



Item 5.2: Information Technology Update

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Technology and Security Committee Meeting

ERCOT Public
October 16, 2023

ERCOT Application Release this cycle

Application Release R5 (October)

- PR424-10 Upgrade Configuration Management Database (CMDB)
- PR438-01 Credit Monitoring & Management-Commercial Systems Integration Refactor
- PR431-01 NPRR1154 Firm Fuel Alternate Resource

Application Release Off-cycle

- PR429-01 Tech Health Dynamic Security Assessment (DSA) Upgrade Go-Live 9/28
- PR428-01 Real Time Dynamics Monitoring System/Phasor Measurement Units (PMU) Upgrade Go-Live 10/19

Key Takeaway: Continuing to maintain the tech health of our systems

ERCOT Application Release Upcoming

Application Release R6 (December)

- PR423-01 Retail Application Programming Interface
- NPRR1164/RRGRR033 - Black Start and Isochronous Control Capable Identification
- NPRR1026 – Self Limiting Facilities (modeling changes only)

Application Release Off-cycle

- PR320-01 Energy Management System (EMS) Upgrade
- Information Services Master (ISM) database upgrade
- PR405-01 Test Modernization
- PR422-01 Weatherization customer service management / Market Participant Portal

Key Takeaway: Continued focus on tech health as well as business deliverables while delivering major projects like EMS upgrade.

EMS Upgrade

- Communications with Market Participants via Inter-Control Center Protocol (ICCP) already cutover on both sites
 - This was the first step in the sequence for closed loop testing
- Closed loop testing on October 12, 2023
 - 4-hour test duration with MPs
 - Analyze results for Go-No Go decision
- Go-Live is scheduled for November 16, 2023

Key Takeaway: EMS upgrade project continues to be ahead of schedule and under budget

Cloud Computing Pilot

- **Problem**

- Need to run a large number (~100K) of simulations within two weeks to support Reliability Standard deliverable

- **Options**

- Get more desktop machines - not possible in time frame
- Commission many servers on-prem - time and capacity constraints
- Use temporary compute in cloud - chosen option

- **Outcome**

- Using a cloud solution, leveraged 8000 cores and parallelized the computation. Simulations ran in less than a day
- Met the deadline for the PUCT submission

Key Takeaway: Delivered our first ever Infrastructure as a Service (IaaS) project in record time that provided a huge value to business.

Other IT Initiatives

- **Annual ERCOT Membership process automation**
 - Automated a process that typically takes a month for legal person to collect all the Membership documents
 - Used a simplified automated workflow in the Service Management system
- **Ongoing improvements with Public Service Portal**
 - Go live was 4/6/2023
 - Total number of Users Registered = 1,069
 - Total number of Cases Created = 1,207
 - Total number of Cases Resolved = 1,105
 - Average Resolution time = 7 days

Key Takeaway: Continuing to focus on process optimization and digitalization.