



President's Task Force on Carbon Neutrality and Climate Resilience Working Group on Climate-Positive, Equitable Economic Development

The Working Group on Climate-Positive, Equitable Economic Development (Working Group 7) focuses on defining the concepts of climate-positive economic development and equity as they should be used by Working Groups 1-6 in their deliberations.

For the April 1, 2020 deliverable, Working Group 7 will provide input on three broad topics:

1. Define a concept of climate-positive, equitable economic development that can be applied to task force efforts - what does it mean to be a good steward of the environment and equity while considering economic development strategies for the university and broader economy?
2. How can we achieve/contribute to climate-positive, equitable economic development through functions of the university?
3. How do the Rutgers climate-positive, equitable economic development efforts align with/contribute to state policies for the broader economy?

Insights generated on these topics will aid Working Groups 1-6 as they seek to incorporate climate-positive economic development considerations.

In developing the information for the WG7 report, consider the following:

- What programs/activities are already in place at RU? (i.e. social/equity oriented economic development programs)
 - Identify prior approaches - examples of what other universities are doing, identify exemplars; What are opportunities and challenges for adopting these approaches at Rutgers?
 - How can we engage external stakeholders, such as surrounding communities, state entities, local organizations, etc. with regard to our topic area?
 - Develop a menu of options to pursue in more detail for the final report, which will be due in September
 - Identify cross cutting areas with other working groups (i.e. improving economic development opportunities may involve improving public transit).
1. **Define a concept of climate-positive, equitable economic development that can be applied to task force efforts - what does it mean to be a good steward of the environment and equity while considering economic development strategies for the university and broader economy?_**

A primary task of the working group is to define the concept of climate-positive, equitable economic development. The idea appears in the carbon neutrality plans of universities, in the economic development strategies of U.S. cities, and in the frameworks of global organizations. Yet, there is no agreed upon definition. Below are examples of how various actors characterize the concept.

- NYU's carbon neutrality plan includes a discussion of the school's aspiration to be "climate positive". Their definition is broader than economic development. Essentially, the transition to carbon neutrality should not just be a goal to do "less bad", but to "leave the planet in a better condition for future generations".
 - A focus on economic development could make explicit a goal to leave the economy in a better condition, such as by making it more resilient to extreme weather events
- The **sustainable university model** (which includes environmental considerations, but takes a broader view of "sustainability") as described by Valezquez, et. al. "defines a sustainable campus community as 'A higher education institution, as a whole or in part, that addresses, involves and promotes, on a regional and global level, the minimization of negative environmental, economic, societal, and health effects generated in the use of their resources in order to fulfill its functions of



teaching, research, outreach and partnership, and stewardship in ways to help society make the transition to sustainable lifestyles.”

- The 10-year vision (2020-2030) for the **Pittsburgh region** is described as a triple bottom line approach that encompasses thriving people, quality of place and a strong, inclusive economy. Quality of place focuses on “collaborative efforts to chart the region’s path to a low carbon future” and to “eliminate non-inclusive economy”.
- The **C40 Climate Positive Development Program** serves as a model for cities to grow in environmentally sustainable and economically viable ways. Developed by the C40 Cities Climate Leadership Group, in partnership with the Clinton Climate Initiative and the U.S. Green Building Council, the program aims to create “large-scale models for urban development that reduce greenhouse gas emissions below zero in an economically viable manner.” (this is above and beyond the Rutgers’ goal of achieving zero emissions)
- The **Organisation for Economic Co-Operation and Development** urges a “combination of pro-growth and pro-environment policies”. According to their analysis, the major economies in the world can boost their “long-term economic growth” with policies that “lower greenhouse gas emissions and boost resilience to climate change impacts”
 - There are two ideas that emerge: 1) the transition to carbon neutrality will catalyze economic development; and 2) economic development strategies should align with climate change goals
- The **International Economic Development Council (IEDC)**; the largest professional organization for economic developers globally) notes that the environment will figure prominently in the future of economic development. Economic developers will “need to understand proactive and reactive measures to address extreme weather”. In its Future Ready Framework, the IEDC lists “green policy” and “disaster recovery and resiliency” as key issues that economic developers can control (policy) and influence (recovery and resiliency).

2. How can we achieve/contribute to climate-positive, equitable economic development through functions of the university?

