GUIDE

RWANDA

Review of the regulatory, financial reporting and tax aspects

Commercial and industrial renewable energy projects in Rwanda

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

This guide was commissioned by the German Energy Solutions Initiative of the German Federal Ministry for Economic Affairs and Climate Action (BMWK)

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Abbreviations/acronyms

C&I	Commercial & industrial
EDCL	Energy Development Corporation Limited
EIA	Environmental impact assessment
Electricity Act	Law No. 52/2018 of 13/08/2018 modifying Law No. 21/2011 of 23/06/2011 governing Electricity in Rwanda, as modified to date
Electricity Law	Law No. 21/2011 of 23/06/2011 governing Electricity in Rwanda
EPC	Engineering, procurement and construction
EUCL	Energy Utility Corporation Limited
ESIA	Environmental and social impact assessment
FiT	Feed-in tariff
GoR	Government of the Republic of Rwanda
IFRS	International Financial Reporting Standards
IPP	Independent power producer
IASB	International Accounting Standards Board
ITL	Rwandan Income Tax Law
MININFRA	Ministry of Infrastructure of the Republic of Rwanda
NM	Net-metering
O&M	Operation and Maintenance
PDP	Project Development Programme
PPA	Power purchase agreement
PV	Photovoltaic/Photovoltaics
RDB	Rwanda Development Board
RE	Renewable energy
Quality of Service Regulations	Regulations governing electricity quality of service in Rwanda of 2016
REFIT Regulations	Regulations on Rwanda Renewable Energy Feed-in Tariff of 2012
REG	Rwanda Energy Group
Regulations on electrical installations	Regulations on electrical installations of 2012 issued by RURA
REMA	Rwanda Environment Management Authority
RURA	Rwanda Utilities Regulatory Authority
Rwanda Energy Policy	Rwanda Energy Policy of 2015
SPV	Special purpose vehicle
SYSCOA	West African Accounting Standards
TPO	Third-party ownership
VAT	Value added tax
WHT	Withholding taxes

Currency units

EUR	Euro
USD	United States Dollar
RWF	Rwandan franc

Conversion rate as of 10.11.2023

USD 1 = EUR 0.9354
EUR 1 = USD 1.0691

Source: https://www.ecb.europa.eu/stats/policy_and_exchange_rates/euro_reference_exchange_rates/html/eurofxref-graph-usd.en.html

Technical units

kWH	Kilowatt hour
MW	Megawatt
MWp	Megawatt peak

Contributors

Trinity International LLP, ENSafrica and KPMG Rwanda were contracted by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH to provide a regulatory framework analysis for commercial and industrial (C&I)/captive renewable energy projects in Rwanda.

Trinity's role in the consortium of consultants has been one of overview, in light of Trinity's experience in jurisdictions across the continent. In addition, Trinity has prepared the template agreements that are annexed to this study as possibilities to be used in various scenarios.

The role of ENSafrica has been to review the legal and regulatory environment in Rwanda, including the regulations relating to taxation.

The role of KPMG in the consortium is to review the accounting/financial reporting implications for both developers and power consumers of the above-mentioned delivery models as a result of globally/regionally recognised accounting/financial reporting standards such as the International Financial Reporting Standards (IFRS) or the West African Accounting Standards (SYSCOA).

ENERGY SOLUTIONS – MADE IN GERMANY

The German Energy Solutions Initiative

The German Energy Solutions Initiative, coordinated and financed by the German Federal Ministry for Economic Affairs and Climate Action (BMWK), aims to globalise German and European technologies and expertise in climate-friendly energy solutions.

Years of promoting smart and sustainable energy solutions in Germany have led to a thriving industry known for world-class technologies. Thousands of specialised small and medium-sized enterprises (SMEs) focus on developing renewable energy systems, energy efficiency solutions, smart grids and storage technologies. Cutting-edge energy solutions are also built on emerging technologies like Power-to-Gas, fuel cells and green hydrogen. The initiative's strategy is shaped around ongoing collaboration with the German business community.

THE PROJECT DEVELOPMENT PROGRAMME (PDP)

Implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, the Project Development Programme (PDP) is an integral part of the German Energy Solutions Initiative. The PDP combines development cooperation with private-sector engagement to promote climate-friendly energy solutions and facilitate market access for German and European small businesses in selected developing and emerging countries. This fosters economic growth and international cooperation, and contributes to climate change mitigation. The PDP works closely with the German Chambers of Commerce Abroad (AHK) to implement tailor made local solutions.

The PDP team keeps a constant eye on key market sectors in the target countries for providers of climate-friendly energy solutions. Using these insights, they generate sector analyses for areas where renewable energies or energy efficiency measures can compete effectively without extra subsidies.

PROJECT OPPORTUNITIES IN DEVELOPING AND EMERGING COUNTRIES

The markets in developing countries and emerging economies are promising, but also pose challenges for international business partners. The PDP team provides free and impartial advice to local companies, in particular, and puts them in contact with German or European business partners.

The team collects data from the energy consumer and evaluates it from a technical and economic perspective, thus developing financially viable projects focused on renewable energies and energy efficiency with local companies. It also offers business initiation opportunities with German or European small and mid-sized companies.

At the same time, the project provides training courses, analyses and studies on the risks and potential of renewable energies to help support market development. Visiting reference projects within the countries also promotes the creation of private-sector business partnerships.

In addition to commerce and industry, operators of refugee camps are a further target group for the transition to renewable energies as many still use diesel generators to supply energy or water.

The focus of activities currently lies in 15 countries across Southeast Asia, South Asia, Sub-Saharan Africa, and the Middle East.

Executive summary

RWANDA'S ENERGY LANDSCAPE – COMPREHENSIVE INSIGHTS INTO REGULATORY, FINANCIAL AND TAX ASPECTS

The guide 'Commercial and Industrial Renewable Energy Projects in Rwanda – Review of Regulatory, Financial Reporting, and Tax Aspects' provides detailed insights into the regulatory dimensions of renewable energy projects in Rwanda's commercial and industrial (C&I) sector.

Developed as a guide for German and European companies offering climate-friendly energy solutions in the promising market of C&I solar projects in Rwanda, it specifically addresses challenges related to self-consumption projects, the associated business environment and legal principles.

OPPORTUNITIES IN RWANDA'S REGULATORY ENVIRONMENT

Rwanda has substantial potential for the application of renewable energies, particularly in the field of solar photovoltaics. Despite the limited utilisation of available resources so far, local businesses in the commercial and industrial sector are looking for cost-effective, solar-powered solutions that can achieve cost savings compared to local grid tariffs.

The regulatory framework for the specific niche of C&I projects within the general solar PV market is not fully defined. The use of self-consumption projects is currently restricted to 50 kWp, with a few exceptions; however, efforts are underway to develop more flexible regulations.

Zusammenfassung

RUANDAS ENERGIELANDSCHAFT: UMFASSENDE EINBLICKE IN REGULATORISCHE, FINANZIELLE UND STEUERLICHE ASPEKTE

Der Leitfaden "Commercial and Industrial Renewable Energy Projects in Rwanda – Review of Regulatory, Financial Reporting, and Tax Aspects" bietet detaillierte Einblicke in die regulatorischen Dimensionen erneuerbare Energieprojekten im gewerblichen und industriellen (C&I) Sektor Ruandas.

Entwickelt als Orientierungshilfe für deutsche und europäische Anbieter klimafreundlicher Energielösungen im vielversprechenden Markt für C&I-Solaranlagen in Ruanda, widmet er sich speziell den Herausforderungen bei Eigenstromprojekten, dem dazugehörigen Geschäftsumfeld und rechtlichen Grundsätzen.

CHANCEN IM REGULATORISCHEN UMFELD RUANDAS

Ruanda verfügt über erhebliches Potenzial für die Anwendung erneuerbarer Energien, insbesondere im Bereich der Solarphotovoltaik. Trotz bisher begrenzter Nutzung der verfügbaren Ressourcen, suchen lokale Unternehmen im gewerblichen und industriellen Sektor suchen nach kosteneffizienten, solarbetriebenen Lösungen, die Kosteneinsparungen im Vergleich mit den lokalen Netztarifen erzielen können.

Die regulatorischen Rahmenbedingungen für die Nische C&I innerhalb des Solar-PV-Marktes sind noch nicht vollständig definiert. Die Nutzung von Eigenstromprojekten ist zurzeit bis auf wenige Ausnahmen auf 50 kWp beschränkt, jedoch wird an flexibleren Regelungen gearbeitet.

The aim of this guide is to comprehensively guide companies offering climate-friendly energy solutions through all current areas in the development of renewable energy projects for commerce and industry in Rwanda. This seeks to minimise uncertainties arising from pending and unclear regulations, as well as inconsistent information from various interest groups, thereby avoiding potential project failures.

TAILORED SUPPORT FOR PRACTICAL IMPLEMENTATION, WITH CONCRETE EXAMPLES

This guide offers practical insights into Rwanda's C&I solar market based on interviews with German and European service providers. It provides a clear guide for the successful development of solar projects and makes complex legal language accessible.

For providers of climate-friendly energy solutions looking to establish a presence in Rwanda, the guide provides crucial support in establishing businesses and overcoming project-related challenges. For already established providers of climate-friendly solutions, it offers guidance and important information to sustain their business. The guide serves as a key resource for both newcomers and established companies, providing insights into essential aspects that every solar PV developer in the C&I sector should be aware of.

THE NEXT STEP BEGINS HERE

This guide marks the initial step taken by a country assuming a leading role on the journey towards a more sustainable industry. It not only sheds light on the rules and financial aspects of C&I photovoltaic projects, but also provides practical tools. Legally vetted contract templates for EPC, PPA and leasing, accompanied by an Operation and Maintenance (O&M) template, facilitate both initial and subsequent projects in Rwanda.

Ziel dieses Leitfades ist es, Anbieter klimafreundlicher Energielösungen umfassend durch alle derzeit geltenden Aspekte der Entwicklung von erneuerbaren Energieprojekten für Gewerbe und Industrie zu führen. Dies soll Unsicherheiten durch ausstehende und unklare Regulierungen, sowie uneinheitliche Informationen verschiedener Interessengruppen minimieren und somit potenzielle Projektausfälle vermeiden.

MASSGESCHNEIDERTE UNTERSTÜTZUNG FÜR DIE PRAXIS MIT KONKRETEN BEISPIELEN

Basierend auf Interviews mit deutschen und europäischen Anbietern, bietet dieser Leitfaden praxisnahe Einblicke eine klare Anleitung für die erfolgreiche Entwicklung von Solarprojekten und macht die komplexe Rechtssprache zugänglich.

Für Anbieter klimafreundlicher Energielösungen, die in Ruanda Fuß fassen wollen, bietet der Leitfaden entscheidende Unterstützung bei Unternehmensgründung und Bewältigung von projektbezogenen Herausforderungen. Bereits ansässigen deutschen und europäischen Anbietern gibt er Orientierungshilfen und wichtige Informationen zur Geschäftsaufrechterhaltung. Der Leitfaden bietet allen - Neueinsteigern und ansässigen Unternehmen - einen Schlüssel zu relevanten Aspekten, die jeder Solar-PV-Entwickler im C&I-Bereich kennen sollte.

DER NÄCHSTE SCHRITT BEGINNT HIER

Dieser Leitfaden ist der erste Schritt in ein Land, das auf dem Weg zu einer nachhaltigeren Industrie eine Vorbildfunktion einnimmt. Er beleuchtet nicht nur die Regeln und finanziellen Aspekte von C&I-Photovoltaikprojekten, sondern stellt auch praktische Werkzeuge zur Verfügung. Juristisch geprüfte Vertragsvorlagen für EPC, PPA und Leasing, begleitet von einer Vorlage für Betrieb und Wartung (O&M), erleichtern sowohl Erst- als auch Folgeprojekte in Ruanda.

1

C&I context

1.1 Commercial and industrial power consumer projects

Falling system prices of renewable energy systems (RE systems), environments challenging the development of large-scale utility projects and rising power prices for commercial/industrial consumers have led renewable energy project developers (RE developers) to increase the focus on developing smaller scale distributed renewable energy systems with commercial/industrial power consumers or offtakers as direct counterparts (C&I projects).

With the C&I market segment gaining traction in various jurisdictions and increasingly threatening the traditional business model of electricity utilities, the segment is also attracting increased attention from regulators.

Most entities interested in C&I power projects in Rwanda seek to offer rooftop solar power systems and solar equipment to industrial and commercial customers. The customers may be grid-connected and, in certain cases, off-grid. Companies would typically supply the solar system and supporting equipment and install these on the customer's premises. Installation is either undertaken directly by the supplier of the equipment or by an independent contractor engaged by the supplier.

1.2 Characteristics of C&I projects

C&I projects have the following characteristics:

1. Energy generation equipment is deployed on the premises of the C&I power consumer. Energy generation equipment may consist of (or be a combination of) photovoltaic/storage energy systems, photovoltaic/diesel-storage systems/natural gas-hybrid systems.
2. The C&I power consumers may be either off-grid or on-grid.
3. Energy systems may be grid-tied or function as islanding systems/only connected to on-site distribution grid.
4. The on-site generation capacity ranges between 50 kWp up to 20 MW.
5. There is partial feed in of electricity to a public grid via net-metering/feed-in tariff.
6. This excludes systems that depend on wheeling.

1.3 C&I delivery models

The study considers the typical delivery models in the C&I power segment, namely:

1. up-front purchase/self-financing by C&I power consumers; or
2. third-party ownership models where investment and operational risks are borne by the renewable energy (RE) developers.

Delivery models in the C&I segment can generally be differentiated between 'up-front purchase/self-financing' by commercial/industrial power consumers as well as 'third-party ownership models', where investment and operational risks, in particular, are borne by RE developers. In these latter cases, RE system services/benefits are provided to commercial/industrial power consumers via a variety of contract structures, such as power purchase agreements (PPAs) or leasing/rental arrangements, possibly with the transfer of system ownership to the C&I power consumer at one point during the project lifetime. The most common contractual arrangement, however, is an outright sale of the solar system to the customer.

The above-mentioned delivery models not only give rise to various regulatory questions for developers and beneficiaries alike, but also come with accounting/financial, reporting and tax-treatment implications which are particularly pertinent to industrial/commercial power consumers.

1.4 Scope of this study

This study is divided into five parts:

- Part I. This introductory section.
- Part II. A description of the regulatory framework governing C&I power projects in Rwanda and covers an evaluation of the legality of C&I power projects, the environmental and social considerations for C&I power projects, the legality of the concept of third-party ownership models, local content considerations and options for establishment of a local subsidiary, options for transfer of funds.
- Part III. A consideration of the various accounting and financial reporting implications of these different models on delivery of C&I projects.
- Part IV. A summary of the tax treatment of C&I power projects.

2

Regulation and licensing

2.1 Electricity Market Structure and Regulation in Rwanda

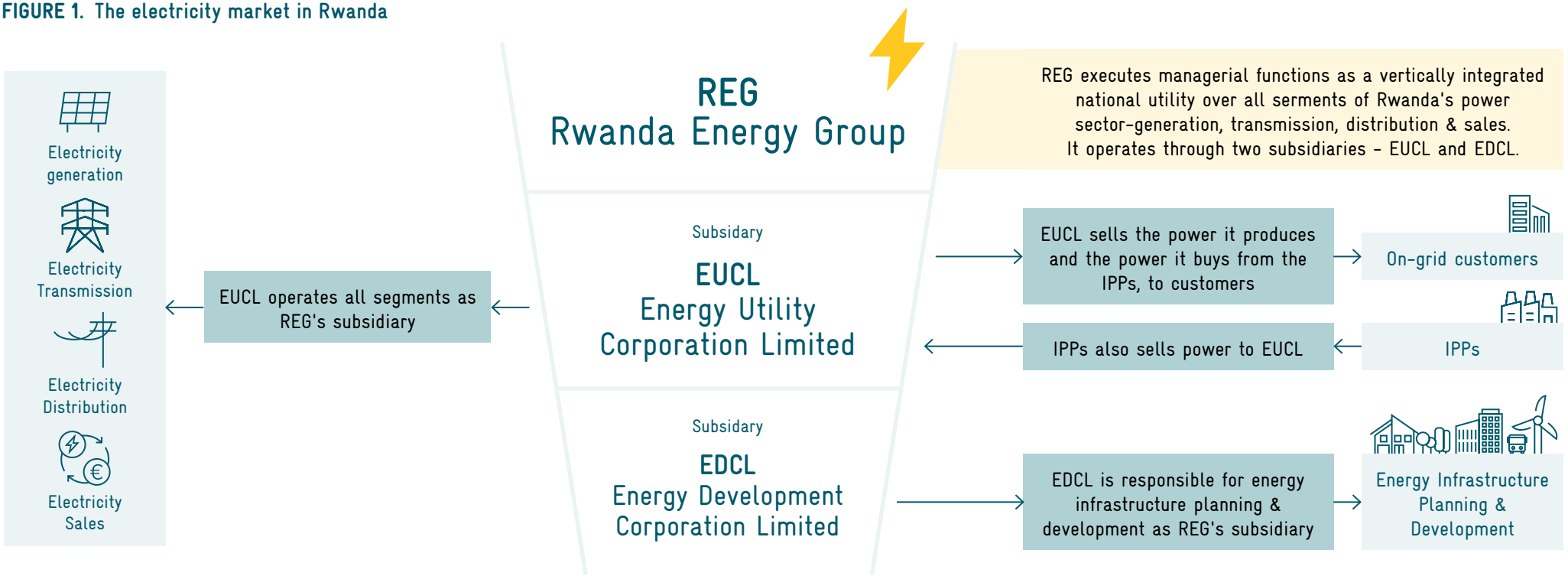
The market for C&I power projects in Rwanda is still nascent, as most C&I customers still rely on grid-connected power, supplied by the state-owned national utility. According to the Government of the Republic of Rwanda's (GoR) Energy Sector Strategic Plan 2018/19-2023/24, auto-produced/self-supply-produced electricity is widely used in Rwanda for home consumption and is required, by law, to be below 50 kWp.

2.1.1 Rwanda's electricity market structure

The electricity market in Rwanda is operated by Rwanda Energy Group (REG), a state-owned, vertically integrated utility. The following diagram provides a basic depiction of Rwanda's electricity market structure.

Besides the grid system, there is a list of mini-grids and standalone systems operated by private developers. The grid electricity is generated from diverse renewable and non-renewable resources, namely hydro, methane gas (extracted from Lake Kivu), peat, solar and fossil fuels (heavy or light fuel oil). A certain amount of the electricity is generated from regionally shared hydroelectric power projects (Rusizi I & Rusizi II), and a small share of electricity is imported from Uganda. Off-grid electricity is mainly generated from solar photovoltaic systems and mini/pico hydropower systems.

FIGURE 1. The electricity market in Rwanda



Source: Author's own illustration, ENSafrica (2023)

2.1.2 Regulatory framework for the electricity market in Rwanda

The regulatory framework for the electricity market in Rwanda is set out in the table below.

In summary, in regulating the energy sector, the primary activities include: establishing different regulatory tools governing activities in the sector; advising the government on energy sector-related policies; licensing; end-user tariff setting for non-competitive regulated services; dispute and complaints handling; and monitoring licensees' performance to ensure compliance with the terms and conditions of their licences.

TABLE 1. Regulatory framework for the electricity market

LEGISLATION/POLICY/REGULATOR	OBJECTIVE/FUNCTION
Law No. 21/2011 of 23/06/2011 governing Electricity in Rwanda (the 'Electricity Law')	
Law No. 52/2018 of 13/08/2018 modifying Law No. 21/2011 of 23/06/2011 governing Electricity in Rwanda as modified to date (the 'Electricity Act')	The Electricity Act regulates the following: • production, transmission, distribution and sale of electricity; • licensing of electricity-sector activities; and • control of activities within the electricity sector.
Rwanda Energy Policy, 2015	This policy was issued as a guiding framework to spearhead the development of the Rwandan energy sector.
Rwanda Grid Code	The Rwanda Grid Code of 2013 establishes the rules and procedures that allow all participants (generation, transmission, distribution and customers) to use the Interconnected Power System (IPS) and to permit the IPS to be planned and operated safely, reliably, efficiently and economically, by covering a range of technical, operational, commercial and governance issues.
Guidelines No. 02/GL/EL-EWS/RURA/2019 on Minimum Technical Requirements for mini-grids in Rwanda, 2019	The purpose of these guidelines is to outline the minimum technical specifications that must be followed when developing mini-grid plants in Rwanda. These technical specifications are developed with the purpose of ensuring safety and reliability of mini-grids.
Electricity Safety Regulation, 2013	These regulations apply to electrical systems, associated plants and apparatus under their ownership or control.
Regulations 002/EL/ENERGY/RURA/2012 of October 4th, 2012, on Electrical Installations	These regulations apply to electrical installations of all premises (residential, commercial, public and industrial premises) on Rwandan territory. The aim of these regulations is to ensure the protection of people, property and the environment from hazards that can arise from the operation of an electrical installation under normal or faulty conditions.
Electricity Licensing Regulations, 2013	The purpose of these regulations is to establish a framework for the undertaking of electricity activities so as to achieve the efficient, effective, sustainable and orderly development and operation of electricity supply in Rwanda.
Rwanda Utilities Regulatory Authority (RURA)	RURA's mandate includes: • regulating the electricity, renewable energy, gas and downstream petroleum sub-sectors; • ensuring the sufficient, reliable, affordable and sustainable supply of energy, fairly, to all customers; and • reporting to the Ministry of Infrastructure.
Ministry of Infrastructure (MININFRA)	The mandate of MININFRA is to set the overall policy and strategy of the energy sector and coordinate the development of the electricity sub-sector.

2.2 Licensing of C&I projects

2.2.1 Energy licensing requirements

All activities related to the production, transmission, distribution and trading of electric power within the national territory of Rwanda are governed by the Electricity Law. As defined in Article 2 of the same law, the term 'electricity' refers to 'electric power generated from water, petroleum, biofuel, gas, peat, solar energy, wind energy, nuclear energy and any other source (Law governing electricity in Rwanda, 2011).

In accordance with the Electricity Law and the electricity licensing regulations issued under it, such activities are subject to a licence issued by RURA.

However, operations for electricity auto-production with a capacity of less than fifty kilowatts (50 kW) do not require a licence and are exempt from prior notification.

To determine whether C&I power projects comply with the regulatory requirements and obligations under the Electricity Law and its regulations, it is necessary to assess whether a company supplying and installing a solar system and supporting equipment on the C&I customer's premises engages in electricity production or generation activities in Rwanda.

Under the Electricity Law, the production of electric power refers to 'the generation of electricity in any power plant connected to transmission or distribution networks and any auxiliary activities of transport up to the supply point of transmission or distribution networks, as well as self-supply production' [our emphasis]. Therefore C&I projects may be subject to a production of electricity licence, even though the Electricity Law is not prescriptive with regards to solar solutions.

RURA is in the process of developing specific regulations regarding solar photovoltaic projects, including C&I projects, as the current Electricity Law is of a non-prescriptive and general nature with respect to solar photovoltaics (PV). The draft regulations provide a clearer licensing regime, which deals with importers, manufacturers, vendors, solar PV contractors, solar PV technicians, system owners, and solar PV system installations separately. Matters such as the design of the solar PV system, the issuance of an installation certificate, the duty of contractors, repair and maintenance of solar PV systems, warranty terms, consumer rights with regards to solar PV devices, compliance with domestic standards and the use and disposal of solar PV systems and components are also dealt with in the draft regulations (Draft - Solar Photovoltaic Regulations).

While the current regulatory environment is not clear, an electricity licence may be required. Interested parties are advised to stay updated regarding local emerging developments in this area and take necessary precautions, especially in view of the development of specific regulations regarding solar PV.

Lastly, with regard to grid connection requirements, all grid-connected solar PV systems must comply with the Rwanda Grid Code (Rwanda Grid Code, 2013).

2.2.2 Licensing process

The current licensing process and requirements detailed in the table below apply to the licensing of electricity production, regardless of the source of electricity, pursuant to the Electricity Law.

As previously mentioned, the draft regulations propose a separate approach for solar PV generation (including C&I projects), in which manufacturers, importers, vendors, system owners and contractors will be licensed independently.

TABLE 2. The process and requirements for acquiring an electricity production licence / Part I. General requirements

The application form	1. Obtain application form from RURA headquarters, website or as may be otherwise specified by RURA.
	2. Complete the licence application form.
	3. The application must contain the following information (where applicable): a) the applicant's name and a list of applicant's affiliated companies; b) the applicant's internal organisational structure; c) a description of the geographic territory for which applicant requests a licence; d) a detailed list of current physical facilities to be covered by the licence, with tables of the technical standards, schemes and parameters of the facilities; e) a description of the technical standards that will apply to any future construction or maintenance of physical facilities to be covered by the application; f) the applicant's financial and technical capacity to carry out licence-related activities, including the qualifications of key employees responsible for supervision of the proposed licence-related activities; g) a business plan covering the duration of the licence applied for, with a requirement to submit an updated business plan to RURA every five years; h) a three-year plan of activities; i) specification of the target customers by customer class or supply activity; j) a list of fixed assets by depreciation groups and the last annual statement of depreciation; k) a proposed quality-of-service improvement plan to address any service deficits; l) a description of any rights of way requested by the applicant; m) attestation that the applicant has not been convicted of any civil or criminal violations of economic or environmental laws, as well as a disclosure of any pending charges concerning civil or criminal violations of economic or environmental laws; n) attestation that members of the applicant's senior management have not been convicted of any civil or criminal violations of economic or environmental laws, as well as a disclosure of any pending charges concerning civil or criminal violations of economic or environmental laws; and o) the additional requirements set out in the table below.
	4. Application forms must be submitted typewritten, or in electronic form approved by RURA. In the latter case, the applicant must confirm that the electronic version is identical to the typewritten form to be submitted later to RURA.
	5. Confirmations or certifications for the licence application must be submitted as verified copies.
	6. The application form and all attachments must be signed by the applicant or its authorised representative. The signatory must sign a statement verifying that: • all information provided to RURA on the application form is true and correct to the best of the applicant's knowledge; and • The applicant accepts responsibility for payment of all future regulatory charges and fees as established by RURA for all licence holders.
	7. The application must be accompanied by a letter containing: • a description of the type of licence required; • the term of the licence requested; and • in the case of a licence renewal, any significant change in licence terms and conditions requested compared to the current licence.

TABLE 3. The process and requirements for an electricity production licence / Part II. Additional requirements, information and documents

Fees	An application must be accompanied by the processing fees as set out in Section 2.2.2.
Additional information and documentation required to accompany the application	1. Trade registration certificate specifying that electricity services are one of the applicant's objects.
	2. Certified copies of any development agreements or concession contracts between Rwanda and the applicant pertaining to the activity to be licensed.
	3. A copy of the power purchase agreement reviewed and approved by RURA prior to its signature by the parties.
	4. Copies of any contracts for the sale or purchase of power applicable to the facility.
	5. Certified copies of any contracts between the applicant and third parties that directly affect the technical operation of the facilities.
	6. Environmental Impact Assessment certificate.
	7. District authorisation approving planned activities at the site.
	8. Copies of the applicant's financial statements audited by an independent auditor for the three years prior for existing companies, and the initial balance sheet for newly formed companies.
	9. Reports of any governmental inspections and reports of any other type of third-party certifications, conducted on the physical facilities covered by the application.
	10. An inventory of all insurance cover taken out by the applicant on the facilities covered by the licence application.
	11. List of all other Rwandan or foreign licences held by the applicant pertaining to activities in the electricity sector.
	12. Any other information deemed necessary by RURA for reaching a decision at any phase of the proceedings.

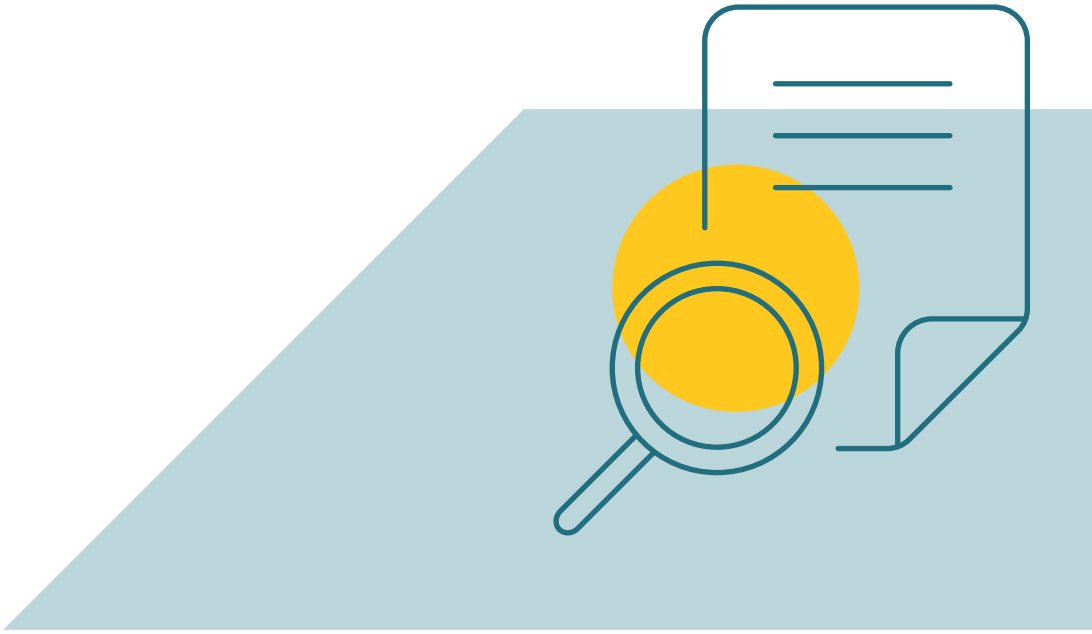


TABLE 4. The process and requirements for an electricity production licence / Part III. Technical requirements

Technical information required to accompany an application	1. A sufficient description adequately specifying the actual or proposed location of each generating station operated or intended to be operated under the licence or permit if granted.
	2. The number of generating plants or stations operated or to be operated.
	3. The date when any proposed generating plants or stations are expected to be commissioned.
	4. The maximum power (MW, MVA, MVAR) expected to be available from each generating plant or station at any one time and the aggregate power (MW, MVA, MVAR) expected to be available from each generating plant or station during any year, excluding in each case such wattage as is expected to be consumed at the station.
	5. The efficiency of each mode of generation.
	6. The expected life of each generating plant or station.
	7. The numbers of generating units and the capacity of each generating unit.
	8. Particulars of the entity or entities to whom the applicant intends to provide electricity.
	9. Any existing contracts between the applicant and third parties related to the sale of electricity to be generated at the plant.
	10. Technical data in tabular form on the power production plant, network and ancillary facilities owned by the applicant and to be used for the activity of electricity production.
	11. Technical data in tabular form on the power production plant, network and ancillary facilities which are not owned by the applicant, but which will be used for the purpose of conducting electricity operations, including details of ownership of these assets.
	12. A layout map and functional block diagram of the plant, network and ancillary facilities.
	13. Specification and technical characteristics of metering devices, and the location of the meters.
	14. Any long-term plans for construction of new facilities and major refurbishment of existing facilities.
	15. Overview of customers who will be directly connected to any power production or transmission network facility.
	16. Overview of the applicant's monitoring systems for any power plant, network and ancillary facilities.
	17. A list and description of software functions acquired for performance of the core activity.
	18. Statement on the capability and readiness of the applicant to meet its obligations under applicable law and regulations pertaining to public service.
	19. Any other information that may be required by RURA.

