The European Association of the Electricity Transmission and Distribution Equipment and Services Industry

European Commission public consultation on the Renewable Energy Strategy

(T&D Europe's answers in blue)
2nd March 2012

Introduction

T&D Europe support and share the opinion of the European Commission regarding the need for a global and systemic approach, given that the European energy system requires a global[1] restructuring in order to evolve the energy mix in a structural manner and begin the energy transition in Europe sustainably.

T&D Europe believes that the only major change necessary consists in redeploying the value of production toward the end uses of energy, and that in order to adhere to that goal, the new energy technologies must be implemented within the framework of a new global regulation at the scale of the entire European Union.

It should be noted that T&D Europe agree with the European Commission that the non-technological barriers resulting from the existing system must be removed, in all European countries.
That existing system is largely based on a supply policy whose diplomatic and energy risks are known and have been pointed out by various European institutions, and it creates competitive positions for suppliers of energy that are asymmetrical in the light of the objectives of promoting energy efficiency, renewable energy (RE) sources and electricity storage aimed at by the EU.

Section A: General Policy Approach

In light of the results of recent communications on a Roadmap to a low carbon economy and transport white paper as well as the Energy 2050 Roadmap:

1. Is there a role for new targets for renewable energy sources post-2020 assuming that any targets must be consistent with climate mitigation and energy efficiency policies and targets as is currently the case with the 20/20/20 targets in the Europe 2020 strategy?
   -Yes, a mandatory target at EU level is appropriate
   -Yes, an indicative and non-legally binding target at EU level is appropriate
   -Yes, sectoral targets (e.g. electricity, transport, heating and cooling) are appropriate
   -Yes, a combination of EU and sectoral level targets is appropriate
   -No, targets for renewable energy sources are unnecessary

   Please explain the reasons for your answer (such as the scope and contribution from GHG targets/ETS, the need to address other environmental, security of supply or technological development benefits)

[1] Paragraphs 4 to 8 of the introduction of the consultation

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- **The reason for having mandatory targets at EU level and in the specific sectoral targets are the only way besides the environmental benefits to enhance the technological development for the European Industries.**
- **The enhancing of renewable energies in the EU/local context supports the security of energy supply.**
- **The development of RE provides positive economical fall outs in the industry and in the social/employment value chain.**
- **In the long term the cost of energy will be lower, as currently requested by end users.**

2. Are other policy elements necessary to promote renewable energy post-2020, such as?
   - Enhanced focus on R&D to bring down the costs of renewables technologies
   - Facilitation policies (faster and easier permitting, improved access to the grid and further grid investments, availability of more sites for renewables, etc)
   -Abolition of support mechanism or subsidies to other energy sources
   - Public procurement obligations in support of renewables
   - Better financing possibilities
   - Continue to ensure sustainability and scalability
   -Other (please specify)

a1. In the context of an ambitious program to reduce greenhouse-effect gases by 2050, it is imperative that intermediate goals be set so that the outlook can be a realistic one for financers, given the liquidity problems on the current market: 2015 – 2020 – 2025 – etc.

a2. Neutrality must be ensured in granting public subsidies or State aid, whether direct or indirect, between conventional and renewable energy sources by integrating the total cost of ownership, and in particular the cost of reprocessing and recycling.

a3. Public-sector contracts must promote the integration and deployment of renewable energy sources as long as this does not destabilise other markets, as is the case for wood energy and biomass[2].

It seems only logical that the European Commission should establish a watch on competition between raw materials according to their economic, social, environmental and industrial value for the European Union. For example, the indexing of wood for energy use with the price of gas via a regulatory text in a Member State should give rise to a priori notification of the DG Enterprises and Internal Market in order to ensure that it does not result in a destabilisation of the wood industry in the case of wood for energy.

a4. A framework for investment dedicated to renewable energy sources would seem necessary in the light of a capital market with low liquidity for long-term projects such as renewable energy, especially since aids to production would be reduced in a harmonised fashion on the European continent to allow the market to act in favour of true parity, so long as this does not contradict the goals mentioned in point a2.

