Seamless EV Charging Station Network Migration

Lessons from EV Connect + ChargerHelp! + BTC POWER

Project Overview

In early 2025, a prominent utility company faced a pressing challenge: Migrate 76 BTC POWER DC fast chargers (DCFCs) from the Shell Recharge network to EV Connect before the charging station management system (CSMS) was shut down.

To meet this deadline, the utility engaged ChargerHelp! to execute field operations and troubleshooting, and EV Connect to serve as the new CSMS. The collaboration between ChargerHelp!, EV Connect and BTC POWER (both of whom are Open Charge Point Protocol (OCPP) certified), and the utility revealed not only best practices—but the critical importance of OCPP compliance in making migrations scalable and efficient.

PROJECT SNAPSHOT	
Scope	76 DC fast chargers
Old CSMS	Shell Recharge
New CSMS	EV Connect
Field Operations	Led by ChargerHelp!
Hardware	BTC POWER chargers

Why This Network Migration Mattered

The project wasn't just about flipping a switch—it highlighted what's involved in maintaining a stable, future-proof EV infrastructure in a rapidly evolving ecosystem. With the Shell Recharge CSMS shutting down, they needed a partner ecosystem that could:

- Preserve charger uptime
- Minimize operational disruption
- Navigate complex vendor relationships
- Execute quickly and confidently
- Manage to an affordable and agreed upon budget
- Deliver on their long-term needs as well as, or better than, any leading provider in the industry

Thanks to OCPP compliance and a phased, cross-team approach, the migration was completed and the utility is charging ahead with their new charging platform partner.

The Value of OCPP in Charger Migrations

OCPP = INTEROPERABILITY BY DESIGN

The chargers in this project supported OCPP, an open standard that governs communication between EV chargers and CSMS platforms. The new CSMS, EV Connect, is also certified OCPP. Because of this commitment to OCPP by both BTC POWER and EV Connect:

- No hardware replacement was needed
- Migration relied on standard commands instead of proprietary methods
- Remote reconfiguration was possible for most chargers
- Troubleshooting was simpler with well-defined message flows

In short, OCPP turned a complex transition into a manageable process and avoided vendor lock-in.

How EV Connect Simplifies Migration

Switching CSMS Platforms

Standard message protocols reduce custom dev work

Repointing Chargers to a New Backend

Use *ChangeConfiguration* or *SetNetworkProfile* commands

Updating Security Credentials

Managed through certificate installation and variable settings

Batch Migrations

Chargers can be updated in groups with consistent messaging

Fallback Mechanisms

Devices can retain last-known good connection settings

76 chargers successfully migrated rapidly

Uptime preserved with minimal user impact

Process reused for subsequent L2 charger migrations

Reusable toolkit developed by ChargerHelp! for future RaaS and CSMS transitions

Cross-vendor alignment with BTC POWER, EV Connect, ChargerHelp! and the utility established a template for future collaboration

Best Practices for CSMS Migration

Drawing from this project and our years of experience, here are the top recommendations for a successful EV charging station network transition:

1 DESIGN FOR PORTABILITY: CHOOSE OCPP-COMPLIANT HARDWARE

"The ability to migrate charging stations with minimal disruption depends heavily on OCPP compliance."

- **Use certified chargers and CSMS**. Certification ensures interoperability.
- **Avoid vendor lock-in**. Choose the right hardware and software combo for your needs.
- **Standardization saves time and cost** when switching CSMS or scaling your network.

2 ESTABLISH A DEDICATED PLANNING PHASE

Pro Tip: *With OCPP 2.0.1, you can pre-load new network settings in a secondary slot (e.g., profile 2), test the connection, and reset the charger remotely, reducing site visits, overall project duration and cost.*

- Allocate 2–4 weeks for stakeholder alignment before any on-site activity.
- Create a migration pre-requisite checklist to avoid preventable delays around common items like firmware version and OCPP compliance, SIM card transferability or eSIM provisioning, and connectivity tests to the new backend.
- Develop a shared understanding of:
  - Hardware and firmware readiness
  - SIM card provisioning
  - User account/data transfer
  - Physical signage and QR/NFC update needs

3 INVOLVE ALL VENDORS UPFRONT

- Include the hardware OEM early to confirm firmware compatibility and update paths.
- Align with both the old and new CSMS teams to validate protocol support.
- For OCPP chargers, confirm:
  - Firmware supports OCPP 1.6 or 2.0.1
  - Necessary configuration keys are exposed
  - Remote commands are accepted and executed correctly

4 USE REMOTE CONFIGURATION WHERE POSSIBLE

OCPP enables remote migration methods, such as *SetNetworkProfile* (OCPP 2.x), *ChangeConfiguration* (OCPP 1.6), and *InstallCertificate* & *SetVariablesRequest* for secure transitions.

5 PLAN FOR EDGE CASES AND MANUAL INTERVENTIONS

Even with OCPP, you may encounter:

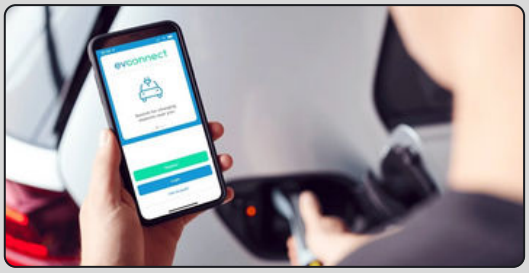
- Chargers with hard-coded settings (older firmware)
- SIM cards tied to the old CPO's cellular contract
- Configuration keys named differently per manufacturer

Prepare your team with fallback strategies and manual override procedures. For particularly difficult chargers, site visits may still be required.

6 CONDUCT CONTROLLED BATCH MIGRATIONS

- Group chargers by model and firmware version
- Migrate in manageable waves during off hours to limit disruption
- Monitor real-time logs for errors or timeouts
- Ensure rollback capability where firmware updates are risky

From Case Study to Industry Standard



This project demonstrates how open standards like OCPP, and the right hardware and CSMS partners can ensure seamless and pain free network migrations.

EV networks face inevitable change: new CSMS platforms, new vendors, and evolving user expectations. This example, with EV Connect as the CSMS, ChargerHelp! as the field execution partner and BTC POWER as the hardware, serves as a model for how to execute migrations quickly, securely, and without major disruption.

By aligning around OCPP, clear governance, and phased execution, any network can position itself to adapt and scale—without re-inventing the wheel.

"This transition project proves that when you combine OCPP-compliant hardware with collaborative project execution and an open software platform like EV Connect, even urgent migrations can be fast, affordable, and scalable."

Kameale C. Terry

Chief Executive Officer, ChargerHelp!