



# **FLEET TRANSITION PLAN**

## **ZERO-EMISSION BUS TRANSITION PLAN**

### **WE CARE ABOUT CLEAN AIR IN PEORIA!**

**GREATER PEORIA MASS TRANSIT DISTRICT**  
2105 NE JEFFERSON AVE, PEORIA IL 61603

**PREPARED BY: NICK STANDEFER, ASSISTANT GENERAL MANAGER**  
**TO FILE: JULY 2022**

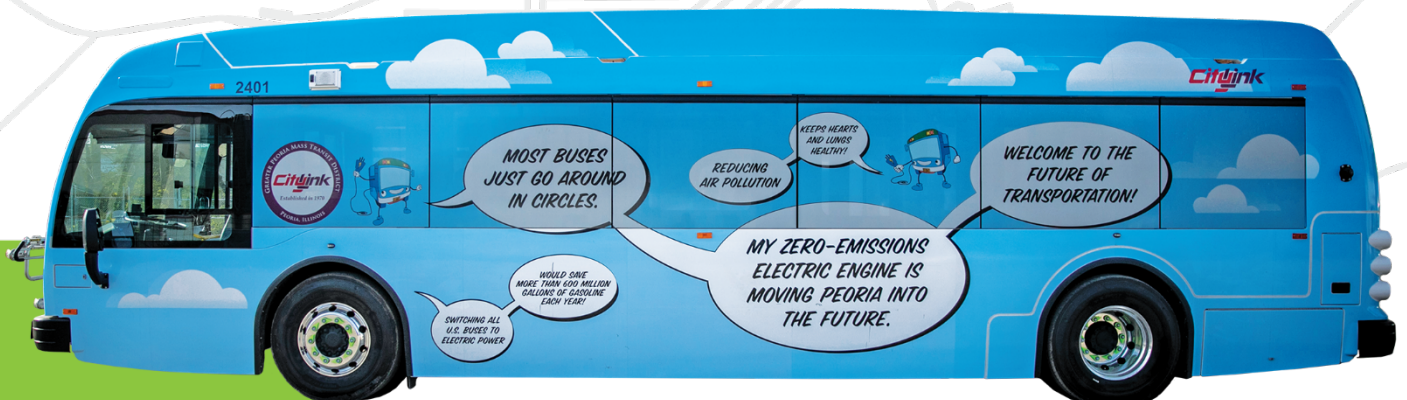


Table of Contents

**INTRODUCTION** ..... 3

**FLEET TRANSITION OVERVIEW** ..... 4

**EXSITING FIXED-ROUTE FLEET**..... 5

**TRANSITION & FLEET REPLACEMENT APPROACH**..... 5

**INFRASTRUCTURE**..... 6

**FUTURE RESOURCES (FUNDING), LEGISLATION & FLEET MANAGEMENT PLAN** ..... 6

**FUTURE FACILITIES/NEW CAMPUS REVITALIZATION**..... 7

**PARTNERSHIPS** ..... 8

**WORKFORCE DEVELOPMENT PLAN** ..... 8

## INTRODUCTION

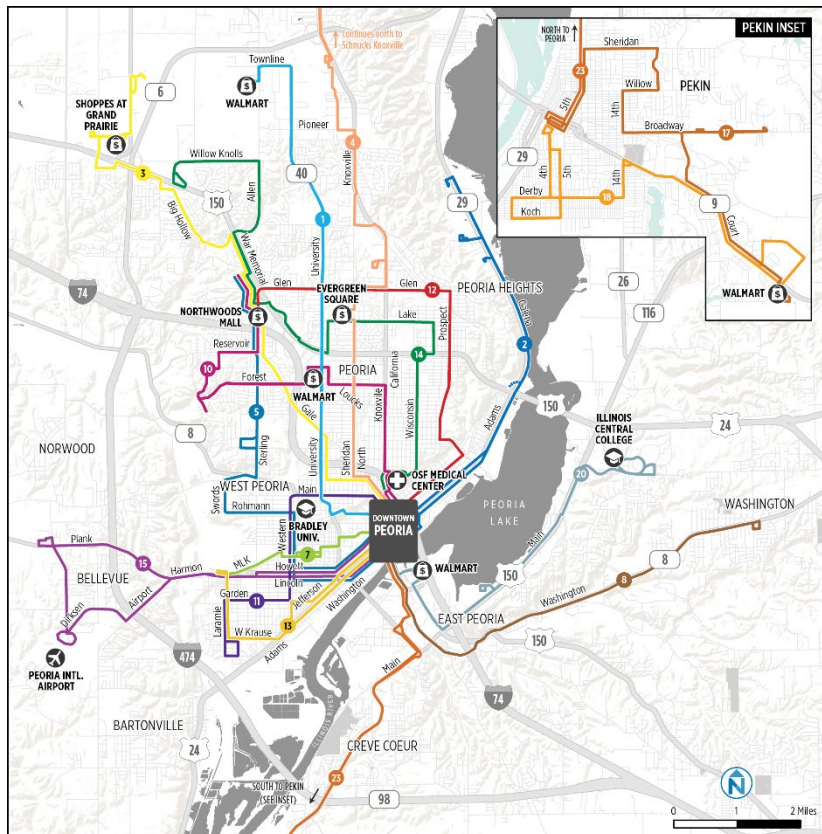
The Greater Peoria Mass Transit District (GPMTD, or the District), also known as CityLink, was established in 1970. It is the primary public transportation provider for the Greater Peoria region serving the Cities of Peoria, East Peoria, West Peoria, Pekin, North Pekin, Creve Coeur and Village of Peoria Heights. GPMTD is a municipal corporation within the State of Illinois, providing economic, social, and environmental benefits to the community through customer focused transportation service. The Greater Peoria region sits on the Illinois River in Central Illinois. It includes the counties of Peoria, Tazewell, Woodford, Logan, and Mason.

GPMTD currently operates 18 fixed bus routes in the Greater Peoria Area that cover parts of Peoria and Tazewell Counties. Service to and within Pekin is limited to weekdays. Evening service is available on 14 of the routes during weekdays and 14 routes on Saturdays. Service is also available on 14 routes on Sundays. The major transfer points are the Downtown Peoria Transit Center and the Tazewell County Courthouse in Pekin.

