



No one can do everything. Everyone can do something.

From Sierra Club's The Green Life: Food waste and yard clippings can be turned into natural fertilizer through the composting process. Sierra Club's Owen Bailey explains the basics in the video, below. Check out the EPA's guide to find composting resources in your region (<http://www.epa.gov/wastes/conservation/rrr/composting/live.htm>).

If you're looking for something more animated than a heap of twigs and peels, consider that kitchen scraps can also be used to feed backyard chickens (<http://sierraclub.typepad.com/greenlife/2008/10/ready-for-an-ev.html>).
<http://climatecrossroads.org/about-climate-change/solutions/individuals/how-to/how-to-007.html>

Don't Forget!

Early bird pricing for Ecosystem Markets: Making Them Work ends on May 22!

<http://www.nebc.org/content.aspx?pageid=45>.

News:

Carbon/general

House Panel (likely) to Approve Climate Change Bill: Reuters Poll

Democrats on the House Energy and Commerce Committee have enough votes to approve historic legislation to cap and reduce U.S. greenhouse gas emissions, according to a Reuters survey of specific lawmakers on the panel.

<http://www.reuters.com/article/environmentNews/idUSTRE54J52S20090520?feedType=RSS&feedName=environmentNews>

Dem Chairmen Preview a Summer of Maneuvering on Global Warming Bill

Three key House Democratic committee chairmen signaled yesterday that they too want to take a swing at the sweeping global warming package that Energy and Commerce Chairman Henry Waxman (D-Calif.) is trying to pass out of committee this week.

Read full text at end of newsletter or by subscription here:

<http://www.eenews.net/EEDaily/rss/2009/05/21/2>

Al Gore Dials for Votes on Warming Bill

House Democrats backing controversial climate change legislation have been getting a hidden helping hand this week from Al Gore.

<http://www.politico.com/news/stories/0509/22796.html>

Ag Panel Members Look for ways to be Heard on Cap and Trade

House Agriculture Committee members, angry over how major energy and climate legislation could affect farmers and ranchers, are eyeing options to alter the bill when it passes through their committee next month.

<http://thehill.com/leading-the-news/cap-and-trade-showdown-2009-05-20.html>

Read full text at end of newsletter or by subscription here:

<http://www.eenews.net/EEDaily/2009/05/21/3/>

Biomass Change to Renewable Energy Standard (RES) Turned Back, More Amendments Planned

The compromise renewable electricity standard in the House energy bill withstood its first major challenge yesterday when lawmakers voted down Rep. Greg Walden's (R-Ore.) amendment to loosen limits on sources of biomass that can be used for power production under the measure.

But several other amendments to the RES -- which requires utilities to supply escalating amounts of power from sources like wind, solar and geothermal -- are likely as the markup of H.R. 2454 proceeds.

Read full text at end of newsletter or by subscription here:

<http://www.eenews.net/EEDaily/2009/05/20/2/>
http://stateforesters.org/blog/waxman_markey_bill_talks_biomass_definition

NYTimes Green Inc Blog: Oil Industry Blasts House Climate Bill

As the House of Representatives [discusses](#) a major climate and energy bill this week, the petroleum industry blasted what it called the bill's inequitable distribution of carbon allowances to oil refiners.

<http://greeninc.blogs.nytimes.com/2009/05/18/oil-industry-blasts-house-climate-bill/?hp>

World Not "Standing Still" on Climate Pact: UN

The United Nations issued a range of rival ideas for fighting climate change from rich and poor nations on Wednesday and said the world was "not standing still" in work on a new U.N. treaty.

<http://www.reuters.com/article/environmentNews/idUSTRE54J2KR20090520?feedType=RSS&feedName=environmentNews>

Lots of Advice, Little Cash for Urban Climate Change

The mayors of some of the world's richest cities have a message on climate change for the ever-growing urban areas of the developing world: "Don't repeat our mistakes."

<http://www.reuters.com/article/environmentNews/idUSTRE54J1NE20090520?feedType=RSS&feedName=environmentNews>

Global Warming Could be Twice as Bad as Forecast

Global warming's effects this century could be twice as extreme as estimated just six years ago, scientists reported on Tuesday. Earth's median surface temperature could rise 9.3 degrees F (5.2 degrees C) by 2100, the scientists at the Massachusetts Institute of Technology found, compared to a 2003 study that projected a median temperature increase of 4.3 degrees F (2.4 degrees C).

<http://www.reuters.com/article/environmentNews/idUSTRE54I6PF20090519?feedType=RSS&feedName=environmentNews>

Brazil's Other Big Forests in Dire Straights

The ongoing degradation of the Amazon rainforest has obscured the plight of its smaller sibling: the Atlantic forest in Brazil, which is a biodiversity hotspot. Once covering about 1.5 million square kilometres, the rainforest has been reduced to about one-tenth of its original area in the past 500 years, a new study has shown.

<http://www.forestrycenter.org/headlines.cfm?refID=106033>

Clear-Cut Carbon

While regrowing, razed forests may sequester enough CO₂ to offset a substantial amount of the carbon lost to logging and other land-use change, a new model shows. Through practices such as clearing forests and cultivating cropland, humans have altered 42–68 per cent of the Earth's surface and added over a hundred billion tonnes of CO₂ to the atmosphere.

<http://www.nature.com/climate/2009/0905/full/climate.2009.35.html>

The Exit Strategy

Emissions targets must be placed in the context of a cumulative carbon budget if we are to avoid dangerous climate change.

<http://www.nature.com/climate/2009/0905/full/climate.2009.38.html>

Big Questions Linger Around Major Source of Carbon Emissions

As environmentalists and politicians rally around the inclusion of avoided deforestation projects in an international climate change agreement, some big questions about forest and land ownership loom unanswered.

<http://www.nytimes.com/cwire/2009/05/12/12climatewire-big-questions-linger-around-major-source-of-12208.html>

Cap and Trade Squares Off Against \$76m PR Barrage

Through the first quarter of 2009, opponents of U.S. climate legislation have spent at least \$76 million on public relations and advertising against any such measure. That figure is what oil and coal companies alone have spent this year through April 27.

<http://www.environmentalleader.com/2009/05/13/cap-and-trade-squares-off-against-76m-pr-barrage/>

Water:

New Hope for the Chesapeake Bay, Maybe

Amid great fanfare, the Chesapeake Bay Executive Council recently announced new, short-term interim goals for reductions in nutrient loads reaching the Bay due to human activity. The first deadline, 2011, sets specific nitrogen and phosphorus goals that call for significantly greater progress from the watershed states – Virginia, Maryland, Pennsylvania, New York, Delaware, West Virginia and the District of Columbia. After 2011, new goals will be established every two years, and all measures needed to restore the Bay are expected to be in place by 2025.

