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

-- Contribution from United States --

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The attached document from United States 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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Session II - Electricity Markets in Latin America: Regional Integration and Competition Issues

-- CONTRIBUTION FROM UNITED STATES --

1. This submission opens with a summary of industry structure and regulation in the U.S. It then describes regulatory efforts to ensure non-discriminatory access to transmission services and the development of regional transmission operators (RTOs). It concludes with examples of antitrust enforcement and competition advocacy related to electricity markets by the U.S. antitrust agencies, the U.S. Department of Justice (DOJ) and Federal Trade Commission (FTC).

1. Industry Structure and Regulation¹

2. For most of the 20th century, the U.S. electric power industry was dominated by regulated monopoly utilities. In 1970, for example, vertically integrated utility companies (investor-owned, municipal, or cooperative) controlled over 95 percent of the electric generation in the United States. Typically, a single local utility sold and delivered electricity to retail customers under an exclusive franchise regulated under state law. In many states, utilities strove for generation self-sufficiency. Over the past several decades, however, technological, economic, regulatory, and political developments have led to fundamental changes in the structure of the industry.

3. Today, the electric power industry includes both utility and non-utility entities, including many new companies that produce, market and deliver electric energy in wholesale and retail markets. As a result of industry changes, electric utilities owned less than 60 percent of electric generating capacity in 2012.² Increasingly, decisions affecting retail customers and electricity rates are split among federal, state, and regional entities, including new private entities. In addition, in recent years, growing numbers of

¹ This section is drawn from the first chapter of the 2007 *Report to Congress on Competition in Wholesale and Retail Markets for Electric Energy*, produced by the Electric Energy Market Competition Task Force, available at <http://www.ferc.gov/legal/fed-sta/ene-pol-act/epact-final-rpt.pdf>.

² Statistical data in this paper is taken from American Public Power Association (APPA), *2014-15 Annual Directory and Statistical Report*, available at <http://www.publicpower.org/Programs/Landing.cfm?ItemNumber=38710&navItemNumber=37577>.

electricity customers have invested in on-site generation that substitutes for all or some of the electricity previously obtained from the grid. In most cases, this on-site generation, including solar and combined heat and power installations, remains connected to the grid and may supply it power when on-site consumption is less than on-site generation.

4. Participants in the electric power sector in the U.S. include: private investor-owned utilities and electric cooperatives; federal, state, and municipal utilities, public utility districts and irrigation districts; co-generators and onsite generators; and non-utility independent power producers (IPPs), affiliated power producers, power marketers, and independent transmission companies that generate, distribute, transmit, or sell electricity at wholesale or retail.

5. In 2012, 3,292 regulated retail electric providers supplied electricity to over 136 million customers, with retail sales totaling over \$366 billion. Retail customers purchased more than 3.7 billion megawatt hours (MWhs) of electricity. Active retail electric providers include utilities, federal agencies, and power marketers selling directly to retail customers. These entities differ greatly in size, ownership, regulation, customer load characteristics, and regional conditions. These differences are reflected in policy and regulation.

1.1 Investor-Owned Utilities

6. Investor-owned utility operating companies (IOUs) are private, shareholder-owned companies ranging from small local operations serving a retail customer base of a few thousand to very large multi-state holding companies serving millions of customers. Most IOUs are or are part of a vertically integrated system that owns or controls generation, transmission, and distribution facilities/resources to meet the needs of retail customers in their franchise service areas. Many IOUs have undergone significant restructuring and reorganization under state retail competition plans over the past 15 years. As a result, several IOUs, concentrated in the Northeastern section of the nation, no longer own substantial generation facilities, and many have transferred their generation resources into separate wholesale entities with no guaranteed rate of return. IOUs that sell electric power to retail customers must procure electricity from wholesale markets.

7. IOUs continue to be a major presence. In 2012, IOUs directly owned about 36.2 percent of total electric generating capacity and accounted for 37.7 percent of generation for retail and wholesale sales. IOUs provide service to retail customers under state regulation of territories, finances, operations, services, and rates. States that have not restructured retail service generally regulate retail rates under traditional bundled cost-of-service rate methods. In states that have restructured IOUs, distribution services continue to be provided under monopoly cost-of-service rates, and retail customers obtain generation service either at market rates from alternative competitive providers or at “provider of last resort” (POLR) rates from the distribution utility or another designated POLR service provider.

