

# Mid-Atlantic U.S. Offshore Carbon Storage Resource Assessment

Award Number: DE-FE0026087

## Project Summary:

Battelle carried out a regional carbon dioxide (CO<sub>2</sub>) storage resource estimate in offshore regions along the mid-Atlantic and northeastern United States (U.S.) that included the Georges Banks Basin, the Baltimore Canyon Trough, and the Long Island Platform. Key input parameters were defined to reduce uncertainty of efficiency estimates and risk factors that may constrain the storage resources assessment. Industry and regulatory stakeholders were engaged through a roadmap development effort designed to assist future project planning and implementation.

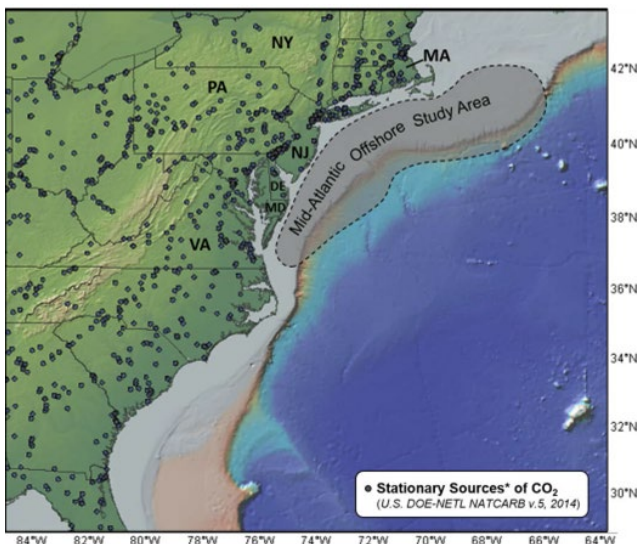


Figure 1: Map of the eastern United States coastal region showing the location of the study area and the onshore locations of stationary CO<sub>2</sub> sources.

## Project Outcomes:

Legacy seismic, well-log, core, and biostratigraphic data were digitized, reprocessed, and analyzed using modern techniques, augmenting previous characterization efforts to create a structural framework that was used to tie together all available well data, constrain sequence stratigraphic interpretations, and make regional assessments of offshore carbon storage resources. Three storage zones and three potential caprocks were identified and stratigraphically correlated across the study area. Twenty pseudo-wells were placed in areas with well data gaps within the study area to better constrain porosity map grids. Porosities derived from seismic inversion were used to characterize storage zone porosity in five pseudo-wells, while average effective porosities from the three nearest wells were assigned to storage zones in 15 pseudo-wells. Using the porosity data, storage resource estimates (P10, P59, and P90 values) were calculated for each of the three identified potential storage formations. The highest storage resource values ( $\geq 2.5$  million metric tons [MMT] CO<sub>2</sub>/kilometer<sup>2</sup> [6.5 MMT/mile<sup>2</sup>]) for both the Missisauga and Logan Canyon storage zones occur near the Great Stone Dome in the Baltimore Canyon Trough, offshore New Jersey.

## Presentations, Papers, and Publications

Final Report: [Mid-Atlantic U.S. Offshore Carbon Storage Resource Assessment Project](#) (September 2019) – Neeraj Gupta

## Prime Performer:

Battelle Memorial Institute

## Key Performers:

Columbia University Lamont-Doherty

Earth Observatory

Rutgers University

Maryland Department of Natural

Resources

Pennsylvania Department of

Conservation and Natural Resources

Delaware Department of Natural

Resources

## Principal Investigator:

Dr. Neeraj Gupta

## Project Duration:

10/1/2015 – 6/30/2019

## Performer Location:

Columbus, Ohio

## Program:

Carbon Storage