

# “A House Upon A Rock”

*Climate legislation gains a shaky foundation on Capitol Hill. How can it be strengthened?*

**Gregory C. Staple**

In time, the vote by the House Committee on Energy and Commerce to pass the American Clean Energy and Security Act, H.R. 2454, on May 21 may be seen as the historic turning point in the efforts of the United States — and, with America’s new commitment, that of the wider international community — to systematically check catastrophic climate change. The bill, later passed by the House, contains the first comprehensive plan to cap global warming pollution ever adopted by a chamber of Congress, and a federal target for renewable electricity. Its chief architects, California Democrat Henry Waxman and Massachusetts Democrat Edward J. Markey, deserve enormous credit.

In his weekly radio address, President Obama hailed the committee’s efforts in providing the climate pillar for the new economic “House Upon a Rock” he proposed in April. Then, paraphrasing the Gospel of Matthew, the president said, “We cannot rebuild this economy on the same pile of sand” if we want a new foundation for growth and prosperity. “We all know that the country that harnesses [clean] energy will lead the 21st century.” And “the only way to really spark this transformation is through a gradual market-based cap on carbon pollution, so that clean energy is the profitable kind of energy.”

Let’s look more closely now at how the work of

the House addresses the president’s goals and resolves some of the prior stumbling blocks to climate legislation. As discussed below, however — and as evidenced by the bill’s still uncertain future in the Senate — before any climate bill reaches the president’s desk further changes are likely, and some suggestions on that score appear in this essay. For example, public support for a climate bill may be helped by narrowing the ability of large emitters to import emission reduction credits — known as offsets — from abroad, thus postponing significant carbon cuts at home for a decade or more, and undercutting U.S. carbon prices.

H.R. 2454 began its life in March as a Discussion Draft by Waxman, the committee’s chair, and Markey, who heads a key subcommittee. Although the draft drew heavily on prior proposals by Markey and former committee chair John Dingell (D-Michigan) it quickly ran into stiff criticism. This came not only from the minority, led by ranking member Joe Barton (R-Texas), who uniformly characterized any cap-and-trade plan as an unwarranted new energy tax, but also from a dozen moderate Democrats primarily concerned about the bill’s impact on jobs and energy prices.

As a consequence, the legislation voted out of committee had significant changes. Some undoubtedly strengthened the bill’s main goals; others are more questionable and, in several cases, advance fuel-specific energy policies with limited regard for the overall impact on emission reductions.

Title I of H.R. 2454 is focused directly on promoting “clean energy” and creates a federal renewable electricity standard, or RES. It requires the largest retail electricity suppliers (covering roughly 70 percent of the market) to obtain 6 percent of their electricity in 2012 from defined “renewable energy resources” (a much debated category). The RES increases to 20 percent by 2020, but up to a



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fourth of this amount may be met by “electricity savings.” States may also petition to increase the savings portion to two fifths of their target.

Using existing state programs as a model, beginning in 2012, the Federal Energy Regulatory Commission also will issue a new category of tradable federal renewable energy certificates, or RECs, to generators, typically with a certificate issued per megawatt hour. (To boost small wind and solar installations, the bill awards triple credits to new facilities of four megawatts or less.) Covered utilities will be required to surrender an appropriate number of RECs annually to FERC and/or demonstrate the required electricity savings. However, in lieu of RECs, a utility may make a capped compliance payment, starting at \$25 per megawatt-hour.

The RES program covers fewer utilities and is less stringent than the renewable energy target (25 percent by 2025) written into the Discussion Draft and championed by the president. The reduced scope reflects a compromise negotiated with a key group of “Blue Dog” Democrats — often led by Representatives Rick Boucher (Virginia), Bart Gordon (Tennessee) and Mike Doyle (Pennsylvania) — whose votes were essential to the bill’s passage.

Apart from easing compliance targets, the com-

promise also modified the definitions of “renewable energy resources” in dealing with hydropower and biomass. “New” nuclear facilities (i.e., those in service after H.R. 2454 is enacted) and “clean coal” (with carbon capture and sequestration) were excluded from the base, as was “old” (largely pre-1992) hydropower. But CO<sub>2</sub> savings or not, there was no consensus on whether “zero carbon” (e.g., new nuclear) or “light carbon” (e.g., natural gas-fired generation) should receive any credits under the RES.

