Municipal Resolution Binder

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I. INTRODUCTION



In Connecticut, the local effects of climate change are becoming increasingly apparent. The state's landscape is changing as the waters of Long Island Sound rise and the intensity and frequency of severe storms increase. Unfortunately, Stamford is particularly vulnerable given its position along the coastline. Stamford residents are concerned and are looking for a solution.

Fortunately, Stamford has been a proactive in preparing for the worst effects of climate change. The city invested \$14.5 million in a hurricane barrier in the late 1960s that saved the city approximately \$25 million worth of damage during Hurricane Sandy. It also formally adopted a hazard-mitigation plan for 2016-2021 and a Salt Marsh Advancement Zone Assessment.

However, despite the importance of local action against climate change, the problem will continue to get worse without national intervention. Stamford has the opportunity to be a leader in championing a solution that addresses the actual causes of climate change: \underline{a} national carbon fee and dividend.

Citizens' Climate Lobby is a non-profit, nonpartisan, grassroots advocacy organization focused on state and national policies to address climate change, specifically Carbon Fee and Dividend. Stamford hosts one of the over 480 active chapters filled with concerned citizens.

CCL's Carbon Fee and Dividend proposal has been endorsed by hundreds of leaders such as former Secretary of Labor George P. Shultz, former Secretary of Energy Dr. Steven Chu, The Brookings Institute, The Center for Global Sustainability, Schneider Electric, Shell Oil, ExxonMobil, and over 1,000 community leaders across America.

We, residents of Stamford, urge the Board of Representatives to pass a municipal resolution in supports of Carbon Fee and Dividend. We hope that on climate, Stamford can be a leader too.

II. WHAT IS CARBON FEE AND DIVIDEND?

Carbon Fee and Dividend is a policy proposal intended to charge producers for the costs of burning fossil fuels that are borne by society. Economists say it is the best first step to reduce the risk of catastrophic climate change.

CCL's Carbon Fee and Dividend proposal $[\frac{1}{2}]$ works like this:

- 1. A fee is placed on fossil fuels at the first point of sale, as near as possible to the well, mine, or port of entry. This fee starts at \$15 per ton of CO2-equivalent emissions, and increases each year by \$10 per ton. This will require far less bureaucracy than pollution-point (power plants, factories, etc.) monitoring and enforcement.
- All of the net proceeds are then divided up and provided to American households, equally per person, as a monthly "carbon dividend." About 58 percent of taxpayers would receive more in their dividend payments than higher energy prices would cost them. [²]
- 3. A border carbon adjustment (BCA) is placed on carbon-intensive goods imported from or exported to countries without an equivalent price on carbon. This adjustment discourages businesses from moving to more permissive regimes and encourages other nations to adopt similar carbon pricing.

A predictably increasing carbon fee will send a clear market signal that will unleash innovation and investment in technologies that reduce greenhouse gas emissions. It will also encourage climate-friendly consumer behavior while helping families cope with the cost of the transition.

¹ "The Basics of Carbon Fee and Dividend." Citizens' Climate Lobby (2018).

² "Financial Impact on Households of Carbon Fee and Dividend." Citizens' Climate Lobby (2016).

Legislative proposal: Carbon Fee and Dividend

Proposed Findings:

- **1. Causation**: Whereas the weight of scientific evidence indicates that greenhouse gas emissions from burning fossil fuels and other sources are causing rising global temperatures,
- 2. Mitigation (Return to 350 ppm or Below): Whereas the weight of scientific evidence also indicates that a return from the current concentration of more than 387 parts per million ("ppm") of carbon dioxide ("CO2") in the atmosphere to 350 ppm CO2 or less is necessary to slow or stop the rise in global temperatures,
- **3. Endangerment:** Whereas further increases in global temperatures pose imminent and substantial dangers to human health, the natural environment, the economy and national security and an unacceptable risk of catastrophic impacts to human civilization,
- 4. Co-Benefits: Whereas the measures proposed in this legislation will benefit the economy, human health, the environment and national security, even without consideration of global temperatures, as a result of advances in clean-energy technology, reductions in non-greenhouse-gas pollutants, reducing the outflow of dollars to oil-producing countries and improvements in the energy security of the United States,
- 5. Benefits of Carbon Fees: Whereas phased-in carbon fees on fossil fuels (1) are the most efficient, transparent and enforceable mechanism to drive an effective and fair transition to a clean-energy economy, (2) will stimulate investment in clean-energy technologies by insuring that fossil fuels lose their competitive price advantage over clean energy within a 10-year time frame, and (3) give all businesses powerful incentives to increase their energy-efficiency and reduce their carbon footprints in order to remain competitive,
- 6. Equal Monthly Per-Person Dividends: Whereas equal monthly dividends (or "rebates") from carbon fees paid to each American household can help insure that families and individuals can afford the energy they need during the transition to a clean energy economy and the dividends will stimulate the economy,

