



ChargeWell Progress Report

ChargeWell is a regional network of electric vehicle charging stations developed by the North Florida TPO in partnership with the North Florida Clean Fuels Coalition.

Performance to Date

- Since established in late 2015, the Phase I ChargeWell network has attracted **822** users, with about 4 new users added every month. There are **1,564** electric vehicles registered in North Florida¹ and this number is growing rapidly (about 50% per year).
- Users have charged their vehicles over **18,000** times. On average about 25 charging sessions occur per day. Usage has grown steadily at a rate of about one new daily charging session every 40 days.
- Use of the ChargeWell network has displaced the equivalent of **20,000** gallons of gasoline. The average car uses about 500 gallons per year, so this is equivalent to the annual fuel use of about 40 vehicles.
- The ChargeWell network has supplied about **160,000** kilowatt-hours (kWh) of electricity. This is equivalent to the annual energy use of about 11 Florida homes.
- Electric vehicles are good for the environment. Use of the network has avoided emission of **67** metric tons of greenhouse gases, the pollution responsible for climate change. This is equivalent to switching 2,242 incandescent light bulbs to LEDs or planting 1,736 trees.
- Using electricity to power vehicles is much cheaper than gasoline. Most ChargeWell stations are currently free. By using ChargeWell electric vehicle drivers have saved about **\$40,000** in gasoline costs.²

Table 1: ChargeWell Phase I Statistics (December 2015 – October 2018)

Statistic	Value
Users	822
Charging Events	18,408
Avoided Gas Consumption (GGE)	19,993
Electricity Consumption (kWh)	159,305
Avoided Greenhouse Gas Emissions (mtCO ₂ e)	67

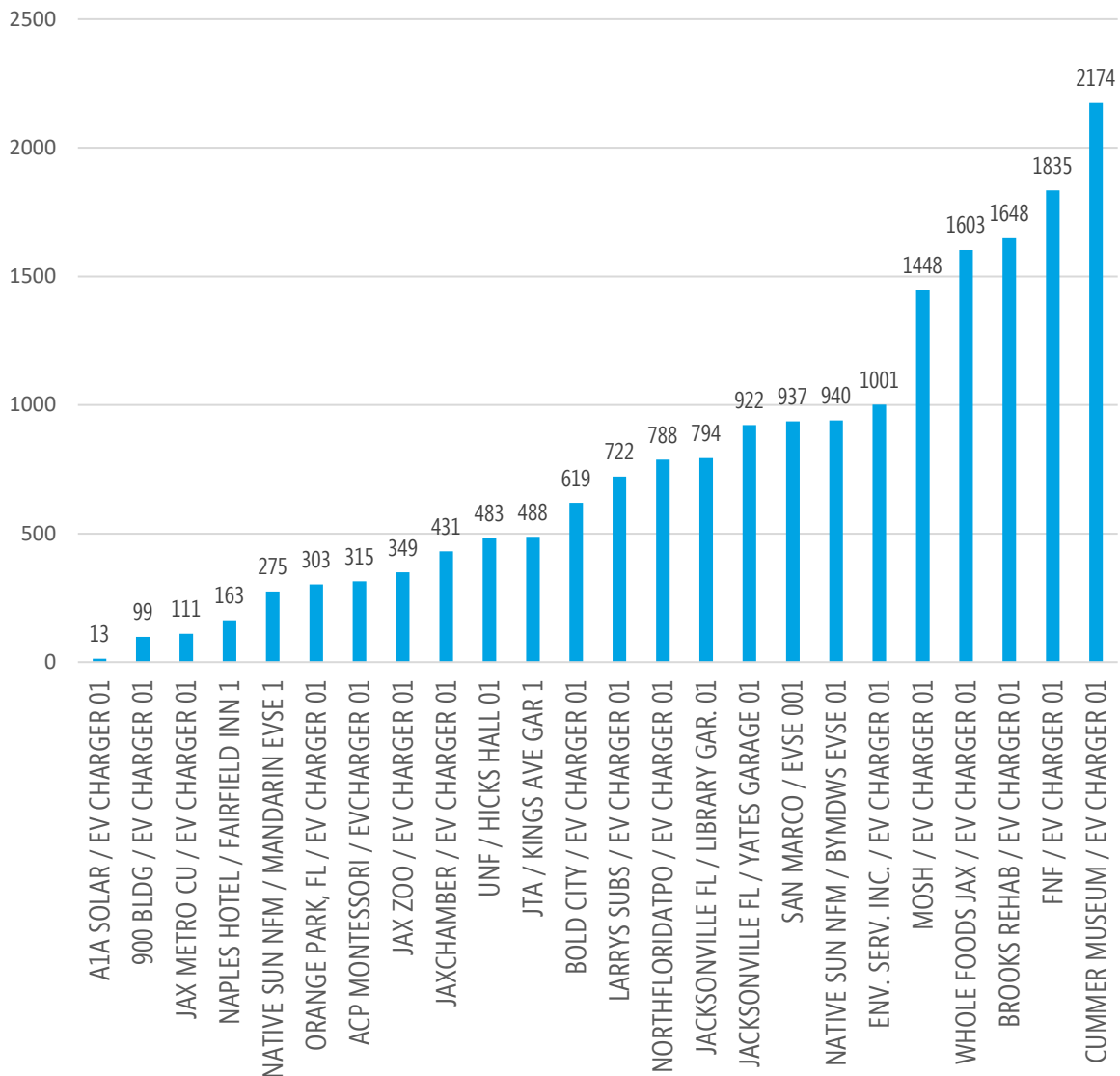
¹ North Florida includes Clay, Duval and Nassau and St. Johns Counties.

