

FERC ORDER 2222
DIRS – EDC Coordination Workshop

**EDC Governance to Guide Coordination Efforts
and PJM Strawman Reflections**

4/16/2022

Agenda

FERC Order 2222 Filing Extension

Path Forward

EDC Objectives and Must Haves

Proposed Approach

Coordination Coordination Timeline

Preliminary Response to PJM Strawman

FERC Extends Filing Deadline



FERC granted an extension for the compliance filing to February 1, 2022



Stakeholder process schedule needed within 30 days of the order



Status reports needed every 90 days until the compliance filing is completed

Path Forward with Extension

Approach to date

- Gathering information on specific issues
- Identifying proposed approaches to specific issues
- PJM Strawman proposed
- **Purpose: meet extremely tight July filing deadline**

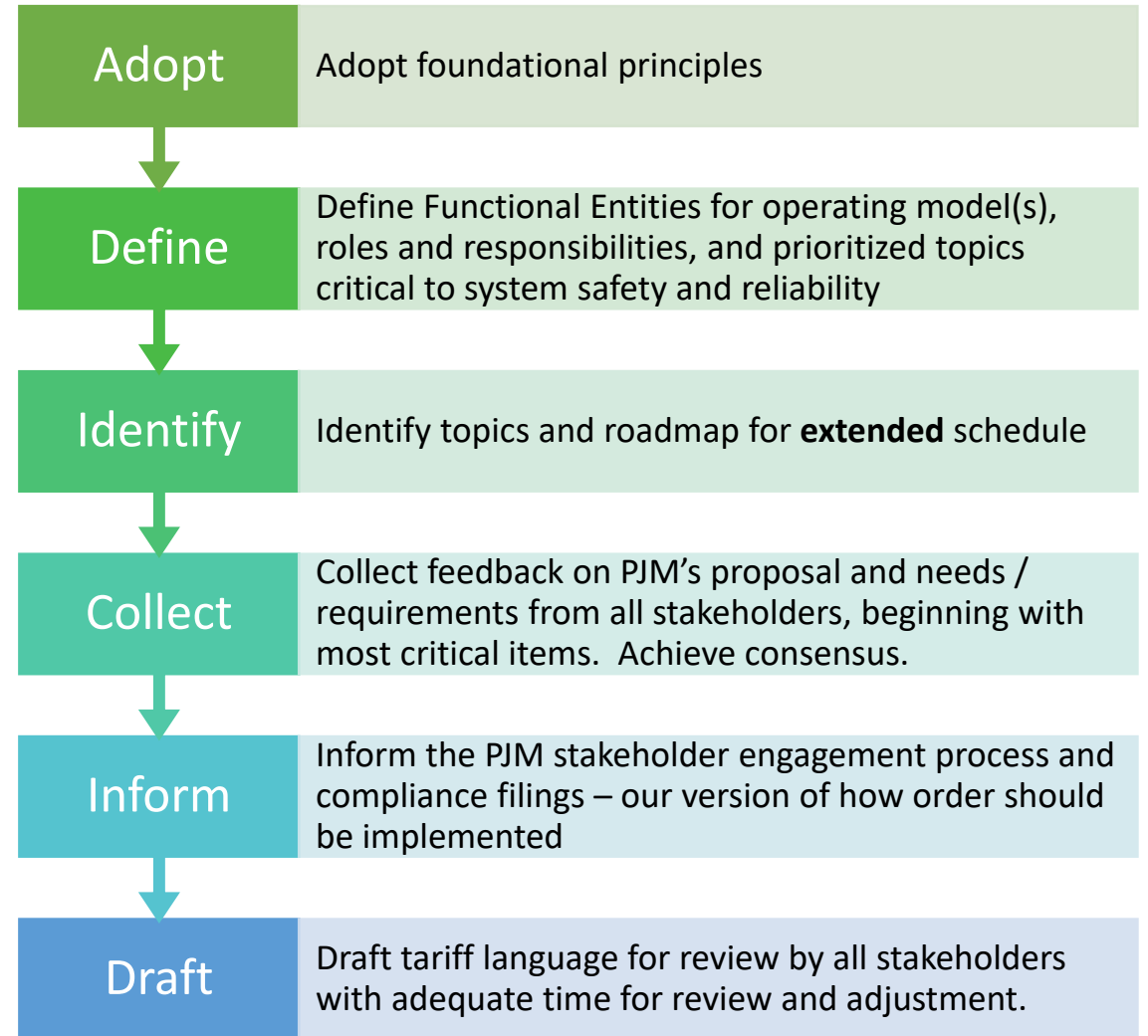
Using additional time most effectively

- Agree upon principles and involve stakeholders
- Define roles and responsibilities
- Prioritize issues most critical to safe, reliable system
- Address details appropriately
- Achieve stakeholder alignment for the compliance filing

