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The Andean Electricity Market: A Competition Law Analysis

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THE ANDEAN ELECTRICITY MARKET: A COMPETITION LAW ANALYSIS

MATEO FERRERO*

ABSTRACT

The countries of the Andean Community (Bolivia, Colombia, Ecuador, and Peru) have great potential to produce clean and reliable energy. However, this potential has only been exploited to a limited extent. Network industries, such as the electricity sector, have special features that create unique challenges for both developed and developing countries seeking to adequately manage this important part of the economy. Although the member countries of the Andean Community have substantially reformed their energy industries in the past decades, this sector still requires further competition. So far, most of the efforts undertaken by these countries have neglected the possibility of enhancing competition in the energy market through deeper regional integration. This Article explores the benefits and challenges of pursuing regional energy market integration in the Andean Community by examining the current Andean legal regime and comparing its most important aspects with the regime implemented during the process of energy integration in the European Union. The aim of this analysis is to propose several changes to the Andean legal framework in order to improve the regional energy integration regime from a competition law perspective.

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INTRODUCTION

Electricity is essential to the production of almost all goods and services. Thus, it is vital to the public interest. Adequate, reliable, competitively priced electricity is essential for modernization, domestic growth, and international competitiveness. Despite its importance, many developing countries still struggle to guarantee the quality, the continuity, and the long-term adequacy of the supply of electricity.¹

Considering the fundamental role that the electricity industry plays, many countries have restructured and liberalized their systems over the past two decades.² The experiences of the countries that embraced electricity reforms are mixed, ranging from highly successful in some cases to disappointing and problematic in many others.³

Generally, the energy sector has improved in countries where certain important reforms have been undertaken.⁴ These reforms have included privatization, the implementation of effective and credible regulation aimed at encouraging efficient behavior by market participants, and carefully structured wholesale markets that foster competition among several unrelated suppliers.⁵

From a competition policy perspective, each of these reforms require making the following decisions: what kind of ownership—public or private—is desirable in the industry; how to control market power in an industry that is particularly sensitive to it; how to design the market to progressively introduce competition; and finally, how to implement public policies without distorting the playing field.

Each of these matters will be analyzed in the context of the Andean Community, a regional integration bloc comprised of Bolivia, Colombia, Ecuador, and Peru.⁶ The main objective of this Article is to make a general assessment of the Andean electricity industry from a competition law perspective, with a view to proposing improvements to the current structure.

¹ See IOANNIS N. KESSIDES, REFORMING INFRASTRUCTURE: PRIVATIZATION, REGULATION, AND COMPETITION 137, 140 (2004).

² Fereidoon P. Sioshansi & Wolfgang Pfaffenberger, *Why Restructure Electricity Markets?*, in ELECTRICITY MARKET REFORM: AN INTERNATIONAL PERSPECTIVE 35, 35 (Fereidoon P. Sioshansi & Wolfgang Pfaffenberger eds., 2006).

³ *Id.*

⁴ KESSIDES, *supra* note 1, at 171–72.

⁵ *Id.*

⁶ *Who Are We?*, COMUNIDAD ANDINA [ANDEAN COMMUNITY], <http://www.comunidadandina.org/ingles/who.htm> (last visited Mar. 15, 2012).

I. THEORETICAL FRAMEWORK ON REGULATED MARKETS

A. *Introductory Remarks on Regulated Markets*

The structure and regulation of network utilities varied substantially throughout the twentieth century, reflecting the regulatory complexities of a market with unique characteristics and crucial importance for economic development and political stability.⁷ For much of the twentieth century, most countries used a system of government ownership and regulation to promote access to network infrastructure, utilizing mechanisms that ranged from non-exploitive pricing to non-discriminatory coverage and universal service.⁸ In the 1980s and 1990s, liberalization and privatization became the rule, marking a significant departure from the previous model.⁹ This shift not only questioned the need for state ownership in network utilities; it also challenged pre-existing conceptions about what constituted a natural monopoly and what regulations were required to address such phenomena.¹⁰

Network utilities are “public utilities that require a fixed network to deliver their services, and include gas, electricity, water, rail, and fixed link telephony.”¹¹ The networks of these utilities are natural monopolies because there are large economies of scale, and the fixed and sunk costs of the infrastructure are a crucial part of the industry.¹² In this situation, the most efficient market solution is a monopoly. This infrastructure becomes an unavoidable natural monopoly when it is a key input to supply the market; that is, when “it is something which is clearly non-replicable on a commercial basis within a reasonable timescale and can therefore be described as an ‘enduring economic bottleneck.’”¹³

The unique economic characteristics of network utilities make them a target of government regulation. These features include: a) economies of scale and scope that tend to create market concentration problems; b) large sunk costs, which impose significant risks to investors and therefore

⁷ See KESSIDES, *supra* note 1, at 29–30.

⁸ *Id.* at 29.

⁹ *Id.* at 35.

¹⁰ *Id.*

¹¹ DAVID M. NEWBERY, *PRIVATIZATION, RESTRUCTURING, AND REGULATION OF NETWORK UTILITIES: THE WALRAS-PARETO LECTURES 1* (1999).

¹² MARK FURSE, *COMPETITION LAW OF THE EC AND UK 228* (4th ed. 2004).

¹³ European Regulators Grp., *ERG Opinion on Functional Separation*, ERG (07) 44, at 5 n.3 (2007).

discourage new participation in the industry; and c) the necessity of these services to the society as a whole.¹⁴

The electricity industry's three intrinsic characteristics make it extremely vulnerable to the exercise of market power.¹⁵ First, "electricity supply is rigid by nature."¹⁶ Second, because electricity cannot be efficiently stored,¹⁷ production and consumption occur at the same time. Finally, the demand for electricity is severely inelastic in the short run.¹⁸

Prior to the market reforms of the 1980s and 1990s, network utilities were designed based on the assumption that, due to the existence of natural monopolies, "these industries were best served . . . when structured as vertically integrated monopolies."¹⁹ Vertical integration occurs when organizations along the production chain are under a unified management and ownership.²⁰

Questioning this assumption led to the recognition that network utilities "encompass several distinct activities with entirely different economic characteristics—entailing a mix of competition and monopoly elements in supply."²¹ Efficiently controlling these distinct activities requires a combination of competition law and regulatory policy. Most activities should be subject to progressive competition.²² However, cases of market failure, including, but not limited to, natural monopoly, asymmetries of information, and network externalities, require the application of regulation. These two approaches are necessary to ensure that competition has the opportunity to develop to the point where it overcomes regulation as the most efficient instrument to discipline the incumbent firm.²³

¹⁴ KESSIDES, *supra* note 1, at 29–30.

¹⁵ *Id.* at 134.

¹⁶ *Id.* at 133.

¹⁷ *Id.* at 133–34.

¹⁸ *Id.* at 134.

¹⁹ *Id.* at 135–36.

²⁰ Russell Johnston & Paul R. Lawrence, *Beyond Vertical Integration—The Rise of the Value-Adding Partnership*, in *MARKETS, HIERARCHIES AND NETWORKS: THE COORDINATION OF SOCIAL LIFE* 193, 199 (Grahame Thompson et al. eds., 1991).

²¹ KESSIDES, *supra* note 1, at 36.

²² Halil Baha Karabudak, Head of Dep't II, Turk. Competition Auth., Presentation at the United Nations Conference on Trade and Development Seminar on Competition Provisions in Regional Trade Agreements: Competition Policy and Regulated Markets: Experience of Turkey (Aug. 1, 2006), available at http://www.unctad.org/sections/wcmu/docs/ditc_ccpb_turkey07-06_ppt05_en.pdf.

²³ Mark Armstrong & David E. M. Sappington, *Regulation, Competition, and Liberalization*, 44 *J. ECON. LITERATURE* 325, 359 (2006).

Concerns about excessive market power are sometimes addressed by unbundling essential facilities in network utilities.²⁴ “An ‘essential facility’ is a facility or infrastructure without access to which competitors cannot provide services to their customers.”²⁵ When a provider has a wholesale market monopoly over an essential facility, competition in the retail market may be at risk.²⁶ Potential retail competitors will face high barriers to entry if the incumbents are able to deny access to their network or demand above-cost prices for its use.²⁷

B. Electricity Restructuring

In the electricity industry, this change of paradigm meant that its main components would be considered as separate sectors and thus, progressively unbundled. Consequently, the electricity industry has been restructured into four main components: a) generation; b) high-voltage transmission; c) low-voltage distribution; and d) supply or retailing, which includes power procurement, billing, and customer service.²⁸

There are four main ways of organizing these sectors of the electricity market, depending on the depth of the reform that the country is undertaking. The traditional approach is a monopoly, where a single vertical integrated company generates the electricity and allocates it over a transmission network to distribution companies or customers.²⁹ A step closer to competition is the “single buyer” model, in which a single company buys electricity from competing generators, but is a monopolist on transmission and sales to distribution companies.³⁰ The third approach is “wholesale competition,” where several distribution companies compete to buy electricity from competing generators, but still hold a monopoly in their distribution areas.³¹ Finally, in the “retail competition” approach, competition is enhanced throughout the production chain because customers

²⁴ Harold Ware & Christian M. Dippon, *Wholesale Unbundling and Intermodal Competition*, 34 TELECOMM. POL'Y 54, 56 (2010), available at http://www.nera.com/extImage/PUB_Wholesale_Competition_01.10.pdf (discussing unbundling in the context of telecommunications).

²⁵ FURSE, *supra* note 12, at 288.

²⁶ Ware & Dippon, *supra* note 24, at 56.

²⁷ *Id.*

²⁸ KESSIDES, *supra* note 1, at 132.

²⁹ *Id.* at 144.

