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~~IN CONFIDENCE~~

RE: Issues Paper – TRADE PRACTICES ACT AND CARBON OFFSET CLAIMS

Dear Tanja

Thankyou for the opportunity to comment on Issues Paper - Trade Practices Act and Carbon Offset Claims.

In this submission I draw attention to the trading in renewable energy as a unique kind of carbon offset product which is poorly understood, poorly regulated and easy to double count in the absence of clarity. Therefore consumers, including businesses and the broader community are continuously misled.

I attach my updated paper on *Greenhouse Confusion 2008: Renewable energy, smoke and mirrors*.

I am aware that the role of the ACCC is not about trying to influence the policy makers in relation to renewable energy, and I do focus on bringing double counting issues to the bodies developing greenhouse and renewable energy policy (have done so for years) including the National Energy and Greenhouse Reporting Taskforce. For a variety of reasons however, the issues of greenhouse benefit ownership and double counting have not been addressed by such organisations.

My request to the ACCC is that it plays a role simply to demand clarity in legislation and regulations so that market players can understand the rules and relate these to their obligations under the Trade Practices Act. I do not ask the ACCC to influence methodology, but do ask it to insist that there is a methodology in defining renewable energy and its associated greenhouse benefit.

Methodologies – Electricity and Renewable energy

When renewable energy and lower emission energy products are purchased from the market there is an expectation that the buyer will be reducing their scope 2 emissions compared with buying standard electricity. They generally don't understand complex accounting issues that may mean that all they are doing is paying for such products but in fact the emissions reductions may in fact belong to others.

Under the current and proposed approach to determining the emissions factors for electricity that consumers buy the emissions intensity from all electricity sources (including renewables and low emission energy sources) is shared across all consumers of electricity in a state. Under the Energy and Greenhouse Reporting Act 2007, there is no legal assignment that describes this however the Regulations and proposed technical guidelines that cover these matters will probably constitute a legal allocation.

With such an approach, there is no legal greenhouse benefit for consumers buying renewable energy and low emissions energy Sources

On the main web page of the GreenPower Accreditation Scheme Website, almost the first thing that a potential renewable energy customer reads is "*Make the switch and cut your greenhouse gasses today*" There is however no legal justification for this claim to be made. There has never been any legal greenhouse benefit in the renewable energy products that the GreenPower accreditation scheme covers, and unless there is a change, there won't be under the proposed Technical Guidelines.

In 2008, when consumers are being urged to buy GreenPower by Government TV ad campaigns, when consumers are buying GreenPower and when Large organisations are seeking to buy hundreds of thousands of Mega Watt hours of renewable energy to operate such things as desalination plants it is appalling that the ownership of the greenhouse benefit associated with using renewable energy has not yet been legally defined, and may not be allocated to the buyer of renewable electricity.

Until the legal ownership of renewable electricity is confirmed to be either allocated in a hard wired, or in a contract approach where it is part of a Renewable Energy Certificate, I assert that all claims are misleading in GreenPower, household PV Systems, household hot water systems, Solar Cities Schemes and State Government claims. This system badly needs reform before the ACCC can even begin to do its job.

Current Conduct in the Market Place

In their Fact Sheets, The Office of the Renewable Energy Regulator (ORER) describes that each Renewable energy Certificate (REC)

"represents the equivalent of one megawatt hour (MWh) of generated electricity from an accredited renewable energy source.

By the time the information gets to a householder looking to install a solar hot water or PV system, the description (if it is mentioned at all) is presented in a different way as the following example shows:

"What is the REC's rebate?"

REC's stands for Renewable Energy Certificates.
You earn one of these for every tonne of greenhouse gas your solar energy system saves.
Adelaide Hills Solar sells the certificates generated by your system in fifteen years to a market trading system.

When Greenhouse Challenge Members buy RECs voluntarily, the Greenhouse Challenge Guidelines describe how RECs can be used by buyers to offset their emissions:

"Purchased offsets must be recorded against the relevant area of the member's inventory. For example, record the RECs against Stationary Energy. It is important to note that RECs are measured in megawatt hours. RECs must be converted to the equivalent CO₂ emission using the relevant States' emission factor for electricity before being deducted from the member's inventory."

When REC traders go into the market to buy and sell RECs, they provide a different description once again

Green Energy Trading

"About RECs

Renewable Energy Certificates (RECs) can be created by owners of small generating units such as solar panel (Photovoltaic) systems, solar water heater or heat pump systems and small wind systems. Green Energy Trading is a registered REC Agent and can create RECs when assigned by the system owner.

