

Briefing on policy initiatives to enhance viability of flexible resources

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Several policy initiatives planned for implementation over the next three years that will enhance the viability of flexible resources

- Market evolution structured around design principle of providing efficient price signals for supply resource attributes needed for reliable grid operations
- Policy initiatives are focused on three areas:
 - Improved price formation and cost recovery
 - Creating new products and market structures that appropriately value flexible resource attributes
 - Improved resource adequacy requirements and ISO backstop provisions to align with changing reliability needs

| Initiative | Impact | Focus | Board Approval | Implementation Target |
|--|---|---|----------------|--------------------------|
| Generator Contingency and Remedial Action Scheme Modeling | Enhances market pricing by including generator contingencies and remedial action schemes into determining locational market prices | Creating products or market structures that appropriately value flexible resources | September 2017 | February 2019 |
| Commitment Cost Enhancements Phase 3 | Enhances market pricing by allowing flexible resources to reflect opportunity costs due to environmental limitations in their commitment costs, resulting in more optimal dispatch and improved cost recovery | Cost recovery and price formation | March 2016 | Spring 2019 |
| Imbalance Conformance Enhancements | Enhances market pricing by allowing market to incorporate scarcity pricing when appropriate | Cost recovery and price formation | May 2018 | Spring 2019 |



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|---|--|-----------------------------------|----------------|--------------------------|
| Commitment Cost and Default Energy Bids / FERC Order 831 | Enhances market pricing and generator cost recovery by enabling generators to bid their actual costs into the market | Cost recovery and price formation | March 2018 | Fall 2019 |
| Intertie Deviation Settlement | Tightens rules to ensure imports bid into the market are delivered, ensuring imports compete more evenly with flexible resources which will lead to enhanced market prices | Cost recovery and price formation | February 2019 | Fall 2019 |
| Local Market Power Mitigation Enhancements | Enhances market pricing and introduces hydro default energy to potentially increase flexible hydro resource participation | Cost recovery and price formation | March 2019 | Fall 2019 |



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|---|--|---|-----------------|--------------------------|
| Day-Ahead Market Enhancements | Changes day-ahead market to 15-minute granularity and adds the flexible ramping product, which will price flexible resource's capabilities into the day-ahead market | Creating products or market structures that appropriately value flexible resources | Q1 2019/Q4 2019 | Fall 2020/2021 |
| Contingency Modeling Enhancements | Prices reliability constraints for critical transmission paths into the market and provides a capacity payment to generators | Creating products or market structures that appropriately value flexible resources | December 2017 | Fall 2020 |



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| Resource Adequacy Enhancements | Aligns resource adequacy requirements with system needs and adds multi-year requirements to ensure needed flexible resource receive resource adequacy contracts that will keep them economically viable | RA requirements and ISO backstop provisions | November 2019 | Fall 2020 |
| Reliability Must-Run and Capacity Procurement Mechanism Enhancements | Improves ISO's resource adequacy backstop provisions to fully compensate resources without resource adequacy contracts that are needed for reliability | RA requirements and ISO backstop provisions | March 2019 | Fall 2019 |



Longer-term initiatives

- Frequency Response
 - Will examine a potential frequency response product that would provide flexible resources with additional revenue for their frequency response capability
 - Policy development 2020
 - Planned implementation 2021
- Regulation pay-for-performance
 - Will refine existing pay-for-performance product, so the market can provide additional revenue for flexible resources with accurate and fast regulation capability
 - Policy development 2020
 - Planned implementation 2021

