



# DBS

## Sustainable & Transition Finance

### Second Opinion

June 24, 2020

**DBS is a multinational commercial bank headquartered and listed in Singapore.** The bank works in consumer banking, wealth management and corporate banking and is active in 18 markets globally including six priority markets in Asia. DBS commenced responsible financing decision making in 2017 and has a goal to finance SGD 10 billion of renewable and clean energy developments by 2024 and an additional SGD 10 billion of other green projects and assets by 2024.

**DBS' Sustainable & Transition Finance Framework and Taxonomy includes a broad list of eligible projects within key industries in its operating countries.** Project categories include automotive, metals & mining, food & agribusiness, real estate, oil and gas (including offshore), chemicals, power (renewable and non-renewable), infrastructure, healthcare, pharmaceuticals, shipping & coastal vessels, aviation, telecommunication, technology, textiles, and logistics. The categories are split into 'Green', 'Transition' and 'Sustainable Development Goals (SDG)' to reflect context-based deviations in environmental and social eligibility requirements. Where applicable, DBS aims to align with the EU and CBI taxonomies, as well as the IEA Sustainable Development Scenario. DBS has also identified specific SDG goals for each eligible category. While this ambition of alignment is commendable it is DBS' responsibility to closely assess each project's actual climate impact.

**DBS' Sustainable & Transition Framework and Taxonomy demonstrates commendable ambition to accelerate the transition and be transparent about its criteria to stakeholders, however some project categories contain a risk of fossil fuel lock-in that will require active follow-up during implementation.** Some categories could be better defined and/or have more specific thresholds and targets to promote greater clarity and transparency within the framework. Some project categories, especially with significant involvement of fossil fuels (such as coke, oil & gas and heavy fuel oil) can bear a significant risk of lock-in risks. As the project categories are defined in this framework, they allow financing activities which remain carbon-intensive despite mitigation and have received a brown shading. DBS confirmed that external consultants will be enlisted in order to ensure a science-based implementation of the framework and that "Transition" cases will be evaluated on a case-by-case basis including contextual considerations to ensure compliance with ESG guidelines and DBS climate ambitions.

**DBS conducts extensive reporting, incl. TCFD reporting, and has a methodology for scenario analysis and reporting for physical and transition risks in place.** The bank reports on key climate indicators including its Scope 1, 2 and partly Scope 3 emissions, and requires that its customers report on these indicators as well. DBS incorporates multiple standards like the UN Global Compact, IFC Standards, and the Equator Principles within its project selection process to ensure compliance with ESG guidelines.

The review does not provide an overall shading of the framework nor a governance score; instead, each project category in the framework and taxonomy has been assessed. These project categories cover the full range from Dark Green to Brown projects and CICERO Green encourages DBS to focus on projects and companies where a positive climate impact is ensured. This review does not assess GBP compliance and constitutes a review of an internal framework not dedicated for issuing financial instruments.

#### SHADES OF GREEN

An overall shading of the framework has not been carried out, however a shading or shading indication of each eligible category is included in Table 1.



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# 1 Terms and methodology









This note provides CICERO Shades of Green's (CICERO Green) second opinion of the client's framework and taxonomy dated June 2020. This second opinion remains relevant to all Green and transition finance identified by the client for the duration of three years from publication of this second opinion, as long as the framework remains unchanged. Any amendments or updates to the framework require a revised second opinion. CICERO Green encourages the client to make this second opinion publicly available. If any part of the second opinion is quoted, the full report must be made available.

This framework is not a Green bond or Green loan framework, but rather is intended to guide origination of Green/transition loans or advising clients' Green/transition bond issuance, as well as the advancement of sustainable finance product and services. Compliance with the Green Bond or Green Loan Principles will therefore not be assessed in full – even if some of the elements of these principles are present in the framework. The second party-opinion (SPO) provided herein will cover most of the elements of a standard SPO but will not include a Management of Proceeds Section – as this framework is not intended to underpin issuance of a DBS bond.

The second opinion is based on a review of the framework and documentation of the client's policies and processes, as well as information gathered during meetings, teleconferences and email correspondence. Its focus is primarily driven by climate governance and credentials. It does not represent a review of the framework's alignment with UN Sustainable Development Goals and contribution to social causes.

## Expressing concerns with 'shades of Green'

CICERO Green second opinions are graded Dark Green, Medium Green or Light Green, reflecting a broad, qualitative review of the climate and environmental risks and ambitions. The shading methodology aims to provide transparency to investors that seek to understand and act upon potential exposure to climate risks and impacts. Investments in all shades of Green projects are necessary in order to successfully implement the ambition of the Paris agreement. The shades are intended to communicate the following:

CICERO Shades of Green	Examples
 <b>Dark green</b> is allocated to projects and solutions that correspond to the long-term vision of a low carbon and climate resilient future. Fossil-fueled technologies that lock in long-term emissions do not qualify for financing. Ideally, exposure to transitional and physical climate risk is considered or mitigated.	 Wind energy projects with a strong governance structure that integrates environmental concerns
 <b>Medium green</b> is allocated to projects and solutions that represent steps towards the long-term vision, but are not quite there yet. Fossil-fueled technologies that lock in long-term emissions do not qualify for financing. Physical and transition climate risks might be considered.	 Bridging technologies such as plug-in hybrid buses
 <b>Light green</b> is allocated to projects and solutions that are climate friendly but do not represent or contribute to the long-term vision. These represent necessary and potentially significant short-term GHG emission reductions, but need to be managed to avoid extension of equipment lifetime that can lock-in fossil fuel elements. Projects may be exposed to the physical and transitional climate risk without appropriate strategies in place to protect them.	 Efficiency investments for fossil fuel technologies where clean alternatives are not available
 <b>Brown</b> is allocated to projects and solutions that are in opposition to the long-term vision of a low carbon and climate resilient future.	 New infrastructure for coal

Sound governance and transparency processes facilitate delivery of the client's climate and environmental ambitions laid out in the framework. Hence, key governance aspects that can influence the implementation are carefully considered. CICERO Green considers four factors in its review of the client's governance processes: 1) the policies and goals of relevance to the framework; 2) the selection process used to identify and approve eligible projects under the framework, 3) the management of transactions and 4) the reporting on the transactions to stakeholders. Please note this is not a substitute for a full evaluation of the governance of the issuing institution and does not cover, e.g., corruption.



## 2 Brief description of DBS' Sustainable & Transition Finance Framework and related policies

DBS is a multinational commercial bank headquartered and listed in Singapore. The bank was originally established as a development bank by the Government of Singapore to support industrial financing in Singapore. The bank provides services in consumer banking, wealth management and corporate banking and is active in 18 markets globally including six priority markets in Asia. In 2019, 63% of DBS' income resulted from Singapore, 27% from Greater China and the remaining 10% from the other 17 markets. With over 28,000 employees, the bank generated an income of SGD 14.5 billion in 2019 and holds SGD 570 billion in total assets.

DBS' Sustainable & Transition Finance Framework and Taxonomy has been developed to facilitate the categorization, monitoring and reporting of financing of sustainable activities, and to engage with customers to adapt in the face of climate change, resource scarcity and social inequality. The framework covers applicable instruments/services offered by DBS' Institutional Banking Group (IBG) including loans, bonds, advisory, trade finance, supply chain financing, bank guarantees and deposits. These can be used for use of proceeds specific financing and corporate level financing.

### Environmental Strategies and Policies

In 2019, total emissions amounted to 66,895 tCO<sub>2e</sub>, of which 1,547 tCO<sub>2e</sub> were Scope 1 (direct carbon emissions e.g., from backup diesel generators and LPG from kitchens), 42,310 tCO<sub>2e</sub> were Scope 2 (purchased electricity and purchased chilled water energy) and 23,038 tCO<sub>2e</sub> were Scope 3 emissions (outsourced shuttle bus travel, air travel and energy used by outsourced data centers). DBS does not yet report Scope 3 emissions from its lending. 2019 was the first year that Scope 1 and Scope 3 emissions were reported. Between 2018 and 2019, DBS reported Scope 2 emissions reductions of 14.8% from 49,686 tCO<sub>2e</sub> in 2018 to 42,310 tCO<sub>2e</sub> in 2019. 2019, 14% of DBS' electricity consumption in its key markets was provided by renewable energy. DBS has a target of 100% renewable energy consumption in Singapore by 2030 and eventually aims to extend this to 100% of its global operations.

DBS commenced with responsible financing decision-making in 2017. The bank has a target to finance SGD 10 billion of renewable and clean energy developments by 2024 and an additional SGD 10 billion of other Green projects and assets by 2024.

The bank has made a commitment to discontinue financing of new coal-fired power plants regardless of the efficiency of technologies used. Other prohibited transactions include: illegal logging, land clearance by burning, forced labor or child labor, violating rights of local communities or operating in locations of significant social conflict, production and movement of weapons, trading wildlife or wildlife products in violation of CITES, finning and/or trading or serving of shark fin, and adversely affecting UNESCO World Heritage Sites or national and/or international protected areas.

A working group from the Institutional Banking Group of the bank provides ESG advisory to the bank and facilitates Green and social financing for corporate customers. The bank offers Green loans and bonds advisory as well as sustainability-linked loans and supply chain financing. In 2019, DBS underwrote over SGD 4 billion worth of Green bonds.



DBS is reporting according to TCFD recommendations and has commissioned an external consultancy to conduct a pilot study on transition risks and have expanded the scope to physical risks in 2019. DBS has identified 5 key sectors that are in particular exposed to climate risks. For the pilot study, DBS has selected 368 customers that are collectively responsible for nearly 10% of the Institutional Banking Group's exposure and has identified carbon intensive sectors in the portfolio. DBS aims to reduce its carbon exposure and help clients to manage their transition to low-carbon economy. Pricing scenarios were used to determine potential costs. Based on different IPCC scenarios, physical risks were also assessed for the 368 selected customers incl. several climate hazard indicators. DBS reports on methodology used for its emissions accounting and TCFD.

DBS is a member of UN Global compact, World Business Council for Sustainable Development (WBCSD) and RE100 and reports according to the GRI. In addition, DBS supports the Equator Principles and the Green Investment Principles for the Belt and Road.

