CLIMATE CHANGE: International Report Shows Increase in CO2 Emissions

Trends in Global CO_2 Emissions, 2012 Report, a recent report from the European Commission's Joint Research Centre and the Netherlands Environmental Assessment Agency, found that, in 2011, global emissions of carbon dioxide (CO_2)—the main cause of global warming—increased by 3%, reaching an all-time high of 34 billion tonnes. Here's a look at the report's key findings—particularly those that relate to Canada—and the implications for your company.

Key Findings

The report's assessment focuses on the changes in annual CO_2 emissions from 2010 to 2011, including emissions from fossil fuel combustion, flaring of waste gas during oil production, cement clinker production and other limestone uses, feedstock and other non-energy uses of fuels, and several other small sources. But it excludes CO_2 emissions from deforestation and logging, forest and peat fires, post-burn decay of remaining above-ground biomass and decomposition of organic carbon in drained peat soils. Although these sources could add as much as 20% to the global emissions total, they're very uncertain and vary widely from year to year, explains the report.

The report's primary finding was that, after a 1% decline in

2009 and 5% increase in 2010, global CO_2 emissions increased by 3% in 2011. Over the past decade, average annual emissions increased by 2.7%. So the 2011 increase appears to be resuming this trend.

In Canada, CO_2 emissions increased in 2011 by 2%. The five largest emitters were, based on their percentage of 2011 emissions:

- China (29%);
- The US (16%);
- The European Union (11%);
- India (6%); and
- The Russian Federation (5%), closely followed by Japan (4%).

What's interesting about the overall global increase in emissions is the fact that, in many countries, CO_2 emissions actually *decreased*—in the European Union by 3%, in the US by 2% and in Japan by 2%—mainly due to weak economic conditions, mild winter weather and high oil prices.

The report does include some good news, though. The share of renewable energy sources excluding hydropower, such as solar and wind energy and biofuels, although still very small, is increasing quite fast. It took 12 years to double from a share of 0.5% to 1%, but only six more years to double again to 2.1% by 2011, representing 0.8 billion tonnes in potentially avoided CO_2 emissions that would have been globally generated by fossil fuel power generation and road transport. If you include hydropower, total renewable energy sources presently supply 8.5% of all the energy that's used globally. And use of biofuels is an area in which Canada is a leader (see the chart on p. X).

What the Findings Mean to You

2011 arguably wasn't a good year for climate change in Canada.

Its CO_2 emissions increased and it officially dropped out of the Kyoto Protocol, an international agreement to reduce GHG emissions by 6% below 1990 levels, in Dec. 2011. (The withdrawal was recently upheld by a federal court.) But the federal government is painting a rosier picture of the current state and future of climate change in the country and its overall regulation of GHG emissions. So if your company is in any of sectors targeted for environmental regulation, you can likely expect increased regulation of CO_2 and other GHG emissions for the foreseeable future at not only the federal but also the provincial and territorial levels.

INSIDER SOURCE

Trends in Global CO_2 Emissions, 2012 Report, the European Commission's Joint Research Centre and the Netherlands Environmental Assessment Agency

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Biofuel consumption in road transport (bioethanol and biodiesel), 2005–2011 (in TJ)

Country	2005	2006	2007	2008	2009	2010	2011
US	364,700	509,800	660,700	829,600	943,100	1,128,500	1,197,500
Canada	**10,200**	**11,500**	**25,600**	**25,100**	**36,800**	**48,900**	**41,300**
Australia	0	0	900	2,700	5,500	7,600	10,000
Norway	200	200	1,400	3,700	4,300	5,200	5,200
Japan	400	400	500	500	1,100	1,800	1,800
Belarus	0	0	0	400	1,000	1,400	1,400
Turkey	0	100	500	3,200	100	200	900
New Zealand	0	0	50	90	500	600	200

Switzerland	300	400	600	600	400	300	500
Monaco	0	10	10	30	30	20	20
Iceland	0	0	0	10	10	10	10
EU	129,040	230,460	314,530	402,850	497,400	573,420	555,120