
Legally Absent
There is no legislated accounting framework to underpin CERT abatement claims
Tim Kelly shared views on Australia's carbon accounting
26 September 2022
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OUTLINE

1. Background

- Disconnected Legislation

2. Renewable electricity

- Forms of double counting
- Accredited renewable electricity
- Scope 2 Market-based accounting
- Small scale renewables issue
- LGCs Mean different things at different times

3. Carbon Offsets

- What are carbon offsets
- Scope 3 Market based accounting

Background: Terminology

RET: Renewable Energy Target (includes large- and small-scale schemes)

LRET: Large-scale Renewable Electricity Target

LGCs: **Large-scale generation certificates**

- Created for power-station-scale production of renewable electricity
- Traded on a market for organisations that need/want renewables
- Explicitly linked to any purchasing/claiming of renewable use without legal foundation

SRES: Small-scale Renewable Electricity Scheme

STCs: Small-scale technology certificates

- Created for solar systems <100kW + small wind/hydro/hot water systems
- 1 for each MWh hour, *cashed in* to offset the cost of systems
- SYSTEM FLAW - All household renewables are incorrectly allocated to the grid

RECs: Renewable energy certificates (both LGCs and STCs)

Residual Grid Mix Factor: A Climate Active pretends that it has created one

Disconnected Legislation

- **The National Greenhouse and Energy Reporting Act 2007 (NGER)**
  - Objective to set a single reporting framework in Australia
  - But only applies to big emitters (~420 corporations)
  - Has not stopped other, **unlegislated and contradictory frameworks** being established

    (e.g., National Greenhouse Accounts (NGA) Factors, Climate Active, GreenPower, CERT, Hydrogen Guarantee of Origin and proposed Renewables Guarantee of Origin)
- **Renewable Energy (Electricity) Act 2000**
  - Determines how **STCs** are created – (causes double counting)
  - Determines how **LGCs** are created – (causes double counting)
  - Does not describe any attributes that LGCs or STCs contain (proof of generation only)
  - Determines:
    - ~18% LARGE SCALE Renewable Power Percentage on every electricity invoice*
    - ~27% SMALL SACLE Renewable Power Percentage on every electricity invoice*

**There are some exceptions foe EITEIs, but that's beyond the scope of this discussion.*

Disconnected Legislation

Carbon Farming Initiative Act 2011

- Establishes Australian Carbon Credit Units
- Part 2 of the *Carbon Credits (Carbon Farming Initiative) Act 2011* (CFI Act) describes how ACCUs are created and issued in relation to eligible offset projects.
- However, there is no adequate definition of what ACCUs are, or any mention of attributes that they could potentially contain or how they should be used in relation to claims (proof of creation only).
- All abatement claims associated with the use of ACCUs is potentially double counted.
- **ACCUs are proof of potential double counting**

Disconnected Legislation

NGER Act Part 3H - Safeguard Mechanism Rule

- Establishes a baseline and constraints and allows Australian Carbon Credit Units and other offsets to prevent an excess emissions situation.
- Exists as a bubble within the NGER Framework, disconnected from Corporate reporting and all other accounting.
- Applies offsets against Scope 1 emissions without defining what offsets are, in legislation.

Safeguard accounting uses Carbon offsets without general debit and credit rules. Clean Energy Regulator:

- Corporation buys and surrenders ACCUs - ***"Surrendering ACCUs does not alter a facility's total scope 1 emissions".***
- Corporation sells ACCUs to a third party from a facility, - "***corporate NGER totals are not adjusted with changes in ACCUs sold as they reflect the actual emissions reported under NGER".***
- Safeguard facility, sells ACCUs to the Government - ***"No changes are made to the corporation's total reported scope 1 emissions under NGER"*** (or under any other public reporting).
- Corporation surrenders ACCUs to government to prevent Excess emissions ***"Deemed surrender of ACCUs to the Australian Government results in the amount of ACCUs surrendered being subtracted from the facility's net emissions***" but the facility emissions are entirely disconnected from corporate emissions reporting to the public.
- Non Safeguard businesses creating and selling ACCUs (Including land based ACCUs or efficiency based ACCUs. - ***"Non-NGER reporters are not obligated to add abated emissions from delivered units onto net emissions".***
- All non Safeguard entities are free to claim emissions reduction and sell emissions reduction: For local government, this was an issue with the recently closed Commercial and Public Lighting Method,

Renewable electricity and Scope 2 emissions

Double counted as far back as the Greenhouse Gas Factors and Methods Handbook in the early 2000s

Issue identified to GreenPower, DCCEEW, (Formerly DISER, DIIS, DIICCSRTE, DCCEE,DCC, DOE, DEH)& ACCC from 2005.

