

WESTERN ENERGY IMBALANCE MARKET

Enhanced Day Ahead Market Enhancements Overview

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Body of State Regulators General Session

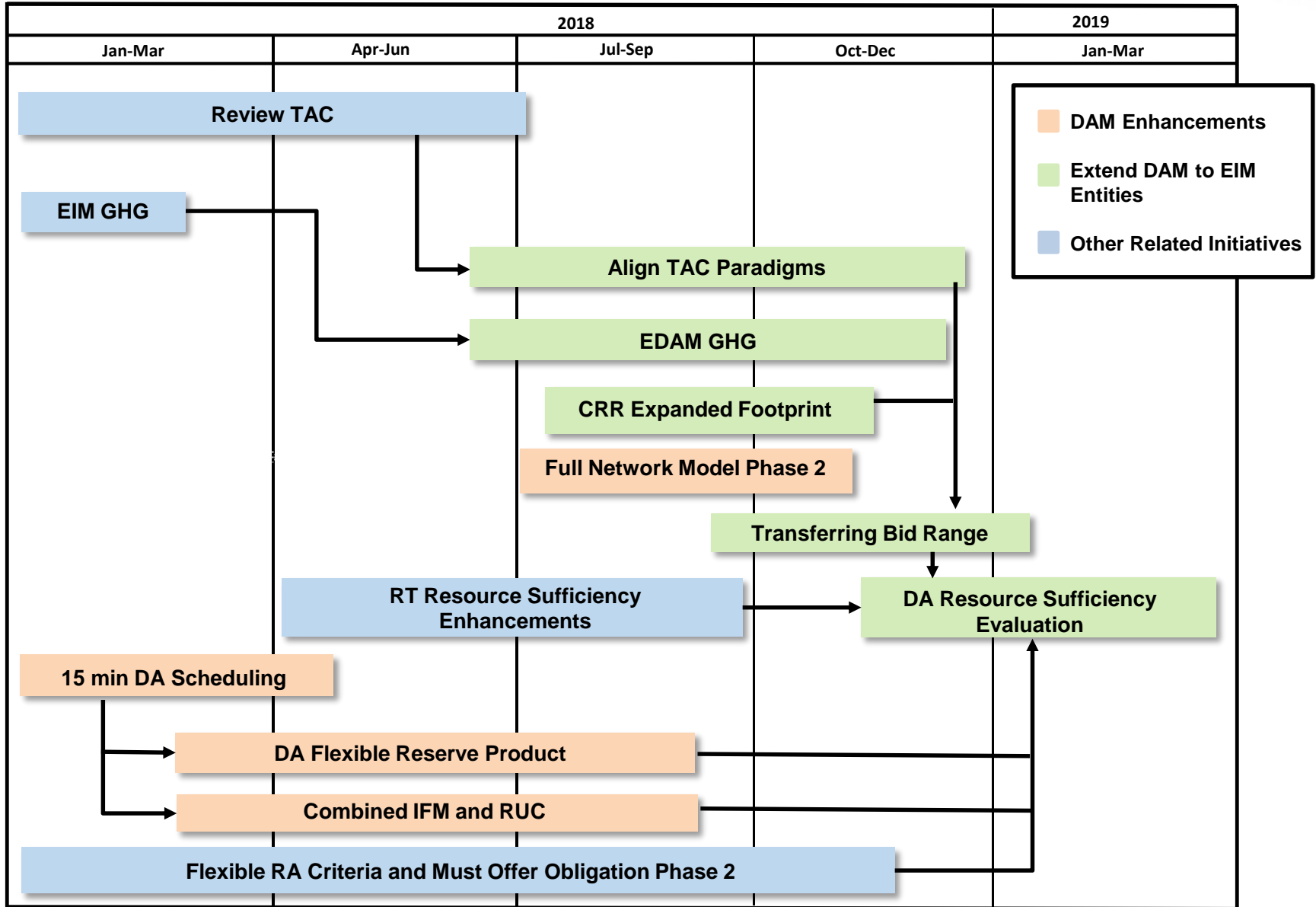
January 8, 2018



Extending DAM to EIM Entities provides additional regional benefits

- Key benefits:
 - Allows EIM participants to take advantage of day-ahead market enhancements
 - Day-ahead unit commitment and scheduling across larger footprint improves market efficiency and more effectively integrates renewables
- Key principles:
 - Each balancing authority retains reliability responsibilities
 - States maintain control over integrated resource planning
 - Resource adequacy procurement decisions remain with local regulatory authority
 - Transmission planning and investment decisions remain with each balancing authority and local regulatory authority

