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## **Non-Tariff Measures in RE Policies**

Submitted by: World Bank



**Trade Policy Dialogue on Environmental  
Goods Non-Tariff Measures  
Big Sky, United States  
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## NON-TARIFF MEASURES IN RE POLICIES

*Findings from "Assessing Investment Climate  
for Doing Climate Business" pilot project in  
South Asia*

-Muthukumara Mani and Mahesh Sugathan,  
APEC Trade Policy Dialogue-12 May 2011,  
Big Sky-Montana.

## Importance of technology-diffusion and transfer for climate-change

- ▣ Continuing climate change at current rates will pose increasingly severe challenges to development (WDR 2010).
- ▣ Historical responsibility for emissions is with developed countries.
- ▣ But future growth in emissions driven by developing countries.
- ▣ Mitigation measures more cost-effective in developing country context. Potential for low-carbon growth and co-benefits.
- ▣ Enables technological leap-frogging.

### Private sector investment as a key driver of technology–diffusion and transfer

- ▣ Public financing for clean energy is important but expected to contribute only a small share of total investment needed for low-carbon transition in DCs [of total need of USD 22 trillion for energy investment as projected by IEA]. Private Sector will need to contribute lion's share.
- ▣ Hence important to understand drivers of private sector investment and the main elements of an enabling environment.

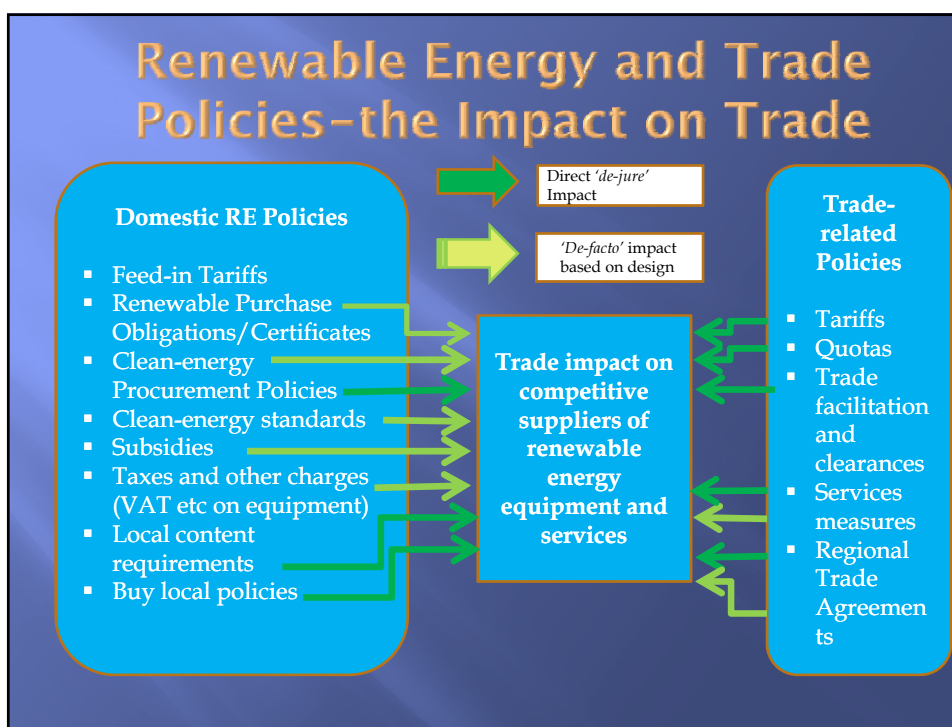
### Barriers to Private-sector investment in clean energy

- ▣ General climate for doing business ( infrastructure, political and macro-economic stability, market-size, skilled and educated labor force, rule of law, financing and credit).
- ▣ Possible Climate-specific drivers: Domestic energy policy and regulation (standards, pricing and subsidies), voluntary and binding commitments towards GHG reduction, access to information and transparency on climate investment opportunities, availability of climate finance including on concessionary terms ( venture capital, commercial credit for climate investment), domestic carbon markets, IPR regimes, voluntary market-based incentives (labelling).

