



Philippine Electricity  
Market Corporation

# FINAL FORECAST ACCURACY STANDARDS RESULT

Annual FAS Results (2023)

20 March 2024 | MS Teams

# REQUESTED ACTION

# FOR INFORMATION

# SUMMARY OF WESM REGISTRATION

on Must Dispatch Generating Units

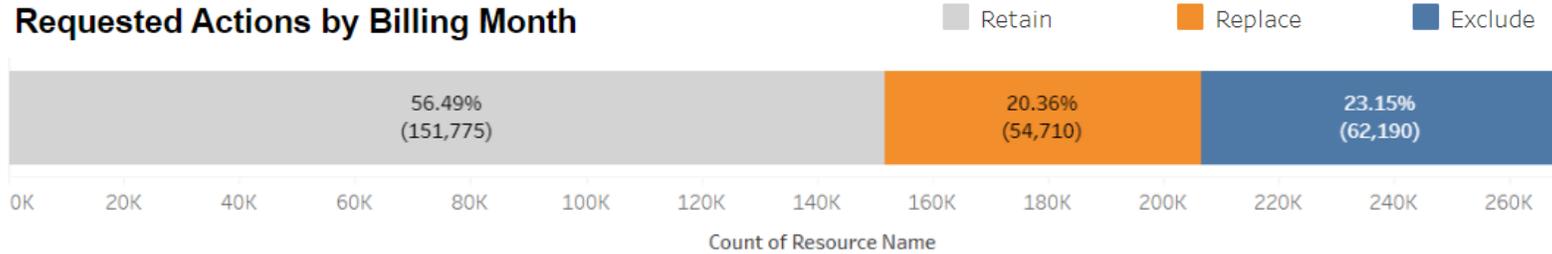
Technology	No. of Resources in Luzon	No. of Resources in Visayas	No. of Resources in Mindanao	Total
Run of River	18	3	14	35
Solar	37	12	5	54
Wind	5	2	0	7
<b>Total</b>	<b>60</b>	<b>17</b>	<b>19</b>	<b>96</b>

As of December 2023, there are **105** facilities registered as MDGU in the WESM. From the registered facilities, **96** facilities from Luzon, Visayas, and Mindanao regions are being monitored; **9** facilities are under test and commissioning; and Mindanao facilities are being monitored after the declaration of commercial operation of the WESM Mindanao on 26 January 2023. (DOE DC2022-12-0039, 23 December 2022)

# TOTAL INTERVALS WITH REQUESTED ACTION & ECO ASSESSMENT

December 2023

## Requested Actions by Billing Month



## Event Categories

Data Variance

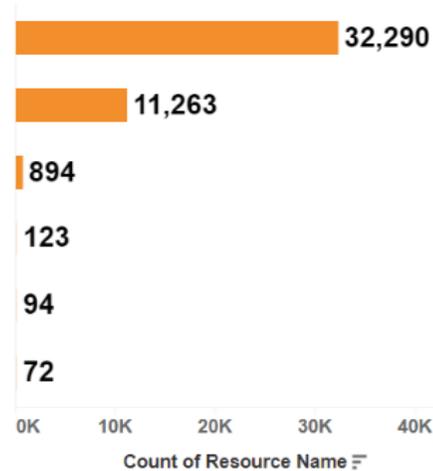
Outage

Outage (Transmission Related Constraints/Activity)

Force Majeure

Outage (Component Unit)

Market System Constraints

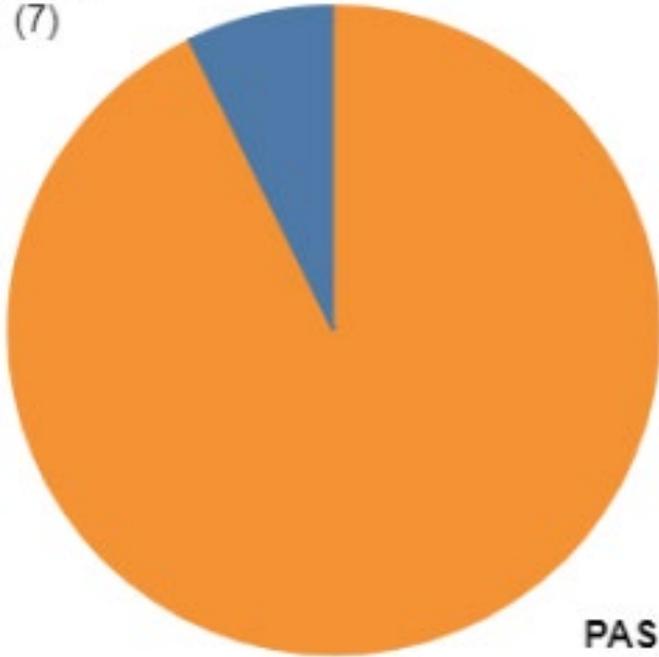


- ECO received a total of **54,710** intervals requesting replacement due to possible Data Variance and a total of **62,190** intervals requesting exclusion. The ECO also received a total of **151,775** intervals to retain results.
- Out of **54,710** intervals requesting data replacement, **32,290** intervals were confirmed to be Data Variance (**59.02%** of the intervals for replacement).
- Out of **62,190** intervals requesting exclusion, the ECO accepts **12,271** intervals (**19.73%** of the total intervals for exclusion).

