



Energy Conservation in Alberta A Regulator's Perspective

Presentation to the Energy Management Workshop

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Alberta Energy and Utilities Board



The Energy Team

- ◆ Identification of and response to customer needs
- ◆ Improvement and simplification of regulatory requirements
- ◆ Decision-making in the public interest



Oil and Gas Conservation Act

Prevention of waste and promotion of conservation of oil and gas

Economic, orderly and efficient development of oil and gas resources in the public interest

Pollution control and environmental conservation

Recording and timely dissemination of information



History of the EUB

- ◆ 1932: Turner Valley Gas Conservation Board
- ◆ 1938: Petroleum and Natural Gas Conservation Board
- ◆ 1957: Oil and Gas Conservation Board
- ◆ 1971: Energy Resources Conservation Board
- ◆ 1995: merger of Public Utilities Board and ERCB to form the Alberta Energy and Utilities Board



Success Stories

**Sulphur Recovery Guidelines – ID 2001-3 /
ST101**

**Flaring Reductions in the Province – Guide
60/ST60B**



Sulphur Recovery Review

Objectives:

- ◆ Sulphur recovery guidelines for sour gas plants approved prior to 1988 that don't meet the requirements for new plants - the so-called "grandfathered" plants;
- ◆ The proliferation of small sour gas plants with inlet sulphur quantities under 1 tonne/day thus not requiring sulphur recovery facilities.

