Item 8.2: 2020 Major Projects Update

Mandy Bauld
Sr. Director, PMO

Board of Directors Meeting
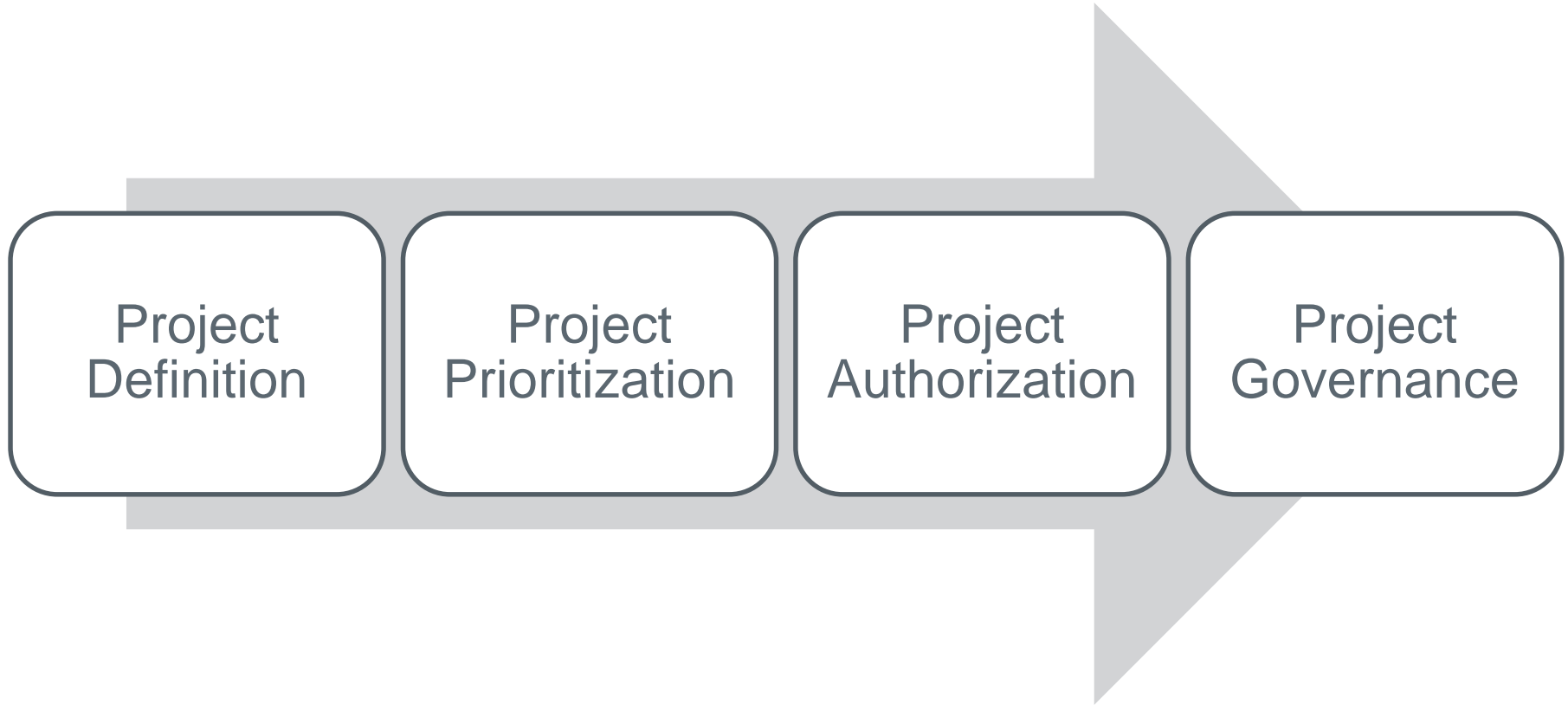
ERCOT Public
February 11, 2020

Agenda

❑ ERCOT Project Portfolio Management

❑ 2019 Project Delivery

❑ 2020 Major Project Highlights

Item 8.2
ERCOT Public

ERCOT Project Portfolio Management

| Project Definition | Project Prioritization | Project Authorization | Project Governance |

Internal Projects

| Project Definition | Project Prioritization | Project Authorization | Project Governance |

