

resources & energy

## **EcoNomics**<sup>™</sup> Delivering profitable sustainability

## EcoNomics<sup>™</sup> Assessment

## Framing Workshop

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CSG:	Infrastructure & Environment
LOCATION:	London
PROJECT #:	305001-51332
PROJ TITLE:	Risks&Vulnerabilities to the Albanian Energy Sector from Climate Change

DESCRIPTION: This is a World Bank project to raise awareness of potential impacts of climate change on energy security in Albania due to changing climatic conditions and to examine the costs and benefits of options to adapt the energy supply. The format of the project is a series of capacity building workshops incountry for key government / policy and industry representatives. The first workshop was top discuss the risks and vulnerabilities of climate change , the second was to discuss adaptive options and framing the cost benefit analysis

## WORKSHOP SUMMARY

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Land Value

DATE:	21-Apr-09	<b>TIME:</b> 09:00-17:00
ATTENDEES:	See attach	ed attendee list
ANALYSIS:		WHOLE PROJECT MARGINAL
OBJECTIVE:		(optimal balance of social, environmental and financial aspects) to meet the shortfall in
	Albania's fu	uture (to 2050) energy (electricity) supply that will result from changing climate impacting
OPTIONS TO	1	Provide new Large (dam storage) Hydro Power Plant (LHPP) capacity
BE	2	Adapt existing LHPP to provide additional capacity
ASSESSED:	3	Adapt an existing LHPP to become a pump storage facility to provide additional capacity
	4	Provide additional Small Hydro Power Plant (SHPP) generation capacity
	5	Provide additional wind generation capacity
	6	Provide additional Concentrated Solar Power (CSP) generation capacity
	7	Provide additional thermal (CCGT) power generation capacity
	8	Import required additional electricity from regional neighbours
	9	
	10	
	-	1
EXTERNAL	1	Water Value
ASSETS TO	2	CO2 emissions
BE VALUED:	3	NOx and Sox emissions
	4	Particulate matter emissions
	5	Ecosystem impact
	6	Risk to security of supply due to wind/rain storm events
	7	Risk to security of supply due to heat wave events
	8	Nuisance / relocation of people

EVALUATION PARAMETERS			
Planning Horizon:	2009-2050 (41 years)		
Other Planning Horizons:			
Internal Rate of Return:			
Social Discount Rate:	4.5 to 6%		
Other Parameters:			