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Integrated Climate Solutions: The Transportation and Climate Initiative (TCI)

Transportation is the second largest emitter of greenhouse gas (GHG) emissions in the U.S., after electricity generation, and is the largest and fastest-growing GHG emissions source in New England. Transportation infrastructure has traditionally been the responsibility of state and local governments; however, for transportation related emission reductions to occur, efforts must be handled regionally because transportation and GHG emissions are similar in scale. Neither are confined within localized spatial boundaries.



The Transportation and Climate Initiative (TCI) is an effort to bridge these gaps between states and regions. TCI is a collaboration of transportation, energy, and environmental officials from twelve jurisdictions across New England and the Mid-Atlantic. Its goal is to, "Expand safe and reliable transportation options, attract federal investment, lower transportation costs, improve overall air quality and public health, and mitigate the transportation sector's impact on climate change." TCI seeks to develop a clean energy economy, reduce oil dependence, and reduce GHG emission from the transportation sector. Its cross-sector, regional, voluntary approach serves as a model for others who want to work across administrative barriers and silos

HIGHLIGHTS

Outcomes

- Sharing goals and mission across a region
- Communicating effectively across boundaries
- Regional collaboration beneficial for all
- Maintaining regional collaboration through voluntary bottom-up approach.
- Creating the Northeast Electric Vehicles Network
 - 190% growth in the number of public EV charging stations
 - 30-fold increase in the number of electric vehicles in the region
- Creating consistent metrics to evaluate impacts impacts
- Development of new tools and resources for municipalities, organizations, and others
- Successful legal action gaining access to use real-time information in applications for public transit
- Actionable research on freight flows in the region

Barriers

- Lack of "top-down" state mandates leads to slower action and lack of implementation
- Lack of capacity to implement and put effort into action
- Limited Available resources & unclear long-term funding
- Competing priorities within states & agencies

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that can restrict effective policy-making.

TCI was born out of the success of a regulatory initiative, the Regional Greenhouse Gas Initiative (RGGI). The energy and environmental agencies participating in RGGI engaged with their counterparts in the region's state transportation departments. Proposed at a Northeast Association of State Transportation Officials meeting, TCI was launched in June of 2010. TCI agencies partnered with the Georgetown Climate Center (GCC) to provide a backbone organization, coordination, administrative and research support for the new effort. GCC is part of Georgetown University and Law School and is funded through private foundational support for TCI, not by TCI member states.



TRANSPORTATION & CLIMATE INITIATIVE (TCI): TCI is comprised of four working groups: Sustainable Communities, Freight Efficiency, Clean Vehicles and Fuels, and Information and Communication Technology.

Most participating states already had climate action targets and plans in place, or in process, which included transportation components. TCI worked together with states to establish collective goals that would support these individual plans without requiring additional state mandates, new state participation, or other obligations. Members organized four working groups: Sustainable Communities, Clean Vehicles and Fuels, Freight Efficiency, and Information and Communication Technology to achieve their goals. All 12 jurisdictions of the Northeast and Mid-Atlantic stayed with the collaborative since its formation, contributing in

different ways at different times. TCI engages with other higher education institutions, business, and NGO partners in its efforts.

Since TCI's inauguration five years ago, the initiative has been able to overturn foreign patents, create applications that provide real time and location travel data, and end threats of a lawsuit against a TCI state for using real-time travel information. This effort was successful due to the significant work put in by Georgetown Law School, GCC, and the 12 jurisdictions supporting the effort. The use of this technology encourages higher usage of public transit; when people have access to real time information about transit, the uncertainty of arrival time and current location helps alleviate people's anxiety with using transit, and thus increases use.

The Sustainable Communities working group created indicators and metrics, related to transportation and ways to reduce the effects of climate change, and to measure and evaluate communities' progress towards more sustainable transportation actions.

Through the Clean Vehicles and Fuels working group, TCI established the Northeast Electric Vehicles Network, an effort that aims to remove barriers to the adoption of electric vehicles (EVs), such as cost and range anxiety, as well as a way to promote low to zero emissions vehicles. The network's mission also encourages clean vehicle technologies and the economic growth of this sector, especially the development of clean energy jobs. The workgroup created many partnerships across public and private sectors to establish this business network. For example, TCI established a charging station network that would allow electric vehicle drivers to drive from Maine all the way to Washington, DC without worrying about finding a place to charge. As part of this effort, TCI created an interactive charging station map of the region. The workgroup also put together several "how to" manuals on electric vehicle charging infrastructure and installment to guide municipalities, organizations, and individuals.

