GOVERNMENT OF PUERTO RICO
PUBLIC SERVICE REGULATORY BOARD
PUERTO RICO ENERGY BUREAU

IN RE: THE DEPLOYMENT OF ELECTRIC VEHICLE CHARGING INFRASTRUCTURE	**CASE NO.:** NEPR-MI-2021-0013 **SUBJECT:** Principles for Initiating EV Infrastructure Deployment.

RESOLUTION AND ORDER

I. Introduction and Background.

On August 26, 2021, the Energy Bureau of the Puerto Rico Public Service Regulatory Board ("Energy Bureau") issued a Resolution under Case No. NEPR-MI-2021-0013[1] commencing a regulatory proceeding regarding the deployment of electric vehicle charging infrastructure ("EV infrastructure deployment"). As part of the proceeding, the Energy Bureau held a Stakeholder Workshop on September 23, 2021, and received written comments from: Cambio PR; College of Electrical Experts; Independent Office of Consumer Protection; Public Energy Policy Program of the Puerto Rico Department of Economic Development and Trade; Mr. Angel D. Rodriguez; and Tesla, Inc.

The main purpose of the workshop was to "...to initiate a dialogue on electric vehicle adoption trends and to encourage the deployment of the necessary infrastructure." During that Workshop, the Energy Bureau chairman set forth the vision for EV infrastructure deployment and specific Energy Bureau objectives. In essence, the Bureau is applying its authority to help improve electric vehicle penetration in Puerto Rico, as well as address the network of EV infrastructure needed on the island, the interconnection of this infrastructure to the electric grid, the necessary and appropriate use of associated financial incentives, and selecting the most appropriate and effective equipment, all while assuring that these infrastructure investments yield net benefits to customers and the electric grid.

Having now conducted the workshop, reviewed the comments received and assessed publicly available documentation on EV infrastructure deployment from other jurisdictions, through this Resolution, the Energy Bureau adopts and publishes the *Principles for Initiating EV Infrastructure Deployment* ("Principles"). The Energy Bureau adopts and publishes this Principles under the powers established on Act 57-2014,[2] Act 17-2019[3], for regulating, supervising, and enforcing the energy public policy of the Government of Puerto Rico.

II. Energy Bureau's Authority

The Energy Bureau is the independent specialized entity in charge of the regulation, supervision, and enforcement of the Puerto Rico energy public policy. The Energy Bureau has broad powers, duties and responsibilities pursuant to Act 57-2014 upon which is acting upon through this *Resolution and Order*. Particularly regarding its authority to "[o]versee and ensure execution and implementation of the public policy on the electric power service...", the Energy Bureau deems that public policy is advanced and the public interest is served through calling for the filings set forth in this *Resolution and Order*.[4] Furthermore, the Energy Bureau is empowered to "[f]ormulate and implement strategies to achieve the objectives of this Act" (pertaining to Act 57-2014).

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[1] Resolution, In Re: The Deployment of Electric Vehicle Charging Infrastructure, Case No. NEPR-MI-2021-0013, August 26, 2021.

[2] *Puerto Rico Energy Transformation and RELIEF Act*, as amended.

[3] *Puerto Rico Energy Public Policy Act.*

[4] *See* Act 57-2014, Section 6.3(a).

Also, the Energy Bureau finds statutory support for directing EV infrastructure deployment efforts in Act 17-2019, where it states to "[e]stablish an Electric System model in which the use of available energy resources is maximized, and the consumer is empowered to become part of the energy resources portfolio..."[5]. Act 17-2019 further directs the Energy Bureau "(t)o promote the necessary changes in order to transform the Electric Power System into one that satisfies the energy needs of the 21st century Puerto Rico".

Finally, the Energy Bureau further draws upon Act 33-2019, where it states "...that it is necessary... to implement an energy system with low petroleum use and eradication of coal-based generation, promote renewable or alternative and more efficient energy systems, improve energy efficiency, and promote the electrification of motor vehicles".[6]

III. Directives for Initiating EV Infrastructure Deployment

This Part III establishes the Principles to guide the adoption of plans, regulations and procedures related to this component of the energy sector in Puerto Rico. The Principles take into consideration the comments received, both written and oral, during the September 23, 2020, Stakeholder Workshop, as well as public regulatory documents and proceedings in other jurisdictions that address the deployment of EV charging infrastructure.