[2] *Les Echos,* 4 January 2012 in France "*La biomasse dérègle-t-elle le marché du bois ?*" ("Is Biomass Perturbing the Wood Market?")

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Section B: Financial Support

Member States at present rely on various forms of national support mechanisms to fulfil their national renewable targets for 2020. This section refers to the further development of support mechanisms post-2020.

1. Do you consider that financial support will continue to be necessary to support renewables post 2020 given their expected greater penetration?
   -Yes
   -No
   -For selected technologies/circumstances/markets (please specify)
   - For selected technologies KPI (key performance indicators) must be identified/ quantified with respect to the EU targets in energy efficiency, CO2 reduction and use of RES.
   - Selection of technologies depends of local needs/market as well as relevant availability of RES.
   - Grid parity targets must be considered in the decision process.

2. If renewable energy sources require support post-2020, how do you think this can best be achieved with a view to achieving a cost-effective deployment?
   -Making support schemes more market-oriented (please specify how)
   -Identifying benefits and explaining them to the end users
   -Accelerate convergence of national support schemes
   -Open up national support schemes to cross-border projects
   -Phase out support schemes over time (please specify for which technologies if applicable)

3. Do you think it would be useful to develop common approaches as regards Member States' financial support for renewables?
   -Yes, with benchmark values for support level per technology per Member State
   -Yes, with EU-wide benchmark values for support level per technology
   -No, support levels should be entirely up to Member States.

4. Should the structure of financial support be gradually aligned EU-wide?
   -Yes (please explain how this could be achieved and which support structure you consider most suitable)
   -No

With regard to questions 3. and 4. please specify if you see a difference between the different sectors (electricity, heating and cooling, transport).

- **The top priority at EU level is to realize EU infrastructures between countries as well as at local level.**
- **An authority should take responsibility to verify/align financial support, in particular with regard to sectors of electricity, heating/cooling, transports.**

5. How do you see the relation between support schemes for renewable energy and the requirements of the internal electricity market for the period after 2020 against the background of a rising share of renewables?

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-Member States need to be able to continue to operate support schemes on a national level and retain control over who benefits from national schemes.
-Member States need to open their support schemes to renewable generation from other Member States (if so, please explain how this could be achieved, e.g. through convergence of national schemes, compensation mechanisms or other)
Member states through convergence of National schemes as well as compensation mechanism
-Member States should open their support schemes to renewable generation from third countries (as above, please explain how this could be achieved)
- The choice of renewable energy is driven by availability in the local context.
- The support schemes needs to be in line with the EU rules and to be applied to the specific pilot projects in the relevant third countries.

6. Do national support schemes and differences between such schemes distort competition?
- No, support schemes do not have a significant distorting impact on competition since it is assumed that the support schemes are applied with respect to the EU rules so they do not have a significant distorting impact on competition.
-Yes, all support schemes distort competition to a similar extent
-Yes, some support schemes are more distorting than others (please specify which you consider most distorting)

b1. In any case, a harmonised European framework for financing renewable energy is necessary in order to avoid national rate policies that generate cyclical activity without visibility in the middle term for industry and private or institutional investors.

This European framework would aim at regulating a “green bond” market and at standardising any form of “securitisation” in order to avoid the excesses that have already been experienced on the financial market.

b2. The industry members are not favourable to subsidised markets in general, and as regards the market for integration and deployment of renewable energies in Europe, feel that current public actions should concentrate on allied, indispensable technologies such as:
- Electricity storage
- Energy aggregation and demand response

b3. Distortions of competition have been seen, and in certain countries have given rise to serious litigation.

Section C: administrative procedures

Articles 13 and 14 of the Directive lay down rules on administrative procedures, information and training.

1. Which of the following issues relating to administrative procedures, information and training do you consider acting as a serious impediment to further growth of renewables following

Member States' implementation of the provisions of the Directive? Please provide explanations and specific examples where available.

