

Energy Students Go Global: HALO ENERGIE

By Morgann McAfee

Students in energy engineering are as unique as the major itself. They graduate not only with an ability to understand engineering fundamentals and how those fundamentals apply to the energy challenges of today's society; but also with the skills necessary to secure an energized future across the globe.

In addition to teaching more efficient uses of traditional energy sources, the energy engineering curriculum at Penn State focuses on renewable energy. Students engage in design strategies for various forms of energy production and efficient energy utilization, including solar energy. Solar power offers a viable solution for many environmental challenges faced by today's society.

"Penn State has an important place in the future of solar, thanks to graduates like these! Himadeep and Drew were so engaged and intent to get as much out of my course as possible (Design of Solar Energy Conversion Systems; EGEE 437). I have been overjoyed to see those efforts come to fruition as a real solar photovoltaic project. It confirmed that motivated EME students can take the tools that we develop in a foundational solar course, combined with experience from energy business learning and project finance, and turn those skills into new opportunities for solar energy jobs and international solar photovoltaic projects, while expanding the visibility of a Penn State EME education," said Dr. Jeffrey Brownson, associate professor of

Geographically, some locations are ideal for solar power production. India, for example, has an abundance of sunny days, experiencing almost 300 clear, sunshine-filled days per year. This level of solar insolation puts the country in a position to not only renewably power itself, but also enables solar energy to become the economic backbone of India.



Meet Himadeep Nallavadla, chief executive officer and founder of Halo Energie. Nallavadla graduated with degrees in energy engineering and energy business and finance (EBF) and a minor in environmental engineering.

As a dual major student, he extensively researched solar power development, solar design, and energy business. During Nallavadla's junior year at Penn State in 2012, he incorporated Halo Energie Private Limited with the goal of it becoming an independent power producer (IPP) and energy investment company based in India. With the help of fellow energy engineering and EBF dual major Drew Gardner—who provided energy financial modelling support as part of his Schreyer Honors College honor's thesis—the company slowly began to win solar development bids through India's Jawaharlal Nehru National Solar Mission.

"Doing a double major at Penn State was certainly a game changer for my life. Although I knew I wanted to get into business, my advisors, and faculty gave me the drive and motivation to take that first step. Penn State has prepared me in every possible way to face the outside world and be successful. Penn State has met beyond my expectations and I couldn't have asked for anything more," said Nallavadla.

Halo Energie's mission is to establish power plants in the renewable energy segment and to address the ever-growing world energy demand. In order to address the global electricity demand, Halo Energie hopes to install utility scale power plants in locations all over the world. In May 2014, Halo's first project, a solar photovoltaic plant, broke ground in Andhra Pradesh, India. The plant generates approximately 3.1 million kWh of electricity (enough electricity to power about 290 American homes) annually. The plant's current electricity consumers are the two largest hospitals in the city of Hyderabad: one of them specializing in cancer treatment and the other in gastroenterology. Halo Energie's plant reliably provides abundant and affordable peak power to these critical load facilities.

Nallavadla's understanding of energy business principles and identifying the unique positioning of India's solar power potential supported by his Penn State education were a formula for success. Himadeep Nallavadla is just another example of the positive impact Penn State graduates are making on the world.