TABLE 5. The process and requirements for an electricity production licence / Part IV. Procedures

Licence application submission and review	1. Following submission of the licence application, RURA must process the application in accordance with the prescribed licensing process and procedures.
	2. Any licence application deemed by RURA to be incomplete will be considered a defective filing.
	3. Any licence application from an applicant who has not made full payment of all regulatory fees due to RURA under a prior licence will be considered to be a defective filing until full payment of the outstanding balance is made.
	4. RURA may require the applicant to remedy the defective filing before any further proceedings take place
Licence application proceedings	5. Upon receipt of a licence application, the Director General of RURA must initiate docket creation to track the application. The docket must reflect all procedural and substantive decisions on the licence application.
	6. Within 21 days of receipt, RURA may, upon review of the application, notify and require the applicant to furnish such additional information or particulars or documents considered necessary for the purpose of further processing with the application.
	7. If RURA determines that the licence application is complete, it will publish a public notice of the licence application in a newspaper of general circulation in Rwanda. The notice will include a summary of the proposed application and inform the public how, when and where to submit comments on the proposed licence. Notice will also be posted on RURA's website and at its headquarters.
	8. Directly affected parties and local authorities will be invited to lodge objections with RURA within a timeframe not less than 21 days after the publication.
	9. After receiving an objection from the public, RURA must notify the applicant and the objector of relevant objections within a period not exceeding 15 days.
	10. The hearing must be conducted under specific procedures issued by RURA, and the duration of the hearing will not be considered as part of the licence processing timeframe.
	11. RURA must make known its decision regarding any objection within 30 days after the hearing.
	12. Where the objection is accepted, RURA must: • inform the applicant in writing of its reasons for the rejection within 30 days after the hearing; • if necessary, RURA will request amendments to the application or the provision of additional information within 15 days to enable it to reconsider the application.
	13. RURA must endeavour to fully consider a licence application within 60 days of receipt of the application. The 60-day period does not include the time for the applicant to respond or RURA to request additional information. This time limit is an internal administrative target and not an enforceable deadline.
	14. The Regulatory Board may promulgate additional substantive rules on licence proceedings.
Licence application hearings	15. RURA will, at its sole discretion, determine if a hearing should be held for the licence application.
	16. RURA retains the right to hold a public hearing for a licence application in order to offer interested parties an opportunity to comment.
	17. RURA may waive a hearing for small projects, allowing submission of comments in writing.
	18. In cases of significant disputed issues of fact or law, RURA may schedule a formal hearing to provide for the submission of evidence.

Final decision	19. The Regulatory Board must make a final decision on the licence application in a regular session, relying upon applicable rules and regulations.
	20. The Regulatory Board members must decide to either issue the licence, with or without conditions, or to deny the licence application.
	21. The Regulatory Board must issue its decision as promptly as possible, but in no event any later than 60 days following receipt of a complete application, except where unusual circumstances require a longer period of review in order to render a fair and reasonable decision. In the event that the Regulatory Board requires additional time for a decision in order to obtain information from third parties, to resolve technical or legal issues or similar reasons, RURA must provide written notice to the applicant, with an explanation of the cause for the delay.
	22. The Regulatory Board will publish a public notice of the final decision in a newspaper of general circulation in Rwanda. The notice will include a summary of the decision. The notice will also be posted on RURA's website.
Criteria for licence issuance	23. RURA must issue a licence to an applicant that demonstrates the following: (a) the applicant fulfils all technical, operational, safety and other conditions in accordance with applicable laws, regulations and standards; (b) the applicant has demonstrated the technical and financial capacity and readiness to perform all related activities applied for and to provide safe and reliable services in accordance with all applicable laws, regulations and standards; (c) the applicant has demonstrated the technical and financial capacity to decommission the physical facilities covered by the licence upon termination of the licence term, in full compliance with all applicable technical and environmental requirements; (d) the applicant has sufficient employees with appropriate qualifications to perform its activities;
	(e) the applicant has demonstrated the capacity to provide accounting reports and other financial information required by RURA in the format and detail prescribed; (f) the applicant and key members of management have not been found liable of any significant civil or criminal violation of an economic or environmental law or law related to fraud in Rwanda or another country; (g) the applicant has not had a licence revoked or been found liable of significant licence violations in Rwanda or another country within the past 10 years; (h) the applicant has provided appropriate financial guarantees of performance to assure that the licensee will fulfil all licence conditions, including, but not limited to, surety bonds, escrow accounts or letters of credit; (i) the applicant fulfils all established criteria for the protection of the environment; (j) the applicant has right, title and interest to conduct the proposed activities on the site selected, or can obtain such right, title and interest through expropriation proceedings; and (k) the applicant has demonstrated that they will comply with all applicable laws and other regulations of the republic, including, but not limited to, RURA's regulations and decisions.
	24. RURA may specify any criteria that it determines are necessary to fully protect public health, safety and welfare.
	25. The licence is issued upon the payment of the initial licence fee. This is a one-time fee for the initial period but will be payable again upon renewal.

Reasons for rejection of the licence application	26. The following are the reasons for refusing to grant a licence as determined in Article 14 of the Electricity Law: (a) non-fulfilment of one of the conditions set forth in the licensing framework; (b) the applicant is in bankruptcy, liquidation due to bankruptcy or subject to a legal requirement; (c) the fact that the proposed activities in terms of production, transmission or distribution of electricity are in an area which is subject to another entity's concession or licence, and the cost is beyond the requestor's capacity; (d) any element likely to be a threat to national security; or (e) any other reason which is a hindrance to the electricity market.
Criteria for licence issuance	27. The following are the reasons for refusing to grant a licence as determined by Article 22 of the electricity licensing regulations: (f) the application was incomplete and the requested information was not submitted by the deadline set by RURA; (g) the applicant failed to demonstrate that it could meet the criteria for licence issuance; (h) the applicant failed to demonstrate the technical or financial capacity to carry out the licensed activities; (i) the applicant has a history of significant criminal, civil or licence violations involving economic, environmental or fraudulent acts within Rwanda or other countries; (j) members of the applicant's management have a history of significant criminal, civil or licence violations involving economic, environmental or fraudulent acts within Rwanda or other countries; (k) the applicant does not have sufficient right, title and interest to conduct the licence activities; (l) the applicant failed to comply with RURA's orders, information requests or other decisions during a prior licence term; (m) the applicant failed to pay an application fee or regulatory fee owed to RURA under a prior licence; (n) the applicant is in, or about to enter, insolvency, bankruptcy or liquidation; or (o) any other basis RURA determines necessary to protect public health, safety and welfare.
Term of electricity sector licences	28. The licence applicant may request a specific period of time for the licence term in the application. 29. RURA issues a licence for a defined period of time not less than five years and not more than 25 years.
Licence renewal	30. The licence holder must file an application for any licence renewal at least 180 days prior to expiration of the current licence. 31. The licence renewal proceedings are subject to the same procedures and approval criteria as an initial licence application. 32. RURA must attempt to make its decision not later than 30 days prior to the expiration of the current licence and must issue the licence not less than seven days prior to the licence expiring, so long as the applicant has filed its renewal application and requested additional information in a timely manner.
Licence modification	33. Licence modification proceedings may be initiated by RURA or at the request of the licence holder. 34. RURA may modify a licence prior to expiration of the licence term when it determines that an amendment of the licence is needed in order to respond to: (a) significant changes in the controlling laws or regulations, or court decisions that directly affect the licence provisions; (b) the inability of the licence holder to comply with controlling licence provisions due to events beyond the licensee's control (e.g. force majeure, major facility failures); (c) changes in the ownership or organisational status of the licensee (e.g. legal unbundling of the utility or merger with third party); (d) significant non-compliance by the licensee with current licence provisions or other

	35. RURA must notify the applicant of the approval or refusal of a licence modification request within a period of two months from the date on which the regulatory agency received the request. Any refusal must be justified. In the case of modification, the licence holder must continue to comply with the obligations relating to the licence.
Licence revocation	36. Licence revocation proceedings may be initiated by RURA or at the request of the licensee.
	37. RURA may revoke a licence prior to expiration of the licence term when it determines that revocation is needed in order to respond to: (a) a licensee's failure to comply with licence terms and conditions; (b) a licensee's abandonment of licence activities; (c) failure of the licensee to provide RURA with monitoring and reporting data required by the licence or failure to cooperate with regard to RURA inspections and audits; (d) a licensee's submission of false or deliberately misleading data or information to RURA in response to RURA's request or in response to RURA's monitoring and reporting inspection or audit requirements; (e) a licensee's failure to provide timely access to RURA for the inspection or audit of licensee's facilities and corporate records; (f) bankruptcy, financial insolvency or liquidation of the licensee; or (g) a licensee's failure to pay regulatory fees to RURA.

Source: Author's own table, ENSafrica Rwanda (2021), derived from the Electricity Licensing Regulations (2013)

2.2.3 Licensing fees

TABLE 6. Licensing fees

APPLICATION/PROCESSING FEES	
Licence application fees	USD 500
Licence transfer application fees	USD 500
GENERATION LICENCE FEES	
Category I – Above 200 MW	USD 50,000
Category II – From 50 MW but less than 200 MW	USD 40,000
Category III – From 10 MW but less than 50 MW	USD 30,000
Category IV – From 5 MW but less than 10 MW	USD 25,000
Category V – From 1 MW but less than 5 MW	USD 15,000
Category VI – From 0.5 MW but less than 1 MW	USD 10,000
Category VII – Less than 0.5 MW	USD 5,000

Source: Electricity Licensing Regulations 2013 (pp. 37–38)

2.2.4 Environmental and social impact assessment and licensing requirements

The Law on Environment of 2018 determines modalities for protecting, conserving and promoting the environment in Rwanda. The Rwanda Environment Management Authority (REMA) is responsible for national environmental protection, conservation, promotion and overall management, including advising the government on all matters pertinent to the environment and climate change (About: REMA, n.d.).

Each project that may have a significant impact on the environment is required, by said law, to undergo an environmental audit during and after its implementation. The projects which must undergo an environmental impact assessment (EIA) before they obtain authorisation for their implementation are listed under the Ministerial Order of 2019 establishing the list of projects that must undergo environmental impact assessment, instructions, requirements and procedures to conduct environmental impact assessment (Ministerial Order (2019). However, smaller-scale distributed renewable energy systems with commercial/industrial power consumers (C&I projects) which have on-site generation equipment of 50 kW up to 20 MW are not specifically listed. In the energy sector, the only related projects listed involve the construction of hydro-dams, hydropower plants and electrical lines of high- and

medium-voltage, micro hydroelectric power plants. In spite of this, an environmental assessment certificate is one of the requirements when applying for a licence, unless an exemption is given by the Ministry of Environment and proof of such is submitted. See Section 2.2.2 above.

To obtain an EIA certificate, there are various requirements. It should be noted that the requirements for an environmental impact assessment certificate are general requirements, regardless of the sector, and do not vary due to the nature of projects, nor are they differentiated by the generator types. The general requirements are provided in the following table:

TABLE 7. The process and requirements for obtaining an environmental certificate / Part I. Application requirements

Information required in the application	1. Name, title and address of developer.
	2. Name, purpose, objectives and nature of project, including attributes such as size of project, design, activities that shall be undertaken during and after the establishment of the project, products and inputs, sources of inputs, etc.
	3. Description of the proposed project site and its surroundings and alternative sites, if any, where the project is to be located.
	4. Description of how the proposed project and its location conform to existing laws, regulations and policies governing such project and the use of the site/area proposed for its location.
	5. Any likely environmental impacts that may arise due to implementing various phases/stages of the project and proposed mitigation measures thereto.
	6. Description of any other alternatives which are being considered (e.g. siting, technology, construction and operation procedures, sources of raw materials, handling of waste, etc., decommissioning/closure and site restoration).
	7. Any other information that may be useful in determining the level of EIA required.
Fees	The application for the environmental certificate is free.
Procedure	1. The developer that requires an EIA selects an expert from the list of environmental assessment practitioners published on REMA's website.
	2. The selected expert must not have any direct or indirect interests in that project.

TABLE 8. The process and requirements for obtaining an environmental certificate / Part II. Assessment process

Procedure	1. The developer that requires an EIA selects an expert from the list of environmental assessment practitioners published on REMA's website.
	2. The selected expert must not have any direct or indirect interests in that project.
	3. The selected EIA expert, on behalf of the developer, submits an official application for an EIA of a proposed project to REMA in the form of a project brief together with proposed terms of reference for review and approval.
	4. After receipt and analysis of the project brief and proposed terms of reference, REMA must approve or request an update of the terms of reference for conducting the EIA within 14 days.
	5. Upon completion of the EIA, the selected EIA expert submits to REMA a copy of the report in electronic format, either Microsoft Word or PDF.
	6. Where the selected EIA expert considers it necessary, they may provide an addendum to the report for the facts that are not provided for under the terms of reference.
	7. Upon receipt of the EIA report, REMA analyses the report to verify conformity with the terms of reference and guidelines.
	8. Following receipt of the EIA report, REMA must accept it or request additional information from the selected EIA expert within 20 days. Depending on the nature of the project, the period provided for may be increased after informing the selected EIA expert, in writing, before the days mentioned have passed.
	9. If it becomes necessary to hold a public hearing, the authorised body requires an additional period of 15 working days from the date of the public hearing notification.
	10. The stakeholders may comment on the EIA report and express views on the impacts of the proposed project.
	11. REMA will communicate its decision to the EIA expert in writing. Within 24 hours of receipt of the decision, the EIA expert must submit a copy of the written decision by the authorised body on the EIA to the developer.
Additional requirements of the EIA expert	12. The selected EIA expert has a duty to involve the developer at all stages of the EIA process. The expert also has a duty to appraise the developer of their responsibilities and obligations in implementing the outcomes of the EIA. The EIA is completed with due consideration of the opinion of all relevant stakeholders.
Costs	The assessment fee is negotiated with the EIA expert.

Source: Ministerial Order Establishing the List of Projects that Must Undergo Environmental Impact Assessment, 2019

2.2.5 Construction and installation licensing requirements

Under the assumption that the RE project is a rooftop solar installation or to be ground-mounted on an already existing commercial/industrial building of the customer, a construction licence is not required.

However, the Regulations on electrical installations of 2012 issued by RURA must be complied with, taking into account the fact that no person/company can practice electrical installation without a valid permit from RURA (Regulations on Electrical Installations, 2012).

These regulations apply to electrical installations of all premises (residential, commercial, public and industrial premises) on Rwandan territory. Under these regulations there are five different classes of permits for undertaking electrical installations (Regulations on Electrical Installations, 2012).

The classes are provided in the following table:

TABLE 9. The process and requirements for obtaining an electrical installation permit

Classes	The following classes are those currently designated for electrical installations in general. RURA is currently formulating regulations with specific provisions for solar PV systems.	
	Class A	For electrical installation of residential premises not exceeding five bedrooms and reparations on equipment of up to 230 V.
	Class B	For electrical installation in multi-torey buildings, other large bungalows and mansions of complex design and commercial buildings, installation of light plants up to a level of 400 V and any work under Class A.
	Class C	For low-voltage and medium-voltage connections up to 30 kV and any work under Class B.
	Class D	For electrical installation system designs and installation in specialised fields such as switchgear, centralised heating, refrigeration and generator sets and solar systems.
	Class Z	For carrying out the installation of any plants up to and including high-voltage (70 kV and above).
Technical qualifications	1. A person/company will not be granted a permit under these Regulations unless they/it possess any of the following technical qualifications: (a) a university degree or advanced diploma in electrical or electromechanical engineering; (b) an advanced level technician's certificate or diploma; (c) an ordinary level technician's certificate or diploma; or (d) relevant working experience of at least three years.	
	2. The qualifications and experience will determine the class of permit RURA will issue to each respective applicant.	
	3. RURA may require and cause such applicant, for the purpose of ascertaining their/its ability to undertake, engage in or perform electrical installation work, to be examined, in such a manner so as it may determine – on any matter or thing in connection with their/its application.	

Permit conditions	4. A person or company must not practice electrical installation works unless they/it or they are/it is in possession of a valid permit issued by RURA.
	5. Each person issued with a permit under these Regulations must exhibit such permit at all times in their or its usual place of business.
	6. A permit holder must practice for at least two years before applying for upgrading their permit.
	7. Any permit issued under these regulations which is not renewed for two consecutive years will, unless the permit holder has informed RURA in writing of their intention and reasons not to renew the permit before expiry of the permit, be deemed to have been revoked and will not be considered for renewal.
	8. RURA maintains a register of all permits issued for the period set under these Regulations.
Compliance with standards	9. All electrical installations should comply with all of the provisions contained in the following Rwandan standards: (a) RS 565-1: 2011 on Electrical Wiring of Premises – Part 1: Low-voltage Installations; (b) RS 474-1: 2011 for Power Installations exceeding 1 kV a.c. – Part 1: Common rules; and (c) any other relevant standards issued by the Rwanda Standards Board.
	10. RURA will revoke or suspend a permit of any person or company involved in electrical installation works that fails to observe the above.
	11. Application fee: RWF 25,000
Applicable fees	12. Permit fees/annual permit fees:

Classes	Persons (RWF)	Company (RWF)
Class A	30,000	100,000
Class B	100,000	300,000
Class C	180,000	500,000
Class D	100,000	300,000
Class Z	250,000	800,000

Permit renewal, transfer and refusal	13. A permit issued under these Regulations may be renewed but is not transferable. A permit issued under these Regulations expires 12 months from the date on which it was issued.
	14. RURA may refuse to grant or renew a permit or cancel a permit at any time if it is proved that the permit holder(s)/applicant(s) has failed to comply with any conditions contained in these Regulations. In the event of refusal to grant a permit or cancellation of a permit, RURA must call upon the concerned in writing.
	15. A person aggrieved by any action by RURA regarding refusal or cancellation of a permit may appeal in writing within one month from the date of refusal or cancellation and seek arbitration from a relevant authority.
Application procedure	16. Applicants of electrical installation permits must submit the following: (a) a completed and signed application form; (b) full payment of the application fee; (c) a copy of the entry in the trade register; (d) notarised copies of all academic qualifications and certificates; (e) a detailed and updated CV; and (f) evidence or particulars relating to the applicant's previous experience of electrical installation works.

Application procedure	17. Diploma, certificates and other qualifications that were obtained outside Rwanda should be from a recognised institution.
	18. An employee of a company may apply for a permit on their own or on behalf of the company if such company authorises them in writing.
	19. Where an employee of a company applies for an individual permit and another for their company or organisation, each permit must be paid for separately in accordance with the fees prescribed in these Regulations.
	20. A company applying for a permit under these Regulations must have amongst its staff persons qualified to be issued the permit of the class the company is applying for as well as staff qualified to be issued with Class A or B permits.
	21. A permit will be issued in a prescribed form and subject to such conditions as determined by RURA.

Source: Author's own table, ENSafrica Advocates (2023), derived from the Regulations on Electrical Installations (2012)

2.2.6 Operations (servicing) licensing requirements

Operation/servicing of the electricity sector is governed by the Electricity Safety Regulations of 2013, which impose safety standards for players in the electricity sector, while the Regulation governing electricity quality of service in Rwanda of 2016 (the 'Quality of Service Regulation'), ensures that any licensee involved in the generation, transmission, distribution and trade of electrical power meets an adequate level of quality and reliable service when supplying electricity in Rwanda (Regulations Governing Electricity Quality of Services in Rwanda, 2016).

Under the Electricity Quality of Service Regulations, there are some requirements and conditions that must be fulfilled by players in the energy sector as they conduct their day-to-day operations. The following table summarises these regulations.

TABLE 10. Electricity Quality of Service Regulations

Timeframes	1. If the customer fulfils all requirements stipulated by the licensee and if, where applicable, all subsidies have been received, the licensee must connect the customer to the electricity supply within the following timeframes: (a) not later than five working days from the date of application where existing infrastructure can be used; (b) not later than two months from the date of application where low-voltage network extensions are required, and; (c) not later than three months from the date of application where medium-voltage network extensions are required.
Procurement, installation and maintenance of equipment	2. All pipes, wires and devices on the licensee's side of the point of delivery must be procured, installed and maintained by the licensee unless otherwise agreed in writing between the licensee and the customer.
	3. All wiring, devices and appliances located on the customer's side of the point of delivery must be procured, installed and maintained by and at the expense of the customer.
Metering and billing	4. The licensee is required to read and physically inspect the meters at regular intervals to avoid or minimise electricity theft and to ensure that billing is based on actual energy consumption. Unless otherwise authorised by RURA, each licensee must provide, install, own and maintain all meters used for measuring electricity delivered to its customers. The licensee must use meters that are reliable and of a standard or type approved by the Rwanda Standards Board. Each licensee must keep a record of all its meters, showing the customers' names and address. A licensee, upon the request of a customer, must provide for a test of the accuracy of the meter serving that customer.
	5. Bills for electricity supply shall be delivered to the address of the customer monthly, unless otherwise agreed by the customer and licensee or unless service is rendered for a period of less than one month. All electricity sold by the licensee is charged based on meter readings or at a flat monthly amount. Unless otherwise agreed, monthly bills shall be calculated for periods of not less than 25 calendar days and not more than 35 calendar days. The licensee shall ensure that, wherever practical, facilities are provided within or close to customers' premises locations to afford customers a reasonable opportunity to pay off their accounts and to resolve account queries.
	6. If the customer fails to pay a bill on or before the delinquency date, a late payment charge may be assessed and charged to the customer as outlined in the contract or supply agreement. Such charge is to be calculated as a percentage of the unpaid balance of the current bill for service
Disconnection of service with notice	7. The licensee may disconnect the customer for any of the following reasons: (a) failure to comply with the terms and conditions of the contract or supply agreement; (b) if the customer has not paid the amount correctly billed to their address by the relevant date, provided that: (i) the payment date is clearly shown on the bill; (ii) the payment date is at least 21 calendar days from the date of delivery of the bill to the supply address or a delivery address provided by the customer, which is acceptable to the licensee; (iii) the payment date has not been superseded by a subsequent payment date issued to the same customer at the same supply address; (iv) the licensee has clearly verified in its records that the bill has not been paid; and (v) the licensee has given a written warning to the customer that the electricity supply shall be disconnected if payment is not made within the payment period;

	(c) if the customer has violated the licensee's rules pertaining to the use of the service in a manner which interferes with the service of others; (d) if the customer uses sub-standard equipment and if they have been made notified on the same and given reasonable opportunity to remedy the situation; or (e) if the customer has tampered with or has bypassed the licensee's meter or equipment.
	8. The licensee shall notify the customer in writing of the intention to disconnect the service at least five working days before the disconnection.
Disconnection of service without notice	9. The licensee has the right to disconnect the customer without notice if: (a) the customer is connected to the licensee's network illegally; (b) the licensee considers a customer's installation to be dangerous to the customer and those in their neighbourhood; or (c) the licensee considers a customer's installation unsafe and it may affect the network reliability and/or the quality of supply to other customers.
Confidentiality and use of information	10. The licensee must ensure that customer information, including payment history and consumption patterns, are kept confidential, except when required by law or relevant institutions, or to the extent authorised by the customer in question or RURA. Customer information may be provided under a protective order issued and/or confidentiality agreement executed in legal proceedings, but in such proceedings the licensee should make every effort to maintain the customer's privacy.
Service interruptions	11. The licensee must minimise electricity supply interruptions and, in the case of planned interruptions, must, except under special circumstances, ensure that customers are given 10 working days' notice prior to the interruption. The licensee should make use of the appropriate media to inform its customers of the reason for any previous major unplanned interruptions.

Source: Author's own table, ENSafrica Advocates (2023), derived from the National Environment (Environmental and Social Assessment) Regulations (2020)

2.2.7 Net-metering and the feed-in tariff in photovoltaic (or a combination of both) regulations

a. Applicability

There are no regulations for net-metering or the feed-in tariff for solar photovoltaic projects. As previously discussed, these projects are currently unregulated. However, on-grid solar photovoltaic projects are regulated by the laws governing hydropower and mini hydropower plants and electricity in general.

Net-metering and the feed-in tariff are regulated by the Regulations on Rwanda Renewable Energy Feed-in Tariff of 2012 (the 'REFIT Regulations'), which determine the feed-in tariff applicable to hydropower and mini hydropower plants in Rwanda. These Regulations apply to any person intending to construct and operate any hydropower plant that produces a minimum of 50 kw and a maximum of 10 MW. Projects outside of the above ranges, which are of acceptable proximity to the national electricity grid and low loss features may be presented to the offtaker for consideration, so long as such projects are not obstructive to system stability and have attractive economies of scale. These Regulations do not apply to off-grid development projects (REFIT Regulations, 2012).

b. Tariffs

The REFIT tariff levels are shown in the following table:

TABLE 11. REFIT tariffs

Plant's installed capacity	Tariff (in USD) per kWh
50 kW	0.166
100 kW	0.161
150 kW	0.152
200 kW	0.143
250 kW	0.135
500 kW	0.129
750 kW	0.123
1 MW	0.118
2 MW	0.095
3 MW	0.087
4 MW	0.079
5 MW	0.072
6 MW	0.071
7 MW	0.070
8 MW	0.069
9 MW	0.068
10 MW	0.067

Source: REFIT Regulations (2012)

It should be noted that once an independent power producer (IPP) enters into a PPA with an offtaker (that is, either the transmission system operator or any other buyer of electricity produced by an IPP), the PPA is effected at mutually agreed price levels, irrespective of REFIT levels.

c. Conditions

The Feed-in Tariff set forth in the REFIT Regulations only applies to projects that are within 10 km of the grid at the time that the relevant PPA is signed, without any penalty or reward for the distance from such grid.

The transmission system operator, which is – at present – exclusively Rwanda Energy Group (REG) through Energy Utility Corporation Limited (EUCL), must negotiate a discount on the REFIT price for any projects beyond 10 km of the grid.

The projects that are beyond 10 km of the grid may be eligible for the tariffs set forth in these regulations, provided that the developer funds or builds the line beyond the 10 km.

Any person who is denied connection to the grid may file a complaint with RURA.

d. Escalation rates

Projects to be built on privately owned sites, with duly obtained licences and concession rights to build such projects, will be subject to additional remuneration not exceeding 5% of the relevant REFIT tariff, verified by independent appraiser valuation and as mutually agreed by the transmission system operator and the developer.

e. Currency exchange for REFIT

Unless otherwise agreed by the concerned parties, REFIT tariffs are payable in USD, provided that projects financed in local currency for any part of the financing required are payable in local currency for that proportion of the payment due. Nonetheless, the total invoice will be created and paid only in local currency, at an equivalent amount in Rwandan francs at the official exchange rate prevailing on the day of payment.

2.2.8 Technical or equipment standards

Currently, there are no specific regulations determining technical standards for solar photovoltaic equipment. However, there is a regulation determining minimum technical requirements for mini-grids in Rwanda which is applicable to mini-grids and isolated grids.

The table below summarises some of the technical requirements that relate to a solar PV generation system under the mini-grid regulations, which are expected to be comparable to those applicable to all solar PV systems when the draft regulations are implemented, which address both grid-connected and off-grid solar photovoltaic systems.

TABLE 12. Component, installation and services standards for solar PV

Modules	
IEC 61215	Crystalline silicon terrestrial photovoltaic (PV) modules – Design qualification and type approval.
IEC 61277	Terrestrial photovoltaic (PV) power generating systems – General and guide.
IEC 61345	UV test for photovoltaic (PV) modules.
IEC 61646	Thin-film terrestrial photovoltaic (PV) modules – Design qualification and type approval.
IEC 61701	Salt mist corrosion testing of photovoltaic (PV) modules.
IEC 61730-1	Photovoltaic (PV) module safety qualification – Part 1: Requirements for construction.
IEC 61730-2	Photovoltaic (PV) module safety qualification – Part 1: Requirements for testing.
IEC 61829	Crystalline silicon photovoltaic (PV) array – On-site measurement of I-V characteristics.
IEC 62108	Concentrator photovoltaic (CPV) modules and assemblies – Design qualification and type approval.
Inverters	
IEC 62109-1	Safety of power converters for use in photovoltaic power systems – Part 1: General requirements.
IEC 62109-2	Safety of power converters for use in photovoltaic power systems – Part 2: Particular requirements for inverters.
IEC 61683	Photovoltaic systems – Power conditioners – Procedure for measuring efficiency.
Charge Controllers	
IEC 62509	Battery charge controllers for photovoltaic systems – Performance and functioning.
IEC 62093	Balance-of-system components for photovoltaic systems – Design qualification natural environments.

Batteries	
IEC 61427	Secondary cells and batteries for solar photovoltaic energy systems – General requirements and methods of test.
IEEE Std. 937	Recommended practice for installation and maintenance of lead-acid batteries for PV systems.
IEEE Std. 1013	Recommended Practice for Sizing Lead-Acid Batteries for Photovoltaic (PV) Systems.
Fuses	
IEC 60269-6	Low-voltage fuses – Part 6: Supplementary requirements for fuse-links for the protection of solar photovoltaic energy systems.
Balance of System	
IEC 61173	Overvoltage protection for photovoltaic (PV) power generating systems – Guide.
Grid-Connected Photovoltaic Systems	
IEC 60364-7-712	Electrical installations of buildings – Part 7-712: Requirements for special installations or locations – Solar photovoltaic (PV) power supply systems.
IEC 61727	Photovoltaic (PV) systems – Characteristics of the utility interface.
IEC 61683	Photovoltaic systems – Power conditioners – Procedure for measuring efficiency.
IEC 62093	Balance-of-system components for photovoltaic systems – Design qualification natural environments.
IEC 62116	Test procedure of islanding prevention measures for utility-interconnected photovoltaic inverters.
IEC 62446	Grid connected photovoltaic systems – Minimum requirements for system documentation, commissioning tests and inspection.

Off-Grid Photovoltaic Systems	
IEC 62509	Battery charge controllers for photovoltaic systems – Performance and functioning.
IEC 61194	Characteristic parameters of stand-alone photovoltaic (PV) systems.
IEC 61702	Rating of direct coupled photovoltaic (PV) pumping systems.
IEC/PAS 62111	Specifications for the use of renewable energies in rural decentralised electrification.
IEEE Std 1526	IEEE Recommended Practice for Testing the Performance of Stand-Alone Photovoltaic Systems.
IEC 62124	Photovoltaic Stand-Alone Systems – Design Qualification and Type Approval.
Monitoring	
IEC 61724	Photovoltaic system performance monitoring – Guidelines for measurement, data exchange and analysis.
IEC 61850-7	Communication networks and systems for power utility automation – Part 7-420: Basic communication structure – Distributed energy resources logical nodes.
IEC 60870	Tele-control equipment and systems.
Note	
In addition, the draft regulations on solar photovoltaics proposes the following standards for grid-connected and off-grid solar PV systems.	Overcurrent protection and disconnect: positive cables between batteries and inverters must be protected with DC-rated over-current protection and disconnect (either circuit breaker or fused disconnect) of an appropriate rating to protect cables in the event of a short circuit.

Source: Draft – Solar Photovoltaic Regulations

2.3 Third-party ownership of C&I projects

This section evaluates two contractual structures in which an RE developer – that is, a third party – owns the power generation asset during the tenor of the contract, namely:

1. power purchase agreements; and
2. leasing.

2.3.1 Power purchase agreements

a. Are bilateral power purchase agreements between private entities legally possible in Rwanda? If so, under which conditions?

A PPA under the REFIT Regulations of 2012[1] is defined as 'an agreement, as amended from time to time, entered into between a transmission system operator and an Independent Power Producer (IPP) in accordance with the provisions of these Regulations.' For the purposes of this Regulation, an IPP is defined as 'any legal entity that is organized to own and, either directly or through subcontracting or leasing, operate and maintain a Plant for the purpose of generating electricity' (REFIT Regulations, 2012).

In line with the foregoing, a PPA should be between an IPP and the licensed transmission system operator in Rwanda, which is exclusively REG through EUCL. However, Article 8 of these Regulations provides that 'an IPP has the right to enter into willing buyer - willing seller arrangements with off-takers other than the Transmission System Operator.' For the purposes of the Regulations, an offtaker is defined as 'the transmission system operator or any other buyer of electricity produced by an IPP.'

b. What are the conditions required to enter into a PPA?

An IPP is first required to acquire an electricity production licence from RURA before entering into a power purchase agreement with the offtakers. Any negotiation and a conclusion thereafter in relation to any power purchase agreement must comply with the relevant regulations and the Electricity Law. From time to time, the Regulatory Authority determines the technical, legal, environmental, financial and other criteria or requirements for any IPP.

For a PPA between an IPP and willing buyer – arrangements with offtakers other than the transmission system operator – the following requirements have to be fulfilled:

1. the IPP must have a licence for electricity production issued by RURA;
2. the above is effected at mutually agreed price levels, irrespective of REFIT levels. However, under this condition it must be noted that the Electricity Law states that the Regulatory Authority must ensure that the electricity tariffs for renewable energy sources or off-grid electricity for end-users do not exceed the appropriate threshold;
3. a licence for electricity production is duly issued by RURA with only one offtaker for each PPA (REFIT Regulations, 2012).

c. Can the transfer of asset ownership be agreed in the PPA and, if so, which conditions apply/what are the implications?

There are no specific regulations or legal provisions governing the transfer of ownership of assets in terms of the PPA. This pertains to both the PPA between the IPP and the transmission system operator and an IPP involved in a willing-buyer arrangement. Despite the absence of clear provisions, it is likely that the transfer of ownership of assets may be agreed upon through mutual negotiations and agreement between the parties involved in the PPA.

1 These Regulations apply to on-grid projects that produce a minimum of 50 kW and a maximum of 10 MW. Projects with sizes below the above ranges, with an acceptable proximity to the grid with low loss features may be presented to EUCL for consideration, provided that no such projects are obtrusive to system stability and will have attractive economies of scale. These Regulations will not apply to off-grid development projects.

