



## Cap-and-Trade 101: Centerpiece to the American Clean Energy and Security Act

In late June, the U.S. House of Representatives narrowly passed the American Clean Energy and Security (ACES) Act, a comprehensive climate and energy bill, by a closely divided margin. The bill, if it becomes law, will initiate historic steps towards curbing greenhouse gas emissions and creating momentum for U.S. climate legislation now and in the future. WRI strongly supported the passage of ACES.

The bill's centerpiece is a cap and trade program that sets mandatory caps on sectors responsible for 87 percent of U.S. greenhouse gas emissions including electric power, oil and gas, and heavy industry. If the bill is implemented, the total U.S. greenhouse emissions would be reduced by 15 percent below 2005 levels by 2020. And when the bill's complementary requirements are also taken into account, including emissions performance standards and funding for forest preservation overseas, U.S. emissions reductions would be 28 percent below 2005 levels by 2020 and 75 percent below 2005 levels by 2050.

Below are some frequently asked questions about what cap-and-trade is all about and why WRI supports it.

**Q: What is a cap-and-trade program?**

**A:** A cap-and-trade program sets a maximum limit, or a "cap," on greenhouse gas (GHG) emissions from those facilities

and sectors covered by the regulation. An emitter covered by the cap has two primary obligations: the emitter must measure, monitor, and report emissions, and at the end of each compliance period, the emitter must have enough allowances to cover its reported emissions (an allowance is a permit that allows the holder to emit a specified amount of greenhouse gas emissions).

The cap limits the total amount of allowances available. This scarcity creates a market price for the allowances based on supply and demand. Regulated emitters may buy and sell allowances, so companies that can cheaply or easily reduce emissions can sell allowances to other companies for which such reductions are more expensive or difficult. This flexibility lowers overall compliance costs by allowing companies to pursue the most cost-effective emission reduction options.

**Q: Who is regulated under a cap-and-trade program?**

**A:** Cap-and-trade programs can have differing scopes of coverage. Some existing programs cover one sector, such as the electric power sector. Other programs and policy proposals cover multiple sectors. Different policy proposals also specify different points of regulation, focusing on "upstream" emission sources, "downstream" emission sources, or some combination of the two. A cap-and-trade program focused on upstream sources



photo: jasohill, flickr

regulates energy producers, suppliers, and transporters, such as oil and gas companies, coal mining operations, petroleum refineries, and fuel shippers/importers. A cap-and-trade program focused on downstream sources regulates emissions at the point of combustion or use (i.e., at the "smokestack" level). Because of the vast number of downstream sources and the associated administrative cost and complexity, regulated downstream sources are often limited to large-scale emitters, such as fossil fuel-fired power plants and energy-intensive industrial sources.

**Q: How is a cap-and-trade program different from a carbon tax?**

**A:** A cap-and-trade program and a carbon tax are similar in that both policy approaches are market-based and create a carbon price that provides a financial incentive to reduce

*continued on back...*

## Big Sky Mountain High



*WRI Board Member Todd Thomson "walks the talk" with New Montana Home.*

Nestled in the majestic mountains of Big Sky, Montana, WRI Board Member Todd Thomson's new home quietly sits in the vast open countryside near Yellowstone National Park. Take a closer look beyond the idyllic and tranquil setting, however,

and you'll quickly realize that the scenery and architecture of this home aren't the only awe-inspiring things in these mountains.

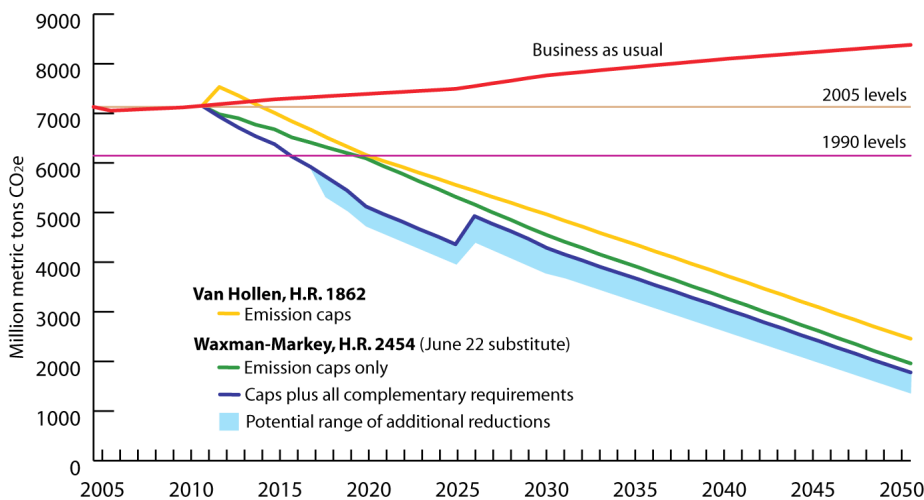
Headwaters Camp, the name of the log cabin style home owned by Melissa and Todd Thomson at Yellowstone Club, stands as a testament to the Thomsons' commitment to the environment and sustainable living. This past spring, it was recognized by the United States Green Building Council for achieving LEED (Leadership in Energy and Environmental Design) Platinum certification. It is only the third home in Montana to receive any kind of certification from the USGBC and the first in Southwest Montana to receive Platinum certification.

