

September 30, 2020

The Hon. Bobby Rush
Chairman
Subcommittee on Energy
Committee on Energy and Commerce
2125 Rayburn House Office Building
Washington, DC 20515

The Hon. Fred Upton
Ranking Member
Subcommittee on Energy
Committee on Energy and Commerce
2322 Rayburn House Office Building
Washington, DC 20515

In RE: October 1, 2020 Hearing: "Creating Equity: Improving Clean Energy Access and Affordability"

Dear Chairman Rush and Ranking Member Upton:

As your hearing addresses strategies to deliver renewable sources of electric power while reducing emissions for sensitive communities, we wanted to provide two perspectives:

- Microgrid solutions that can provide new local electric power options that are based on renewable sources, and
- Sensitive community concerns over emissions from freight movement in the transportation sector.

In summary:

- Microgrids offer sensitive communities new options based on renewable sources of electricity (wind, solar) coupled with battery storage capacity and integrated with back-up diesel or natural gas generators. These sustainable microgrids maintain reliability of power supply to communities irrespective of the grid, and take advantage of renewable energy sources due to weather conditions. These new systems offer communities the best of both worlds; renewable energy that is desired, with reliability that is needed.
- Significant steps have been taken and new measures adopted to further lessen the impact of the goods movement sector on air quality in sensitive or frontline communities. More can be done now to advance air quality for these communities and new regulations are in place or anticipated in the next few months. Congress can act to accelerate the transition to newer and lower-emitting vehicles through a one year suspension of the Federal Excise Tax (FET) on the purchase of new trucks and boost funding for the Diesel Emission Reduction Act program.

By way of background, the Diesel Technology Forum is an educational not-for-profit organization whose members include leaders in diesel engines and equipment, vehicle manufacturers and fuel producers. Our organization serves a primary role of education along with the collection and commission of research to raise awareness of the environmental performance of the newest generation of diesel technology, including those that power commercial vehicles, off-road equipment and engines.

I. Microgrids Offer Sensitive Communities New Options for Sustainable Power Generation.

As the Committee considers strategies to transition away from traditional fossil fuel sources of power generation while providing service to customers and air quality benefits to sensitive communities, we encourage the Committee to consider the important role played by diesel technology. Sustainable microgrids are a popular consideration for communities looking to couple renewable sources of power generation with investments in resiliency. These solutions may provide prime power to communities or larger users like health centers. While many pride these micrgrids for their adoption of sustainable sources of power like wind, solar and battery backup, many also rely on proven backup technologies to provide mission critical power when solar and wind are off line and battery capacity is exhausted. Diesel is a proven and reliable technology that is capable of backstopping renewables when they are off-line. While diesel may not provide prime power to these sustainable microgrids, diesel may play an outsized role in providing mission critical power at critical moments.

II. Significant Progress Is Achieved in Reducing Emissions from the Goods Movement Sector and More Immediate Term Progress is Achievable.

Today, diesel powers most of the nation’s fleet of diesel trucks, buses and equipment. There are ready-to-go solutions that reduce emissions of ozone forming compounds, NOx, and fine particles, PM, to near-zero levels. Getting more of these solutions adopted by the fleet of trucks and equipment are highly cost effective and can generate substantial clean air benefits immediately. Manufacturers are hard at work to take the current near zero-emissions capabilities closer to zero as they work with U.S. Environmental Protection Agency (EPA) and other stakeholders in support of the Cleaner Trucks Initiative.

Incentive programs like the Diesel Emission Reduction Act have proven successful in deploying these zero-emissions solutions to every state in the nation and we encourage robust and continued funding for the program. The 12 percent federal excise tax on truck purchases may be one of the leading financial barriers that explain slow turnover of older trucks in the truck fleet. A temporary tax holiday on truck purchases by suspending the excise tax through 2021 may likely provide significant reduction in emissions, particularly for sensitive communities located near freight facilities, as owners of older trucks replace higher emitting technology with new near-zero emissions options today.

