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Readers are cautioned that these statements are only projections and may differ materially from actual future results or events.

Forward-looking data, information, projections and opinions expressed during the presentation are subject to change without prior notice.
Resilience in 2020 and ready for recovery

5% of Production growth
- Gas: 127 Mm³/d
- Oil: 2.94 Mbpd

Pre-salt high performance

Export records
- Oil: 1.37 Mbpd
- Oil and fuel oil with low sulfur content

Asset's acquisition
- 50 M&As Upstream deals approved by ANP
- 18 areas sold in the 2nd Cycle of Open Offer

More than 15 Offshore Prod. Units expected to start operation until 2025

IEA (Oil 2021): “Brazil is poised to be one of the key sources of growth over the medium term”

Right assets in the right hands
- Ongoing huge Petrobras divestment plan: new investors in Brazil
- + Measures to increase competitiveness

Well positioned for growth
An unprecedented transformation
We continue to make progress in opening the O&G sector

E&P
A completely diverse sector will emerge from Petrobras’ Divestment Plan. All onshore and shallow water fields are being sold, as well as some great offshore post-salt concessions.

With new investments in mature fields, development of pre-salt fields, offshore blocks in the exploratory phase, and a calendar of new auctions, Brazil is ready to grow production and take a leading position in the sector.

Downstream
For the first time, half of the refining capacity (REFAP • RNEST • REPAR • RLAM • LUBNOR • REGAP • REMAN • SIX) is being sold by Petrobras, which will lead to a competitive and open refining and fuel market.

Measures are being taken to deal with the transition to this new environment and to bring competitiveness to the distribution sector.

Gas
First-ever effective opening in the natural gas market with Petrobras leaving the transport and distribution sectors.

A new gas bill has just been approved and a strong regulatory agenda is underway to create a new gas market and opportunities between suppliers and free consumers/distributors. A relevant open season calendar is set for this year.
#1

Exploration & Production
Brazil is taking a leading role in the E&P sector

Potential to reach more than 5 million oil bpd in 2030 (EPE)
Potential to become the 5th largest crude oil exporter in 2030 (EPE)
2021-2025 Investments Forecast: US$ 50 billion

2021

Production:

- **3 M** Bpd of oil production (April 2021)
- **131 M** M³ of gas production (April 2021)

Reserves:

- **12 B** Bbl in proved oil reserves (Dec 2020)
- **337 B** M³ in proved gas reserves (Dec 2020)

Competitive assets, resilient projects and world-class resources

April 2021: example of pre-salt fields
E&P Strategic Goals

Strategic goals for the three environments (pre-salt, pos-salt offshore and onshore)

**Accelerate the pre-salt exploration and development**

**Revitalize the onshore**, increase the mature fields RF, promote the small and medium producers' market, intensify exploratory activities, quantify the oil potential

**Increase the mature fields RF and accelerate exploratory activities in the new frontier basins**

**Attract the right players for each environment (assets in right hands)**
Ongoing measures in the E&P

* April 2021 average

**Pre-Salt**

- Number of producing wells: 122 wells
- Average production per well: 22,636 boe/d
- 73% of Brazilian Total Production

**Post-Salt Offshore**

- Number of producing wells: 343 wells
- Average production per well: 2,443 boe/d
- 22% of Brazilian Total Production

**Onshore**

- Number of producing wells: 5,947 wells
- Average production per well: 33 boe/d
- 5% of Brazilian Total Production

Measures to further increase competitiveness being studied in the BidSIM Program.

- Ongoing discussion over the best fiscal regime
- More pre-salt areas on offer: new pre-salt frontier in the 17th Bidding Round / 2nd Transfer of Rights Surplus Bidding Round

Petrobras Divestment Plan & New areas in the Open Acreage: attracting new investors/agents

- Conditions for new entrants (Access to Infrastructure / New Gas Market etc.)
- Contract’s extension approval with royalty’s reduction on the incremental production
- Onshore public technical data available for free
- Measures to accelerate the approval of M&As at ANP
- Royalties Reduction for Small and Medium Companies under public consultation
- Contracts and rules simplification
- Other measures to increase competitiveness being studied in the ProMar and REATE Programs
Onshore public technical data available for free

23 packages, totalizing **2.5 terabytes**

- 22,641 wells
- 329 2D seismic surveys
- 204 3D seismic surveys
- 217 non-seismic surveys (gravimetry, magnetometry, magnetotellurics and gamma spectrometry)
- 38 geochemical surveys
- 17 studies

Download (no need for registration): [Reate.cprm.gov.br/anp](https://rete.cprm.gov.br/anp)

If you need any help: helpdesk@anp.gov.br
A lot has been done with great results

Since 2016, the government has conducted a lot of measures to resume the E&P activities in Brazil with great results. Petrobras divestment plan is the big opportunity to establish a new onshore and offshore post-salt market, with diversity of agents.

A new onshore market was established:

32

New onshore companies (since 2016) – 2 IPOs

The auctions held since 2017 yielded around 112 billion reais in signature bonuses and resulted in the contracting of 90 thousand km² in area.
Brazil has great opportunities in 2021 auctions

In addition to the 691 blocks available, we aim to put more 377 new blocks (72 onshore and 305 offshore) in July. The 3rd cycle depends on the interest declaration.

