Market-Based Climate Policy Alternatives for Mexico

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Context

- Mexico has several options as it moves to reduce greenhouse gas emissions
- Mexico's decisions could affect the development of policy internationally, including in the US
- Interaction with the US and other countries will affect the **effectiveness** and the **cost** of policy in Mexico

Topics

- Greenhouse Gas Mitigation Policy Strategies
- Policy Design
- Challenges for Mexico

U.S. climate policy speeding forward pre-Copenhagen

- H.R. 2454, the American Clean Energy and Security Act of 2009 (Waxman-Markey), aims to reduce emissions 83% by 2050 and establishes:
  - GHG cap-and-trade system
  - Renewable energy standards
  - Offset market for regulated entities
  - Programs to reduce deforestation in developing countries
- Substantial linkage opportunity given Mexico's close trade relationship with U.S. and country's sizable emissions reduction potential

Potential Greenhouse Gas Mitigation Strategies for Mexico

1. Enhancement of Existing Policies
   - Relies predominantly on Mexican funds; assumes increased CDM use and some post-Copenhagen funding
2. Sectoral Offset Policies
   - Accesses international offset market through bilateral agreements
3. Sectoral or Economy-wide Caps
   - Opens potential to gain from higher value allowances

Strategy 1: Enhance Current Policies

- Continue current energy reform and abatement policies
- Focus on CDM project expansion
- Recent and ongoing Pemex and electricity sector reforms a first step in clearing barriers to renewables, EE, enhanced CDM
- Heavily reliant on domestic funding
  - Yet given the “unprecedented scale of financing and technological support” needed to achieve ambitious PECC goals, domestic abatement targets may not be feasible without additional sources of support, including international funding

Strategy 2: Sectoral Offset Policies

- International resources
  - could increase the magnitude and/or pace of GHG abatement
  - could ease cost burden **without setting legally binding targets**
- H.R. 2454 provisions provide array of programs within which Mexico could participate and monetize emission reductions
  - Capped U.S. GHG emitters may submit purchased *offsets* (verified emission reduction from uncapped entities, either domestic or foreign)
- Requirements include:
  - International negotiation: International offset credits will be issued to developing countries if U.S. has a bilateral or multilateral agreement
  - Accurate measurement, monitoring, reporting, and

Steps to establish a sectoral offset program:

- Mexico signals interest in bilateral negotiations for sector-based international offsets under section 743(c) of H.R. 2454
  - For example, **electricity** generation and **petroleum** production and consumption sectors
- Develop Business As Usual (BAU) sector emissions forecast
- Mexico and U.S. agree to "Negotiated Baseline"
  - "Negotiated Baseline" sets future monetization potential
  - Value of Offsets = Reductions from baseline X market price for offsets
  - Must know with relative certainty the maximum achievable reductions to assist Mexico in establishing negotiated baseline
- Offsets from the **forestry** sector, which is not capped in H.R. 2454, are possible under another program, section 743(e) Offsets from Reduced Deforestation.

