ABSOLAR
Brazilian Solar Photovoltaic Energy Association

PV in Brazil:

Growth, Policies, and Perspectives.

Dr. Rodrigo Lopes Sauaia

Chief Executive Officer (CEO)

RE+ 2025

Las Vegas (NV) | Sept 9th, 2025

Our Work

- To represent and promote, both nationally and internationally, the following sectors:
  - **Solar photovoltaic;**
  - **Electric energy storage;**
  - **Green hydrogen in Brazil and abroad.**

- Serve as the sector meeting ground and focal point for debates.

- Monitor the development of these markets in Brazil.

✓ Present in 26 states + Federal District

✓ National and International companies

COP30 in Brazil: Accelerating the Energy Transition

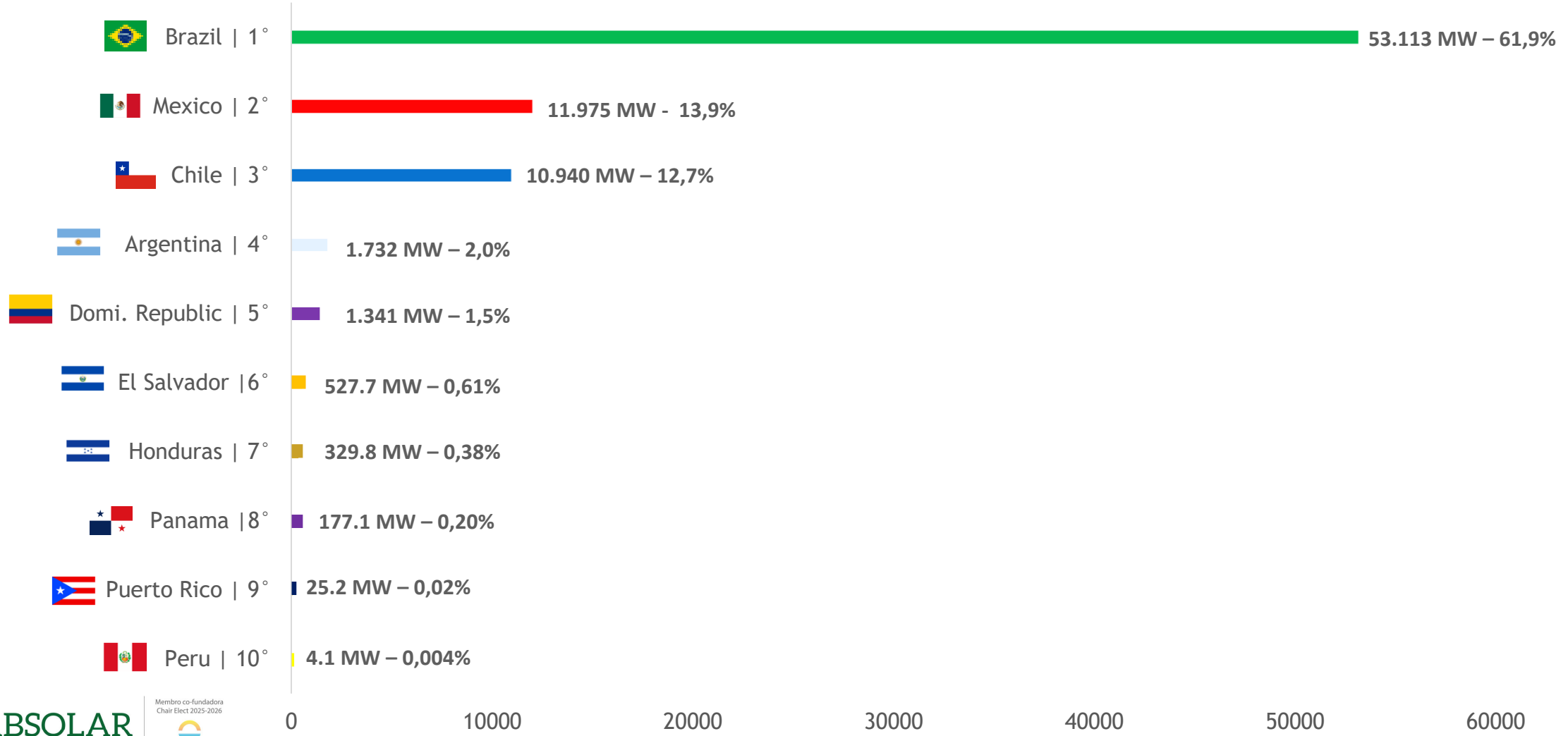
- COP30 will be held in Belém, Pará, Brazil, in November 2025, with **Brazil presiding and playing a key role in the negotiations.**

- Brazil has the **opportunity to demonstrate its efforts in renewable energy**, biofuels, and low-carbon agriculture.

- Main topics to be discussed during the conference:
  - **Reduction of greenhouse gas emissions.**
  - **Adaptation to climate change.**
  - **Climate financing for developing countries.**
  - **Renewable energy technologies and low-carbon solutions.**
  - **Forest and biodiversity preservation.**
  - **Climate justice and the social impacts of climate change.**

Solar PV in Latin America

Top 10 LATAM countries by installed capacity in 2024



Source: IRENA, Renewable capacity statistics, 2025. Adapted by ABSOLAR.

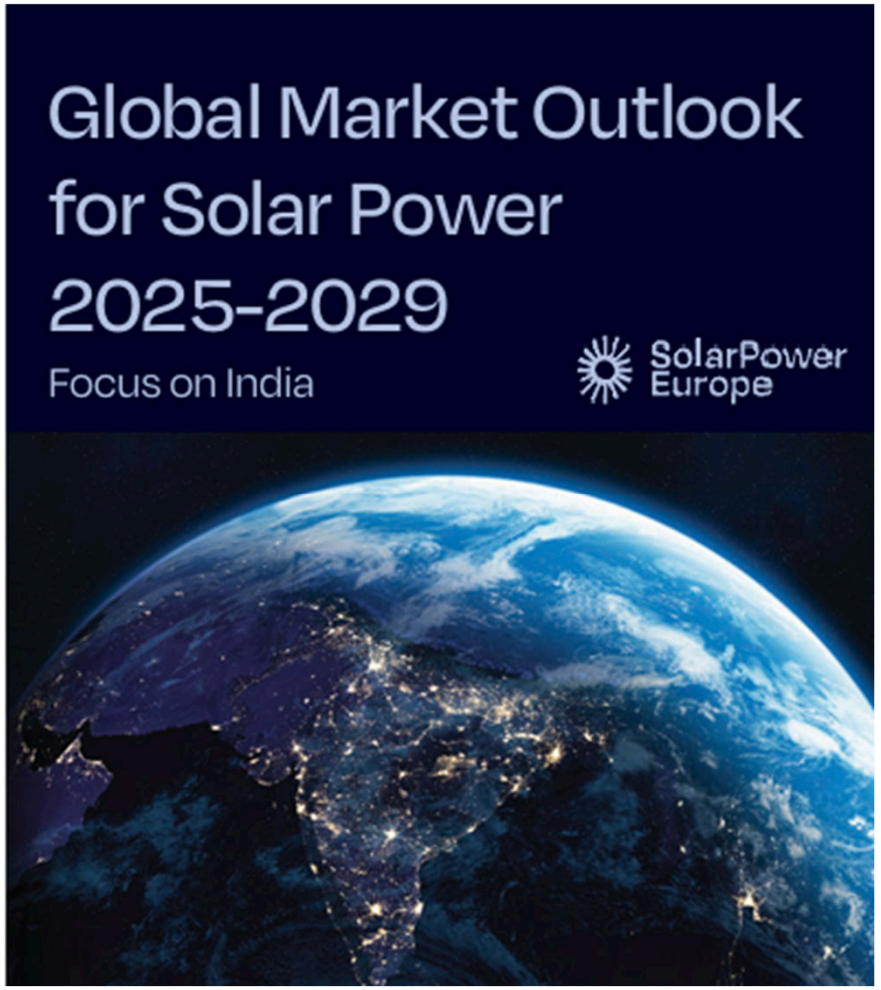
ABSOLAR
Associação Brasileira de Energia Solar Fotovoltaica

