



Centre for Energy and  
Environmental Markets

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SYDNEY • AUSTRALIA



## The Impacts of the CPRS on the Additionality of GreenPower

Rob Passey and Iain MacGill

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Project supported by the NSW Department of Environment and Climate Change

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## IT Power

- Established in the UK 1981
- Specialist renewable energy, energy efficiency and carbon markets consultancy:
- > 1000 sustainable energy projects in over 100 countries
- IT Power – UK (3 offices)
  - Argentina, China, Fiji, India, Kenya, Uganda
- IT Power Australia – Canberra
  - established 2003
  - staff located in other States
  - ITP (Aust) staff have backgrounds in managing government incentive programs, high level policy analysis and research (incl. carbon markets), engineering (system) design and project management.





- Operating since April 1997
- Independently audited
- Individuals and businesses can support accredited renewables
- Pay a price premium
- About 2,000 GWh in 2008 (MRET 9,500 GWh in 2010)
- Reduce emissions by offsetting fossil fuel-based elec generation



### GreenPower and the CPRS: Additionality impacts

Has been suggested that CPRS will make GP non-additional because

- GP frees up permits
- used by others
- no net decrease in emissions
- GP customer subsidising large emitters through lower permit prices

We used scenarios to explore how this is affected by:

- Australia's emissions with respect to the CPRS cap
- Relative prices of AEU and International Units

1. CPRS cap not binding
2. Cap binding, \$AEU < \$IU
3. Cap binding, \$AEU = \$IU
4. Cap binding, \$AEU = price cap





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**1. Cap not binding - \$AEU ~0**

**Key points**  
 Emissions less than cap (and stay that way)  
 GP reduces emissions further  
 Permit price is independent of target

---

**Emissions reductions**

**Australian**  
 Yes

**International**  
 No

---

**Cost Impacts**

**GreenPower customers**  
 Paying for both renewables & associated abatement

**Large emitters**  
 No or low carbon price and GP not subsidising

**Australian government**  
 GP effectively driving abatement

cap

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 GP effectively driving abatement

cap

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### 2. Cap binding, \$AEU < \$International unit

**Key points**  
Emissions hit cap  
All abatement occurs in Australia  
No purchase of international units  
GP frees up AEU and so reduces price

**Emissions reductions**  
**Australian**  
No  
**International**  
No

**Cost Impacts**  
**GreenPower customers**  
Paying for renewables  
Paying for some abatement if GP reduces price of AEU (assumes GP premiums not significantly reduced by CPRS)  
**Large emitters**  
Subsidising these emitters to the extent that reduces price of AEU  
**Australian government**  
None



cap

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Emissions hit cap  
All abatement occurs in Australia  
No purchase of international units  
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**Emissions reductions**  
**Australian**  
No  
**International**  
No

**Cost Impacts**  
**GreenPower customers**  
Paying for renewables  
Paying for some abatement if GP reduces price of AEU (assumes GP premiums not significantly reduced by CPRS)  
**Large emitters**  
Subsidising these emitters to the extent that reduces price of AEU  
**Australian government**  
None



cap

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### 2. Cap binding, \$AEU < \$International unit

#### Key points

Emissions hit cap  
All abatement occurs in Australia  
No purchase of international units  
GP frees up AEU and so reduces price

#### Emissions reductions

##### Australian

No

##### International

No

#### Cost Impacts

##### GreenPower customers

Paying for renewables  
Paying for some abatement if GP reduces price of AEU  
(assumes GP premiums not significantly reduced by CPRS)

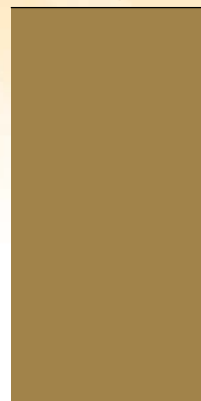
##### Large emitters

Subsidising these emitters to the extent that reduces price of AEU

##### Australian government

None

cap



### 3. Cap binding, \$AEU = \$International unit

#### Key points

Emissions hit cap  
Purchase of international Kyoto units on the margin to meet CPRS liabilities.  
AEU price set internationally

#### Emissions reductions

##### Australian

Yes

##### International

Depends on additionality of international Kyoto units

#### Cost Impacts

##### GreenPower customers

Paying for renewables  
Paying for some abatement depending on additionality of international Kyoto units  
(assumes GP premiums not significantly reduced by CPRS)

