



# **Expanding the use of Incentive-based Policy Tools**

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# Outline

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- Introduction
- Classification & range of policy tools
- Rationale for incentive-based tools
  - Strengths and limitations
- AENV examples of incentive-based tools
  - Existing applications and tools under development
- Future AENV initiatives and approaches
- Sources of information



# Introduction

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- Environmental Policy – two fundamental parts
  - **Policy Goal** – scientific risk-based approach to set environmental objectives
  - **Policy Instrument(s)** – the means (tools) applied to achieve the policy goal
    - **Regulatory tools** (command and control approaches)
    - **Incentive-based tools** (economic instruments, co-operative agreements, information disclosure, voluntary initiatives)
- Policy goal first - then select tool(s)
- Incentive vs. Regulatory Tools
  - In practice, not so much an “either / or” - rather incentive based tools frequently used in tandem with regulatory approaches or set within a regulatory framework

# Range & Categories of Environmental Policy Tools



<b>Command &amp; Control</b> Impose rules & limits through regulations – enforce compliance	<b>Economic Instruments</b> Engage market forces through price mechanism to motivate behavior toward environmental goals	<b>Cooperative Management</b> Government, industry & public - setting performance expectations through binding agreements	<b>Information Disclosure</b> Disclosure of information to engage the force of public opinion and citizen purchasing habits	<b>Voluntary Approaches</b> Self imposed initiatives and activities motivated through a stewardship ethic, social conscience (triple bottom line)
<ul style="list-style-type: none"> <li>■ <b>Product Bans</b></li> <li>■ <b>Technology Standards</b></li> <li>■ <b>Design Based (Source Emission) Standards</b></li> <li>■ <b>Effects Based Standards</b></li> <li>■ <b>Bubble Permitting (whole facility limits)</b></li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Emission/Effluent Trading</b></li> <li>■ <b>Resource Permit Trading</b></li> <li>■ <b>Charges, taxes, fees on emissions, waste disposal</b></li> <li>■ <b>Charges, fees on products/resources</b></li> <li>■ <b>Deposit-Refund</b></li> <li>■ <b>Statutory Liability</b></li> <li>■ <b>Financial Security</b></li> <li>■ <b>Subsidies</b></li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Negotiated Sectoral Agreements</b></li> <li>■ <b>Environmental Performance Agreements</b></li> <li>■ <b>Environmental Covenants</b></li> <li>■ <b>Challenge Regulations</b></li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Product "green" Labeling</b></li> <li>■ <b>Pollution Release Indexes (NPRI)</b></li> <li>■ <b>Environmental Compliance and Performance Reporting</b></li> <li>■ <b>Environmental Report Cards</b></li> <li>■ <b>Environmental Performance Awards</b></li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Voluntary Challenges</b></li> <li>■ <b>EMS Standards</b> -ISO 14001 -Responsible Care -Forest Care</li> <li>■ <b>Voluntary Environmental Audits (VEA's)</b></li> <li>■ <b>Environmental Charters</b></li> </ul>
<ul style="list-style-type: none"> <li>■ Deterrent based</li> <li>■ Prescriptive</li> </ul>	<ul style="list-style-type: none"> <li>■ Greater use of incentives (a mix of incentives and deterrents)</li> <li>■ Greater flexibility to parties in achieving outcomes</li> </ul>			



# Rationale for Incentive Tools

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- Cost-effectiveness/efficiency
  - Reaching environmental goals at less cost, more quickly
- Broader reach (dispersed sources)
  - Price signals have wide reach – can be better suited for numerous & dispersed sources of pollution
- Continuous Improvement
  - Incentives can be structured as “on-going” inducement / motivation toward improved environmental performance
  - Can be structured to spur innovation in the development and adoption of new environmental technology
- Sustainable Development
  - Internalize environmental costs – “polluter pays” principle

# Incentive tools

## Potential Drawbacks & Barriers

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- With greater “flexibility” comes less “certainty”
  - Magnitude of entity’s response not always predictable
  - Distributional / equity concerns – localized effects
- Not suitable (as a single tool) where a uniform response is required – i.e. high risk substances & circumstances
  - Weaknesses can be buttressed through design elements, using a suite of tools - regulation as the backstop
- Some barriers to adoption of incentive tools
  - Lack of awareness/experience
  - Design & implementation complexities
  - Competitiveness concerns
  - Political / public acceptance

