

May 18, 2020

RE: 2020 Probabilistic Assessment Report

Dear ERO-RAPA Members:

The NERC Reliability Assessment Subcommittee (RAS) and Probabilistic Assessment Working Group (PAWG) are requesting your assistance for a consolidation of probabilistic assessment reports across the ERO Enterprise. Related assessment materials are posted on the [PAWG webpage](#). Each NERC Region should submit the requested data and narratives on an Assessment Areas basis. The NERC Regions are ultimately responsible for providing complete and accurate data and information electronically to NERC staff through the PAWG sharepoint site according to the posted schedule that includes all required deliverables with corresponding deadlines. The completed draft data forms and narratives are due by August 27, 2020. PAWG intends to discuss interim results with its members in mid-August.

The NERC Planning Committee (PC) assigned the RAS to coordinate a Probabilistic Assessment to supplement the *Long Term Reliability Assessment (LTRA)*. The Probabilistic Assessment (ProbA) report complements the LTRA by providing additional probabilistic statistics of Loss of Load Hours (LOLH) and Expected Unserved Energy (EUE). NERC anticipates that these probabilistic methods and statistics will make an important contribution to NERC's strategic efforts to assess energy adequacy in the 2020 LTRA.¹

Four previous ProbA reports have been conducted supplementing the 2012, 2014, 2016 and 2018 LTRAs.² The 2018 ProbA report covered the years 2020 and 2022. This 2020 ProbA will complement the 2020 LTRA calculating probabilistic metrics for 2022 and 2024. The 2020 metrics will be compared to previous ProbA studies.

The development of the 2020 ProbA will follow the NERC Probabilistic Technical Guideline document that serves as a platform for detailing probabilistic analytical improvements.³ The Technical Guideline document outlines suggestions to perform probabilistic analyses and common methods used by entities while incorporating PAWG recommendations for enhancing NERC Regions' and Assessment Areas' modeling approaches at the time of publication.

At its February and April 2020 meetings, the RAS and PAWG considered several possible sensitivities to the 2020 ProbA. The RAS approved the 2020 ProbA "Regional Risk Scenarios" (Attachment 2) that will

¹ See ERO 2020 Work Plan Priorities:

https://www.nerc.com/AboutNERC/StrategicDocuments/FINAL_ERO%20Performance%20Objectives_Board_Approved_Feb_6_2020.pdf

² [PAWG Webpage](#)

³ [PAITF Technical Guideline](#)

increase assessment value by evaluating and comparing Base Case probabilistic reliability indices against predetermined regional risk factors.

On behalf of NERC's PC and the RAS, we thank you for your continued support of NERC's Reliability Assessments.

Sincerely,



John Moura
Director, Reliability Assessment and Performance Analysis

CC: Planning Committee
Reliability and Security Technical Committee
Operational Leadership Team
Reliability Assessment Subcommittee
Probabilistic Assessment Working Group

Attachment 1: 2020 Probabilistic Assessment Schedule

RAS has set the schedule below for the **2020 Probabilistic Assessment**. Additional conference calls will take place with the contacts in Attachment 3 as the study progresses.

2020 ProbA Schedule				
Year	Date	Responsible Entity	Meeting/ Email	Action
2020	May 15	NERC	Email	Request sent to Regional Executives, ERO-RAPA and RAS/PAWG (Data Form and Narrative Template Release)
	June 3-4	PAWG	F2F/TBD	Preliminary discussion on ProbA schedule or data/narrative templates; LTRA dashboard-probabilistics
	Late July/Early August (TBD)	PAWG	WebEx	PAWG Review/Discussion of Preliminary ProbA Base Case Results, Risk Scenario Descriptions
	August 27	Assessment Areas	Email	PAWG provides 1st Draft ProbA Base Case Results, Short narratives (including Risk Scenario Description detail) to RAS
	September 2-3	PAWG/RAS	F2F	Discuss progress on ProbA results, Short Narratives for LTRA, and overview of LTRA Probabilistics
	September 15-16	NERC Staff/RSTC	F2F	RSTC Meeting: NERC Staff present initial LTRA Key Findings to RSTC
	September 17	NERC Staff	Email	NERC to send draft LTRA Report with ProbA Base Case Results to RSTC and RAS
	September 17-27	RSTC	-	RSTC Review of Draft LTRA Report
	September 27	RSTC	Email	RSTC provides feedback to NERC by COB on September 27
	September 30 - October 4	NERC Staff	-	NERC Staff Reviews RSTC Feedback
	October 14	RSTC	WebEx	RSTC Webinar: NERC Staff Hosts Webinar with RSTC on Updated Report; Discuss Any Remaining Feedback
	October 14 - 18	RSTC	Email	RSTC Electronic Vote for Report Acceptance
	October 21 - November 8	NERC	-	NERC Technical Publications and NERC Executive Management Review
	November 10-11	PAWG/RAS	F2F	Review Final Base Case ProbA portion of LTRA, Discuss Available Regional Risk Scenarios Results
	November 22 - December 6	NERC	-	NERC Board of Trustees Review of LTRA/Base Case ProbA
	December	NERC	-	NERC Board Approval of LTRA
	December 17	NERC	Email	Target Release for LTRA/ProbA Base Case
December-early January (TBD)	PAWG	Email	PAWG Members Submit Regional Risk Scenarios Results	

