

## Problem Statements for YUKTI - 2017

| SL. NO. | PROBLEM STATEMENT   | PROVIDING ORGANIZATION                                      |
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| 1.      | <p>When it comes to grid integration of renewables, the challenges are across many fronts some of which are,</p> <ul style="list-style-type: none"> <li>• Variability that stems from sources such as solar and wind</li> <li>• Network planning</li> <li>• Power quality issues</li> </ul> <p>How can the grid stability aspects be managed while absorbing maximum renewable power? Can storage could be an effective tool to curb these challenges? If yes, then how?</p>  | <p><b>Tata Power Delhi Distribution Limited (TPDDL)</b></p> |
| 2.      | <p>There is no clarity on usage of any fuel, except Piped Natural Gas (PNG), in industries of Noida/Greater Noida. Pellet Energy Systems have been trying to fight against the notification issued by Pollution Control Board of Uttar Pradesh to the industries in Noida/Greater Noida, by which they have mandated the switching of industries to PNG with immediate effect. However, no parameters or range have been defined by the board for emissions of NO<sub>x</sub>/SO<sub>x</sub>/Particulate Matter (PM), which the industries should comply with. In such a scenario, what should be the appropriate steps that should be taken by the Government to discourage the exponentially increasing NO<sub>x</sub>/SO<sub>x</sub>/PM emissions.</p>   | <p><b>Pellet Energy Systems</b></p>                         |
| 3.      | <p>A lot has been talked about solar energy and a large number of utility scale solar power plants are being installed to increase the power generation capacity in the whole world. Today solar companies have grown up like mushrooms. Every big corporate house today has a solar business division. Still, the deprived section of the society lags in basic electricity needs. Although money is a problem for them because solar devices are somewhat expensive, but not to that extent, as number of financing companies are present that offer low interest Equated Monthly Installments (EMI). It is the mindset that is the prime cause of the trouble. For example, a garbage picker can spend 10 rupees on tobacco every day, but is not willing to invest that money in paying his installment for availing a solar lamp, that can actually provide him more benefits. This explains that the technological inventions and innovations have been executed efficiently, but the diffusion of those technologies in the society is still a major bottle-neck issue. Hence, our problem statement relating to this context is devising '<b>A sustainable business model for diffusion of solar energy among the deprived sections of the population</b>'.</p> | <p><b>Asianera Solar Energy Pvt. Ltd.</b></p>               |

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| 4. | Previously, several off-grid villages in India got locally electrified with the help of renewable energy based mini-grid systems. Now, gradually many of such previously off-grid villages are getting main grid connections under the grid extension programs in the country. When conventional grid supply gets established in those rural areas and starts functioning, what will be the role of the previous off-grid/mini-grid RE plants? Should they become obsolete immediately and discarded altogether?  | <b>Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, India</b> |
| 5. | Solar Impulse is a Swiss long-range experimental solar-powered aircraft project. The goal of this project was to make the first circumnavigation of the Earth by a piloted fixed wing aircraft using only solar power and to bring attention to the rapidly developing clean energy technologies. The aircraft did not carry any passengers or cargo with it. Would it be possible to extend this innovation to commercial aircrafts as well, so as to carry both passengers and cargo alike? If yes, is it possible to accomplish this feat for a for typical 78-seater aircraft? You must back your claims with substantial data and facts. | <b>Indian Smart Grid Forum (ISGF)</b>  |
| 6. | Under Phase-I of National Solar Mission, it was envisaged to develop grid connected solar projects of 1000 MW capacity with share of solar PV and Concentrating Solar Power (CSP) projects in a ratio of 50:50. Today, only 250 MW capacity of CSP projects are operational in India while the installed capacity of solar PV projects has crossed 12 GW mark. Discuss the barriers to large scale deployment of CSP projects in India. Also provide suggestion/s or rectification measures to overcome the identified barriers.  | <b>International Finance Corporation (IFC)</b>                                   |
| 7. | Population in cities is increasing faster than expected. At the other end population in rural areas is decreasing. Therefore, more workforces are available for industries and commercial establishments in cities but less for agriculture and rural development. As we see it, this could pose a serious threat to the society in near future. What needs to be done with intervention of RE technologies and local natural resources so that socio-economic condition of people living in rural areas can be improved and they can continue with their rural livelihood while reaping the benefits of renewable energy?                    | <b>TAFE Motors and Tractors Limited (TMTL)</b>                                   |
| 8. | In India, a recent reverse bidding by Solar Energy Corporation of India (SECI) for 1000 MW Wind Power Project has achieved the wind power tariff of INR 3.46 per unit. This has created a concern among the Distribution Companies (DISCOMs) in various states. DISCOMs of a few states like Gujarat, Andhra Pradesh and Karnataka have shown their reluctance in signing new PPAs at existing Feed-in-Tariff, or even has initiated cancellation of existing Power Purchase Agreements for the Wind Power Projects, which are recently commissioned or yet to be commissioned. This is creating a major concern                              | <b>A Leading Wind Energy Consultancy</b>   |

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| <p>among the communities of IPPs &amp; financial institutions leading to loss of shine of Wind Power Projects as a strategic investment. With near saturated technology in WTGs, it is very unlikely to reach a level of major reduction in Cost-of-Generation. In such case, the options, which remain open are either reduction in production and supply cost by Wind Turbine Generators (WTG) Manufacturers, or implementation of Government Policies and Regulatory Initiatives to promote investments in Wind Energy Sector. Reduction in Production and Supply Cost would have its limitations as the WTG manufacturing is already indigenized and matured. What in your opinion are the kinds of initiatives required to improve the situation and promote Wind Power Generation in the country?</p> |  |
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