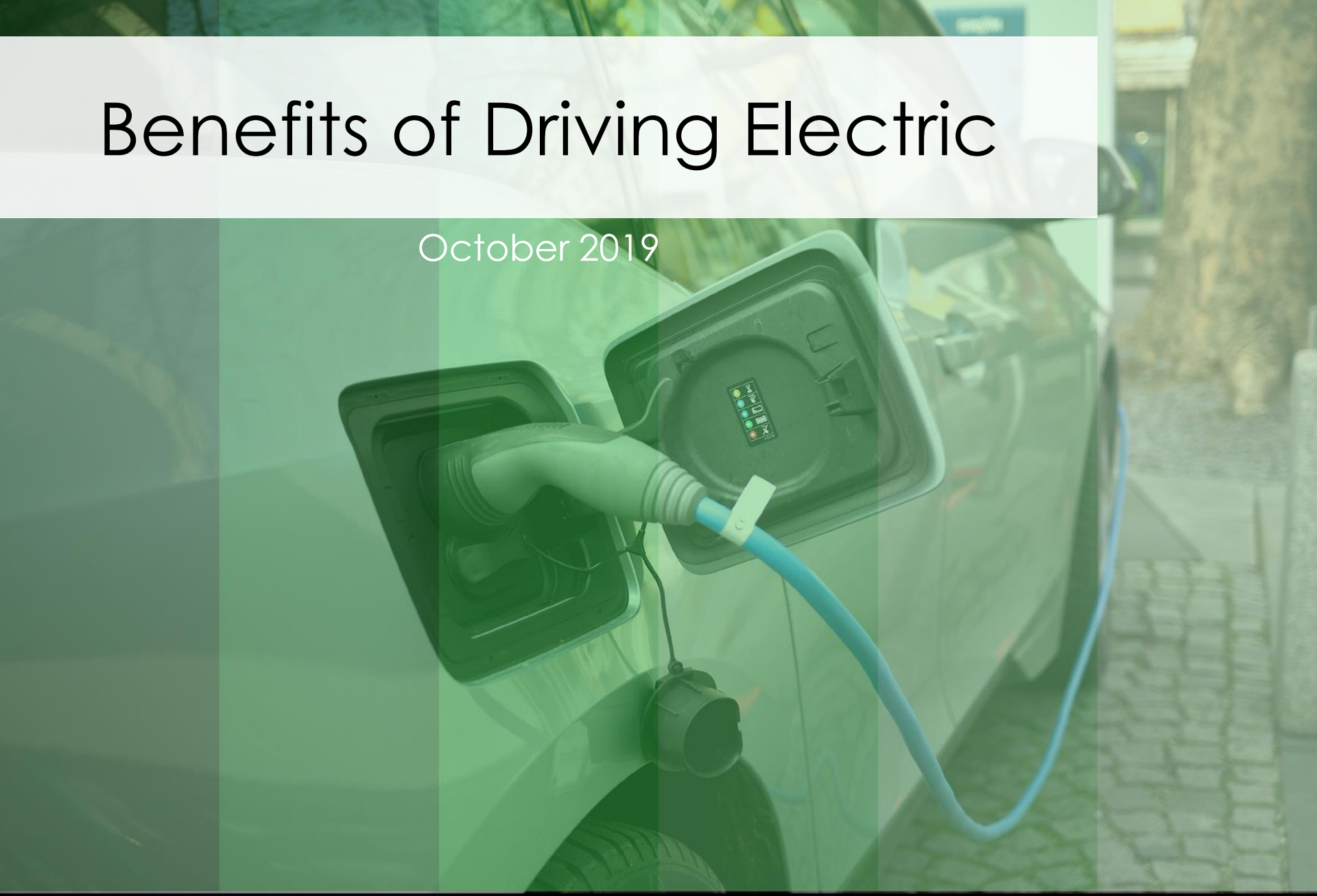
# Benefits of Driving Electric

October 2019



cleanenergy.org
Southern Alliance for Clean Energy

# About Us

The Southern Alliance for Clean Energy (SACE) is a regional membership organization that promotes responsible energy choices to ensure clean, safe, and healthy communities throughout the Southeast.

