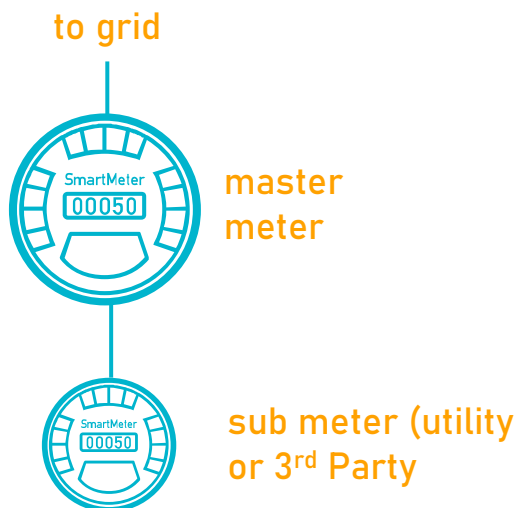
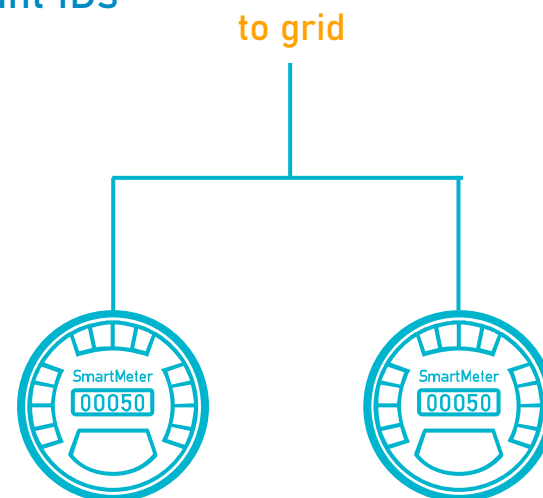


## What is a Submeter?

Submetering: second meter is installed downstream of master meter



Separate metering: two separate meters installed in parallel, with unique service account IDs



## What is the value?

Submetering allows a customer to access value for their EV without the expensive cost of installing a separate utility-grade meter. Some priority use cases include:

- Retail Billing
- Market Participation
- GHG Accounting



# EPIC 1.22: Subtractive Billing With Submetering for EVs

## Gap or Opportunity Addressed

- Lack of utility revenue-grade submeters installed to collect charging data
- Gap in IOU capability to receive third-party submetered data and automatically subtract it from a customer's bill

## Project Objective

- Demonstrate use of EV submetering within an EVSE to provide EV owners access to EV rates without having to install an additional utility meter

## Lessons Learned

- Pilot findings highlighted challenges with submeter accuracy, data quality, and data transfer.
  - More complex data flows increase the number of failure points and likelihood that billing data will be delayed or inaccurate, which also leads to customer dissatisfaction
  - A more reliable network than residential Wi-Fi should be utilized
  - At least three major categories of accuracy problems were found: Time Shifting Issues, Recording Issues, Magnitude Issues



# Next Gen Metering (NGM)

## What is the NGM?

The Next Generation Meter is a utility grade plug and play meter that can fit into any energy consuming or delivering device.

## What is the value?

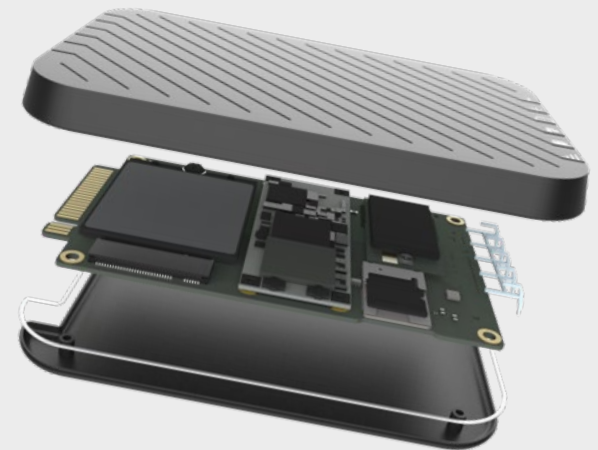
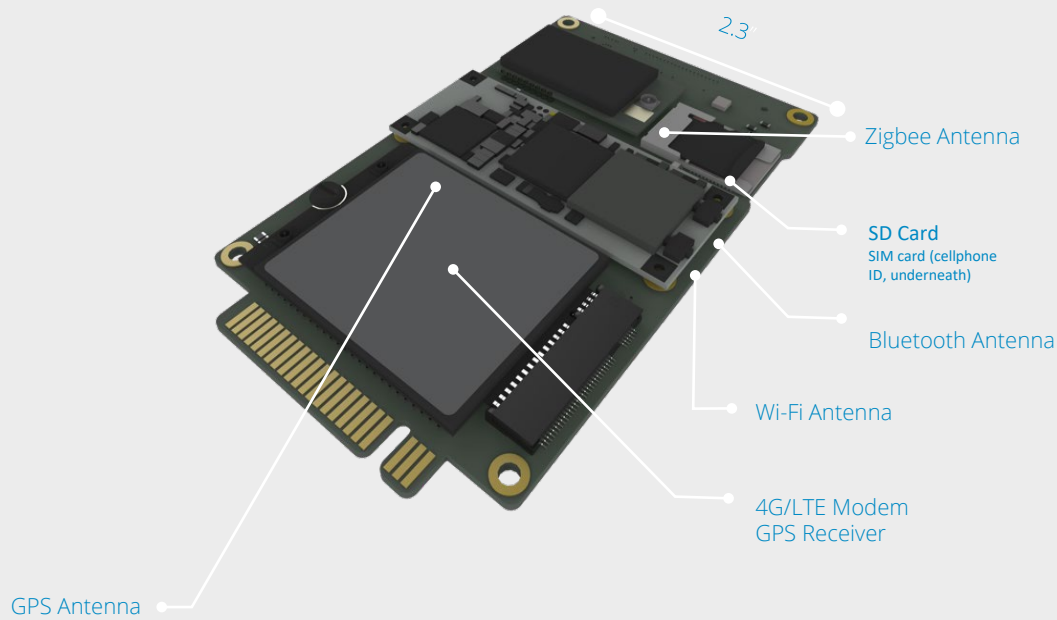
The NGM allows PG&E and other Utilities to easily meter emerging Distributed Energy Resources, Electric Vehicles and Charge stations and provides an upgrade path for traditionally metered devices.

