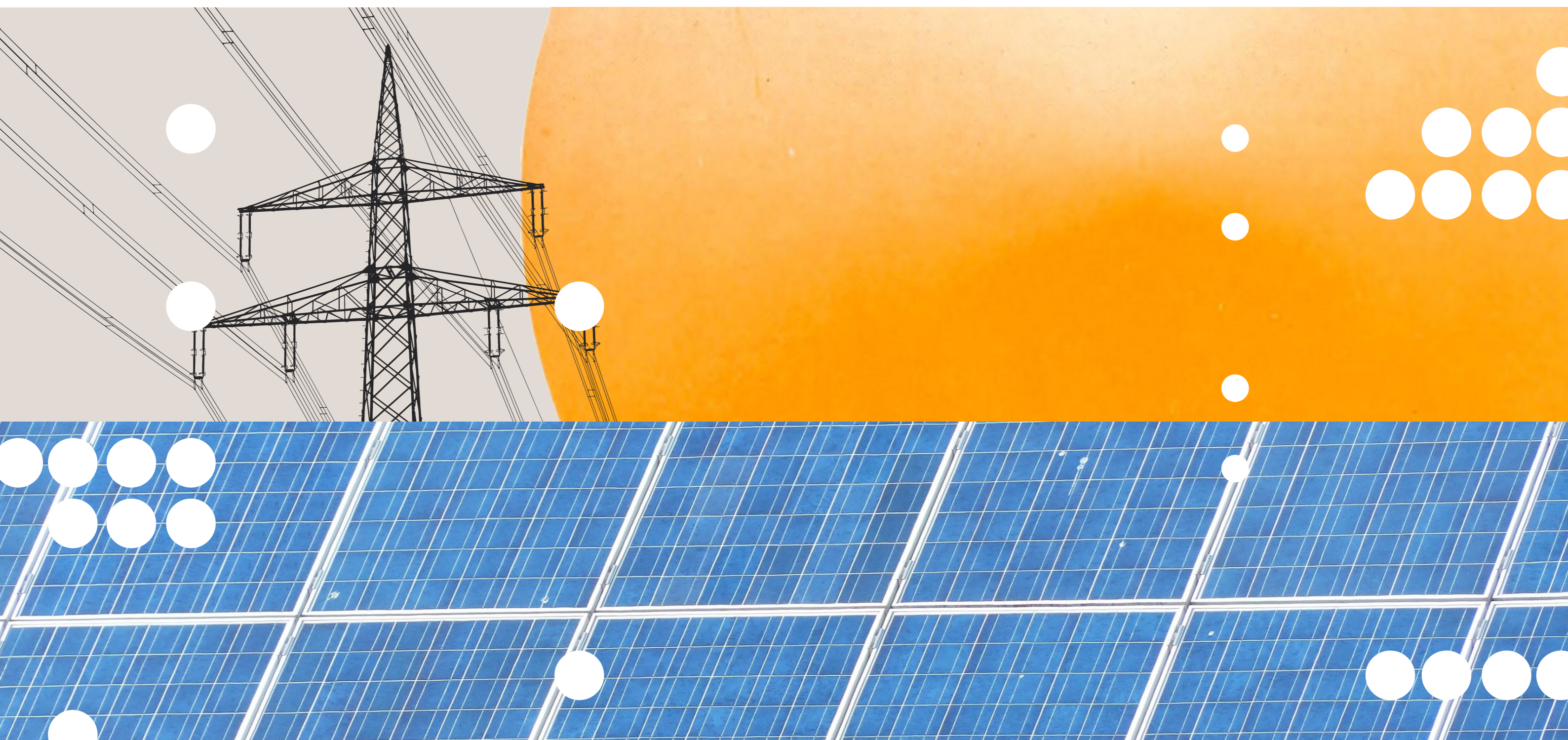


ESG RATING: social and environmental come first





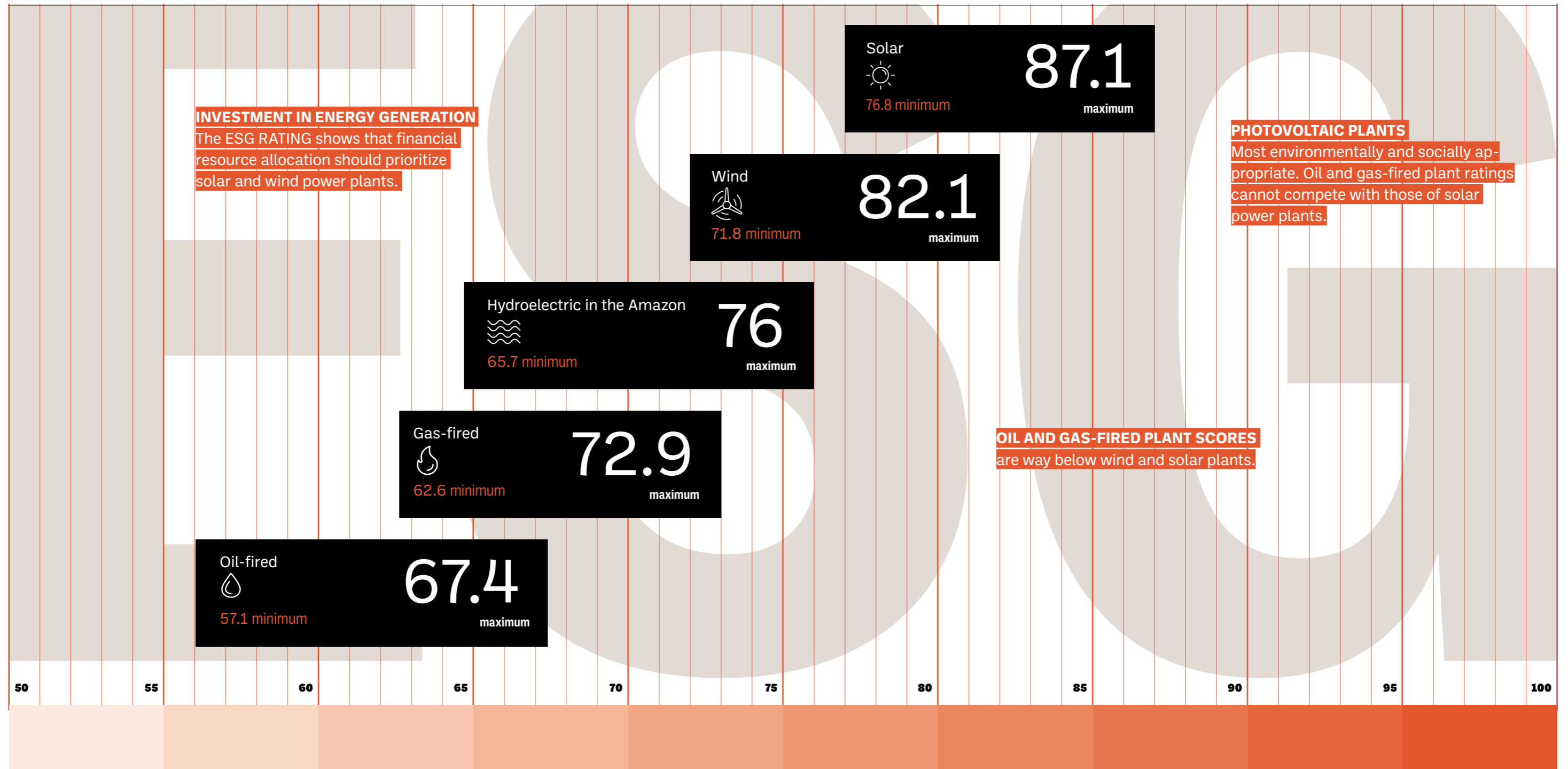
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1. Main results

The infographic below shows the ESG SCORES for each subsector of the electricity sector



60 fair performance level

very good performance level 80

2. Not just another rating



ENVIRONMENTAL, SOCIAL, GOVERNANCE

1

The term ESG (Environmental, Social and Governance) was first coined in 2004 in the report “Who Cares Wins”, a UN-led initiative to promote sustainable development.

Now part of everyday business vocabulary, ESG rating draws attention to the need to evaluate and tailor projects and investments to the demands of consumers, clients, lenders, and public and multilateral institutions related to environmental and social impacts.

Ratings are scores awarded by rating agencies or financial institutions to help inform capital allocation and investment decision-making. They assess the degree of risk and return on capital employed.