# Join Us: Electrify the South

Website:

Facebook:


ElectrifyTheSouth.org

@ElectrifyTheSouth

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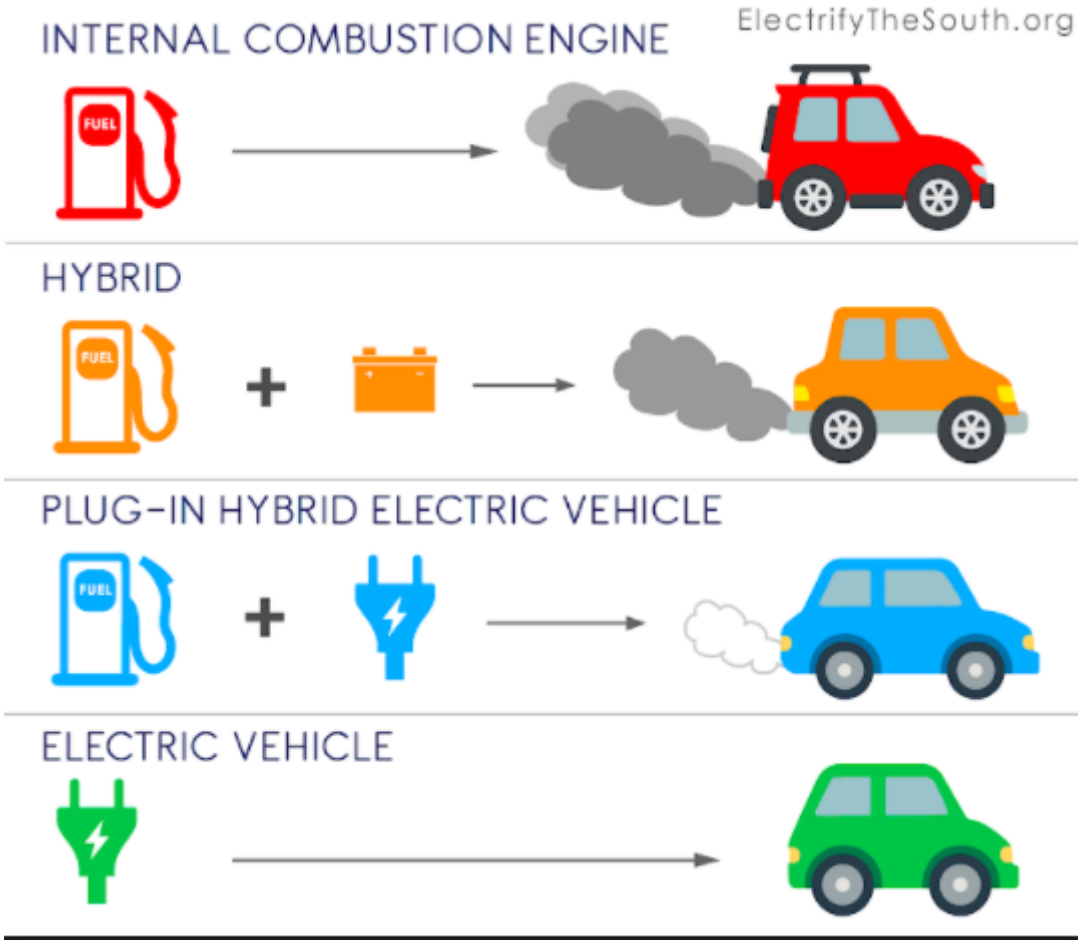
# Why Electric Vehicles?