# DECEMBER 2023 FINAL FAS REPORT (OVERALL PASSING RATE)

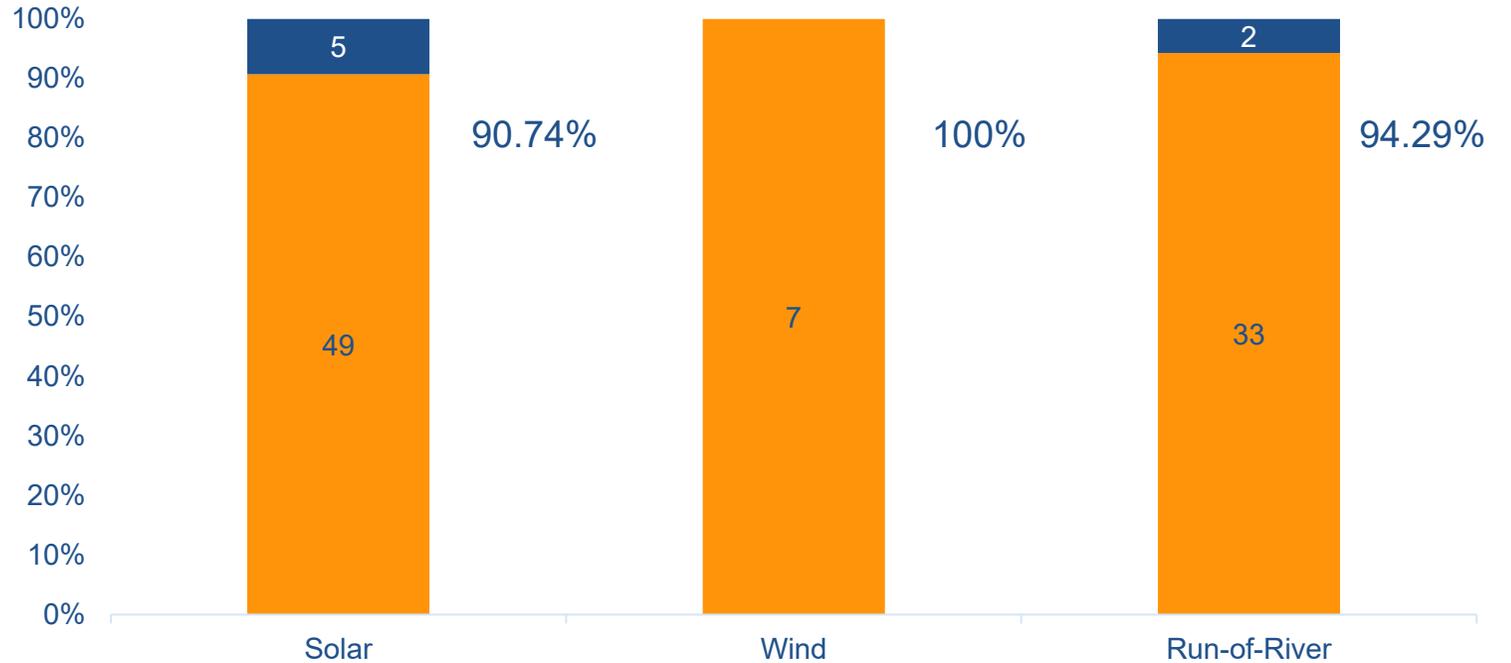


**FAILED**  
7.29%  
(7)



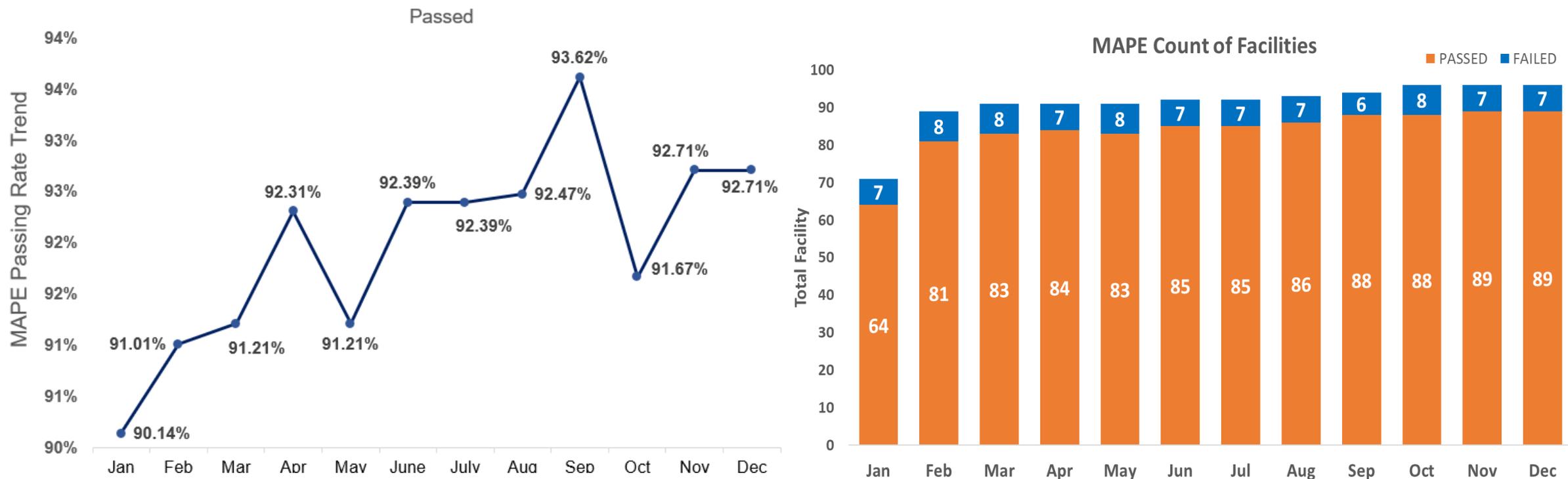
**PASSED**  
92.71%  
(89)

Passing Rate per Technology



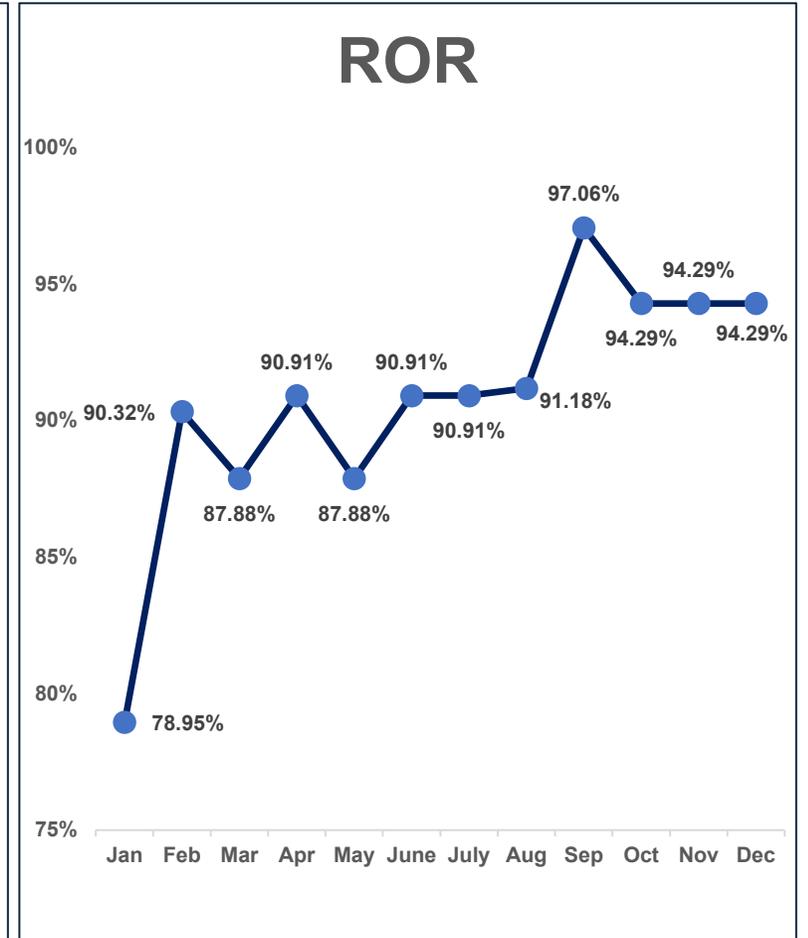
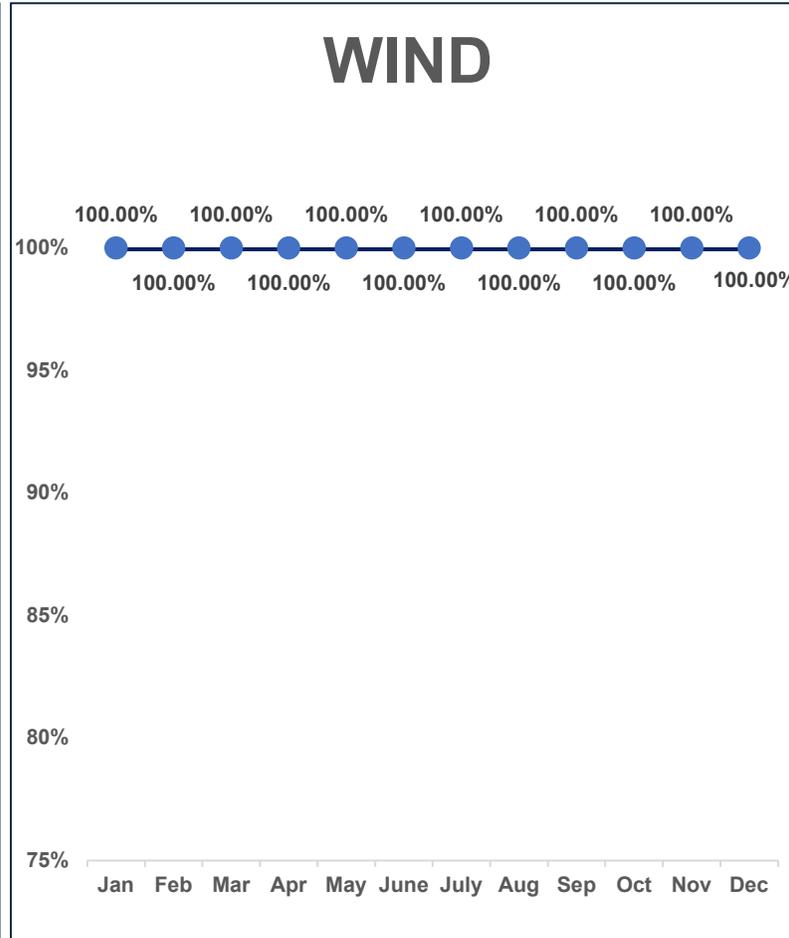
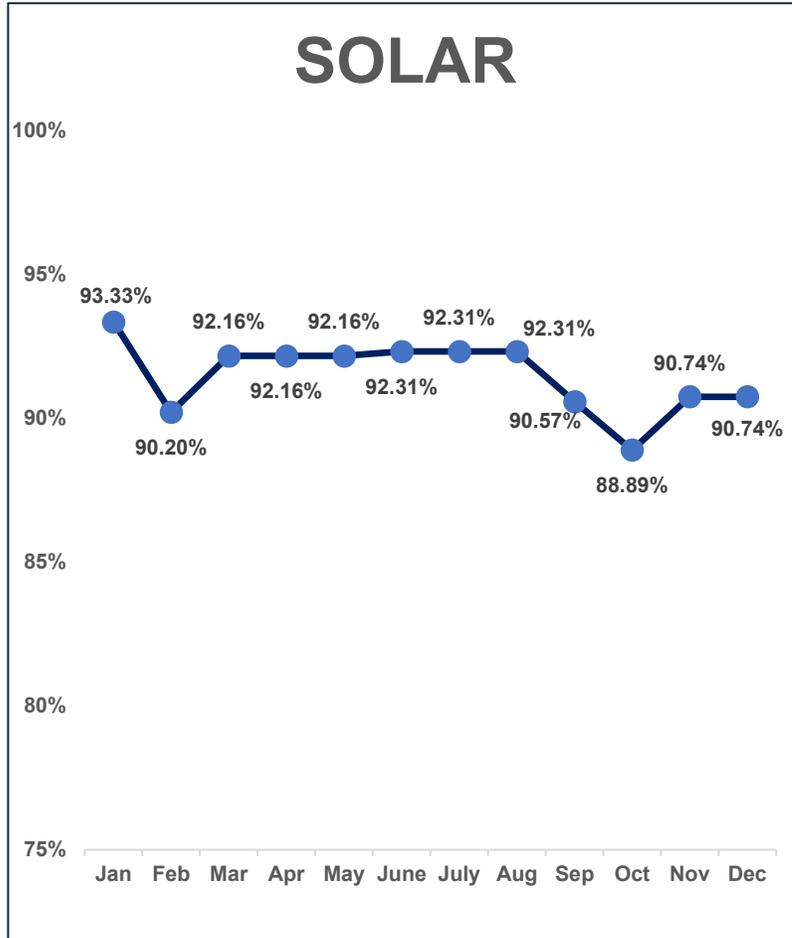
- 89 out of 96 facilities being monitored performed within the MAPE standards while 7 failed.
- 49 out of 54 Solar Power Plants, 7 out of 7 Wind Power Plants, and 33 out of 35 Run of River Power Plants passed the MAPE standards.

