



## **University of Chile – University of Heidelberg**

### **LL.M IN INTERNATIONAL LAW, INVESTMENTS, TRADE AND ARBITRATION**

#### **Thesis:**

#### **Complementarity and Integration of the Energy in South America. A Juridical Analysis Based on the Factors that Obstruct the Market Integration.**

Thesis submitted in fulfilment of the requirement for the Degree of L.L.M. in  
International Law, Investment, Trade and Arbitration

Author: Sebastián Leonardo Canales Angulo.

Advisor: Henry Jiménez Guanipa.

Heidelberg, Germany

March 2011

## **Table of Contents**

<b>Acknowledgements.....</b>	<b>4</b>
<b>Introduction.....</b>	<b>6</b>
<b>Chapter 1: The Development of energy market in Latin America.....</b>	<b>11</b>
1.1 What is integration?.....	11
1.2 Is an important matter the energy integration in South America.....	12
1.3 The Pattern of energy growth in Latin America.....	14
1.4 Visions of Energy: Action Power or socio – political?.....	16
<b>Chapter 2: Determination of the factors, in particular the juridical factors which prevent the integration.....</b>	<b>19</b>
2.1 The Current Situation of the region's energy sectors.....	19
2.2 Obstacles that have obstructed market integration.....	21
2.2.1 Mercosur: integration and nationalism.....	22
2.2.2 Other Factors that Obstruct the Market Integration.....	23
2.3 The energy regulation in the Mercosur.....	29
2.4 Towards the creation of a supranational body?.....	30
<b>Chapter 3: South America, Energy efficiency programs and renewable energy.....</b>	<b>34</b>
3.1 South América: renewable energy and energy efficiency.....	34
3.2 Mercosur and nuclear integration projects.....	36
3.3 The Brazilian Way as a model for South America.....	38
3.4 Some insights about the participation of Brazil in the Latin American integration process.....	42

<b>Chapter 4: The way to an intrnational organization.....</b>	<b>45</b>
4.1 Current composition of the organizational structure of Mercosur, what does it take to integrate? Are we on the way to the creation of a supranational body?.....	45
4.2 Benefit associated with integration.....	49
<b>Chapter 5: The treatment of energy in comparative law and the WTO...52</b>	
5.1 Energy Integration: The case of Europe.....	52
5.2 The Treatment of energy in the WTO.....	57
<b>Conclusion.....</b>	<b>64</b>
<b>References.....</b>	<b>71</b>

## **Acknowledgements.**

I want to express my sincere gratitude to my parents, friends, classmates and professors of the Masters program, who have inspired and challenged me to make a contribution in one of the many topics of my interest and of concern to the world today, as the integration law in the energetic field.

I owe my deepest gratitude particularly to my Supervisor Professor Dr. Henry Jiménez Guanipa, my Academic Coordinator Ms. Andrea Lucas, my friends Carolina Mancini and Fernando Alvarado, who approached me a little more to the German culture, my teacher of English Eileen Lebuy and Marcelo who has always believed in this project.

*Complementarity and Integration of the Energy in South America.  
A Juridical Analysis Based on the Factors that Obstruct the Market Integration.*

*This thesis has been the result of long hours of study, which would not have been possible without the patience, affection and support of those who I love most. I dedicate this work to my parents, Pedro and Evelyn, Marcelo, Stephanie and Antonio.*

## **Introduction.**

Energy integration is not a unique project in the context of globalization. In fact, it is possible to trace its beginnings from more than 50 years ago, that is, at the end of the Second World War, with the Treaty of Coal and Steel Community,<sup>1</sup> signed between two countries with a long history of conflict, and yet did not prevent to start what today we know as the European Union<sup>2</sup>.

However, not all regions of the planet, energy integration processes have followed the same fate, in other words, over the twentieth century and during the decade of the current century, it has been possible to see reluctance of some countries in order to advance in the construction of a multilateral agenda which includes energetic supply services within the areas addressed by the WTO.

If we bring a little more analytical lens to focus on the legal treatment of energy in the Latin American context, specifically the Mercosur<sup>3</sup>, we see that integration projects have been recently addressed by the heads of the states as a common interest area to the region, an issue that has been treated as we will see on the basis of two opposing views, such as energy understood as a power resource and the energy understood as a socio-political tool, with implications that both views imply.

Furthermore, conflicting views about the forms of exchange of energy resources, has not been the only obstacle of the economic integration processes that the states had

---

<sup>1</sup> The Minister of Foreign Affairs of the French Republic Robert Schuman, proposed on May 9, 1950, to the Franco-Germanic coal and steel production under a common High Authority as part of an organization open to participation by other European countries. France, Germany, Italy, Belgium, Luxembourg and the Netherlands accepted the challenge and began to negotiate a treaty against the original intention of Jean Monnet, senior French civil servant who inspired the idea, advocated a simpler, more technocratic mechanism. However, the six founding members were unwilling to accept a simple outline and agreed on a hundred articles which formed a complex. Finally, on April 18, 1951 was signed in Paris the Treaty establishing the European Coal and Steel Community, which entered into force on July 24, 1952 for a limited period of 50 years. The Treaty expired on July 23, 2002. See, [http://europa.eu/abc/symbols/9-may/decl\\_es.htm](http://europa.eu/abc/symbols/9-may/decl_es.htm)

<sup>2</sup> See "European Union Law", Margot Horspool and Mathew Humphreys, Oxford University Press, 2010. PP 26.

<sup>3</sup> On March 26, 2011 marks 20 years since the signing of the Asuncion Treaty, which gave birth to the Southern Common Market. See more, [www.cronista.com/contenidos/2011/03/02/noticia\\_0007.html](http://www.cronista.com/contenidos/2011/03/02/noticia_0007.html)

to overcome, in order to weave an interstate delivery net. Another impediment has been the sustained strong nationalist positions on the possibility of returning ownership and control of natural resources to the state<sup>4</sup>, a position that has received strong support in public opinion in developed countries, since it is considered an effective mechanism to distribute wealth from the exploitation of resources, thus preventing the enrichment of the same by third countries involved.

However, during the thesis we will revise in other aspects that also certainly contribute to making uncertain the path of integration, which for purposes of addressing them in an accessible manner will be treated in the first part describing the current situation in energy markets, to subsequently be passed specifically the barriers to integration, which will be divided into factors of political, economic, financial technical and legal character.

In this direction, it is possible to assert that it has been the lack of a regulatory frameworks at a regional level to establishes a minimum of coincidences, along with the diversity of regulatory frameworks in the context of Mercosur, in relation to the processing of electricity and gas, which has contributed to create some confusion in the region, thus preventing progress in interconnection projects.

Later, with the aim to advance the understanding of the current membership of the Mercosur, in step 2.3 to analyze the institutional structure of organization, making mention of the main objectives outlined in the Memorandum of 1998, which sets the general targets in terms of openness of markets, states applicable the the rules of free trade in energy transactions and promoting the development of trade competitiveness of natural gas.

Moreover, the creation of a supranational body in the context of Mercosur, seems to be increasingly distant at a level in which privilege the sovereign decisions on the

---

<sup>4</sup> Rolf Linkohr, "Latin American energy policy at state and marketplace. " *Revista Pensamiento Propio*, July 2006, Rev No. 22. PP 90

multilateral approach, which is corroborated by the absence of supra-governmental request able to make decisions binding on member states.

Energy is a vital element to overcome the poverty affecting the region, which is essential once there is a supranational decision-making body, to start reform initiatives of the regulatory framework aimed at obtaining goals long run as promoting sustainability of natural resources. In this way, speaking of sustainability, I mean all measurements that are aimed at promoting the rational use of energy while increasing the productivity of the same, reducing the costs associated with energy production, such as pollution of the environment, constituted mainly by pollution and declining fossil fuel reserves.

The incorporation of alternative energy to the energy matrices of the region, has contributed greatly to reducing dependence on fossil fuels. A good example of this type of project was the initiative promoted by the government of Brazil in the 70's, to develop a form of transport fuel, based on sugar cane (Ethanol)<sup>5</sup>.

However, as describe in the course of the thesis, the development of individual projects is not enough if you want to build a project of economic integration also need the development of joint programs with regard to the development and application of new technologies in the area. In this regard, while renewable energy projects for the most part are characterized by high initial investment costs in the long run offset to provide greater autonomy of supply.

In regard to nuclear generation projects, Mercosur has four reactors, two located in Argentina and two are located in Brazil. However, the construction of these plants has not been without criticism by the public, especially by Non Gubernamental Organizations, the argument that there is little experience in the region with regard to waste management.

---

<sup>5</sup> At this time, the Brazilian government launched the "National do Alcohol ", signed by President Ernesto Geisel. To see more, Master Degree Thesis of LLM, University of Heidelberg. "Supplying to the World Biofuels: Biofuels in Brazil and the WTO", Camila Crispim Brother Vinaud Baiocchi.



In order to contrast the process of economic integration in the Mercosur with the lessons learned in other places, we will analyze the sequence of energy integration in the European Union context. Particularly in regard to the failure of the European Union with Russia in order to impose its multilateral approach to the adoption of a regulatory framework that would promote the implementation of WTO principles such as competition and market transparency, all of which aimed to achieve through the signing by Russia of the Treaty on the Energy Charter<sup>6</sup>.

It is because of what it is exposed in the previous paragraph in section 5.2, I propose to review the progress that has entered the EU after the Maastricht Treaty of 1992 to promote and sustainable growth that respects the environment, target otherwise has received new impetus following the Union's commitment to reduce the emission of greenhouse gases by 20% by 2020<sup>7</sup>. Moreover, a measure of this kind can be enhanced in the medium term once the European state become aware of the benefits this can have energy independence in the field, which together with the decongestion of the demand for fossil fuels, help balance the position of the energy-importing countries, such as gas, compared to the producing countries.

Finally, in order to bring this issue to one of the main contents of the master's program, there will be an exercise in analyzing what happens at the regulatory treatment of trade in energy services in the context of the General Agreement on

---

<sup>6</sup> The roots of the Energy Charter date back to the Political Initiative Launched in Europe in the early 1990s, at a time when to the end of the Cold War an Unprecedented Opportunity Offered to Overcome Economic previous divisions. Nowhere Were the prospects for Mutually beneficial Clearer Than Cooperation in the energy sector, and there was a Recognized Need to Ensure That a Commonly Accepted was established foundation for Developing Energy Cooperation Among the states of Eurasia. On the basis of These Considerations, the Energy Charter process was Born. In a world of Increasing Interdependence Between net Exporters and Importers of energy, it is Widely Recognized That Provide dog multilateral rules to more balanced and efficient framework for International Cooperation is Than Bilateral Agreements Offered by alone or by non-"legislative instruments. The Energy Charter Treaty therefore plays an important role as part of an international effort "to build a legal foundation for energy security, based on the Principles of open, competitive development. The Markets and Sustainable Energy Charter Treaty and the Energy Charter Protocol on Energy Efficiency and Related Environmental Aspects Were signed in December 1994 and legal Entered Into Force in April 1998. To date, the Treaty has-been signed or accessed to by fifty-one states, the European Community and Euratom (the total number of members is therefore its fifty-three). The Treaty was Developed on the basis of the 1991 Energy Charter. Whereas the WAS Latter document drawn up as a Political declaration of intent to Promote Energy Cooperation, the Energy Charter Treaty is a legally-binding multilateral instrument. To see more, <http://www.encharter.org/index.php?id=7..>

<sup>7</sup> See, Michaele Schreyer, Lutz Mez, "Una Comunidad Europea para las energías Renovables", Henrich Böll, Stiftung, Green Energy, Septiembre de 2009.

Trade Services. In this way, we will review the main rules applicable to the scenario of Russian gas supplies to the EU,

All of which is done with forecasts show that the door of multilateralism is not yet completely closed and in fact, there are certain terms that allow the maintenance of emergency in some markets. All this, in my opinion, can bring Russia's position, since you should not assume the full cost involved in the strict principle underlying the WTO, in particular the principle of "Treaty of the most favored nation", basing that position on the objective verification of the higher cost of supply of certain countries either by geography or other technical reasons.

## **Chapter 1: The Development of energy market in Latin America.**

According to estimates by the International Energy Agency<sup>8</sup> in Latin America are required a little more than \$ 1.3 million in new investments for the development of power generation programs by the year 2030<sup>9</sup>, projection based on the growing global demand of energy.

Although the region is presented at large, as one of the world's richest regions in terms of reserves of energy resources, is also characterized by a profound asymmetry, existing consequently large energy producers, and also countries that rely almost full on import, such as Chile and Uruguay.

Indeed, if we analyze the composition of supplies to the region's energy matrix<sup>10</sup> is possible to identify fully the potential complementarity of these, through the creation of a network that integrates energy supply. From which arises as the first question, what we mean by the term integration of supply, or In other words, what is integration?

### **1.1 What is Integration?**

When we talk about integration in the context of trade in energy services, we mean the creation by treaty or other instrument similar to a common area, composed of a plurality of states in which there are no supply preferences between producers and consumers, ensuring energy supply through equal access to resources<sup>11</sup>.

---

<sup>8</sup> The International Energy Agency is a Paris-based autonomous intergovernmental organization established in the framework of the Organization for Economic Cooperation and development (OECD) in 1974 in the wake of the 1973 oil crisis. The IEA was initially dedicated to responding to physical disruptions in the supply of oil, as well as serving as an information source on statistics about the international oil market and other energy sectors. See, <http://www.iea.org/>

<sup>9</sup> See Qué es la interconexión, el difícil camino de la integración, 26 de Julio de 2006.

<sup>10</sup> See "La integración energética en Sudamérica", Mauricio Garrón, Coordinador de Política Energética, OLADE, PP 152, 153.

<sup>11</sup> "Mercosur, generating a new source of private international law", Adriana Dreyzin of Klor, Buenos Aires, Ed Savalas. PP. 24.

From the analysis of the concept is possible to infer that integration is a regional vocation, since for reasons of technical, economic and legal is not yet possible to project a globalization of energy supply sources, thus conceived as a process strategic interconnection of energy networks in coming territorially integrated corridors<sup>12</sup>.

The plurality of states in the South American context, is given by all producers and consumers of energy<sup>13</sup>, which traded the provision of energy services under a framework agreement such as a treaty or other instrument of similar nature, which in most cases, have focused on ensuring the customer's country a certain amount of energy supply and its producer, ensuring a level of demand and price in transactions.

## **1.2 Is an important matter the energy integration in South America?.**

It is a fact that energy resources in Latin America are not distributed evenly<sup>14</sup>. Indeed there are countries provided of an abundance of fossil resources such as Bolivia, Brazil, Mexico and Venezuela, and others, however, deprived of almost all sources of supply, such as Chile and Uruguay.

A greater abundance, the asymmetries are not only about the distribution of wealth, but also as regards the capacity of each State to invest in the exploitation of natural resources. In this regard, while some countries have unpublished programs in the field of innovation of energy resources, as is the case Brazil<sup>15</sup>, there are others who

---

<sup>12</sup> See "La Cooperación e Integración energética en América Latina y el Caribe", Ariela Ruiz Caro, Publicaciones Puente Europa PP 65.

<sup>13</sup> Throughout the twentieth century, South American countries signed several bilateral cooperation agreements in the electrical and gas, which can be considered as the first sign of intention to establish a multinational network of energy supply. See Ariela Ruiz Caro, "The cooperation and energy integration in Latin America and the Caribbean," Puente @ Europa, year VIII n ° 1, April 2010.

<sup>14</sup> See note N° 10, PP 152, 153.

<sup>15</sup> See, "Energy Security in South America: The role of Brasil", Adilson de Oliveira, International Institut for Sustainable Development, Winnipeg, Manitoba Canada 2010.

for most of the twentieth century lacked almost entirely on their own funding sources to engage in projects exploration and exploitation of natural resources, as is the case of Bolivia<sup>16</sup>.

Hence the first argument in favor of South American integration is precisely the promotion of overall growth of economies, through the implementation of programs that encourage the exploitation of natural resources in order to raise economically depressed areas and at the same time, provide a secure supply to the most demanding countries. Moreover, a third argument for integration is the benefits associated with the interconnection of regional power systems. Indeed, studies conducted in the area predict that the integration of electricity markets in South America would result in savings of USD 529 million in operating expenses<sup>17</sup>, reason that, in order to exploit economies of scale<sup>18</sup>, is planning to build transmission lines to transport electricity between the countries of the region, both north and south of the continent.<sup>19</sup>.

In the same way, the construction of large power generation projects, as hydroelectric power plants<sup>20</sup>, contribute significantly to the revival of the economies

---

<sup>16</sup> This situation led some states to make the treatment processes of liberalization of investment, during the 90's, which although gave a further boost to the financing of projects to exploit natural resources, did not contribute to the discovery of new energy deposits, since the private companies focused their attention on the farm. See "Energy Cooperation and Integration in Latin America and the Caribbean," Ariela Ruiz Caro, Bridge Publications Europa PP 65.

<sup>17</sup> See Moniz Ramos, 2004, The Role of Brazil, Adilson de Oliveira, Series on Trade and Energy Security Energy Security in South America: 2010. PP .

<sup>18</sup> Economies of scale refers to the power of a company when it reaches an optimal level of production to be producing more at lower cost, ie the production as a business grows (shoes, gum, sticks, match boxes ...) costs per unit produced are reduced. The more you produce, the less it costs to produce each unit. See <http://www.mitecnologico.com/Main/EconomiasDeEscala>.

