COFI POWERPLAY

CASE STUDY

PRESENTED BY:

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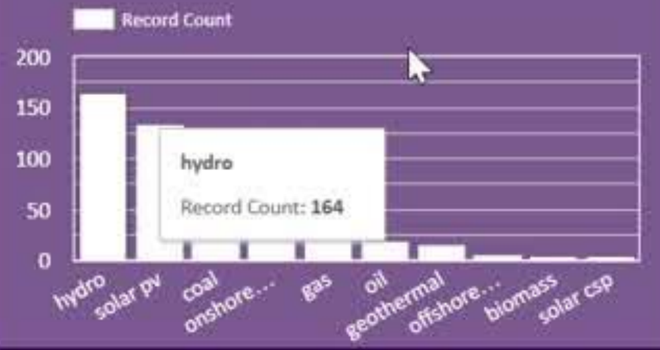
COFI REPORT

primary_fuel	Record Cou...
Type to search	
waste	3
unknown	1
solar pv	132
solar csp	3

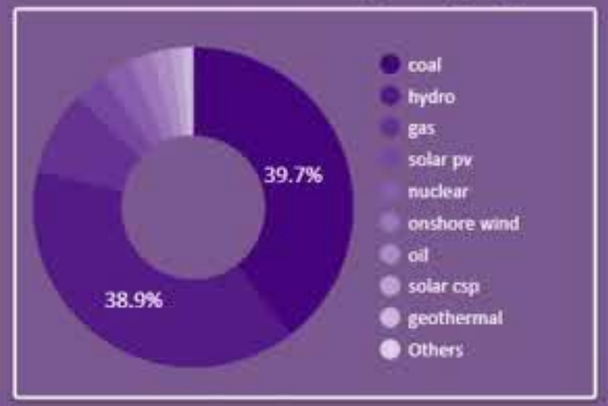
region	Record Count
Type to search	
Oceania	3
Europe	117
Asia	302
Americas	55

subregion	Record Co...
Type to search	
Western Asia	30
Sub-Saharan Africa	97
Southern Europe	55
Southern Asia	67

Number of Projects by Energy Type

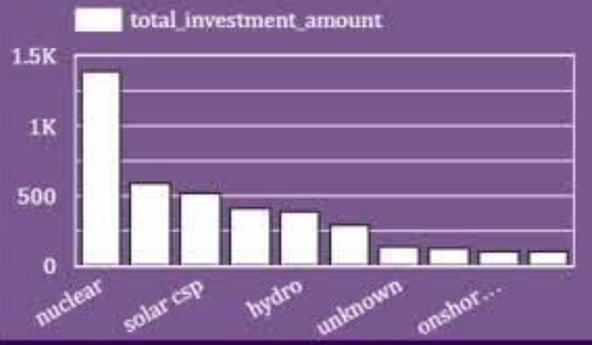


Investment Distribution By Energy Type

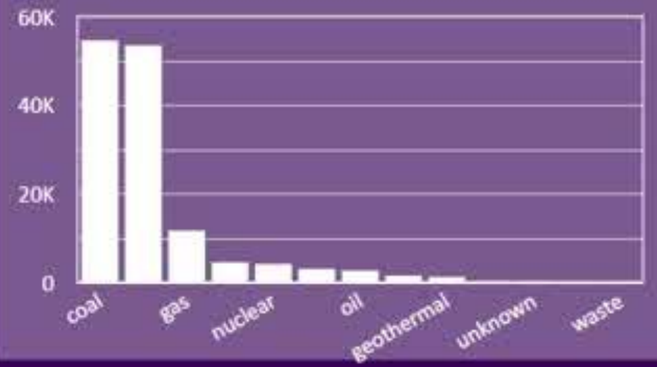


Geographical Distribution of Investment

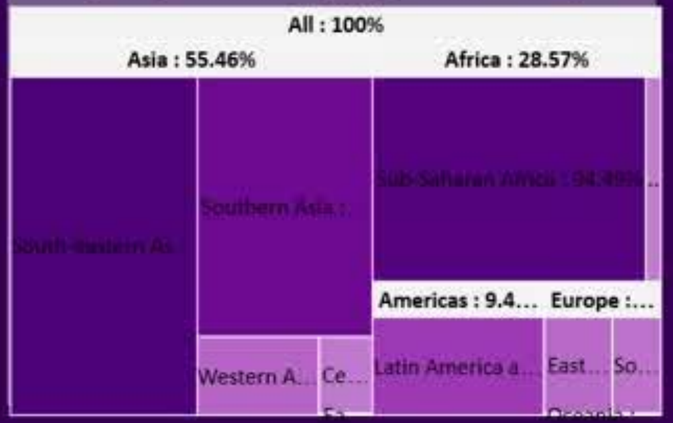
Average Investment Size By Energy Type



Renewable vs Non-Renewable Investment Ratio



Analysis of Investment by Region and Sub-Region



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BACKGROUND AND PROBLEM

The COFI PowerPlay case study offers a comprehensive analysis of global energy investments, particularly focusing on projects funded by Chinese financial institutions under the Belt and Road Initiative (BRI). Leveraging data from the China Overseas Finance Inventory (COFI) Database, it examines investment patterns in power-generation projects across BRI countries. Designed for data science professionals, the case study presents a critical view of the strategic and economic complexities surrounding China's global energy financing. The key challenge is to explore investment trends, assess regional impacts, and derive data-driven insights into China's growing influence in the global energy market.

