



Policy and Regulatory Framework: Flaring and Venting in Canada

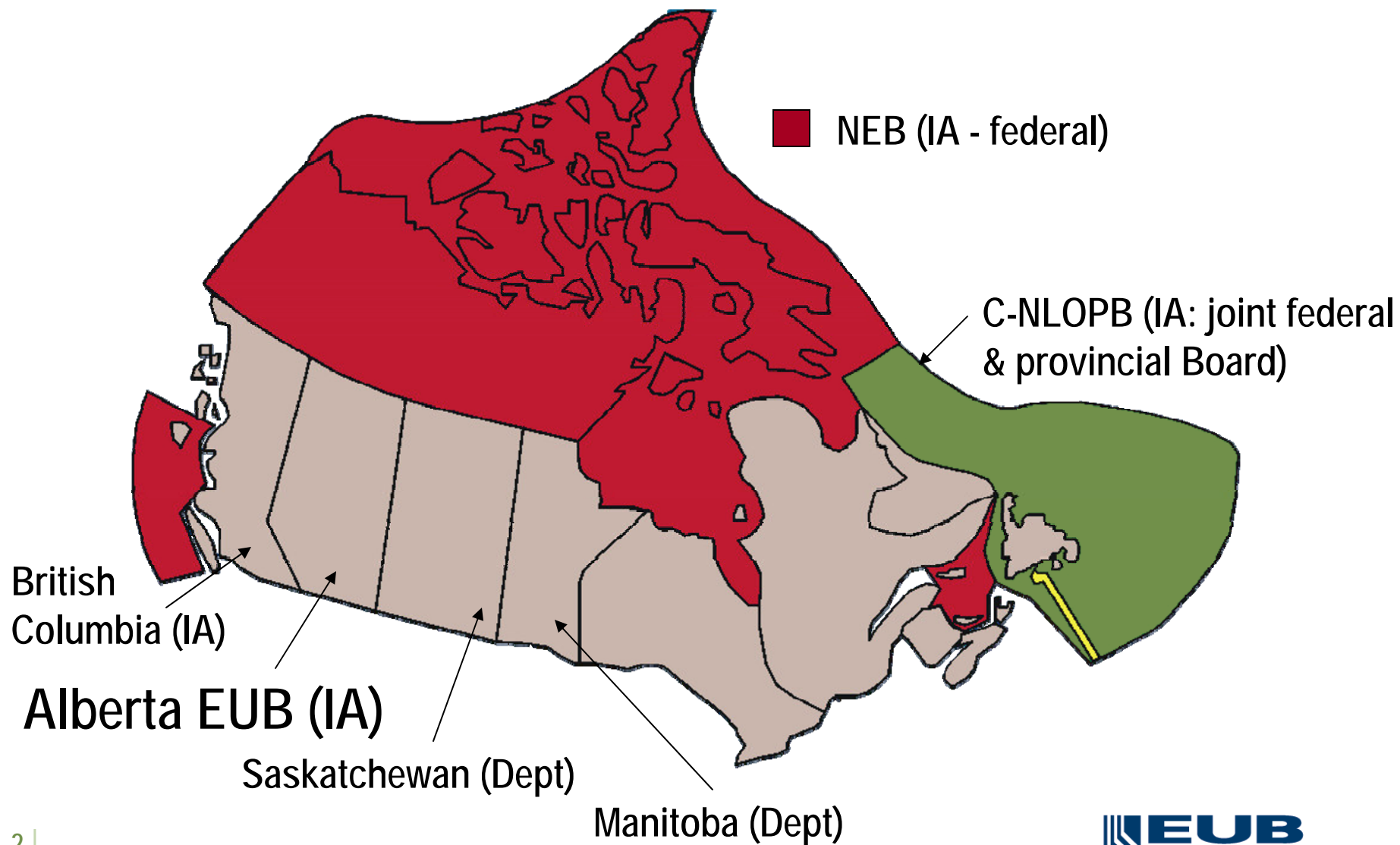


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December 15, 2006



Endorsers – Independent Agency (IA) and Gov't Department



Topics for Discussion

- Regulatory framework
- Themes for regulatory model success
- Roles of independent regulator
- CASA process – consultative approach
- Canadian Offshore
- Other Canadian initiatives