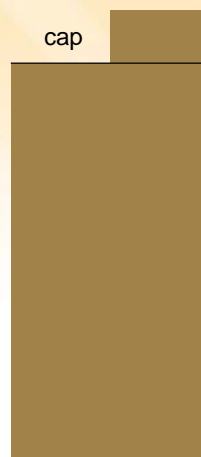
##### Large emitters

Not subsidising because unlikely to reduce price of AEU

##### Australian government

None

cap





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**Key points**

Emissions hit cap  
Purchase of international Kyoto units on the margin to meet CPRS liabilities.  
AEU price set internationally

**Emissions reductions**

**Australian**

Yes

**International**

Depends on additionality of international Kyoto units

**Cost Impacts**

**GreenPower customers**

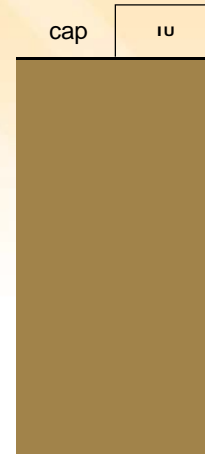
Paying for renewables  
Paying for some abatement depending on additionality of international Kyoto units  
(assumes GP premiums not significantly reduced by CPRS)

**Large emitters**

Not subsidising because unlikely to reduce price of AEU's

**Australian government**

None



**3. Cap binding, \$AEU = \$International unit**

**Key points**

Emissions hit cap  
Purchase of international Kyoto units on the margin to meet CPRS liabilities.  
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**Emissions reductions**

**Australian**

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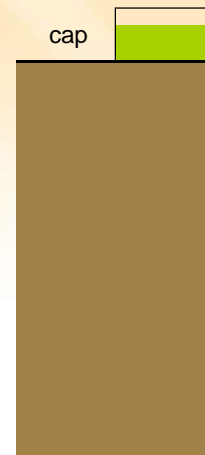
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**Large emitters**

Not subsidising because unlikely to reduce price of AEU's

**Australian government**

None





Cap not binding - \$AEU = 0	Cap binding, \$AEU < \$International unit	Cap binding, \$AEU = \$International unit	Cap binding, \$AEU = price cap
<b>Key points</b>			
Emissions less than cap (and stay that way) GP reduces emissions further Permit price independent of target	Emissions hit cap All abatement occurs in Australia No purchase of international units GP frees up AEU's and so reduces price	Emissions hit cap Purchase of international Kyoto units on the margin to meet CPRS liabilities. AEU price set internationally	Emissions hit cap Australian government issues permits at a fixed price and purchases Kyoto units required to meet international obligations, covering the cost difference
<b>Emissions reductions</b>			
<b>Australian</b>			
Yes	No	Yes	Yes
<b>International</b>			
No	No	Depends on additionality of international Kyoto units	As for adjacent column
<b>Cost Impacts</b>			
<b>GreenPower customers</b>			
Paying for both renewables & associated abatement	Paying for renewables, paying for some abatement if GP reduces price of AEU's (assumes GP premiums not significantly reduced by CPRS)	Paying for renewables depending on additionality of international Kyoto units (assumes GP premiums not significantly reduced by CPRS)	As for adjacent column
<b>Large emitters</b>			
No or low carbon price and GP not subsidising	Subsidising these emitters to the extent that reduces price of AEU's	Not subsidising because doesn't reduce price of AEU's	As for adjacent column
<b>Australian government</b>			
GP effectively driving abatement	None	None	GP effectively subsidising Govt b/c will have to buy fewer international Kyoto units

### The use of International Units

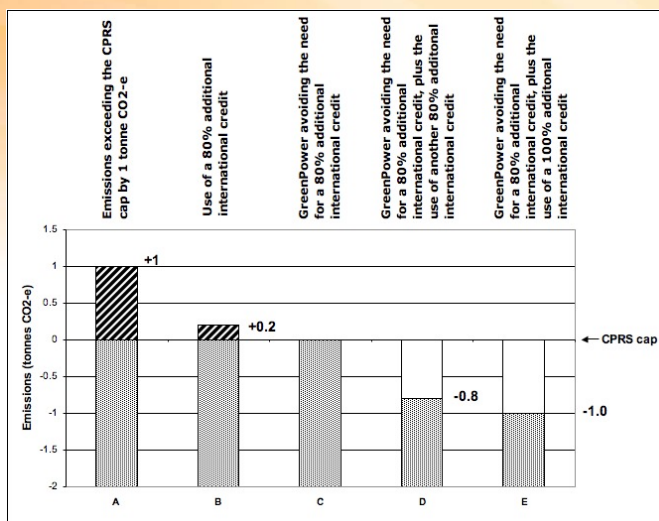
- Australia's CPRS-liable parties can use unlimited CERs, ERUs and RMUs
- CPRS modelling expects IUs to be used from 2013 onwards
- CERs most likely to be used, and by some estimates, are only about 80% additional

