

Talk on “Can Solar, Batteries and EVs Disrupt Energy Industry”

Date: July 12, 2017

Venue: CSTEP

Dr. Kailash Srivastava, PhD, a visiting professor at the Indian Institute Technology, Mandi and Adjunct Faculty at Indian Institute of Technology, Kanpur, delivered a talk titled “Can solar, batteries and EVs disrupt energy industry”, at CSTEP, on July 12, 2017.

Dr. Srivastava began his session with an interesting question: Do technologies have the potential to disrupt the current status and alter the way people live? Historically, there are examples to show that technology has transformed life, business, and the global economy and that it can drive truly massive economic disruptions in the coming years as well. According to Dr. Srivastava, the world of 2030 will be starving for energy and the demand for energy is expected to go up by another 50 percentage. Batteries, electric vehicles and self-driving cars, together with PV, will disrupt the energy industry.

The discussion looked into some manufactures like Tesla Powerwall, Tesla Gigafactory, BYD, etc., whose mission is to accelerate the world’s transition to sustainable energy. The Powerwall is intended to be used for home energy storage and stores electricity for solar self-consumption. Likewise Gigafactory will produce batteries for significantly less cost, lesser weight and lesser volume, using innovative manufacturing and is expected to drive down the per kilowatt hour (kwh) cost of battery pack by more than 30 percent. Dr. Srivastava added that Solar PV is an essential component in the new energy revolution. The technology cost curve suggests that PV will become the world’s main source of energy well before 2030.

The talk ended with an overview of current scenario of conventional energy sources. Solar, batteries, electric vehicle technologies are disruptive in nature and are expected to shape the future of electric power systems in view of fast declining cost of solar cells, lithium-ion batteries and sensors.