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From: Kristin Tilley [mailto:Kristin.Tilley@environment.gov.au]
Sent: Friday, 8 February 2019 11:46 AM
To: Hayley Richards <Hayley.Richards@nt.gov.au>; s22 @nt.gov.au>
Subject: Fwd: Potential ERF methods [SEC=UNCLASSIFIED]

Hayley, s22

Here’s the guidance doc on things we consider when prioritising new methods for development.

Cheers
Kristin

Sent from my iPhone

Begin forwarded message:

> **From:** s22 @environment.gov.au>
> **Date:** 8 February 2019 at 11:35:55 am ACST
> **To:** Kristin Tilley <Kristin.Tilley@environment.gov.au>, Katrina Maguire <Katrina.Maguire@environment.gov.au>, s22 @environment.gov.au>
> **Subject: RE: Potential ERF methods [SEC=UNCLASSIFIED]**
>
> attached
>
> s22
> Assistant Director
> Land and Outreach Branch, Climate Change Division
> T s22 @environment.gov.au
>
> -----Original Message-----
> From: Kristin Tilley
> Sent: Friday, 8 February 2019 1:00 PM
> To: s22 @environment.gov.au>; Katrina Maguire <Katrina.Maguire@environment.gov.au>; s22 @environment.gov.au>
> Subject: Potential ERF methods
>
> Can someone pls send me the fact sheet / guidance about what needs to be considered when thinking about potential methods?
>
> Sent from my iPhone

Australian Government

Department of the Environment and Energy




Making methods under the Emissions Reduction Fund

The Minister for the Environment and Energy determines the priority activities and methods for development under the Emissions Reduction Fund. The priorities are informed by a set of questions that are outlined in the Emissions Reduction Fund White Paper, and set out below. Methods are legislative instruments. They define what activities are eligible to earn carbon credits, and how emissions reductions are to be measured, verified and reported.

It is the role of the Department of the Environment and Energy to develop these methods. The Department scopes the activity, works with scientists, industry, technical experts, and potential end users of the methods. The Minister must seek advice from the independent Emissions Reduction Assurance Committee on whether proposed methods meet the offset integrity standards. These standards are set out in the *Carbon Credits (Carbon Farming Initiative) Act 2011* and below. The Minister cannot make a method unless the committee has advised the offsets integrity standards have been met.

Method prioritisation questions

The Minister considers these questions when determining priority activities for method development.

What is the potential uptake of the emissions reduction activity and the likely volume of abatement?
Is the activity cost effective, what is the level of business support for the activity, and what is the potential volume of abatement from the activity?

Is the activity ready?
Is the technology proven and commercially ready?

Can emissions reductions be estimated with a reasonable degree of certainty and at an acceptable cost?
How straightforward is the approach to estimating emissions reductions?

Are there any adverse impacts?
Could the activity have adverse social, environmental or economic impacts?

Could the activity be promoted more efficiently through other measures?
Is there another method, other mechanism or government program better suited to the activity?

Offsets integrity standards

The Emissions Reduction Assurance Committee must be satisfied each offset integrity standard has been met for a method to be made by the Minister.

Is the activity beyond business as usual?
Is the abatement unlikely to occur in the ordinary course of events?

Can the emissions reductions be measured and verified?
Can estimates be accurately measured and are they capable of being verified?

Is the abatement eligible?
Does the method align with Australia's greenhouse gas inventory approaches and international reporting obligations?

Is it supported by evidence?
Is the method supported by clear and convincing evidence?

Are material emissions from the activity deducted?
Are emissions that would occur as a result of the activity deducted when working out the estimated abatement from the project?

Are the estimates conservative?
Is there evidence to demonstrate estimates, projections and assumptions are conservative?

Other practical questions

Other matters considered when developing methods.

Are there hazards associated with the activity?
Will the method pose risks to people, such as work health and safety risks?

Would the potential method need additional support to be effective?
Are any tools, calculators or models needed to operationalise the proposed method?

Are there other benefits to the activity?
Does the potential method present other benefits to the economy, environment, or communities?

Is the potential method practical and cost effective?
Will the potential method be financially viable for potential project participants? Will the Clean Energy Regulator be able to practically implement the method?

(Banner photos) right to left: © Department of the Environment and Energy; John Baker; James Blaney.

CC200.1117

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From: Edwina Johnson [mailto:Edwina.Johnson@environment.gov.au]
Sent: Wednesday, 13 February 2019 7:05 AM
To: s22 @nt.gov.au>
Cc: Kristin Tilley <Kristin.Tilley@environment.gov.au>; s22 @environment.gov.au>; s22 @environment.gov.au>
Subject: RE: ACTION REQUIRED: provide copies of presentations from Greenhouse Gas Emissions workshop [SEC=UNCLASSIFIED]

Hi s22

Please find the remainder of our presentations attached

Cheers
Edwina

From: s22
Sent: Tuesday, 12 February 2019 3:57 PM
To: s22 @nt.gov.au>
Cc: Edwina Johnson <Edwina.Johnson@environment.gov.au>; Kristin Tilley <Kristin.Tilley@environment.gov.au>
Subject: RE: ACTION REQUIRED: provide copies of presentations from Greenhouse Gas Emissions workshop [SEC=UNCLASSIFIED]

Hi s22 ,

Please find the National Greenhouse and Energy Reporting (NGER) System and the National Greenhouse Gas Inventory presentation attached.

Kind Regards

s22
Director A/g
National Inventory Team | National Inventory Systems and International Reporting Branch
International Climate Change and Energy Innovation Division
Department of the Environment and Energy

GPO Box 787 CANBERRA, ACT 2601
T: s22
environment.gov.au

From: s22 @nt.gov.au]
Sent: Tuesday, 12 February 2019 3:39 PM
To: s22 @nt.gov.au>; s22 @csiro.au; s22 @nt.gov.au>; Edwina Johnson <Edwina.Johnson@environment.gov.au>; Kristin Tilley <Kristin.Tilley@environment.gov.au>; s22 @environment.gov.au>
Subject: ACTION REQUIRED: provide copies of presentations from Greenhouse Gas Emissions workshop
Importance: High

Hi All

Could you please provide copies of your presentations that were delivered at the recent Greenhouse Gas Emissions workshop on the 7 and 8 February **prior to 12:00pm tomorrow, 13 February.**
We will be circulating copies of the presentations to workshop attendees in due course.

If you have any queries in the meantime, please let me know.

Regards

s22
Executive Officer

Hydraulic Fracturing Inquiry Implementation Taskforce
Department of the Chief Minister

Level 4, NT House, 22 Mitchell St, Darwin
GPO Box 4396, Darwin NT 0801

t. +s22
dcm.nt.gov.au

boundlesspossible.com.au

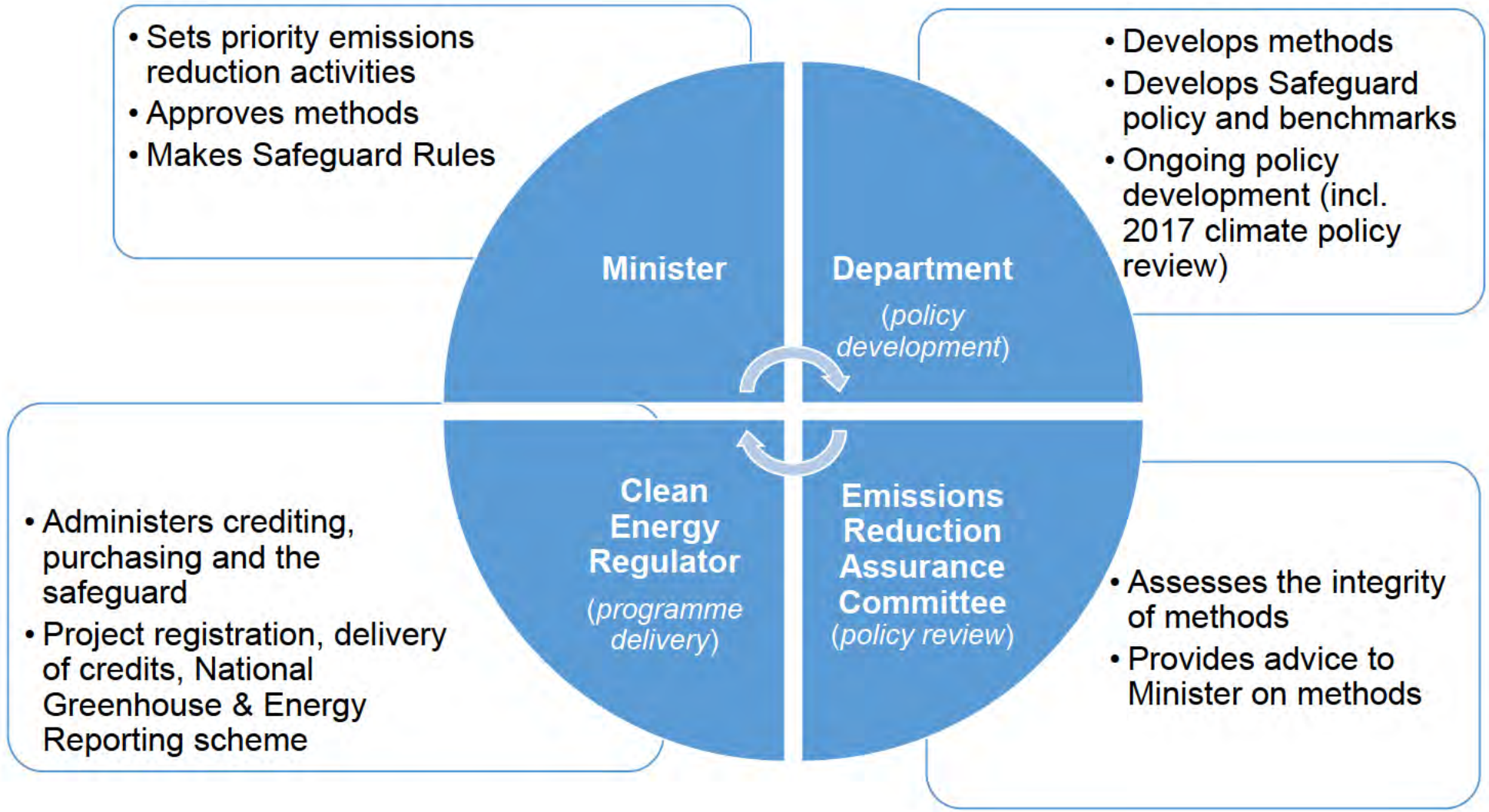
Australian Government
Department of the Environment and Energy

Emissions Reduction Fund

What is the Emissions Reduction Fund (ERF)?

- Carbon abatement scheme
- Voluntary
- Broad range of sectors
- Participants: individuals, communities & businesses
- ACCUs – ‘Australian Carbon Credit Units’
  - Crediting
  - Purchasing

How is the ERF governed?



How do we ensure integrity of ACCUs?

- ❑ ADDITIONAL - Unlikely to occur ordinarily
- ❑ MEASURABLE & VERIFIABLE abatement
- ❑ ELIGIBLE – able to count towards Australia's Targets
- ❑ EVIDENCE BASED – clear and convincing
- ❑ MATERIAL – deducts 'leakage' of emissions
- ❑ CONSERVATIVE estimates, assumptions and projections

Methods available for Land sector

Opportunities for the Land Sector	
Agricultural methods	Destruction of methane generated from manure in piggeries
	Destruction of methane from piggeries using engineered biodigesters
	Reducing greenhouse gas emissions by feeding nitrates to beef cattle
	Beef cattle herd management
	Destruction of methane generated from dairy manure in covered anaerobic ponds
	Reducing greenhouse gas emissions by feeding dietary additives to milking cows
	Reducing greenhouse gas emissions from fertiliser in irrigated cotton
	Measurement of soil carbon sequestration in agricultural systems method
	Sequestering carbon in soil in grazing systems
	Estimating sequestration of carbon in soil using default values (model-based soil carbon)
Savanna burning methods	Savanna fire management 2018—emissions avoidance
	Savanna fire management 2018—sequestration and emissions avoidance
Vegetation methods	Human-Induced regeneration of a permanent even-aged native forest
	Avoided clearing of native regrowth
	Native forest from managed regrowth
	Plantation forestry
	Measurement based methods for new farm forestry plantations
	Avoided deforestation
	Reforestation and afforestation
	Reforestation by Environmental or Mallee Plantings – FullCAM
	Verified carbon standard project

Methods available for Industrial sectors

Opportunities for Industry sectors	
Energy Efficiency Method	Aggregated small energy users
	Commercial buildings
	Commercial and public lighting
	High efficiency commercial appliances
	Industrial electricity and fuel efficiency
	Refrigeration and ventilation fans
	Industrial equipment upgrade
Facility Methods	Facilities method
Landfill and alternative waste treatment methods	Landfill gas
	Alternative waste treatment
	Source separated organic waste
	Wastewater treatment method
Mining, Oil and Gas	Coal mine waste gas
	Oil and gas fugitives
Transport Methods	Aviation transport
	Land and sea transport

Administration of ERF

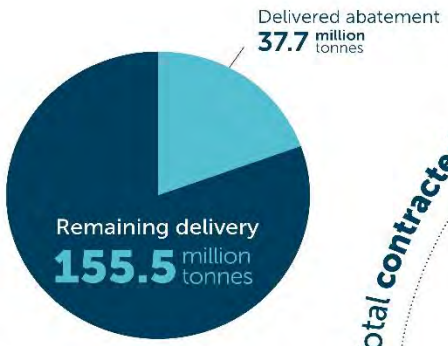
- Project registration
- Auctions
- Crediting period, contract period and permanence period
- Reports and audits

Emissions Reduction Fund contract portfolio

Released 17 December 2018

$2.55 billion scheme funding

$476 million paid	$1.8 billion currently committed	Total remaining $226 million



*Figures exlude volume terminated/lapsed contracts = 13.5 million tonnes

Total contracted abatement*

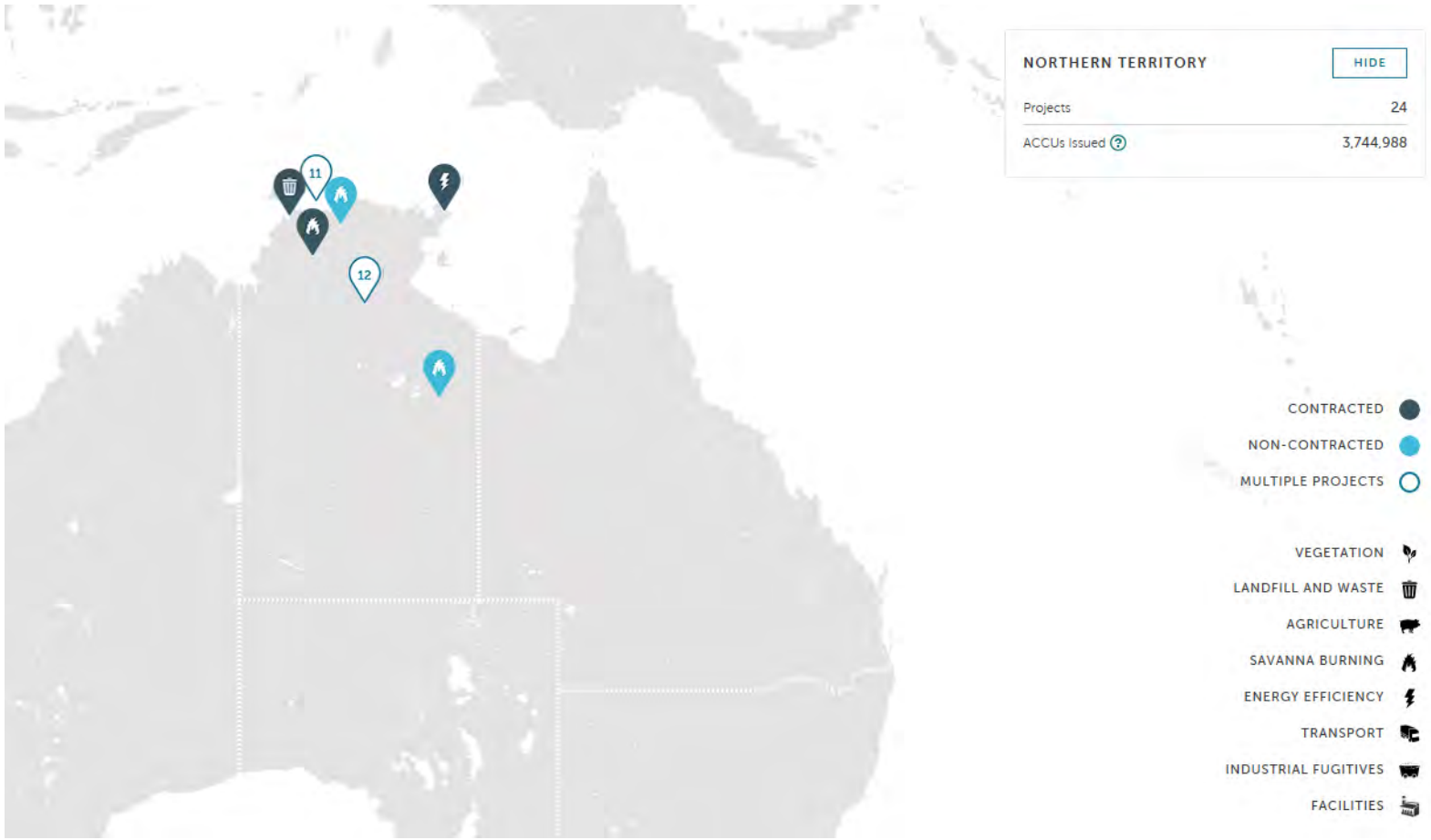
Vegetation	125.7 million tonnes
Landfill and waste	25.5 million tonnes
Agriculture	18.1 million tonnes
Savanna burning	13.6 million tonnes
Energy efficiency	5.2 million tonnes
Industrial fugitives	4.0 million tonnes
Transport	1.2 million tonnes

Contract portfolio

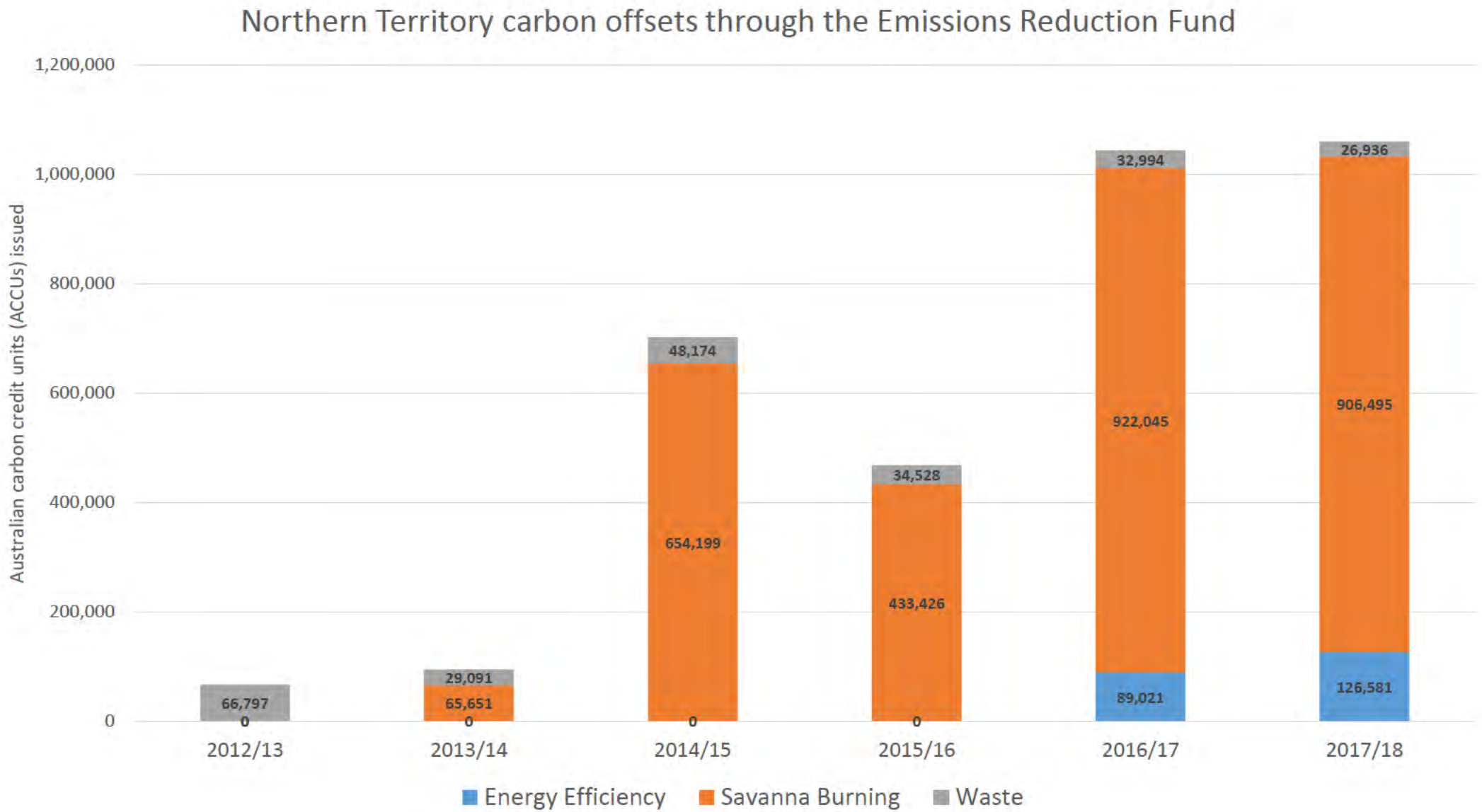
Auction 1	$13.95
Auction 2	$12.25
Auction 3	$10.23
Auction 4	$10.69
Auction 5	$11.82
Auction 6	$13.08
Auction 7	$13.52
Auction 8	$13.87

Average across portfolio **$12**

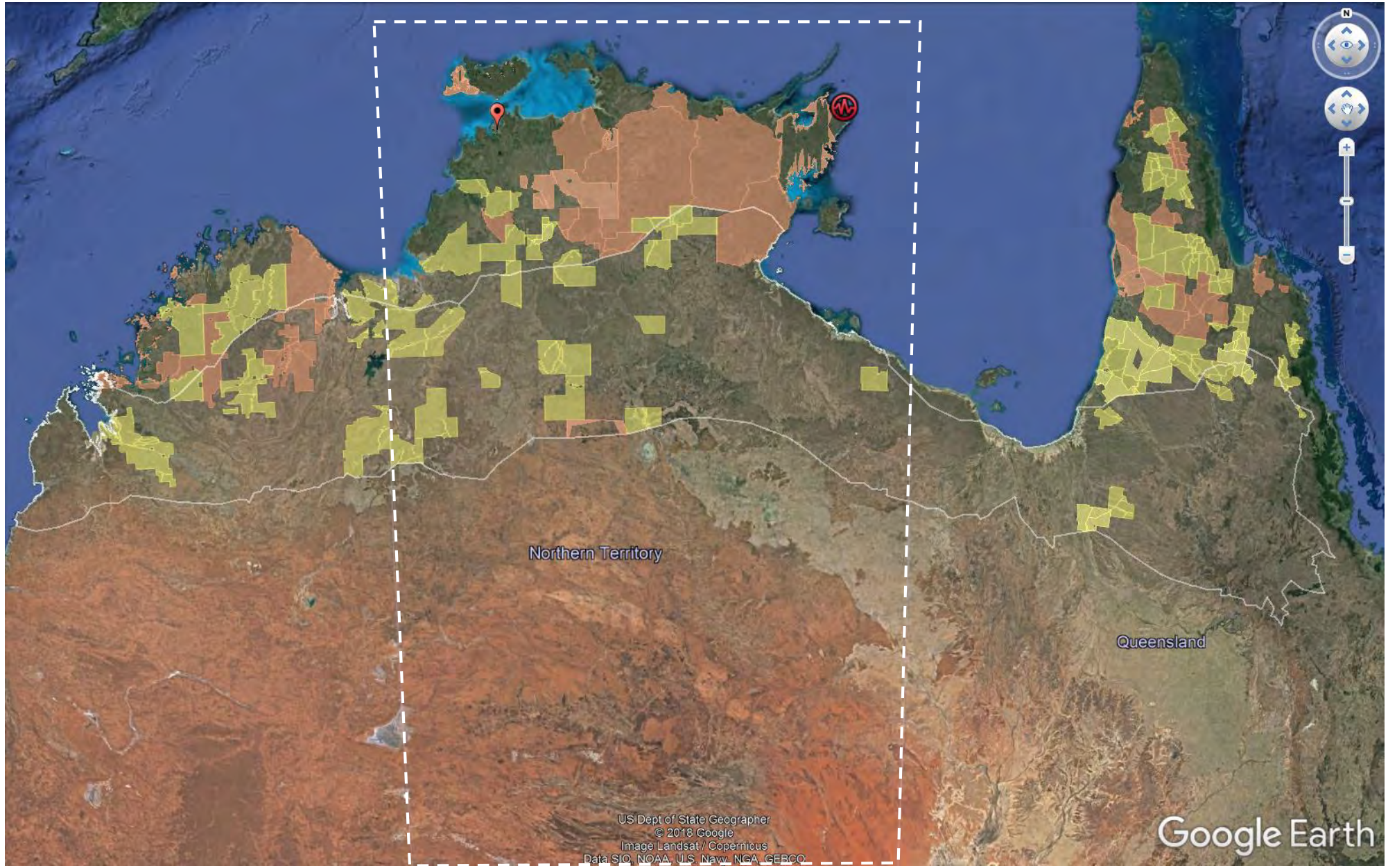
Portfolio of abatement **193** million tonnes



http://www.cleanenergyregulator.gov.au/maps/Pages/erf-projects/index.html


Northern Territory carbon offsets through the Emissions Reduction Fund
Australian carbon credit units (ACCUs) issued
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
66,797
0
29,091
65,651
0
48,174
654,199
0
34,528
433,426
0
32,994
922,045
89,021
26,936
906,495
126,581
2012/13
2013/14
2014/15
2015/16
2016/17
2017/18
Energy Efficiency
Savanna Burning
Waste

Northern Territory carbon farming projects [currently generating ACCUs]



Australian Government
Department of the Environment and Energy

International units

Greenhouse Gas Emissions from Onshore Shale Gas Workshop

2017 Review of Climate Change Policies

- To ensure a balanced approach between domestic and international emissions reductions, by 2020 the Government will determine, in the context of the long-term strategy and in consultation with stakeholders, when and how international units can be used.
- Australia will only allow the use of units that are consistent with the rules implementing the Paris Agreement and where they are of an equivalent standard to ACCUs.

Paris Agreement Article 6
Voluntary cooperation (markets)

Two mechanisms:

- Internationally transferred mitigation outcomes (Article 6.2)
- New multilateral mechanism (Article 6.4)

Details are still being negotiated.

International carbon prices

- EU allowances (EUAs) currently trade at around €23 (A$36)
- Californian allowances trade at around US$15.30 (A$21)
- Korean allowances trade at around 23,200 Korean Won (A$28.90)
- New Zealand allowances trade at around NZ$24.90 (A$23.70)
- Prices in Chinese pilot schemes are between $1.50 and $15.40
- Certified Emission Reductions trade at less than 50 cents

International carbon prices
EU Emissions Trading Scheme

International carbon prices
Clean Development Mechanism

International offsetting mechanism and voluntary schemes

- CORSIA (International Aviation - future source of demand)
- Verified Carbon Standard (Verra)
- Climate Action Reserve
- Gold Standard
- California/Quebec offset program
- Japanese Joint Crediting Mechanism

An Australian Government Initiative

FOI 191011
FOI 191110
Document 2c

Carbon neutrality and the National Carbon Offset Standard



National Carbon Offset Standard

Supporting voluntary action to manage greenhouse gas emissions and achieve carbon neutrality

The Standard

↓

Carbon Neutral Certification

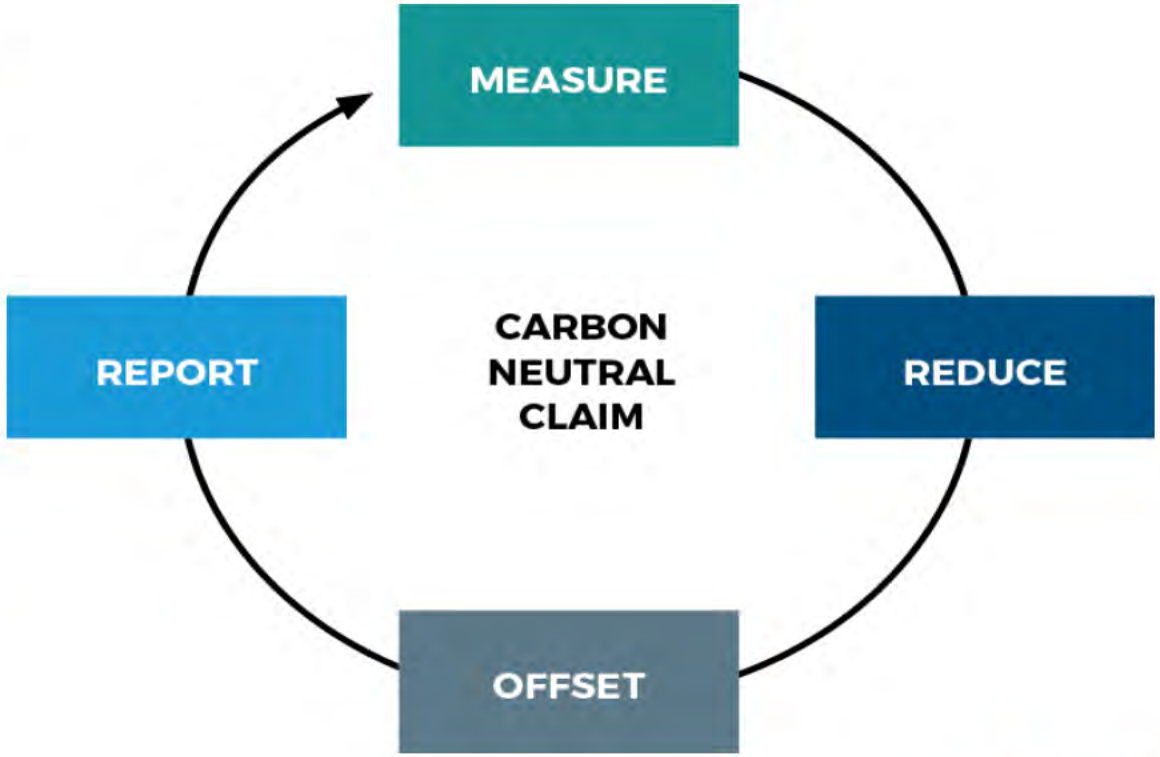
↓

Carbon Neutral Network

Certification Trade Mark

National Carbon Offset Standard

- ✓ Best practice carbon accounting in accordance with international standards
- ✓ Real carbon reductions through use of only credible offset units
- ✓ Transparent and public reporting
- ✓ Independent auditing



National Carbon Offset Standard

Carbon neutral certification against the Standard

- Certification for organisations, products & services, events and precincts is provided by the Department
- For buildings, certification is provided by the NABERS Administrator and the Green Building Council of Australia


Allens › ‹ Linklaters
air bp
ANZ
Australian Paper
AUSTRAL FISHERIES
SUSTAINABLE SEAFOOD
Blue Mountains Explorer Bus
Fantastic AUSSIE TOURS
BRISBANE CITY
Dedicated to a better Brisbane
australbricks
since 1908
Charles Sturt University
CBRE
choice
CITY OF MELBOURNE
2030
CITY OF SYDNEY
CITY OF YARRA
CEFC
CLEAN ENERGY FINANCE CORP
Banksia FOUNDATION
Education Services Australia
FP fleetplus
FRASERS PROPERTY
GPT
The GPT Group
ILD
INTERNATIONAL LUBRICANT DISTRIBUTORS
JARDAN
DEXUS
PROPERTY GROUP
JCDecaux
Moreland City Council
National Australia Bank
OAK FLATS
BOWLING & RECREATION CLUB
Pangolin Associates
POWERSHOP
Sydney Airport
White Pages
It's how we connect
Yellow Pages
ROSS HILL
ORANGE NSW
sustainable living FABRICS
Swisse
NEXTDC
LIVING FUTURE INSTITUTE AUSTRALIA
CROWN
pwc
Protect
UNITING COMMUNITIES
TOM MOORE
UNIVERSITY of TASMANIA
with_ architecture studio
TARONGA
CONSERVATION SOCIETY AUSTRALIA
For the Wild
ZOOS VICTORIA
WERRIBEE
MELBOURNE
HEALESVILLE
CITIES POWER PARTNERSHIP
SUMMIT 2018 ACCELERATING LOCAL ACTION
Westpac GROUP
WWF
d2
Think beyond the square
NATIONAL CARBON OFFSET STANDARD
CARBON NEUTRAL CERTIFIED
EnergyAustralia
Jetstar.com
All day, every day, low fares
KNAUF
sustainable living FABRICS
Carbon Market Institute
QANTAS
Spirit of Australia
Virgin australia
Imagine ENVIRONMENT PEOPLE FUTURE
2018 HANZ CONFERENCE
CORINDA STATE HIGH
ndevr environmental
CLIMATE LEADERSHIP CONFERENCE
15 - 16 MARCH 2018, SYDNEY
Real Utilities
tigerair
Castrol
VECTON

Benefits of Offsetting

- Certified organisations purchase ~2.4mn t of carbon offsets each year
- Additional benefits:
  - In Australia: indigenous communities and/or biodiversity.
  - International projects: environmental or social outcomes linked with SDGS.

Australian Government
Department of the Environment and Energy

Emissions Reduction Fund Safeguard Mechanism

Greenhouse Gas Emissions from Onshore Shale Gas Workshop

How the Safeguard Mechanism works

- Sets emissions limits (‘baselines’) on large facilities (>100,000 tonnes carbon dioxide equivalent per year) that report under the National Greenhouse and Energy Reporting Scheme (NGER)

- Each facility must keep emissions below their baseline, or surrender enough Australian Carbon Credit Units to make up the difference

A brief history of the Safeguard Mechanism

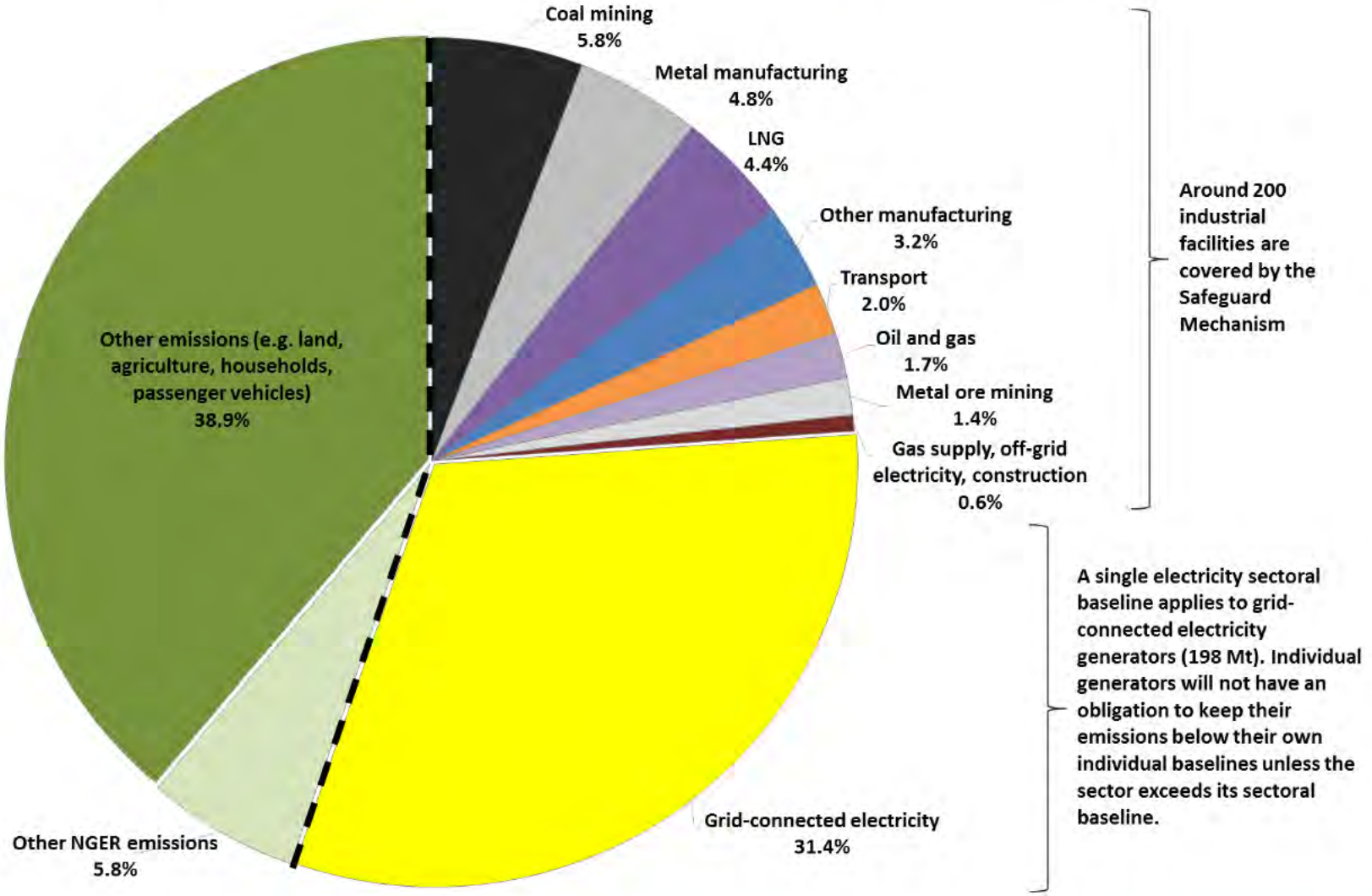
2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
ERF green paper And ERF white paper	ERF legislation enacted Safeguard Consultation Paper (2015)	Safeguard Rule and Regulations made	First year of operation	2017 Review of Climate Change Policies Safeguard Consultation Paper (2018)	

NGER Act	• *National Greenhouse and Energy Reporting Act 2007*
Safeguard Rule	• *National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015*
NGER Regulations NGER (Audit) Determination	• *National Greenhouse and Energy Reporting (2015 Measures No. 2) Amendment Regulation 2015* • *National Greenhouse and Energy Reporting (Audit) Amendment Determination 2015 (No.1)*

Current settings - coverage

- Safeguard applies to NGER facilities that emit more than 100,000 t CO_2-e per year
- The ‘responsible emitter’ is the person with operational control of the facility
- Grid-connected electricity generators are subject to a ‘sectoral baseline’ (198 Mt). Generators do not have obligations unless the sectoral baseline is exceeded, which is unlikely in the foreseeable future

Australian emissions 2016-17



Baselines - overview

'Reported-emissions baseline'

High point of historical emissions (2009-10 to 2013-14)

'Calculated-emissions baseline'

Audited forecast of emissions

Initial calculated baseline criteria

New facility criteria

Significant expansion criteria

Inherent emissions variability criteria

POST 2020

'Production-adjusted baseline'

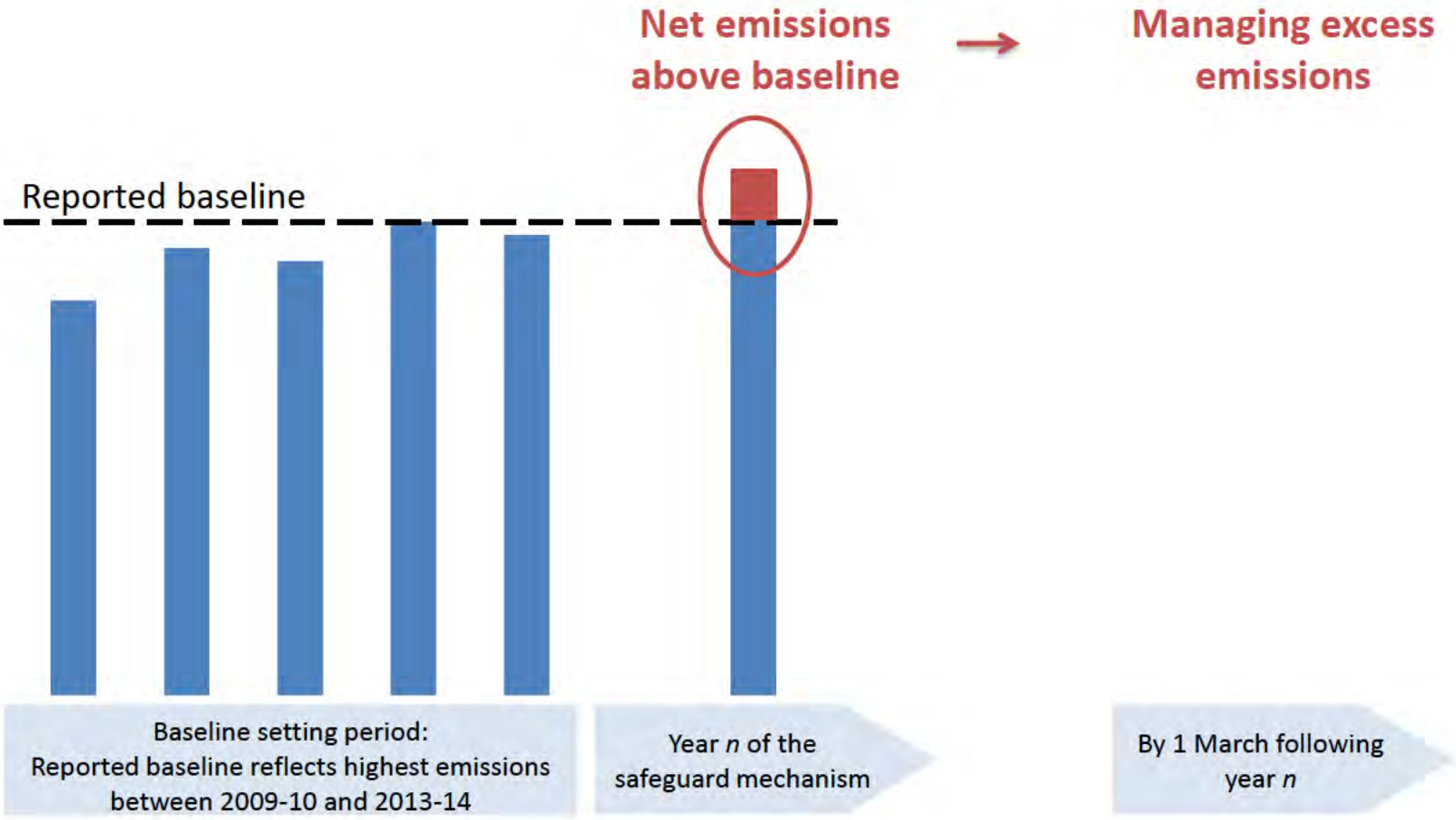
Updated for actual production (one-off)

'Benchmark-emissions baseline'

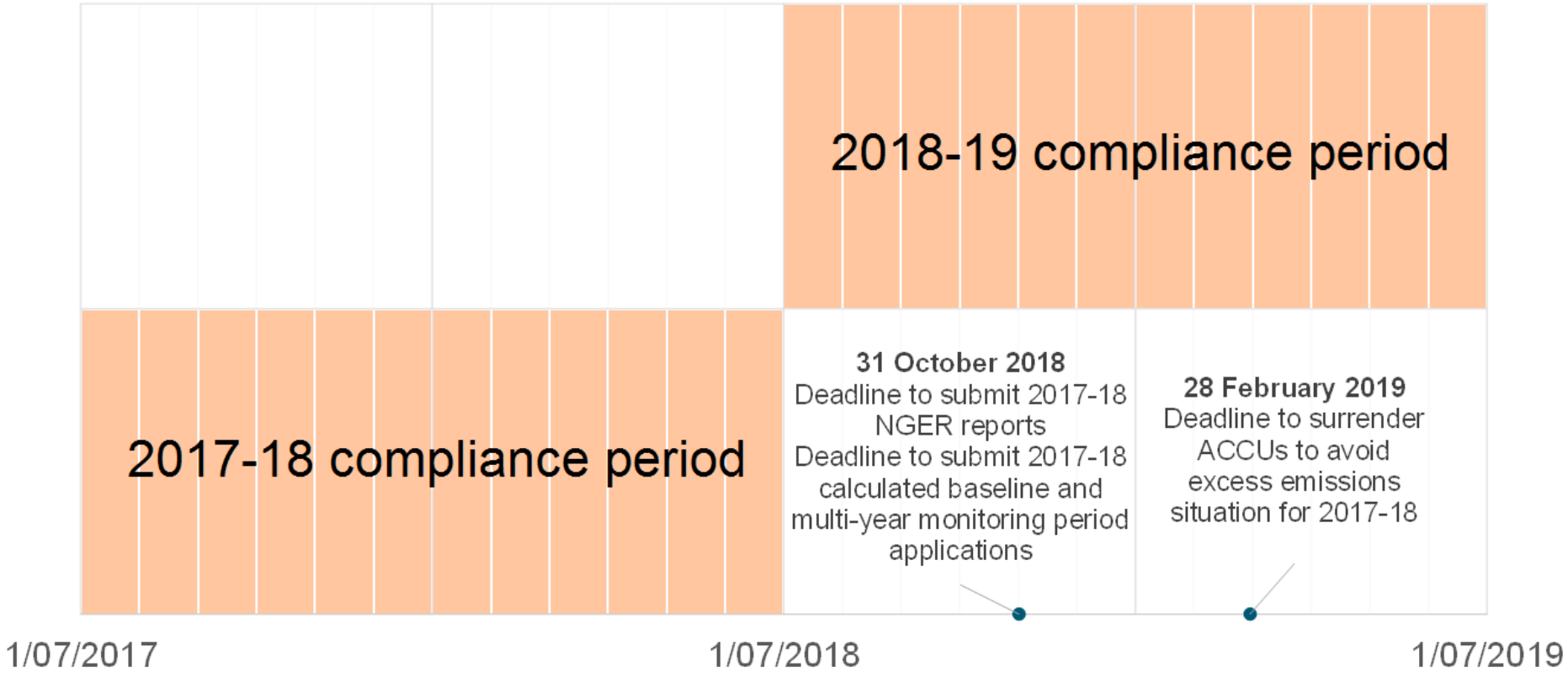
Best practice emissions intensity

Default 100,000 t CO_2-e

Excess emissions



Safeguard compliance dates



Publication of information

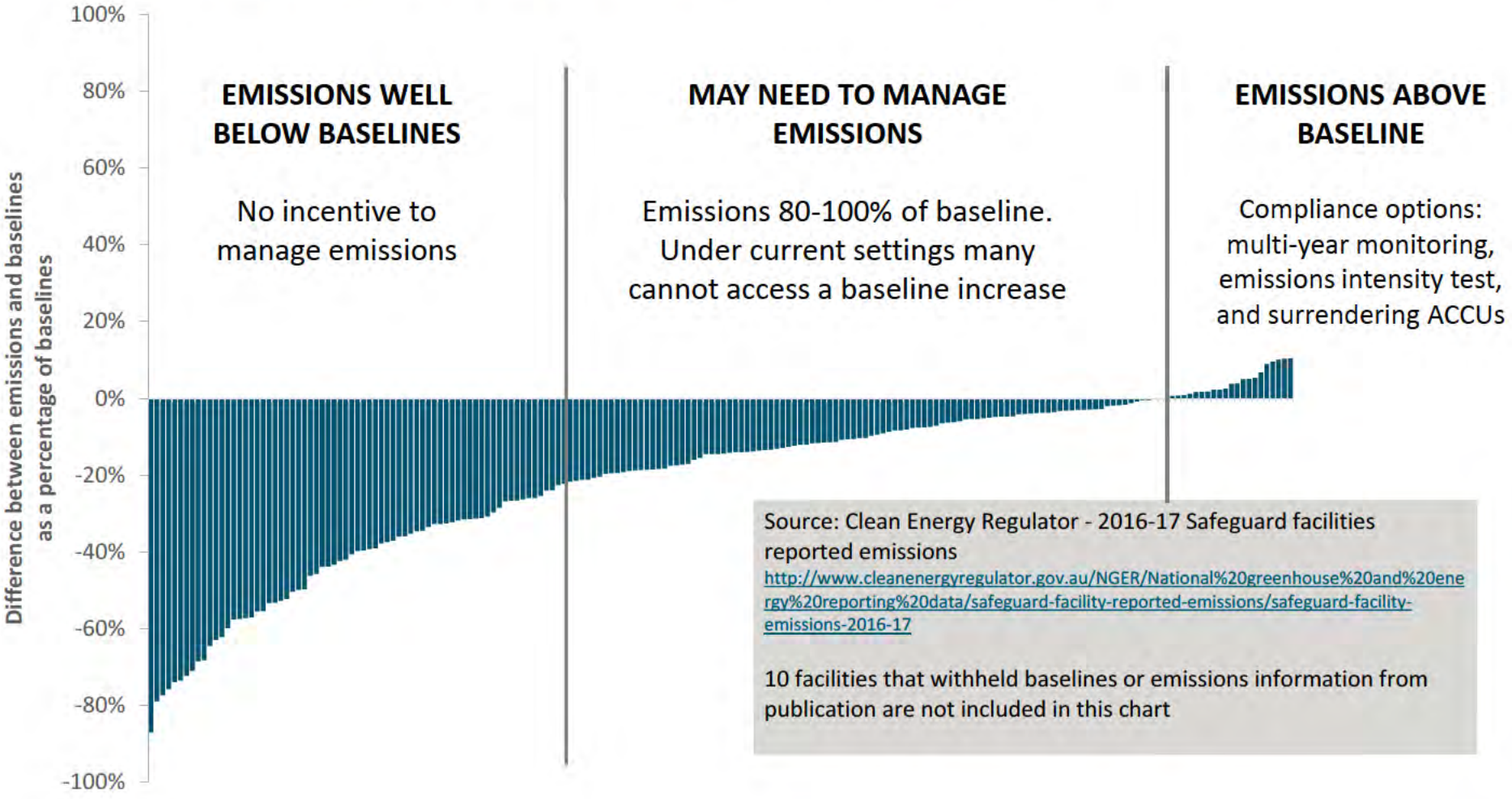
2016-17 Safeguard facility data

This spreadsheet contains all information related to facilities covered by the safeguard mechanism in 2016-17.