The working group will function as a resource to Working Groups 1-6, assisting with the identification of economic opportunities generated in the transition to a carbon neutral university, and recommending equitable programs and policies for preparing the Rutgers community and campus communities (i.e. individuals living in NB, Piscataway, Newark, Camden) to take advantage of such opportunities.

Rutgers has a number of existing assets that are relevant to the working group charge. This is only a sample of the existing assets, and further work is needed to generate a comprehensive assessment of current assets that can be leveraged for this initiative.

- **Rutgers EcoComplex, Clean Energy Innovation Center:** A business incubator for clean energy companies; Services include a proof of concept center and accelerator program which provides state-of-the-art lab space, technology verification and engineering support, regulatory and permitting guidance, and technical training (located in Bordentown)
- **New Jersey Agricultural Experiment Station (NJAES):** Delivers solutions to current and future challenges relating to agriculture; fisheries; food; natural resources; environments; public health; and economic, community, and youth development; Offices in all 21 counties of NJ; Extension specialists who engage directly with farmers; An important goal of NJAES is to spur and support



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economic development in the state; Engaged in addressing climate change, for example, through research collaboration with Duke Farms

- New program being launched **Climate Smart Agriculture and Working Lands Initiative for NJ** is led by the NJAES in conjunction with the NJ Climate Change Resource Center. The Initiative's goal is to explore solutions for reducing greenhouse gas emissions and enhancing climate resiliency related to NJ production agriculture (including terrestrial agriculture and aquaculture) as well as within NJ forests through applied research, development of best practices, and disseminating information to agricultural producers, foresters, land managers, and decision makers. This effort will improve the economic viability of NJ farms through better soil and water management, while improving resiliency to climate change.
- **Rutgers Institute for Corporate Social Innovation:** Educating current and new generations of business leaders to integrate social innovation into their business strategies
- **New Jersey Small Business Development Center at Rutgers New Brunswick:** Provides comprehensive assistance to small and medium businesses to maximize opportunities for growth and generate economic impact statewide; Helped launch the NJ Sustainable Business Registry
- **Rutgers Office(s) of Economic Development:** On all 3 campuses; These offices work to build relationships with a wide range of businesses and organizations with the goal of enhancing the economy of their respective regions and the state.
- **The Center for Urban Entrepreneurship & Economic Development (CUEED) in the Rutgers Business School Newark,** is the first center of its kind in the nation to integrate scholarly works with private capital, government, and non-profit sectors to develop citywide resources and bring renewed economic growth and vitality through urban entrepreneurship. CUEED promotes and fosters a new generation of urban entrepreneurs who actively seek socially conscious urban renaissance.
- **Rutgers discoveries (climate technologies with commercial applications):** As an example, Rutgers Distinguished Professor of Materials Science and Engineering, Dr. Richard Riman, is an entrepreneur and founder of Solidia Technologies, a Piscataway-based company that patented a process for producing cement with 70% fewer emissions; Solidia was recognized as a Global Cleantech 100 company
- **Environmental Justice Action Group (organized by Rutgers School of Social Work):** Connected with the Council on Social Work Environmental Justice Task Force; the Action Group was recently formed (2019) and hopes to galvanize a group of concerned activists within the University, the field of social work, and community partners; Efforts will focus on the various environmental issues to achieve a vision of eco-resilience

Examples of actions taken by other comparable institutions are listed below. Additional research is needed to expand the list, and criteria developed for deciding which strategies best align with the mission and capabilities of Rutgers (pursue in more detail for final report).

- University of Maryland Francis King Carey School of Law: Developing a climate adaptation finance toolkit for communities
- University of Colorado: Eco-Visits program trains students to conduct energy audits and install energy-saving upgrades; students living off-campus can access free energy audits



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- **Cornell University:** One of the first universities in the country to integrate sustainability management tools into a university management academy; University leadership receives training in triple bottom line decision making
- **Cornell University:** Cornell Global Labor Institute works with trade unions to solve major environmental (and other) challenges, such as climate change
- **Northern Arizona University:** Partners with the community to provide opportunities for students in the green economy, such as through its ongoing support of the Coconino County Sustainable Economic Development Initiative
- **Harvard University:** Green Revolving Fund provides up-front capital for projects that reduce the university's environmental impact
- **University of Northern British Columbia:** Collaboration with the Prince George Chamber of Commerce's Chamber Carbon Action Plan - through the project, the chamber pairs businesses with students (most come out of a Carbon and Energy Management class) who create carbon footprint analyses to internationally recognized standards. The students interact directly with the businesses to understand their operational realities, and earn valuable experience, contacts and skills. The chamber also facilitates project funding and generates publicity around the initiative.