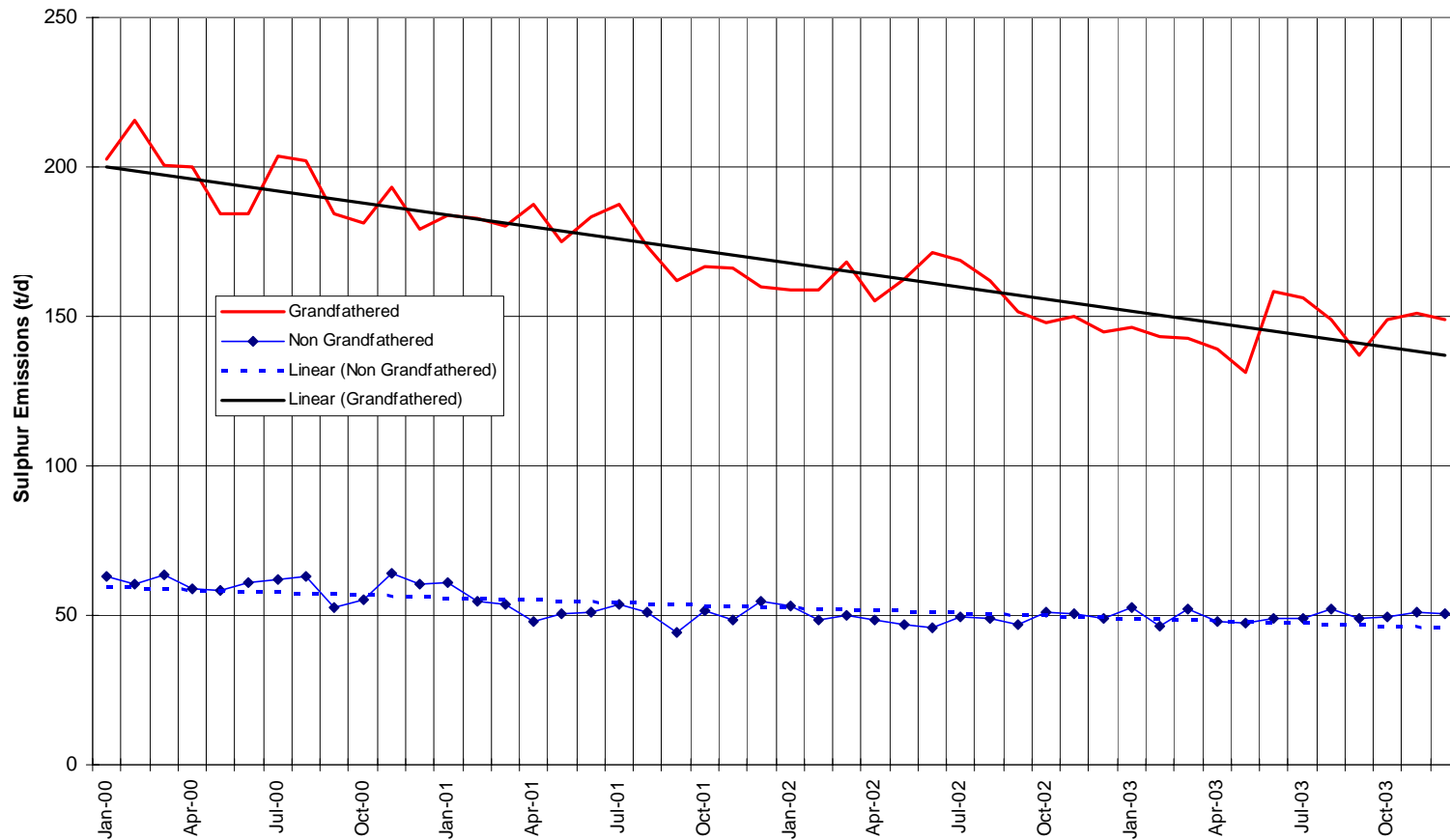


Interim Directive 2001-3

- ◆ Sour gas plants with grandfathered approvals are required to increase sulphur recovery unless sulphur inlets are declining at a 7.5% annual rate
- ◆ Grandfathered gas plants operating better than the minimum sulphur recovery required can earn credits

Sulphur Emissions Results

Sulphur Emissions - Grandfathered (SR and AGF) & Non-Grandfathered (SR and AGI) Plants





World Bank Global Flaring Reduction Initiative

- ◆ 2002 World Bank invitation to participate
- ◆ Application of Alberta flaring reduction approach
- ◆ CASA process
- ◆ Global standards developed

Accomplishing Flaring Reductions in Alberta

Approach:

- ◆ policy development process
- ◆ decision tree analysis
- ◆ industry-wide targets and regulatory backstops

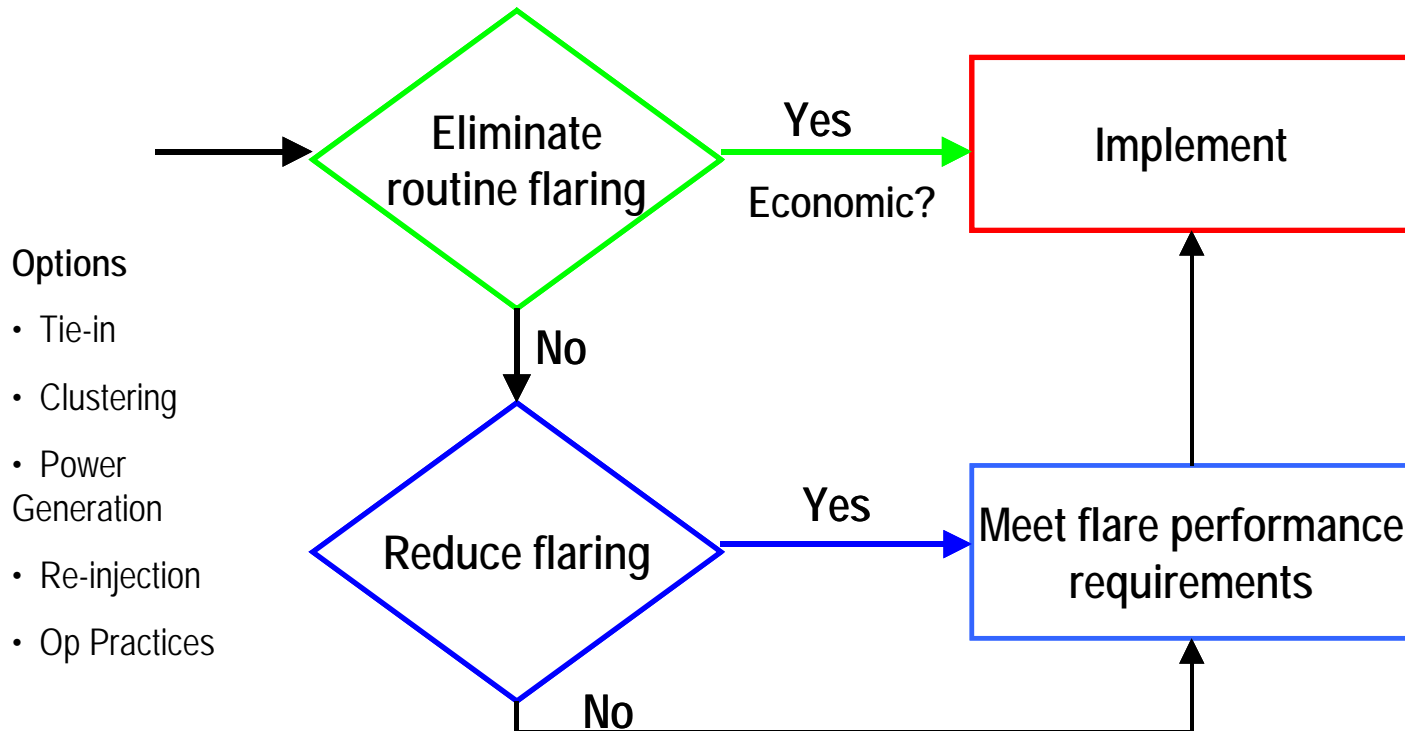


The CASA Process

- ◆ **KEY - Build consensus on flaring solutions**
 - ◆ **Clean Air Strategic Alliance (CASA)¹**
 - industry, environmental organization, and government multistakeholder process
 - ◆ **CASA 1998 Flaring Project Team consensus recommendations**
 - decision tree
 - flaring reduction targets
 - ◆ **EUB acted on CASA recommendations**
 - EUB Flaring Guide (Guide 60)

