



# Smart EV charging RFQ

Tender template for EV charging solution investment



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## 1 CORPORATE PROFILE

Please answer the following questions to give an overview of your company.

### 1.1. Overview

Please give a brief history of your company, your product and service offerings, and describe your core competencies...

*(Look for providers with a proven track record, for example, that have been in business at least 10 years. Look for work with public companies so you can research and examine their financials, and look for growing companies that are healthy and investing in their business.)*

### 1.2. Client examples

Please provide information about a few of your current clients that are using similar products and services to those requested in this proposal...

*(Look for large established businesses as these customers tend to be thorough with their procurement process, have high technical requirements, and expect excellent customer service. In addition, look for testimonials on supplier websites.)*

### 1.3. Locations

Please provide the address of your corporate headquarters and summarise your local offices. Please give the address and role of any local office related to this RFQ...

*(Look for local location and local language expertise in sales, after sales and technical support.)*

### 1.4. Management team

Please provide the names, titles, and background of your top corporate executives...

*(Look for providers willing to share executive names and titles on their website so you can directly contact those people if the need arises.)*

### 1.5. Financials

Please provide a copy of your company's latest Annual Report or summary of most recent financial statements...

*(Review the financial statements to ensure they are healthy, and look for long-term financial stability and capital for future growth. A weak financial position could mean they may be cutting back on people and resources right when your business needs them the most.)*



### 1.6. Alliances & strategic relationships

Please list and briefly describe any alliances, strategic relationships or partnerships you have with companies in the EV charging business...

*(Look for providers that have strong relationships with known service providers and resellers. In addition look for an open, constructive approach to partnership. The success of your EV charging solution may depend on different providers working together.)*

### 1.7. Relevant awards and recognition

Please list and describe any relevant awards your company has received in the last 5 years...

*(Look for providers that have been officially recognized in the industry or recognized for excellence in related disciplines, such as technology, design, customer service etc.)*

### 1.8. Primary contact information

Please provide the details of the primary contact at your company for any questions or queries about this proposal...

*(Look for a local contact with appropriate seniority, and check that personal contact details are included.)*



## 2. REQUIREMENTS FOR LOW OPERATING EXPENDITURE (OPEX)

Please respond to the following points to explain how your solution leads to low operational costs.

### 2.1. Design factors in OPEX

Please explain how the physical design of your EV charging solution minimizes OPEX. Please answer the following specific points and include any other information you think is relevant...

- 2.1.1. Is your solution vandal and accident proof? *(Look for an IK10 rating.)*
- 2.1.2. Does your solution have an IP classification? (Look for IP54 protection against dust and water ingress.)
- 2.1.3. What are materials used in your EV charging solution hardware? *(Look for metal bodywork and metal mounting accessories.)*
- 2.1.4. What is the physical appearance of your units and how can they be customized? (Look for evidence that units can be easily customized with e.g. painted or taped branding.)
- 2.1.5. What is your solution's operational temperature range? (Look for a wide temperature range e.g. -45c to +50c. This is important to ensure year-round operation.)
- 2.1.6. Briefly explain the components used in your EV charging solution? *(Look for evidence of high quality industrial components.)*
- 2.1.7. Is your solution modular? (Look for modular configurations with the capability to easily change modules. This points to future proofing and minimizes the cost to adjust to new market conditions.)

### 2.2. Technology factors in OPEX

Please explain how your technological solutions minimize OPEX. Please answer the following specific points and include any other information you think is relevant...

- 2.2.1. Do you include remote software updates and upgrades? *(Look for remote updates and upgrades as standard.)*
- 2.2.2. Are there remote RCD testing and auto reset capabilities?
- 2.2.3. Do you have a preventive maintenance application and real-time diagnostics tools? *(This points to significantly lower lifetime maintenance costs.)*
- 2.2.4. Is smart service access via secure servers and VPN? *(This points to high security and no requirements for additional costly data security measures.)*
- 2.2.5. Are there any fans or filters to be maintained or changed?
- 2.2.6. What is the replacement parts process, and how easy are parts to fit? *(Look for locally stored spare parts kits, overnight delivery, and no special training required.)*



- 2.2.7. What kind of master-slave functionalities does your solution offer? *(Look for master-slave clustering options.)*
- 2.2.8. What operator network connectivity does your solution offer? *(Look for configuration options where one unit's SIM card can act as the data connection point to manage several EV charging points.)*
- 2.2.9. Does your solution offer dynamic load management (DLM)? *(This means that electricity consumption can be controlled to avoid high cost peak energy consumption and that no additional expensive electricity subscription is required.)*
- 2.2.10. Does your solution offer cloud-based remote management? *(Look for cloud-based solutions that do not require costly on-premise computing hardware, servers, or on-going internal IT support resources.)*

### 2.3. On-site factors in OPEX

Please explain how your approach to commissioning, installation and servicing helps to minimize OPEX. Please answer the following specific points and include any other information you think is relevant...

