



Rapporteur's Report on SELA-SICA Seminar “REGIONAL ENERGY INTEGRATION”

**Social
Development**

Permanent Secretariat of SELA
SELA-SICA Seminar “REGIONAL ENERGY
INTEGRATION”
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I. BACKGROUND AND GENERAL INFORMATION

As a follow-up to the agreements reached during the Forum "Responding to the challenges of integration for the development of Latin America and the Caribbean. Proposals from the regional and subregional integration mechanisms," convened by the Community of Latin American and Caribbean States (CELAC) in December 2022, the Seminar "REGIONAL ENERGY INTEGRATION" was held on 21 April this year, both virtually and in person.

The Permanent Secretariat of the Latin American and Caribbean Economic System (SELA) and the and the General Secretariat of the Central American Integration System (SG-SICA) convened the event, which was held in person at the SICA Headquarters Building, located in Antiguo Cuscatlán, La Libertad, El Salvador. The purpose of the event was to share best practices in the energy and electricity grids sector, as well as to identify points of convergence and build proposals for joint work in this area.

The Secretaries and representatives of the following regional integration organisations participated in the Seminar: the Association of Caribbean States (ACS), the Andean Community (CAN), the Latin American Integration Association (ALADI), the Latin American Energy Organisation (OLADE), the Central American Integration System (SICA), the Latin American and Caribbean Economic System (SELA), as well as honourable representatives of international organisations and bodies specialised in energy issues, honourable secretaries and representatives of the Central American Integration System, representatives of the Presidency Pro Tempore of the Common Market of the South (MERCOSUR), the Director for Integration, Access and Energy Security of OLADE, together with the Ambassadors of the member countries of the Central American Integration System (SICA).

The Seminar was opened by the Secretaries of SICA and SELA. The Secretary-General of SICA, Werner Isaac Vargas Torres, said that the meeting was the result of an effort undertaken under the leadership of SELA and Ambassador Clarems Endara, as Permanent Secretary of SELA. This effort was joined by the rest of the Secretaries of the regional integration institutions and organisations in Latin America and the Caribbean with the aim of identifying the areas that each of the regional integration spaces is working on. The goal was to complement efforts and support the decisions adopted within the framework of each of the decision-making bodies, but also within the framework of the Community of Latin American and Caribbean States (CELAC).

He clearly stated that it is time to address an important and substantial issue, which is the issue of energy integration in Latin America and the Caribbean, raising questions such as: What are the challenges we face in this regard? What progress have we managed to identify in each region? How can we complement this progress in terms of development and joint activities that we can undertake in Latin America?

Ambassador Clarems Endara Vera, Permanent Secretary of the Latin American and Caribbean Economic System (SELA), continued with the opening remarks, pointing out that the objectives set since the first meeting, within the framework of CELAC, were to discuss common support strategies and promote cooperation and convergence, which, he acknowledged, are taking shape with most of the membership of each of our integration mechanisms.

He acknowledged the progress made by each organisation in their respective forums, responding to the need to seek synergies, join forces and work for the region. He emphasised that the effort to bring together the integration mechanisms merely responds precisely to this need to converge through joint work, recognising the efforts made. Above all, he highlighted the intention to build, which highlighted the great potential of the region for the energy transition towards renewable energy sources, mainly wind and solar in some countries, and geothermal and biomass in others, as well as regional electricity integration.

He also recognized that some countries in the region have the possibility to develop the green hydrogen industry in a competitive way, replicating experiences and taking advantage of opportunities and capacities, thus boosting the consumption of this type of energy in the region.

The Permanent Secretary of SELA underscored the existence of data that show the region's capacity to generate alternative energies, as well as the need for interconnection of electricity systems. He acknowledged that significant investments are required in order to make progress in these large projects, for which a regional collaboration system could help leverage these resources and develop the necessary infrastructure to transport renewable energy from where it is produced to where it is needed.

Both Secretaries agreed that this seminar provided continuity and fulfilled the challenge and commitments made in December last year, within the framework of the CELAC Summit. At that time, the challenge was taken on to advance along the path of integration based on the proposals of regional and subregional integration organisations, in order to build mechanisms that provide convergent lines of work, with a regional approach. All of this, obviously while respecting the mandate of each organisation. The activity was moderated by the head of the Central American Integration System (SICA) and was organised in two parts. The first part featured a keynote speech by Andrés Rebolledo, Executive Secretary of the Latin American Energy Organisation (OLADE). After a question-and-answer session, the second part featured the intervention of the Secretaries of the regional integration mechanisms, presenting in plenary session the issues of common interest for the creation of a convergent work agenda.