Data as at: 14/3/2018

Facility name	State of operation	Responsible emitter	Responsible emitter ABN/ACN	Baseline number	Type of baseline	Reported covered emissions	Australian carbon credit units surrendered
Angaston Operations	SA	Adelaide Brighton Ltd.	15 007 596 018	withheld	Reported Baseline	withheld	withheld
APLNG LNG Facility	QLD	CONOCOPHILLIPS AUSTRALIA PTY LTD	86 092 288 376	2,599,192	Calculated Baseline	1,906,267	0
APN01 Appin Colliery - ICH Facility	NSW	ENDEAVOUR COAL PTY LIMITED	38 099 830 476	3,960,227	Reported Baseline	2,384,840	0
APU01 Pyrenees - AOA Facility	WA	BHP BILLITON PETROLEUM PTY LTD	97 006 918 832	1,765,149	Multi-year monitoring period	592,482	0
ARC01 Mining Area C - MNG Facility	WA	BHP BILLITON IRON ORE PTY. LTD.	46 008 700 981	354,064	Calculated Baseline	307,622	0
Ashton Coal Mine (Underground)	NSW	ASHTON COAL OPERATIONS PTY LIMITED	22 078 556 500	501,235	Reported Baseline	339,443	0
ATCO Gas Australia Pty Ltd	WA	ATCO Gas Australia GP Pty Ltd	76 151 245 779	159,142	Calculated Baseline	165,165	6,023
Aurizon Rail Freight NSW	NSW	AURIZON OPERATIONS LIMITED	47 564 947 264	134,160	Calculated Baseline	104,248	0
Aurizon Rail Freight QLD	QLD	AURIZON OPERATIONS LIMITED	47 564 947 264	418,007	Reported Baseline	167,793	0
AusNet Gas Services	VIC	AusNet Gas Services Pty Ltd	43 086 015 036	169,898	Reported Baseline	163,901	0
Austar Coal Mine (Underground)	NSW	Austar Coal Mine Pty Limited	67 111 910 822	211,460	Reported Baseline	113,723	0
Australian Gas Networks (SA) Ltd	SA	Australian Gas Networks Limited	19 078 551 685	300,947	Reported Baseline	206,161	0
Australian Gas Networks (Vic) Pty Ltd	VIC	Australian Gas Networks Limited	19 078 551 685	317,176	Reported Baseline	272,892	0
AWR Rail Freight WA	WA	AUSTRALIA WESTERN RAILROAD PTY LTD	39 094 792 275	216,451	Reported Baseline	169,479	0
Ballera	QLD	Santos Limited	80 007 550 923	439,404	Reported Baseline	156,057	0
Bell Bay Smelter	TAS	RIO TINTO ALUMINIUM (BELL BAY) LIMITED	91 009 483 201	365,384	Calculated Baseline	355,174	0
Beltana / Blakefield South	NSW	BULGA COAL MANAGEMENT PTY LIMITED	48 055 534 391	3,314,944	Calculated Baseline	2,677,829	0
Bengalla Operations	NSW	Bengalla Mining Company Pty Limited	32 053 909 470	443,494	Reported Baseline	429,011	0
Big Lake Gas	SA	Santos Limited	80 007 550 923	140,474	Reported Baseline	121,642	0
Birkenhead Operations	SA	Adelaide Brighton Ltd.	15 007 596 018	withheld	Reported Baseline	withheld	withheld
Blackwater Mine	QLD	BM Alliance Coal Operations Pty Limited	67 096 412 752	768,909	Calculated Baseline	626,090	0
Boddington Mine	WA	NEWMONT BODDINGTON PTY LTD	32 062 936 547	208,038	Reported Baseline	207,938	0
Boggabri Coal Minesite	NSW	BOGGABRI COAL PTY LIMITED	77 122 087 398	186,032	Calculated Baseline	183,750	0
Boyne Smelters Limited	QLD	RIO TINTO ALUMINIUM LIMITED	51 009 679 127	1,052,982	Reported Baseline	996,650	0
Brockman 2 / Nammuldi Mines	WA	Hamersley Iron Pty. Limited	49 004 558 276	316,854	Calculated Baseline	266,172	0
Brockman 4 Mine	WA	Hamersley Iron Pty. Limited	49 004 558 276	144,745	Calculated Baseline	135,344	0
Bulga Opencut	NSW	BULGA COAL MANAGEMENT PTY LIMITED	48 055 534 391	673,617	Reported Baseline	441,453	0
CAN01 Cannington Silver and Lead Mine	QLD	South32 Cannington Proprietary Limited	48 125 530 967	143,326	Reported Baseline	123,826	0
Capcoal Mine	QLD	ANGLO COAL (CAPCOAL MANAGEMENT) PTY	73 010 037 564	1,979,964	Calculated Baseline	2,113,068	133,104

Safeguard operation in 2016-17



Source: Clean Energy Regulator - 2016-17 Safeguard facilities reported emissions
http://www.cleanenergyregulator.gov.au/NGER/National%20greenhouse%20and%20energy%20reporting%20data/safeguard-facility-reported-emissions/safeguard-facility-emissions-2016-17

10 facilities that withheld baselines or emissions information from publication are not included in this chart

Consultation paper and amendments

Sets out an approach with three elements:

Transition to Calculated Baselines

Transition all facilities to calculated baselines over 2018-19 and 2019-20

Introduce Optional Default Parameters

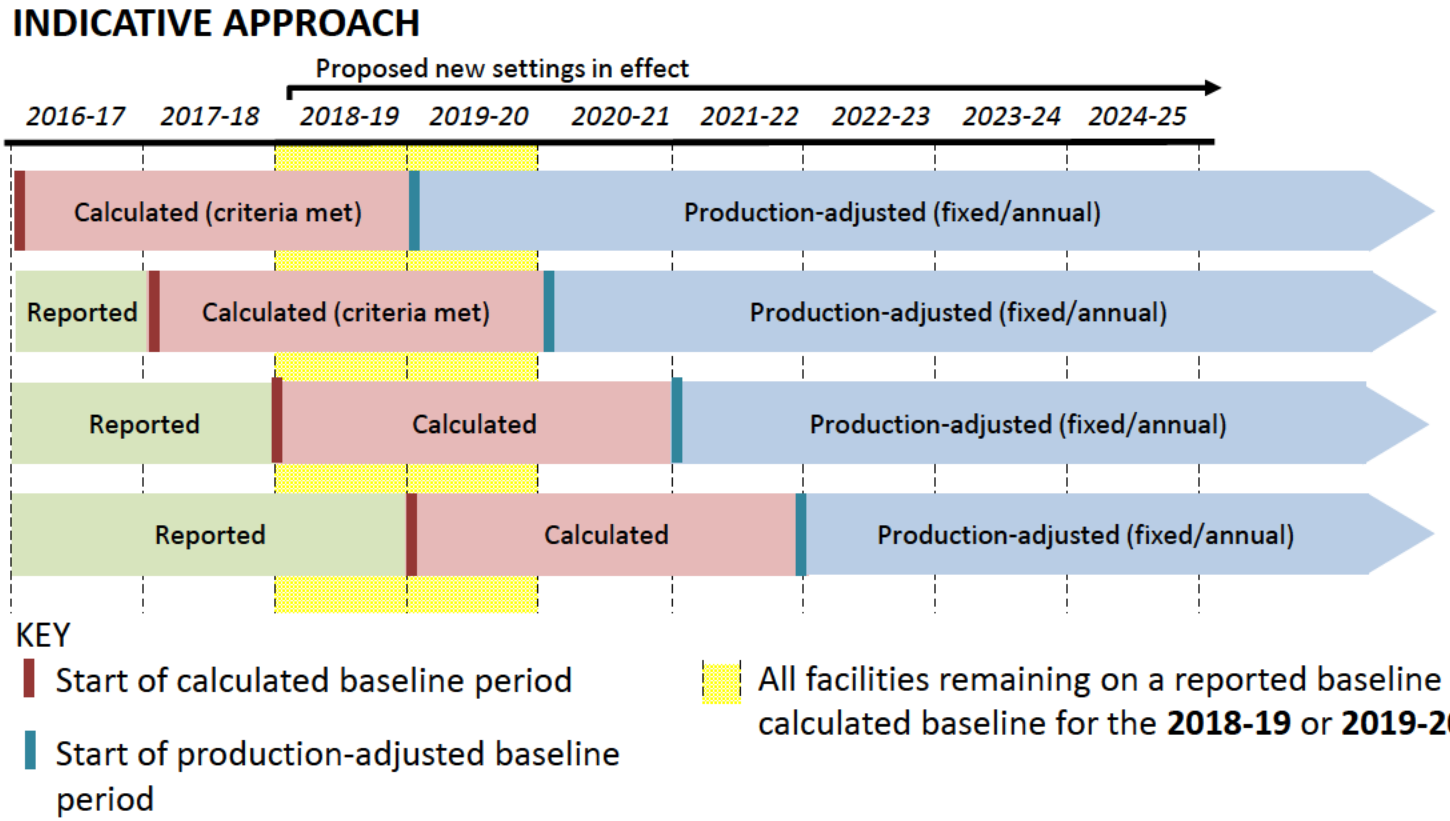
Option to use default production variables and emissions intensities

Annually Update Baselines for Actual Production

Update baselines annually
Requires reporting production data

Transitioning to calculated baselines

Facilities transition in 2018-19 or 2019-20



Optional default parameters

- Default options make applications simpler.
- Defaults remove the need to forecast emissions intensity.

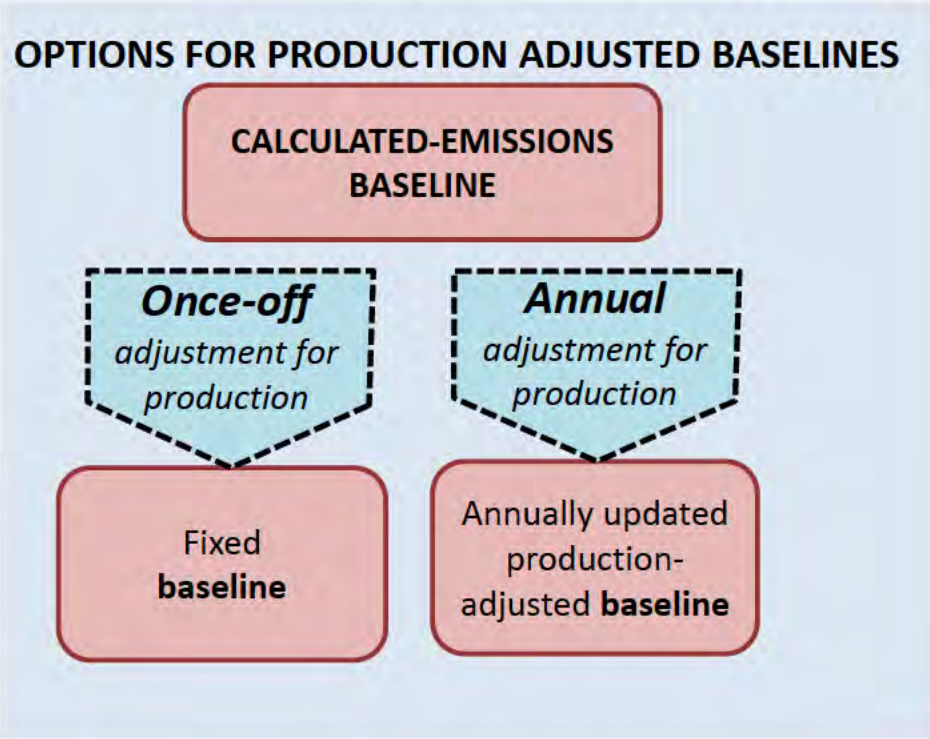
CALCULATED BASELINE = Quantity of Production Variable ✖ Emissions Intensity of Production Variable

Government develops default production variables

Government develops default EI values

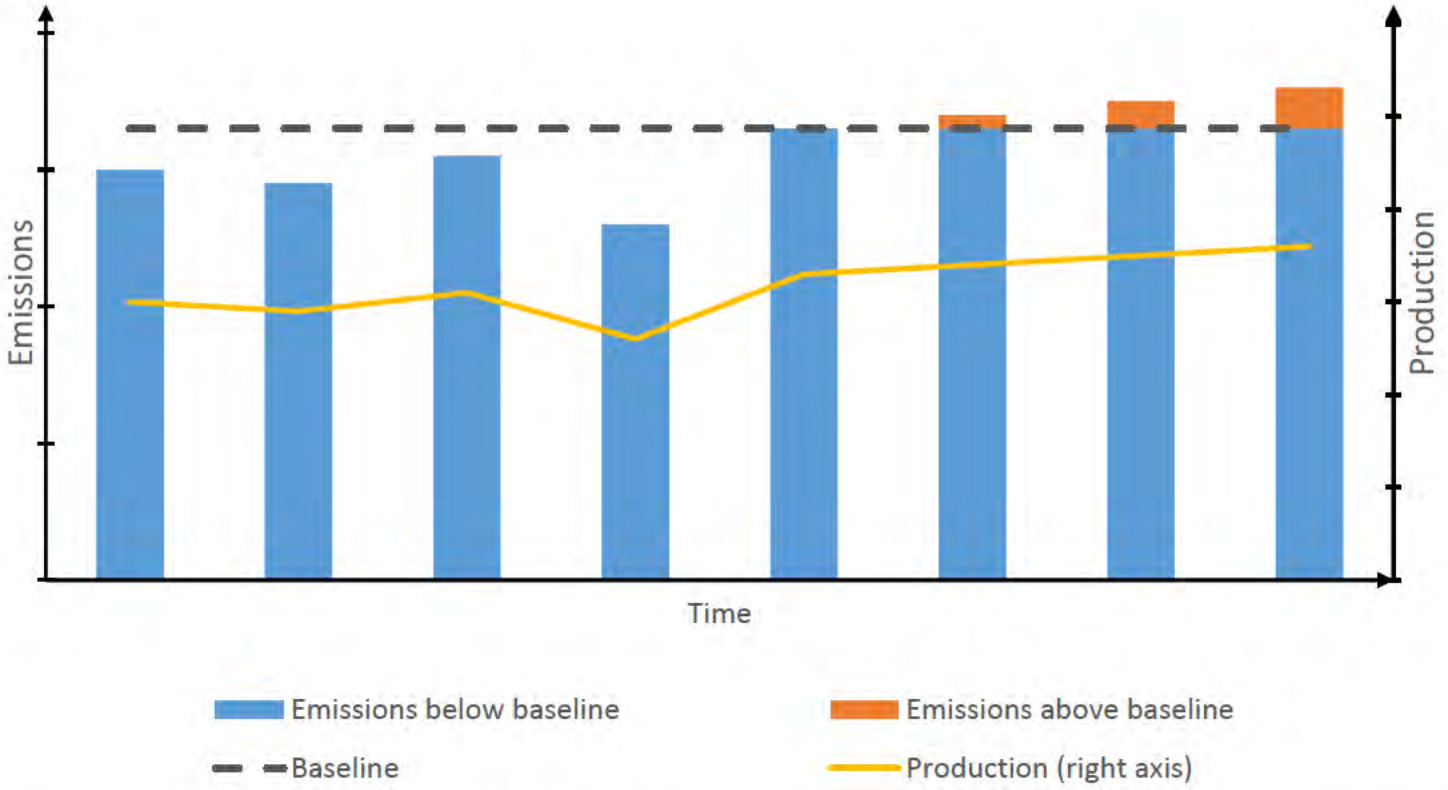
Updating for production

- Amendments will introduce annually updated production-adjusted baselines



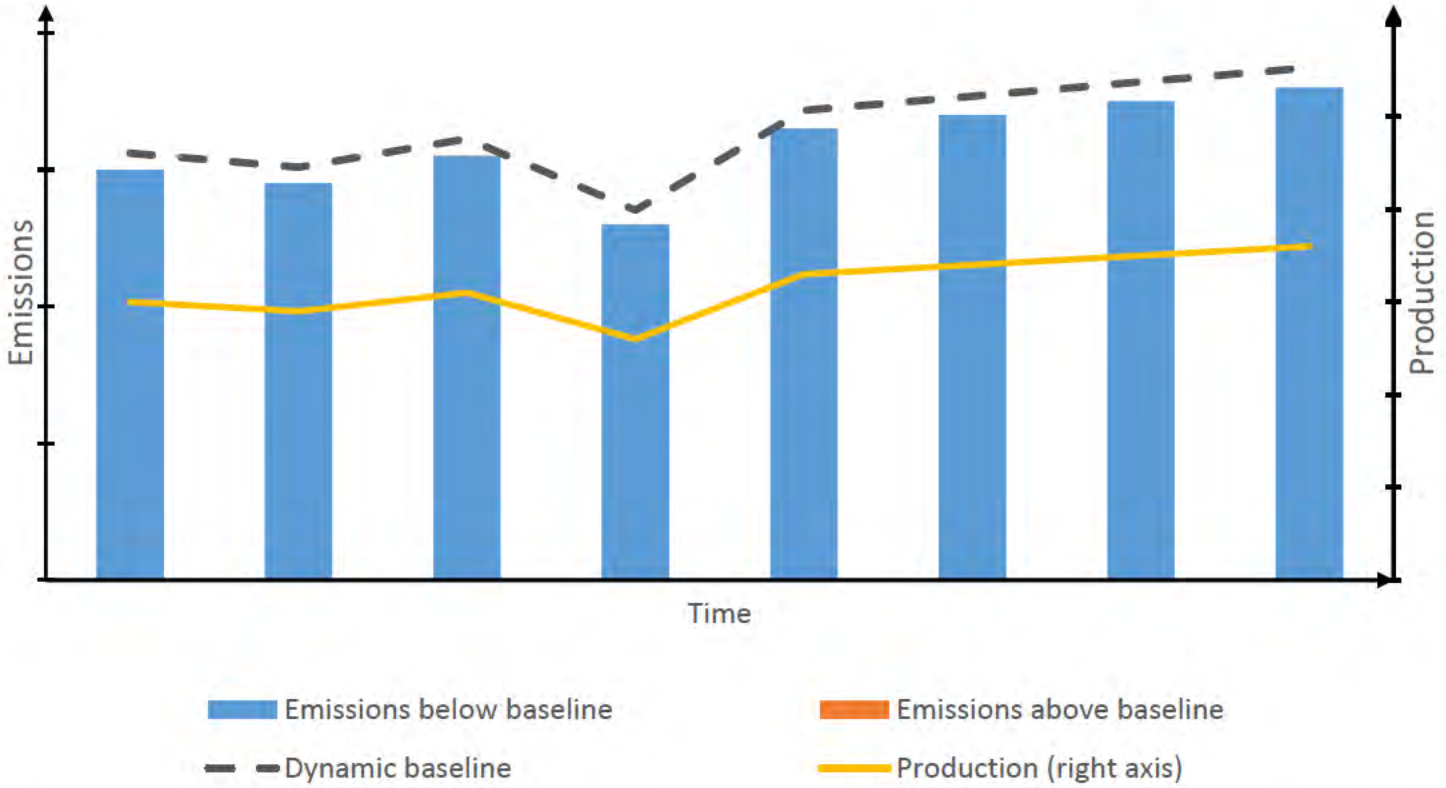
Current approach

Example: fixed baseline



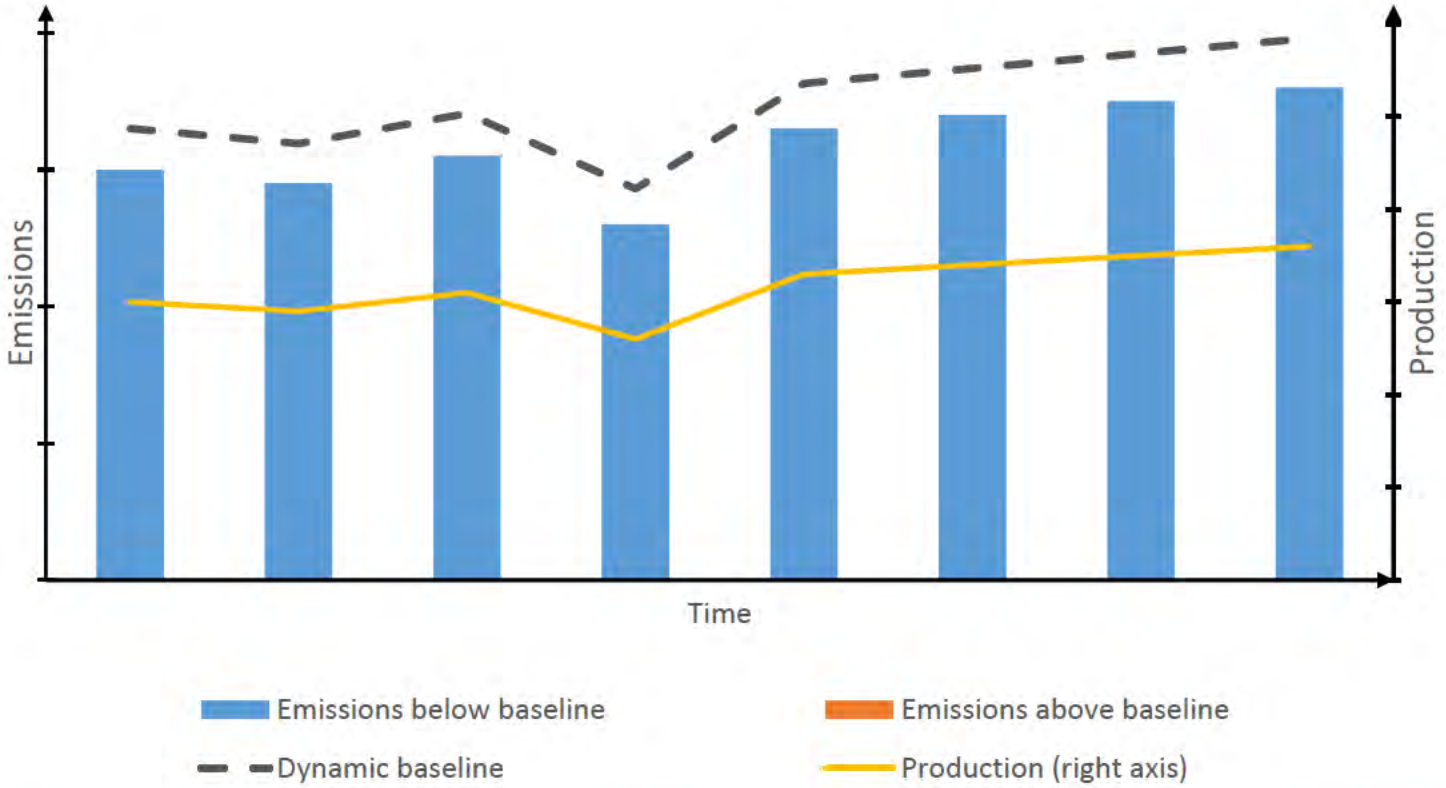
Consultation Paper

Example: baseline updated using production (baseline set using site-specific emissions intensity)



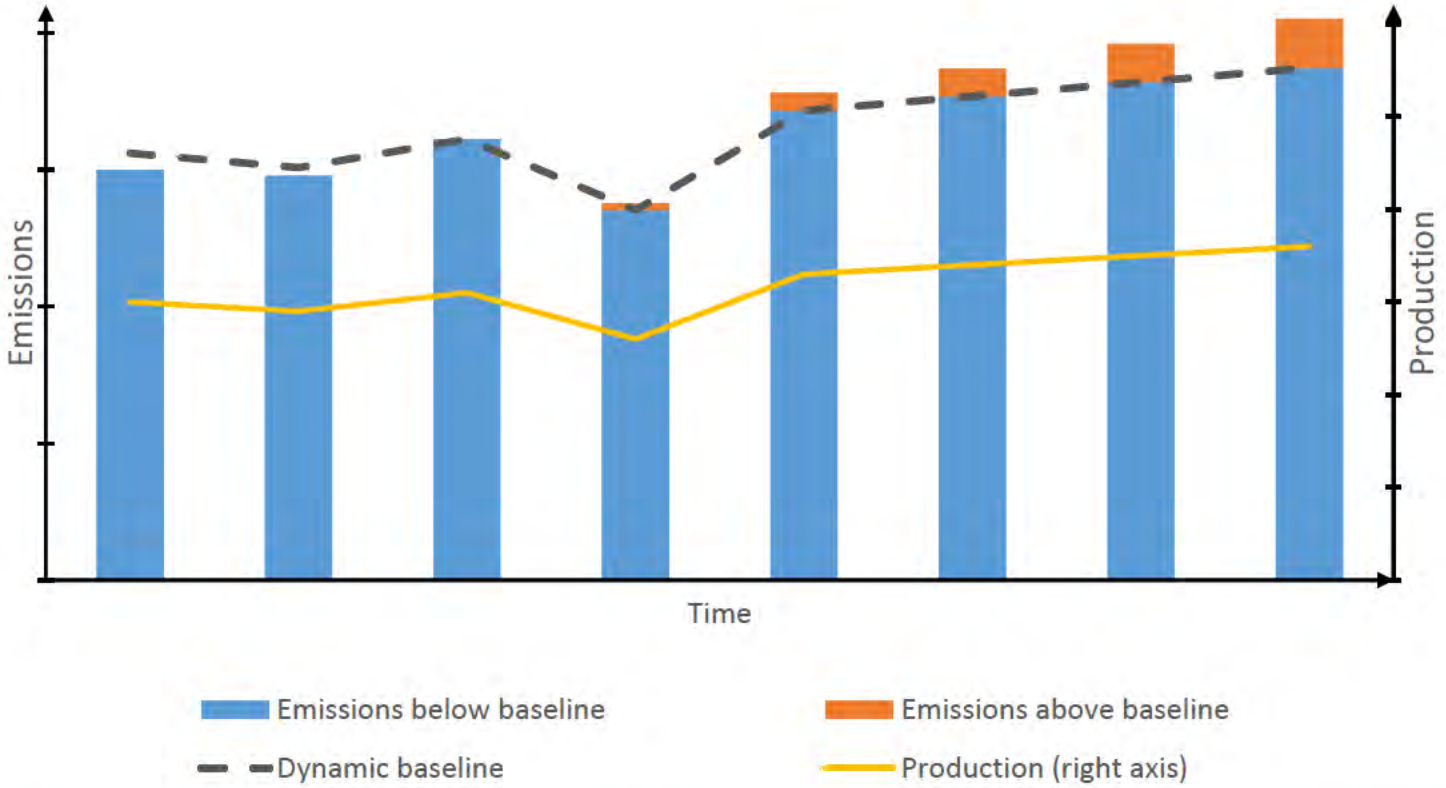
Consultation Paper

Example: baseline updated using production (baseline set using default emissions intensity)



Consultation Paper

Example: baseline updated using production (facility has worsening emissions intensity)



Safeguard Mechanism - next steps

Amendments to Safeguard Rule

- Expect amendments to be made soon

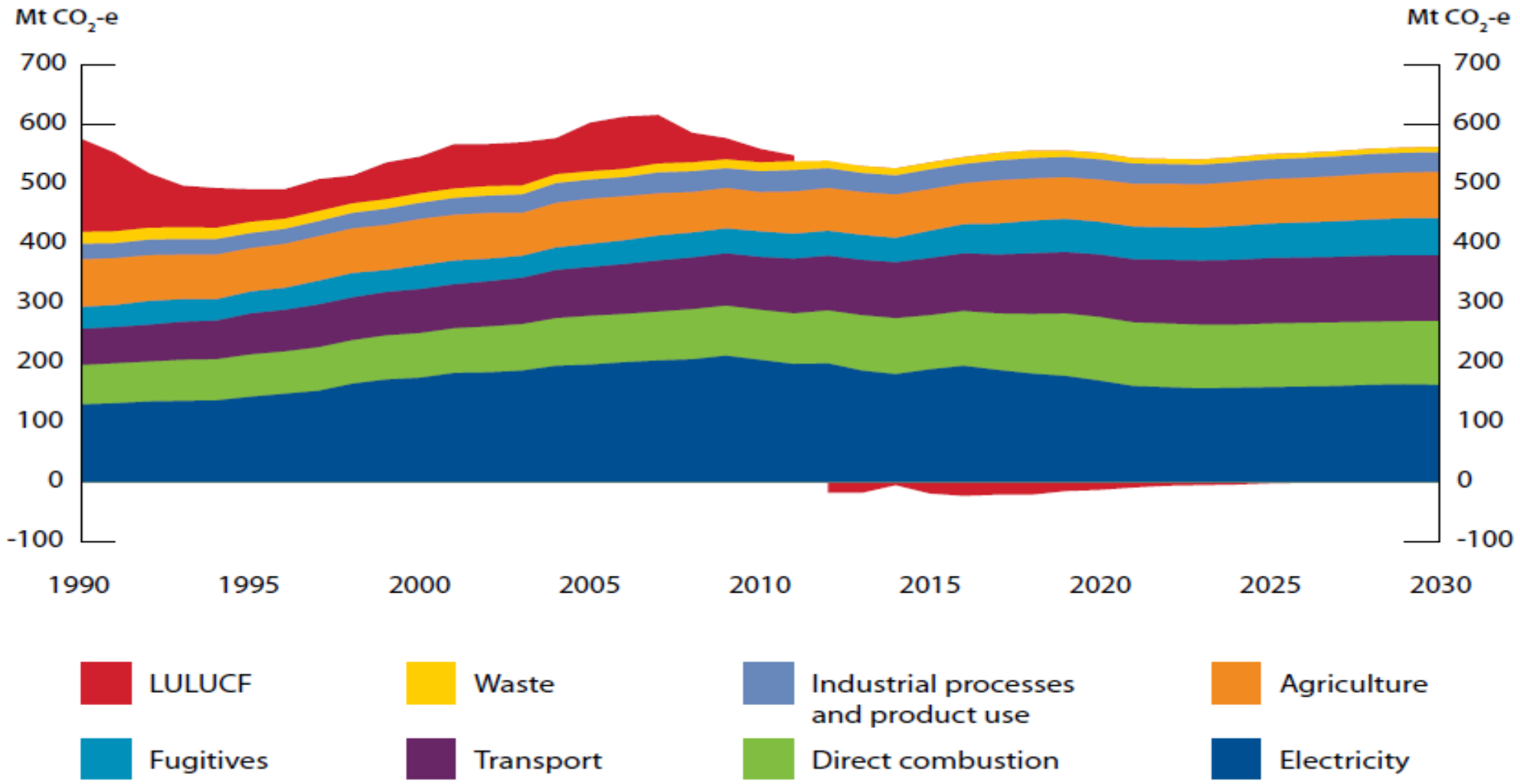
Default production variables and emissions intensities

2020 Review

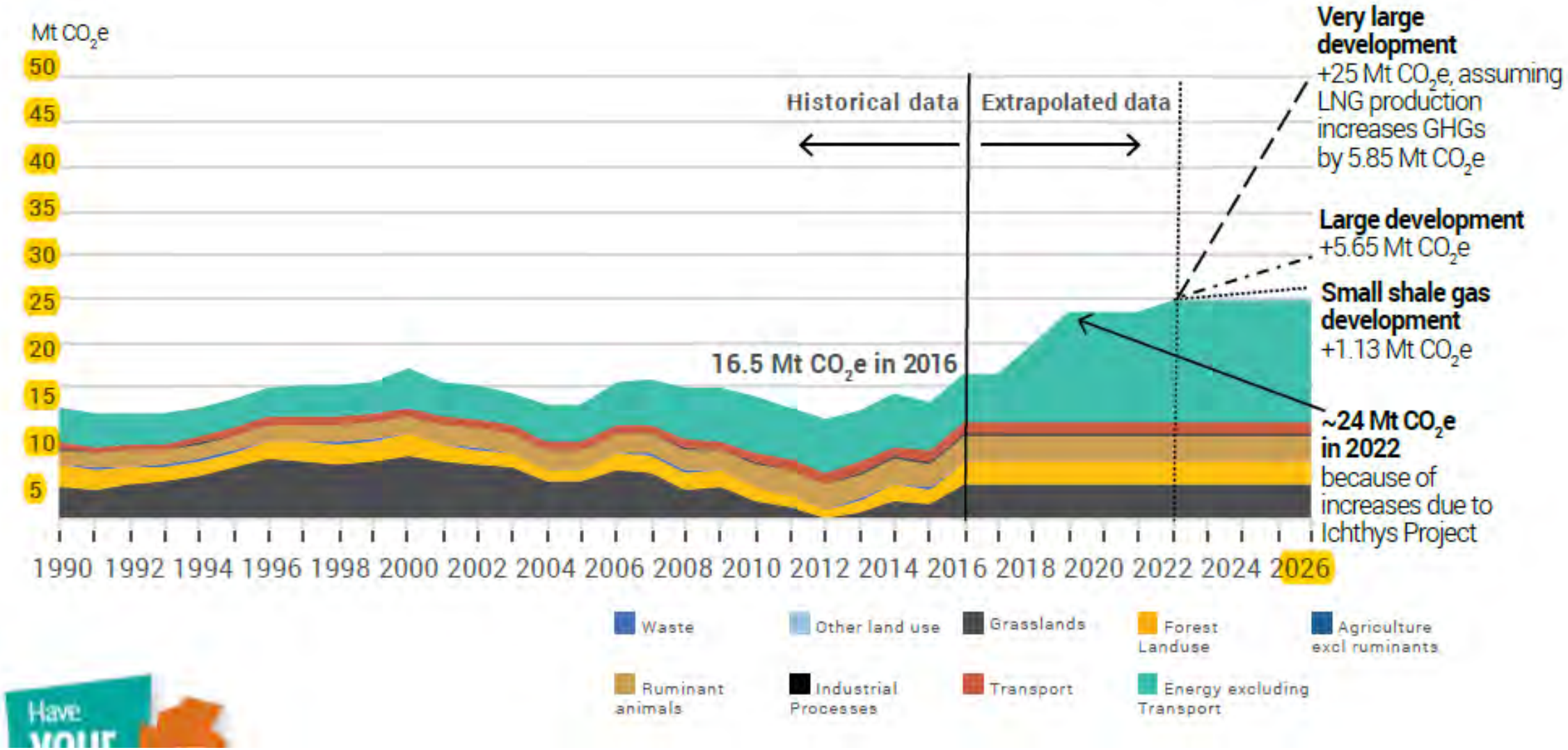
- As highlighted in the 2017 review, the next review of the Safeguard Mechanism will be by 2020 and then as part of the five yearly review and refine cycle
- Will consider any updates to rules and regulations, in the context of progress toward Australia's 2030 Paris target, including when and how international units can be used and under what conditions, and appropriate lead times

Australian Government
Department of the Environment and Energy

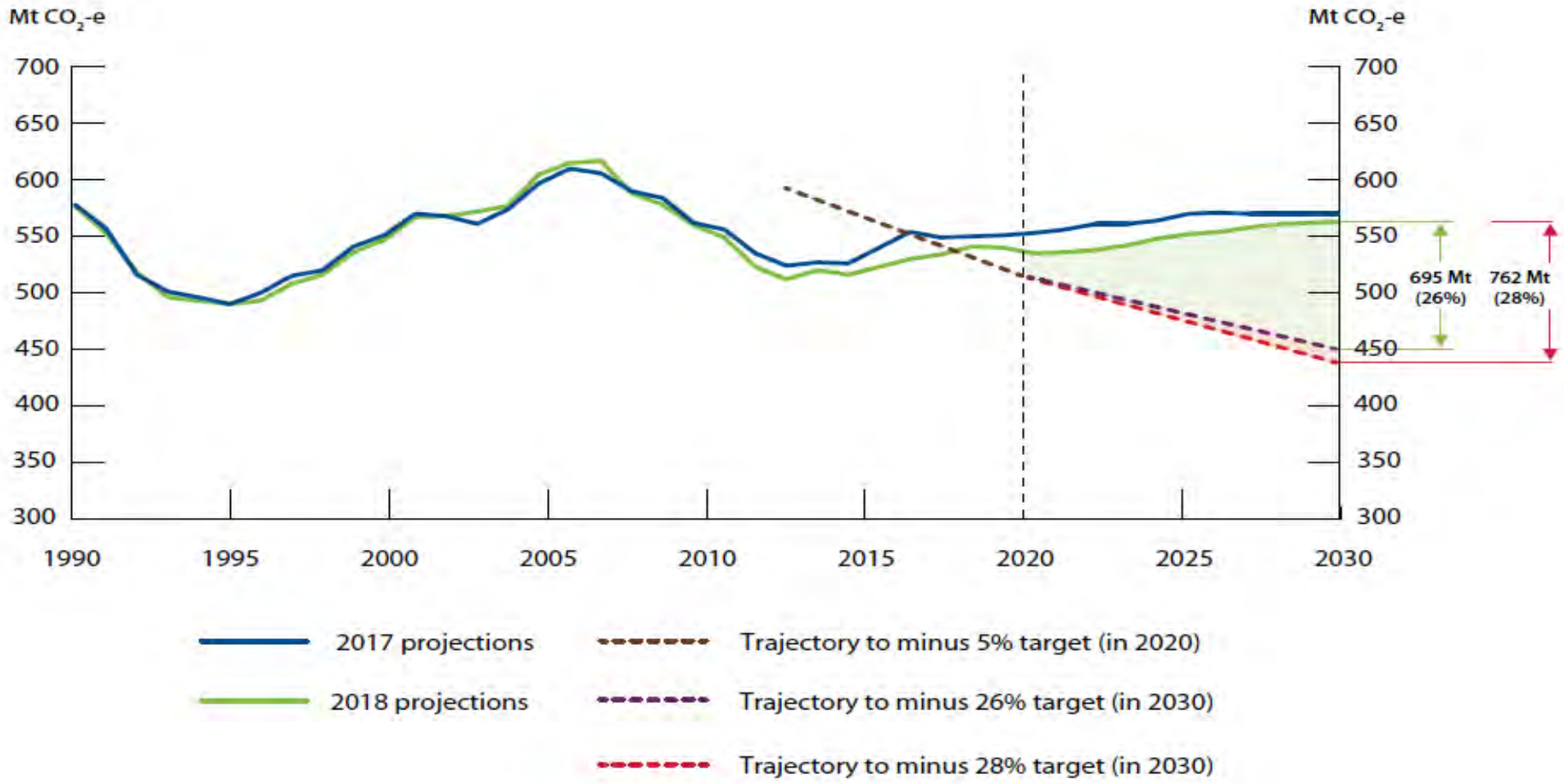
Greenhouse Gas Emissions from Onshore Shale Gas Workshop



