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**LATIN AMERICAN COMPETITION FORUM**

**Session II - Electricity Markets in Latin America: Regional Integration  
and Competition Issues**

**-- Contribution from Uruguay --**

**16-17 September 2014, Montevideo, Uruguay**

*The attached document from Uruguay is circulated to the Latin American Competition Forum FOR DISCUSSION under Session II at its forthcoming meeting to be held on 16-17 September 2014 in Uruguay.*

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# LATIN AMERICAN COMPETITION FORUM



16-17 September 2014 • Montevideo • Uruguay

## Session II - Electricity Markets in Latin America: Regional Integration and Competition Issues

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### -- CONTRIBUTION FROM URUGUAY --

#### 1. Integration and Competition

1. A regional integration of national energy systems undoubtedly offers opportunities to take advantage of scale and support, thanks to the compensation of fluctuations, in terms of the level of both supply and demand of energy. The Regional Energy Integration Commission (*Comisión de Integración Energética Regional – CIER*) has produced various studies proving and quantifying this situation in the region.

2. Infrastructure for physical integration is an essential technological requirement as the primary condition for taking advantage of these benefits, but this can easily be achieved with financial resources that demonstrate potential gains. Furthermore, political and financial determinants are required in order to make energy integration viable, and in practice these define the level and quality of this integration. The extent of the exchange and integration in this case is shown in reality, and its measurable result demonstrates the level of political and financial agreement reached, and the existing restrictions.

3. In the case of a small-scale economy such as that of Uruguay, energy integration also appears to be an interesting alternative as a means of offering alternative solutions and introducing competition into energy supply; the country has a population of around three million and energy-related services have traditionally been provided by companies that, although state-owned, have operated as monopolies.

4. In order to visualize the results and to interrelate the relevant causes, we must recap the different stages of development reached in order to reach some conclusions.

#### 2. Background

5. Uruguay's development has historically been marked by a strong presence of centralized state-owned public utility companies that provide services as monopolies, through large, vertically integrated operations, with broad coverage and high quality. In the electricity sector, the National Administration of

Power Plants and Electrical Transmissions (*Administración Nacional de Usinas y Transmisiones Eléctricas – UTE*) has provided services since 1912, and the state oil company (*Administración Nacional de Combustibles, Alcoholes y Portland ANCAP*) has been responsible for imports, refinery and distribution since 1931.

6. In the 1990s, as part of the liberalization and privatization process throughout Latin America, the reform of the sector's regulatory framework was passed (in 1997), expanding the scope of competition in energy production, in accordance with the National Law of 1977; the UTE remained as the state-owned monopoly for energy transmission and distribution, and progress was made in separating regulatory functions into an independent energy regulatory agency (*Unidad Reguladora de la Energía Eléctrica – UREE*), in the accounting separation of the vertically integrated company, as well as in promoting the creation of a market of contracts and opportunity, with spot prices for sales to large consumers, and creating a government entity for the management of the electricity market (*Administración del Mercado Eléctrico – ADME*).

7. The UREE began to operate in 2000 with the aim of encouraging competition in the energy sector. Its proposals were approved by executive orders in 2002, defining the operating rules for the wholesale market and for transmission and distribution. In that year, and during a major economic crisis, this regulatory agency was given responsibility for the liquid and gas fuel sector, as well as drinking water and sanitation services, to be established under the new name of the Regulatory Agency for Energy and Water Services (*Unidad Reguladora de Servicios de Energía y Agua – URSEA*).

### **3. Energy Integration with Argentina**

8. The idea for this energy market was strongly influenced by the possibility of its integration within the Argentinian energy market, made possible by the large 2,000 MW interconnection with the Salto Grande bi-national hydroelectric plant that was inaugurated in 1979.

9. Uruguay also retains a small 70 MW interconnection with Brazil on the border city of Rivera and Livramento, with a 50/60 Hz converter.

10. It is necessary to consider the important role played by hydropower in the Uruguayan energy matrix: the three plants on the Rio Negro together with the bi-national plant at Salto Grande account for more than 60% of energy production on average. This is a major factor in keeping prices down, although climate conditions cause strong fluctuations.

11. The widespread crisis in the region, as well as changes to economic policy in various countries, has made it practically impossible to align prices for energy exchange. A further obstacle has been added by necessary export restrictions, or distortion due to strong subsidies applicable only to internal consumption, causing agreements to be disregarded. In any case, exchanges of energy were frequent but limited to emergencies or cases of surplus production, rather than as part of a strategy for integrating markets.

