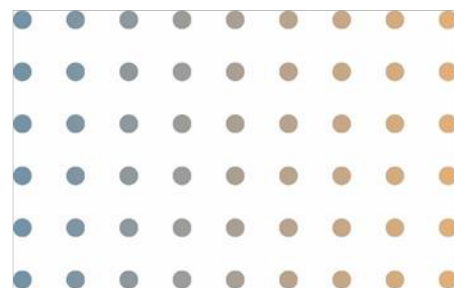




DEMAND RESPONSE REGULATIONS



EFFECTIVE DATE: 01/01/2024





Contents

Foreword	4
Acknowledgements.....	5
Changes History Sheet	6
1. Introduction.....	7
1.1 Citation	7
1.2 Commencement.....	7
1.3 Purpose.....	7
1.4 Scope.....	7
1.5 References.....	8
1.6 Distribution	8
2. Definitions.....	9
2.1 Interpretation	9
2.2 Definitions	9
3. Demand Response Mandate	12
3.1 Demand Response Objectives.....	12
3.2 Demand Response Targets	12
3.3 Licensing DR Providers.....	13
4. Demand Response Roles & Responsibilities	15
4.1 Procurement Licensee	15
4.2 Electricity Distribution and Supply Licensee(s).....	16
4.3 Electricity Despatch Licensee	17
4.4 Demand Response Licensee(s).....	17
5. Evaluation, Measurement & Verification	19
5.1 EM&V Plan.....	19
5.2 Monitoring and Reporting	19
6. Cost Recovery	21
6.1 Cost Recovery Mechanisms.....	21
7. Review of DoE decision	22
7.1 Application for review	22
7.2 Timescale for application for review	22
7.3 Extension of time for application for review	22
7.4 DoE request for information	22



7.5	DoE decision	22
8.	Failure to comply with Regulations	24
8.1	Reporting failures	24
8.2	Enforcement procedures	24
9.	Governing Law	25
9.1	Governing Law	25



Foreword

The Department of Energy (DoE) was established in accordance with Law No. (11) of 2018 to replace the Abu Dhabi Water and Electricity Authority (ADWEA) and the Regulation and Supervision Bureau (RSB). The DoE aims to provide services related to the Energy Sector at optimal level, seeking to achieve progress and keeping pace with global developments in the Energy Sector, as per the applicable legislations and in cooperation with the concerned entities in the Emirate. Moreover, the Executive Council Chairman Resolution No. (26) of 2018 set out additional competencies for the DoE, which included the development of initiatives and demand management programs aimed at rationalizing the use of energy.

On this basis, the Demand Response Regulations provide a comprehensive regulatory framework for the Mandate, Roles & Responsibilities, and Evaluation, Measurement & Verification for the development, implementation, and utilization of Demand Response resources.

The regulatory framework defined here was developed through close collaboration and coordination with key stakeholders and sector companies, and represents the culmination of efforts to establish and develop a market for Demand Response in Abu Dhabi.

Demand Response is recognized as a key initiative within the Abu Dhabi Demand Side Management Strategy and Energy Rationalization Strategy 2030, and therefore, supports the government objectives related to the achievement of energy and water efficiency objectives.

These Regulations are available for download from the DoE's website at www.doe.gov.ae.

H.E. AHMED MOHAMED AL RUMAITHI
Undersecretary-Department of Energy

Acknowledgements

The DoE gratefully acknowledges the contributions and comments provided by the following organisations:

- (a) Al Ain Distribution Company (AADC).
- (b) Abu Dhabi Distribution Company (ADDC).
- (c) Abu Dhabi Transmission and Despatch Company (TRANSCO).
- (d) Emirates Water and Electricity Company (EWEC).