³⁰ *Id.*

³¹ *Id.*

have access to competing generators and the transmission and “distribution networks operate under open access arrangements.”³²

Although there are several options, there is agreement across many countries on the basic architecture for electricity restructuring.³³ The usual reform separates the natural monopoly segments from the activities in which competition is possible.³⁴ Accordingly, transmission and distribution are separated from generation and retail.³⁵ Wholesale and retail competition, with a regulatory agency setting the tariffs for transmission and distribution, is the standard recommendation.³⁶ This standard prescription and its sequencing should be, however, nuanced and tailored to the needs of each country and region.³⁷

Electricity restructuring initially aims at lowering downstream costs, phasing out cross-subsidies and direct subsidies, and setting a sustainable structure in the long run.³⁸ Energy market reform should start by unbundling transmission and upstream activities. The objective is to put domestic power generation and long-distance imports on a competitive footing while keeping transmission a public or private monopoly.³⁹ A competitive wholesale market can be created by “unbundling” competitive supplies of electricity from transmission.⁴⁰ Some countries stop at this point and keep energy market reform simple.⁴¹ Other countries go further by partly or totally breaking up distribution and retail supply.⁴²

There are two natural monopolies in the electricity market: transmission and distribution.⁴³ Both segments entail largely sunk fixed costs⁴⁴ and, as a result, introducing competition would lead to a wasteful duplication of network resources. Thus, regulation is an appropriate tool

³² *Id.*

³³ *Id.* at 145.

³⁴ KESSIDES, *supra* note 1, at 145.

³⁵ *Id.*

³⁶ *Id.*

³⁷ *See id.*

³⁸ WORLD ENERGY COUNCIL, ENERGY MARKET REFORM: LESSONS LEARNED AND NEXT STEPS WITH SPECIAL EMPHASIS ON THE ENERGY ACCESS PROBLEMS OF DEVELOPING COUNTRIES 32 (2004).

³⁹ *Id.* at 40.

⁴⁰ *Id.*

⁴¹ *Id.*

⁴² *Id.*

⁴³ *See* Tooraj Jamasb & Michael Pollitt, *Benchmarking and Regulation of Electricity Transmission and Distribution Utilities: Lessons from International Experience 1* (Cambridge Working Papers in Economics, 2000).

⁴⁴ KESSIDES, *supra* note 1, at 36.

for monitoring the sector because it acts as a substitute for market forces and ensures adequate supply and quality of service.⁴⁵

The other crucial question, besides dealing with the natural monopoly segments in the industry, is how to introduce competition into the competitive markets of the production chain: generation and supply. The usual answer is that competition requires a market. Therefore, generation needs a wholesale electricity market ideally organized as a power exchange. One of the most important advantages of this market-oriented solution is that it raises “fewer concerns about the use of government powers and the fairness of regulatory proceedings.”⁴⁶ However, an adequate competition-based model for electricity requires, at the very least, enough capacity in the generation and transmission segments and several independent competing generators.⁴⁷

The objective of unbundling the different segments is to introduce competition into segments that are not natural monopolies while continuing to regulate the ones that are. Nonetheless, competition is not an end in and of itself. Rather, it is an important means of achieving economic efficiency and benefits for consumers. Reforming the electricity industry requires a “tradeoff between vertically integrated and unbundled forms of organization”; that is, between potential losses of coordination and increases in transaction costs vis-à-vis potential efficiency gains from competition and increased transparency.⁴⁸

1. Distribution

Privatizing distribution helps to address revenue shortfalls by introducing efficiencies at the segment of the business which is in direct contact with end-users. Therefore, “[t]he best way to start and sustain pricing and related reform is to separate the distribution monopoly from the rest of the industry, privatize it, and subject it to price or revenue cap regulation.”⁴⁹ Nevertheless, the use of price caps poses challenges to the regulator because distributors have the incentive of providing inflated investment forecasts in hopes that the regulator will set a higher price cap.⁵⁰

⁴⁵ Karabudak, *supra* note 22, at 10.

⁴⁶ JOSÉ A. GÓMEZ-IBÁÑEZ, REGULATING INFRASTRUCTURE: MONOPOLY, CONTRACTS, AND DISCRETION 35 (2003).

⁴⁷ KESSIDES, *supra* note 1, at 142–43.

⁴⁸ *Id.* at 46.

⁴⁹ *Id.* at 146.

⁵⁰ Graham Shuttleworth, *Using Incentives to Inform Regulatory Decisions*, ENERGY REG. INSIGHTS (NERA ECON. CONSULTING), Aug. 2005, at 1, 2.

A company following this approach would earn an extra profit from “saving” costs, which were not intended in reality.⁵¹

2. Generation

Introducing competition into generation has frequently been done by involving the private sector in such activity.⁵² As a general rule, the private sector can become involved in generation when: a) the government sells a controlling share in generation companies; or b) when the government invites tenders from independent generators interested in supplying the restructured state electricity company.⁵³ If the first approach is chosen—privatizing generation—it is crucial that the state electricity company is separated into several companies that engage in competition.⁵⁴ These competing companies must be structured with similar conditions in terms of size and pre-existing contractual arrangements, as otherwise a few would supply most of the contract-demanded energy.⁵⁵

3. Transmission

Adequate transmission services are crucial to succeeding in reforming the electricity industry. The *raison d'être* for unbundling transmission from generation is simple: a vertically integrated company would probably favor the transportation of the energy generated by itself over that of competing undertakings.⁵⁶ The reliability of the transmission sector is crucial for enhancing competition at the generation level because if the transmission capacity is insufficient, divided geographical markets will arise because of congestion problems. As a result, operators with increased market power would emerge in these geographical niches due to fewer competitors.⁵⁷ Accordingly, after separating transmission from generation and creating conditions for regulated third-party access to transmission, close regulation is necessary.

4. Wholesale Electricity Market

One of the most important elements of a successful restructuring is the creation and adequate implementation of a wholesale electricity

⁵¹ *Id.*

⁵² See KESSIDES, *supra* note 1, at 144–45.

⁵³ *Id.* at 147.

⁵⁴ *Id.*

⁵⁵ See *id.* at 148–55.

⁵⁶ *Id.* at 147.

⁵⁷ See *id.* at 59.

market. There are several conditions required in order to succeed. First, buyers and sellers should meet in a power exchange for entering into spot transactions.⁵⁸ Second, there should be several unaffiliated generators actively participating in the wholesale market.⁵⁹ Third, numerous purchasers should also be present in both long-term and short-term markets.⁶⁰ Finally, effective regulation should be present to address market design imperfections.⁶¹

Spot markets have certain benefits from a competition policy point of view: they guarantee efficient energy dispatch and, more importantly, they reduce the possibility that generators exercise market power.⁶² In any event, policymakers have several other mechanisms with which to lessen market power. First, they can focus on preventing horizontal concentration at the generation sector.⁶³ Second, policymakers can increase investments in transmission capacity with a view toward impeding the congestion of transmission lines.⁶⁴ Finally, policymakers can encourage the use of long-term contracts by, for instance, "requiring generators to offer a portion of their expected annual sales in the form of long-term forward contracts."⁶⁵

5. The Role of Regional Integration

Regional integration of electricity markets is particularly important for many developing countries because they lack many of the characteristics needed to have a healthy wholesale market. Namely, these developing countries lack enough unaffiliated suppliers and enough residential and industrial customers.⁶⁶ As a result, countries found in this situation should integrate with neighboring countries with a view toward creating a larger energy market.

Integrating markets at the regional level is not only about having strong and trustworthy interconnections. The countries taking part in a

⁵⁸ KESSIDES, *supra* note 1, at 150.

⁵⁹ *Id.*

⁶⁰ *Id.*

⁶¹ *Id.* at 151.

⁶² *Id.* at 154.

⁶³ *Id.* at 163.

⁶⁴ KESSIDES, *supra* note 1, at 163.

⁶⁵ *Id.*

⁶⁶ See generally Keith Kozloff, *Electricity Sector Reform in Developing Countries: Implications for Renewable Energy* (Renewable Energy Pol'y Project, Research Report No. 2, 1998), available at http://www.repp.org/repp_pubs/articles/kozloff/kozloff.html (explaining the previous structure of power sectors in developing countries under the heading "Characteristics of 'Pre-Reform' Power Sectors").

process of integration must enter into a stage of substantial regulatory convergence. This regulatory convergence is, however, a difficult and lengthy process. Thus, it is advisable to undertake such a task progressively by initially establishing a regional agency to facilitate information exchange and offer non-binding advice on matters such as standardization, interconnection, and pricing methodologies. Subsequently, countries should increase policy and regulatory coordination with the goal of creating a regional regulatory authority.⁶⁷

II. ANDEAN ENERGY INTEGRATION

A. *Overview of Andean Community Law*

The Andean Community was created by the Cartagena Agreement in 1969 and currently comprises four countries: Bolivia, Colombia, Ecuador, and Peru.⁶⁸ Since its creation, the Andean Community has changed its approach towards regional integration. The first stage of integration in the Andean Community was a closed model based on an import substitution strategy.⁶⁹ After almost two decades of following this strategy, the region found itself amid a serious economic crisis.⁷⁰ In the late 1980s, the Andean countries sought to relaunch their integration process on the basis of economic opening and privatization.⁷¹

The main rules on intra-region trade are comprised of: a) the most-favored nation clause; b) the national treatment clause; c) the prohibition to impose tariffs or restrictions on community trade; and d) the automatic and irreversible character of the integration process.⁷²

The Andean Community has four main legal sources: a) the provisions of the Cartagena Agreement; b) the decisions issued by the Commission of the Andean Community; c) the Resolutions of the

⁶⁷ KESSIDES, *supra* note 1, at 126.

⁶⁸ *Who Are We?*, *supra* note 6.

⁶⁹ *About Us: Brief History*, COMUNIDAD ANDINA [ANDEAN COMMUNITY], <http://www.comunidadandina.org/ingles/quienes/brief.htm> (last visited Mar. 15, 2012).

⁷⁰ *Id.*

⁷¹ See JORGE CASTRO BERNIERI, *El Comercio Intracomunitario y el Mercado Común Andino*, in DERECHO COMUNITARIO ANDINO, 117, 117–18 (Allan R. Brewer Carías et al. eds., 2003).