² Even if the average retail rate for electricity was charged to all ChargeWell drivers, they still would have saved over \$25,000 since 2015.

ChargeWell Stations

Use of ChargeWell stations varies greatly by location. Some locations are used much more frequently than others. The most used stations tend to be in locations near a variety of activities, such as retail, dining, cultural attractions and multi-family housing. Examples include the ChargeWell station located at the Cummer Museum, which is within walking distance to Five Points (a popular shopping and entertainment district) and the weekend Riverside Arts Market. Popular stations are also located near a workplace where electric vehicles are used. Examples include the ChargeWell station located at the Brooks Rehabilitation Hospital.

Figure 2: ChargeWell Phase 1 Stations, Charging Events to Date

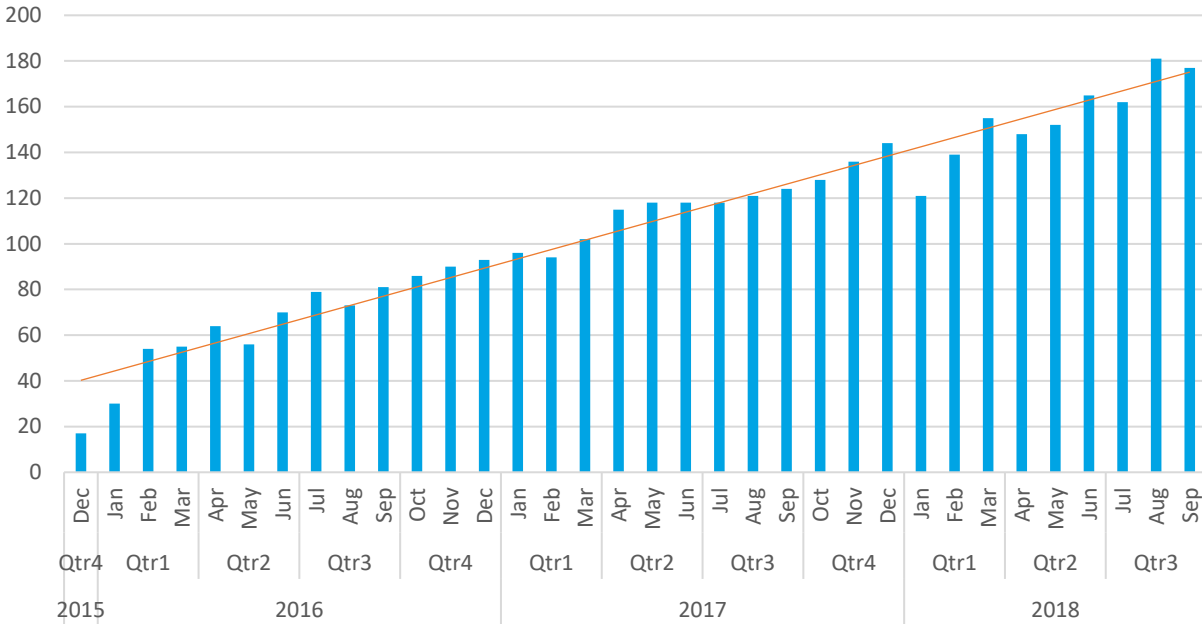




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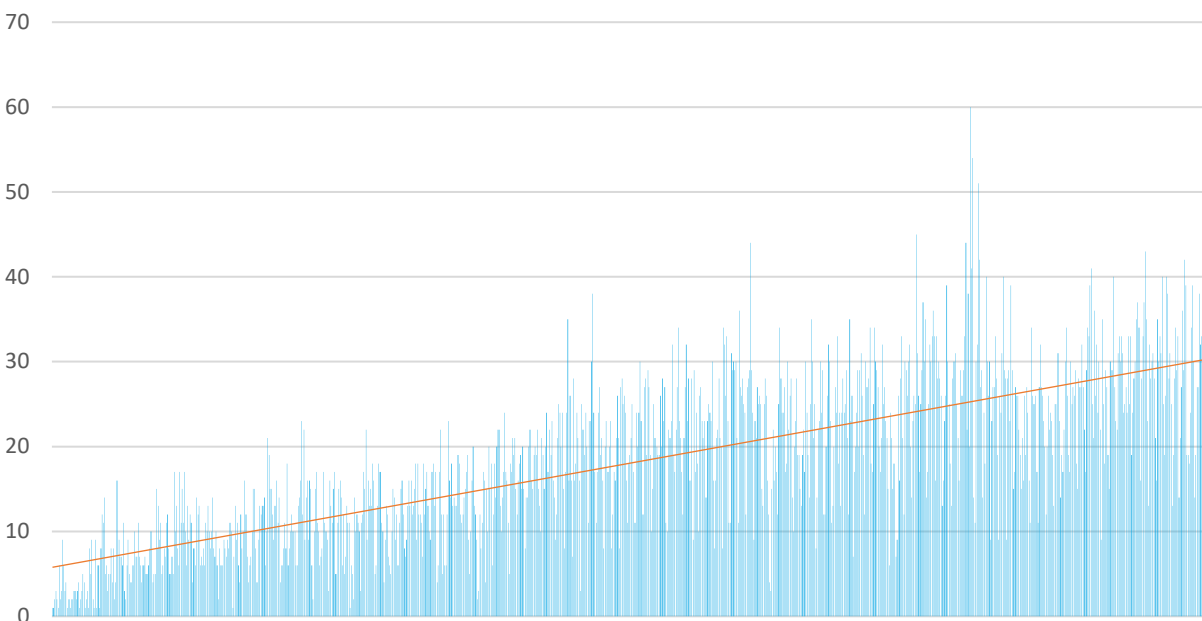
Users