Title I also has several other important provisions including authority for a new EPA-run national greenhouse gas (GHG) registry with annual reports required from a broad range of entities. In March, EPA began a rulemaking that would accomplish much the same result and this portion of the bill may ultimately be superseded.

Title II of the American Clean Energy and Security Act is concerned largely with boosting the efficient use of energy in America’s houses, offices and factories — the proverbial low hanging fruit. The title requires updated building energy codes (they must be 50 percent more efficient by 2016); lighting and appliance efficiency standards (from TVs to portable electric spas to bottled water dispensers), and efficiency standards for industrial plants.

## Boosting Energy Efficiency, Putting a Price on Carbon Emissions

**T**he third Title of H.R. 2454 contains the bill's plan for putting a price on carbon by authorizing EPA to issue a declining number of tradable GHG emissions allowances each year beginning in 2012. Under the plan, each March, suppliers of petroleum-based fuels (gasoline, heating oil), fossil fuel-fired electricity generators, other large GHG emitters, and natural gas utilities would need to have a sufficient number of these allowances (or offset credits or non-U.S. emission allowances) to cover their emissions for the prior year. The plan is phased in, with coverage of large industrial emitters delayed until 2014 and natural gas utilities until 2016.

The nominal pool of allowances is capped in 2012 at 97 percent of 2005 GHG emissions from covered sources. The cap declines to 83 percent of 2005 levels in 2020 (the Discussion Draft had 80 percent) and is set at 17 percent of 2005 levels in 2050.

Beginning in 2013, the bill requires EPA and the National Academy of Sciences to report to the Congress every four years on whether U.S. GHG reduction efforts (together with international efforts) are sufficient. The climate tests written into the bill are the avoidance of global GHG concentrations above 450 parts per million in CO<sub>2</sub> equivalents (CO<sub>2</sub>e) — it is now at roughly 435 ppm — and increases in the average global surface temperature of more than 3.6 degrees Fahrenheit above pre-industrial levels (1°F has already occurred).

These two metrics have been widely used by the U.N.'s Intergovernmental Panel on Climate Change as approximate danger points for avoiding catastrophic climate changes. (Some scientists think the 450 ppm standard is much too high, however.) By the same token, the IPCC has also indicated that to achieve this goal, the world's developed countries will need to bring emissions at least 25–40 percent below 1990 levels by 2020 rather than just below 1990 emissions, as H.R. 2454 mandates. Still, if EPA or NAS finds the U.S. GHG mitigation efforts are inadequate, the president must direct federal agencies to correct the shortfall. In that event, the president must also submit a remedial action plan to the Congress, including legislative recommendations.

The emission caps and associated market-based allowance scheme are the centerpiece of H.R. 2454 for various reasons. First, the scheme not only provides a nominal ceiling (albeit an elastic one, counting the offsets and non-U.S. allowances) on

roughly 85 percent of U.S. GHG emissions, but also provides a fundamental, long-term price driver for both allowances and offsets to underpin the renewable energy and efficiency mandates in the bill.

The emission allowances to be issued under the plan from 2012–2050 — over 130 billion allowance covering a like number of tons of GHGs — provides the bill's main funding source. The complicated formula negotiated for distribution of this de facto carbon currency during the plan's first two decades — allowances may be worth \$10–15 at the outset and rise to \$35 or more by 2030 — became the practical glue for binding enough Democratic members of the committee together to get the bill passed.

On its face, the allocation scheme agreed by the committee appears wholly at odds with President Obama's campaign plan for a 100 percent allowance auction from year one, with the bulk of the auction revenues rebated to consumers and for clean energy R&D. This kind of "cap-and-dividend" plan was also reflected in a 2008 bill by Representative Markey and initially had some supporters on the committee. Nevertheless, the broad united front by the bill's key industry and environmental backers (e.g., the utility-backed Edison Electric Institute and the USCAP alliance among BP, Shell, GE, Pepsi, DuPont, and the Natural Resources Defense Council and Environmental Defense Fund), compelled compromise.

Under H.R. 2454, the largest emitters (apart from petroleum suppliers) will not need to buy most of their allowances at auction until after 2025. Yet, consumers would still see an early dividend. Starting in 2012, 15 percent of the allowance pool would be auctioned to benefit low- and middle-income taxpayers; a further 30 percent would be distributed to electric utilities and another 9 percent to natural gas utilities with both tranches of free utility allowances to be used to benefit rate payers (not utility stockholders) pursuant to annual plans approved by state regulators. In addition, up to 15 percent of the allowances would be distributed initially to state governments for renewable energy and energy efficiency programs that can include rate relief and tax credits.

