

Voltage<sub>4</sub>



# MEET THE TEAM

1/4



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# THE PROBLEM

14



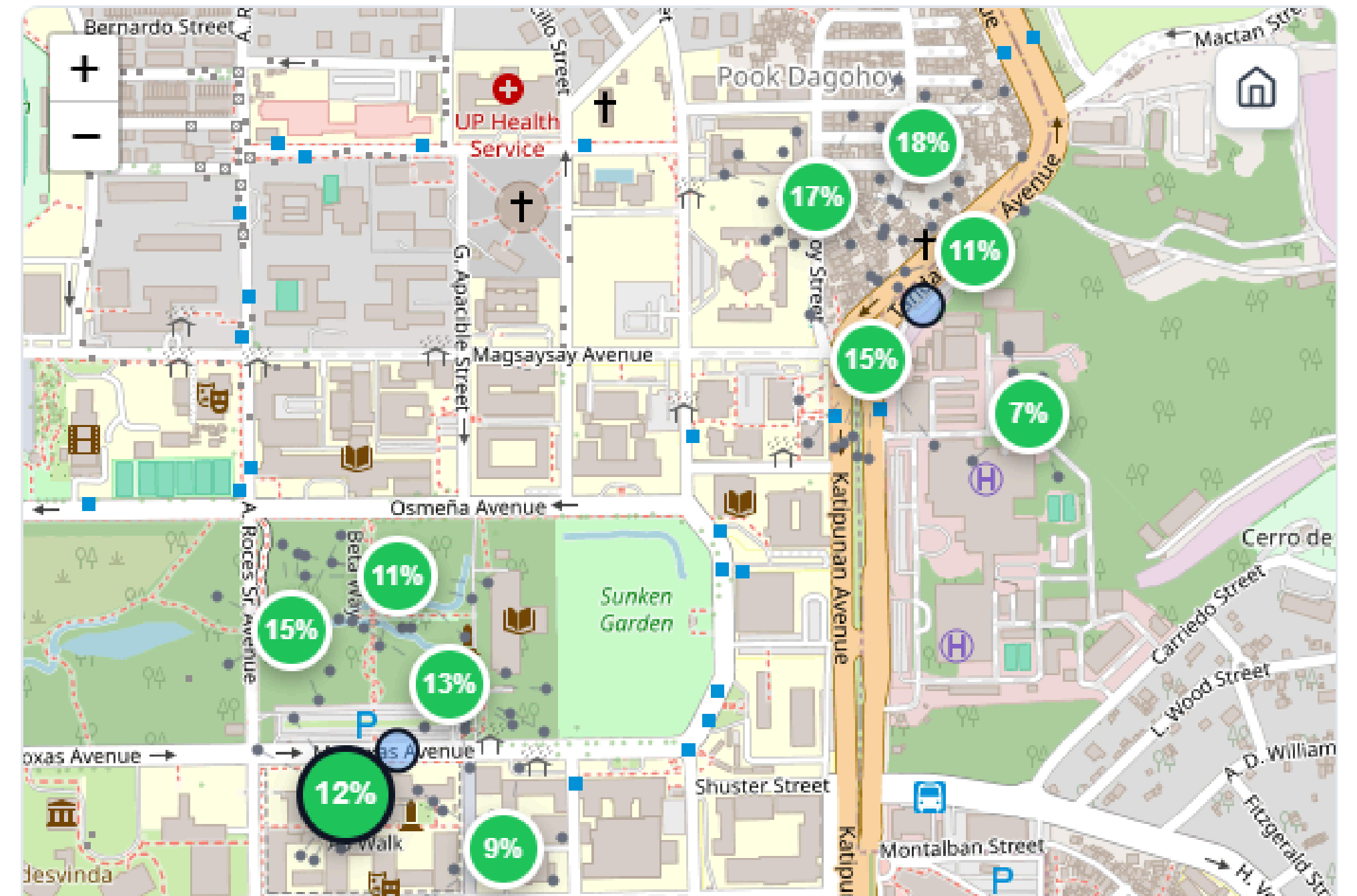
- Supply-demand imbalance
- Environmental and climate stress
- Limited distribution-level visibility

# GridPulse<sup>14</sup> by

GridPulse delivers **real-time grid monitoring and analytics**, combining load, outages, power quality, and environmental stress into a **Grid Health Index (GHI)**. This helps utilities, barangays, and consumers spot weak points early, plan maintenance smarter, and boost resilience against demand spikes and climate impacts.

## Barangay Grid Map

Transformers and connected households within UP Diliman





# KEY FEATURES





Login

# GridPulse<sup>1/4</sup>

## Powering Smarter Energy Insights

A comprehensive energy monitoring and analytics platform for Meralco, Barangay administrators, and consumers.  
Monitor grid health, transformer loads, and consumption patterns in real-time.



