Table 21. Total Energy Related Carbon Dioxide Emissions, Projected vs. Actual

Projected

(million metric tons)

AEO 1994 AEO 1995 AEO 1996 AEO 1997 AEO 1998 AEO 1999	5060		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	201
AEO 1995 AEO 1996 AEO 1997 AEO 1998		5130	5185	5240	5287	5335	5379	5438	5482	5529	5599	5658	5694	5738	5797	5874	5925	5984			
AEO 1997 AEO 1998		5137	5174	5188	5262	5309	5361	5394	5441	5489	5551	5621	5680	5727	5775	5841	5889	5944			
AEO 1997 AEO 1998			5182	5224	5295	5355	5417	5464	5525	5589	5660	5735	5812	5879	5925	5981	6030	6087	6142	6203	62
				5295	5381	5491	5586	5658	5715	5781	5863	5934	6009	6106	6184	6236	6268	6316	6365	6417	64
AEO 1999				***************************************	5474	5621	5711	5784	5893	5957	6026	6098	6192	6292	6379	6465	6542	6612	6683	6752	68
						5522	5689	5810	5913	5976	6036	6084	6152	6244	6325	6418	6493	6563	6641	6703	67
AEO 2000							5573	5692	5777	5865	5971	6078	6172	6262	6345	6420	6480	6551	6610	6678	67
AEO 2001								5630	5781	5909	6023	6114	6197	6281	6387	6470	6541	6633	6709	6788	68
AEO 2002									5723	5808	5981	6095	6210	6323	6438	6530	6624	6727	6839	6937	70
AEO 2003										5633	5749	5856	5954	6095	6232	6360	6475	6602	6719	6828	69
AEO 2004											5743	5826	5986	6124	6251	6357	6453	6559	6657	6763	68
AEO 2005												5905	6023	6138	6274	6415	6533	6627	6721	6812	68
AEO 2006													5967	5978	6080	6182	6281	6365	6440	6536	65
AEO 2007														5940	5999	6059	6124	6214	6296	6369	64
AEO 2008															5977	5983	5978	6011	6087	6144	61
AEO 2009																5849	5699	5746	5803	5842	58
AEO 2010																	5507	5521	5643	5706	57
AEO 2011																		5643	5601	5622	56
AEO 2012																			5632	5570	54
AEO 2013																				5361	53
AEO 2014																					54
Actual	5189	5262	5323	5510	5584	5635	5688	5868	5761	5804	5855	5975	5999	5919	6021	5835	5417	5619	5483	5267	53
Average Absolute	129	128	143	273	244	197	164	259	138	149	159	157	143	220	221	380	809	653	846	1068	9:
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	20
AEO 1994	-2.5	-2.5	-2.6	-4.9	-5.3	-5.3	-5.4	-7.3	-4.8	-4.7	-4.4	-5.3	-5.1	-3.1	-3.7	0.7	9.4	6.5			
AEO 1995		-2.4	-2.8	-5.8	-5.8	-5.8	-5.8	-8.1	-5.5	-5.4	-5.2	-5.9	-5.3	-3.2	-4.1	0.1	8.7	5.8			
AEO 1996			-2.6	-5.2	-5.2	-5.0	-4.8	-6.9	-4.1	-3.7	-3.3	-4.0	-3.1	-0.7	-1.6	2.5	11.3	8.3		47.0	
