

BINGHAMTON METROPOLITAN TRANSPORTATION STUDY
POLICY COMMITTEE

October 3, 2024 – SPECIAL MEETING

11:00 a.m.

Broome County Office Building, 6th Floor Legislative Conference Room

Also, via Zoom at

<https://broome.zoom.us/j/88549283001?pwd=hya357deVNC5NtgEFDQbpfSfqnxOEv.1>

The meeting was called to order by the Committee Chair, Mike Marinaccio, at 11:03 a.m.

Members Present

- × Michael Marinaccio, Supervisor, Town of Dickinson, Chair
- × Michael Lumsden, Supervisor, Town of Chenango
- × Marie Therese Dominguez, Commissioner, NYSDOT, *represented by Andrew Stiles, Region 9*
- × Jason Garnar, County Executive, Broome County
- × Ron Ciotoli, Tioga County Legislator
- × Martin Meaney, Mayor, Village of Johnson City
- × Nick Burlingame, Mayor, Village of Endicott
- × Maria Sexton, Supervisor, Town of Vestal
- × Rob Mack, Supervisor, Town of Union
- × Ashley Seyfried, Southern Tier 8

Policy Members Absent

- Jared Kraham, Mayor, City of Binghamton
- Mike Baratta, Mayor, Village of Owego
- Don Castellucci, Supervisor, Town of Owego
- Lew Grubham, Supervisor, Town of Kirkwood
- Mike Roberts, Highway Superintendent, Town of Owego
- Omar Sanders, NYS Department of Economic Development

Policy Committee Advisory Members Absent

Nicole McGrath, Community Planner, FHWA NY Division

Zach Lukin, Community Planner, FTA Region II

Others Present

Jennifer Yonkoski, BMTS

Scott Reigle, BMTS

Leigh McCullen, BMTS

Erin Cavanagh, NYSDOT

Greg Kilmer, Broome County Commissioner of Public Transportation

Michele Craig, Broome County Transit Financial Analyst

Derin Kraak, Highway Superintendent, Town of Chenango

Mike Ponticello, Deputy County Executive, Broome County

APPROVAL OF MINUTES September 5, 2024. POLICY COMMITTEE MEETING

Rob Mack motioned to approve the minutes; Jason Garnar seconded.

DISCUSSION

A comment was made that the Vice-Chairmanship title should be with Rob Mack and not Michael Lumsden. The minutes were unanimously approved with the change of title.

PUBLIC COMMENT

There was no public comment.

ANNOUNCEMENTS

Jennifer Yonkoski, BMTS, introduced Greg Kilmer, Commissioner of Public Transportation for Broome County. Mr. Kilmer was invited to address the Committee over concerns about the efficacy of electrified transit buses, especially in the northern winter climate.

Mr. Kilmer provided his background in transportation services. He also provided education and work experiences in alternative fuel projects in addition to stating he is an Executive Board Member with the agency that represents public transportation, is also on the NYS NYPTA, and is on the Legislative Policy Committee.

ACTION ITEMS

▪ 2023-2027 TIP Amendments

Committee approval is needed to accept an almost \$9 million grant that was given under a competitive Federal Low No Grant.

Mr. Kilmer

In 2021, BC Transit applied for and was awarded a Low No Grant awarding 6 full battery electric buses with charging infrastructure. Also retained consultant group, Center for Transportation and the Environment (CTE). Also engaged NYPA, the New York State Power Authority, to facilitate toward green energy projects.

Due to supply chain issues the new American made buses will not arrive until mid-2025.

A Grant was also received in 2023 to build on the infrastructure, and purchase seven (7) additional buses. This project was unique as it recognized the current grid has some resiliency issues and provides the opportunity to work on resiliency by doing cogeneration.

Currently BC Transit consumes almost \$1 million dollars' worth of diesel and unleaded gas annually.

BC Transit will use the existing footprint of the transit center in Vestal and add up to a megawatt of solar with a large battery bank. The system is designed with CTE using a 5-year plan for implantation and best use of current technology to maximize the use of electric buses.

The infrastructure design under the first grant planned for up to 18 buses to be charged at the same time and NYSEG has the ability to provide enough charging stations for all 18 buses. Capacity has been doubled for purposes of phasing the buses in and with improving technology will be able to replace more conventional buses and even some battery hybrids. BC Transit is still also purchasing hybrids, and recently took delivery of 4 which use a propulsion system from BAE.

These buses are operating 1/3 of the day in full electric mode as they circulate through city due to geofencing. A living laboratory agreement with BAE, Binghamton University and others will study data collected to capture efficacy of the buses.

Mr. Kilmer.

Redundancies have been built in; a large natural gas generator that will be able to back up the charging infrastructure and advised the batteries will be stored in ambient boxes which will maintain a constant

temperature so fluctuations or seasonal temperatures will have no effect. A total conversion will not happen for many years. Currently, New York State has mandated all new bus purchases be electric by 2030 but that could change.

Lead time for bus builds is currently two years. We are being given a production slot for a timely delivery. These buses are part of a fleet replacement plan and can be charged using the current infrastructure.

This interim meeting was called because approval is needed for phase two of the project and the project needs to go live in November.

If this is not approved, using the funding appropriated, it will put a financial burden on the county and the local taxpayer, and delay necessary replacement buses.

