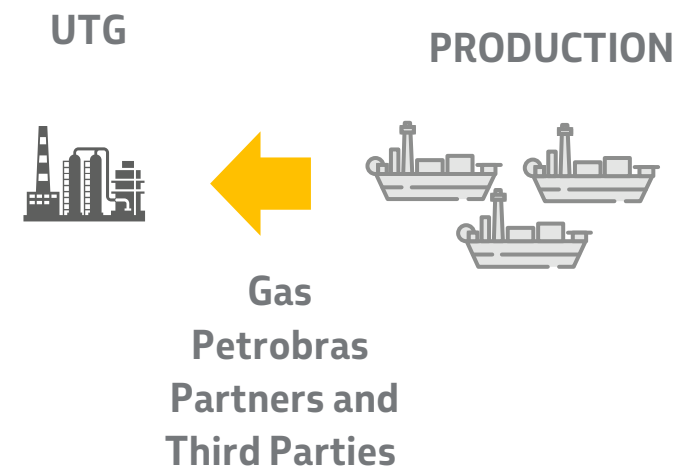
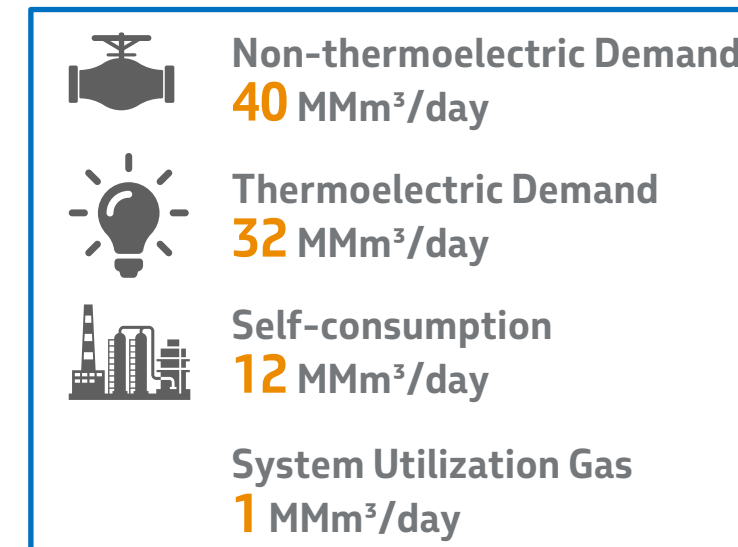
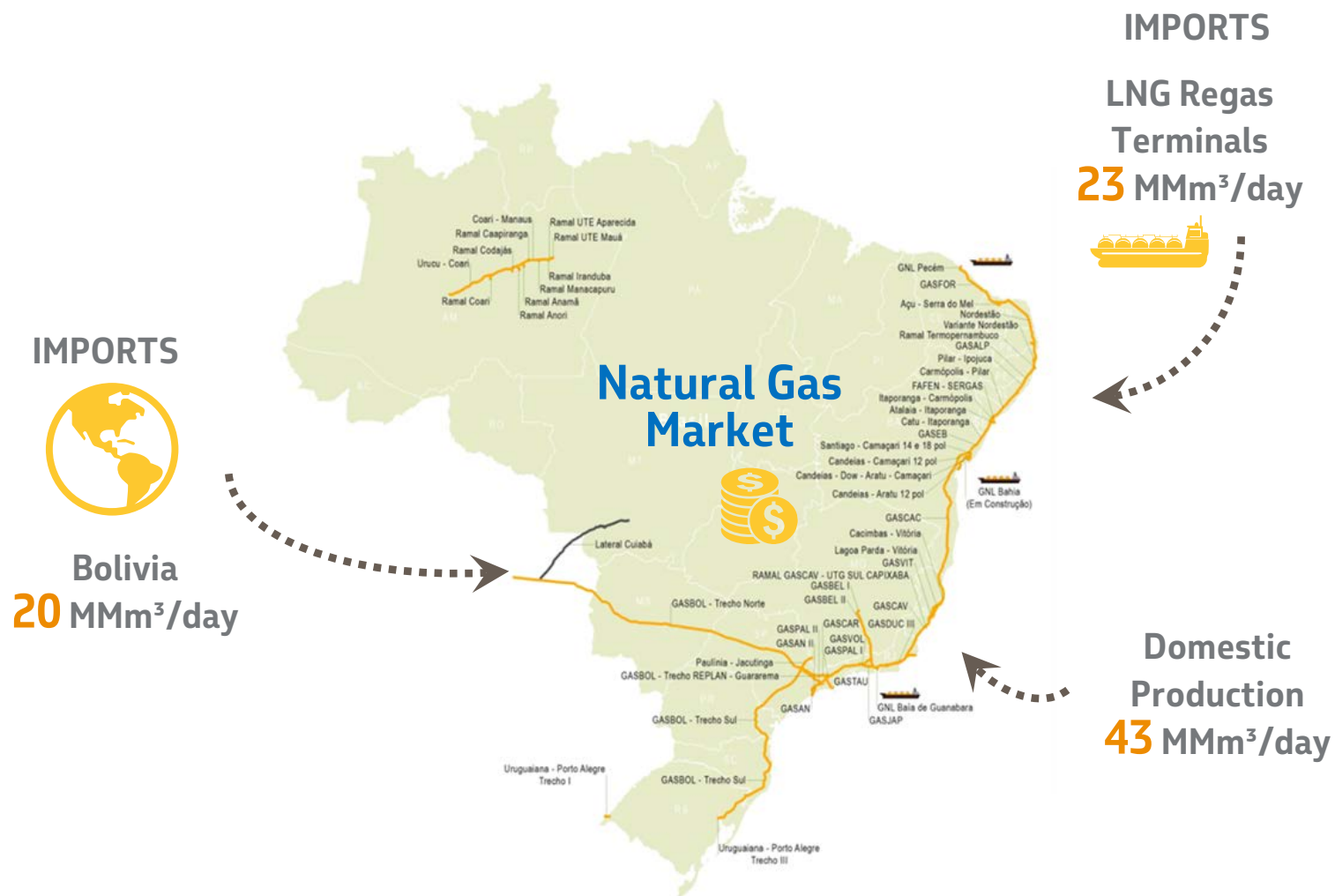