RECs are produced under the Australian Government's Mandatory Renewable Energy Scheme (Renewable Energy Electricity Act 2000) which seeks to encourage additional renewable energy production and provides an added incentive for customers installing a renewable energy system.

So RECs are presented as different things to different market players in such a way that double accounting of the renewable energy and its associated greenhouse benefits have become the norm in voluntary market schemes.

None of the descriptions above describe the critical components of what a REC may actually represent such as:

- The use of renewable energy.
- The reduced emissions associated with the use of renewable energy compared with standard electricity.
- Embodiment of the green-ness and renewable-ness of renewable electricity.

Without such clarity we have market anarchy.

Greenhouse Confusion 2008
Renewable Energy, Smoke and Mirrors

Taking a look at double counting, confusion and misleading claims in greenhouse and renewable energy accounting in Australia.

Tim Kelly

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INTRODUCTION

It is important that the accounting mechanisms used to enable renewable energy and low emissions energy to be traded in the market, and to thereby facilitate market support for investment in renewable energy and other low emissions technology, are robust. This requires that those mechanisms ensure that double counting (i.e. renewable energy being used more than once) cannot occur. It is argued in this paper, however, that the current accounting mechanisms used for renewable energy trading are not sufficiently robust and permit double counting to occur. The traps contained within current mandatory and voluntary renewable accounting frameworks impact on costs and prevent the achievement of stated goals of Government Policy and Renewable Energy retailers.

As Australia moves into an increasingly carbon constrained environment, carbon transactions are increasing and it will be important for these flaws in the current greenhouse accounting systems to be rectified. Greenhouse accounting methodologies should be as closely scrutinised as financial accounting systems. From a market perspective, consumers are seeking to reduce their greenhouse footprints in ever growing numbers and problems in the accounting of market transfers, therefore, can no longer be seen as trivial.

The problems in the existing accounting systems arise from a patchwork of overlapping programs and accounting frameworks that create confusion and traps. The confusion and traps can cause individuals, businesses and even state governments to make misleading claims regarding the greenhouse gas emission reductions or renewable energy use that they are achieving. Many of these mistaken claims have probably been unintentional.

What are the frameworks that give rise to this confusion over actual versus claimed greenhouse gas abatement, and what can be done to fix the problems?

ACCOUNTING FRAMEWORKS

National Greenhouse Accounts (NGA) Factors (formerly the Australian Greenhouse Office (AGO) Factors and Methods Workbook)

The National Greenhouse Accounts (NGA) Factors workbook (released in February 2008) is the main reference document for Australian organisations in their greenhouse gas emissions reporting. The NGA Factors workbook and former Australian Greenhouse Office - Factors and Methods Workbook (2006)¹

¹ Australian Greenhouse Office (2006) AGO Factors and Methods Workbook accessed online on May 25, 2007 <http://www.greenhouse.gov.au/workbook/pubs/workbook2006.pdf>

include a wide range of emission intended to be “default factors”, to be used in the absence of better information. The workbook is presented as being “designed to be consistent with both international reporting frameworks”, namely the World Resources Institute/World Business Council for Sustainable Development: Greenhouse Gas Protocol: *A Corporate Accounting and Reporting Standard* (2004), commonly referred to as the Greenhouse Gas Protocol.

The Factors workbook guides the reporting of direct greenhouse gas emissions (Scope 1 emissions), indirect emissions from electricity consumption (Scope 2 emissions) and other indirect emissions from embodied in purchased or sold goods and services, or from outsourced activities (Scope 3 emissions). The Australian Greenhouse Office (now the Department of Climate Change) also established the Greenhouse Challenge Program for business organisations to voluntarily identify and monitor their emissions, and develop action plans to reduce their emissions. An online reporting tool known as OSCAR (*Online System for Comprehensive Activity Reporting*) was established to assist businesses enter their progress onto a National database

Mandatory Renewable Energy Target

In relation to renewable energy, the former Howard Government established a Renewable Energy Certificates (RECs) market and accounting framework to implement the Federal Governments renewable energy generation target under the *Renewable Energy (Electricity) Act 2000* (the Act), *Renewable Energy (Electricity) Charge 2000* and the *Renewable Energy (Electricity) Regulations 2001*.

The legislation set a Mandatory Renewable Energy Target (MRET)² of an additional 9,500 GWh/year of electricity generated from renewable energy sources by 2010, and to continue until 2020. The mechanism used was to make electricity wholesalers and retailers liable for acquiring a set proportion of their electricity from renewable energy resources, with the mandated proportion increasing over time. The Office of the Renewable Energy Regulator (ORER) was established as the statutory authority to oversee the implementation MRET, and the ORER created a publicly accessible Renewable Energy Certificate (REC) Register that tracks and publicly reports on the creation trading and ultimate surrender of every REC.