The freight efficiency work group has been hard at work researching the flow of freight in the region to better understand how to make it more efficient. TCI is also working to develop a regional goal to reduce carbon pollution. Since the network launched in 2011, TCI has seen a 30-fold increase in the number of electric vehicles in the region, and a 190% growth in public EV charging stations.

LESSONS LEARNED

A regional approach to transportation benefits all participants

Because transportation systems do not stop at political borders, even states with significant resources and political will to tackle the issue of transportation-related GHG emissions struggle to do so on their own. These states need to know that their efforts will not be undercut by conflicting or absent policies in neighboring states. To have the greatest impact, state policies should be aligned and complementary. For small states with fewer resources, being able to lean on and learn from neighbors with more resources saves time and likewise increases the overall impact of their efforts. Less tangible, but equally important benefits are: encountering and learning from very different perspectives, developing professional information and support networks with others in similar roles in other states, and serving as allies for each other in advancing a collective agenda.

A systems approach needs participation from diverse sectors

The cross-departmental nature of TCI has increased capacity for approaching transportation holistically and systematically. There are about 100 members involved, from all levels of the 30+ participating agencies. Participants range from commissioners and secretaries, deputy directors, policy directors, to junior staff members. Having multi-level perspectives on the same idea from the energy, environment, and transportation sectors allows for the strongest, most well-aligned solutions.

Focus on agreement and collective need

Collaborative work is difficult by nature: TCI members have different backgrounds and politics constraints, which frame their work, including different departmental priorities, budgets, and administrations. The keys to success, establishing objectives collectively, aligning with these shared goals (e.g. increased public health

and safety, economic development, etc.), and being flexible and adaptive in how these objectives are pursued. TCI focuses on providing tools, frameworks and information that its member states can use regardless of their diverse socioeconomics or politics.

Capitalize on individual interests that contribute to shared vision and goals

Unlike RGGI, there is no state mandate requiring participation in TCI. This means there is nothing requiring members to participate or make specific commitments. Participating states do not devote any full-time staff to TCI. Instead, each member is free to determine whether and how much they participate based on the work's relevance to their agency mandates. This presents the challenge of capacity which slows progress. On the other hand, this approach allows states to tailor their participation according to their own needs and strengths, making for a more flexible and diverse effort that can continually focus on finding the "sweet spots" for collaboration.

A backbone organization and private funding play vital roles

GCC provides important support as TCI's backbone organization. GCC coordinates calls, meetings, and events between working group members; facilitates internal and external communications on behalf of TCI as a whole, and provides research support. One example of the invaluable role of GCC is its coordination of the TCI members' joint participation in the legal challenge over real-time transit information used to create applications that many TCI state municipalities were using or hoping to use.

Transportation provides economic and environmental benefits

In a recent study performed by Georgetown and Cambridge Systematics, TCI found that market-based policy solutions can provide net economic benefits as well as reduce

“TCI has evidenced the benefits of regional collaboration, providing important continuity and resources to the state’s work to address climate change in the transportation sector.

- TCI article “Celebrating 5 Years of Success”

transportation greenhouse gas emissions.

“This analysis shows that significant progress in curbing pollution from the transportation sector is not only possible, it would also provide net economic benefits.”

- Vicki Arroyo, Executive Director of the Georgetown Climate Center

The key findings from their analysis are:

- 1) Transportation emissions will be reduced by 29% by 2030 from 2011 levels due to existing federal and state policies.
- 2) The region can reduce its transportation greenhouse gas emissions by 31-39% if additional clean transportation investments are made (specifically in clean vehicles, reduced traffic congestion, freight rail and shipping, transit, efficient land-use policies, and cycling).
- 3) With additional transportation policies and investments, the region could reduce its oil consumption by 4-27% more than it currently will under existing federal and state policies; this is valued at \$114- \$463 million in current dollars.
- 4) These changes could lead to a gross regional product of \$11.7 billion to \$17.7 billion, the creation of 91,000- 125,000 new jobs, and an increase in personal disposable income to \$9.4 -\$14.4 billion.

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Integrated Climate Solutions Case Study Series

This briefing was researched and written by the Climate Solutions New England research team: **Sarah Large**, Jennifer Andrews, Cameron Wake, Catherine Ashcraft, Henry Herndon, Irene Queen, and Tom Kelly. This briefing is part of Climate Solutions New England's "Integrated Climate Solutions" project. The "Integrated Climate Solutions" project aims to promote leadership and innovation by highlighting initiatives that provide opportunities for enhanced civic participation and democratic governance, economic development, public health, and social justice, while tackling climate change mitigation and/or adaptation. Full case studies on each of the solutions featured are in development, and will be available at climatesolutionsne.org.