Mexico’s NDC-Implementation Challenges and Opportunities

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Mexico's NDC vs BAU pathway

Mexico’s NDC

1. General Climate Change Law. 2012
2. National Strategy on Climate Change, 10-20-40 vision. 2013
6. Ongoing process for new set of standards and regulations
Mexico’s NDC

Unconditional
• Reduce GHG and SLCP emissions by 25% (from BAU) by 2030
  • 22% GHG reduction
  • 51% of Black Carbon
• Net emissions peak in 2026
• Reduce Carbon Intensity by 40% from 2013-2030
• Zero net deforestation by 2030

Conditional
• Reduce GHG and SLCP emissions by 40% (from BAU) by 2030
  • 36% GHG reduction
  • 70% of Black Carbon
• Subject to:
  • international carbon price
  • carbon border adjustments
  • low-cost finance
  • technology transfer
Mexico’s NDC vs BAU pathway

GHG emissions (MtCO$_2$e)
Million metric tons of carbon dioxide equivalent

- **High scenario:**
  - GDP increase = 4.2% annual
  - Energy scenario of SENER
- **Low scenario:**
  - GDP increase = 2.3% annual
  - Elimination of power generation from coal

- 2,257 MtCO$_2$e
  - [1,967–2,410] MtCO$_2$e

- 960 MtCO$_2$e
- 672 MtCO$_2$e
- 320 MtCO$_2$e

- 30% decrease regarding the baseline in 2020 (288 MtCO$_2$e)
- 50% relating to the 2000 baseline in 2050

Source: Secretaría de Medio Ambiente y Recursos Naturales (SEMARNAT), 2014
Mexico’s NDC

1. General Climate Change Law. (Oct 2012)

- Reduce GHG emissions by 30% by 2020 with respect to BAU
- Achieve 35% of electricity generation from “clean energy sources” by 2024
- Reduce GHG emissions by 50% by 2050 with respect to 2000
- Achieve a rate of Zero Deforestation
Mexico’s NDC

2. National Strategy on Climate Change, 10-20-40 vision. (Jun 2013)

• By 2050 Mexico reaches:
  “sustainable, equitable, and efficient management of its natural resources, as well as the use of clean and renewable energies (...) allowing a low GHG and compound emission development”

• 50% electricity by ‘clean energy’ by 2050
3. Carbon Tax. (Nov 2014)

- Economy-wide (almost) set at USD 3.18/tCO2e (Nat. Gas is exempt)
- Allow it to link to a regional market
- Offset by via investments in CDM projects
Mexico’s NDC


- Mandatory GHG reporting system (+25,000 tCO$_2$e/ yr)
- 3 year independent verification cycle

• Ended 76-year state monopoly on oil and gas

• Created an open energy market with equality of access to grid
  ➢ First Successful Energy Auction in April 2016 (1.86 GW/4M RECs)
  ➢ Second Auction in September 2016 (2.8 GW/ 4.9M RECs)

• Requires major power consumers to source 5% of their power from clean power sources through the purchase of REC’s
Mexico Oil Production Has Declined 11 Straight Years

Oil output forecast to decline again in 2016 given Pemex's pending budget reductions

Source: Pemex official production data
Oil output measured as millions of barrels per day
U.S. NatGas Pipelines to Mexico Set Another Export Record in June

David Bradley | September 1, 2016

For the second consecutive month, the United States in June sent the most natural gas to Mexico through pipelines of any month on record, reaching 105.84 Bcf (3.53 Bcf/d), according to Energy Information Administration (EIA) data.

The previous record high was set just a month earlier at 104.70 Bcf (3.38 Bcf/d) (see DGE 2). June 2016 pipeline exports to Mexico were significantly higher than June 2015 (90.34 Bcf (2.97 Bcf/d), according to EIA's latest Natural Gas Monthly report.

Total U.S. natural gas exports in June were 173.00 Bcf, a 25% increase from 138.18 in June 2015, according to the report. Pipeline exports to Canada reached 50.71 Bcf (1.69 Bcf/d) in June, compared with 44.66 Bcf (1.49 Bcf/d) at the same time last year, and total liquefied natural gas (LNG) exports were 16.45 Bcf in June, compared with 2.77 Bcf in June 2015.

Monthly Gross U.S. NatGas Exports to Mexico
Jan 15 - Jun 16

Source: EIA, NGI's Daily Gas Price Index calculations
6. Ongoing process for new set of standards and regulations

New Objectives for CENACE (Nat’l Centre for Energy Control)

- Operational control of National Energy System to SENACE
- Regulation of the Mexican Energy Market
- Design of an Expansion Strategy for the National Electricity System
- Open and indiscriminate access to the National Grid
Nuevo modelo de la industria eléctrica

Generación
- Transacciones a corto plazo
- Cogeneración
- Contratos a largo plazo

Control operativo
- Mercado spot
- Subastas

Comercialización
- Abasto no regulado
- Abasto regulado
- Usuarios calificados
- Usuarios estándar

Consumo

Source: cenace.gob.mx/modelo-industria-electrica

Solar Power Dominates In Mexico’s Second Renewable Energy Auction

The preliminary results of a much-awaited Mexico’s second power auction were declared last week.

According to the state power regulator and grid operator, auction was highly competitive with average price of renewables and clean energy certificates (CEL) declared at USD 33.47/MWh.

Strengths
- Public support
- Executive Priority
- Economy wide
- Mechanisms in place

Challenges
- Technical capacity for implementation
- Complicated op. environment
- Regulation and enforcement

Threats
- Nat. Gas lock in
- Scale rate of RE
- Regional adoption

Opportunities
- Scaling of utility and residential PV
- Supply chain economy
- Link to int’l markets