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**Concept Paper on Data Product Change Management**

Submitted to the Market Data Working Group on Month DD, YYYY.

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# Executive Summary

The objective of this White Paper is to describe a proposal for the development of a database establishing transparency for all internal ERCOT initiated projects, as well as Market driven projects initiated through the Market Stakeholder process.

# Introduction

On March 31, 2016 concerns were expressed at the Technical Advisory Committee (TAC) by Market Participants regarding negative impacts experienced upon release of ERCOT driven initiatives due to the lack of timely notification. TAC recommended a data workshop be conducted as an appropriate forum to address Market Participant visibility into upcoming ERCOT initiated internal system or report changes.

The Market Data Workshop, hosted by ERCOT on May 20, 2016, identified the process in which Market changes are currently performed establishing the framework for dialogue regarding data changes, delivery methods and desires for a future communication state. The Market Data Working Group (MDWG) agreed to be the venue for gathering these discoveries.

Problem Statements were developed and agreed upon at MDWG whereby Market Participants would participate in a sub-working group to begin a deep dive exploring potential solutions to increase change transparency.

# Problem Statements

The following problem statements reflect impacts to consumers of ERCOT data products. Not all problem statements are present in all cases and don’t necessarily impact all stakeholders equally. The problem statements do not capture any constraints that may impact potential solutions to the problem statements.

* A 30-day notice of data product changes does not provide a sufficient window within which to assess and address Market Participant downstream technical impacts.
* Design, development, and testing efforts for Market Participants are hindered by a lack of accurate data definitions and sample data.
* There is no single location/repository for documentation of the drivers behind changes and affected reports and data elements.
* There is no single historical record of changes made to reports and data elements.
* The lack of a central repository for releases with details and links to change management discussions and approvals accessible to Market Participants makes it difficult to track status of changes.
* Impacts to Market Participant downstream system owners are not included in the Impact Analysis for proposed changes.
* Since changes with Market Participant downstream impacts often result in downtime and/or outages, maintenance/release windows for changes are too broad.

# Case Studies

## Wind Report

## Browser Upgrade to IE11

At the September 2014 Technical Data Transport Working Group (TDTWG) ERCOT noted an upcoming change to occur at the end of 2014, upgrading ERCOT’s current IE8 supported browser to IE11. For many in the room, this announcement came as a surprise. In the November 2014 TDTWG meeting numerous questions arose and concerns from Market Participants regarding the tight timeline for notice, implementation and lack of information. ERCOT noted that supported Internet Explorer versions and browsers would not be known until after March 2015. Market Participants requested more information be provided which could not be obtained until the following TDTMS meeting. Being made aware of this upcoming project earlier would have allowed all impacted MPs ample time for adequate preparations to systems and related dependencies. Fortunately, due to browser compatibility issues, ERCOT’s release of IE11 did not occur until September of 2015.

## ERCOT Dashboard Change Impacts

# Current Process

## Initiation of Change

* SCR
* Revision Request
* ERCOT Sponsored Project

## Prioritization of Change

* PPL

## Approval of Change

* Committee process
* ERCOT internal project process
* Board Approval in some cases

## Release Coordination

* Release scheduled based on:
  + Resource availability
  + Priority
  + Impacts to other scheduled changes
  + CAB Process
* Release Types
  + On-Cycle – Follows standard process and schedule
  + Off-Cycle – Follows standard process and non-standard schedule
  + Exception – Follows highly accelerated process due to non-critical production issue
  + Emergency – Emergency, paperwork later release due to critical issue
* Schedule can change based on:
  + Schedule slippage
  + Critical production issues
  + Change in priority, project cancelled (?)
  + Failed deployment (uncommon)
  + Code deployed but backed out due to missed defects (uncommon)
* Release Windows
  + Release window can span a few days

## Release Communication

* Process spelled out in detail in COPS Market Guide
* Notices sent as emails to different lists
* Currently working on adding searchable three year archive on ERCOT.com
* Elements of a Market Notice
  + Form elements (Description, etc can add later)
  + Attachments (What are the ‘types/categories’ of attachments?)
  + For a data release, what is needed? Data definition, sample data, change history, etc?

## Publishing End Points

* ERCOT.com
  + Committees
  + Meeting Pages
  + Market Rules – Revision Requests, SCRs
  + Projects page in About Section
  + Market Notices Archives (Feb 2017)
* Lists.ercot.com

# Constraints to Current Process

Constraints to current process go here.

# Gaps in Current Process

* How does the ERCOT process fit with MP Process
* Communication gaps
* Documentation gaps
* Version History

# How Others Approach

## Peer Institutions

ERCOT Peer institutions manage changes in the following……..

**PJM:**

**ISO-NE:**

**CAISO:  
  
MISO:**

**NYISO:**

## Other Industries

The following are excellent examples of developer portals. While not strictly data change management, they do emphasize change visibility and interaction.

**GitHub Developer:**

* Extensive documentation that is easy to navigate and search.
* A stay in the know section with posts of the most recent changes to their API.
* A versions page with a change log with the differences in the API from version to version.
* Callouts of breaking changes.
* Code examples of request and responses of every endpoint.

**New Zealand Electric Authority Developer**

* Detailed information about each API service.
* Each API service has the GET, POST and DELETE operations broken out
* Code examples of responses and requests in a variety of languages.
* Ability to try out API services in the browser.
* Swagger API documentation.

**Stripe**

* Clean easy to navigate interface
* Uses google groups for API updates, mailing lists, discussion
* Provides a change log and history of API services
* Code examples in a variety of languages

# Solutions

Solutions go here.