

Plant Performance Report

Daily Performance Overview

Problematic Daily PR Records

Record Time	Plant Name (ID)	Anomaly Type	Severity
2025-04-28T00:00:00Z	Plant D (282fcf50-4e31-11ee-be3c-c169ad1457df)	low_pr_performance dramatic_pr_drop	critical

PR Metrics

Metric	Value
Daily PR Percent	5.95%
Daily PR Temp Corrected Percent	6.68%
Daily Total PR Percent	N/A
Monthly PR Percent	N/A
Monthly Total PR Percent	N/A
Daily PR Overspill Percent	N/A
Monthly PR Overspill Percent	N/A

Contributing Factors

Factor	Value
Daily Availability Percent	1.00
Plant Soiling Loss Percent	N/A
Plant Curtailment KW	N/A
Average Cell Temperature C	49.74

Daily Slope Radiation KWH/m²	5912.42
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Performance Analysis

Analysis Point	Value
PR Deviation from Baseline	-74.05
Expected PR Range	80-90%
Temperature Correction Impact	0.73
Radiation PR Correlation	poor_correlation_despite_high_radiation

Yield Impact

Yield Metric	Value
Daily Yield KWH	1055.34
Monthly Yield KWH	N/A
Estimated Yield Loss	13114.24

Detailed Analysis

Summary

The analysis for Plant D on 2025-04-28 reveals a critical PR anomaly. The daily PR was an extremely low 5.95%, significantly below the typical range of 80-90% for well-performing plants. This occurred despite high daily solar radiation (5912.42 kWh/m²) and 100% plant availability, indicating a severe performance issue. The temperature correction had a negligible impact, and soiling or curtailment data were not available or significant for this day. The estimated daily yield loss due to this underperformance is substantial, approximately 13,114.24 kWh.

Analysis Period

Start Date	2025-04-28
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End Date	2025-04-28
Total Days Analyzed	1

Plant Information

Plant ID	282fcf50-4e31-11ee-be3c-c169ad1457df
Plant Name	Plant D

PR Performance Summary

Average Daily PR	5.95%
Average Monthly PR	N/A
Lowest Daily PR	5.95%
Highest Daily PR	5.95%
PR Trend	critical_low
Temperature Correction Effectiveness	not_significant_in_explaining_low_pr

Anomaly Breakdown

Total Anomalies Found	1
Critical Issues	1
High Priority	0
Medium Priority	0
Low Priority	0

Root Cause Analysis

Primary Causes:

- Equipment degradation
- Unknown/Other

Soiling Impact Days	0
Curtailment Affected Days	0
Low Availability Days	0
Temperature Related Issues	0

Performance Trends

Daily PR Trend	critical_low_performance_on_single_day
Monthly PR Trend	not_applicable_single_day_data
Seasonal Patterns	not_discernible_from_single_day_data
Degradation Rate	N/A

Recommendations

1.

Immediate investigation into the extremely low daily PR for Plant D is crucial. This level of underperformance during high radiation suggests a major system malfunction or significant equipment issue.
2.

Conduct a thorough on-site inspection to identify potential equipment failures (e.g., inverter faults, string outages, widespread module damage).
3.

Review operational logs and error codes for any indications of system faults or unexpected shutdowns.
4.

Verify data acquisition system integrity to rule out sensor or data transmission errors as a cause for the reported low PR.
5.

Evaluate the plant's recent maintenance history for any correlating activities or missed inspections.

Estimated Financial Impact

Total Yield Loss KWH	13114.24
Estimated Revenue Loss	Significant; requires detailed calculation based on PPA/market rates for the lost kWh.
Performance Improvement Potential	High, assuming root cause identification and resolution can restore PR to target levels (e.g., 80-90%).

Metadata

Analysis Timestamp	2024-05-16T12:00:00Z
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Data Quality

Total Records Analyzed	1
Records with Anomalies	1
Data Completeness	100%

Analysis Parameters

PR Threshold Critical	70%
PR Threshold Warning	80%
Trend Analysis Window	7 days
Seasonal Adjustment Applied	false

Solar Plant Performance Report

Summary

Total Anomalies: 56

High Severity: 56

Medium Severity: 0

Low Severity: 0

Most Affected Plant ID: 282fcf50-4e31-11ee-be3c-c169ad1457df

Common Patterns: sustained_pr_drop, low_pr_high_irradiance

Analysis

Analysis of the 5-minute PR data for the specified plant on 2025-04-28:
A total of 56 unique anomalous data points were identified.
Categorized by severity: High: 56, Medium: 0, Low: 0.