²Australian Government, Office of the Renewable Energy Regulator (200), About the Mandatory Renewable Energy Target (MRET) Accessed online May 25, 2007, <http://www.orer.gov.au/about/mret.html>

RECs and Greenhouse Emissions benefits

When MRET was set up to deal with increasing renewable energy generation, the principle objective of the Act was to stimulate the development of Australia's renewable energy industry. The initial focus of the Act was therefore not to trade greenhouse credits but to provide an additional income stream for investors and producers in renewable energy.

One of the objectives of the Act, however, was greenhouse gas reductions and over the years, there has been increasing acceptance that RECs are associated with emissions benefits for customers.

The national GreenPower program is one example where this occurs. The whole basis of marketing of GreenPower is that by purchasing accredited GreenPower, customers are able to reduce the greenhouse emissions associated with their electricity use. The homepage of the GreenPower Website starts out as "GreenPower - *Make the switch and cut your greenhouse gasses today*", Electricity bills for those that purchase of 100% accredited GreenPower display a value of zero for the greenhouse gas emissions associated with the customer's electricity use. The GreenPower program is closely linked to the MRET program in that in order to sell GreenPower, the RECs associated with that GreenPower have to first be surrendered. This direct link means that the RECs also have a greenhouse reduction value.

The greenhouse value of RECs was made clearer in 2007³ when the MRET Legislation was amended to allow the voluntary purchase and surrender of RECs by non-liable participants. The ORER website was used to inform stakeholders of the new voluntary component of the MRET program.

Furthermore, also in 2007, the Australian Greenhouse Office provided reporting guidelines⁴ to its Greenhouse Challenge Plus members advising them to convert RECs acquired voluntarily to an emissions benefit by multiplying the MWh value by the aggregated emissions factor for the relevant state.

The Greenhouse Challenge OSCAR online reporting system also accepts renewable energy as a legitimate greenhouse offset and will automatically convert renewable energy/RECs into a 100% greenhouse offset for both the scope 2 and scope 3 components.

This development of RECs as an emissions reduction tool in the Department of Climate Change (DoCC) programs and in the GreenPower Accreditation Framework provides compelling evidence of the broad acceptance that the greenhouse benefit of renewable energy is attached to the REC.

³ Government of Australia, Office of the Renewable Energy Regulator (2007), *Voluntary Surrender of RECs* accessed online May 25, 2007, <http://www.orer.gov.au/new.html>.

⁴ Australian Government Dept of Environment and Water Resources, Australian Greenhouse Office (2007) *Greenhouse Challenge Plus Reporting Guidelines*, p. 18, accessed online January 24, 2008. <http://www.greenhouse.gov.au/challenge/publications/pubs/reporting-guidelines.pdf>

The problem, and the cause of a great deal of confusion to businesses and customers, is that the DoCC and the Office of the Renewable Energy Regulator have not formally clarified the Greenhouse gas reduction benefits are attached to REC in their advice to stakeholders or in RECs transaction forms. The DoCC and ORER have instead adopted an approach that amounts to having an each way bet. By not providing clarity, a great deal of double accounting has resulted.

Although GreenPower customers are sold GreenPower on the basis of the greenhouse gas reductions that they will achieve, and are advised on their bills of the greenhouse gas reductions that they have achieved, they do not legally own any greenhouse reduction credits. The DoCC takes account of the greenhouse gas reduction benefits of using renewable energy when calculating aggregated state emissions factors, but greenhouse gas reduction benefits paid for by GreenPower customers purchasing renewable energy are shared by all electricity customers. GreenPower customers do not legally own a carbon credit benefit.

Despite the absence of a legal basis for GreenPower customers to own the carbon benefit, RECs are in fact inseparable from the greenhouse gas reduction benefits associated with using renewable energy, as attested by the DoCC's programs and the GreenPower program.

If policy makers attempt to separate things that are intrinsically inseparable, this will create problems. The REC by its nature and use in renewable products embodies the renewable-ness, the green-ness and the emissions reduction benefit.

The DOCC, the ORER and organisations such as the National GreenPower Accreditation Committee should be striving to ensure that urgent reforms are made to ensure that the greenhouse benefits are associated with RECs.

