
Memorandum

From: Neenu Walia
Section Head, Regulatory and Mitigation

Date January 23, 2014

Subject: Notice of Change for Global Warming Potentials

Alberta has adopted the 2007 global warming potentials as published by the International Panel on Climate Change. These changes have been reflected in the Technical Guidance for Completing Specified Gas Compliance Reports. Factors will also be reflected in the Handbook for Emission Factors for Alberta Offset Projects (under development). Changes will apply as follows:

- **Specified Gas Reporting Program:** Changes apply for the 2013 reporting year for reports submitted June 1, 2014. This change ensures consistency with the “one window” reporting program with Environment Canada.
- **Specified Gas Emitters Program:** Changes apply for the 2014 compliance year for reports due March 31, 2015. Alberta Environment and Sustainable Resource Development will issue up-dated baseline emissions intensities for all facilities in fall 2014 for use in the 2014 compliance report.
- **Alberta Offset Program:** Changes apply for 2014 vintage credits. Project developers will be required to up-date the project baseline, and note changes in the 2014 offset project report.

A complete list of revised global warming potentials is attached.

Please direct questions to AENV.GHG@gov.ab.ca.

Sincerely

Neenu Walia

Attachment

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Global Warming Potentials for Greenhouse Gases

IPCC Global Warming Potentials - 100-Year Time Horizon

Greenhouse Gas	Formula	Second Assessment Report ¹	Fourth Assessment Report ²
Carbon dioxide	CO ₂	1	1
Methane	CH ₄	21	25
Nitrous oxide	N ₂ O	310	298
Sulphur hexafluoride	SF ₆	23 900	22 800
Hydrofluorocarbons (HFCs)			
HFC-23	CHF ₃	11 700	14 800
HFC-32	CH ₂ F ₂	650	675
HFC-41	CH ₃ F	150	92
HFC-43-10mee	C ₅ H ₂ F ₁₀	1 300	1 640
HFC-125	C ₂ HF ₅	2 800	3 500
HFC-134	C ₂ H ₂ F ₄ (Structure: CHF ₂ CHF ₂)	1 000	1 100
HFC-134a	C ₂ H ₂ F ₄ (Structure: CH ₂ FCF ₃)	1 300	1 430
HFC-143	C ₂ H ₃ F ₃ (Structure: CHF ₂ CH ₂ F)	300	353
HFC-143a	C ₂ H ₃ F ₃ (Structure: CF ₃ CH ₃)	3 800	4 470
HFC-152a	C ₂ H ₄ F ₂ (Structure: CH ₃ CHF ₂)	140	124
HFC-227ea	C ₃ HF ₇	2 900	3 220
HFC-236fa	C ₃ H ₂ F ₆	6 300	9 810
HFC-245ca	C ₃ H ₃ F ₅	560	693
Perfluorocarbons (PFCs)			
Perfluoromethane	CF ₄	6 500	7 390
Perfluoroethane	C ₂ F ₆	9 200	12 200
Perfluoropropane	C ₃ F ₈	7 000	8 830
Perfluorobutane	C ₄ F ₁₀	7 000	8 860
Perfluorocyclobutane	c-C ₄ F ₈	8 700	10 300
Perfluoropentane	C ₅ F ₁₂	7 500	9 160
Perfluorohexane	C ₆ F ₁₄	7 400	9 300

¹ IPCC Second Assessment Report (1996)

² [IPCC Fourth Assessment Report \(2007\)](#)