



NRCan Upstream Petroleum Air Issues Research Initiative (UPAIRI)

Program Overview and International Outreach

PTAC Air Issues Forum
September 20, 2012
Calgary, Alberta

Canada

NAMA Background

- **Fast Start Funding (FSF)**
 - Established at Cancun COP 16
 - New & **ADDITIONAL** resources
 - \$30 billion seed funding for period 2010-12
 - Post 2012 fund currently being established
- **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
 - Must now work to develop NAMA plans for subsequent project implementation
 - **Significant opportunity for Canadian expertise**

Canada's Fast Start Oil & Gas Funding

- Environment Canada has committed \$3.0 million Fast Start Financing (FSF) for oil and gas NAMA plan development
 - FY 2011-2012 (\$1.1 million)
 - FY 2012-2013 (\$1.9 million)
 - 53% Mexico & 47% Colombia

- PTAC Administering funding
 - This is a unique precedent as international CC funding usually goes to international development banks

Canada's NAMA Projects

- Canada, Colombia and Mexico working to develop NAMAs for upstream and downstream oil & gas production
- **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

Objectives

- NAMA plans for Colombia & Mexico:
 - address policy priorities for management of energy, environment and the economy
 - advance the development & transfer of knowledge and clean energy technologies
 - ensure the economic, environmental & social sustainability of oil and gas production
 - develop new and profitable opportunities to **measurably improve resource recovery and environmental performance**
- Develop a list implementable mitigation actions for Colombia & Mexico

Scope

- Energy & emissions measurement projects
 - Energy efficiency, flaring, venting, fugitives, etc.
- “Bottom up” development of NAMA plans
 - Based on **comprehensive measurement studies**
 - Facilities which are **highly representative of PEMEX and Ecopetrol sectors**
- New heavy oil production
 - Optimized well spacing & full gas recovery
 - Based upon Flare & Vent Economics study
- Bottom up approach **enables successful development of projects, programs or policies**

Scalability

NAMA development based on measurement studies supports:

- **Verifiable** facility or sector **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 **sector emissions reduction potentials**
- Extrapolation to develop **sector strategies**
 - Through identification of highly replicable opportunities within Colombia & Mexico

Scalability

- **Sector strategies** include NAMAs for:
 - Upstream exploration, production & processing
 - Midstream gathering, storage & transportation
 - Downstream refining & petrochemical

- Projects based upon **credible NAMA plans will enable third party verification of:**
 - **Emissions reduction magnitudes**
 - **Sustainability periods** of environmental performance improvements
 - **Eligibility for post 2012 carbon financing**
 - ❖ This is a demonstration of the “Gold Standard” credibility of the Canadian approach to NAMA development
 - ❖ Complementary to provincial credit or off-set programs

Benefits

- Internationally standardized and credible “**Business Case**” implementation plans
 - Based upon transparent & internationally credible 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 strategies to implement less cost effective opportunities

Benefits to Canada

- International case studies to inform Canadian industry & regulators
- **Ongoing & strategic leadership in international partnerships**
 - UNEP Short Lived Climate Pollutants Partnership
 - Methane and black carbon
 - GMI & GGFR
- Internationally credible and economically viable emissions reduction via a UNFCCC platform
 - **Canada can demonstrate verifiable global leadership at COP events**

Summary

- Canadian energy and environmental R&D is **recognized globally as leading**
- Canadian solutions are **internationally transferable**
- **International uptake of Canadian solutions benefits Canada's image and economy**
 - E.g. NAMA development & implementation
- International implementation of Canadian solutions can **inform development of domestic policy and regulation**

UPAIRI Collaborators



PEMEX



Natural Resources
Canada

Ressources naturelles
Canada