Bank Alfalah

SUSTAINABLE & GREEN FINANCE
Products/Projects/Initiatives

Sectors / Areas

Sustainable Finance

Sustainable Agriculture Sectors/Areas

a) Crops
b) Irrigation Tools
c) Agricultural Tools
d) Live-stock
e) Pisciculture
f) Crop Storage
g) Poverty Alleviation
h) Others (time-to-time as recognized by Bangladesh Bank)

Along with the above products, financing for Integrated Farming System (IFS) in the specific sectors like horticulture, livestock, fishery, ago-forestry, apiculture etc. to enable farmers not only in maximizing farm returns for sustaining livelihood, but also to mitigate the impacts of drought, flood or other extreme weather events with the income opportunity from allied activities during crop damage.

Sustainable MSME

A. ***Sustainable MSME areas***

1. Women entrepreneur based project financing
2. Rural Based business enterprises project financing
3. New entrepreneur project financing
4. Cluster Based project financing
5. Agricultural product processing industry

B. ***Sustainable MSME industries/projects***

Low Risk Rated (as per ESDD) Micro, Small and Medium enterprises financing with special focus to:

1. Herbal cosmetic manufacturing industries
2. 100% local ingredients-based milk processing industry
3. Handicrafts, Handloom and alike
4. Agro feed manufacturing industry
5. Jute made products manufacturing industry
6. Unani/Ayurvedic/Homeopathic manufacturing industries
7. Rice processing industry
8. Agro equipment manufacturing industry
9. Production of bio pesticide, production of organic fertilizer

10. Bran wood projects
11. Horticulture processing industry

C. Sustainable Finance to other CMSME Priority Projects

1. Helpless/distressed/underprivileged/Marginal group/area-based project financing
2. Project Financing for the sustainability of Third gender, Physically/Mentally challenged person, Tribal people

Socially Responsible activities/projects linked to Sustainable Finance

a) Financing/Investment through MFI (MRA Regulated)/NGO (Govt. Approved) Linkage Mode for capacity building, Education, employment generation including self-employment
b) Financing in trading of green and agro products using ICT/online/e-business platform (as recognized by Bangladesh Bank)
c) Financing in Orphanage/Child Rehabilitation Centre/Old Age Home

Identification of other Sustainable linked finance

a) Low Risk Rated Projects/Initiatives using ESDD checklist (other than Green Finance, Sustainable Agriculture, Sustainable MSME, SRF and Working capital and demand loan of Green Products)

b) Working capital and demand loan of Green Products/projects/initiatives

Green Finance

List of Green Products/Projects/Initiatives applicable for Term Finance

A. Renewable Energy

1. Solar Home System
2. Solar Park
3. Solar Irrigation Pumping System
4. Solar Photovoltaic (PV) Assembly/Manufacturing Plant
5. Solar Water Heater Assembling/Manufacturing Plant
6. Solar Grid
7. Net Metering Rooftop Solar System
8. Solar Pump for Drinking Water
9. Solar Cooker Assembly/Manufacturing Plant
10. Solar Air Heater & Cooling System Assembly/Manufacturing Plant
11. Solar Powered Cold Storage
12. Bio gas plants Establishment of Biogas Plant using following raw materials: (i) Agricultural residues (ii) Community (City/Municipality) based wastes (iii) Industrial wastes.
13. Integrated Cow Rearing and Setting up of Bio-gas Plant
14. Wind Power Plant
15. Hydropower Plant
16. Portable solar charging station

B. Energy & Resource Efficiency

17. Installation of Energy Auditor Certified machineries including boiler in industries for following purposes:
    i. Energy efficiency
    ii. Resource efficiency
    iii. Heat and temperature management
    iv. Air ventilation and circulation efficiency
    v. Business process automation
    vi. Operations management
    vii. Waste management
    viii. Water use management
    ix. Human resources development and management
18. Accounting, inventory management, marketing, sales and security management automation Auto Sensor Power Switch Assembly Plant
19. Energy Efficient Cook Stove Assembly Plant
20. LED Bulb/Tube Manufacturing/Assembly Plant
21. Energy Efficient Lime Kiln
22. Improved Rice Parboiling System

