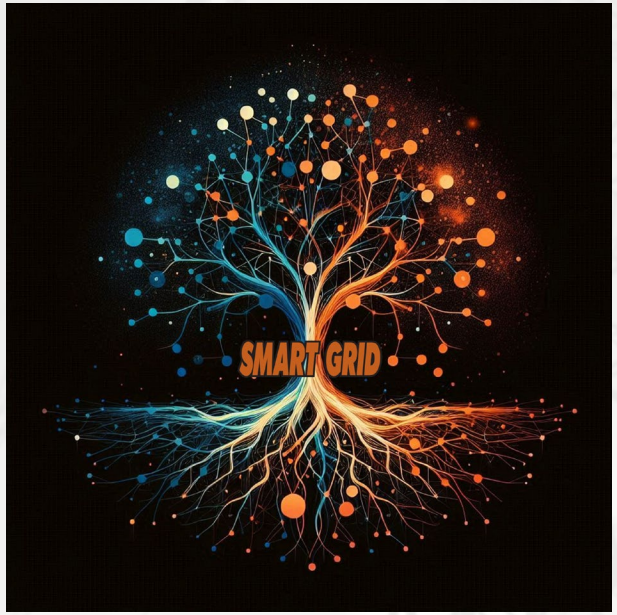
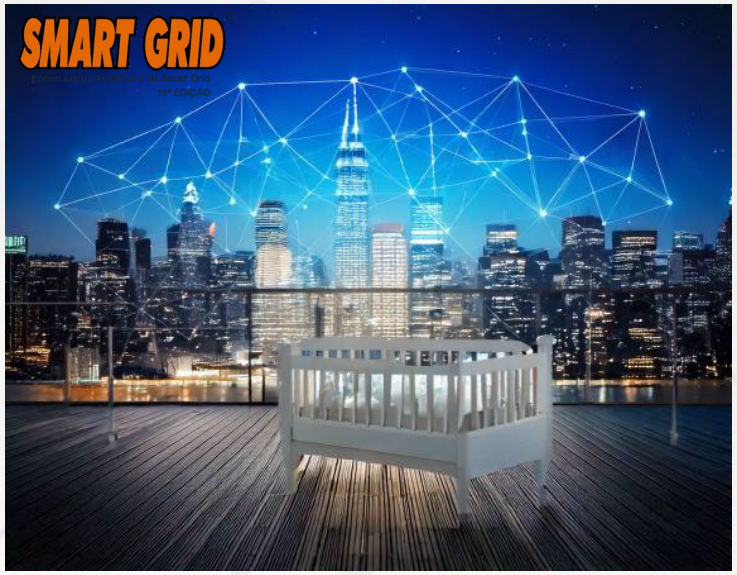


16th SMART GRID FORUM 2024

Latin American Smart Grid Forum

São Paulo, Brazil, October 28th & 29th, 2024



"Digital energy systems and the **requalification of T&D networks as a critical path** for the **energy transition** and for the **energy resources integration** with **other services in smart buildings**"

INTRODUCTION OF THE LATIN AMERICAN SMART GRID FORUM

São Paulo, October 28, 2024

Cyro Vicente Boccuzzi, President, LATIN AMERICAN SMART GRID FORUM and CEO, ECOee

Latin American Smart Grid Forum: 17 years of Innovation and Leadership

Pioneering Smart Grid Discussions

- ✓ Founded in 2008
- ✓ Open and inclusive platform
- ✓ Global collaborations
- ✓ Neutral and independent
- ✓ Sustainable modernization advocate

