

CAREC CONFERENCE & EXHIBITION

September 24th - 28th, 2023 | Kimpton EPIC Miami

Transcending Barriers - Boosting the Region's Development through Reliable, Affordable and Clean Electricity Supply & Resilient Power Grids



Theme Synopsis

Within recent times, the Caribbean has battled natural disasters, exorbitant fuel prices and the effects of the COVID-19 pandemic. These challenges have not only highlighted **the region's vulnerabilities** but its **innovation, resilience, and adaptiveness**. Despite the rising fuel prices, the Caribbean has successfully implemented projects in various **renewable energy (RE)** technologies on the **utility-scale**, simultaneously with an uptake of **grid-tied, small-scale distributed RE** along with the gradual introduction of **e-mobility** and the acquisition of electric vehicles. Between 2018 to 2021, **installed capacities in solar and wind energy** in the Caribbean **increased by 254MW and 64MW** respectively. These experiences further power and boost the energy transition and have encouraged similar efforts to be undertaken throughout the region.

Justifiably, setbacks and barriers to regional RE pursuits could be substantially alleviated with holistic, yet detailed plans for RE expansion and suitable regulatory frameworks in place. The implementation of **fitting grid codes, effective procurement procedures** and **fair tariff methodologies** should be utilized concomitantly to boost energy transition efforts. Moreover, feasible **financing and planning for RE expansion and energy storage** can positively contribute to increased energy affordability by subsidizing and lowering existing electricity rates and modernizing tariff structures.

The Caribbean possesses an **abundance of indigenous RE resources** and the exploration of innovative, dispatchable, proven and successfully established RE technologies should fall within its radar. In addition to utility-scale **solar PV, wind and hydropower** technologies, **geothermal energy** lauds itself as a weather-resistant, consistent resource, which if explored correctly, has the potential to supply year-round baseload demands for several Caribbean countries. Additionally, direct-use **geothermal power can be a game changer** for small-scale developments in relation to the agricultural and tourism industries – on which the region heavily relies. Moreover, upon further testing for suitability in the region, **marine RE** technology can also serve as a catalyst for cost-efficient decarbonization.

In order to ensure grid flexibility and resilience, the importance of **battery energy storage** systems (BESS) and critical grid infrastructure has been realized and they are gradually taking precedence within the Caribbean. BESS systems are being implemented across the region as more utility-scale RE projects are being developed. In the same vein, dispatchable distributed energy resources (DER), e-mobility and **new energy services** with their

progressive uptake can perform harmoniously towards grid expansion and integration. With cost-efficient storage systems, appropriate smart grid technologies, and flexible, operative mechanisms; the reliability of the grid can be maintained, as well as its ability to withstand the effects of intermittent RE and extreme weather events.

Suitable energy service models such as the **Integrated-Utility-Services (IUS) Model** or Energy-Service-Contracting (ESCO) model can effectively support energy transition efforts and the upscaling of e-mobility within the Caribbean via best-practices, innovative solutions and the provision of opportunities for demand-site-management and decentralized RE generation. Energy service providers can capitalize on these business models towards increasing system flexibility and allocating for higher shares of intermittent RE and e-mobility.

The expansion of RE, grid flexibility and decentralization of RE generation must be executed with the consideration of variables as they relate to **security of supply, decarbonization and energy affordability**. The successful implementation of innovative technologies requires planning tools and processes, as well as regional and international support and best-practices, that are accessible. Furthermore, key success factors which will allow for reliable, affordable, and resilient electricity supply based on indigenous RE resources include **solid policies and regulation, intelligent financial planning and business models**, and increased **regional, technical capacity**, which will effectually lead to a more resilient Caribbean power sector.

During our CAREC Conference 2023, best-practices and innovative approaches that have transcended barriers will be explored and discussed in an effort to boost the region's development through reliable, affordable and clean electricity supply and resilient power grids.

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All interested persons are invited to submit abstracts of approximately 100 words with titles, for preliminary consideration, as presentations for CARILEC 2023 CAREC Conference & Exhibition and Articles for the [CARILEC CE Industry Journal](#).

Presentation Topics

Topics of interest to the CARILEC Conference audience must incorporate the theme of the conference and focus on sub-topics listed below:

Panel Discussion:

Transcending Barriers - Boosting the Region's Development through Reliable, Affordable and Clean Electricity Supply & Resilient Power Grids

Key Topics (with a focus on best practices, lessons learnt and successful models for replication in the region)

1. Policy & Regulation for Energy Transition

- **The pace of regional renewable energy developments** – tailored best-practices, setbacks, and successes in the Region.
- **RE expansion planning** – successful processes to develop feasible and realistic RE expansion plans and targets for the Caribbean.

