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More Than Meats the Eye: An Argument for a Comparative Energy Meat Label

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MORE THAN MEATS THE EYE: AN ARGUMENT FOR A COMPARATIVE ENERGY MEAT LABEL

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I. INTRODUCTION

As the need to promote energy efficiency grows more urgent, there is still a dearth of solutions concerning the energy used in the United States' food system. Considering that an estimated fifteen percent of the United States' energy usage comes from food, any comprehensive plan to encourage efficient energy use must consider how the country's food is created and transported.[2] On an international scale, food systems consume thirty percent of the energy available and produce about twenty percent of the greenhouse gases created in the world.[3] The discrepancy between the energy usage used for food consumed in the United States and internationally may exist because Americans[4] spend a smaller percentage of their incomes on food than citizens of any other country in the world.[5]

There is a plethora of labels and certifications available for a producer or manufacturer who wants to promote its product as being environmentally or energy friendly. These are "ecolabels," the definition of which somewhat varies depending on whether it is voluntary and what it may label.[6] There is not a statutory definition, but ecolabels have been described as "signs, symbols, or seals, used with goods or services, whose essential function is to indicate that the products in connection with which they are used satisfy criteria for environmental preferability [sic] or reduced environmental harm."[7]

This article places energy-related labels under that schema because most exist as a conduit of exposing excessive energy use in the context

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1. Mr. Nemkov is a J.D. Candidate 2017 at the University of Denver Sturm College of Law.

2. *See* Canning, P., et al., *Energy Use in the U.S. Food System*, *Economic Research Report Number 94*, U.S. DEP'T OF AGRIC. (2010) *available at* http://www.ers.usda.gov/media/136418/err94_1_.pdf.

3. *Energy-Smart Food at FAO: An Overview*, FOOD AND AGRIC. ORG. OF THE UNITED NATIONS (2012) at 6, *available at* http://www.fao.org/docrep/015/an913e/an913e.pdf.

4. The term "Americans" in this paper is exclusive to citizens of the United States.

5. Eliza Barclay, *Your Grandparents Spent More Of Their Money On Food Than You Do*, NPR (Mar. 5, 2015), http://www.npr.org/sections/thesalt/2015/03/02/389578089/your-grandparents-spent-more-of-their-money-on-food-than-you-do; *Percent of consumer expenditures spent on food, alcoholic beverages, and tobacco that were consumed at home, by selected countries*, *Food Expenditures*, U.S. DEP'T OF AGRIC. ECONOMIC RESEARCH SERVICE, http://www.ers.usda.gov/data-products/food-expenditures.aspx (last visited Nov. 21, 2015).

6. GLOBAL ECOLABELING NETWORK, http://www.globalecolabelling.net/what_is_ecolabelling/index.htm (last visited Nov. 21, 2015) ("'Ecolabelling' is a voluntary method of environmental performance certification and labelling that is practised around the world").

7. Jeffrey Belson, *Ecolabels: Ownership, Use, and the Public Interest*, 102 TRADEMARK REP. 1254, 1254 (2012).

of environmental harm or economic incentive.[8] Some labels are created and given by independent organizations, others are self-declared by the company giving itself the label, and yet others are sponsored and given by the government.[9] The rapid growth of these labels has led to a lack of clarity and skepticism about their efficacy.[10] However, when used correctly, labels are an efficient way to promote consumer knowledge and provide clarity.[11]

In the realm of food labeling, there exist only a few labels that are issued by the government and are mandatory.[12] Since the government is in the exclusive position to have the power to mandate labels and declare public policy, it is uniquely suited to make a wide impact.

Meat is an ideal candidate for a mandatory label to promote energy efficiency.[13] Meat is a large part of America's diet, with per capita meat

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8. *See Directive 2010/30/EU of the European Parliament and of the Council of 19 May 2010 on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products*, EUR-LEX, http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32010L0030 (last visited Nov. 21, 2015) ("The provision of accurate, relevant and comparable information on the specific energy consumption of energy-related products should influence the end-user's choice in favour of those products which consume or indirectly result in consuming less energy and other essential resources during use, thus prompting manufacturers to take steps to reduce the consumption of energy and other essential resources of the products which they manufacture."); *see also About Energy Star*, ENERGY STAR, https://www.energystar.gov/about (last visited Nov. 21, 2015) ("ENERGY STAR is a U.S. Environmental Protection Agency (EPA) voluntary program that helps businesses and individuals save money and protect our climate through superior energy efficiency.").

9. Jason Czarnezki, et al., *Creating Order Amidst Food Ecolabel Chaos*, 25 DUKE ENVTL. L. & POL'Y F. 281, 283 (2015).

10. *Id.* at 281.

11. J.C. Horvath, *How Can Better Food Labels Contribute to True Choice?*, 13 MINN. J.L. SCI. & TECH. 359, 382 (2012) (Article that recommends the development and implementation of FDA-mandated universal allergen warnings and front-of-pack labels as way to improve consumer clarity).

12. Czarnezki, *supra* note 9, at 294; *see also* Megan S. Houston, *Ecolabel Programs and Green Consumerism: Preserving A Hybrid Approach to Environmental Regulation*, 7 BROOK. J. CORP. FIN. & COM. L. 225, 225 (2012) ("Modern government environmental programs often intertwine regulatory standards with ecolabel programs, but whether such intervention has eradicated the problems of technology-based standards is questionable.").

13. This paper uses the term "meat" to conform to the government's definition of both meat and poultry. "Meat food product" is defined in 21 U.S.C. § 601 ("The term 'meat food product' means any product capable of use as human food which is made wholly or in part from any meat or other portion of the carcass of any cattle, sheep, swine, or goats, excepting products which contain meat or other portions of such carcasses only in a relatively small proportion or historically have not been considered by consumers as products of the meat food industry, and which are exempted from definition as a meat food product by the Secretary under such conditions as he may prescribe to assure that the meat or other portions of such carcasses contained in such product are not adulterated and that such products are not represented as meat food products. This term as applied to food products of equines shall have a meaning comparable to that provided in this paragraph with respect to cattle, sheep, swine, and goats."). "Poultry" product is defined in 21 U.S.C.A. § 453 ("The term 'poultry product' means any poultry carcass, or part thereof; or any product which is made wholly or in part from any poultry carcass or part thereof, excepting products which contain poultry ingredients only in a relatively small proportion or historically have not been considered by consumers as products of the poultry food industry, and which are exempted by the Secretary from definition as a poultry product under such conditions as the Secretary may prescribe to assure that the poultry ingredients in such products are not adulterated and that such products are not represented as poultry products.").

and poultry consumption averaging around 200 pounds per person per year.[14] *See Figure One*. In 2011, the meat and poultry production in the United States reached almost 93 billion pounds, up 800 million pounds from 2010.[15] It is also inefficient. "It takes, on average, 28 calories of fossil fuel energy to produce [one] calorie of meat protein for human consumption, [whereas] it takes only 3.3 calories of fossil-fuel energy to produce one calorie of protein from grain for human consumption."[16]

Livestock is a large part of the greenhouse gases emitted by the agricultural sector, which was responsible for ten percent of the total U.S. greenhouse gas emissions in 2012.[17] The percentage of the food system's effect on energy resources and greenhouse gas emissions is likely higher, but is difficult to quantify because the food production system is so varied and uses energy during every step.[18] For example, a calculation of the energy needed to have a steak end up on the dinner table would need to include the energy used to grow the feed given to livestock, to slaughter the livestock, to store the product, to transport the meat to the consumer, and to cook the meat. This implicates energy costs of agriculture, transportation, industry, and residential sources.[19] *Figure Two* shows the fossil energy inputs needed to create the food energy outputs for the United States' food system, measured in BTUs. It incorporates energy across a wide swath of sectors, from agricultural production to packaging material.

This article will explore the practicability of a label affixed to meat products that states the comparative energy used to create the product. If a concept of government is to promote environmental and energy sustainability for the future, the government should intervene on the free market and require a comparative energy meat label (CEML) on meat products in order to promote the production of meat with low energy output in order to increase energy efficiency in food production.[20] The

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14. *Organisation for Economic Co-operation and Development/Food and Agriculture Organization of the United Nations* (2014), OECD PUBLISHING, http://dx.doi.org/10.1787/agr_outlook-2014-en (last visited Nov. 21, 2015).

15. Trae Norton, *From the Lab to the Supermarket: In Vitro Meat As A Viable Alternative to Traditional Meat Production*, 11 J. FOOD L. & POL'Y 157, 160 (2015) (citing AM. MEAT INST., *The United States Meat Industry at a Glance*, MeatAMI.com, http://www.meatami.com/ht/d/sp/i/47465/pid/47465).

16. *Meat! Now It's Not Personal.*, WORLD WATCH MAGAZINE (July/August 2004) (last visited Nov. 21, 2015), *available at* http://www.worldwatch.org/system/files/EP174A.pdf at 2.

17. *U.S. Food System*, Michigan Center for Sustainable Systems *available at* http://css.snre.umich.edu/sites/default/files/U.S._Food_System_Factsheet_CSS01-06.pdf (citing Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990 – 2012 http://www3.epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2014-Main-Text.pdf).

18. Daniel A. Farber, *Sustainable Consumption, Energy Policy, and Individual Well-Being*, 65 VAND. L. REV. 1479, 1525 (2012) (citing Hannah Pearce, et al., *Double Dividend? Promoting Good Nutrition and Sustainable Consumption Through Healthy School Meals* 11–23, SOIL ASSOC., (2005), available at http://www.sd-commission.org.uk/data/files/publications/Double_Dividend.pdf.).

19. *See* Canning, *supra* note 2, at 3–4.

20. It is assumption that this government concept of intervention bests the pure laissez-faire

CEML itself will be affixed either to individual product labels, product invoices, or display signs for the product. It will have three components: first, a simple color code to correspond to the product's level of efficiency; second, the energy inputs that went in to creating the specific product; third, the product's "efficiency ratio," a quotient of the caloric energy output divided by the energy input.

First, the article will survey the current field of environmental and energy sustainability labels related to energy efficiency and food. Second, the article will theorize and discuss a model label. Finally, the article will include a discussion of potential legal challenges to CEML. Overall, a government-mandated comparative energy label on meat products would benefit the public by vastly increasing the public awareness of the energy it takes to create the meat it consumes.

