## **REPUBLIC OF RWANDA**



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### REGULATIONS N°004/ENERGY/SWH/RURA/2015

ON

## **SOLAR WATER HEATING**

**ADOPTED BY** 

THE REGULATORY BOARD

**OF** 

RWANDA UTILITIES REGULATORY AUTHORITY (RURA)

## **Table of Contents**

CHAPTER 1: GENERAL PROVISIONS	5
Article One: Purpose of these Regulations Article 2: Definitions of Terms	5 5
CHAPTER 2: DESIGN, OPERATION AND MAINTENANCE OF SOLAR WATER HEATING SYSTEMS	7
Article 3: Design, Installation, Repair and Maintenance of SWH Article 4: Installation of solar collectors Article 5: Issuance of an installation certificate	7 7 7
Article 6: Compliance with the Regulations	7
Article 7: Minimum Hot Water Demand and Demand Calculation	7
Article 8: Exemptions from Solar Water Heating installations Article 9: Processing the application for exemption of Solar Water Heating installations	7 7
CHAPTER 3: LICENSING FRAMEWORK	8
Article 10: Application for SWH Contractor License	8
Article 11: Application for SWH Technician Permit Article 12: Minimum Education Qualifications and Professional experience of SWH	8
Technicians	8
Article 13: Requirements for SWH Contractor License or SWH Technician Permit	8
Article 14: Decision on License or Permit application	9
Article 15: Reasons for rejection of a License or Permit Application	9
Article 16: Re-application	9
Article 17: Validity of SWH Contractor License and SWH Technician Permit	10
Article 18: License and Permit Fees Article 19: Modifications of a License or Permit	10 10
Article 19. Modifications of a License of Fermit  Article 20: License/Permit transfer	10
Article 20. Electise/Fermit transfer Article 21: Procedures for license/permit transfer or modification	11
Article 22: Renewal of License or Permit	11
Article 23: License or Permit Revocation	11
Article 24: Keeping registers and records	12
CHAPTER 4: MONITORING AND ENFORCEMENT	12
Article 25: Monitoring Action	12
Article 26: Regulatory Sanctions	13
Article 27: Compliance with Rwanda Standards	13
Article 28: The conventional back-up Water Heating System	14
Article 29: Disposal	14
CHAPTER 6: TRANSITIONAL AND FINAL PROVISIONS	14
Article 30: Transitional Period	14

#### Rwanda Utilities Regulatory Authority (RURA) Article 31: Interpretation 14 Article 32: Repealing provision 15 Article 33: Commencement 15 **ANNEXES** 16 Annex 1: Daily Hot Water Demand Calculation 16 Annex 2: Application fees 17 Annex 3: Exemption Requirements 18 Form 1: Application for Exemption 18 Annex 4: Application for Permit 20 Form 2: Application for Permit of SWH Technician 20 Form 3: Application for License of SWH Contractor 23

Annex 5: List of Standards

27

#### REGULATIONS N° 004/ENERGY/SWH/RURA/2015 ON SOLAR WATER HEATING SYSTEMS

#### **PREAMBLE**

Pursuant to Organic Law n° 04/2005 of 08/04/2005 determining the modalities of protection, conservation and promotion of the environment in Rwanda;

Pursuant to Law n°09/2013 of 01/03/2013 establishing Rwanda Utilities Regulatory Authority (RURA) and determining its mission, powers, organization and functioning, especially in Articles 2, 8, 10, 20, 37, 47and 48;

Pursuant to Law n°21/2011 of 23/06/2011 governing Electricity in Rwanda;

Pursuant to Regulations 002/EL/ENERGY/RURA/2012 of October 4th, 2012 on Electrical Installations;

Having taken into consideration the Guidelines promoting energy efficiency measures guiding electricity consumers on how to promote energy efficiency use;

Based on the recommendations made during the validation workshop held on June 26, 2014, between RURA and different stakeholders;

The Regulatory Board of the Rwanda Utilities Regulatory Authority, upon due consideration and deliberations in its meeting of 20/02/2015;

**HEREBY** issues the following regulations governing Solar Water Heating Systems in Rwanda:

## **CHAPTER 1: GENERAL PROVISIONS**

## **Article One: Purpose of these Regulations**

These Regulations are intended to provide a licensing and regulatory framework for the design, installations, operation, repair, maintenance and upgrade of Solar Water Heating Systems in Rwanda.

