



Regulatory Framework for Small-Scale Solar PV Systems

هـ خ و - ف ن - ٠١٢ (ص ٤١/٠٢)

ERD - TA - 012 (v02/19)

المستند النظامي:

قرار معالي رئيس مجلس إدارة هيئة تنظيم الكهرباء والإنتاج المزدوج رقم ١٨٢ وتاريخ ٠٤ / ١١ / ١٤٣٨ هـ،

وتعديله الصادر بقرار المجلس ذي الرقم (٢ / ٤٧ / ٤١) والتاريخ ٢٩ / ٠٤ / ١٤٤١ هـ

مرجعية هذه الوثيقة:

في حال وجود أي استفسارات أو ملاحظات فإن المرجع فيها إلى مدير الإدارة العامة للشؤون الفنية

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هاتف: ٠٠٩٦٦١١٢٠١٩١١٢

فاكس: ٠٠٩٦٦١١٢٠١٩١١٣

دورة تحديث هذه الوثيقة:

يتم تحديث هذا الدليل حسب ما تقتضيه الحاجة.


لغة الوثيقة :

تم إعداد هذه الوثيقة باللغتين العربية والإنجليزية


حقوق النسخ والنشر محفوظة لهيئة تنظيم الكهرباء والإنتاج المزدوج

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The Electricity and Co-generation Regulatory Authority (ECRA) in exercise of its powers conferred under Article (4) of Electricity Law, Article (4) and (5) of ECRA's Charter and the relevant clauses of Distribution Code, ECRA hereby issued the following Regulations:

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1. INTRODUCTION

These Regulations aim to achieve the following:

- a) Setting up the requirements and provisions for connection of Small-Scale Solar PV Systems with the Distribution System.
- b) Setting up the regulatory requirements and the financial charge related to the Small-Scale Solar PV Systems connected with the Distribution System.
- c) Establishing the necessary framework for Net Billing arrangements of surplus energy exported to the Distribution System; and
- d) Ensure the efficient and safe construction, installation, maintenance and operation of Small-Scale Solar PV Systems in all Premises in KSA.
- e) Protection of the consumer, increasing his awareness and caring for his financial interests relating to Small-Scale Solar PV Systems connected with the Distribution Systems.

2. DEFINITIONS

2.1. The words and expressions, defined in the Electricity Law or its Implementing Regulations, related to the duties of ECRA, shall have the same meanings in these Regulations unless the context otherwise requires:

2.2. The following words and expressions, when used in these Regulations, shall have the meanings against each, unless the context otherwise requires:

KACARE – King Abdullah City for Atomic and Renewable Energy

Distribution Service Provider (DSP) – The legal entity that is licensed by ECRA to develop, construct, own, operate and maintain a network on the Distribution System.

Eligible Consumer – A person who has an Exit Point that meets the requirements of these Regulations and the Connection Conditions between the Distribution System and the Consumer's Premises as defined in the Distribution Code and the requirements stipulated in clause (5) of these Regulations.

Contracted Load – The load of the Eligible Consumer's Premises, contracted with the Distribution Service Provider (DSP).

Electricity Department – An administrative entity within a Licensed utility that is responsible for supplying a specific geographical area.

Electrical Installation – An Electrical Installation comprises any fixed cable, switchgear or other electrical equipment or apparatus within a Consumer's Premises or other place where there is an electricity supply.


Net Billing – The energy exchange and financial arrangements between an Eligible Consumer and a Distribution Service Provider linked to a single Exit Point in a Premises.

Low Voltage (LV) – A voltage used for the supply of electricity, the upper limit of the nominal RMS value not exceeding 1kV.

Maximum Connected Capacity – The Eligible Consumer maximum PV installed generation capacity which the DSP allows to operate in parallel to the Distribution System pursuant to these Regulations.

Medium Voltage (MV) – A voltage used for the supply of electricity, the nominal value of which is 13.8kV and 33kV.

Premises – Any real estate with an exit point of connection to the Distribution System.

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Small Scale Solar PV System: a solar PV installation of not more than 2 MW and not less than 1kW capacity that is installed in one Premises and connected in parallel to the Distribution System.

Small-Scale PV System Connection Agreement – The connection agreement between the Eligible Consumer and the DSP, which sets the terms and conditions, application form and approvals for the Net Billing arrangement and the solar PV connection to the Distribution Network.

PV – Photovoltaic of relating to or utilizing the generation of a voltage or current when radiant energy falls on the boundary between dissimilar substances.

Certification Committee: The committee concerned with the qualification, approval and registration of consultants and contractors executing the designing, examination, installation and maintenance of small scale solar PV systems


Certified Consultant/Contractor – Any qualified, approved and registered entity via the Certification Committee to carry out design and Electrical Installations work specific to solar photovoltaic (PV) systems.