-Length and complexity of administrative procedures relating to authorisation/ certification/ licensing

- Lack of commonly agreed technical specifications
- Lack of information on support schemes or other
- Lack of credible and certified training and qualification
- Other

2. Which policy response to the problems identified above do you consider appropriate?

-The approach of the current Directive to lay down a general framework for Member State action is fine

-Strengthen rules to intrude more directly into Member States procedures in terms of roles of different actors (e.g. one-stop-shop), maximum time-frame or other

-Push for more standardisation and harmonisation on EU level or mutual recognition

-Other (please specify which would be in your view a workable solution to eliminate barriers)

c1. Administrative procedures are extremely varied across Europe, ranging from very simple to highly complicated, and an effort towards harmonisation needs to be made.
According to the PV LEGAL Web site, which tracks bureaucratic barriers and their consequences for the development of Photovoltaic (PV) projects in EU member States, the administrative costs for a solar installation run from less than 10% of the total cost of development of the project (excluding equipment) in Germany to 70% in Poland, and administrative delays from 50 days in Bulgaria to 250 days in France.

c2. This administrative harmonisation must underlie the standardisation that is necessary at the financial level in order to create a legible investment framework for international financers, thus broadening the field of competition and innovation as much as possible.

D. Grid integration of electricity from renewable sources

Article 16 of the Directive lays down a number of binding rules related to network development, access and operation in order to ensure that electricity from renewable energy sources may access the electricity network freely.

1. Do you consider that any of the following national rules and framework conditions will still create obstacles to renewable energy production after 2020? If so please specify which obstacles and the nature and degree of them for each of the following:

- Grid connection rules
- Cost-sharing rules
- Balancing rules
- Curtailment regime

-None of the above

2. Which renewables-specific grid related rules do you consider necessary and proportionate in a post-2020 perspective? (please explain why)

- Obligation for network operator to develop network

- Priority or guaranteed access
- Priority dispatch and obligation on TSO to counteract curtailment
-Other (please specify).
-None of the above

3. With regard to system integration of wind and solar power, what measures do you consider most important to increase the flexibility reserve of the system:
- Increase flexible back-up capacity (capacity payments …)
- Increase availability of demand response (smart grids …)
- Accelerate infrastructure development and interconnection
- Market-based measures: better use of interconnectors (implicit auctions), trading closer to real time
- Increased availability of storage
- Enable renewable generators to offer balancing services to TSOs
-Other (please specify)

d1. It is worth recalling that the variety of grid codes and technical requirements (for example certifications), sometimes coupled with the absence of translations of reference documents, constitutes a source of complexity and costs for manufacturers of electrical equipment.

d2. A certain number of measures specific to intermittent RE (wind, solar) are proposed in the European Commission document (question D3) in order to encourage their integration into grids, and all of these measures are worth promoting and implementing.

d3. This item is not detachable from the standardisation under way in the areas of smart grids and interoperability between load side and supply side, and is coherent with the absolute need for conceiving of the integration of RE as a building block of a new energy system; any compartmentalisation or "siloing" must be avoided where standardisation is concerned, at the risk of slowing investment and failing to create an overall context of confidence for investors, manufacturers and financers.

Section E: Market integration

Current national support schemes expose renewable energies to market signals to various degrees. In many cases, these support schemes nevertheless result in parallel "systems" for conventional and for renewable generation which are largely unresponsive to each other. The following questions ask in which way this could be addressed in a post-2020 perspective where renewables will represent a significant share of the market.

1. In which of the following ways could renewable energy be made responsive to market signals?
-Price risk - producers of renewable energy should be obliged to sell their production on the market and aid be granted exclusively as a) premiums or b) investment aid
-Price risk – producers of renewable energy should operate without any aid
-Producers of renewable energy should bear greater responsibility for system costs.
-Balancing risk - producers of renewable energy should bear balancing responsibility towards TSOs (if so, please specify how: responsibility on individual operator or centrally organized, same balancing rules for all operators or specific rules for variable generation?)
-Producers of renewable energy should continue to be treated separately (no exposure to

conventional market)

2. How can it be ensured that market arrangements reward flexibility?
   - Dedicated arrangements to reward availability of generation capacity
   - Favourable regulatory treatment of storage operators
   - Develop demand response to market signals (please specify, e.g. smart grids, smart meters, demand aggregation, interruptible demand)
   -Current market arrangements are sufficient to reward flexibility

