Item #211295

Quarterly Report

June 9, 2022

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Quarterly Update

First quarterly update to keep CC informed on the progress of ongoing projects and make them aware of initiatives, campaigns and outreach that may not come before then during regular commission meetings.

Quarterly Report

What's inside:

- AMI/CIS update
- DHR update
- Main Street WRF Capacity & Renewal Upgrade


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AMI/CIS

What is CIS?

CIS = Customer Information System

Known internally as Project ICE (Improving Customer Experience), these improvements to our Enterprise Software Systems enable us to install AMI while simultaneously enhancing customer experience and communication.

What is AMI?

AMI = Advanced Metering Infrastructure

Sometimes referred to as Smart Meters, AMI is a best practice in the utility industry. Through two-way communication, the AMI system tracks near real-time usage of electric, water and gas consumption and monitors the health of the utility's infrastructure while providing better service to customers.

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Why is AMI important?

Why is AMI Important?

1.  OPERATIONAL EFFICIENCIES

2.  CUSTOMER BENEFITS

3.  ENVIROMENTAL IMPROVEMENTS

4.  CUSTOMER ENGAGEMENT

AMI: Operational Efficiencies

OPERATIONAL
EFFICIENCIES

- Efficient & accurate meter reading
- Eliminate truck rolls
- Remote disconnect/reconnect for electric meters
- Improves safety
- Faster response to customer outages
- Improves outage restoration

AMI: Customer Benefits

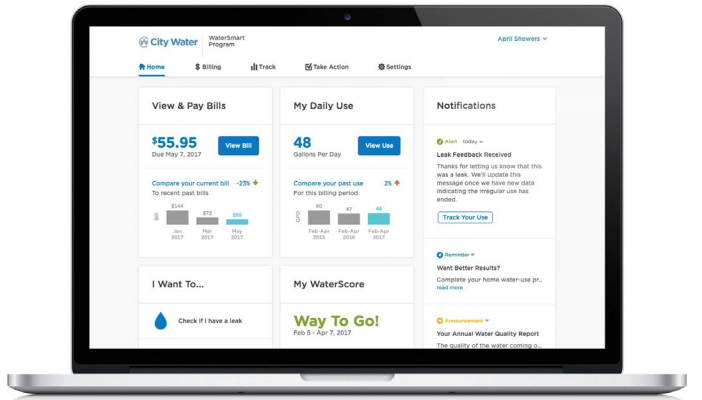
CUSTOMER
BENEFITS

- Improved outage/restoration time
- Near real-time usage information
- Leak detection
- Assists customers with water conservation
- Reduction in estimated bills
- Power quality improvements & notifications

AMI: Customer Engagement

CUSTOMER ENGAGEMENT

- Mobile-friendly customer engagement web portal
- Device agnostic and form fitting
- Customer notifications such as possible water leaks and when bill is due
- Enhanced monitoring capabilities
- Consumption comparisons which will assist with conservation
- Reduction in call times
- Increased first call resolution



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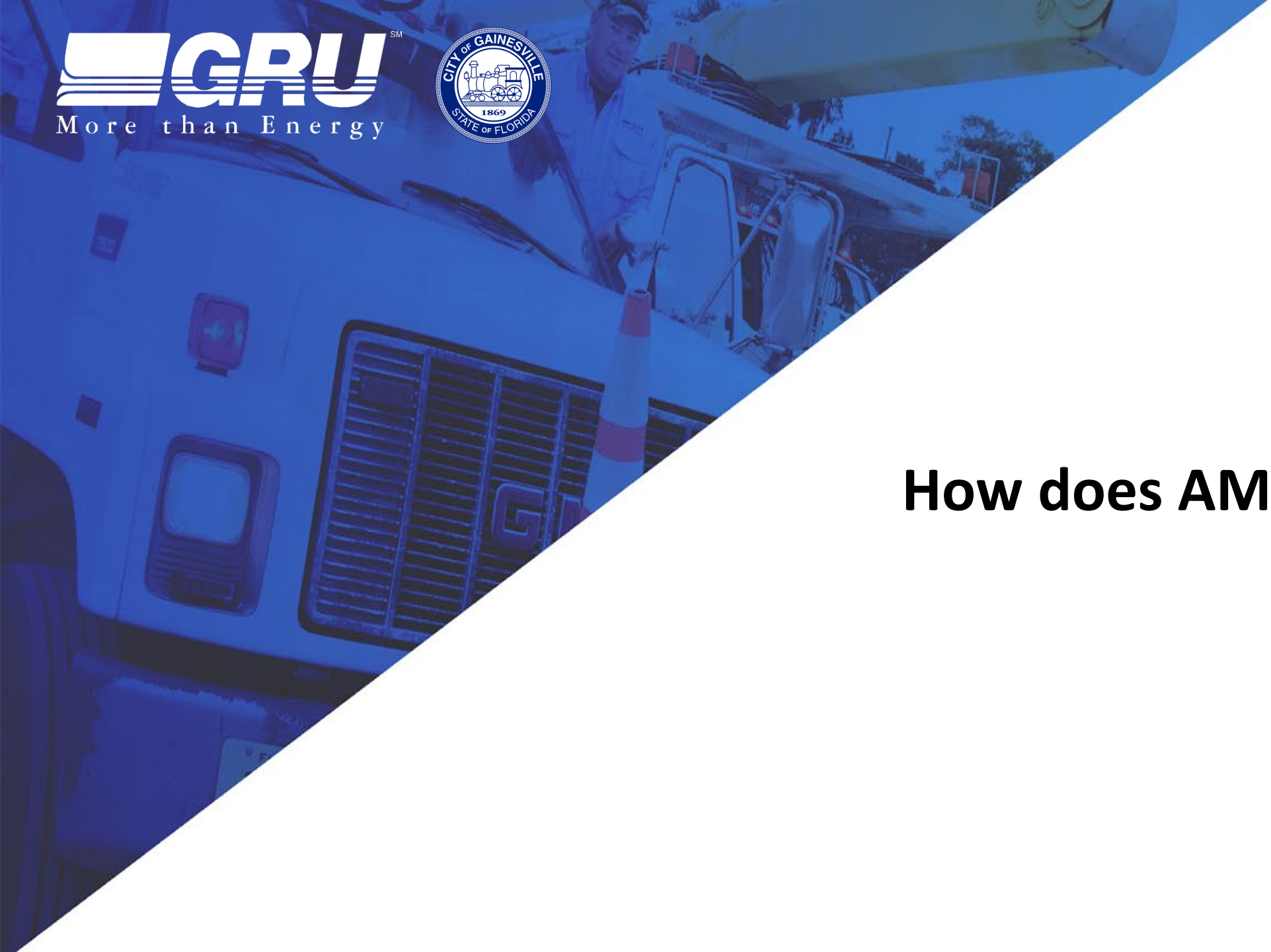
AMI: Environmental Improvements