Global Review Regulation in 44 Countries

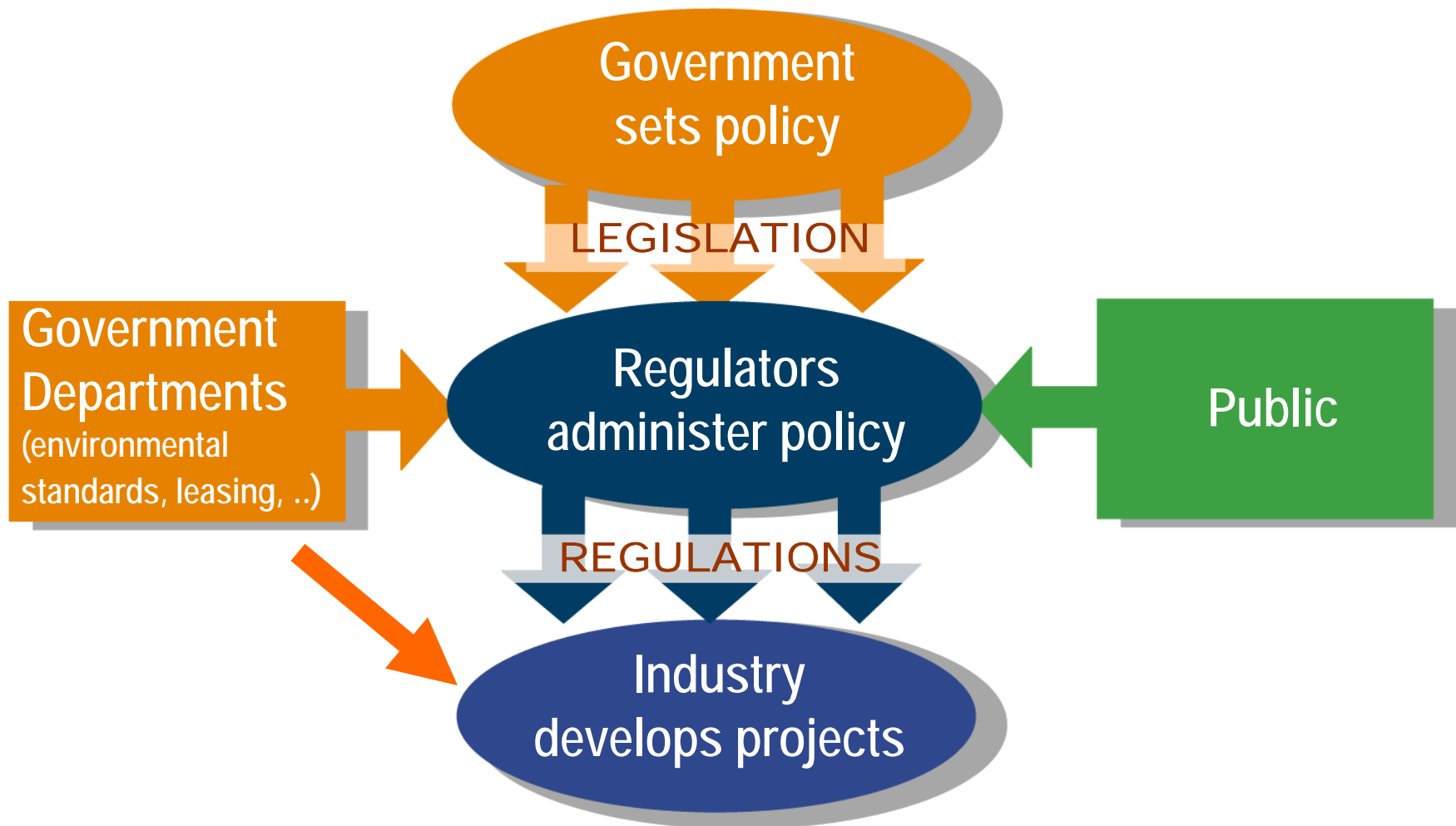
World Bank studied 44 oil producing countries