1. *Equipment Siting/Locating*

- Consumer behavior (anticipated/as known from other jurisdictions further along in the development process) must be factored in siting analysis to determine where to focus the deployment of charging infrastructure.
- The charging infrastructure deployment should be sequenced by sector:
  - residential (*i.e.*, single dwellings);
  - fleets;
  - transit (*i.e.*, small and large public transportation vehicles);
  - multi-family structures.
- Sites most beneficial to the grid and with the least impediments for interconnection shall be available through a database[7] (or similar distribution system interface) that site developers can use to identify such locations.

2. *Grid Connectivity*

- Rate design shall encouraged/incentivize consumer behavior(s) beneficial to the system
- To the extent possible, the deployment in the residential sector shall be synchronized with a concurrent implementation of a time-of-use rate for this customer class.
- The infrastructure and technologies to be deployed shall match market demand and ensure flexibility for emerging technologies:
  - Level 2: locations where parking occurs for an extended period of time (shopping centers; restaurants; residences);
  - Level 3: locations where user seeks a relatively quick charge (15 minutes or less).

3. *Incentives*

- Use rate design to deliver incentives (price signals); consider focusing rate design on the pairing of charging with DG and storage.

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[5] *See* Act 17-2019, Article 1.5(2)(e).

[6] *See* Act 33-2019, Article 3.

[7] To facilitate the implementations of such database, the same should be coordinated, to the extent possible, with the Hosting Capacity and Voltage Maps available to the public in compliance with the Energy Bureau orders in Case No. NEPR-MI-2019-0011.

- The Government of Puerto Rico has received $8.7M from the Volkswagen (VW) Settlement. These funds are currently overseen by the Department of Natural Resources. They can be used for EV incentives and infrastructure-related expenses. The funds have not yet been used; a planning process is still underway. Consider reassigning these funds to the Energy Bureau.

4. ***Changing Technologies & Needs***

- Use existing standards, such as ISO 15118 (concerning the interface between EV's and the grid) to direct deployment.
- Consider resources from other jurisdictions, such as the NESCAUM May 2020 EV Charging Interoperability Recommendations.

5. ***Benefits and Costs***

- Rate design (time-of-use rates)shall be used, to the extent possible, to shift EV charging to times when energy, particularly low-carbon energy, is abundant.
- EV charging deployment shall be coordinated with energy efficiency deployment and demand response implementations to decrease load, and better direct load toward renewably generated electricity, thereby effectively transitioning the grid away from carbon.

6. ***Utility participation in EV charging market***

- To ensure consumers have alternatives and that a competitive market is developed, both the private sector and the utility shall participate in the deployment of EV charging infrastructure.
- To capitalize the utility's participation in this component of the energy sector, its participation shall primarily target:
  (a) make-ready infrastructure investments;
  (b) services to hard-to-serve segments (such as low/moderate income or other equity-driven deployment needs); and
  (c) areas where the market does not adequately respond to demand or needs.
- The delivery of electricity via EV charging to an end user does not constitute functioning as an electric utility, as defined in statute.

7. ***Charging/billing those receiving electric service via EV charging***

- Billing to end users of EV charging stations shall be on a unit ($/kWh) basis, not time-based ($/minute).
- Mixed opinions about including a base fee within the billing.
- Consider establishing a maximum allowable price.
- Note that certain third parties (such as hotels) operate under an electric tariff that includes discounts/subsidies, which should not necessarily be passed on to EV charging occurring at these premises.

8. ***Government supplying land for EV charging infrastructure, especially along highways***

- Focus on developing public land first.
- Make sure that when public lands are made available for development that they process is fair and transparent.

