

# WESTERN ENERGY IMBALANCE MARKET

## Briefing on 2021 Three-Year Policy Initiatives Roadmap and Annual Plan

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# Annual roadmap process is a comprehensive planning process for evolving the ISO markets

- Roadmap developed through a stakeholder process to prioritize the policy initiatives the ISO will undertake over the next three years
- The development of the annual roadmap includes updating the Policy Initiatives Catalog
  - Comprehensive directory of current, planned, and potential policy initiatives that require a stakeholder process
  - Stakeholders can propose potential policy initiatives
  - Updated twice a year but catalog submissions are accepted year-round

# PRIMARY DRIVERS

# Primary drivers of proposed three-year roadmap

- **Resource sufficiency** - comprehensively reform resource adequacy requirements to align with the changing nature of resources and load and tightening western supply conditions
  - Net peak load, reserve margin, load and supply uncertainty, accurate resource crediting to meet reliability needs
- **Increased resource and load variability** - enhance the day-ahead market and extend to EIM entities to leverage regional diversity to provide benefits across the West
- **New technologies** - enhance market products, modeling, and deliverability to integrate new technologies that replace operational attributes previously provided by the thermal fleet

# COMPREHENSIVE REDESIGN OF RESOURCE ADEQUACY

# Reforms to resource adequacy program needed to align procurement with operational needs

- Phase 1 - Implementation 2021 (RA Yr. 2022)
  - RA Import provisions
  - Planned outage process enhancements
  - Local studies w/ availability-limited resources CPM clarifications
  - Operationalizing Storage – minimum charge requirement
- Phase 2 - Implementation 2022 (RA Yr. 2023)
  - Unforced capacity (UCAP) counting
  - Portfolio analysis to ensure system sufficiency
  - Day-ahead market enhancements alignment
    - Must offer obligations and Bid Insertion Modifications
    - Flexible Resource Adequacy

# EVOLVE ISO MARKETS

# The day-ahead market enhancements initiative addresses challenges of the transforming grid

- Efficiently schedule supply to meet net load and to address uncertainty that may materialize between day-ahead and real-time
  - Improve market efficiency and price signals by co-optimizing imbalance reserves with energy and ancillary services
  - Enhanced RUC process to prioritize demand (load and exports)
- Minimize the need for out-of-market actions and RUC load biasing to meet ramping and uncertainty

# Extending the day-ahead market to EIM entities provides regional benefits

- EDAM will improve market efficiency and more effectively integrate renewable resources by
  - Optimizing day-ahead unit commitment
  - Producing hourly schedules
  - Improving transmission utilization across a larger footprint

## Stage EDAM policy development to develop policy on major topics prior to considering other issues

- Bundle 1 – Resource sufficiency evaluation, transmission provision, transfer/congestion revenue
- Bundle 2 – Accounting for GHG costs, ancillary services, FNM Phase 2, EDAM administrative fee
- Bundle 3 – Price formation, convergence bidding, external resource participation, market power mitigation including system market power, other issues

# Dispatch enhancements initiative will improve renewable resource management

- Manage ramp rates to better control system balance
  - Solar and storage resources
- Enhance market incentives for resources to provide accurate curtailment response
- Explore solutions to mitigate decremental market power
- Change settlement rules for decremental exceptional dispatch

# Scarcity pricing initiative planned in response to Summer 2020 tight supply conditions

- Improve market's scarcity pricing provisions for efficient market pricing during tight supply conditions
- Explore mechanisms to ensure real-time prices incentivize accurate day-ahead scheduling and bidding that aligns with operational needs during tight supply conditions
- Examine relationship of scarcity pricing to System Market Power Mitigation and FERC Order 831 designs

# Frequency Response initiative will examine mechanisms to meet NERC/WECC frequency response requirements

- Consider development of new frequency response product
- Consider regulation product enhancements
  - Enhancements to the pay-for-performance payments
  - Enhancements to the ISO's minimum performance criteria and regulation certification process

# INTEGRATING DISTRIBUTED ENERGY AND STORAGE RESOURCES

# FERC Order 2222 Compliance

- Complete comprehensive gap analysis on FERC Order 2222 requirements against current distributed energy resource provider provisions (2021 Q1)
- Compliance filing (July 19, 2021)
- Deploy all changes identified in compliance filing (TBD)
  - May include but not limited to:
    - Reducing minimum size requirement of 500 kW to 100 kW
    - Adjusting aggregation and metering requirements to accommodate baseline measured demand response in a DERA
    - Resolving settlement impact on broader definition of mixed aggregations (energy injections, energy withdrawals, and demand reductions)

