



THE MOBILITY HOUSE

The Mobility House

The Mobility House (TMH) is a 11-year old technology company with 200 employees based across offices in Silicon Valley, Munich, and Zurich, serving customers in over 10 countries. The Mobility House has built a technology platform, ChargePilot, that enables reliable and efficient charging of electric vehicle fleets and vehicle-grid integration using intelligent charging, energy management, and storage solutions.

Mobility Services

- Charging and Energy Management (CEM) system
- Fleet electrification consulting

Website

- https://www.mobilityhouse.com/usa_en/

Contact

- Zoheb Davar, VP Business Development and Growth, zoheb.davar@mobilityhouse.com

References

- Center for Transportation and the Environment, GA
- Ocean View School District, CA
- M.A. Mortenson Company

Experience



The Mobility House's product, ChargePilot, is an interplay between software and hardware services. In the United States, The Mobility House has provided this charging and energy management solution to numerous partners such as the Mortenson Company, the Stockton Unified School District, and St. Louis Metro Transit.

Globally, ChargePilot is operational at more than 350 sites.

TMH has worked with numerous disadvantaged communities in the United States and has no limitations with providing its mobility products to

communities of concern in this program. For example, TMH has worked with the Stockton Unified School District, located in a disadvantaged community, to procure 24 chargers, design an optimized charging strategy, as well as implement its charging and energy management software on-site.

Services

ChargePilot, the Charging and Energy Management (CEM) system by The Mobility House, charges electric vehicle fleets intelligently, reliably, and cost-efficiently. With just one system, operators can manage loads and keep track of their fleet's energy consumption while charging. ChargePilot is modular and grows with the fleet's needs, providing flexibility to design and plan for growth. ChargePilot optimizes the use of available power and charging infrastructure.

ChargePilot processes different parameters such as total available power, building load, electricity rates, vehicle battery state-of-charge, and vehicle schedules nearly in real-time to optimize when and how much to charge each vehicle. The goal is to smooth out expensive peak loads ("peak shaving") and take advantage of low-cost charging windows, which significantly reduces electricity expenditures.

ChargePilot's system architecture applies both local and global intelligence. All chargers are physically connected to a local controller, onsite, using Ethernet. The controller communicates with the charging stations using open-source communication protocols such as OCPP (Open Charge Point Protocol) and ensures charging processes can be controlled even if there are network or internet connectivity issues. The use of a local controller provides close to real-time response for smart charging and reliability in case of loss of connectivity or increased latency in cloud communication. TMH can forward OCPP messages from EVSE to any third-party backend. Nevertheless, OCPP messages for smart charging will always be processed locally by TMH controllers at every site.

Equity



Engagement

TMH has worked on community engagement projects to help build consensus and is willing to host town hall meetings to allow for community participation in decision-making.

Language

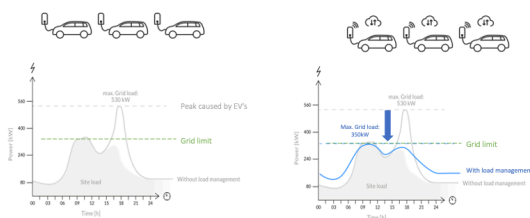
TMH has the capability to work with a variety of community partners: TMH's US

team can converse in Spanish, Hindi, Tamil, German, and Chinese, and can communicate complex technical requirements.

Access without Smartphone or Unbanked

TMH has built its service offering to enable access to its platform through Radio Frequency Identification Cards (RFID Cards), which are provided free of charge to partners in the Clean Mobility Options program for users without a smartphone or unbanked to access the platform.

Financial



Cost

The Mobility House is able to engage in a shared savings model with any partner that wants to explore new models that may unlock longer-term, sustainable, financial benefits. In order for TMH to engage in this arrangement, the partner must be willing to purchase

and implement TMH’s charging and energy management solution, ChargePilot, using voucher funds. ChargePilot will unlock a significant degree of savings for the customer, through reduced demand charges and optimized charging with time-of-use rates, and TMH is willing to take a percent of those shared savings, over time, in exchange for sharing certain portions of the project costs such as procurement and installation of chargers.

The partner must also be willing to share a year of utility bills and agree to a monthly “true-up” process in which TMH will compare projected charging costs with actual charging costs. Furthermore, the partner must be willing to engage in discussions surrounding the allocation of Low Carbon Fuel Standard (LCFS) credits, which can also be used to offset other project costs.

CMO is expected to cover the costs for the installation of TMH’s ChargePilot kit. Ongoing operational costs for charging can be shared between partner and The Mobility House.

Pricing

- Shared Savings Model: TMH is willing to engage in bilateral negotiations with any recipient of voucher funding to evenly distribute savings that are earned from use of TMH’s products. TMH has built an internal tool to value a deal under this model and would be inclined to find an agreement that works for all stakeholders to ensure long-term sustainability.

- VGI Revenue: TMH is willing to engage in bilateral negotiations with any recipient of voucher funding to evenly distribute any revenues that are earned from charger participation in energy markets.

Revenue

The Mobility House USA takes revenues generated from its operations and reinvests in personnel of TMH USA to continue to operate and develop electric vehicle projects throughout the state of California. TMH USA and its partners through the clean mobility options program would receive revenue through these services.

Financial Sustainability

The Mobility House has demonstrated the ability of vehicles to also act as grid resources and be compensated as such. This is referred to as “Vehicle Grid Integration” (VGI), wherein a vehicle processes signals from grid operators to either curtail charging or remit power back to the grid. Currently, regulatory hurdles and scales of economy need to be overcome in order for this long-term strategy to be realized, but TMH has built its technology around the expectation that vehicles will be able to generate revenue by participating in open energy markets within 3 years. With revenues being generated by the vehicles, TMH can ensure long-term operational sustainability of projects funded by the Clean Mobility Options program.

TMH is willing to put arrangements in place to allocate revenues and costs in a way that works for all stakeholders by consulting with its partners on an ad-hoc pro-bono basis on what steps, strategies, processes, and investments that its partners need to make in order to sustainably operate their projects. TMH understands that education is a requisite piece of the electrification process and can fill the informational gaps for fleet managers to understand the prospect of fleet electrification.

Data



TMH's databases are not accessible from the internet. TMH backs up all of its data on a daily basis. Any data read/write actions are solely going through dedicated servers using specific endpoints protected by JSON Web Tokens (JWT) with a very short TTL (time to live). Every customer is a unique entity in the database with individual users who have access to customer-specific data, limited in their scope by means of the above-described

JWT token. TMH does not collect any personal information. Every

environment has a different VPC (Virtual Private Cloud), i.e. there are no connections to each other. Specific connections needed to access services are available through the AWS load balancer.

TMH has a data protection officer and engages in regular data protection audits that are compliant with the European Union's General Data Protection Regulation.