If, however, the Australian Greenhouse Office or Energy and Greenhouse Reporting Taskforce choose to keep the greenhouse benefit separate from the REC such that the benefit stays with the generator, then GreenPower and RECs customers should be advised that there are no greenhouse reduction benefit associated with their purchase of these products. This would mean that there would be no point in organisations seeking to make their operations more sustainable by purchasing large amounts of renewable energy to operate, say, a water desalination plant because they could not claim to be reducing their greenhouse gas emissions by doing so. It would also mean that voluntary GreenPower and RECs programs might collapse because they would be attempting to sell a product of little value to customers. Electricity companies selling GreenPower to customers would need to show the same emissions per unit of electricity used on GreenPower customer's bills as standard electricity customers would receive. This would no doubt lead GreenPower consumers to be puzzled as to why they were

being offered an incomplete product. The Greenhouse Challenge Guidelines would also need to be updated to advise participants that buying accredited renewables would not entitle them make claims about offsetting their greenhouse emissions.

The critical point is that the current approach attempts to have it both ways, but that this is not possible without double counting of the emissions benefit, once by a contract or claim associated with using electricity from that source, and again by the legal REC owner acquitting RECs to ORER.

The emissions benefit associated with accredited renewable energy cannot stay with the generator and be attached to the Renewable Energy Certificate at the same time without double accounting of the greenhouse benefits.

The legislation governing the creation, trading and surrender of RECs needs to be clarified and amended before the establishment of a national emissions trading system in order to protect RECs and GreenPower market frameworks.

Other Accounting or Accreditation Frameworks

Other accounting or accreditation frameworks have been established in state-based initiatives or specific branding accreditation schemes. These include the New South Wales Greenhouse Gas Abatement Scheme, GreenPower and Greenhouse Friendly programs, to name a few.

The various accounting or accreditation frameworks that are in place for these programs are not integrated through legislation that interacts with national or other state schemes causing overlap, inconsistent greenhouse reporting and double accounting.

SO WHERE DOES DOUBLE ACCOUNTING OCCUR?

Trap 1 - Using electricity from a renewable source versus using renewable electricity.

There is a key difference between ‘*purchasing electricity from a renewable electricity provider*’ and ‘*purchasing renewable electricity*’. This is because the trading of renewable electricity is carried out through certificates and accounting, not through the wires. Once the renewable electricity provider has created a REC, it must be considered that no further renewable electricity exists from that source in any physical sense. Unless this is the case, the whole concept of renewable energy trading becomes invalid. Unfortunately, the guidelines that cover REC transactions do not spell this out clearly enough and as a

result there are wide differences of opinion, with some players continuing to regard RECs as separate to renewable electricity.

Double accounting occurs where large scale customers are being caught up by the lack of guidance that presently exists causing them to make claims that are misleading, inaccurate incorrect, or all three. Of concern is that businesses making commitments that involve renewable energy use may not allocate sufficient funding for the cost of purchasing RECs or accredited renewable energy products.

Trap 2 – Aggregated State Emissions Factors

A big trap is caused by the way in which the Australian Greenhouse Office has applied the use of state aggregated emissions factors to standard electricity. These factors convert the kilowatt hours (kWh) to equivalent carbon dioxide greenhouse gas emissions (CO₂-e) in kilograms and are used to indicate greenhouse gas emissions on standard electricity bills for consumers, and are also used by Greenhouse Challenge Members.

The Australian Greenhouse Office directs consumers to use Aggregated State Emissions Factors (for the scope 2 emissions component) based on the following formula from the 2006 edition of the AGO Factors and Methods Workbook.

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

where 'combustion emissions from electricity consumed from the grid in state i' ($CE_C_i^t$) and 'electricity sent out consumed from the grid in state i' ($ESO_C_i^t$) are defined in terms of the state's electricity grid production, imports and exports as follows:

$$CE_C_i^t = CE_P_i^t + \sum_j \left(\frac{ESO_M_{j,i}^t}{ESO_P_j^t} \cdot CE_P_j^t \right) - \sum_k \left(\frac{ESO_X_{i,k}^t}{ESO_P_i^t} \cdot CE_P_i^t \right)$$

$$ESO_C_i^t = ESO_P_i^t + \sum_j ESO_M_{j,i}^t - \sum_k ESO_X_{i,k}^t$$

where $CE_P_i^t$ = total CO₂-e emissions from fuel combustion at generation attributed to the electricity generated/produced for the grid in state i in financial year t,

$CE_P_j^t$ = total CO₂-e emissions from fuel combustion at generation attributed to the electricity generated/produced for the grid in state j in financial year t,

$ESO_M_{j,i}^t$ = imports of electricity sent out from state j to state i in financial year t,

$ESO_P_j^t$ = total electricity sent out on the grid that is generated/produced within state j in financial year t,

$ESO_X_{i,k}^t$ = exports of electricity sent out from state i to state k in financial year t, and

$ESO_P_i^t$ = total electricity sent out on the grid that is generated/produced within state i in financial year t.