Therefore the following legislation is hereby enacted:

- 1. Collection of Carbon Fees/Carbon Fee Trust Fund: Upon enactment, impose a carbon fee on all fossil fuels at the point where they first enter the economy. The fee shall be collected by the Internal Revenue Service. The fee on that date shall be \$15 per ton of CO2 equivalent emissions and result in equal charges for each ton of CO2 equivalent emissions potential in each type of fuel. The Department of Energy shall propose and promulgate regulations setting forth CO2 equivalent fees for other greenhouse gases including methane, nitrous oxide, sulfur hexafluoride, hydrofluorocarbons (HFCs) emitted as a byproduct, perfluorocarbons, and nitrogen trifluoride. The Internal Revenue Service shall also collect the fees imposed upon the other greenhouse gasses. All fees are to be placed in the Carbon Fees Trust Fund and be rebated 100% to American households as outlined below.
- 2. Ensuring that Clean Energy Becomes Competitive Within a Ten year Time Frame: The yearly increase in carbon fees including other greenhouse gasses, shall be at least \$10 per ton of CO2 equivalent each year to ensure that fossil fuel energy

loses its competitive price advantage with respect to the clean energy technologies we have today, including, at a minimum, wind, geothermal and industrial solar energy, within 10 years of the date of enactment. Annually the Department of Energy shall determine whether an increase larger than \$10 per ton per year is needed to achieve program goals. Yearly price increases of at least \$10 per year shall continue until total U.S. CO2-equivalent emissions have been reduced to 10% of U.S. CO2-equivalent emissions in 1990.

- **3. Equal Per-Person Monthly Dividend Payments:** Equal monthly per-person dividend payments shall be made to all American Households (1/2 per child under 18 years old, with a limit of 2 children per family) each month. The total value of all monthly dividend payments shall represent 100% of the total Carbon Fees collected per month.
- 4. Border Adjustments: In order to ensure that U.S.-made goods can remain competitive at home and abroad and to provide an additional incentive for international adoptions of carbon fees, Carbon-Fee-Equivalent Tariffs shall be charged for goods entering the U.S. from countries without comparable Carbon Fees/Carbon Pricing. Carbon-Fee-Equivalent Rebates shall be used to reduce the price of exports to such countries and to ensure that U.S. goods can remain competitive in those countries. The Department of Commerce will determine rebate amounts and exemptions if any.
- **5. Phase Out of Fossil Fuel Subsidies:** All existing subsidies of fossil fuels, including tax credits, shall be phased out over the 5 years following enactment.
- 6. Moratorium on New or Expanded Coal-Fired Power Plants: Beginning on the date of enactment, there shall be no new coal-fired power plants permitted, constructed, or operated. There shall also be no expansions in capacity of any existing coal power plants permitted, constructed, or operated. And any previously permitted coal-fired power plants that have not yet been constructed or put into operation prior to the date of enactment shall not be put into operation and shall not be further constructed.
- **7. Seeking Treaties:** The President in consultation with the United States Department of State shall seek treaties with other countries that encourage adoption of programs similar to the ones provided for in this Act to reduce CO2 and other greenhouse gas emissions in other countries.

Legislation introduced in the 111th Congress by Rep. Larson (D-CT), H.R. 1337 America's Energy Security Trust Fund Act, and by Rep. Inglis (R-SC), H.R. 2380 Raise Wages Cut Carbon Act, reflects an approach very similar to this.