<http://www.wri.org/stories/2009/05/new-hope-chesapeake-bay-maybe>

A Global Model: The Case for Water Quality Markets in the Chesapeake Bay

The **Chesapeake Fund** was launched earlier this year to jump-start the reduction of one million pounds of nitrogen annually in "hotspots" around the Bay watershed by channeling investments from nitrogen offsets into conservation and restoration practices. The Fund's management team, led by Director, Dan Nees, lays out the goals and the plan for achieving them.

http://ecosystemmarketplace.com/pages/article.opinion.php?component_id=6772&component_version_id=10160&language_id=12

Water Trading Helped Farmers Stay Afloat (Australia)

Water traders in the Murrumbidgee region of the Murray-Darling Basin purchased the largest net volume of water in 2006/07, research by the nation's commodity forecaster shows.

<http://www.smh.com.au/environment/water-issues/water-trading-helped-farmers-stay-afloat-20090519-bdk2.html>

Biofuels:

Ethanol Formula, Climate Bill Collide in House

Democratic leaders in the U.S. House of Representatives must change existing biofuel rules if they want to pass a bill to regulate greenhouse gas emissions, the House Agriculture Committee chairman said on Tuesday.

<http://www.reuters.com/article/environmentNews/idUSTRE54I79X20090519?feedType=RSS&feedName=environmentNews>

Corn-Based Ethanol Flunks Key Test

In setting state rules for low-carbon fuels, California officials have calculated that corn ethanol is worse than gasoline.

<http://www.sciencemag.org/cgi/content/full/324/5927/587?rss=1>

Bundled / ES Markets:

Breaking News: Indexes to Provide New Benchmarks for Environmental Markets

If environmental markets are to achieve the scale needed to bring the value of ecosystem services into the global economy, they need to become more commoditized and liquid. Indexing is one way to achieve that goal.

http://ecosystemmarketplace.com/pages/article.news.php?component_id=6768&component_version_id=10146&language_id=12

Reports:

Climate Change and Outdoor Recreation Resources

By Resources for the Future, April 2009

http://www.rff.org/RFF/Documents/RFF-BCK-ORRG_ClimateChange.pdf

Global Warming's "Six Americas"

There are six unique segments of the American public that each engage with the issue of global warming in their own distinct way. Just over half of American adults (51 percent) are either Alarmed or Concerned about global warming, and these individuals are poised to vote on the issue with their pocket books and at the ballot box.

Summary / blog entry: <http://climateprogress.org/2009/05/19/global-warming%E2%80%99s-six-americas/>

Report: <http://environment.yale.edu/uploads/6Americas2009.pdf>

Pew Center: Quick References for Federal Climate Policy

<http://www.pewclimate.org/federal/congress/quick-references>

Ecosystem Marketplace Releases New Report: "Fortifying the Foundation: State of the Voluntary Carbon Markets 2009"

The voluntary carbon markets doubled in both transaction volume and value in 2008 according to Ecosystem Marketplace and New Carbon Finance's report, *Fortifying the Foundation: State of the Voluntary Carbon Markets 2009*, released Wednesday. Consistent with the trend in 2007, this represents more than twice the aggregate 2008 growth rate of the regulated carbon markets across the globe.

www.ecosystemmarketplace.com

Fact Sheet: The Role of Adaptation

Developed and developing countries are now grappling with ways to slow greenhouse gas emissions, but global warming is already causing more severe storms, unpredictable planting seasons, and melting glaciers around the world. Adaptation means learning to live with these changes – and preparing for other changes that are unavoidable – in order to minimize harm from climate change impacts.

<http://www.wri.org/stories/2009/05/fact-sheet-role-adaptation>

Journal Articles:

Danielsen, F.; Beukema, H.; Burgess, N.D.; Parish, F.; Bräøehl, C.A.; Donald, P.F.; Murdiyarsa, D.; Phalan, B.; Reijnders, L.; Struebig, M.; Fitzherbert, E.B. 2009. Biofuel plantations on forested lands: Double jeopardy for biodiversity and climate. <http://www.scopus.com/inward/record.url?eid=2-s2.0-62549104186&partnerID=40>

The growing demand for biofuels is promoting the expansion of a number of agricultural commodities, including oil palm (*Elaeis guineensis*). Oil-palm plantations cover over 13 million ha, primarily in Southeast Asia, where they have directly or indirectly replaced tropical rainforest. We explored the impact of the spread of oil-palm plantations on greenhouse gas emission and biodiversity. We assessed changes in carbon stocks with changing land use and compared this with the amount of fossil-fuel carbon emission avoided through its replacement by biofuel carbon. We estimated it would take between 75 and 93 years for the carbon emissions saved through use of biofuel to compensate for the carbon lost through forest conversion, depending on how the forest was cleared. If the original habitat was peatland, carbon balance would take more than 600 years. Conversely, planting oil palms on degraded grassland would lead to a net removal of carbon within 10 years. These estimates have associated uncertainty, but their magnitude and relative proportions seem credible. We carried out a meta-analysis of published faunal studies that compared forest with oil palm. We found that plantations supported species-poor communities containing few forest species. Because no published data on flora were available, we present results from our sampling of plants in oil palm and forest plots in Indonesia. Although the species richness of pteridophytes was higher in plantations, they held few forest species. Trees, lianas, epiphytic orchids, and indigenous palms were wholly absent from oil-palm plantations. The majority of individual plants and

animals in oil-palm plantations belonged to a small number of generalist species of low conservation concern. As countries strive to meet obligations to reduce carbon emissions under one international agreement (Kyoto Protocol), they may not only fail to meet their obligations under another (Convention on Biological Diversity) but may actually hasten global climate change. Reducing deforestation is likely to represent a more effective climate-change mitigation strategy than converting forest for biofuel production, and it may help nations meet their international commitments to reduce biodiversity loss. © 2008 Society for Conservation Biology.

Evans, A.M.; Perschel, R. 2009. A review of forestry mitigation and adaptation strategies in the Northeast U.S. *Climatic Change*, 1-17. <http://www.scopus.com/inward/record.url?eid=2-s2.0-64149086622&partnerID=40>

The forests of the Northeast U.S. will be significantly affected by climate change, but they also play a role in mitigating climate change by sequestering CO₂. Forest management decisions can increase forests' resilience and ability to adapt to altered precipitation and temperature patterns. At the same time, management strategies that increase carbon storage will help reduce climate disruptions. Because of climate change, foresters on managed lands should take into account changes in species composition, more frequent disturbances, potential changes in growth rates, and distorted insect and disease dynamics. Silvicultural prescriptions should emphasize low impact logging techniques, the perpetuation of structural complexity, legacy trees, extended rotations, and uneven aged management systems where appropriate. In order to maintain resilience as well as to store carbon, forests should be protected from land use conversion.

