

Leadership in ecoInnovation

RETSCREEN[®] INTERNATIONAL





RETScreen's Clean Energy Policy Toolkit

Clean Energy Solutions Center Webinar 26 April 2013





RETScreen's Mission: Empower Cleaner Energy Decisions Worldwide

RETSCREEN[®] INTERNATIONAL

www.retscreen.net





Natural Resources Ressources naturelles Canada Canada

What is **RETScreen**?

RETSCREEN[®] INTERNATIONAL

www.retscreen.net



- World's leading clean energy decision-making software
 - Energy efficiency; heating & cooling; power generation; and cogeneration
 - Fossil fuels
 - Renewable energy
 - 36 languages covering 2/3rds Earth's population



- 372,000+ users in 222 countries & territories
 - 40,000+ new users each year
 - 500+ universities & colleges use for training & research
 - Over \$8 billion in direct user savings since 1998





Example of Project Facilitated by RETScreen

RETSCREEN[®] INTERNATIONAL

www.retscreen.net

Photovoltaic Water Pumping System in Africa



Sasso s.n.c., Italy

"We have used RETScreen to design different solar pumping systems installed in Africa."

Armando Martinez, Renewable Energy Consultant

Photo credit: Armando Martínez

CanmetENERGY

Leadership in ecoInnovation



Natural Resources Ressources naturelles Canada Canada

Example of Project Facilitated by RETScreen

RETSCREEN[®] INTERNATIONAL

Wind Farm in Ireland (7 Turbines x 650 kW)



www.retscreen.net

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

Photo credit: Sustainable Energy Authority of Ireland

CanmetENERGY

Leadership in ecoInnovation



Natural Resources Ressources naturelles Canada Canada



Leadership in ecoInnovation

RETSCREEN[®] INTERNATIONAL



Overview of *RETScreen Suite* **Software**

RETScreen Training Institute







Natural Resources Ressources naturelles Canada Canada

RETScreen Software Suite

RETSCREEN[®] INTERNATIONAL

www.retscreen.net

Downloading and running **RETScreen Software Suite** will install two separate programs:



RETScreen 4 is an Excel-based clean energy project analysis software tool that helps decision makers quickly and inexpensively determine the technical and financial viability of potential renewable energy, energy efficiency and cogeneration projects.



RETScreen Plus is a Windows-based energy management software tool that allows project owners to easily verify the ongoing energy performance of their facilities.

Also available on RETScreen website:

Transa	-	- 25	Ē	1	- P	
		-		-		112
	- 101	h				

REFRIG3 is an Excel-based RETScreen Energy Efficient Arena & Supermarket Project Model (Version 3 format)



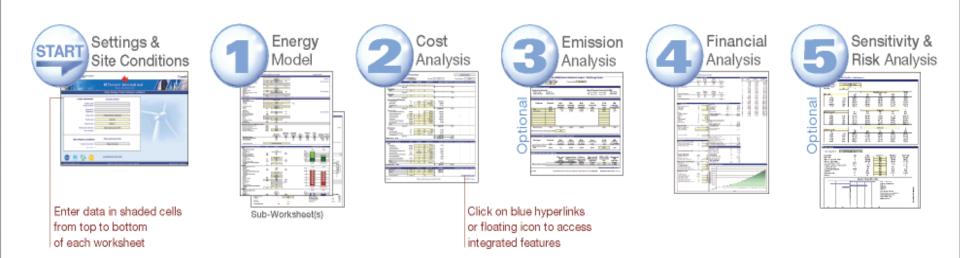


RETScreen® International

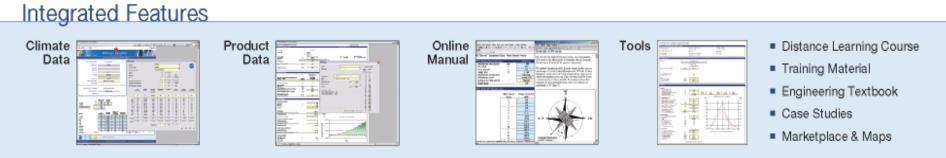
www.retscreen.net

Clean Energy Project Analysis Software

Five Step Standard Analysis



Ready to make a decision



RETScreen[®] International

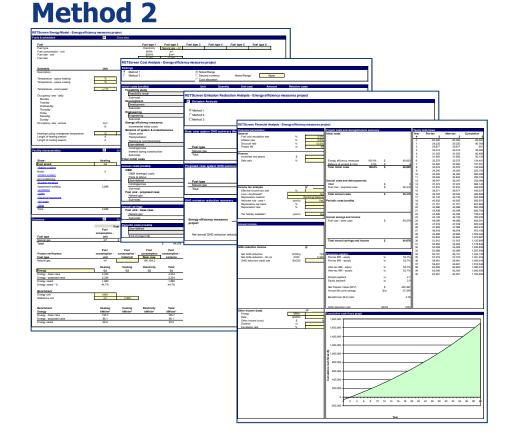
Analysis Type (Start Sheet)

