

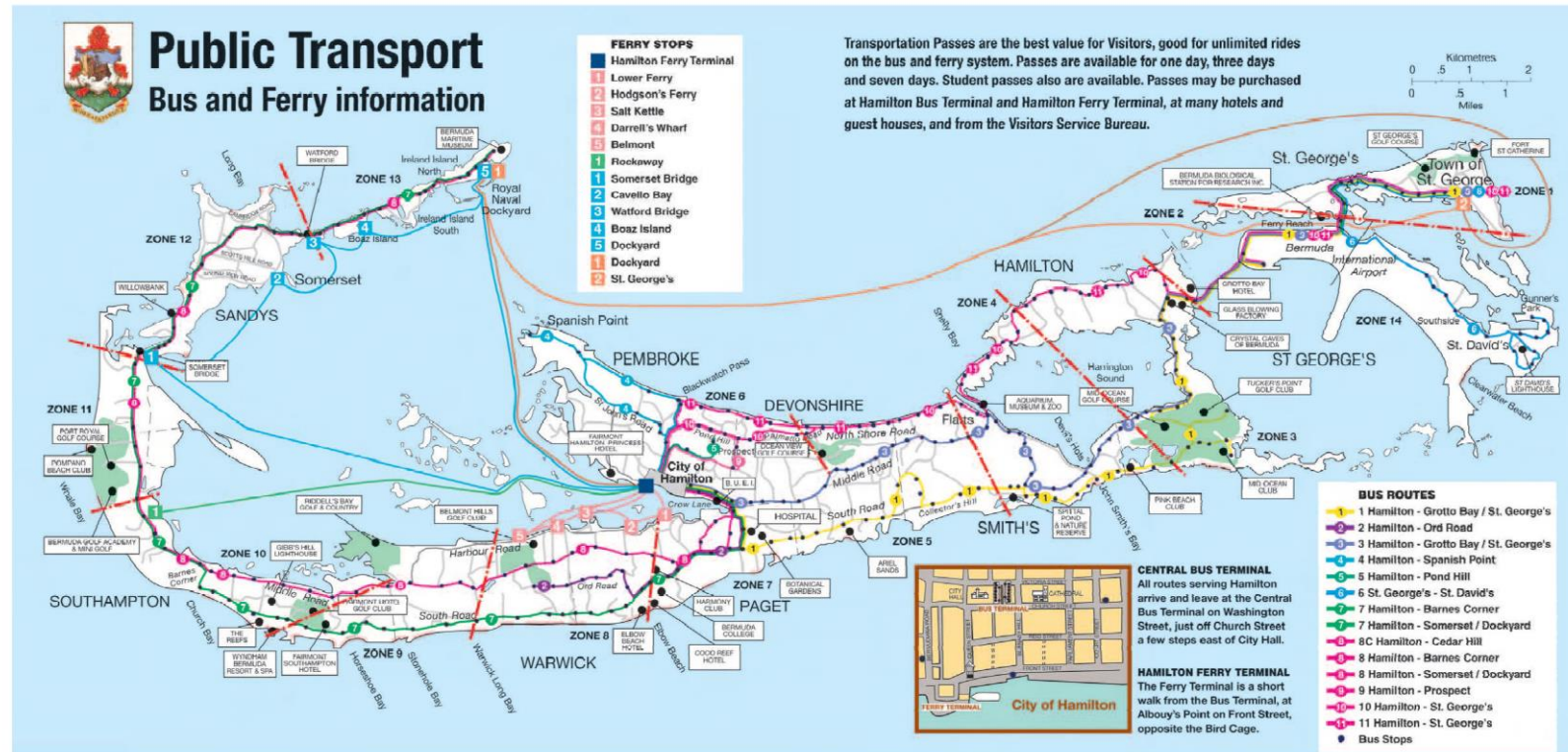


E-BUSES FOR BERMUDA

SOLUTION FOR PUBLIC TRANSPORTATION

E-BUSES FOR BERMUDA

PUBLIC TRANSPORTATION



Route-1	25.63Km	Route-6	9.83Km	Route-9	2.52Km	Route-11	20.25Km
Route-2	6.45Km	Route-5	1.63Km	Route-8	23.35Km	Route-10	19.80Km
Route-3	19.95Km	Route-4	4.32Km	Route-7	24.55Km		

E-BUSES FOR BERMUDA

► WHAT IT IS?

