TECO
TAMPA ELECTRIC

September 27, 2012

Mr. Benjamin Crawford
Florida Public Service Commission
2540 Shumard Oak Blvd
Tallahassee, Florida 32399-0850

Re: FPSC Electric Vehicle Charging Study

Dear Mr. Crawford:

Thank you for providing Tampa Electric the opportunity to participate in the September 6, 2012, staff workshop on the Electric Vehicle Charging Study. I am writing on behalf of Tampa Electric Company to provide additional information in response to the Florida Public Service Commission Staff's (Staff) request for certain data described in Staff's presentation.

As indicated in the chart below, the most common size transformer on Tampa Electric's system serving 120/240 3 wire, 1 phase secondary voltage is 25 kVA. Also indicated in the table below are the ranges of numbers of single family dwellings that can be supported by each of the transformer sizes.

Transformer Size (KVA)	Typical Number of Single Family Dwellings per Transformer [1]	Quantity of Transformers on Distribution System [2]
15	1 - 3	9,265
25	2 - 6	22,746
37.5	3 - 9	17,114
50	5 - 13	16,273
75	7 - 16	3,600
100	10 - 12	953

Notes:
1. Based on Tampa Electric's design guidelines for new construction of 1 phase residential single family dwellings 1,501 - 3,500 square feet in size.
2. Indicates quantity of transformers with 120/240 3 wire 1 phase secondary voltage on Tampa Electric's distribution system. Transformers with 120/240 3 wire, 1 phase secondary voltage are used to supply power to both residential and commercial Customers.

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Tampa Electric appreciates Staff's need to understand the extent to which the existing utility infrastructure will support vehicle charging. As indicated in our response to the Staff's 1st data request in this matter, there is no set number of EVs on a single transformer that will require an upgrade for that transformer. The kW loading for the cars utilizing the charging device (which can range currently from 1.4 kW to over 19 kW), the number of cars that regularly utilizes each charger, the existing loading for that transformer, and the periods during which charging will occur all will play a part in determining if an upgrade is needed.

Tampa Electric is concerned that the values included on slide 15 in the Staff's presentation may give the impression that existing utility infrastructure would have to be upgraded to support even a relatively small number of charging stations. As indicated in our response to question 21 of the staff's 1st data request, Tampa Electric completed a residential distribution system impact study that considered the impact of home charging station load. Based on anticipated levels of EV expansion, the company believes significant grid impacts are years away from being a concern. If it is necessary for the report to include values showing the numbers of charging stations that can be accommodated by the utilities' existing distribution systems, they should be accompanied by the assumptions relied on to develop the values and a caveat that the values may not be representative of all parts of the system.

Again, we appreciate the opportunity to participate in this important study. Please do not hesitate to call me if you need additional information.

Sincerely,

Wilbur J. Stiles, II
Manager Regulatory Affairs

cc: Bill Ashburn, Tampa Electric Company
Paula Brown, Tampa Electric Company