SYSTEMS AND RELATED METHODS FOR THE DESIGN OF ELECTRIC VEHICLE INFRACSTRUCTURE

TECHNICAL FIELD

[0001] The present disclosure relates to devices and methods useful for designing and constructing electric vehicle infrastructure.

BACKGROUND

[0002] Among the challenges posed by transitioning away from fossil fuels is the need to provide accessible stations at which electric vehicles can be charged. Over the last several decades, urbanization of population centers has resulted in many suitable locations for stations being subjected to various restrictions. These restrictions may be related to physical space, terrain, available utility resources, access to roads, governmental regulations, etc. These restrictions may impose challenges to applying the same station configuration at each prospective site for a charging station. Because the number of charging stations required will rapidly increase in the next few years, there is a need to evaluate and develop a large number of suitable sites of charging stations despite the unique restrictions each suitable site may have. The present disclosure addresses this need as well as other needs of the prior art.

SUMMARY

[0003] According to a first aspect of the present invention, there is provided a method of designing a charging station to charge electric vehicles at a selected site. The method may include the steps of compiling a set of engineering rules, wherein each engineering rule represents a predetermined design decision; encoding the set of engineering rules in a processor; obtaining non-site specific information from suppliers and manufacturers; storing non-site specific information in a database; obtaining site specific information for the selected site; conveying the site specific information via a user interface to the database; generating deliverables using at least the set of engineering rules, the non-site specific information and the site specific information; and sending the deliverables to an end user.

[0003a] According to a second aspect of the present invention, there is provided a system for evaluating and developing a prospective site for a charging station for electric vehicles, comprising:

- a user interface configured to receive site-specific information;

- a database configured to store at least non site-specific information and site-specific information received from the user interface; and

- a processor configured to access the database and encoded with engineering rules, the processor configured to generate at least one deliverable for constructing the charging station at the prospective site using the engineering rules, the site-specific information, and the non site-specific information.