



## **NPRR1108 ERCOT Shall Approve or Deny All Resource Outage Requests -- Recap and Updates**

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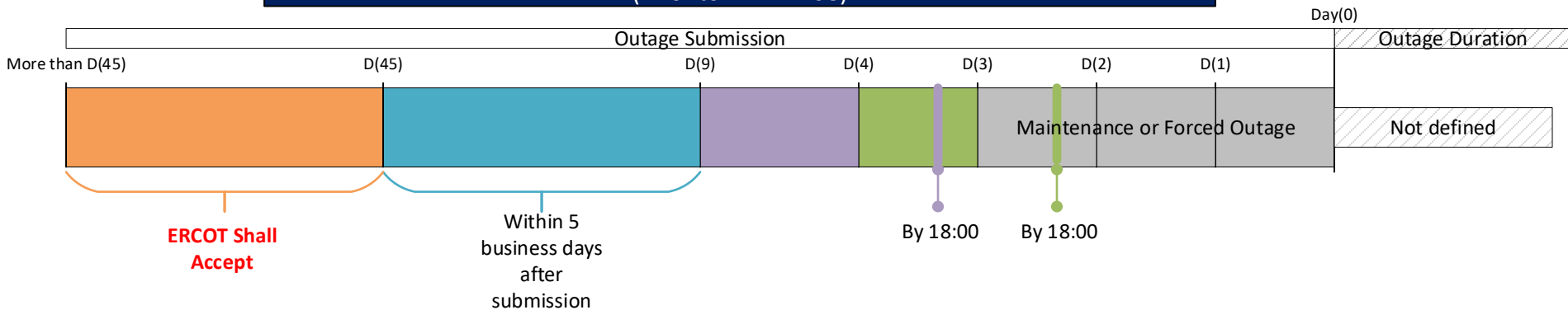
Wholesale Market Working Group (WMWG)  
January 28, 2022

## Recap

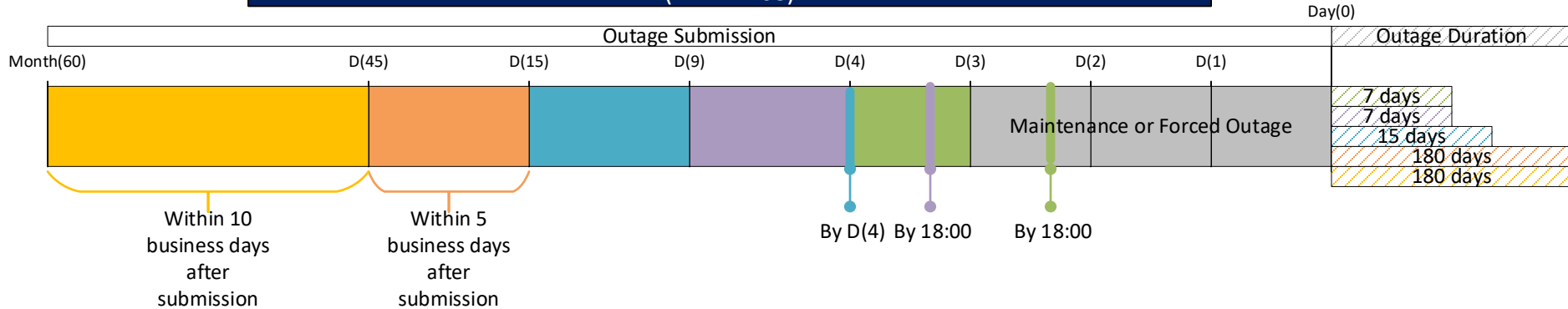
- The 87th Texas Legislature passed SB 3, which requires ERCOT to review, coordinate, and approve or deny requests by providers of electric generation service for a planned power outage during any season and for any period of time
- NPRR 1108, filed on Nov. 9, 2021, will allow ERCOT to meet the requirements of SB 3 related to approval of all Planned Outages of electric generation. Notable changes include:
  - Require that a Planned Outage, or change to an approved Outage, submitted more than 45 days in advance of the planned start time of the Outage would no longer be “accepted” but would be approved following the proposed process
  - Define a process for calculating a maximum MW of Resource Planned Outages that would be allowed for each day of the next rolling 60 months based on a capacity assessment
  - Define a process to update and post the maximum and aggregate MW of approved Resource Planned Outages to the ERCOT website

