## Write sql query:

Beginners:

1. List all sites name with ONM\_Project\_status is 'In operation'.

SELECT AssetTitle

FROM Business.vwSites

WHERE ONM\_Project\_status = 'In operation'

1. List all weather stations “AssetTitle” for Sarnia Solar.

SELECT w.AssetTitle

FROM Business.vwSites s

LEFT JOIN Business.vwWeatherStations w

ON s.AssetID = w.SiteAssetId

WHERE s.AssetTitle = 'Sarnia Solar'

1. Retrieve the site name (“AssetTitle”) and the associated inverter names and models (“AssetTitle” and “Make\_Model”) for all inverters located at the Sarnia Solar site.

SELECT s.AssetTitle, i.AssetTitle, i.Make\_Model

FROM Business.vwSites s

LEFT JOIN Business.vwInverters i

ON s.AssetID = i.SiteAssetID

WHERE s.AssetID = 48

Intermediate:

1. List all site names (“AssetTitle”) that are currently in operation along with the total number of inverters for each site.

SELECT s.AssetTitle, COUNT(i.AssetTitle) AS InverterCount

FROM Business.vwSites s

LEFT JOIN Business.vwInverters i

ON s.AssetID = i.SiteAssetID

WHERE s.ONM\_Project\_Status = 'In operation'

GROUP BY s.AssetTitle

1. List all site names (“AssetTitle”) that are currently in operation along with the total number of inverters for each site.

SELECT s.AssetTitle, COUNT(w.AssetTitle) AS InverterCount

FROM Business.vwSites s

LEFT JOIN Business.vwWeatherStations w

ON s.AssetID = w.SiteAssetID

WHERE s.ONM\_Project\_Status = 'In operation'

GROUP BY s.AssetTitle

Advanced:

1. For all operational sites, list each site's ID and name, Tilt\_Angle, MaximumTrackingLimitAngle and MinimumTrackingLimitAngle for blocks where the module tilt angle is not null. Exclude records with null or blank azimuth or tilt angle values.

SELECT

s.AssetID,

s.AssetTitle,

AVG(CAST(b.Modules\_Tilt\_Angle AS FLOAT)) AS Tilt\_Angle,

AVG(CAST(b.Modules\_Azimuth\_Angle AS FLOAT)) AS Azimuth\_Angle,

t.[MaximumTrackingLimitAngle],

t.[MinimumTrackingLimitAngle],

CASE

WHEN AVG(CAST(b.Modules\_Tilt\_Angle AS FLOAT)) = -1 THEN “Tracker”

ELSE “Fix Mount”

END AS Mount\_Type

FROM Business.vwSites s

LEFT JOIN Business.vwBlockDetails b

ON s.AssetID = b.SiteAssetID

LEFT JOIN Business.vwTrackerController t

ON s.AssetID = t.SiteAssetID

WHERE s.OnM\_Project\_Status = 'In Operation'

AND b.Modules\_Tilt\_Angle IS NOT NULL

AND b.Modules\_Azimuth\_Angle IS NOT NULL

AND b.Modules\_Tilt\_Angle NOT LIKE ''

AND b.Modules\_Azimuth\_Angle NOT LIKE ''

GROUP BY s.AssetID, s.AssetTitle, t.[MaximumTrackingLimitAngle], t.[MinimumTrackingLimitAngle]

1. Retrieve the most recent production record (latest timestamp) for each date from the #production table.

--Create a temporary local table

CREATE TABLE #production (

[timestamp] DATETIME,

[date] DATE,

total\_output INT

);

-- Insert data into the temporary table

INSERT INTO #production ([timestamp], [date], total\_output) VALUES

('2025-04-15 17:00', '2025-04-15', 185),

('2025-04-15 17:30', '2025-04-15', 192),

('2025-04-16 17:15', '2025-04-16', 188),

('2025-04-17 17:37', '2025-04-17', 186),

('2025-04-18 17:14', '2025-04-18', 176),

('2025-04-18 17:50', '2025-04-18', 183),

('2025-04-19 17:16', '2025-04-19', 188),

('2025-04-19 17:44', '2025-04-19', 196);

WITH RankedProduction AS (

SELECT

[timestamp],

[date],

total\_output,

ROW\_NUMBER() OVER (PARTITION BY [date] ORDER BY [timestamp] DESC) AS rn

FROM #production

)

SELECT

[timestamp],

[date],

total\_output

FROM RankedProduction

WHERE rn = 1;