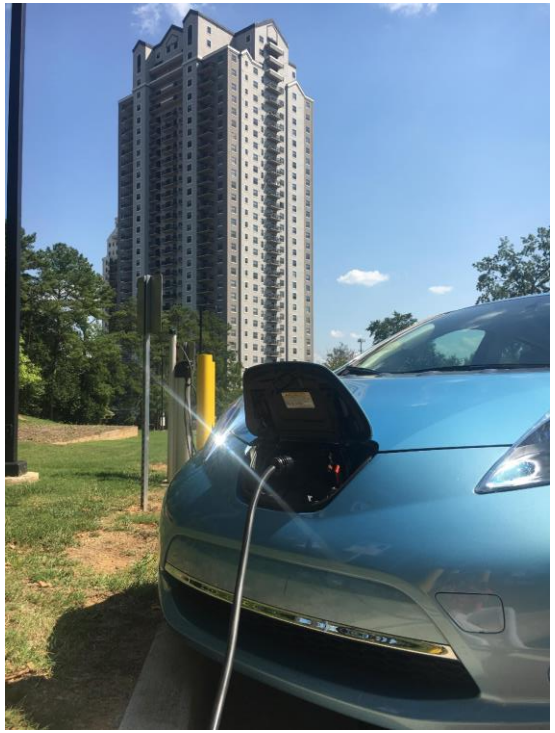
The transportation sector is now the largest source of greenhouse-gas pollution in the United States.

# What is an EV?


ElectrifyTheSouth.org
INTERNAL COMBUSTION ENGINE
FUEL
HYBRID
FUEL
PLUG-IN HYBRID ELECTRIC VEHICLE
FUEL
ELECTRIC VEHICLE

# Benefits of Electric Vehicles (EVs)

- **EVs save money** – low fuel and maintenance costs
- **EVs save time**– no more gas stations or oil changes
- **EVs protect public health & the environment**



# Lower Fuel Costs

- It costs about 3.5 cents per mile to drive electric and 1 cent per mile if charging with rooftop solar.

- It costs about 10 cents per mile to drive a gas-powered car if your car gets 23 mpg and gas is $2.25.

| Model | Cost per mile (cents) | 200 miles cost (dollars) |
|---|---|---|
| Gasoline | 10 | $20 |
| Electric | 3.5 | $7 |
| Solar PV | 1 | $2 |

Assuming $2.25 cost per gallon of gasoline and 23mpg
Assuming 33.7kW/h= 1 gallon and $.12/kWh and 115mpge

# PV Economics *Provided by SUN

- With an EV and co-op PV*, the charging is on the house. Really.