Australia's emissions 1990-2030 – sectoral breakdown



NT emissions 1990-2026 – sectoral breakdown



Australia's emissions trends, 1990 to 2030

Australian Government
Department of the Environment and Energy

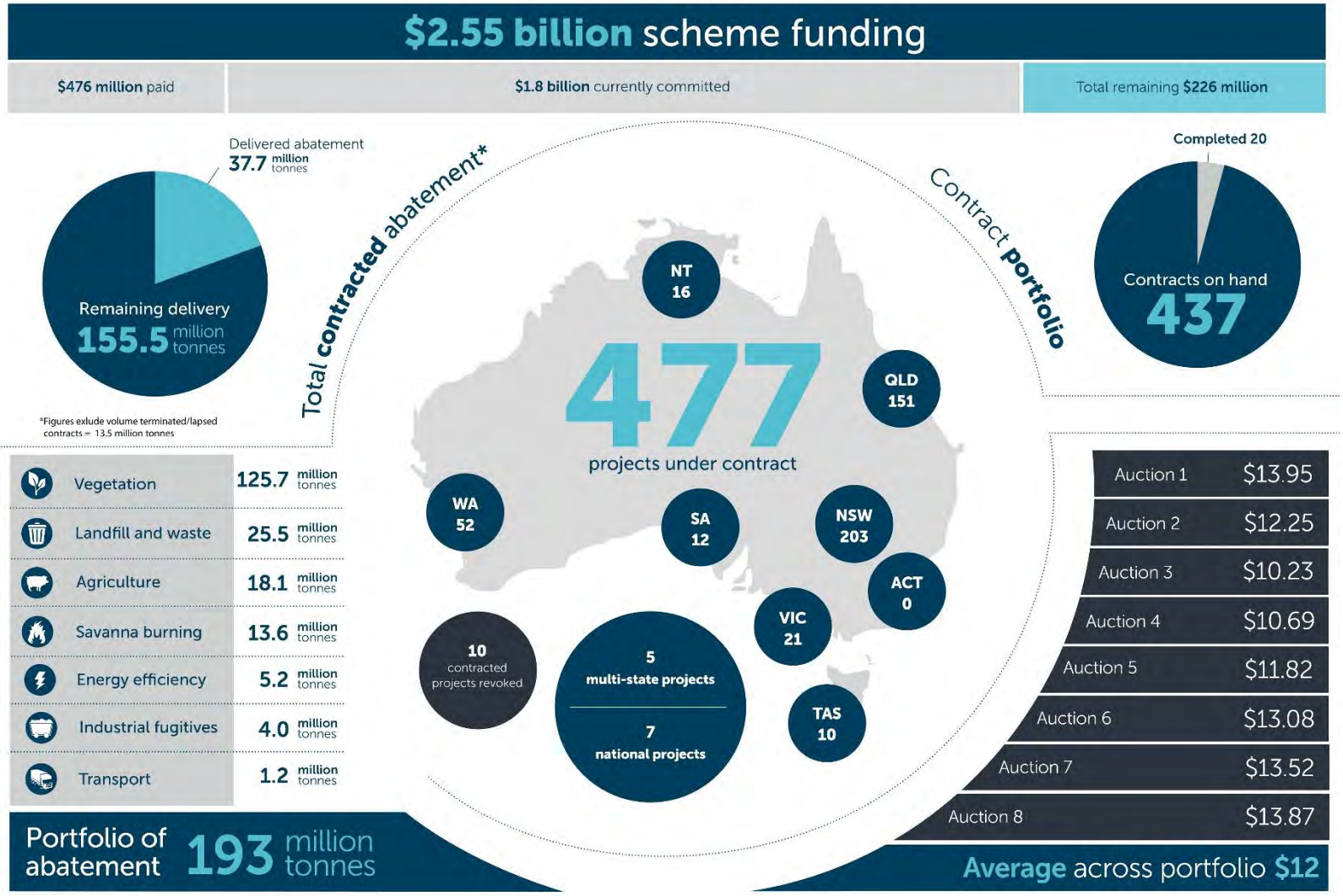
Overview of the ACCU market

Greenhouse Gas Emissions from Onshore Shale Gas Workshop

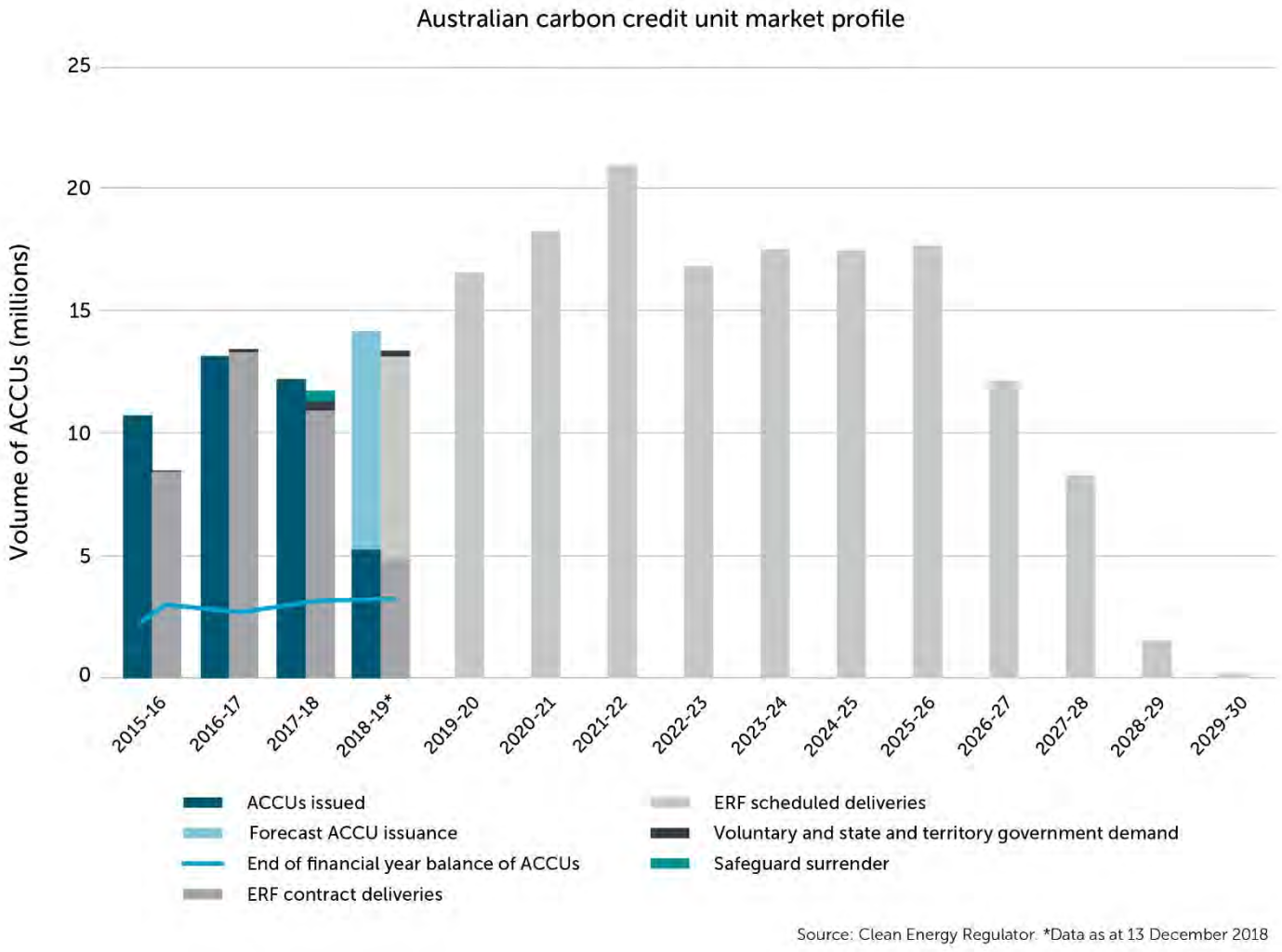
Australian Carbon Credit Units

- Australian Carbon Credit Units (ACCUs) are issued for ERF projects
- An ACCU represents a tonne of abatement
- Where there is an ERF contract, ACCUs can be delivered to the Government for payment
- ACCUs can also be sold on the ‘secondary market’

ERF contract portfolio

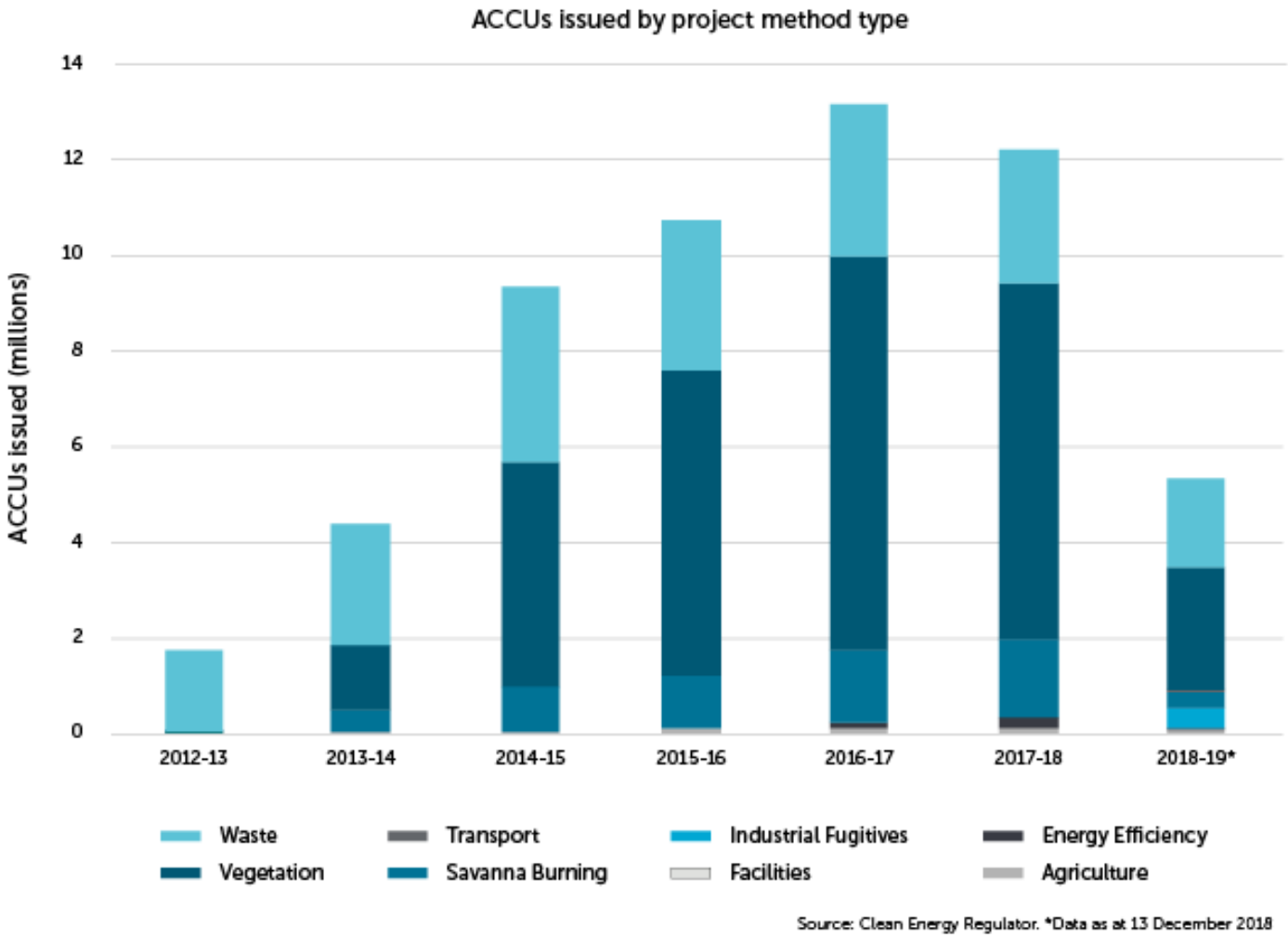


ACCU supply and demand



Source: Clean Energy Regulator. *Data as at 13 December 2018

ACCU supply



Source: Clean Energy Regulator. *Data as at 13 December 2018

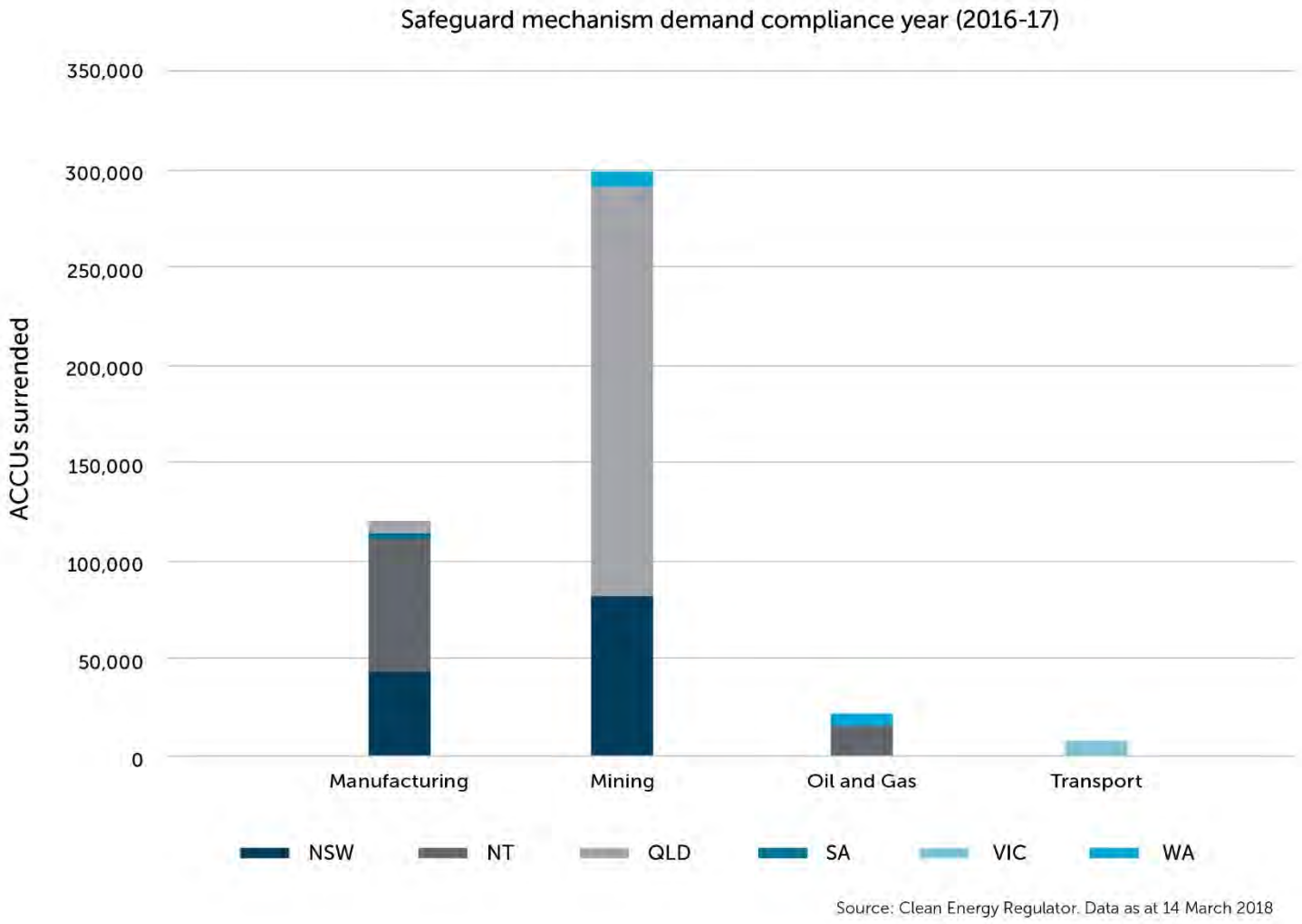
ACCUs – sources of demand

- Emissions Reduction Fund compliance
- Safeguard Mechanism compliance
- Voluntary demand
- State and territory governments

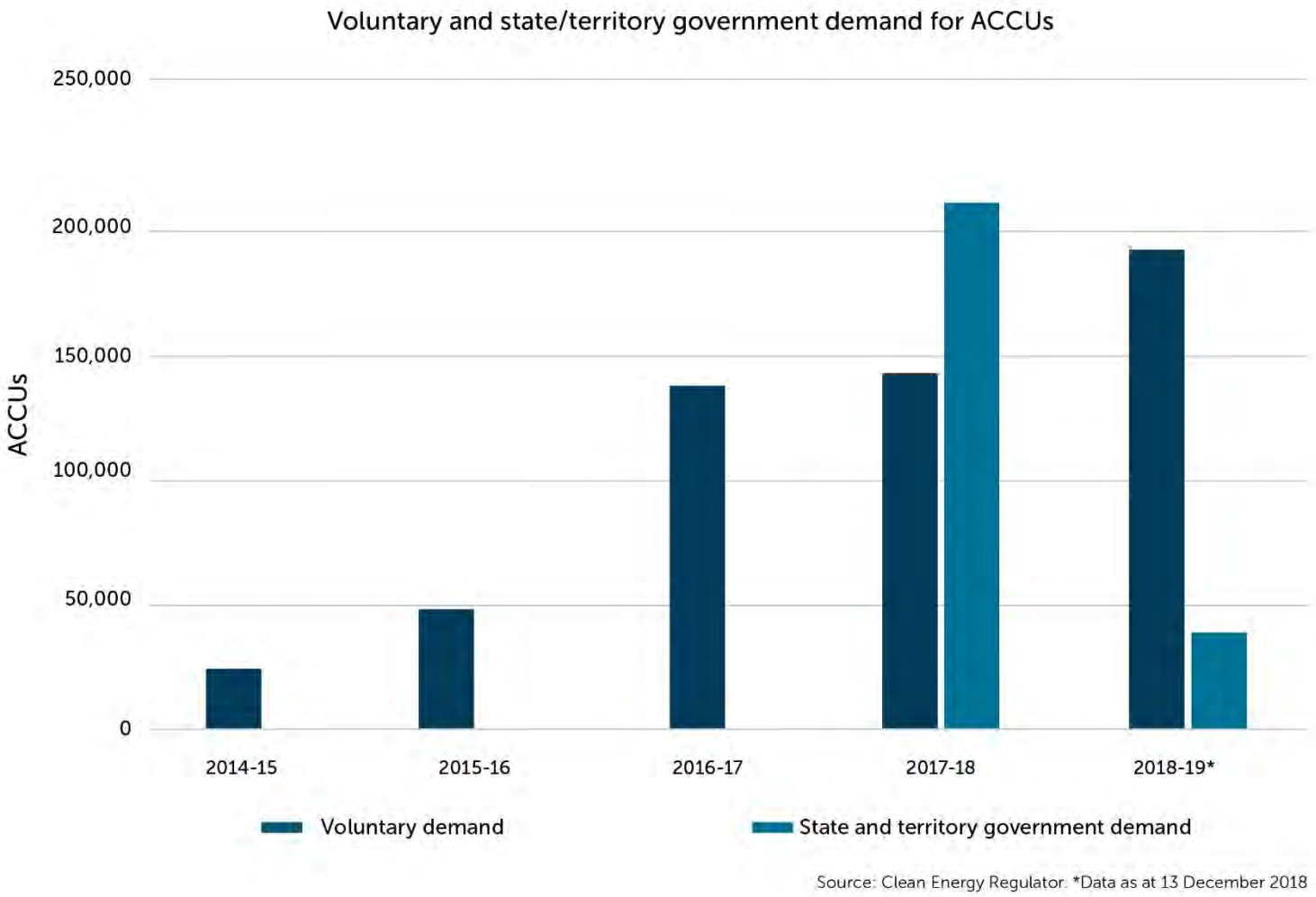
Demand for ACCUs in 2017-18 and 2018-19 (as at 13 December 2019) by source

Demand Source	2017–18	2018–19 (to date)
Emissions Reduction Fund contracts	10.92 million	4.87 million
Safeguard mechanism (compliance year 2016–17)	0.45 million	-
State and territory government demand	0.21 million	0.04 million
Voluntary demand	0.14 million	0.19 million

Safeguard Mechanism compliance



Voluntary, state/territory government demand



Sourcing ACCUs

Suppliers of ACCUs can be found via:

- Carbon Market Institute's Carbon Marketplace
- Emissions Reduction Fund project register

Note: ERF projects have long lead times (1-1.5 years from project registration to first credit delivery)

s22

From: Edwina Johnson
Sent: Friday, 1 November 2019 10:36 AM
To: s22
Cc: s22
Subject: FW: Greenhouse Gas Emissions workshop outcomes and presentations - 7 and 8 February 2019 [SEC=OFFICIAL]
Attachments: Workshop Outcomes NTG and DoEE- 7 and 8 February 2019.docx

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From: s22 @nt.gov.au] **On Behalf Of** Hayley Richards
Sent: Wednesday, 6 March 2019 10:48 AM
To: s22 @csiro.au; s22 nt.gov.au>; Brett Easton <Brett.Easton@nt.gov.au>; s22 @nt.gov.au>; s22 @nt.gov.au>; Edwina Johnson <Edwina.Johnson@environment.gov.au>; Kristin Tilley <Kristin.Tilley@environment.gov.au>; s22 @environment.gov.au>; s22 @environment.gov.au>; s22 @environment.gov.au>; s22 @environment.gov.au>; s22 @nt.gov.au>; Giovina D'Alessandro <Giovina.D'Alessandro@nt.gov.au>; s22 @nt.gov.au>; s22 @nt.gov.au>; s22 @nt.gov.au>; Hayley Richards <Hayley.Richards@nt.gov.au>
Cc: Hydraulic Fracturing <Hydraulic.Fracturing@nt.gov.au>
Subject: Greenhouse Gas Emissions workshop outcomes and presentations - 7 and 8 February 2019

Good Morning All

Thank you for attending last month's workshop on Greenhouse Gas Emissions in Darwin.
Please find attached, the workshop outcomes and presentations from the workshop, that was held on the 7 and 8 February 2019.
We look forward to joining you in the next steps, comprising of initiating quarterly discussions to ensure alignment of work programs in achieving multi-jurisdictional solutions and, initiating communications on a regular basis at relevant officer level on specific matters.

Please note that a calendar invite for the next quarterly discussion will be sent out in due course

Warm regards

Hayley Richards
Executive Director

Hydraulic Fracturing Inquiry Implementation Taskforce
Department of the Chief Minister

Level 4, NT House, 22 Mitchell St, Darwin
GPO Box 4396, Darwin NT 0801

t. s22

dcm.nt.gov.au

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WORKSHOP OUTCOMES

Northern Territory and Commonwealth workshop:
Greenhouse gas emissions from onshore shale gas
Darwin, 7-8 February 2019

Attendees: Northern Territory Government: Department of the Chief Minister (DCM)- Hayley Richards, s22 , s22 , s22 , s22 (day 2); Department of Environment and Natural Resources(DENR) - s22 , s22 ; Department of Primary Industry and Resources(DPIR) - s22 , Brett Easton

Commonwealth Department of Environment and Energy (DoEE): Kristin Tilley, Edwina Johnson, s22 via teleconference (part of day 1).

CSIRO: s22 .

Workshop Objective:

- To build the NT level of understanding of Commonwealth policies and frameworks in relation to Greenhouse Gas emissions in the context of recommendation 9.8 from the final report of the Scientific Inquiry into Hydraulic Fracturing of Onshore Unconventional Reservoirs in the Northern Territory (the Inquiry).
- To seek agreement on way forward and future engagement in addressing the implementation of the recommendation.

Summary of key outcomes from the workshop:

- Established a better understanding of the Commonwealth's policy settings and implications of the implementation of recommendation from the Inquiry and the growth of the gas industry in the Northern Territory.
- Joint recognition that the NT carbon offsets will not be sufficient to address the growth of the gas industry and related emissions and that offsets may need to be sourced from other jurisdictions.
- Agreement to build channels of communication and networks between the NT and DoEE for a collaborative approach to working on innovative methods and options.
- Commitment to meet quarterly as a group and communicate regularly with key contacts on specific matters.

Day One

Agenda Item	Outcomes and Actions
· Welcome, introductions and context setting by Hayley Richards DCM and Kirstin Tilley DoEE	 Greenhouse Gas Emissions from Ons
Overview of 'Report of the Scientific Inquiry into Hydraulic Fracturing of Onshore Unconventional Reservoirs in the Northern Territory' (the Inquiry) and Northern Territory Government response · *Ensure all participants understand background and context to workshop, including work of the Independent inquiry, underpinning analysis, relevant recommendations, NT Government response, relevant discussions with industry in NT, timeframes and process for implementation of response*	· Presentation by s22 DCM on potential Greenhouse Gas emissions from onshore gas activities in the NT  Briefing on potential GHG emiss Overview by s22 DCM on development of an NT Climate Change Strategy and Offsets Framework and engagement with stakeholders. ACTION: Slides from all presentations to be emailed to Hayley Richards o s22 @nt.gov.au for circulation to all workshop attendees.
Development of Northern Territory guidelines for methane monitoring by the onshore petroleum industry · Provide an update on development of new technical guidelines for methane monitoring *Discussion:* Consideration of greenhouse gas emissions in environmental approvals and Commonwealth input regarding the overlay with NGER.	· CSIRO undertaking data collection for baseline monitoring in Beetaloo basin NT. CSIRO undertaking lifecycle analysis work for CSG in Queensland but the variability in conditions and facilities makes this challenging and it is not clear when CSIRO will finalise and/or publish this analysis. Lessons learnt by CSIRO in undertaking this CSG work may be relevant to any similar analysis undertaken in the NT. · CSIRO preparing Code of Practice for methane monitoring for NT Government to meet recommendations from Inquiry for be enforceable COP's under Petroleum legislation. Discussion on: the need to align CoP and National Greenhouse and Energy Reporting(NGER) requirements for data sets and basis for offsetting as well as ability to establish cumulative baselines and trends over time. Presentation by s22 DoEE on: the NGER and National Greenhouse Gas Inventory, its review and proposed changes for more transparent reporting and to incentivise better management.

Agenda Item	Outcomes and Actions
Coverage of emissions from onshore shale gas development and production in the National Greenhouse and Energy Reporting Scheme and National Greenhouse Gas Inventory *Ensure all participants understand scope of reporting of emissions from all stages of development and production, including data availability*	Discussion on the use of NGER as a national framework for reporting greenhouse gas emissions by corporations nationally. Beneficial for NTG, CSIRO and DoEE to have further discussions while CoP are being finalised and DoEE processes for NGER under review. ACTION: Circulate contact details of workshop attendees to facilitate ongoing dialogue.  National Greennhouse and E
Overview of Commonwealth policy frameworks, including Safeguard Mechanism, Emissions Reduction Fund and Carbon Neutral program · *Ensure all participants understand existing Commonwealth policy frameworks*	· Presentation on Carbon neutrality and the National Carbon Offset Standard by s22 · Offset units, international offsets, voluntary and compliance offsets schemes and appeal of co-benefits, targets and reporting Carbon Neutral Program · Standards for obtaining carbon neutral certification to meet sustainable development goals  Carbon Neutrality and the National Ca
Overview of Commonwealth policy frameworks, including Safeguard Mechanism, Emissions Reduction Fund and Carbon Neutral program (Continued) · *Ensure all participants understand existing Commonwealth policy frameworks*	· Presentation on the Emission Reduction Fund by Edwina Johnson on the crediting and purchasing by the Commonwealth of CO_2 offsets, governance of ERF, methods and potential projects, pricing.  Emissions Reduction Fund Pre  Emissions Reduction Fund Saf · Presentation by s22 on Emissions Reduction Fund Safeguard Mechanism for obtaining baselines of significantly large emitters (i.e. >100,000 tonnes of GHGs per annum) with review leading to amending changes to all calculated baselines rather than reported baselines. Potential part of a suite of options to reduce emissions by large emitters in the future.

Agenda Item	Outcomes and Actions
Developments on international units *Provide update on expected approaches to international units*	· Presentation by s22 on international units and overview of the ACCU markets with regards to Paris agreements, linked schemes. Source of demand, quality and eligibility of units to mitigate price risks.  International Units Presentation Clth.pd  Overview of the ACCU Market Preser
Briefing on Aboriginal Industry Carbon Strategy · *Provide update on Aboriginal Carbon Industry Strategy*	· Presentation by s22 DENR on NT Aboriginal Carbon Industry Strategy, history and existing projects, request of industry for a policy framework for certainty and stability. · Upcoming annual North Australia Savanna Fire and Carbon Forum at Charles Darwin University on 13 and 14 February.  Aboriginal Carbon Industry Strategy Pr ·

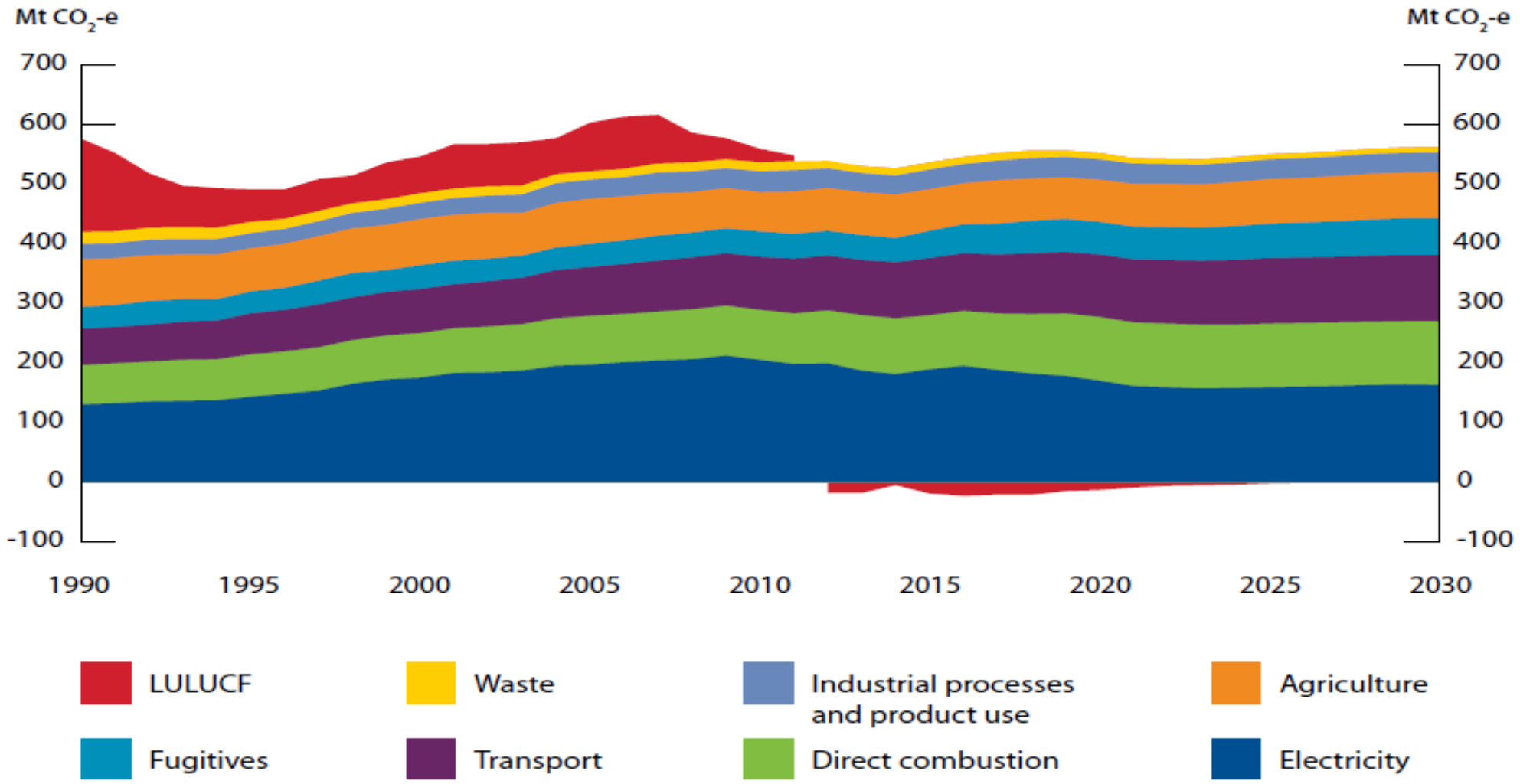
Day Two

Item	Outcome
Welcome and recap from Day One	Discussion on carbon capture and storage with regard to geology and research. · Presentation by s22 DCM on the development of an Offsets Framework for the NT with regard to new environment protection legislation, climate change strategy – mitigation & adaptation and potential NT offset strategy tiers. · ACTION: DoEE to provide contact with relevant officers to DCM with regards to EP&BC Act and Commonwealth offset program  Offsets Policy Update Presentatior Presentation by s22 CSIRO on overview of GSIERA overview and transparency protocols as well as lifecycle assessment project and challenges of the study including: commercial in confidence data; scope 1 and 2 emissions and displacement of other sources. Discussion included agreement that lifecycle of GHG can only be reliably considered in Australian.
Discussion on possible options to offset emissions from onshore shale gas · *Workshop possible benefits and costs of different options to offset emissions*	· Views, questions and discussions as captured on the white board – for further discussion: **Regulation and roles of players:** · What is the role of the regulators and clarifying role at National and NT level? · What are the three most important objectives (policy/political) ie who pays and what signals to industry? · Be mindful of scope creep · Evidence, science, collaboration and pragmatism of government and industry important elements

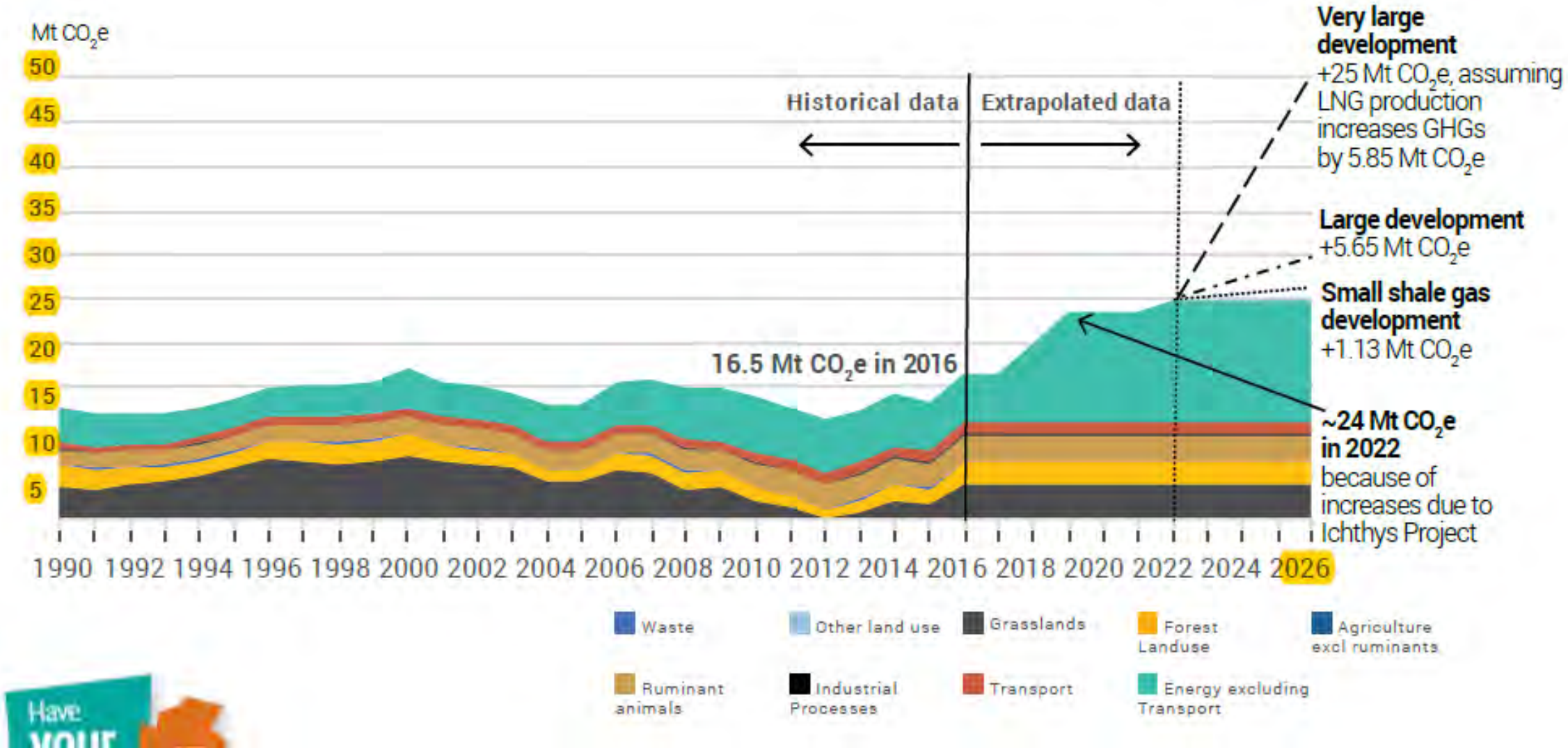
	Emissions: · What facility level options are there to reduce emissions – to minimise offset needs? Ie considering Energy side to processing and fugitive side. · How do we take a National approach to gas emissions lifecycle? · How to offset 40M (t) of emissions in Australia every year? · Consider sequencing with industry timing: when the emissions hit? What we do when? How does it impact targets? **Offsets:** · How will the NT offsets interact with regulation? · Offset pricing – striking the balance between abatement viability and industry and a policy that accommodates uncertainty. · Beneficial use · The supply of NT Carbon Offsets and how to increase these: ie grow aboriginal developed offsets. What policy levers will support these? Ensuring the methods are right for NT context. **ACTION:** agreed NT to review Cth methods and have a further discussion about methods that might better meet NT context (noting high cost of method development) **Communications** Consideration of the communication of information and messaging.
Next steps and wrap up	Agreement to hold discussions quarterly to ensure alignment of work programs in achieving multijurisdictional solutions. Additional regular communications at relevant officer level on specific matters.

Australian Government
Department of the Environment and Energy

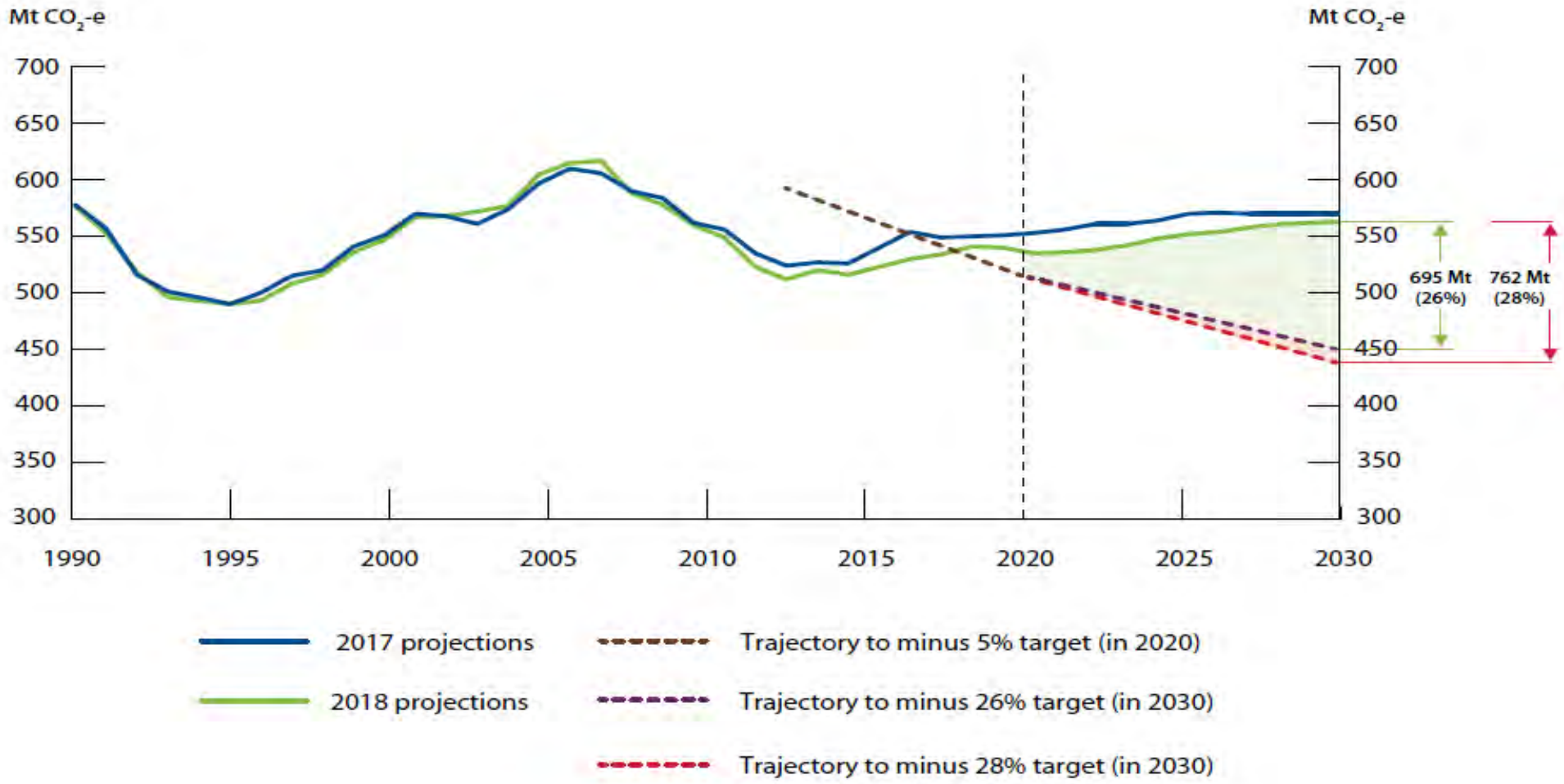
Greenhouse Gas Emissions from Onshore Shale Gas Workshop



Australia's emissions 1990-2030 – sectoral breakdown



NT emissions 1990-2026 – sectoral breakdown



Australia's emissions trends, 1990 to 2030

Briefing on potential GHG emissions from Fracking activities in the NT

7 February 2019

Hayley Richards
Executive Director – Hydraulic Fracturing Implementation Taskforce
Northern Territory Department of the Chief Minister.

NORTHERN TERRITORY GOVERNMENT

What the Inquiry recommended and Government's response

The Inquiry identified and assessed the environmental, cultural, social and economic risks associated with hydraulic fracturing.

The Final Report (March 2018) made 135 recommendations to mitigate those risks to acceptable levels.

> *"The recommendations in this Report are a complete package. It is only the implementation of the entire package that will create the framework that will mitigate the risks associated with any onshore shale gas industry in the NT to an acceptable level."*

On 17 April 2018 the Government announced it supported all recommendations from the Inquiry and determined that hydraulic fracturing of onshore unconventional shale gas reservoirs may proceed in some areas.

