EU Harmonisation of Capacity Adequacy Policies: Free trade of capacity rights is not a relevant issue.

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Policy Brief, September 25, 2012

Harmonization in matter of capacity adequacy is not on the 2014 agenda of electricity markets integration. But the Council of European Energy Regulators (CEER), the European Commission and different European bodies of stakeholders have engaged reflections on this issue. A guideline of good practices on generation adequacy and capacity remuneration mechanisms (CRM) initiated by the CEER is currently in discussion. The DG Energy is partly focusing the redaction of its next October Internal market communication on CRM among different issues, free trading and cross-border contracting on capacity rights are on the top of the list.

According to the Treaty of Functioning of the European Union (TFEU) and EU Directives, no limitations should be accepted beyond the cross-border constraints, for the capacity rights as well as for energy. The exclusion of external capacities from the capacity remuneration mechanism of one market (bilateral capacity obligation, centralized auctioning of forward capacity contract, etc.) would be similar to a measure of trade restriction, which is prohibited by the article 34 and 35 of the Treaty. From another side, Article 4.3 in the Security of Supply Directive 2005/89/EC specifies : "(...) Member States shall not discriminate between cross-border contracts and national contracts".(e.g. a French generators should have the right to join the Italian capacity mechanism to the extent they can actually deliver "reliability" in Italy in times of scarcity in France, Germany and Belgium).

But the principle of free trading of the European law supposes conditions allowing transactions on physical exchanges of good or service (identification, measurability) which

are not met with exchange of capacity rights between systems, which, according to us, should not make this principle roughly applicable to the capacity rights. Some Member States developing a CRM could prefer to account external contributions to capacity adequacy in a statistical way and to exclude bilateral transactions with external capacities. We question in the first section the relevance of trading capacity rights between systems and then we claim in favor of the exemption of capacity rights exchanges from the free trade provision of the TFUE by analyzing in legal terms its conformity to the TFUE and the European jurisprudence.

- **We do not know what we exchange with accuracy**

The discussion on the conformity of possible restrictions to trade capacity rights to the TFUE evacuate some crucial questions about the nature of property rights on guaranteed capacity and their transferability between systems.

We have to distinguish two types of property rights related to two collective goods managed by the Transmission System Operator (TSO), the reliability of the system and the capacity adequacy. Reliability rights are offered by every generation unit which produces and could adjust their production, or which are in reserve, ready to produce energy, to offer the balancing services and ancillary services sold to the TSO which is in charge to guarantee the system reliability to every producer and consumer. So the reliability rights cover not only the different types of reserve and balancing services bought by the TSO but also all the energy which is forward exchanged between producers and loads which are “balancing responsible” for a delivery hour in bilateral transactions, on the day ahead and the intraday markets just before the “real time” during which the TSO takes the complete control. So any kWh injected in the system also includes an implicit “reliability right”.

A capacity right is related to the capacity adequacy of a system, a “collective good” which is a long term insurance of supply reliability during scarcity periods obtained by targeting a reserve margin. This helps the Transmission System Operator (TSO) who is in charge to manage the system reliability, to be sure to have sufficient reliability rights in the system. These rights come from existing units as well as new generation units installed under the incentives of the CRM, which both commit to be reliable during peaks on the delivery date by signing up their forward contract . So a capacity right is a simple promise of reliability in scarcity periods, under the incentive of a penalty. Bilateral capacity obligation (BCO) or forward capacity contracts central auctioning (FCM) create such capacity rights which in turn will contribute to generate reliability rights during scarcity periods. As the TSO is in charge of the system reliability in any annual period, it should have the exclusivity of reliability rights purchases in last resort or at least it should have the total control of their use in last resort in scarcity periods in its own system.

It is now possible to understand what an exchange of capacity rights between two systems means. Simply saying, we do not know exactly what we exchange. It is a bilateral transaction between a buyer in the system A which is equipped with a CRM, -- a supplier in the BCO case, the TSO in the FCM case -- and a production unit located in the system B able to forward commit to be reliable and to send reliability rights on the delivery period into the system A. The parties need also to have firm reservation of access rights to guarantee the transferability of reliability rights associated to the capacity rights in the scarcity periods of the importer’s system, even in situation of congestion on the interconnection. Using a

metaphor, we could consider the exporting unit of capacity rights as an enclave of the system A inside the system B with a interconnection corridor dedicated to it. Certainly this enclave is temporary, for the delivery year and the scarcity periods in the system A, but it should be a real complementary mean to offer energy and the associated reliability rights in the system A during this period.

This “capacity rights” transaction means that we are able to identify the physical flows of energy & reliability rights attached to them, and to separate these capacity rights from the statistical contribution of the system B to the adequacy of the system A which are physically integrated in one regional market. Indeed absence of traceability of electricity flows from one system to another one does not allow to follow the exchanges of the corresponding “reliability rights” at the delivery date in the scarcity period. This is not problematic if bilateral relations are very few (they would rely on a regime of exception in this case), and if there is a very low probability of congestion on the interconnections during scarcity periods, because we could suppose transferability of capacity rights and beyond, transferability of reliability rights during scarcity periods. But problems arise when transactions on capacity rights rely on a common regime, and when congestion exists on the interconnections during these periods and separates the two system’s markets of energy and reliability rights.

Let us remind some basic elements of the property rights theory about exchanges on property rights: First, property rights should be clearly defined by the market designs and should be homogenous if exchanges occur between two markets. Second, the exchanges must be acceptable by all the parties involved, in particular when collective goods monitored by public agencies are at stake. Third, their exchanges should be able to come true in every situation. Fourth, the transactions must be measurable. Exchanges of capacity rights between two electricity markets do not respect some of these conditions in every situation.

