A review of energy and power planning and policies of Pakistan

Nayyar Hussain Mirjat[a,*], Mohammad Aslam Uqaili[a], Khanji Harijan[b], Gordhan Das Valasai[b,c], Faheemullah Shaikh[a], M. Waris[d]

[a] Department of Electrical Engineering, Mehran University of Engineering & Technology, Jamshoro, Pakistan
[b] Department of Mechanical Engineering, Mehran University of Engineering & Technology, Jamshoro, Pakistan
[c] Department of Mechanical Engineering, Quaid-e-Awam University of Engineering, Sciences & Technology, Nawabshah, Pakistan
[d] Faculty of Industrial Management, Universiti Malaysia Pahang Lebuhraya Tun Razak, 26300 Gambang, Kuantan, Pahang Darul Makmur, Malaysia

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ABSTRACT

Pakistan is facing multiple challenges for harnessing the indigenous energy resources and devise rational energy policies. The country is believed to have abundant energy resources, however, coping substantial electricity supply gap of over 5000 MW. This paper analyses country's energy and power planning studies conducted since its independence in 1947 and policies announced so far. It is found that water resources management attained more emphasis in early decades of post-independence rather than energy concerns. The first energy and power planning study was conducted in late 1960s and since then various studies were undertaken to supplement five yearly medium term development plans of government. However, it is pertinent to mention that formal energy and power policies were only announced from 1994 onwards owing to growing electricity demand and progressing industrialization. Beside this, the focus of these policies is not only varied but were conceived without undertaking integrated energy planning using energy modeling tools e.g. MARKAL/TIMES; LEAP, ENPEP BALANCE, MESSAGE and EnergyPLAN. It is despite the fact that these tools are successfully applied globally for devising the energy policies and address the complexities of energy system by assisting effective policy formulation. This study recommends that integrated energy planning using energy modeling tools will be helpful to develop sustainable energy policies in Pakistan to eradicate electricity crises.