



IMPORTANT NOTE

This is an unofficial translation intended as a guide only, and should not be relied upon in the event of any dispute or legal proceedings. Where there is a conflict between this unofficial translation and the original Arabic version, the Arabic version will prevail.

**Department of Energy Chairman Decision No (45) of 2019
concerning the District Cooling Applicability Regulation**

Chairman of the Department of Energy

- Following perusal of Law No (1) of 1974 concerning the restructuring of government body in the Emirate of Abu Dhabi and its amendments;
- Law No (4) of 1983 concerning the regulation of building works and its amendments;
- Law No (3) of 2015 concerning the regulation of real estate sector in the Emirate of Abu Dhabi;
- Law No (1) of 2017 concerning the financial system of the Government of Abu Dhabi;
- Law No (5) of 2018 concerning the establishment of the Department of Urban Planning and Municipalities;
- Law No (7) of 2018 concerning the re-organization of Department of Economic Development;
- Law No (11) of 2018 concerning the establishment of the Department of Energy;
- The Executive Council Chairman Resolution No (26) of 2018 concerning additional competencies to the Department of Energy;
- The Department of Energy Chairman Decision No (44) of 2019 concerning District Cooling Regulation; and
- Pursuant to what has been presented to the Executive Council and upon the approval of the Executive Council on the same,

We issued the following:

Article (1)

The District Cooling Applicability Regulation attached to this decision shall be adopted.

Article (2)

All real estate developers shall settle their legal status and carry out feasibility study for applying district cooling services in new developments subject to the provisions of this regulation.

Article (3)

The Regulation shall be published in the official gazette and shall come into force on the date of publication.

**Eng. Awaidha Murshed Al Marar
Chairman**

Issued in Abu Dhabi on 2/9/2019
Encl: The District Cooling Applicability Regulation



District Cooling Applicability Regulation

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Department Objectives and Competencies

The Department of Energy (“**Department**”) is established pursuant to Abu Dhabi Law No. (11) of 2018 as a regulatory entity for the energy sector in the Emirate of Abu Dhabi. The Department aims at providing services relating the energy sector, seeking to achieve progress and keeping pace with global developments in the sector.

Law No (11) of 2018 states that the Department of Energy will oversee the activities of the production, storage, and distribution of chilled liquid for purposes of central cooling, which encompasses the District Cooling (‘DC’) activities.

Within its jurisdiction, the Department is responsible for regulating the DC activities in all respects. The Department shall license all facilities, entities and persons carrying out DC activities as well as monitor their commitment to provide the optimum level of service.

Therefore, the Department has issued the District Cooling Applicability Regulation (“**The Regulation**”) to ensure that DC is applied in areas where the system is technically and economically feasible as well as to ensure that premises located in licensed areas are complying with the regulations.

The Regulation is also available in Arabic. It may also be downloaded from the Department website at www.doe.gov.ae.

In case of any conflict between the Arabic and English versions of this Regulation, the Arabic version published in the official gazette of Abu Dhabi shall prevail.



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1. Legal Framework of the Regulation

1.1 Preliminary provisions

- 1.1.1 This Regulation is the first version of the “District Cooling Applicability Regulation” and the schedules attached to it are considered part thereof. This Regulation and the schedules are hereinafter referred to as “**The Regulation**”.
- 1.1.2 DoE has issued this Regulation in accordance with the provisions of Law No (11) of 2018 following the Executive Council’s approval.
- 1.1.3 The DoE Chairman may adopt or issue any regulations, policies, decisions, circulars, or executive and operational codes to implement the provisions of this Regulation without contravening the legislations in force.
- 1.1.4 It is prohibited for any facility or individual to carry out District Cooling activities without obtaining a license from DoE in accordance with the rules and procedures set forth by the DoE.
- 1.1.5 The DoE Chairman may exempt any individual from complying with the provisions of this Regulation for a certain period on conditions determined by the exemption decision. The Chairman may also cancel, amend, or extend any general or special exemption issued under the provisions of this Clause.
- 1.1.6 The DoE Chairman may delegate any of the DoE functions listed in this Regulation to any government company reporting to DoE to the extent needed and to the interest of work, after obtaining the approval of the Executive Council.

1.2 Commencement

- 1.2.1 This Regulation shall come into force as of the date of its publication in the official gazette of the Emirate (“**Effective Date**”).
- 1.2.2 The DoE Chairman may specify period(s) during which the Persons subject to this Regulation shall be allowed to settle their legal status.
- 1.2.3 The DoE shall periodically review the Regulation and the implementation and compliance with it. The DoE Chairman may amend or cancel the DC Regulation after obtaining the Executive Council’s approval.
- 1.2.4 The schedules to the Regulation may be amended by the DoE subject to a three-month’ notice of its intention to do so.