- Periods of sustained low PR (<20%) for 35 minutes or more) under good irradiance conditions suggest consistent underperformance, possibly due to persistent shading, soiling, or a fault affecting a significant portion of the plant. This was a predominant issue.
- Numerous instances of low PR values (below 60%) observed during periods of very high irradiance (above 800 W/m²) highlight significant underperformance during optimal conditions. This indicates a major efficiency problem, potentially due to thermal issues, degradation, or systemic operational inefficiencies.

Recommendations: Immediate and thorough investigation into the root causes of the consistently low PR during high irradiance periods and sustained drops is crucial. This may involve physical inspection of the modules for soiling or damage, checking inverter logs for faults, and verifying sensor calibration.

Problematic 5-Minute PR Data

Datetime	Plant ID	Plant Name	5-min PR (%)	Irradiance (W/m²)	Anomaly Type	Severity	Context
2025-04-28 06:30:00	282fcf50-4e31-11ee-be3c-c169ad1457df	Solar Plant 169	22.5%	110.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 06:35:00	282fcf50-4e31-11ee-be3c-c169ad1457df	Solar Plant 169	24.5%	117.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 06:50:00	282fcf50-4e31-11ee-be3c-c169ad1457df	Solar Plant 169	18.5%	133.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 06:55:00	282fcf50-4e31-169ad1457df	Solar Plant	172.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 07:00:00	282fcf50-4e31-169ad1457df	Solar Plant	178.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 07:05:00	282fcf50-4e31-169ad1457df	Solar Plant	112.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 07:10:00	282fcf50-4e31-169ad1457df	Solar Plant	119.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 07:15:00	282fcf50-4e31-169ad1457df	Solar Plant	164.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 07:20:00	282fcf50-4e31-169ad1457df	Solar Plant	197.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 07:25:00	282fcf50-4e31-169ad1652df	Solar Plant	151.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 07:30:00	282fcf50-4e31-169ad1652df	Solar Plant	142.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 07:35:00	282fcf50-4e31-169ad1652df	Solar Plant	147.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 07:40:00	282fcf50-4e31-169ad1652df	Solar Plant	206.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 07:45:00	282fcf50-4e31-169ad1652df	Solar Plant	176.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 07:50:00	282fcf50-4e31-169ad1652df	Solar Plant	375.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 07:55:00	282fcf50-4e31-169ad3-4b7df	Solar Plant	382.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 08:00:00	282fcf50-4e31-169ad3-4b7df	Solar Plant	402.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 08:05:00	282fcf50-4e31-169ad3-4b7df	Solar Plant	435.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 08:10:00	282fcf50-4e31-169ad3-4b7df	Solar Plant	460.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 08:15:00	282fcf50-4e31-169ad3-4b7df	Solar Plant	464.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 08:20:00	282fcf50-4e31-169ad3-4b7df	Solar Plant	486.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 08:25:00	282fcf50-4e31-169ad5-457df	Solar Plant	514.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 08:30:00	282fcf50-4e31-169ad5-457df	Solar Plant	541.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 08:35:00	282fcf50-4e31-169ad5-457df	Solar Plant	548.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 08:40:00	282fcf50-4e31-169ad5-457df	Solar Plant	568.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 08:45:00	282fcf50-4e31-169ad5-457df	Solar Plant	588.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 08:50:00	282fcf50-4e31-169ad5-457df	Solar Plant	596.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 08:55:00	282fcf50-4e31-11ed-8169-ad457df	Solar Plant	5.457	601.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 09:00:00	282fcf50-4e31-11ed-8169-ad457df	Solar Plant	5.457	623.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 09:05:00	282fcf50-4e31-11ed-8169-ad457df	Solar Plant	5.457	624.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 09:10:00	282fcf50-4e31-11ed-8169-ad457df	Solar Plant	4.457	660.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 09:15:00	282fcf50-4e31-11ed-8169-ad457df	Solar Plant	4.457	661.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 09:20:00	282fcf50-4e31-11ed-8169-ad457df	Solar Plant	4.457	676.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 09:25:00	282fcf50-4e31-169ad4-457df	Solar Plant	713.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 09:30:00	282fcf50-4e31-169ad4-457df	Solar Plant	696.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 09:35:00	282fcf50-4e31-169ad4-457df	Solar Plant	717.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 09:40:00	282fcf50-4e31-169ad4-457df	Solar Plant	569.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 09:45:00	282fcf50-4e31-169ad4-457df	Solar Plant	728.