# The Economic Impact of Waxman-Markey on the Home Building Industry

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## Introduction

On June 26, 2009 the U.S. House of Representatives passed the American Clean Energy and Security Act[1] (ACESA) by a narrow vote of 219-212. The House passed the over 1,200 page piece of legislation which contains provisions intended to lower Greenhouse Gas (GHG) emissions from large segments of the United States economy. It also sets benchmarks for increased efficiency in buildings and consumer products, and mandates that certain percentages of power generation come from non-fossil fuel and renewable sources. Possibly the most famous part of the ACESA legislation is its cap and trade system for GHG emissions.

The use of cap and trade in an attempt to curb emissions is not new to the political landscape. Similar systems have been used to curb sulfur emissions in the U.S.[2] and carbon emissions in the European Union.[3] The theory behind a cap and trade system is that market principles will efficiently allocate emissions credits among the participants if the government places a cap on the aggregate amount of emissions. The system also provides an incentive for emitters to go beyond the minimum reduction amounts by allowing them to sell their surplus emissions rights to others who are unable to make the same reductions.

## Overview of Current Legislation

The ACESA legislation purports to increase alternative energy production, mandate lower energy consumption, and limit emissions from large-scale sources. ACESA is intended to reduce GHG emissions by cutting energy demand and decreasing the amount of GHG's emitted in the production of energy. The bill is divided into five

titles addressing different aspects of its approach. Title I concerns clean energy and addresses implementation of smart grid technology and energy production from renewable sources such as wind, solar, or biomass. Title II addresses energy efficiency, specifically dealing with transportation, consumer products, and building regulations which are targeted at reducing national energy demand. Title III involves reducing global warming pollution by limiting GHG emissions using a cap and trade system. Title IV deals with the transition to a clean energy economy and outlines retrofit programs for current industries and the creation of "green jobs". Title V is dedicated to agricultural and forestry related offsets and deals with administration of and oversight of an offset program.

The most well-known part of ACESA is its cap and trade program. Emitters producing over 25,000 tons[4] of CO2 equivalent[5] per year, such as electric utilities, oil companies, and large industrial sources, would be subject to the program's "cap." The cap on aggregate emissions from these covered entities decreases over time to pre-set benchmarks. Some goals from ACESA include lowering GHG emissions to 17% below 2005 levels by the year 2020, and by 83% from 2005 levels by 2050.[6]

Covered entities which fail to lower their emissions to acceptable levels have the option of obtaining tradable federal allowances for each ton of excess carbon they produce. Also, rather than buying more allowances, entities have the option of obtaining emissions offsets.[7]

Initially 85% of the emissions allowances will be allocated at no cost to emitters with the remainder being auctioned off.[8] The proceeds from the auction are intended to

be at least partially put toward consumer rebate programs intended to counteract the inevitable increases in utility bills that are expected to result from ACESA.[9]

**Building Specific Provisions**

As part of Title II dealing with energy efficiency, ACESA establishes energy use reduction goals and a National Energy Efficiency Building Code intended to decrease the amount of energy consumed by both residential and commercial structures. Section 201 of ACESA amends Section 304 of 42 U.S.C. 6833, setting energy use reduction benchmarks and target dates for meeting them.

ACESA establishes a goal that all new buildings be thirty percent more efficient than a comparable building constructed in compliance with the baseline code – on the date of enactment.[10] Local governments would then have one year to adopt building codes which comply with that goal.[11] ACESA goes on to state that on January 1, 2014 (for residential buildings) and January 1, 2015 (for commercial buildings) that all new buildings must use fifty percent less energy than a comparable building constructed under the baseline code.[12] Finally, the bill mandates that on the first of the year in 2017 for residential buildings and a year later for commercial buildings there must be an additional five percent decrease in energy use with further five percent reductions being required every three years until 2029 for residential and 2030 for commercial buildings.[13]

The bill does provide some modicum of latitude, however. If the Secretary of Energy determines that meeting these goals is not feasible, then lower reduction goals can be established as long as the reduction in energy use is greater than zero and is the maximum possible using a code that is life-cycle cost justified.[14] Higher energy use reduction goals can also be implemented either by local legislation, a successor national

code, or by the Secretary of Energy.[15] In addition to these energy use reductions, ACESA also mandates that beginning in 2030 and once every three subsequent years, the Secretary of Energy shall establish updated energy efficiency goals.[16]

