

FESC-USF Faculty Members Awarded New Grants

Submitted by Barbara Graham

Two prestigious grants were awarded for thermal energy storage (TES) research to Prof. Yogi Goswami, director of the USF arm of FESC, and co-director of the USF Clean Energy Research Center (CERC). USF Co-PIs include CERC Director Prof. Lee Stefanakos and Mechanical Engineering's Prof. Muhammad Rahman.



Prof. Yogi Goswami (top) and Prof. Lee Stefanakos (bottom).

Both awards address the groundbreaking science of concentrated solar power (CSP). CSP technology can be used to focus the sun's rays so as to generate heat, and later on, electricity. CSP plants combined with heat stores can then produce climate-friendly electricity around the clock as needed, even when the sun is not shining.

- E-On International granted \$814,108 for "Innovative Latent Thermal Energy Storage System for Concentrating Solar Power Plants." This project will produce encapsulated phase change material capsules of different sizes and melting ranges of use in several energy storage applications such as space heating and cooling, solar cooking, solar water heating, industrial process heat, greenhouse and waste heat recovery systems. Joining the Goswami-led USF research team, this project includes a research team from IMDEA Energía in Madrid headed by Prof. Manuel Romero.
- US DOE granted \$3.9M for "Development and Demonstration of an Innovative Thermal Energy Storage System for Baseload Solar Power Generation." The objective is to research and develop a thermal energy storage system based on encapsulated phase change materials to meet the utility-scale base-load CSP plant requirements at much lower system costs compared to the existing TES concepts, making it competitive with fossil fuels.