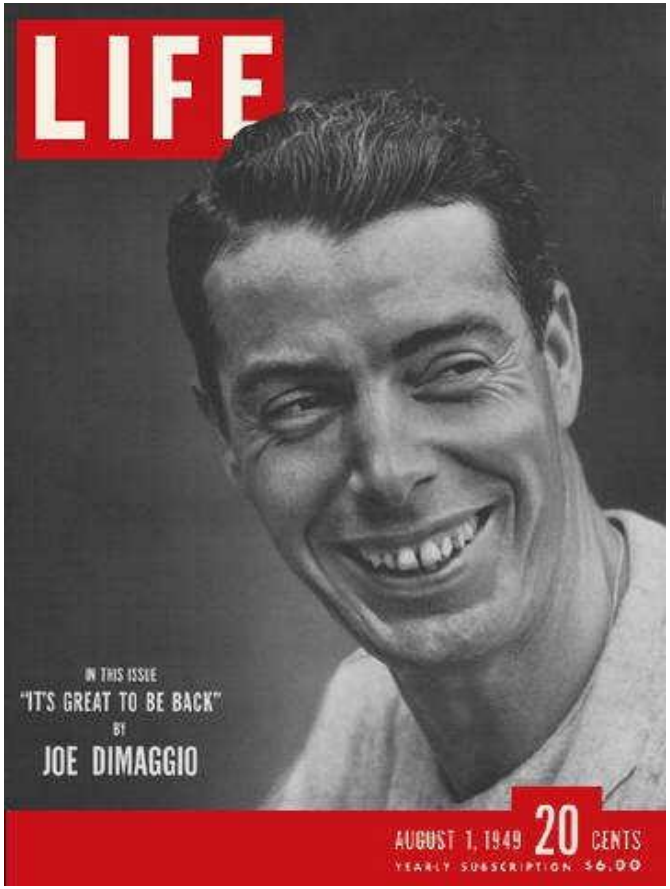

/Mile


One penny per mile is equivalent to $.27/gallon for gas.

TRIVIA: Know when the last time anyone saw gas at that price?

*Cost determined by FSEC

# Answer:

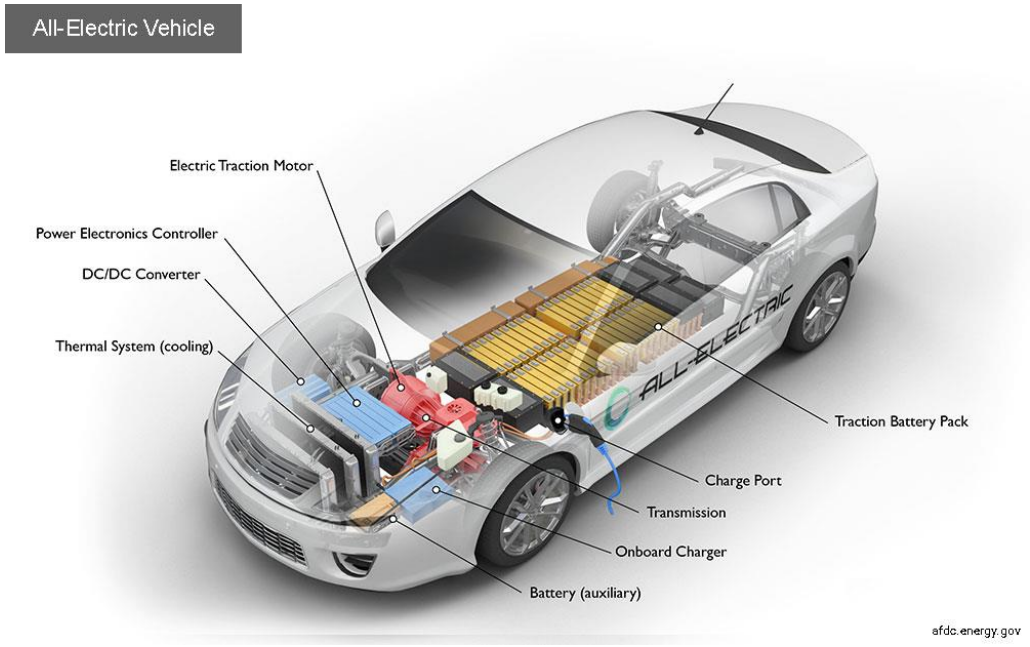



- 1949

Source: Life Magazine
Office of Energy Efficiency and Renewable Energy
energy.gov

