# Advanced Metering Infrastructure (AMI) Program Update
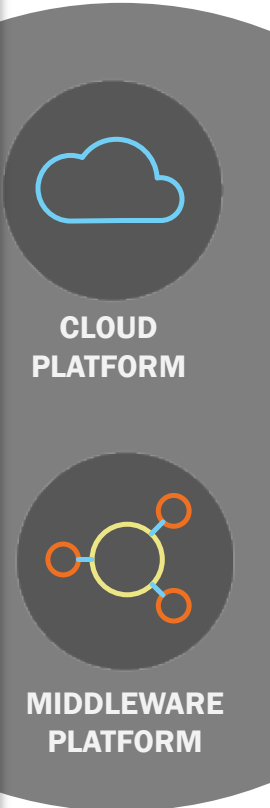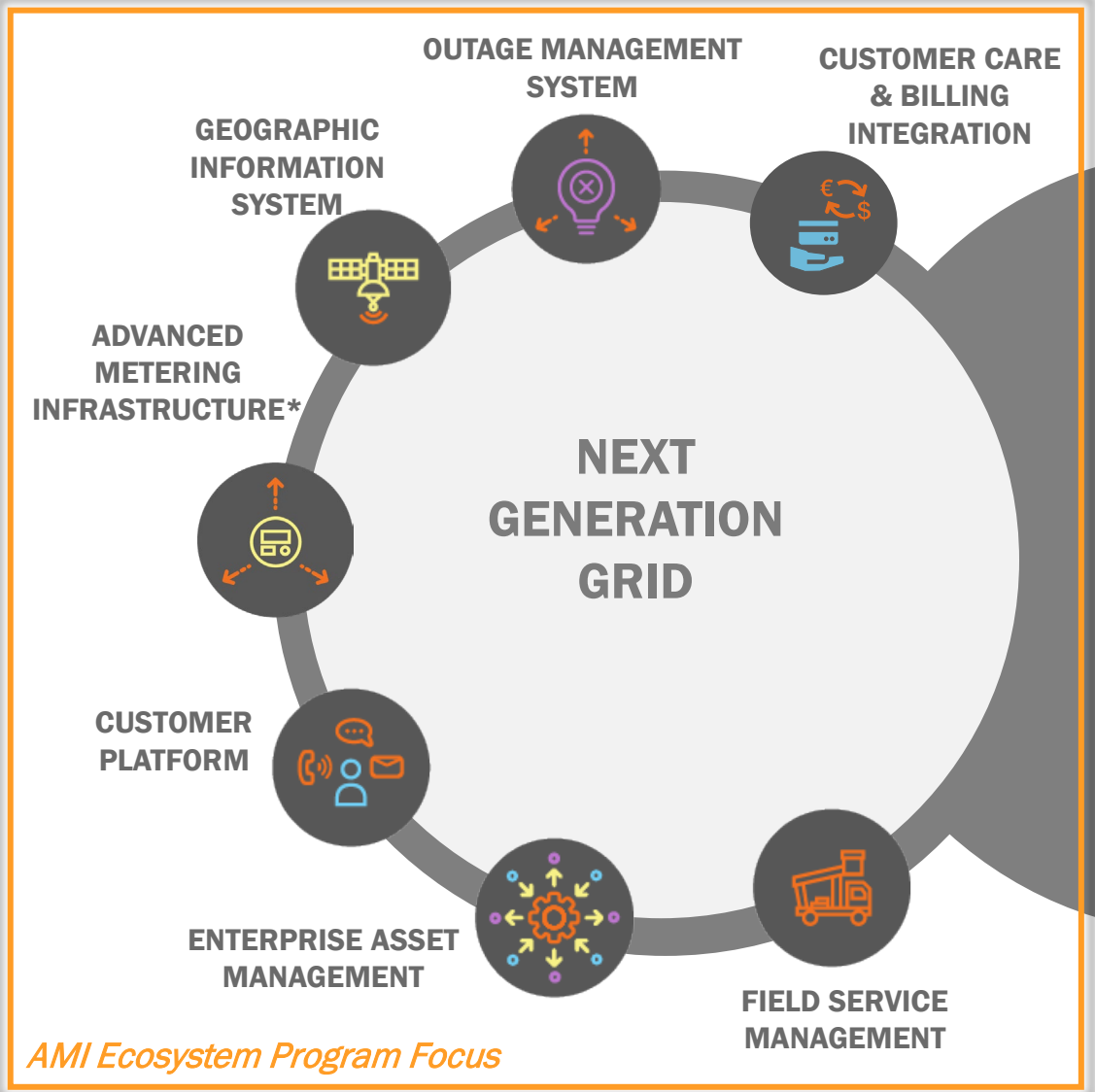
Aaron Smith, Director Distributed Device Strategy

