

La Cámara de Comercio de Puerto Rico y
su Comité de Energía y Agua presentan:

CUMBRE DE INDUSTRIA ENERGÉTICA

LUMA Energy Grid Transformation
Don Cortez



Grid Transformation Roadmap

Incorporating Renewables and Energy Storage

Working Towards Grid Resiliency

Replacing / Adding Grid Advanced Management Systems

Incorporating Renewables and Energy Storage

Currently working on:

- **Three utility scale renewable projects for a total of approximately 175 MW**
- **Forty-Four (44) medium size renewable projects representing 93 MW**
- **Processing over 1000 Distributed Generation (DG) applications a month.**
- **Grid Impact Studies for Utility Scale Renewables and Energy Storage for additional proposals**

Incorporating Renewables and Energy Storage

RFP Target Release Date	Procurement Tranche	Solar PV or Equivalent Other Energy (MW)		4-hr Battery Storage Equivalent (MW ¹)	
		Minimum	Cumulative	Minimum	Cumulative
Dec-20	1	1000	1000	500	500
Jun-21	2	500	1500	250	750
Dec-21	3	500	2000	250	1000
Jun-22	4	500	2500	250	1250
Dec-22	5	500	3000	125	1375
Jun-23	6	750	3750	125	1500

Currently in process

Solar PV /Renewables and Battery Storage RFP Tranches authorized by PREB in the 2020 IRP