<sup>19</sup> See The Role of Brazil, Adilson de Oliveira, Series on Trade and Energy Security Energy Security in South America: 2010. PP 5.

<sup>20</sup> In Chile, the HidroAysén Project will generate about 5,000 direct jobs to work during the construction phase, where maximum requirement and a monthly average of 2,260 workers, of which some will be hired in the region. A contrario sensu, the paralysis in the construction of other hydroelectric plants, as is the case of Ralco, has claimed about 1,600 unemployed. About 300 of them are pehuenches (native people of Chile), who took part in the works. These figures for the Region VIII represent 2.23% of total unemployed and 10.7% of the unemployed in the construction sector. The Central Building was projected for next year, employing over 2,500 workers. See, [www.central-hidroelectricas.html](http://www.central-hidroelectricas.html), and [www.hidroaysen.cl / site / beneficios\\_para\\_aysen.html](http://www.hidroaysen.cl/site/beneficios_para_aysen.html)

through the creation of new jobs<sup>21</sup>, a situation that is another argument in favor to promote the construction of mega gas interconnection projects, as is the case the Southern Gas Pipeline<sup>22</sup>.

Finally, protection of the environment through the implementation of joint action at regional level will contribute decisively to the sustainable development<sup>23</sup> of economies. Understanding of sustainable development, one that favors the orderly and efficient use of available energy resources through the implementation of plans to diversify the range of the energy matrix, thus easing the demand for fossil fuels, whose combustion emits the highest levels of greenhouse gases, the main cause of global warming.

### **1.3 The patterns of energy growth in Latin America.**

During most of the 20th century the energetic topic in Latin America was considered to be a State matter. Thus, both exploitation and distribution of the energetic resources were in public hands, being based the private participation to only those areas in which the law expressly permitted<sup>24</sup>.

In this period the construction funding of energetic projects, was mainly obtained from the World Bank<sup>25</sup> and the Inter-American Development Bank (IDB)<sup>26</sup>, and after

---

<sup>21</sup> Notwithstanding the above, it is criticized by some economists that the temporary nature of these works, since operation once the plant significantly lower the number of operators required. No. 1 See page 11.

<sup>22</sup> Southern Gas Pipeline or in Spanish "Gasoducto del Sur".

<sup>23</sup> It was in 1987 when the World Commission on the United Nations Environment and Development adopted the report unanimously Brundtland2, better known as Our Common Future, where sustainable development is defined as "that meets the essential needs present without compromising the ability to meet the essential needs of future generations." See <http://www.senado.gob.mx/iilsen/content/publicaciones/revista2/3.pdf>.

<sup>24</sup> Energy in America: an interface that integrates. Gerardo Honty, Journal of Foreign Policy. PP 120

<sup>25</sup> The World Bank is one of five institutions created at the Bretton Woods Conference, in 1944. This institution is a vital source of financial and technical assistance to developing countries around the world. Our mission is to fight poverty with passion and professionalism for lasting results and to help people help themselves and their environment by providing resources, sharing knowledge, building capacity and forging partnerships in the public and private sectors. We are not a bank in the common sense; we are made up of two unique development institutions owned by 187 member countries: the International Bank for Reconstruction and Development and the International Development Association.

See

<http://web.worldbank.org/WBSITE/EXTERNAL/EXTABOUTUS/0,,pagePK:50004410~piPK:36602~theSitePK:29708,00.html>

completion of the projects, the assets remained under state control. It was at the early eighties when it started to glimpse with great force in the region, the possibility that the private investors have participation in the energetic sector.

Indeed, reforms began to take effect first in Chile, through the work of economists recently arrived from the University of Chicago<sup>27</sup>, who proposed an economic package to the military government of the time which included private sector participation in a sector traditionally had been under state control, a situation that was repeated in the rest of Latin America. These proposals, otherwise agreed with the new approach to multilateral development banks, which began to promote the financing of energy projects by the private sector.

Since then, the energetic projects required the concurrence of several requirements to get the financial support from the multilateral banks, among which were; the promotion of the free competence, the adoption of new regulatory frameworks, increasing of the private investment and promotion of forms of energetic integration.

Once applied this new formula in Chile it spread to the rest of Latin America, due to the dissemination of these new ideas implemented by the Chicago economists, from the perception of the head of state this actions would contribute to more efficient use of resources, clearing to the state a source of corruption difficult to remove.

---

<sup>26</sup> The Inter American Development Bank is the largest source of development financing for Latin America and the Caribbean. Established in 1959, the IDB supports for Latin American and Caribbean economic development, social development and regional integration by lending to governments and government agencies, including State corporations. See <http://www.iadb.org/es/acerca-del-bid/acerca-del-banco-interamericano-de-desarrollo,5995.html>

<sup>27</sup> University of Chicago, School of Economics (Chicago Boys). The name "Washington Consensus" was used by the British economist John Williamson in the eighties, and refers to the adjustment issues structural programs were part of the World Bank and the Bank Development Bank, among others, at the time of re- economic approach during the debt crisis erupted in August 1982. In Chile, the so-called "Chicago Boys", neoliberal policies implemented in early years of the military dictatorship of Augusto Pinochet. Moreover, good of these ideas had been raised in a book called "The Brick ", written some months before the military coup of September 1973 by a group of renowned economists associated with the University Católica de Chile and the University of Chicago. This text formed the basis the military government's economic policy. Social sacrifices Chileans had to endure during this structural reform is a matter well known . As for the political cost could be mentioned the loss of October 1988 plebiscite by the military regime, albeit by a disappointingly not very wide margin, given the social cost economic which had to pay for the adjustment and reform. (See The Consensus Washington: Governor of Governments "Maximilian Larraín, August 1999).

Notwithstanding this, the legislative and executive powers including the energy ministries of the Southern Cone countries, held at first the control of energy policy by way of regulation.

However, the necessity to attract and maintain capital investments in the country, led governments to ignore the “reasons of the state” and to emphasize the economic requirements of businesses, which encouraged for the destruction of state monopolies or oligopolies, which according to neoliberal theory, distorting market forces, paradoxically, however, moved an oligopoly of state property into private hands, with the consequent rise in energy prices, a situation that was observed in the early 90 in Argentina with the privatization of some companies in the hydrocarbons sector.

#### **1.4 Visions of energy: Action power or socio-political?**

In Latin America the issue of energy has recently been incorporated into the issues to be addressed by the leaders and heads of state as a matter of common interest to the region, first linked to the generation and binational interconnection projects<sup>28</sup>, and then in the last 20 years projects linked to regional integration level, this is the case of the Latin American Energy Organization (OLADE)<sup>29</sup> and the Corporación Andina de Fomento. In this sense, there are two major views about energy in Latin America,

---

<sup>28</sup> Binational Integration Projects, Hydroelectricity; Itaipú: is the largest hydroelectric dam in the world and is situated on the Rio Parana, on the borders of Paraguay and Brazil. The reason for its construction came from the need for expansion and development of Brazil since the 60's in this country went through a strong and advanced industrialization. In a first analysis, the problem of hydroelectric plant in a border river poses a set of geopolitical problems and questions which have caused serious conflicts between these countries and Argentina (as the Paraná river drained this country, and threatens conducting Yaciretá Dam downstream). Finally, among the comings and goings, in 1973 and establishing the Itaipu Treaty, which puts an end to the conflict. To see more, <http://www.monografias.com/trabajos59/represa-itaipu/represa-itaipu.shtml>.

<sup>29</sup> OLADE born in the context of the international energy crisis of the early seventies, whose scope and impact were analyzed by the countries of Latin America and the Caribbean, lack of energy policies and the need to adequately address this crisis began a intense process of political mobilization that culminated on November 2, 1973 with the signing of the Lima Convention, the constituent instrument of the Organization, which has been ratified by 26 countries in Latin America and the Caribbean: South America: Argentina, Brazil, Chile, Paraguay and Uruguay, Bolivia, Colombia, Ecuador, Peru and Venezuela  
Caribbean: Barbados, Cuba, Grenada, Guyana, Haiti, Jamaica, Trinidad & Tobago, Dominican Republic and Suriname  
Mexico and Central America: Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama and Mexico.



one promoted by Venezuela that sees energy as a power resource and the second vision, shared by some members of Mercosur, and the Andina Community, which is conceived as a socio-political tool.

The restricted view links energy to concepts such as security and international competition. While in a wide view energy is related to the security of society, i.e. the possibility to develop and strengthen institutions and contribute to the gestation of conditions of autonomy for the people.

Both views have different implications. In the first view, we approach a controller management of energy resources by a single state or state enterprise and/or private, which can lead to a confrontation in the management and distribution of natural resources for national security. In the second case, by contrast it is important a more cooperative and inclusive markets, which seeks to harness and complementation of resources for the security of countries that depend on the purchase and sale of energy resources<sup>30</sup>.

From a narrow perspective the emphasis is on the control of natural resources in the context of nationalist claims and government is close to the negotiations with multinational companies for investment opportunities and financing for the exploitation of oil and gas fields.

From the broad view, however, are reviewed the responsibilities of local governments in pursuit of the best opportunities for energy stability, through design and planning of cooperation and integration schemes that are more efficient.

If we bring these visions to a strictly political sphere, re nationalisation is a good example of what are today the mechanisms of control exercised by states over natural resources.

In this regard, the re nationalisation provide for the strengthening of national oil companies, for which there are two ways to carry out these processes.

---

<sup>30</sup> Regional Democratic Governance and the role (dis) integrating energy, Elsa Cardozo, Revista Nueva Sociedad 204, PP 137 ff.

The first consisting of a strong control of the state, but at the same time providing a wide range of trading to the State with transnational corporations, a good example of the latter is the case of Petrobras in Brazil. The second way, is the state control of resources with a strong political conditions, thus favoring the political rather than commercial interests, an example of the latter is the case of PDVSA<sup>31</sup> in Venezuela.

Linked to politics, there are also environmental and socio-cultural implications of energy security. Aspect that in turn can again be addressed from a narrow and broad vision. In the first case, it subsumes the political reasons for the demand for natural resources in the nationalist discourse and the repudiation of transnational corporations, particularly those led by American capital. From a broader significance, however, environmental and socio cultural implications are for the benefit of human security, for the sake of thereby promoting the institutional protection of fundamental freedoms, including these, those of political, socio cultural and economic character.

From a narrow perspective it is considered the institutional as an instrumental appearance, i.e. is a means of gaining control of strategic, political and economic resources by the state.

In a broad concept, however, the institutional aspect is vitally important for creating opportunities to improve living conditions in the region through building a network to ensure balanced growth and overall through the efficient and secure energy resources distribution<sup>32</sup>.

Finally, if we take these approaches to the South American continent in the first decade of 2000, it can be seen that there have been countries that have ranged between both views, which has revealed the change in the management of the energy issue. However, following the proposed re-nationalization of hydrocarbons, it has been strengthened the national approaches in relation to the management of energy resources, making clear that there is some rivalry between governments to

---

<sup>31</sup> PDVSA: Petróleos de Venezuela Sociedad Anónima/ Petroleum Corporation of Venezuela.

<sup>32</sup> See, "Energy Investment Outlook for the Apec Region", Chapter Energy Investment Outlook: The Role of Governments. Asia Pacific Energy Research Centre, Chuo-Ku, Tokyo Japan 2003, PP 97, 98.

ensure the supply of energy sources. In this regard, during the decade of 2000, despite the overlap in the approach progressive government of Evo Morales, Nestor Kirchner, Luiz Inacio Lula da Silva, Hugo Chavez and Tabaré Vazquez has not been an understanding of these leaders in integration projects<sup>33</sup>, in large part due to the restricted view has prevailed on the use of natural resources, which meant more as a control element of cooperation.

## **Chapter 2: Determination of the factors, which prevent the integration.**

### **2.1 Current Situation of the region's energy sectors.**

Studies developed by different investors<sup>34</sup>, show that exchange of electric power and gas, in the countries of Mercosur, does not require a complete regulatory uniformity to achieve integration beneficial for the region, however if its required a minimum number of coincidences and common rules and to make profitable international trade.

Main challenges in the future to advance the construction of networks of hemispheric exchange of energy will be:

1. Establish a system for buying and selling of energy based on transparent and non discriminatory rules.
2. Eliminate direct or indirect subsidies to the generation or energy prices.
3. Adopt transmission fees representing the cost of network expansion.
4. In turn, is essential to establish a methodology for transmission expansion that will consider the generation and demand in a country as their own, thus establishing safer networks of energy supply.
5. It is also necessary to make international trade operations in a business open to the public and private companies.

---

<sup>33</sup> See note N<sup>o</sup> 30.

<sup>34</sup> See, "Energy Investment Outlook for the Apec Region", Chapter Energy Investment Outlook: The Role of Governments. Asia Pacific Energy Research Centre, Chuo-Ku, Tokyo Japan 2003, PP 97.

6. It should be noted that according to experts, the fact that spot market<sup>35</sup> price of energy is different, it is an impediment to international trade, provided that an appropriate system design framework for the regulation of exchanges.

Thus, in the electricity sector is specifically essential to implement the following policies:

A. Strengthening sectorial policies that recognize the demand of neighboring countries (energy-exporting countries) to demand equal rights with their own. In particular it should be emphasized that generators of one country can sign supply contracts with consumers in other countries, regardless of the conditions of supply of the producing country. In this sense there would be a similarity between this rule of conduct among exporting countries and energy consumers, with an old an existing principle in the GATS<sup>36</sup>, related to multilateralism, and the clause is denominated the most favored nation. However, unlike the GATS, which establishes this principle with the hope of avoiding the introduction of arbitrary differences in tariff treatment services in the energy market aims to give equal treatment to the state claimant of energy (importers), the same status as producing countries of the same, in terms of market supply. Therefore, in this case, unlike the GATS, the application of the principle of multilateralism should be done at the level of demand and no supply of services.

B. It is necessary to create rules of operation and management of regional exchanges as well as an operating entity of energy exchanges, which has as its main task to coordinate the exchanges.

C. Improving regulation and extension of regional energy transport, in order to establish international connections that are based only on interconnection relationships. In this sense, it is essential to avoid inefficiencies in the national

---

<sup>35</sup> The spot market is a market where securities or commodities, goods, perishable and non perishable items are sold for cash and delivered immediately or within a short time. Contracts sold on a spot market are also effective immediately. The spot market is also known as the "cash market" or "physical market." Purchases are settled in cash at the current prices set by the market, unlike the price at the time of delivery. An example of a spot market product regularly sold is crude oil is sold at current prices and physically delivered later.

<sup>36</sup> Ranging from architecture to voice-mail telecommunications and to space transport, services are the largest and most dynamic component of both developed and developing country economies. Important in their own right, they also serve as crucial inputs into the production of most goods. Their inclusion in the Uruguay Round of trade negotiations led to the General Agreement on Trade in Services (GATS). Since January 2000, they have become the subject of multilateral trade negotiations.

transport pricing signals and to define and increase the efficiency of domestic transport pricing signals for the use of opportunity.

D. Define transactions of purchase / sale of power through a short-term market, complementing the existing terminal market, with prices freely agreed, and establish rules that allow the exchange of complementary services.

By contrast, the recommendations that the experts have done on the gas market differ from those of the electricity market. Among these may be considered:

1. Mitigate the monopolistic positions
2. Match the regulatory frameworks of countries, and instead implement similar regulatory frameworks in countries that do not yet have them.
3. Promote transparency in business operations and service contracts.

## **2.2 Obstacles that have obstructed market integration.**

The road to integration of energy markets is no easy task indeed there is no political consensus in the region about the vision that shall apply to management of energy resources, giving a priority in the last period a narrow vision and power controller, which is conceived as an element of power generating dependency relationships between producers and consumers<sup>37</sup>.

The lack of a shared vision is not the only reason to preclude the integration, in fact there are a number of politics, economics, financial, technical and law reasons that help us to accentuate the differences between governments, making it harder for the realization an instance of supranational cooperation. However, the approach to the factors which impede the energy integration in the context of Latin America, one of the first glimpses are the outbreaks of nationalism in producer countries, as we shall see below require vindication of natural resources.

---

<sup>37</sup> Designation to indicate the energy exporters and importers.

### **2.2.1 Mercosur, integration and nationalism.**

A consistent position in relation to energy regulation, it is not the only thing that is required to advance in the path of integration, it is also necessary that governments set aside positions of extreme nationalists, wary of patriotic emblems and signs, and give effect to a decision maker placed above the nations, since this is the only way that the economies of the region to gain ground against the superpowers. However, in favor of nationalization<sup>38</sup> it can be said that having responded to the legitimate expectation to have the resources themselves and not work on behalf of foreign powers, all with the aim of giving the states greater leeway. In this way allows the inflow of resources from oil companies or gas companies, to government coffers, making also partially prevent corporations meddling in domestic politics. In other words, nationalism can be understood as a defense mechanism of the southern face of the countries to U.S. interference, and judging from the South American countries' relations with the country of the North during the twentieth century, this seems more reasonable<sup>39</sup>. Moreover, it is coherent with the U.S. regulation that states except Texas, Louisiana and Mississippi, does not allow oil drilling in its territorial waters by foreign companies.