# PASSING RATE TREND – MAPE FINAL RESULT



From the **Final MAPE result (January to December 2023)**, the average passing rate is **91.99%**, and the average count of passing plant is **84**.

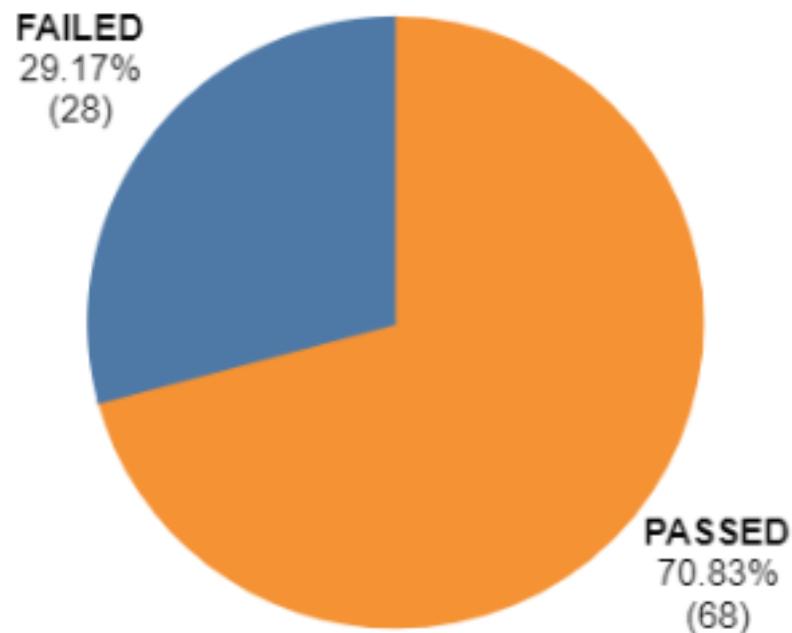
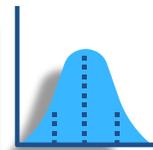
# PASSING RATE TREND – MAPE



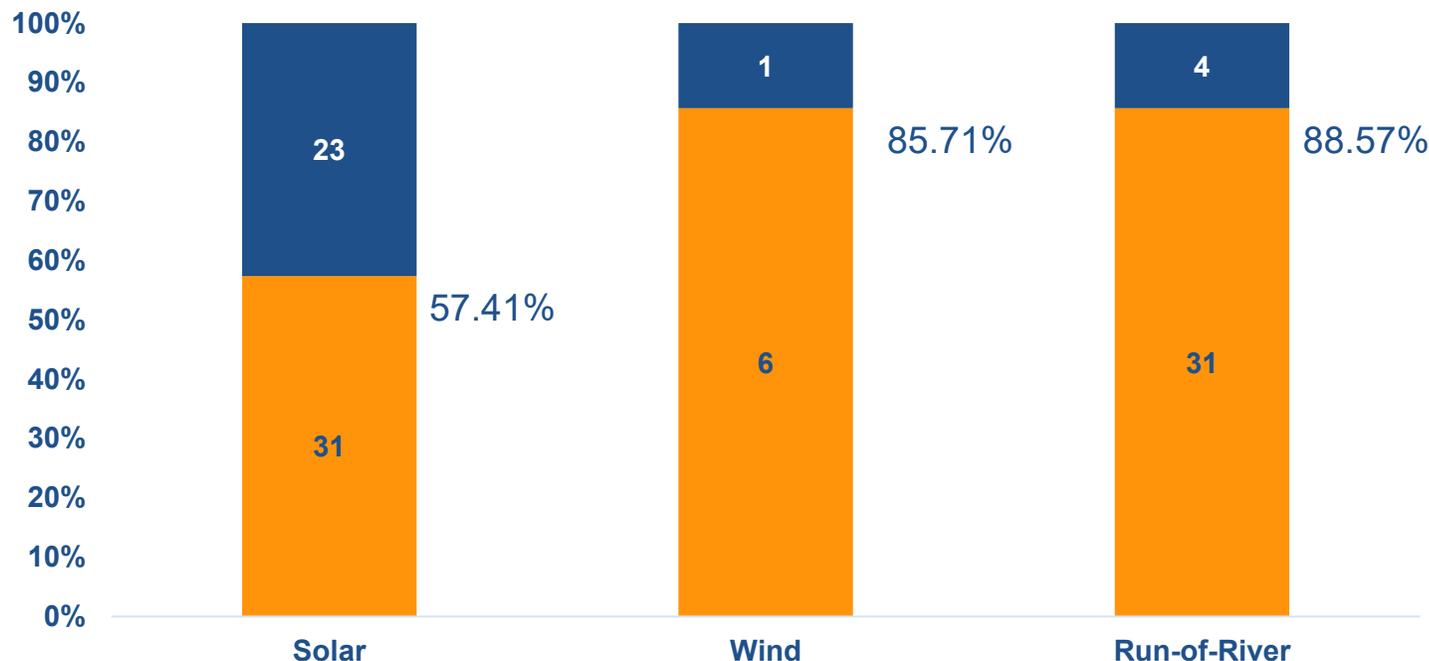
- The **average passing rates** of Solar, Wind and ROR Power Plants from the final result (January to December 2023) are **91.49%**, **100.00%** and **90.74%**, respectively.