## Implementation is Critical!

### –Results of consultations with private sector in South Asia

- ▣ Clarity and coherence: *in policies*
- ▣ Consistency: *across sectors/regions*
- ▣ Commitment to/ Credibility of: *policies and targets*
- ▣ Clearances: *speedy*
- ▣ Capacity: *of agencies*
- ▣ Compliance: *of utilities/RE purchasing entities*
- ▣ Co-ordination: *across agencies*
- ▣ Collateral: *easy access to financing*
- ▣ Connectivity: *access to grids*
- ▣ Cartography: *data and resource maps*



## Tariffs and Non-tariff Barriers

- ▣ **Tariffs** are customs duties charged on equipment at the border.
  - *Ad-valorem*
  - *Specific*
  - *Bound*
  - *Applied*
- ▣ Tariffs are transparent and impacts on price of equipment is immediately known.
- ▣ **Non-tariff measures** are much more diverse.
  - *De-jure* trade-restrictive (ranging quotas, import-licensing, clearance delays)
  - *De-facto* restrictive in the way measures are designed or implemented (eg. Standards set in favour of domestic producers).

## Change in Trade Volumes in High GHG Emitting Developing Countries from Liberalizing Clean Energy Technologies

Technology Option	Liberalization Scenario 1 (%)	Liberalization Scenario 2 (%)
	Elimination Tariff (only)	Elimination Tariff and Nontariff Barriers
Clean coal technology	3.6	4.6
Wind power generation	12.6	22.6
Solar power generation	6.4	13.5
Efficient lighting technology	15.4	63.6
All 4 Technologies	7.2	13.5

Source: International Trade and Climate Change: Economic, Legal and Institutional Perspectives, World Bank (2008)

## RE Policy, Regulation and Incentives (PRIs) in South Asia

### ▣ Cross-cutting

	Cross-cutting Grid-Connected PRI Indicators	India	Pakistan	Sri Lanka
1.	Existence of Law and Policy on Renewable Energy	X	X	X
a.	<i>Existence of RE Policy</i>	X	X	X
b.	<i>Existence of RE Law</i>	X	X	X
2.	Existence of RE Target	X	X	X
3.	Obligation for Designated Entities to Purchase/Off-take RE	X	X	X
4.	Availability of Tradeable Instruments for RE Generation	X		

## RE Policy, Regulation and Incentives (PRIs) in South Asia

### ▣ Solar-PV

	Solar PV Grid-Connected Indicators	India	Pakistan	Sri Lanka
1.	Availability of Designated Preferential Tariffs for Solar PV	X		
2.	Grants, subsidies and incentives related to capital/Investment tax credits	X	X	
3.	Incentives linked to generation/Production tax-credits	X		
4.	Income-tax holidays/exemptions	X	X	X
5.	Trade-related Incentives			
	-Customs-duty exemptions (zero duty on major components and equipment)	X	X	X
	-Absence of 'local-content' requirements for solar PV power producers		X	X
6.	Other tax-exemptions (Sales, VAT, Energy Tax etc)	X	X	



## RE Policy, Regulation and Incentives (PRIs) in South Asia

### □ *On-shore Wind*

	Onshore Wind Grid-Connected Indicators	India	Pakistan	Sri Lanka
1.	Availability of Designated Preferential Tariffs for Onshore Wind	X	X	X
2.	Grants, subsidies and incentives related to capital/Investment tax credits	X		
3.	Incentives linked to generation/Production tax-credits	X		
4.	Income-tax holidays/exemptions		X	X
5.	Trade-related Incentives			
	-Customs-duty exemptions (zero duty on major components and equipment)		X	X
	-Absence of 'local-content' requirements for onshore wind power producers	X	X	X
6.	Other tax-exemptions (Sales, VAT, Energy Tax etc)	X	X	X