Galik, C.S.; Jackson, R.B. 2009. Risks to forest carbon offset projects in a changing climate. *Forest Ecology and Management* 257, 2209-2216. <http://www.scopus.com/inward/record.url?eid=2-s2.0-64149104972&partnerID=40>

When included as part of a larger greenhouse gas (GHG) emissions reduction program, forest offsets may provide low-cost opportunities for GHG mitigation. One barrier to including forest offsets in climate policy is the risk of reversal, the intentional or unintentional release of carbon back to the atmosphere due to storms, fire, pests, land use decisions, and many other factors. To address this shortcoming, a variety of different strategies have emerged to minimize either the risk or the financial and environmental implications of reversal. These strategies range from management decisions made at the individual stand level to buffers and set-asides that function across entire trading programs. For such strategies to work, the actual risk and magnitude of potential reversals need to be clearly understood. In this paper we examine three factors that are likely to influence reversal risk: natural disturbances (such as storms, fire, and insect outbreaks), climate change, and landowner behavior. Although increases in atmospheric CO₂ and to a lesser extent warming will likely bring benefits to some forest ecosystems, temperature stress may result in others. Furthermore, optimism based on experimental results of physiology and growth must be tempered with knowledge that future large-scale disturbances and extreme weather events are also likely to increase. At the individual project level, management strategies such as manipulation of forest structure, age, and composition can be used to influence carbon sequestration and reversal risk. Because some management strategies have the potential to maximize risk or carbon objectives at the expense of the other, policymakers should ensure that forest offset policies and programs do not provide the singular incentive to maximize carbon storage. Given the scale and magnitude of potential disturbance events in the future, however, management decisions at the individual project level may be insufficient to adequately address reversal risk; other, non-silvicultural strategies and policy mechanisms may be necessary. We conclude with a brief review of policy mechanisms that have been developed or proposed to help manage or mitigate reversal risk at both individual project and policy-wide scales

Hudiburg, T.; Law, B.; Turner, D.P.; Campbell, J.; Donato, D.; Duane, M. 2009. Carbon dynamics of Oregon and Northern California forests and potential land-based carbon storage. *Ecological Applications* 19, 163-180. <http://www.scopus.com/inward/record.url?eid=2-s2.0-63849229053&partnerID=40>

Net uptake of carbon from the atmosphere (net ecosystem production, NEP) is dependent on climate, disturbance history, management practices, forest age, and forest type. To improve understanding of the influence of these factors on forest carbon stocks and flux in the western United States, federal inventory

data and supplemental field measurements at additional plots were used to estimate several important components of the carbon balance in forests in Oregon and Northern California during the 1990s. Species- and ecoregion-specific allometric equations were used to estimate live and dead biomass stores, net primary productivity (NPP), and mortality. In the semiarid East Cascades and mesic Coast Range, mean total biomass was 8 and 24 kg C/m², and mean NPP was 0.30 and 0.78 kg C·m⁻²·yr⁻¹, respectively. Maximum NPP and dead biomass stores were most influenced by climate, whereas maximum live biomass stores and mortality were most influenced by forest type. Within ecoregions, mean live and dead biomass were usually higher on public lands, primarily because of the younger age class distribution on private lands. Decrease in NPP with age was not general across ecoregions, with no marked decline in old stands (>200 years old) in some ecoregions. In the absence of stand-replacing disturbance, total landscape carbon stocks could theoretically increase from 3.2 ± 0.34 Pg C to 5.9 ± 1.34 Pg C (a 46% increase) if forests were managed for maximum carbon storage. Although the theoretical limit is probably unattainable, given the timber-based economy and fire regimes in some ecoregions, there is still potential to significantly increase the land-based carbon storage by increasing rotation age and reducing harvest rates.

Hopmans, P.; Elms, S.R. Changes in total carbon and nutrients in soil profiles and accumulation in biomass after a 30-year rotation of *Pinus radiata* on podzolized sands: Impacts of intensive harvesting on soil resources. *Forest Ecology and Management*. <http://www.scopus.com/inward/record.url?eid=2-s2.0-61449130575&partnerID=40>

A large proportion of plantations of radiata pine (*Pinus radiata* D. Don) in southern Australia have been established on podzolized coastal sands with low nutrient reserves. Inter-rotational management of the forest floor and harvesting residues has been shown to be critical to maintain the productive capacity of these soils. In 1974 a study was initiated at the end of the first rotation to evaluate the long-term sustainability of fast-growing plantations on these podzolized sands. Growth was measured at 5, 10 and 20 years and prior to clear-felling at age 30. Soil sampling at the end of the first rotation in 1974 was repeated in 2004 prior to clear-felling to determine changes in carbon and nutrients in profiles after 30 years. Forest floor and tree biomass were measured to determine sequestration of carbon and nutrients in mature radiata pine. Productivity of radiata pine on infertile podzolized sands was either maintained at 26 m³ ha⁻¹ year⁻¹ or improved from 21 to 27 m³ ha⁻¹ year⁻¹ over two rotations from 1946 to 2005 and this was attributed to conservation of organic matter and nutrients through retention of litter and harvesting residues after the first rotation. Total carbon (23.4 Mg ha⁻¹) and N (595 kg ha⁻¹) remaining in residues and litter after harvesting compensated for losses of carbon (9.2 Mg ha⁻¹) and N (582 kg ha⁻¹) in soil (0-75 cm) over the rotation. Total S, P, K, Ca and Mg remaining on site after conventional harvesting (stem wood and bark) increased during the second rotation (1975-2005). Accumulation of nutrients in the above-ground biomass and soil over 30 years exceeded deposition in rainfall indicating a redistribution of S, P, K, Ca and Mg from the sub-soil to tree biomass. The net accumulation of N in biomass (201 kg ha⁻¹) also exceeded atmospheric deposition indicating significant inputs from nitrogen fixation during the rotation. Intensive harvesting including removal of log residues and branches for biofuels but leaving foliage on site increased nutrient exports by approximately 30% but did not exceed accession of nutrients over 30 years except for N. In contrast, whole-tree harvesting including foliage increased nutrient exports by 70-150% and fertilizers are likely to be required to compensate for the additional removal of nutrients and to maintain site productivity in the next rotation.