G&E Segment



Dynamics of Petrobras' Performance in the Natural Gas Market



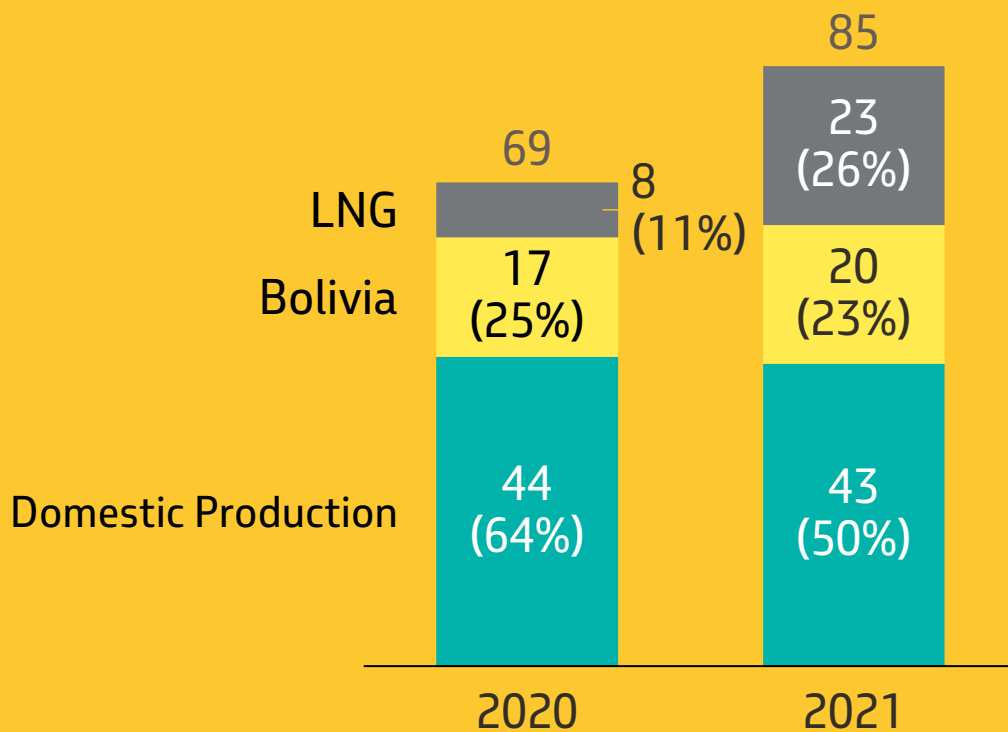
2021 VOLUMES

Natural Gas Imports

Flexible Portfolio

NG Supply

MM m³/d



LNG



Price : +217% (from 4.7 US\$/MMbtu in 2020 to 15 US\$/MMbtu in 2021)

Import Capacity : **47 MM m³/d**

SPOT performance

94% of cargo imported from the USA

Price tied to **LNG Europe benchmark**

BOLIVIA