1.3 Purpose

- 1.3.1 This Regulation intends to optimize energy infrastructure and encourage the adoption of more efficient cooling systems in areas where it is feasible. Specifically, this Regulation intends to increase the penetration of District Cooling in the Emirate by means of aggregating cooling demand and promoting and applying this technology wherever feasible.



1.4 Scope

- 1.4.1 This Regulation applies to any Entity that uses, supplies, installs, procures or commissions the installation of equipment or apparatus for purposes of cooling that meet the criteria in Schedule (1) and/or (2).

1.5 Supervising the Implementation of the Regulation

- 1.5.1 Pursuant to Articles (10) and (11) of Law No. (11) of 2018, all individuals, facilities, and entities shall comply with the provisions of this Regulation and the rules, policies, decisions, circulars, codes and licenses issued thereunder.
- 1.5.2 Without prejudice to any other stricter punishment provided in any other legislation, an administrative fine of not more than (AED 10,000,000) ten million dirhams shall be imposed on anyone who contravenes the provisions of this Regulation and the rules, policies, decisions, circulars, codes and licenses issued thereunder pursuant to Law No (11) of 2018.
- 1.5.3 After Executive Council's approval, the DoE Chairman shall issue the fines and administrative penalties table for violating any of this Regulation's provisions, rules, policies, decisions, circulars, codes and licenses issued thereunder. The conciliation procedures and administrative penalties procedures shall be applied in accordance with the approved and adopted regulations as per Law No (11) of 2018.
- 1.5.4 The DoE shall remove the violations at the expense of the violator if the latter does not remove them at the time specified by DoE.
- 1.5.5 The DoE by itself or by any other authorized Persons, after Executive Council's approval, shall supervise the implementation of this Regulation and the rules, policies, decisions, circulars, codes and licenses issued thereunder.



2. Definitions

2.1 Interpretation

- 2.1.1 Words and expressions other than those defined in this Regulation which are defined in Law No (11) of 2018, shall have the meanings ascribed to them in Law No (11) of 2018.
- 2.1.2 Words using the singular or plural number also include the plural or the singular number respectively.
- 2.1.3 Unless otherwise specified, days shall mean calendar days.

2.2 Definitions

Country: United Arab Emirates.

Emirate: Emirate of Abu Dhabi.

DoE: the Department of Energy.

Regulation: the District Cooling Applicability Regulation.

Law: Law No (11) of 2018 concerning the establishment of the Department of Energy.

District Cooling: means the cooling of facilities through centralized DC Systems and networks using a cooling medium from the cooling plant producing the cooling energy.

Air Conditioning: means the process of treating air to simultaneously control its temperature, humidity, and cleanliness and distribution of this air to meet the requirements of the conditioned space.

DC Services: means any activity carried out by the DC Services Provider in relation to production and distribution of cooling energy using Chilled Water or one or more DC Plants.

DC Regulation: means the “*District Cooling Regulation*” issued by the DoE further to the approval of the Executive Council to regulate the District Cooling activities, as may be amended, supplemented or replaced by the DoE from time to time.

DC System: means the equipment and cooling plant comprising a centralized system for production and distribution of Cooling Energy in the form of Chilled Water from a central chiller plant to multiple Buildings through a network of underground pipes.

DC Services Provider: means any activity by a DC Provider related to the generation and distribution of Cooling Energy by means of Chilled Water using one or more DC Plants.

DC Plant: means the plant, including pumping stations, chillers, thermal energy storage facilities, Cooling Towers, associated electrical substations, emergency power supply equipment, systems control, switchgear, electrical installation auxiliary equipment, piping and other installations and ancillary equipment, used or useful in the production of cooling energy and the distribution of Chilled Water, operated and maintained for purposes of supporting the provision of DC Provider Services, to be installed the DC Plant area.



Chilled Water: means chilled water used in a closed hydronic system (typically chemically treated) for Air Conditioning or process cooling applications.

Building: means any building and associated structures and facilities constructed or to be constructed by, or on behalf of customers.

Person: means any natural or judicial person.

Entity: means an individual, company, association, society, partnership, corporation, municipality, institution, government organisation, agency or group.

Developer: means the Person licensed to carry out the activities of developing, selling, managing and renting properties as a main developer or a sub-developer in a real estate development project.

