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Access User Fee – Past and Future Revenue Projections

Increased fuel efficiency, electric vehicle adoption, and changes in miles driven are among the factors driving volatility in revenue collected from the state motor fuels tax. **The regional and statewide business community has proposed an “access user fee” concept as a potential method of replacing the gas tax to modernize and stabilize funding for transportation.**

We determined the potential value of an access user fee based on the average gas tax paid annually per vehicle, national average fuel economy, average vehicle miles traveled (VMT), and the state gas tax rate. The proposed access user fee would initially apply to gasoline, gas-electric hybrid, electric, and hydrogen-powered vehicles. These represent more than 90% of the vehicles registered in North Carolina. Diesel vehicles, the majority of which are commercial, would be treated separately from this proposal.

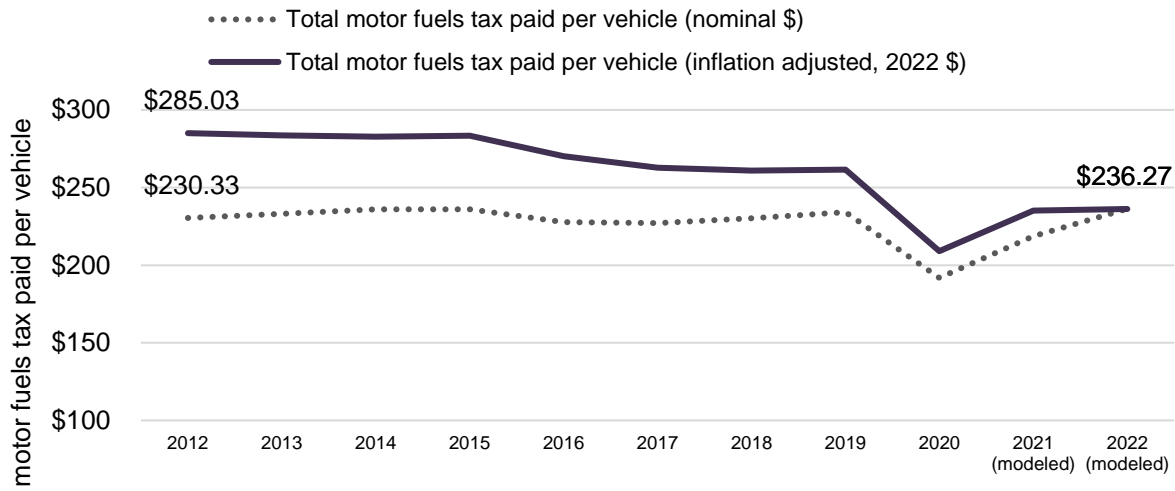
Key findings

- **An access user fee activated in 2023, in concert with the elimination of all state gas taxes and EV fees, would be around \$251 per year, or about \$21 per month, assuming revenue neutrality at the time of implementation.**
- North Carolinians are paying **nearly \$50 less per vehicle** in annual gas taxes today compared to 2012, when adjusted for inflation.
- If an access fee had been implemented in 2012 (based on fuel efficiency, VMT, and gas tax rates that year), and then adjusted for inflation quadrennially (like vehicle registration fees) or annually (like gas taxes), the current access fee would be between \$261 and \$285 per year, or \$22 to \$24 per month.
- **Had an access fee been in place since 2012, the state would now be collecting between \$2.3 billion and \$2.5 billion annually, compared to \$2.1 billion currently with the gas tax**
- **Were an access fee in place since 2012, the state would have collected an additional \$1.4 billion to \$2.1 billion in cumulative revenue over the past decade.**
- **An access fee mitigates revenue risk** from both ongoing increases in fleet fuel economy and volatility in vehicle miles traveled due to the pandemic and economic cycles.
- If an access fee had been in place prior to the pandemic, the state would have retained between \$400 million and \$600 million in additional revenue during 2020 alone.

