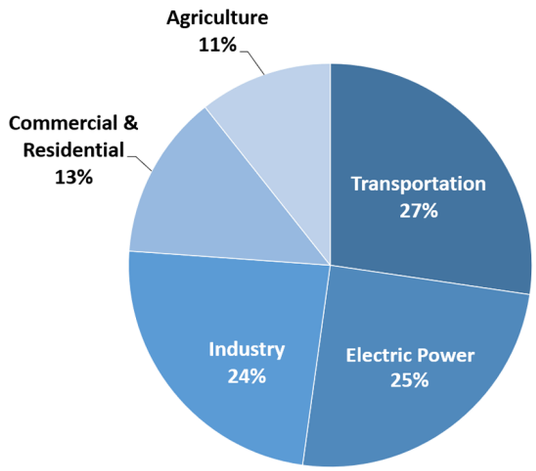
Including Walking and Bicycling in Greenhouse Gas Reduction Efforts

Transportation related greenhouse gas emissions surpassed electricity production in the last couple years. The Bicycle Alliance of Minnesota knows that bicycling and walking is not the only strategy for reducing greenhouse gas emissions. But, with a relatively modest investment biking and walking could be a much bigger part of the solution.

Total U.S. Greenhouse Gas Emissions by Economic Sector in 2020



Source: EPA.gov

Carbon Dioxide Emissions Emitted Per Kilometer*

Mode	Amount of CO2 released/km
Car	271g
Transit	101g
Bike	16g**

** European Cyclists Federation*
***Food production accounts for the bike commute carbon footprint. Cyclists on the average European diet will add 16 g of CO2 per km ridden. The amount of CO2 released changes based on the cyclists' diet. In particular meat has a very high carbon footprint.*

The Next Generation Energy Act of 2007 created the **Minnesota Climate Change Advisory Group**. Their 2008 report found that biking and walking will play a critical role in Minnesota's efforts to reduce greenhouse gas emissions from transportation. They recommended both building more and safer infrastructure and programs to encourage walking and biking as an alternate means of transportation. By themselves, the combination of these supply and demand side strategies represented the fifth best opportunity the Advisory Group identified for reducing greenhouse gas emissions from transportation. However, if taken together with the Group's smart growth recommendations, the walking and biking strategies, would represent the second-best opportunity for reducing transportation-related emissions—behind only adopting the equivalent of California's low-carbon fuel standard.

Mode Share and Impact

Nearly half of all trips taken nationwide are less than 3 miles, a very bikeable distance, yet very few are taken by bike. We simply need to develop a strategies that make it easy and safe to replace many of those short trips with biking and walking.

The Institute for Transportation and Development Policy estimates that increasing the mode share for bicycling from the current 6% in major cities worldwide to 14% would reduce carbon emissions from cities by 11%. Minnesota's bicycle mode share is more like 1%. In Minneapolis it is 4-5%. But that can change. Major northern European cities have achieved significant bicycle mode share. Muenster Germany, Copenhagen, and Amsterdam are around 40%.

The federal Nonmotorized Transportation Pilot Project invested a little more than $30 million in Minneapolis and its surrounding communities. That investment contributed to, but does not totally account for, a mode share shift from 2% to 5%. Ultimately that was a change from about 750,000 work trips by bike per year in the early 2000's to about 2.3 million rides in 2015.

MnDOT's Economic Impacts of Bicycling study estimates that Minnesotans take 90 million trips by bike a year averaging two miles per trip or 180 million miles—about 70% (60 to 65 million trips) of that is in the Twin Cities Metro. Unfortunately there are limited good estimates for how many of these trips are replacing car trips. More research is needed.

There are now 34 nationally ranked Bicycle Friendly Communities in Minnesota. There are also about 115 Bicycle Friendly Businesses. About 40 are in the Metro and 50 are in Greater Minnesota including a few hotbeds like Duluth with 13, Fergus Falls with 16, and Walker with 13.