### Eligible categories

This framework is directed mainly towards two areas: specific financing towards Green, sustainable or transition economic activities; or to corporate level financing with an intent to aid corporate customers transition to a low carbon operation.

Specific financing projects will be divided into three labels: Green, UN SDGs-aligned, Transition. Green projects are distinguished by their alignment with the technical screening criteria of the EU Taxonomy, and/or the CBI Taxonomy, or their alignment with the categories in the Green Bond Principles and/or LMA Green Loan Principles. UN SDGs-aligned projects must contribute to the 17 Sustainable Development Goals and the corresponding 169 targets that address current global challenges within the social and environmental realm. Projects are labelled Transition if they displace more carbon intensive options and facilitates progression along the Paris Agreement trajectory and follows the guidelines drawn up by the IEA in the Sustainable Development Scenario, while also documenting and independently verifying the extent of emissions reductions compared to industry norms; or if it enables the wider application or integration of less carbon intensive options. Transition projects will be evaluated on a case-by-case basis, with different science-based accepted methods used for different industries. An external consultant will be enlisted if necessary.

Corporate transition includes un-specified uses and only applies if the company has in the previous 12 months of any new transaction either divested from carbon-intensive assets, diversified from carbon intensive activities through R&D investment or the acquisition of Green and socially positive business, or decarbonized by demonstrating through independent verification an overall reduction in emissions intensity. For the latter criterion to hold, the company must have demonstrated significant and long-term progression beyond the national or regional industry average. These funds may be used at the companies' discretion.

### Selection

The selection process is a key governance factor to consider in CICERO Green's assessment. CICERO Green typically looks at how climate and environmental considerations are considered when evaluating whether projects can qualify for Green finance funding. The broader the project categories, the more importance CICERO Green places on the governance process.

All projects must satisfy the criteria outlined within each of the four eligible labels: Green, UN SDG's-aligned, Transition, Corporate in Transition. Selection and evaluation of projects will be done through a three-tier process involving the IBG Relationship Managers, IBG Sustainability and IBG Management Committee, which consists



of IBG segment heads and led by the Head of IBG. This includes identifying and liaising with potential transactions qualifying for any of the four labels. IBG Sustainability will then undertake a technical review and the team, and providing advice to customers on the measurement of required data where needed. Where necessary an external consultant will be enlisted to ensure Green credentials of projects. Final validation and approval will be carried out by the IBG Management Committee, with the right of veto held by the head of IBG Sustainability in the event of a non-unanimous decision over project approvals. There will also be periodic audits to assess effectiveness and compliance in the selection and evaluation process.

All Relationship Managers are required to complete ESG training, IBG Sustainability team members are required to have academic and professional experience within the field of Sustainability, Environmental Health and Safety or equivalent, and Management Committee members are familiar with industry trends including ESG risks. In addition, DBS informed us that the bank is committed to enlist assistance of external technical consultants and align clients' green loans/bonds with international best practices where necessary to ensure a science-based approach to implementing the framework

DBS has conducted scenario analysis on physical and transition risks to aid the assessment of these risks for new projects. Physical and transition risks are evaluated and applied to relevant guidelines, e.g., if a project aligns with the EU Taxonomy, the relevant criteria for EU taxonomy will be applied. For projects meeting the scope, their ESG risks will be assessed following the Equator Principles, and where relevant, IFC Performance Standards for Environmental and Social Sustainability and World Bank Industry Specific Environmental, Health and Safety Guidelines. Projects are then categorized in terms of their risk level and consequential due diligence and mitigation required. Impact on communities will be evaluated as part of this categorization process, and in ESG Risk Assessment Templates. Supply chain ESG risk considerations are limited to "major accidents and incidents within operations and supply chains".

## Reporting

Transparency, reporting, and verification of impacts are key to enable investors to follow the implementation of Green finance programs. Procedures for reporting and disclosure of Green finance investments are also vital to build confidence that Green finance is contributing towards a sustainable and climate-friendly future, both among investors and in society.

Reporting requirements may vary depending on the instruments and stakeholders involved. However, the IBG Sustainability Team will collaborate with the Group Sustainability Team to incorporate reporting into the annual Sustainability Report. DBS plans to report at a portfolio level, (subject to feasibility) at a minimum for all transactions tagged under each of the four labels, and their relevant metrics. Included metrics are: aggregated GHG emissions avoided (for transition and Corporate in transition projects), committed loan amount, sectoral breakdown, and financial instrument breakdown.

This reporting will be made publicly available annually in the DBS Sustainability Report, which is externally reviewed. In addition, IBG promotes the transparency and quality of ESG data by providing incentives (e.g., lower interest sustainability loans) for customers, where appropriate, to measure and/or publicly report their carbon exposure, or to independently verify their ESG data.



### 3 Assessment of DBS' Sustainable & Transition Finance Framework and policies

The framework and procedures for DBS' Green finance are assessed and their strengths and weaknesses are discussed in this section. The strengths of a framework with respect to environmental impact are areas where it clearly supports low-carbon projects; weaknesses are typically areas that are unclear or too general. Pitfalls are also raised in this section to note areas where DBS should be aware of potential macro-level impacts of investment projects.

#### Eligible projects under the DBS' Sustainable & Transition Finance Framework

At the basic level, the selection of eligible project categories is the primary mechanism to ensure that projects deliver environmental benefits. Through selection of project categories with clear environmental benefits, green finance aim to provide stakeholders with information as to how the financing delivers environmental returns as well as financial returns.

Industry	Sub-Industry	Asset Type	Asset Specifics	Green Shading and some concerns
Automotive	Upstream	System design/ manufacturing/ integration	Related to electric, hydrogen, hybrid or alternative fuel vehicles	<p><b>Dark to Medium Green</b> if EU taxonomy applies and threshold of 50gCO<sub>2</sub>/km applies for hybrids  <b>Light Green to Brown</b> if plug-in or mild hybrid vehicles with large emissions and other alternative vehicles are included</p> <p><b>Concerns</b></p> <ul style="list-style-type: none"> <li>✓ Hybrid vehicles constitute an ambiguous climate benefit dependent on proportion of use in electric vs fuel mode</li> <li>✓ Production of vehicles represent significant emissions</li> <li>✓ Hydrogen produced with natural gas is a concern</li> <li>✓ Electric vehicles may not have the desired impact if not coupled with a decarbonized electric grid</li> </ul>



- ✓ Advanced biofuels must include screening process to identify full life-cycle impacts

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Energy-efficient engine (including for heavy duty vehicles) **Dark Green** if zero emission engine efficiency and no fossil fuel industries (e.g., fossil fuel transport trucks) supported

**Light Green** if engine facilitates fuel switch from diesel and no fossil fuel industries supported e.g., fossil fuel transport trucks)

**Brown** if diesel-based efficiency improvement.

**Concerns**

- ✓ Energy efficiency in diesel-based engines for land transportation do not contribute significantly to the green transition. The fuel economy of new light-duty vehicle sales will need to improve by about 3.7% per year on average to stay on track with global climate goals, while 2017 saw an improvement of only 0.7%.<sup>1</sup> However, low-emission alternatives already exist for light-duty vehicles.
- ✓ Concerns regarding the transport of fossil fuels.
- ✓ Fuel switch and rail-based transportation should be encouraged.

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Improved aerodynamics and tire design (especially for heavy duty vehicles) **Dark Green** if solely for zero emissions vehicles and no fossil fuel industries supported

**Light Green to Brown** if for fossil fuel-based vehicles and no fossil fuel industries supported

**Concerns**

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<sup>1</sup> <https://www.iea.org/fuels-and-technologies/fuel-economy>





- ✓ This could represent a risk of lock-in if technology is optimized for fossil fuel vehicles
- ✓ May make fossil fuel-based vehicles more attractive and reduce incentives to switch to zero carbon vehicles

Components/  
equipment supply  
(include  
design/manufacturin  
g/)

Related to electric,  
hydrogen, hybrid or  
alternative fuel vehicles

**Dark to Medium Green** if these support vehicles that are in line with the EU taxonomy and the threshold of 50gCO<sub>2</sub>/km applies for hybrids  
**Light Green to Brown** if they support plug-in or mild hybrid vehicles with large emissions and other alternative vehicles

**Concerns**

- ✓ DBS currently considers anything within the supply chain of electric, hydrogen, hybrid or alternative fuels as Green.
- ✓ Production of components for cars including batteries is often carbon-intensive and may not be compliant with ESG standards.
- ✓ DBS has stated the origin of the hydrogen will be assessed by considering the fuel mix of the country where the hydrogen is produced, or the energy used directly for hydrogen production.
- ✓ Financing is ringfenced solely for use of stated asset specifics, and will not be applicable for general use in internal combustion engines.

Services such as  
automotive logistics,  
shared services  
centre and charging  
stations

**Dark Green** for services that support zero emissions vehicles.  
**Medium Green** for shared services that are dedicated to hybrid and alternative fuel cars



**Light Green (very few cases) to Brown (most cases)** if car sharing for petroleum-based cars

**Concerns**

- ✓ Same concerns apply as depending on fuel type of vehicles (e.g., biofuels)
- ✓ Manufacturing of charging stations and life cycle assessment should be considered

Midstream Assembly and sale of automotive/brand owners<sup>2</sup>

**Dark Green** if assembly plants are powered by renewable energy and are manufacturing zero-emission vehicles.

**Medium Green to Brown** if plants are fossil-fuel based but producing low-carbon vehicles

**Concerns**

- ✓ Manufacturing and assembly can be carbon intensive

Downstream Distribution/ retail of automotive

**Dark Green** if transportation with zero carbon vehicles

**Medium to Light Green** if transportation of low carbon vehicles is through low-carbon shipping

**Light Green to Brown** if transportation of low carbon vehicles is through conventional shipping

**Concerns**

- ✓ The distribution and transportation of heavy goods may require carbon intensive fuels.
- ✓ Transport across borders is more carbon intensive than transport within borders (e.g., via electric railways).
- ✓ DBS strives to record and report its Scope 3 emissions.