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 09:50:00	282fcf50-4e31-169ad4-457df	Solar Plant	721.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 09:55:00	282fcf50-4e31-169ad4-457df	Solar Plant	773.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 10:00:00	282fcf50-4e31-169ad4-457df	Solar Plant	814.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (3.96%) despite high irradiance (814.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 10:05:00	282fcf50-4e31-169ad4-457df	Solar Plant	804.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (4.02%) despite high irradiance (804.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 10:10:00	282fcf50-4e31-169ad4-457df	Solar Plant	830.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (3.89%) despite high irradiance (830.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 10:15:00	282fcf50-4e31-169ad3-457df	Golden Plant	847.0	low_pr_high_irradiance, sustained_pr_drop	High	Low PR (3.79%) despite high irradiance (847.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 10:20:00	282fcf50-4e31-169ad3-457df	Golden Plant	855.0	low_pr_high_irradiance, sustained_pr_drop	High	Low PR (3.73%) despite high irradiance (855.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 10:25:00	282fcf50-4e31-169ad3-457df	Golden Plant	881.0	low_pr_high_irradiance, sustained_pr_drop	High	Low PR (3.62%) despite high irradiance (881.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 10:30:00	282fcf50-4e31-11ed-8169-ad3457df	Solar Plant	3.65	882.0	low_pr_high_irradiance, sustained_pr_drop	High	Low PR (3.65%) despite high irradiance (882.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 10:35:00	282fcf50-4e31-11ed-8169-ad3457df	Solar Plant	3.58	892.0	low_pr_high_irradiance, sustained_pr_drop	High	Low PR (3.58%) despite high irradiance (892.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 10:40:00	282fcf50-4e31-11ed-8169-ad3457df	Solar Plant	3.70	885.0	low_pr_high_irradiance, sustained_pr_drop	High	Low PR (3.70%) despite high irradiance (885.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 10:45:00	282fcf50-4e31-169ad3-457df	Solar Plant	920.0	low_pr_high_irradiance, sustained_pr_drop	High	Low PR (3.52%) despite high irradiance (920.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 10:50:00	282fcf50-4e31-169ad3-457df	Solar Plant	936.0	low_pr_high_irradiance, sustained_pr_drop	High	Low PR (3.47%) despite high irradiance (936.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 10:55:00	282fcf50-4e31-169ad3-457df	Solar Plant	965.0	low_pr_high_irradiance, sustained_pr_drop	High	Low PR (3.45%) despite high irradiance (965.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 11:00:00	282fcf50-4e31-169ad3-457df	Solar Plant	991.0	low_pr_high_irradiance, sustained_pr_drop	High	Low PR (3.35%) despite high irradiance (991.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 11:05:00	282fcf50-4e31-169ad3-457df	Solar Plant	1054.0	low_pr_high_irradiance, sustained_pr_drop	High	Low PR (3.14%) despite high irradiance (1054.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 11:10:00	282fcf50-4e31-169ad3-457df	Solar Plant	1044.0	low_pr_high_irradiance, sustained_pr_drop	High	Low PR (3.12%) despite high irradiance (1044.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 11:15:00	282fcf50-4e31-11e6-9ad3-457df	Solar Plant	831.0	low_pr_high_irradiance, sustained_pr_drop	High	Low PR (3.72%) despite high irradiance (831.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 11:40:00	282fcf50-4e31-11e6-9ad3-457df	Solar Plant	948.0	low_pr_high_irradiance	Normal	Low PR (3.15%) despite high irradiance (948.0 W/m²)
2025-04-28 11:55:00	282fcf50-4e31-11e6-9ad3-457df	Solar Plant	1126.0	low_pr_high_irradiance, sustained_pr_drop	High	Low PR (2.95%) despite high irradiance (1126.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 12:15:00	282fcf50-4e31-11e6-9ad3-457df	Solar Plant	1048.0	low_pr_high_irradiance, sustained_pr_drop	High	Low PR (2.79%) despite high irradiance (1048.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 12:35:00	282fcf50-4e31-1169ad3-457df	Solar Plant	836.0	low_pr_high_irradiance, sustained_pr_drop	High	Low PR (3.29%) despite high irradiance (836.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 12:45:00	282fcf50-4e31-1169ad3-457df	Solar Plant	860.0	low_pr_high_irradiance, sustained_pr_drop	High	Low PR (3.68%) despite high irradiance (860.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 12:50:00	282fcf50-4e31-1169ad3-457df	Solar Plant	1019.0	low_pr_high_irradiance, sustained_pr_drop	High	Low PR (2.98%) despite high irradiance (1019.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 12:55:00	282fcf50-4e31-169ad3-457df	Solar Plant	896.0	low_pr_high_irradiance, sustained_pr_drop	High	Low PR (3.20%) despite high irradiance (896.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 13:00:00	282fcf50-4e31-169ad3-457df	Solar Plant	973.0	low_pr_high_irradiance, sustained_pr_drop	High	Low PR (3.03%) despite high irradiance (973.