

## New Approaches to Integrating Renewable Energy Technologies

Aside from crude biomass usage, non-hydro renewable energy technologies currently provide only a small part of global energy services. Yet, there are cost effective and environmentally beneficial niches for renewable technologies in all parts of the world. Solar radiation drives peak power loads in many regions. Solar technologies with and without battery backup can be a competitive supply source to meet high cost peaking needs, especially in densely populated urban areas. Large scale wind generation can provide a hedge against fossil fuel costs and emissions, especially as part of a hybrid system. Emerging bioenergy technologies to produce fuels, power and chemicals can alleviate agricultural and urban effluent problems, provide a mechanism for enhancing rural economic opportunities and sequester carbon dioxide. Policy reforms to remove institutional and market barriers combined with recognition of the economic value of these technologies can lead to a significant increase in deployment in a relatively short period of time.