

Pricing Strategies for Electric Mobility Providers

The Holy Grail of eMobility
Business Models

Why are pricing strategies in the current and future phase of eMobility so important.

WRITTEN BY OLIVER ADRIAN AND FABIAN GUSE – HUBJECT CONSULTING

Here's what Electric Mobility Providers (EMP) need to know about the current and future challenges and opportunities of how to design sustainable pricing strategies for electric vehicle (EV) drivers.

Imagine a charging session in a not so distant future: Arriving at the charging station, the EV Driver Christina had already checked in her eMobility app that this station was available and that she could fast charge her EV with 350kW. Going through the whole registration process, she was already familiar how to activate the charging station. Christina stopped at the pricing section. Instead of displaying the easy to understand price per kWh she was used to, the screen now shows a variety of graphs, with the first graph titled "Price per kWh" on one axis and the "Time" on

the other axis. Further graphs informed her about the change in parking fee over time and that the first 15 minutes are billed in 5-minute intervals. Confused she tried to look for more information but pressing on the banner "Introducing dynamic pricing" only refreshed the page, which led to the graphs changing each time she did so. Puzzled by the complexity of this pricing model she drove away.

This situation can become reality pretty soon if Electric Mobility Providers (EMP) are forced to adapt the pricing structure set by the Charging Point Operators (CPO).

Looking at the current European EV market, simple B2C pricing models, like flat-rate pricing (e.g. 15€ per month) and mixed-pricing (0,30€ per kWh or 7,95€ per session for all charging points) are dominant. While this allows for a clear communication towards the customer, it creates significant financial risks for the EMP by decoupling a complicated B2B purchasing pricing from a simple B2C pricing.

MAIN ROLES IN THE EMOBILITY ECOSYSTEM

Charging Point Operator (CPO)

Installs, operates and maintains the charging station

Operates only in a business-to-business environment (B2B): Buys the electricity from the electricity supplier and sells it to the Electric Mobility Provider (EMP)



Does not need to be the owner of the charging station, depending on the business model

Responsible for providing electricity at the charging station

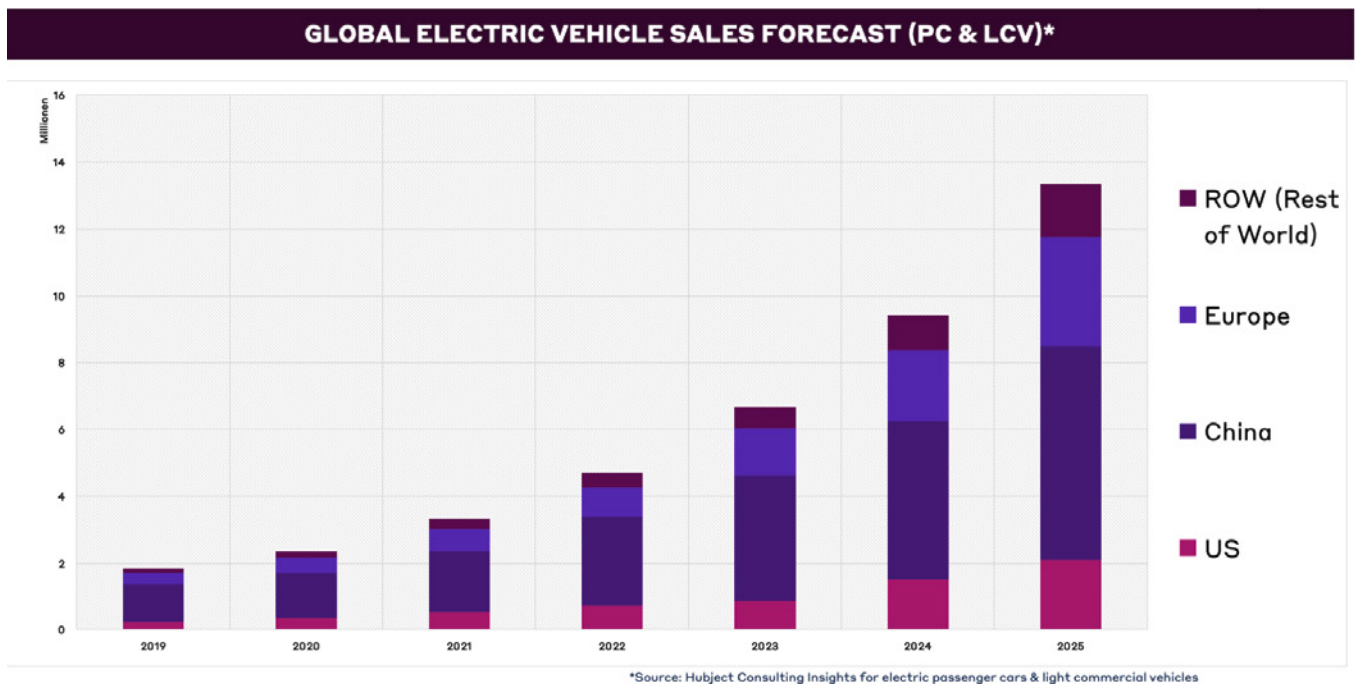
Electric Mobility Provider (EMP)

