هيئة تنظيم الكهرباء والإنتاج المزدوج

ELECTRICITY & COGENERATION REGULATORY AUTHORITY

Small-Scale Solar PV Systems Regulations

هـ خ و – ف ن – ٠١٢ (ص ٣٨/٠١)

ERD - TA – 012 (V01/17)

المستند النظامي:

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

مرجعية هذه الوثيقة:

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

البريد الإليكتروني : TechnicalA.Dept@ecra.gov.sa

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

TABLE OF CONTENTS

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:

1. INTRODUCTION

1.1. Title and Commencement

1.1.1. These Regulations shall be cited as Small-Scale Solar PV Systems Regulations.

1.1.2. These Regulations shall come into force on 17/10/1439 AH (July 1, 2018).

1.2. Purpose

1.2.1. These Regulations set out the regulatory framework for the connection of a Small-Scale Solar PV Systems to the Distribution System.

1.2.2. The Regulations aim to achieve the following:

a) specify the terms, conditions, regulatory requirements, processes, and charges pertaining to promoting Distribution System connected Small-Scale Solar PV Systems in the Kingdom of Saudi Arabia (KSA);

b) establish a framework for Net Metering arrangements of surplus energy exported to the Distribution System; and

c) ensure the efficient and safe construction, installation, maintenance and operation of Small-Scale Solar PV Systems in all Premises in KSA.

2. DEFINITIONS

2.1. The following words and expressions shall have the following meanings in these Regulations unless the context otherwise requires:

The Law – Electricity Law.

The Charter – Charter of the Electricity and Co-generation Regulatory Authority.

Business Day – Any day on which Government offices are officially open for business in KSA.

Distribution Code – The Distribution Code issued by the Board and any amendments thereafter.

Consumer – Any Person supplied with electricity services for his own consumption.

Distribution Service Provider (DSP) – The legal entity that is licensed by ECRA to own 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.

Connected Load – The sum of the nameplate ratings of all electrical equipment installed by a Consumer or the contracted load.

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

Distribution System – A system consisting of cables, overhead lines and electrical apparatus having such design voltage(s) used for the distribution of electricity from connection points with the transmission system or with Generating stations to points of delivery to Consumers or another Distribution Network and includes any electrical installations and meters owned or operated in connection with the distribution of electricity, but shall not include any part of a Transmission System.

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 Metering – The energy exchange and clearing arrangements between an Eligible Consumer and a Distribution Service Provider linked to a single Exit Point in a Premises where the Eligible Consumer pays for the supplied energy by the Distribution Service Provider and is entitled to receive energy credit on the supplied energy by the Distribution Service Provider for any surplus generation that is exported to the Distribution System.

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.

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

Person – Any natural or corporate person.

Premises – Any occupied or unoccupied land, building, enclosure or other place with an exit point of connection to the Distribution System.

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 application, approvals and connection agreement between the Eligible Consumer and the DSP which sets the terms and conditions for the solar PV connection and generation to the Distribution Network and the Net Metering arrangement.

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

Certified Consultant/Contractor – An entity that is registered with the DSP 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.

Year – A calendar year according to the Gregorian calendar.

2.2. The terms defined in the Charter, Implementing Regulations or Distribution Code shall have the same meaning in these Regulations, unless the context otherwise requires.

3. SCOPE AND APPLICATION

3.1. These Regulations 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/or entering into a Net Metering arrangements with the DSP.

3.2. The Eligible Consumer may install the Small-Scale Solar PV System under Net Metering arrangement which:

a) shall be within the permissible rated capacity as defined under clause (5.2) of these Regulations;

b) shall be located in the Premises of the Eligible Consumer;

c) shall not exceed a capacity of 2 MW in one Premises;

d) shall not exceed an aggregate capacity of 5 MW installed in different Premises owned by the same Eligible Consumer in the area of supply at one Electricity Department;

e) shall not be less than 1 kW; and

f) shall connect and operate safely with the Distribution System.

3.3. These Regulations do 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.

3.4. These Regulations do not preclude the right of the investors to undertake solar PV projects of more than 2 MW capacity where there are alternative mechanisms prepared by the Principle Buyer for such projects.

