, and infrastructure development.

Increased coordination should not invariably result in the cross-border opening of national support schemes, especially if there is no physical import of electricity. Renewables are predominantly domestic energy sources and their use reduces the dependence on fossil fuel imports, particularly from politically unstable regions and contributes to strengthening security of supply, thus having a real impact on the energy system and the transformation of the energy system.

Whereas some Member States have recognized the need to reduce the minimum generation of conventional power plants and the fossil-nuclear overcapacity, others are continuing to subsidize this form of generation and introduce capacity mechanisms that will distort the market and lead to the lock-in of inflexible generation for decades to come. In this context, coordination should include working towards creating a level playing field for renewables and creating a stable and reliable framework, so that Member States can reach their binding 2020 goals and advance towards their 2030 targets and beyond.

A well-designed and functioning market with high shares of renewable energy and abundant and competitive flexibility options can guarantee security of supply. For this, we need to reduce the investment uncertainty stemming from the lack of binding national targets for 2030. A new Governance Framework is needed, which guarantees investor

certainty by providing a clear and timely indication of Member States' contributions to meet the overall European goal and ensures achievement of the renewable energy target of at least 27% by 2030.

Promoting Demand-response

10. *Where do you see the main obstacles that should be tackled to kick-start demand response (e.g. insufficient flexible prices, (regulatory) barriers for aggregators / customers, lack of access to smart home technologies, no obligation to offer the possibility for end customers to participate in the balancing market through a demand response scheme, etc.)?*

The role of demand side management (DSM) as a flexibility option in the future energy market will significantly increase. Demand-side response, but also increased energy efficiency and savings in general, are key to facilitate the integration of renewable energy sources and move towards an efficient, 100% renewable energy system. An optimized market design should incentivize industry, commerce and households to reduce their power demand in times of high residual load and shift their demand to times of low residual load if this allows them to increase their profitability (by for example storing heat or cold or adapting production processes).

Administrative barriers to self-consumption are one of the obstacles to kick-start demand-response. Similarly, security, privacy and interoperability should be guaranteed in smart equipment to communicate with the grid. A framework to facilitate self-consumption - a key driver for demand-side flexibility – should be included in the revision of the 2009 renewables directive for the period 2020-2030, on the basis of the guidance published in July by the Commission. For now only large consumers perform demand side management to different degrees. Nevertheless, the structure of grid charges does not make DSM attractive for some industrial businesses, and should be revised. Furthermore, the participation of aggregators (which pool flexible consumers) in the balancing of markets should be simplified.

At the same time, barriers such as the current fossil-nuclear overcapacity should be reduced, so as to allow for peak prices that incentivize the development and competition of flexibility options. In addition, artificial price ceilings, as created by the lack of remuneration for renewables under negative prices, should be removed.

A large part of consumers' electricity bills is composed of taxes and levies that remain unaffected by changes in wholesale prices. The larger it is, the lower the signalling effect for customers, reducing the likelihood that customers' flexibility potential will be used. Smart

meters are also critical to advance demand response further: they allow consumers to get settlement according to the balancing period and enable an accurate measurement of demand response actions. In order to ensure smooth functioning, the design of the current balancing and intraday markets must be upgraded, for instance by introducing possibilities to trade balancing forward and more sophisticated products, implementing timeframes that better fit the flexibility requirements (ramp-up and down rates, product size etc.) and developing additional flexibility services for system operators.

Cooperation between System Operators

11. *While electricity markets are coupled within the EU and linked to its neighbours, system operation is still carried out by national Transmission System Operators (TSOs). Regional Security Coordination Initiatives ("RSCIs") such as CORESO or TSC have a purely advisory role today. Should the RSCIs be gradually strengthened also including decision-making responsibilities when necessary? Is the current national responsibility for system security an obstacle to cross-border cooperation? Would a regional responsibility for system security be better suited to the realities of the integrated market?*

Security of supply should be considered in the European context, and not as a national issue. This means that Regional Coordination Initiatives can play an important role in strengthening its regional dimension through transnational contracts, which would in turn render the introduction of capacity markets obsolete. The cooperation between TSOs and DSOs is of critical importance to ensure coordinated infrastructure planning and maintenance, and exchange of information. Current national responsibility for system security is not an obstacle, and institutions such as ACER and ENTSO-E are already contributing to increased cooperation. A reform of the role of RSCIs should take into account the need of a multinational supervisory authority and that of multi-stakeholder participation. RSCIs should support the operation coordination to ensure an aligned and common vision of the regional grids. Establishing regional system operators could be a first step towards more operational coordination of TSOs in the future.