3. In how far do you think today's market design needs to be adapted to provide an appropriate framework for renewables
   -The current wholesale market model based on short-run marginal cost pricing is appropriate
   -The current wholesale market model based on short-run marginal cost pricing would have to be supplemented by instruments incentivizing investment in generation capacities with a high capex/opex ratio (please specify which)
   -Premium fee for renewable energies.
   -Wholesale markets would have to move to reflecting full costs
   -Electricity markets should evolve into energy services markets, earning revenues from more than just electricity

e1. It is important to underline the fact that "making producers bear heavier responsibility for the costs of evolving the grid" constitutes a brake, because the needs in question will be very large in scale (due to the move from a network wherein production is largely centralised to a network with highly decentralised production), and that brake could have major consequences on the growth of the European Union – restriction of competition downstream, sagging innovation, and drastic reductions in investment projects.

e2. The success of the integration and deployment of non-carbon[3], renewable energy sources depends on the creation of storage operators, and, in parallel and without conditionality; the demand response market must be developed at the scale of the EU in close coordination with the white certificates and carbon (black certificates) markets.

e3. The conclusions of the report drawn up by EU deputy, Claude Turmes point in this direction and must be supported by the European Commission and the European Council, for the reconstruction of the European energy system must be carried out in global fashion, and the energy efficiency market taken in the broad sense must be open, transparent and competitive at the level of the EU-27.

Section F: renewables in heating and cooling

[3] Wood for energy, in our opinion, needs to be regarded in a highly circumspect way because its energy and environmental balance can be negative for employment, for ecosystems and for the sustainable attainment of environmental goals, and may even be a source of destabilisation of other industrial sectors.

The challenges for renewable energy in the heating and cooling market are sometimes considered to be different in that its use is in many cases already cost-competitive but impeded by other barriers. Many of the barriers should be addressed when the Directive is implemented.

1. What do you consider to be the main barriers against a stronger uptake of renewable energy in the heating and cooling market beyond 2020?
   - Costs/lack of financial support
   - Building regulations etc.
   - Lack of awareness
   - Lack of suitable information
   - Lack of public support
   - Lack of capacity (installers, other)
   - Other (please specify)

2. What pathways do you consider to be the most promising for further increasing the share of renewable energy in heating and cooling beyond 2020?
   - Biomass
   - Geothermal
   - Solar thermal
   - Electrification together with higher share of renewables in electricity production
   - Other (please specify)
     Waste to energy plants

3. How do you see the interaction of promoting further use of renewable energy in heating and cooling and enhancing energy efficiency in this sector?
   Very positive from social and economical point of view in order to fight against fuel poverty in Europe

f1. The production of cold for cooling / air conditioning combines well with PV solar.

Section G: Renewables in Transport

Transport is almost entirely dependent on oil consumption. There is a growing recognition that major efforts are needed to reduce GHG emissions and fossil fuel dependency in this sector. The Directive requires that 10% of transport fuel should come from renewable energy sources but more efforts to reduce oil dependency and GHG emissions are needed post-2020.

1. What do you consider to be the main barriers against a stronger uptake of renewable energy in transport?
   - Costs
   - Pace of technology development
   - Lack of standards
   - Lack of infrastructure
   - Lack of awareness
   - Lack of suitable information
   - Limits of availability of sustainably produced bio fuels
   - Other (please specify)
     Electricity storage

2. What sectors of transport do you consider to be the most promising for further increasing the share of renewable energy?
   Electrical energy from REs will become the most economical energy to be used in the long term and this can be distributed on:
   - Road for passengers
   - Road for goods
   - Rail
   - Water
   - Air

Please explain your answer.
g1. There is a strong advantage in associating electric vehicles and solar canopies, since PV solar guarantees greenhouse-gas-free production, which is the ultimate goal of electric vehicles, and also, by its local nature, limits needs for reinforcing the grid and also limits transmission losses.

Section H: Sustainability

Currently bio fuels have to comply with sustainability criteria in order to benefit from support or to be counted towards renewable energy targets. This is in order to avoid negative side effects from an increasing use of bio fuels. In addition, the Commission is currently considering introducing additional requirements related to indirect land use change and criteria for solid and gaseous biomass for energy.