### **Article 2: Definitions of Terms**

For the purpose of these regulations, terms below shall have the following meanings:

- **a.** "Active solar water heating system": a solar water heating system that employs a pump to circulate water through a solar collector to a storage tank or to the point of use;
- b. "Contractor": companies providing solar water heating equipment;
- **c.** "Co-generation": the production of electricity and heat in one single process for dual output streams:
- **d.** "Direct Solar Water Heating System": solar water heating system in which water is heated directly in the collector;
- **e.** "Indirect Solar Water Heating System": a solar water heating system in which a heat transfer fluid in the collector transfers heat to the water through a heat exchanger;
- **f.** "License": legal document issued by the Regulatory Authority granting rights and obligations for the import/manufacture and sale of Solar Water Heating Systems and related equipment;
- g. "Permit": legal document issued by the Regulatory Authority granting rights and obligations for the design, installations, operation, repair, maintenance and upgrade of Solar Water Heating Systems in Rwanda;
- **h.** "Permit holder": the holder of a licence issued under these Regulations;
- i. "Passive Solar Water Heating system": a solar water heating system that employs natural convection to circulate water through a solar collector to a storage tank or to the point of use;
- **j.** "Premises": means existing, new or alterations and extensions to existing residential or commercial buildings or structures, including but not limited to:
  - Small domestic houses:
  - All other domestic dwellings or residential houses;
  - Commercial buildings such as hotels, lodges, clubs, restaurants, cafeterias, laundries, eating places and similar premises;

- Health institutions such as hospitals, health centres and clinics and similar medical facilities;
- Educational institutions such as universities, colleges, boarding schools and similar institutions.
- **k.** "Regulatory Authority": the Rwanda Utilities Regulatory Authority established by Law N°09/2013 of 01/03/2013;
- **I.** "Rwanda Standard": the specification or code of practice declared by the National Bureau Standards;
- m. "(RS)": Rwanda Standard;
- **n.** "**Solar collectors**": include evacuated tube collectors, and glazed and unglazed flat plate collectors:
- **o.** "Solar Water Heating System": a device or system that uses sunlight to heat water and comprises of solar collectors, storage tanks, controls, installation hardware and fittings;
- p. "SWH": Solar Water Heating

#### CHAPTER 2: DESIGN, OPERATION AND MAINTENANCE OF SOLAR WATER HEATING SYSTEMS

## Article 3: Design, Installation, Repair and Maintenance of SWH

The design, installation, repair and maintenance of SWH shall be in conformity with the Code of Practice – Solar Water Heating for Domestic Hot Water as detailed in the following Rwanda Standards:

RS 214:2014	The Installation, maintenance, repair and replacement of domestic solar water heating
systems	
RS 213:2014	Domestic solar water heater – Mechanical qualification tests
RS 212:2014	Domestic storage for solar water heating systems - Requirements

#### **Article 4: Installation of solar collectors**

Solar collectors shall be installed at an angle between 10° and 20° from horizontal plane.

### Article 5: Issuance of an installation certificate

The SWH technician or contractor shall issue an installation certificate, showing as a minimum, the date of installation, capacity of the SWH, details of the installer and warranty, for the premises upon commissioning of the SWH.

## **Article 6: Compliance with the Regulations**

All premises with the jurisdiction of a local authority with hot water requirements of a capacity exceeding one hundred litres (100 L) per day shall install and use SWH.

An owner or occupier of premises with SWH installed shall ensure regular maintenance and repairs required to keep the installation in good and efficient working condition.

