

RMTD'S NEW Hybrid Electric Buses

Look what's coming to RMTD!

Get to Know RMTD ... Our Service

- ▶ RMTD currently operates the following service:
 - ▶ 18 routes Monday thru Friday from 5:15 a to 6:15p Monday thru Friday
 - ▶ We operate the same 18 routes Monday thru Saturday from 6:15 am to 5:15 p
 - ▶ These 18 routes provide service to Rockford, Loves Park, Machesney Park
 - ▶ Monday thru Friday we also offer 4 routes to Belvidere throughout the day
 - ▶ We operate 6 routes in Rockford only from 6:15 p to 10:15 p Monday thru Friday
 - ▶ We also run these 6 routes in Rockford on Sundays from 9:15 a to 4:15p
 - ▶ Our paratransit service, in accordance with the ADA runs during the same times and same destinations.
 - ▶ We do have extended night paratransit service in the Parks, Monday thru Friday

Get to Know RMTD ... Our Fleet

- ▶ Currently RMTD runs essentially 2 types of vehicles.
 - ▶ We have (40) 35' Fixed Route Buses
 - ▶ We have (35) smaller Paratransit vehicles ranging from medium duty to super duty in capacity.
 - ▶ The Fixed Route vehicles run on a “clean” diesel fuel while our Paratransit vehicles run on both clean diesel and gasoline.
 - ▶ Currently the Fixed Route buses use approximately 50 gallons of fuel/day while the Paratransit buses use approximately 35 gallons of fuel/day



The Big News ...

- ▶ Our fleet is aging and according to FTA requirements we are eligible to replace vehicles once they get to 12 years of age.
- ▶ We have 20 vehicles that are now eligible for replacement
- ▶ To replace a standard 35' Fixed Route “diesel” bus the cost is roughly \$350,00.00
- ▶ To replace a standard Fixed Route with electric buses, CNG buses, or Hybrid electric buses the doubles and in some cases almost triples.

RMTD'S DECISION TO GO HYBRID

- ▶ In Spring 2018, the RMTD Board of Trustees adopted a Sustainability Policy.
- ▶ *As the Rockford Mass Transit District is committed to the environment and enhancing the quality of life in our community, we therefore will work toward implementing environmentally sustainable practices whenever financially feasible. These includes, but are not limited to the adoption of alternative fuel technology vehicles to reduce greenhouse gas emissions and to increase energy efficiencies with our fleet, our facilities, our operations and our staff.*
- ▶ RMTD understands that from an environmental stand point it can no longer be “business as usual” so that presented with the opportunity to start replacing our vehicles, we needed to look for alternative fuel options.

HYBRID ELECTRIC PURCHASE

- ▶ In April of 2019 the RMTD Board approved the purchase of (5) 35' diesel hybrid electric buses from Gillig Corporation.
- ▶ As of this writing these 5 buses will be going into production in late November to early December of this year with an anticipated arrival date of late January 2020.
- ▶ The cost for these vehicles is \$719,167.00 per vehicle, almost double the cost of the standard diesel buses.
- ▶ The funding for this purchase is coming from the FTA discretionary fund for capital and rolling stock purchases

So What Does That Mean for Rockford

- ▶ **Efficient Stop and Go Driving**
 - ▶ Hybrid buses are ideally suited for the stop and go demands of transit
 - ▶ Electric motors develop maximum torque at slow speeds with regenerative braking recovering and storing energy
 - ▶ The start/stop technology allows for engine off operation when the vehicle is stopped.
- ▶ **Saves Energy**
 - ▶ These hybrid electric buses use approximately 25% less fuel than diesel.
 - ▶ Current buses use 50 gallons / day x 40 buses or 2,000 gallons daily
 - ▶ With the 5 new buses at 25% fuel savings that fuel usage drops to 1937 gallons per day
 - ▶ Annualized that is approximately and 18,000 gallon savings - that's significant!

EMISSIONS IMPACT



Trends shaping urban mobility



Concerns over air pollution are at the point of generating genuine action

EMISSIONS IMPACT

- ▶ Rockford, at the moment is very lucky.
- ▶ We do not have air quality issues as demonstrated in the previous slide
- ▶ In fact, our air quality is good enough that RMTD cannot access CMAC funds which are funds set aside for cities with air quality containment issues.
- ▶ That's the good news
- ▶ The bad news is that we have such good air quality that we cannot tap into CMAC funds, which we really could use

EMISSIONS IMPACT

- ▶ The best feature and benefit both on the hybrid buses we are purchasing is that they run approximately **90%** cleaner than the diesel buses we are replacing!

ADDITIONAL BENEFITS OF HYBRID ELECTRIC BUSES

- ▶ Geofencing
- ▶ One of the most exciting features of these buses is the option to set up zones or “geofenced” areas where we can run in electric mode
 - ▶ No emissions
 - ▶ Significant sound reductions
- ▶ Geofenced areas can include
 - ▶ Hospitals
 - ▶ Schools
 - ▶ Highly dense residential area
- ▶ Essentially it is a pre programmed area that when the bus senses it is approaching the designated area, it runs on electric power.
- ▶ The following slide demonstrates how a geofenced area in Rockford would look

GEOFENCING EXAMPLE