## How does it work?

The NGM packages all of the low voltage components : Metrology, Wireless comms, Storage and Edge computing capabilities into small modular device.



# Next Gen Meter Layout



Mechanical Rendering



# EPIC 3.27: Multi-Purpose Meter

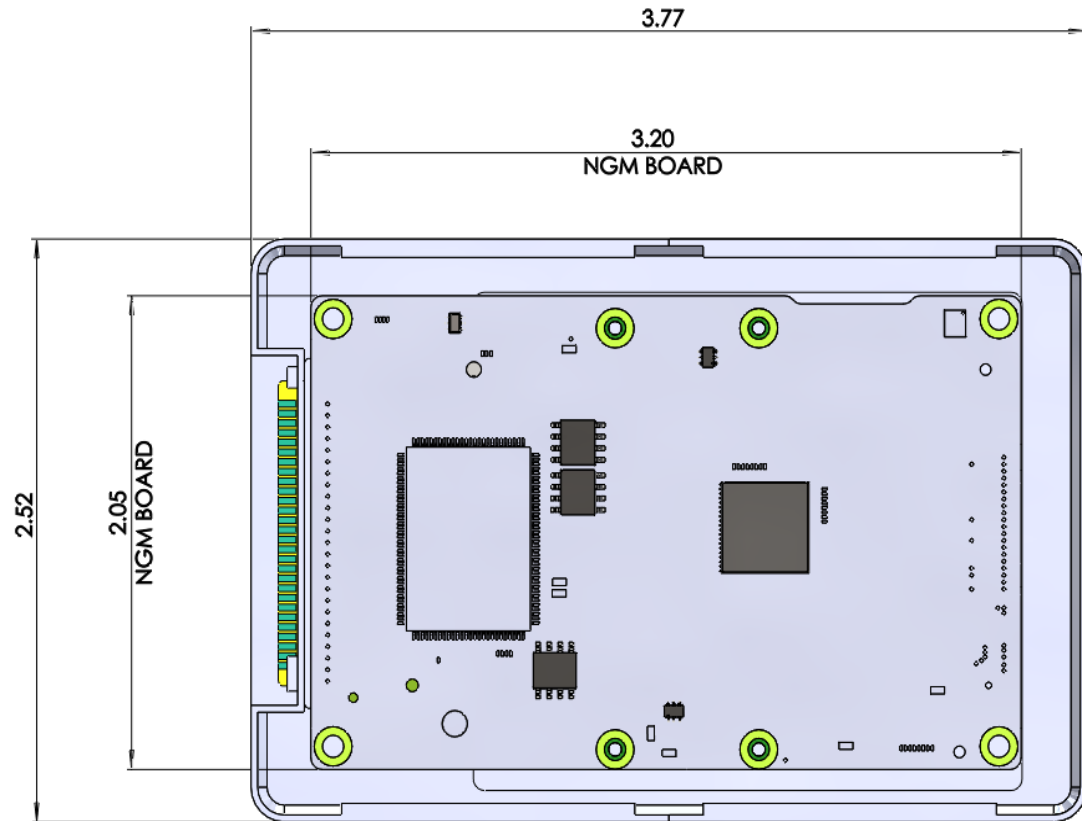
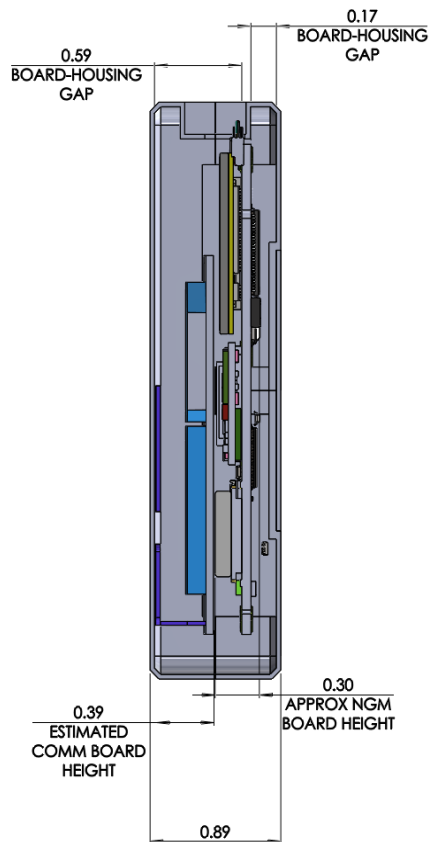
**Hypothesis:** PG&E can develop a utility grade electric vehicle and EV charging submeter prototype that can be easily plugged into readily available level 2 and emerging level 3 EV charge stations.

## **Project Activities:**

- Integrate the Itron Network Integration Card (NIC) with the current NGM circuit board - Q1 2021
- Redesign and package the NGM with a common interface for EV charge station integration – Q2 2021
- Partner with a major manufacturer for prototype testing and adoption - Q3 2021
- Deployment of **20** EV charge stations with the new EV meter and PG&E back office billing integration – Q4 2021



# Next Gen Meter + NIC Integration = EV AMI submeter



Mechanical Rendering