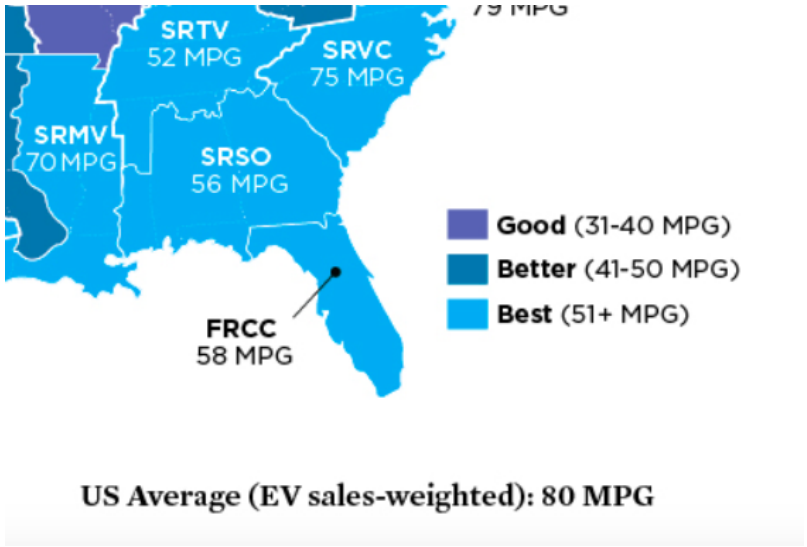
# Lower Maintenance Costs

- EVs require less maintenance than traditional Internal Combustible Engine (ICE vehicles).
- Additionally, time spent on maintenance is reduced.
- 20 moving parts vs 2,000



# Driving Electric Protects Public Heath

- No polluting tail pipe emissions mean cleaner air.
- Even when powered from coal generated electricity, EVs are cleaner.




Union of Concerned Scientists
2018 Report

# Electric Vehicles Are the Future

| | |
|---|---|
| **BMW** | 12 all-electric cars and 13 hybrids will be on the market by 2025 |
| **Daimler/Mercedes Benz** | $11 billion investment in electric range of vehicles; Mercedes-Benz – all vehicles will have an an electric model by 2022 |
| **Ford** | Ford will invest a total of $11 billion in electrification programs and launch 40 new electrified vehicles globally by 2022; Ford will launch 16 electrified vehicles over the next five years. |
| **GM** | At least 20 new EVs by 2023 |
| **Hyundai/Kia/Genesis** | Hyundai plans 23 kinds of electric vehicles by 2025 and is investing $35 billion in autonomous and electric vehicles by 2025. |
| **Renault, Nissan, Mitsubishi** | $11.7 billion investment to bring twelve new electric vehicles by 2022 |
| **Volkswagen** | VW Group promises to spend up to $84 billion USD in order to bring 300 electric vehicle models to market by 2030. |
| **Volvo** | All the models it introduces starting in 2019 will be either hybrids or powered solely by batteries |

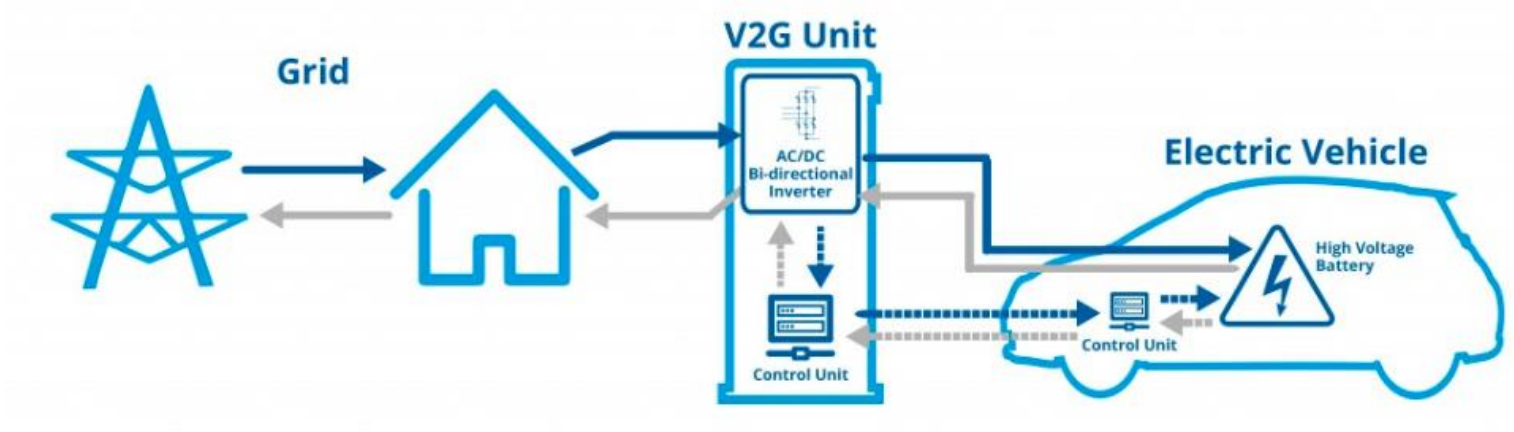
# Electric Vehicles Can Replace Offshore Drilling

