This document has been prepared as part of the implementation project of Legal Pathways to Deep Decarbonization (Michael B. Gerrard and John C. Dernbach, eds. Environmental Law Institute [2019]) (LPDD). For background information on the project, see https://lpdd.org

January 22, 2024

Memorandum to the Federal/State Model Law for a Carbon Footprint Labeling Program[*]

Introduction

Greenhouse gases trap heat in the Earth's atmosphere, leading to an intensified greenhouse effect and resulting in global warming.[1] The rising temperatures contribute to climate change, leading to more frequent and extreme weather events, disruptions to ecosystems, and threats to human health.[2]

Household purchases, including durable and consumer goods like appliances and food, generate significant greenhouse gas (GHG) emissions.[3] Even modest changes in the household sector could significantly reduce GHG emissions.[4] "Carbon footprint" is a term used to describe the amount of GHG emissions caused by a particular activity or entity, and thus a way for organizations and individuals to assess their contribution to climate change.[5] As you cannot reduce what you do not measure, measuring and disclosing the carbon footprints of products are important steps in reducing GHG emissions.

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[1] United Nations. (n.d.). *Causes and effects of climate change*. United Nations. https://www.un.org/en/climatechange/science/causes-effects-climate-change

[2] Id.

[3] Vandenbergh, Michael & Dietz, Thomas & Stern, Paul. (2011). Time to Try Carbon Labelling. Nature Climate Change. 1. 10.1038/nclimate1071.

[4] Id.

[5] The Carbon Trust (2018) Carbon Footprinting.

This model law is adaptable for use at either the federal or state level. It focuses on consumer products, which means any tangible personal property distributed in commerce and commonly used for personal, family, or household purposes. It defines a product's "carbon footprint" as the GHG emissions throughout a product's life cycle, from raw materials through production, distribution, consumer use, and disposal/recycling.[6]

The Case for Carbon Footprint Labels on Consumer Products

Product labels, in general, are a well-established method for providing information to consumers. Nutrition labels, and other labels such as "organic" and "fair trade," are used on food products in the United States, and entities such as the Food and Drug Administration (FDA), the United States Department of Agriculture (USDA), and Fair Trade USA, have successfully overseen the development, certification, and verification processes of these labels.[7]

A carbon footprint product label would be valuable because it could influence consumers to make environmentally friendly choices without substantial effort on their part, by providing more information than the consumer has at present.[8]

It can also induce retailers and others in the supply chain to provide consumers with lower-carbon products. For example, high carbon footprint disclosures could negatively affect a corporation's reputation and motivate the corporation to set goals to decarbonize its business.[9] The process of collecting carbon footprint data itself would also require manufacturers to

[6] There is more than one way to calculate a product's carbon footprint. "Gate vs. Grave: What's the Best Way to Measure Your Carbon Footprint?" Clearloop, 24 Mar. 2021. https://clearloop.us/2021/03/24/cradle-to-gate-vs-cradle-to-grave/

[7] Vandenbergh, Michael & Dietz, Thomas & Stern, Paul. (2011). Time to Try Carbon Labelling. Nature Climate Change. 1. 10.1038/nclimate1071.

[8] Id.

[9] Stern & Michael P. Vandenbergh, 2022. "Revisiting the promise of carbon labelling," Nature Climate Change, Nature, vol. 12(2), pages 132-140, February.

identify inefficiencies in their manufacturing, production, and/or distribution processes that they could then, in turn, be motivated to eliminate.[10]

In addition, the disclosure protocols of a carbon labeling program can generate information about product-specific GHG emissions that, even if not all put on a label, can be used by governments for broader climate mitigation measures, such as border adjustments and carbon taxes.[11]

A Federal/State Carbon Labeling Program for Consumer Products

This model law requires the implementation of a federal/state carbon labeling program, in which a participating manufacturer calculates the carbon footprint of its product by using the criteria developed or adopted by the federal/state government agency, and after having that calculation independently verified by a designated third-party nongovernment organization, has the relevant portions of that information, as determined by the agency, disclosed on a government-sponsored label directed to the public.