AEO 1997				-3.9	-3.6	-2.6	-1.8	-3.6	-0.8	-0.4			0.2	3.2					12.0	17.8	16
					-2.0	-0.3						-0.7		3.2	2.7	6.9	15.7		12.0 16.1	17.8 21.8	16 19
							0.4	-1.4	2.3	2.6	0.1 2.9	-0.7 2.1			2.7 6.0	6.9 10.8	15.7 20.8	12.4	12.0 16.1 21.9	21.8	19
AEO 1998						-2.0	0.4	-1.4 -1.0	2.3 2.6	2.6 3.0	2.9	-0.7 2.1 1.8	3.2	6.3 5.5	6.0 5.1	6.9 10.8 10.0	15.7 20.8 19.9	12.4 17.7	16.1		19 26
							0.4 0.0 -2.0	-1.4 -1.0 -3.0				2.1	3.2	6.3	6.0	10.8	20.8	12.4	16.1 21.9	21.8 28.2	19 26 25
AEO 1998 AEO 1999 AEO 2000							0.0	-1.0 -3.0	2.6	3.0	2.9 3.1	2.1 1.8	3.2 2.5 2.9	6.3 5.5	6.0 5.1 5.4	10.8 10.0	20.8 19.9	12.4 17.7 16.8 16.6	16.1 21.9 21.1	21.8 28.2 27.3	19
AEO 1998 AEO 1999 AEO 2000 AEO 2001							0.0	-1.0	2.6 0.3	3.0 1.0	2.9 3.1 2.0	2.1 1.8 1.7	3.2 2.5	6.3 5.5 5.8	6.0 5.1	10.8 10.0 10.0	20.8 19.9 19.6	12.4 17.7 16.8	16.1 21.9 21.1 20.5	21.8 28.2 27.3 26.8	19 26 25 25 25
AEO 1998 AEO 1999 AEO 2000 AEO 2001 AEO 2002							0.0	-1.0 -3.0	2.6 0.3 0.3	3.0 1.0 1.8	2.9 3.1 2.0 2.9	2.1 1.8 1.7 2.3	3.2 2.5 2.9 3.3	6.3 5.5 5.8 6.1	6.0 5.1 5.4 6.1	10.8 10.0 10.0 10.9	20.8 19.9 19.6 20.8	12.4 17.7 16.8 16.6 18.1	16.1 21.9 21.1 20.5 22.4	21.8 28.2 27.3 26.8 28.9	19 26 25 25 27 30
AEO 1998 AEO 1999 AEO 2000 AEO 2001 AEO 2002 AEO 2003							0.0	-1.0 -3.0	2.6 0.3 0.3	3.0 1.0 1.8 0.1	2.9 3.1 2.0 2.9 2.2	2.1 1.8 1.7 2.3 2.0	3.2 2.5 2.9 3.3 3.5	6.3 5.5 5.8 6.1 6.8	6.0 5.1 5.4 6.1 6.9	10.8 10.0 10.0 10.9 11.9	20.8 19.9 19.6 20.8 22.3	12.4 17.7 16.8 16.6 18.1 19.7	16.1 21.9 21.1 20.5 22.4 24.7	21.8 28.2 27.3 26.8 28.9 31.7	19 26 25 25 27 30 28
AEO 1998 AEO 1999							0.0	-1.0 -3.0	2.6 0.3 0.3	3.0 1.0 1.8 0.1	2.9 3.1 2.0 2.9 2.2 -1.8	2.1 1.8 1.7 2.3 2.0 -2.0	3.2 2.5 2.9 3.3 3.5 -0.8	6.3 5.5 5.8 6.1 6.8 3.0	6.0 5.1 5.4 6.1 6.9 3.5	10.8 10.0 10.0 10.9 11.9 9.0	20.8 19.9 19.6 20.8 22.3 19.5	12.4 17.7 16.8 16.6 18.1 19.7	16.1 21.9 21.1 20.5 22.4 24.7 22.5	21.8 28.2 27.3 26.8 28.9 31.7 29.6	19 26 25 25 27 30 28 27
AEO 1998 AEO 1999 AEO 2000 AEO 2001 AEO 2002 AEO 2003 AEO 2004 AEO 2005							0.0	-1.0 -3.0	2.6 0.3 0.3	3.0 1.0 1.8 0.1	2.9 3.1 2.0 2.9 2.2 -1.8	2.1 1.8 1.7 2.3 2.0 -2.0 -2.5	3.2 2.5 2.9 3.3 3.5 -0.8	6.3 5.5 5.8 6.1 6.8 3.0 3.5	6.0 5.1 5.4 6.1 6.9 3.5 3.8	10.8 10.0 10.0 10.9 11.9 9.0 8.9	20.8 19.9 19.6 20.8 22.3 19.5	12.4 17.7 16.8 16.6 18.1 19.7 17.5	16.1 21.9 21.1 20.5 22.4 24.7 22.5 21.4	21.8 28.2 27.3 26.8 28.9 31.7 29.6 28.4	19 26 25 27 30 28 27 27
