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What is the Future of Energy Integration in Central America?

Inter-American Dialogue's Latin American Energy Advisor

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Q and A: What is the Future of Energy Integration in Central America?

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First proposed in 1987, the Central American Electricity Interconnection System (SIEPAC), a plan to create a more robust regional transmission grid in Central America, is scheduled to become operational this year. In order to allow economies of scale to occur, the aim is to harness the transmission project to create an integrated regional electricity market known as the Mercado Eléctrico Regional (MER). What are the potential benefits and downsides of the MER? What challenges does the integrated market face? What steps do the region's governments and institutions need to take to bring it to fruition?

A: Juan Miguel Cayo, senior energy specialist for Latin America and the Caribbean at the World Bank:

"SIEPAC was designed to bring the benefits of integration to the six countries and improve their national power systems. Due to the relatively small size of the power system in each of the region's nations, the opening of the regional market was seen as a means for creating a larger market that enhanced competition among power producers and for providing security of supply to all individual countries at the same time. The goal is for the regional market to gradually allow qualified agents to buy or sell electricity no matter where they are located in the Central American region. Additionally, a regional market with clear and uniform rules is expected to offer incentives for building larger and more efficient power plants, sparking investments that would help reduce the costs of electricity in the region and strengthen the reliability of its electricity systems. However, as the national markets evolve towards integration and increased trade, there are still important barriers remaining that hinder the full implementation of the Regional Electricity Market. Power integration is much more than simply building transmission lines and interconnection facilities. Its success will depend on several conditions: political, institutional, regulatory and physical. At present, these conditions are not fully in place. Political conditions are not clear and decisive actions still need to be taken; institutions are weak; regulatory conditions are not completed yet and important obstacles remain; and there is weak power supply. While Central America should pursue its power integration, each country needs to focus on strengthening its domestic market, while simultaneously working to strengthen the supranational institutions and removing obstacles at both the regulatory and commercial levels, to promote the materialization of a truly enhanced power market. The consolidation of the regional regulatory and institutional framework and the creation of a strong regional power market will not succeed if it will be based on weak, inefficient and vulnerable national power sectors. Achieving a strong integrated market based on weak national markets is a mirage."

A: Jorge Asturias, subregional coordinator for Central America for the Latin American Energy Organization (OLADE):

"The regional electricity market is a seventh market superimposed on the six national markets, which will operate based on the following premises: a) regional electricity trade can take place in a regional contract market and a spot market; b) all MER agents with the exception of the transmission companies can purchase and sell electricity freely and will have open access to the transmission system; c) MER generation agents can install power plants in any of the member countries and sell energy at the regional level; d) the MER is a market with its own rules, independent of the national markets, which makes energy transactions using the regional transmission grid (RTR) and the national networks. The points of connection between the MER and national markets are the nodes of the RTR. The design and regulations of the regional market provide a regulatory framework that allows and promotes long-term firm power trade among Central American countries and facilitates the development of regional generation plants. However, the market regulations have several obstacles to achieving this goal; for example, the existence of vertically integrated state owned companies in Costa Rica and Honduras that may limit generators from other countries from accessing their domestic markets. The operation of long-term firm regional contracts is not compatible with the application of rules that give priority to the domestic demand in the case of energy shortages. (Two countries maintain explicit norms that give priority to domestic demand.) The application of price controls and generalized subsidies in some countries could reduce the opportunities for longterm contracts and short-term transactions in the regional market. It is important to establish a proper coordination mechanism between bilateral agreements like the electric interconnection between Guatemala-México or Panama-Colombia and the MER regulations. The application of the MER will be strengthened by a second protocol signed in 2007 and ratified by five countries (it is waiting for the ratification of the National Congress in Costa Rica)."

A: Angel Baide, independent energy consultant:

"The benefits of the MER are those of greater competition, which will produce lower prices for consumers. The downsides are only for governments and state-owned companies, mainly in Costa Rica and Honduras, which will lose their dominance of the power sector. They now have to step back and let private agents take advantage of the institutional and regulatory infrastructure created by SIEPAC. It seems governments were reluctant partners in SIEPAC. The original design presents the MER as 'a seventh market, superposed to the six national markets.' But, the MER makes sense only if it is to become the single electricity market for the region. Also, the treaty defines 'regional' transactions as those where the parties are in different countries. However, the goal being that of a single integrated market, all transactions are the same, they are all regional! The narrow definition has led to problems now that project costs begin to be charged to regional transactions, because there are too few of them, leading to high unit costs which discourage trading. The MER operation rules reflect the best standards. However, there is no obligation for national system operators to use this fine machine. They can keep the national markets segregated, and avoid global optimization. Governments must introduce rules obliging each national system operator to elevate each day to the regional system operator all buy and sell bids received in the national market. Only in this manner will there be an integrated regional dispatch optimizing the use of generation and transmission resources in the region."

The Energy Advisor *welcomes responses to this Q&A. Readers can write editor Gene Kuleta at kuleta@thedialogue.org with comments.*