



ESTELA ANSWER TO THE EC PUBLIC CONSULTATION ON A NEW ENERGY MARKET DESIGN

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European Solar Thermal
Electricity Association



INTRODUCTION

ESTEL co-signed several letters and declarations worked out by several RES associations joining in general comments on behalf of the full “renewable sector”. However, just as all other industries, ESTELA intends via its own answer to the consultation to clarify the needs of the solar thermal electricity (STE) industry and provide more detailed answers regarding the STE sector with the objective to bring into perspective the complementarity of various RES technologies in the future European power system.

The STE industry supports the ambition of the European Union to advance swiftly towards the crucial target of a decarbonized power system by 2050 and at the same time to keep technological leadership for renewables power generation technologies. Only such a massive effort will secure in a reliable way EU’s energy independence and trigger a substantial reduction of emissions as contribution of the electricity sector to the global fight against climate change.

The role that renewable energy sources have to play in this context remains essential. Nevertheless, after promoting the deployment of intermittent generation sources, time has come to promote yet less developed, but available flexible renewable power generation technologies (as this is the case for STE) that essentially build on their ability to dispatch energy according to demand under the control of transmission system operators.

The above said should be the guiding principle for any adjustment of the current market design.

The STE industry believes that no “adjustment” of the current market design will be able to be achieved by market forces alone, i.e. if not strongly embedded in a solid and EU-wide political and regulatory framework; market forces alone cannot provide the necessary those price signals that could deliver a better balance between intermittent and flexible power generation sources.

This non-ability to deliver this better balance will also hamper the most rational and also ultimately most cost-efficient achievement of the essential policy targets: EU’s energy independency and reduction of emissions. On top of this principle, the principle of resource optimization should be applied, which means that the power generation should occur where the natural resources are most abundant and from where the produced energy can physically be transferred to those parts of Europe that lack such energy sources.

We highly miss in the present consultation questions about this RES balance across the whole Union. This would bring to light that, until new instruments or mechanisms are adopted which enable a truly full integration of all renewables in the power system, flexible generation sources should increase their share in the “*European RES portfolio*” via cooperation across member states. Therefore, support measures to such generation sources with their own storage capacities should be now prioritized. This will also result in the most substantial cost reduction of such technologies.

We believe that in case this fundamental objective of a better balanced system, the above mentioned core objectives of European energy policy in the next decades are at serious threat.

Some ESTELA answers are addressing several questions grouped in a box; some questions are left unanswered since not directly relevant to the STE industry

- 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?
- 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?

According to elementary economics, prices are always reflecting scarcity! Scarcity is however a concept that does not directly apply to sun power, in itself abundant and for free.

What prices should reflect is the ability of delivering this abundant resource when it is needed: the key concept to be reflected in power prices is therefore generation flexibility.

Capacity mechanisms / payments for making capacity available when needed are no doubt a suitable instrument to explore, but should not result in double remuneration of generators, especially not when this capacity is provided with fossil fuels.

The second aspect is that the full value of energy technologies is doubtlessly higher than the currently used criteria (CAPEX + OPEX / generated energy over a given time lap).

The challenge has always been and remains to allocate to various groups in society (energy consumers, all citizens) either the charge or the exemption of rewarding the full value of a resource. Energy prices are bearing a substantial amount of levies and taxes, all different across Europe.

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

The point is not about "aligning" fragmented balancing markets but to open up the access to balancing markets: this can be done via reservation of a dedicated segment of these markets to a market-based competition among CO₂-free resources. This would encourage the development of flexible RES generation and drive the most efficient use of RES resources in Europe (abundant resources, less transmission needs) and reduce quickly the viability gap of less deployed technologies, hence the still needed public support.

Participation in the ancillary services market should ultimately not only be a matter of access and order of merit by generation prices; but the qualification to participation in this markets should also include the full value chain (going beyond prices – see also CBA methodology) where STE's flexibility provides for added value.

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

→ No opinion

- 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?

There are many reasons calling for a STE deployment around the world, such as global environmental and climate protection targets, as well as the overarching objective of sustainability of the power systems (firmness and flexibility of generation enabling a reliable integration of non-flexible generation linked with a contribution to energy security and independence from fossil fuels).