AEO 1998 AEO 1999 AEO 2000 AEO 2001 AEO 2002 AEO 2003 AEO 2004 AEO 2005 AEO 2006							0.0	-1.0 -3.0	2.6 0.3 0.3	3.0 1.0 1.8 0.1	2.9 3.1 2.0 2.9 2.2 -1.8	2.1 1.8 1.7 2.3 2.0 -2.0 -2.5	3.2 2.5 2.9 3.3 3.5 -0.8 -0.2	6.3 5.5 5.8 6.1 6.8 3.0 3.5 3.7	6.0 5.1 5.4 6.1 6.9 3.5 3.8 4.2	10.8 10.0 10.0 10.9 11.9 9.0 8.9 9.9	20.8 19.9 19.6 20.8 22.3 19.5 19.1 20.6	12.4 17.7 16.8 16.6 18.1 19.7 17.5 16.7	16.1 21.9 21.1 20.5 22.4 24.7 22.5 21.4 22.6	21.8 28.2 27.3 26.8 28.9 31.7 29.6 28.4 29.3	19 26 25 27 30 28 27 27 27
AEO 1998 AEO 1999 AEO 2000 AEO 2001 AEO 2002 AEO 2003 AEO 2004							0.0	-1.0 -3.0	2.6 0.3 0.3	3.0 1.0 1.8 0.1	2.9 3.1 2.0 2.9 2.2 -1.8	2.1 1.8 1.7 2.3 2.0 -2.0 -2.5	3.2 2.5 2.9 3.3 3.5 -0.8 -0.2	6.3 5.5 5.8 6.1 6.8 3.0 3.5 3.7	6.0 5.1 5.4 6.1 6.9 3.5 3.8 4.2	10.8 10.0 10.0 10.9 11.9 9.0 8.9 9.9 5.9	20.8 19.9 19.6 20.8 22.3 19.5 19.1 20.6 15.9	12.4 17.7 16.8 16.6 18.1 19.7 17.5 16.7 17.9	16.1 21.9 21.1 20.5 22.4 24.7 22.5 21.4 22.6 17.4	21.8 28.2 27.3 26.8 28.9 31.7 29.6 28.4 29.3 24.1	19 26 25 27 30 28 27 27 27 27
AEO 1998 AEO 1999 AEO 2000 AEO 2001 AEO 2002 AEO 2003 AEO 2004 AEO 2005 AEO 2006 AEO 2006 AEO 2007							0.0	-1.0 -3.0	2.6 0.3 0.3	3.0 1.0 1.8 0.1	2.9 3.1 2.0 2.9 2.2 -1.8	2.1 1.8 1.7 2.3 2.0 -2.0 -2.5	3.2 2.5 2.9 3.3 3.5 -0.8 -0.2	6.3 5.5 5.8 6.1 6.8 3.0 3.5 3.7	6.0 5.1 5.4 6.1 6.9 3.5 3.8 4.2 1.0	10.8 10.0 10.0 10.9 11.9 9.0 8.9 9.9 5.9 3.8	20.8 19.9 19.6 20.8 22.3 19.5 19.1 20.6 15.9	12.4 17.7 16.8 16.6 18.1 19.7 17.5 16.7 17.9 13.3	16.1 21.9 21.1 20.5 22.4 24.7 22.5 21.4 22.6 17.4	21.8 28.2 27.3 26.8 28.9 31.7 29.6 28.4 29.3 24.1 20.9	19 26 25 27 30 28 27 27 27 22 19
AEO 1998 AEO 1999 AEO 2000 AEO 2001 AEO 2002 AEO 2003 AEO 2004 AEO 2005 AEO 2006 AEO 2006 AEO 2007 AEO 2008							0.0	-1.0 -3.0	2.6 0.3 0.3	3.0 1.0 1.8 0.1	2.9 3.1 2.0 2.9 2.2 -1.8	2.1 1.8 1.7 2.3 2.0 -2.0 -2.5	3.2 2.5 2.9 3.3 3.5 -0.8 -0.2	6.3 5.5 5.8 6.1 6.8 3.0 3.5 3.7	6.0 5.1 5.4 6.1 6.9 3.5 3.8 4.2 1.0	10.8 10.0 10.0 10.9 11.9 9.0 8.9 9.9 5.9 3.8 2.5	20.8 19.9 19.6 20.8 22.3 19.5 19.1 20.6 15.9 13.1	12.4 17.7 16.8 16.6 18.1 19.7 17.5 16.7 17.9 13.3 10.6 7.0	16.1 21.9 21.1 20.5 22.4 24.7 22.5 21.4 22.6 17.4 14.8	21.8 28.2 27.3 26.8 28.9 31.7 29.6 28.4 29.3 24.1 20.9 16.7	19 26 25 25 27 30 28 27 27 27 22 21 4
