

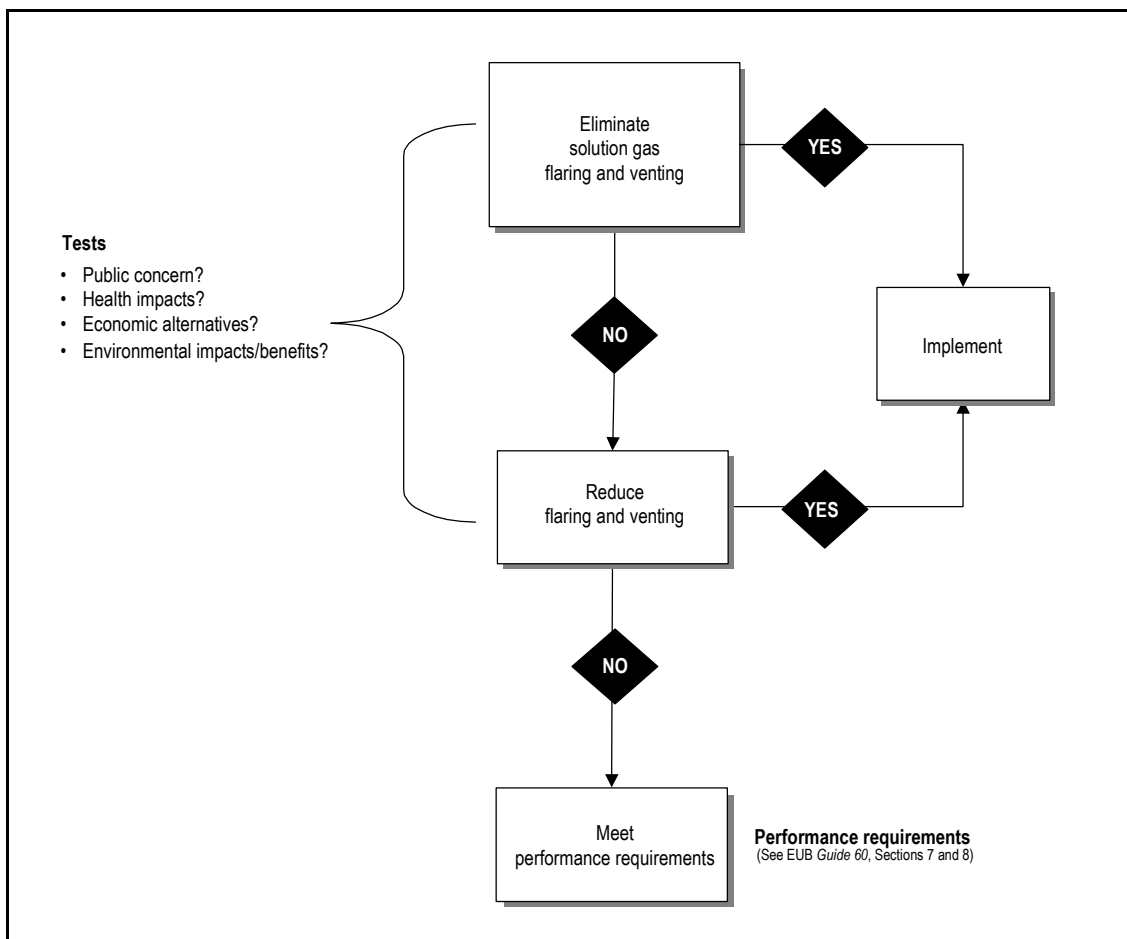
Alberta's Tool for Regulating Flaring

The Alberta Energy and Utilities Board regulates flaring and venting in Alberta's upstream petroleum industry with *Guide 60 – Upstream Petroleum Industry Flaring Guide*. This Guide can be found at www.eub.gov.ab.ca/bbs/products/guides/g60/g60-1999.pdf

(This guide has since been added to with the Updates and Clarifications in 2001, and there is a Draft Guide 60 dated December 2002 which represents the latest thoughts and developments re: flaring and venting management in Alberta. However, most of the intent is captured in the original 1999 Guide 60)

Flaring Management Decision Tree

The Guide includes a management framework and decision tree for associated gas flaring that challenges operators to eliminate routine associated gas flaring wherever possible. Where routine flaring can not be eliminated (based on a feasibility test that includes an economic evaluation), the operator is challenged to reduce the flaring as much as possible. Any flaring that remains is then required to meet performance requirements outlined in Section 7 of the Guide.