<sup>2</sup> Majority-owned investments of such Original Equipment Manufacturers (OEMs) and which do not fall into either the Upstream or Downstream segments are included as well (e.g., investments into ride-sharing companies, charging infrastructure for electric vehicles).



However, this is dependent on whether the clients incorporate Scope 3 in their GHG measurements.

Metals & Materials	Midstream	Iron or steel producers	Decarbonisation technologies (e.g., scrap-based (recycled) steel, carbon capture and storage, electrolysis) <sup>3</sup>	<p><b>Dark to Medium Green</b> if technology is zero emissions and no lock-in effects of technology is to be expected.</p> <p><b>Light Green (few cases) to Brown (most cases)</b> if substantial lock-in risks exists with the financed technology.</p>
				<p><b>Concerns</b></p> <ul style="list-style-type: none"> <li>✓ Risk of water overconsumption in water-scarce areas as well as water and air pollution of gases and chemicals. DBS' ESG risk assessment considers environmental health and safety assessments conducted by the clients.</li> <li>✓ The steel sector is heavily reliant on coal, oil and gas. Any financing should exclude coal-fired iron or steel plants and consider long-term decarbonization strategies in cases where solutions are gas-fired.</li> <li>✓ Energy intensity should decrease by at least 1% annually between 2017-2030 to comply with IEA's SDS.</li> <li>✓ Scrap availability puts a limit on potential for recycled production.</li> <li>✓ Longer term emissions reductions require a shift in the way primary steel is produced, through the adoption of technologies that</li> </ul>

<sup>3</sup> Energy Transitions Commission (November 2018) *Mission Possible: Reaching net-zero carbon emissions from harder-to-abate sectors by mid-century: Steel*. Retrieved from: <http://www.energy-transitions.org/mission-possible>



facilitate the integration of low-carbon electricity.

- ✓ Carbon capture and storage facilities should strive to capture 100% of carbon.

Energy efficiency of blast furnace (e.g., coke dry quenching, production gases reuse for power production)<sup>3</sup>

**Light Green** (very few cases) if energy efficiency improvements are part of a longer term plan to decarbonize and if emissions are substantially reduced and rebound effects are managed.

**Brown** (most cases) if there is no long term plan in place, and if emissions are insufficiently reduced.

**Concerns**

- ✓ The company has informed us they are complying with ETC guide by encouraging alternative fuel types.
- ✓ Potential lock-in of technology that promotes carbon-intensive energy production.
- ✓ Potential rebound effects as energy efficiency measures may increase usage of blast furnaces, which are not part of the Green transition.
- ✓ Specific GHG emissions reduction thresholds will be evaluated on a case-by-case basis taking into account contextual information such as location of the plant.

Cement producers

Recycling of un-hydrated cement and reuse of concrete<sup>4</sup>

New cement chemistries or new concrete chemistries using less cement input<sup>4</sup>

**Medium to Light Green** if new low-carbon cement or recycling is financed. Recycling technique should not contribute to substantial GHG emissions and no substantial lock-in effects.  
**Brown** if cement is produced without substantial fossil fuel substitute.

<sup>4</sup> Energy Transitions Commission (November 2018) *Mission Possible: Reaching net-zero carbon emissions from harder-to-abate sectors by mid-century: Cement*. Retrieved from: <http://www.energy-transitions.org/mission-possible>



**Concerns**

- ✓ Emissions reductions in cement production will mostly comprise of improving energy efficiency, switching to lower-carbon fuels, reducing the clinker-to-cement ratio and advancing process and technology innovations.<sup>5</sup>
- ✓ Fossil fuel substitutes, e.g., fossil fuel based waste such as care tires can have significant additional environmental impacts.
- ✓ The majority of energy demand is supplied by fossil fuels, and a small fraction provided by waste and biomass. Cement is therefore a heavily carbon-intensive industry.
- ✓ Avoid rebound effects.

Decarbonisation technologies (e.g., use of biomass/waste as heat generation, carbon capture and storage, kiln electrification from renewable energy source)<sup>4</sup>

**Dark Green** for kiln electrification and for carbon capture and storage strives to capture 100% of carbon emitted.

**Light Green** for use of biomass and waste which emit carbon dioxide and might incentivize unsustainable practices of waste management and biomass production.

**Concerns**

- ✓ Carbon Capture and Storage (CCS) can be a key factor in the transition.

Food & Agri-Business

Upstream

Animal feed, animal protein, agribusiness

Avoidance of GHG emissions (e.g., animal management, storage and processing of manure and slurry, and management of permanent grasslands)

**Dark to Light Green** if only used for sustainable agricultural and aquaculture practices and preparing zero carbon solutions and methane emissions reductions as well as sustainable feed stock (e.g., no soy, or

<sup>5</sup> <https://www.iea.org/fuels-and-technologies/cement>



only sustainably sourced soy with highest standards).

**Brown** if increased or sustained animal husbandry and meat production.

**Concerns**

- ✓ DBS informed us that this would entail rearing and slaughter of livestock including poultry, piggery, cattle, dairy and aquaculture.
- ✓ Animal husbandry contributes significantly to Greenhouse gas emissions
- ✓ Meat is among the most carbon intensive protein sources due to feedstock for livestock and animal husbandry.
- ✓ Sustainability of aquaculture heavily depends on type of feedstock and environmental precautions.
- ✓ No fossil based farm equipment can be financed according to DBS.

Agri-Commodities	Upstream	Farming, cultivation, plantation and harvesting of fruits, vegetables and agri-commodities	Contribute to Climate Smart Agriculture (CSA), which is an integrative approach to address the interlinked challenges of food. CSA aims to improve the following <sup>6</sup> :	<b>Dark Green</b> if focused on promoting sustainable and zero emissions agricultural practices and biodiversity measures are in place as well as zero-emission equipment (e.g., for milling and other operations)
	Midstream	Milling, processing, crushing and refining of agri-commodities	<ul style="list-style-type: none"> <li>• <b>Food security:</b> Produce more food to improve food and nutrition security and boost the incomes in developing countries.</li> </ul>	<b>Medium to Light Green</b> if palm oil and soy is grown sustainably with highest standards, according to stringent environmental and biodiversity regulations
	Trading	Agri-commodities traders, supply chain service providers and procurements arms		<b>Brown</b> if includes irresponsibly sourced palm oil or soy as well as large monocultures focused on feed

<sup>6</sup> Food and Agriculture Organization of the United Nations (2013) *Climate-Smart Agriculture Sourcebook*.



F&B Manufacture Conversion of bulk, un-branded outputs from primary production and turns them into products suitable for the end-consumer: processed food and alcoholic and non-alcoholic beverages.

- **Climate resilience:** Reduce vulnerability to drought, pests, disease and other shocks; and improve capacity to adapt and grow in the face of longer-term stresses like shortened seasons and erratic weather patterns.

for livestock, transport based on fossil fuels, unsustainable use of pesticides.

**Concerns**

- ✓ Climate-smart agriculture framework is robust and provides actionable guidelines. It recognizes the trade-offs between various Sustainable Development Goals. E.g., sustainable intensification increases food availability but may have adverse impacts on the environment (especially if governance on farms is not robust). Green shading depends solely on environmental factors, so greenness depends on the extent to which green factors are prioritized.
- ✓ Considerations as to origin of soy must be taken into account. There is a climate risk that soy production contributes to additional deforestation.
- ✓ DBS excludes financing projects that include irresponsible land clearance. It is important to ensure significant screening of potential deforestation. Despite the inclusion of the NDPE criterion, it is important that clients do not partake in deforestation at any point in their supply chain.
- ✓ Considerations of emissions from transportation should be considered in selection process.

F&B Distribution, Retail and Services Wholesale distribution of F&B goods from the manufacturer up to and including the final point of sale

**Impact on climate change:** Pursue lower emissions for each calorie or kilo of food produced, avoid deforestation from agriculture and identify ways to suck carbon out of the atmosphere.

Real Estate Residential • Mass market, middle class & Retail Green buildings meeting the required certification rating: **Medium Green** if significantly above ambition level for green certifications



Office	luxury segment for residential use	• Singapore Building and Construction Authority (BCA) Green Mark (Gold Plus and above)	(e.g., on energy efficiency, building materials, public transport access).
Industrial/Logistics	• Office properties	• Hong Kong BEAM (Gold and above)	<b>Light Green</b> if no substantial fossil fuel energy sources are deployed or maintained in buildings and if refurbishments require substantial improvements in energy consumption as well as if buildings are screened for climate resilience.
Hospitality	• Retail malls and shops	• LEED (Gold and above)	
Mixed	• Business park, high tech, multi-user factories, logistics and modern logistics properties	• China Three Star Green Building Evaluation Standard (Three Star rating)	<b>Concerns</b>
	• Hotels, serviced residences/apartments and student accommodation	• India Green Building Council Certification (Gold and above)	
	• Combination of any of the asset classes listed above	• EDGE Green certification (EDGE Advance)	
		----- A substantial reduction in GHG emissions or energy saving because of upgrade or retrofit, or an upgrade in certification rating of at least one notch higher -----	✓ Emphasis should be placed on the relative ambition of these building codes and certifications. These building codes are not necessarily aligned with the EU or CBI Taxonomy and do not guarantee positive climate impact.
		Affordable housing for low income groups	✓ Building materials, public transport access, energy efficiency, climate resilience and type of energy used should be taken into account. Not all of the listed building certifications include a full list of environmental considerations. E.g., climate resilience and proximity to public transportation
			✓ Industrial and logistics real estate may include fossil-fuel based clients.
			✓ Mixed buildings have multiple uses and may be subject to more or less stringent building policies.
			✓ Energy efficiency of buildings is dependent on multiple factors including increasing affluence and expectations of larger living areas, growth in population and unpredictability of weather, greater appliance





- ownership and use leading to greater power demand.
- ✓ DBS has informed us they require a Gold standard or above to encourage greater ambition than the basic certification.
- ✓ IEA SDS has a recommendation of minimum 30% improvements in energy efficiency. DBS has not yet set its own standard for energy efficiency improvements.
- ✓ Technologies and materials used to improve efficiency should include a supply chain and life cycle assessment.
- ✓ Affordable housing, hospitals and other buildings with social objectives should still comply with green considerations. There is a risk that affordable housing cuts corners on regulations to ensure affordability.