Exit Point– The joint point of delivery of electricity supply by the DSP and export of surplus generation by the Eligible Consumer linked to one single meter in a Premises.

Computer Program: An electronic calculator for analysis of the financial matters, hosted by ECRA in its Website, established by KACARE and approved by ECRA; for carrying out the feasibility study to calculate the cost of installation of the Small Scale Solar PV Systems, forecasting revenues and savings based on the energy produced by the Solar System and the consumption rates of the Applicant; and stating the time period expected for recovery of the costs value. The Program includes the information and data necessary for awareness of the consumer.


Year – A calendar year according to the Gregorian calendar.

Distribution Operating Area: Includes the service territory of MARAFIQ and Central, Western, Eastern, Southern Operating Area of Saudi Electricity Company or any other entity licensed by ECRA for carrying out the Electricity Distribution Activity.

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3. SCOPE AND APPLICATION

- 3.1. This regulatory framework shall apply to the DSP, Eligible Consumer, Certified Consultant/Contractor, and any other Persons involved in the connection of Small-Scale Solar PV Systems to the Distribution System and entering into a Net Billing arrangements with the DSP.
- 3.2. This regulatory framework does not apply to solar PV systems greater than 2 MW capacity or smaller than 1 kW capacity or to Solar PV system that do not operate in parallel with the Distribution System.
- 3.3. This regulatory framework does not preclude the right of the investors to undertake solar PV projects of more than 2 MW capacities according to the related regulatory provisions.

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4. GENERAL PROVISIONS

- 4.1. ECRA shall be the final reference for interpretation of any article or provision of this regulatory framework or for any arise of dispute between the regulatory framework and any other regulatory documents.
- 4.2. ECRA is responsible for improvement of the Electricity Services provided to the Consumer, and protection of its rights and raising awareness.
- 4.3. The Certification Committee is established in the Ministry, by a resolution of the Minister of Energy, and headed by a representative of the Ministry of Energy and the membership of a representative of ECRA, a representative of KACARE, a representative of the Saudi Centre for Power Efficiency, a representative of the Service Distribution Providers and two independent members expert in the field. The resolution of the establishment of the Committee sets up its duties, tenure and method of dissolution.
- 4.4. The Eligible Consumer shall comply with all applicable regulations and other relevant requirements within KSA.
- 4.5. The DSP shall:
 - A. Comply with all applicable laws and regulations and adhere to the approved standards and technical codes and any other regulatory requirements approved by ECRA.
 - B. Guarantee all rights of the Eligible Consumer provided for in this regulatory framework, laws and the related regulations.
 - C. Provide the Net Billing arrangements to the Eligible Consumer on a non-discriminatory and first come first served basis.
 - D. Priority in provision of the Net Billing arrangement shall be given to the Residential Consumption category.
- 4.6. The Eligible Consumer can install a Small-Scale Solar PV System connected to the Distribution System in the DSP area of supply provided that its connection complies with the Distribution Code requirements, as amended from time to time.
- 4.7. This regulatory framework shall be applicable to all categories of Consumers.
- 4.8. In case of existence of a complaint or dispute in any matter relating to this regulatory framework, any Person may file his complaint with the DSP in accordance

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with the procedures for handling Consumers' complaints approved by ECRA. If no resolution is reached amicably between the DSP and the Person for the complaint or dispute through these procedures, the Person shall have the right to file his complaint to ECRA for resolution thereof.

- 4.9. Decisions affecting the consumer shall be published in the Official Gazette and in any other way ECRA deems appropriate.

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5. ELIGIBLE CONSUMER AND INDIVIDUAL PROJECT CAPACITY


- 5.1. The consumer, shall satisfy the following requirements to be an Eligible Consumer:
- be a Consumer of the DSP;
 - The system shall be located in the Consumer's Premises.
 - The capacity shall not exceed two (2) MW and not less than one (1) MW in one Premises.
 - The aggregated capacity installed in different Premises owned by the same Eligible Consumer in a supply area related to one Electricity Department, shall not exceed (5) MW.
 - own or be entitled by owner via a lease contract or similar agreement to build and operate or be in legal possession of the Premises on which the Small-Scale Solar PV System is proposed to be installed; and
 - It is practicably possible to connect safely the proposed small-scale solar PV system to the Distribution System of the DSP.
- 5.2. The Maximum Connected Capacity of Small-Scale Solar PV System to be installed at any Eligible Consumer's Premises shall not exceed the Contracted Load.