II. SURVEY OF CURRENT ECOLABELS

Most ecolabels bring awareness to harmful products or environmental concerns. The objective of a new food ecolabel should achieve a broader sense of "sustainable food" that combines "lowering the carbon footprint of food at all stages (agriculture, distribution, and packaging), reducing consumption, supplying healthier food, promoting sustainable agriculture (less resource intensive and less polluting agriculture), and encouraging water and land use efficiency."[21] In order to theorize a CEML that works most effectively, this section looks at the efficacy of existing ecolabels from a variety of contexts. First, this section examines third-party carbon footprint and food miles labels. Second, this section looks at the government Energy Star certification. Finally, this section looks at the government-mandated country of origin labels.

A. Carbon footprint and food miles labeling

Carbon labels display how much carbon dioxide and other greenhouse gases were emitted during the manufacture of a particular product, the result of which is commonly referred to as a product's carbon footprint.[22] In the United States, there are a variety of carbon footprint labels a company can purchase for its product.[23] There are a few

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theory of government.

21. Jason J. Czarnezki, *The Future of Food Ecolabeling: Organic, Carbon Footprint, and Environmental Life-Cycle Analysis*, 30 STAN. ENVTL. L.J. 3, 5 (2011).

22. Stacey R. O'Neill, *Consuming for the Environment: A Proposal for Carbon Labels in the United States*, 39 CAL. W. INT'L L.J. 393, 403 (2009).

23. *Reduce Your Product's Carbon Footprint With Carbonfree® Certification*, https://www.carbonfund.org/offset/product-certification (last visited Nov. 21, 2015); *Carbon Footprint Labels from the Carbon Trust*, http://www.carbontrust.com/client-services/footprinting/footprint-certification/carbon-reduction-label (last visited Nov. 21, 2015); *GreenCircle Certification*, http://www.greencirclecertified.com/ (last visited Nov. 21, 2015); *CEMARS - Certified Emissions Measurement And Reduction Scheme*, http://www.carbonzero.co.nz/cemars/ (last visited Nov. 21, 2015); http://www.verus-co2.com/certification.html (last visited Nov. 21, 2015); *Carbon Neutral Certification*,

commonly used methods to quantify the carbon analysis: (1) a life-cycle assessment will measure the product's carbon emissions from "cradle-to-market"; (2) an Environmental Input-Output Life-Cycle Assessment method estimates the materials and energy expended and the resulting environmental emissions based on activities in the economy; and (3) a hybrid of the previous two, relying on national averages for information the company does not specifically provide.[24]

The concept of accounting for food miles is similar, but stems from the local food movement,[25] and measures the distance food travels from its point of origin to its point of consumption.[26] A food miles label would then list the miles the product traveled to get to the point of sale, as opposed to the carbon output.

Carbon footprint and food miles ecolabels provide awareness as a conduit to positive societal effects including: (1) protecting the environment by stemming greenhouse gas emissions (and encouraging manufacturer's to do the same); (2) having a shorter supply chain for food safety concerns; and (3) creating more nutritious food.[27]

However, criticism abounds for carbon footprint and food miles ecolabels. First, there are a variety of potential challenges from countries under the World Trade Organization's (WTO) rules.[28] The WTO requires that countries treat all trading partners equally, so a partner country could lodge a WTO challenge if a government was found by the WTO to legislate discrimination on the basis of carbon footprint or food miles labels.[29] Carbon footprint labels are further critiqued for consumer confusion and their effectiveness.[30]

Finally, a downside of carbon footprint labels is that they could discourage people from buying from poorer nations because of the relation between miles traveled and a larger carbon print. This is reasoned away by stating, "While this disadvantage to poor[er] foreign markets may be an unfortunate side effect of carbon labeling, it must be secondary to the more severe consequences presented by global

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http://www.carbonneutral.com/ (last visited Nov. 21, 2015); *The Bay Area Green Business Program* http://www.greenbiz.ca.gov/ (last visited Nov. 21, 2015).

24. O'Neill, *supra* note 22, at 404.

25. Meredith Kolsky Lewis & Andrew D. Mitchell, *Food Miles: Environmental Protection or Veiled Protectionism?*, 35 MICH. J. INT'L L. 579, 580 (2014).

26. *Id.* at 581.

27. *Id.* at 586 (*citing* Els Wynen & David Vanzetti, *No Through Road: The Limitations of Food Miles* 1, ASIAN DEV. BANK INST., WORKING PAPER NO. 118 (Oct. 2008), available at http://www.adbi.org/files/2008.10.wp118. limitations.food.miles.pdf)); O'Neill, *supra* note 22, at 401.

28. O'Neill, *supra* note 22, at 408; Kolsky Lewis & Mitchell, *supra* note 25, at 593.

29. *Id.*

30. *Id.*, at 412 ("[c]ritics of carbon labeling . . . argue that although consumers welcome the information on products, a majority of them do not understand the meaning of a carbon footprint" and critics further argue there is not proof consumers would actually make enough of an impact based on the information).

warming."[31] However, there is substantial skepticism that greater food miles actually equate to higher greenhouse gas emissions.[32] Studies have shown "imported organic foods would have a lesser impact than domestically grown nonorganic foods"[33] and the production process itself, rather than transportation, accounts for more of the greenhouse gasses emitted in food production.[34] For example, "grapes shipped by boat from Chile to Philadelphia, Pennsylvania resulted in a similar level of carbon dioxide emissions per pound as truck transport of grapes from California to Philadelphia."[35]

Overall, the intentions of carbon footprint and food miles labels are positive, but the actual effectiveness towards energy efficiency—even if the labels were highly used—is suspect. The greatest concerns for carbon footprint labels are a lack of accessibility and understanding. Proponents attempt to temper this using the consideration of food miles. But this positive (for carbon footprint labels and for the food miles label on its own) is potentially mooted because food miles are not the most effective way to measure energy use. This is where the proposed CEML fits in.

B. Energy Star labels

The Energy Star program was established by the Environmental Protection Agency in 1992, and in 2005 Congress enacted the Energy Policy Act as a voluntary program between the Department of Energy and the EPA which states its goal is "to identify and promote energy-efficient products and buildings in order to reduce energy consumption, improve energy security, and reduce pollution through voluntary labeling of, or other forms of communication about, products and buildings that meet the highest energy conservation standards."[36] The program gives certifications to products, new homes, commercial buildings, and industrial plants.[37] Most pertinent here are the certifications given to products.

> In order to earn the label, [Energy Star] products must be third-party certified based on testing in EPA-recognized laboratories. In addition to up-front testing, a percentage of all [Energy Star] products are subject to "off–the–shelf" verification testing each year. The goal of this testing is to ensure that changes or variations in the

31. *Id.*
32. Kolsky Lewis & Mitchell, *supra* note 25, at 587.
33. *Id.* (*citing* DEPARTMENT FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS, THE MILES AS AN INDICATOR OF SUSTAINABLE DEVELOPMENT 2005, ED50254 (U.K.)).
34. *Id.* at 590 (*citing* Rich Pirog, *Food Miles: A Simple Metaphor to Contrast Local and Global Food Systems*, HUNGER & ENVTL. NUTRITION NEWSL. (Hunger & Environmental Nutrition Dietetic Practice Group, Carson City, NV), Summer 2004, at (1)).
35. *Id.*
36. 42 U.S.C. § 6294a; *About Energy Star*, ENERGY STAR, https://www.energystar.gov/about (last visited Nov. 21, 2015).
37. *About Energy Star*, ENERGY STAR, https://www.energystar.gov/about (last visited Nov. 21, 2015).

> manufacturing process do not undermine a product's qualification with [Energy Star] requirements.[38]

The products certified include furnaces, lamps, televisions, ice makers, and dishwashers.[39] The certification process (using a dishwasher as an example) includes meeting energy performance requirements, calculating the maximum annual energy consumption, providing optional cleaning performance reports, criteria for connections to power, and requirements for passing a test promulgated by the Code of Federal Regulations.[40] The Code of Federal Regulations itself provides detailed instructions for test runs, such as the water temperature and what to put into the machine.[41]

The Energy Star label has had a wide impact. In 2014, 320 million Energy Star label certified products were purchased across more than 70 product categories, and more than 85 percent of the American public recognized the Energy Star label.[42] Further, Energy Star initiatives saved 300 million metric tons of greenhouse gas emissions in 2014, and have cumulatively saved more than three trillion kilowatt hours of energy since 1992. *See Figure Three.*

However, the Energy Star program has seen its share of criticism. First, there were concerns of product dilution. Even though the program aimed to identify only the top twenty-five percent of performing appliances, Consumer Reports reported in 2010 that 75 percent of TVs, dishwashers, and humidifiers qualified for Energy Star designation.[43] Further, the Government Accountability Office (GAO) found it was easy to certify "radically inefficient products" and easily manipulate the certification requirements.[44] In response to this, Energy Star created a "most efficient" label, which did not put a specific percentage on the qualification, but aimed to certify the top five percent of energy efficient products.[45] These products are subject to additional verification testing administered by EPA-recognized certification bodies.[46] In 2014, fifty-

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38. *Id*.

39. *Product Specifications & Partner Commitments Search*, ENERGY STAR, https://www.energystar.gov/products/spec (last visited Nov. 21, 2015).

40. *ENERGY STAR® Program Requirements for Residential Dishwashers Partner Commitments*, ENERGY STAR, https://www.energystar.gov/sites/default/files/ENERGY%20STAR%20Residential%20Dishwasher%20Version%206.0%20Final%20Program%20Requirements_0.pdf (last visited Nov. 21, 2015); 10 C.F.R. Pt. 430, Subpt. B, App. C1.

41. *Id.*

42. *ENERGY STAR® Overview Of 2014 Achievements*, ENERGY STAR, http://www.energystar.gov/ia/partners/publications/pubdocs/Overview%20of%20Achievements_508Compliant.pdf (last visited Nov. 21, 2015).

43. Houston, *supra* note 12, at 245 (*citing* Taylor Knight, *New Label Takes Energy Star One Step Further*, USA TODAY, at 3b (Aug. 31, 2011).

44. *Id.* (*citing* Sean Rosner, *Energy Star Criteria Now Tougher*, MOTHER EARTH NEWS (Aug.-Sept. 2010)).

