

Nationally Appropriate Mitigation Action (NAMA) Development

**Canada-Colombia-Mexico Oil & Gas
Industry Collaboration Opportunities**

GMI Oil & Gas Subcommittee

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Denver, CO

NAMA Background

- NAMA considered as fundamental for a **Market-based post 2012 Climate Regime**
- Are expected to improve emissions trading and project-based mechanisms
- **Objectives**
 - Contributing to goal of measureable and verifiable reductions to GHG emissions
 - Intended to enable mitigation action and access to financing under future climate agreements
- NAMAs can be **policies, programs or projects** implemented at national, regional, or local levels

3rd Party NAMA Observations

- **Simple:**

- Avoids market fragmentation and unnecessary complexity in the number and design of new mechanisms.
- This would make it simpler for negotiators to design and implement, and for the market and investors to engage with.

- **Efficient:**

- Scales up the market beyond what CDM alone can deliver
- incentivises emission reductions at the sector level

3rd Party NAMA Observations

- **Flexible/durable:**
 - Is able to accommodate developing countries different NAMAs, and adjustments to their NAMAs over commitment periods.
- **Inclusive:**
 - Enables developing countries to participate more fully in the international carbon market according to their desire and capability.
- **Environmentally effective:**
 - Incentivises a real and measurable benefit to the atmosphere.

NAMA Background

- **Fast Start Funding (FSF) & Green Climate Fund**
 - Established at Cancun COP 16
 - New & **ADDITIONAL** resources
 - \$30 billion seed funding for period 2010-12
- **NAMAs must be in place for recipient countries to be eligible for funding**
 - Many countries have developed NAMA objectives at national, regional, or local levels and submitted these on UNFCCC – **Project Network should be aware as this**
 - Must now work to develop NAMA plans for subsequent project implementation

NAMA Project Background

- Canada will collaborate with Colombia & Mexico to develop **highly credible NAMAs** under the Fast Start program
- **Credible NAMAs will require verifiable**
 - Baseline activity determination
 - Quantification of emission reduction opportunities
 - Economic business case development
 - Environmental performance improvements that can be measured, monitored and sustained
- **O&G NAMA = Business Case Development**
 - Credible NAMA development requires a rigorous, standardized business case approach

Canada – Colombia - Mexico

O&G NAMA Objectives

- NAMA plan development for upstream, midstream & downstream to-chemical sectors in Mexico:
 - address emerging priorities for management of energy, environment and the economy
 - advance the development and transfer of knowledge and clean energy technologies
 - ensure the economic and environmental sustainability of oil and gas production
 - develop new and profitable opportunities to measurably improve resource recovery and environmental quality
- Develop a list implementable mitigation actions for Ecopetrol & PEMEX

Scope & Link to GMI

- Canada and PEMEX have a successful history of cooperation in projects under GMI
- Detailed measurement of EE, flaring, venting & fugitives quantification studies at upstream facilities in Mexico, in collaboration with EPA
- Under NAMA plan development, we will expand studies to also include downstream facilities in Colombia & Mexico
- This will facilitate “bottom up” development of NAMA plans based on detailed measurement studies at representative facilities
- Bottom up approach enables successful development of projects, programs or policies

Scope & GMI Complementarity

- Fast Start projects (modelled after Canada-EPA GMI projects) at upstream and downstream facilities complement development of facility or sector NAMAs
- Sector strategies could include NAMAs for:
 - Upstream exploration, production & processing
 - Midstream gathering, storage & transportation
 - Downstream refining & petrochemical
- This complements existing and emerging government objectives for sector NAMAs in housing, transportation, landfill, water, etc.

Scope & GMI Complementarity

NAMA development based upon measurement derived studies at O&G facilities supports:

- Verifiable facility baseline and benchmark development
 - For activities like flaring, venting, fuel utilization
- Statistical extrapolation certainty to develop accurate sector emissions inventories
- Standardized and verifiable determination of emissions reduction potentials
- Extrapolation to develop sector strategies or facility based projects

Benefits

- Highly accurate baseline emissions quantification from **measured** process performance and fuel gas utilization
 - PEMEX & Ecopetrol exposure to
 - Measurement technologies, methodologies & service providers (GMI)
 - Emission reduction technology or service providers (GMI)
 - Supports existing and high priority energy efficiency and environmental objectives within Colombia and Mexico
 - Required information to enable strategic management of energy and capital resources
- Verifiable & necessary first step for carbon credits

Benefits

- Standardized and reproducible determination of opportunities
 - Capacity building within PEMEX & Ecopetrol via collaborative engineering evaluation of measured activity data
 - Verifiable quantification of **technically achievable** emissions reduction magnitudes
 - Important knowledge for all stakeholders
 - Extrapolatable to identify and compare sector specific emission reduction opportunities
- Verifiable & necessary next step for carbon credits

Benefits

- Internationally standardized and credible “Business Case” implementation plans
 - Based upon transparent engineering and economic rigor
 - Identify costs for **all technically achievable opportunities**
 - Allows for immediate identification of cost effective opportunities
 - Informs corporate and gov’t policy discussions to develop economic instruments to enlarge “cost effective” range
- Enables development of carbon credit projects to implement less cost effective opportunities
 - Potential for additional carbon revenue streams to capitalize projects within PEMEX & Ecopetrol

Benefits

- Implementation of projects based upon credible NAMA plans will enable:
 - Third party verification of emissions reductions
 - Verification of sustainability period of environmental performance improvements
- Necessary final step for carbon financing to capitalize projects
 - This level of rigor complements development of competitive proposals within companies as well
- Strategic leadership in international partnerships and finance brokers
 - Short Lived Climate Forcers
 - Methane and black carbon
 - GGFR

Benefits

- Capacity building within recipient countries & companies will support
 - Increased ability for compliance with emerging international and domestic performance and reporting requirements
 - Strategic planning and development of economically and technically credible solutions for economically, environmentally and socially sustainable energy production

Questions