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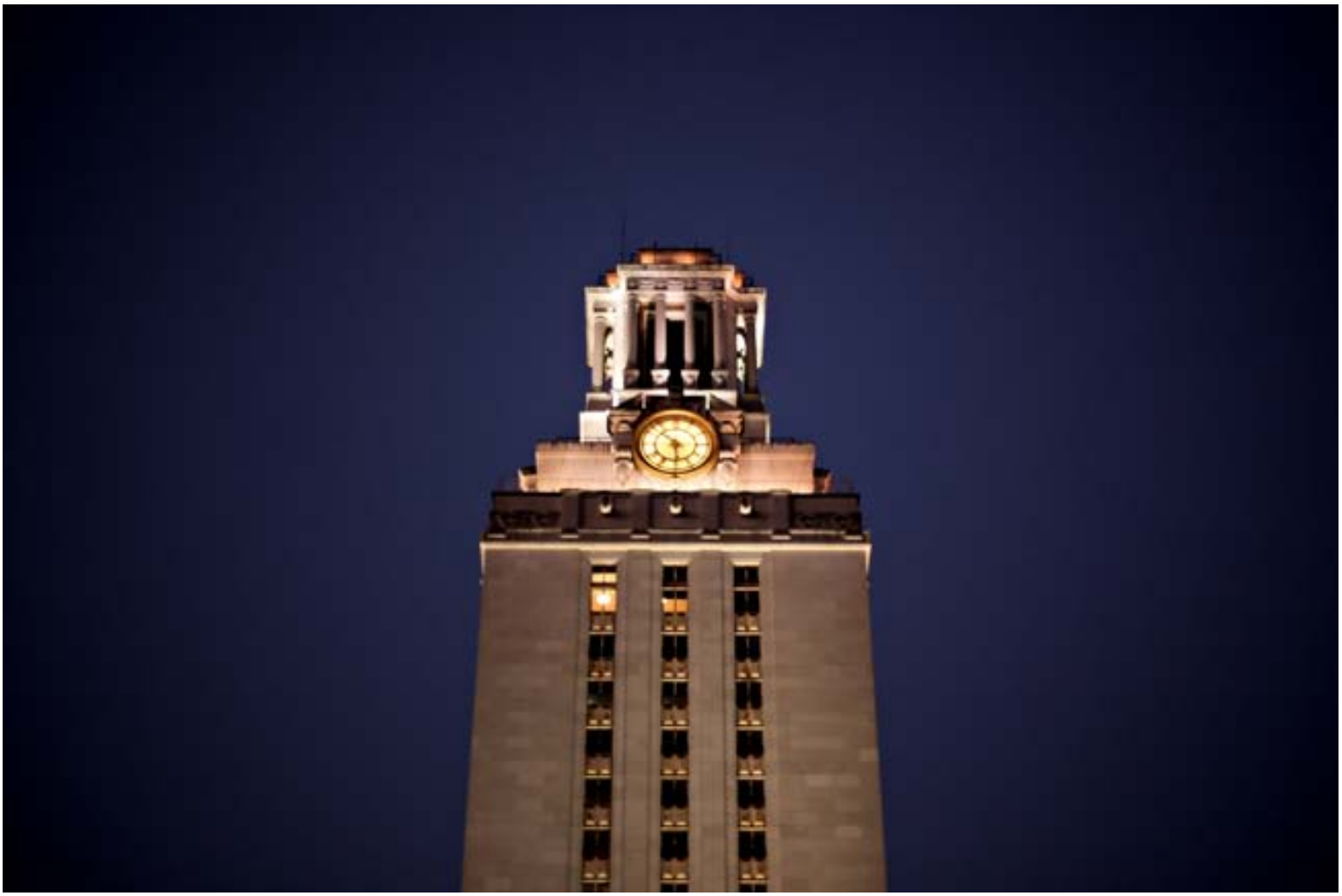
Carbon capture and storage has a future



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BY JULI BERWALD

The author of the column published on Feb. 10, 2016 on carbon capture and storage highlights supposed problems with this climate change mitigation technology. Unfortunately, the author has failed to critically assess all available information.

We know that carbon dioxide can be injected and stored underground safely. Carbon dioxide has been injected into more than 100 locations globally over the past four decades; many of these locations have been extensively studied. In scientific, peer-reviewed literature, results published reveal the carbon dioxide is retained where it is stored.

Under the Safe Drinking Water Act, federal and state laws regulate site characteristics and operational practices for all injection wells in the U.S., including those that inject carbon dioxide. There are few failures in correctly

implementing these requirements, but these errors have been sparse, non-catastrophic, successfully remediated and build confidence that underground storage of carbon dioxide can be conducted safely under existing regulation.

The University of Texas at Austin is one of the world's leaders in carbon capture and storage research. The Gulf Coast Carbon Center is a collaboration of about 30 UT students and researchers, comprised of more than 100 U.S. and international academic, lab and industrial partners who have been critically assessing geologic storage as a tool for reducing greenhouse gasses since 1999. The Center for Frontiers of Subsurface Energy Security is a UT-Los Alamos National Lab collaboration that recently received a $12 million grant to improve understanding of the processes that control the behavior of carbon dioxide in the subsurface. Numerous researchers in the Center for Petroleum and Geosystems Engineering study the geology and physics of CCS. Scientists in the Department of Chemical Engineering conduct research at a laboratory-scale demonstration facility to increase efficiency of capture of carbon dioxide from power plant emissions.

Not one of the CCS experts in any of these research groups was interviewed for the Feb. 10 column. If they were, they would have surely corrected the numerous mistakes about both the viability and safety of CCS. The author's cavalier denial of CCS as a mitigation technology shows not that CCS is dangerous or untenable but that the author hasn't done his homework.

As the author correctly states, the transition to carbon-free energy needs to happen as fast as possible. What he doesn't appreciate is that CCS is a powerful tool, one that can help not only the United States but also the developing world, make the shift more quickly. Recent reports by international agencies studying climate change — International Energy Agency and the Global Climate Change Institute — conclude that keeping global temperature increase below 2 degrees Celsius will be more expensive — and perhaps impossible — without CCS. The U.S. president agrees. In his newest budget, he allocates over $250 million for CCS research and development.

What's dangerous to our future is not CCS. Rather, it's dismissing of any of the options available to us as we attempt the enormous task of righting our climate.

Berwald is a science writer for the Gulf Coast Carbon Center in the Bureau of Economic Geology in the Jackson School of Geoscience.