### Interactive Maps

Visualize transformers and households on interactive maps with real-time grid health indicators.



### Analytics & Insights

Track consumption trends, grid health metrics, and predictive insights for better energy management.



### Multi-Level Access

Role-based dashboards for Meralco administrators, Barangay officials, and individual consumers.



Exit

# GridPulse<sup>v4</sup>

Barangay Watch by

## Barangay Dashboard

Barangay Grid Health Index  
Barangay UP Diliman

 Export Report

**99.2**  
GOOD

Warnings  
**0**

Critical  
**0**

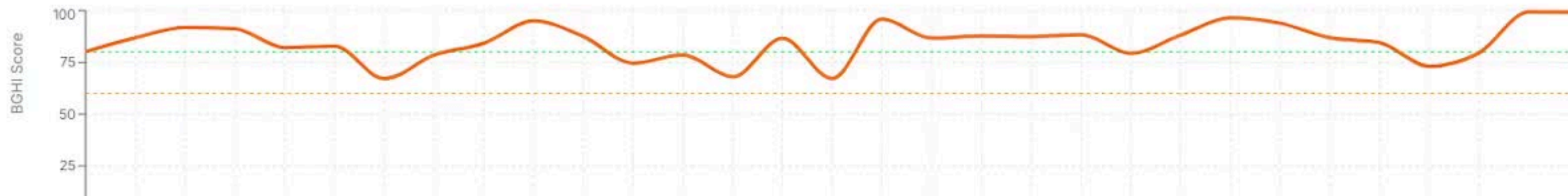


### BGHI Trends

Grid health history for UP Diliman

Last 7 Days

Last 30 Days





Exit

# GridPulse<sup>v4</sup>

Bahay Watch by

Current Consumption



**2.15 kWh**

Real-time consumption

Live Load (Kw)