Evaluation of Associated Gas Flares

One of the major requirements of Guide 60 is that the flaring or venting of associated gas (“solution gas”) be evaluated to determine if there are economically feasible alternatives to flaring or venting (Section 2). The Guide outlines a standardized calculation which includes:

- Commodity price forecasts to be used
- Power price forecasts to be used for electrical power generation projects
- Rules regarding estimation of capital and operating costs of the possible gas utilization project
- Long-term inflation rate to be used
- Discount rate to be used

If gas utilization is economic (based on incremental economics (gas only)), the operator is required to proceed with the utilization (“conservation”) project and is not allowed to flare the gas. If utilization is uneconomic, the operator is allowed to flare the gas.

There are also *clustering* requirements whereby multiple facilities (wells, batteries, pipelines) that are in close proximity must consider the economics of gas conservation on a combined basis. While conserving gas at an individual well may not be economic, it may be feasible if multiple wells are tied together. Giving consideration to clustering is required by Guide 60, and also applies in cases where multiple operators are involved.

While there are many other requirements in Guide 60, these two (the Decision Tree and the economic evaluation) have played a large role in the reductions in associated gas flaring achieved in Alberta. As shown in the graph under “Reporting”, Alberta has reduced solution gas flaring by 72% since 1996.

Consensus-based Decision Making

Guide 60, the EUB’s flaring and venting requirements for the upstream petroleum industry in Alberta, was the result of a multistakeholder consensus-based decision making process. This multistakeholder team under CASA (www.casahome.org, see *Flaring and Venting Project Team* under “CASA Library” link) reached consensus agreement on recommendations for a regulatory approach that was then implemented by the EUB. The approach was one that all stakeholders (industry, public & NGOs, regulators) could support. The result was significant flaring reductions, while industry was provided the flexibility to find the most cost-effective means of achieving the results.

Multistakeholder consensus-based approaches have worked well for Alberta. This approach can require more time initially, especially to build trust between stakeholders who may have previously viewed each other as opponents. However, the time invested in the beginning pays off with results that are supported by all parties, and are often more creative and long lasting than those the regulator would have developed on their own. Also, because all parties have a vested interest in seeing the success of the approach they

have helped develop, the new requirements are usually well supported by the stakeholders.