Our Focus

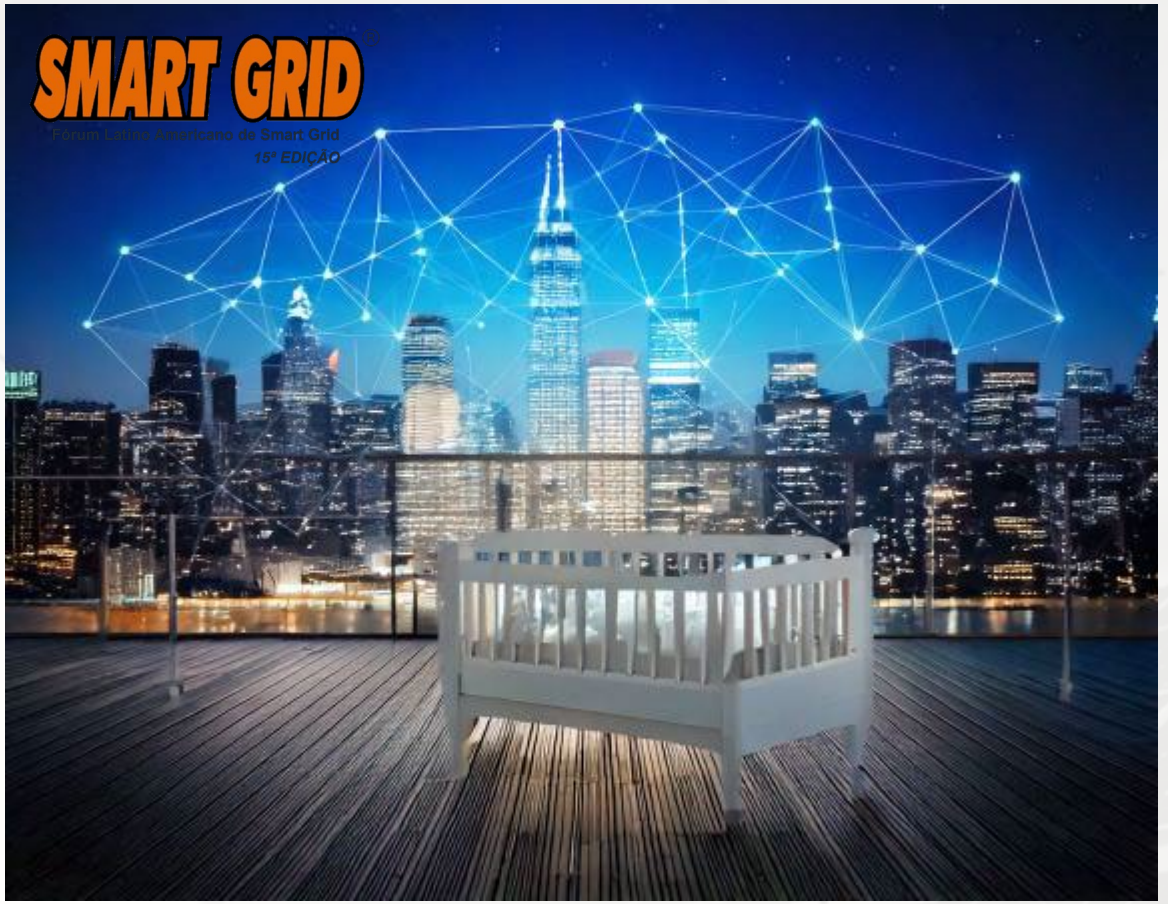
Business-Driven Innovation

- ✓ Tech modernization and innovation focus
- ✓ Future-oriented perspective
- ✓ Addressing fundamental challenges
- ✓ Continuous work beyond the conference
- ✓ 16th edition: Electricity system integration for energy transition and climate

Our Impact

Shaping the Future of Energy

- Early adopter of key topics:
  - Renewable energy integration
  - Energy efficiency and storage
  - Microgrids and electric mobility
  - Smart metering and tariffs
  - Network automation, digitalization, and resilience
  - Regulatory sandboxes and new business models
  - Smart city developments
- Ahead of the curve: Discussing future trends