<p>Oil &amp; Gas (including Offshore)</p>	<p>Oil &amp; Gas Shipyards</p>	<p>Oil &amp; gas shipyards involved in building specialised oil &amp; gas vessels (e.g., drilling rigs, vessels, FPSO, ESO) and related components used in the exploration and production phase</p>	<p>Electric engines driven either by batteries or hydrogen/ammonia fuel cells<sup>7</sup></p>	<p><b>Light Green</b> if solely financing electric engines or engines that provide innovative solutions that are significantly beyond best practice. Only if servicing existing oil / gas fields.</p> <p><b>Brown</b> if vessels are dedicated to drilling, exploration and development and servicing of new fields (independent of engine type).</p> <p><b>Concerns</b></p> <ul style="list-style-type: none"> <li>✓ DBS requires that the client demonstrates “significant” reduction of GHG</li> </ul>
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<sup>7</sup> Energy Transitions Commission (November 2018) *Mission Possible: Reaching net-zero carbon emissions from harder-to-abate sectors by mid-century: Shipping*. Retrieved from: <http://www.energy-transitions.org/mission-possible>



emissions. DBS does not require that the technology be made publicly available.

- ✓ Should conduct a supply chain assessment of hydrogen and ammonia fuel cells to ensure it is not produced from natural gas.
- ✓ R&D and information sharing is an important aspect to promote rapid uptake of new technologies and rapid emissions reductions in line with the SDS. DBS does not currently partake in R&D activities within this industry.

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Use of low GHG (e.g., biofuel, bio-methanol, LNG, hydrogen, ammonia)<sup>7</sup> or less pollutive (e.g., low sulphur) fuels

**Light Green** if solely financing use of hydrogen, bio-methanol or ammonia or engines that provide innovative solutions that are significantly beyond best practices. Only if servicing existing oil / gas fields

**Brown** if vessels are dedicated to drilling, exploration and development and servicing of new fields (independent of engine type). Less pollutive vessels in the oil and gas industry are considered brown.

**Concerns**

- ✓ Only ships using a fuel type which demonstrates lower pollution impact are eligible for this financing.
- ✓ There remains a very high risk of lock-in of emissions by financing vessels for the oil and gas industry.

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Improved ship design, hull and propulsion efficiency<sup>7</sup>

**Dark Green to Light Green** if combined with low-carbon shipping  
**Brown** if tied to conventional shipping technology.



			<p><b>Concerns</b></p> <ul style="list-style-type: none"> <li>✓ Improvements in ship design and propulsion efficiency for vessels in the fossil fuel industry have a substantial risk of lock-in of emissions and are considered Brown.</li> </ul>
Chemicals	Petrochemicals	Olefins, polyolefins, aromatics, polymers, copolymers, intermediates and derivatives	<p>Alternative feedstocks (e.g., natural gas, shale gas, biofuels and other unconventional feedstocks)<sup>8</sup></p> <p><b>Dark Green to Medium Green</b> if using biofuels and low emissions alternative fuels.</p> <p><b>Light Green</b> if using natural gas (in few cases) if lock-in risk is managed and no alternative is expected to exist.</p> <p><b>Brown</b> if using natural gas (in most cases), shale gas and if produced for use in the fossil fuel industry.</p> <p><b>Concerns</b></p> <ul style="list-style-type: none"> <li>✓ The chemical sector is the largest industrial consumer of both oil and gas, currently comprising 14% of total demand.</li> <li>✓ The transition will require alternative feedstocks, however natural gas and shale gas are still fossil-fuel based and represent limited ambition</li> <li>✓ Biofuels that comply with CBI and EU taxonomy standards can contribute to the transition.</li> </ul>
		Energy-efficient production/innovation (e.g., catalytic olefin technologies using naphtha, etc or use of hydrogen from renewable energy sources to produce ammonia or methanol) <sup>8</sup>	<p><b>Dark Green</b> if chemicals are produced with renewable energy sources and the product is zero carbon.</p> <p><b>Medium to Light Green</b> if produced with carbon-based fuels but produce significant improvement in energy</p>

<sup>8</sup> International Energy Agency (IEA), International Council of Chemical Associations (ICCA) and DECHEMA (2013) *Technology Roadmap “Energy and GHG Reductions in the Chemical Industry via Catalytic Processes”*. Retrieved from: <https://dechema.de/en/industrialcatalysis.html>



efficiency and end-user is considered (e.g., no fossil fuel industry)

**Brown** if produced with carbon-based fuels and if production improvement is limited.

**Concerns**

- ✓ Demand for chemicals is expected to increase as global economic activity increases. This necessitates measures to reduce energy and emissions intensity of production.

Carbon capture and storage<sup>8</sup>

**Dark Green** if facilities strive to capture 100% carbon.

**Concerns**

- ✓ Carbon capture and storage facilities may disincentivize other measures to transition to non-fossil fuel methods

Production of biodegradable polymers and composites

**Dark to Medium Green** if produced without oil and gas.

**Light Green (few cases) to Brown (most cases)** if oil and gas based.

**Concerns**

- ✓ Biodegradable polymers may still have long lifetimes, and have limited positive environmental impact.
- ✓ The production of polymers is mostly carbon intensive, and efforts to reduce emissions intensity are valuable.

Agrichemical Crop protection chemicals i.e. pesticides, fungicides and herbicides

Energy-efficient production/innovation (e.g., use of hydrogen from renewable energy sources to produce ammonia)<sup>8</sup>

**Light Green**

**Concerns**

- ✓ Efficiency improvements may lead to rebound effects and greater production from



			<p>fossil fuel-based production facilities.</p> <ul style="list-style-type: none"> <li>✓ This requires considerations of the effects of crop protection chemicals on local environment and biodiversity levels.</li> <li>✓ Currently DBS' ESG assessment does not specifically include these factors in their decision making, beyond a consideration of whether clients follow EHS guidelines.</li> </ul>
		Carbon capture and storage <sup>8</sup>	<p><b>Dark Green</b> if facilities strive to capture 100% carbon.</p> <p><b>Concerns</b></p> <ul style="list-style-type: none"> <li>✓ Carbon capture and storage facilities may disincentivize other measures to transition to non-fossil fuel methods.</li> </ul>
Specialty Chemicals	Construction chemicals, electronic lubricating oil additives/synthetic lubricants, plastics additives, water management chemicals, adhesive and sealants, flavour and fragrances, specialty coatings, specialty polymers and surfactants	Alternative feedstocks (such as natural gas, shale gas, biofuels and other unconventional feedstocks) <sup>8</sup>	<p><b>Dark Green to Light Green</b> if using biofuels and low emissions alternative fuels.</p> <p><b>Light Green</b> if using natural gas (in few cases) if lock-in risk is managed and no alternative is expected to exist.</p> <p><b>Brown</b> if using natural gas (in most cases), shale gas and if produced for use in the fossil fuel industry.</p> <p><b>Concerns</b></p> <ul style="list-style-type: none"> <li>✓ Holistic assessment of effects of specific chemicals on local environment should be required.</li> <li>✓ Supply chain assessment of materials should be conducted</li> </ul>
		Energy-efficient production/innovation (e.g., use of hydrogen	<p><b>Dark Green</b> if chemicals are produced with renewable energy</p>



from renewable energy sources to produce ammonia or methanol)<sup>8</sup>

sources and the product is zero carbon.

**Light Green to Brown** if fossil fuels are used and if energy efficiency improvement is not substantially better than before.

**Concerns**

- ✓ Efficiency improvements may lead to rebound effects and greater production from fossil fuel-based production facilities.

Carbon capture and storage<sup>8</sup>

**Dark Green** if facilities strive to capture 100% carbon.

**Concerns**

- ✓ Carbon capture and storage facilities may disincentivize other measures to transition to non-fossil fuel methods

Plastics

Production of plastic related products

Decarbonization technologies (e.g., carbon capture of exhaust gas from pyrolysis furnaces, biomass/waste for heat generation, finance electrification from renewable sources)<sup>9</sup>

**Medium Green** if production is fossil fuel free but plastics are still based on fossil fuels

**Light Green (few cases) to Brown (most cases)** if efficiency improvements are implemented for conventional production.

**Concerns**

- ✓ Plastics are fossil-fuel based and production and manufacturing can be carbon intensive.
- ✓ Plastic pollution is a major global issue. DBS should require a supply chain assessment to directly evaluate environment impacts.
- ✓ Consider potential alternatives to plastic

<sup>9</sup> Energy Transitions Commission (November 2018) *Mission Possible: Reaching net-zero carbon emissions from harder-to-abate sectors by mid-century: Plastics*. Retrieved from: <http://www.energy-transitions.org/mission-possible>



Power	Power Original Equipment Manufacturers (OEMs)	Solar	Manufacturing facilities wholly dedicated to onshore solar energy development such as photovoltaic (PV) cells and components, concentrating solar power (CSP) dishes, troughs and components, inverters	<p><b>Dark Green</b></p> <p><b>Concerns</b></p> <ul style="list-style-type: none"> <li>✓ Screening of life-cycle and supply chain for materials e.g., solar PV cells should be undertaken to ensure responsible sourcing</li> <li>✓ NDPE status for bioenergy ensures no deforestation, no peat and no exploitation. DBS should take care to ensure customers have no linkages to these practices in any of its activities, not just within the specific project to be financed.</li> <li>✓ EU Taxonomy has a threshold of 100g CO<sub>2</sub>/kWh for renewable energy equipment.</li> <li>✓ Hydropower can have substantial environmental impact. Manufacturers of all renewable power sources should adhere to international standards (e.g., IFC standards) and consider and minimize emissions from production (e.g., cement) and the operation (e.g., from water reservoirs).</li> </ul>
		Wind	Manufacturing facilities wholly dedicated to onshore wind energy development such as wind turbines	
		Geothermal	Manufacturing facilities wholly dedicated to geothermal energy development such as geothermal turbines	
		Bioenergy	Manufacturing facilities wholly dedicated to bioenergy development	
		Hydropower	Manufacturing facilities wholly dedicated to hydropower development such as hydro turbines and components	
		Marine Renewables	Manufacturing facilities wholly dedicated to marine renewable energy development such as wind turbines platforms, vertical and horizontal axis turbines, in-stream generators, etc.	
	Power Generation (Conventional)	Fossil fuels including oil and/or gas (excluding coal)	Carbon capture and storage	<p><b>Dark Green</b> if complies with EU Taxonomy that 100% of carbon is stored.</p> <p><b>Concerns</b></p> <ul style="list-style-type: none"> <li>✓ Potential rebound effects if CCS does not capture all</li> </ul>



carbon emissions for oil and gas power generation plants.

