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(54) **BATTERY CHARGING SYSTEM WITH ENHANCED TIME-BASED CHARGING AND COUPLING DETECTION**

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(57) **ABSTRACT**

A battery charging system with enhanced time-based charging and coupling detection. A user provides a time available for charging to a control unit of the vehicle, a mobile device of the user, or a control unit of a charging station directly. In the case that the time available for charging is provided to the control unit of the vehicle or the mobile device of the user, this information is then shared with the control unit of the charging station when the control unit of the charging station detects coupling of the associated connector/coupler to the vehicle, or when the vehicle is detected within a predetermined proximity of the charging station. When the vehicle is connected to the charging station and charging commences, a standard charging power may be utilized or a charging power may be selected and utilized such that enhanced charging can be provided in the available time period.