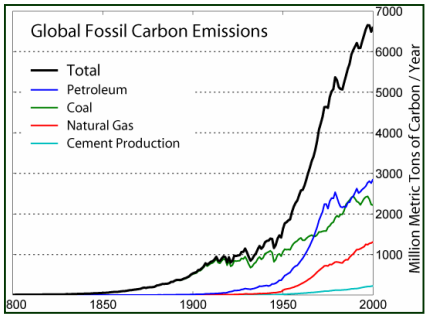
Cross Talk
CROSSROADS Language Studio's Newsletter August, 2014

GLOBAL WARMING (PART 11): WHAT CAN WE DO ABOUT IT?

Several authorities on the subject of global warming have described the necessary measures that must be taken to stabilize atmospheric concentrations of carbon dioxide at 450 ppm or lower. American physicist Joe Romm concludes that while it is not politically possible now to achieve this goal, it is both economically and technologically feasible. He also suggests that humanity is bound to wait before taking serious systematic action until global warming delivers some really catastrophic effects. This would happen through amplifying the release of carbon into the atmosphere, thus undermining mitigation efforts and quickly shooting us to very high levels of CO_2.



In order to combat global warming, we cannot afford to wait for new technologies and scientific breakthroughs; instead, says Romm, we must "deploy existing and near-term low-carbon technologies as fast as humanly possible". Presently we are emitting over 30 billion tons of carbon dioxide a year. We'll need to peak by 2020, then drop by at least 60% by 2050 to at most 15 billion tons, and go to near zero net carbon emissions by 2100.

To do this we need to implement 12 – 14 of the following strategies within four decades. Each wedge is estimated to reduce projected global carbon emissions by one billion metric tons per year (as per Romm 2011). I have grouped these under four broad headings: electric power [P], automobiles (transportation) [T], buildings and industry [A], and landscape management [L]. We need 3 wedges of concentrated solar thermal power[P], generating 5,000 GW peak, and 1 wedge of solar panels[A]. Equally important are 3 wedges of energy efficiency, one each from buildings, industry, and cogeneration/heat-recovery for a total of 15 – 20 million GW-hrs[A]. A key strategy for reducing direct fossil fuel use for heating buildings (while also reducing air conditioning energy) involves the use of heat pumps. We should add 1 wedge of WWII-style conservation, post-2030[A], which may well include dietary changes. We need 1 wedge of wind power from one million large (2 MW peak) wind turbines[P] and 1 of nuclear power (700 GW)[P]. One wedge of reflective change can be fulfilled through white roofs and pavements[A]. Most cars must be plug-in hybrids or fully electric vehicles[T], requiring another wedge of electric power through the combined use of solar car ports and wind energy to recharge them; and within the automotive sector we require 1 wedge of vehicle efficiency wherein all cars must get at least 25.5 km per liter, with no increase in miles travelled per vehicle[T]. Finally, we need 2 wedges of forest management that would put a stop to tropical deforestation and plant new trees over an area the size of continental U.S.A.[L].

Additional wedges may prove significant with some major advances in applied research. Of these the one with the greatest practical usage for Japan is geothermal plus ocean-based renewable energy.

Article by Kenneth

Net News

NET LESSONS: Too busy to come to CROSSROADS? …. Try our ***lessons through the net!***

SITE OF THE MONTH:

Get the basic facts about global warming here:
http://www.justfacts.com/globalwarming.basics.asp

Some Thoughts for the Month

Joshua Says This month we will begin adding the answer grid for the crossword puzzle in our newsletter. It will be for the previous month's puzzle and you can catch it on page 3 each month. We will also start putting the puzzle up on our home-page as well, but you'll have to print it out, or copy it some other way, to do it from there. Please continue to enjoy the puzzle each month, and good luck with your answers!

Junko Says: Japanese English skills, including speaking, rank 26th in the world according to a 2013 survey of 700,000 people in 60 different countries conducted by EF. Most Japanese adults want to speak English, but this result is not very encouraging, is it? It's time to persuade your friends and family to start studying! Take advantage of our September/October 1+1 campaign, and let's improve our ranking!

Kenneth Says: Well the summer holiday is drawing to a close and soon our kids will be back to school. Throughout this cooler than usual month of August that seemed a bit more like tsuyu than tsuyu itself was in June-July, we only managed to get away on a couple of excursions, both to Niihama. We went to the Besshi copper mine on one occasion, and to the Niihama Science Museum on another. But alas we have purchased a yellow plate car, which may open the door to many new family adventures.

Danielle dit: Bonjour! Chaque année mon fils et moi passons le mois d'août avec ma famille au Québec. Je suis de Gatineau, une ville moyenne tout près d'Ottawa. Cet été, il fait plutôt frais, entre 16 et 25 degrés. L'été je fais des bbq avec ma famille et je nage dans la rivière et le lac. J'aime manger des mets de tous les pays: mexicains, libanais, français. À bientôt!

Play A Game!

ACROSS

1 get a result by reasoning
4 headed or going towards
6 producing (energy)
7 restrict or hinder normal operations
8 relating to heat in the interior of the earth
11 increase in volume (sound) or size
12 possible of being done
13 related to heat
14 the removal of trees
15 extremely harmful, disastrous

DOWN

2 giving off or discharging
3 something pushed between two things to separate them
4 make an important discovery
5 lessening the severity or intensity of something
9 make steady, stable
10 being planned out, logical

(Print Version here)