**2.15 kW**

Derived from barangay smart meter

Daily Average



**2.01 kWh**

Last 30 days average

vs Average



**+6.9%**

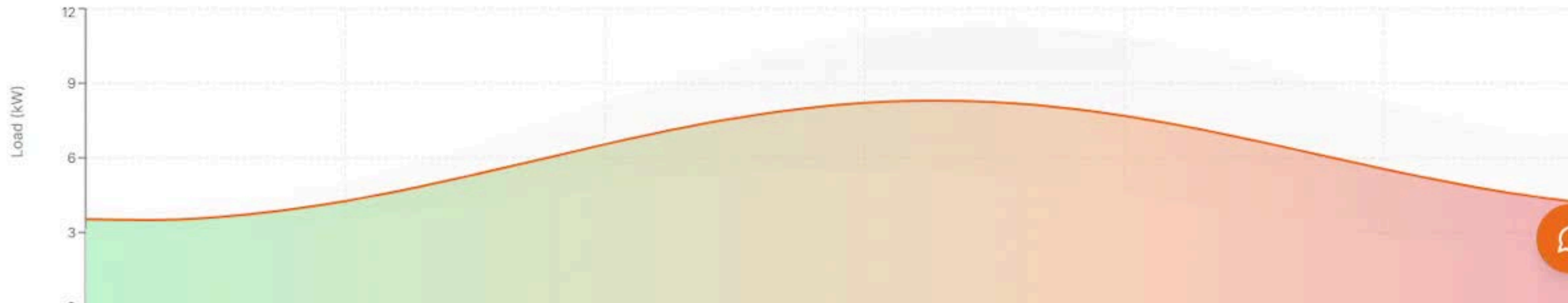
Compared to daily average

## Household Load Forecast

24-hour prediction with 95% confidence interval

Forecast Accuracy

**95.0%**




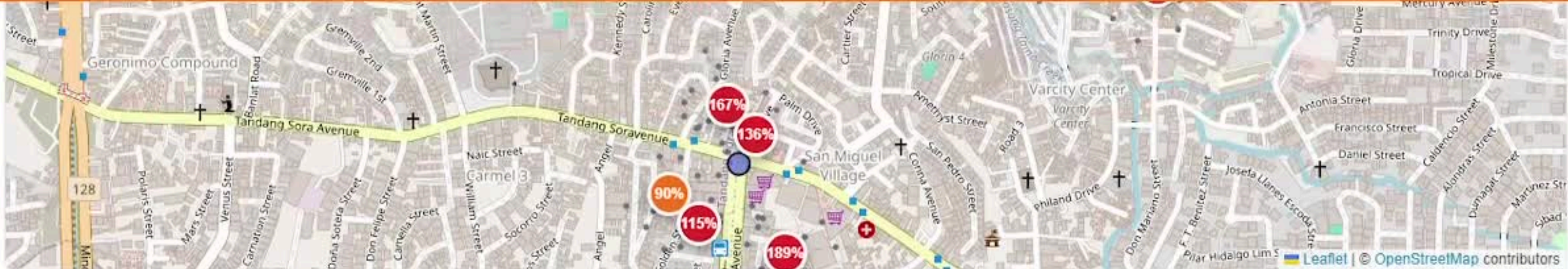


# Simulating Disaster

GridPulse - Powering Smarter E x +

localhost:3000/dashboard/meralco

 9+ Exit



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### Predictive Insights

Realtime predictions and recommendations

Select a transformer to see predictive insights


6:52 am  
14/11/2025

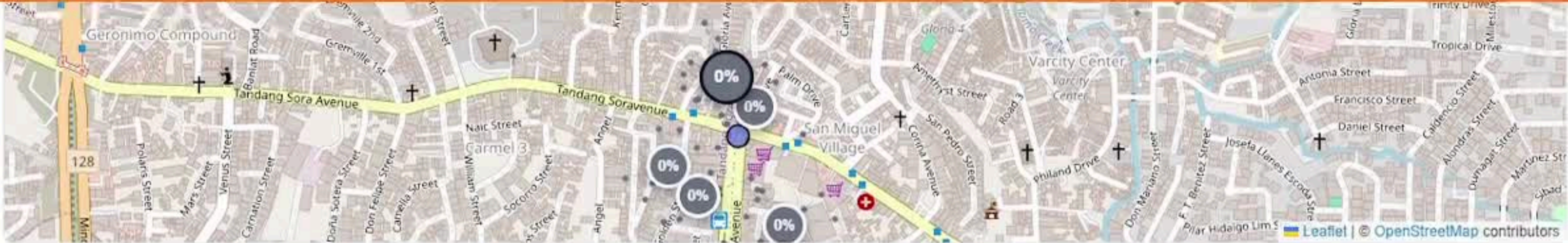


# Simulating Blackout

GridPulse - Powering Smarter E x +

localhost:3000/dashboard/meralco

 9+ Exit



**Predictive Insights**  
Realtime predictions and recommendations

⚠️ PPT-QC-003 within IEEE normal loading (NaN%) - continue routine monitoring per ERC standards

**PPT-QC-003**  
Current load 0.00 kW · 0.0%

**Transformer Alerts**  
Real-time recommendations

ENG US 6:56 am 14/11/2025

**9** INDUSTRY, INNOVATION  
AND INFRASTRUCTURE



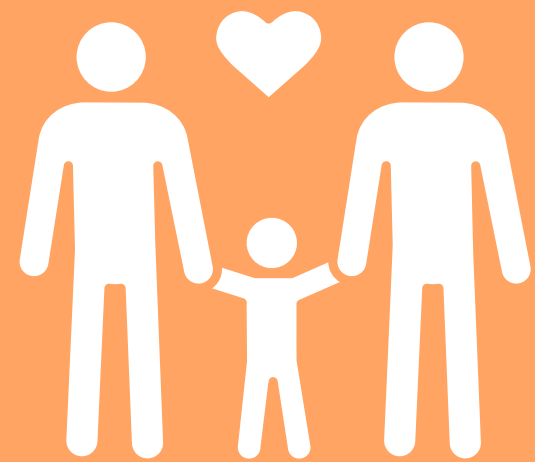
**11** SUSTAINABLE CITIES  
AND COMMUNITIES



**10** REDUCED  
INEQUALITIES



# MARKET OPPORTUNITIES



Meralco serves over  
**8 million residential,**  
**commercial,** and  
**industrial customers**



**556 million pesos** for  
every five hours of  
no electricity



Philippine smart city  
market - estimated  
to reach **\$266.11 m**  
**revenue in 2025**



Philippine ICT  
market size in 2025 -  
**\$27.20 billion**



# ROLLOUT STRATEGY

Phase 1

Phase 2

Phase 3

Phase 4

DESIGN  
PROCESS PLAN  
AND  
MERALCO/LGU  
ALIGNMENT

LOW-RISK,  
INFO-BASED  
PILOT

ANALYST  
INTEGRATION  
AND FEEDBACK  
LOOP  
IMPROVEMENT

FIELD  
EXPANSION AND  
FURTHER  
COMMERCIAL-  
IZATION



# THANK YOU

<https://newsinfo.inquirer.net/1935270/record-ph-heat-drives-power-supply-alerts-bares-grid-weaknesses>

<https://powerphilippines.com/luzon-grid-at-risk-as-coal-plants-falter-icsc/>