Membro co-fundadora
Chair Elect 2025-2026
GLOBAL SOLAR COUNCIL

Global Market Outlook for Solar Power 2025-2029

Growth Forecast:

- **Annual Installations:** Global record of **597 GW added** in 2024..
- **Cumulative Capacity:** Doubled from 1 TW in 2022 to 2.2 TW by the end of 2024.
  - Curiosity: It took nearly 70 years to reach the first terawatt, but only two years (from 2022 to 2024) to double that capacity to 2 TW, highlighting the industry's extraordinary acceleration.
- Solar PV accounted for **81% of all new renewable energy capacity added worldwide**.
- The report presents two scenarios: in the **medium scenario**, global solar capacity is expected to reach **7.1 TW by 2030**, while in the **high scenario**, it could reach **8 TW**.



Source: SolarPower Europe, Global Market Outlook for Solar Power 2025-2029, 2025.

Top 10 countries with solar PV

Which countries most invested in solar PV energy in 2024?

Which countries lead the world in accumulated capacity?

Annual installed capacity (GWp)

1º	China	329,0 GW
2 °	EUA	50,0 GW
3º	India	30,7 GW
4º	Brazil	18,9 GW
5º	Germany	17,4 GW
6º	Spain	8,7 GW
7º	Turkey	8,5 GW
8º	Italy	6,8 GW
9º	Japan	6,2 GW
10º	França	4,7 GW

Cumulative installed capacity (GWp)

1º	China	985,0 GW
2º	EUA	223,0 GW
3º	India	121,0 GW
4º	Germany	101,0 GW
5º	Japan	96,6 GW
6º	Brazil	66,7 GW
7º	Spain	46,1 GW
8º	Australia	37,8 GW
9º	Italy	36,7 GW
10º	South Korea	28,1 GW

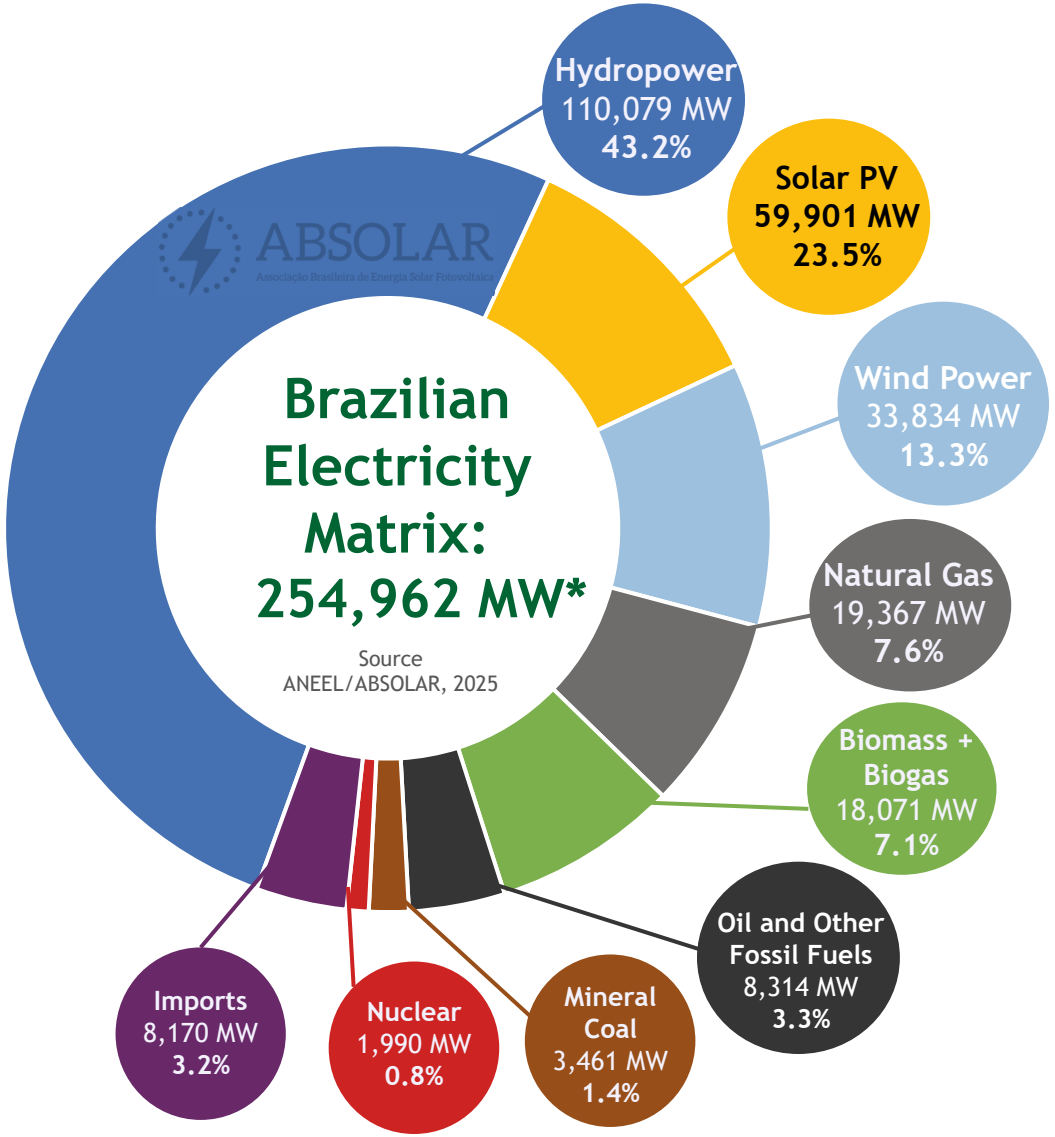
ABSOLAR
Brazilian Solar Photovoltaic Energy Association

Co-founding member
Chair 2025-2026
GLOBAL SOLAR COUNCIL

Source: SolarPower Europe, Global Market Outlook for Solar Power 2025-2029, 2025.

