

# Renewable Energy Financing Options Guidance Webtool

The World Bank, Washington DC

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# Overview

13 Webtools Presentation - Windows Internet Explorer  
 http://www.slideshare.net/wsstephens/13-webtools-presentation

## Renewable Energy Financing Options Guidance Webtool

**Financial Instrument Tool: Technical Specifications, Risks and Barrier Inputs.**

Choice in Grid Connectivity	
<input type="radio"/> Off Grid	<input checked="" type="radio"/> Grid Connected

Technology Choice	
<input type="radio"/> Wind	<input type="radio"/> Solar PV
<input type="radio"/> Solar thermal	<input type="radio"/> Small Hydro
<input checked="" type="radio"/> Micro Hydro	<input type="radio"/> Biomass
<input type="radio"/> Geothermal	

Technology Risks	<input checked="" type="checkbox"/> Uncertainties over resource adequacy
	<input checked="" type="checkbox"/> High costs of resource assessments
	<input type="checkbox"/> Uncertainties over carbon financing
	<input type="checkbox"/> High financial cost relative to other technologies
	<input type="checkbox"/> High exposure to regulatory risks
	<input type="checkbox"/> Small scale of projects
Financing Barriers	<input type="checkbox"/> High and uncertain project development costs
	<input checked="" type="checkbox"/> Lack of project financing
	<input checked="" type="checkbox"/> Lack of long term financing

**Financial Instrument Recommended**

Financial Instruments	
Grants	<input type="checkbox"/> Working Capital Grants
	<input type="checkbox"/> Capital Grants
Equity	<input type="checkbox"/> Venture Capital
Guarantees and Insurance	<input type="checkbox"/> Liquidity Guarantee
	<input type="checkbox"/> Resource Insurance
	<input type="checkbox"/> Partial/ Political Risk Guarantee
Debt	<input checked="" type="checkbox"/> Senior Debt
	<input type="checkbox"/> Subordinated Debt (Mezzanine Finance)
Asset Backed Securities	<input type="checkbox"/> Asset-backed Securities
Results-based Financing	<input type="checkbox"/> Payment Against Outputs
	<input type="checkbox"/> Contingent Project Development Grants
Carbon Financing	<input type="checkbox"/> Carbon Financing
Small Scale Project Instruments	<input type="checkbox"/> Aggregation
	<input type="checkbox"/> Micro-Financing
	<input type="checkbox"/> Portfolio Guarantees and Loss Reserves

# Component 1: Financial Instrument Recommendation Tool

**Lack of long term financing:** RET technologies are characterised by high up-front capital costs and low ongoing operating costs, due to the nature of the technologies concerned. This implies a need for RET projects to be able to access long-term funding on

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## Recommended Financial Instrument/s:

**Project Loan** ★

## Relevant Case Studies:

Project Loan

**Case study 1: Nepal – Power Development Project**

Further Reading:

**Financing Renewable Energy: Options for Developing Financing Instruments using SREP and Other Public Funds**

Lack of long term financing

Financial Instrument  
Recommended



- Project details and applicable risks, and barriers to be input by user
- In-built definitions for each entry
- **Purpose:** Based on user input, the tool will recommend financial instrument or instruments and associated case studies

# Component 2: Range of Financial Instruments

**Subordinated debt** can take multiple forms. For the purposes of this webtool, subordinated debt is considered to encompass all forms of mezzanine or quasi-equity finance, of which there are many variants. The key features these share in common are that repayment is subordinate to providers of senior debt (hence the name), but that the financier does not obtain a shareholding and thus control of the project (although some forms of subordinated debt may be capable of conversion to shares or, such as preferred shares, take the form of equity but with lesser or no rights of control).

## **Further Reading:**

**Financing Renewable Energy: Options for Developing Financing Instruments using SREP and Other Public Funds**

## **Relevant Case Studies:**

***Case study 10: Macedonia Sustainable Energy Financing Facility***

- Range of Financial Instruments covered by the webtool
- In-built definitions for each financial instrument, and links to relevant case studies

# Webtool Application: Example

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Case Study 6: Nepal - Power Development Project	
Barriers	Lack of long term financing and availability of equity
Instrument	Project loan
Application	
Amount	Original IDA fund of US\$ 35 million

**Project background and objective**

Nepal faced a large and growing need for investment in its power sector. The required investment was beyond the capacity of the government and donor agencies. The availability of private-sector debt and equity for hydropower projects was constrained, the debt that was available was of an insufficient maturity, and private investors were uncomfortable with investing in first-of-a-kind projects.

This project aimed to increase the flow of private investment in small and medium hydropower plants through the creation of a Power Development Fund (PDF), which provides provide long term financing to private investors, leveraging debt (and developer's equity) financing from the local capital markets. The project also aimed to reduce costs of new plants by implementing improved international competitive tendering processes. The project became effective in March 2004.

# Identifying Project Details, Risks and Barriers

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<b>Financing Barriers</b>	<input type="checkbox"/> High and uncertain project development costs <input checked="" type="checkbox"/> Lack of project financing <input checked="" type="checkbox"/> Lack of long term financing
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <b>Financial Instrument Recommended</b> </div>	

Financial Instruments	
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By selecting a financial tool listed in component 2, all applicable risks, barriers and project details will automatically be selected in component 1