

# Incorporating Sustainability into Trade Operations

IFC Global Trade Facilitating Program

# Outline of the presentation

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1. **Definition of Sustainability & IFC's Support**

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2. Eligible Trade Operations

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3. Reporting Requirements

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# What means “Sustainability” for trade?

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- ▶ **Addressing climate change, and ensuring environmental and social sustainability** is one of five key pillars of IFC overall strategy since 2004
- ▶ In trade, **IFC is keen to support trade with materials and goods** supporting ideas of sustainability and helping to mitigate climate change.
- ▶ We see sustainability here **as trade with goods, materials and technologies, which will be end used primarily in Sustainable Energy areas, like:**

Energy Efficiency

Renewable Energy

Cleaner Production

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# Sustainable Energy Technology Trade

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## Technology for more efficient use of limited resources

### Energy Efficiency (EE)

The same **OUTPUT** with less energy (heat, electricity) consumption

- Technology for facility upgrades
- Energy management systems
- Efficient lighting, heating, cooling
- Building insulation materials
- Boiler retrofitting
- Cogeneration
- Efficient production lines
- Etc.

### Cleaner Production (CP)


The same industrial **OUTPUT** with less environmental contamination and/or more efficient use of limited resources;

- Technologies for energy savings;
- Tech for efficient use of water
- Waste management technologies
- Technology for emission reduction;
- Protection of natural habitats;
- Etc.

## Technology for generation of clean energy

### Renewable Energy (RE)

Any sub-project that generates energy from renewable sources (energy obtained from sources that are natural, rapidly replenished, and essentially inexhaustible)

- Hydro power
  - Wind turbines
  - Biogas cogenerations
  - Solar panels
  - Biomass boilers
  - Etc.
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# What are Energy Efficiency Technologies?

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<b>Sector</b>	<b>Potential Recipients</b>	<b>Equipment to be traded</b>
<b>Industrial</b>	Industrial companies, SMEs and MSMEs	<ul style="list-style-type: none"><li>•Energy efficient production lines</li><li>•Waste heat recovery devices</li><li>•Heating systems upgrades</li><li>•Efficient boilers and heaters</li><li>•Boiler fuel switching (coal-gas, coal-biomass)</li><li>•Electricity peak-load control systems</li><li>•Cogeneration units</li></ul>
<b>Commercial</b>	Housing complexes operators, Maintenance companies; Housing developers	<ul style="list-style-type: none"><li>•Heating and ventilation equipment</li><li>•Control and metering systems</li><li>•Electricity peak-load control systems</li><li>•Efficient air-conditioners</li><li>•Heat pumps, solar water heaters</li></ul>
<b>Municipal</b>	Municipalities, District heating companies, Street-lighting operators, Public buildings operators	<ul style="list-style-type: none"><li>•Boilers for district heating as well as for public/municipal buildings</li><li>•Heat exchangers, pipes for infrastructure projects</li><li>•Cogeneration units</li><li>•EE transport vehicles (LPG buses)</li></ul>



# What are Renewable Energy Technologies?

Source	Type of Project	Equipment to be traded
<b>Small Hydropower</b>	Run of river generation projects or shaft power at industrial sites; small scale (maximum 10MW); stand-alone power system (on- or off-grid)	Turbines, power generators Pipes, other technologies Control systems Power transformers, transmission
<b>Wind</b>	Wind farms; stand-alone power system (on- or off-grid); individual turbines for residential or small-scale use; Water-pumping	Wind turbines, control systems Poles, construction bases Power transformers, transmission
<b>Biomass &amp; biogas</b>	Organic matter used to generate electricity (e.g. wood and agricultural residues, plants, trees, municipal waste, landfill gas, animal waste); stand-alone power system (on- or off-grid)	Boilers, technology for Biomass processing, dryers Cogeneration units, power generators Landfill gas capturing technologies Fomenters and auxiliary equip.
<b>Solar</b>	Photovoltaic power and solar thermal Buildings/residential systems; stand-alone power system (on- or off-grid); Water heaters, water purification	PV solar panels, support equip. Converters Solar hot water heaters, tanks