Once a National Energy Efficiency Building Code has been established or updated all states have one year to bring their respective codes into compliance with national standards.[17] If a local jurisdiction fails to become compliant within the span of 18 months then the National Energy Efficiency Building Code becomes the applicable code in that jurisdiction.[18] A jurisdiction is deemed compliant if it has adopted a code that meets or exceeds the standards of the national code, and ninety percent of the "new and substantially renovated building space" inspected during the following year conforms to that code.[19] If a state is noncompliant it will become ineligible to receive federal funding in excess of that state's allotment under the Energy Policy and Conservation Act, or emissions allowances under ACESA.[20] Additionally, for each year that a state remains non-compliant it will be denied one quarter of any federal funding it would otherwise have received under ACESA.[21]

In addition to the National Energy Efficiency Building Code provisions ACESA also provides for a building retrofit program intended to decrease energy consumption by existing buildings.[22] The Retrofit for Energy and Environmental Performance (REEP) program is meant to achieve cost-effective energy efficiency improvements while also improving other attributes of existing buildings such as lowering water usage.[23] One section of REEP provides for the development of training and certification programs for auditors, inspectors, and contractors.[24] Another element of REEP requires federal, state, and local agencies to develop methods for testing and measuring the efficiency of a

building.[25] ACESA calls for establishing a means of rating and certifying retrofitted buildings according to an Energy Star or similar green building rating system in order to facilitate tracking and identification of buildings under REEP.[26]

The National Energy Efficiency Building Codes and the REEP programs are meant to limit the amount of energy consumed by buildings. ACESA, in its current form, provides a statutory mandate to create an additional layer of certification and oversight in an already heavily regulated industry. ACESA lays out the broad strokes of an ambitious plan to drastically cut the amount of energy used per household. It expects a rapid response from state and local governments to comply with these laws and presumes that technology will advance sufficiently to meet the bill's demands. The necessary response to ACESA would include both rulemaking and establishment of oversight methods in order to first establish baselines for energy use and then provide measurements of any reductions.

## What Will the Actual Impact of ACESA Be?

The House of Representatives narrowly decided that spending the better part of a trillion dollars over the next ten years on ACESA and climate change is a worthwhile venture.[27] Something that must not be overlooked is that fact that any funding for this bill is going to come from the taxpayers either in direct taxes or through higher prices for energy and commodities. Furthermore, the specific effects on the housing market and the building industry must be considered in order to see if the bill is actually achieving its end or manipulating the U.S. economy in an ineffective attempt to stop global warming.

If the extremists on either side are to be believed, continued unchecked emission of GHG's can lead to results ranging from the eventual cessation of all life on earth, to

absolutely no change to the status quo. What Congress is considering is a multi-trillion dollar gamble that this program will even have any measurable affect on the global climate. Instituting this cap-and-trade system creates a series of disincentives and additional expenditures in an already tough economic climate, and this bill will be enormously costly in terms of both funding and opportunity costs incurred in an attempt to achieve an uncertain and possibly negligible gain.[28]

**Economic Impacts Generally**

In a market economy it is expected that individuals within the market act according to the relative costs and benefits of available alternatives. What ACESA is hoping to do is spur the development of a "green economy" by increasing the cost of carbon-based energy to the point that demand either decreases or shifts to other sources. ACESA also requires that a certain percentage of power come from alternative sources, and more efficient products be used to further reduce demand for carbon-based energy. The result of many of these programs is that products that could not compete cost-wise on a level playing field are now being given a boost. The government is artificially shifting demand by forcing an increase in the use of more costly forms of energy production and more efficient technologies. These technologies are already expensive relative to alternative products, and will probably become more so in the short run due to an abrupt increase in demand caused by ACESA.

ACESA does two things that will influence the economy. First, it turns GHG's into a commodity by capping the aggregate amount of emissions and establishing an allowance trading system. While it is true that most of the allowances are going to be allocated at no cost initially, over time the cap will lower and fewer allowances will be

given away. This creates scarcity and forces any large emitter to pay for their emissions. This added cost, along with any necessary capital investments for reequipping, will be passed on to the eventual users. The second thing is that ACESA mandates shifts in market demand by requiring certain energy efficiency and production benchmarks. By forcing a certain percentage of energy to come from alternative sources and increasing efficiency requirements for consumer products the government is pushing demand toward these products while pulling it away from less-expensive GHG based energy sources. Enacting these measures means that consumers will be left to pay higher energy prices as the economy is forced to adjust to changing regulations.