Where the transfer of asset ownership requires a transfer of the licence, such transaction must be approved by RURA. The electricity licensing regulations indicate that '*modification and transfer of a simplified licence, including the direct or indirect sale, assignment, conveyance, lease or other transfer of assets or activities subject to a simplified license to a different individual or institution shall be subject to a prior written approval of the Authority.*' Additionally, the Electricity Act provides that a licence must not be transferred without the written consent of RURA. Licences issued under this Electricity Act and its implementing regulations are of intuitu personae nature. They may only be subject to succession or transfer to a third party upon prior approval of the regulatory agency.

Licence transfer is subject to prior approval by RURA. The concerned parties must make a written request therefor. RURA must give a response within two months of receiving the request.

2.3.2 Leasing or renting

a. Are alternative contract structures such as leasing/renting possible?

There are no specific regulations or legal provisions relating alternative contract structures such as leasing/renting.

b. What are the energy and financial market licensing (e.g. banking licence) conditions?

In cases where pay-as-you-go (PAYGo) business models are considered wherein C&I customers may lease to own, this could be regarded as carrying out finance lease operations, which involve financial products regulated and subject to a licence in Rwanda.

Pursuant to Article 2 of the Regulation on finance lease operations, 'finance leasing' is defined as a loan agreement whereby a lessee obtains the right of possession and use of a non-monetary asset owned by a lessor for a specified period of time. The lessee is required to make lease rental payments in accordance with the terms of the lease agreement, and may have the option to acquire ownership of the asset upon payment of its residual value, as provided for in Article 4 of said Regulation (Regulations on Finance Lease Operations, 2016).

It is our interpretation that a finance lease is a type of rental contract between two parties, with the lessee having the option to acquire ownership of the asset or return it to the lessor on conclusion of the lease period. The primary purpose of such a contract is to provide the lessee with the use of an asset in exchange for rental payments over a specified period of time so as to own it.

Given the foregoing, and if these kinds of arrangements were to be considered: a finance lease licence from the National Bank of Rwanda maybe required.

It is important to note that the National Bank, the regulatory body governing finance lease operations, is currently reviewing the laws and regulations pertaining to finance lease operations. The purpose of the revision is to expand the scope of the regulations to incorporate and accommodate innovative business models.

In view of these factors, RE developers should remain aware of local developments regarding finance leases and take necessary precautions.

c. Can the transfer of asset ownership be agreed in the contract and, if so, what conditions would apply?

Generally, yes. However, in accordance with the provisions of the Electricity Act and the regulation under it, it is a requirement that any person wishing to engage in the production, transmission, distribution and sale of electric power within and outside Rwanda must obtain a licence from RURA. Please also refer to the response to question (f).

d. Who is responsible for the operation and maintenance of the asset (by law), and can the O&M be outsourced to a private service provider? If so, who requires an O&M licence (if applicable)?

There are no explicit regulations governing the operation and maintenance of the leased assets. Nonetheless, it is specified under the Electricity Act that the holder of a licence for electricity production must have, inter alia, the right and corresponding obligation to erect, operate, preserve and administer their electricity production facilities, in accordance with the terms and conditions specified in the licence. In terms of the draft regulations relating to solar PV, it is proposed that the owner of a solar PV system must ensure maintenance and carry out repairs required to keep the installation in good and efficient working condition.

e. What performance guarantees (e.g. performance ratios, availability, yield, etc.) can be included (from a legal point of view)?

Pursuant to Regulation No. 02/R/EL-EWS/RURA/2016 governing electricity quality of service, performance guarantees and electricity quality of service are regulated. The Regulation establishes, among other things, rules regarding the technical quality of electricity, continuity of supply, the quality of supply provided by licensees, the quality of service to consumers (i.e. commercial quality of electricity), liability for interruptions and service availability. The Regulatory Authority, as specified in the Regulation, is charged with enforcing minimum service standards, and, as a result, a licensee is obligated to implement service rules, a customer charter and procedures that reflect said minimum service standards.

f. For a German entity, is it possible to enter into a leasing/rental agreement without the need to register a local subsidiary?

In order to enter into a leasing/rental agreement, the entity must be an institution registered in accordance with Rwandan laws and must have a licence from RURA. Therefore, it is not possible for a German entity to enter into a leasing/rental agreement without the need to register a local subsidiary.

g. What is the view of regulators (energy/financial markets) on 'energy equipment' leasing?

There are no legal or regulatory provisions relating to the view of regulators (energy/financial markets) on 'energy equipment' leasing.

2.3.3 Considerations in all cases

For both third-party ownership (TPO) contract structures, the following will be evaluated in addition to the above:

a. How are energy, environmental and social impact assessment (ESIA), construction, operation, net-metering or feed-in tariff (FiT) (if any) licensing requirements applied in a TPO context?

Please refer to Section 2 for an assessment of the energy, construction, operation and net-metering licensing requirements applied in the TPO context.

b. Which currencies can be used in the selected countries to pay for services (including the provision of electricity as laid down in a PPA)? Is the indexation of contract currency to hard currency permitted? Are different contract currencies allowed if the contract is entered into between a German entity and a local offtaker?

Pursuant to the Regulations No. 001/ENERGY/RURA/2012 dated 09/02/2012 on Rwanda renewable energy feed-in tariff, the choice of currency with regard to PPAs must be specified in the contract. In the absence of such an agreement, it will be deemed that REFIT tariffs are payable in USD. However, if a portion of the project financ-

ing is executed in local currency, that proportion of the payment due must also be made in local currency. The final invoice, nonetheless, must be settled in local currency at the official exchange rate published by the National Bank of Rwanda on the day of payment.

The indexation of contract currency to hard currency is permitted. It is permissible to have different contract currencies if the contract is entered into, pursuant to the context, between a German entity and a local offtaker. Note, however, the entity must be registered in Rwanda.

c. Evaluation and listing of financial guarantees and warranties is to be taken into account within the framework of negotiations with industrial clients (long-term lease for the installation of photovoltaic units on roofs and on the ground).

There are currently no regulations regulating these aspects so parties would handle such aspects in their own agreements.

d. Assessment of legal possibilities of repossession during contract in case of offtaker default (considering payments already made by the offtaker and resulting 'ownership' definition).

Repossession of property is contingent upon the nature of the contract executed between the relevant parties. The possibility of repossession may be included as a provision in the agreement; however, it is imperative to take into account the transfer of ownership of the goods in question. In the event that ownership of the goods has been transferred, the developer is only entitled to initiate legal proceedings for the recovery of any outstanding amounts owed by the offtaker.

2.4 Local content regulations

2.4.1 Local content regulation

Are there any local content regulations to be adhered to in terms of use of equipment, installation and operation, or ownership of a subsidiary?

There are currently no local content regulations to be adhered to in terms of use of equipment, installation and operation, or ownership of a subsidiary. However, as we noted above, only locally incorporated/registered companies are licensed.

2.4.2 Responsibility of the licence holder

Since there are currently no local content regulations for the installation and operation of solar PV systems, there is no responsibility for contractual counterparties or subcontractors to fulfil any such mandates.

2.4.3 Responsibility of third parties

Since there are currently no local content regulations for the installation and operation of solar PV systems, there is no responsibility for either a German entity or a local offtaker to satisfy any such mandate.

2.5 Establishment of a local subsidiary

2.5.1 Type of company

The ideal legal form for the establishment of a local subsidiary is a private company with liability limited to subscribed shares.

There is no minimum equity capital required for new investors registering their projects in Rwanda. However, investment incentives offered to registered investors differ based upon fulfilment of the legal requirements.

The process of incorporation of a company in Rwanda is free of charge.

The following table summarises the steps for incorporating a company in Rwanda online through Rwanda Development Board's website.

TABLE 13. Establishing a company in Rwanda

Name	1. Name search and reservation with the Office of the Registrar General (ORG) which can be undertaken at the same time as registration unless you wish to reserve the name and register the company at a later stage.
Required information	2. The information required for incorporation of a subsidiary/private company limited by shares in Rwanda is: (a) the proposed name of the company; (b) the main objectives/activities that the company intends to carry out (a list of coded business activities is available on the ORG website); (c) a notarised resolution by the parent company establishing the subsidiary in Rwanda (NB: A clear stamp from a notary public is sufficient for the notarisation requirement); (d) details of the share structure of the company – the nominal capital in Rwandan francs, number of shares and their par value (NB: there is no minimum share capital or minimum par value set by the Company Act and there is no minimum share capital required for company incorporation in Rwanda except for companies in banking and financial services); (e) details of the shareholder(s): its/their registered name, full physical and postal address, notarised certificate of registration/incorporation and notarised memorandum and articles of association, if any); (f) details of the directors – minimum of 1 director – (full names, gender, postal address, full physical address, ID or passport copies, date of birth, phone contact number, email address, etc.); if there is only one director, that director should be a resident of Rwanda, and if there are more than one, one of them should be a resident of Rwanda (but, in such cases, not necessarily a Rwandan citizen); (g) details of the chairperson of the company (full names, gender, postal address, full physical address, ID or passport copies, date of birth, phone contact number and email address); (h) details of the managing director, chief executive officer or general manager (full names, gender, ID or passport copies, date of birth, phone contact number and email address); and (i) details of the registered office of the company, – postal and physical address;
Timing	3. Once the required documents have been lodged with the ORG through its online platform, it typically takes between one and two working days to complete the incorporation of a company.

Source: Author's own table, ENSafrica Advocates (2023), derived from the Company Act (2012)

2.5.2 Local ownership

Generally, there are no local shareholding requirements, but they may exist in specific industries such as the mining sector.

2.5.3 Foreign investment protection and requirements

In Rwanda, foreign investors are treated as equal to national investors. Therefore, there is no legal obligation for foreign investors to solicit and procure special approvals from authorities. A foreign investor is given equal treatment to Rwandan investors regarding investment incentives and investment facilitation.

However, a foreign investor similar to a local investor wishing to register as an investor for incentive purposes files an application therefor with the Rwanda Development Board (RDB). The purpose of this investment registration enables an investor in strategic areas of investment (including energy) to enjoy investment incentives and investment facilitation in accordance with Law No. 006/2021 of 05/02/2021 on investment promotion and facilitation.

TABLE 14. Applying for a foreign investment licence

Required information	1. An applicant must submit the following information in order to support its application for an investment licence: (a) a completed investment registration application form; (b) a certificate of incorporation; (c) a business plan that includes at least the following: (i) the name of the project and detailed information on the project in which investment is or will be made; (ii) an action plan; (iii) date of commencement of operations; (iv) detailed information on raw materials sourced in Rwanda or in the locality where the investment is operating; (v) detailed information on financing or assets to be sourced abroad, including the timeframe within which the finance or assets are invested; (vi) a market survey; (vii) details of the projected technology and knowledge transfer; and (viii) a table that indicates five-year income projections for the investment project; (d) a project environmental impact assessment certificate; (e) the projected number of employees and categories of employment; (f) proof of payment of the non-refundable registration fee; and (g) a licence granted by the business sector in which the investor intends to operate.
Timing	2. An investment licence is issued between two and five working days from the date of receipt of the application and verification of the required documentation.

Source: Author's own table, ENSafrica Advocates (2023), derived from Investment Code (2021)

2.5.4 Investment protection

Foreign investment is protected by the Investment Code. Under Article 9 thereof, it stipulates that a foreign investor is authorised to invest and purchase shares in an investment enterprise in Rwanda, and foreign and local investors must receive equal treatment in respect of incentives and investment facilitation.

The Investment Code provides the following rights in relation to investor's capital and assets:

An investor has a right to own private property, whether individually or collectively. Private property, whether individually or collectively owned, is inviolable. However, Law No. 27/2021 of 10/06/2021 governing land (the 'Land Law') stipulates that foreigners can only hold freehold title over land by virtue of a presidential order (Land Law, 2021).

Investment, interest in or right over a property forming part of the investment cannot be seized or confiscated, except where provided for by relevant laws.

Action to expropriate an investor's property in public interest is taken after the investor is given fair compensation in accordance with relevant laws.

The investor's intellectual property rights and legitimate rights relating to technology transfer are protected in accordance with relevant laws.

2.6 Transfer of funds offshore

2.6.1 Regulation and best practice standards

The transfer of investments and repayment of investments between the subsidiary and the German entity is regulated by the Company Act 2021 and the Law governing contracts 2011.

Funds may be invested by the German entity into the subsidiary either as equity or debt. Under the Company Act, the German entity as the holding company is entitled to receive more than half of every dividend paid on shares issued by the company, other than shares that carry no right to participate beyond a specified amount in a distribution of either profits or capital. The Board of Directors of the subsidiary is vested with the power to authorise dividends after satisfaction of the solvency test. A company satisfies the solvency test when:

a. it is able to pay its debts as they fall due in the normal course of business; and

b. the realisable value of the company's assets is greater than the aggregate of the present value of its liabilities, whether contingent or otherwise.

The German parent company is also entitled to receive more than half of the surplus assets of the company.

The German parent company may invest in its subsidiary through a shareholder loan. The relationship would be governed by a shareholder loan agreement, which would stipulate the agreed terms of the loan and the repayment terms. Repayments of the loan would be made by the subsidiary in accordance with the loan agreement.

2.6.2 Transfer of funds out of the country

The repatriation of funds in Rwanda is regulated by Regulation No. 42/2022 of 13/04/2022 governing foreign exchange operations.

In Rwanda, there are no legal restrictions on the repatriation of capital and assets as provided for in the above Regulation. Inward and outward transactions on direct investment are fully liberalised as long as local obligations are initially fulfilled, including payment of all taxes due. Portfolio investment transactions between residents and non-residents are liberalised, provided that the transfer of funds is carried out through licensed intermediaries. It is worth mentioning that from a tax perspective, additional requirements such as transfer pricing rules may apply to such transfers (Regulation Governing Foreign Exchange Operations, 2022).

2.6.3 Currency conversion

The Rwandan franc can be converted into USD or EUR at any time and on an unlimited scale.

3

Accounting and financial reporting

3.1 The questions

The specific questions that are to be evaluated by the analysis in this Part III are summarised below:

1. Which contract characteristics lead to a lease either being classified as an operating or finance lease (for instance, considering contract lifetime, accumulated payments vs asset value, ownership transfer clauses/options, termination payments, etc)?

The classification of either an operating or finance lease has to be determined from two perspectives, i.e. lessor or lease.

A lessee applies a single accounting model under which it recognises all leases as on balance sheet items, unless it chooses to apply the recognition exemptions. There is therefore no distinction between finance and operating leases for a lessee (*IFRS 16.22*).

Refer to Section 3.7 of this report for the details of lessee accounting considerations.

A lessor classifies each lease as either a finance lease or an operating lease based on the extent to which the lease transfers the risks and rewards incidental to ownership of an underlying asset (*IFRS 16.61, B53*).

Refer to Section 3.8 of this report for details of the classification considerations as a lessor.

2. What accounting treatment do operating and finance leases undergo for both the offtaker and the RE service provider during and (in case ownership is being transferred) after the contract period?

Generally, the offtaker follows the lessee accounting principles, whereas the RE service provider follows lessor accounting principles.

Section 3.7 details the accounting considerations for a lessee and Section 3.8 details the accounting considerations for a lessor.

3. For the offtaker, which components of the payments are to be classified as operating, depreciation or interest expenses? How is each of them to be discounted to determine the present-value lease liability? What is the most appropriate method to account for down/final payments and fair values?

In the application of lessee accounting, at initial recognition, the offtaker recognises a right of use of the underlying asset and a liability which represents its obligation to make payments.

Lease liability is determined by discounting the future lease rentals over the lease term and the expected payments at the end of the lease using a discount rate implicit in the lease or incremental borrowing rate if the discount rate implicit in the lease cannot be readily determined.

The right-of-use asset is determined as a summation of the lease liability, initial direct costs, prepaid lease payments, estimated costs to dismantle, remove or restore the asset less any lease incentives received.

After initial measurement, the right-of-use asset is depreciated over the period of the lease term. Refer to *Section 3.9 for details of how the lease term is determined.*

The carrying amount of the lease liability is increased to reflect interest on the lease liability and reduced to reflect the lease payments made.

Refer to Section 3.7 for details of the accounting considerations for a lessee.

4. For the RE service provider, can depreciation and any tax incentives can be claimed and, if so, how?

RE service providers may classify the lease as either an operating or finance lease. The different classifications have different tax implications.

An RE service provider (lessor) whose lease meets the criteria of an operating lease would be treated as the asset owner. For accounting purposes, the asset is depreciated using an entity's elected method over the useful life of the asset.

For tax purposes, the asset qualifies for certain capital allowances depending on the rates provided under each category of assets.

An RE service provider (lessor) whose lease meets the criteria of a finance lease derecognises the asset and recognises a finance lease receivable at an amount equal to its net investment in the lease, which comprises the present value of the lease payment and any unguaranteed residual value accruing to the lessor. Over the lease term, the lessor accrues interest income on the net investment and the receipts under the lease are allocated between reducing the net investment and recognising finance income, to produce a constant rate of return on the net investment.

For tax purposes, the receipts under the leases (which include an interest income component) are taxable as part of the lessor's business income. No capital allowances are applicable since the asset is not on the statement of financial position.

Refer to Section 4.1 for details of the tax implications and Section 3.9 for the accounting considerations.

5. How may accounting treatment change over the contract lifetime (e.g. if majority of asset value has been paid by the offtaker)?

The lease classification for a lessor (RE service provider) is confirmed on the inception date and only reassessed if there is a lease modification. Changes in estimates or circumstances do not give rise to a new classification for accounting purposes. However, if a contract includes terms and conditions to adjust lease payments for changes occurring between the inception date and the commencement date, then, for the purpose of classifying the lease, the effect of any such changes is deemed to have taken place on the inception date.

Refer to Section 3.10 for details on lease modifications.

6. Under which circumstances is a PPA to be classified as a lease agreement, to be differentiated between an operating/finance lease, if applicable? How are contract characteristics to be considered: for instance, optional or mandatory transfer of ownership at the end of the contract period; transfers at price, at fair value, above fair value or below fair value; termination payments, take-or-pay vs consumption-based PPA; feed-in tariff (FiT) revenue to remain with RE service provider; structured payments vs capacity charges vs energy charges (or as a combination); and responsibility and/or approval rights for O&M?

The PPA does not give guidance on whether or not to account for the PPA as a lease agreement. There are specific conditions that need to be met for a lease agreement to qualify for accounting under IFRS 16. Some of the conditions include whether or not there is an identifiable asset, the customer (lessee) obtains substantially all of the economic benefits and the party who has the right to direct the use of the asset. *Refer to Section 3.5, Section 3.6 and Section 3.7 for a more detailed analysis.*

The existence of a condition in the lease agreement which may include optional/mandatory transfer of ownership at the end of the contract period at a price below or above or at fair value determines the initial classification as a finance lease or operational lease for a lessor (as RE developer). This does not have an impact on the lessee's accounting since the lessee (as offtaker) applies a single lease accounting model.

Refer to Section 3.9 for a more detailed analysis of the application of the different lease accounting models.

Considerations relating to the termination payments, take-or-pay vs consumption-based (PPA, FiT revenue to remain with RE service provider), structured payments vs capacity charges vs energy charges (or as a combination) and responsibility and/or approval rights for O&M, the inputs used in the measurement criteria of the right-of-use asset and lease liability on the part of a lessee (offtaker).

Refer to Section 3.7 and Section 3.8 for a more detailed analysis.

7. Even if not considered a lease, which contract structures potentially impact classification as derivates and financial instruments (e.g. as per IFRS 9)?

There are circumstances where a lease agreement does not give rise to the application of lease accounting, especially if certain conditions under the lease agreement have not been met.

Refer to the decision tree in Section 3.5 for a detailed analysis.

In this case, alternative accounting standards to IFRS 16 are applied. These may include, but are not limited to, IFRS 9 *Financial Instruments*, IFRS 15 *Revenue from Contracts with Customers* and IAS 16 P*roperty, Plant and Equipment*, depending on the nature and complexity of the transaction (KPMG insights into IFRS 19th edition 5.1.25).

Under IFRS, derivatives embedded in a lease that are not considered closely related to the lease host have to be separated and accounted for under IFRS 9. For example, if an entity has a lease agreement with variable lease payments adjusted for two times the change in the consumer price Index (CPI), then the feature needs to be separated and accounted for under IFRS 9 because it is considered. An inflation-indexed embedded derivative in a lease contract may be considered closely related to the lease and the whole payment accounted for under IFRS 16 if:

- the index relates to inflation in the entity's economic environment (e.g. the CPI of the country in which the leased asset is operated); and
- the feature is not leveraged.

An embedded purchase option for a leased asset included in a lease contract is not separated because such an option is accounted for as part of the lease (*IFRS 16.BC81*).

The detailed application of these alternative accounting standards has not been covered in this study.

3.2 The relevant accounting framework

Rwanda as a jurisdiction has adopted the International Financial Reporting Standards (IFRS) as the accounting framework. The most relevant standard for our discussion is IFRS 16 Leases. The application details are discussed in the following paragraphs.

The detailed responses are captured in the following sections, where the relevant accounting standard, IFRS 16, is discussed in detail.

As we perform a detailed analysis of the application of IFRS 16, the RE service provider is referred to as the lessor and the offtaker the lessee in our analysis. The examples included in our analysis are hypothetical and intended to relate to the C&I projects.

3.3 Key definitions

In this Part III, the following key terms and concepts are used:

Lease
A contract, or part of a contract, that conveys the right to use an asset (the underlying asset) for a period of time in exchange for consideration.

Finance lease
A lease that transfers substantially all the risks and rewards incidental to ownership of an underlying asset.

Fixed payments
Payments made by a lessee to a lessor for the right to use an underlying asset during the lease term, excluding variable lease payments.

Gross investment in the lease
The sum of:
(a) the lease payments receivable by a lessor under a finance lease; and
(b) any unguaranteed residual value accruing to the lessor.

Commencement date of the lease
The date on which a lessor makes an underlying asset available for use by a lessee.

Inception date of the lease (inception date)
The earlier of the date of a lease agreement and the date of commitment by the parties to the principal terms and conditions of the lease.

Economic life
Either the period over which an asset is expected to be economically usable by one or more users or the number of production or similar units expected to be obtained from an asset by one or more users.

Effective date of the modification
The date when both parties agree to a lease modification.

Fair value
For the purpose of applying the lessor accounting requirements, the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction.

Fixed payments
Payments made by a lessee to a lessor for the right to use an underlying asset during the lease term, excluding variable lease payments.

Lease term
The non-cancellable period for which a lessee has the right to use an underlying asset, together with both:
(c) periods covered by an option to extend the lease if the lessee is reasonably certain to exercise that option; and
(d) periods covered by an option to terminate the lease if the lessee is reasonably certain not to exercise that option.

Lessee's incremental borrowing rate
The rate of interest that a lessee would have to pay to borrow over a similar term, and with a similar security, the funds necessary to obtain an asset of a similar value to the right-of-use asset in a similar economic environment.

3.4 IFRS 16 Leases

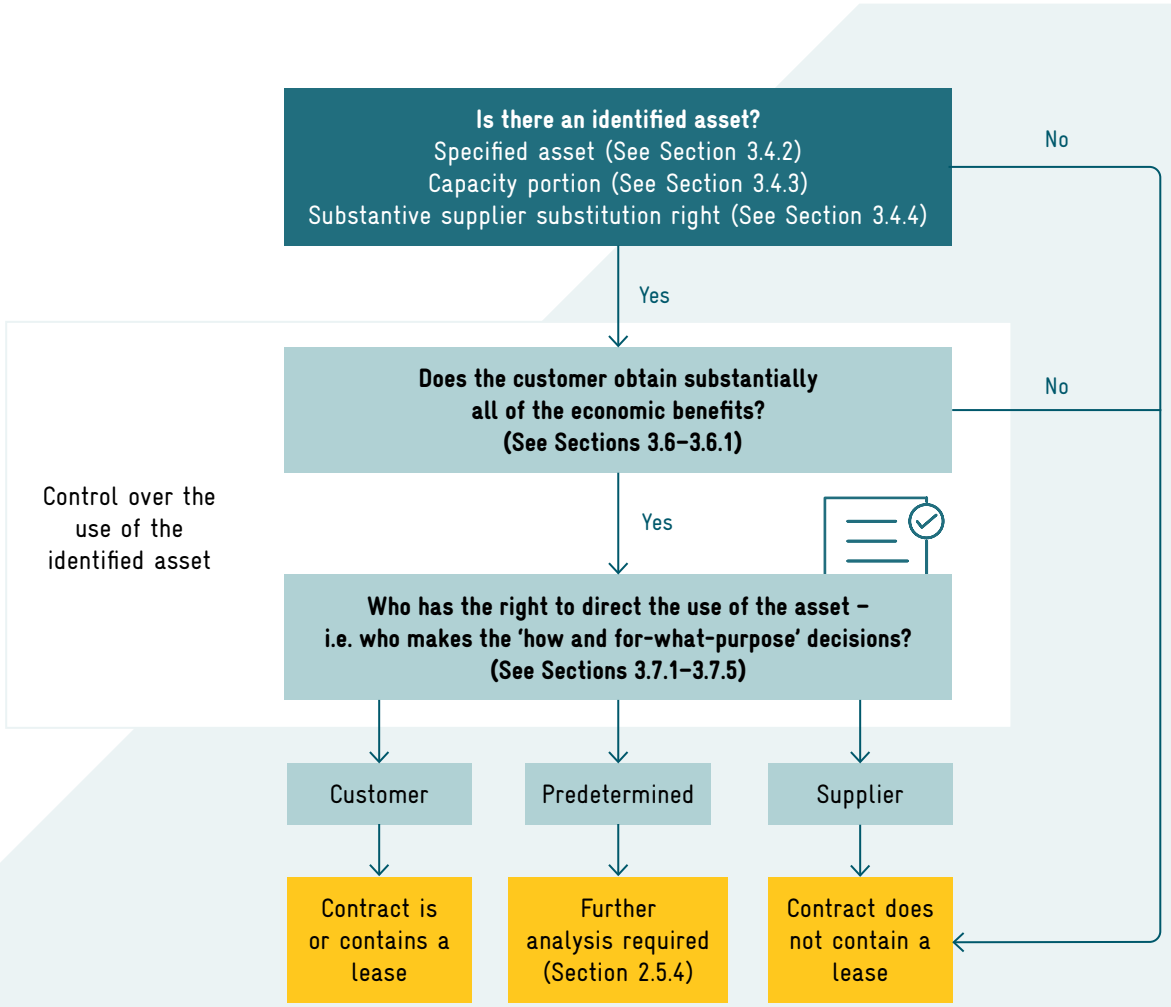
IFRS 16 defines a lease as a contract, or part of a contract, that conveys the right to use an asset (the underlying asset) for a period of time in exchange for consideration. If a contract contains a lease, then it will generally be an on-balance sheet item for the lessee (*IFRS 16.A, B9*).

The key factors to consider when applying the lease definition are as follows.

Both customer and supplier need to make this assessment at inception of a contract and will revisit it only if the terms and conditions of the contract change[2] *(IFRS 16.9, 11)*.

A lessee may elect not to apply the lease accounting model to short-term leases and leases of low-value items. *See Section 3.7.6 (IFRS 16.5)*.

FIGURE 2. Key factors to consider when applying the lease definition



Source: KPMG IFRS 16 – Leases Handbook

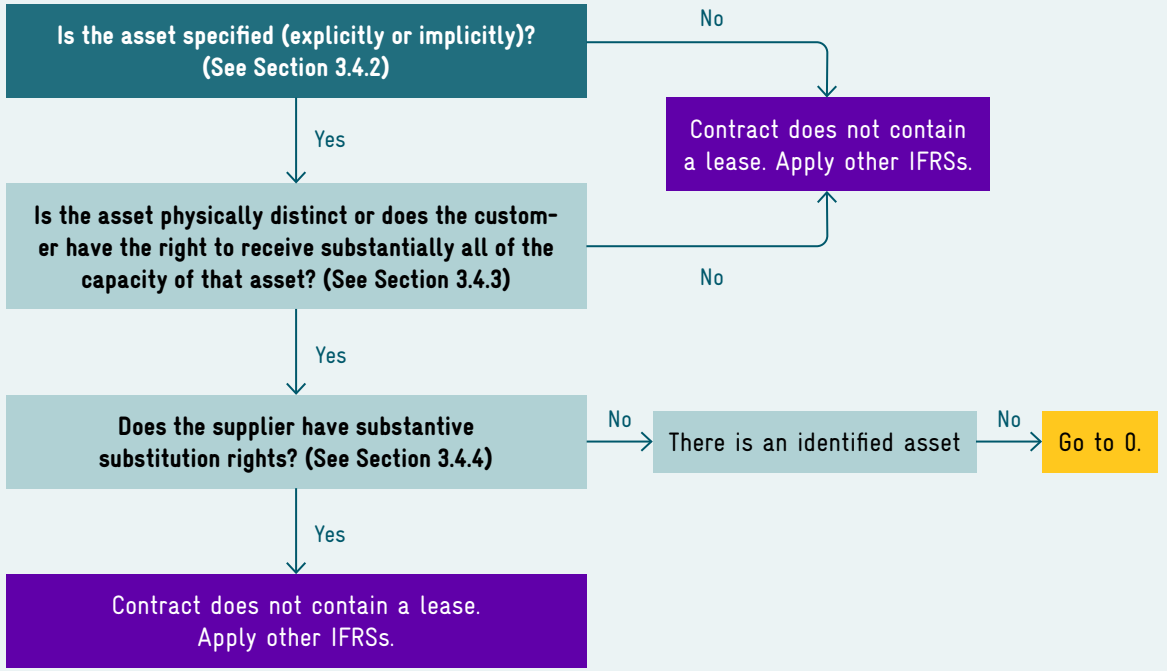
2 As the customer and supplier are subject to the same assessment, we also refer to them interchangeably as a 'company'.

3.4.1 Identified asset

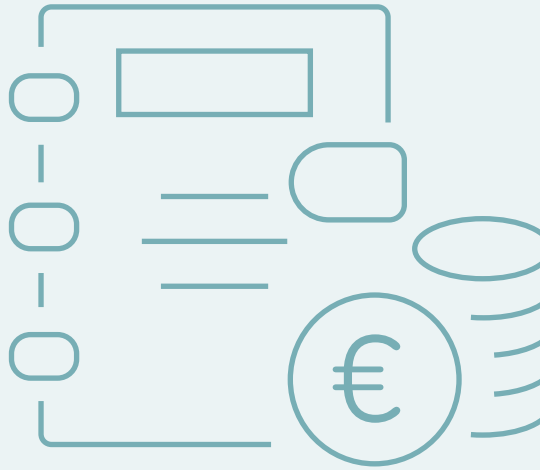
Determining whether a supplier's substitution rights are substantive is key to assessing whether an identified asset exists (*IFRS 16.B13-B20*).

For a lease to exist, there has to be an identified asset, determined as follows:

FIGURE 3. Determination of an identifiable asset



Source: KPMG IFRS 16 – Leases Handbook



3.4.2 Specified asset

In many cases, the asset that is the subject of the lease will be explicitly specified in a contract (e.g. by a serial number or a specified floor of a building). However, an identified asset can be one that is implicitly specified when it is made available for use by the customer (*IFRS 16.B13, BC111*).

What does 'implicitly specified' mean? ?

An asset is implicitly specified if the facts and circumstances indicate that the supplier can fulfil its obligations only by using a specific asset.

This may be the case if the supplier has only one asset that can fulfil the contract. For example, a power plant may be an implicitly specified asset in a power purchase agreement if the customer's facility is in a remote location with no access to the grid, such that the supplier cannot buy the required energy in the market or generate it from alternative power plants.

In other cases, an asset may be implicitly specified if the supplier owns a number of assets with the required functionality, but only one of those assets can realistically be supplied to the customer within the contracted timeframe – i.e. the supplier does not have a substantive right to substitute an alternative asset to fulfil the contract. *See Section 3.4.4.* For example, a supplier may have an assembly of photovoltaic panels but only one set of panels that are in the required geographic area and not already being used by other customers.

Does the asset need to be specified at contract inception? (IFRS 16.B13, BC111) ?

No. The key test is whether the asset is specified at the time when it is made available to the customer.

In many cases, the contract will specify the asset at inception. For example, a contract to use real estate will typically specify the relevant floor of the building at the time when the contract is signed.

However, an asset may only be specified at a later date. For example, a supplier may enter into a binding contract to supply photovoltaic panels to a customer in an offshore oilfield in six months. On the date of signing the contract, the supplier has an assembly of panels of a similar specification that could be used to fulfil the contract. All the panels are at a similar distance from the offshore oilfield. However, once a given set of panels is transported to the offshore oilfield, only those panels can be used to fulfil the contract. In this case, although the contract does not initially specify the panels that will be used to fulfil the contract, it is clear at contract inception that the contract will depend on the use of specific panels. The individual panels are specified when they are made available to the customer.

