

# Flaring Summary

2013 | BC Oil and Gas Commission



# Table of Contents

About the Flaring Summary	3
Summary of Flared Volumes	4
Sources of Flaring	5
Summary	6
Appendix 1	7
Appendix 2	8

## About the BC Oil and Gas Commission

The BC Oil and Gas Commission is the single-window regulatory agency with responsibilities for regulating oil and gas activities in British Columbia, including exploration, development, pipeline transportation and reclamation.

The Commission’s core services include reviewing and assessing applications for industry activity, consulting with First Nations, cooperating with partner agencies, and ensuring industry complies with provincial legislation and all regulatory requirements. The public interest is protected by ensuring public safety, respecting those affected by oil and gas activities, conserving the environment, and ensuring equitable participation in production.

For general information about the Commission, please visit [www.bccgc.ca](http://www.bccgc.ca) or phone 250-794-5200.



### Mission

We regulate oil and gas activities for the benefit of British Columbians.

We achieve this by:

- Protecting public safety,
- Respecting those affected by oil and gas activities,
- Conserving the environment, and
- Supporting resource development.

Through the active engagement of our stakeholders and partners, we provide fair and timely decisions within our regulatory framework.

We support opportunities for employee growth, recognize individual and group contributions, demonstrate accountability at all levels, and instill pride and confidence in our organization.

We serve with a passion for excellence.

### Vision

To be the leading oil and gas regulator in Canada.

### Values

- Respectful
- Accountable
- Effective
- Efficient
- Responsive
- Transparent

## About the Flaring Summary

The annual Flaring Summary provides data on flared volumes related to oil and gas development in B.C. and progress made toward reducing flaring. This summary is for the 2013 calendar year.

In 2008 the BC Oil and Gas Commission (Commission) released the [Flaring and Venting Reduction Guideline](#). With natural gas conservation a key objective, the guideline – which is reviewed regularly and updated as required – provides regulatory guidance to operators for flaring, venting and incinerating at all wellsites, facilities and pipelines regulated under the Oil and Gas Activities Act.

### What is Flaring?

Flaring is the safe, controlled burning of natural gas that cannot be processed. It is a necessity for certain aspects of oil and gas production, and is primarily conducted to ensure the safe operation of facilities. All flaring in B.C. must be conducted in accordance with Commission regulations and government air quality objectives and standards.



## Summary of Flared Volumes

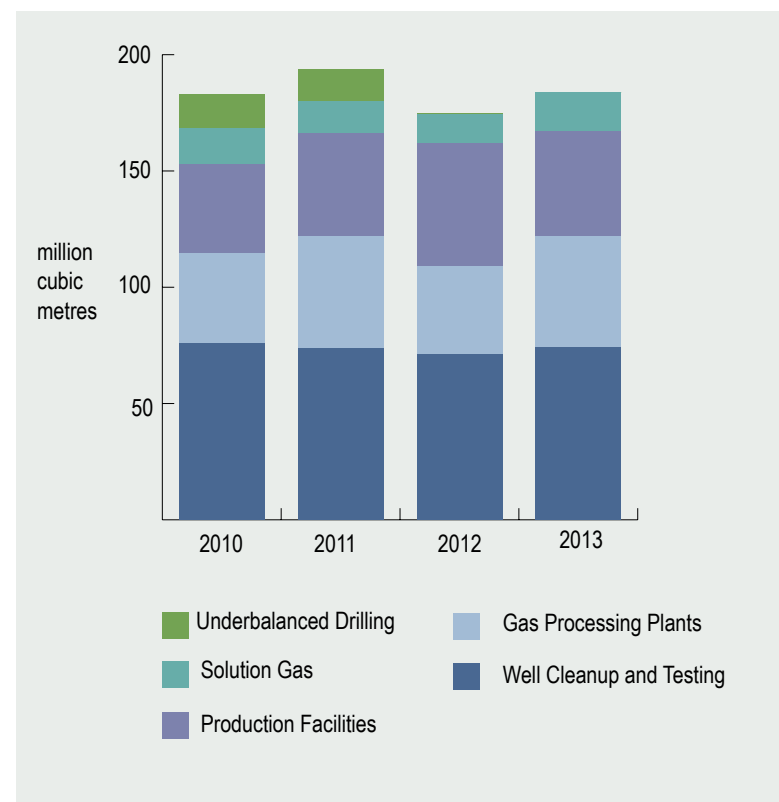
Overall, flaring levels in 2013 increased five per cent over 2012 levels, and were comparable to 2010 levels.

The five sources of flaring are broken down in Table 1 and Figure 1. Data for flared volumes from 1996-2013 is listed and graphed in Appendices 1 and 2.

Table 1 – Flared volumes by source 2010-2013 (million cubic metres)

Source	2010	2011	2012	2013
Well Cleanup and Testing	75.9	73.5	71.3	74.2
Gas Processing Plants	38.8	48.3	37.7	47.8
Production Facilities	37.9	44.3	52.7	45.1
Solution Gas	15.5	13.8	12.8	16.8
Underbalanced Drilling	15	13.6	0.1	0
Total	183.1	193.5	174.6	183.9
Solution Gas Production	472	426	469	477
Solution Gas Flared	15.5	13.8	12.8	16.8
% Conserved	97%	97%	97%	96%

Figure 1 – Flared volumes broken down by source 2010-2013



## Sources of Flared Volumes

Flared volumes from year to year are dependent primarily on activity levels, but also types of recovery techniques used and locations of oil and gas activities. Due to flaring reduction efforts, levels have declined significantly since 1996. Smaller fluctuations in flaring levels in recent years are attributed to increases or decreases in production, and increases or decreases in certain types of drilling. The following is a breakdown of 2013 flaring sources.

