13.02.23

Revision of the Electricity Market Design

currENT response to consultation by the European Commission

CURRENT
Enabling Network Technology throughout Europe

Overview of recommendations in consultation response

- Contracts for difference can be efficient in mitigating the impact of short-term markets, but greater network interconnection of existing market pools should be considered first by incentivising increased interconnection capacity development.

- A transmission access guarantee may encourage more offshore renewables, but this should be carefully implemented to ensure new offshore renewable connections are not refused by TSOs. This approach does not solve the larger problem of constraints throughout the grid and especially on interconnectors leading to existing renewable plants being curtailed and large constraint costs being passed to the consumer. A better approach would be to implement a wider reaching profit/cost share of constraints all around the grid (including offshore windfarms).

- Implement the NOVA principle: while it is clear that large investments in the network are needed to reach Net Zero in 2050 in the meantime the NOVA principle (optimisation ahead of reinforcement, ahead of reinforcement) should be implemented at EU and national level, with full transparency on how these decisions were taken.

- Set up competitive processes to seek either speed and/or cost improvements to all grid expansion projects that are proposed. This would ensure the size of price spikes due to lack of network capacity is reduced.

- Existing incentives strongly favour high-cost investments over lower-cost (digital) solutions that could greatly increase the efficiency of the electricity system. Other regulatory measures could work better, such as TOTEX-regulation, efficiency first requirements, benefit sharing, pathfinders, sandboxes, etc., depending on how high the technology-readiness level is.

- The EU could greatly benefit from a rapid procurement mechanism that could speed up the approval of new technologies, in order to address energy security already in the upcoming winter. Much work can also be done to support grid operators in procuring innovative grid technologies

- Increased transparency is crucial to ensuring smart investments are made to use the network as efficiently as possible. For example, by giving open access to TSO's modeling data, in order to model alternative scenarios that use innovative grid technologies. EU-wide curtailment data would also be useful in showing the benefits of innovative grid technologies.

Contract for Difference

Do you consider the use of two-way contracts for difference or similar arrangements as an efficient way to mitigate the impact of short-term markets on the price of electricity and to support investments in new capacity (where investments are not forthcoming on a market basis)?

Contracts for difference can be efficient in mitigating the impact of short-term markets, but hedging this risk will come at an overall cost. Power producers, storage, demand market participants or future participants will undoubtedly factor the perceived risk into their financial models, and the strike price will need to be set high enough to sufficiently incentivise them to operate in the market.

Obviously, price spikes are as a result of scarcity. There is insufficient choice in the supply of energy in the places where it is needed, and therefore market forces increase the cost of energy at that time. Contracts for difference can manage the price that can be charged, but the underlying problem is essentially a lack of choice in the supply of energy. Another mechanism that should be considered first is to increase the market pool of energy through the greater network interconnection of existing market pools by incentivizing increased interconnection capacity development first.

Such interconnection incentivisation would benefit in a number of ways. The pool of players in a market is increased immediately by adding existing players in adjacent markets. The cost of any market instruments like CfD's would undoubtedly be lowered. The risk of failure to deliver or distortion to the market is majorly reduced. One simple mechanism to increase interconnection and incentivisation is to open planned interconnection projects (or increased interconnection needs) up to transparent competitive counter proposals that will improve speed and/or cost of delivery. This mechanism is independent of the ultimate ownership or operation of these assets, with any accepted improved proposal, flexible to construction by the incumbent asset owner or a third party, as per EU or national regulatory requirements.

How would you rate and address the following potential risks as regards the imposition of regulated CfDs on existing generation capacity?

(a) legitimate expectations/legal risks;
(b) ability of national regulators/governments to accurately define the level of the price levels envisaged in these contracts;
(c) locking in existing capacity at excessively high price levels determined by the current crisis situation;
(d) impact on the efficient short-term dispatch.

For (a) the risks are extremely high if these requirements are likely to impact on the present operating profits of an existing generator, such examples already exist of similar impositions.

For (b) the complexity placed on regulators of governments to define not only equitable treatment across market participants they setting prices for, accounting for age, technology, financial position would be hugely challenging and require a huge investment in expertise. This excludes probably the greater challenge of considering their national choices in the context of the full range of participants in a pan-European market.

Accelerating the deployment of renewables

Do you consider that a transmission access guarantee could be appropriate to support offshore renewables? Please explain and outline possible alternatives.

A transmission access guarantee may encourage more offshore renewables, but this should be carefully implemented to ensure new offshore renewable connections are not refused by the TSOs.

