



renewable  
energy  
& energy  
efficiency  
partnership

## RETScreen Expert: decision intelligence software platform



RETScreen decision support software currently has over 368,000 users across the globe. It is made available free of charge by Natural Resources Canada.

### Background

RETScreen is free-of-charge decision support software made available by the Government of Canada to help evaluate the viability and performance of renewable energy and energy efficiency projects.

The software currently has over 368,000 users across the globe. REEEP has previously supported the development of RETScreen Version 4 (energy efficiency and multilingual capability), RETScreen's Performance Analysis module and Benchmark Analysis Tool, as well as the creation of the RETScreen Clean Energy Legal & Policy Toolkits.

The new RETScreen Expert represents the next generation of RETScreen, expanding the software from a decision-making model for specialist engineers to an intelligent decision support tool for a much broader range of stakeholders over the entire project life cycle. RETScreen Expert will leverage a global database of project input parameters, a knowledge base of best practices, and make use of Linked Open Data to create an intelligent decision engine.

### Project purpose

To transform the internationally recognized RETScreen software into a new decision intelligence software platform: RETScreen Expert.



### Main activities and outputs

- Build a large and evolving global database of project input parameters (including data on benchmarks, facilities, archetypes, costs, products, and finances)
- Create an expert system decision-engine within the software that will mine this database relative to the user's project location
- Gather publically available data for multiple regions, based on the existing climate data in RETScreen
- Link to open data sources and energy resource maps such as NASA's satellite weather data, streaming dynamic near real-time data into the software
- Use the above to underpin the creation of a Virtual Energy Analyser, a Smart Project Identifier, Financial Risk Assessor and project lifecycle Performance Tracker
- Create training material
- Conduct beta testing/pilot project in a REEEP priority country

### Expected impacts

- Dramatic reduction in financial and time costs to identify and assess potential clean energy investments
- Direct user savings of more than \$ 20 billion achieved by the end of 2022
- RETScreen Expert used for at least \$ 100 billion in project investments
- Emission reductions of at least 50 MT CO<sub>2</sub>/year in greenhouse gas emissions achieved
- Substantial contribution to global economic development, greenhouse gas and pollution reduction, and energy security

Project Information
<b>Location:</b> Global
<b>Duration:</b> 2013–2014
<b>Sector:</b> Renewable Energy
<b>Thematic focus:</b> Business
<b>Total project budget:</b> € 950,000
<b>REEEP grant:</b> € 150,000
<b>REEEP donor:</b> United Kingdom and Norway
<b>Co-funding:</b> € 800,000 from CanmetENERGY
<b>Implementing partner:</b> CanmetENERGY