American Forest & Paper Association
Climate VISION Implementation Plan

Summary of Commitment

Members of AF&PA are *collectively* committed to meeting the President's emissions intensity reduction goals through programs that include: inventorying and reporting emissions, enhancing sequestration in forests and products, developing and implementing improved technologies, improving energy efficiency, and increasing fiber recovery for recycling. AF&PA members estimate that these programs will reduce their greenhouse gas intensity by 12 percent by 2012 relative to 2000.

Government policies and incentives will play a large part in determining whether this 12 percent voluntary target is a minimum or whether our industry will make greater strides. The degree of success will depend in part on the Administration's efforts to manage the activities of all government agencies, especially with respect to the promulgation of regulatory requirements that may result in increases in greenhouse gas emissions. AF&PA members ability to meet or exceed their commitment also will depend on the measurement and accounting methods and implementation guidelines applicable to recycling and forest and product sequestration.

Work Plan

The following plan outlines the industry's proposed actions to reduce greenhouse gas emissions intensity. Timelines for achieving the objectives listed in each element are shown at the end of the paper.

Element 1: Emission measurement and reporting protocols

In 2002, AF&PA and the International Council of Forest and Paper Associations retained the National Council for Air and Stream Improvement, NCASI, to develop a calculation tool for estimating greenhouse gas emissions from pulp and paper mills. These calculation tools address the industry's unique attributes – such as the neutrality of biomass fuel emissions – and allow the international industry to collect credible, transparent data that is comparable around the world. The methodology – which is based on the *Greenhouse Gas Protocol* created by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD) – received international peer review and was subsequently adopted by WRI/WBCSD as the pulp and paper mill module for their protocol.

The initial version of the calculation tools has also been modified with a user interface to make the tools more compatible with DOE's 1605(b) voluntary green house gas registry.

In 2003, AF&PA members, working with their Canadian counterparts, retained NCASI to develop a similar tool for wood products facilities. Like the pulp and paper mill tool, it is based on the WRI/WBCSD protocol. The work is now complete and was delivered to WRI/WBCSD in July 2004 for peer review.

AF&PA will apply the combined tools to aggregated energy to determine emissions for its membership.

Element 2: Identify / implement near-term *cost-effective opportunities*

In making its Climate VISION commitment, the forest products industry identified several programs that are fundamental to the industry and will reduce greenhouse gas emissions. These include recovery and recycling of paper, sequestration in forests and products, and enhancing energy efficiency. Some aspects of these programs – which are outlined below – can be implemented immediately to yield results over the next decade. These actions are briefly outlined below:

- In 2003, AF&PA announced a new paper recovery goal of 55 percent of all paper consumed in the US by 2012. AF&PA expects that achieving the recovery rate of 55 percent will lead to corresponding reductions in greenhouse gas emissions by reducing potential emissions from landfills. In 2002, the US recovery rate for paper and paperboard was just above 48 percent, and AF&PA is asking households and businesses across the country to help meet our new goal of recovering 55 percent of the paper consumed in the US. EPA, Keep America Beautiful, CarrAmerica, and others have agreed to work with AF&PA to achieve this goal. AF&PA also has produced a video on recycling for its members and the general public.

- The industry is working with the US Forest Service, universities, and others on a wide range of forest sequestration research projects. In 2002, industry members and associations established the Forest Carbon Consortium to promote research on the potential of managed forests to store carbon and produce renewable energy. In 2003, the Consortium working with the US Forest Service and Michigan Technological University formed the Northern Institute of Applied Carbon Science (NIACS) to develop information needed to manage northern forest ecosystems sustainably while increasing carbon sequestration and renewable energy production. Similarly, the industry is supporting research on carbon management in northwest US timberlands and evaluating carbon pools in southern forest soils.

  Industry also is collaborating with the US Forest Service on development of a web-based tool for estimating forest carbon stocks using Forest Service national inventory data. The tool will allow users to define regions for the estimation.

