



October 16, 2009

Dr. Douglas Elmendorf  
Director  
Congressional Budget Office  
Ford House Office Building, 4th Floor  
Second and D Streets, SW  
Washington, DC 20515

Dear Dr. Elmendorf:

On October, we received the attached letter from Chairman Henry Waxman and Chairman Edward Markey with a list of questions concerning our economic modeling of H.R. 2454, the American Clean Energy and Security Act. We noticed that although many organizations and government agencies received a similar letter and list of questions the Congressional Budget Office did not.

Your analysis of the legislation was widely used both in the public and by Congress. Though you did not receive these questions we urge you to answer them and release those answers to the public in the name of transparency.

The Heritage Foundation and our Center for Data Analysis have always believed in the importance of openness and transparency in regard to our different economic modeling activities. Therefore, we will post our response to Chairman Waxman and Chairman Markey on our website for the general public to see. We encourage you to do the same. Heritage is also prepared to open our website as a collection spot for all of the various organizations responses so they all can be viewed in one location.

Please contact Dan Ziegler, U.S. House Relations Deputy, at [dan.ziegler@heritage.org](mailto:dan.ziegler@heritage.org) or 202-608-6063 if you have any questions or follow up.

Sincerely,

William Beach  
Director, Center for Data Analysis

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# Congress of the United States

## House of Representatives

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October 2, 2009

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Dr. David Kreutzer  
Senior Policy Analyst  
The Heritage Foundation  
214 Massachusetts Avenue, NE  
Washington, DC 20002

Dear Dr. Kreutzer:

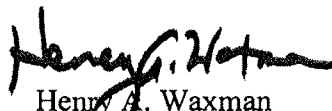
On June 26, 2009, the House of Representatives approved H.R. 2454, the American Clean Energy and Security Act. As Congress continues its consideration of this legislation, debate is likely to cite the results of economic models that project the potential impacts of this legislation.


Models are not crystal balls which allow us to predict the future. Even modeling by the EPA in 1990 overstated the costs of the Clean Air Act program to cut acid rain pollution. However, we recognize that models based on reasonable assumptions can be used to inform policy decisions and evaluate various policy choices.

In order to better understand the modeling that is informing public debate, we are writing to request that your organization provide more details about the approach and assumptions used in your analysis of the climate legislation. We are making identical requests to other governmental and nongovernmental entities that have made modeling results publicly available. We hope that this transparency will allow members of Congress and the public to put model results in appropriate context.

We request that you answer the attached a list of questions regarding your recent analysis: "The Economic Consequences of Waxman-Markey: An Analysis of the American Clean Energy and Security Act of 2009." In order to ensure that this information is available on a timely basis, please respond no later than October 15, 2009. Thank you for your assistance with this matter.

Sincerely,

  
Henry A. Waxman  
Chairman

  
Edward J. Markey  
Chairman  
Subcommittee on Energy and  
Environment

cc: The Honorable Joe Barton  
Ranking Member

The Honorable Fred Upton  
Ranking Member  
Subcommittee on Energy and  
Environment

### **Details on the analytical approach behind the economic model(s) used in the analysis**

1. Does the model quantify any benefits of avoided climate change? If so, how?
2. Does the model quantify the benefits of reductions in air pollution (Clean Air Act criteria or hazardous air pollutants) which will occur as a result of the policy? If so, how?
3. Does the model quantify benefits from provisions that remove barriers to cost-effective energy efficiency measures? If so, how?
4. Does the model capture increased private sector investments in research and development as a result of the legislation and new carbon market? If so, how?
5. What assumptions are made about international actions to reduce emissions?
6. Have you reported a state or regional level analysis within the United States? If so, describe the additional assumptions used.
7. Many models are calibrated against a single base year. If this is the case with your model, what year is used?