RETSCREEN[®] INTERNATIONAL

www.retscreen.net

Method 1

TScreen Energy Model - User-defined							
r-defined							
User-defined	0	Energy					
User-Genneg		Green power					
		Other					
	0	Uther					
		Base case	Proposed case				
Technology		Grid electricity	Wind turbine				
Power capacity	kW		2,000				
Capacity factor	%		30%				
Electricity exported to grid	MWb		5.256				
Incremental initial costs	\$/kW		2.000				
O&M (savings) costs	\$/kWh		0.010				
Electricity export rate	\$/kWh		0.150				
Encouncily expert time	46.000		0.150				
Emission Analysis							
		GHG emission					
		factor	T&D	GHG emission			
Base case electricity system (Baseline)		(excl. T&D)	losses	factor			
Country - region	Fuel type	tCO2/MWh	%	tCO2/MWh	1		
Canada	All types	0.211	5.0%	0.222	-		
Electricity exported to grid	MWb	5,256	T&D losses	8.0%	1		
					-		
GHG emission			-				
Base case	tCO2	1,167	-				
Proposed case	tCO2	93					
Gross annual GHG emission reduction	tC02	1.074	-				
Gross annual GHG emission reduction GHG credits transaction fee	1002	0.0%	1				
GHG credits transaction fee Net annual GHG emission reduction	% tCO2		1		0.000		_
Net annual GHG emission reduction	tCO2	1,074	is equivalent to	218	Cars & light trucks not	used	
GHG reduction income							
GHG reduction credit rate	\$/tCO2	0.00					
GHG reduction credit rate ancici Analysis Financial parameters Infation rate	%	2.0%]				
GHG reduction credit rate ancial Analyzis Financial parameters]				
GHG reduction credit rate ancici Analysis Financial parameters Infation rate	% yr	2.0%					
GHG reduction credit rate Inclait Analysis Financial parameters Inflation rate Project life Debit ratio	% yr %	2.0% 20 70%					
GHG reduction credit rate ancial Analysis Financial parameters Inflation rate Project life Debt ratio Debt inforest rate	% yr %	2.0% 20 70% 7.00%					
GHG reduction credit rate Inclait Analysis Financial parameters Inflation rate Project life Debit ratio	% yr %	2.0% 20 70%					
GHG reduction credit rate ancial Analysis Financial parameters Inflation rate Project life Debt ratio Debt inforest rate	% yr %	2.0% 20 70% 7.00%					
GHG reduction credit rate total Analysis Financial parameters Halaton rate Debt ation Debt Horess rate Debt term Initial costs	% yr % yr	2.0% 20 70% 7.00%	100.0%				
GHG reduction credit rate mclisi Analyzis Financial parameters indication rate Project life Debit ratio Indications Indications Indications	% yr % yr yr	2.0% 20 70% 7.00% 10					
GHG reduction credit rate Initial Analysis Financial parameters Initiality of the Initial Costs Incremental Initial Costs Other	% yr % yr \$ \$	2.0% 20 70% 7.00% 10 4.000.000	0.0%				
GHG reduction credit rate mclisi Analyzis Financial parameters indication rate Project life Debit ratio Indications Indications Indications	% yr % yr yr	2.0% 20 70% 7.00% 10	0.0%				
GHG reduction credit rate ancial Acatyris Financial parameters histian crate Project life Debit ratio Debit ratio Institut costs Total Institut costs Total Institut costs	% yr % yr \$ \$ \$	2.0% 20 70% 7.00% 10 4.000.000	0.0%		Gur	nuisitive cash flows graph	
GHG reduction credit rate Initial Analysis Financial parameters Initiality of the Initial Costs Incremental Initial Costs Other	% yr % yr \$ \$	2.0% 20 70% 7.00% 10 4.000.000	0.0%		Cur	nulative cash flows graph	
GHG reduction credit rate ancial Acatyris Financial parameters histian crate Project life Debit ratio Debit ratio Institut costs Total Institut costs Total Institut costs	% yr % yr \$ \$ \$	2.0% 20 70% 7.00% 10 4.000.000	0.0%		Cur	nulative cash flows graph	
GHG reduction credit rate actual Analysis Analysis Analysis Analysis Analysis Analysis Ana	% yr % yr \$ \$ \$	2.0% 20 70% 7.00% 10 4.000.000	0.0%		Car	nulative cash flows graph	
GHG reduction credit rate ancol Analysis Financial grametra Financial grametra Financial grametra Delot atio Delot atio Delot atio Delot atio Delot atio Delot atio De	% yr % yr \$ \$ \$ \$ \$	2.0% 20 7.0% 7.0% 10 4.000.000 4.000.000	0.0%		Car	nulative cash flows graph	
GHG reduction credit rate ancial Acalysis Financial parameters Healing credit Project life Debit tem Institut credit Total Institut credit Total Institut credit Total Institut credit Institut credit Cold (parage) credit Cold (para	% yr % yr \$ \$ \$ \$ \$ \$ \$	2.0% 20 70% 7.0% 10 4.000,000 4.000,000	0.0% 100.0% 0.0% 14,000	0.000 -	Car	nulative cash flows graph	
GHG reduction credit rate statu function Financial parameters Heador rate Delt atio Delt atio Delt rates Delt rates Delt rates Delt rates Delt rates Delt rates Delt rates Delt rates Delt rates Delt rates Delt rates Delt rates Delt ra	% yr % yr \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	2.0% 20 7.0% 7.0% 10 4.000.000 4.000.000	0.0% 100.0% 14,000 12,000	0.000 -	Car	nulative cash flows graph	
GHG reduction credit rate attack J parameters Financial parameters Financial parameters Financial content Debt stem Debt stem Debt stem Debt stem Debt stem Debt stem Debt stem Debt stem Debt stem Debt stem Debt stem Debt stem Debt	% yr % yr \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	2.0% 20 70% 10 4.000.000 4.000.000	0.0% 100.0% 14,000 12,000	0.000 -	Car	nulative cash flows graph	
GHG reduction credit rate statu function Financial parameters Heador rate Delt atio Delt atio Delt rates Delt rates Delt rates Delt rates Delt rates Delt rates Delt rates Delt rates Delt rates Delt rates Delt rates Delt rates Delt ra	% yr % yr \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	2.0% 20 70% 7.0% 10 4.000,000 4.000,000	0.0% 100.0% 14,000 12,000	3,000	Cur	nulative cash flows graph	
GHG reduction credit rate attal Ansiyds Ansign and ansaters Minima and ansaters Minima costs Ansater and ansaters Minima costs Ansater and and add payments Ansater and add paym	% yr % yr \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	2.0% 20 70% 10 4.000.000 4.000.000	0.0% 100.0% 14,000 12,000	3,000	Gar	nulative cash flows graph	
GHG reduction credit rate	%, yr %, %, % yr \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	2.0% 20 70% 7.0% 10 4.000.000 4.000.000 0.388.67 461.217	0.0% 100.0% 14,000 12,000	3,000	Car	nulative cash flows graph	
GHG reduction credit rate	% yr % % % % \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	2.0% 20 70% 7.00% 10 4.000.000 4.000.000 4.000.000 4.000.000 4.001.007 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0% 100.0% 14,000 12,000	3,000	Car	nulative cash flows graph	
GHG reduction credit rate ancol Analysis Financial grammetra Mexicar file Analogical grammetra Mexicar file Delit ation Delit at	% 7% % % % \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	2.0% 20 70% 7.0% 10 4.000.000 4.000.000 0.388.67 461.217	0.0% 100.0% 14,000 12,000	2,000	Car	nulative cash flows graph	
GHG reduction credit rate	% // // // % % // // // % // // // // //	20% 20% 70% 70% 4.00.00 0 0.0 0.0 0.0 0.0 0.0 0	0.0% 100.0% 14,000 12,000	2,000	Gar	nulative cash flows graph	
GHG reduction credit rate ancol Analysis Financial grammetra Mexicar file Analogical grammetra Mexicar file Delit ation Delit at	% 7% % % % \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	2.0% 20 70% 7.00% 10 4.000.000 4.000.000 4.000.000 4.000.000 4.001.007 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0% 100.0% 14,000 12,000	2,000 2,000 2,000 2,000	Car	nulative cash flows graph	
GHG reduction credit rate ancol Analysis Financial parameters Financial parameters Financial parameters Financial parameters Delt statio Delt statio Delt statio Delt statio Delt st	% // // // % % // // // % // // // // //	20% 20% 70% 70% 4.00.00 0 0 308.677 451.217 0 788.400	0.0% 100.0% 14,000 12,000	2,000 2,000 2,000 2,000	Cur	nulative cash flows graph	
GHG reduction credit rate	% // // // % % // // // % // // // // //	2,20% 20% 7,0% 10,00,000 4,000,000 4,000,000 0 238,657 461,217 0 788,400 788,400 788,400	0.0% 100.0% 100.0% 10.0% 10.00 10.00 8 8.00 8 8.00 8 8.00 8 8.00 8 8.00 8 8.00 8 8.00 9 8 8.000 9 8 8.000 9 8 8.000 9 8 8.0000000000000000000000000	0,000		nulative cesh flows graph	
GHG reduction credit rate	% // // // % % // // // % // // // // //	20% 20% 70% 70% 4.00.00 0 0 308.677 451.217 0 788.400	0.0% 100.0% 100.0% 10.0% 10.00 10.00 8 8.00 8 8.00 8 8.00 8 8.00 8 8.00 8 8.00 8 8.00 9 8 8.000 9 8 8.000 9 8 8.000 9 8 8.0000000000000000000000000	2,000 2,000 2,000 2,000			
GHG reduction credit rate	% % % % \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	2,20% 20% 7,0% 10,00,000 4,000,000 4,000,000 0 238,657 461,217 0 788,400 788,400 788,400	0.0% 100.0% 100.0% 14,000 12,000 10,000 68,8,000 84,000 84,0000 84,0000 84,0000 84,0000 84,0000 84,0000 84,0000 84,0000 84,0000 84,0000 84,00000 84,0000000000	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Cur		N 15 16 17 11 19 28
GHG reduction credit rate	N, N, YPT N, N, YPT S S S S S S S S S S S S S S S S S S S	2.0%% 20% 7.0%% 100 4.000.000 4.000.000 4.000.000 0 0 288.607 788.400 788.400 788.400 788.400 788.400	0.0% 100.0% 100.0% 14.00 12.00 88.00 88.00 88.00 80.00 88.00 80.00 88.00 80.00 88.00 80.000 80.000 80.000 80.000 80.000 80.00000000	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			
GHG reduction credit rate	1% 1% 1% 1% 1% 1% 1% 1% 1% 1% 1%	2,205% 202% 7,00% 7,00% 4,000,000 4,000,000 4,000,000 4,000,000	0.0% 100.0% 100.0% 14,000 12,000 12,000 12,000 12,000 12,000 12,000 12,000 12,000 12,000 12,000 12,000 12,000 14,0000 14,0000 14,0000 14,0000 14,00000000 14,0000000000	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			



