

Carbon calculator provides personalized footprint

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The CoolClimate Calculator website allows users to tweak variables to estimate the amount of carbon dioxide they generate annually.

Researchers at the University of California, Berkeley, have created a carbon calculator that shows people as well as cities and businesses how their lifestyles contribute to global warming and identifies areas where they can reduce their footprint.

Debuting this week, the latest edition of the [CoolClimate Calculator](#) was created by scientists at the campus's Berkeley Institute of the Environment (BIE) and the Renewable and Appropriate Energy Laboratory (RAEL). The calculator allows not only individuals, but

households, small businesses and even cities and municipalities, to estimate the amount of carbon dioxide they generate annually based on their mode of transportation and their food, housing and lifestyle choices, and then compare the results to the footprints of similar households in the nation's 28 largest urban areas.

Simultaneously, the State of California's Air Resources Board this week premiered a California-centric version of the carbon calculator on its new Web site, "[Cool California](#)."

According to BIE researcher Christopher M. Jones, who gathered much of the information incorporated into the calculator, the calculator could be tailored to any state, region or city to provide residents with more precise information that is based, for example, on available energy sources and modes of public transportation, and local food and energy prices. In fact, he is working now with the city of Berkeley to make a carbon calculator tuned to the choices available in that city.

"The goals are to get people to understand that every thing they do, every dollar they spend, has an impact on the climate, and to provide critical information about which consumption choices lead to the greatest impact," Jones said. "This is the only carbon footprinting tool that allows people to look at all of their consumption together and to compare themselves to similar households with similar incomes living in the same area."

According to Richard Corey, assistant chief of the research division of the California Air Resources Board, an important aspect of the calculator is that it helps to "identify the actions people can take. In many cases, these actions save money."

Working with BIE and RAEL to design the calculator were Lawrence Berkeley National Laboratory, the California Air Resources Board, the

California Energy Commission and Next 10, an independent, nonpartisan organization that educates Californians to improve the state's future. The calculator was supported in part by the Gordon and Betty Moore Foundation, the World Wildlife Fund and the Center for Information Technology in the Interest of Society (CITRIS), which is a research partnership between the University of California, the state and industry to apply information technology solutions to California's biggest challenges.

Jones suggests that people first explore the calculator to look at the average impact of similar households in their area and compare this with households in other urban areas. They may find surprises, such as that environmentally conscious San Francisco has a higher average carbon footprint than Tampa, Fla., mostly because of Tampa's lower incomes and milder winters.

People can then get more specific, inputting their cars' average mileage and how many miles they drive each year, how much public transportation they use, how much they spend on food per month, and their average monthly heating, electricity and gas bills. None of this personal information is collected by UC Berkeley or the state.

BIE and the state will continue to refine the calculator, with plans to launch phase 2 of CoolClimate in September, Jones said. That version will include enough data for Californians to compare themselves to neighbors in the same zip code and link to additional resources and options to mitigate their carbon footprint. It also will allow businesses and organizations as well as households to customize the calculator for their continued use as they make lifestyle changes to lower their carbon footprint. Cities, for example, could use the calculator to make procurement decisions.

"This will be a benchmarking tool as well as a Web services tool to allow

other cities or associations or businesses to develop their own versions," Jones said. "That way, they can enhance and really take ownership of it."

Daniel Kammen, co-director of BIE, noted that, "carbon calculators, even at this early stage, already highlight an important feature: that our carbon budget is not all energy purchases, but is also the embedded carbon in the goods and services we purchase. A next step for this effort is to provide and support regional or state versions of the calculator and to get increasing amounts of detail on individual products."

"The more we use these tools to educate the public, the easier it will be for us to manage the state's greenhouse budget," added Kammen, a professor of energy and resources and of public policy at UC Berkeley. "By the Air Resources Board taking the lead on this public mission, the board is making people's personal carbon footprints part of the public dialog around California's low-carbon future."

Source: UC Berkeley

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