8. POLR rates are determined by two main methods (chosen by the state). Some states use traditional cost-of-service rate-making to determine a price charged by the local retail company, and the local retail company is responsible for producing or procuring power at reasonable rates. Another method, often adopted by states that have access to competitive wholesale power, is for power for POLR load to be procured through an auction. Under this method, the local utility (or the state on its behalf) issues a call for wholesale suppliers to participate in an auction to supply the needed power. The lowest bidder(s) are then chosen; the local utility may or may not win this contract. This method can keep the retail price of power very close to the competitive wholesale price.

9. Under the Federal Power Act (FPA),³ the Federal Energy Regulatory Commission (FERC) regulates wholesale electricity transactions (sales for resale) and unbundled transmission activities of IOUs as “public utilities” engaged in interstate commerce. The exceptions are IOUs that do not have direct interconnections with utilities in other states that allow unimpeded flow of electricity across systems. Thus, IOUs in Alaska, Hawaii, and the Electric Reliability Council of Texas (ERCOT) region of Texas generally are not subject to FERC jurisdiction.

1.2 Public Power Systems

10. The more than 2,000 publicly owned power systems include local, municipal, state, and regional public power systems. These providers range from tiny municipal distribution companies to large systems such as the Los Angeles Department of Water and Power. Publicly-owned systems operate in every state but Hawaii. Public power systems generated 9.8 percent of the nation’s power in 2012, accounted for 15.4 percent of total electricity sales, and owned about 10.3 percent of total generating capacity. Many public systems are distribution-only utilities that purchase, rather than generate, power.

11. Regulation of public power systems varies among states. In some, the public utility commission exercises jurisdiction in whole or part over operations and rates of publicly-owned systems. In most states, public power systems are regulated by local governments or are self-regulated. Municipal systems usually are governed by a local city council or an independent board elected by voters or appointed by city officials.

1.3 Electric Cooperatives

12. Electric cooperatives are privately-owned, non-profit electric systems owned and controlled by the members they serve. Members vote directly for the board of directors. While some cooperative systems generate their own power and sell power in excess of their members’ needs, most G&Ts and distribution cooperatives are net buyers. In 2012, electric cooperatives generated about 5 percent of total electricity generation and owned roughly the same amount of generating capacity. Regulatory jurisdiction over cooperatives varies among states. Some states exercise considerable authority over rates and operations, while others exempt cooperatives from state regulation.

1.4 Federal Power Systems

13. Federally-owned or chartered power systems include the federal power marketing administrations (PMAs), the Tennessee Valley Authority (TVA), and facilities operated by the U.S. Army Corps of Engineers, the Bureau of Reclamation, the Bureau of Indian Affairs, and the International Water and Boundary Commission. Wholesale power from federal facilities (primarily hydroelectric dams) is marketed through four federal power marketing agencies. PMAs own and control transmission to deliver power to wholesale and direct service customers. They also may purchase power from others to meet contractual needs and may sell surplus power as available to wholesale markets.

14. Federal systems provided 6.9 percent of the nation’s power generation in 2012. Although most federal power sales are at the wholesale level, some are made to end users. Federal systems nationwide directly served 39,032 retail customers in 2012, mostly industrial customers amounting to about 1.2 percent of retail load.

³ 16 U.S.C. §§ 791a et seq. (2000).

1.5 *Non-utilities*

15. Non-utilities are entities that generate, transmit, or sell electric power, but do not operate regulated retail distribution franchises. They include wholesale non-utility affiliates of regulated utilities, merchant generators, and qualifying facilities (QFs). They also include power marketers that buy and sell power at wholesale or retail but that do not own generation, transmission, or distribution facilities.

16. Non-QF wholesale generators engaged in wholesale power sales in interstate commerce are subject to FERC regulation under the FPA. Power marketers selling at wholesale also are subject to FERC oversight. Power marketers selling only at retail are subject to state jurisdiction and oversight in states where they operate. FERC regulates interstate transmission services of independent transmission companies. Some independent transmission companies operate as components of organized wholesale markets, also under FERC regulation. Such companies also may be organized and regulated as utilities where they are located for planning, siting, permitting, and other purposes.

17. As retail electric providers, 211 power marketers served over 6 million retail customers or about 4.3 percent of all retail customers and reported revenues of over \$51 billion, on about 14.0 percent of retail electricity sold in 2012. The number of customers served has grown substantially in recent years.

