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

by
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Some Environmental Recommendations for President-Elect Joe Biden

As we will have a new presidential administration in two months, there are a number of environmental issues that should be addressed. Some of these are obvious, but others may need some evaluation. Here are just a few examples, in no particular order, where some action should be taken.

The first, and most obvious, action that should be taken is to rejoin the Paris Agreement of 2015. About 188 countries are members and most have already started taking action to achieve the goal of reducing carbon emissions 50% by 2030. We have only 10 years to accomplish this goal, but it is possible if action plans are established and everyone participates and contributes. This means the U.S. government, state governments, companies of all sizes, and the citizens of the U.S.

One recommendation for meeting the 2030 goal for carbon emissions is to implement a carbon tax. I think the best way to do it is according to James Hansen's carbon and dividend program. If a tax is added to all products and services that emit carbon, this additional money would go into a fund and be distributed evenly to all U.S. citizens on an annual basis. The people that are climate change conscious and do not emit much carbon will receive an annual dividend that will be greater than the carbon tax they paid. On the other hand, those that are not carbon conscious will pay more in carbon taxes than they will receive as a dividend.

Another carbon tax alternative that may be more difficult to implement is to introduce a universal carbon tax. All signatories of the Paris Agreement would have to participate in the program where a tax is added to the cost of a product and paid by the final consumer. This tax would be based on the embedded carbon of the product and would include everything in the supply chain from sourcing to final transportation. This could be a big advantage for the U.S. relative to products made in foreign countries such as China or India and sold in the U.S. Considering that many countries are still using dirty coal powered energy and with the addition of the carbon emitted during the transportation of that product to the U.S., it could make U.S. manufactured products more competitive. It could even encourage some production in Mexico due to the minimal transportation. This would have an added benefit of improving the Mexican economy and adding many jobs there.

For corporations to become more sustainable, they need to endorse the strategies for environmental, social and governance, or ESG. This is the new mantra of sustainability from the original triple bottom line – people, plant, profit. But it is necessary for all the companies to follow one national standard to be able to assess and rate how companies are doing. Joel Makower, GreenBiz executive director, has also recommended one reporting standard rather than SASB (Sustainability Accounting Standards Board), GRI (Global Reporting Initiative), IIRC (International Integrated Reporting Council), CDP (Climate Disclosure Project). The big

four accounting firms are also taking some action, so hopefully a corporate standard used by all companies can be implemented soon.

With climate change being such a major environmental issue and energy production being the major contributor, what can we do to improve this industry? One possibility is to look at hydrogen as an alternative fuel source. This material is readily available and can be used as a gaseous fuel for automobiles and trucks, can be used for generating electrical energy, or even as a source for fuel cells to expand the EV industry. The technologies are available but we must assess the economics for them to be acceptable.

Renewable energy like solar and wind is really growing because the cost of either technology has decreased significantly. But these two technologies have one major negative, that of not being available when the sun is not shining or when the wind is not blowing. So energy storage is a major requirement, but it is costly. What needs to be assessed is improving the availability and cost of baseload energy. Maybe we should evaluate improved alternatives of nuclear energy like thorium fueled reactors rather than uranium. A thorium reactor will generates less waste than a uranium reactor and uses less water for cooling. Or maybe we should reconsider fusion reactors rather than fission. We should carefully look at the economics and safety of nuclear reactor alternatives and see if they make sense.

Since solar energy has been growing rapidly, perhaps we should look at its major negative and try to offset it. Is there any way that solar energy can be generated when the sun isn't shining? Solar cells are dependent on the intensity of ultraviolet rays which don't exist in the evening. But what about infrared rays? Research is being conducted to see if solar energy can be generated during the evening even if the output is only one-fourth of that during the day. This is better than no energy at night.

In addition to taking a careful assessment of new technologies, we should also look at expanding the implementation of new sustainability strategies to improve the circular economy and the sharing economy. We should also consider taking a closer look at nature to develop systems inspired by biomimicry.

While the Covid pandemic has had a negative impact on the economy and on our lives, we should assess any positive impacts. For instance, with many employees working from home, office buildings are becoming vacant. What can we do with them? How about converting them to urban farms. With a very small investment, the empty office floors can be used for hydroponic growth of vegetables which could be sold on the first floor of the building. The urban farms which could operate 12 months per year would be right in the middle of its major market requiring no transportation.

As there are many other opportunities to improve our failing environment, the new presidential administration should create a task force consisting of sustainability and energy experts who can make additional contributions to our country.