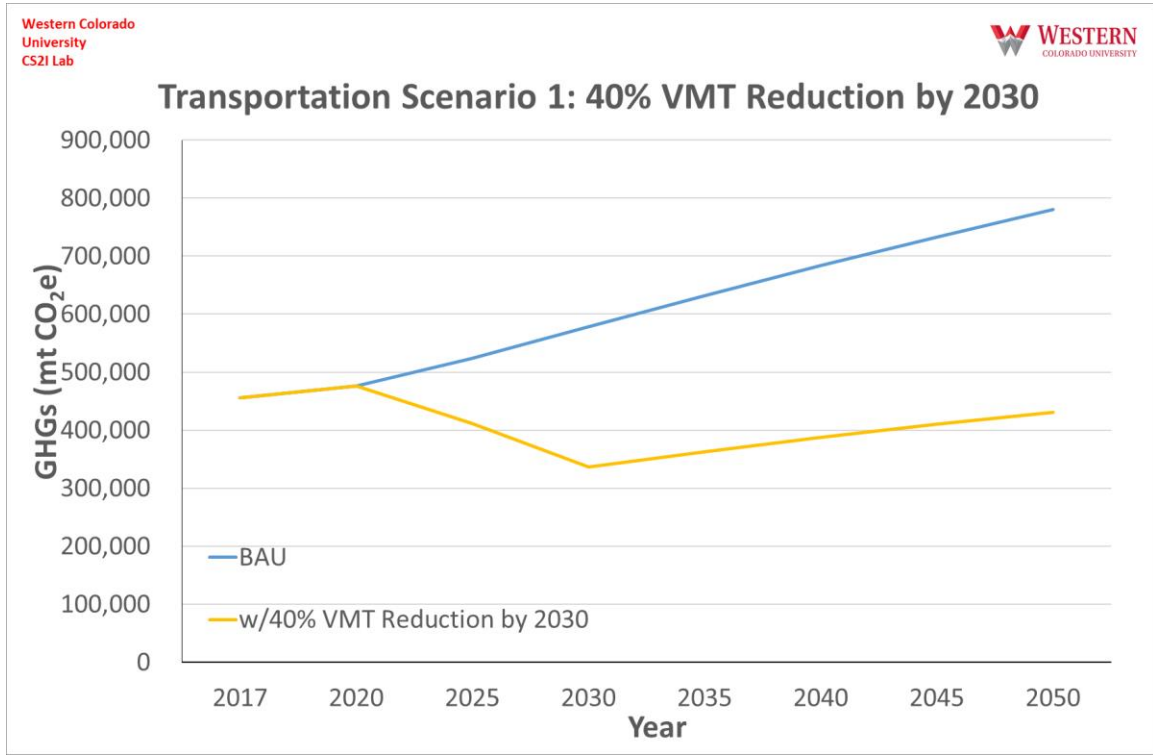


Transportation Modeling Scenarios

(All units mT CO₂e unless otherwise noted)