E-buses are transport vehicles designed to run on **pure electric energy** (DC power stored in advanced batteries and/or super capacitors)

► WHY WE NEED THEM

As we head towards the age of renewable energy, the latest advances in technology have powered electric buses to become a viable alternative for public transportation.

E-BUSES FOR BERMUDA

► WHAT ARE ADVANTAGES?

Electric buses have several notable advantages for both operators and the public such as

- ✓ Elimination of use of fossil fuels (\$\$\$ Savings)
- ✓ Reduced operating cost (\$\$\$ Savings)
- ✓ Few mechanical parts ((\$\$\$ Savings by less maintenance)
- ✓ High efficiency (\$\$\$ Savings)
- ✓ Zero emissions (Environmentally friendly)
- ✓ Quieter (smoother and more comfortable experience)
- ✓ Remote monitoring

E-BUSES FOR BERMUDA

► FEATURES



**ZERO
EMISSION**



**QUICK
CHARGING**



**HIGH
EFFICIENCY**



**LONG LIFE
CAPACITORS**



**LONG YEARS
IN SERVICE**



**NO
BATTERIES**



**NO TOXIC
ELEMENTS**



**ALL
WEATHER**

E-BUSES FOR BERMUDA

► INTEGRATED BUS OPERATING SYSTEM (BOS)

BOS stands for "bus operation system". It integrates the functions of GPS, driving recorder, energy consumption recorder, maintenance management, remote breakdown analysis and more.

BOS provides bus operators with an innovative bus monitoring operation management system which integrates advanced features and tools for massive data collection, 3G wireless internet and remote intelligence control.

E-BUSES FOR BERMUDA

- ▶ **WHAT INFRASTRUCTURE IS NEEDED?**
 - ▶ **ADVANCED E-BUSES (100% ELECTRIC)**
 - ▶ **FAST CHARGING STATIONS**
 - ▶ **GSM/3G/4G CELLULAR (FOR GPS & FLEET MANAGEMENT)**