# AENV Examples

## Incentive-based Policy Tools

Economic Instruments	Cooperative Management	Information Disclosure	Voluntary Approaches
<ul style="list-style-type: none"> <li>■ <b><i>Emissions Trading for SO<sub>2</sub> &amp; NO<sub>x</sub> (Electricity sector)</i></b></li> <li>■ GHG offsets (transition principles)</li> <li>■ <b><i>Water Allocation Transfers (SSRB)</i></b></li> <li>■ <b><i>Wetland Restoration &amp; Compensation</i></b></li> <li>■ <b><i>Environmental Handling Fees (electronics recycling)</i></b></li> <li>■ EHC's for scrap tires, used oil</li> <li>■ Deposit-Refund – Beverage Containers</li> <li>■ Statutory Liability – EPEA &amp; WA</li> <li>■ Financial Security – Mines</li> </ul>	<ul style="list-style-type: none"> <li>■ <b><i>Stewardship Agreements - Envirovista Program (Championship Level)</i></b></li> <li>■ Sectoral Agreements – Climate Change Act</li> <li>■ CASA - Flaring Agreement</li> </ul>	<ul style="list-style-type: none"> <li>■ <b><i>Stewardship Recognition - Envirovista (Leadership Level)</i></b></li> <li>■ <b><i>Web-based publication</i></b> *<b><i>Drinking Water</i></b> *<b><i>Industrial CEM Data</i></b></li> <li>■ Land Stewardship Rating System</li> <li>■ Emerald Awards</li> </ul>	<ul style="list-style-type: none"> <li>■ <b><i>Environmental Farm Plans - Voluntary Environmental Audits</i></b></li> <li>■ Policies promoting EMS Standards</li> <li>-ISO 14001</li> <li>-Responsible Care</li> <li>-Forest Care</li> </ul>

\* (***bold italics*** denote tools to be discussed)



## *Emissions Trading* *SO<sub>2</sub> and NO<sub>x</sub> in the Electricity Sector*

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### ■ **Part of *Emissions Management Framework* for the electricity sector (CASA - EPT Recommendations)**

- Imposes annual SO<sub>2</sub> & NO<sub>x</sub> emission limits (BATEA) to new units and existing units that operate after end of design life
- Allows Trading: *Baseline & Credit (with regulatory backstop)*
  - Baseline emissions rate established for existing/new generating units
  - Emission credits are generated if units emit less than baseline
  - Unit operators can sell credits to other parties or apply credits to meet the lower emission limits of units operating after end of design life

### ■ **Benefits: flexibility and cost savings**

- Provides an incentive for early emission reductions and early shut down of old units - cost savings in meeting new limits

### ■ **Implementation – Spring 2006**





# *Emissions Trading (continued)*

## *SO<sub>2</sub> and NO<sub>x</sub> in the Electricity Sector*

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### ■ **Program Framework**

- Trading Regulation - identifies participants, creation/use of credits
- Trading Registry - tracks creation, transfer and retirement of credits
- Trading Standard – detailed rules of trading, guidance to all parties
- Revised CEM Code – monitoring system accuracy, missing data
- Facility Approvals - specify new “BATEA” limits for units

### ■ **Design Elements/Environmental Safeguards**

- Trading does not apply to hourly emission limits – prevent “hot spots”
- Credits have a maximum 10 year period after end of design life
- 10% discount applied to credits not used within the first year
- Protocol (Multi-stakeholder response plan)
- Backstopped by existing compliance and enforcement program

### ■ **Emissions trading – really market-based “regulation”**

- Requires the same (or greater) complexity of infrastructure as traditional regulation (program design, monitoring, reporting and enforcement)



## ***Water Allocation Transfers (South Saskatchewan River Basin)***

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- **Allocation Transfers (tradable water rights)**
  - Example of “property rights” - improve resource conservation/management
  - Water Act (1999) provides for transfers - allows all or part of an existing water allocation to be transferred (sold) by an existing license holder to another party for use in a new location permanently or fixed period of time
  - Implemented in 2002 - part of SSRB Water Management Plan
- **Key Objective - “water use efficiency”**
  - Provides incentives for water use efficiency among existing water users
  - Redirects water to the highest beneficial use – allows economic growth
  - Possible drawback – more efficient use of existing allocations could result in net increase of water consumption
- **Environmental Safeguards**
  - Transfers require ministry approval
  - Coupled with water holdback provisions to protect aquatic environment
- **Status**
  - Six trades completed to date, 20 applications pending
  - Implications for possible basin closures



# *Wetlands Restoration & Compensation*

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## ■ **Restoration / Compensation**

- Provides flexibility to *Water Act* approval applicant - option to pay monies (compensation) into a fund to offset the loss of wetlands where impact of development is unavoidable
- Fund administered by independent “wetland restoration agency” (i.e. Ducks Unlimited) and used solely for restoring drained or impacted wetlands

## ■ **One part of a broader wetlands mitigation strategy**

- Policy of “no net loss” of wetlands function
- Policy Hierarchy: Avoidance > Minimization > Restoration/Compensation

## ■ **AENV Guide (design features & safeguards)**

- Compensation (\$) based on wetlands replacement ratio of 3:1 or greater
- Replacement (restoration) in same or nearby watershed
- Use of Qualified Wetland Aquatic Specialists, restoration verification and reporting process - with AENV oversight

