# RIO DE JANEIRO

THE ENERGY THAT COMES FROM THE SEA

Secretaria de Energia e Economia do Mar



GOVERNO DO ESTADO RIO DE JANEIRO



#### RIO DE JANEIRO ON ITS WAY TO THE ENERGY MATRIX OF THE FUTURE

Over the last few decades, the State of Rio has played a leading role in the nacional production of oil and gas, and is now moving foward in the transition to other clean and more renewable energy sources to guarantee a sustainable future. In addition to its energy riches, Rio de Janeiro has competitive advantages, offers countless opportunities to the development of the sector and it ´s on its way to consolidating itself as a protagonist in the diversification of the energy matrix in Brazil.

Stimulating regional vocations and the energetic potencials in all territory of Rio de Janeiro is in among the priorities of the State government, due to the extremely relevant role they play in socioeconomic growth. The State Energy Transition Policy, developed by the Secretariat of Energy and Maritime Economy, will define priority actions for reducing greenhouse gas emission.

The climate change state policy, the Susteinable Corridors Program – which already has 11 gas stations, adapted to fuel heavy vehicles with natural gas and biomethane, generating less pollution - and the pilot project to encourage the installation of offshore wind turbines are some of the initiatives already underway to transform Rio de Janeiro into a increasingly sustainable state.

Recognized for its port and logistics infrastructure, consolidated naval industry and skilled labor, the State of Rio de Janeiro is an important actor in the nacional energy scenario. It has great potencial for generating renewable sources, such as wind energy, solar photovoltaic, biogas, hydrogen, and diversified investment opportunities. By stablishing itself as an energy hub, Rio de Janeiro is moving to consolidate its leading position in energy innovation and ensure a promising future for the state.

## SUMMARY



**COMPETITIVE ADVANTAGES** 

### NATURAL GAS





2nd largest distribution pipeline network, with 6.456Km



Largest CNG consumer in the country



**2nd largest** biogas producer of the country **327 million** of m³/year \* Potential: **800 million** m³/year



**Ist biomethane** producer of the country

**41 million** of m<sup>3</sup>/year \*\* Potential: **up to 478 million** of m<sup>3</sup>/year

\* ANP - March, 2024

\*\* ABIOGas, 2022

### **OFFSHORE WIND**



636 km of coastline extension



**3rd largest** coastline in the country



#### 255 thousand km<sup>2</sup> of continental shelf

(territorial sea and exclusive economic zone)



## Constant wind,

especially from the city of Arraial do Cabo to the boundary with the State of Espírito Santo



#### 15 projects in the licensing phase at IBAMA



#### 38.7 GW

of installed power (IBAMA, 2024) including the pilot project led by the Secretariat of Energy and Maritime Economy



#### US\$85.2 billion potential investment attraction in the next 10 years

### Rio de Janeiro's 50 years of experience in offshore oil and gas exploration and production,

robust port logistics and infrastructure, the recognition as the country's second largest energy shipping center, several research complexes, excellent higher education and technical institutions are all distinguishing features.





Solar irradiation potential that varies from **1,460 to 2,010 kwh/m²** 



### R\$7,6 billion

invested in own generation since 2012



\* ABSOLAR, 2024

#### Rio de Janeiro is among the top 10 states in the national ranking of the sector.

It has significant growth potential and plans to install solar panels in public buildings and social housing developments.

### HYDROGEN



#### Significant potential for low carbon hydrogen

from renewable energies – solar, offshore wind – and natural gas.



### Porto do Açu and Eletrobras have an agreement

to evaluate the implementation of low-carbon projects, focusing on the production of renewable hydrogen and its derivatives.

### MAPS OF RENEWABLE ENERGIES OF RIO DE JANEIRO



440 kW in operation



## Total installed power: 48,4 MW

## Total operating power: 39,9 MW

Aneel 2023

NOVA IGUAÇU

16.932 kW in operation

#### SÃO PEDRO DA ALDEIA

1.429,20 kW in operation

#### SÃO GONÇALO

8.466 kW in operation

#### **RIO DE JANEIRO**

4.998,40 kW in operation

**RIO DE JANEIRO** 

1.000 kW **in operation** 

#### 15 OFFSHORE WIND PROJECTS ARE IN THE LICENSING PROCESS AT IBAMA

- RJ-01 MARAVILHA
- RJ-02 ARACATU
- RJ-03 VENTOS DO ATLÂNTICO
- **RJ-04** VENTOS FLUMINENSES
- RJ-05 VENTOS DO AÇU
- **RJ-06** QUARESMEIRA
- RJ-07 BROMÉLIA
- **RJ-08** SOPROS DO RIO DE JANEIRO
- RJ-09 PROJETO AÇU
- **RJ-10** REDENTOR DOS MARES
- RJ 11 CARUARA I
- RJ-12 CARUARA II
- RJ-13 CABO FRIO
- **RJ-14** SOPROS DO RIO DE JANEIRO 2
- **RJ-15** SITE DE TESTE PORTO DO AÇU



### SOLAR

#### The State of Rio has 97.4 thousand operational solar energy connections on roofs, facades and small plots of land



#### THE STATE'S COMPETITIVE ADVANTAGES

**Logistics and infrastructure,** with an extensive railway and highways network, ports and airports.

## Strategic geographical location for exports,

including the largest private port and industrial complex in Latin America: Porto do Açu, an excellent hub for renewable energies.

**Transmission lines** close to the cargo center and transportation infrastructure throughout Brazil.

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Edifício Palácio Austregésilo de Athayde Av. Presidente Wilson, nº 231 - 19º andar Centro – Rio de Janeiro – RJ www.seenemar.rj.gov.br

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