How can we engage external stakeholders, such as surrounding communities, state entities, local organizations, etc. with regard to our topic area?

- Meet with local organizations such as New Brunswick Tomorrow and engage them in the planning process. NBT has tremendous connections with the local community and
3. **How do the Rutgers climate-positive, equitable economic development efforts align with/contribute to state policies for the broader economy?**

In thinking about the unique position and possibility for Rutgers to impact the broader economy, it is useful to document alignment with current state-level climate change and economic development initiatives, and to recognize opportunities for influencing future policy directions. Some current state-level initiatives are described below, but additional work is needed to develop a comprehensive list of current and relevant efforts, and to identify policy gaps, and best practices for addressing such gaps.

- **New Jersey Energy Master Plan:** The Murphy Administration describes clean energy as “vital for our future from both an economic development and environmental sustainability policy perspective”. With this in mind, Governor Murphy, through Executive Order 28, has set an ambitious goal of setting New Jersey on the path to a conversion to **100% clean energy by 2050**.
- **Offshore Wind:** Nation's largest single solicitation of 1,100 MW awarded in June 2019; Pipeline of 3,500 MW by 2030 signed into law
 - **New Jersey Offshore Wind Supply Chain Registry:** Allows companies to publicly indicate their interest and ability to supply components and services for US East Coast offshore wind projects; Serves as a resource for companies looking to buy from and partner with New Jersey-based firms.
 - **Wind Innovation & New Development (WIND) Institute:** Public-private partnership will serve as a hub for research, innovation, and workforce development for the offshore wind industry
- **Solar:** 300+ operating grid-level solar installations; #3 ranking in ease with which companies can procure renewable energy in the U.S.



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- Electric Vehicles: 310+ electric vehicle charging stations; 840+ electric vehicle charging outlets
 - **Partnership to Plug-In:** A first-of-its kind partnership to register 300,000 electric vehicles by 2025
- Energy Storage: New Jersey is one of only six states with an energy storage target over the next decade (2,000 MW by 2030); There are currently eight operational energy storage projects
- Green Buildings: New Jersey is the first state in the U.S. to require* new construction projects to consider climate change impact (*for projects seeking Department of Environmental Protection permits)

There are also a number of initiatives at the community or state-level that are not government led. The organizations leading these initiatives are potential partners and resources to the Working Group. Below is a small sampling of these initiatives.

- **Lincoln Park Coast Cultural District, Inc. (LPCCD)** in Newark: A non-profit 501C (3) organization with a mission to plan, design and build a comprehensive arts and cultural district in the Lincoln Park/Coast area of the City of Newark
 - *Lincoln Park Fossil Free Learning Lab:* LPCCD facilitates urban agriculture, sustainable design, energy efficiency, home energy audit and renewable technology workshops to underprivileged and/or unemployed constituents of New Jersey communities.
 - *Green Neighborhood Pilot Project:* Through this federally funded project, LPCCD installs energy efficiency measures and provides targeted weatherization services, with a goal to reduce utility costs for local residents while simultaneously reducing carbon emissions.
- **Camden SMART Initiative** in Camden: Oversees a comprehensive network of green infrastructure programs and projects (including green infrastructure workforce training programs) for the City of Camden; A collaboration between the City of Camden, Camden County Municipal Utilities Authority, Cooper's Ferry Partnership, Rutgers Cooperative Extension Water Resources Program, New Jersey Tree Foundation, NJ Department of Environmental Protection, and Camden residents
- **PowerCorps Camden** in Camden: PowerCorps Camden members are a team of young leaders from Camden City serving to tackle pressing environmental challenges in their community; Projects aim to improve storm water management, clean and green vacant lots, improve community space and parks for Camden's young people, and revitalize public land in the city
- **Sustainable Jersey:** A nonprofit organization that provides tools, training, and financial incentives to support communities as they pursue sustainability programs, and a Sustainable Jersey certification program to recognize municipalities that are leaders in sustainability
- **New Jersey Sustainable Business Registry:** Created to recognize and promote sustainable businesses, nonprofit organizations and higher education institutions across the state. The registry is open to companies of all types and there is no cost to join.