ENVIROMENTAL
IMPROVEMENTS

- Reduced carbon footprint
- Enhanced insight into resource losses
- Leak detection capabilities
- Reduced fuel consumption
- Reduced emissions



How does AMI work?

How Does AMI Work?

1. Each day, meter information is sent electronically to 51 collectors located around our service territory
2. These collectors route the data to the AMI Head-End System (HES) and Meter Data Management System (MDMS) for processing
3. Once processed, the data is sent to the CIS and billing system to prepare bills
4. Customers can then access and monitor their consumption via a self-service web portal, empowering them to make informed decisions about budget and conservation

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How did we get here?

AMI: How Did We Get Here?

- More than 75% of U.S. homes are equipped with AMI
- Commission approved $46.8 million for AMI implementation and $32.5 million for operations and maintenance
- 20-year contract with Itron: *Hosted in the cloud; Meters and endpoints; AMI communication network*
- GRU will hire temporary labor to mass-install meters
- Project kicked off August 2021

CIS: How Did We Get Here?

- Same CIS since 2007; outdated
- Commission approved $30,783,923
- 10-year contract with VertexOne: *Cloud solution; Pre-configured SAP*
- Fully hosted and managed, which allows for high availability and business continuity
- Project kicked off March 3, 2021
- Go-Live is estimated to be Feb 2023

Where are we now?

AMI: Where Are We Now?

- Design and build phase
- 90% of network infrastructure hardware has been deployed (communications network)
- On schedule and on budget

Network Installation

AMI: Where Are We Now?

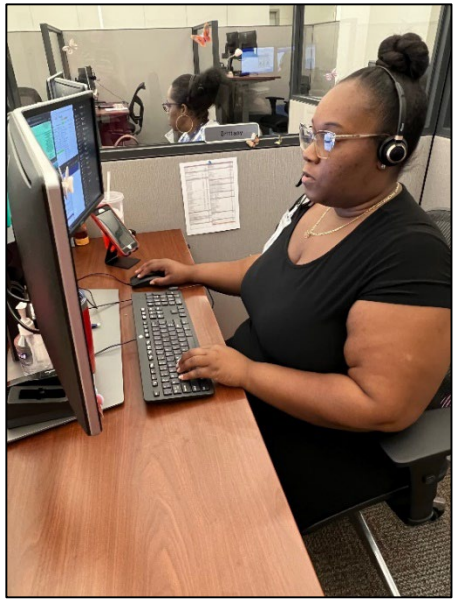
- Meter farm build complete and being used for testing
- Solar access point for outside of electric footprint built and tested
- Meters/endpoints currently being manufactured and shipped

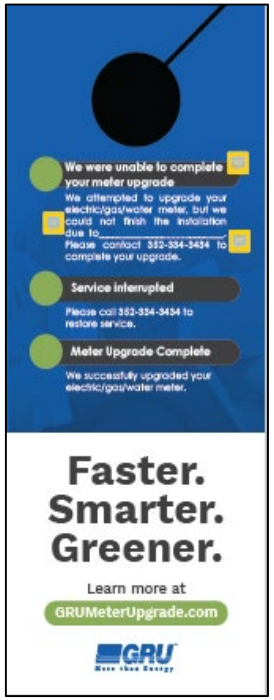
Meter Farm

Solar Network Device build

AMI: Where Are We Now?