CanmetENERGY



🎯 RETScreen

Natural Resources Ressources naturelles Canada

- D X

RETScreen[®] International

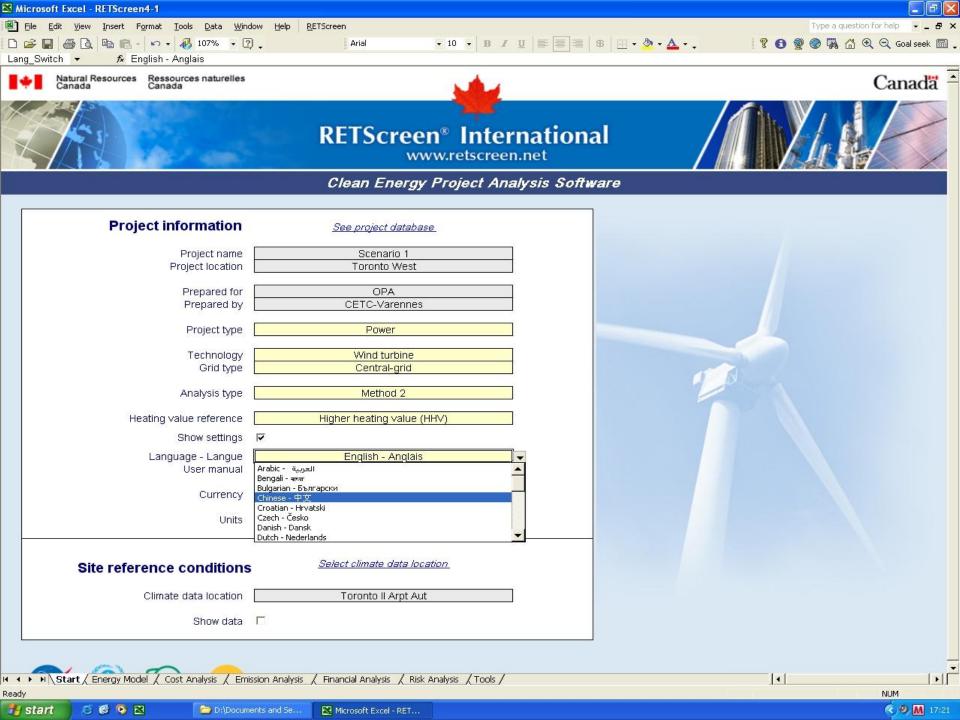


Templates Case studies User-defined

Project type	Туре	Project name	^
Power	Photovoltaic	100 kW	
Power	Solar thermal power	100,000 kW	
Power	Hydro turbine	2,000 kW	
Power	Wind turbine	50,000 kW	
Combined heating & power	Gas turbine	Apartment building	
Power	Reciprocating engine	Biogas	
Energy efficiency measures	Residential	Building envelope	
Energy efficiency measures	Commercial	Building envelope - Windows	
Combined heating & cooling	Heat pump - Ground-source	Commercial	
Energy efficiency measures	Industrial	Compressed air	≡
Energy efficiency measures	Commercial	Electrical equipment - Computer	
Energy efficiency measures	Industrial	Fans	
User-defined	Energy	Generic	
Energy efficiency measures	Industrial	Heat recovery	
Heating	Solar water heater	Hot water	
Energy efficiency measures	Residential	Hot water – Apartment	
Power	Reciprocating engine	Landfill gas	
Energy efficiency measures	Commercial	Lights – Compact fluorescent light	
Energy efficiency measures	Commercial	Lights - Fluorescent T8 - electronic ballast	
Energy efficiency measures	Industrial	Motors	
Energy efficiency measures	Industrial	Other	
Heating	Solar air heater	Process	
Energy efficiency measures	Industrial	Process electricity	
Energy efficiency measures	Industrial	Process heat	
Energy efficiency measures	Industrial	Process steam	
Energy efficiency measures	Industrial	Pumps	~









 Tenson and the second se
Content under gearch Pavotes Content Under gearch Pavotes Content Overway Content Overw
Centre Overview Centre Overview Centre Overview Control Overview Contr
 Construction_term loop Agreement[]doc-Microsoft Word Training Cance Chan energy projects Construction_term loop Agreement[]doc-Microsoft Word Construction_term loop Agreement[]doc-Microsoft Word
 Tenson and the second se
 Energy efficancy Heating / Cooling Power Cooling energy and cogneration projects. In st reavable energy and cogneration projects. In st Cooling energy procession Cooling energy procession Figures 4 spaces Ret Screen Heb & Contact Us Training material RET Screen Heb & Contact Us Training material RET Screen Legal Aspects of Clean Energy Pro- e-Textbook / Guides RET Screen Legal Aspects of Clean Energy Pro- e-Textbook / Guides Ret Screen Legal Aspects of Clean Energy Pro- e-Textbook / Guides Ret Screen Legal Aspects of Clean Energy Pro- e-Textbook / Guides Ret Screen Legal Aspects of Clean Energy Pro- e-Textbook / Guides Ret Screen Legal Aspects of Clean Energy Pro- e-Textbook / Guides Ret Screen Legal Aspects of Clean Energy Pro- e-Textbook / Guides Ret Prover with the second on the signature pages to this Agreement (the "Lenders"), and , as agent for the Lenders (together with its successors and assigns in that capacity, the "Berry performance contracts Ensitive trading agreements Interconnection agreements
 Healing / Cooling Power Consisted near sports of energy near clean Energy Lagal Toolkit has The RETScreen Clean Energy Lagal Toolkit has The RETScreen Clean Energy Lagal Toolkit has The RETScreen Clean Energy Lagal Toolkit has Training material Training material RETScreen - Legal Aspects of Clean Energy Pro Energy endoge Training material RETScreen - Legal Aspects of Clean Energy Pro Training material RETScreen - Legal Aspects of Clean Energy Pro Energy endoge This mitative was undertaken by NRCan Cancent Sample legal documents Rear property agreements Finance agreements Finance agreements Finance agreements Finance agreements Finance agreements Energy performance contracts Energy performance contracts The initiative has brought together sample legal do time and ock associated with developing legal an public stakeholder awareness and capacity regart The Borrower intends to design, construct, own, and operate afired, The initiative has brought together sample legal do time and cost associated with developing legal an public stakeholder awareness and capacity regart
 Power Conducted & power (Cogneration) Legal aspects of nergy projects e Testbook Case studies / Funglese Photos Training calendar Other languages RETScreen - Legal Aspects of Clean Energy Pro Training calendar Other languages RETScreen - Legal Aspects of Clean Energy Pro Training material RETScreen - Legal Aspects of Clean Energy Pro Training calendar Other languages RETScreen - Legal Aspects of Clean Energy Pro The initiative was undertaken by NRCan Cannets Representation Construction AND TERM LOAN AGREEMENT (as amended from time to time, this "Agreement") is entered into on, by and among a (the "Borrower"), the lenders named on the signature pages to this Agreement (the "Lenders"), and mong a agent?). The initiative has brought together sample legal documents Indeconnection agreements Indeconnection agreements Indeconnection agreements Interconnection agr
Conduct de la sport of energy projects I canadiant de la sport of energy projects I canadiative vas undertaken by NRCan Cannets Provest & graphs
Training material
Construction AND TERM LOAN AGREEMENT Construction And the signature pages to this Agreement (the "Lenders"), and Sample legal documents Green leases Finance agreements Inderconnection agreements Interconnection agree
Protos Training material RETScreen - Legal Aspects of Clean Energy Pro re-Textbook / Guides RETScreen - Legal Aspects of Clean Energy Pro e-Textbook / Guides RETScreen - Legal Aspects of Clean Energy Pro Sample legal documents Real property agreements Green leases Finance agreements Engineering, procurement & construction agreements Interconnection agreements Interc
Training material RETScreen - Legal Aspects of Clean Energy Pro FIE IScreen Help & Contact Us Training material RETScreen - Legal Aspects of Clean Energy Pro e-Textbook / Guides RETScreen - Legal Aspects of Clean Energy Pro Sample legal documents Real property agreements Green leases Finance agreements Engineering, procurement & construction agreements Interconnection
I training material RETScreen Help & Contact Us I training material RETScreen - Legal Aspects of Clean Energy Pro e-Textbook / Guides RETScreen - Legal Aspects of Clean Energy Pro e-Textbook / Guides RETScreen - Legal Aspects of Clean Energy Pro Sample legal documents Real property agreements Green leases Finance agreements Engineering, procurement & construction agreements Engineering, procurement & construction agreements Engineering procurements Engineering frommance contracts Engineering engineering Engineering procurements Engineering engineering Engineering frommance contracts Engineering fraget for the Lenders to design, construct, own, and operate afired, 2. The Borrower has asked the Lenders to provide a portion of the financing for this facility, and the Lenders are willing to do so on the terms and conditions contained in this Agreement.
e-Textbook / Guides RETScreen - Legal Aspects of Clean Energy Pro Sample legal documents Real property agreements Green leases Finance agreements Engineering, procurement & construction agreement Engineering, procurement & construction agreements Engineering, procurement & construction agreements Energy performance contracts Emissions/Environmental attributes trading agreement The initiative has brought together sample legal do time and costs associated with developing legal an public stakeholder awareness and capacity regard
e-Textbook / Guides RETScreen - Legal Aspects of Clean Energy Pro This CONSTRUCTION AND TERM LOAN AGREBMENT (as amended from time to time, this "Agreement") is entered into on, by and among, a (the "Borrower"), the lenders named on the signature pages to this Agreement (the "Lenders"), and, as agent for the Lenders (together with its successors and assigns in that capacity, the "Agreem"). Finance agreements Finance agreements RecITALS: Power purchase agreements 1. The Borrower intends to design, construct, own, and operate afired, Interconnection agreements 1. The Borrower has asked the Lenders to provide a portion of the financing for this facility, and the Lenders are willing to do so on the terms and conditions contained in this Agreement.
RETScreen - Legal Aspects of Clean Energy Pro This CONSTRUCTION AND TERM LOAN AGREEMENT (as amended from time to time, this "Agreement") is entered into on, by and among, a (the "Borrower"), the lenders named on the signature pages to this Agreement (the "Lenders"), and, as agent for the Lenders (together with its successors and assigns in that capacity, the "Agreement"). Finance agreements Engineering, procurement & construction agreements RECITALS: Interconnection agreements Interconnection agreements 1. The Borrower intends to design, construct, own, and operate afired, The initiative has brought together sample legal do time and costs associated with developing legal an public stakeholder awareness and capacity regard 2. The Borrower has asked the Lenders to provide a portion of the financing for this facility, and the Lenders are willing to do so on the terms and conditions contained in this Agreement.
Sample legal documents This CONSTRUCTION AND TERM LOAN ACREBMENT (as amended from time to time, this "Agreement") is entered into on, by and among, a (the "Borrower"), the lenders named on the signature pages to this Agreement (the "Lenders"), and, as agent for the Lenders (together with its successors and assigns in that capacity, the "Agent"). Finance agreements Finance agreements Fuel supply and O&M agreements Recitation agreements Interconnection agreements Interconnection agreements Energy performance contracts 1. The Borrower intends to design, construct, own, and operate afired, Power purchase agreements 1. The Borrower has asked the Lenders to provide a portion of the financing for this facility, and the Lenders are willing to do so on the terms and conditions contained in this Agreement.
 "Borrower"), the lenders named on the signature pages to this Agreement (the "Lenders"), and <u>Real property agreements</u> <u>Green leases</u> <u>Finance agreements</u> <u>Engineering, procurement & construction agreements</u> <u>Engineering, procurement & construction agreements</u> <u>Interconnection agreements</u> <u>Interconnection agreements</u> <u>Energy performance contracts</u> <u>Emissions/Environmental attributes trading agreements</u> <u>Emissions/Environmental attributes trading agreements</u> <u>The initiative has brought together sample legal do</u> time and costs associated with developing legal an public stakeholder awareness and capacity regard "Agreement."
Real property agreements "Borrower"), the lenders named on the signature pages to this Agreement (the "Lenders"), and, as agent for the Lenders (together with its successors and assigns in that capacity, the "Agent"). Finance agreements Engineering, procurement & construction agreements Fuel supply and O&M agreements RECITALS: Power purchase agreements 1. The Borrower intends to design, construct, own, and operate afired, Interconnection agreements 1. The Borrower has asked the Lenders to provide a portion of the financing for this facility, and the Lenders are willing to do so on the terms and conditions contained in this Agreement.
Green leases
Finance agreements Engineering, procurement & construction agreements Fuel supply and O&M agreements RECITALS: Power purchase agreements Interconnection agreements Interconnection agreements 1. The Borrower intends to design, construct, own, and operate afired, Emissions/Environmental attributes trading agreem 1. The Borrower has asked the Lenders to provide a portion of the financing for this facility, and the Lenders are willing to do so on the terms and conditions contained in this Agreement.
Fuel supply and O&M agreements RECITALS: Power purchase agreements Interconnection agreements Interconnection agreements 1. The Borrower intends to design, construct, own, and operate afired, Emissions/Environmental attributes trading agreem 2. The Borrower has asked the Lenders to provide a portion of the financing for this facility, and the Lenders are willing to do so on the terms and conditions contained in this Agreement.
Power purchase agreements Interconnection agreements Interconnection agreements 1. The Borrower intends to design, construct, own, and operate afired, Emissions/Environmental attributes trading agreem 1. The Borrower intends to design, construct, own, and operate afired, The initiative has brought together sample legal do time and costs associated with developing legal an public stakeholder awareness and capacity regard 2. The Borrower has asked the Lenders to provide a portion of the financing for this facility, and the Lenders are willing to do so on the terms and conditions contained in this Agreement.
Interconnection agreements 1. The Borrower intends to design, construct, own, and operate afired, Emergy performance contracts Emissions/Environmental attributes trading agreement The initiative has brought together sample legal do time and costs associated with developing legal an public stakeholder awareness and capacity regard 1. The Borrower intends to design, construct, own, and operate afired, 2. The Borrower has asked the Lenders to provide a portion of the financing for this facility, and the Lenders are willing to do so on the terms and conditions contained in this Agreement.
Energy performance contracts megawatt electric generating facility to be located in Emissions/Environmental attributes trading agreem 2. The Borrower has asked the Lenders to provide a portion of the financing for this facility, and the Lenders are willing to do so on the terms and conditions contained in this Agreement. Dublic stakeholder awareness and capacity regard
Emissions/Environmental attributes trading agreem The initiative has brought together sample legal do time and costs associated with developing legal an public stakeholder awareness and capacity regard
The initiative has brought together sample legal do time and costs associated with developing legal an public stakeholder awareness and capacity regard
The initiative has brought together sample legal do time and costs associated with developing legal an public stakeholder awareness and capacity regard
time and costs associated with developing legal an public stakeholder awareness and capacity regard -
public stakeholder awareness and capacity regard
The parties therefore some as follows:
The parties therefore agree as follows:
Many legal documents in a clean energy project at
employment contracts, etc. In keeping with RETS
known agreements, those more specific to clean e - ARTICLE 1
categories listed is not necessarily sequential. Not energy projects but may still be useful as an inform - DEFINITIONS
To facilitate discussion and information sharing, the
Capitalized defined terms used in this Agreement have the meanings given to them in
The Toolkit is also incorporated within the RETSc - Schedule X, and the rules of construction set forth in Schedule X govern this Agreement.
RETScreen software.
RETScreen software. Note ARTICLE 2
The RETScreen Training Course (i.e. the Toolkit $\begin{bmatrix} - \\ \end{bmatrix}$ and does not necessarily reflect the views of the $G \equiv \square \square \square \square \square$
and does not necessarily reflect the views of the G area a line and does not necessarily reflect the views of the G area a line a line and does not necessarily reflect the views of the G area a line
1 Start 3 Skype ^m O Outlook T C:\Docum Microsoft RETScree Construc O Outlook T O Outlook T.

