



METHANE REGULATOR-TO-REGULATOR NETWORK MR2R

Empowering regulators for methane action

Session 6

Designing and planning for effective methane regulations

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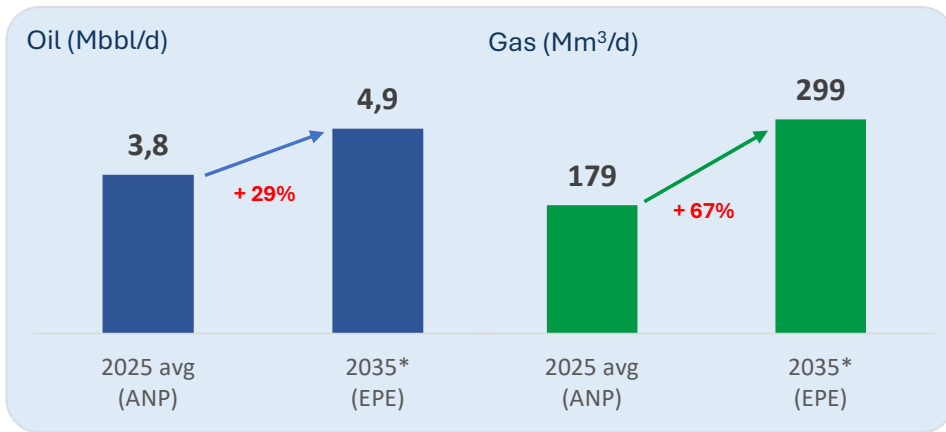
April 15, 2026



BRAZILIAN OVERVIEW OF OIL AND GAS E&P



2025 AVERAGE PRODUCTION



Consortium Companies
81

Operating Companies
58

Producing Fields
302

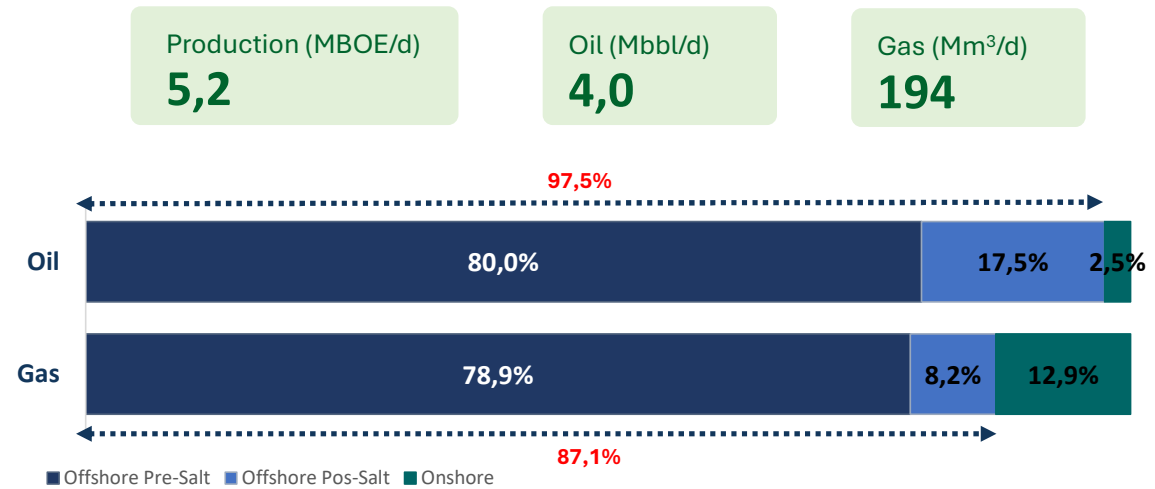
Fields Under Development
42

Offshore Assets
76

*Ten-Year Energy Expansion Plan (EPE)

<https://www.gov.br/anp/pt-br/centrais-de-conteudo/publicacoes/boletins-anp/boletim-mensal-da-producao-de-petroleo-e-gas-natural>