#### **Article 7: Minimum Hot Water Demand and Demand Calculation**

The daily hot water demand shall be calculated as provided in **Annex One** of these Regulations.

### **Article 8: Exemptions from Solar Water Heating installations**

The Regulatory Authority may grant an exemption from these Regulations to any premises supplied with hot water from a cogeneration plant, premises directly utilising electricity generated from renewable energy and the excess is used to heat water as a dump load.

An application for such exemption shall be submitted to the Regulatory Authority before submission of the building plans for approval to the relevant local authority in the form set out under these Regulations.

#### Article 9: Processing the application for exemption of Solar Water Heating installations

The Regulatory Authority shall process all applications for an exemption for SWH within thirty (30) days and inform the applicant and the relevant local authority.

In case the applicant does not receive the exemption, the Regulatory Authority shall provide the reasons of such a refusal.

## **CHAPTER 3: LICENSING FRAMEWORK**

## **Article 10: Application for SWH Contractor License**

Any person who intends to operate as a SWH contractor shall apply for a License to the Regulatory Authority and the application letter shall be addressed to the Director General accompanied with the application form provided in **Annex 4** of these regulations.

A SWH Contractor must have in his employment SWH technicians with valid permits to install, repair and maintain SWHs.

## **Article 11: Application for SWH Technician Permit**

Any person desirous to be permitted as a SWH technician shall submit an application to the Regulatory Authority and the application letter shall be addressed to the Director General accompanied with the application form provided in **Annex 4** of these Regulations.

## Article 12: Minimum Education Qualifications and Professional experience of SWH Technicians

The required qualifications to conduct SWH services under these Regulations are subject to minimum education and professional experience provided in the table below:

	Education (Academic)	Professional (Job)
	A Graduate Engineer (Mechanical Eng.,	2 years of work experience involving plumbing works
1	Renewable Energy Eng. and other relevant	
	fields)	
2	Higher National Diploma (IPRC)	2 years of work experience involving plumbing works
2	A <sub>2</sub> certificate with background in renewable	3 years of work experience involving plumbing works
3	energy technologies	
4	A <sub>3</sub> certificate with background in renewable	4 years of work experience involving plumbing works
1	energy technologies	
5	Certificate of a tailored training in SWH	4 years of work experience involving plumbing works
J	Technology	

#### Article 13: Requirements for SWH Contractor License or SWH Technician Permit

Any person who intends to apply for a SWH Contractor License or SWH Technician Permit shall submit to the Authority the following documents:

Application letter addressed to the Authority;

- 2. Application form well filled obtained from the Authority's website;
- 3. Copy of ID or Passport of contact person;
- 4. Specific information as specified under Annex 4 of these Regulations;
- 5. Any other information deemed necessary by the Authority for decision making.

## **Article 14: Decision on License or Permit application**

- 1. The Regulatory Board shall declare its decision as promptly as possible, but in no event later than thirty (30) working days following receipt of a complete application;
- 2. In case the Authority requires additional time, it shall provide written notice to the applicant, with an explanation of the cause for the delay.

## Article 15: Reasons for rejection of a License or Permit Application

The Authority shall reject a license or permit application when it is found that:

- 1. The application was incomplete and the requested information was not submitted within the deadline set by the Authority;
- 2. The applicant failed to demonstrate the technical capacity to carry out the permitted activities;
- 3. The applicant and/or member of the applicant management has history of significant criminal case, license/permit violations for economic or fraudulent acts within Rwanda or other countries connected to services rendered;
- 4. The applicant failed to comply with the Authority orders, information requests, or other decisions during a prior permit term;
- 5. The applicant failed to pay the required fees to the Authority as prescribed in the Regulations;
- 6. The applicant is in, or about to enter, insolvency, bankruptcy or liquidation; or
- 7. Any other reason that the Authority may find necessary to protect the consumers in Rwanda.

