

**MONTEREY COUNTY BOARD OF SUPERVISORS  
ALTERNATIVE ENERGY AND ENVIRONMENT COMMITTEE**

<b>MEETING: 3/22/2018</b>		<b>AGENDA NO.:</b>
<b>ACTION REQUESTED OF COMMITTEE:</b>		<ol style="list-style-type: none"><li>a. Receive a presentation on the Citizen's Climate Lobby's Carbon Fee and Dividend (CF&amp;D) Program</li><li>b. Direct staff to bring a resolution supporting the CF&amp;D program to the Board of Supervisors Legislative Committee for consideration; and,</li><li>c. Provide direction to staff as appropriate.</li></ol>
<b>DEPARTMENT:</b>		CAO – IGLA

**Recommendation:** It is recommended that the Alternative Energy and Environment Committee:

1. Receive a presentation on the Citizen's Climate Lobby's Carbon Fee and Dividend (CF&D) Program,
2. Direct staff to bring a resolution supporting the CF&D program to the Board of Supervisors Legislative Committee for consideration; and,
3. Provide direction to staff as appropriate.

**SUMMARY/DISCUSSION:**

The Citizens Climate Lobby (CCL) is a non-profit, nonpartisan, grassroots advocacy organization focused on national policies to address climate change. The CCL has proposed a Carbon Fee and Dividend (CF&D) program (Attachment A) by which a federal fee will be placed on carbon based fuels so that their consumer costs more accurately reflect their costs to society. The artificially low costs of carbon based fuels do not currently reflect impacts such as environmental degradation or public health impacts related to their use.

The main components of the CF&D Program are as follows:

- Place a steadily rising fee on fossil fuels with an initial fee of \$15 per ton of greenhouse gas emissions equivalent (carbon dioxide)
- Yearly price increases of at least \$10 per year shall continue until program goal is reached (10% of U.S. GHG emissions in 1990).
- Distribute 100% of the proceeds (minus administrative costs) back to US households on a per-capita basis.
- Discourage businesses from relocating where they can emit more CO<sub>2</sub> and motivate other countries to adopt similar carbon pricing policies through border adjustment and import fees or rebates.

The CF&D program is a fee, not a tax, and would not create more regulations or government agencies/staff. It is designed to be an efficient, transparent, and enforceable mechanism to transfer to domestic energy production, stimulate alternative energy growth, and give all businesses an incentive to become energy efficient. For these reasons, it is often seen as being able to gain bi-partisan support, especially in bodies such as the Climate Solutions Caucus in the US House of Representatives, consisting of 31 Democrats and 31 Republicans, of which Congressman Jimmy Panetta is a member. Some form of the CF&D program has already been supported by roughly 60 municipalities across the country, including the City of Monterey, the City of Marina, and the City of Santa Cruz.

Because the CF&D program will impact all US households by collecting fees on the purchase of fossil fuels and redistributing the proceeds on a per-capita basis, an analysis was conducted to gauge the net financial impacts on US households. A working paper published by the

International Institute for Applied Systems Analysis (Attachment A) produced the following results:

- 53% of all US households and 58% of individuals receive a net financial benefit resulting from the CF&D program. Meaning, annually they receive more money in dividends than what they spent on fees.
- A net positive financial impact was concentrated among households considered to be “most vulnerable” (households with lower income, the youngest and oldest age groups, and minorities).
- Though households with higher incomes generally experience a net loss in this study, the negative impact would be minimal.

Additionally, a study specifically for the Monterey Bay region (Congressional District 20) was conducted (Attachment C) in conjunction with the US study. The District 20 study shows a net positive financial benefit for households of low to moderate income, as well as for minority groups. An independent study of the CF&D Program by Regional Economic Models, Inc. (REMI) concluded that in 30 years, the CF&D program could result a 50% reduction of carbon emissions below 1990 level throughout the US and the addition of 2.8 million jobs to the American economy.

Based on this information, staff is recommending the Alternative Energy and Environment Committee recommend staff to bring the attached resolution (Attachment D) requesting the United States Congress pass legislation creating a Carbon Fee and Dividend Program to the Legislative Committee for consideration to go before the Board of Supervisors.

**OTHER AGENCY INVOLVEMENT:**

None

**FINANCING:**

The recommendation to receive this presentation will not result in additional general fund impacts.