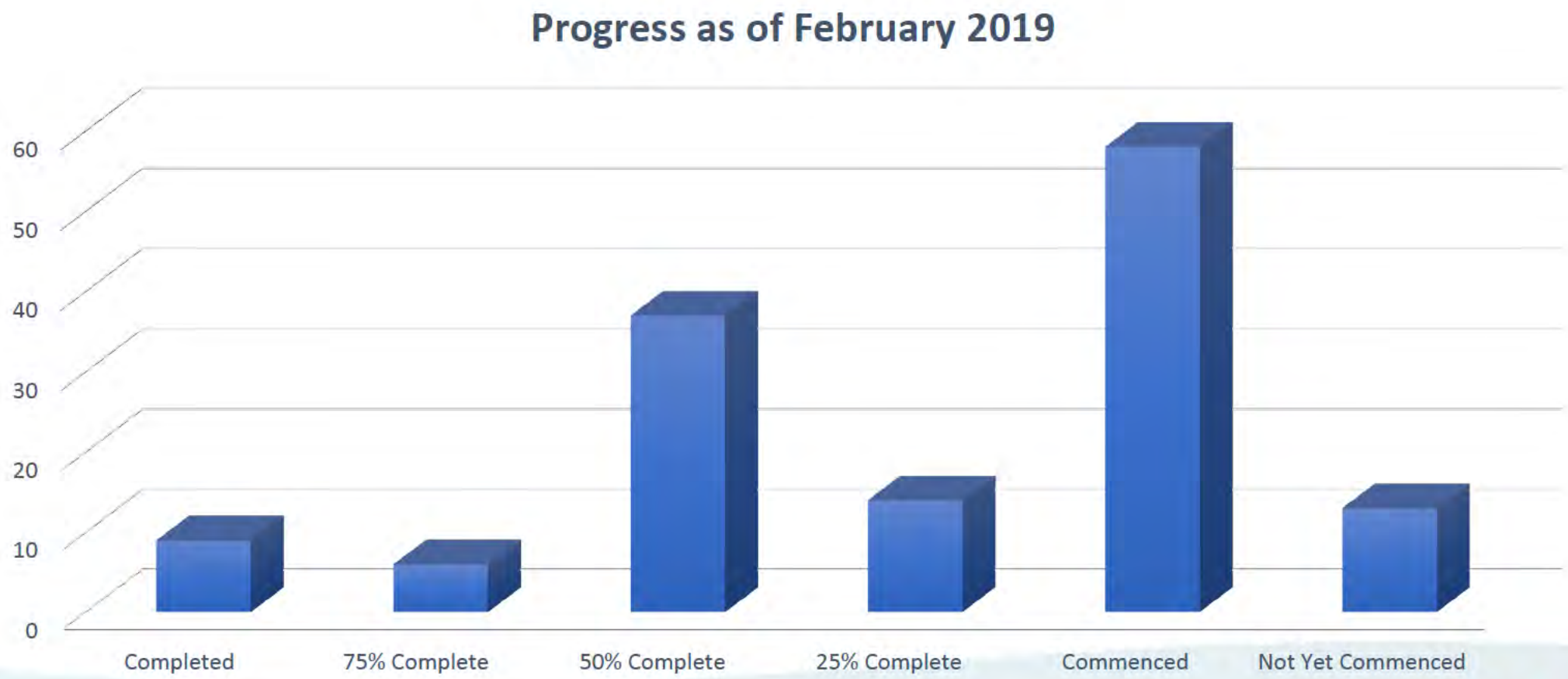
Of the five supported-in-principle, one is now fully supported and a path forward on the remainder is set:

- charging for water
- industry funding for roads
- minimum compensation for pastoralists
- costs for cases pursued in the public interest

Some recommendations involve a significant policy stance.

DCM's Taskforce works with similar structures in DPIR and DENR to ensure timely implementation.

Progress on Inquiry recommendations



Note: Commenced/Not yet commenced includes recommendations for phase 3 (end-2021)

Where is the shale gas?

- There are six major basins
- Most of them are unexplored
- **~ 70% of the total shale gas is in the Beetaloo Sub-basin**
- There has already been hydraulic fracturing of conventional wells (sandstone) already in the NT (e.g. Mereenie)
- Some gas plays in some basins may produce gas plus liquids
  - the presence of liquids would not materially affect the panel's assessment of risks

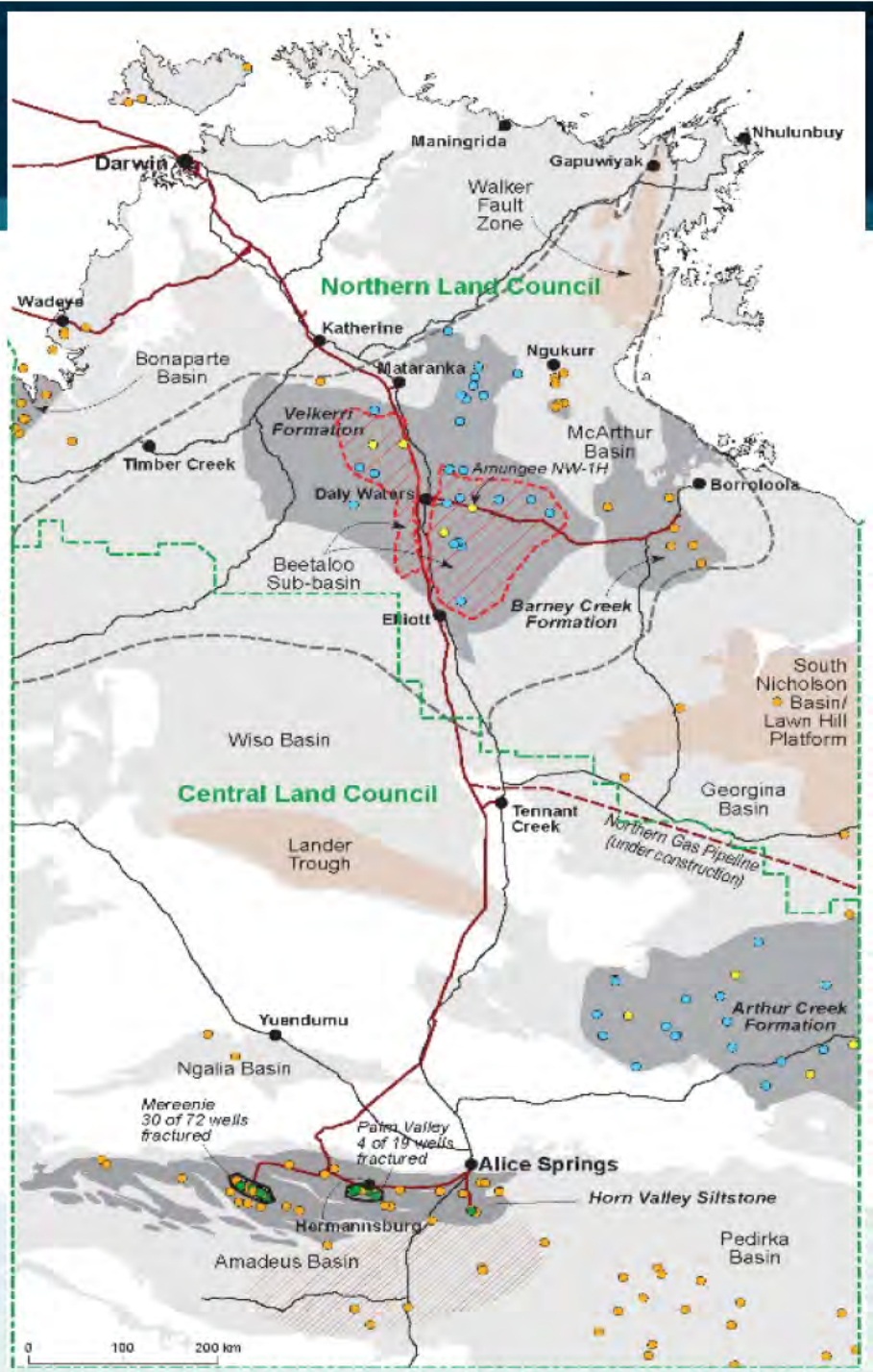
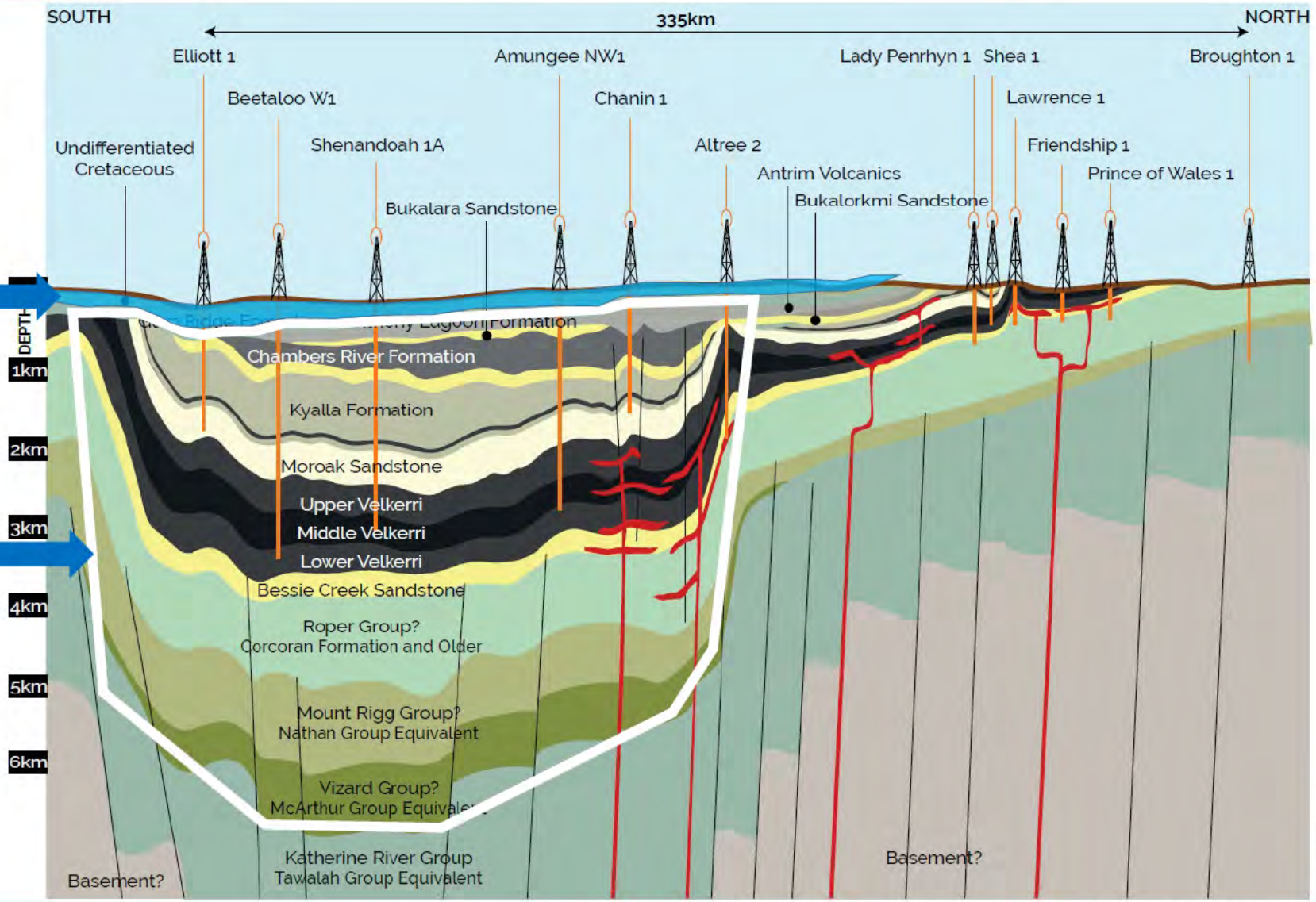


Image source: Northern Territory Department of Primary Industry and Resources

A cross-section to 6km below the surface

Cambrian basin

Beetaloo Sub-basin



Source: NT fracking report 2018

NORTHERN TERRITORY GOVERNMENT

What development might look like

1-2 onshore shale gas resources might be developed in next 5 -10 years:

- Beetaloo Sub-basin is likely to be first
- **4 to 8 exploration wells drilled in dry season of 2019**, scaling up steadily from there
- Industry estimates between 1,000 to 1,150 wells on 104 to 140 drill pads in the Beetaloo Sub-basin (over the 30-40 year expected life of the industry)
- Development of other basins will depend upon completion of suitable baseline studies (SREBAs)
- Industry is confident, but still to confirm commercial feasibility

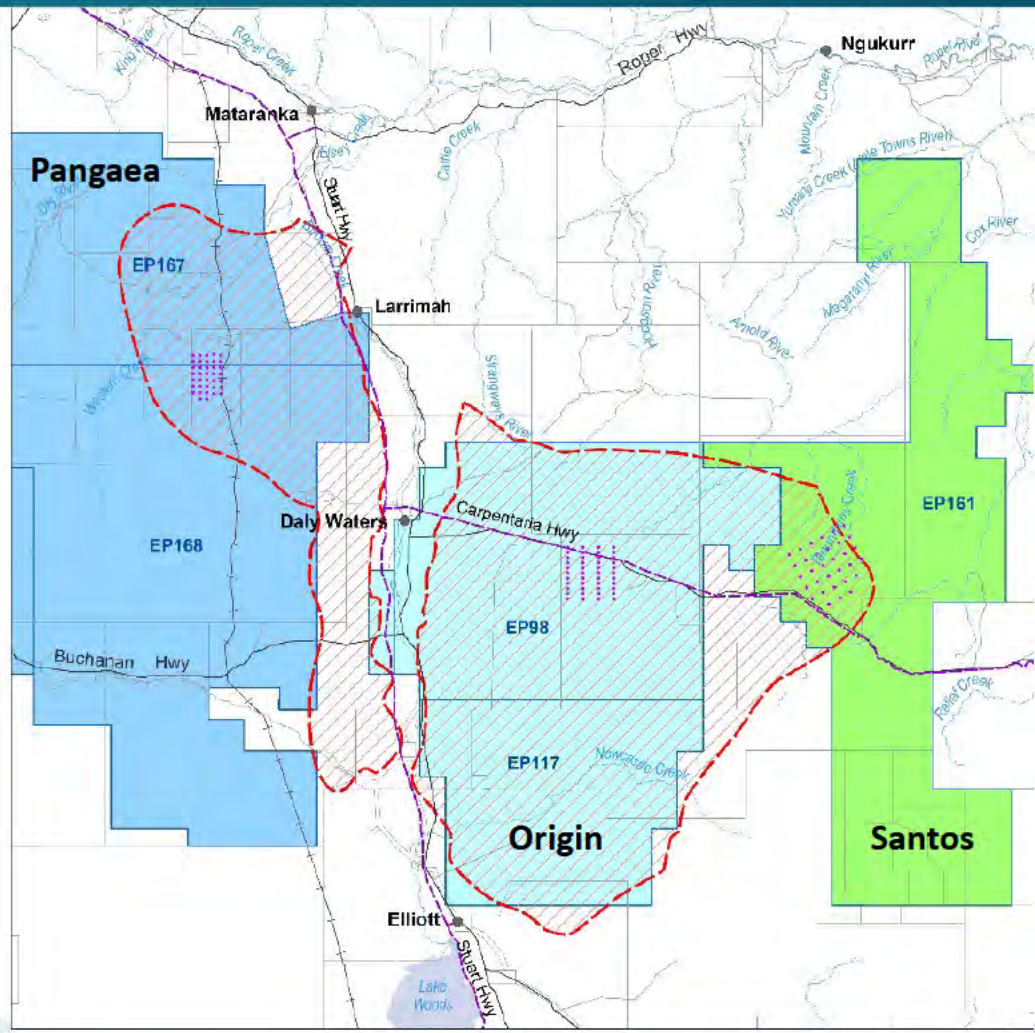


Image: Map of major players in NT onshore gas industry and associated regions for exploration
Source: Pangaea, Origin, Santos

NORTHERN TERRITORY GOVERNMENT

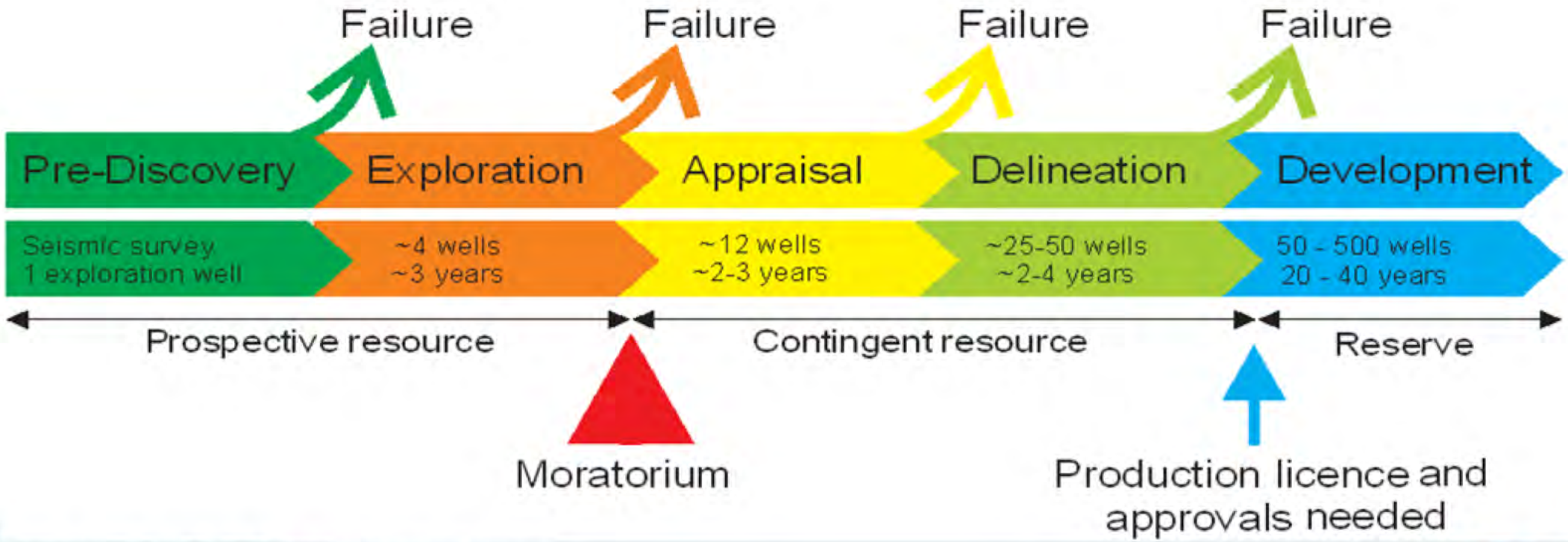
Both Government and industry have a role in implementation

Source: Scientific inquiry into Hydraulic Fracturing: Implementation Plan (2018)

NORTHERN TERRITORY GOVERNMENT

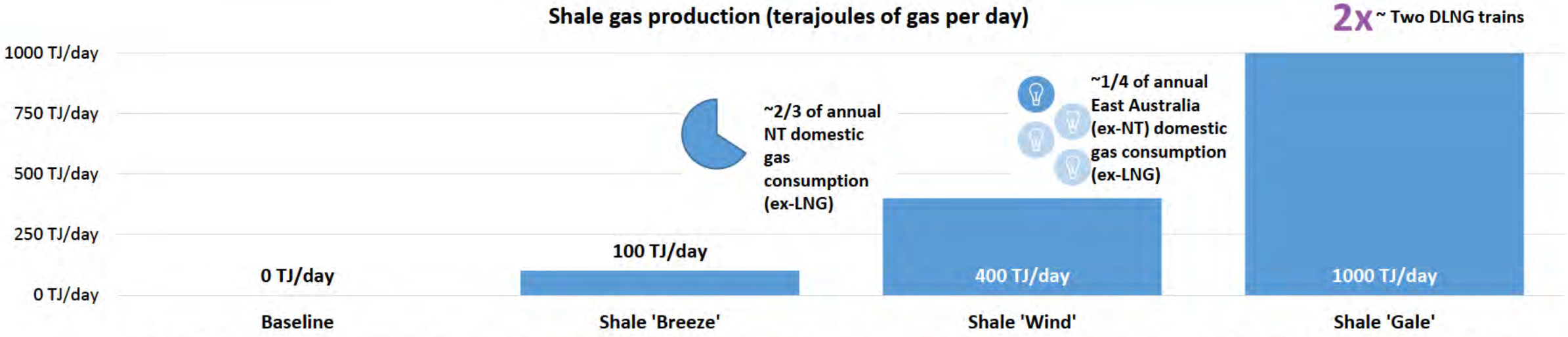
Development timeline

Possible timeline for the Beetaloo Sub-basin (time required for regulatory approval of each activity is not indicated)



Developed from DPIR and Origin development diagrams

The five alternative development scenarios



Baseline

- **The hydraulic fracturing moratorium remains in place**
- The Northern Territory economy grows, without a shale gas industry
- There is a future off shore gas development, which is used to backfill the Darwin LNG plant
- This is the scenario used to compare others against

Shale 'Breeze'

- **The hydraulic fracturing moratorium is lifted, exploration activity occurs, and a small scale development is commercialised**
- Target production is 100 TJ/day
- Gas flows to Natural Gas Production (NGP), and some gas to domestic NT market

Shale 'Wind'

- **The hydraulic fracturing moratorium is lifted, exploration activity occurs, and a medium scale development is commercialised**
- Target production is 400 TJ/day
- Gas flows to expanded NGP, and is used for domestic Australian gas market

Shale 'Gale'

- **The hydraulic fracturing moratorium is lifted, exploration activity occurs, and a large scale development is commercialised, pipeline expansions required**
- Target production is 1000 TJ/day
- Gas flows to Darwin LNG (DLNG), East Coast LNG, and domestic market
- Off shore gas development is displaced, meaning economic benefit is smaller than otherwise

Source: Scientific enquiry into Hydraulic Fracturing in the NT, Final report, Chapter 13

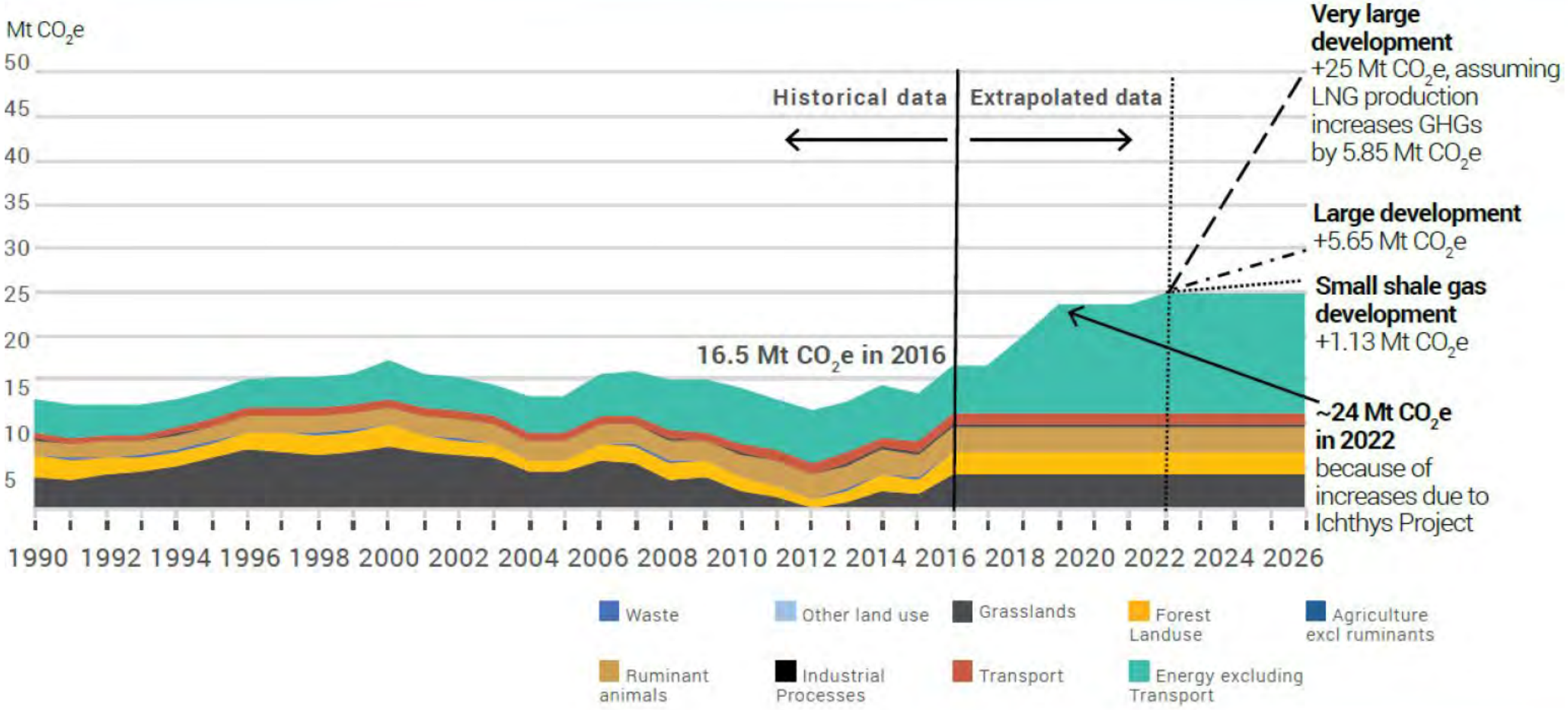
Discussion of GHGs in recommendations

- 8 recommendations regarding GHGs directly (*Rec. 9.1 – 9.8*)
- Require the establishment of ongoing monitoring of baselines prior to exploration and subsequent changes to emissions as a result of development
- Monitoring and transparency guidelines enforced by NT regulator for onshore gas industry
- Monitoring and mitigation of fugitive emissions
- Federal collaboration to limit future life cycle emissions and meet proposed emissions targets

Monitoring of background GHGs

- Draft CSIRO guidance note received on 23 January 2019
- Multiple methods of collection using both on the ground and remote sensing techniques
  - Undertaken for both CO_2 and methane emissions
  - Mobile surveys (aerial and terrestrial), Flux chambers, Fixed monitoring stations, Tracer gas
- Monitoring methods dependant on location, landscape and access
- Difficulty separating natural variation, other anthropogenic sources and new emissions from onshore gas industry

Extrapolated GHG emissions for NT



Source: Pg. 12 Climate Change Discussion Paper: Mitigation and adaptation opportunities in the Northern Territory

NORTHERN TERRITORY GOVERNMENT

Upstream Sources of emissions from onshore gas industry

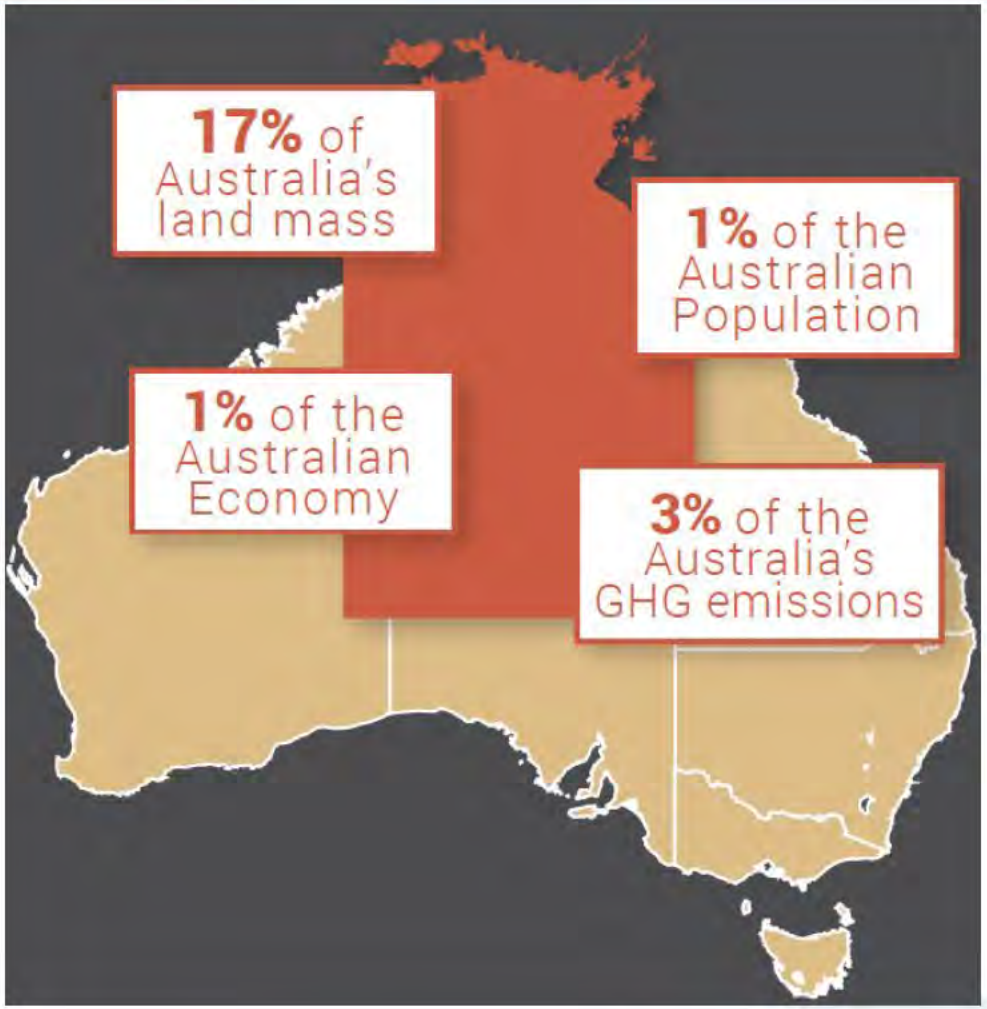
- Exploration and production emissions involving:
  - Equipment and well casing leaks
  - Process venting (normal operations and maintenance activities)
  - Waste streams (flaring and venting)

- Other emissions include transport, accommodation, power generation, construction etc.

Recommendation on downstream emissions

- *Recommendation 9.8 – That the NT and Australian governments seek to ensure that there is no net increase in the life cycle GHG emissions emitted in Australia from any onshore gas produced in the NT.*
- NT and Australian governments responsible for minimising emissions from downstream of any NT gas extracted.
  - Can be within the territory, nationally or internationally dependent on uses/agreements of sale
  - Currently downstream emissions represent 78% of life cycle emissions
- Appropriate risk management strategies and technical guidance notes are currently in development. NTG working collaboratively with stakeholder groups that includes the Australian Government Department of Energy and Environment.

NT 2016 emissions and population/economy



Source: State and Territory Greenhouse Gas inventories (2016)

NORTHERN TERRITORY GOVERNMENT

Working with Federal to meet emissions targets

- Territory accounted for 3% of Australian emissions in 2016
- Working with Aboriginal offset program to reduce impact of emissions
  - West Arnhem Land Fire Abatement project which around 100 000/CO_2 per year
  - Possibility to expand to other areas
- Encouragement of industry to invest in developing new technologies aimed at reducing the impact of proposed onshore gas industry

Workshop goals

Aim of today:

- Understanding of Australian government arrangement and ideas surrounding GHGs
- Better understand NTG options to mitigate and regulate GHGs arising from any onshore gas development in NT
- Begin dialogue and proactive planning to address recommendations

Further information

Online information hydraulicfracturing.nt.gov.au

Read the Inquiry report and recommendations frackinginquiry.nt.gov.au

Contact us **Inquiry Implementation Taskforce**

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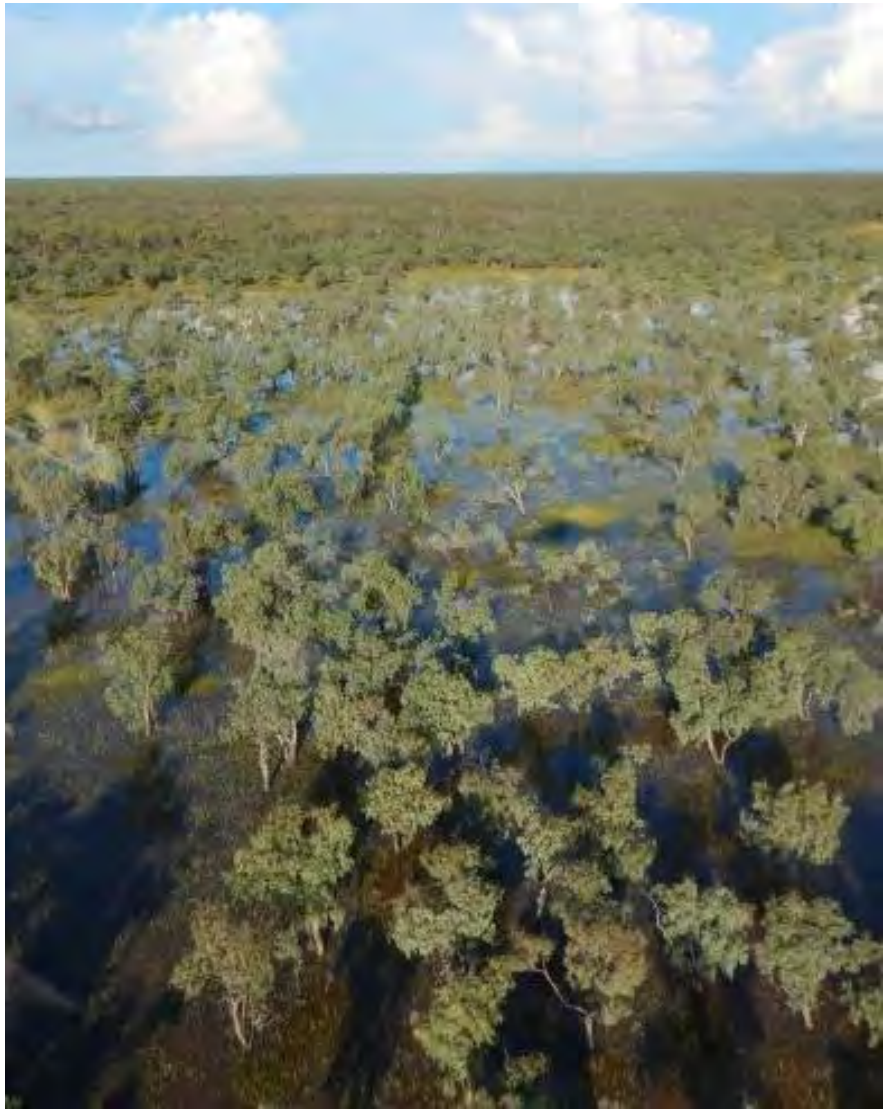
Questions?

Australian Government
Department of the Environment and Energy

National Greenhouse and Energy Reporting (NGER) System and the National Greenhouse Gas Inventory

Greenhouse gas emissions from onshore shale gas workshop
Darwin 7 – 8 February 2019

National Greenhouse and Energy Reporting

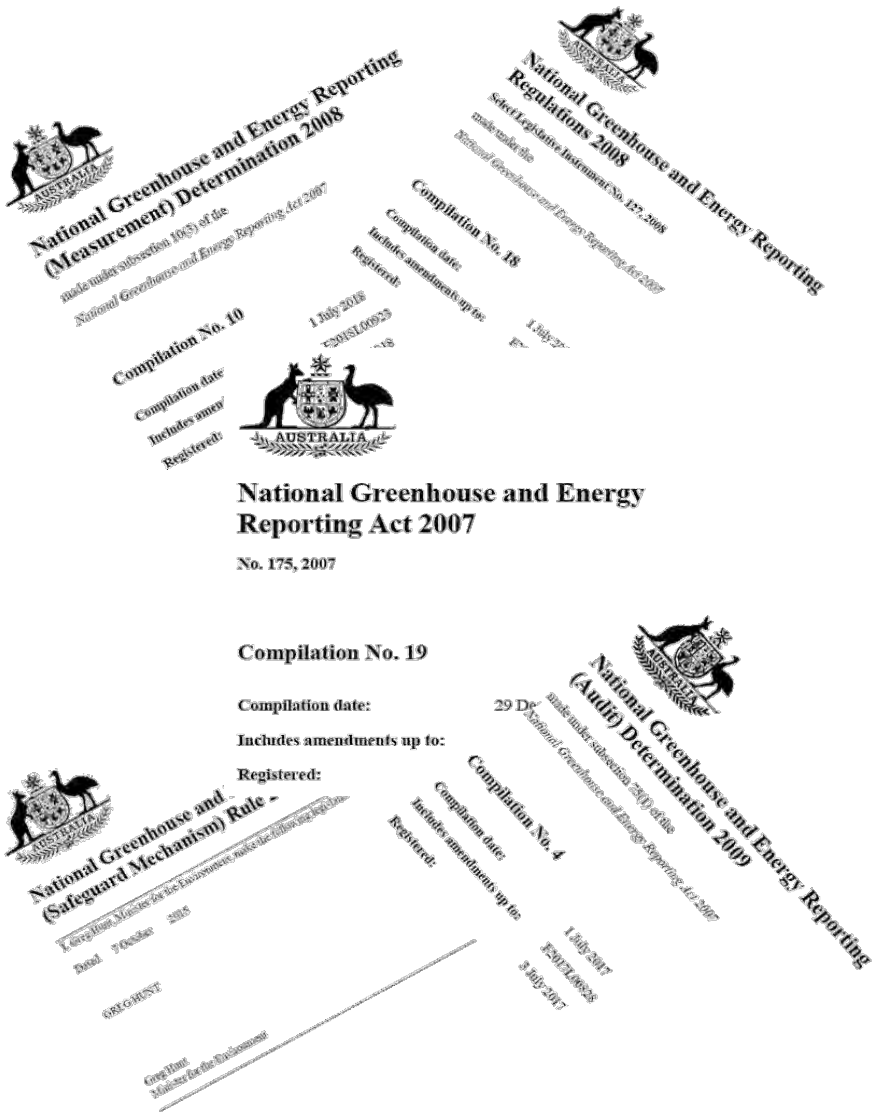


- All companies undertaking shale gas activities in the Beetaloo sub-basin will report under NGER
- NGER is the official data set on greenhouse gas emissions and energy
- Should form the basis for the requirement of off-setting
  - *amount to be offset*

NGER overview

- Critical asset for collecting data on emissions from the:
  - *energy;*
  - *industrial process and product use*; and
  - *waste* sectors.
- Legislative framework established through the *National Greenhouse and Energy Reporting Act 2007*

NGER legislation



- The legislation establishes rules for:
  - who is required to report and what must be reported;
  - how to measure / report; and
  - publishing the data.
- An explicit objective is to collect information to support the development of the national inventory

Who is required to report?

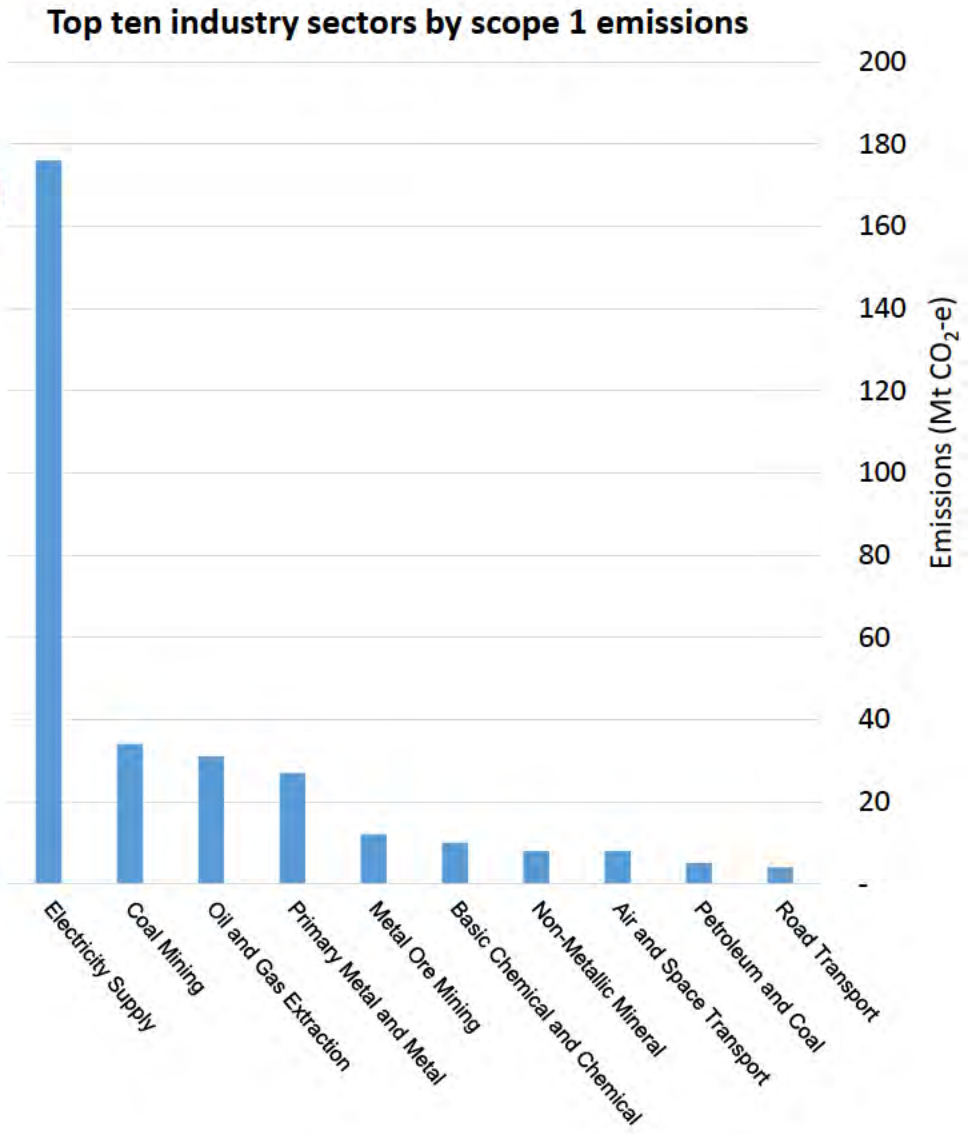
- Energy production, energy use, or greenhouse gas emissions meet certain thresholds

	Scope 1 and 2 emissions (Kt CO_2-e a year)	Energy production (TJ a year)	Energy use (TJ a year)
Corporate group threshold	50	200	200
Facility threshold	25	100	100

Scope 1: Emissions released as a direct result of an activity
Scope 2: Indirect emissions are associated with the use of electricity at a facility

Who is required to report?

- Annual reports since 2008-09
- In 2016-17:
  - 800 companies reported
  - 25,000 facilities
  - 60% (336 Mt CO_2-e) of Australia's emissions
  - 80% (268 Mt CO_2-e) came from the top 100 emitting facilities



What is required to be reported?

National Greenhouse and Energy Reporting (Measurement) Determination 2008

made under subsection 10(3) of the

National Greenhouse and Energy Reporting Act 2007

Compilation No. 10

Compilation date:	1 July 2018
Includes amendments up to:	F2018L00923
Registered:	5 July 2018

- *Scope:*
  - fuel combustion;
  - fugitive emissions;
  - industrial processes and product use emissions; and
  - waste

How are emissions estimated?

