The evolution of Petrobras in an industry in transformation

Nelson Silva
Chief Strategy and Performance Officer
OUR TOP METRICS

**Safety**

TOTAL RECORDABLE INJURY FREQUENCY RATE (TRI)*

- 2015: 2.2
- 3Q17: 1.1
- In 2018: 1.0

50% reduction

**Financial**

NET DEBT / ADJUSTED EBITDA

- 2015: 5.1
- 3Q17: 3.2
- In 2018: 2.5

40% reduction

*Number of recordable injuries per million man-hours
From 2015 to October 2017, TRIFR dropped from 2.15 to 1.09 injuries per million man-hours, preventing more than one thousand injuries!

We have reduced the TRIFR and prevented hundreds of injuries

Total recordable injuries per million man-hours (TRIFR)

From 2015 to October 2017, TRIFR dropped from 2.15 to 1.09 injuries per million man-hours, preventing more than one thousand injuries!
Falling debt and improving debt profile

Note: prepayment of US$ 2.8 billion to China Development Bank not included (due in 2019)
NEW STRATEGIES

LOW CARBON ECONOMY

DIGITAL TRANSFORMATION

FINANCIAL AND RISK MANAGEMENT

VISION
An integrated energy company focused on oil and gas that evolves with society, creating high value, with a unique technical capability

VALUES

Ethics and transparency

Overcoming and confidence

Market driven

Respect for life, people and environment

Results oriented

PURPOSE
To provide the energy that drives society to fulfill its potential
Preparing the company for a future based on a low carbon economy

- Reducing our carbon footprint
- Investing and promoting new technologies to reduce GHG
- Developing high value renewable energy businesses
Capturing opportunities generated by the digital transformation

Value generation through the implementation of consolidated and emerging digital solutions, and new ways of collaboration and innovation:

- Automation
- Big data
- Cloud computing
- Artificial intelligence
- High performance computing
- IoT
Improvement on cash management, increasing predictability and optimizing size and allocation

Reduction of the risk associated to the company’s cash flow
Focus on the most profitable projects

Capex 2018-2022

<table>
<thead>
<tr>
<th>Segment</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
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<td>Upstream</td>
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<td>11.9</td>
<td>8.4</td>
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<td>Refining and Natural Gas</td>
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<td>3.8</td>
<td>1.9</td>
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<tr>
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<td>15.8</td>
<td>10.5</td>
<td>14.2</td>
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Note: considers impacts of divestments
Leading to a robust production growth

Note: considers impacts of divestments
While improving our operational performance —

**Average of 2018-2022 BMP**

<table>
<thead>
<tr>
<th>Location</th>
<th>FPSO ramp-up months to reach plateau</th>
<th>Lifting costs (US$/bbl)</th>
<th>Refining costs (US$/bbl)</th>
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<td>Ilhabela</td>
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<td>Itaguaí</td>
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</tbody>
</table>

**Average of 2018-2022 BMP**
Resulting in pre-salt breakeven being among the lowest

* Breakeven price range for a typical Pre-salt project

Sources: IHS Markit 2016, *Petrobras
The transformation of the energy industry
The future of the industry will be impacted by multiple disruptions.

Linear World

- Mobility Revolution
  - ICE efficiency
  - Ride sharing
  - EV adoption & autonomous cars
  - Leapfrogging ICE

Non-Linear World

- Consumption Growth
  - GDP growth
  - PetChem product innovation
  - Developing market indigenous consumption
  - Energy intensity

- Power "Super Charged"
  - Conventional supply
  - Unconventional supply
  - Renewables supply
  - New sources of supply / Nuclear fission

Source: Accenture Strategy Energy, ICE: Internal Combustion Engine
Going electric...

Plans by automakers:

- **GM**: plans to offer 20 electric models by 2023
- **Ford**: plans to offer 13 electric models by 2023
- **Volvo**: plans to stop manufacturing combustion engine-only vehicles by 2019
- **VW Group**: plans to invest USD 84 billion to manufacture batteries and offer 300 electric models by 2030
- **Tesla**: the first *Model 3* (350 km range) started to be delivered by mid-2017, at a price point of US$ 35,000

Renewable energy costs are falling exponentially

U.S. Energy Cost (US$/MWh)*

Source: Lazard and CEE, *unsubsidized energy cost
Some burning questions...

- What is the future of our industry?
- How fast will we be able to adapt to disruptive changes?
- What is the actual value of our assets?
- Are we ready to reposition ourselves in new businesses and markets?
Our challenge is to discover NOW what will matter TOMORROW and transform our industry into a FUTURE that is unfolding TODAY.
Thank you