Prepared by:

Approved by:

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Dan Bertoldi, Sustainability Coordinator

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Nicholas E. Chiulos, Assistant CAO

Attachments:

- A) Legislative proposal: Carbon Fee and Dividend
- B) US Financial Impact Analysis
- C) District 20 Financial Impact Analysis
- D) Draft Resolution

# Legislative proposal: Carbon Fee and Dividend

## Findings:

1. Causation: Whereas the weight of scientific evidence indicates that greenhouse gas emissions from human activities including the burning of 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 400 parts per million (“ppm”) of carbon dioxide (“CO<sub>2</sub>”) in the atmosphere to 350 ppm CO<sub>2</sub> 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, 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 correcting market distortions, 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 greenhouse gas emissions (1) are the most efficient, transparent, and enforceable mechanism to drive an effective and fair transition to a domestic-energy economy, (2) will stimulate investment in alternative-energy technologies, 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 every American household can help ensure that families and individuals can afford the energy they need during the transition to a greenhouse gas-free 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 and other greenhouse gases at the point where they first enter the economy. The fee shall be collected by the Treasury Department. The fee on that date shall be \$15 per ton of CO<sub>2</sub> equivalent emissions and result in equal charges for each ton of CO<sub>2</sub> equivalent emissions potential in each type of fuel or greenhouse gas. The Department of Energy shall propose and promulgate regulations setting forth CO<sub>2</sub> equivalent fees for other greenhouse gases including at a minimum methane, nitrous oxide, sulfur hexafluoride, hydrofluorocarbons (HFCs), perfluorocarbons, and nitrogen trifluoride. The Treasury shall also collect the fees imposed upon the other greenhouse gases. All fees are to be placed in the Carbon Fees Trust Fund and rebated to American households as outlined in #3 below.
2. Emissions Reduction Targets: To align US emissions with the physical constraints identified by the Intergovernmental Panel on Climate Change (IPCC) to avoid irreversible climate change, the yearly increase in carbon fees including other greenhouse gases, shall be at least \$10 per ton of CO<sub>2</sub>

equivalent each year. 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. CO<sub>2</sub>-equivalent emissions have been reduced to 10% of U.S. CO<sub>2</sub>-equivalent emissions in 1990.

3. Equal Per-Person Monthly Dividend Payments: Equal monthly per-person dividend payments shall be made to all American households (½ payment 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 net carbon fees collected per month.
4. Border Adjustments: In order to ensure there is no domestic or international incentive to relocate production of goods or services to regimes more permissive of greenhouse gas emissions, and thus encourage lower global emissions, 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. The State Department will determine rebate amounts and exemptions if any.



# Citizens' Climate Lobby

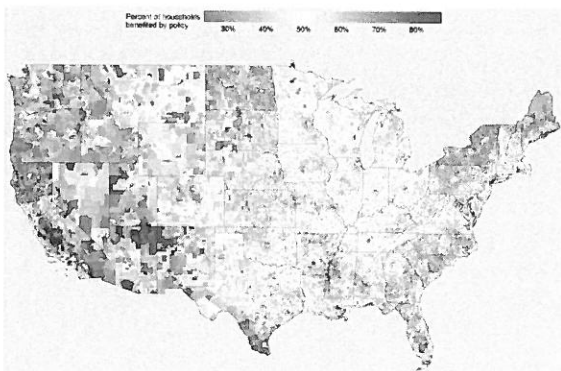
## Financial Impact on Households of Carbon Fee and Dividend

Summary by Jerry Hinkle and Daniel Richter

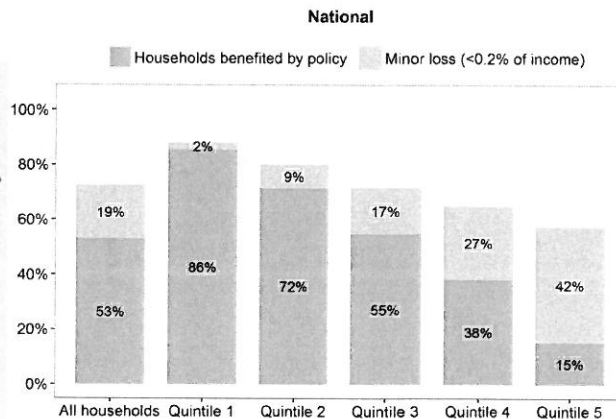
### Introduction

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 CO<sub>2</sub> 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.