Objective: determine how regulations and other factors affected flare and venting volumes

Findings: countries reducing flaring and venting used

- Efficient regulation
- Incentives (fiscal policies and reform of energy markets)

Regulatory Framework Diagram



Was it always easy?

- **No – not easy! Wasteful flaring in Turner Valley**
 - “Hell’s Half Acre”; 200 MMCFD for a decade
 - Challenges through the years
- **Had far sighted political will and leadership**
- **Created EUB - independent and technical**
 - To be independent of political process / timetables
 - To conserve / prevent waste of reserves
 - To reduce impact on environment / society
 - To enforce regulations, including shut-in oil if necessary

Who is the Alberta Independent Agency? (EUB)

9 Board Members – Government appointed

- 4 engineers, 2 lawyers, 1 accountant, 2 public

800 Staff

- engineers, geologists, technicians, accountants, lawyers, 135 field staff
- 143,000 producing wells, 373,000 km pipelines

Key to effective independence

“Nobody controls the Regulatory Authority but the Regulatory Authority remains under control”

Energy Resources Conservation Act (ERCA)

Section 2 — Purposes of Act

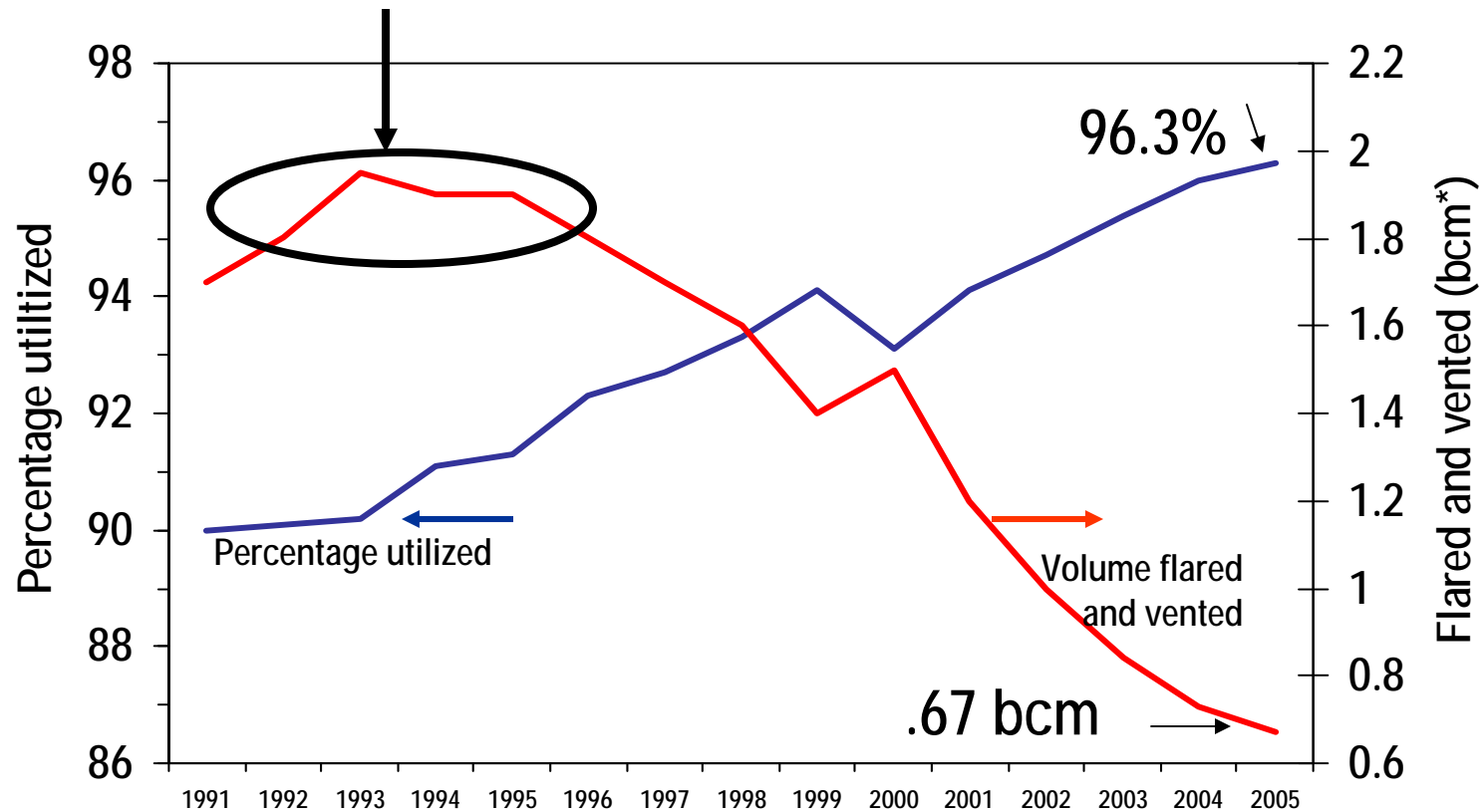
- a) appraisal of the reserves and productive capacity
- b) appraisal of the requirements for energy resources
- c) **conservation** of, and to **prevent the waste**...energy
- d) **control pollution** and ensure **environment conservation**
- e) secure the observance of **safe** and **efficient practices**
- f) recording...timely...useful **dissemination** of **information**
- g) receive information, advice and recommendations