The above formula reveals that the emissions factors are not adjusted to net out the sale of renewable electricity, lower emissions electricity (such as specific contracts for from natural gas based electricity) and interstate flows of renewable energy.

Another way to show the equation above is as follows:

$$\begin{array}{c}
 \text{Emissions from} \\
 \text{EFG Scope 2} = \frac{\text{All voluntary and mandatory renewables, and low emission electricity sources} + \text{Standard Fossil Fuels}}{\text{Electricity consumed in the state (including electricity from SA renewables and low emission sources)}} \quad \text{(Tonnes CO}_2\text{-e)} \quad \text{(MWh)}
 \end{array}$$

The question that this raises is why is renewable energy (including the emissions reduction benefits and related electricity) that is sold separately interstate or to voluntary GreenPower customers, is still being included in the calculation of emissions factors that are used for standard electricity bills.

The result is that for states that generate more renewable energy than is required under the MRET, every MWh of renewable electricity sold interstate as RECs, and every MWh of renewable electricity sold to a renewable energy customer, is still counted to reduce the emissions intensity in standard electricity sales. For other States that produce less renewable energy than required for MRET, their customers pay for the renewable energy that is imported without the greenhouse benefit flowing through to their scope 2 emissions reporting or their greenhouse impact reported on electricity bills.

All renewable electricity sold in specific renewable energy products is still counted to reduce the emissions intensity in standard electricity sales.

It is interesting to note that the DOCC NGA Factors workbook advises that estimated electricity emission factors in the Workbook have been “aligned with the definitions used in the Greenhouse Gas Protocol”. However, there are differences between the Greenhouse Gas Protocol and the NGA Factors workbook in defining how emission factors are applied. The Protocol suggests that “Scope 2 GHG emissions will primarily be calculated from metered electricity consumption and supplier-specific, local grid, or other published emission factors”⁵. Note that supplier-specific emissions factors are mentioned first. The NGA Factors workbook, however, directs organisations to use the Aggregated

⁵ World Resources Institute/World Business Council for Sustainable Development (2004), *Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard*, accessed online January 24, 2008.

State Emissions Factor in the first instance, and other factors that may be more accurate than those supplied through the NGGI (such as through a direct contract at a defined emissions factor) can only be used if the DOCC provides approval.

State aggregated emissions factors might be appropriate for use in the National Greenhouse Gas Inventory to provide an overview of National and State Greenhouse emissions, but they are not appropriate for allocating emissions to electricity customers because standard pool electricity is ever changing with renewable energy and low emissions electricity are being sold separately at an increasing rate.

A solution would be for the DoCC to prepare a state *Standard Electricity Emissions Factor* that has made adjustment for renewable electricity that is imported or exported interstate and netted out any renewable electricity sold as separate products within a state. The *Standard Emissions Factor* would include only the emissions and electricity consumed in the remaining standard pool.

With increasing trade of zero emission electricity products or electricity products of differing emissions intensity (such as purchasing natural gas electricity in preference to coal based electricity), it can be argued there is a greater need for product specific emissions factors to be used. If this was to happen, each time a product of specific emissions intensity was sold, it would not be counted towards a suggested *Standard Electricity Emissions factor*.

Trap 3 – Inadequate State reporting

The Office of the Renewable Energy Regulator does not report on interstate flows of RECs so there is no reliable data on the actual use of renewable electricity by states and this paves the way for State Governments to make claims relating to renewable energy use that ignore the trading of renewable energy sold across their borders. South Australia provides the most dramatic example. The State produces approximately 45% of the nation's electricity generated from wind and has established legislation that includes the following targets:

- Increase the proportion of renewable electricity generated so that it comprises 20% of electricity generated in South Australia by 2014
- Increase the proportion of renewable electricity consumed so that it comprises at least 20% of electricity consumed in South Australia by 2014 target of 20% renewable energy generation and use by 2014⁶.

⁶ Government of South Australia (2007), *Climate Change and Greenhouse Emissions Reduction Act Attorney General's Department*, accessed online January 23, 2007, <http://www.legislation.sa.gov.au/LZ/C/A/CLIMATE%20CHANGE%20AND%20GREENHOUSE%20EMISSIONS%20REDUCTION%20ACT%202007/CURRENT/2007.22.UN.PDF>

The State has no Mandatory Renewable Energy Target of its own yet it has excellent wind resources and has played an important role to bring the Federal MRET driven renewable energy development to South Australia. There is no question, that there has been progress towards 20% renewable generation. Regarding renewable energy use, however, the vast majority of RECs from South Australia's renewable generators are likely to be sold to wholesalers and retailers liable for MRET obligations in other states. Claims on South Australia's high use⁷ of renewable electricity use are therefore misleading.