Figure 3: ChargeWell Phase 1 Montly Users



Charging Events

Figure 4: ChargeWell Phase 1 Daily Charging Events

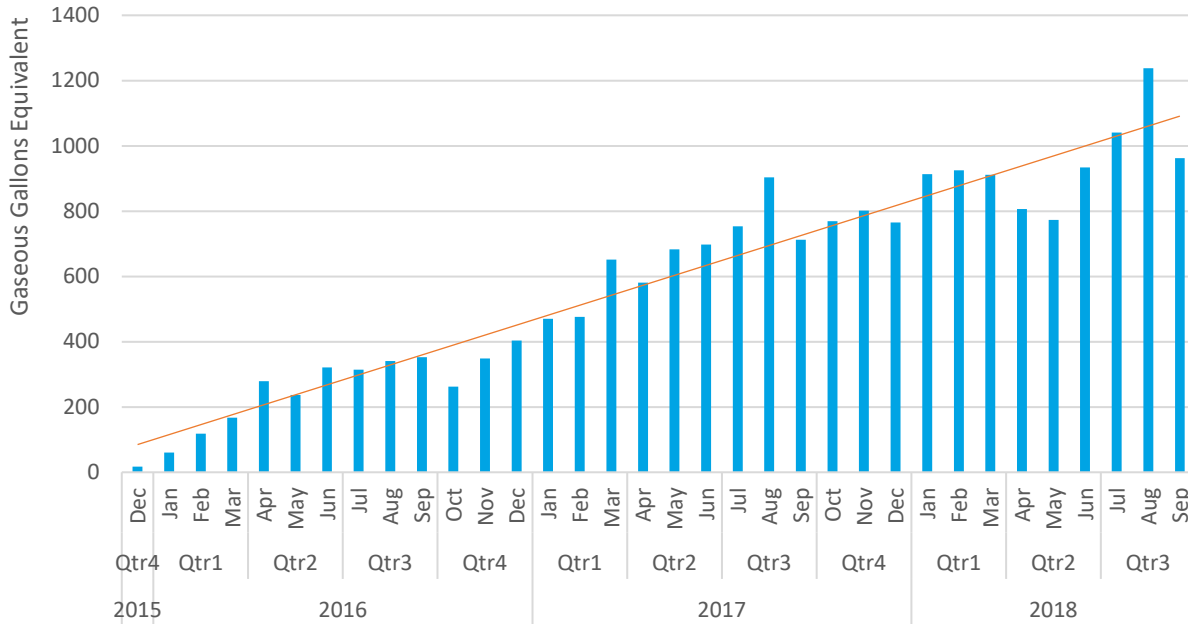




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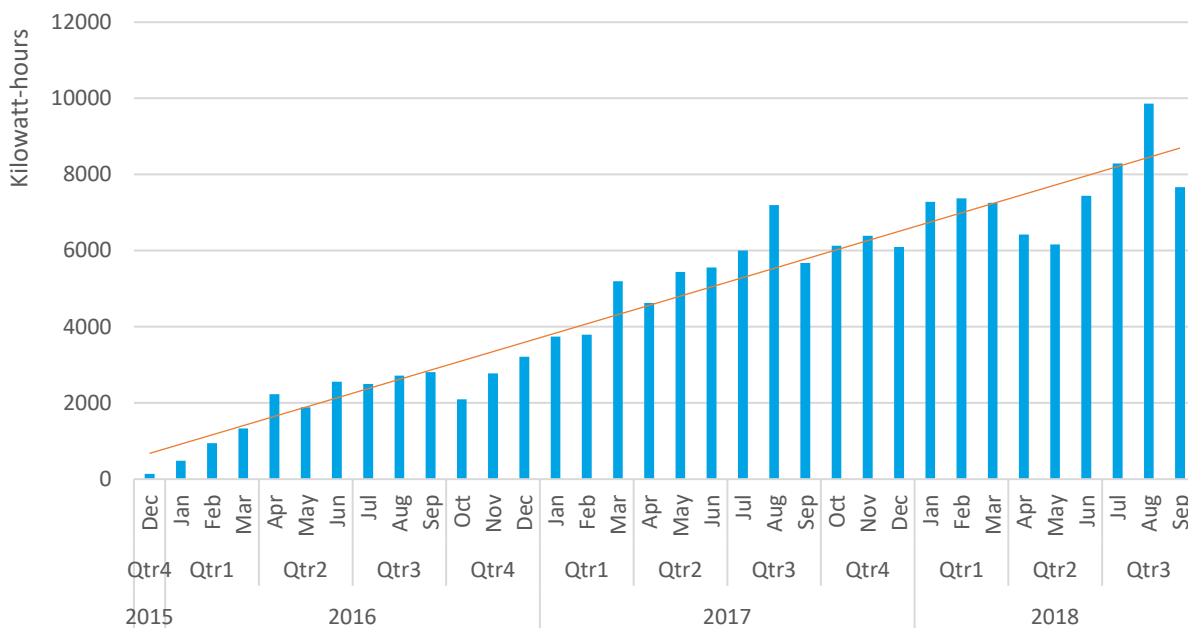
Avoided Gas Consumption