Generally, Latin America has a very strong national consciousness, in which the countries comprising the Mercosur are not exempt. This nationalism can be attributed to the heterogeneity of their societies, which contributes to that nationalism is presented as an articulator link. For this reason, national symbols replace the national consensus, and the bigger the gap between rich and poor, the greater the need for compensating actions to maintain cohesion, in this sense, the raw materials, in particular, oil, gas and copper play an unifying role, a demonstration of the above has been the policy displayed by the Argentine and Bolivian governments respectively. In the first case to prioritize domestic gas provision to Chile before the

---

<sup>38</sup> Rolf Linkohr, "Latin American energy policy at state and marketplace. " *Revista Pensamiento Propio*, July 2006, Rev No. 22. PP 91

<sup>39</sup> See note N° 37

Second, by implementing the policy of nationalization of the assets of Petrobras, Brazil putting assets at risk.<sup>40</sup>

Paradoxically, the opposite of what is to be believed, Latin American countries with oil and gas reserves are characterized by low per capita income and the great social inequality. This shows clearly that the wealth of natural resources is not always serving the common good.

Finally, energy nationalism generates an additional disadvantage that consists in to prevent foreign investment, thus reducing the possibilities for innovation. An example of this is the case of Mexico with Pemex, which the State of Mexico forced to pay unfair taxes and therefore they did not make the necessary investments to explore new fields, all of which impacted in a drop in production due to lower incentive for production companies.

### **2.3 Other Factor that Obstruct the Market Integration:**

As I announced in the preamble of section 2.2, there are obstacles not only from nationalist discourses, there are a number of obstacles of various kinds, which to be analyzed comprehensively will be divided into five types;

#### **A. Political:**

a) Cases of hasty political decisions, it has been invested in infrastructure without making previous studies; in this sense should be considered:

- i) The studies must be regionalized;
- ii) The growth of electricity demand, since in some applications the gas competes with electricity<sup>41</sup>;

---

<sup>40</sup> The Role of Brazil, Adilson de Oliveira, Series on Trade and Energy Security Energy Security in South America: 2010. PP

<sup>41</sup> See Integración Energética en el Mercosur Ampliado, Banco Interamericano de Desarrollo, Washington 2001.

iii) The growth of general energy demand

b) Lack of political institutions with enough power to advance the integration process. In relation to this point has been the lack of a vision shared by states and private actors that have become more difficult the creation of a supranational regulatory agency able to set margins on which to build a joint regional gas and electric regulation.

Herewith, the imbalance between countries affects the effectiveness of joint regulation, which adds to the economic instability of countries which leads to frequent changes in macroeconomic policies, thus undermining the possibilities of integration.

c) The nationalist phenomenon mentioned before in the point 2.2.1, starts a new contradiction to the process of integration. In this sense, the energy-producing countries gained ground, at expense of countries demanding these resources, which means a greater reliance on the latter, under control of the first, along with a notably rising in prices.

Furthermore, far from having a lower price of the cost of energy, through processes of integration, in the short term it is possible to see that the consumer countries must bear the prices rise of the commodities. Thus, an increase of gas in Venezuela, transported through the great southern gas pipeline, will have to be taken both by the nearby markets, as in the case of northern Brazil and also, even more stronger, in regard of those countries that are away from the exploitation center, as in the case of Paraguay, Uruguay, and northern Argentina, concerning to Venezuela<sup>42</sup>, as in the case of the latter, also they have to assume the associated cost to the monopoly position of the producer country they should pay the higher price of transportation.

d) Finally, although development was achieved on a formula that maintains the low prices, as in the case of subsidy application, in the short term it is possible to visualize in the unavoidable rise of the prices of energy. That is justified because

---

<sup>42</sup> See note N° 41



although the establishment of subsidies, by the producing countries, search the maintenance of low prices, in practice by increasing the universe of countries demanding that entails integration process, in the long term it becomes untenable the maintenance of the prices through subsidies for the poorest economies in the region, as in the case of Bolivia including Venezuela. In fact, in keeping the prices with subsidies is not profitable the exploitation of the gas fields, to which is added the impossibility of apply the principles of the WTO, which tends to balance the equation in favor of the requesting countries. In summary, an energetic security policy would be in the long term to the region, should aim to avoid the increase of the energy prices by building diversified energetic sources, which privilege the competition through the exploitation of alternatives<sup>43</sup> energies.

### **B. Economic:**

a) Demand for gas should be analyzed by regions and sectors are subdivided into omogeneous modules and applications. (gas can compete in caloric use.)

b) Differences between domestic prices and export.

The actors either public or private hardly want to cede some of their profits in order to obtain a more balanced regional market, encouraging growth and orderly set of local markets.

For his part, regarding to the nondiscrimination policy of prices this may result insurmountable in the absence of a compensation system as in electricity. Finally, investors, hardly want to cede some of their profits to benefit the community, the joint growth of the markets.

c) Different Prices of Energy, Gas: There is uniformity in the pricing criteria, however, in practice the differences are seen in relative prices levels, exchange rate policy of a country and prices on global macroeconomic linked to each order. Therefore the gas

---

<sup>43</sup> Retos y perspectivas de la integración energética en América Latina, Mario García Molina, "La energía como motor para la integración de América Latina". PP 26.

pricing respond to each country's history, their productive structure to the allocation of resources and other factors related to the development reached by each nation. In this respect, the objective of unifying the gas prices treating it as a commodity is difficult to implement and could eventually delay the development of the markets.

d) The integration that we are witnessing in the region is primarily a physical interconnection, which lacks a real political commitment, and the prospect of designing a sustainable regional development. The main objective of the current interconnection is to have access to sources of low prices, meaning optimization for money in the area of integration which always takes the cheapest energy source, regardless of where the country is. However, if this policy is not accompanied by a distribution of benefits from energy, translates into a mere lowering of production costs for large industries. This situation produces a pernicious effect on the price of energy, not reflected in consumer prices, the internalization of negative externalities associated with the generation of certain types of energy such as hydroelectricity<sup>44</sup>.

f) Although the potential economic benefits of regional energy integration are important, this process has not progressed as expected. In principle, all countries gain in terms of improvements in security of energy supply. Consumers in importing countries have the added benefit of cheaper energy supplies and producers in exporting countries to obtain new business opportunities. However, the energy becomes more expensive for consumers in exporting countries, while energy producers in importing countries face competition from suppliers with lower production costs. This tends to mobilize social and political forces opposed to the integration process. The clear identification of the costs and benefits for those involved in the integration process is therefore an essential step necessary to adjust to different conflicting interests<sup>45</sup>.

In the case of South America, a large part of the costs and benefits of integrating energy production comes from hydroelectric plants, as it determines the use of fossil fuels in power plants. Thus, the output of hydroelectric power plants plays a role in

---

<sup>44</sup> Energy in America: an interface that integrates. Gerardo Honty, *Journal of Foreign Policy*. PP 126-127.

<sup>45</sup> See note N<sup>o</sup> 42.

the pricing of natural gas, as well as emissions of greenhouse gases. Given the differences in the technological composition (hydraulic and thermal) generation capacity in the countries of the region, coordinating the production of hydroelectric power plants is essential to harvest the benefits of regional energy integration.

**C. Financial:**

a) Majority opinion not to transfer resources from the oil industry gas industry.

Unlike what happened in the past, when it was accepted the transfer of the oil to gas to facilitate its development, there is a tendency today to prevent this transfer of resources, resulting in practice that states or their companies, who must bear the cost of gas infrastructure.

b) The implementation of open access is not always guaranteed, and it has not worked properly in the open market or in the interconnections gas (pipelines).

**D) Technical:**

a) In South America there are virtually no surplus to bargain because all countries get the most of their energy matrixes to supply domestic demand, which may account for only two exceptions in the region, the surplus hydro electric from Paraguay forced to sell Brazil and Argentina by the agreement of Itaipú<sup>46</sup> and Yacyreta<sup>47</sup>, and the surplus of natural gas from Bolivia, sites operated by foreign companies to the decree for nationalization of Evo Morales.

---

<sup>46</sup> It is a concrete structure built to hold the course of the Paraná River to form the reservoir of the plant. Is the point where they are installed electricity generating units, was the result of a bilateral agreement between the governments of Brazil and Paraguay in 1966, but the first turbine began operation on May 5, 1984. See <http://www.itaipu.gov.py/es/turismo/represa>.

<sup>47</sup> Hydroelectric dam Yacyretá-Apipé is a hydroelectric plant built on Yacyretá-Apipé jumps in the Parana River in the province of Corrientes Argentina and Paraguay Missions Department. It was inaugurated in 1998 by the presidents of Argentina Carlos Menem and Paraguay, Juan Carlos Wasmosy. See [www.corrientes.com.ar / dam-yacyreta.htm](http://www.corrientes.com.ar/dam-yacyreta.htm)

b) Do not disregard that way, attracts investors, in an open system of attracting private capital for power generation may result in resource allocation. Creating an inefficient allocation of resources.

c) On the other hand, the appellant foreigners look at successful models, has also facilitated the integration of markets, revealing the lack of a shared regional vision of integration, notwithstanding that in many cases the imitation of successful models from Europe and the United States have not taken into account differences in market structures that make implementation difficult in the region. These differences are related to:

- 1) Degree of connectivity of transport networks
- 2) Income per capita between 4 and 20 times higher than in Latin America
- 3) Density and size of markets for long pipelines and distribution networks.

#### **E) Legal:**

a) Ambiguity of rules of interconnection arrangements designers, this is because the authorities have not developed a pattern of gas or electric integration. Indeed, the interconnections observed in this sector should be more of the private sector interests, which have an intergovernmental planning to share a common vision<sup>48</sup>.

b) Regulatory Models Dissimilar Affecting the Feasibility of Integration. In fact, there are two types of regulatory models: a) Regulatory Framework Contract b) General Mark; company negotiates directly with customers

This situation demonstrates the different degrees of maturity of the markets make it difficult to choose a regulatory alternative.

c) Diversity of market structures and pricing policies.

This diversity is explained by historical, political orientations, cultural elements, and finally because the new discoveries of gas fields alter the projections of the energy matrices.

---

<sup>48</sup> Gas Industry in South America: Status and Potential for Market Integration. Roberto Kozulj. Natural Resources and Infrastructure Division., CEPAL, Santiago, December 2004.

## **2.4 The Energy Regulation in the Mercosur.**

Mercosur, created in 1991 with the objective to integrate commercially in Argentina, Brazil, Paraguay and Uruguay, has an energy chapter in the Memorandum 10/98 and 10/99 in which it set guidelines for electric and gas integration. In this MOU will set the general objectives on energy, which are:

1. Open competition in the generation market;
2. Declare applicable the rules of free trade their transactions recognized market players of the member countries;
3. Promote competitive market for natural gas production, without the imposition of policies that might alter the normal competitive conditions.

In addition there are two major objectives at both the regional and international levels, these are: promoting the interconnection and opening markets to free competition. Both goals are the cornerstone of energy policies in South America<sup>49</sup>.

In the course of history in Latin America greatly increased its energy consumption, which should be an indication of economic growth in the region, since studies by economists indicate that there is a relationship between growth in energy demand and economic growth. Thus, sector investments have been made with the expectation of generating more jobs in addition to expanding the supply of energy services for the population<sup>50</sup>. Paradoxically, the story of recent years has shown that although there has been an increase in energy demand has not progressed in the same proportion of the reduction of poverty.

The situation described in the previous paragraph could have been avoided through the observation of the sectors of the economy which is heading the new consumption and the realization of how electricity is distributed in the population, thus calculating what might be the most favored sectors to invest in certain sectors of the industry. Thus the energy investment that affects the public transport sector may have a more noticeable for people with limited resources that an investment in the copper industry, notwithstanding that in both cases can be viewed a positive stimulus

---

<sup>49</sup> See, Energy in America: an interface that integrates. Gerardo Honty, Journal of Foreign Policy. PP 124.

<sup>50</sup> See note N<sup>o</sup> 41.

for economy, which in the first case directly reflected, for example a decrease in the value of the underground passage, while in the second case, the positive effect will be indirect, the generation of jobs that can bring about greater investment in supply energy for the large copper mines.

In summary, in both cases it is possible to observe the same subject favored the most vulnerable, with the difference that the investment effects take longer to be seen in the case of the generation of jobs, since in this case the subject will be benefitted to the extent that is used in the construction of a mine or later is used in the process of operating the same, further spreading the benefits of their work among family members. In the second case, by contrast, the investment aims to reduce the cost of transportation energy, which directly benefits each of the members of the same family<sup>51</sup>.

Finally it should be noted that another related index as stated above is energy efficiency. In this sense, recent studies show that Latin American energy consumption is always increasing in accordance to the growth of the economy, however, does not diminish in the same way when there is recession. In corroboration of this we can say that today produces more than 7% of energy in 1980 to generate the same unit of a property, which makes it evident that the region has not pursued policies of rational use of energy resources which in addition to alleviating the energy demand decreases production costs associated with the production of goods and services.

## **2.5 Towards the creation of a supranational body?**

For decades the issue of energy in Latin America, has been a matter of sovereign states. In this way, exploitation and transformation of energy resources such as oil and gas has been in state hands, leaving the private equity relegated to the background. At this time, was the Inter-American Development Bank and World

---

<sup>51</sup> Energy in America: an interface that integrates. Gerardo Honty, Journal of Foreign Policy In this sense, the author states that besides being slow the effects of investment to overcome poverty in power generation projects to create employment, these initiatives have a low occupancy rates in relation to the energy consumed . PP 125.

Bank financial agents which allowed the construction of infrastructure, energy assets falling under the ownership of States.

Subsequently, as described in the preceding paragraphs, the reforms initiated in Chile permeated the rest of Latin America, generating a series of reforms that eventually transfer ownership of state enterprises into private hands, changes made as a way to alleviate corruption installed in many South American countries<sup>52</sup>. The changes were endorsed by the Inter-American Development Bank and World Bank, organizations that began to demand greater participation of private investment, in addition to the increase of free competition and the establishment of new regulatory frameworks. At this point, are the States who are residing in the background, being able to participate in energy activities, not in the business role, but by way of market regulation.

Certainly the benefits of the multilateral banks was related to the privatization of the sector, being only related to the price reduction, linking the concept of efficient use of resources by firms' access to cheaper sources of energy resources. Therefore, from this time, it became increasingly difficult for the States any attempt to reflect in the price of energy internalization of the costs associated with their generation. From that moment, Latin American countries began to compete against each other, to ensure investors a low-cost energy supply<sup>53</sup>. All this is contrary to a policy of protection of energy reserves in the long term.

On the contrary, a policy convergence in the energy field by Latin American countries and specifically on expanded Mercosur countries<sup>54</sup> should advance political agreements to define the rules of the game in the long term and not just ensure the injection of foreign capital in the present. Understanding long-term, protection of fossil energy sources such as oil and gas, with a view to establishing a regulatory framework that includes the absorption of environmental costs associated with the exploitation of these resources, set standards of efficiency , and even the rules

---

<sup>52</sup> Energy in America: an interface that integrates. Gerardo Honty, Journal of Foreign Policy. PP 120.

<sup>53</sup> This is the case of investments in sectors of the industry called "Energ-intensive", as in the case of industries engaged in aluminum metallurgy and cement.

<sup>54</sup> Extended Mercosur: Southern Common Market made up of four countries founders, namely Argentina, Brazil, Paraguay and Uruguay, which add Bolivia and Chile as associate members. \* See Adriana Dreyzin.

regarding greenhouse gas emissions and other effluents. Objectives, moreover, the Mercosur countries should jointly negotiate if they want to enroll in an agenda for negotiations with developed countries. Thus, it is essential to raising a consistent and unique position in this regard, since it is the only way to have greater bargaining power in the context of a globalized economy.

However, the political sphere is not the only angle from which it can be addressed energy integration, must also be analyzed in its economic context. In this sense, the energy sector studies conducted by organizations such as is the case OLADE<sup>55</sup> demonstrates the comparative advantage of the region regarding the availability of primary energy. Indeed, the region is immensely rich in oil reserves, natural gas and mineral coal, in addition to a major hydroelectric potential, however, is still poor in terms of generation capacity and hence, consumption continues to remain low. All this shows clearly evidence of the delayed of Latin America from the industrialized countries.

An energy integration project, as glimpsed in the Mercosur through binational integration agreements<sup>56</sup>, is a bet that must be evaluated in the long run in terms of costs and risks involved in their planning and to strengthen necessarily integrated tools for the exploitation of resources. Shall otherwise expand the capacity of enterprises extracting both, private and state, in charge of the reservoir and power

---

<sup>55</sup> OLADE: as indicators of the Latin American Energy Organization, Latin America and the Caribbean, 2005, produced about 9% of energy world, consuming 6.8% and 2.2% export. Displaying a growth of 3.7%. As for oil and its derivatives, they represent about 13.5% of world reserves and 13.8% of the production, the main source of energy for domestic consumption (48%) well as for export. The main exporters to the world are Venezuela, Mexico, Colombia, Ecuador, Trinidad and Tobago, growing near 60% extra-regional trade in recent years. Natural gas representing 5.7% of world reserves and 7.7% of production world, the second most consumed energy resources, accounting about 22% of domestic consumption, with the greatest concentration Mercosur expanded consumption (participation of Bolivia and Chile as countries partners). In the case of coal, it represents a low turnout world both in the amount of reserves and the production (1.7% and 1.3% respectively), without prejudice which ranked second in the global consumption matrix and only the fifth in the energy matrix (5% of total consumption). Finally, with regard to potential hydropower, it is among the largest in the world about 6.5% of world total, representing about 63% of the total electricity produced in the region.

