

## **An Impact Analysis of Rural Electrification - Nepal**

**Clients: Canadian International Water and Energy Consortium (CIWEC) and the Nepal Electricity Authority.**

CIDA has been the chief international support agency for both the Water and Energy Commission (WEC), the national water and energy planning agency, and the Nepal Electricity Authority (NEA) for over 20 years. The Canadian International Water and Energy Consortium (CIWEC) composed of the international engineering consulting firms of Acre-s, SNC and Shawinigan is the primary contractor providing a long-term complement of permanent and short term advisors. Rural electrification has created issues amongst Nepali energy agencies. It is provided from a variety of sources: central grid, isolated diesel and hydro grids and solar home systems. Penetration is very low; costs are high and returns are low. A joint NEA-WEC task force assisted by CIWEC specialists was tasked with an impact analysis of RE in Nepal and creation of recommendations for a strategy for development.

Under the supervision of SGA, on subcontract to CIWEC, local consultants performed a detailed survey of grid, isolated diesel, micro, mini and small hydro (grid and isolated) and photovoltaic supply options. Each option was statistically assessed for performance, costs, income and socio-economic impacts. Detailed analysis was made of technical and economic performance as well as socio-economic impacts. Recommendations were made for technical and institutional changes to the rural electrification system.