

CARBON FEE AND DIVIDEND				07-31-10	rev									
US total population from [www.census.gov/population/www/projections/files/nation/summary/np2008-t1.xls] on 07-19-10														
Per capital GDP is assumed to grow at rate of 1.9% per year. Resulting GDP grows at average annual rate of 3.0% over 40 years.														
Rough estimate for undocumented residents is 12 million, about 4% of current total. Assume legal residents are 96% of total population.														
Adults age 18 and over are estimated from census to be 76% and assigned one share each. Minors age 17 and under are 24% and assigned one half share each.														
Reference family with two adults and two minors will be assigned three shares.														
Compute total fee shares by equation: Shares = Total Population x 0.96 x (0.76 + (0.24/2)) = Total Population x 0.84														
Total US CO2 emissions in 2007 before recession were 5.99 billions of metric tons. [From http://www.eia.doe.gov/emeu/mer/query/mer_data.asp?table=T12.01]														
Estimate total US CO2 emissions in 2011 to be 6.00 billions tons. Assume straight line decline over 40 years.														
Fee assigned in 2011 to each metric ton of emitted CO2 is \$11.50														
Assume that administrative costs are 1% of revenue and that distributed dividends are 99% of revenue.														
Year	Total US Population in Millions	Per Capital GDP	GDP in \$ Billions	Total Fee Shares in Millions	Emitted Metric Tons of CO2 in Billions	Fee per Metric Ton of CO2	Total Fee Revenue in \$ Billions	Fee Revenue as Pct of GDP	Cumulative Fee Revenue in \$ Billions	Dividend per Share in Year	Dividend for Reference Family in Year	Cumulative Dividend per Share	Cumulative Dividend for Reference	
2010	310	46,800	14,508	260										
2011	313	47,689	14,927	263	6.00	\$11.50	\$69	0.5%	\$69	\$0	\$0	\$0	\$0	
2012	316	48,595	15,356	265	5.85	\$23.00	\$135	0.9%	\$204	\$260	\$779	\$260	\$779	
2013	319	49,519	15,796	268	5.70	\$34.50	\$197	1.2%	\$400	\$502	\$1,505	\$762	\$2,285	
2014	322	50,459	16,248	270	5.55	\$46.00	\$255	1.6%	\$656	\$727	\$2,180	\$1,488	\$4,465	
2015	326	51,418	16,762	274	5.40	\$57.50	\$311	1.9%	\$966	\$934	\$2,803	\$2,423	\$7,268	
2016	329	52,395	17,238	276	5.25	\$69.00	\$362	2.1%	\$1,328	\$1,123	\$3,368	\$3,545	\$10,635	
2017	332	53,391	17,726	279	5.10	\$80.50	\$411	2.3%	\$1,739	\$1,298	\$3,893	\$4,843	\$14,529	
2018	335	54,405	18,226	281	4.95	\$92.00	\$455	2.5%	\$2,194	\$1,457	\$4,372	\$6,300	\$18,901	
2019	338	55,439	18,738	284	4.80	\$103.50	\$497	2.7%	\$2,691	\$1,602	\$4,806	\$7,902	\$23,707	
2020	341	56,492	19,264	286	4.65	\$115.00	\$535	2.8%	\$3,226	\$1,732	\$5,197	\$9,635	\$28,904	
2021	345	57,565	19,860	290	4.50	\$126.50	\$569	2.9%	\$3,795	\$1,848	\$5,545	\$11,483	\$34,449	