<sup>56</sup> Binational cooperation agreements may be presented as a good Experiment instance joint negotiations. In this regard, instruments such as Clean Development Mechanisms (CDM), including the Kyoto Protocol may benefit Latin America, through block trading in carbon credits for countries industrialized fail to move enough emissions. In the there are already concrete examples of clean development mechanisms used in Mexico and Brazil. (View) Rolf Linkohr, "Energy policy Latin America: between state and market." *Revista Pensamiento Propio*, July 2006, Rev No. 22. PP 101.



generation<sup>57</sup>. Conversely, if you choose to marginalize the state enterprises in the energy production, in many cases it is necessary to pay allowances to cover the gap between market prices and prices set under future international cooperation agreements.

In addition to the above, you must create mechanisms to overcome the difficulties in obtaining financing from private banks and multilateral, therefore it will be important to have state support. For this reason, it will be vital to have a strong political will, which is difficult to happen under the light of restricted views about energy use prevailing in the region and concepts such as privilege and control dependence. This situation, coupled with the nationalistic positions of some States, a likely economic patriotism, progress is difficult to envision a supranational direction which include the transfer of sovereignty of States for a combined treatment of energy resources. An example of this vision controller, has been the policy pursued by Bolivia during the last decade, coming to raise the slogan "not a molecule of gas to Chile", in relation to its decision not to supply gas to the Chilean market, while were not accepted their demand for a sovereign outlet to the Pacific.

Finally, another major difficulties to be overcome Mercosur countries, is that with the exception of Bolivia and Venezuela, other countries do not have significant energy surplus, which is a clear signal that governments will engage in first term to ensure their domestic supply the best possible price. Therefore, the security of the region depends on diversifying the array, which will involve incorporating non-conventional renewable energies such as wind, solar, geothermal, biomass<sup>58</sup>, in addition to

---

<sup>57</sup> Raul Sohr, *Energy and Security in South America: Beyond the materials premiums*. PP 154

<sup>58</sup> Non-Conventional Renewable Energies, are sources of supply that environmentally friendly. This does not mean they do not cause effects impacts on the environment, but they are infinitely less if compare the environmental impacts of conventional energy (Fossil fuels: oil, gas and coal, nuclear energy, etc..) And also are almost always reversible. According to a study on "Environmental Impacts Electricity Production" environmental impact in generating electricity from conventional energy is 31 times higher than the renewable energy. As important environmental benefits can highlight the non-emission of polluting gases such as those resulting from combustion of fossil fuels responsible for global warming planet (CO<sub>2</sub>) and acid rain (SO<sub>2</sub> and NO<sub>x</sub>) and non-waste generation difficult to treat hazardous and posed for generations a threat to the environment as related to radioactive waste the use of nuclear energy. Other advantages to draw energy renewables are contributing to regional balance, as they can installed in rural and remote areas, and reduced dependence external supply, and that renewables are autonomous, while fossil fuels are only a limited number countries. The Sun is the source of all renewable energies: Earth causes the pressure differences that give rise to the winds: wind energy source. Order the water cycle, causing evaporation leading to the formation of clouds and thus rainfall: source hydropower. Plant serves for life and growth:

conventional renewables such as hydropower, the energy matrices each of the countries that make up the Mercosur.

## **Chapter 3 Mercosur: Energy efficiency programs and renewable energy.**

### **3.1 Mercosur, renewable energy and energy efficiency.**

Energy is a vital element in overcoming the major indices of poverty affecting the region, to achieve this objective, it is essential to implement appropriate reforms of regulatory frameworks, meaning those, which promote long-term goals Such as the sustainability of natural resources. Otherwise, as already has been anticipated in the previous paragraphs, a policy of promoting only the low cost of energy, will not ensure the delivery of the next 50 years<sup>59</sup>. In this sense, the creation of a supranational regulatory body should be oriented towards a policy of promoting the rational use of energy, meaning that, which favors the increase in productivity, while reducing the risk of rationing or increased costs, reduces pollution and helps conserve nonrenewable natural resources.

Among the elements to be considered responsible for regional policy, is the incorporation of renewable energies, setting targets or quotas for the participation of these energies in the matrices of the associated countries. This requires advance gas interconnection projects<sup>60</sup>, but it is also essential to explore new technologies for

---

source biomass. Is the direct source of solar energy, both thermal and photovoltaics. To see more: <http://www.olade.org.ec/proyecto/energias-renewable> [www.enbuenasmanos.com/articulos/muestra.asp?art=243](http://www.enbuenasmanos.com/articulos/muestra.asp?art=243).

<sup>59</sup> Years of natural reserves in South America: studies indicate that oil and gas in Latin America can reach only 40 years, the estimate is conservative, because Venezuela has reserves just behind Saudi Arabia. Brazil for its part, has managed to extract much oil in the adjacent sea, which has begun to become exporter. However, there is no full certainty about the size of these reserves, nor its projection in real time. View Linkhor Rolf, "The American energy policy: between the state and the market. " Magazine Pensamiento Propio, July 2006, Rev No. 22. PP 100.

<sup>60</sup> Within the gas interconnection projects, the most important is the project in Venezuela, involving the construction of a major gas pipeline depart from that country go through Brazil to Argentina to reach with subsequent integration of Bolivia, Paraguay and Chile. Its cost is estimated will be approximately \$ 20,000 million, creating approximately one million construction jobs. Its production would be of 150,000,000 cubic meters of gas over 8,000 km. (It is projected that the total of 335 million cubic meters of natural gas

the production of electricity, such as wind power or small hydro or in passing energy<sup>61</sup>.

However, not only through the generation of electricity supply problems solved, it is also necessary to find alternative energy for transportation, an example of the use of alternative fuels for transportation, is a project that began in the 70 in Brazil by the military government initiative. Proposal to develop a form of fuel based on the fermentation of sugar cane, which is what is known today as ethanol<sup>62</sup>.

As the aforementioned measures will help reduce the use of non-renewable resources (oil, natural gas and coal) and eventually the decline in demand for raw materials by the company, in turn cause a structural change in the economy by reducing energy consumption in response to reduced use of raw materials. In this sense, recycling of waste and scrap, by reintegrating them into the production process also produces a favorable effect on the performance of non-renewable resources, and it lessens the demand for new inputs from society, all of which can have visible effects on citizenship, which is the reduction in electricity and gas bills.

---

consumed per year 2030 100 million cubic meters will come from Venezuela). However, this point is disputed by the experts as to the viability of the project due to it is not profitable to transport gas to more than 4,000 miles due to loss of pressure in that case preferably in the form of transport liquefied gas by sea regasify the terminals, and on the other hand, there are some doubts about the adequacy of Venezuelan reserves to supply the Mercosur countries, to which must be added the environmental impacts that means crossing between 2,000 and 3,000 km of the reserve in the Amazon. See Rolf Linkhor, "Latin American energy policy at state and marketplace. " *Revista Pensamiento Propio*, July 2006, Rev No. 22. PP 95, and Mario García Molina, "La energía como motor para la integración de América Latina", *Compilación Retos y perspectivas de la integración energética en América Latina*.

<sup>61</sup> Wind Energy Hydroelectric passing \*\*.

<sup>62</sup> Brazil developed in the eighties a program for obtaining alcohol from sugar cane. Today, the alcohol used as fuel is supplied in the Brazilian market without any Grant then that after 2003, the car engines start to operate with a new technology called ecoflex allowing the indiscriminate use of gasoline and ethanol. Rolf Linkhor, "Politics American energy: between the state and the market. " *Thought Magazine Own*, in July 2006, Rev No. 22. PP 101, 102.

### **3. 2 Mercosur and nuclear integration projects:**

In the field of nuclear energy, Mercosur already has 4 nuclear reactors, two are located in Argentina and two in Brazil<sup>63</sup>, planning to build more reactors in each country. However, the construction of such plants has not been without controversy, in fact, green parties and environmental NGOs have been the main opposition to such projects, arguing that the use of enriched uranium, produces waste highly polluting.

Opposing currents have influenced European governments; an example of this is the cessation by the German government to build new nuclear plants. And if we go across the Atlantic in the United States, the battle against the proliferation of nuclear weapons, has increased the level of pressure exerted on the uranium-producing countries, around lower their production quotas. Indeed, these pressures have been felt in Brazil, which has had to postpone its ambitious plan to become a leading exporter of enriched uranium by 2015<sup>64</sup>, given the northern country tries to close Iran and North Korea the ways of nuclear fuel supplies<sup>65</sup>. This is explained in view of the mistrust that this isotope deal for military purposes<sup>66</sup>.

---

<sup>63</sup> In Latin America there are three countries with nuclear projects consolidated What are Argentina (Atucha and Embalse), Brazil (Angra I and II) and Mexico (Laguna Verde). However, Argentina's future projects (Atucha II) and Angra III is now paralyzed. This shows that Latin America nuclear projects have great success in the opinion public. (View) Rolf Linkohr, "Latin American energy policy: between State and market." Revista Pensamiento Propio, July 2006, Rev No. 22. PP 100.

<sup>64</sup> Brazil inaugurated in May 2006 a modern production plant for uranium Rich, located in the town of Resende, although it is projected that in a first production would be aimed only at nuclear plants Angra I Angra II and then III, is projected to run in 2014 Brazil can begin to supply the world market. Rolf Linkohr, "The American energy policy: between the state and the market." Magazine Pensamiento Propio, July 2006, Rev No. 22. PP 102. (see).

<sup>65</sup> See, Jimena Villanueva Florencia "Nuclear program North Korea: A power without power, "the Argentine Center of International Studies (CAEI) Asia-Pacific program. See, Diario Tiempo Argentino, Published on January 23, 2011, "Tehran Revive the agreement with Brazil, Iran's nuclear plan is still forming. " Hit another failure of negotiations between Iran and the United States and its allies in the Group 5 + 1 on the Iranian nuclear issue in a round Dialogue in Istanbul. In Tehran, meanwhile, revived an old plan agreed with Brazil and Turkey, but rejected by Washington, to enrich uranium in Russia. ¶ The two days of talks between Friday and Saturday ended without results to the "unacceptable" conditions imposed by Iran, he assured the head of European diplomacy, Catherine Ashton. ¶ In fact, the emissary said he did not provide new meetings between Iran and the 5 +1 group (composed of States U.S., China, Russia, Britain, France and Germany), but said that doors remain open if Tehran proves that its nuclear program is peaceful purposes. ¶ "The process can go forward if Iran chooses respond positively, "said Ashton. "We hope to listen to Iran after thinking ". ¶ However, the head of the Iranian delegation Said Jalili, said new talks are scheduled, but without a precise date and venue. But he warned that any agreement must include his country's right to

However, it is difficult to predict the future of nuclear energy in the Mercosur, given that governments avoid making statements. Nevertheless, there are certain symptoms that allow us to infer some sort of review of old projects asleep by southern governments, such as Brazil with the expectation of completing their third nuclear power plant (Angra III) and projected as a provider of enriched uranium by the year 2014 through its modern Resende plant, built in 2006.

Not many meetings between the leaders of Mercosur that open discussion of nuclear integration projects, however, this is not synonymous with lack of cooperation projects. Indeed, binational cooperative agreements like the one signed between the government of Argentina and Brazil, and the draft cooperation agreement between Argentina and Mexico to create fourth-generation nuclear plants<sup>67</sup>, which would be completed in 20 to 30 years, all of which gives an account of progress in the region.

---

develop nuclear policy. ☐ Beyond Failure Istanbul, Iran declared himself ready to revive a consensual agreement year past governments of Brazil and Turkey, but rejected by the House White, which provides for delivery of low-enriched uranium to Russia exchange of highly enriched uranium. ☐ "In line with the Declaration of Tehran, Iran is ready to receive Russian 120 kilos (uranium enriched to 20%) and give nuclear material to store in Turkey (1200 kilos of low enriched uranium), said Iranian Ambassador to the International Atomic Energy Agency, Ali Asghar Soltanieh.

<sup>66</sup> All substances in the earth are composed of the combination of 118 building blocks. Some, like gold, are composed a single element. Others, like water, are composed of two elements (Oxygen and hydrogen). And most are composed of many elements. The smaller part can be obtained for each element is called atom, and This, in turn, is divided into protons, neutrons and electrons. Protons and neutrons form the nucleus and orbiting electrons. Composition of substances: what distinguishes the atoms of an element of another is the number of protons contained in the nuclei of atoms. Atoms having the same number of protons but different numbers of neutrons called isotopes of an element. Isotopes of an element Uranium is a element that contains 92 protons and 92 electrons. Naturally, in the crust can find two kinds of uranium, which contains 142 neutrons, called uranium-235 by the particles in its nucleus, and which contains 146 neutrons, U-238. Both are isotopes of uranium. The U-238 not be used as nuclear fuel, but the U-235. To produce a nuclear reaction, the U-235 may be bombarded with a neutron. The U-atom 235 decomposes and releases a few neutrons collide with other U-235 atoms, breaking them down and releasing more neutrons which, in turn, collide and repeat the process until they consume all the available U-235. Is what called chain reaction. In each decomposition releases large amount of energy. It so happens that the Earth's crust U-235 is less than 1% of total uranium. The rest is U-238 and both are mixed. For an efficient nuclear fuel is necessary "to enrich uranium," ie, increase the proportion of atoms U-235 with respect to the U-238 for this chain reaction does not consume U-235 before getting the necessary energy. If enriched uranium about 5% is sufficient for use as reactor fuel nuclear, but when it comes to extremely high numbers, about 90%, energy released will be the size of an atomic bomb. In this sense, as column published in The Daily Universe, 27 August 2003, several Inspectors from the International Atomic Energy Agency (IAEA) would found two types of enriched uranium not needed for programs type nuclear energy. In fact, at that time issued a report noted that non-compliance by Iran of the Treaty nuclear nonproliferation. At that time the United States insisted hiding his thesis through the program's true purpose Iran, this is the construction of military weaponry. See *Diario El Universo* August 27, 2003. "

<sup>67</sup> Recently, on March 4, 2011, the presidents of Argentina and Brazil, Cristina Fernandez and Dilma Rousseff, respectively, reaffirmed their commitment to bilateral integration through the signing of agreements in which highlighted the nuclear cooperation. Both countries signed, in agencies through their

However, there is a long distance to get to emulate a nuclear cooperation treaty to the European Union-style, it is much longer to create a joint authority in these matters, this situation makes clear the lack of significant progress in the Mercosur, about the creation of institutions with binding decision-making power, which is why it is necessary to analyze the current institutional framework of Mercosur and its ability to give life to a supranational body on energy matter.

### **3.3 The Brazilian way as a model for South America.**

Brazil is the most innovative country of South America in terms of ideation of alternative sources of energy supply, such as biofuels. In fact, this country can be considered as the great reference point to which they must look at developing countries to achieve the independence of energy supply.

Before addressing on the development of the Brazilian energy matrix necessarily I have to mention the history of industrial development in Brazil, which is directly linked to energy development. Brazil has gone through several stages of intensification of their industry, which may distinguish four periods: a first stage of prohibition, from 1500 to 1808, a second call for implementation from 1808 to 1930, (which in turn is divided into two phases)<sup>68</sup> third stage of industrial revolution from 1930 to 1956 and finally a fourth stage called the Internationalization of the industry, from 1956 onwards. The latter period, noted for the vigorous development of the steel industry (founded in 1946), for which they had to overcome a series of

---

nuclear research and development, an agreement for the construction of multipurpose reactors for research, on what constitutes a partnership in the peaceful use of such energy. The statement was welcomed by political scientists and researchers highlighted the character of "sovereign" decision. Through a cooperative agreement between the Comisión Nacional de Energía Atómica (CNEA) of Argentina, and Comissão Nacional de Energia Nuclear (CNEN) of Brazil, was screened the design and construction of two nuclear reactors multi purposes with aims of research. In the final declaration of the two mandatory at the end of Summit, it was highlighted the "high degree of integration" that the two countries reached in bilateral nuclear cooperation, to be held in the scope of the Binational Commission of Nuclear Energy (Coben). Both Rousseff Fernandez and reiterated that nuclear cooperation be "settled in the political dialogue in building confidence and in close coordination on safeguards, "which" is inalienable common heritage" of the strategic partnership between the two countries. The project includes that the reactors have similar technical specifications and 30 MW, which will be used to scientific evidence, no military applications.

More information <http://www.paginadigital.com.ar/articulos/2011/2011prim/tecnologia02/mundo-17022011.asp>.

<sup>68</sup> See [http://pt.wikipedia.org/wiki/História\\_da\\_industrialização\\_no\\_Brasil](http://pt.wikipedia.org/wiki/História_da_industrialização_no_Brasil).

obstacles linked to each other, to the lack of electricity, the low production of oil and poor telecommunications and transport interconnections<sup>69</sup>.

However, the real urgency to change the composition of energy supply sources, emerged following the 1973 oil crisis and rising interest rates, since at this time Brazil was supplied almost 80%<sup>70</sup> of imported oil, a situation against to which the military government<sup>71</sup> decided to create an alternative source of supply of energy for transport. This initiative was a unique project worldwide, and is what is known under the name of the program "Pró-álcool"<sup>72</sup>.

Thus emerges the ethanol, biofuel that captures the attention of the industrialized markets due to its production potential<sup>73</sup>. In this way, the introduction of ethanol to the Brazilian market was gradual, the first step was to mix anhydrous alcohol with gasoline, with the aim of reducing the import of alcohol. And in a second phase, they encouraged the use of pure ethanol to substitute gasoline.