Decision Tree Analysis

◆ KEY - Decision-tree analysis





Decision Tree Analysis continued

Economic decision criteria must be specified

- regulatory criteria - not corporate “hurdle rate”
- positive present value at prime + 3% interest rate (before tax)

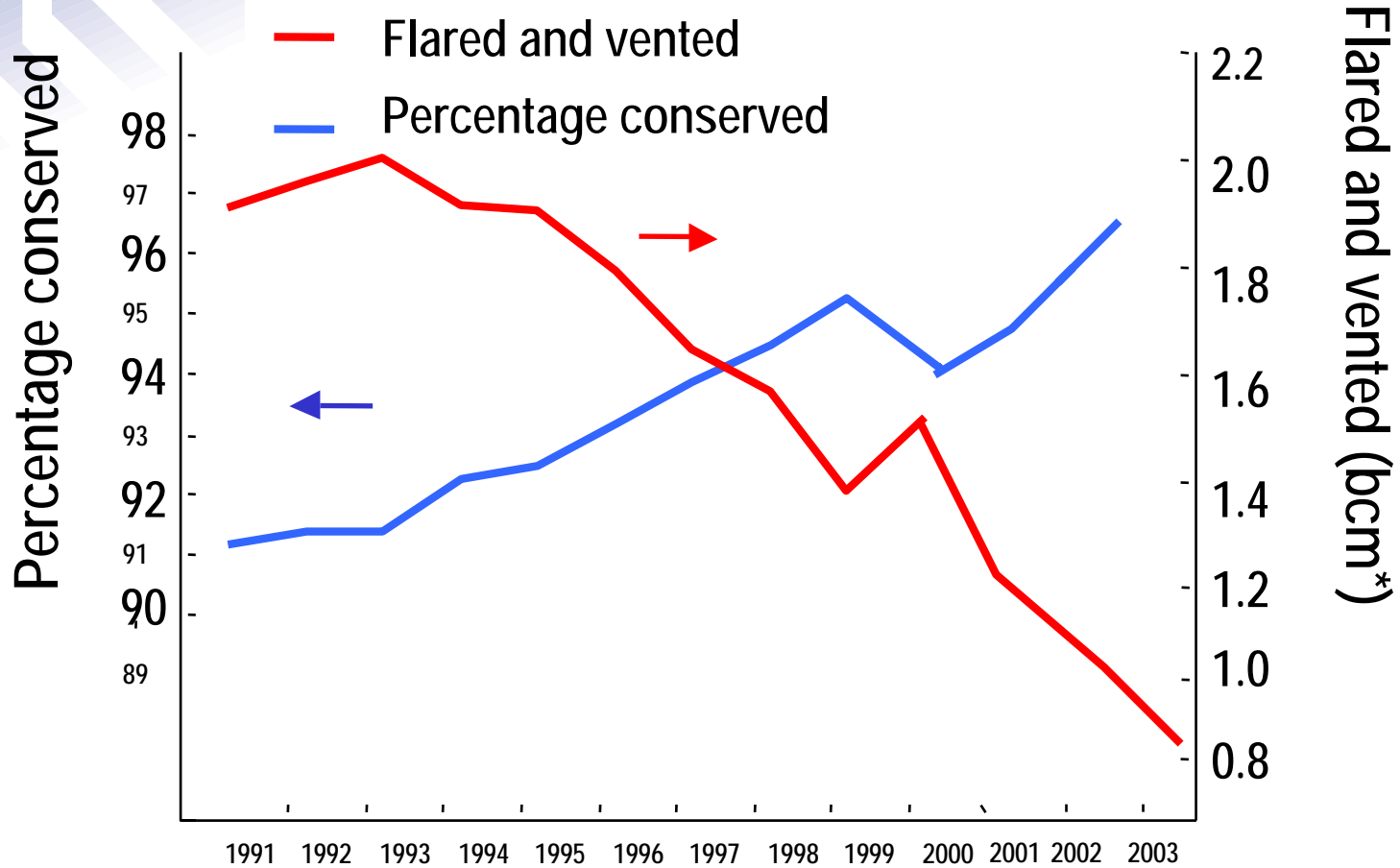
Industry must evaluate each flaring site