## ■ **Program Status** – Activities to date



## *Environmental Handling Fees Electronics Recycling Program*

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- **Environmental Fee (Advanced Disposal Surcharge) applied to the purchase of new electronics (Computers/TV's) in Alberta**
  - Raise revenues to fund stewardship program: collection, transportation, recycling, education and research initiatives
  - Fee collection initiated February/05 – first electronics program in Canada
  - Program managed by Delegated Administrative Organization (DAO)
- **Objectives / Benefits**
  - Diversion of wastes from landfills, reduce environmental & health risks associated with hazardous substances in electronics; i.e. lead, mercury
  - Support the recovery and re-cycling of reusable materials
- **Design features / Environmental Safeguards**
  - DAO Accountability - Business Plans, Performance Measures, Annual Reports
  - Processors of materials are registered – must have EMS, health & safety system and are subject to independent auditing protocol
- **Status of Program**
  - First 6 months: > 1,000 tonnes of electronic materials recycled

## Cooperative Management & Info Disclosure

### *EnviroVista Program*

- Voluntary, facility based stewardship program to recognize and incent environmental leadership among regulated clients
- Two levels of program participation – Leaders & Champions
- **EnviroVista Leaders** – recognition for facilities that meet environmental performance criteria - ***Information Disclosure tool***
  - Performance Criteria: audited EMS, emissions performance, sound compliance
  - Recognition: facility identified on AENV Web Page, use of program logo on documents, business cards, site signage & Certificate of Recognition
- **EnviroVista Champions** – negotiated “Stewardship Agreement” that commits facilities to beyond regulatory performance coupled with a “Modified EPEA Approval” - ***Cooperative Management & Disclosure***
  - Must be Envirovista Leaders plus meet additional entry criteria
  - Performance Commitments: reduced emissions, stewardship, stakeholder acceptance and sign-off
  - Modified Approval: provide greater operational flexibility - retain regulatory backstop

## *EnviroVista Program (continued)*

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### ■ **Program Status**

#### ■ **Leadership Level**

- Launched in June/05 (Environment Week) – with 10 participating facilities
- Strong interest by parties to participate, applications being received by other facilities to participate

#### ■ **Championship Level**

- Design & implementation guided by multi-stakeholder advisory group
- Some issues/challenges
  - need for program support and commitment throughout AENV
  - streamlining the application process –i.e public/stakeholder notification process for Approvals application

### ■ **EnviroVista has evolved from “LEAD” Program**

- Evaluation and stakeholder surveys conducted on former program to identify and address barriers to participation – addition of the “leadership level” provides a stepping stone for participation at the Championship level



## *Web-based Reporting of Drinking Water Quality / CEM Data*

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- **Electronic reporting (web-based transfer) of regulatory monitoring information and internet publication of results**
  - Potable water – Municipal water treatment facilities
  - Air Emissions (CEM) – Industrial facilities
- **Program Objectives / Benefits**
  - Electronic submission – streamlining the regulatory reporting process
  - Disclosure – educates, assures and engages public participation & scrutiny to leverage improved performance by regulated parties
- **Program Status**
  - Electronic reporting
  - Internet publication



# *Environmental Farm Plans (Voluntary Environmental Audits)*

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- **Environmental Farm Plans (EFP's) – Voluntary Stewardship**
  - Voluntary Environmental Audits conducted by farmers to identify environmental risks and adopt BMP's to address risks
- **MOU between AENV & EFP Company**
  - Outlines cooperative roles to promote farm stewardship through EFP's and addresses barriers to broader participation
- **EFP Company:**
  - Help communicate environmental compliance & regulatory obligations
  - Evaluate & communicate program results against environmental goals
- **AENV:**
  - Respect confidentiality of EFP's – will not seek access to EFP's during routine inspections to trigger investigations or use as evidence in prosecutions (certain conditions)
  - Not proceed with enforcement actions for minor non-compliance (genuinely discovered through EFP's) provided that regulatory expectations and policy safeguards are met – prompt reporting & correction of non-compliance, non-repeat infractions, no shielding





# AENV Strategic Approach for Incentives – based Tools

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- **A more comprehensive and deliberate strategy for expanding the environmental tool box**
  - **Water for Life** – exploring and screening for Economic Instruments to help meet water conservation, efficiency and quality objectives
  - **Ecological Fiscal Reform** – a cross-ministry approach (AENV, Finance, Energy, Agriculture, ASRD) to explore opportunities on Ecological Fiscal Reform – applied to Climate Change, Water, Waste, Land Management
  - **Environmental Tools Network** – a cross ministry / multi-disciplined network of specialists to support the coordinated development, implementation, communication, tracking and evaluation of incentive based policy tools.
  - **Monitoring & Evaluation** – more deliberate approach to track and evaluate the environmental outcomes, efficiency and impacts of policy tools



# Sources of Information

## Incentive-based Policy Tools

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- **OECD** – Organization for Economic Cooperation and Development
- **NTREE** - National Round Table for the Environment and the Economy
- **USEPA** – National Center for Environmental Economics
- **EEA** – European Environmental Agency
- **RRF** - Resources for the Future
- **PI** - Pembina Institute
- **CWS** - Canada West Foundation
- **AENV** – Environmental Tools Guide