Throughout this period, Petrobras<sup>74</sup>, has been responsible for buying all the sugar cane production, as well as assume the transport, storage, distribution and mixing of

---

<sup>69</sup> See "El Largo y Sinuoso Camino del Desarrollo Industrial de Brazil", autores David Kupfer, Joao Carlos Ferraz y Laura Carvalho, Instituto de Estrategia Internacional, Cámara de Exportadores de la República Argentina, Buenos Aires, Diciembre de 2009.

<sup>70</sup> See, Series on Trade and Energy Security Energy Security in South America: The Role of Brazil, Adilson de Oliveira, 2010

<sup>71</sup> See, <http://www.americas-fr.com/es/historia/brasil.html>.

<sup>72</sup> Implemented In 1975 the National Alcohol Program, signed by President Geisel, the program was to: promote the production of alcohol., increasing the supply of raw material (raw materials).

<sup>73</sup> The Brazilian government promoted economic studies for the production of alcohol on a large scale, performing technology transfer and to provide subsidies for alcohol distilling plants, installed automotive industry in Brazil at that time, Volkswagen, Ford, Fiat and General Motors-adapted; vehicle engines to run on alcohol fuel. That came on the market two versions of vehicles: 100% engine moved with alcohol and conventional gasoline version. The first car to run on 100% alcohol was the Fiat 147, 1978. Hasta1986 Since then, the alcohol car gained popularity among Brazilians, to the point that most of the vehicles manufactured by the automotive industry using the fuel. In 1986 production reached 619,854 cars, representing 76% of all vehicles produced in that year. See., <http://www.americas-fr.com/es/historia/brasil.html>..

<sup>74</sup> Brazilian state energy company dedicated to the exploration, production, refining, transportation and marketing of oil and gas, petrochemicals, biofuels and their derivatives. It also participates in the market for electric power generation and renewable energy sources. Some of their products include: gasoline, ethanol, lubricants, oils, asphalt, fertilizers, LPG, LNG, CNG, among others. Works in 4 continents and in over 25 countries. It has about 9,000 stations, 15 refineries, as well: 133 production platforms (86 fixed and 47 floating), 100 drilling rigs (48 shipping), about 15,000 wells, about 26,000 km of pipelines, 5 floors biofuel, 2 fertilizer plants and a shipping fleet of 172 vessels (52 own). According to its latest annual report published in 2009, the company had a daily production of 2.526 million barrels of oil equivalent (Mboe) and

alcohol with gasoline, targeting the gas station, the sale of ethanol to final consumers. Thus, the objectives have been focused on ensuring low prices for which consumers have subsidized ethanol producers.

However, it was due to a rise in international sugar prices, the end of the eighties<sup>75</sup>, which led to a decline in alcohol consumption, a situation that triggered the decline in car sales moved with this type of fuel. Ethanol became scarce in the market (its sales fell 11.4%)<sup>76</sup>, to the point that in 1991 the Brazilian government had to import from the United States<sup>77</sup>. This measure was accompanied by a progressive reduction of subsidies for sugar cane production, which caused the near extinction of the "Pró-

---

LNG, which represented an increase of 5.25% over the previous year, while its installed capacity refining reached 2.2 Mb / d. Moreover, its proven reserves of oil and natural gas fell in 2009 to 14.900Mbep 220Mbep. Through its 18 power plants (owned and leased) has a total installed capacity of 6.136MW. Petrobras, considered the 4 th largest energy company in the world according to PFC Energy, operates in 12 countries in Latin America, including Argentina, Chile, Mexico, Colombia and Bolivia. See, [http://www.bnamericas.com/company-profile/es/Petroleo\\_Brasileiro\\_S,A,-Petrobras](http://www.bnamericas.com/company-profile/es/Petroleo_Brasileiro_S,A,-Petrobras).

<sup>75</sup> See, <http://www.americas-fr.com/es/historia/brasil.html>.

<sup>76</sup> See, Sugarcane based bioetanol: energy for sustainable development. Coordinations: BNDES and GCEE, Rio de Janeiro: BNDES, 2008. PP 260-261, also available [www.sugarcanebioethanol.org](http://www.sugarcanebioethanol.org). Research developed with the cooperation of stakeholders, such as FAO and ECLAC of the United Nations.

<sup>77</sup> In the United States sugar cane is grown in Florida, Louisiana, Hawaii, and Texas that have tropical climate suitable for cultivation. The first three floors distilling ethanol produced from sugar cane in the United States in Louisiana will be operational by mid 2009. Sugar-producing plants in Lacassine, St. James and Bunkie were converted using Colombian technology and investment to distill ethanol from sugar cane. It is expected that these three plants to produce at a profit of 378 million liters (100 million gallons) of ethanol within five years. However, the ethanol industry distilled from sugarcane developed in Brazil is much more efficient than the U.S. industry based on corn supplies. Indeed, in 2007, the Brazilian produced ethanol distilling plants for \$ 0.22 per liter, compared to \$ 0.30 per liter of ethanol made from corn, as well as U.S. farmers receive from the Federal Government a grant of USD 0, 51 per bushel of corn produced. In March 2007, the "ethanol diplomacy" was the focus of the tour of President George W. Bush in Latin America, through which Bush and former Brazilian President Luiz Inacio Lula da Silva, sought to promote the production and use of ethanol distilled from sugar cane in Latin America and the Caribbean. The two countries also agreed to share technology and set international standards for biocombustibles.<sup>4</sup> Brazilian technology transfer based on the distillation of sugar cane would allow him to several Central American countries like Honduras, Nicaragua, Costa Rica and Panama, several countries Caribbean and several countries of the Andean Community ethanol exports to the U.S. duty free, thanks to free trade agreements in force. As an example, while the U.S. imposes a tariff of USD 0.54 per gallon of imported ethanol, the countries that signed the Free Trade Agreement between United States and the Dominican Republic that would be exempt from import tax if they produce ethanol from agricultural products cultivated in the country. The expectation is that through technology to produce ethanol from Brazilian sugar cane, these countries could become exporters to the U.S. market in the short plazo.<sup>30</sup> ECLAC in 2004 had already submitted a proposal to develop a biofuels program Central America, <sup>31</sup> building on the tradition in the region in the cultivation of sugarcane and with intent to revive the attempt which took place in the eighties to replicate the Brazilian experience to produce alcohol as fuel in Central America. <sup>32</sup> August 2007, Brazilian President toured Mexico and several countries show due and the Caribbean to promote Brazilian technology etanol.<sup>33</sup> See <http://www.aporrea.org/internacionales/a33163.html>.



álcool”<sup>78</sup>. To the extent that between 1991 and 1999 the Brazilian government reduced its intervention in the market of ethanol, reducing subsidies with the aim of liberalizing trade. The only advantage that remained was the difference in tax on cars with flex engines or running 100% ethanol<sup>79</sup>.

The advantages of incorporating ethanol to power supply sources say not only relation the increased autonomy of supply, in this sense one of the great achievements of the "Pró-álcool" in Brazil, has been a significant drop in emissions of greenhouse gases by nearly 90%<sup>80</sup> compared with the emission of gases derived from oil. Moreover, the Brazilian program based on the production of ethanol from sugar cane, limited adverse effects on farmland compared to other types of plantations, as is the case of corn ethanol production (United States)<sup>81</sup>.

However, the ethanol boom has also raised difficult problems; one of them has been the increase in sugar production at the expense of pasture, which has caused concern that the cattle, another booming export, should be moved to the Amazon, causing more deforestation<sup>82</sup>. To enhance the performance of sugar cane, Brazilian scientists have mapped the genome, which could allow counting on the authorization of the Brazilian government, the planting of genetically modified sugar.

---

<sup>78</sup> Another factor that contributed to the decline in the claim, is related to some technical problems with engines powered by alcohol, that cold weather did not work properly. During the 90's, and due to unexpected hikes in oil prices, ethanol became blended with gasoline at a ratio of about 20%, as away to reduce the price to be paid by consumers for gasoline. In 1999 only 1,188 were assembled alcohol powered cars. See, <http://www.americas-fr.com/es/historia/brasil.html>.

<sup>79</sup> At this time the only incentive that remained was the tax difference applied (annual registration fees) to cars with flex-fuel operation or fully based on Ethanol, See The evolution of bioethanol fuel in Brazil and the Pro-Alcool program section is Based on: Sugarcane - based ethanol: Energy for Sustainable Development. Coordination: BNDES and GCEE. Rio de Janeiro: BNDES, 2008. Also available online: <http://www.sugarcanebioethanol.org/>

<sup>80</sup> In the environmental area has been a multitude of developments. In the last decade, the area deforested in the Amazon has fallen by 74%, which is partly due to an increase in renewable and clean sources in the Brazilian energy matrix.

<sup>81</sup> For every million cubic meters of cane sugar mixed with gasoline, it stops emitting into the atmosphere app 1.9 million tonnes of CO<sub>2</sub>. See <http://www.biodiesel.gov.br/>.

<sup>82</sup> See, "Las Manos Sucias del Etanol", Carlos Amorin, Gerardo Iglesias, UITA, Montevideo Uruguay, Noviembre de 2009. Con el apoyo de NGG de Alemania y LO-TCO de Suecia.

### **3.4 Some insights about the participation of Brazil in the Latin American integration process.**

The escalation of oil prices in the last decade have encouraged Brazil to explore new deposits of hydrocarbons on the continental shelf, this initiative has enabled them to find a great potential for oil exploitation, which has earned him the possibility of reversing the status net importer of fossil fuels that was in the course of the twentieth century. In this sense, it was because of the discovery of oil deposits in the 90's, which was projected for the end of this decade, the consolidation of Brazil as a major supplier of oil. While this new scenario initially motivated the indifference of the Brazilian economic thinking on the regional energy integration, regarded as a reliable source of provision for domestic supply, there are certain factors that blur the autarkic position of Brazil in relation to countries in the region. In other words, it appears that in the context of the global energy transition, energy integration continues to offer a wide window of economic benefits to Brazil and its neighbors<sup>83</sup>.

In this way, although Brazil currently is projected as a self-sustainable country, is no less true that is projected to double in 20 years the demand for gas, which will not be enough action to strengthen ties with one producer, as is the case Venezuela. Moreover, in the electricity sector, the rise in prices has been one of the factors that have influenced the loss of competitiveness. For This the Brazilian government to curb rising prices, has shown different types of subsidies for the construction of new hydroelectric plants. This initiative is added the study of various proposals for grants to renovate the hydroelectric facilities at prices far below their opportunity costs, which is a mechanism to achieve average fees that are considered economically competitive.

However, despite the great advances in Brazil in the diversification and consolidation of its energy, the country remains dependent on the supply of fossil fuels like gas, by its neighbors, since their production does not even cover their current needs, let alone projections of future demand. Therefore, the integration continues to offer a

---

<sup>83</sup> See, Series on Trade and Energy Security Energy Security in South America: The Role of Brazil, Adilson de Oliveira, 2010. PP 9.

better economic alternative for the increased competition for the supply of energy<sup>84</sup>, all while providing access to energy resources in neighboring countries with low opportunity costs, especially in the Andean countries, such as Peru and Bolivia. In this sense, the creation of a competitive gas market, contributes one part, to reduce dependence on Venezuelan gas provision and the other to maintain some stability in prices.

As for the other South American countries, energy integration advantages even more visible as they are, the opportunity to improve its energy security through access to sources of supply of fossil fuels, which as mentioned in the first paragraph, Brazil has been exploiting from the 90's. On the other hand, offers the opportunity to create joint investigative bodies in the area of creation and development of renewable energy, developed by Brazil with great success since the 70's. All these initiatives, if implemented, could contribute decisively to the overall growth of the region, since a reduction in energy costs may attract more foreign investment, thereby increasing the employment rate, which is a decisive index overcoming poverty affecting the region.

Finally, it is important that energy development in Brazil is far from being limited to programs for generation of biofuels and petroleum exploitation. Indeed, Brazil stands out in Latin American concert as a pioneer in the creation of two nuclear programs such as Angra I and II.

The development of nuclear programs dates back to the early thirties, when it began nuclear fission research, scientists recruited from abroad. Later the discovery of large uranium deposits facilitated the development of the program. In 1940, President Getúlio Vargas signed an agreement with the United States for cooperation in the extraction of uranium and monazite, followed by three other agreements on the United States transferred nuclear technology in exchange for monazite.

---

<sup>84</sup> See, The Role of Brazil, Adilson de Oliveira, Series on Trade and Energy Security Energy Security in South America: 2010. PP 9-10.

In the context of South America, highlights the relationship with Argentina on nuclear cooperation, a country with which Brazil signed in 1980 an Agreement on Peaceful Uses of Nuclear Energy<sup>85</sup>. On this path to find another solution to the problem of the lack of a reliable supply in the region has again questioning the nuclear issue, especially by political and technological cooperation between Argentina and Brazil<sup>86</sup>.

It is noteworthy that in the current international scenario, there are compelling reasons for Buenos Aires and Brasilia to push the issue again as a leading nuclear dialogue on bilateral cooperation and integration, since Brazil has high hopes of becoming a producer of enriched uranium by 2015, capable of supplying the major nuclear-powered industries such as Japan. And Argentina for its part, has a strong interest in supplying low-cost electricity to its major urban centers and industries. Therefore, it is expected that these countries achieve reconcile the legitimate right of access to technology without, puts them in an awkward position against the international community.

---

<sup>85</sup> After several statements in the following years, in 1990 the Presidents Collor de Mello and Carlos Menem signed the Declaration on Common Nuclear Policy of Foz de Iguazu, which is committed to exclusively peaceful use of nuclear energy. A year later, in 1991, the two countries signed the comprehensive IAEA safeguards for nuclear installations. In 1994 Brazil also signed the Tlatelolco Treaty and ratified the 1997 Nuclear Nonproliferation Treaty. See <http://edant.clarin.com/diario/2007/08/21/opinion/o-02515.htm>.

<sup>86</sup> With respect to Argentina, seem to be a political will to strengthen further the nuclear field. It highlights the budgets allocated to complete Atucha II, reviving the heavy water plant Arroyito and Pilcaniyeu uranium enrichment as well as funding to complete in the medium term the construction of low-power nuclear reactor CAREM, See, <http://edant.clarin.com/diario/2007/08/21/opinion/o-02515.htm>.

## **Chapter 4: The way to an international organization.**

### **4.1 Current composition of the organizational structure of Mercosur, what does it take to integrate? Are we on the way to the creation of a supranational body?.**

Before addressing what it takes to create a supranational body, we must approach the concept that crosses the creation of a common market of the south, which is the integration, for which we must first clarify what we mean by integration.

Indeed, integration may be defined as, "a juridical status in which states surrender some of their sovereign powers to a superior being, with the aim of building an area in which people move freely, goods, services and capital above, through the coordination of sectorial regulations and under the control of a joint body<sup>87</sup>"

According to Professor Adrian Dreyzin, in his book "The Mercosur Builder a new source of private international law ", the integration is the creation of an economic space formed by the territories of a plurality of states in which there are no protectionist barriers that may affect the free movement of goods, services and factors of production such as capital and labor, subject to translation<sup>88</sup>."

If we take this concept to the field of energy integration, we can infer that in the current context of Mercosur, we are still far from elucidating the outline of a community organization whose function is to promote the exchange of energy services. Indeed, the structure envisaged by the Treaty of Asunción, was based on a pragmatic vision, which prevented the creation of a body in whom to place the sovereignty of States for the decision in certain matters.

---

<sup>87</sup> See definition of Di Giovanni, Ileana. International Economic Law. Ed Abeledo Perrot, Buenos Aires 1992, p. 145.

<sup>88</sup> "Mercosur, generating a new source of private international law", Adriana Dreyzin of Klor, Buenos Aires, Ed Savalas. PP. 24.

It was the Joint Statement of Energy Ministers and Secretaries of Mercosur<sup>89</sup> and Chile, signed on June 29, 2000, which adopted the set of guiding principles that should guide the process of integration, in this sense we can highlight the adoption of following consensus:

1. The common interest of establishing a way of complementing the region's energy resources.
2. The joint creation of competitive markets in terms of non-discrimination and practices compatible with sustainable development principles.
3. The concurring opinion of the Mercosur countries around the need to optimize the security of supply to users.
4. Promptly complete the technical analysis on specific asymmetries raised by various delegations.
5. The matching will of harmonizing technical regulations on the transport of energy and interconnections
6. The idea shared by the countries of the region about the importance of creating tools that enable the development of regional wholesale markets open and competitive energy exchange. To meet this priority to the analysis of rules and agreements that allow a lively exchange, particularly in spot markets or short term, both for liquid fuels such as natural gas and electricity<sup>90</sup>.

However, in the evolution of the early years of the Mercosur, not displayed the creation of institutions to articulate a policy convergence, which had established common requirements based on which to practice subsequent reforms of the electric

---

<sup>89</sup> The way of market integration in Latin America has a long-standing, in February 1960 establishing for the first time the "Asociación Latinoamericana de Libre Comercio (ALALC), based in Uruguay. Later due to the ambition of autonomy of Latin American economies, this association was weakened until completely extinguished. ALALC was replaced by ALADI, created in Montevideo in 1980. It was only after this partnership to deepen ties begin to create an instance of regional integration. It is targeted first towards the establishment of a common market. However, as in ALADI also showed shortcomings in the ALADI attendant with the absence of integrative goals and deadlines that compromise compliance with the request that requires a process of integration. However, the ALADI agreement allowed the realization of the integration program more important in Latin America, which are agreements between Argentina and Brazil, immediately preceding the Southern Common Market.