⁷² *Id.* at 121; see also Interpretación Prejudicial de los Artículos 45 y 54 del Acuerdo de Cartagena [Prejudicial Interpretation of Articles 45 and 54 of the Cartagena Agreement], Proceso No. 1-IP-90 (Tribunal de Justicia de la Comunidad Andina [Tribunal of Justice of the Andean Community]), available at <http://intranet.comunidadandina.org/Documentos/Procesos/1-ip-90.doc> (last visited Mar. 15, 2012).

General Secretariat; and d) the judgments of the Court of Justice of the Andean Community.⁷³

Andean competition law is based on Articles 105 and 106 of Chapter VIII of the Cartagena Agreement, which gives powers to the Commission to enact the necessary legislation to prevent practices that harm competition.⁷⁴ These provisions also establish that the General Secretariat is the body responsible for administering the regulations enacted by the Commission.⁷⁵ On the basis of these provisions, the Andean Community began enacting legislation governing competition matters in the early 1970s.⁷⁶ The first two Decisions were Decision 45/1971 and Decision 230/1987, which were issued in the first stage of integration mentioned above.⁷⁷ The third Decision, Decision 285/1991, was enacted in the new context of deeper integration.⁷⁸ Decision 285 regulated cases of restrictive agreements and abuse of dominance.⁷⁹ It only applied when competition was being affected in more than one Andean country and it did not contain rules regarding merger review.⁸⁰ The last instrument, explained in detail below, is Decision 608/2005.⁸¹

B. *Energy Conditions in the Andean Countries*

As a result of geographical and geological conditions, the Andean Community has great opportunities to develop its hydropower and thermal

⁷³ Jorge Castro Bernieri, *La Regulación de la Competencia en la Comunidad Andina*, GACETA JURÍDICA DE LA UNIÓN EUROPEA Y DE LA COMPETENCIA, May–June 2000, at 49, 50.

⁷⁴ Codification of Andean Subregional Integration Agreement, art. 105, May 26, 1969, 8 I.L.M. 910 (1969) [hereinafter Cartagena Agreement]; see also *id.* at 50.

⁷⁵ See Bernieri, *supra* note 73, at 50–51.

⁷⁶ See Francisco Marcos, *Downloading Competition Law from a Regional Trade Agreement (RTA): A New Strategy to Introduce Competition Law in Bolivia and Ecuador* 4 (Instituto de Empresa Business School, Working Paper No. WPED07-02, 2006).

⁷⁷ See *Decisiones [Decisions]*, COMUNIDAD ANDINA [ANDEAN COMMUNITY], http://intranet.comunidadandina.org/IDocumentos/c_Newdocs.asp?GruDoc=07 (search “45” and also “230” in the “Inicio” box under “Ingrese las Condiciones de Búsqueda” to pull up files of each Decision in Spanish) (last visited Mar. 15, 2012).

⁷⁸ See *Decision 285*, COMUNIDAD ANDINA [ANDEAN COMMUNITY], <http://www.comunidadandina.org/ingles/normativa/d285e.htm> (last visited Mar. 15, 2012).

⁷⁹ *Id.*

⁸⁰ *Id.*

⁸¹ See *Decisiones [Decisions]*, *supra* note 77 (search “608” in the “Inicial” box under “Ingrese las Condiciones de Búsqueda” to pull up the file of the Decision in Spanish); see also *Competition*, COMUNIDAD ANDINA [ANDEAN COMMUNITY], <http://www.comunidadandina.org/ingles/competition.htm> (last visited Mar. 15, 2012).

energy industries. According to the World Energy Council, the installed capacity of Bolivia, Colombia, Ecuador, Peru, and Venezuela is approximately forty-five gigawatts (“GW”).⁸² In addition, the Andean Countries had twenty-five percent of the installed capacity of South America in 2007.⁸³ Electricity demand in the Andean Community has been steadily rising by 3.3% a year.⁸⁴ Regional energy generation is diverse, and includes: hydropower, which accounts for fifty-nine percent of the generation; coal; gas; oil for thermal generation; and alternative energy sources, such as wind or solar energy.⁸⁵

The projections for energy demand in the region show that it will continue to increase.⁸⁶ Additionally, the Andean countries have a power surplus in relation to the expected maximum demand.⁸⁷ As a result, these countries have the capacity to attend to their domestic electricity demand and the surpluses are an opportunity to develop a regional energy market.⁸⁸

C. *Electricity Conditions in the 1990s and the Subsequent Reforms*

In the early 1990s, the electricity system of the Andean countries was facing a severe lack of the resources necessary to increase energy supply and to maintain the existing infrastructure.⁸⁹ In the case of energy, the problems were particularly complicated, because constant price distortions and subsidies that had left the energy companies in a concerning financial situation.⁹⁰

As a result, several Andean countries began to thoroughly reform their electricity industries. In general, these countries sought to foster private investment in the sector by reducing their ownership in energy companies and reserving the roles of policymaker and regulator to the state.⁹¹ “In Peru, Bolivia and Ecuador regulation agencies were created,

⁸² WORLD ENERGY COUNCIL, REGIONAL ENERGY INTEGRATION IN LATIN AMERICA AND THE CARIBBEAN 17 (2008).

⁸³ *Id.* at 16.

⁸⁴ *Id.*

⁸⁵ *Id.* at 16–17.

⁸⁶ *Id.* at 16.

⁸⁷ *Id.* at 13.

⁸⁸ WORLD ENERGY COUNCIL, *supra* note 82, at 13, 17.

⁸⁹ *Id.* at 42.

⁹⁰ MENTOR POVEDA, CAN. INT’L DEV. AGENCY, ORGANIZACIÓN LATINOAMERICANA DE ENERGÍA (LATIN AM. ENERGY ORG.) & UNIV. OF CALGARY, COMPETENCIA EN MERCADOS ENERGÉTICOS: EXPERIENCIAS DE LA OPERACIÓN DE MERCADOS ENERGÉTICOS EN LATINOAMÉRICA Y EL CARIBE: LECCIONES APRENDIDAS 4 (2008).

⁹¹ WORLD ENERGY COUNCIL, *supra* note 82, at 42.

but linked to the [Energy] Ministries.”⁹² Conversely, “[i]n Colombia an independent regulatory agency was created, . . . while the task of defining policies was assigned to the Administration.”⁹³ Venezuela, however, “did not make any substantial change to the structure of its electric system.”⁹⁴ Most Andean countries considered a fundamental step for reforming the electricity industry to be the creation of wholesale electricity markets.⁹⁵ The main objective was to introduce competition in the electricity system with a view to improving a set of infrastructure that could not meet the increasing demand for electricity.⁹⁶

The energy industry in the Andean countries was mainly composed of state-owned monopolies.⁹⁷ Hence, when countries started to introduce reforms, they decided to break up their energy companies to create several independent entities.⁹⁸ In some cases the state opted for full privatization while in others it merely sold a share of its energy companies.⁹⁹

The reforms to the energy sector also entailed a change in the manner in which Andean countries regarded energy integration. Previously, Andean countries were more focused on achieving self-supply of energy than on searching for economic efficiency in the industry.¹⁰⁰ Recently, countries have started to seek synergies and complementarities between themselves.¹⁰¹ The high reliance on hydropower generation made countries in the region face electricity shortages when droughts occurred.¹⁰² As a result, Andean Community members started to “encourage a more comprehensive energy integration that would improve the reliability of supply.”¹⁰³

Andean energy integration has been enhanced through the following measures: a) the enactment of Decision 536 in 2002, setting a general framework for regional electricity interconnection and community electricity exchanges; b) the harmonization of the regulatory frameworks of Colombia and Ecuador (Colombian Resolution CREG 004/2003 and Ecuadorian Resolution CONELEC 002/2003); and c) the implementation

⁹² *Id.*

⁹³ *Id.*

⁹⁴ *Id.*

⁹⁵ *Id.*

⁹⁶ *Id.*

⁹⁷ POVEDA, *supra* note 90, at 4.

⁹⁸ *Id.*

⁹⁹ *Id.*

¹⁰⁰ See Genaro Arriagada, *Petropolitics in Latin America: A Review of Energy Policy and Regional Relations* 9 (Inter-American Dialogue, Working Paper, 2006).

¹⁰¹ See WORLD ENERGY COUNCIL, *supra* note 82, at 43.

¹⁰² *Id.* at 107.

¹⁰³ *Id.* at 42.

of the Coordinated Operation Scheme, in order to allow market coupling between Colombia and Ecuador.¹⁰⁴

Energy integration between Ecuador and Colombia through International Electricity Transactions (“IETs”) has allowed significant improvement in the electricity supply of both countries.¹⁰⁵ These IETs are governed by the efficiency principle, whereby the energy generated in one country will only be dispatched in another country if it constitutes an efficient service in that market.¹⁰⁶ In particular, the IET framework has contributed to decreasing the price for the importing country and mitigating the risk of energy shortages in the short and mid-term.¹⁰⁷

D. *Current Andean Electricity Integration*

Andean electricity integration is only at its initial phase because the interconnection capacity is still scarce.¹⁰⁸ At the moment there are three main interconnection points within the Andean region: between a) Colombia and Venezuela; b) Colombia and Ecuador; and c) Peru and Ecuador.¹⁰⁹ These points will likely be insufficient for all the cross-border energy trade of the coming decades.

Due to the importance of upgrading the transmission networks and interconnection points, regional institutions, such as the Corporación Andina de Fomento (“CAF”), a regional development bank, and the Iniciativa para la Integración de la Infraestructura Regional Suramericana (“IIRSA”) have joined efforts to develop projects in this direction.¹¹⁰

¹⁰⁴ ASOCIACIÓN NACIONAL DE EMPRESAS DE SERVICIOS PÚBLICOS Y COMUNICACIONES (“ANDESCO”) CÁMARA SECTORIAL DE ENERGÍA, ANÁLISIS ECONÓMICO DE LAS TRANSACCIONES INTERNACIONALES DE ELECTRICIDAD EN EL MERCADO ANDINO 2–3 (2007) [hereinafter ANDESCO].

¹⁰⁵ *Id.* at 1.

