



REGULATORY POLICY FOR ELECTRIC VEHICLE CHARGING INFRASTRUCTURE IN THE EMIRATE OF ABU DHABI

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1. Foreword

The Energy Sector in the Emirate of Abu Dhabi is adapting to the changes witnessed in the global energy transition, in order to be prepared to accomplish the goals of the Emirate of Abu Dhabi and the United Arab Emirates aiming to reduce carbon-dioxide emissions through use of clean energy for electrification and support the reduction of the carbon footprint and pollutant emissions of the surface transport sector.

The surface transport sector in the Emirate of Abu Dhabi has a Low Emission Vehicle Strategy aimed towards diversifying the sources of energy used, in particular, the transition towards electrification. For instance, there is an on-going noticeable global transition towards the use of Electric Vehicles (EVs) that will be charged from the electric grid system, which as the energy mix evolves, allows for the increased use of clean energy for transportation, as well as the corresponding reduction of CO2 emissions and other pollutants. The use of EVs have the potential of restructuring of the future of surface transport globally. These EVs have already achieved a remarkable uptake in some specific markets, which has significantly contributed to the reduction of the negative environmental impact of surface transport. At the time when the uptake of EVs in Abu Dhabi is still at its inception, it is nonetheless envisaged that technical developments in the near future, would likely result in customer demand and higher demand of EVs that will likely become mainstream in the Emirate over the coming decade and onwards. The aim of this Regulatory Policy is to contribute to such development to evolve in an orderly and transparent manner by providing the regulatory requirements and guiding principles for up-take of the EV charging infrastructure, while considering the benefits to customers, the economy and the environment of the Emirate of Abu Dhabi.



The Emirate of Abu Dhabi aspires to enable such transition in the Sector of surface transport, and to enhance the use of EVs, to garner benefits to the community, accelerate the fight against climate change, improve the local air quality and protect the environment, while supporting the UAE's efforts in achieving Net Zero emissions target by 2050. The Abu Dhabi Executive Council had in this regard approved "Low-Emission Vehicle Strategy" in 2016 prepared by Department of Municipalities and Transport (DMT), which aims at supporting the uptake of low-emission vehicles in the Emirate of Abu Dhabi.

In this context, the Department of Energy (DoE) has prepared this "Regulatory Policy for Electric Vehicle Charging Infrastructure in the Emirate of Abu Dhabi", which explains and defines the regulatory principles for EV charging infrastructure in the Emirate.

This Regulatory Policy is the outcome of the consultations carried out by the DoE to define the basic principles of the EV Charging infrastructure and to support the roles and functions expected from various stakeholders.



2. Introduction

2.1 Purpose

The regulatory policy for EV charging infrastructure in the Emirate of Abu Dhabi ('**The Policy**') sets out the fundamental principles for ownership, installation and management of Electric Vehicle Supply Equipment (EVSE), the electricity supply to EVSE, and pricing mechanism to End Customers. This Policy aims to support the transition of UAE and Abu Dhabi Emirate into achieving carbon neutrality by the year 2050.

2.2 Scope

This Policy is applicable to all activities pertaining to EV charging infrastructure in the Emirate of Abu Dhabi including conductive and inductive charging. While this Policy is primarily designed for on-grid charging, it does not intend to restrict off-grid charging. However, this Policy does not cover battery swapping stations.

2.3 Responsibility for Implementation

The Following stakeholders are responsible for supporting the implementation of this Policy:

- Department of Energy (DoE)
- Department of Municipalities and Transport (DMT)
- Integrated Transport Centre (ITC)
- Department of Economic Development (DED)
- Emirates Water and Electricity Company (EWEC)
- Abu Dhabi Distribution Company (ADDC)
- Al Ain Distribution Company (AADC)
- ADNOC Distribution Company (ADD)
- Abu Dhabi Quality and Conformity Council (QCC)

2.4 References



This Policy is made by the Abu Dhabi Department of Energy (DoE), pursuant to:

- Law No. (2) of 1998 on the Regulation of the Water and Electricity Sector in the Emirate of Abu Dhabi (as amended).
- Law No. (18) of 2009 on the Regulation of Vehicle Parking Areas in the Emirate of Abu Dhabi.
- Law No. (11) of 2018 on the Establishment of the Department of Energy.
- Chairman of the Executive Council Resolution No. (26) of 2018 concerning Additional Competencies of the Department of Energy.
- Executive Council's Executive Committee Resolution No. (06/020/2/2016) on the Low- Emission Vehicle Strategy in the Emirate of Abu Dhabi.
- Executive Council's Decision No. 149 for the year 2021 concerning EV charging tariff.
- DoE Chairman Decision No.11 of 2021 in relation to EVSE.
- Abu Dhabi Quality and Conformity Council (QCC) Specific Requirements for Electric Vehicle Supply Equipment QCC-PCS-ASP040.02 Issue Date: January 2019 Issue Number: 2.
- The Electricity Wiring Regulations (EWR) 2020, issued 01 April 2020.
- Consent for Interim Relaxation -The Use of Outdoor IP54 rated High Power/Fast Electric Vehicle Charging Equipment (EVSE) issued on 6 June 2021
- Guidance Document-Installation of Electric Vehicle Supply Equipment (EVSE) issued 1 Jan 2017
- The Electricity Supply Regulations 2020 issued 01 September 2020.



- The Customer Metering Regulations (Second Edition) issued 1 Jan 2018.
- The Electricity Distribution Code
- DMAT Technical Circular concerning new requirements for Low Emission Vehicle Parking Spaces with Electric Vehicle charging points Ref. 2017-TMM-0050 dated 09 March 2017.

2.5 Distribution

The approved version of this Policy will be distributed to the stakeholders stipulated under section 2.3 and a copy of the Policy will be available under “Publications” section in DoE’s website.



3. Definitions

Distribution Company	A company or body holding an electricity distribution and supply licence, granted by the DoE pursuant to the Law.
Charge Point Operator (CPO)	An entity who operates EVSEs in Public or Private Parking Areas and provide EV Charging Service to End Customers. A CPO may own, install and/or operate EVSE as per the agreement with the Premises owners. CPOs may carry out Self-Provision Charging for EV-fleets.
Electrical Installation	An Electrical Installation comprises any fixed or temporary cable, switchgear or other electrical equipment or apparatus within a Premises or other place where there is an electricity supply (including outdoor locations).
End Customer/s	EV user/s.
Electric Vehicle (EV)	Any vehicle propelled by an electric motor drawing current from a rechargeable storage battery or from other portable electricity storage devices (portable batteries rechargeable using energy from a source off the vehicle, such as a residential or public electricity service), which is manufactured primarily for use on public streets, roads or highways, such as battery electric vehicles and plug-in hybrid vehicles. For the purpose of this Policy, electric bikes, scooters, golf carts, or similar vehicles are not considered EVs.
EV Charging Services	All types of services concerning the charging of EVs from EVSE excluding areas of Self-Provision Charging. This includes but is not limited to access to EVSE, payment and any other relevant services.



EV Ready	The design and construction of a parking space with the necessary infrastructure including conduits and Electrical Installation as needed to easily receive the installation of a suitable EVSE in the future.
Electric Vehicle Supply Equipment (EVSE)	Conductors, including the phase, neutral and Circuit Earth Conductors, the EV couplers, attachment plugs, and all other accessories, devices, equipment, power outlets or apparatuses installed specifically for the purpose of delivering energy from the Premises wiring to the EV and allowing communication between them if required. Example: wall-box unit and charging pole
EVSE Meter	An approved metering equipment installed for the purpose of measuring the electricity consumed by such EVSE
EVSE Tariff	An electricity supply tariff to EVSE, as may be issued by DoE and as amended from time to time.
Parking Competent Authority	The governmental department or authority concerned with regulating Public and Private Parking Areas in the Emirate of Abu Dhabi.
Premises	Any occupied or unoccupied land, structure, building, enclosure, parking or other place. Such locations include, but are not limited to, apartments, villas, offices, shops, warehouses, hotels, commercial complexes, leisure complexes, public buildings, parks and public realm, farms and entertainment arenas.
Public Parking Areas	The Premises that are not privately owned and are operated and managed by the Parking Competent Authority as public parking for vehicles, whether with or without pay, in accordance with Law No. (18) of 2009 referred to hereinabove.



