Public Private Partnership in Hydropower Development: Prospects for Nepal's Development

Bikram Acharya¹, Aoumer Mohand Akli², Chun-Young Hong³, Kyung-Woo Park⁴, Putra Ridhanda⁵, Yeon-Jun Na⁶, Hyudon Shin⁷

Nepal has abundant hydropower resources with a total economically feasible capacity which amounts to approximately 45GW. Despite this tremendous hydro-power capacity, only less than 2% of this capacity has been exploited so far. This is not enough to provide sufficient electricity to the consumers connected to the national grid. According to the Nepal Electricity Authority (NEA), the current demand for electricity rose to 946MW in 2011 and is increasing at 10.67% per year, showing the need to add hydropower projects of more than 100MW to the national grid. As construction of such public infrastructure might not be possible only through the efforts of the public sector, the Nepalese government has encouraged the private sector and energy consumer's groups to participate in the construction of hydropower projects to utilize the efficient management, entrepreneurship, and financial ability of the private sector. Recently a remarkable number of power plant projects has been started. Until the year 2011, power purchasing agreements for a total capacity of 1,118 MW have been signed with independent power producers (IPPs) and the installed capacity was raised to 175 MW, showing the private sector's great interest in hydropower projects. The government offered the private sector to construct new projects under a build-own-operate-transfer (BOOT) scheme to promote the private sector's participation and also guaranteed 10% of project share to the general public affected by the projects. With this new investment concept, Chilime Hydropower has started producing power in 2003 from 22.1MW and now it is undertaking the development of a number of large hydropower

¹

¹ Master Candidate, IEEPP/TEMEP, Seoul National University (Engineer, E-Networking Research and Development Nepal)

² Master Candidate, IEEPP/TEMEP, Seoul National University(Civil Servant, Ministry of Energy and Mineral Resources, Indonesia)

³ Senior Manager, Fuel & Resources Office, Korea Western Power, Republic of Korea

⁴ General Manager, Fuel and Resource Team, Procurement and Corporation Group, Korea Midland Power, Republic of Korea

⁵ PhD Candidate, IEEPP/TEMEP, Seoul National University (Manager, Energy and Mining Ministry, Algeria)

⁶ Senior Manager, Fuel Team, General Administration Department, Korea South-East Power, Republic of Korea

⁷ Mentor Professor, IEEPP/TEMEP, Seoul National University (Professor, Inha University, Republic of Korea)

projects: Upper Sanjen (14.6 MW), Sanjen (42.5 MW), Rasuwagadhi (111MW) and Middle Bhotekoshi (102 MW). This tremendous success in a short period of time as well as the efforts to empower the local people by making them direct stakeholders is one of the success measures of the PPP model in the energy sector in Nepal. These success measures have not only promoted large hydropower plants but also empowered local people and energy consumer group to invest in micro-hydro and pico-hydro projects. This enthusiasm of the private sector and the local public should further increase with the goal of jointly constructing large hydropower projects following PPP models. The government has further announced a hydropower development plan to attract foreign investment, further investment from the Nepalese private sector and is ready to work with any IPP project as long as certain requirements such as ensuring a 10% share to local people are met.