II. SUMMARY OF INTERVENTIONS

FIRST SESSION

The Executive Secretary of the Latin American Energy Organisation (OLADE), Andrés Rebolledo, opened the day by presenting the keynote speech “Challenges of energy integration in Latin America and the Caribbean.” In his presentation, he stated that the objective was to provide a perspective of the energy agenda from our region: What are the main considerations in terms of what progress has been made? What is the diagnosis in terms of energy? What are the fundamental challenges that allow and would allow us to imagine a regional integration based on this?

From his perspective, the region stands out in terms of electricity integration, as considerable progress has been made. In the area of electricity integration and interconnection, significant progress has been made over the last 30 or 40 years. As background information, he mentioned that the potential of the Latin American and Caribbean region is very relevant. It is a diverse region, very rich in natural resources and energy resources, and this is a central element in achieving integration. Latin America is rich in oil, rich in hydrocarbons, rich in gas resources (a very important energy source in the energy transition). The countries are connected, including territorially, and therefore there is great potential.

Secondly, in terms of different productive sectors, there has been one of the most disruptive technological changes, and this is something that does not only concern the region. The Latin American and Caribbean region is committed to energy transformations with the incorporation of renewable energy, the digitalisation of its electricity grid and the development of new fuels, which are intended to provide a forceful response to climate change mitigation. This is a commitment of the region at the international level.

He reported that many countries are working on the technological frontier with great potential for competitiveness and institutional commitment, such as the development of green hydrogen, the production of synthetic fuels, or zero-footprint emission in all ongoing technological developments.

A third element raised by the OLADE Secretary, along with the advances in technological development in the region, is the progress that has already been made in terms of integration. There are several subregional initiatives in the area of electricity, as well as an important infrastructure for another fundamental energy source, gas, in addition to important supply and potential demand poles.

Integration has great potential and relevance because, among other things, it generates economies of scale and achieves an integrated market, which makes it more attractive to investment. Secondly, integration is also an appropriate, consolidated, and permanent response to security. Securing supply in our countries and, therefore, energy integration, whether by way of electrons or molecules, responds significantly to the prospect of progress in security. Furthermore, when there is integration in electricity grids, the stability of the electricity system is also increased, generating quality electricity grids.

In other words, being integrated into larger grids also has the benefit of improving the stability and quality of the system in some way.

Similarly, integration today is also a contribution to the effort to combat climate change and protect the environment. Hydroelectricity has built an important history of sharing this resource in South America and there is a very deep integration based on energy resources that are shared across borders.

The speaker pointed out that Central America has currently made fundamental progress towards a single market. There is also the experience of the Andean countries and the countries of the Southern Cone, with projects that have been built on a bilateral basis, which may allow, in the future, a single market based on multiple connections that already exist between pairs of countries. There is also the case of the "northern arc" (covering the north of South America, northern Brazil, Guyana), which is currently the most lagging subregion, as it is still under study and does not have infrastructure. With these characteristics, South America's integration is anchored to the sharing of the strategic resource of water. Hydroelectricity has allowed the construction of an important history of cross-border integration, developed over the years.

He explained that the dream is to advance towards regional integration between each and every one of these different initiatives, for which important challenges remain: How much of what is consumed is exchanged or explained by the exchange of our countries? Currently, 4% of electricity consumption in Central America goes through exchange and integration networks. In South America, the percentage is between 5% and 10%, depending on whether shared water resources are considered, and only 0.5% if we talk about interconnection. In the Andean region, in 2011, 1.3% of electricity exchange was reached, but this decreased to 0.4% at present. For reference purposes only, the speaker reported that in the European Union, the exchange reaches 14%. In other words, the region has great potential for further growth.

Another interesting element worth highlighting, according to the speaker, is the relationship between integration and infrastructure. First, he stressed that there is currently the possibility of exchanging electricity through a third country, and this is also integration. Countries that do not have a border can exchange energy, which means a challenge in terms of regulation. Likewise, it is possible to build larger markets through regulatory harmonisation, through regulatory convergence, i.e., it is a regional public good and it is a matter of generating some degree of harmonisation so that this can be more integrated. This is also energy integration. Therefore, there is also an important effort of regulatory consistency, this aspect is a different form, less directly associated with infrastructure.