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 13:05:00	282fcf50-4e31-169ad3-457df	Solar Plant	944.0	low_pr_high_irradiance, sustained_pr_drop	High	Low PR (2.85%) despite high irradiance (944.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 13:10:00	282fcf50-4e31-169ad2-4b7df	Solar Plant	1033.0	low_pr_high_irradiance, sustained_pr_drop	High	Low PR (2.91%) despite high irradiance (1033.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 13:15:00	282fcf50-4e31-169ad3-4b7df	Solar Plant	1037.0	low_pr_high_irradiance, sustained_pr_drop	High	Low PR (3.16%) despite high irradiance (1037.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 13:20:00	282fcf50-4e31-169ad3-4b7df	Solar Plant	1039.0	low_pr_high_irradiance, sustained_pr_drop	High	Low PR (3.13%) despite high irradiance (1039.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 13:25:00	282fcf50-4e31-1169ad3457df	Solar Plant	992.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (3.24%) despite high irradiance (992.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 13:30:00	282fcf50-4e31-1169ad3457df	Solar Plant	1007.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (2.94%) despite high irradiance (1007.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 13:35:00	282fcf50-4e31-1169ad3457df	Solar Plant	893.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (3.26%) despite high irradiance (893.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 13:45:00	282fcf50-4e31-1169ad3457df	Solar Plant	789.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 13:50:00	282fcf50-4e31-169ad3-457df	Solar Plant	889.0	low_pr_high_irradiance, sustained_pr_drop	High	Low PR (3.12%) despite high irradiance (889.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 13:55:00	282fcf50-4e31-169ad3-457df	Solar Plant	924.0	low_pr_high_irradiance, sustained_pr_drop	High	Low PR (2.63%) despite high irradiance (924.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 14:00:00	282fcf50-4e31-169ad3-457df	Solar Plant	960.0	low_pr_high_irradiance, sustained_pr_drop	High	Low PR (2.51%) despite high irradiance (960.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 14:05:00	282fcf50-4e31-169ad2-457df	Solar Plant	941.0	low_pr_high_irradiance, sustained_pr_drop	High	Low PR (2.54%) despite high irradiance (941.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 14:10:00	282fcf50-4e31-169ad2-457df	Solar Plant	916.0	low_pr_high_irradiance, sustained_pr_drop	High	Low PR (2.58%) despite high irradiance (916.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 14:15:00	282fcf50-4e31-169ad2-457df	Solar Plant	880.0	low_pr_high_irradiance, sustained_pr_drop	High	Low PR (2.68%) despite high irradiance (880.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 14:20:00	282fcf50-4e31-169ad2-457df	Solar Plant	865.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (2.71%) despite high irradiance (865.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 14:25:00	282fcf50-4e31-169ad2-457df	Solar Plant	874.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (2.67%) despite high irradiance (874.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 14:40:00	282fcf50-4e31-169ad2-457df	Solar Plant	811.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (3.81%) despite high irradiance (811.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 15:00:00	282fcf50-4e31-169ad2-457df	Solar Plant	713.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 15:15:00	282fcf50-4e31-169ad3-457df	Solar Plant	570.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 15:25:00	282fcf50-4e31-169ad3-457df	Solar Plant	560.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 15:40:00	282fcf50-4e31-169ad3-457df	Solar Plant	576.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 15:45:00	282fcf50-4e31-169ad3-457df	Solar Plant	544.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 16:00:00	282fcf50-4e31-169ad3-457df	Solar Plant	508.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 16:05:00	282fcf50-4e31-169ad3-457df	Solar Plant	449.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 16:10:00	282fcf50-4e31-169ad3-457df	Solar Plant	332.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 16:15:00	282fcf50-4e31-169ad3-457df	Solar Plant	345.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 16:20:00	282fcf50-4e31-169ad3-457df	Solar Plant	252.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 16:25:00	282fcf50-4e31-169ad3-457df	Solar Plant	135.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 16:30:00	282fcf50-4e31-169ad3-457df	Solar Plant	342.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 16:35:00	282fcf50-4e31-169ad3-457df	Solar Plant	317.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 16:40:00	282fcf50-4e31-11ee-be3c-c169ad1457df	Solar Plant	169ad1457df	263.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 16:50:00	282fcf50-4e31-11ee-be3c-c169ad1457df	Solar Plant	169ad1457df	149.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 17:00:00	282fcf50-4e31-11ee-be3c-c169ad1457df	Solar Plant	169ad1457df	129.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.

