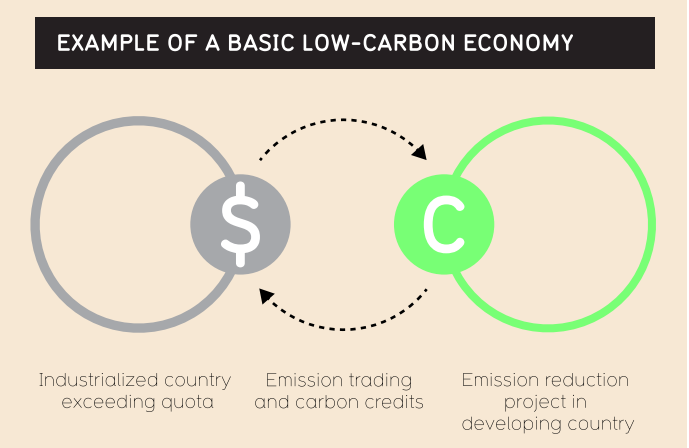
THE LOW CARBON ECONOMY

The phrase low-carbon economy is an international emissions trading system that uses a market-based approach to control pollution by providing economic incentives for achieving reductions in the emission of greenhouse gases. Also known as cap and trade, the trading process starts with a central authority, usually a government, setting a limit or cap on the amount of pollutant that can be emitted.

Each operator, such as a power plant or manufacturer, has an allowance of credits, where each unit gives the owner the right to emit one metric ton of carbon dioxide (CO_2) or other equivalent greenhouse gas. Operators that have not used up thheir quotas can sell their unused allowances as carbon credits, while businesses that are about to exceed their quotas can buy the extra allowances as credits, privately or on the open market.

By permitting allowances to be bought and sold, an operator can seek out the most cost-effective means of reducing its emissions, either by investing in "cleaner" machinery and practices or by purchasing emissions from another operator who already has excess capacity.



Big numbers in a Low-Carbon Economy

25% – Countries representing one-quarter of the world's economy are putting carbon markets in place

30% – The Regional Greenhouse Gas Initiative (http://www.rggi.org) has helped reduce emissions by 30% in 9 US states since 2009.

12 Billion — after California announced a cap on carbon in 2006, more than $12 billion in clean energy venture capital has flown into the state, a figure higher than all other states combined.

250 million — China is implementing cap-and-trade pilot programs in seven provinces and cities that encompass 250 million people

1.5% — European Union emissions have been decreasing at an average rate of 1.5% since the EU launched its carbon emission program.

Kyoto Protocol

Efforts towards a low-carbon economy began in 1972, at the UN Conference on the Human Environment in Stockholm. It became an international reality in 2005, with the signing of the Kyoto Protocol under which most industrialized countries committed to the reduction of their carbon emissions.

Specifically, The Kyoto Protocol is an international agreement under the UN Framework Convention on Climate Change that sets binding targets for the Annex I countries to reduce emission of greenhouse gases by an average of 5.2 % of the 1990 level over the five-year period 2008 – 2012. The carbon credit system was ratified in conjunction with the Kyoto Protocol.

Solidia: A Competitive Edge for Cement in the Low-Carbon Economy

Six cement companies are among the top 10 carbon traders in the world. The revenue stream from carbon trading topped $1 billion from 2008–11.

Solidia offers the cement industry a way to pivot to the low-carbon economy with a competitive edge. The Solidia process sequesters CO^2 in the production of cement and mitigates the impact of new carbon taxes and offers new product options and savings for concrete customers while leveraging the same manufacturing process, equipment and raw materials currently used by the cement industry.

Replacing Ordinary Portland Cement with Solidia Cement™ could have a dramatic and lasting global impact. For example, if cement manufacturers worldwide adopted the Solidia process today, its 2050 reduction targets would be achieved by 2015. Adoption by even a fraction of concrete manufacturers for select applications would represent a significant step towards reducing the industry's carbon footprint.

For example, if a company in a developing country has registered projects such as wind farms which generate energy without the burning of fossil fuel, and as a result reduced carbon emissions by one ton, the company will be awarded a credit. If a cement manufacturer has an emission quota of 10 tons, but is expecting to produce 11 tons, it could purchase one carbon credit fromthe wind farm, at current market price. Both companies benefit– the wind farm owner gets a financial reward and the cement manufacturer may continue cement production after having fulfilled its carbon quota. The mechanism is based on the reasoning that an emission reduction in one part of the world is as good for the atmosphere elsewhere.

COST OF CARBON CREDITS

	Cost Today (USD)	Planned Increases
Europe	$05.37	2015
Australia	$24.00	2015
California	$13.60	annual
Canada (Alberta)	$15.00	$24 TBD

Additional Resources:

How Cap and Trade Works.
Environmental Defense Fund
Why Support Carbon Markets?
Environmental Defense Fund
How does the emission trading scheme work? Carbon Control
Greenhouse Gas Emission Trading Allowance Scheme, Europa, Summaries of EU Legislation