

Energy Transition in Brazil: Opportunities and Challenges

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Scatec Solar
Improving our future™

Scatec Solar at a glance

1.9 GW

In operation &
under construction

5.6 GW

Backlog &
pipeline

319

Employees

Key facts

- We develop, build, own and operate solar plants across emerging market
- Founded in 2007 – Headquarter in Oslo, Norway
- Present in 15 countries globally

Our locations

Scatec Solar offices

Plants in operation

Plants under construction



A portfolio of 1.9 GW in operation and under construction

IN OPERATION

Egypt, 390 MW



Ukraine, 47 MW



Malaysia, 197 MW



Jordan, 43 MW



South Africa, 190 MW



Mozambique, 40 MW



Brazil, 162 MW



Czech, 20 MW



Honduras, 95 MW



Rwanda, 9 MW



UNDER
CONSTR.

Ukraine, 289 MW



South Africa, 258 MW



Argentina, 117 MW



Malaysia, 47 MW



A clear strategic direction: Expanding our platform for increased growth

- Strong market outlook
- Growth target raised
- Introducing Release
- Continued ESG focus

Installed capacity*
4.5 GW
by end 2021

Annual growth of
1.5+ GW
from 2022
onwards



Effective execution of
current project portfolio



Secure growth in
priority regions



Broaden commercial
and technology scope



Optimise financing and asset
portfolio to enhance value

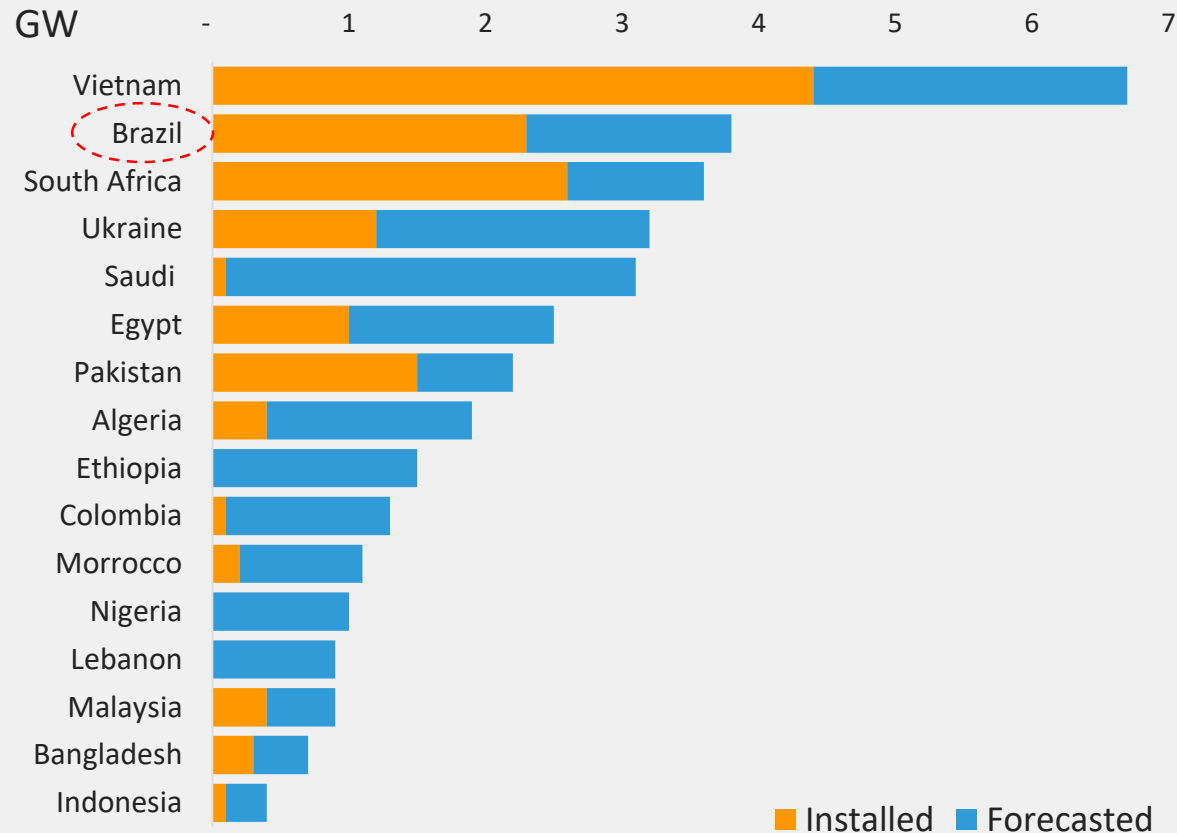


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*In operation and under construction.