45. Taylor Knight, *New Label Takes Energy Star One Step Further*, USA TODAY, at 3b (Aug. 31, 2011).

46. *Id*

seven models were decertified based on the results of this more rigorous post-market testing.[47]

Overall, the Energy Star certification and label has undoubtedly done good for energy efficiency since its inception, but the numbers may be deceiving. Such a large, multifaceted regulatory system is complex and led to complaints of government accountability.[48] Further, if the Energy Star label were mandatory, the amount of potential fraud and inefficiency would undeniably grow. The purposed CEML must avoid the pitfalls of bureaucracy that plague the multi-agency realities of such a large program.

C. Country of origin labels

Country of origin labeling (COOL) notifies consumers of a meat product's source location.[49] "While the underlying rationales for COOL in the United States are improving the safety of foreign goods and economic protectionism for domestic products, COOL also allows consumers to choose food products that did not travel so far to market and thus may have a lower carbon footprint (i.e., lower food miles)."[50] Along with irradiated products[51], COOL is one of the only federally mandated labels that must be affixed to applicable food.[52]

The 2002 Farm Bill initiated the current iteration of COOL and required a retailer of a "covered commodity" to inform consumers at the final point of sale of the covered commodity's country of origin.[53] Covered commodities include: muscle cuts of beef, lamb, pork, and venison; ground beef, ground lamb, ground pork, and ground venison; farm-raised fish; wild fish; a perishable agricultural commodity; peanuts; and [sic] meat produced from goats; chicken, in whole and in part; ginseng; pecans; and macadamia nuts.[54] A report by the Government Accountability Office noted that, if given the choice, consumers would choose to purchase domestic beef in order to support U.S. businesses and farmers.[55] The bill was passed into law despite the vociferous and deep-

47. *Id.*

48. Matthew Wald, *Energy Star Appliances May Not All Be Efficient, Audit Finds*, N.Y. TIMES (Oct. 18, 2009), *available at* http://www.nytimes.com/2009/10/19/business/energy-environment/19star.html.

49. Czarnezki, *supra* note 9, at 294 (*quoting* Peter Chang, *Country of Origin Labeling: History and Public Choice Theory*, 64 FOOD & DRUG L.J. 693 (2009); Anastasia Lewandoski, *Legislative Update: Country-of-Origin Labeling*, 9 SUSTAINABLE DEV. L. & POL'Y 62 (2008)).

50. *Id.*, at 294.

51. 21 C.F.R. § 179.26 (2014).

52. Czarnezki, *supra* note 9, at 294; Neil D. Hamilton, *Legal Issues Shaping Society's Acceptance of Biotechnology and Genetically Modified Organisms*, 6 DRAKE J. AGRIC. L. 81, 98 (2001).

53. 7 U.S.C. § 1638a.

54. 7 U.S.C. § 1638.

55. *BEEF AND LAMB Implications of Labeling by Country of Origin*, U.S. GEN. ACCOUNTING OFFICE, at 4 (Jan. 2000), *available at* http://www.gao.gov/assets/230/228665.pdf.

pocketed dissent from powerful industry groups.[56]

COOL is regulated by the USDA. After contentious amendments and revisions to the bill relating to meat products from another country, but modified in the United States, there are now four options in how to label an applicable covered commodity's source: (1) United States origin exclusively; (2) origin and production entirely outside the United States (with the outside country listed); (3) products of the United Stated and non-United States that have combined origin (with both the United States and the outside country listed); and (4) products of blended origin.[57]

While COOL has had strong support from the general public,[58] it has been especially divisive in the past few years. COOL has seen challenges for First Amendment violations[59] and has run afoul of the WTO, leading to potentially costly consequences for the United States.[60] In May of 2015, Canada and Mexico won a final WTO ruling that the COOL laws discriminate against animal products from their respective countries, and COOL labels for beef and pork have been repealed.[61]

Overall, consumer approval of COOL is a signifier that CEML would be received well in the public because CEML closely aligns with the structure and goals of COOL. The story obviously does not end there, though, due to the recent developments regarding COOL. These would be hurdles to a proposed CEML, and similar concerns may exist in conflict with international trade agreements. Section III will argue how CEML could survive such challenges.

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56. Peter Chang, *Country of Origin Labeling: History and Public Choice Theory*, 64 FOOD & DRUG L.J. 693, 702 (2009) ("A number of powerful producer and retail groups, including Wal-Mart, NCBA, ConAgra, National Pork Producers Council, Grocery Manufacturers of America, and others, joined together to halt the mandatory labeling program. These organizations and others gave over $2.5 million in contributions to various Congressmen. In return for such largesse, Rep. Bob Goodlatte (R-VA), who received over $103,000 in donations from COOL opponents, introduced the Food Promotion Act in the House to change COOL into a voluntary program; and Sen. John Cornyn (R-TX), who received $38,250, introduced a similar act in the Senate").

57. Czarnezki, *supra* note 9, at 295 (*citing* C. Parr Rosson, III & Flynn J. Adcock, *The Potential Impacts of Mandatory Country-of-Origin Labeling on U.S. Agriculture, in* INTERNATIONAL AGRICULTURAL TRADE DISPUTES: CASE STUDIES IN NORTH AMERICA 38 (Andrew Schmitz et al. eds., 2005)).

58. Lydia Zuraw, *House Votes to Repeal Country-of-Origin Labeling for Meat*, FOOD SARETY NEWS (Jun. 11, 2015) *available at* http://www.foodsafetynews.com/2015/06/house-votes-to-repeal-country-of-origin-labeling-for-meat/#.VirAC61Viko (last visted Nov. 21, 2015) ("Rep. Jim McGovern (D-MA) . . . referenc[ed] a survey conducted by the Consumer Federation of America finding that 90 percent of Americans favored requiring a label with the country of origin on meat").

59. Am. Meat Inst. v. U.S. Dep't of Agric., 760 F.3d 18 (D.C. Cir. 2014).

60. Tennille Tracy, *House Votes to Remove Country-of-Origin Labels on Meat Sold in U.S.*, WALL STREET JOURNAL (last updated June 10, 2015, 11:31 p.m. ET), http://www.wsj.com/articles/house-votes-to-remove-country-of-origin-labels-on-meat-sold-in-u-s-1433990294.

61. *Certain Country of Origin Labelling (COOL) Requirements*, WORLD TRADE ORG., *available at* https://www.wto.org/english/tratop_e/dispu_e/cases_e/1pagesum_e/ds384sum_e.pdf (last visited Nov. 21, 2015); Tracy, *supra* note 60.

III. A PROPOSED COMPARATIVE ENERGY MEAT LABEL

In order to consider the viability of CEML, this section will first present the process the government would use to implement CEML. This section will then present a model CEML, including a proposed statute, a discussion on the best theory of energy quantification, how the data would be collected, a supply chain analysis, and a prototype label.

A. The process the government would use to implement CEML

An initial matter to discuss is what government agency would regulate CEML. USDA and FDA have an interrelated system of oversight of America's food system. USDA is a cabinet-level department that administers programs to help farmers and handles concerns regarding food safety for consumers.[62] USDA also distributes price supports and other subsidies to farmers, certifies products as organic, inspects food processed at agricultural facilities, and provides food assistance and nutrition education.[63]

FDA is located within the Department of Health and Human Services and regulates a wide range of medical and food products, including reviewing new medicines and inspecting food processing centers.[64]

In the food realm, the two agencies can have a confusing interplay. For example, FDA inspects shelled eggs, but USDA is responsible for egg products, which include liquid, frozen and dehydrated eggs.[65] FDA regulates the food chickens eat, but USDA regulates the laying facility.[66] "The determination of whether a product falls under the jurisdiction of USDA's FSIS (Food Safety and Inspection Service) or FDA is referred to as 'amenability.' Amenability decisions are based on how a product is formulated, not the composition of the finished product."[67] USDA is responsible for the safety of meat, poultry and egg products, while FDA regulates all other foods, which leads to overlap and confusion in many

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62. *United States Department of Agriculture*, ALLGOV, http://www.allgov.com/departments/department-of-agriculture?detailsDepartmentID=568 (last visited Nov. 21, 2015).

63. *Id.*

64. *Food and Drug Administration*, ALLGOV, http://www.allgov.com/departments/department-of-health-and-human-services/food-and-drug-administration-fda?agencyid=7405 (last visited Nov. 21, 2015).

65. Gretchen Goetz, *Who Inspects What? A Food Safety Scramble*, FOOD SAFETY NEWS, Dec. 16, 2010, http://www.foodsafetynews.com/2010/12/who-inspects-what-a-food-safety-scramble/#.ViwJWa1Viko.

66. *Id.*

67. Post, R., et al., *A Guide To Federal Food Labeling Requirements For Meat, Poultry, And Egg Products*, The Labeling and Consumer Protection Staff Office of Policy, Program, and Employee Development Food Safety and Inspection Serv., U.S. DEP'T OF AGRIC. (August 2007), *available at* http://www.fsis.usda.gov/wps/wcm/connect/f4af7c74-2b9f-4484-bb16-fd8f9820012d/Labeling_Requirements_Guide.pdf?MOD=AJPERES.

situations, especially processed foods.[68]

If the label were to follow the path of the similar federally mandated COOL, it would be under the guidance of USDA's Agricultural Marketing Service (AMS) and to a lesser extent FDA and the Federal Trade Commission (FTC).[69] For USDA, Congress gave the Secretary of Agriculture power to enact COOL through 7 U.S.C.A. § 1622[70] and 7 U.S.C.A. § 1638a.[71] AMS monitors the labeling under 7 C.F.R. §§ 65.300-65.500. This includes the definitions, enforcement, regulations, and oversight of COOL. FDA would independently have oversight of the actual labeling under 21 C.F.R. §§ 101.1-101.108. FDA does not preapprove labels, but ensures they are properly labeled under jurisdiction from the Federal Food, Drug, and Cosmetic Act and the Fair Packaging and Labeling Act.[72] Generally, FDA will confirm the information on the labels is correctly stated and displayed.[73]

Finally, Section 12 of the Federal Trade Commission Act specifically states the FTC shall prohibit the false advertisement of foods, drugs, and cosmetics.[74] This gives FTC power to pursue false labeling claims, a power well upheld by the courts.[75]

Overall, Congress would likely enact in a similar fashion to COOL. Then, USDA would administer the project, but FDA and FTC would have independent oversight over correct labeling standards and the avoidance of false advertising, respectively.

B. The model CEML

In order to present a cohesive model of a CEML, there are a variety of fields in which to consider. First, this section presents a proposed statute. Next, a brief discussion on the type of energy unit to use, followed by how data could be could be collected. Finally, this section will discuss a CEML's supply chain analysis and model label.