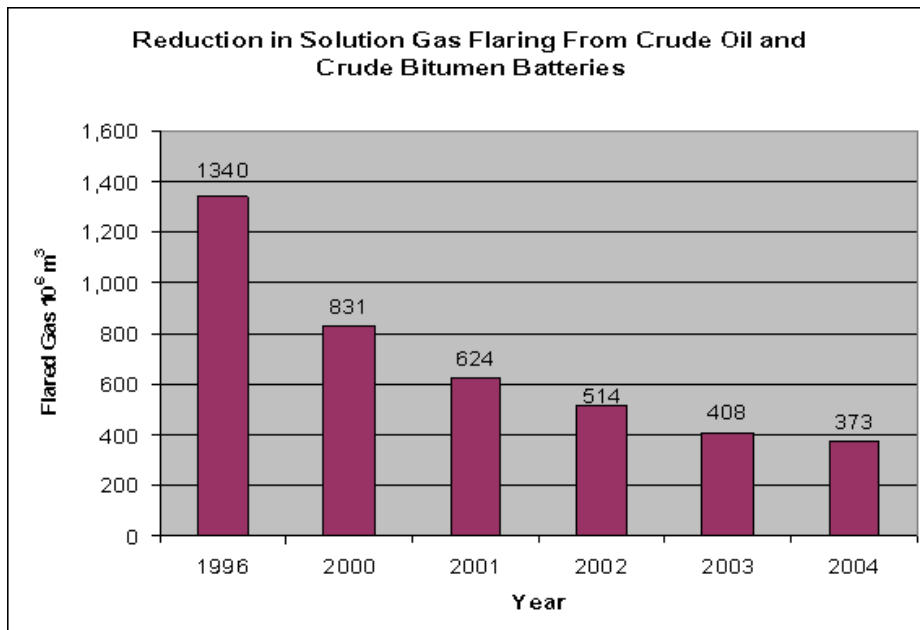
Voluntary Targets

The multistakeholder team set voluntary reduction targets that were to be achieved. These were expressed as percentages of flared gas volume as compared with a baseline year. The targets did not state how the reductions had to be achieved, or in what locations. Rather, the targets were based on a provincial total flared gas volume. If the voluntary reduction targets were not achieved, the regulator would step in with a prescriptive approach that would ensure results (this is known as the “regulatory backstop”). This approach provided flexibility to the industry while assuring the public and the regulator that results would be achieved.

Because of the flexibility provided to industry, they were able to agree to a higher target than they might have otherwise agreed to. Industry utilized the flexibility of the voluntary targets to come up with their own most cost-effective means of producing results, and outperformed the targets.

Reporting

Guide 60 also includes requirements to report volumes of flared and vented gas (Section 10). The EUB publishes a report every year containing the total volumes of gas flared and vented in Alberta, and includes a breakdown of flaring and venting by company. The total volume provides an indication of progress on flaring and venting in the province, while the individual company statistics provide a positive pressure and recognition for companies to continually improve their performance. This report is publicly available. http://www.eub.gov.ab.ca/bbs/products/STs/st60b_current.pdf



Enforcement

Guide 60 and Directive 019 outline the enforcement associated with failure to comply with EUB requirements. Consequences of non-compliance are described so that operators are aware. While the EUB's preference is to help industry be compliant with our requirements (i.e. we often focus on having a system corrected more than we focus on delivering punishment), we will suspend operations where an operator is unable to comply with our requirements. Although we do not issue fines or penalties, we can rescind an operators right to produce from that facility. Removing the right to produce has a significant monetary impact. If a company is grossly non-compliant, we can go so far as to suspend all operations for that company.

Directive 019 can be found at:

<http://www.eub.gov.ab.ca/bbs/documents/directives/Directive019.pdf>

LESSONS LEARNED

The Decision Tree works

- The hierarchy of “eliminate, reduce, meet performance requirements”, combined with the standardized economic evaluation for gas conservation have resulted in significant flaring and venting reductions in Alberta

Multistakeholder Consensus-Based decision making works

- This approach has resulted in regulations that are unique, work for all stakeholders, and deliver results

Voluntary Targets can work

- By providing flexibility in how the results are achieved, voluntary targets can allow industry to shoot for higher goals, while allowing them the freedom to find their best, often most cost effective way to get there. Voluntary targets should be backed up by some form of regulatory backstop that specifies what action the regulator will take if the targets are not met. This provides the motivation to industry to meet the targets, rather than have a required method prescribed.

Data must be made publicly available

- What gets measured, gets managed. The regulator must require that flared and vented volumes be measured and reported. This will provide the data necessary for prioritizing actions and tracking trends.
- By making data publicly available, this provides transparency and credibility to the process. It also provides further incentive to industry for improvement, and reward operators that take positive action.

Requirements must be clear and the regulator must enforce

- Regulatory documents must clearly identify the requirements and the corresponding consequences of not complying with the requirements. The regulator is then obligated to follow through by delivering these consequences where non-compliances have occurred.

For more information on EUB flaring and venting requirements, contact Michael Brown at (403) 297-8412 or michael.brown@gov.ab.ca