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6. METERS

To measure the energy generated by the Small-Scale Solar PV System and energy consumed by the Eligible Consumer, the metering system as defined below shall be applied:

- a) The first meter supplied and installed by the DSP at the Exit Point must be a bidirectional meter that measures the energy injected to the Distribution System and the energy consumed from the Distribution System (“Main Meter”). The DSP shall bear the cost of such meter.
- b) The second meter will be supplied and installed by the DSP in case of the Small-Scale Solar PV System capacity exceeds 100kW. It measures the energy generated by the PV system (Solar PV System Meter). The Eligible Consumer shall bear the cost of such meter, according to the approved standards and specifications.
- c) Before the meter system is installed, the DSP inspects the Small-Scale Solar PV System to ensure that the system complies with the Distribution Code and safety rules.

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7. ANNUAL APPLICATION AND GENERATION CAP

7.1. The Small-Scale Solar PV Aggregate Capacity Limit

7.1.1. The DSP shall provide the Net Billing arrangement to all Eligible Consumers provided that the Small-Scale Solar PV Systems aggregated capacity to be allowed in parallel with the Distribution System shall not exceed 3% of the preceding year peak load of the power system within the distribution operating area.

7.1.2. Should the Annual Connection and Generation Cap, as specified under clause (7.1.1), be reached for a certain calendar year, the DSP may continue to receive, process, and approve connection requests for new Small-Scale Solar PV installations. However, approved connection requests shall be placed on hold by the DSP for connection in the following calendar year on a prioritised basis, starting with those that received approval first (i.e. the connection queue will be managed on a 'first approved first connected' basis).

7.2. Capacity of Transformer

7.2.1. The DSP shall provide information on its website regarding capacity available on transformers feeding the loads of Eligible Consumers at different locations for connecting Small-Scale Solar PV System. This information shall be made available within (90) days prior to the date of commencement of this regulatory framework, and shall be updated within (30) days of the start of the subsequent financial year with notification to ECRA.


7.2.2. The installed Small-Scale Solar PV System capacity shall not exceed (15%) of the rated capacity of the DSP transformer from which the load of the Eligible Consumer is fed.

7.3. Distribution System Connectivity

The small-scale solar PV system shall be connected to the Distribution System on the same feeding voltage. Each system shall be approved individually by the relevant DSP.

7.4. General Connection Requirements

7.4.1. The Eligible Consumer, to be able to connect its Small Scale Solar PV System, with the Distribution System, shall seek the assistance of a certified contractor or

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consultant. The certified contractor or consultant shall comply with the following provisions:

- a) Submit a complete application for the connection of the small-scale solar PV system, signed by the Eligible Consumer.
- b) Submit to the DSP an evidence of material compliance with the Saudi standards or equivalent International standards (PV modules, inverters etc.)
- c) Design and determine the specifications of the Small Scale Solar PV of the Eligible Consumer and the electrical installation related thereto according to the designs and specifications approved by the concerned authorities.

7.4.2. The Eligible Consumer shall pay the financial charge for the initial enquiry and connection to the Distribution System as set out in Annex (3) of this regulatory framework.

7.4.3. The DSP, prior to the energization, shall review and approve the drawings, submitted by the certified contractor or consultant and complete the required inspection process for assuring compliance with the instructions, codes and standards of the electrical wirings and this regulatory framework.

7.4.4. The DSP must ensure that any Small-Scale Solar PV System is connected to only one Exit Point in one Premises.

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8. SMALL-SCALE SOLAR PV SYSTEMS CONNECTION PROCESS

This section outlines the different steps leading to the connection of a Small-Scale Solar PV System to either MV or LV Distribution System. The process is similar for the two cases, so that the main steps described hereinafter apply for both.

The overall process is divided into five main steps, namely:

Step 1: Selection of Small Scale Solar PV Systems Contractor/Consultant.

Step 2: Small Scale Solar PV Systems installation Initial Enquiry.

Step 3: Economic Feasibility Study about the installation of the Small Scale Solar PV System.

Step 4: Design Approval.

Step 5: Inspection and Energization.


8.1. Step 1: Selection of Small Scale Solar PV System Consultant/Contractor

The Eligible Consumer wishing to install a Small-Scale Solar PV System shall select a certified Solar PV Contractor/Consultant to carry out the solar PV system design and Electrical Installation work and to carry out practical steps to connect its Small Scale Solar PV System with the Distribution System.

8.2. Step 2: Small Scale Solar PV System Initial Enquiry:

8.2.1. Small-Scale Solar PV Initial Enquiry Application:

- The Certified Contractor or Consultant has to submit an Application Form as per Annex-1 of this regulatory framework for connection of the Small-Scale Solar PV System with the Distribution System.
- The Eligible Consumer should provide all necessary information and documents regarding the proposed geographical location for the Small-Scale Solar PV System to the Certified Contractor or Consultant.

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8.2.2. Distribution System Impact Study of Small Scale Solar PV System with capacities over 50 kW:

- a) To enable the DSP to carry out the required impact studies, the Certified Contractor or Consultant may be requested to provide the detailed Planning data listed in the Planning Code of the Distribution Code.
- b) The DSP may disapprove an application only if the impact studies indicate that the proposed connection will result in degradation of the Distribution System Performance. If the DSP does not approve an application, he must inform the Eligible Consumer of the reasons for non-approval and shall grant the Consumer a grace period to rectify the situation.