- AMI-specific customer service reps
- Customer education: *branded messaging*; *bill inserts; bill messages; grumeterupgrade.com; gru.com/meterupgrade; door hangers; video, email campaign*

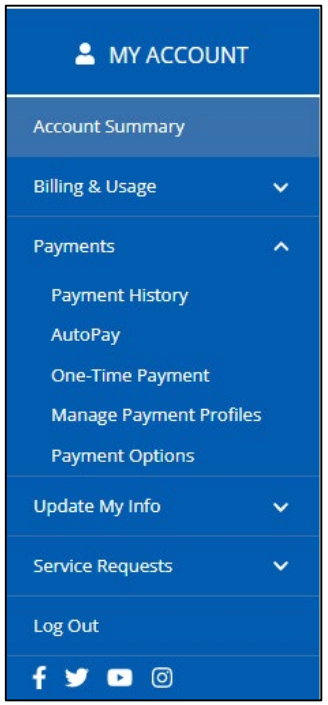




https://grumeterupgrade.com/wp-content/uploads/2022/01/Grudave-2-Final-HD-V3.mp4

CIS: Where Are We Now?

- Dynamic online bill payment portal:
  Spanish-language option; payment/usage history; usage chart, etc.



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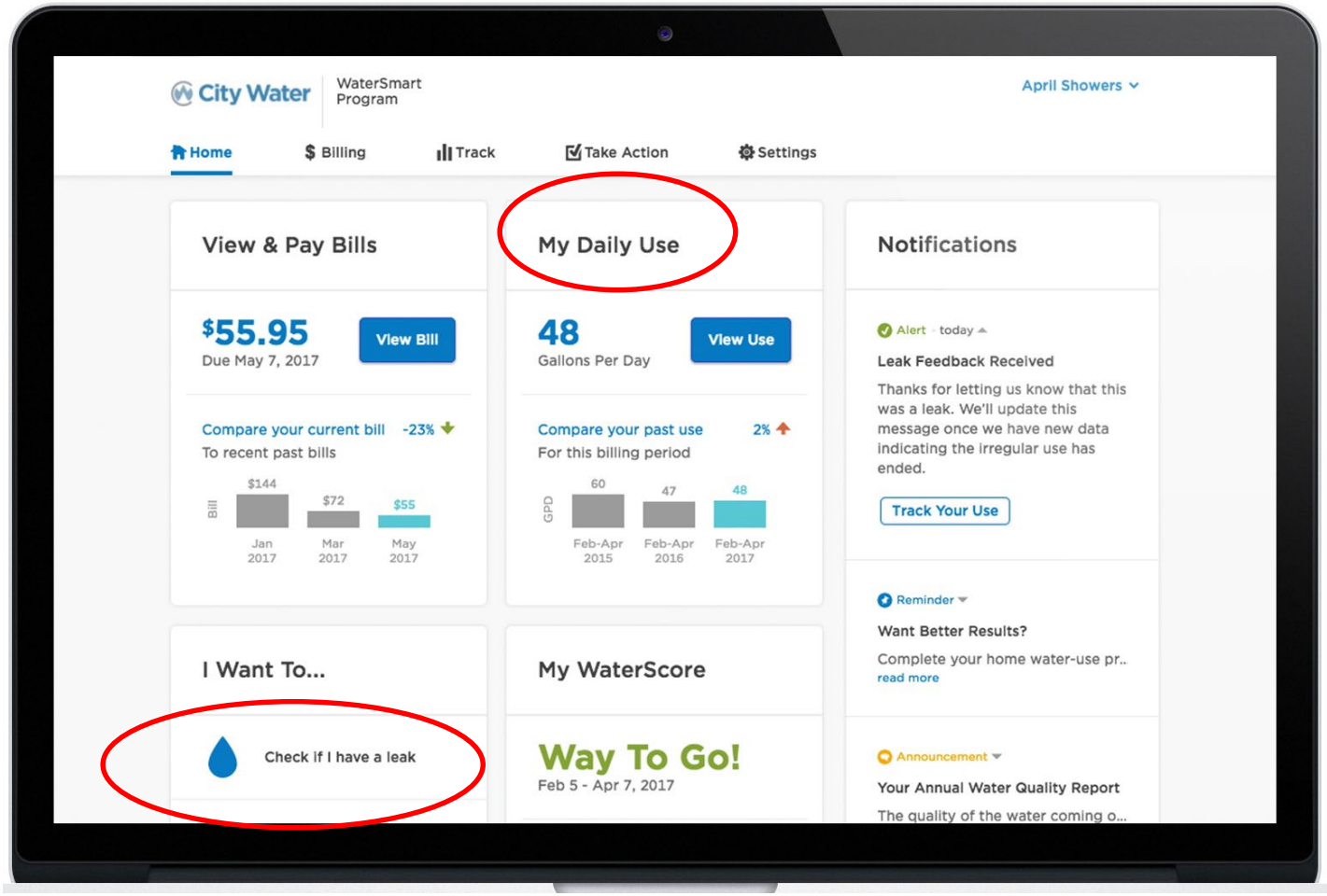
Where are we headed?