<sup>90</sup> Annex to the document prepared by the Inter-American Development Bank, "integration in Mercosur Expanded Energy, Regional Operations Department 1 (RE1), Finance Division and basic infrastructure 1 (RE1/F11), Private Sector Department, Washington DC 2001.

and gas sectors of Argentina<sup>91</sup>, Brazil, Paraguay and Uruguay. In this sense, statements and Mercosur relevant milestones dating back to 1985, the date on which the presidents of Argentina and Brazil, then Raúl Alfonsín and José Sarney signed the Declaration of Iguazú, giving rise to the Joint Commission Bilateral cooperation and integration, whose main task would be to propose and discuss plans and programs related to economic integration. In fact, those serving on the Commission at this time, received as a first job, prepare a report in areas relating to industrial complementation, transportation, communications, scientific and technical development, bilateral trade and third markets and on energy cooperation. This report should be submitted by June 30, 1986.

Subsequently, the Declaration of Iguazú decanted in the approval of twelve Protocols, which undoubtedly is the beginning of what would become a project of economic integration and cooperation, in which eighth paragraph specifically contemplated "energy cooperation"<sup>92</sup>.

It was only in the March 26, 1991, which is signed by the states of Argentina, Brazil Federal Republic, the Republic of Paraguay and the Eastern Republic of Uruguay to the Treaty of Asunción. As to the legal nature of the Treaty of Asunción, was born as a challenge to the ability of countries which are signatories to achieve economic development with social justice. In this sense it is a framework treaty, which does not create a common market, but that plans a sequence to get to their consolidation.

Thus, gave birth to an institutional structure that corresponds to a type intergovernmental organization in which the members that make up this organization are appointed by governments and therefore act in accordance with the instructions they receive from their superiors.

---

<sup>91</sup> Argentina began the reforms in the fields of gas and electricity in 1991, then energy exchanges with the countries of MERCOSUR and associated lead him to become the supplier of natural gas to Chile (partner country), initiated during the decade of 2000 exports to Uruguay and Brazil. Brazil for its part, start practicing your market reform in 1995, deepening the privatization process has not been completed to date. Paraguay on the other hand, has begun a process of transformation, while Uruguay has performed modestly. (View) Energy Integration in the Extended Mercosur, Regional Operations Department 1 (RE1), Finance Division and basic infrastructure 1 (RE1/FI1), Private Sector Department (PRI), Washington DC 2001.

<sup>92</sup> Later in the Act of Buenos Aires was decided to establish a Common Market, which should definitely find made on 31 December 1994. In its annex n<sup>o</sup> 1 specifies the methodology to achieve this common market, establishing the manner in which coordinate macroeconomic policies to that effect should lead to a system of tariff reductions.

If we analyze the organizational structure of Mercosur, which was weakly consolidated after the signing of the Protocol of Ouro Preto<sup>93</sup>, we can see that in all instances in which it has attempted to define the composition of the Common Market, transient systems have been chosen, in which have been intergovernmental bodies which have led the integration processes. All of which, the opinion of Professor Adriana Dreyzin<sup>94</sup>, should be corrected by creating bodies with legislative powers and judicial process, to which it is increasingly important to identify the partial delegation of sovereignty of member states.

Indeed, if we analyze the developments in energy, treatment of these issues through the working subgroups depending on the Common Market Group, does not ensure the adequacy of regulatory frameworks of member countries in a consistent way, whenever these groups have as its main task as a focal point of macroeconomic and sectorial policies. And to achieve this end, we have private sector participation at an early stage, no decision, in which States send a three-member representation for purposes of negotiating matters related to production processes, distribution and consumption of goods and services.

On the other hand, the states have not been able to bring a coherent integration policy, and the consequence of this situation means the abundance of bilateral treaties between many parts who come from different countries, in other words, this system has been presented as a very big trouble, which has relation with the failure

---

<sup>93</sup> The Protocol of Ouro Preto is an important document supporting the Treaty of Asuncion, (founder of Mercosur), signed on December 16, 1994 in the city of Ouro Preto, Brazil, which established the institutional basis of the Southern Common Market. It is divided into 10 chapters and 53 articles, established in its articles, the Common Market Council, the Economic and Social Consultative Forum, the Decision Making System and extensive articles on Peaceful Settlement of Disputes, among other matters regulated.

See

<http://www.espaciosjuridicos.com.ar/datos/OTROS%20TRATADOS/PROTOCOLO%20DE%20OURO%20PRETO.htm>

<sup>94</sup> Adriana Dreyzin of Klor, Advocate. Doctor of Law and Social Sciences at the Univ Nac Cordoba, Argentina. Private international law professor and legal integration, Univ Nac Cordoba. Member roster Mercosur in Argentina. Honorary Academic of the Mexican Academy of International and Comparative Law. Vice-President of European Community Studies Association-Latin America, Mercosur author. Builder of a New Source of Private International Law.



of contracts, which produces and adverse effect, that is the risk increases of failure of attempts to market integration<sup>95</sup>.

Finally, the second stage is reserved exclusively for public officials representing the states parties. This situation is criticized by some experts<sup>96</sup>, who point out that the cause of private participation in the decision-making stage, it is a mistake since they are individuals who are generally in Latin American economies are leading the development and maturation processes of the industries, reason why it would be much more helpful than the technical recommendations of the expert working groups, were immediately assimilated by the private sector, which would be achieved more simply if these groups had the option to participate in decision-making.

#### **4.2 Benefits associated with integration.**

While it is not possible to expect a seamless integration related costs, which implies that in some cases certain solutions may not be considered optimal in the sense that it is possible to introduce certain inefficiencies in the markets, they will always be tolerable and justifiable in expert opinion<sup>97</sup>, because the main objective pursued, which is the integration of the markets. Indeed, while it is possible to verify certain inefficiencies, they always will be absorbed by the benefits stemming from the integration, which are, the greater efficiency and security of energy supply.

According to studies conducted by the Inter-American Development Bank, the benefits of integration can be classified into two types:

1. Quantitative
2. Qualitative.

---

<sup>95</sup> Challenges and perspectives for energy integration in Latin America, "La energía como motor para la integración de América Latina", Mario García Molina. PP 20.

<sup>96</sup> See "Mercosur, generating a new source of private international law ", Adriana Dreyzin of Klor, Buenos Aires, Ed Savalas. PP. 24.

<sup>97</sup> See Energy Integration in the Extended Mercosur, Regional Operations Department 1 (RE1), Finance Division and basic infrastructure 1 (RE1/FI1), Private Sector Department (PRI), Washington DC 2001.

Within the first one considers the benefits that result in lower prices, which may include reduced use of nonrenewable fuels, in exchange for an improvement in the office in the generation fleet, which is attributed the specific case of Brazil, to greater use of water stored in reservoirs, hydrological years poured into media rich or having no demand able to use this stored water.

On the contrary, qualitative improvements are benefits such as increased competition generated by the opening of the regional market, which turns out to be a consequence of the greater number of actors involved in energy generation, as well as the largest volume and market regulatory stability.

In the study developed by the Inter-American Development Bank, 2001, projections drawn by experts based on the benefits associated with the integration, justified the belief that there would be virtually no losers in the process of integration, due to the benefits consumers would be significantly higher compared with the costs associated with the expansion of the transmission, all of which was apparent from the following assumptions:

1. The performance boost of energy resources, because the common use of the plants, mainly taking into account the secondary energy use in Brazil, avoiding or greatly reducing any spills.
2. The decrease of the need for reserve power to meet demand in dry years.
3. Increased competition in the short term market and the expansion of generation.
4. The optimization of system service quality.

However, in becoming the next 5 years, energy integration projects in Mercosur should take difficulties caused by a distortion between the existing state projects and new oligopolistic trading schemes. In this regard it is noteworthy that not always true as stated in paragraph 3 above, in the sense that integration does not always produce an increase in competition in the short term, since the development of certain markets such as hydraulic, specifically, creates the need for administrative regulation, which in practice has delayed the growth of certain markets, as has happened in Brazil with the development of the electricity market<sup>98</sup>.

---

<sup>98</sup> (See) Challenges and prospects for energy integration in Latin America. "Energy as an engine for the integration of Latin America, Mario García Molina. (2006) PP 17.

Moreover, the electric transmission system has a state such participation in most countries of Mercosur<sup>99</sup>, however, the introduction of private operators in the area of electrical integration has created some imbalances in the regulation, which the fact has triggered the application of barriers that hinder the implementation of interconnections.

In the case of gas, although the appearance of its market is expansive in nature, compared with the electricity market there is a clear lack of competition in the exploitation of gas fields, which is directly related to the progress in Latin America in the process of nationalization of energy resources, recognizing the State as the only entity entitled to invest and operate either directly or through their companies, domestic goods, consisting in this case for energy resources.

As for the financial viability of projects, they should have been evaluated from the perspective of the common good or social benefit works or infrastructure can enter and turn the inverter, which seeks to maximize the financial and economic results. In this regard, studies indicate that there is some relationship between the common good and economic performance of projects, whenever a plan is inconvenient for the common good can introduce risks of default by the effect of pressure on the parties concerned. In this sense both in the market for gas and electricity, is of utmost importance to ensure the sustainability of market prices. In this sense, the new gas interconnection projects in Argentina, Bolivia and Brazil, should just be related to ensuring competitive prices in the generation market, which will affect the maintenance of prices at a level accessible to users.

In the case of electrical interconnection<sup>100</sup>, to ensure recovery of investment will be important to verify certain conditions, such as: The existence of long-term contracts, as well as the effectiveness of long-term project and no involvement of the quality electrical system.

---

<sup>99</sup> This is what happens in countries like Paraguay, Brazil, Peru and to a lesser extent in Argentina. See Challenges and prospects for energy integration in Latin America. "Energy as an engine for the integration of Latin America, Mario García Molina. (2006) PP 16.

<sup>100</sup> See note N° 97

Based on the above in the previous paragraphs, we can infer that it is feasible to move ahead in deepening interconnection networks, for which markets must be strengthened through the creation of a regional organization. For this reason, in future bilateral integration agreements probably will be associated with inefficient forms of energy integration, since in the long run may reduce the extent of interconnections, or prevent the optimal level of trade in energy that would be possible to achieve an international organization, all of which will impact on the level of efficiency of regional energy market.

For all the above, it is essential that in the coming years the Mercosur countries work together to define the compliance of its regulations, the previous with the aim of creating a system of expansion and to avoid transport pricing inefficiencies or inequities international transactions.

The creation of an independent regional body responsible for keeping the international market rules and to resolve disputes between the parties and monitor the functioning of the market is an increasingly more important situation to define in the context of institutions that includes the Mercosur, given that it depends on the future stability of the region's energy supply.

## **Chapter 5: The treatment of energy in comparative law and the WTO.**

### **5.1 Energy Integration: The case of Europe**

In general, the energetic relationships represent a good example of analysis the international political economy, in response to the notorious state intervention in production, trade and energy transit. On the other hand, energy business has a direct involvement in internal security affairs of States, due to the incidence that this have concerning to the accessibility, cost and stability of the energetic supply, for the production of goods and services.

Due to the above in the preceding paragraph, it is important to highlight the way in which energetic relationships give life to international relationships, structuring dependency relations and interdependency between the producers and consumer states, all of which constitutes a crucial precedent for the development and intensification of cooperation and integration at the continental level.

Growing demand for primary energy worldwide is a challenge for large consuming regions, consisting of secure energy supply. In this sense, from 2004 onward, world oil demand grew about 3, 4%, while gas demand is about 3.3%, primary energy consumption increased by 4.3%<sup>101</sup>. This unexpected increase in demand, has left open the shortage of supply, both in terms of production and refining capacity in the specific field of oil. According to data produced in 2004<sup>102</sup>, OPEP supplied figures close to 95% and 97% of its total production capacity, to which we must add the fact that about 60% of world oil reserves are located in the Middle East, making it likely that future increases in demand will have to be taken by these countries.

---

<sup>101</sup> Kirsten Westphal, "Flujos energéticos, cambios en la correlación de poder y relaciones internacionales", Retos y perspectivas de la integración energética en América Latina.

<sup>102</sup> See;  
[http://www.opec.org/opec\\_web/static\\_files\\_project/media/downloads/publications/MOMR\\_February\\_2011.pdf](http://www.opec.org/opec_web/static_files_project/media/downloads/publications/MOMR_February_2011.pdf).

It is because of this, the growing demand from major importers, namely U.S., EU, Japan and China, not to modify their consumption policy in the medium term, by diversifying their energy sources and incentive domestic saving policies, makes possible to foresee a stagnation of their levels of development, compromising their welfare, in the absence of a policy not to place all supply options in unstable areas the political sphere.

However, it is not possible to assert that the developed economies, especially for the U.E., have ceased to be in these matters, indeed, throughout the twentieth century there were specific examples of regulatory restructuring, one of the best examples, is the reform practiced during the eighties through deregulation and privatization processes in the energy industries in the markets of North America, Europe and the OCDE. These processes were part of the changes neoliberal Reagan-Thatcher era, which transformed the state's role in the economy. At that time, the idea of two leaders was to extend the energy markets beyond the OCDE<sup>103</sup> area, in order to ensure free movement and equal access to markets, while increasing the flow of foreign investment.

Nevertheless, the overwhelming differences between energy-importing countries made it difficult to understand, which was plotted in the lack of consensus to include the provision of energy services within the area of WTO negotiations (with the exception of electricity, area to which is assigned a residual importance within the networks that make up the power.) In fact, the only real attempt to include this item within the areas of WTO multilateral trade was through the Energy Charter Treaty on European Union, an instrument that was conceived as an area open to multilateral cooperation principles of GATT and WTO, with regard to competition issues, market

---

<sup>103</sup> Founded in 1961, the Organization for Economic Cooperation and Development groups 34 member countries committed to democracy and a market economy within its objectives are: 1) To support sustainable economic development, 2) increase employment; 3 ) Raising standards of living, 4) maintain financial stability, 5) Support the economic development of other countries; 6) Contribute to the growth of world trade. The organization is a unique forum where governments can compare their experiences, seek answers to common problems, identify good practice and work to coordinate economic and social policies both nationally and internationally. See [http://www.oecd.org/pages/0, 3417, es\\_36288966\\_36288120\\_1\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/pages/0,3417,es_36288966_36288120_1_1_1_1_1,00.html)

transparency and implementation of the provisions of the most favored of energy service providers.

Europe through this charter, tried to apply the principles underlying the multilateral trading system, however, the results differ substantially from the initial project layout. Indeed, the charter has promoted the creation of multilateral structures cutting homogenous regulatory frameworks, and in turn encouraged the development of competitive markets to fix prices, thus balancing the market for energy importers. In other words, it has been made significant efforts to extend the reach of its multilateral approach, first through the European Energy Charter, and later by the Treaty on the Energy Charter<sup>104</sup>, whose validity dates since 1998. Treaties which have plotted the explicit interest of Europe to extend the scope of multilateral rules and standards applied in order to create a stable regulatory environment in which they can entrust all parties involved.

However, despite the UE seeking to apply the energy market transparency rules, competition in order to facilitate greater participation of investors in the production and trade of energy, thus diversifying the offer, practice have prevailed the interests of producer countries, in particular the interest of Russia, which has implemented a policy that strengthens its monopoly position (the only gas supplier to Europe), through the imposition of supply contracts and long-term foreign policy that has managed to break the will of Europe's intention to restrict the import of fossil fuels.

Foreign policy deployed by Russia, has considerably unbalanced equation in their favor, which is explained by the high level of Russian gas supplies to the countries of Eastern Europe, joining after the year 2004, the European Union countries.

Consequently, negotiations were conducted between Russia and the EU in order to extend the Partnership and Cooperation Agreement to new Member States, were difficult partly because it was conditional on the negotiation to integrate Russia into

---

<sup>104</sup> Charter Treaty Energy has been backed by the European Union, however, is not a European institution since it was designed for an open macro region. This treaty is exhaustive in the sense that it covers all important areas of energy cooperation such as trade, transit, investment rules, dispute resolution and energy efficiency. In this sense, the Treaty seeks to introduce the application of WTO rules in the context of trade in energy services.

the WTO, in order to get the Russian market opening and liberalization, focusing on this case, energy trade openness, all of which was with the expectation to deregulate the pricing of the State. In this direction, as more countries take action state-centric, the harder it will be the way to implement multilateral approach to try to balance the situation for both producers and consumers<sup>105</sup>.

The Russian foreign energy policy, has shown great ability maneuver that allowed him not to sign the Energy Charter Treaty Energy and later Euro-Russian energy dialogue. Indeed, in the case Euro-Russian dialogue, the success of negotiations is based on Russian preeminence of the current themes of the agenda by the rules and general regulations, which has allowed him to divert attention from those uncomfortable issues, such as those relating to the application of rules transparency and competition.

Reveal largely state-centric position adopted by Russia, measures taken during the era of Vladimir Putin, who promoted a energy policy based on maintaining a monopoly on transit (supply gas), while improving competition in the sector of demand, thus achieving reverse the price control, as well increase the potential consumer market, thereby reducing the risk of loss of capacity.