- ✓ Since this is 'Transition', this will be evaluated on a case-by-case basis taking into account contextual information.

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Conversion from coal to gas **Light Green** (very few cases) if part of realistic medium- and long-term strategy to continue transitioning to zero emissions energy generation, substantial emission reductions and conducted screening for zero emission alternatives

**Concerns**

- ✓ Avoid lock-in of emissions and grandfathering effects as new carbon-emitting plants are built.
- ✓ DBS has specified this is only applicable for emerging markets, e.g., Vietnam and Indonesia where alternative energy sources are limited.

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Power Generation Facilities (Renewable)      Solar

Onshore PV generation facilities **Dark Green**

**Concerns**

Onshore concentrated solar power facilities

- ✓ EU and CBI Taxonomy require less than 100g CO<sub>2</sub>/kWh for eligibility.
- ✓ Supply chain assessments are important to ensure responsible sourcing of materials
- ✓ Efforts to ensure adverse local impacts
- ✓ Larger scale PV arrays are often more effective than smaller scale.
- ✓ Requires regular maintenance and cleaning, which must be done responsibly.

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Wind      Onshore wind farms      **Dark Green**






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Geothermal	Electricity generation facilities	<p><b>Concerns</b></p> <ul style="list-style-type: none"> <li>✓ EU and CBI Taxonomy require less than 100g CO<sub>2</sub>/kWh for eligibility.</li> <li>✓ Potential risk of controversial projects. DBS takes this into account within its ESG risk assessment.</li> </ul>
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Bio-Energy	<p>Facility producing biofuel, biomass, biogas including fuel preparation process facilities, pre-treatment facilities and biorefinery facilities for various purposes (e.g., heating, cogeneration, electricity production and transport)</p> <hr style="border-top: 1px dashed #000;"/> <p>Generation facilities (e.g., power, heat, cooling and combined heat and cooling)</p>	<p><b>Medium to Light Green</b></p> <p><b>Concerns</b></p> <ul style="list-style-type: none"> <li>✓ CBI Taxonomy includes fossil fuel reduction criteria as well as climate adaptation and resilience criteria.</li> <li>✓ NDPE status for bioenergy ensures no deforestation, no peat and no exploitation. DBS should take care to ensure customers have no linkages to these practices in any of its activities, not just within the specific project to be financed.</li> <li>✓ Bioenergy still represents net carbon dioxide emissions and is a helpful transition fuel. However, efforts should be directed at ensuring emissions are not locked-in.</li> </ul>
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Hydropower	<p>Run of river</p> <hr style="border-top: 1px dashed #000;"/> <p>Impoundment</p> <hr style="border-top: 1px dashed #000;"/> <p>Pumped Storage</p>	<p><b>Dark Green</b></p> <p><b>Concerns</b></p> <ul style="list-style-type: none"> <li>✓ DBS has specified this includes only hydro projects that are &lt;25MW to be considered green</li> <li>✓ Hydropower – especially pumped storage – is a valuable addition to renewable generation portfolio because power generation is more</li> </ul>
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- predictable than other sources like wind and solar.
- ✓ Hydropower often leads to adverse environmental impacts related to flooding for reservoirs for impoundment and pumped storage facilities. This involves the relocation of people living in the area as well as destruction of local habitats. Limiting size of hydropower projects will somewhat limit these impacts.
  - ✓ Consider emissions resulting from water storage.

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Marine Renewables Offshore wind farms **Dark Green**

Offshore solar farms

**Concerns**

- ✓ Ensure sufficient assessment of impacts on local marine ecosystems
- ✓ There is constantly-developing research on the impacts of human activities in the ocean. DBS should incorporate transition risks as new knowledge and new policies surface.

Tidal and wave energy generation facilities

Other marine electricity generation facilities using ocean thermals, salinity, gradients, etc.

Heating or cooling facilities using ocean thermals

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Waste to Energy Facilities for solid waste treatment with production of electricity or heat as a by-product **Dark to Light Green**

**Concerns**

- ✓ Risk of air and water pollution of waste management facilities
- ✓ DBS has stated the circular economy model is taken into account. This should be prioritized, waste should be diverted from landfills and recycled as much as possible.



- ✓ DBS currently does not specify the type of waste.

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Transmission & Distribution	All renewable energy sources	Businesses which own and/or operate cable/wire networks that carry electricity from generator to the suppliers/retailers and eventually the end-user	<p><b>Dark Green to Medium Green</b> if it is clearly enabling and/or solely for renewables integration</p> <p><b>Concerns</b></p>
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- ✓ Grid emissions factors should be taken into account when evaluating avoided GHG emissions.
- ✓ Grid expansion can indirectly support expansion of fossil fuel based electricity production.
- ✓ Construction emissions should be taken into account.
- ✓ Should ensure that the transmission lines do not indirectly facilitate transport of fossil fuel based electricity.

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Energy Storage Solution Providers	All energy sources	Businesses which supply energy storage equipment or solutions	<p><b>Dark Green</b> if energy storage is storing electricity from renewable sources and does feature fossil fuel components</p> <p><b>Medium to Light Green</b> if primarily storing non-renewable energy sources</p>
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- Concerns**
- ✓ Storage is a key component of increasing renewable energy penetration into the grid, as it increases reliability of electricity availability.

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Demand Response Solution Providers	All energy sources	Businesses which supply demand response and smart meter equipment or solutions	<p><b>Dark to Medium Green</b></p> <p><b>Concerns</b></p>
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- ✓ Demand response plays a crucial role in increasing the flexibility of energy systems.



	Independent Electricity Retailers	All renewable energy sources	Independent electricity retailers with no generation assets	<b>Dark to Medium Green</b> if expenditures do not include fossil fuels (e.g., company cars).
Infra-structure	Waste Management	Facilities for collection, sorting and material recovery	Facilities and assets with high recovery rates of reusable or recyclable material	<b>Medium Green</b>  <b>Concerns</b> <ul style="list-style-type: none"> <li>✓ Despite criterion of facilities with high recovery rates of recyclable material, facilities may still be run on fossil-fuels.</li> </ul>
		Facilities for the re-use of materials	Facilities refurbishing or repairing products or cleaning components or products for reuse in their original function	<b>Dark Green</b> if facilities are powered by renewable energy and if repaired goods are not run on fossil fuels <b>Light Green</b> if powered by fossil fuels.
	Facilities for the recycling of materials	Facilities for recycling or metals, plastics, glass (except aggregate) and paper		<b>Concerns</b> <ul style="list-style-type: none"> <li>✓ Can be carbon intensive</li> <li>✓ Repaired goods could be powered by fossil fuels</li> </ul>
	Biological treatment facilities	Anaerobic digestion facilities that produce biogas from Green waste	Composting facilities that produces compost from residual waste	<b>Medium Green</b>  <b>Concerns</b> <ul style="list-style-type: none"> <li>✓ Methane leakage is a potential concern, however DBS has stated methane leakage is monitored through the ESG risk assessment, which will ensure that proper environmental management systems are in place.</li> </ul>
	Landfill with gas capture		Use of gas capture for electricity generation	<b>Dark to Medium Green</b> if leads to eventual closure/ remediation of the landfill and contributes to the circular economy <b>Brown</b> if associated with new landfills  <b>Concerns</b> <ul style="list-style-type: none"> <li>✓ Potential risk that gas capture extends the lifetime of the landfill as opposed to</li> </ul>



				the closure and/or remediation.
Water Infrastructure	Water treatment including but not limited to drinking water treatment, desalination plants, water recycling systems, wastewater treatment facilities and manure/slurry treatment facilities/	Shift from anaerobic to aerobic wastewater treatment or separate solids from wastewater management systems ----- Energy efficiency or shift to low carbon fuel sources	<b>Dark to Light Green</b>  <b>Concerns</b>	<ul style="list-style-type: none"> <li>✓ Risk of methane leakage</li> <li>✓ Water treatment facilities will likely still run on fossil fuels, which may result in lock-in of emissions.</li> <li>✓ DBS has specified this includes only any new measures which lower energy consumption intensity, or on-site renewable energy generation.</li> </ul>
Healthcare	Healthcare Providers	<ul style="list-style-type: none"> <li>• Private &amp; public hospitals</li> <li>• Clinical chains</li> <li>• Specialty: Dental, Dialysis Services, Radiation, Oncology, etc</li> <li>• Nursing homes &amp; elderly care</li> </ul>	<p>Recruitment, development, training and retention of the health workforce in developing countries</p> <p>-----</p> <p>Access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all</p> <p>-----</p> <p>Invest in telehealth and telecare to reduce patient travel and improve quality of care<sup>10</sup></p> <p>-----</p> <p>Build hospitals, primary healthcare centres<sup>10</sup></p> <p>-----</p> <p>Laboratory and diagnostics centres</p> <p>Research and development (R&amp;D) of vaccines and medicines for the communicable and non-communicable diseases</p>	<p><i>No shading provided for SDG categories</i></p> <p><b>Concerns</b></p> <ul style="list-style-type: none"> <li>✓ DBS has assigned this category as SDG-related so projects fulfilling these criteria will be eligible without fulfilling any Green criteria</li> <li>✓ DBS conducts environmental impact assessment through its ESG risk document.</li> <li>✓ Buildings should comply with Green standards</li> <li>✓ Supply chain assessment should be undertaken to ensure responsible sourcing.</li> </ul>

<sup>10</sup> United Nations Global Compact (2015) SDG Industry Matrix: Healthcare & Life Sciences. Retrieved from: [https://www.unglobalcompact.org/docs/issues\\_doc/development/SDGMatrix-Healthcare.pdf](https://www.unglobalcompact.org/docs/issues_doc/development/SDGMatrix-Healthcare.pdf)