2020 ProbA Schedule

Year	Date	Responsible Entity	Meeting/ Email	Action
2021	Mid-January (TBD)	PAWG	F2F	PAWG Peer Review Risk Scenario Results, Compile/Draft ProbA Regional Risk Scenarios Report
	Late January (TBD)	PAWG	Email	PAWG submits to RAS ProbA Regional Risk Scenarios Report
	Early February (TBD)	PAWG/RAS	F2F	RAS/PAWG Peer Review for ProbA Regional Risk Scenarios Report
	Early February (TBD)	NERC	Email	Draft ProbA Regional Risk Scenarios Report to RSTC
	Early March (TBD)	RSTC	F2F	RSTC Meeting Approval; Public Release of ProbA Regional Risk Scenarios Report

Attachment 2: 2020 Probabilistic Assessment Regional Risk Scenarios

At its February and April 2020 meetings, the RAS and PAWG considered several possible sensitivities to the 2020 ProbA. The RAS approved the 2020 ProbA “Regional Risk Scenarios” that will increase assessment value by evaluating and comparing Base Case probabilistic reliability indices against predetermined regional risk factors.

Each Region or Assessment Area should submit probabilistic statistics of Loss of Load Hours (LOLH) and Expected Unserved Energy (EUE) under their discussed Regional Risk Scenario methodology.⁴ Based on projected LTRA resources, a Year 4 (Y4) study is required. Entities can also provide an optional Year 2 (Y2) analysis for the Risk Scenario case. Regions and Assessment Areas should compare Base and Scenario Case to evaluate Risk Scenario sensitivities against examined risks.

Region/Area	Regional Risk Scenario	Study Year(s)
NPCC and PJM	<i>“Planned-Expected Future Capacity or Resources May Not Materialize”</i>	Y2, Y4
ERCOT	<i>“Low Wind Output”</i>	Y4
SaskPower	<i>“Impact of Low Hydro Conditions”</i>	Y2, Y4
WECC	<i>“Energy Distribution Shift from Baseload to Variable Units”</i>	Y4
SPP	<i>“Low Wind Output and Increased Conventional Generation Outages”</i>	Y4
Manitoba Hydro	<i>“Low Hydro Output with External Assistance Limitations”</i>	Y2, Y4
SERC	<i>“Planned Maintenance Sensitivity”</i>	Y4
MISO	<i>“Increase Demand Response as a Percentage of Overall Resource Mix”</i>	Y4

⁴ Specific methodology and assumptions may change as necessary as the study matures.

**Attachment 3:
2020 Probabilistic Assessment Contacts**

PAWG			
Region	Assessment Area	Contact	E-mail
MRO			
	MRO (All)	Salva Andiappan	Salva.Andiappan@mro.net
	Saskatchewan	Guarav Maingi	GMAINGI@saskpower.com
	Manitoba Hydro	Bagen Bagen	bbagen@hydro.mb.ca
	MISO	Darius Monson	dmonson@misoenergy.org
	SPP	Alex Crawford	acrawford@spp.org
NPCC			
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	New England	Manasa Kotha	mkotha@iso-ne.com
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