CIS: Where are we headed?

- Water Smart Program



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AMI: Where are we headed?

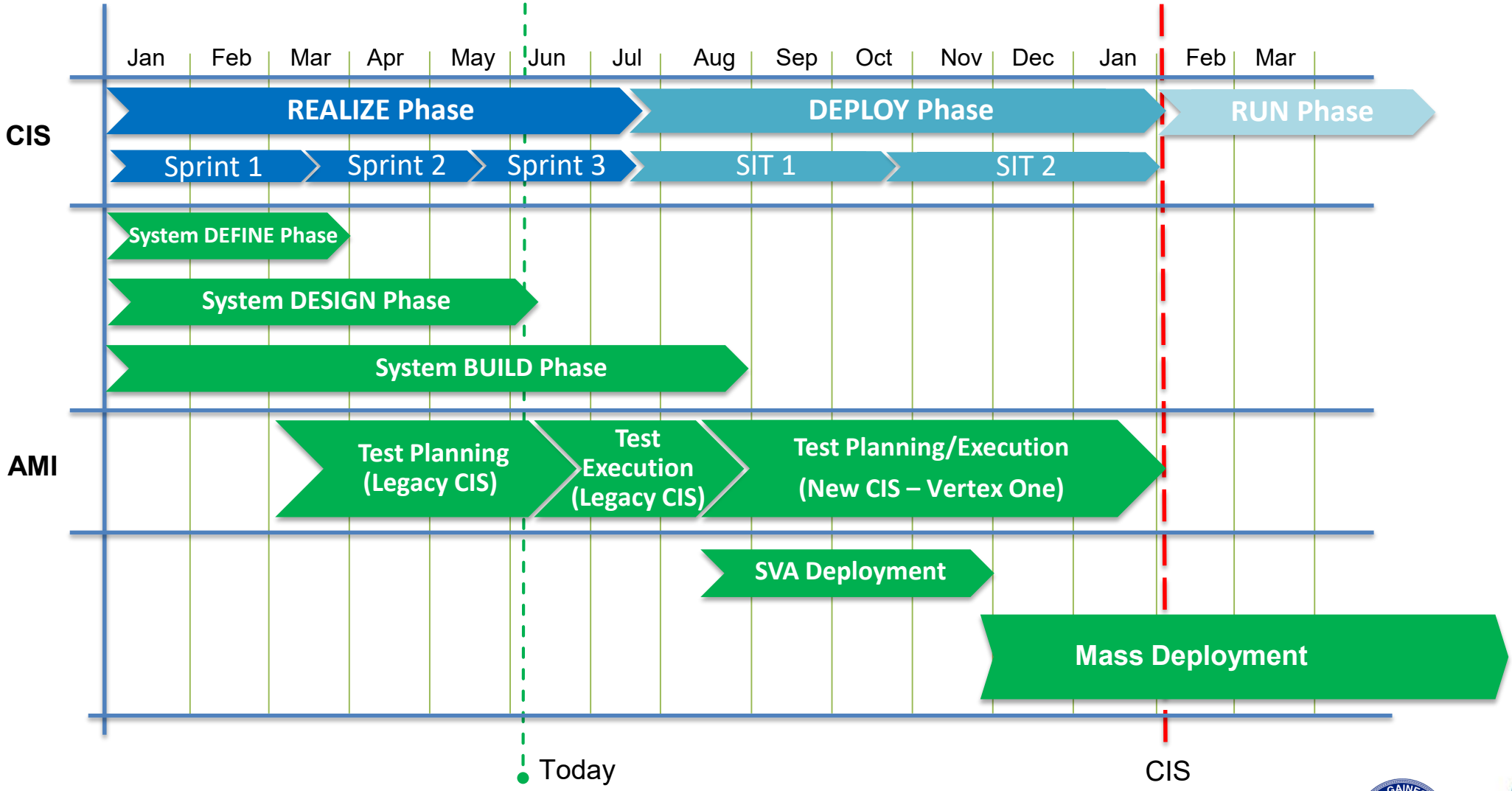
Phase I – AMI Mass Deployment

- Installation of approximately 100k electric meters, 75k water meters and 37k gas modules
- Installation of AMI communication network
- Implementation of a Meter Data Management System (MDMS)
- Integration between AMI to new CIS
- Transition to billing using AMI System reads
- Integration to Outage Management System (OMS)

Phase II – (Optional)

- Time-of-Use Program
- Prepay solution
- Distributed Intelligence Applications
- Smart lighting

Where are we headed?




Questions?
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DHR Overview

DHR Overview

Deerhaven Renewable Generating Station

DHR Overview

Outline

3 categories of fuel

- *Mill residues*
- *Urban*
- *In-woods*

- Historic Biomass Fuel Sourcing

- Minimum Sustainability Standards

- Current Fuel Supply Update

DHR Overview

Category attributes – MILL RESIDUES

Three types: *Pine bark; dry residuals (12% moisture); Wet residuals (green sawdust, 45-52% moisture)*

- Very high quality, large volumes produced, but many buyers.
- Not responsive to surge demand.
- Historically about 5% of fuel.