Figure 5: ChargeWell Phase 1 Monthly Avoided Gasoline Consumption



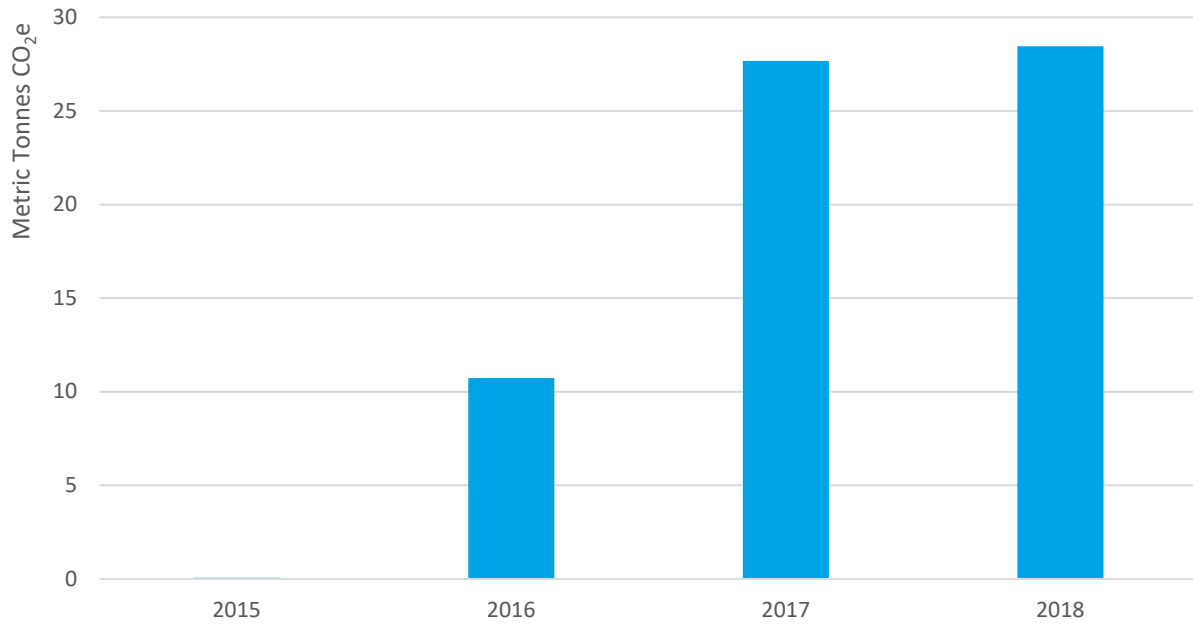
Electricity Consumption

Figure 6: ChargeWell Phase 1 Monthly Electricity Use



Avoided Greenhouse Gas Emissions

Figure 7: ChargeWell Phase 1 Annual Avoided Greenhouse Gas Emissions*



*Data are for December 2015 through September 2018.



