CARBON TAX GUIDE: 
A HANDBOOK FOR POLICY MAKERS

Carbon Pricing: Latest Developments on carbon taxes
Zurich, Switzerland
March 11, 2016
Purpose of handbook

A practical tool for policy makers to determine:

1. **Whether a carbon tax is the right instrument to achieve their policy aims...**

2. **...and how to design and implement a carbon tax.**

   - Primary target audience is policy makers in PMR Participant countries.
   - Broader relevance to other jurisdictions, experts and civil society groups.
   - Presented in three parts.
   - Publication expected second half 2016.

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1. **Understanding carbon taxes**
   - Key concepts
   - National context

2. **Designing carbon taxes**
   - Tax base
   - Tax rate
   - Carbon leakage
   - Use of revenues
   - Use of offsets
   - Engage stakeholders
   - Oversight and compliance

3. **Evaluating outcomes**
   - Evaluating policy outcomes
Key principles

• **Country-driven approach:** the right design options will depend on national context and priorities.

• **Agnostic approach:** options assessment and how-to tool – not promoting one approach over others.

• **Methodology:** desk research, interviews, questionnaire and case studies.

• Companion piece to ETS Handbook, consistent where possible.
Discussion questions

• Is anything missing from this outline?

• What are the key concerns of policy makers, and where should focus of this guide fall?

• Are there key experiences with carbon taxes to date, positive or negative, that this guide should foreground?

• How best to ensure this guide is used by policy makers, and not just another report?
1. Understanding carbon taxes
### 1.1 Key concepts

<table>
<thead>
<tr>
<th>What is a carbon tax?</th>
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<tbody>
<tr>
<td>A tax that explicitly prices carbon</td>
<td>Not excise tax, ad valorem tax, congestion charge...</td>
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<table>
<thead>
<tr>
<th>Why tax?</th>
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<tbody>
<tr>
<td>Internalize social cost of GHG emissions → lower emissions</td>
<td>Revenue, co-benefits, innovation</td>
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</table>

<table>
<thead>
<tr>
<th>Other instruments?</th>
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<tbody>
<tr>
<td>ETS, traditional regulatory, state investments...</td>
<td>Instrument a means not an end</td>
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</table>
1.2 National context

**Country profile:**
- Population
- Size/type of economy
- GDP per capita
- Tax administration capacity

**Emitting sectors:**
- GHG emissions intensity
- Total energy production & consumption
- Elasticity of sectors
- Mitigation options for sectors

**Strategic objectives:**
- What GHG reductions sought?
- Over what period?
- Economic benefits sought?

**Tax design principles:**
- Fairness
- Alignment
- Stability
- Transparency
- Efficiency
- Reliability
2. Designing carbon taxes
2.1 Define the tax base

Sectors and gases
- Cover major gases and emitters
- Demand elasticity
- Competitiveness concerns
- Complementary regulatory options
- Political pressure

Point of taxation and threshold
- Extraction, refinement, manufacturing, final consumption
- Abatement options
- Ease of monitoring
- Number of parties
- Ease of tax collection
Example: Gasoline supply chain

Source: US Energy Information Administration
2.2 Determine the tax rate

Key considerations:
- Social cost of carbon
- Level of ambition
- Relative balance of goals (GHG mitigation, co-benefits, revenue)
- Avoid counterproductive/regressive impacts
- Baseline setting

Dynamics of tax rate:
- Incremental increases
- Periodic review of rate and rate structure: environmental and economic impacts
- Ad hoc changes may present challenges

Practical tools:
- Benchmarking tax rates
- Utilizing tax models
2.3 Carbon leakage and loss of competitiveness

Exemption/ rebates; Border carbon tax adjustment; Support programs; Reciprocity

GATT/WTO challenge to BCA?  Domestic/international legal challenges to subsidies?

• Shift in production overseas
• Shift in consumption overseas
• Environmental and political/economic challenge
• How to determine leakage risk?
2.4 Determine use of revenues

Questions:
• How to counter regressive impacts?
• Efficiency v. political expediency?

1. Household rebates/corporation tax cuts for affected sectors...
2. Social and environmental spending/household grants/industry assistance...
3. General budget spending
2.5 The use of offsets

Subject to tax

Benefits:
- Cost containment
- Acceptability
- Develop offset 'industry'
- Possible international linking
- Emission reductions in non-covered sectors

Drawbacks:
- Environmental integrity risk
- Fraud risk
- Transaction costs
- Administrative burden

Program design
- Which standards to use?
- Quantitative limits on offset use
- Governance and registry infrastructure
2.6 Engage stakeholders

- **Stakeholders can include:** public bodies, taxed entities, indirectly affected entities, civil society, academics and other researchers, the media, the general public.

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Engagement strategy</th>
<th>Media strategy</th>
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<tbody>
<tr>
<td>Legal requirements</td>
<td>Inform</td>
<td>Tailored messages</td>
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<tr>
<td>Understanding and expertise</td>
<td>Consult</td>
<td>Simple messages</td>
</tr>
<tr>
<td>Credibility and trust</td>
<td>Involve</td>
<td>Counterarguments</td>
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<tr>
<td>Acceptance and support</td>
<td>Collaborate</td>
<td>Coordination</td>
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- **Key challenge:** how to achieve balance between taking inputs into account, and avoiding disproportionate influence of any single stakeholder.
2.7 Ensure oversight and compliance

- **MRV of performance**
  - Environment or energy department
  - Complexity and arrangements vary between sectors

- **Tax administration**
  - Existing tax collection structures
  - Capacity to investigate and enforce noncompliance

- **Offset administration**
  - Verification and issuance of offsets
  - Oversight of transactions/registry

- **Categories of noncompliance include**: misreporting of emissions, tax evasion, smuggling, failure to comply with enforcement measures

- **Penalty options include**: name and shame, make good requirements, fines and injunctions, criminal charges
3. Evaluating outcomes
3.1 Evaluating policy outcomes

<table>
<thead>
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<th>Summary</th>
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<tr>
<td><strong>Establishing Key Performance Indicators</strong></td>
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<tr>
<td>Choose KPI’s relevant to policy goals</td>
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<tr>
<td>- Emission reductions</td>
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<tr>
<td>- Revenue raising</td>
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<tr>
<td>- Impacts of revenue use</td>
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<tr>
<td>- Technological innovation and deployment</td>
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<tr>
<td><strong>Review Processes and Feedback Loops</strong></td>
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<tr>
<td>- Assign responsibility to a specific agency</td>
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<tr>
<td>- Schedule periodic and timely reviews</td>
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<tr>
<td>- Consider separating program evaluation from tax implementation</td>
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<tr>
<td>- Consider value of external review</td>
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<tr>
<td><strong>Mechanism for adjusting tax rate</strong></td>
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<tr>
<td>- Develop a mechanism for reviewing and adjusting tax rates</td>
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<tr>
<td>- Recognize the need to balance adaptability with stability</td>
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<td>- Insulate the review process from political influence whenever possible</td>
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<td><strong>Ex-post evaluation challenges</strong></td>
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<tr>
<td>- Establishing a reference case/baseline is challenging, but necessary</td>
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<tr>
<td>- Consider multiple baseline scenarios to enhance value of analysis</td>
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Summary

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3. Evaluating outcomes
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Case studies
- Australia
- BC, Canada
- Chile
- Catalonia
- Costa Rica
- Denmark
- Finland
- France
- Iceland
- India
- Ireland
- Japan
- Mexico
- Netherlands
- Norway
- South Africa
- Sweden
- Switzerland
- UK
- Zimbabwe
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