



PEMEX®

TENEMOS LA ENERGÍA

MEXICO: ADVANCES IN METHANE MITIGATION OIL & GAS SECTOR

GMI Oil & Gas Subcommittee Meeting
Calgary, Canada
June 12, 2017

Greenhouse Gases MITIGATION GOAL

-22%
UNCONDITIONAL
GOAL

-36%
CONDITIONAL

**NDC
UNCONDITIONAL
GHG MITIGATION
TARGETS**
IN Tg CO₂e
FOR THE PERIOD
2020-2030

2013	2020	2025	2030	2030 GOAL	Δ
665	792	888	973	762	-22%

- ✓ **Net emissions peak** starting from **2026**
- ✓ **51%** reduction of **Black Carbon** emissions
- ✓ **ADAPTATION commitments** to increase resilient capacities in vulnerable communities, infrastructure, and ecosystems, specially Early-Warning Systems

NORTH AMERICAN CLIMATE, CLEAN ENERGY, AND ENVIRONMENT PARTNERSHIP

On June 29, 2016, Mexico, USA and Canada announced their common commitment to reduce methane emissions from the oil and gas sector:

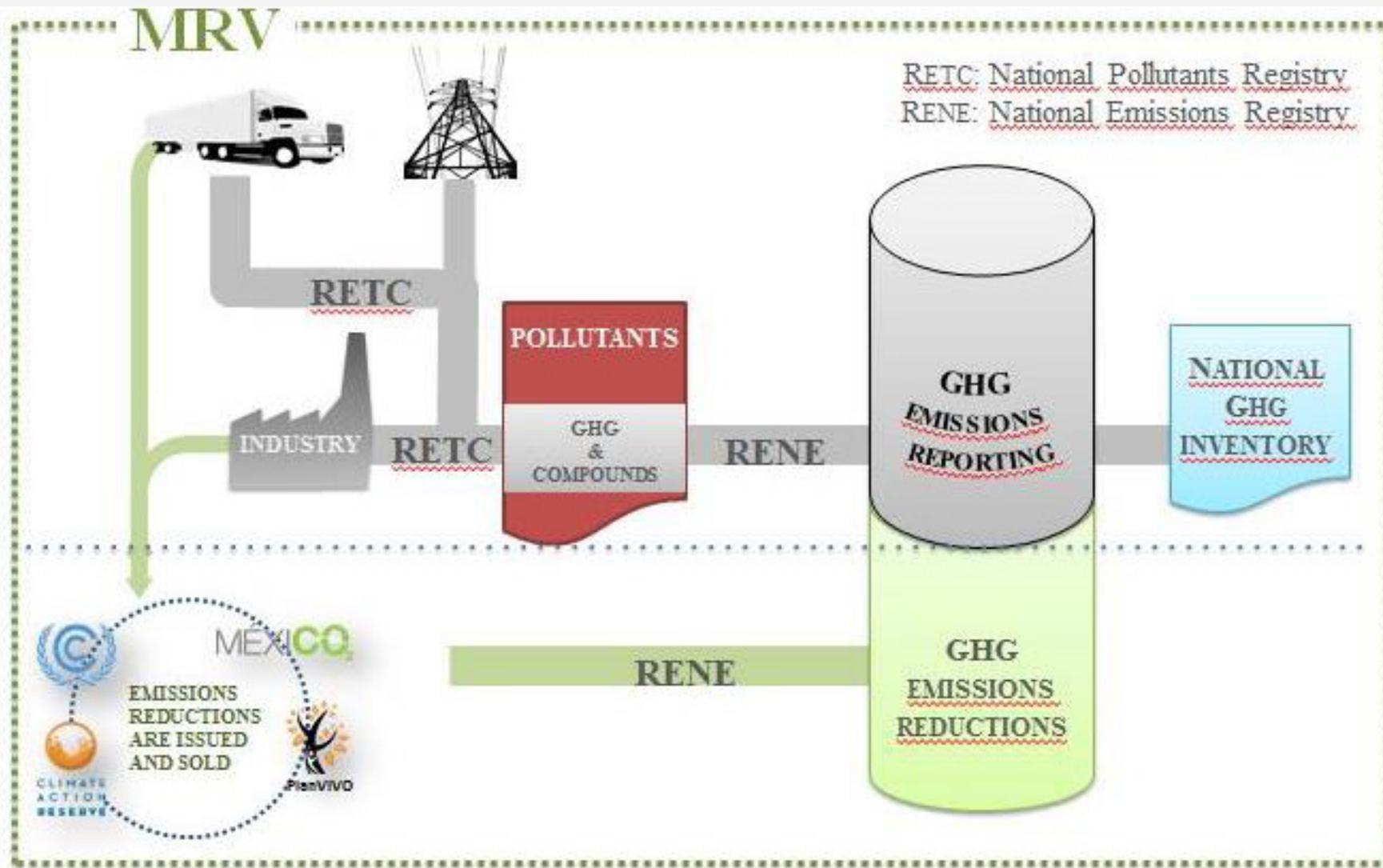


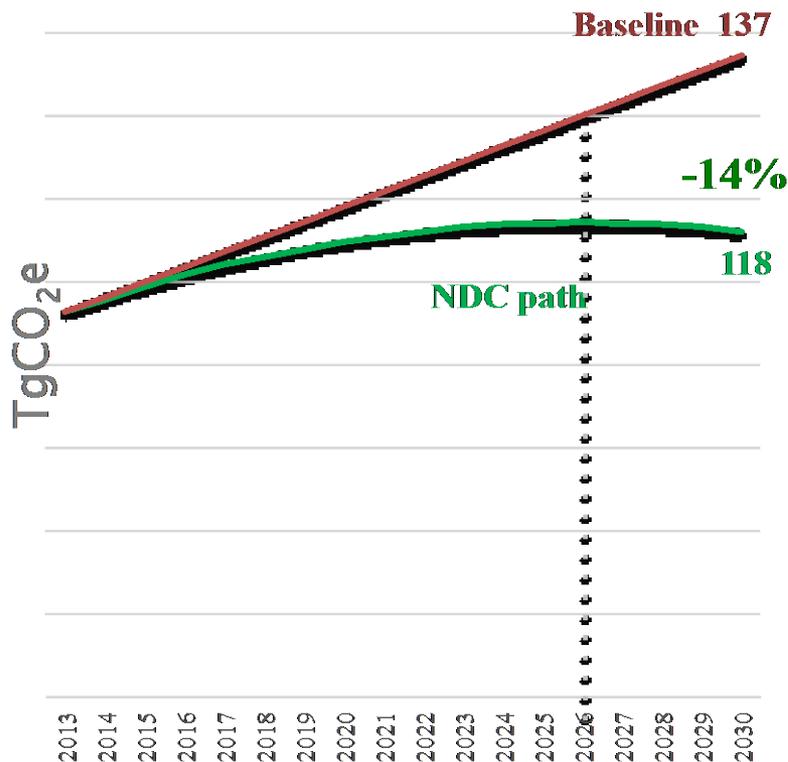
Climate Change, Clean Energy, and Environment Statement

Commitment to reduce methane emissions from the oil and gas sector 40% to 45% by 2025.
To help accomplish NDCs.
An important component of regulations will be included



- The federal government set a regulation to initiate an GHG emissions registry through the Annual Operating Permit
- 2015 data was registered partially as it covered the last months of the year
- 2016 - due to learning curve and the completeness of 2016 will allow a more solid data base
- 2017 data will need to be verified by a third recognized party, starting with facilities that emit over 1 million tons of CO₂eq
- It is based on a bottom-up approach, which allows traceability and assesses emission trends and reductions achieved through different mechanisms implemented in the country
- The registry allows also the registry of mitigation project verified by a third party





2013* Emissions level for the oil and gas sector :

- 80,455.26 Gg of CO₂e
- ≈ 31 Mt of CO₂e associated to CH₄
- which accounted for 12% of total GHG total emissions

- Energy efficiency including cogeneration
- Fuel substitution from heavy fuels to natural gas
- CCS/EOR
- Flare reduction
- Fugitive emissions reductions
- Venting reduction

Commitments were set during important changes in conditions of the energy sector:

- In 2013, the Mexican government embarked on a series of institutional reforms of the Energy Sector
- Shortly after the reforms were announced, oil and gas prices began to fall
- Both affected PEMEX, a state oil and gas owned company that for 75 years has been the monopoly oil and gas in the country
- Since then PEMEX initiated a transformation process
