

FRA AWARDS 2021

EV-RIDES: ZERO- EMISSION ELECTRIC LYMMO BUSES

Transportation Transit Enhancement

May 24, 2021

City of Orlando, Community
Redevelopment Agency



APPLICATION CRITERIA



- Recognizing rapid downtown economic expansion and residential growth, Orlando has sought ways to improve its fee-free downtown circulator and reduce operating costs as well as adverse health and environmental impacts
- “No-emission” electric buses were identified as a multi-pronged--fiscally sound, health promoting, and environmentally-friendly approach
- Only 2% of the nation’s cities have electric buses
- The City/CRA and its partners, LYNX and OUC collaborated to receive \$4.8 million from Federal Transit Administration (FTA) which support a fleet of 14 electric buses by 2022 – 3 ebuses are already in circulation

COMMUNITY IMPACT

- LYMMO Electric Bus Project operates in Downtown Orlando which is the home to Orlando City Hall and Orange County government, 7 neighborhoods including historic African American Parramore, regional cultural and entertainment venues, educational institutions as well as commercial, civic/non-profit and corporate offices
- The burning of fossil fuels, release carbon dioxide (CO₂) into the atmosphere and the buildup of CO₂, is a leading cause of poor air quality and climate change.
- Project reduces costs including the elimination of 120,347 gallons of diesel fuel each year, prevents the release of 31 lbs. particulate matter annually, 28 lbs. of which is fine particulate matter and which positively impacts community health and reduces costs and climate change



- FTA Grant funding for 7 buses is as follows:

Low-No Emission Grant

- \$1,961, 244 53% (FTA)
- \$1,750,000 47% (Local Share)

The local share is fully committed as follows:

- City of Orlando (CRA): \$850,000,
- Orlando Utilities Commission (OUC): \$900,000.

- Local match of \$0.89 for each \$1.00 of the FTA Low-No grant funding, demonstrates an equitable and sustainable cost-sharing model that can be replicated in other regional initiatives
- One e-bus was funded by City/LYNX, *while the FTA 5399 Bus and Facilities grant* for \$2,840,000, is for the six (6) remaining buses and has a match of \$800,000 by the City and \$500,000 by OUC

PROBLEM SOLVING

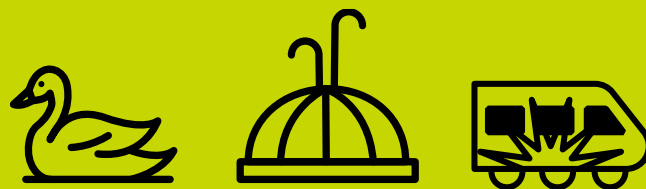
- Recognizing the various economic, health and environmental issues related to fossil fuels, the project will address City implementation goals:
- **2017 Green Works Municipal Sustainability Action Plan**
 - ❑ Goal #5: 100% of city vehicles and LYMMO buses powered by electric and alternative fuel vehicles by 2030
- **2018 Green Works Community Sustainability Action Plan**
 - ❑ Strategy #32: Deploy Electric Bus/Shuttle Technology on the LYMMO
- **2019 American Cities Climate Challenge commitment**
 - ❑ 1 of the 15 actions includes “Electrify city fleets and buses”
- African Americans face a 54% higher health burden and in support of the City/CRA Parramore air quality assessment, the e-buses will help support these health efforts

APPLICABILITY TO OTHER COMMUNITIES

- Most communities have a public bus system and a public utilities agency, who are increasingly looking for ways to improve and expand their respective operations
- Forming partnerships with other public agencies, sharing costs and seeking funding from federal government transportation agencies who are increasingly coming under regulatory requirements to fund sustainable initiatives
- The Orlando 3-P (Public-Public-Public) partnership, as formalized through a multi-party agreement, with clear role delineation and long-term financial responsibilities for implementation and maintenance, is a transferable and sustainable model

OTHER THINGS TO TELL THE JUDGES

- To fully appreciate the impact of this project it is first important to understand how LYMMO fits within the greater bus system. LYNX provides public transportation services for Orange, Seminole and Osceola Counties, and small portions of Polk and Lake Counties. It also operates a fleet of 315 buses on 77 local bus routes, providing more than 105,000 passenger trips each weekday spanning an area of approximately 2,500 square miles.
- LYNX exclusively operates LYMMO, as a downtown circulator, and has often introduced new technologies into this smaller fleet for various purposes, and that may later be implemented into their multi-county wide bus system, as economies of scale are achieved



BEFORE AND AFTER PHOTOS



BEFORE AND
AFTER
LYMMO BUS
VIEWS



Older LYMMO Bus



New Zero Emission Electric LYMMO Bus

ZERO EMISSION ELECTRIC LYMMO BUSES



BEFORE AND
AFTER
LYMMO BUS
VIEWS



Non-Electric LYMMO Bus Photo by Joey Roulette, Orlando Weekly



New Electric Bus Being Outfitted

ZERO EMISSION ELECTRIC LYMMO BUSES



BEFORE AND
AFTER
LYMMO BUS
VIEWS



Non-Electric LYMMO Bus at Stop which will also be used by Electric Buses



Mayor Buddy Dyer (left foreground) on a
Zero Emission Electric LYMMO Bus

ZERO EMISSION ELECTRIC LYMMO BUSES



BEFORE AND
AFTER
LYMMO BUS
VIEWS



Older LYMMO Bus



Unveiling Electric Bus with LYNX Officials,
Commissioners and Mayor in Attendance

ZERO EMISSION ELECTRIC LYMMO BUSES





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