



## UPCOMING REPORT: ENERGY STORAGE FOR RURAL ELECTRIFICATION & MICROGRIDS

As part of its continuing market analysis and research on opportunities related to Energy Storage System (ESS) applications in India, IESA will be releasing the “ESS integration for Rural Electrification and Microgrids” report in the coming months. This report will cover detailed analysis and research on potential applications of ESS to support rural electrification and development of micro grids in India.

India has nearly 54,000 un-electrified villages, representing over 300 million people. In addition, connected households in most of the villages which are considered electrified only receive power on an average of 4 hours per day. Rural electrification and off-grid power generation augmented by local renewable energy (wind, solar, bio, hydro) in a micro-grid mode is being pursued by numerous stakeholders as an attractive option to energize the villages currently off-grid.

Key highlights of the report for applications of ESS for rural electrification and micro grids are:

- Drivers for rural electrification and micro grids
  - ✓ Details on number of un-electrified villages and people in India, and the resulting negative consequences.
  - ✓ Review of the reliability and quality of electric service provided in areas where villages are already electrified but operating marginally.
  - ✓ Estimates on electrical infrastructure and energy required for the electrification of these un-electrified villages.
  - ✓ Current diesel consumption statistics due to insufficient or lack of grid power to remote villages.
- Discussion on Indian government initiatives such as
  - ✓ Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) for rural electrification.
  - ✓ Jawaharlal Nehru National Solar Mission (JNNSM) phase II special emphasis on developing micro grids using solar energy.
  - ✓ Examples of existing and upcoming rural electrification and micro grid projects in India.
- Key stakeholders and major micro grid companies in India.
- Applications of ESS for rural electrification and micro grids.
  - ✓ Discussion of appropriate ESS types and sizing to meet the specific demands of rural India.
  - ✓ Case studies illustrating ESS integration with micro grid using financial metrics such as payback period, IRR, etc.
- IESA estimated market potential for ESS for rural electrification and micro grids in India.

The **India Energy Storage Alliance (IESA)** was launched in 2012 by Customized Energy Solutions to promote Energy Storage and Micro-grid technologies and their applications in India by creating awareness among various stakeholders to make the Indian industry and power sector more competitive and efficient, and by promoting information exchange with the end users to assist with more informed decision making. IESA also provides insights to technology developers and system integrators on the policy landscape and business opportunities in India through frequent interaction with key stakeholders.

**IESA – Knowledge Partner Network:** IESA has also launched the Knowledge Partner Network (IESA KPN) for an open and transparent information exchange that will assist with decision making. Proactive Indian state owned utilities and regulatory commissions, statutory central government bodies like power research institutes, leading power transmission utilities, Special Economic Zone (SEZ)/ townships, telecom towers and infrastructure industry, industries (metals, petroleum etc.), storage supply chain vendors / manufacturers, universities / research groups, hotel groups and other key market participants in the storage arena are actively taking part in this alliance to broaden the vision and help realize the key goal of the IESA.

For more information on IESA,  
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