

# Broward County Transit

## Electric Bus Program Implementation



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# 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

**CLEAN**

**POWER**

**EFFICIENCY**

**RENEWABLE**

**SUSTAINABLE**

BROWARD  
COUNTY  
*Transit*



# Planning & Analysis

## ❖ Route and Schedule Evaluation

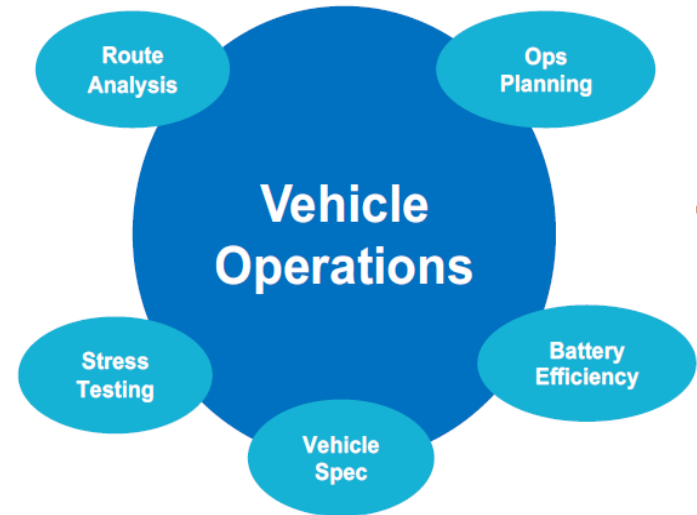
- ✓ Length of route
- ✓ Layovers and bus stops
- ✓ Deadhead miles

## ❖ Service Type

- ✓ Local
- ✓ Express
- ✓ Circulator

## ❖ Fleet Replacement Schedule

## ❖ Coordination with Local Utility Company





# Planning & Analysis

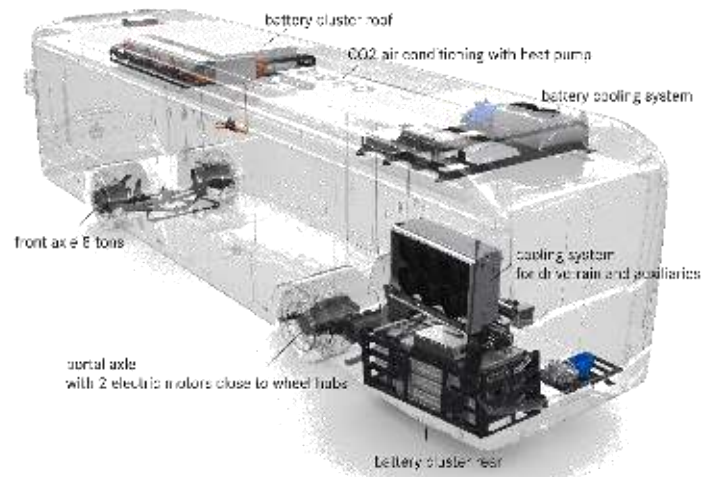
## ❖ Space / bus parking requirement

## ❖ 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**

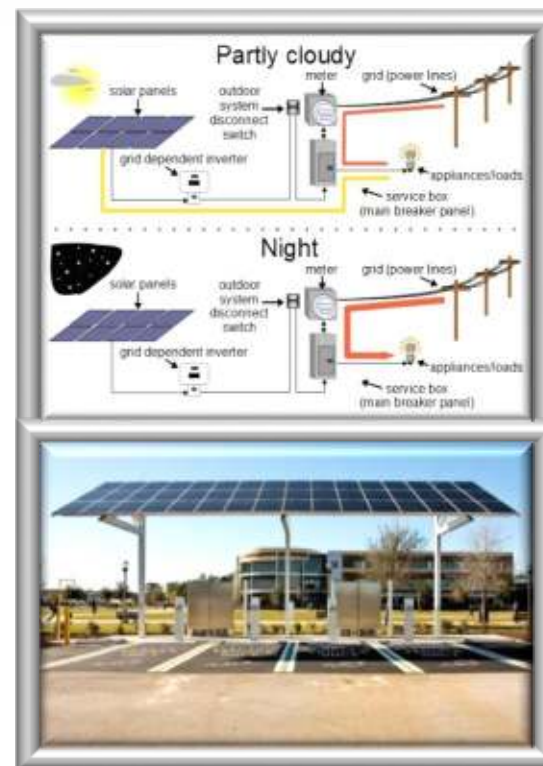




# Installation

## 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