Adjusting the Regulatory Framework

12. *Fragmented national regulatory oversight seems to be inefficient for harmonised parts of the electricity system (e.g. market coupling). Would you see benefits in strengthening ACER's role?*

EREF supports a strong ACER, as some standards require European harmonization. It is though crucial to consider the risks of taking decisions without the participation of multiple national stakeholders. We therefore advise considering the need of solid supervision and transparent coordination which means identifying the right governance structures to make the most out of regional power markets. This will allow to build trust beyond borders and to ensure cost-savings and system optimisation.

In general, the role of ACER should be to realise seamless cooperation of NRAs as one regarding efficient cross-border intraday platform issues and in particular regarding the implementation of network codes and guidelines and the related projects. Moreover, ACER should be able to act upon objectively observed disagreements among NRA. ACER should remain an Agency for cooperation of NRAs but its accountability and transparency of governance should be increased by for instance defining terms of reference of the participation of NRA; making the NRAs accountable for the requested work and monitor it.

13. *Would you see benefits in strengthening the role of the ENTSOs? How could this best be achieved? What regulatory oversight is needed?*

EREF welcomes the strengthening of ENTSO-E and ENTSO-G, especially if the prediction is that there will be much more transmission between different areas, and encourages increasing the transparency of processes and the inclusion of multiple stakeholders in decision-making. Also, the exchange of experience about how to integrate renewable electricity is interesting. Strengthening ENTSO-e could increase EU member states' cooperation on EU energy policy implementation and energy policy objectives' achievement. This being said, ENTSO-e should as a matter of priority make sure to deliver on the numerous deliverables expected from it as part of the Third package, in particular by enhancing cooperation between TSOs, ensuring the harmonization of network codes and rules, and coordination research and development plans. This would ensure, overall, the operability, reliability, compatibility and security of the European electricity transmission systems.

As regards regulatory oversight, ACER is playing an important role already today. It is paramount that political decisions, such as setting the right framework for the development of flexibility options, allow for multi-stakeholder consultation processes and are not taken

by technical bodies only. This bears the risk that technical bodies delay the market transformation process by for example tightening prequalification standards for participating to the balancing markets in favour of incumbent market participants.

14. What should be the future role and governance rules for distribution system operators? How should access to metering data be adapted (data handling and ensuring data privacy etc.) in light of market and technological developments? Are additional provisions on management of and access by the relevant parties (end customers, distribution system operators, transmission system operators, suppliers, third party service providers and regulators) to the metering data required?

The renewable energy industry believes that the future role of distribution system operators (DSOs) is to enable the swift and competitive development of flexibility options. Furthermore, we encourage strengthening competition, without sacrificing it to technological developments. DSOs should act as neutral market facilitators and be in charge of aggregating the energy data and providing all players on the market with the data to facilitate the local energy transition.

In a future energy system with high shares of renewable energy, the role of DSOs will change, as secure system operation will have to be supported by the distribution system (for example by providing balancing power from the distribution grid). As regards metering data, we encourage keeping the data transfer down to the necessary minimum (e.g. collecting end consumer data on a quarterly or yearly basis), most data should remain in the meter sphere itself for privacy reasons, and aggregating only the most important data as to prevent conclusions on individual consumer behaviour. Further it is important that consumers have easy access to their own data and are given the tools to understand the available information. EREF also fears that by forcing de-central energy suppliers and grid operators to provide data of their clients to other market players that the independence of power production and the regional added value may again be endangered by “client shaving” to the benefit of big suppliers and thus leading to a further market restriction.

Data relevant to the secure operation of the system should continue to be provided as often as necessary, but aggregated at the substation level so to ensure the protection of individual rights. As far as aggregated information is concerned, DSOs could act as market neutral facilitators.