3.4.3 Capacity portions

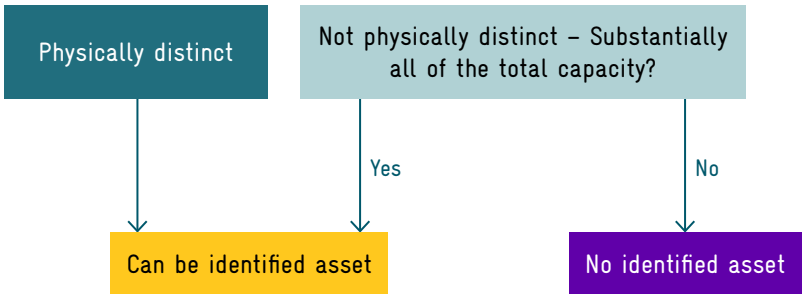
In many cases, the asset subject to the contract will be the entire underlying asset and therefore easy to identify (e.g. a building or a piece of equipment). However, a portion of an asset's capacity can be an identified asset if:

- it is physically distinct (e.g. a floor of a building, a specified strand of a fibre- optic cable, specified set of solar panels or a distinct segment of a pipeline); or
- it is not physically distinct, but the customer has the right to receive substantially all of the capacity of the asset (e.g. a capacity portion of a solar panel that is not physically distinct but represents substantially all of the capacity of the panel).

(IFRS 16.B20)

The International Accounting Standards Board (IASB) concluded that a customer is unlikely to have the right to control the use of a capacity portion of a larger asset if that portion is not physically distinct (e.g. if it is a 20% capacity portion of a solar panel). This is because decisions concerning its use are typically made at larger-asset level. Consequently, the IASB concluded that broadening the definition to include capacity portions of a larger asset would increase complexity for little benefit. Companies would be forced to consider all contracts for goods or services in which a customer obtains some capacity from an asset as possible leases, only to then (possibly) conclude that they are not leases as the customer does not have the relevant decision-making rights concerning the asset's use and does not have the right to obtain substantially all of the economic benefits (*IFRS 16.BC116*).

FIGURE 4. Capacity portions



Source: KPMG IFRS 16 – Leases Handbook

Example 1 – Capacity portion is not an identified asset

Customer D enters into an arrangement with Supplier E for the right to use the renewable energy generated from its solar power plant located in a particular location. There are no specific solar panels allocated to D. At inception of the contract, D has usage rights that permit it to use up to 60% of the capacity of the power plant throughout the term of the contract. E can use the other 40% of the capacity as it sees fit.

E has no substitution rights. However, the arrangement allows E to supply power to other customers.

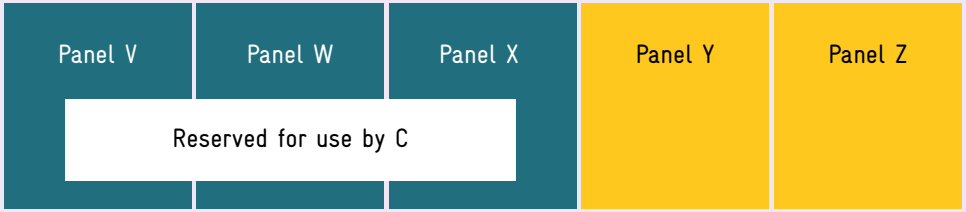
Solar power plant

Power available to Customer D	Power available to other customers
60%	40%

In this scenario, there no identified asset. This is because D only has rights to 60% of the capacity of the solar plant and that capacity portion is neither physically distinct from the remainder of the plant nor meets the 'substantially all' criteria.

Example 2 – Portion is an identified asset

Customer C (the offtaker) enters into an arrangement with Supplier S (as RE provider) for the right to consume power generated from specific panels. Within the solar power plant, panels V, W and X are contractually allocated to C for its exclusive use. S has no substitution rights. Panels V, W and X represent 60% of the plant's total generation capacity.



Warehouse

In this scenario, there is an identified asset even though C is using only 60% of the plant's total generation capacity. This is because:

- the panels are explicitly specified in the contract;
- the panels are physically distinct from the other panels within the plant; and
- S has no substitution rights.

Does 'substantially all' of the capacity of an asset mean 90%?

Not necessarily. The standard does not define 'substantially all' in the context of the definition of a lease.

IFRS 16, like IAS 17 *Leases*, uses the same phrase in one of the criteria used by the lessor to determine lease classification: whether the present value of the lease payments (including the residual value guaranteed by the lessee or a third party) equals or exceeds substantially all of the fair value of the asset. US generally accepted accounting principles (GAAP) allow the use of a threshold of 90% for 'substantially all'. In our view, although the 90% threshold may provide a useful reference point, it does not represent a bright-line or automatic cut-off point under IFRS.

For the purpose of applying the lease definition, a company should develop an interpretation of 'substantially all' and apply it on a consistent basis.

How do you determine the asset's capacity?

In some situations, there is a difference between an asset's nominal capacity and the capacity expected to be used by customers.

For example, Customer O enters into a 30-year contract with Supplier B to supply renewable energy. B builds and operates a new solar plant to supply O with power. O decides upon the capacity of power to be consumed. B anticipates that O will need additional capacity in the future and decides to build a solar plant with excess capacity – i.e. on the commencement date, O uses only 70% of the plant's nominal capacity. The plant is located in a remote area where the probability is low that another customer would use the excess capacity.

Determining an asset's capacity for assessing whether the customer has the right to receive substantially all of the capacity of the asset may involve judgement and requires consideration of all facts and circumstances – e.g. considering the reason for the unused excess capacity. In this example, the assessment should be made based on the capacity expected to be used by O and other parties – i.e. 70%. This is consistent with assessing whether the customer has a right to obtain substantially all of the economic benefits of using the asset throughout the period of use – see Chapter 2. Consequently, in this example O uses all of the expected capacity and the plant therefore qualifies as an identified asset.

Should a customer's 'right of first refusal' over capacity be considered when assessing whether a portion represents 'substantially all' of the capacity of an asset?

Generally, yes.

In some contracts, a supplier commits to making all of the capacity of an asset available to a customer but may sell unused capacity to third parties, if the customer agrees. In these cases, the customer has the right to use substantially all of the capacity of the asset such that there is an identified asset.

For example, Customer O enters into a 10-year contract with Supplier B for 70% of the capacity of the solar plant. O decides upon the quantities of power consumption. B operates and maintains the power plant. O pays a fixed capacity charge per month and a variable amount for each quantity of power consumed. O has the right of first refusal to the additional 30% capacity.

In this situation, O is entitled to substantially all of the capacity of the plant, given that it uses 70% of the capacity and has the right of first refusal to the other 30%. Therefore, the plant is an identified asset.

However, a 'right of first refusal' would not be considered when the right is not substantive. For example, in the case above, if the amount that O would be required to pay to use the additional 30% of capacity was so high that there was no realistic commercial possibility that O would ever purchase that additional capacity, then the plant would not be an identified asset.

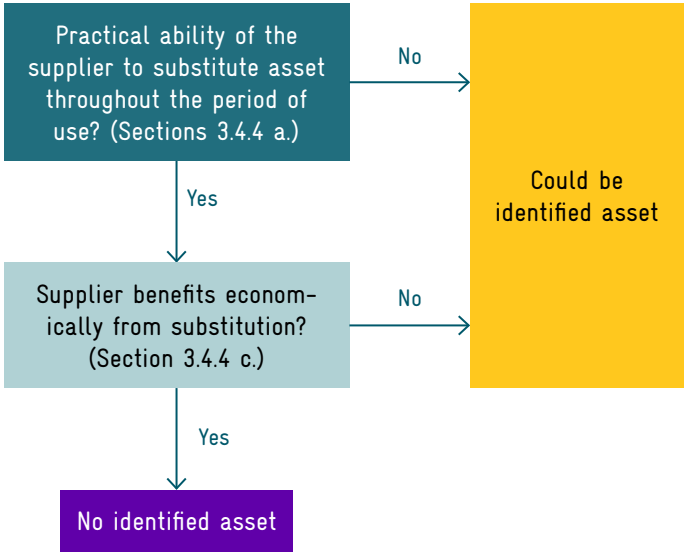
3.4.4 Substantive supplier substitution rights

Even if an asset is specified in a contract, a customer does not control the use of an identified asset if the supplier has a *substantive right to substitute* the asset for an alternative asset *throughout the period of use* (*IFRS 16.B14-B19*).

A supplier's substitution right is 'substantive' if the supplier:

- has the practical ability to substitute the asset throughout the period of use; and
- would benefit economically from exercising its right to substitute the asset.

FIGURE 5. Substantive supplier substitution rights



Source: KPMG IFRS 16 - Leases Handbook

A company assesses whether substitution rights are substantive at inception of the contract. At that time, the company considers all of the facts and circumstances, but not future events that are unlikely to occur. For example, it excludes the following future events:

- an agreement by a future customer to pay an above-market rate for use of the asset;
- the introduction of new technology that is not substantially developed at inception of the contract;
- a substantial difference between the customer's use of the asset, or the performance of the asset, and the use or performance considered likely at inception of the contract; or
- a substantial difference between the market price of the asset during the period of use and the market price considered likely at inception of the contract.

(*IFRS 16.B16*)

A supplier's right or obligation to substitute the asset for repairs and maintenance because the asset is not working properly – i.e. a 'warranty-type' obligation or because a technical upgrade becomes available – is not a substantive substitution right (*IFRS 16.B18*).

Why does the definition focus on 'substantive' substitution rights? (IFRS 16.B17, BC113)

Substitution rights are likely to be a key area of focus in applying the lease definition. This is because some elements of substitution are often permitted in leases of fleets of vehicles, or portfolios of photocopiers and similar equipment. However, if the underlying asset is with the customer, then the costs of substitution will probably exceed the benefits, such that the substitution rights are not substantive.

The assessment of substitution rights is aligned with the overall approach of assessing whether the supplier or customer controls the use of the underlying asset. The presence of a substantive substitution right indicates that the supplier (and not the customer) controls the use of the underlying asset, such that there is no lease.

The focus on substitution rights that are 'substantive' also reflects concerns that companies may seek to structure arrangements to avoid lease accounting by including substitution rights in contracts – e.g. substitution rights that the supplier has no practical ability to exercise.

As a result, there is an 'anti-avoidance' flavour to some of the guidance on substitution rights. In most cases, demonstrating that a substitution right is substantive will be a great hurdle.

What should a customer do if it cannot assess whether a substitution right is substantive? (IFRS 16.B19)

If a customer does not have sufficient information to assess whether a substitution right is substantive, then the customer should assume that it is not substantive.

Many of the factors that influence whether a substitution right is substantive are specific to the supplier – e.g. whether the supplier has access to alternative assets, the costs involved in substitution, etc. The customer may not have access to this information.

The IASB believes that often when a substitution right is substantive, this will be clear to the customer. In other cases, the IASB does not expect the customer to exert undue effort in making the assessment.

a. Practical ability to substitute

A supplier has the practical ability to substitute alternative assets when the customer cannot prevent it from substituting the asset and the supplier has alternative assets either readily available or available within a reasonable period of time (*IFRS 16.B14(a)*).

b. Period of use

The 'period of use' is the total period of time that an asset is used to fulfil a contract with a customer (including any non-consecutive periods of time) (*IFRS 16.A*).

A supplier does not have the practical ability to substitute the asset throughout the period of use (and there is therefore no substantive substitution right) if, for example:

- the substitution right applies only to a part of the period of use or on or after a specific date (Example 4, Scenarios 1 and 2); or
- the substitution right applies only on the occurrence of a particular event (Example 4, Scenario 3).

(*IFRS 16.B15*)

Example 3 – Practical ability to substitute

Customer L enters into a five-year contract with an RE provider (Supplier M) to supply a specified capacity of power for his coffee farm. M uses solar panels of a particular specification that are stored at its premises and has a large pool of similar panels that can be used to fulfil the requirements of the contract.

In this case, because the solar panels are stored on M's premises, it has a large pool of similar panels and substitution costs are minimal, M has the practical ability to substitute the assets – i.e. the solar panels are not implicitly specified.

Example 4 – Supplier's substitution right does not apply throughout the period of use (IFRS 16.B14-B15)

Scenario 1

Customer S enters into a contract with Supplier T for the right to use its solar panels to generate renewable energy for five years. T has the right to substitute the asset at any time after three years from commencement of the contract (i.e. no substitution right for the first three years).

As the supplier's substitution right does not apply throughout the period of use, it is not substantive.

Scenario 2

The contract is the same as above except that it gives T the right to substitute the identified asset on a single date, three years into the lease, but not at any other time.

The substitution right is not substantive because it does not apply throughout the period of use.

Scenario 3

The contract is as above but T has a right to substitute on the occurrence of a particular event.

The substitution right is not substantive because it does not apply throughout the period of use but only on the occurrence of a particular event.

What if the customer has the right to use the underlying asset for 'non-consecutive periods'?

An arrangement to use an identified asset will meet the definition of a lease if it contains intermittent periods during which the customer does not have the right to control the use of the asset.

For example, Company V has the exclusive right to use a specific solar system for the months of September to May each year (during V's sunny season when the power generation capacity is high); the contract runs for 10 years. From June to August, the owner of the solar system stores the energy using batteries and sells it to other consumers.

In this situation, the period of use consists of 90 non-consecutive months. This is because V can use the solar system for nine months each year over the 10-year contract. The use of the same solar system by the owner in the remaining months of the year does not prevent the contract from being a lease (provided that the other aspects of the definition are met).

This part of the definition of a lease prevents companies from avoiding lease accounting by including in the contract term periods during which the customer cannot make the decisions concerning how and for what purpose the asset is used, and/or obtain substantially all of the economic benefits of using the identified asset.

If the supplier can exercise a substitution right on or after a given date, does the lease then end on this date?

No, the lease does not end on the date on, or from which, the supplier may exercise a substitution right. The lease term is instead determined in the usual way and may extend beyond this date.

For example, in Scenarios 1 and 2 of Example 4 above, assuming that the other elements of the lease definition are met, on the commencement date it should not be assumed that the lease ends after three years. In the absence of additional information, the lease term, as assessed at contract inception, would be five years – i.e. the period for which the customer (lessee) has the right to use the asset.

c. Economic benefits of substitution

A supplier would benefit economically from the exercise of its right to substitute the asset when the economic benefits associated with substituting the asset are expected to exceed the related costs (*IFRS 16.B14(b)*).

The costs associated with substitution are generally higher if the asset is not located on the supplier's premises – i.e. when it is on the customer's premises or elsewhere. In this situation, the costs are more likely to exceed the benefits associated with substituting the asset (*IFRS 16.B17*).

Example 5 – Supplier substitution right. Evaluation of economic benefits

Customer C enters into a three-year lease for solar panels. The contract provides C with the right to determine how to use the solar system during the three-year term (subject to the limitations of its design and capabilities).

Supplier S is required to provide equivalent solar panels if those originally delivered cease to operate properly. S may also substitute equivalent solar panels at any time during the period of use at its expense and without C's approval.

S has other equivalent solar panels readily available. However, it is not likely that S would earn more rental income by substituting equivalent solar panels for the original solar panels. S would incur costs both to transport and install the equivalent solar panels at C's location, and to remove and transport the original solar panels to storage or to another customer's location.

In this example, S's substitution right is not substantive because the economic benefits of substituting the original solar panels for equivalent solar panels would not exceed the costs of the substitution. Therefore, there is an identified asset.

Example 6 – Substitution right is substantive

Building on Example 3, Supplier M has the practical ability to substitute the solar panels that are stored on its premises when they are not being used to generate power. Costs associated with substituting the solar panels are minimal for M.

Relevant experience demonstrates that:

- M benefits economically from being able to deploy alternative assets as necessary to fulfil customer needs; and
- the conditions that make substitution economically beneficial (e.g. the nature and mix of different customer needs for M's assets) are likely to continue throughout the period of use.

As M has the practical ability to substitute the solar panels and their substitution is economically beneficial throughout the period of use, M's substitution rights are substantive, and the arrangement does not contain a lease.

Example 7 – Lighting as a service. No practical ability to substitute and no economic benefits

Customer L enters into an eight-year contract with Supplier K that requires K to install a solar system and lighting equipment at L's stores. The solar system and lighting equipment are designed and selected by K, subject to L's approval. K has an option to upgrade the solar system and lighting equipment for future technological advancements and an obligation to replace any damaged or defective equipment.

However, the solar system and lighting equipment are large and costly to transport and install, so it is not economically feasible or practicable for K to substitute alternative assets once the equipment is installed (i.e. the costs of substitution would exceed the benefits).

Fulfilment of the arrangement is dependent on the use of identified assets and the substitution rights are not substantive.

Example 8 – Alternative scenarios involving substitution rights

The following three scenarios relate to a contract to use a vessel for five years:

- Renewable Energy Developer S has a substitution right and many identical solar panels (Scenario 1);
- Renewable Energy Developer S has a substitution right and the solar panels are significantly customised (Scenario 2); and
- Customer C is unable to determine whether Renewable Energy Developer S's substitution rights are substantive (Scenario 3).

Scenario 1

Customer C enters into a five-year contract with Renewable Energy Developer S to provide a solar system. The maintenance of the system is managed and paid for by S. S may substitute the solar system without C's consent throughout the term of the contract. The following facts are also relevant.

S has many identical solar panels that are maintained in a nearby and accessible location and S could easily substitute other solar panels for those specified in the contract at a nominal cost.

S would benefit economically from substituting the solar panels because substitution allows it to make the most effective use of its portfolio of solar panels to act in accordance with regularly changing circumstances, which are likely to continue throughout the period of use.

In this scenario, the solar panels are not an identified asset because S's substitution right is substantive. Accordingly, the contract does not contain a lease.

Scenario 2

Modifying the facts in Scenario 1, although S has the right to substitute the solar panels without C's consent throughout the period of use, there are no other similarly customised solar panels in S's portfolio or those readily available from other suppliers.

In this scenario, the substitution right is not substantive because similarly customised solar panels are not readily available – i.e. S does not have the practical ability to substitute the panels.

Note: In Scenario 2, even if S could customise alternative solar panels in its portfolio within a reasonable period of time, the cost of customising and providing a similar alternative vessel would probably exceed the economic benefits that would be realised from substitution – i.e. although S would not obtain additional payments from C for the substitution, S would incur potentially significant costs to customise alternative solar panels for C's needs. In this case, S's substitution right would still not be substantive because it would not benefit economically from the exercise of its substitution right.

Scenario 3

Changing the facts in Scenario 2, C is unable to determine whether the substitution right is substantive. In particular, C is unable to determine whether similarly customised solar panels are readily available, or whether the economic benefits that would result from substitution would exceed the expected costs of making the substitution.

In this scenario, C presumes that the substitution right is not substantive, and that there is therefore an identified asset.

How do you evaluate whether the supplier would benefit economically from exercising its substitution rights? (IFRS 16.B19, BC115) ?

Judgement will be required to evaluate when the economic benefits associated with substituting the asset are expected to exceed the costs associated with doing so.

Examples of factors to consider include:

- the availability of other assets to fulfil the contract;
- alternative use of the asset and additional benefits for the supplier;
- the costs that would be incurred to substitute the asset (e.g. costs of relocation, disruption of activity during a period of time); and
- the feasibility of substituting the asset (because of size, remote location, etc.).

As the analysis is performed from the supplier's perspective, it is more difficult for the customer to determine whether the supplier's substitution right is substantive. As noted in Example 8, Scenario 3, if a customer cannot readily determine whether a supplier has a substantive substitution right, then the customer should presume that any substitution right is not substantive.

3.5 Economic benefits

Identifying the economic benefits of using the asset and evaluating whether the customer has the right to obtain substantially all of them throughout the period of use is not always straightforward.

3.5.1 Economic benefits of using the asset

The economic benefits of using an asset include its primary output, by-products and other economic benefits of using the asset that could be realised from a commercial transaction with a third party (e.g. sub-leasing the asset) (*IFRS 16.B21*).

These economic benefits need to be within the defined scope of a lessee's right to use an asset – e.g. if a contract limits the use of a vehicle to only one particular territory during the period of use, then a company considers only the economic benefits of using the vehicle within that territory, and not beyond (*IFRS 16.B22*).

Example 9 – Lease of a solar system with maximum capacity permitted (IFRS 16.B22)

Company C leases a solar system that it can use only up to a maximum of 300 kWp during the three-year period. When assessing whether it has the right to obtain substantially all of the economic benefits of using the solar system, C considers only the economic benefits for the permitted usage capacity.

Example 10 – Solar farm. Primary products and by-products (IFRS 16.IE2.Ex9)

Utility Company C enters into a 20-year contract with Power Company D to purchase all of the electricity produced by a new solar farm. D owns the solar farm and will receive tax credits relating to the construction and ownership of the solar farm, and C will receive renewable energy credits that accrue from use of the solar farm.

C has the right to obtain substantially all of the economic benefits of using the solar farm over the 20-year period because it obtains:

- the electricity produced by the farm over the lease term – i.e. the primary product of use of the asset; and
- the renewable energy credits – i.e. the by-product of use of the asset.

Although D receives economic benefits from the solar farm in the form of tax credits, these economic benefits relate to ownership of the solar farm.

The tax credits do not relate to the use of the solar farm and are therefore not considered in this assessment.

Are tax credits and similar items 'economic benefits' for the purposes of applying the lease definition? (IFRS 16.BC118) ?

It depends on whether the benefits arise from ownership or use of the asset.

A lease conveys a right to use the underlying asset. Accordingly, the IASB concluded that the benefits derived from ownership of the asset (e.g. income tax credits) are excluded when considering whether a customer has the right to obtain substantially all of the economic benefits of using the identified asset throughout the period of use.

Conversely, benefits such as renewable energy credits received from use of the asset are more akin to a by-product and so will be included in the analysis of economic benefits.

The standard is more specific in this area than current guidance and has the potential to reduce diversity in assessing whether an arrangement contains a lease. However, given the variety of arrangements seen in practice, and the complex structures sometimes used to allocate specific forms of benefits to different parties, judgemental issues may still remain in practice.

3.5.2 'Substantially all'

Evaluating whether a customer has the right to obtain substantially all of the economic benefits of using an asset throughout the period of use is straightforward in many situations, generally because the customer in a lease frequently has exclusive use of the asset.

However, in some situations a contract may provide a party other than the customer the right to more than a minor amount of the economic benefits of using the same asset. In evaluating whether the customer has the right to obtain substantially all of the economic benefits of using an asset, a company considers the complete population of economic benefits that can be derived from the asset within the scope of the customer's right of use.

Example 11 – Selling of excess capacity (IFRS 16.B21)

Customer C enters into a contract to use a solar plant. Since C does not need all of the capacity produced by the power plant, it sells 25% of the production. C receives substantially all of the economic benefits through its own use and selling the excess power (other benefits).

Example 12 – Sharing of the economic benefits (IFRS 16.B22)

Customer G enters into a two-year contract to use a solar system. G shares access and use of the solar system with another party. Both parties have the right to use the solar system at any point in time, subject to a certain capacity per day and the other party not using it at the same time. G does not receive substantially all of the economic benefits because it shares the use of the asset with another party.

Does 'substantially all' mean 90%?

Not necessarily. *See the discussion of the 'substantially all' threshold in Section 3.5.2.*

Can a customer obtain substantially all of the benefits from use even if lease payments are variable? (IFRS 16.B23)

Yes. The existence of variable lease payments derived from the use of an asset – e.g. a percentage of sales from use of a solar power system as a lessee – does not prevent a customer from having the right to obtain substantially all of the economic benefits of using the asset. In these cases, although the customer passes on certain benefits to the supplier, the customer receives substantially all of the gross benefits.

For example, Customer D enters into a contract to use a solar power system. The rent payments include a fixed amount per month plus 20% of the revenue generated from the power sales. D receives substantially all of the economic benefits: the gross proceeds accrue to D. Sharing a part of the revenue generated from the solar system (or, generally, usage-based rentals) does not prevent a contract from being a lease.

The standard is explicit on this point, to reduce the risk that companies seek to avoid lease accounting by introducing variable payments into an arrangement that would otherwise be a lease.

Does the significance of the lease payments affect the conclusion as to whether a lease exists?

Generally, not. The economic benefits that a customer derives from use of the asset (e.g. the cash flows from selling power in a leased solar system) are generally separate from its lease payments. The significance of the lease payments, fixed or variable, for the right to use the asset, compared with the economic benefits to be derived from use of that asset (e.g. high-sales revenue), should generally not affect the conclusion as to whether a lease exists.

What if the supplier absorbs all of the variability in net operating profits and receives most of the economic benefits of using the asset?

Profit-sharing arrangements generally do not prevent the customer from obtaining all of the economic benefits of using an identified asset throughout the period of its use. However, when the customer obtains a fixed rate of return and the supplier receives or absorbs all of the variability in net operating profits, it is not clear whether a contract contains a lease, particularly if the supplier also receives most of the economic benefits from use of the asset.

For example, a supplier may receive most of the cash flow from use of the asset in a business such as a solar power plant operation. In this situation, careful consideration should be given to the substance of the contract, including the nature of the arrangement between the parties, when determining whether the customer has the right to obtain substantially all of the economic benefits of using the identified asset. Customer and supplier should assess whether the nature of the arrangement is such that the customer is, in effect, an agent of the supplier, rather than the principal in the operation that is using the asset. If the customer is an agent of the supplier, then there is no lease between the supplier and customer.

3.6 Right to direct the use

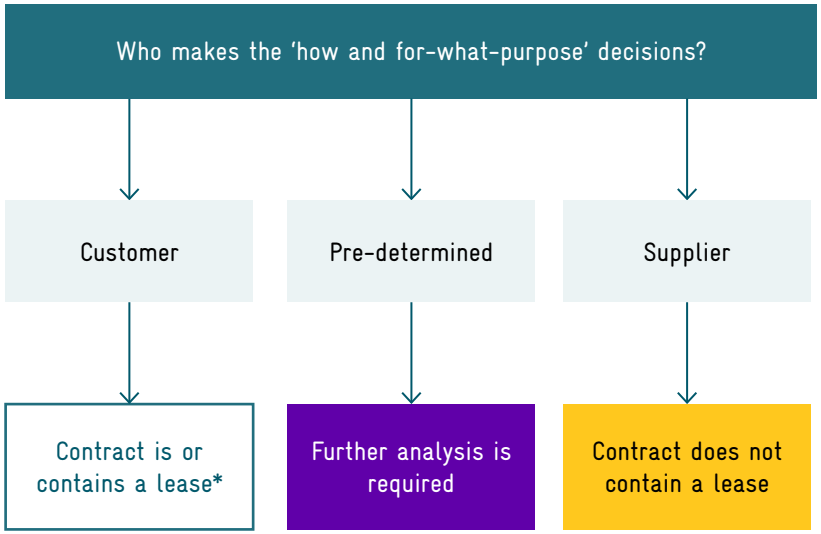
It is the right to direct the use of an identified asset that differentiates a lessee from a customer in a typical supply or service contract

3.6.1 Overview

(IFRS 16.B24) A customer has the right to direct the use of an identified asset in either of the following situations:

- the customer has the right to direct how and for what purpose the asset is used throughout the period of use – *see Section 3.6.3*; or
- the relevant decisions concerning how and for what purpose the asset is used are predetermined; and
- the customer has the right to operate the asset (or to direct others to operate the asset in a manner that it determines) throughout the period of use, without the supplier having the right to change those operating instructions; or
- the customer designed the asset (or specific aspects of the asset) in a way that predetermines how and for what purpose the asset will be used throughout the period of use – *see Section 3.6.4.*

FIGURE 6. Right to direct the use



*If other criteria are met.

Source: KPMG IFRS 16 - Leases Handbook

How are decision-making rights evaluated? ?

The standard effectively requires a three-fold classification of decision-making rights into how and for-what-purpose decisions, operating decisions and protective rights. These categories feature in the analysis in different ways.

- How and for-what-purpose (or relevant) decisions: unless they are predetermined, the allocation of these decisions to the supplier or customer determines whether the arrangement contains a lease. *See Sections 3.6.3–3.6.4.*
- Operating decisions: these are ignored, unless the how and for-what-purpose decisions are predetermined, in which case there is a lease if the customer makes the operating decisions, and the other criteria are met. *See Section 3.6.4.*
- Protective rights: these typically define the scope of the customer's right to use an asset but do not, in isolation, preclude a conclusion that there is a lease. However, when protective rights are too restrictive for the customer to have any substantive decision-making authority over the use of the asset, this could indicate that the how and for-what-purpose decisions are predetermined. *See Section 3.6.5.*

It follows that assessing the categories into which decisions fall is likely to be a key area of judgement in practice. The first step is to identify what the how and for-what-purpose decisions are. *See Section 3.6.3.*

3.6.2 How and for-what-purpose decisions

A company considers the decision-making rights that are most *relevant* to changing how and for what purpose the asset is used – 'relevant' in the sense that they affect the economic benefits derived from use.

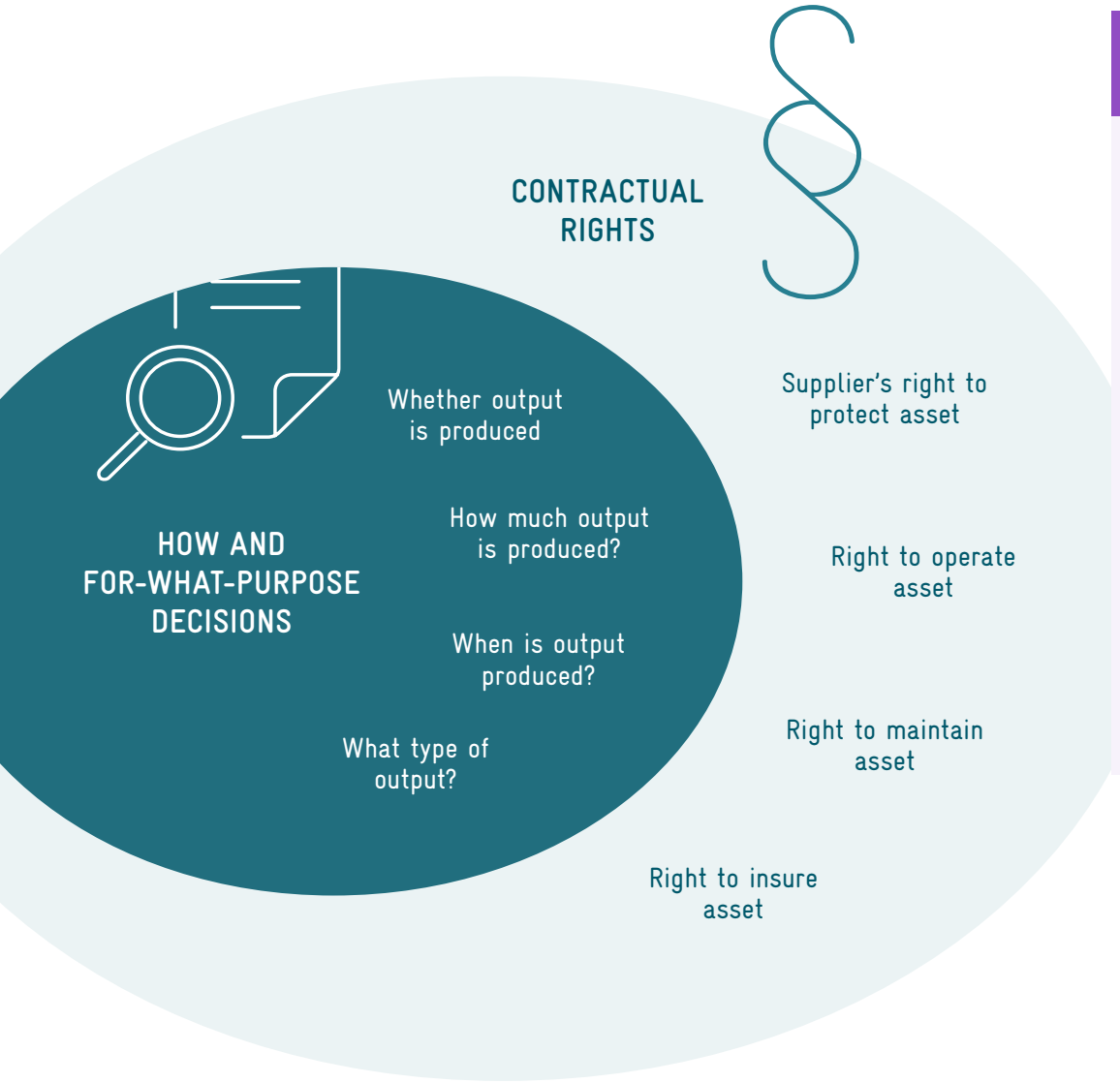
Examples of relevant decisions that, depending on the circumstances, grant the right to change how and for what purpose the asset is used include the following.