Furthermore, the Energy Bureau has reviewed, and takes administrative notice of the following regulatory documents and proceedings in other jurisdictions, addressing the deployment of EV charging infrastructure:

- Minnesota Public Utilities Commission (various resources).[8]

[8] Available at https://mn.gov/puc/activities/economic-analysis/electric-vehicles/. Visited November 16, 2021

- New Jersey Public Service Commission. Re: IN THE MATTER OF MINIMUM FILING REQUIREMENTS FOR LIGHT-DUTY, PUBLICLY-ACCESSIBLE ELECTRIC VEHICLE CHARGING DOCKET NO. QO20050357.[9]
- Oregon Public Utilities Commission, promulgated Rules, Division 87, Transportation Electrification Programs.[10]
- Wisconsin Public Service Commission Investigation into Electric Vehicle Policy and Regulation; Order 402117.[11]

IV. Conclusion.

The Principles are informed by the Energy Bureau's review of input received during the in the Workshop and the comments filed by Stakeholders under the instant case and information from other jurisdictions. In particular, the Energy Bureau received comments and reply comments from many different stakeholders, each with a unique perspective and expertise regarding EVs and the broader electric system. The Energy Bureau has reviewed and considered these comments, as well as the most prominent issues that emerged from these comments, in order to develop the Principles make general and specific findings regarding EVs in Puerto Rico that are also intended to shape and guide future EV related filings by LUMA. The Principles will also help the Energy Bureau, in the adoption of regulations and procedures needed to effectively regulate the EV Industry and the deployment of related infrastructure on the island.

Therefore, the Energy Bureau **ORDERS** LUMA to file the following **on or before September 1, 2022,** a First Phase of an EV Charging Infrastructure Deployment Plan ("Phase I EV Plan") that reflect the Principles and complies with the following requirements:

a. The Phase I EV Plan" shall identify near-term transportation electrification actions LUMA can take to address barriers to the adoption of EVs in Puerto Rico to the residential segment;
b. Within the Phase I EV Plan, LUMA shall identify a portfolio of actions, which may include investments and infrastructure to support electric vehicles, rate design, programs, and services, reasonably expected to contribute to the objectives of Act 17-2019 and Act 33-2019.
c. The Phase I EV Plan should seek to first address barriers to the adoption of transportation electrification in the residential and low-income sectors.
d. As part of the Phase I EV Plan, LUMA shall file a draft proposal for one or more of the following aspects of charging service for residential customers: rates related to EV charging and/or load management efforts to control the timing of charging.
e. The Phase I EV Plan should also address disadvantaged communities. This may include programs to enable vehicle charging access to multifamily buildings and renters, low-income customers, and public transit. Any proposal to serve low-income customers should include documentation of LUMA's outreach to community organizations within the areas LUMA seeks to serve
f. The Phase I EV Plan should seek to minimize electric system impacts resulting from increased electrification of the transportation sector.
g. LUMA shall discuss in detail the following information in the Phase I EV Plan, which the Energy Bureau will take into consideration as part of the evaluation and approval of the Phase I EV Plan:

[9]Available at https://www.nj.gov/bpu/pdf/boardorders/2020/20200923/8F%20-%20ORDER%20Electric%20Vehicle%20MFRs.pdf . Visited November 16, 2021

[10] Available at https://secure.sos.state.or.us/oard/displayDivisionRules.action;ISESSIONID_OARD=vDrxPnCjGoPh1vD-r5Una4kvoKKTa0r0sAtx1Ru5xv8kkJ5!444010641?selectedDivision=4089. Visited November 16, 2021

[11]Available at https://apps.psc.wi.gov/ERF/ERFview/viewdoc.aspx?docid=402117. Visited November 16, 2021

i. How the Phase I EV Plan will accelerate transportation electrification, address barriers to adoption, and extend access to traditionally underserved communities;
ii. The potential impact of LUMA's proposed actions on the competitive EV supply equipment market, including consideration of alternative infrastructure ownership and business models, and identification of a sustainable role for LUMA in the transportation electrification market;
iii. Current and anticipated electric system impacts resulting from increased transportation electrification and LUMA's proposed EV portfolio, and how the Phase I EV Plan is designed to address these system impacts; and
iv. How programs and concepts in the Phase I EV Plan relate to Puerto Rico's climate and energy goals and public policy.
v. The supporting data, and analysis methodology used to develop the Phase I EV Plan;
vi. The cost-effectiveness analysis in accordance with the Puerto Rico Benefit-Cost Test ("PR Test") for each proposed program and the Phase I EV Plan as a whole;
vii. A budget for each year of the plan by program;
viii. A schedule for reporting program outcomes, including participation, expenditures, that clearly identifies the timeframe for final reporting at the end of the plan period as well as any interim reporting before the end of the plan;
ix. A description of proposed accounting procedures that explains how program costs will be recovered.
x. For each proposed Phase I EV Plan program, LUMA shall include the following information: (1) A description of the proposed program that identifies the target customers to be served, eligibility criteria for program participation, EV adoption barriers the program seeks to address, and the approaches to be used to address barriers; (2) A description of how the program will be coordinated with the concurrent filing of rate design(s); (3) A description of the marketing and education approaches that will be used to make eligible customers aware of the program; and, (4) Detailed budget by spending category, including information relating to: incentives; contractor costs; marketing costs; training; administrative costs; capital costs; and coordination with federal, local and private efforts.

