

Making Sense of AFIR Payment Rules for EV Charging

A WORKING GUIDE FOR CPOS AND EMSPS



Why this guide exists

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EV charging is turning into a payments business almost overnight, and a lot of Charge Point Operators (CPOs) and e-Mobility Service Providers (eMSPs) are getting confused by the paperwork that comes with it. Two EU regulations sit at the center of it: the Alternative Fuels Infrastructure Regulation (AFIR) and the revised Payment Services Directive (PSD2).

If you've tried to get a straight answer on what they actually require from your charging network, you've probably hit the same wall we have. EU articles, delegated acts, national interpretations, vendor blog posts, and PSP fine print all sound authoritative, and they don't always agree. Ask five people in this industry what's mandatory today versus what's still theoretical, and you'll likely get five different answers.

That confusion is normal. This is a messy corner of EV charging right now, and a lot of what's published about it overstates how settled it actually is. This guide is our attempt to lay out what's actually confirmed, what's still moving, and what you can practically do about it, without pretending it's simpler than it is.

- 01.** What AFIR expects from Charge Point Operators
- 02.** One regulation, two layers
- 03.** What AFIR expects from e-Mobility Service Providers
- 04.** Who's the merchant? Understanding the financial set-up
- 05.** What CPOs can expect from Optimile

What this guide covers

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The EU isn't regulating EV charging for its own sake. It has **one long-term goal: climate neutrality by 2050**. That requires mass adoption of electric vehicles. And that only happens if charging in public feels as easy and trustworthy as filling up at a petrol station. Every EV charging rule traces back to that one goal.

This guide covers one part of the **EU standardization efforts**: the commercial access layer. That's AFIR's payment rules plus the payment security rulebook (**PSD2 and PSD3**, the latter expected in 2027-2028). There's another technical communication layer, which is not the focus of this guide: how the vehicle and charger talk to each other, governed by **ISO 15118-2/-20**. The two are more connected than most articles suggest. AFIR doesn't just regulate payment; it also makes **ISO 15118-2/-20** mandatory through AFIR's delegated acts. Section 2 explains how.



01

Why the rules are changing

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Public EV charging **grew up with no rulebook**. Drivers charging away from home needed a different app, RFID card, or subscription at almost every stop. Prices were often unclear until the invoice landed.

AFIR has been in force since **April 2024**. It sets two simple expectations for ad hoc charging: any driver should be able to **charge anywhere without a contract**, and every price should be clear before the session starts. Alongside it, PSD2 governs a separate question: how the payment itself has to be secured. For CPOs and eMSPs, PSD2 and AFIR aren't optional. **AFIR is binding law in every EU member state**. Some deadlines have already passed. One major one is still ahead (1 January 2027).



02

One regulation, two layers

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AFIR covers a lot of ground: national deployment targets, hydrogen and other alternative fuels, public information, and more. This guide focuses on the commercial access layer. The table below shows how it compares to the technical communication layer, governed separately by AFIR's delegated acts.

	COMMERCIAL ACCESS LAYER (THIS GUIDE)	TECHNICAL COMMUNICATION LAYER
Governed by	AFIR Article 5 and PSD2 for payment security	AFIR delegated acts, requiring ISO 15118-2/-20
Covers	- Ad hoc payment - Price transparency both at the charger and via published station data - No-contract charging - Touches cross-border roaming too, though not extensively yet	Vehicle-to-charger communication, automatic authentication (Plug & Charge), vehicle-to-grid
Enables	Paying without needing an app, card, or subscription	Automatic vehicle authentication via Plug & Charge, once ISO 15118-20 is in place. This still requires an underlying driver contract with an eMSP: ISO 15118 removes the manual card, app, or charging token step at the charger, not the need for that contract
Key deadlines	50 kW+ stations: card or contactless payment required since April 2024 for new stations, and by 1 January 2027 for existing ones needing a retrofit	- ISO 15118-2 for new/renovated AC and DC charging hardware: in force since 8 January 2026. - ISO 15118-20 for all new public and private AC charging hardware: 1 January 2027. - ISO 15118-20 for all new public DC charging hardware and private DCFC (Direct Current Fast-Charging) hardware: 1 January 2027.

