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| 15. Supplementary Notes | | | | | |
| 16. Abstract <p>This report was prepared in support of the 2015 Paris Agreement of the United Nations Framework Convention on Climate Change, which calls for each country to “aim to reach global peaking of greenhouse gas emissions as soon as possible...and to undertake rapid reductions thereafter.” The focus of this study was on actions individual Americans can take without a major change in lifestyle to assist in meeting the Paris Agreement, and how these actions compare in their effectiveness across different areas of daily living.</p> <p>There are five man-made sources of greenhouse gas emissions: industry, transportation, residential, commercial, and agriculture. Individuals can contribute to reductions of emissions in each of these sectors. However, the largest contributions that an individual can make are in the transportation, residential, and agriculture sectors—the sectors of focus in this study. Consequently, the study tabulates the impact of selected actions in these three sectors both on the emissions generated by the respective sector, and also on total U.S. emissions.</p> <p>Four target levels of reduction in emissions were considered: 0.2%, 1%, 5%, and 10%. The report outlines several actions that, if taken by each American, would reduce <i>total</i> U.S. emissions by 0.2%. These actions relate to the transportation sector (how much, what, and how we drive, and how much and how we fly), residential sector (how much we heat, and what we use for lighting), and agriculture sector (how much and what food we consume and discard). However, to achieve larger reductions in emissions—on the order of 5% to 10%—there is only one realistic action that, by itself, would accomplish the goal: driving a more fuel-efficient vehicle. Specifically, the actual, on-road fuel economy of light-duty vehicles currently averages 21.4 mpg. Instead, if the average fuel economy were 31.0 mpg, total U.S. emissions would be reduced by 5%. Analogously, if the average fuel economy were 56.0 mpg, total U.S. emissions would be reduced by 10%.</p> <p>This study estimated the effects of selected individual actions. However, reducing emissions does not have to be implemented by just one action. Nevertheless, the analysis indicates that improving vehicle fuel economy is by far the most effective action that an individual can take, and it would require several other actions to equal the effect of improved vehicle fuel economy.</p> | | | | | |
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