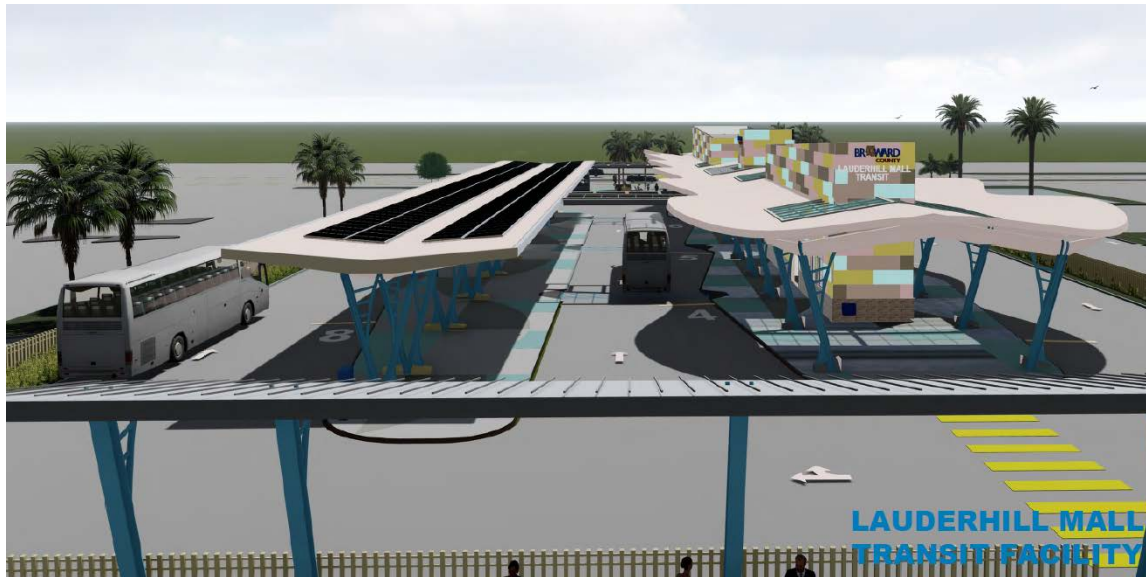


Electric Buses

and other Broward County Transit Initiatives



Climate Change Task Force Presentation
February 28, 2019

Broward County Transit

- 2nd largest transit system in the State of Florida
- Two major operations & maintenance facilities
 - Copans Road – Pompano Beach
 - Ravenswood Road – Dania Beach
- Four major transfer facilities
 - Downtown Main Terminal on Broward Blvd.,
Lauderhill Mall, Northeast Transit Center &
West Regional



Services Provided

- 44 weekday bus routes
- Partnerships with 19 cities for Community Bus
- In FY 2018, BCT provided over 30.8 million passenger trips
 - 27.8 million Fixed-Route passenger trips
 - 2.2 million Community Bus passenger trips
 - Over 867,293 Paratransit trips



Broward County's Commitment to Zero Emission Transportation

- Procuring only zero emission vehicles for appropriate fleet by 2030
- Promoting the roll out of zero emission vehicles charging infrastructure and fueling stations
- Providing incentives for the purchase of zero emission vehicles by consumers and businesses.

New Electric Bus Initiative

Why Electric?

- Advancement of clean, sustainable, innovative transportation and energy technologies
- Environmental and health Benefits
- Cost per mile savings
- Reduced maintenance
- Ride quality



New Electric Bus Initiative

Electric Bus Trends

- Approximately 330 in the US
 - Approximately 2,500 in Europe
 - Approximately 385,000 in China
-
- First Step: Hybrid fleets
 - Long Term: 100% electric
 - Improved battery technology



New Electric Bus Initiative

Underway/Planned

- Addition of electric buses to Broward County Transit fleet.
 - Five 45 foot over the road coach buses ordered for new I-75 express service
 - Fifteen 40 foot buses to be purchased for existing local service
 - Investigation of various type of electric technologies for the development of specifications for future bus purchases
 - Testing of various electric vehicles to determine suitability
- Improvements at two existing Transit maintenance facilities to add electric bus charging infrastructure
- Addition of new solar canopies to offset new electric loads

New Electric Bus Initiative

Key Challenges

- Initial capital cost (Vehicle and Infrastructure)
- New operational and scheduling requirements
- Training and driver behavior
- Procurement hurdles
- Charging interoperability / standards
- Coordination with utility company