Currently, GPMTD fixed route fleet consists of fifty-three (53) buses with annual FY 2022 ridership of over 1.5 million to serve the needs of commuters, shoppers, and others in need of transit services.

GPMTD also offers ADA complimentary paratransit service and rural door-to-door services in the form of CityLift and CountyLink. GPMTD subcontracts the operations of these services to a third-party.

The combination of fixed routes and comprehensive scheduling times provides convenient, reliable, and affordable transportation to > 25 shopping centers, entertainment venues, a resurgent “warehouse” district, > 75 schools, colleges and universities, hospitals and medical clinics, in addition to 2 airports including the General Wayne A. Downing Peoria International Airport, and many major employers including Caterpillar, Komatsu, Illinois Mutual Life Insurance Co. and OSF Healthcare. Fixed routes also serve community agencies such as CWTC (“Community Workshop & Training Center, Inc.”), EP!C (“Empowering people. Inspiring capabilities”), CIAA (“Central Illinois Agency on Aging”), Dream Center



CityLink Service Route Map Effective June 5, 2022

## GREATER PEORIA MASS TRANSIT DISTRICT ZERO-EMISSION BUS TRANSITION PLAN

Peoria, Salvation Army, and the City of Peoria "Peoria Promise" with Illinois Central College. Fixed route service is integral transportation means for servicing Agencies in the community.

The GPMTD Transit Center opened in 2004 as a covered bus transfer center with amenities. In 2020 the interior received a refresh and renovation to provide passengers a more modern and accessible Transit Center. Burlington Trailways (Greyhound) and Peoria Charter Coach

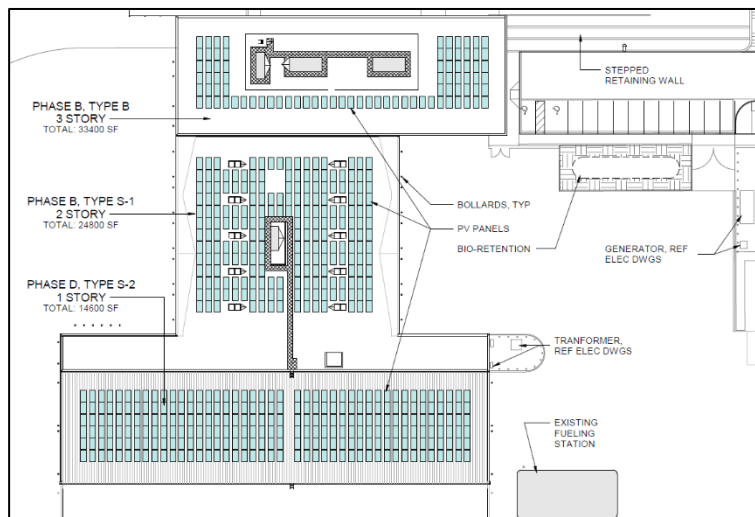


Passengers riding one of the hybrid buses.

utilizes the Transit Center for bus connections to and from Peoria. Additional services include bus pass sales via live customer service or through a vending machine, Burlington Trailways bus pass sales, and most recently designation as a cooling/warming facility.