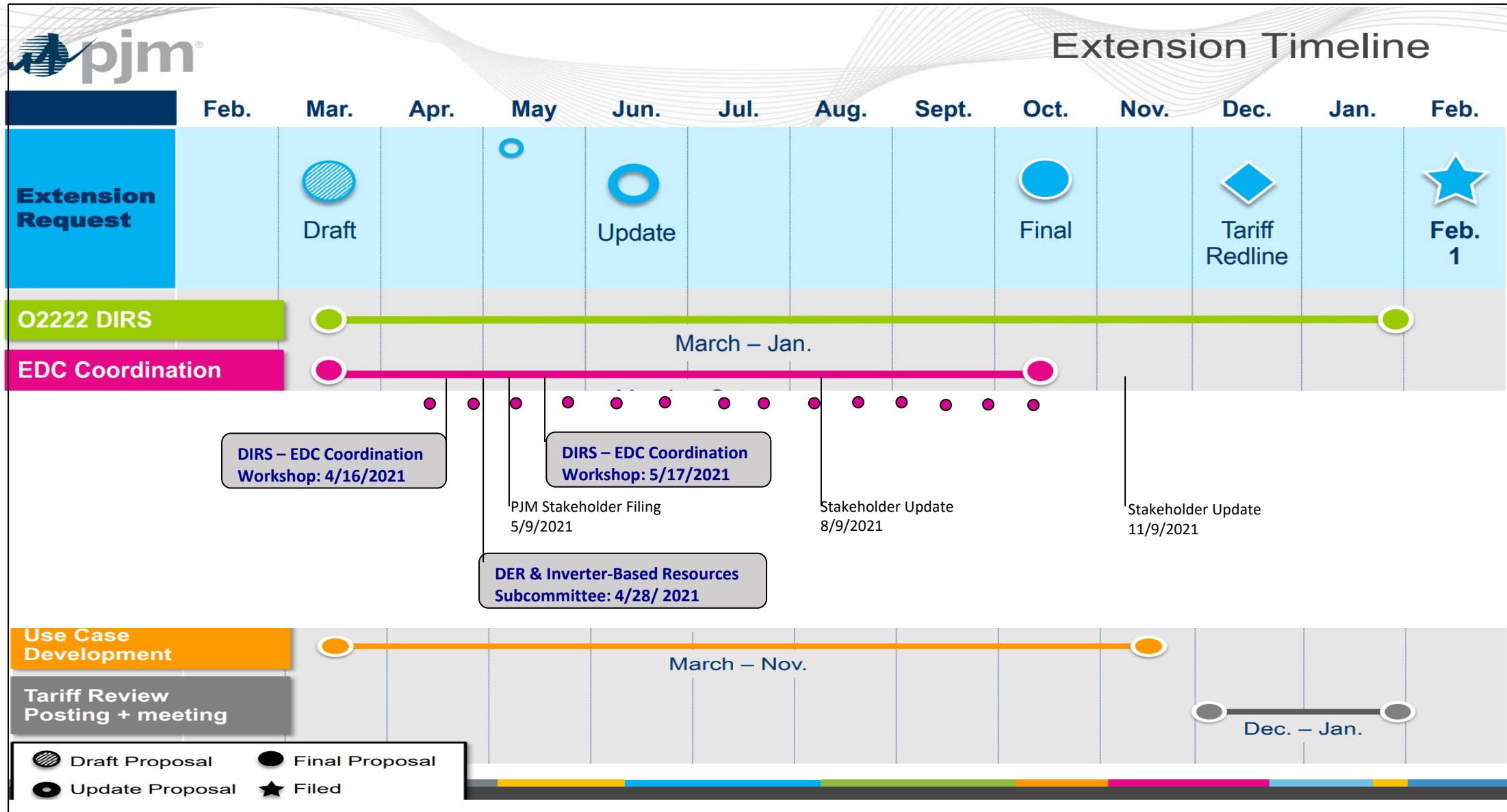
EDCs' Objectives and Must Haves

- **Responsibility** - EDCs are singularly responsible for distribution-level grid reliability, as well as system, worker and customer safety and security
- **Objective** – Maintain our ability to plan and operate distribution system to provide a reliable, safe, affordable electric system while enabling customers to produce and use clean, renewable resources
- **“Must Haves”**
 - Ability to override and take action when needed
 - Sufficient time to study DER aggregations
 - Ability to review and refine Day-Ahead dispatch
 - Ability to protect customer data
 - Ability to plan system for reliable, safe service
 - Ability to protect system from cyber attacks
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Proposed Approach