DECEMBER, 2025



TOP 5 PRODUCERS	(MBOE/d)	PARTICIPATION
Petrobras*	3.22	62%
Shell Brasil	0.55	11%
TotalEnergies	0.26	5%
PPSA	0.21	4%
CNOOC Petroleum	0.15	3%
Others	0.81	15%

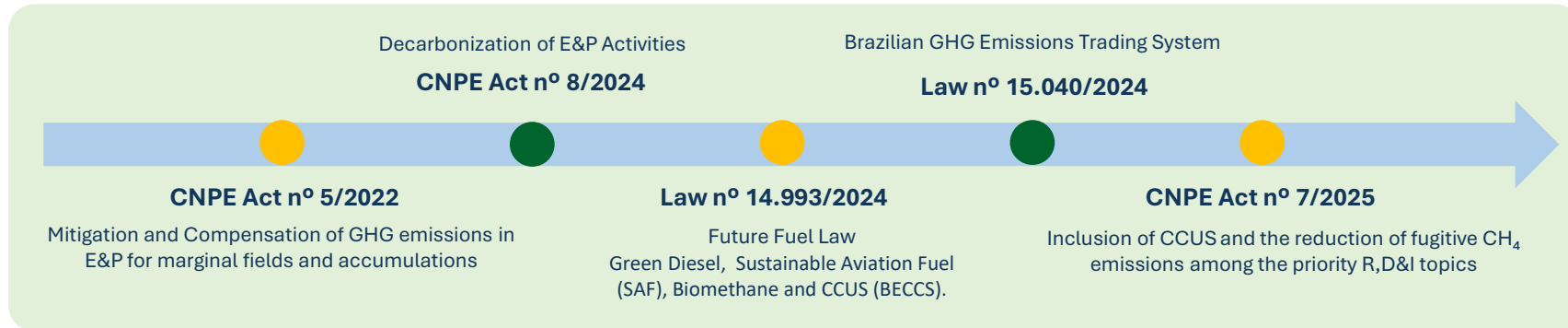
*Petrobras operates 89,8% of Brazil's total production (4,72 MBOE/d)



BRAZILIAN LEGAL FRAMEWORK



GHG emissions mitigation is one of the objectives of Brazil's national policies for the rational use of energy resources (**Law n°. 9,478/1997**). The contracts require adopting best practices, including minimizing GHG emissions.



BRAZIL IS MOVING FORWARD

COMMITMENTS

- ❖ **Paris Agreement:** Updated at COP29 - 2024
Achieve climate neutrality by 2050
Reduce GHG emissions by 59% to 67% by 2035, compared with 2005 levels
- ❖ **Accession to the Global Methane Pledge**
30% reduction target by 2030, relative to 2020
- ❖ **Accession to Zero Routine Flaring (ZFR)**
Eliminate the routine flaring by **2030**

COOPERATIONS & PARTNERSHIPS

- ❖ **World Bank (GFMR)**
Benchmarking and field measurement campaign and training
- ❖ **Clean Air Task Force (CATF)**
Technical support through CoMAT to prepare the regulatory impact analysis and the draft resolution
- ❖ **Partnership with IMEO/UNEP**
Training provided by UNEP on emissions reduction in the O&G sector.
MARS alerts for large emission events

BRAZIL'S REGULATORY PATHWAY

DIAGNOSIS: Characterize emissions by asset, operator, basin, and operating environment

PRIORITIZATION: Identify methane emission hotspots and the most cost-effective opportunities

REGULATION: Design a future methane regulation that is proportional, technically grounded, and feasible to implement and audit



