FRI-10.326-1-EEEA-07

CURRENT STATUS AND FUTURE DIRECTIONS OF RENEWABLE ENERGY USE IN AFGHANISTAN

Najmuddin Noorzad, PhD Student

Department of Electrical and Electronics Engineering, Muğla Sıtkı Koçman University, Turkey Electrical Engineering, Electronics and Automation, "Angel Kanchev" University of Ruse, (ERASMUS⁺) Tel.: +359 877 904 195 E-mail: najmuddin.noorzad@gmail.com

Prof. Nicolay Mihailov, PhD, DHC Electrical Engineering, Electronics and Automation, "Angel Kanchev" University of Ruse Phone: +359 888 539 388 E-mail: mihailov@uni-ruse.bg

Abstract: This paper reviews the existing status of renewable energy resources, assesses their potential for the contribution of energy demand in Afghanistan, and in order to make the best possible use of these resources, it examines the future prospects. Afghanistan's viable renewable energy sources are hydro, wind, solar, biomass and geothermal, which are spread over wide geographical areas throughout the country. Now, the power sector of Afghanistan has mainly relied on importing electricity from the neighbor countries, which is not an optimum solution for the long-term. The most hopeful and promising source for everlasting electricity generation in Afghanistan is renewable energy, which offers a wide array of opportunities. Afghanistan can produce around 318 GW of electricity through utilizing renewable energy resources available in the country. The rapid and high deployment of renewable energy empowers a sustainable future in Afghanistan. By using its energy potential, Afghanistan will be capable of providing its own energy at self-sufficiency level. Afghanistan's energy sector and its economy are at crossroads of the region. With the cooperation of Regional Energy and Natural Resources, this potential can be harnessed timely for the benefit of the country and entire region. Therefore, to establish PEACE and PROSPERITY for all, we need to make a leap beyond our past limitations, get rid of barricades at our borders, and secure a Regional Power Trade.

Keywords: Renewable Energy, Potential, Electricity Generation, Power, Sustainable Future

Reports Awarded with "Best Paper" Crystal Prize – 57th Science Conference of Ruse University, Bulgaria, 2018, ISBN 978-954-712-753-1.