

Questions for Tom Lewis
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Committee on Transportation and Infrastructure Hearing
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Responses to Representatives' Comments

Thank you for posing these follow-up questions. I have provided answers below that reflect mine and WSP's positions on federal policies and practices intended to support investments in infrastructure by incorporating more attention and focus on sustainable and resilient practices as a way to deliver outcomes that promote the effective use of limited natural resources, reduce emissions associated with the transportation sector, and provide stronger infrastructure that limits disruptions to the user.

Questions from Chair Peter DeFazio:

Mr. Lewis, your testimony references the "Envision" system, a framework for evaluating the sustainability and resilience of transportation projects.

1. Do you think a similar model can or should be used by the U.S. DOT, State DOTs, MPOs, or transit agencies when making funding decisions?

Are there any changes to federal procurement requirements that would facilitate the adequate consideration of resilience and climate benefits in transportation projects?

Answer:

Yes, the inclusion of standards and models that directly address sustainability and resilience concerns and inform project selection, funding and implementation should be a part of all types of projects – and this applies to transportation as well as other types of infrastructure. Taking such measures makes sense from many different perspectives – natural resource management, energy policy, and prioritizing and protecting the large investments made in infrastructure nationally from extreme events and/or changing environmental conditions possible with climate change.

The American Society of Civil Engineers (ASCE) expects to publish the Standard Requirements for Sustainable Infrastructure Standard in late 2021 through the American National Standards Institute (ANSI) process. Once it is launched, this standard should be used to better inform and implement infrastructure development, specifically including the procurement process associated with infrastructure projects. These are consensus-based standards designed for transportation projects, supported by years of scientific and calibrated on actual transportation projects. Similarly, incorporating or at the very least incentivizing the use of a broad infrastructure rating system like Envision from the Institute for Sustainable Infrastructure (ISI) will help the government ensure that the right projects are being done, as well as being done right when it comes to sustainable and resilient infrastructure.

When it comes to transportation, the USDOT and state and local transportation agencies in particular can also leverage more specialized tools such as FHWA's Infrastructure Voluntary Evaluation Sustainability Tool (INVEST), and the Greenroads rating system to ensure that transportation projects are designed for long-term resilience and adaptability. The National Cooperative Highway Research Program (NCHRP) through the National Academies of Science Transportation Research Board (TRB) also expects to publish this year a guide on Mainstreaming System Resilience Concepts into Transportation Agencies that was led by WSP USA in collaboration with other transportation system resilience experts through an NCHRP project and funding.

It is vitally important to encourage Project Sponsors, such as local public works agencies, state DOTs and transit agencies, to use such standards, tools, and guides to monitor and measure sustainability, resilience, and climate benefits starting from the initial project planning and development process, through procurement, construction, and maintenance and throughout the asset lifecycle. For transportation programs and projects, USDOT can send a clear message to the project sponsors that their request for funding and approvals will be evaluated based on evidence that the project has been developed in accordance with industry benchmarked sustainability, resilience, and equity standards and considers the entirety of the period when the asset will be in service. Requiring grant applicants or funding recipients to meet sustainability and resilience criteria and/or to design to sustainable and resilient infrastructure standards will lead to funding "shovel worthy" projects that are more sustainable, resilient, and equitable in their design and delivery, as mentioned in my testimony.

Further, USDOT does not need to and should not act alone to prepare the country for a sustainable, resilient, and equitable future. Infrastructure serves communities and facilitates the economy. Transportation and infrastructure planning is also intricately linked with and can impact land use planning and housing policy, amongst other sectors. Through innovative programs like the Partnership for Sustainable Communities which brought USDOT together with HUD and EPA, USDOT has recognized its critical and interdependent role in the future of the communities in which it invests transportation infrastructure dollars. Interdisciplinary efforts like these can continue to have a necessary impact.

Finally, I reiterate that federal procurement policies are a powerful tool to shape aspects of project selection and design, including at the state and local levels. The "power of the purse" is an opportunity for the government to establish expectations for project sponsors seeking the use of federal monies, and the new ASCE Standard Requirements for Sustainable Infrastructure Standard coming out in late 2021 should be broadly leveraged accordingly to result in more sustainable and resilient infrastructure projects. Without clear requirements in the procurement solicitation and evaluation process for delivering sustainability, resilience, and equity outcomes throughout the project lifecycle, it is incredibly difficult to construct, operate and maintain a sustainable infrastructure project and system. ESG principles (Environment, Social, and Governance) are becoming an explicit tenet in how the private sector and government conduct their business and should also be considered during procurement and throughout the infrastructure project lifecycle.