Irland, L. Assessing sustainability for global forests: a proposed pathway to fill critical data gaps. *European Journal of Forest Research*. <http://dx.doi.org/10.1007/s10342-009-0285-3>

The UN's Millennium Development Goals (MDGs) and other regional and national policy commitments have motivated an upsurge of interest in concepts and practical methods for monitoring forest conditions and trends at very wide geographic scales. Two approaches to sustainability assessment at a global level are reviewed here. One consists of monitoring change in forest conditions over time—the so-called Criteria and Indicators (C&I) approach. Another approach compares nations at a given point in time. An example is the Yale Environmental Performance Index (EPI). Both approaches yield insights. It is widely

recognized, though, that severe data weaknesses afflict forest information over much of the world. These weaknesses include weak or absent information on wood consumption in many regions, poor area estimates, and weak or absent information on key ecological conditions in forests. The purpose of this essay is to introduce these efforts at global assessment, and to argue that an entirely new discipline is needed to supply the information needed. The focus of this new discipline would be to design an ecologically based set of definitions for forest and related ecosystems, and then to build and implement the optimum combination of satellite measurements, air photo interpretation, and field plot measurements needed to measure world forest resource conditions and trends. Examples of this new approach are already appearing. This argument is addressed to members of the global forest policy community concerned with assessment, and to scientists, technologists, and managers in the many technical fields already engaged on one or another aspect of measuring and monitoring forest conditions at a national and regional scale.

Kim, H.; Kim, S.; Dale, B.E. 2009. Biofuels, land use change, and greenhouse gas emissions: Some unexplored variables. *Environmental Science and Technology* 43, 961-967.

<http://www.scopus.com/inward/record.url?eid=2-s2.0-61649112442&partnerID=40>

Greenhouse gas release from land use change (the so-called "carbon debt") has been identified as a potentially significant contributor to the environmental profile of biofuels. The time required for biofuels to overcome this carbon debt due to land use change and begin providing cumulative greenhouse gas benefits is referred to as the "payback period" and has been estimated to be 100-1000 years depending on the specific ecosystem involved in the land use change event. Two mechanisms for land use change exist: "direct" land use change, in which the land use change occurs as part of a specific supply chain for a specific biofuel production facility, and "indirect" land use change, in which market forces act to produce land use change in land that is not part of a specific biofuel supply chain, including, for example, hypothetical land use change on another continent. Existing land use change studies did not consider many of the potentially important variables that might affect the greenhouse gas emissions of biofuels. We examine here several variables that have not yet been addressed in land use change studies. Our analysis shows that cropping management is a key factor in estimating greenhouse gas emissions associated with land use change. Sustainable cropping management practices (no-till and no-till plus cover crops) reduce the payback period to 3 years for the grassland conversion case and to 14 years for the forest conversion case. It is significant that no-till and cover crop practices also yield higher soil organic carbon (SOC) levels in corn fields derived from former grasslands or forests than the SOC levels that result if these grasslands or forests are allowed to continue undisturbed. The United States currently does not hold any of its domestic industries responsible for its greenhouse gas emissions. Thus the greenhouse gas standards established for renewable fuels such as corn ethanol in the Energy Independence and Security Act (EISA) of 2007 set a higher standard for that industry than for any other domestic industry. Holding domestic industries responsible for the environmental performance of their own supply chain, over which they may exert some control, is perhaps desirable (direct land use change in this case). However, holding domestic industries responsible for greenhouse gas emissions by their.

Kranabetter, J.M. 2009. Site carbon storage along productivity gradients of a late-seral southern boreal forest. *Canadian Journal of Forest Research* 39, 1053-1060. <http://dx.doi.org/10.1139/x09-031>

The quantity and distribution of carbon (C) storage in old-growth forests is a fundamental parameter needed to more accurately predict management effects on landscape C. C accounting on a regional or national level is generally based on zonal ecosystems, but total ecosystem C can vary widely with soil productive capacity within landscapes. To illustrate this, I compared old-growth forests of contrasting plant associations reflecting typical soil productivity gradients of the southern boreal forest in British Columbia, Canada. Total ecosystem C of zonal sites (medium–Huckleberry plant association) averaged 309 Mg C–ha⁻¹, while less and more productive forest types ranged from 120 to 725 Mg C–ha⁻¹, respectively. On average, 62% of ecosystem C was in live trees, 20% in mineral soils (0–50 cm), 9% in forest floors, and 9% in coarse woody debris and snags. Positive linear correlations between total ecosystem C and soil nitrogen availability or asymptotic stand height

confirmed the strong influence of site productive capacity on C storage. The results demonstrate how ecological site classification or direct measures of stand productivity could refine estimates of the upper limits in potential C storage.

Martin, L.J.; Blossey, B. 2009. A framework for ecosystem services valuation. *Conservation Biology* 23, 494-496. <http://www.scopus.com/inward/record.url?eid=2-s2.0-62549133513&partnerID=40>

Profft, I.; Mund, M.; Weber, G.-E.; Weller, E.; Schulze, E.-D. Forest management and carbon sequestration in wood products. *European Journal of Forest Research*. <http://dx.doi.org/10.1007/s10342-009-0283-5>

Wood products are considered to contribute to the mitigation of carbon dioxide emissions. A critical gap in the life cycle of wood products is to transfer the raw timber from the forest to the processing wood industry and, thus, the primary wood products. Therefore, often rough estimates are used for this step to obtain total forestry carbon balances. The objectives of this study were (1) to examine the fate of timber harvested in Thuringian state forests (central Germany), representing a large, intensively managed forested region, and (2) to quantify carbon stocks and the lifetime of primary wood products made from this timber. The analyses were based on the amount and assortments of actually sold timber, and production parameters of the companies that bought and processed this timber. In addition, for coniferous stands of a selected Thuringian forest district, we calculated potential effects of management, as expressed by different thinning regimes on wood products and their lifetimes. Total annual timber sale of soft- and hardwoods from Thuringian state forests (195,000 ha) increased from about 136,893 t C (~0.7 t C ha⁻¹ year⁻¹) in 1996 to 280,194 t C (~1.4 t C ha⁻¹ year⁻¹) in 2005. About 47% of annual total timber harvest went into short-lived wood products with a mean residence time (MRT) < 25 years. Thirty-one per cent of the total harvest went into wood products with an MRT of 25–43 years, and only 22% was used as construction wood and glued wood, products with the longest MRT (50 years). The average MRT of carbon in harvested wood products was 20 years. Thinning from above throughout the rotation of spruce forests would lead to an average MRT in harvested wood products of about 23 years, thinning from below of about 18 years. A comparison of our calculations with estimates that resulted from the products module of the CO2FIX model (Nabuurs et al. 2001) demonstrates the influence of regional differences in forest management and wood processing industry on the lifetime of harvested wood products. To our knowledge, the present study provides for the first time real carbon inputs of a defined forest management unit to the wood product sector by linking data on raw timber production, timber sales and wood processing. With this new approach and using this data, it should be possible to substantially improve the net-carbon balance of the entire forestry sector.