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68. Goetz, *supra* note 65.

69. *Country of Origin Labeling for Meat and Chicken*, FOOD SAFETY AND INSPECTION SERVICE, (last updated Aug. 21, 2013), *available at* http://www.fsis.usda.gov/wps/portal/fsis/topics/food-safety-education/get-answers/food-safety-fact-sheets/food-labeling/country-of-origin-labeling-for-meat-and-chicken/country-of-origin-labeling-for-meat-and-chicken.

70. "Duties of Secretary relating to agricultural products."

71. "The Secretary may conduct an audit of any person that prepares, stores, handles, or distributes a covered commodity for retail sale to verify compliance with this subchapter."

72. *Guidance for Industry: A Food Labeling Guide*, U.S. FOOD & DRUG ADMIN., (last updated Jan. 2013), *available at* http://www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/LabelingNutrition/ucm2006828.htm#introduction.

73. *Id.*

74. Post, *supra* note 67, at 11 (citing 15 U.S.C. § 5(2)).

75. *Id.* at 12 (citing Houbigant v. Federal Trade Commission, 139 F.2d 1019 (2d Cir. 1944), cert. denied, 323 U.S. 763 (1944) (FDA does not have exclusive jurisdiction over false and misleading labeling)); Fresh Grown Preserve Corp. v. Fed. Trade Comm'n, 125 F.2d 917 (2d Cir. 1942).

1. Proposed statute

Portions of the COOL statute could be closely replicated in a CEML statute. *Attachment One* is a sample CEML statute, including the most relevant (although not comprehensive) sections of the statute. *Attachment Two* shows a redlined version of the current, pertinent COOL statute for comparison. Additional portions would be needed to codify the enforcement and regulatory framework, but are beyond the scope of this article.

2. Type of energy unit

A threshold matter when considering CEML is to define what signifier of energy to use. It should be reliably quantifiable, uniform, and relatable to the public. The most relevant options are calories, joules, watts, and BTUs. Despite the potential downsides, calories are the best option. First, the United States is famously adverse to converting to the metric system as it is the only industrialized nation to not use it.[76] While FDA's requirement of dual (imperial and metric) labeling is one of the few examples of the metric system's use in the United States, adding the additional layer of a less common unit of measurement would probably not increase CEML's popular acceptance.[77]

Second, even though much of the energy use quantified in the U.S. Energy Information Administration (EIA) and U.S. Department of Commerce Bureau of Economic Analyses' (BEA) is in BTUs[78], calories are the most familiar unit of energy regarding food in the United States, and the data in BTUs can be easily converted. While the common connotation of "calorie" in the food world is actually a "kilocalorie,"[79] this misconception does not make a CEML too murky. Having consumers make the connection between caloric intake and the calories used to produce the item is likely relatable enough to make an impact.

3. How the data is collected

While the scale of instituting CEML would be monumental, it is feasible. Using data from EIA and BEA, a comprehensive energy use of the entire food system may be synthesized.[80] The most recent detailed,

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76. Zack Guzman, *Why the US hasn't fully adopted the metric system*, CNBC (Jun. 4, 2015) *available at* http://www.cnbc.com/2015/06/04/why-the-us-hasnt-fully-adopted-the-metric-system.html.

77. *Id.*

78. *See generally Total Energy*, U.S. ENERGY INFORMATION ADMIN., http://www.eia.gov/totalenergy/ (last visited Nov. 21, 2015); *see also Interactive Data*, U.S. DEP'T OF COMMERCE BUREAU OF ECONOMIC ANALYSIS, http://www.bea.gov/itable/ (last visited Nov. 21, 2015).

79. Linda Tarr Kent, *Why Do Food Labels Use Calories Instead of Joules or Kilojoules?*, LIVESTRONG.COM (Mar. 5, 2014) http://www.livestrong.com/article/49686-labels-use-calories-instead-joules/.

80. *Interactive Data*, U.S. DEPARTMENT OF COMMERCE BUREAU OF ECONOMIC ANALYSIS, http://www.bea.gov/itable/ (last visited Nov. 21, 2015) (This allows for interactive data to read

U.S. government-funded study looking at comprehensive energy use in the U.S. food system is from 2010, but uses quantified data from 1997 to 2002.[81] While this data is dated, it is still relevant because the methodologies the authors used illustrate the process needed for CEML analysis.[82] The authors of the 2010 report used an input-output (IO) material flow analysis to trace the energy sources used as fuel to final markets in the United States.[83] Essentially, the higher an IO ratio, the more efficient the product. The IO analysis is ideal because it analyzes "interdependencies, both among industries throughout an economy and between industry and final market sales."[84] In fact, a 2003 joint handbook from the United Nations, the European Commission, the International Monetary Fund, the Organization for Economic Co-operation and Development, and the World Bank recommended IO analysis as a best practice for "a consistent analysis of the contribution of the environment to the economy and of the impact of the economy on the environment.[85] Three interrelated steps are used to comprehensively measure the energy use.

> [The steps] (1) measure all known quantities of energy directly used in each domestic production activity, including household operations, organized into roughly 400 industry classifications; (2) trace the flow of energy embodied in each of the energy-using industry products throughout the production economy and into a complete accounting of final market sales; and (3) identify all food-related final markets and assess the food-related energy embodied in all final market sales. This analysis uses data from two Federal sources: the Bureau of Economic Analysis Benchmark Input-Output tables and the Energy Information Administration's State Energy Data System.[86]

Further, the supply chain analysis for food energy was compiled in 2010 to show the change in U.S. energy consumption by stage of production.[87] *Figure Four* shows each applicable stage of production in the U.S. food system and the change in energy use from 2002 to 2007. By using this data across economic sectors, energy sources, and markets, it is possible to create the data needed to implement CEML on a national level. *Figure Five* shows this process broken into specific products, with

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across different industries).

81. *See* Canning, *supra* note 1, at 3–4.

82. *Input-Output Accounts Analysis*, U.S. DEP'T OF COMMERCE BUREAU OF ECON. ANALYSIS, http://www.bea.gov/industry/io_annual.htm (last visited Nov. 21, 2015) (The BEA explains "Beginning with 2007, the benchmark input-output tables are fully integrated with the annual industry accounts and the national income and product accounts. In keeping with this integration, data and files associated with the 2007 benchmark input-output account can be found here on the annual input-output page. Statistics prepared at the 389-industry level of aggregation are available only for estimate year 2007. Additionally, estimates for 2007 at all levels of aggregation reflect the highly detailed and accurate data available during an economic census year.").

83. Canning, *supra* note 2, at iv, 6.

84. *Id.* at 6.

85. *Id.* at 1.

86. *Id.* at iv.

87. *Id.* at 20.

the energy use from different stages of production cumulatively quantified.

4. The CEML supply chain analysis and model label

In order to make CEML impactful on a national scale, it must take into account the variety of inputs in the industrial meat system. This IO analysis would be more complex than looking at solely industry-level data because the final product is marked on the individual product of that specific individual product's caloric input. A tiered approach would be necessary. For some data, such as the initial inputs into the farm (for example, fertilizer, feed for the animals, and the transport of those items to the farm), the CEML input could be created by using the annual estimates for EIA's yearly national flow totals divided by the specific market share purchased,[88] not unlike the hybrid approach used in carbon footprint labeling. For the other inputs, the farmers, producers, and transporters themselves would be responsible for conveying the energy inputs of their processes (added with the cumulative proceeding inputs) to the next stage of the process. A full statute would likely include the power for USDA to employ auditors and inspectors to confirm the veracity of the data.

Figure Six is a theoretical supply chain analysis of CEML. The first stage contains inputs that occur before reaching the farm. It could include the energy of creating fertilizer (usually from fossil fuels) and purchasing feed. The transportation from that stage is then accounted for by the transportation company (or the company buying the product). The farm inputs are then measured, including the energy to irrigate, run the buildings and machines, and grow additional feed. The animals are then sent to a slaughterhouse (again with transportation energy noted), where the slaughterhouse's energy input is accounted for and measured. The same occurs at the manufacturing stage, where the meat may be further processed into more desirable consumer products. The products are packaged and then shipped to a wholesaler. Finally, they are sent to a retailer where there is a process at the retail label to mark the products (in order to account for the final transportation to get the product from processing or wholesale to the final retail destination).

Throughout this whole process, there is an energy input per calorie that is growing and always accounted for.[89] It is important to note the producers at each stage will be dividing their entire energy input by the total calories that move on in the next process. By the end of the entire

88. *See generally Total Energy*, U.S. ENERGY INFO. ADMIN., http://www.eia.gov/totalenergy/data/annual/pdf/sec2_13.pdf (last visited Nov. 21, 2015).

89. Beyond the purview of this paper is the actual algorithm or data method that would be used to track and quantify the data. This section merely shows this level of data collection is already feasible on a national scale. It could be done by the government first hand by USDA inspectors, a third-party contractor network, or a hybrid that could involve hiring private companies for aspects of the process.

process, the retail seller will have a specific package of meat or meat product that has a specified number of calorie outputs along with its corresponding number of caloric inputs. As the statute dictates, the burden will be on the end seller to allow the label to be presented in a way that makes it substantially likely to be seen by the consumer. The information could then be conveyed in a variety of ways depending on the type of the retailer. First, any time a retailer processes meat in-store, the CEML could be a part of the already existing price label. Second, it may be built into the software used during checkout, so the receipt will display the corresponding CMEL of the purchase for items that do not have an individual price sticker placed on it at the store. Note that subsection (b) of the statute will exempt restaurants from using CEML due to the additional processing the restaurant may do. However, the restaurant will receive the energy information from the prior stage so it can make an independent assessment of the energy efficiency of the product it purchases.

Figure Seven presents three prototypes of how CEML would be displayed to the consumer. In general, the labels are deceptively simple, only stating the caloric input that went into the product. This number would then be divided by the calorie count that already exists on the nutritional label, which would give an "efficiency ratio." The closer to zero, the less efficient the product. While a "zero" may be initially intuitive to show energy efficiency, a larger number will continue to show a larger discrepancy between calorie-dense, energy efficient foods and less-efficient foods. A consumer may not appreciate the difference between a .3 and .6 energy ration, but may better appreciate a ten energy ratio compared to a four. A predetermined threshold on what is defined "energy efficient," "moderately energy efficient," or "not energy efficient" could be created on a per-meat basis. This could alleviate concerns about beef products, which inherently take more inputs to create, to always be marked inefficient, while inefficiently produced chicken would be marked efficient.