# Energy Security

- Transportation accounts for nearly three-fourths of total U.S. petroleum consumption

# Utility and Grid Enhancement

## V2Grid Technology

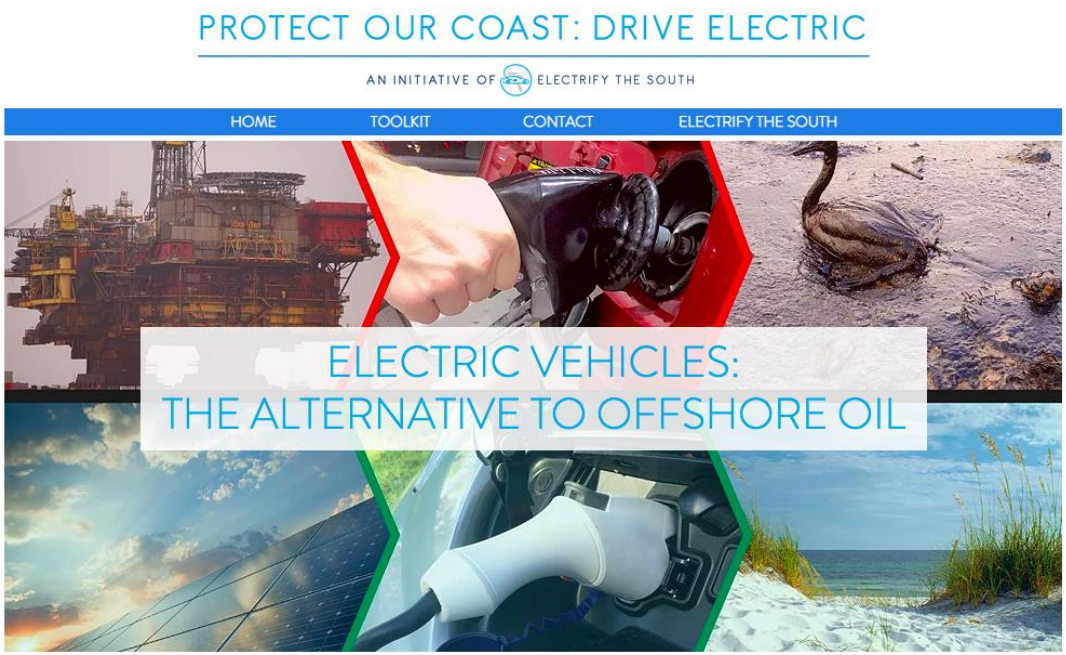


# New Campaign: Protect Our Coast – Drive Electric

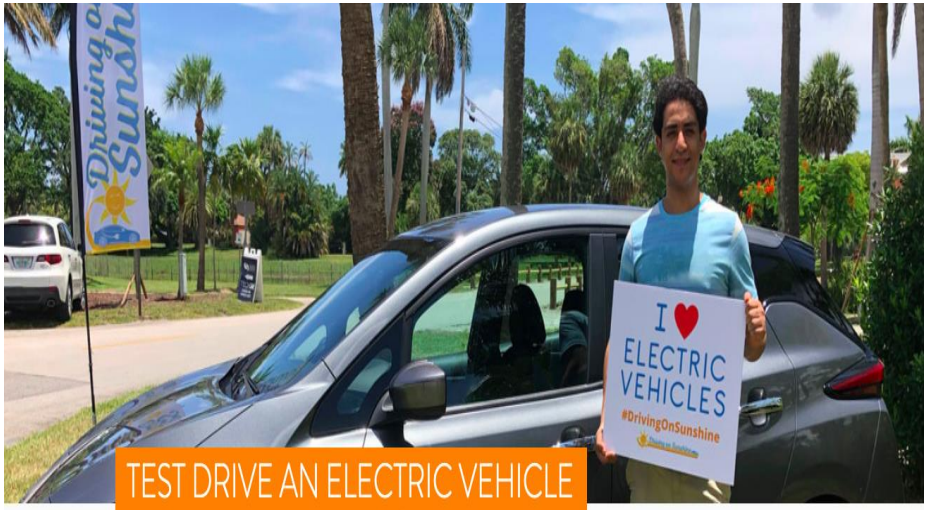
- **Goal:** local governments accelerate the transition to electric vehicles by adopting targeted policies
- **Outcomes:** reduce need for offshore oil and gas drilling, cleaner environment, better public health, and equitable access to benefits of EVs