The two layers are meant to meet in the middle over time. **Ad hoc payment and Plug & Charge serve different use cases** today and are likely to keep coexisting rather than one fully replacing the other. Where Plug & Charge is available, a driver with the right contract may not need to touch a card reader or scan a QR code at all: the car and charger recognize each other automatically, and payment happens quietly in the background. Where it isn't, or for drivers without that contract, AFIR's payment rules remain the legal requirement.

A note on the AFIR review: the European Commission has opened a public consultation on revising AFIR itself, gathering feedback from CPOs, eMSPs, and industry associations on what's working and what isn't. No formal proposal has been published, so this guide doesn't assume any particular outcome. Existing obligations are unlikely to disappear and could well become stricter, and areas not covered yet could become regulated. Worth keeping on your radar alongside PSD3.



03

What AFIR expects from Charge Point Operators

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If you own or operate the charging hardware, AFIR spells out exactly what's expected of you, both for the payment experience at the charger and for how easily your stations can be found and trusted before a driver ever arrives.

Payment hardware at fast chargers

Every publicly accessible station of 50 kW or more that requires payment needs a card reader. New stations have needed this since April 2024. Older stations must be retrofitted **by 1 January 2027**. If your charging network isn't retrofitted yet, treat this as urgent, not as a future to-do.

A web-based option below 50 kW

For stations under 50 kW, whether AC or DC, a QR code that links to a secure payment page is an accepted alternative to a card reader, as long as the payment itself is secure. A static QR code is fine under the rules, as long as it stays readable and can't easily be tampered with.

A working ad hoc session, start to finish

Article 5 requires a digital receipt for every ad hoc session. In practice, that only holds up if the rest of the flow behind it does too: the payment gets authorized, the energy delivered gets measured accurately, and the driver is charged the right amount, all without being asked to register first.



Ad hoc pricing, shown up front

Drivers without a contract need to see the price before they start charging, broken down by the components that apply, typically the energy price per kWh plus any session or time-based fee. AFIR states that the price also has to be non-discriminatory: it shouldn't be set higher than what a driver with an eMSP contract would pay at the same station.

Transparency before a driver arrives

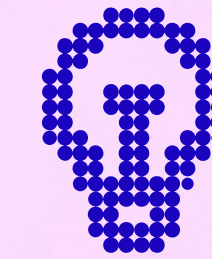
Under AFIR Article 20, static and dynamic data about your charging points (location, availability, pricing) needs to be published to your country's National Access Point (NAP), so drivers can find and trust your stations through mapping services and eMSP apps before they ever plug in. Coverage of these access points still varies by member state today, but the obligation applies regardless of how ready your country's NAP is.



TIP

AFIR only applies to charging points that are publicly accessible in practice, not just publicly listed.

A charger behind a gate at a company site, or in an employee-only parking lot, usually falls outside AFIR's scope, even if it shows up as public in an app. If you're unsure whether a location counts, confirm that before you invest in a retrofit you might not actually need.



TIP

Retrofit hardware and installation slots fill up.

If you haven't started yet, get quotes as soon as possible. Delivery, installation, and testing for contactless payment terminals routinely takes longer than the retrofit itself.

04

What AFIR expects

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from e-Mobility Service Providers

eMSPs don't own the hardware, so your obligations look different. They're easy to miss, because most AFIR articles are written with CPOs in mind.



Price transparency before the session starts

Under Article 5(5), you must show the driver **every price component**, before charging begins. This has to happen in your app or digital channel, not buried in a monthly invoice.



Consistent, fair pricing

The fees you charge a driver can't unfairly change from one member state to another. If you charge roaming costs, they need to be visible and applied the same way everywhere.



Accurate, real-time data to work with

None of this works if the pricing and status data from your CPO partners arrives late or incomplete. Your compliance depends in part on data quality that sits upstream of you, with your CPO partners and their Charge Point Management System (CPMS).

05

Who's the merchant?

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Understanding the financial set-up

AFIR covers the infrastructure regulation and is all about **transparency in the customer interaction**: can the driver charge, and can they see the price before they do? PSD2 on the other hand is a payment services directive that handles **the financial side to support** that interaction: who's responsible once the payment goes through?