- Submit Project Concept
- Submit Project Charter
- Build Impact Analysis
- Ongoing Basis
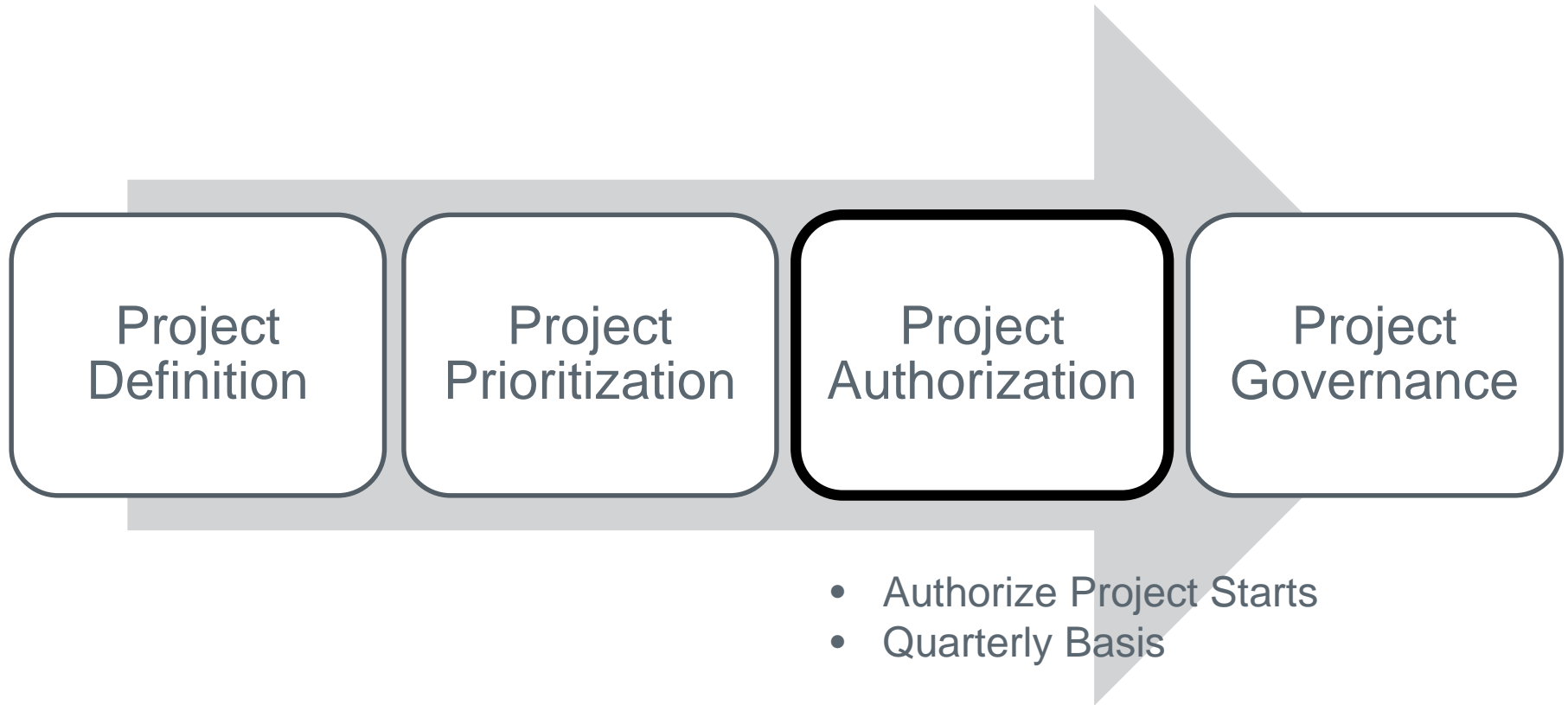
ERCOT Project Portfolio Management