A. Standardization and Uniformity

The carbon labeling program should be government-sponsored because of the federal/state government's extensive reach and capability to establish a universally applied carbon footprint calculation standard. Meaningful comparisons of carbon footprints across products or the same product over time can only be achieved by using the same standard.[12] Multiple labels created by private actors using different protocols for calculating carbon footprints would create confusion and mistrust among consumers.[13]

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[10] Vandenbergh, Michael. How Carbon Labels Can Aid in the Fight Against Climate Change. https://news.vanderbilt.edu/2022/01/27/how-carbon-labels-can-aid-in-the-fight-against-climate-change/

[11] Stern & Michael P. Vandenbergh, 2022. "Revisiting the promise of carbon labelling," Nature Climate Change, Nature, vol. 12(2), pages 132-140, February.

[12] Id.

[13] Kardis, Arlene. "Will Emerging Carbon Labels Become Norms Like Nutrition Labels?" Waste 360, 7 Apr. 2022. https://www.waste360.com/sustainability/will-emerging-carbon-labels-become-norms-nutrition-labels

Concerning the standard to be used, various protocols for carbon footprint calculation, such as the Publicly Available Specification (PAS) 2050, GHG Protocol Product Standard (GHG Protocol), and ISO 14067 Carbon Footprint of Products (ISO 14067) have already been developed by experts.[14] In this model law, lawmakers have the discretion to develop or choose an existing calculation standard, to uniformly apply in the program. It is the uniform, widespread application of this standard that will prevent fragmentation and ensure that enough products are labeled for consumers to readily compare.

B. Independent Verification

The value of a carbon footprint label also rests on the assurance that the disclosed information is credible. Reliable data supports the fight against greenwashing by providing a metric to assess companies' climate claims. Verification is crucial to ensure that any actions or decisions based on the data are grounded in a correct and consistent analysis.[15] Thus, this model law instructs the agency to designate a third-party non-governmental organization to independently verify the manufacturer's data sources and calculations and certify the accurate application of the standard. Involving an independent third-party non-governmental organization in the certification process would enhance transparency and foster consumer trust.[16]

C. Voluntary to Become Mandatory Participation of Manufacturers

Lawmakers can decide whether a manufacturer's participation in the proposed labeling program should be mandatory or voluntary. However, this memorandum recommends that, at

[14] Stern & Michael P. Vandenbergh, 2022. "Revisiting the promise of carbon labelling," Nature Climate Change, Nature, vol. 12(2), pages 132-140, February.
[15] Id.
[16] Climate Neutral is an example of a nonprofit organization that certifies and awards product labels to businesses—both small and large—that demonstrate offsetting their carbon emissions. Currently, Climate Neutral has certified 294 companies, with 80 percent domestic and 20 percent international representation, including well-known names like Allbirds, Kickstarter, Klean Kanteen, REI, and Bud Light Next.

least in the beginning, manufacturer participation in the labeling program should be voluntary, with a potential shift to mandatory participation in the future.

Opting for voluntary participation by manufacturers could potentially reduce opposition to the bill's progression into law.

Voluntary participation would also allow for the program to be rolled out gradually, which may be important to protect the interests of smaller producers. Large organizations, through substantial purchasing power, can use emissions data to push suppliers to reduce emissions so that they may reduce their carbon footprint faster than small producers who do not have that leverage.[17] Therefore, requiring all producers – large and small – from the start, to disclose their carbon footprints may put small producers at an unfair disadvantage. Allowing more time to pass before mandating all producers to carry a disclosure label may allow the positive effects of the larger organizations' push for suppliers to reduce emissions – to reach and benefit smaller producers over time.

In any event, relatively little research has focused on the impact of carbon labeling on the carbon footprint of retailers, producers, intermediaries, and sale consumers.[18] There may be other challenges that need to be addressed. Given the potential for unforeseen challenges, balanced with the urgent need for action, the labeling system should be developed and modified gradually through a learning process[19], which can best be afforded by a voluntary participation program.

