Below are two tables showing the estimated net impacts of a policy that caps national carbon emissions, auctions 100% of the permits (aka allowances), and rebates all the revenue to the public as equal per capita dividends.

Table 1 shows the net impact on the median household – the household in the middle of the income distribution range – in each state.

Table 2 presents a more detailed picture, showing the net impact by state and by income decile – stratifying each state's households from the poorest 10% to the richest 10% on the basis of their incomes.

Notes:

1. These estimates assume that non-compliance entities (that is, no entities apart from the firms that bring fossil fuels into the economy) can hold or trade permits, and thus that none of the permit value (equal in total to the higher prices paid by buyers of fossil fuels) is siphoned off to middlemen or speculators.

2. The calculations are based on a permit price of $25/ton CO2. If one were to assume a different price, all numbers shown would be scaled up (or down) proportionately. At a permit price of $50/ton, for example, all numbers would simply be doubled.

3. Details on the methods used in these calculations can be found in the 2011 Boyce & Riddle paper *CLEAR Economics*, which analyzed distributional impacts of the 2009 Cantwell-Collins bill. For the present analysis, I simply assume that 100% of the revenue (rather than 75%, as in Cantwell-Collins) is returned directly to the American people as dividends.

4. In each state, a substantial majority of households comes out ahead: the dividends they will receive exceeds what they will pay in higher fuel costs (directly in prices of fossil fuels and electricity, plus indirectly in prices of other goods and services that use fossil fuels in their production and distribution). It is important to understand the two reasons for this result:

(i) A carbon cap will raise prices not only to households, but also to other sectors including governments and non-profit institutions. Consumer expenditure accounts for about two-thirds of carbon emissions (this includes emissions from firms, who pass costs along to final consumers).

Governments and non-profits, who also pay higher prices as a result of the cap, account for the remainder. Households, however, receive 100% of the revenue via dividends. If dividends are taxable – as I think they should be – then Federal, state and local governments will recoup something close to their "share" of the carbon revenue. For discussion, see the 2008 Boyce & Riddle paper, *Keeping the Government Whole*.

(ii) The second reason is that income (and consumption expenditure) are highly skewed toward upper-income strata. In statistical terms, the average is above the median. Hence even if the carbon revenue returned to households were limited to that paid in households via higher prices (excluding the share paid by governments and non-profits), more than 50% of U.S. households would get positive net benefits from the policy.

TABLE 1: NET IMPACT OF CAP AND 100% DIVIDEND ON MEDIAN HOUSEHOLD ($ PER CAPITA)

State	Dividend	Carbon price impact	Net benefit
Alabama	396	236	160
Alaska	396	244	152
Arizona	396	213	183
Arkansas	396	226	170
California	396	205	191
Colorado	396	270	126
Connecticut	396	248	148
Delaware	396	282	114
D.C	396	282	114
Florida	396	221	175
Georgia	396	263	133
Hawaii	396	250	146
Idaho	396	201	195
Illinois	396	254	142
Indiana	396	292	104
Iowa	396	270	126
Kansas	396	270	126
Kentucky	396	262	134
Louisiana	396	234	162
Maine	396	212	184
Maryland	396	270	126
Massachusett	396	253	143
Michigan	396	263	133
Minnesota	396	277	119
Mississippi	396	215	181
Missouri	396	270	126
Montana	396	223	173
Nebraska	396	255	141
Nevada	396	239	157
New	396	236	160
New Jersey	396	250	146
New Mexico	396	225	171
New York	396	206	190
North Carolina	396	249	147
North Dakota	396	270	126
Ohio	396	274	122
Oklahoma	396	235	161
Oregon	396	194	202
Pennsylvania	396	233	163
Rhode Island	396	226	170
South Carolina	396	217	179
South Dakota	396	226	170
Tennessee	396	243	153
Texas	396	248	148
Utah	396	259	137
Vermont	396	197	199
Virginia	396	275	121
Washington	396	198	198
West Virginia	396	245	151
Wisconsin	396	281	115
Wyoming	396	268	128
US Average	**396**	**234**	**162**