Atlantic Accord Implementation Act

- Accord Act Section 154 addresses “Waste” and Paragraph (f) deals with gas flaring specifically: *the escape or flaring of gas that could be economically recovered and processed or economically injected into an underground reservoir*
- If, after the hearing, the Oil and Gas Committee is of the opinion that waste as defined in paragraph 154(2)(f) is occurring in the recovery of petroleum from a pool, the Committee may, by order, direct the introduction of a scheme for the collection, processing, disposition or re-injection of any gas produced from such pool
- Production and Conservation Regulations: *The Chiefs may approve the flaring or venting of gas during a production operation at a rate and volume and for the period set out in the approval where the flaring or venting does not constitute waste or an undue safety hazard.*

1996 vs. 2005 (flaring -72%, venting -59%)

Issue: 1996 @ 1.8 bcm and not declining



*bcm = billion cubic metres

Year 1996 - baseline for flaring

Year 2000 - baseline for venting



Best Management Practices

- **KEY — Build consensus on flaring solutions**
 - ✓ **Clean Air Strategic Alliance (CASA)¹**
 - industry, environmental NGOs, and Government multistakeholder process
 - ✓ **Eventual elimination routine AG gas flaring**
 - ✓ **Orderly transition .. balances .. stakeholders ..**
 - eliminate, reduce, and improve the efficiency of flares
- **Regulatory backstop if voluntary failed**

CASA Flaring Project Team (FPT)

