Greenhouse Gas Emissions and Energy Calculation Methodology

2026

APA



At APA, we acknowledge the Traditional Owners and Custodians of the lands on which we live and work throughout Australia. We acknowledge their connections to land, sea and community.

We pay our respects to their Elders past and present, and commit to ensuring APA operates in a fair and ethical manner that respects First Nations peoples' rights and interests

About this document

This document describes the reporting boundaries, methodologies, assumptions and key references used in the preparation of APA's reported inventory of energy (consumption and production) and greenhouse gas (GHG) emissions (Scope 1, Scope 2, Scope 3 and end-user[1]), as published in the APA FY26 Sustainability Data Book.

APA uses the GHG Protocol supported by the National Greenhouse and Energy Reporting (NGER) determination methods to calculate GHG emissions. We calculate GHG emissions from our value chains in accordance with The GHG Protocol Corporate Accounting and Reporting Standard and its supporting, and integrated, calculation guides:

- GHG Protocol Scope 2 Guidance (GHG Protocol Scope 2 Guidance)
- GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (GHG Protocol Scope 3 Standard)
- Technical Guidance for Calculating Scope 3 Emissions (GHG Protocol Scope 3 Calculation Guide).

The document you're reading, which we've titled Greenhouse Gas Emissions and Energy Calculation Methodology, together with our published climate-related disclosures in the APA FY26 Annual Report and APA FY26 Sustainability Data Book, have been prepared in alignment with Australian Australian Accounting Standards Board S2 Climate-related disclosure (AASB S2) requirements, Based on aligning with AASB S2, APA assesses it generally aligns to the Financial Stability Board (FSB) Task Force on Climate-related Financial Disclosures (TCFD).

Changes from prior year

This FY26 Greenhouse Gas Emissions and Energy Calculation Methodology document has been updated to reflect changes to:

- our enhanced methane methodology that estimates methane emissions based on engineering calculations, activity data, ground level and aerial methane surveys (Page 4). For the first time in FY26, methane estimates using this methodology have been included in our Scope 1 emissions inventory for the gas infrastructure asset class, methane emissions and APA Group total, across the following facilities:
    - Central Ranges Pipeline (CRP)
    - Central West Pipeline (CWP)
    - Moomba Sydney Pipeline (MSP)
    - Dandenong LNG Storage Facility (DLNG)
    - South West Queensland Pipeline (SWQP)
    - Eastern Goldfields Pipeline (EGP)
    - Mondarra Gas Storage and Processing facility (MSF)

Verification

We engaged Deloitte to undertake assurance over selected metrics in the Climate section of APA's FY26 Sustainability Data Book. in accordance with Australian Standard on Sustainability Assurance ASSA 5000 General Requirements for Sustainability Assurance Engagements ("ASSA 5000") issued by the Australian Auditing and Assurance Standards Board (AUASB). Key performance indicators are to be read in conjunction with APA's FY26 Greenhouse Gas Emissions and Energy Calculation Methodology (this document) as referenced in FY26 Sustainability Data Book.

Details of the assurance scope, procedures and conclusions are provided in the Assurance Report on pages [119-131] within the APA FY26 Annual Report.

Unless noted otherwise, APA calculates energy and GHG emissions using methods consistent with the GHG Protocol Corporate Standard definitions for organisational boundary setting. This ensures we consider the full spectrum of GHG risks and opportunities across our value chains.

The organisational boundary for all emissions and energy calculations relates to facilities under APA's operational control, as defined by the GHG Protocol. The exception is Scope 1 and Scope 2 emissions where, in addition to operational control, we also disclose emissions using an equity share organisational boundary.

For voluntary public disclosures, we report Scope 1 and Scope 2 emissions and energy for each APA asset class i.e. gas infrastructure, power generation infrastructure and electricity transmission infrastructure.

We also report Scope 1 emissions by GHG emission type (carbon dioxide, methane, nitrous oxide, and sulphur hexafluoride).[2] Scope 3 emissions are reported by relevant GHG Protocol Scope 3 Standard categories.

Regulatory reporting is completed in accordance with legislative requirements.

[1] Refer to glossary for the definition of end-user emissions.
[2] The other GHG emission types covered by the GHG Protocol Corporate Standard are hydrofluorocarbons, perfluorocarbons, and nitrogen trifluoride. Emissions of these gases are not material and therefore not reported by APA.

Image cover: Badgingarra Solar and Wind Farms, Western Australia

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Image: Dugald River Solar Farm, Qld

Operational control organisational boundary

Calculation boundary

We have a regulatory requirement to report in accordance with the National Greenhouse and Energy Reporting Scheme (NGERS) established by the *National Greenhouse and Energy Reporting Act 2007* (NGER Act). The operational control organisational boundary we have adopted is in accordance with section 11 of the NGER Act, and this aligns with those provided in the GHG Protocol Corporate Standard.

We account for 100% of energy consumed, energy produced, and Scope 1 and Scope 2 emissions for all facilities where APA has operational control within a financial year reporting period. Unless otherwise noted or where there is a legislative NGER reporting requirement to alter this approach, reported data covers the period that APA has operational control.

For AASB S2 disclosures we provide disaggregated Scope 1 and Scope 2 emissions using an organisational boundary which includes APA's Consolidated Reporting Group and other investees.

Exclusions

Under section 11 of the NGER Act, APA is not considered to have operational control of the following assets:[1]

- Gruyere Power Station
- Gruyere Solar Farm
- North Brown Hill Wind Farm
- Victorian Transmission System (except for maintenance emissions)
- SEA Gas Pipeline
- Mortlake Pipeline
- Wallumbilla Gladstone Pipeline.

GHG emissions for these energy assets are captured in Scope 3 reporting (Category 15) and in APA's FY26 Sustainability Data Book (reported as equity share).

We divested the Networks business, including entities which undertake gas distribution operations and maintenance services. For our AASB S2 disaggregated, voluntary and NGER Scope 1 and Scope 2 inventories emissions associated with Network offices were excluded from 1 December with the distribution component of Central Ranges removed from 1 April.

For the Allgas entity, consistent with NGERS reporting requirements, Scope 1 and Scope 2 emissions have not been reported in FY26 within the headline asset class disclosures or the Group NGER and voluntary inventories, as the entity was divested during FY26. However, to ensure compliance with AASB S2 Appendix D, paragraph Aus20.1, which requires climate-related financial disclosures to be prepared for the same reporting entity as the related financial statements, part-year Allgas Scope 1 and Scope 2 emissions up to 30 November 2025 have been included in the AASB S2 disaggregated emissions inventory.

There are no international APA operations.

Energy consumption and energy production

Definition

We use the definition of energy found in section 2.03 of the National Greenhouse and Energy Reporting Regulations 2008 (NGER Regulations).

Calculation boundary

Energy consumption[2] includes both energy combusted and energy consumed (but not combusted). It includes all fuels and electricity consumed in the operation of APA operated equipment and vehicles, gas flaring, gas storage tank venting, and gas transmission and distribution losses. Energy consumption is reported both as a gross (total) and net consumption amount.

Energy production[3] includes all energy produced at power stations, renewable energy generation facilities, and gas engine alternators (GEAs) under APA's operational control. It also includes transformation of coal seam methane or unprocessed natural gas into natural gas injected into a pipeline through APA's gas processing facilities.

We account for 100% of energy consumption and production from facilities under APA's operational control.

Exclusions

Net energy production excludes energy produced by APA and then consumed by APA (this is captured under energy consumption).

Calculation Methodology

We calculate total energy consumed and produced in accordance with section 6.2, section 6.3 and section 6.5 and Schedule 1 of the National Greenhouse and Energy Reporting (Measurement) Determination 2008 (NGER Determination).