- **What**. Right to change the type of output that is produced by the asset (e.g. deciding whether to use a shipping container to transport goods or for storage).
- **When.** Right to change when the output is produced (e.g. deciding when a power plant will be used).
- **Where.** Right to change where the output is produced (e.g. deciding on the destination of a truck or a ship).
- **Whether and how much.** Right to change whether the output is produced, and the quantity of that output (e.g. deciding whether to produce energy from a power plant and how much energy).

Examples of decision-making rights that do *not* grant the right to change how and for what purpose the asset is used include rights to operate an asset or rights to maintain an asset.

(IFRS 16.B24–B27, B30)

FIGURE 7. Decision-making rights



Is a decision to take output that has already been produced a how and for-what-purpose decision? ?

No. The right to take output that has already been produced only determines what happens to that output, not whether and how much output is produced in the first place.

For example, Customer M enters into a 20-year contract with Supplier S, a solar developer, to install, operate and maintain a solar plant on M's facility. The solar plant has been designed by S to fulfil M's energy demand. M has the right to purchase any energy produced and S has the obligation to sell the energy to M whenever M wants to purchase it. Energy that is not purchased by M is sold back to the grid – i.e. M has no obligation to purchase energy.

In this example, M's decision as to whether to purchase the electricity from the solar plant affects only the entity to whom the existing output is directed (to M or the grid); M's decision does not affect when, where, whether or how much energy is produced. Therefore, it is not a how and for-what-purpose decision.

It is possible that all of the relevant decisions concerning how and for what purpose the asset is used are predetermined. *See Example 15 in Section 3.6.4.*

Source: KPMG IFRS 16 – Leases Handbook

3.6.3 Determining who makes the how and for-what-purpose decisions

A customer has the right to direct how and for what purpose the asset is used if, within the scope of its rights of use defined in the contract, it can change how and for what purpose the asset is used throughout the period of use. *See Section 3.7.2 (IFRS 16.A, B25, B29).*

In assessing whether a customer has the right to direct the use of an asset, a company considers only the rights to make decisions concerning the asset's use during the period of use. Decisions that are predetermined before the period of use – i.e. commencement date – are not considered.

The standard defines the period of use as 'the total period of time that an asset is used to fulfil a contract with a customer (including any non-consecutive periods of time).' *See Section 3.4.4 b.*

Example 13 – Lighting. Customer makes the how and for-what-purpose decisions (IFRS 16.IE2.Ex6)

Customer L enters into an eight-year contract with Supplier K that requires K to install a specific solar power lighting solution in L's stores. The equipment used to install the solar power lighting solution is designed and selected by K, subject to L's approval. To optimise its usage, K provides services under which it monitors the equipment remotely and performs maintenance on the equipment as needed. However, L specifies the hours of operation and the level of brightness, which impact the amount of consideration that it pays, which is based on usage.

In this example, L directs the use of the assets because it directs how and for what purpose the assets are used by specifying:

- the hours of operation (when, whether and how much output is produced); and
- the level of brightness (how much output is produced).

It can also direct K to change these specifications within a reasonable variance.

substantially all of the economic benefits of using the solar system, C considers only the economic benefits for the permitted usage capacity.

Example 14 – Rooftop solar systems. Customer makes the how and for-what-purpose decisions

Customer O enters into a 10-year contract with Supplier S to install three rooftop solar systems in a defined area. The solar systems to be used by S are explicitly specified in the contract; S has no substitution rights. S is responsible for manning the solar systems, maintenance and safety. Compensation is based on a daily operation rate. In the case of bad weather or adverse conditions, S can suspend operations. Without S's consent, O cannot change the allocation of the solar systems – i.e. O cannot sub-lease the solar systems or change the defined area on its own.

O can make the following decisions:

- select the places to be installed;
- set the exact timing of usage; and
- stop operations, even if the initial expected term has not been reached.

In this example, O can change the how and for-what-purpose decisions related to the usage of the solar systems throughout the period of use and therefore directs the use of the solar systems. S's right to suspend work in the case of bad weather or adverse conditions is a protective right. *This is discussed further in Section 3.6.5.*

How is an arrangement analysed when the customer and the supplier each make some of the how and for-what-purpose decisions? (IFRS 16.IE2.Ex4)

The customer does not have to make all of the how and for-what-purpose decisions in order to have a lease – they can be split between the parties. Judgement is required to assess the individual significance of the different how and for-what-purpose decisions – i.e. their impact on the economic benefits.

If some decisions are of greater significance than others, then the party that makes the more significant decisions generally directs the right to use the asset.

For example, Customer T enters into a contract with Renewable Energy Developer L to install a rooftop solar system for his shopping centre which houses a number of retail shops for a five-year period. The solar system serves many customers who are connected to the system. The contract requires retail stores to use the power to operate their well-known store brands to sell their goods. T can make reasonable changes to the shopping centre's opening hours. The retail stores decide on the mix of goods sold from the unit, their pricing and the quantity of inventory held.

In this example, there are a number of how and for-what-purpose decisions that are not predetermined. T can make reasonable changes to the opening hours. However, by deciding upon the mix of goods, their pricing and available quantities, the retail stores make the decisions that will have a more significant impact on the economic benefits derived from the unit. Therefore, it is the retail stores that direct the right to use the unit.

3.6.4 How and for-what-purpose decisions are predetermined

The decisions concerning how and for what purpose the asset is used can be predetermined in a number of ways. They could, for example, be agreed between the customer and the supplier in negotiating the contract, with neither party being able to change them after the commencement date, or they could, in effect, be predetermined by the design of the asset *(IFRS 16.B24, B28-B29, BC121-BC122).*

A customer has the right to direct the use of an identified asset when *all* relevant decisions are predetermined and either:

- the customer has the right to operate the asset (or to direct others to operate the asset in a manner that it determines) throughout the period of use, without the supplier having the right to change those operating instructions; or
- the customer designed the asset (or specific aspects of the asset) in a way that predetermines how and for what purpose it will be used throughout the period of use.

In either of these two cases, the customer controls the rights of use that extend beyond the rights of a customer in a typical supply or service contract (i.e. the customer has rights that extend beyond solely ordering and receiving output from the asset). This is important because the ability to specify the output in a contract before the period of use is not sufficient to direct the use.

(IFRS 16.BC121) The IASB noted that it would expect situations in which *all* how and for-what-purpose decisions are predetermined to be rare.

Example 15 – Solar system. Customer hires the operations and maintenance manage

Customer T enters into a four-year contract with Supplier S, a renewable energy power developer, to install a rooftop solar system. The solar system to be used is explicitly specified in the contract and cannot be substituted. T's operations will utilise substantially all of the capacity of the solar system. The contract specifies the capacity to be generated. T hires the manager in charge of operations and maintenance of the system; the rest of the operations and maintenance staff are provided by S.

In this example, all of the decisions concerning how and for what purpose the asset is used are predetermined because the contract specifies when and where the solar system is installed, as well as the generation capacity. The solar system was not designed by T, but T operates the solar system because the operations and maintenance manager is hired by T. Although the solar system cannot be operated without the rest of the operations and maintenance staff (which is provided by S), it is usually the operations and maintenance manager who makes the (major) operational decisions and gives instructions. In this scenario, the presumption is that T operates the solar system and consequently has the right to direct its use.

Example 16 – Solar plant. Customer designed the asset (IFRS 16.IE2.Ex9A)

Customer M enters into a 20-year contract with Energy Supplier S to install, operate and maintain a solar plant for M's energy supply. M designed the solar plant before it was constructed – M hired experts in solar energy to assist in determining the location of the plant and the engineering of the equipment to be used. M has the exclusive right to receive and the obligation to take any energy produced.

In this example, the nature of the solar plant is such that all of the decisions concerning how and for what purpose the asset is used are predetermined because:

- the type of output (i.e. energy) and the production location are predetermined in the agreement; and
- when, whether and how much energy is produced is influenced by the sunlight and the design of the solar plant.

As M designed the solar plant and thereby predetermined any decisions concerning how and for what purpose it is used, M is considered to have the right to direct the use. Although regular maintenance of the solar plant may increase the efficiency of the solar panels, it does not give the supplier the right to direct how and for what purpose the solar plant is used. In practice, solar panels may be one rare example where all how and for-what-purpose decisions are predetermined.

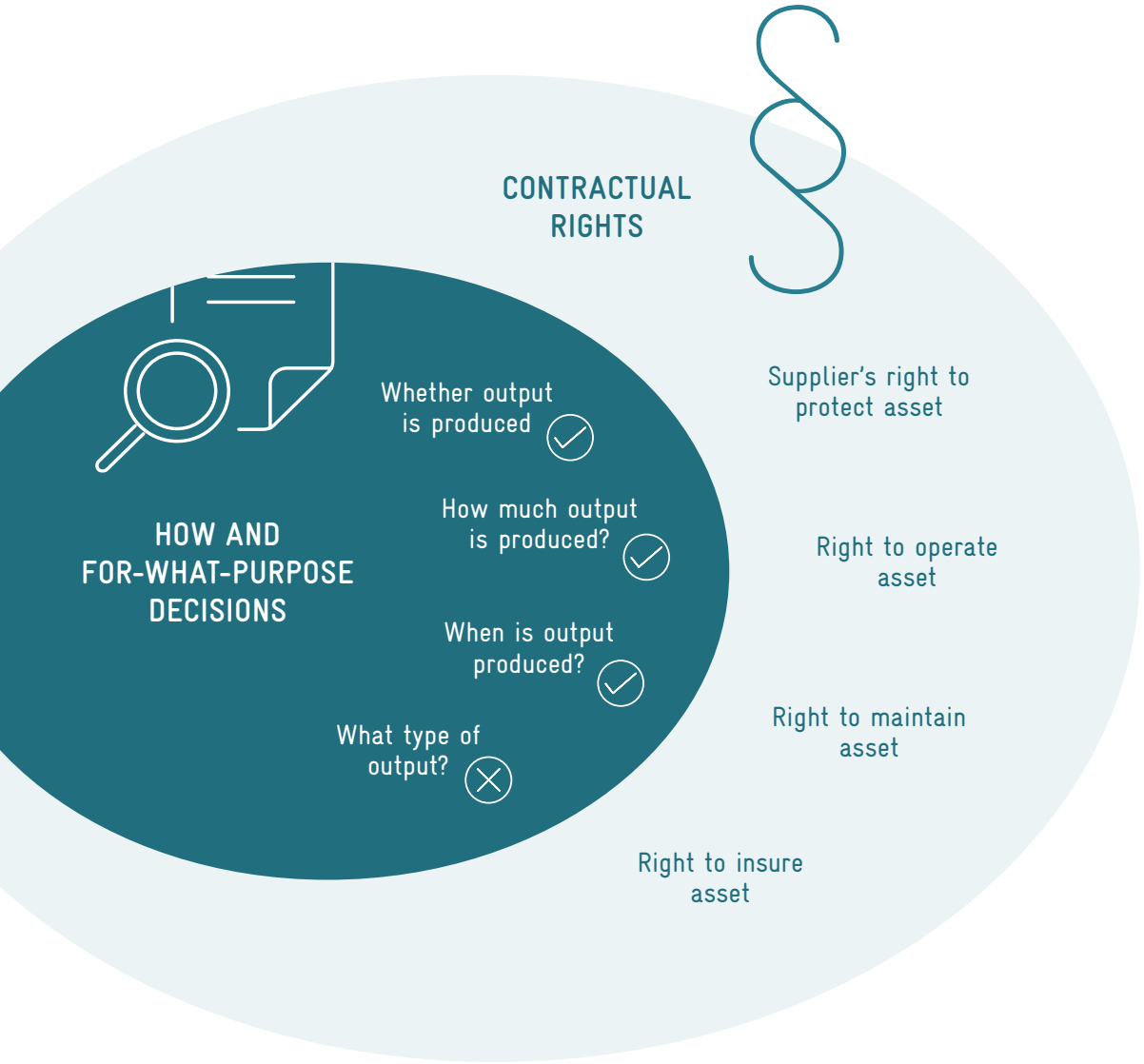
What happens if only some of the how and for-what-purpose decisions are predetermined? (IFRS 16.B29)

If some but not all of the relevant decisions concerning how and for what purpose the asset is used are predetermined, then the assessment includes only those relevant decisions that are not predetermined. *See Section 3.6.4.*

For example, Customer O who owned a coffee factory enters into a contract with Renewable Energy Developer P to obtain exclusive use of P's solar power plant for a period of 30 years. In this case, the decisions over what is generated (i.e. solar energy) and where it is transmitted (coffee factory) are predetermined.

Therefore, the analysis will focus on determining whether the supplier or the customer has the right to make the relevant decisions that are not predetermined – i.e. whether, when and how much solar energy is transmitted to the coffee factory.

FIGURE 8. How and for-what-purpose decisions



Source: KPMG IFRS 16 – Leases Handbook

Does the customer need relevant expertise in order to support a conclusion that the 'customer designed the asset'?

No. Example 16 illustrates the involvement of an external specialist by the customer in determining the location of the solar farm and the engineering of the equipment to be used.

In some cases, a customer's (or its specialist's) decision concerning the location of the asset and the engineering of the equipment could be sufficient to conclude that the customer designed specific aspects of the asset when the location is key to the asset's performance (e.g. for solar or wind farms). However, judgement applies, and the individual facts and circumstances need to be considered.

3.6.5 Supplier's protective rights

A contract may include certain terms and conditions designed to protect the supplier's interest in the identified asset or other assets, to protect its personnel or to ensure the supplier's compliance with laws or regulations. Such protective rights typically define the scope of the customer's right to use an asset but do not, in isolation, prevent the customer from having the right to direct the use of the asset within that framework *(IFRS 16.B30)*.

For example, a contract may:

- specify the maximum amount of use of an asset or limit where or when the customer can use the asset;
- require a customer to follow particular operating practices; or
- require a customer to inform the supplier of changes in how an asset will be used.

Example 17 – Scope of right of use (IFRS 16.IE2.Ex7)

Customer L enters into a 20-year contract with Supplier M, renewable energy producer, for the installation of a solar system. The contract details the specifications for the solar system. It also contains contractual and legal restrictions on how to use the solar system. Subject to these restrictions, L determines the utilisation of the power generated by the solar system. M is responsible for operating the solar system using its own staff.

The restrictions on how to use the solar system define the scope of L's right to use the solar system. Within the scope of its right of use, L determines the utilisation of the power generated by the solar system the 20-year period of use because it decides upon the utilisation of the power generated by the solar system. L has the right to change these decisions throughout the period of use.

The contractual and legal restrictions on how to use the solar system are protective rights and do not prevent L from having the right to direct the use of the solar system.

3.7 Lessee accounting

The key objective of IFRS 16 is to ensure that lessees recognise assets and liabilities for their major leases.

3.7.1 Lessee accounting model

A lessee applies a single lease accounting model under which it recognises all leases as an on-balance sheet item unless it elects to apply the recognition exemption. *See Section 3.7.6.* A lessee recognises a right-of-use asset representing its obligation to make payments *(IFRS 16.22).*

(IFRS 16.4,49)

FIGURE 9. Balance sheet and profit-or-loss lease components

Source: KPMG IFRS 16 – Leases Handbook

Is IFRS 16 a pre-tax accounting model? ?

Yes. IFRS 16 continues to address lessee (and lessor) accounting on a pre-tax basis, even if tax considerations are often a major factor when a company is assessing whether to lease or buy an asset, and when a lessor is pricing a lease contract.

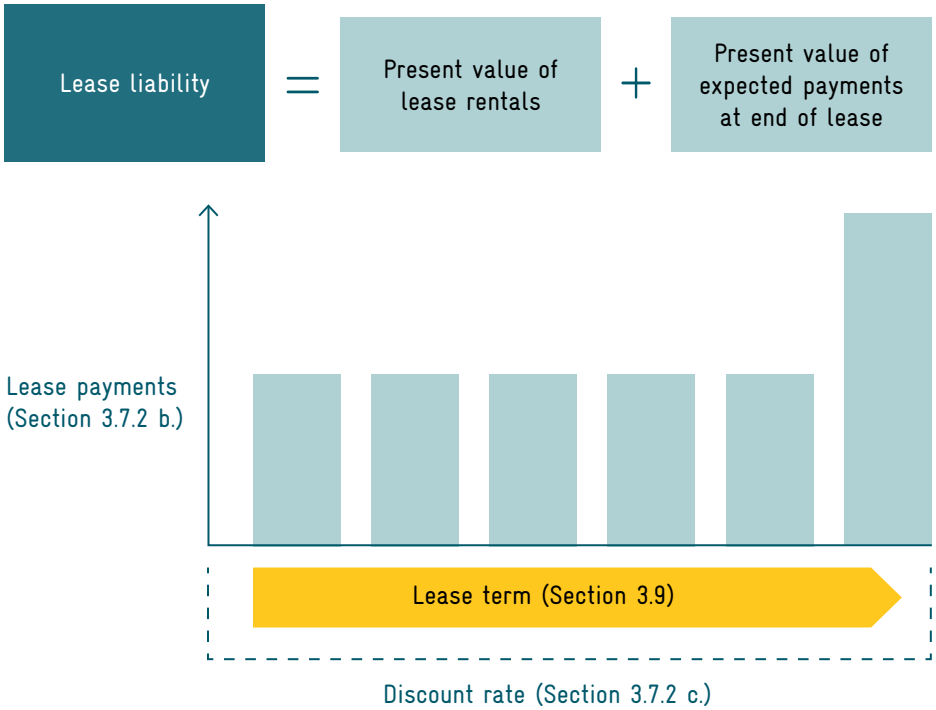
The income tax accounting for lease contracts falls within the scope of IAS 12 *Income Taxes*. The complexities in accounting for income taxes by lessees of on-balance sheet leases include, for example, how to apply the initial recognition exemption. The International Accounting Standards Board is expected to issue an amendment to IAS 12 addressing this issue.

3.7.2 Initial measurement of the lease liability

a. Overview

A lessee initially measures the lease liability at the present value of the future lease payments *(IFRS 16.26)*.

FIGURE 10. Components of the lease liability (a)



Source: KPMG IFRS 16 – Leases Handbook

When does a lessee first measure the lease liability? (IFRS 16.A) ?

A lessee initially measures the lease liability on the commencement date of the lease. This is the date on which a lessor makes an underlying asset available for use by a lessee.

The commencement date should be distinguished from the inception date of a lease, which is the earlier of the date of the lease agreement and the date of commitment by the parties to the principal terms and conditions of the lease. A company assesses whether a contract is, or contains, a lease on the inception date.

Are lease liabilities financial liabilities? (IFRS 9.2.1(b)) ?

Yes, lease liabilities are financial liabilities measured in accordance with IFRS 16 – not IFRS 9 *Financial Instruments*. However, they are subject to the derecognition requirements of IFRS 9.

This represents a considerable simplification compared with financial instruments accounting in some cases. For example, common features of lease agreements – e.g. renewal and purchase options – are not accounted for separately, nor do they have the potential to result in the liability being measured at fair value.

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a. Lease payments

A lessee includes the following payments relating to the use of the underlying asset in the measurement of the lease liability:

- fixed payments (including in-substance fixed payments), less any lease incentives receivable;
- variable lease payments that depend on an index or a rate;
- amounts expected to be payable by the lessee under residual value guarantees;
- the exercise price of a purchase option that the lessee is reasonably certain to exercise; and
- payments for terminating the lease if the lease term reflects early termination.

(IFRS 16.27)

'In-substance fixed payments' are payments that are structured as variable lease payments, but that – in substance – are unavoidable. Examples include:

- payments that have to be made only if an event occurs that has no genuine possibility of not occurring;
- there is more than one set of payments that a lessee could make, but only one of those sets of payments is realistic; and
- there are multiple sets of payments that a lessee could realistically make, but it has to make at least one set of payments.

(IFRS 16.B42)

Variable lease payments that depend on an index or rate are initially measured using the index or rate as at the commencement date of the lease. Such payments include payments linked to a consumer price index (CPI), payments linked to a benchmark interest rate (such as Interbank Offered Rates (IBOR)) or payments that vary to reflect changes in market rental rates *(IFRS 16.27-28, BC166).*

Variable lease payments whose occurrence is highly probable are not in-substance fixed payments if they are based on performance or use of the underlying asset, and are therefore avoidable.

If a lessee provides a residual value guarantee, then it includes in the lease payments the amount that it expects to pay under that guarantee. An unguaranteed residual value is always excluded from the determination of the lease payments by the lessee *(IFRS 16.27(c), A)*

Lessees determine whether it is reasonably certain that they will exercise a purchase option considering all relevant facts and circumstances that create an economic incentive to do so. This is similar to the approach for assessing whether a lessee expects to exercise a renewal option. *See Section 3.9.6 (IFRS 16.27, 37).*

Example 18 – In-substance fixed payments. Minimum lease payment (IFRS 16.27, 38(b),B42)

Utility Company A enters into a 20-year power purchase agreement with Company B to purchase electricity produced by a new solar farm. A and B assess that the contract contains a lease. The lease payments depend on the number of units utilised on the farm per day – i.e. B has to pay USD 0.1/ kWh of use. The expected usage per hour is 300 kWp. If the usage is less than 250 kWp, then B must pay USD 25.

This lease contains in-substance fixed payments of USD 25 per hour which are included in the initial measurement of the lease liability. The additional USD 5 that B expects to pay per year relates to variable payments that depend on usage and, therefore, is not included in the initial measurement of the lease liability but is expensed as the 'over-use' occurs.

Example 19 – Variable payments not depending on an index or rate (IFRS 16.27)

Utility Company C enters into a 20-year contract with Power Company D to purchase electricity produced by a new solar farm. C and D assess that the contract contains a lease. There are no minimum purchase requirements, and no fixed payments that C is required to make to D. However, C is required to purchase all of the electricity produced by the solar plant at a price of USD 10 per unit.

C notes that it is highly probable that the solar plant will generate at least some electricity each year. However, the whole payment that C makes to D varies with the amount of electricity produced by the solar farm – i.e. the payments are fully variable. Therefore, C concludes that there are no in-substance fixed lease payments in this contract. C recognises the payments to D in profit or loss when they are incurred.

Example 20 – Variable payments depending on an index (IFRS 16.28)

Utility Company E enters into a 20-year contract with Power Company F to purchase electricity produced by a new solar farm. C and D assess that the contract contains a lease. The lease payments depend on the capacity of the solar system with a capacity of 200 kWp – i.e. B has to pay USD 0.1 /kWh for the capacity of the solar system. The initial payment is USD 0.1/kWh. Payments are made at the end of each year. The rates will be increased each year by the change in the CPI over the preceding 12 months.

This is an example of a variable lease payment that depends on an index. The initial measurement of the lease liability is based on the value of the CPI on lease commencement – i.e. a charge of USD 0.1/kWh. If during the first year of the lease the CPI increases from 100 to 105 (i.e. the rate of inflation over the preceding 12 months is 5%), then at the end of the first year the lease liability is recalculated assuming a future annual rate of USD 0.105 (i.e. USD 0.1 x 105 / 100).

Example 21 – Residual value guarantees (IFRS 16.27(c))

Lessee Z (the offtaker) has entered into a lease contract with Lessor L (the RE provider) to lease a solar system. The lease term is 25 years. In addition, Z and L agree on a residual value guarantee – if the fair value of the solar system at the end of the lease term is below USD 5,000, then Z will pay L an amount equal to the difference between USD 5,000 and the fair value of the solar system.

On commencement of the lease, if Z expects the fair value of the solar system at the end of the lease term to be USD 4,000, then it includes USD 1,000 in the lease payments in respect of the residual value guarantee when calculating the lease liability.

Which variable lease payments are included in the initial measurement of the lease liability? (IFRS 16.BC168-BC169)

The initial measurement of the lease liability includes variable lease payments that depend on an index or rate – e.g. the CPI or a market interest rate – and payments that appear to be variable but are in-substance fixed payments.

Variable lease payments that depend on sales or usage of the underlying asset are excluded from the lease liability. Instead, these payments are recognised in profit or loss during the period in which the performance or use occurs. This has a number of important consequences:

- A lessee's apparent indebtedness depends on the mix of fixed and variable payments within its lease portfolio. For example, suppose that Company X leases its solar system with fixed lease payments. Company Y leases a similar solar system on similar terms but with a mix of fixed lease payments and lease payments that depend on usage. X recognises higher lease liabilities than Y – even if the total expected lease payments for X and Y are the same.
- Some power purchase agreements that are leases may result in a lease liability of zero for the lessee. For example, if a lessee enters into an agreement to purchase all of the electricity produced by a solar farm and the lease payments all depend on the amount of electricity produced, then the lessee's lease liability is zero.

How does the lessee decide whether to include in the lease liability amounts payable on exercise of renewal, purchase or termination options? (IFRS 16.18-19, 27(d)-(e),70(d)-(e), A, B37-B40)

The lessee determines whether it is reasonably certain to exercise an option to extend the lease or to purchase the underlying asset, or not to exercise an option to terminate the lease early. This assessment is made by considering all relevant facts and circumstances that create an economic incentive to exercise an option or not to do so. *See Section 3.9.6.*

Each party determines the lease payments in a manner consistent with this assessment as follows:

- renewal option. If it is determined that the lessee is reasonably certain to exercise a renewal option, then the lease payments include the relevant payments for the period covered by the renewal option.
- termination option. If it is determined that the lessee is not reasonably certain not to terminate the lease early, then the lease payments include the termination penalty.
- purchase option. If it is determined that the lessee is reasonably certain to exercise an option to purchase an underlying asset, then the lease payments include the exercise price of the purchase option.

What are lease incentives and how are they accounted for by lessees? (IFRS 16.A, 27(a)) ?

Lease incentives are payments made by a lessor to a lessee associated with a lease, or the reimbursement or assumption by a lessor of the costs of a lessee.

Payments made by the lessor to the lessee are not lease incentives when they are associated with other obligations of the lessee to transfer distinct goods or services to the lessor.

Examples of lease incentives provided by lessors include up-front cash payments to the lessee or assumption of costs of the lessee such as leasehold improvements, relocation costs and costs ass ociated with a pre-existing lease commitment. Alternatively, initial periods of the lease term may be agreed to be rent-free or at a reduced rent.

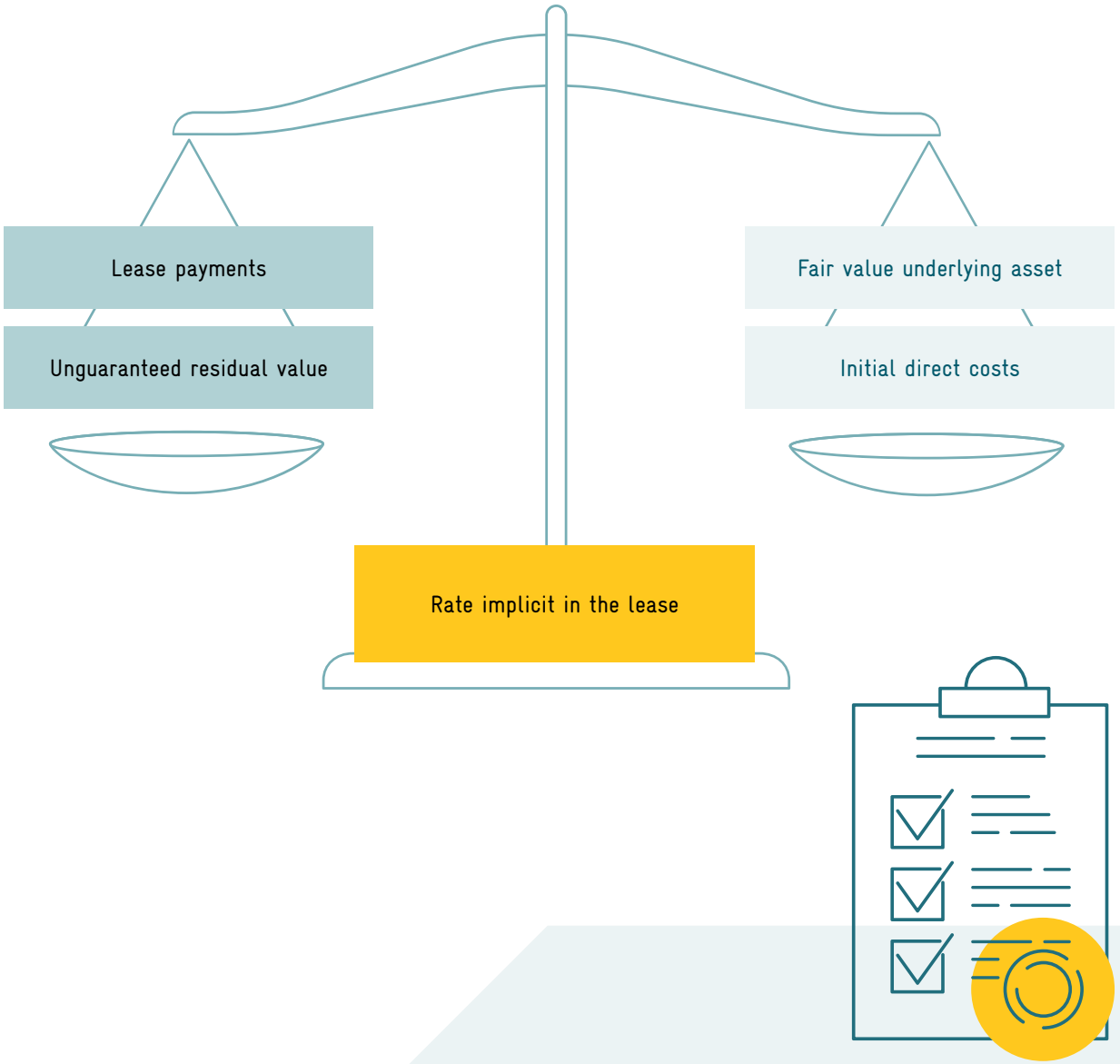
Irrespective of its form, a lease incentive is part of the lease payments – i.e. the net consideration for the lease.

a. Discount rate

On the commencement date, a lessee measures the lease liability at the present value of the lease payments using the interest rate implicit in the lease if this can be readily determined. This is the rate that causes the present value of the lease payments and the unguaranteed residual value to equal the sum of the fair value of the underlying asset and any initial direct costs of the lessor (IFRS 16.26, A).

If the lessee cannot readily determine the interest rate implicit in the lease, then the lessee uses its incremental borrowing rate. This is the rate that a lessee would have to pay on the commencement date of the lease for a loan of a similar term, and with similar security, to obtain an asset of similar value to the right-of-use asset in a similar economic environment.

FIGURE 11. Rate implicit in the lease (c)



Source: KPMG IFRS 16 – Leases Handbook

Is the rate implicit in the lease readily determinable for a lease? ?

In most circumstances, a lessee is not able to determine the rate implicit in the lease. There is no separate definition of the interest rate implicit in the lease for the lessee. The lack of information available to the lessee (e.g. the lessor's initial direct costs, the initial fair value of the underlying asset and the lessor's expectations of the residual value of the asset at the end of the lease) typically makes it difficult for the lessee to determine the interest rate implicit in the lease. Therefore, it is likely to be difficult for lessees to readily determine the interest rate implicit for most leases. As a result, lessees often use their incremental borrowing rate.

Should a lessee's incremental borrowing rate reflect the interest rate in a loan with both a similar maturity to the lease and a similar payment profile to the lease payments? (IFRS 16.A, BC162) ?

In some cases, a lessee seeking to determine its incremental borrowing rate may have readily observable evidence of the interest rate on a loan with the same term but a different payment profile from the lease. A question arises about whether a lessee's incremental borrowing rate is required to reflect the interest rate in a loan with both a similar maturity to the lease and a similar payment profile to the lease payments.

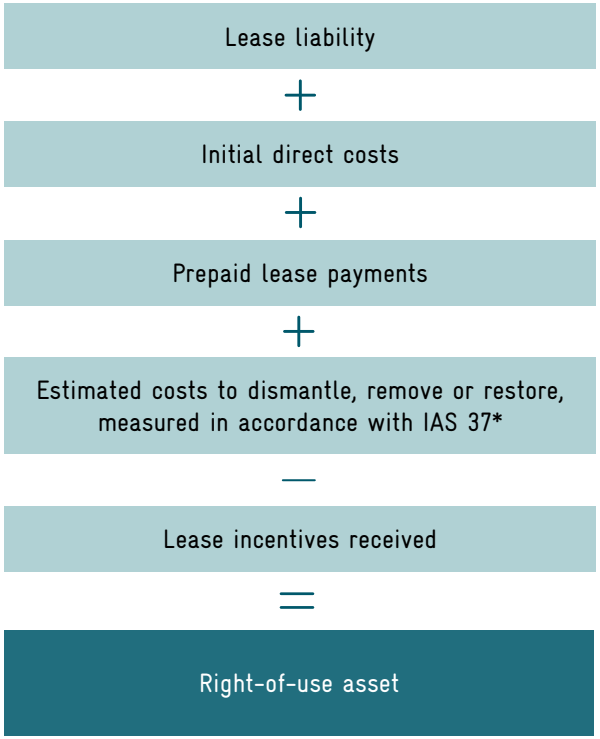
The IFRS Interpretations Committee discussed this matter and noted that the definition of a lessee's incremental borrowing rate requires the lessee to determine its incremental borrowing rate for a particular lease considering the terms and conditions of the lease. The Committee observed that it would be consistent with the Board's objective in developing the definition of incremental borrowing rate for a lessee to refer as a starting point to a readily observable rate for a loan with a similar payment profile to that of the lease, although IFRS 16 does not explicitly require this.