Series of Consensus CASA FPT Recommendations

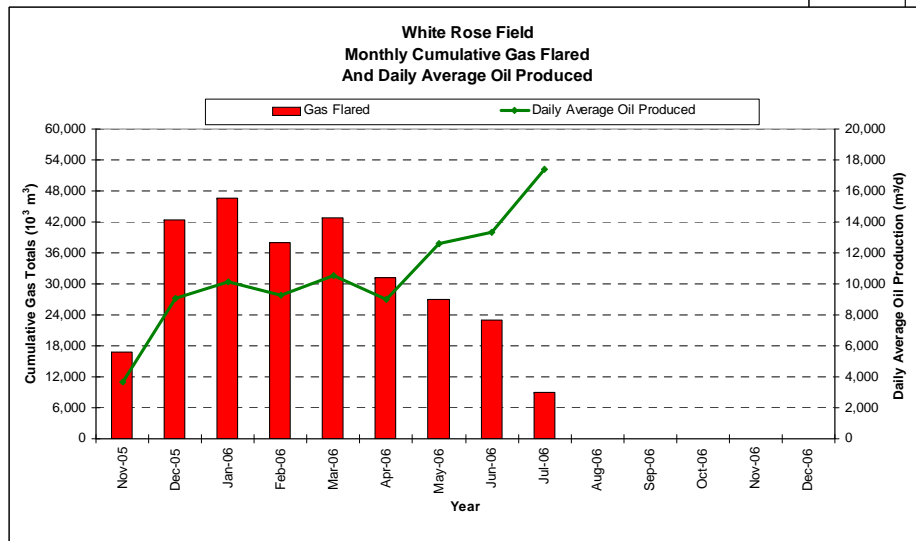
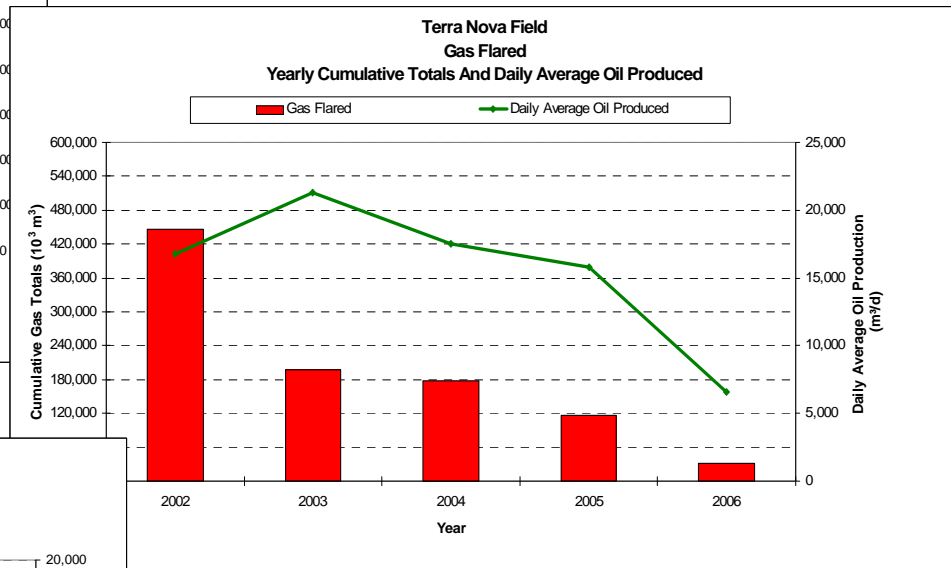
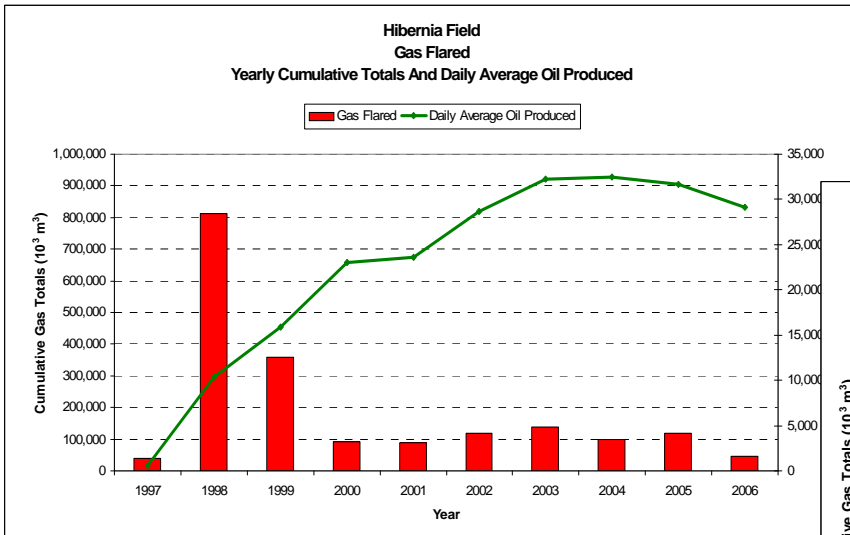
- decision tree with predetermined input controls
- industry wide flaring reduction targets