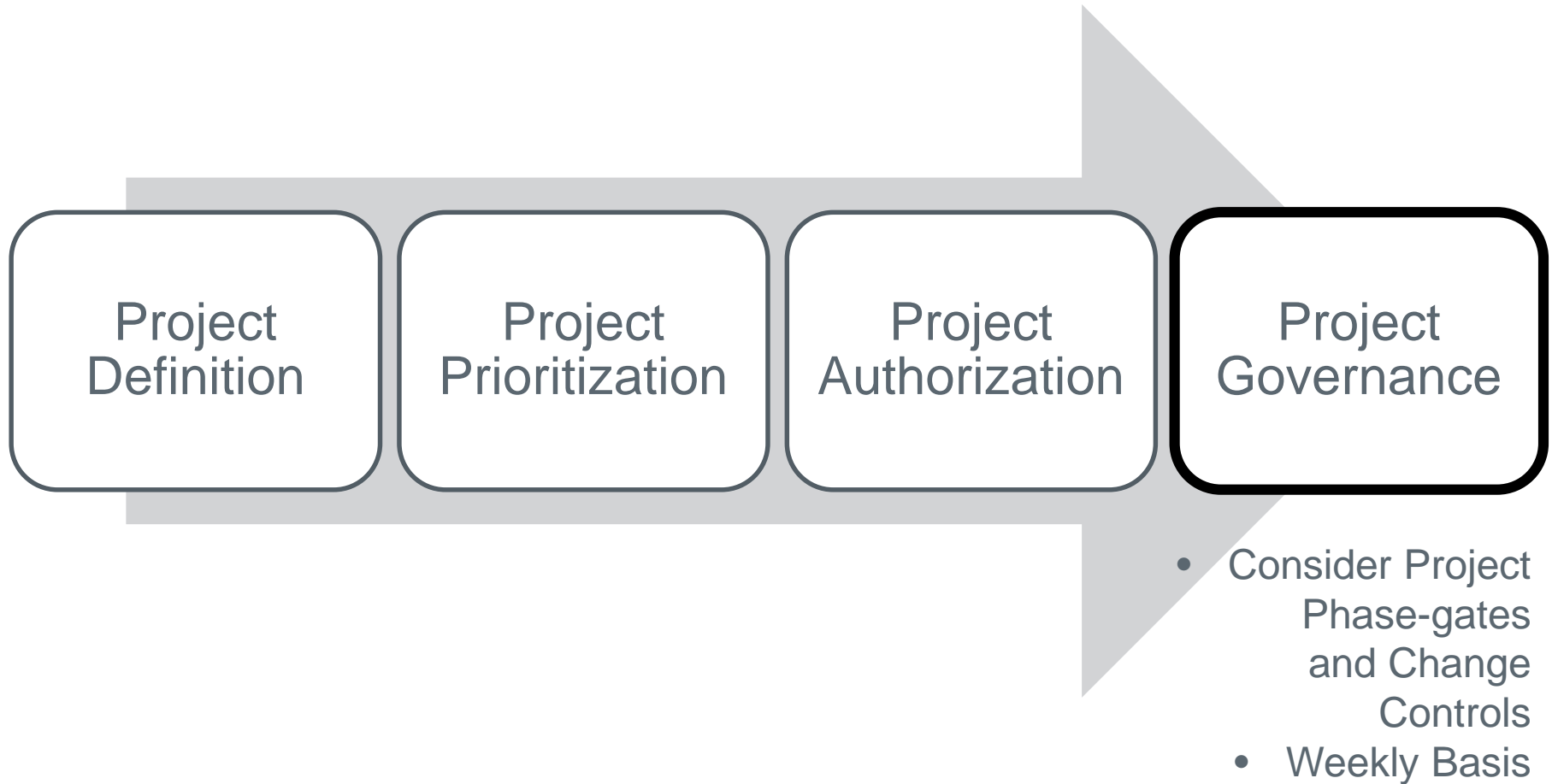| Project Definition	**Project Prioritization**	Project Authorization	Project Governance