Changes History Sheet

DOC. CHANGE REQUEST NO. & DATE	PAGE NO.	SUMMARY OF CHANGE	NEW EFFECTIVE DATE





1. Introduction

1.1 Citation

1.1.1 These Regulations are the Abu Dhabi Demand Response Regulations 2023.

1.2 Commencement

1.2.1 These Regulations come into force on 01/01/2024.

1.2.2 These Regulations are issued by the DoE pursuant to Article 62 of Law No (2) of 1998 and Article 4 of Law No (11) of 2018.

1.3 Purpose

1.3.1 In accordance with the approved Abu Dhabi Emirate Demand Side Management and Energy Rationalization Strategy 2030, and in accordance with Demand Response as defined within the Abu Dhabi Emirate Demand Side Management and Energy Rationalization Strategy 2030, the DoE developed these Regulations to set out the regulatory framework defining the Mandate, Roles & Responsibilities, and Evaluation, Measurement and Verification for the development, implementation, and utilization of Demand Response resources.

1.4 Scope

1.4.1 These Regulations apply to any entity that uses, supplies, installs, procures or commissions the installation of equipment or apparatus for the purposes of providing or provisioning Demand Response services, and shall be responsible to implement the applicable Regulations defined here.

1.4.2 These Regulations may be amended or revoked by the DoE at any time.

1.4.3 Nothing in these Regulations is intended to conflict with, or affect the operation of any Federal or Abu Dhabi Law, Regulation, Decree, Order, or other ordinance.



1.5 References

Abu Dhabi Demand Side Management and Energy Rationalization Strategy 2030, approved by Executive Council Executive Committee Decision No. 2019/2/007/04.

Abu Dhabi Demand Side Management Regulations, (Document no. DoE/QC/R01/001, Version no. 0 August 2021).

Clean Energy Strategic Target 2035 for Electricity Production in Abu Dhabi, approved by Executive Council Executive Committee Decision No. 24/15/2/2022.

Abu Dhabi Evaluation, Measurement & Verification (EM&V) Protocol (Document no. DoE/QR/P04/001, Version no. 1 July 2023).

1.6 Distribution

1.6.1 These Regulations are issued to entities involved in the implementation of the Demand Response Initiative, including, but not limited to:

Al Ain Distribution Company (AADC)

Abu Dhabi Distribution Company (ADDC)

Abu Dhabi Transmission and Despatch Company (TRANSCO); and

Emirates Water and Electricity Company (EWEC).



2. Definitions

2.1 Interpretation

- 2.1.1 Words with capital letters are defined within these Regulations with the meaning(s) provided to them as per Section 2.2.
- 2.1.2 Words and expressions other than those defined in these Regulations and which are defined in Law No (11) of 2018, shall have the meanings ascribed to them in Law No (11) of 2018.
- 2.1.3 Words using the singular or plural number also include the plural or the singular number respectively.
- 2.1.4 Unless otherwise specified, days shall mean calendar days.

2.2 Definitions

Customer – means any person or entity who has an agreement with a holder of a Licence for the supply of electricity and/or water.

Department of Energy (DoE) – means the Department of Energy (formerly the Regulation and Supervision Bureau) established pursuant to Law No (11) of 2018 Concerning the Establishment of the Department of Energy (as amended from time to time).

Demand Response (DR) – means a method to adjust electricity consumption from Customers in response to economic, commercial, or reliability signals and for the purposes of providing an explicit service to the grid, which may include, but is not limited to, capacity, balancing and/or grid stability services. Depending on the DR Resource type and program design, DR can adjust electricity demand down (load reduction), up (load increase) or move demand to other hours during the day (load shifting).

Distribution Company – means a party holding a Licence for electricity distribution in Abu Dhabi.

DR Aggregator – means an entity that aggregates and represents a portfolio of Customers for the purpose of providing DR services through a DRA.



DR Agreement (DRA) – means a contractual arrangement between a DR Provider and the DR Program Owner and/or Procurement Licensee outlining the terms for load adjustments by the DR Provider.

DR Program – means Demand Response as defined in the Abu Dhabi Demand Side Management and Energy Rationalization Strategy 2030.