8.2.3. Application Validation

The DSP should inform the Certified Contractor or Consultant (which in turn shall notify the Eligible Consumer) within Twenty (20) Business Days from the submission of the Initial Enquiry Application of the result of the study of the application, whether acceptable or not, and consider the following:

- a) If the application is acceptable, the DSP shall approve and sign the Small Scale Solar PV Initial Enquiry Form.
- b) Prior to commencing installation works of the Small Scale Solar PV System, the Eligible Consumer shall sign connection agreement with the DSP.
- c) The acceptance validity of the Initial Enquiry Application of the Small Scale Solar PV System is hundred eighty (180) days of the date of acceptance of the DSP.
- d) If the Application is rejected, the DSP should notify the Eligible Consumer of the reasons of rejection and grant the Eligible Consumer a grace period of sixty (60) days for rectification. The Application shall be studied again without any cost on the Eligible Consumer.

8.3. Step 3: Feasibility study of the installation of the Small Scale Solar PV System:

- 8.3.1 The Certified Contractor or Consultant shall assure the feasibility study of the installation of the Small Scale Solar PV System and the related details, by entering the required data in the Computer Program. The results of the feasibility study should include a recommendation by the Computer Program, clear to the Eligible

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Consumer about the feasibility study of the Electrical Installations of the Solar PV System and detailed statement of the costs of these Installations, estimation of revenues and savings based on the power produced by the Solar System, consumption rates of the Applicant and the expected return period of the costs.

8.3.2 Upon perusal and acceptance of the results of the Feasibility Study and prior to performing any work, the Eligible Consumer shall sign the acceptance form of the Feasibility Study of the project approved by ECRA. The Certified Contractor or Consultant shall provide the DSP with a copy of this form when the connection agreement has been signed.

8.4. **Step 4: Design Approval**

8.4.1. Design Approval Application Form


- a) A Design Approval Application Form, as specified by the DSP, shall be submitted to the DSP by the Eligible Consumer. The Eligible Consumer will also be required to submit a comprehensive set of documents and information.
- b) The main purpose and objective of obtaining the Design Approval is to carry out the electrical installation work complying with the Standards and the Electrical Codes.

8.4.2. **Validation of the Documentation (formal check)**

The DSP shall verify the completeness and correctness of the documents submitted by the Certified Contractor or Consultant. If inconsistencies are detected, the DSP shall inform the Certified Contractor or Consultant thereabout and shall grant it a onetime grace period of thirty (30) days to rectify the condition and to restudy the application. If the submitted documents are complete and correct, the Small Scale Solar PV System Design Review stage follows.

8.4.3. **Solar PV Design Approval and Notification to the Eligible Consumer.**

The small-scale solar PV system Design will be approved if the impact study as per clause (8.2.2) yields positive results and the connection can be carried out, while maintaining the parameters and variables according to the Standards of the Distribution System. In that case, the DSP approves the design and provides notification of approval to the Eligible Consumer.

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8.4.4. Eligible Consumer Pays Small Scale Solar PV System Connection Fee

Based on the approved drawings, the DSP calculates the connection fees that will be charged to the Eligible Consumer for the connection of the small-scale solar PV system to the Distribution System. The Connection Fee will be estimated as per Annex-3 of this regulatory framework.

8.4.5. Small-Scale Solar PV System Connection Agreement

- a) The payment of the connection fees by the Eligible Consumer shall lead to the signing of a Small-Scale Solar PV Agreement as per Annex-2 of this Regulatory Framework.
- b) The Connection Agreement specifies the Terms and Conditions, in accordance with this Regulatory Framework.
- c) The DSP signs two copies of the Connection Agreement in Arabic language within ten (10) Business Days from the date of payment of the connection fee and submits one copy to the Eligible Consumer.

8.4.6. The Small-Scale Solar PV Systems Construction


Once the Connection Agreement is signed by the parties, the Eligible Consumer, through a certified contractor, can commence the construction of the small-scale solar PV system.

8.5. Step 5: Inspection and Energization

8.5.1. Inspection Notification

When the small-scale solar PV system is installed and all civil and electrical works have been completed, the Eligible Consumer, through a certified contractor or a consultant, submits an Inspection Application to the DSP. This Application has to be submitted for all small-scale PV systems. Prior to submitting the Inspection Application, the Eligible Consumer needs to prepare a number of documents, including:

- Specification of Major Equipment.
- Details of the protection arrangement and settings referred to in the Distribution Code.
- Copies of all Safety Rules and instructions applicable to the Eligible Consumer's Equipment at the Exit Point.
- Electrical Diagram of the Eligible Consumer's Equipment at the Exit Point.