Private Parking Areas	The Premises that are owned / managed by any person or government or private company or entity (other than the Parking Competent Authority) used for the purpose of vehicle parking whether with or without a pay under the permission or approval of the competent authority, in accordance with Law No. (18) of 2009, referred to hereinabove
Self-Provision Charging	EV charging for non-commercial purpose including personal use at residential Premises such as villas, townhouses and “Shaabiat”, or for EV fleet owned by/serving a single entity.



4. POLICY STATEMENT

4.1 Objectives

In accordance with Articles 4 to 6 and 14 of Law No. 11, the DoE issues this Policy to achieve the following objectives:

- 4.1.1 To ensure EV Charging Infrastructure in Public and Private Parking Areas is available, monitored, affordable, safe to use and accessible by all End Customers.
- 4.1.2 To identify and integrate roles and responsibilities of key stakeholders concerning EV charging infrastructure in Public and Private Parking Areas.
- 4.1.3 To enhance preparedness of electrical distribution system in line with EV uptake and urban planning.
- 4.1.4 To define relevant licensing requirements, connection and tariff applications to EVSE and principles of EV Charging Services.

4.2 Planning of EV Charging Infrastructure

- 4.2.1 The Parking Competent Authority shall set an immediate, short-term, and long-term targets for EV-ready and/or EVSE coverage ratio in Public and Private Parking Areas where applicable in coordination with the DoE.
- 4.2.2 The Parking Competent Authority shall conduct a regular load demand assessment, forecasts and location planning for EV charging infrastructure in Public Parking Areas or in Private Parking Areas as applicable and in coordination with the relevant Distribution Company and submit in accordance with regulatory processes established in the Electricity Distribution Code.
- 4.2.3 The Distribution Company shall develop and publicly share the criteria, requirements, and procedures for all types of EVSE connections – in Public or Private Parking Areas and for self-provision – along with associated charges for the interest of EVSE owners and CPOs.



4.2.4 All new residential developments to comply with the provision of EV ready requirements that are set by the Parking Competent Authority or DoE on self-provision arrangements.

4.3 Electricity Supply to EVSE

4.3.1 The electricity supply to all EVSEs – in Public or Private Parking Areas and for Self-Provision, shall be made through dedicated EVSE Meters linked to the EVSE owners' electricity accounts.

4.3.2 The Distribution Company shall apply an EVSE Tariff on electricity consumption by EVSEs. Where metered consumption is not activated, the Distribution Company shall submit for DoE approval a pricing methodology to be applied until such metered consumption is activated.

4.3.3 All EVSEs installation shall be verified by the Distribution Company in accordance with DoE's Electricity Wiring Regulations and any other relevant DoE guidance or regulations prior to permitting electricity supply to EVSEs.

4.3.4 All EVSEs shall comply with the Abu Dhabi Quality and Conformity Council (QCC) Specific Requirements for Electric Vehicle Supply Equipment prior and after installation.

4.3.5 The Distribution Company shall maintain an electronic database for all EVSE accounts and ensure the coverage of the following information as minimum; EVSE owner, EVSE rating and mode, EVSE location and metered consumption per EVSE. The database must be accessible by DoE.

4.3.6 The Distribution Company shall create a new service named "EVSE" and reflect this amendment in all its processes and procedures including but not limited to planning statements, connection and metering procedures, supply and connection agreements, billing and customer services.