### **4. Energy Policy**

12. Most countries in the region underwent a privatization process of state-owned enterprises that operated in the various markets. In Uruguay this process was held in check by protests and plebiscites; it only took place in a few isolated cases. Reforms to the energy sector still continued, and although necessary changes and improvements were made to the state enterprise's management in terms of the distribution and sale of energy, the investments required for energy generation were postponed until such time as the market or the energy integration with the Argentinian market might resolve the issue. As a result, the electricity system was left in a critically vulnerable state in 2004 as a result of the drought, and when demand began to pick up after the crisis.

13. Since 2005, after the change of government, and during a period of strong economic growth, the government resumed control over energy policy, and the state-owned enterprise was given responsibility for planning and making the necessary investments to make up for the deficit in energy production, in accordance with the regulatory framework in force.

14. Within this context, the energy sector has continued to develop to this day, based on an energy policy drawn up in 2008 by the Ministry of Energy and Mining Industry (*Ministerio de Industria Energía y Minería – MIEM*) and approved by the four political parties represented in the country's parliament, as an official policy with a 30-year planning horizon. This same policy contemplates the involvement of private stakeholders in the production and demand, and a key role has been given to the state-owned enterprise as the executor of policies to promote renewable and domestic energy sources in order to diversify the energy matrix, as well as to ensure supply and energy sovereignty. The regulatory agency was also given responsibility for regulating the sector and encouraging competition where applicable.

15. Within this framework, the production of renewable energy (and wind energy in particular) has been one of the pillars of energy policy, and for this purpose 20-year energy supply contracts have been signed by UTE with the private sector for around 1,000 MW—approximately 300 MW of which has been installed so far.

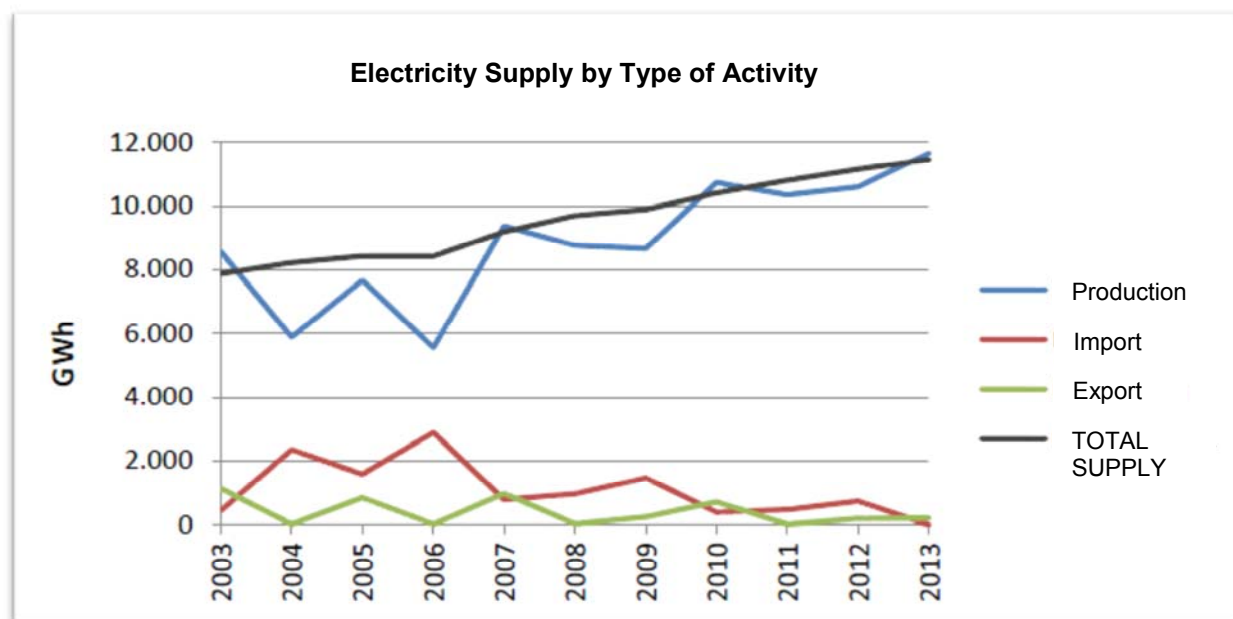
## **5. Gas Integration**

16. Energy integration with Argentina took place by means of a gas pipeline linking Buenos Aires to Montevideo, constructed with a 30-year concession, that entered into operation in 2002 in order to supply and develop the natural gas market on the basis of Argentinian production. This initiative was later thwarted due to the lack of the fuel in question, and it now operates exclusively for residential consumption and to supply interruptible contracts in special circumstances.

17. With the purpose of developing this fuel as part of the primary energy matrix, the energy policy includes plans for the installation of a floating regasification plant near Montevideo that could provide a constant supply to the residential and industrial market, and fundamentally the electricity sector, as well as allowing surplus to be sent to the Argentinian system, now in the opposite direction to that initially planned.