DR Program Owner – means the entity that maintains primary responsibility and accountability for the design, administration, and delivery of the DR Program and for meeting the appropriate and relevant targets of the DR Program. The DR Program Owner is defined as per the DSM Regulations and the Abu Dhabi Demand Side Management and Energy Rationalization Strategy 2030.

DR Provider – means an entity that provides a DR service, either a Customer directly connected to the Transmission System (transmission-connected) or a DR Aggregator.

DR Resource – means the final end-use load at a Customer responsible for providing an actual DR service.

DSM Regulations – means the Abu Dhabi Demand Side Management Regulations 2023 issued by the Abu Dhabi Department of Energy

Economic Purchase – means EWEC's license obligation requiring the purchase of water and electricity production capacity, ancillary services and fuel in a manner which minimises overall costs of the water and power system for Abu Dhabi Emirate.

Energy – means the amount of electricity consumed at the point of sale (e.g., that enters the home, building, or establishment) without adjustment for any energy loss in the generation, transmission, and distribution of that energy. To simplify the descriptions in this document, the word energy will commonly be used to mean energy and water use or demand, unless explicitly mentioned.

Evaluation, Measurement and Verification (EM&V) – means the collection of methods and processes used to assess the performance of energy and/or



water efficiency activities so that planned results can be achieved with greater certainty and future activities can be more effective.

Licence – means the electricity and/or water distribution and/or supply licence issued by the DoE, as amended from time to time.

Price Controlled Licensee – means Al Ain Distribution Company (AADC), Abu Dhabi Distribution Company (ADDC), Abu Dhabi Transmission and Despatch Company (TRANSCO) and Emirates Water and Electricity Company (EWEC), or any other entity holding a Licence issued by the DoE and subject to price control regulation.

System Operator – means the party holding a Licence to operate the Abu Dhabi system.

Transmission System – means the high voltage electricity network as defined by the Abu Dhabi Electricity Transmission Code.

UAE – means the United Arab Emirates.

Water – means all types of water used for drinking or non-drinking purposes including desalinated water, recycled water, and groundwater.



3. Demand Response Mandate

3.1 Demand Response Objectives

3.1.1 The Demand Response Program shall fulfil the following objectives:

- (a) Achieve and promote energy savings, load shifting, seasonal peak reduction, reduction in emissions of greenhouse gases, lowering the government subsidy to Customers' electricity bills and enhancing Customers' comfort, health, and safety.
- (b) Support supply side plans to postpone, reduce or avoid investments in generation, transmission, and distribution infrastructure.
- (c) Support losses reduction in transmission and distribution networks.
- (d) Security of supply and cost-minimisation, requiring that all procurements are pursued on an economic purchase basis and to drive cost-effective investments in the supply mix.

3.1.2 Further, Demand Response is also intended to provide certainty and direction to electricity sector stakeholders in resource planning, encouraging the consideration and assessment of DR opportunities, and encouraging implementation and innovation by the Energy Sector.

3.2 Demand Response Targets

3.2.1 The DR targets shall be in line with the approved and relevant DSM Program targets under the DSM Strategy.

3.2.2 The DR Program Owner shall maintain responsibility and shall be accountable for the achievement of the targets defined for the DR Program.

3.2.3 The DoE, in consultation with the DR Program Owner and other relevant stakeholders, will define the targets, the timeframe for achieving those targets, and whether such targets are strategic or binding.

3.2.4 The set DR targets for the achievement of a specific capacity and/or output from DR shall be subject to periodic review to ensure their continued relevance and



effectiveness. The DoE shall conduct these reviews at intervals determined in accordance with industry best practices, or as required, but not exceeding more than every five (5) years. During these reviews, the following aspects shall be considered:

- (a) New or revised relevant energy and climate policies or targets set for Abu Dhabi Emirate or the UAE;
- (b) Assessment of changing supply and demand conditions, technological advancements, or shifts in demand patterns that may impact the appropriateness of the established targets;
- (c) Input from key relevant stakeholders within the sector to gather diverse perspectives and insights; and
- (d) Evaluation of the performance of the DR Program and their contributions to overall system efficiency and reliability.

