

The power to integrate

INTERVIEW WITH CARMEN URÍZAR HERNÁNDEZ

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CARMEN URÍZAR holds a Master's degree in Economics from Clemson University in the USA and completed further studies in the area of economic regulation at the John F. Kennedy School of Government at Harvard and at the Adam Smith Institute in London. During a distinguished career in public service, Ms Urizar has held a number of senior positions in the energy sector, including Vice President of the Board of the National Electrification Institute (INDE), President of the National Petroleum Institute of Guatemala, and Minister of Energy & Mines (2007-08).

Pressure drop:
Guatemala's diversification of its energy matrix has helped mitigate the effects of the recent drought in the region

What is your assessment of the current state of Guatemala's power sector, 17 years after privatisation?

As a result of the privatisation and subsequent reforms, the Guatemalan electricity sector is now a vertically segmented industry, with many players and competitors active in all stages of the process. Today, we have over 80 plants operating in generation, seven transmission companies, three distributors, and 17 municipal distribution companies.

The consistency and transparency of the legal and regulatory framework, coupled with the recent moves to incorporate new generation and transmission, has resulted in more than 1,600 MW of new capacity in different types of generation technology, which represents more than US\$4.8 billion in new investments and a 60 per cent expansion of the transmission system.

How serious an impact has the recent drought had on Guatemala's electricity market? Should the country be looking to diversify its energy matrix away from its current reliance on hydroelectricity?

Compared to previous years, Guatemala's generation matrix is now balanced in such a way that it allows us

to minimise the impact of the 30 per cent reduction in hydro resources that we have seen as a result of the recent water shortages.

One of the guidelines of the country's energy policy is to diversify our power generation options by prioritising renewable energy sources, whilst at the same time increasing the country's energy supply at competitive prices so as not to limit the inclusion of other renewable technologies. In fact, our first wind and solar projects are already operational.

What steps is the country taking to adapt its system to new means of generation, such as solar, geothermal, and biomass? Which renewable sources offer the greatest potential for growth, in your view?

In 2007, the country made a series of changes to the regulatory regime that mean we now have biomass, wind and solar power contributing to the diversification of the energy matrix, and we are now making legislative and technical adjustments to incorporate these renewable technologies into the electricity grid. Studies are also underway to update our knowledge of the geothermal potential that the



country has, which is the energy source that offers the most potential after hydro.

The long-awaited Jaguar Energy coal-fired plant is due to begin commercial operations later this year. What impact do you expect it to have on the domestic and regional electricity markets?

Whilst it is true that the project has suffered from delays, it's important to note that its impact on the domestic market has been immediate from the moment it was awarded: subsequent tenders for other energy projects have been lower, which has brought down prices overall. As a result, it is now possible to increase opportunities in the regional market, provided that the other countries of the Regional Electricity Market [MER] are willing and able to use our electricity supplies in their systems.

Guatemala's sugar industry was the country's first private electricity generator, using its own waste biomass, supplemented with coal and fuel oil. How significant is its contribution today, and what other industrial sectors have the greatest potential to contribute to the market?

Currently, the sugar industry accounts for about 22 per cent of the effective capacity of the system through biomass generation. In 2014, it contributed 18 per cent of the annual generation and so far in 2015, it has contributed on average 30 per cent.

Its contribution is significant and it remains the industry with the greatest potential to contribute to the market.

What more can be done to address the issue of energy price competitiveness in Guatemala and Central America vis-à-vis your giant neighbours to the North?

We need to make better use of the transmission capacity of the MER, which means reinforcing all its members' electricity distribution systems – something that will give us greater ability to import and export power, thus encouraging greater regional competition.

Guatemala has undertaken several projects with its neighbours to increase the stability and reliability of its power supplies, and by extension that of the region, including an interconnection with Mexico, as well as the regional project known as SIEPAC. How are these initiatives progressing, and how do you see the regional electricity sector evolving over the next five to 10 years?

The interconnection with Mexico is already an important infrastructure project and, since its entry into operation in 2010, has allowed us to import low-cost energy from our neighbour country; imports during 2014 accounted for 4.73 per cent of the energy consumed in Guatemala. Furthermore, Mexico's surplus has contributed to the stability not just of our electricity system, but that of the rest of Central America.

