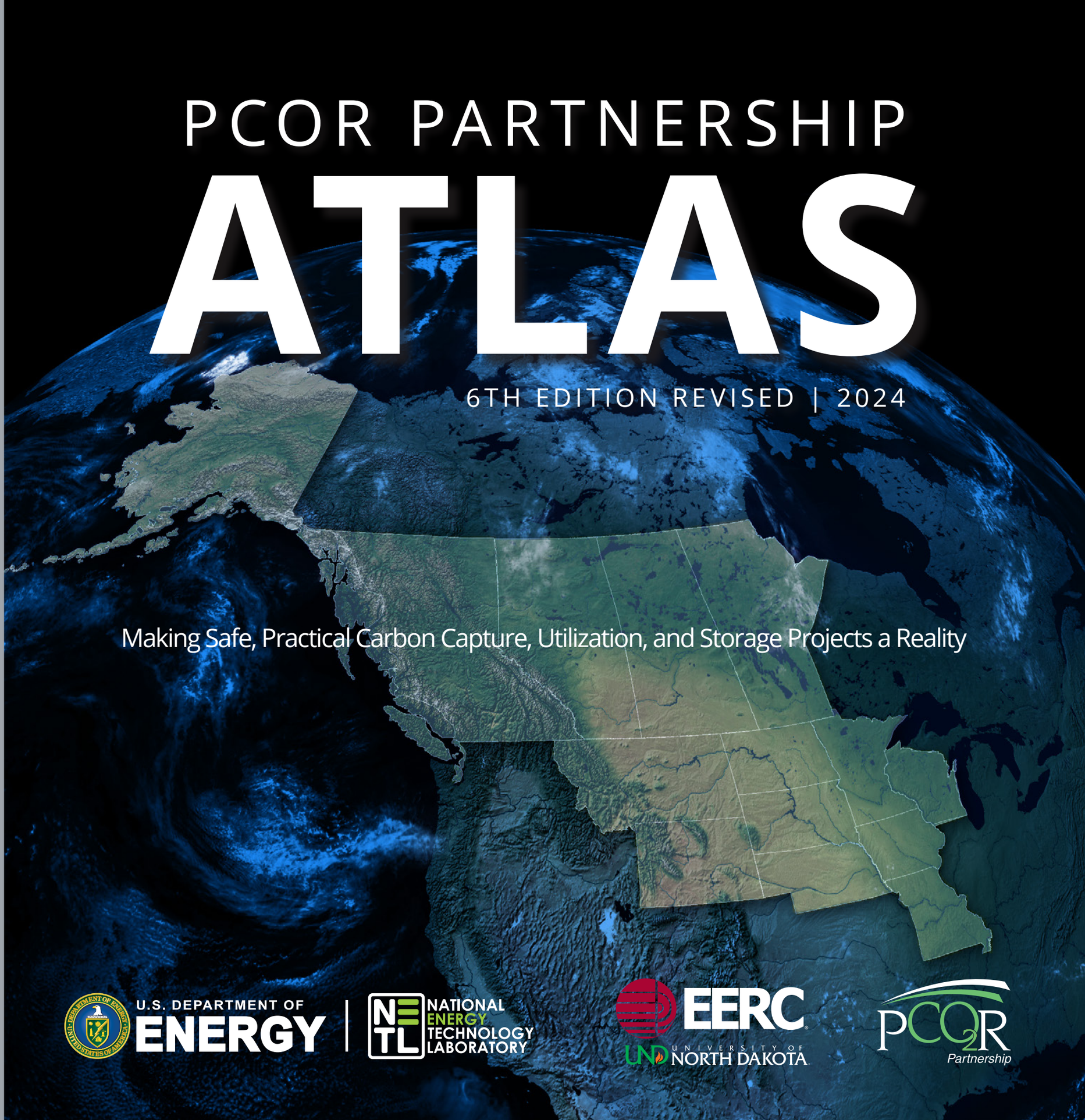
PCOR PARTNERSHIP

ATLAS

6TH EDITION REVISED | 2024



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

U.S. DEPARTMENT OF ENERGY | NATIONAL ENERGY TECHNOLOGY LABORATORY

EERC UNIVERSITY OF NORTH DAKOTA

PCOR Partnership

PCOR Partnership ATLAS

6TH EDITION REVISED | 2024

Compiled and Created by
Wesley Peck, Assistant Director for Subsurface Strategies
Kari Suedel, Principal Communications Specialist, Photographer
Kyle Glazewski, Assistant Director for Research, Community Benefits and Stakeholder Engagement

Plains CO_2 Reduction (PCOR) Partnership Management
Kevin Connors, Assistant Director for Regulatory Compliance and Energy Policy
James Sorensen, Director of Subsurface R&D
Charles Gorecki, CEO
Brian Kalk, Chief Research Officer
John Harju, Vice President for Strategic Partnerships

Published by the
Energy & Environmental Research Center (EERC)
2024

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.

NOTICE

Printed in the United States of America and available from:
Energy & Environmental Research Center (EERC)
Grand Forks, ND 58202

ACKNOWLEDGMENTS

This atlas was made possible through the contributions and efforts of numerous groups from throughout the United States and Canada. We acknowledge the PCOR Partnership partners for their efforts in providing much of the information used for the assessments and for cooperating with us in producing a regional portfolio for public use. We also extend our appreciation to the various federal, state, and private organizations and university groups for their cooperation in our search for data.

