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Press Release

BSES Commissions Solar Micro Grids With Energy Battery Storage

Four solar micro grids set-up in partnership with Panasonic in East Delhi

- **A similar concept will also be rolled-out in South and West Delhi areas soon**
- **Micro Grids combine roof-top solar with energy Lithium-ion based energy battery storage**
- **Solar plants set-up between 5 KW and 7 KW and battery storage between 7 -10 kWhr**
- **Encouraging results of the Pilot:**
  - **Locations used only 8% grid power, 92% was solar generated**
  - **Surplus power stored in Lithium-ion batteries**
  - **Potential to save upto 62 MUs of electricity and 51,000 tonnes of CO2 on a pan-discom roll-out of 1000 installations**
- **Benefits includes: Power availability (in case of an outages), Reduction in carbon footprint and Reduction in energy bills**

New Delhi: In its quest to take rapid strides for sustainable development, BSES continues to embrace emerging technologies in the realms of solar, energy efficiency, decentralised distributed generation and now battery storage. In the latest such initiative, BSES Yamuna Power Limited (BYPL) has launched a pilot to establish solar micro grids, becoming one of the first discoms in the country to do so in an urban setting. Similar roll-out is planned for South and West Delhi areas also.

Launched to accelerate the penetration of renewable energy as part of the discom's Green Division initiative, these micro grids will combine roof-top solar with Lithium-ion (Li Ion) based battery energy storage systems. As a technology demonstrator, four such micro grids have been set-up at BYPL offices in East Delhi. The energy generated through roof-top solar is being used for catering to the internal power requirements of office loads and to charge the batteries. The surplus is fed-into the grid, which has the potential to reduce the electricity bills.

Marking a leap in decentralised 'distributed generation using energy battery storage at specific locations, these micro grids have multiple benefits, both for the consumer and the discom. They include: (i) Preventing outages: Support in sharing load with DT, thereby, help in reduction of outages/trippings of DT due to overloading. (ii) Power availability even in case of an outage from the main Grid, (iii) Auto Demand Response in case of peak power (iv) Savings in diesel consumption (v) demand (vi) Reduction in Carbon Footprint and (vii) Reduction in energy bills

Impressive results of the pilot project

The initial results of the pilot project at four BYPL locations in East Delhi are very encouraging. At these locations, the discom has installed roof-top solar plans varying between 5 KW and 7 KW and energy battery storage between 7kWhr and 10 kWhr. They show that over this period only 8% of grid power (net of exports) was used. The balance 92% was generated and met through the solar plant coupled with the energy battery storage. Apart from this, on an annualised basis, around 1245 litres of diesel and 0.24 million units of electricity amounting to around Rs 20 lakh can be saved on an annual basis. Additionally, it can also reduce CO2 of around 205 tons.

A pan discom (including at consumer location) roll-out of 1000 such solar-energy battery storage micro grids has the potential to save around 62 million units of electricity, over 3 lakh litres of diesel amounting to around Rs 41 crore on an annualised basis – cumulatively for the discom and the consumers. Moreover, this will lead to a CO2 reduction of around 51,000 tonnes.

To gauge and assess the system performance of the micro grid pilot and to popularise the concept, the discom has tied-up with Council on Energy, Environment and Water (CEEW), South Asia's leading not for profit research institution.

After a very encouraging initial results of the project, BSES spokesperson said, "With an aim to increase the penetration of renewable energy, reduce carbon footprint and to help our consumers reduce their electricity bills, BSES is going-higher in the renewable energy value chain. The energisation of the micro grids is a testimonial to these efforts. The installation of micro grid applications as part of its green division initiative would act as a showcase for our customers to adopt and help in preserving environment through a reduction in carbon foot print.

Costing

The costs for establishing a micro grid are competitive and are likely to further go-down as the market trends suggest. At present, the cost of setting-up a roof-top solar system is around Rs 40,000 per KW and around Rs 80,000 per KW for an energy storage system. This cost may further go down as the number of consumers increase.

BRPL & BYPL are premier power distribution companies and Joint Ventures between Reliance Infrastructure Limited and GoNCT.

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