Ref Ref Weithing Ref Weithing Ref Weithing Ref Weithing Ref Ref Ref Weithing Ref Weithing Ref Weithing Ref Weithing Ref Ref Ref Ref Ref Weithing Ref Weithing Ref Weithing Ref Ref <	🧟 RETScreen International Clean energy project analysis - Wi	ndows Internet Ex	plorer										_ 1	Ð×
We want want want want want want want want	C	t_analysis.php							- 🗟 😽	🗙 🚼 God	ogle			ρ-
<page-header></page-header>	File Edit View Favorites Tools Help													
kt retuin retuin retuin retuin retuin kt retuin retuin retuin retuin retuin kt retuin retuin retuin retuin retuin retuin kt retuin retuin retuin retuin retuin retuin retuin retuin kt retuin r	🔆 Favorites 🛛 👍 🛞 RETScreen International Home 👾 Workshop	s and conferences 💡	Google Transl	late										
Image: Note: The second of	RETScreen International Clean energy project analysis													
Training Caccult Contract 2: rouge labels Ending Single Caccult Contract 2: rouge labels Ending Caccult Contract 2: rouge labels Ending Caccult Contract 2: rouge labels Ending Caccult Contract 2: rouge labels Setting Caccult Contract 2: rouge labels Setting Caccult Contract 2: rouge labels Contract 2: rouge labels Contract 2: rouge labels Setting Caccult Contract 2: rouge labels Contract 2: rouge labels Contrate 2: rouge labels Contract 2: r	× Find: tata	Previous Next	🥖 Options 👻											
registad Telena Search Lenado de col Hans Classe Centre Colerande Centre Colerande Hans Contre Colerande Centre Colerande Centre Colerande Schware A Data Centre Colerande Centre Colerande Schware A Descipation The Efforteen Classe Descipation Centre Colerande Schware A Descipation The Efforteen Classe Descipation Centre Colerande Schware A Descipation The Efforteen Classe Descipation Centre Colerande Schware A Descipation The Efforteen Classe Descipation Centre Colerande Centre Colerande Schware A Schware A The Efforteen Classe Descipation Centre Colerande Centre Colerande Schware A Schware A Schware A Schware A Centre Colerande Centre Colerande <td< td=""><td></td><td></td><td></td><td>www.</td><td>nrcan.gc.</td><td>ca</td><td></td><td></td><td>18</td><td></td><td></td><td></td><td></td><td></td></td<>				www.	nrcan.gc.	ca			18					
Imme Centre Overview Gentre Overview Charte Overview Gentre Overview The Reflectment Charte Overview of the Overview of Overvi	English	Home	Con	ntact Us	Help									
WE Burgers (Linker) We Burgers (Linke		<u>r course</u> > <u>crear</u>	and a second	w		in the second	. /							
Conference & Luccounter Links of Property Analysis Status The RETS reserved can Energy Project Analysis Status reserves from government, industry, and developed with the contribution of numerous expects from government, industry, and developed with the contribution of numerous expects from government, industry, and academia. The software, provided free-of-charge, can be used workforwide to evaluate the energy project analysis of the software, provided free-of-charge, can be used workforwide to evaluate the energy project analysis and the software, provided free-of-charge, can be used workforwide to evaluate the energy project analysis and acase study based college/university-level training course, including an energy project analysis. Clean energy technologies RETS resen 4, a major new edition of the RETS resen software, helps rapid would are whether a propered dam energy project analysis. Status of clean energy technologies The initiag material Element energy technologies The initiag initi		ew 🕅	RET					Je H						
Conference & Training Course The RETS creen Clean Energy Project Analysis Software is a unique decision support tool developed with the contribution of numerous expands from government, industry, and developed with the contribution of numerous expands from government, industry, and developed with the contribution of numerous expands from government, industry, and developed with the contribution of numerous expands from government, industry, and developed with the contribution of the RETS creen for government, industry, and developed with the contribution of the RETS creen for government, industry, and developed with the contribution of the RETS creen for government, industry, and developed analysis project analysis. Clean energy project analysis. Renewable-energy and Energy-Africator, Frinzel Vandorgy and dimate databases, a dedaid user manual, and a case study based college/iniversity-level training course, including an energy product to riopsed clean energy project analysis. Training course RETS creen 4, a major new edition of the RETS creen software, helps rapide evaluate whether a proposed to project analysis. Training network RETS creen 4, a major new edition of the RETS creen software, helps rapide evaluate whether a proposed to project analysis. RETS creen 1, RETS creen 1, RETS creen 1, Introduction - Creat Retains alides (3.39.1MB) efficit analysis with RETS creen efficit analysis. RETS creen end and a stride retains a stade stride retains alides (5.88.1MB) RETS creen end and a stride retains a clean energy project analysis. RETS creen end analysis with RETS creen end analysis with RETS creen end analysis with RETS creen end conter analysis with RETS creen end conter analysis with	Software & Da													
Training Course energy production and savings, costs, emission reductions, financial viability and risk for various in types of Renewable-energy and Energy-efficient Echonologies (EFF). The Software (available in user manual, and a case study based college/industry rolect, hydrology and dimate databases, a detailed user manual, and a case study based college/industry rolect. Hydrology and dimate databases, a detailed user manual, and a case study based college/industry rolect. The Software, helps rapidly evaluate whether a proposed clean energy project marks sees and is worth further consideration. This presentation introduces RETScreen 4, highlights its new features, and describes the RETScreen approach to project analysis. Training nourse Training nourse RETScreen 4, anajor new edition of the RETScreen and escribes the RETScreen approach to project analysis. Training nourse RETScreen 1, highlights its new features, and describes the RETScreen approach to project analysis. RETScreen 1, introduction - Noire & Bildes (3, 50 MB) RETScreen 1, introduction - Noire & Bildes (3, 50 MB) RETScreen 1, introduction - Desclear is noted. RETScreen 1, introduction - Clean Energy Project - a - Fortbook (12.7 MB)* RETScreen 1, introduction - Clean Energy efficiency NaSA Data - Ouerview - Graning course, introduction - Clean Energy efficiency Nest user of origination ourse Status of clean energy torifect analysis with RETScreen Coes studies / Templets Power Clean energy torifect analysis with RETScreen Engineering & Cases Textbook - entire e-Textbook' includes most RETScreen executis ther factores		The RET	Screen Clear	n Energy Pro	oject Anal	ysis Softwar				ol				
Cheen energy project analysis types of Renewable-energy and Energy-efficient Technologies (RETs). The software (available in multiple language) also includes product, project, hydrology and climate databases, a detailed user manual, and a case study base college/university-level training course, including an engineering etextbook. Overview of training course RETScreen 4, a major new edition of the RETScreen software, helps rapidy evaluate whether a proposed dean energy project makes sense and is worth further consideration. This prosentation introduces RETScreen 4, hiphlights its new features, and describes the RETScreen approach to project analysis. Training material Clean energy With RETScreen Greenhouse gas emission analysis Thistoren - Introduction - Presentation sides (3.59 MB) ETScreen - Introduction - Speaker's notes RETScreen analysis with RETScreen marysis with RETScreen analysis with RETScreen emission analysis Cree studies (5.58 ME) Financia R risk analysis with RETScreen summary Cree studies / Templater Power Case studies / Templater Power Case studies / Templater Power Consist with RETScreen Second of the analysis with RETScreen Combined heat & Power Consent Combined heat & Power Consist with RETScreen Second of the analysis with RETScreen Combined heat & Power Consent Consent with RETScreen Combined heat & Power Constitution / Cean Energy Legal and clean energy retermine a clean heat with RETScreen Consent and with RETScreen Consent and with RETScreen Consent and with RETScreen Consent and with RETScreen Engineering & Cases Textbook - entire e Textbook ' includes most RETScreen suma	Training Cours	e energy	production a	nd savings,	costs, en	ission reduc	tions, finar	ncial viabilit	y and risk fo	r various				