Scenario 1: 40% VMT Reduction by 2030



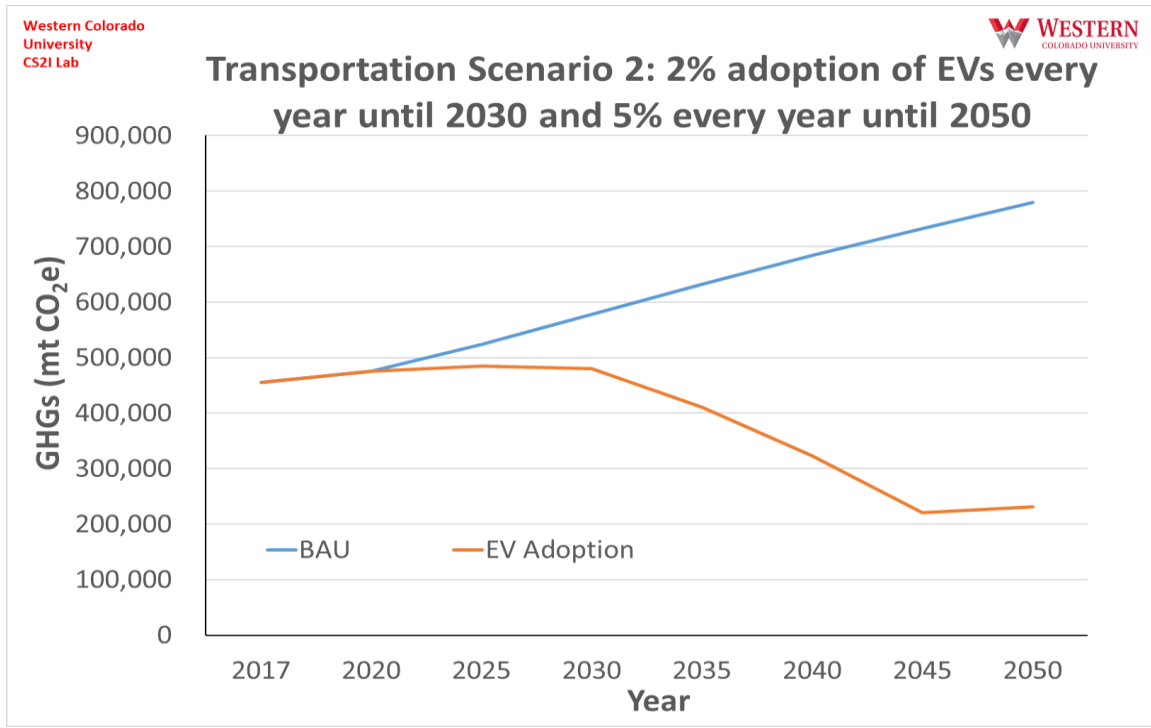
Assumptions:

- 40% is applied to ALL in-county traffic.
- Reduction is 4% VMT decrease from BAU annually 2021-2030, then no VMT growth after 2030.

Quantitative Results:

| | BAU | w/40% VMT Reduction by 2030 | |
|------|-----------------|-----------------------------|----------------------|
| | TOTAL Fuel GHGs | TOTAL Fuel GHGs | TOTAL GHGs Mitigated |
| 2017 | 455,566 | 455,566 | 0 |
| 2020 | 475,712 | 475,712 | 0 |
| 2025 | 523,370 | 411,538 | 111,832 |
| 2030 | 578,136 | 336,646 | 241,490 |
| 2035 | 632,029 | 363,260 | 268,769 |
| 2040 | 683,586 | 387,671 | 295,915 |
| 2045 | 732,773 | 409,902 | 322,872 |
| 2050 | 780,098 | 430,275 | 349,823 |

Scenario 2: 2% adoption of EVs every year until 2030 and 5% every year until 2050