# DECEMBER 2023 FINAL FAS REPORT (OVERALL PASSING RATE)

## PERC95

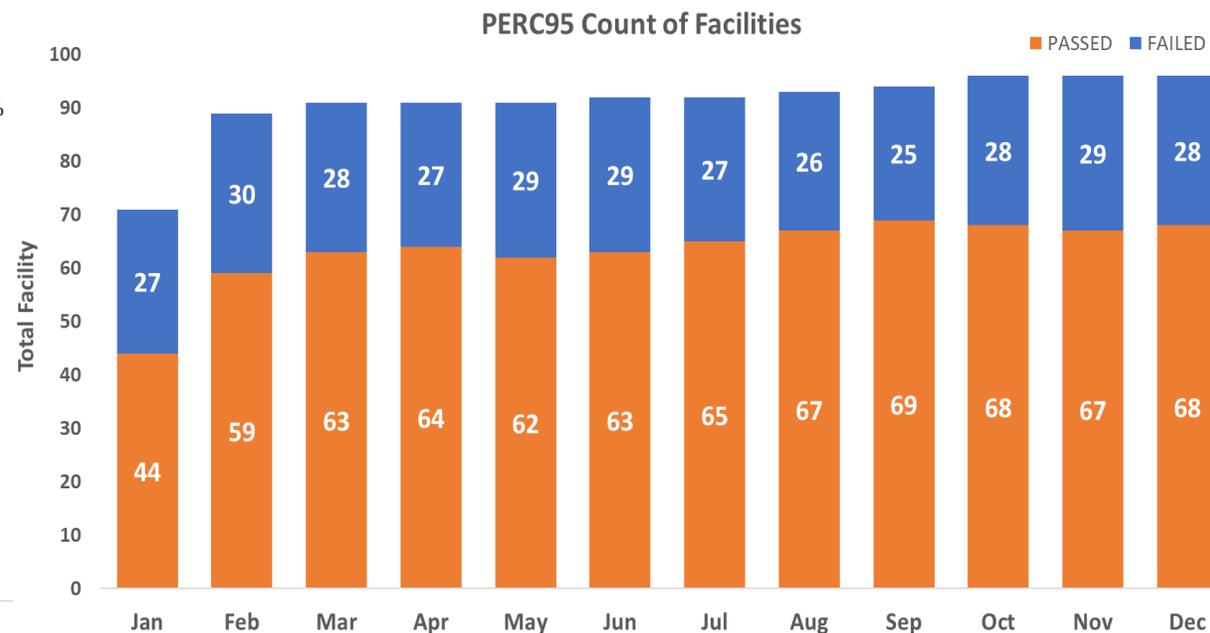
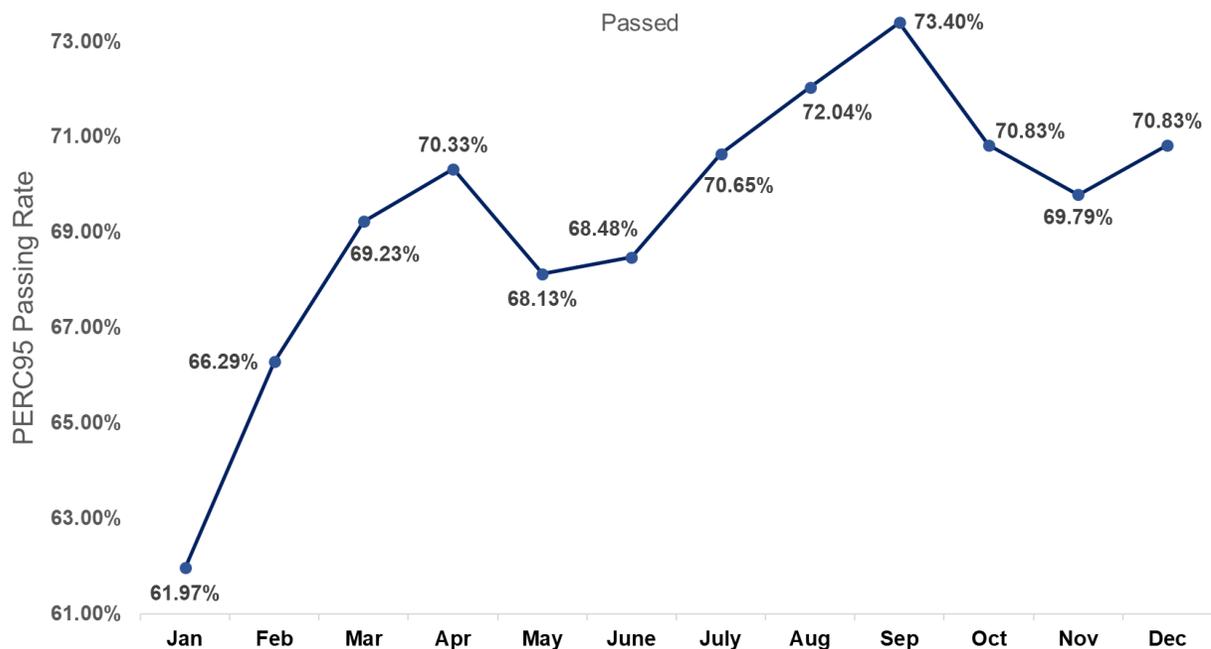