- 2.3.1. What training is required to commission your solution? *(Look for solutions where no special training required.)*
- 2.3.2. What training is required to install your solution? *(Look for no special training required.)*
- 2.3.3. Do you offer factory pre-commissioning? *(Look for factory pre-commissioning of network connectivity. This speeds up installation and reduces deployment costs.)*
- 2.3.4. Do you offer customer-specific configurations? *(Look for solutions that offer custom configurations. This means you can ensure that the solution fits your usage case and is compatible with your systems and end-user vehicles without additional cost.)*
- 2.3.5. What is your standard warranty? *(Look for a 3-year standard warranty.)*
- 2.3.6. What are your extended warranty options? *(Look for extended warranty options. This shows the provider is confident in the reliability and durability of their solutions.)*
- 2.3.7. How does your solution deal with fixed charging cable installation and repair? *(Look for rapid installation, replacement or repair that does not require specialist skills.)*
- 2.3.8. Can your EV charging station components be changed on site? *(Look for solutions where components can be easily changed on site. This results in lower lifetime costs, particularly if your business model or charging network changes significantly in future.)*



### 3. REQUIRED TECHNICAL FEATURES

Please clearly state that your solution meets the following required technical specifications. Please respond to each point in turn and make it clear if your solution does or does not meet the criteria...

#### 3.1. Power connection requirements

3.1.1. Nominal voltage 230V/400V, AC 50Hz, nominal current max. 3-ph 32A

#### 3.2. Charging mode requirements

3.2.1. Mode 3 charging available with Type 2 socket outlets

#### 3.3. Standards compliance requirements

- 3.3.1. IEC61851-1
- 3.3.2. IEC 62192, Type 2 socket outlet
- 3.3.3. EN61439-1 & EN61439-3
- 3.3.4. ISO15118 (V2G) Vehicle-to-Grid communication interface

#### 3.4. Operating environment requirements

- 3.4.1. Ambient temperature range: -45c to + 50c
- 3.4.2. Humidity tolerance 95%, non-condensing

#### 3.5. Enclosure classification requirements

- 3.5.1. Ingress protection class: IP54
- 3.5.2. Impact resistance class: IK10
- 3.5.3. Minimum requirements for enclosure materials: *(Look for solutions that avoid the use of painted steel, due to corrosion.)*
  - a. For tough outdoor use: painted or unpainted stainless steel
  - b. For indoor use: plastic/ or painted aluminium.
- 3.5.4. Options for dual charging and mounting: *(Look for solutions that offer all of the following.)*
  - a. Single charger, wall mounting
  - b. Single charger, floor mounting
  - c. Dual charger, wall mounting
  - d. Dual charger, floor mounting

#### 3.6. Communication and operational requirements

- 3.6.1. Does your solution offer online mode communication? *(Look for solutions that offer all of the following to avoid extra costs of network connectivity in different environments.)*
  - a. To cloud-based software
  - b. Via 2G/3G mobile networks
  - c. Via tethered Ethernet
  - d. Via Wi-Fi networks
- 3.6.2. Does your solution record and transmit the following data? *(Look for a solution that records and transmits all of the following user session data in real-time to cloud-based software.)*



- a. Charging point identification code
- b. User identification number (e.g. the user's RFID/NFC ID)
- c. User identification through authentication
- d. Date, time, and duration (start/stop) of each charging session with real time clock
- e. Total kWh output per charge and socket type

3.6.3. Does your solution offer standalone mode/white-listed mode? *(Look for a solution that can also operate when there is no back-end connection and is still able to operate via RFID or user-specific application authentication.)*

3.6.4. Does your solution communicate via secure VPN between EV charging stations and cloud-based software? *(Look for VPN enabled secure connectivity.)*

### 3.7. User access methods

3.7.1. Does your solution offer RFID/NFC compatibility to 13,56Mhz frequency, ISO/IEC 14443A/B, ISO/IEC15693? *(Look for RFID/NFC enabled solutions that offer maximum convenience for the user, and easy remote management.)*

3.7.2. Does your solution offer mobile application/SMS integration? *(Look for a solution that offers online mode charging stations, cloud-based software and integration interfaces, such as a RESTful API.)*

3.7.3. Does your solution offer free access with no user authentication required?

### 3.8. User operation indication

3.8.1. Do you offer user operation indication via three-colour LED? *(Look for three-colour LED status indication as standard.)*

3.8.2. Do you offer charging process visualization using light indicators:

- a. Station ready and available for charging (GREEN)
- b. Station is connected to the electric vehicle and is waiting for charging to be started or is charging (BLUE)
- c. Station is unavailable/faulty (RED)