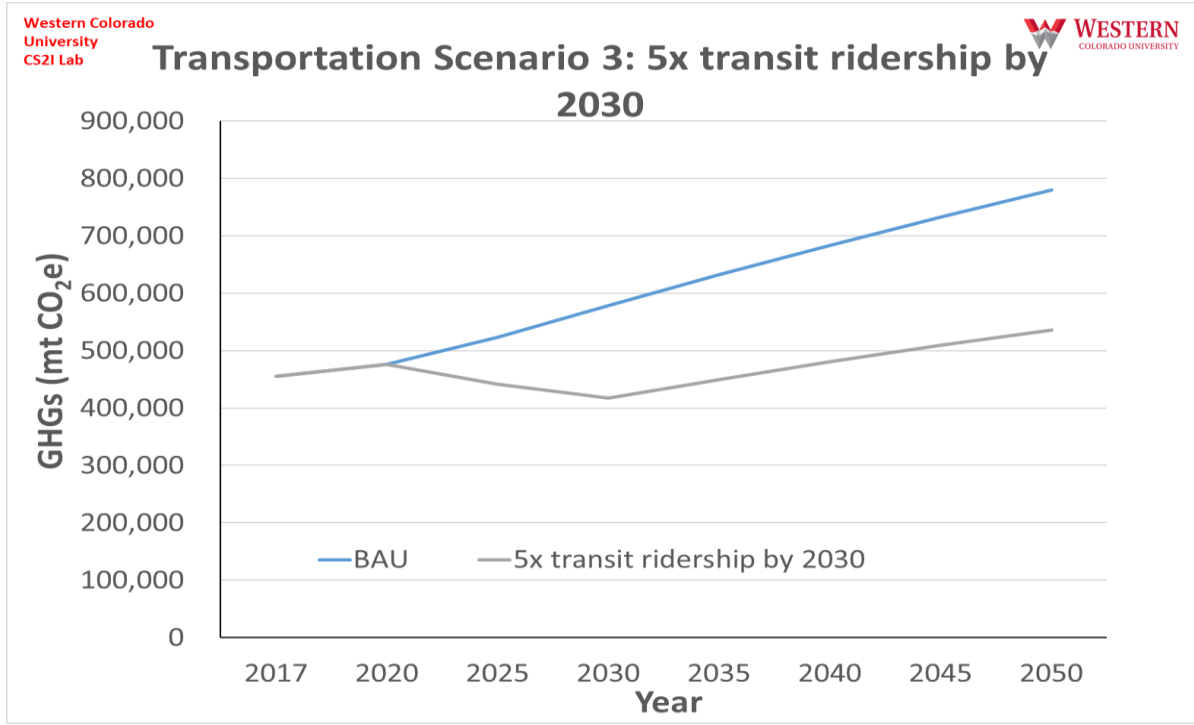
Assumptions:

- Reduction is from BAU for just gasoline fueled vehicles.
- No cap on max number of electric vehicles, resulting in a vehicle stock entirely electric and diesel by 2046
- Added emissions resulting from EV charging included, assuming an average efficiency of 268 Wh/mi [Link](#)
- Overarching Assumptions:
 - HCE achieves 70% renewable electricity by 2022
 - HCE achieves 100% renewable electricity by 2030
 - Xcel Energy achieves 100% renewable electricity by 2050

Quantitative Results:

| | BAU | 2% adoption of EVs every year until 2030 and 5% every year until 2050 | |
|------|-----------------|---|----------------------|
| | TOTAL Fuel GHGs | TOTAL Fuel GHGs | TOTAL GHGs Mitigated |
| 2017 | 455,566 | 455,566 | 0 |
| 2020 | 475,712 | 475,712 | 0 |
| 2025 | 523,370 | 484,357 | 39,012 |
| 2030 | 578,136 | 480,074 | 98,062 |
| 2035 | 632,029 | 410,791 | 221,238 |
| 2040 | 683,586 | 323,797 | 359,789 |
| 2045 | 732,773 | 221,049 | 511,724 |
| 2050 | 780,098 | 230,895 | 549,203 |