AEO 1998 AEO 1999 AEO 2000 AEO 2001 AEO 2002 AEO 2003 AEO 2004 AEO 2005 AEO 2006 AEO 2007 AEO 2008 AEO 2008 AEO 2009							0.0	-1.0 -3.0	2.6 0.3 0.3	3.0 1.0 1.8 0.1	2.9 3.1 2.0 2.9 2.2 -1.8	2.1 1.8 1.7 2.3 2.0 -2.0 -2.5	3.2 2.5 2.9 3.3 3.5 -0.8 -0.2	6.3 5.5 5.8 6.1 6.8 3.0 3.5 3.7	6.0 5.1 5.4 6.1 6.9 3.5 3.8 4.2 1.0	10.8 10.0 10.0 10.9 11.9 9.0 8.9 9.9 5.9 3.8 2.5	20.8 19.9 19.6 20.8 22.3 19.5 19.1 20.6 15.9 13.1 10.4 5.2	12.4 17.7 16.8 16.6 18.1 19.7 17.5 16.7 17.9 13.3 10.6 7.0	16.1 21.9 21.1 20.5 22.4 24.7 22.5 21.4 22.6 17.4 14.8 11.0 5.8	21.8 28.2 27.3 26.8 28.9 31.7 29.6 28.4 29.3 24.1 20.9 16.7 10.9	19 22 22 22 22 22 22 22 22 22 22 22 22 22
AEO 1998 AEO 1999 AEO 2000 AEO 2001 AEO 2002 AEO 2003 AEO 2004 AEO 2005 AEO 2006 AEO 2007 AEO 2008 AEO 2008 AEO 2009 AEO 2009 AEO 2009							0.0	-1.0 -3.0	2.6 0.3 0.3	3.0 1.0 1.8 0.1	2.9 3.1 2.0 2.9 2.2 -1.8	2.1 1.8 1.7 2.3 2.0 -2.0 -2.5	3.2 2.5 2.9 3.3 3.5 -0.8 -0.2	6.3 5.5 5.8 6.1 6.8 3.0 3.5 3.7	6.0 5.1 5.4 6.1 6.9 3.5 3.8 4.2 1.0	10.8 10.0 10.0 10.9 11.9 9.0 8.9 9.9 5.9 3.8 2.5	20.8 19.9 19.6 20.8 22.3 19.5 19.1 20.6 15.9 13.1 10.4 5.2	12.4 17.7 16.8 16.6 18.1 19.7 17.5 16.7 17.9 13.3 10.6 7.0 2.3	16.1 21.9 21.1 20.5 22.4 24.7 22.5 21.4 22.6 17.4 14.8 11.0 5.8 2.9	21.8 28.2 27.3 26.8 28.9 31.7 29.6 28.4 29.3 24.1 20.9 16.7 10.9 8.3	19 26 25 25
AEO 1998 AEO 1999 AEO 2000 AEO 2001 AEO 2002 AEO 2003 AEO 2004 AEO 2005 AEO 2006 AEO 2007 AEO 2008 AEO 2009 AEO 2009 AEO 2010 AEO 2011							0.0	-1.0 -3.0	2.6 0.3 0.3	3.0 1.0 1.8 0.1	2.9 3.1 2.0 2.9 2.2 -1.8	2.1 1.8 1.7 2.3 2.0 -2.0 -2.5	3.2 2.5 2.9 3.3 3.5 -0.8 -0.2	6.3 5.5 5.8 6.1 6.8 3.0 3.5 3.7	6.0 5.1 5.4 6.1 6.9 3.5 3.8 4.2 1.0	10.8 10.0 10.0 10.9 11.9 9.0 8.9 9.9 5.9 3.8 2.5	20.8 19.9 19.6 20.8 22.3 19.5 19.1 20.6 15.9 13.1 10.4 5.2	12.4 17.7 16.8 16.6 18.1 19.7 17.5 16.7 17.9 13.3 10.6 7.0 2.3	16.1 21.9 21.1 20.5 22.4 24.7 22.5 21.4 22.6 17.4 14.8 11.0 5.8 2.9	21.8 28.2 27.3 26.8 28.9 31.7 29.6 28.4 29.3 24.1 20.9 16.7 10.9 8.3 6.7	199 26 25 25 27 30 28 28 27 27 22 22 22 24 4 4 8 8 8 8 4 4 4 4 4 4 4 4

Sources: Projections: Annual Energy Outlook, Reference Case Projections, Various Editions.

Historical Data: U.S. Energy Information Administration, September 2014 Monthly Energy Review, DOE/EIA-0035(2013/08) (Washington, DC, September 25, 2014), Table 12.1.