

NAMA DESIGN OPTIONS WORKSHOP

BREAKOUT SESSION II-RENEWABLE ENERGY INTRODUCTION TO NAMA DESIGN SESSIONS



Ned Helme, President, CCAP

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MAIN NAMA COMPONENTS

1. NAMAs must be **host country-driven** and incorporate the dual goals of greenhouse gas mitigation and sustainable development.
2. NAMAs should strive to be **sector-wide programs** that are national in scope, with the potential for regional or municipal elements.
3. NAMAs should include both **policies and financial mechanisms** targeted to address the main barriers to mitigation activities.
4. NAMAs that seek international support should use NAMA funding (in the form of grants or highly concessional finance) to **mobilize additional climate finance** from bilateral institutions, international and domestic development banks and financial institutions, and the private sector.

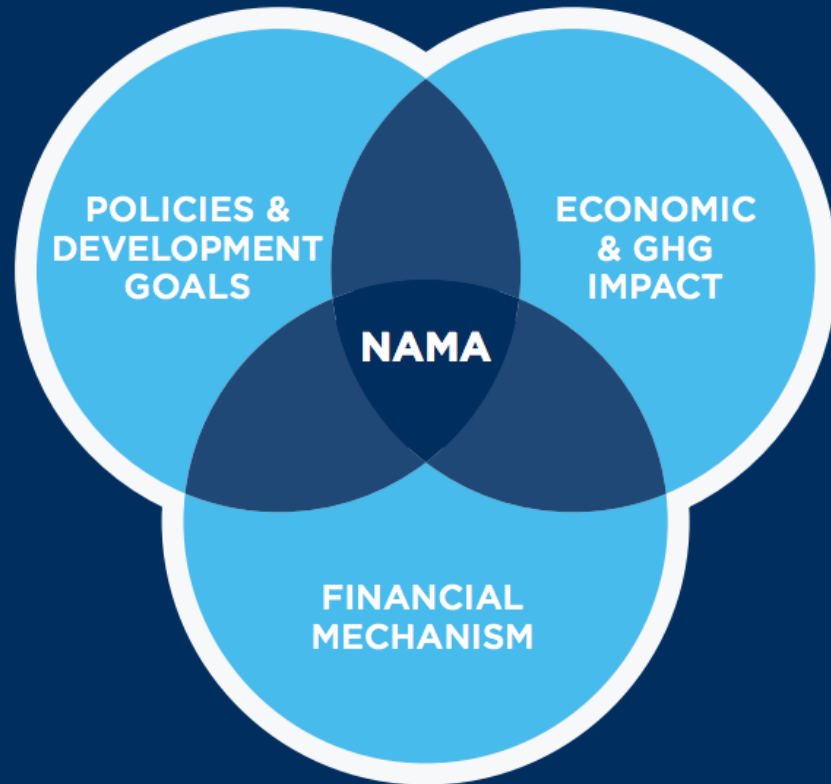
MAIN NAMA COMPONENTS

Policy change and transformational potential: Does the NAMA address key barriers? Is there significant country ownership? Does it help to meet development goals?

GHG mitigation and economic impact: Does the NAMA reduce GHG emissions? What are the co-benefits? Is the proposed action economic?

Sustainable financing mechanism: Is there significant private sector involvement? Does the financial mechanism leverage additional funds?

3 KEY ELEMENTS TO A NAMA



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POLICY CHANGE AND TRANSFORMATIONAL POTENTIAL



Stan Kolar, CCAP

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OBJECTIVES OF THE PAKISTAN RENEWABLE ENERGY NAMA & BARRIERS TO ACHIEVING THEM

OBJECTIVE

- Increase renewable energy capacity by 3,000 MW by 2020.

BARRIERS TO ACHIEVING RE OBJECTIVE

1. Lack of transparent regulation and equal access to the grid
2. Intermittent supply
3. Higher capital costs of renewables
4. Financial Risk and uncertainty
5. Established energy monopolies
6. Lack of grid capacity to distribute RE
7. Insufficient technical & human capacity

PURPOSE OF TRANSFORMATIVE POLICY CHANGES

- To remove or overcome barriers and create an enabling environment

OVERCOMING REGULATORY OBSTACLES

Policy & Regulatory Prerequisites

Economic & fiscal drivers

Risk Reduction: Financial mechanisms

① **Interconnection standards and grid regulation**

- Need to balance between real technical concerns and providing equal access to the grid on non-discriminatory basis.
- Standards should be very clear, enforceable, and should give no reason for different interpretation of criteria by generator and grid operator.
- Responsibilities for engineering, permitting, construction, cost-sharing (if any), and commissioning should be clearly delineated
- Differentiate projects by location.
- Mandatory grid connection: require grid operator to connect RE projects above a certain size to the grid

