An Analysis of the Implications of Delay of Ambitious Mitigation Action

Climate Interactive

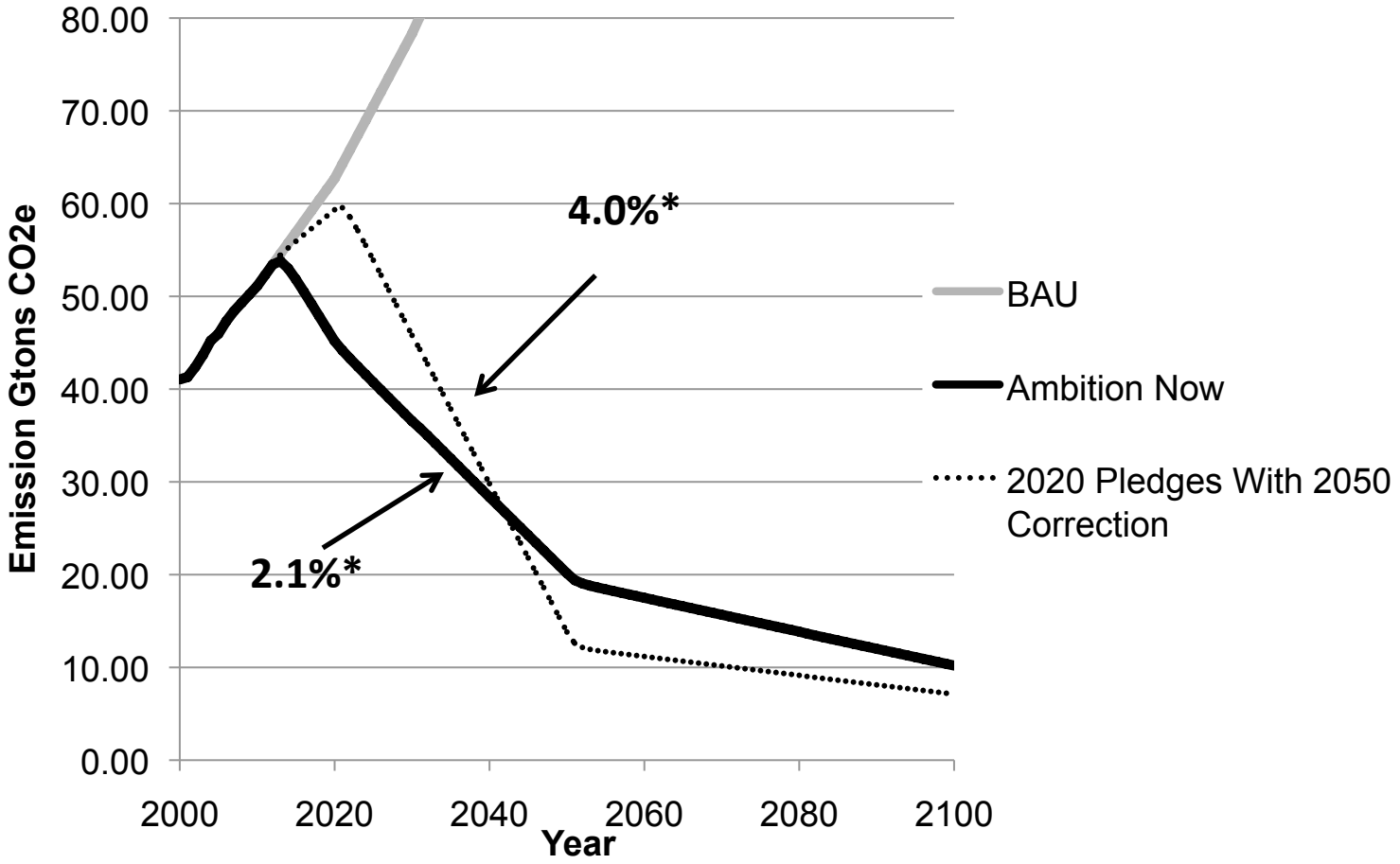
COP-17

4 December 2011

We Explored the Implications of Delaying Action on Ambitious Emissions Reduction

- We examined two scenarios for future emissions reductions, both of which would limit temperature change to 2°C.
- Ambition Now
  - The world gets on a 2°C pathway in 2020, similar to the pathway defined in the UNEP 2010 Emissions Gap report
- 2020 Pledges with 2050 Correction
  - 2020 emissions are to the amount indicated by the current level of ambition of the Cancun Agreement (as calculated by our Climate Scoreboard)

Delayed Action Requires Faster Rates of Reduction Later



* Reduction in $C0_2$ emissions from fossil fuel as % of year 2000 emissions

Some Comparisons

	Emissions Reduction Rate (as % of 2000 emissions)	Carbon Intensity Reduction Annual Rate	Source
Ambition Now	2.1%	5.8%	C-ROADS analysis
2050 Correction	4.0%	8.0%	C-ROADS analysis
High End of Energy System Models	3.0-3.5%		Emissions Gap Report; Rogelj,et al. Nature Climate Change. 1:413.
Historical Estimates		1.3 -1.7%	Canadell, J. 2007 PNAS. 104(47): 18866-18870; Freedlingstein et al. Nature Geoscience. 3: 811–812

Underlying Data

Change in fossil fuel CO_2 emissions and carbon intensity across scenarios

	Reference Scenario	**Ambition Now**	**2020 Pledges with 2050 Correction**
Change in fossil fuel CO_2 emissions as % of 2000 emissions			
2012-2020	3.9%	-2.1%	2.7%
2020-2030	5.2%	-1.9%	-3.1%
2030-2050	6.5%	-2.1%	-4.4%
2020-2050	**6.1%**	**-2.1%**	**-4.0%**
2050-2100	2.2%	-0.58%	-0.39%
Change in carbon intensity (annual rate of change of fossil fuel CO_2 emissions/GWP)			
2020-2050	-1.0%	-5.8%	-8.0%

Cumulative emissions and 2100 temperature increase

	Reference Scenario	Ambition Now	2020 Pledges with 2050 Correction
Cumulative Emissions 2012-2050			
CO_2 ($GtonsCO_2$)	2452	1060	1212
CO_2e ($GtonsCO_2e$)	3216	1401	1604
Cumulative Emissions 2012-2100 ($GtonsCO_2$)			
CO_2 ($GtonsCO_2$)	7696	1631	1586
CO_2 ($GtonsCO_2e$)	9809	2121	2076
2100 Temperature Change from Preindustrial			
Mean (Deg C) Range	5.0 (3.0 – 8.0)	2.0 (1.2 -3.2)	2.0 (1.2 -3.2)
Mean (Deg F) Range	9.0 (5.4 to 14.4)	3.6 (2.2 to 5.8)	3.6 (2.2 to 5.8)

For More Information

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