Action needed now for Minnesota to reach goals in reducing greenhouse gas emissions by 2015

July 22 2008

The state of Minnesota must act now if it wants to reach its Minnesota Next Generation Energy Act goals of reducing greenhouse gas emissions by 15 percent by 2015, according to a team of University of Minnesota transportation and public policy researchers.

The research team, which will release the new study Tuesday, July 22, modeled emissions for Minnesota and found that it is possible to reduce emissions by 30 percent by 2025 and 80 percent by 2050 and possibly exceed those numbers if a combination of strategies are implemented, including reducing fuel consumption, increasing fuel efficiencies and fuel carbon content and by using new methods for designing communities. However, the researchers point out that the methods could be applied nationally. In fact, history shows that when one state or city implements environmental policy changes, the nation often follows.

To view a video about the study, visit: http://www1.umn.edu/urelate/newsservice/Multimedia_Videos/ghg_study.htm

"The emission reduction goal is achievable if action starts today," said Bob Johns, director of the Center for Transportation Studies. "By changing the amount of traveling we do, purchasing vehicles with higher fuel efficiency and adopting low-carbon fuel standards we can exceed the goals that the Minnesota legislature has put before us and be a leader

in the nation for reducing greenhouse gas emissions."

"This study provides a great starting point for the 2009 legislative session and will help facilitate a thorough debate and good policy development to create cost effective solutions and improve Minnesota's energy security," said Rep. Melissa Hortman, who commissioned the study.

The researchers say that the majority of the changes don't require any costly or new technologies and are applicable in other states too, not just Minnesota.

"There is a misconception that it is not possible to make these changes because it isn't affordable," said Julian Marshall, professor of civil engineering and researcher on the study. "In fact, these methods can be used and save people a lot of money and fuel. Energy efficiency can help consumers and benefits the economy, especially with high gas prices."

For instance, the savings from buying a more fuel-efficient vehicle can offset the added cost of technology in less than a year by using technologies that are already available and manufacturing vehicles that achieve the CAFE standards and even go beyond them.

The study also suggests improving fuel economy for heavy-duty fleet by refining aerodynamics, using lower rolling-resistance tires and reducing speed. Those changes could contribute about 13 percent of the transportation sector's reduction goal by 2015. There could be an even greater emission reduction if goods movement shifts from truck and airplane to rail and boat.

"The technology to make this happen exists, it is just a matter of using it," said David Kittelson, professor of mechanical engineering and study researcher. "The engines we use in our cars are no worse or better than the engines they have in passenger cars in Japan or Germany - the

difference is, we put our engines in enormous cars."

It is more than just fuel efficiency though; low-carbon fuels can also help. The researchers say that biofuel production must start using non-food materials to produce a more efficient biofuel that could contribute 27 percent of Minnesota's reduction goals by 2015.

To reach and potentially exceed the emissions goals, the researchers say that there are actions that the average person to can take, such as using fuel-efficient vehicles, choosing homes that are close to their work so they are able to walk or bicycle, carpool or use public transportation and obey posted speed limits to improve fuel economy.

"This is a groundbreaking study which outlines cheaper and environmentally better transportation solutions in a comprehensive way that will make greenhouse gas emission reduction possible for every Minnesotan and every American," said Rep. Frank Hornstein, who commissioned the study. "We can easily apply these methods to our lifestyle choices and hopefully this will inspire us to start work now."

Source: University of Minnesota

Citation: Action needed now for Minnesota to reach goals in reducing greenhouse gas emissions by 2015 (2008, July 22) retrieved 19 April 2024 from https://phys.org/news/2008-07-action-minnesota-goals-greenhouse-gas.html