There have been various studies published estimating the impact that ACESA will have on the economy. One study released by the EPA estimates that the annual cost increase per household will be somewhere between 80 and 111 dollars.[29] Other analysis by the Energy Information Administration and Congressional Budget Office estimate the costs at between 83 and 175 dollar.[30] Non-governmental analyses of ACESA place the costs considerably higher, estimating an average annual increase in direct energy expenditures of over 1,200 dollars per household.[31] This same study goes on to estimate that between 2012 and 2035 ACESA would result in an aggregate loss of 9.4 trillion dollars in real GDP and average annual job losses of 1,145,000. Another study places annual job losses even higher, at an average of 2.5 million per year between 2010 and 2030, even after accounting for the promised green jobs ACESA is supposed to create.[32]

Because ACESA is so far-reaching modeling its impact is wrought with uncertainty. Every analysis of the bill naturally relies on varying sets of assumptions that can drastically skew the results. What can be clearly seen though is that, if enacted, this

bill will carry a massive price tag that will no doubt affect the U.S. economy. The Congressional Budget Office estimated that within the first decade that ACESA is enacted, before energy caps become most severe, it would result in $873 billion in additional tax revenue and an a $864 billion increase in government spending.[33] This huge sum of money will be taken out of the economy and passed through a notoriously inefficient government structure where there will inevitably be some transaction loss. The funds will then be re-inserted into circulation according to priorities created by ACESA. This opens creates open season for lobbyists to vying for their respective causes resulting in funding decisions that are politically driven rather than economically or environmentally meritorious. It also confines decision making within a rigid federal structure regardless of local circumstances or customs.

**Economic Impacts on the Building Industry**

ACESA does three things that will raise housing prices and harm the building industry. First, it adds requirements to an already cumbersome regulatory environment. Second, it introduces uncertainty and increased risk by creating new standards for building construction. Third, it increases the cost of construction projects by forcing builders to use more expensive, higher efficiency materials to meet energy use restrictions.

ACESA will undoubtedly result in an increase in housing prices because it raises efficiency requirements overnight and adds to the amount of oversight and regulation needed to ensure compliance. The establishment of a National Energy Efficiency Building Code and the associated reductions in building energy consumption are not going to be cheap. On the day that it is enacted ACESA starts the clock ticking on a one

year grace period for local governments adopt codes requiring all new buildings to use 30% less energy. That also means that systems for testing and enforcing building compliance must be developed. Another concern is that the additional oversight required under ACESA would lengthen the time necessary to complete a project. A longer holding period on a piece of property means that the developer incurs greater overhead expenses and those costs get passed down the line to consumers.

This legislation adds yet another level of approval to an already cumbersome real estate development process. The price of housing will invariably rise as measures must be enacted and enforced which will reduce their energy consumption by over two-thirds in the next twenty years.

The ACESA legislation also introduces uncertainty into the market. The bill sets down broad guidelines for new energy reduction standards that artificially shift the demands of the market. In a changing regulatory and economic landscape investors are less apt to get involved in a project if they are unsure when and to what extent the regulations may change and interfere with their expectations. Local governments have the option of enacting energy efficiency standards that are more draconian than those mandated in ACESA. ACESA and the new local laws enacted under it are going to create fresh territory for litigation and as long as the application of law is unsettled, real estate development projects are going to become even less appealing to investors than they already are.

The third thing ACESA does to harm the building industry is that it will increase the cost per square foot to construct a building. The decreases in energy use could involve changes to materials, plans, and construction methods. The high efficiency

materials needed to meet the energy consumption requirement are not going to become any cheaper in the short run, given that the bill would create a sudden enormous demand for them. Not only is the additional demand a concern, but increases in energy costs resulting from ACESA will raise the cost of necessary materials, and that added expense will then be incorporated into the price of finished structures. Even with government rebate programs that are meant to limit this impact, ACESA enacts continually more stringent regulations over the course of decades and that will unavoidably lead to higher up-front housing costs. It may cause lower long-run operation costs, but it will make it particularly difficult for low-end buyers to enter the market.

The bottom line is that ACESA regulates and inflicts enough economic pain that the results will be buildings that use less energy. The costs may be dispersed among heavy polluters and reduced to some extent by offsets, but ultimately the money to pay for these carbon allowances and added regulations will be coming from the consumers who buy the finished products. The building industry has already taken a severe beating in recent years and ACESA would further the injury by depressing consumer purchasing power while increasing the cost of buildings.