To ensure the timely compliance with the foregoing, the Energy Bureau **ORDERS** LUMA to attend Compliance Technical Hearings every three (3) months[12]:

Event	Date & Time	Time
Compliance Technical Hearing No. 1	February 25, 2022	10:00 am
Compliance Technical Hearing No. 2	May 31, 2022	10:00 am
Compliance Technical Hearing No. 3	August 31, 2022	10:00 am

The Energy Bureau **ORDERS** LUMA to ensure that all its relevant representatives shall be ready to answer, under oath, any questions that the Energy Bureau staff, consultants and/or Commissioners may have. LUMA representatives shall be prepared to: (i) inform the Energy Bureau on the efforts completed and/or in progress towards the timely filing of the Phase I EV Plan; and (ii) discuss how such efforts ensure compliance with the information/content requirements established by the Energy Bureau.

The Energy Bureau **ORDERS** LUMA to, **on or before** February 24, 2022, **at 12:00 p.m.**, file a Power Point Presentation to guide LUMA's reporting during the Compliance Technical Hearings.

The Energy Bureau **ORDERS** LUMA to, **on or before May 31, 2022,** file a proposal for one or more rate designs targeting the customer segments set forth in the Principles and

[12] The Energy Bureau will hold the Compliance Technical Conferences via the *Microsoft Teams* platform. The login information will be provided through separate communication. The dates of the subsequent conferences will be timely established by the Energy Bureau by separate resolutions.

envisioned in the Phase I EV Plan. This rate filing[13] shall, at a minimum, address the following:

a. The tariff shall be designed to be implemented as a component of the EV charging infrastructure deployment schedule.
b. Enrollment in an EV tariff shall be a prerequisite of installation of EV charging equipment on a customer's premises/property.
c. The proposed tariffs shall include particular focus on customers with distributed generation (DG) and/or storage installed on the customer's premise, operating on the customer's side of the meter. This focus on DG and storage is to propose tariff offerings designed to minimize any adverse impact of load growth on the system, as well as encourage DG and storage deployment.
d. Include projections of impact (energy and capacity) upon load, in total values and as a factor of time.
e. The filings shall also propose how costs associated with EV infrastructure asset investments are to be allocated and recovered. This shall include, at a minimum, assets that are system-beneficial and can thus be recovered from all customers benefitting from the system, as well as customer-specific assets, the costs of which merit allocating directly to customers taking service under an EV tariff. Further, when considering costs to be allocated to EV customers, the proposed tariff(s) are to also address how costs and benefits of customer-specific investments are factored into determining the tariffed rate(s).

The Energy Bureau **WARNS** LUMA that noncompliance with the Energy Bureau's orders or applicable legal requirements may carry the imposition of administrative fines of up to twenty-five thousand dollars ($25,000.00) per day, per violation and/or other sanctions that the Energy Bureau may deem appropriate.

Finally, the Energy Bureau recognizes the necessity for more Stakeholder Workshops to be held to further shape and guide the EV infrastructure deployment. These workshops will serve to provide additional oral and written comments to the Energy Bureau, as well as coordinate the Energy Bureau's EV Charging Infrastructure Deployment plans with other agencies of the Government of Puerto Rico and local governments. Therefore, the Energy Bureau **will schedule** Stakeholder Workshops to be held on the following months:

Event	Date & Time	Topic
Second Technical Workshop	January 2022	Criteria to be considered when determining the priorities by which additional EV charging infrastructure should be deployed.
Third Technical Workshop	February 2022	The ongoing use of pilot programs for assessing EV charging infrastructure deployment in nascent market segments and suggestions for designing pilot programs that will yield substantive and actionable results and in a relatively concise time period.