In Europe the ambitious STE program launched in Spain came unfortunately to a stop. As drivers for such a STE deployment, efficient structures for off-taker are first needed in order to secure the project financing and starting bidding procedures.

Such structures would build on essential factors like regulations from governments securing the power purchase deals agreements (both in terms of quality and prices) **at least over the financing duration term.**

Without such a secured power purchase agreement, long-lasting infrastructure such as STE plants are not bankable.

- 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?

→ No opinion

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

Especially in Europe, where all technologies in the conventional energy sector and later in the today more deployed renewables (wind, PV) found conditions to develop, the **“market forces” alone cannot and will not deliver a better balanced system between flexible and non-flexible generation.**

Instead, - just as this was the case for already more deployed RES - further support is still needed to bring other, less deployed but more flexible generation technologies to grid parity.

This will avoid that with the further penetration of non-flexible RES in to the system (**fueled by their respective cheap cost levels**) balancing power continues to be covered in the future by highly expensive conventional generation – far from any economic optimization;

All renewable technologies should be promoted for the future power system and therefore guarantee the development of carbon-free generation. New priority should be given to use the full dispatchability of some renewable energy sources (which is the key asset of STE) towards complementing other more developed RES technologies with the crucial objective to avoid a back-up support by conventional technologies.

Only this would go in line with the political goal of decarbonizing the European power sector by 2050.

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)?

Yes the cooperation mechanisms established in the current RES directive

Regarding the obstacles, see the dedicated [EC/ECOFYS study](#)

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.)?

→ No opinion

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?

Yes, RSCIs are intrinsically able to aggregate political and economic objectives and so the full value chain of STE at a larger scale than national borders.

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?

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

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

- 15) 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)?
- 16) Would an alignment of the currently different system adequacy standards across the EU be useful to build an efficient single market?

ESTELA supports the strengthening of the role of ENTSOE – provided it becomes a fully independent body (European Agency such as ACER)

Under this condition, the “generation adequacy assessment” exercise performed by ENTSOE as a basis for each Ten-Year Network Development Plan (TYNDP) is an already existing tool that could be improved towards a full EU-wide approach (less bound to existing transmission business structures) and more likely to show the system design path towards this better balance between flexible and non-flexible RES.

However, it should not only be built on national demand/demand forecasts but evolve soon into a kind of Portfolio Standards at European level.

Another instrument used by TSOs in the context of PCI is the Cost/Benefits analysis that includes a term for assessing social welfare effects and the value of storage (however beyond a threshold of 250 MW). This disqualifies the storage capabilities of the CSP plants in Europe (50 MW); this limitation should either be reduced or the aggregation over several plants within a “region” should be possible;

For both the generation adequacy assessment and the CBA, stakeholders (among them ESTELA) should not only be consulted but actively integrated in the adequacy assessment;

Regulators (both national and ACER) should refrain to limiting their assessment to short-term markets (allegedly, but wrongly seen as capable to deliver the overall optimum). Instead, a more long-term perspective is urgently needed both by governments and regulating authorities and include the full value of the various generation technologies (which means full macro-economic returns of the various technologies, far beyond the LCOE – a widely insufficient metrics unable to capture the full value of STE)

- 17) 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?

→ No opinion

- 18) 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?

→ No opinion

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

→ No opinion

20) 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?

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

The framework should be the **Cooperation Mechanisms established in the current RES Directive** Applied to STE and with a view on relaunching the STE market in Europe, this should be articulated around a new initiative for STE in Europe.

More specifically, the main objective is to build up a catalogue of First-Of-Its-Kind STE projects with a realistic chance to attract the interest of both member states and potential off-takers.

“FOIK projects” will be such that are able to reduce the current gap between the costs of commercially viable projects (approx. 18 c€/kWh) and the average pool price (approx. 5 c€/kWh) to – ideally less than 7 c€/ kWh. This reduced gap and the still necessary support level it implies would be very attractive for countries with needs of renewable energy imports to achieve their 2020 targets.

Such projects ideas – so far they receive a positive support by two Member States concerned – would lead to a formal mandate to the Commission services to help the STE industry to realize the project.

Yes, the decision to introduce capacity mechanisms should be based on a harmonized methodology to assess power system adequacy. See also answer to question 15 and 16.



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