Annual revenue impact – 10-year retrospective

A hypothetical scenario can provide potential impacts to annual revenue over the past decade. In 2012, drivers paid an average annual motor fuels tax of \$230 per vehicle, or around \$285 per vehicle in inflation-adjusted 2022 dollars. Compared with 2022 annual fuel tax payments calculation of \$237 above, this \$50 difference represents a 17% drop in annual revenue for each registered vehicle, and thus not collected by the state. The reduction in annual revenue in 2022 has been driven primarily by increases in fuel efficiency and by a gas tax rate that has increased more slowly than the overall rate of inflation. *Note that since 2017, annual adjustments to the gas tax rate are based on state population growth and the energy component of the consumer price index (CPI), which prior to 2022 grew at a slower pace than the overall rate of inflation¹.* Reduced travel during the prior years of the pandemic was not the only source of declining revenue per vehicle, which will be described in the following paragraphs and sections.

Figure 1: Annual Average North Carolina Motor Fuels Tax Paid per Vehicle



Source: FHWA Highway Statistics, Bureau of Transportation Statistics Fuel Efficiency Estimates, NCDOR Motor Fuels Tax Rate. CPI from Bureau of Labor Statistics

Had an access fee been in place since 2012, the state would have collected between \$1.4 billion and \$2.1 billion in cumulative additional revenue the past decade, assuming periodic inflation adjustments in the access fee rate, since the access fee substantially mitigates revenue risk from both ongoing increases in fleet fuel economy and volatility in vehicle miles traveled due to the pandemic and economic cycles.

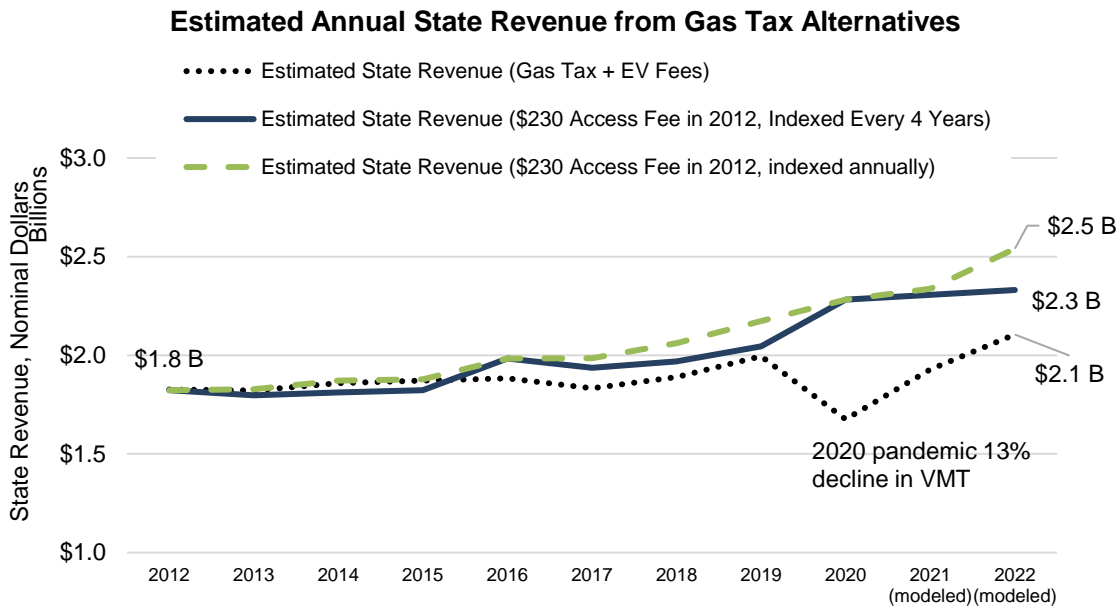
If a \$230 access fee had been implemented in 2012, equivalent to the average motor fuels tax paid by drivers that year in 2012 dollars, and subsequently adjusted for inflation every four years (like state vehicle registration fees currently are), drivers in 2022 would now be paying an access fee of \$261/year, or about \$22/month. The increments would have been as follows:

- 2012-15: \$230 annual access user fee
- 2016-19: \$240 annual access user fee
- 2020-23: \$261 annual access user fee

¹ <https://www.ncdor.gov/taxes-forms/motor-fuels-tax/motor-fuels-tax-rates>

In 2022 under this scenario, a \$261 annual access fee would be generating \$2.3 billion in annual revenue (compared to \$2.1 billion today with the gas tax), which is a 17% increase. This scenario meets the state requirements for quadrennial CPI-Based inflation adjustment under GS 20-4.02. ²

If a \$230 access fee had been implemented in 2012, and subsequently adjusted annually for inflation (like state gas taxes currently are), drivers in 2022 would now be paying an access fee of \$285/year based on annual inflation adjustments, or about \$24/month. In 2022 under this scenario, a \$285 annual access fee would be generating \$2.5 billion in annual revenue (compared to \$2.1 billion today with the gas tax).



Values modeled based on data from Federal Highway Administration, EPA, NCDOR

Cumulative Revenue Impact – 10-year Retrospective

In examining the potential cumulative revenue impact of an access fee, a hypothetical scenario provides potential impacts to state revenue over the past decade. In 2012, drivers paid an average motor fuels tax of \$230 per vehicle. Adjusted for inflation, that would be equivalent to either \$261 or \$285 today, depending on whether inflation adjustments occurred quadrennially or annually.

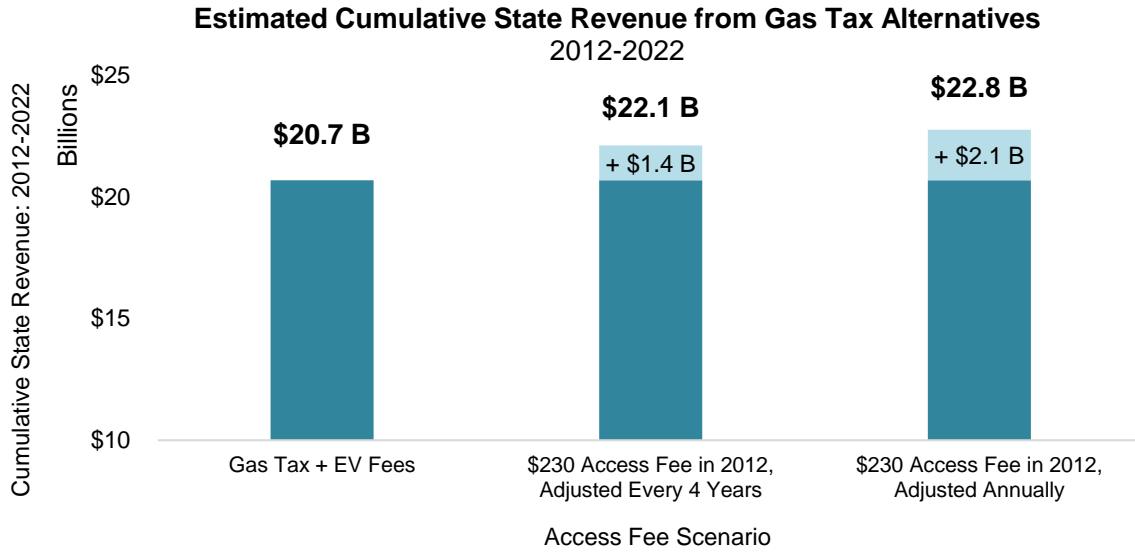
If a \$230 access fee had been implemented in 2012 (equivalent to the average motor fuels tax paid by drivers that year in 2012 dollars), and subsequently adjusted for inflation every four years like state vehicle registration fees currently are, that would have resulted in a cumulative increase in revenue of \$1.4 billion over the ten-year period compared with revenue from state gas taxes and EV fees paid during that time.

- In this scenario, drivers in 2022 would now be paying an access fee of \$261/year based on inflation adjustments in 2016 and 2020, or about \$22/month, as noted above.

