

The Collegiate Carbon Exchange

Cap and Trade Between the Big 10 Schools

Emily Cheng and Maya Robles



Issue

Climate change is one of the most urgent and complex environmental issues and requires widespread cooperation across different institutions to solve. As institutions of progress and knowledge, as well as large contributors to greenhouse gas emissions, universities and colleges should be leaders in combating climate change. Cost is often a barrier to sourcing renewable energy or energy efficiency projects, which require large capital upfront. Despite support from students to implement climate friendly policies, schools are still resistant due to the costs.

Solution

Our solution is to implement a **carbon cap and trade program** called the **Collegiate Carbon Exchange (CCX)** between schools in the **Big 10** that will hold universities accountable to becoming **carbon neutral by 2050**. Universities must publicly track their GHG emissions, so each cap is accurate and realistic. Any revenue made when a universities sells its pollution permits must be reinvested into sustainability efforts that reduce emissions.

Ideal Long-Term Timeline (of 2008 levels)

1	25% carbon decrease by 2025
2	40% carbon decrease by 2030
3	75% carbon decrease by 2040
4	100% carbon neutral by 2050

Meetings

Each university has a task force (meets throughout the year)



Presidents of each university meet annually



Task forces from each school meet every 5 years



Student Engagement

The Big 10 athletic conference is a major source of pride for Rutgers, so using this frame to communicate climate change will garner support for the program. CCX taps into this identity to motivate students to support Rutgers by reducing emissions and take on active roles. Students will be part of the university task force, the governing body that serves to consult the university on how best to approach reducing and trading emissions.



The schools are comparable in size, endowment, and budget, putting them on an even playing field under our program. They have a large constituency of students capable of influencing administrators.

How Rutgers Could Meet the First Cap

Reduce emissions by 112,015.5 MTCO₂e by 2025

Topic	Cost	Monetary Benefit	Potential Emission Reduction (MTCO ₂ e) by 2050
Purchasing Renewable Energy	\$0 addition	None, embedded in energy costs	323,056
Additional On-campus Solar Energy	\$3.6 million for 8.01 MW solar capacity	\$8.4 million	38,184
All-Electric Transportation	Total fuel, maintenance, fleet cost: \$20,884,240	Net saving \$6,202,460 from cost of current transportation	11,820
Existing Building Retrofits	\$20 million capital costs	None	28,356
Energy Efficient Behavior	\$0	6 years: \$649,814.40	4,437

<p>Total Benefit Reduce 405,853 MTCO₂ total Using SCC: benefit of \$13,516,525 in avoided climate change damages Under cap by 293,837.5 Sell as allowances: \$2,938,375</p>	<p>Net Monetary Benefit (without SCC or allowances factored in) \$15,252,274.40</p>
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Outcomes

- With zero carbon emissions by 2050 as the end goal, this program will **reduce emissions by 5,824,806 MTCO₂e**.
- Using the social cost of carbon, this is a **benefit of \$333,470,144** in avoided cost of climate change damages.
- **Overall, CCX will make sustainability and climate a key campus priority.**