¹⁰⁶ *Id.* at 4.

¹⁰⁷ *Id.* at 1.

¹⁰⁸ See WORLD ENERGY COUNCIL, *supra* note 82, at 77–83 (discussing the main sub-regional electricity infrastructure projects in the Andean countries).

¹⁰⁹ See *Andean Energy Alliance*, COMUNIDAD ANDINA [ANDEAN COMMUNITY], http://www.comunidadandina.org/ingles/energia/energy_1.htm (last visited Mar. 15, 2012) [hereinafter *Andean Energy Alliance*]; see also WORLD ENERGY COUNCIL, *supra* note 82, at 77–83.

¹¹⁰ WORLD ENERGY COUNCIL, *supra* note 82, at 70; see also CORPORACIÓN ANDINA DE FOMENTO (“CAF”) [ANDEAN DEVELOPMENT CORPORATION], <http://www.caf.com/view/index.asp?ms=19&pageMs=61502> (last visited Mar. 15, 2012); INITIATIVE FOR THE INTEGRATION OF REGIONAL INFRASTRUCTURE IN SOUTH AMERICA (“IIRSA”), <http://www.iirsa.org/index.asp?CodIdioma=ENG> (last visited Mar. 15, 2012).

IIRSA has focused on financing eight major projects in the region since its creation in 2000. Specifically, IIRSA has provided funding and support for: a) the energy regulatory harmonization among Bolivia, Colombia, Ecuador, Peru, and Venezuela;¹¹¹ b) strengthening the interconnections of Cuatricentenario-Cuestecitas and El Corozo–San Mateo between Colombia and Venezuela;¹¹² c) the second stage of energy interconnections between Ecuador and Colombia that allow the systems to function in a synchronized manner;¹¹³ d) creating a 230 kilovolt (“KV”) interconnection line between Pasto (Colombia) and Quito (Ecuador);¹¹⁴ e) creating energy interconnections between Colombia and Venezuela through Puerto Nuevo–Puerto Páez–Puerto Carreño;¹¹⁵ f) constructing new energy interconnections between Ecuador and Peru;¹¹⁶ g) constructing new transmission lines within the State of Táchira (Venezuela) and new interconnection points between Colombia and Venezuela;¹¹⁷ and h) upgrading the transmission network of west Venezuela in order to allow the required energy integration with Colombia.¹¹⁸

¹¹¹ See *Harmonization of Electricity, Gas and Oil Regulations*, INITIATIVE FOR THE INTEGRATION OF REGIONAL INFRASTRUCTURE IN SOUTH AMERICA, http://www.iirsa.org/proyectos/detalle_proyecto.aspx?h=105&x=9&idioma=EN (last visited Mar. 15, 2012).

¹¹² See *Strengthening of the Cuatricentenario-Cuestecitas and El Corozo–San Mateo Interconnections*, INITIATIVE FOR THE INTEGRATION OF REGIONAL INFRASTRUCTURE IN SOUTH AMERICA, http://www.iirsa.org/proyectos/detalle_proyecto.aspx?h=106&x=9&idioma=EN (last visited Mar. 15, 2012).

¹¹³ See *Electricity Interconnection Between Colombia and Ecuador Project, Second Stage*, INITIATIVE FOR THE INTEGRATION OF REGIONAL INFRASTRUCTURE IN SOUTH AMERICA, http://www.iirsa.org/proyectos/detalle_proyecto.aspx?h=116&x=9&idioma=EN (last visited Mar. 15, 2012).

¹¹⁴ See *Electricity Interconnection Project Between Colombia and Ecuador: A 230 KV-Line Between Pasto (Colombia) and Quito (Ecuador) Substations*, INITIATIVE FOR THE INTEGRATION OF REGIONAL INFRASTRUCTURE IN SOUTH AMERICA, http://www.iirsa.org/proyectos/detalle_proyecto.aspx?h=107&x=9&idioma=EN (last visited Mar. 15, 2012).

¹¹⁵ See *Electricity Interconnection Project Between Puerto Nuevo–Puerto Páez (Venezuela) and Puerto Carreño (Colombia)*, INITIATIVE FOR THE INTEGRATION OF REGIONAL INFRASTRUCTURE IN SOUTH AMERICA, http://www.iirsa.org/proyectos/detalle_proyecto.aspx?h=114&x=9&idioma=EN (last visited Mar. 15, 2012).

¹¹⁶ See *Electricity Interconnection Between Ecuador and Peru*, INITIATIVE FOR THE INTEGRATION OF REGIONAL INFRASTRUCTURE IN SOUTH AMERICA, http://www.iirsa.org/proyectos/detalle_proyecto.aspx?h=115&x=9&idioma=EN (last visited Mar. 15, 2012).

¹¹⁷ See *Uribante Caparo Project (Transmission and Generation Networks)*, INITIATIVE FOR THE INTEGRATION OF REGIONAL INFRASTRUCTURE IN SOUTH AMERICA, http://www.iirsa.org/proyectos/detalle_proyecto.aspx?h=113&x=9&idioma=EN (last visited Mar. 15, 2012).

¹¹⁸ See *Electricity Transmission to Supply the West*, INITIATIVE FOR THE INTEGRATION OF REGIONAL INFRASTRUCTURE IN SOUTH AMERICA, http://www.iirsa.org/proyectos/detalle_proyecto.aspx?h=117&x=9&idioma=EN (last visited Mar. 15, 2012).

E. Current Regulation: Decisions 608 and 536 of the Andean Community

1. General Competition Framework: Decision 608/2005

Decision 285 was replaced in 2005 with a more comprehensive competition regulation.¹¹⁹ Decision 608 was enacted with the objective of protecting and promoting free competition, market efficiency, and consumer welfare in the Andean Community.¹²⁰ Decision 608 defines and establishes the conduct that will be deemed illegal within the Andean Community and creates the Andean Committee on the Defense of Free Competition, which is composed of a representative of the national competition authority from each Member State.¹²¹ Remarkably, Decision 608 does not establish a regional merger review mechanism.¹²²

The scope of Decision 608 specifies the covered subjects and practices and the geographical market in which it is applicable.¹²³ In the first case, the subjective scope is determined in Article 1 as “every legal or natural person, public or private, for-profit or non-profit purposes that offers or demands material or immaterial goods or services in the market, as well as the trade unions and associations that group them.”¹²⁴

In a regional setting, the objective scope of application is crucial because it determines the geographic reach of the decision and the practices that will be considered anti-competitive. Article 5 of Decision 608 limits the geographic scope to two different situations.¹²⁵ First, Decision 608 is applicable to practices carried out in the territory of one or more Member States and whose effects take place in one or more Member States.¹²⁶ Article 5 further clarifies that Decision 608 is inapplicable when

¹¹⁹ See Comunidad Andina [Andean Community], *Guía Práctica para la Aplicación de la Decisión 608 “Normas para la Protección y Promoción de la Libre Competencia en la Comunidad Andina”* [Practical Guide for the Application of Decision 608 “Standards for the Protection and Promotion of Free Competition in the Andean Community”], 1, SG/dt 396 (Oct. 23, 2007) [hereinafter *Guía Práctica*].

¹²⁰ *Id.* at 4.

¹²¹ Comunidad Andina [Andean Community], Decisión 608 [Decision 608], arts. 7–8, 38 (Mar. 28, 2005) [hereinafter Decisión 608].

¹²² See generally Decisión 608, *supra* note 121 (failing to discuss merger reviews); *Guía Práctica*, *supra* note 119.

¹²³ *Guía Práctica*, *supra* note 119, at 6.

¹²⁴ *Id.*

¹²⁵ Decisión 608, *supra* note 121, at art. 5.

¹²⁶ *Id.*

the origin is, and the effects take place, in a single country.¹²⁷ Additionally, Decision 608 is applicable when the origin of the practices is in a non-member state and the effects happen in two or more Member States.¹²⁸

Article 5 reflects that Decision 608 is based on the "pure effects doctrine." This doctrine "is an extension of the territoriality principle which permits jurisdiction if the effects of conduct committed abroad are felt within the jurisdiction of the state claiming jurisdiction."¹²⁹ Unfortunately, as there is little case law on Decision 608, the precise definition of what is considered a cross-border effect has not yet been extensively developed.

Concerning the anti-competitive practices covered by Decision 608, Article 4 prohibits: a) restrictive practices and b) abuse of dominance cases.¹³⁰ If the General Secretariat finds any of the mentioned practices, it can request the immediate cessation of the conduct and, if necessary, impose corrective measures such as fines or other obligations.¹³¹ For determining the sanctions, the General Secretariat must take into account the gravity of the case, the dimensions of the affected market, the duration of the practice, and the restrictive effect on existing or potential competitors and consumers.¹³²

Article 7 of Decision 608 establishes that restrictive practices are, *inter alia*, agreements that have the purpose or effect of restricting competition in the expanded market.¹³³ The agreements bearing upon competition presuppose a coordinated behavior and a premeditated intent between two or more economic actors that has the effect of restricting competition in the market.¹³⁴ Another type of conduct that has a similar effect are concerted practices.¹³⁵ These practices show certain coordination among economic actors leading to unusual market conditions.¹³⁶ This last group includes parallel practices by companies, with or without an express agreement among them.¹³⁷ The agreements and concerted practices covered are the ones which have the purpose or effect of: a) fixing

¹²⁷ *Id.*

¹²⁸ *Id.*

¹²⁹ M. SORNARAJAH, THE INTERNATIONAL LAW ON FOREIGN INVESTMENT 164 (1994).

¹³⁰ Decisión 608, *supra* note 121, at arts. 4, 7, 8.

¹³¹ *Id.* at art. 34.

¹³² *Id.*

¹³³ *Guía Práctica*, *supra* note 119, at 9.

¹³⁴ *Id.*

¹³⁵ *Id.* at 10.