3.5. These Regulations may be amended by ECRA at any time.

4. GENERAL PROVISIONS

4.1. The Eligible Consumer shall comply with all applicable regulations and other relevant requirements within KSA.

4.2. The DSP shall provide the Net Metering arrangements to the Eligible Consumer on a non-discriminatory and first come first served basis.

4.3. 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.

4.4. These Regulations shall be applicable to all categories of Consumers (Residential, Commercial, Industrial, Agricultural, Government).

4.5. The DSP shall prioritize the availability of Net Metering arrangements to Residential, Commercial, Government, and Agriculture categories of Consumer.

5. ELIGIBLE CONSUMER AND INDIVIDUAL PROJECT CAPACITY

5.1. In addition to the general requirements defined in clause (3.2) of these Regulations, the Eligible Consumer for the Small-Scale Solar PV Systems with Net Metering arrangement shall:

a) be a Consumer of the DSP;

b) 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

c) connect 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 Connected Load for the consumption account.

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.

c) During the connection process, the Solar PV system will be inspected by the DSP/Certified Consultant(s)/Contactor(s) before the meters system can be installed. The inspection aims to ensure that the Solar PV system complies with the Distribution Code and safety rules. The Eligible Consumer shall bear the cost of such meter.

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 Metering 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 (the service territory of MARAFIQ and Central, Western, Eastern, Southern Operating Area of Saudi Electricity Company).

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 transformer(s) feeding the loads of Eligible Consumers at different locations for connecting Small-Scale Solar PV System. This information shall be made available within three months prior the date of commencement of these Regulations, and shall be updated within one month 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 transformer from which the load of the Eligible Consumer is fed.

7.3. Distribution System Connectivity

7.3.1. The small-scale solar PV system shall be connected to the Low Voltage (LV) Distribution System. Each system shall be approved individually by the relevant DSP.

7.3.2. Should an application be received for a Small-Scale Solar PV System connected to the Distribution System on Medium Voltage (MV), then the DSP shall review it separately to determine its viability.

7.4. **General Connection Requirements**

7.4.1. The Eligible Consumer shall comply with the following provisions:

a) Submit a complete application for the connection of the small-scale solar PV system.

b) Pay the relevant fees and charges for connection and inspection which are set by the DSP and approved by ECRA.

c) Submit to the DSP an evidence of material compliance with the Saudi or equivalent International standards (PV modules, inverters etc.)

d) Only a certified Solar PV Contractor/Consultant shall carry out the design and specification of the small-scale solar PV system.

e) A Certified Contractor/Consultant may also be appointed to carry out any design and Electrical Installations works and to liaise with the DSP on the submittals, drawing approvals and inspection process.

7.4.2. The DSP shall review and approve design drawings and then carry out an inspection to verify compliance with the Electricity Wiring Regulations and these Regulations before final commissioning.

7.4.3. The DSP must ensure that any Small-Scale Solar PV System benefiting from a Net Metering arrangement is connected to one Exit Point only in a single Premises.

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 the MV or the 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 four main steps, namely:

Step 1: Selection of Solar PV Contractor/Consultant.

Step 2: Solar PV Initial Enquiry.

Step 3: Design Approval.

Step 4: Inspection and Energization.

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

8.1.1. 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.

8.1.2. The Solar PV Contractor/Consultant must be approved by the DSP as a Certified Consultant/Contractor to carry out the design and Electrical Installations work.

8.2. Step 2: Solar PV Initial Enquiry

8.2.1. Small-Scale Solar PV Initial Enquiry Application:

a) The Eligible Consumer has to submit an Application Form as per Annex-1 for a Small-Scale Solar PV System connection.

b) The Eligible Consumer shall pay a Small-Scale Solar PV Application Fee as per Annex-3.

c) The Eligible Consumer should provide all necessary information and documents regarding the proposed geographical location for the Small-Scale Solar PV System.

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 Eligible Consumer 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.

8.2.3. Application Validation

The DSP should inform the Eligible Consumer within Twenty (20) Business Days from the submission of the Initial Enquiry Application and settlement of admissible application fees whether the application is acceptable to be processed or not.

a) If the application is acceptable, the DSP shall approve and sign the Solar PV Initial Enquiry Form.
b) The acceptance of the Solar PV Initial Enquiry is mandatory prior to starting construction activities at site.
c) The acceptance of the Solar PV Initial Enquiry may have (180) days validity from the date of issue.