Passing Rate per Technology



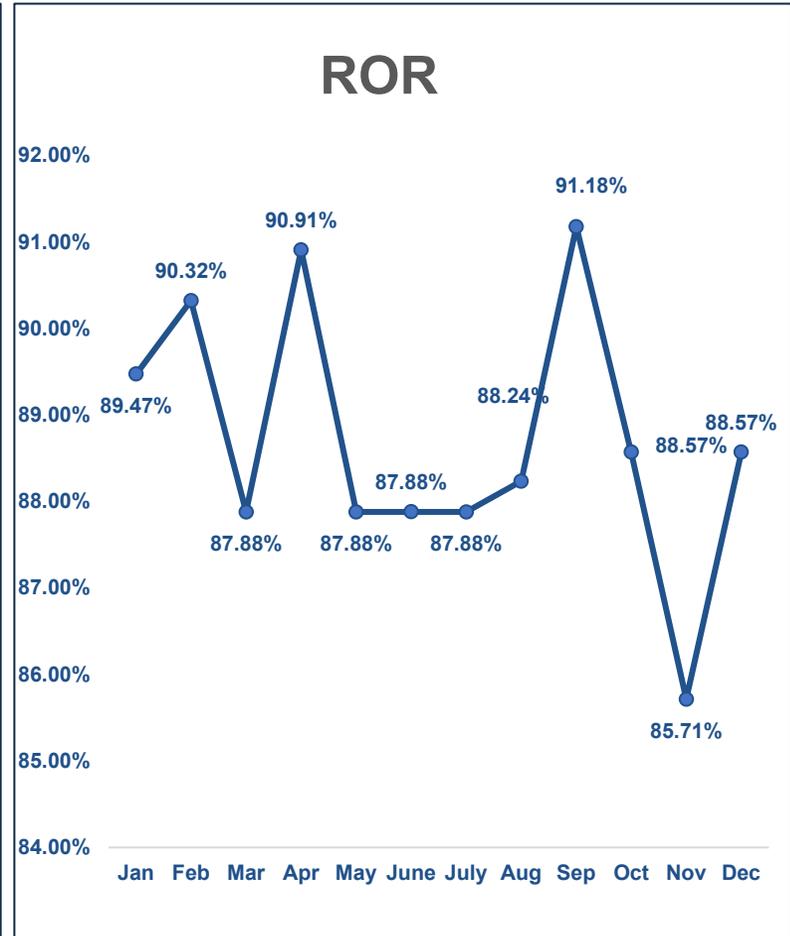
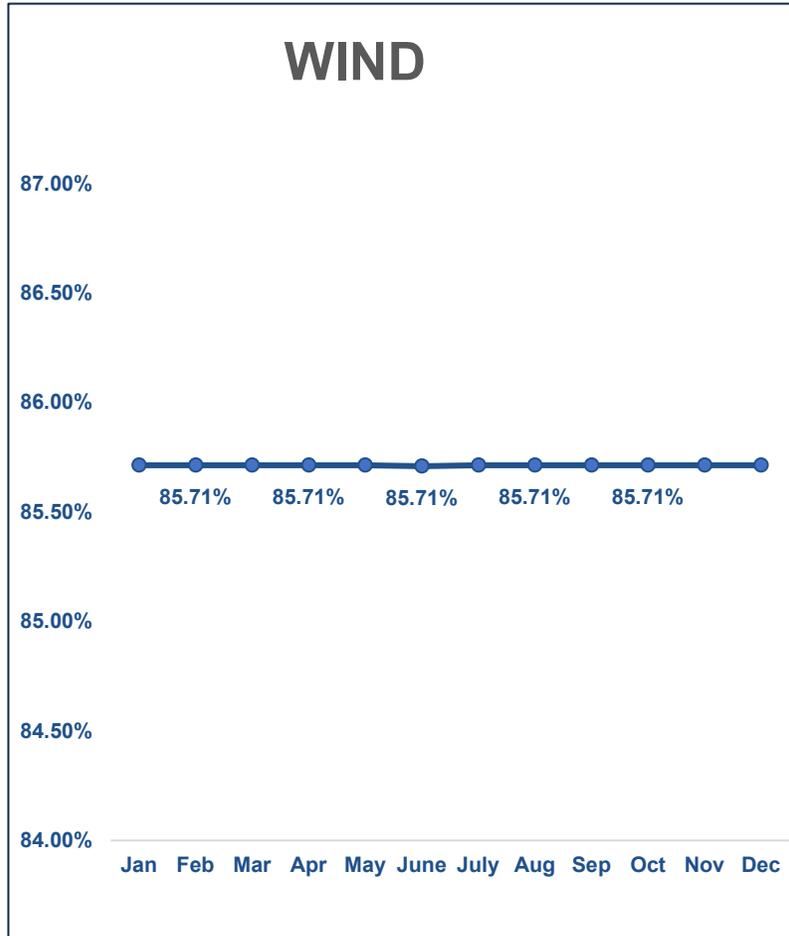
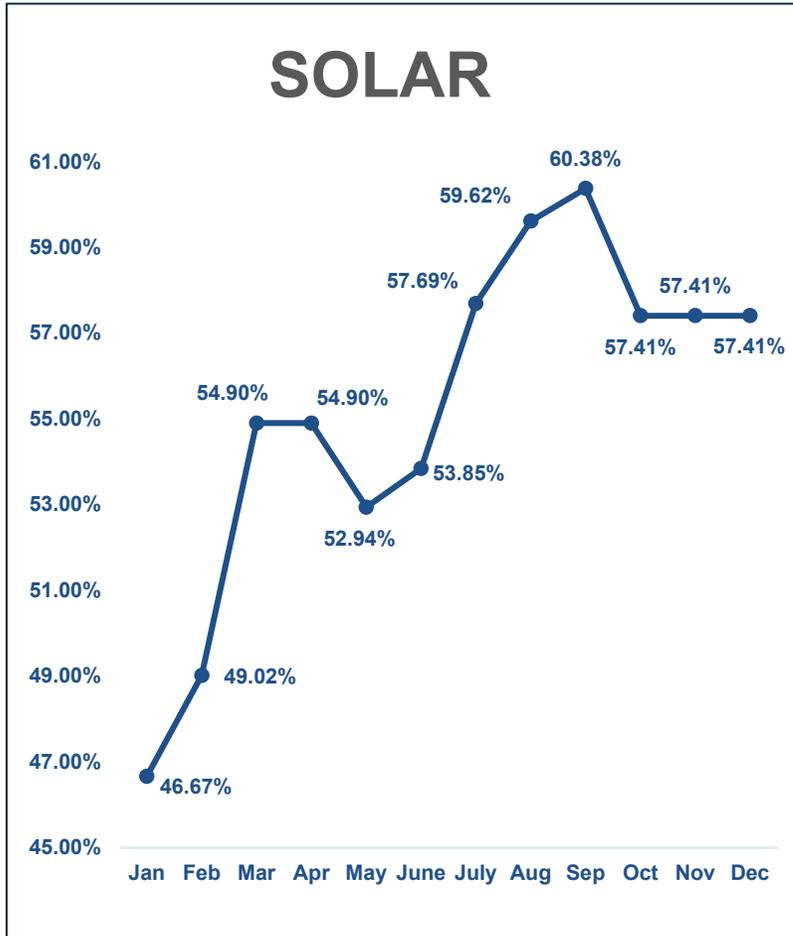
- 68 out of 96 facilities being monitored performed within the PERC95 standards while 28 failed.
- 31 out of 54 Solar Power Plants, 6 out of 7 Wind Power Plants, and 31 out of 35 Run of River Power Plants passed the PERC95 standards.

