Opinion of the Committee of the Regions on 'Renewable energy: a major player in the European energy market'

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THE COMMITTEE OF THE REGIONS

— notes that the uncoordinated and faster-than-expected development of RES in many countries has led to a number of political, regulatory and technical problems in the operation of energy systems. Serious debate is necessary at the EU level about appropriate mechanisms and instruments to promote RES in a coordinated way;

— points out that a simple and effective support scheme for RES should be developed, based on a common European strategy. A common strategy is needed to develop both market-based and regulatory mechanisms in order to ensure an effective and socially viable transition to higher RES production;

— considers that the future subsidy mechanisms could be based on verified cohesion policy procedures in order to support the production and distribution of renewable energy as well as promote a wider implementation of new RES technologies;

— is convinced that, in order to stabilise the current situation and create long-term incentives for investors, there is a need for more consistency between the decisions of individual Member States. One instrument to promote this could be a pan-European support scheme for renewable energy sources;

— considers that it would be possible to combine different renewable technologies in the regions with new methods of managing power generation and transmission capacity through the application of smart grid technologies, and thus to balance local electricity needs with production, thereby significantly increasing the energy security of the regions and reducing dependence on long-distance energy imports.

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Opinion of the Committee of the Regions – Renewable energy: a major player in the European energy market

I. POLICY RECOMMENDATIONS

THE COMMITTEE OF THE REGIONS

Introduction

1. agrees with the view expressed by the European Commission that renewable energy is key in diversifying energy supply, increasing European competitiveness and creating jobs, and fulfilling the European Union's climate change commitments; also believes that post-2020 renewable energy milestones are essential to ensure that renewable energy is part of the European energy market;

2. considers that one of the main reasons behind the problems in RES development is that EU energy policy lacks long-term vision and coordination between the countries, regions and parties involved, in line with the subsidiarity principle and points to the vital role of energy efficiency measures in meeting the objectives set. It also agrees with the European Commission that Member States should make use of the existing instruments to foster cooperation between them and trade in renewable energies, and underlines the particular role that border regions can play as laboratories for cooperation in this regard;

3. points out that a simple and effective support scheme for RES should be developed, based on a common European strategy. In line with the principles of subsidiarity and proportionality, only a general framework should be specified at European level, focussing especially on cross-border effects. The future subsidy mechanisms could be based on verified cohesion policy procedures in order to support the production and distribution of renewable energy as well as promote a wider implementation of new RES technologies. Stresses the key role that local and regional authorities have to play in the development and promotion of renewable energy solutions, which need to be based on the experiences and needs of different regions; calls therefore on the European Commission and the Member States to involve representatives of the local and regional levels in the design of EU level policy instruments and their implementation;

II. EUROPEAN COMMISSION COMMUNICATION

4. agrees with the European Commission that, in order to achieve a significant increase in the share of renewable energy sources, current support schemes will have to be improved. According to the Commission's analysis, high administrative and capital costs often raise the cost of renewable energy projects and jeopardise their competitiveness, especially in their early stages. The Communication highlights the need to ensure consistency between national support schemes which can help remove distortions in the energy market. Moving towards schemes that progressively expose producers to market price risk should increase RES technology competitiveness. In particular, a well-functioning carbon market is crucial for decreasing the need for subsidies for mature technologies in the long run. Support will, however, be necessary in the case of new, less mature technologies. The CoR therefore welcomes EC plans to prepare guidance on best practice and experience gained in these matters;

5. emphasises that infrastructure development is critical for the success of a single market and for the integration of renewable energy into power systems. The improvement of energy infrastructure can be achieved through:

— investment in distribution grids,

— upgrades to transmission infrastructure, investment in interconnections, especially between Member States and their regions,

— development of smart grids,

— support for decentralised/small-scale power generation;

6. notes that research and development (R&D) funding is crucial for supporting technology innovation and development. Agrees with the Commission that in particular ocean technologies, energy storage and advanced materials as well as development of technologies to tap unexploited biomass resources, for renewable energy needs can play an important role in this process. The Strategic Energy Technology (SET) plan and the forthcoming Horizon 2020 research programme represent the EU's main contribution to driving developments in key energy technologies. Stresses the important role which local and regional authorities have to play in cooperation with and

support for research infrastructure and as public investors; recalls in this context also that the crucial importance of EU research funding in this domain should be reflected adequately in the ongoing debate on the EU's multi-annual financial framework;