# ESDER implementation, evaluation, and clean up

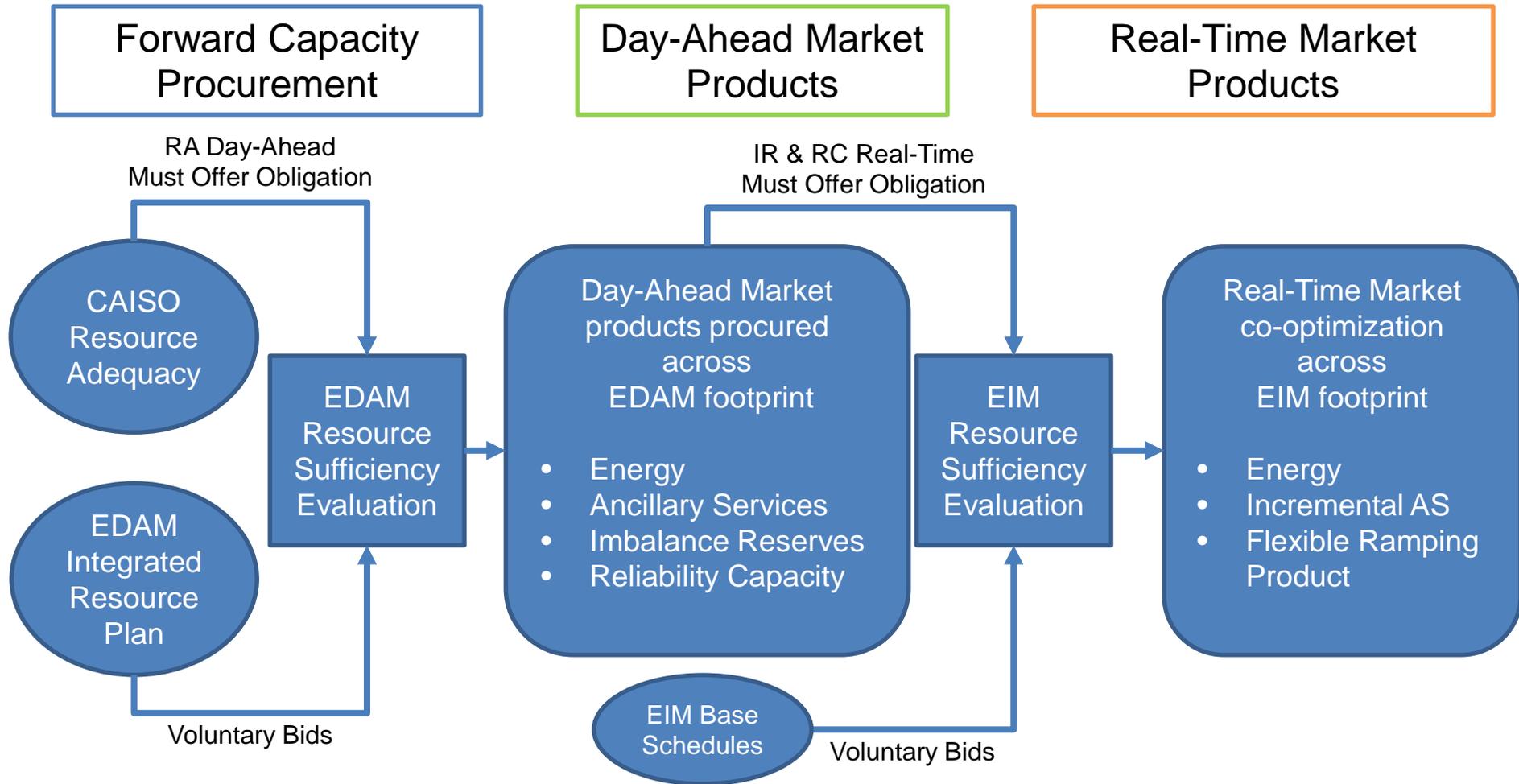
- Focus on implementing ESDER 3b and ESDER 4 functionality in 2021 and 2022
  - Evaluate the usefulness and effectiveness of new distributed energy resource functionality and identify gaps that remain
  - Will consider new enhancements based on evaluation of current functionality
- Focus on operationalizing distributed energy resources
  - Enhancements to distributed energy resource systems and tools
  - Greater visibility
  - Enhanced forecasting
  - Operationalizing storage

# Hybrid resource evolution initiative will develop additional provisions and consider enhancements for hybrid resource market participation

- Market power mitigation
- Resource adequacy must offer obligations
- Additional functionality based on operational experience