# PASSING RATE TREND – PERC95



- From the **Final PERC95 result (January to December 2023)**, the average passing rate is **69.33%**, and the average count of passing plant is **63**.

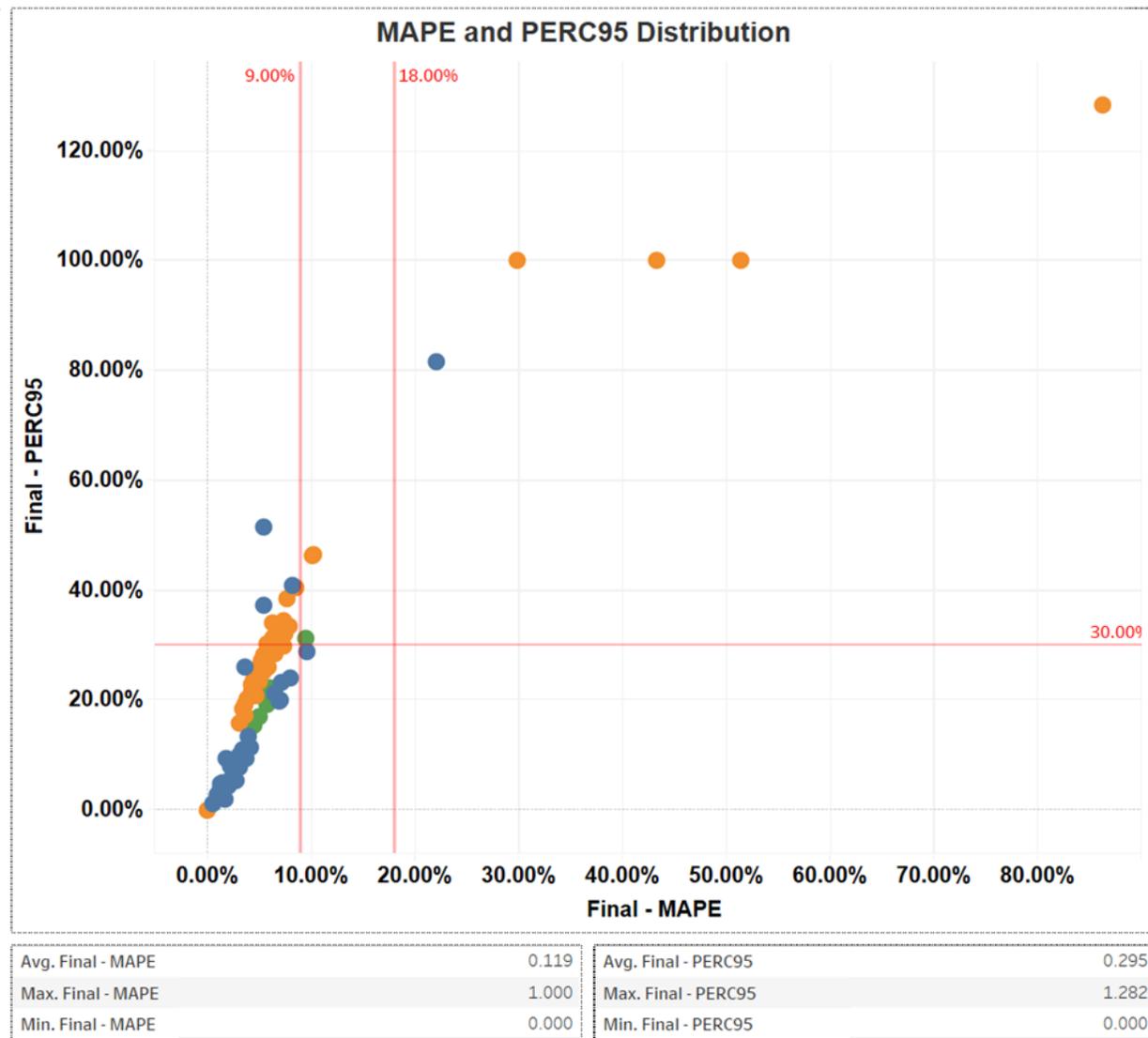
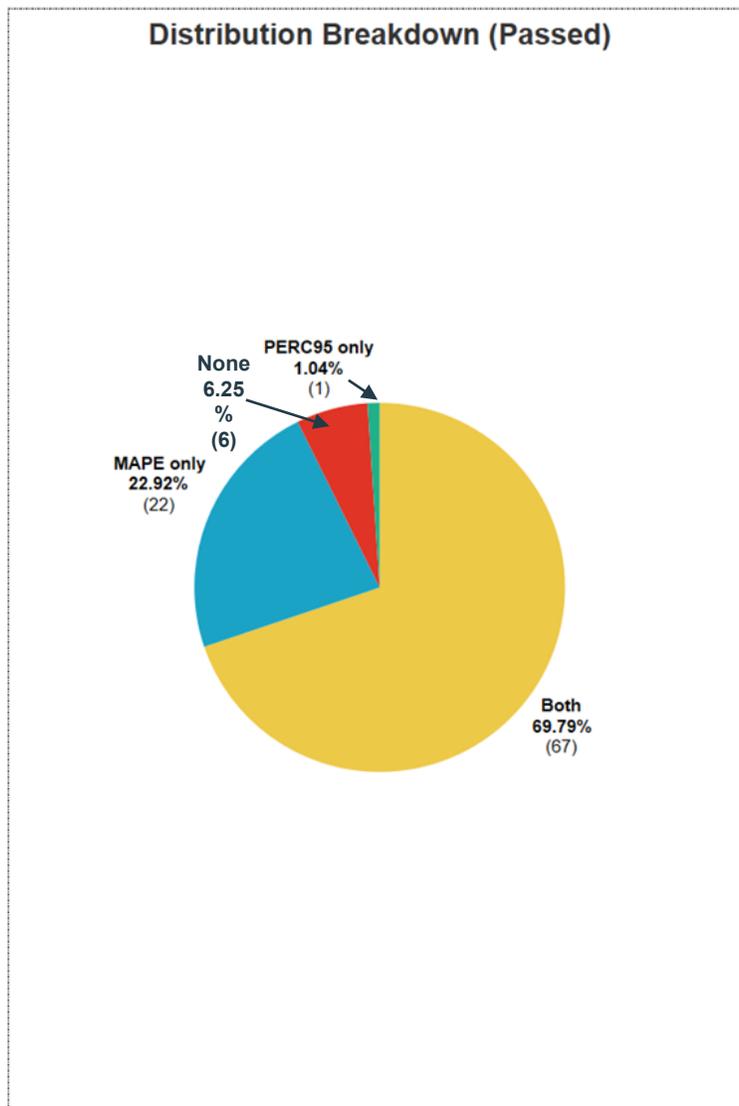
# PASSING RATE TREND – PERC95