8.3. **Step 3: Design Approval**

8.3.1. 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 Regulations for Electrical Installations.

8.3.2. Validation of the Documentation (formal check)

The DSP shall verify the completeness and correctness of the application for the connection of the small-scale solar PV system. If inconsistencies are detected, the application may be rejected. If the application is complete, the Solar PV Design Review stage follows.

8.3.3. 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) yield positive results and the connection can be carried out, while maintaining the parameters and variables according to the Standards of the Distribution Network. In that case, the DSP approves the design and provides notification of approval to the Eligible Consumer.

8.3.4. Eligible Consumer Pays Solar PV 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.

8.3.5. Small-Scale Solar PV 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.

b) The Connection Agreement specifies the Terms and Conditions, in accordance with these Regulations.

c) The DSP signs two copies within ten (10) Business Days from the date of payment of the connection fee and returns them to the Eligible Consumer. The Eligible Consumer returns one signed copy which is filed by the Distribution Service Provider.

8.3.6. The Small-Scale Solar PV Systems Construction

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

8.4. **Step 4: Inspection and Energization**

8.4.1. Inspection Notification

When the small-scale solar PV system is installed and all civil and electrical works have been completed, the Eligible Consumer 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.

- 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.
- Any further information required by the DSP.

8.4.2. Inspection and Installation of the Meter(s)

In the case of an acceptable site inspection, the DSP installs the meter(s). The DSP may witness the commissioning tests [of the small-scale solar PV installation] made by a Test Engineer appointed by the Certified Contractor. 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 Solar PV system can be energized.

8.4.3. 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 is compliant with rules and that the electricity production can start.

9. CERTIFICATION AND QUALIFICATION

9.1. Certification of Solar PV Contractors/Consultants

9.1.1. In coordination with King Abdullah City for Atomic and Renewable, the DSP shall be responsible for certification of Solar PV Contractor/Consultant in line with a designated registration scheme as per Annex-4.

9.1.2. A register of certified Solar PV Contractors/Consultants shall be kept up-to-date by the DSP, published on its website, and provided upon request to any Person.

9.2. Certification of 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 and SASO shall make available to the Eligible Consumer an up to-date list of certified solar PV components and their suppliers.

10. METERING AND BILLING

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

10.2. The DSP shall develop, submit for ECRA's approval and implement the appropriate consumption bill to ensure effective communication of the Net Metering scheme to the Eligible Consumer.

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) accumulated credit energy units due to surplus energy generated and exported to the Distribution System;
d) Net energy units due to credit energy units within the current billing cycle; and
e) carried forward credit energy units for future billing cycles.

11. PROMOTING SMALL-SCALE PV SYSTEM INSTALLATIONS

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:

a) information on the process to apply for connecting Small-Scale Solar PV Systems installations to the Distribution System;

b) information on economic and environmental benefits to the Consumers through Net Metering; and

c) increasing public awareness about Small-Scale Solar PV Systems installations through a media campaign on its website.

11.3. The DSP shall conduct awareness programmes for potential Consumers and Solar PV Contractors and Consultants.

11.4. The DSP shall develop and implement advisory services to support the Eligible Consumers wishing to install a Small-Scale Solar PV Systems.

12. NET METERING ARRANGEMENT

12.1. The Net Metering 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.

12.3. Surplus energy shall be carried forward from one billing cycle to the next and shall be offset against future energy consumption at an Exit Point**.**

12.4. Net Metering arrangements shall be done via one Exit Point linked to one single meter in a Premises. The Eligible Consumer can benefit from a Net Metering arrangement for several consumption accounts under the same Eligible Consumer in the area of supply at one Electricity Department of the Distribution Service Provider.

12.5. The DSP is required to bill the Eligible Consumer for the remaining energy supplied (if any) after deducting any exported energy generated from the small-scale solar PV system into Distribution System.

12.6. Surplus units will be rolled over for a period of one year. At the period-end the DSP shall pay to the Eligible Consumer at a Tariff prepared by the DSP and submitted for ECRA's approval.

12.7. Any accrued credit amount of surplus energy shall be paid upon Termination of the Connection Agreement with the DSP.

13. REPORTING

The DSP shall monitor and report, as a minimum, the following information to ECRA on 31 January of each calendar year:

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 credited monthly and yearly;
c. the aggregated peak capacity of small-scale solar PV connected and disconnected during the year and since the commencement of these Regulations;
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 from small-scale solar PV installations.