Currently, initiatives in the economic and business spheres use accurate methodologies to assess the main risks of projects and investments in terms of the ESG criteria – in other words, methodologies that are capable of measuring company performance in key ESG areas¹.

While governance indicators have long been included in this assessment by lenders and investors, calls for a just and inclusive transition to a low-carbon economy mean that social and environmental issues must gain special relevance in this context.

That is why, following on from the publication of our environmental risk matrix – also geared towards financial institutions – and the guide How to include the environment in business math, Instituto Escolhas now offers an innovative tool to help banks and investment funds incorporate social and environmental aspects into investment decision-making.

More comprehensive and accurate ESG RATING places unprecedented emphasis on these aspects, ensuring they are properly weighted by financial institutions when allocating resources. The tool also helps organizations differentiate between initiatives that are truly committed to the desired ESG criteria and those which only adopt superficial procedures – commonly known as greenwashing.

The term ESG was first coined in

2004



I. The electricity sector as an example

ESG RATING methodology allows adaptations to be made to broaden the scope of analysis to include projects and investments in other infrastructure sectors. To this end, a weight is assigned to each indicator according to its influence on the overall rating.

As a point of reference, the ESG RATING design used data from different electricity generation projects: wind, solar, hydroelectric, gas-fired, and oil-fired power plants. Rather than obtain absolute values, the aim was to test the rating’s sensitivity against selected variables to determine how identified impacts influence performance.

The results clearly show that wind and solar projects are better equipped to meet the ESG criteria. The indicators used in the assessment also show the disadvantages of investing in oil-fired and gas-fired power plants.

Prepared by the state-owned Energy Research Company (EPE), the document envisages significant investment to meet growing electricity demand, which is projected to rise by up to 40% between 2021 and 2031.

Escolhas believes that ESG RATING also addresses the challenge of setting standardized metrics and criteria for reporting socioenvironmental impacts in assessments of applications for financial support.

Hence, this proposal provides an instrument to help society and the market make strategic capital allocation decisions that meet expectations for corporate social responsibility in the twenty-first century.

BY CALCULATING AND APPLYING DETAILED SCORES TO SOLID BUSINESSES, ESG RATING PROVIDES BANKS, CUSTOMERS, AND INVESTORS WITH:

- A.** **The practical capacity** to comply with Central Bank environmental, social, and climate risk requirements when deciding on capital allocation in electricity sector projects.
- B.** **The possibility of** using clear and accurate metrics to prioritize investment in projects with high levels of social and environmental responsibility and that positively impact society.
- C.** **Evidence of** the grave risk of “dirtying” Brazil’s energy matrix if resources are allocated to fossil fuel-fired power plants as envisioned by the Eletrobras privatization law.

Growth forecast for electricity demand 2021 to 2031

40%

 **Results show that wind and solar projects are better equipped to meet ESG criteria**

3. Methodology

The indicators were selected based on six criteria — generality, relevance, materiality, measurability, availability, and impossibility of correlation with the other indicators — and subdivided into the following areas:

S E C T O R A L

directly linked to sector characteristics such as water usage and greenhouse gas emissions. estufa

O R G A N I Z A T I O N A L

related to company management culture and capacity and response

How was the ESG RATING designed

Although each rating is free to choose indicators and their respective weightings in the calculation of the final score, this proposal is aligned with the criteria found in the literature and practical applications.

However, maintaining explicit emphasis on the socioenvironmental dimension of ESG RATING, greater weight was assigned to the elements of E (environmental) and S (Social), ensuring they play a pivotal role in the decision-making process.



The ESG RATING is the sum of 57 separate indicators scored on a scale of 1 to 100.

I. ESG RATING in practice

To illustrate the applicability of ESG RATING simulations were performed for four subsectors of the electricity sector. We assessed real projects that are already in operation; however, ESG RATING may and should also be used to assess new projects and investments.

Two simulations were performed for each project applying different quality scenarios for the organizational indicators relating to GOVERNANCE: 60 (fair) and 80 (excellent)².

For the environmental and social dimensions, we used real project parameters to establish some indicators. For example, measurement of greenhouse gas emissions, water usage, loss of vegetation cover, and other indicators specific to each type of plant for which there is data in the relevant literature or from financial and economic models developed by the authors of the study.

