

Electric and Autonomous Vehicles, Housing Location Choice and the Potential Impacts on Travel Demand in Chittenden County

VTrans Research and innovation symposium

Barre, Vermont September 25, 2024

Narges Ahmadnia, Ph.D. Candidate

University of Vermont
Department of Civil and Environmental Engineering
Email: Narges.Ahmadnia@uvm.edu

Gregory Rowangould, Ph.D.

University of Vermont
Department of Civil and Environmental Engineering
Email: Gregory.Rowangould@uvm.edu

A household's current neighborhood type may not always match its preferences.

Example:

A person who has desire to live in a rural area may live in an urban area to be closer to their job.



A household's current neighborhood type may not always match its preferences.

Example:

A person who has desire to live in a rural area may live in an urban area to be closer to their job.



CASE STUDY

We designed a survey...

Where do you live?

How **satisfied** they are with various attributes of their residence and how **important** each attribute is to them.

A household's current neighborhood type may not always match its preferences.

Example:

A person who has desire to live in a rural area may live in an urban area to be closer to their job.



CASE STUDY

We designed a survey...

Where do you live?

How **satisfied** they are with various attributes of their residence and how **important** each attribute is to them.

RESEARCH QUESTION

How autonomous vehicles, electric vehicles and remote working might have the potential to reduce dissonance by reducing travel related constraints on housing choices

A household's current neighborhood type may not always match its preferences.

Example:

A person who has desire to live in a rural area may live in an urban area to be closer to their job.



CASE STUDY

We designed a survey...

Where do you live?

How **satisfied** they are with various attributes of their residence and how **important** each attribute is to them.

RESEARCH QUESTION

How autonomous vehicles, electric vehicles and remote working might have the potential to reduce dissonance by reducing travel related constraints on housing choices



54%

of the respondents expressed a desire to live elsewhere

Town centers

are the most preferred locations where people would like to live.

Rural Residents

are the most dissatisfied with their residence

Transportation and accessibility

are main sources of dissonance in rural and suburban areas

54%

of the respondents expressed a desire to live elsewhere

Town centers

are the most preferred locations where people would like to live.

Rural Residents

are the most dissatisfied with their residence

Transportation and accessibility

are main sources of dissonance in rural and suburban areas

There's more to discuss on the poster....

54%

of the respondents expressed a desire to live elsewhere



Town centers

are the most preferred locations where people would like to live.

Rural Residents

are most dissatisfied with their residence

Transportation and accessibility

are main sources of dissonance in rural and suburban areas



Access the final report for this study

There's more to discuss on the poster....

This study was funded by the Vermont Chittenden County Regional Planning Committee.



narges.ahmadnia@uvm.edu

