County of Fairfax, Virginia

MEMORANDUM

DATE: March 16, 2022

TO: Board of Supervisors

FROM: Bryan J. Hill
County Executive

SUBJECT: Board of Supervisors Environmental Committee Follow-up: February 15, 2022

At the February 15, 2022 Board of Supervisors Environmental Committee meeting, members raised questions regarding the Fairfax Green Initiatives (FGI) update and the presentation on legislative concepts associated with the Community-wide Energy and Climate Action Plan (CECAP) implementation. This memorandum responds to those questions.

Fairfax Green Initiatives

At the February 15th Environmental Committee meeting, staff presented an update on FGI, which includes Board Matters adopted in 2019 and 2020 that address environmental and energy-related action items.

Item 6c.v from the first Fairfax Green Initiatives Board Matter directs the County Executive to report to the Board on developing partnerships like the U.S. Department of Energy's Better Buildings Challenge. In support of this item, the Department of Economic Initiatives (DEI), in collaboration with the Office of Environmental and Energy Coordination (OEEC) and university and technology partners, is planning a Carbon Neutral Energy Pitch and Pilot for fall 2022.

Following the FGI update, Supervisor Rodney Lusk asked about the number of companies that will be participating in the Pitch and Pilot event. DEI reports that this number is not yet known, but has information from its Pitch and Pilot: Fairfax County Innovation Challenge on Bicycle. Sixteen companies submitted concept papers and six were selected to participate in the final event in April 2021. DEI expects about the same level of participation for this year's Pitch and Pilot, if not more, given the broader scope.

More information on the Carbon Neutral Energy Pitch and Pilot event was shared at the October 26, 2021 Economic Initiatives Committee. While a presentation on the pilot was cut for time, a copy is available as part of the meeting materials. Attachment 1 includes

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additional background on the pilot from Smart City Works, which is helping to organize the event.

CECAP Implementation: Legislative Concepts

At the February 15th Environmental Committee meeting, staff also presented on legislative concepts associated with implementation of CECAP. This included concepts related to electric vehicles (EVs) and EV charging infrastructure. Following the presentation, Supervisor Penny Gross noted that federal legislation adopted earlier this year provided funding for EV infrastructure intended to develop a network of direct-current (DC) fast EV charging stations along the nation's interstate corridors. Supervisor Gross asked whether it was possible for localities to obtain some of this funding so that EV charging stations could be located within jurisdictions rather than along the interstate highways. No such option is currently available, however, an option may arise if Virginia determines that the alternative fuel corridors (AFCs) in the Commonwealth are fully built out.

The federal initiative to which Supervisor Gross was referring is the $5 billion National Electric Vehicle Infrastructure (NEVI) Formula Program, funded as part of the bipartisan Infrastructure and Investment Jobs Act (IIJA). The NEVI Formula Program aims to develop a network of publicly-available DC fast charging stations along the nation's travel corridors to help make cross-country electric travel accessible to all Americans.

Under the NEVI Formula Program, Virginia will receive a total of $106,375,132 for building EV charging stations across Virginia over the next five years. According to a February 10, 2022 Notice from the U.S. Department of Transportation's Federal Highway Administration (FHWA) (Classification Code N 4510.863) and FHWA Program Guidance, the NEVI Formula Program apportioned $15,745,244 to Virginia – the first of its five installments. By August 1, 2022, Virginia must submit an EV Infrastructure Deployment Plan (Plan) to the federal Joint Office of Energy and Transportation (Joint Office) describing how it intends to use its apportioned funds. Funds cannot be accessed until the FHWA approves the state's plan. The FHWA will approve eligible plans by September 30, 2022.

Section 4.f of the FHWA Notice provides that any EV charging infrastructure "acquired or installed with the funds **shall** be located along" a designated AFC. (Emphasis added.) Subpart 4.f.(i), however, offers some flexibility to Virginia and other states if there is a finding that the AFC is fully built out:

> (i) If a State determines, and the Secretary certifies, that the designated alternative fuel corridors in the States are fully built out, then the State may use the funds for electric vehicle charging infrastructure on any public road or in other publicly accessible locations, such as parking facilities at public buildings, public schools, and

public parks, or in publicly accessible parking facilities owned or managed by a private entity.

A locality will be able to apply to the NEVI Program directly when a state does not submit a Plan. However, local projects must meet the requirements outlined in the FHWA NEVI Program Guidance. Consequently, should Virginia not submit a Plan, there is no guarantee that a locality could obtain NEVI funding for EV charging infrastructure outside the AFCs.

According to the Joint Office, the Virginia Department of Transportation is responsible for developing the state's Plan. Observers expect that the Virginia Department of Energy and the Governor's Office will also be involved. At this time, it is not clear whether localities will be invited to participate in Plan development.

In addition to establishing the NEVI Formula Program, the IIJA set aside $2.5 billion for grant awards to eligible entities, including localities, for strategic deployment of publicly-accessible EV charging infrastructure. The $2.5 billion discretionary grant program is further divided into two distinct $1.25 billion grant programs intended to ensure that EV charger deployment meets the Biden-Harris Administration priorities, such as climate change, building resilient infrastructure, and increasing EV charging access in underserved and overburdened communities. Those programs are being currently being developed.