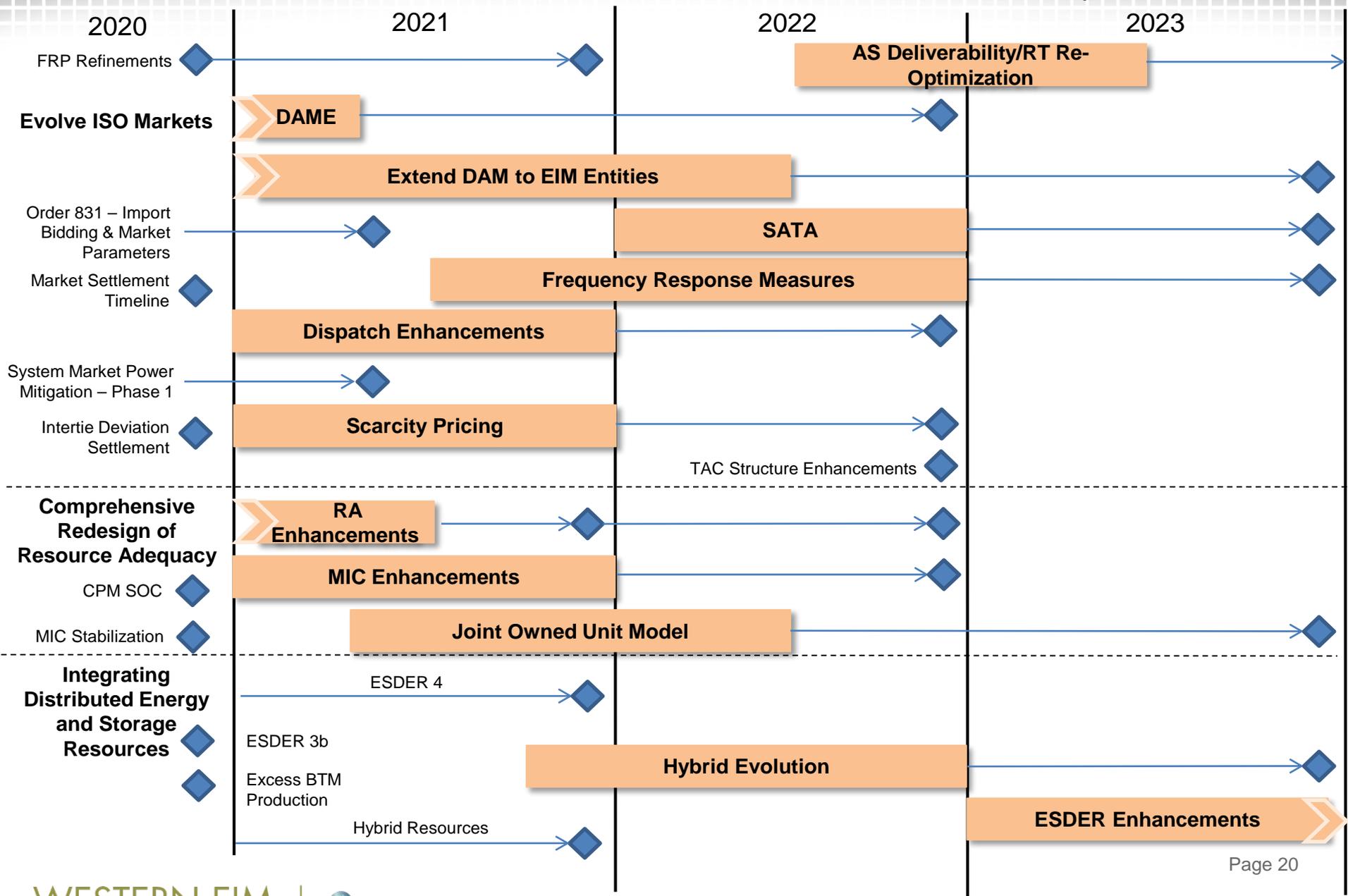
# ROADMAP AND ANNUAL PLAN

# Market evolution requires coordinated policy development among forward capacity requirements, day-ahead market enhancements, and extended day-ahead market