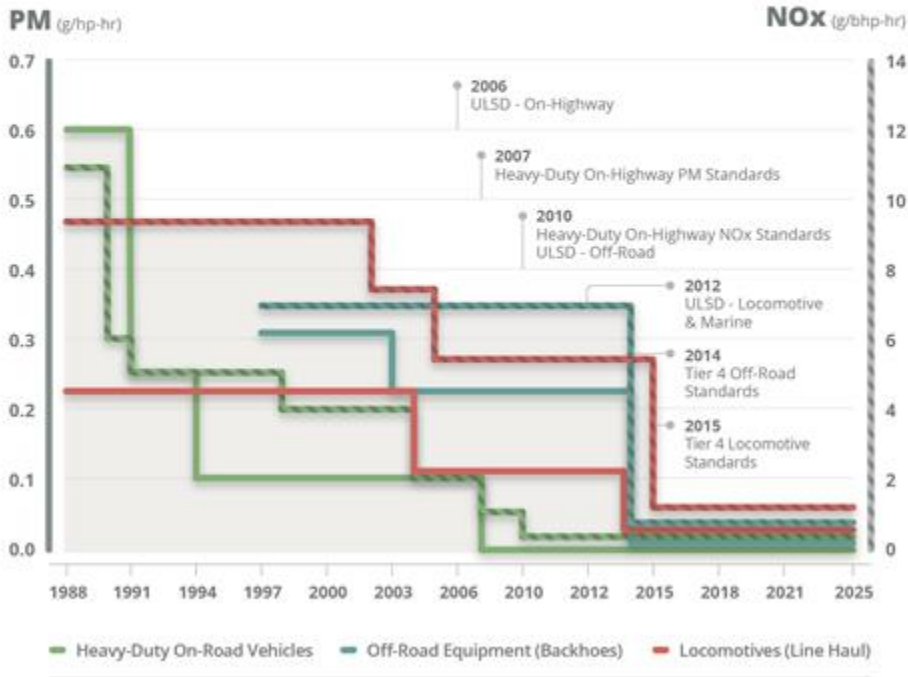
As you consider strategies to reduce emissions to improve air quality for communities located near these facilities, we encourage you and the Committee to consider the goods movement sector and the progress to date and opportunities to do more. When it comes to mobile source emissions, we recognize that there are frontline communities located near ports, railyards, warehouse and distribution centers and other facilities across the country, that have been promised emission reductions from the

many heavy-duty trucks and equipment in operation in these facilities. Communities like the Ironbound district that surround New Jersey marine terminals and residents in Wilmington and Carson in Southern California that encompass railyards in that region, just to name a few, have been promised air quality improvements from the many large conveyances that keep the economy moving for more than a decade. Thankfully, there are ready-to-go solutions available today to provide needed improvements in air quality to these frontline communities and we encourage you and the Committee to consider strategies to deploy these solutions quickly including the federal excise tax holiday on truck purchases and robust funding for the Diesel Emission Reduction Act program.

Near-Zero Emissions Performance of Trucks & Off-Road Equipment

Today, diesel technology powers three out of every four commercial vehicles on the road, 97 percent of the larger Class 8 trucks and a nearly all of the larger off-road equipment including the large engines that power marine vessels and locomotives. Thanks to decades of investment and innovation, every diesel truck and piece of equipment sold must today meet a stringent tailpipe standard established by EPA for NOx and PM emissions. For trucks, those standards were first required for engines for model year 2010 and for off-road equipment, the near-zero Tier 4 engine emissions standards were required for 2014 and for much larger equipment including locomotives and marine vessels in 2015.

PROGRESS TO NEAR-ZERO PM & NOx EMISSIONS



Source: U.S. EPA Office of Transportation and Air Quality (DTAQ)

After nearly a decade since these near-zero emissions requirements were required for commercial vehicles, less than half of the fleet of diesel trucks come with technologies to meet these standards. Of those that meet the standard, these new technology diesel trucks generate significant benefits. Since 2011, this fleet of diesel trucks have:

- Eliminated 18 million tons of NOx emissions that is equivalent to taking all cars and light trucks of the road for 6 years, and
- Eliminated over 1 million tons of fine particle emissions that is equivalent to taking all car and light trucks off the road for 33 years.

Heavy-Duty Trucks and Equipment are Long Lived and Slow to Turn Over to New Technologies

Unlike passenger vehicles, commercial trucks have longer service lives while off-road equipment may last even longer. A typical commercial vehicle may be on the road between 15 and 20 years while engines may last upwards of 1 million miles and may be rebuilt many times over. Recent studies

suggest that off-road equipment and machines are much longer lived and may have services lives twice as long lived as EPA assumes.^{1,2}

Frontline communities located near freight facilities can realize substantial benefits if more of the older generation of truck and equipment are replaced faster with these near-zero emissions diesel solutions widely available today. Replacing these trucks and off-road equipment faster than would occur under normal business conditions may generate substantial benefits. For commercial trucks, we can expect another 55 million tons of NOx emissions to be eliminated as more of the fleet transitions to near-zero emissions technology by 2030. These substantial benefits can be realized much sooner if more of the older and higher emitting trucks are replaced quickly

For even larger off-road machines, including engines that power marine vessels, the benefits of transitioning to existing near-zero emissions technology may generate substantial immediate term benefits for near-port communities. According to research commissioned jointly by the Diesel Technology Forum and the Environmental Defense Fund, replacing engines that power the large fleet of marine workboats in the New York-New Jersey Harbor twice as quickly as occur under normal business conditions can generate an estimated 8 tons per day of NOx emission reductions.³ These are substantial and immediate term benefits that accrue to frontline communities including residents in the Ironbound district near Newark, NJ.