Australia's BAU emissions, actual emissions and allocation CPRS -5 (Treasury, 2008)





### Possible impacts of CPRS on GreenPower Additionality




### Abatement and cost impacts of 5 GreenPower 'packaging options'

- Option 1:** The Commonwealth cancels AEU's and AAU's that correspond to GreenPower's abatement
- Option 2:** GreenPower customers purchase AEU's/AAU's or international credits in addition to RECs
- Option 3:** No change to GreenPower's operation
- Option 4:** AEU's/AAU's are used instead of RECs
- Option 5:** Where GreenPower sales above 2009 levels are accounted for in setting future caps (recently proposed by the Commonwealth)










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### Impacts of Commonwealth Proposal for GreenPower


**Up to 2009 GP baseline (no intervention by Commonwealth)**

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Cap binding, \$AEU < \$International unit	Cap binding, \$AEU = \$ International unit
<b>Emissions reductions</b>	
Domestic additionality. No purchase of international units and so no international impact.	Domestic additionality. Reduced purchase of international units and so GP additional globally to the extent that international units are not AND Cancellation of AEU & AAU results in addition to purchase of international units, so GP additional to the extent that international units are additional (Column D).
<b>Cost Impacts</b>	
GP buyer not subsidising because no extra AEU's or AAUs should be freed up. Govt will forego revenue from auctioning AEU's. (assumes GP premiums not significantly reduced by CPRS)	As for adjacent column.

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### Impacts of Commonwealth Proposal for GreenPower

**Up to 2009 GP baseline (no intervention by Commonwealth)**

Cap binding, \$AEU < \$International unit	Cap binding, \$AEU = \$ International unit
<b>Emissions reductions</b>	
No domestic additionality as permits are freed up for other emitters. No purchase of international units and so no international impact.	Domestic additionality. Reduced purchase of international units and so GP additional globally to the extent that international units are not (Column C)
<b>Cost Impacts</b>	
GP buyers subsidising other emitters through reduced AEU prices. (assumes GP premiums not significantly reduced by CPRS)	Not subsidising because GP unlikely to reduce price of AEU's. (assumes GP premiums not significantly reduced by CPRS)

**Above 2009 GP baseline (targets reduced in proportion to GP purchases)**

Cap binding, \$AEU < \$International unit	Cap binding, \$AEU = \$ International unit
<b>Emissions reductions</b>	
Domestic additionality. No purchase of international units and so no international impact.	Domestic additionality. Reduced purchase of international units and so GP additional globally to the extent that international units are not AND Cancellation of AEU & AAU results in addition to purchase of international units, so GP additional to the extent that international units are additional (Column D).
<b>Cost Impacts</b>	
GP buyer not subsidising because no extra AEU's or AAUs should be freed up. Govt will forego revenue from auctioning AEU's. (assumes GP premiums not significantly reduced by CPRS)	As for adjacent column.

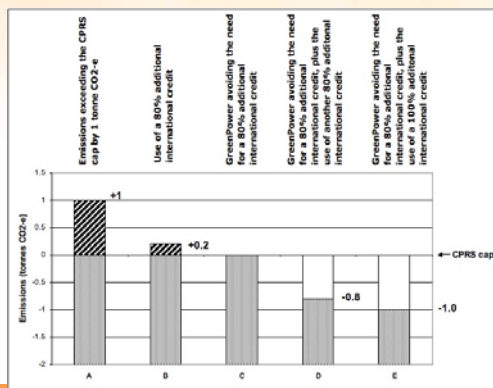
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### In Summary

- Assuming CPRS cap is binding and international units are used at the margin, the Commonwealth proposal would mean that
- (i) GreenPower below 2009 levels is additional to the extent that international units are not, and
- (ii) GreenPower above 2009 levels is additional only to the extent that international units are additional



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### It's all about perception

- ATA surveyed 775 of its members
- 93% of those who purchased GreenPower said that either their *primary* reason, or one of their main reasons for doing so was to reduce carbon emissions.
- 33% of respondents who already purchased GreenPower would cease doing so if it did not make a difference to Australia's overall net greenhouse gas emissions.
- 49% of those who were considering purchasing GreenPower stated that they would not do so should their efforts not make a difference.

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The importance of getting it right .....



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Thank you... and *questions*

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