Thorp, B.A.; Akhtar, M. 2009. The best use of wood. *Paper360* 4, 26-29.

Wood comes in different forms and is used in multiple ways. The historical pathways are complex and not well understood by the public. The emerging pathways are even more complex and less understood. There are no cases in which the value derived from the combustion of slash or pulp wood approach the value derived from processing wood to biofuels or pulp and paper. Any non-discriminating or general incentive to use cellulosic biomass as an energy source or to offset fossil fuel CO₂ emissions will damage the historical wood-to-products industries like pulp and paper, as has happened in Europe. Processes with high capital costs cannot be burdened with high raw material costs. Any incentive that increases relative raw material costs will damage or destroy the emerging but fragile cellulosic biofuels industry. The use of non-pulp wood in an integrated forest biorefinery model will not only produce additional revenue streams for the industry (even without any federal incentives, depending upon the cost of oil) but will reduce the manufacturing cost of making pulp and paper by reducing the amount of fossil fuel the industry uses. This model will retain and create high-paying jobs that are desperately needed, and improve U.S. energy independence.

Events / Webinars:

National Association of State Foresters (NASF) Forest Markets Committee

Wednesday, May 27, 3-4:30pm Eastern

NASF Forest Markets Committee Chair and Maine State Forester Alec Giffen is hosting a webinar on [federal climate legislation](#), Wednesday, May 27, 3-4:30 pm (EDT). The webinar will be led by Ellen Hawes, Policy Analyst for Environment Northeast, and Jad Daley, Director of Northern New England Programs for The Trust for Public Land. The session will discuss research on the carbon impacts of forest management, an update on efforts to include forests in international and regional climate change agreements and an overview of current legislation, including the Waxman-Markey bill. To participate, RSVP to Ellen Hawes (ehawes@env-ne.org).

Green Infrastructure Summit and Urban Trees Forum Conference: Economic Valuation of Ecosystem Services

University of Chicago

May 28-29, 2009

Chicago, IL

<http://pge.uchicago.edu/events/08-09/econeco/index.shtml>

Carbon in Northern Forests: Integration of Research and Management

Northern Institute of Applied Carbon Science

June 10-11, 2009

Hagerty Center at Northwestern Michigan College

Traverse City MI

<http://forest.mtu.edu/cinf/>

Ecosystem Services on Corporate Lands Conference

June 11-12, 2009

Crowne Plaza Hotel, Silver Spring, MD

<http://www.wildlifehc.org/events/ecosystems-services.cfm>

Ecosystem Markets: Making Them Work

Northwest Environmental Business Council, American Forest foundation, and the US Forest Service

June 18-19, 2009

Doubletree Hotel, Portland, OR

<http://www.nebc.org/content.aspx?pageid=45>

Ecosystem Service Markets Short-course

July 29-31, 2009 (Register by June 17)

Duke University, Durham, North Carolina

<http://www.nicholas.duke.edu/del/continuing/ecoservice7.09.html>

Full Text of Selected Articles:

CLIMATE: 14 hours later, Democrats hold the line on cap-and-trade bill (05/20/2009)

Darren Samuelsohn and Ben Geman, E&E senior reporters

House Democrats defeated a series of Republican "benchmark" amendments aimed at halting a future U.S. global warming law during a 14-hour, politically charged Energy and Commerce Committee markup yesterday.

The GOP amendments took on a familiar theme by proposing the law's sunset should the measure lead to significant job losses, higher gas prices and electricity rates, or a lack of corresponding action from China and India.

While the Republicans lost each of their amendments, they did their best to gain political traction with each vote. Minutes after each roll call on amendments to [H.R. 2454](#), the House GOP's campaign operation blasted reporters' inboxes with press releases pinpointing Democrats who voted against their amendments.

"\$5 gasoline apparently not too much for Energy and Commerce Dems," was the headline of one National Republican Congressional Committee press release that spotlighted the votes of nine House Democrats.

Even the atmosphere complied with the GOP storyline late last night when a silky terrier started barking just outside the Rayburn hearing room. "They're coming for you," joked Rep. Fred Upton (R-Mich.).

Moments later, Rep. John Barrow (D-Ga.) crossed the aisle to vote in favor of a Republican amendment that would halt the climate law if the nation's unemployment rate hit 15 percent, prompting Upton to add, "He heard 'em." Even without Barrow, Upton's [amendment](#) failed, 21-34.

Energy and Commerce Chairman Henry Waxman (D-Calif.) and his committee allies did not let the Republican alternatives go unanswered, explaining that their 946-page comprehensive energy and climate plan would curtail greenhouse gas emissions, create new jobs and reduce U.S. dependence on foreign oil.

"Your only solution to any benchmark is to have the law evaporate," Waxman said. "That's not thoughtful."

"It's a very pessimistic view of the future," added Rep. Ed Markey (D-Mass.), the bill's lead co-sponsor. "It almost guarantees we wind up with \$5 gasoline. It almost guarantees we end up with higher unemployment."

Those were familiar themes throughout the daylong markup even as the subject matter shifted among 17 different amendments.

Rep. Roy Blunt (R-Mo.) lost, 23-32, on a [proposal](#) that would have negated the entire law if the average retail price of electricity sold to residential sector goes up by more than 10 percent in one or more census divisions.

The former majority whip insisted his amendment was a straightforward way to protect consumers who would see their energy bills increase because of the new greenhouse gas emissions limits. "You say it's not a problem," Blunt said. "We say if it's not a problem, what's wrong with coming up with a safe solution?"

"You are addressing climate change as if it's the Holy Grail," added Rep. Marsha Blackburn (R-Tenn.). "What we're trying to help you with is constituents and taxpayers who are saying someone needs to put some roadblocks, some timelines and checks and balances in this legislation."

Democrats countered that Blunt's amendment failed to take into account a carefully crafted agreement that sends free allowances to the local distribution companies that service electric utilities. The bill specifies that the allowances must be directed toward consumers to help offset any higher energy bills.

Markey, the chairman of the Energy and Environment Subcommittee, also questioned the legitimacy of an amendment that would kill the overall bill based on rising energy prices when those prices have already increased 25 percent in the last four years, with Energy Information Administration projections showing they will go up 15 percent by 2030.

He also cited support of the bill's local distribution company provision from several major U.S. electric utility companies, including American Electric Power Corp., Duke Energy Corp., Exelon and PG&E, as well as the National Association of Regulatory Utility Commissioners and the Edison Electric Institute, which represents investor-owned utilities. "I don't think we had EEI endorsing anything in 1990 or 1978," Markey said, referring to the last two major sets of amendments to the Clean Air Act.

Only Rep. Zack Space (D-Ohio) crossed party lines on Blunt's electricity price amendment. "I'm looking out for the cost of this bill to consumers," Space explained.