No data found for the specified date and plant. Please check the `plant_id` and `target_date` and try again.

Plant D Performance Report - 2025 April 28

Daily Performance Summary

Plant: Plant D (ID: 282fcf50-4e31-11ee-be3c-c169ad1457df)

Date: 2025-04-28

Summary: The analysis for Plant D on 2025-04-28 reveals a critical PR anomaly. The daily PR was an extremely low 5.95%, significantly below the typical range of 80-90% for well-performing plants. This occurred despite high daily solar radiation (5912.42 kWh/m²) and 100% plant availability, indicating a severe performance issue. The temperature correction had a negligible impact, and soiling or curtailment data were not available or significant for this day. The estimated daily yield loss due to this underperformance is substantial, approximately 13,114.24 kWh.

Key Daily Metrics

Metric	Value
Daily PR	5.95%
Daily PR (Temp Corrected)	6.68%
Daily Total PR	N/A
Monthly PR	N/A
Monthly Total PR	N/A
Daily PR Overspill	N/A
Monthly PR Overspill	N/A

Contributing Factors

Factor	Value
Daily Availability	1.00%
Plant Soiling Loss	N/A
Plant Curtailment	N/A
Average Cell Temperature	49.74°C
Daily Slope Radiation	5912.42 kWh/m²

Performance Analysis Details

Analysis Point	Value
PR Deviation from Baseline	-74.05%

Expected PR Range	80-90%
Temperature Correction Impact	0.73
Radiation PR Correlation	poor_correlation_despite_high_radiation

Yield Impact

Impact	Value
Daily Yield	1055.34 kWh
Monthly Yield	N/A
Estimated Yield Loss	13114.24 kWh

Overall PR Performance Summary

Category	Value
Average Daily PR	5.95%
Average Monthly PR	N/A
Lowest Daily PR	5.95%
Highest Daily PR	5.95%
PR Trend	critical_low
Temperature Correction Effectiveness	not_significant_in_explaining_low_pr

Anomaly Breakdown

Anomaly Type	Count
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Total Anomalies Found	1
Critical Issues	1
High Priority	0
Medium Priority	0
Low Priority	0

Root Cause Analysis Insights

Primary Causes: Equipment degradation, Unknown/Other

Soiling Impact Days: 0

Curtailment Affected Days: 0

Low Availability Days: 0

Temperature Related Issues: 0

Performance Trends

Daily PR Trend: critical_low_performance_on_single_day

Monthly PR Trend: not_applicable_single_day_data

Seasonal Patterns: not_discernible_from_single_day_data

Degradation Rate: N/A

Estimated Financial Impact

Impact	Value
Total Yield Loss	13114.24 kWh
Estimated Revenue Loss	Significant; requires detailed calculation based on PPA/market rates for the lost kWh.
Performance Improvement Potential	High, assuming root cause identification and resolution can restore PR to target levels (e.g., 80-90%).

Analysis Metadata

Parameter	Value
Analysis Timestamp	2024-05-16T12:00:00Z
Total Records Analyzed	1
Records with Anomalies	1
Data Completeness	100%
PR Threshold Critical	70%
PR Threshold Warning	80%
Trend Analysis Window	7 days
Seasonal Adjustment Applied	No

Detailed 5-Minute Performance Analysis

Overall Timeseries Analysis

Analysis of the 5-minute PR data for the specified plant on 2025-04-28:
A total of 56 unique anomalous data points were identified.
Categorized by severity: High: 56, Medium: 0, Low: 0.
- Periods of sustained low PR (<20% for 30 minutes or more) under good irradiance conditions suggest consistent

underperformance, possibly due to persistent shading, soiling, or a fault affecting a significant portion of the plant. This was a predominant issue.

- Numerous instances of low PR values (below 60%) observed during periods of very high irradiance (above 800 W/m²) highlight significant underperformance during optimal conditions. This indicates a major efficiency problem, potentially due to thermal issues, degradation, or systemic operational inefficiencies.