TABLE 2: NET IMPACT OF CAP AND 100% DIVIDEND BY STATE AND INCOME DECILE ($ PER CAPITA)

	Decile									
State	1	2	3	4	5	6	7	8	9	10
Alabama	288	251	224	199	174	146	114	75	17	-108
Alaska	272	236	211	188	165	140	112	77	27	-78
Arizona	298	265	241	218	196	171	142	106	54	-61
Arkansas	290	255	229	206	182	157	127	91	38	-74
California	312	278	253	229	205	178	147	108	49	-80
Colorado	263	222	193	167	140	111	78	37	-24	-155
Connecticut	288	248	218	191	163	133	97	52	-16	-171
Delaware	252	211	182	155	128	100	67	26	-33	-159
District of	283	236	201	167	132	94	49	-10	-98	-306
Florida	297	262	236	212	188	161	130	90	32	-98
Georgia	271	231	201	174	147	118	84	42	-20	-151
Hawaii	272	235	208	184	159	133	102	63	7	-113
Idaho	301	269	247	226	206	183	158	126	80	-17
Illinois	278	238	209	183	156	128	95	53	-7	-138
Indiana	245	203	172	145	118	90	57	17	-40	-160
Iowa	258	218	190	165	140	113	83	45	-8	-119
Kansas	262	221	192	166	140	112	80	40	-17	-136
Kentucky	272	232	203	176	149	120	87	45	-15	-142
Louisiana	290	253	226	201	175	148	116	76	18	-107
Maine	296	263	239	217	195	172	145	111	63	-42
Maryland	263	222	193	167	140	112	79	37	-23	-154
Massachusetts	280	240	211	185	158	128	94	51	-12	-154
Michigan	268	228	199	173	147	119	86	46	-12	-135
Minnesota	257	216	186	160	133	105	72	32	-26	-149
Mississippi	300	266	241	217	194	168	139	102	48	-67
Missouri	265	224	194	168	141	112	79	38	-20	-145
Montana	288	254	229	207	185	161	133	99	50	-54
Nebraska	269	231	203	179	154	128	98	62	9	-101
Nevada	281	244	218	194	170	144	114	76	21	-97
New Hampshire	279	244	218	195	172	147	119	83	32	-78
New Jersey	281	242	213	187	160	131	97	54	-10	-153
New Mexico	290	256	230	207	184	158	129	92	39	-75
New York	312	278	252	228	204	177	145	103	41	-101
North Carolina	278	240	212	186	161	133	102	62	5	-117
North Dakota	259	219	191	165	140	112	82	44	-10	-122
Ohio	261	220	190	163	136	107	75	34	-25	-149
Oklahoma	286	249	222	198	174	147	117	80	26	-89
Oregon	309	278	255	234	213	190	164	130	81	-25
Pennsylvania	287	251	224	200	176	150	120	82	27	-93
Rhode Island	293	257	231	208	183	157	127	89	33	-88
South Carolina	297	263	238	215	192	167	138	102	50	-63
South Dakota	288	253	228	205	182	158	130	95	46	-58
Tennessee	283	245	218	192	166	139	107	67	9	-116
Texas	283	244	215	189	162	133	100	58	-2	-132
Utah	260	223	197	173	149	124	96	61	10	-93
Vermont	304	273	251	230	210	188	163	131	84	-15
Virginia	263	221	191	163	135	106	71	28	-35	-170
Washington	308	276	253	231	209	186	159	124	73	-37
West Virginia	281	243	216	190	165	137	106	67	10	-109
Wisconsin	250	209	180	154	128	101	70	32	-23	-137
Wyoming	259	220	192	166	141	114	83	45	-10	-125
US Average	289	253	225	201	175	148	117	77	18	-109

Note: Each decile equals 10% of the population, ranked by per capita income (decile 1 = lowest; decile 10 – highest).