National Greenhouse and Energy Reporting (Measurement) Determination 2008

made under subsection 10(3) of the

National Greenhouse and Energy Reporting Act 2007

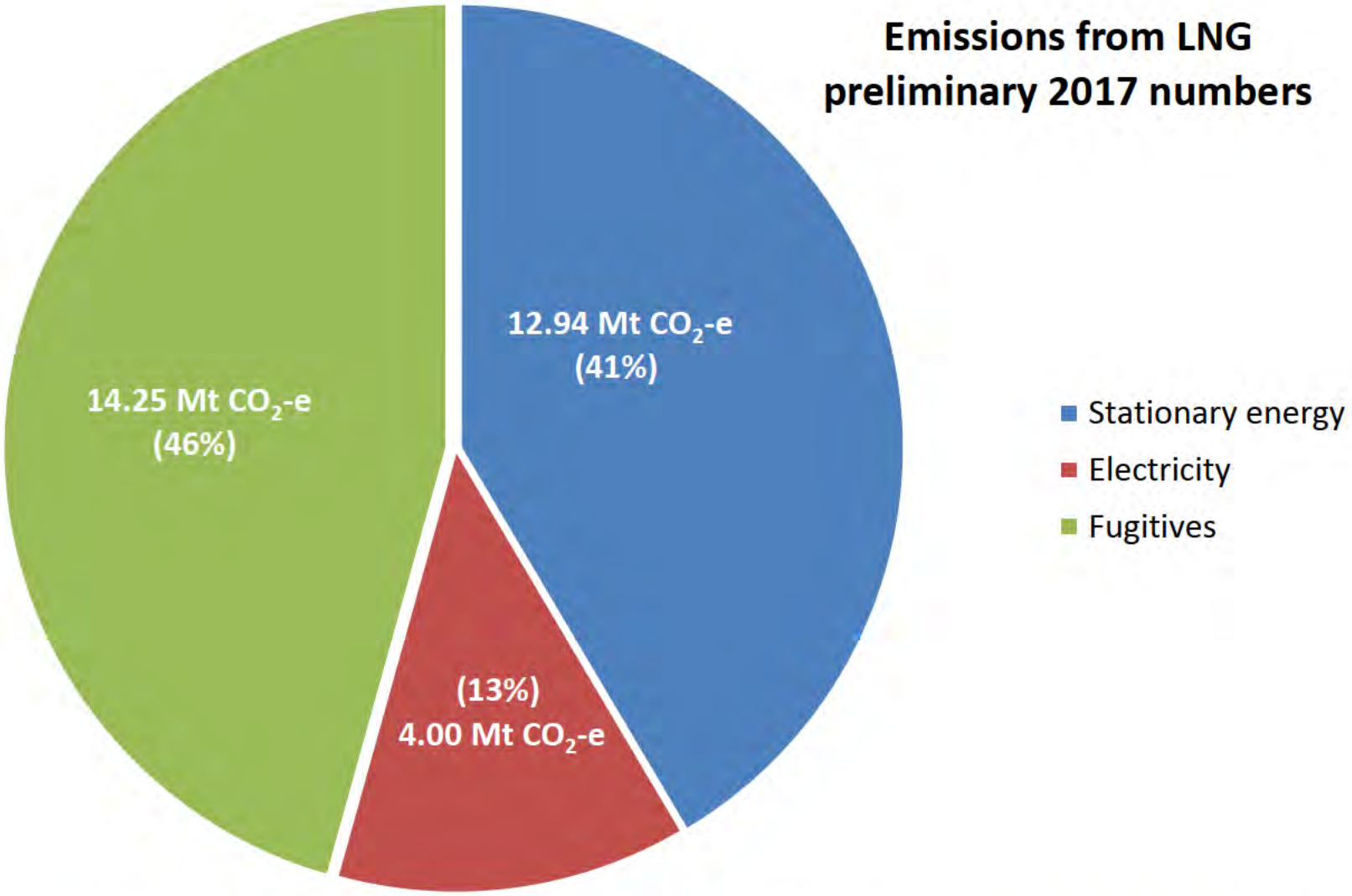
Compilation No. 10

Compilation date:	1 July 2018
Includes amendments up to:	F2018L00923
Registered:	5 July 2018

- *Four estimation methods:*
  - Method 1: Designated EF's
  - Method 2: Facility specific
    - industry sampling standards
    - Australian or international analysis standards
  - Method 3: Facility specific
    - Australian or international sampling and analysis standards
  - Method 4: Direct measurement

Australian Government **Federal Register of Legislation** https://www.legislation.gov.au/Details/F2018C00431

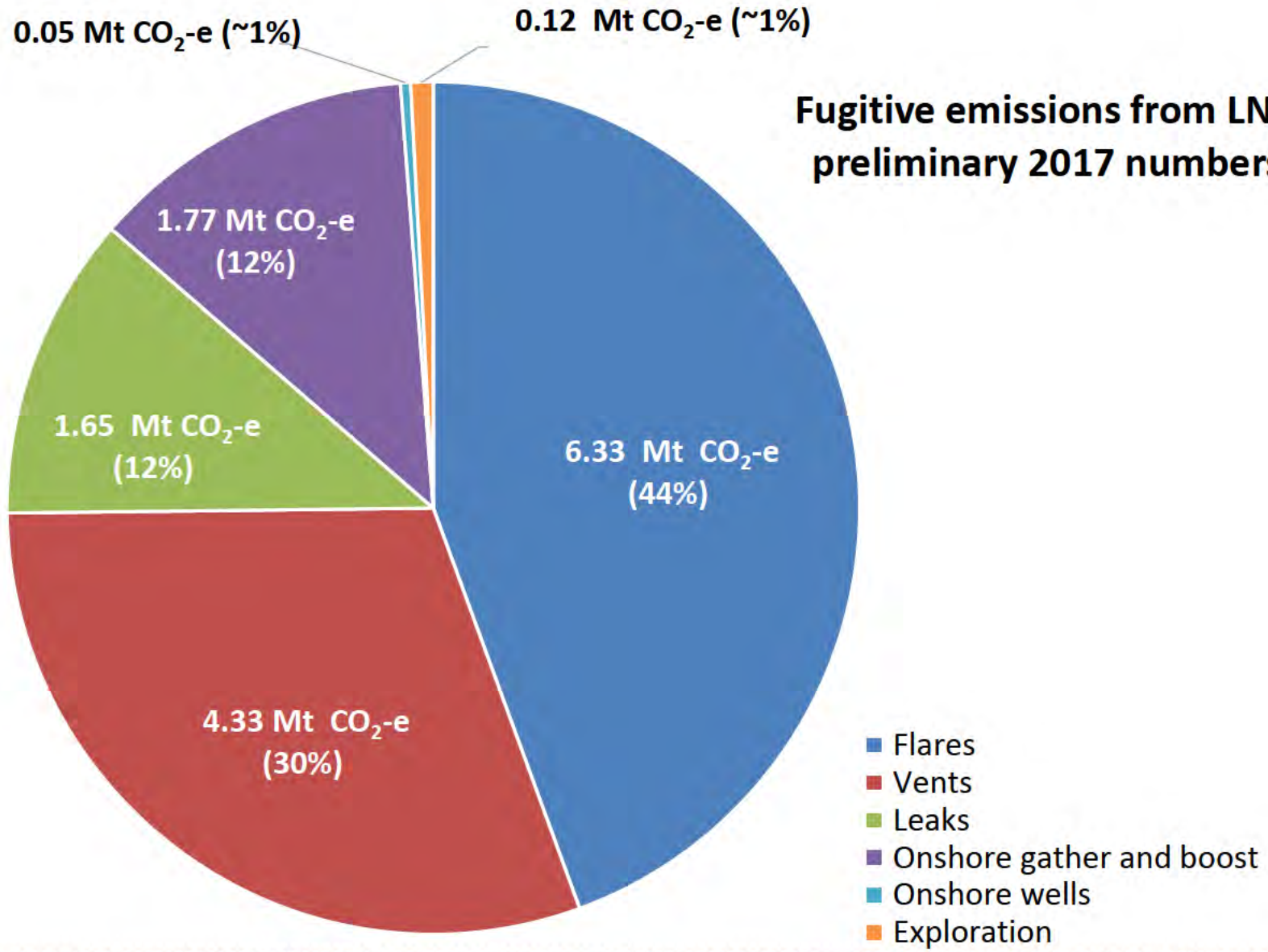
Supply chain emissions – LNG example



Reporting fugitive emissions from shale gas

- Already provided for under NGER
  - Definition of shale gas
  - Focus on *fugitive* emissions including:
    - shale gas
    - tight gas
    - coal seam methane

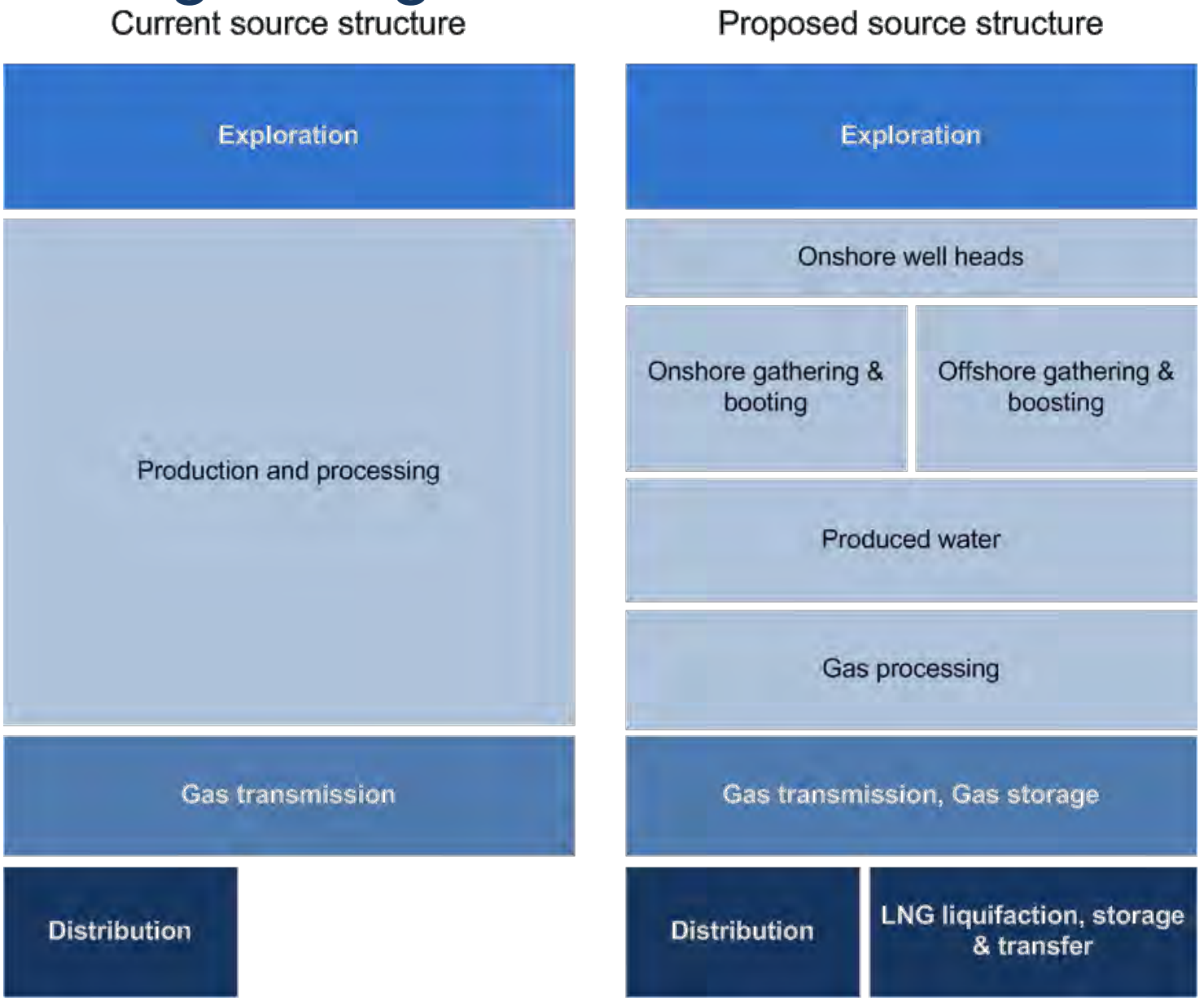
Supply chain emissions – LNG example



Reporting fugitive emissions from shale gas

- Includes:
  - oil or gas exploration;
  - natural gas production or processing, other than emissions that are vented or flared;
  - natural gas transmission;
  - natural gas distribution; and
  - natural gas production or processing (emissions that are vented or flared).

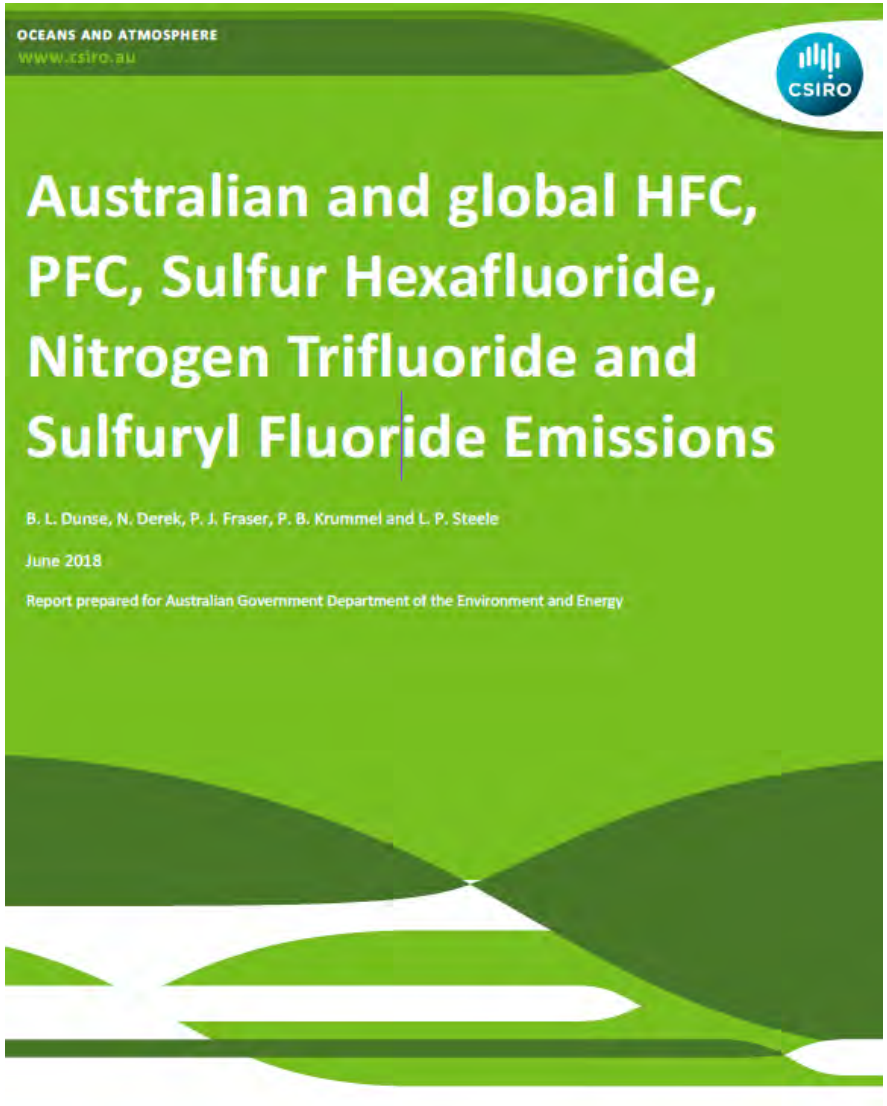
Upcoming changes



Going forward - emerging data sources

- Methane monitoring data
- Potential to reconcile with NGER reported data?
- Similar experience with sulphur hexafluoride (SF_6)

Going forward - emerging data sources



- SF_6 example:
  - country specific emissions factor
  - measured SF_6 concentrations at Cape Grim monitoring station
  - inverse modelling to derive national estimate
  - EF calibrated each year
  - top-down / bottom-up reconciliation and verification

An Australian Government Initiative

FOI 191011
FOI 191110
Document 3e

Carbon neutrality and the National Carbon Offset Standard



National Carbon Offset Standard

Supporting voluntary action to manage greenhouse gas emissions and achieve carbon neutrality

The Standard

↓

Carbon Neutral Certification

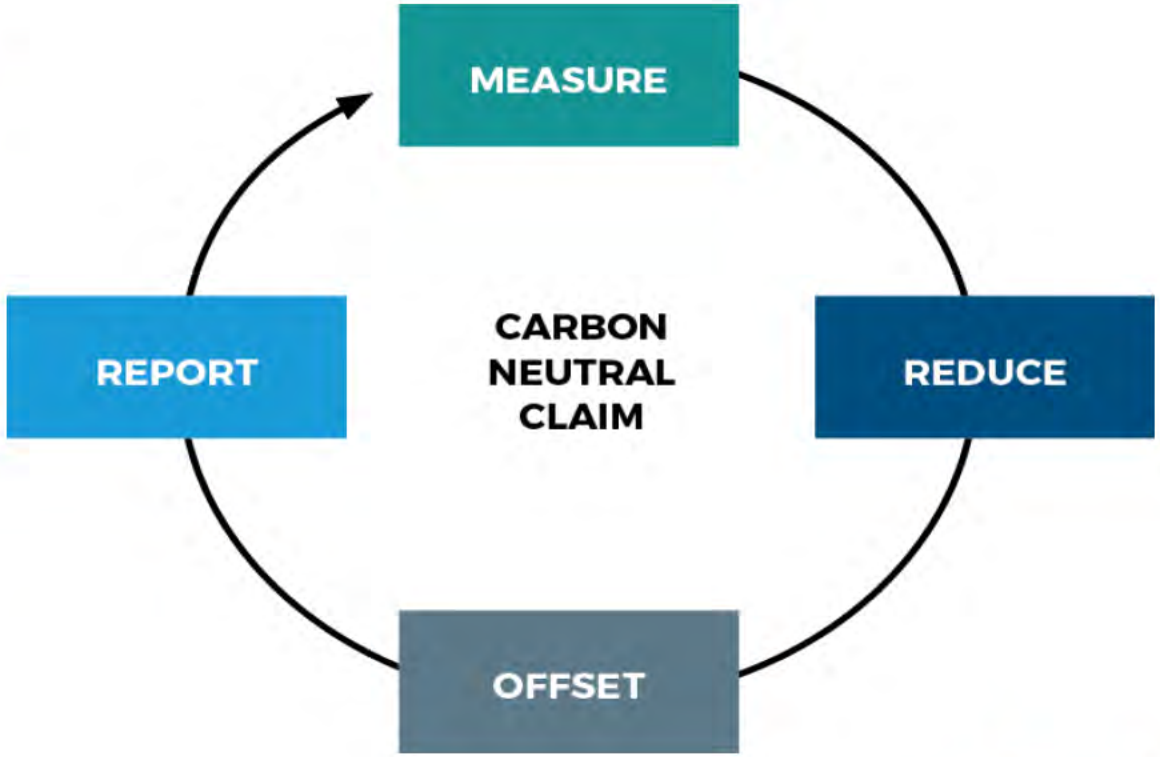
↓

Carbon Neutral Network

Certification Trade Mark

National Carbon Offset Standard

- ✓ Best practice carbon accounting in accordance with international standards
- ✓ Real carbon reductions through use of only credible offset units
- ✓ Transparent and public reporting
- ✓ Independent auditing



National Carbon Offset Standard

Carbon neutral certification against the Standard

- Certification for organisations, products & services, events and precincts is provided by the Department
- For buildings, certification is provided by the NABERS Administrator and the Green Building Council of Australia


Allens › ‹ Linklaters
air bp
ANZ
Australian Paper
AUSTRAL FISHERIES
SUSTAINABLE SEAFOOD
Blue Mountains Explorer Bus
Fantastic AUSSIE TOURS
BRISBANE CITY
Dedicated to a better Brisbane
australbricks
since 1908
Charles Sturt University
CBRE
choice
CITY OF MELBOURNE
2030
CITY OF SYDNEY
CITY OF YARRA
CEFC
CLEAN ENERGY FINANCE CORP
Banksia FOUNDATION
Education Services Australia
FP fleetplus
FRASERS PROPERTY
GPT
The GPT Group
ILD
INTERNATIONAL LUBRICANT DISTRIBUTORS
JARDAN
DEXUS
PROPERTY GROUP
JCDecaux
Moreland City Council
National Australia Bank
OAK FLATS
BOWLING & RECREATION CLUB
Pangolin Associates
POWERSHOP
Sydney Airport
White Pages
It's how we connect
Yellow Pages
ROSS HILL
ORANGE NSW
sustainable living FABRICS
Swisse
NEXTDC
LIVING FUTURE INSTITUTE AUSTRALIA
CROWN
pwc
Protect
UNITING COMMUNITIES
TOM MOORE
UNIVERSITY of TASMANIA
with_ architecture studio
TARONGA
CONSERVATION SOCIETY AUSTRALIA
For the Wild
ZOOS VICTORIA
WERRIBEE
MELBOURNE
HEALESVILLE
CITIES POWER PARTNERSHIP
SUMMIT 2018 ACCELERATING LOCAL ACTION
Westpac GROUP
WWF
d2
Think beyond the square
NATIONAL CARBON OFFSET STANDARD
CARBON NEUTRAL CERTIFIED
EnergyAustralia
Jetstar.com
All day, every day, low fares
KNAUF
sustainable living FABRICS
Carbon Market Institute
QANTAS
Spirit of Australia
Virgin australia
Imagine ENVIRONMENT PEOPLE FUTURE
2018 HANZ CONFERENCE
CORINDA STATE HIGH
ndevr environmental
CLIMATE LEADERSHIP CONFERENCE
15 - 16 MARCH 2018, SYDNEY
Real Utilities
tigerair
Castrol
VECTON

Benefits of Offsetting

- Certified organisations purchase ~2.4mn t of carbon offsets each year
- Additional benefits:
  - In Australia: indigenous communities and/or biodiversity.
  - International projects: environmental or social outcomes linked with SDGS.

Australian Government
Department of the Environment and Energy

Emissions Reduction Fund Safeguard Mechanism

Greenhouse Gas Emissions from Onshore Shale Gas Workshop

How the Safeguard Mechanism works

- Sets emissions limits (‘baselines’) on large facilities (>100,000 tonnes carbon dioxide equivalent per year) that report under the National Greenhouse and Energy Reporting Scheme (NGER)

- Each facility must keep emissions below their baseline, or surrender enough Australian Carbon Credit Units to make up the difference

A brief history of the Safeguard Mechanism

2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
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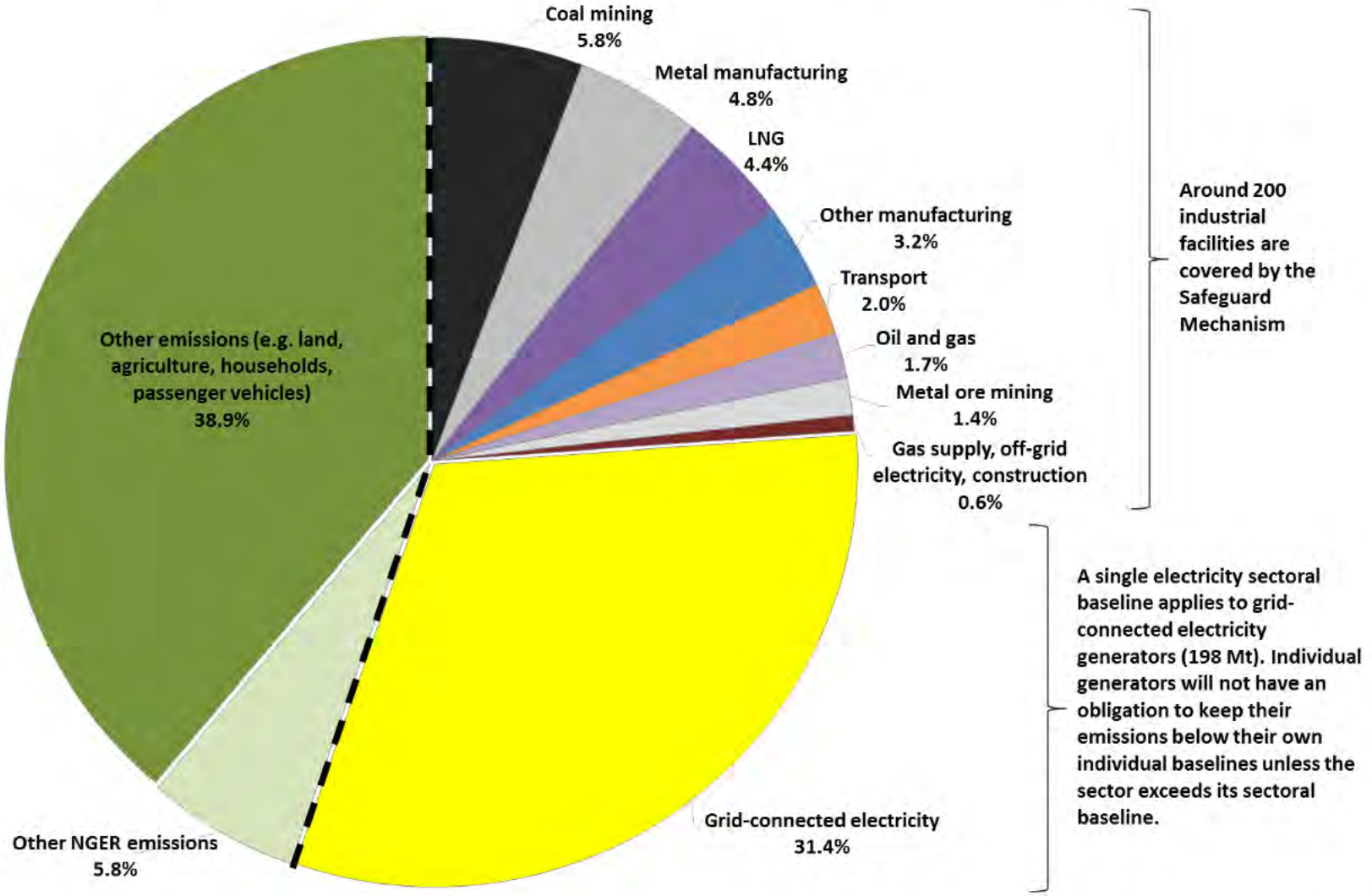
Current settings - coverage

- Safeguard applies to NGER facilities that emit more than 100,000 t CO_2-e per year
- The ‘responsible emitter’ is the person with operational control of the facility
- Grid-connected electricity generators are subject to a ‘sectoral baseline’ (198 Mt). Generators do not have obligations unless the sectoral baseline is exceeded, which is unlikely in the foreseeable future

Australian emissions 2016-17



Baselines - overview

'Reported-emissions baseline'

High point of historical emissions (2009-10 to 2013-14)

'Calculated-emissions baseline'

Audited forecast of emissions

Initial calculated baseline criteria

New facility criteria

Significant expansion criteria

Inherent emissions variability criteria

POST 2020

'Production-adjusted baseline'

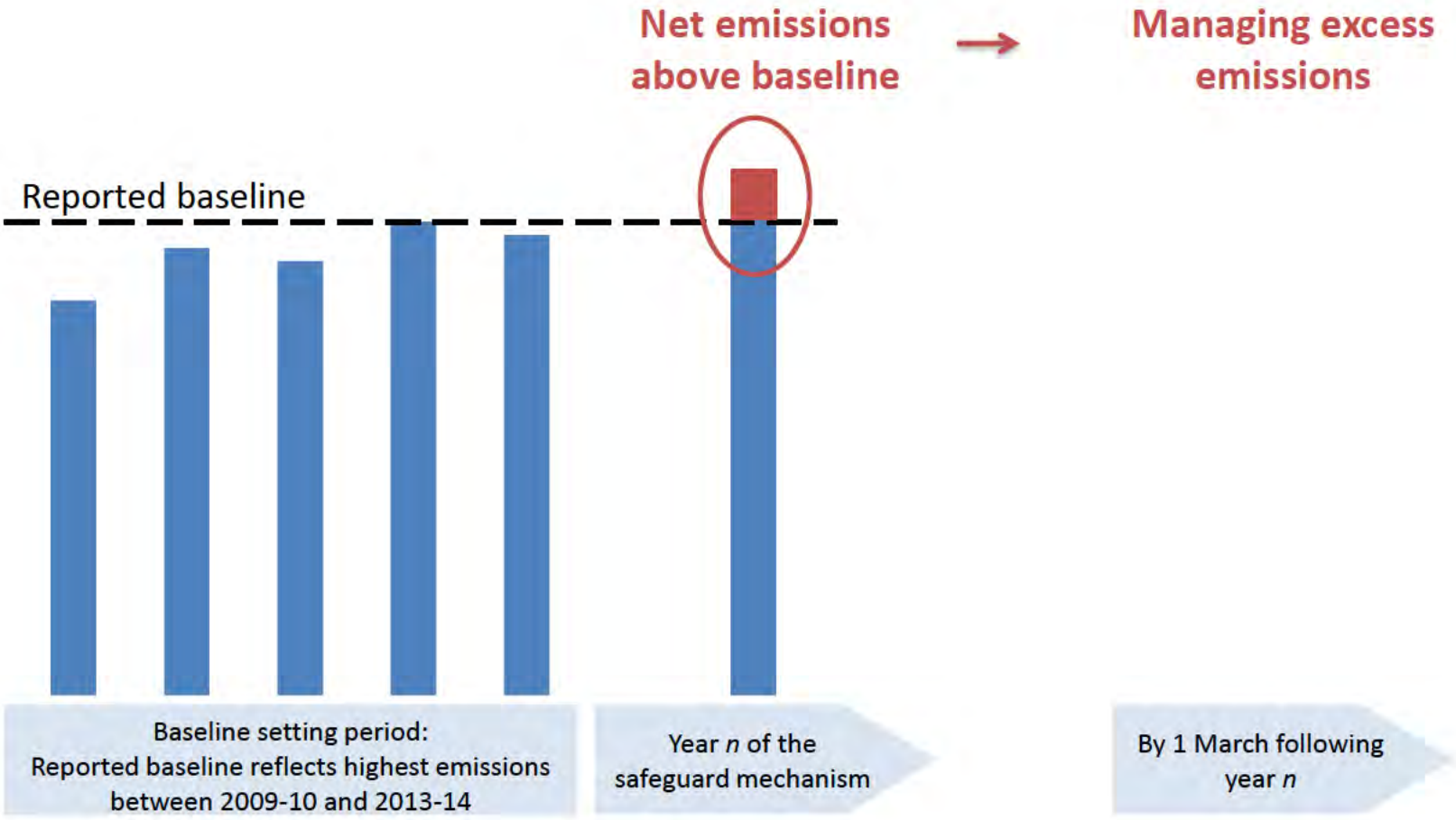
Updated for actual production (one-off)

'Benchmark-emissions baseline'

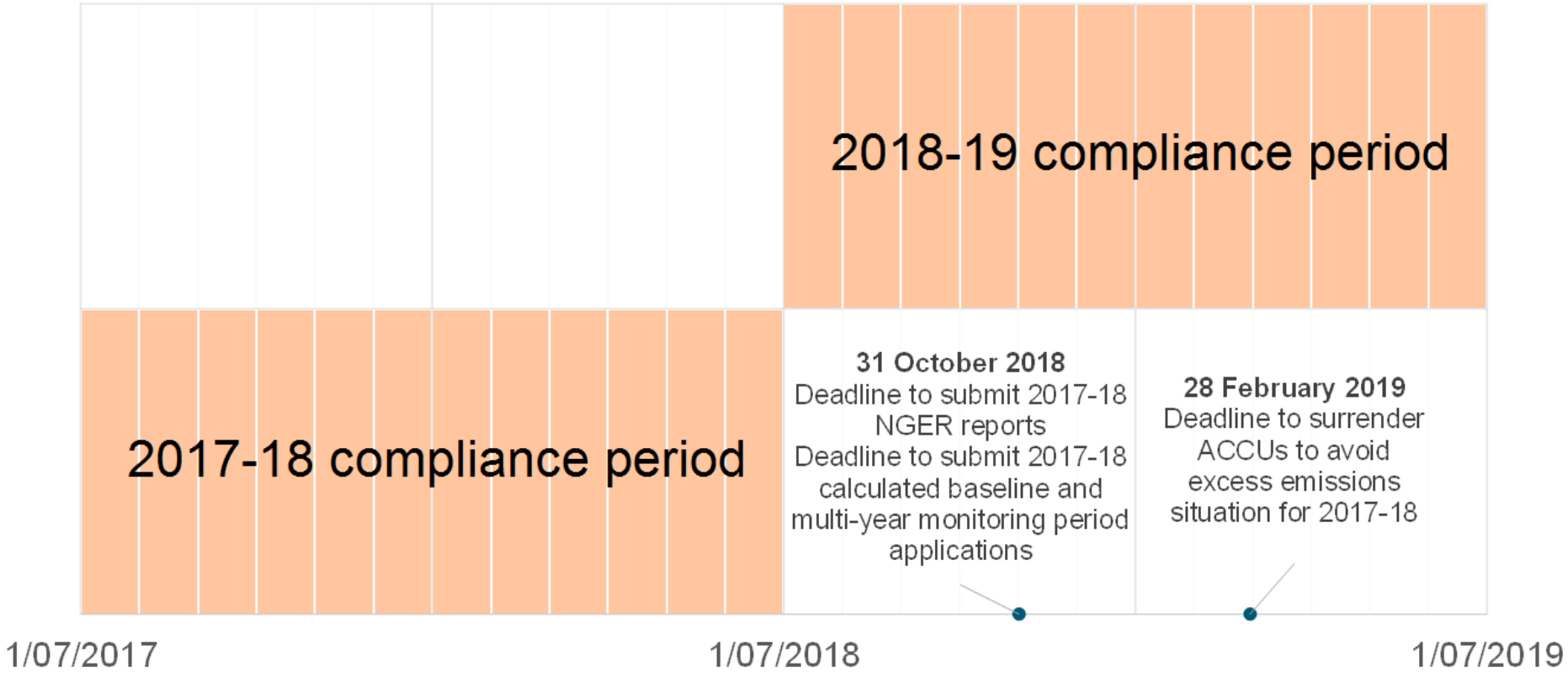
Best practice emissions intensity

Default 100,000 t CO_2-e

Excess emissions



Safeguard compliance dates



Publication of information

2016-17 Safeguard facility data

This spreadsheet contains all information related to facilities covered by the safeguard mechanism in 2016-17.

Data as at: 14/3/2018

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APLNG LNG Facility	QLD	CONOCOPHILLIPS AUSTRALIA PTY LTD	86 092 288 376	2,599,192	Calculated Baseline	1,906,267	0
APN01 Appin Colliery - ICH Facility	NSW	ENDEAVOUR COAL PTY LIMITED	38 099 830 476	3,960,227	Reported Baseline	2,384,840	0
APU01 Pyrenees - AOA Facility	WA	BHP BILLITON PETROLEUM PTY LTD	97 006 918 832	1,765,149	Multi-year monitoring period	592,482	0
ARC01 Mining Area C - MNG Facility	WA	BHP BILLITON IRON ORE PTY. LTD.	46 008 700 981	354,064	Calculated Baseline	307,622	0
Ashton Coal Mine (Underground)	NSW	ASHTON COAL OPERATIONS PTY LIMITED	22 078 556 500	501,235	Reported Baseline	339,443	0
ATCO Gas Australia Pty Ltd	WA	ATCO Gas Australia GP Pty Ltd	76 151 245 779	159,142	Calculated Baseline	165,165	6,023
Aurizon Rail Freight NSW	NSW	AURIZON OPERATIONS LIMITED	47 564 947 264	134,160	Calculated Baseline	104,248	0
Aurizon Rail Freight QLD	QLD	AURIZON OPERATIONS LIMITED	47 564 947 264	418,007	Reported Baseline	167,793	0
AusNet Gas Services	VIC	AusNet Gas Services Pty Ltd	43 086 015 036	169,898	Reported Baseline	163,901	0
Austar Coal Mine (Underground)	NSW	Austar Coal Mine Pty Limited	67 111 910 822	211,460	Reported Baseline	113,723	0
Australian Gas Networks (SA) Ltd	SA	Australian Gas Networks Limited	19 078 551 685	300,947	Reported Baseline	206,161	0
Australian Gas Networks (Vic) Pty Ltd	VIC	Australian Gas Networks Limited	19 078 551 685	317,176	Reported Baseline	272,892	0
AWR Rail Freight WA	WA	AUSTRALIA WESTERN RAILROAD PTY LTD	39 094 792 275	216,451	Reported Baseline	169,479	0
Ballera	QLD	Santos Limited	80 007 550 923	439,404	Reported Baseline	156,057	0
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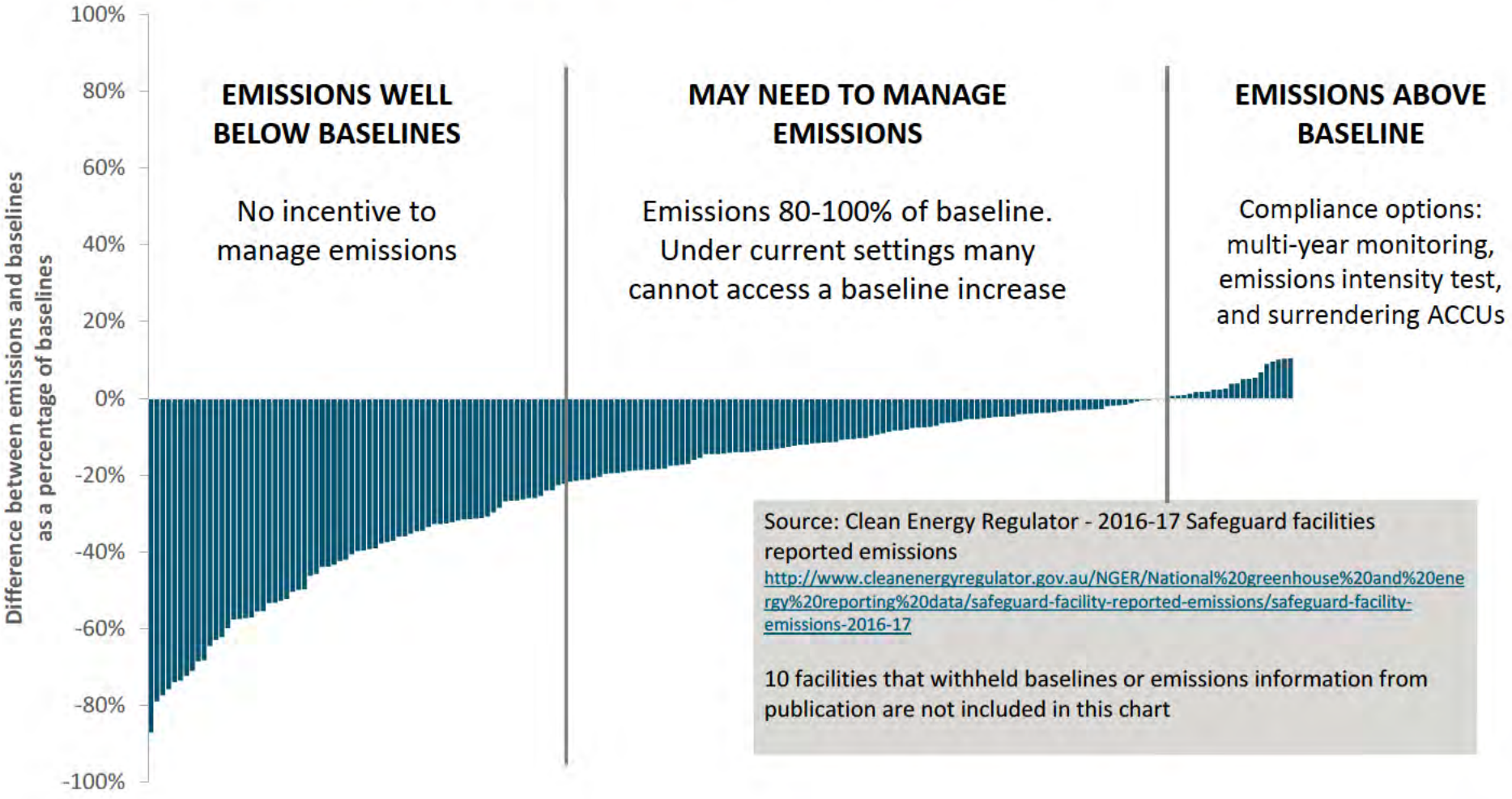
Beltana / Blakefield South	NSW	BULGA COAL MANAGEMENT PTY LIMITED	48 055 534 391	3,314,944	Calculated Baseline	2,677,829	0
Bengalla Operations	NSW	Bengalla Mining Company Pty Limited	32 053 909 470	443,494	Reported Baseline	429,011	0
Big Lake Gas	SA	Santos Limited	80 007 550 923	140,474	Reported Baseline	121,642	0
Birkenhead Operations	SA	Adelaide Brighton Ltd.	15 007 596 018	withheld	Reported Baseline	withheld	withheld
Blackwater Mine	QLD	BM Alliance Coal Operations Pty Limited	67 096 412 752	768,909	Calculated Baseline	626,090	0
Boddington Mine	WA	NEWMONT BODDINGTON PTY LTD	32 062 936 547	208,038	Reported Baseline	207,938	0
Boggabri Coal Minesite	NSW	BOGGABRI COAL PTY LIMITED	77 122 087 398	186,032	Calculated Baseline	183,750	0
Boyne Smelters Limited	QLD	RIO TINTO ALUMINIUM LIMITED	51 009 679 127	1,052,982	Reported Baseline	996,650	0
Brockman 2 / Nammuldi Mines	WA	Hamersley Iron Pty. Limited	49 004 558 276	316,854	Calculated Baseline	266,172	0
Brockman 4 Mine	WA	Hamersley Iron Pty. Limited	49 004 558 276	144,745	Calculated Baseline	135,344	0
Bulga Opencut	NSW	BULGA COAL MANAGEMENT PTY LIMITED	48 055 534 391	673,617	Reported Baseline	441,453	0
CAN01 Cannington Silver and Lead Mine	QLD	South32 Cannington Proprietary Limited	48 125 530 967	143,326	Reported Baseline	123,826	0
Capcoal Mine	QLD	ANGLO COAL (CAPCOAL MANAGEMENT) PTY	73 010 037 564	1,979,964	Calculated Baseline	2,113,068	133,104

Safeguard operation in 2016-17



Source: Clean Energy Regulator - 2016-17 Safeguard facilities reported emissions
http://www.cleanenergyregulator.gov.au/NGER/National%20greenhouse%20and%20energy%20reporting%20data/safeguard-facility-reported-emissions/safeguard-facility-emissions-2016-17

10 facilities that withheld baselines or emissions information from publication are not included in this chart

Consultation paper and amendments

Sets out an approach with three elements:

Transition to Calculated Baselines

Transition all facilities to calculated baselines over 2018-19 and 2019-20

Introduce Optional Default Parameters

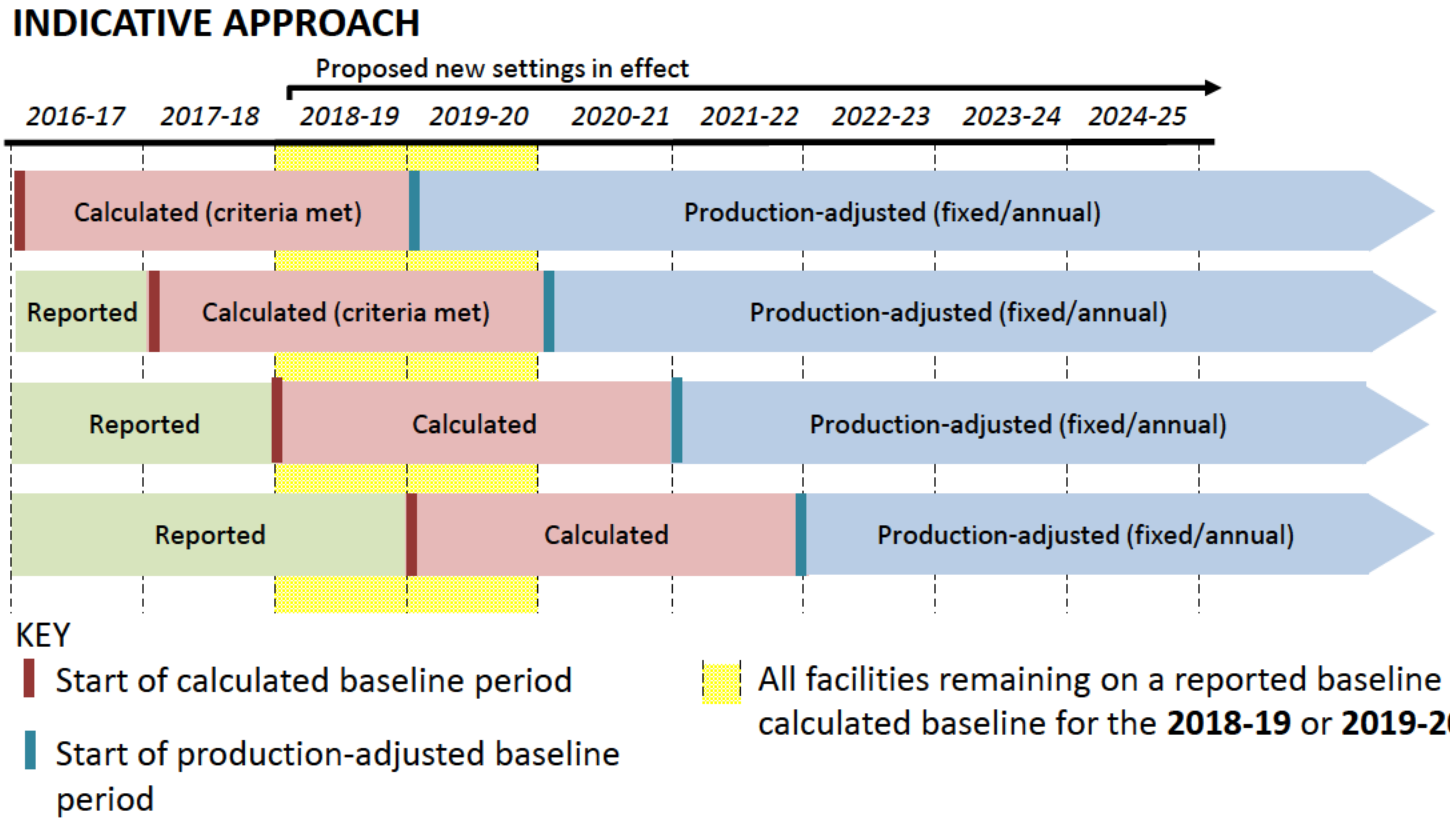
Option to use default production variables and emissions intensities

Annually Update Baselines for Actual Production

Update baselines annually
Requires reporting production data

Transitioning to calculated baselines

Facilities transition in 2018-19 or 2019-20



Optional default parameters

- Default options make applications simpler.
- Defaults remove the need to forecast emissions intensity.

