**GWRCCC/DC Water Meeting on B100 implementation through the DC DERA Grant Program**

**November 15, 2023**

**Meeting Highlights**

Participants from DDOT, DOEE, DCCCR, MWCOG and other local organizations convened on November 15, 2023, for the first of several conversations to begin outlining elements of a comprehensive strategy to shift to a zero-carbon transportation sector in the District. Several ideas emerged from the discussion. A summary of those ideas, as well as some potential next steps, follow below. We hope to share these ideas with the DC Commission on Climate Change and Resiliency at its next meeting on December 14, 2023.

The challenge before the District was outlined as follows:

* Well-documented climate change and human health impacts require a shift in the DC transportation fleet to operate on zero-carbon fuel. There are two primary goals that would be addressed by such a shift: 1) the reduction of carbon emissions that exacerbate climate change impacts; and 2) the reduction of criteria pollutants that negatively impact human health, particularly in historically marginalized communities throughout the District.
* The shift to a fully zero-carbon transportation fleet in the District will take several years, if not decades, due to the technical feasibility of that shift. Specifically, the number of heavy-duty vehicles needed for that shift are not expected to be available in the next 5-10 years. Supply chain issues continue to stymie efforts to drastically increase the availability of electric vehicles, and manufacturing capabilities within the US have only begun to ramp up to meet demand. As a result, costs for full electrification or hydrogen vehicles are such that make a rapid shift cost-prohibitive for most jurisdictions, including the District.
* There are technologies that can offer partial carbon emission reductions while also reducing criteria pollutants. By not deploying those technologies in the interim while we develop zero-carbon transportation technologies, we deny residents, particularly those historically marginalized and underserved communities, the opportunity to improve their environments.
* Employing these interim technologies will need to be done in a way that understands travel and emissions patterns and deploys specific technologies in communities to reduce those emissions and impacts. For instance, we need to understand where diesel vehicle travel is high and deploys appropriate technologies there.
* One such technology is the use of B100 in diesel vehicles and equipment. This technology is featured in the current project managed by Greater Washington Regional Clean Cities Coalition (GWRCCC) and DC Water and funded through the federal Diesel Emissions Reduction Act (DERA) grant. The program will replace 13 diesel-powered DC Water heavy-duty vehicles with new B100 biodiesel engines. According to estimated reduction figures, the change will result in greatly reduce carbon and criteria pollutant emissions. Through this project, DC Water will be able to realize substantial (80%-90%) reductions with the retrofitted vehicles while preparing to purchase zero emission vehicles in the future as those vehicles become more readily available.
* Other options that would leverage existing vehicle technology – such as using RNG to power existing CNG buses – should be considered in a holistic approach, which would make transition to a cleaner fuel easier for operators and fleet employees. There are also emerging technologies, such as hydrogen cell batteries, that should be considered as well. The goal should be to have as many viable tools as possible to convert public and private fleets to cleaner, greener operations in the near and mid-term as we build the pathway to a zero-emission transportation sector.

The GWRCC/DC Water partnership highlights two key issues that must be addressed in the District’s push towards a zero-carbon transportation infrastructure:

* ***Near-term reductions*** in both carbon emissions and criteria pollutants can be made with existing available technology at a reasonable cost; in some cases, federal grant dollars can be accessed to pay down those costs. These reductions, while not total reductions, can move the District closer to that goal of a zero-emission sector.
* Ultimately, the zero-emission transportation sector is a ***long-term goal*** of many constituencies in the District, and policies should move the city in that direction. While development of zero-emission transportation technologies at the scale needed to support our economy will take some time, ***interim strategies and solutions should be developed in support of the ultimate goal of a zero-emission transportation sector.***
* District leadership has the opportunity right now to fashion a transportation strategy that incorporates more emissions reduction efforts in city fleets (both carbon emissions and criteria pollutants) in the near-term through a range of technologies. Those efforts should be designed as part of a long-term strategy to establish a zero-carbon transportation sector in the District. The DC Commission on Climate Change and Resiliency, the DC City Council, and the DC Office of the Mayor can work with residents and surrounding jurisdictions to make such a plan reality.

Some ideas for consideration:

* As we drive towards a clean transportation sector in the District, our collective focus should be on carbon reduction and public health, and what we need to focus on in the coming decades to move us forward and make both incremental and quantum leap improvements as they become available. We should take great care not to focus on a single tool or technology (i.e., electric vehicles) that may be a longer-term solution at the expense of technologies that can produce substantial, nearer-term gains (i.e., biodiesel, RNG, etc.).
* City leaders should offer a plan for phased integration of a zero-carbon transportation sector by 2044. The plan should consider both carbon emission and criteria pollutant reduction, with a focus on historically marginalized and underserved communities; and offer a plan to secure maximum reductions with a range of technologies available today and in the mid- and long term.
* There is an abundance of funding available right now to support interim steps such as the GWRCC/DC Water B100 effort. The District can identify those opportunities and work directly with community organizations and other agencies and jurisdictions to apply for and secure those funds. The Climate Pollution Reduction Grant (CPRG) program is one such opportunity mentioned.
* The District could consider floating bonds to raise funding for vehicle or engine replacement and upgrades. The bond issue(s) could be done as part of the planned strategy for phased integration of the zero-carbon transportation sector. A combination of grant funding, bonds, and tax dollars could provide the resources necessary to ensure a phased shift in city fleets over the twenty-year period.
* Those entities operating large and heavy equipment that already have significant investments in cleaner tech, like biodiesel or CNG, should be carefully transitioned with public health goals in mind, not just electrification. There are business and workforce development opportunities that must be developed in line with clean energy goals, to ensure proper and safe maintenance and operation of any vehicle using cleaner, greener fuels.
* DC agencies often employ subcontractors to provide and manage portions of District operations – road construction, building construction, utility support for things like streetlights and bikeshare services – that all utilize their own fleet services. Procurement and contracting offer opportunities to drive subcontractors towards utilizing cleaner technologies in fleet operations, thus providing another mechanism for reducing emissions in the near- and long term. There could be incentives, preference points, or a certification program developed for cleaner, greener businesses to aid in procurement decisions around the region.
* To select and justify actions for meeting the interim and long-term goals outlined above, city leaders and civic organizations will want to see evidence of the air quality shifts that are promised by cleaner technologies. There should consideration on ways to utilize existing air quality data or adding more air monitors to track those changes and expand air quality data collection (preferably in partnership with civic organizations) for this purpose. DC universities can be engaged to monitor these results.