- New regulations for the sector have and are galvanizing
- A National Agency for Safety and Environment for the oil and gas sector was created



- largest company in Mexico
- 8th largest producer of crude oil
- 18th largest oil and gas company in the world

KEY CONSIDERATIONS AS COMMITMENTS WERE MADE

Importance of revisiting the emissions inventory and having consistency across institutions, regulations and stakeholders and that the inventory could reflect reductions associated with mitigation actions.

Methane emissions estimates may vary due to methodological choices:

- Top-down (national GHG inventories): aggregated activity data and emission factors for fuels consumed in Mexico. May not have level of detail as that in the hands of the industry.
- Bottom-up (equipment /facilitate level): process-specific data from sites/facilities and equipment; emissions factors per technology or estimated from operation. More accurate in relation to actual level of emissions.
- Key point: methods of choice may generate differences in estimates; need to reconcile numbers. Which estimate to be used as reference? What is used to create / develop an emissions baseline? What to use to compare effect of mitigation actions? What needs to be monitored? What is used as basis for verification of emissions or actions?

Consultation and engagement are key to successful achievement of commitments. Working groups are set to:

- Upgrading the emissions inventory

- Drawing an emissions base line reconsidering changes in oil prices and Energy Reform

- Draw more detail mitigation plans and actions

Future coordination groups among stakeholders are needed for the following task forces:

- Materializing incentives

- Carbon finance

- Regulation



KEY COLLABORATIONS AND STRATEGIC ALLIANCES WITH CANADA

Development of a program that facilitated the development of verifiable methane emission reductions at oil and gas facilities through the transfer of technical expertise and the provision of technical assistance to support the completion of key steps to systematically identify major cost-effective emission reduction opportunities, evaluate control options, and implement final solutions.

Canada will work with Mexico (2017-21) to set the stage for the wide scale-up mobilization of finance and co-investment in its oil and gas sector during the post-2022 period by providing financial support that will address the following priorities:

- Reducing flaring, venting and fugitive emissions
- Supporting:
 - Clean technology deployment
 - Mobilization of financing for emissions mitigation
 - Piloting innovative and robust sectorial MRV