- Consider Project Charters
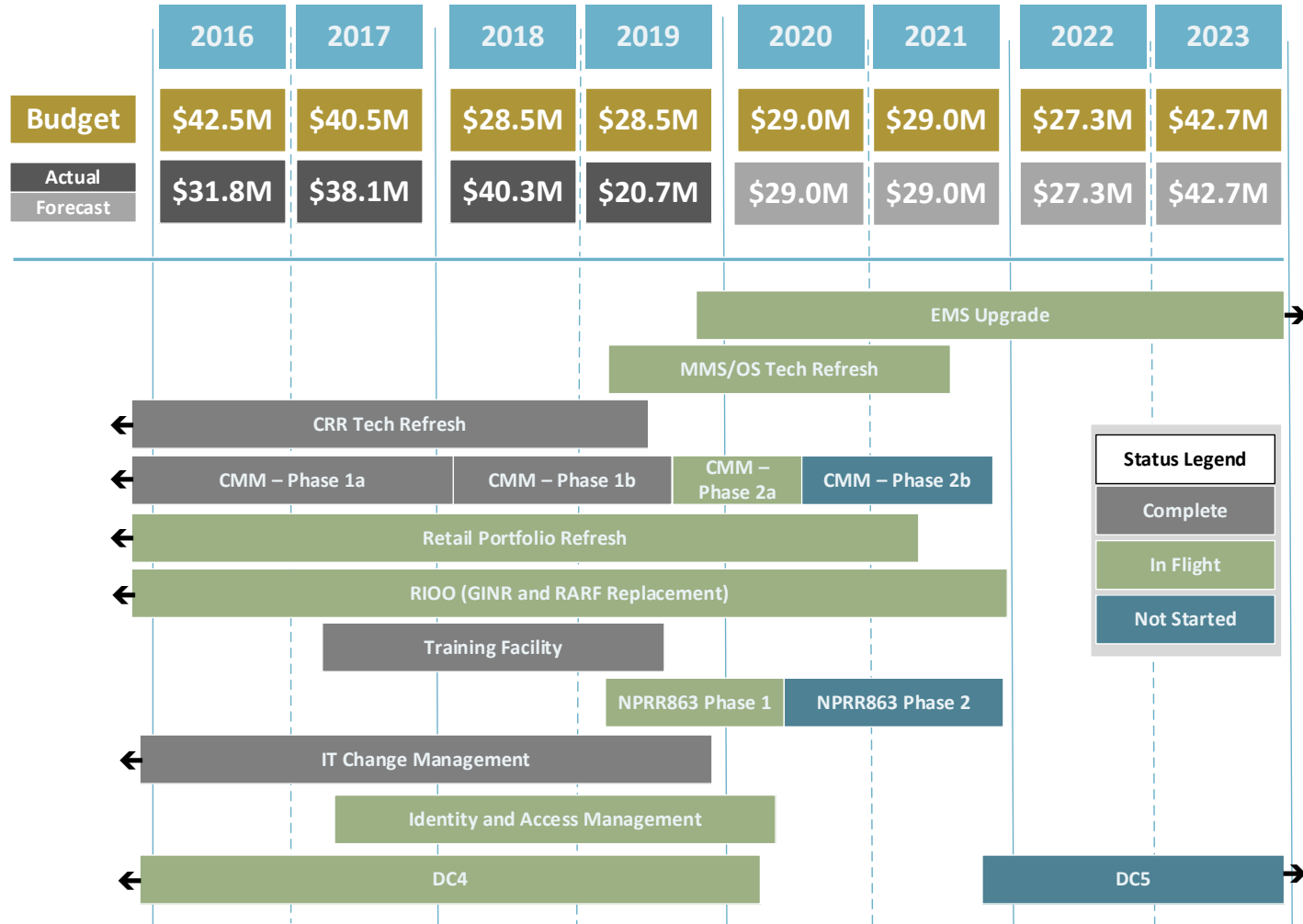- Approve Projects for Project Prioritization List (PPL)
- Monthly Basis

ERCOT Project Portfolio Management

| Project Definition | Project Prioritization | **Project Authorization** | Project Governance |

- Authorize Project Starts
- Quarterly Basis

ERCOT Project Portfolio Management

Project Definition

Project Prioritization

Project Authorization

Project Governance

- Consider Project Phase-gates and Change Controls
- Weekly Basis

PPL Activity 2016-2023

	2016	2017	2018	2019	2020	2021	2022	2023
Budget	$42.5M	$40.5M	$28.5M	$28.5M	$29.0M	$29.0M	$27.3M	$42.7M
Actual / Forecast	$31.8M	$38.1M	$40.3M	$20.7M	$29.0M	$29.0M	$27.3M	$42.7M

EMS Upgrade

MMS/OS Tech Refresh

CRR Tech Refresh

CMM – Phase 1a　　CMM – Phase 1b　　CMM – Phase 2a　　CMM – Phase 2b

Retail Portfolio Refresh

RIOO (GINR and RARF Replacement)

Training Facility

NPRR863 Phase 1　　NPRR863 Phase 2

IT Change Management

Identity and Access Management

DC4　　　　DC5

Status Legend

Complete
In Flight
Not Started

Subset of projects illustrated includes Major Projects highlighted to the BOD
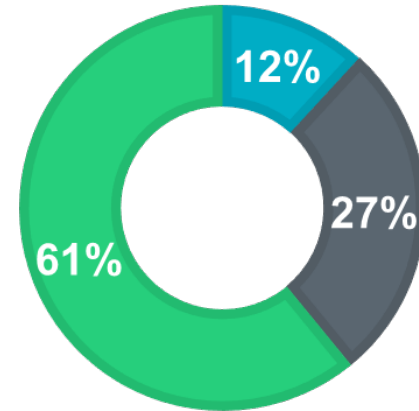
2019 Project Delivery
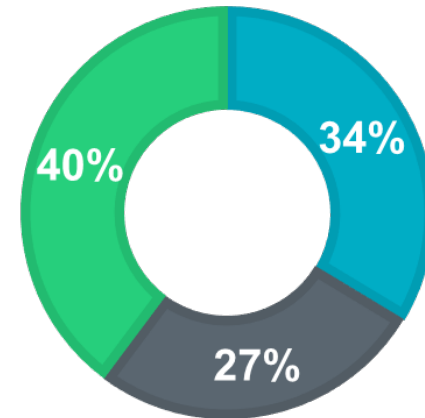
2019 Project Delivery

$20.7m project spend

113 unique projects active in 2019

49 average # active projects

67 projects completed

Corporate IT Operations

12%
27%
61%

Small Medium Large
<$100K $100K-$500k   >$500k

34%
27%
40%

Data as of 1/20/2019

2020 Major Project Highlights

Current ERCOT Enterprise Objectives

Establish rules for new resources and market modernization.