### **Article 16: Re-application**

In case, the applicant has not fulfilled the requirements under these Regulations, he/she is allowed to resubmit the missing documents within three (3) months following the rejection of the initial application. Failing to do so during that period, the applicant shall apply and fulfil all requirements in accordance with the rules and regulations in force.

## Article 17: Validity of SWH Contractor License and SWH Technician Permit

A SWH Contractor License or SWH Technician Permit issued under these Regulations shall be valid for three (3) years renewable.

## **Article 18: License and Permit Fees**

- 1. The permit for installation of SWH services shall be issued upon payment of the application and permit fees as prescribed in **Annex 2** to these Regulations.
- 2. The License to trade SWH systems shall be issued upon payment of the application and License fees as prescribed in **Annex 2** to these Regulations.
- 3. The annual regulatory fee based on a percentage of the turnover shall be paid according to the Regulatory Board Decision governing the matters.

### Article 19: Modifications of a License or Permit

- 1. A license or permit modification proceeding may be initiated by the Authority or on request of the license/permit holder.
- 2. The Authority may modify a license/permit before the expiration of the license/permit term when it determines that an amendment of the license/permit is needed in order to respond to:
  - a. Significant changes in the relevant laws or regulations, or significant court decisions that directly affect the license/permit provisions;
  - b. The inability of the license/permit holder to comply with the license/permit provisions due to events beyond the license/permit holder's control;
  - c. Changes in the ownership or organizational status of the license holder;
  - d. Significant non-compliance by the license/permit holder with the current license/permit provisions or other Authority rules, decisions or orders.

### Article 20: License/Permit transfer

- 1. Transfers of licenses or permits, including the direct or indirect sale, assignment, conveyance, lease or other transfer of assets or activities subject to a license/permit to a different individual or institution shall be subject to a prior written approval of the Authority.
- 2. Such approval shall be granted after consideration of the matter and if the proposed transfer meets all the conditions for granting the license/permit.

3. Failure to comply with such requirements shall amount to license/permit suspension or revocation.

## Article 21: Procedures for license/permit transfer or modification

- 1. A license/permit transfer or modification proceeding is initiated by an application from the license/permit holder. Until the Authority has issued an approval of the transfer, no license/permit holder may attempt to transfer his/her license/permit to another person.
- 2. A license/permit transfer proceeding shall be conducted in the same manner as review of a license/permit application. The transferee shall be considered as the applicant to assume the operational license/permit. The duration of a license/permit and the license/permit terms and conditions shall remain the same, unless the license/permit transferee requests a license/permit modification as part of the transfer proceedings.

#### **Article 22: Renewal of License or Permit**

- 1. An application for renewal of a licence shall be made at least thirty (30) calendar days before the expiry date of the current licence and the Authority shall consequently make its decision not later than fifteen (15) days prior to the expiration of the current license/permit.
- 2. The license/permit renewal proceeding shall be subject to the same procedures and approval criteria as an initial license/permit application.
- Where, upon application, it is shown to the satisfaction of the Regulatory Authority that a license/permit has been lost, destroyed or defaced; the Regulatory Authority may issue a duplicate license/permit.

### **Article 23: License or Permit Revocation**

A license/permit revocation proceeding may be initiated by the Authority or on request of the license/permit holder.

The Authority may revoke a license/permit before the expiration of the license/permit term when it determines that revocation is needed in order to respond to:

- 1. License/permit holder failure to comply with license/permit terms and conditions;
- 2. License/permit holder abandonment of licensed/permitted activities;
- 3. Failure of the license/permit holder to provide the Authority with monitoring and reporting data required by the license/permit or failure to cooperate with the Authority inspections and audits;

- 4. License/permit holder submission of false or deliberately misleading data or information to the Authority in response to the Authority request or in response to the Authority monitoring reporting inspection or audit requirements;
- 5. License/permit holder failure to provide timely access to the Authority or inspection or audit of license/permit holder facilities and corporate records;
- 6. Bankruptcy, financial insolvency or liquidation of license/permit holder; and
- 7. License holder failure to pay the required regulatory fees.