IV. WHY CARBON FEE AND DIVIDEND?

The city of Stamford should support Carbon Fee and Dividend over other proposed climate solutions because research clearly demonstrates that it will <u>work</u>. It's good for the economy AND even better for people.

A study from REMI³ shows that carbon fee-and-dividend will reduce CO2 emissions 52% below 1990 levels in 20 years and that recycling the revenue creates an economic stimulus that adds 2.8 million jobs to the economy.

A structured rising price on greenhouse gas emissions will focus business planning on optimizing investment priorities to thrive in a carbon-constrained world. Additionally, Carbon Fee and Dividend is projected to prevent over 230,000 premature deaths over 20 years from improved air quality.



Saved Premature Deaths (cumulative, regional level)

Each color in this chart represents one of the nine US regions. PAC=Pacific, MNT=Mountain,

WSC=West South Central, ESC=East South Central, SA=South Atlantic, WNC=West North Central,

ENC=East North Central, MA=Mid Atlantic, NE=New England.

Carbon Fee and Dividend does not increase the size of government, require new bureaucracies or directly increase government revenues. The dividend increases real disposable income, protects personal spending decisions and will recruit widespread, sustained engagement.

Finally, Carbon Fee and Dividend is elegant in its simplicity, transparent in its accessibility to public scrutiny and clear in its signals and benefits.

³ Nystrom, S. and P. Luckow. "<u>The Economic, Climate, Fiscal, Power, and Demographic</u> <u>Impact of a National Fee-and-Dividend Carbon Tax</u>." Regional Economic Models, Inc. and Synapse, Inc. (9 June 2014).

V. WHY SHOULD STAMFORD PASS A MUNICIPAL RESOLUTION?

Stamford has many reasons to be concerned about climate change, especially since impacts are felt locally. Climate change is already affecting us. In the Northeast, the most important impacts include:

- **Rising temperatures**, with risks to health and infrastructure
- Sea level rise, increasing the risk of flooding in Stamford and other coastal communities
- More heavy rainstorms, which can cause flooding and overrun our sewage infrastructure

Climate change is also expected to bring:

- More violent storms, including hurricanes and nor'easters
- **Disruption to ecosystems**, including changes in the plant and animal species that thrive in our area
- An increase in prevalence of climate-sensitive infectious diseases, such as Lyme disease, West Nile virus, and other vector-borne diseases

These local impacts all pose serious threats to public health and overall quality of life. Moreover, they place a large financial burden on local governments like the city of Stamford. While state and local efforts are hugely important in the fight against climate change, climate change is a national problem. As put by Dennis Schain, then spokesman for the state Department of Energy and Environmental Protection, "while we want to do our fair share and more in Connecticut, we can't stop climate change on our own."⁴

The passage of a municipal resolution in support of Carbon Fee and Dividend is a powerful way for the city of Stamford to promote a national policy that effectively addresses climate change. Municipal resolutions are important because the more that the Congress and Senate hear from local municipalities, the more attention will be paid to implementation of a carbon fee.

This resolution also provides an opportunity for Stamford to demonstrate leadership in climate action. Stamford would be the first city in Connecticut to pass a municipal resolution in support of Carbon Fee and Dividend, joining over 90 other municipalities that have already passed similar resolutions. As a Climate Mayor, Mayor Martin is especially suited to lead the state of Connecticut in action against climate change. Strong and effective policy like the Carbon Fee and Dividend can mitigate the worst effects of climate change, protecting the environment for our children and grandchildren.

⁴ Erik Ofgang et al., "<u>Connecticut's Rising Seas: Are Towns and Cities Ready?</u>" Connecticut Magazine, (28 March 2017).

