

A Sustainable Environment: Our Obligation to Protect God's Gift

by
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We Must Reduce Carbon Emissions – It is Never Too Late to Start!

The US EPA recently released its “Clean Power Plan”, a 645 page document. This plan contains the proposed rules that will require reductions in greenhouse gas emissions from existing electric power plants, primarily focused on coal fired plants. Electric generation accounts for about 40 percent of current U.S. carbon dioxide emissions. There will be a public comment period for 120 days, and the rules won't become final until June 2015. Each state will be required to submit its own plan for complying with the rules by June 2016, although they can request a one-year extension, until June 2017.

The target of these regulations is to reduce the power plants' carbon emissions from 2005 levels by 26 or 27 percent by 2020 and about 30 percent by 2030. This is a strange target to be very aggressive for the first three or four years and then barely improving any further for the next ten years. Normally, one would expect the implementation of the clean energy technologies to take some time, and being more expensive, delay the introduction as much as possible. While these regulations are somewhat late, we certainly need them.

You might ask why are the emission reductions based on the 2005 level and not on, say, the current level of 2013 or 2014? The economy in 2005 was very strong and since then we have experienced a reduction in emissions due to energy efficiency measures that have been implemented and the expansion of renewable energy like solar and wind. In addition, the use of more natural gas has reduced the carbon emissions. So the current level of carbon dioxide emissions is less than that of 2005. If we were to base the 2030 target as a reduction of 2014 carbon emissions, the regulations would only require a 20% reduction. For our politicians, reducing emissions by 30% really sounds much better than reducing emissions by 20%.

If you recall, the first gathering of nations to address global warming was at the Rio Summit in 1992. Five years later, the summit was in Kyoto, Japan which led to the Kyoto Protocol and was eventually ratified by all the major nations except for the U.S. One of the long term goals of this protocol was to reduce emissions 80% below 1990 levels by the year 2050. One of the short-term goals was to reduce emissions 5% below 1990 levels within 15 years – not a very aggressive goal. So instead of reducing emissions by 5% in 2012, they increased globally by 58%. It should also be noted that the economy in 2005 was much stronger than in 1990, so reducing emissions from a higher base should be much easier.

I commend the current administration for proposing these new rules, but they should have been done much earlier. During the 2009 climate talks in Copenhagen, President Obama committed to a 17% reduction below 2005 levels by 2020. I don't see any way that this will happen when the new proposed rules pertain only to the power industry which accounts for 40% of all carbon dioxide emissions. So even if the power plants were to reduce emissions by 30%, that amounts to only 12% of all U.S. emissions, far below his 17% commitment. But it is still important that we are moving in the right direction so our administration can feel comfortable at the next climate talks in Paris in 2015.

What is really disappointing is to see what other countries have accomplished since the Kyoto Protocol. Denmark is relying on wind energy and derived one-third of all of its power in 2013 from this source. In northern Germany, four states derive half of their power from wind energy. There have been many new technologies proposed to reduce emissions like sequestering carbon through biological means on land and in the ocean, storing carbon dioxide in a liquefied form in underground geological formations and wells, increasing the Earth's cloud cover and solar reflection. However, the only method that can really reduce our emissions with confidence is more energy efficiency and more renewable energy sources. Each of the world's leading carbon emitters has enough wind potential to meet its electricity needs. We should be focusing on that target with more emphasis on power storage.