¹³⁶ *Id.*

¹³⁷ *Id.*

prices or other commercial conditions directly or indirectly; b) restricting the supply or demand of goods or services; c) segmenting markets for goods or services; d) impeding the access or permanence of existing or potential competitors in the market; and e) bid rigging.¹³⁸

Article 9 defines the cases in which one or more actors are considered to have a dominant position in the relevant market.¹³⁹ This situation arises when the actor is capable of restricting, affecting, or distorting supply or demand in the market in a substantial manner, without the possibility that other existing or potential actors or consumers are able to change that situation.¹⁴⁰ This provision is founded on the economic concept of market power, which is “the ability of a company profitably to raise prices above competitive levels for a significant period of time” without losing market share.¹⁴¹ Market power is also present when a supplier is able to lower prices below competitive levels in order to drive out competitors and then raise prices above competitive levels.¹⁴² Having a dominant position is not a violation per se of Decision 608; rather, the infraction arises when the actor abuses its dominant position.¹⁴³

Decision 608 contains a list of actions that are presumed to be an abuse of dominance: a) predatory price-fixing; b) the unjustified imposition of exclusive distribution agreements; c) the subordination of contracts to tying agreements that are not related to the object of such contracts; d) the imposition of discriminatory conditions upon third parties, putting them in a situation of competitive disadvantage; e) the unjustified refusal to contract; f) inciting third parties to refrain from entering into contracts; and g) any conduct that impedes the access or permanence of existing or potential competitors for reasons other than economic efficiency.¹⁴⁴

Nevertheless, Decision 608 allows Member States to temporarily exclude certain economic activities from its scope, subject to the approval of the Commission of the Andean Community.¹⁴⁵ This possibility was foreseen for sensible economic activities and only when: a) the activity creates significant benefits for producing or distributing goods or services or enhances economic progress; b) the activity provides special conditions to

¹³⁸ Decisión 608, *supra* note 121, at art. 7.

¹³⁹ *Id.* at art. 9.

¹⁴⁰ *Id.*

¹⁴¹ PHILIP RAPHALS, HELIOS CENTRE, THE EVOLUTION OF COMPETITIVE ENERGY MARKETS IN NORTH AMERICA 44 (2005).

¹⁴² *Id.*

¹⁴³ *Guía Práctica, supra* note 119, at 12.

¹⁴⁴ Decisión 608, *supra* note 121, at art. 8.

¹⁴⁵ *Guía Práctica, supra* note 119, at 21.

depressed regions or to economically sensitive activities; and c) the exclusion does not completely eliminate competition in the production, distribution, or supply of the covered goods or services.¹⁴⁶

2. Energy Integration Framework: Decision 536/2002

Integrating the energy industries in the Andean countries required regulating the interconnection of the electricity markets and the electricity transactions among countries.¹⁴⁷ For this reason, the Andean Community decided to enact Decision 536 on December 19, 2002.¹⁴⁸ The purpose of Decision 536 is to develop the energy sector in the Andean region, to promote the construction and development of infrastructure—including power plants and transmission networks of common use—and to create a single regional transmission system.¹⁴⁹

Decision 536 sets out the following rules: a) intra-communitarian trade in energy will not be restricted by price discrimination between national and foreign markets, subsidies, tariffs, or any other kind of restrictions; b) non-discriminatory access to international interconnected lines is guaranteed; c) free contracting is allowed among the electricity market agents; d) short-term IETs are permitted and should only be limited by the capacity of the international links; e) revenue that may arise from congestion at the interconnection link shall not be credited to the owner of such interconnection link; and f) Member States will ensure competitive conditions in the electricity market with prices reflecting economic efficiency, and will avoid discriminatory practices and abuse of dominance.¹⁵⁰

From a competition law perspective, the obligation establishing non-discriminatory access to interconnection lines reflects the “essential facilities doctrine,” according to which owners of an “essential” or “bottle-neck” facility must provide access to that facility to competitors at a reasonable price.¹⁵¹ This concept is particularly important in network industries that contain natural monopolies, such as electricity, gas, and

¹⁴⁶ *Id.*

¹⁴⁷ Comunidad Andina [Andean Community], Decisión 536 [Decision 536], pmb. (Dec. 19, 2002) [hereinafter Decisión 536].

¹⁴⁸ *Id.*

¹⁴⁹ See WORLD ENERGY COUNCIL, *supra* note 82, at 43–44.

¹⁵⁰ *Id.* at 43; see also Decisión 536, *supra* note 147, at art. 1.

¹⁵¹ SIMON BISHOP & MIKE WALKER, THE ECONOMICS OF EC COMPETITION LAW: CONCEPTS, APPLICATION AND MEASUREMENT 238 (2002).

telecommunications.¹⁵² This doctrine is important when a company has created vertical integration by owning an essential facility active in the upstream and downstream supply of two related activities, and then refuses to provide access or services to a competitor that wishes to supply in only one of these activities.¹⁵³ The main reason for considering a refusal to supply as anti-competitive is that it prevents third parties from entering the market, with the effect of lessening competition.¹⁵⁴

Since the essential facilities doctrine affects the property rights of the owner of the facility, it is usually applied in a restricted manner.¹⁵⁵ An asset must fulfill five conditions in order to be considered an essential facility.¹⁵⁶ “First, it must be impossible or at least uneconomic for any other firm to replicate the asset”¹⁵⁷ Second, “there should be no alternative means of entering the relevant market at a reasonable cost.”¹⁵⁸ Third, the asset must have spare capacity to provide increasing supply to the relevant market, and not merely to substitute for the capacity of the incumbent.¹⁵⁹ Fourth, the relevant market must lack effective competition.¹⁶⁰ Finally, the owner of the essential facility must compete in the same relevant market as the potential entrant.¹⁶¹

An effective essential facilities doctrine not only imposes on the incumbent the obligation to grant access to its competitors, but also involves detailed price regulation.¹⁶² Without any further regulation, the owner of the asset would effectively keep competitors out of the relevant market by charging an excessively high price.¹⁶³

However, the essential facilities doctrine does not solve certain problems of non-price discrimination, such as “delaying the introduction of new services, delaying the processing of orders, or providing detailed advance information to the vertically-integrated operator’s own downstream business operations before making it available to competing downstream customers”¹⁶⁴ Therefore, more burdensome competition law

¹⁵² *Id.* at 238–39.

¹⁵³ *Id.* at 239.

¹⁵⁴ *Id.*

¹⁵⁵ *See id.* at 240.

¹⁵⁶ *Id.* at 242.

¹⁵⁷ BISHOP & WALKER, *supra* note 151, at 242.

¹⁵⁸ *Id.* at 243.

¹⁵⁹ *See id.*

¹⁶⁰ *Id.*

¹⁶¹ *Id.* at 244.

¹⁶² *Id.*

¹⁶³ BISHOP & WALKER, *supra* note 151, at 244.

¹⁶⁴ European Regulators Grp., *supra* note 13, at 6.

remedies, such as the functional separation requirement, may be required to solve the competition-related challenges.¹⁶⁵

Functional separation is designed to avoid price and non-price discrimination abuses by the owner of an essential facility.¹⁶⁶ Under this remedy, the parts of the network that are impossible or uneconomic to replicate are separated into different business units.¹⁶⁷ Once separated, these parts are managed separately from the rest of the company.¹⁶⁸ In order to work, functional separation must be designed to ensure that “the separated part of the company is provided with local incentives that encourage it to act in the interests of all its customers, both internal and external, and not in the interests of its parent company.”¹⁶⁹ Decision 536 does not establish a functional separation requirement.¹⁷⁰

In the context of the United States, the Federal Energy Regulatory Commission (“FERC”) considers that functional separation is necessary for providing confidence to other users of the transmission system that the transmission operator will not favor its own affiliates at the expense of other users.¹⁷¹ The separate business unit that functional separation creates must ensure a separation of functions, employees, and information.¹⁷² In the first case, the objective is keeping apart the functions of the upstream and downstream business units of the company in order to ensure that the upstream ones provide services on a non-discriminatory basis.¹⁷³ In the second case, separating employees requires imposing mobility restrictions within the company, physically separating the offices and, importantly, paying incentives to compete.¹⁷⁴ Finally, information must also be set apart by creating different information systems for the various business units in the company.¹⁷⁵ Furthermore, the FERC encourages the additional step of creating an Independent System Operator (“ISO”), which is a non-profit organization that controls and operates—but does not own—the transmission system.¹⁷⁶

¹⁶⁵ *See id.* at 8.

¹⁶⁶ *Id.* at 6.

¹⁶⁷ *Id.* at 2.

¹⁶⁸ *See id.* at 2–3.

¹⁶⁹ Jason Whalley & Peter Curwen, *Is Functional Separation BT-Style the Answer?*, COMM. & STRATEGIES, Third Quarter 2008, 145, 146–47.

¹⁷⁰ *See generally* Decisión 536, *supra* note 147.

¹⁷¹ RAPHALS, *supra* note 141, at 38.

¹⁷² European Regulators Grp., *supra* note 13, at 4.

¹⁷³ *See id.*

¹⁷⁴ *See id.*

¹⁷⁵ *See id.*

¹⁷⁶ RAPHALS, *supra* note 141, at 38.

Another important objective of Decision 536 is enhancing IETs.¹⁷⁷ In this regard, Articles 2 and 3 of Decision 536 establish that a license to engage in IETs must be automatically granted when a party has fulfilled all the requirements according to its internal legislation.¹⁷⁸ Moreover, when an agent is already authorized to make IETs in one Member State, the license will be automatically extended for operating in the rest of the Member States.¹⁷⁹

With respect to international links, Decision 536 establishes that, in order to incentivize the development of this important infrastructure, Member States can establish special mechanisms to remunerate transmission services at their borders.¹⁸⁰ In addition, Member States will coordinate efforts for the construction of such international links, including joint procurement.¹⁸¹

In order to better regulate IETs among Andean countries, Article 19 of Decision 536 exhorts Member States to make the necessary changes in their legislation to promote harmonization of the rules governing international interconnections and IETs.¹⁸² This harmonization was completed between Colombia and Ecuador in 2003.¹⁸³

Decision 536 states that the energy production of one Member State will, as a whole, compete with the energy domestic suppliers in another Member State.¹⁸⁴ Therefore, energy will be dispatched in a coordinated manner among countries and will not be subject to an energy production surplus.¹⁸⁵ Moreover, IETs will only be limited by the capacity of international links.¹⁸⁶

Additionally, Decision 536 creates the Andean Committee of Electric Service Policy-Setting and Regulatory Agencies (“CANREL” by its acronym in Spanish), charged with the task of enacting the legal provisions necessary to attain the objectives set out in Decision 536.¹⁸⁷ It is composed of representatives from each national energy regulatory authority.¹⁸⁸ Other regional bodies have also been created for the purpose

¹⁷⁷ See Decisión 536, *supra* note 147, at pmb1.