New Building: means a Building which enters into commercial operation after the Effective Date of this Regulation.

Existing Buildings: means Buildings that entered into commercial operation before the Effective Date of this Regulation.

Authorised Service Area: means the area or areas (i) for which the DoE approves the DC System feasibility study as per Section 3.2.6 of this Regulation (ii) meets the DC System Applicability Criteria and (iii) the Developer accepts to proceed with the procurement of DC Provider Services as per Section 3.2.8.

Cooling Load: means the rate of heat energy removal, expressed in megawatts cooling or kilowatts cooling.

Cooling Load Density: means the projected total DC Cooling Load per unit of land area for a potential DC Authorised Service Area.

Full Build-Out: means the ultimate phase of a master Development.

Qualified Cooling Load: means the maximum projected Cooling Load in the District Cooling scheme, assuming completion of project according to the District Cooling scheme and the comprehensive implementation plan submitted to DoE as per this Regulation. However, the load shall be equal to or exceeding 17.6 MW, with exempting the Cooling Load from any Existing Buildings or existing industrial facilities in the scheme for the purposes of calculating the Qualified Cooling Load.

Potable Water: means water defined in the “Water Quality Regulations” issued by the DoE.

Recycled Water: means treated liquid effluent produced by a wastewater treatment system that is suitable for disposal, reuse or selling to others.

Business Days – means any day other than a Friday or Saturday, when government departments in the Emirate of Abu Dhabi are required to be open for business.

AED: is the official currency used in the Country.

Year: The calendar year.



3. DC Applicability

3.1 Authorised Service Area

- 3.1.1 For any Authorised Service Area(s), the Developer shall be required to comply with this Regulation and the DC Regulation.
- 3.1.2 The Developer's acceptance to implement the DC System upon DoE approval for DC System feasibility study is considered to be completely irrevocable and in case the Developer fails to comply with this Regulation, the DoE has the right to apply necessary procedures, fines and sanctions in accordance with provisions of Law No (11) and this Regulation to oblige the Developer to implement the DC System.

3.2 DC System Feasibility Study

- 3.2.1 All new developments in the Emirate of Abu Dhabi that meet the criteria in Schedule (1) shall be subject to a check for DC System applicability by conducting a DC System feasibility study.
- 3.2.2 The DC System feasibility study shall be sufficiently comprehensive and shall include all supporting documents, assumptions, formulas and factors used. The DC System feasibility study shall recommend DC System for the development if the study meets the DC System Applicability Criteria stated under Schedule (2).
- 3.2.3 The Developer shall submit the DC System feasibility study during the concept planning stage for DoE review.
- 3.2.4 The DoE upon review (28 Business Days) may provide preliminary approval or request a revision of the DC System feasibility study.
- 3.2.5 The Developer shall revise the DC System feasibility study and submit it for DoE final approval in case any design change incurred during liaising with other stakeholders from concept planning stage to the detailed planning stage impacted the DC System feasibility study.
- 3.2.6 The DoE by approving the DC System feasibility study concurs with the recommendation of the DC System feasibility study.
- 3.2.7 If DC System is feasible in accordance with requirements stipulated in Schedule (2), the Developer will have 60 days to decide whether DC scheme will be implemented and the Provider Services will be procured.
- 3.2.8 If the DC System is feasible in accordance with requirements in Schedule (2) and the Developer decides to proceed with procurement of DC Provider Services, then the area is designated Authorized Service Area and the procurement of DC Provider Services shall be continued in accordance with DC Regulation.
- 3.2.9 The procurement of DC Provider Services shall follow the processes as set out in the DC Regulation in relation to the District Cooling market competition.



- 3.2.10 The Developer through timely and effective communication, shall ensure that the stakeholders related to all New Buildings to be built in the development are in full knowledge of the availability of DC System infrastructure in the development and thereby may plan, design, construct and commission such Buildings as District Cooling ready Buildings described in relevant District Cooling code and subsequently connect such Buildings to the DC network of the development.
- 3.2.11 If DC System is not feasible as per the approved DC System feasibility study, then the development may proceed with conventional cooling.

3.3 Criteria for DC System Applicability

- 3.3.1 The DoE deems areas meeting the following criteria as Authorized Service Area. The criteria includes:
- (a) The development includes at least two New Buildings.
 - (b) The DC Authorised Service Area is expected to have access to sufficient quantities and qualities of water in-line with the DC Regulation (Potable Water, Recycled Water or seawater) for DC Plant condenser cooling to successfully meet the DC Cooling Load within applicable laws, regulations and standards.
 - (c) The development is expected to have access to sufficient electricity supply in-line with the DC Regulation for DC Plant to successfully meet the DC Cooling Load within applicable laws, regulations and standards.
 - (d) At Full Build-Out, the development is projected to have a lower levelised cost for DC System than that for conventional cooling.