# Resource Planned Outage Submission, Review, and Approval Timeline

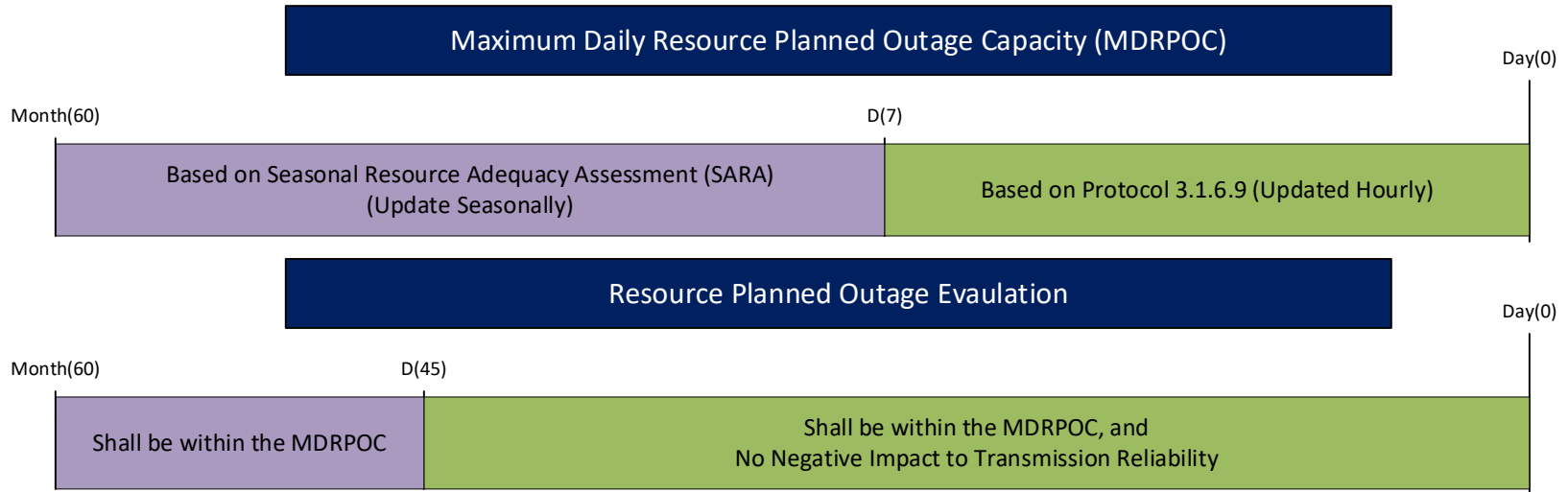
Resource Planned Outage Submissions, Review and Approval Timeline  
(Prior to NPRR1108)



Resource Planned Outage Submissions, Review and Approval Timeline  
(NPRR1108)



# Resource Planned Outage Evaluation



45 Days to 60 Months	Less than 45 Days
<ul style="list-style-type: none"> <li>Total aggregate MW of approved Outages is less than MDRPOC</li> <li>Consider all the approved Outages</li> </ul>	<ul style="list-style-type: none"> <li>Total aggregate MW of approved Outages is less than MDRPOC, and</li> <li>Impacts on transmission reliability</li> <li>Consider all the approved Outages</li> </ul>

# Calculation of Maximum Daily Resource Planned Outage Capacity (MDRPOC) (Examples as available in Appendix)

More than 7 days (up to 60 months) ahead of the Operating Day <sup>(1)</sup>	7 days or less prior to the Operating Day <sup>(2)</sup>
<ul style="list-style-type: none"> <li>• Operational Resource</li> <li>• Unplanned Outage, Thermal</li> <li>• Wind and Solar Capacity Contribution<sup>(3)</sup></li> <li>• Capacity from Private Use Network<sup>(3)</sup></li> <li>• Load Resource</li> <li>• Long Term Load Forecast</li> <li>• Expected Ancillary Service Requirement</li> <li>• Historical maximum resource planned outage capacity (3yrs)</li> </ul>	<ul style="list-style-type: none"> <li>• Load forecast</li> <li>• Wind forecast</li> <li>• Solar forecast</li> <li>• Targeted reserve levels</li> <li>• DC Tie import</li> <li>• Price-responsive demand</li> <li>• Planned Outage Capacity</li> <li>• Forced Outage Capacity</li> <li>• Seasonal net maximum capacity of generation resources</li> </ul>

(1). Primarily based on the input used for the Seasonal Assessment of Resource Adequacy (SARA)