In some EU Member States such as Germany, the high voltage grid operators are currently the only one who are allowed to buy and sell stand-by energy. As there are only four high-voltage grid operators in Germany, they have a kind of monopoly. Any demand of such standby energy by the distribution system operators (DSO's) has to be negotiated by them. This results in the interesting situation that RES-suppliers may sell standby energy to their

neighbouring RES consumer via the high-voltage grid operator. However, the transport way to his neighbourhood consumer is a very long one and goes (virtually) via the high voltage grid of the high voltage grid operator who will charge the total amount of grid use on any voltage level to the distribution system operator and therefore finally to the consumer. This is despite of the fact that only the same grid level was used (may be only the low-voltage grid) to get the electricity from the RES producer to the consumer.

Based on this case, EREF recommend for a future electricity market design that the saved grid charges of any higher voltage power line which is actually not used should be given and shared among the producer of the RES and the neighbourhood consumer.

Furthermore, EREF regards it as necessary to create minimum bit sizes of standby energy as low as 100KW as many producers of small RES units currently need to pool standby energy with other operators in case he wants to offer it to the only allowed high voltage grid operator. It should be allowed to sell this standby energy directly to the distribution grid operator who directly may sell the electricity to the consumers in a future electricity market.

A critical legal topic is the collection and use of data. In EREF's view, data sovereignty should be in the hands of the user; consumers should decide whether and which data they make available.

15. *Shall there be a European approach to distribution tariffs? If yes, what aspects should be covered; for example tariff structure and/or, tariff components (fixed, capacity vs. energy, timely or locational differentiation) and treatment of self-generation?*

EREF welcomes the fundamental revision of the distribution grid charges regime. Overall, an effective scheme is one that provides tariffs for all levels, from domestic to large-scale developments, guarantees long term investment security, is administratively simple, and is easy to explain in order to ensure public acceptance with a view to incentivizing self-consumption, increasing system flexibility, support energy efficiency measures and removing adverse incentives for operation that does not serve the system. Demand-side response should also be valued, together with self-consumption and other mechanisms incentivising consumers to actively participate to the market. All barriers to self-consumption should be removed.

The scheme should also take into account the level of development of each technology. Some innovative renewable technologies, which are still at the demonstration phase of development, may require a different type of government support, such as tax incentives or soft loans.

EREF supports a careful national tariff structure assessment that takes into account criteria such as relevant system operation and accurate power forecasting as a first step towards a more European approach. Regional cooperation should also play an important role, as Member States can learn from each other how to optimize the system for increased flexibility and better integrate renewable energy in order to succeed in the transition to a 100% renewable energy system.

As mentioned, EREF favours to support self-consumption by removing all barriers. In this respect, RES suppliers should be allowed to use the low voltage and distribution grid to transport the electricity to his own neighbouring location where he/she consumes the electricity. There are several cases that the public grid must be used to transport electricity from the production side to the consumption side of the same operator/consumer/producer. Today, this use is often restricted. A new market design should change this.

16. As power exchanges are an integral part of market coupling – should governance rules for power exchanges be considered?

Power exchanges should not be subject to governance rules. An optimized power market allows for prices where supply and demand intersect or peak pricing, making power exchanges the main venue for investments, competition and innovation, as more and more transactions will be conducted here. Power exchanges are capable of self-regulation and there are rules in place that allow participants to complain according to existing competition law.

EREF would like to stress that power exchanges are not the only driver of competition and innovation. In the future energy market, bilateral contracts agreed upon outside the market will continue to play an important role.

Ensuring Security of Supply

Is there a need for a harmonised methodology to assess power system adequacy?

EREF strongly supports a harmonised methodology to assess regional power system adequacy as a tool to increase transparency. The integration of large amounts of renewable energy sources fluctuating into the system, new storage technologies and the internal electricity market call for a harmonised methodology to improve interconnection assessments, system flexibility and inputs - and a transparent methodology developed and implemented in a way that helps people understand the need for grid developments. These assessments though should not serve as a pretext for introducing capacity markets, as harmonised criteria tend to pave the way for introduction.

Assessments resulting in the identification of missing new generation capacity should rather take into account the long-term perspective of the transformation process, as lack of capacity can be a temporary issue. A dynamic consideration of the energy system requires increasing the overall system efficiency and identifying the existing obstacles to the development of flexibility options and their removal, not locking-in inflexible capacities via capacity markets. The latter would only distort the transformation process, as they would render market mechanisms null and void.