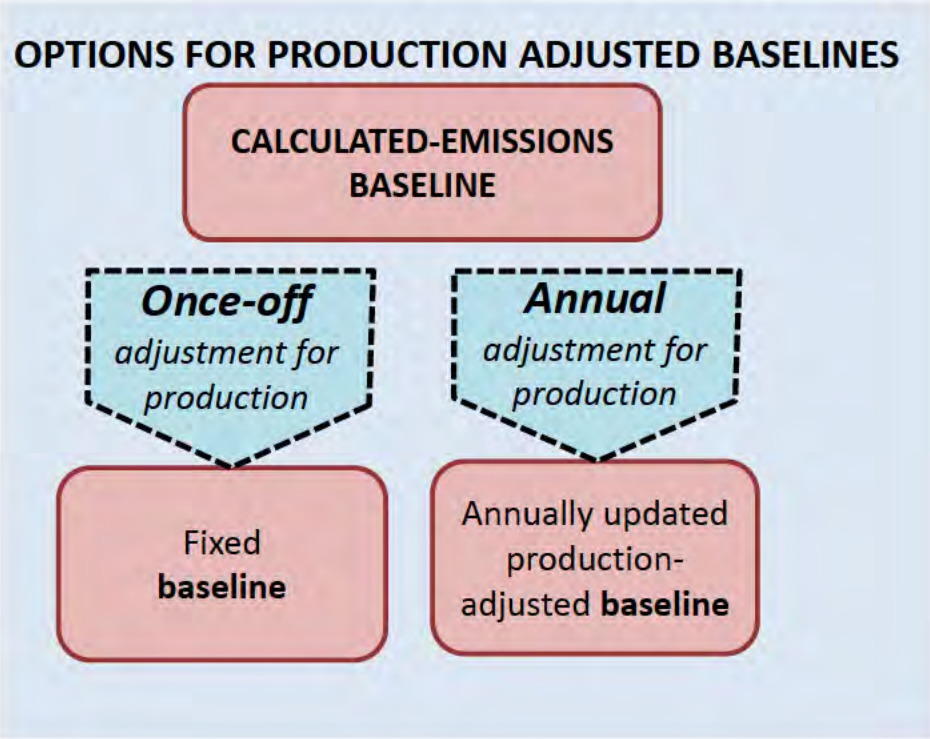
CALCULATED BASELINE = Quantity of Production Variable ✖ Emissions Intensity of Production Variable

Government develops default production variables

Government develops default EI values

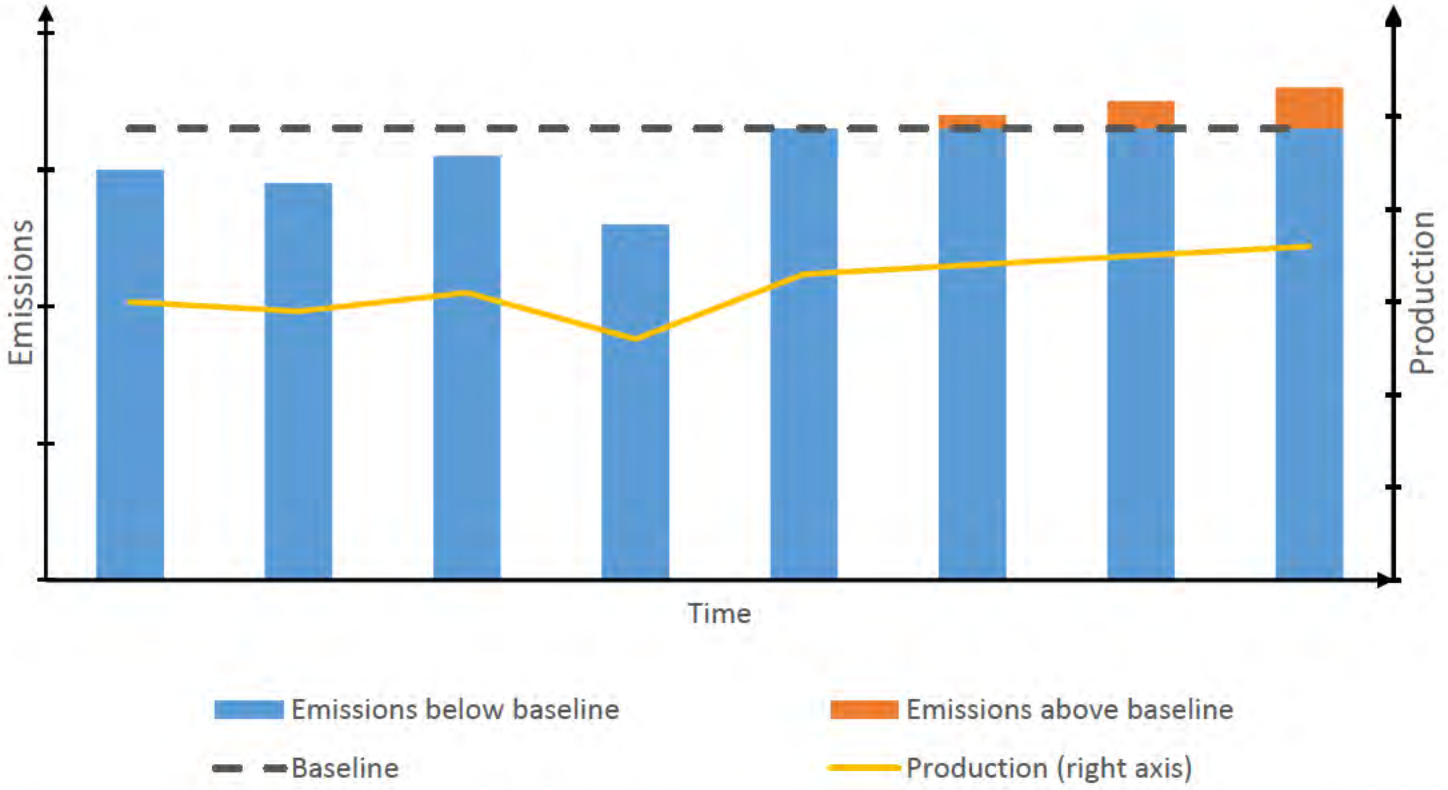
Updating for production

- Amendments will introduce annually updated production-adjusted baselines



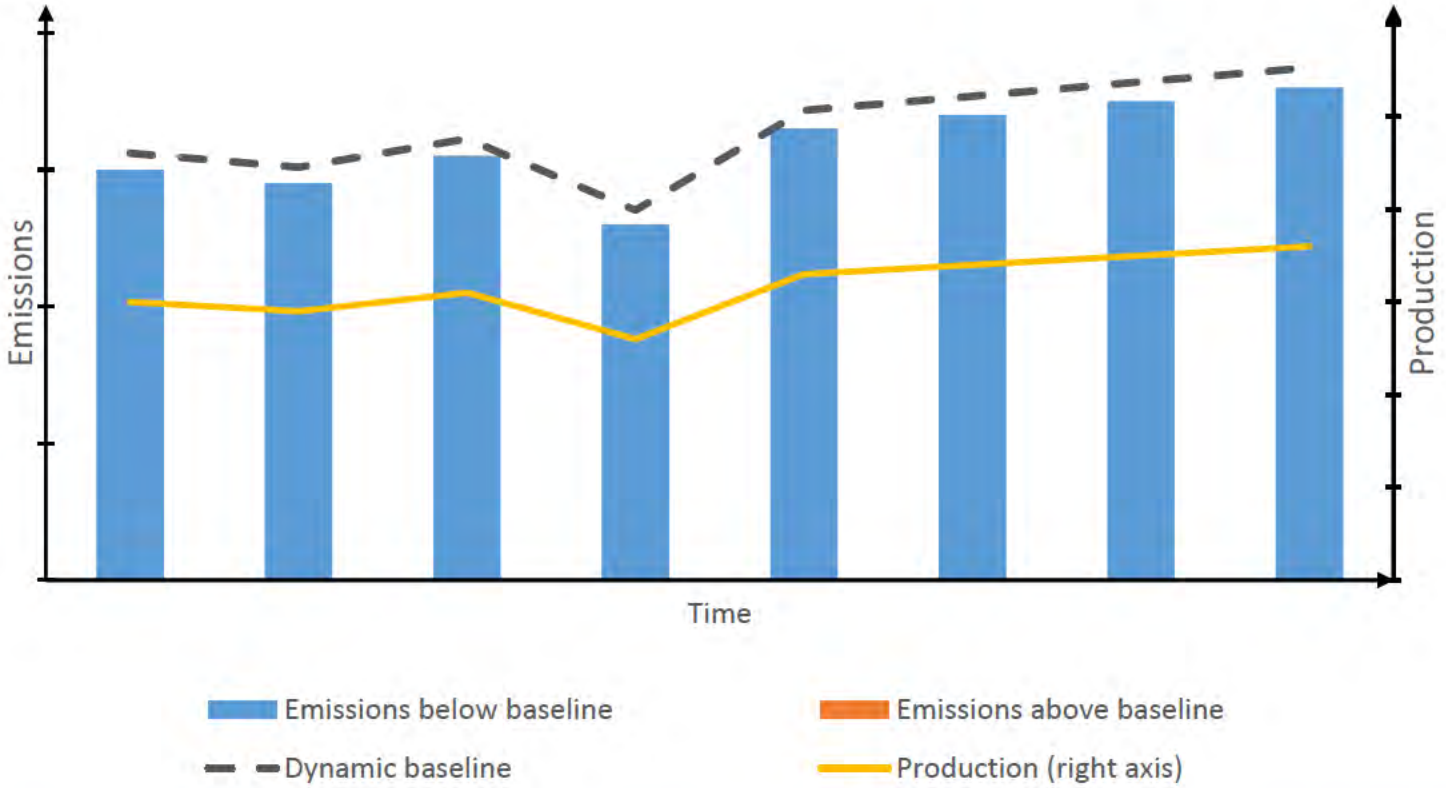
Current approach

Example: fixed baseline



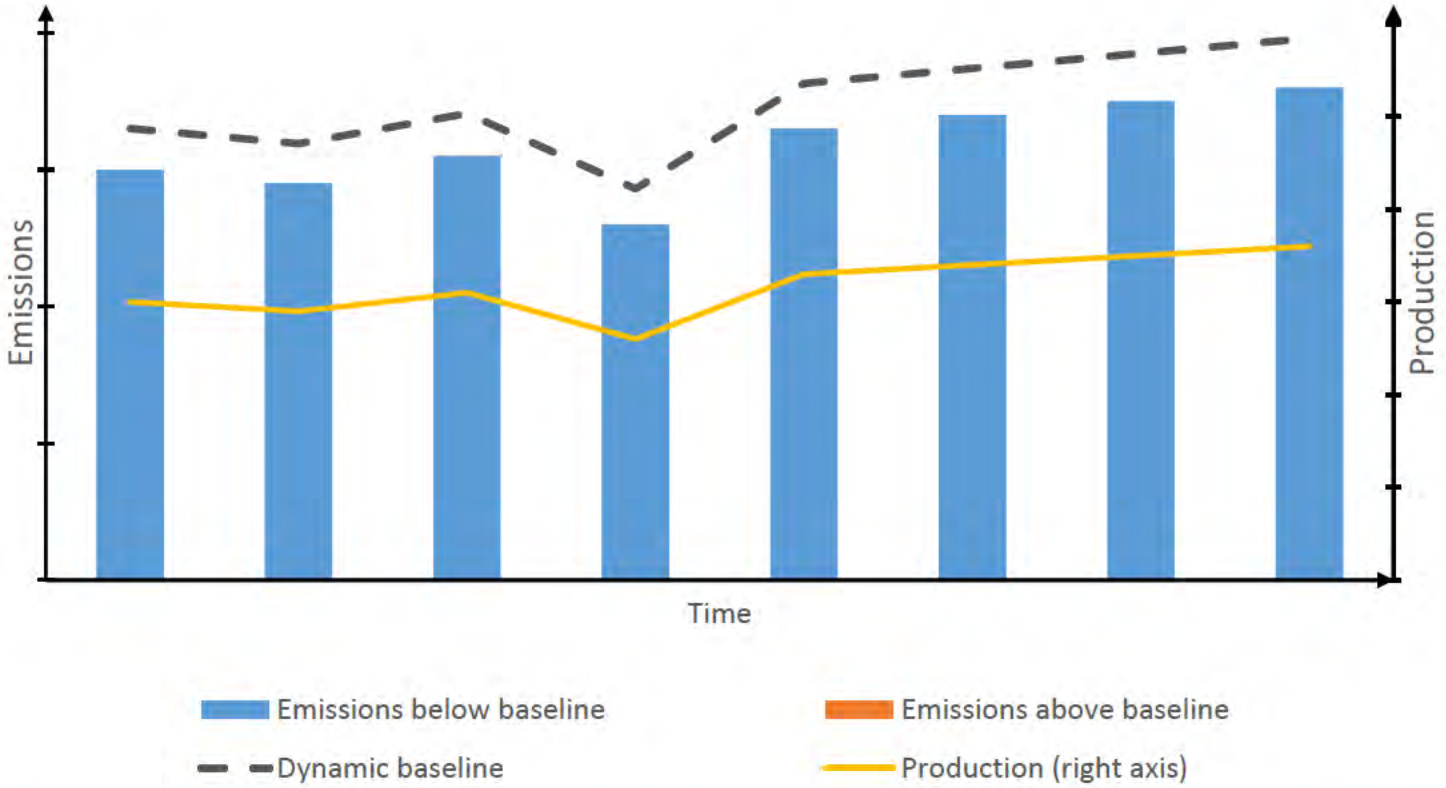
Consultation Paper

Example: baseline updated using production (baseline set using site-specific emissions intensity)



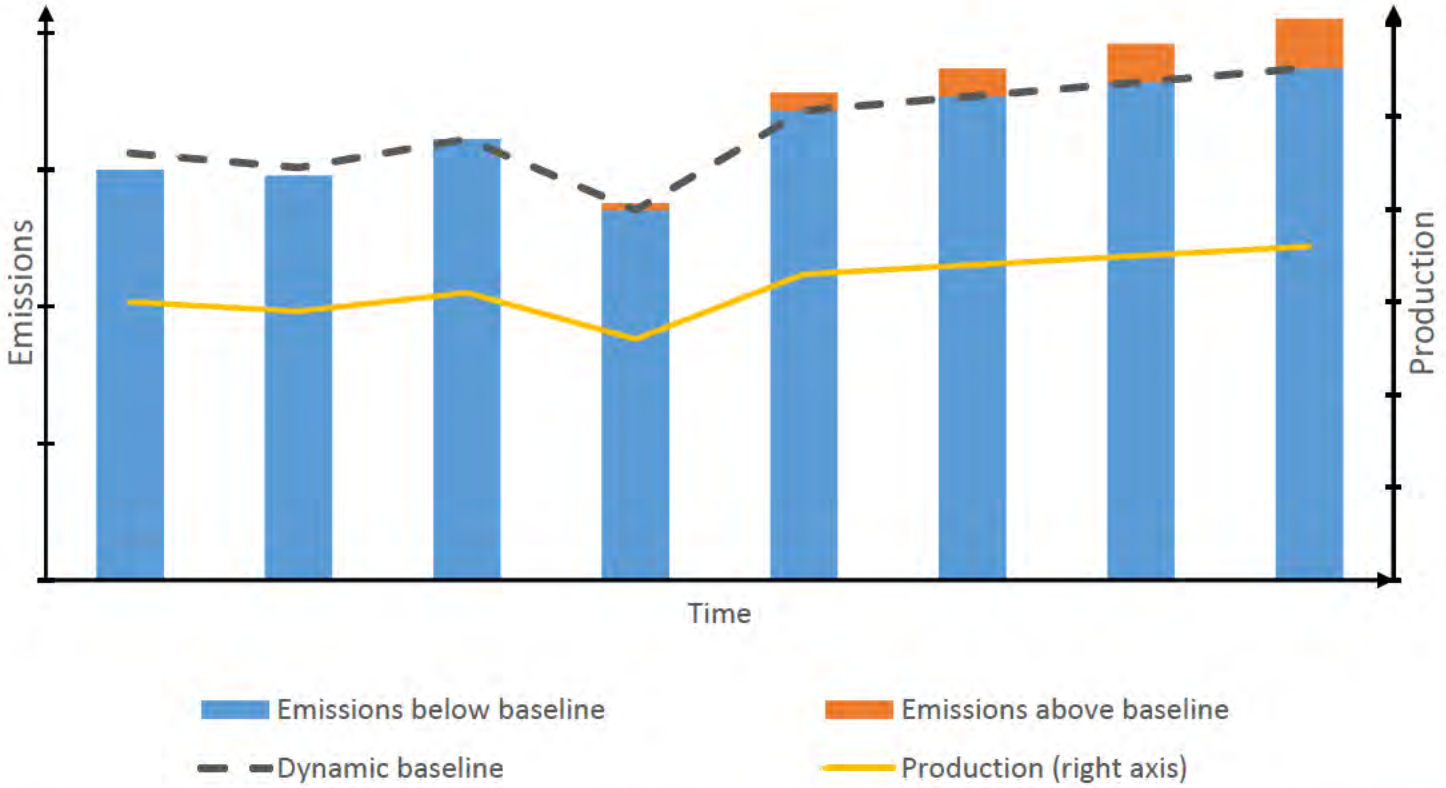
Consultation Paper

Example: baseline updated using production (baseline set using default emissions intensity)



Consultation Paper

Example: baseline updated using production (facility has worsening emissions intensity)



Safeguard Mechanism - next steps

Amendments to Safeguard Rule

- Expect amendments to be made soon

Default production variables and emissions intensities

2020 Review

- As highlighted in the 2017 review, the next review of the Safeguard Mechanism will be by 2020 and then as part of the five yearly review and refine cycle
- Will consider any updates to rules and regulations, in the context of progress toward Australia's 2030 Paris target, including when and how international units can be used and under what conditions, and appropriate lead times

Australian Government
Department of the Environment and Energy

Emissions Reduction Fund Safeguard Mechanism

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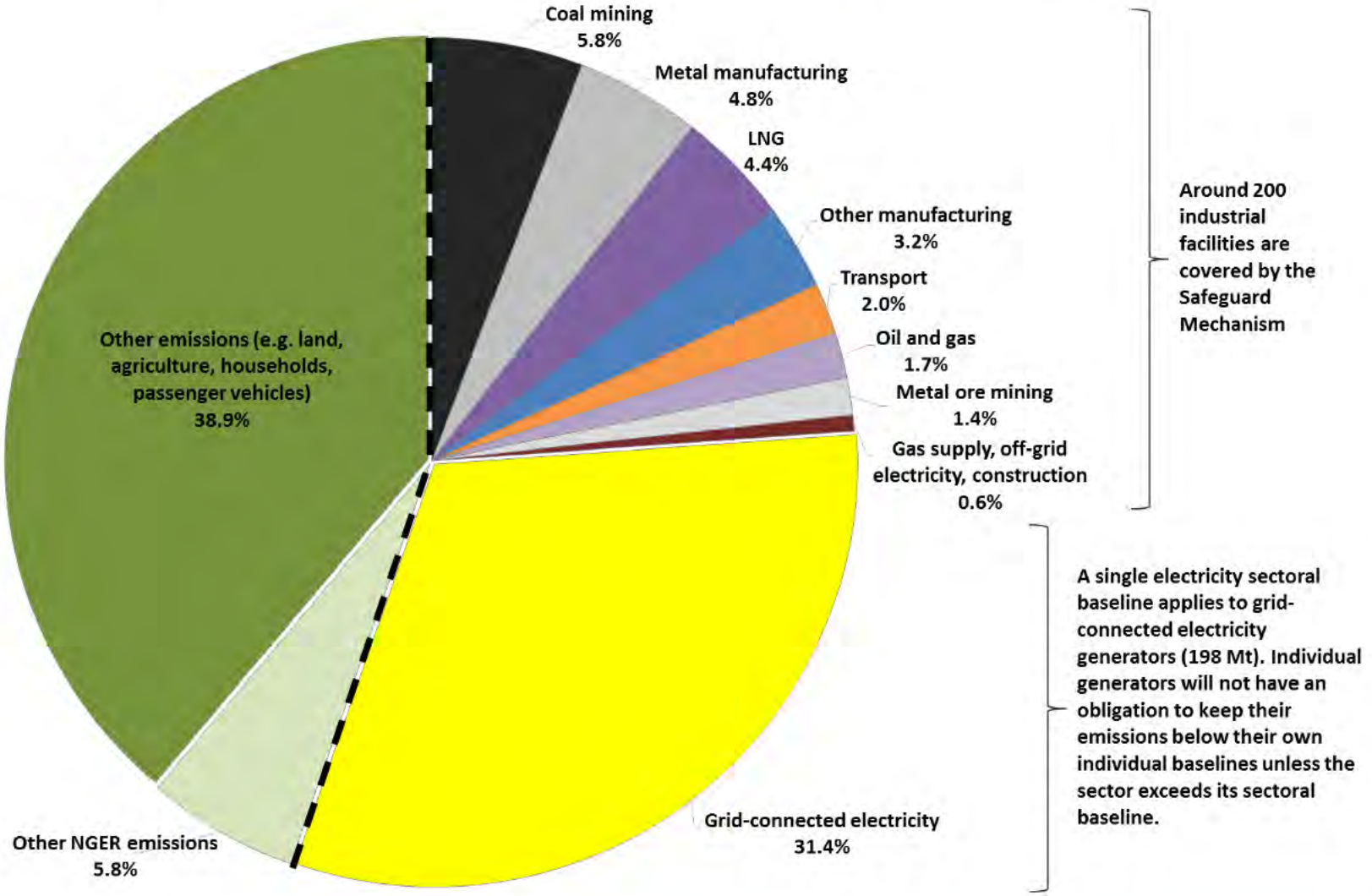

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New facility criteria

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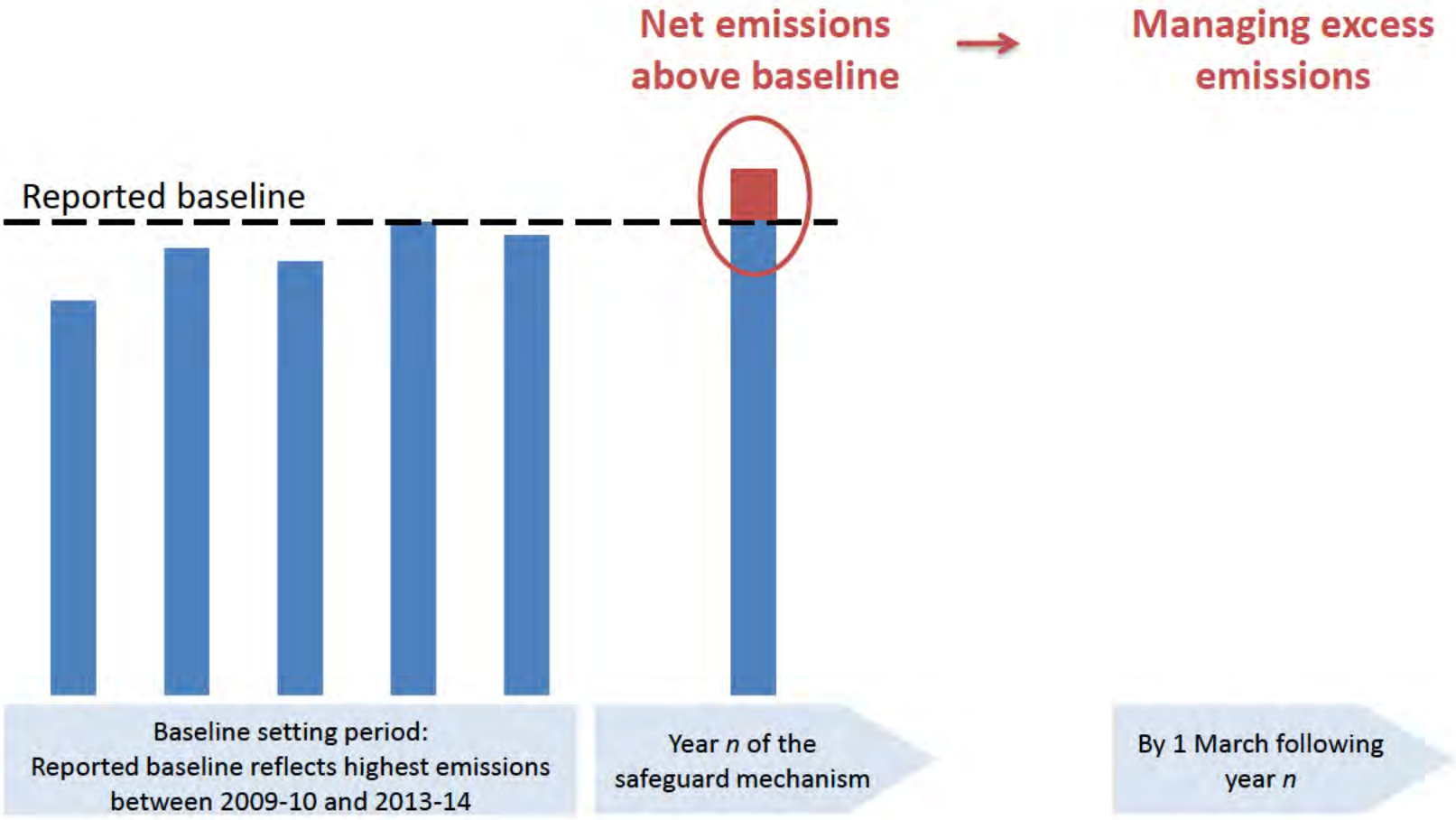
'Benchmark-emissions baseline'

Best practice emissions intensity

Default 100,000 t CO_2-e

Excess emissions



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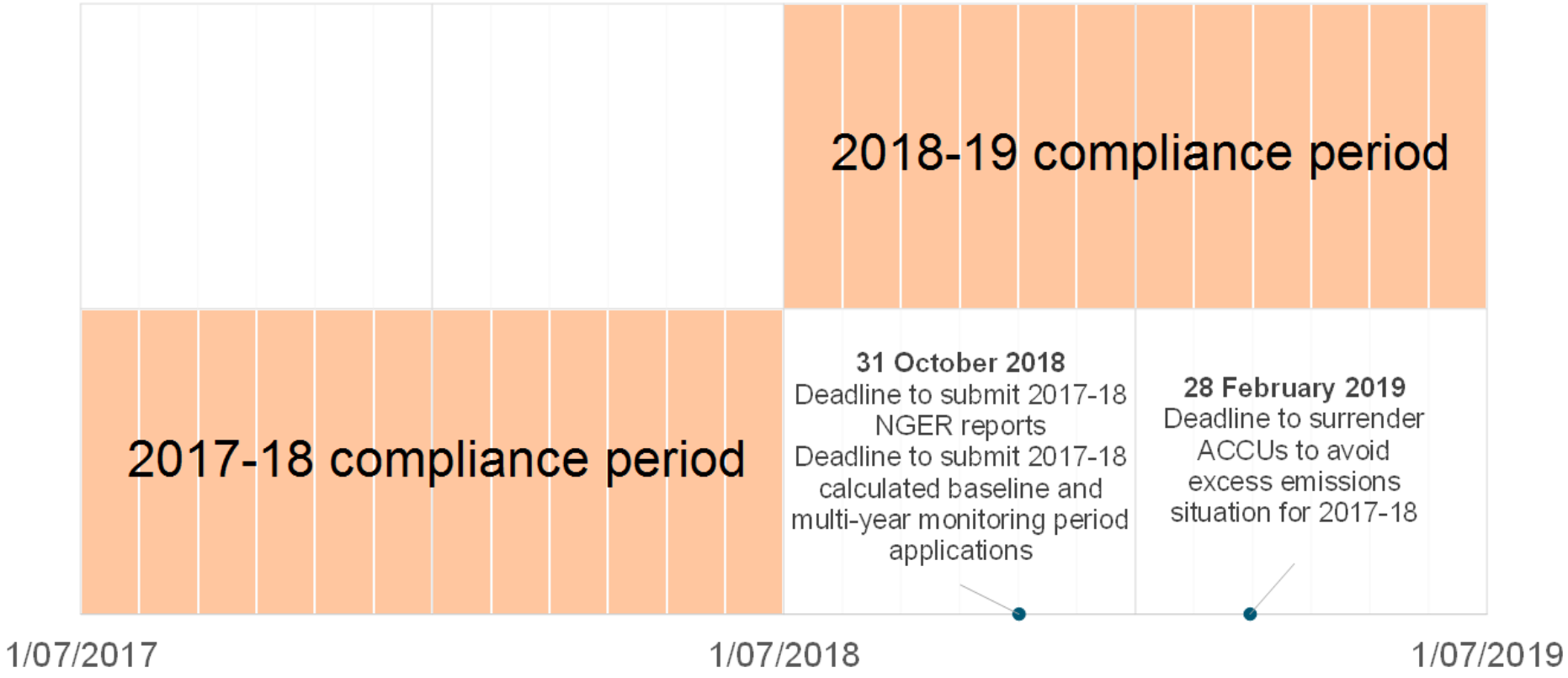

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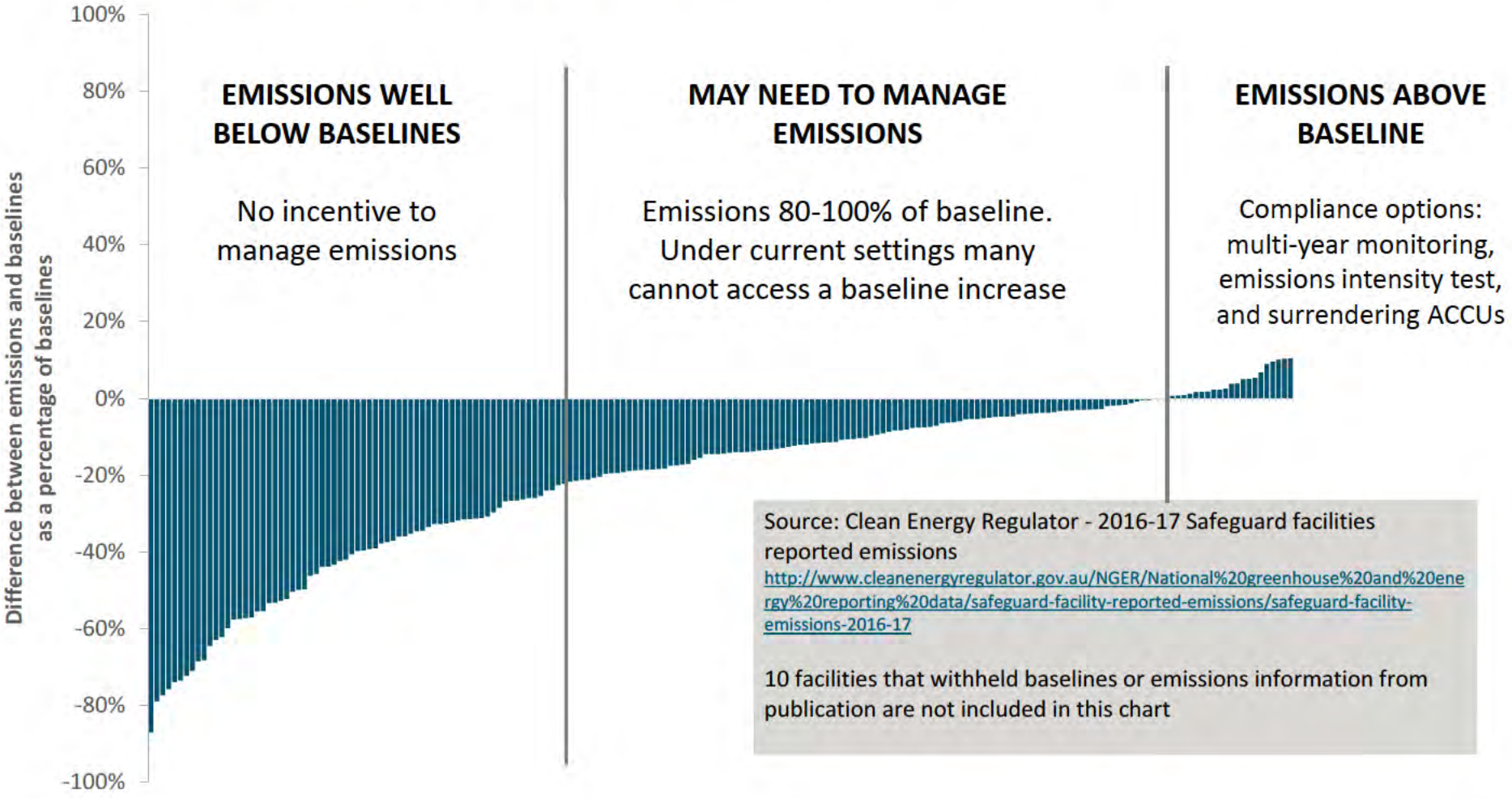
Blackwater Mine	QLD	BM Alliance Coal Operations Pty Limited	67 096 412 752	768,909	Calculated Baseline	626,090	0
Boddington Mine	WA	NEWMONT BODDINGTON PTY LTD	32 062 936 547	208,038	Reported Baseline	207,938	0
Boggabri Coal Minesite	NSW	BOGGABRI COAL PTY LIMITED	77 122 087 398	186,032	Calculated Baseline	183,750	0
Boyne Smelters Limited	QLD	RIO TINTO ALUMINIUM LIMITED	51 009 679 127	1,052,982	Reported Baseline	996,650	0
Brockman 2 / Nammuldi Mines	WA	Hamersley Iron Pty. Limited	49 004 558 276	316,854	Calculated Baseline	266,172	0
Brockman 4 Mine	WA	Hamersley Iron Pty. Limited	49 004 558 276	144,745	Calculated Baseline	135,344	0
Bulga Opencut	NSW	BULGA COAL MANAGEMENT PTY LIMITED	48 055 534 391	673,617	Reported Baseline	441,453	0
CAN01 Cannington Silver and Lead Mine	QLD	South32 Cannington Proprietary Limited	48 125 530 967	143,326	Reported Baseline	123,826	0
Capcoal Mine	QLD	ANGLO COAL (CAPCOAL MANAGEMENT) PTY	73 010 037 564	1,979,964	Calculated Baseline	2,113,068	133,104

Safeguard operation in 2016-17



Source: Clean Energy Regulator - 2016-17 Safeguard facilities reported emissions
http://www.cleanenergyregulator.gov.au/NGER/National%20greenhouse%20and%20energy%20reporting%20data/safeguard-facility-reported-emissions/safeguard-facility-emissions-2016-17

10 facilities that withheld baselines or emissions information from publication are not included in this chart

Consultation paper and amendments

Sets out an approach with three elements:

Transition to Calculated Baselines

Transition all facilities to calculated baselines over 2018-19 and 2019-20

Introduce Optional Default Parameters

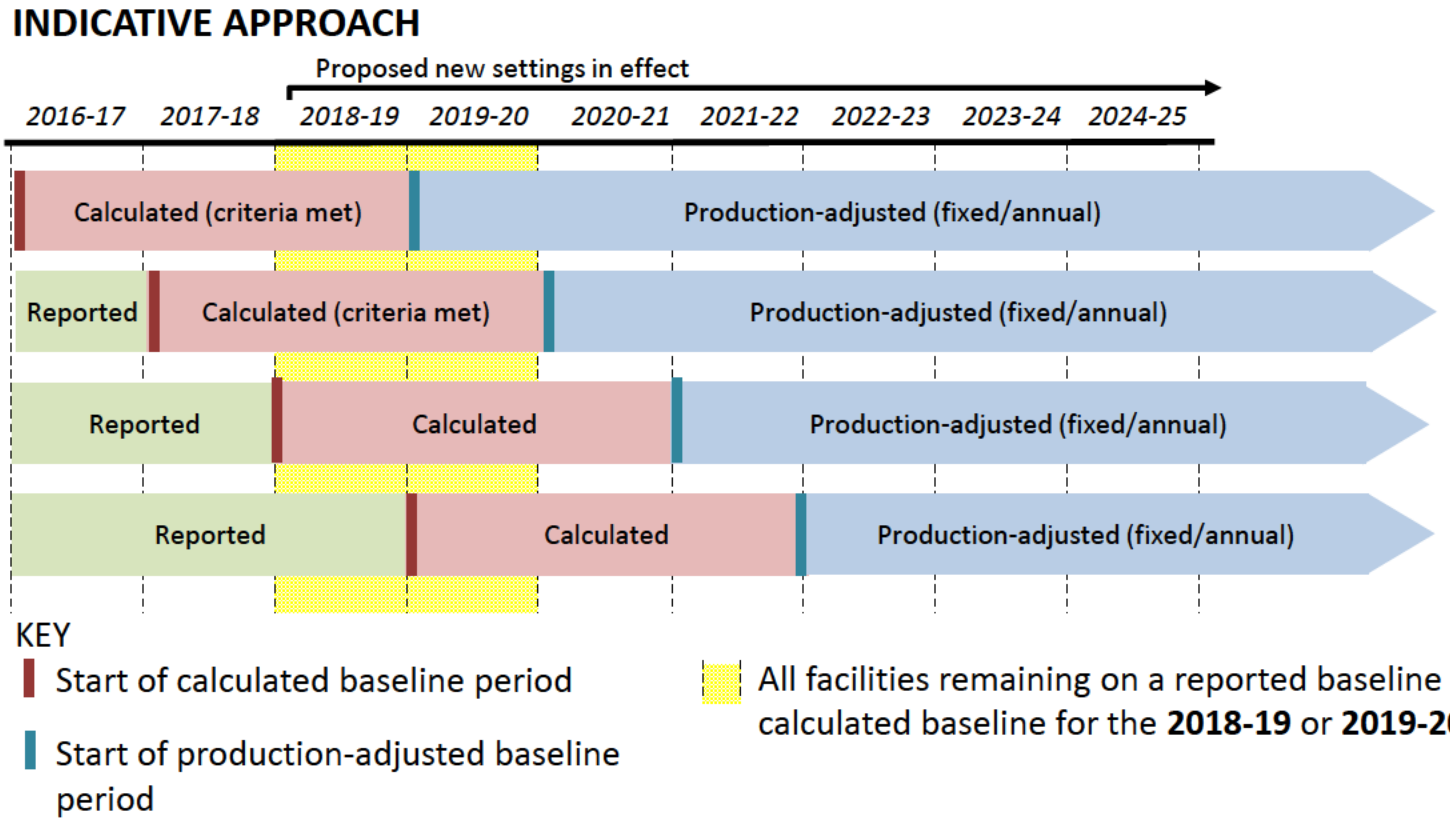
Option to use default production variables and emissions intensities

Annually Update Baselines for Actual Production

Update baselines annually
Requires reporting production data

Transitioning to calculated baselines

Facilities transition in 2018-19 or 2019-20



Optional default parameters

- Default options make applications simpler.
- Defaults remove the need to forecast emissions intensity.