4.4 EV Charging Services to End Customers

- 4.4.1 No operational licence or permit is required by the DoE to own, operate EVSE and/or to provide EV Charging Services in Public and Private Parking Areas and for Self-Provision Charging.
- 4.4.2 All new EVSEs charging in Public and Private Parking Areas shall be accessible by all End Customers. Dedicated EVSEs for special applications or types of Electric Vehicles may be permitted in Private Parking Areas after obtaining the approval from the Parking Competent Authority.
- 4.4.3 The Parking Competent Authority will ensure the sufficient availability of EV charging infrastructure in Public and Private Parking Areas in the Emirate as per the process referred to in Section 4.2
- 4.4.4 The Parking Competent Authority to ensure compliance of EV parking spaces requirements in Public and Private Parking Areas for new and existing spaces.
- 4.4.5 The Parking Competent Authority may opt to grant exclusive concessions for installation and operation of EVSEs including provision of EV Charging Services in the Public Parking Areas to a Charge Point Operator (CPO).
- 4.4.6 EVSE owners in Private Parking Areas or their appointed CPOs shall obtain a commercial license from the Department of Economic Development to undertake the EV Charging Services activity and obtain prior approval by the Distribution Company for connecting the EVSE as stipulated in Section 4.3.
- 4.4.7 EVSE owners or CPOs in Public and Private Parking Areas may determine the adequate service level and price required for the EV Charging Services in compliance with all existing regulatory requirements for commercial activities as decided by the Department of Economic Development and Competitiveness Office of Abu Dhabi (COAD), and any contractual arrangements agreed upon between the different parties.
- 4.4.8 The EVSE owners and CPOs must:



- (a) make the EV Charging Services prices available to the public whether by publishing these prices on their website or an application or clearly by displaying them at the EVSE.
- (b) comply with all federal and local consumer protection legislations.
- (c) adopt fair, reasonable, transparent and non-discriminatory EV Charging Services prices.
- (d) use an open payment framework in line with ISO 15118 where applicable. The charging management software and the payment systems should adopt open protocols that are flexible for future enhancement and communication with new technologies and platforms. Guiding Principles on EV Charging Services payment platform is presented in Annex (B).



5. Annex-A: Policy Summary

Classification of EV Charging Infrastructure	EV Charging in Public Parking Areas	EV Charging in Private Parking Areas	EV Charging for Self-Provision
Usage	Open for all End Customers	Open for End Customers who are allowed to use the private Parking Areas	Dedicated for personal EV or EV fleet owned by one entity
Locations	Public Parking Areas such as on-street, off-street and highways	Shopping centres, hotels, petrol stations, gated communities, buildings, etc	Villas, townhouses, and “Shaabiat”, or EV fleet’s owner premises
Ownership	Parking Competent Authority or CPO	Premises owners, or CPO	End Customers, or EV fleet owners
Operation	CPO	CPO	Self-operated or CPO for EV fleet
EV Charging Service	service level/price set by Parking Competent Authority or CPO	service level/price by CPO	Not applicable



6. Annex-B: Guiding Principles on Payment

- a) It is DoE recommendation that the unified charging management software and uniform payment system adopts an open payment framework in line with ISO 15118, to be used by all EVSE Owners and CPOs across the Emirate of Abu Dhabi, and made available for all public charging locations, with flexible payment options.
- b) Different payment gateway shall be offered to End Customers, aimed at ensuring payment flexibility and a seamless customer experience, EVSE infrastructure's full interoperability, in addition to allowing for establishing a competitive market environment.
- c) The uniform payment system should provide adequate flexible payment options, allowing End Customers to pay easily and conveniently at all publicly accessible EV charging points, without the specific need to enter into a contract with the operator of the EV charging point.
- d) For EV charging on an ad hoc basis, all publicly accessible EV charging points should accept payment instruments that are widely used and in particular, electronic payments through terminals and devices used for payment services.
- e) EV charging points should provide ad hoc payment methods in addition to contract-based payments, including at least one of the following payment methods: a) Payment via card readers; b) Devices with a contactless functionality that is at least able to read payment cards; c) Devices using an internet connection and can generate a Quick Response code for payment transaction; and d) Payment via a mobile app.
- f) Payment instructions and pricing shall be clearly displayed at/or near the EVSE and written in both Arabic and English language. This should also apply to the prices consumers pay for EV Charging Services.



- g) A contact number should be clearly displayed at each EVSE to address any payment or charging issues faced by customers (for EVSE in public municipal locations such contact number needs to be available on a 24/7 basis).
- h) End Customer shall be able to locate all charge points via user-friendly applications and view their status and availability.
- i) DoE may request from EVSE Owners or CPOs to review the price charged to End Customers if any of the above were not observed or complied with.

7. Annex-C: Governance Model Public - Parking Areas