### FLEET TRANSITION OVERVIEW

The GPMTD operation in Peoria, Illinois has evaluated its current fleet of 46, 35' Gillig Diesel buses, that were manufactured in 2011 & 2012, and has determined that moving towards vehicles with little or zero fossil fuel emissions is of great value to the community it serves. Through this evaluation GPMTD has determined that the best route for the agency is to create an upgraded fleet mixed with 26 all-electric and 20 diesel buses that run on biofuel such as B20 or B100. This will be in addition to the three battery-electric buses and four diesel-electric hybrid buses already in service. GPMTD



Site plan for future solar panels on GPMTD facilities

is currently in the process of building a state-of-the-art Maintenance & Administration building that will have the capability to charge an electric fleet with its 300+ solar panels that will be placed on the roof. The GPMTD also employs over 10 diesel mechanics with the capability of maintaining a fleet that is run on a biofuel, locally grown and manufactured in the Midwest thus supporting its local economies. Due to the rise in fuel prices, obtaining new diesel buses with the latest technology, which are run on a sustainable fuel, would offset the operational costs as would electric buses that are fueled through renewable solar energy. The plan for the electric bus batteries is to have the manufacturer dispose of the batteries when they replace the batteries in 7 years. Recycling the batteries or selling them to an organization that follows NEPA guidelines has also been considered.

## EXISTING FIXED-ROUTE FLEET

- 3, 2021 35' Proterra Electric Buses
- 4, 2016 & 2017 40' New Flyer Hybrid Buses
- 46, 2011 & 2012 35' Low Floor Gillig Buses

GPMTD has an existing fixed-route fleet of fifty-three (53) vehicles. In 2016/2017 GPMTD replaced aging Diesel Engine buses with four (4) Hybrid Buses. Three (3) battery-electric buses were received in 2021.



*CityLink Diesel-Electric New Flyer Hybrid Buses*

In the next 2-3 years GPMTD expects to start replacing the remaining forty-six (46) aging diesel engine buses.

## TRANSITION & FLEET REPLACEMENT APPROACH

Beginning in May 2022, GPMTD will have 5-8 diesel buses up for replacement based on years and miles regarding their useful lives. GPMTD will begin to apply for replacement of these buses through grants such as The Bus and Bus Facilities/Low or No Emissions Vehicle Program. GPMTD will apply for four electric buses and four diesel buses in 2022. From 2023–2027, GPMTD will focus on obtaining a mix of electric-buses and diesel-powered buses. This approach will allow GPMTD to not only continue to ensure the infrastructure is in place – electric bus chargers – but also ensuring maintenance has the training needed and familiarity with these vehicles to maintain them. This also applies to operators and ensuring they are fully trained and comfortable driving these new buses.



*Example of CityLink's current Gillig diesel buses*

## INFRASTRUCTURE

GPMTD currently has three, 125kw Proterra Chargers that have two dispensers each. These three chargers can charge six electric buses at once. GPMTD has already planned ahead in purchasing those chargers for additional electric buses. Also, as a part of the new construction project, upgrades will be made to the amp service feeding the main campus from a 2500-amp service to a 4000-amp service by December of 2023. This power upgrade – provided and partnered with the local power company – Ameren – will allow GPMTD to fully charge an electric fleet of up to 10 buses. Plans are in place to add an additional 2000-amp service that will power up to 30 electric buses. GPMTD also plans to have 300+, 4-5’ solar panels on top of new facility (to be completed in December of 2023), which will generate close to 40% of the power consumption needs. Total System size: 280 KW DC. Approximate Production: 378,000 kWh/yr. Current Energy Usage (2105 NE Jefferson): ~ 820,000 kWh/yr. Total Savings: ~40% of energy used by the building will be produced by new solar system.