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- Proposed Maintenance Program for a small-scale solar PV Systems with capacity exceeding 100kW.
- Commission Test Procedures for the Exit Point and the Premises.
- Site Test Reports, clearance and Readiness for Energisation of the proposed Exit Point and Equipment.

8.5.2. Inspection and Installation of the Meter(s)

In case of an acceptable site inspection, the DSP installs the meter(s). The DSP may witness the commissioning tests, carried out by the Certified Contractor or Consultant. The Commissioning Tests procedures will be performed as specified in the Distribution Code and as recommended by the manufacturer acceptable to the DSP. After the commissioning tests have been completed and passed, the Small Scale Solar PV system can be energized.

8.5.3. Final Inspection Report

Following successful completion of all inspections and tests as stated above the DSP issues the Final Inspection Report, which certifies that the installations are compliant with rules and that the electricity production can start.

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9. CERTIFICATION AND QUALIFICATION

9.1. Qualification and Certification of Contractors/ Consultants responsible for Designing, Inspection, Installation and Maintenance of Small Scale Solar PV Systems:


9.1.1. The Certification Committee shall be responsible for certification of Contractors / Consultants permitted to design, inspect, install and maintain the Small Scale Solar PV Systems in line with a designated registration scheme as per Annex-4 of this Regulatory Framework and to maintain an updated register for each.

9.1.2. DSP shall maintain an updated register of the Contractors/Consultants certified for designing, inspection, installing and maintaining the Small Scale Solar PV Systems and to be published thereof on its website, and to be provided upon request to any Person.

9.2. Certification of Small Scale Solar PV Components

9.2.1. The DSP shall liaise with Saudi Standards, Metrology and Quality Organization (SASO) to ensure certification of small-scale solar PV components where applicable.

9.2.2. The DSP shall coordinate with SASO to make available an up to-date list of the components used in the Small Scale Solar PV Systems and their approved suppliers.

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10. BILLING

10.1. The DSP may utilise the existing infrastructure for billing purposes under the Net Billing arrangement.

10.2. The DSP shall develop appropriate consumption bill and submit it for ECRA's approval to ensure effective application of the Net Billing arrangement.


The bill shall include as a minimum the following information:

- a) the number of energy units exported;
- b) the number of energy units imported;
- c) financial credit of accumulated energy units due to surplus energy generated and exported to the Distribution System;
- d) Balance of the financial value of energy units carried forward to the future billing cycles.

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11. AWARENESS OF SMALL-SCALE SOLAR PV SYSTEMS

- 11.1. In coordination with ECRA, the DSP shall promote the availability and accessibility of Small-Scale Solar PV Systems installations to the Eligible Consumers.
- 11.2. The DSP shall make available to the Eligible Consumers the relevant information and guidance on Small-Scale Solar PV Systems installations. This shall include:
- The information necessary to enable the Consumer to carry out an initial feasibility study by using the Computer Program existing at ECRA website.
 - Information on the process to apply for connecting Small-Scale Solar PV Systems installations to the Distribution System;
 - Information on economic and environmental consequences to the Consumers through Net Billing; and
 - Increasing public awareness about Small-Scale Solar PV Systems through a media campaign on its website and to update regularly in a manner that achieves its objectives.
- 11.3. The DSP shall conduct awareness programmes, approved by ECRA, for potential Consumers intending to install the Small Scale Solar PV Systems in their facilities.
- 11.4. The DSP shall develop and implement advisory services to support the Eligible Consumers wishing to install a Small-Scale Solar PV Systems in their facilities.

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12. NET BILLING ARRANGEMENT


- 12.1. The Net Billing arrangement is a mandatory arrangement for energy exchange and clearing between the Eligible Consumer and the DSP.
- 12.2. Surplus energy generated from the small-scale solar PV system will be exported to the Distribution System and recorded in the Billing system as financial balance according to the financial fees explained in Annex No (3).
- 12.3. The financial balance shall be carried forward from the present Billing Cycle to the next cycle and to be deducted from the electricity consumption bill of the Exit Point itself.
- 12.4. Net Billing arrangements shall be done via one Exit Point linked to one single meter in a Premise. The Eligible Consumer can benefit from a Net Billing arrangement for several consumption accounts under the same Eligible Consumer in the area of supply at one Electricity Department of the DSP.
- 12.5. The DSP is required to bill the Eligible Consumer for the energy supplied after deduction of the financial balance, (if any) of the energy exported from the small-scale solar PV system, affiliated to the Eligible Consumer into the Distribution System of the DSP.
- 12.6. DSP shall pay the accrued credit amount of surplus energy, if any, upon Termination of the Connection Agreement according to the Fees prescribed in Annex No (3), within sixty (60) days of the Termination Date.

