

Achieving the 2020 BIEC Climate Goal: A Guide for Printers

*Created by Green Press Initiative with contributions from the
Climate Committee of the Book Industry Environmental Council*

In 2009, the Book Industry Environmental Council established a goal of reducing the U.S. book industry's greenhouse gas emissions by 20% (from a 2006 baseline) by 2020, with a long term target of an 80% reduction by 2050.

Printers make many decisions that affect the carbon footprint of the books industry. Choices about the types of papers used in books will likely present the greatest opportunities to reduce climate emissions as will efforts to reduce basis weights of book papers and the number of books that are overproduced. However, there are also significant benefits associated with improving energy efficiency and sourcing energy from carbon free renewable sources.

When the BIEC established its climate goals, it also identified 6 actions that can result in significant reductions in the book industry's greenhouse gas emissions. Based on the assumption that the U.S. book industry will be using at least 30% recycled paper by 2020, achieving any three of the six goals below would combine to achieve a 20% industry wide reduction in greenhouse gas emissions.

- Reduce average basis weight of paper used in books by 3.5%
- Reduce the average percentage of books that are returned to publishers from 25% to 22%
- Increase the energy efficiency of publishers, printers, paper manufacturers mills and distribution by 4.5% each
- Reduce the portion of books that end up in landfills by 25%
- Increase recycled content an additional 3.5% to 33.5%
- Use 5.5% renewable energy

The goals above are industry wide goals, but printers can play a significant role in helping the industry achieve many of these targets as is detailed below. At the end of this report there are also suggestions and resources for printers who wish to set their own corporate climate goals that may mirror the industry targets established by the BIEC.

It should be noted that all of the numbers above and throughout this report include forest carbon loss, or emissions of the carbon that was stored in trees used to make paper prior to harvest. Currently the BIEC has not made a final decision as to whether or not forest carbon loss should be included when calculating the carbon footprint of the book industry. A summary of this debate is discussed *here*. If forest carbon loss were not included more substantial measures would be required to achieve the goal because the climate benefits associated with using recycled fiber would be reduced.

Reduce average basis weight of paper used in books by 3.5%

Paper accounts for about 77% of the book industry's total carbon emissions when the impacts of forest carbon loss are included. Using lighter weight papers in books means that the total amount of paper used is reduced. This can result in significant reductions in greenhouse gas emissions. Below are some strategies printers can employ to help reduce the basis weight of papers used in books. In addition to reducing climate emissions and other environmental impacts, recommending lighter weight papers can reduce the cost of projects which may be seen as a significant benefit to customers.

- See if current “house sheets” can be replaced with lighter weight alternatives.
- Evaluate each project to see if a lower weight alternative exists. If so recommend these papers to publishers.
- Promote the environmental benefits, and cost saving of using lighter papers to customers
- Encourage publishers to be flexible and experiment with lighter weight papers, especially when printing books from well know authors or reprints of bestsellers.



Work with Publisher to Reduce Overproduction of Books

With an industry averaging return rate above 25%, more than a quarter of the industry's climate impacts are associated with books that did not need to be produced. Below are some strategies printers can implement to help reduce this high return rate.

- Recommend that publishers print fewer initial copies and work with them to ensure that you can respond quickly if more frequent reprints are necessary. This may involve stocking more paper on the floor, and printing dependable backlist titles at off-peak times.
- Print on demand (POD) and short/medium run printing can be used to create just enough books to meet demand until longer-runs can be completed.
- Look at the big picture. More frequent but shorter print runs may result in fewer books printed, but allowing this flexibility may be highly valued by publishers and could result in additional business in the long run.

The BIEC has recently formed a new committee that is working to reduce the number of books that are discarded in landfills. A key focus for this committee will be to identify best practices and opportunities for reducing the industry's return rate. For more information, [click here](#).

Increase energy efficiency by 4.5%

There are many opportunities for printers to reduce energy consumptions. Using energy more efficiently will not only reduce greenhouse gas emissions, but can also result in lower utility bills. Combining a variety of the strategies below should result in reductions many times greater than the 4.5% reduction of this target. Even in instances where there are up-front costs, most of the steps below will result in a net savings over the long run.