VI. THE MUNICIPAL RESOLUTION

RESOLUTION URGING THE FEDERAL GOVERNMENT TO PASS LEGISLATION IN SUPPORT OF A NATIONAL REVENUE NEUTRAL CARBON FEE AND DIVIDEND IN ORDER TO HELP SLOW CLIMATE CHANGE

WHEREAS, the sustainability and viability of a clean environment is critical for the safety and well-being of our society; and

WHEREAS, damaging weather systems are increasing that threaten lives and properties and stress community emergency response resources;

WHEREAS, sea levels of the world are rising and if unabated will substantially impact private, public, and commercial properties;

WHEREAS, citizens have become concerned with the ramifications of poor management of the environment and its impacts now and in the future; and

WHEREAS, an effective plan to address climate change must provide a measurable benefit to improving the environment while not detracting from economic viability or opportunity; and

WHEREAS, the United States congress has acknowledged that climate change is an important matter that needs to be considered and addressed; and

WHEREAS, there is strong scientific agreement that climate change is occurring and is at least partially the result of human activity, including but not limited to the use of fossil fuels; and

WHEREAS, continuing to use fossil fuels at the current rates will increase the long-term damage of climate change, which will become more and more difficult and expensive to reverse and even to slow;

WHEREAS, a Federal, Revenue Neutral Carbon Tax on fossil fuels would reflect their net real costs to our nation and its citizens;

WHEREAS, such carbon tax revenue would be returned to citizens to mitigate its economic impact;

NOW, THEREFORE,

BE IT RESOLVED, that the Mayor and members of the Board of Representatives of the City of Stamford hereby express their support of a federally mandated, national revenue neutral carbon tax with all revenues refunded to the citizens; and

BE IT FURTHER RESOLVED, that the Mayor and members of the Board of Representatives of the City of Stamford, Connecticut urge Senator Richard Blumenthal, Senator Chris Murphy, and Congressman Jim Himes to take the necessary actions to examine the feasibility of such carbon tax and dividend to citizens and enact such a program to help slow climate change; and

BE IT FURTHER RESOLVED, that the City Clerk is hereby directed to transmit copies of this Resolution to US Senators Blumenthal and Murphy and U.S. Representative Jim Himes.

VII. STATE, COUNTY, AND CITY RESOLUTIONS

State Resolutions calling for Carbon Fee and Dividend

State	Population	Members of Congress
California	39,144,818	55

Municipal Resolutions calling for Carbon Fee and Dividend

Municipality	Population	District and member(s) of Congress
Philadelphia, PA	1.5 million	Robert Brady (D-PA-01), Chaka Fattah (D-PA-02), Brendan Boyle (D-PA-13)
Pima County, AZ	980,263	Tom O'Halleran (D-AZ-01), Martha McSally (R-AZ-02), Raul Grijalva (D-AZ-03)
<u>Austin, TX</u>	947,890	Bill Flores (R-TX-17), Michael McCaul (R-TX- 10), Lamar Smith (R-TX-21), John Carter (R- TX-31), Lloyd Doggett (D-TX-35), Roger Williams (R-TX-25)
San Francisco, CA	837,000	Nancy Pelosi (D-CA-12)
Essex County, NJ	789,565	Donald Payne Jr. (D-NJ-10), Rodney Frelinghuysen (R-NJ-11)
San Mateo County, CA	765,135	Jackie Speier (D-CA-14), Anna Eshoo (D-CA- 18)
Portland, OR	609,456	Suzanne Bonamici (D-OR-01), Earl Blumenauer (D-OR-03)
Tucson, AZ	503,706	Martha McSally (R-AZ-02); Raúl Grijalva (D- AZ-03)
Sonoma County, CA	483,878	Jared Huffman (D-CA-02), Mike Thompson (D-CA-05)
Oakland, CA	413,775	Barbara Lee (D-CA-13)
Pittsburgh, PA	305,841	Mike Doyle (D-PA-14)
Santa Cruz County, CA	275,897	Jimmy Panetta (D-CA-20) and Anna Eshoo (D-CA-18)
Marin County, CA	260,000	Jared Huffman (D-CA-02)
Dona Ana County, NM	213,460	Steve Pearce (R-NM-02)