Net energy consumption is calculated in accordance with section 5.03 of the NGER Regulations by deducting the total amount of energy produced at a facility and then consumed by the facility, from the gross energy consumption total consumed by the facility.

Data sources

We source most of our energy consumption data from internal APA systems, including Historian via PI DataLink, SCADA, and APA Grid Portal. We obtain third party data from major service providers including Optima (previously BID Energy).

We calculate energy production from third-party calibrated meters for facilities connected to the National Energy Market (NEM), the North West Power System (NWPS) in Queensland and the South-West Interconnected System (SWIS) in Western Australia. Energy production is also calculated from custody transfer meters for APA's gas processing facilities and from internal APA systems for gas transmission pipelines.

[1] The Kurri Kurri Lateral Pipeline (KKLP) reached practical completion on 6 June 2025 which is when operational control was transferred to APA.
[2] As defined in section 2.26 of the NGER Regulations.
[3] As defined in section 2.25 of the NGER Regulations

Scope 1 emissions

Definition

Direct emissions that occur from sources owned or controlled by a company, e.g. combustion of natural gas within a compressor. Reported in metric tonnes carbon dioxide-equivalent (t CO_2-e) and direct emissions (t) by GHG emission type.

Calculation boundary

We account for 100% of Scope 1 emissions that occur from facilities under APA's operational control. Emissions are calculated for relevant sources including:

- combustion of gas within power stations and compressor stations on transmission pipelines
- combustion of liquid fuels in site generators and company-owned vehicles
- fugitive methane emissions from gas transmission (pipelines), gas distribution, gas storage, gas venting and flaring
- sulphur hexafluoride emissions from electricity transformers.

Exclusions

None.

Calculation Methodology

Scope 1 emissions are calculated in accordance with methodologies provided in the NGER Determination using method 1, except for sulphur hexafluoride emissions and natural gas combustion emissions for electricity generation in which case method 2 is adopted, and those gas infrastructure assets with enhanced methane measurement calculations in which case these calculations are used in place of the method 1 calculation.

Method 1 calculates emissions based on default, national-average-based emission factors[1] derived from the National Greenhouse Accounts methods.

Method 2 uses a mass balance accounting approach for sulphur hexafluoride emissions[2], and a site specific emission factor to calculate natural gas carbon dioxide emissions for electricity generation[3].

Scope 1 emissions are calculated by dividing the calculated carbon equivalent emissions (t CO2-e) by the specific GHG emission type global warming potential current for the reporting period.[4]

Data Sources

Energy consumption data.

Enhanced methane measurement data.

Scope 2 emissions and % renewable electricity consumed

Definition

Indirect emissions associated with third party generation of electricity, steam, heating or cooling purchased or acquired for facilities under APA's operational control, reported in tonnes carbon dioxide-equivalent (t CO_2-e).

Calculation boundary

We account for 100% of Scope 2 emissions associated with electricity consumed at facilities under APA's operational control.

Exclusions

APA has assessed that emissions associated with heating and cooling purchased or acquired for APA's office facilities are immaterial.

Calculation methodology

Two reporting methods are used to calculate Scope 2 emissions.

Location-based method

This method calculates electricity emissions in the context of location and reflects the emissions intensity of the electricity grid(s) from which electricity is purchased or acquired. Location-based emissions are calculated using default state/territory grid electricity emission factors in accordance with method 1 of the NGER Determination. This method is a legislative requirement under the NGER Act.

Market-based method

The market-based method calculates electricity emissions in the context of electricity choices based on APA's electricity supplier or product, e.g. the purchase of large-scale generation certificates (LGCs).

Market-based emissions are calculated by applying the market-based emissions approach in accordance with Method B found in the National Greenhouse and Energy Reporting (Measurement) Amendment (2024 Update) Determination 2024 for voluntary market-based Scope 2 emissions reporting.

The exceptions are:

- where APA has not voluntarily surrendered LGCs in any reporting period, there will be minor differences in the Scope 2 emissions value calculated between the location-based and market-based methods. This is partly due to the residual mix factor being applied at a national level rather than on a state-by-state basis. When this is the case, we assume the location-based method calculation value also represents the market-based method calculation value.[5]
- any surplus LGCs will be carried forward and applied to the next financial year reporting period.

[1] In accordance with section 7.2 of the NGER Determination.
[2] In accordance with section 4.103 of the NGER Determination.
[3] Calculated in accordance with section 2.22 of the NGER Determination.
[4] Global warming potential is obtained from section 2.02 of the NGER Regulations.
[5] APA has not voluntarily surrendered LGCs for electricity transmission line losses in FY21-FY26.

LGCs are distributed across all facilities on the basis of an operational control boundary. When applying an equity share boundary, these LGCs are not re-distributed. This means that some facilities which are not operated by APA will not have LGCs (voluntarily purchased) attributed to them.

% of renewable electricity (RE) consumed

% RE = A + B / C, where:

- A = voluntary surrender of LGCs within the reporting period or shortly thereafter from our renewable energy certificate registry (REC registry).
- B = legislated surrender of LGCs due to the large-scale renewable electricity target (LRET) scheme. This is determined by the volume of electricity covered by the renewable power percentage (RPP) (in MWh).
- The RPP is applied on a full-year average basis. We obtain RPP values from https://www.cleanenergyregulator. gov.au/RET/Scheme-participants-and-industry/ the-renewable-power-percentage.
- C = the amount of electricity consumed in APA's facilities under our operational control (in MWh).

Purchased renewable electricity amounts are determined by the volume of LGCs voluntarily surrendered via our REC registry within the reporting period.

LGC purchase requirements are based on an electricity forecast. We carry out a true-up once the assured electricity consumption values are determined. Any differences are carried forward and we complete a reconciliation as part of the next reporting period's LGC requirements. If the combined LGC volume surrendered voluntarily plus that required under the LRET legislation is more than 95% of our total electricity consumption in MWh, we will have achieved our 100% renewable electricity commitment for the reporting period.

Our LGC eligibility criteria are consistent with s 7.4 (3) of the latest NGER Determination for voluntary LGC surrenders.

Data sources

We obtain grid electricity amounts from our grid electricity provider, Optima (previously BID Energy), and manually source data for some office facilities due to lease arrangements in place. The RPP is obtained from the Clean Energy Regulator website. The voluntary LGC surrender volume is obtained from APA REC registry.

Electricity consumption, where invoice data is not available for the reporting period, is estimated based on the previous available month(s) invoiced data to support data completeness.

Line losses

For electricity transmission facilities we report Scope 2 emissions split by grid-consumed electricity and line losses. This is to differentiate between emissions APA can directly control (without line losses) and emissions APA cannot directly influence (with line losses).

Power generation emissions intensity

Definition

Power generation emissions intensity is a measure of the amount of gross Scope 1 and Scope 2 emissions generated per unit of electricity produced.

Calculation boundary

We calculate a power generation emissions intensity for all power generation facilities under APA's operational control.

Exclusions

Our power generation emissions intensity calculations exclude any Australian Carbon Credit Units (ACCUs), Safeguard Mechanism Credits (SMCs) or LGCs generated from our facilities.

Calculation methodology

Power generation emissions intensity is calculated by dividing the gross Scope 1 and Scope 2 emissions (t CO_2-e) by the total electricity (MWh) produced. Reported in t CO_2-e/MWh.

Data sources

Scope 1 and Scope 2 emissions and electricity produced is taken from our NGER data and voluntary emissions data.

Equity share organisation boundary

Definition

APA voluntarily discloses Scope 1 and Scope 2 emissions using an equity share boundary. Under this equity share approach, we account for GHG emissions from operations according to our ownership interest of a facility.

Calculation boundary

As per the equity share organisation boundary definition above.

Exclusions

None.

