Centre for Energy and Environmental Markets

UNSW
THE UNIVERSITY OF NEW SOUTH WALES
SYDNEY • AUSTRALIA



Domestic Offset Schemes in Australia

Domestic Offset projects as a supplementary policy to achieving GHG emissions reductions

Energy Delta Convention 2010, 24th November 2010, Groningen, Netherlands

Presented by

Dr. Regina Betz
Dr. Iain MacGill

Presentation outline

- Australian context
- Australian Domestic Offset Action
- Australian Experience: Greenhouse Gas Abatement Scheme (GGAS)
  - Project types
  - Positive experiences
  - Critique
- Greenhouse Friendly
- Outlook on future Domestic Offset Action in Australia
- Additional Action Reserve
- Conclusions

The Australian context for domestic offsets

- A signatory of the Kyoto Protocol… that maintained a commitment to meet targets yet didn't ratify until end-2007 under new government
- The world's first national renewable energy certificate scheme (MRET) commenced 2001
- The world's first mandatory emissions reduction trading scheme (NSW GGAS) commenced 2003
- An ETS design process since 2007 with commitments to implement an ETS in 2010 then 2011 then 2013… then?
- *Therefore a range of domestic offset programs that have had to endure a change in Kyoto ratification and government, then on-again off-again ETS commitments…*
  … and some interesting perspectives