Rochester, NY	210,358	Louise Slaughter (D-NY-25)
Modesto, CA	204,000	Jeff Denham (R-CA-10)
Salt Lake City, UT	191,000	Chris Stewart (R-UT-02)
Santa Rosa, CA	175,155	Mike Thompson (D-CA-05)
Santa Fe County, NM	147,423	Ben R. Luján (D-NM-03)
Syracuse, NY	143,378	John Katco (R-NY-24)
Ann Arbor, MI	120,782	Debbie Dingell (D-MI-12)
Allentown, PA	120,443	Charles Dent (R-PA-15)
La Crosse County, WI	118,212	Ron Kind (D-WI-03)
Berkeley, CA	116,768	Barbara Lee (D-CA-13)
Boulder, CO	108,090	Jared Polis (D-CO-02)
Richmond, CA	107,000	Mark DeSaulnier (D-CA-11)
Tompkins County, NY	103,617	Tom Reed (R-NY-23)
Eau Claire County, WI	102,105	Ron Kind (D-WI-03)
Santa Monica, CA	92,472	Ted Lieu (D-CA-33)
Asheville, NC	89,121	Patrick McHenry (R-NC-10) and Mark Meadows (R-NC-11)
Bellingham, WA	87,574	Rick Larsen (D-WA-02)
Duluth, MN	86,923	Rick Nolan (D-MN-08)
Bloomington, IN	82,575	Trey Hollingsworth (R-IN-09)
Fayetteville, AR	79,000	Steve Womack (R-AR-03)
Alameda, CA	78,906	Barbara Lee (D-CA-13)
Bethlehem, PA	75,293	Charles Dent (R-PA-15)
Iowa City, IA	74,398	Dave Loebsack (D-IA-02)
Flagstaff, AZ	71,459	Tom O'Halleran (D-AZ-01)
Santa Fe, NM	70,000	Ben R. Luján (D-NM-03)
Davis, CA	68,111	John Garamendi (D-CA-03)

Portland, ME	66,937	Chellie Pingree (D-ME-01)
Santa Cruz, CA	64,465	Anna Eshoo (D-CA-18) and Jimmy Panetta (D-CA-20)
La Crosse, WI	62,109	Ron Kind (D-WI-03)
Encinitas, CA	61,588	Darrell Issa (R-CA-49)
Petaluma, CA	60,530	Jared Huffman (D-CA-02), Mike Thompson (D-CA-05)
Lancaster, PA	59,325	Joseph Pitts (R-PA-16)
Hoboken, NJ	53,312	Albio Sires (D-NJ-08)
<u>Oak Park, IL</u>	52,066	Danny Davis (D-IL-07)
<u>San Luis Obispo, CA</u>	46,377	Lois Capps (D-CA-24)
Henrietta, NY	43,690	Louise Slaughter (D-NY-25)
State College, PA	42,034	Glenn Thompson (R-PA-05)
Summit County, UT	39,633	Rob Bishop (R-UT-01)
Montclair, NJ	38,977	Donald Payne, Jr. (D-NJ-10), Rodney Frelinghuysen (R-NJ-11)
Brighton, NY	36,609	Louise Slaughter (D-NY-25)
Penfield, NY	36,242	Louise Slaughter (D-NY-25)
Claremont, CA	36,054	Judy Chu (D-CA-27)
West Hollywod, CA	35,883	Adam Schiff (D-CA-28)
Bangor, ME	31,985	Bruce Poliquin (R-ME-02)
Ithaca, NY	30,515	Tom Reed (R-NY-23)
Princeton, NJ	30,108	Bonnie Watson (D-NJ-12)
Los Altos, CA	30,010	Anna Eshoo (D-CA-18)
San Carlos, CA	29,797	Jackie Speier (D-CA-14)
Pittsford, NY	29,406	Louise Slaughter (D-NY-25)
Monterey, CA	27,810	Jimmy Panetta (D-CA-20)
Stevens Point, WI	26,423	Ron Kind (D-WI-03)