- **Suitable regulation** for clean, affordable and reliable power supply: fitting electricity codes, effective procurement procedures and fair tariff methodologies to boost energy transition.
- **Decentralized RE generation in the Caribbean** – best-practices and lessons learnt for a smooth and cost-efficient grid integration of small-scale RE.
- **Financing RE expansion** - Impact on existing electricity rates and possibilities for tariff modernization to increase energy affordability to the customer.
- **Fuel-switch to LNG in the Caribbean** – guaranteed benefits and possible drawbacks with regards to security of supply, decarbonization and energy affordability.
- Similar topics related to Policy & Regulation for Energy Transition.

2. Successfully established and innovative RE Technologies for the Caribbean

- **Marine Renewable Energy Technologies** – A door opener for cost-efficient decarbonization ready for implementation?
- **Geothermal development** - a cost-efficient option to generate predictable RE for the Caribbean region?
- **Utility-scale wind and solar PV** – Key success factors for project development on small islands.
- Similar topics related to RE Technologies for the Caribbean.

3. Smart grids - Technical and operational solutions for grid resilience and flexibility

- **Critical grid infrastructure for Energy Transition** – cost-efficient storage systems, suitable smart grid technologies and grid operative mechanisms that help to maintain the reliability of the grid of the future facing a high penetration of extreme weather events and intermittent RE.
- **Approaches for “building-back-better”** after climate hazards and natural disasters – suitable technology options and innovative financing models.
- Similar topic related to Smart Grid Infrastructure for the Caribbean.

4. Alternative Energy Services and E-mobility

- **Suitable Energy Service Models** to support Energy Transition in the Caribbean such as the Integrated-Utility-Services (IUS) Model or Energy-Service-Contracting (ESCO) – experiences, best-practices, and innovative solutions to increase energy efficiency for customers, provide opportunities for demand-site-management and offer decentralized RE generation.
- **Upscaling E-mobility in the Caribbean** – innovative business models for electric utilities
- **Battery Storage Systems and new energy services** - innovative business models for energy service providers to increase system flexibility and allow a higher share of intermittent RE
- **E-Mobility as an opportunity for RE integration and RE expansion** - how to use e-mobility infrastructure to increase grid flexibility.
- Similar topic related to Alternative Energy Services and E-mobility for the Caribbean.

Utility Case Studies: Presentations on experiences and practices which are relevant to the Region and the Conference theme.

Presenters Guidelines

1. All completed Abstract Submissions Forms must be submitted by **August 15th, 2023**.
2. Selected presenters will be informed by **August 22nd, 2023**.
3. Subsequent to notification, a full presentation must be submitted by **September 18th, 2023**, based on the selection committee's allotted time for your presentation:
 - Option 1** - Power Point slides, for an approximate 35–60-minute presentation/ working session (inclusive of 15 minutes Q & A)
 - Option 2** - Power Point slides, for an approximate 20 - 35 minutes presentation (inclusive of 5 - 10 minutes Q & A)
 - Option 3** - Power Point slides, for an approximate 15–20-minute presentation (inclusive of 5 minutes Q & A)

* A Written Article (Optional) to be considered for publication in the CARILEC's CE Industry Journal. For more information on the Journal email caribbeanelectric@carilec.org

Please send all Submissions to: Marketing and Member Services Department, at events@carilec.org (Early Submissions are highly encouraged). Receipt of your submission will be acknowledged within two days.

General: CARILEC has appointed a selection committee to determine the presentations to be delivered at its conferences. The number of presentations accepted for a conference depends on program size (the number of sessions), technical coverage (the topics to be covered), focused on the subtopics and the number and quality of presentations. The selection committee identifies the best contributions for the agenda.

Awards

Presenters will:

1. Have an opportunity to be published in [CARILEC CE Industry Journal](#).
2. Have their bio, photo and company name published on the CARILEC website.
3. Present to Caribbean Regional Utility Managers and an audience of over 60 delegates.

Criteria for Selection: Your abstract should demonstrate clearly that your presentation:

1. Will focus on the specified theme and general topics;
2. Will be of interest particularly to the target audience of the conference;
3. Will present information that is theoretically sound and accurate;
4. Will present new knowledge or experience, the substance of which has not been previously presented at a CARILEC conference (unless otherwise advised);
5. Will not be commercial in nature and will not promote specific companies, products, or services.

Full Disclosure: Third Party Compensation

All instructors and presenters are required to disclose proprietary interest in any product, instrument, device, service, or material discussed in the experience, event, or program, as well as the source of any compensation related to the presentation.

[CLICK TO ACCESS ABSTRACT SUBMISSION AND AUTHORIZATION TO PUBLISH FORM](#)

***ONLY SIGNED FORMS WILL BE ACCEPTED NO EXCEPTIONS.**