### 3.9. Protection and safety requirements

3.9.1. Can units be plugged and unplugged only when unpowered? *(Look for solutions that can be hot-plugged i.e. unplugged when powered. This means reduced risk of accidental damage by users and lower maintenance costs.)*

3.9.2. Do your charging sockets have lockable lids? *(Look for the option for each charging socket to be protected by a lockable lid with a release mechanism via an authentication method e.g. the charging socket lid is opened if mobile user authentication is granted.)*

3.9.3. Do your units automatically disconnect charging power in the case of over current? *(Look for automatic over current disconnection as this reduces risk of failure, damage, maintenance and replacement costs.)*



- 3.9.4. Do you offer ground fault protection (RCD Class A or B) with auto-reset and RCD remote testing? *(Look for ground fault protection as standard.)*
- 3.9.5. Do you offer automatic release of Mode 3 / Type 2 socket locks in case of sudden supply power failure? *(Look for automatic socket lock release as standard.)*
- 3.9.6. What is the solution's control voltage? *(Look for a low control voltage e.g. 12 / 24VDC.)*
- 3.9.7. Do you utilize sensors for collision activation and detection? *(Look for a solution that monitors collisions as this supports preventive maintenance and lowers maintenance costs.)*
- 3.9.8. Do you utilize temperature detection? *(Look for a solution that detects temperature as this supports preventive maintenance and lowers maintenance costs.)*



#### 4. REQUIRED INTEGRATION TO OTHER SYSTEMS

Please state how your solution integrates with other systems. *(Add/delete as appropriate based on integrations required for your circumstances.)*

##### 4.1. Integration with back-end systems

4.1.1. What backend system do you offer?

4.1.2. What payment system do you offer?

4.1.3. Do you offer integration interfaces to transfer data collected from charging stations? How do you integrate with reporting systems, including...

- a) Access control systems
- b) Human resources systems
- c) Building automation systems
- d) Tax authority system
- e) Hotel/business park reception systems
- f) **Other specific systems**

4.1.4. How can your solution integrate with a mobile app or **other specific system** for remote control of EV charging stations?

4.1.5. Do you offer a cloud-based interface or reporting portal where user can see the consumed energy, status, charging events etc. *(Look for one unified, easy-to-use interface.)*

4.1.6. How is hosting provided for the backend system? Who is responsible for...

- a) Secure servers?
- b) Installations?
- c) Backup?
- d) Network connections?
- e) Monitoring?
- f) VPN setup?

##### 4.2. Energy consumption control

4.2.1. Does your solution offer Dynamic Load Management (DLM)? *(Look for a solution with the capability to connect charging stations via cloud-based smart load management functionalities, with two-level DLM and connections to other control systems, such as building automation systems.)*

##### 4.3. Charging control by third party systems

4.3.1. Is your solution capable of being controlled directly from company existing applications (like Access control systems)?

##### 4.4. OCPP compliance

4.4.1. Is your solution OCPP compliant? *(Look for embedded OCPP 1.5 / 1.6 (evolutionary 2.0) compliance.)*



### 5. ANCILLARY SERVICES

Please explain your solution's ancillary services.

#### 5.1. Service portfolio

*(Depending on your project, look for self-managed services or fully managed services. Look for self-managed services with easy-to-use cloud-based software for remote management. Look for evidence of proven success in the field with fully managed services.)*

- 5.1.1. What additional services does our solution offer?
- 5.1.2. Are these service managed by your company or by a third party?
- 5.1.3. What service providers do you work with?
- 5.1.4. Do you offer troubleshooting?
- 5.1.5. Do you offer hardware support?
- 5.1.6. Do you offer software support?
- 5.1.7. Do you offer technical support?
- 5.1.8. Do you have procedures in place for logistics (e.g. shipping and receiving)?



## 6. PRICING AND AVAILABILITY

Please send a detailed pricing proposal appropriately based on the solutions above.

### 6.1. Costs

6.1.1. What is the cost break down of your solution?

6.1.2. What flexibility options do you have for this contract?

6.1.3. What impact would there be on the pricing if an expansion of services is required during the term?

6.1.4. Are there hidden fees such as charge-backs, connections, etc.?

*(Ensure all pricing comparisons between data center providers are 'apples to apples'. Often, a provider may share a low price upfront, but then add additional charges once the contract is nearly final. Ensure you understand the lifetime costs of the solution. Ensure that operational costs are clearly explained. Operational costs are typically over 80% of the lifetime costs of EV charging solutions.)*

### 6.2. Timing

6.2.1. What is the lead-time for your solution?

## 7. TERMS

### 7.1. Additional documentation requirements

7.1.1. Please provide your company's standard contract and service level agreement

7.1.2. Please state impacts occurring at the conclusion of the agreement