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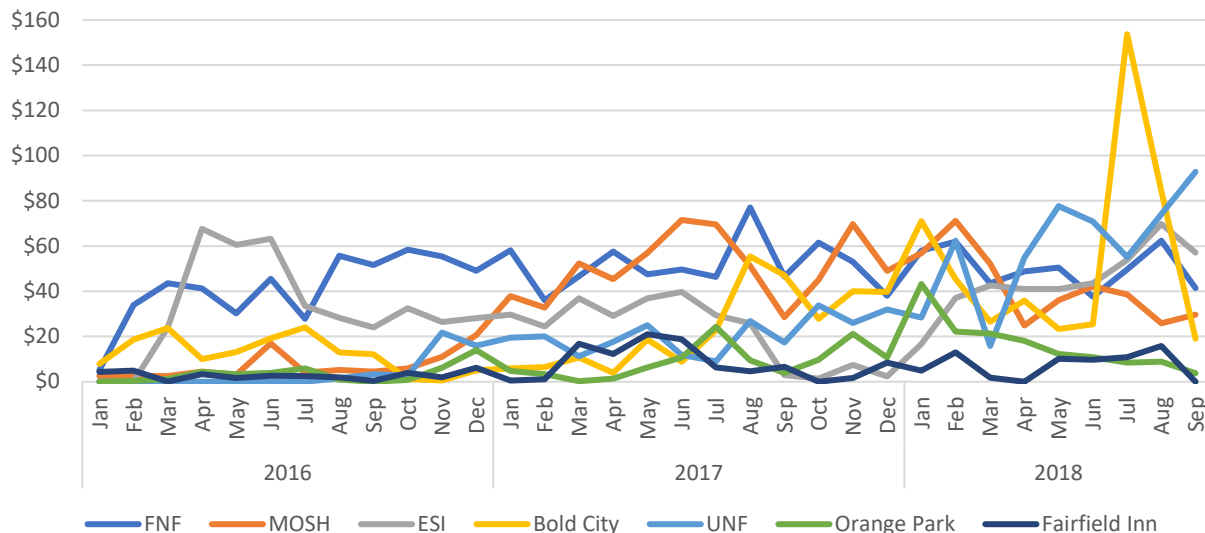
Revenue

Nine of the 25 ChargeWell stations require a fee for use. The remainder are free. The rates charged and annual revenue for stations that require a fee for use are shown in Table 2³. Figure 9 graphs monthly revenue. Notably, the MOSH station has generated the second largest amount of revenue to date while charging the lowest average rate per kilowatt-hour (\$0.11 / kWh). MOSH accomplishes this by charging a flat fee of \$0.50 for up to four hours of use. After four hours, charges are \$0.50 per hour and \$0.14 per kWh up to \$7.50 per session.

Table 2; ChargeWell Phase I Station Rates and Annual Revenue

Station	Organization	Rate	2016	2017
FNF	Fidelity National Financial	\$0.12 / kWh	\$497	\$618
MOSH	Museum of Science and History	\$0.50 / use*	\$83	\$610
ENV. SERV. INC.	Environmental Services, Inc.	\$0.50 / hour*	\$388	\$266
BOLD CITY	Bold City Brewery	\$0.18 / kWh	\$149	\$287
UNF	University of North Florida	\$1.00 / hour	\$45	\$250
ORANGE PARK	City of Orange Park	\$0.13 / kWh	\$41	\$106
NAPLES HOTEL	Fairfield Inn & Suites Jacksonville Airport	\$0.13 / kWh	\$34	\$98

