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NASA: coal, gas more harmful than nuclear

By K. Steiner-Dicks on Nov 6, 2013

In a recent NASA paper it has been demonstrated that without nuclear power, it will be even harder to mitigate human-caused climate change and air pollution.

This is fundamentally, says NASA, because historical energy production data reveal that if nuclear power never existed, the energy it supplied almost certainly would have been supplied by fossil fuels instead (overwhelmingly coal), which cause much higher air pollution-related mortality and GHG emissions per unit energy produced, said the NASA report.

Using historical electricity production data and mortality and emission factors from the peer-reviewed scientific literature, NASA found that despite the three major nuclear accidents the world has experienced, nuclear power prevented an average of over 1.8 million net deaths worldwide between 1971-2009. This amounts to at least hundreds and more likely thousands of times more deaths than it caused. An average of 76,000 deaths per year were avoided annually between 2000-2009, with a range of 19,000-300,000 per year.

NASA also calculated that nuclear power prevented an average of 64 gigatonnes of CO₂-equivalent (GtCO₂-eq) net GHG emissions globally between 1971-2009. This is about 15 times more emissions than it caused. It is equivalent to the past 35 years of CO₂ emissions from coal burning in the U.S. or 17 years in China—i.e., historical nuclear energy production has prevented the building of hundreds of large coal-fired power plants.

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