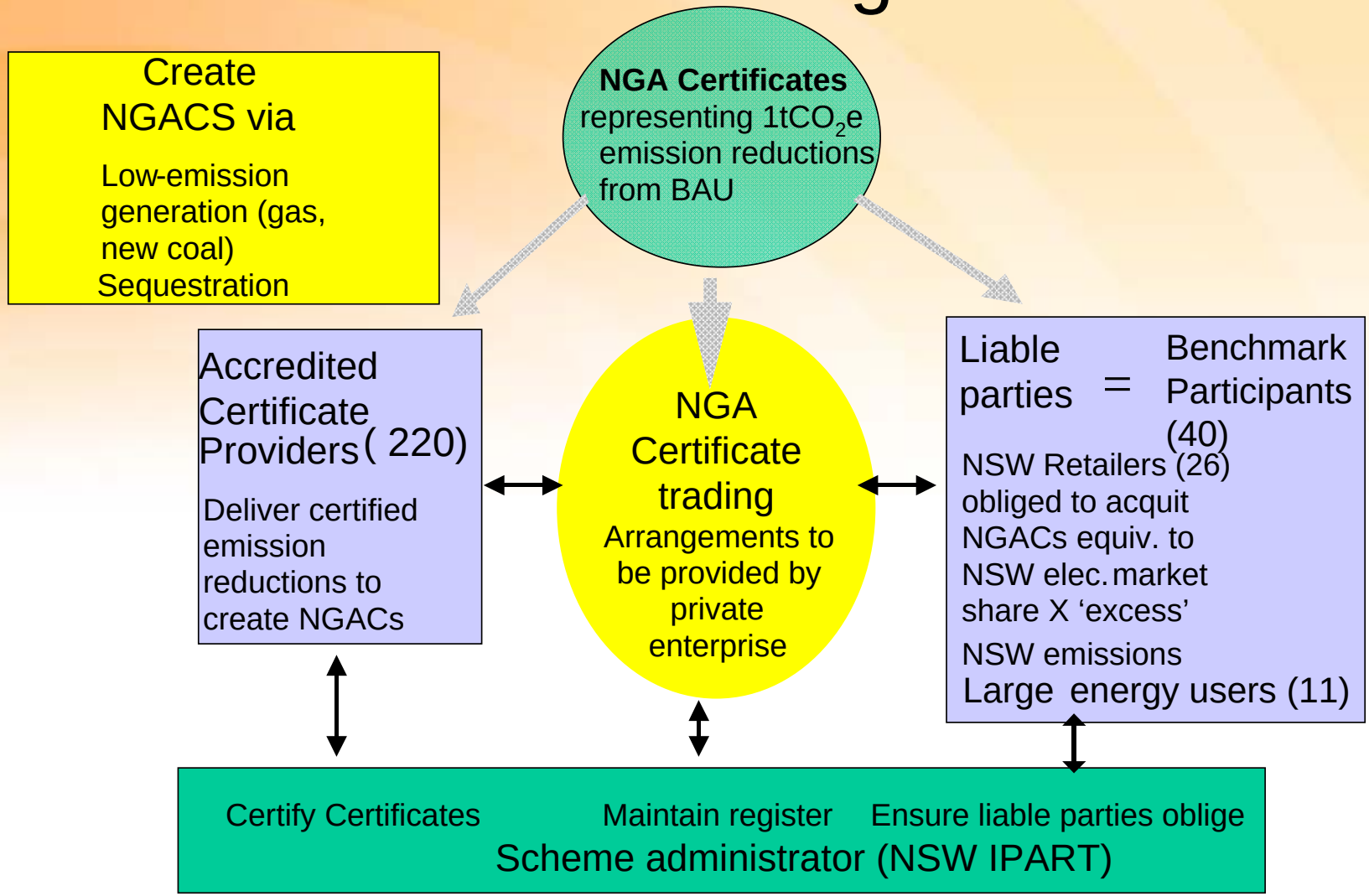
Australian Domestic Offset Action

- Greenhouse Gas related
  - **NSW and ACT Greenhouse Gas Abatement Scheme (GGAS)** trading in NSW Greenhouse Gas Abatement Certificates (**NGACs**)
  - **Greenhouse Friendly**
  - **National Carbon Offset Standard (NCOS)** NEW
  - **Planned: Carbon Farming Initiative (CFI)** NEW
- Energy related
  - Green certificates schemes:
    - Federal scheme trading Renewable Energy Certificates (**RECs**)
    - Victorian Renewable Energy Scheme trading Victorian Renewable Energy Certificates (**VRECs**) will be merged with Federal Scheme
  - White certificate schemes:
    - Victorian Energy Efficiency Scheme trading in Victorian Energy Efficiency Certificates (**VEECs**)
    - NSW Energy Savings Scheme (ESS) trading Energy Saving Certificates (**ESCs**)
  - Queensland Gas Scheme trading in Gas Electricity Certificates (**GECs**)

NSW Greenhouse Gas Scheme

- Policy intent to introduce scheme in 2003
  - "reduce greenhouse gas emissions associated with the production and use of electricity..."
    (Overview to the Electricity Supply Amendment Bill, 2002)
- Implementation
  - State per-capita greenhouse gas emissions targets (NSW Electricity Supply Act, 1995)
  - Since January 2005 ACT Government joined Greenhouse Gas Reduction Scheme
  - July 2009 the Energy Savings Scheme (ESS) commenced which is covering all Energy savings measures from GGAS
  - Baseline+credit 'emissions reductions' trading

NSW Scheme – a 'designer' market



Australia (NSW): GGAS I

- Created credits by project types (status 2009):
  - 57% in electricity generation:
    - Renewables such as hydro, biomass…
    - Landfill gas
    - Coal seam gas
  - 32 % Demand Side Management
  - 3 % Sequestration
  - 4% Large user

- Positive experiences:
  - Nomination process: projects are implemented by nominated body which enables bundling of projects and reduces transaction costs
  - Monitoring and verification: standard verification is done internally and admin. body is client for third party verification (special verification needs)

Australia (NSW): GGAS II

Additionality:

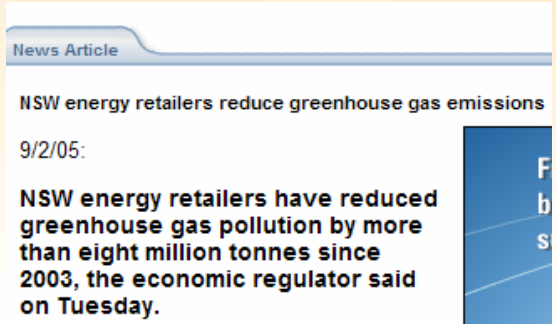
- GGAS doesn't *explicitly* discuss or attempt to assess additionality at all.
- CEEM evaluation has shown that:
  - In early years more than 95% came from projects built + operating well before 2003
  - Great majority of these projects were not required to make operational changes in order to earn NGACs
- Additionality important for environmental integrity and difficult to prove if standardized baselines

Environmental performance – fungibility?