Provides access (usually contract based) to charging stations for Electric Vehicle drivers via app or RFID card



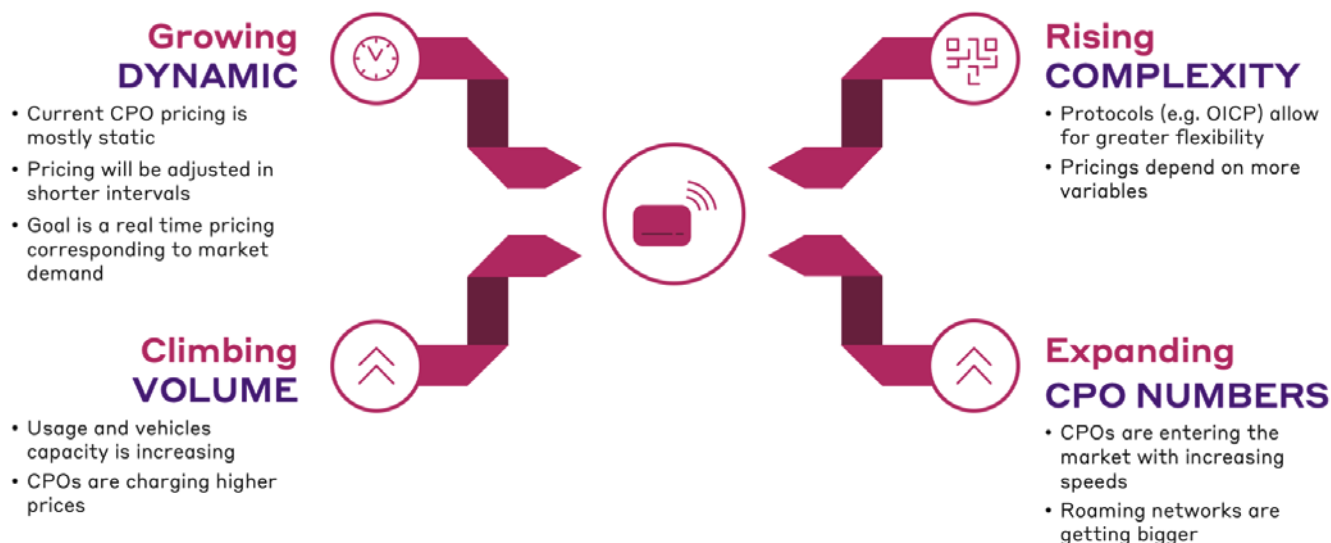
The EMP app usually shows the locations of charging stations (POI, point of interest) and their status (free, occupied, reserved)

THE EUROPEAN EV MARKET IS STILL QUITE UNDEVELOPED WITH LOW VOLUMES OF CARS, BUT THIS IS ABOUT TO CHANGE, AS THE FOLLOWING GRAPH ILLUSTRATES.



