FY 2009 RESEARCH PROBLEM STATEMENT

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TITLE

GHE-09-29 Greenhouse Gas Emissions from Transportation Projects

PROBLEM (Description of need)

The issue of reducing greenhouse gas emissions is rapidly gaining the attention of the public and elected officials. Local, state, and regional jurisdictions across the country are pursuing means to control their emissions. In Oregon, House Bill 3543, signed by Governor Kulongoski, aims by 2010 to begin to reduce greenhouse gas emissions, by 2020 to achieve greenhouse gas levels 10% less than 1990 levels, and by 2050 to achieve greenhouse gas levels 75% below 1990 levels. The Oregon Strategy for Greenhouse Gas Reduction produced by the Governor's Advisory Group on Global Warming lists transportation as a strategic area to concentrate efforts to reduce greenhouse gas emissions. One of the stated transportation strategies is, "Incorporate greenhouse gas emission impacts into transportation planning decisions."

Currently, ODOT does not have a formal mechanism to calculate the expected increase or reduction of greenhouse gas emissions from proposed transportation projects. Consequently, planning personnel are unable to include greenhouse gas emissions data into project decisions on a consistent basis.

PROPOSED RESEARCH, DEVELOPMENT OR TECHNOLOGY TRANSFER ACTIVITY

The proposed research would develop a procedure to calculate greenhouse gas emissions increases or decreases resulting from transportation projects. The methodology would include emissions due to construction and materials in addition to emissions increases or reductions due to the use of the transportation feature. The procedure would ideally have the capability to be coupled with existing travel models used by ODOT, and would also allow consistency with the methodology used for energy analyses currently undertaken for project Environmental Impact Statement (EIS) NEPA documentation. The procedure would be computer-based so that transportation personnel would only need to input quantitative descriptors of the project in a worksheet or questionnaire format. However, the computer application would need to be flexible and transparent so that the calculating algorithm could be understood and updated as the state-of-knowledge of greenhouse gas emissions improves.

BENEFITS

The tool that would result from the proposed research would allow stakeholders to incorporate greenhouse gas emissions into deciding which transportation projects to pursue in accordance with the State's strategy on climate change.

CONTACT PERSON:

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