Michele Craig, Financial Analyst,

Financial breakdown: the seven battery electric buses with the solar array and storage system have a project cost of almost \$15 million. Only \$1.38 million of this will be required by the local taxpayer to absorb. Any contingency costs can be allocated by Transit due to its responsible fiscal spending. The last six years transit has brought on 25 buses worth \$14.6 million, and the local taxpayer portion was \$642,000. Transit works on 4.38%.

Two years ago, BC Transit met with NYSEG to verify the grid could handle the charging for 18 buses, although at this time there will only be 13. The transformer has already been purchased, have our own pole and underground facilities built out and contractors.

Mr. Kilmer

Addressed concerns regarding the trouble electric school busses have had in the local area. Transit buses are far more heavy duty than school buses, routes are shorter, and mandates are different, so one does not correlate to the other. Questions about how the new electrified buses will operate in winter were addressed. The new fully electric buses are electric with a small diesel tank that acts as generator to heat as needed.

There will be an intelligent charge management system that will not provide more energy to any bus than is necessary and BC Transit plans to use a slow charge process to preserve battery life. In the future BC Transit is looking at demand charging in the field. Not economically viable right now.

Current buses will have more power and be able to handle climbing hills and will recover 98% of the energy expended when it returns down the hill using regenerative braking, turning kinetic energy into electrical energy. Routes are mapped out by consultants to for the best recharge. Limitations have been addressed as best as can be for the moment.

Mr. Kilmer

Addressed a comment about continuing the use of hybrid busses because “we know they work”. Hybrids are great but the State is pushing away from them, even though we have lobbied Albany. Hybrid buses will still be purchased while moving toward battery electric. It may be there will be a retrofit option with newer technology like hydrogen fuel cells. Diesel engines are not being built in the quantities they used to be.

Maintenance and Training

Mr. Kilmer

The Grant Application requires 5% go towards educating and training of existing staff. The 2021 grant has over \$200,000 allocated for training and in 2024 it is over \$400,000. Grants have built-in training, overhaul and replacement scenarios.

Vestal has a solar moratorium.

Jason Garnar

Does not apply to the County.

Mr. Kilmer

It is not a solar farm but rather a backup system on an existing facility and will include a natural gas generator that will not require electricity to run.

Battery efficiency in cold weather.

Mr. Kilmer

The battery trays are heated and cooled so there should be no reduction and supplemented heat is separately generated.

Does this bus qualify for 0 emissions when it has a diesel generator being used?

Mr. Kilmer

We have been advised it will. However, the legislation is fluid and subject to change. They are trying to keep the technology moving in the direction of battery electric.

If buses need to run 18 hours, but charges last 12, will we need a bigger fleet? How long will batteries last? Engine? Breaks? Weight difference?

Mr. Kilmer

There will be a slight increase in fleet size. Planning infrastructure to cycle buses out but will need additional buses in the short run. Technology improvements have much more storage capacity than even 5 years ago. Some of this new technology may be coming to Endicott.

Depends on the bus and manufacturer but battery electric buses are considered 12-year assets under the FTA, which is the lifetime of the vehicle. Battery should outlive the bus, especially if managed correctly. Over that same span of time Diesel engines are replaced three times in a regular bus. The cost of the 3 diesel engines is less than the battery. Supplements/grants assist with cost. Overall, there are fewer moving parts. Regenerative brakes will not need replacing often as the electrical resistance to charge the generator could stop the vehicle without using brakes. Re-education and training will help reduce maintenance costs.

The weight of an all-electric bus is heavier, but the weight of a hybrid to a traditional bus is minimal.

Fire suppression systems needed onsite?

Mr. Kilmer

There are three environments of concern. Mitigating it as best as possible. One is thermal runaways, which use non-UL certified batteries which are not tested. Charging is when we see the biggest problem. We will monitor every group of cells for temperature and anticipate any thermal runaways. Will

automatically shut down system and notify someone. Due to the battery containment, it is unlikely to propagate to the others, but have extraction protocols in place for that too. Training will be done with all the local fire departments.

Accidents, average speed of bus is 12 miles per hour, very rarely reach 45, 55 mph.

- [Resolution 2024-14, Approving an amendment to the 2023-2027 Transportation Improvement Program, Addition of new project, PIN 982201, capital purchase of buses, BC Transit.]

A motion to adopt was made by Ashley Seyfried; Regional Director Andrew Stiles seconded.

A roll call vote was called for by Chairman Michael Marinaccio:

<u>Yes</u>	Michael Marinaccio, Supervisor, Town of Dickinson, Chair
<u>Yes</u>	Michael Lumsden, Supervisor, Town of Chenango
<u>Yes</u>	Marie Therese Dominguez, Commissioner, NYSDOT, <i>represented by Andrew Stiles, Region 9</i>
<u>Yes</u>	Jason Garnar, County Executive, Broome County
<u>Yes</u>	Ron Ciotoli, Tioga County Legislator
<u>Yes</u>	Martin Meaney, Mayor, Village of Johnson City
<u>Yes</u>	Nick Burlingame, Mayor, Village of Endicott
<u>Yes</u>	Maria Sexton, Supervisor, Town of Vestal
<u>Yes</u>	Rob Mack, Supervisor, Town of Union
<u>Yes</u>	Ashley Seyfried, Southern Tier 8

2024 MEETING SCHEDULE

- Scheduled for December 12, 2024

A motion to adjourn was made by Supervisor Rob Mack, it was seconded by Jason Garnar, County Executive.

The meeting was adjourned at 11:47 a.m.