

## ▶ RETScreen Software

### *Reducing the cost of pre-feasibility studies*

**“Excellent optional help and guidance features— as useful for the novice as for the experienced professional.”**

*Economic Evaluation Tools for Distributed Generation,*  
Christine Hurley

**“[RETScreen] was a big part of bringing this project to fruition.”**

Brian Chatfield, Vice President  
Pacific Cascade Hydro Inc.

The *RETScreen International Clean Energy Project Analysis Software* can be used worldwide to evaluate the energy production, life-cycle costs and greenhouse gas emission reductions for various types of proposed energy efficient and renewable energy technologies (RETs).

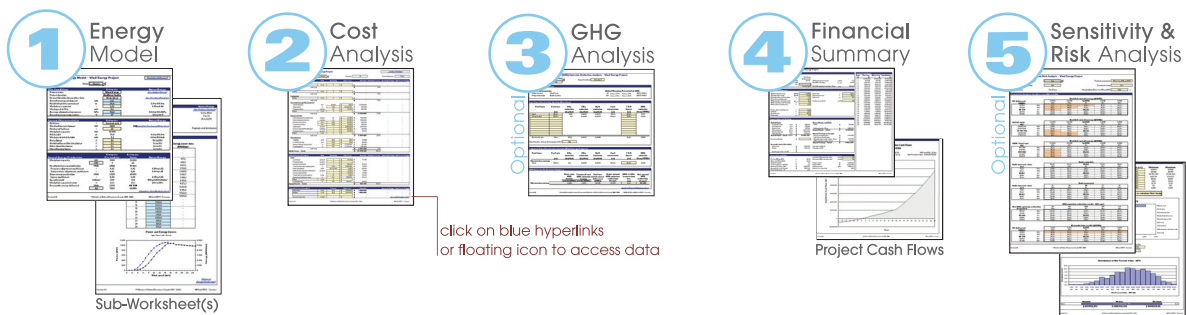
All clean energy technology models in the RETScreen Software have a common look and follow a standard approach to facilitate decision-making – with reliable results. Each model also includes integrated product, cost and weather databases and a detailed online user manual, all of which help to dramatically reduce the time and costs associated with preparing pre-feasibility studies.

For example, RETScreen was instrumental in helping CETC-Varenes and a team of eleven consulting firms prepare studies for 56 potential RET projects in Canadian remote communities at a cost of less than \$2,000 each. Similar studies would otherwise have cost in the order of 5 to 10 times this amount! As a result, money saved is now being used to develop a number of these projects, with several projects already built.



### RETScreen Software Model Flow Chart

#### Five Step Standard Analysis ➔



➔ Ready to make a decision

#### Integrated Features

Weather Data



Product Data



Online Manual



- Training Course
- Engineering Textbook
- Case Studies
- Online Marketplace
- Internet Forums

# ▶ Clean Energy Technology Models

*Standardising the decision-making process*



Sustainable Energy  
Authority of Ireland  
2003 User Survey Summary:

RETScreen Software  
used for 20 wind energy  
projects built or under  
construction, totalling  
100 MW and an investment  
of \$210 million.

Paul Kellett,  
Technical Manager

National Renewable Energy  
Laboratory (NREL), USA

“RETScreen was useful  
in completing feasibility  
studies and would use  
again in the future.  
It is a valuable tool for  
the renewable energy  
community and  
I applaud your making  
it freely available to  
interested users.”

Robi Robichaud,  
Senior Engineer

Canadian Association  
for Renewable Energies

“For those of us who  
promote renewables but  
do not actually install  
systems, RETScreen  
is a wonderful tool to  
obtain a ‘quick & dirty’  
idea of the cost feasibility  
and GHG impacts  
from a wide range of  
applications.”

Bill Eggertson,  
Executive Director

The RETScreen Software can be used to evaluate industrial, commercial, institutional, community, residential and utility applications for the following technologies:



**Wind Energy Project Model** for central-grid and isolated-grid connected projects, ranging in size from large-scale multi-turbine wind farms to small-scale single-turbine wind-diesel hybrid systems.



**Small Hydro Project Model** for central-grid and isolated-grid connected projects, ranging in size from multi-turbine small and mini hydro installations to single-turbine micro hydro systems.



**Photovoltaic Project Model** for on-grid (central-grid and isolated-grid PV systems); off-grid (stand-alone (PV-battery) and hybrid (PV-battery-genset) systems); and water pumping applications (PV-pump systems).



**Biomass Heating Project Model** for biomass and/or waste heat recovery (WHR) heating projects, from large scale developments for clusters of buildings to individual building applications. The model can be used to evaluate three basic heating systems using: waste heat recovery; biomass; and biomass and waste heat recovery combined.



**Solar Air Heating Project Model** for ventilation air heating and process air heating applications of transpired-plate solar collectors, from small residential to larger commercial/industrial scale ventilation systems, as well in the air-drying processes for various crops.



**Solar Water Heating Project Model** for domestic hot water; industrial process heat and swimming pools (indoor and outdoor), ranging in size from small residential systems to large scale commercial, institutional and industrial systems.



**Passive Solar Heating Project Model** for passive solar designs and/or energy efficient window use in low-rise residential and small commercial building applications, for either retrofit or new construction projects.



**Ground-Source Heat Pump Project Model** for heating and/or cooling of residential, commercial, institutional and industrial buildings, for both retrofit and new construction projects using either ground-coupled (horizontal and vertical closed-loop) or groundwater heat pumps.



**Combined Heat & Power (CHP) Project Model** for any one or combination of the following applications: power; heating; cooling; single buildings or multiple buildings; industrial processes; communities; district heating and district cooling. Further, it permits analysis with a wide range of renewable and non-renewable fuels, using multiple types of power, heating and/or cooling technologies (e.g. gas turbines).