¹⁷⁸ *Id.* at art. 2.

¹⁷⁹ *Id.* at art. 3.

¹⁸⁰ *Id.* at art. 7.

¹⁸¹ *Id.* at art. 10.

¹⁸² *Id.* at art. 19.

¹⁸³ *Andean Energy Alliance*, *supra* note 109.

¹⁸⁴ See Decisión 536, *supra* note 147, at art. 1.

¹⁸⁵ *Id.* at arts. 12–13.

¹⁸⁶ *Id.* at art. 13.

¹⁸⁷ *Id.* at art. 20.

¹⁸⁸ *Id.*

of adequately handling energy integration in the region; namely, the Working Group of Electric Service Regulatory Agencies ("GTOR" by its acronym in Spanish) and the Working Group of Electric Service Policy-Setting Agencies ("GOPLAN" by its acronym in Spanish).¹⁸⁹ CANREL has discussed several issues to fine-tune the current legislation. These have included the improvement of the interconnection status among the Andean countries,¹⁹⁰ the coordinated energy dispatch,¹⁹¹ and the proper treatment of congestion rents.¹⁹²

III. EUROPEAN UNION

A. *Historical Overview*

Since the creation of the European Coal and Steel Community by the Treaty of Paris in 1951,¹⁹³ competition law has played a major role in European integration.¹⁹⁴ The Treaty of Rome, signed in 1957, founded the European Economic Community ("EEC") and included as one of its goals "the institution of a system ensuring that competition in the common market is not distorted."¹⁹⁵ Consequently, this treaty included some provisions to achieve that objective. Articles 85 and 86 were designed to address private restraints on competition, and Article 90 was designed to regulate governmental restraints.¹⁹⁶

However, since the creation of the EEC, there has been agreement that in some sectors of the economy, such as agriculture, transport, and energy, the application of competition rules should be nuanced to provide

¹⁸⁹ *Andean Energy Alliance*, *supra* note 109.

¹⁹⁰ *See generally* Comunidad Andina [Andean Community], *Acta de la Primera Reunión del Consejo de Ministros de Energía, Electricidad, Hidrocarburos y Minas de la Comunidad Andina* [Minutes of the First Meeting of the Council of Ministers of Energy, Electricity, Hydrocarbons and Mines of the Andean Community], SG/CM.EEHM/IACTA (June 7, 2004).

¹⁹¹ *See generally* Comunidad Andina [Andean Community], *Acta de la III Reunión del Consejo de Ministros de Energía, Electricidad, Hidrocarburos y Minas de la Comunidad Andina* [Minutes of the Third Meeting of the Council of Ministers of Energy, Electricity, Hydrocarbons and Mines of the Andean Community], SG/CM.EEHM/III/ACTA (Oct. 5, 2005).

¹⁹² *Id.*

¹⁹³ DAVID J. GERBER, LAW AND COMPETITION IN TWENTIETH CENTURY EUROPE: PROTECTING PROMETHEUS 335 (1998).

¹⁹⁴ *Id.*

¹⁹⁵ Treaty Establishing the European Economic Community, art. 3(f), Mar. 25, 1957, 298 U.N.T.S. 11 [hereinafter European Economic Community Treaty].

¹⁹⁶ GERBER, *supra* note 193, at 344.

room for other potentially conflicting goals.¹⁹⁷ In the case of network utilities, the objective of providing universal coverage to all societal groups required that a provider with a universal service obligation should be, to a certain extent, protected from competition and allowed to cross-subsidize certain groups of customers.¹⁹⁸

B. *Legal Framework*

The first substantial steps toward the integration of the electricity and gas markets in Europe materialized in Directives 96/92/EC and 98/30/EC, which introduced common rules for the electricity and gas markets, respectively.¹⁹⁹ Nonetheless, it was soon clear that, although necessary, common rules by themselves were not sufficient to create a single European market.²⁰⁰ As a result, the second Electricity and Gas Directives—2003/54/EC and 2003/55/EC—were enacted in 2003, making progress toward harmonizing national regulatory frameworks.²⁰¹ These Directives were complemented by Regulations—1228/2003 for electricity and 1775/2005 for gas—which dealt with the integration of national markets and cross-border exchanges in electricity and natural gas.²⁰²

In fact, the Electricity Directive (Directive 2003/54) provided for full liberalization of the electricity market of the European Union (“EU”) by July 2004 for all non-household customers and by July 2007 for all customers.²⁰³ The Electricity Directive sets common rules for the generation, transmission, distribution, and supply of electricity.²⁰⁴ In addition, it contains important competition-related provisions to ensure legal unbundling of transmission and distribution system operators.²⁰⁵ Moreover, the Directive ensures non-discriminatory access to networks and imposes obligations on Member States to ensure universal service to all household customers.²⁰⁶

¹⁹⁷ See Christopher Brown, Manish Das & Ben Rayment, *Sectoral Regimes*, in BELLAMY & CHILD EUROPEAN COMMUNITY LAW OF COMPETITION 1071, 1072 (Peter Roth QC & Vivien Rose eds., 6th ed. 2008).

¹⁹⁸ *Id.*

¹⁹⁹ EVERIS & MERCADOS ENERGY MARKETS INTERNATIONAL, FROM REGIONAL MARKETS TO A SINGLE EUROPEAN MARKET 16 (2010) [hereinafter MERCADOS EMI].

²⁰⁰ *Id.*

²⁰¹ *Id.*

²⁰² *Id.*

²⁰³ Council Directive 2003/54, art. 21, 2003 O.J. (L 176) 37 [hereinafter Directive 2003/54].

²⁰⁴ *Id.* at art. 1; Brown et al., *supra* note 197, at 1104.

²⁰⁵ Directive 2003/54, *supra* note 203, at art. 10; Brown et al., *supra* note 197, at 1104.

²⁰⁶ Directive 2003/54, *supra* note 203, at art. 3; Brown et al., *supra* note 197, at 1104.

The Electricity Transit Regulation (Regulation 1228/2003) creates a common framework for cross-border transactions and the allocation of available interconnection capacity in order to avoid congestion among countries.²⁰⁷ The Electricity Transit Regulation was adopted with a view to regulating the conditions for access to the network for cross-border exchanges of electricity.²⁰⁸

The latest set of EU regulations, adopted in June 2009, is the so-called “3rd package,” comprising two Directives and three Regulations. It has three main objectives: a) to effectively unbundle vertically integrated energy utilities; b) to facilitate the delivery of massive energy investment; and c) to improve the functioning of markets and customer rights.²⁰⁹ It creates the EU Agency for the Cooperation of Energy Regulators which will act in the consumers’ interest and work together with national regulators to remove persistent obstacles to a single EU energy market.²¹⁰

C. *Functioning of the European Electricity Market*

The European electricity market is structured in different regions, each of them with one or more energy exchanges.²¹¹ An energy exchange is a marketplace in which derivatives, commodities, securities and other financial instruments related to energy are traded.²¹² The main function of the European electricity market “is to ensure fair and orderly trading, as well as efficient dissemination of price information”²¹³ The appeal of an exchange-based market is that trading is facilitated through standardized products, and market information and liquidity are promoted.²¹⁴ Moreover, “[e]xchanges also provide other benefits, such as a neutral marketplace, a neutral price reference, easy access, low transaction costs, a safe counterparty, anonymity and clearing and settlement service.

²⁰⁷ *Id.* at 1105.

²⁰⁸ *Id.*

²⁰⁹ EUR. ENERGY REGULATORS, 2009 ANNUAL REPORT OF THE EUROPEAN ENERGY REGULATORS 8 (2009), available at http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/ANNUAL%20REPORTS/AR2008/erreg_%20ceer%20annual%20report%202009.pdf.

²¹⁰ *Id.*

²¹¹ See generally KOEN RADEMAEKERS ET AL., ECORYS NEDERLAND BV, REVIEW AND ANALYSIS OF EU WHOLESALE ENERGY MARKETS: HISTORICAL AND CURRENT DATA ANALYSIS OF EU WHOLESALE ELECTRICITY, GAS, AND CO₂ MARKETS 17–29 (2008) (providing an overview of the European power market).

²¹² *Id.* at 12.

²¹³ *Id.*

²¹⁴ *Id.*

Furthermore, exchanges provide a benchmark reference for both over-the-counter and bilateral trading.”²¹⁵

Exchanges usually operate the day-ahead market or the intra-day market.²¹⁶ Both of them can be considered spot markets because energy is traded and delivered in the short term.²¹⁷ In the day-ahead market, “bids are submitted and the market is cleared on the day before actual delivery.”²¹⁸ Intra-day trading, on the other hand, allows participants to fine-tune their positions in light of new information on their own production and consumption position.²¹⁹ Participants are willing to enter into intra-day trading to ensure that: a) they have exploited all profitable opportunities for generation; and b) their contracted energy position is close to their expected physical energy position.²²⁰

In terms of volume, the European electricity market is not equally divided among exchanges nor types of contracts.²²¹ There are seven regional energy markets.²²² All of them make part of the Electricity Regional Initiative (“ERI”), guided by the European Regulators Group for Electricity and Gas (“ERGEG”) in 2006 with a view to moving the EU closer to an integrated electricity market.²²³ These regional markets have been able to move at different speeds and to address their own priorities, while still having EU-wide industry legislation and the coordinating role of ERGEG to ensure progress in a consistent manner.²²⁴

Moreover, the ERI has served the purpose of allowing each region to focus on practical issues that are needed for cross-border trade.²²⁵ Among others, the regional groups are addressing the following issues: a) interconnection, congestion management, and capacity allocation; b) transparency of supply and demand; c) the development of liquid trading points; and d) integration and interoperability.²²⁶

²¹⁵ *Id.*

²¹⁶ *Id.*

²¹⁷ *See* RADEMAEKERS ET AL., *supra* note 211, at 12.