Scenario 3: 5x Transit Ridership by 2030



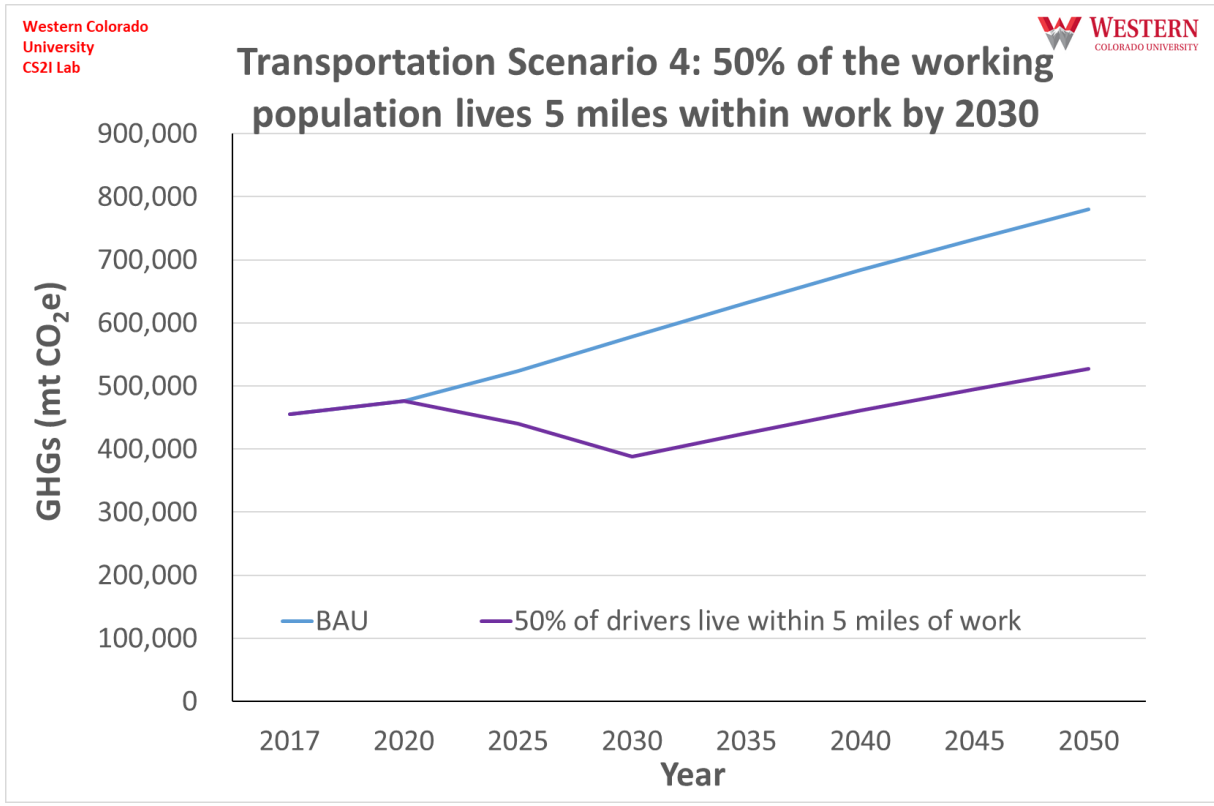
Assumptions:

- Ridership taken from APTA for available service providers (ECO, Town of Avon). [Link](#)
- Town of Vail statistics taken from Year in Review report. [Link](#)
- Bustang statistics taken from CDOT. [Link](#)
- Only revenue miles used for calculation of increased ridership.
- Projected passenger vehicle miles mitigated assumes 90% are solo drivers (NHTS), 50% full busses (on average) and average number of bus seats from APTA. [Link](#)
- Ridership continues to increase by 2.5% annually beyond 2030
- Assume all resulting additional bus miles are electric, biodiesel or CNG, which are not modeled

Quantitative Results:

| | BAU | 5x transit ridership by 2030 | |
|------|-----------------|------------------------------|---------------------------|
| | TOTAL Fuel GHGs | TOTAL Fuel GHGs | TOTAL Fuel GHGs Mitigated |
| 2017 | 455,566 | 455,566 | 0 |
| 2020 | 475,712 | 475,712 | 0 |
| 2025 | 523,370 | 442,022 | 81,347 |
| 2030 | 578,136 | 416,958 | 161,178 |
| 2035 | 632,029 | 448,998 | 183,031 |
| 2040 | 683,586 | 480,218 | 203,368 |
| 2045 | 732,773 | 509,068 | 223,705 |
| 2050 | 780,098 | 536,056 | 244,042 |