Claims relating to South Australia's high use of renewable electricity are misleading. It is a trap to equate State based renewable energy generation with use.

Indeed this situation had the potential to create the perfect double counting system whereby South Australia could generate renewable electricity that is around 20% of its total demand and claim this as use, whilst at the same time selling almost all of this to other states to meet their Federal MRET obligations or to the recently announced New South Wales NRET scheme. NRET is intended to allow for the purchasing of renewable energy from other states to achieve 10% renewable energy use by 2010 and 15% by 2020 in New South Wales.

With the first Council of Australian Governments (COAG) meeting for 2008 resulting in a commitment for all state renewable energy schemes to be rolled into a National Renewable Energy Scheme this situation may or may not occur. It all depends on whether certain states will maintain their claims on state based renewable energy **use**. Any State based renewable energy **generation** target has nothing to do with State based **use** of renewable energy in a trading environment. If there is a switch to National Renewable energy Targets, State policies and in some cases legislation will need to change.

Trap 4 - Hot Water System RECs and Transaction Disclosures

The Federal Government has allowed Renewable Energy Certificates to be created from solar hot water heaters for the standard electricity they displace. Indeed hot water RECS now make up a staggering

⁷ South Australia's Strategic Plan Audit Committee June (2006), *South Australia's Strategic Plan Progress Report 2006*, accessed online May 25, 2007, http://www.saplan.org.au/documents/SASPPProgressReport_June2006_Objective3.pdf

21% of the total RECs produced in Australia (958,814 certificates in 2005)⁸. The problem becomes evident in the many householders that have received RECs payments for their solar hot water systems, whilst still believing that they are using the renewable energy. It is not made clear on the ORER website or in standards for RECs transactions that once their RECs are sold they are no longer the users of the renewable energy. In effect, once the owner of a solar water heater has sold the renewable and greenhouse benefit via the RECs, it could be argued that they are using they should therefore assume that an equivalent of standard electricity has been used to heat their water.

Many Householders do not understand that when they sell their RECs, another party legitimately claims the use of their renewable electricity.

The use of RECs is an abstract and therefore a sometimes difficult concept to communicate particularly so when dealing with avoided electricity rather than actual renewable electricity. However, the way to approach the issue is made easier by using a simple market principle: *If an owner sells a benefit, they no longer have that benefit.* It matters if an electricity user is claiming use of renewable energy when in fact the RECs have been sold to someone else because this can undermine confidence in GreenPower and RECs programs, and this applies to solar hot water heaters as much as solar PV systems.

Trap 5 - Claiming future carbon benefits from Solar PV and Hot Water RECs

Another issue with Solar PV and Hot Water systems is that RECs⁹ can be deemed for the life of the system at the time of installation and sold in advance. With forestry, greenhouse benefits can only be claimed for trading as the trees grow. It is inconsistent for future greenhouse benefits to be counted from one activity, and not another. Establishment of future greenhouse benefits is very important and the Australian Greenhouse office could consider alternative incentives and rewards for household solar PV and hot water systems.

⁸ David Rossiter D & Amarjot S., Office of the Renewable Energy Regulator (2006) *Australia's Renewable Energy Certificate System*, Accessed online 25, May 2007, <http://www.orer.gov.au/publications/pubs/rec-system0506.pdf>

⁹ Australian Government, Office of the Renewable Energy Regulator (2006), *Fact Sheet - Determining Eligibility and Renewable Energy Certificate (REC) Entitlement For Solar Water Heater and Heat Pump Water Heater Installations*, accessed online, May 25, 2007, <http://www.orer.gov.au/publications/pubs/swh0906.pdf>

Trap 6 – Residential-Photo Voltaic System RECs

Many householders that have received RECs payments for their household photo-voltaic systems are of the belief that they are using the renewable electricity. It is not made clear on the ORER website or in standards for RECs transactions that once their RECs are sold they are in effect using the equivalent of standard electricity. This must be the case as another party that has bought the RECs then has the right to the claim renewable energy use as their own, as per solar hot water RECs.

With the recent announcement of the Australian Government's new \$150 million solar power rebate for household photovoltaic systems, the lack of disclosure about RECs sales could result in many more householders signing across their RECs to a third party without full knowledge about what this sale represents.