²¹⁸ *Id.*

²¹⁹ FRONTIER ECON. & CONSENTEC, BENEFITS AND PRACTICAL STEPS TOWARDS THE INTEGRATION OF INTRADAY ELECTRICITY MARKETS AND BALANCING MECHANISMS 4 (2005).

²²⁰ *Id.* at 4–5.

²²¹ MERCADOS EMI, *supra* note 199, at 6–7 (noting the differences between regional energy markets).

²²² *See id.* at 6.

²²³ *See id.*

²²⁴ *Id.* at 6–7.

²²⁵ *See id.*

²²⁶ MOFFAT ASSOC. PARTNERSHIP, REVIEW AND ANALYSIS OF EU WHOLESALE ENERGY MARKETS 7 (2008).

Above all, dealing with congestion management is a fundamental step toward the development of a single market.²²⁷ The creation of a single market implies having good interconnection capacity and giving the market its most efficient use.²²⁸ Therefore, as cross-border trade increases, there is a need to develop congestion management methods to efficiently allocate the available cross-border capacity.²²⁹ Congestion management requires handling the following aspects: a) capacity calculation; b) long-term capacity allocation; c) day-ahead capacity allocation; and d) intra-day capacity allocation.²³⁰

Further, transparency is considered essential for the effective functioning of an electricity market because it helps to level the playing field for all market participants, including smaller traders without access to information.²³¹ Accordingly, the EU has consistently sought to reduce information asymmetries.²³² Regulations 1228/2003 and 714/2009 define ex-ante and ex-post demand information, production information, and information on the availability and use of the networks and interconnections.²³³

Moreover, the need to have adequate market liquidity in electricity is crucial for enhancing competition in the market. This is particularly challenging in a regional setting because of variations in liquidity between different national markets and the strong inverse relationship between the levels of market concentration and the degree of liquidity.²³⁴ The following measures are considered important to enhance market liquidity: a) incentives to encourage more investment in interconnections; b) the removal of regulated end-user prices; and c) harmonization of rules regarding the transmission system operators.²³⁵

Finally, energy integration in Europe has also focused on increasing the degree of interconnectedness among some key power exchanges: a) Powernext, APX and Belpex (France, the Netherlands and Belgium); and b) within the NordPool area (Norway, Sweden, Finland, and Denmark).²³⁶ This process entails “managing their respective supply and purchase curves jointly, by matching the highest purchase bids and lowest sale

²²⁷ MERCADOS EMI, *supra* note 199, at 27.

²²⁸ *Id.*

²²⁹ *Id.*

²³⁰ *Id.* at 29.

²³¹ *Id.* at 44.

²³² *See id.* at 44–45.

²³³ MERCADOS EMI, *supra* note 199, at 45.

²³⁴ MOFFAT ASSOC. PARTNERSHIP, *supra* note 226, at 6.

²³⁵ *Id.*

²³⁶ RADEMAEKERS ET AL., *supra* note 211, at 26.

bids, regardless of where they have been made (eg. matching a purchase bid in Belgium with a sales bid in France), but taking into account the available interconnection capacities on the borders.”²³⁷ As a result, the border power flows among countries have improved by setting the energy flows in the right direction.²³⁸ Thus, when congestion is fully eliminated, energy markets will merge to create a truly single zone with one price and shared liquidity.²³⁹

IV. CHALLENGES AND PROPOSALS TO IMPROVE ANDEAN ENERGY INTEGRATION

A. *Challenges*

Although great efforts have been made to enhance competition and energy integration in the Andean region, many challenges still exist. According to the World Energy Council, the main energy integration challenges for the Andean region include: a) lowering the existing regulatory and institutional barriers to make the legal systems compatible with each other; b) maintaining and improving the mix of regional energy sources; and c) enhancing regional energy security by establishing joint management of natural gas and hydropower reservoirs.²⁴⁰

In addition to those challenges, it is necessary to reinforce the institutional setting by further regulating, supplying information, and supervising. The objective is avoiding legal and institutional clashes among the Member States. In particular, there should be a body in charge of coordinating the operations of the dispatch operators of each Andean country (Centro Nacional de Despacho—“CND”—in Colombia, Comité de Operación Económica de los Sistemas—“COES”—in Peru, Oficina de Operación de Sistemas Interconectados—“OASIS”—in Venezuela and Corporación Centro Nacional de Control de Energía—“CENACE”—in Ecuador).²⁴¹ This body should be in charge of developing agreements regarding the quality principles that must be kept in supplying the service.²⁴²

²³⁷ *Id.* at 28.

²³⁸ *Id.*

²³⁹ *Id.*

²⁴⁰ WORLD ENERGY COUNCIL, *supra* note 82, at 112.

²⁴¹ David Tobón Orozco & Germán Valencia Agudelo, *La Institucionalidad en los Intercambios Internacionales de Electricidad: Un Tema en la Agenda de Negociaciones Colombiana* [*Institutionality in International Energy Exchanges: A Topic in the Colombian Negotiations Agenda*], 5 PERFIL DE COYUNTURA ECONÓMICA [PROFILE OF THE ECONOMIC SITUATION] 44, 49 (2005) (Colom.).

²⁴² *Id.*

The Working Group of Electric Service Regulatory Agencies (“GTOR”) has also highlighted some aspects that the Member States should take into account when revising Decision 536.²⁴³ First, Member States must determine how to address an energy shortage in one or more countries.²⁴⁴ Second, countries have to clarify what will happen with the congestion rents arising out of limited capacity at the interconnection links.²⁴⁵ Third, Member States must determine whether legal unbundling for vertically integrated energy companies will be mandatory or optional.²⁴⁶ Finally, Member States must decide how to distribute the costs of upgrading the internal energy networks.²⁴⁷

B. Proposals to Improve Integration

Energy integration in the Andean Community still requires work in many different areas. Andean energy integration needs to focus on further developing the following four aspects: a) enhancing regional energy liberalization; b) reducing market concentration; c) impeding abuse of the network’s operator dominant position; and d) better complementing competition law with regulatory policy.

1. Liberalization Measures

a. Creating a Single Energy Market and a Regional Independent Regulator

As mentioned before, Decision 536 of the Andean Community sets forth a normative framework aimed at regulating the interconnection of electricity markets and enhancing IETs among Andean countries.²⁴⁸ Despite the valuable work of Decision 536, it is only a first step in the right direction. Greater aspirations are needed. Decision 536 never intended to create a single energy market for the region, and this objective should be the first item in the reform agenda. Only the establishment of a single Andean energy market will lead to real competition in a regional

²⁴³ Comunidad Andina [Andean Community], *Vigesimo Segunda Reunión del Grupo de los Organismos Reguladores de la Comunidad Andina [22nd Meeting of the Group of Andean Community Regulatory Organizations]*, 1, SG/GTOR/XXII/ACTA (July 6, 2010).

²⁴⁴ *See id.* at 2.

²⁴⁵ *See id.*

²⁴⁶ *See id.*

²⁴⁷ *See id.*

²⁴⁸ ANDESCO, *supra* note 104, at 3.

market. Therefore, future regional legislation should set the roadmap for attaining a single regional market. This objective should be gradually sought and will require a transition period to allow national legislations to converge.

As a second step, Member States should create a single independent energy regulator for the entire region. Currently, Decision 536 creates three different bodies—CANREL, GTOR, and GOPLAN—to coordinate the regulatory decisions in each country and to create common rules for the region.²⁴⁹ However, this arrangement only works in today's market. A single market would require a regional energy regulator in order to fully grasp the advantages of liberalization and competition. The regulator should be independent from the national governments and the domestic regulators of the Member States. It should be a supranational body at the same level as the Commission of the Andean Community or the Court of Justice of the Andean Community. The regulator should receive a clear mandate from the Andean countries and should have all the institutional means to pursue it. Indeed, close cooperation with domestic regulators is crucial. Opening spaces for sharing experiences and information is fundamental for a successful outcome.

b. Enhancing Competition at the Wholesale Level Through a Regional Exchange

Energy liberalization in the Andean region requires an institutional environment in which undertakings from the four Member States are able to compete. Such an environment requires the creation of a single energy exchange for the entire Andean Community. The objective is enhancing competition by allowing generators throughout the Member States to compete with each other and thus, push the market towards efficiency. Moreover, the creation of a regional exchange would allow the Andean region to use its weather and geographic complementarities by setting a common playing field for both thermal and hydroelectric power. As mentioned in the context of the European Union, the importance of an exchange-based market is the creation of a neutral marketplace with enough liquidity and low transaction costs.²⁵⁰ This exchange market necessarily implies promoting market information because market players need to carefully calculate their intra-day and inter-day positions on the basis of that information.²⁵¹

²⁴⁹ *Id.* at 2.

²⁵⁰ See RADEMAEKERS ET AL., *supra* note 211, at 12.

²⁵¹ See *id.*

The creation of a single Andean energy exchange should be done progressively to allow national legislations to converge and the network capacity to be improved. The development of this power exchange should be accompanied with a strong and efficient supranational dispute settlement system. This is required to solve all the potential conflicts that might arise out of the IETs. This would help market players have confidence in the institutional setting and the enforceability of the transactions done at the exchange.

2. Market Structure and Concentration

a. Differences in Market Structures and Cross-Border Merger Review

Each Member of the Andean Community has a domestic energy market with differences in the number of economic agents, their size, the sources used to produce energy—for example, thermal or hydroelectric—and the state of the transmission networks.²⁵²

The largest markets usually have the biggest economic agents and when markets are liberalized, these companies usually try to deter competition by abusing their position in the market.²⁵³ Creating a regional market and allowing the largest operators from the largest countries—for example, Peru or Colombia—to manipulate the market would be counter-productive. Smaller operators from both large and small countries need to be able to effectively compete in the market. Thus, taking into account each country's market structure is necessary for tailoring the rules and sequencing of a new regional market.