All Committee Meeting

May 14, 2024

# Agenda

- Next Generation Grid

- Program Risk - Dependency Management
  - "Walk the Walls" Workshop

- Solution Confirmation Sessions
  - Example Change Impact Themes

- Meter PCA (Product Configuration Acceptance) Testing

- Project Spotlight – Field Service Management

- Next Steps

# Program Vision & Project's Role



NEXT GENERATION GRID

GEOGRAPHIC INFORMATION SYSTEM

OUTAGE MANAGEMENT SYSTEM

CUSTOMER CARE & BILLING INTEGRATION

ADVANCED METERING INFRASTRUCTURE*

CUSTOMER PLATFORM

ENTERPRISE ASSET MANAGEMENT

FIELD SERVICE MANAGEMENT

*AMI Ecosystem Program Focus*

CLOUD PLATFORM

MIDDLEWARE PLATFORM

## COMPLEMENTARY EFFORTS

RATE DESIGN PROJECT

STAKEHOLDER & CUSTOMER ENGAGEMENT

FERC 2222

*Meters, Head End Systems (HES), Field Area Network (FAN), and Meter Data Management System (MDMS)

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# Walk the Wall Objectives



## Drive to...

- A common understanding among **Project Managers** of each other's schedules, key milestones and dependencies across and external to the program

