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## CSE study finds solar rooftop power tariff cheaper than power generated by DG sets

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New Delhi, January 10, 2017: A new analysis done by Centre for Science and Environment (CSE) suggests that residential societies – which use diesel generator sets for power back-up -- can easily replace them with rooftop solar power systems and save substantially on costs.

“In all the residential societies that CSE studied and analysed, the cost of power from solar rooftop with battery back-up was found to be about half the cost of power generated by DG sets. This alone should make residential societies move away from the extremely polluting diesel generator and adopt solar rooftop to meet their power back-up needs,” said Chandra Bhushan, deputy director general, CSE, while releasing the results of the analysis in a conference organised here today by CSE.

The CSE study examined the feasibility of solar rooftops in residential societies across Delhi, Haryana, Uttar Pradesh and Rajasthan. CSE’s research was aimed at understanding the economic considerations including financing and generation cost; architectural and roof space preferences; building by-laws; and constraints experienced by various stakeholders including customers, government agencies and distribution companies (discoms).

The study finds that the cost of power generation from a DG set, including the capital cost, is Rs 27 to Rs 33 per unit -- compared to rooftop solar tariff of less than Rs 10 per unit.

The CSE study finds that as power outage from the grid reduces, the cost of power generation from DG sets increases and that from solar rooftops with battery storage becomes more financially attractive. Says Priyavrat Bhati, programme director, energy, CSE: “DG back-up has become increasingly redundant because of reducing power outages in cities. On an average, many cities now have less than an hour of power cut in a day. We must realise that ‘full back-up’ was considered a basic need by upscale societies when the outages often lasted several hours a day.”

The study concludes that for most societies, solar rooftop would be able to meet the basic load for individual flats (‘partial load’ in industry parlance which covers lighting, fans and some communication and entertainment appliances) along with essential area loads. “Moving away from the DG set to solar rooftop requires a change in mindset. If power outage is less than a hour a day then the very definition of “full back-up” needs to be changed. For tens of minutes of outage, even for the high end societies “partial load back-up” should be sufficient,” adds Bhushan.