3.7.3 Initial measurement of the right-of-use asset

On the commencement date, a lessee measures the right-of-use asset at a cost that includes the following:

(IFRS 16.23-24)

FIGURE 12. Components of the right-of-use asset



* IAS 37 Provisions, Contingent Liabilities and Contingent Assets.

Source: KPMG IFRS 16 – Leases Handbook

A lessee's 'initial direct costs' are the incremental costs of obtaining a lease that would otherwise not have been incurred. This definition is similar to the definition of the incremental costs of obtaining a contract under IFRS 15 *Revenue from Contracts with Customers*. That is, the focus is on costs that are contingent on actually obtaining the lease. Costs that are directly attributable to seeking to obtain a lease but are incurred irrespective of whether the lease is actually obtained are not initial direct costs (IFRS 16.A).

TYPICAL INITIAL DIRECT COSTS OF A LESSEE

Include	Exclude
• Commissions • Legal fees* • Costs that are incremental and directly attributable to negotiating lease terms and conditions* • Costs of arranging collateral • Payments made by a potential lessee to existing tenants to obtain the lease	• General overheads (e.g. costs incurred by a sales and marketing team or a purchasing team) • Costs of investment appraisals, feasibility studies, due diligence, etc. that are incurred regardless of whether the lease is entered into • Costs of obtaining offers for potential leases

* If they are contingent on obtaining the lease

3.7.4 Subsequent measurement of the lease liability

a. Measurement basis

After initial recognition, a lessee measures the lease liability by:

- increasing the carrying amount to reflect interest on the lease liability;
- reducing the carrying amount to reflect the lease payments made; and
- remeasuring the carrying amount to reflect:
  - any reassessment *(see Section 3.7.4 b.)* or lease modifications *(see Section 3.9.6)*; and
  - revised in-substance fixed lease payments *(see Section 3.7.4 b.)*.

(IFRS 16.A)

Interest on the lease liability for each period during the lease term is the amount that produces a constant periodic rate of interest on the remaining balance of the lease liability. The 'periodic rate of interest' is the discount rate used in the initial measurement of the lease liability *(see Section 3.7.2 c.)* or, if appropriate, the revised discount rate *(see Section 3.7.4 b.* and *Section 3.9.6) (IFRS 16.37)*.

Lessees cannot choose to measure lease liabilities subsequently at fair value *(IFRS 16.BC183)*.

Example 22 – Lease liability. Subsequent measurement

Lessee X has entered into a contract with Lessor L to lease a solar system for seven years. The annual lease payments are USD 450, payable at the end of each year. X estimates that the incremental borrowing rate is 5.04% and uses it to measure the lease liability. The initial recognition of the obligation to make lease payments is USD 2,600.

X performs the following calculations at the end of Year 1.

Initial recognition of lease liability		USD 2,600
Payment	(USD 450)	
Repayment of interest	(USD 131)[1]	
Repayment of principal (USD 319)	(USD 319)[2]	
Carrying amount of liability at end of Year 1		USD 2,281[3]

1 Calculated as USD 2,600 x 5.04 %.
2 Calculated as USD 450 - USD 131.
3 Calculated as USD 2,600 - USD 319.

a. Remeasurement of the lease liability

After the commencement date, a lessee remeasures the lease liability to reflect changes in the lease payments. This occurs when the lessee reassesses whether it is reasonably certain to exercise an option to extend the lease or to purchase the underlying asset, or not to exercise an option to terminate the lease early. In addition, the lessee revises the lease term and remeasures the lease liability when there is a change in the non-cancellable period of a lease. *See Section 3.9 for a detailed discussion (IFRS 16.39).*

The following table describes which discount rate to use for the remeasurement:

(IFRS 16.36(c), 40-43, B42(a)(ii))

FIGURE 13. Lease liability remeasurement (b)

Lessee remeasures lease liability using lease repayments and...

AN UNCHANGED DISCOUNT RATE WHEN:

- the amount expected to be payable under the residual value guaranteed changes;
- future lease payments change to reflect market rates (e.g. based on a market rent review) or a change in an index or rate* used to determine the lease payment; or
- the variability of payments is resolved so that they become in-substance fixed payments.

A REVISED DISCOUNT RATE WHEN:

- future lease payments change as a result of a change in floating interest rates;
- the lease term changes; or
- the assessment of the exercise of a purchase option changes.

* Other than changes in floating interest rates.

Source: KPMG IFRS 16 – Leases Handbook

Example 23 – Lease liability. Change in variable payments linked to an index

Lessee Y enters into a lease for a five-year term with Lessor L for a farm solar system, commencing on 1 January. Y pays USD 155 per year, in arrears. Y's incremental borrowing rate is 5.9%. Additionally, the lease contract states that lease payments for each year will increase on the basis of the increase in the CPI for the preceding year. On the commencement date, the CPI for the previous year is 120 and the lease liability is USD 655 based on annual payments of USD 155 discounted at 5.9%.

Assume that initial direct costs are zero and there are no lease incentives, prepayments or restoration costs. Y records the following entries for Year 1.

	Debit (USD)	Credit (USD)
Right-of-use asset	655	
Lease liability (To recognise lease on commencement date)		655
Depreciation	131	
Right-of-use asset		131
Interest expense (USD 655 x 5.9 %)	39	
Lease liability (USD 155 – 39)	116	
Cash (payment for Year 1) (To recognise payment and expenses for Year 1)		155

At the end of Year 1, the CPI increases to 125. Y calculates the revised payments for Year 2 and beyond adjusted for the change in CPI as USD 161 (USD 155 x 125 / 120). As the lease payments are variable payments that depend on an index, Y adjusts the lease liability to reflect the change. The adjustment is calculated as the difference between the original lease payments (USD 155) and the reassessed payment (USD 161) over the remaining four-year lease term, discounted at the original discount rate of 5.9% (USD 21).

Remeasurements of variable lease payments that depend on an index and relate to future periods are reflected in the carrying amount of the right-of-use asset. Y records the following entry.

	Debit (USD)	Credit (USD)
Right-of-use asset	21	
Lease liability (To recognise lease on commencement date)		21

3.7.5 Subsequent measurement of the right-of-use asset

a. Measurement basis

A lessee generally measures right-of-use assets at cost less accumulated depreciation *(see Section 3.7.5 b.)* and accumulated impairment losses *(see Section 3.7.5 c.) (IFRS 16.29-39).*

The lessee adjusts the carrying amount of the right-of-use asset for the remeasurement of the lease liability – e.g. when there is a change in CPI *(see Section 3.7.4 b.).* If the carrying amount of the right-of-use asset has already been reduced to zero and there is a further reduction in the measurement of the lease liability, then the lessee recognises any remaining amount of the remeasurement in profit or loss *(IFRS 16.30(b), 38(b), 39).*

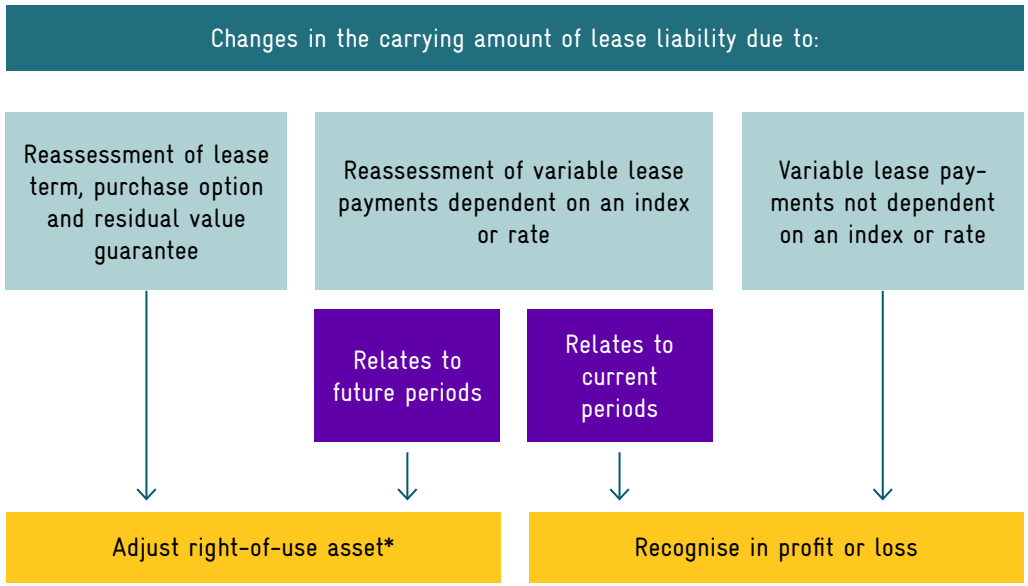
A lessee applies alternative measurement bases in two circumstances:

- *if the right-of-use asset meets the definition of investment property*, then the lessee measures the right-of-use asset in accordance with its accounting policy for all of its investment property, which may be at fair value; and
- *if a lessee applies the revaluation model to a class of property, plant and equipment,* then it may elect to apply the revaluation model to all right-of-use assets that belong to the same class.

(IFRS 16.34-35, IAS 40.2)

The following diagram summarises the impact of changes in the carrying amount of the lease liability on the right-of-use asset *(IFRS 16.38-39).*

FIGURE 14. Changes in the carrying amount of lease liability (a)



* If the carrying amount of the right-of-use asset is reduced to zero, then any further reductions are recognised in profit or loss.

Source: KPMG IFRS 16 – Leases Handbook

a. Depreciation of the right-of-use asset

A lessee depreciates right-of-use assets in accordance with the requirements of IAS 16 *Property, Plant and Equipment* – i.e. the depreciation method reflects the pattern in which the future economic benefits of the right-of-use asset are consumed. This will usually result in a straight-line depreciation charge *(IFRS 16.31, IAS 16.60)*.

Depreciation starts on the commencement date of the lease. The period over which the asset is depreciated is determined as follows:

- if ownership of the underlying asset is transferred to the lessee, or the lessee is reasonably certain to exercise a purchase option, then the depreciation period runs to the end of the useful life of the underlying asset; otherwise
- the depreciation period runs to the earlier of the end of the useful life of the right-of-use asset or the end of the lease term.

(IFRS 16.32)

Example 24 – Right-of-use assets. Depreciation period

Lessee X enters into a non-cancellable, non-renewable 10-year lease with Lessor L for a solar system that will be used in X's manufacturing process. The useful life of the underlying machine is 20 years and ownership remain with L.

Ownership does not transfer to X; therefore, X depreciates the right-of-use asset from the commencement date over a period of 10 years (i.e. the end of the lease term).

Does IAS 16 component accounting apply to the depreciation of leases? (IFRS 16.31, IAS 16.43)

Yes. IFRS 16 states that a lessee applies the depreciation requirements in IAS 16 and therefore identifies separate components for the purposes of depreciation. This can be an important practical consideration for lessees that lease big-ticket items under operating leases and adopt a component approach to maintenance accounting – e.g. major maintenance checks in some solar system leases.

a. Impairment of the right-of-use asset

A lessee applies IAS 36 *Impairment of Assets* to determine whether a right-of-use asset is impaired and to account for any impairment. After recognition of an impairment loss, the future depreciation charges for the right-of-use asset are adjusted to reflect the revised carrying amount *(IFRS 16.33, IAS 36.63)*.

Example 24 – Right-of-use assets. Depreciation period

Lessee Y leases a solar system for its manufacturing process over a non-cancellable 10-year period. The initial carrying amount of the right-of-use asset is USD 1,000, which is subsequently measured at cost and depreciated on a straight-line basis over a period of 10 years – i.e. the depreciation charge per year amounts to USD 100. At the end of Year 5, the cash-generating unit that includes the right-of-use asset is impaired. An impairment charge of USD 200 is allocated to the right-of-use asset.

Immediately before the impairment, the carrying amount of the right-of-use asset is USD 500. Following the impairment, the carrying amount is reduced to USD 300 and the future depreciation charges are reduced to USD 60 (USD 300/5) per year.

3.7.6 Recognition exemptions for lessees

A lessee can elect not to apply the lessee accounting model to:

- leases with a lease term of 12 months or less that do not contain a purchase option: i.e. short-term leases *(see Section 3.7.6 a.*; and
- leases for which the underlying asset is of low value when it is new, even if the effect is material in aggregate *(see Section 3.7.6 b.)*.

(IFRS 16.5, A)

If a lessee elects to apply either of these recognition exemptions, then it recognises the related lease payments as an expense on either a straight-line basis over the lease term or another systematic basis if that basis is more representative of the pattern of the lessee's benefit *(IFRS 16.6)*.

a. Short-term leases

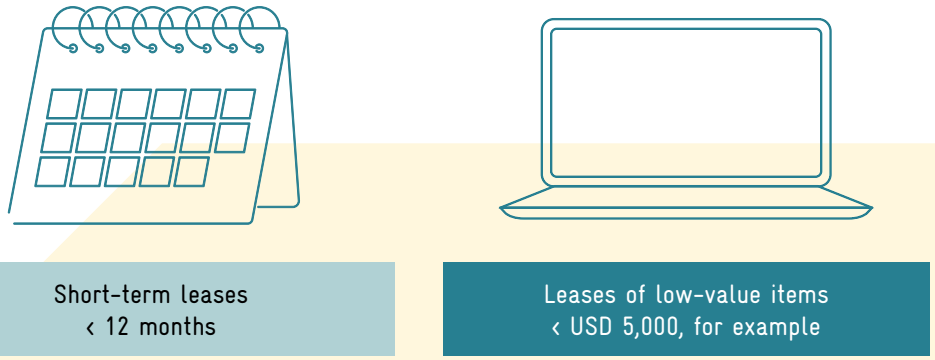
The election for short-term leases is made by class of underlying asset. A 'class of underlying asset' is a grouping of underlying assets of a similar nature and use in the lessee's operations. When electing the short-term lease exemption for a particular class of underlying asset, only underlying assets from leases that meet the definition of a short-term lease are considered *(IFRS 16.8)*.

The 'lease term' is determined in a manner consistent with that for all other leases (see Chapter 9). Consequently, the short-term lease exemption may be applied to renewable and cancellable leases (e.g. month-to-month, evergreen leases) if the lessee is not reasonably certain to renew (or to continue, in the case of a termination option) the lease beyond 12 months *(IFRS 16.A)*.

b. Low-value items

A lessee is permitted not to apply the recognition and measurement requirements to leases of assets that, when they are new, are of low value. This exemption, unlike the short-term lease exemption, can be applied on a lease-by-lease basis *(IFRS 16.5(b), 8, B3-B8)*.

FIGURE 15. Short-term and low-value leases



Source: KPMG IFRS 16 – Leases Handbook

Example 26 – Recognition exemption. Short-term lease (IFRS 16.18, B34-B35, B37)

in the manufacturing process of racing cars. It expects to use this solar system until it completes the development and testing of an improved specialised solar system. The current solar system can be easily replaced and the cost to install it at L's manufacturing facility is not significant. L, but not the lessor, has the right to terminate the lease without penalty on each anniversary of the lease commencement date.

The non-cancellable period is one year. *See Section 3.9.2*. In addition, as the solar system is not specialised, it can easily be replaced and the cost to install the system at L's manufacturing facility is not significant. L determines that it is not reasonably certain to continue the lease after the first year. *See Section 3.9.4.* As a result, the lease term is also one year, and the lease qualifies for the short-term lease exemption.

What happens if the lessee applies the short-term lease exemption and there are changes to the lease term? (IFRS 16.7)

If a lessee elects to apply the short-term lease recognition exemption and there are any changes to the lease term – e.g. the lessee exercises an option that it had previously determined that it was not reasonably certain to exercise – or the lease is modified, then the lessee accounts for the lease as a new lease.

A lessee does not apply the low-value exemption to a lease of an individual asset in either of the following scenarios:

- if the underlying asset is highly dependent on, or highly inter-related with, other assets; or
- if the lessee cannot benefit from the underlying asset on its own or together with other readily available resources, irrespective of the value of that underlying asset.

(IFRS 16.B5)

The low-value exemption also does not apply to a head lease for an asset that is sub-leased or is expected to be sub-leased. When a lessee neither enters into a sub-lease immediately nor expects to do so later, it may elect to apply the exemption *(IFRS 16.B7)*.

IFRS 16 does not specify a threshold for the low-value exemption, but the basis for conclusions states that the Board 'had in mind' assets with a value of approximately USD 5,000 or less when they are new, such as small solar equipment *(IFRS 16.B6, B8, BC98-BC104)*.

Example 27 – Recognition exemption. Low-value items (IFRS 16.IE3)

Lessee B is in the pharmaceutical manufacturing and distribution industry and leases the following:

- real estate, both office building and warehouse;
- inexpensive office furniture;
- company cars, both for sales personnel and for senior management and of varying quality, specification and value;
- trucks and vans used for delivery;
- a solar system used as an alternative power source; and
- inexpensive IT equipment – e.g. laptops.

B determines that the leases of inexpensive office furniture and laptops qualify for the recognition exemption on the basis that the underlying assets, when they are new, are individually of low value. Although the low-value exemption can be applied on a lease-by-lease basis, B elects to apply the exemption to all of these leases. In contrast, B applies the recognition and measurement requirements of IFRS 16 to its leases of real estate, solar systems, company cars, trucks and vans.

What happens if the exemption is applied, and the underlying asset is subsequently sub-leased? (IFRS 16.7, B7)

If a lessee sub-leases, or expects to sub-lease, an asset, then the head lease does not qualify as a lease of a low-value item. When a lessee neither enters into a sub-lease immediately nor expects to do so later, it may elect to apply the exemption.

However, if a lessee initially elects to use the low-value exemption – because it expects not to sub-lease the asset – but subsequently does enter into a sublease, then the lease would no longer qualify for the exemption. It appears that on the date of the change, the lessee should consider the lease to be a new lease. In these cases, the lessee also considers whether the reason for the change in intention provides evidence of whether other leases of low-value items do or do not qualify for the exemption.

3.8 Lessor accounting

Lessors classify leases as finance or operating leases.

3.8.1 Lessor accounting model

The lessor follows a dual accounting approach for lease accounting. The accounting is based on whether significant risks and rewards incidental to ownership of an underlying asset are transferred to the lessee, in which case the lease is classified as a finance lease *(IFRS 16.B53, BC289)*.

Are the lessee and lessor accounting models consistent? ?

No. The lack of consistency between the lessee and lessor accounting models can be seen in Example 11 below:

- the lessee applies the right-of-use model and recognises a right-of-use asset and a liability for its obligation to make lease payments; whereas
- the lessor continues to recognise the underlying asset and does not recognise a financial asset for its right to receive lease payments.

There are also more detailed differences. For example, lessees and lessors use the same guidance for determining the lease term and assessing whether renewal and purchase options are reasonably certain to be exercised, and termination options not reasonably certain to be exercised. However, unlike lessees, lessors do not reassess their initial assessments of the lease term and whether renewal and purchase options are reasonably certain to be exercised, and termination options not reasonably certain to be exercised. *See Section 3.10.3.*

Other differences are more subtle. For example, although the definition of lease payments is similar for lessors and lessees [*see Section 3.7.2 b*], the difference is the amount of residual value guarantee included in the lease payments.

- The lessor includes the full amount (regardless of the likelihood that payment will be due) of any residual value guarantees provided to the lessor by the lessee, a party related to the lessee or a third party unrelated to the lessor that is financially capable of discharging the obligations under the guarantee.
- The lessee includes only any amounts expected to be payable to the lessor under a residual value guarantee.

3.8.2 Lease classification

A lessor classifies a lease as either a finance lease or an operating lease, as follows:

- leases that transfer substantially all of the risks and rewards incidental to ownership of the underlying asset are finance leases; and
- all other leases are operating leases.

(IFRS 16.61-62, B53)

Generally, the presence of the following indicators, either individually or in combination, leads to a lease being classified as a finance lease *(IFRS 16.63)*:

- transfer of ownership to the lessee either during or at the end of the lease term *(IFRS 16.63(a))*;
- existence of a purchase option that is reasonably certain to be exercised *(IFRS 16.63(b))*;
- the lease term is for a major part of the economic life of the underlying asset *(IFRS 16.63(c))*;
- the present value of the lease payments amounts to substantially all of the fair value of the underlying asset at inception of the lease *(IFRS 16.63(d))*; and
- the underlying asset is specialised *(IFRS 16.63(e))*.

The following are additional indicators that a contract may be a finance lease *(IFRS 16.64)*:

- the lessee can cancel the lease, but the lessor's losses associated with the cancellation are borne by the lessee;
- gains or losses from the fluctuation in the fair value of the residual value fall to the lessee – e.g. in the form of a rent rebate equalling most of the sales proceeds at the end of the lease; or
- the lessee can extend the lease at a rent that is substantially lower than the market rent.

Lease classification is confirmed on the inception date and is reassessed only if there is a lease modification. Changes in estimates (e.g. changes in estimates of the economic life or of the residual value of the underlying asset) or changes in circumstances (e.g. default by the lessee) do not give rise to a new classification of a lease for accounting purposes *(IFRS 16.66)*.

However, if the contract includes terms and conditions to adjust the lease payments for particular changes occurring between the inception date and the commencement date, then, for the purpose of classifying the lease, the effect of any such changes is deemed to have taken place on the inception date *(IFRS 16.B54)*.

Example 28 – Lease classification

Lessor L enters into a non-cancellable lease contract with Company X, under which X leases a solar system for five years. The economic life of the equipment is estimated to be 15 years and legal title will remain with L. The lease contract contains no purchase, renewal or early termination options. The fair value of the equipment is USD 100,000 and the present value of the lease payments amounts to USD 50,000.

In assessing the classification of the lease, L notes that:

- the lease does not transfer ownership of the solar system to X;
- X has no option to purchase the solar system;
- the lease term is for one third of the economic life of the solar system, which is less than a major part of the economic life;
- the present value of the lease payments amounts to 50% of the fair value of the equipment, which is less than substantially all of the fair value; and
- the solar system is not specialised.

L notes that there are no indicators that the lease is a finance lease and that, based on an overall evaluation of the arrangement, the lease does not transfer substantially all of the risks and rewards incidental to ownership of the solar system to X.

Therefore, L classifies the lease as an operating lease.

Are there special rules on the classification of leases of land? (IFRS 16.B55, BCZ241-BCZ244)

No. The classification of a lease of land is assessed based on the general classification guidance. One key consideration is that land normally has an indefinite economic life. However, the fact that the lease term is normally shorter than the economic life of the land does not necessarily mean that a lease of land is always an operating lease; the other classification requirements are also considered.

For example, in a 99-year lease of land with fixed lease payments, the significant risks and rewards associated with the land are transferred to the lessee during the lease term, and on lease commencement the present value of the residual value of the land would be negligible. It follows that a long lease term may indicate that a lease of land is a finance lease.

There is no bright-line threshold for the lease term above which a lease of land would always be classified as a finance lease and classification assessment can require the use of significant judgement in some cases.

Do changes between the inception and commencement dates impact lease classification? (IFRS 16.6-67,70-71, B54)

Yes, in some cases. Generally, the classification of a lease is determined at inception of the lease and is not revised unless the lease agreement is modified. However, the classification is updated for certain changes between the inception date and commencement date that are deemed to have taken place on the inception date.

A significant amount of time may pass between the inception date and the commencement date – e.g. when parties commit to leasing an underlying asset that has not yet been built. A lease contract may also include terms and conditions to adjust the lease payments for changes that occur between the inception date and the commencement date – e.g. a change in the lessor's cost of the underlying asset or a change in the lessor's cost of financing the lease.

In such cases, the calculation of the present value of lease payments used in determining the classification of the lease covers all lease payments made from the commencement of the lease term. However, if the lease payments are adjusted for contractual changes such as changes in the construction or acquisition cost of the underlying asset, general price levels or the lessor's costs of financing the lease between the inception and commencement dates, then the effect of these changes is deemed to have taken place at inception for the purpose of classifying the lease.

It appears that, for classification purposes, the lease payments should also be updated for changes between the inception and commencement dates in:

- the non-cancellable period of the lease *(see Section 3.9.2)*;
- lease payments that depend on an index or a rate; and
- variable payments that become in-substance fixed.

We believe that these changes are akin to contractual changes between the inception and commencement dates and the effect of these changes should therefore be deemed to have taken place at inception for the purpose of classifying the lease. Consequently, a lessor should also update the rate implicit in the lease and its estimate of the unguaranteed residual value for such contractual changes for classification purposes.

However, for measurement purposes, it appears that a lessor should update the lease payments, the rate implicit in the lease and the unguaranteed residual value for all changes between the inception and commencement dates. This is because a lessor measures the net investment in a finance lease and the amount of operating lease income to be recognised on the commencement date.

3.8.3 Operating lease model

The lessor classifies a lease that is not a finance lease as an operating lease *(IFRS 16.81)*.

If, before lease commencement, a lessor recognises an asset in its statement of financial position and leases that asset to a lessee under an operating lease, then the lessor does not derecognise the asset on lease commencement. Generally, future contractual rental payments from the lessee are recognised as receivables over the lease term as the payments become receivable.

Lease income from operating leases is generally recognised by the lessor on a straight-line basis from the commencement date over the lease term. It may be possible for the lessor to recognise lease income using another systematic basis if that is more representative of the time frame in which the benefit of using the underlying asset is diminished. Similarly, increases (or decreases) in rental payments over a period of time, other than variable lease payments, are reflected in the determination of the lease income, which is recognised on a straight-line basis *(IFRS 16.81,83)*.

The initial direct costs incurred by the lessor in arranging an operating lease are added to the carrying amount of the underlying asset and cannot be recognised immediately as an expense. These initial direct costs are recognised as an expense on the same basis as the lease income. This will not necessarily be consistent with the basis upon which the underlying asset is depreciated *(IFRS 16.83)*.

Incentives granted to the lessee in negotiating a new or renewed operating lease are recognised as an integral part of the lease payments relating to use of the underlying asset. They are recognised as a reduction in rental income over the lease term using the same recognition basis as that used for the lease income *(IFRS 16.81.A)*.

The lessor depreciates the underlying asset over the asset's useful life in a manner that is consistent with the depreciation policy that it applies to similar owned assets *(IFRS 16.84)*.

A lessor applies IAS 36 to determine whether an underlying asset subject to an operating lease is impaired and to account for any impairment loss identified. In addition, the lessor applies the impairment and derecognition requirements of IFRS 9 to operating lease receivables *(IFRS 16.85, 9.2.1(b)(i))*.

Should a lessor continue to recognise operating lease income on a straight-line basis if the lessee reduces actual usage of the underlying asset? (IFRS 16.81) ?

Generally, yes.

In most leases, the benefit conveyed by the lessor to the lessee is the right to use the underlying asset over the lease term. For this reason, operating lease income is typically recognised by the lessor on a straight-line basis from the commencement date over the lease term.

IFRS 16 states that it is possible to recognise operating lease income using another systematic basis if that is more representative of the time frame in which the benefit of the underlying property is diminished. However, it is rare that a basis other than straight-line meets this test in a lease. For example, in a solar system lease, a retailer that leases a solar system from a renewable energy developer may expect its sales to vary seasonally and may project year-on-year increases/decreases in sales. However, the benefit that the retailer receives under the lease is the right to use the solar system. Therefore, if the lease payments are fixed then the developer would recognise operating lease income on a straight-line basis in this fact pattern.

One question arises about whether this approach remains appropriate if the sales significantly reduce and/or the government imposes restrictions that impact production.

In the absence of a change in the lease agreement, the retailer's benefit under the lease agreement remains the right to use the solar system. As long as the developer continues to convey the right to use the system to the retailer, the developer will typically continue to recognise operating lease income on a straight-line basis.

3.8.4 Finance lease model

On commencement, the lessor derecognises the underlying asset and recognises a finance lease receivable at an amount equal to its net investment in the lease, which comprises the present value of the lease payments and any unguaranteed residual value accruing to the lessor. The present value is calculated by discounting the lease payments and any unguaranteed residual value, at the interest rate implicit in the lease *(see Section 13.7.2 c.)*. Initial direct costs are included in the measurement of the finance lease receivable because the interest rate implicit in the lease takes initial direct costs incurred into consideration *(IFRS 16.67-69, A)*.

The lessor deducts any lease incentive payable from the lease payments included in the measurement of the net investment in the lease *(IFRS 16.70(a))*.

The lessor recognises the difference between the carrying amount of the underlying asset and the finance lease receivable in profit or loss when recognising the finance lease receivable. This gain or loss is presented in profit or loss in the same line item as that in which the lessor presents gains or losses from sales of similar assets.

Over the lease term, the lessor accrues interest income on the net investment. The receipts under the lease are allocated between reducing the net investment and recognising finance income, to produce a constant rate of return on the net investment *(IFRS 16.75-76)*.

A lessor applies the derecognition and impairment requirements of IFRS 9 to the net investment in the lease. A lessor recognises any loss allowance on the finance lease receivable, applying IFRS 9. A lessor regularly reviews estimated unguaranteed residual values used in computing the gross investment in the lease. If there is a reduction in the estimated unguaranteed residual value, then the lessor revises the income allocation over the lease term without changing the discount rate and immediately recognises any reduction in respect of amounts accrued *(IFRS 16.77)*.

3.9 Lease term

The lease term is a critical estimate. For lessees, the lease term affects the size of the lease liability. For lessors, it may impact the lease classification.

3.9.1 Overview

The lease term is the non-cancellable period of the lease, together with:

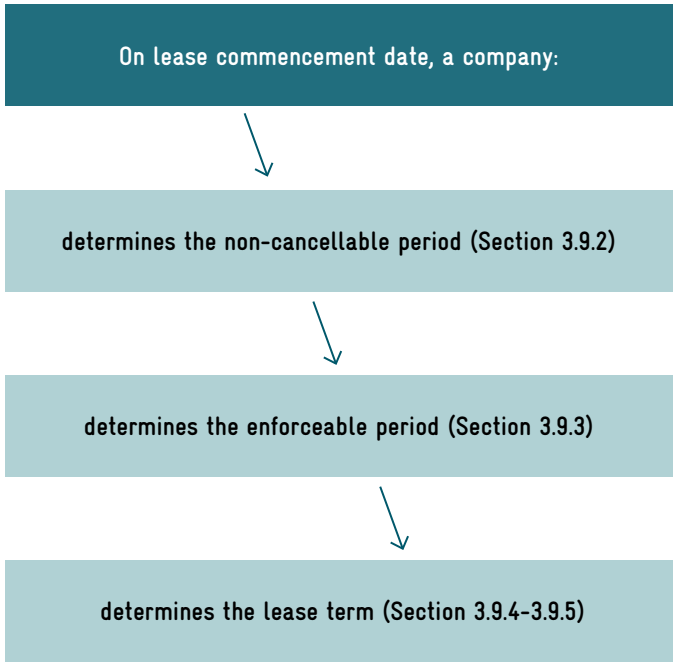
- optional renewable periods if the lessee is reasonably certain to extend; and
- periods after an optional termination date if the lessee is reasonably certain not to terminate early.

(IFRS 16.18)

Termination options held only by the lessor are not considered when determining the lease term *(IFRS 16.B35)*.

To determine the lease term, a company first determines the length of the noncancellable period of a lease and the period for which the contract is enforceable. It can then determine – between those two limits – the length of the lease term. In lease contracts that have no options, the non-cancellable period, the period for which the contract is enforceable and the lease term will all be the same.

FIGURE 16. Lease term determination



Source: KPMG IFRS 16 – Leases Handbook

3.9.2 The non-cancellable period

The 'non-cancellable period' is the period during which the lessee cannot terminate the contract. The lease term cannot be shorter than the non-cancellable period *(IFRS 16.B35, BC127-BC128)*.

If a lessor can cancel the lease, does this affect the non-cancellable period? (IFRS 16.B35, BC128) ?

No. If only the lessor has the right to terminate a lease, then the non-cancellable period of the lease includes the period covered by the lessor's option to terminate the lease. In this situation, the lessee has an unconditional obligation to pay for the right to use the asset for the period of the lease, unless and until the lessor decides to terminate the lease.