The first label in *figure seven* is an example that could be used as an average of a large shipment to the specific store, which could alleviate issues of affixing individual stickers on items that are pre-labeled from the distributor. In the second option, the energy inputs and the efficiency ratio could be printed from existing label printing scales when an item is cut and weighed. In the final option, the energy inputs and the efficiency ratio could be calculated automatically when the price lookup code (PLU) is scanned, and then displayed on the receipt.

IV. POSSIBLE LEGAL CHALLENGES TO CEML

This section examines a few of the potential legal challenges concerning CEML. Even if CEML were enacted, it is likely there would be a barrage from industry groups to get the law repealed before it was

deployed on a large scale, as happened with COOL. Based on the treatment of carbon footprint labels and COOL, there are two main avenues those challenging the law would likely pursue. First would be Constitutional challenges, including (but not limited to) compelled free speech and equal protection challenges. Second would be challenges related to international trade agreements, similar to those leading to COOL challenges.

A. Constitutional Challenges

There are a variety of potential Constitutional challenges to the proposed CEML. This section will consider a First Amendment challenge and an Equal Protection challenge.

1. First Amendment

The most likely challenge of CEML would be the argument that the statute enacting a mandated CEML compels speech in violation of the First Amendment. The most analogous case is *American Meat Institute v. U.S. Department of Agriculture*.[90] In that case, AMI's argument, among others, was COOL mandates violated its First Amendment right because the law compelled unwanted speech from AMI (stating the country of origin of the meat).[91] The court found against AMI, stating the regime was "'reasonably related to the [USDA's] interest in preventing deception of consumers.'"[92]

An en banc rehearing of AMI ensued to focus on the use of an analysis of compelled speech from *Zauderer v. Office of Disciplinary Counsel of Supreme Court of Ohio* compared to the analysis from *Cent. Hudson Gas & Elec. Corp. v. Pub. Serv. Comm'n of N.Y.*[93] The *Central Hudson* test requires a heightened requirement to allow the government to compel speech: the government interest must be substantial and the regulation must directly advance the governmental interest asserted, and may not be more extensive than is necessary to serve that interest.[94]

The *Zauderer* standard sets forth that the government may mandate the disclosure of factual information if the requirement is (1) not unduly

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90. The D.C. Circuit originally heard the case, and then granted a rehearing en banc in which it upheld the original ruling. Am. Meat Inst. v. USDA, 968 F. Supp. 2d 38, 76 (D.D.C. 2013) (denying a preliminary injunction), *aff'd*, 746 F.3d 1065 (D.C. Cir.), *reh'g en banc granted, opinion vacated*, No. 13-5281, 2014 WL 2619836 (D.C. Cir. Apr. 4), *judgment reinstated*, 760 F.3d 18 (D.C. Cir. 2014).

91. Cassidy L. Woodard, *From Cattle Drives to Labeling Legislation: The Implications of Mandatory Country of Origin Labeling on the Beef Industry*, 47 TEX. TECH L. REV. 399, 448 (2015) (citing *First Amended Complaint* at 12, Am. Meat Inst. v. USDA, 968 F. Supp. 2d 38 (D.C. Cir. 2013).

92. *Id.* at 417 (quoting *Am. Meat Inst.*, 968 F. Supp. 2d at 51); 471 U.S. 626, 651 (1985); 447 U.S. 557, 565 (1980).

93. *Id.* (citing *Am. Meat Inst.*, 746 F. 3d at 1067).

94. Cent. Hudson Gas & Elec. Corp. v. Pub. Serv. Comm'n of New York, 447 U.S. 557, 566 (1980).

burdensome and (2) "reasonably related to the State's interest in preventing deception of consumers."[95] The AMI court renewed its justification for using the *Zauderer* analysis as applicable to instances where the government mandates disclosure of "purely factual and uncontroversial information" that prevents deception in commercial speech.[96] The court found COOL laws did just that.[97]

A potential challenge to CEML laws would likely bear the same fate as AMI did. Under a *Zauderer* analysis, both a government interest—in *Zauderer*, to prevent deception of consumers[98]—and a reasonable relationship exist between the interest and the CEML law. The government interest for a CEML could be promoting energy efficiency and increasing consumer information and transparency. The relationship between a label mandating the energy that went into the creation of the product and a stated goal of promoting energy efficiency seems reasonable.[99] Further, CEML mandates disclosures of purely factual and uncontroversial information, satisfying the *Zauderer* analysis.

2. Equal Protection

An equal protection argument under the Fifth and Fourteenth Amendment intends to prevent the government from subjecting similarly situated individuals to different treatment without adequate justification.[100] The Supreme Court has identified three levels of review for equal protection issues. First is the most stringent level, strict scrutiny, which requires a classification be narrowly tailored to a compelling governmental interest.[101] The next level is intermediate scrutiny which requires a classification be substantially related to an important governmental objective.[102] The lowest level is rational basis review and requires only that a classification be rationally related to a legitimate governmental interest.[103]

Strict scrutiny is used to examine a law that classifies based on either immutable characteristics such as race or national origin, or on classifications that affect a fundamental right.[104] Intermediate scrutiny is used when the classification is based on quasi-suspect classes, such as gender or illegitimacy, and rational basis is the most common review,

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95. Zauderer v. Office of Disciplinary Counsel of Supreme Court of Ohio, 471 U.S. 626, 651 (1985).

96. Woodard, *supra* note 91, at 437 (quoting *Am. Meat Inst.*, 760 F. 3d at 21).

97. *Id.*

98. *Zauderer,* 471 U.S. at 651.

99. Granted, the Supreme Court has yet to hear a case on point, so if the Court found a *Central Hudson* test more appropriate, the fate of CEML law could be more uncertain.

100. Sean G. Williamson, *Contemporary Contextual Analysis: Accounting for Changed Factual Conditions Under the Equal Protection Clause*, 17 U. PA. J. CONST. L. 591, 602 (2014).

101. *Id.* (citing Kermit Roosevelt III, *Constitutional Calcification: How the Law Becomes What the Court Does*, 91 VA. L. REV. 1649, 1655–58 (2005)).

102. *Id.*

103. *Id.*

104. *Id.*

used for anything else.[105]

Rational basis is a relatively low threshold, an analysis similar to that of *Zauderer*. Those attempting to fight a CEML law would first have to define the classification. It is unlikely there would be any possible classification requiring strict or heightened scrutiny. The most likely classification would be that this law classifies those involved in the production of meat against those who are involved in the production of non-meat products. This would afford the law rational basis review.

The only additional wrinkle is that of governmental animus. A law that is in the realm of rational basis has the potential of being overturned if the court finds the government interest was based on animus towards a class.[106] This animus would be found, for example, if the legislature made it clear this law was being introduced to put meat companies out of business (an unlikely scenario). Overall, a court would likely find that a label mandating the energy that went into the creation of the product is rationally related to a legitimate government interest of promoting energy efficiency in the food system, thereby not violating equal protection.

B. WTO regulations

COOL laws have seen recent trouble due to complications with international trade agreements. If CEML laws are to accurately portray the international scope of the food system and account for out-of-country energy inputs, similar complications may arise.

The main international challenges to the COOL laws relate to the WTO's Technical Barriers to Trade (TBT) Agreement, which aims to prevent the arbitrary use of "unnecessary obstacles" to trade.[107] Canada and Mexico have lodged complaints since the modern iteration of the COOL was enacted, generally stating the laws violated the TBT because it unduly disadvantaged their meat industries, both directly and indirectly as an effect of American businesses having to change their processes in order to comply with COOL.[108] After brief resolution and amendments to the COOL law, Canada and Mexico again initiated complaints, and the WTO found the COOL law to be discriminatory.[109] Canada is currently arguing for a retaliatory tariff of $2.5 billion for each year the laws were

105. *Id.*

106. Ryan James & Jane Zara, *Equal Protection*, 4 GEO. J. GENDER & L. 1, 10 (2002); *see* Romer v. Evans, 517 U.S. 620, 634–35 (1996) ("If the constitutional conception of 'equal protection of the laws' means anything, it must at the very least mean that a bare . . . desire to harm a politically unpopular group cannot constitute a legitimate governmental interest").

107. Woodard, *supra* note 91, at 411 (citing *Technical Barriers to Trade*, WORLD TRADE ORG., http:// www.wto.org/english/tratop_e/tbt_e/tbt_e.htm (last visited Nov. 15, 2015)).

108. *Id.* at 448 (citing Request for Consultations by Canada, *United States--Certain Country of Origin Labelling (COOL) Requirements*, WT/DS384/1 (Dec. 4, 2008)).

109. Tracy, *supra* note 60.

in place.[110] In June of 2015, the U.S. House of Representatives responded to the result by voting 300 to 131 to amend the COOL laws to repeal country of origin labeling requirements for the meat products affected by the WTO decision.[111] The spending bill amendment passed the Senate, and President Obama it into law in December of 2015.[112] The bill repeals the country of origin labeling requirements for beef and pork, but keeps the requirement for chicken and lamb.[113]

Canada and Mexico argued in part that COOL legislation violated Articles 2.1 and 2.2 of the TBT Agreement.[114] Article 2.1 ensures "products imported from the territory of any Member shall be accorded treatment no less favourable [sic] than that accorded to like products of national origin and to like products originating in any other country."[115] Article 2.2 states "[T]echnical regulations shall not be more trade-restrictive than necessary to fulfil a legitimate objective, taking account of the risks non-fulfilment would create."[116] Canada and Mexico won the dispute by arguing because "the objective of COOL was to protect domestic industries and promote and enable purchases of United States products, the United States had not fulfilled a legitimate objective by enacting COOL legislation."[117]

For CEML law to survive a similar challenge, the United States would have to be very clear about its stated objectives in enacting the law. On its face, the CEML law objectively relates to energy inputs, regardless of borders. While COOL inherently requires that countries are noted, CEML will have no similar impact. If the objective of CEML is to make the food system more energy efficient, this will not necessarily have an unfavorable impact for other countries. Further CEML legislation would satisfy Article 2.2's scrutiny because, while it is no

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110. Caroline Simson, *Canada Will Launch Retaliatory Tariffs Over US Labeling Rules*, LAW360, May 20, 2015 http://www.law360.com/articles/658176/canada-will-launch-retaliatory-tariffs-over-us-labeling-rules.