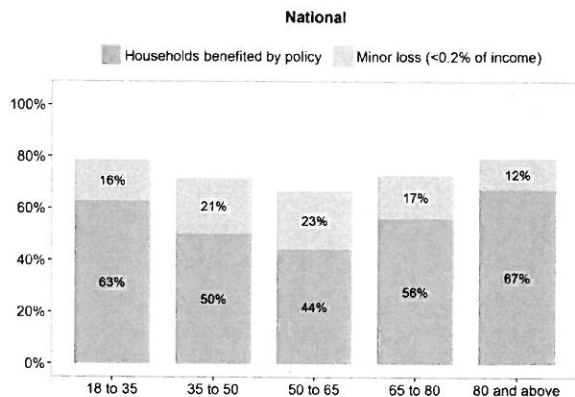


**Figure 2: Percent of Households Benefited, by Income quintile.** The average household in Quintile 1 sees a net gain of \$280 per year, equal to 1.78% of income. Quintile 1 has a median (or typical) income of 95% of the federal poverty level (FPL).

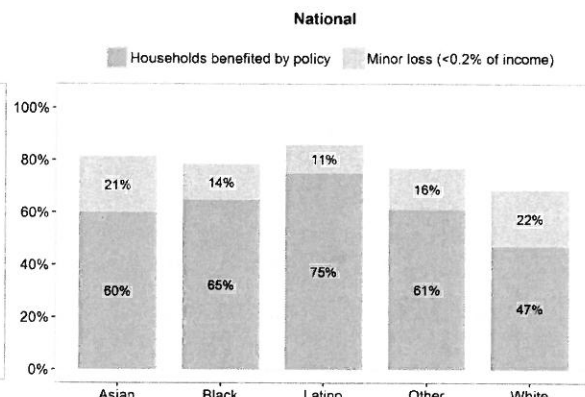
### Study Highlights:

- 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.



**Figure 4: Percent of Households benefited, by race.** Minority households do well because on average they have lower income and/or more people per household, both associated with a lower footprint. Since the dividend formula is per capita, households with more members generally see higher net benefit.

### 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.



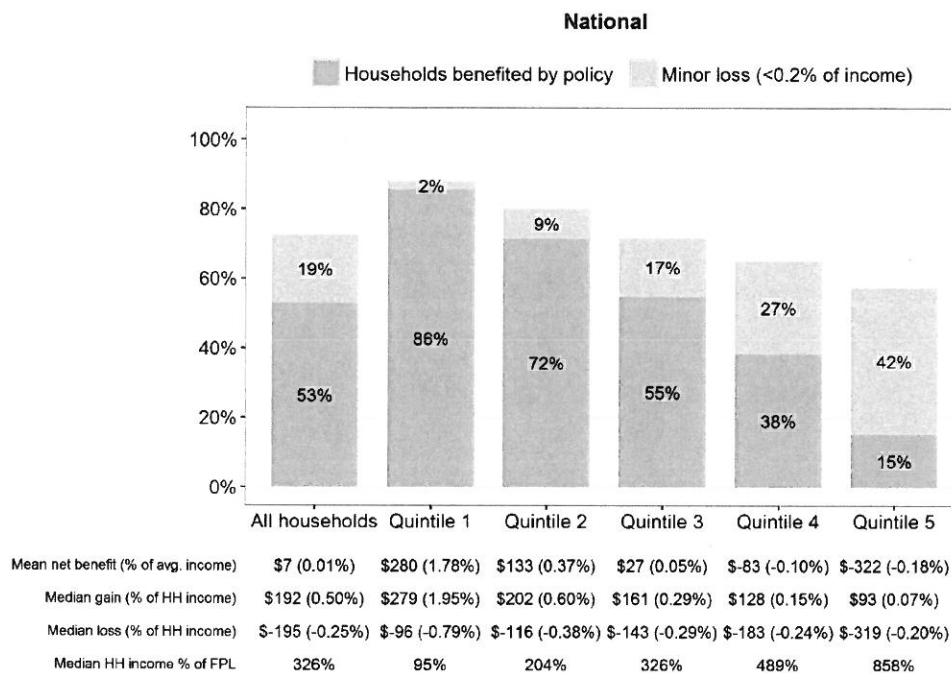


# Citizens' Climate Lobby

## Financial Impact on Households of Carbon Fee and Dividend Local Impacts in California - District 20

### 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 district 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.