  The world's forests remove carbon dioxide from the atmosphere and store substantial quantities for long periods of time. To encourage world-wide sustainable management of forests, AF&PA has taken a strong position against illegal logging and is actively promoting mutual recognition of various forestry sustainable management standards.

- In addition to managing forests that store or sequester carbon, the forest products industry also produces products that make an important contribution to carbon sequestration. AF&PA, working with its international counterparts, is gathering data and evaluating models to assess the amount of carbon stored in wood and paper products. In 2004, forest product associations from around the world began work on a calculation tool that companies can use to determine carbon storage. This will be

the first consensus method for calculating the amount of carbon stored in products along the value chain.

- AF&PA has been participating in DOE's Industry's of the Future program, which is a collaborative research and development partnership between DOE and the forest products industry, and AF&PA is actively promoting technologies that are emerging from this research effort. A number of these technologies will cut energy use, minimize environmental impacts while improving the industry's productivity.

Element 3: Develop *cross-sector projects* for reducing greenhouse gas emission intensity

A number of steps that AF&PA is taking as part of its Climate VISION will have a favorable effect on other industries. For example, the commitment to recover 55 percent of the paper currently used in the US will reduce greenhouse gas emissions from landfills. Also, the industry's generation of electricity from biomass or through cogeneration processes, reduces the amount of power the industry purchases. The forest products industry currently produces and exports electricity generated from renewable biomass sources and is developing technologies that will increase exports of electricity generated from renewable fuels.

Wood and paper products are widely used by other industries, and AF&PA is taking a number of steps to promote the use of forest products, which store carbon dioxide. The American Wood Council (AWC) – the domestic wood products division of AF&PA – maintains wood building standards for the US. AWC publishes and distributes standards and related technical information to designers and builders and is working to increase the building community's awareness and understanding of the benefits of using wood.

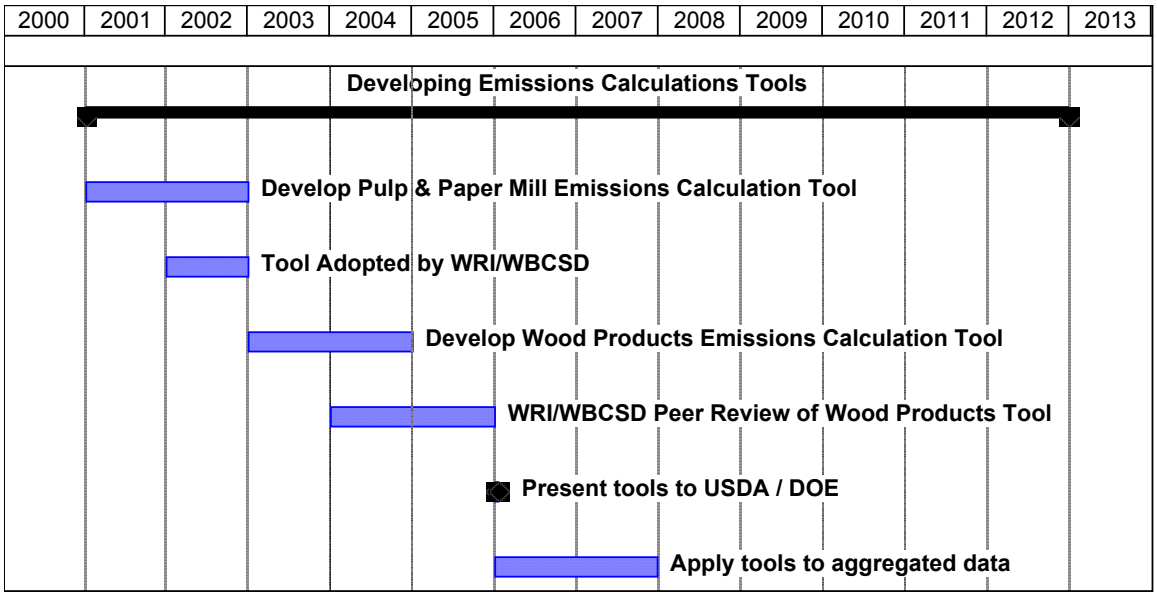
Element 4: Accelerate investment in R&D and commercialization of advanced technology