Strategy 3: Economy-wide or Sectoral Binding Targets

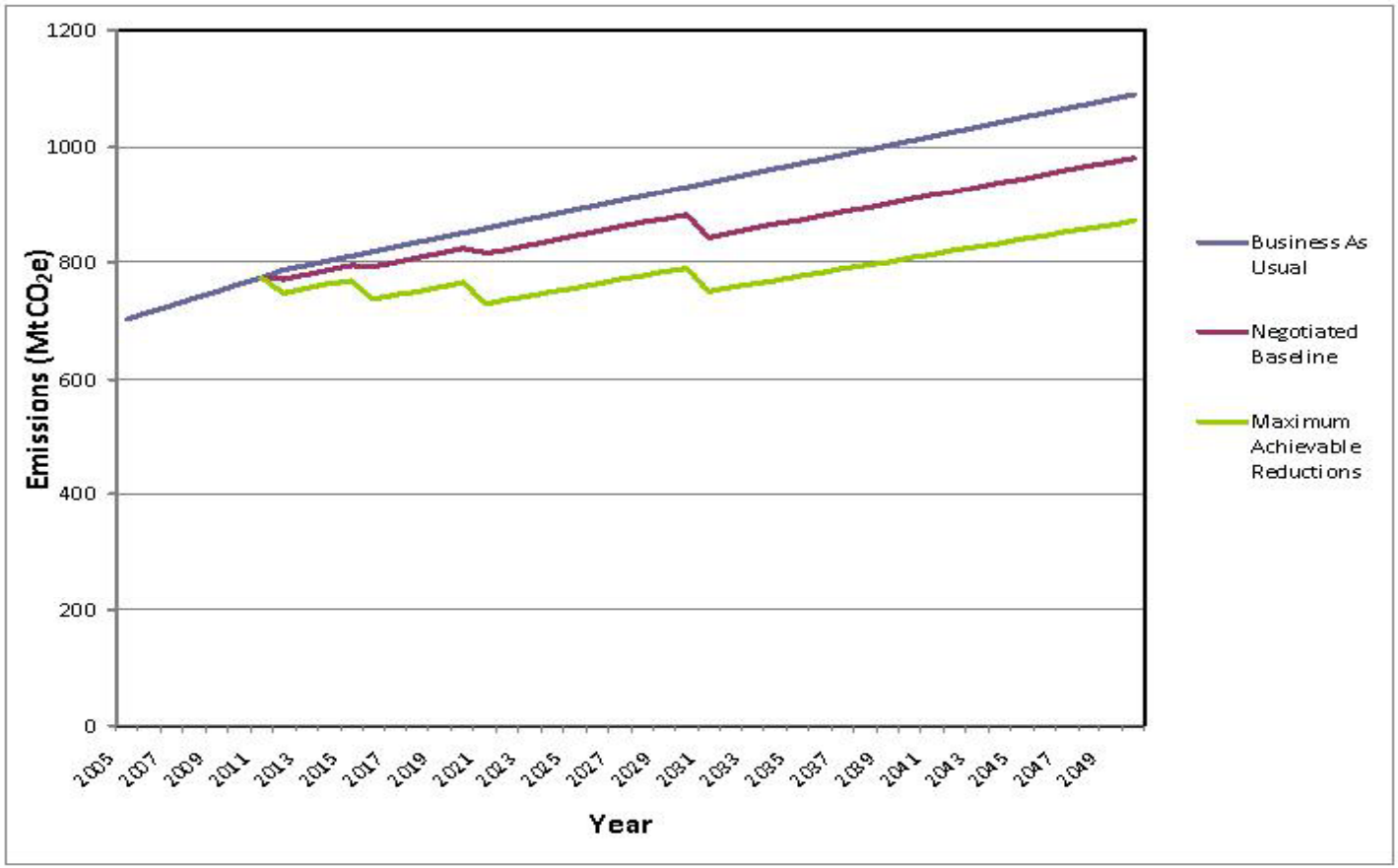
- Mexico cap-and-trade system for chosen sectors or entire economy; could sell international emission allowances to U.S.
- Section 722 (d) (3) allows U.S. regulated companies to meet annual emission obligations by surrendering U.S. government-issued allowances, offsets, or *international emission allowances*
- Cons:
  - Legally binding targets with penalties for noncompliance
- Pros:
  - Larger scale for *allowances* (U.S. limits number of international *offsets* entering market per year)
  - Allowances are not discounted, unlike offsets
  - Acceptance of binding targets may convey advantage in negotiation of baseline

Steps to Link Economy-wide or Sectoral Binding Policies

- U.S. EPA may designate an international climate change program as an international emission allowance "international qualifying program" if:
  - Government-run program with emissions limits
  - Program is at least as stringent
    - Stringency not defined in terms of the quantity of emissions; solely on the quality of monitoring, reporting, compliance and penalties for noncompliance
- Steps to link up a binding target (cap) program are similar to those for sector offsets:
  - Mexico informs U.S. of desire to put "mandatory absolute tonnage limits on GHG emissions" from particular sectors, or the entire economy
  - Express interest in using cap-and-trade program similar to EU ETS or soon-to-be-established U.S. GHG market
  - Request that program to be accepted under section 728 of H.R. 2454
  - Bilateral negotiation follows, covering topics including baselines, stringency, and monitoring

An important negotiation:

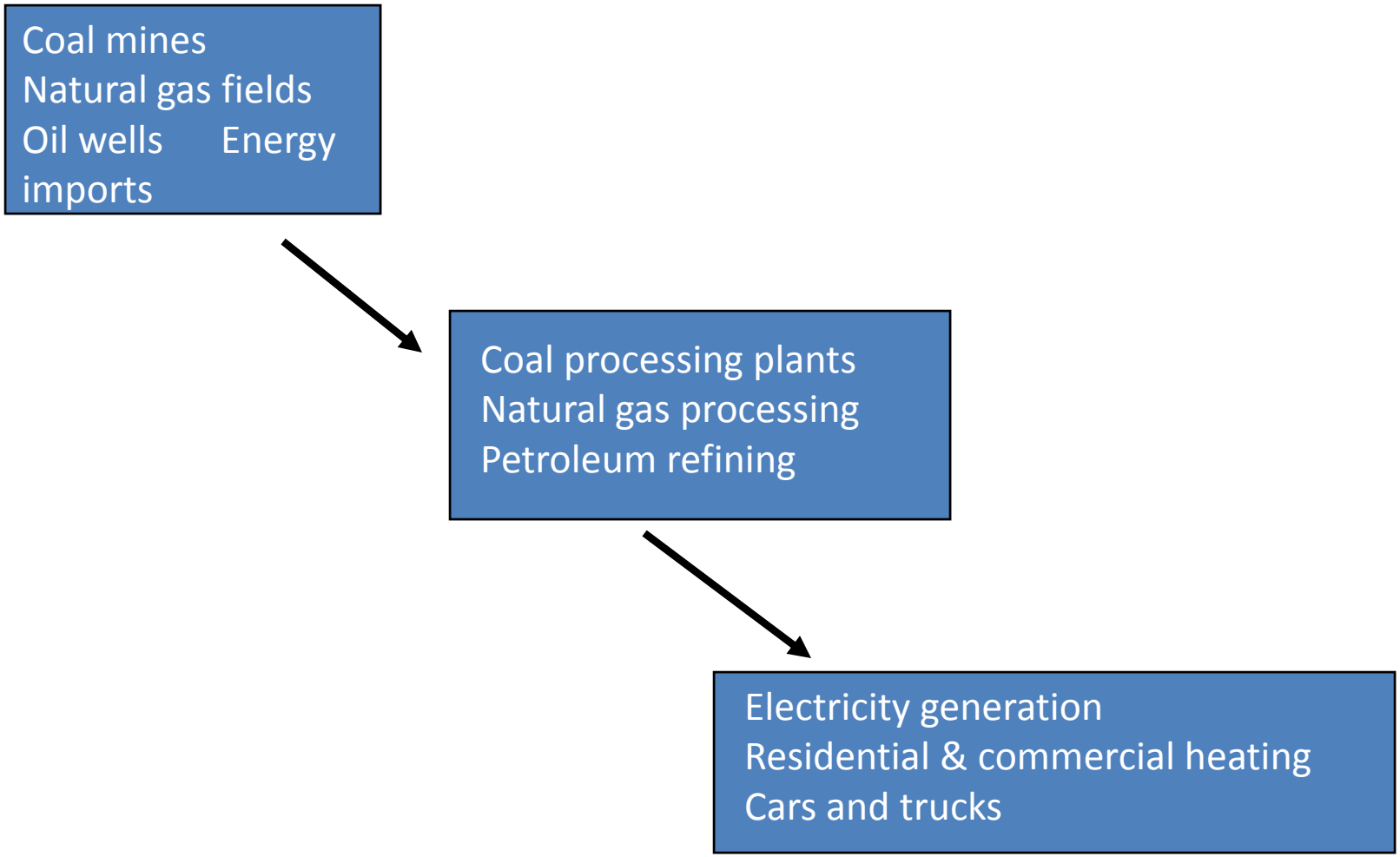
Hypothetical BAU forecast, **Negotiated Baseline** and Maximum Achievable Reductions



Mitigation Policy Design

- Scope: magnitude of reduction and number of emitters subject to regulation
- Point of Regulation:
  - upstream (e.g., petroleum production and refining) or downstream (e.g., gasoline consumption)
- Form of Regulation:
  - Prescriptive: standards, limits, or required procedures or control devices
  - Incentive: price-based. Cap-and-trade or emission tax
- Matching Strategy to Form of Regulation:
  - Land-use: should quickly align with H.R. 2454 provisions
  - Electricity: Environmental and economic arguments support a suite of policies, including cap-and-trade, efficiency standards and retail pricing reform (could be implemented via a within-sector cap-and-trade program)
  - Upstream and Downstream Oil and Gas: Within-Pemex cap-and-trade could assign downstream emission estimates to Pemex refineries, thus adding the allowance cost to wholesale refined product prices (barring fuel subsidy interference)