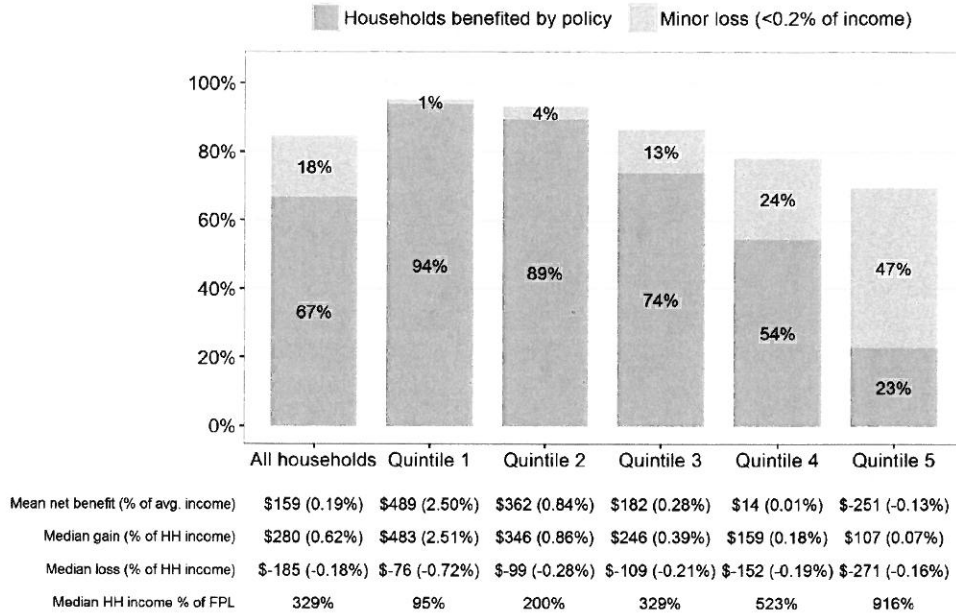
**Figure 1: National Averages by Economic Quintile.** Note that the three lowest-income quintiles show a benefit for the mean (average) household. The average net benefit for the lowest-income quintile is 1.78% of income, whereas households in the top quintile experience, on average, net losses that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

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

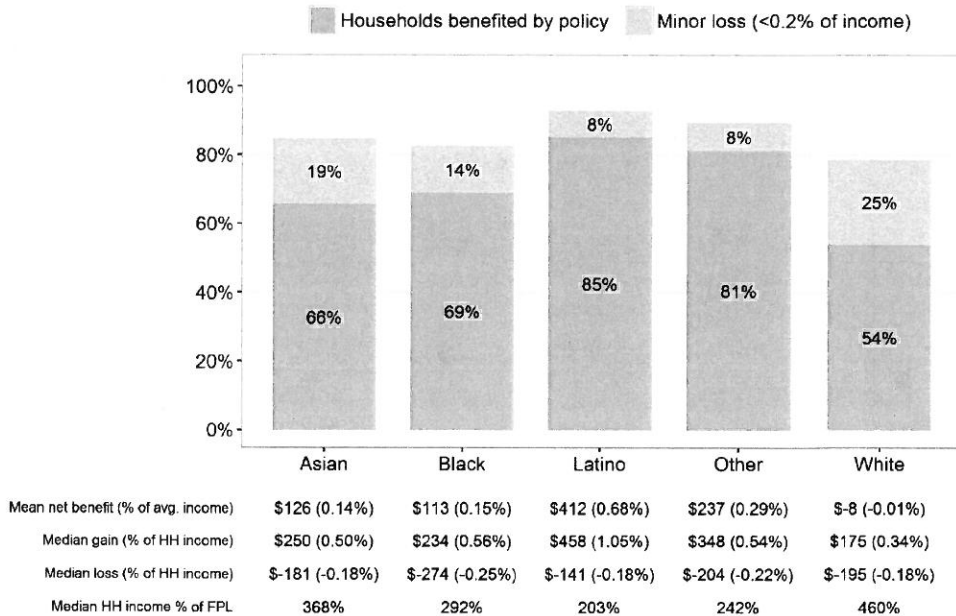
Current working paper and summary available at <http://citizensclimatelobby.org/household-impact/>