### **Reference case assumptions**

1. Does the analysis rely on a preexisting, public set of reference case assumptions (e.g. Annual Energy Outlook (AEO) 2009)? If so, please provide the source information and list, in detail, all modifications that were made to the reference case.
2. If a preexisting set of reference case assumptions was not used, what are the reference case assumptions for changes in gross domestic product, population, emissions, energy (fossil and renewable fuel) use and energy prices? What are the assumed costs and performance of technology options (wind, solar, nuclear, biomass, carbon capture and sequestration (CCS))?
3. Are existing federal and state policies included in the model (e.g. Corporate Average Fuel Economy (CAFE), other Energy Independence and Security Act of 2007 (EISA) provisions, state renewable portfolio standards, state cap and trade systems, utility decoupling)? If so, how?
4. Are any recently enacted or adopted energy or climate policies not represented in the model (e.g. H.R. 1 or recently revised CAFE standards)? Are the recently proposed greenhouse gas standards for light duty vehicles incorporated into the reference case?
5. Does the reference case capture how concerns over greenhouse gas emissions, especially expectations of greenhouse gas regulation, impact the behavior of investors? If so, how is this modeled (e.g., AEO 2009 adds a cost penalty when assessing investments in greenhouse gas-intensive technology)?
6. Does your reference case include any regulations that would be adopted by EPA, as required under current Clean Air Act authority (i.e. Massachusetts vs. EPA), or any other clean energy policies likely to be adopted by Congress over the time scale of the model?

## **Policy case assumptions**

1. Does the analysis model H.R. 2454? If so, which version of H.R. 2454 (discussion draft, as introduced, reported from committee, reported from the House of Representatives) is modeled?
2. Does the model constrain the adoption of new or existing technologies in the policy case (e.g. nuclear, CCS, solar, biomass or wind)? Please describe any limits in detail.
3. Does the model capture the benefits of federal research & development expenditures on technology deployment and cost? If so, how?
4. How does the model capture supplemental energy efficiency policies in the legislation? Please list any energy efficiency provisions which have been modeled.
5. How does the model capture supplemental policies in the transportation sector? Please list the transportation sector provisions which have been modeled.
6. How does the model capture supplemental policies in the electric power sector? Please list the power-sector policies which have been modeled.
7. How does the model capture supplemental policies in the industrial sector (e.g. output-based rebates)? Please list the supplemental policies in the industrial sector which have been modeled.
8. How does the model incorporate the banking and borrowing provisions of the bill? If the model's outlook is shorter than that of the bill, how is the bank balance determined for the last year of the model? What interest rate is used to determine banking behavior?
9. Please list any sections of the legislation which have not been modeled. List separately any policies assumed in the policy case which are not in the legislation.
10. How are allocations of emission allowances or revenues from auctions of such allowances recycled into the economy in the model?
11. Are any rebates to households (or firms) through local distribution companies (LDCs), tax cuts, dividend checks, or other mechanisms captured in the model?
12. What are the assumptions for domestic and international offset supply and cost (i.e. what offset marginal abatement cost curves are used and have they been modified in any way for the purposes of this analysis)? Please describe, in detail, any limits placed on the supply or usage of offset for compliance.
13. Please outline the key differences between the primary policy scenario and any sensitivity scenarios.

## **Details on the interpretation and presentation of results**

1. Are policy case outputs presented in comparison to the appropriate corresponding reference case scenario (e.g. is a high oil price reference case used for comparison to a policy case with high oil price assumptions)?
2. Are statements about the impact of the legislation made relative to current levels or relative to the appropriate reference case year?
3. Consumers pay energy bills, not energy prices. Are net household energy expenditures presented or only changes in per unit energy prices? Do those expenditures or prices reflect the impact of allowance allocations (e.g. LDC allocations)?
4. Do predictions about household expenditures account for the effect of energy efficiency policies in the legislation?
5. Are energy price changes presented as wholesale prices or the retail prices consumers actually pay?
6. Describe in detail what is (and is not) included in your measure(s) of welfare, income, or consumption. Do reported changes in household income, welfare or consumption reflect any rebates, allowance allocations or tax credits?
7. If job impacts are discussed in your report, please describe in detail how any job impacts are calculated and provide the number of jobs in the model for 2009. For any year in which job impacts are discussed, please provide the total number of jobs in the model output for both the reference and policy scenario(s).