WHAT POLICY INTERVENTION IS NEEDED? (2)

Policy & Regulatory Prerequisites

Economic & fiscal drivers

Risk Reduction: Financial mechanisms

② Build smart grids

- A modernized electrical grid that uses information and communications technology to gather and act on information in an automated fashion to improve the efficiency, reliability, economics and sustainability of the production and distribution of electricity
- Smart grids can reduce intermittency problems of RE, but regardless of RE, help operate grid more effectively.
- Many smart grid solutions do not require high capital investments
 - Weather forecasting integration into daily grid operations
 - Demand respond control
- Can help Pakistan with current grid problems

WHAT POLICY INTERVENTION IS NEEDED? (2)

Policy & Regulatory Prerequisites

Economic & fiscal drivers

Risk Reduction: Financial mechanisms

③ Streamline and simplify **project approval process**

- Bureaucratic
- Involves too many steps especially for small projects
- Requires unnecessary obligations (LoI by regulator is provided only after “acceptable” bank guarantee. This will rule out most small developers and small projects.
- Issuance of Letter of Support by regulator is issued only after provision of “performance guarantee”
- Investor needs to execute “security package”
- For small projects these obligations are prohibitive

WHAT POLICY INTERVENTION IS NEEDED? (3)

Policy & Regulatory Prerequisites

Economic & fiscal drivers

Risk Reduction: Financial mechanisms

④ Establish **Renewable Portfolio Standards**

- Mandatory obligations by generating & distributing electric utilities to deliver RE
- Utilities could comply by producing RE on their own, or purchasing it from independent producers
- Self generation by customers could also qualify
- This can create favorable environment for RE investments at all levels

WHAT POLICY INTERVENTION IS NEEDED? (4)



⑤ Decide on scope of policies to increase **economic attractiveness**

– Policies to increase long-term returns

- Feed-in tariffs
- Renewable energy obligations/certificates
- Tax benefits
- Credit guarantees

Partially exists

Does not exist

Exists or partially exists

– Policies to reduce upfront capital costs

- Investment rebates

Does not exist

– Policies to reduce risks

- Exchange rate guaranteed
- PPA sovereign guarantees
- Resource availability protection

Exists

WHAT POLICY INTERVENTION IS NEEDED? (5)



⑥ Establish clear and transparent **price support & purchase obligations**

- Feed-in-tariff
 - Currently available only for solar electricity
 - Could be established for other sources, and be based on levelized costs of electricity
- Net metering
 - No net metering regulations exists
 - Need to define clear obligation by grid operator to provide net metering upon request, during specified time period
 - Need to decide if costs of NM to be shared by all customers, or only NM customers
- Negotiated or tendered PPA
 - Currently little incentives on the part of monopolies to provide attractive terms to independent generators

OVERCOMING FINANCIAL RISK AND UNCERTAINTY: FINANCIAL MECHANISMS

Policy & Regulatory Prerequisites

Economic & fiscal drivers

Risk Reduction: Financial mechanisms

Financial Mechanisms

Risks/Barriers	Instrument
Perceived credit quality of borrowers or entering a new sector	Partial Credit Risk Guarantee – but not helpful in high interest rate environments
High transaction costs of smaller-scale projects	Special Purpose Entity (SPE) to bundle projects for investment and implementation
Lack of familiarity with technology	Performance Guarantee
High interest rate environments and/or lack of project revenues to cover market- terms of financing	Revolving Fund Extension of lending maturities Soft loans Co-financing with local banks
Lack of capacity in local banks	Special Funds

BIRD'S EYE VIEW: OVERCOMING RE BARRIERS

				Barriers to Renewable Energy					Score
				Utility and regulatory opposition	Lack of equal access to the grid	Higher capital costs of renewables	Financial risk and uncertainty	Intermittent supply	
Supporting RE Policies	Pre-requisites	Pre-requisites	Interconnection Standards	✓	✓		✓		3
			RPS/Purchase Obligations	✓			✓		2
			Negotiated PPAs	✓			✓		2
	Drivers	Economic Policies	FITs			✓			1
			Reverse Auction			✓			1
			Tax Credits			✓			1
			RE Certificates			✓			1
			Sovereign guarantees				✓		1
		Policy Measures	Mandatory grid connection	✓	✓		✓		3
			Streamline project approval			✓			1
			Net metering			✓		✓	2
			Exchange rate guaranteed				✓		1
			Resource availability protection				✓		1
		Financial Mechanisms	Loan Guarantee Fund/Soft loans				✓		1
			Parial Credit Risk Guarantee				✓		1
			Performance Guarantee				✓		1
			Special Purpose Entities (SPEs)				✓		1
	Future		Smart grids			✓		✓	2

THANK YOU

For more information,
please visit us at
www.ccap.org.