DETECTION AND DISAGGREGATION OF ELECTRICAL VEHICLE CHARGING

ABSTRACT

A system and method for disaggregation of customer electrical usage to detect an electrical vehicle (EV) charger from among other electrical devices. An example electricity meter includes a processor, memory device(s), and applications including a model for detecting EV charging. An example model: associates data from a time-series of paired voltage and current measurements with a moving time-window including a plurality of sub-windows having a cumulative duration of the moving time-window; adds a new sub-window having at least one new paired voltage and current measurement to the moving time-window, and deletes an old sub-window, in a continuing manner; determines a value of power, and a value of volt-amps-reactive, for each sub-window within the moving time-window, wherein a stream of paired P and Q values is created; and determines, based on the stream of paired P and Q values, if an EV was charged and estimates the amount of EV charging power or energy.

FIG. 1