

Climate Change Industry Braces For More Disruption

The U.S. climate change industry grew 9% in 2024 to \$530 billion, according to Climate Change Business Journal's annual model of the climate change industry. The tables and charts in this review summarize the key numerical trends of the industry and key segments that impact overall growth. The 9% growth in 2024 is down noticeably from the previous three years as detailed by segment on the table on page 3. Declining growth rates in the sales of electric vehicles was a significant reason for the transportation segment, the industry's largest, falling below the double digit growth line and only growing 5% in 2024. Growth in renewable energy and clean power, the third largest segment, was over 20% in revenues in 2024, and improvement over the previous three years, but not enough to keep overall climate change industry growth in the United States above 10%.

These two influential segments are profiled from a statistical standpoint later in this review, and their trajectory will likely be increasingly influential to climate change industry growth for the rest of the 2020s, given the result of the 2024 presidential election. The second and fourth largest climate change industry segments, energy efficiency technology and services and green buildings, also failed to produce double-digit growth in 2024 according to CCBJ analysis. A valid argument exists that these segments could be excluded from the core climate change industry, as saving or conserving energy or producing less energy-consuming assets in the built environment may not be seen as being part of the solution, but more as just incremental efforts to minimize the problem. However, we do continue to include these segments, but also to produce segment specific breakdowns to allow more selective analysis.

Climate Change Industry Overview 2024

CCBJ's annual assessment of the climate change industry quantifies segment fluctuations and the impacts of political change. The U.S. climate change industry grew 9% in 2024 to \$530 billion, lagging recent growth but most executives remain optimistic about long term drivers in their business. Features in this edition summarize public transit, carbon markets and biogas, with executive Q&As on oil & gas carbon capture, hydrogen infrastructure, VC investment, decarbonization, restoration, climate grants, factory farms and law firms' take on energy transition

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Research Mgr Laura Carranza
Managing Editor Lyn Thwaites
Co-Founding Editor Jim Hight
Contributing Editors

Adriana Blair, George Stubbs,
 Brian Runkel, Charles Helget,
 Andrew Paterson, Tom Aarts

Subscriber Services

Laura Fernandes
 Climate Change Business Journal

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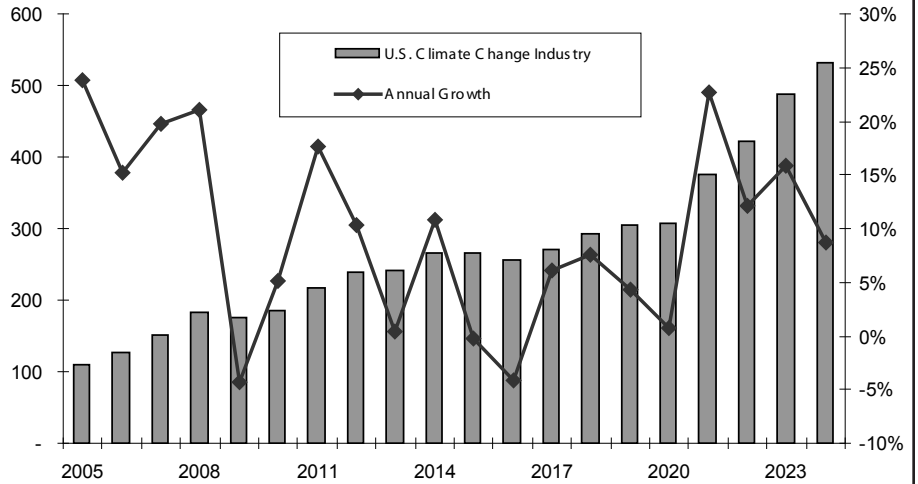
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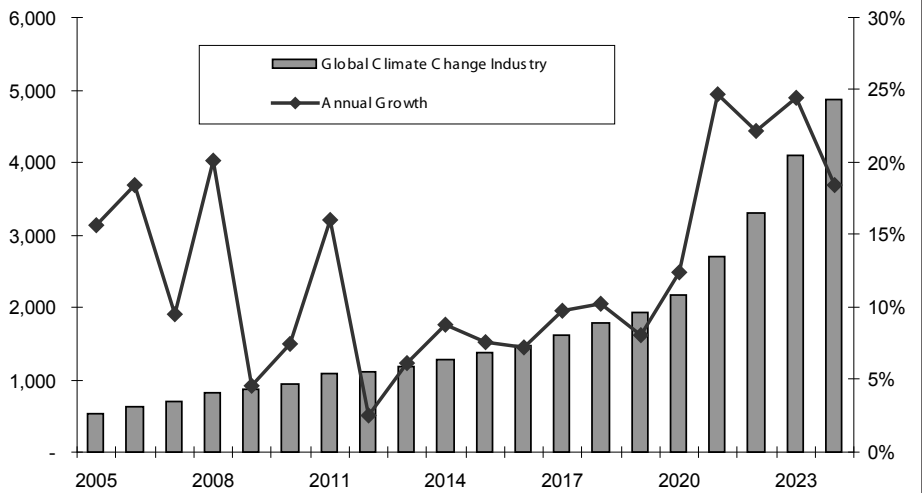
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U.S. Climate Change Industry in \$bil & Annual Growth