The industry's Climate VISION commitment is based on a continuation of its research partnership with DOE through the Agenda 2020 program. Under this program, the forest products industry is developing technologies that will create energy from biomass. Black liquor, a biomass by-product created during the chemical pulping process, can be efficiently burned like natural gas when gasified. If fully commercialized, black liquor gasification could produce enormous energy and environmental benefits. In fact, biomass gasification technologies could make the US forest products industry energy self-reliant and an exporter of electricity created from renewable energy sources.

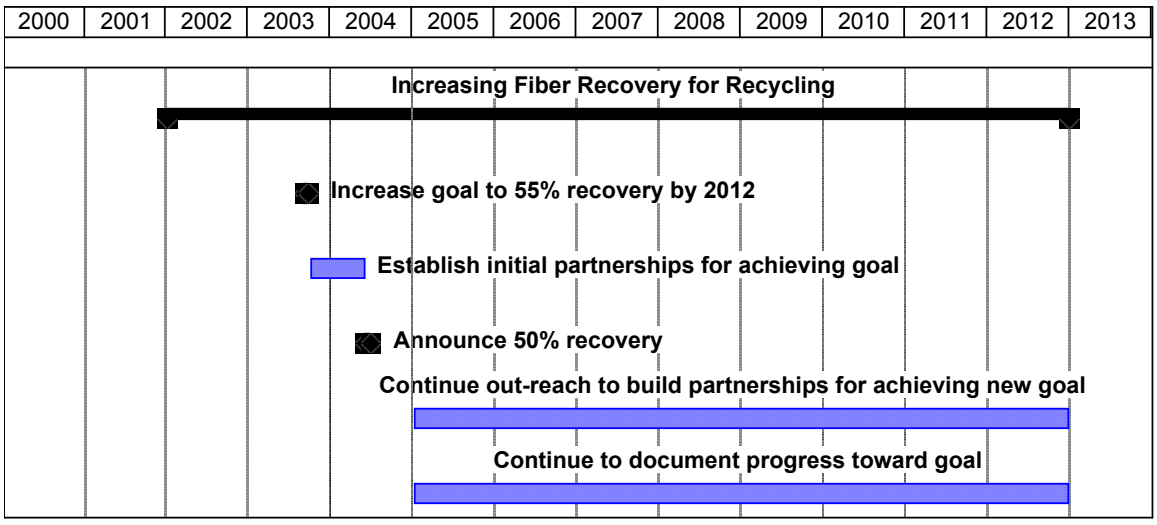
Because of the tremendous potential of this technology, AF&PA members are aggressively pursuing development opportunities. A high-temperature demonstration project is underway at a facility in North Carolina, and a commercial-scale, black liquor plant being built by Georgia-Pacific Corp is slated to go online in Big Island, Virginia by the end of the year. This project will give the industry information on low-temperature processes, and AF&PA's Chief Technology Officers have outlined a detailed schedule for building on the results of this work.