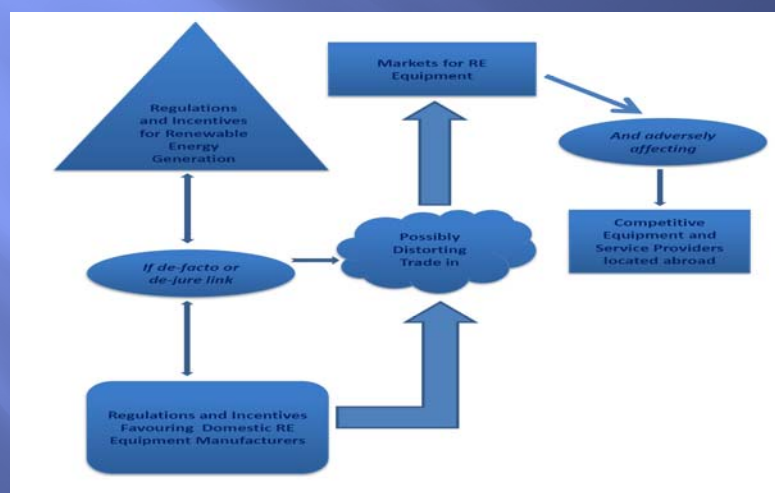
## I.Subsidies and Grants

- Crucial for enabling RE off-take and sustainability
- However design is important-is it neutral as to country of origin of equipment?
- Subsidy for RE power producers vs Subsidy for equipment manufacturers.
- If there is de-jure or de-factor link so as to benefit local equipment producers *and* it causes 'injury' to producers abroad it may be actionable under WTO Agreement on Subsidies and Countervailing Measures (SCM).
- Incentives for local equipment manufacturers should also be designed so they are not 'actionable' under WTO SCM rules.

## Examples of RE subsidies from South Asia

- ▣ Preferential tariffs for power producers are prevalent (as shown in figures above) but may not be a problem if they benefit 'power' producers' and 'consumers'.
- ▣ Countries may also provide active incentives for RE manufacturing.
- ▣ Eg: In India there exists 'Special Incentive Package Scheme' (SIPS) for semi-conductor fabrication, manufacturing of state of the art cells and modules etc. 20 percent of capital expenses covered for SEZ units and 25 percent for non-SEZ units.
- ▣ Again manufacturing subsidies per se cannot be presumed 'actionable' under WTO. Depends on design and context.

## Trade and RE subsidies link





## II.Taxes ,charges and other requirements–RE equipment

- ▣ Import-related excise duties and VAT.
- ▣ In many cases exemptions are provided for RE development.
- ▣ Requirement under Article III
- ▣ If certain technologies provide the same service-eg: Solar CSP and PV equipment, differential taxation could encourage one tech at the cost of others even though measure may be *de-jure* non-discriminatory.
- ▣ HS-codes may be one way of determining 'like products'. Need to be determined in relation to context of use etc.

## Taxes ,charges and other requirements–Renewable Electricity

- ▣ Differential taxation on electricity 'imported' from across the border also raises issues esp if the different taxes are applied based on nature of electricity (renewable or non-renewable). ('Like-product' /DCS issue may arise again).
- ▣ In future this may assume significance as grid-interconnection increases esp in developing world.
- ▣ Even-handed application of same rates to 'domestic' and 'imported' sources would matter.

## Taxes ,charges and other requirements–Renewable Electricity

- ▣ 'Minimum Price' schemes for RE
- ▣ Renewable Purchase Obligations (RPOs)
- ▣ Trade in RE certificates
- ▣ Measures affecting sale of RE certificates: GATT or GATS?

## III. Local Content Requirements

- ▣ 'Indigenisation' encouraged by governments worldwide.
- ▣ Are 'local content' policies mandatory for all RE projects or only under specific-schemes? For eg: In India LCRs applicable only under Nehru Solar Mission. Other schemes do not have them. Hence trade effect may be less as compared to country-wide LCR scheme.
- ▣ Are these schemes linked in any way to government procurement (GP)? Eg: If the entity buying electricity generated is a public sector company or government entity. If power is further sold onto consumers then it may not be GP.
- ▣ This is relevant as many countries not bound by GPA.

## India example-Specific guidelines under various JNNSM schemes

- ▣ Off-grid
  - Use of imported 'complete' PV systems not permitted.
  - Use of imported components of PV system permitted subject to adequate disclosure and compliance to specified quality norms and standards.
- ▣ Rooftop PV and Small Solar-power generation program
  - Projects based on crystalline-silicon technology should use modules manufactured in India. No LCRs for projects using other technologies.
- ▣ Grid-connected Solar Projects
  - For solar PV technology, it is proposed that all deployment under the Draft JNNSM Phase I Guidelines should use a module manufactured in India. It is also proposed to mandate use of cells manufactured in India.
  - For solar thermal technology, it is proposed that 30% of the total project cost should be utilised for domestic equipment.

## IV. Standards and Accreditation Procedures

- ▣ Lower costs for manufacturers due to bigger scales of production
- ▣ Enables easier and quicker deployment among projects and countries
- ▣ Standards could be set nationally-can create burdensome requirements for producers and dampen 'scale economies.'
- ▣ Accreditation procedures can also constitute an NTM. Requiring certification from select locally-based accreditors can raise costs for exporters.
- ▣ International Electro-technical Commission (IEC) has developed standards in a no: of renewable energy sectors-working on new areas such as ocean power.