- Enforcement of property rights in view of exchanges between electricity systems will need the importer’s TSO involvement (to certify) and the exporter’s TSO (to control the reliability), the forward reservation of access rights to the interconnection, etc., what implies a clear cooperation between TSOs while their interests diverge. Moreover if there is difference of criteria in matter of capacity adequacy, and reliability, there will not be the same metric in the measure of the capacity rights.
- The exchange of capacity rights imposes that TSOs renounce to the exclusivity of reliability rights purchases in last resort in scarcity periods, which means that their central function of offering the collective good “reliability” is questioned, and that is not acceptable by the TSOs and their government.
- The commitment of external capacities to be reliable and to serve the reliability of the importer’s system is not credible without firmness of access rights reservation, but firm reservation is not possible with the market coupling or the future financial transmission rights allocation. Moreover an eventual substitute by swaps of reliability rights which could be envisaged does not solve the problem if congestion separates the markets during scarcity periods.
- Bilateral transactions with an external capacity are not measurable and separable among the statistical contributions of the exporter’s system to the importing system’s adequacy, if we refer to a regional market with two systems only. Electrical energy flows (and so the associated “reliability right” flows) are not traceable. If bilateral exchanges of capacity rights are allowed, their contributions should have to

be separated from these statistical contributions. As a consequence, the statistical contributions should be reduced by the substraction of this external capacity while nothing could prove that it effectively contribute to the reliability of the importer's system. Managing such a system of exchanges will be impossible, except if bilateral transactions on capacity rights are exceptional. We can guess that the problem will be magnified in a multi-system.

Beyond these pitfalls of cross-border capacity rights exchanges, the central problem remains that we do not know with accuracy the exchangeable "product". Because of this fuzziness of transferable capacity rights, the legal discussion of restrictions on their trade which refers to the European jurisprudence might appear as a piece of scholastic.

- **The euro-compatiblity of exclusion of external capacities from a CRM**

In the legal discussion, the non-conformity character of the exclusion of external capacities from a CRM should be appreciated according to the alternative measure which is the accounting of the statistical contribution of external capacities across interconnection capacities to the power supply reliability during scarcity periods. The Treaty does not put barriers to restrictions which are justified by arguments of public security (art. 30). Along the European jurisprudence, the conformity of a restrictive measure or all measures with equivalent effect is subjected to three main conditions: the absence of total harmonisation of the derived law; the effectiveness of the measure; and the proportionality of the measure to the desired outcome which justifies the legitimate public policy objective, here the capacity adequacy for the long term supply reliability.

- On the first point, the SoS directive n° 2005/89 allows to State members to implement a number of measures in order to reach supply security. But this directive does not proceed to any harmonization by defining a set of principles or market rules, and lets a wide margin of maneuver to State members. The result is an absence of homogeneity of approaches in matter of adequacy, and reliability criteria, and in matter of adoption of a CRM. It is the homogeneity of capacity rights which are supposed to become exchangeable which is questionable.

  Moreover the concept of supply security which needs to be clarified in a complex industry as electricity, is so vague in the texts than it could be interpreted in a way that measures in matter of harmonization might only concern the different energy markets and reliability rights exchanges (market coupling for day ahead, intraday, balancing, etc) with the implementation of the so-called Target Models. Indeed if free trade principle is evoked in the article 4.3 of the SoS directive in order to avoid discrimination "between cross-border contracts and national contracts", it might only be about trade of kWhs during scarcity periods (which implicitly incorporate reliability rights). Nothing designates explicitly the capacity right which is a forward guarantee of reliability during scarcity periods. The SoS directive does not define precisely the two imbricated objectives of "capacity adequacy" and "system reliability" which are concerned, referring only to the vague concept of "supply security". Capacity rights, which again are only forward commitments to be reliable and to deliver energy/reliability rights beyond the interconnection during scarcity

periods, are clearly much less tradable than the latter ones. The current improvement of integration of day ahead, intraday and balancing markets via the future implementation of “target models” will deliver mutual advantages in terms of reliability.

- About the second criteria, a capacity mechanism is a direct response to the protected interest which is the long term reliability of the national electricity system. If there is a preference for the statistical approach into bilateral purchases of capacity rights to external units, it is because it creates more problem to the reliability of the system, than economic gains for the importer system. Indeed, if there is risk of congestion on the interconnection, there is no guarantee that the external capacity could deliver.

  Conversely if the market with CRM is confronted to numerous demands of capacity rights exports, -- which should have to be accepted in the name of reciprocity principle --, these bilateral sales of capacity rights in neighboring systems alter the ability of the TSO to guarantee the supply reliability in its system. It would be a good reason for governments who are the ultimate warrants of supply reliability, to be opposed to bilateral trade of capacity rights, which could jeopardize the system reliability during peak periods.

- Concerning the argument of proportionality, the statistical accounting of external contributions, via all the interconnections, to the capacity adequacy of a system, leads to the splitting of the cost of the remaining adequacy objective (after deduction of the statistical contributions) between the consumers: it is via the retailers’ pricing in the BCO, or via the TSO uplift in the FCM. This splitting is defined in relation to the market share of the retailers in the BCO. This leads to consider that this measure does not affect in an excessive way the intra community exchanges according to the goal of supply security and reliability.

To conclude the true nature of transferable capacity rights is against the European principle of free trade. The common sense would not recommend to give substance to the inter-system trade of capacity rights. This is all the more so as the current improvement of the integration of energy and reliability rights markets (by the implementation of the Target Models) will help to the mutualization of the reserves between systems by the market, helping investment in the best place.