In short, H.R. 2454 is now part cap-and-dividend and part cap-and-invest. The bulk of the early dividends are targeted for utility rate payers, however, and the investments are weighted to "clean coal." The auto industry also receives some money (roughly 2 percent of allowances until 2025) for "clean cars," which should be boosted by the rising carbon levy H.R. 2454 would impose on gasoline.

## An Allocation Scheme With Bipartisan Appeal

The bipartisan political appeal of the committee's allocation scheme, while publicly denied, was evident during the waning hours of one of the committee's late night mark up sessions. Although the committee's Republican members had previously taken issue with almost every facet of the cap-and-trade plan (seeking to suspend its operation if various gasoline price, unemployment, or utility rate targets were breached), when Georgia Republican Phil Gingrey proposed a boldly populist amendment to require the auction of all allowances from day one with the revenues disbursed by the governors of each state — a return to pure cap-and-dividend — there was but a perfunctory debate before the amendment was rejected by a vote of 52 to 4.

The power of the committee's carbon currencies to secure consensus was also much in evidence when it came to securing the votes of Democrats from states whose electricity suppliers depend significantly on coal-fired generation; many of these states are also coal producers. Representative Boucher, who led the negotiations for this bloc, later made it clear that the allowance scheme was crucial, but so too was the committee's decision to allow covered entities to use GHG emissions offsets up to a total of 2 billion tons annually. This offset pool inflates the potential pool of compliance instruments by roughly 30 percent annually between 2012–2022 and, according to some estimates, if all the offsets were used, capped parties could maintain business-as-usual emissions through 2030.

Offsets reflect ton-for-ton GHG emission reductions by non-capped sectors of the U.S. economy (e.g., forestry, agriculture) or like reduc-

## The Senate's Top Ten

Now it's the Senate's turn to act. Here are the top 10 reasons the upper chamber should move this fall to pass strong, comprehensive climate legislation:

1. *Clean up carbon pollution.* We need science-based limits that tighten over time. The House bill's long-term limits meet that need, cutting 2005 emissions 42 percent by 2030 and 83 percent by 2050. For the mid-term, however, we need and can afford at least a 20 percent reduction by 2020.

2. *Take a comprehensive approach.* Along with a declining cap, we need complementary standards and incentives to advance energy efficiency, renewable, and clean energy technologies. The bill should fully account for carbon emissions and build on, not replace, the Clean Air Act.

3. *Create jobs.* Passing climate legislation will unlock billions of dollars in clean energy investments that will help power our economic recovery. Investing \$150 billion in clean energy will create 1.7 million jobs.

4. *Make energy affordable.* The per-household cost in 2020 of the House-passed bill will be less than a postage stamp a day. NRDC's research shows that by then American households will save an average of \$6 per month on their electricity bills and \$14 per month on the cost of owning and driving their vehicles.

5. *Keep America competitive.* Building on the House bill, the Senate can help U.S. manufacturers compete in the global economy by investing in more efficient domestic facilities, preventing jobs and emissions from moving overseas.

6. *Increase our energy and national security.* The Senate can join the House in providing the retooling incentives and loan guarantees to help

meet President Obama's targets for cleaner, higher-mileage vehicles by the year 2016 — targets that will cut U.S. oil dependence by 1.4 million barrels a day by 2020.

7. *Be fair.* We should use emission permits to achieve public purposes, not private windfalls. The House bill uses allowances mainly to protect consumers, deploy clean technology, and assure the competitiveness of our industrial base. Over the House bill's life, more than 80 percent of the permit value goes to public purposes. The Senate can further cut costs and increase consumer benefits by dedicating more of the permit value to money-saving energy efficiency investments.

8. *Regulate markets.* The House bill includes safeguards to regulate the market for emissions permits, as well as futures and other derivatives. The Senate can further strengthen these safeguards.

9. *Balance the budget.* Energy and climate legislation can be budget neutral. The House-passed bill will not increase the federal deficit, according to the Congressional Budget Office.

10. *Lead.* The worst impacts of global warming can't be avoided without U.S. leadership, and the United States can't lead the required global effort without making a strong commitment to cut our own emissions before the international climate summit in Copenhagen this December.