E-BUSES FOR BERMUDA

► E-BUSES



E-BUSES FOR BERMUDA

► E-BUSES



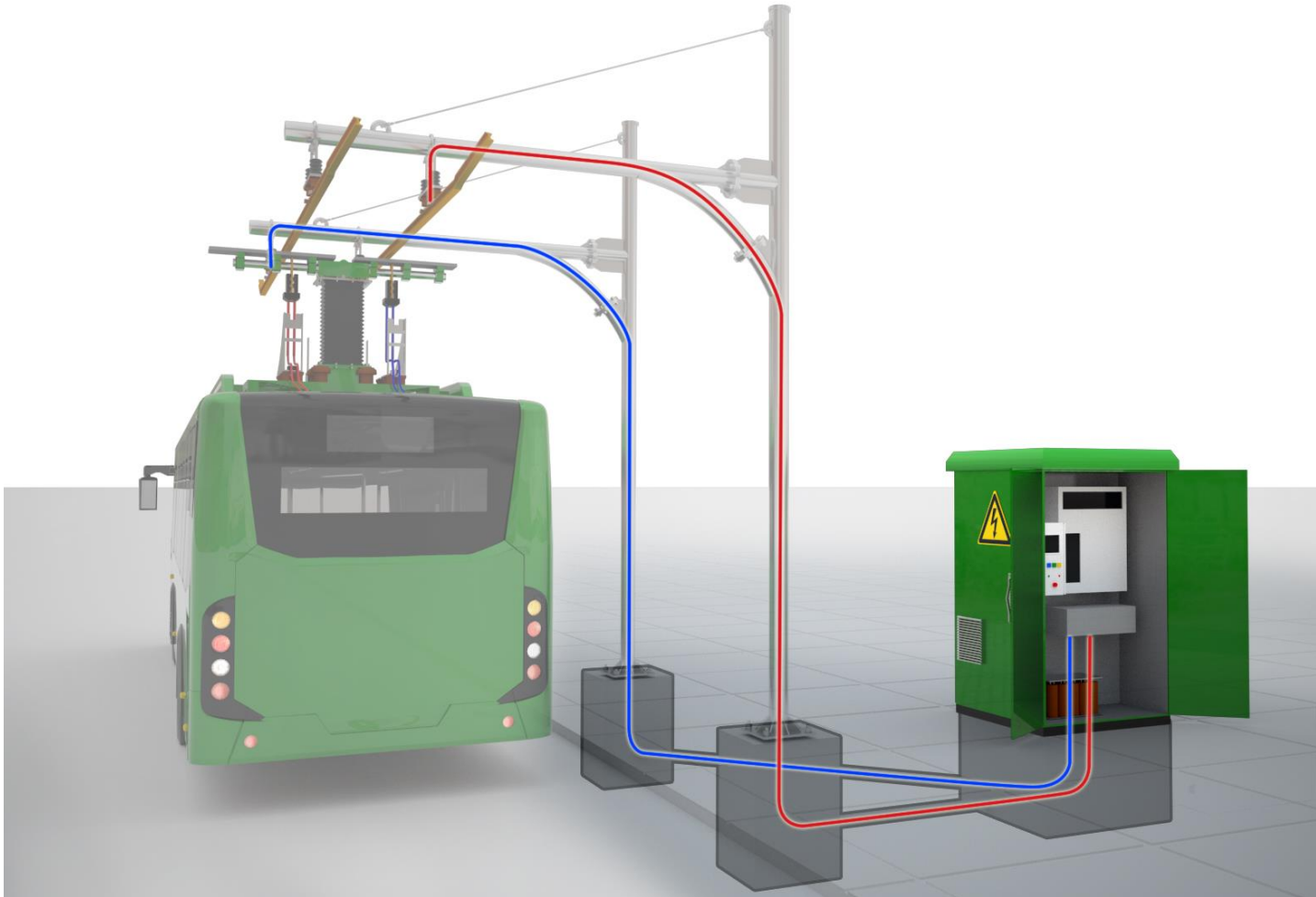
E-BUSES FOR BERMUDA