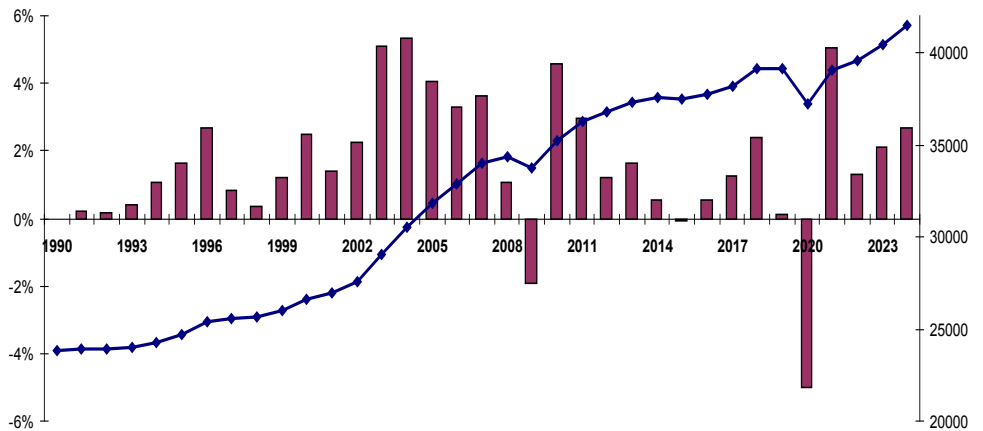


Global Climate Change Industry in \$bil & Annual Growth



Source: Climate Change Business Journal; Environmental Business International, Inc., San Diego, Calif.

Global Emissions in CO2e & Annual Change from 1990-2024



Source: CCBJ derived from Energy Institute Statistical Review of World Energy

Dudek Partners to Convert a Coastal California Oil Field into a Nature Preserve

Dudek is a 100% employee-owned, multidisciplinary planning, environmental, and engineering consulting firm based in Encinitas, Calif. **Coastal Corridor Alliance** is a 501(c)3 non-profit corporation, originally established to protect Banning Ranch, now the Randall Preserve. The **Mountains Recreation and Conservation Authority** is dedicated to the preservation and management of local open space and parkland, wildlife habitat, coastal access, watershed lands, and trails in both wilderness and urban settings, and to ensuring access to public parkland and coastal resources.

CCBJ: Tell us about the two lead project authorities, how they came about, how they are funded and how they accessed the Project funding for this first phase of the project?

Dudek: Coastal Corridor Alliance (CCA) is a 501(c)3 non-profit organization that works closely with the Randall Preserve titleholder, the Mountains Recreation and Conservation Authority (MRCA), a Joint Powers Authority, through a Memorandum of Understanding to advance the Preserve's planning.