C. Alternative Energy

23. Pyrolysis Processed Oil/Bio-crude Oil/Biofuel Manufacturing Plant
24. Lithium Battery Manufacturing Plant

D. Liquid Waste Management

25. Biological ETP
26. Combination of Biological and Chemical ETP
27. Conversion of Chemical ETP into Combination of Biological and Chemical ETP
28. Central ETP
29. Wastewater Treatment Plant
30. Sewage Water Treatment Plant

E. Solid Waste Management

31. Methane Recovery and Power Production from City/Municipal Waste Plant
32. Compost Production from City/Municipal Waste Plant
33. Hazardous Waste Management Unit/Plant
34. Medical Waste Management Unit/Plant
35. E-Waste Management Unit/Plant
36. Sludge Management Unit/Plant

F. Circular Economy and Eco-Projects financing

37. PET Bottle Recycling Plant
38. Plastic Waste (PVC, PP, LDPE, HDPE, PS) Recycling Plant
39. Paper Recycling Plant
40. Recyclable Bag Manufacturing Plant
41. Recyclable Poly Propylene Thread and Bag Manufacturing Plant
42. Battery (Solar/Led Acid/Lithium Ion) Recycling Plant
43. Recycling & Recyclable Goods Manufacturing Plant
44. Biodegradable/ Reusable/ Compostable Items Manufacturing Plant
45. Solar powered/used Items Manufacturing Plant
46. Eco-industrial parks
47. Jute Products Manufacturing Plant

G. Environment Friendly Brick Production

48. Compressed Block-Brick
49. Foam Concrete Brick
50. Environment Friendly/Brick Kiln Efficiency Improvement Project (Tunnel Kiln,HHK and other eco-friendly bricks)

H. Green/Environment Friendly Establishments

51. Establishment of Green Industry certified by appropriate authority (In Bangladesh - SREDA, Internationally - USGBC-LEED, BREEAM, CASBEE, EDGE, GRIHA)

52. Establishment of Green Building certified by appropriate authority (In Bangladesh - SREDA, Internationally - USGBC-LEED, BREEAM, CASBEE, EDGE, GRIHA)
53. Establishment Green Featured Buildings (Characteristics have been given in Annex-07)
54. Concerning Factory working environment and safety (Fire defence system, disaster defence and prevention system, workers" health safety system)
55. Affordable green housing

I. Green Agriculture

56. Earthworm compost manure (Vermicompost) production
57. Palm oil production
58. Organic manure production from slurry
59. Forestation (Social/integrated/Agro)
60. Organic Farming
61. Rooftop Agriculture/Vertical Farming or Gardening
62. Fish cultivation in cage
63. Biofloc fish cultivation
64. Integrated Recycling System (IRS) fish cultivation/Bottom clean fish cultivation
65. Financing in coastal aquaculture
66. Floating system cultivation, Hydroponic cultivation/farming

J. Green CMSME

67. Financing in Cottage Industry

K. Green SRF

68. Community Investment for addressing Climate Resilience and Disaster Management in a concessional rate (finance to clean air, clean water, minimizing industrial and municipal waste, recovery and protection of water bodies, marshy lands, expansion of green coastal belt, water purification, sustainable sanitation, water blockage mitigation, soil and water salinity mitigation, river erosion prevention)
69. Financing in Green/Clean transportation projects (cycles, green vehicles those run-on wind, solar energy, electricity, biofuels etc.)
70. Financing in Sand-witch Panel (Floating or Movable Houses in coastal areas or climate vulnerable zone)
71. Financing in Govt. approved Eco-tourism project
72. Health and Healthcare Services
73. Digital Loan/credit using MFS or other digital medium
74. Financing in educational institutions, scholarship programs, or edtech startups that aim to improve access to quality education and workforce development.
75. Financing projects and businesses that promote gender equality, such as those supporting women entrepreneurs, addressing gender-based violence, and promoting women's rights.
76. Financing projects that promote cultural preservation, arts, and heritage conservation.
77. Natural ecosystem protection and restoration.

