



of Business & Technology

108 Years of Training Excellence

Next Course
Starts
June 6, 2005

RS130 Solar Photovoltaics Project Feasibility Analysis Certification Program

Photovoltaic Technologies for

- Residences
- Businesses
- Industries
- Off-Grid Applications
- Grid Connected Applications
- Water pumping
- Developing countries

Distance learning eCourse (3 weeks - 15 hours) – 1 credit
+ 2 hands-on projects (4 weeks – 20 hours) – 1 credit

- College Certificate – Continuing Education Credits
- Distance Learning/Online Course



In partnership with



GPEKS
Constructions Inc.

Clean Energy International

We thank the following organizations for their support with the resources they have provided:



RETScreen®
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United Nations
Environment
Programme



Global
Environment
Facility



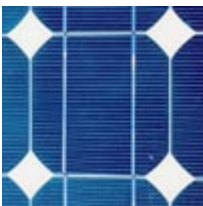
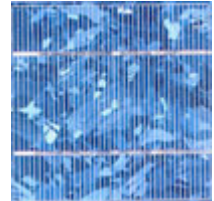
Natural Resources
Canada

Solar Photovoltaics Project Feasibility Course



The requirement to get smart about renewable energy technology and the financial analysis of renewable energy projects is becoming increasingly critical for a growing number of public and private organizations. With the Kyoto Protocol now in force and many energy issues coming into play such as oil and gas shortages, energy price surges, energy security issues, the demand for renewable energy professionals is heating up.

The RS130 solar energy course follows a case-study approach that expands on a curriculum initially developed by Natural Resources Canada's RETScreen Division (with co-sponsoring from UNEP and GEF). The RS130 training materials include a multimedia presentations that cover solar air heating technology, "RETScreen International Renewable Energy Project Analysis Software", RETScreen Engineering & Cases" electronic textbook, and various other related resources. Internet resources to facilitate learning for this course include an online forum and "Study Group".

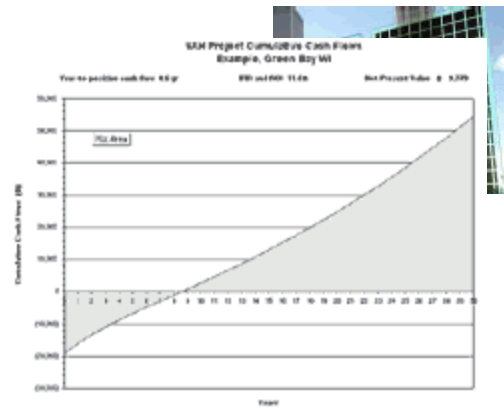
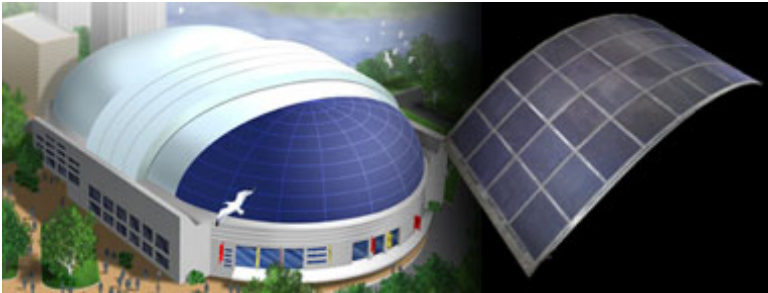


The course content can easily be applied to real life local or international projects.

The first module provides a status of solar water energy technology, markets and applications; and presents an introduction to renewable energy project analysis, including estimating the greenhouse gas (GHG) emission reductions and financial performance of potential projects.

Following modules cover solar photovoltaic technologies, the RETScreen software model and include a review of basic solar water technology that illustrates key considerations for project analysis. Participants are given a technology background so that they have sufficient technical understanding to perform feasibility studies.

The last module gives participants a hands-on exposure to the



software, databases and documentation with which they will complete a series of case study assignments found in the text book. The text book also provides solutions to the assignments and descriptions of the projects that were actually built. In addition,

the textbooks provide engineering background reading for the training module and a detailed description of the algorithms found in the eight RETScreen computer models.

AUDIENCE

The audience for this course is anybody involved in the technical and economical evaluation of solar photovoltaic projects: building and **facility** owners or managers, **project** coordinators and managers, people working for **utilities, municipalities** (especially members of the PCP program), energy **utility** companies, energy **auditors**, project advisors on innovative or **environmental** technologies, **finance** managers of energy projects, **financial institutions** who want to be able to conduct informed due diligence on Solar Photovoltaics projects, **marketing** companies involved in Solar Photovoltaics projects, national and multinational **engineering** firms, HVAC professionals and specialists, etc.

