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### 15th SMART GRID FORUM 2023 Latin American Smart Grid Forum

# "Advanced technologies for integrating and managing energy, connectivity and other services in electrical networks and in buildings and smart homes"

INTRODUCTION OF THE LATIN AMERICAN SMART GRID FORUM

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### SOCIETY TRANSFORMATION AND ENERGY TRANSITION IN THE 21st CENTURY



FROM Profit



TO Purpose







**Hierarchies** 



**Networks & Collaboration** 





**Empowerment** 



**Planning** 



**Experimentation** 



**Limited Access** 







#### **Latin American Smart Grid Forum**

- Pioneering initiative in 2008.
- Open, periodic and systematic exchange of information and policy formulation focus on articulation and synthesis.
- Collaboration with other similar initiatives in the world.
- Neutral, independent and inclusive (nonexclusive) vehicle to engage the widest possible array of stakeholders in the debates.
- It defends sustainable mdernization considering the technical, economic, environmental, political, legal and social aspects.
- No fees: conferences are self-sustaining.
- Edition Fifteen begins TODAY!!







#### **Latin American Smart Grid Forum**

- Business-oriented perspective from technological modernization and innovations
- Up-to-date monitoring and evaluation of progress around the world
- More focus on the next steps than on previous achievements
- No easy answers or magic solution: the Forum commits to raise and debate the fundamental basic questions for the next building blocks to move forward in the LA region
- The work does not end after the Conference – it actually begins again – each Conference is a new structuring of the issues relevant to the debate and the progress of the region in the coming year.
- This 15th edition will address the integration of Electricity Services in Smart Buildings







## Smart Grid: Radical Technological Transition of the Electricity Sector

#### **Traditional Centralized Industry**



Heavy Assets - Capital Intensive Concessions, Monopoly, Captive markets, Regulation, Capital Intensive and Large Scale End of Technology Cycle

#### **New Industry of the XXI Century**



Free access to renewable energy: small scale
Decentralization + Electrification
Digitalization = Connectivity + AI + Analytics + IoT
Competitiveness, New Uses and Markets
Emerging technologies: rapid development



## Why and how is the business model changing around the world?

Traditional Business Model	Smart Grid Business Model
Infrastructure concessions, based on public tariffs	Free and ad-hoc access to technology, build your own energy infrastructure
Captive market and exclusive supplier of energy, from the plant to the end use	Multiple power sources, from multiple users and owners working together
Capital-intensive industry, focus on continued energy growth and demand	Competitive costs, focus on energy efficiency and demand management
Return on investment in decades, 30 years	Return on investment in less than 10 years
Pricing policies defined by the required investments and scale (sales volumes), embedded cross-subsidies	Prices defined by the use, reliability, technology and efficiency required
Main Products: kWh and kW	Main Products: Usage Management



#### THE CHALLENGE FOR THE ENERGY TRANSITION



**Current T&D Networks** 

NOT

prepared



host and optimize DER and DG

tariffs and smart meters

Demand Response

flexibility services

energy transition **Need for Requalification of current networks** 

Smart Grids (T&D) are a critical path to enable the energy transition.

This requalification needs to be suported by a specific PUBLIC POLICY and considered in the process of renewal of the concessions of the distribution utilities.

The current scope of work of the T&D companies is no longer and will not be, in the future, the same as that described in the contracts of the current concessions.

It needs to be considered the reality of a more competitive market and the energy and technological transition.



#### THE CHALLENGE FOR THE ENERGY TRANSITION



Requalification of T&D Networks



investments in digitalization, automation and introduction of advanced control systems for their automatic management

capacity and resilience reinforcements to host growing decentralized generation, new electrification loads, and resisting increasingly frequent extreme weather events

Tariffs and smart meters that allow the offer of flexibility services and demand response









### Welcome to the XV Latin America Smart Grid Forum 2023!

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