CHARLOTTESVILLE CITY COUNCIL
Work Session on Alternative Fuels Study
February 27, 2024 at 5:00 PM
CitySpace, 100 5th Street NE

The Charlottesville City Council met on Tuesday, February 27, 2024, in a work session to review and discuss the Charlottesville Area Transit Alternative Fuels Study recommendations. Mayor Juandiego Wade called the meeting to order at 5:03 p.m. with all Council members present: Natalie Oschrin, Michael Payne, Vice Mayor Brian Pinkston, Lloyd Snook, and Mayor Juandiego Wade.

City Manager Sam Sanders introduced the topic of the meeting and turned the presentation over to Garland Williams, Director of Transportation. Mr. Williams explained the flow of the meeting and presented the recommendations provided by Kimley-Horn and Associates regarding alternative fueled bus fleet transition:

1. CAT (Charlottesville Area Transit) will transition to a zero emissions fleet by 2040, supporting the City's climate goals of carbon neutral operations by 2050.

2. CAT will pilot to two fuel types for transition: battery electric and hydrogen fuel cell
   - The BEB pilot will begin with 2 BEBs being purchased in 2024.
   - Hydrogen fuel cell pilot vehicles will be purchased in 2027.
   - BEB pilot testing will come before hydrogen pilot testing, so there is sufficient time to establish a source for a hydrogen supply or generation.

3. During pilot testing, CAT will continue expanding its fleet to meet the capital requirements of planned service improvements.

4. The final fleet mix will be determined through pilot testing and improvements to zero emissions bus (ZEB) technologies. CAT's chief consideration will be the fleet's reliability and capital and operations and maintenance costs.

5. Charging and fueling will take place at the CAT facility.
   - The City will identify a source for hydrogen fuel and investigate on site green hydrogen production as part of the site planning effort.
   - The City will investigate on site generation of electricity for the charging of BEBs at the CAT facility as part of the site planning effort

Kristel Riddervold, Director of the Office of Sustainability provided background information. In 2019 Charlottesville adopted climate goals of 45% reduction by 2030 and carbon neutrality by 2050. In 2022 CAT engaged Kimley-Horn to conduct an Alternative Fuels Feasibility Study. Public Works/Environmental Sustainability (now the Office of Sustainability) requested and funded a study addendum to evaluate the climate and health implications of transitioning the current CAT fleet to an alternatively fueled option. In 2023 Charlottesville adopted the Community Climate Action Plan.

The Office of Sustainability recommended that Council adopt the recommendations in the Alternative Fuels Feasibility Study for the following reasons. The proposed fleet expansion will allow CAT to provide improved transit frequency and reliability, improving transit equity within the community. The pilot approach will allow CAT maintenance staff to gain familiarity with two ZEB technologies prior to widespread fleet adoption. The two proposed ZEB technologies each provide unique benefits and can provide redundancy in the event of problems with either type of propulsion system. Leadership by example: the plan achieves a zero-emission public transportation fleet by 2040. Ms. Riddervold expressed support for expediting the transition to ZEBs.

Ben Chambers, City Transportation Planning Manager, presented context from the perspective of Neighborhood Development Services. He described CAT service over the past decade and pre-Covid pandemic, stating that ridership has increased recently. City Council in 2021 adopted the System Optimization Plan and CAT is currently working on its Transit Strategic Plan. The Transit Strategic Plan (TSP) is a state-required document of planned service improvements over the next decade, necessary for securing federal and state operating dollars. CAT's TSP is laying out a path away from existing Extended Lifeline service and toward the expanded services in the regional vision, and more details on the recommendations for the TSP will be communicated at the April 15 City Council work session.

Mr. Chambers stated that in the next decade CAT expects to increase ridership by:

- Doubling the amount of service provided
- Increasing frequencies on all routes and making the Trolley, Route 5, and Route 7 high-frequency routes
- Expanding night service hours and Sunday service on all routes
- New bus shelters
- Coordination with the City, the County, and VDOT on sidewalks and safe access
- MicroCAT demonstration project and exploring expansion in the City and County
- Increased funding resources through the Regional Transit Partnership for increased operating and capital expenses
- Increased staff hiring
- Reliable buses

Kimley Horn consultants Sam Sink and Paul Ellman presented the analysis assumptions, including the technology evaluation, battery electric bus range analysis, charging capacity and infrastructure, hydrogen fuel cell access, and funding. The analysis was based on CAT's 2022 existing conditions and assumptions based on 2022 market trends and technology capabilities.

Councilor Pinkston expressed concerns about the feasibility of transitioning to hydrogen fueled buses. Mr. Williams stated that his priority is to have the most reliable public transit service regardless of a specific fuel type. He requested permission from Council to move forward with pilots of battery electric buses and hydrogen fuel cell buses.

Mr. Snook asked about fire suppression in the event of an incident. Deputy Chief/Fire Marshal Joe Phillips described additional infrastructure needed to accommodate fire suppression, protection and support.

Councilors engaged in further discussion and Mr. Williams answered questions about CAT organization structure, future vehicle purchase considerations, changing costs of buses and technology, hiring and training of mechanics, and the lifecycle of buses. He presented public survey findings and next steps: 1) finalize the alternative fuel feasibility study; 2) begin the conceptual site design of the CAT facility expansion and additional site improvements; and 3) complete zero-emissions transition plan requirements for the FTA (Federal Transit Administration).

Mr. Sanders summarized the options and asked Council to deliberate on their preferences as well as their willingness to prioritize transit. Councilor Snook indicated interest in having hydrogen in consideration and that he was willing to support funding. Vice Mayor Pinkston was willing to consider a pilot study for both fuel types and stated that it was critical to figure the sourcing of hydrogen fuel. He stated that he would like to know more about the cost of funding. Councilor Payne said that while he was interested in having hydrogen in consideration, he was more willing to consider BEBs and needed more info to support funding and consider adding the topic to the Legislative Agenda. He did not want the pursuit of hydrogen fuel to hinder the implementation of battery electric buses. Councilor Oschrin was generally in support of the plan, while expressing concerns about reliability and net pollution benefit among other concerns. She was willing to support funding. Mayor Wade spoke in support of a pilot program as well as resources and he expressed concerns about ridership.

Mayor Wade opened the floor for public comment, and the following people spoke:

- Gaetano de Campo Lopes, Community Climate Collaborative (C3), spoke in support of the proposal.
- Susan Kruse, Executive Director of C3 spoke in support of the CAT proposal.
- Katie Larson, C3 intern and Environmental Practice student at UVA, spoke in support of the proposal.
- James Groves, city resident, expressed disappointment about Council not taking a more aggressive approach to move forward to complete transition to BEBs.

The meeting adjourned at 7:54 p.m.

BY Order of City Council

BY Kyna Thomas, Clerk of Council

Approved by Council
April 15, 2024

Kyna Thomas

Kyna Thomas, MMC
Clerk of Council