14. MAINTENANCE

14.1. 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

14.2. It is the responsibility of the Eligible Consumer to ensure that the frequency of the required maintenance and corresponding tests are conducted.

15. DISPUTE RESOLUTION

In case of existence of a complaint or dispute in any matter relating to these Regulations, any Person may file his complaint with the DSP in accordance 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.

ANNEX – 1

Small-Scale Solar PV Systems Initial Enquiry Application Form

رقم الطلب		التاريخ	

بيانات مقدم الطلب

الاسم الأول	اسم الأب	اسم الجد	اسم العائلة	رقم الهوية الوطنية
الجنسية				
رقم الجواز			رقم الإقامة	

الاسم	رقم الخطاب / السجل	تاريخه	مصدره

بيانات الموقع		بيانات الاتصال	
المدينة		صندوق البريد	
الحي		الرمز البريدي	
الشارع		الهاتف المحمول	
نوع الوحدة		هاتف المنزل	
رقم الوحدة		هاتف العمل	
رقم العداد		الفاكس	
رقم الاشتراك الذي سيتم استخدامه للربط بموجب نظام صافي القياس		البريد الالكتروني	

المرفقات المطلوبة

١. صورة من الهوية الوطنية أو الإقامة والجواز لغير السعوديين.	☐
٢. خطاب تعريف من جهة العمل.	☐
٣. التفويض (في حال كان مقدم الطلب غير المستهلك المؤهل).	☐
٤. وصل مالي (تُعاد هذه المبالغ ذات العلاقة بالاستفسار المبدئي من خلال استقطاعها من رسوم التوصيل لأنظمة الطاقة الشمسية الكهروضوئية الصغيرة)	☐ .... ريال سعودي
٥. إثبات الشخصية الطبيعية أو الاعتبارية	☐
٦. المخطط الأحادي لأنظمة الطاقة الشمسية الكهروضوئية الصغيرة	☐

بيانات تنظيمات أنظمة الطاقة الشمسية الكهروضوئية الصغيرة

معلومات محول العكس (Inverter Data)

١. اسم المصنع (Manufacture)/ رقم الموديل (Model Number) .	/
٢. الرقم التسلسلي (إن وُجد)	☐
٣. البيانات الإسمية (Nameplate Rating)	القدرة (ك.و/ك.ف.أ) : الجهد – تيار متناوب (فولت) :

البيانات الفنية لتنظيمات أنظمة الطاقة الشمسية الكهروضوئية الصغيرة

١. قدرة النظام التصميمية (ك.و/ك.ف.أ)	☐
٢. هل معدات الأنظمة تتوافق مع مواصفات ومعايير هيئة المواصفات والمقاييس والجودة	☐

قائمة بمكونات عناصر النظام والجهة التي اعتمدتها

العنصر	الجهة المعتمدة

تاريخ التركيب والتشغيل المتوقع في الموقع :	

إقرار مقدم الطلب

أقر بأن المعلومات الواردة في هذا الطلب صحيحة وأوافق على الالتزام ببنود وشروط اتفاقية ربط تنظيمات أنظمة الطاقة الشمسية الكهروضوئية الصغيرة على الصفحات التالية

الاسم	
التوقيع	
التاريخ	

الموافقة المبدئية من مقدم خدمة التوزيع

يوافق مقدم خدمة التوزيع على ربط أنظمة الطاقة الشمسية الكهروضوئية الصغيرة بشكل مبدئي شريطة الالتزام ببنود وشروط اتفاقية ربط تنظيمات أنظمة الطاقة الشمسية الكهروضوئية الصغيرة المدرجة على الصفحات التالية:

اسم الموظف	
الوظيفة	
التاريخ	
رقم طلب الربط	
التوقيع	

ANNEX – 2

Small-Scale Solar PV Systems Connection Agreement Form

تمهيد :

١. يكون للألفاظ والعبارات المعرفة في تنظيمات أنظمة الطاقة الشمسية الكهروضوئية الصغيرة المعاني نفسها لغرض تطبيق هذه الاتفاقية ما لم يتطلب السياق خلاف ذلك.