- *"Greenhouse tonnes ain't greenhouse tonnes"*

≠

≠



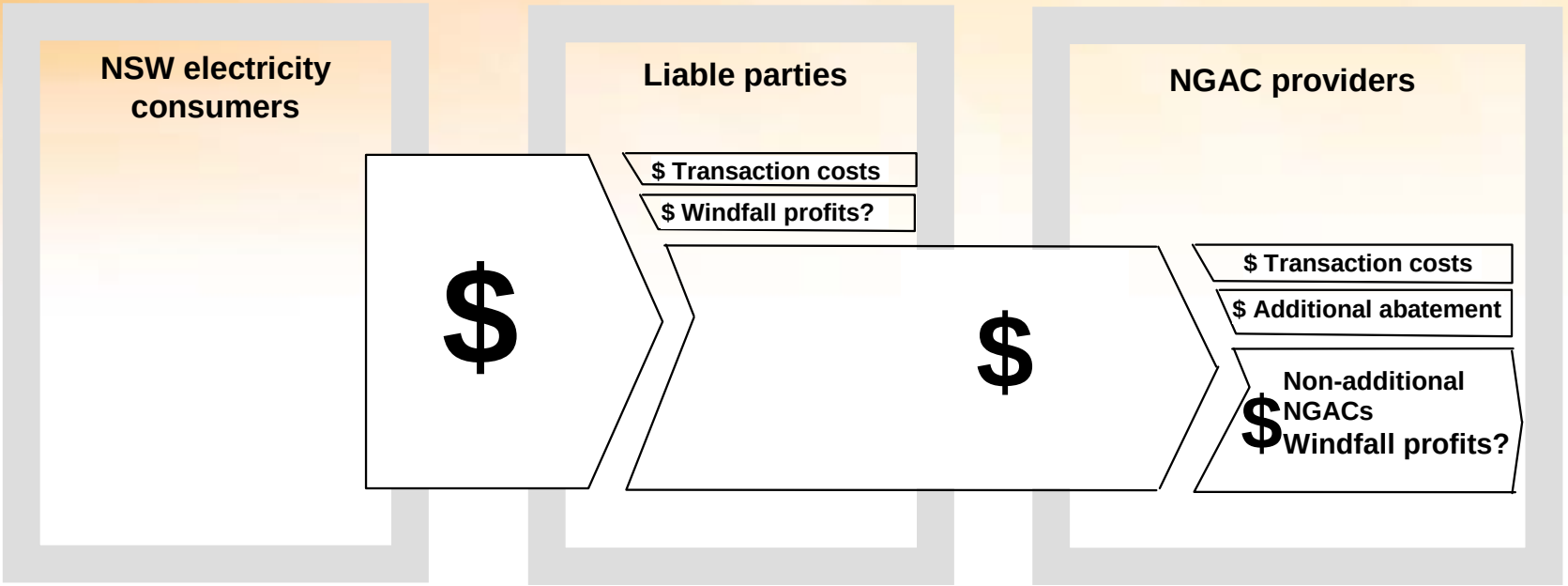
Physical, measurable emissions from fossil-fuel consumption

Estimated net CO2 fluxes from select ecosystems

Hypothetical estimates of emission reductions from counter-factual BAU baselines

Efficiency + equity?

- Efficiency generally low when environmental effectiveness low
  - especially when high transaction costs + windfall profits
- Equity often threatened when environmental effectiveness low
  - Potential that some key stakeholders have captured the policy process