Latest Updated Recommendations

(EUB updated Directive 60)

- flaring Absolute Cap = 50% 1996 Base Line (0.670 BCM)
- must tie-in if Present Value is > \$ -50k
- decision tree extended: gas plant and non-assoc gas flares
- conventional wells—shut in until tied in (72 hour tests)
- fugitive emissions programs and implementing required

Newfoundland and Labrador Offshore Petroleum Board



Other Strategies - Canadian Jurisdictions

- Facilitate discussions with stakeholders and industry
- Resolve regulatory barriers and economic barriers
- Adopt air quality guidelines, measurement, and modeling
- Improve flare design and operations standards
- Require utilization unless flaring justified to regulator
- Expand public notification and consultation
- Use flare hierarchy—eliminate, reduce, improve
- Re-licence facilities - deadline or permit cancelled
- Amend acts and regulations

Conclusions—What Worked

- Stakeholder consensus processes
- Industry-wide targets but assess each site
- Independent regulator—backstop provisions
- Clear and consolidated requirements
- Good measurement, reporting, monitoring
- Regular review of flaring and venting targets
- Improved public confidence in process

Supplemental Slides

Annual Canadian Energy Production - 2005



Alberta73 % of Canada Energy

Canadian Totals

- Conventional oil (land)1 059 000 B/d
- Bitumen
 - in situ.....436 000 B/d
 - surface-mineable.....625 000 B/d
- Offshore oil..... 305 000 B/d
- Natural gas.....17.1 BCFD
- Oil / Gas producing wells.....170,000+

Source: CAPP

Global Standard – Canadian Endorsers

Represent 99.9 % of Canadian Production

(4 Independent Agencies and 2 Departments of Government)

- National Energy Board
- British Columbia Oil and Gas Commission
- Alberta Energy and Utilities Board
- Saskatchewan Industry and Resources
- Manitoba Industry, Economic Development and Mines
- Canada-Newfoundland and Labrador Offshore Petroleum Board

Themes for Regulatory Model Success

- **Government and its departments establishes policy, standards, guidelines**
- **Independent regulatory agency**
 - Regulates and implements consistently
 - Independent decisions and authority
 - Resourced, funded, skilled staff
 - Balance social and economic interests

Themes for Regulatory Success (cont'd)

Stakeholder consultation

- Provide opportunity for stakeholders input
- Regulations and project decisions consider stakeholder input

Confidence by stakeholders

- Regulator seen to ensure energy industry operations are in the public interest—fairness, natural justice
- Public source for accurate, detailed information
- Regulator is fair and objective
- Regulator is willing to act

Roles of an Independent Regulator

- Applications and approvals
- Adjudication and regulation
- Surveillance and enforcement
- Information collection and dissemination

Surveillance and Enforcement

- **Critical element of regulatory framework**
 - Monitor industry performance and compliance
 - Consequences for non-compliance (enforcement)
- **Consistent in jurisdiction and between companies**
- **Develop with stakeholder input**
- **Focus on poor performers and sensitive areas**

Information Collection and Dissemination

Important for all stakeholders

Government

- Basis for royalty and tax determination

Industry

- Must report production data to EUB
- Basis for investment decisions

Public

- Awareness of industry activity and performance

Independent regulator

- Monitoring resource recovery and conservation
- Regulating flaring and venting
- Reporting and forecasting production and reserves
- Resource base information for investment decision