Carbondale, CO	26,363	Scott R. Tipton (R-CO-03)
El Cerrito, CA	24,316	Mark DeSaulnier (D-CA-11)
Portsmouth, NH	21,485	Carol Shea-Porter (D-NH-01)
<u>Carrboro, NC</u>	21,265	David Price (D-NC-04)
Brunswick, ME	20,645	Chellie Pingree (D-ME-01)
Millburn, NJ	20,130	Leonard Lance (R-NJ-07)
<u>Marina, CA</u>	19,718	Jimmy Panetta (D-CA-20)
<u>Albany, CA</u>	19,192	Barbara Lee (D-CA-13)
Oroville, CA	19,033	Douglas LaMalfa (R-CA-01)
Carlisle, PA	18,916	Lou Barletta (R-PA-11)
Hopewell, NJ	18,523	Bonnie Watson Coleman (D-NJ-12)
Boone, NC	18,211	Virginia Foxx (R-NC-05)
Pitkin County, CO	17,379	Scott R. Tipton (R-CO-03)
South Orange Village, NJ	16,994	Donald Payne (D-NJ-10)
Pacific Grove, CA	15,624	Jimmy Panetta (D-CA-20)
Emeryville, CA	11,761	Barbara Lee (D-CA-13)
Morro Bay, CA	10,461	Lois Capps (D-CA-24)
Sitka, AK	8,863	Don Young (R-AK-00)
Oberlin, OH	8,331	Jim Jordan (R-OH-04))
Sebastopol, CA	7,678	Jared Huffman (D-CA- 02), Mike Thompson (D-CA- 05)
Cotati, CA	7,455	Mike Thompson (D-CA- 05)
Aspen, CO	6,971	Scott Tipton (R-CO-03)
Fairfield, ME	6,734	Bruce Poliquin (R-ME-02)
Canton, NY	6,524	Elise Stafanik (R-NY-21)
Moab, UT	5,242	John Curtis (R-UT-03)
Narberth, PA	4,295	Dwight Evans (D-PA-02)

Del Mar, CA	4,278	Darrell Issa (R-CA-49)
Pittsboro, NC	4,266	Mark Walker (R-NC-06)
Lambertville, NJ	3,856	Leonard Lance (R-NJ-07)
Danby, NY	3,329	Tom Reed (R-NY-23)
Eureka Springs, AR	2,095	Steve Womack (R-AR-03)
Shutesbury, MA	1,800	Jim McGovern (D-MA-02)
Grand Marais, MN <u>Public Utility</u> <u>Commission</u> and <u>City Council</u>	1,351	Richard Nolan (D-MN-08)
Ridgway, CO	953	Scott Tipton (R-CO-03)

State Resolutions calling for Action on Climate

State	Population	Members of Congress
<u>Utah</u>	3,101,833	4

Municipal Resolutions calling for Action on Climate

Municipality	Population	Districts and member(s) of Congress
Montgmoery County, MD	1.04 million	John Sarbanes (D-MD-03), John Delaney (D-MD-06)
Denver, CO	663,862	Diana DeGette (D-CO-01)
Santa Clarita, CA	181,972	Steve Knight (R-CA-25)
Las Cruces, NM	101,324	Steve Pearce (R-NM-02)
Eau Claire, WI	68,339	Ron Kind (D-WI-03)
Corvallis, OR	57,390	Peter DeFazio (D-OR-04), Kurt Schrader (D-OR-05)
Irondequoit, NY	51,692	Louise Slaughter (D-NY-25)
East Lansing, MI	48,544	Mike Bishop (R-MI-08)
Haverford Board of Commissioners, PA	48,491	Patrick Meehan (R-PA-07)
Blacksburg, VA	45,038	Morgan Griffith (R-VA-09)

San Juan Capistrano, CA	36,276	Darrell Issa (R-CA-49)
Prior Lake, MN	25,863	Jason Lewis (R-MN-02)
Bainbridge Island, WA	23,196	Derek Kilmer (D-WA-06)
Hastings, MN	22,602	Jason Lewis (R-MN-02)
Red Wing, MN	16,526	Jason Lewis (R-MN-02)
Truckee, CA	16,297	Tom McClintock (R-CA-04)
Winslow, ME	7,794	Chellie Pingree (D-ME-01)
Peterborough, NH	6,284	Annie Kuster (D-NH-02)
Media, PA	5,327	Pat Meehan (R-PA-07)
Livingston, NY	3,646	John Faso (R-NY-19)
Stockport, NY	2,815	John Faso (R-NY-19)
Village of Cooperstown, <u>NY</u>	1,834	John Faso (R-NY-19)
Chatham, NY	1,731	John Faso (R-NY-19)
Ancram, NY	1,573	John Faso (R-NY-19)
Taghkanic, NY	1,310	John Faso (R-NY-19)
Alta, UT	387	(UT-03)