18. Non-utilities are a growing presence in the industry. In 2012, non-utilities owned or controlled approximately 41.7 percent of all electric generation capacity, compared to about 8 percent in 1993. About half of non-utility generation capacity is owned by non-utility affiliates or subsidiaries of holding companies that also own a regulated electric utility. Non-utilities accounted for about 41 percent of generation in 2012.

2. **Open Transmission Rules and the Development of Regional Transmission Organizations (RTOs)**

19. In 1996, FERC adopted Order No. 888 in exercise of its statutory obligation under the FPA to remedy undue transmission discrimination.⁴ The goal was to ensure that transmission owners do not use their transmission facility monopolies to unduly discriminate against IPPs and other sellers of electric power in wholesale markets. In Order No. 888, FERC found that undue discrimination and anti-competitive practices existed in transmission service provided by public utilities in interstate commerce. FERC determined that non-discriminatory open access transmission service was an appropriate remedy and one of the most critical components of a successful transition to competitive wholesale electricity markets. Accordingly, FERC required all public utilities that own, control, or operate facilities used for transmitting electric energy in interstate commerce to file open access transmission tariffs (OATTs) containing certain non-price terms and conditions.

20. Concurrently with Order No. 888, FERC issued Order No. 889, which imposed standards of conduct governing communications between a utility's transmission and wholesale power functions to prevent the utility from giving its power marketing arm preferential access to transmission information. Order No. 889 requires each public utility that owns, controls, or operates facilities used for interstate transmission to provide information regarding available transmission capacity, prices, and other information that will enable transmission customers to obtain open access to non-discriminatory transmission service.

⁴ Order No. 888, FERC Stats. & Regs. ¶ 31,036.

21. In Order No. 888, FERC also encouraged grid regionalization through the formation of independent system operators (ISOs). Participating utilities would voluntarily transfer operating control of their transmission facilities to the ISO to ensure independent operation of the transmission grid. In practice companies created single company ISOs rather than regional ones.

22. In December 1999, responding to continuing complaints of discrimination and lack of transmission availability, FERC issued Order No. 2000.⁵ This order recognized that although Order No. 888 set up the foundation for competitive electric markets, it did not eliminate the potential to engage in undue discrimination and preference in providing transmission service. FERC concluded that *regional* transmission organizations (RTOs) could eliminate transmission rate “pancaking,”⁶ increase region-wide reliability, and eliminate any residual discrimination in transmission services where operation of the transmission system remains in the control of a vertically integrated utility. Accordingly, FERC encouraged voluntary formation of RTOs. Some organized markets retain the earlier title of “ISO.”

23. RTOs are independent entities that control and operate regional electric transmission grids for the purpose of promoting efficiency and reliability in the operation and planning of the transmission grid and for ensuring non-discrimination in the provision of electric transmission services. RTOs currently do not own transmission; the owners (most of whom also own generation capacity) relinquish operating control to the RTO. To date, all RTOs and ISOs are organized as non-profit organizations, but FERC recognizes the option of for-profit RTOs that would directly own some or all of the transmission systems they operate. Each RTO also retains an independent market monitor to identify market rules that should be modified or identify behavior of market participants that is anticompetitive or otherwise inefficient.

3. Regionalization and Electric Reliability Standards

24. Ensuring the reliability of the North American bulk power system is the responsibility of the North American Electric Reliability Corporation (NERC), a non-profit international regulatory authority. NERC develops and enforces Reliability Standards and monitors the bulk power system. It is responsible for the continental U.S., Canada, and the northern portion of Baja California, Mexico; it is subject to oversight by FERC and Canadian governmental authorities. NERC delegates its authority to monitor and enforce compliance to eight Regional Entities accounting for virtually all the electricity supplied in the U.S., Canada, and the northern portion of Baja California; three of these regional entities cover territory from more than one country.⁷ The Energy Policy Act of 2005 created an Electric Reliability Organization (“ERO”) to develop and enforce compliance with mandatory reliability standards; in 2006, NERC was granted this designation, and violation of its standards can be subject to fines up to \$1 million per day per violation.⁸

⁵ DOJ filed comments in support of this order. See <http://www.justice.gov/atr/public/comments/200221.htm>.

⁶ This refers to circumstances in which a transmission customer must pay separate access charges for each utility service territory crossed by the customer’s contract path.

⁷ See <http://www.nerc.com/AboutNERC/Pages/default.aspx>;
<http://www.nerc.com/AboutNERC/keyplayers/Pages/default.aspx>.

⁸ See “North American Electric Reliability Corporation,” http://en.wikipedia.org/wiki/North_American_Electric_Reliability_Corporation.