Overview of training course RETScreen 4, a major new edition of the RETScreen software, helps rapidly evaluate whether a proposed clean energy project makes sense and is worth further consideration. This presentation introduces RETScreen 4, highlights its new features, and describes the RETScreen approach to project analysis. Training course RETScreen 4, individual to new resentation stidues (3.59 MB) RETScreen - Introduction - Versentation stidues (3.32 minutes) RETScreen - Introduction - Speaker's notes Greenhouse gas emission analysis with RETScreen NiSA video (1:30 minutes) RETScreen - Introduction - Speaker's notes RETScreen NiSA video (1:30 minutes) RETScreen - Introduction - Speaker's notes RETScreen NiSA video (1:30 minutes) RETScreen - Introduction - Speaker's notes RETScreen NiSA video (1:30 minutes) RETScreen - Introduction - Speaker's notes RETScreen Creenhouse gas emission analysis with RETScreen RETScreen Case studies / Templates NiSA video (1:20 minutes) NiSA video (1:20 minutes) RETScreen RETScreen Case studies / Templates Nower - Wind Lurbine - 30,000 kW Userview of training course Status of clean energy volet analysis with RETScreen Clean energy volet analysis with RETScreen RETscreen summary Power Clean Energy Helphologies Clean energy volet analysis with RETScreen RETscreen summary Clean Energy Legist * Net that the "RETScreen Additional		rsis types of multiple user ma	f Renewable- languages) inual, and a (-energy and also include case study b	Energy-e s product	efficient Tech , project, hy	nologies (F drology an	RETs). The s d climate da	software (av atabases, a	ailable in detailed				
Status of clean energy technologies		of Irse RETScre	en 4, a majo	or new editio						hether a				
Clean energy project analysis with RETScreen Training material RETScreen - Introduction - Presentation sides (3.59 MB) RETScreen - Introduction - Speaker's notes Greenhouse gas emission analysis with RETScreen RETScreen - Introduction - Speaker's notes Financial & risk analysis with RETScreen - Introduction - Speaker's notes Financial & risk analysis with RETScreen summary e-Textbook / Guides RETScreen Summary RETScreen summary Case studies / Templates Power - Wind tubine - 50.000 kW User-defined - Energy - Generic Energy efficiency Status of clean energy with RETScreen financial & nisk analysis w	energy	ean present approad	ation introdu	ices RETScre						TScreen				
Greenhouse gas emission analysis with RETScreen NASA video (1:39 minutes) NASA Data - Overview - Presentation slides (5.88 MB) Financial & risk metriscreen = Introduction Clean Energy Project - e-Textbook / AmB/ RETScreen = Introduction Clean Energy Project - e-Textbook (12.7 MB)* RETScreen Case studies / Templates Power - Wind Europhice Search for: Heating / Cooling Power Case studies / Templates Power - Wind Europhice Energy efficiency Beach for: Search for: Heating / Cooling Power Overview of training course Status of clean energy tegota Einergy tegota Combined heat & power (Cogeneration) Greenhouse gas mission analysis with RETScreen Einergy Legat Rettion and the "RETScreen summary "Note that the "RETScreen Engineering & Cases Textbook - entire e-Textbook" includes most RETScreen summary Clean Energy Legat Toolkit "Note that the "RETScreen Engineering & Cases Textbook - entire e-Textbook" includes most RETScreen e-textbook chapters, not included in the "entire e- Textbook," are also available (e.g. RETScreen - Legal Aspects of Clean Energy Projects - e- Textbook," are also available (e.g. RETScreen - Legal Aspects of Clean Energy Projects - e- Textbook," are also available (e.g. RETScreen - Legal Aspects of Clean Energy Projects - e- Textbook," are also available (e.g. RETScreen - Legal Aspects of Clean Energy Projects - e- Textbook	Clean ener project ana	y RETScre lysis RETScre reen RETScre	en video (2:0 en - Introduc en - Introduc	<u>ction - Prese</u> ction - Voice	& slides	(33:23 minut								
analysis with RETScreen RETScreen Engineering & Cases Textbook - entire e-Textbook (12.7 MB)* RETScreen Case studies / Templates summary Power - Wind turbine - 50,000 kW User-defined - Energy - Generic Energy efficiency Search for: Heating / Cooling Overview of training course Status of clean energy technologies (Case an energy technologies power Combined heat & power (Cogeneration) Greenhouse as emission analysis with RETScreen Financial & risk analysis with RETScreen Firstoren e-textbook chapters. Additional new chapters, not included in the "entire e- Textbook," are also available (e.g. RETScreen - Legal Aspects of Clean Energy Projects - e- Textbook chapter). Done Winternet W * 100% *	emission a	e gas nalysis <u>NASA vi</u> o	deo (1:39 mi	nutes)		_								
Summary Power - Wind turbine - 50.000 kW User-defined - Energy - Generic Energy efficiency Search for: Heating / Cooling Overview of training course Status of clean energy technologies Oten energy roject analysis with RETScreen Combined heat & power (Cogeneration) Greenhouse gas emission analysis with RETScreen Clean Energy Legal Toolkit * Note that the "RETScreen Engineering & Cases Textbook - entire e-Textbook" includes most RETScreen e-textbook chapters. Additional new chapters, not included in the "entire e- Textbook," are also available (e.g. RETScreen - Legal Aspects of Clean Energy Projects - e- Textbook, chapter).	analysis wi	th RETScre	en - Introdu	ction Clean B					<u>4B)</u>					
Energy efficiency Search for: Heating / Cooling Overview of training course Status of clean energy technologies Status of clean energy technologies Combined heat & power (Cogeneration) Greenhouse gas emission analysis with RETScreen Combined heat & power (Cogeneration) Status of clean energy technologies Clean Energy Legal Toolkit * Note that the "RETScreen Engineering & Cases Textbook - entire e-Textbook" includes most RETScreen e-textbook chapters. Additional new chapters, not included in the "entire e-Textbook," are also available (e.g. RETScreen - Legal Aspects of Clean Energy Projects - e-Textbook chapter). Done Power		Power -	Wind turbin	<u>e - 50,000 k</u>	w									
Heating / Cooling Overview of training course Power Status of clean energy technologies Combined heat & power (Cogeneration) Greenhouse gas emission analysis with RETScreen Combined heat & power (Cogeneration) Greenhouse gas emission analysis with RETScreen RETScreen summary * Note that the "RETScreen Engineering & Cases Textbook - entire e-Textbook" includes most RETScreen e-textbook chapters. Additional new chapters, not included in the "entire e-Textbook," are also available (e.g. RETScreen - Legal Aspects of Clean Energy Projects - e-Textbook Done Power	Energy effici	encv												
Power Status of clean energy technologies Clean energy project analysis with RETScreen financial & risk analysis with RETScreen financial & risk analysis with RETScreen RETScreen summary Clean Energy Legal Toolkit * Note that the "RETScreen Engineering & Cases Textbook - entire e-Textbook" includes most RETScreen e-textbook chapters. Additional new chapters, not included in the "entire e- Textbook," are also available (e.g. RETScreen - Legal Aspects of Clean Energy Projects - e- Textbook chapter). Done Internet In	Heating / Co	olina		course										
Combined heat & power (Cogeneration) Greenhouse das emission analysis with RETScreen Clean Energy Legal Toolkit * Note that the "RETScreen Engineering & Cases Textbook - entire e-Textbook" includes most RETScreen e-textbook chapters. Additional new chapters, not included in the "entire e-Textbook," are also available (e.g. RETScreen - Legal Aspects of Clean Energy Projects - e-Textbook chapter). Done Power	Power	Status o	of clean ener	gy technolog		reen								
Clean Energy Legal Toolkit RETScreen e-textbook chapters. Additional new chapters, not included in the "entire e- Textbook," are also available (e.g. RETScreen - Legal Aspects of Clean Energy Projects - e- Textbook chapter). Done Image: Clean Energy Legal Textbook	power	at & Greenho Financia	ouse gas emi Il & risk analy	ission analy: sis with RET	sis with R									
Done	Toolkit	Legal RETScre Textboo	en e-textboo k," are also	ok chapters.	Additiona	al new chapt	ers, not in	cluded in th	e "entire e-					
		Textboo	ik chapter).								Internet			•
		e 🛛 🗿 Inbox	🔏 RETS 📔) C:\Do 🕅	RETSc	🌉 Wind	RETSc) C:\Do	RETSc			,		