By requiring project applicants to follow the tenets of such programs and justify instead why

their investments are not sustainable or not resilient (rather than the other way around, as is done currently) infrastructure funding allocated today can make a change for decades into the future. Policies and requirements are powerful tools for change, and such considerations should definitely be a part of transportation project decisions moving forward.

Mr. Lewis, one of the former Administration's proposed changes to the environmental review process is intended limit the consideration of cumulative effects, such as climate change, in the environmental review process.

2. Given the cost of climate change to the government and the economy, do you believe it is appropriate that a NEPA analysis consider the impact of a proposed project on the climate?

Answer:

Yes, it is appropriate and very beneficial to include the impacts of transportation projects relative to climate considerations as an element of NEPA. The NEPA process is a powerful, structured delivery process that has provided a framework for projects for decades. Explicitly including climate concerns would be beneficial.

Cumulative impacts analysis is a well-understood method for identifying a project's effects in the context of other project's effects that has been part of NEPA analyses for decades. Experienced NEPA practitioners are readily able to assess a project's impacts on climate change (emissions) through cumulative effects, however federal agencies can do more to provide guidance on how these assessments should be prepared. Prior to the September 2020 changes to the environmental review process, the structure established over many decades of NEPA provide a basis to further the assessment of cumulative effects and climate change as well as environmental justice. It is familiar to NEPA practitioners both from the preparation of NEPA documents as well as their assessment and affirmation of NEPA records of decision that underpin agency actions to approve and fund projects.

Improved analysis of a project's climate profile can serve as a tool for communicating the importance of resiliency and the need to address climate change head on. This is an area that can be improved and made more useful as a metric to ensure that climate change and equity are integral to the decision-making process. CEQ and federal agencies can provide more specific criteria and methodology guidance to make these existing elements of NEPA more effective. Additionally, CEQ and federal agencies can consider encouraging agencies to include climate change goals and activities in the Purpose and Need statement for NEPA documents in order to indicate when the project's goals are oriented around climate action. This framework can introduce documented requirements for resilience that may not be a part of current baseline approach methods. As federal agencies reassess recent changes to the environmental review process, the time is ripe to consider providing practitioners with additional standards, guidance and tools such as those identified in response to question number one above to conduct these reviews.

Question from Representative Nikema Williams:

Mr. Lewis, thank you for sharing WSP's innovative approaches to a more sustainable future. In your testimony you mentioned that our national approach to repairing and maintaining transportation infrastructure must urgently consider new ideas on how we design, manage, and invest to achieve both resilient and adapted standards as we transition to a low or net zero carbon economy that cognitively responds to the impact of carbon and other GHG emissions on communities.

3. How are we to re-evaluate existing infrastructure to achieve sustainability and resiliency that considers equity and social justice impacts in the design and development?

Answer:

Generally speaking, I refer you to my answer to question number one above from Chairman DeFazio regarding the incorporation and leveraging of modern standards, systems, guides and other tools to better select, fund and implement sustainable and resilient infrastructure projects – specifically and importantly including during procurement activities.

More specifically in answer to “the how” question, the key will be to broaden the considerations of investment in infrastructure to consider the entire period when the asset will be in place, its operation, the maintenance and repair requirements, and how these considerations should drive different decisions in the planning or design phase. This should include how future changes in community, economy, or technology may be considered now to ensure appropriate investments today. This broader, future oriented, perspective is not a part of traditional practices, so is the high-level basis of what needs to change. We should no longer be looking at historical conditions, or past ideas, to guide investments. We should be looking to implement new methods that enable better decisions.

Importantly, potentially affected communities should be engaged at the beginning of project planning to inform the planning and implementation process regardless of the project type. Equity, when implemented effectively, is more enabling than traditional environmental justice perspectives that focus on the proportionality of impacts. Equity in investments should be toward providing equal opportunities to transportation service, regardless of income level or work type/location.