- The average passing rates of Solar, Wind and ROR Power Plants from the final result (2023) are **55.18%**, **85.71%** and **88.71%**, respectively.

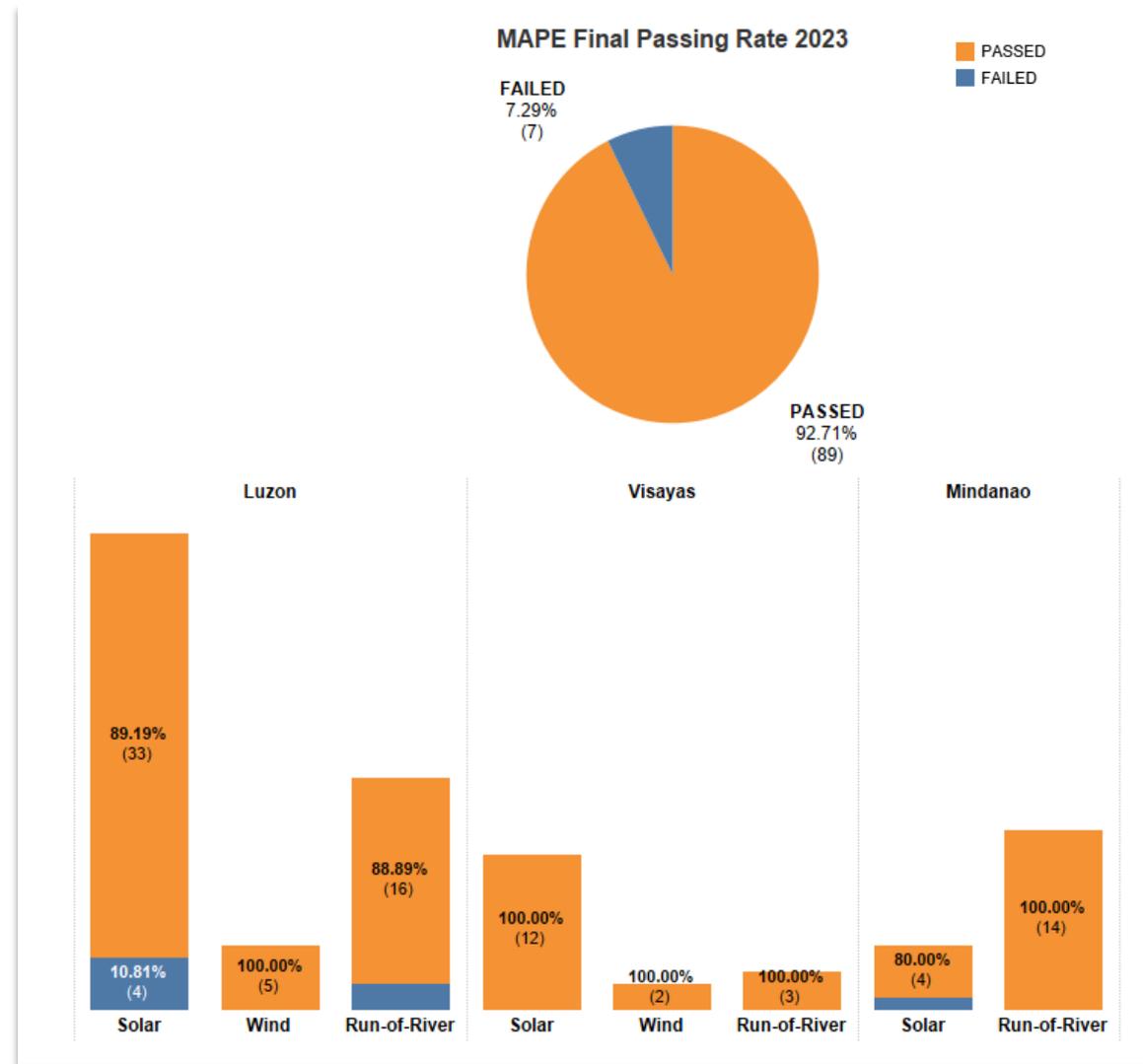
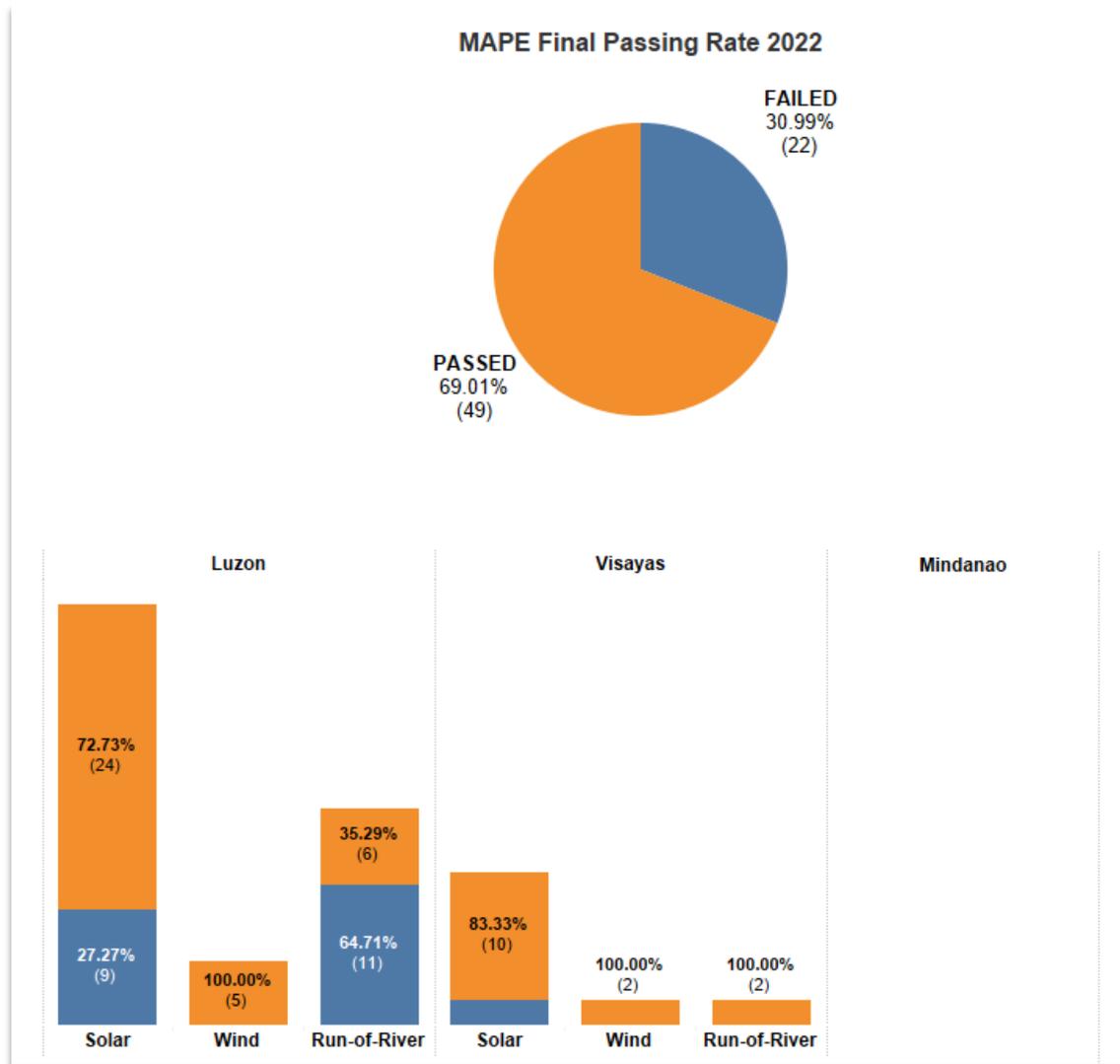
# DECEMBER 2023 FINAL FAS REPORT (OVERALL PASSING RATE)