Any non-cancellable period or notice period in a lease meets the definition of a contract and is part of the lease term.

3.9.3 The enforceable period

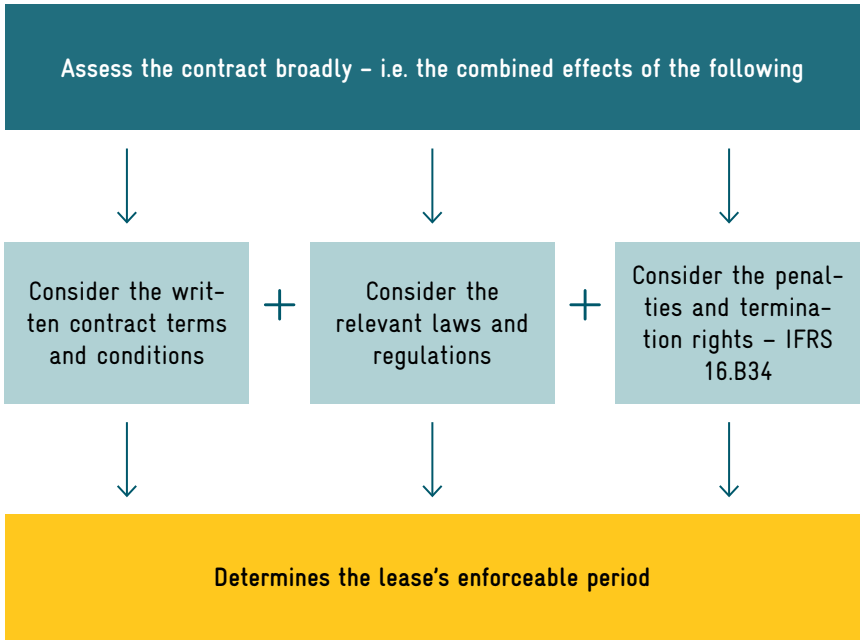
The 'enforceable period' is the period during which enforceable rights and obligations exist between the lessee and lessor. This is the maximum potential length of the lease term *(IFRS 16.B34, BC127)*.

To determine the enforceable period of the lease, a company applies the definition of a contract. For this purpose, the contract comprises the written agreement and applicable laws and regulations in the local jurisdiction that stipulate and govern the parties' rights and obligations. Enforceability is a matter of law in the relevant jurisdiction and each contract will need to be evaluated based on its terms and conditions. This includes considering the guidance on enforceability in paragraph B34 of IFRS 16, including the role of penalties in assessing the enforceable period *(IFRS 16.2, B34, BC127)*.

The key steps in determining the enforceable period are as follows:

Renewal and termination options are considered in the assessment of the lease term if they are enforceable *(IFRS 16.B34, BC127)*.

FIGURE 17. Enforceable period



Source: KPMG IFRS 16 – Leases Handbook

A lease is no longer enforceable beyond the point at which both the lessee and the lessor have the unilateral right to terminate the lease without permission from the other party, and with no more than an insignificant penalty *(IFRS 16.34, BC127, IU 11-19)*.

Consequently, a contract is enforceable beyond the date on which it can be terminated if:

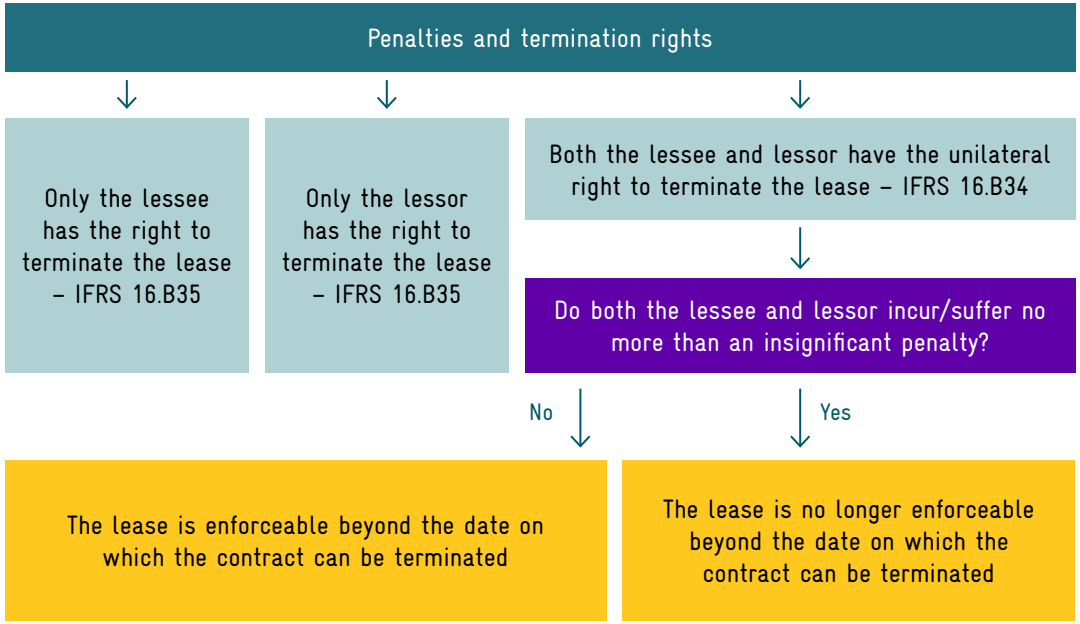
- both parties have the right to terminate but one party, or both, would incur a penalty on termination that is more than insignificant; or
- only one party has the right to terminate the lease without the permission of the other party.

A lease is no longer 'enforceable' when both the lessee and lessor have the right to terminate it without agreement from the other party with no more than an insignificant penalty. If only the lessee has the right to terminate a lease, then that right is considered to be an option available to the lessee to terminate the lease that a company considers when determining the lease term. Termination options held by the lessor only are not considered when determining the lease term because, in this situation, the lessee has an unconditional obligation to pay for the right to use the asset for the period of the lease, unless the lessor decides to terminate the lease *(IFRS 16.B34-B35, BC127, IU 11-19)*.

The following summarises the impact of penalties and termination rights on the determination of the enforceable period.

IFRS 16 does not define the term 'penalty'. Therefore, questions have arisen in practice about whether a company considers the broader economics of the contract or only contractual termination payments when applying paragraph B34 of the standard. The IFRS Interpretations Committee discussed this issue and noted that when determining the effect of termination rights under paragraph B34, a company considers the broader economics of the contract and not only contractual termination payments *(IFRS 16.B34, IU 11-19)*.

FIGURE 18. Impact of penalties and termination rights on the determination of the enforceable period



Source: KPMG IFRS 16 – Leases Handbook

Example 29 – Impact of termination rights on the enforceable period

Scenario 1

Lessee B leases solar panels from Lessor C under the following terms:

- the written contract is for a stated maximum term of five years;
- B and C each have the unilateral right to terminate the lease at the end of Year 2 with no more than an insignificant penalty;
- relevant laws and regulations that govern the transaction do not stipulate any other rights and obligations of the parties in addition to those in the written contract.

On lease commencement, the enforceable period is two years, regardless of how likely it is that both parties will decide to extend the lease beyond the end of Year 2.

Scenario 2

Lessee D leases solar panels from Lessor E under the following terms:

- the written contract is for a stated maximum term of five years;
- after Year 1, D and E each have the unilateral right to terminate the lease, but a one-month notice period is required – i.e. the lease terminates one month after the termination notice is given. Notice cannot be given before the end of Year 1. If the lease is terminated in this way, then neither party will suffer a more than insignificant penalty;
- relevant laws and regulations that govern the transaction do not stipulate any other rights and obligations of the parties in addition to those in the written contract.

On lease commencement, the enforceable period is 13 months.

What is the enforceable period when both the lessee and lessor have termination rights, but only one party would suffer a more than insignificant penalty? (IFRS 16.B34-B35, BC127, IU 11-19)

The existence of a penalty affects the enforceable period in different ways, depending on which party would suffer a more than insignificant penalty.

In the following scenarios, relevant laws and regulations that govern the transaction do not stipulate any other rights and obligations of the parties in addition to those in the written contract.

Scenario 1 – Both parties have termination rights without the permission of the other, but only the lessor's right gives rise to a more than insignificant penalty

In this case, the enforceable period ends when the lessor's exercise of its termination option no longer gives rise to a more than insignificant penalty – i.e. when both the lessee and the lessor have the unilateral right to terminate the lease with no more than an insignificant penalty.

In contrast, if the lessor's termination right will no longer result in a more than insignificant penalty before the lessee's termination option becomes exercisable, then the lessor's termination option is disregarded for accounting purposes until the lessee's termination option becomes exercisable. When the lessee's termination option becomes exercisable, both the lessee and the lessor have the unilateral right to terminate the lease with no more than an insignificant penalty, and the enforceable period does not extend beyond that point.

Scenario 2 – Both parties have termination rights without the permission of the other, but only the lessee's right gives rise to a more than insignificant penalty

In this case, the enforceable period ends when the lessee's exercise of its termination option no longer gives rise to a more than insignificant penalty.

3.9.4 The reasonably certain threshold

IFRS 16 does not define 'reasonably certain' and there is no bright line when making the assessment. When determining the lease term, a company considers all relevant facts and circumstances that create an economic incentive for the lessee to exercise an option to renew or purchase, or not to exercise an option to terminate early. When assessing whether a lessee is reasonably certain to exercise an option to extend or purchase, or not to exercise an option to terminate early, the economic reasons underlying the lessee's past practice regarding the period over which it has typically used particular types of assets (whether leased or owned) may provide useful information *(IFRS 16.19, B37, B40, BC157)*.

IFRS 16 provides examples of factors to consider when assessing whether it is 'reasonably certain' that a lessee would exercise an option to renew or not exercise an option to terminate the lease. The assessment of the degree of certainty is based on the facts and circumstances on commencement of the lease, rather than on the lessee's intentions. The following table provides examples of factors that create an economic incentive to exercise or not to exercise options to renew or terminate early *(IFRS 16.B37-B40)*.

FIGURE 19. Factors that create an economic incentive to exercise or not to exercise options to renew or terminate early

Example of relevant facts and circumstances	
CONTRACTUAL/MARKET	**ASSET**
• Level of rentals in any secondary period compared with market rates • Contingent payments • Renewal and purchase options • Costs relating to the termination of the lease and the signing of a new replacement lease • Costs to return the underlying asset	• Nature of item (specialised) • Location • Availability of suitable alternatives • Existence of significant leasehold improvements

Source: KPMG IFRS 16 – Leases Handbook

Example 30 – Lessee renewal option. Reasonably certain to renew

Lessee X enters into a lease contract with Lessor L to lease rooftop solar panels mounted on the factory premises. The non-cancellable period is four years and X has the option to extend the lease by another four years at the same rent.

To determine the lease term, X considers the following factors:

- market rentals for comparable solar supplies in the same area are expected to increase by 10% over the eight-year enforceable period. On commencement of the lease, rentals under the contract reflect current market rates;
- X intends to run the factory in the same area for at least 10 years;
- the location of the factory is ideal for relationships with suppliers and customers; and
- X undertakes non-removable significant leasehold improvements to facilitate efficient functioning with an estimated useful life of eight years.

X concludes that it has a significant economic incentive to extend the lease and is therefore reasonably certain to exercise its four-year extension option. Consequently, X determines that the lease term is eight years.

Example 31 – Lessee renewal option. Not reasonably certain to renew

Lessee Y enters into a lease for a solar supply for its factory from a nearby solar plant that provides solar power to the neighbouring community. Specific identifiable solar panels have been dedicated to support solar power to Y to guarantee supply. The non-cancellable period is 10 years. Y has the option to extend the lease after the initial 10-year period for optional periods of 12 months each at market rents.

To determine the lease term, Y considers the following factors:

- the solar power is expected to be used in manufacturing parts for a type of aircraft that Y expects will remain popular with customers until development and testing of an improved model, which efficiently needs hydroelectricity for production, is completed in approximately 10 years;
- the cost to install the solar connections at Y's manufacturing facility is not significant;
- Y does not expect to be able to use solar power in its manufacturing process for other types of aircraft without significant modifications; and
- the total remaining economic life of the solar plant is about 25 years.

Y notes that the terms for the optional renewal provide no economic incentive and the cost to install is insignificant. Y has no incentive to make significant modifications to its factory after the initial 10-year period to install stronger rooftop panels with stronger batteries. Y does not expect to have a business purpose for using the solar power after the non-cancellable lease period.

Y therefore concludes that it is not reasonably certain to exercise its renewal options. Consequently, the lease term consists of the 10-year non-cancellable period only.

Does the existence of non-removable significant leasehold improvement impact the lease term? (IFRS 16.B37, IU 11-19)

Yes. The IFRS Interpretations Committee considered the interaction between the determination of the lease term and the useful life of non-removable significant leasehold improvements.

The Committee noted that a company considers all relevant facts and circumstances that create an economic incentive for the lessee when assessing whether it is reasonably certain to extend (or not to terminate) a lease. This includes significant leasehold improvements (made or intended to be made) over the term of the contract that are expected to have significant economic benefits when the option to extend (or terminate) becomes exercisable.

Can lessees and lessors reach different conclusions on whether it is reasonably certain that an option will be exercised?

Yes. Lessees and lessors may reach different conclusions on lease terms because of information asymmetry and the judgemental nature of the assessment. The assessment of reasonably certain is based on judgements (e.g. concerning the importance of an underlying asset to the lessee) and estimates (e.g. of the fair value of the underlying asset in the future).

Lessees and lessors may reach different conclusions on whether the lessee is reasonably certain to exercise an option to renew or not to exercise an option to terminate early.

3.9.5 Renewable and cancellable leases

In some cases, a lease contract may continue indefinitely until either party gives notice to terminate it (i.e. cancellable lease), or may renew indefinitely unless it is terminated by either party (i.e. renewable lease). For example, evergreen leases are leases that automatically renew on a day-to-day, week-to-week or monthto-month basis – i.e. they are cancellable leases. One question arises concerning how to determine the non-cancellable and enforceable period of such leases. The IFRS Interpretations Committee discussed this issue and noted that, in doing so, a company considers the broader economics of the contract and not only contractual termination payments. If only one party has the right to terminate the lease without permission from the other party and with no more than an insignificant penalty, then the contract is enforceable beyond the date on which the contract can be terminated by that party *(IFRS 16.B34, IU 11-19)*.

If a company concludes that the contract is enforceable beyond the notice period of a cancellable lease (or the initial period of a renewable lease), then it applies the reasonably certain threshold assessment to determine the lease term. *See Section 3.9.4 (IFRS 16.19, B37-B40, IU 11-19)*.

A penalty may expire or, over a period of time, the effect of a penalty that is initially more than insignificant may become insignificant. For example, a termination penalty that is more than insignificant if it is incurred after only one year of a lease may be insignificant if it is incurred after four or five years when considered within the context of the broader economics of the contract.

Example 32 – Termination rights. No more than an insignificant penalty (IFRS 16.B34, IU 11-19)

Lessee L enters into a five-year lease to buy solar power from Lessor M for use in the warehouse. L designs and sells furniture internationally online and is testing the use of the warehouse as a showroom. The cost to fit the solar panels is not significant. If the showroom is unsuccessful, then L does not plan to use the space as a warehouse.

Under the lease agreement, L and M each have the right to terminate the lease without a contractual penalty on each anniversary of the lease commencement date.

In applying the broad definition of penalty, L considers the following:

- the leasehold improvements are minor. Therefore, L's loss of economic value if the contract is terminated before the end of their economic life is not significant;
- the cost to dismantle the leasehold improvements is not significant;
- the cost to restore the warehouse to its original condition is not significant; and
- the potential impact of early termination on customer relationships is low. L mostly interacts with its customers through its website, with a small number expected to visit the showroom in person.

Based on its analysis of the facts and circumstances, L determines that it can terminate the lease with no more than an insignificant penalty after one year. Assuming that M can also terminate with no more than an insignificant penalty after one year, the lease term consists of the one-year non-cancellable period because there are no enforceable rights and obligations beyond this point. This is because – after both parties' termination rights become exercisable – neither party has enforceable rights (i.e. L to use the solar power or M to receive lease payments) or obligations (i.e. L to make lease payments or M to permit continued supply of solar power to the warehouse).

Example 33 – No stated terms (IFRS 16.B37, B39)

Lessor R leases solar equipment to Lessee E. There is no stated duration for the lease in the contract. E can terminate the lease at any time by returning the underlying asset to R's location. For each day that the asset remains in E's possession, E will pay a fixed fee to R for the right to use that asset.

The non-cancellable period of the lease is one day because E could elect to return the asset to R's location before the start of Day 2. If E has an ongoing need to use an asset similar to the underlying asset in its business, then the costs to E of terminating the lease (e.g. returning the underlying asset to R's location) and entering into a new lease (e.g. identifying another asset, entering into a different contract and training employees to use a different asset) may provide a compelling economic reason for E to continue to use the same asset for a period that is longer than the non-cancellable period – i.e. the lease term may be more than one day.

Does the assessment of reasonably certain differ for evergreen leases? (IFRS 16.A, B37, B39)

No. For evergreen leases, once the enforceable period is established, the lease term is determined in the same manner as for all other leases. This involves considering whether the lessee is reasonably certain to exercise one or more of the renewal options. The assessment is based on all relevant facts and circumstances that create an economic incentive for the lessee to exercise the option to renew.

Determining whether a lessee is reasonably certain to exercise a renewal option in an evergreen lease may involve significant judgement. In general, the shorter the non-cancellable period of a lease, the more likely a lessee is to exercise an option to extend the lease or not to exercise an option to terminate the lease. This is because the costs associated with obtaining a replacement asset are likely to be proportionately higher for a shorter non-cancellable period.

For example, if a lessee leases solar equipment on a monthly basis and expects to need substantially similar equipment for the next 18-24 months, then there may be a significant economic incentive to renew the lease rather than continually searching for similar equipment throughout the period.

3.9.6 Changes in the lease term

After the commencement date, a lessee reassesses whether it is reasonably certain to exercise an option to extend the lease or to purchase the underlying asset, or not to exercise an option to terminate the lease early. The lessee revises the lease term accordingly. The lessee does this when there has been a significant event or a significant change in circumstances that:

- is within its control; and
- affects whether it is reasonably certain to exercise those options.

(IFRS 16.20,36(c), 40)

IFRS 16 provides the following examples of significant events or changes in circumstances:

- significant leasehold improvements that the lessee did not anticipate on the commencement date, if it expects them to have a significant economic benefit when the option to extend or terminate the lease, or to purchase the underlying asset, becomes exercisable;
- a significant modification to, or customisation of, the underlying asset that was not anticipated on the commencement date;
- the inception of a sub-lease of the underlying asset for a period beyond the end of the previously determined lease term; and
- a business decision of the lessee that is directly relevant to exercising, or not exercising, an option – e.g. a decision to extend the lease of a complementary asset, to dispose of an alternative asset or to dispose of a business unit within which the right-of-use asset is used.

(IFRS 16.B41)

If a lessee reassesses the lease term due to changes in its assessment of whether it is reasonably certain to exercise a renewal option, then it remeasures its lease liability using a revised discount rate. The lessee adjusts the carrying amount of the right-of-use asset for the remeasurement of the lease liability. If the carrying amount of the right-of-use asset is reduced to zero, then any further reductions are recognised in profit or loss.

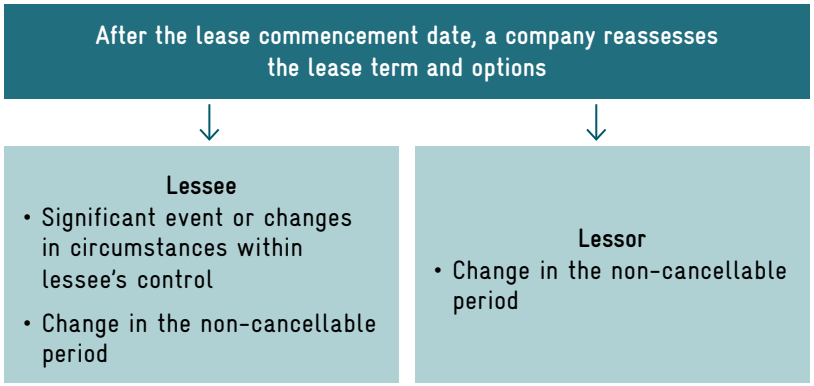
In addition, both the lessee and the lessor revise the lease term when there is a change in the non-cancellable period of a lease. For example, the non-cancellable period of a lease will change if:

- the lessee exercises an option that was not previously included in the company's determination of the lease term;
- the lessee does not exercise an option previously included in the company's determination of the lease term;
- an event occurs that contractually obliges the lessee to exercise an option not previously included in the company's determination of the lease term; or
- an event occurs that contractually prohibits the lessee from exercising an option previously included in the company's determination of the lease term.

For example, a lessee and a lessor determined on commencement that the lease term was the non-cancellable period of five years, considering that it was not reasonably certain that the lessee would exercise a renewal option for an additional five years. However, if at the end of Year 4 the lessee exercises the renewal option for the additional five years by giving formal notification to the lessor, then the lessee and the lessor revise the remaining lease term to six years to reflect the new non-cancellable period.

(IFRS 16.21)

FIGURE 20. Reassessment of the lease term and options



Source: KPMG IFRS 16 – Leases Handbook

When there is a change in the lease term, a lessee remeasures its lease liability using a revised discount rate and, generally, makes a corresponding adjustment to the right-of-use asset (IFRS 16.40).

IFRS 16 is silent on how a lessor accounts for the remeasurement of the net investment in the lease when it revises the lease term. It appears that the lessor should choose an accounting policy, to be applied consistently, to remeasure the net investment in the lease by applying the guidance in:

- IFRS 9 on accounting for a change in expected cash flows; or
- IFRS 16 on remeasurement of a lease liability by the lessee.

(IFRS 16.21)

Example 34 – Lessee renewal option. Reassessing if it is reasonably certain to be exercised (IFRS 16.B37(b))

Lessee W leases a rooftop solar panel from Lessor L.

The lease has a non-cancellable term of five years, and W can renew the lease for a further five years – i.e. the lease has a potential maximum term of 10 years.

Initial assessment on commencement

On commencement of the lease, W assesses that it is not reasonably certain to exercise the renewal option and therefore determines that the lease term is five years.

Subsequent reassessment of certainty that the option will be exercised

During Year 3, W undergoes significant change, increasing the capacity of the solar panels and the space occupied by the solar panels. Based on its experience in other stores, W believes that these materials have a useful life of 10 years once they are installed; they cannot be repurposed to other stores because they would be damaged during their removed.

W notes that it was its own decision to implement the leasehold improvements and the improvements are evidence that it has an economic incentive to renew the lease. W updates its overall assessment and notes that it is now reasonably certain to extend the lease.

Accordingly, W reassesses the lease term and determines that the remaining lease term is seven years. W remeasures the lease liability using a revised discount rate and makes an equal adjustment to the right-of-use asset.

Example 35 – Date of the change in the non-cancellable period (IFRS16.21)

Lessee L leases a rooftop solar panel from Lessor R. The lease is non-cancellable for 10 years and includes a five-year renewal option. L is required to notify R if it intends to exercise the renewal option by the end of Year 9. On lease commencement, R concludes that L is not reasonably certain to exercise the renewal option and, therefore, the lease term is 10 years.

The retail location where the solar panels are installed performs better than expected for reasons not anticipated on lease commencement. In Year 7, L decides that it will exercise the renewal option. However, L decides not to notify R until it is required to do so – i.e. at the end of Year 9.

In this case, the better-than-expected trading performance is a market-based factor, which does not – in isolation – trigger a reassessment of the lease term. Therefore, both R and L reassess the lease term only when L formally notifies R that it will renew the lease – i.e. at the end of Year 9. This is the date when there is a change in the non-cancellable period.

What are the major impacts for lessees of reassessing the lease term and remeasuring the lease liability?

Companies need to reassess key judgements – e.g. the lease term – and consider the need to remeasure lease balances each time they report. Significant judgement is needed in determining whether there is a change in relevant factors or a change in the lessee's economic incentive to exercise or not to exercise renewal or termination options. Additionally, it may be difficult for a company to ignore changes in market-based factors (e.g. market rates) when performing a reassessment of the lease term.

A lessee's reassessment of key judgements may, in some cases, have a significant impact on the lease amounts recognised on the statement of financial position and the statement of profit or loss and other comprehensive income.

Remeasurements during the lease term provide more up-to-date information to users of financial statements. However, they create volatility in reported assets and liabilities, which may impact the ability to accurately predict and forecast future financial performance. Additional resources need to be focused on lease accounting not only on lease commencement, but also on each reporting date.

Is a lessor allowed to reassess the lease term when the lessee reassesses whether it is reasonably certain to exercise an option? (IFRS 16.20-21)

No. Unlike a lessee, it appears that a lessor should revise the lease term only when there is a change in the non-cancellable period of the lease, as described in paragraph 21 of IFRS 16. In contrast, paragraph 20 requires reassessment in additional circumstances, but this applies only to lessees.

3.10 Lease Modifications

IFRS 16 provides detailed guidance on accounting for lease modifications for both the lessee and the lessor.

3.10.1 Definition

A lease modification is a change in the scope of a lease, or the consideration for a lease, that was not part of its original terms and conditions. Common examples are:

- increasing the scope of the lease by adding the right to use one or more underlying assets or extending the contractual term;
- reducing the scope of the lease by removing the right to use one or more underlying assets or shortening the contractual lease term; and
- changing the consideration in the lease by increasing or reducing the lease payments.

(IFRS 16.A)

Changes that result from renegotiations of the contract are lease modifications. Adjusting the lease payments (cash flows) by contractual rent adjustment mechanisms, and reassessing whether a lessee is reasonably certain to exercise (or not to exercise) an option included in the contract, are not lease modifications because these are part of the original terms and conditions. *See Section 3.10.3 (IFRS 16.18-20, 39-40(a)-(d)).*

IFRS 16 distinguishes between lease modifications that represent, in substance, the creation of a new lease that is separate from the original lease and those that represent, in substance, a change in the scope of, or consideration paid for, the existing lease *(IFRS 16.BC202)*.

Lease modifications that are not accounted for as separate leases are accounted for on the effective date of the lease modification. This is the date on which both parties agree to the lease modification and is usually the date on which the modified contract is signed *(IFRS 16.A)*.

What is the difference between remeasurement of lease assets and liabilities and lease modifications? (IFRS 16.BC201) ?

There is a difference between scenarios that result in the remeasurement of existing lease assets and lease liabilities due to:

- reassessment of estimates used in lease accounting; and
- lease modifications *(see Section 3.10.1)*.

After the commencement date, lease reassessments take place, for example, when there are changes in the lease payments (cash flows) based on contractual clauses included in the original contract. *Accounting for remeasurement is addressed in Section 3.9.6 and Section 3.10.3.*

Changes that result from renegotiations and changes to the terms of the original contract are lease modifications. *Accounting for a lessee lease modification is addressed in Section 3.10.1.*

What are the accounting implications for the lessee and the lessor if a lessee does not make rent payments when they are due? (IFRS 16.A, 38, 76, 81, 9.3.3.1) ?

If the lessee fails to pay amounts due under the lease contract with no agreement with the lessor, then this is not a lease modification. However, there may be other accounting implications, as follows.

Lessee

The lessee continues to recognise the lease liability and assesses whether it is liable for additional interest or penalties for late payment under the lease contract.

Lessor

The lessor continues to account for the lease under its original terms and conditions unless and until the lessor agrees to modify the contract.

However, if the lessee fails to pay amounts due under the lease contract, or the lessor is otherwise concerned that the lessee may be unable to pay amounts falling due in future periods, then there are a range of other issues that the lessor needs to consider.

For **operating leases**, these issues include, but are not limited to, the following:

- income recognition. Operating lease income reflects the rental payments to which the lessor is entitled under the enforceable terms and conditions of the lease. In addition, the lessor will need to assess whether it remains appropriate to recognise income from non-lease components – e.g. maintenance income under IFRS 15;
- carrying amount of the underlying asset. Lessors will need to ensure that the underlying asset is appropriately measured. For investment property measured at fair value, this will include ensuring that the fair value reflects current market participant expectations about in-place leases and residual values. For other underlying assets, this will include considering whether there is a trigger for impairment testing; and
- lease receivables. Operating lease receivables are subject to impairment testing under IFRS 9.

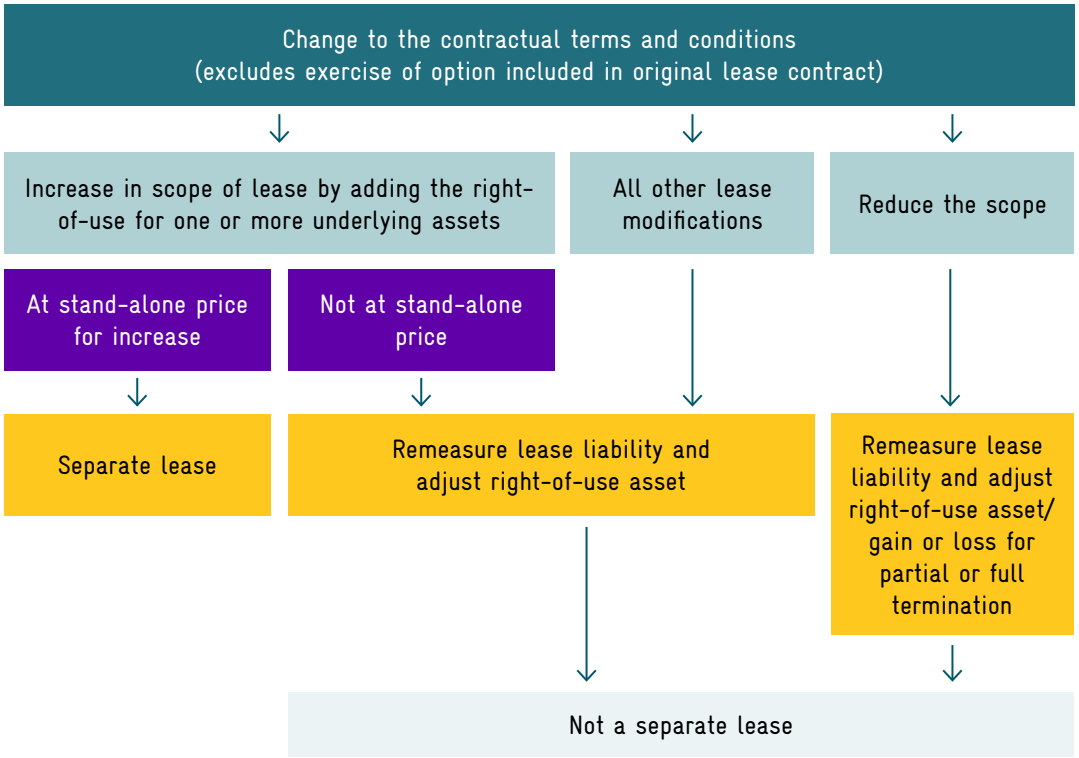
In **a finance lease**, although the lessor will continue to account for the lease under its original terms and conditions, the carrying amount of the net investment in the lease and related interest income may be impacted. The lessor applies IFRS 9's impairment requirements to the net investment in the lease and regularly reviews the estimated, unguaranteed residual values used in computing the gross investment in the lease. The lessor applies IFRS 16 to recognise reductions in the unguaranteed residual value of the underlying asset.

3.10.2 Lessee modification accounting

a. Lessee modifications – General

The following diagram summarises accounting for lease modifications by a lessee *(IFRS 16.44-46)*.

FIGURE 21. Change to the contractual term and conditions (a)



Source: KPMG IFRS 16 – Leases Handbook

b. Separate lease

A lessee accounts for a lease modification as a separate lease if both of the following conditions exist *(IFRS 16.44)*:

- the modification increases the scope of the lease by adding the right to use one or more underlying assets; and
- the consideration for the lease increases by an amount commensurate with the stand-alone price for the increase in scope and any appropriate adjustments to that stand-alone price to reflect the circumstances of the particular contract.

In this case, the lessee accounts for the separate lease in the same way as any new lease and makes no adjustment to the accounting for the initial lease. The lessee uses a revised discount rate to account for the separate lease. The new rate is determined on the effective date of the modification. The lessee uses the interest rate implicit in the lease if it is readily determinable; otherwise, the lessee uses its incremental borrowing rate *(IFRS 16.44)*.

Example 36 – Lease modification. Separate lease (IFRS 16.44, Ex15)

Lessee Z entered into a lease contract with Lessor L to lease rooftop solar panels for a coffee factory for 10 years. At the beginning of Year 7, Z and L amend the contract to grant Z the right to use additional solar panels installed on the same building for four years. The new solar panels are the same size as the original solar panels and similar in all significant respects.

