حكومة دبي
GOVERNMENT OF DUBAI

هيئة كهرباء ومياه دبي
Dubai Electricity & Water Authority

SHAMS DUBAI

DEWA DRRG Standards Version 1.1 Amendments and Temporary Derogations August 2015

NOVEMBER 2016 UPDATE

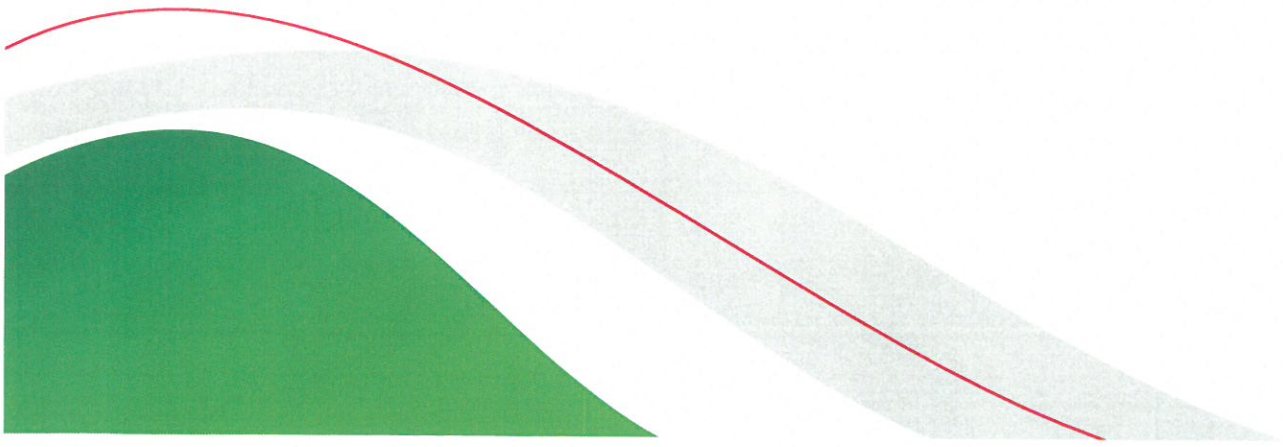

TABLE OF CONTENTS

1. INTRODUCTION

This document contains:

- Reference to one key content amendment related to temperature derating of inverters, which has been introduced in DRRG Standards – Version 1.1 Compared to Version 1.0, Version 1.1 also includes a number of clarifications and formatting refinements. (Section 2)

- A temporary derogation related to the requirement of IEC61850 standards for interface protections. (Section 3)

- A temporary derogation related to the procedure required for manufacturers to show compliance to the DEWA DRRG Standards. (Section 4)

2. AMENDMENTS TO THE DEWA DRRG STANDARDS INTRODUCED WITH VERSION 1.1 FROM AUGUST 2015.

Under heading 2.1 General Rules, Point #4 has been modified to the following:

1. "The inverters shall be provided with an IP65 enclosure for outdoor application and IP54 enclosure for indoor application. In this latter case, lower protection grades shall only be permitted if the characteristics of the room will be properly conceived to protect the equipment. The inverter shall be able to withstand the maximum temperatures with effective heating dispersion and with a power derating smaller than or equal to 25% of its rated power as determined for an ambient temperature of 50 °C at the DC design voltage. This temperature is to be considered the maximum outdoor value at which all equipment, apparatus, materials and accessories used in electrical installations must be capable of operating with satisfactory performance in the climatic conditions of the Emirate of Dubai. In addition, provisions which prevent the increase of the internal heating of the inverters shall be taken for outdoor installation (e.g. protections against direct exposition to the sun). For those inverters which do not comply with the above set rule, a placement in cooled room or enclosures with effective ventilation shall be required, inside which the ambient temperature will be kept below the value which determines a power derating equal to 25% of the inverter rated power at the DC design voltage."

3. TEMPORARY DEROGATIONS TO THE DEWA DRRG STANDARDS - RELATED TO THE REQUIREMENT OF IEC61850 STANDARDS FOR INTERFACE PROTECTIONS

The "Standards for Distributed Renewable Resources Generators Connected to the Distribution Network" at clause 2.2.1.2 "Protection System for RRGPs", sub-clause 3.8 state:

"The Interface Protection shall include the ability to receive signals with protocol IEC 61850, finalised to remote tripping."

A temporary derogation from such requirement is granted for projects with application and design approval submitted to DEWA until 01/09/2017, provided that the following requirements are jointly met:

1. Plant capacity does not exceed 200 kW (PMC ≤ 200 kW). For projects consisting of more than one generating unit, plant capacity is intended to be the sum of capacities of all generating units installed by the customer and connected to the same feeder.

2. Connection of the plant to the distribution feeder does not cause the crossing of a threshold of 10%, calculated as ratio between the overall DRRG installed capacity and the peak load of the distribution grid ring where the plant is connected. This condition will be verified by DEWA during NOC assessment and communicated to the Applicant.

3. The Interface Protection equipment (inverter with embedded protection, when applicable, or external interface protection device) allows for remote tripping via digital input;

During the derogation time, DEWA will periodically monitor the two mentioned thresholds (200 kW and the 10% ratio) and reserves the right to modify them if needed, according to both the development of the distribution network and the penetration of the DRRG plants in the network itself. Projects approved by DEWA under the derogation will be 'grandfathered' (i.e. DEWA will not require customers to retrofit the plants for IEC61850 compliance in the future), but DEWA reserve the right to impose, at DEWA expense, future retrofits in order to enable remote tripping or any other form or remote control leveraging the digital input capabilities of the installed Interface Protection equipment.

4. TEMPORARY DEROGATIONS RELATED TO THE COMPLIANCE PROCEDURE

As a temporary derogation, DEWA will accept as proof of compliance to the DEWA DRRG standards also certificates from agreed laboratories stating that the tested equipment complies with international standards deemed by DEWA to be equivalent to the DEWA DRRG standards on all critical aspects related to the inverter capabilities and settings.

The acceptance of these international standards as a proof of compliance will only be valid until ~~01/11/2016~~ *. After the mentioned date, all equipment that has failed to prove compliance to the DEWA DRRG Standards via the procedure set out in the standards themselves will be removed from the eligible equipment list.

Under this derogation, new registration forms have been uploaded on Shams Dubai website, and manufacturers wishing to have their equipment added to the eligible list based on the derogation are invited to submit them together with the required certificates.

* Extended to 01/05/2017