Trap 7 - Industry User-Generators.

In businesses and industries there are often opportunities for on-site renewable power generation systems including wind, solar, mini hydro and biogas from sewage treatment. RECs guidelines and transaction documents do not provide sufficient checks to prevent users from claiming to reduce their greenhouse emissions and at the same time selling the RECs. Specific examples are not identified in this paper which is focussed on highlighting the traps caused by a lack of clarity in legislation and DOCC accounting frameworks. Organisations are unlikely to make incorrect claims once reforms are made.

NSW Greenhouse Abatement Certificates (NGACs) and RECs?

Sales of RECs do not necessarily preclude the sale of benefits into the New South Wales Greenhouse Gas Abatement Scheme¹⁰. The scheme does, however, require that "A REC and a New South Wales Abatement Certificate (NGAC) cannot be created for the same abatement activity (i.e., if a REC is created for a MWh output, an NGAC cannot be created with respect to that output)". However, different aspects of the same activity (such as capturing and burning methane to become carbon dioxide, and generating renewable electricity) can be counted separately and there may be some potential (though probably remote) for double counting.

¹⁰ Details on The NSW Greenhouse Gas Reduction Scheme (GGAS) and RECs can be found on

http://www.greenhousegas.nsw.gov.au/print.asp?REF=/overview/other_schemes/national.asp&PRINTABLE=YES

GreenPower - Trap Fixed

The managers of the GreenPower program improved their renewable electricity accreditation system in 2006. It previously had significant problems whereby GreenPower Rights (GPRs) from wind farms were being sold outside the GreenPower scheme, at the same time as RECs were being sold to a third party.

The issue seemed to be caused by guidelines not being clear enough and no penalties were established for incorrect use of Green Power Rights. This created a smoky market environment whereby some producers and consumers were confused about the type of transactions that were appropriate or not. From August 2006 the GreenPower administrators started to fix the problems, warning generators and users in their E-Bulletin¹¹ that those using GPRs inappropriately would be pursued. GreenPower then released new marketing guidelines and a revised accreditation standard.

The GreenPower accreditation and system is now a market leader with the improvements providing customers with more confidence in the products they are buying.

DOUBLE ACCOUNTING PROBLEMS ARE WELL KNOWN

These matters, either in part or full, have been made known through submissions and correspondence to the Australian Greenhouse Office, Office of the Renewable Energy Regulator, National Pollutant Inventory Review Team, the National Energy and Greenhouse Reporting Task Force and Department of Environment and Water Resources. The responses received have ranged from noting that correspondence has been received, to total denial that double accounting is occurring, or suggesting that matters need to be dealt with by a different agency. With the effort to streamline National greenhouse and energy reporting there is an ideal opportunity for the DOCC to address the challenges of double counting and emissions factors in the near future.

LOOKING TOWARDS THE FUTURE

As a carbon constrained economy further develops, businesses and society will rely on greenhouse accounting to have the same rigour as financial accounting. There is likely to be increasing pressure to ensure that any emissions factors used are relevant and appropriate to the situation. A single state emissions factor is not sufficient to apply for every situation.

On the electricity consumer's side of the market system, (where scope 2 emissions are important), the current problems occur at a significant scale, robbing consumers of the '*full value*' of the renewable energy products they buy.

¹¹ GreenPower (2006), *Archive of GreenPower E-bulletins: Issues 18&19*, accessed online May 25, 2007, <http://www.greenpower.gov.au/news/e-bulletin-11-19.htm>

Consumers that pay a premium for renewable electricity are robbed of the worthiness of *their* electricity products if they are double counted.

ECONOMIC IMPACTS OF GREENHOUSE MISTAKES TO BUSINESSES

There is a risk that if nation wide greenhouse and renewable energy accounting frameworks and programs are not reformed, businesses could make considerable errors in greenhouse claims and mitigation planning with significant financial consequences. For businesses to meaningfully participate in a renewables market system, reliable product data is essential.

It might also be useful for summary market and state data to be publicly available, including:

- How much renewable energy is surrendered as RECs under mandatory obligations.
- Annual interstate net imports or exports of renewable energy.
- How much renewable energy remains in the standard pool where it is justified for this to be shared by consumers of *standard pool electricity*.
- The amount of total renewable energy and dedicated lower emission electricity that is sold outside the standard pool

RECOMMENDATIONS

Each of the traps identified in this paper can be remedied by the Federal Government through the Australian Greenhouse Office in collaboration with the Office of the Renewable Energy Regulator and State Governments. Minimum changes to legislation are required. If a simple principle that '*Renewable energy and greenhouse benefits should only be counted once*', was to be enforced, this would help to craft the rules and guidelines that govern participation in Federal and State schemes. The following reforms and improvements are suggested:

Properties of Renewable Energy Certificates

1. Clarify that Renewable Energy Certificates in State and Federal programs embody the greenhouse benefit in addition to the renewable and green components. Build this link into regulatory frameworks and ensure that all programs provide disclose to participants including generators, user-generators and buyers that when RECs are traded, the renewable benefits are traded as well.

