



## **Item 4.1: Projects and Technology Update**

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Technology and Security Committee Meeting

ERCOT Public

February 26, 2024

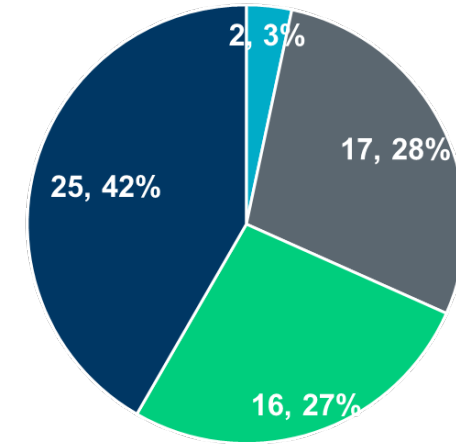
## Highlights

- Increased number of Application Releases from 6 to 11 for 2024.
  - January was the first of these releases
- Shortened Site Failover to a single day event instead of 4 days in 2024.
  - January was the first of these Single day Site Fail Over
  - Applying Lessons learnt in additional automation
- Treasury Management went live with reduction of manual work and business risk. This application uses machine learning features for invoice matching.
- Public API and Data Portal went live.
- Our projects are generally on track with normal Project Ups & downs.

**Key Takeaway:** Continuing to maintain the tech health and do enhancements to our systems.

# 2024 Project Delivery Statistics

YTD Projects Initiated	4
YTD Projects Closed	2
Number of Projects Worked	62
Number of Active Projects	60
Total of Active Project Budgets	\$167M