7. takes note of the Commission's analysis of the different degrees of openness and integration of different energy markets (heating & cooling, transport, electricity etc.); agrees that integration of markets can help the entry of new players, such as RES, but also underlines that market opening in itself is no guarantee for an increase in efficiency and a decrease in prices, and that successful opening requires appropriate European level regulation and supervision, transparency and information for the consumers; looks therefore forward to the future debate on the Commission's proposals on the internal energy market;

III. **DEVELOPMENT OF RENEWABLE ENERGY SOURCES**

Share of RES in energy consumption

8. points out that the share of renewable energy in EU energy consumption in mid-2012 was 12.4 %, which represents a rise of 1.9 % on 2008 levels; this means that the EU is currently on track to reach its 20 % share of renewables goal by 2020, but it also means that the EU should be more ambitious and set itself a higher target or set at least a 20 % target for each Member State; moreover, further efforts are needed beyond 2020 and the EU should set itself ambitious milestones aiming at the possibility of reaching 100 % renewable energy by 2050, as soon as possible;

Subsidies for RES

9. calls for a proper structure and realistic objectives for the EU Emissions Trading Scheme (ETS) which was supposed to act as an indirect form of support for RES;

Support schemes and the energy market

10. shares the EC's opinion that the competitiveness of RES operating in energy markets needs to be improved. The subsidy systems should be constructed in a way that encourages investors to develop RES and ensures that they operate effectively in the competitive energy market. The support systems should also lead to the gradual substitution of other forms of energy, in particular those which have a negative impact on environment;

11. is concerned that some RES support systems may have unintended consequences or may be abused by some energy producers of RES leading to high costs of RES energy for consumers. A coordinated EU-level strategy for RES using the existing instruments of European and national competition policy is necessary to prevent such abuses;

12. draws attention to the fact that, similarly to the guaranteed tariffs system, the system of green certificates also eliminates market risks. Furthermore, the system of green certificates may not function properly in all respects in some countries. The rapid growth of RES energy means that the number of certificates is beginning to exceed the obligatory purchase level, leading to a collapse in their price. It is therefore necessary to review RES targets and adjust the number of certificates issued accordingly;

13. welcomes, in principle, the new system proposed, i.e. a *Guarantee of Origin* system, a type of European green certificate, which will make it possible to trade green certificates in all EU countries which implement this system. However, monitoring is required to verify if this measure is sufficient to correct the shortcomings of the existing systems;

Reactions to the uncoordinated development of RES

14. notes that the uncoordinated and faster-than-expected development of RES in many countries has led to a number of political, regulatory and technical problems in the operation of energy systems. Serious debate is necessary at the EU level about appropriate mechanisms and instruments to promote RES in a coordinated way. A common strategy is needed to develop both market-based and regulatory mechanisms in order to ensure an effective and socially viable transition to higher RES production;

15. indicates that flows of electric energy between various countries and regions need to be better coordinated. Significant growth of RES shares in the total amount of energy produced requires more coordination in the development and operation of networks, as well as effective legal regulation of interconnected power systems between different countries and regions, between the mainland and islands and between islands;

16. points out that energy production from renewable sources can be promoted with reference to local energy concepts. These energy concepts should take in measures for saving energy, increasing renewable energies and saving resources with all due regard for sustainability.

Technical conditions for the operation of RES

17. points out that RES are connected to energy grids that are not constructed for such energy sources. The wide use of renewable energy will require time and investment to upgrade energy networks, which, in their current state, limit the growth of RES. It can be overcome through the implementation of smart grids and greater grid interconnection between EU Member States, as well as between mainland and island regions and between islands. In addition, many RES such as

wind farms or photovoltaic facilities experience significant fluctuations. As a result, there is a need to maintain some spare capacity in conventional power plants, to develop appropriate energy storage, and to encourage flexibility through demand-side management;

18. notes that, while the large-scale use of energy storage facilities would significantly improve the operating conditions of electricity systems that use renewable energy sources, it is not technically possible to store electricity directly. Indirect energy storage systems, which convert electrical energy into chemical energy (e.g. electric batteries) or kinetic energy (e.g. pumped storage power stations) are currently very expensive and limited in terms of their wider implementation. The wider use of RES in electricity systems depends on new technologies, in particular new energy storage with two to three times the current energy density at significantly lower cost. Technologies that convert surplus electricity into gas ("power to gas") should be further developed, because they offer many advantages. Artificially produced gas can use existing network and storage infrastructure. The CoR believes that research to new energy storage technologies should be stepped up to facilitate the wide application of renewable energy sources for electricity generation;

