



PennState

RESS

Renewable Energy and Sustainability Systems
ONLINE MASTERS AND GRADUATE CERTIFICATE PROGRAMS



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RESS Online Tools (in the Solar Option context)

+ Renewable Energy and Sustainability Systems

Solar - Wind - Bio - Sust. Mgmt. & Policy

- Intercollege Master of Professional Studies (iMPS)
- Online degree and certificate Program
- Designed for **part-time adult learners**
- Allows students to learn while remaining in current employment and location.
- Preparation to assume advanced roles as project and program developers, managers, and policy analysts.
- Professionally oriented technical education that enables graduates to lead the transformation to an economy embracing renewable energy and sustainable solutions
- Guiding educational objective is to impart **technical understanding** and **advanced project development skills**
- **Solar Option:** create graduates who can lead **project development** and **policy development** in the solar energy industry





Solar Ensemble:

Defining Utility and/or Distributed Scope and allowing Electric and/or Thermal Focus.

Foundation

- **EME 810: Solar Resource Assessment and Economics**
- Methods, economic criteria, and meteorological background for assessing the solar resource with respect to solar energy conversion technologies.

Summative

- **A E 878: Solar Project Development and Finance**
- Economic analysis of solar energy projects, project development process, energy policies, finance methods, and economic analysis tools.



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Distributed

- A E 862: Distributed Energy Planning and Management
- A E 868: Commercial Solar Electric Systems

Utility

- EME 811: Solar Thermal Energy for Utilities and Industry
- EME 812: Utility Solar Electric and Concentration

+ Online Access Points

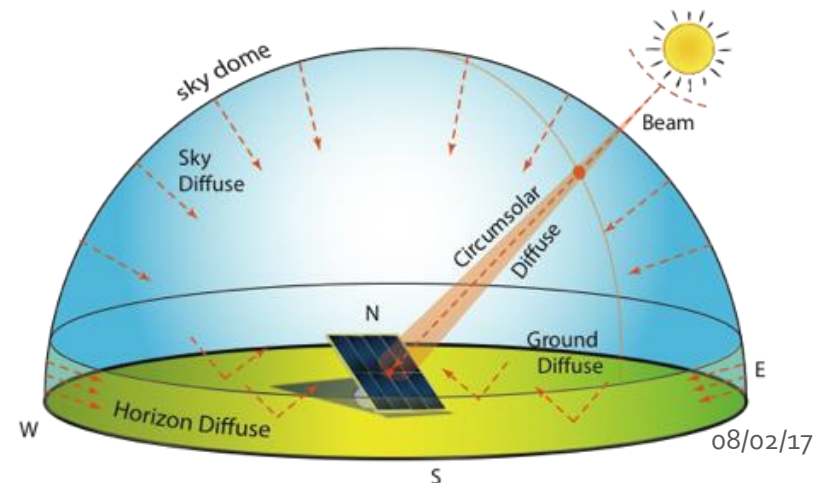
■ RESS Program Home:

- <https://www.ress.psu.edu/>

- https://www.ress.psu.edu/solar_energy

■ Penn State World Campus : RESS Degrees/Certificates

- <http://www.worldcampus.psu.edu/degrees-and-certificates/renewable-energy-and-sustainability-systems/overview>



+ Tools Online

- Open Educational Resources:
 - Courses open through Creative Commons Share-alike
 - <http://open.ems.psu.edu/>
- Lynda.com @ PSU -- Training does not have to occur only in the class
 - <http://lynda.psu.edu/>
- Other resources for technology
 - <https://libraries.psu.edu/>

+ Open Educational Resource Initiative for RESS Solar

- **New 2016 commitment in RESS:** *Open Educational Resources* via Creative Commons Share-Alike 3.0 licensing
 - **Courseware open** - similar to opening the doors to our libraries
 - **Benefit for teachers** - access to Penn State expertise
 - **Benefits learners** around the world who can't afford to enroll or don't need academic credit
 - **Benefits learners with disabilities** enabling testing out courseware before enrolling; enabling us to make necessary adjustments
 - **No negative impact on enrollments** and broadcasts the high quality of Penn State's resources
- **Four Solar courses now open for sharing and exploring!**
[EME 810](#), [EME 811](#), [EME 812](#), and [AE 868](#)



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RESS

And now on to Solar Utility...

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Welcome to EME 810: Solar Resource Assessment and Economics

Print

EME 810: Solar Resource Assessment and Economics

LESSONS

- ▶ Lesson 1 - The Historical Context of Solar Energy Valued in Society
- ▶ Lesson 2 - Tools for Time and Space Relationships
- ▶ Lesson 3 - Meteorology: the Many Facets of the Sky
- ▶ Lesson 4 - Measurement and Estimations of the Solar Resource
- ▶ Lesson 5 - Solar Economic Analysis
- ▶ Lesson 6 - Maximizing the Solar Utility for the Client in a

New to EME 810?
Registered students should begin with the **Course Orientation**, located in the menu.

Not registered? Students who register for this Penn State course gain access to assignments and instructor feedback and earn academic credit. [Learn more about our program and how to register here.](#)

As a member of the inter-college Master of Professional Studies in Renewable Energy and Sustainability Systems, this course could count toward your RESS degree or toward a graduate Certificate in Solar Energy.

Quick Facts about EME 810

Instructor

Dr. Jeffrey Brownson, Associate Professor, Dept. of Energy & Mineral Engineering and Dept. of Materials Science & Engineering, College of Earth and Mineral Sciences, The Pennsylvania State University.