-- USE Cleanenergy;

-- 1. Total Energy Production by Energy Type

SELECT Type\_of\_Energy, SUM(Capacity\_MW) AS Total\_Production

FROM Energy\_Producers

GROUP BY Type\_of\_Energy

ORDER BY Total\_Production DESC;

-- 2. Energy Consumption by Consumer Type

SELECT Type, SUM(Energy\_Usage\_kWh) AS Total\_Consumption

FROM Energy\_Consumers

GROUP BY Type

ORDER BY Total\_Consumption DESC;

-- 3. Average Energy Price by Energy Type

SELECT Energy\_Type, AVG(Price\_Per\_Unit) AS Avg\_Price

FROM Energy\_Prices

GROUP BY Energy\_Type

ORDER BY Avg\_Price DESC;

-- 4. Energy Price Trend Over Time (for Solar as an example)

SELECT Date, Price\_Per\_Unit

FROM Energy\_Prices

WHERE Energy\_Type = 'Solar'

ORDER BY Date ASC;

-- 5. Most Expensive Region for Energy Consumption

SELECT Energy\_Type, Region, MAX(Price\_Per\_Unit) AS Max\_Price

FROM Energy\_Prices

GROUP BY Energy\_Type, Region

ORDER BY Max\_Price DESC;

-- 6. Details of Renewable Energy Projects (including status and capacity)

SELECT Name, Type, Capacity\_MW, Status

FROM Renewable\_Energy\_Projects

ORDER BY Capacity\_MW DESC;

-- 7. Consumers with Energy Usage Greater than 10,000 kWh

SELECT Name, Type, Location, Energy\_Usage\_kWh

FROM Energy\_Consumers

WHERE Energy\_Usage\_kWh > 10000

ORDER BY Energy\_Usage\_kWh DESC;

-- 8. Environmental Impact Assessments of Energy Projects

SELECT Project\_Facility\_ID, Type\_of\_Impact, Mitigation\_Measures, Compliance\_Status

FROM Environmental\_Impact\_Assessments

ORDER BY Compliance\_Status DESC;

-- 9. Energy Distribution Networks with High Efficiency (Efficiency Rating > 0.85)

SELECT Name, Coverage\_Area, Efficiency\_Rating

FROM Energy\_Distribution\_Networks

WHERE Efficiency\_Rating > 0.85

ORDER BY Efficiency\_Rating DESC;

-- 10. Operational Energy Storage Facilities

SELECT Type, Capacity\_MWh, Location, Operational\_Status

FROM Energy\_Storage\_Facilities

WHERE Operational\_Status = 'Operational'

ORDER BY Capacity\_MWh DESC;

-- 11. Government Policies Impacting Clean Energy Affordability (High Impact)

SELECT Name, Type, Effective\_Date, Impact\_on\_Affordability\_Clean\_Energy

FROM Government\_Policies\_Regulations

WHERE Impact\_on\_Affordability\_Clean\_Energy = 'High'

ORDER BY Effective\_Date DESC;

-- 12. Participation in Energy Efficiency Programs

SELECT Name, Target\_Audience, Success\_Metrics

FROM Energy\_Efficiency\_Programs

ORDER BY Start\_Date DESC;

-- 13. Energy Producers Operating in a Specific Location (e.g., Nairobi)

SELECT Name, Type\_of\_Energy, Capacity\_MW

FROM Energy\_Producers

WHERE Location = 'Nairobi'

ORDER BY Capacity\_MW DESC;