CCA, formerly Banning Ranch Conservancy, was instrumental in defending the property from a massive coastal development, secured the catalyst funding of \$50 million from local philanthropists Frank and Joann Randall to acquire the property, and has taken the lead to support MRCA in fundraising for and managing the planning effort on the property.

CCA is funded through private donations, local grants, and regularly applies for funding to support this effort from local, state, and federal sources. MRCA is dedicated to the preservation and management of local open space and parkland, wildlife habitat, coastal access, watershed lands, and

Park Planning Begins on the Randall Preserve

Habitat and Species Protection, Coastal Resilience, and Public Access are Being Studied During Park Planning Efforts

Coastal Corridor Alliance (CCA) and the Mountains Recreation and Conservation Authority (MRCA) have partnered to plan the future habitat stewardship of the Randall Preserve, which was protected in 2022. Together through a federally compliant procurement process, CCA has hired the environmental, engineering, and planning firm Dudek to coordinate a variety of studies and assist with the Randall Preserve design. "After 80 years of oil drilling, I'm excited that the public will soon have access to the Randall Preserve," said CCA Stewardship Consultant Melanie Schlotterbeck. "Public access restrictions have been in place since it was protected, while remediation is completed by the previous titleholder."

CCA was awarded, through a federal competitive grant from the National Fish and Wildlife Foundation with support from the National Oceanic and Atmospheric Administration, funds to complete park planning in the form of a Resource Management Plan and Coastal Resilience Strategy. The development of these plans and a Tribal Access and Engagement Plan will collectively inform a Public Access Plan.

Additional funds are being sought, while Dudek's team completes biological surveys of the vegetation and special status species, coupled with mapping and research on the property. In Winter 2024, the procurement process received eight proposal submissions and Dudek was awarded the contract. Dudek previously participated in many of the studies conducted when the land was proposed for development as Newport Banning Ranch. This extensive knowledge of the property and creative approach to stewardship and recreational planning helped this firm secure the contract award. Together CCA, MRCA, and Dudek will work to complete the surveys, setting the tone for future stewardship, education and programming, public access, and regulatory compliance.

trails in both wilderness and urban settings, and to ensuring access to public parkland and coastal resources.

MRCA, as the titleholder, acted as the governing agency to secure the awarded acquisition grants for the property. Together CCA and MRCA collaborate on planning grants to fund this important work.

CCBJ: Seeing as you at Dudek have been involved on the site in the past when possibilities of future development were raised, how has the history of public comment and potential land use options been addressed from a public and private perspective over time on this site?

Dudek: The public's role in this property has been instrumental in its preservation—from attending Coastal Commission hearings and City Council meetings, to

letters of support advocating for the land's protection. Once the land was conserved, the grant deeds limited the potential urban/development uses by prioritizing flora and fauna protection, Tribal access and engagement, and public access.

Significant public comment opportunities will be offered when the plans have been drafted. As a result, the engagement with the community will have come full circle: many of the same voices that stopped the initial development will be included to create the park. Many more new voices will be sought. Many agencies and local businesses support the Preserve's "park status" as they recognize the importance of natural lands, proximity to people, and its potential for economic support via tourism and recreation.

CCBJ: Is this something new for the National Fish and Wildlife Foundation to pursue this kind of ambitious project? And is the support and funding from NOAA related to the Infrastructure bill or any other vehicle which is creating more opportunities for firms like Dudek to advance coastal conservation and public access?

The National Coastal Resilience Fund (NCRF) supports the planning, design and implementation of nature-based solutions to enhance the resilience of coastal communities and ecosystems, and the Randall Reserve project is a great example of these kinds of solutions,” said Mirjam Kuzee, program director for coastal resilience at the National Fish and Wildlife Foundation. “The Foundation strategically invests in projects that increase the capacity of communities and habitats to withstand and recover from coastal hazards and adapt to changing environmental conditions, through nature-based solutions such as restoring coastal marshes, living shorelines, reconnecting floodplains, rebuilding dunes or other natural buffers.”