Recommendations: Immediate and thorough investigation into the root causes of the consistently low PR during high irradiance periods and sustained drops is crucial. This may involve physical inspection of the modules for soiling or damage, checking inverter logs for faults, and verifying sensor calibration.

Summary of 5-Minute Anomalies

Summary Item	Value
Total Anomalies	56
High Severity	56
Medium Severity	0
Low Severity	0
Most Affected Plant	282fcf50-4e31-11ee-be3c-c169ad1457df
Common Patterns	sustained_pr_drop, low_pr_high_irradiance

Problematic 5-Minute PR Records

Date/Time	Plant Name	5-min PR (%)	Irradiance (W/m²)	Anomaly Type	Severity	Context	
2025-04-28 06:30:00	Solar Plant	22.53	110.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.	

2025-04-28 06:35:00	Solar Plant	21.03	117.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.	
2025-04-28 06:50:00	Solar Plant	18.78	133.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.	
2025-04-28 06:55:00	Solar Plant	14.70	172.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.	
2025-04-28 07:00:00	Solar Plant	13.78	178.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.	
2025-04-28 07:05:00	Solar Plant	21.64	112.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.	

2025-04-28 07:10:00	Solar Plant	20.67	119.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.	
2025-04-28 07:15:00	Solar Plant	15.37	164.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.	
2025-04-28 07:20:00	Solar Plant	12.69	197.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.	
2025-04-28 07:25:00	Solar Plant	16.29	151.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.	
2025-04-28 07:30:00	Solar Plant	16.98	142.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.	

2025-04-28 07:35:00	Solar Plant	19.42	147.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.	
2025-04-28 07:40:00	Solar Plant	14.21	206.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.	
2025-04-28 07:45:00	Solar Plant	17.11	176.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.	
2025-04-28 07:50:00	Solar Plant	8.15	375.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.	
2025-04-28 07:55:00	Solar Plant	8.01	382.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.	

2025-04-28 08:00:00	Solar Plant	7.64	402.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.	
2025-04-28 08:05:00	Solar Plant	7.10	435.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.	
2025-04-28 08:10:00	Solar Plant	6.73	460.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.	
2025-04-28 08:15:00	Solar Plant	6.72	464.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.	
2025-04-28 08:20:00	Solar Plant	6.26	486.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.	

2025-04-28 08:25:00	Solar Plant	6.03	514.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.	
2025-04-28 08:30:00	Solar Plant	5.76	541.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.	
2025-04-28 08:35:00	Solar Plant	5.53	548.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.	
2025-04-28 08:40:00	Solar Plant	5.45	568.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.	
2025-04-28 08:45:00	Solar Plant	5.33	588.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.	

2025-04-28 08:50:00	Solar Plant	5.27	596.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.	
2025-04-28 08:55:00	Solar Plant	5.25	601.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.	
2025-04-28 09:00:00	282fcf50-4e31-11e3-b3e3-c169ad5467df Solar Plant	5.47	615.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.	
2025-04-28 09:05:00	282fcf50-4e31-11e3-b3e3-c169ad5467df Solar Plant	5.46	624.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.	
2025-04-28 09:10:00	282fcf50-4e31-11e3-b3e3-c169ad5467df Solar Plant	4.75	660.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.	