19. emphasises that the lack of infrastructure to effectively use renewable energy resources on the European continent, such as large-scale wind farms in the North Sea and solar plants around the Mediterranean and in North Africa, means that substantial investment in European Electricity Highways is required. When it comes to developing European Electricity Highways, substantial environmental constraints have to be respected and the regions concerned must imperatively be involved. In addition, non-invasive supply methods should be opted for and the possibility of underground systems also explored. Moreover, it should be taken into account that the current European electricity system, managed by the European Network of Transmission System Operators for Electricity (ENTSO-E), extending from Portugal to Poland's eastern border and from Denmark to the Balkans, needs to be upgraded to handle the new demands arising from greater European energy integration; therefore supports the construction of new DC power lines which could increase the operational reliability of the European network and reduce power losses during transmission;

Making sure that renewable energy is sustainable

20. points out that expansion of renewable energy needs to be carried out in a way that is fully sustainable. When developing existing systems to ensure sustainability or creating new ones, care should be taken that they do not create new obstacles to the development of energy and fuel markets. Existing approaches and systems should be fully exploited. Efforts to ensure that bioenergy is carbon-neutral are of key importance when expanding renewable energy.

IV. NEW SUPPORT SCHEME FOR RES

21. notes that it is advisable for the European Commission to carry out the analysis leading to the design of new support schemes for RES, which would be coordinated throughout the European Union, taking into account the experience and good practices of Member States and regions. Such an approach could identify pan-European objectives and measures for achieving them. A new scheme should cover legal, economic, technical and social aspects;

22. points out that the European support scheme for renewable energy sources should:

— establish a pan-European fund to support RES

— coordinate RES support schemes at the European level and make them compatible with each other

— increase the role of the regions in allocating RES support and raising social awareness

— optimise use of RES technologies based on availability of renewable resources in the regions

— operate at several levels: European level for large installations and regional level for small installations and micro-sources

— grant subsidies and other forms of support for investment at levels which would enable the full participation of RES in competitive energy markets

— support efforts to achieve energy independence

— support the development of electricity grids and intelligent networks allowing for wider RES implementation

— improve the operation of RES in smart electric networks through support for RES and energy storage packages

— share the costs of RES development fairly among the people of Europe, at its optimal level;

Pan-European fund to support RES development

23. notes that some Member States are introducing restrictions on support for RES, attempting to curb rapidly rising electricity prices, which they assume are in some cases partially linked to the malfunction of existing RES support schemes. Such short-term policy reactions show how the lack of stable regulation and a coordinated EU policy on renewables and the resulting, significant regulatory risks may have a very negative impact both on the environment and on the energy market;

24. is convinced that, in order to stabilise the current situation and create long-term incentives for investors, there is a need for more consistency between the decisions of individual Member States. One instrument to promote this could be a pan-European support scheme for renewable energy sources. Moreover, a reduction in national subsidies for fossil fuels and an end to other policies which hinder investment in renewables are of key importance;

25. points out that, given the substantial need for investment in order to achieve the energy revolution (estimated at 1 trillion Euros needed across the EU by 2030), and the widespread risk-aversion of investors in particular in the current climate, it is necessary to make use of all existing financial resources (such as EU cohesion funds, income from a revised ETS, innovative financial instruments at different levels, returns from installed capacity), it may also be necessary to envisage project bonds for renewable energy projects in order to provide financial resources for research and development and investment capital for RES;

26. considers therefore that subsidies for RES should be coordinated at the European Union level and between the Member States, taking into account the experience and good practices of Member States and regions, thus reducing investment risk and creating new incentives for RES development;

Increasing the role of the regions in allocating support for RES

27. underlines that some existing support schemes implemented at the level of the Member States may not always properly reflect the specificities of different regions. Often renewable energy sources are not located close to final users, requiring major development work on transmission and distribution lines. The lack of sufficiently developed transmission infrastructure is one of the main obstacles to the rapid development of renewables;

28. is strongly convinced that increasing the role of the regions would boost synergy effects and at the same time optimise the costs of developing network infrastructure. That is why it is so important to increase the involvement of the regions in promoting renewables and in channelling funds for the promotion of renewables to the regions as well as to producers of renewable energy. Support schemes for renewables should also share the knowledge of regions and encourage regions to work together;

Optimum exploitation of renewable energy technologies based on renewable energy resources in the regions

29. is convinced that the regions could identify the best mix of renewable technologies, such as combining the development of wind farms and solar energy parks with power plants using biogas and biomass as well as geothermal resources, especially technologies using geothermal heat for electricity generation; for these reasons it should be endeavoured – where technically possible – to feed the biogas produced into existing natural gas networks, and to encourage this practice;