Policy Options to Speed the Deployment of Near-Zero Emissions Technology

Incentive funding programs have been demonstrated to be an effective tool to encourage the owners of older and higher emitting trucks and equipment to scrap and replace with new and cleaner solutions. Diesel technology is a prime technology to deliver cost effective and significant emissions reductions. The Diesel Emission Reduction Act, managed by EPA, is one of the most highly effective programs that provides older vehicle and equipment owners with just enough funding to encourage the replacement of old technologies with new clean solutions. Despite the fact that higher funding is provided for the replacement with a zero-emission solution including battery-electric technology, the overwhelming majority of awards have incentivized the introduction of near-zero emissions diesel technology.

¹ <https://www.dieselforum.org/largeengineupgrades>;

² <https://www.oregon.gov/deq/air/Documents/orNonroadDieselRep.pdf>

³ <https://www.dieselforum.org/largeengineupgrades>



The Diesel Emissions Reduction Act (DERA) has provided funding for the EPA's National Clean Diesel Campaign (NCDC) since its inception in 2008. EPA's NCDC administers rebates and grant funding to projects that utilize verified or certified diesel emission reduction technologies in legacy diesel engines. Authorized by Congress with bipartisan support, DERA is the only Federal government program focusing on legacy engines as its sole objective.



Increased multi-year funding for the Diesel Emission Reduction Act can go a long way to replace older and higher emitting heavy-duty trucks and equipment with cleaner technologies to generate needed air quality improvements for frontline communities. Maintaining the existing funding formula, that allows all clean technology types to compete for funding, will allow much greater emission reductions for more communities than if the program were altered to exclusively fund only one solution. While battery-electric and natural gas options exist today, they may not be easily adopted by all users. Those that may adopt these solutions are encouraged to do so, and in the case of battery-electric options they are

awarded greater funding, while others may choose to replace older vehicles and equipment with new near-zero emissions solutions.

Temporarily suspending the Federal Excise Tax on truck purchases is another powerful policy change that may generate substantial and immediate term environmental benefits for frontline communities. One of the leading variables that helps explain the longevity of commercial trucks is the 12 percent federal excise tax on new truck purchases. As the average price of a new truck comes in at about \$150,000, the FET adds an additional \$18,000 to the final acquisition price of a new truck. FET helps explain long service lives of trucks and a relatively robust market for used trucks that are not subject to the FET.

According to the latest data published by the U.S. Census, the trucking industry relies on 3.5 million drivers while the overwhelming majority of trucking firms are small businesses and independent owner-operators. These smaller owner-operators, including the many businesses moving international freight through maritime and airport gateways, may not have the financial wherewithal to pay the tax on top of the purchase of a new truck. According to survey results published by the American Trucking Associations, over 60 percent of trucking companies stated their intention to purchase a new truck if a tax holiday were granted to the FET cleaner and more efficient trucks.⁴ These new more efficient trucks will help businesses remain more competitive as the economy rebounds while delivering substantial air quality improvements to the communities where they operate.

Faster Replacement of Older Trucks and Off-Road Equipment Can Generate Immediate Climate Benefits

Mobile sources are the leading category of greenhouse gas emissions just edging out power generation over the last several years. While the fleet of cars and light trucks is responsible for most mobile source greenhouse gas emissions, commercial trucks make up roughly 24 percent of mobile source emissions and the larger Class 7 and 8 trucks are responsible for 60 percent of these emissions. The fleet of off-road equipment including construction, locomotives and marine vessels comprise another 9 percent of mobile source emissions.

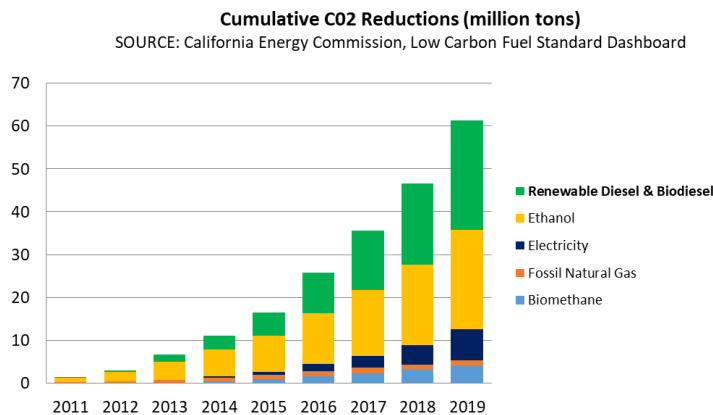
Replacing older heavy-duty trucks and equipment with new diesel solutions today can contribute to immediate term climate benefits. Unlike passenger vehicles, where there are growing zero-emissions options in the marketplace today, there are very few zero-emission options for the larger Class 7 and 8 trucks that meet the demanding duty cycle of these trucks nor is there a nationwide or regional network of charging infrastructure today to support these zero-emissions over-the-road trucks. For off-road equipment including marine vessels and locomotives, there are no zero-emissions solutions available.