What is the share of each source in the matrix?

Installed capacity in operation in the country



Source: ANEEL, 2025. Adapted by ABSOLAR. Last update : 12/08/2025.

Benefits of solar PV to Brazil in numbers since 2012

✓ More than **R$ 270.3 billion** in new investments.

✓ More than **59,9 GW operational.**

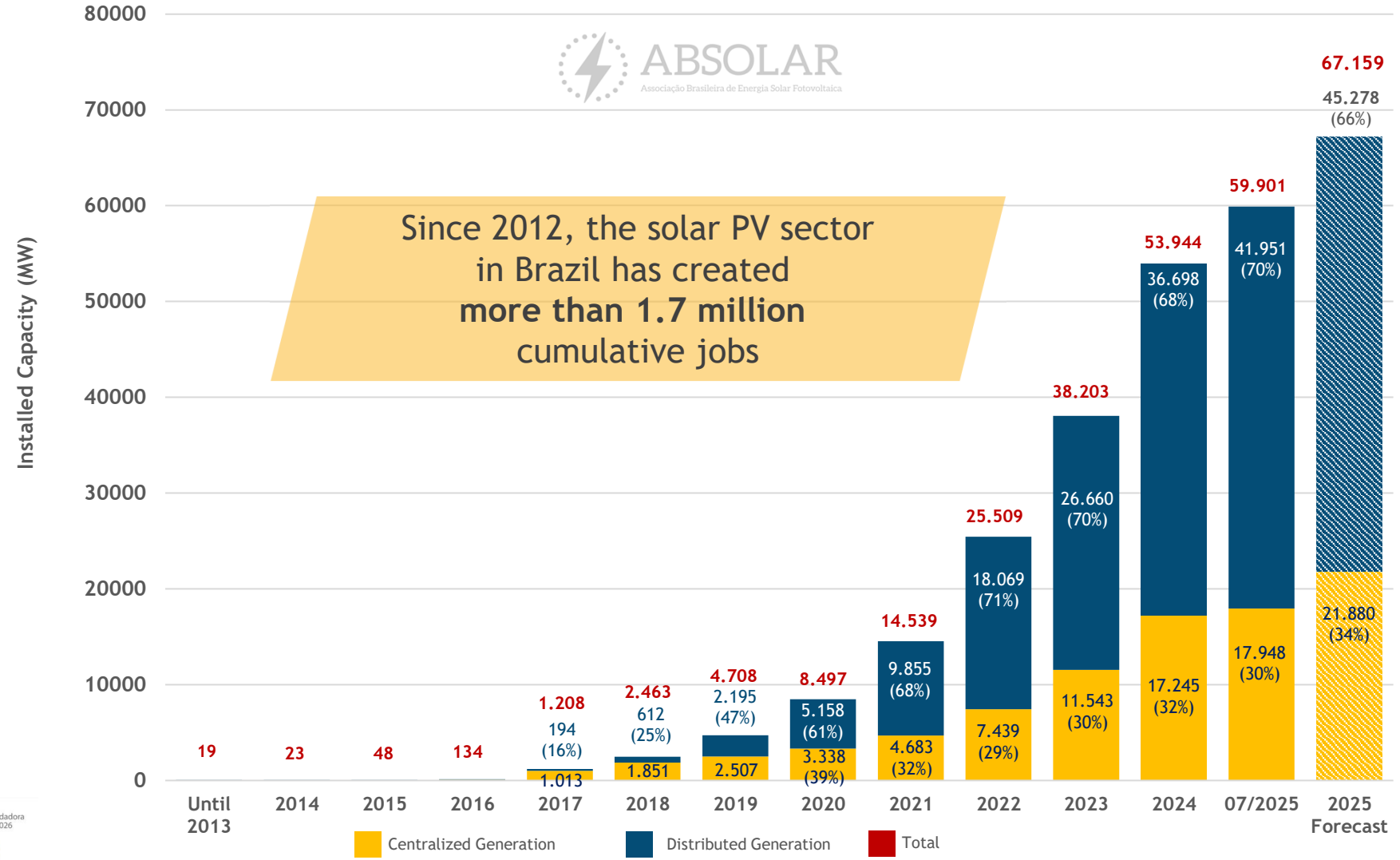
✓ More than **1.7 million accumulated new jobs.**

✓ More than **88.3 million avoided tons** of CO2.

✓ More than **R$ 84.2 billion** in public taxes.

Source: ANEEL, 2025. Adapted by ABSOLAR. Last update: 12/08/2025.

Evolution of solar PV in Brazil



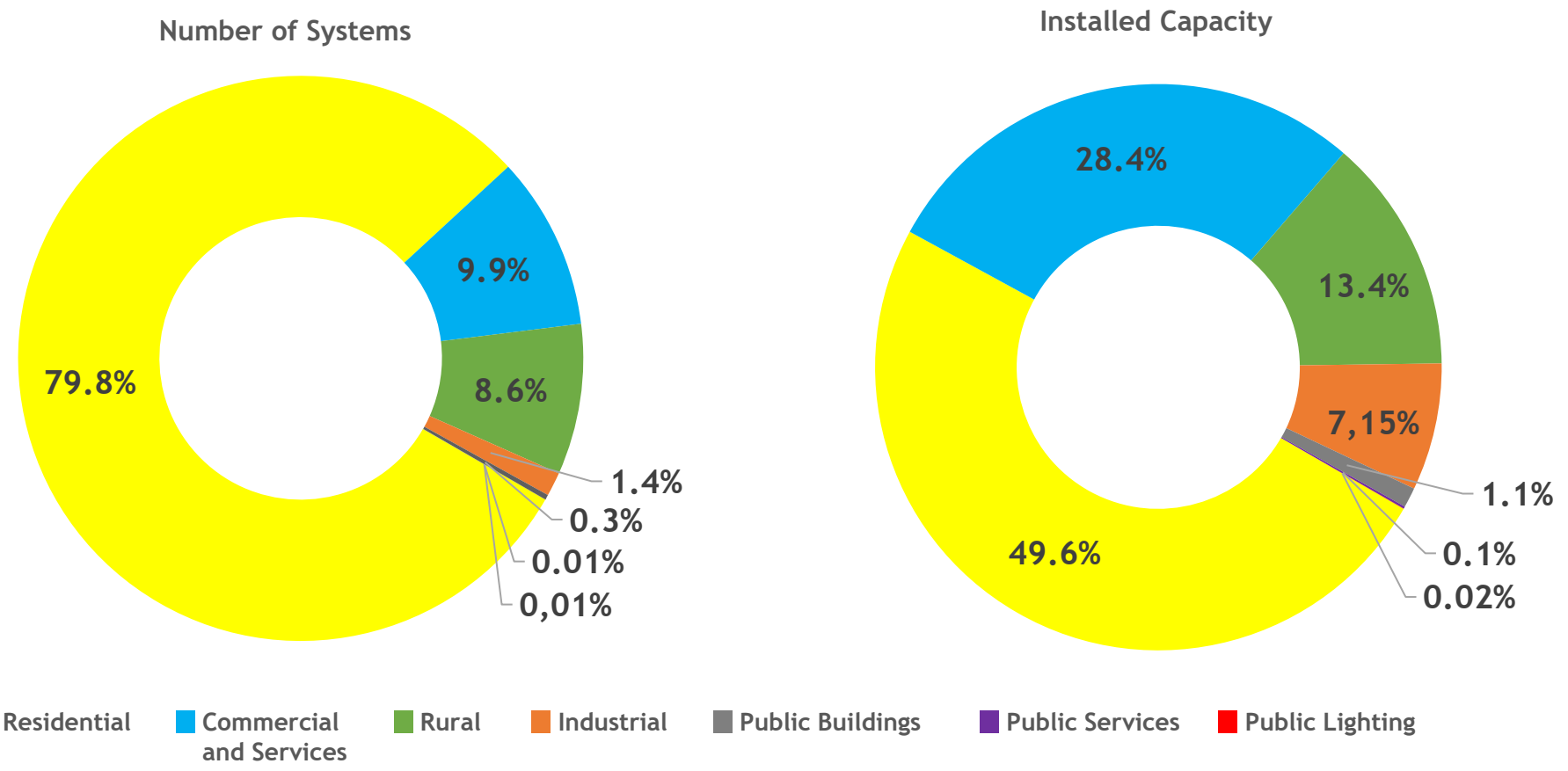
Source: ANEEL, 2025. Adapted by ABSOLAR. Last update : 12/08/2025.

