RENEWABLE INVESTMENTS ATTRACTIVENESS RANKING FRAMEWORK FOR DECISION-MAKERS[1]

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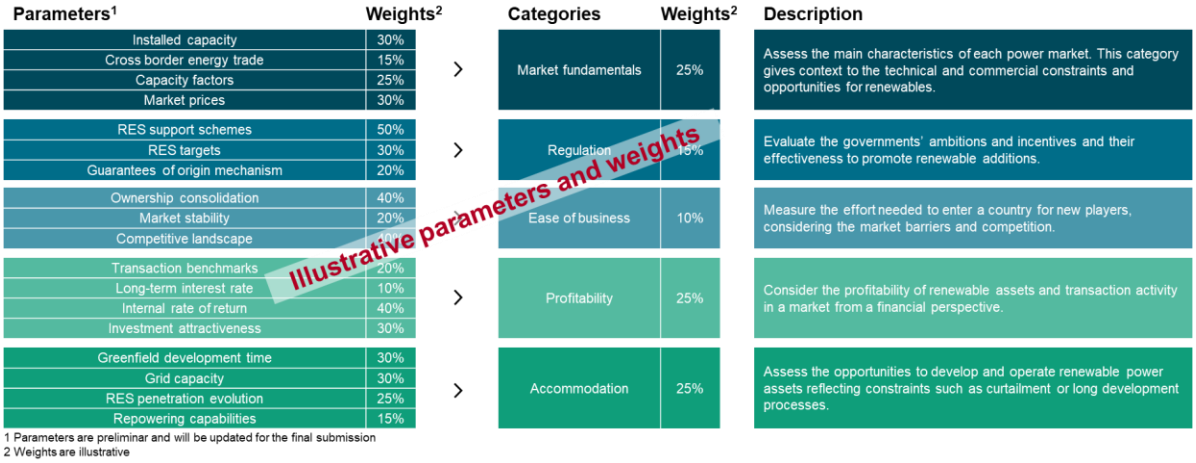
Overview

S&P Global has developed a framework to assess the attractiveness of renewables for investment purposes, highlighting risks and opportunities based on the comparison of 18 parameters and five categories. The framework can be adapted to any generation technology and country. This framework is designed to assist energy companies in making sound decisions to expand their renewable energy portfolio by prioritizing markets showcasing high opportunities and discarding low-profile markets. Policymakers can also use it to assess the position of their market against others, understanding their strengths and weaknesses to improve market conditions and attract investors and developers.

Methods

The methodology considers the analysis of up to 18 parameters classified into five categories: market fundamentals, regulation, ease of business, profitability, and accommodation. Each parameter[2] analyzes a specific metric and attributes a score from 0 to 5.



Most of the parameters have been designed to compare quantitative metrics. For example, the capacity factors score the expected capacity factor of a specific technology in 2030 (in %). The highest capacity factors scored 5, whereas low capacity factors scored the lowest. The boundaries for the lowest and highest scores vary depending on the markets analyzed. For example, comparing European markets, the solar capacity factor boundaries could be from 8% (lowest score) to 20% (highest score). In contrast, the comparison of African markets could see the maximum boundary reach more than 30% (highest score) due to better solar irradiation.

Some parameters are more complex and involve a qualitative assessment. For example, the Renewable Energy Sources (RES) support schemes parameter entails three sub-parameters: the variety of schemes, long-term visibility, and the mechanism's effectiveness. Each sub-parameter is analyzed to build the score from 0 to 5. In this case, the variety of schemes attributes a score of 0 for countries without a support scheme, 0.5 for countries with only one support scheme, and 1 for countries with several measures to support renewables.

[1] S&P Global Commodity Insights research group developed the original conceptualization of the framework explored in this paper.
[2] The complete list of parameters with description and illustrative scoring can be made available on demand.

Each parameter score is given a weight used to compute the category score. Finally, each category score is weighted to calculate a final score for each market and technology. These scores are comparable within the same technology which allows the creation of a ranking.