Several large markets hold significant potential short to medium term

Installed and forecasted solar volumes in selected emerging markets



- Selected emerging markets are expected to install large volumes of solar over the next years
- Focus on larger emerging markets or regions and build scalable and concentrated portfolios
- Avoid smaller isolated tenders
- Maintain flexible approach to capture opportunities also outside main priority areas

Apodi 162 MW – Scatec Solar's first project in South America



Project facts

- Joint Venture with **Equinor**
- Ownership: Scatec Solar 44%, Equinor 44%, Kroma 12%
- 20 year Power Purchase Agreement (PPA)
- Capex: USD 215 million
- Start of construction: December 2017
- Commercial operation: November 2018
- Households powered: 170,000
- CO₂ emissions avoided (tons): 345,000
- GWh produced per annum: 305

Financing

- Long term debt financing from Banco Nordeste (BNB), project finance, USD 477 mBRL (64%)

Creating a sustainable business in complex environments

Why sustainability is good business

- Ensures stable operations and investor return
- Enables compliance with international standards and reporting on non-financial results via Global Reporting Initiative
- Makes us attractive for solid financing partners
- Creates competitive advantage
- Long term engagement creates solid community relations



Local development programmes – key contributor to local value creation in Brazil

Programmes roll-out

- Offered training and education within health care, sexual disease, teenager pregnancy, and environmental cares to the local community
- Kinder garden refurnishing
- Local entrepreneurship project



Local recruitment

50%

The unemployment rate in the local community surrounding the site

60%

Percentage of local employees (citizen) working at Apodi

1,400

Number of jobs created during the peak construction period





Energy Matrix Expansion in Brazil

Hydro and natural gas

- Natural gas almost double its participation
- Good hedge for wind/solar intermittence
- Reduction in price volatility, substituting expensive TPPs

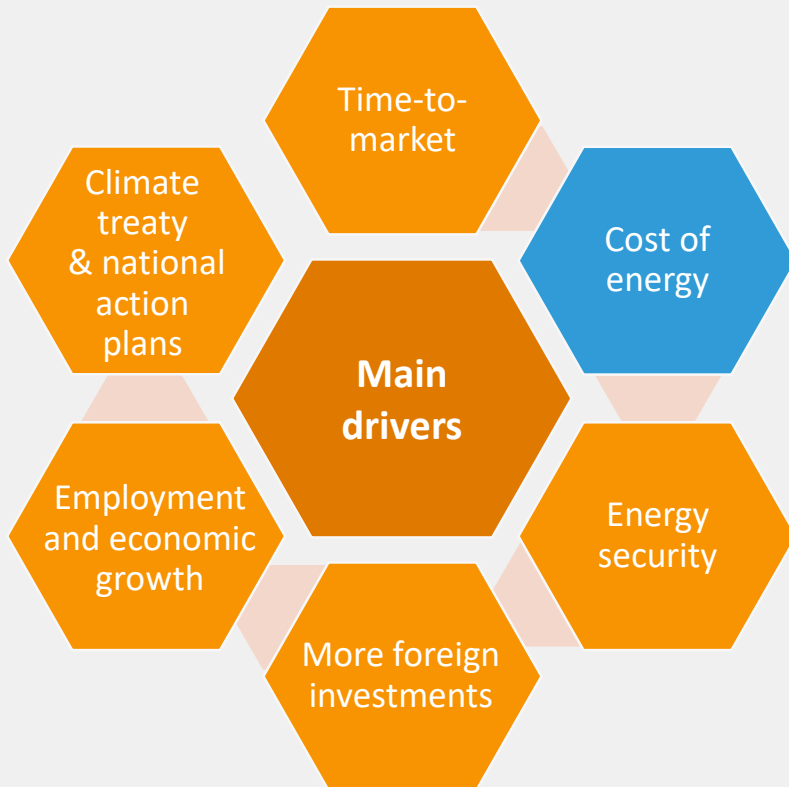
Wind and solar

- Wind & solar surpass 20%
- Solar accounts for the greater increment (42 GW vs. 20 GW)
- Different impacts of hourly pricing