3.3 Licensing DR Providers

3.3.1 The DoE shall, and in accordance with the applicable Laws and Regulations, be the sole entity authorised to issue Demand Response Licences to Demand Response Providers.

3.3.2 DR activities subject to licensing shall be those that are contracted by the DR Program Owners under a DRA, and may include, but are not limited to:

- (a) Demand Response Aggregator Services.
- (b) Direct Load Control Programs.
- (c) Demand Response Resource Operations.

3.3.3 The DoE shall maintain, and publish on its website, a list of licensed DR Providers.

3.3.4 In addition to any other requirements issued by the DoE from time to time, prospective DR Providers may seek a Licence from the DoE to provide DR Services based on the following conditions:



- (a) DR Providers must have a valid Demand Response Agreement (DRA) with the DR Program Owner; and
- (b) DR Provider must be either be directly connected to the Transmission Network or an aggregator representing a portfolio of Customers.

3.3.5 Applicants seeking a Licence to operate as a DR Provider must submit a formal application to the DoE for a DR Licence, and must adhere to the licensing processes and procedures established by the DoE.

3.3.6 In addition to the above, applicants must also:

- (a) Describe the type of DR it seeks to develop and/or aggregate;
- (b) Adopt and maintain a privacy and data security policy that describes and governs how it stores, safeguards, and limits disclosure of Customer information. Policies described are to be in alignment with prevailing UAE Data Protection Laws.
- (c) Demonstrate that the provision of DR Services shall not negatively impact electricity service supply to the sick and elderly.
- (d) Provide the standard form letter, electronic communication, and/or agreement to be submitted to each Customer explaining the terms and conditions of participating in the DR service.
- (e) Demonstrate that consent has been obtained from Customers to provide DR capacity.

3.3.7 The DoE shall evaluate each application on its merits and may grant a DR Licence to eligible entities upon satisfying the established criteria.



4. Demand Response Roles & Responsibilities

4.1 Procurement Licensee

4.1.1 The Procurement Licensee is, to the extent appropriate to their duties and obligations under the DSM Regulations and their respective License(s), required to fulfil the following responsibilities:

- (a) Coordinate with Transmission, Distribution, and Supply Licence holders to identify the market potential for different types of DR resources and their techno-economic characteristics. These techno-economic characteristics may include, but are not limited to, response time, response durations, and acquisition costs.
- (b) Assessment of the various types of DR resources as potential resource alternatives in its capacity expansion and despatch optimisation modelling to determine least cost expansion plans through the Statement of Future Capacity Requirements (SFCR) process.
- (c) Demonstrate that any such DR capacity incorporated into capacity expansion plans adhere to the principles of Economic Purchase and system security requirements, and are assessed against best new entry costs for additional relevant generation capacity.
- (d) Where applicable, share market intelligence data with DR Providers during the procurement process to de-risk uncertainties regarding Abu Dhabi's DR potential and facilitate their market entry and the development of a local market. These may include, but are not limited to, details of consented Customers that have expressed interest in offering their load for DR services, details of prospective end-users with a curtailable load, the response rate from DR-prospective end-users, and capacity potential.
- (e) Identification and development of appropriate compensation mechanism and structure to incentivise the desired objective and application of DR



(e.g. peak demand reduction, peak emissions reduction, system balancing, etc.).

- (f) Where applicable, management of DR Providers under similar obligations, duties, and responsibilities as imposed on traditional supply-side resources.
- (g) Share DR asset information to the Transmission, Distribution and Supply, and Despatch Licensee(s) to support in the incorporation of related DR Providers and Resources into scheduling and despatch processes.