Price: +7% (from 4.3 US\$/MMbtu in 2020 to 4.6 US\$/MMbtu in 2021)

Contract with estimated end date: from **may/24** to **apr/25**

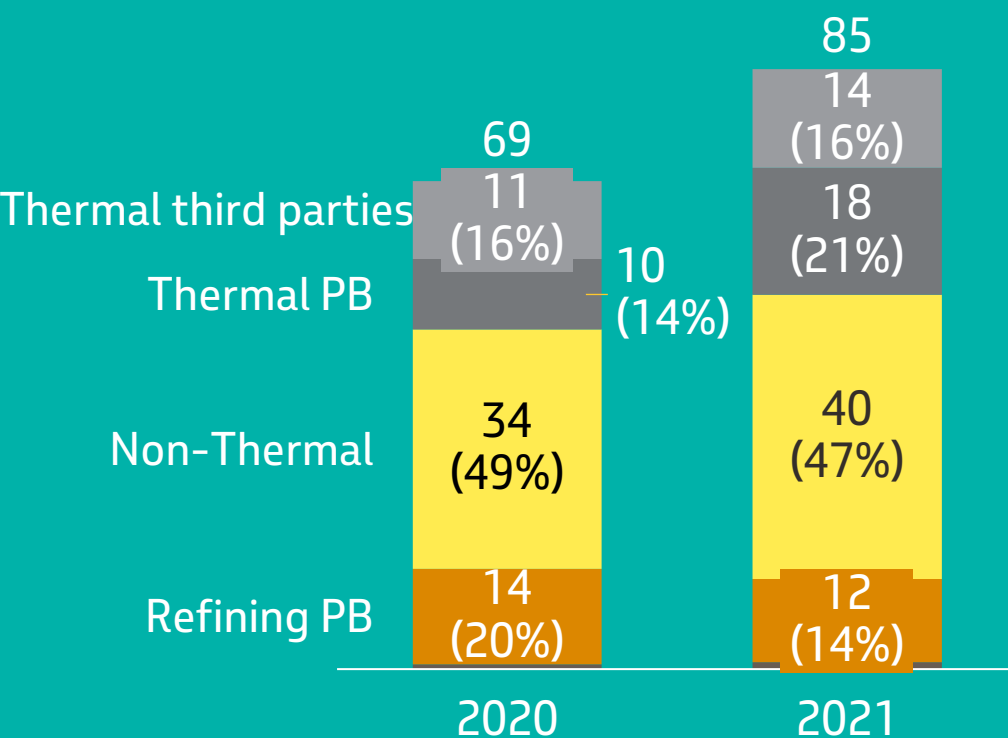
Contracted amount (DOP): **20 MM m³/d**

Volume *Take* (minimum): **14 MM m³/d**

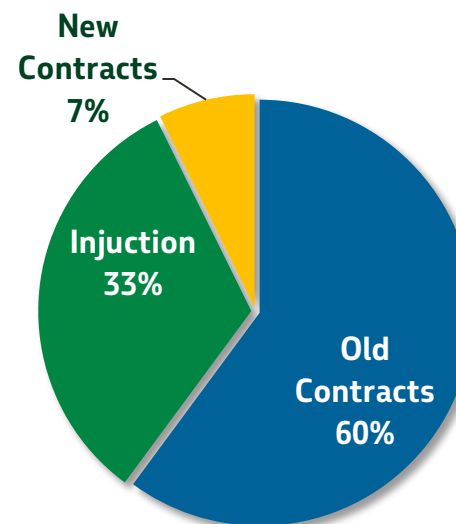
Prices: **Fuel Oil-indexed contract**

NG Demand

MM m³/d



Commitment Distribution 2022
(in volumes)