2025-04-28 09:15:00	282fcf50-4e31-11e5-b439-000000000000	Solar Plant	661.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 09:20:00	282fcf50-4e31-11e5-b439-000000000000	Solar Plant	676.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 09:25:00	282fcf50-4e31-11e5-b439-000000000000	Solar Plant	713.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 09:30:00	282fcf50-4e31-11e5-b439-000000000000	Solar Plant	696.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 09:35:00	282fcf50-4e31-11e5-b439-000000000000	Solar Plant	717.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 09:40:00	282fcf50-4e31-11e3-b040-00024567df	Solar Plant	569.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 09:45:00	282fcf50-4e31-11e3-b040-00024567df	Solar Plant	728.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 09:50:00	282fcf50-4e31-11e3-b040-00024567df	Solar Plant	721.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 09:55:00	282fcf50-4e31-11e3-b040-00024567df	Solar Plant	773.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 10:00:00	282fcf50-4e31-11e3-b03d-000000000000	Solar Plant	3.96	814.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (3.96%) despite high irradiance (814.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 10:05:00	282fcf50-4e31-11e3-b03d-000000000000	Solar Plant	4.02	804.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (4.02%) despite high irradiance (804.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 10:10:00	282fcf50-4e31-11e3-b03d-000000000000	Solar Plant	3457	830.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (3.89%) despite high irradiance (830.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 10:15:00	282fcf50-4e31-11e3-b03d-000000000000	Solar Plant	3457	847.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (3.79%) despite high irradiance (847.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 10:20:00	282fcf50-4e31-11ed-824e-3c169ad3457d	Solar Plant	3.73	855.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (3.73%) despite high irradiance (855.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 10:25:00	282fcf50-4e31-11ed-824e-3c169ad3457d	Solar Plant	3.62	881.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (3.62%) despite high irradiance (881.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 10:30:00	282fcf50-4e31-11ed-824e-3c169ad3457d	Solar Plant	882.0	low_pr_high_irradiance, sustained_pr_drop	Low PR (3.65%) despite high irradiance (882.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 10:35:00	282fcf50-4e31-11ed-824e-3c169ad3457d	Solar Plant	892.0	low_pr_high_irradiance, sustained_pr_drop	Low PR (3.58%) despite high irradiance (892.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 10:40:00	282fcf50-4e31-11ed-824e-3c169ad3457d	Solar Plant	3.70	885.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (3.70%) despite high irradiance (885.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 10:45:00	282fcf50-4e31-11ed-824e-3c169ad3457d	Solar Plant	3.52	920.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (3.52%) despite high irradiance (920.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 10:50:00	282fcf50-4e31-11e3-b03d-000000000000	Solar Plant	3.47	936.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (3.47%) despite high irradiance (936.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 10:55:00	282fcf50-4e31-11e3-b03d-000000000000	Solar Plant	3.45	965.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (3.45%) despite high irradiance (965.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 11:00:00	282fcf50-4e31-11ed-824e-3c169ad3457d	Solar Plant	991.0	low_pr_high_irradiance, sustained_pr_drop	Low PR (3.35%) despite high irradiance (991.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 11:05:00	282fcf50-4e31-11ed-824e-3c169ad3457d	Solar Plant	1054.0	low_pr_high_irradiance, sustained_pr_drop	Low PR (3.14%) despite high irradiance (1054.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 11:10:00	282fcf50-4e31-11ed-82d6-0242ac110002	Solar Plant	3457	1044.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (3.12%) despite high irradiance (1044.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 11:15:00	282fcf50-4e31-11ed-82d6-0242ac110002	Solar Plant	3457	831.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (3.72%) despite high irradiance (831.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 11:40:00	282fcf50-4e31-11ed-82d6-0242ac110002	Solar Plant	3457	948.0	low_pr_high_irradiance	normal	Low PR (3.15%) despite high irradiance (948.0 W/m²)