The SIEPAC project has increased Central America's regional transmission capacity, allowing Guatemala to export 12 per cent of the electricity it generates. Over the next five to 10 years, due to surplus production, Guatemala will share more of its power through interconnections with its neighbours,

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Will to power:
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forcing producers to be more aggressive and to look to the MER and Mexico – which recently opened and liberalised its energy market – to increase exports. This will require more regional transmission infrastructure.

In addition, it is important that the members of the MER succeed in consolidating the market through the creation of a stable regulatory framework and institutions that give confidence and certainty to market participants.

As the leading exporter of electricity in the region, Guatemala has long been at the forefront of the trend towards greater integration of Central America. It is in the minority, however, as one of only three liberalised electricity markets, along with El Salvador and Panama. How serious is this asymmetry facing the implementation of high-risk projects like the gas pipeline proposed by Mexico and backed by the IDB?

As the principal exporter of energy to the region, Guatemala wants to see greater integration between countries with liberalised markets and those that are yet to privatise their electricity sectors. In this context, it is important to mention that the framework treaty for the MER acknowledges that there are five countries in the region that are unlikely to move towards a liberalised market. Article 5 of the treaty stipulates that while members can allow the same company to carry out transmission, generation, and distribution, they should be clearly divided into business units allowing for the identification of the costs of each activity. Regional bodies should enforce this provision and ensure that it is fulfilled, because this is the best way to reduce the risks involved in major projects such as the proposed gas pipeline from Mexico, and to increase its feasibility.

What is your assessment of the harmonisation process within the MER? What investment opportunities does the MER present, and how should overseas players position themselves in order to take advantage of them?

I believe the MER harmonisation process has been carried out correctly, now that it has been recognised that several provisions contained in the MER rules could not be implemented because of the realities of the markets and electricity systems of the countries of Central America, for which reason the regional entities have issued provisions such as the PDC Complementary Detail Procedure, which have allowed for national regulations to be harmonised in such a way that national markets can coexist with the MER.

In the case of Guatemala, our legislation has been harmonised with that of the MER, allowing us to

maintain our market model while our companies can take advantage of the opportunities which the MER represents. Regarding investment opportunities, currently there is no mechanism or incentive for long-term contracting, so I think they are very limited. At present, most investment is the result of processes and incentives created by each of the Central American countries to meet their supply needs, rather than decisions taken on the basis of regional planning or incentives provided by the MER.

Guatemala has the fastest electricity sales growth in Central America, with a compound annual growth rate of 6.6 per cent since privatisation in 1998. Is enough being done to meet this growth in demand, in your view?

Electricity demand is increasing in response to economic growth and the number of new users connecting to the grid. For example, energy demand in 1999 was 4,595.73 GWh and in 2014 was 8,955.04 GWh. To cover this rising demand for power and energy we have increased supply very successfully.

At present we have transmission capacity available through Guatemala's three interconnections with the MER: two with El Salvador and one with Honduras. It is 300 MW at the minimum band (between 10:00pm and 6:00am), 260 MW in the medium band (from 6:00am to 5:00pm, and 250 MW in the maximum band (from 5:00pm to 9:00pm).

Guatemala can meet Central America's supply and demand gap, which in 2013 was 635.74 GWh, and in 2014, 835.62 GWh.

Guatemala's power generation capacity exceeds the growth of domestic demand, meaning we have the ability to export surplus power.

How satisfied are you with the progress of the government's Rural Electrification Programme (PER)? What more needs to be done in order to achieve full national coverage?

The PER – which the government has implemented through the National Electrification Institute (INDE) – means that by the end of 2014, 89.59 per cent of the country was supplied with electricity. Problems with coverage in isolated areas of Guatemala are not due to lack of power generation, but rather because there hasn't been enough investment in transmission lines and power distribution, an issue that will be addressed by the PER.

The estimated investment in distribution for 2014 was in the order of US\$165.77 million, and the PER was designed on the hypothesis that it would require an investment of US\$333 million, so we estimate that to achieve total coverage will require a further investment of US\$167.23 million.