Calculation methodology

Under the equity share approach, we take our ownership interest into account when we calculate the emissions from the operation of facilities that may or may not be under our operational control. Equity share emissions are the total emissions for all facilities according to APA's percentage of ownership, and are calculated by multiplying the total Scope 1 and Scope 2 emissions (t CO_2-e) by APA's ownership interest.

Data sources

Where APA has operational control, we use NGER data. Where we have an ownership interest only, we obtain data from emissions reported under Scope 3 – Category 15 (Investments).

Enhanced methane methodology

Definition

Enhanced methane methodology refers to our approach for quantifying methane emissions using a combination of activity data, engineering calculations, and both ground-level and direct aerial measurements. This methodology is applied to selected facilities to improve the accuracy and completeness of reported emissions beyond current regulatory requirements, and is included in our scope 1 emissions inventories including for reporting against our gas infrastructure and methane targets as well as APA Group total.

Calculation boundary

We use an operational control facility boundary for enhanced methane emissions reporting for the selected facilities in the reporting period.

Exclusions

This methodology is not applied to NGERS calculations for annual regulatory submissions. Calculation methods consistent with NGERS are used for NGER compliance.

Calculation methodology

Methane emissions from fugitive, venting and incomplete combustion sources are calculated based on direct measurement, engineering calculations and activity factors. The methane emissions calculations are guided by international leading practices on enhanced methane measurement and reporting, including the United States Environment Protection Agency (USEPA) Method 21 and the United Nation's Environment Programme (UNEP) Oil and Gas Methane Partnership 2.0 (OGMP 2.0) framework. Methane emissions are calculated in tCH_4.

Methane emission sources and estimation methods[1]

Methane Emission Source	Data Source					Estimation Method	Reference Framework
	Direct Measurement	Engineering Calculation	Emission Factor	Estimation	Measurement Frequency[1]		
Venting							
Compressor Blowdown Start/ Stop Vents		X			D	Engineering calculation of compressor blowdown emissions based on the internal volumes of each compressor, under the specific temperature and pressure conditions at each corresponding blowdown event. Annual emissions are calculated by determining the time and size of each blowdown event, recorded in the PI Historian time-series database.	OGMP 2.0 TGD – Purging and venting
Compressor Seals	X				A	Component-level direct measurement which estimates the methane emission rate in kg CH_4/hr. Site level aerial measurements are conducted using gas mapping LiDAR (GML) technology and source level measurements are performed consistent with USEPA Method 21. Annual emissions are calculated using the actual run hours of each compressor unit, recorded in the PI Historian time-series database.	USEPA 40 CFR 60 Subparts OOOOb and OOOOc USEPA Method 21 OGMP 2.0 TGD – Centrifugal Compressors OGMP 2.0 TGD – Reciprocating Compressors
Pneumatic Equipment Vents	X				A	Component-level direct measurement which estimates the methane emission rate in kg CH_4/hr. Site level aerial measurements are conducted using GML technology and source level measurements are performed consistent with USEPA Method 21. Annual emissions are calculated assuming that pressure control valves or flow control valves continuously vent as part of normal operations.	USEPA 40 CFR 60 Subparts OOOOb and OOOOc USEPA Method 21 OGMP 2.0 TGD – Pneumatic devices
Gas Analysers	X				A	Component-level direct measurement which estimates the methane emission rate in kg CH_4/hr. Site level aerial measurements are conducted using GML technology and source level measurements are performed consistent with USEPA Method 21. Annual emissions are calculated assuming that gas analysers continuously vent as part of normal operations.	USEPA 40 CFR 60 Subparts OOOOb and OOOOc USEPA Method 21 OGMP 2.0 TGD – Purging and venting

[1] For measurement frequency, D refers to daily measurements and A refers to annual measurements noting that asset specific emissions estimates are updated annually based on activity factors and we target re-measuring facilities every three years.

Methane Emission Source	Data Source					Estimation Method	Reference Framework
	Direct Measurement	Engineering Calculation	Emission Factor	Estimation	Measurement Frequency[1]		
Incomplete Combustion							
Methane Slip from Compressors, GEAs and Gas-Fired Heaters	X		X		A	Source-level direct measurement which estimates the incomplete combustion rate in kg CH_4/hr. Site level aerial measurements are conducted using GML technology and source-level compressor stack measurements are performed via compressor stack testing. Where measured data is not available, emission factors from literature are applied to annual fuel consumption data based on actual run hours of each individual compressor unit as recorded via PI Historian.	USEPA 40 CFR 60 Subparts OOOOb and OOOOc OGMP 2.0 TGD – Incomplete Combustion
Flares	X		X		A	Site-level aerial measurements are conducted using GML technology. Where measured data is not available, it is calculated based on combustion efficiency, gas composition, and flare usage logs.	USEPA 40 CFR 60 Subparts OOOOb and OOOOc OGMP 2.0 TGD – Flare Efficiency
Fugitive Emissions							
Fugitive Leaks	X				A	Component-level direct measurement which estimates the fugitive methane emission rate in kg CH_4/hr. Site-level aerial measurements are conducted using GML technology and source-level measurements are performed consistent with USEPA Method 21. Annual emissions are calculated assuming that fugitive sources continuously leak at the measured leak rate until they are repaired. Post-repair the leak rate is re-measured and annual emissions are calculated as follows: (pre-repair leak rate * annual hrs pre-leak) + (post-repair leak rate * annual hrs post-leak).	USEPA 40 CFR 60 Subparts OOOOb and OOOOc USEPA Method 21 OGMP 2.0 TGD – Unintended Equipment Leaks
Non-routine Emissions							
Maintenance Venting		X		X	A	Maintenance venting emissions are typically calculated as follows: (a) For each asset, all planned and corrective maintenance work orders are extracted from the Maximo asset software database for the relevant reporting period. (b) Extracted work orders are filtered for any maintenance activities that required methane venting. (c) Design documents are reviewed to identify characteristic equipment volumes. (d) Process characteristics (e.g. operating pressures and temperatures) are applied to calculate a standard vented emission factors (EF) for the equipment.	OGMP 2.0 TGD – Purging and venting, starts and stops and other process and maintenance vents
Commissioning		X		X	A	Commissioning emissions are estimated by filtering commissioning work orders to identify activities involving methane venting. A qualified process engineer classifies each as a major or minor project. For major projects, reported vent volumes are used, or fixed values based on similar past projects if data is unavailable. For minor projects, actual or estimated equipment volumes are used. Emissions are then calculated based on asset characteristics such as pipe size, pressure, and temperature.	OGMP 2.0 TGD – Purging and venting, starts and stops and other process and maintenance vents
Process Safety Events	X	X		X	A	Emissions from process safety events are estimated as follows: (a) For each asset, all Tier 1, Tier 2 and Tier 3 process safety incidents are extracted from the Maximo asset software database for the relevant reporting period. (b) For each Tier 1 (500kg and above) or Tier 2 (50kg to <500kg) process safety event, the quantity of gas released is calculated as part of an incident investigation report. (c) For any Tier 3 (<50kg) process safety events a conservative 50kg emission volume is used.	OGMP 2.0 TGD – Incidents, emergency stops and malfunctions

Uncertainty and reconciliation processes

Reconciliation is the process of comparing source-level emission estimates with independent site-level measurements to develop a complete and more accurate inventory of methane emissions. Our reconciliation process involves the following steps:

- Source matching: Emission detections from aerial surveys are spatially matched to known equipment using GPS coordinates, Piping & Instrumentation Diagrams (P&IDs), and other documentation. Where possible, tag IDs are assigned to link site-level and source-level data.
- Gap identification: Each emission source is reviewed to determine whether it was captured through both measurement approaches. Differences in detection thresholds are documented.
- Discrepancy resolution: Where discrepancies exist between site-level and source-level estimates, factors such as methodology, timing, weather, and field conditions are reviewed to determine the more accurate data source and remove any duplication in measured data between the two datasets.
- Uncertainty calculation: Upper and lower uncertainty bounds are calculated by first estimating the uncertainty of individual emission sources and subtotals using a weighted average approach. These are then combined using a root-sum-of-squares method to determine total additive uncertainty, in accordance with GHG Protocol Guidance on Measurement and Estimation Uncertainty of GHG Emissions.
- Reconciled emissions estimate: The process produces an annual reconciled asset emissions estimate (t CH_4/yr) with associated lower and upper uncertainty bounds, incorporating both routine and non-routine sources.