- BUS STOP SIDE CHARGING (5-6 MINUTE, FULL CHARGE for 25 KM)



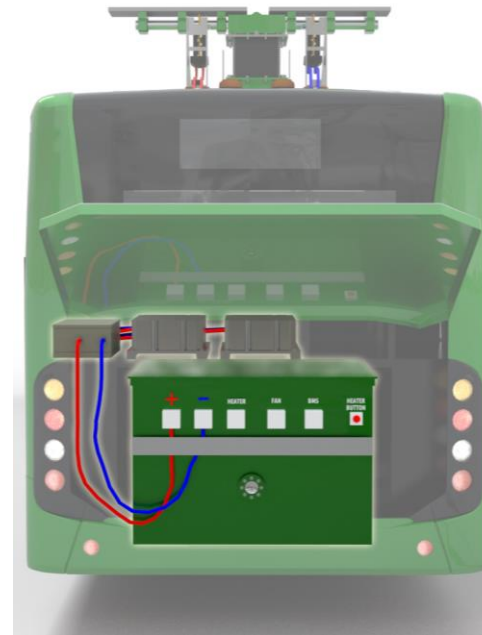
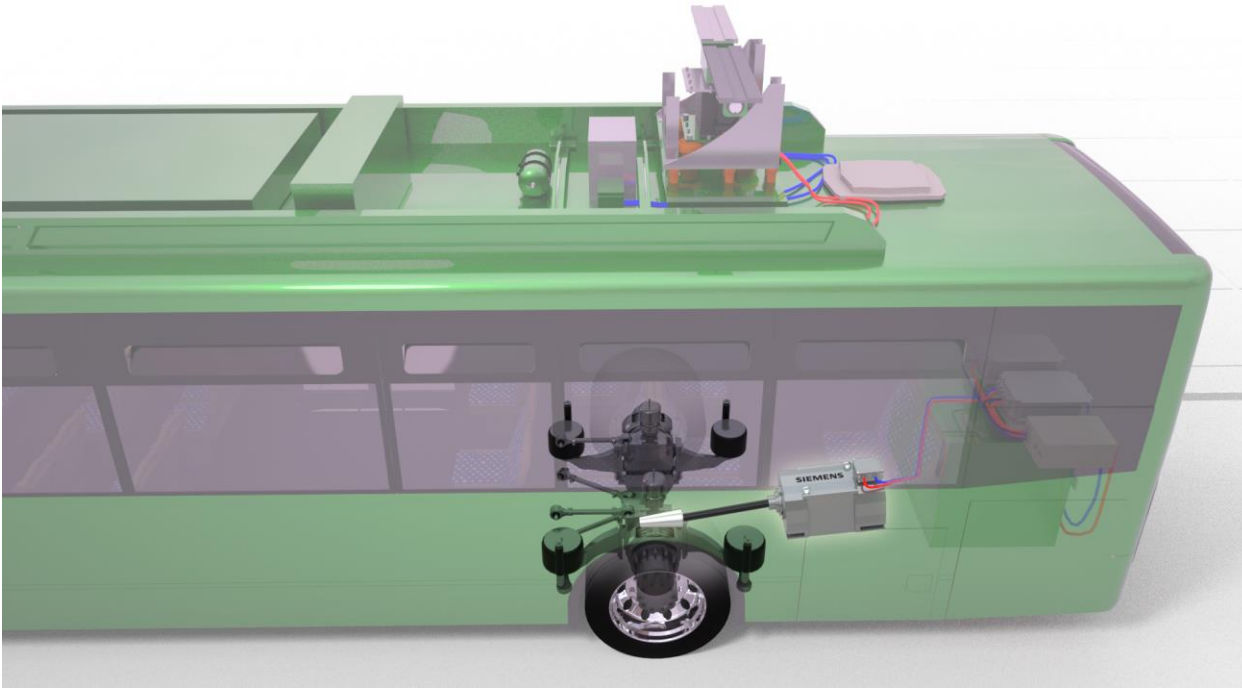
E-BUSES FOR BERMUDA