ABSOLAR
Associação Brasileira de Energia Solar Fotovoltaica

Membro co-fundadora Chair 2025-2026
GLOBAL SOLAR COUNCIL

Solar PV distributed generation

Distributed generation solar PV by consumer type in Brazil

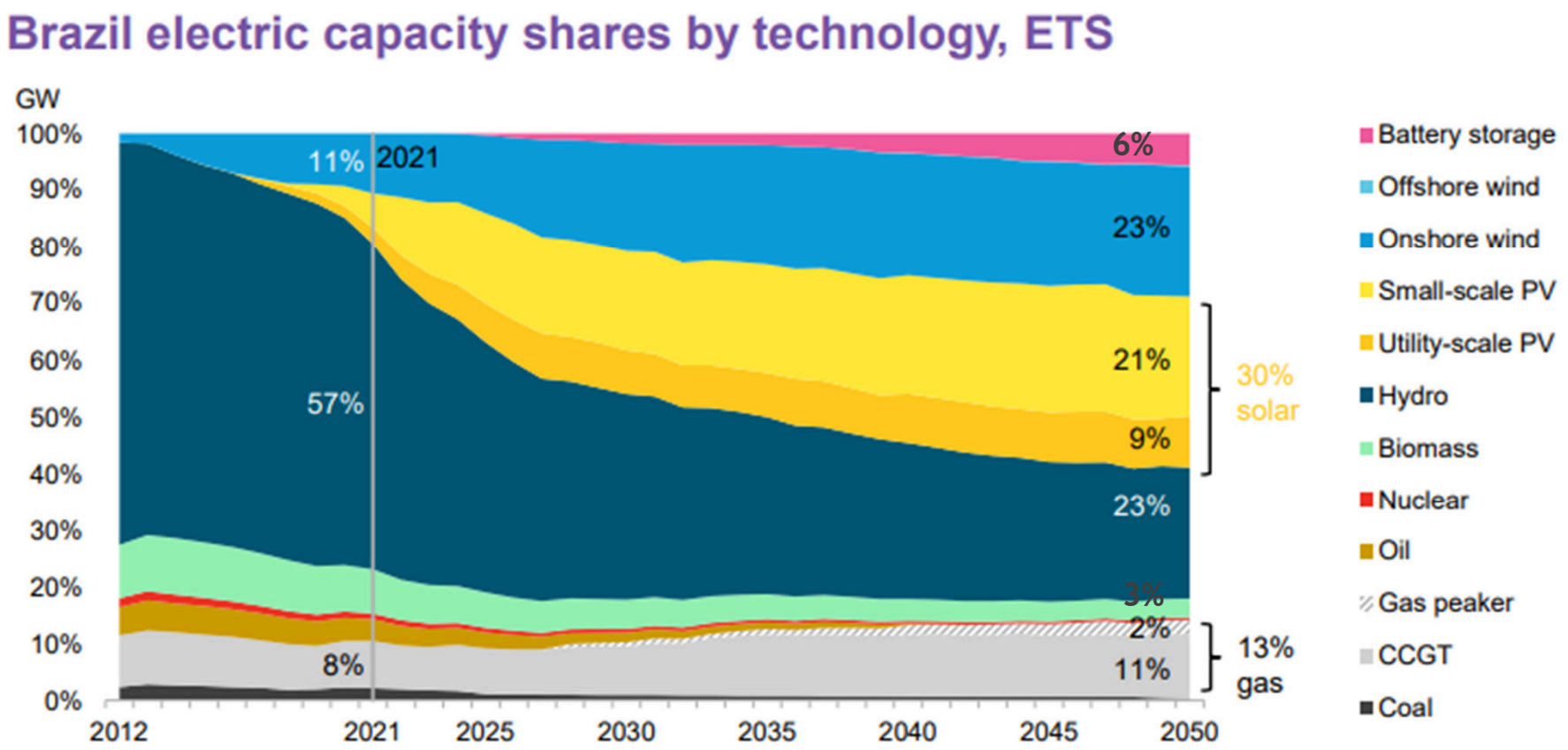


Source: ANEEL, 2025. Adapted by ABSOLAR. Last update: 12/08/2025.

The transformation of the electricity market

- BloombergNEF projection for **the Brazil's electric capacity by technology, ETS**

In this scenario, 30% of the capacity is solar.



Source: BloombergNEF. Note: ETS is the Economic Transition Scenario from BNEF's New Energy Outlook

Solar PV distributed generation

Power Flow Reversal

- Resolution of the issue of grid connection rejections due to power flow reversal, without proper evidence of deterioration in network quality parameters.
- Non-participation in generation curtailments, as the regulatory treatment is entirely different (DG and APE).

Costs and Benefits of DG

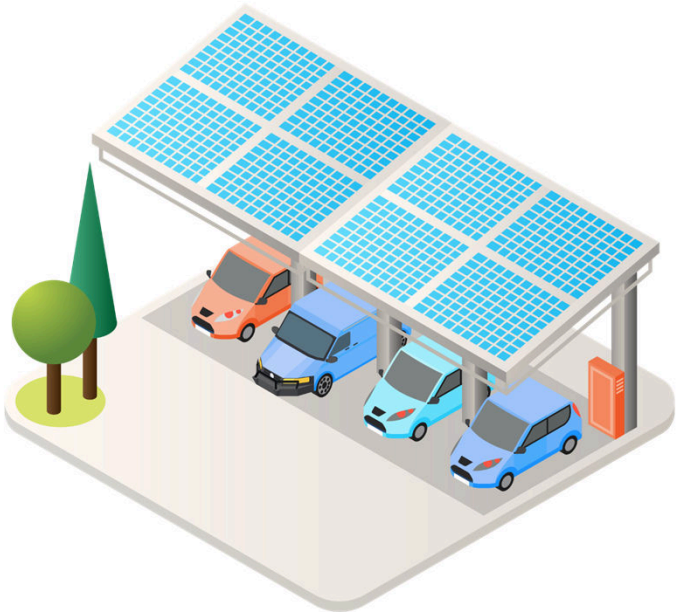
- **Publication of CNPE Resolution No. 02/2024, establishing guidelines for the calculation of costs and benefits**.
- ABSOLAR has requested that ANEEL publish the calculations, which should have been released **in 07/07/2023**.

