**The Nexus between Energy Access and Welfare of Low Income Households**

Govinda R. Timilsina (gtimilsina@worldbank.org), Development Research Group, World Bank, Washington, DC

Mike Toman (mtoman@worldbank.org), Development Research Group, World Bank, Washington, DC

**Abstract**

This study presents a review of existing literature that provide evidence of how access to modern energy enhances welfare of low income households in various countries around the world. The paper first discusses factors affecting access to modern energy including lack of supply infrastructure, connection costs and affordability. This is followed by a review existing literature evaluating impacts of energy access projects, particularly rural electrification countries in various developing countries show that energy access increases household welfare through several channels. First, energy access increases household income by creating employment generating activities (e.g., agro-industries) and providing longer and flexible hours to produce marketable goods (e.g., handmade carpets, handicrafts). Second, it provides better quality light for children’s education thereby enhancing their academic performance. Third, it enables rural and remote areas to establish and operate healthcare facilities. Fourth, it directly provides comforts to households through modern energy services such as information and entertainments through electronic devices (e.g., radio, television, cell phones). Fifth, access to modern cooking energy or technology (e.g., LPG, improved stoves) contributes reducing indoor air pollution one of main cause of mortality and morbidity in developing world. By highlighting the impacts of energy access in improving welfare in low income households and in reducing poverty, this paper aims to draw attention of policy makers to expedite energy access to 1.2 billion people who do not have electricity access and 2.8 billion people do not have access to modern fuels for cooking and heating.