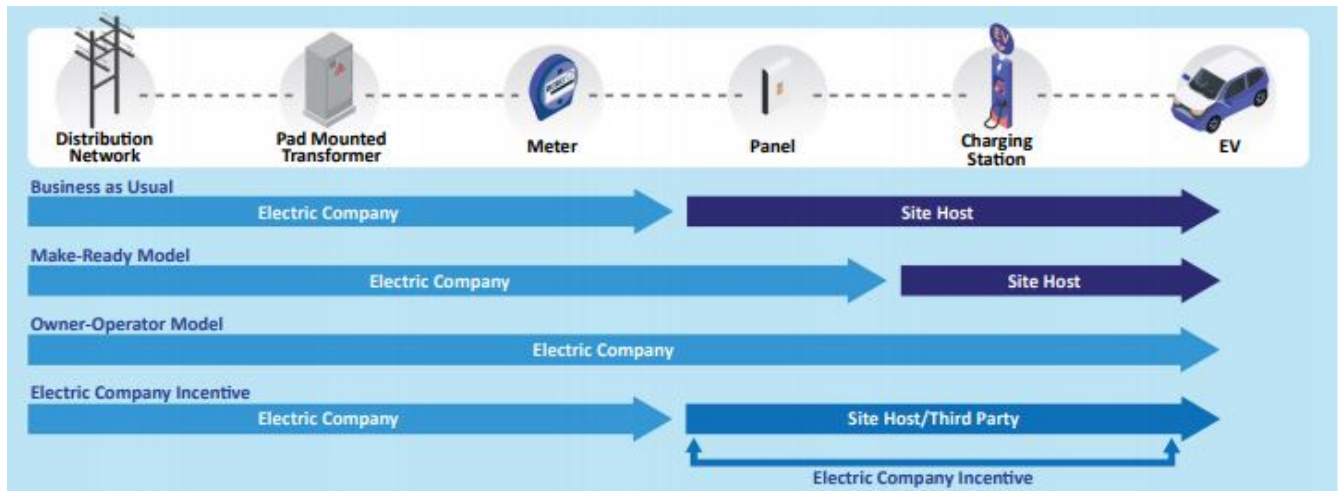


EVSE Business Models

Ownership Models

Several charging station business and ownership models are available to entities interested in developing charging infrastructure. Understanding ownership models starts with understanding the various components that are part of the broader charging system. The figure below from EPRI shows four types of EV charging infrastructure ownership models from the perspective of an electric utility.

Figure 1: Electric Vehicle Charging Infrastructure Ownership Models¹



The four types of infrastructure ownership models illustrated above are a business-as-usual model, the make-ready model, the owner-operator model, and the electric company incentive model. The difference between ownership models is found in which party owns and operates site-level charger equipment, including the panel and the charging station itself. Naturally, utilities will own electric transmission and distribution infrastructure, but virtually any entity can own and operate site-level EVSE. The list of infrastructure ownership options includes the following:

- **Site-Host Owner-Operator:** In this model, the entity hosting the charging stations also own the charging stations. This model gives the site host complete control of the station and allows them to keep all revenue, but also places the most risk on the host, including risks associated with maintenance, obsolescence, and low charger utilization.
- **Utility Ownership:** In this model, the electric utility would own the charging station. The utility may lease the chargers to the site host or develop its own sites and charging network. For non-utility entities that lease chargers, risks associated with maintenance and charger obsolescence are reduced, but risk of low charger utilization still remains.

¹ Electric Power Research Institute. Interoperability of Public Electric Vehicle Charging Infrastructure. Retrieved from: <https://www.eei.org/-/media/Project/EEI/Documents/Issues-and-Policy/Electric-Transportation/Final-Joint-Interoperability-Paper.pdf>