⁴ <https://www.nada.org/WorkArea/DownloadAsset.aspx?id=21474861331>

Replacing the fleet of older Class 7 and 8 trucks today with new diesel options can generate substantial climate benefits. Like passenger vehicles, commercial trucks are now subject to stringent fuel economy and greenhouse gas reduction standards. According to EPA, Phase 1 and Phase 2 standards will eliminate over 1 billion tons of greenhouse gas emissions between 2014 and 2027 as more older and less efficient trucks will be replaced with more efficient trucks. While zero-emissions solutions may become available in the future, research suggests that the overwhelming majority of these benefits will be delivered by more efficient diesel trucks.⁵ Replacing an older truck with a new diesel truck today, generates immediate term climate benefits that contributes to attaining climate goals.

The use of advanced biofuels, including renewable diesel fuel and high quality blends of biodiesel, also yield substantial and immediate term climate benefits. These are benefits that may only be generated by the use of a diesel engine. The original diesel engine patented by Rudolph Diesel was intended to operate on biofuels. Today, nothing has changed. Diesel engines, old and new, may operate on these advanced biofuels that deliver at least a 50 percent reduction in greenhouse gas emissions. In the case of renewable diesel fuel, upwards of 80 percent of greenhouse gas emissions may be eliminated.

Nowhere has the benefits of immediate term greenhouse gas emissions reduction been achieved through the use of these fuels than in California. Through the state’s Low Carbon Fuel Standard, that requires the gradual reduction of the carbon content of transportation fuels sold in the state, renewable diesel fuel and biodiesel have eliminated the most greenhouse gas emissions in the transportation sector in California, beating electrification of cars, trucks and buses by almost 4-to-1.



Other states and regions are adopting these fuels and realizing significant, immediate and cost effective climate benefits. The City of New York is now fueling its large fleet of non-emergency heavy-duty vehicles and equipment with renewable diesel fuel to substantially reduce greenhouse gas emissions

⁵ <https://ihsmarkit.com/products/reinventing-the-truck.html>;
<https://www.fuelsinstitute.org/Research/Reports/Tomorrows-Vehicles>

while commuter rail operators in Florida are using biodiesel in rail applications to generate immediate term benefits.^{6,7}

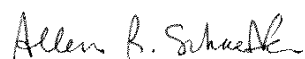
We recognize that zero-emissions technology will be part of the future suite of climate solutions. The climate crisis requires both a response today and a solution in the future. More can be done today to generate immediate term benefits by relying on more efficient diesel options and supporting the greater uptake of advanced biofuels like biodiesel and renewable diesel fuel while we wait for zero-emissions technology for the future.

In conclusion, as the Committee considers strategies to move away from fossil fuels as sources of power generation, we highlight the expanding role of sustainable microgrids that couple renewable sources of power with resiliency. These solutions, while proving popular, typically rely on a trusted and proven source of backup power to provide mission critical service when renewable are off-line. Diesel technology is one of these proven technologies.

We encourage you and the Committee to consider strategies to generate immediate term air quality benefits for the many frontline communities located near freight activity. Replacing older trucks and equipment, including much larger marine workboats and locomotives, with near-zero emissions diesel options today can go a long way to reduce emissions for these communities that have been promised air quality benefits. We recognize that zero-emissions options will be part of the future, many of these frontline communities should not be asked to continue to wait for promised benefits when there are existing solutions today to help achieve clean air goals. Robust and continued funding for the Diesel Emission Reduction Act and a tax holiday for the Federal Excise Tax on truck purchases can go a long way to generate these immediate term benefits. We can also make significant progress to achieve climate goals as more older, higher emitting and less efficient commercial vehicles and equipment is replaced with new near-zero emissions diesel solutions.

We thank you for your consideration of these comments. Please feel free to contact me with any questions or concerns at (301) 514-9046.

Sincerely,



Allen R. Schaeffer
Executive Director

⁶ https://www1.nyc.gov/site/dcas/news/007_18/dcas-expand-use-99-petroleum-free-renewable-diesel-city-vehicles;

⁷ <https://www.palmbeachpost.com/business/all-aboard-florida-brightline-trains-use-fpl-made-biodiesel-fuel/8M7iMebSXumZJyBtvKRNpN/>