Financial Impact on Households of Carbon Fee and Dividend

Summary by Jerry Hinkle and Daniel Richter

Introduction

In February, 2016, Citizens' Climate Education (CCE) and Citizens' Climate Lobby (CCL) released a working paper that assessed the net financial impact on U.S. households of a \$15/ton of CO2 carbon fee in which all proceeds are returned to households on a per-capita basis, The purpose of that working paper (see link at end to download) was to respond to enduring interest from members of Congress in how their own constituents would fare under CCL's Carbon Fee and Dividend proposal. To complete that study CCE and CCL funded Kevin Ummel, an independent researcher at the International Institute for Applied Systems Analysis and author of a separate, earlier study estimating household carbon emissions with zip-code level detail.

The analysis is "static" and does not consider the "dynamic" effects the policy and corresponding price changes would have on the general economy. It is assumed the entire pollution fee is passed through in the form of higher prices "overnight", without changes in production or consumption in response to the price signal.



Figure 1: Map of US showing which zip codes have more (blue) or fewer (red) households benefiting with Carbon Fee and Dividend. Overall, 53% of households, and 58% of individuals benefit.



Figure 2: **Percent of Households Benefited, by Income quintile.** The average household in Quintile 1 sees a net gain of \$280 per year, equal to 1.78% of income. Quintile 1 has a median (or typical) income of 95% of the federal poverty level (FPL).

Study Highlights:

• 53% of US households and 58% of individuals receive a net financial benefit as the dividend exceeds the estimated increase in costs of goods purchased (Figure 1). This analysis includes none of the health and environmental benefits that come with the reduction of GHGs.

- The gains are concentrated among those considered "most vulnerable" within our society: those with lower incomes (Fig 2), the youngest and oldest (Fig 3), and minorities (Fig 4). Since the Dividend formula is not means-tested in any way, this effect stems simply from charging for pollution and returning proceeds equally per person; not any type of redistribution.
- Though households with higher incomes generally experience a net loss in this study, the impact would be minimal. 15% of households in the 5th quintile actually benefit, and an additional 42% experience only a minor loss (defined as a loss less than .2% of annual income).



Figure 3: Percent of Households benefited, by age group. Older households do well because they tend to have smaller footprints, reflecting reduced mobility and less consumption as a result of low fixed incomes. Younger households tend to be larger – and therefore benefited by the dividend formula – in addition to having less income/consumption in early career.



Minor loss (<0 2% of income)

22%

479

White

16%

61%

Other

Reducing Costs

How can households who experience a net loss reduce their carbon footprint, and thus their pollution costs? There are many avenues for this, from more efficient transportation (e.g., public transit), more efficient living conditions (e.g., higher household density), and careful consumer choices. Being static, with price signals passed on "overnight", this study did not allow for or anticipate any such changes in behavior.

Conclusions

This new study provides a useful look at how every congressional district does in unprecedented detail. Though overall projections for how many households benefit are lower than some previous estimates, the overall progressivity of this policy is highlighted, especially in contrast to other options for addressing climate change.

Current working paper and additional resources available at: <u>http://citizensclimatelobby.org/household-impact/</u> Contact for questions: Danny Richter - <u>daniel@citizensclimate.org</u>.

Version 2: May 5, 2016



Financial Impact on Households of Carbon Fee and Dividend Local Impacts in Connecticut

Introduction

This study on the impact to households of Carbon Fee and Dividend was funded to respond to concerns expressed by members of Congress that constituents in their state would not benefit under our proposal. Key to the concerns expressed was not only understanding how the average constituent did, but how different groups of constituents fared. Concern for low-income constituents, for instance, is common for members of both parties.