Issue communicated as a concern throughout the development of the NGER Act from 2006.

GreenPower *and Voluntary LGC surrender*

- GreenPower & LGCs support purchasing renewables ☺ - (Maybe) BUT…
- GreenPower & LGC surrender have no legislated accounting framework to operate
- Buying 100% GreenPower = paying 145% for renewables

  When 100% GreenPower customers purchase renewables, LGCs cover 100% of the electricity.

  All good so far, BUT…

  Like all other customers*, Greenpower customers must purchase an additional ~18% LGCs and ~27% STCs.

  Therefore, GreenPower customers are paying for 145% of the renewables they wanted.

- <u>GreenPower and LGC surrender are proof of absolute double counting</u>

  GreenPower LGCs surrendered are not excluded from State location based Grid Factors or even the Climate Active falsely labelled Residual Mix Factor

Issues: What is 100% Renewable Electricity?

There is no legally-mandated, consistent method to buy 100% renewables

Potential methods to claim 100%:

- Purchasing GreenPower with 100% LGCs **(=~145% with LRET + SRET RECs).**
- Claiming the renewable generation % in a state first and making up the difference in GreenPower or LGCs (e.g., with SA having 60% renewables, buying 40% GreenPower to claim 100%).
- Claiming the renewable generation % in Australia first and making up the difference in GreenPower or LGCs.
- Claiming the mandatory Renewable Power Percentage/s first (~18% LRET + 27% SRES) charged on every electricity invoice) and making up the difference in GreenPower or LGCs.
- Making a time of use alignment to claim renewables when the sun is shining and the wind is blowing.
- Making a proximity claim based on being near a renewables point of generation.

Issues: Accounting Frameworks for Electricity

Two main choices…

1. **Location based accounting**

   (as per the Legislated NGER Framework and non-legislated National Greenhouse Accounts (NGA) Factors

   All consumers are allocated averaged greenhouse gas emissions for the electricity (INCLUDING ALL RENEWABLES) they use and purchasing of renewables does not exist by definition.

2. **Market Based accounting**

   (as per GreenPower and voluntary LGC surrender)

   Consumers can buy either:

   A. Renewable electricity at zero emissions, OR

   B. Default grid electricity which is allocated the RESIDUAL MIX FACTOR of electricity emissions, no longer diluted with renewables sold separately.

The systems only work with integrity and fairness when not used at the same time in the same grid for the same electricity.

Issues: Residual Mix Factor

GHG Protocol Scope 2 Guidance

- *the emissions rate left after the three other contractual information items are removed from the system)*
- *(subnational or national) that uses energy production data and factors out voluntary purchases*
- *To prevent double counting of GHG emission rate claims tracked through contractual instruments, the market-based method requires an emission factor that characterizes the emission rate of untracked or unclaimed energy.*

DCCEEW through Climate Active

Total Grid emissions diluted by voluntary emissions/(total grid demand less RPP)

This double counts all voluntary renewables

Clean Energy Regulator CERT proposal (developed with DCCEE Climate Active)

Total grid emissions diluted by voluntary renewables and small scale household solar/total grid demand less RPP

This double counts all voluntary renewables and all small scale behind the meter produced and consumed renewables. Whilst not presented this way and not presented with full information, this is what is proposed.

Issues: Financial impacts

Why is GreenPower more expensive despite renewables becoming cheaper?

- Based on LGCs GreenPower is charged as a premium above default grid electricity
- Price of LGCs inflated by scarcity
  - Competes with mandatory demand
  - Renewables produced from pre 1997 infrastructure not included in the market
- Overpaying, being charged a second time for mandatory LRET & SRES renewables (145%)

How do accounting frameworks disadvantage GreenPower compared with offsets

- **Distorted the business case** – Because GreenPower is double counted it artificially lowers grid emissions . This distortion of the market makes it impossible for consumers to make informed decisions. For example comparing GreenPower to offsets is distorted.
- **Solution** With Market-based accounting, renewables should be compared against a Residual Mix Factor that isn't diluted with renewables that are already sold.