Incorporating Renewables and Energy Storage

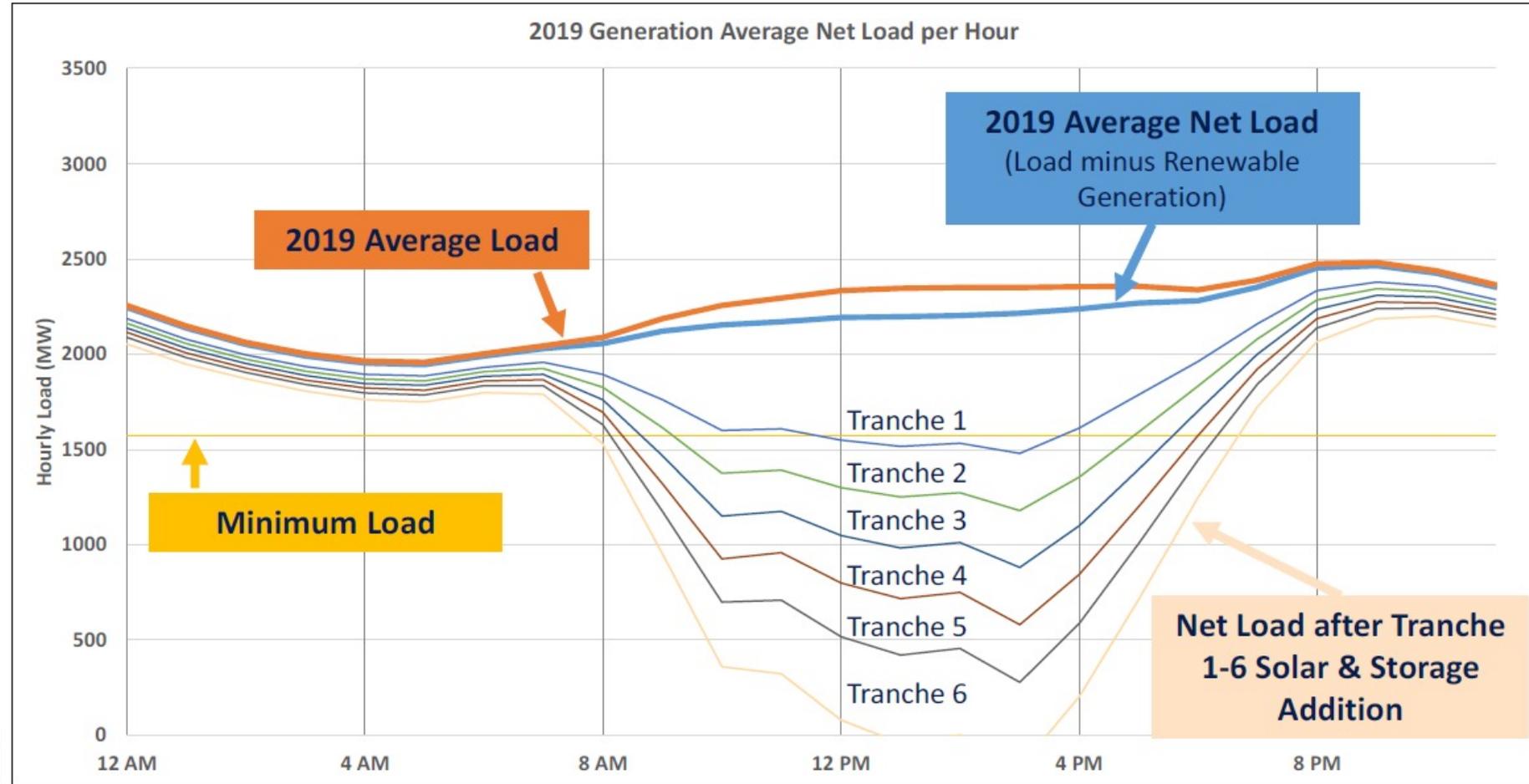


Illustration of Potential Puerto Rico Duck Curve

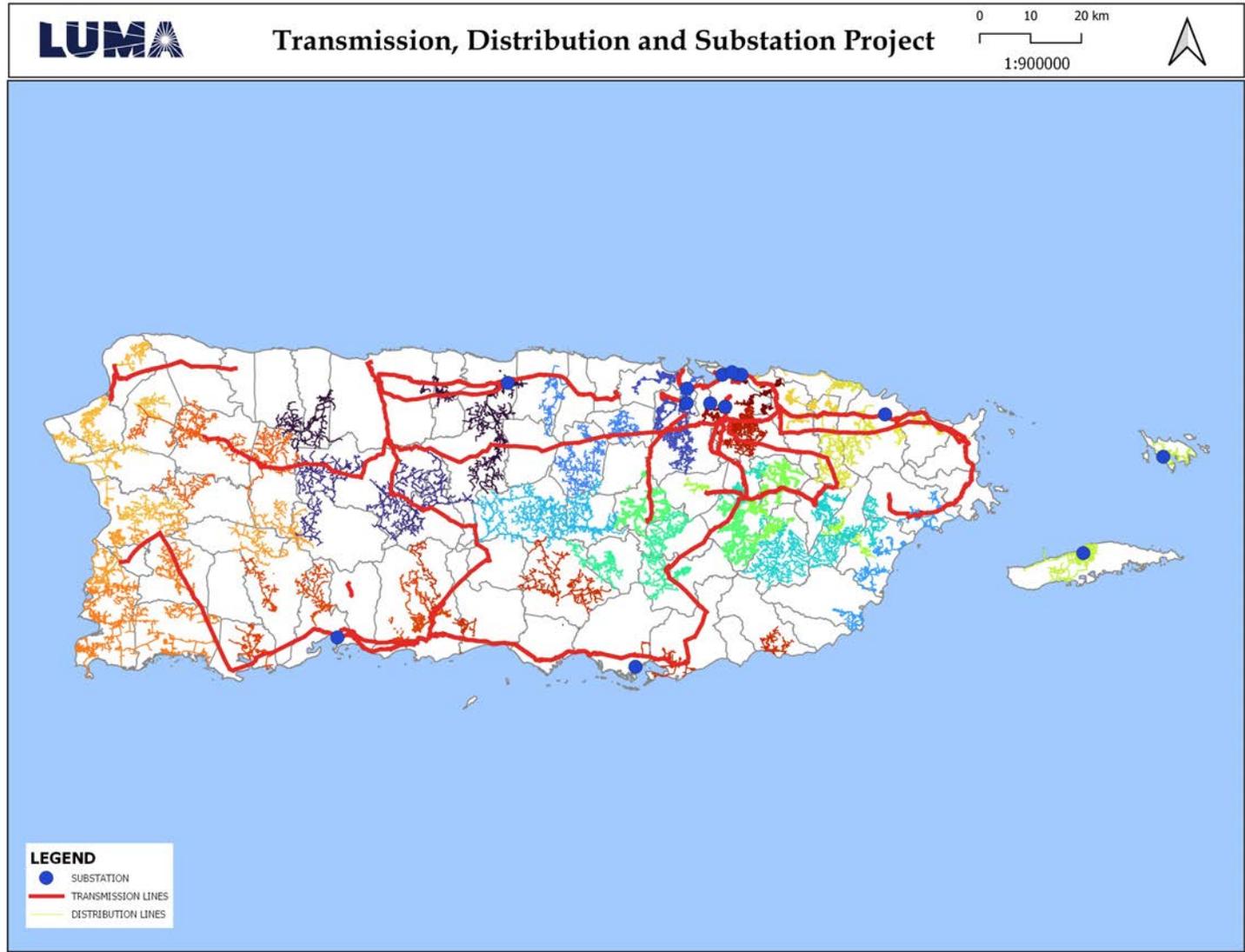
Working Towards Grid Resiliency

Grid resiliency is necessary for optimum distributed generation and for utility scale renewables operation.

- **Working on Grid Recovery - LUMA has documented over 800 major components of the grid that are out of service and is in the process of repairing or replacing them.**
- **Working on Grid Upgrades – There is approximately \$10 B in federal funding for Transmission, Substation and Distribution repair / replacement from Hurricane Maria damage.**

FEMA PROJECTS Summary Statement

Initial projects
94 Projects
representing
\$6.6B



Replacing / Adding Advanced Grid Management Systems

- **Replacing our Energy Management System to accommodate utility scale renewables, virtual power plants and demand response.**
- **Planning for addition of Advanced Distribution Grid Management system to operate and optimize Distributed Generation on the medium voltage.**
- **Planning for smart meters to optimize DG, promote energy efficiency, support future retail markets and offer various billing options**



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