# Policy Guide or 'Toolkit'

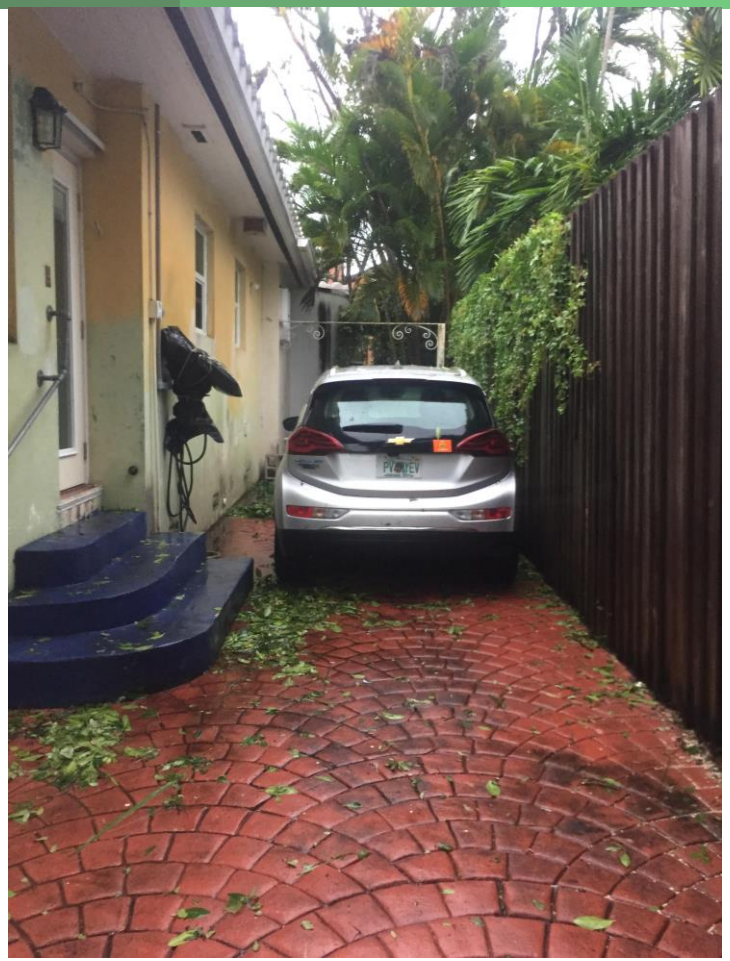
https://www.electrifythesouth.org/coast



# Driving on Sunshine

# Evacuating in an EV



- Bolting From Hurricane Irma: Maximizing the benefits of solar and an electric vehicle

- https://cleanenergy.org/blog/bolting-out-of-town-and-back/

# How to use an Electric Vehicle for Emergency Power


- https://bit.ly/EVPower

# Let's Connect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