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13. REPORTING

The DSP shall prepare a report to ECRA on a date not later than 31 January of each calendar year, including, in minimum, the following information:

- a. the uptake of small-scale solar PV installations by the type of Eligible Consumers (Residential, Commercial, Industrial, Agricultural, Government);
- b. the total energy units generated monthly and yearly;
- c. the aggregated peak capacity of small-scale solar PV connected and disconnected during the year.
- d. the number of small-scale solar PV installations approved and connected;
- e. the number of small-scale solar PV installations approved but not yet connected;
- f. the minimum/maximum/average duration for connecting to the Distribution System from the time an application is submitted;
- g. the minimum/maximum/average peak generation from small-scale solar PV installations; and
- h. monthly and yearly generation/export from small-scale solar PV installations.


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14. MAINTENANCE


It is the responsibility of the Eligible Consumer to ensure that regular and routine maintenance of the Small-Scale Solar PV Systems and its corresponding components is undertaken, through Certified Contractor/ Consultant.

ANNEX – 1

Small-Scale Solar PV Systems Initial Enquiry Application Form

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Applicat ion No											Date			
Applicant's Particulars:														
First Name	Father Name			Grandfather Name			Family Name			National ID No				
<input type="checkbox"/>														
National ity														
Passpor t No.												Iqama (Residence Permit) No.		
Name							Letter No. / Register			Date		Place of issuance		
Location Particulars						Contact Details								
City;						P. O. Box								
Quarter						Postal Code								
Street						Mobile								
Type of Unit						Home telephone								
Unit No.						Office telephone								
Meter No.						Fax								
No of subscription to be used for connection as per Net Billing System						Email								
Required attachments														
1. Copy of National ID or Residence Permit and Passport for non-Saudi										<input type="checkbox"/>				
2. Authorization (in case the Applicant is other than the Eligible Consumer).										<input type="checkbox"/>				
3. Natural personality ID or corporate personality ID										<input type="checkbox"/>				
4. Monocular Scheme of the Small Scale Solar PV Systems										<input type="checkbox"/>				
Data of the the Small Scale Solar PV Systems														
Contractor/Consultant data														
1. Contractor/Consultant name:														
2. Qualification certificate number:														
3. The name of the responsible person:						4. Position / Attribute:								
5. mail box:						6. Phone number:								
7. Postal code:						8. Mobile number:								
9. FAX:						10. E-mail:								
Technical Data of the Small Scale Solar PV Systems														
1. Design capacity (KW/KVA)														
2. Expected date of installation and commissioning on site:														

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Applicant's Undertaking	
I confirm that the information provided in this application is correct	
Name	
Attribute	
Signature	
Date	
Initial Acceptance of the DSP	
The DSP consents to connect the Small Scale Solar PV Systems initially provided that the terms and conditions of the Small Scale Solar PV Systems Connection Agreement, approved by ECRA, have been complied with:	
Name of the Employee	
Occupation	
Date	
No. of Connection Application	
Signature	

ANNEX – 2

Small-Scale Solar PV Systems Connection Agreement Form

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Preamble:

1. The phrases and expressions defined in the regulatory framework for Small Scale Solar PV Systems shall have the same meanings for the purpose of implementation of this Agreement, unless the context otherwise requires.
2. This Agreement states the terms and provisions agreed upon between the Distribution Service Provider (DSP) and the Applicant. The Agreement includes the application submitted by the Applicant and all the basic data required from the Applicant.
3. This Agreement refers to a number of references such as the Saudi Distribution Code, regulatory framework for Small Scale Solar PV Systems and the Consumers' Complaints Handling Procedures, which may be accessed via the DSP's website or by visiting one of the branches of the Distribution Service Provider (DSP) or the website of the Electricity and Co-Generation Regulatory Authority (ECRA).

□ **First:** The above preamble is considered an integral part of this Agreement. The Eligible Consumer may install the Small Scale Solar PV Systems and conduct the operational tests for connecting the Systems upon signing the Applicant Form and this Agreement by the DSP.

Second: Small Scale Solar PV Systems Connection and Operation Procedures:

The Eligible Consumer may operate the Small Scale Solar PV System and connect thereof with the Distribution System according to the procedures provided for in the Distribution Code and the Regulatory Framework for Small Scale Solar PV Systems approved by ECRA, upon completion of the following procedures:


- 2-1: Testing the Small Scale Solar PV Systems by the Distribution Service Provider and checking the compatibility of the System with the requirements of the Small Scale Solar PV Systems stated in the Distribution Code.
- 2-2: Assigning the duty of testing by the SDP in the cases when such assignment is required.