4. Antitrust Enforcement and Competition Advocacy

25. Historically antitrust enforcement has played an important role in ensuring open access to competing electricity providers. In *Otter Tail Power Company v. United States*,⁹ the U.S. Supreme Court held that Otter Tail had violated the Sherman Act by refusing to sell wholesale power or to “wheel” power from another source to a municipal power system that sought to compete with Otter Tail in the retail electricity market. In particular, the Court concluded that Otter Tail had monopoly power in retail sales of electric power in its service area and that it had used its dominance in transmission to foreclose potential competition for retail sales. Although FERC has since taken the lead in ensuring open access to facilities by regulation,¹⁰ the courts have historically played an important role in enforcing antitrust claims based on a denial of access.¹¹ Although each market is structured differently – both within and outside the United States – both regulators and enforcers should be aware that incumbent electricity firms may be able to impede entry of not only generation sources but also of new technologies that have the potential to facilitate new forms of competition. To address this possibility, competition authorities need to evaluate whether such efforts reflect legitimate business purposes or an effort to exclude competition on the merits.

26. In a more recent enforcement action, the Antitrust Division of the U.S. Department of Justice announced in February 2010 a settlement with KeySpan Corporation, requiring the company to pay the United States \$12 million, as disgorgement of profits, for violating the antitrust laws by entering into an agreement restraining competition in the New York City electricity capacity market. KeySpan was the largest seller of electricity capacity in the New York City market. According to the civil antitrust complaint filed in the U.S. District Court for the Southern District of New York, KeySpan and Morgan Stanley entered into an agreement in January 2006 that gave KeySpan a financial interest in the electricity capacity sales of its largest competitor, Astoria. By providing KeySpan revenues from its competitor’s capacity sales, in addition to its own, the agreement with Morgan Stanley had the anticompetitive effect of eliminating KeySpan’s incentive to sell its electricity capacity at lower prices. As a result, retail electricity prices in New York City likely were higher than they would have been without this anticompetitive agreement.¹²

27. In 1998, the Division filed a settlement with Rochester Gas & Electric Company (“RG&E”) invalidating its anticompetitive agreement with the University of Rochester. RG&E offered exceptionally low electricity rates and threatened to withhold research grants to discourage the University from proceeding with construction of a high efficiency electric generating plant, which would have produced inexpensive, surplus electric power that could have, in turn, competed with RG&E. The settlement allowed the University to build its generating plant and prohibited RG&E from negotiating similar arrangements with other potential competitors.¹³

28. The antitrust agencies and FERC have overlapping jurisdiction with respect to mergers among electric utilities. FERC operates under a public interest standard that includes competition as one element of the public interest, while the antitrust agencies apply the substantial lessening of competition standard of

⁹ *Otter Tail Power Company v. United States*, 410 U.S. 366 (1973).

¹⁰ See discussion of FERC Order No. 888 above.

¹¹ See, e.g., *City of Vernon v. So. California Edison Co.*, 955 F.2d 1361 (9th Cir.), *cert. denied*, 506 U.S. 908 (1992); *City of Anaheim v. So. California Edison Co.*, 955 F.2d 1373 (9th Cir.), *cert. denied*, 506 U.S. 908 (1992); *City of Malden v. Union Elec. Co.*, 887 F.2d 157 (8th Cir. 1989).

¹² See http://www.justice.gov/atr/public/press_releases/2010/255503.htm; <http://www.justice.gov/atr/cases/morgan.html>.

¹³ See <http://www.justice.gov/atr/cases/indx23.htm>.

Section 7 of the Clayton Act. The antitrust agencies can sue to block a merger approved by FERC, and FERC can refuse to approve a merger on which DOJ or the FTC has taken no action.

29. Recently, for example DOJ challenged the proposed \$7.9 billion merger of Exelon Corporation and Constellation Energy Group Inc. The complaint, filed on December 21, 2011, alleged that the transaction, as originally proposed, likely would substantially lessen competition for wholesale electricity, ultimately increasing electricity prices for millions of consumers in the mid-Atlantic region of the country. To resolve these competitive concerns, DOJ filed a proposed settlement simultaneously with the complaint. The settlement required the merged firm to divest three electricity generating plants in Maryland, which in total provide more than 2,600 megawatts of generating capacity. The court approved the settlement on May 23, 2012.¹⁴