Action to secure our economic, energy, and environmental future has been delayed too long. The Senate needs to pass comprehensive climate legislation this year.

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tions in foreign countries. Under the bill, a covered party must generally source half of its offsets from domestic origins but the EPA may expand the international tranche to 1.5 billion tons per year if there is an insufficient volume of U.S. offsets. Offsets may be acquired in any year (up to the authorized ceiling) and unused ones banked for use in later years.

In announcing his support for the bill, Boucher noted that H.R. 2454 met his objectives (preserving coal jobs; growing coal production; and keeping coal-fired electricity rates affordable) because, “Our agreement provides 2 billion tons annually of offsets that will enable electric utilities to invest in agriculture and forestry [etc.] Therefore, by using offsets, electric utilities can continue using coal while at the same time reducing greenhouse gas emissions” off-site.

Wholly apart from the bill’s compliance-linked offset provisions, H.R. 2454 provides allowance-based funding (starting at 5 percent of the allowance pool in 2012–2025) for reducing emissions from deforestation in developing countries, a program with broad international backing. Deforestation now accounts for 20 percent of GHG emissions globally and H.R. 2454 has targeted 720 million tons of CO<sub>2</sub>-equivalent reductions annually from these offset projects by 2020 — a goal which may well exceed annual reductions in the U.S. by that date.

There is one other major compromise in Title III that deserves emphasis. With limited exception, at the federal level, the EPA’s cap-and-trade regime would take the place of any new GHG-specific regulatory regime by EPA under the Clean Air Act. Thus, as Markey advised during the markup, and as stated explicitly in Title III, the “parade of horrors” envisioned by some stakeholders from EPA application of the CAA to GHGs as criteria air pollutants (e.g., a natural ambient air quality standard for CO<sub>2</sub>; expanded new source review proceedings, etc.) has largely been mooted. In addition, H.R. 2454 suspends all state cap-and-trade programs until 2017 and makes state allowances convertible to federal ones.

Title IV of the bill seeks to protect energy-intensive U.S. manufacturers from rising carbon costs and from being put at a competitive disadvantage vis-à-vis foreign manufacturers not subject to like GHG curbs. To that end, from 2014–2025, the title awards a tranche of free allowances (beginning at 15 percent of the pool) for rebates to “trade-exposed” and/or “energy intensive” manufacturers. After 2025, the program may be extended at the president’s request. After 2018, if 85 percent of the global output from an industry sector originates in

countries not subject to effective GHG reductions then, after 2020, the president may also prohibit imports from a non-compliant country unless the importer submits an appropriate number of emission allowances auctioned from a special reserve account. These trade protection measures are complemented by new worker retraining and clean technology export assistance provisions.

The full House added a final Title V granting the Department of Agriculture, rather than EPA, the power to issue offsets for domestic agricultural and forestry projects. A new category of temporary or term offsets was also added to the bill.

## More a Clean Energy Program Than a Climate Change Mitigation Bill?

It should be obvious by now that H.R. 2454 is much more than an environmental bill. In fact, with the Obama administration’s not so hidden support, H.R. 2454 has in significant respect been recast as more of a clean energy program than a global warming one. This transformation seems to track recent polling data that show relative enthusiasm for what is “green,” and “clean” but limited support for “climate change regulations” per se, especially a complicated cap-and-trade plan that can easily be labeled as an energy tax.

In these circumstances, the leadership in the House (and likely the Senate, too) is intent on an omnibus bill that couples a new federal RES together with a cap-and-trade program that delivers ample funding for “clean energy” (albeit with a carbon capture and storage emphasis) while rebating costs from most emission allowances to utility rate payers and low income consumers. At the same time, the now modest mid-term (2020) emission reduction targets in H.R. 2454 and the ample scope for offsets and foreign allowances are likely to keep the price of U.S. carbon allowances quite low, averaging \$16–\$21 through 2025, according to EPA.

All of this may be good politics, especially in a recession. But, looking ahead, does the compromise version of H.R. 2454 really provide the best clean energy foundation for that “House Upon A Rock” the president wants? And more specifically, in combination, are the main elements of H.R. 2454 — the new RES, the carbon-storage investments, the nominal emission caps, and the actual compliance options (counting offsets and foreign allowances) — adequate to meet the bill’s overreaching goal of reducing U.S. emissions enough to stabilize global GHG concentrations near 450 ppm?