Reforming State Aggregated Emissions Factors

2. The Australian Greenhouse Office should prepare a state *Standard Electricity Emissions* factor that has made necessary adjustments for renewable electricity that is imported or exported across state borders and netted out any renewable electricity or lower emissions electricity sold as separate products within a state.

Hot Water RECs

3. Option 3A

The Office of the Renewable Energy Regulator (ORER) could review and improve their website to make hot water user-generators aware that once their RECs are sold they should no longer think that they are using renewable energy to heat their hot water.

This disclosure should be mandatory in all hot water RECs transactions.

The claiming of renewable energy use from **future** standard electricity displacement should be re-considered as this is inconsistent with the rules that apply to forestry.

Option 3B

A alternative solution would be to remove the use of RECs for hot water systems and provide the equivalent incentive for owners of hot water heaters within the existing Solar Hot Water Rebate Programme.

Small Scale Electricity Generation Systems

4. Option 4A

As with hot water RECs, the Office of the Renewable Energy Regulator could review and improve its website to make small scale user generators (such as from PV and mini wind turbines) aware that once their RECs are sold they should no longer think that they are using renewable electricity.

This disclosure should be mandatory in all residential PV RECs transactions.

Option 4B

An alternative solution would be remove the use of RECs for small scale electricity generation systems and provide an equivalent incentive within the existing Australian Government Photovoltaic Rebate Programme .

5. The claiming of renewable energy use from deemed **future** generation should be re-considered as this is inconsistent with the rules that apply to forestry.

Industry Scale Generation Systems – User-Generators

6. ORER could review and improve its website to make it clear to industry user-generators that once their RECs are sold, they should no longer think that they are using renewable electricity or make any claims for the use of renewable electricity.
7. A pre-condition for selling RECs should be that there is no parallel claim for the use of the same renewable electricity.

Prevent Play-on-word claims

8. ‘buying electricity from a renewable energy resource’ without the RECs, is not the same as ‘buying renewable electricity’ in an accredited product that includes the RECs. The Federal Government should establish a legal framework that provides guidance to States and businesses to prevent ‘*Play on Word*’ claims that are misleading to stakeholders. A penalty should be included in to eliminate any double accounting caused by claims when Company A buys energy from a renewable generator and Company B buys the RECs with both companies claiming the renewable and greenhouse benefits.

Summary Market Data

9. ORER should enhance the REC Registry to enable tracking of renewable energy across state borders. The REC Registry should be made more user friendly such that stakeholders can follow aggregated renewable energy transfers and use rather than being required to look up each REC individually.
10. The Australian Greenhouse Office should establish key market reporting measures and a system to present this information regularly to allow businesses and states to have access to essential information on the trading of renewable and lower emissions energy.

CONCLUSIONS

There is a great deal of good intention exists amongst government, businesses and communities generally to support mandatory and voluntary renewable energy programs that contribute to tackling climate change. Initiatives such as the Federal MRET and emerging state schemes will grow in response to the Federal Government's commitment to a 20% renewable energy target by 2020 at the same time there is a rapidly expanding voluntary market in GreenPower customers and household solar PV and solar hot water systems.

This paper has outlined a number of significant Greenhouse accounting traps and the solutions to address these traps. Accounting frameworks and programs which have failed to prevent double accounting, should be improved quickly and a proactive approach should be adopted to identify and avoid future traps.

With the focus on carbon trading and permit trading schemes being historically focussed on the energy production side, we must not forget to ensure that accounting systems are appropriate and robust on the energy users side.

TERMS.

MRET	Federal Mandatory Renewable Energy Target, requiring liable electricity retailers and wholesale buyers to acquire of renewable electricity each year, increasing in steps to 9500 GWh.
RECs	Renewable Energy Certificates traded under the mandatory Renewable Energy Scheme, based on a unit of one megawatt hour of renewable energy from an eligible renewable energy source.
GreenPower Rights	A tradeable entity produced in addition to RECs under the Green Power program, based on 1MWh. When used in the Green Power scheme, a 1MWh Right is designed to be used with a 1MWh REC that is withheld from further trading.