If financial responsibilities aren't properly assigned under PSD2, a small error can escalate fast. A missing KYC (Know Your Customer) check can stop payouts from happening, or could run you into banking compliance rules.

This section explains, in general terms, how these roles and setups typically work. It isn't financial or legal advice and shouldn't be treated as a substitute for it. The right setup for your business **depends on your specific contracts, payment terminal provider, and jurisdiction**. Confirm your own arrangement with your PSP, acquirer, and legal counsel before acting on it.

But most critically, it leaves you exposed to chargebacks - when a driver disputes a transaction and their bank reverses the payment, pulling the funds directly from your account without a clear way to contest them.

AFIR only tells you that a payment must be possible. It doesn't say who's financially responsible for it. That question sits with PSD2 and your own commercial setup, and it catches a lot of CPOs and eMSPs off guard because almost nobody has a clear view.

Who's who in a charging payment?

Four different roles often hide behind the phrase “payment provider.” Worth knowing which is which, since it’s usually who you’d actually deal with if something goes wrong.

Some companies combine several of these roles; others split them across separate parties. Worth mapping out which is which for your own setup.

ROLE	WHAT THEY ACTUALLY DO
MERCHANT	Under the merchant model, you (the CPO) act as the merchant. You set the ad hoc pricing displayed at the charger, own the financial transaction, handle tax/VAT compliance, and receive payouts directly in your payment processing platform.
ACQUIRER	The bank that holds the merchant account, moves the money, and carries the settlement risk.
PAYMENT SERVICE PROVIDER (PSP)	The technical layer connecting your payment terminal or checkout page to the acquirer.
PAYMENT SCHEME	Visa, Mastercard, and similar card networks. Sets the rules the transaction travels under.
PAYMENT TERMINAL PROVIDER (PTP)	The company running the payment terminal hardware and its management system, for example Payter or CCV.



Ad hoc charging: who's the merchant?

For the ad hoc, pay-per-session flow at the payment terminal, here's what different situations typically mean in practice.

CPO AS MERCHANT

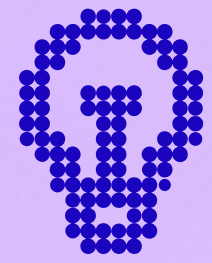
- Sells the session directly to the driver
- Carries KYC checks
- Carries chargeback risk
- Available on every payment terminal setup

HOST AS MERCHANT

- The site host (e.g. a retail chain, employer, or parking operator) is the merchant instead
- Carries KYC checks
- Carries chargeback risk
- Only available for some payment terminal providers, worth checking rather than assuming

NOTE

If your payment terminal provider does not support host-as-merchant routing, you automatically fall under the CPO-as-merchant category. Certain closed hardware setups do not allow multi-merchant account configuration. So you hold the agreement with the acquirer, and you carry the KYC checks and chargeback risk for that payment terminal.



TIP

When operating under the merchant role, your business is directly responsible for compliance, so make sure your PSP registers the payment terminal under the right merchant category code for EV charging (MCC 5552), not a nearby code like parking or general retail. A wrong MCC can sail through onboarding and still cause real compliance problems later, plus a lot of confusion for whoever has to untangle it.

None of this needs to keep you up at night. Optimile's onboarding checks for the two mistakes we see most often: the wrong merchant model setup for your payment terminal provider, and the wrong merchant category code. Once those are right, they tend to stay right.

Subscriptions: a separate merchant relationship for eMSPs

Everything above is about the ad hoc, pay-per-session flow at the payment terminal. If you're an eMSP, there's a second, separate merchant relationship to track: the one with your own contracted drivers.

When you're the drivers' eMSP, you are the merchant for that billing relationship, not the CPO. In general, you bill the driver directly for their charging sessions, while roaming gets settled separately with the CPO through protocols such as OCPI (Open Charge Point Interface), rather than through a card payment at the charger.

As an Optimile customer, you don't have to manage these separate payment pipelines yourself. Optimile takes care of both CPO roaming settlements and ad-hoc payment flows as a managed service, keeping your operations simple and compliant.

06 What CPOs can expect from Optimile

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As your CPMS partner, Optimile handles the parts that sit between your hardware and the banking network: structuring your pricing data for payment terminals so it stays AFIR-compliant, and helping you configure a pricing policy that fits what your hardware can actually do.