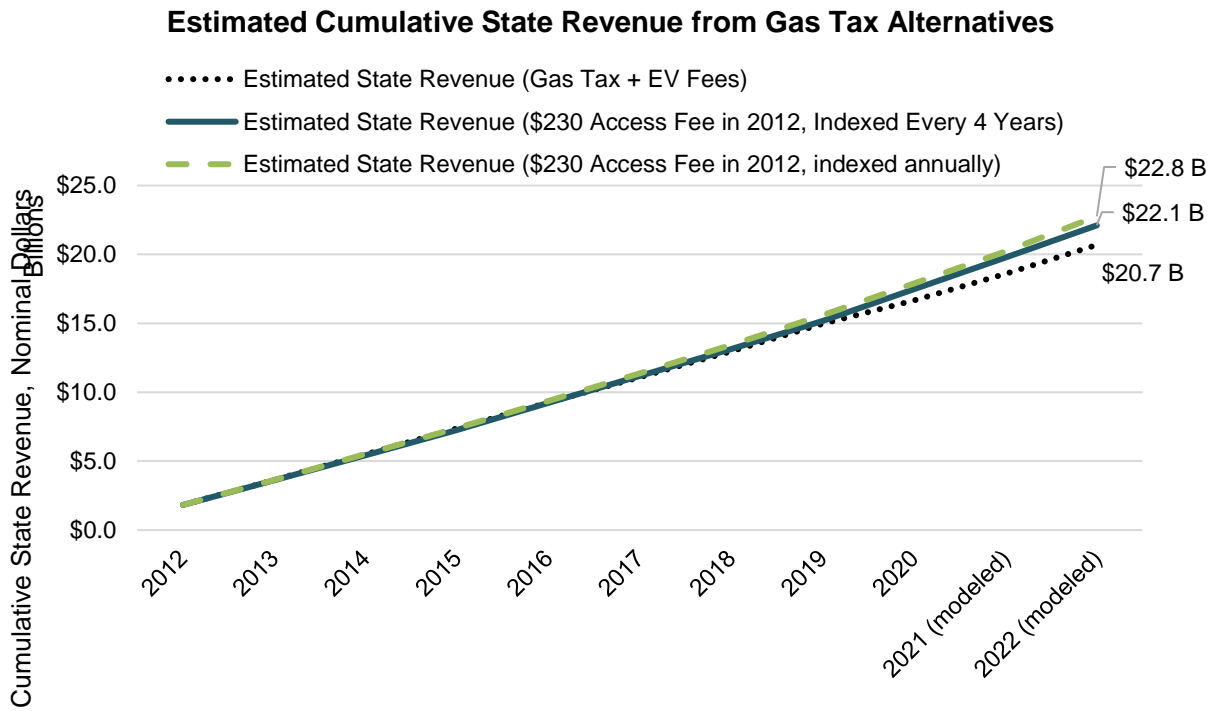
If a \$230 access fee in 2012 had been subsequently adjusted for inflation annually like state gas taxes currently are, this would have resulted in a cumulative increase in revenue of \$2.1 billion over the 10-year period from 2012 to 2022 compared with revenue from state gas taxes and EV fees paid during that time.

² https://www.ncleg.gov/EnactedLegislation/Statutes/PDF/BySection/Chapter_20/GS_20-4.02.pdf

- *In this scenario, drivers in 2022 would now be paying an access fee of \$285/year based on annual inflation adjustments, or about \$24/month, as noted above.*