Without offering a firm answer to this question, which is likely unknowable in the near term (that is

also one reason for the bill's regular EPA and NAS report cards), there is reason to think Congress might do better.

First, significant additional GHG reductions might be achieved if the clean energy provisions of the bill were not limited almost exclusively to a fairly narrowly set of "renewable energy" sources and "clean coal," but rather provided a greater role for other low- and zero-carbon energy sources (hydropower, natural gas, and nuclear power). This is particularly so given that the combined renewable energy/efficiency standards finally agreed in committee may only boost the total amount of renewable power in 2020 nationwide a few percent above that mandated under existing renewable standards adopted by the majority of states. The current RES is self-consciously designed to favor new zero-carbon renewable technologies (mainly wind, solar, geothermal, biomass) at the expense of old ones (hydro), and to let other low-carbon technologies (natural gas, nuclear) rely upon existing federal programs or separate legislation. From an emissions standpoint, that may be short sighted.

Take the case of gas-fired power plants. Without any carbon capture and storage, gas-fired generators emit approximately half the CO<sub>2</sub> of coal-fired plants for the same energy input; they are also generally more efficient. In principle, therefore, one might think that a comprehensive clean energy policy would encourage gas-fired power in tandem with renewable energy so that the highest carbon fuel (coal) is displaced first. Yet, H.R. 2454 may well have the opposite effect because gas-fired power is ineligible under the RES (even for partial credit) and the carbon advantage of gas is largely neutralized under the bill's allowance plan because retail utilities will receive free allowances based in large measure on past CO<sub>2</sub> emissions, which favors coal.

Second, H.R. 2454 sends very mixed signals on whether or not federal policy should support more decentralized or distributed generation facilities to decarbonize the transmission grid. The RES seems to favor that but the allowance policies tend to cut the other way and, apart from a compromise plan for western states, the bill does little to resolve federal-state disputes regarding the approval of new transmission facilities. The absence of clear direction on this contentious issue may well hamper key energy investments. After all, in April, Obama's new FERC chairman, Jon Wellinghoff, asserted that the United States can meet its electricity needs without building a single new base load coal or nuclear plant.

Finally, and perhaps of greatest concern, is the outsized role that H.R. 2454 accords foreign offsets — and by implication, the international carbon mar-

kets — in setting U.S. carbon prices and facilitating compliance by covered parties. This is the likely consequence — intended or not — of the bill's current offset provisions. As Representative Boucher made clear, these provisions will allow many covered entities to maintain much the same fuel mix and emission profile for some time by paying to reduce emissions off site, which may mean largely overseas. How so? According to Point Carbon (and other analysts), international offsets are expected to be cheaper and much more plentiful in the near term than U.S. offsets from the agriculture and forestry sectors. Thus, these international offsets — and the project developers and brokers who facilitate them — may well set the cost for compliance and, in so doing, place a ceiling on the market price for domestic U.S. allowances. Indeed, the Congressional Budget Office estimates that offsets will cut the price of allowances by roughly 70 percent (\$35) in 2012.

The foregoing scenario is fraught with political and economic peril as many in Congress well know. For foreign observers, it is only likely to reinforce the view that the United States is still unwilling to be decisive on global warming, preferring instead to tread water while paying less-developed countries for the privilege of maintaining a high carbon diet. Meanwhile, the U.S. public may have a hard time accepting the wisdom of reducing its foreign dependence on one commodity — oil — only to gain a new dependence on another — carbon offsets. That does not sound very much like energy or climate security.

Worse still, the more overseas carbon markets are able to set the terms for domestic environmental compliance, the more suspicious many Americans are likely to become of cap-and-trade. As *New York Times* columnist Thomas Friedman has stressed, cap-and-trade is easily demonized as a financial scam: "If you liked credit default swaps," say its opponents, "you're going to love carbon-offset swaps."

You don't have to be a fan of carbon taxes (Friedman's alternative) to take his point. When it comes to authorizing offsets, Congress should exercise caution and expedite approval of domestic ones first. (This should be done without undermining H.R. 2454's plan for investing in international forest conservation, however). That would make the whole scheme easier to understand and, by boosting the role of U.S. agriculture and forestry in neutralizing carbon, it should also broaden the appeal of cap-and-trade on Capitol Hill. That is vitally important because, despite its short comings, the programs advanced by H.R. 2454 probably provide the best chance we will have for some time to put America on the path to a cleaner energy future. •