DHR Overview

Category attributes – URBAN

Most variable category

- Ash 1-8%
- Moisture 20-50%
- Particle size/quality: GROUND = fibrous,
- High fines (20%+)
- Foreign materials (plastic, metal, etc.)
- All above lead to handling and combustion concerns

Producer force irregular

- *Quality and reliability consequences*

- Limited response to surge demand

- Historically 10-25% of fuel

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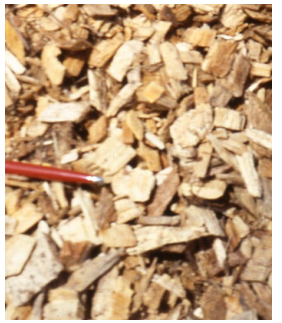
DHR Overview

Category attributes – IN-WOODS

- Foundation of fuel supply
- Large majority is hardwood
- Most volume comes from “site-prep cuts” – already logged over and being prepared for replanting
- Best handling (chips, sharp knife)
- Most consistent quality (particle size, MMBtu, moisture, ash)
- Largest volume
- Most dependable producer force
- Most reliable scale-up when surge needed
- Historically 60-90% of fuel



DHR Overview

Recent Biomass Sourcing

DHR received the following three types of biomass

- In–woods: 75%
- Urban wood: 22%
- Mill residues (bark, saw dust, etc.): 3%

The wood comes from within a 75-mile range with the majority coming from roughly within a 55-mile radius.

**GRU does not accept developer debris*

DHR Overview

Minimum Sustainability Standards

- Purpose: Ensure suppliers abide by responsible biomass harvesting standards
- Focus on the longevity and health of the forests
- Developed by group of forestry professionals and consultants
- All suppliers must agree to abide by these standards
- All suppliers must attend annual sustainability and best practices seminar
- Annual audits by independent third-party verify compliance

Main Street WRF
Capacity & Renewal Upgrade

Status Update

Main Street WRF – Capacity & Renewal Upgrade

VISION STATEMENT

Collaboratively upgrade the Main Street Water Reclamation Facility (MSWRF) to be a resilient, efficient, and modern treatment operation that will continue to benefit our community for the next 30 years.

- Efficiency
- Modernization
- Safety
- Increased Capacity
- Reliability & Resiliency
- Operability & Maintainability

VALUES

- Trust
- Collaboration
- Buy-in
- Effective Communication
- Team Cohesion
- Efficient Decision-Making
- Fair Resolution of Conflict
- Effective Scope, Schedule, & Budget Management
- Risk Identification & Management
- Stakeholder Engagement

Main Street WRF – Capacity & Renewal Upgrade

Benefits of Investment

- **Capacity:** Accommodate growth and development.
- **Aging Infrastructure:** Replace 25+ year-old equipment and technology.
- **Operation and Maintenance:** Lower O&M costs per MGD.
- **Regulatory:** Meet future water quality treatment needs.