### California - Congressional district No. 20



**Figure 2: Impact by Quintile for California - District 20.** 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.

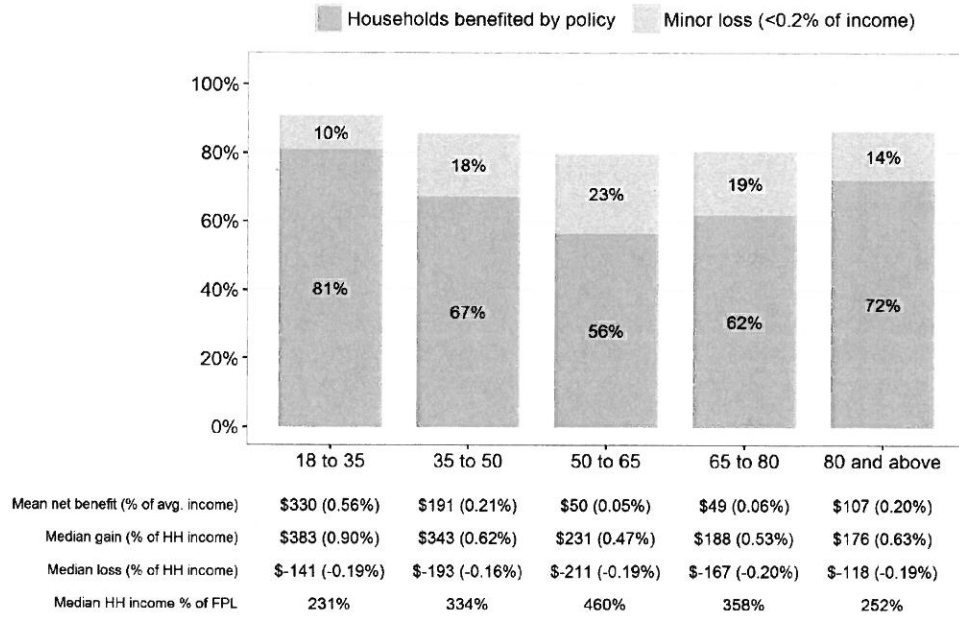
### California - Congressional district No. 20