REIDI and Priority Status (Infrastructure Incentive Debentures)

- Regulation of REIDI for Small-Scale DG (Ordinance No. 78/GM/MME)
- Regulation of infrastructure incentive debentures (Decree No. 11,964/2024).

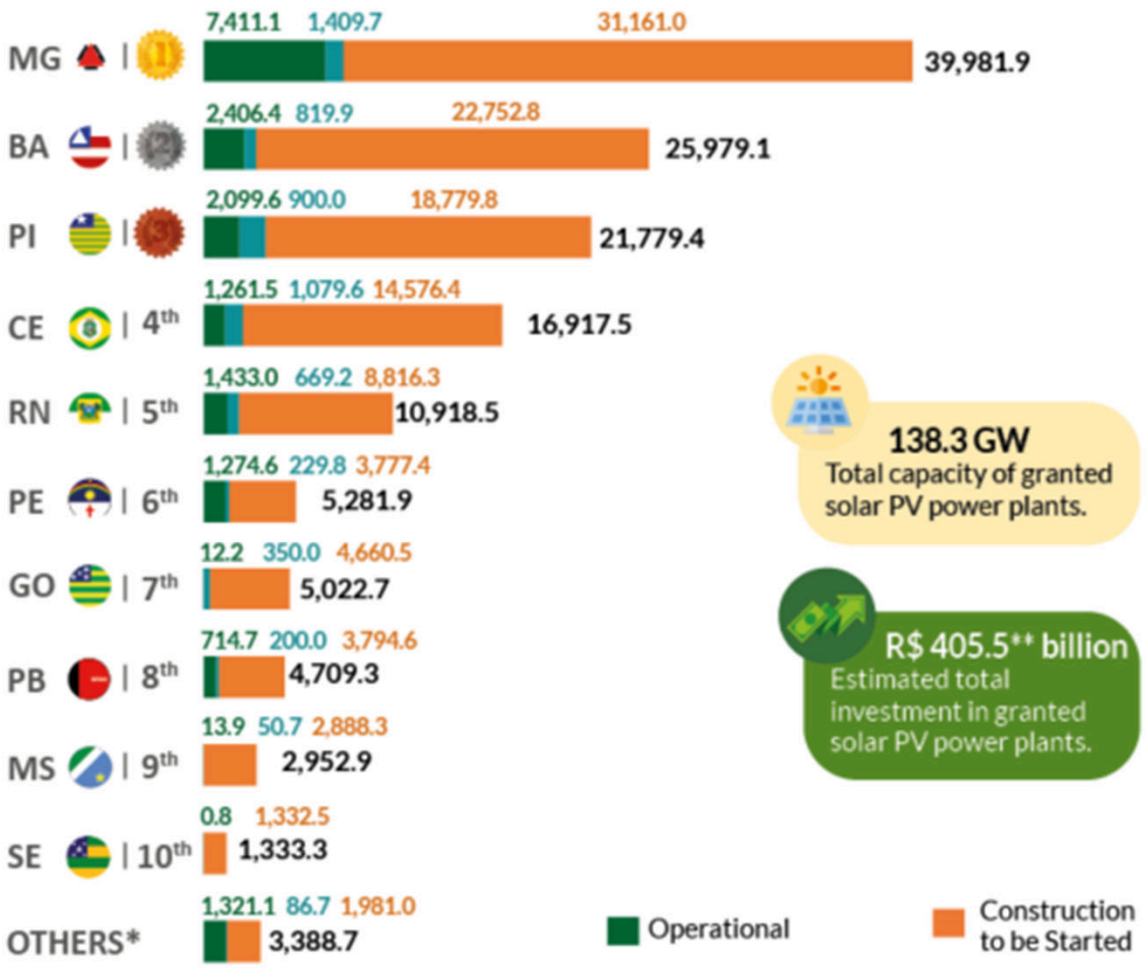
Inspection and competition

- Preservation of free competition in the distributed generation segment: it is essential that the regulation of the legal framework also advances on antitrust and competition rights. ANEEL must ensure that distribution companies do not gain an unfair advantage.
- More effective supervisory action by ANEEL: to help resolve issues with distribution companies, as well as in the enforcement of Law No. 14,300/2022.



Solar PV centralized generation

Installed capacity (MW) and status of centralized generation PV by State



*Power Plants located in 17 brazilian states

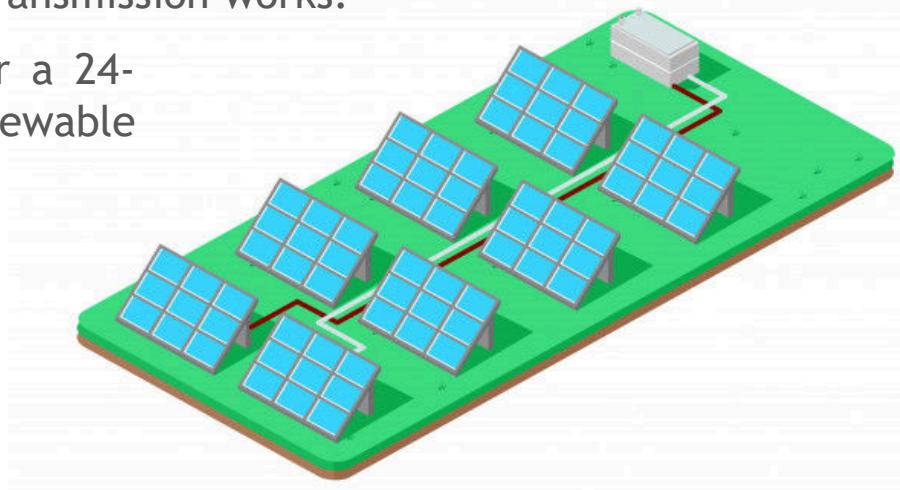
**The future investment values were recalculated due to drop in equipment values

Source: ANEEL, 2025. Adapted by ABSOLAR. Last update: 12/08/2025.