4.2 Electricity Distribution and Supply Licensee(s)

4.2.1 Electricity Distribution and Supply Licensees, to the extent appropriate to their duties and obligations under the DSM Regulations and their respective License(s), are required to fulfil the following responsibilities:

- (a) Support the Procurement Licensee and/or DR Program Owner by carrying out market awareness and Customer outreach activities to increase knowledge and responsiveness for potential participation in the DR Program.
- (b) Lead Customer outreach and survey to develop a register of Customers that are willing to offer their load to a DR Provider. The register should also contain, at the minimum, the capacity and type of DR Resource offered by the Customer.
- (c) Share such information with the Procurement Licensee and/or DR Program Owner to support in the undertaking of further market assessments and capacity expansion plans.
- (d) Facilitate communication between Licensees, DR Program Owner, and key stakeholders to coordinate DR efforts effectively.



4.3 Electricity Despatch Licensee

4.3.1 The Electricity Despatch Licensee, to the extent appropriate to their duties and obligations under the DSM Regulations and their respective Licence(s), are required to fulfil the following responsibilities:

- (a) Maintains a process for identifying and recognizing DR Resources within their jurisdiction.
- (b) Close coordination and open communication with DR Providers to facilitate timely and reliable despatch of DR as and when instructed.
- (c) Ensure grid reliability and stability in balancing electricity supply and demand during DR activities.
- (d) Incorporate DR Providers into existing grid scheduling, notification, and despatch processes and to align such obligations of the DR Providers, where applicable, to traditional supply-side resources.
- (e) Supply of information and data to the Procurement Licensee and/or DR Program Owner related to despatch instructions to support in evaluation, measurement and verification activities.

4.4 Demand Response Licensee(s)

4.4.1 Demand Response Licensee(s), to the extent appropriate to their duties and obligations under the DSM Regulations and their respective Licence(s), are required to fulfil the following responsibilities:

- (a) Comply with all applicable Laws, Regulations, and guidelines governing DR activities.
- (b) Meet and maintain technical and operational requirements as defined by the prevailing Standards and Codes as they are related to scheduling, notification and despatch.
- (c) Obtain written consent from Customers enrolling to provide a DR service and maintain a database of consented Customers to avoid double counting of the DR Resource during the term of its agreement with the DR Provider.



- (d) Comply with obligations, duties, and responsibilities as imposed on traditional supply-side resources.
- (e) Ensure that DR Resources respond promptly to despatch instructions from the Transmission and Despatch Licensee(s).
- (f) Ensure that there shall be no interruption in the supply of electricity to the sick and elderly in the provision of DR services.
- (g) Maintain accurate records of its DR activities, including participant information, for auditing purposes.

4.4.2 Prioritize clear and timely communication with their Customers regarding any impending and/or materialized DR Licence revocation.

4.4.3 In the event that DR Provider Licence is revoked or the DRA is terminated, the DR Provider must adhere to the following at a minimum:

- (a) Inform Customers of their rights and available options. This may include the ability to switch to another licensed DR Provider or to exit the program.
- (b) Offer assistance and guidance to the Customer(s) if they wish to transition to another licensed DR Provider or exit the program.
- (c) Clarify any contractual obligations, including termination clauses and penalties that may apply.
- (d) Ensure that Customer data is handled in accordance with applicable data privacy Laws and Regulations. Customer information and data shall be transferred securely if necessary during the transition to another Licensed DR Provider.



5. Evaluation, Measurement & Verification

5.1 EM&V Plan

- 5.1.1 The DR Program Owner shall prepare an EM&V Plan in accordance with the Abu Dhabi EM&V Protocol and this DR Regulatory Framework, during the development of the business case for the DR Program.
- 5.1.2 The EM&V Plan shall be tailored to the context and needs of the specific applicable DR Resources considering their scale and the type of participating Customers.
- 5.1.3 The EM&V Plan shall include description of the evaluation framework, roles and responsibilities, metrics, reporting requirements, timeline and how the results are going to be used.
- 5.1.4 Complimentarily, the DoE shall conduct a comprehensive EM&V benchmarking study to identify the most appropriate methodologies for the Abu Dhabi market.