## **Article 24: Keeping registers and records**

The Regulatory Authority shall maintain a registry of all permitted SWH technicians and licensed contractors under these Regulations.

- 1. The contents of the registry shall be available for inspection by the public.
- 2. All SWH technicians and contractors registered by the Regulatory Authority shall maintain records of all installed Solar Water Heating systems, specifying the location, capacity and type.
- 3. All SWH technicians and contractors shall maintain any reports required under these Regulations for a minimum period of five years.

A person who contravenes the provisions of paragraph (3) commits an offence and shall, on conviction, be liable to a fine not exceeding two million (2,000,000) Rwandan Francs.

### **CHAPTER 4: MONITORING AND ENFORCEMENT**

#### **Article 25: Monitoring Action**

- 1. The Regulatory Authority or its agent may carry out inspection, in relation to the installation of SWH in premises, in accordance with provisions provided under these Regulations.
- Where the Regulatory Authority finds that the provisions of these Regulations have been contravened by the owner or occupier of the premises or that a condition has arisen that has the potential of contravention of these Regulations, the Regulatory Authority or its agent may issue a compliance notice thereof;

A notice issued under these Regulations shall state:

- a. The specific provision that have been contravened;
- b. The measures that must be taken to rectify the contravention;
- c. The period within which the notice shall be complied with.

## **Article 26: Regulatory Sanctions**

- 1. If the Regulatory Authority determines that the license/permit holder has failed to comply with any term or condition of the license/permit, the Regulatory Authority shall send a written warning to the license/permit holder including a deadline for correction of the alleged license/permit violation.
- If the license/permit holder, after receipt of the warning from the Regulatory Authority, does not cure the alleged non-compliance, the Regulatory Authority may proceed with further sanctions which may consist of monetary sanctions not exceeding two million (2,000,000) Rwandan Francs, license/permit suspension or revocation.
- 3. A person who contravenes a compliance notice issued pursuant to an inspection, and after the expiry of the stipulated time, shall, on conviction, be liable to a fine not exceeding ten thousand (10,000) Rwandan Francs for residential premises and thirty thousand (30,000) Rwandan Francs for all other premises for each day or part thereof that the contravention continues.
- 4. Any person, with hot water requirements exceeding 100littres per day, who does not install s SWH system commits an offence and shall, on conviction, be liable to a fine not exceeding one million (1,000,000) Rwandan Francs.
- 5. Where any default in or contravention of any of the provisions of these Regulations is made for which no fine or penalty is expressly stated, the person so defaulting or contravening shall, on conviction, be liable to a fine not exceeding one million (1,000,000) Rwanda Francs.

#### **CHAPTER 5: STANDARDIZATION REQUIREMENTS**

### **Article 27: Compliance with Rwanda Standards**

- 1. No person shall use or employ for or in connection with any of the purposes of SWH, any mode, material or apparatus other than that which complies with the Rwanda Standards as listed in **Annex 5**.
- 2. A Solar collector shall be of the unglazed flat plate, glazed flat plate or evacuated tube collector technologies or any other type as per Rwanda Standards or EAC Standards.
- 3. A glazed, evacuated tube collector or any other type as per Rwanda Standards shall be used in all installations except installations for heating swimming pools which may use unglazed collectors.
- 4. Solar collector panels shall be insulated to improve their thermal efficiency performance.
- 5. The storage capacity of SWH shall not be less than 1.5 times the daily hot water demand of the installation.

- 6. Hot water storage tanks shall be insulated.
- 7. All components selected for use in the installation of SWH shall be corrosion resistant.
- 8. Selection of components for plumbing works in SWH shall be in accordance with the planning and building code made under the Local Government.