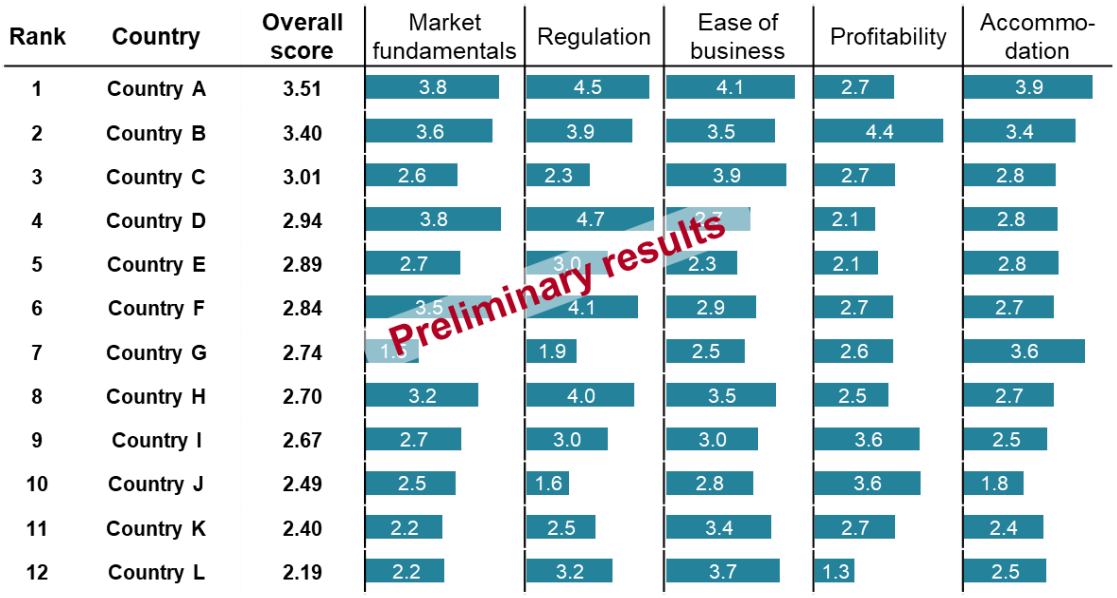
Note that the framework is adaptable to suit the specific needs of a company or a government by playing with the weights of the categories and parameters. These weights represent the importance of the component in the eyes of the framework's user.

Results

We applied the proposed framework to 12 European countries and created two rankings for solar PV and onshore wind. We observed that the countries can be divided into two distinct groups.

The first group comprises established markets characterized by significant economies (high demand) and a well-established renewable sector. These countries, which include Germany, Italy, France, Spain, and the UK, began investing in solar PV and onshore wind over a decade ago and were pioneers in the renewable sector. Their average solar PV and onshore wind contribution to the electricity mix is around 25%. These markets generally scored higher in the list of countries studied, reflecting their robust infrastructure, mature regulatory environments, and high market stability.

The second group comprises high-growth markets, such as Romania, Poland, Czechia, Lithuania, Austria, and Romania, which have recently started integrating renewables into their energy mix. The average solar PV and onshore wind contribution in these countries is around 13%. Despite their smaller scale, these markets present a high opportunity for new entrants.



Rank	Country	Overall score	Market fundamentals	Regulation	Ease of business	Profitability	Accommo-dation
1	Country A	3.51	3.8	4.5	4.1	2.7	3.9
2	Country B	3.40	3.6	3.9	3.5	4.4	3.4
3	Country C	3.01	2.6	2.3	3.9	2.7	2.8
4	Country D	2.94	3.8	4.7	[illegible]	2.1	2.8
5	Country E	2.89	2.7	[illegible]	2.3	2.1	2.8
6	Country F	2.84	[illegible]	4.1	2.9	2.7	2.7
7	Country G	2.74	[illegible]	1.9	2.5	2.6	3.6
8	Country H	2.70	3.2	4.0	3.5	2.5	2.7
9	Country I	2.67	2.7	3.0	3.0	3.6	2.5
10	Country J	2.49	2.5	1.6	2.8	3.6	1.8
11	Country K	2.40	2.2	2.5	3.4	2.7	2.4
12	Country L	2.19	2.2	3.2	3.7	1.3	2.5

For the final submission and presentation, the framework will be applied to all EU countries and other European countries not part of the EU (around 30 countries will be analized).

Conclusions

The framework provides a comprehensive and adaptable tool for assessing the investment attractiveness of renewable energy markets across various technologies and countries. By utilizing a systematic approach, this framework enables energy companies to make informed decisions about where to allocate resources for renewable energy projects. Applying this framework to European countries has revealed distinct market groupings, highlighting the contrasting characteristics of established markets with mature infrastructures and high contributions to the energy mix versus high-growth markets that offer significant opportunities for new investments. Both type of countries can be interesting for investors and can receive a high scores and rank high. Our framework highlight the different risks and opportunities for country, allowing for improved risk management. As policymakers and industry stakeholders seek to enhance their renewable energy portfolios and improve market conditions, this framework serves as a valuable resource for identifying strengths, addressing weaknesses, and ultimately fostering a more sustainable energy future.