1. Do you think that additional sustainability criteria are necessary in the post 2020 period?
   -No, the existing criteria are already burdensome to implement
   -No, the existing binding sustainability criteria are sufficient
   -Yes, sustainability criteria should apply to both all biomass and fossil fuels
   -Yes, additional criteria should be introduced to promote only the best performing biomass (please specify which)
   Please explain

This section would seem to apply only to biomass, especially in its wood-energy version, and criteria should be imposed to avoid windfall effects similar to the feed-in rates in PV production; a framework harmonised at the European level will promote greater market integration, strengthen European manufacturers and provide a framework for long-term investment which will inspire confidence among international, European and national financers[4].

Section I: Regional and international dimensions

The cooperation mechanisms of the current Directive offer a framework for cooperation between Member States and with third countries. A number of initiatives are currently under consideration for putting regional coordination in practice, both within the EU as well as with neighbouring

[4] An example might be individual savings, which need evidence of profitability over time and confidence in the market.

regions.

1. Do you consider current rules for cooperation *between Member States* sufficient to fulfil their purpose, i.e. realisation of cost-efficient renewable potential in the EU?
   -Yes.
   -No. (Please specify how they should be amended or which elements added)
   Pilot projects with relevant KPIs as well as benchmark need to be used at EU level.

2. Do you think the EU should further facilitate cooperation with third countries when it comes to the development of the potential for renewable energy?
   -No, the EU should first focus on developing its own renewable potential
   - **Yes, cooperation with third countries should be further promoted** (please specify how and with whom, i.e. only neighbouring countries or more widely) **in particular with neighbouring countries having resources in hydro, wind and solar Res; access to green electricity is a key element of the peace process in Middle East"**

3. Should investments in electricity networks in some Member States (i.e. Spain, Greece, Italy) be prioritized for this purpose?
   -Yes (explain in which way and to which degree)
   - Electricity networks in Transmission and Distribution as well as at the LV level close to the end users should be upgraded and adapted so to allow a cost effective demand/response, smart metering and smart grids in line with EU efficiency targets.
   - The above should be implemented not only in T&D but in particular in smart building regulation so to foster energy efficiency in domotics and appliances.
   - Buildings: Electrical system security as well as safety of supply requires a proper focus so to allow and start a process upgrading the electrical system in old electrical installation.
   -No (explain why)

4. Which measures do you consider appropriate and necessary in order to foster cooperation with third countries in this area?
   -Bilateral agreements between Member States and third countries
   -Agreements between the EU and third countries
   -Other measures (please specify)

In its Communication on security of supply and energy cooperation – "The EU Energy Policy: Engaging with Partners beyond our Borders"7, the European Commission proposes to promote cooperation on renewable energy projects with the Southern Mediterranean countries and to gradually build a renewed EU-Mediterranean energy partnership focus on electricity and renewable energy. How do you consider this should relate with the EU internal renewables policy? What should be the priorities?

We consider the promotion and cooperation with on REs projects with the Southern Mediterranean countries to be taken with the first priority and this to be integrated in the EU internal REs policy.

5. The possibility to explore regional cooperation and a coordinated, more strategic approach to grid connection for the rapidly growing volume of offshore wind generation in the North Sea is currently being explored in the framework of the North Sea Countries Offshore Grid Initiative (NSCOGI). Do you think such cooperation should be further fostered? What benefits do you think could arise from it? Do you consider that this experience could be generalised and applied elsewhere?

   - **NSCOGI is a very positive initiative as it is recommended to be used/ applied as a benchmark in other areas with similar structures for a cost/effective approach.**
   - **In response to questions I4 and I5 on co-operation with third-party countries, it seems important to reaffirm the importance of the electrical industry in Europe and its position as a leader in Balance of System PV.**
   - **International cooperation provides opportunities to export European standards and European know-how[5] and to strengthen our positions vis-à-vis competitors outside the EU zone.**

Section J: Technology development

The SET plan presents the strategic framework to accelerate the development and deployment of cost-effective low carbon technologies in the perspective until 2020. For a limited number of technologies industrial initiatives were set up according to two criteria, their large-scale availability by 2020 and the willingness of industry to engage in public private partnerships.

