

# Broward County Transit

## Electric Bus Program Implementation



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**September 19, 2019**

**BROWARD**  
COUNTY  
*Transit*



# WHY GO ELECTRIC ?

- ❖ **Advancement of a cleaner, more sustainable, innovative transportation and energy technologies system**
- ❖ **Environmental and health benefits to the riding public**
- ❖ **Ride quality / experience**
- ❖ **Cost per mile savings**
- ❖ **Reduces maintenance and operational cost**



# Planning & Analysis

## ❖ Route and Schedule Evaluation

- ✓ Length of route
- ✓ Layovers and bus stops
- ✓ Deadhead miles

## ❖ Service Type

- ✓ Local
- ✓ Express
- ✓ Circulator

## ❖ Fleet Replacement Schedule

## ❖ Coordination with Local Utility Company



# Planning & Analysis

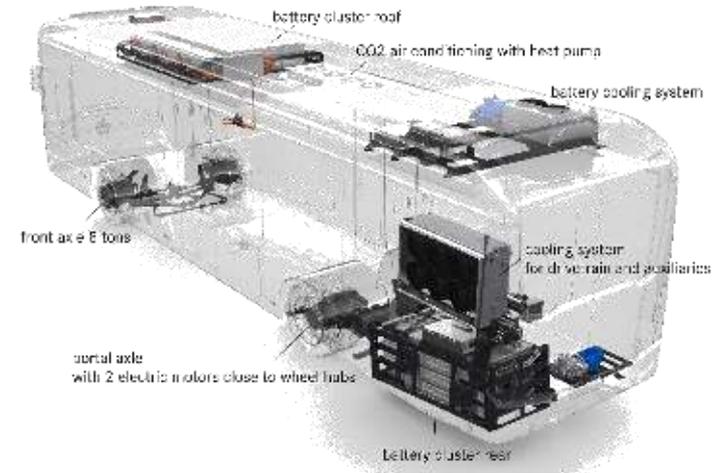
## ❖ Space / bus parking requirement

## ❖ Bus Procurement

- ✓ Type of vehicle
- ✓ Range
- ✓ Battery capacity
- ✓ Warranty
- ✓ Maintainability

## ❖ Efficient and viable charging infrastructure (AC or DC)

## ❖ Electrification Phasing



# Installation

## Charging Infrastructure

- ❖ **Power/grid requirement**
- ❖ **Type of chargers**
  - ✓ **Depot**
  - ✓ **En-route**
- ❖ **Charging requirements**
  - ✓ **Kilowatts**
  - ✓ **Charge rate**
  - ✓ **Number of units**
- ❖ **Specification of electric equipment**



# Installation

## Additional Infrastructure

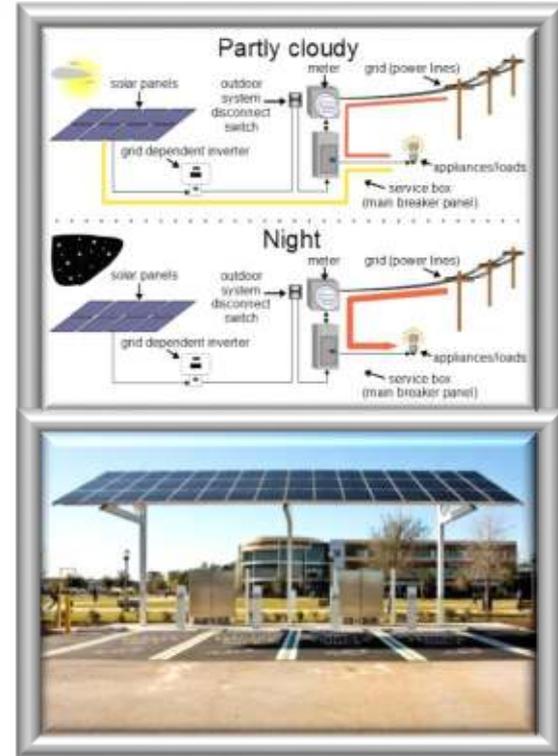
- ❖ **Smart Charging Network**
- ❖ **Backup power (redundancy)**
- ❖ **Electrical rooms**
- ❖ **Fleet Car Chargers**



# Installation

## Solar Initiatives

- ❖ Solar canopies
- ❖ Solar panels – roof installation
- ❖ Reduce grid dependence



# Challenges

❖ **Upfront capital cost / funding – vehicle and infrastructure**

❖ **Charging**

- ✓ Interoperability
- ✓ Standards

❖ **Management**

- ✓ Space
- ✓ Charging

❖ **Training and driver behavior**

❖ **Climate**

- ✓ Rainfall
- ✓ Heat