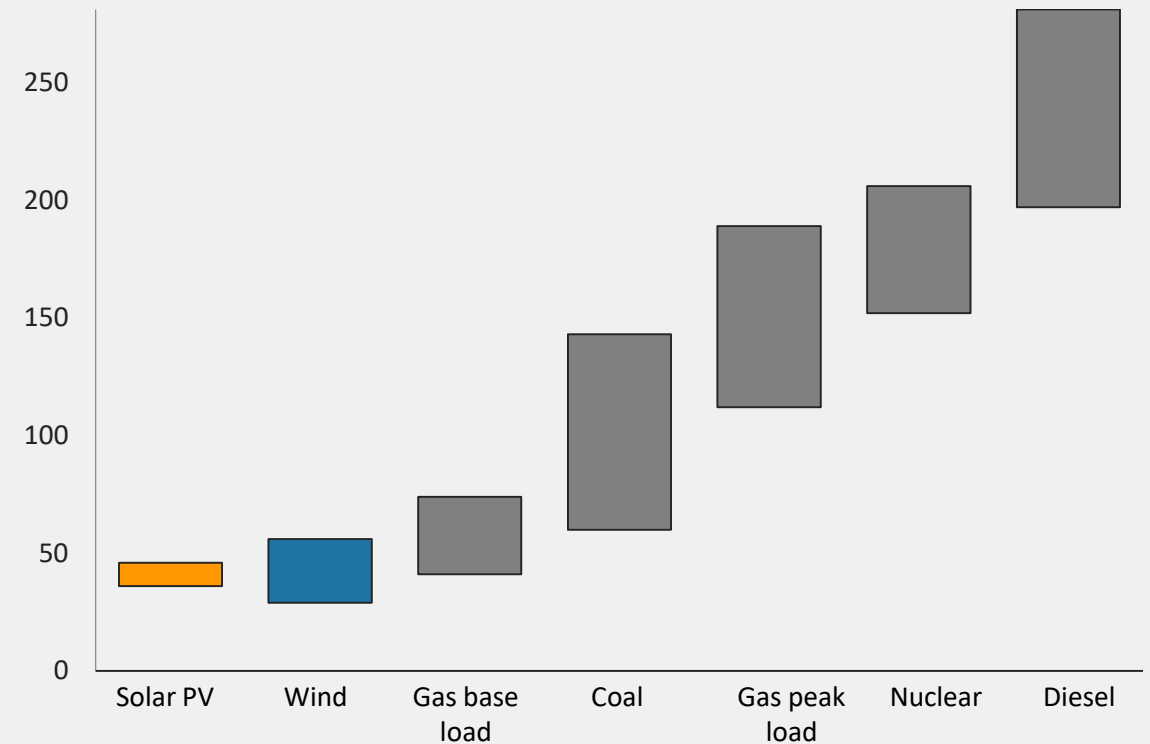
	2020	2035
Hydro 	70%	51%
Natural gas 	9%	17%
Wind 	8%	13%
Solar 	1%	9%

