



Climate and TDM







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Introduction

The 82 Alliance is a not-for-profit mobility think tank that focuses on reimagining how we move our cities, towns, and people. As our world is changing, we can and should be planning for a better tomorrow.

With over 30 years of experience, <u>GVF</u> is a notfor-profit organization whose mission is to inspire mobility choices for ALL.

TDM

Transportation Demand Management (TDM) refers to strategies, programs, or policies that are designed to reduce drive-alone trips and enable the transportation system to function more effectively and efficiently through alternative transportation options.

By implementing TDM strategies and reducing drive-alone trips we can improve our climate and increase the efficiency of our regional roadways.

This report looks at how TDM can effectively reduce transportation carbon emissions to improve our climate. You will find case studies of successful TDM programs within both an employer and community setting.



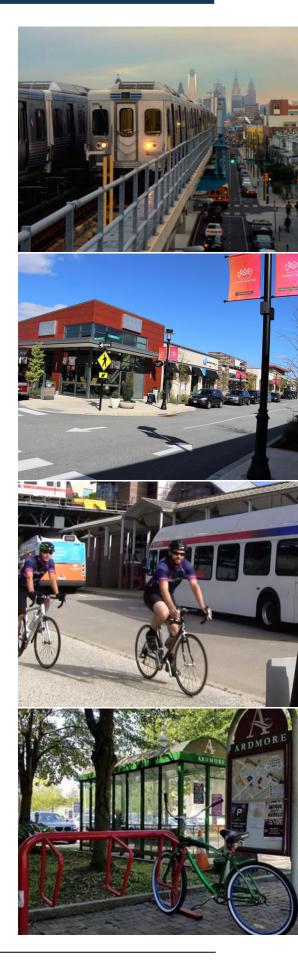
Climate and TDM

The buildup of carbon dioxide (CO2) and other greenhouse gases from burning fossil fuels like gasoline and diesel is causing the Earth's atmosphere to warm, resulting in changes to the climate we are already starting to see today.

Transportation is the leading cause of U.S. greenhouse gas emissions. It is responsible for 27% of all U.S. emissions.

In 2020, we saw a drop in transportation emissions due to the pandemic and stay-at-home orders. However, a recent study by the Rhodium Group found that U.S. transportation emissions climbed back to two-thirds of pre-pandemic levels during 2021.

According to Forbes, TDM is one of the four policies that can reduce U.S. transportation emissions by nearly half by 2050. As climate concerns continue to grow, individuals can shrink their carbon footprint by shifting trips from personal vehicles to transit, walking, biking, ridesharing, and working from home.



Climate Crisis Report "Solving the Climate Crisis"

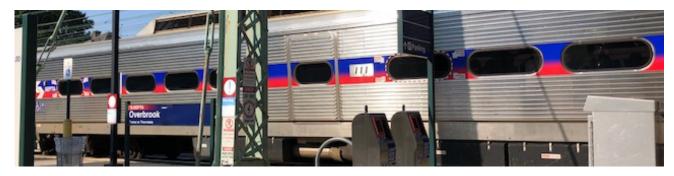
The House Select Committee Climate Crisis Report is a comprehensive set of policy recommendations for congressional action to satisfy the scientific and moral imperatives to reduce carbon pollution as quickly and aggressively as possible, make communities more resilient to the impacts of climate change, and build a durable and equitable clean energy economy.

The Climate Crisis Action Plan calls for:

- Reaching 100% clean, net-zero emissions economy-wide in the U.S. by no later than 2050.
- Establishing ambitious interim targets to assess progress and reduce pollution in environmental justice (EJ) communities.
- Achieving net-negative emissions during the 2nd half of the century

TDM is highlighted in the report as a recommendation for decreasing carbon emissions.

Recommendation: Congress should pass legislation to deploy TDM strategies across the country. Congress should require MPOs to consider TDM as a tool to reduce greenhouse gas emissions and provide households with alternatives to driving. Congress also should ensure local, state, and tribal governments interested in implementing TDM within their jurisdictions have the resources they need, including technical assistance.



It is important to note, although electric vehicles (EVs) are a huge improvement to gasoline-fueled vehicles, it is not enough to drastically reduce carbon emissions. This is due to the growing number of personally owned vehicles worldwide. In order to effectively and efficiently reduce our carbon footprint, we need to implement modes such as walking, biking, and public transit at a higher level than we see today.