**Gas processing plants:** Flaring occurs at gas processing plants primarily for safety reasons. Reduction efforts focus on conservation as a priority during the application review stage. Flaring from gas processing plants increased 21 per cent between 2012 and 2013, the result of newly constructed gas plants. In 2013 the Commission improved data efficiency by differentiating between emissions from provincially and federally regulated gas plants.<sup>1</sup>

**Production Facilities:** Flaring occurs at production facilities primarily for safety reasons and during process upsets. The Commission works with operators on production facility designs, ensuring all reasonable options are considered in an effort to eliminate or reduce flaring. Flaring from production facilities decreased 14 per cent from 2012.

**Underbalanced Drilling:** This drilling procedure is used to drill natural gas wells wherein wellbore pressure is kept lower than fluid pressure in the formation being drilled. There was no flaring from underbalanced drilling in 2013.

**Well Cleanup and Testing:** These are conducted once a well is completed drilling and prior to placing it into production. Well cleanup flaring ensures sufficient contaminants have been removed from the gas stream to allow the well to produce safely, and well testing involves flowing a well so pressure and flow data can be collected. Flaring from these sources increased four per cent in 2013, largely due to increased exploratory activity.

**Solution Gas:** This occurs at oil producing wells and batteries. Operators are required to conserve solution gas that meets an economic threshold as defined in the Flaring Venting and Reduction Guideline. There was a 31 per cent increase in solution gas flaring between 2012 and 2013, mainly due to new oil batteries in the Montney play. Conservation rates at the new batteries are expected to improve in 2014.

The Commission continues to work to reduce other sources of flaring including temporary flares, flaring required for safe operations and the flaring of gas not economical to conserve.

---

<sup>1</sup> In an effort to improve data efficiency, 2013 marks the first year flaring volumes for gas processing plants apply only to plants regulated by the Commission. In previous reporting years, the volumes included both plants regulated by the National Energy Board and by the Commission. Total volumes for Commission-regulated plants have been recalculated to 2010. Going forward, flaring data summaries will include only Commission-regulated plants. Appendix 1 includes a comparison for both sets of flaring volumes.



## Summary

The Commission continues to work with oil and gas operators to ensure all emission reduction options are considered before an operation commences. Priority is placed on eliminating flaring, and where elimination is not possible (for instance, if there is a lack of available infrastructure such as pipelines and facilities due to remoteness) focus is placed on reducing emissions and/or improving system efficiencies.

The Commission also regularly reviews the Flaring and Venting Reduction Guideline and updates are made as required. Other areas of focus include reducing venting and fugitive emissions, which is achieved by increased scrutiny of flare applications, economic assessments of flared gas, improvements to existing facilities and regulatory and policy changes.

In 2010, the BC Energy Plan target of eliminating all routine associated gas flaring was achieved. Routine associated gas flaring is defined as the continuous flaring of solution gas that is economical to conserve. Associated (solution) gas is gas produced from a well during oil production.



More Information

[www.bcogc.ca](http://www.bcogc.ca)

This summary was published in December 2014 and is updated annually. Previous annual flaring technical reports can be found [here](#). For more information see our [poster](#) on managing air emissions. For specific questions regarding this document please contact [ogc.communications@bcogc.ca](mailto:ogc.communications@bcogc.ca).



## Appendix 1 – Total flared volumes 1996-2013 (million cubic metres)



## Appendix 2 – Breakdown of flared volumes 1996-2013 (million cubic metres)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Gas Processing Plants	22.7	29	35.7	33.7	30.6	35.4	35.7	31	35	45.7	39	38	48.8	51.7	51	59.6	59.9	84.3
Production Facilities	40.9	26.9	24.3	21.3	24.8	28.4	25.3	21.8	25.7	27.4	25.9	37.9	37.5	35.9	37.9	44.3	52.7	45.1
Underbalanced Drilling	1.4	4.5	3.1	0.1	11	26.4	38.9	87.3	94.1	71.5	55.6	59.2	47.4	7	15	13.6	0.1	0
Well Cleanup and Testing	69.8	89	96	82.7	90	91.7	67.6	72.9	83.4	91.7	107	101.9	128.5	92.7	75.9	73.5	71.3	74.2
Solution Gas	182.9	199.5	146.4	88.1	75	59.8	50.3	48.9	33.9	33	36.1	30.9	26.5	15.9	15.5	13.8	12.8	16.8
Total	317.7	348.9	305.5	225.9	231.4	241.7	218	261.9	272.1	269.3	263.6	267.9	288.7	203.2	194.9	204.8	196.8	220
Adjusted volumes removing federally regulated gas processing plants															183	193	175	184
Solution Gas Production	1424	1681	1700	1629	1655	1659	1368	1137	976	861	830	747	669	490	472	426	469	477
Solution Gas Flared	182.9	199.5	146.4	88.1	75	59.8	50.3	48.9	33.9	33	36.1	30.9	26.5	15.9	15.5	13.8	12.8	16.8
% Conserved	87%	88%	91%	95%	95%	96%	96%	96%	97%	96%	96%	96%	96%	97%	97%	97%	97%	96%