## Article 28: The conventional back-up Water Heating System

Back up water heater systems utilizing traditional fuels, that is, electricity, gas, or similar fuels, may be installed in the buildings to ensure adequate hot water supply at all times. The backup systems may be integrated into SWH system or be separate;

The conventional back-up system shall be designed to supplement SWH. It shall operate only when strictly necessary to supply the energy deficit from solar collectors due to adverse weather conditions or SWH defects.

## Article 29: Disposal

End-of-life disposal of solar water heating equipment shall be done in accordance with the Regulations on Management and Handling of Hazardous Waste (MHW Regulations). Any disposal of solar water heating equipment done in contravention to MWH Regulations shall be sanctioned according to the provisions provided therein.

#### **CHAPTER 6: TRANSITIONAL AND FINAL PROVISIONS**

#### **Article 30: Transitional Period**

Any contractor/technician willing to trade and install SWH systems shall comply with the provisions provided under these Regulations.

Any other person / technician that have commenced installations of SWH after the effective date of these Regulations shall submit an application for License/Permit in due form prior to continuing such activities.

Within a period of two (2) years from the date of coming into force of these Regulations, all existing premises with hot water requirements of a capacity exceeding one hundred litres (100 L) per day shall install and use SWH.

### **Article 31: Interpretation**

Upon the request and in appropriate circumstances, the Regulatory Authority may, at its sole discretion, provide an interpretation of these Regulations to assist the license/permit holder or license/permit applicant in ensuring its compliance with these Regulations.

Rwanda Utilities Regulatory Authority (RURA)	
Article 32: Repealing provision	
All prior provisions contrary to these Regulations are hereby repealed.	
Article 33: Commencement	
These Regulations shall come into force on the date of approval and signature by the F	Regulatory Board.
Kigali, March 27, 2015	
{SE}	
Coletha U. RUHAMYA	
CHAIRPERSON OF THE REGULATORY BOARD	
Colan Water Heating Deculations	15 / D -

## **ANNEXES**

## **Annex 1: Daily Hot Water Demand Calculation**

Type of Building Premises	Specific Daily Hot Water Demand (DHWD) in litres per day at 60 °C
Domestic residential houses	30 per person
Educational institutions such as colleges and boarding schools	5 per student
Health institutions such as Hospitals, Health Centres, clinics and similar medical facilities	50 per bed
Hotels, Hostels, Lodges and similar premises providing boarding services	40 per bed
Restaurants, Cafeterias and similar eating places	5 per meal
Laundries	5 per kilo of clothes

i. Hot Water Demand calculations at other temperatures (T) shall be adjusted for the 60 °C reference temperature. For the purposes of making the adjustment, the following equation shall be used:

$$D(T) = \frac{D(T60) * 45}{T - 15}$$

The equation assumes that the cold water temperature (inlet water temperature) is 15°C and a linear relationship of 45 °C is the difference between 60 °C and 15 °C.

- ii. For buildings with seasonal variations in hot water demand such as Hotels, Game Lodges and similar premises, the demand may be adjusted by an annual occupancy rate of factor of not less than 70%.
- iii. In calculating the demand, it shall be assumed that the daily hot water demand is constant, throughout the year.
- iv. In calculating demand for domestic residential houses, the number of persons shall be taken to be equal to the number of bedrooms X 1.5
- v. In calculating the heat load of SWH system, heat losses in the hot water distribution system shall be taken into account.

Rwanda Utilities Regulatory Authority (RURA)

## **Annex 2: Application fees**

To be licensed/permitted as a solar water heating system contractor or technician the following fees shall apply:

Type of authorization	Application fee (Rwf)	Licence/Permit Fee (Rwf)	Renewal Fee (Rwf)
Technician's permit	20,000	100,000	100,000
Contractor's license	30,000	300,000	300,000

## **Annex 3: Exemption Requirements**

## Form 1: Application for Exemption

"This form must be accompanied with a technical report signed by an expert (Registered Engineer, Architect, or Technician) explaining why it is not technically viable to have SWH in the premises".