**Figure 3: Impact by Race for California - District 20.** 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).

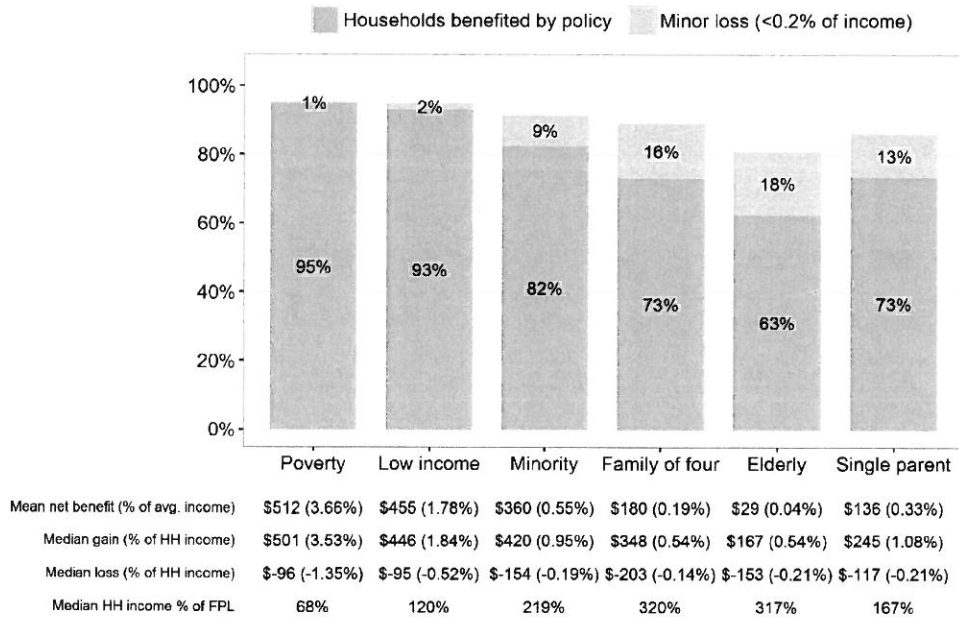


#### California - Congressional district No. 20

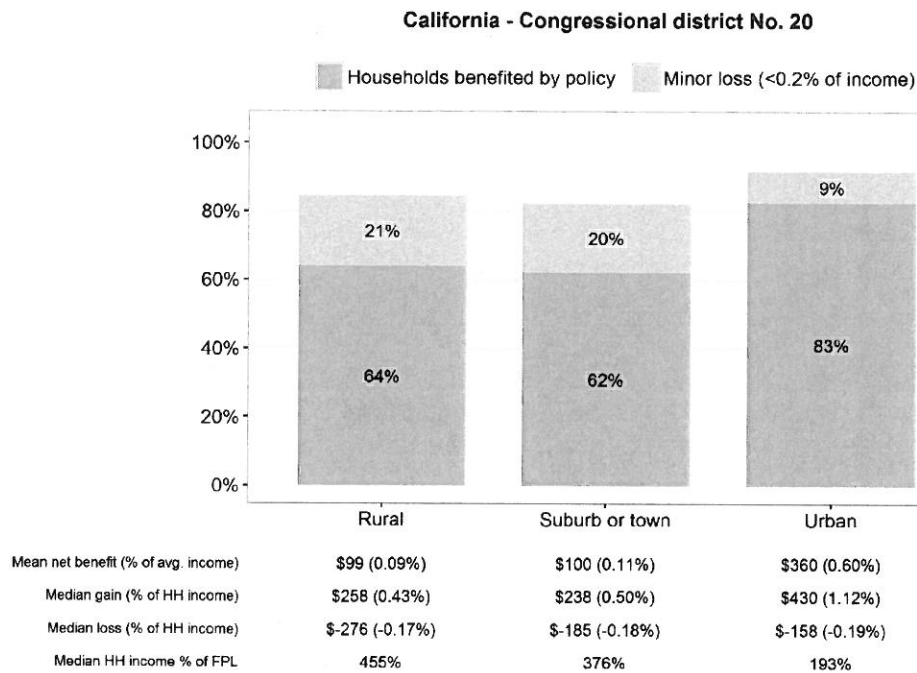


**Figure 4: Impact by Age Group for California - District 20.** The pattern of benefits across age groups makes sense given the impact of age on both carbon footprints and dividend received. Older households tend to have smaller footprints, reflecting reduced mobility and less consumption as a result 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.

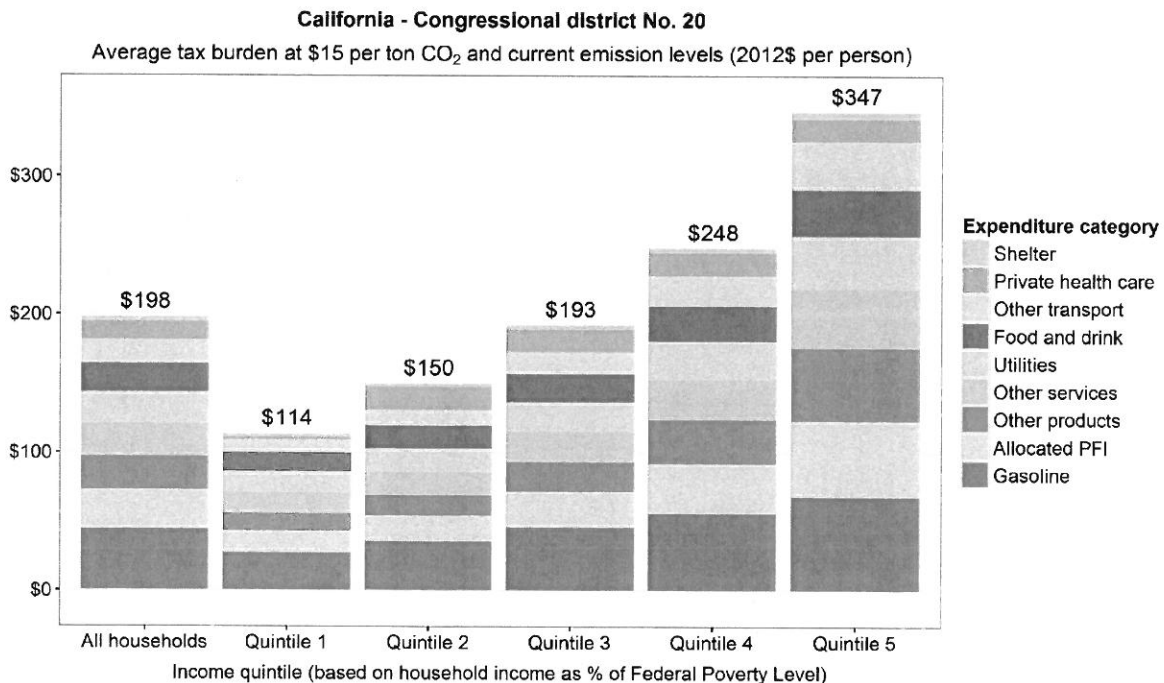
#### California - Congressional district No. 20