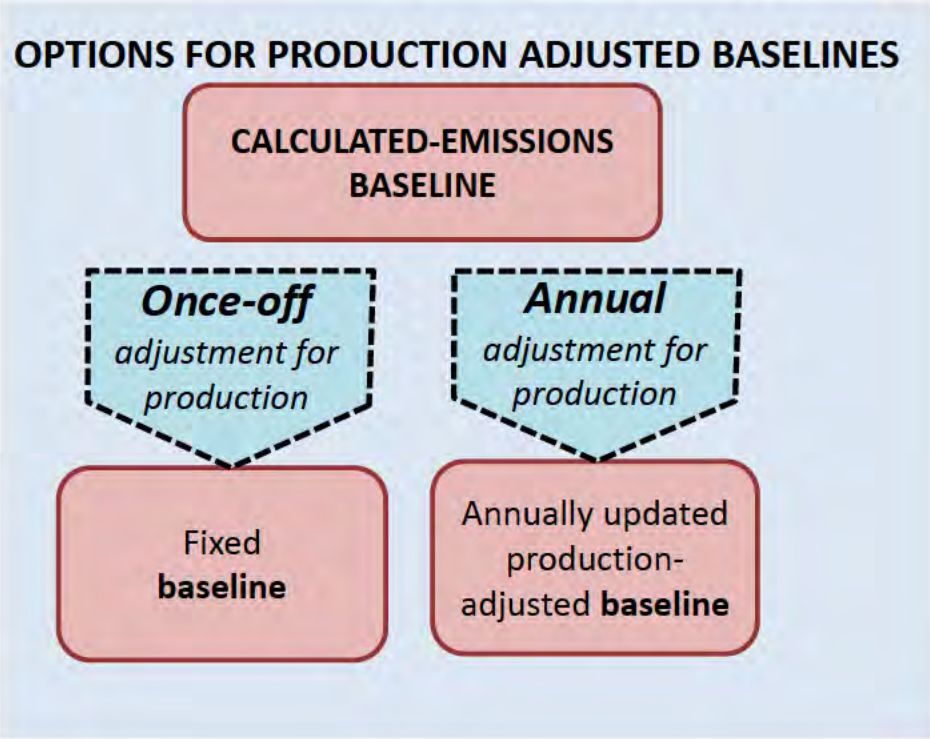
CALCULATED BASELINE = Quantity of Production Variable ✖ Emissions Intensity of Production Variable

Government develops default production variables

Government develops default EI values

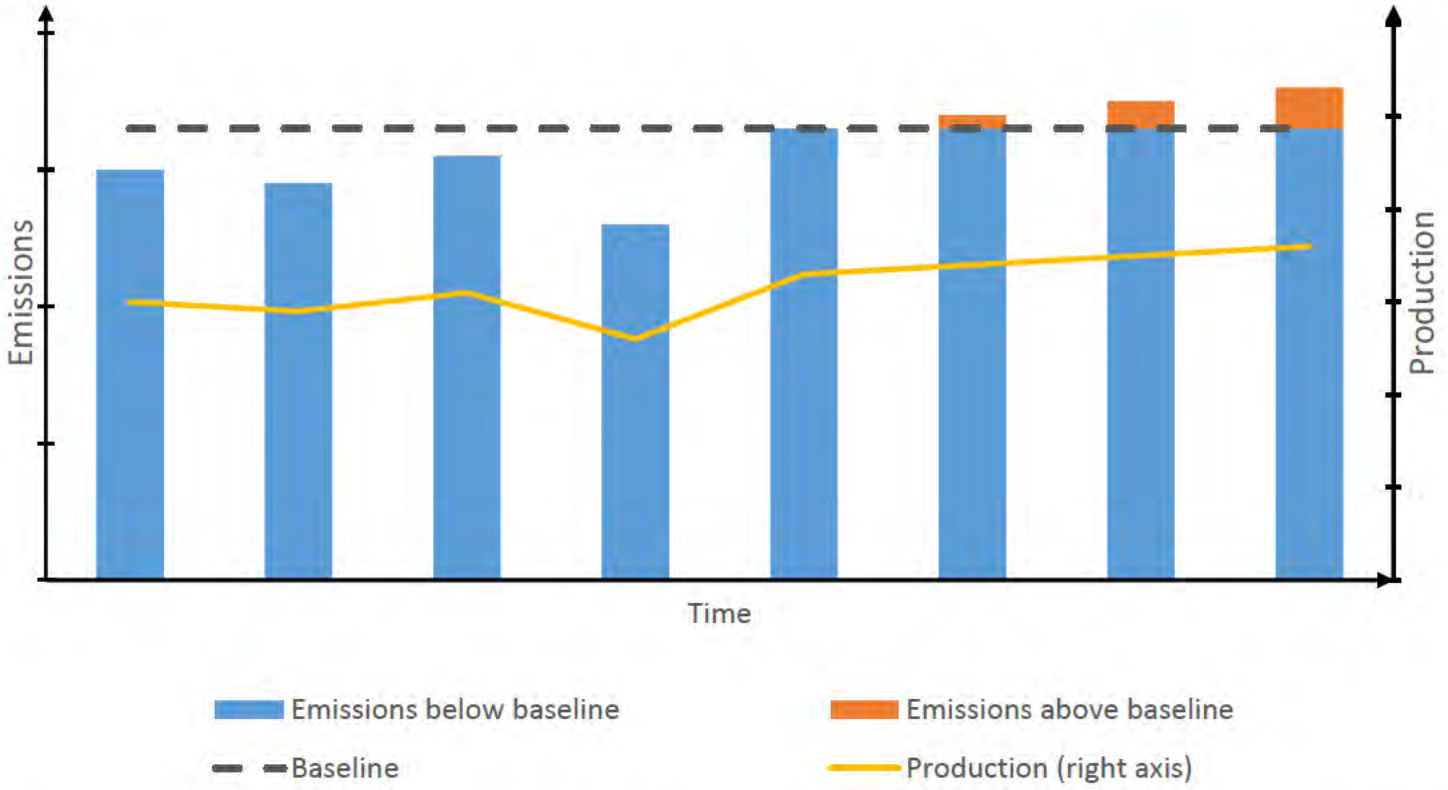
Updating for production

- Amendments will introduce annually updated production-adjusted baselines



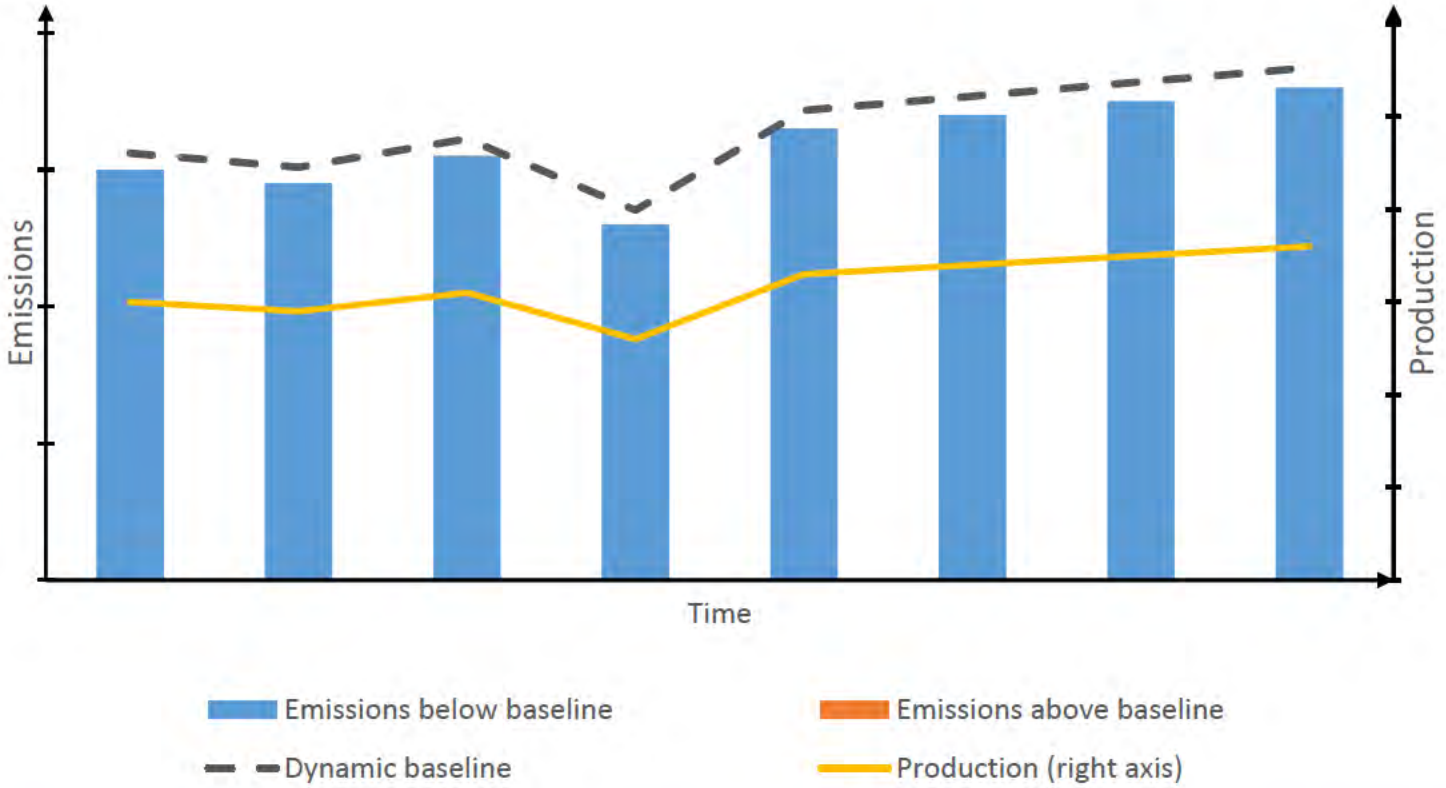
Current approach

Example: fixed baseline



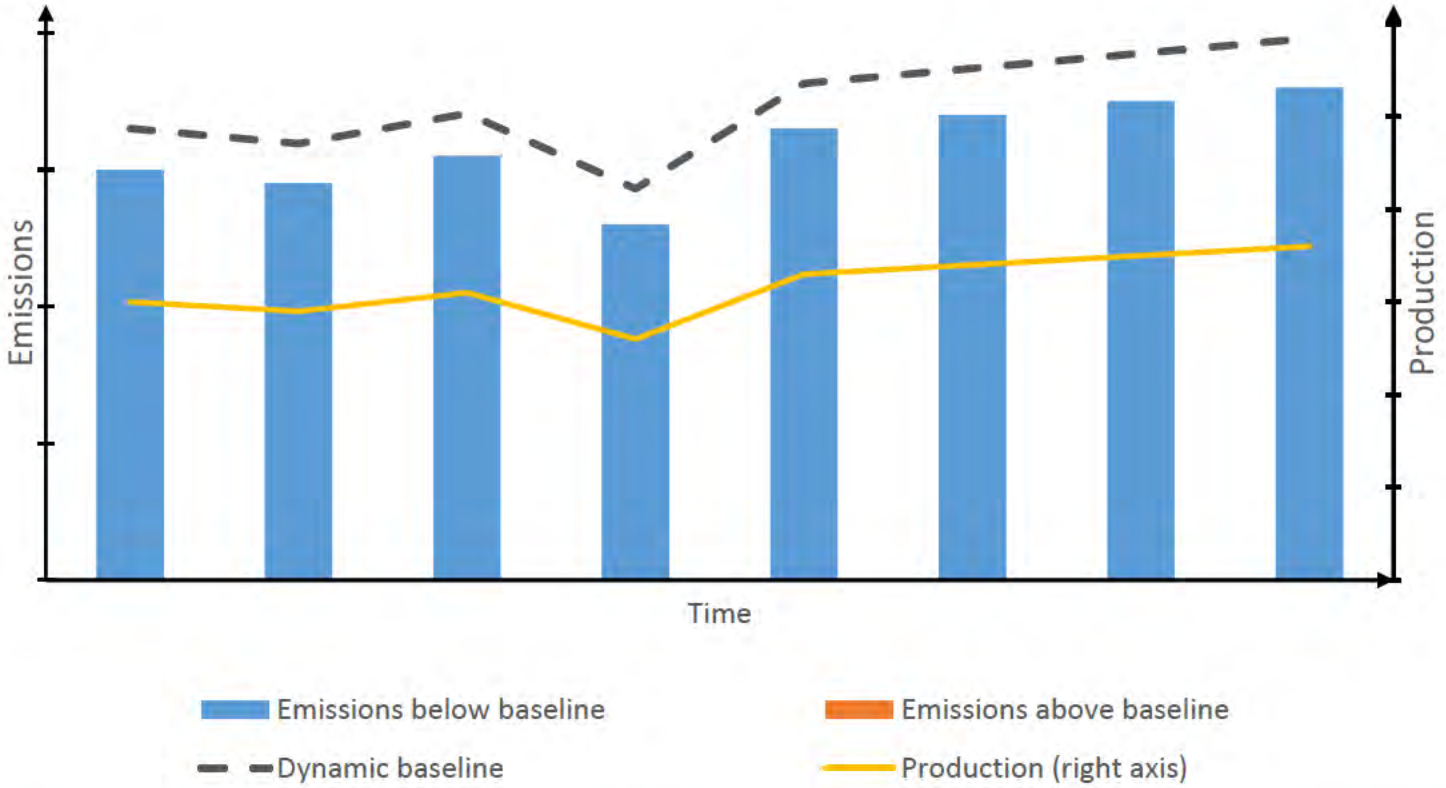
Consultation Paper

Example: baseline updated using production (baseline set using site-specific emissions intensity)



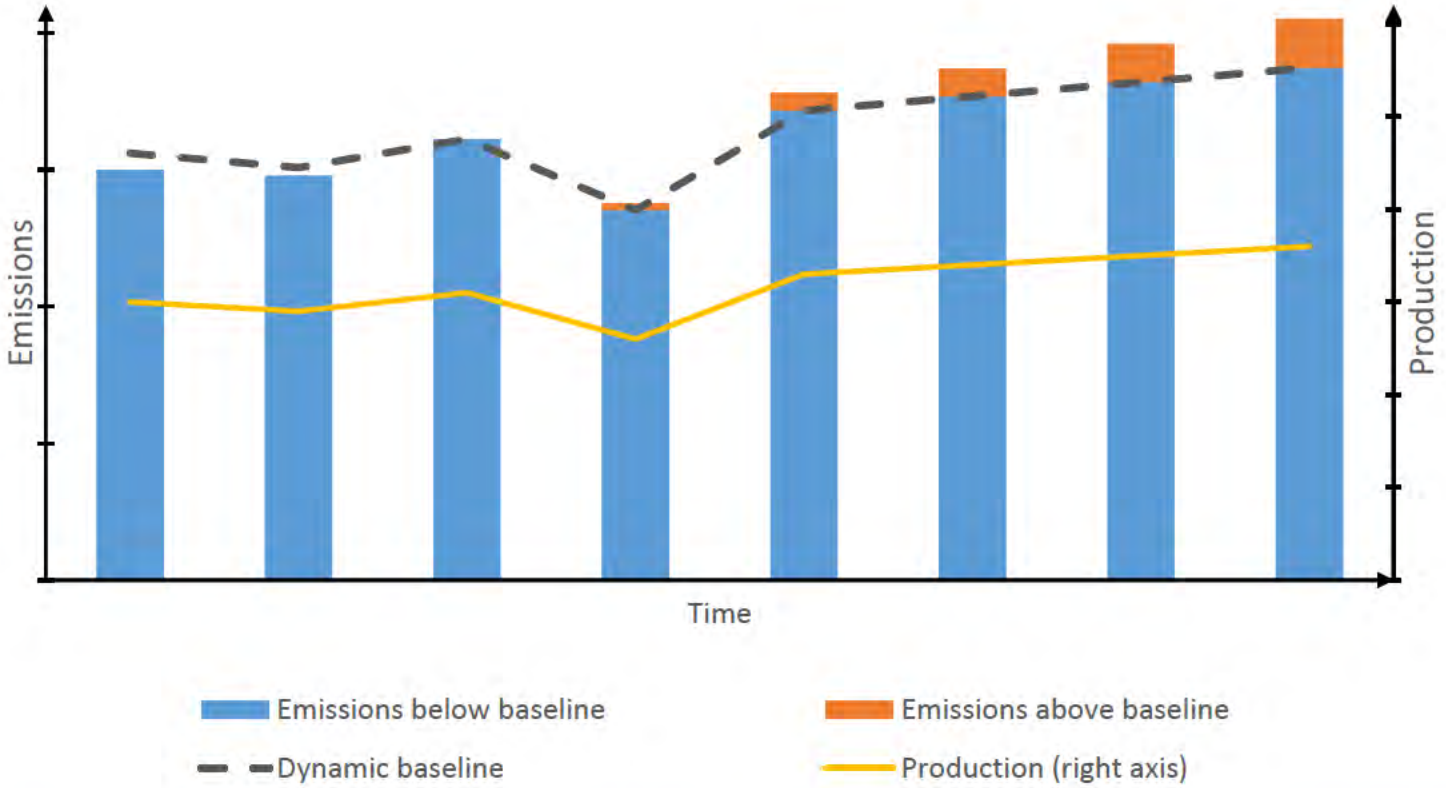
Consultation Paper

Example: baseline updated using production (baseline set using default emissions intensity)



Consultation Paper

Example: baseline updated using production (facility has worsening emissions intensity)



Safeguard Mechanism - next steps

Amendments to Safeguard Rule

- Expect amendments to be made soon

Default production variables and emissions intensities

2020 Review

- As highlighted in the 2017 review, the next review of the Safeguard Mechanism will be by 2020 and then as part of the five yearly review and refine cycle
- Will consider any updates to rules and regulations, in the context of progress toward Australia's 2030 Paris target, including when and how international units can be used and under what conditions, and appropriate lead times

Australian Government
Department of the Environment and Energy

International units

Greenhouse Gas Emissions from Onshore Shale Gas Workshop

2017 Review of Climate Change Policies

- To ensure a balanced approach between domestic and international emissions reductions, by 2020 the Government will determine, in the context of the long-term strategy and in consultation with stakeholders, when and how international units can be used.
- Australia will only allow the use of units that are consistent with the rules implementing the Paris Agreement and where they are of an equivalent standard to ACCUs.

Paris Agreement Article 6
Voluntary cooperation (markets)

Two mechanisms:

- Internationally transferred mitigation outcomes (Article 6.2)
- New multilateral mechanism (Article 6.4)

Details are still being negotiated.

International carbon prices

- EU allowances (EUAs) currently trade at around €23 (A$36)
- Californian allowances trade at around US$15.30 (A$21)
- Korean allowances trade at around 23,200 Korean Won (A$28.90)
- New Zealand allowances trade at around NZ$24.90 (A$23.70)
- Prices in Chinese pilot schemes are between $1.50 and $15.40
- Certified Emission Reductions trade at less than 50 cents

International carbon prices
EU Emissions Trading Scheme

International carbon prices
Clean Development Mechanism

International offsetting mechanism and voluntary schemes

- CORSIA (International Aviation - future source of demand)
- Verified Carbon Standard (Verra)
- Climate Action Reserve
- Gold Standard
- California/Quebec offset program
- Japanese Joint Crediting Mechanism

Australian Government
Department of the Environment and Energy

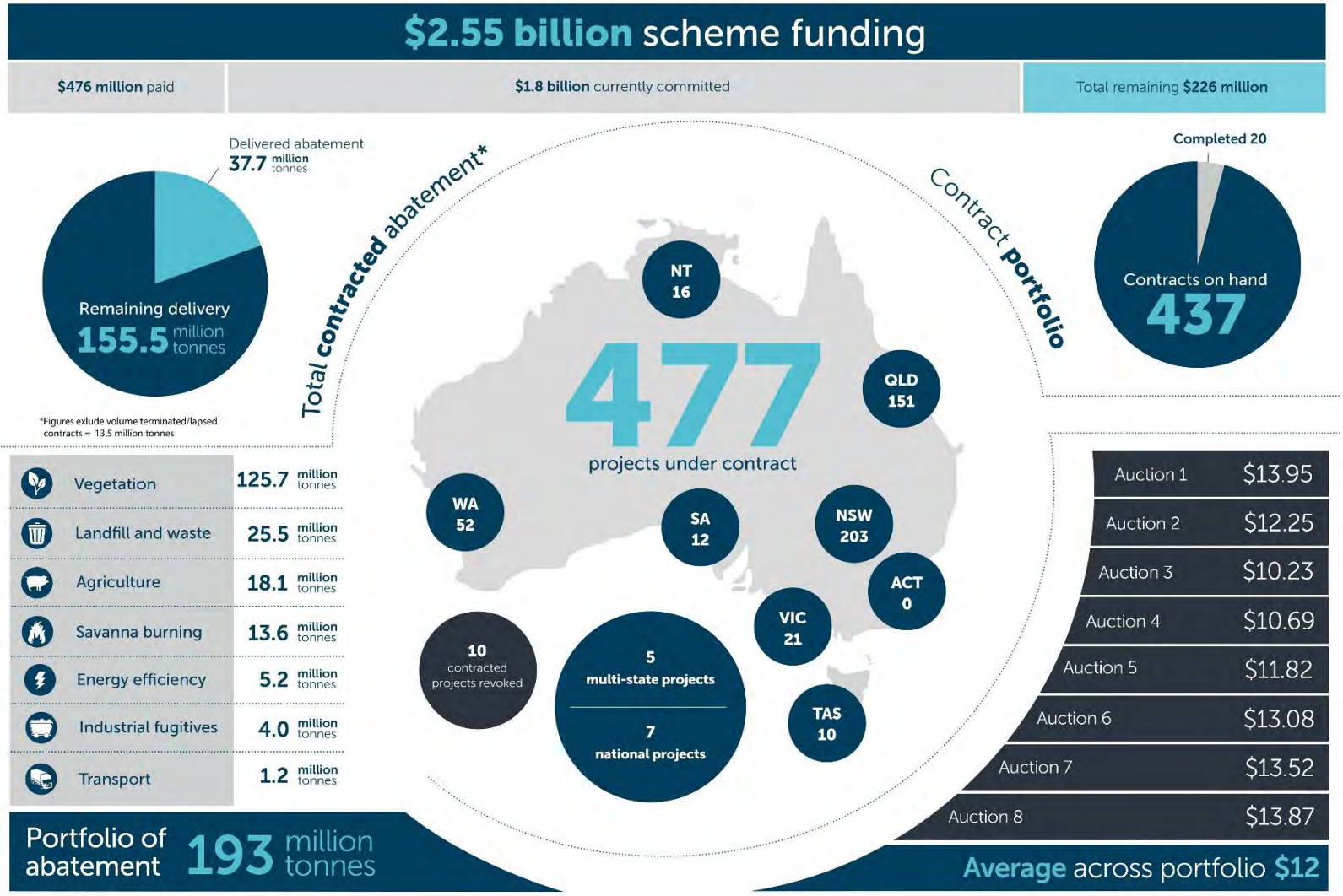
Overview of the ACCU market

Greenhouse Gas Emissions from Onshore Shale Gas Workshop

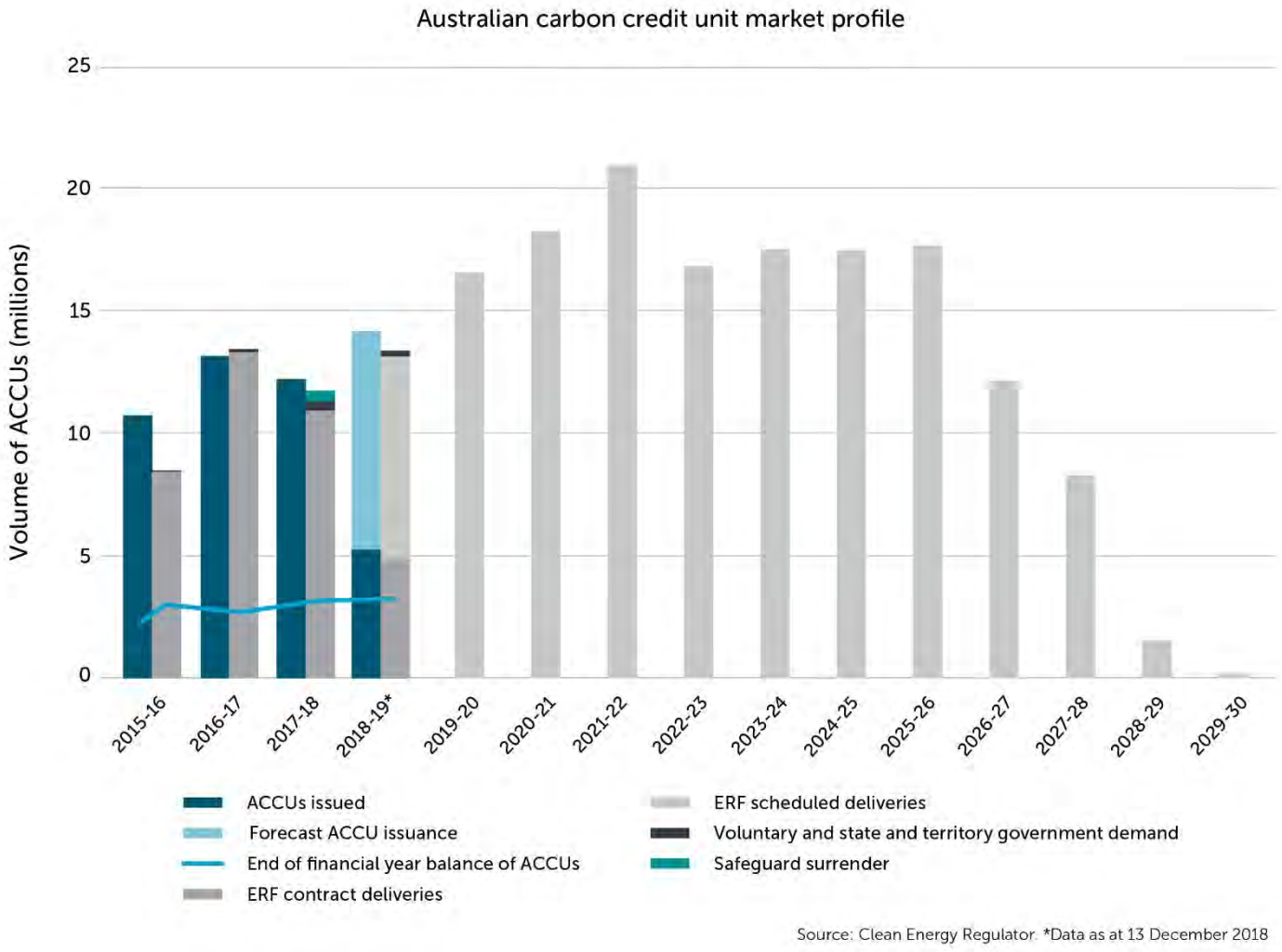
Australian Carbon Credit Units

- Australian Carbon Credit Units (ACCUs) are issued for ERF projects
- An ACCU represents a tonne of abatement
- Where there is an ERF contract, ACCUs can be delivered to the Government for payment
- ACCUs can also be sold on the ‘secondary market’

ERF contract portfolio

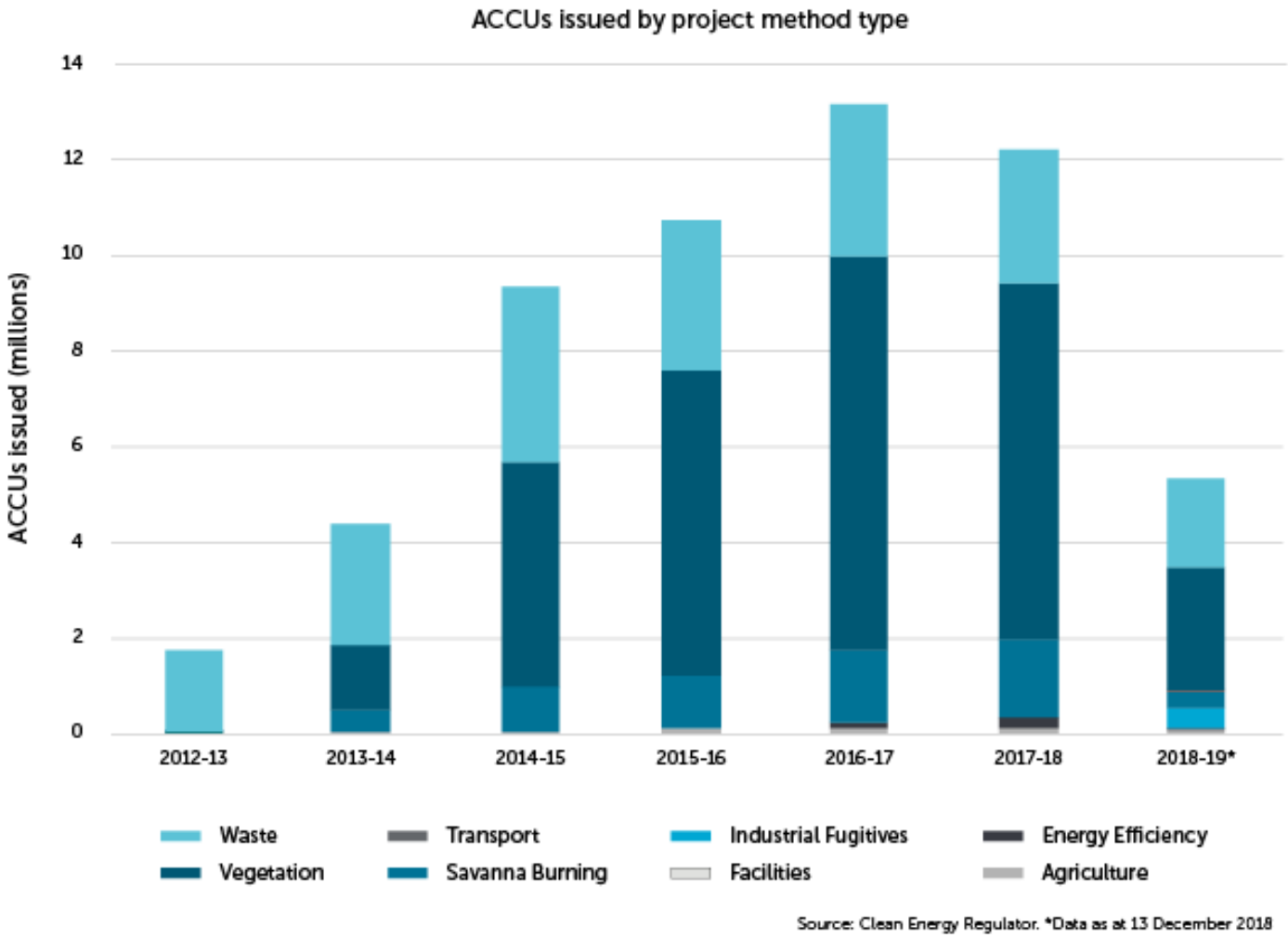


ACCU supply and demand



Source: Clean Energy Regulator. *Data as at 13 December 2018

ACCU supply



Source: Clean Energy Regulator. *Data as at 13 December 2018

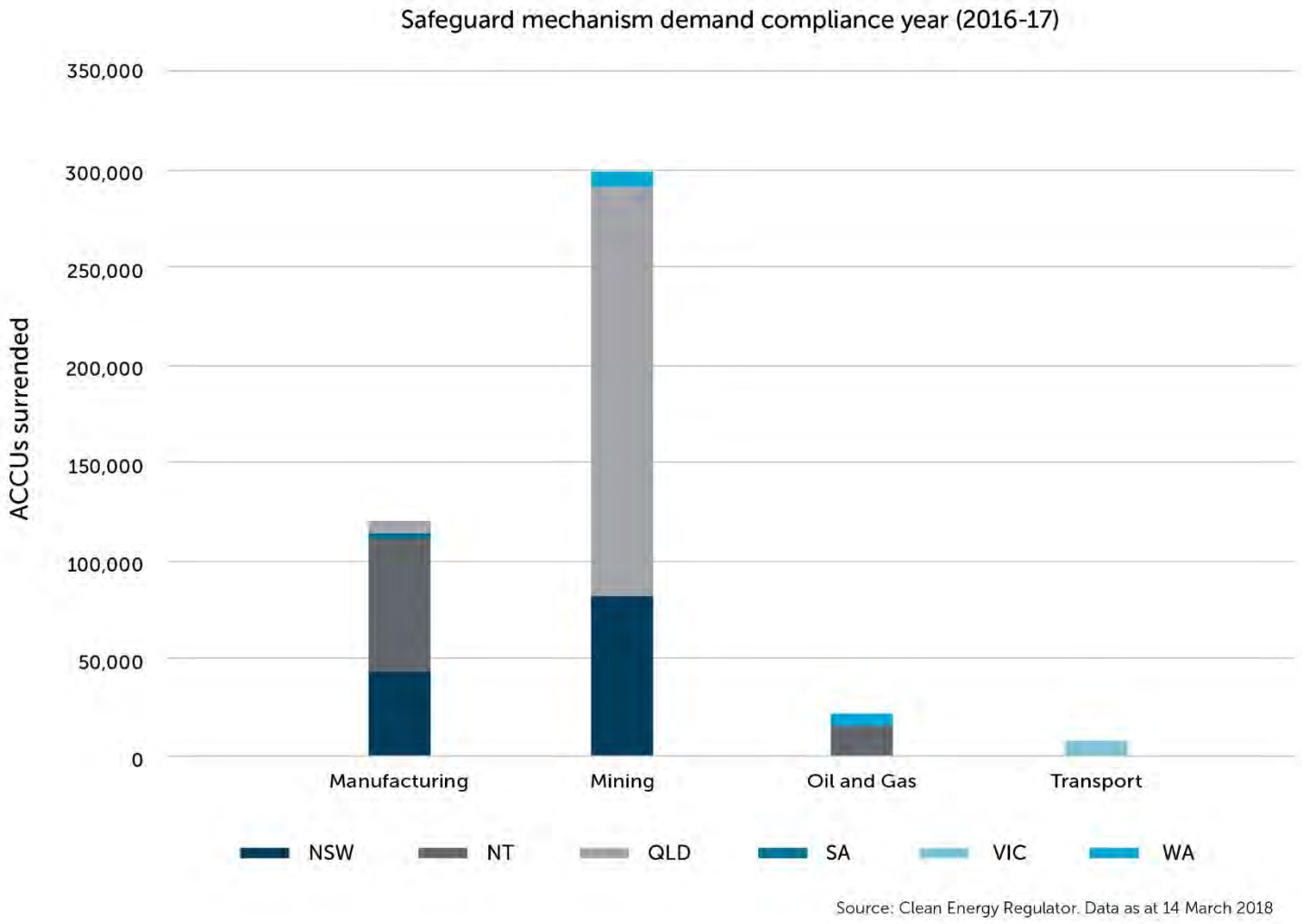
ACCUs – sources of demand

- Emissions Reduction Fund compliance
- Safeguard Mechanism compliance
- Voluntary demand
- State and territory governments

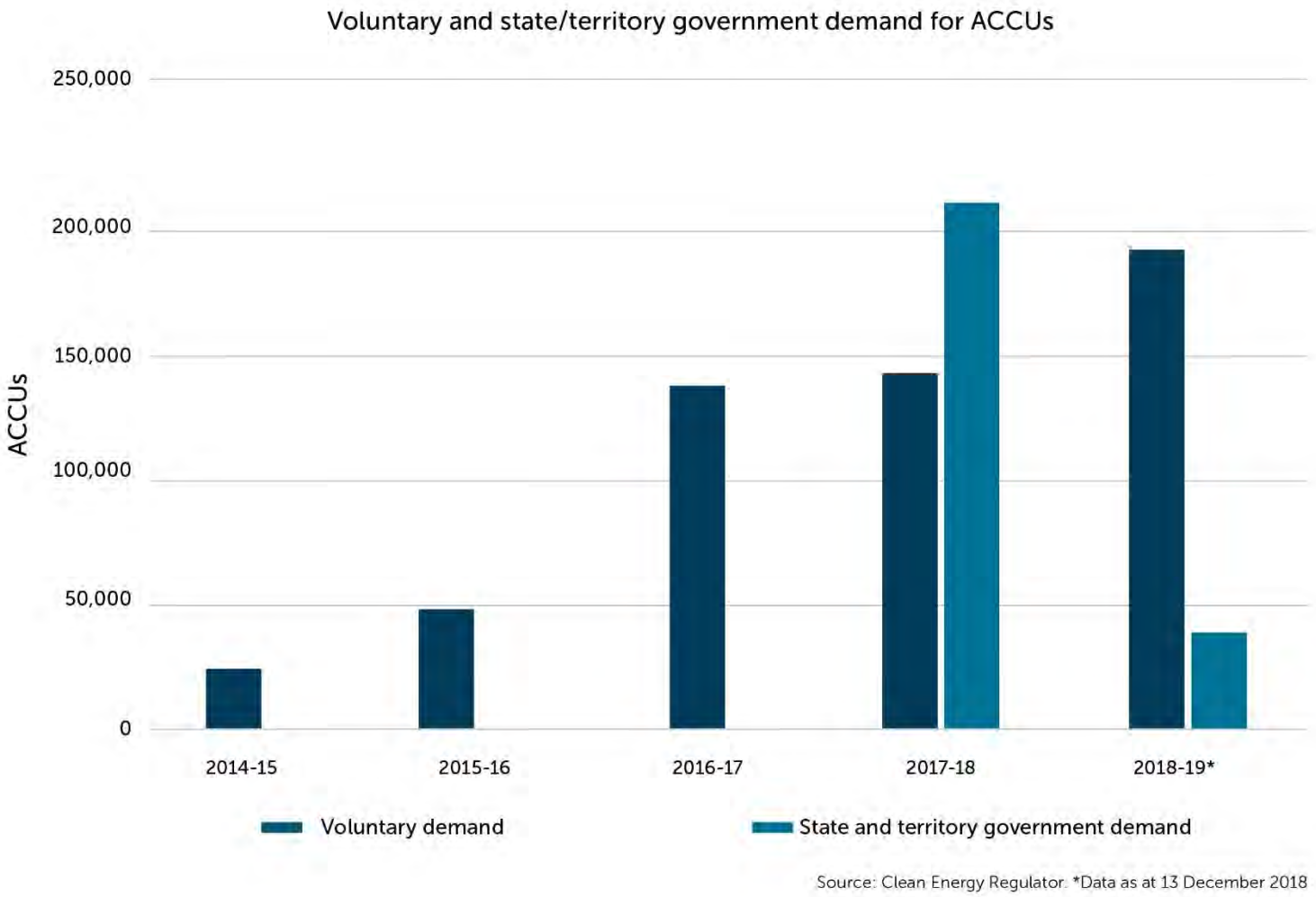
Demand for ACCUs in 2017-18 and 2018-19 (as at 13 December 2019) by source

Demand Source	2017–18	2018–19 (to date)
Emissions Reduction Fund contracts	10.92 million	4.87 million
Safeguard mechanism (compliance year 2016–17)	0.45 million	-
State and territory government demand	0.21 million	0.04 million
Voluntary demand	0.14 million	0.19 million

Safeguard Mechanism compliance



Voluntary, state/territory government demand



Sourcing ACCUs

Suppliers of ACCUs can be found via:

- Carbon Market Institute's Carbon Marketplace
- Emissions Reduction Fund project register

Note: ERF projects have long lead times (1-1.5 years from project registration to first credit delivery)

FOI 191011
FOI 191110
Document 3j

Aboriginal Carbon Industry Strategy

www.nt.gov.au

NORTHERN TERRITORY GOVERNMENT

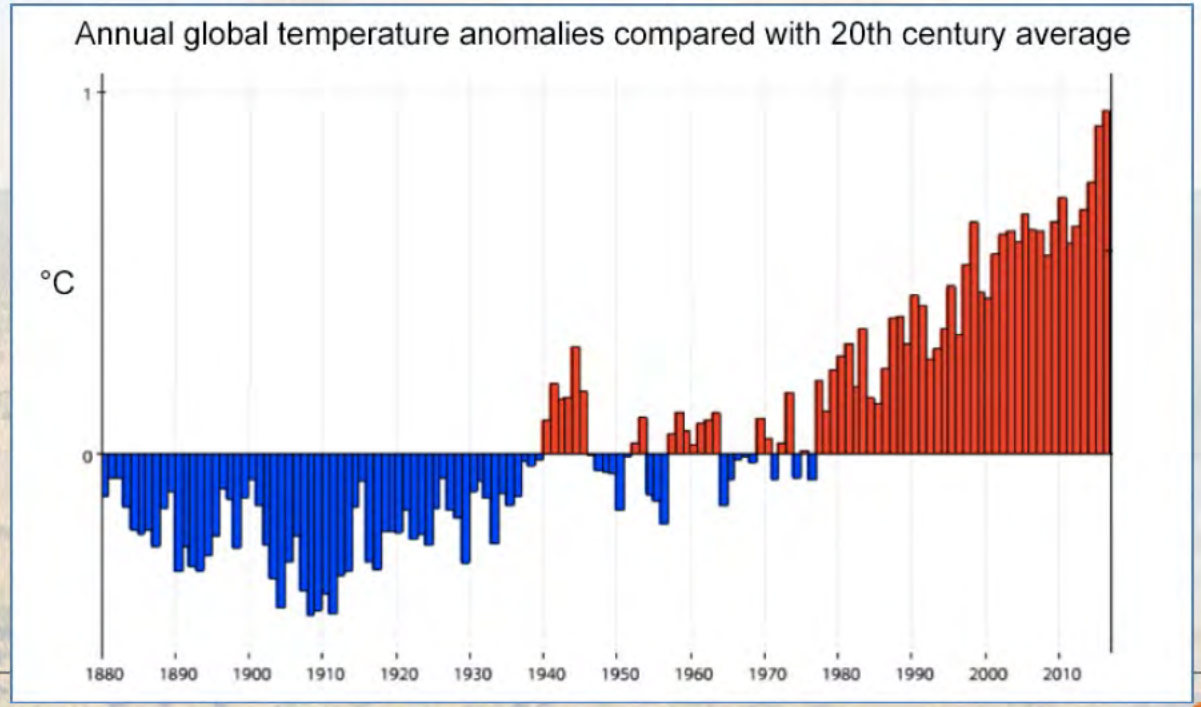
Aboriginal Carbon Industry Strategy

- the carbon industry in the Territory
- Aboriginal Carbon Unit
- the Strategy

global warming – some facts

- the earth is getting hotter
- 1°C warmer than it was 100 years ago
- this century so far - 16 of the 17 hottest years
- last three years have each been a record hottest year

global warming – a graph



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global warming – some impacts

- melting icecaps + thermal expansion = sea level rise
- more frequent and more intense severe storms/hurricanes/cyclones
- more extreme weather events – floods, droughts, heatwaves
- more severe fire weather – bigger fires
- reduced agricultural production, famine
- mass migration, climate refugees, social disruption
- impacts on human health
- destruction of natural systems - coral reefs, marine ecosystems . . . .

Carbon farming – savanna burning

- early burning to prevent late, destructive fires
- low intensity fires = 50+% less emissions
- strategic – create patchworks and firebreaks
- can reduce overall emissions by up to 50%
- projects must use an approved methodology to reduce emissions from a known baseline
- bad fire history provides best opportunities
- method is based on traditional practise

Carbon farming in the Territory - history

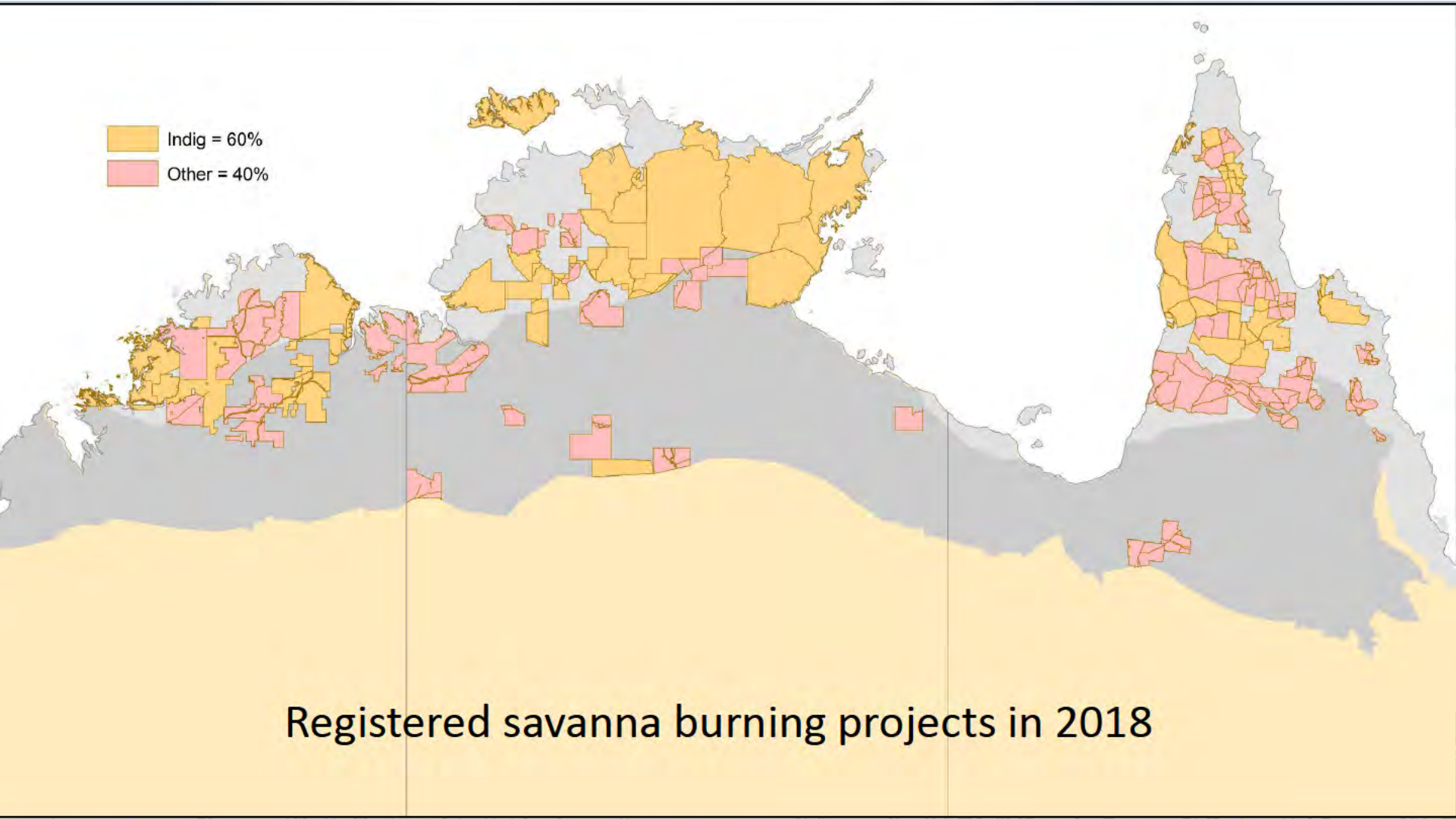
- European settlement
- Depopulation of country - changed fire regimes
- Policy swings since the 1970s – homelands in, homelands out, indigenous ranger groups, caring for country, homelands back in …
- NT based research – originally designed to restore customary land management practises

Carbon farming in the Territory - snapshot

Projects to date within the Indigenous estate:

- In the 2017/18, Indigenous projects generated **over $16m** worth of ACCUs across north Australia.
- **68% in the Northern Territory**(828,069 million tonnes or $11.2 million per annum).
- **91%**of the NT carbon credit generation by savanna fire projects can be attributed to **Indigenous-owned carbon projects**

NORTHERN TERRITORY GOVERNMENT



Registered savanna burning projects in 2018

Carbon farming in the Territory – future?