With respect to achieving sustainability and resilience through repairing or maintaining existing infrastructure, we need to find ways to make a better case to provide adequate repairs to infrastructure that is failing. Federal investments in infrastructure have often been followed by the imposition of maintenance requirements on states and in many cases these states are very resource constrained and unable to keep up with the maintenance backlog. As we work towards ensuring a state of good repair, considerations of how to improve and modernize the aging infrastructure should include whether there are opportunities through these programs to also make improvements that address past environmental or social harms as well as address future climate change impacts and make facilities more resilient to damage/impacts, thus limiting the disruption costs to users. Every project that is begun to restore or replace existing infrastructure should evaluate opportunities to promote a more equitable distribution of project benefits and

be designed to withstand the challenges of rising seas, stronger storms, and more extreme weather.

Questions from Representative Michael Guest:

Research has shown that the demand for travel has grown due to urban sprawl and low fuel costs that have allowed individuals to work in urban centers but commute long distances to town. We have discussed expanding transit systems and more efficient pedestrian travel to account for that. But as we know, there are also rural communities that require travel to get to school or work in their rural communities. We have discussed a proposed Vehicle Miles Travelled (VMT) Tax to promote more efficient collection of highway users in fees. Rural citizens are going to be the most against this and disproportionately affected in the short run.

4. Would you be able to discuss how a VMT may be beneficial to rural Americans?

Answer:

The basic premise of a VMT tax is to delink transportation funding only from a gas tax and instead distribute costs to all users equitably for those users of the highway system. Highway drivers that use only electric powered vehicles, as an example, are providing no revenue to maintain the highway network.

To your question, you should note that a study conducted by a group called RUC West analyzed the financial impacts of a road usage charge (RUC) for urban and rural drivers in eight western states and found that rural drivers will likely save money under RUC schemes or a VMT tax. Using estimates of vehicle-miles traveled (VMT) by geographic area, vehicle registrations, and gas tax revenue data, researchers determined the per-mile fee required to potentially replace current state gas tax revenues. RUC West research projects that, on average, rural households will pay 1.9%-6.3% less and urban households will pay 0.3%-1.4% more state tax in a RUC system than they currently pay in state gas tax. Ranges reflect the differences from state to state.¹

These findings are due to two key factors:

1. While rural residents will travel longer distances to reach urban areas, they tend to chain trips together. Meaning, a rural resident will combine a trip to the grocery store, the pharmacy, doctors appointments, etc. into one single trip as opposed to urban or suburban residents who will take each of those trips independently. The rural driver will actually travel less distance than their urban or suburban counterparts due to chaining trips together.
2. Rural drivers tend to drive less fuel-efficient vehicles. Should states who are exploring VMT programs choose to provide a credit to all motor fuel taxes paid, then rural residents may actually pay less in a VMT than their urban or suburban counterparts.

In general, I believe a VMT tax is a way to more equitably distribute highway costs to all users and should be a consideration for funding.

Across much of rural America, there are closed roads and bridges that are creating longer trips and

¹ Financial Impacts of Road User Charges on Urban and Rural Households (RUC West in cooperation with ODOT).

commutes for families, drivers, and delivery systems. The longer these trips are, especially compounded by something like a heavy logging area that is running trucks constantly in and out of that area, or daily parcel services, or school buses, the more emissions occur.

5. How would long-term and robust investment in our roads and bridges across rural America best address emissions in rural America?

Answer:

The high costs of maintaining the highway system is requiring some infrastructure owners to make hard decisions on managing assets, including closure of roads and bridges that are expensive to maintain or repair/replace. These closures are limiting access, increasing mileage driven, increasing costs for those having to drive longer distances, and causing an increase in emissions due to the longer trips. The entire situation imposes costs that are undesirable.

Better long-term investments in roads and bridges, including the leveraging of private investment to supplement and be synergistic with government funding, could benefit communities and business in rural areas and reduce emissions, in three primary ways. First, roads and bridges maintained at a state of good repair are safer and more efficient for vehicles to drive on, thus reducing overall fuel consumption. Secondly, investments made in roads and bridges with improved resilience perspectives as part of design and implementation requirements will reduce the likelihood of outages and requirements for costly repair. Finally, fully including sustainable practices as part of design and implementation would help facilitate better use of limited natural resource, and reduce effects including construction-related emissions and other environmental impacts as described in my testimony regarding California High Speed Rail.