Centralized generation PV

Curtailment

- **Legal Action:** ABSOLAR, together with ABEEólica, has filed a lawsuit seeking recognition and compensation for any type of curtailment suffered by market agents.
- ABSOLAR is in dialogue with the MME within the Curtailment Working Group (GT Curtailment) for the publication of an Ordinance to address curtailment issues.
- **Reclassification of Curtailments:** On 06/05, ABSOLAR filed an administrative appeal against ANEEL Ruling No. 1,543/2025, requesting the immediate reclassification of curtailments categorized under Electrical Reliability Reason to External Unavailability, due to delays in the completion of transmission works.
- **Stand still:** presentation of a proposal to public banks and MME for a 24-month suspension of debt payments for projects affected by renewable generation curtailments.



Centralized generation PV

Expansion of the Free Contracting Environment (ACL)

- MME Public Consultation No. 137/2022 presents a proposal for a full liberalization plan of the electricity retail market starting in 2028.
- Provisional Measure (MP) 1,300 expands access to the free market beginning in 2026 for industrial and commercial consumers, and in 2027 for other low-voltage consumers, allowing them to choose their electricity suppliers
- ABSOLAR considers the modernization of the sector and the market opening as favorable.

Self-Production

- ABSOLAR's priority is to ensure predictability and security for existing businesses.
- **Provisional Measure (MP) No. 1,300/2025** raises concerns by **increasing requirements for eligibility, potentially making projects unfeasible and undermining business predictability**. ABSOLAR proposes granting a deadline until 12/31/2025 for the eligibility of existing projects and allowing new arrangements to be carried out with projects authorized after the publication of the MP.

Access and Connection to the SIN (National Interconnected System)

- Improving Access Conditions to the Transmission System for PV Plants – ABSOLAR seeks greater transparency from ONS regarding the expansion of transmission capacity, through the publication of a complementary study for the release of capacity during daytime hours.
- Competitive Process for Capacity (PCM) or Alternative Method – the sector awaits the results of MME Public Consultation No. 148/2022, which proposes improvements to the Normative Ordinance on the competitive procedure for contracting transmission capacity in the SIN.

Dependence on Fossil Fuels in the North of Brazil

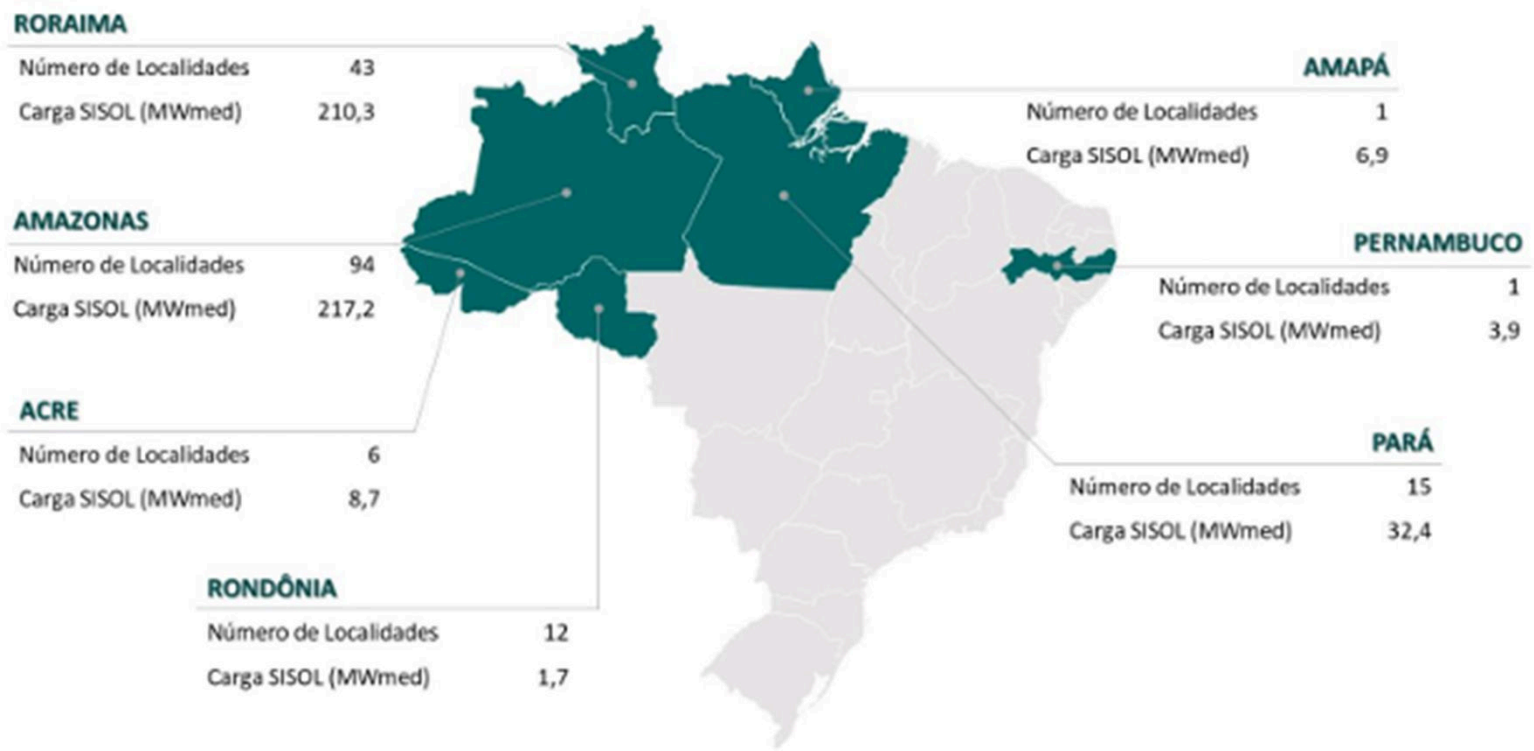
In 2024, **diesel and natural gas accounted for 92%** of Isolated Systems' electricity, with renewables under 10% - **solar PV just 0.01%**[1].

In the 2025 **Isolated Systems Auction**, projects must include at least **22% renewable sources**.

Brazil's "Energias da Amazônia" program aims to **decarbonize the Legal Amazon** by **replacing diesel-based power in 171 isolated systems with cleaner energy sources**, including natural gas, solar PV, and hybrid systems, supported by a **R$5 billion federal investment**.