► CHARGING STATION



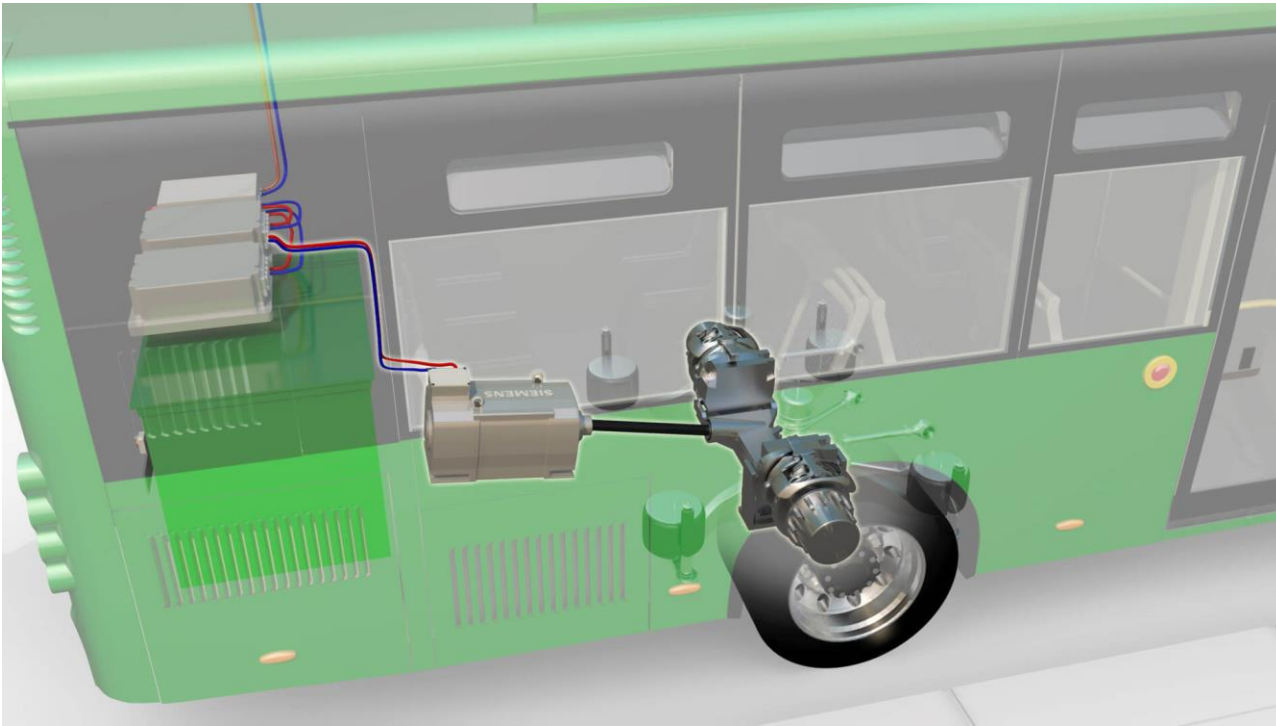
E-BUSES FOR BERMUDA

► SIEMENS ELECTRIC MOTORS & CONTROLS



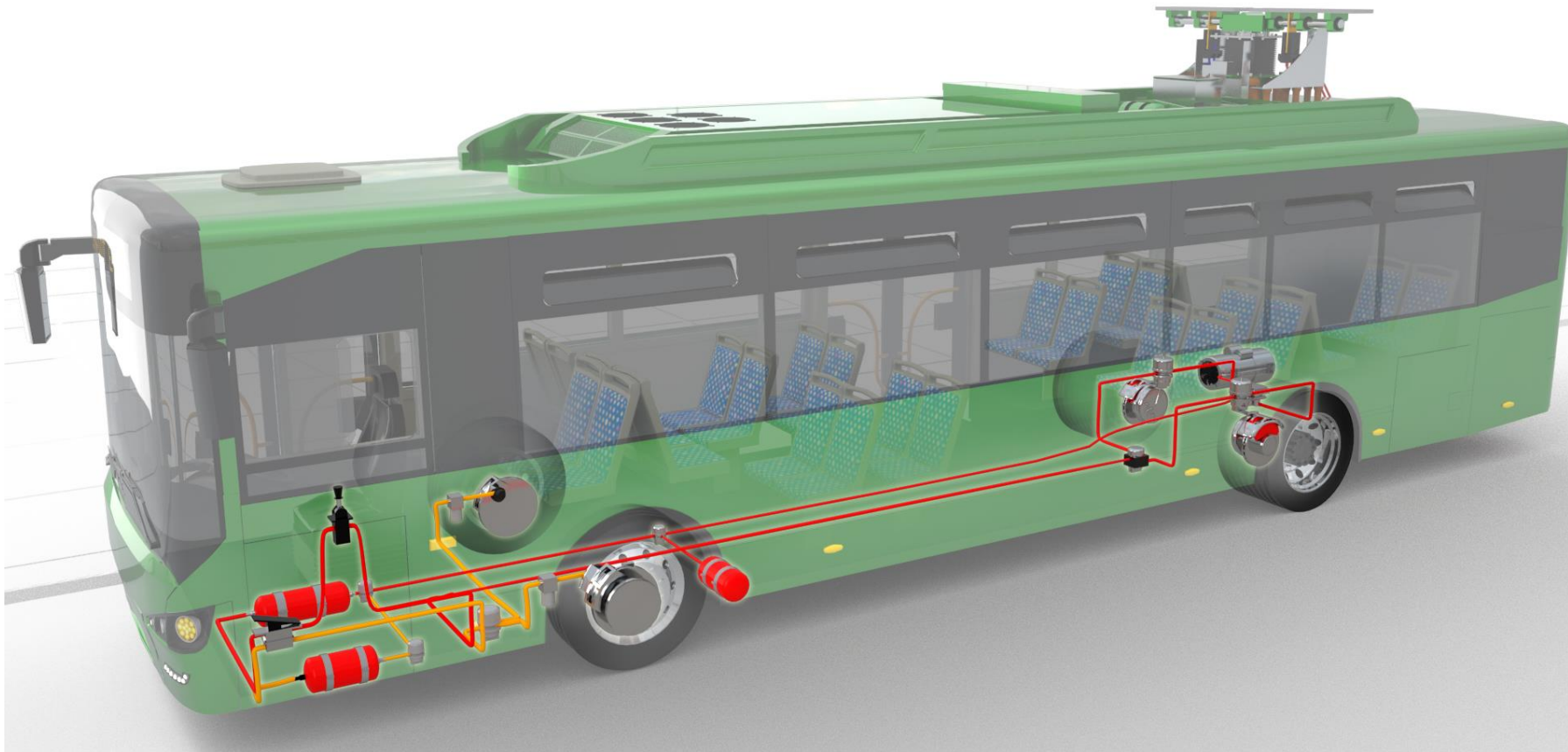
E-BUSES FOR BERMUDA

► REAR AXLE WITH CENTRAL MOTOR & STEERING



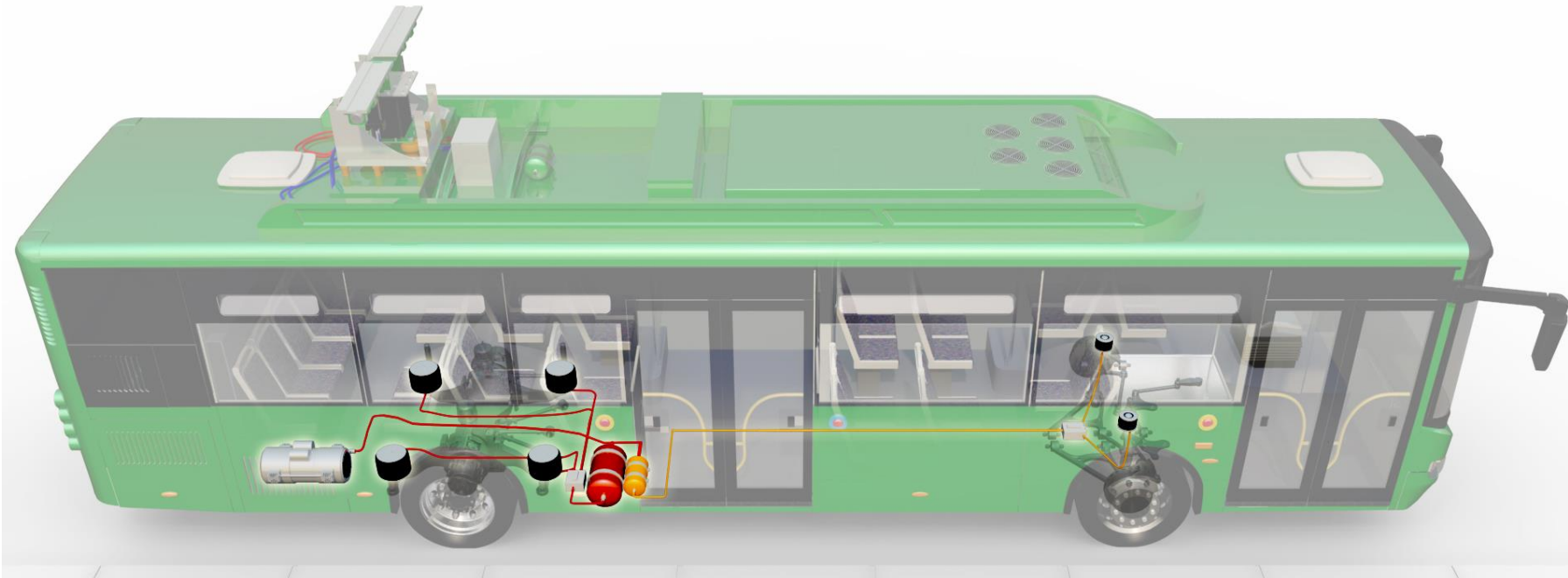
E-BUSES FOR BERMUDA

► PNEUMATIC BRAKE SYSTEM



E-BUSES FOR BERMUDA

► PNEUMATIC SUSPENSION



E-BUSES FOR BERMUDA

► PNEUMATIC DOORS



E-BUSES FOR BERMUDA

► ROAD SIDE SERVICE (MOBILE CHARGING) OPTION



E-BUSES FOR BERMUDA

► CHARGING SYSTEM



E-BUSES FOR BERMUDA

- ▶ AIR CONDITIONED
- ▶ WiFi ENABLED
- ▶ ACCESS RAMP (WHEEL CHAIR POSSIBLE)
- ▶ SEAT CONFIGURATION CUSTOMIZATION
- ▶ COLOR & BODY CUSTOMIZATION
- ▶ COINS, BILL, SMART CARD READY
- ▶ ROUTE DISPLAY, PUBLIC ANNOUNCEMENT SYSTEM
- ▶ ENGLISH LANGUAGE
- ▶ TV/ADVERTISEMENT DISPLAY OPTION

LATEST TECHNOLOGIES

LATEST TECHNOLOGIES: Online Electric Vehicle (OLEV)



LATEST TECHNOLOGIES:

Online Electric Vehicle (OLEV)

- ▶ **Pure Electric Vehicle**
- ▶ **Wireless battery charging. NO CORDS!!!**
- ▶ **Proven Technology based on induction (magnetic field):** Induction relies on magnetic charge plates beneath roadways and a counterpart inside the bus. When an induction-capable bus passes over that charging plate, the two magnets become "tuned," and current flows to charge the on-board battery.
- ▶ **Fast Charging: Takes 90 seconds!**

LATEST TECHNOLOGIES:

Online Electric Vehicle (OLEV)

- ▶ Can be charged quickly while stationary at a stop or driving, thus removing the need to stop at a charging station.
- ▶ OLEV does not need to be parked at a charging station to have a fully powered battery
- ▶ It gets charged while running, idling, and parking, enabling a reduction in size of the reserve battery down to one-fifth of the battery on board a regular electric vehicles.
- ▶ OLEV complies with the national and international standards of 62.5 mG, a safety net for electromagnetic fields.

