EIDEN O. GARCIA TORRES, B.S.E.E.

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Education

University of Puerto Rico, Mayagüez   Jan. 2020 – Dec. 2024

Bachelor of Science in Electrical Engineering (Cum Laude)   *Mayagüez, PR*

- **Concentration:** Power and Systems Engineering
- **Minors:** Construction Engineering & Architecture; Project Management & Professional Ethics

Professional Experience

LUMA Energy LLC   Jan. 2025 – Present

Technical Specialist II, Engineering & Asset Management   *Santurce, PR*

- Led cost-benefit–driven reliability analyses and field validations across **67 distribution feeders**, recommending and verifying DA devices (3-ph/1-ph reclosers, fuses, cFCIs) impacting **100,500 customers** in Puerto Rico.
- Performed **80+ protection coordination studies** using Synergi Electric and Excel-based TCC tools, ensuring optimal operation and compliance with protection standards.
- Supported commissioning of **6 three-phase reclosers**, programming control modules, verifying protection settings, and validating operational readiness before energization.
- Performed **8+ event analyses** for 3-ph reclosers using Wavewin and Excel to identify root causes of operational events with critical reliability or safety impact.
- Led **4+ internal workshops** and developed **6+ departmental guidelines** and **3+ analytical tools** to standardize the Reliability Recommendation process and enhance team efficiency.
- Delivered **4+ technical training sessions** to over **90 field personnel**, covering safe operation of DA devices (IntelliRupter, TripSaver II, cFCI, ABB Reclosers).
- Led quarterly log reviews for over **300 three-phase reclosers** to analyze device data and calculate FY25 CMI avoidance using Python, Excel, and Power BI, delivering reports to stakeholders that showed an estimated **25% SAIDI (CMI) improvement** and **23% SAIFI reduction**.

LUMA Energy LLC   Jan. 2023 – Jan. 2025

Jr. Technical Specialist, Engineering & Asset Management   *San Sebastián, PR*

- Assessed construction feasibility across **40+ distribution feeders** impacting **40,000+ customers** in Puerto Rico.
- Performed preliminary protection studies (fuses, 3-ph/1-ph reclosers) on **10+ feeders** using Synergi Electric and Excel.
- Completed feeder load studies supporting protection coordination and constructability decisions.
- Managed configuration, maintenance, and data acquisition for **20+ S&C devices** (IntelliRupters, TripSavers).
- Authored **4+ internal guidelines** (data acquisition, load study procedures).
- Built Power BI dashboards/trackers for **400+** IntelliRupters, GridShields, and TripSavers maintenance and data.
- Integrated **CMI Avoidance** into analytics (Power BI/Excel/Python), contributing to ∼**10% CMI reduction** via 3-ph recloser analysis.
- Supported Tropical Storm Ernesto response: tracked **500+** damage points for the Mayagüez region in Excel.

LUMA Energy LLC   May 2022 – Jan. 2023

Internship & Co-op, Engineering & Asset Management   *Santurce, PR*

- Verified and assessed fuse placements on **15+ feeders** using GIS and Excel; produced feasibility reports.
- Configured IntelliRupters (S&C and ABB); supported field maintenance and commissioning of **5+ S&C units**.
- Reviewed **6+ feeder recommendation reports** (Synergi/GIS) for device siting accuracy and completeness.
- Analyzed interruption metrics and feeder performance; contributed to **CEMI metric** integration.
- Programmed ammeters, organized datasets, and generated operational insights.

Academic & Research Experience

Solar Engineering Research Racing Team   Aug. 2021 – Jul. 2022

Battery Division Leader   *UPR Mayagüez — Mayagüez, PR*

- Led team of **3**; optimized BMS parameters, executed battery module testing, and enforced safety compliance to improve efficiency and reliability.
- Managed 3D modeling and fabrication of battery components; delivered workshops and progress reports (Shapr3D, Excel).

Georgia State University (NSF RETRO Program)   Jun. 2021 – Jul. 2021

Undergraduate Student Researcher — Remote Tandem Robots   *Atlanta, GA*

  – Researched logistics for a robotic vehicle; optimized mobility, sensor coverage, and integration for mission performance.
  – Collaborated on design improvements to enhance reliability and task success.

Solar Engineering Research Racing Team   Jan. 2021 – Aug. 2021

Battery Division Member   *UPR Mayagüez — Mayagüez, PR*

  – Configured BMS for **420 Li-ion cells**; executed module testing and safety validation (Excel, Shapr3D).

Publications

Emergency Shelter and Connectivity for Rural Communities After Natural Disasters: A Case Study

Proceedings of the International Structural Engineering and Construction (ISEC)   **Feb. 2024**

  – Presented a modular, solar-powered, off-grid shelter concept to support rural Puerto Rican communities post-disaster.

Technical Skills

Software/Tools: Synergi Electric, Wavewin, GIS Mapping, Power BI, Python, MATLAB, AutoCAD, MS Office, Shapr3D
Power Systems: Protection studies (fuses, reclosers), load studies, device configuration (S&C IntelliRupter, TripSaver)
Languages: English; Native Spanish

Certifications

FEMA ICS-100 (Introduction to Incident Command Systems); FEMA ICS-200 (Basic Incident Command System);
CITI Program — Responsible Conduct of Research for Engineers