Data sources

Methane site-level emissions data is provided by suitably qualified aerial methane, ground-source-level methane and the source-level combustion emissions testing services providers. Service providers are selected based on the following criteria:

- Technology and methodology - Detection technology, sensitivity and detection limits and measurement accuracy.
- Experience and expertise - Industry experience, personnel qualifications and certification/ accreditation.
- Data analysis and reporting - Data processing and emissions quantification capabilities.
- Industry standards and best practice - Compliance with industry standards and best practice.
- Logistics and operations - Survey coverage, weather and terrain adaptability, compliance with Civil Aviation Safety Authority (CASA) regulations and safety and environmental protocols.
- Reputation and references - Client references in gas/oil industry, reputation and track record and case studies of similar projects.

Estimation of Historical Methane Emissions

We have re-baselined historical emissions for facilities where we have estimated methane emissions using our enhanced methane measurement methodology.

The revised FY21 base year and intervening year estimates have been developed using measured methane emissions data, historical asset information, operational records and maintenance data. The following approach was applied:

- Obtain FY21 asset and emissions data and align it to the facilities included in the revised inventory boundary.
- Review facility changes occurring between FY21 and the reporting year, including asset additions, modifications, upgrades, conversions, decommissioning activities and removals. These changes are assessed to determine their impact on methane emissions and the treatment of historical emissions estimates.
- Apply historical operational activity data, where available, including equipment operating time, compressor utilisation, blowdowns, venting events and other operational parameters relevant to methane emissions.
- Apply methane emission rates derived from direct measurement programs, including measured venting, fugitive emissions and incomplete combustion emissions. Where direct measurements are unavailable, representative emission factors derived from similar equipment may be applied.
- Estimate non-routine emissions using available maintenance records, operational data and work order information. Where historical measurements are not available, emissions estimates developed from measured events and reporting-period analyses are used.
- Incorporate measured fugitive emissions rates from ground-based and aerial methane surveys and adjust estimates, where appropriate, to reflect changes in asset configuration, operating conditions and equipment performance over time.
- Reconcile estimated emissions using the same quantification framework applied to the FY26 inventory, with historical activity data used to represent operating conditions during the relevant reporting period.

Key Assumptions

The following assumptions were applied in developing the revised FY21 base year and intervening year emissions estimates:

- Methane emission rates measured during FY24, FY25 and FY26 ground-based and aerial measurement programs are assumed to be representative of historical emissions sources unless evidence indicates that changes in asset configuration, operating conditions, equipment performance or facility modifications would materially affect emissions rates.
- Emission factors developed from measured venting, fugitive and incomplete combustion emissions from similar equipment are assumed to be representative of historical operations where equipment-specific measurements are unavailable.
- Historical operational activity data, maintenance records, work orders and incident records available at the time of assessment are assumed to be sufficiently complete and representative of facility operations during the relevant reporting periods.
- Where historical event-specific emissions data are unavailable, non-routine emissions are estimated using available maintenance and operational records together with emissions estimates derived from measured events and reporting-period analyses.
- Historical emissions estimates incorporate adjustments for known asset additions, removals and modifications where sufficient information is available to support those adjustments.

This methodology provides a consistent and transparent basis for estimating historical methane emissions and establishing a revised FY21 baseline aligned with the enhanced methane quantification methodology applied in FY26.

Scope 3 emissions

The GHG Protocol Scope 3 Standard organises Scope 3 emissions into 15 categories, divided into upstream and downstream emissions:

- Upstream emissions: indirect GHG emissions related to purchased or acquired goods and services (Categories 1 to 8 inclusive)
- Downstream emissions: indirect GHG emissions related to products sold and emissions unrelated to products (leased assets, franchises, and investments) (Categories 9 to 15 inclusive).

Organisational boundary

APA uses an operational control organisational boundary for emissions reporting.

Inclusions

We assess each of the 15 categories based on their relevance to determine which emissions are included versus excluded. Where a reporting category is relevant[1] to APA, emissions are calculated and reported regardless of materiality.

Exclusions

Our Scope 3 emissions assessment excludes upstream Scope 1 and Scope 2 operational control emissions already accounted for as part of regulatory reporting in accordance with the NGERS. Upstream and downstream categories that are not relevant to APA are also excluded.

Category 1 – Purchased goods and services (including capital goods) calculation methodology

Scope 3: Category 1 – Purchased goods and services (including capital goods)	
Category description	Upstream (cradle-to-gate) emissions associated with the extraction, production, and transportation of goods and services purchased or acquired by the reporting company in the reporting year (not otherwise included in Categories 2 – 8).
Calculation status	Relevant, calculated.

Calculation boundary

This category includes spend recorded in our internal financial systems that is determined to be attributable to the purchase of goods and services, including capital goods.[2]

Exclusions

Spend that is not associated with the purchase of goods and services (and capital goods), including:

- internal payroll
- community and charitable donations
- bank fees
- expenses associated with regulatory compliance and taxation
- third party assets where APA operates but does not have ownership interest
- facilities where APA has ownership interest but does not have operational control
- pass-through spend where emissions are associated with the pass-through amount attributable to the third party charged.

Spend which is captured in other reporting categories including:

- fuel and energy consumption (Category 3)
- purchase of sold product (Category 11)
- business travel (Category 6)
- employee commuting (Category 7)
- waste (Category 5).

Calculation methodology

We estimate emissions using the spend-based method consistent with GHG Protocol Scope 3 Calculation Guide. Spend is categorised according to the Australian and New Zealand Standard Industrial Classification (ANZSIC) and then aligned with emissions factors from the ANZSIC Class Australian Scope 3 Emission Factors (2023) produced by Footprint Lab Pty Ltd using the IELab data infrastructure, adjusted to inflation. GHG emissions are calculated by multiplying categorised spend by the corresponding emission factors.

Assumptions

The exchange rate at the time a purchase order was created is consistent for the life of that purchase order, and the rate specified on invoices submitted against a purchase order is applicable to the GST amount only for tax purposes.

Data sources

The Journal Line Report from our internal financial systems.

Emission factor source

ANZSIC Class Australian Scope 3 Emission Factors (2023) produced by FootprintLab Pty Ltd using the IELab data infrastructure. https://footprintlab.io

[1] Upstream (cradle-to-gate) emissions associated with the extraction, production, and transportation of goods and services purchased or acquired by the reporting company in the reporting year (not otherwise included in Categories 2 – 8).
[2] Operating (purchased goods and services) and capital (capital goods) expenditure can be captured together and difficult to segregate. As a result of this, emissions associated with spend on both capital goods and purchased goods and services is reported together in Category 1.

Category 2 – Capital goods

Scope 3: Category 2 – Capital goods	
Category description	Upstream (cradle-to-gate) emissions associated with the extraction, production, and transportation of capital goods purchased or acquired by the reporting company in the reporting year (not already accounted for in Scope 1 or Scope 2).
Calculation status	Relevant, calculated. Due to the difficulty in disaggregating between operational and capital expenditure, emissions associated with the purchase of capital goods are reported under Category 1.

Category 3 – Fuel and energy related activities

Scope 3: Category 3 – Fuel and energy related activities	
Category description	GHG emissions associated with the extraction, production, and transportation of fuels and energy purchased or acquired by the reporting company in the reporting year (not already captured in Scope 1 or Scope 2).
Calculation status	Relevant, calculated.

