Evcharger

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evcharger - Electric or hybrid vehicles

Synopsis

```
class evcharger {
      (class residential_enduse;)
      enumeration {HIGH=2, MEDIUM=1, LOW=0} charger_type;
      enumeration {HYBRID=1, ELECTRIC=0} vehicle_type;
      enumeration {WORK=1, HOME=0, UNKNOWN=4294967295} state;
      double p_go_home[unit/h];
      double p_go_work[unit/h];
      double work_dist[mile];
      double capacity[kWh];
      double charge[unit];
      bool charge_at_work;
      double charge_throttle[unit];
      char1024 demand_profile;
}
```

Properties

Property name	Type	Unit	Description
charger_type	enumeration	none	Charge rate (HIGH, MEDIUM, or LOW)
vehicle_tpe	enumeration	none	Specify if vehicle is hybrid or all electric.
state	enumeration	none	Initial location of the vehicle.
p_go_home	double	unit/h	Probability of vehicle returning home.
p_go_work	double	unit/h	Probability of vehicle leaving to work.
work_dist	double	mile	One way distance traveled between home and work.
capacity	double	kWh	Battery capacity
charge	double	unit	Current battery state of charge, fraction of capacity.
charge_at_work	bool	none	Specify if work charging is available.
charge_throttle	double	unit	Sets fraction of full charge rate.
demand_profile	char1024	none	Demand profile of the vehicle.

Default Evcharger

The minimum definition for an evcharger object is

```
object evcharger {
}
```

Evcharger Schedule

The evcharger object can be put on a schedule to control when it is at home, work, or on a trip. This can be done by using a schedule for the p_go_home and p_go_work properties (only control when it is at home or work) or by using the demand_profile property.

Example

```
module residential;
module tape;

clock {
        timezone PST+8PDT;
        timestamp '2001-07-10 00:00:00';
        stoptime  '2001-07-18 00:00:00';
};

object house {
        object evcharger {
                object recorder {
                        file charge.csv;
                        property charge;
                        interval 600;
                };
        };
}
```

Bugs

See Also

- Residential module
  - User's Guide
  - Appliances
  - house class – Single-family home model.
  - residential_enduse class – Abstract residential end-use class.
  - occupantload – Residential occupants (sensible and latent heat).
  - ZIPload – Generic constant impedance/current/power end-use load.
- Technical Documents
  - Requirements
  - Specifications
  - Developer notes
  - Technical support document
  - Validation

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