As stated in the Climate Crisis report "Congress needs to take a multi-pronged, tailored approach to the transportation sector to drive down emissions and increase the sector's resilience in the face of worsening climate impacts. Improving a vehicle's efficiency, for example, will not be enough if that vehicle travels farther each year."

As we continue to work to implement TDM into legislation, businesses and communities can and should, take initiative to implement TDM programs. Below are two case studies that highlight successful TDM programs within a company and community setting.







Employer TDM Programs to Help Fight Climate Change

One purpose of TDM is to create a permanent commuting behavior change — meaning, getting employees to choose sustainable options on a consistent basis.

Biotechnology Company Located in the San Francisco Bay Area

We spoke with a Senior Transportation Program Manager at a large biotechnology company located in the San Francisco Bay Area about its successful TDM programs. The company is a passionate supporter of TDM and consistently provides its employees with the resources to take greener trips.

The company has created a robust transportation network of shared and sustainable commute options for its employees, including commuter buses, carpools, vanpools, and a fleet of ferries. The first battery-electric bus was introduced in 2018, with plans for the entire fleet to be electric by 2025.

Prior to the pandemic, the on-campus employee population was between 12,000 to 15,000. Approximately 40% of employees commuted regularly using an alternative transportation mode. At this time, many employees continue to work from home. The company plans to return employees to campus starting March 2022.

Highlighted below are a few of the TDM programs and incentives offered.

Robust Employee Bus System

The company runs an elaborate corporate commuter bus system that travels across the Bay Area. The impressive system includes over sixty (60) buses, thirty (30) different routes, with forty (40) different stops.

As part of the program, the company also runs on-demand shuttles and private commuter ferries.



The on-demand shuttles manage employee movement around the campus. The campus is roughly two hundred (200) acres with over fifty (50) buildings. The ferries currently connect employees between Berkeley and the Marina at South San Francisco

Incentives

- The company fully reimburses public transportation fares this includes buses, trains, and ferries.
- The company owned on-demand shuttles and ferries are free for employees and contractors to utilize

Vanpools

The Senior Transportation Program Manager stated that the vanpool program is the most successful TDM program offered. The program moves the greatest amount of people at a cheaper cost per person compared to the other programs.

Company-owned vanpools are provided to employees free of charge. The company assists with organizing and setting up vanpools, and employees track through trips through the "My Commute Log" software.

Prior to the pandemic, there were fifty-five (55) active vanpools throughout the company.

Incentives

- Vanpool vehicles are provided free of charge to employees
- Both vanpool drivers and passengers receive a reimbursement (when the minimum number of passengers is met).

Biking

Despite some barriers to biking in the area, the company has a large biking population. To increase the number of employees who bike to work, a pilot program is currently underway where twenty-five (25) employees have received an electric bike for free with a commitment to use it to bike to work. The company hopes to expand the pilot to a larger number of employees in the future.



A study is also being conducted to determine the potential for a bike-share system within the area. The company is looking to include surrounding organizations in a joint effort to reduce congestion and carbon emissions.

Incentives

- Employees receive \$10 per commute reimbursement for biking or walking to work
 - If employee bikes or walks to work, they can receive up to \$20 per day for doing so.



Log My Commute

To receive incentive reimbursements, employees must log their commutes through the company's commuter management platform "Log My Commute". The platform allows employees to track multimodal trips and allows for automated and predictive trip logs. The company can easily track this data to assist when making transportation decisions.



Leadership

As the largest organization in the area, the company recognized quickly it must take a leading role in implementing TDM programs within the area if it was to make a difference.

To combat congestion and air pollution in the air it was not enough for the company to offer these robust TDM programs to only its employees. In order to make a difference, the company had to form partnerships with the smaller organizations in the area to must work together in a joint effort to reduce drive-alone trips.

The company allows the smaller organizations in the area to utilize the TDM programs that they offer for a small fee. The fee helps to offset some of the program costs and allows for program expansion into new service areas.

"The only way to solve this (congestion and carbon emissions) is to do it together."

Senior Transportation

Program Manager

"We believe that a healthy future for our global community starts in our own backyard. We view every decision we make through the lens of its potential impact on our people and our planet."