RETScreen Training Institute

RETSCREEN[®] INTERNATIONAL

- RETScreen 101 Introduction to Clean Energy Project Analysis (just completed)
- RETScreen 201 Energy Efficiency Project Analysis
- RETScreen 202 Heating & Cooling Project Analysis
- RETScreen 203 Power Project Analysis
- RETScreen 301 Cogeneration Project Analysis
- RETScreen 302 Energy Performance Analysis
- We do customized training!



CanmetENERGY

Leadership in ecoInnovation



www.retscreen.net



Leadership in ecoInnovation

RETSCREEN[®] INTERNATIONAL



www.retscreen.net

Clean Energy Policy Analysis With RETScreen®



Photo Credit: Strong, Steven DOE/NREL

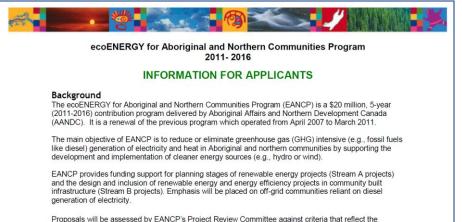


Clean Energy Policies - Incentives

RETSCREEN[®] INTERNATIONAL

www.retscreen.net

- Direct Cash Payments
 - Grants and Rebates
 - Performance-Based Payments
- Tax Incentives
 - Tax Credits
 - Tax Exemptions
 - Accelerated Depreciation
- Loan Programs



Proposals will be assessed by EANCP's Project Review Committee against criteria that reflect the objectives of the program. These criteria include the level of reduction of GHG emissions, the likelihood of the project being installed or built and operational, the ability of the community to take a leadership role in the project, as well as other economic, environmental and social considerations.

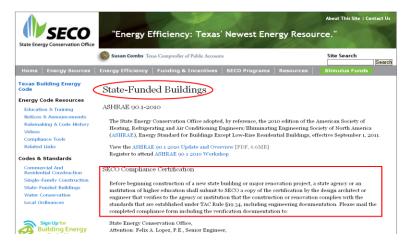




Clean Energy Policies - Regulations

RETSCREEN[®] INTERNATIONAL

- Building Code Mandates
- Favourable Permitting Rules
- Interconnection Standards





Leadership in ecoInnovation



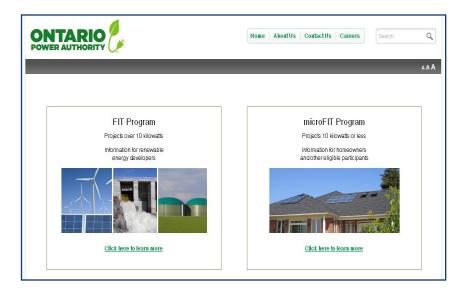
Natural Resources Ressources naturelles Canada Canada



Clean Energy Policies - Hybrids

RETSCREEN[®] INTERNATIONAL

- Feed-in Tariffs
- Utility Quota Obligations
- Net Metering
- Emissions & Environmental Attributes Trading





Leadership in ecoInnovation

www.retscreen.net



Natural Resources Ressources naturelles Canada Canada



RETScreen for Projects *and* **Policy**

RETSCREEN[®] INTERNATIONAL

www.retscreen.net

RETScreen as a tool to demonstrate the viability of clean energy *projects*

But also ...

