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Emissions of Greenhouse Gases in the United States 2009

Table 5. Greenhouse gases and 100-year net global warming potentials

		Global warming potential		
Greenhouse gas	Chemical formula	SAR[a]	TAR[b]	AR4[c]
Carbon dioxide	CO_2	1	1	1
Methane	CH_4	21	23	25
Nitrous oxide	N_2O	310	296	298
Hydrofluorocarbons				
HFC-23 (trifluoromethane)	CHF_3	11,700	12,000	14,800
HFC-32 (difluoromethane)	CH_2F_2	650	550	675
HFC-41 (monofluoromethane)	CH_3F	150	97	92
HFC-125 (pentafluoroethane)	CHF_2CF_3	2,800	3,400	3,500
HFC-134 (1,1,2,2-tetrafluoroethane)	CHF_2CHF_2	1,000	1,100	1,100
HFC-134a (1,1,1,2-tetrafluoroethane)	CH_2FCF_3	1,300	1,300	1,430
HFC-143 (1,1,2-trifluoroethane)	CHF_2CH_2F	300	330	353
HFC-143a (1,1,1-trifluoroethane)	CF_3CH_3	3,800	4,300	4,470
HFC-152 (1,2-difluoroethane)	CH_2FCH_2F	—	43	53
HFC-152a (1,1-difluoroethane)	CH_3CHF_2	140	120	124
HFC-161 (ethyl fluoride)	CH_3CH_2F	—	12	12
HFC-227ea (heptafluoropropane)	CF_3CHFCF_3	2,900	3,500	3,220
HFC-236cb (1,1,1,2,2,3-hexafluoropropane)	$CH_2FCF_2CF_3$	—	1,300	1,340
HFC-236ea (1,1,1,2,3,3-hexafluoropropane)	CHF_2CHFCF_3	—	1,200	1,370
HFC-236fa (1,1,1,3,3,3-hexafluoropropane)	$CF_3CH_2CF_3$	6,300	9,400	9,810
HFC-245ca (1,1,2,2,3-pentafluoropropane)	$CH_2FCF_2CHF_2$	560	640	693
HFC-245fa (1,1,1,3,3-pentafluoropropane)	$CHF_2CH_2CF_3$	—	950	1,030
HFC-365mfc (pentafluorobutane)	$CF_3CH_2CF_2CH_3$	—	890	794
HFC-43-10mee (decafluoropentane)	$CF_3CHFCHFCF_2CF_3$	1,300	1,500	1,640
Perfluorocarbons				
Perfluoromethane	CF_4	6,500	5,700	7,390
Perfluoroethane	C_2F_6	9,200	11,900	12,200
Perfluoropropane	C_3F_8	7,000	8,600	8,830
Perfluorobutane (FC 3-1-10)	C_4F_{10}	7,000	8,600	8,860
Perfluorocyclobutane	$c\text{-}C_4F_8$	8,700	10,000	10,300
Perfluoropentane	C_5F_{12}	7,500	8,900	9,160
Perfluorohexane (FC 5-1-14)	C_6F_{14}	7,400	9,000	9,300
Sulfur hexafluoride	SF_6	23,900	22,200	22,800
Nitrogen triflouride	NF_3	—	10,800	17,200

[a]Intergovernmental Panel on Climate Change, *Climate Change 1995: The Science of Climate Change* (Cambridge, UK: Cambridge University Press, 1996). This document was part of the Second Assessment Report (SAR) by the Intergovernmental Panel on Climate Change.
[b]Intergovernmental Panel on Climate Change, *Climate Change 2001: The Scientific Basis* (Cambridge, UK: Cambridge University Press, 2001), website www.ipcc.ch/ipccreports/tar/wg1/index.htm. This document was part of the Third Assessment Report (TAR) by the Intergovernmental Panel on Climate Change.
[c]Intergovernmental Panel on Climate Change, *Climate Change 2007: The Physical Science Basis: Errata* (Cambridge, UK: Cambridge University Press, 2008), website http://ipcc-wg1.ucar.edu/wg1/Report/AR4WG1_Errata_2008-12-01.pdf. This document describes errata in parts of the Fourth Assessment Report (AR4) by the Intergovernmental Panel on Climate Change.