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Koomey: One way out of climate crisis: Stop digging now

Jonathan Koomey McClatchy-Tribune News Service (MCT)

The Intergovernmental Panel on Climate Change recently released its Fifth Assessment Report, summarizing the state of climate science and solutions. The report reinforces previous findings that the earth is warming, humans are primarily responsible and rapid reductions in emissions are urgently needed. Our current emissions trend substantially increases the risk of costly, dangerous, irreversible and potentially catastrophic changes in the global life support systems we all depend upon.

We've dug ourselves into a deep climate hole. Despite ever more dire warnings, greenhouse gas emissions have grown 42 percent since the IPCC's first assessment report in 1990. Preserving a safe climate means turning global greenhouse gas emissions down this decade and reducing them rapidly in absolute terms during the next 40 years, even as GDP and population increase. It also means keeping three quarters of proven fossil fuel reserves in the ground or safely storing the emissions from burning those fuels.

The science summarized by the IPCC gives clear guidance for what we should do next:

-Stop new digging

The more high-emissions infrastructure we build now, the more we'll have to scrap in coming decades, so let's stop building it as soon as we can. That means no new coal-fired power plants, no new shipping terminals to move coal overseas, no more pipelines or rail lines to unconventional oil supplies, and no drilling for oil in the soon-to-be ice-free Arctic. It will be difficult to stop these projects. But once built, they will be even harder to shut down. Better to not build them in the first place.

-Charge the full cost of digging

To stabilize the climate, we need policies consistent with a low emissions world (like those now in place in California), including putting a price on greenhouse gas emissions and other pollutants. We also need even stricter safety and environmental regulations. That also means ditching the "all of the above" energy strategy in the U.S., where fossil fuels are supported on a coequal basis with non-fossil energy sources. Subsidies for fossil fuels need to end. Mountaintop removal coal mining and single-bid auctions of fossil fuels on public lands need to stop. And bonding requirements for U.S. natural gas drilling companies, last set in 1960 and never adjusted for inflation, need to increase substantially.

Climb out with alternatives. Existing clean energy technologies already offer many opportunities in both

developed and developing economies. Costs are dropping fast. Wind generation is now competitive with conventional energy sources, even without counting the latter's pollution costs. Solar is not far behind. Deploying distributed renewable electricity in microgrids is often cheaper than extending the central electric grid in the developing world. Energy efficiency remains the cheapest, cleanest, fastest emissions reduction resource, with innovation (especially in information technologies) delivering more and better efficiency options with each passing day. Retrofitting existing hydropower facilities is simple and cost effective. Cogeneration of heat and power remains underused. And if the nuclear industry can build plants as quickly, cheaply and safely as they say they can, nuclear power might also help.

Surviving this stage of human development means we will need to evolve as a species and learn how to face challenges like climate change, trying many things, failing fast and doing more of what works and less of what doesn't work. We will need to foster rapid innovation, fierce competition and active coordination, all at the same time. We also need to reassess our responsibilities to each other, to the earth and to future generations. And we will need to explore changes in our values, our behaviors and our institutions, which can be as powerful as new technologies in improving our future.

Today's technology allows us to move past combustion now, in most applications. But scaling up new technology to meet the demands of a modern industrial society won't be easy. Not doing so will be harder still, because of the damage runaway climate change will inflict on the earth and on human society.

The new IPCC Synthesis Report shows how to climb out of this hole. But first we need to stop digging.

Jonathan Koomey is a research fellow at the Steyer-Taylor Center for Energy Policy and Finance, Stanford University and author of "Cold Cash, Cool Climate: Science-based Advice for Ecological Entrepreneurs." He can be reached at jonkoomeyforoutreach@gmail.com.