For other indicators, we created quality scenarios using the following scores applied equally across all cases to avoid distortions: 60 (fair), 80 (excellent), or 70 (average). The same was done for indicators whose scores should be 100 or zero, such as encroachment onto indigenous or Quilombola lands or conflicts for example.

Further details on the parameters can be found in the technical report [available here](#) (only in Portuguese).

² For the Business Model indicator, a different indicator relating to product sustainability was used from the well-known Canadian magazine Corporate Knights.

APPLICATION

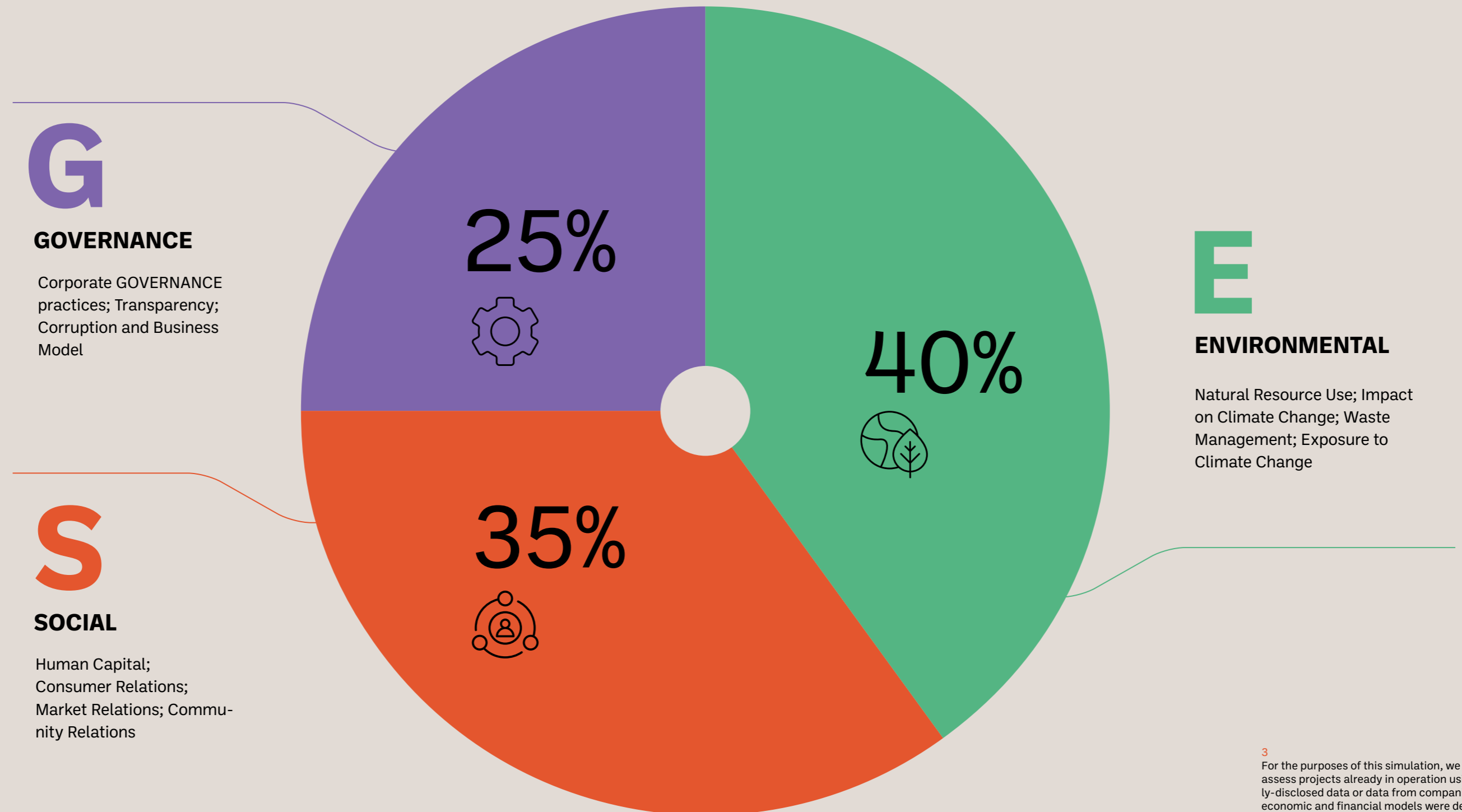
To illustrate the applicability of ESG RATING, simulations were performed for four subsectors of the electricity sector

1. Hydropower, focusing on the Amazon.
2. Thermoelectric power (oil and gas-fired plants).
3. Wind power.
4. Solar power, focusing on the northeast of Brazil.



