



Department of Mechanical Engineering
**UNIVERSITY OF ENGINEERING
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Thesis Title		
<p>SEMINAR ABSTRACT: The aim of the study is to analyze Alternative and Renewable Energy Policy 2019(the “Policy”) and NEPRA Regulations 2015(the “Regulations”) and identify the problems hindering in achieving the RE targets (20% by 2025 and 30% by 2030) set in the ARE Policy 2019. Up to, July 31, 2021, total capacities of 214 MW of net metering connections have been commissioned all over the country.</p> <p>Total installed capacity is 39,772 MW and dependable capacity is 37,771 MW. According to the statistics issued by the Power Regulator of Pakistan (NEPRA) the overall share of R.E in the energy mix of the country is around 5%, by June 2021, whereas high targets 30% set in the Policy to achieve RE targets by 2030. On the other side power purchaser (CPPA-GL) showing reluctance to purchase more power from new IPPs due it’s over commitment of purchase against estimated demand. NEPRA introduced net metering Regulations 2015 amended 2018 to regulate & monitor the net metering of 3 phase consumers up to the capacity of 1 MW for each case (solar & wind). Net metering using solar PV is the key area of RE which can give all benefits at distribution level (near consumer end). Case studies have been built on standard specifications for different energy yields and financial model was built accordingly. Furthermore, these case studies also carries analysis of respective distribution feeders, elaborating key technical benefits to DISCOs. Due to high initial capital expenditure (CAPEX) the financing scheme of State Bank of Pakistan for RE also included. This study at the end, identifies the key problems including technical, policy related and financial those are hindering promotion of net metering and solutions have been suggested. Therefore, with streamlining the Net-metering rules/policy & procedures we can still achieve RE targets set in the ARE Policy 2019.</p>		
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