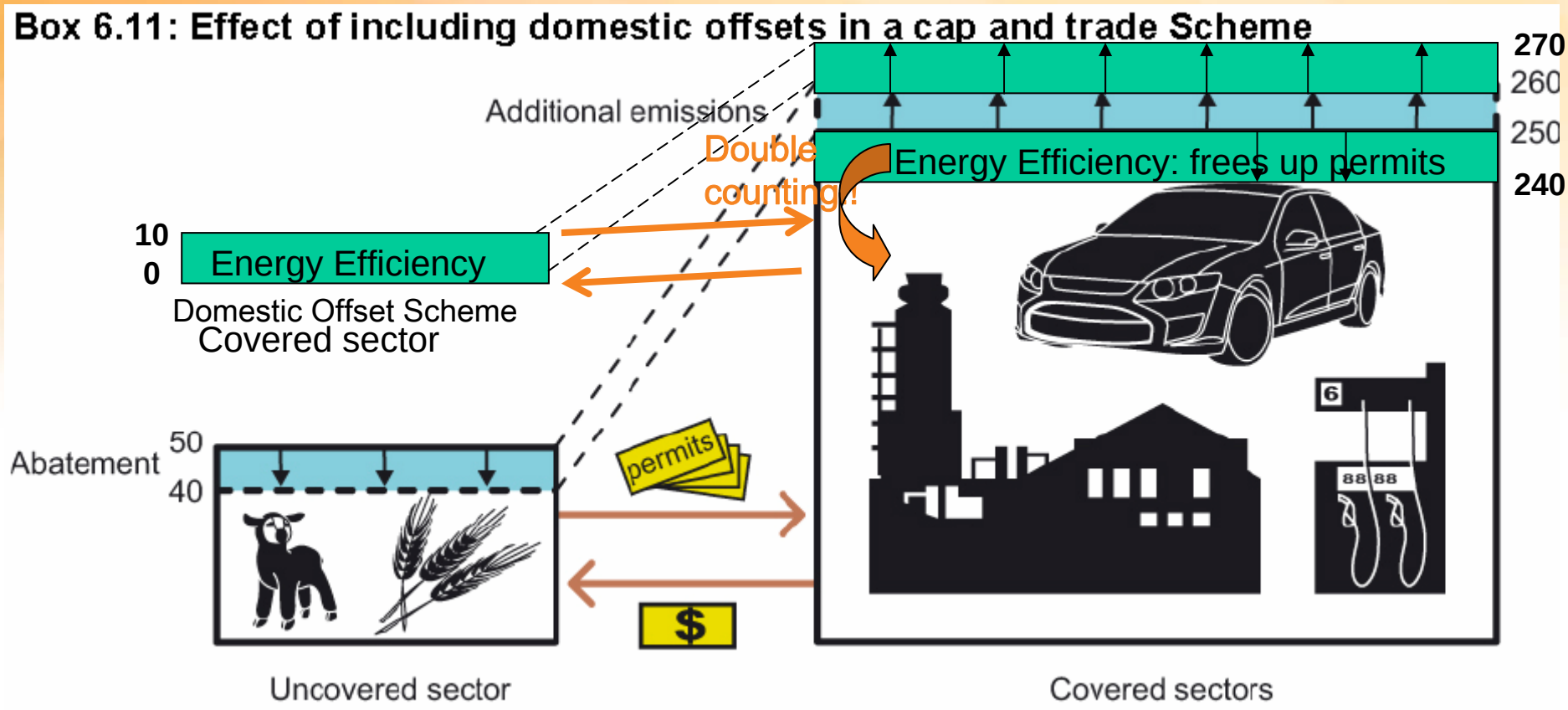


- **What next?** NSW Govt. is evaluating the scheme

Voluntary DO – Greenhouse Friendly

- Government implemented initiative (2001 to 1 July 2010).
  - "..Enable companies to market carbon neutral products and services, deliver greenhouse gas abatement and give Australian consumers greater purchasing choice.
  - ..abatement activities offered permanent, independently verified offsets which represented emissions reductions or sequestration which had contributed to a net reduction of Australia's emissions." (Aust. Govt, 2010)
- **However, wound up in 2010**
  - "The (proposed) CPRS's broad sectoral coverage means less scope to pursue offset activities which are limited to emissions sources not covered by the CPRS.
  - All Greenhouse Friendly abatement is in sectors that would be covered by the CPRS and that are counted towards Australia's Kyoto Protocol target. Abatement in these sectors would not meet test of being additional to "business as usual", and therefore cannot be used to support carbon neutral claims."