## Looking Forward

With its passage in the House of Representatives in June, ACESA now moves to the Senate where it is expected to be highly contested. ACESA barely passed the house because of political wrangling and last-minute amendments, and it is expected to face considerably harsher scrutiny in the Senate. Some climatologists still contend that anthropogenic global warming does not exist while others that agree it is happening differ regarding the extent of the threat posed. That debate is too complex to be addressed here,

but what is certain is that if carbon emissions do in fact lead to a greenhouse effect, the unilateral cutting of U.S. emissions will likely do little to solve the global problem. It is estimated that the U.S. currently emits approximately 19 percent of global carbon dioxide.[34] China is already emitting more carbon than the U.S. and India is rapidly catching up.[35] An EPA analysis estimated that unilateral cutting of emissions by U.S. will not have any appreciable effect on global temperature.[36] ACESA sets the goal of reducing the per capita CO2 emission in the U.S. to the same level they were in 1875 and to less than half of any other industrialized nation.[37] This current push for climate change legislation comes as the United Nations prepares for a Framework Convention on Climate Change to be held in Copenhagen this December. After America's refusal to sign onto the Kyoto protocol, legislators may be hoping that ACESA or successor legislation will be seen as a good faith effort on the part of United States to address environmental issues.

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[1] Also referred to as the Waxman-Markey Bill
[2] 1990 Clean Air Act Amendments
[3] European Union Greenhouse Gas Emission Trading System, implemented in 2005.
[4] ACESA § 312, amending § 700(13)B)
[5] *Id*. amending § 712
[6] *Id*. amending § 703
[7] *Id*. amending § 732
[8] Stone, Andy, "A Winner In The New Climate Legislation" Forbes.com 6-24-09
[9] ACESA § 431
[10] *Id*. § 201, amending § 304(a)(1)(A), "baseline code" defined in ACESA § 201, amending § 304(a)(6)
[11] *Id*. amending § 304(b)(1)(A)
[12] *Id*. amending § 304(a)(1)(B)
[13] *Id*. amending § 304(a)(1)(C)
[14] *Id*. amending § 304(a)(3)

[15] *Id*. amending § 304(a)(2) & (3)
[16] *Id*. amending § 304(a)(4)
[17] *Id*. amending § 304(c)(1)(A)(i)
[18] *Id*. amending § 304(d)(1)
[19] *Id*. amending § 304(e)(3)
[20] *Id*. amending § 304(e)(6)(C)(i)-(ii) – EPCA divides 125 millions dollars among the state governments based on a formula contained therein. Emissions allowances issued pursuant to section 304(h)(1)
[21] Id. amending § 304(e)(6)(C)(iii)(I)-(IV)
[22] Id. § 202(c)
[23] Id. § 202(b)-(c)
[24] Id. § 202(f)(1)-(2)
[25] Id. § 202(f)(4)-(6)
[26] Id. § 202(f)(12)(A)-(B) & (f)(14)
[27] http://www.cbo.gov/ftpdocs/103xx/doc10376/hr2998WaxmanLtr.pdf. June 26, 2009 Congressional Budge Office estimate that ACESA would increase direct spending by $864 billion from 2010-2019.
[28] ACESA § 311, amending § 701(a)(5) – "That some of the adverse and potentially catastrophic effects of global warming are at risk of occurring and not a certainty does not negate the harm persons suffer from actions that increase the likelihood, extent, severity of such future impacts."
[29] EPA Analysis of the American Clean Energy and Security Act of 2009 H.R. 2454 in the 111th Congress, June 23, 2009. This average is calculated from 2015-2050.
[30] EIA's Economic Analysis of "The American Clean Energy Security Act of 2009". August 4, 2009
[31] WebMemo No. 2450. "Son of Waxman-Markey: More Politics Makes for a More Costly Bill" June 16, 2009. Heritage Foundation. Exact amount of estimate is $1241. This average is calculated from 2012-2035.
[32] http://www.nationalbcc.org/index.php?option=com_content&view=article&id=750:&catid=1:&Itemid=7
[33] *Supra* note 27.
[34] http://cdiac.ornl.gov/ftp/trends/emissions/Preliminary_CO2_Emissions_2006_2007.xls
[35] http://cdiac.ornl.gov/trends/emis/tre_tp20.html
[36]http://epw.senate.gov/public/index.cfm?FuseAction=Minority.PressReleases&ContentRecord_id=564ed42f-802a-23ad-4570-3399477b1393
[37] http://bx.businessweek.com/us-energy-policy/view?url=http%3A%2F%2Fwww.energytribune.com%2Farticles.cfm%3Faid%3D2066