Regarding the challenges and a work agenda, the expert reported that, first, the political challenge is faced: The first challenge is to seek continuity in energy policies, as they are projects that go beyond governments. These policies have to be conceived as state policies. This is a central element that must be incorporated into policies.

he second challenge would be to find a correlation between the technical and political cadres that implement the projects. The political leadership has to monitor. There are also the regulatory challenges, which give legal certainty to decision-makers. One element that should be highlighted from the experience is that, for investment to take place, the regulation of project remuneration must be harmonised to some extent.

Latin America does not have this regulatory context, but there is an important element: energy plays a determining role in traditional goods markets.

In short, the expert acknowledged that significant progress has been made in electricity integration in the region, although the figures show that there is still significant potential, there is an interesting baseline from which integration can be built in a pragmatic and gradual manner.

In response to the questions raised, the Executive Secretary of OLADE pointed out that the dialogue and meeting between the public sector and the private sector is very important, where the State is fundamental in planning and regulation, generating a more competitive market, while the private sector contributes with investments. He also stressed that OLADE promotes these approaches.

As for green hydrogen, he reflected that hydrogen is a fuel that has been used for a long time in many processes. Rather than green, we would speak of a clean energy source for generating electricity, bearing in mind that the enabling condition for producing green hydrogen is to have made progress in the transition of the energy model. Probably the biggest challenge lies in determining where its main uses are.

With regard to studies on electro-mobility in the region and regulatory harmonisation, he reported that OLADE is working on this issue and on the possibility of having some degree of regulatory harmonisation, for which they count on a group of countries where relevant information is exchanged.

SECOND SESSION

In the second part of the agenda, referred to the presentations of the mechanisms on the work they are carrying out in the area of energy and electricity interconnection, Silvia Hernández, analyst of the Economic System of Latin America and the Caribbean (SELA), took the floor. Her presentation, entitled “The role of SELA in the process of sustainable energy transition,” stated that the strategic objectives of the programme are:

- 1** Promote the development of sustainable infrastructure;
- 2** Promote the use of green energy; and
- 3** Boost LAC electricity integration.

The aim is to achieve energy integration, with emphasis on electricity, by analysing successful regulatory experiences that facilitate regional electricity interconnection; analysing strategies and actions to strengthen and expand regional electricity interconnection; and identifying challenges to improve electricity integration in Latin America and the Caribbean.

In the participation of the Secretaries, the Secretary General of SICA, Werner Isaac Vargas, reported on the origin of the regional electricity market in Central America, recalling that it began with bilateral or bi-national interconnection processes. It began with the interconnection between Honduras and Nicaragua in 1984. A small interconnection of a few hundred kilometres, today we already have an interconnection of 1,800 kilometres of electricity network that stretches from Guatemala to Panama, which allows an exchange of 300 megawatts, with a projection of a second line of the interconnected system for Central America of 600 megawatts.

It should be noted that it is owned by the Central American integration system, not by the countries themselves. It also has a Regional Electricity Market Board, which is a political body responsible for managing the market. The region also has a Regional Electricity Interconnection Commission, which is the regulatory body for this electricity market. Although there are still weaknesses in the area of contracting, there is still a need to move towards a firm contracting market.

The existing mechanism allows for the exchange of surplus electricity at the regional level; at the same time, it identifies a share of 74% of renewable energies in the regional electricity market. This percentage places them at the forefront of many countries and regions. The Secretary also informed that SICA is not only working on the issue of distribution and electricity transmission, but also on energy efficiency in terms of the use of certain appliances, such as refrigeration, air conditioning, lighting, public lighting, among others.

These examples of best practices and lessons learned are made available to the other Latin American integration schemes to share experiences and to undertake common actions. The Secretary General acknowledged that some challenges remain, such as reducing the use of firewood as a source of energy in the region; achieving better promotion of renewable energies; and expanding coverage in countries such as Guatemala and Honduras.