2 pre-salt fields: Atapu (prod. In March: ~81 thousand boepd) and Sépia (first oil scheduled this year) ~12 Billion bbl (OOIP) Technical and Economical Parameters approved by CNPE To be scheduled (most likely in December)

92 blocks on offer Campos, Pelotas, Potiguar and Santos Basins Pre-salt opportunities beyond 200 nautical miles with 3D seismic recently acquired October 7th
#2

Downstream
The Downstream Sector

8th largest refinery park – 19 refineries
50 Biodiesel Plants and 358 Ethanol Plants
132 Mm³ consumed in 2020 (including biofuels)

98% of the refining capacity in Brazil belongs to Petrobras (price maker): half in the divestment plan

2020 National Oil Products Production:

[1.9 million bpd]

Brazilian Vehicle Matrix with relevant participation of biofuels: 30%

<table>
<thead>
<tr>
<th>Fuel</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gasoline A</td>
<td>22.22%</td>
</tr>
<tr>
<td>Diesel A</td>
<td>43.22%</td>
</tr>
<tr>
<td>LPG</td>
<td>24.58%</td>
</tr>
<tr>
<td>Biodiesel</td>
<td>5.61%</td>
</tr>
<tr>
<td>Anhydrous Ethanol</td>
<td>8.22%</td>
</tr>
<tr>
<td>Hydrated Ethanol</td>
<td>16.36%</td>
</tr>
<tr>
<td>Total Ethanol</td>
<td>24.58%</td>
</tr>
</tbody>
</table>

Import percentage in relation to sales (2020 average):

- Gasoline A: 15%
- Diesel A: 24%
- LPG: 27%
- JetFuel: 9%
The Supply Chain

239 distributors (wholesale) & 124,343 retail stations and regulated consumers
7th largest oil products consumer

**Importer**

<table>
<thead>
<tr>
<th>Product</th>
<th>Sales (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gasoline A</td>
<td>3,944,014</td>
</tr>
<tr>
<td>Diesel A</td>
<td>11,994,559</td>
</tr>
<tr>
<td>Ethanol</td>
<td>1,099,833</td>
</tr>
</tbody>
</table>

**Producer**

<table>
<thead>
<tr>
<th>Product</th>
<th>Sales (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gasoline A</td>
<td>23,395,022</td>
</tr>
<tr>
<td>Diesel A</td>
<td>42,215,122</td>
</tr>
</tbody>
</table>

**Biodiesel Plants**

<table>
<thead>
<tr>
<th>Product</th>
<th>Sales (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>32,803,191</td>
</tr>
<tr>
<td>Biodiesel</td>
<td>6,432,008</td>
</tr>
</tbody>
</table>

**Wholesale**

<table>
<thead>
<tr>
<th>Product</th>
<th>Sales (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gasoline C</td>
<td>35,823,614</td>
</tr>
<tr>
<td>(Gasoline A + Ethanol)</td>
<td></td>
</tr>
<tr>
<td>Diesel B</td>
<td>57,472,056</td>
</tr>
<tr>
<td>(Diesel A + Biodiesel)</td>
<td></td>
</tr>
<tr>
<td>Hydrated Ethanol</td>
<td>19,257,933</td>
</tr>
</tbody>
</table>

*Only for Diesel, Gasoline and Ethanol – 2020 numbers in m³*
The Greatest Transformation

PRESENT

An open, diversified and competitive market with multiple players

De facto monopoly

- Import Parity
- Risk of new price controls or anticompetitive practices
- Investment needs

EXPECTED FUTURE

Petrobras Divestment Plan

- Market Price
- New investments
- Increase in national production

The refineries’ sale process will contribute to diversify the supply and to increase competition in the downstream sector.

The role of ANP is to work in the transition with an emphasis on guaranteeing supply and improving the regulatory framework, aiming an open and competitive market.

In addition, ANP is working to better monitor the oil products stocks and to ensure transparency on the prices.

There is also a huge regulatory agenda to increase competitiveness in the wholesale and resale sectors.
Natural Gas Market
The Natural Gas Market in numbers

Natural gas used in Brazil has a predominantly national origin and mainly is associated with oil produced in offshore fields. Other sources include imports through pipelines from Bolivia and LNG through regasification terminals. Only around 40% of the national production is consumed by the Brazilian market due to lack of demand/infrastructure and high gas prices.