To prevent the spread of Covid-19, the Technical Workshops will be held remotely via the *Microsoft Teams* platform and livestreamed via the Energy Bureau's YouTube Channel. All persons interested in participating in the Technical Workshops scheduled above, must request access **on or before 2:00 p.m. of the day before each scheduled Technical Workshop**, by (i) sending an email to secretaria@jrsp.pr.gov; or (ii) contacting the Energy Bureau's Clerk at (787) 523-6262.

[13] This requirement shall not be interpreted or construed as a revision of the approved permanent rate. This is targeted and focused on the establishment of new and rates for certain specific services and to incentivize certain consumer behavior. Furthermore, the evaluation of this filing will take place in a separate docket to be timely opened by the Energy Bureau. The Energy Bureau will timely establish the procedural calendar for the evaluation of such filing.

Be it notified and published.

Edison Avilés Deliz
Chairman

Ángel R. Rivera de la Cruz
Associate Commissioner

Lillian Mateo Santos
Associate Commissioner

Ferdinand A. Ramos Soegaard
Associate Commissioner

Sylvia B. Ugarte Araujo
Associate Commissioner

CERTIFICATION

I hereby certify that the majority of the members of the Puerto Rico Energy Bureau has so agreed on November 18, 2021. I also certify that on November 18, 2021 a copy of this Resolution was notified by electronic mail to the following: energypr@gmail.com; Edwin.Acevedo@ddec.pr.gov; idiaz@glenninternational.com, azayas@azeng.net, gerardo_cosme@solartekpr.net, luisgmoreno@gmail.com, Fberrios@peritoselectricistas.org, juan.diaz.galarza@guidehouse.com, angel.d.rodriguez@outlook.com, javrua@sesapr.org, aldo@skootel.com, pablo.rivera@hitachi-powergrids.com, divine.energy@hotmail.com, franciscojrullan@yahoo.com, Ochavez@Padigm.com, antonio@velocicharge.com, dcordero@group-em.com, kenan.d.davila@sargentlundy.com, emelyies.torres@toyota.com, gerard.berlinski@toyota.com, marilyn.maldonado@toyota.com, pjcleanenergy@gmail.com, bigwheelcorp@gmail.com, jan.rodriguez@toyota.com, eduardo.pinera@toyota.com; gerard.berlinski@toyota.com, Marangelly.Cruz@toyota.com, ismael.diaz@warren-ecm.com; alberto.cortes@warren-ecm.com, wnavasesq@gmail.com, rvega@guidehouse.com, rry@tcm.law, agalloza@aggpr.com, victor.martinez@totalenergies.pr, nmontes@ccmpr.com, zlopez@efonalledas.com, omundo@plazalasamericas.com, ialsina@plazalasamericas.com, mlandron@plazaad.com, Ruben.Gonzalez@pumaenergy.com, dacosta@aggpr.com, rdiaz@glenninternational.com, l.marcano@aconer.org, jtosado@motorambar.net, hamely@motorambar.net, ISantana@motorambar.com, jorrodriguez@motorambar.net, nannette.berrios@solpetroleum.com, jameaux1@aim.com, jpibernus@motorambar.com, wilfredsonllc@gmail.com, Melvin.Ayala@lumapr.com, francisco.berrios@hotmail.com, CR.Tejera@ddec.pr.gov, nrodriguez@senado.pr.gov, nsantos@glenninternational.com, patlopez00@gmail.com, laura.rozas@dlapiper.com, jcardona@aggpr.com, kkoch@tesla.com, jvazquez905@gmail.com, jose.maeso@crowley.com, jortiz@caguasexpressway.com, odette@grupofernandezpr.com, info@carlosmatta.com, jbouza@caguasexpressway.com, erica.cosme@gsonnell.com, clrivera@caguasexpressway.com, flota@caguasexpressway.com, lsundeen@tesla.com, carlosxcedeno@gmail.com. I also certify that today, November 18, 2021, I have proceeded with the filing of the Resolution issued by the Puerto Rico Energy Bureau.

NEGOCIADO DE ENERGÍA DE PUERTO RICO
NEPR
JUNTA REGLAMENTADORA DE SERVICIO PÚBLICO

For the record, I sign this in San Juan, Puerto Rico, today November ____, 2021.

Sonia Seda Gaztambide
Clerk

NEGOCIADO DE ENERGÍA DE PUERTO RICO
NEPR
JUNTA REGLAMENTADORA DE SERVICIO PÚBLICO