- Identify and capture opportunities for further evaluation
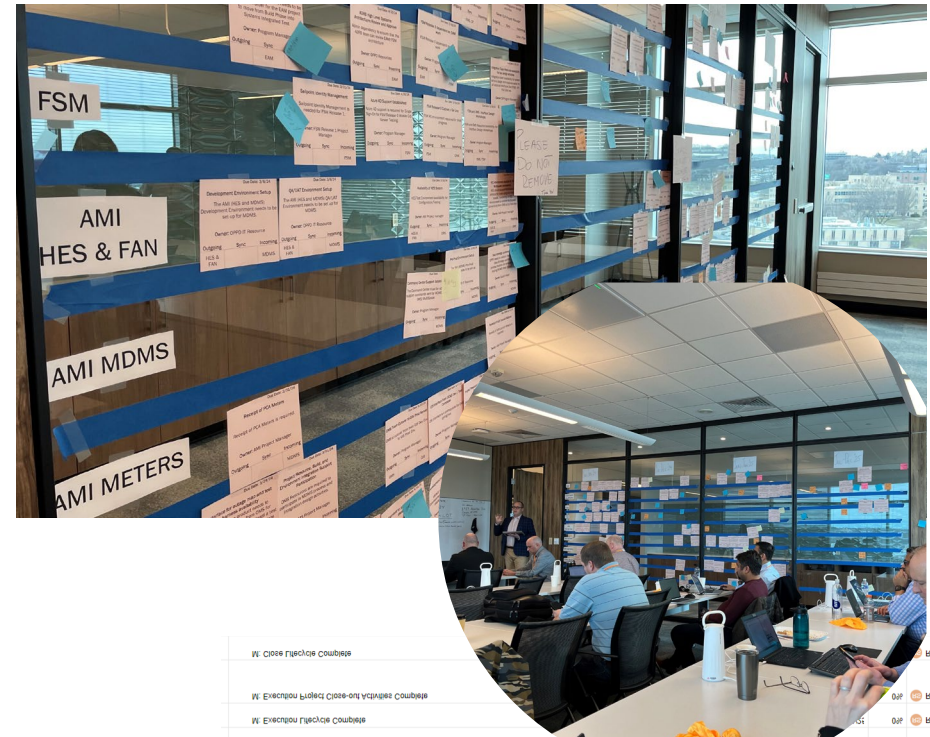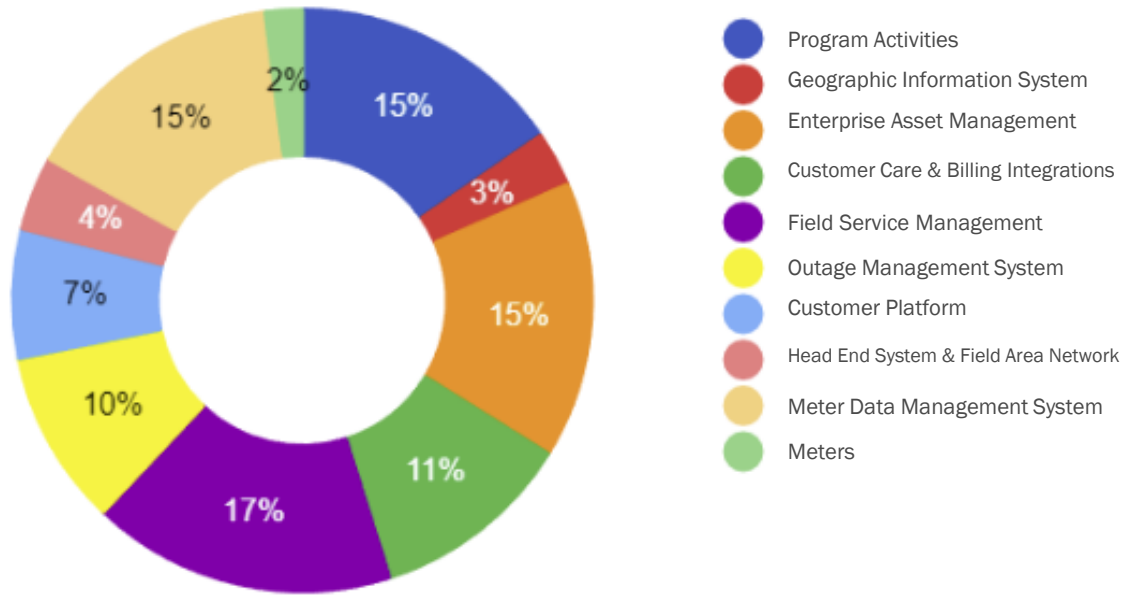
## The workshop delivered...

- The foundation for Integrated Program Schedule (IPS) v0 and Program Critical Path