- Replace T12 fluorescent lights with T8 or T5 fluorescent lights. This will require installing new ballasts, but can reduce the energy needs for each light by 50%.
- Replace incandescent bulbs with compact fluorescent bulbs. They use about 66% less energy, and save \$40 to \$60 per bulb over their lifetimes.
- Use task lighting in office space to reduce the total amount of lighting used.
- Adjust the thermostat to 76° F (or above) in the summer and 65° F (or below) in the winter.
- Turn down the heat or air conditioning in storage areas and corridors where people don't spend much time.
- Install energy efficient windows. They can reduce heating/cooling costs (and energy consumption) by 15%.
- Ensure that the thermostat is not in a drafty area. This will allow the heating/cooling system to operate more efficiently.
- Keep furniture and equipment clear of vents and radiators to allow for proper circulation.
- Use EnergyStar approved appliances and heating/cooling system.



Increase recycled content an additional 3.5% (above 30%) to 33.5%

Increasing the recycled content in books is one of the best ways printers can help reduce the carbon footprint of books. Each ton of 100% recycled paper that replaces a ton of virgin freeseeht paper saves the equivalent of 5399 lbs. of carbon equivalent greenhouse gas emissions when the impacts of forest carbon loss are included. Printers can increase recycled content in books by following the steps below.

- Offer a house sheet with at least 30% recycled content. By purchasing in bulk some printers are able to offer recycled papers at or near cost parity with virgin sheets.
- Establish specific targets for increasing recycled fiber. Many printers have policies that include targets of using an average of 30% recycled (with a majority post consumer recycled) by 2012.
- In addition to a long term target, set incremental annual benchmarks.
- Share these goals and benchmarks with paper mills and other suppliers so they can prepare for future demand.
- Review Green Press Initiative's Paper Listing which includes dozens of grades with at least 30% recycled fiber (10% for coated grades). If you stock such papers you can also be included Green Press Initiative's Printer Listing which is a resource frequently provided to publishers looking for environmentally responsible printers.
- Promote your company's recycled paper goals and recycled options to publishers and other customers.



Use 5.5% next generation renewable energy

Use of next generation renewable energy sources such as solar and wind power, or using renewable energy credits derived from those sources is another way printers can significantly reduce climate changing emissions. Printers interested in using renewable energy sources should:

- Check with current utilities to see if they offer a renewable energy option.
- Explore opportunities for generating energy onsite with windmills or rooftop solar panels.
- Purchase Green-e certified Renewable Energy Credits.

Offsets and Renewable Energy Credits

The best way for a printers to reduce impacts on climate change to directly reduce greenhouse gas emissions by using more recycled paper, preventing the overproduction of books, using lighter weight papers, and reducing energy consumption. While these efforts can go a long way towards reducing emissions, there will always be some greenhouse gas emissions that are impossible or impractical to eliminate. In these situations emissions may be offset or reduced through less direct means such as carbon offsets or renewable energy credits (RECs). RECs are created when renewable energy from sources such as solar panels or wind turbines generate energy. Since electricity providers cannot direct specific electrons to a specific consumer, they create a separate market for the electricity and for the renewable energy credits. Even if your local electricity provider doesn't produce renewable energy you can purchase RECs from another provider. You may not be receiving electricity generated from renewable sources, but your purchase of RECs gives you credit for purchasing an equivalent amount of renewable energy and helps the REC supplier recoup their investment in renewable energy.

Carbon offsets are another indirect way to reduce carbon emissions. With carbon offsets, rather than directly reducing your own emissions, you fund projects that will either prevent emissions, or sequester carbon somewhere else.

Use caution when purchasing carbon offsets or renewable energy credits. Currently there are no laws in the U.S. that qualify what counts as a legitimate offset or REC. Two key concepts to consider are additionality and permanence. The idea of additionality addresses whether or not the project would have happened without the funding that was provided from selling the RECs or offsets. For example if a utility company is required by law to upgrade a power plant to reduce carbon emissions, then the reduction in carbon from any offsets sold to fund the upgrades are not considered to be "additional" because the project would have happened even if the offsets had not been purchased. Permanence is another key concept to consider when purchasing offsets or RECs. The idea of permanence addresses the timeframe that the carbon dioxide (or other greenhouse gases) that are sequestered or prevented are kept out of the atmosphere. For example, some people have concerns about offsets that are derived from planting trees because if the carbon stored in the trees is ever released (i.e. through logging or a forest fire) the carbon that was "offset" is released back to the atmosphere. The best carbon offsets and RECs will have a high degree of both permanence and additionality.