## **GENERAL PARTICULARS**

1)		name and address of applicant in full; in the case of a partnership or other joint venture a body corporate), give the names and addresses of each party concerned					
2)	State the name, address and telephone number of person to whom correspondence or enquirie concerning the application should be directed.						
3)	State whether the applicant is a public limited company, private limited company, overseas company, other body corporate, partnership, unincorporated association, sole trader or other entity (and in the last case give particulars of the legal status).						
4) If the applicant is a b		cant is a body corporate, state:					
	i.	i. the jurisdiction under which it is incorporated					
	ii.	if applicable, its registered number					
	iii.	Attach copies of Certificate of Registration, Memorandum and/or Articles of Association where applicable)					
	iv.	the full names and addresses of its current directors					
	٧.	the name and registered office of any holding company of the applicant					

r a body corporate nor a sole trader, give the name(s) and adwhom effective control of the applicant rests.	dress (es)
e Number and name and address of the local Regulatory Au d.	thority whe
e applicant seeks exemption.	
n(s) of person(s) signing the application.	

## **Annex 4: Application for Permit**

## Form 2: Application for Permit of SWH Technician

Purpos	e of Application:
New A	pplication $\Box$ Renewal $\Box$ (Please indicate with a tick ( $$ ))
1)	Name in full
	(Block capitals, surname first)
2)	Postal Address
3)	Date of Birth
4)	Nationality
5)	Name and address of present employer, if any
6)	Title of present job
7)	Academic qualifications: iii.
8)	Professional Qualification: i. iii
9)	Details of apprenticeship (if any):

10) Subsequent experience in the work of a plumber (if any)			
44) D ( 'I COMIL' ( II C			
11) Details of SWH installation permit held (if any) i. Permit No			
ii. Issued on			
iii. Issued by			
I declare that the particulars given by me are true and correct.			
Date:			
Signature of Applicant:			
REFEREES			
(The following details to be completed by two independent referees who must have known the a ability very well, preferably in the SWH installation sub-sector)	pplicant's		
1st Referee			
I declare that the particulars given by the applicant in this form are true and correct to the be knowledge.	est of my		
i. Full Name:			
(Block letters, surname first)			
ii. Occupation:			
iii. Postal address:			
iv. SWH installation license/permit No. (if any)			
v. I have known the above person for Years.			
vi. Position held at present			

Rwanda Utilities Regulatory Authority (RURA)

Date
Signature of 1st referee
nd Referee
declare that the particulars given by the applicant in this form are true and correct to the best of my nowledge.
i. Full Name:
iii. Postal address:
iv. SWH installation licence/permit No. (If any)
v. I have known the above person for
vi. Position held at present
Date
Signature of 2nd referee

Rwanda Utilities Regulatory Authority (RURA)

## Form 3: Application for License of SWH Contractor

Purpose of Application: New Application Renewal $\Box$ (Please indicate with a tick ( $\checkmark$ ))						
1)						
2)	Details of Contractor:					
	i.	i. Income Tax Personal Identification Number:				
	ii.	ii. Postal Address:				
	iii.	ii. Location of business premises:				
		PlotNo. Building Name. Street/Market: Town/District:				
3)	) Give full details of proprietors or partners owning business or directors/shareholders of the company, as the case may be.					
		Name Nati	onality			
••••						
(Aı	ny addi	dditional information should be submitted on a separate sheet of paper)				
4)	Certif	ertified copies of the following documents should be submitted with the applications of the following documents should be submitted with the applications of the following documents are submitted with the applications of the following documents are submitted with the applications of the following documents are submitted with the applications of the following documents are submitted with the applications of the following documents are submitted with the applications of the following documents are submitted with the applications of the following documents are submitted with the applications of the following documents are submitted with the applications of the following documents are submitted with the applications of the following documents are submitted with the applications of the following documents are submitted with the applications of the following documents are submitted with the applications of the following documents are submitted with the applications of the following documents are submitted with the applications of the following documents are submitted with the applications of the following documents are submitted with the applications of the following documents are submitted with the submitted with the following documents are submitted with the following documents are submitted with the submitted with	ation for a license:			
	<ul> <li>i. If the applicant is a Rwandan, a copy of both sides of ID card or if a non-Rwandan current work permit (if applicable) together with copies of pages 1 and 5 of the passport;</li> </ul>					
i	i. R	Relevant entry permits(s) for non-citizens;				