- review documents subject to EUB audit

Targets

- ◆ **KEY - Industry wide targets**
 - ◆ allows industry find best solutions for individual sites
 - Alberta flare reduction targets:
 - 1996 Baseline
 - 15% Overall industry reduction by end of 2000
 - 25% Overall industry reduction by end of 2001
 - 50% Overall industry reduction by end of 2002
 - ◆ regulatory consequence if targets not achieved
 - EUB imposition of site specific maximum flare limits

The Results



*bcm = billion cubic metres



Future Directions

(Draft Guide 60 – Dec 2002)

- ◆ **Decision tree analysis for flaring and venting at gas plants**
 - ◆ Evaluate flares, incinerators and vents
 - ◆ Eliminate and reduce gas flared and vented
- ◆ **Fugitive Emissions Surveys**
 - ◆ Recommends that companies periodically assess fugitive emissions losses and determine priorities for leak detection and repair
 - ◆ EUB may require fugitive emission surveys where odours are noted.



Future Directions

(CASA Recommendations Sept 2004)

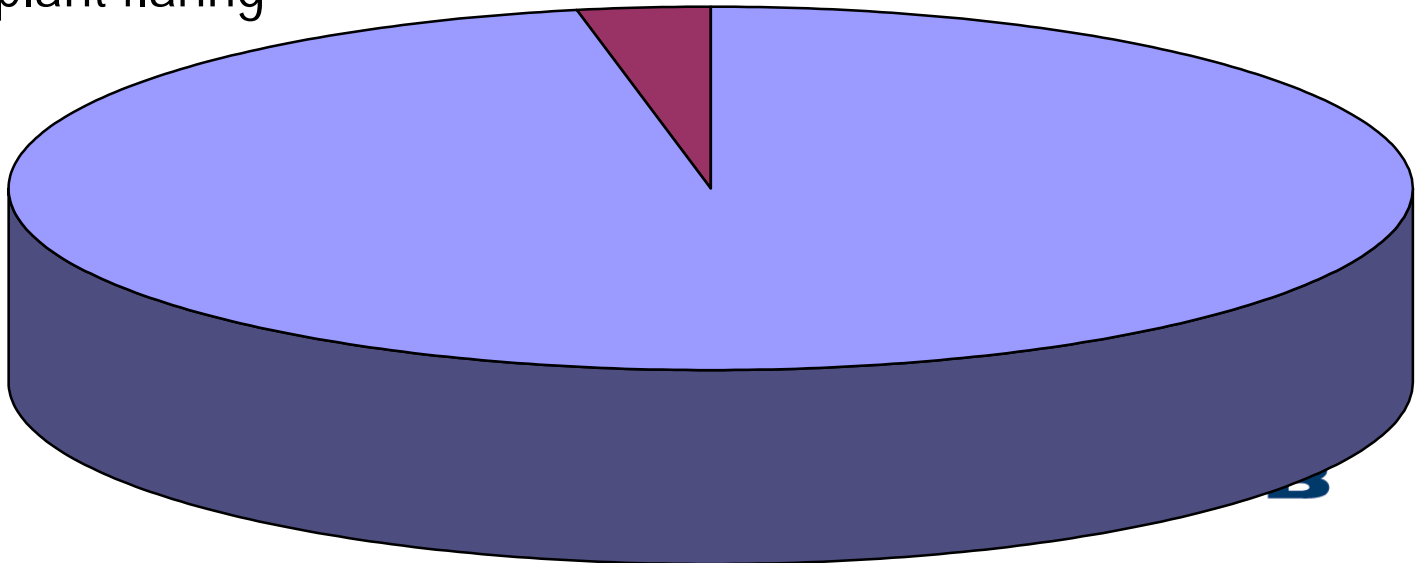
- ◆ CAPP and SEPAC develop BMP in managing fugitive emissions and targeting larger volume emissions that are cost effective to address
- ◆ Once above work complete, EUB require leak detection and repair programs
- ◆ Review best practices in 2007

Fuel Gas Use at Upstream Oil and Gas Facilities - 2004

Type of Facility	E9M3/yr
Batteries	3.467
Gas Gathering Systems	3.217
Gas Processing Plants (Excludes Straddles)	4.537
Total	11.221

Fuel Use at Gas Processing Plants

- ◆ Fuel use at gas processing plants in 2004 was approximately 35 times greater than gas plant flaring





Questions the EUB is Asking

- ◆ Is one fuel gas number for plants enough or is more needed for better benchmarking?
- ◆ Should the EUB be asking more questions of large fuel consumers on fuel efficiency?
- ◆ What role can the EUB play in encouraging benchmarking?
- ◆ Should the EUB consider ranking fuel gas consumption?



Regulatory Expectation

- ◆ Where opportunities present themselves for more efficient use of gas, implement them when the economics are marginal or better
- ◆ Be proactive