It is possible to assert that the strategy devised by Russia has managed maximize its natural resources for personal gain. In this direction, the strategy of diversifying its energy supply to alleviate the burden of the gas fields, has allowed to resolve the growing demand from the U.E. Moreover, the convenient location of energy resources has sponsored the use of energy trade for political purposes, that aim is revealed through the signing of important bilateral agreements that deviate multilateral policy ostensibly proposed by the EU.

Finally, the scenario described above makes it possible to envisage a future scenario favorable for importing countries, in the absence of political encourage the diversification of European energy mix by encouraging use of alternative and

---

<sup>105</sup> See note N° 99.



renewable energies such as energy solar, wind and geothermal, in addition to programs already outlined in the case of nuclear generation.

Actions aimed at diversifying the matrices allow the regions devoid of energy resources for autonomy, which will result in reducing demand for oil and gas, thus achieving as a decrease in prices, without prejudice to the congestion that this mean for the environment.

Based on the discussion in this chapter it is going to be briefly discussed what way is set in the regulatory framework of the European Union to encourage the use of non-conventional renewable energies.

## **5.2 The Renewable Energy Projects in the Framework of the European Union.**

Renewable energies within the European Union have an important mission, firstly, reduce the external dependency of the EU from its supply energy, and secondly, with regard to actions that aim to reduce emissions of greenhouse gases.

The Member States of the European Union (EU) together constitute the leading world power as the development and implementation of energy renewable energy is concerned. However, only a few members of the EU as are Germany, Austria, Sweden and Finland, are really on track achieve the goals set in the Kyoto Protocol on climate change climate<sup>106</sup>.

The Maastricht Treaty<sup>107</sup> assigned to the EU the objective of promoting sustainable growth that respects the environment. For its part, the Amsterdam Treaty incorporated the principle of sustainable development within the European

---

<sup>106</sup> For which the EU as a whole has launched the 20-20-20 program, ie by the year 2020 it is expected that 20% of the energy comes from renewables, and in turn the same percentage increase will be reached energy efficiency and reducing emissions of greenhouse gases by 20% See, Sergio García Sánchez, Trends in EU Energy Review Debate, October 2009.

<sup>107</sup> The Treaty on European Union policy is the main substrate of the Union. It was signed in 1992 in the Dutch city of Maastricht (hence the name) in order to complete the regulatory package consists of three preexistentes Treaty, namely the Treaty establishing the European Coal and Steel Community, the Treaty establishing the European Atomic Energy Community and the Treaty establishing the European Economic Community. "See Deutsche Welle, author Mathis Von Hellfeld [www.dw-world.de](http://www.dw-world.de).

community goals. Indeed, since 1997, devised a plan to reach 12% share of renewable energy compared to projected total energy consumption by 2010.

However, after the year 2010 have drawn new objectives, in fact, today the European Union has decided to generate 20% of total final energy consumption from renewable sources by 2020. However, the main criticism raised by the experts, is that they do not get the real potential benefits that the EU could achieve as a community through joint action, leading to this situation given that member states are differentiated national targets which aim to achieve by taking their own action plans.

The absence of a joint project on energy development is evident when contrasted with the formative years of the European Community - such as the European Coal and Steel Community (ECSC)<sup>108</sup> and the European Atomic Energy Community (EAEC)<sup>109</sup>. Indeed, two of the three founding treaties set out to achieve energy-oriented objectives, projects that are missed today, which shows clearly the lack of determination to a common action to foster the development and use of renewable energy.

Joint action in the area of renewable energy will provide a perspective on which many states might introduce more character surgeries in energy matrices. In this sense, a new "European Renewable Energies Community" (CEER) could bring to fruition a joint plan in this area. In this direction, the CEER should have as its main purpose the supervision over the national framework, through the development and establishment of a community strategy designed to provide a total change towards renewable energy for electricity sector.

In this manner, the main objective of CEER should be the creation of the necessary conditions to benefit from the diverse climate, geology and hydrology of the EU.

---

<sup>108</sup> Ibid 1, page 4.

<sup>109</sup> The Euratom Treaty establishing the European Atomic Energy Community (Euratom) was initially created to coordinate the Member States' research programmes for the peaceful use of nuclear energy. The Euratom Treaty today helps to pool knowledge, infrastructure, and funding of nuclear energy. It ensures the security of atomic energy supply within the framework of a centralised monitoring system. The Euratom Treaty created the Euratom Supply Agency, which has been operational since 1 June 1960. The Agency has the task of ensuring a regular and equitable supply of ores, source materials and special fissile materials in the European Union (EU). See [http://ec.europa.eu/energy/nuclear/euratom/euratom\\_en.htm](http://ec.europa.eu/energy/nuclear/euratom/euratom_en.htm).

Such measurements can contribute to the decongestion of the demand for fossil fuels, which results in a decrease in the generation of dependency relationships between producers and consumers, in addition to increasing the participation of green energy in the energy matrices of Union countries.

Clearly, a strategy that combines the use of regional renewable sources with a transnational network for the European internal market of green electricity will create new opportunities for sustainable modernization of the electricity sector and for the eventual coverage of the total demand EU electricity through renewable energy sources. In this way, the CEER is not intended to compete with the Directive of the European Commission in January 2008 on the use of renewable energy, which was certainly a big step in energy policy of the EU. In fact, the CEER<sup>110</sup> would provide states with ambitious members the opportunity to develop a strategy that goes beyond the EU directive through a joint action, which constitutes the front line to move from the production of electricity with nuclear energy and fossil to renewable sources. At the same time, would strengthen European integration and emphasize the value of joint action to overcome the current problems.

Finally, note that the creation of the CEER, could take two characters, as a community to enhance cooperation between member states under the auspices of the EU or as a community on the basis of a separate treaty. In the first case, i.e. if established as a community to increase cooperation, it will be emphasized that this is a new and important project for the EU integration, but as happened with monetary union, not all Member States would enter immediately in the community. By contrast, if it is established on the basis of a new treaty separately, as the ECSC and EAEC,

---

<sup>110</sup> The Council of European Energy Regulators (CEER) is a not-for-profit association in which Europe's independent national regulators of electricity and gas voluntarily cooperate to protect consumer' interests and to facilitate the creation of a single, competitive, efficient and sustainable internal market for gas and electricity in Europe. CEER acts as a preparatory body for the European Regulators' Group for Electricity and Gas (ERGEG). ERGEG is the European Commission's formal advisory group of energy regulators. ERGEG was established by the European Commission, in November 2003, to assist the Commission in creating a single-EU market for electricity and gas. ERGEG's members are the heads of the national energy regulatory authorities in the 27 EU Member States. The Regional Initiatives is the regulators' flagship project to speed up the integration of Europe's national energy markets. The Regional Initiatives has created 3 regional markets for gas and 7 for electricity in Europe. ERGEG and the European Commission work at EU level to ensure the coherence and convergence of these regions towards the ultimate goal, a single-EU energy market. For more information, see [www.energy-regulators.eu/portal/page/portal/EER\\_HOME](http://www.energy-regulators.eu/portal/page/portal/EER_HOME).

announced a historic step in the era of fossil fuels and nuclear power to renewable energy, making clear that States of the European Union, fifty years after his union as a community, continue dedicating the goal to establish a secure energy supply and environment-friendly Europe. All of which, I believe, will serve as an example for energy integration processes elsewhere, such as Mercosur Energy Project, to demonstrate the feasibility of developing renewable energy, jointly delivering to all subscribers States of a treaty, the higher costs involved in the investment of these projects, which in other words are called "barriers to entry"<sup>111</sup>. "

### **5.3 The Treatment of energy in the WTO.**

With regard to trade in energy supply, the General Agreement on Trade in Services, does not have specific rules applicable to international sale of energy. Notwithstanding which, for purposes of clarifying the scope of the Agreement, Article I, No. 2, defines the scope of coverage, noting that "This Agreement applies to actions taken by members affecting trade in services" being applicable, in my opinion, to commerce defined as the provision of services described in the form of letters a and b.

In the first case, "from the territory of a Member into the territory of another Member"  
In the second case "in the territory of one Member to the service consumer of any other member"

In my opinion, the first situation occurs in cases where there is a supply agreement in which a State commits to send by land or sea certain amount of gas, electricity or other energy, providing a transport service associated with the marketing of the property. However, the service ends once the commodity has entered the territory of

---

<sup>111</sup> Barriers to entry: Obstacles and difficulties that a firm has to endure to be part of a new production. In general, the economies of scale or economies that are obtained by increasing the volume of production, hinder access to new businesses which compete to costs with existing, new companies will have to be very size. In the case of the energy sector, companies are state or needed private investment in order to compete, more or less sums capital. The need to invest large sums of capital to create company, is a second barrier of entry to the sector. Finally, administrative procedures to follow to obtain the necessary licenses and permits, and laws and regulations relating to environment be a matter of vital importance in the large generation projects Hydroelectric and fossil resource exploitation, such as gas and oil, constituting a third type of barrier to entry to be investors overcome. See: Encyclopedia of Economics, [www.economia48.com/spa/d/barreras-de-entrada/barreras-de-entrada.htm](http://www.economia48.com/spa/d/barreras-de-entrada/barreras-de-entrada.htm).

the consuming country, with state or private companies receiving state participation, which is concerned with the marketing and distribution of the commodity to local consumers.

In the second case, on the contrary, the provision of services extends to marketing and commodity distribution to final consumers, individual consumers or businesses. Therefore, in this case, the State Producer in addition to providing transportation services, which in the case of gas, for example, carried out by sea or by pipeline construction, takes a delivery service once entered the energy resources within the requesting country.

Once the scope of the Agreement, paragraph three of Article I, point to define what is meant by "measures taken by members affecting trade in services"<sup>112</sup> Understanding them, "the measures taken by governments, central, regional and local" and secondly "the measures taken by governmental bodies exercising powers delegated by governments or central, regional or local."

For its part, it is inferred that the rules contained in this agreement are applicable to trade in energy services, since the letter b, third paragraph of Article I, clarifies that services it has to be understand "any service in any sector except services supplied in the exercise of governmental authority, explaining the same normative body, below the letter c in the third paragraph of Article I, that "any service supplied in the exercise of governmental authority, means any service which is not provided on commercial terms nor in competition with one or more service suppliers. "

It is in Part II of the Agreement where we find a section devoted exclusively to general obligations and disciplines, and in particular in Article II of the Agreement, the principle of "Treatment of the most favored nation" defines the number first, "that any measurement covered by this Agreement, each member shall accord immediately and unconditionally to services and service suppliers of any other Member a treatment no less favorable than that accorded to similar services and service suppliers of any other country " .

---

<sup>112</sup> General Agreement on Trade in Services, Annex 1B, World Trade Organization, PP 5.

Further down in Article V<sup>113</sup>, we find an interesting article on economic integration, which states that "This Agreement shall not prevent any of their members to be part of an agreement that liberalizes trade in services between the parties in it, or enter into an agreement of this kind". Without prejudice, it immediately goes on to detail the conditions that must be met to conclude an agreement of this type, in this sense, there must be an agreement with substantial sectoral coverage, which also provides for the absence or elimination, in essence, discrimination whatsoever between the parties, either through the elimination of existing discriminatory actions or through the ban on new or discriminatory measurements that increase discrimination.

If we exercise to apply the rules to the international context, it is possible to observe the purpose of the supply of Russian gas to the European Union, that the existence of certain exceptions to the treatment of most favored nation, through circumstances in which States producers can benefit some consumers, without having to extend the application of benefit to other requesting countries, makes it more likely that a Russian medium-term yield to pressure from Europe to lose its observer status to assume membership the World Trade Organization. Possibility that otherwise can be strengthened to the extent that the EU countries show less interest in buying gas, due to the greater abundance of its matrices, thanks to the raid on renewable energy projects.

For its part, the Agreement leaves a small door open to Russia, so as not to extend the benefits accorded to adjacent countries, as is the case of countries like Latvia, Lithuania and Slovakia to 100% dependent on Russian gas<sup>114</sup>, the Article II establishes that the third number that "The provisions of this Agreement shall not be construed to prevent a Member from conferring or according advantages to adjacent

---

<sup>113</sup> General Agreement on Trade in Services, Annex 1B, World Trade Organization.

<sup>114</sup> "El conflicto energético de Rusia-Ucrania-UE",  
<http://www.mtin.es/es/mundo/Revista/Revista121/72.pdf>

countries to facilitate exchanges limited to contiguous frontier zones of services produced and consumed locally<sup>115</sup>. "

Thus, in my opinion, it is possible to balance the equation between producers and consumers by signing the Service Agreement by the major energy suppliers, such as Russia. Task that can be achieved through strict application of the principle not of equal treatment among States, which is based on the fact that not all benefits are applicable to all States, whether for reasons of proximity or technical arguments, based for example, on the article XX. The measure needs to be "necessary" to protect human, animal or plant life or health, in order to be in line with the GATT, and in any case can be an arbitrary measurement. This means that no other alternative less restrictive trade measure can be found in order to achieve the respective policy objective<sup>116</sup>.

But besides this, to the extent that decrease the demand for fossil fuels will also reduce competition for supply, which can be subtracted producing countries to price fixing, since monopolies will have to compete with gas extraction new sources of power generation, emerging in the future a new stage of international energy relations, governed more by global competition and complementarity energy, than the establishment of relations of dependence.

---

<sup>115</sup> See Yulia Selivanova — The WTO and Energy: WTO Rules and Agreements of Relevance to the Energy Sector, ICTSD Programme on Trade and Environment, August 2007, PP 15.

<sup>116</sup> In this case the burden of proof lies to the party who invoke this exceptions, See note n<sup>o</sup> 100.

## **Conclusions.**

Traditionally in Latin American, energy integration has been associated to construction of network exchanges supplied by fossil fuels, not available in all countries of the region, which leads to inequality in supply conditions.

This lack of balance in the energy access has helped in generating dependency relationships characterized by the predominance of the monopolistic position from the producer, who in this privileged status, diversifies the risk of sale of power supply in many consuming countries.

In this direction, a good example of the situation described, is what that takes place in the field of gas, in terms of supply policy in countries such as Russia, which in recent years have increased control over gas prices, implementing restricted type policies, ie, based on a strong nationalism, which has as foundation the security of the national supply.

As a counterpart, the multilateral approach supported by the energy consuming countries, encourage the establishment of a system of buying and selling based on transparent and non discriminatory rules designed to balance the scales cost - benefit of exporters and importers. Goal that can be achieved in the medium term to the extent that finds support in the creation of regional coordination mechanisms.

In this regard my first observation is that energy integration projects will bear fruit in the future as they are guaranteed in the common interest of consumer countries to find methods consistent and diverse energy supply. Thus, the proposal promoted by some countries in the region, as is the case of Brazil, in its plan to diversify its energy matrix by using renewable energy, can set a good example for the creation of mechanisms that mitigate the supply control that are currently producing countries of fossil fuels.

In this way, to ensure the success of Multilateral Treaties we must consider the dynamics of trade and interconnections of energy supply, is not only restricted to the



interests of consumer countries. In other words, as in every good agreement, the progress of integration will depend on the energy-producing countries glimpse advantages of selling power in the long term.

The interest of producers will increase especially if considering the current position of unilateralism, may lead to a stifling of the consuming countries, after which it is hoped that they are forced to search for new energy sources and expand its energy matrix in order to restrict the dependence on supply, as Germany<sup>117</sup> has done with expanding wind and solar generators.

Thus rigid positions of some states, as to prevent the signing of multilateral agreements could be relaxed in an effort to achieve a higher profit, to avoid a sharp decline in demand for gas and oil supply, since to perpetuate behavior based on unilateral conditions, driving the developed and developing countries to seek greater energy independence, in which the development of technology for the production of low-polluting renewable energy can provide an effective remedy and low cost.

One of the alternatives that have explored the developing countries in recent years has been the genesis of nuclear generation projects, since the high cost of fossil fuels make it profitable to build nuclear reactors capable of supplying the industry and domestic consumption. However, as has been highlighted as a result of events that occurred in Russia itself (Chernobyl) and the recent tragedy in Fukushima, Japan, the vulnerability of nuclear reactors against unexpected events from acts of nature or man, may endanger a large part of the population. In this case, the lack of agreements for inclusive solutions can result in a cost to humanity that will affect both producing countries and consumers and tragically this time people will pay with the most valuable thing.

Furthermore, we must consider that in addition to the aforementioned nuclear Disasters, the risk that represents the proliferation of nuclear power plants in the emission of radioactive waste and the poor security they offer in terms of their

---

<sup>117</sup> See, <http://diarioecologia.com/2009/06/europa-podria-generar-toda-la-energia-que-necesita-a-partir-de-fuentes-renovables-en-2050/>.

operation in emergency situations are sufficient grounds to postulate that the States seek more effective ways to regulate trade in energy services together, through the creation of supranational body to define the order of energy supply, regardless of local particularities.

In the context of South America a good example of integration exercises in the context of energy are MERCOSUR, although instances have failed to create a supranational regulatory body, if they have achieved a breakthrough with regard to the approach to discuss about identifying the factors that influence the inequitable distribution of energy supply in the region and the obstacles of nature cultural, political, technical and legal, impede interconnection.