Democrats largely held together to oppose Nebraska Rep. Lee Terry's [amendment](#) that would have negated the law if gas prices reach \$5 a gallon. The 25-31 vote saw four Democrats jump ship: Barrow, Space and Reps. Charles Melancon of Louisiana and Mike Ross of Arkansas.

Earlier in the day, Democrats also rejected a GOP [amendment](#) that would have sunset the climate law if China and India did not take equal steps to curb their emissions.

Republican said the bill would force U.S. manufacturers to move their operations to developing countries that do not have to meet the same environmental requirements. "It's a competition issue," said Rep. Mike Rogers (R-Mich.), the sponsor of the amendment. "Do not eliminate our middle class and send it to China."

But Democrats responded that their bill already has built into it several provisions to protect energy-intensive companies, including pulp and paper, steel, aluminum, glass and cement. That includes a 15 percent distribution of free allowances to the trade-vulnerable industries, as well as a clause that allows the president by 2025 to impose tariffs on carbon-intensive goods imported into the United States.

"I wouldn't vote for a bill if I believed this would cause us to lose jobs in the steel industry or the aluminum industry," said Rep. Mike Doyle (D-Pa.), a lead negotiator on the issue. "We're just as concerned as you are about job leakage."

Markey said the legislation would help President Obama at this December's international climate change negotiations, at which diplomats will try to reach agreement on a successor to the Kyoto Protocol. "If we want to go to [the climate talks in] Copenhagen with the ability to begin serious negotiations with the Chinese and the Indians, we have to show we are serious, as well," Markey said.

Republicans questioned the viability of the Democrats' trade language. "It's just not going to work," said Rep. Joe Barton (R-Texas), the panel's ranking member.

Other Republicans insisted that China, which recently surpassed the United States as the world leader in greenhouse gas emissions, is a long way from making similar commitments.

Rep. Tim Murphy (R-Pa.) cited congressional investigations into Chinese copyright infringement, espionage, currency manipulation and lead in toys. "And now we trust them?" on climate change, he asked. "I'd like to know where this came from."

Office of Consumer Advocacy

The panel adopted, 32-20, an amendment last night that would create a new Office of Consumer Advocacy within the Federal Energy Regulatory Commission.

The plan by Rep. Jan Schakowsky (D-Ill.) would establish the office to serve as an "advocate for the public interest" within FERC that would have a presidentially appointed, Senate-confirmed director. The office would represent consumers on rate and service issues with public utilities and natural gas companies under FERC jurisdiction. This would include representation at FERC hearings, judicial proceedings and proceedings of other federal agencies. The advocacy office would also "monitor and review" energy customer complaints, and investigates utilities' and gas companies' service and rates, among other roles.

Schakowsky said that as energy matters become increasingly interstate, the federal office is needed in addition to existing state-based public advocates. "We provide a place where we have special advocacy for the little guy," she said.

Barton attacked the idea, and all but two of the GOP members present opposed it. Barton said the plan would be duplicative of state-based efforts. "It is very unclear how adding a national consumer advocate ... would do anything but muck up the waters," he said.

Other amendments adopted include Reps. Kathy Castor (D-Fla.) and Jay Inslee's (D-Wash.) amendment that clarifies that states may adopt so-called feed-in tariffs, which enable regulators to require that utilities buy power from renewable generators at set rates to help ensure a market. It passed 32-18 on a party-line vote.

Schedule: The markup resumes at 10 a.m. today in 2123 Rayburn.

E&E climate bill amendment scorecard

A rundown of yesterday's votes at the House Energy and Commerce Committee markup of global warming and energy legislation.

Sponsor	Description	Outcome
John Dingell (D-Mich.)	Establish clean energy bank to help with loans and loan guarantees	Accepted, 51-6
Mike Rodgers (R-Mich.)	Cancel climate law if China, India, don't take comparable action	Defeated, 26-32
Betty Sutton (D-Ohio)	'Cash for clunkers' gives consumers thousands of dollars toward buying or leasing new fuel-efficient vehicles when they trade in older, gas-guzzling autos	Accepted, 50-4
Greg Walden (R-Ore.)	Change the definition of woody biomass	Defeated, 26-32
Anna Eshoo (D-Calif.)	Clean technology business competition grant program	Accepted, voice vote
Roy Blunt (R-Mo.)	Negates law if the average retail price of electricity sold to residential sector rises by more than 10 percent in one or more census divisions	Defeated, 23-32
Tammy Baldwin (D-Wis.)	Authorizes up to 10 DOE-backed, university-based Centers for Energy and Environmental Knowledge and Outreach, to coordinate regional DOE-backed industrial and building efficiency centers	Approved, 30-19
Lee Terry (R-	Negates law if gas prices reach \$5 a gallon	Defeated, 25-

Neb.)		31
Donna Christensen (D-V.I.)	Adds coverage for diesel emission reductions to U.S. territories	Accepted, voice vote
Zack Space (D-Ohio)	Expands the pool of bonus allowances for carbon capture and sequestration to existing power plants	Accepted, voice vote
Fred Upton (R-Mich.)	Suspends the law if the nation's unemployment rate for the prior year hits 15 percent as a result of the law's implementation	Defeated, 21-34
Tammy Baldwin (D-Wis.)	Include energy savings from solar water heating and solar light pipe technology among the eligible efficiency measures in the combined 20 percent renewable power and efficiency mandate	Accepted, voice vote
Jay Inslee (D-Wash.)	Codifies the National Bioenergy Partnership	Accepted, 36-20
Bobby Rush (D-Ill.)	Puts a 1 percent minimum on funds for low-income community energy efficiency	Accepted, voice vote
Janice Schakowsky (D-Ill.)	Creates an Office of Consumer Advocacy in FERC to represent customer interests on rate and service issues	Accepted, 36-20
Marsha Blackburn (R-Tenn.)	Gives EPA six months to put compliance costs on utility bills, fuel, manufactured products, food	Defeated, 19-35
Kathy Castor (D-Fla.)	Gives states the ability to adopt "feed-in tariffs" for renewables	Accepted, 32-18

Last updated: May 20, 2009

RENEWABLE ENERGY: Biomass change to RES turned back, more amendments planned (05/20/2009)

Ben Geman, E&E senior reporter

The compromise renewable electricity standard in the House energy bill withstood its first major challenge yesterday when lawmakers voted down Rep. Greg Walden's (R-Ore.) amendment to loosen limits on sources of biomass that can be used for power production under the measure.

But several other amendments to the RES -- which requires utilities to supply escalating amounts of power from sources like wind, solar and geothermal -- are likely as the markup of [H.R. 2454](#) proceeds.