- new methodologies – combining sequestration and abatement – more ACCUs per km^2, makes more country viable
- growth in demand ACCUs - increased price?
- recognition of associated benefits – cultural, social, economic, environmental
- blue carbon …

Aboriginal Carbon Unit

- 2016 election commitment
- protecting country, creating jobs policy
- established in late 2017

NORTHERN TERRITORY GOVERNMENT

protecting country, creating jobs policy

a policy focused on Aboriginal ranger groups – 4 elements

- capital grants
- ongoing land management and conservation fund
- legislative recognition/regulatory powers
- creating jobs in the carbon economy

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Aboriginal Carbon Industry Strategy

- ACU consulted extensively with industry
- very consistent advice about government role
- developed a strategy that reflects industry views and sets out to shape government support for industry

Aboriginal Carbon Strategy - 5 key areas

1. Develop policies to provide certainty and stability
2. Promote industry across government and community
3. Address impediments to long term growth
4. Identify new opportunities for industry growth
5. Streamline access to support services

Aboriginal Carbon Strategy

1 Develop a policy framework

- offsets for environmental impact of govt business – carbon neutral
- incentives for business to offset emissions and other impacts
- mandatory offset requirements for high environmental impact activities
- improve investment certainty, policies around climate change and environmental offsets

Aboriginal Carbon Strategy

2 Improve awareness of industry

- develop a communication strategy – improve awareness and understanding
- investigate partnership opportunities, promote NT produced credits
- research to quantify beneficial economic, social & environmental impacts
- support establishment of online presence/promotion

Aboriginal Carbon Strategy

3 Address impediments to industry growth

- provide clarity around 'carbon rights' – the right to conduct carbon industry activities across a range of land tenure and title arrangements
- research into secondary or voluntary offset markets and establishment of channels for Territory projects to access those markets

Aboriginal Carbon Strategy

4 Identify new opportunities

- investigate packaging emission reduction activities with other environment and land management services to achieve economies of scale
- package and market fire management and project management services
- investigate market for co-benefits – create opportunity for corporations to offset social or cultural costs of business activity
- new methodologies for low rainfall regions

Aboriginal Carbon Strategy

5 Streamline access to support services

- consult with industry about delivery of existing industry support programs
- develop tailored industry wide or enterprise support programs
- establish a website to provide resources and information
- single point of contact – the ACU
- support industry forums and networks

Thankyou

NORTHERN TERRITORY GOVERNMENT

Developing an Offsets Framework for the Northern Territory

Tracey Duldig
Economic and Environment Policy Division
Department of the Chief Minister
February 2019

NORTHERN TERRITORY GOVERNMENT

Context

2002	Conoco Phillips 9MTPA Liquefied Natural Gas (LNG) plant development in Darwin Harbour – the largest industrial development in the Northern Territory
2006	West Arnhem Land Fire Abatement (WALFA) Project commenced
2012	Inpex Coastal Offset Strategy – 2nd offset agreement in the NT
2016	Election commitment *Healthy Environment, Strong Economy* (HESE), including commitment to suite of environmental regulatory reform and introduction of *Environment Protection Act*
2019	• Draft environment protection Bill establishes Framework to implement an Offsets Framework • Climate Change Strategy to be released August/September – Mitigation and Adaptation • Offsets Framework to be released

ConocoPhillips

INPEX Ichthys PROJECT

NORTHERN TERRITORY GOVERNMENT

NT Statutory context under proposed legislation

Part 8 Environmental Offsets

106 Environmental Offsets Framework and Guidelines

(1) The Minister may establish an environmental offsets framework for the use of environmental offset measures under this Act or an Act prescribed by regulation.
(2) The Minister may by gazette notice publish guidelines for the purposes of the environmental offsets framework.
(3) The guidelines may provide for:

- (a) The types of environmental offset measures that may be required;
- (b) Different requirements for different classes of persons; and
- (c) Different requirements for different areas; and
- (d) Different requirements for different kinds of offsets.

107 Environmental Offsets Register

- (a) The CEO must establish an environmental offsets register.
- (b) The CEO must record in the environmental offsets register all offset measures that are approved under this Act or an Act prescribed by regulation.
- (c) The environmental offsets register must include the information set out in the schedule 3 for each approved offset measure.

NORTHERN TERRITORY GOVERNMENT

What does the NT want to achieve through offsets?

Nationally recognised and accredited opportunities to offset emissions

Northern Territory emissions to be preferentially offset in the Northern Territory

Minimal regulatory and reporting burden on industry and the NT Government through linkages to Commonwealth Government requirements and frameworks

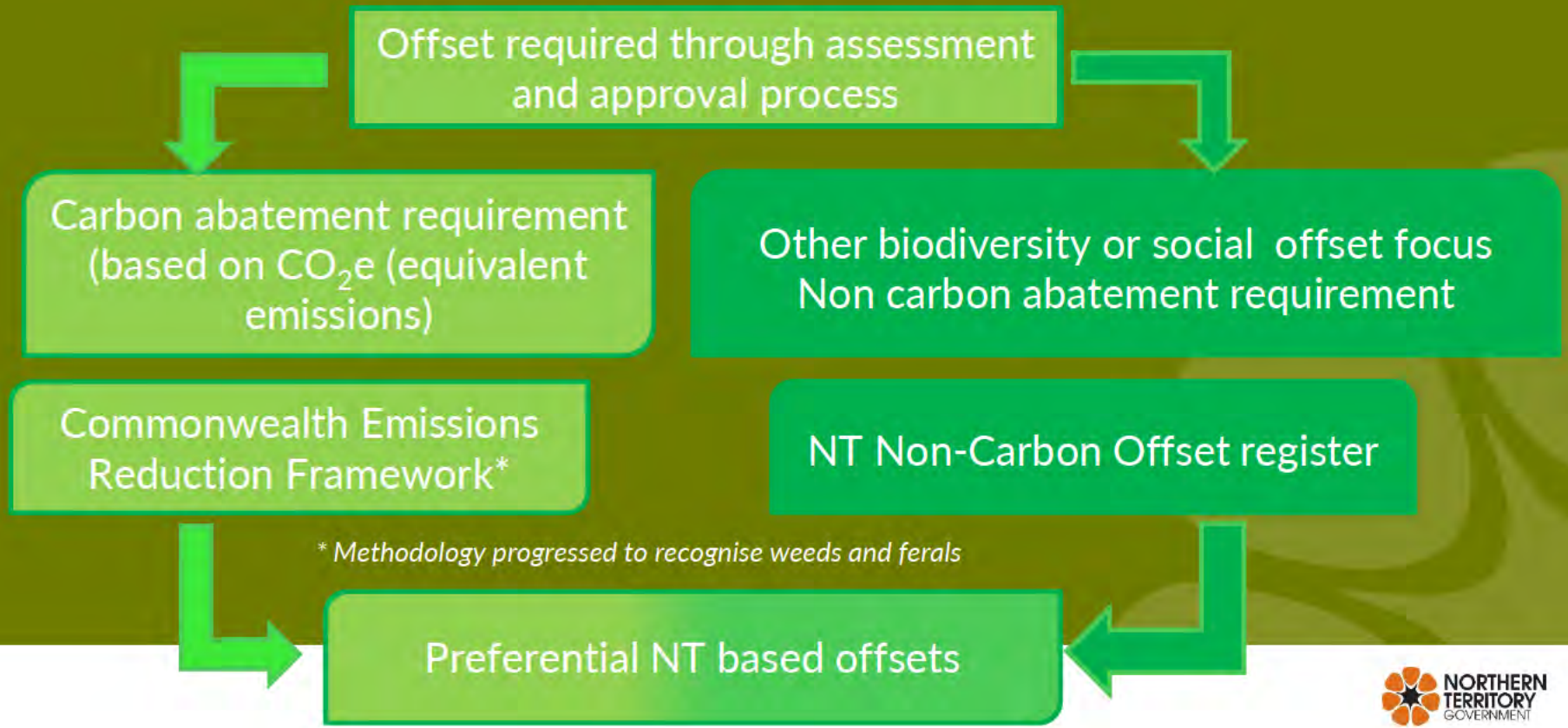
Commonwealth expansion of methodology of the Emissions Reduction Framework to recognise ACCU generation in the Territory *(weed management and feral animal control)*

Facilitation of industry offset funding to regional and remote communities

Preliminary Draft Structure for Discussion

- Scope of this Policy
- What are offsets
- New Environment Protection Act and Offsets in the Northern Territory
- Process (covers timing, NT EPA role, compliance and enforcement and review provisions)
- Aim
- Principles
- Types of offsets used in the NT (direct, indirect, advanced, like for like or not)
    - Biodiversity
    - Carbon
    - Social
- High level Criteria/Requirement (indirect/direct ratio, % of social benefits from offsets)
- Decision making considerations
- Offset Delivery Options (Proponent Responsibility / Third Parties)
- Offset Register
- Relationship to Commonwealth EPBC Act
- Further Information

Potential NT Offset Strategy tiers



NORTHERN TERRITORY GOVERNMENT

NORTHERN TERRITORY GOVERNMENT

Further work required to meet objectives

Determine actions required to realise Territory aspirations for offset benefits to reach Aboriginal communities.

Undertake necessary actions to identify current (or new (long term)) methodologies under ERF that address carbon abatement opportunities in the NT other than savanna burning *(eg weeds and ferals)*.

Develop an NT based offsets register for smaller scale impacts that fall below or outside of the Commonwealth Carbon Emission offset framework.

Questions?

- Can the Commonwealth comment on the **effectiveness of other jurisdictions** offsets frameworks and which jurisdiction would they recommend that could work in the Territory?
- Assessment of the risk to proponents (i.e. how likely is duplication from the Commonwealth's perspective?).
- What are the **opportunities for streamlining** the process?
- Is an Offsets Framework that is fully accredited by the Australian Government an option?
- Given the Northern Territory's particular challenges relating to the **90:10 ratio**, would the Commonwealth consider jurisdiction specific guidance on what would constitute 'limited circumstances of high uncertainty or demonstration of greater conservation benefit'.
- Can the Commonwealth comment on how that would play out if the proponent also triggered Commonwealth offsets?
- Give the challenges in developing carbon projects in the Territory, is the Commonwealth able to **contribute to the development of projects** in the Territory?
- What is the Australian Government position on flexibility regarding the **like for like** concept?

[redacted]

From: Edwina Johnson
Sent: Friday, 1 November 2019 10:44 AM
To: s22
Cc: s22
Subject: FW: GHG Workshop Outcomes NTG and DoEE 7 and 8 Feb 2019 DRAFT.docx [SEC=UNCLASSIFIED]
Attachments: GHG Workshop Outcomes NTG and DoEE 7 and 8 Feb 2019 DRAFT v2.docx

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From: Edwina Johnson
Sent: Tuesday, 26 February 2019 1:44 PM
To: 'Hayley Richards' <Hayley.Richards@nt.gov.au>
Subject: RE: GHG Workshop Outcomes NTG and DoEE 7 and 8 Feb 2019 DRAFT.docx [SEC=UNCLASSIFIED]

Hi Hayley

Thanks for sending these through. I've included a couple of suggestions in the attached.

Cheers
Edwina

From: Hayley Richards [mailto:Hayley.Richards@nt.gov.au]
Sent: Monday, 25 February 2019 3:50 PM
To: Edwina Johnson <Edwina.Johnson@environment.gov.au>
Subject: GHG Workshop Outcomes NTG and DoEE 7 and 8 Feb 2019 DRAFT.docx

HI Edwina,
Apologies for the delay in sending these through.
Do you want to have a quick review before I finalise and send to the group. Note CSIRO did not agree to circulating their slides.
Hayley

WORKSHOP OUTCOMES - DRAFT

Northern Territory and Commonwealth workshop:
Greenhouse gas emissions from onshore shale gas
Darwin, 7-8 February 2019

Attendees: Northern Territory Government: Department of the Chief Minister (DCM)- Hayley Richards, s22 , s22 , s22 , s22 (day 2); Department of Environment and Natural Resources(DENR) - s22 , s22 ; Department of Primary Industry and Resources(DPIR) - s22 , Brett Easton

Commonwealth Department of Environment and Energy (DoEE): Kristin Tilley, Edwina Johnson, s22 via teleconference (part of day 1).

CSIRO: s22

Workshop Objective:

- To build the NT level of understanding of Commonwealth policies and frameworks in relation to Greenhouse Gas emissions in the context of recommendation 9.8 from the final report of the Scientific Inquiry into Hydraulic Fracturing of Onshore Unconventional Reservoirs in the Northern Territory (the Inquiry).
- To seek agreement on way forward and future engagement in addressing the implementation of the recommendation.

Summary of key outcomes from the workshop:

- Established a better understanding of the Commonwealth's policy settings and implications of the implementation of recommendation from the Inquiry and the growth of the gas industry in the Northern Territory.
- Joint recognition that the NT carbon offsets will not be sufficient to address the growth of the gas industry and related emissions and that s47C offsets may need to be sourced from other jurisdictions.
- Agreement to build channels of communication and networks between the NT and DoEE for a collaborative approach to working on innovative methods and options.
- Commitment to meet quarterly as a group and communicate regularly with key contacts on specific matters.

Day One

Agenda Item	Outcomes and Actions
· Welcome, introductions and context setting by Hayley Richards DCM and Kirstin Tilley DoEE	Greenhouse Gas Emissions from Ons
Overview of 'Report of the Scientific Inquiry into Hydraulic Fracturing of Onshore Unconventional Reservoirs in the Northern Territory' (the Inquiry) and Northern Territory Government response · *Ensure all participants understand background and context to workshop, including work of the Independent inquiry, underpinning analysis, relevant recommendations, NT Government response, relevant discussions with industry in NT, timeframes and process for implementation of response*	· Presentation by s22 DCM on potential Greenhouse Gas emissions from onshore gas activities in the NT Briefing on potential GHG emiss Overview by s22 DCM on development of an NT Climate Change Strategy and Offsets Framework and engagement with stakeholders. ACTION: Slides from all presentations to be emailed to Hayley Richards or s22 @nt.gov.au for circulation to all workshop attendees.
Development of Northern Territory guidelines for methane monitoring by the onshore petroleum industry · Provide an update on development of new technical guidelines for methane monitoring *Discussion:* Consideration of greenhouse gas emissions in environmental approvals and Commonwealth input regarding the overlay with NGER.	· CSIRO undertaking data collection for baseline monitoring in Beetaloo basin NT. CSIRO undertaking lifecycle analysis work for CSG in Queensland but the variability in conditions and facilities makes this challenging and it is not clear when CSIRO will finalise and/or publish this analysis. Lessons learnt by CSIRO in undertaking this CSG work may be relevant to any similar analysis undertaken in the NT. · CSIRO preparing Code of Practice for methane monitoring for NT Government to meet recommendations from Inquiry for be enforceable COP's under Petroleum legislation. Discussion on: the need to align CoP and National Greenhouse and Energy Reporting(NGER) requirements for data sets and basis for offsetting as well as ability to establish cumulative baselines and trends over time. Presentation by s22 DoEE on: the NGER and National Greenhouse Gas Inventory, its review and proposed changes for more transparent reporting and to incentivise better management.

Agenda Item	Outcomes and Actions
Coverage of emissions from onshore shale gas development and production in the National Greenhouse and Energy Reporting Scheme and National Greenhouse Gas Inventory *Ensure all participants understand scope of reporting of emissions from all stages of development and production, including data availability*	Discussion on the use of NGER as a national framework for reporting greenhouse gas emissions by corporations [647] nationally. Beneficial for NTG, CSIRO and DoEE to have further discussions while CoP are being finalised and DoEE processes for NGER under review. ACTION: Circulate contact details of workshop attendees to facilitate ongoing dialogue.  National Greennhouse and E
Overview of Commonwealth policy frameworks, including Safeguard Mechanism, Emissions Reduction Fund and Carbon Neutral program · *Ensure all participants understand existing Commonwealth policy frameworks*	· Presentation on Carbon neutrality and the National Carbon Offset Standard by s22 · Offset units, international offsets, voluntary and compliance offsets schemes and appeal of co-benefits, targets and reporting Carbon Neutral Program · Standards for obtaining carbon neutral certification to meet sustainable development goals  Carbon Neutrality and the National Ca
Overview of Commonwealth policy frameworks, including Safeguard Mechanism, Emissions Reduction Fund and Carbon Neutral program (Continued) · *Ensure all participants understand existing Commonwealth policy frameworks*	· Presentation on the Emission Reduction Fund by Edwina Johnson on the crediting and purchasing by the Commonwealth of CO_2 offsets, governance of ERF, methods and potential projects, pricing.  Emissions Reduction Fund Pre  Emissions Reduction Fund Saf · Presentation by s22 on Emissions Reduction Fund Safeguard Mechanism for obtaining baselines of significantly large emitters (i.e. >100,000 tonnes of GHGs per annum) with review leading to amending changes to all calculated baselines rather than reported baselines. Potential part of a suite of options to reduce emissions by large emitters in the future.

Agenda Item	Outcomes and Actions
Developments on international units *Provide update on expected approaches to international units*	· Presentation by s22 on international units and overview of the ACCU markets with regards to Paris agreements, linked schemes. Source of demand, quality and eligibility of units to mitigate price risks.  International Units Presentation Clth.p  Overview of the ACCU Market Preser
Briefing on Aboriginal Industry Carbon Strategy · *Provide update on Aboriginal Carbon Industry Strategy*	· Presentation by s22 DENR on NT Aboriginal Carbon Industry Strategy, history and existing projects, request of industry for a policy framework for certainty and stability. · Upcoming annual North Australia Savanna Fire and Carbon Forum at Charles Darwin University on 13 and 14 February.  Aboriginal Carbon Industry Strategy Pr ·

Day Two

Item	Outcome
Welcome and recap from Day One	Discussion on carbon capture and storage with regard to geology and research. · Presentation by s22 DCM on the development of an Offsets Framework for the NT with regard to new environment protection legislation, climate change strategy – mitigation & adaptation and potential NT offset strategy tiers. · ACTION: DoEE to provide contact with relevant officers to DCM with regards to EP&BC Act and Commonwealth offset program Offsets Policy Update Presentatior Presentation by s22 CSIRO on overview of GSIERA overview and transparency protocols as well as lifecycle assessment project and challenges of the study including: commercial in confidence data; scope 1 and 2 emissions and displacement of other sources. Discussion included agreement that lifecycle of GHG can only be reliably considered in Australian.
Discussion on possible options to offset emissions from onshore shale gas · *Workshop possible benefits and costs of different options to offset emissions*	· Views, questions and discussions as captured on the white board – for further discussion: **Regulation and roles of players:** · What is the role of the regulators and clarifying role at National and NT level. · What are the three most important objectives (policy/political) ie who pays and what signals to industry? · Be mindful of scope creep · Evidence, science, collaboration and pragmatism of government and industry important elements **Emissions:**

	· What facility level options are there to reduce emissions – to minimise offset needs. Ie considering Energy side to processing and fugitive side. · How do we take a National approach to gas emissions lifecycle? · How to offset 40M (t) of emissions in Australia every year · Consider sequencing with industry timing: when the emissions hit? what we do when? how does it impact targets? **Offsets:** · How will the NT offsets interact with regulation? · Offset pricing – striking the balance between abatement viability and industry and a policy that accommodates uncertainty. · Beneficial use · The supply of NT Carbon Offsets and how to increase these: ie grow aboriginal developed offsets. What policy levers will support these? Ensuring the methods are right for NT context. **ACTION:** agreed NT to review Cth methods and have a further discussion about methods that might better meet NT context (noting high cost of method development) **Communications** Consideration of the communication of information and messaging.
Next steps and wrap up	Agreement to hold discussions quarterly to ensure alignment of work programs in achieving multijurisdictional solutions. Additional regular communications at relevant officer level on specific matters.

s22

From: s22
Sent: Thursday, 13 December 2018 3:13 PM
To: 'Hayley Richards'
Subject: FW: DoEE contact re Greenhouse Gas emissions [DLM=For-Official-Use-Only]

FYI ☺

From: s22
Sent: Monday, 5 November 2018 5:47 PM
To: 'Hayley Richards'
Cc: s22
Subject: DoEE contact re Greenhouse Gas emissions [DLM=For-Official-Use-Only]

Hi Hayley

Following up on your request about assistance from the Department in understanding how to account for the greenhouse gas emissions from gas developments, s22 is the Director of the National Inventory Team and has offered to assist you. She can be contacted on s22 @environment.gov.au

I will be in touch again soon regarding our visit later this month

Cheers
s22

Assistant Director – Major Projects West Section
Department of the Environment and Energy
s22 @environment.gov.au | GPO BOX 787 Canberra ACT 2600 | Phone s22

s22

From: Edwina Johnson
Sent: Friday, 1 November 2019 10:35 AM
To: s22
Cc: s22
Subject: FW: Commonwealth contact on EPBC offsets [SEC=UNCLASSIFIED]

From: s22 @nt.gov.au]
Sent: Friday, 15 February 2019 12:52 PM
To: Edwina Johnson <Edwina.Johnson@environment.gov.au>
Cc: Bruce Edwards <Bruce.Edwards@environment.gov.au>; s22 @environment.gov.au>
Subject: RE: Commonwealth contact on EPBC offsets [SEC=UNCLASSIFIED]

Hi Edwina

Thank you for the contact. I'll follow up with s22 .

Regards

s22
Principal Policy Officer
Economic and Environment Policy
Department of the Chief Minister
Northern Territory Government

Floor 3, NT House, 22 Mitchell Street, Darwin
GPO Box 4396, Darwin, NT 0801, Australia

p ... s22
e s22 @nt.gov.au
w ... www.nt.gov.au/dcm

THE TERRITORY BOUNDLESS POSSIBLE | NORTHERN TERRITORY GOVERNMENT

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Our Values: Commitment to Service | Ethical Practice | Respect | Accountability | Impartiality | Diversity

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From: Edwina Johnson <Edwina.Johnson@environment.gov.au>
Sent: Wednesday, 13 February 2019 4:33 PM

To: s22 @nt.gov.au>
Cc: Bruce Edwards <Bruce.Edwards@environment.gov.au>; s22 @environment.gov.au>
Subject: Commonwealth contact on EPBC offsets [SEC=UNCLASSIFIED]

Hi s22

It was good to meet with you last week.

In relation to your question on a contact from the Department on environmental offsets, s22 , Director of Environmental Protection – Regulatory Policy (on s22) is the best contact from the Department on offsets under the EPBC Act.

Cheers
Edwina

Edwina Johnson
A/g Assistant Secretary
Industrial and Air Quality Branch
Department of the Environment and Energy
GPO Box 787, Canberra ACT 2601
s22

The Department acknowledges the traditional owners of country throughout Australia and their continuing connection to land, sea and community. We pay our respects to them and their cultures and to their elders both past and present.

s22

From: Edwina Johnson
Sent: Friday, 1 November 2019 10:42 AM
To: s22
Cc: s22
Subject: FW: NT Hydraulic Fracturing Implementation update and 9.8 meeting [SEC=OFFICIAL]

From: Edwina Johnson
Sent: Tuesday, 10 September 2019 9:04 AM
To: 'Brett Easton' <Brett.Easton@nt.gov.au>
Cc: 'Daniel.Quinn@industry.gov.au' <Daniel.Quinn@industry.gov.au>; s22 @industry.gov.au>; s22 @industry.gov.au>; s22 @industry.gov.au>; s22 @environment.gov.au>; s22 @environment.gov.au>; s22 @nt.gov.au>; s22 @nt.gov.au>; s22 @nt.gov.au>; s22 @environment.gov.au>; s22 @environment.gov.au>
Subject: RE: NT Hydraulic Fracturing Implementation update and 9.8 meeting [SEC=OFFICIAL]

Hi Brett

Thanks for sending through these notes. Please find below further information on the ERF methods.

Please don't hesitate to contact me or s22 should you need any further information.

Kind regards
Edwina

- The Emissions Reduction Fund Human-Induced Regeneration method provides for projects involving changing land management to regenerate native forest.
  - Land on which projects are undertaken must have had no forest cover in the preceding 10 years. The land must also have trees with the potential to attain forest cover. Forest cover is defined as trees at least two metres high with at least 20 per cent crown cover, on an area of at least 0.2 hectare.
  - During the 10 years preceding the project, forest cover must have been suppressed (for example through weeds, pests, clearance). Project activities must address these suppressors, to enable forest cover to be achieved.
  - Eligible project activities include managing plants that are not native to the area. Fire management is not an eligible activity.
- The Clean Energy Regulator can only declare proposed Emissions Reduction Fund projects to be eligible if they meet requirements specified in subsection 27(4) of the *Carbon Credits (Carbon Farming Initiative) Act 2011.* These include additionality requirements (subsection 27(4A)). One of the additionality requirements is that a project is not required to be carried out by or under a law of the Commonwealth, a state or a territory.
  - These requirements apply for all projects, irrespective of the method being used.
  - Any project where the management activity only comprises managing a weed species that is required by law to be controlled may not be eligible.
  - We understand Gamba grass is a noxious weed, and that therefore removal of Gamba grass is required by NT laws
- The Emissions Reduction Assurance Committee completed a review of the Human-Induced Regeneration method in 2019. The Department is working on improvements to the method, taking the Committee's recommendations into account.

- The Department is not undertaking work on including fire management as an eligible activity, because fire has not been identified as a common factor suppressing forest cover. However, we would be happy to consider any information the NT Government would like to provide. Information on how burning suppresses forest cover and how changes in fire management promote regeneration of forest cover would be necessary to support any work looking at potential to include fire management as an activity.
- The Department intends to discuss proposed changes to the method with stakeholders in coming months. We will add you and your Northern Territory Government colleagues to the stakeholder list for this matter.

From: Brett Easton [mailto:Brett.Easton@nt.gov.au]
Sent: Tuesday, 3 September 2019 5:17 PM
To: 'Daniel.Quinn@industry.gov.au' <Daniel.Quinn@industry.gov.au>; s22 @industry.gov.au>; s22 @industry.gov.au>; s22 @industry.gov.au>; Edwina Johnson <Edwina.Johnson@environment.gov.au>; s22 @environment.gov.au>; s22 @environment.gov.au>; Brett Easton <Brett.Easton@nt.gov.au>; s22 @nt.gov.au>; s22 @nt.gov.au>; s22 @nt.gov.au>; s22 @environment.gov.au>
Subject: NT Hydraulic Fracturing Implementation update and 9.8 meeting

Good Afternoon,

Thank you again to everyone that was able to attend the NT Government (NTG) meeting on hydraulic fracturing on Tuesday 27th August 2019 at Industry House Canberra, at short notice. Please find attached my summary of the general issues covered and what steps we will be undertaking from here.

Attendees:

Daniel Quinn	DQ	Acting General Manager, Onshore Minerals and Energy	Department of Industry, Innovation and Science	Daniel.Quinn@industry.gov.au
s22		Acting Manager, Onshore Gas Team	Department of Industry, Innovation and Science	s22 @industry.gov.au
s22		Onshore Gas Team	Department of Industry, Innovation and Science	s22 @industry.gov.au
s22	s22	Market Intelligence Team	Department of Industry, Innovation and Science	s22 @industry.gov.au
Edwina Johnson	EJ	Assistant Secretary, Climate Change Division	Department of the Environment and Energy	edwina.johnson@environment.gov.au
s22	s22		Department of the Environment and Energy	s22 @environment.gov.au
s22	s22	Director, Gas Policy, Gas and Governance Branch	Department of the Environment and Energy	s22 @environment.gov.au
Brett Easton	BE	A/Executive Director, External Strategy and Policy	Department of Primary Industry and Resources	Brett.easton@nt.gov.au
s22		Executive Director, Onshore Gas Development	Department of Primary Industry and Resources	s22 @nt.gov.au
s22		Principal Policy Officer, Economic and Environment Policy	Department of the Chief Minister	s22 @nt.gov.au

s22		Principal Policy Officer, Economic and Environment Policy	Department of the Chief Minister	s22 @nt.gov.au

Apologies:

s22	Director, National Inventory Systems	Department of the Environment and Energy	s22 @environment.gov.au

s22 provided an update on progress on implementation of the Inquiry: https://hydraulicfracturing.nt.gov.au/

- 52 out of 135 recommendations complete
- CSIRO codes of Practice for onshore petroleum activities in the NT completed. (4 components: Methane, Well Integrity, Surface Activities and Waste Water Management)
- Monitoring and Compliance Strategy and No Go Zones policy completed
- Environmental regulation transferred to the Department of Environment and Natural Resources. The Minister for Environment now has approval powers for Environment Management Plans along with Environmental offences provisions under the Petroleum Act.
- The Minister for Resources still holds all other powers under the Petroleum Act i.e titles, tenure and operational approvals (i.e well operations/well integrity/decommissioning and abandonment).
- SREBA (Strategic Regional Environmental Baseline Assessment) body of work in progress (estimated duration: minimum 3 years from commencement. A SREBA Framework and Guidance Notes are being completed and will be released for public consultation later this year. This will cover environment (flora, fauna, water), social impact, health, cultural (Aboriginal interests) and economic themes. CSIRO (Damian Barrett) is assisting in the development of the framework and guidance notes.
- s22 GBA Team is also undertaking studies in the Beetaloo Sub-basin, which will feed in and complement the SREBA requirements. There has been great engagement from s22 on the SREBA and it is highly appreciated.
- Statutory Land Access agreements work commencing. Legislation introduced to Parliament later this year.
- Current legal challenge to Origin access to Amungee Mungee Pastoral Station (test case on level of consultation undertaken)
- Northern Territory gas strategy: 5 Point Plan
    - Expand the world-scale Darwin LNG export hub
    - Grow the NT's service and supply industry
    - Establish gas-based processing and manufacturing
    - Grow research, innovation and training capacity
    - Contribute to Australia's energy security
- Highlighted background to Recommendation 9.8 based on experience during the Inquiry.
- Highlighted that the full development potential of the Macarthur Basin is higher than the current modelling.

s22 provided an update on current policy positions:

- Current GHG emission profile for the NT (16.5MT/yr = 3% of Australian emissions) and what is currently offset through savannah burning management (1MT/yr),
- Development of the NT Climate Change Response and possibility of including a net zero emissions target
- Progress on an NT offsets policy to potentially address both carbon and biodiversity offsets management.
- Overview on current carbon abatement projects in the Northern Territory and limitations to expansion of savannah burning programs.
- Unlikely to be able to offset the life cycle emissions in the NT.

EJ provided an overview of current Emissions Reduction Fund (ERF):

- There are currently 36 approved methodologies
- s47C

s22 outlined the current Gorgon CCS initiative and highlighted that there may only be limited emissions reductions available through fugitive emissions management.

BE provided a synopsis of Recommendation 9.8:

- Current challenges and hurdles the NT is facing in addressing the requirement in any measure. At full development looking at somewhere between 39MT to 117MT/yr in carbon offsets (forward projection).

- Acknowledged that whilst the recommendation has some flexibility in its wording that it will remain critical for the NTG (& to a lesser extent the Commonwealth) to take every practical step to address the issue, including the long term need to adopt new methodologies to apply to the NT context to ensure some flow on benefits for Territorians and social licence for industry.
- Have held initial discussions with CSIRO. Need to develop some underpinning science/modelling for whole of life emissions profiles against different development scenarios and supporting abatement research on human induced regeneration opportunities.
- NT increase in emissions will also be an increase in overall Australian emissions.
- Raised that there was little incentive for the clean energy regulator (CER) to push for new methodologies without significant project push - the NT needs assistance.
- Some discussion on potential risk of competitive disadvantage to NT based gas industry with carbon offsets requirements potentially applying to 'life cycle' in the Territory, as opposed to only in excess of safeguard levels, as is the case in other jurisdictions.

DQ provided overview of current Carbon Capture Storage (CCS) initiatives and the development potential of the Betaloo Sub-basin:

- Development of Carbon Net https://earthresources.vic.gov.au/projects/carbonnet-project offshore CCS joint initiative with Victorian Government to facilitate Hydrogen industry development.
- Similar systems have been trialled in Norway, Nth Africa and the United States.
- Acknowledged enormous potential of developing the Betaloo Sub-basin reserves.
- May need to consider large-scale industrial solutions to address 9.8.
- Issues need to be raised with the Minister for Industry, Innovation and Science.

s22 outlined some key technical aspects of the CCS initiatives for carbon net.

s22 highlighted importance of maintaining the narrative around the international (global) emissions benefits from economies transitioning from coal to gas.

Next Steps:

1. DPIR to continue finalisation of Stage II implementation, including land access agreement legislation.
2. DoEE to revisit methodology human induced regeneration methodology opportunities (regeneration opportunities through improved weed and fire management initiatives) and advise NTG.
3. DPIR & DCM to develop research questions for GISERA consideration.
4. DoEE, DPIR & DCM to further discuss the interface of the 'new entrant's policy' (Safeguard), the existing ERF, and likely residual NT emissions.
5. DoIIS to discuss the development potential of the Betaloo Sub-basin and the NT position regarding implementation of Recommendation 9.8 with the Commonwealth Minister for Industry, Innovation and Science.
6. Based on advice from DoIIS, determine whether the NT Chief Minister needs to write to the current Prime Minister again, to outline the NT position and what assistance we may require.
7. DPIR & DCM to develop an issues paper on potential tiers of offset availability and responsibility across NT and national schemes.

I would like to suggest that we continue to use this distribution group as a pivot point for the continued implementation of Recommendation 9.8 and to keep you informed on progress. If I omitted any key elements and/or issues raised last week, please pass them on to the group.

Some useful links if you require general information: https://hydraulicfracturing.nt.gov.au/

Thank you again for your time, I look forward to working together and we will be back in touch soon.

Kind Regards

Brett Easton
A/Executive Director – External Strategy and Policy
Department of Primary Industry and Resources
Northern Territory Government
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GPO Box 4550 Darwin NT 0801
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Our Values: Commitment to Service | Ethical Practice | Respect | Accountability | Impartiality | Diversity

s22

From: Edwina Johnson
Sent: Friday, 1 November 2019 10:40 AM
To: s22
Cc: s22
Subject: FW: Meeting between DoEE/CER/NTDoCM [SEC=OFFICIAL]

s22

From: s22 @nt.gov.au]
Sent: Wednesday, 10 July 2019 4:15 PM
To: Edwina Johnson <Edwina.Johnson@environment.gov.au>; s22 @nt.gov.au>; s22 @cleanenergyregulator.gov.au>
Cc: s22 @environment.gov.au>; Katrina Maguire <Katrina.Maguire@environment.gov.au>; s22 @environment.gov.au>
Subject: RE: Meeting between DoEE/CER/NTDoCM [SEC=OFFICIAL]
Importance: High

Hi Edwina,

We are looking forward to the discussion but would like to reschedule please. We are Friday available any time after 11:30am Canberra time or Monday anytime from 11am Canberra time.

We are looking to explore how we can work with you to build flexibility into existing methodologies, develop new ones and improve the commercialisation proposition of the same. Included in this, we would like to know your perspective on whether there is anything the NT Government can do in how we set our offset policy framework to remove barriers for potential offset supply growth.

We have some questions around how the international aspects of methodology standards are developed, influenced and agreed. The questions that keep coming during our conversations across government & stakeholders include:

- How do the international methodologies work and who manages them? IPCC?
- Do the IPCC set methodologies for calculating emissions produced and sequestered, and the Commonwealth creates methodologies for the ERF based on these? Or are there specific international offset methodologies?
- Who from the Commonwealth Government is leading international methodology negotiations?
- How do these negotiations work? Does Australia do the work on how a certain methodology may work and then present this to the IPCC?
- What is the difference between Kyoto ACCUs and non-Kyoto ACCUs?
- What is the Kyoto abatement deadline and what does it mean?
- How will the ERF methodologies be effected by transition from the Kyoto Protocol to the Paris agreement?
- How are the methodologies around forest management, cropland management, grazing land management, and revegetation allowed if we haven't adopted article 3.4 of the Kyoto Protocol regarding counting these emissions?

Hopefully this gives some better context for rescheduled discussions next week? I suspect there may be some relevant links and/or docs you can send us in the meantime also to help refine the discussion? Very happy to receive any of this kind of information in the meantime also.

With thanks,

s22

s22
Director Economic Development & Environment Policy
Department of the Chief Minister

Level 6, Darwin Plaza, 41 Smith St
GPO Box 4396, Darwin NT 0801

t. s22

dcm.nt.gov.au

<image001.png>

boundlesspossible.com.au

<image002.png><image003.png>

My days in the office are Monday to Thursday. I work flexibly and am sending this email now because this time works for me. I encourage you to read and/or action it at a time that works for you.

I acknowledge the traditional Aboriginal owners of country throughout the Territory and pay my respect to them, their culture and their Elders past, present and emerging.

assistance in the meantime also.

With thanks

s22

Hayley - 31 May

- Offsets policy - 2nd half of year
- Climate policy - 2nd half of year.

⇒ Progress discussion on Feb

- 4 wells this year: all flaring (60-90 days)
- will know more at end of year
  ⇒ looking for condensate ← would happen pretty quick.

s22 - 25 June

- Climate change strategy ⇒ draft w/ Min office
- Offsets strategy in 2019

- May be project conditions to implement
- Having a session tomorrow on vol 9.8

Discussion w/ NT - 17 July

s22
- s22 - NT
- s22 - CER
- s22 - DoEE

- NT: exploration applications
  ⇒ next conversations will have more info on industry timeframes
- Bill going through scrutiny committee
  ⇒ provides that Min can develop offsets framework → to approvals under resources development, pastoral framework.
  ⇒ would seek to use Cth process. (Reg noted would think through).

⇒ CER noted expectation to retire
s22 offset - willing to have a look at language.

- Offsets: - both carbon & biodiversity
  - also moratorium / link w/ ↳ link to Petroleum Act → offsets mangmt plan which covers carbon/biodiversity.
- s22 raised link w/ biodiversity offset ⇒ NT seemed ok.
- HIR + Gamba grass ⇒ offline w/ s22
- s47B(a) framework offsets by end of Sept ⇒ then consultation ⇒ then end year.
- Climate policy ⇒ w/ Min
  ↳ question whether have target

[- s22 contacts] to s22

⇒ whether trials in ERF

- Contact details

FOI 191110
Document 12

Edwina [redacted] s22
[redacted] s22
[redacted] s22
[redacted] s22
Dale   NT   CER   17/7/19

NT MTG

· Commitment re graziers' offset · ensure no net ↑ lifecycle re onshore
- how do that?
  - if req co. offset & emissions then permit cond. → fail addit' test? Yes, curr^ly.
    - if 3rd P do' proj & made co. offset & co. bought ACCUs OK?
      - Yes CER realise not ideal.

· Not ff cond. or prodn → offset mid 2020s → Cth resolve by then.
- NT gov gett' alot of explorn applicns.

· Env Pro Bill - (1) Min' can ... offsets framewk - to commence late 2019, early '20.
  (Bill)
  ↳ to apply to approvals under [redacted] s47B(a), finalise by end o yr.
Env Pro Act & petm land clr' act.

· intend' offset retired to NT gov? no firm pos. Follow exist' appr, don't [illegible] to new appr.
- [redacted] s22 - old mirror of much app & surrender.

· both an emissions & biodiversity reqmt

· the Clim CC Strat' be' considered w/i MO. Says will deliver offsets framewk. Discuss' whether have a target.

NT - ph 17/7

s22 s22

Edwina s22

s22

s22 * Reg Add'y - looking at ways to help co.s with state obligations meet them - eg parking - not current posture

NT - commitment to offset fracking emissions - want as many projects in NT as poss.
- if require offsets - would fail reg add'y - yes!
- but if get someone else to - OK? - yes

- Edwina - if an prod'n - would be years away before have to offset
- Bill in process - may start next yr or this yr → s47B(a) finalised by early yr
env prot'n leg'n, land clearing leg'n

s22 require retiring? - NT - don't know - would prefer to piggyback off our process
s22 - expectation is that units

- NT offsets will apply to C & biodiv
- C - general req't to offset over certain amt
- specific " for emissions relating to fracking

- s22 - might also need to think abt whether biodiv offset req't trips up other req'ts - would be ok

- NT - our methods prob won't help much for biodiv - land clearing

* gamba grass - control gamba grass to regen? - eligible activities
using HIR? - we said we would get back to them - what is BXU?
- is control of gamba grass already required?

* is there something more we can do to explain methods & opps in NT? - savanna seq'n? savanna on non-Indig land?
- s22 call in when in Darwin?

contacts - for diff methods

info

s22 - under Paris, moving from KP to UNFCCC categories

NT meeting – 27 Aug s22

- Env reforms – mining
- Assisting Inquiry taskforce ⇒ clusters in diff agencies.
- Canavan interested in opening up basin; inc Beetaloo.
- DCM taskforce wound down at end of year.
- Completed 31 pre-exploration recs
- Exploration approvals given about 10 days ago:
  - Origin & Santos – 2 wells
    - ↳ well pacing
- Completed 52/135 recs ⇒ almost at end of Stage 2
- Stage 3 from early next year to 2021.
- SREBA: w/ s22 + CSIRO ⇒ final piece which prevents prod° licences.
  - ↳ needs to be done w/i 5 years. (expected w/i next 2-3 years).
- Statutory land agreements
  - current case b/w Origin and S/H ⇒ claiming insufficient consult
    - ↳ hearing set down for 20 Sept.
- NT: offsets framwk
  - → new Env Protection Bill (soon to be Act)
    - ⇒ incorporating carbon + biodiversity.
  - looking at ERF methods: both demand & supply
  - draft offsets policy; would be underpinned by guidance notes
- Also NT 5 point gas plan ⇒ inc establishing manufacturing hub in the harbour.

only in Beetaloo.

· 39 MT doesn't include manufacturing. ⇒ NT times could be 3x more than this

· Don't know where gas will go.

· Modelling of emissions over time

· CCS?

· CarbonNet: arrangement w/ Vic to allow Cth to manage.

· DIIS planning on CCS (?) deep dive.

· Have done baseline survey of NT

[· Gamba grass] *. Rimy | Woody weeds |

· GISERA model technologies ⇒ will come up that.

· Petroleum Act: under prod^n licences

· Also considering net zero emissions framework

· Env Protection Act – doesn't reg petroleum
– offsets sits w/i.

· Env Min would apply through Petroleum Regs.

Chair [redacted] s22 D199

[redacted] s22 - overview

- 31 pre-exploration recom implemented
- exploration approved - origin & santos approved
  - origin to frack
- 52 recs done.

- Feb march next yr 3rd stage -
- Cereba - must be completed - ~3 yr before prod licences issued.
- Next - land access agreements
  - most on pastoral leases
  - GHG emission & offsets.

[redacted] s22 Offsets in GHG.
- new bill - enables offsets framework
  - 9.8 - no increase in emiss in Aust - LCA
  - have high level draft offset policy
  - looking to use Nat gas in NT.

LCA → Includes Em from end use combustion within Aust.

- looking with [redacted] s22 - modelling emissions
- No leaks or seeps
- Talking of Brown coal coal to gas CCS as offset
- Carbon seq.
- Vegetation
- ANZSIC model.

2

Interjurisdictional Land Sector Working Group: Meeting #3 June 2019, Canberra

Meeting outcomes:

s22

s22

Action items:

	Responsible	Action item	Status
1.	**Northern Territory**	NT to share draft offset framework as it relates to ACCUs with Commonwealth Department of the Environment and Energy and Clean Energy Regulator	For action

for assistance in identifying any overlap or opportunities.

s22

s22

NT s22 : climate response

s47B(a)

- offsets framework being developed

S&T W/shop 13/3/22

NT Update

- looking to expand opps for sav burning
- ~~[redacted]~~ fracking means more offsetting
- Blue carbon interest
- Offset framework unplemented end of this year

s22 asked if they want to run wording past DOEE for offset framework

(*) s22 NT to send offset framework to s22 for checking

s22 mentioned additionally

s22

s22 [redacted]

NT : s22 [redacted]

- a NT wants to reinvigorate
CAR. the inventory ~~[illegible]~~ emissions
reduct pathway group too
- a ~~off~~ Draft offsets ~~[illegible]~~
model - want to take
a diff approach to east coast
hoping public end of year
~~too~~ & will need to talk

S&T

17 Oct

to Cwth
~~[illegible]~~ lots of work in offsets
seeking advice from other
states - QLI
QLD + NT to talk about
offset strategy offline for
advice to NT
QLD says good to share
info cos they no competing
interests.

s22 [redacted]

FOI 191110
Document 19

s22

From: s22 @nt.gov.au>
Sent: Monday, 3 June 2019 4:38 PM
To: s22
Cc: Emissions Reduction; s22
Subject: RE: 13 June Interjurisdictional Land Sector Carbon Farming Workshop [SEC=OFFICIAL]

Hi s22

Thanks for your email and the voicemail. We are very interested in participating as we are in the thick of developing an Offsets framework, reviewing methodologies and looking at how we grow our carbon farming industry. This work is especially important given our focus on working with yourselves to implement recommendation 9.8 of the HFI review and the resultant expected demand for offsets projects.

Given this is next Friday, it's unlikely we can physically get someone to this meeting, but will definitely arrange to dial in. Can you please ensure you send through to me relevant details to facilitate my team's participation asap?

Can you please also ensure I am kept on the list going forward as the NTG rep specifically responsible for the work across whole of government up here and I will ensure relevant people are included?

With thanks

s22

s22
Director, Economic Development & Environment Policy
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