Chapter 7

High-level Market Concept

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One of the possible objective and future expansions for the ASEAN Power Pool (APP) is to host an efficient, multilateral regional trading in APG. There are multiple ways of organizing this trading, however, going into details of such arrangements are out of the scope of this project. In this chapter, the importance of the regional cooperation in power markets and the possible ways of achieving this is discussed, drawing from some of the best practices in Europe and the Southern African Power Pool (SAPP).

When speaking of regional cooperation, it is important to emphasize that increasing regional cooperation does not directly correlate with losing national control of the electricity sector. Both European cooperation and SAPP coordination are living examples of this ideology. To facilitate this common price calculation, the Price Coupling of Regions (PCR) relies on a decentralized sharing of data and on the robust market operations and procedures. However, in the PCR framework, each market area still holds its local control by having local power exchanges, transmission system operators, and national regulatory authorities. As can be seen from the PCR framework, the regional market solution does not necessarily require a centralized regional entity. Instead, regional markets and joint operations can also be achieved by retaining the local control and authority of the national market operators, and further, it does not mean that all of the market activities must be implemented in one place. SAPP is other good example, from a different point of view. From SAPP market, it can be seen that it is not always necessary to unbundle, privatize, and have a full national market deregulation to initiate an effective cross-border trading. In the African regional market, many different national market types coexist, and the flow on interconnectors can still be calculated using the implicit capacity allocation.

Figure 13 presents this multi-type regional market structure, where also a single buyer (without a national market) is presented together with a national market. Both of these types of markets can bid on the cross-border capacities. This model is beneficial because it allows the national markets to follow their own path at their own pace. Price coupling to determine the interconnector flows is the international best practice and should be seen as the most efficient way for the ASEAN region to fully utilize the potential of cross-border trading. The risk of dominance of the largest market can be considered low since the trading is based only on cross-border capacities.

Another important aspect of the regional cooperation is that it does not require total standardization of all markets to achieve an efficient cross-border capacity trading. Instead, successful regional cooperation allows the national markets to follow their own paths. However, spreading the ownership and operations of the regional market place among all

involved countries in Southeast Asia is an important factor to support the effective evolution of the market.

The creation of an ASEAN multilateral trading has the potential to carry significant benefits, as follows:

(a) It allows the APG to operate on a multilateral basis, thereby unleashing the benefits as envisioned by the ASEAN leaders as the reason for its creation.

(b) It achieves a more efficient utilization of ASEAN energy resources by connecting countries with surplus power generation capacity to countries facing a deficit within the region.

(c) It helps ASEAN power utilities to balance their excess supply and demand, improve access to energy services, and reduce costs of developing energy infrastructure.

(d) It reduces the need for investment in power reserves to meet peak demand, therefore, lowering operational costs while achieving a more reliable supply and reducing system losses.

(e) It attracts additional investment in APG interconnection by providing a price signal as a key catalyst to investors for their financial returns.

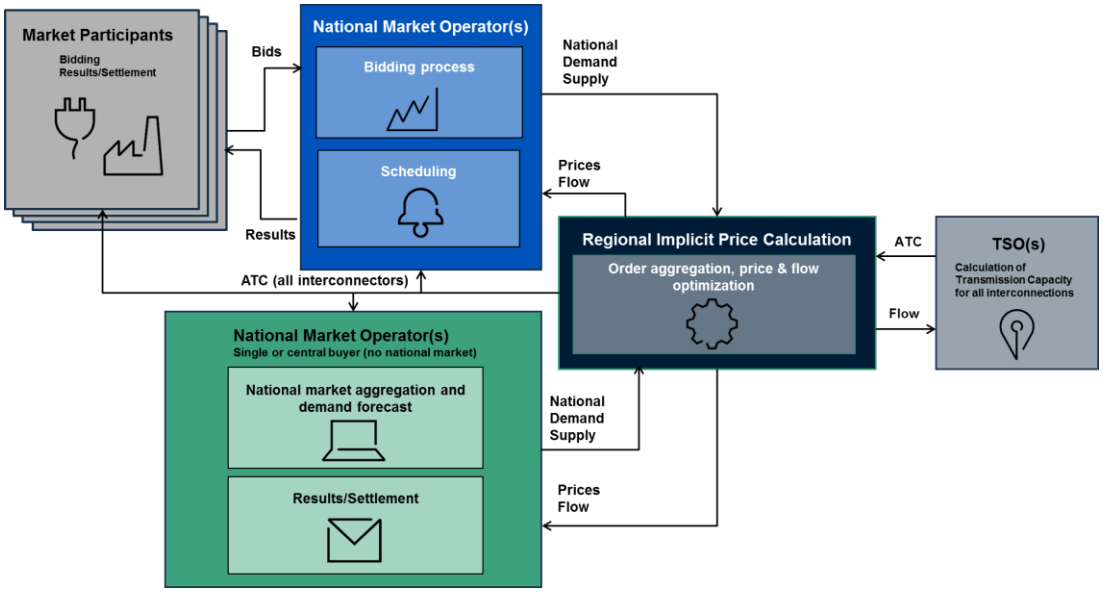
(f) It accelerates the development and integration of renewable power generation capacity into the APG. Such efficient sharing of renewable energy sources would also help hydropower to substitute present coal and other fossil fuels, thereby helping to curb emissions.

(g) It helps expand power networks and client base in a region where some 120 million people still lack access to electricity and clean cooking energy sources. In several cases, access to electricity will prove more economically viable through connections to the APG rather than extensions of the national grid, where additional investments are required.

(h) Countries with an energy surplus can benefit from regional interconnections by servicing their deficit areas more efficiently with power imports from the APG.

(i) It facilitates the introduction of national-level energy-efficiency schemes, such as Smart Grid and Smart City solutions.

Figure 13. Connection Flexibility: National Control – Regional Cooperation



TSOs = transmission system operators.
Source: Author.