The [Walden amendment](#) failed on a 26-32 vote during the Energy and Commerce Committee's first full day of votes on the measure. Walden's amendment would create a renewable biomass definition far more permissive than the underlying bill by allowing materials from national forests to meet the RES, and also eases limits on materials from private lands.

Walden said his plan did not waive environmental laws, arguing that the materials could be harvested sustainably while reducing fire risks. "We can create jobs here, we can do the right thing for the environment here," he said, and alleged the current House bill tries to boost renewable energy while restricting it at the same time.

"Can somebody explain to me how you can have it both ways? You can't," he said.

The underlying bill allows some materials from federal forest lands as part of a compromise plan the sponsors crafted that is more permissive on biomass sources than a March draft. Rep. Ed Markey (D-Mass.), who sponsored the bill with Energy and Commerce Chairman Henry Waxman (D-Calif.), said that compromise should hold.

"What we have here is a balance that was struck," Markey said. Walden's plan, Markey said, lacks safeguards for private lands and has "very weak" protections for federal lands. "This amendment fails to protect the core values on federal lands," he said. Markey said he was concerned that Walden's plan could jeopardize native grasslands and forests.

Additional efforts to address the biomass issue may be in the offing. Rep. Mike Ross (D-Ark.), one of four Democrats who voted for Walden's plan, is considering offering an amendment that would use the definition of biomass included in last year's farm bill.

The RES will probably face amendments on other fronts too as the markup proceeds. Energy and Commerce Committee ranking member Joe Barton (R-Texas) said GOP amendments would likely include efforts for nuclear power and fossil generation with carbon capture and storage as eligible fuels under the electricity standard. Republicans in the past have called for replacing the renewable standard with a broader "clean" generation standard that includes these sources.

"We are going to have a debate tomorrow on the definition of renewable," Barton said last night.

But one GOP member acknowledged that Republicans face an uphill climb in changing the RES. Waxman and Markey have already softened the plan in a bid to secure support from more conservative panel Democrats, lowering the renewable target, altering the biomass definition and making other changes.

"There have not been many defections on many amendments," said Rep. Michael Burgess (R-Texas). "Clearly the numbers are not on our side."

The underlying bill would create a combined renewable power and utility energy savings mandate that reaches 20 percent in 2020, with 15 percent coming from renewables and 5 percent through efficiency. But states may petition to lower the renewable requirement to 12 percent, with a corresponding increase in energy savings to 8 percent.

The committee, by voice vote, did accept one modest amendment to the RES last night. Lawmakers backed Rep. Tammy Baldwin's (D-Wis.) plan to include savings from solar water heating and solar light pipe technology among the efficiency measures eligible under the standard.

CLIMATE: Dem chairmen preview a summer of maneuvering on global warming bill (05/21/2009)

Darren Samuelsohn, E&E senior reporter

Three key House Democratic committee chairmen signaled yesterday that they too want to take a swing at the sweeping global warming package that Energy and Commerce Chairman Henry Waxman (D-Calif.) is trying to pass out of committee this week.

Offering perhaps the biggest road block to a floor debate, Ways and Means Chairman Charles Rangel (D-N.Y.) told reporters that he plans to put President Obama's health care reform agenda ahead of Waxman's global warming bill. "We have to deal with health care first," Rangel said.

Asked for a time frame on the health care legislation, Rangel replied, "As long as it takes."

Rangel later conceded, "Maybe at some point we can do both at the same time. But health being first is a priority."

The New York Democrat also said he continues to consider a carbon tax to curb greenhouse gas emissions, rather than the cap-and-trade approach that Waxman has been busy marking up since Monday in [H.R. 2454](#). Several senior members of Rangel's committee support an outright carbon tax, while others back a different method for distributing emission allowances compared with Waxman's bill.

"It's on the table," Rangel said of the carbon tax. "Of course it is. How can it not be on the table?"

Other House Democratic committee leaders are also itching to get at Waxman's climate legislation.

House Agriculture Chairman Collin Peterson (D-Minn.) and other senior Democrats on his panel have a long list of grievances with the Waxman climate bill, from winning more offsets for farmers to giving the Agriculture Department a greater role in its implementation.

Peterson said he is waiting for answers from the House parliamentarian before he decides how his committee will handle the Energy and Commerce Committee's legislation, and he would not role out going beyond his panel's reach if necessary (*see related story*).

Also yesterday, Natural Resources Chairman Nick Rahall (D-W.Va.) said he wants to make his own contribution that promotes domestic energy production on the outer continental shelf and federal lands. House Democratic leaders have not requested the language, but Rahall said he would move anyway and try to include his proposal as part of Waxman's broader bill.

"Pre-emptively," Rahall said. "We know gas prices are inching back up. More than inching back up, as we speak. And it's what I think should be part of a responsible, comprehensive, pro-energy bill."

Efforts to expand the energy and climate bill into domestic production issues would no doubt spark a fight among Democrats and with environmental groups. Former President George W. Bush allowed executive bans on offshore drilling in federal waters to expire last summer, and congressional Democrats -- under intense political pressure at a time of record high gas prices -- reluctantly allowed largely overlapping bans to expire months later.

"That ought to be interesting," Rep. Rick Boucher (D-Va.) said of Rahall's plans.

Rahall said he had not scheduled a markup for his bill. And he also said he was just starting to review the Energy and Commerce Committee bill to determine what parts of it fall under his jurisdiction.

For his part, Waxman said he was not so concerned about other committees moving on the issue, even Rangel's plan to go first onto health care.

"You have to figure out the time to do both," Waxman said. "I think that's what we're doing with our committee, and that's what he'll have to do in his committee and other committees."

Waxman also did not seem bothered by Rangel's interest in a carbon tax.

"I'm not worried about it," Waxman said, adding that Democratic committee leaders would meet after the Memorial Day recess. "We're going to sit down and talk this all over. And then we'll see where we go from there. But I think we have a formidable coalition behind our legislation, and I think they will see the wisdom of some of our decisions. And then we're going to talk through where we have differences and then we'll resolve them."

Democratic leaders have sent signals they will press the energy and climate issue ahead. Majority Leader Steny Hoyer (D-Md.) said Tuesday that he is interested in getting the climate and energy bill ready for floor action in either late June or in July. And House Majority Whip James Clyburn (D-S.C.) told E&E last week that he could find the 218 votes to pass the legislation on the floor.

To date, House Speaker Nancy Pelosi (D-Calif.) has said she wants to act in the House this year. Pelosi could force the legislation through the different committees by giving them time constraints and using the Rules Committee to combine the various sections.

"She has a number of devices at her disposal," said Boucher, who has played a key role in negotiations in the Energy and Commerce Committee.