- Passing Status**
- Both
  - MAPE only
  - None
  - PERC95 only
- Type**
- Run-of-River
  - Solar
  - Wind



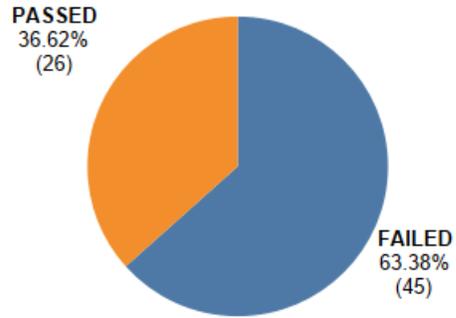
# ANNUAL RESULTS COMPARISON

# MAPE ANNUAL RESULTS COMPARISON

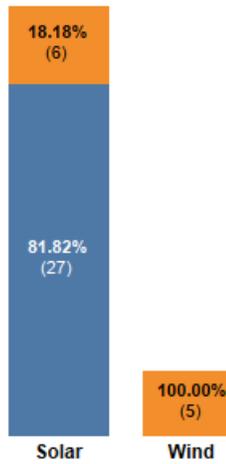


# PERC95 ANNUAL RESULTS COMPARISON

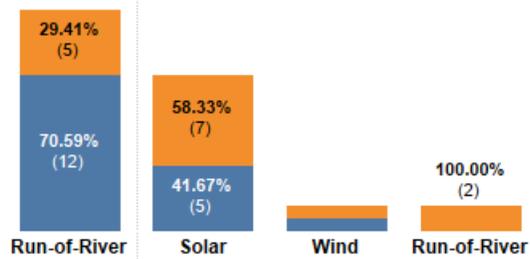
PERC95 Final Passing Rate 2022



Luzon

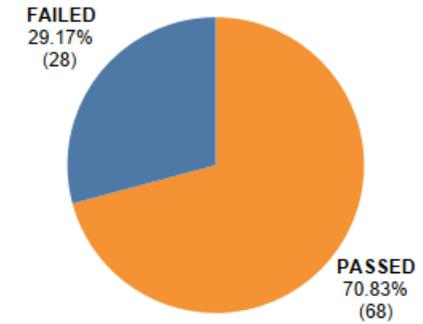


Visayas

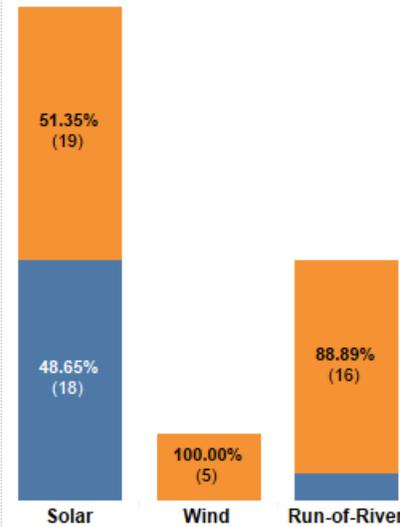


Mindanao

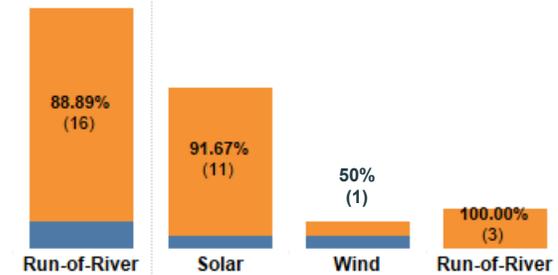
PERC95 Final Passing Rate 2023



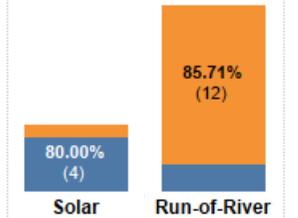
Luzon



Visayas

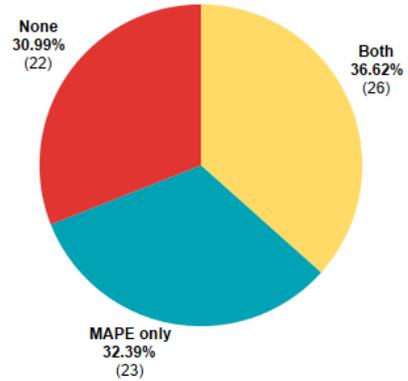


Mindanao

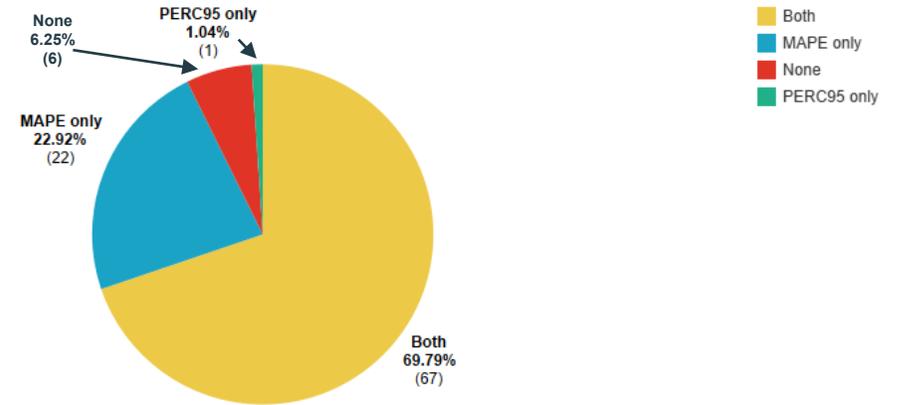


# MAPE AND PERC95 ANNUAL RESULTS COMPARISON

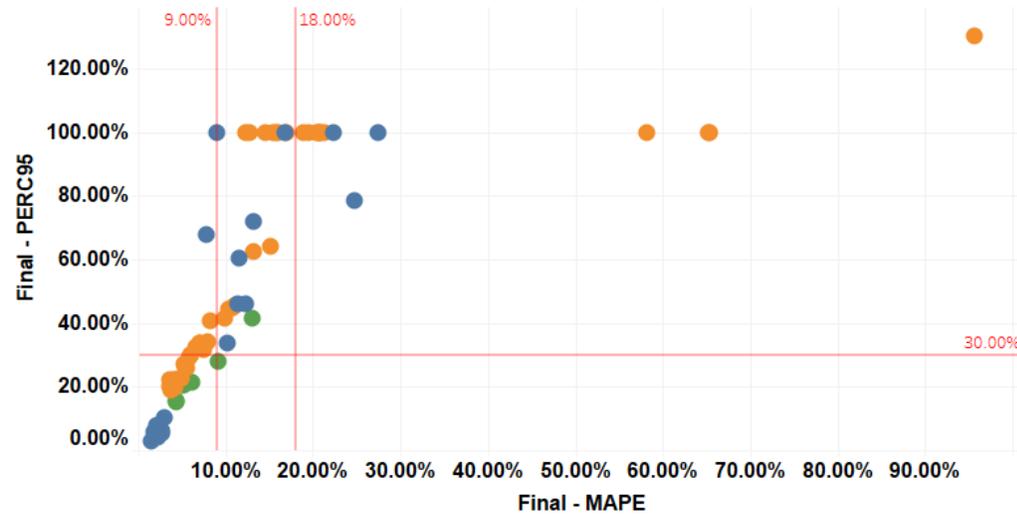
Distribution Breakdown 2022 (Passed)



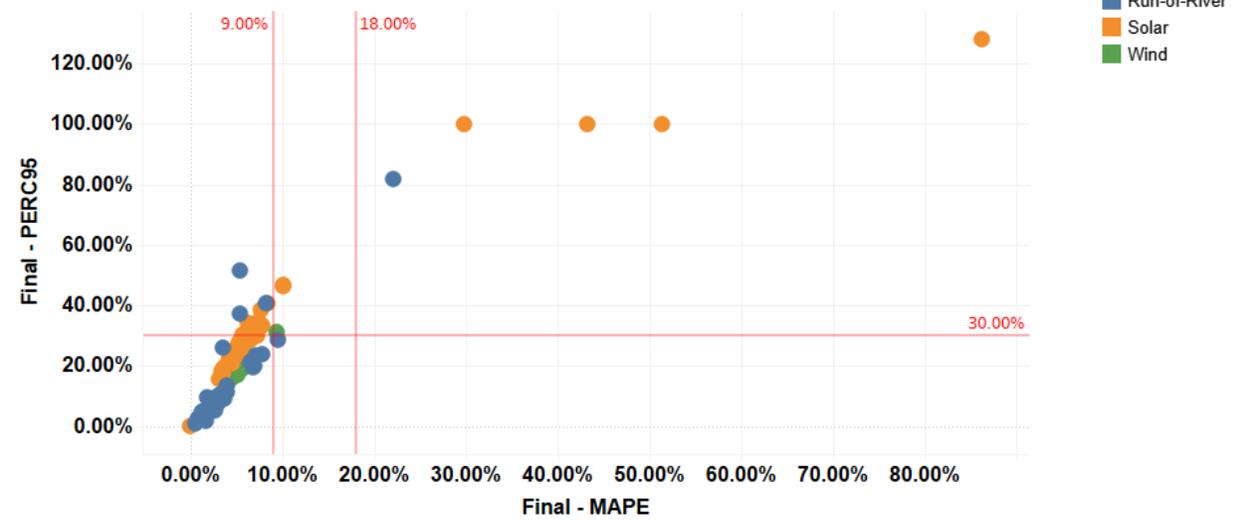
Distribution Breakdown (Passed)



MAPE and PERC95 Distribution 2022



MAPE and PERC95 Distribution 2023



# GENERAL OBSERVATIONS

Factors Contributing to Improved FAS Results	Observations
Active submission and revision of nominations	MDGUs actively submitted and revised nominations, resulting in a significant improvement in forecast accuracy.
Solar nighttime nomination	Solar plants now actively submit 0 MW nighttime nominations, contributing to improved FAS results.
Awareness of MDGUs with FAS obligation	<ul style="list-style-type: none"> <li>• Increased awareness of their obligations related to the FAS process, resulting in improved performance during the second year of monitoring.</li> <li>• Regular coordination and conduct of conferences</li> <li>• Conduct special FAS training</li> </ul>
Investment of MDGUs in forecasting tools	Some MDGUs invested in advanced forecasting tools, enhancing their ability to provide accurate projected outputs

## Other notable matters:

- Awareness of new MDGUs resulting in improved performance / FAS compliance
- Change or Transfer of WESM Compliance/ Enforcement Officers potentially contributed to poor FAS compliance / performance

# PENALTY IMPOSITION

# FAS LEVEL OF PENALTY

Breach of MAPE and PERC95			
	Level 1	Reprimand	Notice of Reprimand
	Level 2	Financial Penalties	P500,000 per breach of MAPE P500,000 per breach of PERC95
	Level 3	Escalated Financial Penalties	P1 Million per breach of MAPE P1 Million per breach of PERC95
	Suspension & Deregistration		

Penalty Applicable for MAPE	Proportionate Penalty	Exemption
<p>MAPE with deviation <math>\leq</math> 30%: Standard leveling for penalties apply</p> <p><b>MAPE with deviation &gt; 30%: Level 2</b> Penalty will be immediately imposed even if first offense</p>	<p><i>“The Generation Company with must-dispatch generating unit that is in operation for less than a year and is found in breach of MAPE or PERC95, shall be imposed a <b>penalty in proportion to the number of months the must-dispatch generating unit is in operation during the covered monitoring year. For instance, the plant commenced operation on 26 March, the financial penalty to be imposed shall be in proportion to the nine (9) billing months over the twelve (12) month-period.</b>”</i></p>	<p><i>“The Generation Company with must-dispatch generating unit that is in operation for less than a year and is found in breach of MAPE or PERC95, shall be <b>exempted from liability, if it commences operation within three (3) months prior to the end of the covered monitoring year.</b>”</i></p>
- Section 5.4 of the WESM Penalty Manual 3.0	- FAS Manual Section 4.5.a	- FAS Manual Section 4.5.b

# MAPE 2023 PENALTY SUMMARY

## MAPE 2023 FAILED FACILITIES

Region	TP Status	MAPE Penalty Level 2023	Type	Frequency of Occurrence (MAPE)	
				First Offense	Second Offense
Luzon	Existing MDGU	Level 2: Financial Penalty	Run-of-river	-	1
			Solar	-	3
	New MDGU	Exempted	Run-of-river	1	-
Mindanao	New MDGU	Level 2: Financial Penalty	Solar	1	-

## NO. OF FACILITIES WITH PENALTY

Total Facilities with Penalty in 2022	18
Total Facilities with Penalty in 2023	6

Note:

Existing MDGU: Operating since 2021 or 2022

New MDGU: Operating in the year 2023

# PERC95 2023 PENALTY SUMMARY

## PERC95 2023 FAILED FACILITIES

Region	TP Status	PERC95 Penalty Level 2023	Type	Frequency of Occurrence (PERC95)	
				First Offense	Second Offense
Luzon	Existing MDGU	Level 1: Reprimand	Solar	2	-
		Level 2: Financial Penalty	Run-of-river	-	1
			Solar	-	13
	New MDGU	Exempted	Run-of-river	1	-
			Solar	1	-
		Level 1: Reprimand	Solar	1	-
Visayas	Existing MDGU	Level 2: Financial Penalty	Solar	-	1
			Wind	-	1
Mindanao	New MDGU	Level 1: Reprimand	Run-of-river	2	-
		Level 1: Reprimand	Solar	4	-

## NO. OF FACILITIES WITH PENALTY

Total Facilities with Penalty in 2022	41
Total Facilities with Penalty in 2023	25

# REQUESTED ACTION

# FOR INFORMATION

# Connect with PEMC



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