

# Renewable Energy Program

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# Green Energy Job Market

The green jobs market is growing as the world shifts toward sustainable development and low-carbon economies. Green jobs reduce the consumption of energy and raw materials, limit pollution, and protect ecosystems

## Five High-Priority Green Sectors



**Solar**



**Built Environment**



**Sustainable Farming**

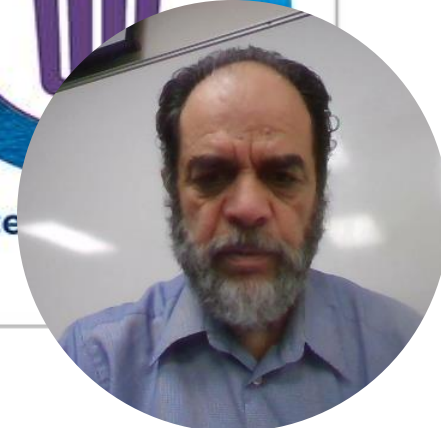


**Electric Mobility**



**Waste**

Source: The Bridgespan Group



# Future Green Energy Job Market

- Nationwide, there is a mismatch between what students learn at school and the skills set in demand through the industry.
- As the industry moves at a much higher speed compared to curriculum content, the gap is getting wider.



Between 2023 and 2028, renewable electricity capacity is expected to grow by 7,300 gigawatts, with solar PV and onshore wind usage expected to at least double over current levels in India, Brazil, Europe, and the US through 2028

Electricity generation in the Renewable Energy market worldwide is projected to reach 8,744.00bn kWh in 2025.

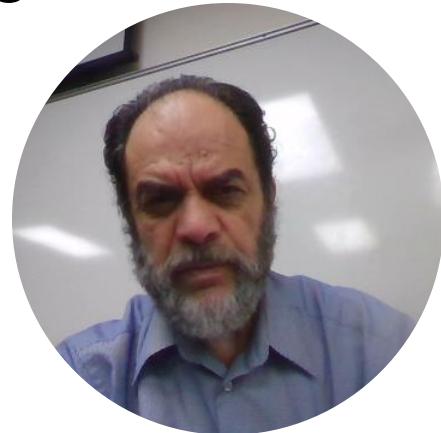
An annual growth rate of 4.20% is anticipated for the same period



- The proposed project is a step to narrow the mismatch in the renewable energy field.
- The program will work in joint venture between HCCC and private industry facilities.
- The college will provide academic courses toward the certificate or the associate degree.
- Onsite training for **NABCEP certification** will be provided by our private industry partners.



- HCCC will develop the necessary coursework to support the academic knowledge needed to succeed.
- The courses will consider the application of basic scientific knowledge needed without sailing through the theoretical aspect of those courses and mix the theory with the hands-on approach.
- The lab will enforce and facilitate a continuous daily hands-on training on the skills needed in the field through daily experimentation.



There are several academic programs focused on solar panel installation and related fields. They range from **certificate programs** to **associate's degrees**. These programs typically cover both the technical aspects of solar panel installation and broader topics related to *renewable energy, sustainability, and energy management*.



A parallel facility will be established to provide  
**“On-the-Job Training”** for our graduates. This  
will transition them during a period through  
which they will transition to the main job market

**Some types of programs we can have**

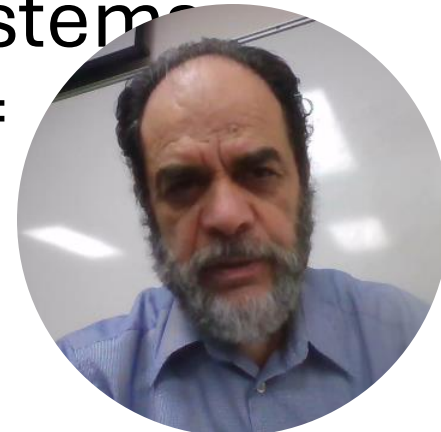




- **Solar Energy Technician Certificate:** This focuses on the installation, maintenance, and repair of solar energy systems. This is typically a short-term program (six months to a year) that offers hands-on training.
- **Renewable Energy Technician Certificate:** This covers solar, wind, hydroelectric, and other renewable energy systems. The program includes system design, electrical basics, and safety protocols.
- Those programs are ideal for those seeking a quick into the field or for professionals looking to upskill.



- **Associate of Science in Renewable Energy Technology (Solar Focus):** This degree provides more in-depth knowledge than a certificate, covering solar energy technology, electrical systems, energy efficiency, and sustainability practices. It typically lasts two years and includes hands-on training and internships.
- **Solar Energy Technology Associate Degree:** Focuses specifically on solar panel installation and system maintenance. Students learn about photovoltaic systems, electrical components, and the business aspects of renewable energy.



An associate degree can be a great foundation for students looking for technical and practical expertise in solar energy. The associate degree could be developed into a bachelor's degree in any nearby 4-year university.



The cost of setting up a solar energy training laboratory can vary significantly depending on the size, equipment included, and location, but ranges from \$10,000 to \$50,000 for a basic setup.

Starting with our business partners will secure the initial training facilities that will minimize the initial cost for HCCC.



The extra lab equipment could be secured through Perkins funding for post-secondary and career readiness programs. Our CEWD has secured many other equipment and lab facilities for training purposes for other fields at HCCC.

NJ Department of Energy and the US Department of Energy can be additional funding sources for staffing and equipping sufficient training facilities at HCCC.



At HCCC, we have a history of developing several new programs such as, but not limited to, the Construction Management, Advanced Manufacturing, and the Woodwork Programs. Based on our previous experience, renewable energy demand will surpass those programs if we jump into the wagon soon enough to be leaders in that field in our area.