Scenario 4: 50% of the working population lives 5 miles within work by 2030

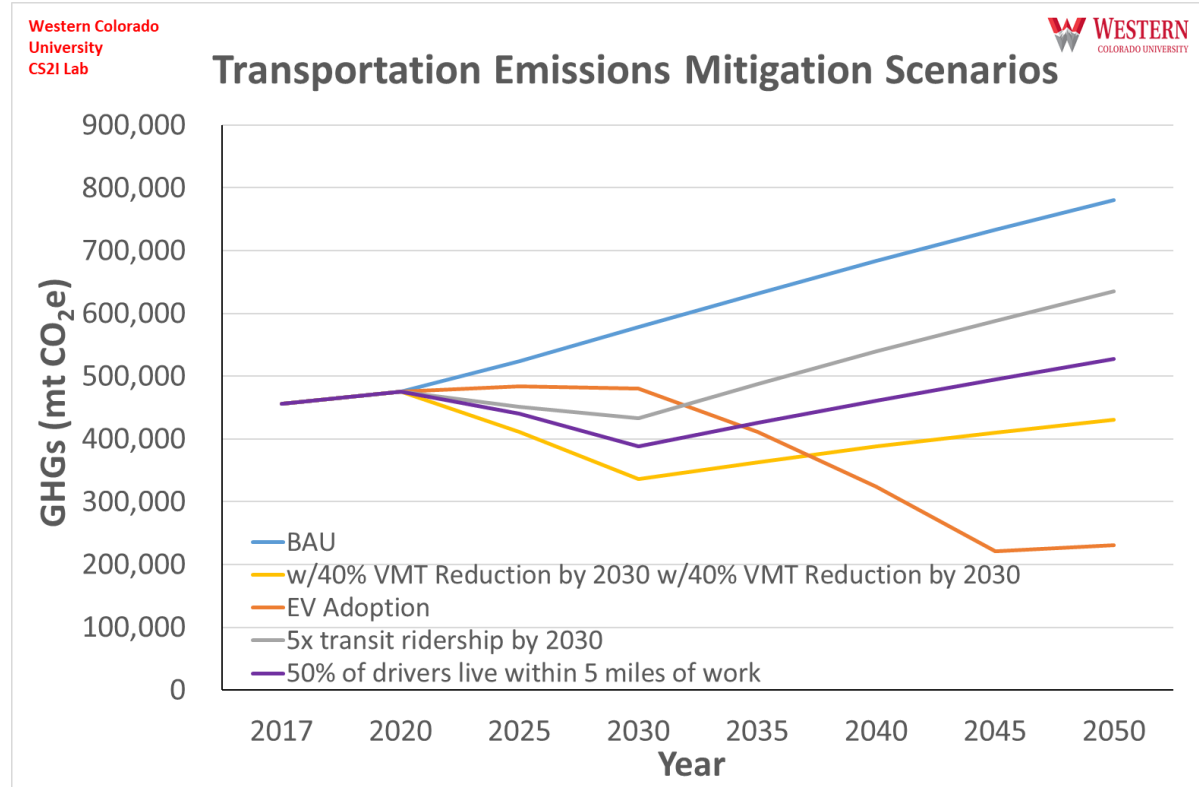


Assumptions:

- 17.5% of people already live within 5 miles of work, interpolated from % Commutes <10 minutes AND % commutes by walking, bus, bike or working from home (Census) [Link](#)
- 41.6% of VMT are for commuting (NHTS). [Link](#)
- 10% more people move within 5 miles of work annually 2021-2030 until remaining 32.5% of people live within 5 miles of work by 2030.
- 95% of commuters use gasoline, 5% use diesel (BAU).
- Single-unit truck, combination truck, and bus VMT's omitted from commuting mileage reduction
- No annual growth rate of VMT applied

| | BAU | 50% of drivers live within 5 miles of work | |
|------|-----------------|--|---------------------------|
| | TOTAL Fuel GHGs | TOTAL Fuel GHGs | TOTAL Fuel GHGs Mitigated |
| 2017 | 455,566 | 455,566 | 0 |
| 2020 | 475,712 | 475,712 | 0 |
| 2025 | 523,370 | 440,828 | 82,542 |
| 2030 | 578,136 | 388,240 | 189,896 |
| 2035 | 632,029 | 425,168 | 206,861 |
| 2040 | 683,586 | 460,690 | 222,896 |
| 2045 | 732,773 | 494,782 | 237,991 |
| 2050 | 780,098 | 527,789 | 252,309 |

Summary:



All scenarios shown together for comparison, however it is likely that there is overlap of emissions savings between the actions.