(2). Primarily based on the input used for the planning assessment for an Outage Adjustment Evaluation described in Protocol Section 3.1.6.9

(3). IRR and PUN capacity contribution in the MDRPOC is based on actual power production that included the impact of historical planned outages

# Use of MDRPOC

## Maximum Daily Resource Planned Outage Capacity

Month(60)

D(7)

Day(0)

Based on Seasonal Resource Adequacy Assessment (SARA)  
(Update Seasonally)

Based on Protocol 3.1.6.9 (Updated Hourly)

### More than 7 days (up to 60 months) ahead of the Operating Day

- The MDRPOC is applied to non-IRR, non-PUN Planned Outages
- ERCOT expects to approve IRR and PUN Planned Outages
- ERCOT will monitor the approved IRR and PUN Planned Outages
- ERCOT will review the actual IRR and PUN Planned Outages
- ERCOT may adjust the methodology and MDRPOC as needed

### 7 days or less prior to the Operating Day

- MDRPOC is applied to non-IRR, non-PUN Planned Outages
- ERCOT expects to approve IRR and PUN Planned Outages if no transmission reliability concerns

# Planned Outage Update and Posting

<b>More than 7 days (up to 60 months) ahead of the Operating Day</b>	<b>7 days or less prior to the Operating Day</b>
<ul style="list-style-type: none"><li>• MDRPOC will be updated seasonally for each day of the next 60 months on a rolling daily basis<sup>(1)</sup></li><li>• MDRPOC and the aggregate MW of approved Resource Planned Outages will be posted daily on the ERCOT website</li></ul>	<ul style="list-style-type: none"><li>• MDRPOC will be updated hourly for each hour of the next seven days on a rolling hourly basis</li><li>• MDRPOC and the aggregate MW of approved Resource Planned Outages will be posted hourly on the ERCOT website</li></ul>

(1). The maximum capacity closer to the operating day is expected to be increased in each seasonal update by including the planned generation capacity contribution in the SARA

# Status Update

- ERCOT is reviewing the proposed phase implementation as described in the filed Impact Analysis
- ERCOT plans to file the comments and present the changes at a future WMWG meeting
- For questions, please contact [shuang@ercot.com](mailto:shuang@ercot.com)



# Appendix

## Example: Calculation of MDRPOC(7 days or less)

Item	Description	Sign	Value	Source
1	Seasonal Net Maximum Capacity of Generation Resource <sub>(non-renewable, non-PUN)</sub>	+		RIOO
2	Lowest wind forecast	+		STWPF, Extreme Weather Forecast, and WGRPP all vendors
3	Lowest solar forecast	+		STPPF and PVGRPP
4	PUN Capacity Contribution	+		SARA
5	Planned Outage-ed Capacity <sub>(non-renewable, non-PUN)</sub>	-		Outage Scheduler
6	Forced Outage Capacity	-		Outage Scheduler
7	MLTF	-		
8	DC Import	+		DC Tie Schedule
9	Price Responsive Demand	+		Expected Value
10	Targeted Reserve	-		Expected Value
MDRPOC = sum (1, 2, .., 10)				

## Example: Calculation of MDRPOC (more than 7 days up to 60 months)

Item	Description	Sign	Source
1	Operational Resource (Thermal/Hydro Unit Capacity)	+	SARA <sup>(1)</sup>
2	Unplanned Outages, Thermal (High Generation Outages)	-	SARA
3	Wind and Solar, Capacity Contribution (Low Renewable Output)	+	SARA
4	Non-Synchronous Ties, Capacity Contribution	+	SARA
5	Capacity from Private Use Networks	+	SARA
6	Load Resource	+	Expected Value
7	Long Term Load Forecast	-	<a href="#">ERCOT 2022 LTLF</a>
8	Expected Ancillary Service Requirement	-	
9	Switchable Capacity Total	+	SARA
10	Switchable Capacity Unavailable to ERCOT	-	SARA
11	Available Mothballed Capacity	+	SARA
A	Preliminary MDRPOC = sum (1, 2,..11), all seasons		
B	100% of maximum planning resource outage in the last 3 years for winter and summer seasons only		Historical Data
MDRPOC = Min (A, B)			

# Example: Max Daily Resource Planned Outage Capacity for 2022-2026

1. Declining MDRPOC is due to the forecasted load growth and the exclusion of planned generation capacity
2. MDRPOC is expected to increase along with seasonal SARA update to include the capacity contribution from new planned generation

