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Critique of ACCF/NAM's Analysis of the Impacts of H.R.2454 on the U.S. Economy

Environmental Defense Fund, 12 August 2009

Assumptions matter – and unrealistic assumptions make for outlandish results

Once again, NAM has adopted a set of draconian assumptions in its analysis that ignore important provisions of the legislation and impose artificial constraints on the economy's ability to reduce emissions.

Two top level comments:

- "**Modified" NEMS model** – ACCF/NAM makes much of its use of the NEMS model (the same model used by the EIA). The truth is, however, that they use a modified version of the model (NEMS/ACCF-NAM 2) and very little is known of what they have changed from the original NEMS model. Nonetheless we know two things for sure, even if they have kept the endless number of algorithms and equations upon which this model rests, changes to the assumptions will make huge differences in the results – and very few of assumption are laid out.[1]
  As ACCF/NAM itself writes in its Executive Summary: the analysis is the result of *"ACCF/NAM's interpretation of the bill, and input assumptions provided by ACCF/NAM. The modeling was performed independent of EIA."*

- **ACCF/NAM reports state specific impacts**. As the NEMS model is an economy-wide model and is not designed for or even capable of doing state level analysis, it is anybody's guess what model or back of the envelope calculations their state impacts are actually based on. These results cannot be directly compared to those of government agencies (EPA and EIA), or the independent analysis by CBO, because none of these attempted to estimate the state level impacts.
  As the Congressional Research Service concluded last year: *"Simple attempts by some presentations to break down the cost by industrial sector or by state should be viewed with attentive skepticism." (CRS, Climate Change: Costs and Benefits of S.2191, May 151998, p.70)*

Some comments regarding the limited information on their assumptions:

- **Limitation of the use of offsets and the ratio of national vs. international offsets.** Offsets are a very powerful cost containment mechanism, and therefore constraining their use in a modeling exercise is equivalent to artificially inflating the cost of the overall bill. Even ACCF/NAM acknowledges the importance of the assumptions in its Executive Summary: "assumptions regarding the likely availability of domestic and international offsets -- key factors influencing analysis of the cost of limiting greenhouse gas emissions." Yet they choose to HALF the number of offsets actually available in the period 2012-2030 under HR 2454 (they use a 15% limit – but in reality, 2 billion allowable offsets as per HR2454 translates to just over 30% of the yearly compliance obligation for the 2012-2030 period). In addition to artificially constraining the use of offsets in general, they constrain the use of international offsets even further (only 5% of the 15% offset amount is assumed to come from international offsets -- this roughly translates to a meager 165 million tons on average instead of the 1.25 billion the bill allows for!). Since international offsets are expected to be more abundantly available and cheaper, ACCF/NAM's assumptions can be seen as a direct attempt to inflate the potential negative economic impact of the bill. It is widely accepted that tapping into low-cost emission reduction opportunities on farms and forests here at home, (or wherever they might be

[1] Unfortunately ACCF/Nam has not yet published its full report. We look forward to learning more about its assumptions to be included in Appendix 1.

found throughout the world) through offsets will help to keep the costs of emission reductions as low as possible.

- **Constraints on renewable and nuclear energy:** A key step in cutting CO2 emissions is to reduce our reliance on fossil fuels and shift instead to clean, renewable energy like wind, solar, and biomass, and to consider the further use of safe nuclear energy. But the assumptions employed by ACCF/NAM prevent this shift from happening by artificially constraining new construction in renewables. For example, their *maximum* allowable construction of wind power every year (5 GW of capacity) under their high cost scenario is much less than the *actual* amount of new wind power deployed in 2008 (8,538 MW as reported by the American Wind Energy Association). Even more striking is their constraint on nuclear energy to 10 to 25 GW over the whole period. In comparison, EIA found that even without the bill nuclear is expected to increase by more than 10 GW and with HR2454 the nuclear capacity is expected to expand to 195 GW (base case). No wonder NAM stated in their press conference that they felt nuclear was a "huge missed opportunity"!

Unsurprisingly with assumptions such as these, the results are much more negative than those of the EIA,EPA and CBO:

- ACCF/NAM predicts a carbon allowance price of $123 to $159 per ton of carbon dioxide in 2030. This is two to three times as high as what EIA and EPA found! This is crucial as the carbon price drives the increases in energy and other prices, which in turn drive the economic impact on households and the economy as a whole. Unsurprisingly, ACCF/NAM also finds two to three times the GDP effect by 2030 then EIA or EPA did.

BOTTOM LINE: ACCF/NAM's unrealistic assumptions, some of which do not even reflect the actual provisions in H.R. 2454, result in an ungrounded analysis of the American Clean Energy and Security Act of 2009. Not surprisingly, its results are far removed from those found by the most credible analyses available as done by the Energy Information Administration (EIA), the Congressional Budget Office (CBO) and the Environmental Protection Agency (EPA). Although their analytical approaches differ, these three credible analyses all agree on the basic results:

- **The U.S. economy will grow strongly under the proposed legislation.**
    - In the year 2015, the estimated impact on GDP of HR 2454, relative to a no-policy case, ranges from a slight reduction of 0.4% to an increase of 0.1%.
    - By the year 2030, the U.S. economy will be about 70 percent larger than it is today (range is 69-72%). The average estimated impact of HR 2454 is a reduction of 0.75% (0.4% to 1%) relative to the baseline.

- **The costs for the average American family, taking into account increased energy and gasoline prices are small and affordable.**
    - Both the EIA and EPA analysis find that, on a per-person basis, the average annual cost amounts to about a dime a day. Fro example, EIA's estimate for the average annual cost to households over the period 2012-2030 is just $83 in present value. That is just 22 cents a day for the average American family — and a dime a day per person (assuming average household size of 2.2).