Calculation boundary

This category covers GHG emissions arising from the extraction, production and transportation of fuels and energy consumed by facilities under our operational control.

This category captures upstream emissions associated with:

- the consumption of fuels and electricity
- the consumption (loss) of natural gas from gas transmission and distribution systems due to gas transmission pipeline losses (methane emissions), gas vented
- emissions from flaring
- electricity line losses from electricity interconnectors.

Note: for this category we use gross emissions data as reported under NGER legislation.

Exclusions

None.

Calculation methodology

We calculate emissions using the average-data method consistent with GHG Protocol Scope 3 Calculation Guide by multiplying the amount of fuel/energy consumed (GJ or MWh) by the most recent relevant Australian National Greenhouse Accounts (NGA) default emission factors.

For the consumption of electricity covered by APA's 100% renewable electricity procurement target, the Scope 3 emissions factor is 0 t CO_2-e/MWh due to the surrender of LGCs.

Double counting

By choosing to report upstream emissions associated with fuel combustion, flaring and gas transmission pipeline emission losses, we introduce an element of double counting. Upstream emissions for this category are made up of the extraction, production, and transportation of fuels and energy.

These emissions are calculated from a single emission factor that combines emissions from all these sources together – there is no way to isolate emissions associated only with transportation. As a result, there is a double count associated with transport already accounted for by APA through Scope 1 and Scope 2 emissions.

Assumptions

The NGER dataset used for upstream emissions calculations is true and correct as independently validated as part of the Scope 1 and Scope 2 assurance process.

As pipelines are linear infrastructure, the emission factor we apply is dependent on the location of the pipeline and the location of gas delivery, as this is taken to be where the gas is consumed. When a pipeline has exit meters that traverse both non-metro and metro locations, an average emission factor is used. Where a pipeline and exit meters are only located in non-metro areas, the non-metro emission factor is applied. Similarly, where a pipeline and exit meters are located only in metro areas, the metro emission factor is applied.

For the Northern Territory (NT), there are no published NGA emission factors. So in accordance with NGA guidance, we apply the Western Australia emission factors for the NT.

Data Sources

We use fuel and energy consumption data used to calculate Scope 1 and Scope 2 emissions for NGER reporting.

Emission factors source

National Greenhouse Accounts Factors (NGA) 2025; Australian Government Department of Climate Change, Energy, Environment and Water.

https://www.dcceew.gov.au/climate-change/publications/national-greenhouse-accounts-factors

Category 4 – Upstream transportation and distribution

Scope 3: Category 4 – Upstream transportation and distribution	
Category description	GHG emissions from the transportation and distribution of products purchased by the reporting company in the reporting year between a company's tier 1 suppliers and its own operations (in vehicles and facilities not owned or controlled by the reporting company); transportation and distribution services purchased by the reporting company in the reporting year, including inbound logistics, outbound logistics (e.g. of sold products); and transportation and distribution between a company's own facilities (in vehicles and facilities not owned or controlled by the reporting company).
Calculation status	Relevant, calculated as part of Category 1. Spend associated with upstream transportation and distribution logistics are included in the total contracted capital expenditure amounts.

Category 5 – Waste generated in operations

Scope 3: Category 5 – Waste generated in operations	
Category description	Emissions from third party disposal and treatment (in facilities not owned or controlled by the reporting company) of waste generated in the reporting company's operations in the reporting year.
Calculation status	Relevant, calculated.

Calculation boundary

This category covers upstream emissions arising from the disposal of waste to landfill from facilities over which APA has operational control.

Exclusions

Waste that has been diverted from landfill, recycled, and treated. This includes cardboard and paper recycling, coolant, e-waste, liquid waste (hydrocarbon, oily water), metals and steel, regulated waste diverted from landfill, sanitary and septic, secure waste, waste oil, organic waste and general recycling. Emissions from the transportation of waste are also excluded.

Calculation methodology

We calculate emissions using the average-data method consistent with *GHG Protocol Scope 3 Calculation Guide* by multiplying the amount of waste disposed to landfill (tonne) by the most recent relevant NGA default emission factors.

The steps to estimate waste volumes are:

1. categorise APA facilities into groupings (e.g. power stations, gas transmission pipelines, offices)
2. obtain actual waste data from waste providers/ entities engaged by APA
3. Where data is not available for all facilities within a group, determine a base waste factor applicable for each group, e.g. number of waste accounts, employee headcount
4. calculate the % of the group total that the base waste factor represents[1]
5. calculate the extrapolation factor which is 1 divided by the % of the group total that the base waste factor represents[2]
6. multiply the extrapolation factor by the actual waste data to calculate the waste data for the group. We only use the extrapolation factor where waste data is not available for all facilities within a group.

Assumptions

Classification as landfill/landfill diversion is based on waste contractor reporting and assumptions based on standard industry disposal options derived from waste descriptions.

Where there is uncertainty about actual waste disposal, we assume the waste goes to landfill.

When extrapolating waste data for a group, we assume all facilities within the group generate the same types of wastes consistent with the facility from which the base waste factor was derived.

Where waste data is not provided in tonnes, conversions using bulk density are applied, e.g. weight per volume of a specified waste type.

Waste quantities for the last month in the reporting period is estimated using monthly averages based on existing data for the reporting period.

Data sources

Waste contractor supplied data and invoices.

Emission factors source

National Greenhouse Accounts Factors (NGA) 2025; Australian Government Department of Climate Change, Energy, Environment and Water.

https://www.dcceew.gov.au/climate-change/publications/national-greenhouse-accounts-factors

[1] For example, if the base waste factor uses headcount, the headcount for the facility where actual data is available is 100, and the total headcount for facilities within the group is 200, the base waste factor is 50% i.e. 100 divided by 200.
[2] For example, if base waste factor data represents 50% of the group total, the extrapolation factor will be 2 (i.e. 1 (100%) divided by 0.5 (50%)).

Category 6 – Business travel

Scope 3: Category 6 – Business travel	
Category description	Emissions from the transportation of employees for business-related activities during the reporting year (in vehicles not owned or operated by the reporting company).
Calculation status	Relevant, calculated.

Calculation boundary

This category covers both upstream and downstream emissions that occur from transport carriers using their vehicles to transport APA employees and contingent workers for business travel purposes. Additionally, we have elected to include accommodation emissions associated with business travel where employees and contingent workers are required to stay away from their normal place of residence (home).

Exclusions

Transportation of employees and contingent workers between their homes and their regular worksites in personal vehicles and by using public transport (this is captured in category 7 – employee commuting).

Calculation methodology

Emissions are calculated consistent with GHG Protocol Scope 3 Calculation Guide by multiplying the input quantity by the adopted emission factor:

- **flight emissions**: distance-based method using travelled (km) for each flight category (long or short flight, and either business, economy, first class or premium economy class) multiplied by the most recent relevant UK Department for Environment, Food & Rural Affairs (DEFRA) emission factors. Calculations include radiative forcing (RF) emissions that measure the additional environmental impacts from emissions of nitrous oxide and water vapour at high altitudes.
- **fuel hire car emissions**: fuel-based method using amount of fuel consumed (GJ) multiplied by the NGA default factors for each fuel type.
- **electric hire car emissions**: distance-based method using travelled (km) per car hire converted into electricity consumed (kWh) by multiplying distance travelled by the DEFRA conversion factor (kWh/km travelled for an average car). Estimated kWh of electricity consumed multiplied by the most recent NGA full-cycle electricity consumption default factors specific to the state/territory of the car hire.
- **taxi emissions**: spend-based method using dollar spent on taxis converted to kilometres (km) based on assumed Australian average taxi spend per km travelled multiplied by the most recent DEFRA emission factors for taxi hire.
- **accommodation emissions**: average-based method using number of nights per accommodation stay multiplied by the relevant country-specific accommodation emission factors (DEFRA or New Zealand Ministry for the Environment (MfE)). No allowance is made for accommodation star rating or accommodation type.