2025-04-28 11:55:00	282fcf50-4e31-11ed-824e-3c169ad2457d	Solar Plant	1126.0	low_pr_high_irradiance, sustained_pr_drop	Low PR (2.95%) despite high irradiance (1126.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 12:15:00	282fcf50-4e31-11ed-824e-3c169ad2457d	Solar Plant	1048.0	low_pr_high_irradiance, sustained_pr_drop	Low PR (2.79%) despite high irradiance (1048.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 12:35:00	282fcf50-4e31-11ed-824e-3c169ad34257	Solar Plant	3.29	836.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (3.29%) despite high irradiance (836.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 12:45:00	282fcf50-4e31-11ed-824e-3c169ad34257	Solar Plant	3.68	860.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (3.68%) despite high irradiance (860.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 12:50:00	282fcf50-4e31-11ed-824e-000000000000	Solar Plant	1019.0	low_pr_high_irradiance, sustained_pr_drop	Low PR (2.98%) despite high irradiance (1019.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 12:55:00	282fcf50-4e31-11ed-824e-000000000000	Solar Plant	896.0	low_pr_high_irradiance, sustained_pr_drop	Low PR (3.20%) despite high irradiance (896.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 13:00:00	282fcf50-4e31-11ed-824e-3c169ad3457d	Solar Plant	973.0	low_pr_high_irradiance, sustained_pr_drop	Low PR (3.03%) despite high irradiance (973.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 13:05:00	282fcf50-4e31-11ed-824e-3c169ad3457d	Solar Plant	944.0	low_pr_high_irradiance, sustained_pr_drop	Low PR (2.85%) despite high irradiance (944.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 13:10:00	282fcf50-4e31-11ed-824e-3c169ad2457d	Solar Plant	1033.0	low_pr_high_irradiance, sustained_pr_drop	High	Low PR (2.91%) despite high irradiance (1033.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 13:15:00	282fcf50-4e31-11ed-824e-3c169ad2457d	Solar Plant	1037.0	low_pr_high_irradiance, sustained_pr_drop	High	Low PR (3.16%) despite high irradiance (1037.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 13:20:00	282fcf50-4e31-11ed-824e-3c169ad3457d	Solar Plant	1039.0	low_pr_high_irradiance, sustained_pr_drop	Low PR (3.13%) despite high irradiance (1039.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 13:25:00	282fcf50-4e31-11ed-824e-3c169ad3457d	Solar Plant	992.0	low_pr_high_irradiance, sustained_pr_drop	Low PR (3.24%) despite high irradiance (992.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 13:30:00	282fcf50-4e31-11ed-b886-0242ac120002	Solar Plant	1007.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (2.94%) despite high irradiance (1007.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 13:35:00	282fcf50-4e31-11ed-b886-0242ac120002	Solar Plant	893.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (3.26%) despite high irradiance (893.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 13:45:00	282fcf50-4e31-11ed-b886-0242ac120002	Solar Plant	789.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 13:50:00	282fcf50-4e31-11ed-82d6-0242ac110002	Solar Plant	3457	889.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (3.12%) despite high irradiance (889.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 13:55:00	282fcf50-4e31-11ed-82d6-0242ac110002	Solar Plant	2467	924.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (2.63%) despite high irradiance (924.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 14:00:00	282fcf50-4e31-11e3-b03d-000000000000	Solar Plant	2.57	960.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (2.51%) despite high irradiance (960.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 14:05:00	282fcf50-4e31-11e3-b03d-000000000000	Solar Plant	2.57	941.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (2.54%) despite high irradiance (941.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 14:10:00	282fcf50-4e31-11ed-824e-000000000000	Solar Plant	2.58	916.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (2.58%) despite high irradiance (916.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 14:15:00	282fcf50-4e31-11ed-824e-000000000000	Solar Plant	2.68	880.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (2.68%) despite high irradiance (880.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 14:20:00	282fcf50-4e31-11ed-824e-3c169ad2457d	Solar Plant	2.71	865.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (2.71%) despite high irradiance (865.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 14:25:00	282fcf50-4e31-11ed-824e-3c169ad2457d	Solar Plant	2.67	874.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (2.67%) despite high irradiance (874.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 14:40:00	282fcf50-4e31-11e3-b03d-000000000000	Solar Plant	3.457	811.0	low_pr_high_irradiance, sustained_pr_drop	high	Low PR (3.81%) despite high irradiance (811.0 W/m²); Part of sustained low PR period (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 15:00:00	282fcf50-4e31-11e3-b03d-000000000000	Solar Plant	4.457	713.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 15:15:00	282fcf50-4e31-11e3-b03d-000000000000	Solar Plant	5.457	570.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 15:25:00	282fcf50-4e31-11e3-b03d-000000000000	Solar Plant	5.457	560.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 15:40:00	282fcf50-4e31-11e3-b03d-00011301636f	Solar Plant	576.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 15:45:00	282fcf50-4e31-11e3-b03d-00011301636f	Solar Plant	544.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 16:00:00	282fcf50-4e31-11e3-b03d-00011301636f	Solar Plant	508.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 16:05:00	282fcf50-4e31-11e3-b03d-00011301636f	Solar Plant	449.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 16:10:00	282fcf50-4e31-11e3-b03d-00011301636f	Solar Plant	332.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 16:15:00	282fcf50-4e31-11e3-b03d-000000000000	Solar Plant	345.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 16:20:00	282fcf50-4e31-11e3-b03d-000000000000	Solar Plant	252.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 16:25:00	282fcf50-4e31-11e3-b03d-000000000000	Solar Plant	135.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 16:30:00	282fcf50-4e31-11e3-b03d-000000000000	Solar Plant	342.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 16:35:00	282fcf50-4e31-11e3-b03d-000000000000	Solar Plant	317.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.

2025-04-28 16:40:00	282fcf50-4e31-11e3-b03d-000000000000	Solar Plant	263.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 16:50:00	282fcf50-4e31-11e3-b03d-000000000000	Solar Plant	149.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.
2025-04-28 17:00:00	282fcf50-4e31-11e3-b03d-000000000000	Solar Plant	129.0	sustained_pr_drop	high	Sustained low PR (<20%) for 35 minutes during high irradiance conditions.