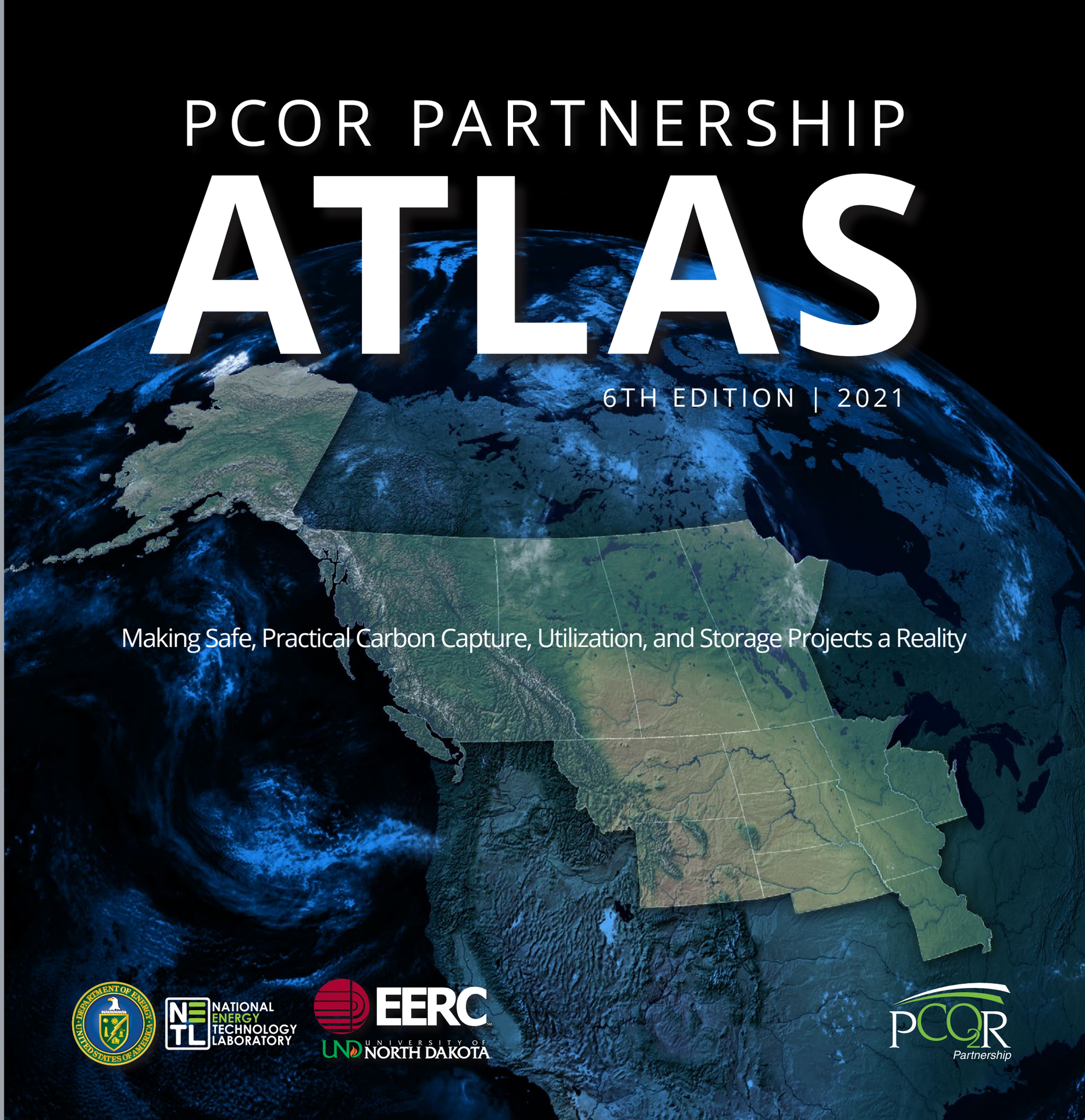
PCOR PARTNERSHIP

ATLAS

6TH EDITION | 2021



Making Safe, Practical Carbon Capture, Utilization, and Storage Projects a Reality

NATIONAL ENERGY TECHNOLOGY LABORATORY

EERC

UNIVERSITY OF NORTH DAKOTA

PCOR Partnership

PCOR Partnership ATLAS

6th Edition | 2021

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The PCOR Partnership is a group of public and private stakeholders working together to enable deployment of carbon capture, utilization, and storage (CCUS) of CO_2 emissions from stationary sources in the upper Great Plains and northwestern regions of North America. The PCOR Partnership is led by the EERC at the University of North Dakota with support from the University of Wyoming and the University of Alaska Fairbanks and is one of four competitive awards by the U.S. Department of Energy National Energy Technology Laboratory under the Regional Initiative to Accelerate CCUS.

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Several members of the PCOR Partnership research team from the EERC provided valuable input to this effort through the production of technical publications, presentations, and outreach materials. This body of work provided the foundation from which this atlas was created.