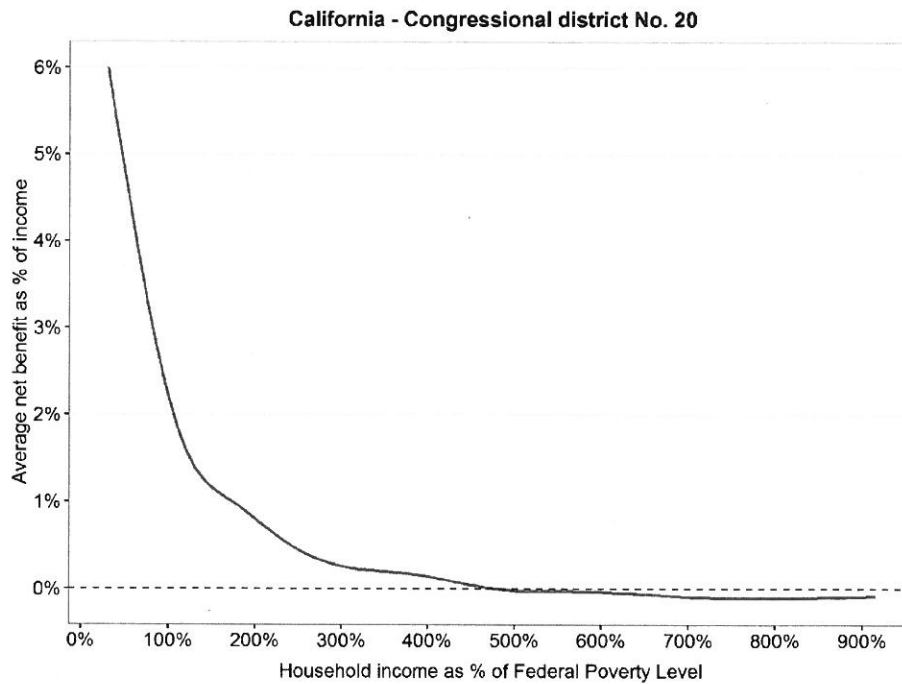
**Figure 5: Impact by Household Type for California - District 20.** This graph reports data for demographic groups of particular interest to many legislators. “Elderly” households are defined as having a household head age 65 or older, no more than two adults, and no children present. “Poverty” and “Low income” refer to households with income below 100% and 200% of FPL, respectively.



**Figure 6: Impact by Community for California - District 20.** This graph breaks down data by “community type” – Rural, Suburb or Town, vs Urban.



**Figure 7: Expenditures by Category for California - District 20.** 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 California - District 20.** 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 the district. This graph also does not convey information about how much of the population in the district is at any given point along the line.

**Before the Board of Supervisors in and for the  
County of Monterey, State of California  
(Draft)**

Resolution No.:

RESOLUTION OF THE MONTEREY COUNTY BOARD OF )  
SUPERVISORS REQUESTING THE UNITED STATES )  
CONGRESS PASS LEGISLATION CREATING A CARBON )  
FEE AND DIVIDEND PROGRAM..... )

**WHEREAS**, greenhouse gas (GHG) emissions from human activities, including the burning of fossil fuels, are causing rising global temperatures; and

**WHEREAS**, the average surface temperature on Earth has been increasing steadily, with the sixteen hottest years ever recorded all occurring since 1998, and the hottest of all years to date being 2016; and

**WHEREAS**, the global atmospheric concentration of carbon dioxide (CO<sub>2</sub>) exceeded 410 parts per million (ppm) in April 2017, the highest level in three million years; and

**WHEREAS**, the average global temperature by the year 2100 is predicted to be 2 degrees Fahrenheit to 11.5 degrees Fahrenheit higher than the current average global temperature, depending on the level of GHG emissions trapped in the atmosphere; and

**WHEREAS**, scientific evidence indicates that it is necessary to reduce the global atmospheric concentration of CO<sub>2</sub> from the current concentration of more than 400 ppm to 350 ppm or less in order to slow or stop the rise in global temperature; and

**WHEREAS**, global warming is already leading to large-scale problems including ocean acidification and rising sea levels; more frequent, extreme, and damaging weather events such as heat waves, storms, heavy rainfall and flooding, and droughts; more frequent and intense wildfires; disrupted ecosystems affecting biodiversity and food production; and an increase in heat-related deaths; and

**WHEREAS**, further global warming poses an unacceptable risk of catastrophic impacts to the ecosystems on which all life depends; and

**WHEREAS**, conservative estimates by the world's climate scientists state that to achieve climate stabilization and avoid cataclysmic climate change, by the year 2050 GHG emissions must be reduced to levels that are 80% below 1990 levels; and

**WHEREAS**, the Global Warming Solutions Act of 2006 (AB 32) commits the State of California to reduce GHG emissions to 1990 levels by 2020, and the State has further established goals to reduce GHG emissions by 40 percent below 1990 levels by 2030 (SB 32), and to 80 percent below 1990 levels by 2050 (Executive Order S-3-05).