The lease payments for the new solar panels are commensurate with market rentals for solar panels of that size and characteristic. However, Z receives a 5% discount for the new solar panels because its existing relationship with L enabled L to forego costs that it would have incurred if the additional solar panels had been leased to a new tenant – e.g. marketing costs, rental agent's commission, costs for undertaking credit checks, etc.

The lease of the additional solar panels was not part of the original terms and conditions of the contract. Therefore, this is a lease modification.

Z accounts for this modification as a separate lease on the effective date of the lease modification because:

- the modification increases the scope of the lease by adding the right to use an additional underlying asset – i.e. additional solar panels; and
- the lease payments for the additional solar panels are commensurate with market rentals for similar equipment, as adjusted for the circumstances of the contract. Even though the lease payment for the new solar panels is 5% below market rentals, the discount reflects L's sharing with Z of the benefit of not having to market the equipment or pay a broker's commission and not having to incur other common origination fees.

Z does not modify the accounting for the original office space lease.

a. Not a separate lease

A lessee accounts for a lease modification that is not a separate lease on the effective date of the modification by remeasuring the lease liability. To do so, the lessee discounts the revised lease payments using a revised discount rate determined on that date and:

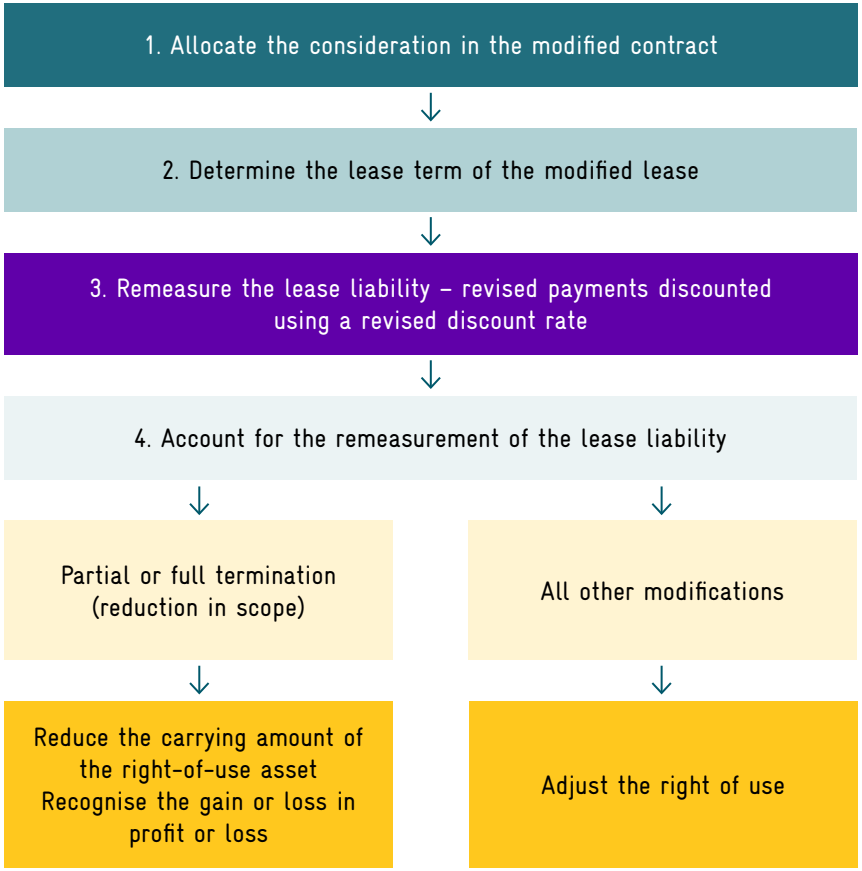
- for lease modifications that reduce the scope of the lease, the lessee reduces the carrying amount of the right-of-use asset to reflect the partial or full termination of the lease, and recognises a gain or loss that reflects the proportionate reduction in scope; and
- for all other lease modifications, the lessee makes a corresponding adjustment to the right-of-use asset.

(IFRS 16.45-46)

For a lease modification that is not accounted for as a separate lease, the lessee allocates consideration in the modified contract, determines the lease term and remeasures the lease liability *on the effective date of the modification (IFRS 16.45-46).*

The following diagram summarises the steps for accounting for a modification that is not a separate lease on the effective date of the modification *(IFRS 16.45-46).*

FIGURE 22. Steps for accounting for a modification that is not a separate lease on the effective date of the modification (c)



Source: KPMG IFRS 16 – Leases Handbook

Example 37 – Lease modification. Not a separate lease. Increase in lease term (IFRS 16.45-46, A, Ex16)

Lessee X enters into a 20-year lease for supplying solar power to a manufacturing plant with Lessor Y through the installation of rooftop solar panels. The annual lease payments are USD 150,000, payable in arrears. The interest rate implicit in the lease cannot be readily determined and X uses its incremental borrowing rate. The incremental borrowing rate on commencement of the lease is 5%. There are no initial direct costs, lease incentives or other payments between X and Y. Accordingly, X initially recognises a lease liability and right-of-use asset of USD 1,869,332.

At the end of Year 18 (i.e. two years before the end of the original lease term), X and Y agree to modify the lease by extending the lease term for an additional 10 years – i.e. the lease term will be 30 years in total. As there were no renewal options in the original lease, this is not a reassessment of the lease term. This is a lease modification that increases the lease term only – i.e. it does not grant X the right to use an additional underlying asset. Therefore, it does not result in a separate lease.

The annual lease payments remain unchanged and X's incremental borrowing rate on that date is 8%. There are no initial direct costs, lease incentives or other payments between X and Y as a result of the modification. The pre-modification carrying amount of the lease liability and right-of-use asset are USD 278,912 and USD 186,933, respectively.

X remeasures the lease liability at USD 1,130,412[1] and recognises the difference between the carrying amount of the lease liability before the modification and the carrying amount of the modified lease liability of USD 851,500[2] as an adjustment to the right-of-use asset.

1 The lease liability after the modification is determined based on:
- annual lease payments payable inarrears of USD 150,000;
- a remaining lease term of 12 years; and
- a revised incremental borrowing rate of 8 %.

2 Calculated as USD 1,130,412 - USD 278,912.

Example 38 – Lease modifications. Not a separate lease. Reductions in scope and consideration (IFRS 16.45-46, A, Ex17)

Lessee E entered into a 10-year lease with Lessor F to install rooftop solar panels on a tea factory up to a maximum of 1,000 kWp. The rental payments are USD 100,000 per annum, payable in arrears. The interest rate implicit in the lease cannot be readily determined and E uses its incremental borrowing rate. The incremental borrowing rate on commencement of the lease is 7%. There are no initial direct costs, lease incentives or costs to restore the leased asset to its original condition. Accordingly, E recorded a rightof-use asset and a lease liability of USD 702,358 on the commencement date.

At the beginning of Year 7, E and F agree to modify the lease by reducing the capacity consumed to 750 kWp (i.e. a reduction of 250 kWp) and the lease payments to USD 75,000 per annum, payable in arrears for the remaining four years. The incremental borrowing rate on this date is 8%, the pre-modification carrying amount of the right-of-use asset is USD 280,943 and the lease liability is USD 338,721.

On the effective date of the modification – i.e. the beginning of Year 7 – E remeasures the lease liability at USD 248,410 based on:

- annual lease payments payable in arrears of USD 75,000;
- a remaining lease term of four years; and
- a revised incremental borrowing rate of 8 %.

E accounts separately for the reduction in consumption and change in consideration as follows.

As an initial step, on the effective date of the modification, E accounts for the partial termination of the lease – i.e. reduction in consumption by 250 kWp and proportionally reduces the pre-modification carrying amount of the right-of-use asset by USD 70,236[1] and lease liability by USD 84,680[2]. The resulting gain is USD 14,444[3].

As a second step, on the effective date of the modification, E recognises the difference between the remaining carrying amount of the lease liability determined in Step 1 of USD 254,041 and the modified lease liability of USD 248,410 (i.e. USD 5,631) as an adjustment to the right-of-use asset. This reflects the change in the consideration paid for the lease and the revised discount rate.

1 Calculated as USD 280,943 x (250 kWp / 1,000 kWp), the remaining carrying amount of the rightof-use asset is USD 210,707.
2 Calculated as USD 338,721 x (250 kWp / 1,000 kWp), the remaining carrying amount of the lease liability is USD 254,041.
3 Calculated as USD 84,680 - USD 70,236.

3.10.3 Lessor modification accounting

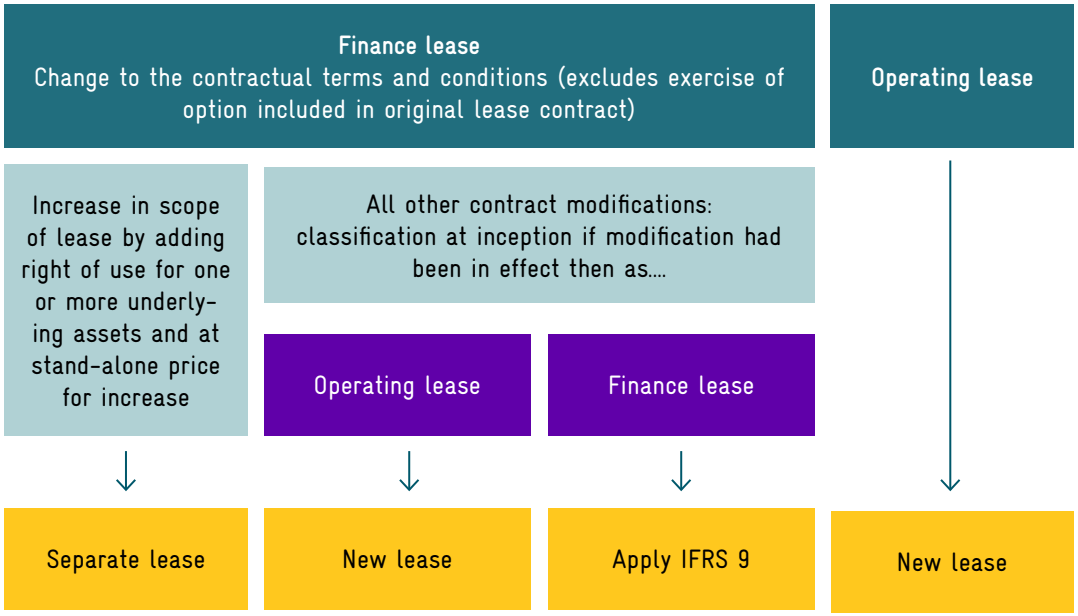
a. Lessor modifications – General

The following diagram summarises the accounting for lease modifications by a lessor *(IFRS 16.1679-80, 87)*.

b. Lessor – Modifications to an operating lease

A lessor accounts for a modification to an operating lease as a new lease from the effective date of the modification, considering any prepaid or accrued lease payments relating to the original lease as part of the lease payments for the new lease *(IFRS 16.87)*.

FIGURE 23. Accounting for lease modifications by a lessor (a)



Source: KPMG IFRS 16 – Leases Handbook

Example 39 – Lease modifications. Operating leases (IFRS16.87)

Lessor Y enters into a 10-year lease of a rooftop solar panel with Lessee X. Y classifies this lease as an operating lease because it does not transfer substantially all of the risks and rewards incidental to ownership of the solar equipment.

The lease agreement specifies a starting rent of USD 100,000, payable in arrears, and requires the lease payments to be increased by 2% per annum – i.e. USD 1,094,972 for the whole 10-year period. X does not provide any residual value guarantee. There are no initial direct costs, lease incentives or other payments between X and Y.

The accounting for the lease payments on a straight-line basis is performed by first determining the annual rental income of USD 109,497 (USD 1,094,972 / 10), which takes into account the annual indexation. Therefore, Y accounts for the lease payments over the first half of the lease term (i.e. Years 1-5) as follows:

Date	Lease payment (A) USD	Annual rental income (B) USD	Accrual period closing balance (C)* USD
Year 1	100,000	109,497	9,497
Year 2	102,000	109,497	16,994
Year 3	104,040	109,497	22,451
Year 4	106,121	109,497	25,827
Year 5	108,243	109,497	27,081

* Calculated as previous year's C + (B – A).

At the beginning of Year 6, the solar power market deteriorates, and Y would like to encourage X to commit to using the equipment for longer. Y and X enter into negotiations and agree to:

- extend the original lease for use of the equipment by an additional five years after Year 10; and
- fix the annual payments for the original lease at USD 110,000, payable in arrears, for the remaining 10 years (i.e. five remaining years of the original lease term plus a five-year extension).

The change in consideration and the extension of the lease term were not part of the original terms and conditions of the lease and are therefore a lease modification. Y accounts for this modification as a new operating lease from the effective date of the modification. This takes into account accrued lease payments relating to the original lease as follows:

Date	Lease payment (A) USD	Annual rental income (B)* USD	Accrual period closing balance (C) USD
Year 6	110,000	107,292	24,373
Year 7	110,000	107,292	21,665
Year 8	110,000	107,292	18,957
Year 9	110,000	107,292	16,249
Year 10	110,000	107,292	13,541
Year 11	110,000	107,292	10,833
Year 12	110,000	107,292	8,125
Year 13	110,000	107,292	5,417
Year 14	110,000	107,292	2,709
Year 15	110,000	107,292	–

* Calculated as ((110,000 x 10) – 27,081) / 10 – i.e. (sum of A (lease payments) – (C at end of Year 5)) / 10 (remaining lease term).

a. Lessor – Modifications to a finance lease

A lessor's accounting for a modification to a finance lease depends on whether the modification, in substance, represents the creation of a new lease that is separate from the original lease. Like the lessee *(see Section 3.10.2 b.)*, the lessor accounts for such a modification as a separate lease. Accounting for a modification to a finance lease that does not result in a separate lease depends on whether the lease classification would have been different had the modified terms been in effect on the inception date *(IFRS 16.79-80, BC238-BC239)*.

Separate lease *(IFRS 16.79)*

A lessor accounts for a modification to a finance lease as a separate lease if both of the following conditions exist:

- the modification increases the scope of the lease by adding the right to use one or more underlying assets; and
- the consideration for the lease increases by an amount commensurate with the stand-alone price for the increase in scope and any appropriate adjustments to that stand-alone price to reflect the circumstances of the particular contract.

The lessor accounts for the separate lease in the same way as any new lease and makes no adjustment to the initial lease.

Not a separate lease

If the modification is not a separate lease, then the lessor accounts for a modification to a finance lease as follows *(IFRS 16.80)*.

If the lease would have been classified as an operating lease if the modification had been in effect on the inception date, then the lessor:

- accounts for the lease modification as the termination of the original lease and the creation of a new operating lease from the effective date of the modification; and
- measures the carrying amount of the underlying asset as the net investment in the original lease immediately before the effective date of the lease modification; or
- otherwise applies the requirements of IFRS 9.

Example 40 – Lease modifications. Separate lease (IFRS 16.63-66, 79)

Lessor L enters into a 20-year lease for rooftop solar panels with Lessee M. The lease term approximates the solar equipment's economic life, and no other features indicate that the lease does not transfer substantially all of the risks and rewards incidental to ownership. Therefore, L classifies the lease as a finance lease.

M's business has expanded, and M now requires additional solar panels. At the beginning of Year 17, L and M amend the contract to grant M the right to use additional solar panels of the same type for the remaining contractual period – i.e. for four years. The lease payments for the additional solar equipment are 5 % higher than originally, reflecting an increase in their purchase price.

The lease of the additional solar equipment was not part of the original terms and conditions of the contract. Therefore, this is a lease modification. L accounts for this modification as a separate lease on the effective date of the lease modification because:

- the modification increases the scope of the lease by adding the right to use additional underlying assets – i.e. additional solar equipment; and
- the lease payments for the additional solar equipment are commensurate with their stand-alone rentals. Even though the lease payments for the new solar panels are 5% higher than the prices in the original lease, this change reflects the increase in purchase prices.

L does not modify the accounting for the original lease for the old solar panels. L classifies the lease of additional solar panels as an operating lease because the lease term for those additional solar panels is not for a major part of their economic life and no other features indicate that the lease transfers substantially all of the risks and rewards incidental to ownership of the solar panels.

Example 41 – Lease modifications. Not a separate lease. Lease would have been classified as an operating lease (IFRS 16.63-66, 79-80(a), 81, 88)

Changing the facts in Example 40, at the end of Year 2, Lessee M decides to cease one of its activities in two years and therefore needs to terminate the lease of solar panels. At the beginning of Year 3, L and M amend the contract so that it now terminates after Year 4.

Early termination was not part of the original terms and conditions of the lease and is therefore a lease modification. The modification does not grant M an additional right to use an underlying asset and therefore cannot be accounted for as a separate lease.

L determines that had the modified terms been in effect on the inception date, the lease term would not have been for a major part of the solar panels' economic life. In addition, there are no other indicators that the lease would have transferred substantially all of the risks and rewards incidental to ownership. Consequently, the lease would have been classified as an operating lease.

At the beginning of Year 3, L accounts for the modified lease as a new operating lease.

Consequently, L:

- derecognises the finance lease receivable and recognises the underlying assets in its statement of financial position according to the nature of the underlying asset – i.e. as property, plant and equipment in this case; and
- measures the aggregate carrying amount of the underlying assets as the amount of the net investment in the lease immediately before the effective date of the lease modification.

4

Taxation

The following *Section 4* analyses the tax implications of the different delivery models described above, from both an RE developer and an offtaker point of view. The table in the following *Section 4.2* summarises the various taxes to which an RE developer may be subject in Rwanda.

4.1 Rwandan tax implications: Ownership versus use

In Rwanda, the Income Tax Law (ITL) generally allows a tax depreciation allowance for entities who own depreciable assets at the end of the tax period and use such assets in the production of income.

In addition, Law No 006/2021 of 05/02/2021 on investment promotion and facilitation provides accelerated depreciation of 50% on newly acquired assets exceeding USD 50,000 each, by entities registered as investors in Rwanda and holding an investment certificate from RDB.

4.1.1 Tax implications on ownership

Article 27 of the ITL allows depreciation of leased assets to the lessee in the case of a finance lease and to the lessor in the case of an operating lease.

An RE service provider (lessor) whose lease meets the criteria of an operating lease would be treated as the asset owner; the asset qualifies for certain capital allowances depending on the rates provided under each category of assets. In addition, the asset qualifies for:

Wear and tear allowance for PPE

Under Article 27, the ITL provides depreciation rates depending on the life span of the assets. Therefore, the solar plant and machinery will qualify for wear and tear allowances on a straight- line basis.

The following are the depreciation rates:

- buildings, heavy industrial equipment and machineries are depreciated annually, each individually, based on 5 % of the cost of acquisition, construction, refining, rehabilitation or reconstruction.
- intangible assets purchased from a third party are depreciated annually, each individually, based on 10 % of the cost of acquisition or value addition.
- information and communication system assets whose life is 10 years and above are depreciated annually based on the rate of 10 % of the cost of acquisition.

Furthermore, the law provides additional rates for assets in a 'pooling system', whose life span cannot exceed four years. These assets are:

1. computers and accessories, information and communication systems whose life is under 10 years, which depreciate at the rate of 50 %;
2. any other business asset, which depreciates at the rate of 25 %: vehicles, furniture, other small items of equipment.

Investment allowance deductions

The RE service provider would be eligible for an investment allowance deduction when determining the taxable income for the year if they hold an investment certificate.

The law states that a registered investor is entitled to a flat accelerated depreciation rate of 50 % for the first year for new or used assets worth more than USD 50,000 in each category.

The assets must remain on the books of the owner for three years after benefiting from the accelerated depreciation and before disposal. If an investor disposes of the assets before three years have passed, payment will be due for the difference between the reduction of corporate income tax caused by the accelerated depreciation and applicable penalties and interest.

However, the investor is not liable to pay any amount if it is determined that the disposal was the effect of natural calamities, hazards or any other involuntary reason.

The investment allowance is computed in the first year of use of the new or used assets. 50 % of the costs is depreciated based on the applicable rate for the category of the asset. The remaining 50 % of the cost is considered as an investment allowance deducted from the taxable profit.

Illustration

Company X acquires solar panels, also known as photovoltaic or PV panels, which are made to last more than 25 years. The costs are estimated at USD 750,000 in PPE.

As per the ITL, the applicable depreciation rate would be 5%.

IFRS 16's model recognises the provision on the right-of-use depreciation and interest expense in the income statement. For tax treatment, such provisions are not allowed to reduce the taxable profit. However, the actual rental cost is allowed as deduction on to the taxable income.

4.1.2 Tax implications on use of the assets

In the case of a finance lease, the lessor is liable to tax on the lease rentals and does not qualify for capital allowance. Instead, the allowance is granted to the lessee.

An RE service provider (lessor) whose lease meets the criteria of a finance lease derecognises the asset and recognises the receipts under the leases (which include an interest income component). The income is therefore taxable as part of the lessor's business income. No capital allowances are applicable since the asset is not on the statement of financial position.

Step 1. Determination of depreciation and investment allowance

DESCRIPTION	COST BASE	COMPUTED AMOUNT (USD)*
Investment allowance deductible	USD 750,000 x 50%	**375,000** (b)
Depreciation expense/capital allowance	USD 750,000 – (b)	(375,000 x 5%) = **18,750**
Tax written down value		(375,000 – 18,750) = **356,250**

Step 2. Determination of the taxable base

DESCRIPTION	AMOUNT (USD)
Profit/loss before tax	XXXX
Less capital allowance	(18,750)
Less investment allowance	(375,000)

* The currency used above is for illustration only; the actual reporting and calculations should be executed in Rwandan francs (RWF).

4.2 Summary of relevant taxes

TABLE 15. Summary of relevant taxes

CORPORATE INCOME TAX	
Residents	• Under the Rwandan tax system, corporate income tax is levied on business profits received by taxpayers other than individuals. • According to Rwanda's Income Tax Law, resident entities are liable to corporate income tax on business profits per tax period from both domestic and foreign operations. • With consideration to the project, the following entities are subject to corporate income taxes, amongst others: – a company established in accordance with Rwandan law and a foreign company registered in Rwanda; – a protected cell company or a cell of a protected cell company depending on the choice of the investor at the time of company registration; or – a non-resident in Rwanda, person with a permanent establishment. • Taxable business profit is rounded down to the nearest one thousand Rwandan francs (RWF 1,000) and taxable at a rate of 30%.
Non-residents	• Non-resident entities are liable to corporate income tax of 30% on business profits per tax period, which is equivalent to the income tax applicable to resident entities through their permanent establishments in the country. • As also specified above, a non-resident in Rwanda, which is a person with a permanent establishment, is subject to corporate income tax of 30%.

CORPORATE INCOME TAX	
Taxable income & deductions	• Rwanda's Income Tax Law provides that income taxable in Rwanda includes the activities performed in Rwanda by any person and activities performed abroad by a resident of Rwanda. • Income tax law specifies that, in determining profits on business activities, deductions from taxable income must fulfil the following: – to have been incurred wholly and exclusively for the purpose of business and they are directly chargeable to the income; – to correspond to a real expense and can be substantiated with proper invoices or receipts accepted by the tax administration; – to lead to a reduction in the net assets of the business; – to have been used for activities related to the tax period in which they are incurred.
Depreciation rates and methods	• According to Rwanda's Income Tax Law, depreciation for business assets is categorised as follows: – buildings, heavy industrial equipment and machinery are depreciated annually, each individually, on the basis of the rate of depreciation equivalent to 5 % of the cost of acquisition, construction, refining, rehabilitation or reconstruction. – intangible assets purchased from a third party are depreciated annually, each individually, on the basis of the rate of depreciation of 10 % of the cost of acquisition or added value. – information and communication system assets whose life is 10 years and above are depreciated annually on the basis of the rate of depreciation of 10 % of the cost of acquisition. • The assets in the following categories are depreciated in a pooling system on the basis of the following rates, respectively: – computers and accessories, information and communication systems whose life is under 10 years, which depreciate at the rate of 50 %; and – any other business asset, which depreciates at the rate of 25 %.

CORPORATE INCOME TAX	
Incentives (Law on investment promotion and facilitation, 2021)	• In accordance with the Rwandan Investment Code, there are incentives in relation to corporate income tax, which is a preferential corporate income tax rate of 15 % granted to a registered investor undertaking one of the following operations, amongst others: – energy generation, transmission and distribution from peat; and – solar, geothermal, hydro, biomass, methane and wind. **Note:** The above specified incentive excludes an investor having an engineering procurement contract executed on behalf of the Government of Rwanda. • With regard to corporate tax holidays/exemptions, only energy projects producing at least 25 MW are granted a maximum of a seven-year corporate income tax holiday. Therefore, since the project will be producing between 50 kW – 20 MW, it will not benefit from the same incentive because it is below the threshold. • In view of the depreciation, a registered investor is entitled to a flat accelerated depreciation rate of 50 % for the first year for new or used assets, if they meet the criteria for investing in business assets worth at least USD 50,000 each, and operate in any sector if the investment is worth at least USD 100,000. • To enjoy the depreciation incentive, an investor should meet the criteria set forth by Rwandan investment codes.
Transfer pricing	• In terms of Rwandan Income Tax Law and the Ministerial Order establishing general rules on transfer pricing, related persons involved in controlled transactions must have documents justifying that their prices and profits are applied according to the arm's length principle. • An entity is required to prepare a transfer pricing policy which should be available by the time of filing of the income tax return.

CORPORATE INCOME TAX	
Compliance requirements	• Each company chargeable to tax is required to furnish an annual income tax return, accompanied by financial statements, starting from the date of declaration and not later than 31 March of the year following the tax period, through procedures specified by the tax administration, unless provided otherwise. • During the current tax period, the taxpayer declares and pays to the account of the Tax Administration before and not later than 30 June, 30 September and 31 December of the year, of taxable business activities, a quarterly prepayment tax calculated from tax paid for the previous annual tax period divided by the turnover of the same tax period, multiplied by the current quarterly turnover. This amount is reduced by the tax withheld in that quarter, unless the taxable income is not included in the total taxable income.
Capital gains tax	• According to Rwanda's Income Tax Law, capital gains tax of 5% is charged on the direct or indirect sale or transfer of shares carried out in Rwanda or abroad. • The capital gains tax is declared to the tax administration within 15 days following the month in which the sale or transfer of shares occurred.
Incentives (Investment Code, 2021)	• In relation to the Investment Code, a registered investor does not pay capital gains tax. However, income derived from the sale of a commercial immovable property is included in the taxable income of the investor.
Withholding taxes (WHT)	The Income Tax Law imposes the duty on all residents to withhold a 15% withholding tax on, inter alia, the following payments made to both Rwandan residents and non-residents.

CORPORATE INCOME TAX

		WHT rate and payment due date (Law Establishing Taxes on Income, 2022)	
	WHT type	**Rate and description**	**Payment due date**
	Withholding tax on allowance to a board member	An allowance allocated to a member of the Board of Directors and any other member of a similar entity is taxable at a rate of 30 %. This tax is withheld on every payment made.	A person who withheld tax is required to file a declaration and make payment in accordance with the procedures prescribed by the tax administration within 15 days after the month in which the taxes were withheld.
	Dividends	15 %	15th of the month following the day of withholding.
	Interest	15 %	15th of the month following the day of withholding.
	Royalties	15 %	15th of the month following the day of withholding.
	Service fees including management and technical service fees, except for transport services	15 %	15th of the month following the day of withholding.

CORPORATE INCOME TAX

	Withholding tax on goods imported for commercial use	5 % of the value of goods imported for commercial use must be paid on the cost, insurance and freight (CIF) value before the goods are released by customs.	Paid at customs office upon release.
	Withholding tax on public tenders	3 % of the sum of the invoice, excluding VAT, is retained when successful bidders are paid.	15 %
Double-taxation agreements (DTAs) entered into by Rwanda	• DTAs are in force with Belgium, the Republic of Mauritius, the Republic of South Africa, the Republic of Singapore, Barbados, Jersey, the Kingdom of Morocco, United Arab Emirates, Qatar, the People's Republic of China, Democratic Republic of Congo. • There is currently no DTA in force between Germany and Rwanda. • In terms of domestic anti-avoidance provisions, any relief provided for by a DTA is only available to a beneficial owner with full and unrestricted ability to enjoy the income, to determine the income's future use and who has economic substance in the country of residence. The restrictions do not apply to a publicly listed company.		
Incentives	• According to Rwanda's Investment Code, a preferential withholding tax of 0% is applicable to dividends, interest and royalties paid by investors benefiting from preferential corporate income tax of 15%.		

VALUE ADDED TAX (LAW ESTABLISHING THE VALUE ADDED TAX, 2012)	
Basis of taxation and rate	• VAT is levied on the supply of goods and services other than those on the exemption list and on the importation of goods and services in Rwanda, other than those on the exemption list, at the standard rate of 18%.
Registration threshold	• A person who carries out any taxable activity whose turnover is equivalent to 20,000,000 Rwandan francs in the previous fiscal year, or 5,000,000 Rwandan francs in the preceding calendar quarter, is required to register for value added tax within a period not exceeding seven days from the end of the year or quarter in question. However, a person who is not required to register for VAT may voluntarily register with the tax administration. For taxpayers whose annual turnover is equal to or less than 200,000,000 Rwandan francs, the VAT declaration is quarterly and must be submitted with payment of the tax due within 15 days of the end of the quarter. However, taxpayers whose annual turnover is equal to or less than 200,000,000 Rwandan francs, who wish to do so, may opt for a monthly VAT declaration. • However, when annual turnover exceeds 200,000,000 Rwandan francs, the taxpayer must declare and pay VAT on a monthly basis, which is paid on or before the 15th day of each month.
VAT on imported services	• A taxpayer who receives a supply of services from a foreign supplier must account for the VAT due on the supply in terms of a reverse-charge mechanism. • No input tax is allowed if goods purchased in the country or taxable imported goods or services are for personal purposes. • An input tax is allowed when the taxable goods are acquired or imported.
Exemptions	• According to Article 2 of Rwanda's VAT Law, energy supply equipment appearing on the list established by the minister in charge of energy and approved by the minister in charge of taxes. The list of exempted goods will be annexed to this report.

CUSTOMS DUTIES	
Basis of taxation	• Rwanda is a member of the East African Community (**'EAC'**). Customs duties are regulated under the East African Community Customs Management Act, 2004 (the **'EACCMA'**), which prescribes the common external tariffs for goods originating outside of the EAC. • Goods originating from non-EAC member states are generally subject to import duties at rates ranging between 0 % and 100 %. • Law No 025/2019 of 13/09/2019 establishing the excise duty provides for tax rates for imported goods.
Rates	• Goods are generally subject to import duties of **0 %** for raw materials and capital goods, **10 %** for intermediate goods and **25 %** for finished goods. • All imported goods, except those listed as exempt, are also subject to a **1.5 %** industrial development levy and a **0.2 %** African Union levy. Additionally, imported goods, regardless of whether they are exempted, are subject to a **0.2 %** quality inspection fee. The levies are computed on the customs value of imported goods.
Exemptions	• Goods originating from partner states of the EAC are exempt from customs duties. • Other exemptions include: – compact fluorescent bulbs (energy-saving bulbs) with a power connecting cap at one end; – specialised equipment, accessories and spare parts for development and generation of solar energy, including deep cycle batteries; and – imports for donor-funded projects. • Preferential duty rates apply to goods imported under the Common Market for Eastern and Southern Africa (COMESA) and the South African Development Community (SADC) arrangements or any other approved tariff arrangement.
STAMP DUTIES	**N/A**
Excise duties	• **Solar equipment and energy saving bulbs are not subject to excise duty in Rwanda.**

EMPLOYEES' TAXES	
Income tax	• On a similar basis as companies, resident individuals are subject to Rwandan income tax on their worldwide income, whereas non-resident individuals are subject to tax only on their Rwandan-sourced income at rates of between 0% and 30%. • Employers are required to withhold the relevant tax from payments to employees and to remit the same to the Rwanda Revenue Authority on or before the 15th day of the subsequent month.
Social security contributions	• Rwanda Revenue Authority has a mandate to collect the following contributions on behalf of Rwanda Social Security Board (RSSB): – RSSB pension contributions: 5 % of the employee's gross salary for employer and 3% of employee; – RSSB maternity contributions: 0.3 % of the gross salary of employer and 0.3% of employee; and – Community Based Health Insurance: 0.5 % of employee's net salary. • RSSB statutory contributions are declared and submitted on or before 15th of every month. • Expatriates may qualify for exemption.
Trading licence fees	• The trading licence tax is paid by any person for each place in which they start a business activity within a district. • Trading licence fees vary according to turnover, as provided for by law. • Any taxpayer submits a tax declaration to the tax administration not later than 31st January of the year that corresponds to the tax period
Cleaning service fees	• Cleaning service fees are regulated by the district in which the entity is registered. • All entities in Kigali city pay RWF 10,000. • Cleaning fees are paid on or before the 5th of every month.

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