1. For a first set of renewable technologies, namely wind, solar, bio-energy, the SET Plan aims at a cost-competitive market roll out of renewable energy by 2020. It also aims at enabling integration of renewable energy into the electricity grid and smart cities and communities. In your view, what would be the remaining key challenges of these technologies to be addressed by research and innovation in view of the 2050 objectives?
   - **Technology performance and cost-competitiveness**
   - **System integration**
   - **Industrial manufacturing and supply chain**
   -Other (please specify)

   An overall transversal approach for EU targets with initiatives like smart cities, smart infrastructures, smart harbours, smart building, smart grids, e-health, etc.

2. Which additional measures and/or instruments should be developed to address these technologies and their remaining challenges and to ensure that the EU innovation fabric is geared to supporting the significant deployment up to 2050?

[5] In this context, DESERTEC – decentralised cooperation – must be developed on the African continent.

Start immediately with the deployment of pilot projects in different member states as national as well as transnational infrastructures for energy European highways.

3. In your point of view, which technologies other than those covered by the current industrial initiatives should be given priority in the post-2020 perspective? Please justify with reference to the criteria mentioned above, i.e. large-scale availability and willingness of industry to engage in public private partnerships?

The European technologies platforms are the following:

- European Wind Energy Technology Platform
- European Photovoltaic Technology Platform
- European Biofuels Technology Platform
- European Technology Platform on Renewable Heating and Cooling
- Zero Emission Fossil Fuel Power Plants
- Sustainable Nuclear Technology Platform
- The Fuel Cells and Hydrogen Joint Technology Initiative (FCH JTI)

The above platforms require the integration of grid technologies and grid users. The topics of future research/investments are outlined in the Strategic Research Agenda 2035 (SRA 2035). Below are indicated some basic future tasks:

- Smart Distribution:
  - The energy ecosystem of the future
  - Demand Response - Innovative energy management strategies
  - Network Control - Innovative energy management strategies
  - Storage - Innovative energy management strategies
  - EV - Innovative energy management strategies
- Smart Transmission
  - Transmission networks of the future – long distance energy supply
  - HVDC and under-ground / under water transmission grids of the future - new architectures & new equipment
  - SmartGrids for the Integration of Large Renewable Generation and Storage Power in Transmission Systems by 2035
- Smart Customers
  - Information and communication Technology Enablers
  - Energy Services & Management
  - Customer Interfacing Technologies
  - Customer Driven markets
  - Active Customer Programs
- Smart Integration
  - Network Asset Management
  - Ancillary services, sustainable operations and low level dispatching
  - Advanced forecasting techniques for sustainable operations and power supply

- Architectures and tools for operations, restorations and defence plans
- Grid Status monitoring - Advanced operation of electricity systems - seamless SmartGrids
- Storage in all energy carrier forms - Advanced operation of electricity systems - seamless SmartGrids
- Information and Communication needs for SmartGrids – Advanced operation of electricity systems - seamless SmartGrids
- Training tools - Advanced operation of electricity systems – seamless SmartGrids
- Information and Communication needs for SmartGrids - Pre-standardisation

4. How successful do you consider the existing measures have been and which have been the main drawbacks? Explain why.
   - Very successful, no drawbacks
   - Successful but some drawbacks (please specify which)
   In particular bureaucracy, too long administrative procedures and too long projects implementation time
   -Not successful

5. Do you consider that assistance in technology development should be linked to a certain result to be achieved by a certain deadline?
   Yes

Support for technological development must be oriented towards all technologies that meet two cumulative and priority goals:

1) Everything that encourages integration of renewables in general, from PV in particular to grids
2) Everything that encourages integration of renewables in general, from PV in particular to residential and non-residential buildings.

That is why two priorities are necessary:

- Concentrate R&D on electricity storage in all its possible components and forms
- Create a new framework for economic, financial and environmental regulation to migrate towards an economical energy system in which reasonable consumption is consistent with increased competitiveness for the European Union.