Hence, for EMPs it will be more and more complicated to maintain their current pricing strategies. Here is why:

- Expanding competition and lower margins
More and more EMPs are entering the market. While energy utilities and OEMs already try to “own” the customer and the entire value chain completely (from energy provision to the EMP service), new players such as retail chains, telecommunications providers or gas and oil companies want their share of the market, too.
- Complex and dynamic pricing
It is quite challenging for every EMP to transfer a pricing model from B2B to B2C. CPOs sell their energy to the EMP based on dynamic pricings: Energy costs may vary a lot over the course of a day, different pricings exist for locations (e.g. higher pricings for charging stations along highways) and even for Sundays or holidays (which vary e.g. in Germany from Federal State to Federal State).
- Heterogenous legal frameworks all over Europe
There is no contract framework in place to regulate B2C pricing schemes. Therefore, quick changes of energy prices are common, leading to a “creative” balance sheet at the end. Specific national requirements like the German metering law – or “Eichrecht” (Weights- and measures act), is only applicable in Germany. In France for instance, volume-based time pricing is quite common.
- Low data quality
The poor quality of POI (Point of Interest) data, that is supposed to show the exact location of charging stations, is a constant hassle for EMPs. While CPOs are supposed to provide the exact geo-location of their charging stations to the EMPs which display this info on the EMP app for the EV driver, unfortunately EV drivers very often are routed to wrong locations. For the EMP pricing model this becomes an issue, if the CPO energy price is based on the location. Taken the above example: If the POI of a charging station is not set correctly, it is impossible for an EMP to find out if e.g. a holiday applies (Federal State A) or applies not (Federal State B).



Hence, increasing competition with extremely low margins, the sheer number of dynamic variables that need to be taken into account, the lack of a contractual framework and the poor quality of data make it nearly impossible for the EMP to plan and calculate the CPO energy prices correctly. This leads to an increasing complexity for the EMP in its own price calculation for the B2C charging contract and therefore its entire business model. Because EV drivers at the end of the value chain expects a

transparent and fair pricing, it is difficult to transfer the CPO prices 1:1 to them. Consumer protection associations are already advocating strongly against complicated and opaque “tariff jungles”. And while consumers know a dynamic pricing model at gas stations, here prices usually vary only a few cents per liter. In contrast, CPO prices can vary over many euro per charging session. This contradicts consumer friendliness.

Will ad-hoc payment be the solution?

Although some market players advocate heavily for it, this will not solve the mentioned issues.

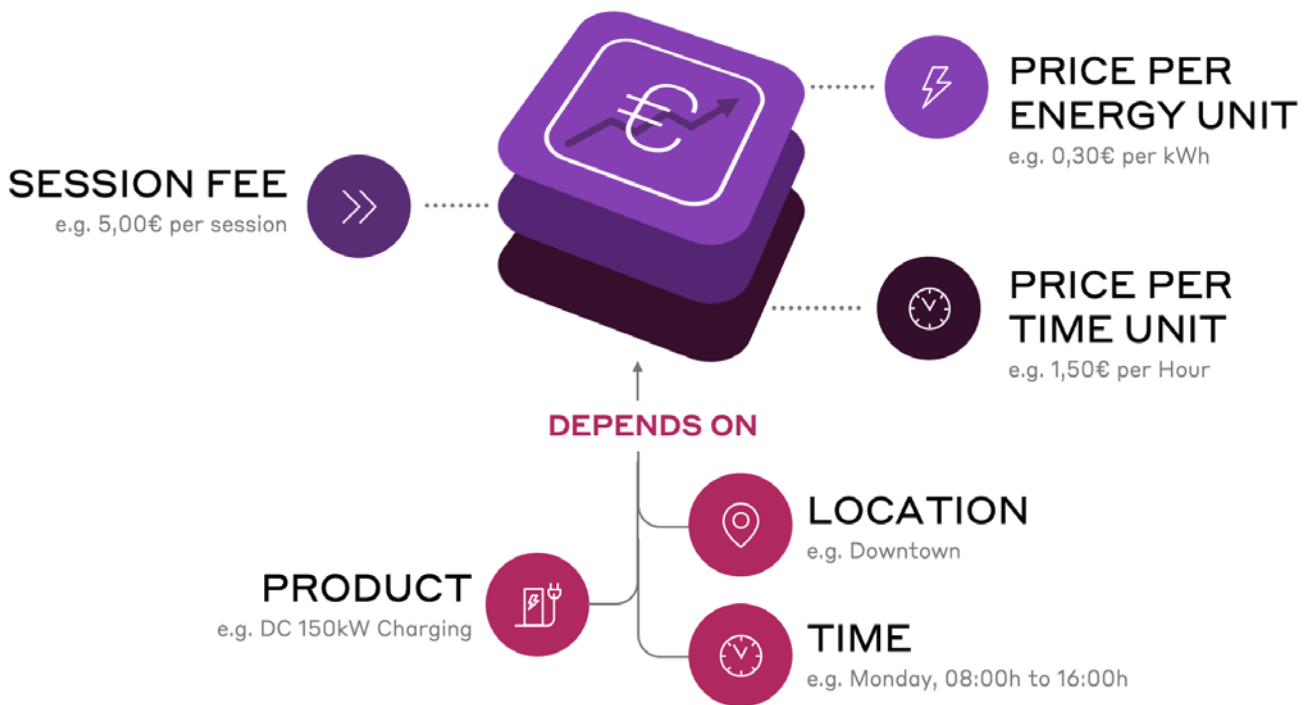
To let the EV driver pay directly at the charging station without having a specific EMP contract will not change the dynamic pricing scheme of CPOs: The consumer will find huge variations in energy prices at the charging station. This will be even more true when real SMART CHARGING becomes a reality: Energy peak shaving, vehicle-to-grid (V2G) energy transfer and dynamic charging protocols are strongly needed to keep the stability