Solutions: Market-based Scope 2 Accounting

In 2015 The International Greenhouse Gas Protocol Scope 2 Guidance described the solution for market-based accounting for electricity…

- Reforms can be made via the NGER Framework:

1. Discontinuing the location-based approach to assigning electricity emissions (getting rid of state grid factors for end user claims).

2. Using grid-wide market-based accounting to enable customers to choose and be allocated renewable electricity.

3. Establishing a **true** residual mix factor for remaining, **unallocated** electricity.

4. The Residual Mix Factor must not be diluted by voluntary renewables (Greenpower, LGCs or small scale household renewables)

5. Systemic double counting must be eliminated

Greenhouse Gas Protocol – **Scope 2 Quality Criteria**

Table 7.1 Scope 2 Quality Criteria

Further explanation on select Scope 2 Quality Criteria can be found in Section 7.5.

All contractual instruments used in the market-based method for scope 2 accounting shall:

1. Convey the direct GHG emission rate attribute associated with the unit of electricity produced.
2. Be the only instruments that carry the GHG emission rate attribute claim associated with that quantity of electricity generation.
3. Be tracked and redeemed, retired, or canceled by or on behalf of the reporting entity.
4. Be issued and redeemed as close as possible to the period of energy consumption to which the instrument is applied.
5. Be sourced from the same market in which the reporting entity's electricity-consuming operations are located and to which the instrument is applied.

In addition, utility-specific emission factors shall:

6. Be calculated based on delivered electricity, incorporating certificates sourced and retired on behalf of its customers. Electricity from renewable facilities for which the attributes have been sold off (via contracts or certificates) shall be characterized as having the GHG attributes of the residual mix in the utility or supplier-specific emission factor.

In addition, companies purchasing electricity directly from generators or consuming on-site generation shall:

7. Ensure all contractual instruments conveying emissions claims be transferred to the reporting entity only. No other instruments that convey this claim to another end user shall be issued for the contracted electricity. The electricity from the facility **shall not** carry the GHG emission rate claim for use by a utility, for example, for the purpose of delivery and use claims.

Finally, to use any contractual instrument in the market-based method requires that:

8. An adjusted, residual mix characterizing the GHG intensity of unclaimed or publicly shared electricity shall be made available for consumer scope 2 calculations, or its absence shall be disclosed by the reporting entity.

RENEWABLES: Reforms required for the CERT

- Underpin GreenPower & LGC surrender with **adequate legal foundation** for zero emissions and renewable electricity use to be allocated to renewable customers
- GreenPower & LGC surrender should be **free of double counting**, such that renewable electricity use and zero emissions, should not be claimed by other parties at the same time under any mandatory or voluntary framework
- GreenPower should be the single national Renewable Electricity Program, **priced fairly** so that:
  - Those paying for 100% renewables, are not paying for more than 100% renewables
  - The pricing of accredited renewable electricity to customers, reflects the falling cost of renewable electricity generation and firming.
- Australia's accounting for electricity (renewables use and emissions) should be **informed by and consistent with the** GHG Protocol Scope 2 Guidance Quality Criteria (Table 7.1 Pg 60).
- The National Greenhouse and Energy Reporting (NGER) Framework should be amended to transition Australia to ***Market Based*** **Scope 2 accounting for electricity**, under legislation and to ensure that *location based* accounting is not also used for end user claims at the same time.

What is the SRES double counting issue?

NGER Technical Guidelines 2017- the last official publication on how NGER Grid factors are created

$$EFG\ scope2_i^t = \frac{Combustion\ emissions\ from\ electricity\ consumed\ from\ the\ grid\ in\ state\ i\ (CE\_C_i^t)}{Electricity\ sent\ out\ consumed\ from\ the\ grid\ in\ state\ i\ (ESO\_C_i^t)}$$

- Small scale renewables produced and consumed are not sent out to the grid
- Are not consumed from the grid
- Are not produced for the grid

HOWEVER

After **many, many many**, years of asking DCCEEW whether they were allocating small scale renewables to the grid they finally provided a straight answer – YES in 2022. ~60% of the small scale renewables effort is allocated to NGER Corporations, the rest across the remainder of the grid.