## **6. Regional Energy Exchanges**

18. The following chart shows the evolution in the exchanges of energy in Uruguay with neighboring countries. A strong fluctuation can be seen in the country's production, caused by climate variability, which, in the 2003-06 period, was compensated by large volumes of imported energy, before stabilizing in the last decade as a result of investments in local production and greater shortages in the Argentinean system.



Source: Energy matrix report, MIEM 2013

## 7. New Initiatives for Energy Integration with Brazil

19. One of the action lines of the energy policy has included the construction of an interconnection transmission line and 500 MW converter with the Brazilian electricity system, in order to strengthen opportunities and alternatives for interconnection in addition to the integration with the Argentinian electricity system.

20. This physical integration is justified by the possibility of increasing the number of regional exchange options, in order to cope with possible production deficits, or to send surplus energy to the Brazilian system, due to climate variability, and the increase of wind energy. This will also make it possible to take advantage of potential economies in resources due to a more efficient combined dispatch.

## 8. Competition and Integration

21. After considering the evolution of energy integration with neighboring countries, and the development of Uruguay's national system, competition can be analyzed as an instrument to achieve improved allocative efficiency in the context of an integrated market, as proposed at the outset as an opportunity.

22. In order to take advantage of the benefits of regional competition, it seems clear that the appropriate infrastructure is obviously required in order to enable exchanges. But a stable exchange also requires the proper conditions, including political and economic aspects, a firm and fair set of rules that are credible to the various stakeholders and that provide the necessary assurance to support decisions whose term will be the adjustment variable of this credibility.

23. Certainly, the types of energy exchange that take place will be enabled by the temporary stability of the set of rules, which should be kept stable. In the case of short-term sets of rules, exchanges will continue to take place as they do now, on an ad-hoc basis in the case of energy surpluses or emergency situations. In this scenario, cooperation takes precedence over competition.

24. If a more stable set of rules is achieved, more efficient energy exchange costs can be obtained due to higher levels of confidence, and a more integrated scenario makes it possible to consider longer-term investment decisions linked to a firm energy supply. In this case, apart from appropriate operating rules, there also appears to be a need for a high-level organization to be responsible for handling the integrated system.

25. To the extent that a firm set of rules exist, competition between the different stakeholders can develop as a more efficient allocation mechanism, although it will be hard to bring about this competition while the various types of sources continue to have particular characteristics, advantages and disadvantages.

26. The level of integration will depend on the stability of the proposed set of rules. From a simple physical integration with ad-hoc exchanges to a full integration as in a single integrated market, without any exchange barriers, a single dispatch and arbitrated prices.

27. Integration can also be seen as a set of rules that defines the relevant market in which stakeholders may be in competition. This implies fewer “market reserves” for local production, especially in the case of total integration.

28. Furthermore, it implies greater opportunities to place “surplus” energy production (although surpluses would no longer apply because there would be a single market). This could potentially provide consumers access to cheaper energy.

29. Integration also has a risk reallocation component. In a completely integrated market, the supply risk would be a single risk to be managed in conjunction by the integrated countries (for example, to decide on rationing), therefore integration also poses a risk for spreading scarcity, and there must be protection against this risk.

30. These essential questions for the electricity sector—with specific, long-term investments in various uses without replacement fuels, with significant environmental and social impacts, and with the need for centralized decisions on the dispatch of energy supplies at all times—make this market particularly sensitive, strategic and integral to the political agenda of the nations involved. The relevance of this impact can be seen when large asymmetries exist between countries, as between Uruguay and its two neighbors.

31. Market integration undoubtedly offers opportunities and advantages, but deepening integration also implies increasing adaptation and exit costs as well as risks. Integration must be seen as a long-term process in which the results achieved are also the result of each stakeholder’s performance in relation to the set of rules that are drawn up.

32. As a minimum, the existence of physical interconnections between regional systems makes it possible to take more advantage of existing infrastructure, creating opportunities to provide an outlet for surplus energy.

33. In this scenario, regulation is essential to ensure a smooth and standardized operation, and for arbitration purposes.

## **9. Competition for the Market**

34. Possibilities for competition in the energy sector remain within each system anyway, as shown by the experience with developing wind energy production infrastructure through 20-year energy supply contracts, using competition processes, international public bidding, organized by the state-owned enterprise with good results and obtaining competitive prices, in the region of 64 US\$/MWh.

35. The regulatory challenge in this case involves defending and encouraging competition through the review of contracts, avoiding clauses that limit potential competitors, and ensuring unrestricted access to networks at recognized efficient costs.

36. Within this framework, in order to promote efficiency, it is also important to consider not only the integration of regional markets but also the integration of markets constituted by the electricity and gas sectors.