



of Business & Technology 108 Years of Training Excellence

Next Course Starts May 23, 2005

RS120 Solar Water Heating Project Feasibility Analysis Certification Program

- Water Heating Technologies for**
- Pool Heating
 - Domestic Hot Water
 - Space heating
 - Hotels, Restaurants, Campsites
 - Hospitals, Retirement homes
 - Aquaculture & pisciculture
 - Car washes, Laundromats
 - Industrial Process Heat

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



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Constructions Inc.
Clean Energy International

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



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Environment
Programme



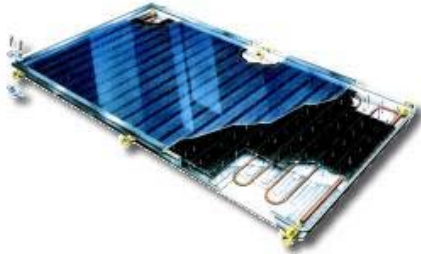
Global
Environment
Facility



Natural Resources
Canada

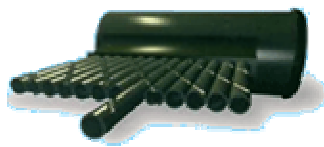
Solar Water Heating Project Feasibility Course

There is no better time to acquire the renewable energy technical and financial knowledge required by a growing number of public and private organizations to implement alternative energy projects. The time has come for renewable energies to be taken seriously: with the Kyoto now international law, oil and gas shortages, energy price surges, energy security issues, increasingly expansive extraction of fossil fuel resources and utilities deficits running at historic highs.



This course is based on a case-study learning approach and expands on the curriculum initially developed by the Natural Resources Canada RETScreen division (co-sponsored by UNEP and GEF) The training material for the course includes multimedia presentation slides for on this technology, the “RETScreen International Renewable Energy Project Analysis Software” and the “Renewable Energy Project Analysis: RETScreen Engineering &

Cases” electronic textbook, and various other related resources. An online forum and “Study Group” is also provided for this module to facilitate learning.

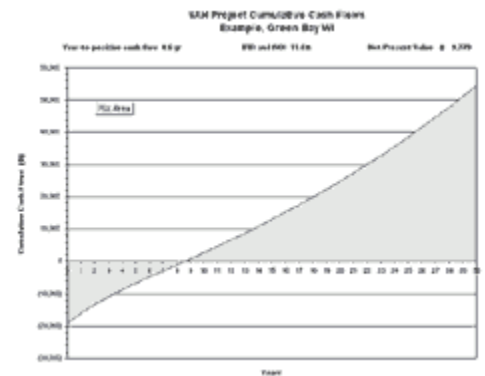


The course content can easily be applied for real life local or international projects.

The presentation of the first module provides a status of this renewable 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.

The following modules cover the solar water heating technologies and related RETScreen software model, including reviewing the basics of these technologies, illustrating key considerations for project analysis. Participants are given a background on the technology covered so that they have enough technical understanding to perform relevant preliminary feasibility studies.

In the last module, participants are given hands-on exposure to the software, databases and documentation to complete a series of case study assignments found in the textbooks. Also provided are 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 water heating 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 Water Heating projects, **marketing** companies involved in Solar Water Heating projects, national and multinational **engineering** firms, HVAC professionals and specialists, etc.

Steps To Obtain Willis College Solar Water Heating 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 analysis.



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 analyses. 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 Water Heating Project Feasibility Analysis Certification			

OBJECTIVES

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

After completion of this course, participants will have learned:

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

BENEFITS

This course will also:

- Give participants a solid understanding of what Solar Water Heating can achieve
- Allow participants to save thousands of dollars on feasibility studies
- Teach participants to perform a Solar Water Heating feasibility study in a minimum number of hours.
- Allow building owners to perform their own due diligence on Solar Water Heating systems
- For people looking at a career transition, open the path to a new career, or to a career transition into this exciting growing field.

RS110: Solar Water Heating Project Analysis

➤ Course Content:

- ◆ What do Solar Water Heating Systems provide?
- ◆ Components of Solar Water Heating Systems
- ◆ Unglazed Solar Collectors, Flat Plate Solar Collectors; Evacuated Tube Collectors
- ◆ Pool heating and Domestic water heating specifics
- ◆ Different types of system configurations
- ◆ Solar Water Heating for Various Climates
- ◆ Solar Water Heating Project Considerations
- ◆ Solar Water Heating System and project Costs
- ◆ Solar water project feasibility tools, methods and elements
- ◆ Assignment on conceptual design concepts for Solar Water Heating projects
- ◆ Guided exercises on performing technical & economic Solar Water Heating project feasibility analysis
- ◆ Graded exam on Solar Water Heating 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 Water Heating 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