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Floating Solar Cell Power Generation, Power Flow Design and its Connection and Distribution

Sai Fai Hui¹, H.F. Ho², W.W. Chan², K.W. Chan², W.C. Lo³, K. W. E. Cheng ³

Solarisver Holdings Limited¹ and Power Electronics Research Center, The Hong Kong Polytechnic University²
E-mail: kenneth.lei@hkusite.com

Abstract - Solar power installed in sea water has advantages as compared to installed on lands such as good and unshaded solar source by buildings or plants, better cooling, good utilization of surface than lands, but it also suffers from other scenario such as the sea water corrosion, wave and tidal disturbance. The present paper is to discuss the project for the sea water solar power generation. The configuration of the solar power system for sea water is examined. The solar cells design, connection power distribution, protection, environment impact and shore side power management are discussed. The power delivery using V2X is proposed.

Keywords - Solar power, sea water solar power, floating solar system, Photovoltaics,

I. INTRODUCTION

The electrical power generation is based on coal fire, natural gases or through fossil fuel to power a generator through mechanical connection to generate power from electrical generator. This method produces green house gases and the efficiency is relatively poor. Photovoltaic (PV) cells or so called the solar power cells are no

Under sea water environment, a floating unit is used to fix the solar panel above the sea water level. This is important as the long term immersed in sea water could shortened to life time of the electrical connections and solar panel. The floating unit is flat and floats on sea water. The solar panel is to be designed to have a certain tilt angle compared to the horizon. This tilt angle has to be selected between the solar power and the wind speed condition.

The present project is to provide the best method of the design for the sea water floating solar panel power generation system. The design parameter for this exercise is to be discussed.