LATEST TECHNOLOGIES:

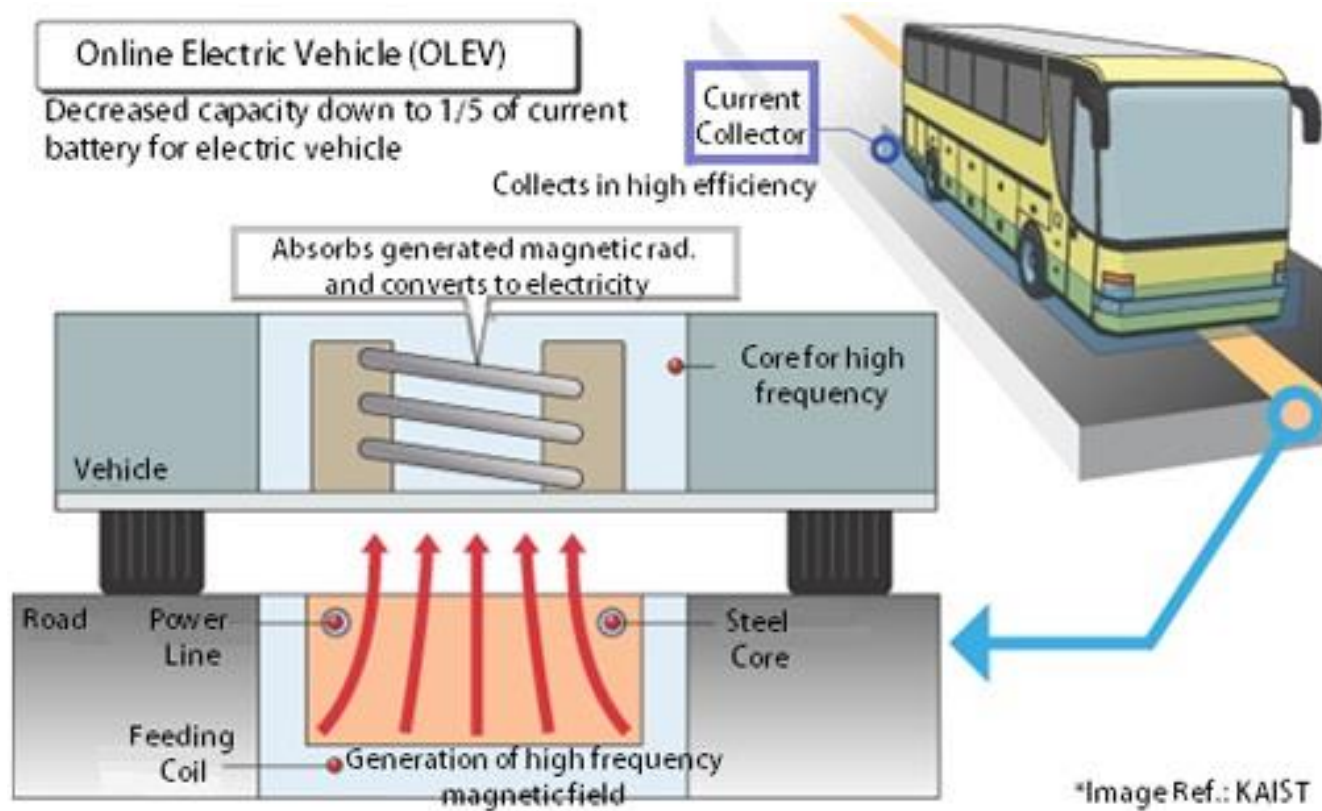
Online Electric Vehicle (OLEV)



LATEST TECHNOLOGIES:

Online Electric Vehicle (OLEV)