## Example of Technical Requirements in JNNSM

- ▣ Solar PV
  - PV modules used in the grid solar power projects must qualify to the latest edition of any of the following IEC PV module qualification test or equivalent or equivalent Bureau of Indian Standards (BIS).
    - ▣ Crystalline Silicon Solar Cell Modules -IEC 61215
    - ▣ Thin Film Modules- IEC 61646
    - ▣ Concentrator PV modules- IEC 62108

- Must also conform to safety ( IEC 61730) and corrosion standards (IEC 61701)
- PV modules must be tested and approved by one of the IEC authorized test centers or approved national test centers.
- Performance standards also laid down.
- Traceability: Each PV Module used in any solar PV project to have RIF identification tag indicating manufacturer of cell and module with month and year of manufacture and country of origin and name of test lab issuing IEC certificate.



### **Any Link between Subsidies/Incentives and Technical Standards?**

- ▣ Do incentive schemes specify performance or international standards or do they lean towards stricter national standards/specific equipment types?
- ▣ Red flag may be raised if incentives linked to use of specific equipment/domestic equipment standards rather than being based on performance standards.
- ▣ Need to consider any linkage of subsidies with type/specifications of equipment-i.e.is this justified? Does the objective of the incentive program and performance criteria( taking into account local conditions) require certain types of equipment or specifications?

### **Any Link between Subsidies/Incentives and Use of specific service providers?**

- ▣ Are subsidies/incentive-schemes for RE installations linked to use of specific service providers?
- ▣ Examples of such measures might be to ship equipment in ships/vessels flying a certain country's flag, hiring only local technicians and staff, using only locally-based accreditation agencies.
- ▣ In such cases a country will need to consider these in terms of its GATS obligations/other RTA commitments for services.



## **'Buy Local or National' Policies**

- ❑ Public-spending programmes often seek to incentivise local industries
- ❑ 'Buy-America' provisions under the America Recovery and Reinvestment Act-exceptions allowed in certain cases (for example if project costs are increased by more than 25 percent).

## **Trade Facilitation and Import Clearances**

- ❑ Cumbersome clearance procedures and delays at customs adds to cost of doing business.
- ❑ Many private sector respondents interviewed in South Asia felt import clearances could be made 'quicker.'

### Trading Across Borders–Findings from the WB Doing Business Initiative–2011

Economy	Document s to Export (Number)	Time to Export (Days)	Cost to Export (USD per Container)	Document s to Import (Number)	Time to Import (Days)	Cost to Import (USD per container)
East Asia and Pacific	6.4	22.7	889.8	6.9	24.1	934.7
Asia	6.4	26.7	1651.70	7.6	28.1	1845.40
Latin America and Caribbean	6.6	18	1228.30	7.1	20.1	1487.90
Middle-east and North Africa	6.4	20.4	1048.90	7.5	24.2	1229.30
OECD	4.4	10.9	1058.70	4.9	11.4	1106.30
South Asia	8.5	32.3	1151.60	9	32.5	1744.50
Sub-saharan Africa	7.7	32.3	1961.50	8.7	38.2	2491.80

Source: Doing Business 2011: Making a Difference for Entrepreneurs, The World Bank Group. [www.doingbusiness.org](http://www.doingbusiness.org)

### Trading Across Borders–South Asia specific data– 2010

Economy	Document s to Export (Number)	Time to Export (Days)	Cost to Export (USD per Container)	Document s to Import (Number)	Time to Import (Days)	Cost to Import (USD per container)
Bangladesh	6	25	985	8	31	1,390
India	8	17	1,055	9	20	1,025
Nepal	9	41	1,960	10	35	2,095
Pakistan	9	21	611	8	18	680
Sri Lanka	8	21	715	6	19	745

Source: Doing Business 2011: Making a Difference for Entrepreneurs, The World Bank Group. [www.doingbusiness.org](http://www.doingbusiness.org)

▣ THANK YOU!

For further questions and comments please  
contact:

- Muthukumara Mani. Email:  
[mmani@worldbank.org](mailto:mmani@worldbank.org)
- Mahesh Sugathan. Email:  
[mahesh.sugathan.wb@gmail.com](mailto:mahesh.sugathan.wb@gmail.com)