General Comments: Risk of additional emissions



Outlook: National Carbon Offset Standard

- Released December 2009, came into effect 1 July 2010.
- Voluntary
  - "The Government has developed NCOS to provide national consistency and give consumers confidence in the voluntary carbon offset market. …and will provide the functions of Greenhouse Friendly in a way that complements Kyoto commitments and planned introduction of CPRS.
- Specific Aims:
  - Provide integrity of offsets
    - specifies types of carbon offsets that constitute genuine, additional emissions reductions in the context of the CPRS.
    - current list, which is expected to be reviewed over time, includes AEUs, CERs (but not lCERs and tCERs), ERUs, RMUs, GS VERs, VCUs and 'Offsets generated from emissions sources in Australia not counted toward Australia's Kyoto Protocol target, where they meet eligibility criteria and use a methodology that has been approved under the Standard' (NCOS, 2010).
    - Australian offsets must be independently audited, and registered and tracked in a publicly transparent registry.
  - Provide integrity to carbon neutral products
    - specifies the processes that must be undertaken to claim that an organisation or their product(s) are carbon neutral
    - involves a carbon footprint calculation, the steps undertaken to reduce emissions, the certificates required to offset the remaining emissions, and the processes for recoding and maintaining any relevant information. Any offsets used must be retired into a registry, and all this should be publicly reported. Compliance with these processes will allow the organisation to use the NCOS logo.

Outlook: Carbon Farming Initiative (CFI)

- Announced in August 2010 planned legislation in the first half of 2011.
- The program would recognise LULUCF, agricultural and waste projects including (but not necessarily limited to): Reforestation, Avoided deforestation, Forest management, Revegetation, Cropland management, Grazing land management, Livestock and fertiliser application, Manure management, Rice cultivation, Landfill waste
- Certified units will be differentiated
  - 'Kyoto' CFI credits (Article 3.3 activities such as reforestation and avoided deforestation, agriculture and waste projects)
  - 'non-Kyoto' CFI credits (created by the additional Article 3.4 LULUCF activities and any soil carbon activities, none of which Australia opted to include in its accounting for the first commitment period of the Kyoto Protocol.)
- 'Kyoto' CFI units could be converted to Kyoto Protocol Assigned Amount Units (AAUs) or Emission Reduction Units (ERUs) and potentially traded in international compliance markets until 2012.
- 'Non-Kyoto' CFI units would be eligible as voluntary units only, which could be used within the NCOS or potentially recognised under other international voluntary programmes.
- Certification process plans to involve methodologies which need to be approved by the Domestic Offsets Integrity Committee (DOIC) and the Minister for Climate Change.
- Project developer has to be accredited as a 'Recognised Offset Entity',
- Offsets must be independently audited, and registered and tracked in a publicly transparent registry.

Additional Action reserve

Reason:

In Australia intensive discussion when Emissions Trading legislation was on the table on additional action such as voluntary offsets or double counting of DO. The concern was that once the cap on emissions has been set, then no actions by individuals, communities, businesses or governments can provide additional reductions beyond the level of the cap. ***Significant public concerns***

A range of proposed options including Additional Action Reserve (CEEM):

(i) **Set a new emission target which augments the original target** by including additional potential reductions (e.g. for a target of -20%, increase it to -30%)

(ii) **Place the AEUs corresponding to the additional reductions in a reserve**. Thus, instead of allocating, for example, 100% of a particular year's AEUs to the market, only allocate 88% and put 12% in the reserve.

Aditional Action Reserve (II)