Sited on the company website







The company is dedicated to making a positive impact within its communities. It understands that encouraging employees to adopt more sustainable means of getting to work means a greater reduction of its carbon footprint and reduction of local traffic and congestion.

TDM programs and incentives also help to attract and retain talent. A comfortable and cost-saving ride to and from the workplace ultimately supports and reinforces talent retention and productivity at the office.











Community TDM Programs to Help Fight Climate Change

TDM helps meet a community's travel needs, improves the environment, and makes more efficient use of existing transportation systems.

Upper Merion Township

Upper Merion Township has a population of 30,000+ people. The township is a long-time partner and supporter of GVF. During our 20+ year partnership, Upper Merion has worked with GVF to implement several TDM programs for its residents and employment-population.

The Upper Merion Rambler

One initiative is the Upper Merion Rambler. The Rambler is a low-cost transit service for residents of the Township. The Rambler has an established route, schedule, and is wheelchair accessible.

In partnership with GVF, Upper Merion Township started the service in 2000. For over 20 years the Rambler has served as a lifeline to many, connecting people to their community, while reducing congestion, and having a positive impact on the environment.

The Rambler reduces carbon emissions and air pollution by moving people more efficiently. It produces significantly less air pollution per passenger mile than a standard car carrying a single driver.

Initiatives like the Rambler positively contribute to the economic, environmental, and overall quality of life of a community.







"For every dollar invested in public transportation, approximately \$4 in economic return are generated."

National Express Transit

2015 - 2021 the Rambler's environmental impact:

- Total Vehicle Miles Saved = 582,843
- Total Saved Gallons of Gasoline = 72,855
- Total Tons of C02 Prevented = 386

Communities should invest in TDM programs to improve climate, public health, and economic benefits.

Check out our report "Enhancing Mobility Through TDM Policies" to learn more.











The 82 Alliance

The 82 Alliance is a not-for-profit mobility think tank that focuses on reimagining how we move our cities, towns, and people. As our world is changing, we can and should be planning for a better tomorrow.



We have an opportunity to reimagine our communities of the future.

We need to prioritize our investments in our infrastructure system and offer choices by focusing on the following:

- Investing in public transit so that we can maintain and expand our systems
- Investing in protected bikes lanes, trails, and other bicycling amenities
- Investing in mobility technology that not only enhances the user's experience but also has a positive environmental impact
- Investing in our sidewalk network
- · Supporting and improving broadband technology for all
- · Investing in technology that incentivizes carpooling and vanpooling
- Partner with architects, builders, developers, and funders to connect affordable housing to mobility options
- Partner with the ADA community to ensure all needs are being met
- Supporting electrification of vehicles like buses, shuttles, or vanpools that move many people vs. a few
- Supporting AV deployment and standards that prioritize public transit, shuttles, and or vanpools

Visit our website 82alliance.com

GVF Connected Communities Committee

In 2021, GVF created three committees to help advance its mission and improve climate, health, and equity within our region.

The **Connected Communities Committee** will work together to ensure everyone has access to TDM options. The committee will focus on affordable housing, equity, funding opportunities, health & wellness, strategic partnerships, transportation accessibility, workforce & economic development, and climate.

Committee Goals:

- Over the next five years, GVF will work to have 50 amount of protected bike lanes throughout Montgomery and Chester counties.
- Implement TDM ordinances in other municipalities
- Implement My School in Motion program in other school districts
- Create more walkable communities

Committee Chair:

Ernie McNeely, Manager, Lower Merion Township, GVF Board Member

Committee Vice-Chair:

PA State Representative Ben Sanchez, GVF Board Member

Join Our Cause

Employers and communities must reimagine how we are planning for our future to put the people first, protect our environment and ensure a better quality of life for all. When you become a partner, your organization is part of a larger voice advocating for equitable and innovative programs and projects.

Contact Stacey Weiss to discuss partnership sweiss@gvftma.com or 610-354-8899.

References

- Rhodium Group Preliminary US Greenhouse Gas Emissions Estimates for 2021
- Forbes Four Policies Can Reduce U.S. Transport Emissions 45%, Cut Oil Use 23%, Save 5,300 Lives Per Year
- EPA Carbon Pollution from Transportation
- The House Select Committee report "Solving the Climate Crisis"