### Supply

<table>
<thead>
<tr>
<th>Source</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Production</td>
<td>66%</td>
</tr>
<tr>
<td>Bolivia Imports</td>
<td>23%</td>
</tr>
<tr>
<td>LNG Imports</td>
<td>11%</td>
</tr>
</tbody>
</table>

*2020 Average numbers

### Demand

<table>
<thead>
<tr>
<th>Sector</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial</td>
<td>50%</td>
</tr>
<tr>
<td>Electric Generation</td>
<td>36%</td>
</tr>
<tr>
<td>Automotive</td>
<td>7%</td>
</tr>
<tr>
<td>Cogeneration</td>
<td>3%</td>
</tr>
<tr>
<td>Others</td>
<td>4%</td>
</tr>
</tbody>
</table>

### The Natural Gas Market in numbers

- **National Production**: 77 Million m³/d
- **Bolivia Imports**: 23% of national production
- **LNG Imports**: 11% of national production
- **Electric Generation**: 36%
- **Industrial**: 50%
- **Automotive**: 7%
- **Cogeneration**: 3%
- **Others**: 4%

*2020 Average numbers*
The Natural Gas Infrastructure

Brazil: continental size with limited natural gas infrastructure

~9.4 Thousand km of transmission gas pipelines

~2.2 Thousand km of transfer gas pipelines

15 NG Processing Plants
Capacity: ~108 Million m³/d

<table>
<thead>
<tr>
<th>LNG Terminal</th>
<th>Capacity (Million m³/d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pecem</td>
<td>7</td>
</tr>
<tr>
<td>TRBA (Bahia)</td>
<td>20</td>
</tr>
<tr>
<td>TRBG (Baia de Guanabara)</td>
<td>20</td>
</tr>
<tr>
<td>Barra dos Coqueiros (SE - CELSE)*</td>
<td>21</td>
</tr>
<tr>
<td>Porto de Açu (UTE GNA I)*</td>
<td>21</td>
</tr>
</tbody>
</table>

*In pre-operation in nov/20

5 LNG Terminals + 4 LNG Terminals expected

Source: ANP Statistical Yearbook (2020)
Towards an Open and Competitive Natural Gas Market

**PAST**
- Vertical Integration
- Open Access not possible
- Prices solely defined by one player

**PRESENT**
- Developing Effective Open Access
- Unbundling from transportation and competitive activities
- Effective competitiveness for gas supply to Consumers and Distribution Companies
- Gas prices negotiated by players

**FUTURE**
- Total Unbundling
- Effective Open Access
- Competitiveness for gas supply to all final users
- Prices determined by the market (lower gas prices)

**Monopoly**
- Vertical Integration
- Open Access not possible
- Prices solely defined by one player

**Market Development**
- Developing Effective Open Access
- Unbundling from transportation and competitive activities
- Effective competitiveness for gas supply to Consumers and Distribution Companies
- Gas prices negotiated by players

**Petrobras Divestment Plan & CADE Agreement**

**Open and Competitive Market**
- Total Unbundling
- Effective Open Access
- Competitiveness for gas supply to all final users
- Prices determined by the market (lower gas prices)
2021 ANP Measures

The new Gas Law (Law 14,134 / 2021) represents a decisive step towards an open, liquid and competitive market. A robust regulatory agenda is underway to implement the new NG market.

2021 Open Season Calendar

Incremental Open Season:
TAG
TBG (Focused on expanding the southern section)
NTS (Focused on the implementation of the Itaboraí Guapimirim Gas Pipeline)

Annual Open Season to offer available capacity:
- TBG Open Seasons 2 and 3 to offer available capacity for 2021 (starting on May)-2025 and 2022-2026
- NTS Open Season 1 to offer the available capacity for 2022-2026 - Preferably coordinated with Open Season 3 from TBG
- TAG Open Season 1, to offer available capacity for 2022-2026

2021 Regulatory Agenda

✓ Independence criteria for gas pipelines transmission operators – to be approved in the first semester
✓ New ANP Order on Interconnection between gas pipelines
✓ Review of the ANP Order on Tariffs (ANP nº 15/2014)
✓ Review and unification of the ANP Order on Gas Transportation Carriers (ANP nº 51/2013) & Commercialization (ANP nº 52/2011) – New conceptual model of the gas market under discussion
✓ Work Group to address third party access to essential facilities

2021 ANP Measures

The new Gas Law (Law 14,134 / 2021) represents a decisive step towards an open, liquid and competitive market. A robust regulatory agenda is underway to implement the new NG market.
Energy Transition
Brazil is in a privileged position in the energy transition

Renewables account for 46% of the energy matrix. Emissions in the energy sector are lower compared to the world average. Big opportunities due to diverse energy and environmental assets.

Since 2009, O&G production operated by Petrobras increased more than 40% without increasing emissions. Petrobras goals: 25% reduction in absolute operating emissions by 2030; Zero routine flaring by 2030; 40Mton CO2 reinjection by 2025 in CCUS projects.

30% of the vehicle matrix is fueled by renewables (ethanol and biodiesel). 3% of the R&D resources from the O&G industry obliged to be applied in Brazil are spent on renewables projects.

Brazil is the 2nd largest producer and consumer of biofuels and benefits from a longstanding well-established industry: 80% of our automobiles are flex-fuel.

Public policies like Renovabio Program show the country will continue to advance in this agenda. In 2020, more than 14 million tons of greenhouse gas emissions were avoided.

A new government program (Fuel of the future) was approved by the CNPE (i.e.: incentives to the large-scale use of 2nd generation ethanol; R&D to encourage fuel-cell technology; creation of green corridors to supply heavy vehicles powered by biomethane; introduction of BioJetFuel etc).

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