Advantages:

- The investment case for offshore renewables becomes clearer and easier for wind farm developers to secure funding and approve construction
- The consequence of a constrained grid is felt financially by the TSOs and hopefully incentivizing cost-effective action to relieve the constraints and thereby save consumers massively on constraint costs

Disadvantages:

- Could encourage TSOs to refuse additional connections when constraint is remotely possible – i.e. actually discourage additional offshore renewable connection
- It is possible that the transmission access cost will be passed onto the consumer and that the incentive to reduce constraints is not felt by the TSOs.
- This only solves the constraint issue around new offshore wind farms – there are currently many constraints all around the grid that the TSOs are not incentivised to solve, and consumers pay for the constraint costs.

Fundamentally, the consumer must pay for constraint costs in the current market – there are many cost-effective solutions available to TSOs to alleviate these constraints in the short term such as dynamic line rating and advanced power flow control systems. These constraints can only be solved by the TSOs, yet they currently have no incentive to do so in the short term. The TSOs are not currently incentivised to consider these technologies because whilst reducing constraint costs dramatically, these savings would be passed to the consumer and not the TSOs. Whilst solving constraints with large CAPEX investments does contribute financially to the TSOs.

We believe that using a transmission access guarantee on offshore windfarms only, does not solve the larger problem of constraints throughout the grid and especially on interconnectors leading to existing renewable plants being curtailed and large constraint costs being passed to the consumer.

We believe, a better approach would be to implement a wider reaching profit/cost share of constraints all around the grid (including offshore windfarms). This would ensure TSOs will look to faster solutions available to resolve these constraints.

Do you see any other short-term measures to accelerate the deployment of renewables? If yes, please specify.
(a) at national regulatory or administrative level,
(b) in the implementation of the current EU legislation, including by developing network codes and guidelines,
(c) via changes to the current electricity market design?

Please also see the response to the question below. For (a) national regulatory or administrative levels should require a NOVA principle first and foremost. In addition, a competitive process to seek either speed and/or cost improvements to all grid expansion projects that are proposed would ensure the size of price spikes due to short fall in network capacity is reduced. Allowing technological counter proposals or improvements that would automatically be assessed, would be provide a mechanism to hone proposals and extract greater benefits.

How should the necessary investments in network infrastructure be ensured? Are changes to the current network tariffs or other regulatory instruments necessary to further ensure that the grid expansion required will take place?

While it is clear that large investments in the network are needed to reach Net Zero in 2050, currENT recommends applying the NOVA principle in the meantime. This means optimisation ahead of reinforcement, ahead of expansion. Innovative grid technologies, that can increase grid capacity very quickly, need to be prioritised in order to speed up the integration of renewables and reach 2030 targets.

At the same time, a different approach is needed to investment incentives for grid operators. Existing incentives strongly favour high-cost investments over lower-cost (digital) solutions that could greatly increase the efficiency of the electricity system. Other regulatory measures could work better, such as TOTEX-regulation, efficiency first requirements, benefit sharing, pathfinders, sandboxes, etc., depending on how high the technology-readiness level is.

Additionally, the EU could greatly benefit from a rapid procurement mechanism that could speed up the approval of new technologies, in order to address energy security already in the upcoming winter. Much work can also be done to support grid operators in procuring innovative grid technologies, such as establishing best practices and check lists for procurement processes, including functional/non-functional requirements, and relevant tests and standards.

Finally, increased transparency is crucial to ensuring smart investments are made to use the network as efficiently as possible. For example, by giving open access to TSO's modeling data, in order to model alternative scenarios that use innovative grid technologies. EU-wide curtailment data would also be useful in showing the benefits of innovative grid technologies.

Incentivising the development of flexibility assets

In particular, do you think that a stronger role of OPEX in the system operator's remuneration will incentivise the use of demand response, energy storage and other flexibility assets?

Yes. In addition to demand response and energy storage, this would greatly incentivise the use of grid enhancing technologies, such as Dynamic Line Rating, Advanced Power Flow control, innovative solutions and digital platforms etc.

All digital solutions – as it is planned for e.g. creating a digital twin of the whole European grid announced by the European Commission and other interesting digital solutions, would be incentivised by OPEX remuneration. Around the world, initiatives have commenced for innovative solutions to bring the utilities into the digital age. Promoting investments into the digitalisation of electricity infrastructure were announced by the Energy System Action Plan of the commission in October 2022.

Do you see any further measure that could be implemented in the shorter term to incentivise the use of demand response, energy storage and other flexibility assets? If so, what would that be?

See the answer above. The EU could greatly benefit from a rapid procurement mechanism that could speed up the approval of new technologies, in order to address energy security already in the upcoming winter.