Other Sustainable Initiatives

Efficient AC Systems

- Rooftop air conditioning specified on all new bus purchases for more efficient cooling, less engine drag, better performance



Other Sustainable Initiatives

Hybrid Buses in Fleet

- 40 foot hybrid bus purchases started in 2007
- 42 foot hybrid bus with WiFi
- Average 20% increase in fuel efficiency



Other Sustainable Initiatives

Articulated Buses

- First hybrid articulated (60 foot) bus purchased in 2009
- More passengers per trip combined with fuel efficiency
- 19 of 47 articulated buses are now hybrid



Other Sustainable Initiatives

Solar Lit Bus Shelters

- 575 solar lit shelters installed in various cities and Unincorporated Broward County.
- Hundreds more to be installed in the coming years.



Other Sustainable Initiatives

Fleet Replacement

- 184 of 252 diesel/gasoline Paratransit vehicles replaced with propane vehicles. Anticipate 100% replacement by 2021.
- 55 new propane vehicles for Community Shuttle service by 2020
- Propane costs are approximately \$1.20 less per gallon than gas
- 19,318,336 fewer lbs of CO2 produced to date





- First countywide bike sharing system
- A healthy form of transportation that's good for you and the environment
- Great for short trips lasting under half-hour and connections to other Transportation
- Over 274,000 trips taken since program launch in 2011
- Over 197,000 riders and 23,579 annual members
- 994,032 miles ridden, saving 48,964 gallons of gas
- 964,592 lbs of carbon offset (GHG emissions)
- 40,302.021 calories & 10,643 lbs of fat burned
- Located in Pompano Beach, Lauderdale-by-the-Sea, Fort Lauderdale, Hollywood, Dania Beach & Hallandale Beach



Future Initiatives

Expand Electric Bus Pilot Programs

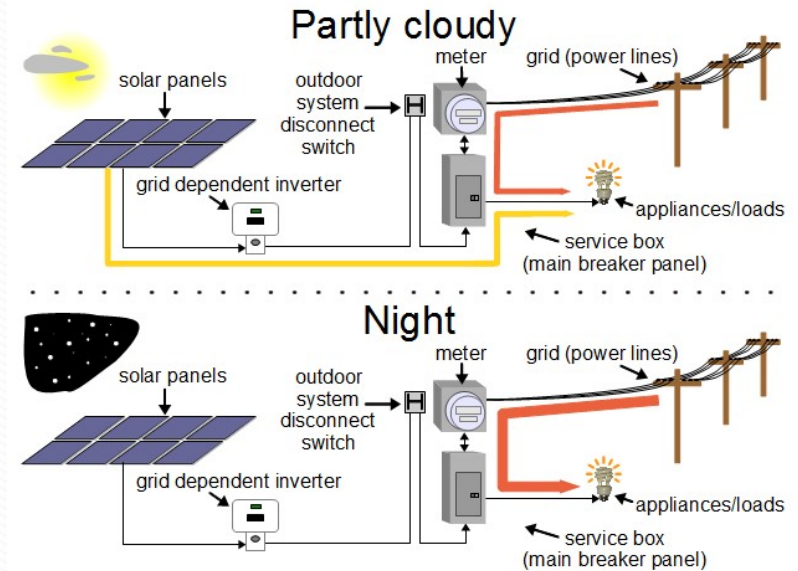
- Hydrogen Fuel Cell buses
- New battery technology



Future Initiatives

Facility Solar Panel Installation

- Net metering
- Bi-directional metering
- Reduce grid dependence



Penny for Transportation

Plan Overview

- Collaborative plan with projects in every community
- Prioritizing connectivity and congestion relief
- Dedicated 30 year transportation-specific funding
- Independent Board reviews revenues and expenditures, assuring project transparency and accountability.
- Makes Broward County eligible for a larger share of state and federal funds.



Penny for Transportation

Transit Projects Include:

- Bus service enhancements
 - Route extensions, realignments, increased frequencies, service spans, new local routes, new rapid bus on 8 corridors
- Light Rail Transit (26 miles) – location TBD
- Full funding for Community Shuttle and Paratransit programs
- Transit center and park and ride lot expansion
- Bus shelters and related amenities



Penny for Transportation

Multimodal Projects Include:

- Roadway improvements
- Traffic signal synchronization (real time information)
- Fiber optic cables
- Countywide traffic video system
- Sidewalk and bike lanes
- Street lighting
- School safety zones
- Improved drainage
- Future technology adaptation



Questions ?



www.broward.org/bct