# Proposed Three-year Policy Roadmap of Major Initiatives

◆ = Implementation



# New initiative in response to Summer 2020 events requires reprioritization of near term stakeholder efforts

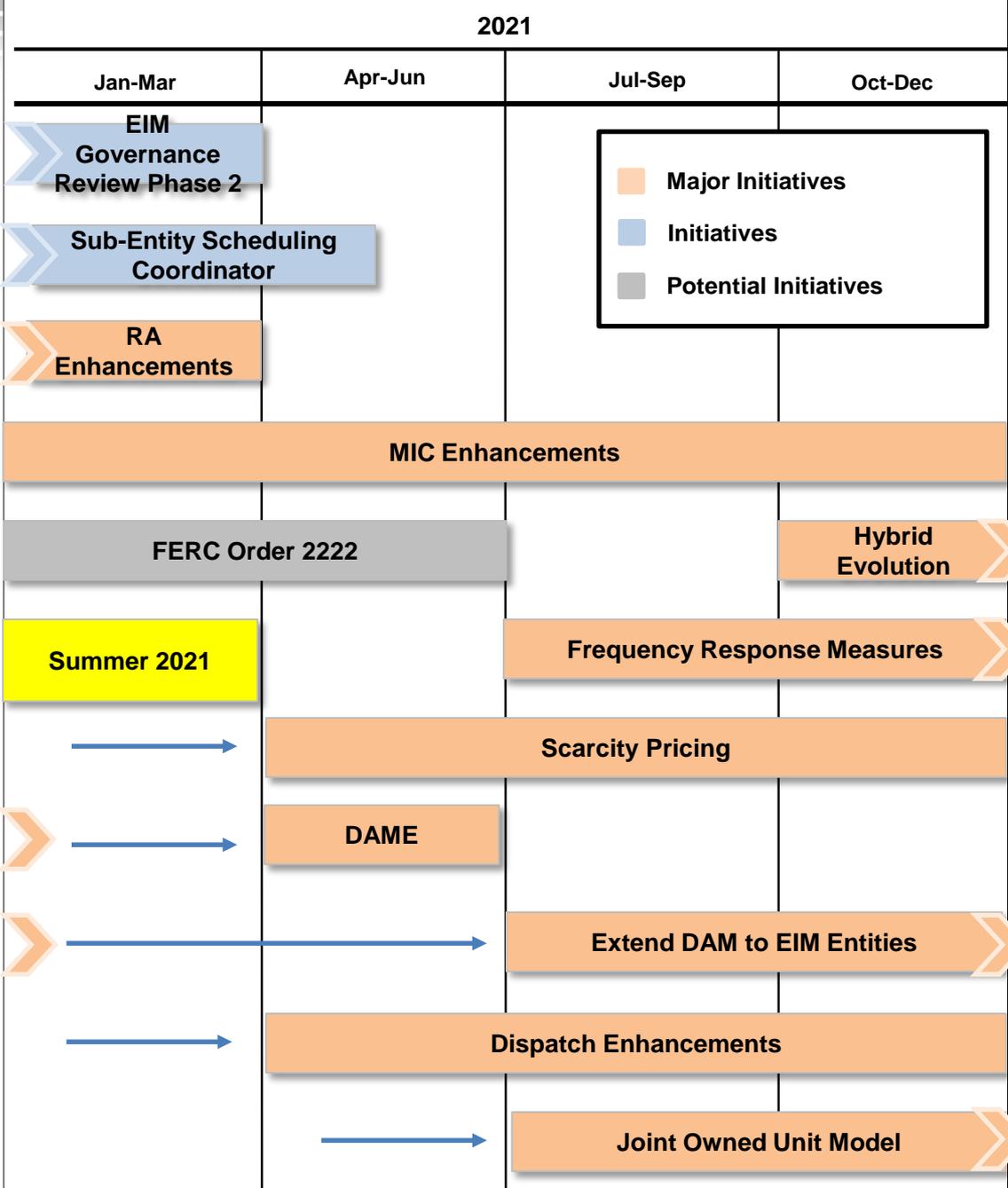
- Focus near term efforts on market rules and procedural changes to manage heat events next summer
  - Rescheduling existing and planned market design stakeholder initiatives
  - Focus internal resources and the broader stakeholder community on addressing the changes for Summer 2021
- Policy changes that require tariff amendments need to be filed with FERC by April for June implementation
  - March EIM Governing Body and ISO Board of Governors

# Omnibus stakeholder initiative to consider changes to ensure summer 2021 readiness

1. Export and load priorities
2. Reliability demand response resource dispatch and real-time price impacts
3. Requirements for storage resources during tight system conditions
4. Cost recovery provisions for hourly block imports during tight system conditions
5. Short term scarcity price enhancements
6. EIM coordination and resource sufficiency test review
7. Other items that can be vetted through stakeholder process and implemented by June 1

# 2021 Draft Annual Plan

\*Timeframes are approximate and subject to change



# 2021 Policy Initiatives Roadmap process schedule

- Final roadmap and annual plan – November 20
  - Stakeholder call – November 23
  - Comments December 7
- Board of Governors briefing – December 17
- EIM Governing Body briefing – January 20