Values modeled based on data from Federal Highway Administration, EPA, NCDOR



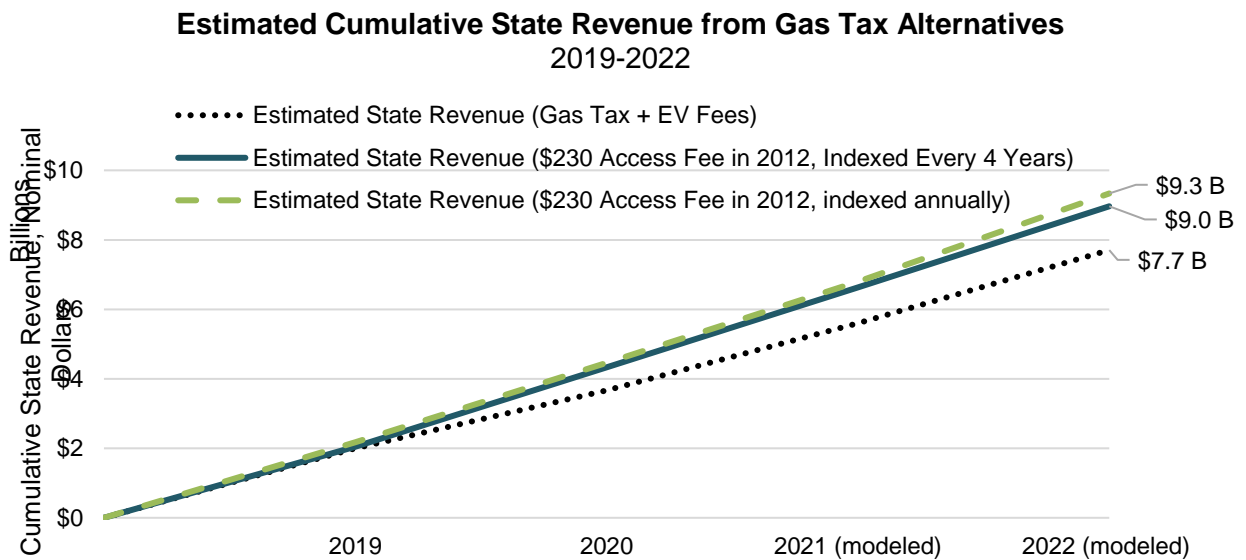
Values modeled based on data from Federal Highway Administration, EPA, NCDOR

Cumulative Revenue Impact – Focus on Pandemic Resilience

The above calculations on cumulative impact reflect the revenue resilience of the access fee under conditions of reduced vehicle miles traveled due to a pandemic and/or economic downturn.

Had an access fee been in place prior to 2020 in lieu of a gas tax and adjusted for inflation as described above, the state would have retained between \$400 and \$600 million in lost revenue from the 13% drop in vehicle miles traveled attributed to the COVID-19 pandemic, just during calendar 2020.