The following EERC staff focused on the execution of PCOR Partnership efforts in 2019–2021. This atlas was possible because of their creative energy and collective efforts:

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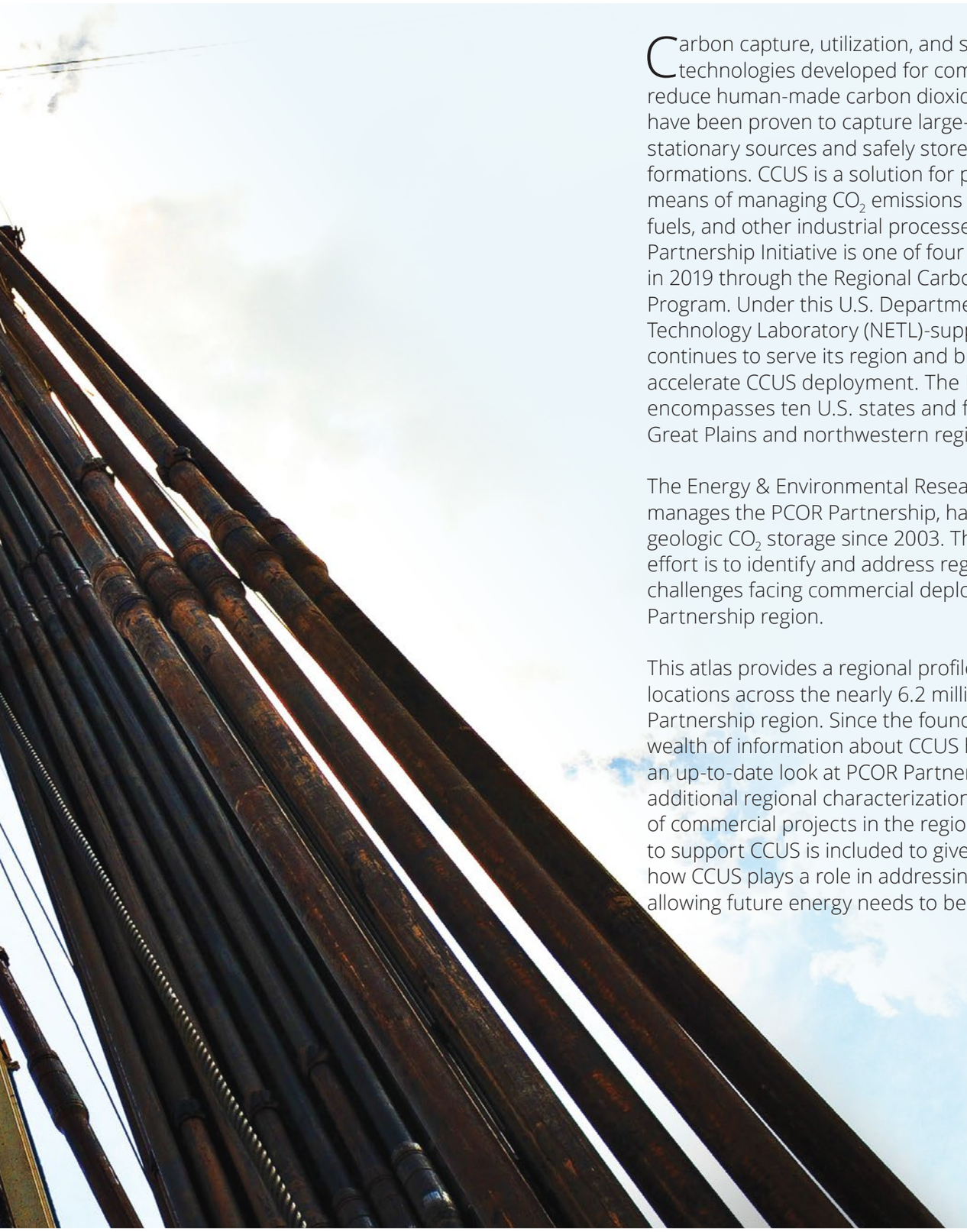

Carbon capture, utilization, and storage (CCUS) are a key set of technologies developed for commercial deployment to significantly reduce human-made carbon dioxide (CO_2) emissions. These technologies have been proven to capture large-scale CO_2 emissions from major stationary sources and safely store the CO_2 underground in geologic rock formations. CCUS is a solution for providing a safe, effective, and efficient means of managing CO_2 emissions while producing energy for electricity, fuels, and other industrial processes. The Plains CO_2 Reduction (PCOR) Partnership Initiative is one of four Regional Initiative Projects established in 2019 through the Regional Carbon Sequestration Partnership (RCSP) Program. Under this U.S. Department of Energy (DOE) National Energy Technology Laboratory (NETL)-supported initiative, the PCOR Partnership continues to serve its region and broad stakeholder base to advance and accelerate CCUS deployment. The PCOR Partnership Initiative region encompasses ten U.S. states and four Canadian provinces in the upper Great Plains and northwestern regions of North America.

The Energy & Environmental Research Center (EERC), which leads and manages the PCOR Partnership, has been conducting focused research on geologic CO_2 storage since 2003. The goal of this joint government–industry effort is to identify and address regional capture, transport, use, and storage challenges facing commercial deployment of CCUS throughout the PCOR Partnership region.

This atlas provides a regional profile of CO_2 sources and potential storage locations across the nearly 6.2 million square kilometers of the PCOR Partnership region. Since the founding of the PCOR Partnership in 2003, a wealth of information about CCUS has emerged. This sixth edition provides an up-to-date look at PCOR Partnership Initiative activities, to include additional regional characterization and updates on the growing number of commercial projects in the region. Additional background information to support CCUS is included to give the reader a better understanding of how CCUS plays a role in addressing concerns about climate change while allowing future energy needs to be met.