CCBJ: How important is the coastal resilience aspect of the plan and what

measures do you expect to take in terms of construction? What options do you have in terms of nature-based solutions and green versus gray infrastructure?

Grant funders supporting the acquisition required the creation of a Property Management Plan that encompassed three aligned/intertwined plans: the Resource Management Plan, Tribal Access and Engagement Plan, and a Public Access Plan. The Coastal Resilience Strategy was added because it deeply aligns with NFWF’s grant opportunity to improve coastal resilience from the impacts of climate change and closely supported the ecological studies already being planned.

Nature-based solutions and Traditional Ecological Knowledge will be important features of the planning process, likely with a mix of green versus grey infrastructure depending on what is needed and the potential alternatives developed. For example, one ecological restoration approach being considered is the reintroduction of tidal flow onto the property to support rare coastal wetland resources. The historic wetlands were diked decades ago for oil operations. Design features will consider sea level rise to promote long term sustainability and resilience of the restored wetlands. ⚙️

Climate Resolve Enables \$25 Million in Climate Grants

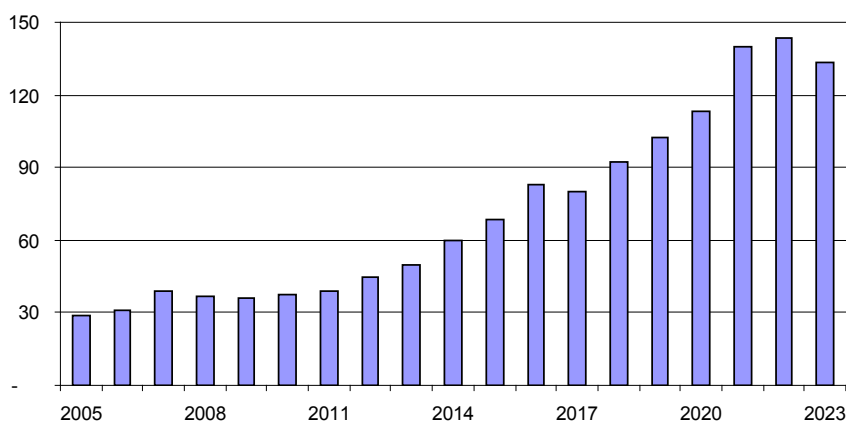
Climate Resolve was founded in 2010 and is a 501(c)(3) organization dedicated to establishing a just and resilient future in Southern California. Since 2019, Climate Resolve’s Ready for Tomorrow program has provided no-cost grant writing assistance to municipalities, tribal entities, and community-based organizations in pursuit of funding for climate action. Since its inception, the Ready for Tomorrow program has secured \$24.4 million in awards and was recently awarded *ecoAmerica’s* 2024 American Climate Leadership Award.

Kris Eclarino is dedicated to advancing environmental equity and protecting vulnerable communities in the Los Angeles region from the impacts of climate change. He attributes his strong passion for working in the climate and environmental field to his first-hand experience with poor air quality while growing up in the Los Angeles region and from hearing stories about his parents’ home country, the Philippines, and how it has become more prone to stronger, more frequent typhoons due to anthropogenic greenhouse gas emissions.

At Climate Resolve, he supports the organization’s programmatic activities through research, quantitative analysis, and written reports. He is the Project Manager of Climate Resolve’s Ready for Tomorrow (RfT) program which connects disadvantaged communities (as defined by CalEnviroScreen 4.0), in Southern California, to climate planning research, funding, and resources. Under RfT, he also leads the Grant Writing Assistance Program, which provides grant writing assistance to municipalities in pursuit of federal, state, and foundation grants for climate planning.

CCBJ: Please provide some history and context for the entity climate resolve. When did you start and what are the overall objectives and how did you get into the grant writing support area?

Dudek Annual Revenues: 2005-2023 in \$million



Source: EBJ database of environmental consulting & engineering firms; Dudek revenue reported to ENR