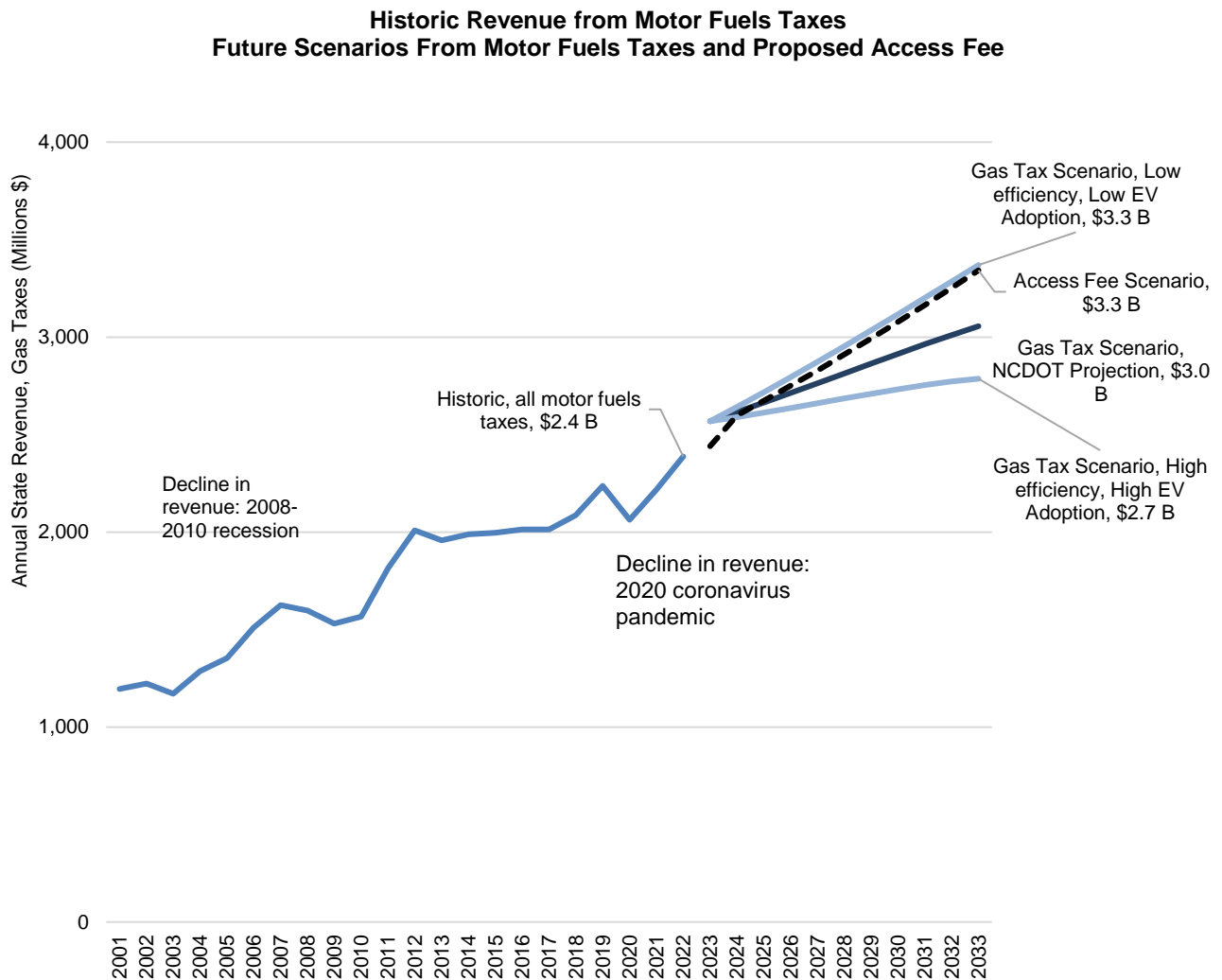
Over a four-year period (2019-2022), an access fee would have enabled the state to retain between \$1.3 billion and \$1.6 billion in revenue compared with what we experienced with gas taxes. North Carolina would have received either \$9.0 billion or \$9.3 billion with an access fee in place during that four-year period versus \$7.7 billion under the existing gas tax framework. The specific amount of total or additional revenue retained by an access fee depends on whether the access fee rate was indexed quadrennially (like vehicle registration fees are) or annually (like gas taxes are).



Values modeled based on data from Federal Highway Administration, EPA, NCDOR

Future Scenarios

The North Carolina Department of Transportation projects that annual gas tax revenue will exceed \$3 billion by fiscal year 2033, based on continued population growth, increase in VMT and congestion, and slow rates of adoption of electric and high efficiency vehicles. As seen in Figure X, in the past two decades there have been events that have led to sharp volatility in motor fuels tax revenue in North Carolina, notably the recession from 2008-2010 and the sharp decline in driving during the 2020 coronavirus pandemic.



Source: NDOR Statistical Abstract of North Carolina Taxes Table 53, NCDOT-OSBM Estimates, RTI models based on variance in future fleet MPG and future EV adoption scenarios. Access fee based on 2023 estimated gas tax payments, escalated by the same rate as the North Carolina gas tax. Access fee scenario excludes diesel vehicles.