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 2019–2024. This atlas was possible because of their creative energy and collective efforts:

Heather Altepeter, Katherine Anagnost, Scott Ayash, Nicholas Azzolina, César Barajas-Olalde, Matthew Belobraydic, Nicholas Bosshart, Barry Botnen, Aldjia Boualam Djezzar, John Brunner, Shaughn Burnison, Matthew Burton-Kelly, Brock Callina, Carrie Christianson, Kevin Connors, Charlene Crocker, Janet Crossland, Chantsalmaa Dalkhaa, Sofiane Djezzar, Thomas Doll, Neil Dotzenrod, Janelle Ensrud, Ian Feole, Zahra Finnigan, Bret Fossum, Kyle Glazewski, Charles Gorecki, Steve Guillot, John Hamling, John Harju, Jun He, Loreal Heebink, Michael Hillix, Erin Hoffert, John Hunt, Lonny Jacobson, Melanie Jensen, Tao Jiang, Lu Jin, Lauren Kagan, Nicholas Kalenze, Brian Kalk, John Kay, Ryan Klapperich, Scott Klara, Stacy Kouba, Justin Kovacevich, Nikki Krueger, Beth Kurz, Olivia Lacher, Sam Landa, Jason Laumb, Remington Leger, Kerryanne Leroux, Amanda Livers-Douglas, Jacob Loing, Macy Mack, Kris MacLennan, Nessa Mahmood, Kyle McBride, Austin McRae, Jake Meyer, Brian Mladenich, David Nakles, Jeff Noll, John Oleksik, Caitlin Olsen, Wesley Peck, Lawrence Pekot, Joshua Regorrah, Trevor Richards, Steven Schlasner, Kari Schmidt, Rhonda Shirek, Steven Smith, James Sorensen, Nicholas Stanislowski, Joshua Strege, Kari Suedel, Merry Tesfu, Michael Warmack, Neil Wildgust, Cody Williamson, Jib Wilson, Xue Yu, and Agustinus Zandy.

This material is based upon work supported by the U.S. Department of Energy National Energy Technology Laboratory under Award No. DE-FE0031838.

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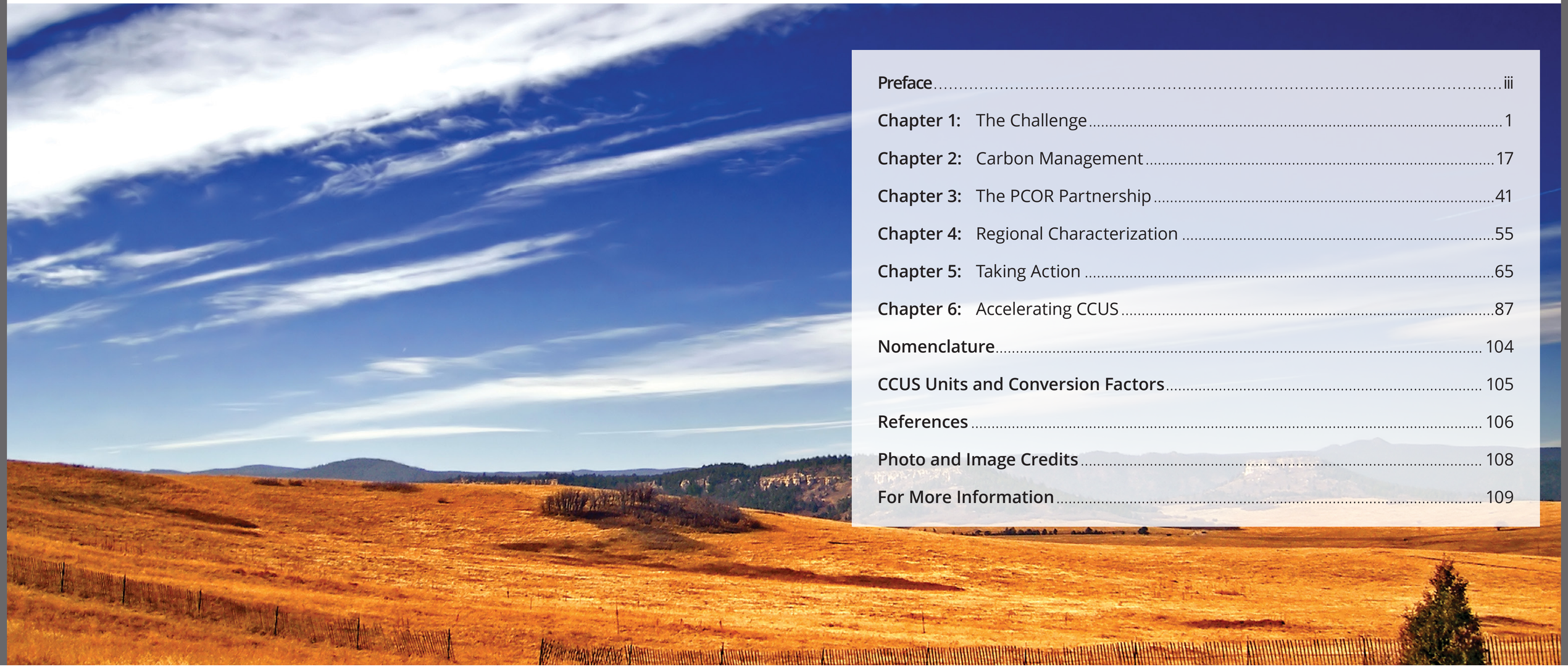

PREFACE

Carbon capture, utilization, and storage (CCUS) are a key set of technologies developed for commercial deployment to significantly reduce anthropogenic (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 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 revised sixth edition of the atlas provides an up-to-date look at PCOR Partnership Initiative activities, including 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 addresses concerns about climate change while allowing future energy needs to be met.