			R&D that ends epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases	
			R&D that improves early diagnostic techniques <sup>10</sup>	
			R&D that improves solutions to protect animals from infectious disease <sup>10</sup>	
Medical Devices	Companies that develop and manufacture medical, surgical and dental devices and instruments	Low-cost medical devices for low income countries which are easy to operate and maintain <sup>10</sup>	Design medical devices with lower power consumption or/and improved end of product lifecycle recycling <sup>10</sup>	<b>Concerns</b> ✓ Supply chain assessment should be undertaken to ensure responsible sourcing
Pharmaceuticals	<ul style="list-style-type: none"> <li>• Patented Drugs</li> <li>• Generic Drugs &amp; Contract Service Organisations</li> </ul>	<ul style="list-style-type: none"> <li>• Patented manufacturer (exclude pure R&amp;D companies)</li> <li>• Generic drugs manufacturer, contract service organisations (generic finished products, active pharmaceutical ingredient (API) and vitamins and supplements)</li> </ul>	<p>Access to quality, safety and efficacious medicines and vaccines (e.g., enable pharmaceutical companies in low- and Medium-income countries to produce generic drugs, by permitting exemptions to patents in these countries)<sup>10</sup></p> <p>Build environmentally-friendly manufacturing plants<sup>10</sup></p> <p>Develop and implement improved processes to reduce, reuse and recycle water, raw materials, non-renewable minerals, energy, other inputs, by-products, hazardous</p>	<b>Concerns</b> ✓ Concerns regarding the environmental impact of production facilities (e.g., fossil fuel equipment) and low building standards.



waste, non-hazardous  
waste and packaging<sup>10</sup>

Shipping & Coastal Vessels	<ul style="list-style-type: none"> <li>• Vessels Owners/ Operators</li> <li>• Coastal Vessel Owners/ Operators</li> <li>• Companies that own/ charter in/ operate vessels. Examples include owners/operators of container vessels/ tankers/ bulkers/ harbour tugs that support port &amp; terminals/ LNG/ LPG carriers and dredgers.</li> <li>• Companies that principally own/ charter in/ operate vessels in the coastal water regions/</li> </ul>	Fleet management and voyage plan optimisation <sup>7</sup>	<p><b>Dark to Medium Green</b> if vessels transport no fossil fuels and if vessels are operated with low carbon fuels or zero carbon.</p> <p><b>Light Green</b> if fuel switch to low carbon or zero carbon fuels is conducted or in very few cases substantial improvement of vessels for non-controversial deployment of vessels (e.g., transport of climate relevant goods)</p> <p>.</p> <p><b>Concerns</b></p> <ul style="list-style-type: none"> <li>✓ DBS has given this a Transition label</li> <li>✓ Dependent on type of company chartering vessel. DBS has no exclusion criteria for this category.</li> <li>✓ Transport vessels can transport partly fossil fuels.</li> <li>✓ Inclusion of LNG/ LPG carriers and dredgers is not in line with the green transition</li> </ul>
		Use of vessels with electric engines driven either by batteries or hydrogen/ammonia fuel cells <sup>7</sup>	<p><b>Dark Green</b> if no fossil fuels are transported</p> <p><b>Light Green</b> if fossil fuels are transported</p> <p><b>Concerns</b></p> <ul style="list-style-type: none"> <li>✓ Be aware of potential for irresponsible sourcing of materials for batteries and hydrogen. Hydrogen may be produced by natural gas.</li> </ul>
		Use of vessels powered by low GHG fuel (e.g., biofuel, bio-methanol,	<b>Light Green (few cases) to Brown (most cases)</b>



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LNG, hydrogen,  
ammonia)<sup>7</sup>

**Concerns**

- ✓ Aids the transition of vessels to lower carbon intensity, however this may detract from main goal of transitioning to zero emissions vessels.
- ✓ Risk of lock-in of GHG fuels
- ✓ Certain alternative fuel types may have higher carbon intensity
- ✓ Screening process for determining sourcing and origins of fuel types

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Use of open-loop scrubbers for treatment of pollutants, mainly, sulphur dioxide SO<sub>2</sub>, released from the vessel's exhaust.

**Light Green (few cases) to Brown (most cases)**

**Concerns**

- ✓ Scrubbers aid in process of reducing effects of adverse health effects from sulphur dioxide.
- ✓ Scrubbers require energy for operation, which may increase carbon dioxide emissions.
- ✓ DBS has stated they will, at a minimum, expect the CO<sub>2</sub> emissions to not be above the average for vessels in the relevant tonnage.

Open -loop scrubbers use seawater as the scrubbing Medium. Used seawater will be treated and discharged back to the sea.

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Use of closed-loop scrubbers for treatment of sulphur dioxide SO<sub>2</sub>, released from the vessel's exhaust.

**Light Green (few cases) to Brown (most cases)**

**Concerns**

- ✓ As above, pollution control technologies may lead to lock in and rebound effects in an increase in CO<sub>2</sub> emissions. However, DBS has stated they at a minimum expect CO<sub>2</sub> emissions to not exceed the industry average for vessels in the relevant tonnage.

Closed-loop scrubbers use freshwater with a chemical, usually sodium hydroxide, as the scrubbing Medium. Used scrubbing Medium will be stored in a holding tank,





as there will be no discharge to the sea.

Aviation	Airlines & Leasing Companies	Prime credit quality airlines, alliances and companies which provide operating lease and fleet financing services for airlines	Use of aircrafts with electric engines or hydrogen fuel cells <sup>11</sup>	<p><b>Dark Green</b> if all financing is directly only at climate-friendly aircraft</p> <p><b>Concerns</b></p> <ul style="list-style-type: none"> <li>✓ Materials for electric engines and hydrogen fuel cells can be sourced from areas with varying environmental regulations.</li> </ul>
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Use of aircrafts powered by low GHG fuel (e.g., biofuel, synthetic fuels)<sup>11</sup>

**Light Green** if aircrafts are fully powered by low GHG fuel

- Concerns**
- ✓ Be aware that biofuel has varying climate risks including potential deforestation
  - ✓ DBS does not restrict the type of biofuels as long as the use of it can justify significant reduction in carbon emissions. DBS does include a requirement that biofuel fulfil NDPE (No Deforestation, No Peat, No Exploitation) requirements of such commodities.
  - ✓ Other potential concerns with biofuels include loss of biodiversity in the region

Manufacturers	Research, development and manufacture of airframes and aircraft engines for all sectors of airlines	Energy efficient aircraft design such as thermodynamic efficiency of new engines or improved airframes <sup>11</sup>	<p><b>Dark Green</b> if for aircraft that is powered zero carbon sources (hydrogen, electricity)</p> <p><b>Light Green</b> if significant efficiency improvements are achieved that go significantly beyond historical improvements</p>
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<sup>11</sup> Energy Transitions Commission (November 2018) *Mission Possible: Reaching net-zero carbon emissions from harder-to-abate sectors by mid-century: Aviation*. Retrieved from: <http://www.energy-transitions.org/mission-possible>



		and corporate jet market		<p><b>Concerns</b></p> <ul style="list-style-type: none"> <li>✓ May result in lock-in of emissions.</li> <li>✓ New models of airplanes are often significantly more advanced and energy efficient than previous models. Light Green shading requires significant additional ambition above normal industry trajectories.</li> </ul>
Airport Operators/ Owners	Operators/ Owners of commercial airports, providing a location that facilitates aircrafts and helicopters in the provision of commercial air transport	Improved infrastructure such as deployment of fixed electrical ground power units (i.e. equipping airport gates with power and pre-conditioned air, which the aircrafts can use while on the ground instead of running those functions on jet fuel) <sup>11</sup>	<b>Medium to Light Green</b>	<p>if it does not increase airport capacity, solely used to support electrification of airports and airplanes, and if electricity provided is zero-carbon and high green building standards (s. green buildings category)</p> <p><b>Concerns</b></p> <ul style="list-style-type: none"> <li>✓ Risk that efficiency improvements may lead to an increase in the capacity of airports, as they are better able to manage and optimize air traffic.</li> <li>✓ Supplying aircraft with electricity for power and pre-conditioned air saves emissions, but is small compared with total</li> <li>✓ Electricity provided may be either non-renewable or renewable sources, which will constitute additional emissions.</li> <li>✓ Buildings should follow green building standards.</li> </ul>
		Better air traffic management such as optimising routing, air traffic flow management, minimising flight distances, cutting aircraft waiting times and more flexible routing <sup>11</sup>		
		Airports with Airport Carbon Accreditation (ACA) <sup>12</sup> at Optimisation and Neutrality Levels		
Telecommunication	Wireless Operator	Involved in the provision of wireless telecommunication	Broadband networks and supporting infrastructure	<p><b>Dark to Light Green</b></p> <p><b>Concerns</b></p>

<sup>12</sup> Airport Carbon Accreditation is an independent, voluntary programme administered by WSP, an international consultancy appointed by ACI EUROPE to enforce the accreditation criteria for airports on an annual basis. <https://www.airportcarbonaccreditation.org/>



	services i.e. voice, data, etc		
Integrated Operator	Communication Services Provider covering both wireless and wire telecommunications services. i.e. voice, data, etc.		
Subsea Cable Operator	Involved in the construction and operation of subsea communication cable infrastructure		
Mobile Virtual Network Operator (MVNO)	A wireless communications services provider that does not own the wireless network infrastructure over which the MVNO provides services to its customers.	Teleconferencing and telecommuting service	
Telecom Tower Operator	Involved in the construction and operation of telecommunication sites (for which towers is the primary example) for telecommunication operators		
Telecom Infrastructure & Equipment Vendor	Involved in the manufacturing / provision of telecommunication infrastructure and equipment such as carrier network infrastructure, enterprise networking, telecom		

- ✓ Telecommunication aids in the transition and electrification of global communities and may lead to reduced business, and to some extent personal, travelling. However, additional telecommunication technology might increase fossil fuel based electricity consumption and the construction process is carbon-intensive and can be disruptive to marine ecosystems by introducing new acoustics and disruptions to habitats on the seafloor.
- ✓ Potential issues with the supply chain.



operations systems,  
mobile devices, etc

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Fixed Line Operator Involved in the provision of wired telecommunication services i.e. voice, data, etc.