Assumptions

When applying relevant emission factors for emissions calculations, business travel flight emissions are categorised according to distances travelled (defined as long flight (>3,700 km), short flight (>400 km, ≤3,700 km), and very short flight (≤ 400 km), and flight category (class of travel, e.g. economy, business class). As there are no published DEFRA emission factors for short first class flights, or short premium-economy flights, they are classified as short business class flights or short economy class flights respectively.

Data sources

APA's corporate travel management provider (CTM) for accommodation and flight data; car hire information from Hertz; and dollar spend for taxi hire from APA's internal financial system.

Emission factor sources

National Greenhouse Accounts Factors (NGA) 2025; Australian Government Department of Climate Change, Energy, Environment and Water.

https://www.dcceew.gov.au/climate-change/publications/national-greenhouse-accounts-factors

UK Department for Environment, Food & Rural Affairs (DEFRA) 2025.

https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting

New Zealand Ministry for the Environment (MfE) Measuring Emissions Catalogue 2025. Wellington: Ministry for the Environment.

https://measuringemissionsguide.environment.govt.nz/files/historical/2025/Measuring-Emissions-Catalogue-2025-v3.pdf

Category 7 – Employee commuting

Scope 3: Category 7 – Employee commuting	
Category description	Emissions from the transportation of employees between their homes and their worksites during the reporting year (in vehicles not owned or operated by the reporting company) and working from home.
Calculation status	Relevant, calculated.

Calculation boundary

This category covers emissions arising from the transportation of employees and contingent workers between their home and regular APA worksites not included in category 6, as well as working-from-home emissions. APA does not currently remove emissions associated with employee and contingent worker commutes in company-owned vehicles.

Exclusions

Employees travelling to regular work locations not under the operational control of APA.

Calculation methodology

Employee commuting

We calculate emissions using the distance-based method consistent with the GHG Protocol Scope 3 Calculation Guide by multiplying commuting distance (km) travelled by employees and contingent workers by the adopted emission factor.

APA adopts a blanket approach, with assumed mode of transport for employee commuting used to calculate emissions based on Australian commuting patterns. We apply Australian Bureau of Statistics (ABS) census data outlining the typical method of travel (employee commute) by geographical location and typical distance travelled (km) to the quarterly employee and contingent worker average head count over the reporting period.

Emissions are calculated by multiplying the estimated distance travelled (km) per travel mode for each worksite location by the most recent DEFRA emission factors. Calculations includes well-to-tank (WTT) emissions resulting from the production, transportation and distribution of fuels consumed during employee and contingent worker commute.

Working from home

We calculate working from home emissions using the average office occupancy to calculate the percentage of employees working at the office, with the remaining percentage assumed to be working from home. This is completed for each office location.

Emissions are calculated by multiplying the number of working-from-home days by the number of employees for each office location, then by multiplying by the most recent DEFRA emission factor.

Double counting

Our choice to include employees and contingent workers who commute to work in company-owned vehicles introduces an element of double counting, as these emissions have already been captured in Category 3. This double counting is considered immaterial and occurs due to the blanket approach adopted for calculating employee commuting emissions.

Assumptions

Annual working days for employee commute excludes public holidays that fall on weekends and assumes a five (5) day working week and 20 days of annual leave, with all employees commuting to their regular work locations on office working days.

Contingent workers are considered as full-time employees of APA. Employee and contingent worker headcount for a reporting period is the quarterly average.

Employee commuting data, for the last month in the reporting period, is estimated using eleven months of data.

Data sources

Quarterly employee and contingent worker headcount from APA's internal enterprise human resources system and ABS census data.

Emission factors source

UK Department for Environment, Food & Rural Affairs (DEFRA) 2025.

https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting

References

Australian Bureau of Statistics (ABS), 2071.0.55.001 Census of Population and Housing: Commuting to Work – More Stories from the Census, 2016.

Category 8 – Upstream leased assets

Scope 3: Category 8 – Upstream leased assets	
Category description	Operation of assets leased by the reporting company (lessee) in the reporting year and not included in Scope 1 and Scope 2 – reported by lessee.
Calculation status	Scope 1 and Scope 2 emissions associated with APA-leased offices are captured as part of APA's NGER reporting. Upstream emissions are included in Category 3. For ownership interest only assets, both upstream and downstream emissions are captured in Category 15.

Category 9 – Downstream transportation and distribution

Scope 3: Category 9 – Downstream transportation and distribution	
Category description	Transportation and distribution of products sold by the reporting company in the reporting year between the reporting company's operations and the end consumer (if not paid for by the reporting company), including retail and storage (in vehicles and facilities not owned or controlled by the reporting company).
Calculation status	Emissions associated with the transportation and distribution of products sold by APA are captured in Category 11.

Category 10 – Processing of sold product Scope 3

Category 10 – Processing of sold product	
Category description	Processing of intermediate products sold in the reporting year by downstream companies (e.g. manufacture).
Calculation status	Not relevant. There is no intermediate product processing of sold product.

Category 11 – Use of sold product

Scope 3: Category 11 – Use of sold product	
Category description	End use of goods and services sold by the reporting company in the reporting year.
Calculation status	Relevant, calculated.

Calculation boundary

This category covers upstream and downstream emissions arising from the production, transportation and distribution of natural gas sold to customers and customer consumption of the natural gas purchased from APA.

Exclusions

None.

Calculation methodology

Emissions are calculated using the 'direct use phase' method for 'fuels and feedstocks' described in the GHG Protocol Scope 3 Calculation Guide by multiplying the amount of product (gas) sold (GJ) by the most recent NGA default emission factors to capture both upstream and downstream emissions.

Assumptions

All natural gas sold is combusted.

Data sources

Internal sales data.

Emission factor source

National Greenhouse Accounts Factors (NGA) 2025; Australian Government Department of Climate Change, Energy, Environment and Water.

https://www.dcceew.gov.au/climate-change/publications/national-greenhouse-accounts-factors

Category 12 – End-of-life treatment of sold products

Scope 3: Category 12 – End-of-life treatment of sold products	
Category description	Waste disposal and treatment of products sold by the reporting company (in the reporting year) at the end of their life.
Calculation status	Not relevant, the end use of APA sold product (natural gas) is combustion (end of life).

Category 13 – Downstream leased assets

Scope 3: Category 13 – Downstream leased assets	
Category description	Operation of assets owned by the reporting company (lessor) and leased to other entities in the reporting year, not included in Scope 1 and Scope 2 – reported by lessor.
Calculation status	Not relevant, APA does not lease assets to other entities.

Category 14 – Franchise

Scope 3: Category 14 – Franchises	
Category description	Operation of franchises in the reporting year, not included in Scope 1 and Scope 2 – reported by franchisor.
Calculation status	Not relevant, APA does not have franchises.

Category 15 – Investments

Scope 3: Category 15 – Investments	
Category description	Operation of investments (including equity and debt investments and project finance) in the reporting year not included in Scope 1 or Scope 2.
Calculation status	Relevant, calculated.

Calculation boundary

This category covers downstream emissions for facilities and activities where APA does not have operational control but does have an ownership interest.

Exclusions

None.

Calculation methodology

Where APA calculates emissions, we use the average data method consistent with the GHG Protocol Scope 3 Calculation Guide by multiplying the amount of energy consumed (GJ) by the most recent NGA default emission factors where APA has control of the data source for emissions calculations.

Where energy emissions data is provided by the ownership-interest partner in operational control, emissions are calculated by them in accordance with their legislative NGER reporting obligation.