٢. هذه الاتفاقية تحدد الشروط والأحكام المتفق عليها بين مقدم خدمة التوزيع ومقدم الطلب، وتشمل الاتفاقية الطلب المقدم من مقدم الطلب وكافة البيانات الأساسية المطلوبة منه.

٣. تمت الإشارة في هذه الاتفاقية إلى عدد من المراجع مثل كود التوزيع السعودي، وتنظيمات أنظمة الطاقة الشمسية الكهروضوئية الصغيرة ، وإجراءات معالجة شكاوي المستهلكين والتي يمكن الحصول عليها من خلال موقع مقدم الخدمة على الانترنت (.....) أو زيارة أحد فروع مقدم خدمة التوزيع أو موقع هيئة تنظيم الكهرباء والإنتاج المزدوج (الهيئة) على الانترنت www.ecra.gov.sa .

أولاً : يعتبر التمهيد السابق جزءاً لا يتجزأ من هذه الاتفاقية، ويجوز للمستهلك المؤهل تركيب أنظمة الطاقة الشمسية الكهروضوئية الصغيرة وإجراء الفحوصات التشغيلية اللازمة لربط الأنظمة بعد توقيع مقدم خدمة التوزيع على نموذج الطلب وهذه الاتفاقية.

ثانياً : **إجراءات ربط وتشغيل أنظمة الطاقة الشمسية الكهروضوئية الصغيرة :**

يجوز للمستهلك المؤهل تشغيل **أنظمة** الطاقة الشمسية الكهروضوئية الصغيرة وربطها مع نظام التوزيع وفق الإجراءات المنصوص عليها في كود التوزيع، وتنظيمات أنظمة الطاقة الشمسية الكهروضوئية الصغيرة المعتمد من الهيئة وذلك بعد إتمام الإجراءات التالية:

٢ -١: قيام مقدم خدمة التوزيع بفحص أنظمة الطاقة الشمسية الكهروضوئية الصغيرة والتأكد من مطابقة النظام لمتطلبات تنظيمات أنظمة الطاقة الشمسية الكهروضوئية الصغيرة والمتطلبات الواردة في كود التوزيع.

٢ -٢: تنازل مقدم خدمة التوزيع عن مهمة إجراء الفحص في الحالات التي يعتقد أنها تستدعي ذلك.

ثالثاً : **إجراءات السلامة والصيانة الدورية:**

٣ -١: يلتزم المستهلك المؤهل بإجراءات التشغيل والصيانة الدورية والمحافظة على أنظمة الطاقة الشمسية الكهروضوئية الصغيرة لضمان التقيد المستمر بمتطلبات كود التوزيع السعودي وأي متطلبات يفرضها مقدم خدمة التوزيع.

٣ -٢: يلتزم المستهلك المؤهل تأمين ممر آمن وسهل الوصول إلى موقع الأنظمة لأغراض السلامة التي قد تستدعي ذلك.

رابعاً : **الكشف على معدات القياس لأنظمة الطاقة الشمسية الكهروضوئية الصغيرة:**

٤ -١: بدون الإخلال بما ورد في تنظيمات أنظمة الطاقة الشمسية الكهروضوئية الصغيرة، يحق لمقدم خدمة التوزيع الكشف على معدات القياس وأنظمة الطاقة الشمسية الكهروضوئية الصغيرة في الوقت الذي يراه مناسباً بأي وسيلة يراها على أن يقوم بإشعار المستهلك المؤهل قبل يومي عمل على الأقل من موعد الكشف وعلى المستهلك المؤهل تمكينه من إجراء هذا الكشف بدون عوائق.

٤ -٢: في حال فصل أنظمة الطاقة الشمسية الكهروضوئية الصغيرة نتيجة الإخلال بالبنود الواردة في هذه الاتفاقية فللمستهلك المؤهل أن يقوم بتقديم طلب إعادة كشف على هذه أنظمة بعد إجراء التعديلات المطلوبة أو إزالة أي ملاحظات لدى مقدم خدمة التوزيع على أن يتحمل المستهلك المؤهل أجور إعادة الكشف حسبما ورد في تنظيمات

أنظمة الطاقة الشمسية الكهروضوئية الصغيرة كما يتم الاتفاق على موعد الكشف ما بين المستهلك المؤهل مقدم خدمة التوزيع وذلك خلال ٥ أيام عمل من تاريخ طلب إعادة الكشف.