Copy of Business name Registration Certificate or Certificate of Incorporation and Memorandum

and Articles of Association in case of a company (whichever is applicable);

iii.

Rwa	anda	nda Utilities Regulatory Authority (RURA)	
iv	<b>'</b> .	Lease agreement or letter from landlord confirming tenancy;	
٧	<b>'</b> .	PIN and VAT certificates;	
vi	i.	Valid Tax compliance certificate;	
vii	i.	Any other document that may be required by the Regulatory Authority from time	to time.
		NB: An applicant for renewal of a license shall submit only a photocopy of the co	urrent License.
5)	List	List of Permitted SWH technicians under the Applicant's supervision:	
4	Fu	Full name Permit No.	
1.			
2.			
3.			
4.			
5.			
6)	Are	Areas where the business will operate.	
	· · · · · · · · · · · · · · · · · · ·		
7)	Pre	Previous SWH project or work experience.	
8)		Name and address of bank(s) or financial institution(s) where the business maintained.	s account(s) is/are
••••			
Solo	ar W	r Water Heating Regulations	24   P a g e

Rwanda Ui	tilities Regulatory Authority (RURA)
	by apply for registration as a SWH Contractor. We commit to carry out all trade and installations ince with the Solar Water Heating (SWH) Regulations, 2015.
Si Si	We hereby, declare that the information I/we have provided in the application is true and correct.  gnature of Applicant
REFEREE	ES CONTRACTOR OF THE PROPERTY
•	wing details to be completed by two independent referees who must have known the applicant's vell, preferably in the trade of SWH systems)
1st Refer	ee ee
I declare knowledge	that the particulars given by the applicant in this form are true and correct to the best of my e.
(Block lett	ull Name:ers, surname first) ccupation:
ix. Po	ostal address:
x. S'	WH installation license No. (if any)
xi. I h	nave known the above person for Years.
xii. Po	osition held at present
D	ate
Si	gnature of 1st referee

Rwanda Utilities Regulatory Authority (RURA)

## 2<sup>nd</sup> Referee

I declare that the	ne particulars	given by	/ the	applicant	in	this	form	are	true	and	correct	to	the	best	of	my
knowledge.																

vii.	Full Name:
Block	letters, surname first)
viii.	Occupation:
ix.	Postal address:
Χ.	SWH installation license No. (if any)
xi.	I have known the above person for
xii.	Position held at present
Da	te
Sic	anature of 2nd referee

# Annex 5: List of Standards

RS ISO 9488:1999	Solar energy - Vocabulary					
RS ISO 9459-1: 1993	Solar heating-Domestic water heating systems - Part 1: Performance rating procedure using indoor test methods					
RS ISO 9459-2: 1995	Domestic water heating systems - Part 2 Outdoor test methods for system performance characterization and yearly performance prediction of solar only system					
RS ISO/TR 10217: 1989	Solar energy - Water heating systems - Guide to material selection with regard to internal corrosion					
RS ISO 6509: 1981	Corrosion of metals and alloys - Determination of dezincification resistance of brass					
RS ISO/TR 10217: 1989	Solar energy - Water heating systems - Guide to material selection with regard to internal corrosion					
RS 214: 2014	The installation, maintenance, repair and replacement of domestic solar water heating systems					
RS 213: 2014	Domestic solar water heater - Mechanical qualifications tests					
RS 212: 2014	Domestic storage solar water heating systems - Requirements					