**Proposal 3**

**Proposal for International Training Programme for FY 2018-19, to be conducted under ITEC an initiative of Ministry of External Affairs**

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| Programme Name | Power, Renewable & Alternate Energy |
| Name of Course | International Training Programme on Biogas Production, Power Generation and Upgradation for Vehicular Application |
| Programme Coordinator(s) | Prof. V. K. Vijay, Prof. P. M. V. Subbarao & Prof. Ram Chandra  Centre for Rural Development and Technology, Indian Institute of Technology Delhi, New Delhi |
| Programme Duration | 08-07-2019 to 21-07-2019 (02 weeks) |
| Programme Objectives | 1. To make aware international community on role of compressed biogas (CBG) in providing of sustainable energy and agriculture under climate change era. 2. To discuss the fundamental and scientific issues of anaerobic digestion process for efficient biogas production using agricultural biomass residues. 3. To discuss the fundamental and scientific issues and technologies in production of compressed biogas. |
| Minimum Participants | 30 |
| Maximum Participants | 40 |
| Evaluation Criteria | Lectures, Practical’s and Participant’s Feedbacks |
| Eligibility | Diploma/Degree in Engineering or Science (Energy, Agricultural Engineering, Mechanical Engineering, Microbiology, Biotechnology). Preference will be given to the candidate having experience in biogas area. |
| Minimum Age | No bar |
| Maximum Age | No bar |
| Local Trip | 02 Days |
| Transport | Bus |
| **Details of Programme** | |
| **Week – 1** | **08-07-2019 to 14-07-2019** |
| Day 1: Introduction on role of energy and bio-fertilizer production from biomass resources and its impact on mitigation of climate change. | |
| Day 2: Fundamentals of anaerobic digestion process and its requirements. | |
| Day 3: Alternate feed materials for biogas production. | |
| Day 4: Design of anaerobic digesters (biogas plants) and evaluation criterion of performance of biogas production plants. | |
| Day 5: Biogas slurry application and management, Maintenance of biogas plants | |
| **Week – 2** | **15-07-2019 to 21-07-2019** |
| Day 1: Understanding the role of compressed biogas (CBG) in fulfilment of country energy demand and waste valorisation and management. | |
| Day 2: Fundamentals of compressed biogas production (biogas purification system) and design criterion. | |
| Day 3: Experiential learning of operation of water based biogas upgradation and bottling system. | |
| Day 4: Fundamentals of utilization of compressed biogas (CBG) for stationary power generation and automotive applications. | |
| Day 5: Energy auditing of compressed biogas (CBG) system, understanding of climate change mitigation impacts of biogas system and sustainable agricultural production systems. | |