Related to the above and as I have described at various points of my thesis, it is appropriate to consider the obstacles that exist and if not being timely identified by the projects of regional integration challenge the process of interconnection and energy complementarity. Among the factors I have presented, in my conclusion I must mention the following:

1. The lack of adequate infrastructure to solve the supply in geographically distant countries and with high supply demand gas and / or electric, which is corroborated whenever major regional integration projects have been carried out at a binational level, namely through the signing of bilateral treaties. However, still are pending integration projects that include the interconnection of three or more countries, such as the pipeline construction project in the South, whose viability depends on overcoming a series of technical and political obstacles..
2. Related to the above, the construction of large gas interconnection structures, as well as hydroelectric power interconnection projects, they will face great difficulties of environmental character, given by the negative externalities that its construction will result in areas of great natural wealth, like the pipeline construction project in the South, whose area of approximately 4,000 kilometers, threatening the biodiversity of flora and fauna, in addition to altering the regimen of life of several tribes that inhabit the Amazon.

3. The asymmetry between the existing legal frameworks of countries that currently have mapped regional integration projects, as is the case Mercosur. Indeed, this is due to the lack of intergovernmental planning, to order energy exchanges by establishing a common denominator in terms of rules that govern the delivery.
4. The absence of common rules attached to the excessive role of private investment in energy supply projects lacking a regulation that defines objectives to be achieved, resulting in an investment that preclude an efficient allocation of resources. This situation is exacerbated by the proliferation of various regulatory frameworks, from specific character, and general, all of which also clearly demonstrate the various degrees of maturity of the regional markets.
5. There is an ignorance in regard to the availability of fossil energy reserves, which is due to the lack of exhaustive studies in the area. In this regard, the lack of a register of available resources at the regional level, can lead to uninformed decisions making by political authorities, rushing into the signing of supply agreements subsequently impossible to meet.
6. The absence of trust between States on the implementation of the agreements, a situation that results from a number of factors, including bad experiences have been in the bilateral conclusion of agreements on gas supply, untimely nationalization of companies incorporated with foreign investment, amounting to frequent economic instability, resulting from successive changes in the macroeconomic policies of the States.
7. Political differences in the Latin American concert and expressed more strongly in the course of the twentieth century have also contributed to distancing countries when establishing cooperation agreements. Indeed, the region has been led by various military regimes and democratic, have not followed the same development path as regards the management of markets, which led to the region to go through periods of market liberalization, marked by a strong private sector participation, and others where state intervention has dominated. This situation must be overcome, in the sense of establishing consistent regulations in the long term, since it will be essential to create an environment of certainty and confidence in interstate relations

8. With regard to economic nature difficulties, the differences between domestic prices and export make it difficult to equalize the prices of energy in the South American level. This situation is explained whenever power producers hardly want to cede some of their profits to build a set and orderly growth of local markets, a situation that worsens when energy producers are private investors. In this regard, although there is uniformity in the price fixing criteria, in practice the differences are seen in relative prices and exchange rate policy of a country. Therefore the pricing of energy responds to the history of each country, its production structure, to the allocation of resources and other factors related to the development reached by each nation
9. The integration that we are witnessing in the region is primarily a physical interconnection, which lacks a real political commitment, and the prospect of designing a sustainable regional development. The main objective of the current interconnection is the access to sources of low prices, meaning value for money in the area of integration which always takes the cheapest energy source, regardless of where it is. However, if this policy is not accompanied by a distribution of benefits from energy is translated into a mere lowering of production costs for large industries. This situation produces a pernicious effect on the price of energy, not reflected in consumer prices, the internalization of negative externalities associated to the generation of a certain type of energy as in the case of hydropower<sup>118</sup>.
10. In the Southern Cone there are virtually no surplus stocks to bargain because all countries get the most of their energy matrixes to supply their domestic demand, which may give account of only two exceptions in the region, the surplus hydroelectric Paraguay forced Brazil to sell and Argentina by the treaties of Itaipú and Yacyretá, and the surplus of natural gas from Bolivia, fields operated by foreign companies to the decree for nationalization of Evo Morales.

To overcome the obstacles described in the previous section, Brazil has a wide experience in regard to the creation of alternative sources of supply, providing

---

<sup>118</sup> Energía en Sudamérica: una interconexión que no integra. Gerardo Honty, *Revista Mexicana de Política Exterior*. PP 126-127.

countries with an excellent model in terms of innovation, autonomy and security of energy supply, a position it has been achieved due to a visionary energy policy in obtaining benefits based on the diversification of its matrix and the creation of low carbon fuels greenhouse gases, such as Ethanol. Thus has opened the door to the expansion of the regional offer of energy goods and services required by the productive chains.

Furthermore, Brazil through its program of selling ethanol and biofuels, has become the proof that South America can use to its favor in the current context of international environmental agreements, with regard to emission reduction requirements of greenhouse gases, as is the case European Union and Japan to overcome the vulnerable status as an exporter of raw materials, and be enhanced as a major player with regard to the provision of goods and energy services renewable and low-pollution worldwide. On the assumption that an instance of regional integration requires a supranational regulation to set the parameters around which made the integration process, for which will be of vital importance to analyze the range of feasible interconnections through Evaluation studies of the projected balance of supply and demand of current and future energy supply, and in this way to assess the costs and benefits needed to ensure the supply of supply.

Additionally, returning to the issue of global multilateral agreements, now in the context of the WTO, the authors criticize the signing of multilateral agreements since they produce an increase in prices of energy for local consumption in the producing country, which is caused product of increased demand for supply. However, the adverse effects that can generate multilateral integration are far lower than those incurred in the execution of Bilateral Treaties, since the formula of bilateral agreements is far from becoming a way for the integration of energy markets and that does not minimize the risk of unilateral changes in terms of the agreements. So if we moved the logic of relations of exchange energy supply services to the global context, the absence of specific regulation in the context of the WTO, can trigger an arbitrary behavior of regional clusters of energy exporters, for foreign importers, in

the absence of a monitoring body to comply with standards of transparency and comparability of the conditions of sale, as provided by clause Most Favored Nation.

The consolidation of regional agreements in the context of globalization is directly linked to the advancement of multilateral agreements under the WTO, with the understanding that regional agreements will serve as a unifying mechanism for articulating and binding small markets which alone they are unlikely to balance the equation for import and export of power supply services, further facilitating the adoption of rules governing the exchange at an intercontinental level.

Finally, in South America it is essential to proceed with the installation of a roundtable to be attended by providers and consumers of energy services, which in the first place sets on its agenda as a target the identification and recognition of the obstacles that must be overcome to integrate the region, on the understanding that through this instance states may overcome old nationalism and feelings of distrust, through the objective recognition of the obstacles that must be dropped to achieve a higher good which is the projection of sales in the long term producing countries and safety of supply for consumers. Matter which I believe will be critical to advance to a second phase consisting of the possibility of granting a supranational power of decision regarding to the adoption of an applicable common legal framework. With the understanding that through the first Instance the States may overcome old nationalism and feelings of distrust, through the objective recognition of the obstacles that must be dropped to achieve a greater good which is the projection of sales in the long term producing countries and safety of supply for consumers.

### **References.**

1. Accioly, Elizabeth. **“Mercosul y Uniao Européia”**, 3° Edición, Portugués (V.O), Curitiba, Paraná, Brasil, Juruá Editora.
2. Alterini, Atilio **”La Supremacía Jurídica en el Mercosur”**. Eus et Praxis v.11 n.2 Talca (2005).
3. Amarin, Carlos e Iglesias Gerardo, **“Las Manos Sucias del Etanol”**, Producción periodística UITA/FERAESP, Montevideo Uruguay, noviembre 2009.
4. Ander-Egg, Ezequiel ; Aguilar, María José **“Como Elaborar un Proyecto; Guía para diseñar proyectos sociales y culturales”**, Buenos Aires Argentina, Humanitas, 1994.
5. Banco Interamericano de Desarrollo. **“La integración en el Mercosur Ampliado de Energía”**, Departamento Regional de Operaciones 1 (RE1), División de Finanzas e Infraestructura Básica 1 (RE1/FI1), Departamento del Sector Privado (PRI). Washington D.C., 2001.
6. Asia Pacific Energy Research Centre, **“Energy Investment Outlook for The Apec Region”**, Asia Pacific Energy Research Centre, Chuo-Ku Tokyo, Japan, 2003, 202 PP.
7. Cardozo, Elsa. **“La gobernabilidad democrática regional y el papel (des)integrador de la energía”** Rev. Nueva Sociedad 204, 14 PP.
8. Cortina, Alfonso. **“Integración Energética y Crecimiento Económico”**, 5 PP.
9. Cortina, Alfonso. **“Regionalización de los Mercados de Energía en Latinoamérica y El Caribe. Reservas, producción y consumo de gas natural en Latinoamérica y El Caribe”**. Petrotecnia del Instituto Argentino del Petróleo y del Gas. [www.iapg.org.ar](http://www.iapg.org.ar). Buenos Aires (2003).
10. Crispim Baiocchi Hermano Vinaud, Camila **“Supplying Biofuels to the World: Biofuels in Brazil and the WTO”**, Thesis Master Degree of L.L.M, University of Heidelberg, Marzo 2009.
11. De Oliveira, Odete María. **“Integraçao Nuclear Brasil-Argentina”**, Florianópolis Brasil, Editora Obra Jurídica, 1996, 208 PP.

12. Dreyzin de Klor, Adriana. **“El Mercosur Generador de una nueva fuente de derecho internacional privado”**, 1° Edición, Buenos Aires, Editorial Zavalia, 1997, PP. 24, 396.
13. Dreyzin de Klor, Adriana. “Ampliación del Mercosur: El caso de Venezuela”, Buenos Aires, Argentina, Editorial Zavalia, 2009, 208 PP.
14. Faíña Medí, J. Andrés; García-Lorenzo, Antonio; López-Rodríguez, Jesús. **“La Liberalización del Mercado del Gas”**. Infraestructuras: Industrias y Transportes de Red n. 808 Madrid (Julio 2003) PP 35-36.
15. García Molina, Mario. “La energía como motor para la integración de América Latina”, Retos y perspectivas de la integración energética en América Latina, 26 PP.
16. García Sánchez, Sergio. “Tendencia en la Unión Europea”. Energía a Debate. Sept a Octubre 2009
17. Honty, Gerardo. **“Energía en Sudamérica: una interconexión que no integra”**, Rev. Mexicana de Política Exterior. Nueva Sociedad 204, 17 PP.
18. Honty, Gerardo. **“Venezuela pierde el gasoducto del sur, y Brasil se reposiciona”**. Eenergiasur.com
19. Horspool, Margot and Humphreys, Mathew, “European Union Law”, Great Britain, Oxford University Press, 2010, PP.26
20. Di Giovanni, Ileana. **Derecho Internacional Económico**. Ed Abeledo Perrot, Buenos Aires 1992, p. 145.
21. Jiménez Guanipa, Henry. “El Derecho de la Energía en Venezuela” Caracas, Venezuela. Editorial Jurídica Venezolana, Dic. 2010
22. Kozulj, Roberto. **“La Industria del Gas Natural en América del Sur. Situación y Posibilidades de la Integración de Mercados”**. CEPAL, n.77 Santiago de Chile (November 2004). PP. 4-25



23. Lander, Luis E. **“La energía como palanca de integración en América Latina y el Caribe”**. Caracas Venezuela. Retos y perspectivas de la integración energética en América Latina. 2007
24. Lagos, Ricardo **“América Latina: Integración o Fragmentación”**, **“Entre la Geopolítica y la Geoeconomía: la Energía en las Relaciones Latinoamericanas”** Sennes, Ricardo ; Pedrotti, Paula. Santiago de Chile, Edhasa, 2008, 644 PP.
25. Larraín Maximiliano. **“El Consenso de Washington: gobernador de gobiernos”**, Agosto 1999.
26. Linkor, Rolf. **“La política energética latinoamericana: entre el estado y el mercado”**, Publicación Trilingüe, Buenos Aires, Revista Pensamiento Propio, Dic 2006, N° 22.
27. Llairó, María de Monserrat y Raimundo Siepe **“Globalización e integración en América Latina- La Iniciativa de las Américas a principios de los noventa”** Observatorio de la Economía Latinoamericana, n. 58, Universidad de Buenos Aires [www.eumed.net/cursecon/ecolat/la/](http://www.eumed.net/cursecon/ecolat/la/) (2006).
28. Maldonado, Pedro; G/Palma, Rodrigo. **“Seguridad y Calidad del abastecimiento Eléctrico a más de 10 años de la Reforma de la Industria Eléctrica en Países de América del Sur”**, Cepal, División de Recursos Naturales e Infraestructura, Santiago de Chile, (Julio de 2004). PP 8-12
29. Michael Schreyer, Lutz Mez, **“Una Comunidad Europea para las energías Renovables”**, Henrich Böll, Stiftung, Green Energy, Septiembre de 2009.
30. OLADE, **“Interconexiones energéticas e integración en América Latina y el Caribe”**, Junio de 1999.
31. Oliveira, Adison De, **“Energy Security in South America: The Role of Brazil”**, International Institut for Sustainable Development, Winnipeg Manitoba, Canada 2010.
32. Pimentel, Luis Otávio. **“Mercosul, ALCA e Integração Euro-Latino-Americana”**, Portugués (V.O), Curitiba Brasil, Juruá Editora Curitiba, Enero 2001, 1/291.

33. Pinheiro Ricardo P. **“Integración Energética en el Mercosur Ampliado”**. Banco Interamericano de Desarrollo. Departamento Regional de Operaciones. División de Finanzas e Infraestructura Básica. Washington DC, 2001.
34. Pressacco, Carlos. **“Democracia en el Mercosur”**, Santiago de Chile, Universidad Alberto Hurtado, Octubre 2001, 401 PP.
35. Proyecto Cepal/Comisión Europea **“Promoción del Uso Eficiente de la Energía en América Latina”**, Guía Para la formulación de Marcos Regulatorios, Naciones Unidas, LC/L. 1142 Santiago de Chile (Agosto1998).
36. Roy, Joaquín y Domínguez Roberto. **“España Unión Europea y la Integración Latinoamericana”**, 1° Edición, Miami, U.S. Jean Monet Chair, University of Miami. 2010.
37. Ruiz Caro, Ariela. CEPAL, UNO. **“Cooperación e Integración Energética en América Latina y el Caribe”**. Santiago de Chile, abril 2006.
38. Ruggeri, María Delicia **“La Investigación Jurídica”** Ciencia Y Derecho. Universidad Nacional de Cuyo, Mendoza, Argentina (2000).
39. Rudiger Dornbusch, Stanley. **“Macroeconomía”** 7° edición, Caracas, Venezuela. Retos y Perspectivas para la integración energética en América Latina. Marzo 2007, 38 PP.
40. Schreyer Lutz Mez, Michael. **“Una Comunidad Europea para las energías renovables”** Berlín, Alemania. Henrich Böll Stiftung, Green European Foundation. 11/9/2009.
41. Selivanova, Yulia. **“The WTO and Energy: WTO Rules and Agreements of Relevance to the Energy Sector”**, International Centre for Sustainable Development, Geneva, Switzerland, 2007. 44 PP.
42. Sohr, Raúl. **“Energía y Seguridad en Sudamérica: más allá de las materias primas”**, D.F. México, Revista Mexicana de Política Exterior.
43. Villanueva Florencia, Jimena. **“Programa Nuclear de Corea del Norte. Una política de poder sin poder”**. Centro Argentino de Estudios Internacionales. Programa Asia Pacífico.
44. Westphal, Kristen. **“Flujos energéticos, cambios en la correlación de poder y relaciones internacionales”**. Caracas, Venezuela. Retos y Perspectivas para la integración energética en América Latina.

45. Zanoni, José Rafael. “**¿Qué pueden hacer las políticas energéticas por la integración?**”, D.F. México, Revista Mexicana de Política Exterior, Octubre 2005, N° 75.

[http://europa.eu/abc/symbols/9-may/decl\\_es.htm](http://europa.eu/abc/symbols/9-may/decl_es.htm)

[www.cronista.com/contenidos/2011/03/02/noticia\\_0007.html](http://www.cronista.com/contenidos/2011/03/02/noticia_0007.html)

<http://www.encharter.org/index.php?id=7>.

[www.centrales-hidroelectricas.html](http://www.centrales-hidroelectricas.html), and [www.hidroaysen.cl/site/beneficios\\_para\\_aysen.html](http://www.hidroaysen.cl/site/beneficios_para_aysen.html)

, <http://www.senado.gob.mx/iilsen/content/publicaciones/revista2/3.pdf>.

<http://web.worldbank.org/WBSITE/EXTERNAL/EXTABOUTUS/0,,pagePK:50004410~piPK:36602~theSitePK:29708,00.html>

<http://web.worldbank.org/WBSITE/EXTERNAL/EXTABOUTUS/0,,pagePK:50004410~piPK:36602~theSitePK:29708,00.html>

<http://www.iadb.org/es/acerca-del-bid/acerca-del-banco-interamericano-de-desarrollo,5995.html>

<http://www.monografias.com/trabajos59/represa-itaipu/represa-itaipu.shtml>.

<http://www.olade.org.ec/proyecto/energias-renovables>;

[www.enbuenasmanos.com/articulos/muestra.asp?art=243](http://www.enbuenasmanos.com/articulos/muestra.asp?art=243).

[//www.paginadigital.com.ar/articulos/2011/2011prim/tecnologia02/mundo-17022011.asp](http://www.paginadigital.com.ar/articulos/2011/2011prim/tecnologia02/mundo-17022011.asp).