At a minimum, we check all energy and emissions data provided by the ownership-interest partner and investigate variances to confirm that no material omissions have been made, or that there is no material error in information provided. Some ownership partners subject their NGER reporting data to external audit prior to NGER submission.

Ownership interest emissions are calculated by multiplying total (100%) emissions by APA's ownership interest (percentage).

Category 15 emissions from investments are split by power generation and gas transmission infrastructure. A list of APA's facilities relating to power generation or gas transmissions is maintained, consistent with mandatory NGER reporting requirements.

Assumptions

None.

Data sources

APA internal data sources (including APA Grid Portal) and information maintained by APA Contracts and Commercial, and Operation and Maintenance teams. External data is obtained from the equity share partner in operational control of the ownership asset.

Emission factor source

National Greenhouse Accounts Factors (NGA) 2025; Australian Government Department of Climate Change, Energy, Environment and Water.

https://www.dcceew.gov.au/climate-change/publications/national-greenhouse-accounts-factors

End-user emissions

End-user emissions are emissions (upstream and downstream) that result from the end use consumption (combustion) of natural gas that APA transports through its wholly or partially owned pipelines but does not take ownership of and therefore does not sell to the end-user. The exception is comparatively minor volumes of gas sold to customers, which is included in Scope 3 – Category 11.

Calculation boundary

When we report end-user emissions, we report based on ownership interest of the pipeline.

Exclusions

None.

Calculation methodology

While the natural gas we transport may have differing downstream applications i.e. either as a feedstock or for combustion purposes, our emissions estimates assume that the product is combusted. By doing so, we are taking a conservative approach to the calculation of these emissions.

We calculate emissions using the fuel-based method consistent with GHG Protocol Scope 3 Calculation Guide using pipeline exit meter natural gas volume (GJ) data multiplied by the most recent and relevant Australian National Greenhouse (NGA) emission factors for both upstream and downstream emissions. Calculated emissions are then multiplied by APA's pipeline ownership interest percentage.

Assumptions

As pipelines are linear infrastructure, the emission factor we apply is dependent on the location of the pipeline and the location of gas delivery, as this is taken to be where the gas is consumed. When a pipeline has exit meters that traverse both non-metro and metro locations, an average emission factor is used. Where a pipeline and exit meters are only located in non-metro areas, the non-metro emission factor is applied. Similarly, where a pipeline and exit meters are located only in metro areas, the metro emission factor is applied.

There are no published NGA emission factors for the NT. So in accordance with NGA guidance, we apply the Western Australia emission factors for the NT.

Data sources

For APA operated pipelines, we use internal meter data. For pipelines that we own (either wholly or partially) but do not operate, we obtain data from internal systems, supplemented by information provided by the entity who has operational control.

Emission factor source

National Greenhouse Accounts Factors (NGA) 2025; Australian Government Department of Climate Change, Energy, Environment and Water

https://www.dcceew.gov.au/climate-change/publications/national-greenhouse-accounts-factors

Re-baselining

Our GHG re-baselining principles are consistent with the GHG Protocol. We review and reset APA's base year inventory and targets where:

- there are changes in company structure and activities such as acquisitions, divestments, mergers, insourcing or outsourcing
- emissions from exclusions in the base year inventory or reporting boundary change significantly, e.g. shift to an equity share reporting boundary
- there are adjustments in the base year inventory due to emission calculation methodology changes or changes in the data used to set targets, e.g. if we discover significant errors or several cumulative errors that are collectively significant.[1]

We do not re-baseline for minor changes in emissions of <1,000 t CO_2-e.

When the base year inventory is re-baselined, a review of targets or goals will only occur when the base year inventory changes by more than 10% as a result of this re-baselining. Re-baselining will not occur for strategic acquisitions or facility closures to support climate targets or goals, e.g. renewables investment.

For transparency, the impact of any re-baseline is presented in APA's FY26 Sustainability Data Book as adjusted total Scope 1, Scope 2 and Scope 3 emissions.

Carbon credits

We include the number of carbon credits surrendered from:

- our Australian National Registry of Emissions Units (ANREU) account for ACCUs
- carbon credits surrendered by our suppliers on our behalf
- other relevant sources, e.g. Verra registry.

When APA surrenders carbon credits, each unit surrendered is equivalent to one t CO_2-e.

We also disclose the number of carbon credits surrendered to meet Safeguard Mechanism requirements for the financial year.

[1] APA will make the adjustment for the full reporting period rather than only for the remainder of the reporting period after the change occurred.

% of Scope 1 emissions covered by emissions-limiting regulations

Assets covered by emissions-limiting regulations are those assets covered by a facility-specific or sectoral baseline as legislated by the Safeguard Mechanism under the NGER Act. We take the Scope 1 emissions as reported under NGERS from those facilities covered by the Safeguard Mechanism and divide by the total Scope 1 emissions under APA's operational control as reported under NGERS.

Performance against targets and goals

Scope 1 and Scope 2

Progress against APA's targets and goals relevant to Scope 1 and Scope 2[1] is disclosed based on:

Gas infrastructure

- gross emissions reductions (% and t CO_2-e) that represent a comparison of emissions from the current reporting period against the base year inventory (including any re-baselining adjustments). This does not consider reductions or increases associated with carbon credits. This is also application our methane emissions target.
- net emissions reductions (% and t CO_2-e) that represent a comparison of emissions from the current reporting period against the base year inventory (including any re-baselining adjustments) deducting carbon credits from the gross emissions value.

Power generation infrastructure

- gross emissions intensity reductions (% and t CO_2-e/MWh) that represent a comparison of emissions intensity from the current reporting period against the base year emissions intensity (including any re-baselining adjustments). This does not consider reductions or increases associated with carbon credits.

Electricity transmission

Whilst not a target or goal we report:

- gross emissions reductions (% and t CO_2-e) (excluding line losses) that represent a comparison of emissions from the current reporting period against the base year inventory (including any re-baselining adjustments). This does not consider reductions associated with carbon credits.

Scope 3

Progress against APA goals relevant to Scope 3 is disclosed based on:

Category 1 and 2

- percentage of Category 1 and 2 suppliers, of total spend,[2] engaged to set a net zero goal.[3,4]

In addition, whilst not a goal metric, we report Category 1 and 2 suppliers, as a percentage of total spend, who have set a net zero goal.[5]

We calculate this percentage as follows:

- establish a register of all suppliers for the reporting period
- assess the suppliers to determine if they have set a net zero goal with a focus on suppliers with the higher spend and emissions. Assessing the net zero goal supplier commitments is based on public disclosures e.g. Climate Transition Plan or equivalent
- calculate the percentage of total Category 1 (including capital goods) spend represented by the suppliers with net zero goals.

Category 15 gas infrastructure

- gross emissions reductions (% and t CO_2-e) that represent comparison of emissions from the current reporting period (including any re-baselining adjustments) against the base year inventory. This does not consider reductions associated with carbon credits.

[1] All targets and goals and calculations are based on market-method for Scope 2 except where indicated otherwise.
[2] Total spend is all procurement expenditure that is included in APA's Category 1: Purchased goods and services (including capital goods) reporting, excluding spend associated with expense reimbursements.
[3] Net zero goal or equivalent (e.g. carbon neutral goal) covering operational emissions.
[4] Engagement is an interaction between APA and a supplier for the specific reason of encouraging the supplier to set a net zero goal. Engagements are recorded in APA's 'Engagement Goal - Supplier net zero goal register'.
[5] Suppliers that already had a net zero goal assessed through desktop analysis prior to engagement are excluded from the metric.

