Five Step Standard Analysis

1. Energy Model
2. Cost Analysis
3. GHG Analysis
4. Financial Summary
5. Sensitivity & Risk Analysis

Ready to make a decision
Objectives

- Illustrate role of preliminary feasibility studies
- Demonstrate how the RETScreen® Software works
- Show how RETScreen® makes it easier to help identify & assess potential projects
How accurate is an energy project analysis tool?

- It depends on the tool
- It depends on the accuracy of the inputs
How much does it cost to use an energy project analysis tool?

• It depends on the tool

• It depends on the accuracy of the inputs

• Cost is related to accuracy
What accuracy do we need?

- **Tenders**: ± 5 to 10%
- **Engineering phase**: ± 10 to 20%
- **Feasibility study**: ± 15 to 25%
  - Attaining this level of accuracy is still very expensive
  - What if the project doesn’t go ahead?
- **Prefeasibility study**: ± 20 to 50%
  - We want to answer the question “are we in the ballpark?” as quickly and cheaply as possible
Significant barrier

Clean Energy projects not being routinely considered up-front!
Are photovoltaics cost-effective?

- **On-grid**: not without subsidies (in most areas)

- **Off-grid**: most cost-effective power supply
The notion of cost-effectiveness only exists by way of comparison.

- **Cost-effective compared to what?**
  - Compared to a genset or batteries or grid extension, photovoltaics are cost-effective.
  - Compared to conventional generation, photovoltaics are not cost-effective on grid without subsidies.

- **RETScreen always compares two options**
  - Proposed case versus base case
  - Clean energy technology versus conventional technology
Example: Base case versus proposed case power system for SCADA system at natural gas well head

- **Incremental** initial costs: Cost of PV system – cost of genset
- Annual credits: fuel, maintenance
- Periodic credits: genset overhaul
- Periodic costs: battery replacement
What is RETScreen® 4 for?

- RETScreen 4 provides an approximate answer fast: “Is this project in the ballpark?”

- RETScreen is not an engineering design tool
Why Use RETScreen®?

- Simplifies preliminary evaluations
  - Requires relatively little user input
  - Provides key outputs
- Standardized procedures allow objective comparisons
- Validated methodology
- To learn about clean energy technologies
- As a repository of tools and data
Questions?

Clean Energy Project Analysis with RETScreen® Software Module
RETScreen® International Clean Energy Project Analysis Course

For further information please visit the RETScreen Website at

www.retscreen.net