Main Street WRF – Capacity & Renewal Upgrade

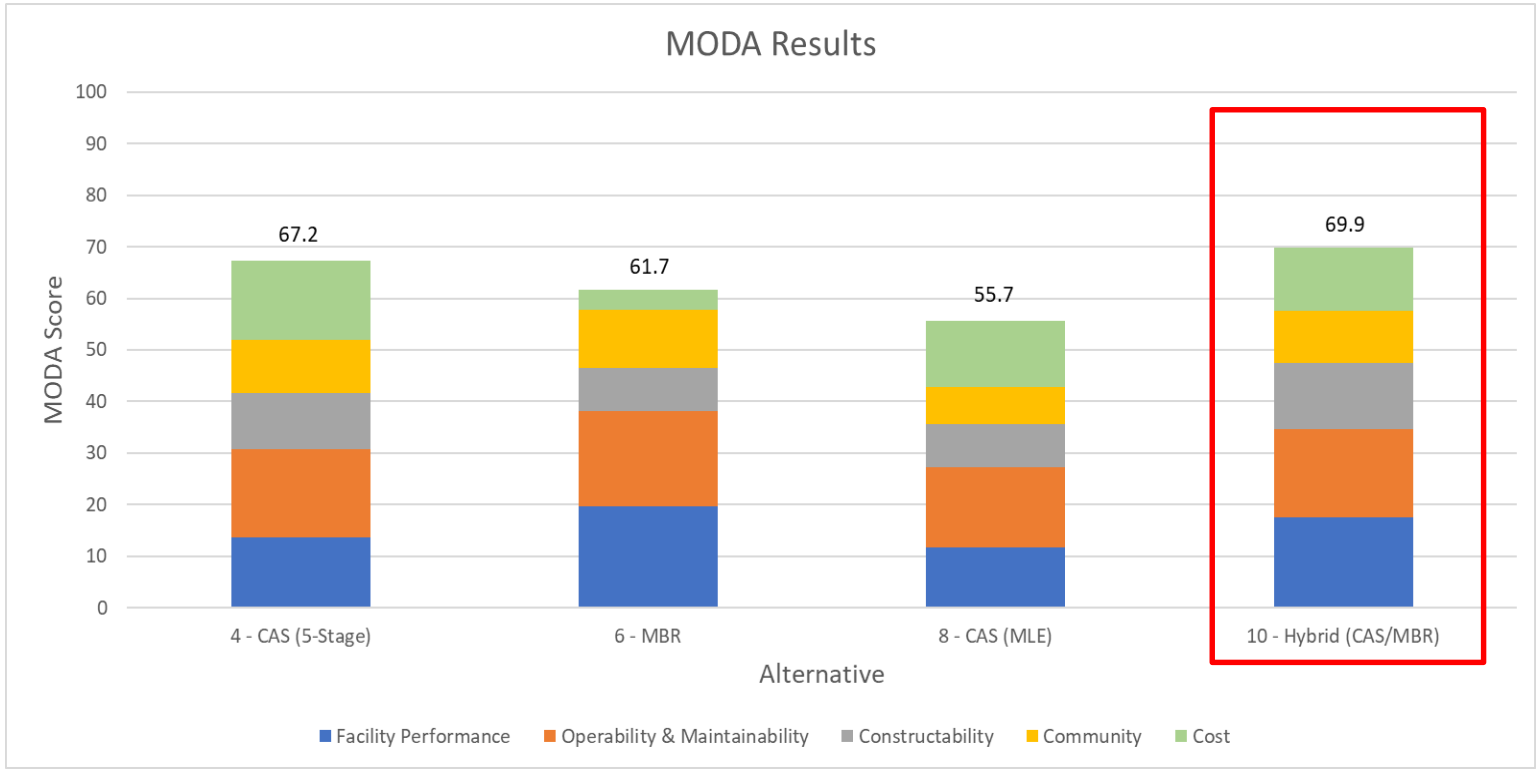
Project Scope 2019

Estimated Cost $50M

Main Street WRF – Capacity & Renewal Upgrade

Planning Phase

- Investigated 12 new technology combinations for MSWRF
- Narrowed down to 4 most viable alternatives
- Alternative 10 was selected based on the project criteria