Please contact Kambiz Agazi at Kambiz.Agazi@fairfaxcounty.gov or 703.324.1778 if you have questions or need additional information.

cc: Rachel Flynn, Deputy County Executive
Ellicia Seard-McCormick, Deputy County Executive
Christina Jackson, Chief Financial Officer
Kambiz Agazi, Director, Office of Environmental and Energy Coordination
Rebecca Moudry, Director, Department of Economic Initiatives

Attachment 1

CARBON NEUTRAL ENERGY
INNOVATION CHALLENGE

A "Pitch & Pilot" Initiative focused on
De-carbonizing & Reducing Energy Consumption

Purpose

To find innovative technology-enabled solutions to minimize energy consumption, improve renewable energy adoption, or otherwise migrate from a carbon-based to a carbon-neutral economy.

Program Summary

Innovation challenges solicit ideas to improve government services, programs and/ or infrastructure or support government policies through technology innovation. An innovation challenge program provides a novel way for municipalities to find and demonstrate or even pilot cutting-edge technology solutions in priority policy or program areas, but without the intensive and often cumbersome challenges of a full procurement. It is, in effect, a less risky and less costly way of getting smart and testing the waters.

Through a series of step-wise or 'gated' activities, municipalities can find, test, and even pilot promising solutions in partnership with the private sector, whereby positive results in initial program activities can open the door for potential follow-on activities that, in turn, may ultimately lead to—but does not require or promise—a procurement. Beginning with pitch competitions, companies are invited and selected to pitch their solutions to a panel of judges on a specific innovation topic (e.g., "Carbon Neutral Energy"). This may be followed, if desired, by demonstration projects for pitch-contest winners, and even longer-term pilot projects for the most promising technologies. To incentivize private-sector participation, the program offers prize money for pitch-contest winners, and/ or potentially technology demonstration or pilot project opportunities, as well.

Smart City Works will lead the Innovation Challenge on behalf of, and in partnership with the local government. Each challenge will be tailored to specific municipal goals and priorities (in this case "De-carbonizing & Reducing Energy Consumption"). A working group consisting of government officials, academia, and/ or private-sector leaders will be assembled to support and guide the program.

Program Focus and Benefits

The US government's recent announcement of at least 50 percent economywide emissions reduction by 2030, and the longer-term goal of net-zero emissions by 2050, are a reminder of the urgent action required to avert the worst impacts of climate change. Exactly how the United States will reach these targets is yet unknown; what is certain, however, is that such ambitious targets can only be met by pursuing the widest possible suite of emission reduction pathways and technologies, across the broadest cohort of cities, counties, communities, and sectors. Indeed, state and local governments across the U.S. have been setting new or strengthening existing climate mitigation commitments, to include pledging to achieve carbon neutrality by 2050 or sooner through the Carbon Neutral Cities Alliance or the Race to Zero campaign. In July 2021, Fairfax County committed to carbon neutral government operations by 2040, prioritizing the reduction of operational greenhouse gas emissions among other activities.

Carbon neutral goals are, nonetheless, not credibly achievable without major innovations in—and deployment of—carbon capture, carbon removal, energy storage, energy grid management, hydrogen supply chain and similar renewable energy capabilities. Such innovation would not only make possible fulfilling Fairfax County's recent commitments, and advance Fairfax County's Board of Supervisors' FY2020 Environmental stewardship Vision and Sustainability priorities, but would also contribute significantly to providing solutions than can, and must be scaled nationally, even globally. As such, pioneering work achieved in Fairfax County would no doubt be exported across the region and beyond, which, in turn, would support new economic imperatives, in facilitating the creation of green jobs, which have become a priority for economic development and long-term sustainability.

In summary, an innovation challenge program focused exclusively on one aspect of "Carbon Neutral Energy" (e.g., carbon capture technologies) or across the spectrum of technologies that minimize energy consumption, improve renewable energy adoption, or otherwise migrate from a carbon-based to a carbon-neutral economy, could not only support long-standing County environmental stewardship goals, but more recent economic imperatives and priorities, as well.

Process

1. Smart City Works and local government officials will select specific areas of focus and develop a summary of the challenge, as well as identify existing government programs that would benefit from innovative solutions. This information will inform a "Call for Solutions" or "Pitch & Pilot" solicitation.
2. In partnership with the local government, Smart City Works will assemble a leadership team consisting of government officials, academia, and private-sector partners to support and guide the program. The leadership team will put in place specific requirements and plans (e.g., eligibility requirements, prize packages, and location and program details on demonstration and/ or pilot project opportunities, if interested).
3. The leadership team will then announce a *Challenge Innovation* and issue a "Call for Solutions" to request ideas and proposals. Details will be posted online when the application cycle opens and would specify if the Challenge is a pitch and pilot opportunity or a pitch contest only.
4. The selection committee will evaluate proposals and select finalists to the pitch event. Finalists will present their proposals at the Pitch event; selections will be made; and winners awarded prize money and/ or a demonstration or pilot project opportunity and/ or a possible slot in Smart City Works Business Actuation program.
5. For Innovation Challenges that include pilot opportunities, Smart City Works in partnership with the municipality would develop, administer, and help evaluate a pilot project, as well.

About Smart City Works.ORG

Smart City Works is a 501(c)3 nonprofit organization whose mission is to harness the power of digital technology to create smart, sustainable, and resilient communities. We focus on urban challenges. We deliver economic growth.

Smart City Works currently leads *The Northern Virginia Smart Region Initiative*, an initiative powered by the U.S. Department of Commerce's i6 Economic Development Challenge grant and the Commonwealth of Virginia's GO Virginia grant. The Initiative brings together governments, universities, businesses, and nonprofit organizations to foster the development of a thriving smart city technology innovation cluster to tackle local urban challenges and expand regional economic growth in Northern Virginia and the Greater Washington Region. Along with our partners from the private sector and local government, our goal is to make Northern Virginia the forefront of urban technology innovation and a new locus of economic growth and vitality that leads the nation.