...useful for planning, designing, implementing, and reviewing the viability of clean energy *policies*



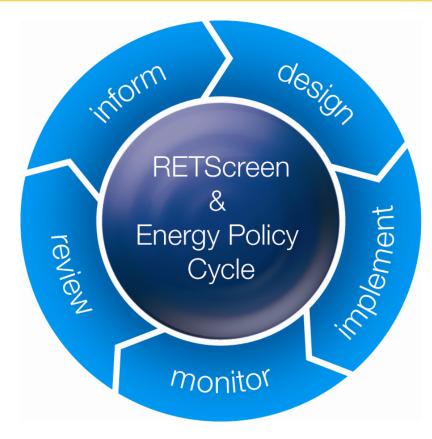


The Policy Cycle

RETSCREEN[®] INTERNATIONAL

www.retscreen.net

- Inform
- Design
- Implement
- **Monitor**
- **Review**









Examples of RETScreen Use for Policy

RETSCREEN® INTERNATIONAL

- International (UNFCCC)
- National (Canada)
- Sub-National (Texas)
- Municipal (Toronto)
- Utility (National Grid)

10 11	Public Utilities Commission 21 S. Fruit Street, Suite 10, Concord, NH 03301-2429
	STEP 1: INCENTIVE PRE-APPROVAL APPLICATION
	FOR NON-RESIDENTIAL SOLAR THERMAL ¹ AND SOLAR ELECTRIC SYSTEMS up to 100 KW or 100 KW EQUIVALENT
•	System must become operational on or after November 1, 2010. Pre-approval will reserve your place in the funding queue. Once the facility has been installed at the site, applicant must then complete Step 2 by submitting a final incentive request form . The incentive pre-approval expires <u>9 months</u> from the date this application is pre-approved and funding is reserved. When all available program funding has been reserved for approved projects, applicants that meet all program and project requirements will be placed on a waitlist. Projects placed on the waitlist are not guaranteed funding.
	Because this application requires original signatures, no electronic copies will be accepted
	Because this application requires original signatures, no electronic copies will be accepted Technical Requirements
1.	
	Technical Requirements Any renewable energy system must comply with all manufacturers' requirements, installed according to manufacturer's recommendations, and meet all applicable requirements of the State Building Code pursuant to RSA 155-A:1, IV including the National Electric Code 2008 and the International Fire Code.
2.	Technical Requirements Any renewable energy system must comply with all manufacturers' requirements, installed according to manufacturer's recommendations, and meet all applicable requirements of the State Building Code pursuant to RSA 155-A:1, IV including the National Electric Code 2008 and the International Fire Code. Any interconnection of the renewable energy system with your utility must comply with your Interconnection Agreement, the
2.	Technical Requirements Any renewable energy system must comply with all manufacturers' requirements, installed according to manufacturer's recommendations, and meet all applicable requirements of the State Building Code pursuant to RSA 155-A:1, IV including the National Electric Code 2008 and the International Fire Code. Any interconnection of the renewable energy system with your utility must comply with your Interconnection Agreement, the Puc 900 Net Metering Rules (if applicable), as well as any applicable tariffs governing interconnection. Solar PV systems must have a manufacturer's rated panel output under standard test conditions (STC) of equal to or less than 100 kilowatts and must be certified by a nationally-recognized testing laboratory as meeting the requirements of UL 1703.
2. 3. 4.	Technical Requirements Any renewable energy system must comply with all manufacturers' requirements, installed according to manufacturer's recommendations, and meet all applicable requirements of the State Building Code pursuant to RSA 155-A:1, IV including the National Electric Code 2008 and the International Fire Code. Any interconnection of the renewable energy system with your utility must comply with your Interconnection Agreement, the Puc 900 Net Metering Rules (if applicable), as well as any applicable tariffs governing interconnection. Solar PV systems must have a manufacturer's rated panel output under standard test conditions (STC) of equal to or less than 100 kilowatts and must be certified by a nationally-recognized testing laboratory as meeting the requirements of UL 1703.
2. 3. 4. 5.	Technical Requirements Manufacturer's requirements, installed according to manufacturer's recommendations, and meet all applicable requirements of the State Building Code pursuant to RSA 155-A:1, IV including the National Electric Code 2008 and the International Fire Code. Any interconnection of the renewable energy system with your utility must comply with your Interconnection Agreement, the Puc 900 Net Metering Rules (if applicable), as well as any applicable tariffs governing interconnection. Solar PV systems must have a manufacturer's rated panel output under standard test conditions (STC) of equal to or less than 100 kilowatts and must be certified by a nationally-recognized testing laboratory as meeting the requirements of UL 1703. Systems shall include a labor warranty of no less than five years in order to qualify for a rebate. Solar electric systems greater than 50 kW shall include a revenue grade meter to measure production of the system [and shall include data monitoring through a web-based system].
2. 3. 4.	Technical Requirements Any renewable energy system must comply with all manufacturers' requirements, installed according to manufacturer's recommendations, and meet all applicable requirements of the State Building Code pursuant to RSA 155-A:1, IV including the National Electric Code 2008 and the International Fire Code. Any interconnection of the renewable energy system with your utility must comply with your Interconnection Agreement, the Puc 900 Net Metering Rules (if applicable), as well as any applicable tariffs governing interconnection. Solar PV systems must have a manufacturer's rated panel output under standard test conditions (STC) of equal to or less than 100 kilowatts and must be certified by a nationally-recognized testing laboratory as meeting the requirements of UL 1703. Systems shall include a labor warranty of no less than five years in order to qualify for a rebate. Solar electric systems greater than 50 kW shall include a revenue grade meter to measure production of the system [and shall include data monitoring through a web-based system]. Solar thermal systems with a collector area of 500 sq. ft. or greater shall have an output meter and/or web-based temperature

Leadership in ecoInnovation



Natural Resources **Ressources naturelles** Canada Canada

www.retscreen.net

3 / 9

÷.

RETScreen

Ŵ

🛃 Start

⁵ Criteria for approval of computerized simulation model programs include: (a) The program is nonproprietary and available at no cost or for a small cost; (b) The simulation algorithms are available and documented; (c) Reliable and documented historical and real time weather data, compatible with the program, are available for the country were the project(s) are implemented; and (d) The program has been tested and bench marked to show that it is reliable and the results of such testing/bench marking in the public domain; and user support is available. At the time of approval of this version of this methodology, the only pre-approved model simulation program is RETScreen (<htp://www.retscreen.net/>). Submittals may be made for requesting revision of this methodology to include other programs.

ABC

肁

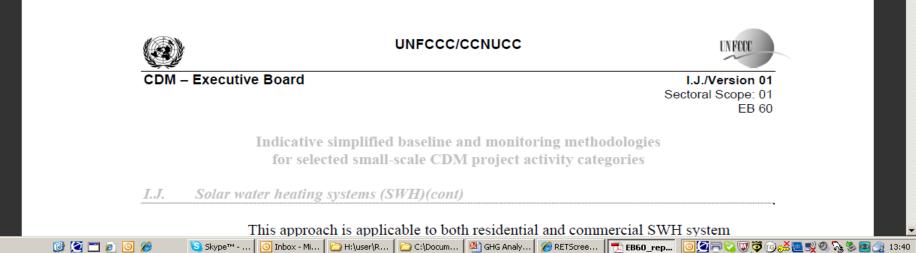
⁶ Water consumption per day shall be assumed to follow a typical daily, per hour, pattern that can reasonably shown to be typical for the residence(s) for which the project SWH system(s) will serve.

- 🖹 🖹

According to national or international standards, e.g. the Solar Rating and Certification Corporation certification, rating, and labelling program for solar collectors and complete solar water heating systems.

⁸ Insolation and ambient temperature data must be obtained from globally accepted data sources, e.g. data published by the National Aeronautics and Space Administration (NASA) or the National Renewable Energy Laboratory (NREL). Data can be used only if they are for a location that can be demonstrated to be representative of the project location.

3/9



CecoENERGY for Aboriginal and Northern Communities Program	n 2011- 2016 - Windows Internet Explorer	<u>_ 8 ×</u>
	🗾 🗟 🖅 🗙 🚼 Goog	jle 🖉 🗸
File Edit View Favorites Tools Help		
🖕 Favorites 🛛 👍 🛞 RETScreen International Home 🎖 Google Tran	Islate	
	Project Eligibility Criteria	_
	Projects must meet the following criteria in order to be eligible for EANCP funding:	
	• The applicant is an eligible recipient.	
	 The project will facilitate the engagement of Aboriginal peoples and / or northerners in a community driven strategy for addressing the use and provision of energy. 	
	 The project will lead to the reduction or elimination of heat and / or electricity use from a conventional, more GHG-intensive source. For Stream A projects, the proposal must demonstrate that a completed and built project will result in 4,000 tonnes or greater of GHG reductions from a 'business as usual' scenario (i.e., conventional heat or electricity source) over the life-cycle of the project (usually considered to be 20 years). 	
	 The project will have economic, environmental and social benefits for the community in which it is located. 	
	 The community in which the project is located is supportive of the project and it can be demonstrated that the community has a vested interest in the successful outcome of the project. 	
	 The project has not already received the maximum amount of funding from EANCP (see 'Maximum funding levels' below). 	
	 The project will involve the incorporation or implementation of a proven technology that is appropriate to the application, location, etc. Research and development, pilot or demonstration projects are not eligible for funding. 	
	 The applicant has completed and submitted the following: 	
	1. Proposal for project funding	
	Project budget template: Both worksheets must be completed: 'Expenditure details' and 'Contributions from other sources'	
	3. Letter of support for the project from the community	
	4. RETScreen: The RETScreen Clean Energy Project Analysis Software is described as a 'decision support tool' for renewable energy and energy efficiency projects. A user can enter data into RETScreen about their project (like site conditions, systems characteristics, costs, etc) and about their current or 'base case' electricity and / or heating systems and RETScreen will output estimated energy production and savings, costs, emission reductions, financial viability and risk. The software can be downloaded free of charge from <u>Natural Resources Canada</u> www. A completed RETScreen must be provided in .xls or .ret format (a photocopy, pdf or faxed copy is not acceptable).	
	 Proposits for projects that include key partners (such as provincial/territorial governments, Aboriginal governments, educational institutions, professional or 	.
🏄 Start 🛛 🕑 🙋 🗖 🖉 🎯 😽 Skyp	• • • • • • • •	nternet 🛛 🖓 🔹 🔩 100% 🔹 🧷
		- 🕊 🖓 🕅 🖉 🔚 🛣 🖓 🖉 📟 🖓 13.30