of the energy grids and necessary for the so-called “Energiewende”. Ad-hoc payment at a charging station cannot support these use-cases.

But then: how can the EMP develop a sustainable pricing model?

Simple answer: There is no one size fits all solution.

EMP PRICE STRUCTURE



In several projects over the last years Hubject Consulting has conceptualized, specified and strategically positioned EMPs of main OEMs and helped already existing EMPs, e.g. from the utility side, advance their services. Our findings clearly

show that indeed, EMPs could fill in the blanks. They could create the missing legal framework and negotiate with CPOs for a pricing model that fits with the B2C pricing. However, being in a growing market with an increasing number of players, this task becomes increasingly difficult to accomplish.

EMP PRICE STRUCTURE

		STATIC	DYNAMIC	REALTIME
FLATRATE Pricing	<ul style="list-style-type: none"> + Easy Billing + Customer friendly - Very Risky - Hard to calculate 	↘	↓	N/A
MIXED Pricing	<ul style="list-style-type: none"> + Easy Billing + Customer friendly - Risky - Very hard to calculate 	→	↘	↓
COST-PLUS Pricing	<ul style="list-style-type: none"> + Easy to calculate + Minimized risk - Customer unfriendly - Not market dependent 	↘	→	↗
MARKET Pricing	<ul style="list-style-type: none"> + Optimized margin - Customer unfriendly - Hard to calculate 	↘	↗	↑

Another strategy could be the development of smart algorithms that take all the dynamic information into account: Energy prices, charging behavior, smart charging and much more. Due to the high complexity of the necessary information to be processed, this will still need many years to be a valid option.

In the end, an individual solution is needed for every EMP, looking at the very specific market position, USPs, respectively consumer strategies and CPO relationships. With the right mix of metrics, it is possible to develop a successful and sustainable pricing model.

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WRITE AT CONSULTING@HUBJECT.COM

About the Authors

Oliver Adrian is Senior Consultant at Hubject Consulting's Berlin office and a distinguished expert with several years' experience in consulting major international companies in the area of mobility and digital platforms. Oliver has led various consulting projects with a focus on Strategic Positioning and Market Entries.

Fabian Guse is Head of Consulting at Hubject and a notable expert with several years consulting & industry experience who has led several consulting projects in eMobility, digitalization, telecommunication and automotive topics.

About Hubject Consulting

Hubject Consulting is an ensemble of hand-picked specialists, placing both well-established enterprises and young entrants right in the mobility market. As a pioneer and market maker, we carry our today's expertise into tomorrow's mobility world. We help you to enhance your market position, sharpen your portfolio, and align your strategy with what's to come. Our international team is particularly well positioned for complex tasks in a highly competitive and networked market environment. Based in three offices around the globe we're offering advisory services to customers along a broad variety of new mobility's value chains: local fleet operators and software services, new and renowned car manufacturers, international energy providers as well as Fortune 500 companies. No matter where you're coming from: we lead the way into the future mobility market.

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