Third: Safety and Regular Maintenance Procedures

- 3-1: The Eligible Consumer shall perform the operation and regular maintenance procedures and preserve the Small Scale Solar PV Systems to comply continuously with the requirements of the Saudi Distribution Code and any other requirements imposed by the DSP.
- 3-2: The Eligible Consumer, for safety purposes, shall maintain safe and easy access to the location of the Systems.

Fourth: Small Scale Solar PV Systems Inspection:

- 4-1: Without prejudice to the provisions of the Regulatory Framework for Small Scale Solar PV Systems, the DSP may inspect the Metering Equipment and the Small Scale Solar PV Systems at the time it deems appropriate with any means it considers suitable, provided that the DSP notifies the Eligible Consumer at least two days prior to the inspection date. The Eligible Consumer shall enable DSP to conduct the inspection without hindrance.

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4-2: In case of disconnection of the Small Scale Solar PV Systems due to violation of the terms and conditions of this Agreement, the Eligible Consumer may submit an application for re-inspection of these Systems after conducting the required amendments or remedying any remarks of the DSP. The Eligible Consumer shall bear the cost of re-inspection fees approved by ECRA. The Eligible Consumer and the DSP shall agree upon the date of re-inspection within 5 business days of the application for re-inspection.

▫ **Fifth: Disconnection of the Small Scale Solar PV Systems:**

The DSP may temporary disconnect the Small Scale Solar PV Systems of the Eligible Consumer in the following cases:


- 5-1: In case of scheduled disconnection of the Distribution System;
- 5-2: In case of non-scheduled disconnection of the Distribution System;
- 5-3: If the DSP finds that the operation of the Small Scale Solar PV Systems is not complying with the terms and provisions of the Connection Agreement and the Distribution Code.

▫ **Sixth: Limit of liability for compensation:**

- 6-1: The liability of any party towards the other for compensation for a material damage shall be limited to the level of direct damage actually incurred. No party, under any circumstances, shall be liable towards the other party for any indirect damage.
- 6-2: The Eligible Consumer shall be fully responsible for the internal wirings of the Small Scale Solar PV Systems after the breaker of the DSP from the side of Eligible Consumer, therefore, the DSP shall not bear any legal or financial responsibility as a result of any default, error or change in the connection equipment of the Small Scale Solar PV Systems .

▫ **Seventh: Calculation of Net Billing Invoices:**

- 7-1: For the purposes of calculation of net billing, the amount of energy exported from the Small Scale Solar PV Systems is considered starting from the date of DSP notification to the eligible consumer about the possibility of actual operation of these systems and their connection with the Distribution System.
- 7-2: If the financial value of electrical energy imported by the Eligible Consumer is higher than the financial balance of the quantity of the electrical energy exported from the Small Scale Solar PV System to the Distribution System, the Eligible Consumer shall pay monthly the due value of the Net Billing invoice to the DSP according to the fees approved by ECRA.
- 7-3: If the financial value of the electrical energy exported from the Small Scale Solar PV System to Distribution System is higher than the financial value of the electrical power imported by the Eligible Consumer, The DSP shall forward the balance amount to the bill of the next month, and the settlement shall be in accordance to the provisions of the Regulatory Framework for Small Scale Solar PV Systems.

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- 7-4: In case the Eligible Consumer fails to pay the due consumption invoice, the DSP shall have the right to disconnect the electricity from the Eligible Consumer according to the instructions regulating the cases for disconnection of electrical power as stated in the Electrical Service Provision Manual approved by ECRA.
- 7-5: The calculation method (Net Metering and Net Billing) and the approved fees may be amended according to the instructions of ECRA and in accordance with the approved policies and the public interest.

Eighth: Complaints or Disputes

In case of the arise of any complaint or dispute in any matter connected with this Agreement or its implementation or any aspects related to the Small Scale Solar PV Systems Regulatory Framework, the Eligible Consumer may submit his complaint to the DSP according to the procedures for settlement of complaints of the Consumers approved by ECRA. In case of not reaching any solution to the complaint or dispute satisfactory to the DSP and the Eligible Consumer, through these procedures, the Eligible Consumer shall have the right to submit its complaints to ECRA for settlement.

Ninth: Termination of the Agreement

No Party may terminate this Agreement unless pursuant to the following cases:


- 9-1: The Eligible Consumer may terminate this Agreement at any time by (30) business days' notice to the DSP, prior to the termination date.
- 9-2: The DSP may terminate this Agreement by written notice to the Consumer (30) days prior to the termination date, if the Eligible Consumer violates any of the provisions of this Agreement and not remedying such violation within 15 days of the receipt of the written notification.
- 9-3: The DSP may terminate the Agreement if the Eligible Consumer performed any amendment on the Small Scale Solar PV System that affects its contractual relation with the DSP or the Network without written consent of the DSP.
- 9-4: In case of termination of the Agreement, the Small Scale Solar PV Systems shall be disconnected of the Distribution System within twenty (20) business days of the date prescribed for termination.

