Setting a scene: Framing efforts to promote private sector's actions toward introducing low carbon technologies with business benefits: Role of different players

> JICA SPI-NAMA/ Low Carbon Technology Assessment Team



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### **Outreach event on LC-Tech**

Agenda			
14:00-	Opening remarks		
14:10-	Setting a scene: Framing efforts to promote private sector's actions		
15:10-	Promotion of LC-Tech (Presentation from Private Sector)		
16:10-	Open discussion		
16:45-	Wrap up the discussion		

## **Objectives**



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- 1. Identifying and Assessing Low Carbon Technologies applicable to each mitigation option of INDC & F-gas (HFC)
- 2. Explores concrete Opportunities for Technology Transfer / Deployment

### **NDC implementation toward Low Carbon Development**

### NDC

## A national climate change action strategy aiming to GHG emission reduction

### **Energy / Transport**

- 17 options are identified, 10 options from Energy efficiency and industry, 7 options from Power generation, 3 options from transport sector.
- It reflects National Target Programme on Energy Efficiency (2006), Law on Economical and Efficient Use of Energy (2010) as well as the Power Development Master Plan No. VII (2011).

#### Agriculture

- 11 out of 15 options are higher priority.
- It mainly consist of crop production subsector related activities, followed by irrigation, livestock and fisheries subsectors.

#### LULUCF

- 9 options including protection national/coastal forest, plantation of coastal forest, national forest regeneration are described.
- It reflects the goal that Viet Nam will reduce its GHG emissions by 8% by 2030 compared to the BAU scenario.

#### Waste

- 4 options are identified namely organic fertilizer production, landfill gas recovery, recycling of solid waste and anaerobic treatment of organic solid waste.
- Mitigation measures are identified in the policy document of the waste sector in Viet Nam, i.e. "Decision No.2149/QD-TTg".

#### F-gas

Added!

- F-gas sector is not included in the INDC, yet it has high potential for GHG emission reduction.
- There is no regulation is developed in Viet Nam.



### NDC at glance – Summary of Prioritizing mitigation options

	Sector	Prioritized mitigation		
	Energy	<ul> <li>High efficiency air conditioner for household,</li> <li>LED/CFL</li> <li>Solar water heaters</li> <li>2 options from cement 5 options from steel</li> <li>7 options from Refinery</li> <li>2 options from Fertilizer</li> <li>2 options from Fertilizer</li> <li>2 options from pulp and paper</li> <li>Coal power generation (USC),</li> <li>Solar PV generation,</li> <li>Natural gas power generation</li> </ul>		
	Transport	<ul> <li>4 options from modal shift : e.g. Passenger – Urban railway (Metro, LRT, monorail), Passenger – Bus (Bus route development/improvement)</li> <li>14 options from energy efficiency : e.g. Road – Improve fuel efficiency of vehicle (Low emission vehicle (High fuel economy vehicles, not including Hybrid/Electric/CNG/LPG))</li> <li>1 option from fuel switching: e.g. Gaseous fuel – CNG, LPG (CNG for buses, trucks, taxis and waterways)</li> </ul>		
	Agriculture	<ul> <li>Increased used of biogas,</li> <li>Reuse of agricultural residue as organic fertilizer,</li> <li>Introduction of biochar (Small scale),</li> <li>Introduction of biochar (Small scale),</li> </ul>		
	LULUCF	<ul> <li>Protection of Natural Forest (1 million ha and 2.2 million ha) ,</li> <li>Protection of Coastal Forest (100,000, 10,000, and 30,000 ha),</li> <li>Natural forest / Production Forest Regeneration (200,000 ha),</li> <li>Reducing emissions from forest degradation and deforestation (REDD+)</li> </ul>		
	Waste	Semi anaerobic landfill operation		
Added!	F-gas	<ul> <li>Destruction of F-gas at Cement Kiln,</li> <li>Leakage Inspection (Maintenance) of Refrigerator, Cold Storage and Air Conditioner of Commercial sector</li> </ul>		

# **Barrier Analyses**

	Policy	Investment
Energy	<ul> <li>No mandatory energy efficiency standard and labeling</li> <li>No environmental standard for CH4</li> </ul>	<ul> <li>Low incentive for energy efficiency measure (Industry)</li> <li>Subject to payment for forest ecosystem service (Power)</li> </ul>
Transport	<ul> <li>Standard not yet available for bioethanol</li> </ul>	<ul> <li>Demand Risk, to secure the planned demand to fulfill project profitability (modal shift)</li> </ul>
Agriculture	<ul> <li>Cross sectoral issue may occur between livestock and food security.</li> </ul>	<ul> <li>High initial investment cost required</li> </ul>
LULUCF	Land use prioritization	Limited financial resources
Waste	<ul> <li>Strategy for commercializing compost products should be in place</li> </ul>	<ul> <li>Limited demand (Anaerobic treatment of organic solid waste)</li> </ul>
F-gas	<ul><li>No policy framework</li><li>Low awareness of stakeholders</li></ul>	<ul> <li>Price competitiveness of low GWP refrigerant</li> </ul>

## Potential Avenues for Private Sector Engagement in Low Carbon Development

- Government's policy lead can facilitate to introduce for low carbon technologies (standards, regulations, procedures)
- Companies should seek <u>opportunities</u> being provided through <u>domestic and international climate finances.</u>
- Demonstration of successful cases may encourage business initiatives for their investment decisions



Promoting energy efficiency, IDFC2013

### Energy saving labeling in Viet Nam

- The labeling of Viet Nam energy star was launched and it became mandatory
- It applies to household appearances, industry, office devices, renewable energy devices and materials
- Self-promotion for company products and quality assurance of manufacture processes are confirmed when purchasing the product.

### Benchmark system in industry sector

- Benchmark is developed for beverage and steel in 2016, followed by chemical, plastic, paper and pulp and cement.
- It can mobilize energy saving in industry sector and can promote to introduce low carbon technology.



## Thank you for your attention