CharIN BPT Survey
Insight into CharIN expert view

Industry players participating
We conducted a survey within our community of industry expert to rate several aspects of the bidirectional charging (also called V2X). The following graphic shows the stakeholders of the survey participant.

Market readiness for BPT
The industry representatives think that the current implementation level of bidirectional charging per region seems similar like figured in the voting below

North America  Asia  Europe
25%  25%  25%
19 of 35  16 of 30  20 of 34

Most relevant vehicle types for BPT
Our members rated the importance of the following vehicle types for V2G use cases

Benefits of BPT
- Grid services (for DSO)
- FCR, aFFR
- Arbitrage
- Long dwell times for fleet vehicles
- Peak utilization
- Emergency power by car
- Energy Storage System support
- Island mode (V2H)
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Time expectation for BPT to be market ready
2025 seems to be the year where V2X will be commercial available from majority of stakeholders

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Barriers of BPT

- Specification / interoperability
- Grid codes, connection, compatibility
- Availability of EVSE and EV and customer awareness
- Multiple standards efforts and missing standards
- Legal restrictions, hardware restrictions of OEMs for V2L
- Price and installation costs, lack of financial incentives
- Guidelines to V2X market entry

Does discharging leads to significant battery degradation?
This was the result of asking our experts if discharging leads to battery degradation and impacts the battery life. The majority of the experts see no risk with battery degradation.

Yes 32%  No 68%

Top 3 Use Cases for Bidirectional Charging
We think that these use cases will be the most important ones but many more to consider as well

- Home
- Fleet
- Bus / Truck (Depot)
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Conformance & Interoperability Test

Grid Code compliance

EV owner reimbursement

Grid connection requirements

Coordination with OCA (OCPP 2.1) development

Do you intend to implement ISO15118-20 for bidirectional charging?

Majority of our stakeholders are working on V2X using ISO 15118-20

- 78% Yes
- 3% No
- 20% Comment

- When ISO Conformance Test document (ISO 15118-21) is available
- Partly implementation of ISO15118-20

Comments:

- The lack of conformance testing is slowing the deployment of the technologies
- Stay solution oriented, so not overregulate
- Specific V2X testival more regularly put together by CharIN
- Interoperability use cases

Define test cases