01

Payment terminal integration

Optimile integrates with Payter and CCV. We communicate with the hardware to authorize and release sessions on card validation. Which merchant models are available to you depends on the payment terminal provider, as covered in Section 5.

02

Web and QR payment for AC chargers

For stations under 50 kW, Optimile builds the secure payment page behind your QR code, showing clear per-kWh pricing before checkout. See Section 5 for how PSD2 applies to this flow.

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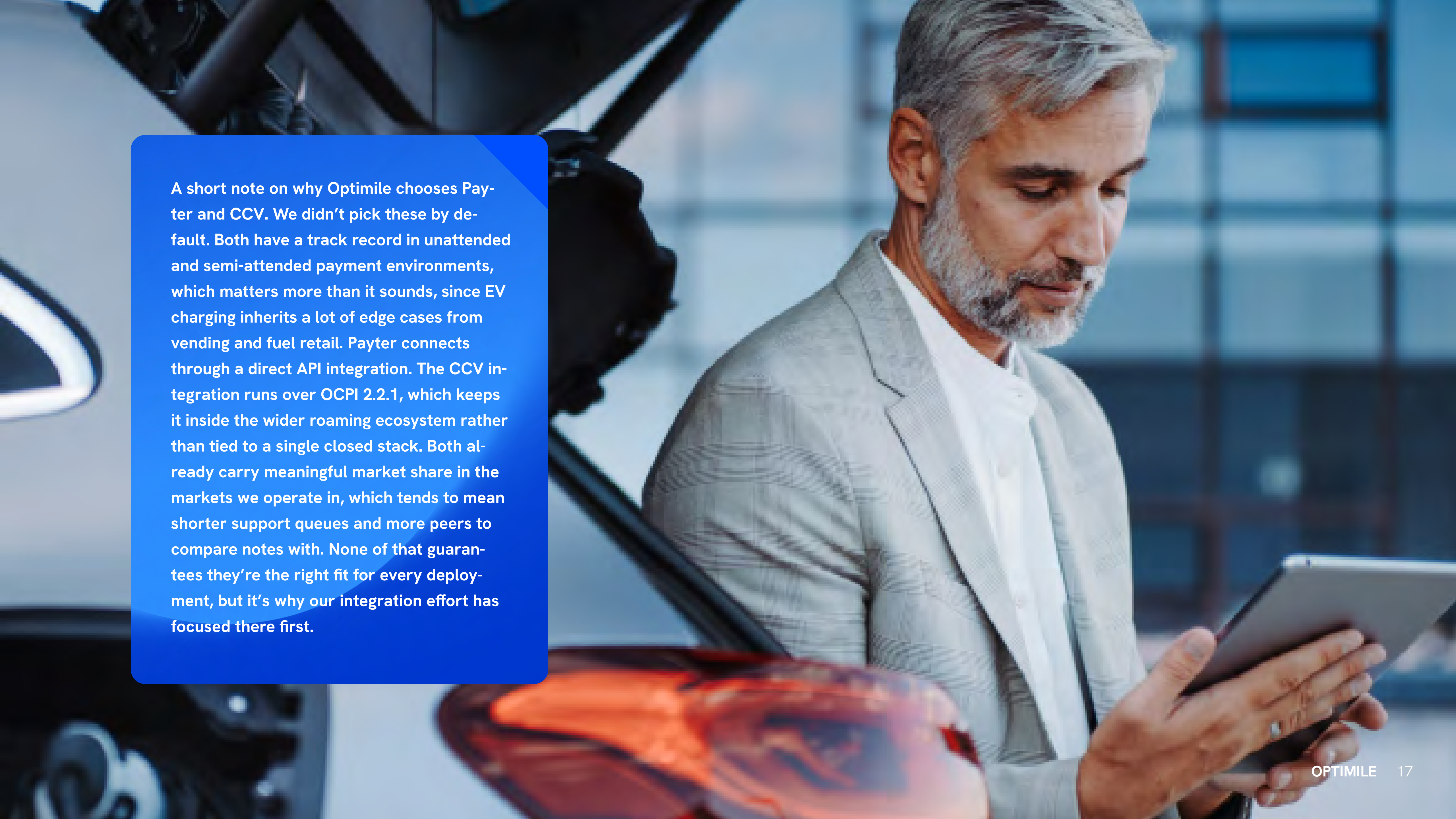
Automated transaction handling

We handle pre-authorization, the final metered calculation, settlement, and the digital receipt, so you don't have to reconcile it by hand.