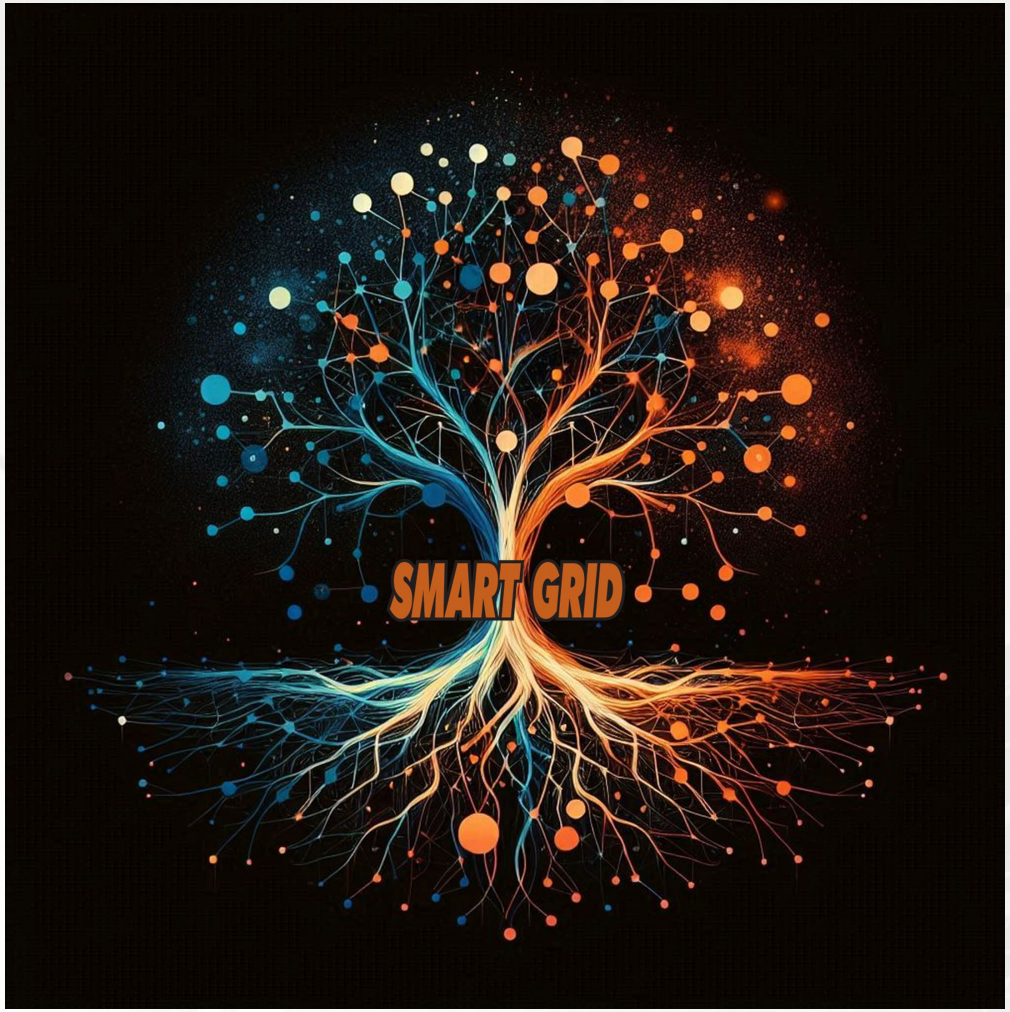


Our Network

- **Global Collaboration**
  - Active global institution
  - Collaborations with 50+ countries
  - Annual conference on smart energy
  - Promoting intelligent energy systems
  - Improving electricity and energy services

Our Conference

- **A Unique Experience**
  - Single-hall conference and exhibition
  - High-quality attendees
  - Focused discussions and networking
  - Recognizing industry leaders
  - Celebrating sustainability with the digital tree symbol



Smart Grid: Technological & Business Radical Transition for the Electricity Sector

FÓRUM LATINO-AMERICANO DE SMART GRID
SMART GRID 16ª EDIÇÃO

Past Business Model: Traditional Centralized Industry

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

Present Business Model: 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

Infrastructure concessions, based on public tariffs	→	Free and ad-hoc access to technology, build your own energy infrastructure
Captive market and single energy supplier, from plant to end use	→	Multiple power sources, from multiple users and owners working together
Capital-intensive, focus on continued energy and demand growth	→	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

Source: Latin America Smart Grid Forum 2013

Waking Up to Reality: The Urgency to Change

- ✓ **New Paradigms:** The introduction of uncontrollable renewable sources and extreme weather events have drastically altered the energy landscape.
- ✓ **Recurring Extreme Events:** Regions such as São Paulo, Rio Grande do Sul and the North of the country experienced extreme weather events, exacerbating the system's problems.
- ✓ **Network Modernization:** Electricity grids need to be modernized to meet new demands, including greater resilience, self-healing capacity, and distributed generation integration.
- ✓ **Need for a Sectoral Program:** An agreement between the various actors in the energy sector is essential to define the next steps and face the challenges together.
- ✓ **Specific Opportunity and Funding:** Concession´s renewal and the National Energy Transition Plan (PLANTE) must include a specific financing plan for the modernization of the electricity system.
- ✓ **Intersectoral Action:** It is necessary to join efforts to face the energy crisis, as the challenges will multiply if there are no effective actions.