# What are Cleaner Production Technologies?

Sector	Opportunity	Example
<b>Agri-food</b>	Reducing the consumption of resources (water and energy), increasing production yields and reducing the volume and organic load of effluent discharges.	Waste-water and habitat management for shrimp farms in Honduras saved costs of cleaning input water, replacing lost stock and managing pond erosion.
<b>Construction</b>	Reducing and recycling construction waste on site and reduced increased fuel efficiency of vehicles and equipment.	In South Africa, construction methods that use of renewable resources, operate efficiently, and require relatively little maintenance add to the profitability of Spier Estate.
<b>Manufacturing</b>	Reduction of water, energy and chemical use; better management of wastewater; creating a recycling loop; minimization of hazardous wastes	Process improvements and a \$25,000 capital investment in an Indian pulp and paper mill had a payback period of less than 3 months.
<b>Mining</b>	Reduction of water and energy use; utilization of methane to generate electricity; smelting processes which generate heat to reduce energy use;	Mexico's largest producer of mineral lime adopted a water recovery program that allowed it to recover 47.4% of groundwater for industrial facilities in desert areas.
<b>Utilities</b>	Fuel-switching to reduce the consumption of fossil fuels; co-generation; waste minimization and recycling	The Philippines' CEPALCO saves on operating costs by using solar photovoltaic technology in Mindanao rather than increasing its fossil fuel generation to meet growing demand.



# How to establish the sustainability product

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- ▶ Eligibility criteria (broad definition at the slide 5)
- ▶ Examples of eligible technologies (next section)
  
- ▶ Minimal additional burden for bank, only simple reporting template to inform about few details
- ▶ Information based on LC document
- ▶ Requirement/Option to get further inputs from dedicated IFC team (FMS)
  
- ▶ Be sure it is worth of your attention ... it will be rewarded!





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# Detailed examples of eligible technologies 1

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## **Boilers**

- ▶ Fuel switching e.g. oil to gas, coal to biomass etc.
- ▶ New more efficient boilers (modular boilers allowing better load matching)
- ▶ Heat recovery devices
- ▶ Feed water preparation technology
- ▶ Pump control, ventilation control systems
- ▶ Combustion control systems
- ▶ Technology for conversion from steam to hot water
- ▶ Insulation materials (for boilers and pipes)
- ▶ Combined generation of heat and power (cogen, cogeneration)
- ▶ Steam or gas turbines to be installed to existing boilers
- ▶ ORC technology, etc.



## Detailed examples of eligible technologies 2

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### **Buildings Technologies**

- ▶ Technology for decentralizing or centralizing local hot water supply
- ▶ Efficient lighting systems
- ▶ Ventilation systems (including heat recovery)
- ▶ Infra-red heating
- ▶ Automatic doors and shutters
- ▶ Energy management hardware/software
- ▶ Space heating systems, efficient heaters for workshops
- ▶ Building envelope insulation materials, efficient windows
- ▶ Technologies for heating systems retrofits, etc.



# Detailed examples of eligible technologies 3

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## **Motors and Drives**

- ▶ High efficiency electric motors
- ▶ Variable speed drives

## **HVAC**

- ▶ Customized HVAC controls and energy management systems
- ▶ High efficiency motors and variable speed drive motor controls
- ▶ Heat recovery technology

## **Compressed air**

- ▶ New compressors, heat recovery
- ▶ Automatic controls of compressors and distribution networks
- ▶ Technology for cooling of compressors



# Detailed examples of eligible technologies 4

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## **Lighting technology (external, internal)**

- ▶ Efficient lamps and ballasts
- ▶ Automatic lighting controls (i.e. timers or motion sensors, daylight sensors), new fixtures and reflectors
- ▶ Street lighting system components, control systems

## **District Heating Systems (DH)**

- ▶ Boilers, heat exchangers
- ▶ Combined generation of heat and power (cogen, cogeneration)
- ▶ Process control and management systems
- ▶ Pre-insulated pipes and fittings

## **Advanced transport technologies**

- ▶ Hybrids, LPG buses



# Detailed examples of eligible technologies 5

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## **Technologies for Use of Renewable Energy Sources**

- ▶ Wind power turbines, poles, transformers & transmission lines
- ▶ Small hydro power plants equipment
- ▶ Photovoltaic systems incl. PV panels, convertors, holders
- ▶ Solar thermal energy technology
- ▶ Heat pumps & piping
- ▶ Biomass boilers
- ▶ Biogas cogeneration units, fermentors, technology for landfill gas capturing
- ▶ Geothermal energy utilization technology