خامساً : **فصل أنظمة الطاقة الشمسية الكهروضوئية الصغيرة:**

يحق لمقدم خدمة التوزيع القيام بالفصل المؤقت لأنظمة الطاقة الشمسية الكهروضوئية الصغيرة لدى المستهلك المؤهل وفقاً للحالات التالية:

٥ -١: في حالة الانقطاع المخطط لنظام التوزيع

٥ -٢: في حال الانقطاع غير المخطط لنظام التوزيع

٥ -٣: في حال ظهر لمقدم خدمة التوزيع أن تشغيل أنظمة الطاقة الشمسية الكهروضوئية الصغيرة لا يتوافق مع شروط وأحكام اتفاقية الربط وكود التوزيع.

سادساً : **حدود مسؤولية التعويض :**

٦ -١: تقتصر مسؤولية كل طرف على الطرف الآخر في التعويض عن أي ضرر مادي على مقدار الأضرار المباشرة التي تلحق فعلا ، ولا يجوز بأي حال لأي من الطرفين أن يكون مسؤولا تجاه الطرف الآخر عن أي ضرر غير مباشر.

٦ -٢: يُعتبر المستهلك المؤهل مسؤولا مسؤولية كاملة عن التمديدات الداخلية الخاصة به لأنظمة الطاقة الشمسية الكهروضوئية الصغيرة بعد قاطع مقدم خدمة التوزيع من جهة المستهلك المؤهل وعليه فإن مقدم خدمة التوزيع لا يتحمل أي مسؤولية قانونية أو مالية عما يقع من أضرار نتيجة حدوث أي خلل أو خطأ أو تغيير بمعدات الربط بأنظمة الطاقة الشمسية الكهروضوئية الصغيرة.

سابعاً: **احتساب فواتير عدادات صافي القياس:**

٧ -١: لغايات احتساب صافي كمية الطاقة، يتم اعتماد كمية الطاقة المصدرة من أنظمة الطاقة الشمسية الكهروضوئية الصغيرة اعتباراً من تاريخ اشعار مقدم خدمة التوزيع للمستهلك المؤهل بإمكانية التشغيل الفعلي لهذه الأنظمة وربطها مع نظام التوزيع.

٧ -٢: في حال وجد مقدم خدمة التوزيع أن كمية الطاقة الكهربائية المستوردة من قبل المستهلك المؤهل أكبر من كمية الطاقة الكهربائية المصدرة من أنظمة الطاقة الشمسية الكهروضوئية الصغيرة إلى نظام التوزيع، على المستهلك المؤهل أن يقوم بتسديد قيمة صافي كمية الطاقة المترتبة عليه لمقدم خدمة التوزيع شهرياً وفقاً للتعريفة المعتمدة .

٧ -٣: في حال كانت كمية الطاقة الكهربائية المصدرة من أنظمة الطاقة الشمسية الكهروضوئية الصغيرة إلى نظام التوزيع أكبر من كمية الطاقة الكهربائية المستوردة من قبل المستهلك المؤهل، على مقدم خدمة التوزيع تدوير فائض الطاقة (كيلوواط ساعة) إلى حساب الشهر الذي يليه، وعلى أن تتم التسوية بموجب ما ورد في تنظيمات أنظمة الطاقة الشمسية الكهروضوئية الصغيرة.

٧ -٤: في حال تخلف المستهلك المؤهل عن دفع فاتورة الاستهلاك المستحقة عليه، يحق لمقدم خدمة التوزيع أن يقوم بفصل الكهرباء عن المستهلك المؤهل حسب التعليمات المنظمة لحالات فصل الطاقة الكهربائية عن المستهلكين الواردة في دليل تقديم الخدمة الكهربائية المعتمد من الهيئة.

ثامناً : الشكاوى أو النزاعات :

في حالة وجود شكوى أو نزاع في أي موضوع يتعلق بهذه الاتفاقية أو تنفيذها أو أي جوانب تتعلق بتنظيمات أنظمة الطاقة الشمسية الكهروضوئية الصغيرة، يحق للمستهلك المؤهل تقديم شكواه لمقدم خدمة التوزيع وفقاً لإجراءات معالجة شكاوى المستهلكين المعتمدة من الهيئة وإذا لم يتم التوصل إلى حل مرضٍ بين مقدم خدمة التوزيع والمستهلك المؤهل بالنسبة للشكوى أو النزاع من خلال هذه الإجراءات، فيحق للمستهلك المؤهل أن يتقدم بشكواه إلى الهيئة للبت فيها.