Day-ahead market/Extended Day-ahead Market Interactions



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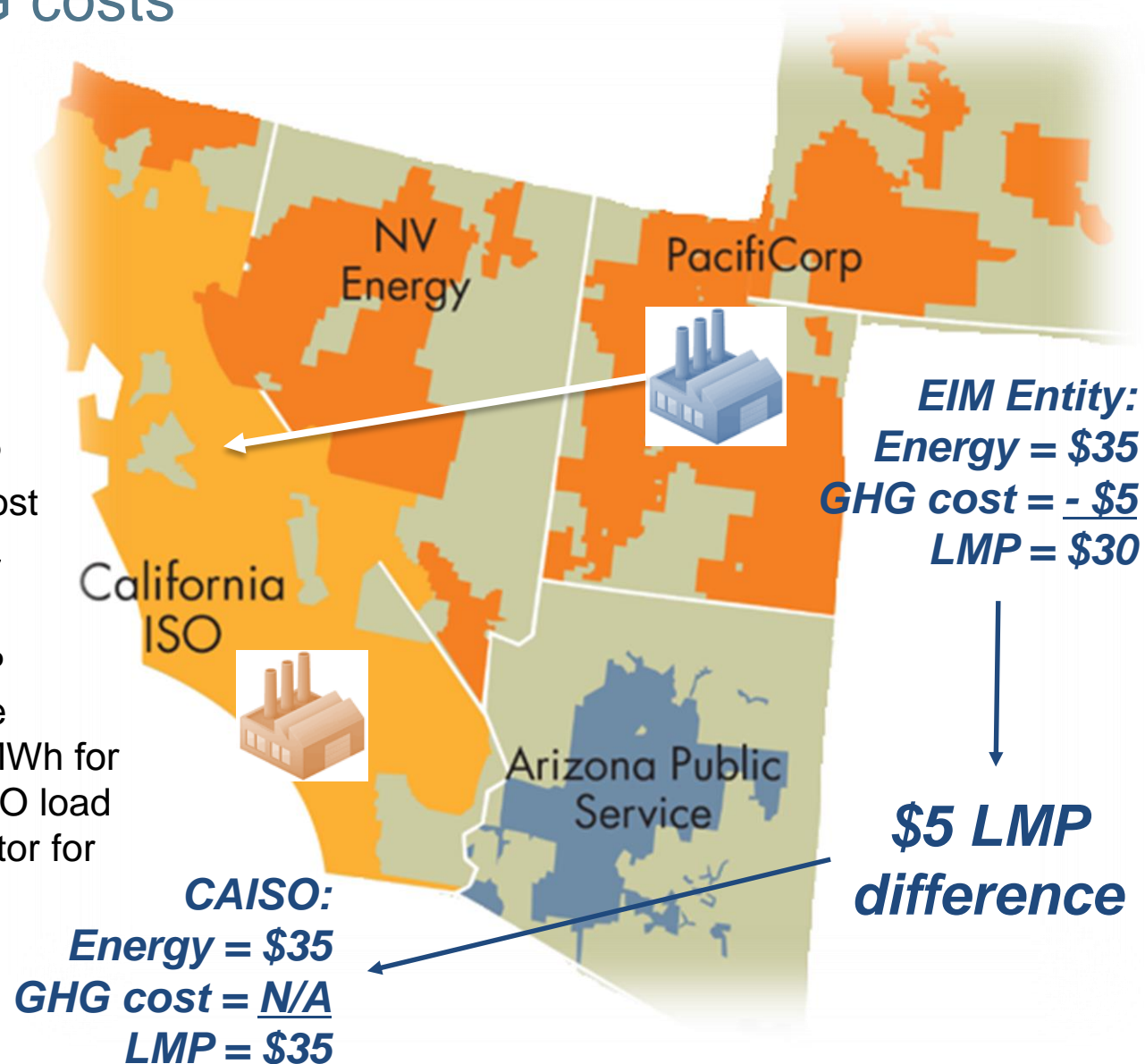
Update on EIM GHG Design Changes

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GHG design ensures price paid by non-CA load does not include GHG costs

- Both generators
 - Fuel cost = \$30/MWh
 - GHG cost = \$5/MWh
- CA generator
 - \$35/MWh energy bid
 - Sets \$35/MWh ISO LMP
 - Covers \$5/MWh GHG cost
- External EIM generator
 - EIM transfer into CA
 - Sets \$30/MWh EIM LMP
 - Sets \$5/MWh GHG price
 - ISO collects “extra” \$5/MWh for transfer into ISO from ISO load
 - Pays \$5/MWh to generator for its GHG costs



The ISO will continue to use the following principles to guide GHG design changes

- Dispatch and prices to serve load in a GHG compliance area will consider GHG effects
- Prices to serve imbalances outside of GHG compliance area will not include GHG effects
- Those responsible for GHG compliance receive compensation to sufficiently cover GHG compliance costs

Solution pathways under consideration

- Restructure optimization and revise two-pass solution to address incentive issue identified
- No change to optimization but account for secondary dispatch effects by retiring allowances
- No change to optimization but account for secondary dispatch effects through resource GHG bid quantity and price rules