2022	348	58,659	20,413	292	4.35	\$138.00	\$600	2.9%	\$4,395	\$1,945	\$5,834	\$13,428	\$40,283	
2023	351	59,774	20,981	295	4.20	\$149.50	\$628	3.0%	\$5,023	\$2,033	\$6,099	\$15,461	\$46,382	
2024	354	60,909	21,562	297	4.05	\$161.00	\$652	3.0%	\$5,675	\$2,108	\$6,325	\$17,569	\$52,707	
2025	357	62,067	22,158	300	3.90	\$172.50	\$673	3.0%	\$6,348	\$2,171	\$6,513	\$19,740	\$59,219	
2026	361	63,246	22,832	303	3.75	\$184.00	\$690	3.0%	\$7,038	\$2,221	\$6,663	\$21,961	\$65,882	
2027	364	64,448	23,459	306	3.60	\$195.50	\$704	3.0%	\$7,742	\$2,253	\$6,758	\$24,213	\$72,640	
2028	367	65,672	24,102	308	3.45	\$207.00	\$714	3.0%	\$8,456	\$2,279	\$6,836	\$26,492	\$79,477	
2029	370	66,920	24,760	311	3.30	\$218.50	\$721	2.9%	\$9,177	\$2,293	\$6,880	\$28,786	\$86,357	
2030	374	68,191	25,504	314	3.15	\$230.00	\$724	2.8%	\$9,901	\$2,297	\$6,890	\$31,082	\$93,247	
2031	377	69,487	26,197	317	3.00	\$241.50	\$724	2.8%	\$10,626	\$2,283	\$6,849	\$33,365	\$100,096	
2032	380	70,807	26,907	319	2.85	\$253.00	\$721	2.7%	\$11,347	\$2,265	\$6,795	\$35,630	\$106,891	
2033	383	72,153	27,634	322	2.70	\$264.50	\$714	2.6%	\$12,061	\$2,236	\$6,709	\$37,867	\$113,600	
2034	386	73,524	28,380	324	2.55	\$276.00	\$704	2.5%	\$12,765	\$2,198	\$6,593	\$40,064	\$120,193	
2035	390	74,920	29,219	328	2.40	\$287.50	\$690	2.4%	\$13,455	\$2,149	\$6,447	\$42,213	\$126,640	
2036	393	76,344	30,003	330	2.25	\$299.00	\$673	2.2%	\$14,128	\$2,085	\$6,255	\$44,298	\$132,895	
2037	396	77,794	30,807	333	2.10	\$310.50	\$652	2.1%	\$14,780	\$2,018	\$6,053	\$46,316	\$138,948	
2038	399	79,273	31,630	335	1.95	\$322.00	\$628	2.0%	\$15,408	\$1,941	\$5,822	\$48,257	\$144,770	
2039	402	80,779	32,473	338	1.80	\$333.50	\$600	1.8%	\$16,008	\$1,855	\$5,564	\$50,111	\$150,334	

2040	406	82,314	33,419	341	1.65	\$345.00	\$569	1.7%	\$16,577	\$1,760	\$5,280	\$51,871	\$155,614
2041	409	83,878	34,306	344	1.50	\$356.50	\$535	1.6%	\$17,112	\$1,652	\$4,957	\$53,524	\$160,571
2042	412	85,471	35,214	346	1.35	\$368.00	\$497	1.4%	\$17,609	\$1,541	\$4,623	\$55,065	\$165,194
2043	415	87,095	36,144	349	1.20	\$379.50	\$455	1.3%	\$18,064	\$1,421	\$4,263	\$56,486	\$169,457
2044	419	88,750	37,186	352	1.05	\$391.00	\$411	1.1%	\$18,475	\$1,293	\$3,880	\$57,779	\$173,337
2045	422	90,436	38,164	354	0.90	\$402.50	\$362	0.9%	\$18,837	\$1,155	\$3,464	\$58,934	\$176,802
2046	425	92,154	39,166	357	0.75	\$414.00	\$310	0.8%	\$19,148	\$1,012	\$3,035	\$59,946	\$179,837
2047	429	93,905	40,285	360	0.60	\$425.50	\$255	0.6%	\$19,403	\$861	\$2,583	\$60,807	\$182,420
2048	432	95,690	41,338	363	0.45	\$437.00	\$197	0.5%	\$19,599	\$701	\$2,104	\$61,508	\$184,524
2049	436	97,508	42,513	366	0.30	\$448.50	\$135	0.3%	\$19,734	\$536	\$1,609	\$62,044	\$186,133
2050	439	99,360	43,619	369	0.15	\$460.00	\$69	0.2%	\$19,803	\$364	\$1,091	\$62,408	\$187,225
2051					0.00					\$185	\$556	\$62,593	\$187,780