EDC Coordination Timeline



Topics and reports needed for EDC/ TO Meetings held every (other?) week

- Potential subcommittees for each of these topics

EDC Coordination Prep Approach

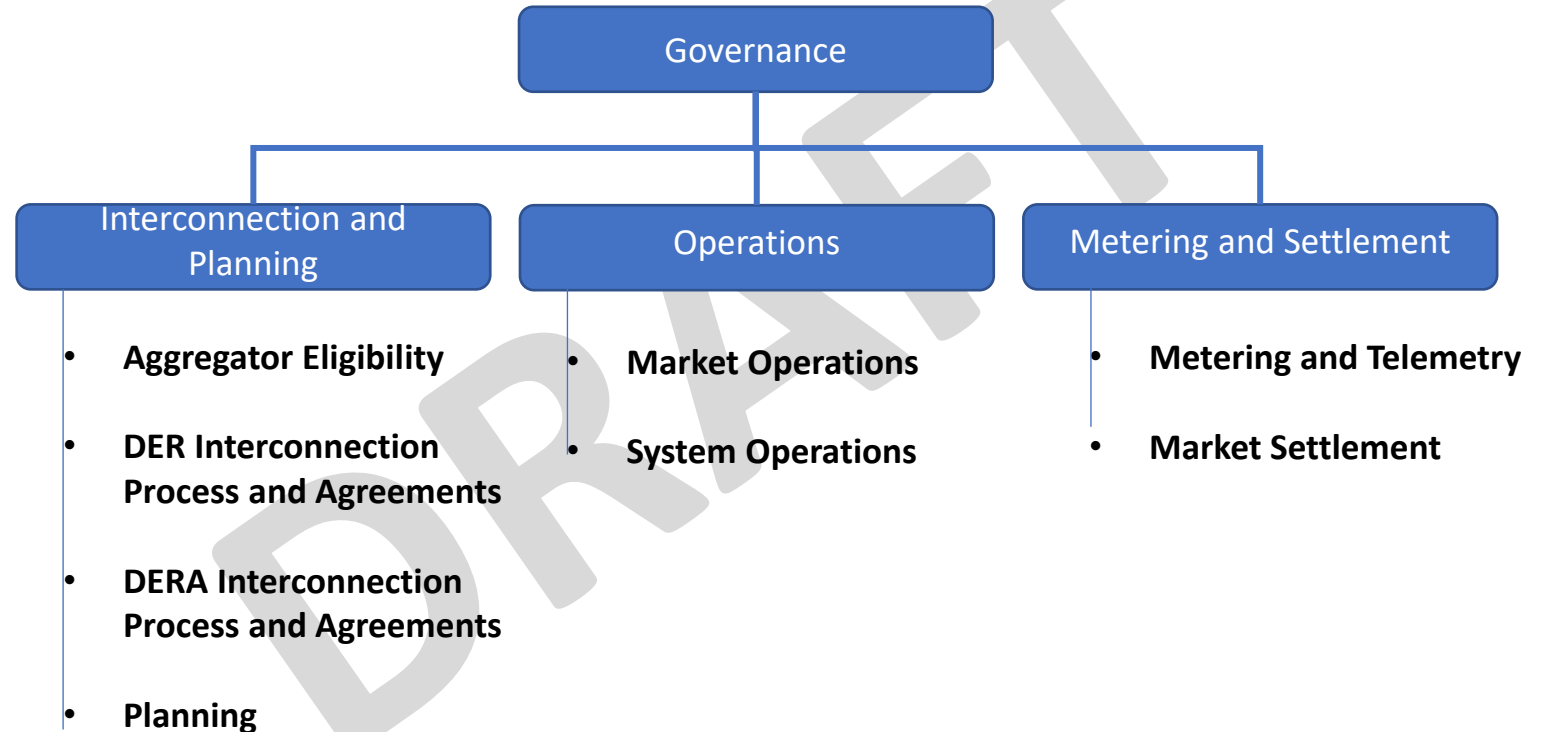
- **EDC/TO Coordination Prep Meetings**

- Date: Tuesdays