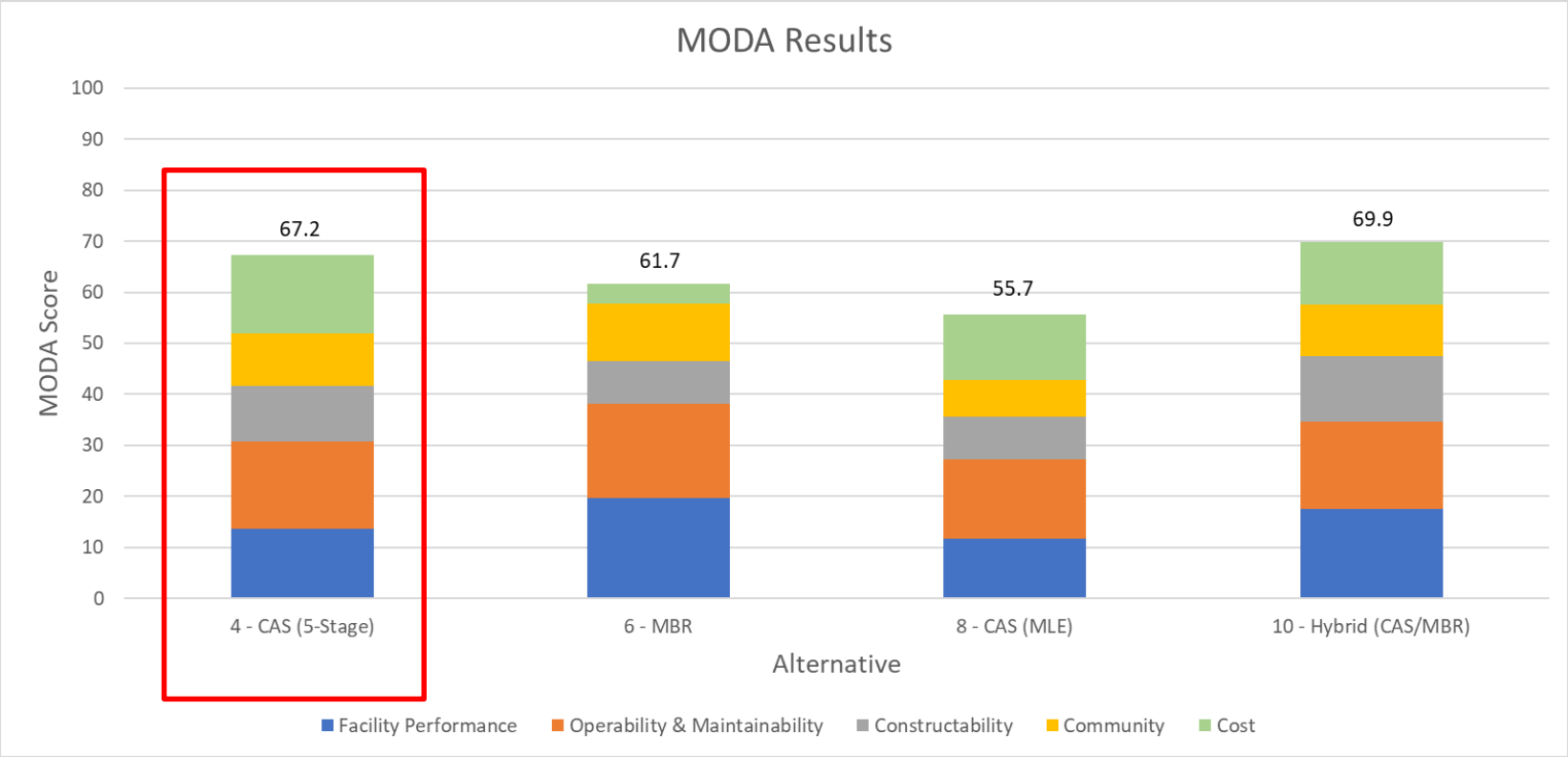


Alternative 10 – Cost $95M:

- Master LS
- New Headworks
- Biological Phosphorus Treatment
- 5-Stage Bardenpho Nutrient Treatment
- Membrane Bioreactor (MBR)
- No Filter Upgrades
- UV Disinfection (partial)

Main Street WRF – Capacity & Renewal Upgrade

Planning Phase



Alternative 4 – Cost $65M:

- Master LS
- New Headworks
- Biological Phosphorus Treatment
- 5-Stage Bardenpho Nutrient Treatment
- ~~Membrane Bioreactor (MBR)~~
- ~~No Filter Upgrades~~
- ~~UV Disinfection (partial)~~
- Filter Improvements
- Continue Sodium Hypo Disinfection
- Clarifier resilience does not meet goals