30. considers that it would be possible to combine different renewable technologies in the regions with new methods of managing power generation and transmission capacity through the application of smart grid technologies, and thus to balance local electricity needs with production, thereby significantly increasing the energy security of the regions and reducing dependence on long-distance energy imports;

31. stresses that the regions have a particularly important role to play in the establishment and development of renewable micro-installations and in encouraging the emergence of "prosumers", consumers of energy who also produce energy for their own use or that of their neighbours. The emergence of energy prosumers could contribute not only to limiting the total costs of obtaining and supplying energy but also to the development of new patterns of sustainable energy consumption and production. The CoR strongly supports energy production at regional level for public and private sector including households;

32. points out that the regions also have a major role to play in the development of co-generation. This technology for the combined production of heat and electricity makes it possible to extract nearly 90 % of the primary energy content of fuel. The role of the regions could be to coordinate the development of co-generation, taking account of existing district heating networks and the location of new investments in the region. The European Union should create the conditions needed to facilitate support for these highly efficient facilities so that they can cover their operating costs;

Coordinated action on different levels: an EU level support scheme enabling RES to become competitive and to develop regional renewable solutions

33. notes that current RES subsidy schemes only allow limited planning of RES development, and that in many cases the requirements for operators are non-existent;

34. therefore considers that a new system for subsidising renewable energy sources should be predictable, with the amount of the resources earmarked for subsidising renewables laid down and known years in advance in correlation with the RES targets. The system should be tailored to each technology, taking account of its viability and degree of maturity, and should have the flexibility needed to be able to respond to market signals in each country;

35. indicates that the role of the regions and local stakeholders should be increased by using existing knowledge to quantify investment costs and the support required, so that at a later stage RES producers will be able to operate on European energy markets;

36. points out that the development of support centres for RES in the regions will generate employment and promote the development of various forms of training which are essential for investors and the firms involved in construction and connection to the grid. The development of local know-how will also result in an increase in research on the regional development of renewables. This could also form part of the research carried out at European and national level;

37. points out that the development of renewables is in many cases limited by inadequate development of the distribution, transmission and interconnections grid between EU Member States, between mainland and island regions and between islands. Removing these restrictions requires a twin-track approach: the development of the existing grid and its modernisation, and modern management of the grid and of consumers and producers of electric power connected to the grid. In addition, different storage technologies should be integrated when developing the grid, because they reduce the need for further grid capacity and can also make reserve power available. Use of the gas network by developing power-to-gas facilities should also be taken into consideration as one alternative;

38. also believes that part of the funding needs to be allocated to the development of the distribution, transmission and interconnections grid between EU Member States, between mainland and islands regions and between islands. The support scheme should allow for simultaneous and co-ordinated support for the development of RES grids and installations. This will on the one hand permit more effective use of support funds, and on the other, cooperation between local network operators and producers of renewable energy, as well as prosumers. This kind of cooperation between network operators and renewable energy producers, initiated by the coordinated allocation of support funding, will eliminate one of the shortcomings of the existing system, inadequate cooperation between network operators and producers;

Limiting variations in the production of renewable energy through support for packages: RES + energy storage

39. notes that the production of energy from RES technologies depends on external factors, such as wind or solar radiation levels. This limits increases in the capacity of renewable energy installations. Improved RES operation can be achieved by establishing RES clusters using different technologies, such as: wind turbines, PV solar energy, biomass and biogas, as well as geothermal energy and power storage technology through the use of intelligent grids;

Solidarity-based support for cost of RES development by European society

40. considers that renewable energy production systems cannot be developed by individual Member States in isolation. This development is bound up with the achievement of objectives relating to climate policy, the promotion of the development of new technologies and the improvement of European energy security by making Europe independent of external energy supplies. This joint pan-European objective should be implemented jointly by all levels of government coordinating with each other; at the same time, it is important to keep the transition towards the possibility of 100 % RES in clear view and make sure that "unconventional" or other forms of energy which may appear as alternatives, but which are not renewable and therefore not sustainable and do not replace conventional fossil fuels, do not divert attention and resources from the necessary change to RES;

41. points out that uncoordinated actions can lead to unintended consequences such as a decline in security of supply and unjustified price increases, resulting in negative public attitudes and loss of support for renewables. This can be improved through public debates and transparent political decision-making processes, as well public information campaigns on the need for efficient energy use and the existence of new models for the sustainable consumption and production of energy;

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The President
of the Committee of the Regions
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