Mitigation Policy Design: Potential Points of Regulation



Comparison of regulatory mechanisms

	Cap and Regulate	Cap and Trade	Cap and Tax
Certainty of cost or CO2 price?	No.	No, but price volatility can be controlled with price collars, safety valve or other cost containment measures.	Yes. The tax is a single price per ton of CO2 set by the government.
Certainty over emissions?	Yes, but places huge information gathering burden on regulators.	Yes, though certainty is reduced with use of cost containment mechanisms.	No. Emissions vary based on fluctuations in fuel price. However tax can adjust to achieve emissions goal
Encourages least-cost emissions reductions?	No, but tradable standards are more efficient than non-tradable standards.	Yes.	Yes.
Ability to raise revenue?	No, though some funds may be obtained in the form of fines for non-compliance.	Yes, dependent on the amount of auctioned vs. free allocations.	Yes, all tax revenue transferred directly to regulators
New institutional requirements?	Minimal, though existing institutions may require expansion.	Yes, including agencies to govern	Minimal.
Practical/political challenges to implementation?	Yes, industries may resist more regulation and setting individual cap may be difficult.	Yes, requires design, regulation and monitoring of new market structures.	Yes, new taxes may be politically unpopular.
Harm to competitiveness?	Some, regulations may require capital investments, but operating costs will remain stable without a carbon price.	Yes, though firms can be partly compensated through free allocations and program revenue.	Yes, though tax revenues can be used to offset increased costs.

Further Emphasis on 3 Challenges

- Performance of CDM to date
- Competitiveness
- Transition path for Mexico

CDM Project Performance

- Mexico's CDM performance: room to grow
  - Many small scale projects
  - Agriculture, biomass and methane projects predominate, though methane projects heavily underperform
  - Energy projects largely untapped
  - Broadly speaking, CDM overhead/back office requirements are relatively large as complex project verification rules require technically trained staff and intricate project methodologies; can stifle innovation

Electricity and Oil and Gas Sectors

- Similar institutional barriers discourage reform at state-run entities such as Pemex and CFE and LFC
  - Flexible budget line not linked to actual costs: operations do not determine available capital, salaries or corporate survival
    - Little incentive for efficiency and cost cutting when government covers operational deficits
  - Public administration rules may impede efficiency
  - Heavy subsidies discourage conservation and drain resources
  - Emission reductions not top priority for scarce capital
  - Lack renewable and EE financing instruments
  - At Pemex high debt limits access to external credit while declining reserves further reduce capital available

Competitiveness

- Free allowance allocation (rebates): designed to kick in simultaneous with the introduction of domestic pricing policy (cap-and-trade)
- Trade-related border adjustment policies: could begin in 2020 depending on U.S. presidential findings

- Mexico is affected by H.R. 2454 whether or not it acts on climate change
  - If Mexico does NOT act → trade sanctions could hurt ability to export certain products
  - If Mexico does act → it may face its own competitiveness concerns as energy-intensive/trade sensitive industries may be disadvantaged as they compete with U.S. firms receiving rebates

Competitiveness Provisions in H.R. 2454

- All industry emissions covered starting in 2014
- H.R. 2454 has 2 provisions for vulnerable industries

1. Allocations (**rebates**) for trade-vulnerable industries (Title VII, Sec. 782; Title IV, Sec. 764-765)
   - Given to trade-vulnerable industries to compensate for increased cost and to reduce leakage
   - 2 % of allowances in 2012-2013 to cover electricity use
   - 15% of allowances starting in 2014, reducing on annual basis (0% allocation by 2035)
2. International Reserve Allowances(**border adjustments**) (Title IV, Sec. 766)
   - Not implemented before 2020
   - Sets “appropriate price” for selling allowances to importers of trade-sensitive goods

Transition path for Mexico: Existing domestic policies to offsets to sectoral /economy-wide cap

- Important to negotiate baseline at the outset to assure full monetization of GHG reductions from both sector policies and binding targets. Failure to do so risks losing credits.
- Domestic climate initiatives pose a dilemma to additionality test if initiatives not pursued in tandem with international negotiations
- Establishing clear measurement and monitoring system that meets international standards also key

Summary: Important Information for Mexico

- Business as usual **emissions**
- Development of **marginal abatement cost** curves for
  - the electricity sector
  - Pemex including oil and gas extraction, refining, and processing
  - forestry and land-use
- Analysis of **regulatory options** for
  - a sector-based offset strategy appropriate to CFE/LFC, Pemex, and land use (forests), including technical, economic and institutional issues
  - the transition to an emission trading system and binding commitments for emissions of CO_2
- **Institutions**:
  - Programmatic: measurement, reporting, monitoring, enforcement

Rationale for Action Now

- Potential advantages to Mexico for acting quickly include:
  - Avoid being harmed by climate-related policies implemented by the United States
  - Help shape favorable terms for future international agreements
  - Get maximum international credit for domestic mitigation options
  - Establish itself as an international leader for Copenhagen and beyond
  - Accelerate on-going reforms taking place in the energy and other sectors
  - Increase financial flows coming into the economy

Thank you

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