**Actions in 2022
focused on the re-
contracting of the
non-thermal portfolio**

**Challenging scenario
with lawsuits in
contracts with
distributors**

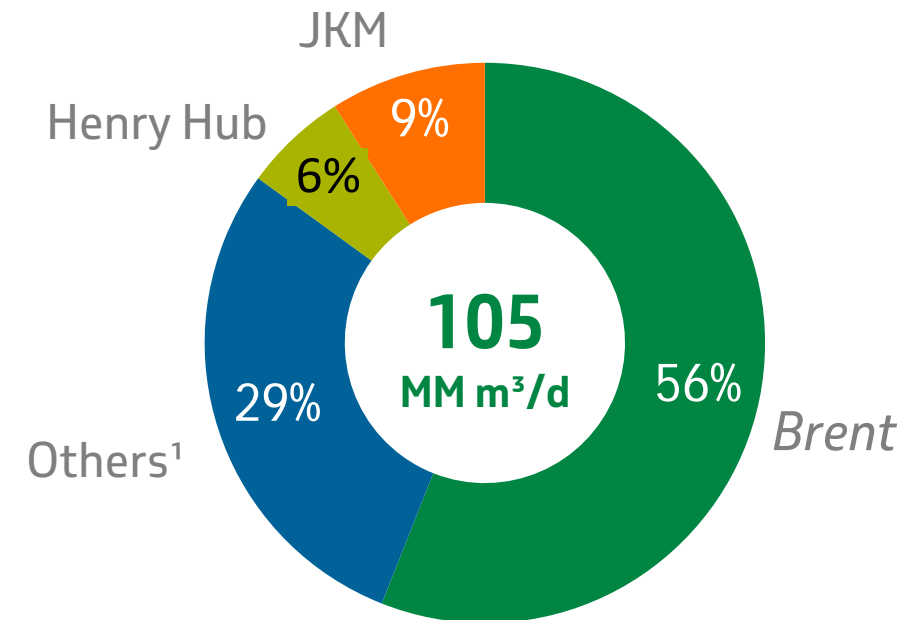
Market

Natural Gas and Energy Commercialization



In natural gas markets like Brazil's, most of Petrobras' sales of natural gas and power are through long-term contracts, with oil-indexed prices.

G&E Volumetric Exposure



In 2021, the cyclical decoupling between Brent and LNG did not allow sales prices to accompany the increase in cost.

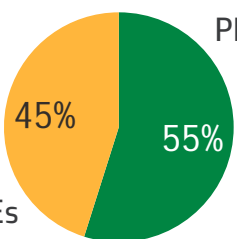
¹ Exchange rates, spot energy prices, inflation, among others.