- Time: 2:30 – 4:00 EST

- **Preliminary Dates**

- April 27
- May 11
- May 25
- June 8
- June 22
- July 6
- July 20
- August 3
- August 17
- August 31
- September 14
- October 12

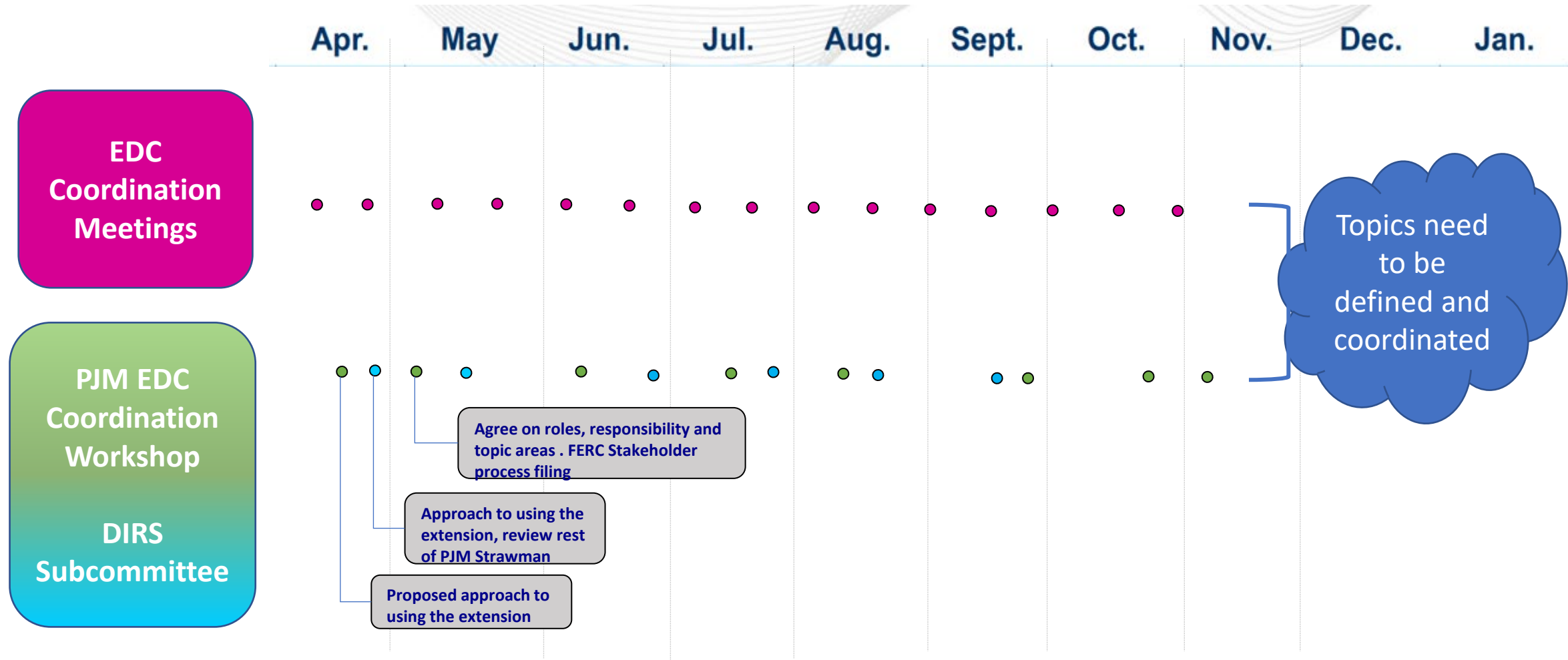
Conceptual Design (Preliminary) EDC Sub-Group Structure



Sub-Group responsibility:

- ✓ Analyze, assess and make EDC recommendations for prioritized topics
- ✓ Report at EDC Prep Coordination Meetings

Integrated Schedule Development



EDC Preliminary Reactions to PJM Strawman

Covered Sections

- Order 2222 Design and Terminology (7-8)
- Interconnection (9-12)
- PJM Planning Requirements (13-18)
- Jurisdiction (19-20)
- Market Participation Agreements (21)
- Opt-In Small Utility (22-23)
- Weighting Factors (24)
- Locational Requirements (25-40)
- Telemetry (41-42)
- Operational Needs (43)
- Market Participation Model (44-58)

Upcoming Sections

- Min/Max Size Requirements (59-62)
- Metering (63-64)
- Settlements (65-73)
- Double Counting (74-78)
- EDC Coordination (79)
- EDC Interconnections (80-81)
- EDC Registration/Utility Review (82-86)
- EDC Operations (87-90)
- EDC Settlement and Compliance (91-94)

PJM Strawman review is underway by EDCs: reactions provided are preliminary

EDC Preliminary Reactions

- Need to define participant (all) roles and responsibilities in order to effectively plan market actions and provide strawman reactions
- Don't believe DR market is appropriate model for DER Aggregations participation
- Ensure that Order 2222 adheres to jurisdictional boundaries defined by various governance documents and the state and federal level. Need clarification on FERC vs non-FERC jurisdiction (RE: slide 9).
 - Compliance questions raised regarding PJM request of distribution customer information detailed in the planning and modeling proposal and the request for non-market participation DERs
 - Why is the data needed by PJM versus managed by the EDC - RE: slide 18
- Define how capacity aggregations integrate with energy aggregations
- Consumer participation coordination gaps
 - Procedures needed to ensure operational fairness and balance between net metered participants and market participants
 - Planning for flexibility to provide customer choice (switching net metered/market and between DERA's)
 - Required responses to consumer decisions ie removing the wifi
 - Compliance verification
- Coordination needed with DER autonomous functions / Active Management and market functions to understand how conflicting local inverter settings could affect market functions
- Need a position, requirements and process defined by utilities to apply when a DER seeks interconnection through the 'hybrid' process proposed by PJM (not through EDC NM process and not through PJM queue – but seeking interconnection exclusively as part of an aggregation) (slide 10)
- What the definition “lowest voltage PJM modeled bus” is. (slides 14-17)

EDC Preliminary Reactions

- Explain what the “WMPA-like” participation agreement and process will look like (slide 21)?
 - Why create a new process and agreement?
 - Why doesn't the EDC have an active role in the process to affirm the Aggregator and DERs are in compliance with EDC/PUC rules?
- Time factors need to be assessed and allotted for in the process. EDCs need time for
 - Appropriate feedback loops for day-ahead and intra day market dispatching plans to prevent issues before they occur
 - Communicate and execute market override capabilities to provide expeditious resolutions to dynamic grid changes.
 - Perform adequate analysis and feedback to day-ahead and intra-day proposals
- General concern that the approach does not adequately factor in the dynamic nature of the distribution system (many unplanned outages, contingent configurations daily)
- A performance expectations vs. technology capability disconnect i.e. metering systems and more
- Significant variability in EDC metering infrastructure design need to be considered
- Adherence to NERC requirements will be needed for cyber security, data hand offs and analytical processes and is needed and missing.
- Need cyber security requirements for grid edge integrated devices (adequate safeguards of consumer and grid protection) and responsibility defined for oversight and compliance
- Additional definition is required to effectively dispatch varying assets together in a singular location (Smart Thermostat, EV, Solar, Battery)
 - Requirements for expected data frequency and reliability.
 - Requirements related to dispatch frequency and reliability
 - Surrounding response to communication disruptions. (Customer WIFI, Cellular)
 - Related to dispatch and data reliability performance enforcement.

EDC Preliminary Reactions

- Weighting factors should be provided to EDCs during registration of DERs as part of a DERA (same time PJM gets them)
- What does map DERs “individually in PJM network model” means up to the 12kV bus (their current level of visibility)
- Single Pnode aggregation (not multi-node or zonal) is generally supported; reconfirm use of the term “node” and what it means for 12kV bus or above
- Re-explain slide 29; specifically, the last column “Utility Review”