STAKEHOLDERS

01.

INTERNAL STAKEHOLDERS

- *Consultancy firms analysts.*
- *Decision makers.*

02.

EXTERNAL STAKEHOLDERS

- *Multinational corporations.*
- *RBI Country Governments.*
- Environmental groups.

GOALS

- ***Understanding Investment Patterns***: Trainees will analyze the data from COFI Database to identify trends in energy-sector investments, focusing on the geographic distribution, energy types, and project scales across various BRI countries.

- ***Evaluating Economic and Environmental Impacts:*** This encourages participants to assess the economic outcomes of these investments, including their contributions to energy infrastructure, as well as their environmental implications.

Key Performance Indicator (KPI)

Total Investment

137,495.79

Average Investment in Energy Type

1,390

Record Count

592.0

Recommended Analysis

1. Investment Distribution by Energy Type:

- ***Visualization Type:*** *Pie Chart*
- ***Columns Used:*** *primary_ fuel, total_ investment_ amount*
- ***Calculation:*** *Sum of total_ investment_ amount grouped by primary_ fuel.*
- ***Creating in Looker Studio:***
  - *Use a Pie Chart to set primary_ fuel as the Dimension.*
  - *SUM of total_ investment_ amount as the Metric.*
- ***Output:*** *Coal(39.7%) has the highest investment distribution as compared to others(0.3%).*

Recommended Analysis

2. Geographical Distribution of Investments:

- ***Visualization Type***: *Geo Map*
- ***Columns Used:*** *country, total_ investment_ amount*
- ***Calculation:*** *Sum of total_ investment_ amount grouped by country.*
- ***Creating in Looker Studio:***
  - *Use a Geo Map to set country as Dimension.*
  - *SUM of total_ investment_ amount as Metric.*
- ***Output:*** *As compared to Bulgaria(16.1), Pakistan(20,820.96) has the highest geographical distribution of investment.*

Recommended Analysis

3. Average Investment Size by Energy Type:

- ***Visualization Type:*** *Column Chart*
- ***Columns Used:*** *primary_ fuel, total_ investment_ amount*
- ***Calculation:*** *Average of total_ investment_ amount grouped by primary_ fuel.*
- ***Creating in Looker Studio:***
  - *Use a Column Chart to set primary_ fuel as Dimension.*
  - *AVERAGE of total_ investment_ amount as Metric.*
- ***Output:*** *Nuclear energy(1,390) has the highest average investment from energy type as compared to others.*

Recommended Analysis

4. Renewable vs Non-Renewable Investment Ratio:

- ***Visualization Type:*** *Stacked Bar Chart.*
- ***Columns Used:*** *primary_ fuel, total_ investment_ amount.*
- ***Calculation:*** *Total investment grouped by primary_ fuel categorized into renewable and non-renewable.*
- ***Creating in Looker Studio:***
  - *Use a Stacked Bar Chart, setting a time dimension if available or directly primary_ fuel.*
  - *SUM of total_ investment_ amount as Metric, categorized by renewable status.*
- ***Output:*** *Coal(54,584.89) which is categorized as non-renewable source has the highest investment ratio as compared to other source.*

Recommended Analysis

5. Analysis of Investment by Region and Subregion:

- ***Visualization Type:*** *Tree map or Geo Map.*
- ***Columns Used:*** *region, subregion, total_ investment_ amount.*
- ***Calculation:*** *Sum of total_ investment_ amount grouped by region and subregion.*
- ***Creating in Looker Studio:***
  - ***For Tree map or Geo Map:***
    - *Use Tree map to show region with breakdowns by subregion.*
    - *Set region and subregion as Dimensions.*
    - *SUM of total_ investment_ amount as Metric.*
    - *Customize the visualization to display investment intensity via colour depth.*
- ***Output:*** *Asia(55.46%) has the highest analysis of investment .*

Recommended Analysis

6. Number of Projects by Energy Type:

- ***Visualization Type:*** *Column Chart.*
- ***Columns Used:*** *primary_ fuel.*
- ***Calculation:*** *Count of records grouped by primary_ fuel.*
- ***Creating in Looker Studio:***
  - *Use a Column Chart to set primary_ fuel as Dimension.*
  - *COUNT of records as Metric.*
- ***Output:*** *Hydro(164) has the more number of projects by energy as compared to others.*

Conclusion

- In conclusion, the COFI PowerPlay case study highlights key investment trends in the global energy sector, driven by Chinese financing under the Belt and Road Initiative. Based on data analysis, it encouraged to recommend a balanced approach that prioritizes sustainable energy projects while addressing regional energy demands.
- The study underscores the importance of strategic decision-making in global energy investments, advocating for a focus on clean energy to mitigate environmental impacts. Ultimately, data-driven insights guide recommendations for optimizing investment portfolios that align with both economic growth and sustainability goals.

Thank You

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