



Date of Memo: November 02, 2022
Current Meeting: November 10, 2022
Board Meeting: November 17, 2022

BOARD MEMORANDUM

TO: Indianapolis Public Transportation Corporation (IPTC) Board of Directors
THROUGH: President/CEO Inez P. Evans
FROM: Chief Development Officer Jennifer Pyrz, PE
SUBJECT: Consideration and approval to purchase and operate hybrid electric vehicles on the Blue Line Bus Rapid Transit (BRT)

ACTION ITEM A – 10

RECOMMENDATION:

It is requested that the Board authorize IPTC Staff to purchase and operate hybrid electric vehicles for the initial implementation of the Blue Line Bus Rapid Transit (BRT) line.

BACKGROUND:

IPTC and its community partners have been working together over many years to build out a vision for improved public transportation in Indianapolis. From the early stages of planning, it was envisioned that electric vehicles would be a key component of that vision. The Bus Rapid Transit (BRT) system, in particular, was planned to operate using all electric vehicles.

The Red Line BRT, which opened for operation in 2019, was widely touted as the first all-electric BRT in the nation. Battery-electric vehicles have also been purchased for the Purple Line BRT, will begin arriving next year, and will be operating beginning in 2024. The Blue Line BRT has been planned to be serviced with battery-electric buses as well.

Late in 2021, however, the U.S. National Defense Authorization Act of 2020 went into effect, banning federal transit funding for manufacturers linked to China. This ban applies to IPTC's purchase of BYD vehicles and effectively restricts IPTC to buying lower-range, more expensive, battery-electric vehicles. With the lower range comes the need for more buses to operate the same level of service, and more time and infrastructure devoted to charging vehicles. As the Blue Line design was reaching 60% completion, IPTC was projecting the need for 55 battery-electric vehicles to operate the Blue Line effectively under these new restrictions, at a cost of \$130 Million (in year of expenditure, YOE).

DISCUSSION:

In June 2022, IPTC received an updated project cost estimate for the Blue Line. Since the previous estimate, at the 30% design milestone, the project cost increased from \$220 Million to more than \$520 Million. The updated estimate included the cost for 55 vehicles, based on the new restrictions of the National Defense Authorization Act as described above.

IPTC staff have since been evaluating the project with the intent of bringing it back in line with available funding. It has been determined that, at least for the initial implementation, it is no longer feasible to use battery-electric vehicles on the Blue Line. In addition to the high upfront costs of purchasing the vehicles, the many additional vehicles needed to operate the Blue Line also require enroute charging infrastructure and new charging infrastructure in the garage. A greater number of buses also requires a greater number of operators at a time where labor shortages are already

impacting our ability to provide service. When considered together, the capital and operating costs of using fully electric vehicles on the Blue Line do not fit within IPTC's current budget.

IPTC staff is recommending that hybrid electric vehicles be purchased and operated for the initial implementation of the Blue Line. This change will save almost \$100 million and will require at least 35 fewer vehicles. This change will be incorporated into our Capital Investment Grant application update next spring for Federal Transit Administration review and scoring.

It is important to note that this is not a recommendation or decision to use hybrid electric vehicles in perpetuity. To serve the Blue Line as currently designed, buses would last seven to 12 years, depending largely on how many miles they are driven per year. When the time comes to replace the initial set of hybrid vehicles, IPTC could choose to move back to battery electric vehicles or choose another zero-emission vehicle. The hope is that, at that point, IPTC would be able to take advantage of new manufacturers or new technology that could make the decision to go zero emission more cost-effective.

ALTERNATIVES:

The Board could reject this recommendation and direct IPTC Staff to continue with battery-electric buses on the Blue Line BRT project.

FISCAL IMPACT:

Funding for the Blue Line project is provided from a variety of sources, including FTA Small Starts, Bond Revenues, 5307 Formula Funds, and local funds, as documented in the Capital Plan. This change will reduce both the capital and operating costs of the project. The exact value of the change will be determined as the project progresses.

DBE/XBE DECLARATION:

Not applicable for non-fiscal action items.

STANDING COMMITTEE DISCUSSION/RECOMMENDATION:

This action will be reviewed by the Service Committee on November 10, 2022.