The specific criteria shall be updated from time to time and listed in Schedule (2).

3.4 Scope of the Regulation

- 3.4.1 If the area under consideration includes Existing Buildings, the Cooling Load of the Existing Buildings shall not be considered in the analysis of DC Cooling Load, and Existing Buildings shall not be required to use District Cooling unless Existing Buildings have an imminent plan for cooling system replacement or a business plan for retrofitting that is presented to the DoE.
- 3.4.2 Industrial real estate developments or developments including industrial facilities are not considered in the definition of Authorised Service Areas and are therefore exempt from the Regulation.
- 3.4.3 If the potential DC Authorised Service Area includes industrial facilities, the criteria relating to Cooling Load Density and magnitude of Cooling Load must be applied only to the non-industrial portions of the development.



4. Review of DoE decision

4.1 Application for review

4.1.1 An application to review a decision by the DoE under Clause 3.2.11 must be made in writing to the DoE and submitted with any supporting documents or evidence that can refute the feasibility of to use District from a technical and economic perspective in the Authorised Service Area.

4.2 DoE request for information

4.2.1 The DoE may request from any Entity making an application for review under this Part any information or documentation it considers reasonable and necessary in the circumstances and the Entity must provide such information within an agreed period.

4.3 DoE decision

4.3.1 The DoE shall make its decision within (60) days of receiving an application for review.

4.3.2 The DoE shall notify the Entity which made the application for review of its decision within five (5) Business Days of making its decision.

4.3.3 The DoE may:

- (a) make any decision it sees fit in the circumstances; and/or
- (b) issue directions as it sees fit to the Entity which made the application for review and to any third party.

4.3.4 Any decisions or directions issued by the DoE are binding on the Entity which made the application for review and any third party stated in these decisions or directions.

4.3.5 Failure to comply with decisions or directions shall be considered as a failure to comply with the Regulation.



5. Failure to comply with Regulation

5.1 Reporting failures

5.1.1 Any failure to comply with this Regulation or any act that may be considered as a failure to comply with this Regulation must be reported to the DoE.

5.2 Enforcement procedures

5.2.1 In case of failure to comply with this Regulation, the DoE may issue an improvement notice or other enforcement instrument or administrative sanction under Law No. (11) of 2018 to the non-complying Entity.

5.2.2 Such notice, instrument or administrative sanction shall include:

- (i) the name of the Entity;
- (ii) the Clause which has been violated;
- (iii) a grace period in which to comply; and
- (iv) the administrative fines and sanctions to be imposed against the Entity in case it does not comply with the Regulation within such grace period.

5.2.3 The DoE may impose administrative fines and sanctions against those who fail to comply with the provisions of this Regulation, policies, decisions, circulars and notices issued thereunder as per Clause 1.5 of these this Regulation.



6. Governing Law

6.1 Governing Law

- 6.1.1 This Regulation and the rights and duties of any parties hereunder shall be governed by the laws of the Emirate of Abu Dhabi and the federal laws of the UAE as applied by the courts of the Emirate of Abu Dhabi.



Schedule 1: Criteria for Carrying out Feasibility Study

1. The development does not fall within an existing Authorized Service Area.
2. The development includes at least two New Buildings.
3. The development has a minimum gross floor Area of 40,000 m².



Schedule 2: DC System Applicability Criteria

1. The development includes at least two New Buildings.
2. The licensed area is expected to have access to sufficient quantities and qualities of water (Potable Water, Recycled Water or seawater) according to the DC Regulation for DC Plant condenser cooling to successfully meet the DC Cooling Load within applicable laws, regulations and standards. Sufficient annual water supply is defined, for each year of projected DC System operation (up to 25 years maximum):
 - Required annual water supply (m^3)
 - Projected annual cooling energy (MWh_c) X water use factor (m^3/MWh_c)
3. The development is expected to have access to sufficient electricity supply to meet the projected phased DC Cooling Load according to the DC Regulation for DC Plant condenser cooling. Sufficient electricity supply is defined, for each year of projected DC System operation (up to 25 years maximum):
 - Required electricity supply (kW)
 - Projected peak load (kW_c) X peak power demand factor (kW/kW_c)
4. DC is projected to provide cooling at a lower levelised cost than conventional cooling.