L. Blue Economy Financing

78. Marine sustainable Fisheries

79. Mariculture
80. Coastal Ecotourism
81. Marine Plastic Pollution
82. Coastal Renewable Energy
83. Maritime Transport
84. Green Shipyard (Ship building and ship breaking) certified by appropriate authority (compliant with the International Maritime Organization (IMO) Guidelines for Safe and Environmentally Sound Ship Recycling under the Hong Kong Convention)
85. Eco Port
86. Marine protection

M. M. Information and Communication Technology

87. Hi-Tech Park
88. Broadband Networks and IT solutions
89. Internet of Things (IOT)
90. Artificial Intelligence
91. Robotics

N. N. Miscellaneous

92. Research and development for Sustainable Activities
93. Sustainable Supply Chain management
94. Manufacture and assembly of green building products

Characteristics of Green Featured Building

<table>
<tr><th>Sl</th><th>Equipment Name</th><th>Specification</th></tr>
<tr><td>01</td><td>Air Conditioning System</td><td>Air-conditioning accounts for more than 50% of the total electricity costs in a centrally air-conditioned building. Hence the efficiency of a HVAC system is of prime importance. The heart of the HVAC system is the chiller and hence it is important to procure an efficient chiller system. The cooling equipment shall meet or exceed the minimum efficiency requirement as stated in the table below.
<table>
<tr><th>Description</th><th>Capacity</th><th>COP</th><th>IPLV</th><th>Input kW/TR</th><th>Test Procedure</th></tr>
<tr><td>Air cooled chillers including the condenser</td><td>All Capacities</td><td>2.8</td><td>3.05</td><td>1.25</td><td>ARI 550/590</td></tr>
<tr><td>Air cooled chillers without the condenser</td><td>All Capacities</td><td>3.1</td><td>3.45</td><td>1.13</td><td>ARI 550/590</td></tr>
<tr><td>Water cooled, electrically operated positive displacement (Reciprocating)</td><td>All Capacities</td><td>4.20</td><td>5.05</td><td>0.83</td><td>ARI 550/590</td></tr>
<tr><td rowspan="3">Water cooled, electrically operated positive displacement (Rotary Screw and Scroll)</td><td><150TR</td><td>4.45</td><td>5.2</td><td>0.79</td><td rowspan="3">ARI 550/590</td></tr>
<tr><td>≥150TR and 300TR</td><td>4.90</td><td>5.6</td><td>0.71</td></tr>
<tr><td>≥300TR</td><td>5.5</td><td>6.15</td><td>0.64</td></tr>
<tr><td rowspan="3">Water cooled, electrically operated positive centrifugal</td><td><150TR</td><td>5.0</td><td>5.25</td><td>0.70</td><td rowspan="3">ARI 550/590</td></tr>
<tr><td>≥150TR and 300TR</td><td>5.55</td><td>5.9</td><td>0.63</td></tr>
<tr><td>≥300TR</td><td>6.1</td><td>6.4</td><td>0.57</td></tr>
</table>
Table–Minimum efficiency requirements for water chilling pack</td></tr>
</table>

Sl	Equipment Name	Specification

Air cooled absorption single effect	All Capacities	0.60			ARI 560
Water cooled absorption single effect	All Capacities	0.70			ARI 560
Water cooled absorption double effect (indirect fired)	All Capacities	1.0	1.05		ARI 560
Water cooled absorption double effect (Direct fired)	All Capacities	1.0	1.0		ARI 560

Table– Minimum efficiencies requirements for air cooled air-conditioning equipment

Equipment type	Refrigerant output	Seasonal coefficient of performance (SCOP) kW/kW	Testing procedure
Air- cooled air conditioner	<19 kW	2.84 (COPc)	ARI 210/240
	≥ 19 kW and < 40 kW	3.16 (COPc)	ARI 340/360
	≥ 40 kW and < 70 kW	3.04 (COPc)	
	≥ 70 kW	2.72 (COPc)	
Evaporate ng water- cooled air conditioners	<19 kW	3.35 (COP)	ARI 210/240
	≥ 19 kW and < 40 kW	3.37 (COP)	ARI 340/360
	≥ 40 kW and < 70 kW	3.22 (COP) 3.02 (IPLV)	
	≥ 70 kW	2.70 (COP)	
Air- cooled condenser units	≥ 40 kW	2.96 (COP) 3.28 (IPLV)	ARI 365
Water- cooled or evaporating condenser units	≥ 40 kW	3.84 COP	