II. ESG values

LEVEL 1 Indicators were divided into three subgroups: E (environmental), S (social) and G (GOVERNANCE). E and S were given higher weighting in the calculation of the final score³. Also see the infographics on the following pages



³ For the purposes of this simulation, we chose to assess projects already in operation using publicly-disclosed data or data from companies whose economic and financial models were developed by the authors of this study.

INDICATOR

Environmental

E

40%



LEVEL 1

40% Environmental 40% of total

LEVEL 2

37,5% Natural Resource Use 15% of total

37,5% Impact on Climate Change 15% of total

20% Exposure to Climate Change 8% of total

5% Waste Management 2% of total

LEVEL 3

30% Use of water resources 4,5% of total

30% Use of energy resources 4,5% of total

20% Impact on vegetation cover 3% of total

20% Impact on biodiversity 3% of total

100% GHC emissions 15% of total

100% Vulnerability to extreme weather events 8% of total

25% Water pollution 0,5% of total

25% Air Pollution 0,5% of total

25% Waste generation 0,5% of total

25% Generation of toxic/hazardous waste 0,5% of total

LEVEL 4 WHAT DOES THE INDICATOR MEASURE?

60% Usage intensity of resources 4,5% of total

20% Economic efficiency regarding the resource usage 0,9% of total
20% Hydric stress 0,9% of total

