

Media Source Press Page 10  
Circulation 8,559  
Topic Tyndall National Institute International Energy Research Centre



The IERC will focus research on reducing the amount of time renewable energy plants must stop producing energy due to constraints. Rohit Trivedi, IERC; John Mullins, Amarencosolar Limited; Shafi Khadem, IERC; Sandipan Patra, IERC; and Padraig Lyons, IERC. Picture: Gerard McCarthy

# Research would aid solar power revolution

**THE International Energy Research Centre (IERC) at Tyndall National Institute, based at University College Cork, has started innovative new research to reduce the amount of time that renewable energy plants must stop producing energy due to curtailments or constraints.**

To reduce “dispatch downtime” to zero, researchers will examine the full potential of solar PV power plants and battery energy storage systems working side by side.

The benefit of reducing dispatch downtime to zero is that Ireland can then produce additional renewable energy. It will also ensure PV can participate in ancillary grid (DS3) services, which are helping to deliver a secure, sustainable electricity system in Ireland.

The COSTORE project is funded by the Sus-

■ John Bohane

tainable Energy Authority of Ireland (SEAI) and is led by IERC in collaboration with Amarencosolar Limited who are one of the largest PV plant developers in Ireland.

Professor Brian Norton, the head of energy research at Tyndall National Institute, welcomed the innovative new research.

“The rising levels of dispatch downtime compromise Ireland’s power system’s ability to reach its renewable energy targets, increase the financial risk for renewable energy-based power plant owners.

“This increases the cost of renewable electricity for electricity consumers. It is a priority to maintain dispatch downtimes at their minimum possible level.

“COSTORE will analyse the techno-economic challenges and develop innovative solutions to achieve the optimal contributions from solar PV power plant in Ireland with the

support of energy storage and artificial intelligence,” he added.

Dr Shafi Khadem of the IERC said: “We will look at the best possible combination of system structures to achieve zero dispatch downtime. We will also look at why plants have to stop producing energy at certain times, for instance because of limitations on the power system, over frequency, etc. Artificial intelligence techniques will play a vital role in delivering these innovative solutions.”

John Mullins, CEO of Amarencosolar Limited, added: “As decarbonisation progresses and renewable penetration in Ireland and elsewhere increases, the interaction between renewables and storage is critical to get to net zero. The European security of supply crisis is embellishing the need for optimisation of storage on our grid as it interacts with solar PV and other technologies. Our collaboration is a research project that will assist the optimisation of energy on our grid.”