Wise infrastructure investment could reduce/eliminate the requirements for facility closure, reduce costs associated with associated detours, and provide for more sustainable approaches to project delivery and ensure a more resilient future for assets.

Questions from Representative Scott Perry:

I sincerely hope this hearing serves as a wakeup call to the American people about the degree to which our Nation's political and corporate elites are marching in lockstep behind President Biden's Green New Deal – and promise to electrify the transportation sector against the will of the American consumer.

- If this cooperative effort is to succeed, it will cause great harm to America's prosperity and security.

While it appears nearly everyone testifying before the Committee today – and much of the broader corporate community – has accepted and embraced the radical, whole-sale approach to rapidly electrify our transportation sector, historical and recent consumption trends indicate that your consumers – and our constituents – don't share this warm embrace.

- These concerns will grow to disdain as the costs of all consumer goods continues to skyrocket.

The near universal acceptance that electrification is inevitable must be met with the proper historical context – the electric vehicle is NOT some emerging technology that will breakthrough if enough taxpayer money is spent.

- As a matter of fact, electric vehicles are as old as motorized vehicles themselves.

In 1896 – yes, eighteen-ninety-six – Thomas Edison wrote to Henry Ford admitting the electric vehicle had been rendered obsolete by the cheaper, superior alternative, the internal combustion engine:

- “Electric cars must keep near to power stations. The storage battery is too heavy.... Your car is self-contained – carries its own power plant – no fire, no boiler, no smoke and no steam. You have the thing. Keep at it.”

125 years after this exchange, EVs are still plagued by largely the same deficiencies relative to ICEs – a lack of range, higher costs, and a lack of battery capacity per pound.

- More recent concerns about battery life-span, the diminished range of aging batteries, and the propensity for aging batteries to erupt in flames add to consumer weariness.

Until these fundamental issues are resolved, American consumers will not adopt electric vehicles voluntarily as demonstrated by EV’s anemic market share and the continual failure to meet projected sales figures.

At the height of the Obama administration’s taxpayer handouts for EV companies, he predicted there would be 1 million EVs on the road by 2015 – a figure that wasn’t reached until the end of 2018.

Over the past decade, the EV industry received \$43 billion in federal subsidies and tax incentives to manufacturers and consumers – plus state and local incentives – and electric vehicle sales made up only 1.9 percent of US retail car sales in 2020.

Throwing helicopter money at charging infrastructure fails to rectify these underlying issues and thus will not spur widespread voluntary adoption by consumers.

Can anyone please explain to my constituents:

6. How this is a responsible use of their tax dollars; or
7. What is so unique about the EV sector that fosters the unfounded belief that central planning will work this time when every previous attempt has failed?

Answer:

As an infrastructure and planning firm, we work in the best interest of the communities we work for and respond to current conditions while also remaining at the leading edge of our industry. We do not establish policies, or create the market, we merely help to facilitate the needs of the communities we serve and help to provide for a sustainable, resilient, and efficient economy.

This has been the case from the beginning as we helped to develop/implement national transit and highway systems as they were put in place to serve the citizens based on the best technology available at that time. We do see indications of a need to adjust the systems put in place to accommodate petroleum powered vehicles and find ways to create similar infrastructure for developing technologies, like electric vehicles or hydrogen fueled systems, that seem to be growing in interest and market share. The commitment of major US vehicle manufacturers to expand the roll out of electrical vehicles into the future seems to indicate the need for a response.

The transition to better EV infrastructure, bolstered by federal policy support suits both needs as identified in your two questions. First, the rapid deployment of EV infrastructure supports this developing and expanding technology, leads to reduction of particulate pollutants and greenhouse gases and has intangible public health and environmental quality benefits that cannot be achieved through the continued use of ICE vehicles. So, I believe it to be a responsible use of tax dollars.

The automobile industry has indicated its commitment to electrification, which is a different condition from the past, unprecedented in fact. Most recently, GM released a commitment to only sell zero emission vehicles by 2035. Federal policies and programs that support this transition will be bolstering an industry with real momentum and providing a cleaner and healthier environment for future generations. The market is changing, the provision of a support network through targeted infrastructure spending would indicate a path to success.