Tenth: Term of the Agreement

The validity of this Agreement shall be for (20) years commencing from the date of signature of this Agreement by the Parties, unless terminated earlier in accordance with its terms.

Eleventh: This Agreement has been executed in two original copies in Arabic language; each Party has a copy to work on its basis.


May Allah Gives us success

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Eligible Consumer	
Name	
Signature	
Date	
Distribution Service Provider	
Name of the Employee	
Date	
No of Connection Application	
Signature	

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Fees and Charges

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1. Fees and charges of services provided by the Certified Contractor / Consultant

Service	Fees (SAR)
Initial Enquiry Application	To be determined by ECRA*
Application for Feasibility Study	To be determined by ECRA*

* ECRA shall review the fees and charges regularly whenever needed

2. Fees and charges for services provided by DSP

Phase	System Capacity (KW)	Fees (SAR)
Initial Enquiry	50 or less	150
	More than 50	500
Connection	50 or less	550
	More than 50	1800
Total	50 or less	700
	More than 50	2300


3. Fees and Charges for Surplus Energy generated or exported as per the consumption categories approved by ECRA

Consumption Category	Fees (Halalah / KW/H)
Residential Consumption	7
Other non-residential categories	Sale price of Surplus energy *

* To be determined by ECRA resolution

ANNEX – 4

Application and Requirements for Enrolment as Small-Scale Solar PV Consultant/Contractor


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First: Enrolment Application

1. Contractors/Consultants applying for a qualification certificate to work in the field of designing, inspection, installation or maintenance of the Small-Scale Solar PV Systems are required to submit their applications to the Certification Committee. The Contractors/Consultants must submit the documents required by the Certification Committee as part of the Enrolment Application including, but not limited to, the following:
 - a. Registration Certificates/licenses from the concerned Government Departments.
 - b. Legal and financial information, which are deemed necessary by the DSP.
2. Enrolment Application must be signed and dated by the Contractor's/ Consultant's authorised signatory and sealed by his official seal.
3. Originals of all documents required to make a new Certification/Accreditation Application to the Certification Committee.
4. Specific experience in small-scale PV system design, installation, inspection or maintenance (detailed brief information on each project).
 - List of projects within KSA
 - List of projects elsewhere
5. Copy of any certificates obtained by the Contractor or the Consultant in the field of design, installation, inspection or maintenance of Small Scale Solar PV systems.

Second: Requirements for enrolment as small-scale Solar PV Consultant/Contractor:

1. The Contractor or the Consultant shall have a minimum of one Graduate Electrical/ Mechanical Engineer with at least one year experience in supervising electrical works/Design in compliance with the DSP requirements.
2. Have a certain number of employees certified by the Certification Committee in the field of Solar PV, as described in the table below:


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Subject	Minimum requirements		
	System capacity ≤ 20 kW	System capacity ≤ 50 kW	MV connected systems / 50 kW < System capacity
Consultant	1(Designer)		2 (Designers)
Contractor	1(Installation Technician)	2(Installation Technician)	3(Installation Technician)

- The Consultant may perform the installation works, in case of availability of the required number of installation technicians.
- The employees of the Contractor and the Consultant shall have training certificates approved by the Certification Committee as stated in article (Third) below.

Third: Solar PV Certification Scheme

- The objective of Solar PV certification scheme is to make sure that Solar PV systems connected to Distribution System are designed and constructed by professionals with adequate training and skills. This serves multiple purposes, helping to ensure:
 - High standards of safety.
 - Compliance with required technical standards.
 - High quality of the design and installation for customers.
 - Protection of the Distribution System.
- The requirements to obtain the Solar PV certification are for the nominated applicants to attend the full training program (which lasts for at least 5 days) approved by KACARE and organized by one of the approved entities in coordination with the concerned parties.
- The final test (Written and Practical) shall be taken through the Distribution Service Provider to obtain a qualification certificate for working in designing, inspection, installation and maintenance of the Small Scale Solar PV Systems.

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Fourth: King Abdullah City for Atomic and Renewable Energy (KACARE) Roles

In coordination with the Distribution Service Provider, KACARE shall take the following roles:

1. Approving the curriculum of the training program on designing and installation of the Small Scale Solar PV Systems.
2. Coordinating with the concerned training entities to develop complete training programs for Applicants and to work on securing the quality, improvement and continuous development of these Programs.

Fifth: Distribution Service Provider's Roles

In coordination with KACARE, the Distribution Service Provider shall take the following roles:

1. Develops a Manual for installation, maintenance and inspection of small-scale solar PV system.
2. Prepares a Final Test for the certified applicants of the Contractors/Consultants and present it to the Certification Committee for approval.
3. Monitors and audits the works of the Certified Consultant(s) /Contractor(s) and file regular reports to the Certification Committee.