Market

Natural Gas and Energy Integration

Natural Gas

Thermoelectric demand ²⁰²¹
32 MM m³/day



PB UTEs

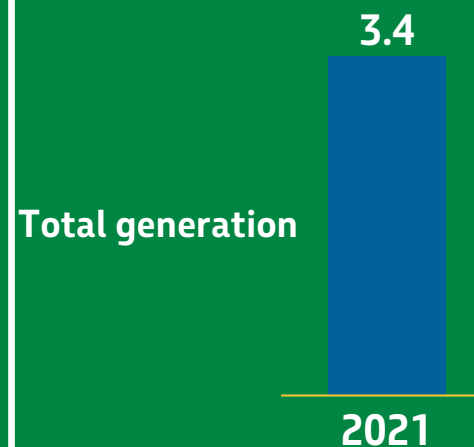


Thermoelectric demand
Own UTEs ²⁰²¹
18 MM m³/dia



ENERGY

EE Generation - Own Thermal Power Plants (UTEs) - GWMed



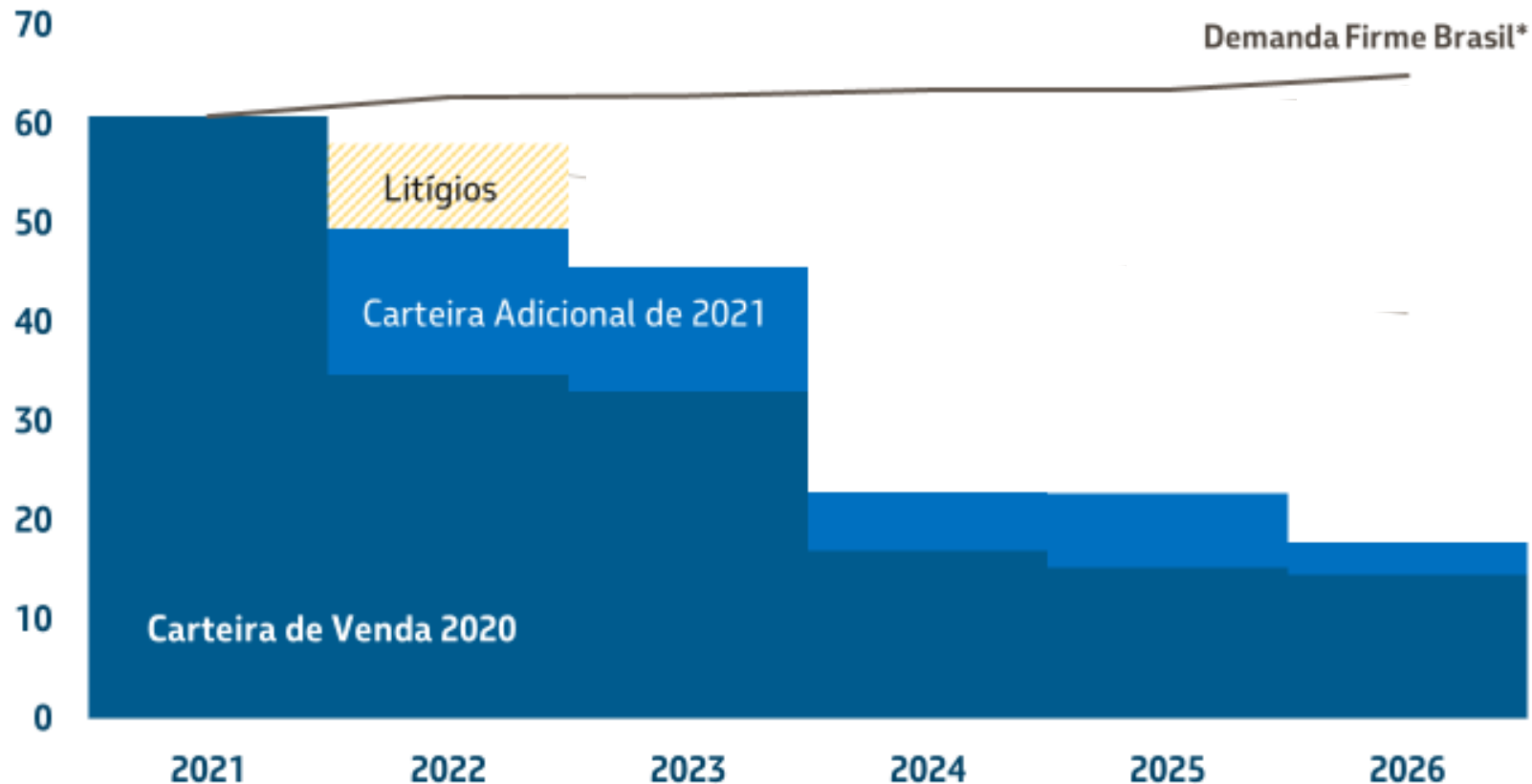
High EE generation in 2021, with the worst drought in the 90-year history, leading to a low level of the hydroelectric reservoirs

ACR sales GWMed



In 2021, added 71 MWmed with the entry of the volume corresponding to the A-2 Auction (2019): UTE Ibirité