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Data Centre Operator Facilities that house - computer systems and associated components related to telecommunications and digital storage systems

**Dark to Medium Green** if data centres are powered by renewable energy

**Light Green** if powered by fossil fuels

**Concerns**

- ✓ Data Centers are important components in the digitalization and electrification of services
- ✓ Be aware that data centers require a lot of power and can therefore be very carbon intensive. This is expected to increase as volume of data grows. Measures to decarbonize power supply for data centers should be considered.
- ✓ Should follow green building requirements.

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Technology Software Product & Development Involved in the provision of Research & development services. Such services cover all that is involved between the conceptions of the desired software through to the final manifestation of the software. Thus, it

Teleconferencing and telecommuting software or power management software (e.g., remote solutions for appliance power management, and load-balancing of renewables)

**Dark Green** if powered by renewable energy

**Concerns**

- ✓ Improving telecommunication software and technology is an important component in aiding the global electrification process.
- ✓ Be aware of the supply of power for these facilities, which may be non-renewable.



		includes research, new development, prototyping, modification, reuse, re-engineering, maintenance, or any other activities that result in software products	
Apparel, Footwear & Textile	Production, processing and trading of raw materials, production of fabric / textiles and clothing components	Raw materials (synthetic and natural) used in the production of yarn	Use of raw materials from <b>Dark to Light Green</b> if using renewable resources such as recycled plastic-based fibres and regenerative agriculture <sup>13,14</sup>
			<p><b>Concerns</b></p> <ul style="list-style-type: none"> <li>✓ Textile production can be water and energy intensive and can include fossil based components. DBS should minimize involvement of all of these aspects.</li> <li>✓ Additional considerations with regenerative agriculture such as ensuring sustainable farming practices and no deforestation should be taken into account.</li> <li>✓ Petrochemical-based polymers present a range of environmental hazards during their production and require large quantities of oil to produce.</li> <li>✓ Risk of microplastic pollution from plastic-based fibres.</li> </ul>
		Effective and efficient	<b>Dark to Medium Green</b> if no fossil production processes that generate less waste (such as fuels, responsible sourcing of water, adequately controlled water pollution)

<sup>13</sup> Regenerative Agriculture Initiative and The Caron Underground (16 February 2017) *What is Regenerative Agriculture?* Regenerative Farming is “farming and grazing practices that, among other benefits, reverse climate change by rebuilding soil organic matter and restoring degraded soil biodiversity – resulting in both carbon drawdown and improving the water cycle”. Retrieved from: [https://regenerationinternational.org/why-regenerative-agriculture/?fireglass\\_rsn=true](https://regenerationinternational.org/why-regenerative-agriculture/?fireglass_rsn=true)

<sup>14</sup> Ellen MacArthur Foundation (2017) *A New Textiles Economy: Redesigning Fashion’s Future*. Retrieved from: <http://www.ellenmacarthurfoundation.org/publications>



as offcuts); need fewer inputs of resources, such as fossil fuels and chemicals; reduce water use in water-scarce regions; are energy efficient; and run on renewable energy<sup>14</sup>

Technologies enabling yarn recycling such as increased automation and 3D knitting<sup>14</sup>

**Light Green** if reduces energy consumption or include energy efficiency measures

**Concerns**

- ✓ Risk of lock-in of emissions from facilities that operate on fossil fuels
- ✓ DBS states that if a project can provide evidence that it contributes to significant water savings while not contributing to other environmental issues or not leading to higher carbon emissions than average, it is eligible.
- ✓ DBS has specified that not all projects have to run on renewable energy, and may therefore lead to increased overall emissions if powered by fossil fuels (even if emissions levels are below the average)
- ✓ Risk of rebound effects if efficiency measures lead to greater usage of fossil fuel-based facilities.

Fabric/Textiles, including both knitted and woven fabrics using yarn as well as leather

Technologies and/or production processes that reduce microfibre release<sup>14</sup>

Solutions to avoid the use of substances of concern. This could include developing alternatives to replace substances of concern as well as innovative processes that dramatically reduce or avoid the use of harmful chemicals e.g., waterless dyeing solutions, chemical-free technologies<sup>14</sup>

**Dark to Medium Green** if powered by renewable energy

**Light Green** if coupled with technologies that promote substantial energy efficiency improvements

**Brown** if powered by fossil fuels and no long term plan to decarbonize.

**Concerns**

- ✓ Microfibers contribute to plastic pollution and should be reduced.
- ✓ Circular economy considerations should be applied
- ✓ Durability should be favoured over recyclability



	Clothing components, including zips, buttons, labels, printing services and belts, etc.	Technologies to ensure recyclability and/or durability <sup>14</sup> ----- Made of recycled materials <sup>14</sup>	as this will require less processing and transportation through clothing production and recycling facilities.
Manufacture of apparel and footwear	<ul style="list-style-type: none"> <li>• Garments, including apparel, underwear, socks, stockings, scarves and gloves and industrial clothing including uniforms</li> <li>• Footwear, including casual, formal, sports and industrial</li> </ul>	<p>Fabric recycling of production offcuts i.e. use leftover materials from factories to make clothes, as these fabrics are high quality and do not have complicated trimmings such as buttons or seams to remove<sup>14</sup></p> <p>-----</p> <p>Fabric recycling of materials after use such as used clothing etc.<sup>14</sup></p> <p>-----</p> <p>Use of new materials suitable for a circular system e.g., waste products<sup>14</sup></p> <p>-----</p> <p>Technologies to ensure recyclability and/or durability of output products<sup>14</sup></p> <p>-----</p> <p>Solutions to avoid the use of substances of concern. This could include developing alternatives to replace substances of concern as well as innovative processes that dramatically reduce or avoid the use of harmful chemicals e.g., waterless dyeing solutions, chemical-free technologies<sup>14</sup></p> <p>-----</p> <p>Effective and efficient production processes that generate less waste (such as offcuts); need fewer</p>	<p><b>Light Green</b></p> <p><b>Concerns</b></p> <ul style="list-style-type: none"> <li>✓ Circular economy considerations should be applied</li> <li>✓ Supply chain assessments should be undertaken to ensure responsible sourcing of materials.</li> <li>✓ Consider the power demand of the facilities and whether this is supplied by renewable or non-renewable energy sources.</li> </ul>



			inputs of resources, such as fossil fuels and chemicals; reduce water use in water-scarce regions; are energy efficient; and run on renewable energy <sup>14</sup>	
	Business to Business and Business to Consumer	Speciality/single brand and multi-brand retail	Short-term/long-term clothing rental <sup>14</sup>	
	retail of apparel, footwear and textiles	Online and physical retail	Technologies that adapt clothing to individual body shapes and styles allowing custom-made clothing to increase clothing utilisation <sup>14</sup>	
			Clothing resale businesses <sup>14</sup>	
<b>Logistics</b>	<ul style="list-style-type: none"> <li>• Third-Party Logistics (3PL) Providers</li> <li>• Fourth-Party Logistics (4PL) Providers</li> <li>Integrated Logistics Providers (ISP)</li> </ul>	<ul style="list-style-type: none"> <li>• Businesses that provide outsourced logistics services including but not limited to distribution, warehousing (including cold chain logistics) and fulfilment services</li> <li>• Businesses that provide end-to-end solutions applying new technologies and advanced methodologies, including but not limited to Artificial Intelligence (AI), Internet of Things (IoT), Big Data &amp; Blockchain, etc.</li> </ul>	Shift long-haul road freight to more carbon-efficient rail or inland/coastal shipping	<p><b>Dark Green</b> if only to support zero carbon transport of low carbon goods and supporting technology.</p> <p><b>Medium to Light Green</b> if transportation with low carbon vehicles and substantially increased efficiency</p> <p><b>Brown</b> if logistics are fossil-fuel powered</p> <p><b>Concerns</b></p> <ul style="list-style-type: none"> <li>✓ Fleet optimization for fossil-fuel based logistics services may lead to rebound effects and lock-in as efficiency promotes greater usage.</li> <li>✓ Consider more climate friendly alternatives, such as railways</li> </ul>





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Businesses that perform a variety of end-to-end solutions logistic-related services such as multi-modal transportation, warehousing and value-added services

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## Background

DBS operates primarily in Singapore, Hong Kong, China, India, Indonesia and Taiwan. Major industries in these regions are predominately within manufacturing of raw materials and include: textiles, food processing, chemicals, cement, iron and steel, software, mining, automobiles, and petroleum.

Increases in income, industrialization, urbanization has led to the world's greatest growth in electricity demand (6%) in this region. At the same time, almost 65 million people in Southeast Asia still lack access to electricity and 250 million people rely on traditional bioenergy.<sup>15</sup> Since 2000, overall energy demand has grown by more than 80%, most of which has been met by a doubling in fossil fuel use.<sup>16</sup> Oil still dominates fuel for the transport sector despite increases in biofuels and electric vehicles have so far had little uptake. According to the IEA, between 2019 and 2024, China will account for 40% of global renewable capacity expansion, including leading growth in global distributed PV and in biofuel production.<sup>17</sup> Meanwhile, coal demand and production capacity remain high, with a young, highly efficient fleet of coal plants that is ten times greater than its gas-fired fleet.

In Southeast Asia (not including India or China) the IEA Sustainable Development Scenario allows for a peak in 2024 at 1552 MtCO<sub>2e</sub> in Southeast Asia, whereas current stated policies indicate a linear upward trajectory to 2355 MtCO<sub>2</sub> in 2040. Emissions are expected to rise by around 66% by 2040 to reach just under 50% of world emissions. The power sector plays a critical role for decarbonizing the energy system, requiring 50% of decarbonized electricity generation by 2030 and 100% by 2050.<sup>18</sup> Electrification and increasing access is a big priority for Southeast Asia, coupled with increased investment in renewables as prices fall to compete with the low prices of coal-fired generation. South and Southeast Asia (including India) have vast renewable energy potential in solar and wind, which could “satisfy needs of almost all countries in these regions many times over”.<sup>19</sup> To comply with the IEA Beyond 2 Degree Scenario pathway, the transport sector will need to see a dramatic change to renewable sources from 1% today to about 50% by 2050, through the decarbonization of the power sector and increased share of electric vehicles. The residential sector needs renewable share of final energy consumption of 80-90%, with traditional biomass being phased out to make way for electrification. The industry sector will see an increase in power demand of 120%, which must be largely comprised of renewable energy, either modern biomass or electricity.