Closely related to market structure is the issue of cross-border mergers. As mentioned before, Decision 608 of the Andean Community does not grant any jurisdiction to the Andean Secretariat, nor to any other regional body, to review mergers in the region.²⁵⁴ As a result, integrating the energy markets could simply lead to mergers among the largest undertakings with the effect of significantly precluding competition. In order to avoid this, merger review should be included under the jurisdiction of the Andean Community.

²⁵² *Energy*, COMUNIDAD ANDINA [ANDEAN COMMUNITY], <http://www.comunidadandina.org/ingles/energy.htm> (last visited Mar. 15, 2012).

²⁵³ See FURSE, *supra* note 12, at 223–24.

²⁵⁴ See generally Decisión 608, *supra* note 121.

3. Abuse of the Network Operators' De Facto Dominant Position
 - a. Differentiating the Different Segments of the Market: From Legal Unbundling to Functional Separation

Although the Andean Community has made great efforts to establish a set of rules governing competition law and energy integration, there are some aspects that remain missing in the legislation. The enactment of common rules for the generation, transmission, distribution, and supply of electricity is of particular importance. The EU created such rules in the Electricity Directive (2003/54/EC).²⁵⁵ The current framework contained in Decision 536 only sets out certain rules regarding IETs, non-discriminatory access to networks, interconnection points and transmission agents, without establishing deeper competition-oriented provisions.

The European Union focused on ensuring legal unbundling of transmission system operators and distribution system operators.²⁵⁶ This approach clearly aims at mitigating the possibility that economic agents exercise market power and thus hinder competition in the market. Some Andean countries already have similar internal legislation in place which could serve as inspiration for a new regional regulation. For instance, in Laws 142 and 143 of 1994, Colombia divided its electricity industry in the four mentioned activities.²⁵⁷ The same approach was taken in Peru through Supreme Decree No. 27-95-ITINCI of October 19, 1995.²⁵⁸ Under the unbundling regime, energy generators are not able to provide transmission or distribution services and vice versa.²⁵⁹ The same limitation applies for transmission and distribution operators.²⁶⁰

Moreover, the mentioned domestic laws also establish ownership and market-share limitations to avoid market power. With respect to generation, distribution and supply of electricity, the Colombian Energy Regulator ("CREG" by its acronym in Spanish) established that none of

²⁵⁵ See Directive 2003/54, *supra* note 203.

²⁵⁶ *Id.* at pmb1.

²⁵⁷ L. 142/94, julio 11, 1994, DIARIO OFICIAL [D.O.] (Colom.), available at http://www.secretariassenado.gov.co/senado/basedoc/ley/1994/ley_0142_1994.html [hereinafter Law 142]; L. 143/94, julio 11, 1994, DIARIO OFICIAL [D.O.] (Colom.), available at http://www.secretariassenado.gov.co/senado/basedoc/ley/1994/ley_0143_1994.html [hereinafter Law 143].

²⁵⁸ IGNACIO DE LEÓN, LATIN AMERICAN COMPETITION LAW AND POLICY: A POLICY IN SEARCH OF IDENTITY 190 (2001).

²⁵⁹ *Id.*

²⁶⁰ See generally Law 142, *supra* note 257; Law 143, *supra* note 257.

these undertakings can participate in more than twenty-five percent of their respective activities in Colombia.²⁶¹ Equally important, generators cannot own more than twenty-five percent of a distribution company and vice versa.²⁶² In principle, neither generators nor distributors are allowed to invest in transmission enterprises.²⁶³ However, there is an exception for those enterprises that did so before the enactment of Law 142 in 1994.²⁶⁴ These enterprises can own up to fifteen percent of a transmission enterprise.²⁶⁵ Therefore, it is important that future Andean legislation contains ownership limitations across the production chain to tackle vertical integration problems.

If it is not politically feasible to establish legal unbundling requirements, another possibility to create integration is the functional separation requirement. This requirement serves the purpose of avoiding the exercise of monopoly power in the natural monopoly segments without legally separating companies. In this scenario, the functional separation obligation would require vertically integrated utilities to set apart their transmission and energy marketing functions, giving the former segment to an independent system operator.²⁶⁶

b. Third-Party Access

Although market structure is important, in the case of network industries, the focus should be on the problems of interconnection. The main objective is safeguarding the existence of effective and non-discriminatory interconnection conditions for all the agents in the market.²⁶⁷ As mentioned before, “[g]iven that the existence of a natural monopoly gives market power to the operator of the utility, it is necessary to ensure that this power will not be misused by excluding potential upstream or downstream competitors whose access to the network is necessary.”²⁶⁸

Decision 536 establishes that non-discriminatory access to international interconnected lines is guaranteed.²⁶⁹ However, it does not foresee

²⁶¹ Ministerio de Minas y Energía [Ministry of Mines and Energy], Resolución No. 128 [Resolution No. 128], art. 3, Dec. 17, 1996.

²⁶² *Id.* at art. 4.

²⁶³ *Id.* at arts. 4–6.

²⁶⁴ *Id.* at art. 6.

²⁶⁵ *Id.*

²⁶⁶ RAPHALS, *supra* note 141, at 38.

²⁶⁷ *See* DE LEÓN, *supra* note 258, at 186.

²⁶⁸ *Id.* at 190.

²⁶⁹ Decisión 536, *supra* note 147, at art. 1.

any rules for effectively regulating scarcity problems at the international link.²⁷⁰ Without clear rules and a proper enforcing capacity, the owner of the international link can still exercise its monopoly power to deter IETs from its competitors to favor its own energy dispatches.

c. Congestion Management

As cross-border trade increases, there is a need to develop congestion management methods to efficiently allocate the available cross-border capacity. Congestion management requires handling the following aspects: a) capacity calculation; b) long-term capacity allocation; c) day-ahead capacity allocation; and d) intra-day capacity allocation.²⁷¹ As previously mentioned, Decision 536 does not contain a comprehensive regulation on the subject.²⁷² Article 1 subsection 10 does not set the criteria to allocate the congestion rents.²⁷³ It only establishes that these rents will not be allocated to the owner of the international link.²⁷⁴ GTOR has recommended that these rents should be allocated to the exporting country; however, there has not been consensus on the matter and no decision has yet been made.²⁷⁵

In the European Union, Regulation 1228/2003 establishes a set of rules that could serve as inspiration for the Andean context.²⁷⁶ This regulation states that all remunerations from congestion rents must be: a) destined to guaranteeing energy availability; b) destined to upgrading the network or the interconnection capacity; and c) taken into account when calculating the revenues of energy companies, which are the basis for fixing new transmission tariffs.²⁷⁷

4. Competition Law and Regulation

Addressing the different challenges in the energy industry requires using a combination of competition law and regulatory policy. In one respect, regulation provides the *ex ante* legal framework that firms

²⁷⁰ See generally *id.*

²⁷¹ MERCADOS EMI, *supra* note 199, at 29.

²⁷² See generally Decisión 536, *supra* note 147.

²⁷³ *Id.* at art. 1.

²⁷⁴ *Id.*

²⁷⁵ See ANDESCO, *supra* note 104, at 7.

²⁷⁶ Commission Regulation 1228/2003, 2003 O.J. (L 176) 1.

²⁷⁷ *Id.* at art. 6.

in the market need to follow. Generally, regulation focuses only on the main aspects of the business conduct. The most important aspects in the energy industry under the umbrella of regulation are: a) third-party access to the essential facilities; b) congestion management; and c) capacity and transport charges. On the other hand, competition law deals with anti-competitive conducts and is only enforced on an *ex-post* basis.

As explained throughout this document, regulation and competition complement each other by focusing on the sectors that are most efficient. For instance, imposing price regulation on a natural monopoly—for example, energy transmission—makes it unnecessary to enforce the prohibition of abuse of a dominant or monopoly position in order to prevent “excessive prices.”²⁷⁸ The introduction of competition at the wholesale level is crucial for improving the efficiency of the market. The same result could hardly be achieved through regulation. Introducing competition into the natural monopoly segments, such as transmission and distribution, would only lead to a waste of important resources. Therefore, understanding that the energy industry must be designed, planned, and supervised with these two policy instruments is fundamental for improving the Andean energy industry.

CONCLUSION

This Article sought to describe a complex industry in a complex context with a view to making concrete proposals to improve economic efficiency in a region that much needs it. The electricity industry in the Andean region was mismanaged for a long time. Several structural reforms have been undertaken in the past decades with impressive results. However, certain deficiencies in the system still remain. Therefore, it is necessary to have a better understanding of the specificities of the Andean energy sector. Only by doing so will it be possible to make effective and concrete proposals that will lead to a better legal framework and institutions for the Andean energy industry.

The energy conditions of the region show that energy demand will increase and that the natural conditions to create a promising industry do exist. Therefore, the challenge is to structure the industry in the most efficient manner to avoid the misallocation of resources, and to exploit the complementarities of the different types of energy produced in each country.

²⁷⁸ INT'L COMPETITION NETWORK, ANTITRUST ENFORCEMENT IN REGULATED SECTORS WORKING GROUP 3–4 (2004).

Improving the Andean energy industry will require drawing on certain experiences from the European Union, since this regional organization has already accomplished a considerable level of energy integration. The proposals made at the end of this document were also inspired by the domestic legislation of certain Andean countries. This shows that these countries have gradually embraced some of the regulatory reforms needed to have an efficient energy industry. Thus, the main remaining task is to transpose and adapt these reforms to the regional context while pursuing deeper integration. This Article has sought to shed light upon some of the issues required to achieve this objective and to increase awareness of its importance. Hopefully, the small contribution of this author will be followed by further research and practical applications in a region where custom-made measures and more ambitious aims are needed.