70% Usage intensity of resources 3,2% of total

30% Economic efficiency regarding the resource usage 1,4% of total

100% Usage intensity of resources 3% of total

100% Usage intensity of resources 3% of total

100% Life Cycle Emissions 15% of total

70% Project exposure 5,6% of total

30% Sector exposure 2,4% of total

100% Water quality management 0,5% of total

35% NOx emissions 0,2% of total

35% SOx emissions 0,2% of total

30% Particulate matter emissions 0,2% of total

70% Waste generation intensity 0,4% of total

30% Waste management 0,2% of total

70% Waste generation intensity 0,4% of total

30% Toxic/hazardous waste generation intensity 0,2% of total

INDICATOR

S

35%

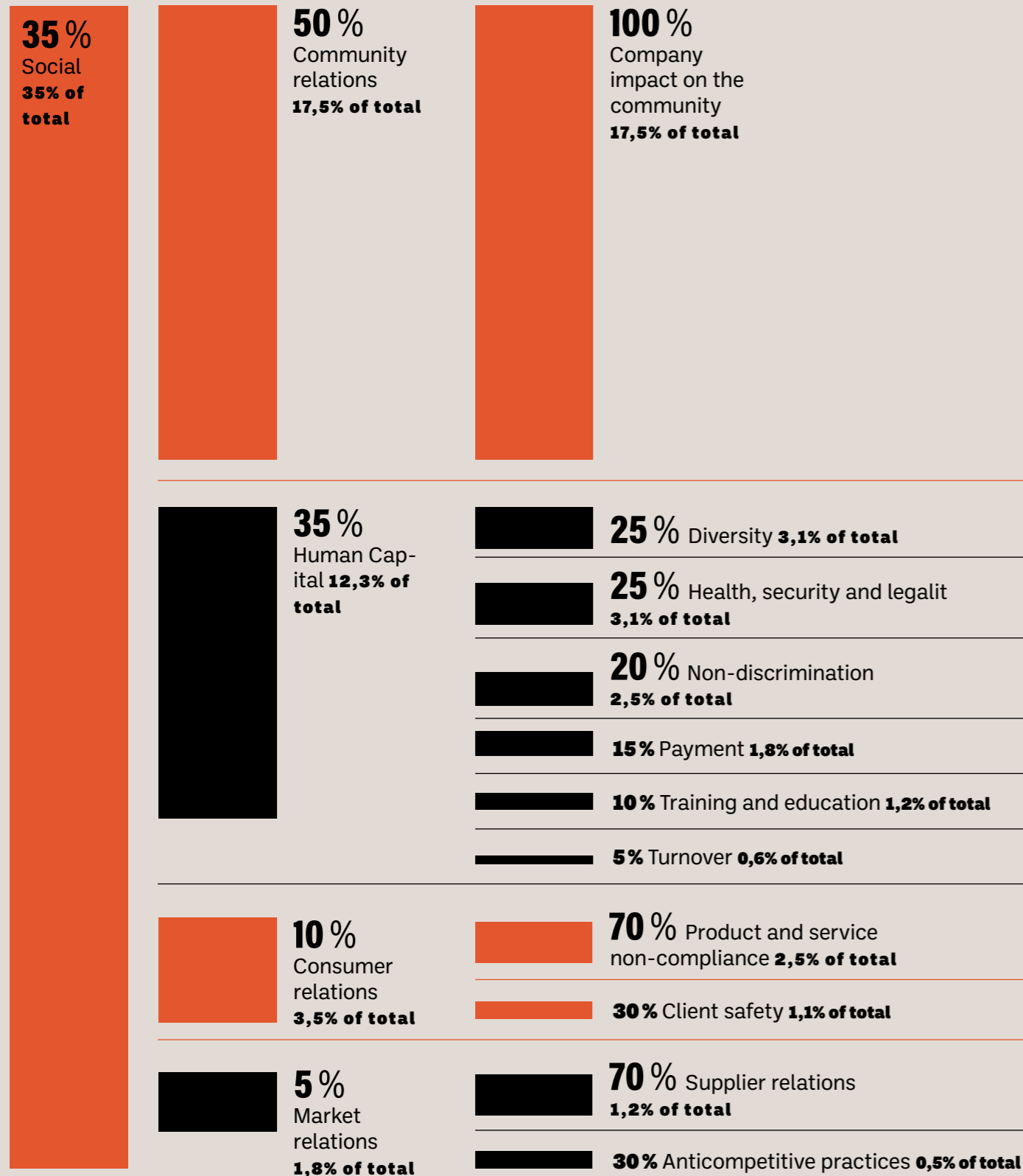


Social

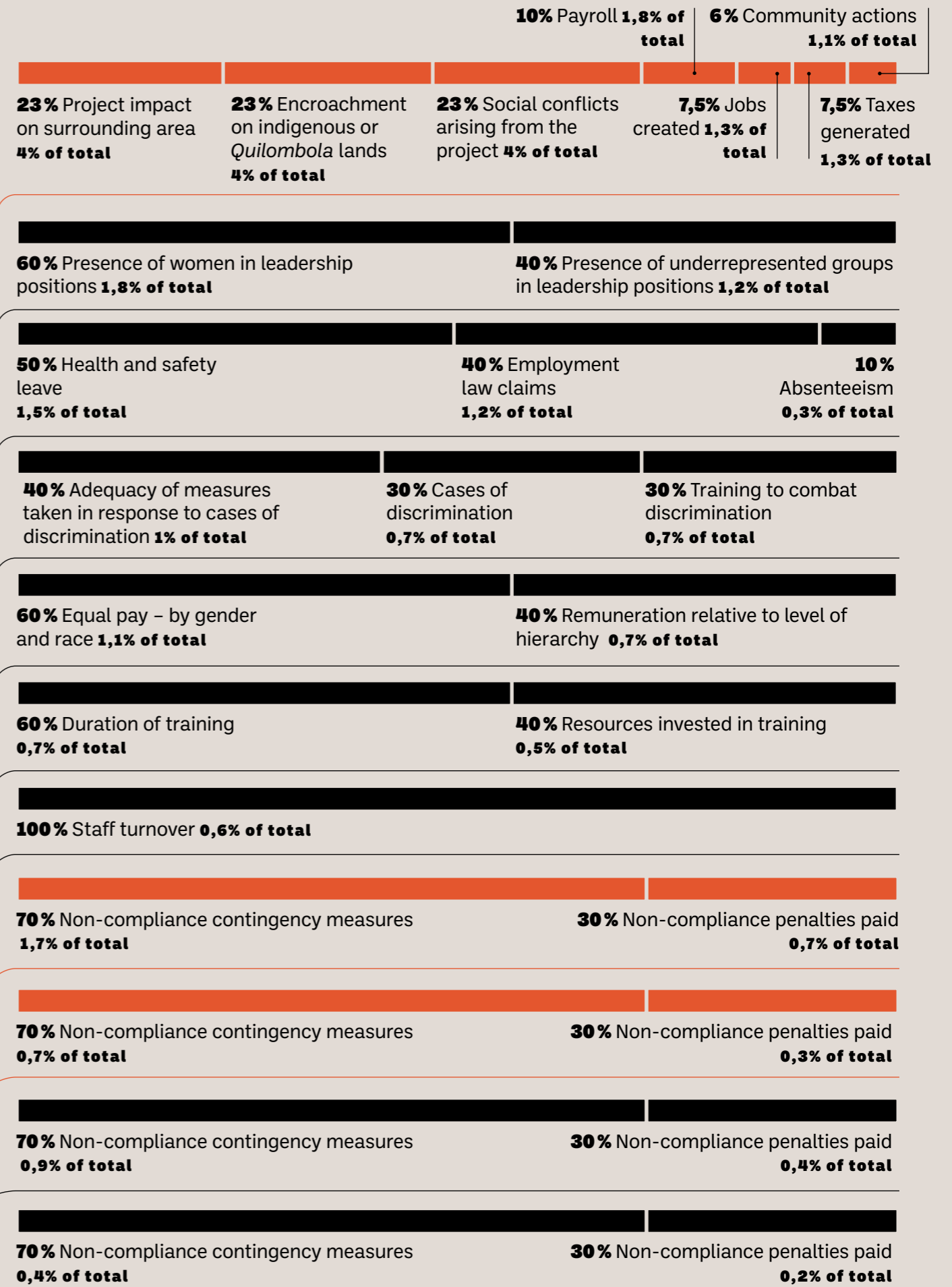
LEVEL 1

LEVEL 2

LEVEL 3



LEVEL 4 WHAT DOES THE INDICATOR MEASURE?



INDICATOR

G

25%



Governance

LEVEL 1

LEVEL 2

LEVEL 3

25 %
Governance
40% of total

30 %
Corporate Governance practices
7,5% of total

70 %
Board diversity
5,3% of total

30 %
Variable pay policy variável
2,3% of total

30 %
Transparency
7,5% of total

50 %
Litigation
3,8% of total

30 % Political engagement
2,3% of total

20 % Reports
1,5% of total

30 %
Corruption
7,5% of total

40 %
Internal policies
3% of total

40 %
Actions
3% of total

20 % Dissemination of internal anti-corruption policies
1,5% of total

10 %
Business Model
2,5% of total

50 % ESG innovation
1,3% of total

50 % Clean revenue – based on the Global 100 report
1,3% of total

LEVEL 4 WHAT DOES THE INDICATOR MEASURE?

100 % Presence of women and underrepresented groups in the board by race and sex **5,3% of total**

100 % ESG-linked pay mechanisms **2,3% of total**

70 % Non-compliance contingency measures **2,6% of total** **30 %** Non-compliance penalties paid **1,1% of total**

100 % Political exposure of the business **2,3% of total**

