

ESAP Third High-Level Plenary Meeting – 23 June 2016

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Concluding Remarks

Good afternoon Ladies and Gentlemen.

- As the director of IEA's Energy Market and Security Directorate, I am very pleased to say a few closing remarks.
- Once again, the level of participants and the quality of interventions have been extremely high. I would like to thank all the speakers for their efforts and their time. Some of you have travelled from very far away to participate to this event. I hope you found it as rewarding and interesting as I did.
- When discussing electricity markets, what is striking is the fact that many of the issues being faced are similar in different parts of the world. Despite the fact that power systems are national or at most regional - that is to say there is no global market for electricity - all power systems seem to be confronted with ageing capacity and a need to re-think the design of electricity markets.
- This is not a coincidence. The decarbonisation agenda is a global one, as all countries are committed to reduce CO₂ emissions. In addition, new technologies can spread very quickly, and improvements in wind and solar PV and of new IT technologies are deeply transforming the power sector. And this is just the beginning.

Some Take Aways

- Let me try to pick up 3 key common issues, corresponding to three timeframes discussed over the course of today: the short term, medium term and long term.
- In the short term (the next few years), some countries want to phase out nuclear while others want to extend the lifetime of nuclear reactors. This reminds us that nuclear development remains primarily a matter of national policy. But keeping existing nuclear reactors available under current market conditions is becoming increasingly challenging due to low energy and CO₂ prices.
- Speakers during the session on ageing capacity – Chairman Bay, President Fauconnier and Mr. Diczfalusy have presented on the ongoing debates in North America and Europe about

the role of nuclear. I would like to sincerely thank them for their honest assessments. I think it is fair to say that this was very useful session for all of us in the audience.

- In the medium term, (the next decade) all countries envision the deployment of higher shares of renewables, most of which will be wind and solar power. This raises many integration issues, not only technical, but also in terms of regulation and market design.
- It is generally agreed that the integration of renewables requires increasing power system flexibility. One key take away is that existing markets can also teach us how to design electricity markets to better tap the existing flexibility potential and to value flexibility.
- Several speakers provided their perspective this morning, from Australia, China, Europe, Japan and the United States. The transition of the power system is a daunting challenge and brings in many uncertainties regarding the path of decarbonisation, including, for example, on carbon pricing policies. Very often, courts have found it necessary to intervene in the decision making process. The power sector has in many ways become less predictable and therefore more risky for investors.
- Consequently, we are moving away from the pure and perfect competitive market framework once envisioned 30 years ago when the deregulation process began.
- Policy makers have to become pragmatic. Interventions to ensure security of supply and, in particular, generation adequacy are going to become more likely during the tumultuous transition to low carbon power systems.
- Capacity mechanisms already exist in most jurisdictions. We concluded in our publication *Re-Powering Markets* that that capacity mechanism can create a valuable safety net. This is a reality. More attention, however, must be paid to their design.
- Let me be clear here. As our Executive Director Fatih Birol said at the start of today's program, energy security is in the DNA of this agency. We firmly believe that decarbonisation cannot be achieved at the expense of electricity security. Governments still have a role to play to ensure that market arrangements deliver a high level of reliability that is needed for our modern economies.
- The third session discussed the longer-term decarbonisation issue: beyond 2030, what can we reasonably say about power markets? We already know that more efforts will have to be made to be on track with the decarbonisation goals laid out in the Paris Agreement and, in particular, the target to limit the global increase in temperature "well below" 2°C.

- According to our own analysis this can be done with existing technologies, providing that we can rely on nuclear and CCS.
- But technologies continue to evolve, and it is very likely that in the future these technologies will heavily impact the functioning of electricity markets.
- For instance, is it possible that the cost of solar PV will become so cheap that we can afford to build massive excess capacity and spill it when we don't need it (as we spill food today)?
- Or let's assume that storage becomes so cheap that every single electrical device attached to the grid can store the electricity it needs to consume. Reliability becomes less of a concern as all equipment will have built in back-up power, recharging their batteries whenever there is cheap, low-carbon generation available.
- Under these hypothetical scenarios, electricity markets would work like many other commodities - for instance like natural gas or many agricultural products.
- We are not yet there, of course. But the question of market design in the long run is likely to be overwhelmed by technological progress. We have to expect more changes in the future. Hopefully these changes will enable to achieve the transformation of the electricity sector to a low-carbon power system at least cost and to raise the decarbonisation ambitions.

The Way Forward

- Despite all our best efforts today, I am afraid we have not exhausted such a deep and enthralling subject.
- The IEA created this Advisory Panel only three years ago, with the objective to create a platform for discussion of electricity market design between IEA member countries.
- More than ever before, electricity is at the core of energy policy. As part of the IEA modernisation agenda, electricity is becoming an important part of IEA activities.
- We hope we will be able to continue this activity with your support in the coming months and years, possibly even at the next ESAP plenary meeting next year.
- Thank you very much.