تاسعا: إنهاء الاتفاقية

لا يجوز لأي من الطرفين إنهاء هذه الاتفاقية إلا بموجب الحالات التالية:

٩ -١: يمكن للمستهلك المؤهل إنهاء الاتفاقية في أي وقت عن طريق إعطاء مقدم خدمة التوزيع (٣٠) يوم عمل كإشعار مسبق على أن يقوم المستهلك المؤهل بتوضيح المبررات لإنهاء الاتفاقية.

٩ -٢: يحق لمقدم خدمة التوزيع إنهاء الاتفاقية شريطة أن يشعر المستهلك خطياً بـ (٣٠) يوم عمل قبل الإنهاء، وذلك في حال مخالفة المستهلك المؤهل لأي من أحكام هذه الاتفاقية وعدم معالجة المستهلك المؤهل لهذه المخالفة خلال ١٥ يوم عمل من استلام الاشعار الخطي

٩ -٣: يحق لمقدم خدمة التوزيع إنهاء الاتفاقية في حال قام المستهلك المؤهل بإجراء أي تعديل على أنظمة الطاقة الشمسية الكهروضوئية الصغيرة يؤثر على علاقته التعاقدية مع مقدم خدمة التوزيع أو الشبكة دون اخذ موافقة خطية من مقدم خدمة التوزيع على ذلك.

٩ -٤: في حال إنهاء الاتفاقية، يجب فصل أنظمة الطاقة الشمسية الكهروضوئية الصغيرة عن نظام التوزيع.

عاشراً: مدة الاتفاقية

تكون مدة سريان هذه الاتفاقية (٢٠) عاماً تبدأ من تاريخ توقيع هذه الاتفاقية من قبل الطرفين ما لم يتم إنهاؤها مسبقاً وفقاً لأحكام هذه الاتفاقية.

أحدى عشر: حررت هذه الاتفاقية من نسختين أصليتين باللغة العربية تسلم كل طرف نسخة منها للعمل بموجبها.

والله الموفق، ، ،

المستهلك المؤهل	
الاسم	
التوقيع	
التاريخ	
مقدم خدمة التوزيع	
اسم الموظف	
التاريخ	
رقم طلب الربط	
التوقيع	

ANNEX – 3

Fees and Charges

The Distribution Service Provider shall develop, submit for ECRA's approval and implement a list of fees and charges to be levied on the Eligible Consumers for the services relevant to the connection and Net Metering arrangement of Small-Scale Solar PV System.

The Distribution Service Provider shall develop, submit for ECRA's approval and implement a list of fees and charges to be levied on the Eligible Consumers for the services relevant to the connection and Net Metering arrangement of Small-Scale Solar PV System.

Service	Fees/Charges
Initial Enquiry Application	Saudi Riyals (……..)
Small-scale Solar PV Connection	Saudi Riyals (…….)
Inspection	Saudi Riyals (…….)
Consultant/Contractor Certification /Accreditation (To be paid by the Consultant/Contractor)	Saudi Riyals (…….)

ANNEX – 4

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

A. Enrolment Application

Contractors/Consultants applying for a certificate specific to Small-Scale Solar PV System are required to submit the following information and documents for evaluation of their certification/accreditation request by the relevant Distribution Service Provider:

1. Prequalification forms prepared by Distribution Service Provider should be filled and submitted to the relevant Department of Distribution Service Provider.
2. The Contractors/Consultants must submit the documents required by the Distribution Service Provider as part of the Enrolment Application including, but not limited to, the following:
    a. Registration Certificates/licenses from Government Departments e.g. Chamber of Commercial and Industry, Labour Department, and Taxation Department etc. (Abroad and inside KSA)
    b. Legal and financial information
    c. Copy of sponsor's or national partner's passport.
    d. If the Contractors/Consultants are not legally registered in KSA, you can contact the Saudi Arabian General Investment Authority (SAGIA).
    e. Copy of a valid lease contract in the name of the Contractor.
    f. Copy of a valid Staff's Registration Certificate for the person named as such in the application.
    g. For each technical staff member named in the application:
        i. a copy of passport and a valid residence visa page showing sponsorship of the Contractor.
        ii. Experience record or curriculum vitae along with references
3. Enrolment Application must be signed and dated by the Contractor's authorised signatory and sealed by the Contractor.
4. Originals of all documents required to make a new Certification/Accreditation Application must be presented at the relevant Department of the Distribution Service Provider.