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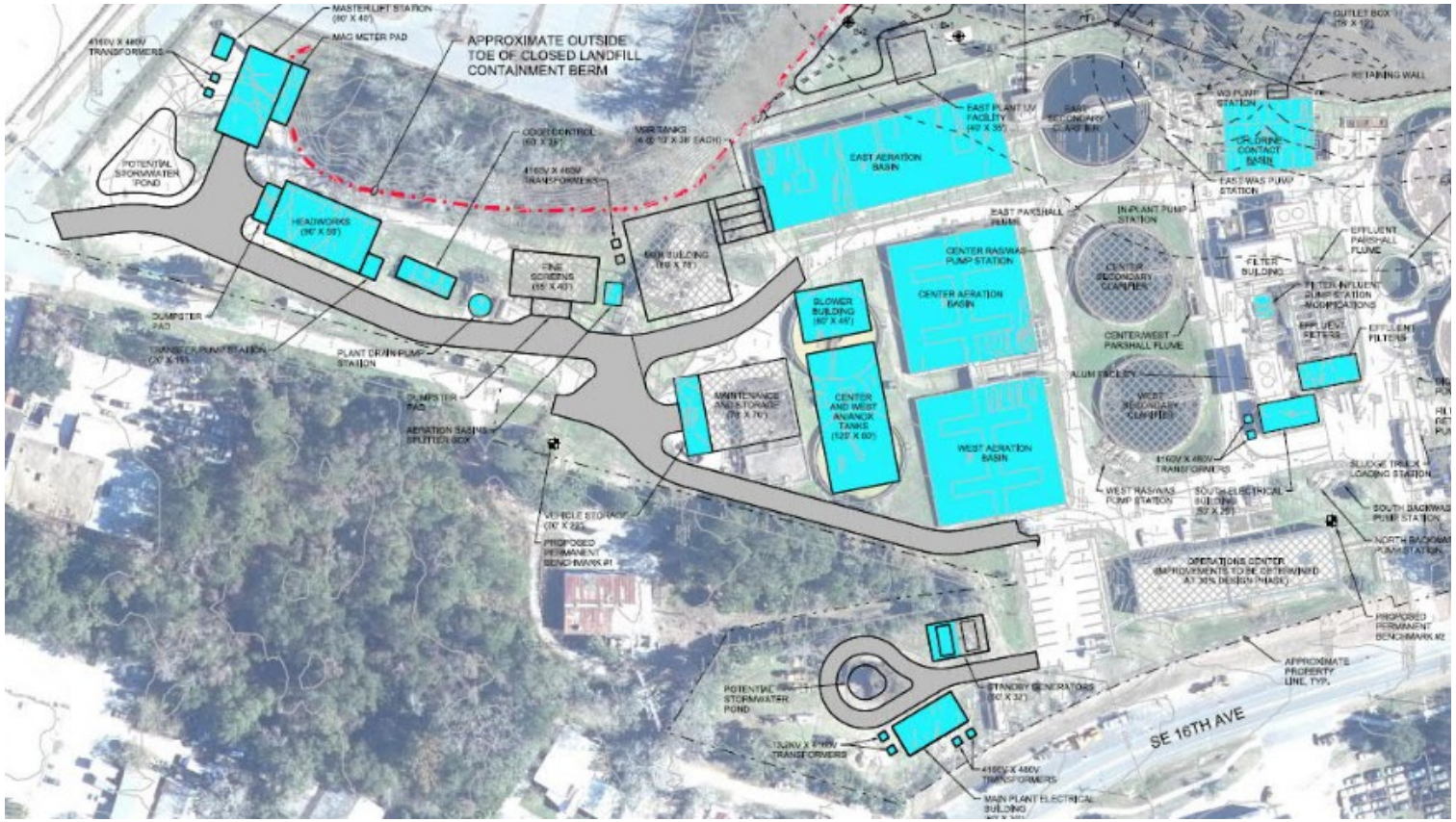
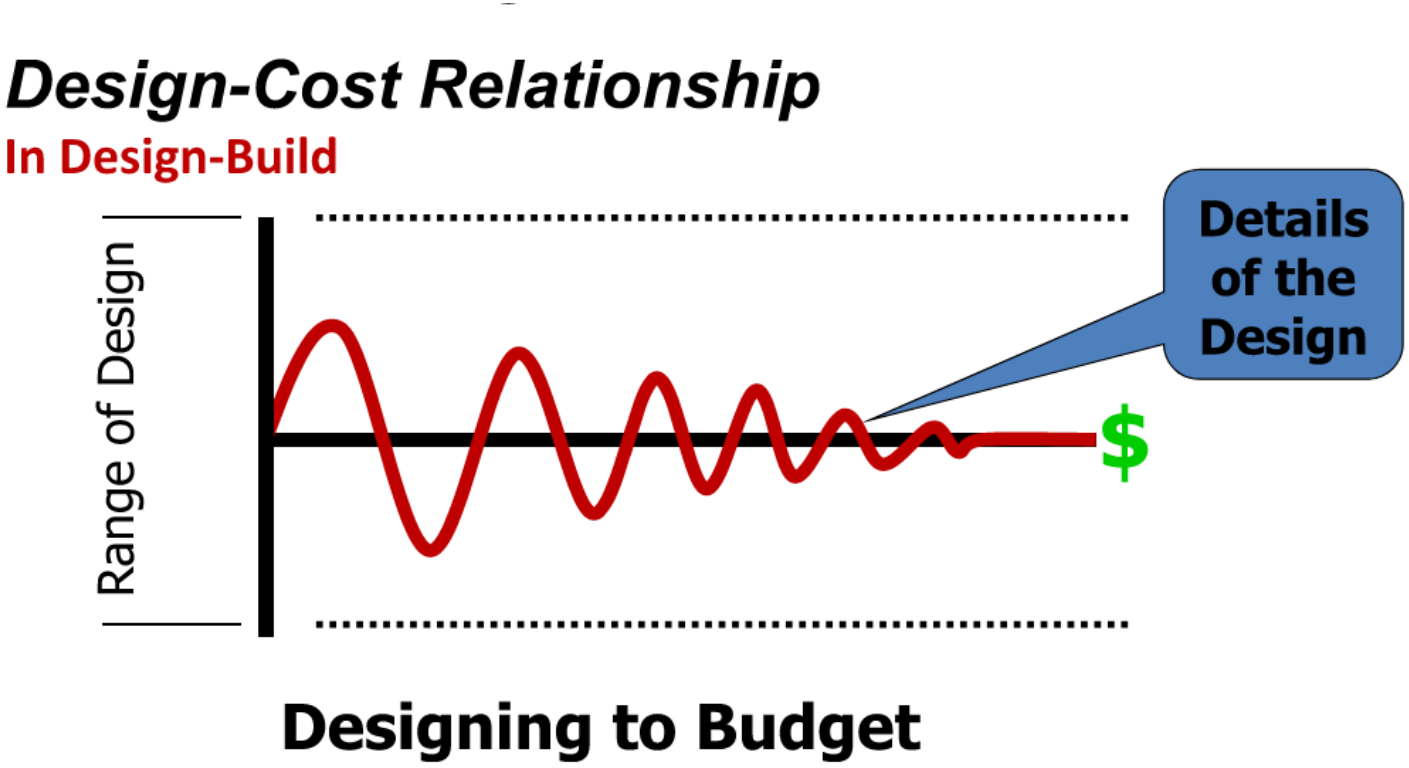
Main Street WRF – Capacity & Renewal Upgrade

Planning Phase



Main Street WRF – Capacity & Renewal Upgrade

Planning Phase



Main Street WRF – Capacity & Renewal Upgrade

Preliminary Phase

- Kicked off May 2, 2022
- Detailed design estimated to be 18 months
- Equipment selections
- Early ordering of equipment - early FY23
- Construction mobilization - est. January 2024
- Construction completion - approx. 4.5 years.

Main Street WRF – Capacity & Renewal Upgrade

Path Forward

- Proceed with design of capacity & renewal upgrade
- Value engineering/cost control
- Propose updated project cost upon completion of detailed design
- Return to City Commission for additional funds if needed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