04

The other half of transparency

Section 3 covers the AFIR Article 20 obligation to publish your station data to your country's national access point, the flip side of the price transparency you show at the charger. We organize your static and dynamic charging data (pricing, connector type, station status) using OCPI, the industry-standard format, and convert it into DATEX II, the format most national access points expect, as those NAPs come online. Coverage still varies by country today, mostly because the NAPs themselves aren't equally ready everywhere. We track that landscape so you don't have to build a separate feed for every country yourself.



A short note on why Optimile chooses Payter and CCV. We didn't pick these by default. Both have a track record in unattended and semi-attended payment environments, which matters more than it sounds, since EV charging inherits a lot of edge cases from vending and fuel retail. Payter connects through a direct API integration. The CCV integration runs over OCPI 2.2.1, which keeps it inside the wider roaming ecosystem rather than tied to a single closed stack. Both already carry meaningful market share in the markets we operate in, which tends to mean shorter support queues and more peers to compare notes with. None of that guarantees they're the right fit for every deployment, but it's why our integration effort has focused there first.

The bottom line

AFIR and PSD2 are pushing EV charging away from a fragmented, hardware-first industry, toward something closer to a managed payments service. PSD3 will push that further once it lands. Some of this is already fully enforced with hard deadlines. Some of it, PSD2's treatment of web and QR payments among it, is still being worked out in practice rather than in the rulebook.

With Optimile as your CPMS partner, the regulatory requirements become an automated backend process. For the evolving parts, we keep an eye on them for you, so you're not caught off guard.

Your action checklist: before 1 January 2027

A short, practical summary of everything above. Use it as a working list, not just a read-through.

- Confirm every 50 kW+ station built before 13 April 2024 has a retrofit plan for contactless or card payment, and that the order is placed, not just planned.
- Decide which merchant model fits your commercial setup, CPO as merchant, host as merchant or a specific combination.
- Check with your PSP that the payment terminals are registered under MCC 5552, not an adjacent code.
- Verify ad hoc pricing is set and visible before the session starts.

ACRONYM	FULL TERM	CONTEXT
AFIR	Alternative Fuels Infrastructure Regulation	The EU regulation this whole guide covers
CPMS	Charge Point Management System	The software platform that manages charge points (Optimile’s role)
DATEX II	(not a literal acronym — a data exchange standard)	Format most National Access Points expect
DCFC	Direct Current Fast-Charging	Pushes high-voltage current straight to the battery, allowing faster charging
ISO 15118	(international standard, not an acronym)	Governs vehicle-to-charger communication, including Plug & Charge. ISO 15118 has two main versions: -2, mandatory for all newly installed or renovated accessible AC charging points, and -20, mandatory from 2027 onwards, adding advanced smart charging and bidirectional features.
KYC	Know Your Customer	Identity check a merchant is required to carry out
MCC	Merchant Category Code	Code a terminal is registered under with the PSP
NAP	National Access Point	National point where charge point data must be published
OCPI	Open Charge Point Interface	Industry-standard format for sharing charging data and roaming
PSD2	Payment Services Directive (2nd)	The payment security law currently in force
PSD3	Payment Services Directive (3rd)	Successor to PSD2, not yet formally adopted
PSP	Payment Service Provider	Technical link between the payment terminal/checkout page and the acquirer
PTP	Payment Terminal Provider	Company behind the payment terminal hardware, e.g. Payter or CCV
SCA	Strong Customer Authentication	PSD2-required extra verification step for payments

About Optimile

Optimile offers advanced, cloud-based management software for charging stations. Whether you're building a charging network or need smart management for existing infrastructure, our solutions are designed to connect, manage, and optimize charging for electric vehicles across Europe.

BOOK A DEMO

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<https://optimile.eu/get-started>
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Ready to future-proof your charging network?

Get in touch with our expert team or request a live demo to see how Optimile can help you streamline your AFIR compliance and scale your charging operations.

