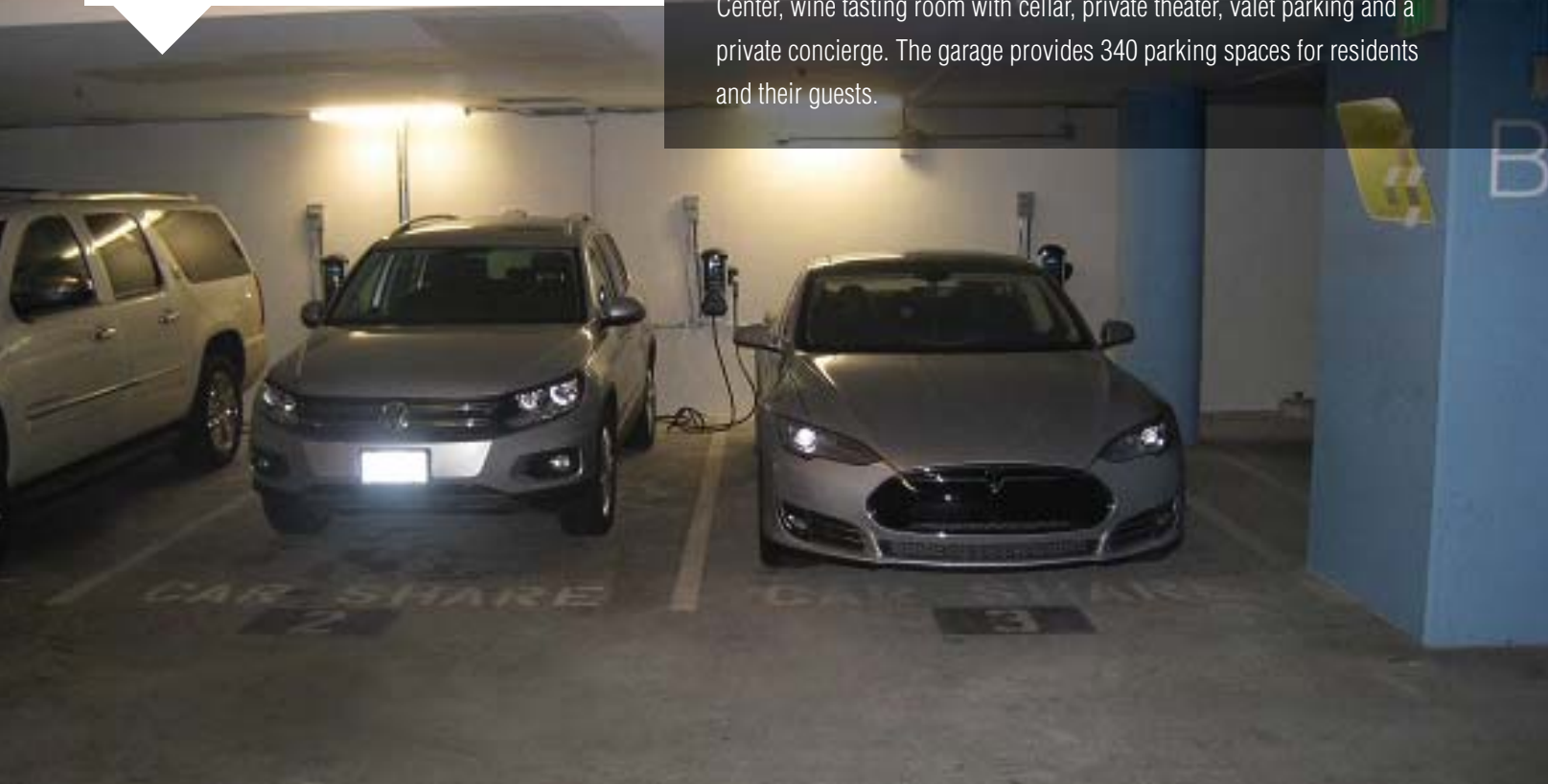


**MILLENNIUM TOWER  
SAN FRANCISCO**

Built in 2009, **Millennium Tower** is a 419-unit high-rise condominium tower in San Francisco. Its numerous amenities include a private resident dining room, lap pool, sports club/LA Fitness Center, wine tasting room with cellar, private theater, valet parking and a private concierge. The garage provides 340 parking spaces for residents and their guests.



**CHARGING SNAPSHOT**

- No. of residential units: **419**
- No. of parking spaces: **340**
- No. of residents driving PEVs: **6**
- Number of charging stations and types:  
**Level 1 - 3**  
**Level 2 - 3**

**CHARGING STORY**



**Charging setting**

Millennium Tower installed its charging stations as part of the San Francisco multi-unit dwelling demonstration program, in conjunction with ChargePoint, the City of San Francisco and REJ Electric. The demonstration program, funded by the U.S. Department of Energy and the California Energy Commission, paid a significant portion of equipment and installation costs.



**Decision-making process**

Building management agreed to be part of the demonstration program with the cooperation of the building engineering group and the valet parking provider, City Park. The homeowners association (HOA) set the ground rules that the program must be revenue-neutral. Costs and revenue are monitored to ensure full cost recovery. Rates are currently set at \$.76 per kWh during on-peak times and \$.54 per kWh during off-peak times. This fee includes all costs for electricity, software services and maintenance. The charging stations' electricity usage is captured by the commercial common area meter, which measures electricity usage for all shared areas. Drivers pay for their individual usage via an account with ChargePoint, the charging station manufacturer.



**Charging implementation and management**

Currently, six PEV drivers share three charging stations located in the guest parking area. The building has valet parking so it is easy and efficient for residents to share the units. To the extent possible, parking management also tries to take advantage of lower off-peak charging rates.



**Charging costs**

The entire project cost was covered by grants.



**Multi-unit dwelling charging challenges**

Before the installation of the charging stations, residents were plugging Level 1 cords into wall sockets and the management company could not recover the electricity cost. The current system allows the costs to be paid by the PEV drivers.

A change in cellular coverage for the area occurred after the units had been installed. Previously, there had been cellular coverage even though the charging stations were located in an underground parking garage. Recently, wireless communication has been poor during the day but available at night. The stations still function normally, but now they communicate data back to ChargePoint only at night.

**Contact information**

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“As the parking provider for Millennium Tower, City Park worked with the engineering group and the HOA to ensure that all ongoing costs for the chargers would be covered by the PEV drivers. As a result, the program has received only positive reviews from the residents.”