- A backlog of action items and considerations needed to progress the IPS

- A list of areas that could risk program schedule, quality, and/or value

- A list of opportunities to improve program schedule, quality, and/or value
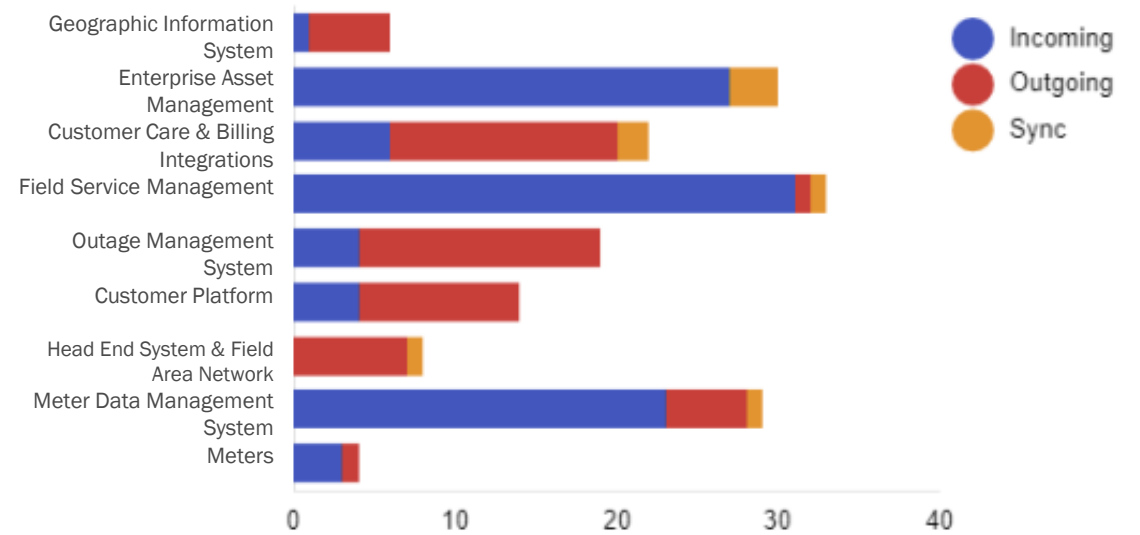
Program Milestones

Cross Program Dependencies

# Total Dependencies



- Program Activities — 15%
- Geographic Information System — 3%
- Enterprise Asset Management — 15%
- Customer Care & Billing Integrations — 11%
- Field Service Management — 17%
- Outage Management System — 10%
- Customer Platform — 7%
- Head End System & Field Area Network — 4%
- Meter Data Management System — 15%
- Meters — 2%

# Program Dependency by Type



Legend: Incoming, Outgoing, Sync

Categories: Geographic Information System, Enterprise Asset Management, Customer Care & Billing Integrations, Field Service Management, Outage Management System, Customer Platform, Head End System & Field Area Network, Meter Data Management System, Meters

# Program Dependency Heat Map

## Effective Dependency Management Requires...

Capture, analysis, and dissemination of program dependencies

Transparency and effective monitoring across the program

Ownership and regular review and analysis of changes

Ongoing capture, analysis and dissemination of emergent dependencies

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# What is Solution Confirmation?

A **hands-on** understanding of the project solutions.

**Confirm the project solution's key capabilities**

**Bring future state processes to life**

**Collect your feedback**

**Gain commitment**

**Get Excited!**

ADVANCED METERING INFRASTRUCTURE* (METERS, HEAD END SYSTEM/FIELD AREA NETWORK, METER DATA MANAGEMENT SYSTEM)

ENTERPRISE ASSET MANAGEMENT

FIELD SERVICE MANAGEMENT

CUSTOMER CARE & BILLING INTEGRATION

OPPD

# High-Level Change Impact Themes

Advanced Metering Infrastructure 2.0 smart meters will **provide more access to enhanced data** across OPPD teams. This better data will streamline the way OPPD works and services their customer base. The expected changes can be grouped into 3 main buckets.

## OPERATIONS CHANGE
*How Does OPPD Complete Work?*

- **Field Work Reduction:** Less manual processes to capture meter data
  - Physical truck rolls will be minimized
  - Data reads can be collected remotely anywhere at any time
- **Assisted Troubleshooting:** Reporting extracts will be available directly in the Meter Data Management System to aid issue resolution
- **More data availability** through increased frequency and validation of reads in the Meter Data Management System

## NEW CUSTOMER OPPORTUNITIES
*How Do OPPD Customers Benefit?*

- **New/Enhanced Customer Programs:** Better technology and data allows OPPD to provide more programs for their customers, creating an enhanced customer experience
  - New data enables enhanced rate flexibility (e.g., time of use rates), notifications (e.g., estimated time of restoration notifications), and information (e.g., power status / usage)
  - Programs such as electric vehicle charging, distributed energy resources and net metering will enhance energy efficiency