Figure 1: National Averages by Economic Quintile. Note that the three lowest-income quintiles show a benefit for the mean (average) household. The average net benefit for the lowest-income quintile is 1.78% of income, whereas households in the top quintile experience, on average, net losses that are a much smaller percentage of their total income, at just 0.18%.

All data is from the 2016 working paper, "Impact of CCL's proposed carbon fee and dividend policy: A highresolution analysis of the financial effect on U.S. households" by Kevin Ummel, Research Scholar, Energy Program, International Institute for Applied Systems Analysis (IIASA).

Current working paper and summary available at http://citizensclimatelobby.org/household-impact/



Figure 2: Impact by Quintile for Connecticut. Looking at the categories on the bottom of this graph, only the numbers for "Mean Net Benefit" and "Median HH income % of FPL" include all households in a given quintile (FPL = Federal Poverty Line). Only those households who receive a financial gain are included in calculating the "Median Gain" figures, and likewise, only those households which experience a loss are included in calculating the "Median Loss" figures.



Figure 3: Impact by Race for Connecticut. Minority households tend to do better than white households as a result of lower average incomes (associated with lower carbon footprint) and/or more people per household (larger pre-tax dividend).



Figure 4: Impact by Age Group for Connecticut. The pattern of benefits across age groups makes sense given the impact of age on both carbon footprints and dividend received. Older households tend to have smaller footprints, reflecting reduced mobility and less consumption as a result of low fixed incomes. Younger households tend to be larger – and therefore benefited by the dividend formula – in addition to less income/consumption in early career.



Figure 5: Impact by Household Type for Connecticut. This graph reports data for demographic groups of particular interest to many legislators. "Elderly" households are defined as having a household head age 65 or older, no more than two adults, and no children present. "Poverty" and "Low income" refer to households with income below 100% and 200% of FPL, respectively.



Figure 6: Impact by Community for Connecticut. This graph breaks down data by "community type" – Rural, Suburb or Town, vs Urban.



Figure 7: Expenditures by Category for Connecticut. Here we show a breakdown of where the carbon fee increases expenses (i.e. before the dividend) for each quintile. Note that direct energy expenditures (gasoline and utilities) represent less than half of the expense for most quintiles with other products and services making up the rest. Quintile 1 shows low expenditure for private health care since most health care for households in this quintile is covered by government programs. Allocated Private Fixed Income (PFI) measures economy-wide spending on fixed assets (e.g. structures, equipment, software, etc.) that are used in the production of goods and services.



Figure 8: Relationship between benefit and income for Connecticut. This line graph shows the relationship between income expressed as a percentage of the Federal Poverty Level (FPL) vs. the average (mean) benefit as a percentage of income for households. Benefits are highest for those at the lowest income levels and generally positive through 200-300% of the FPL. Average loss for those with higher incomes is relatively small as a percentage of annual income. To avoid anomalies from small sample size at the margins, this graph does not include results for households in the bottom 1% of income, nor those above the 90th percentile of income in Connecticut. This graph also does not convey information about how much of the population in Connecticut is at any given point along the line.

CITIZENS CLIMATE LOBBY

HOUSEHOLD IMPACT OF CARBON FEE AND DIVIDEND CALCULATOR - 2018

Assumptions:

Location: Stamford, CT, Zip Code 06901

Family of four (two adults and two children) / Annual Income 30K

Reference Data:

Federal Poverty Level 2018: 25.1K

CT Median Income for 20th Percentile: 27.4K

Stamford, CT, Median Income for 20th Percentile: 29.2K



Household Summary

				household dividend
Number	2	Number 2	2	
of Adults		of		Calculation based on household's number of
		Children		adults, number of minors, and expected federal
Number	2			marginal tax rate.
of				Monthly cost due to
Vehicles				Montility cost due to 5
Zip Code		06901		carbon fee
Income		\$30,000		Estimated additional casts due to higher prices fo
Dwelling		Apartment buildin	g	goods and services, depending on the household
Туре:				characteristics entered above (income, number o
Heating Fuel:		Natural gas		vehicles, etc.).

Your Results

Monthly after-tax

\$85

\$41

Spending Summary

		Net benefit per	\$44
Average Monthly	\$110	month*	
Electricity			/month