In undertaking this project, the Thomsons worked with Highline Partners, Dan Joseph

Architects, and Kath Williams + Associates to carefully and creatively build a home that would not only be architecturally stunning but also be environmentally friendly and sustainable. LEED certification for residential homes measures a home's performance in seven environmental categories: Location and Linkages, Sustainable Sites, Water Efficiency, Indoor Environmental Quality, Energy and Atmosphere, Homeowner Awareness, and Innovation and Design. With over one hundred variables to achieving the extremely rigorous LEED certification, the architects, designers, and builders needed to be truly innovative. It required re-thinking age old building and design techniques in an effort to minimize the impact on the environment, while also emphasizing energy efficient design and building

*continued on back...*

Emission Reductions Under Cap-and-Trade Proposals in the 111th Congress, 2005-2050  
June 25, 2009



WORLD RESOURCES INSTITUTE For a full discussion of underlying methodology, assumptions and references, please see <http://www.wri.org/usclimatetargets>.

GHG emissions. The fundamental difference between the two approaches is how they establish this price and reduce emissions. A cap-and-trade program establishes a limit, or "cap," on GHG emissions, but the price for emission allowances (the carbon price) is determined by supply and demand for allowances in an emissions trading market. A carbon tax, conversely, imposes a direct fee (the carbon price) on fuels based on the amount of GHGs they emit, but does not set a limit on GHG emissions.

**Q: WRI supports a cap-and-trade program over a carbon tax. Why?**

**A:** The objective of federal climate legislation is to control emissions of greenhouse gases. This will require Congress to put a price on carbon using one of two options: by mandating a specific price on carbon, via a tax; or by setting a carbon emissions limit (a cap) and enabling businesses to trade allowances to discharge emissions. With a carbon tax, there is little evidence that we

could get the price right to begin with, and even less to suggest that Congress would be willing to raise the tax regularly in order to keep emission levels falling. In addition, the actual quantity of reductions that could be achieved through a tax would be unknown in advance.

WRI therefore believes the most effective way to control greenhouse gases is through a cap and trade mechanism that is designed to guarantee steady emissions reductions, encourage innovation, and ensure a measure of fairness to low income consumers and coal dependent regions. A blueprint for such a mechanism was recently submitted to Congress by the US Climate Action Partnership (USCAP), a coalition of 26 corporations and five environmental groups, including WRI.

**Q: What about the economic crisis? Won't a carbon cap be bad for already struggling businesses?**

continued from "Big Sky"...

methods. Headwaters Camp achieved this impact through the use of local and reclaimed materials, eliminating construction waste, and taking advantage of increasingly affordable energy reducing technologies. Triple glazed windows, super insulation, on-demand water heating systems, ground source heat pumps, passive solar design, dual flush toilets and grey water reclamation systems are just some of the many technologies that improved the sustainability of Headwaters Camp and dramatically decreased its overall energy demand.

"This was a remarkable experience for us. Our building team managed to accomplish the highest level of green certification with a gorgeous, rustic design and quality construction—all with comfort and exceptional livability for our family. They managed to deliver this with minimal

additional up-front costs and much lower heating and energy costs. I can only hope others are inspired by our experience and follow a similar path," says Todd Thomson of the building and LEED certification of Headwaters Camp.

The Thomson's commitment to building green should also be credited. WRI staff and board members place great importance on the idea of being committed to important environmental issues and "walking the talk" when it comes to the environment. Building green, reducing our carbon emissions to net zero every year, and working in a LEED certified Gold workspace are just some of the ways WRI tries to lead by doing. As an organization, and as individuals, we hope that our actions, like the Thomsons, will inspire and motivate others to be passionate and involved when trying to protect our

**A:** Trading systems adjust automatically during market downturns, and carbon trading would be no exception. In just the same way that other commodities prices are dropping, demand for carbon allowances would decline during a recession and therefore prices would fall. Achieving the same result under a carbon tax approach would require government to intervene to lower the tax rate temporarily, which would be more complicated and produce a less desirable long term environmental outcome.

For more in-depth information about cap-and-trade and the American Clean Energy Security Act, visit: <http://www.wri.org/project/us-federal-climate-policy>

## WRINames Chase and Doctoroff to Board of Directors



Recently, WRI elected Robin Chase and Daniel Doctoroff to its Board of Directors. Chase and Doctoroff bring many years of innovation and experience to WRI from the private and public sector. We welcome them to WRI and look forward to the significant roles they will play in guiding the organization.

Chase, a transportation entrepreneur, is the founder and former CEO of Zipcar, the largest carsharing company in the world. She is also founder and CEO of GoLoco, an online ridesharing community that helps people quickly arrange shared car trips between friends, neighbors, and colleagues.

In April 2009, Chase was named one of TIME Magazine's most influential people in the world for her leadership in the transportation sector, particularly her innovative work with Zipcar and GoLoco.org.

Doctoroff is currently the President of Bloomberg, LP, the leading global provider of financial data, analytics and news. Prior to joining Bloomberg, he was Deputy Mayor for Economic Development and Rebuilding for New York City. He also led the creation of PLANYC, the most extensive plan to strengthen an urban environment ever undertaken by an American city.