ENERGIAS DA AMAZÔNIA

Geographical Distribution of Isolated Systems – 2025 Horizon



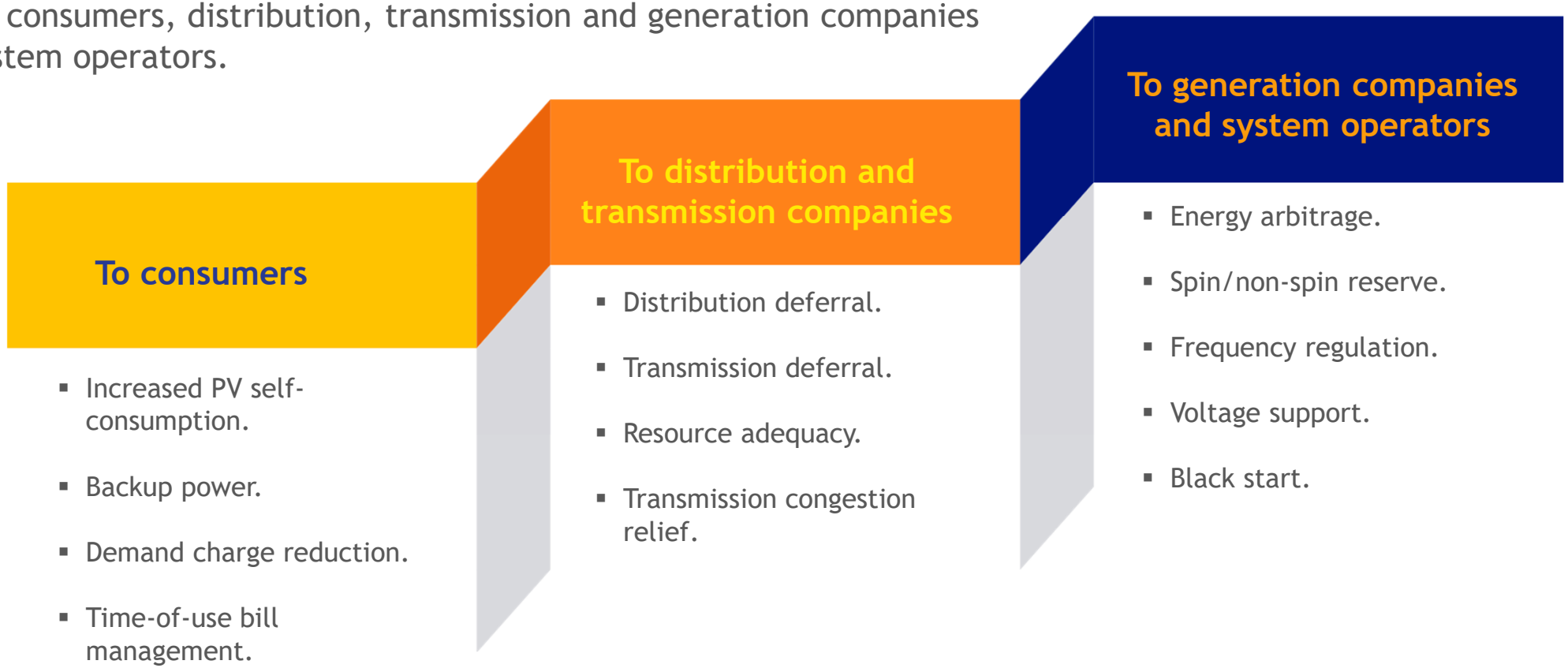
ABSOLAR
Associação Brasileira de Energia Solar Fotovoltaica

Membro co-fundadora
Chair Elect 2025-2026
GLOBAL SOLAR COUNCIL

Source: Plano anual da operação energética dos sistemas isolados para 2025, ONS, 2025.
[1]BEN -Relatório Síntese 2025, EPE, 2025

Electrical energy storage

Electrical energy storage (EES) can perform **important services** for energy consumers, distribution, transmission and generation companies and system operators.

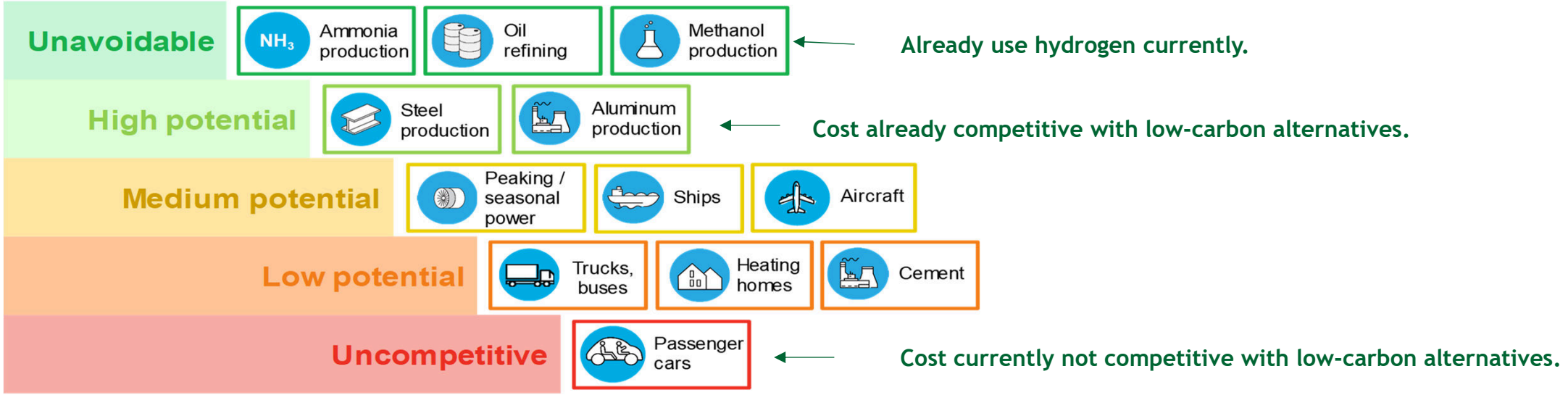


Source: Rocky Mountain Institute, A Review of Solar PV Benefit and Cost Studies 2nd edition, 2015.

Applications of hydrogen

Prospects for the adoption of renewable H2 by sectors

- Fossil-source H2 has been produced and consumed in Brazil on a large scale for decades.
- Worldwide, over 100 million tons of H2 were consumed in 2020[1].
- The growth rate of renewable H2 production in Brazil will depend on the pace of replacing current consumption of **fossil-source H2**, adoption by new sectors, and demand from the external market.