*Electric bus charging stations installed in current maintenance facility*

## FUTURE RESOURCES (FUNDING), LEGISLATION & FLEET MANAGEMENT PLAN

GPMTD has worked to identify funding opportunities and partnerships listed in this Fleet Management Transition Plan that will help to offset the total cost of deployment. GPMTD also plans to apply for grant opportunities yearly such as the Bus and Bus Facilities Program to request funding for fleet replacement.



*Bus 2401 was funded by the Edwards Coal-Fired Plant Settlement*

GPMTD expects to have forty-six (46) fixed-route buses become eligible for replacement within the next 2-3 years. With the substantial cost for battery electric technology, GPMTD will rely on and seek out all competitive grant opportunities such as 5339(b) and 5339(c) in order to fund the cost of the vehicles and related infrastructure required to operate. GPMTD will program available federal TCD credits in order to supplement the required match needed for federal opportunities. Private funding opportunities will also be considered to support the transition cost. Opportunities such as the one previously provided to GPMTD from a privately sourced legal settlement from the local Edwards Coal-Fired Power Plant that was found in violation of the Clean Air Act. GPMTD received funding to purchase one (1) battery-electric bus from the settlement, which is in service now.

## FUTURE FACILITIES/NEW CAMPUS REVITALIZATION

Some features of our new maintenance and administration facility:

- The first level – the ground level – has ten pull through maintenance bays, one with an overhead crane & 8 new with lifts.
  - The pull through bays offers safer operation, reducing the amount of reverse bus movements.
- State-of-the-art maintenance equipment, ensuring better reliability for repairing the buses.
- The second level has a new full-amenity operators day room, with direct interior access to the bus storage garage, via new skywalk, thus preventing the operators from traveling outdoors or through the maintenance areas, reducing the number of slips, trips and falls.
- A new training center, with a dedicated classroom and separate simulation training room to train or re-train operators.
- The third story is a new Administration Center, with a Board Room overlooking the campus and river.
- The entire facility will have access to natural light and exterior throughout – for employee wellness.
  - All glass garage doors in the maintenance shop
  - New three-seasons rooms with movable exterior wall – a post pandemic enhancement – on second and third floors.
  - Two new balconies for staff breaks, etc.
- Photovoltaic panels to generate solar and charge an electric bus fleet.
- Permeable pavement in the employee/visitor lot, reducing stormwater water runoff.
- Energy efficient construction and equipment thought-out.
- The visitor/employee parking will be separate from bus operations.
  - Dedicated building entrance for visitors at upper-level parking eliminating the risk of accidents.
- All employees will be under one roof.
  - Ease of communications, safer operations with no need to walk across the parking lot.
- Outside electric bus chargers for quick access.
- More efficient use of energy.



*Aerial concept view of the new maintenance and administration facility*

## PARTNERSHIPS

GPMTD currently has three Proterra buses and three Proterra 125kw chargers. They have been in service since April of 2022. GPMTD has also partnered with a NPO – Hawk Atollo – who has arranged a Power Purchasing Agreement to obtain 50, 2' solar panels to be placed on the roof of the downtown Transit Center. The panels are being placed on a new – low maintenance – environmentally friendly Modified Bitumen Roof. These solar panels will be generating almost all the power needs of that facility and whatever power is not used goes back into feeding the grid. This facility is in a lower income part of the GPMTD service area, meaning this additional clean energy could potentially help the local community. The panels will be operational in August 2022.



*Aerial site plan of the Transit Center canopy roof showing where the solar panels will be placed*

## WORKFORCE DEVELOPMENT PLAN

Select Citylink employees are in the process of being trained for the preventive maintenance, diagnostics and repair of the battery electric buses. The training is on-site and provided by the current bus vendor, Proterra, that was included in the purchase of the buses. Training is done in two phases. Phase One included familiarization with the bus and charger, best safety practices, basic diagnostics, and the first 6k preventive maintenance inspection. Phase Two has yet to be completed but will cover diagnostics and repairs and further preventive maintenance inspections.



*Local emergency responders were trained on the new electric buses in Summer 2021.*

Upon arrival of the existing Proterra Catalysis battery-electric buses delivered in July 2021.

GPMTD invited local law enforcement and fire department personnel to train and learn the dynamics of the new vehicles. In the event of a bus fire or accident, the appropriate emergency responders will be prepared on how to effectively respond to and handle the situation.