100 % Quality and scope of disclosed data **1,5% of total**

100 % Quality and scope of anti-corruption policies **3% of total**

100 % Adequacy of measures taken in response to cases of corruption **3% of total**

100 % Anti-corruption training **1,5% of total**

100 % P&D geared towards ESG **1,3% of total**

100 % Sustainability of products/services provided **1,3% of total**

4. Which numbers and results matter most?

The application of ESG RATING can help make the allocation of resources to energy generation compatible with the country's international commitments to the global response to the climate emergency. It is also an important tool for guiding policy-making and optimizing the application of resources, taking into account the costs hidden by current risk assessment methodologies employed for this type of investment.

Recent decisions in the sector demonstrate the need for an urgent change to the assessment system. A regrettable step in the wrong direction, the Eletrobras privatization law provides for the purchase of 8GW of electricity from gas-fired power stations: 6GW between 2026 and 2028, with a minimum of 70% inflexibility, and an additional 2 GW between 2029 and 2030⁴. Besides being more expensive, this energy source is a waste of resources for investors when environmental costs are included in the equation – as highlighted by our report [How to include the environment in business math?](#)

Fossil-fuel plants are not the only bad investments that should be avoided by banks, funds and other investors when making lending or investment decisions. On the other side of the coin, however, there are good investments with potentially outstanding returns in the medium- to long-term that are underexplored or undervalued. Just as well we now have ESG RATING to help differentiate between investments.

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