THE CHALLENGE FOR THE ENERGY TRANSITION

Latin America Smart Grid Forum

Current Legacy T&D Networks

NOT prepared

- Host and Optimize DER and DG
- Smart Tariffs and Meters
- Demand Response
- Flexibility Services
- Extreme Climate Events

Need for Requalification of current networks

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

This requalification needs to be supported 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 ON T&D – BRAZIL ONLY

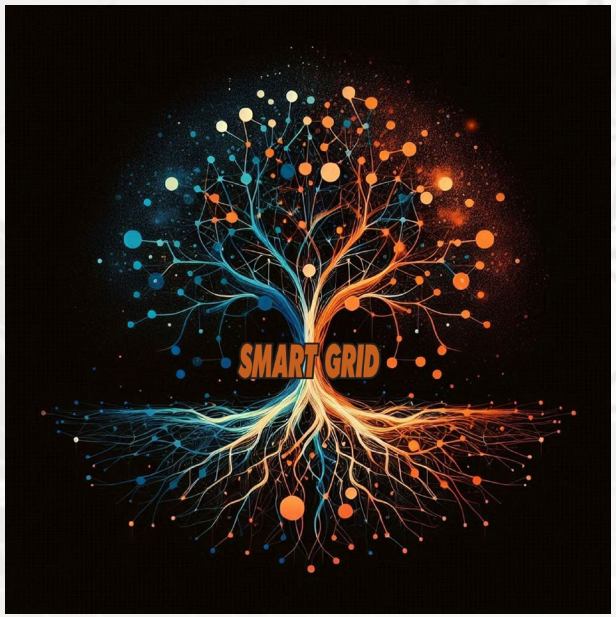
Latin America Smart Grid Forum

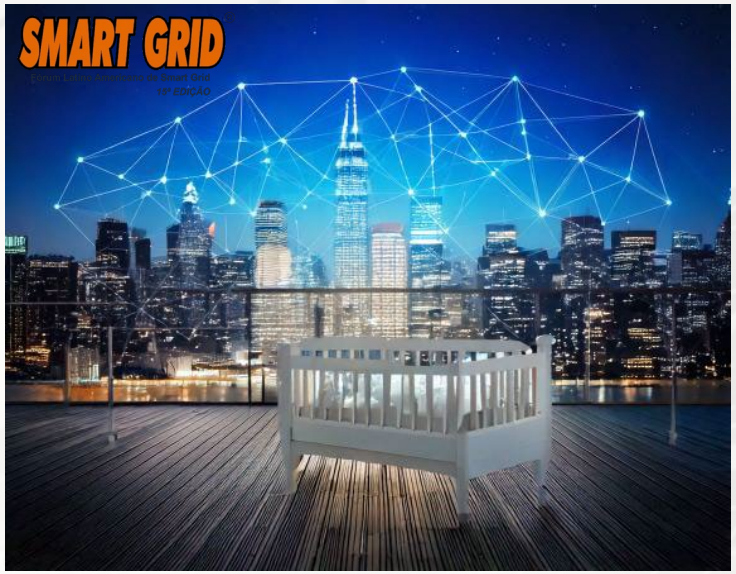
Current T&D Networks

NOT prepared

	UNTIL 2027 / 28	
Host and Optimize DER and DG	R$ 40 Bilhões	US$ 7 Billion
Smart Tariffs and Meters	R$ 60 Bilhões	US$ 10,6 Billion
Demand Response	R$ 20 Bilhões	US$ 3,5 Billion
Flexibility Services	R$ 100 Bilhões	US$ 17,7 Billion
Extreme Climate Events	R$ 130 Bilhões	US$ 23 Billion
	R$ 350 Bilhões	US$ 62 Billion

Welcome to the XVI Latin America Smart Grid Forum 2024!





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