Steps To Obtain Willis College Solar Photovoltaics Project Analysis Certification

The purpose of the certification is to attest that successful candidates have acquired knowledge of the technologies, and that they have gained the essential skills and abilities to perform renewable energy project technical and economic feasibility analysis. By the end of the program, participants will also have acquired experience on conducting two full scale feasibility studies. The program is designed to show that successful candidates are able to conduct various types of renewable energy project analyses.



Certification Steps – Distance eLearning Option

Study class material provided on Technology. Complete Comprehension exercises/quiz (open questions) Weight: 25%	Complete Case Study with assistance from remote coach (email, toll free phone support)	Pass the computer based electronic exams on this technology module (multiple choice, multiple answers, fill the blank, matching answers...) Weight: 25%	Complete two real project feasibility analysis. Note: students may choose project of their choice or use an instructor supplied project. Weight: 50%.
Pass 2 exams, complete mandatory assignments and projects			
Willis College Solar Photovoltaics Project Feasibility Analysis Certification			

OBJECTIVES

The goal of this course is to allow stakeholders to evaluate technical and financial feasibility of a solar Photovoltaics project. This course does not teach how to install or maintain a solar Photovoltaics system.

After completion of this course, participants will have learned:

- The technology of Solar Photovoltaics systems, the various types of Solar Photovoltaics projects, the equipment and processes involved and in what context they are most appropriate.
- How to identify economically viable potential Solar Photovoltaics projects.
- How to perform complete Technical and Economic project feasibility analyses for Solar Photovoltaic projects.
- How to use the RETScreen tool to perform a Technical and Economic Project Feasibility for Solar Photovoltaic projects
- The complete method to calculate the payback, return on investment and other financial ratios for Solar Photovoltaic projects.

BENEFITS

This course will also:

- Give participants a solid understanding of what Solar Photovoltaic can achieve.
- Allow participants to save thousands of dollars on feasibility studies.
- Teach participants to perform a Solar Photovoltaic feasibility study in a minimum number of hours.
- Allow building owners to perform their own due diligence on Solar Photovoltaic systems.
- Give people looking for a career transition an open the path to this exciting and growing field.

RS110: Solar Photovoltaics Project Analysis

➤ Course Content:

- ◆ What do Solar Photovoltaics Systems provide?
- ◆ Components of Solar Photovoltaics Systems
- ◆ On-Grid Systems
- ◆ Off-Grid Systems
- ◆ Water Pumping Systems
- ◆ Solar Resource Assessment and optimization
- ◆ Solar-Load Correlation
- ◆ Solar Photovoltaics Project Considerations
- ◆ Solar Photovoltaics Systems and project Costs
- ◆ Solar Photovoltaics project feasibility tools, methods and elements
- ◆ Assignment on conceptual design concepts for Solar Photovoltaics projects
- ◆ Guided exercises on performing technical & economic Solar Photovoltaics project feasibility analysis
- ◆ Graded exam on Solar Photovoltaics project analysis

➤ Real Projects – Real life Experience Acquisition.

- ◆ Work in an exciting field poised to become a major industry in years to come.
- ◆ Be better positioned in the job market and in the industry
- ◆ Acquire essential workplace skills
- ◆ Earn 2 Willis College **Continuing Education Credits.**
- ◆ This course gives 2 college credits towards our **Project Management in Clean Energy** program.

FAX/MAIL REGISTRATION FORM

RS110- Solar Photovoltaics Project Feasibility Analysis Certification Program

Name: _____
 Mr. Ms. Title: _____
 Company: _____
 Address: _____
 City: _____ Province/State: _____
 Postal/Zip Code: _____ Country: _____
 Telephone: _____ Fax: _____
 Email: _____

Type of Business: _____

Reason for taking this course: _____

How did you learn about this course:

- Clean Energy International
 Other: _____

Payment Information

Course price: C\$295.00
 Special discount (early registration, coupon) \$_____
 GST (Canada only, add 7%) GST Reg. # 858541287
Total: : C\$_____

Payment Method:

Cheque enclosed with registration mail:
Mail to: GPEKS Constructions Inc.
 85 O'Connor Street, Ottawa, ON K1P 5M6
 VISA: Card Number: _____
 Expiry: ____ / ____
 Card Holder's Name: _____
 Signature: _____

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FAX the registration to +1 (819) 775-4315

You may also register using our **online form** at: www.gpeks.com/education/register.asp