## NEW UTILITY CAPABILITIES
*How Does OPPD Improve as a Utility?*

- **System Integrations:** AMI capabilities will sync with adjacent systems to provide real time data
  - Outage Management System: real time outage notifications
  - Customer Platform: access meter data
  - Customer Care & Billing: enhanced customer management with better billing information
- **Elevate Utility Capabilities:**
  - Improved grid quality
  - Enhanced ability to detect grid outages

*We will continue to refine these change themes and capture detailed role-based change impacts based on the outcomes of the Detailed Design Sessions and ongoing change management conversations.*

# Field Service Management (FSM) Project

Replaces existing field tools with Smart Mobile Workforce (SMW) to view field orders, distribution maps, enter field order notes, and manage work requests from Customer Service.

## WHAT CAN WE EXPECT AT THE MVP GO-LIVE IN 2025?

- Schedule and execute all distribution and streetlight work, resulting in the retirement of legacy systems

- Connects to key platforms -- ArcGIS, Outage Management, Customer Care & Billing and Maximo – to provide field crews access to needed information to do their jobs more efficiently and easily

- Offers integrated mobile map viewer, using ArcGIS maps, allowing for online networking tracing, proposed work, online/offline geospatial maps, and ability to view/search for supplies and system equipment.

- Replaces paper packets and modernizes how crews work

- Crew location marked and turn-by-turn directions

- Consistent symbology across OPPD systems

*FUTURE CAPABILITIES*

Future phases will include transmission, substations, energy production and other OPPD organizations
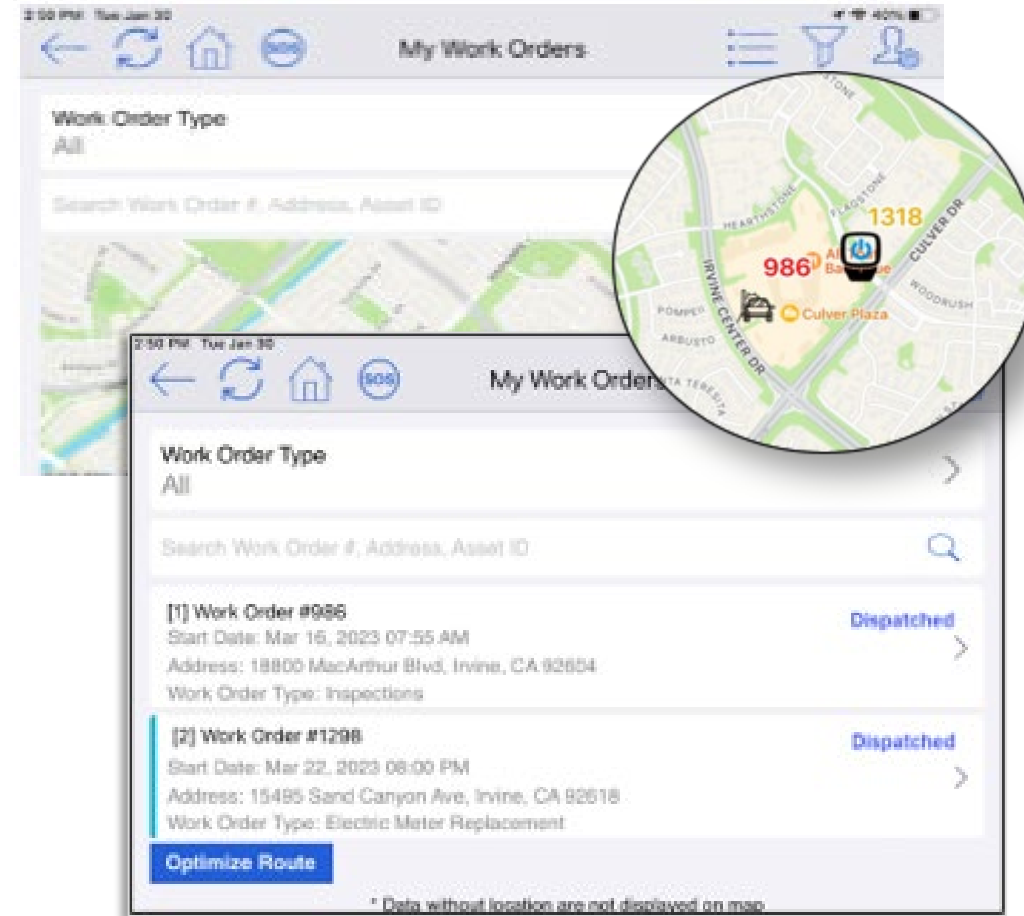
# Our first set of meters have arrived!