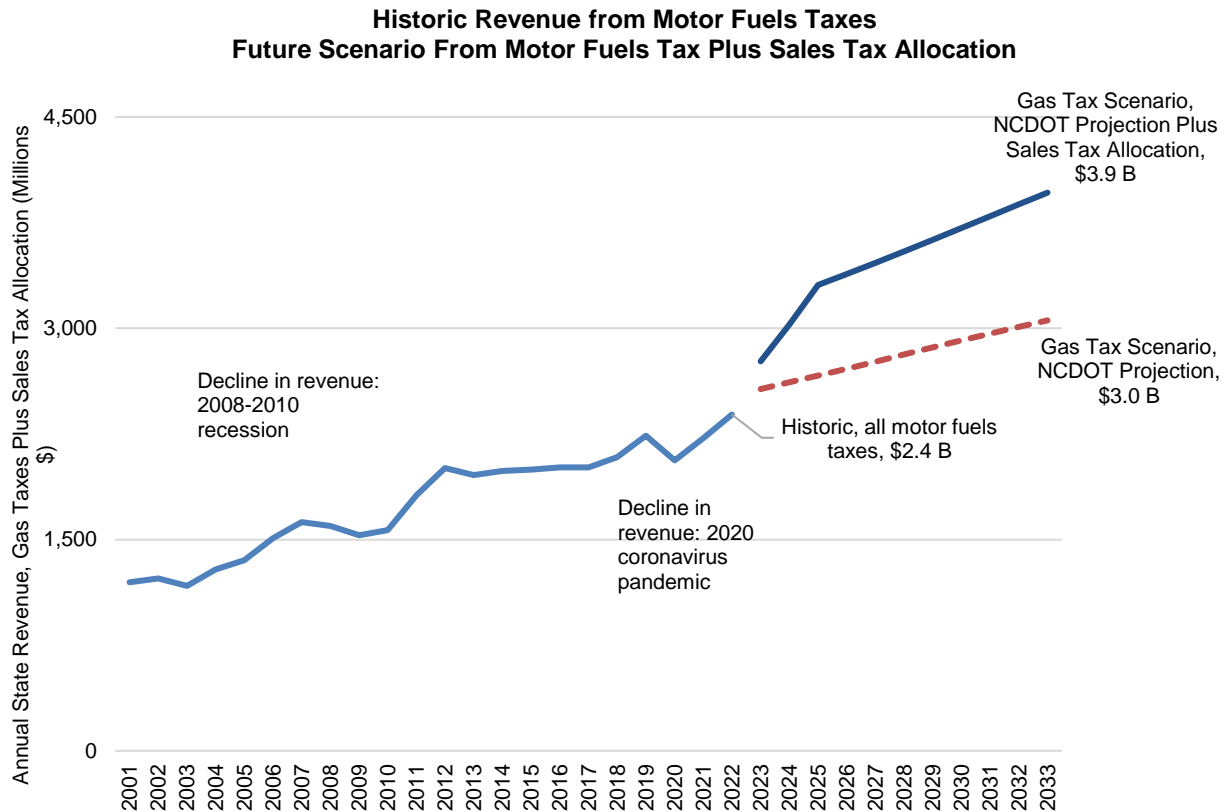
Future scenarios can and should take into consideration:

- Potential future disruptions from recessions or drops in vehicle miles traveled (VMT)
- Variation in rates of adoption of electric vehicles and high efficiency vehicles.

Based on this, RTI estimated a 10% variance in EV adoption and vehicle efficiency, and the proposed revenue from the equivalent access user fee. Based on the assumptions in the model, the access fee would

generate an estimated \$3.3 billion in state revenue by 2033, while the gas tax could generate between \$3.3 billion and \$2.7 billion in annual revenue.

Additionally, in 2021 the state legislature approved an allocation of 6% of sales tax revenue to transportation, which would scale from 2% in fiscal year 2023 to 6% in fiscal year 2025. This scenario would add an additional \$900 million to annual state transportation revenue by 2033, adding an additional source of revenue and providing a buffer against potential future losses of revenue driven by fuel efficiency or declines in gasoline sales or VMT.



Source: NDOR Statistical Abstract of North Carolina Taxes Table 53, NCDOT-OSBM Estimates, RTI models based on variance in future fleet MPG and future EV adoption scenarios. Sales tax allocation based on 2% in FY 2023, 4% in FY 2024, and 6% in FY 2025 and moving forward, based on a linear projection of future state (4.75%) sales tax revenue in NC going to general fund.