CITY OF ORLANDO

U.S. House Oversight & Reform Committee
Environmental Subcommittee

Questions for Mr. Christopher Castro
Senior Advisor to Orlando Mayor Buddy Dyer, Director of Sustainability & Resilience,
City of Orlando Questions from the Subcommittee Chairman Harley Rouda

September 24, 2020, Hearing: "Climate Change Part IV: Moving Towards a Sustainable Future"

1. **The City of Orlando has a goal of utilizing alternative fuels to power the city's vehicle fleet by 2030. Could you briefly describe how strengthening federal standards, such as fuel efficiency standards, could help your city and other cities meet their goals?**

   The transportation sector is the largest direct source of U.S. greenhouse gas emissions, surpassing the power sector in 2015. Transportation emissions are affected by a wide range of laws, regulations, and other government actions that determine the vehicles and fuels used, investments in infrastructure and transportation systems, and the land-use patterns served by transportation. In addition to current federal standards and policies, state and local actions are playing significant and often mutually reinforcing roles in several areas of the transportation sector, such as the deployment of low- and zero-emission vehicles and infrastructure systems, including in public transit.

   In January 2017, following a mid-term review of these standards and draft Technical Assessment, the Obama administration issued a determination that maintained the standards through 2025. EPA cited the success of automakers in meeting early standard requirements and a seven-year growth in U.S. auto sales as reasons to expect that automakers could affordably continue to meet the standards.

   Strengthening the federal corporate auto fuel efficiency (CAFÉ) standards can assist the City in transition our fleet vehicles to 100% electric and alternative fuel by 2030 by supporting the manufacturing of cleaner and more fuel efficient vehicles. Higher standards force automakers to "race to the top", compete to making the most efficient vehicle on the market, which in turn benefits the drivers/citizens in lowering costs, as well as, reduces our dependency on fossil fuels and associated air pollution and carbon emissions.

The federal government plays an important role in making this transition to clean transportation a reality. In addition to fuel efficiency standards, the following are other best practice policy and program levers:

- Vehicle emission standards
- Tax credits for alt fuel vehicle purchases (eg. Electric vehicle tax credit)
- Fuel/VMT taxes
- Infrastructure siting and spending in public right-of-way
- Funding to support electric and alternative fuel vehicle infrastructure (eg. EV charging stations)

Lowering the fuel efficiency standards, as the Trump Administration has done with the introduction of the SAFE (Safer Affordable Fuel Efficient" vehicle rule, would cause the cost of ownership/operations to increase for the average driver by over $1,200 over the lifetime of the vehicles, thereby offsetting the savings gained by lowering the fuel efficiency standards and minimizing impacts on public health and the climate.

2. **At the hearing, you also testified to the importance of decarbonizing buildings in order to significantly decrease greenhouse gas emissions and become more energy efficient. Could you also briefly describe federal standards that could incentivize building owners, developers, and others in this industry to decarbonize their buildings?**

Residential and commercial buildings use large quantities of energy for heating, cooling, lighting, and other needs. They use up to 40% of total energy use in America, and contribute to over 1/3 of total greenhouse gas emissions with the largest increases in indirect emissions, driven largely by population growth, which increases demand for housing and commercial space, the use of electronic devices, and energy consumption.

Deep decarbonization of the building sector requires steps in the near term to reduce the energy demand and carbon intensity of both existing buildings and new construction. Efficiency standards for equipment and appliances and stronger building codes have helped to significantly improve energy efficiency in the buildings sector. The growth of smart meters and other "intelligent components" enabling a more systems-oriented efficiency approach. Increased connectivity between devices and the electric power grid—which produces the majority of building sector emissions—allows users to tailor their demand and even utilize devices for energy storage, both of which could help to reduce emissions.

Electrification of end uses will also be a key pathway to reducing emissions in buildings. Assuming a decarbonized power sector, using electricity for heating, cooling, and hot water needs can greatly reduce a building's emissions. One of the promising technologies is heat pumps, currently the most efficient available technology for space heating in the commercial and residential sectors. Although heat pumps have high initial capital costs, high efficiency and minimal maintenance make air source heat pumps a positive financial investment over 20 years. Federal tax credits and utility incentives can also offset the upfront high cost for residents.

Lastly, energy efficient building design and construction practices are one of the most cost-effective ways to decarbonize buildings. The federal government can help focus laws that design a building to use more natural lighting or install district heating, sourcing construction materials that have less embodied carbon, changing consumer behavior and electricity usage patterns to reduce energy demand, or planning major retrofits over the life of the building.

Major opportunities to decarbonize the buildings sector include the substitution of electricity for direct fossil-fuel combustion and improved energy efficiency, including through wider deployment of "intelligent efficiency" technologies. These could be accelerated through federal investment tax credits, energy-efficiency and conservation block grants (EECBG), and possible mandates on projects that are supported with public capital (eg. Affordable housing, government buildings, etc).

As highlighted in the WRI Climate Federalism report, we hope the principles below will help guide our federal decision-makers on climate action:

▪ Ambitious federal action is necessary to address the climate challenge. Moreover, given the urgency and scale of the challenge of climate change, all levels of government—federal, state, and local— must be part of the solution.

▪ Policies at every level should promote equitable and healthier outcomes for all Americans, especially disproportionately harmed communities of color and low-income communities.

▪ Preemption should be rare. Actions by the federal government should enable and not impede more ambitious actions by state and local governments that aim to drive additional greenhouse gas emissions reductions with strategies that reflect knowledge of state-specific circumstances. Likewise, state governments should enable and not impede more ambitious action by local governments.

▪ The best way to achieve consistency in regulations across the country is to establish federal standards that are sufficiently ambitious to address the climate challenge, while preserving the ability of state and local governments to take more ambitious action and adopt compliance strategies that reflect local and regional conditions.

▪ State and local governments play a key role as “laboratories of democracy” that can help pioneer new solutions and spur market development in a manner that can help enable more ambitious federal policies over time. The federal government should learn from and engage state and local governments and replicate successful policies at the national level where appropriate.

▪ A strong federal role is clearly necessary and appropriate in certain areas. For example, the federal government should: establish national emission reduction targets that are consistent with science; engage the international community to ensure sufficient international action to meet the climate change challenge; support continued research, development and demonstration of technologies that will underpin decarbonization and position U.S. industry for leadership in the global low-carbon economy; provide funding and technical support for subnational efforts; maintain an emissions registry and require adequate and comparable emissions measurement, monitoring, reporting and verification across the economy; and take steps to decarbonize the federal government’s own operations.

▪ A strong subnational role is clearly necessary and appropriate in other areas of action. For example, subnational governments are typically in the best position to: implement local land-use planning and zoning decisions; implement local transportation

Sincerely,

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