1 Dashboard Evolution

2 Public Disclosure (Power BI)

3 CURRENT STATUS

2022

Mandatory Annual reporting

Basin

2025/1

Data disaggregation

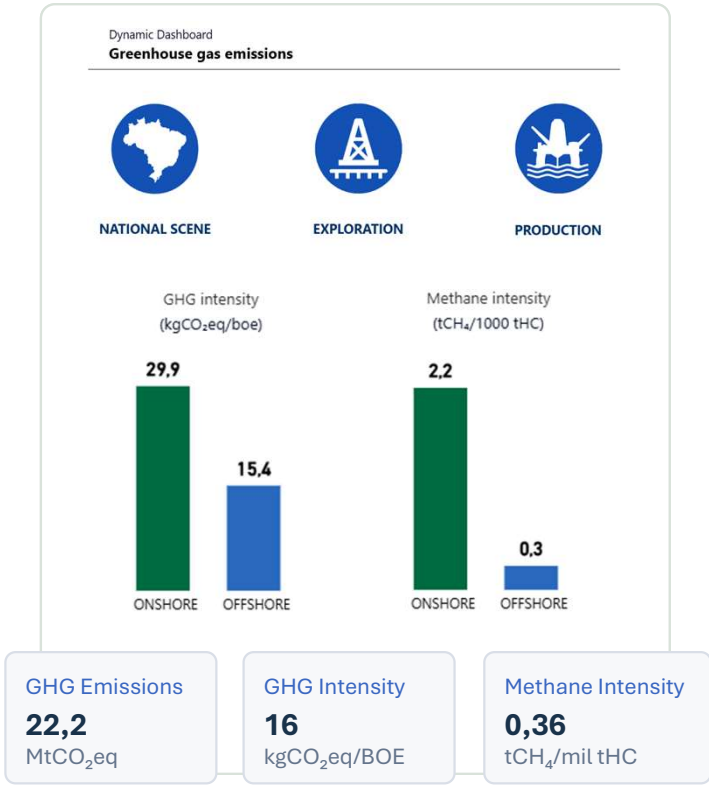
Basin / Field / Asset

2025/2

Expanded scope

Basin / Field
Asset / Block

CO₂, CH₄ e N₂O
by source



Preliminary Study

- ❖ Context
- ❖ Problem identification and approaches
- ❖ Quantification methodologies and reporting structures
- ❖ Technical and operational strategies
- ❖ World Bank recommendations
- ❖ Questions for Regulatory Impact Analysis

TIMELINE

Jul-Dec/25 Preliminary Studies

Jan-May/26 RIA Completion

Jun/26 Draft Regulation Completion

Jul/26 Public Consultation

Oct/26 Public Hearing

Dec/26 Resolution Publication

MAIN CHALLENGES FOR METHANE REGULATION IN BRAZIL

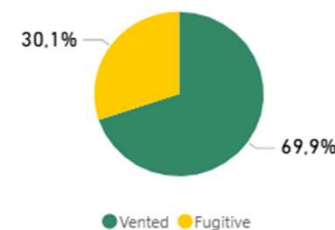
DATA LIMITATIONS

- ❖ Self-reported inventories
- ❖ Higher uncertainty for methane, especially for fugitive emissions
- ❖ Limited direct measurement
- ❖ Flare efficiency

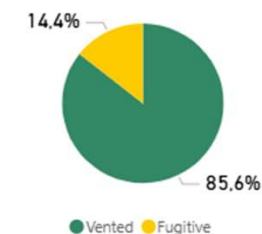
IMPLEMENTATION CHALLENGES

- ❖ Highly diverse production park
- ❖ Large asymmetries among operators
- ❖ Continental-scale territory
- ❖ Significant gaps in gas exportation infrastructure
- ❖ Limited technical staff
- ❖ Older facilities with huge productions
- ❖ Limited knowledge of the cost-effectiveness
- ❖ Technical capacity gaps
- ❖ Limited availability of specialized service providers and equipment suppliers

CH₄ Offshore



CH₄ Onshore



NEXT STEPS

Methane emissions measurement campaign across three production assets | **Supported by the World Bank through GFMR**

Improve the GHG inventory

A more robust technical basis for monitoring reported emissions.

Strengthen the regulator's technical capacity

Applied knowledge to design more effective and auditable rules

EXPECTED OUTCOME

Development of an effective regulation, with clear rules aligned with the sector's reality and capable of delivering real results