Above, AMI Meter Tech Matthew Patrick and AMI Meter Supervisor Jon Willey test out the new devices.





**OPPD METER LAB**

- Meter lab received 16 meters
- Four types: two residential/business, one apartment-style and one for smaller connections, such as a fireworks stand
- Acceptance testing includes verifying nameplates, programs, hardware and more to ensure meters meet OPPD's needs

**LANDIS & GYR METERS**

- Communicate with OPPD in a reliable, secure way to support grid operations
- Allows OPPD to see what is happening at the "edge" of the grid (all the way to the meter).
- Acts as a high-powered computer that can help address OPPD and customer needs
- Facilitates growth in demand related to electrical vehicles, heat pumps, and more

# Field Service Management Release 0: Coming Fall of 2024

In addition to the full functionality and end user roll out coming with the MVP Release in 2025, Field Service Management field users will experience an early preview of some functionality with a Release 0 in 2024.
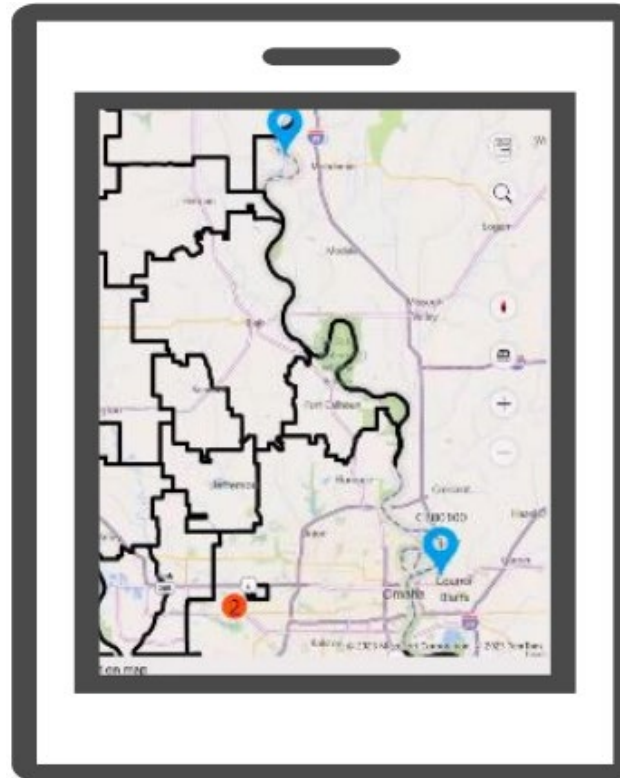
## WHAT CAN WE EXPECT IN 2024?

**300+ distribution field workers** will benefit from the release

Field workers will be receiving an **OPPD mobile device (tablet)**

This steppingstone release will be going live in **August 2024**, a year prior to the full release

- Displaying electrical connectivity model from ESRI
- Online network tracing (upstream, downstream, isolate circuit)
- Display proposed work
- View and search asset information
- Online/offline geospatial maps
- Deep linked navigation to (Google maps, Apple maps, etc.)
- Support of single sign on login

- Finish construction of the meter farm (lab)

- Field Service Management Release 0 with map viewer

- New ESRI GIS is live in parallel with the old system
  - Tailoring look and feel for an OPPD experience

- Customer Engagement Planning and Strategy is underway

- The next quarterly update will be presented at the August All-Committees meeting