Solar is often the most competitive source of energy in many emerging markets

Key drivers for solar/wind demand

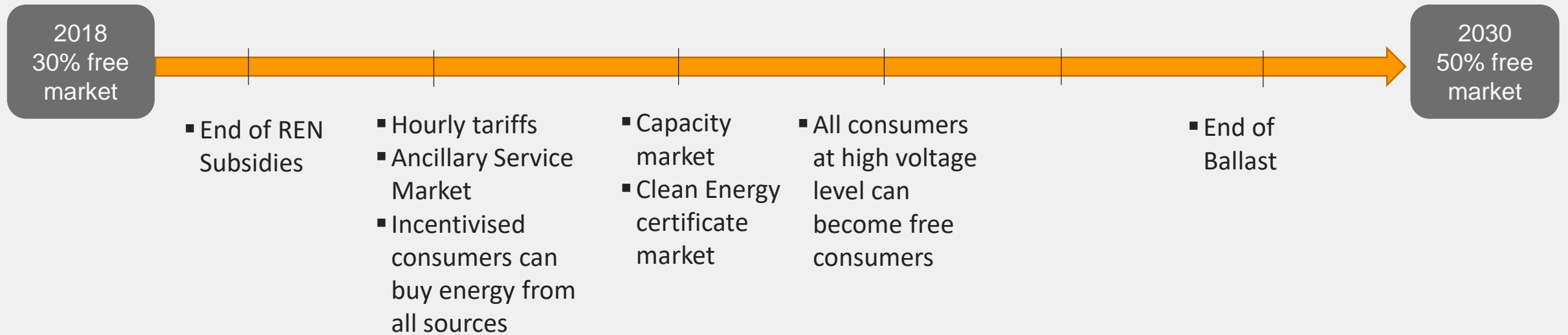


Cost of alternative energy sources (LCOE, USD/MWh)



Source: Lazard Capital, LCOE v12, Scatec Solar.
LCOE: Levelised cost of energy

Expected regulatory changes



Opportunities



Corporate PPAs

- Willingness for longer term contracts
- PPAs in USD



Technology improvements

- Bi-facial panels
- Storage



“Innovative” solutions

- Floating PV
- Leasing solutions (Release)
- Hybrid projects



Capital markets

- Lower i-rate: lower Kd



Distributed Generation

- Substantial growth

Challenges



Guarantees vs. Funding

- “Additional” guarantees (corp. PPAs)
- BNB Budget limit and future changes



High competition

- Very low regulated prices
- Non-bankable corporate PPAs
- Interconnection limitations



Regulatory changes

- Uncertainty (e.g. end of REN subsidies, end of ballast, hourly pricing)



Merchant risk exposure

- Unpredictability of spot prices
- PPA tenures lower than plant life

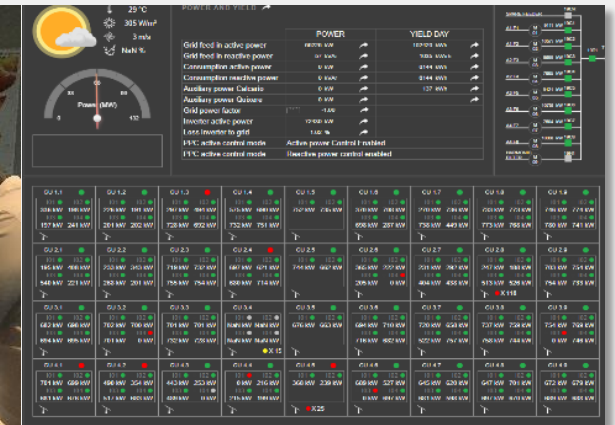
Scatec Solar utilises new technology to improve power plant performance

Bi-facial solar modules, Egypt

- The world's largest solar park with bi-facial modules
- 390 MW / 870 GWh annual production

Global control & monitoring centre, Cape Town

- Real-time data from all plants globally 24/7
- Improving operational quality and efficiency
- R&D programs with several universities and institutions



Introducing **release** - offering reliable, flexible and low cost solar power

BY SCATEC SOLAR

Pre-assembled and containerised solar and battery equipment



Quickly installed – modular, scalable and redeployable



**Limited upfront investment
flexible contract duration**



A customer case – substantial long term savings

Customer

- Western listed mining company operating in Africa
- Relies on diesel – life of mine 5 - 20 years

Customer need

- Power demand: 60 GWh/year - Solar to cover 28%
- Cost savings over 15 years: USD 24 million
- CO₂ emission reduction over 15 years: 160,000 tonnes

Release solution set up

- Customer pays up front fee and issues bank guarantees for a certain period lease payment
- 4 year lease contract – extension with lower cost for customer



Release film





Thank you!



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