Improve data and information exchange services to ERCOT stakeholders.

- **Resource Integration & Ongoing Operations (RIOO)**
- **Enterprise Content Management System (ECMS)**

Complete defined stages of core system and service improvements.

- **Market Management System/Outage Scheduler (MMS/OS) Tech Refresh**
- **Retail Portfolio Refresh**
- **Fast Frequency Response (FFR) & ERCOT Contingency Reserve Service (ECRS) Implementation**

RIOO

Improve data and information exchange services to ERCOT stakeholders.

Overview

- Replace the current Resource Asset Registration Form (RARF) spreadsheet with an online solution.

Benefits

- Reduction of manual processes, streamlining and automation of submittal and validation processes, improved transparency and access to data, improved data validation, improved usability.

Details

- Multiple releases towards RARF spreadsheet retirement. 2020 will deliver the RIOO function that enables Market Participants to electronically review and edit existing Resource Asset registration data.
- **Target Completion**: 2021*
- **Total Spend**: $6M*
- **2020 Spend**: $3.1M
- *Q2 2020 will establish completion date and budget for remaining work that will incorporate create and delete capabilities into the system.

ECMS

Improve data and information exchange services to ERCOT stakeholders.

Overview

- Implement a solution to manage content in alignment with information governance and records management policies, other ERCOT systems integration, and managed metadata as defined by the ERCOT taxonomy. Establish the foundation for an improved user experience on ERCOT.com and MIS.

Benefits

- Complete & secure document management, information governance policy enforcement, improved search capability, and consolidated platform.

Details

- Multiple releases
- **Target Completion**: 2021
- **Total Spend**: $3M - 3.5M
- **2020 Spend**: $1.5M

MMS/OS Tech Refresh

Complete defined stages of core system and service improvements.

Overview

- Support reliability of the Market Management and the Outage Scheduler Systems though replacement of aging technology that is approaching end-of-life and support.

Benefits

- Supported platforms, modern architecture, enhanced security, enhanced testing capabilities, alignment for vendor maintenance and software support.

Details

- **Target Go-Live**: Q4 2020
- **Target Completion**: Q2 2021
- **Total Spend**: $6.4M - $7M
- **2020 Spend**: $5.6M

Retail Portfolio Refresh

Complete defined stages of core system and service improvements.

Overview

- Improve support and maintenance capability for the Retail systems by upgrading or replacing aging retail system products and platforms. The program governs multiple projects delivering the technical foundation changes.

Benefits

- Improved reliability and uptime, supported platforms, modern architecture, enhanced security, improved business rule management.

Details

- Focus is on technical refresh in three areas.

EDI Map & Translator Replacement	NAESB Application Tech Refresh	Registration System Upgrade
Target Completion: Q4 2020	**Target Completion**: Q4 2020	**Target Completion**: 2021
Total Spend: $2.7M -$3M	**Total Spend**: $240K-$270K	**Total Spend**: $900K - $1M
2020 Spend: $939K	**2020 Spend**: $238K	**2020 Spend**: $419k

FFR & ECRS (NPRR863, NPRR960)

Complete defined stages of core system and service improvements.

Overview

- Modify Responsive Reserve (RRS) to be primarily a frequency response service and create a new Ancillary Service: ERCOT Contingency Reserve Service (ECRS).

Benefits

- Changes in Ancillary Services as described in Board approved NPRR863 and NPRR960.

Details

- Phased delivery through separate projects; no earlier than January 1, 2020 for Fast Frequency Response (FFR)-related language, and no earlier than January 1, 2022 for ERCOT Contingency Reserve Service (ECRS)-related language.

FFR Implementation
Effective Date: March 1, 2020
Total Budget: $600-650K
2020 Budget: $275K

ECRS & FFR Implementation
Target Completion: 2022
Total Budget: $2M – $2.5M
2020 Budget: $1.1M

Ongoing Updates or Market Engagement

❑ Board of Directors (all highlighted projects)

❑ Resource Integration Workshops (RIOO)

❑ TAC (ECMS)

❑ Retail Market Subcommittee (Retail Portfolio)