DCCEEW indicated that household renewables would not dilute the location based or RMF from next year. ~Two weeks Later, the Clean Energy regulator proposed to make these "CLAIMABLE" by big corporate polluters.

Small scale system owners are kept in the dark

What is LRET Behind the Meter double counting issue?

Large Scale behind the meter renewables produced and consumed are claimed by the system owners under the NGER Framework and not counted towards the Grid (maybe)

HOWEVER

System owners can still create and sell the LGCs causing absolute double counting.

The Clean Energy Regulator "recognises there is a common industry view that to claim the use of renewable energy, you must surrender LGCs commensurate with that claim". This is not law.

The Clean Energy Regulator has not been able to quantify the scale of large scale renewables produced and consumed behind the meter, whilst selling LGCs as a subsidy. This could already be greater than or ten times greater than the voluntary market, contradicting the "common industry view".

Australian Carbon Credit Units

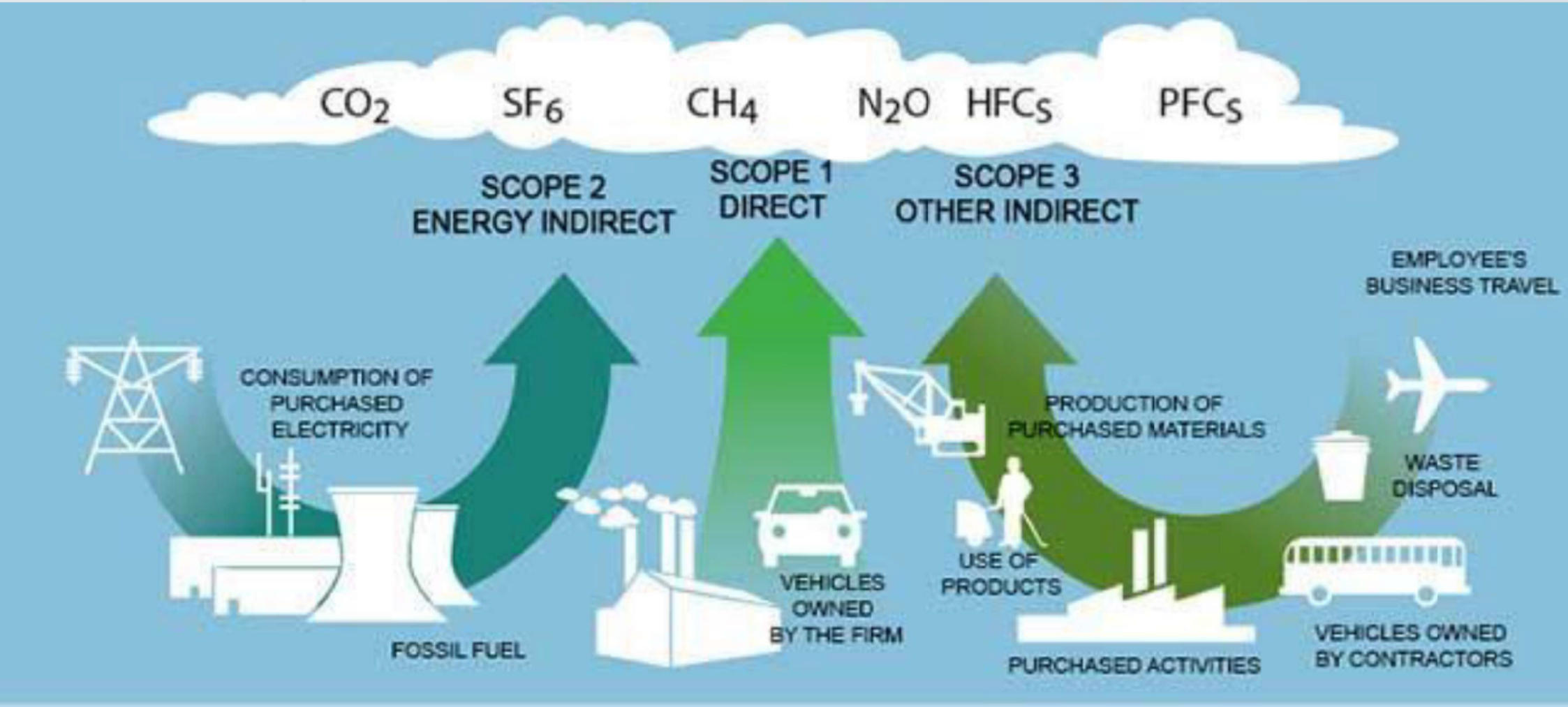
Copied the certificate approach of GreenPower and LGCs without defining any attributes within ACCUs