Glossary

Term	Definition
APA Grid Portal	APA Grid Portal manages contractual relationships with APA's customers, develops a schedule to ensure that customer transportation and storage needs are met at applicable receipt and delivery points, and generates invoices
Australian Carbon Credit Unit (ACCU)	An ACCU is a unit issued to a person by the Clean Energy Regulator (Regulator) by making an entry for the unit in an account kept by the person in the electronic Australian National Registry of Emissions Units (ANREU). Each ACCU issued represents one tonne of carbon dioxide equivalent (t CO2-e) stored or avoided by a project
Australian National Registry of Emissions Units (ANREU)	ANREU supports the issuance, holding, transfer, and acquisition of Australian ACCUs issued under the Australian Government's Emissions Reduction Fund
Base year	A historic datum (a specific year or an average over multiple years) against which a company's emissions are tracked over time
Base year emissions recalculation (re-baselining)	Recalculation of emissions in the base year to reflect a change in the structure of the company, or to reflect a change in the accounting methodology used. This ensures data consistency over time, i.e., comparisons of like with like over time
Carbon credit	An emissions unit that is issued by a carbon crediting programme and represents an emission reduction or removal of greenhouse gases. Carbon credits are uniquely serialised, issued, tracked and cancelled by means of an electronic registry
Clean Energy Regulator (CER)	An Australian independent statutory authority responsible for implementing legislation to reduce carbon emissions and increase the use of clean energy
CO_2-e (carbon dioxide equivalent)	The universal unit of measurement to indicate the global warming potential (GWP) of each GHG, expressed in terms of the GWP of one unit of carbon dioxide (CO2). It is used to evaluate releasing (or avoiding releasing) different GHGs against a common basis
DEFRA emission factors	GHG emission factors published by the UK Department for Environment, Food, and Rural Affairs (DEFRA)
Emission factor	A factor that is applied to activity data to determine GHG emissions (e.g. kilogram (kg) of CO2-e emitted per gigajoule (GJ) of fuel consumed, kg of CO2-e emitted per kilowatt hour (kWh) of electricity used)
Emissions (GHG emissions)	See Greenhouse gases (GHG)
End-user emissions	End-user emissions are emissions (upstream and downstream) that result from the end use consumption (combustion) of natural gas that APA transports through its wholly- or partially-owned pipelines but does not take ownership of and therefore does not sell to the end user
GHG Protocol Corporate Standard	GHG Protocol: A Corporate Accounting and Reporting Standard is the overarching GHG Protocol standard that provides standards and guidance for companies and other organisations preparing a greenhouse gas emissions inventory
GHG Protocol Scope 2 Guidance	The Scope 2 Guidance standardises how corporations measure emissions from purchased or acquired electricity, steam, heat and cooling (called "scope 2 emissions")
GHG Protocol Scope 3 Calculation Guide	The GHG Protocol Technical Guidance for Calculating Scope 3 Emissions serves as a companion to the GHG Protocol Scope 3 Standard to offer companies practical guidance on calculating their Scope 3 emissions. It provides information not contained in the Scope 3 Standard, such as methods for calculating GHG emissions for each of the 15 Scope 3 categories, data sources and worked examples
GHG Protocol Scope 3 Standard	The GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard provides a standardised step-by-step approach that allows the assessment of entire value chain emissions impact and identifies where to focus reduction activities
Global warming potential (GWP)	A factor describing the radiative forcing impact (degree of harm to the atmosphere) of one unit of a given greenhouse gas relative to one unit of CO2
Greenhouse gases (GHG)	The seven greenhouse gases listed in the Kyoto Protocol—carbon dioxide (CO2); methane (CH4); nitrous oxide (N2O); hydrofluorocarbons (HFCs); nitrogen trifluoride (NF3); perfluorocarbons (PFCs) and sulphur hexafluoride (SF6)
Greenhouse Gas Protocol (GHG Protocol)	The Greenhouse Gas Protocol establishes comprehensive global standardised frameworks to measure and manage greenhouse gas emissions from private and public sector operations, value chains and mitigation actions
Global Reporting Initiative	The Global Reporting Initiative establishes comprehensive global standardized frameworks for sustainability reporting, enabling organizations to measure and publicize sector-specific impacts.
Gross emissions	Total GHG emissions for a reporting period with no adjustment due to the application of carbon credits surrendered
Historian	A software package that records data from APA's control system (SCADA) and PI DataLink
Journal Line Report	Detailed accounting report that shows individual journal entries (or "lines") recorded in the general ledger. It provides a granular view of financial transactions including more dimensions of the journal transaction including cost centre, ledger account, revenue category, spend category, project, often used for auditing, reconciliation, and financial analysis
Large-scale Generation Certificate (LGC)	A large-scale generation certificate (LGC) represents 1 MWh of electricity generated from an eligible renewable electricity source
Large-scale Renewable Energy Target (LRET)	The Large-scale Renewable Energy Target (LRET) is part of the Renewable Energy Target. The LRET encourages investment in the development of renewable energy power stations, like wind and solar farms, by providing a financial incentive for electricity generated from renewable sources and creating a market for creating and selling large-scale generation certificates (LGCs)

Term	Definition
MfE emission factors	GHG emission factors published by the New Zealand Ministry for the Environment
Net emissions	Gross GHG emissions for a reporting period reduced/increased by the number of carbon credits surrendered/issued
NGA Factors	National Greenhouse Gas Accounts (NGA) Factors are emission factors published by the Australian Government Department of Climate Change, Energy, the Environment and Water
NGER, NGER Act	National Greenhouse and Energy Reporting Act 2007, and associated legislation/regulations
NGER Determination	National Greenhouse and Energy Reporting (Measurement) Determination 2008
NGER Regulations	National Greenhouse and Energy Reporting Regulations 2008. (NGER Regulations)
NGERS	National Greenhouse and Energy Reporting Scheme
Operational control	A company has operational control over an operation if the company or one of its subsidiaries has the full authority to introduce and implement its operating policies at the operation. This aligns with the definition of operational control provided in both the GHG Protocol and section 11 of the NGER Act
PI Datalink	PI DataLink is a Microsoft Excel add-in that enables APA to retrieve information from Historian directly
PI Historian	A real-time data historian system that collects, stores, and manages time-series data from industrial sensors and control systems. It enables continuous monitoring of operational parameters (e.g.pressure, temperature, flow) and is used for analysis, reporting, and emissions calculations based on actual equipment performance over time
Re-baselining	see Base year emissions recalculation (re-baselining)
REC Registry	The Renewable energy certificate (REC) Registry is the Australian Government's system for all transactions under Renewable Energy Target (RET). It is administered by the Clean Energy Regulator (CER)
Renewable Energy Target (RET)	The Renewable Energy Target (RET) is an Australian Government scheme designed to reduce emissions of greenhouse gases in the energy sector and encourage additional generation of electricity from sustainable and renewable sources
SCADA	Acronym for Supervisory Control and Data Acquisition. SCADA is a computer-based system for gathering and analysing real-time data to monitor and control equipment that deals with critical and time-sensitive materials or events. SCADA data is used where PI DataLink is unavailable
Scope 1 greenhouse gas emissions	Direct greenhouse gas emissions that occur from sources that are owned or controlled by an entity
Scope 2 greenhouse gas emissions	Indirect greenhouse gas emissions from the generation of purchased or acquired electricity, steam, heating or cooling consumed by an entity. Purchased and acquired electricity is electricity that is purchased or otherwise brought into an entity's boundary. Scope 2 greenhouse gas emissions physically occur at the facility where electricity is generated
Scope 3 greenhouse gas emissions	Indirect greenhouse gas emissions (not included in Scope 2 greenhouse gas emissions) that occur in the value chain of an entity, including both upstream and downstream emissions. Scope 3 greenhouse gas emissions include the Scope 3 categories in the Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (2011)
Verra	A company who facilitates the transparent listing of information on certified projects, issued and retired units, and enables the trading of units

APA

Australia's energy infrastructure partner



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