[17] Stern & Michael P. Vandenbergh, 2022. "Revisiting the promise of carbon labelling," Nature Climate Change, Nature, vol. 12(2), pages 132-140, February.
[18] Id.
[19] Id.

The voluntary nature of the program would not necessarily diminish its impact. Examples like Germany's Blue Angel Label[20] and the United Kingdom's Carbon Trust Label[21] illustrate successful government-sponsored carbon labeling programs that operate on the voluntary participation of businesses. Similarly, the U.S. Energy Star certification allows manufacturers to choose participation by meeting specified energy efficiency criteria, and if compliant, they can carry the Energy Star label.[22] Notably, several current Energy Star standards are expected to transition into future mandatory minimum standards for all products,[23] showcasing the potential evolution of a certification and labeling program from voluntary to mandatory status.

The Model Federal/State Law

This model federal/state law is based on selected parts of the California Assembly Bill 19, the Carbon Labeling Act of 2009,[24] and the certification and disclosure principles of Publicly Available Specification (PAS) 2050 – Specification for the assessment of the life cycle greenhouse gas emissions of goods and services.[25]

This model law requires the appropriate federal or state government agency to develop and implement a carbon labeling program for the [voluntary] assessment, verification, and disclosure, through a government-sponsored product label, of the carbon footprint of a consumer

[20] Introduced in 1978, Blue Angel is a voluntary, government-sponsored program in Germany that works with businesses and NGOs to award the Blue Angel eco-label to environmentally friendly products.
[21] Created by the British government in 2001, Carbon Trust is an independent company that awards "carbon reduction labels" on products of companies that commit to reducing the carbon footprint of their products within the next two years. Companies thereby agree to a "reduce it or lose it" clause which states that if they do not reduce their carbon footprint within two years, the Carbon Trust will withdraw the label.
[22] Energy Star. (n.d.). *How a Product Earns the ENERGY STAR Label*. ENERGY STAR. https://www.energystar.gov/products/how-product-earns-energy-star-label
[23] Stern & Michael P. Vandenbergh, 2022. "Revisiting the promise of carbon labelling," Nature Climate Change, Nature, vol. 12(2), pages 132-140, February.
[24] Greenhouse gas emissions: consumer product labeling, Cal. Assemb. B. 19 (2009-2010), (Cal. Stat. 2008). http://leginfo.ca.gov/pub/09-10/bill/asm/ab_0001-0050/ab_19_bill_20081201_introduced.pdf
[25] *See also* British Standards. (n.d.). Guide to PAS 2050 How to assess the carbon footprint of goods and services. London. https://www.co2-sachverstaendiger.de/pdf/BSI%20Guide%20to%20PAS2050.pdf

product sold in [the United States/State]. The model law requires the agency to include a consumer product category in this program if it determines that it is feasible and practical to do so.

The model law requires the agency to establish a standard methodology for calculating the carbon footprint of a consumer product that manufacturers who [choose to] participate in this program will then use to calculate the carbon footprint of its products.

It requires the agency to designate a third-party nongovernment organization to scrutinize the process used by the participating manufacturer to calculate its product's carbon footprint, verify the data sources and calculations, and certify the correct application of the methodology.

It requires the agency to develop labeling standards and a standard carbon footprint label that clearly and effectively presents easily understandable, relevant information about the product's verified carbon footprint data.

It requires the participating consumer product manufacturer to have the relevant portions of the verified carbon footprint data disclosed on the standard carbon footprint label established by the Agency, in accordance with the labeling standards developed by the Agency.

It requires the participating manufacturer to place the carbon footprint label on its products and/or product packaging and/or product advertising, in accordance with the labeling standards developed by the Agency.

Penalties would be assessed for making false, deceptive, or unsubstantiated claims or knowingly providing false, deceptive, or unsubstantiated data for purposes of this program to prevent "greenwashing" by companies and ensure that any actions or decisions based on the data are grounded in a correct and consistent analysis.