Figure 8: ChargeWell Phase I Station Monthly Revenue

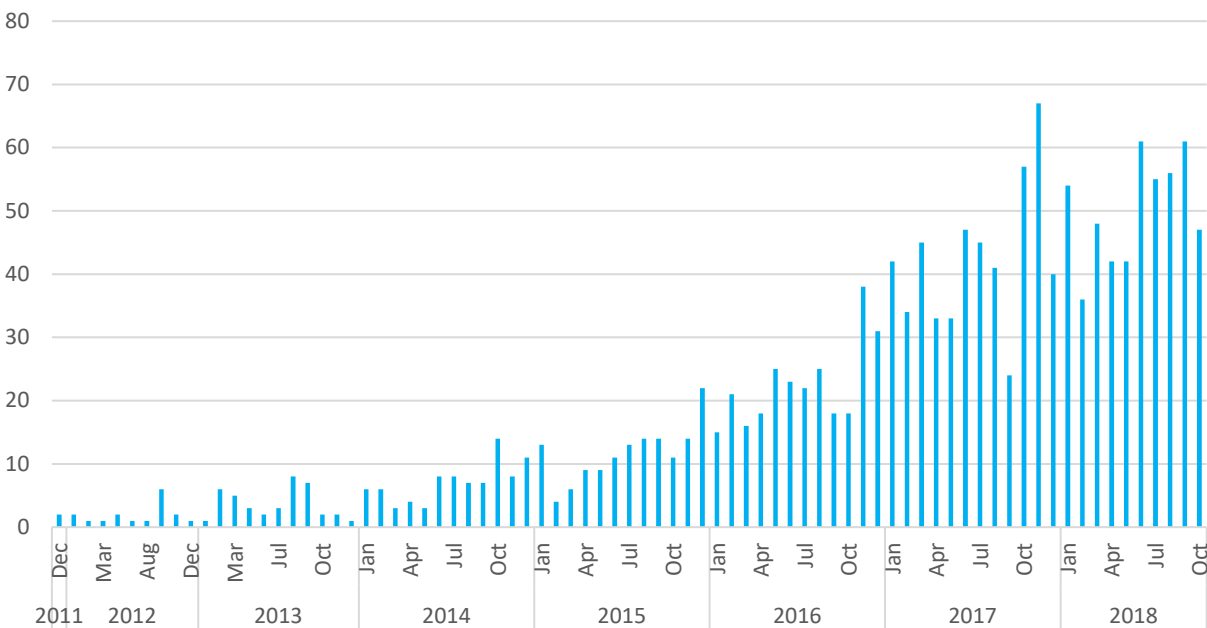


³ Environmental Services, Inc. charges \$0.50 per hour, except for Tesla vehicles which are charged \$0.25 per kWh. Data on vehicle type is not available. Therefore, all usage is assumed to be at the \$0.50 per hour rate. A1A Solar charges \$0.13 per kilowatt-hours, however charges to date have been *de minimus* (< \$4.00). Use of Jax Metro Credit Union's station is free to non-members and \$0.50 / hour to non-members. Data on the membership status of users is not available. Therefore, all usage is assumed to be by members.

Electric Vehicles

Estimates indicate 1,564 electric and plug-in hybrid electric vehicles registered in North Florida to date.⁴ The estimated number of EVs have been growing rapidly and is projected to reach over 10,000 vehicles within the next ten years.⁵ The most popular models are the Tesla Model S, Chevrolet Volt, Tesla Model X, Nissan Leaf and Ford Fusion Energi and Chevrolet Bolt. These models represent 75% of all electric vehicles. The average EV owner in the region is 51 years old.

Figure 9: Monthly EV Registrations in Clay, Duval and Nassau Counties, 2011 to Present



⁴ EV estimates for Clay, Duval, Nassau and St. Johns County are uncertain. There is no direct source for EV counts. The data upon which estimates are based is provided by the Florida Department of Highway Safety and Motor Vehicles (DHSMV). DHSMV provides data in response to user-provided Vehicle Identification Number (VIN) codes that correspond to EV make and model. There is no definitive database of EV VIN codes.

⁵ Projections for future EV sales are highly uncertain. Those presented are based on US Energy Information Administration's Annual Energy Outlook 2017, Light-Duty Vehicles Sales by Technology and Type. Other sources project much higher market penetration for EVs (i.e. 5 to 8 times greater).