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Green carbon as a bridge to renewable energy

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A green use of carbon-based resources that minimizes the environmental impact of carbon fuels could allow a smooth transition from fossil fuels to a sustainable energy economy.

For example, the world used the equivalent of 113,900 terawatts hours [TWh] of fossil energy to fuel economic activity, human mobility, and global telecommunications, among other modern day activities in 2007. Replacing those terawatts hours with non-fossil energy would be the equivalent of constructing an extra 6,020 nuclear plants across the globe or 14 times the number of nuclear power plants in the world today. In renewable energy terms, it is 133 times the amount of solar, wind and geothermal energy currently in use on the planet."[1]

Barring a huge reduction in our global standard of living, we will need to rely on carbon-based energy for some time. Whether this will last for several decades or into the next century is unclear, but what is apparent is that renewable approaches to energy generation are increasing at an annual rate of 7.2% compared with 1.6% for non-renewable growth[2],

References

1. http://www.rice.edu/energy/publications/docs/ObamaEnergyReview-060410%20secured.pdf
2. http://www.iea.org/textbase/nppdf/free/2008/weo2008.pdf