

BC CARBON OFFSETS



Overview and Benefits

The market for British Columbia carbon offsets creates a powerful innovation funding mechanism in the province. Business, NGOs, academia and citizenry have a direct pathway to finance rollout of emissions reduction projects and technologies. If you can get GHGs out of the atmosphere at scale, beyond business-as-usual, the carbon offset system can pay you to do so. By so democratizing access to the benefits of a carbon pricing policy, Government spreads opportunity, responsibility and ownership of climate successes across all citizens and sectors.



Genesis of a Carbon Market

British Columbia has developed a vibrant carbon market spurred by the environmental leanings of its electorate, entrepreneurial drive of its businesses and the policy certainty provided by Government demand. When leadership was ready to act on climate, the province had head start as home to pioneering businesses and NGOs that had developed a diverse voluntary carbon market throughout the 2000's.



Target and Policy Context

BC Government launched the “Greenhouse Gas Reduction Targets Act” in 2007 to reduce provincial greenhouse gas (GHG) emissions by 33% in 2020 and 80% by 2050. A carbon market was created under the BC Emission Offsets Regulation (BC EOR) to enable newly legislated public service carbon neutrality, and develop offsets for a future industrial Cap and Trade program that would capture the large greenhouse gas (GHG) emitters (over 25,000tCO₂e/yr) in the province.



Putting Money Where Your Mouth Is

In order to jumpstart carbon offset development and create a highly-visible financial signal to innovators in the province, BC committed that its government operations and publically funded institutions would be carbon neutral by 2010. An initial investment of \$75 million into energy efficiency retrofits across multiple sectors allowed schools, universities and health authorities to drive down their fuel & electric costs, and reduce GHG emissions in the lead up to regulation. Emissions inventories and reporting structures were established to create an even playing field and gauge progress. Finally, a crown corporation called Pacific Carbon Trust was created to source and supply top-quality, made-in-BC offsets to the marketplace.



Made-in-BC Offsets

Government investment spurred the development of a strong carbon market in the province by contracting projects that could deliver Verified, BC EOR compliant offsets that met both social & environmental goals. 1,564,777 tonnes of carbon offsets from 31 projects were delivered between 2008 and 2012, with significantly more held in other parts of the market. Wholesale offset prices paid for these offsets ranged from \$9-\$19/tCO₂e – significantly more than the wholesale voluntary market, and in 2015, more than most regulated offset systems as well. This healthy, stable price for carbon has enabled project developers and asset owners to make significant investment in offset projects throughout the province. PricewaterhouseCoopers issued a special report titled “Economic analysis of British Columbia Offset Projects” in 2012 that included analysis on project sector breakdown, expenditure and volumes.¹

¹ PricewaterhouseCoopers Economic Analysis of British Columbia Carbon Offsets, August 2012. <http://ow.ly/JQwJZ>

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Figure 1. Portfolio of Carbon Reduction Projects by Industry Sector

| Sector | Projects | Capital Expenditure | Invested % | Offsets tCO2e | Industry % |
|-----------------------|-----------|-----------------------|-------------|------------------|-------------|
| Forestry | 12 | \$ 150,000,000 | 47% | 1,080,439 | 69% |
| Clean Technology | 6 | \$ 110,200,000 | 35% | 85,334 | 6% |
| Mining, Oil and Gas | 5 | \$ 38,100,000 | 12% | 216,431 | 14% |
| Agriculture | 4 | \$ 10,100,000 | 3% | 83,966 | 5% |
| Waste Mgt. plus Mfg. | 4 | \$ 8,400,000 | 3% | 98,607 | 6% |
| Total Projects | 31 | \$ 317,300,000 | 100% | 1,564,777 | 100% |

Up-to-date lists of all projects and offsets Issued under the BC Emission Offsets Regulation can be publically viewed on the Markit Environmental Registry², with offsets retired towards public sector carbon neutrality shown on the BC Ministry of Environment website.³



Economic Impact of BC's Carbon Market

The economic impact of carbon offset development goes far beyond the dollars spent on actual offset purchase. Offset revenue provides leverage on the business plan of emission reduction projects that go beyond business-as-usual, getting them over the investment hurdle that so often stands in the way of innovation.

The PricewaterhouseCoopers report conducted an economic impact assessment of capital project investment on the 31 emissions reductions projects developed in BC. Between 2008 and 2012, project proponents committed \$317.3 million in capital expenditures to these offset projects.

Figure 2. Economic Impact of Capital Expenditures on BC Offset Projects (2008-2012)

| | Direct Impact | Indirect Impact | Induced Impact | Total Economic Impact |
|--------------------------|----------------|-----------------|----------------|-----------------------|
| GDP | \$ 162,700,000 | \$ 52,400,000 | \$ 27,500,000 | \$ 242,600,000 |
| Govt. Revenues | \$ 30,600,000 | \$ 9,000,000 | \$ 9,200,000 | \$ 48,800,000 |
| Federal Taxes | \$14,400,000 | \$ 4,500,000 | \$ 4,000,000 | \$ 22,900,000 |
| Provincial Taxes | \$ 12,100,000 | \$ 3,700,000 | \$ 4,300,000 | \$20,100,000 |
| Municipal Taxes | \$ 4,100,000 | \$ 900,000 | \$ 800,000 | \$ 5,800,000 |
| Employment (Jobs) | 1638 | 779 | 419 | 2836 |

² See ow.ly/JQI45 for Markit Environmental Registry public view of "Pacific Carbon Standard" projects. March 2015

³ BC Ministry of Environment's "Investing in Carbon Offsets" reports ow.ly/JQodp March 2015

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Projects of the BC Carbon Market

Numbers and economic analysis alone do not capture the wide benefit of carbon offset development delivered to the environment and people of British Columbia. Carbon finance has enabled First Nations to protect over half of the Great Bear Rainforest from logging, while maintaining sustainable livelihoods on the landscape for indigenous and non-indigenous citizens alike. A small town has been able to cap its landfill well ahead of regulation and generate offsets by diverting landfill gas into a scrubber and providing methane to the provincial natural gas grid. Cement producers have been able to rationalize biomass co-generation and “clinker” replacement at their facilities because of the financial impact of offsets. Throughout the province, innovation is inspired and people are put to work rolling out the future of a low carbon economy because their emissions reductions have an economic value, enabled by carbon offsets.



BC's Carbon Market today

On April 1, 2014, the provincial government transitioned the mandate to aggregate offsets for the public service to the BC Climate Action Secretariat – Climate Investment Branch (CAS-CIB) at the Ministry of Environment. CAS-CIB continues to provide demand to the provincial carbon market by buying approximately 700,000 offsets each year for carbon neutral government through long-term offset purchase agreements. Government has further announced climate regulations for large emitters in the province, including Liquefied Natural Gas and Cement industries, which shall use carbon offsets for compliance purposes.

Provincial, State and Regional governments must show real emissions reductions achievements in the global fight against climate change. National and international cooperation is being built on the creativity, linkage and ambition of these systems. British Columbia's carbon offset market is a strong, scalable, versatile example of how to reduce emissions, finance innovation and demonstrate climate leadership.