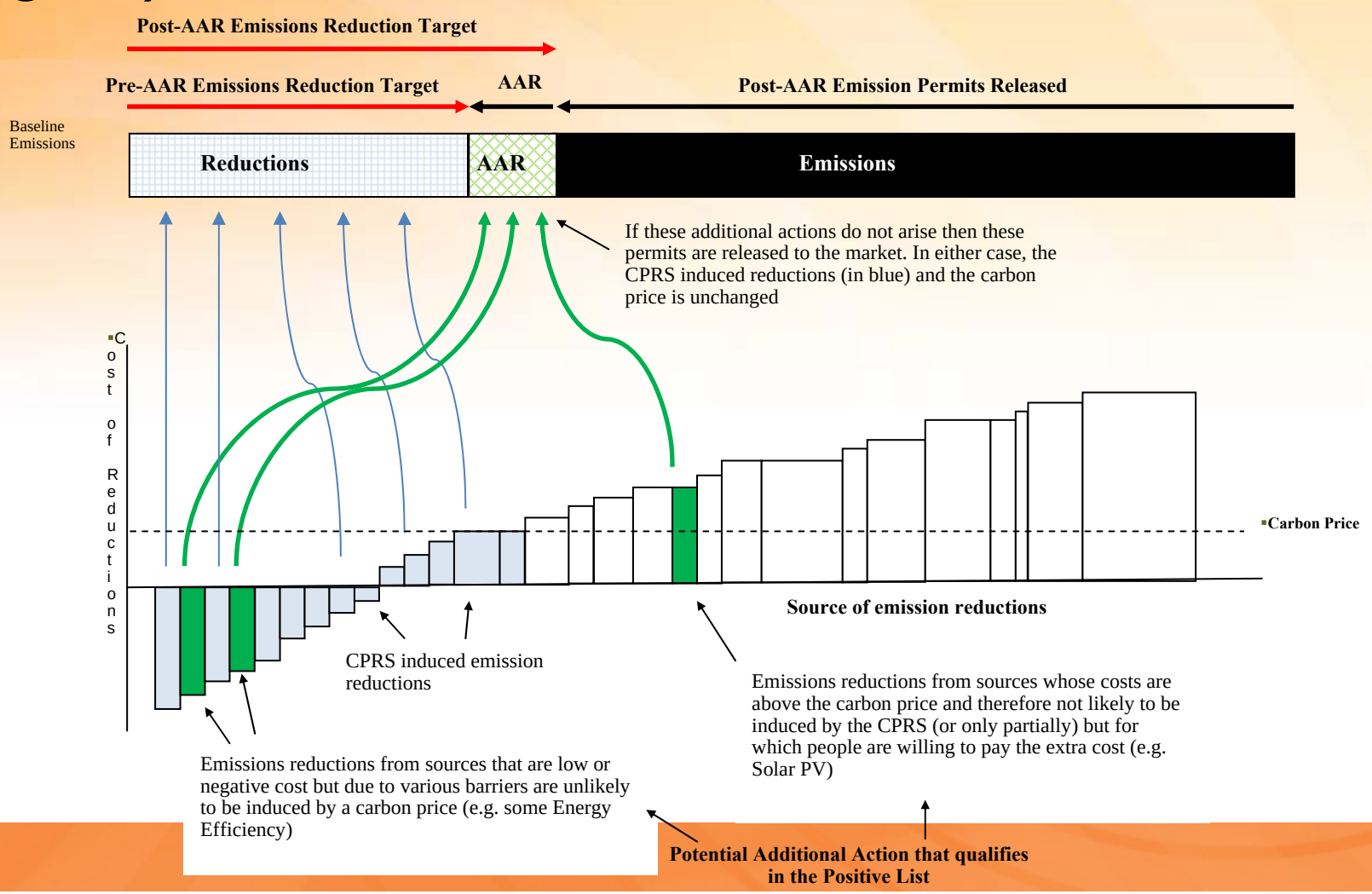
(iii) **Create a Positive List (PL) of measures (programs),** which can constitute additional reductions and are easy to quantify

(iv) When the annual compliance period is over, any additional actions that have been implemented will have their reductions verified. **The equivalent number of permits to the verified reductions will then be cancelled from the reserve.**

(v) If the aggregated reductions do not use up the reserve within a compliance period, **the remaining AEUs will be auctioned off.**

(vi) If the aggregate reductions are going beyond the reserve within a compliance period, **the reserve level will be evaluated over time** and a new reserve may be introduced in order to allow for more reductions.

The relationship between emissions reductions (targets) and the sources of emissions reductions



Conclusions

- Be cautious with Domestic Offset Projects since:
  - they do not contribute to additional reductions if not explicitly accounted for in the target, only to lower costs!
  - they are only a carrot no stick!
    -> no cap and therefore no penalty for increasing emissions only benefits for reducing emissions
  - they can increase emissions by acting as a subsidy (see CDM experience with HFC projects)
  - they might reduce likelihood of extension of a cap and trade scheme since transformation process needed
  - they might complicate target sharing between covered and non-covered sectors (be aware of double counting!)

- But, domestic projects can be valuable:
  - To create additional innovation incentives for projects which may not be implemented by the carbon market
  - additional action reserve may help to avoid double counting

Betz, Regina / Rogge, Karoline / Schön, Michael 2006, 'Domestic Climate Projects: Limited opportunities in Germany but example for others?', *Energy and Environment*, 17/4.

For papers evaluating the NSW GGAS scheme, MRET, NCOS etc, see the CEEM webpage

Centre for Energy and Environmental Markets

UNSW
THE UNIVERSITY OF NEW SOUTH WALES
SYDNEY • AUSTRALIA

r.betz@unsw.edu.au

Many of our publications are available at:
www.ceem.unsw.edu.au