Implementation Timelines

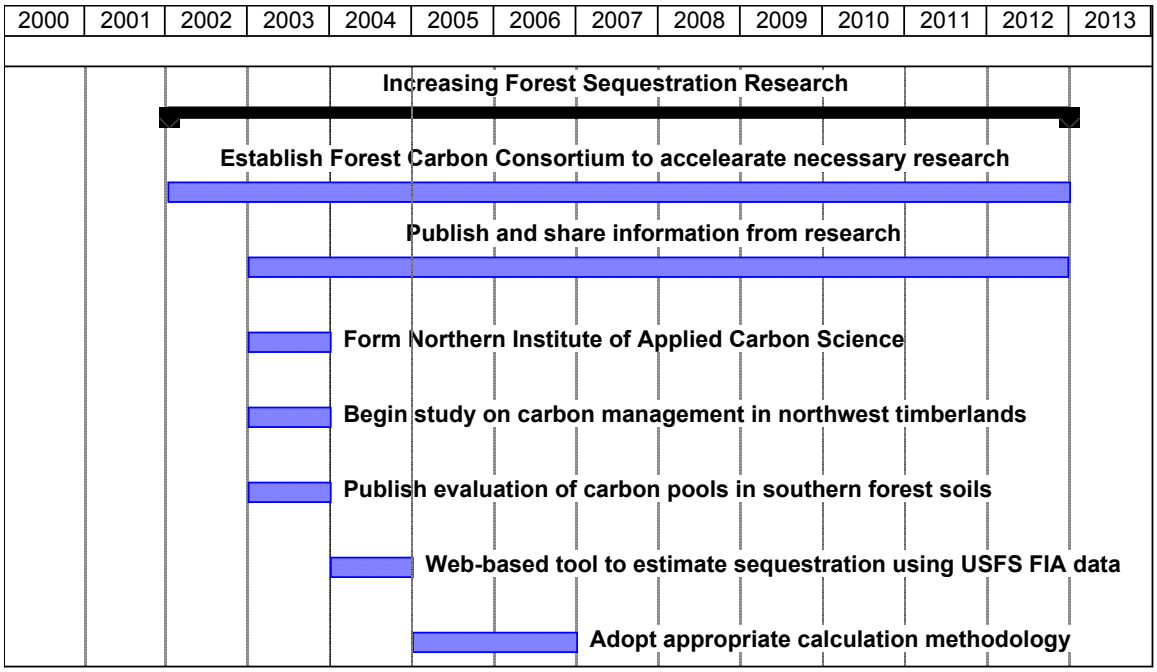
Element 1: Emission measurement and reporting protocols

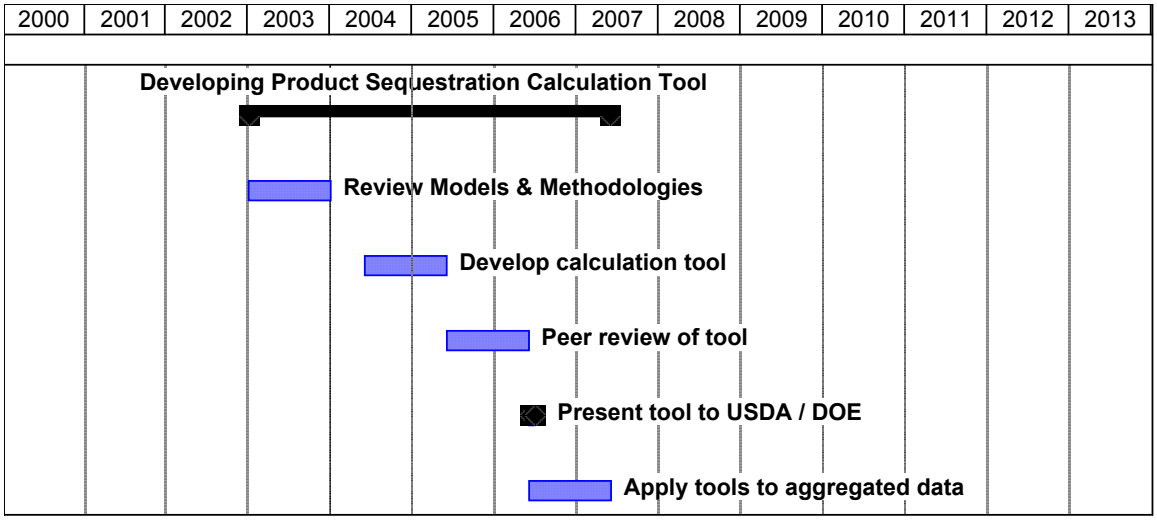


Elements 2 & 3: Near-term and cross-sector opportunities



Elements 2 & 3 Cont'd: Near-term and cross-sector opportunities





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