Waxman yesterday told reporters he did not expect to get to the climate and energy bill on the floor next month, citing his own busy schedule on health care and food safety in the committee. "We've got too much to do," he said.

The House parliamentarian has referred Waxman's climate bill to nine committees in total: Energy and Commerce, Ways and Means, Agriculture, Science, Transportation and Infrastructure, Financial Services, Foreign Affairs, Natural Resources, and Labor.

Several of the panels are not expected to take much interest in the issue beyond staff-level meetings to go over the bill.

"We won't hold it up," said Financial Services Chairman Barney Frank (D-Mass.), explaining that he would have to take a closer look at language on enforcement for the new carbon market. "Yes, there needs to be some regulation," Frank added. "It's not a serious problem. I've not looked at it yet. But I think it can be resolved very quickly."

Rep. James Oberstar (D-Minn.), chairman of the Transportation and Infrastructure Committee, said he had not yet studied the issue. Oberstar's panel may be preoccupied with the federal highway bill this summer.

And Aaron Albright, a spokesman for House Education and Labor Chairman George Miller (D-Calif.), said, "We are largely going to waive jurisdiction."

House Science and Technology Chairman Bart Gordon (D-Tenn.) said yesterday he plans to complete work on the Waxman-Markey legislation's adaptation provisions after the Memorial Day recess. Gordon's committee will mark up [H.R. 2407](#), which would establish a National Climate Service at the National Oceanic and Atmospheric Administration, on June 3.

"We've been working together," said Gordon, who is also a senior member of the Energy and Commerce Committee. "We've got a good relationship."

Reporters Allison Winter and Lauren Morello contributed.

CLIMATE: Ag panel members look for ways to be heard on cap and trade (05/21/2009)

Allison Winter, E&E reporter

House Agriculture Committee members, angry over how major energy and climate legislation could affect farmers and ranchers, are eyeing options to alter the bill when it passes through their committee next month.

The agriculture panel could create some of the most formidable opposition to the compromise brokered by Reps. Henry Waxman (D-Calif.) and Ed Markey (D-Mass.), as the proposal to regulate greenhouse gas emissions makes its way to a vote on the House floor sometime this summer.

Democrats and Republicans on the Agriculture Committee have a long list of grievances against the bill, and leaders of the panel are looking for ways to alter the legislation or slow it down before a full House vote. They want to see more offsets for farmers, a greater role for the Agriculture Department and changes in the bill's requirements for renewable fuels.

"I haven't seen anything that is in the climate change bill that I can vote for," said Rep. Tim Holden of Pennsylvania, the panel's No. 2 Democrat.

Holden is not alone in his views. Chairman Collin Peterson (D-Minn.) has also been outspoken in his criticism of the legislation, and top Republicans on the panel formed a "rural working group" that launched a campaign against the bill this week. Peterson and Holden and the panel's

ranking member, Rep. Frank Lucas (R-Okla.), each said they have heard complaints from many members of their committee.

"I think we're pretty much united in our concerns," Peterson said in an interview yesterday.

Meanwhile, no large agriculture industry groups have endorsed the bill and two major farm groups -- the National Corn Growers Association and the American Farm Bureau -- have come out against the bill's treatment of the agriculture sector.

'I can't be persuaded'

The House Energy and Commerce Committee is expected to approve the bill, [H.R. 2454](#), by the week's end. But before it can go to the House floor it must pass through the agriculture panel and a half-dozen other committees that share jurisdiction.

Most of the committees are expected to give a rubber stamp to the bill (*see related story*), but Peterson said he is investigating options to potentially make significant changes.

It is not clear what portions of the bill the Agriculture Committee will be allowed to weigh in on, and Waxman and other House leaders -- who have spent months in negotiation over the package -- presumably want to advance it with few changes. Peterson said yesterday that he is awaiting instruction from the House parliamentarian before he decides how his committee will handle the legislation.

But even if the Agriculture Committee's official jurisdiction is limited, the fiery chairman said he would consider going beyond his panel's reach to try to alter the legislation.

"Apparently there was a situation in the 1990s where some bill came over from the Banking Committee, and our committee at that time made all kinds of changes that weren't in our jurisdiction -- and some how or another got by with it," Peterson said. "So that could be a possibility."

The panel could also simply report the bill out of committee but recommend the full House reject the measure, Peterson said. But whatever path his panel takes, Peterson said he would not back down, despite the strong support for the measure from House Speaker Nancy Pelosi (D-Calif.).

"I will try to work with the speaker, but in this case, if we don't get this fixed, I can't be persuaded," Peterson said.

Potential changes?

A major area of concern for many members of the Agriculture Committee is the legislation's requirements on biofuels. Farm state lawmakers have been lashing out against biofuels restrictions ever since the 2007 energy law put limits on what sources of biomass could qualify for incentives under the renewable fuels standard.

The climate bill would relax some of those restrictions, but Agriculture Committee members said the changes do not go far enough to meet some of their concerns.

"We're really concerned about the definitions ... which would really restrict the ability of some regions of the country to participate in second-generation ethanol production," Holden said.

Holden said the committee would like to include changes similar to those in an amendment on renewables that failed in the Energy and Commerce Committee earlier this week. The [amendment](#) from Rep. Greg Walden (R-Ore.) would create a renewable biomass definition far more permissive than the underlying bill by allowing materials from national forests to meet the renewable standard and also eases limits on materials from private lands.

Farm state lawmakers are also opposed to avenues for U.S. EPA to consider greenhouse gas emissions from "indirect" land-use changes spurred by biofuels production. The lawmakers say these measurements are based on unproven models that paint an unfair picture of corn ethanol's emissions. An amendment on indirect land use was rejected by the Energy and Commerce panel last night (*see related story*).

"Indirect land use is a big issue," Peterson said.

Other concerns are more broad. Peterson does not support Wall Street getting involved in carbon credit trading. And Republicans on his panel are opposed to any bill that might raise energy prices. The rural group, headed by Lucas, argues that the legislation's predicted higher energy prices would disproportionately affect farmers, who would face higher costs for feed and fertilizer if oil and gas prices rise.

Agriculture interests also want the legislation to include a bigger role for USDA and better opportunities for farmers to profit from changing their soil management practices and selling the resulting estimated emission cuts as a carbon credit.

Unlike a cap-and-trade bill the Senate debated last year, the Waxman-Markey plan does not specify that agricultural practices, such as idling former cropland, can count as offsets.

But despite all the concerns, farm groups say it is not impossible to get them on board with the legislation.

Richard Krause, director of congressional relations for the American Farm Bureau Federation, said major improvements could be made with the addition of just a few sentences in the bill. For instance, he said it should specify that agriculture is eligible for offsets and allow "early actors" who made conservation improvements on their farms several years ago to be involved.