5. Specific experience in small-scale PV system Installations (provide brief details on each project):
    - List of projects within KSA
    - List of projects elsewhere
6. Contractor's Solar PV related experience
7. Certification and Training
    - List of any Solar Installer training programme by an authorised trainer attended by the company (provide copies of the certificates).
    - List of staff with Health and Safety certification
8. Customer Service
    - Provide company website to which customers can reach you in case of service requests.
    - Provide company contact centre and case tracking system for customer support in KSA if available.
    - Provide details of the company's project management system in place.

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

1. The company shall have a minimum of one Graduate Electrical/ Mechanical Engineer in their sponsorship with at least one year experience in supervising electrical works/Design in compliance with Distribution Service Provider requirements.
2. Have a certain number of employees certified by the Distribution Service Provider as Solar PV Experts, as described in the table below:

Subject	Minimum requirements		
	System capacity ≤ 20 kW	System capacity ≤ 50 kW	MV connected systems / 50 kW < System capacity
Consultant	1(Junior)	1(Senior)	1 (Senior) + 1 (Junior)
Contractor	1(Junior)	1 (Senior) + 1 (Junior)	1 (Senior) + 2 (Junior)

3. Solar PV Expert Certificates issued by the Distribution Service Provider to employees having successfully completed the Solar PV Expert Training (or copy

of the communication received from Distribution Service Provider notifying that the employee has successfully completed the training and passed the test).

4. A dated and signed self-declaration as per the form prepared by the Distribution Service Provider.

C. Solar PV Certification Scheme

1. The objectives 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.
    - Quality of the design and installation for customers.
    - Protection for the public and Distribution System.

2. 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) organized by one of the following entities:

    a. SEC Training centres
    b. Technical and Vocational Training Corporation
    c. Aramco Training Centre
    d. SABIC Training Centre

3. Applicants that pass the final test will be provided with a Solar PV Expert certification (Junior or Senior).
4. The final test (Written and Practical) shall be taken through the Distribution Service Provider.
5. It should be noted that the Consultants and Contractors companies need to nominate and submit application on behalf of their employees.

D. Solar PV Experts: Junior and Senior

1. To become a certified "Senior" Solar PV Expert, applicants shall demonstrate, as a minimum, that in the last two (2) years they have gained experience working on minimum three (3) Solar PV system in the respective role (designing, building and verification).
2. Applicants may have none or insufficient experience working on Solar PV systems. As such, after the training they can obtain the title of "Junior" Solar PV Experts. Later, when they gain the needed experience in installing Solar PV systems, they will receive the qualification of "Senior" Solar PV Experts.
3. The table below summarize the requirements for both accreditations namely "Junior" and "Senior" in case the applicant is a Consultant or Contractor.

Requirements for Solar PV Expert "Junior"			**Additional requirements for Solar PV Expert "Senior"**
Subject	Education*	Work Experience	Work Experience
Consultants	Technical degree in Electrical or Electrical & Electronics issued by recognized institution	Minimum 3 years as professional with documented experience in Design and Installation of electrical systems (e.g. system designer, Forman, Electrician, System Engineer	Experience of two (2) years and at least three (3) Solar PV system in: • Designing • Building • Verification/Testing
Contractors	Technical degree Electrical or Electrical & Electronics issued by recognized institution	Minimum 3 years of Electrical Installation, design and construction related work.	Experience of two (2) years and at least three (3) Solar PV system in: • Designing • Building • Verification/Testing

E. Distribution Service Providers Roles

In coordination with King Abdullah City for Atomic and Renewable Energy, 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. develops a Program Training for installation, maintenance and inspection of small-scale solar PV system.
3. coordinates with the training entities where the applicants can attend the full training program
4. prepares a Final Test for the applicants of the Certified Contractor(s)/Consultant(s).
5. monitors and audits the Certified Consultant(s)/Contractor(s)