Sl	Equipment Name	Specification
		NOTES: - AC coefficient of performance: COP = Refrigerant output / power input (kW/ kW); - Condenser unit, including the compressor and condenser coils; - Minimum coefficients of performance listed in Table 2 are calculated at 100% of the refrigerant output. To calculate the coefficient of performance of AC units running for one year, ARI 340/360 uses the following formula: IPLV= 0.01A+0.42B+0.45C+0.12D Where: IPLV – The Integrated Chapter Load Value- coefficient of performance of the AC unit operating for one year at various Chapter loads. A = COP – coefficient of performance of the AC unit (W/W) at full load; B = COP – coefficient of performance of the AC unit (W/W) at 75% load; C = COP – coefficient of performance of the AC unit (W/W) at 50% load; D = COP – coefficient of performance of the AC unit (W/W) at 25% load; ARI – American Refrigerant Institute
02	Lift / Escalator	Escalator–the escalator must be fitted with controls & Sensors to reduce speed or auto stop when no traffic is detected. Escalators shall be designed with one of the energy-saving features as described below: 1. Reduced speed control: The escalator shall change to a slower speed when no activity has been detected for a period of a maximum of three (3) minutes. Detection shall be by photocell activation or similar sensor at the top and bottom landing areas. 2. Use on demand: The escalator shall shut down when no activity has been detected for a period of a maximum of fifteen (15) minutes. Use on demand escalators must be designed with energy efficient soft start technology. The escalator shall start automatically when required; the activation shall be by photocells or sensor installed in the top and bottom landing areas. 3. Use of AC Variable-Voltage and Variable-Frequency (VVVF) drives B. Elevator (lift) - Elevator (lift) must be provided with controls to reduce the energy demand. To meet this requirement, the following features must be incorporated in traction drive elevators: 1. Use of AC Variable-Voltage and Variable-Frequency (VVVF) drives

<table>
<tr><th>Sl</th><th>Equipment Name</th><th>Specification</th></tr>
<tr><td></td><td></td><td>on non-hydraulic elevators.
2. The lift car uses energy-efficient lighting and display lighting i.e. an average lamp efficacy, across all fittings in the car, of >55 lamp lumens/ circuit watt and lighting switches off after the lift has been inactive for a period of a maximum of five (5) minutes.
3. The lifts operate in a stand-by condition during off-peak periods. For example, the power side of the lift controller and other operating equipment such as lift car lighting, user displays, and ventilation fans switch off when the lift has been inactive for a period of a maximum
of five (5) minutes.</td></tr>
<tr><td>03</td><td>Solar power system</td><td>3% of Energy of use for Lift and Escalator</td></tr>
<tr><td>04</td><td>Fresh air supply & mechanical Vent</td><td>Mechanical ventilation and Blower in Basement Floors and Fresh air supply system in habitable floor
*Variable speed derive fan & motor unit</td></tr>
<tr><td>05</td><td>Lighting</td><td>Limitation of Lighting Power Density (LPD) will help to design the lighting system in the most efficient way and reduce the lighting and cooling load in the buildings. The following table sets the average LPD limits for each
building type:
<table><tr><td>Space</td><td>LPD (W/m^2)</td></tr><tr><td>Business</td><td>9</td></tr><tr><td>Mercantile</td><td>13</td></tr><tr><td>Hotels</td><td>9</td></tr><tr><td>Hospitals/Health care</td><td>11</td></tr><tr><td>Residential</td><td>7</td></tr><tr><td>Schools</td><td>11</td></tr><tr><td>Covered parking</td><td>3</td></tr><tr><td>Open and outdoor parking</td><td>1.6</td></tr><tr><td>Industries</td><td>As per requirement for the specific task
preferably LED lights</td></tr></table></td></tr>
<tr><td>06</td><td>Sensors</td><td>Occupancy Sensors , Day light sensors, Co2 Sensor
at least 10 no of sensors (single or different type)</td></tr>
<tr><td>07</td><td>Automation</td><td>Building Management System (BMS) or Energy Management System (EMS): An EMS/BMS reduces energy use in buildings by monitoring conditions and controlling energy-consuming equipment. Frequently used for building loads such as lighting and space conditioning, an EMS/BMS is versatile enough to provide energy savings in process operations in manufacturing facilities. Control functions include everything from basic stop/start functions to more
complex, chiller optimization routines.</td></tr>
<tr><td>08</td><td>Ceiling Fans</td><td>Energy consumption ≤ 65 watt (at least 5 fans)
Energy Efficient Ceiling fan: An energy efficient ceiling fan can save around
35% energy with compared to regular ceiling fan.</td></tr>
<tr><td>09</td><td>Rainwater Collection and Discharge</td><td>Rainwater collection and use system
2000 L/ Day capacity tank and Underground Discharge system for overflow water.</td></tr>
</table>