**WHEREAS**, the Monterey County Board of Supervisors adopted the 2010 General Plan committing the County to reduce GHG emissions for the County's unincorporated area to a target of 15% below 2005 levels by 2020, in accordance with California's Assembly Bill 32; and

**WHEREAS**, in 2013 the Monterey County Board of Supervisors adopted the Municipal Climate Action Plan committing the County to reduce GHG emissions for County government operations to a target of 15% below 2005 levels by 2020; and

**WHEREAS**, the environmental, health, and social costs of CO<sub>2</sub> emissions are not currently included in the price paid for fossil fuels, and these negative externalities are borne by all global inhabitants, particularly those in disadvantaged communities; and

**WHEREAS**, a national carbon tax will benefit the economy, human health, the environment, and national security as a result of correcting market distortions, reducing toxic pollutants, reducing the outflow of dollars to oil-producing countries, and improving the energy security of the United States; and

**WHEREAS**, a phased-in carbon tax on GHG emissions 1) is an efficient, transparent, and enforceable mechanism to drive an effective and fair transition to a renewable energy economy, 2) will incentivize manufacturers, businesses, and consumers throughout the economy to produce and use less fossil fuel, and 3) will stimulate investment in alternative-energy; and

**WHEREAS**, equal monthly dividends (or "rebates") from the funds generated by the carbon tax paid to every American household can help ensure that families and individuals can afford the energy they need during the transition to a GHG-free economy, and these dividends also will stimulate the economy; and

**WHEREAS**, enacting a national carbon tax would make the United States a leader in mitigating climate change and in the clean energy technologies of the 21<sup>st</sup> century, and would incentivize other countries to enact a similar carbon tax, reducing global GHG emissions; and

**WHEREAS**, a national carbon tax, starting at a low rate and increasing steadily over future years, is a market-based solution that would minimally disrupt the economy while sending a clear and predictable price signal to businesses to develop and use non-carbon-based energy resources; and

**WHEREAS**, fossil fuels can be taxed once, as far upstream as possible in the economy as practical, or at the port of entry to the United States, for efficient administration; and

**WHEREAS**, border adjustments levied on carbon-based products imported from countries without comparable carbon pricing, and refunds to exporters, will help level the playing field and maintain the competitiveness of United States' businesses in global markets; and

**WHEREAS**, a national carbon tax can be implemented quickly and efficiently, and respond to the urgency of the climate crisis, because the federal government already has in place mechanisms, such as the Internal Revenue Service, needed to implement and enforce the tax, and already collects taxes from fossil fuel producers and importers; and

**WHEREAS**, the Citizens' Climate Education Corporation contracted with Regional Economic Modeling, Inc. (REMI) to undertake a nation-wide macroeconomic study on the impact of a revenue-neutral carbon tax; and

**WHEREAS**, REMI's research predicts that, after 10 years, a revenue-neutral carbon tax would lead to a decrease of CO2 emissions by 33 percent, an increase in national employment of 2.8 million jobs, and an average monthly dividend for a family of four of \$288; and

**WHEREAS**, if 100% of the carbon tax revenue is returned to households in equal shares, approximately two-thirds of Americans will break even or come out ahead, as their dividends will match or exceed direct and indirect price increases due to the tax, protecting lower and middle income households; and

**WHEREAS**, continued widespread use of fossil fuels and impacts due to climate change pose a present and growing risk to the residents of Monterey County, and a nation-wide, revenue-neutral carbon tax will significantly mitigate those risks and promote the health, safety, and prosperity of communities in Monterey County, across the United States, and around the world.

**NOW, THEREFORE, BE IT RESOLVED** that the Board of Supervisors of the County of Monterey does hereby urge Congress of the United State to enact, without delay, a revenue-neutral tax on carbon-based fossil fuels; and

**BE IT FURTHER RESOLVED** that the tax should be collected once, as far upstream in the economy as practical, or at the port of entry into the United States; and

**BE IT FURTHER RESOLVED** that the tax rate should start low and increase steadily and predictably with the goal of reducing carbon dioxide emissions in the United States to 80 percent below 1990 levels by 2050; and

**BE IT FURTHER RESOLVED** that all tax revenue should be returned to households to protect low and middle income Americans from the impact of rising prices due to the tax; and

**BE IT FURTHER RESOLVED** that the international competitiveness of the United States businesses should be protected by using border tariffs and tax refunds.



**PASSED AND ADOPTED** on this day \_\_\_\_\_ of \_\_\_\_\_, upon motion of Supervisor \_\_\_\_\_, seconded by Supervisor \_\_\_\_\_, by the following vote, to wit:

AYES:

NOES:

ABSENT:

I, Nicholas E. Chiulos, Clerk of the Board of Supervisors of the County of Monterey, State of California, hereby certify that the foregoing is a true copy of an original order of said Board of Supervisors duly made and entered in the minutes thereof of Minute Book \_\_\_\_ for the meeting on \_\_\_\_\_.

Dated:

File Number:

Gail T. Borkowski, Clerk of the Board of Supervisors  
County of Monterey, State of California

By: \_\_\_\_\_  
Deputy