111. Country of Origin Labeling Amendments Act of 2015, H.R. 2393, 114th Cong. (2015) *available at* https://www.congress.gov/bill/114th-congress/house-bill/2393/text; 7 U.S.C.A. § 1638 (2014) (Country of Origin Labeling Amendments Act of 2015, H.R. 2393, Jun. 10, 2015).

112. Huehnergarth, Nancy Fink, *Quashing Consumers' Right-To-Know, Congress Repeals Country-Of-Origin-Labeling For Beef And Pork*, FORBES (Dec. 21, 2015) http://www.forbes.com/sites/nancyhuehnergarth/2015/12/21/quashing-consumers-right-to-know-congress-repeals-country-of-origin-labeling-for-beef-and-pork/#1658661b3fb3; *see* S. 759, 114th Cong. (2015).

113. Huehnergarth, Nancy Fink, *Quashing Consumers' Right-To-Know, Congress Repeals Country-Of-Origin-Labeling For Beef And Pork*, FORBES (Dec. 21, 2015) http://www.forbes.com/sites/nancyhuehnergarth/2015/12/21/quashing-consumers-right-to-know-congress-repeals-country-of-origin-labeling-for-beef-and-pork/#1658661b3fb3.

114. Woodard, *supra* note 91, at 412 (citing Appellate Body Report, *United States--Certain Country of Origin Labeling (COOL) Requirements*, ¶ 496, WT/DS384/AB/R (June 29, 2012).

115. *Id.* at 448. (citing Agreement on Technical Barriers to Trade, Apr. 15, 1994, 1868 U.N.T.S. 120, arts. 2.1 & 2.2, *available at* https://www.wto.org/english/docs_e/legal_e/17-tbt_e.htm).

116. *Id.* (*citing* Agreement on Technical Barriers to Trade, Apr. 15, 1994, 1868 U.N.T.S. 120, arts. 2.1 & 2.2, *available at* https://www.wto.org/english/docs_e/legal_e/17-tbt_e.htm).

117. *Id.* at 413.

doubt expansive and potentially trade-restrictive, a legitimate objective would be fulfilled, even taking into account the risk non-fulfilment would take.

Overall, the hurdles presented by WTO's TBT Agreement could prove fatal if the United States was not able to distinguish CEML laws enough from COOL laws. However, the main purpose of the CEML law is not solely consumer awareness; it is to provide an incentive for energy efficiency in the food system. If the legislative intent is clear, and the infrastructure is properly created, this main purpose could be enough to survive WTO's scrutiny.

V. CONCLUSION

Government labels are trusted by consumers, and the consumers' awareness can affect environmental issues.[118] Government mandated ecolabels are ideal—as long as the process has proper oversight—because the information is simplified.[119]

The model CEML falls into this category, but is not without criticism. Namely, the regulatory and practical framework to collect and account for this much energy input data would be monumental. Accountability issues would be a major concern, and they could encourage fraud or deception if competent oversight is lacking. A CEML would not account for the large amount of human energy needed for the meat aspect of the food system, and would not account for animal suffering. A CEML would not reach consumers dining at restaurants, and there could be issues with mandating thousands of stores to implement a system in which many products would need to have a colored label. However, with such a large energy impact coming from our industrial agriculture system, such a drastic measure may be what is needed to effect actual overhaul.

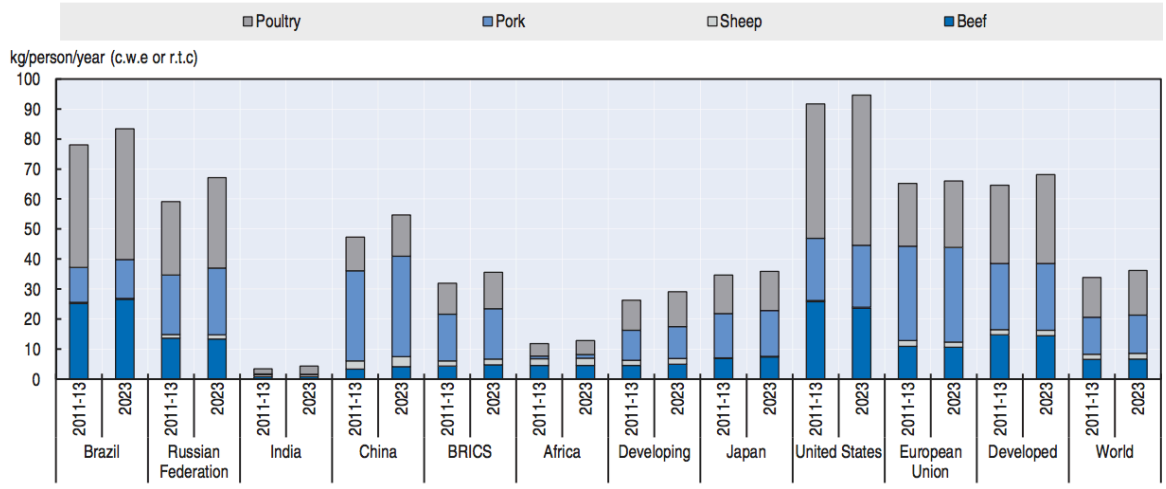
118. Czarnezki, *supra* note 9, at 305.
119. *Id.*

APPENDIX AND FIGURES

Figure One[120]

Figure 7.8. **Per capita meat consumed in the world**

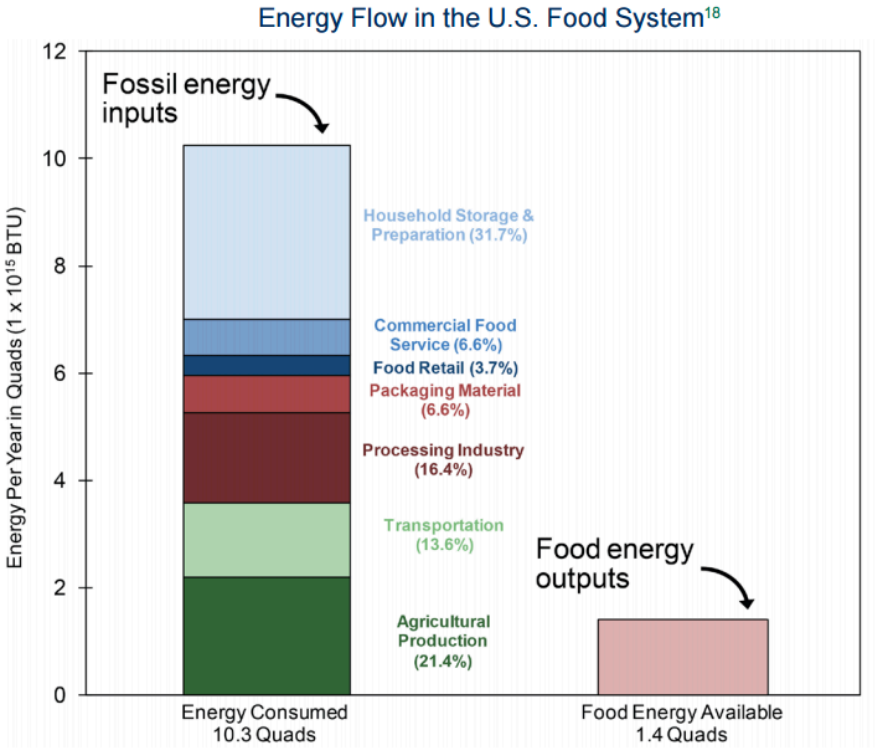
2023 vs. base period 2011-13



Note: c.w.e. is carcass weight equivalent, r.t.c. is ready to cook equivalent.
Source: OECD and FAO Secretariats.

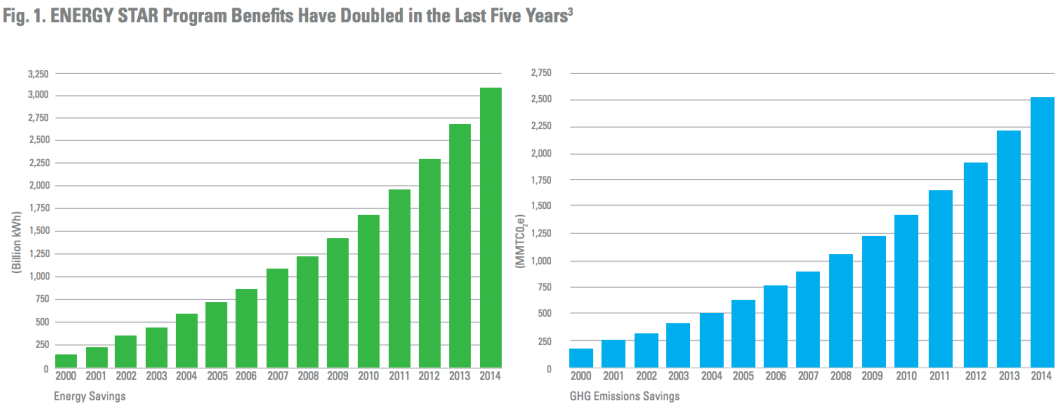
120. Food and Agriculture Organization of the United Nations, Energy-Smart Food at FAO: An Overview, (Environmental and Natural Resources Management Working Paper No. 5, 2012) *available at* http://www.bmel.de/SharedDocs/Downloads/Landwirtschaft/Welternaehrung/OECD-FAO-AgriculturalOutlook.pdf?__blob=publicationFile at 183.

Figure Two[121]



121. *U.S. Food System*, Michigan Center for Sustainable Systems *available at* http://css.snre.umich.edu/css_doc/CSS01-06.pdf (citing Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990 – 2012 http://www3.epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2014-Main-Text.pdf).