17. What would be the appropriate geographic scope of a harmonised adequacy methodology and assessment (e.g. EU-wide, regional or national as well as neighbouring countries)?

EREF supports the development of a harmonised methodology to assess regional power system adequacy, which includes all currently coupled markets. The initial purpose of interconnections built in the "pre-liberalisation era" was to facilitate mutual support and energy sales between countries; performing purely national adequacy assessments would not be efficient. A next step could be the inclusion of future coupled markets, so as to be able to forecast and evaluate possible interactions.

18. *Would an alignment of the currently different system adequacy standards across the EU be useful to build an efficient single market?*

A well-designed and efficient single market is the cost-effective way to achieve the European and national climate and energy targets, while strengthening security of energy supply. As we are working towards its completion, the alignment of different system adequacy standards can play a significant role. The aligned standard would also be useful to take into account of the impacts on the EU internal market and establish a set of acceptable standards in case of disruptions and disconnections. Failure to ensure aligned system adequacy can have spill-over effects and systemic risks, while also miscalculating costs. It is essential though that the development of common standards does not serve as a pretext to introduce capacity markets, which would lead to the lock-in of inflexible fossil-nuclear capacity and would thus distort the flexibility of markets and therefore of the single market as such.

A transitional instrument such as a capacity reserve outside of the market is enough to guarantee security of supply and can be gradually phased-out along with further development of the energy market. In addition, the focus should lie in removing the barriers blocking the development of flexibility options, by implementing 'no regret measures', such as reducing the minimum generation of conventional power plants, reassessing the grid charges regime or optimizing the balancing markets.

19. *Would there be a benefit in a common European framework for cross-border participation in capacity mechanisms? If yes, what should be the elements of such a framework? Would there be benefit in providing reference models for capacity mechanisms? If so, what should they look like?*

EREF strongly rejects the introduction of capacity markets, as they are a distortion and lead to the lock-in of inflexible generation. Furthermore, they interfere with the full implementation of the internal energy market and hinder the development of flexibility options. In a well-designed and fully functioning energy market, capacity markets are redundant; high shares of renewable energy are at the heart of the system, and they are complemented by flexible generation and demand and balancing markets where RES and flexibility options compete on a level playing field.

It is possible that Member States considering the introduction of capacity markets have not yet fully liberalized their markets or have not introduced policies that incentivize flexibility. We encourage these countries to increase cooperation with other Member States and profit from the information available regarding the transformation of their energy system. We welcome the Commission's focus on promoting flexibility and cooperation and believe it is

the right approach to changing our inflexible, old-fashioned system and achieving our decarbonisation targets.

The renewable energy industry believes a common European framework for cross-border participation should not serve as a pretext for introducing capacity markets, as reference models tend to pave the way for introduction.

Nonetheless, in cases the Commission authorises a specific capacity mechanism EREF underlines the need for a common set of indicators and criteria for cross-border participation, as this is *conditio sine qua non* for the existence of capacity markets. Their development should be carefully considered and opened for consultation with all relevant stakeholders. An opening of those mechanisms to participants from other EU Member States should be a strict obligation. This could help to hinder a protectionist approach towards the incumbent market players in a specific country.

In our view, necessary steps have already been outlined in the Commission's communication. The further development of balancing markets – revisiting the prequalification criteria, the long tendering periods or minimum bid sizes – is one of the first steps to be taken towards transforming our energy system and strengthening security of supply.

20. Should the decision to introduce capacity mechanisms be based on a harmonised methodology to assess power system adequacy?

Capacity markets are distortive and hamper the cost-effective integration of renewable energy. They furthermore hinder the development and competition between flexibility options. Not only at the national level, but also at the European level, capacity markets interfere with the full implementation of the internal energy market, especially by limiting the use of cost-effective balancing potential available as European markets continue to converge.

A harmonised methodology to assess power system adequacy bears the risk of creating problems it seeks to solve. Participants wanting capacity markets will strive for their introduction and use the methodology as a tool of enforcing them. We therefore suggest assessing market barriers that still need to be addressed rather than introducing harmonised criteria.