<table>
<tr><th>Sl</th><th>Equipment Name</th><th>Specification</th></tr>
<tr><td>10</td><td>WTP</td><td>Water Treatment Plant including recycling and reuse system with energy efficient pumping system (5KLD)minimum</td></tr>
<tr><td>11</td><td>Hot Water system</td><td>Solar Water Heater: Solar water heating systems use solar panels, called collectors, fitted to roof. (200 Liter/hour) minimum</td></tr>
<tr><td>12</td><td>Motor Usage</td><td>Variable Frequency Drive:
VFDs (Variable Frequency Drives) are basically a green energy savings product that matches the amount of work or load on a motor to the amount of energy it needs to power that amount of work. This reduces excess energy from being wasted.
Soft Starter:
A soft starter is a device used with motors to temporarily reduce the load and torque during startup. It applies a gradually increasing voltage to the motors resulting in smooth acceleration of the motor and coupled load.</td></tr>
<tr><td>13</td><td>Water Fixture</td><td>Water efficient fittings include faucets, showerheads and flushes that use less water in order to perform the same function of cleaning as effectively as standard models. Water efficiency is an important aspect, especially as fresh water resources are increasingly getting depleted at a rate faster that they are replenished.

Use of efficient plumbing fixtures, sensors, auto control valves, aerators, flow control and pressure-reducing devices can result in significant reduction in water consumption.

The following low flow fixtures shall be used:

<table>
<tr><td>Type of fixtures</td><td>Quantity</td><td>Unit</td></tr>
<tr><td>Water closets</td><td>Dual Flush (6/4)</td><td>liters/flushing cycle (full/low)</td></tr>
<tr><td>Shower</td><td>9.5</td><td>liters/min at 500 kPa</td></tr>
<tr><td>Urinals</td><td>Auto Sensor</td><td>--</td></tr>
<tr><td>Hand wash taps</td><td>6 Auto Sensor/Push system</td><td>liters/min at 400 kPa</td></tr>
<tr><td>Kitchen/pantry faucets</td><td>6</td><td>liters/min at 400 kPa</td></tr>
</table>
</td></tr>
<tr><td>14</td><td>Masonry Materials</td><td>Concrete Hollow Blocks / Interlocking Concrete Block/ lightweight Cellular Concrete/ Clay Brick of Auto Brick factory with efficient kiln.
(at list 60% of total Masonry wall)
• The Factory should have energy audit report from national/International Certifying agency</td></tr>
<tr><td>15</td><td>Steel</td><td>Reinforcement steel from the energy efficient factories
• The Factory should have energy audit report from national/International Certifying agency
• >10% Recycle Materials content</td></tr>
<tr><td>16</td><td>Ready mix concrete</td><td>• Natural Stone chips as course aggregate
• The Factory should have energy audit report from</td></tr>
</table>

Sl	Equipment Name	Specification
		national/International Certifying agency • Should have recycle content or fly ash.
17	Paint	Low Volatile Organic Compounds (VOC) paint (VOC level <10g/L) • The Factory should have energy audit report from national/International certifying agency
18	Low- E-Glass	Solar Heat Gain Coefficient (SHGC) 0.4 (maximum) or Shading Coefficient (SC) 0.46 (maximum) Visible Light Transmittance (VLT) of the glazed element should not be lower than 35%. Double Glazing Window: Energy-efficient glazing keeps home or office cooler and quieter as well as reducing our energy bills. That might mean double or triple-glazing, secondary glazing, or just heavier curtains. Double-glazed windows have two sheets of glass with a gap in between, usually about 16mm, to create an insulating barrier.
19	UPVC window frame	Window frame made of UPVC (all Curtain and Sliding windows of a building) • The Factory should have energy audit report from national/International Certifying agency
20	Insulation	Roof top Insulation & heat reflective paint (Solar Radiation Index value >78) or Insulation blokes