Fortunately, there are some organizations that can help identify high quality carbon offsets and RECs. The gold standard foundations identifies and certifies high quality carbon offsets (see <http://www.cdmgoldstandard.org>) and Green-e also verifies RECs and carbon offsets. (see <http://www.green-e.org>)



Setting a Climate Goal

In addition to supporting the BIEC goal for reducing emissions by 20% below 2006 levels by 2020 book industry stakeholders have also established their own climate goals. In some cases these goals closely parallel the BIEC goal, but this may not always be possible because a printer may not have baseline emissions data for 2006. Additionally the Environmental Protection Agency's Climate Leaders program (see www.epa.gov/climateleaders) generally requires companies to set shorter term goals on the order of several years. Though the baseline year and exact timeline may not be completely consistent, any environmental policy that commits to substantial greenhouse gas emissions reductions is a positive step and will help the book industry as a whole make progress towards the goals set forth by the BIEC. One of the first steps in establishing a corporate climate goal will be to establish a baseline to use as a yardstick when measuring future progress. Determining a baseline can be a challenging endeavor but there are a number of resources and organizations that can assist you with the process. For example EPA climate leaders is a program that specializes in helping businesses set climate goal. The greenhouse gas protocol provides a methodology for carbon accounting, and Green Press Initiative can help you calculate the carbon footprint of the paper your company uses to make books (see resources section below for links to these and other useful websites).

Take Action

Climate change presents an enormous challenge that cannot be solved by any one individual, company, industry or government. However by taking action to reduce climate emissions, and establish goals that are in line with the BIEC climate targets, printers, along with other book industry stakeholders can set an example for others to follow. If you've read this guide, you've already taken the first step towards helping your company develop and implement a climate goal. Some next steps you may consider are listed below:

- Share this guide with colleagues and key decision makers at your company
- Setup a team to discuss developing an environmental policy that will, among other things, include a climate goal. If you already have an environmental policy and/or an environmental committee discuss adding a climate goal.
- Calculate your company's baseline carbon emissions. The resources listed below will likely be helpful in completing this step
- Identify the areas where the largest reductions to your company's carbon footprint can be achieved.
- Set a goal and notify paper manufacturers and other suppliers that you expect them to help you achieve that goal. Setting incremental goals will help individuals in your company and suppliers/partners prepare for future targets.

Ultimately, achieving the BIEC climate goal will likely require printers to not only set their own goals and targets but use their market influence to encourage suppliers and other partners to develop, use and offer more environmentally responsible papers and find other ways to reduce the book industry's overall impact. When the BIEC goal is achieved it will result in the prevention of 2.5 million metric tons of carbon equivalent greenhouse gases being released to the atmosphere each year—equivalent to taking 450,000 cars off the road. While this reduction is impressive in itself, the positive benefits can be magnified many times if the book industry serves as an effective model for other industries to work collectively to reduce climate impacts.

Resources:

Book Industry Environmental Council (BIEC): The BIEC is a group of approximately 40 book industry stakeholders including publishers printers and paper manufacturers. The BIEC established industry-wide climate goals in 2009 and is now working to provide a variety of resources to publishers and their suppliers to help make this goal a reality. Website: www.bookcouncil.org/climate.html

EPA Climate Leaders: The EPA Climate Leaders Program is an EPA industry-government partnership that works with companies to develop comprehensive climate change strategies. Participating companies complete a company-wide baseline assessment and commit to greenhouse gas reduction targets. Participating companies receive EPA recognition as corporate environmental leaders. Website: www.epa.gov/climateleaders

Gold Standard Foundation: The Gold Standard Foundation is a national organization based in Switzerland that operates a certification standard identifies high quality carbon credits. Website: www.cdmgoldstandard.org

Green-e: Green-e is the nation's largest independent certification and verification program for renewable energy and greenhouse gas emission reductions. Green-e certifies both carbon offsets and renewable energy. Website: www.green-e.org

Greenhouse Gas Protocol: The Greenhouse Gas Protocol is the most widely used accounting tool for quantifying greenhouse gas emissions. It provides the accounting framework for almost every greenhouse gas program and standard in the world. Website: www.ghgprotocol.org

Green Press Initiative (GPI): Green Press Initiative is a nonprofit program which works with publishers and their suppliers to reduce environmental impacts. GPI provides research and reports as well as listings of environmentally responsible papers and suppliers, and GPI can help publishers quantify the greenhouse gas emissions associate with their paper use. Additionally GPI founded and now coordinates the Book Industry Environmental Council. Website: www.greenpressinitiative.org

Intergovernmental Panel on Climate Change (IPCC): The IPCC was established by the United Nations Environment Program and the World Meteorological Organization and is the leading scientific organization charged with assessing the state of climate change and related consequences. . The IPCC has several reports on its website (<http://www.ipcc.ch>) that may be of particular interest to the book industry. This include its most recent Assessment Reports and a report on Land Use, Land Use Change and Forestry



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