30. The FTC also challenges mergers and acquisitions that it has reason to believe will likely lessen competition and harm consumers. For example, the FTC agreed in 2001 to settle a challenge to the proposed merger of DTE Energy Company and MCN Energy Group. The settlement resulted in the creation of independent natural gas distribution rights within the MCN distribution system serving the Detroit, Michigan, area. The settlement established these rights in order to prevent the loss of (1) growing competition between DTE and MCN to serve customers potentially interested in self-generation of electricity; (2) competition between DTE and Detroit's municipal utility (which relied on natural gas transported by MCN to generate electricity); and (3) competition between DTE and MCN to serve customer demand that could be satisfied with delivery of either electricity or natural gas.¹⁵

31. In 1998, the FTC agreed to a consent order that would have required divestitures of coal mines to remedy a proposed merger between a large utility (PacifiCorp) and a large coal producer (Peabody Coal, owned by Energy Group PLC). Peabody was the sole present and prospective supplier of coal for a large, isolated electricity generating station that competed with generators owned by PacifiCorp. The proposed acquisition could have allowed PacifiCorp to raise the costs of a major rival, which in turn would have raised wholesale electricity prices and allowed PacifiCorp to gain higher profits at the other generators it owned in the same area of constrained transmission capacity. The merger also would have raised a risk of disclosure to PacifiCorp of competitively sensitive information about other generators. PacifiCorp's perceived information advantage regarding electricity supply and costs could have discouraged new entry and encouraged existing suppliers to exit, lessening the competitive discipline other firms exercised on PacifiCorp's wholesale electricity supply offers.¹⁶ The parties subsequently abandoned the transaction.

32. DOJ and FTC also have a long history of competition advocacy related to electricity.¹⁷ In 2007, for example, DOJ submitted comments to FERC on the latter's statutory authority to issue rules regarding transparency in electricity and natural gas markets. The Energy Policy Act of 2005 explicitly provided that FERC may issue rules mandating the collection and public dissemination of information about these markets. The DOJ comments¹⁸ summarized the benefits of transparency, which promotes market efficiency by facilitating efficient production and investment, ultimately reducing prices for consumers. The comments noted, however, that the structural characteristics of these markets may make them

¹⁴ See www.justice.gov/atr/public/press_releases/2011/278473.pdf.

¹⁵ See also John C. Hilke, "Convergence Mergers: A New Competitive Settlement Model from Detroit," 14:8 Electricity J. 13 (2001).

¹⁶ See also Jonathan B. Baker & John C. Hilke, "From Open Access to Convergence Mergers: An Antitrust Perspective on the Transition to Electricity Competition," 3:1 Power 3 (1998).

¹⁷ A compilation of DOJ comments submitted to FERC from 1991-2013 is available at <http://www.justice.gov/atr/public/comments/comments.html#ferc>.

¹⁸ Available at <http://www.usdoj.gov/atr/public/comments/223049.htm>.

susceptible to coordinated interaction, and that public disclosure of detailed firm- and transaction-specific information may increase the risks of coordination and raise prices to consumers. The comments suggested that given the amount of information currently available, the incremental benefit of increased public dissemination may be small relative to the risk of coordination. DOJ concluded that if FERC were to decide to increase the public dissemination of additional information, it may be able to reduce the potential for facilitating coordination by adopting certain safeguards, including aggregating information, masking the identities of individual participants, and releasing information with an appropriate time lag.

33. The Federal Trade Commission (or its staff) has regularly submitted comments to federal and state regulatory agencies regarding competition, efficiency, and consumer protection aspects of proposed regulations since 1995.¹⁹ The general approach of these comments has been to promote regulatory approaches that encourage competition in electricity markets.

5. Conclusion

34. The U.S. electric power industry has evolved from one dominated by vertically-integrated regulated monopolies, investor-owned, municipal, or cooperative, to one in which non-utility entities own over 40 percent of generating capacity. Over the years, regulators and competition enforcers have sought to promote competition in the industry to the benefit of consumers, and the antitrust agencies continue to enforce the antitrust laws and advocate for increased competition.

¹⁹ A listing, in reverse chronological order, of FTC and FTC staff competition advocacy comments to federal and state electricity regulatory agencies is available at http://www.ftc.gov/policy/advocacy/advocacy-filings?combine=&field_matter_number_value=&field_advocacy_document_terms_tid=5290&field_date_value%5Bmin%5D%5Bdate%5D=2013-10&field_date_value%5Bmax%5D%5Bdate%5D=&=Apply.