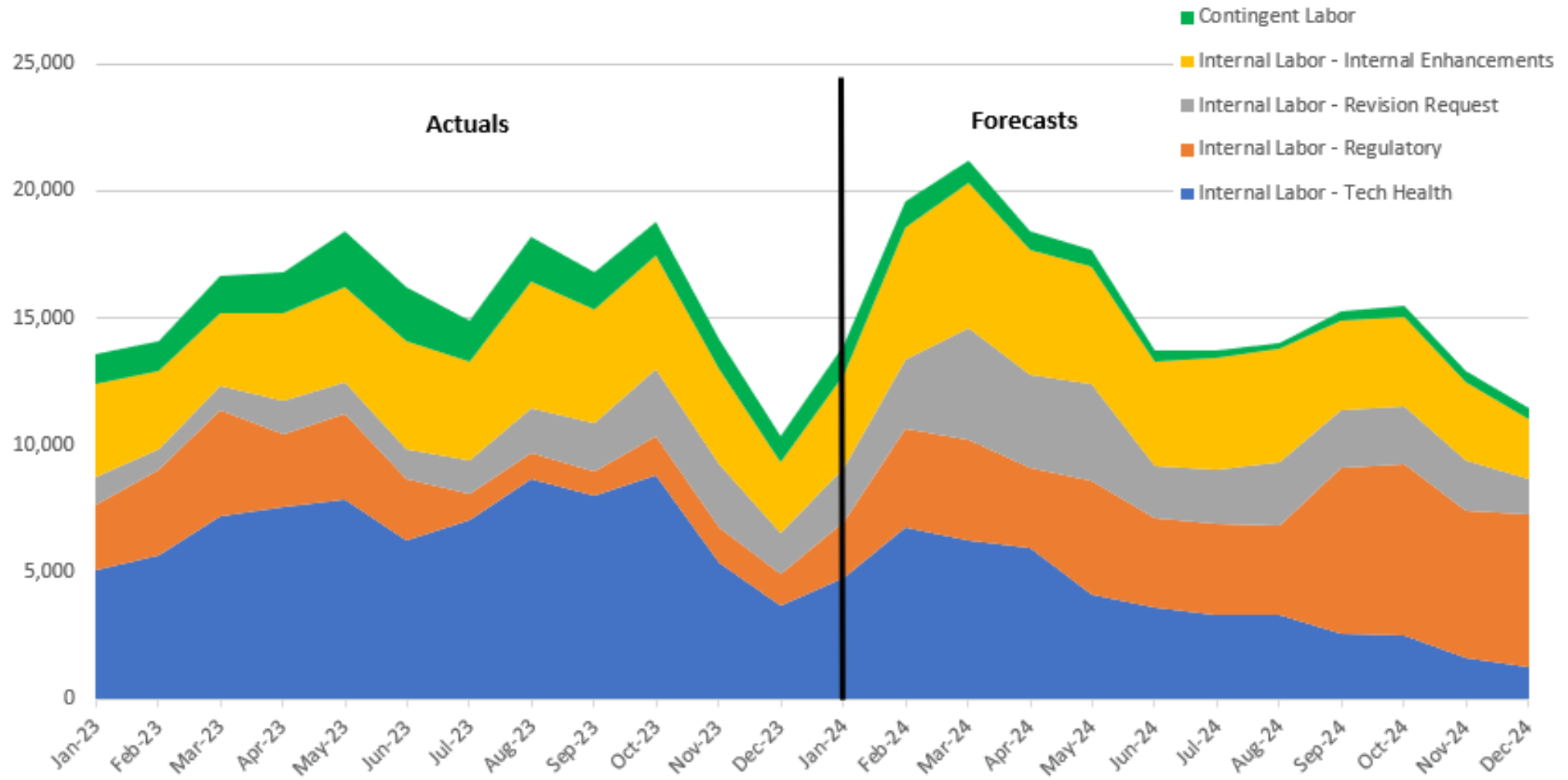


- S <\$100k
- M \$100k-\$500k
- L \$500k-\$1M
- XL >=\$1M

Active Project Budget	Actuals to date	Estimate at Completion
Internal Labor	18.1 M	30.4M
Contract Labor	4.5M	1.4M
Vendor	16.6M	7.0 M
H/W, S/W	53.0 M	26.6 M
Other	2.4M	4.0 M
<b>Total</b>	<b>94.6M</b>	<b>69.3M</b>

**Key Takeaway:** We are managing a healthy volume of projects with no issues to report.

# Project Labor Hours – 2023/2024



**Key Takeaway:** We are ramping up after Holiday season.

# ERCOT Application Release this cycle

## Application Release R1,R2 (January, February)

- PR440-01 NPRR1092 - Reduce RUC Offer Floor and Limit RUC Opt-Out Provision
- PR444-01 - NERC FAC Standard Changes Alignment – all the components will be deployed into production, will be effective from 04/01/2024
- PR456-01 - NPRR1132 - Communicate Operating Limitations during Cold Weather Conditions – RIOO changes will go live
- PR399-01 - Treasury Management R1 release

## Application Release Off-cycle

- Public API GA release on 02/23/2024

**Key Takeaway:** Continuing to maintain the tech health and do enhancements to our systems.

## ERCOT Application Release next cycle

### Application Release R3,R4 (March, April)

- PR399-01 Treasury Management System R4 Release
- PR455-01 ERCOT Developer Portal
- PR427-01 Tech Refresh – MMS OS Migration
- PR422-01 Weatherization and Inspection

### Application Release Off-cycle

**Key Takeaway:** Continuing to maintain the tech health and do enhancements to our systems.

# Treasury Management System

- **Features**

- Significantly reduced risk for the Treasury Management ERCOT team managing the invoices and payments
- Relies on a service that learns and use machine learning for Account Receivable invoice matching. We are seeing matching rates in excess of 95% immediately after launch.
- Each matching corresponds to a reduction in a previous manual task
- Project delivered on time

- **Future Plans**

- R4 Release to automate more items around Reporting and ERP integration

**Key Takeaway:** Treasury Management System project successfully delivered on schedule.

# Public API and Data Portal

- **Features**

- 35 data products released to the public
- Ability to download historical data sets with 7-year available history from both User Interface and Application Programming Interfaces (APIs)
- Browse, filter and download current data sets using both User Interface and Application Programming Interfaces

- **Future Plans**

- Add more public data products this year
- Get feedback from external users and continue to refine the Data Portal and Application Programming Interfaces

**Key Takeaway:** Public API and Data Portal Generally Available.



# Production Incidents

- **Problem**
  - Static ratings for 41 (11 lines, 3 series devices and 27 transformers) out of 10500 branches in the network model were mismatched between Energy Management System (EMS) and Transmission Service Provider (TSP) submittals between 11/8/2023 and 1/30/2024
- **Impacts**
  - We may have had a reliability issue if the ratings used were expansive
  - We may potentially have a price correction if the ratings were too constraining
- **Root Cause**
  - As part of the EMS upgrade a flag that allows network model ratings to be applied to EMS was disabled
- **Fix**
  - The issue was fixed in the EMS on 1/30/2024 and incremental updates to branch ratings were applied
- **Improvement opportunities**
  - Weekly Model Load process will be enhanced to compare the static ratings between current production model and next week's model

**Key Takeaway:** Continue to focus on improving testing not just as part of projects but daily operational activities.

May 21, 2024

# Panel Topics

Essential Reliability  
Services

Demand Flexibility

Energy Storage  
Resources

Uncertainty Management

Transmission Planning

Technology Trends

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