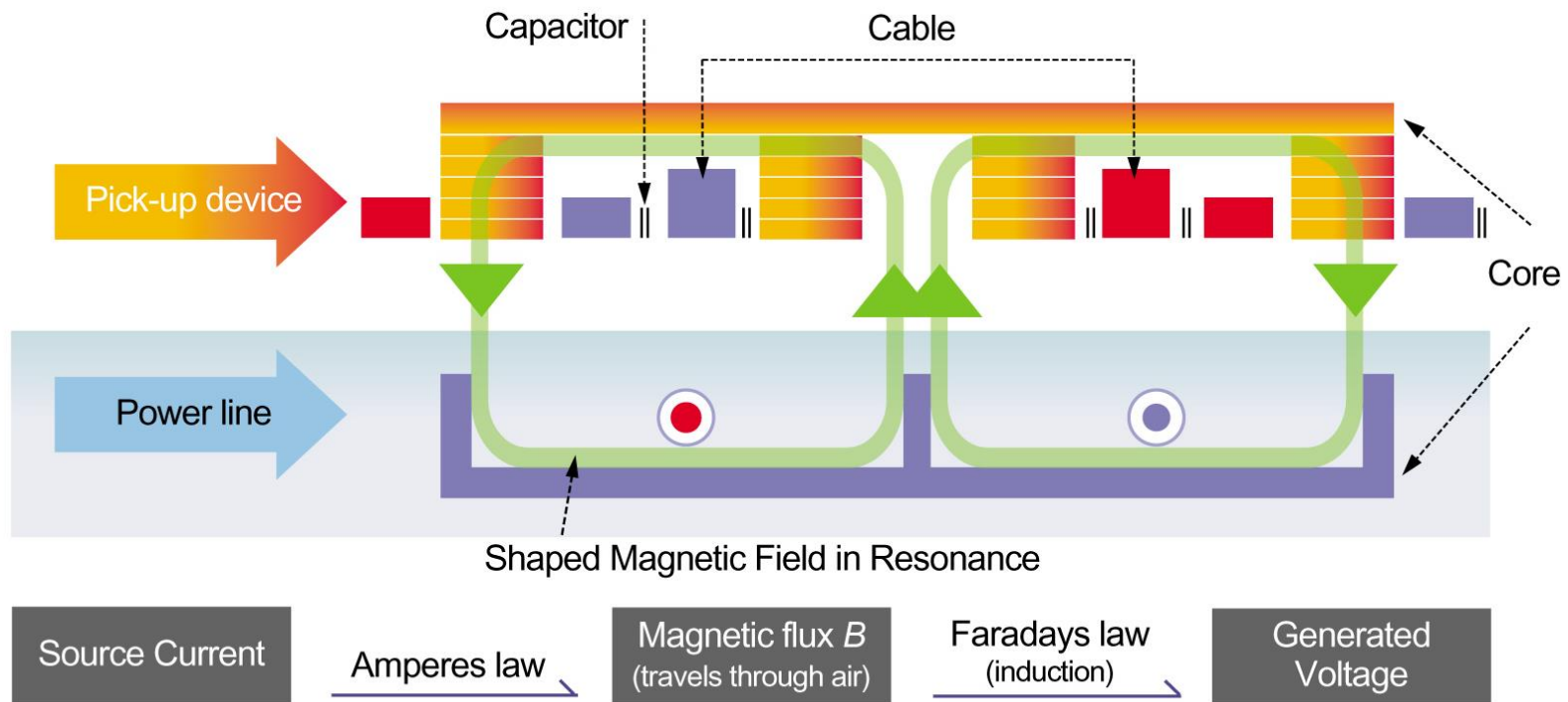
► HOW IT WORKS?



LATEST TECHNOLOGIES:

Online Electric Vehicle (OLEV)

▶ TECHNOLOGY BASIS



LATEST TECHNOLOGIES:

Battery Swappable Technology



LATEST TECHNOLOGIES:

Battery Swappable Technology

- ▶ Pure Electric Vehicle
- ▶ Battery Swap at Main Station or at predetermined locations
- ▶ Able to operate continuously with two swappable batteries on top of the bus
- ▶ Automatic battery swapping technology includes BSS station that links swapping control robot, vision system, fast charger and etc. which automatically and instantly swaps discharged battery with charged battery

LATEST TECHNOLOGIES:

Battery Swappable Technology



LATEST TECHNOLOGIES:

Battery Swappable Technology