5.2 Monitoring and Reporting

- 5.2.1 Regular monitoring and reporting requirements shall apply for, but not be limited to, DR Program Owners and DR Providers.
- 5.2.2 As part of the DR reporting and in accordance with the requirements of the DSM Regulations and with the Abu Dhabi EM&V Protocol, the following evaluations shall be conducted:
 - (a) Impact evaluation to assess the impact of the DR Program in accordance with the impact evaluation methodology defined in the applicable EM&V Plan.
 - (b) Process evaluation to assess and provide recommendations on the following topics, including, but not limited to:
 - (i) DR Program fitness as part of DR objectives.
 - (ii) DR Program design, contracting, procurement, administration, and delivery.

- (iii) Customer engagement, communications, evaluation, and cost-effectiveness.

5.2.3 The EM&V Plan shall include a reporting cadence and timeline for conducting the impact and process evaluations.





6. Cost Recovery

6.1 Cost Recovery Mechanisms

- 6.1.1 Cost recovery for execution of the DR Program by Price Controlled Licensees will be provided in accordance with the DSM Regulations and through the prevailing regulatory arrangements to allow funding through the price controls, as amended or otherwise directed and notified to the Price Controlled Licensee, by the DoE from time to time.





7. Review of DoE decision

7.1 Application for review

- 7.1.1 Any application for enquiry, clarification, relaxation or dispute relevant to these Regulations must be made in writing to the DoE and submitted with supporting documents.

7.2 Timescale for application for review

- 7.2.1 The estimated timescale for application to be reviewed by the DoE is thirty (30) calendar days. The applicant will be informed in case of any extension of time required for application for review.

7.3 Extension of time for application for review

- 7.3.1 The DoE may request from any applicant any information or documentation it considers reasonable and necessary in the circumstances and the applicant must provide such information within the period and the data collection format specified by DoE.

7.4 DoE request for information

- 7.4.1 The DoE may, upon the written request of a relevant applicant, authorise a relaxation of certain requirements of these Regulations.
- 7.4.2 The DoE may at any time modify or revoke an authorisation (whether or not the authorisation is expressly given for a specified period).
- 7.4.3 Any request for a relaxation shall provide sufficient information and data to allow the DoE to assess the necessity and appropriateness of authorising a relaxation.

7.5 DoE decision

- 7.5.1 The DoE shall notify the applicant that made an application for review or relaxation of its final decision. The DoE may:



- (a) make any decision it sees fit in the circumstances; and/or
- (b) issue directions as it sees fit to the applicant and/or to any third party.

7.5.2 Any decisions, relaxations, or directions issued by DoE are binding on the relevant applicant and/or third party stated in the decisions, relaxations or directions. Failure to comply with decisions, relaxations or directions issued by DoE, shall be considered a failure to comply with these Regulations.





8. Failure to comply with Regulations

8.1 Reporting failures

8.1.1 Any failure to comply with these Regulations or any act that may be considered as a failure to comply with these Regulations must be reported to the DoE.

8.2 Enforcement procedures

8.2.1 In case of failure to comply with these Regulations, the DoE may issue a written warning notice to the non-complying entity.

8.2.2 The warning notice shall include:

- (a) The name of the entity;
- (b) The regulation which was been violated;
- (c) A tolerance period to comply;
- (d) The enforcement procedures to be taken against the entity in case it does not comply with the Regulations within the tolerance period.

8.2.3 Pursuant to Article 66 of Law No (2), an entity which fails to comply with these Regulations shall be subject to a fine of not less than Two Hundred and Fifty Thousand United Arab Emirate Dirhams (AED 250,000).

8.2.4 If an entity fails to comply with these Regulations for a second time the fine shall be doubled.

9. Governing Law

9.1 Governing Law

9.1.1 These Regulations 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.