🕹 Building	g Codes and Stan	dards - Mozilla Firef	fox						×
<u>Eile E</u> dit <u>y</u>	<u>V</u> iew Hi <u>s</u> tory <u>B</u> oo	kmarks <u>T</u> ools <u>H</u> elp						4	0
<	- 🕑 🛞 👔	file:///D:/Docume	ents%20and%;	20Settings/gleng/My%20Docur	nents/Generic%20Files/RETScree	n%20Use/Texas%20Legislature/	isa_codes.htm	C	S
Building C	Codes and Standards	🗷 🕒 Buil	-	nd Standards 🛛 🔯					-
			Texas	Design Standard	Compliance Form	S			^
			institutio agency c	n of higher education	shall submit to SECO a c	opy of the certification	uilding or major renovation project, a state agency or a by the design architect or engineer that verifies to the andards that are established under this rule, including	י ו	
					erational change out o e exempt of the submi		nent, where no engineering or architectural design ce certification.		
					pliance form including th ., Attention: Felix A. Lop		ation to: State Energy Conservation Office 111 E. 17th S r.	Street	
			<u>Texas D</u>	esiqn Standard Com	pliance Form for Nonre	esidential Buildings			
			<u>Texas D</u>	esign Standard Com	pliance Form for Resid	ential Buildings			
			SB 982	: Energy Conser	vation in State Buil	dings			
			construc new stat	tion plans for certain s e buildings to certify t	state buildings, such as (certification and project renovation complies with	ocesses and design standards involved in the approval o analysis. The bill requires design architects or engineers h the alternative energy and energy-efficient architectu ction or renovation.	sof	
			or electri a compai	onic software used by rison or determine feas	the commission or gove	rning body, or an entity tion. In compliance with	ce (SECO), or its successor, must approve any methodol contracting with the commission or governing body, to this mandate, SECO has reviewed and selected two sof	make	
			SECO ha	s reviewed and select	ed these two software p	ackages that <u>come fre</u>	e of charge that will allow agencies to meet this legislat	tion.	=
			FRI Bui en cui	ilding-scale application ergy at the building-sc rrently screens for pho	s are small in scale; FRE ale. Facility-scale applic	SA currently screens for ations are technologies d energy at the facility-:	2 screening for building- and facility-scale applications. r photovoltaics (PV), solar hot water heating, and wind that can meet the energy needs of an entire facility; FF scale. Note that if your facility is only made up of one -scale inputs.	RESA	
			RE to wh	TScreen Software is a address this important ich can be used world	: deployment barrier. The -wide to evaluate the er	energy awareness, deci e core of the tool consis nergy production, life-cy	ision support and capacity building tool, has been develo sts of a standardized and integrated project analysis sof /cle costs and greenhouse gas emission reductions for v. ompared to conventional energy projects.	tware	
			ba: fre Pro	sed college/university- e, in both English and bject Analysis Model is ited or no Internet acc	level training course and French, at this Website. also available in 19 more	d electronic textbook; ar In addition, the recentl e languages, together w	ional weather databases; an online manual; a case study nd an Internet-based Marketplace. All of these are avail ly released RETScreen Cogeneration Heat & Power (CHP) rith several modules of the training course. For those wit CM. For additional information, see this RETScreen Soft	able) :h	
			Reside	ential and Comme	ercial Energy Code	s			~
🖸 Find: re	ets	<u>N</u> ext 🏠 <u>P</u> revious	s 🔄 Highlight :	all 📃 Mat <u>c</u> h case					
Done									
🦺 start	📄 🕑 🕑 📄	Outlook Today	- Micr	Related to RETScreen	🔁 Texas Legislature	😻 Building Codes and St		7:00 PM	

🕨 1 / 2 💿 💌 130% 🕶 拱 🚱 Find

🛛 🚱 🧕 🎽 🙆 Outlook Today - Micr... 🛛 🗁 Toronto Solar Neighb...

Ø

🛃 start

Toronto Solar Neighbourhoods Initiative Input Data for RETScreen Simulation

Ŧ

All RETScreen analyses provided to Solar Neighbourhoods should be carried out using RETScreen Version 4, and should use the following basic parameters:

RETScreen Input Line	To use for Product Participation Application "System Performance" Section	To use for modelling of projects eligible under the TSNI	
Start Screen			
Facility Type:	Residential	Residential	
Project type:	Heating	Heating	
Technology:	Solar Water Heater	Solar Water Heater	
Analysis Type:	Method 1	Method 1	
Heating Value Reference:	High	High	
Climate Data Location:	Toronto	Toronto	
Energy Model Screen: Heating Project			
Application:	Hot Water	Hot Water	
Load Characteristics			
Load Type	House	House	
Daily hot water use:	Run 3 separate RETScreen simulations using 150, 225, 300 litres/day	Use estimate from Hot Water Assessment portion of "Solar Hot Water Site Assessment Form" completed by the ecoENERGY assessor – there will be 2 values given (a base and	

RETScreen - CETC-V

🔁 tsni-input-data-r<u>etscr..</u>

🔇 🗿 🙋 🚽 7:29 PM

National Grid Solar Thermal Program

Commercial:

- Solar Thermal \$3/therm first year savings
- LIMIT 50% project cost or \$100,000
- Economic Redevelopment funds available for projects with high Community benefits up to \$8 per therm
- RETScreen analysis is required
- Step #1 energy audit
- 1-800-843-3636





RETScreen Clean Energy Policy Toolkit

RETSCREEN[®] INTERNATIONAL

www.retscreen.net

- Developed by RETScreen International
- Financially supported by a grant from the Renewable Energy and Energy Efficiency Partnership (REEEP)
- Includes Case Studies/Templates, e-Textbook Chapter, Training Slides, and Sample Documents
- Available on the RETScreen Website and within the **RETScreen User Manual**







Case Studies & Templates

RETSCREEN[®] INTERNATIONAL

www.retscreen.net

- Power Photovoltaic Feed-in Tariff Policy / Canada
- Power Wind GHG Reduction Income Policy / China
- Heating Solar Water Heater Capital Cost Incentive Policy / USA
- User-defined Tax and Finance Measures Policy / Canada

+ many more!



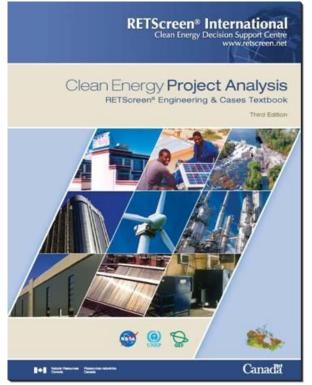




Presentation Slides & e-Textbook Chapter

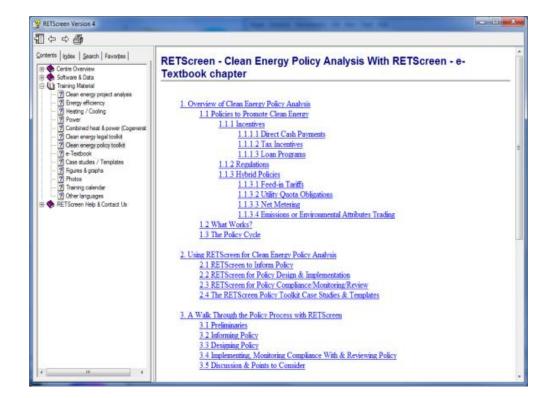
RETSCREEN[®] INTERNATIONAL

www.retscreen.net



See e-Textbook Clean Energy Project Analysis: RETScreen[®] Engineering and Cases

Clean Energy Policy Analysis with RETScreen



CanmetENERGY