# What is not sustainable...?

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- ▶ **Technologies for fossil fuel based power and heat generation**
  - ▶ Technologies using coal and other coal based fuels, oil, petroleum products
- ▶ **Fossil fuels mining and processing technology**
  - ▶ Coke production, refineries
- ▶ **Traditional transport technologies**
  - ▶ Regular cars, buses, trucks, airplanes
- ▶ **Technologies for greenfield projects**
  - ▶ Must be replacement of existing technology (not applicable for renewable energy)
- ▶ **Technologies from IFC exclusion list (see annex)**



# Why to do it all?

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- ▶ IFC is in position to incentivize increased share of trade of “sustainability friendly technology” on the total trade volume
- ▶ It can be part of “normal” trade guarantee line or new dedicated sustainable trade guarantee line
- ▶ **Guarantee price incentives are part of the package**





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# Reporting requirements

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- ▶ Reporting on transactions to be included into the portfolio
- ▶ Information primarily from LC documentation
- ▶ Client info (sector, activities)
- ▶ Project info (type of technology/goods traded)
- ▶ Expected energy benefits (energy savings/energy production)
- ▶ Simple spreadsheet
- ▶ IFC has dedicated team ready to confirm/discuss eligibility



# Reporting information on underlying goods

Description of the Transaction and the Client						Energy Efficiency Projects Indicators						Renewable Energy Projects Indicators					
Transaction ID	Transaction Amount (Euro million)	Client Name	Type of Client (SME, Corporate, etc)	Economy Sector of the Client	Key Activity of the Client	Non-process Related Technology (Energy Supply/Demand)				Industrial Process Related Technology (production lines)				All Technologies			
						Equipment involved in the Transaction (The Project) (brief description) (use Annexure A for reference) :				Please use most relevant here				Please use most relevant here			
						Baseline - Average Energy Consumption of the Original Equipment (MWh/year, three year average) (If other energy units used, please describe) :	Expected Energy Savings from New Equipment (Subject of Transaction) in %	or Expected Energy Savings from Equipment which is the Subject of Transaction in Physical Units (MWh/year) :	or Size of the Equipment in the Transaction (MW, GJ etc.) and average yearly operation (hours) :	Type of fuel/energy which has been saved (for example electricity, coal, heating oil etc) :	Average Unit Energy Consumption with Original Equipment : (MWh/unit of production)	Expected Energy Savings from Equipment which is the Subject of Transaction : (% of Unit Energy Consumption)	or Expected Energy Savings from Equipment which is the Subject of Transaction in Physical Units (MWh/year:unit of production (if using another energy units pls.specify) :	or Size of the Equipment in the Transaction (MW, GJ etc.) and average yearly operation (hours)	Type of fuel/energy which has been saved (for example electricity, coal, heating oil etc)		
1	6.72	Client A	Corporate	Energy Generation	Generation of Power & Sale to the Utility	12 generators of Gamesa AE-59 Model - 800kW Wind Turbine										9.50	25,230
2	5.00	Client B	SME	Dairy	Dairy Products	Pasteurization line					5	25	100,000		electricity		
3	3.00	Client C	Corporate	DH Company	Production of heat	Biomass boiler replacing the coal fired boiler	250,000	50,000		coal						5.00	
4	6.00	Client D	SME	Textile	Textile products	Heat exchanger for boiler house	120,000	20,000		coal							



# Annex: IFC Exclusion List

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The IFC Exclusion List defines the types of projects that IFC **does not** finance. IFC does not finance the following projects:

- ▶ Production or trade in any product or activity deemed illegal under host country laws or regulations or international conventions and agreements, or subject to international bans, such as pharmaceuticals, pesticides/herbicides, ozone depleting substances, PCB's, wildlife or products regulated under CITES.
  - ▶ Production or trade in weapons and munitions.
  - ▶ Production or trade in alcoholic beverages (excluding beer and wine).
  - ▶ Production or trade in tobacco.
  - ▶ Gambling, casinos and equivalent enterprises.
  - ▶ Production or trade in radioactive materials. This does not apply to the purchase of medical equipment, quality control (measurement) equipment and any equipment where IFC considers the radioactive source to be trivial and/or adequately shielded.
  - ▶ Production or trade in unbounded asbestos fibers. This does not apply to purchase and use of bonded asbestos cement sheeting where the asbestos content is less than 20%.
  - ▶ Drift net fishing in the marine environment using nets in excess of 2.5 km. in length.
  - ▶ For **Trade finance projects**, given the nature of the transactions, FIs will apply in addition to the IFC Exclusion List the production or activities involving harmful or exploitative forms of forced labor<sup>2</sup>/harmful child labor.
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