Issues identified from 2011 but more clearly since ~ 2017.

Australian ACCU Carbon offsets do not include a carbon offset in law.

No debit and credit rules apply to abatement

Typical representation of emissions accounting under the three scopes.



Australia has only created a legislated accounting framework for approximately 415 companies and this only covers scope 1 emissions and state location based averages for scope 2 emissions. The rest of the nation operates in anarchy.

CleanEnergyRegulator @CERegulator · Nov 26, 2021

Australia's cattle producers that are reducing there environmental impact can earn Australian carbon credit units 🐄 Watch how you could be involved 👉 bit.ly/3xpK13q

#BeefCattle #ERF #EmissionsReduction #ClimateSmart #ACCUs

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Replying to @CERegulator

This simply demonstrates that the cattle producers are claiming the abatement whilst selling ACCUs for others to claim same abatement. Systemic double counting. The CPs should add an S3 emission so that buyers of the carbon offsets can claim an S3 reduction. Basic rules missing.

What are carbon offsets

- **Scope 3** emissions are an acknowledgement of contractual or purchasing connections to all other indirect emissions typically associated with upstream purchasing or downstream use of a product that causes emissions after sale.
- ACCUs are contractual instruments for an organisation or consumer to make a contractual claim that they have indirectly reduced emissions somewhere else. In the case of ACCUs, these are purchased abatement activities that have occurred elsewhere in Australia.
- By definition, this suggests that the best possible outcome for Australian markets is to properly ***define ACCUs as negative scope 3 emissions.***

ACCU CARBON OFFSETS - Reforms required for the CERT

Reform of the NGER Determination – Market-based accounting solutions for Australia's carbon markets

- **Scope 1 emissions** No change is required to methods. NGER scope 1 methods should be also defined as the approach used for mandatory reporting and voluntary markets and claims.
- **Scope 2 emissions** Market-based accounting of scope 2 emissions is required, and also for claiming renewable electricity use. Those not buying renewables should report using the national Residual Mix Factor.
- **Scope 3 emissions** Market based accounting for scope 3 emissions to be formalised and integrated with the NGER Determination. ACCUs should be legally defined as negative scope 3 emissions. Basic debit and credit rules should e described.

*

Market-based accounting should be standardised to apply to both NGER Corporations and non-NGER consumers.

NGER reporting, Climate Active, GreenPower, the Hydrogen Guarantee of Origin Scheme and the CERT should all be based around the common single legislated National Greenhouse and Energy Accounting framework.

** Market based accounting for scope 3 emissions including carbon offsets, is a key missing piece of Australia's clean energy markets*

Some final issues

- Voluntary market contributions for ACCU carbon offsets and accredited renewable electricity should ideally be counted **as additional** to the Government's Nationally Determined Contribution, not as part of it.

- The NGER Act already makes provision for offsets (Section 21 A) but there is **no accounting framework or logic described** in the NGER Determination.

- Urgent action is required to provide certainty to investors and confidence for Renewable electricity and ACCU customers

- Renewable Hydrogen and Green Steel are false concepts until or unless there is reform

Looking forward: desired outcomes

The adoption of market-based accounting in law for scope 2 and scope 3 emissions would result in:

- Legitimate market choices for all Australian customers
- Fairer and more transparent pricing structures
- Pricing of renewables that reflects the cost of generation (falling)
- Removal of double-counting of renewables
- Fewer and non conflicting electricity emissions factors
- Pricing of ACCUs that is based on a clear definition
- Greater confidence in clean energy and carbon offset markets
- Improved decision-making for customers
  (Including households and small to medium business)