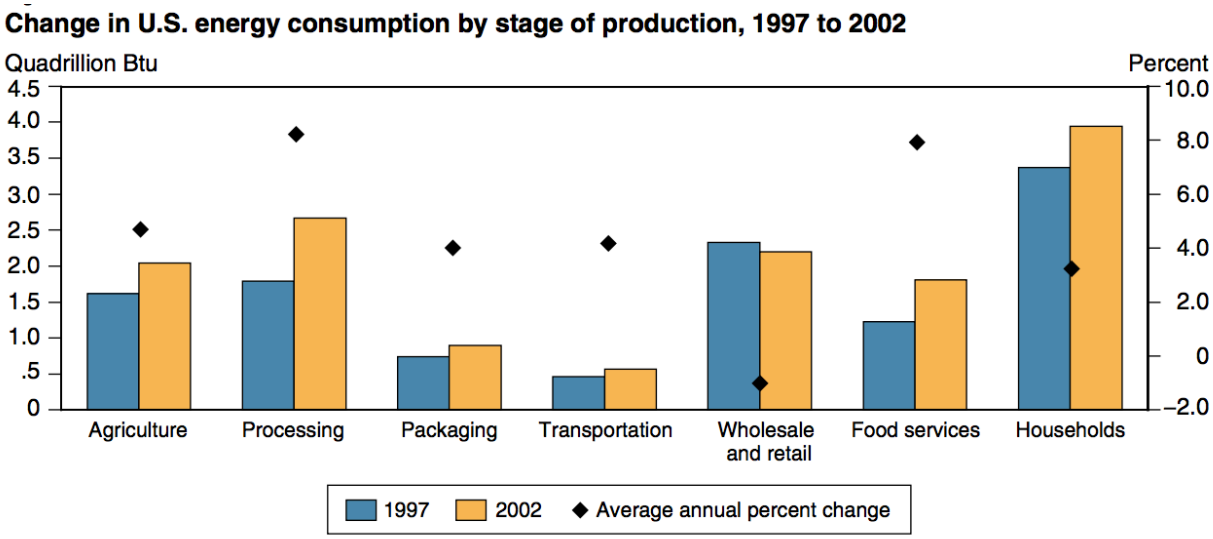
Figure Three[122]*



*Numbers are cumulative year over year.

122. Energy Star® Overview Of 2014 Achievements, Environmental Protection Agency, Apr. 1, 2015, http://www.energystar.gov/ia/partners/publications/pubdocs/Overview%20of%20Achievements_508Compliant.pdf.

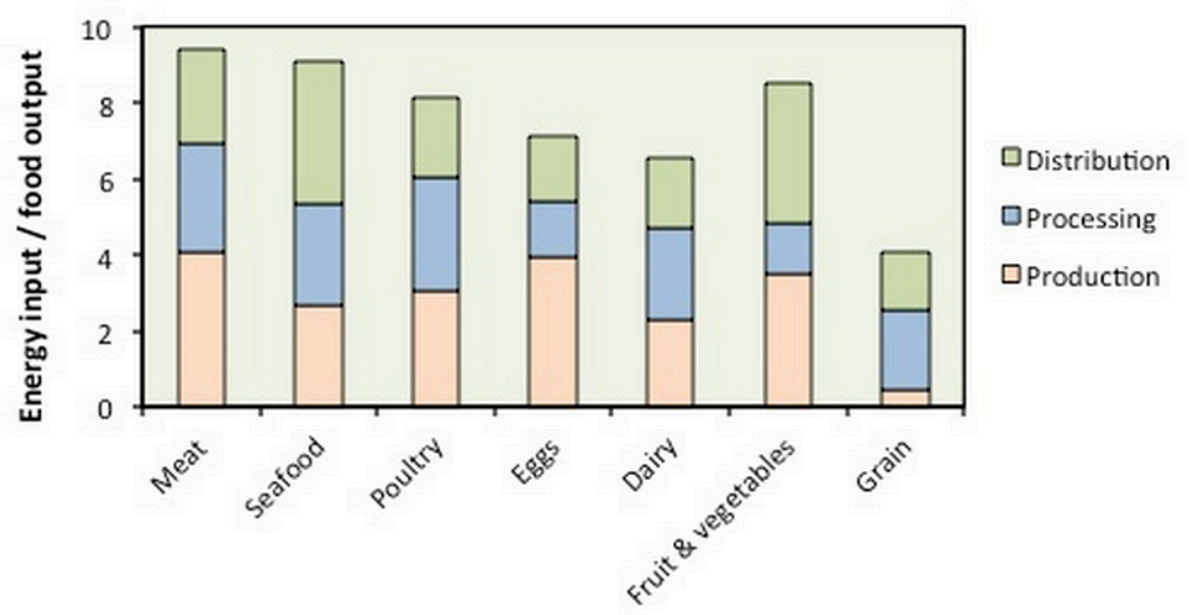
Figure Four[123]



Source: USDA, Economic Research Service.

123. Canning, P., et al., Energy Use in the U.S. Food System, Economic Research Report Number 94,United States Department of Agriculture (2010) at 20.

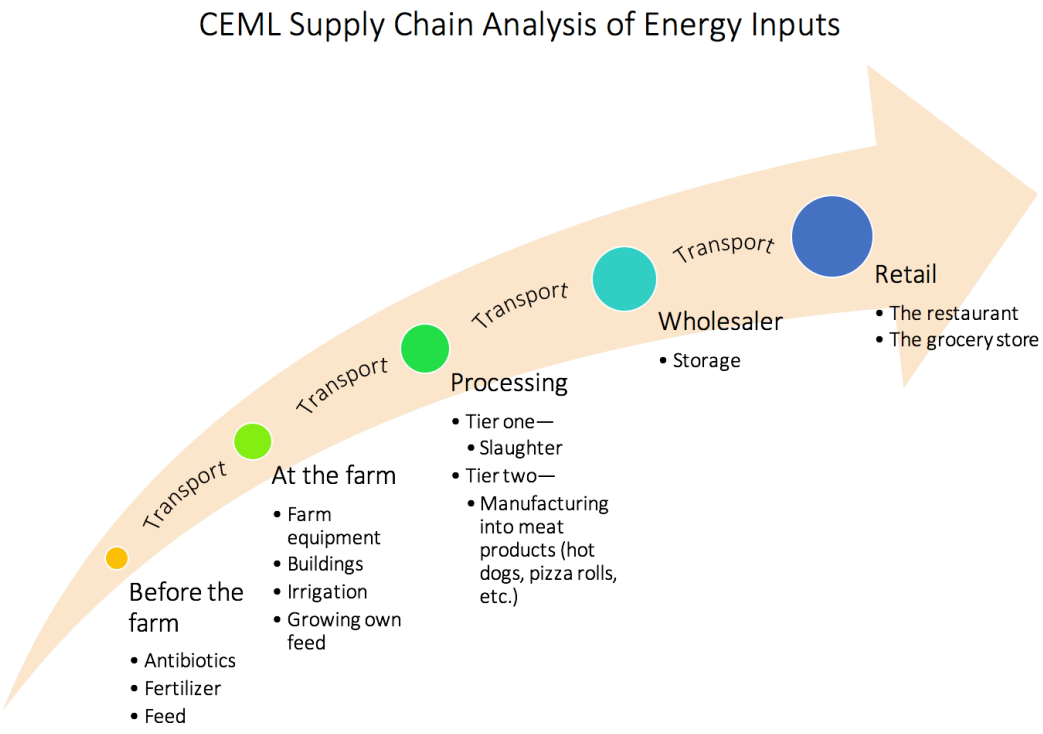
Figure Five[124]



Energy inputs per food calorie for several classes of food in the United States, in 2002. Source: USDA Economic Research Service.

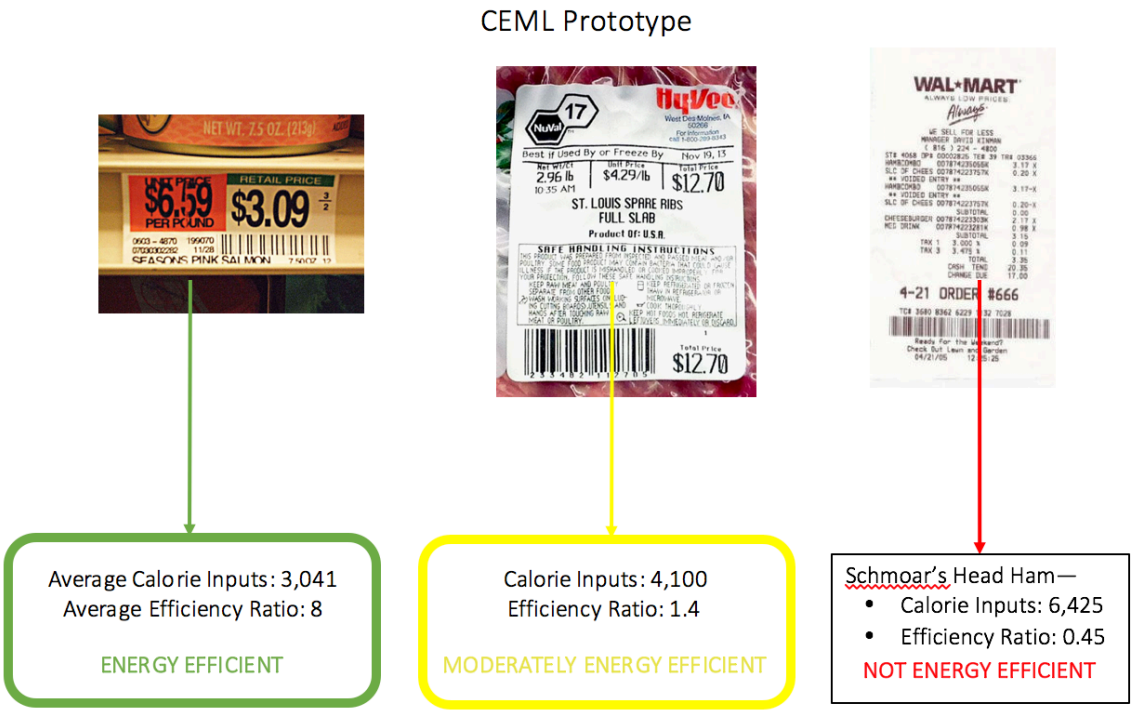
124. Eric Garza, *Meat vs Veg: An energy perspective*, UVM FOOD FEED (Jul. 10, 2014) https://learn.uvm.edu/foodsystemsblog/2014/07/10/meat-vs-veg-an-energy-perspective/.

Figure Six[125]



125. Created by author of this paper.

Figure Seven[126]



126. Created by author of this paper. Image Sources: http://manta.pbworks.com/f/1361964849/shelf-label.jpg; http://netnebraska.org/sites/default/files/styles/largepopup/public/Hyvee_ribs_COOL_label.jpg?itok=GMrCDFxj; http://images.sodahead.com/polls/000142266/polls_walmart_666_receipt_1554_908582_poll_xlarge.jpeg.