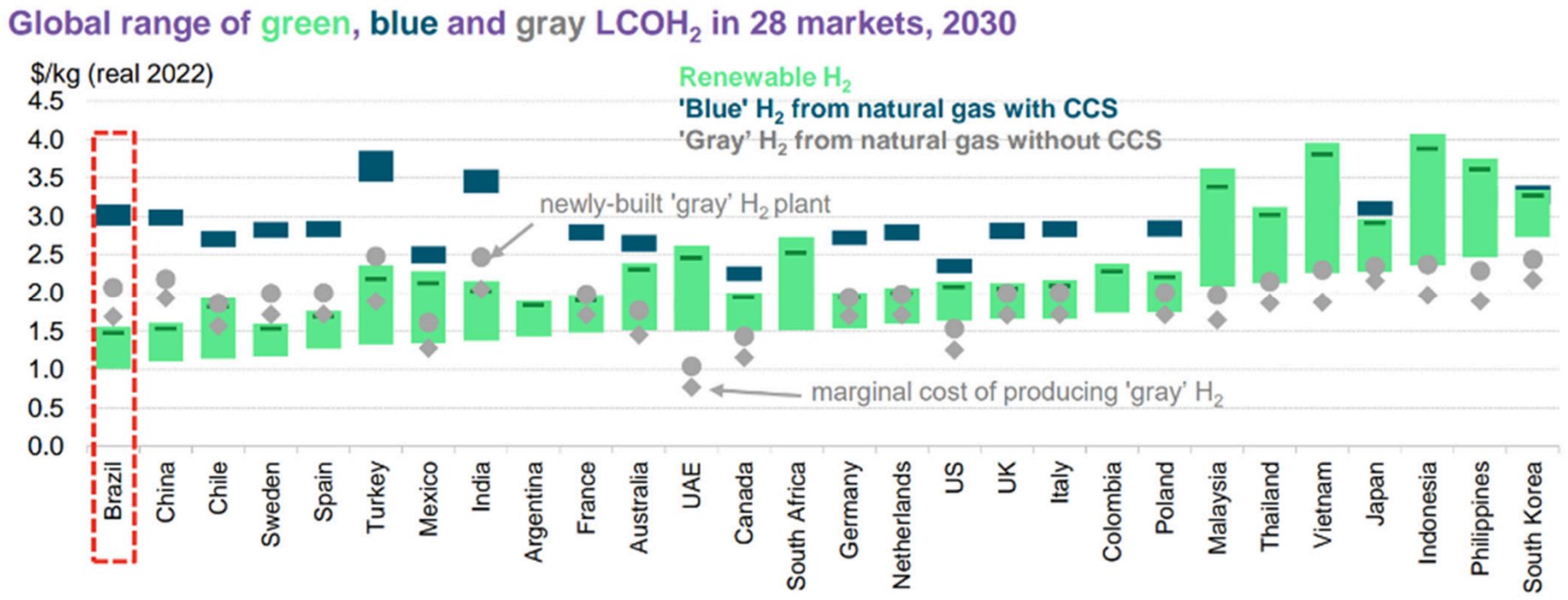


Source: BloombergNEF, adapted from Liebreicht Associates, 2021.
[1]Source: IRENA, 2022.

Green Hydrogen (GH2)

Brazilian potential for GH2

- Due to its huge solar PV potential, Brazil can become **a leader in the production of GH2**, with price competitiveness and large-scale production capacity.



Source: BloombergNEF, 2023.

Incorporating New Technologies into the Sector

Electric Energy Storage

- Consolidation of the **capacity reserve auction for battery storage technologies,** in accordance with the guidelines of Public Consultation No. 176/2024, aiming for a significant amount to reduce the use of thermal power plants.
- Structuring and **approving regulations for electric energy storage in Brazil, defining the storage agent, and regulatory viability** of ancillary services for BESS, with compatible remuneration.
- **Equalizing the tax burden** on electric energy storage applied to renewable sources, unlocking various strategic applications in Brazil.
- **Eligibility for REIDI and incentivized debentures.**

Green Hydrogen

- **Promoting regulatory and tax incentives** for GH2 at the federal and state levels.
- **Encouraging the creation of long-term demand policies for GH2**, such as auctions, blending mandates, etc..
- Fostering conditions for greater volume and competitiveness in **financing projects for H2V production.**
- **Eligibility for REIDI and incentivized debentures** for SPVs for renewable H2 production.

Get ready for the events!

CALENDAR

2025

NEXT EVENTS

Sept. 30rd
SÃO PAULO
SP
H2V E ARMAZENAMENTO ABSOLAR

Out. 16th
RECIFE
PE
ABSOLAR meeting Nordeste

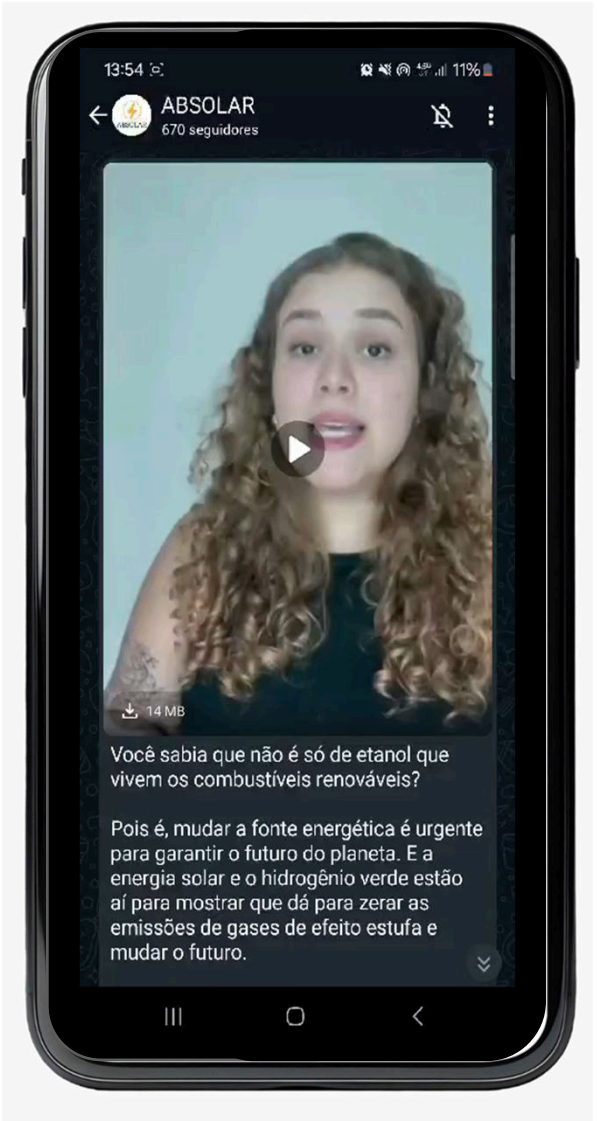
Out. 23rd
SÃO PAULO
SP
Masterclass ABSOLAR

Dec. 10 - 11
SÃO PAULO
SP
5º Encontro NACIONAL ABSOLAR

Dec. 10th
SÃO PAULO
SP
Jantar de confraternização para associados ABSOLAR

ABSOLAR's WhatsApp Channel

Scan the QR code
to keep up with all
the **latest updates**
and important news
in the solar sector!



See the full list of ABSOLAR associates

ABSOLAR
Brazilian Solar Photovoltaic Energy Association
Co-founding member
Chair 2025-2026
GLOBAL SOLAR COUNCIL

Our associates

Visit our website and check out the full list of members!

www.absolar.org.br/en/associados-english/

Talk to us!

+55 (11) 3197-4560 | +55 (11) 98943-4499

associativo@absolar.org.br

Become an ABSOLAR member!

Join forces with us!

www.absolar.org.br/associe-se.html

associativo@absolar.org.br

ABSOLAR
Brazilian Solar Photovoltaic Energy Association

Co-founding member
Chair 2025-2026
GLOBAL SOLAR COUNCIL

Thank you for your attention!

Special thanks to the Solar Energy Industries Association (SEIA) and to the organizers of RE+ for the kind invitation and partnership!

Dr. Rodrigo Lopes Sauaia
Chief Executive Officer (CEO)

+55 11 3197 4560
absolar@absolar.org.br

ABSOLAR
Brazilian Solar Photovoltaic Energy Association

ABSOLAR_Brasil

ABSOLARBrasil

Fala, ABSOLAR

absolaroficial

ABSOLAR

www.absolar.org.br