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<sup>15</sup> <https://climateanalytics.org/media/decarbonisingasia2019-fullreport-climateanalytics.pdf>

<sup>16</sup> <https://www.iea.org/reports/southeast-asia-energy-outlook-2019>

<sup>17</sup> <https://www.iea.org/countries/china>

<sup>18</sup> <https://climateanalytics.org/media/decarbonisingasia2019-fullreport-climateanalytics.pdf>

<sup>19</sup> <https://climateanalytics.org/media/decarbonisingasia2019-fullreport-climateanalytics.pdf>



### Governance Assessment

*Four aspects are studied when assessing the DBS's governance procedures: 1) the policies and goals of relevance to the Sustainable and Transition Finance Framework and Taxonomy; 2) the selection process used to identify eligible projects under the framework; 3) the management of transactions; and 4) the reporting on the projects to clients and other stakeholders.*

DBS has in place a sound management and governance structure, and reporting on funding activities is transparent and extensive, and regular. DBS has multiple commitments and memberships to reporting, risk management and sustainability guidelines and frameworks, but could have more ambitious and specific climate related targets for its operations and lending. The three-tier selection process is commendable. While the selection criteria are sometimes very broad, DBS informed us that the bank is committed to enlist assistance of external technical consultants where necessary and align clients' green loans/bonds with international best practices to ensure a science-based approach to implementing the framework.

Some concerns remain that the eligibility criteria are partly lacking in specific details like specific targets and/or clear delineations within categories, for example whether fossil-fuel based industries or only zero-emissions industries are eligible for inclusion. It will be the responsibility of DBS to follow up on the implementation of the ambitious framework to ensure consistent project selection and compliance especially when considering the breadth of involved industries and technologies'/industries' nuances to avoid lock-in of fossil fuels. DBS plans to report at a portfolio level, the aggregated data of individual transactions tagged under each of the labels and the associated details (e.g. the aggregated GHG emissions avoided, committed loan amount, sectoral breakdown, financial instrument breakdown) annually in its Sustainability Report, which is externally assured.

### Strengths

*Strengths highlight aspects of the framework and governance where DBS has clear environmental ambitions and the ability to follow through.*

It is a strength that DBS is transparently labeling categories according to the main objectives DBS follows, such as green, SDG and transition. DBS has shared that their intent is to start a conversation around what is acceptable in these categories, and the transparency in this framework is a first step.

DBS is committed to reporting on the TCFD framework. DBS reports on Scope 1, 2 and partly on Scope 3 emissions and is transparent on its methodology for calculating and reporting these emissions. This includes outlining methodology for estimating Scope 3 emissions that consist of emissions from DBS' customers, which are harder to report given various reporting methods between companies. DBS conducts studies on its client base, and carves out industries that need support. In addition, DBS has excluded some environmentally harmful and unsustainable industries like coal from their framework.

For a bank which derives majority of its business from financing the economic growth of Southeast Asia, the focus on the EU taxonomy and ensuring alignment with corresponding thresholds, as well as incorporating other guidelines and standards such as the CBI taxonomy make this financing framework ambitious. Additionally, assigning the eligible project categories into different tracks of funding allows for greater transparency where more carbon-intensive industries like oil and gas are involved. This potentially also allows for greater growth in the region as South and Southeast Asia are only at the beginning of their clean energy transition.



DBS is focused on eligible categories that align with the major industries in its operating countries. Specifically, industries like textiles that have previously not received much focus on climate mitigation efforts represents the potential for significant positive impact of DBS' Green financing.

DBS has a comprehensive ESG risk assessment regime. ESG standards are outlined in eight sector guides which are publicly available aiming to be consistent with the “Do No Significant Harm” requirement under the EU Taxonomy.

### Weaknesses

*Weaknesses describe areas that may have fossil involvement or insufficient screening of resiliency where relevant. This can also include areas that are unclear or general in description, making assessment more challenging.*

While DBS is transparent on the inclusion of “transition” projects, some of these project categories risk lock-in of fossil fuels and require extra scrutiny, e.g., the shipping, aviation and automotive industries and technologies and facilities that use oil, natural gas, shale gas, biofuels, and alternative fuels. The inclusion of carbon intensive oil- and gas-related products in the “transition” label for DBS financing may not promote the scale of ambition required to achieve Paris agreement climate goals and present a substantial risk of lock-in or rebound.

DBS does not undertake in-depth green scrutiny on its SDG related categories that are not explicitly geared toward green and/or transition, but which may still have environmental and social effects.

### Pitfalls

*Pitfalls describe areas where there are potential environmental risks. These are not considered weaknesses but rather areas that require further attention. In many cases DBS is already taking steps to mitigate these risks, and we encourage DBS to continue to follow up carefully on these points.*

Broad and sometimes vague selection criteria that include multiple frameworks, thresholds and standards may lead to inconsistent project selection. For example, the criterion of ‘substantial’ GHG emissions reductions in multiple eligible categories is unspecific and may not give adequate guidance for consistent selection of Green and sustainable projects. Another example is the “animal feed, animal protein, agribusiness” category that could entail aquaculture, poultry and slaughter of livestock. These categories require specific criteria in order to guarantee low-climate impact and sustainability. As transitional economic activities are context- and time horizon-specific, CICERO Green in many cases does not have enough information to judge the green credentials with certainty. It is DBS' responsibility to proceed with caution and involve climate expertise where possible.

The fact that DBS can directly finance companies under “corporate in transition” if the client has divested from carbon-intensive assets, diversified from carbon intensive activities through R&D investment or the acquisition of Green and socially positive business represents an area of attention. There is no guarantee funding is used for investments in Green activities. CICERO Green encourages DBS to follow up with transparent reporting.

DBS can consider reporting on a project-by-project basis rather than on an aggregate level. Being extra transparent is important considering that some projects might have potentially large climate impact.

DBS relies on ESG risk assessments to assess clients' environmental performance, which may be insufficient to ensure full compliance with a wide range of possible environmental risks. The ESG risk assessments do not always require escalation to the IBG Sustainability Team for enhanced due diligence. This may lead to incomplete compliance. DBS is taking steps to mitigate this by implementing the Precautionary Principle in escalating projects to the Team, as well as providing training to Relationship Managers to minimize risk of incomplete compliance.



DBS may consider including stringent and clearer short, medium- and long-term targets with a specified end-date to reduce emissions in both own emissions and in lending for global operations. Additionally, it would be beneficial to require reporting of all emissions from funding recipients to enhance methodology for estimating Scope 3 emissions.

The use of the IEA Sustainable Development Scenario as a guide for evaluating transition projects may not be ambitious enough, and it may be difficult to determine the extent to which DBS is contributing to overall regional energy efficiency improvement requirements, e.g., for compliance with the Sustainable Development Scenario. DBS may consider incorporating further factors into their selection process.

Despite the requirement of NPDE for biofuels, there remain concerns of increasing carbon emissions in the long term as well as ecosystem damage. DBS should take steps to ensure funded projects that are categorized as either Green or Transition can demonstrate clear short-term and long-term trajectories of ambitious emissions reductions.

Differing building codes included in the selection criteria for real estate have varying degrees of ambition, which would alter the 'Greenness' of the Green financing. DBS could consider including a description of the methodology for how the climate-friendly dimension is evaluated for all relevant project categories.

Multiple categories include energy efficiency improvements in different industries, e.g., textiles, water management, chemicals production, as well as pollution control technologies, which all may lead to rebound effects. When the cost of an activity is reduced due to lower pollution levels or lower emissions intensity, there is greater incentive to do more of the same activity. We encourage DBS to vigilantly assess potential rebound effects to avoid including projects where the risk is particularly high.

DBS does not always conduct life-cycle assessments or supply chain assessments, specifically for emissions and environmental impacts, for its eligible project categories. Considerations of supply chain ESG risks are limited to major accidents and incidents within the corporate operations and supply chain, which may not take into account carbon emissions or other non-major environmental impacts.



# Appendix 1: Referenced Documents List

Document Number	Document Name	Description
1	DBS Bank, Institutional Banking Group. <i>Sustainable &amp; Transition Finance Framework</i> . June 2020	Framework for Sustainable & Transition Finance
2	DBS Sustainability Report, 2019	Annual Sustainability Report for 2019
3	DBS Bank. <i>Our Approach to Responsible Financing</i> , September 2019	
4	DBS. <i>Equator Principles Implementation Guide</i> . 2020	



## Appendix 2: About CICERO Shades of Green

CICERO Green is a subsidiary of the climate research institute CICERO. CICERO is Norway's foremost institute for interdisciplinary climate research. We deliver new insight that helps solve the climate challenge and strengthen international cooperation. CICERO has garnered attention for its work on the effects of manmade emissions on the climate and has played an active role in the UN's IPCC since 1995. CICERO staff provide quality control and methodological development for CICERO Green.

CICERO Green provides second opinions on institutions' frameworks and guidance for assessing and selecting eligible projects for Green bond investments. CICERO Green is internationally recognized as a leading provider of independent reviews of Green bonds, since the market's inception in 2008. CICERO Green is independent of the entity issuing the bond, its directors, senior management and advisers, and is remunerated in a way that prevents any conflicts of interests arising as a result of the fee structure. CICERO Green operates independently from the financial sector and other stakeholders to preserve the unbiased nature and high quality of second opinions.

We work with both international and domestic issuers, drawing on the global expertise of the Expert Network on Second Opinions (ENSO). Led by CICERO Green, ENSO contributes expertise to the second opinions, and is comprised of a network of trusted, independent research institutions and reputable experts on climate change and other environmental issues, including the Basque Center for Climate Change (BC3), the Stockholm Environment Institute, the Institute of Energy, Environment and Economy at Tsinghua University and the International Institute for Sustainable Development (IISD).