ATTACHMENT ONE[127]

Comparative Energy Meat Label Act

(a) Definitions

(1) The term "covered commodity" shall mean—

(i) muscle cuts of beef, lamb, pork, and venison;

(ii) ground beef, ground lamb, ground pork, and ground venison;

(iii) meat produced from goats;

(iv) poultry, in whole and in part; and

(v) any product that contains more than 1% combined of the above mentioned items

(2) The term "efficiency ratio" means a quotient of the caloric energy output divided by the energy input

(3) The term "energy signal" are the predefined comparative energy meat color symbols created for this statute.

(4) The term "food service establishment" means a restaurant, cafeteria, lunch room, food stand, saloon, tavern, bar, lounge, or other similar facility operated as an enterprise engaged in the business of selling food to the public.

(b) In general

(1) Requirement

Except as provided in subsection (b) of this section, a retailer of a covered commodity shall inform consumers at the final point of sale of the covered commodity by use of a label, presented in a way that makes it substantially likely to be seen by the consumer, of:

(A) The amount of caloric input present in the specific product;

(B) The efficiency ratio (a quotient of the caloric energy output divided by the energy input); and

(C) The ratio's corresponding energy signal.

(b) Exemption for food service establishments

Subsection (a) of this section shall not apply to a covered commodity if the covered commodity is--

(1) prepared or served in a food service establishment; and

(2)(A) offered for sale or sold at the food service establishment in normal retail quantities; or

---

127. *See generally* 7 U.S.C. §§ 1638, 1638a.

(B) served to consumers at the food service establishment.

(c) Audit verification system

(1) In general

The Secretary may conduct an audit of any person that prepares, stores, handles, or distributes a covered commodity for retail sale to verify compliance with this subchapter

(2) Record requirements

(A) In general

A person subject to an audit under paragraph (1) shall provide the Secretary with verification of the energy inputs of the covered commodities.

ATTACHMENT TWO[128]

Redlined Country of Origin Labels Statutes

§ 1638. Definitions[129]

In this subchapter:

(1) Beef

The term "beef" means meat produced from cattle (including veal).

(2) Covered commodity

(A) In general

The term "covered commodity" means--

(i) muscle cuts of beef, lamb, pork, and venison;

(ii) ground beef, ground lamb, ground pork, and ground venison;

~~(iii) farm-raised fish;~~

~~(iv) wild fish;~~

~~(v) a perishable agricultural commodity;~~

~~(vi) peanuts; and~~

~~(vii) meat produced from goats;~~

128. 7 U.S.C.A. § 1638a (2014).
129. 7 U.S.C.A. § 1638 (2014).

~~(viii) chicken, in whole and in part;~~

~~(ix) ginseng;~~

~~(x) pecans; and~~

~~(xi) macadamia nuts.~~

~~(B) Exclusions~~

~~The term "covered commodity" does not include an item described in subparagraph (A) if the item is an ingredient in a processed food item.~~

~~(3) Farm-raised fish~~

~~The term "farm-raised fish" includes –~~

~~(A) farm-raised shellfish; and~~

~~(B) fillets, steaks, nuggets, and any other flesh from a farm-raised fish or shellfish.~~

(4) Food service establishment

The term "food service establishment" means a restaurant, cafeteria, lunch room, food stand, saloon, tavern, bar, lounge, or other similar facility operated as an enterprise engaged in the business of selling food to the public.

(5) Lamb

The term "lamb" means meat, other than mutton, produced from sheep.

~~(6) Perishable agricultural commodity; retailer~~

~~The terms "perishable agricultural commodity" and "retailer" have the meanings given the terms in section 499a(b) of this title.~~

(7) Pork

The term "pork" means meat produced from hogs.

(8) Secretary

The term "Secretary" means the Secretary of Agriculture, acting through the Agricultural Marketing Service.

~~(9) Wild fish~~

~~(A) In general~~

~~The term "wild fish" means naturally-born or hatchery-raised fish and shellfish harvested in the wild.~~

~~(B) Inclusions~~

~~The term "wild fish" includes a fillet, steak, nugget, and any other flesh from wild fish or shellfish.~~

~~(C) Exclusions~~

~~The term "wild fish" excludes net-pen aquacultural or other farm-raised fish.~~

§ 1638a. Notice of country of origin

(a) In general

(1) Requirement

Except as provided in subsection (b) of this section, a retailer of a covered commodity shall inform consumers, at the final point of sale of the covered commodity to consumers, of the country of origin of the covered commodity.

(2) ~~Designation of country of origin for beef, lamb, pork, chicken, goat, and venison meat~~

~~(A) United States country of origin~~

~~A retailer of a covered commodity that is beef, lamb, pork, chicken, goat, or venison meat may designate the covered commodity as exclusively having a United States country of origin only if the covered commodity is derived from an animal that was—~~

~~(i) exclusively born, raised, and slaughtered in the United States;~~

~~(ii) born and raised in Alaska or Hawaii and transported for a period of not more than 60 days through Canada to the United States and slaughtered in the United States; or~~

~~(iii) present in the United States on or before July 15, 2008,~~

~~and once present in the United States, remained continuously in the United States.~~

~~(B) Multiple countries of origin~~

~~(i) In general~~

~~A retailer of a covered commodity that is beef, lamb, pork, chicken, goat, or venison meat that is derived from an animal that is --~~

~~(I) not exclusively born, raised, and slaughtered in the United States,~~

~~(II) born, raised, or slaughtered in the United States, and~~

~~(III) not imported into the United States for immediate slaughter,~~

~~may designate the country of origin of such covered commodity as all of the countries in which the animal may have been born, raised, or slaughtered.~~

~~(ii) Relation to general requirement~~

~~Nothing in this subparagraph alters the mandatory requirement to inform consumers of the country of origin of covered commodities under paragraph (1).~~

~~(C) Imported for immediate slaughter~~

~~A retailer of a covered commodity that is beef, lamb, pork, chicken, goat, or venison meat that is derived from an animal that is imported into the United States for immediate slaughter shall designate the origin of such covered commodity as --~~

~~(i) the country from which the animal was imported; and~~

~~(ii) the United States.~~

~~(D) Foreign country of origin~~

~~A retailer of a covered commodity that is beef, lamb, pork, chicken, goat, or venison meat that is derived from an animal that is not born, raised, or slaughtered in the United States shall designate a country other than the United States as the country of~~

~~origin of such commodity.~~

~~(E) Ground beef, pork, lamb, chicken, goat, and venison~~

~~The notice of country of origin for ground beef, ground pork, ground lamb, ground chicken, ground goat, or ground venison shall include--~~

~~(i) a list of all countries of origin of such ground beef, ground pork, ground lamb, ground chicken, ground goat, or ground venison; or~~

~~(ii) a list of all reasonably possible countries of origin of such ground beef, ground pork, ground lamb, ground chicken, ground goat, or ground venison.~~

~~(3) Designation of country of origin for fish~~

~~(A) In general~~

~~A retailer of a covered commodity that is farm-raised fish or wild fish may designate the covered commodity as having a United States country of origin only if the covered commodity--~~

~~(i) in the case of farm-raised fish, is hatched, raised, harvested, and processed in the United States; and~~

~~(ii) in the case of wild fish, is--~~

~~(I) harvested in the United States, a territory of the United States, or a State, or by a vessel that is documented under chapter 121 of Title 46 or registered in the United States; and~~

~~(II) processed in the United States, a territory of the United States, or a State, including the waters thereof, or aboard a vessel that is documented under chapter 121 of Title 46 or registered in the United States.~~

~~(B) Designation of wild fish and farm-raised fish~~

~~The notice of country of origin for wild fish and farm-raised fish shall distinguish between wild fish and farm-raised fish.~~

~~(4) Designation of country of origin for perishable agricultural commodities, ginseng, peanuts, pecans, and macadamia nuts~~

~~(A) In general~~

~~A retailer of a covered commodity that is a perishable agricultural commodity, ginseng, peanut, pecan, or macadamia nut may designate the covered commodity as having a United States country of origin only if the covered commodity is exclusively produced in the United States.~~

~~(B) State, region, locality of the United States~~

~~With respect to a covered commodity that is a perishable agricultural commodity, ginseng, peanut, pecan, or macadamia nut produced exclusively in the United States, designation by a retailer of the State, region, or locality of the United States where such commodity was produced shall be sufficient to identify the United States as the country of origin.~~

(b) Exemption for food service establishments

Subsection (a) of this section shall not apply to a covered commodity if the covered commodity is--

(1) prepared or served in a food service establishment; and

(2)(A) offered for sale or sold at the food service establishment in normal retail quantities; or

(B) served to consumers at the food service establishment.

(c) Method of notification

(1) In general

The information required by subsection (a) of this section may be provided to consumers by means of a label, stamp, mark, placard, or other clear and visible sign on the covered commodity or on the package, display, holding unit, or bin containing the commodity at the final point of sale to consumers.

(2) Labeled commodities

If the covered commodity is already individually labeled for retail sale regarding country of origin, the retailer shall not be required to provide any additional information to comply with this section.

(d) Audit verification system

(1) In general

The Secretary may conduct an audit of any person that prepares, stores, handles, or distributes a covered commodity for retail sale to verify compliance with this subchapter (including the regulations promulgated under section 1638c(b) of this title).

(2) Record requirements

(A) In general

A person subject to an audit under paragraph (1) shall provide the Secretary with verification of the country of origin of covered commodities. Records maintained in the course of the normal conduct of the business of such person, including animal health papers, import or customs documents, or producer affidavits, may serve as such verification.

(B) Prohibition on requirement of additional records

The Secretary may not require a person that prepares, stores, handles, or distributes a covered commodity to maintain a record of the country of origin of a covered commodity other than those maintained in the course of the normal conduct of the business of such person.

(e) Information

Any person engaged in the business of supplying a covered commodity to a retailer shall provide information to the retailer indicating the country of origin of the covered commodity.

(f) Certification of origin

(1) Mandatory identification

The Secretary shall not use a mandatory identification system to verify the country of origin of a covered commodity.

(2) Existing certification programs

To certify the country of origin of a covered commodity, the Secretary may use as a model certification programs in existence on May 13, 2002, including--

(A) the carcass grading and certification system carried out under this Act;

(B) the voluntary country of origin beef labeling system carried out under this Act;

(C) voluntary programs established to certify certain premium beef cuts;

(D) the origin verification system established to carry out the child and adult care food program established under section 1766 of Title 42; or

(E) the origin verification system established to carry out the market access program under section 5623 of this title.