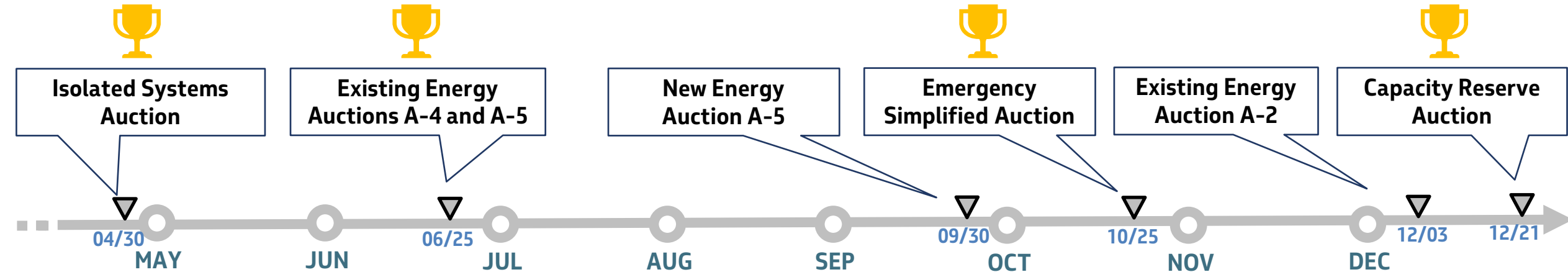
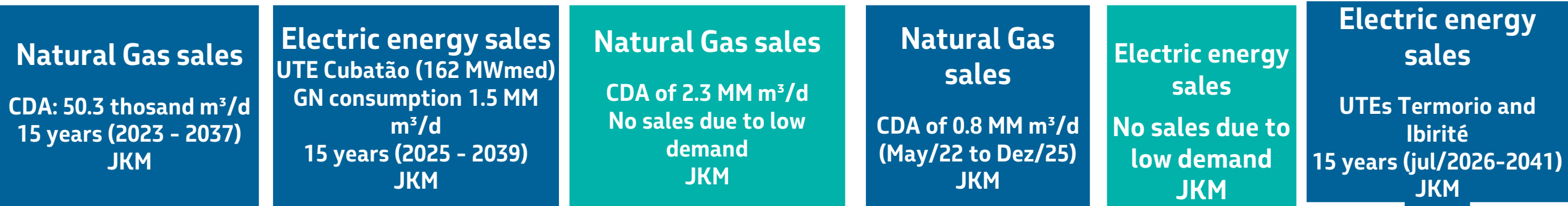
We are working on building the customer portfolio, lengthening the portfolio in contracts in the non-thermal market....



Following the strategy of creating a portfolio to **allocate its own gas**, with sales prices linked to the opportunity cost in Brazil.

and in the thermoelectric market through contracts in auctions.

Sales equivalent to a volume of natural gas of 8 MM m³/d priced at JKM



**Fixed revenue added = R\$ 17.4 billion
(horizon to 2041)**

Note:
CDA = contracted daily amount of gas
UTE = Thermal Power Plant

And optimizing the thermal portfolio: + Efficient.

Portfolio Adjustment

Sale of 3 UTEs Fuel Oil (NE) and 4 Wind Power

Installed Capacity :
433 MW

Termocamaçari Leasing

Installed Capacity :
120 MW

Sale of stakes UTEs (North) - Breitner

Installed Capacity :
313 MW

Sale of stakes UTE Manauara and PCH's

Installed Capacity :
111 MW

TOTAL

Installed Capacity :
1.0 GW

Current Status

13 existing owned plants

Installed Capacity PB:
5.3 GW

1 stake

Installed Capacity PB:
0.1 GW

TOTAL

Installed Capacity PB:
5.4 GW

No sales due to low demand

Proposed Portfolio

Existing owned plants

Installed Capacity PB:
3.8 GW

New Project

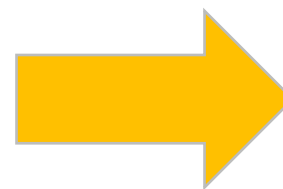
Installed Capacity PB:
1.6 GW

TOTAL

Installed Capacity PB:
5.4 GW

Renewal of UTEs portfolio

- ☐ High efficiency assets;;
- ☐ Allocation of own Natural Gas;
- ☐ Operation of the assets in an integrated way.



+ 10% in efficiency
- 6% in O&M costs