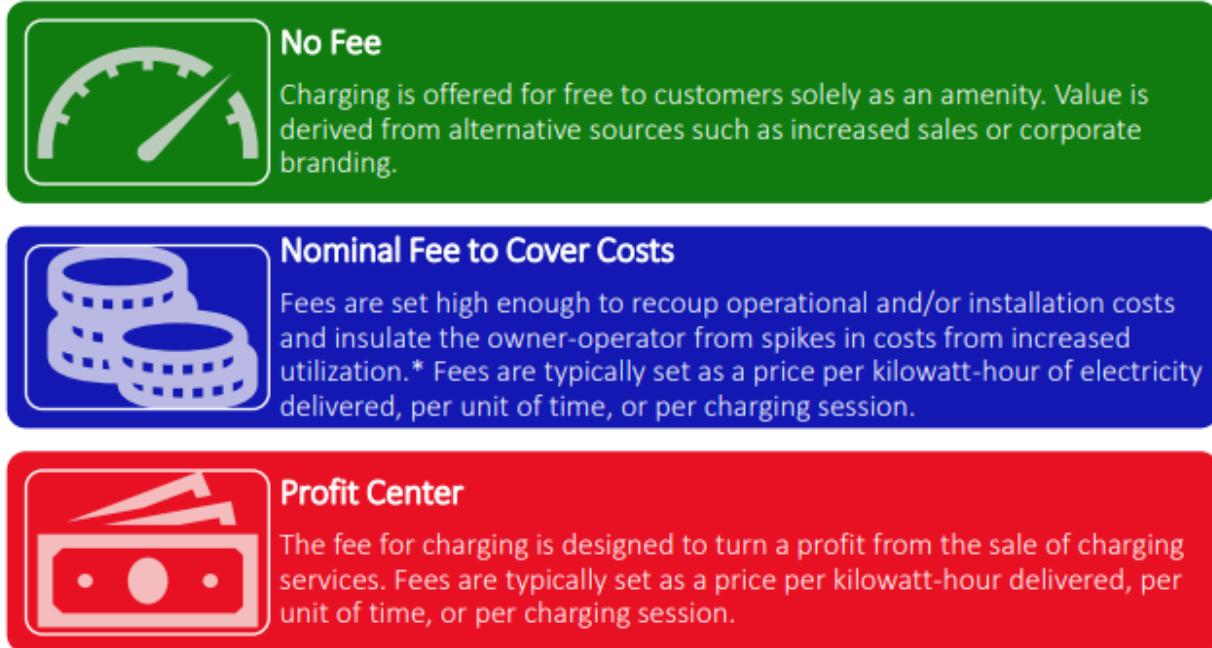
- **Third-Party Ownership:** In this model, a site host may partner with a third-party to handle a portion or all of the ownership, operation, maintenance, and billing responsibilities for the charging stations. There is flexibility in this approach as the two parties may agree to the terms, roles, and responsibilities of their choosing. This approach includes partnerships with EV service providers such as ChargePoint or Shell Recharge Solutions, which is common.
- **Infrastructure-as-a-Service/Charging-as-a-Service:** Infrastructure-as-a-Service is a business model in which a third-party covers all capital expense associated with charging infrastructure development, owns the equipment, and then effectively leases it to a site host under a service agreement that may also include assistance with operations and maintenance. There is a broad range of P3 delivery models with varying levels of City participation and risk transfer. This approach can be beneficial for entities that seek to reduce or minimize the upfront capital cost of charging infrastructure development. The Infrastructure-as-a-Service provider would effectively convert the capital cost of infrastructure development to an operating cost and pass those costs on to the site host via a monthly fee with the addition of a service charge. This approach may be more costly to site hosts in the long run due to service fees but may still be attractive depending on the value that the site hosts places on reduced upfront costs.

Fee Structures

An advantage of being a Site-Host Owner-Operator is control over pricing and consistency and optimization of customer experience. This control comes at the price of total responsibility for station operational and maintenance costs, coordination with utilities, and having detailed knowledge of electricity rate. Knowledge of electricity rate structures can be particularly important if the charging infrastructure is connected to the site host's existing electricity meter. In such cases, also known as operating "behind the meter," balancing the optimal pricing structure with the existing electricity demand can become complicated. If owner-operators site charging stations in unfavorable markets or pursue fee structures that negatively impact utilization or dwell time, then the costs of operating stations can outweigh the benefits. Alternatively, well-sited charging stations have the potential to bring significant financial benefits to the owner-operator.

When choosing a fee structure, owner-operators have a range of options though typically fees fall into one of three categories listed below.

Figure 2: Fee Categories²



** Depending on electric utility rate structures and collective electricity use of charging stations, station owners can incur expensive fees from utilities for exceeding set levels of electricity use in a given period known as demand charges. This is particularly true for charging stations which are “behind the meter” and are part of the power demands of the retail facility as opposed to stations that have a separate meter.*

² Atlas Public Policy. Public EV Charging Business Models for Retail Site Hosts. Retrieved from: <https://atlaspolicy.com/wp-content/uploads/2020/04/Public-EV-Charging-Business-Models-for-Retail-Site-Hosts.pdf>