Subsequently, Christian Leroux, representative of the Secretary General of the Latin American Integration Association (ALADI), made his presentation, informing that ALADI, with its 13 member countries, has a Department of Physical and Digital Integration, which covers trade facilitation. Since the 90s, agreements have been signed on energy integration, electricity, gas, oil, interconnection issues, generation, exploitation, marketing, and transport distribution. Within the framework of the Treaty of Montevideo 1980 (TM80), there are two types of agreements: partial scope agreements and regional

scope agreements. Partial scope agreements are open to the accession of another country, which facilitates greater convergence. An example is the Economic Complementation Agreement between Argentina and Chile, ACE 16, in which an additional protocol regulating gas interconnection and the supply of natural gas was registered. Additional protocols can be signed outside the ALADI General Secretariat, but they are then registered.

There are also trade promotion agreements on gas supply between Argentina and Uruguay. Another trade promotion agreement on gas supply between Bolivia and Brazil. Between Mexico, which is a member of ALADI, and countries that are not members of ALADI, but are Latin American countries, there is an agreement on the acquisition, sale, and transport of natural gas. The complementation agreement AC 35, which is between MERCOSUR and Bolivia.

In 1982 a basic cooperation agreement was signed with OLADE and in 2021 a Memorandum of Understanding on Inter-institutional Cooperation was signed. The intention was to deepen the cooperation with OLADE and among the different integration mechanisms; there is already a memorandum in place to be able to work together on some important issues in order to move forward.

He pointed out that, within their technical possibilities, they can cooperate with other mechanisms in the field of energy. To that end, there is already a virtual centre for training public officials, private sector officials and academics. It is a very active virtual centre, where they have different courses on nomenclature, rules of origin, integration processes, transport and logistics.

He proposed that with OLADE and some other organisation, they could open the platform to provide interested parties with a specific training course, which could then become a permanent meeting space on these issues, offering all their negotiation expertise. The representative informed that it has 13 member countries, but that all Latin American countries are invited to participate.

The Secretary General of the Andean Community (CAN), Jorge Hernando Pedraza, then took the floor and pointed out that one of the points of convergence of the integration organisations is to enhance the strengths of Latin America, recognising that one of the greatest strengths is the institutional framework.

He considered it necessary to call for more research, so that there is much more access to technology to strengthen the region. With the CAN member countries, the aim is to achieve better research conditions that will allow technological developments that the world is demanding, mainly so as not to pollute the planet anymore, innovating with alternative energies, clean energies.

Finally, he confirmed the availability and willingness of the Andean Community to continue working in the areas of coordination and convergence, following the already agreed agenda.

III. CONCLUSIONS

The conclusions were presented by Mr. Jean Paul Guevara, focal point on the subject of the Latin American and Caribbean Economic System (SELA). Mr. Guevara began by stressing that the event is understood as a continuity of the work started the previous day. Underscoring the efforts made to comply with the agenda and respecting the established deadlines, he stressed that the mere identification of progress and challenges in the area of energy and electricity interconnection in the region already provides convergent lines of work.

From the presentations made, it was observed that the reasons for working together and for electricity integration are more than obvious, starting with economic and financial factors, such as the creation of economies of scale, as well as the strengthening of the networks themselves by making them more efficient. But there is also the geopolitical factor and energy security, as well as the political factor of strengthening the integration of the region.

Within this framework, three major converging themes were identified that show the potential for further joint work:

- 1** On the one hand, there is the recurring issue of financing and infrastructure, which includes joint procurement and economies of scale.
- 2** On the other hand, the harmonisation of regulatory standards is a necessity, but also an area where the willingness to work together, in different organisations, is evident.
- 3** Last but not least, with technological advances, innovations and energy transition, electromobility is another area of convergence.

It is clear that there are many reasons to increase our production of renewable energy, reduce dependence on unsustainable fossil fuels and ensure our energy security, for which the fundamental importance of integration, convergence and joint action in the region was highlighted. This is the only possible solution to be able to achieve high impact projects that respond to our own needs.

IV. RECOMMENDATIONS

Following are some recommendations derived from the concepts and ideas expressed by the panellists and the moderator:

- 1** Generate a working group through focal points, established by each of the integration mechanisms, which can guide this work towards convergent agendas, mainly on the subject of regulatory standards.
- 2** Work on the complementarity and transfer of training models on energy and electricity integration, recovering experiences of best practices in this regard.
- 3** The Working Group should make progress on financing and infrastructure issues.
- 4** Finally, it was recommended that the report, resulting from the seminar, be shared with each and every one of the participants, in addition to each organisation present.

All of the above, with the aim of being able to build projects with a regional focus, which is the purpose of the meeting.