

From: s22
To: s22 ; s22
Cc: [Chris Johnston](#); s22 ; s22 ; [James White](#); [Kristin Tilley](#); [Jo Evans](#); s22 ; s22 ; s22 ; s22
Subject: Menzies/Page report response [SEC=UNCLASSIFIED]
Date: Wednesday, 13 March 2019 9:44:57 AM
Attachments: [A Hidden Carbon Tax Response brief.docx](#)

s22

Response attached.

If you have specific questions s22 and/or s22 would be best placed to respond.

Regards

s22

s22

Director – Mitigation and Climate Science
Climate Change Division

Department of the Environment and Energy

s22

www.environment.gov.au

From: s22

Sent: Tuesday, 12 March 2019 12:39 PM

To: s22

Subject: [SEC=UNCLASSIFIED]

Hi s22 – paper in question linked below

https://docs.wixstatic.com/ugd/ab5c75_0b84a875dd7c4d58af51edd9833a40ff.pdf

Would be great if you could please provide a one-pager on the ‘findings’ (aware that it is based on the Brain Fisher modelling that was released in part a couple of weeks ago).

As discussed, in the next couple of hours would be great.

s22

s22

s22

A Hidden Carbon Tax: how bad policy drives up the cost of electricity

Overview of the findings of this report

The report aims to translate the wholesale electricity price impacts of the 26-28 per cent and 45 per cent economy-wide emission reduction targets into retail price impacts. It does not provide much detail on methodology or analysis.

The results indicate that:

- In most regions, retail prices and bills are higher under the 45 per cent scenario in 2030 than they are today, and under the 26-28 per cent scenario they are lower.
- Under the 45 per cent emissions reduction scenario, projected retail price impacts in 2030 range from a 5 per cent reduction in South East Queensland, up to a 35 per cent increase in the ACT compared to retail prices in 2017-18.
 - Depending on the region, quarterly bill impacts compared to 2017-18 range from an \$18 reduction up to a \$144 increase for representative households, and increases of between \$24 and \$416 for representative SMEs.
- Under the 26-28 per cent emissions reduction scenario, projected retail price impacts in 2030 range from a 41 per cent reduction in South East Queensland and NSW, up to a 4 per cent increase in WA compared to retail prices in 2017-18.
 - Depending on the region, quarterly bill impacts compared to 2017-18 range from a \$160 reduction up to a \$17 increase for representative households, and reductions of between \$38 and \$537 for representative SMEs.
- When comparing the two scenarios directly, the benefits in 2030 vary between state and territory from \$117 in WA to \$195 in Tasmania for households; and from \$362 in WA to \$568 in NSW for SMEs.

Conclusion One: An ambitious emissions reduction target could make electricity significantly more expensive in some regions.

Conclusion Two: Businesses may experience price rises in some regions.

Conclusion Three: Household power bills in some regions may rise substantially, while other regions may only see modest impacts.

- The report states that the retail prices have been “adjusted in line with findings” of the recent BAEconomics modelling report, which estimates the impact of economy-wide 26-28 per cent and 45 per cent scenarios.
 - The Department presumes Menzies/Page have applied the projected wholesale price growth rates under the 26-28 per cent and 45 per cent targets to the wholesale component of retail prices.
- Since the BAEconomics report was based on economy-wide emissions reduction targets, it is difficult to be certain what level of emissions reductions is actually being achieved in the electricity sector itself.

- The results suggest that retail prices under the two scenarios will diverge almost immediately.
 - For example, in 2019-20 retail prices in NSW are expected to be 20 per cent higher under a 45 per cent target than the 26-28 per cent target (29c/kWh compared to 24c/kWh). By 2020-21, prices are 45 per cent higher under the 45 per cent scenario (29c/kWh compared to 20c/kWh).
 - As a comparison, the AEMC projects NSW retail prices to be around 28c/kWh (\$2018) in 2020-21. This suggests Menzies/Page are expecting much bigger price reductions in the 26-28 per cent scenario than recently forecast by the AEMC.
- The retail price differences between the two scenarios in 2030 seems much larger than the wholesale price differences published in the BAEconomics report.
 - The BAEconomics report projected wholesale prices at \$93/MWh under the 26-28 per cent scenario, and at \$128/MWh under the 45 per cent scenario, a \$35/MWh difference (equivalent to 3.5c/kWh).
 - The Menzies/Page report shows retail prices differing by 9-14c/kWh (equivalent to \$90-140/MWh), suggesting that the price difference is not just been driven by wholesale price differences.
- The Menzies/Page report does not seem to use the BAEconomics reference scenario, where wholesale prices are lower than either target scenario.
 - Instead, the report uses current prices as its reference point.

s47C

From: s22
To: s22 ; s22 ; s22 ; s22 ; Chris Johnston
Subject: BAE report [SEC=UNCLASSIFIED]
Date: Tuesday, 19 March 2019 10:19:46 AM

Hi all – Brian Fisher has released his report and its available here:

<http://www.baeconomics.com.au/wp-content/uploads/2019/03/Climate-Policy-Report-14March19.pdf>

A summary of this report was released about a month ago, and at that time s22 team developed some summary points (see below). It may be that we can re-used these points as needed now, that is if the report has not changed in that time.

s22

Analysis of BAEconomics report, ‘Economic consequences of some alternative Australian climate policies’.

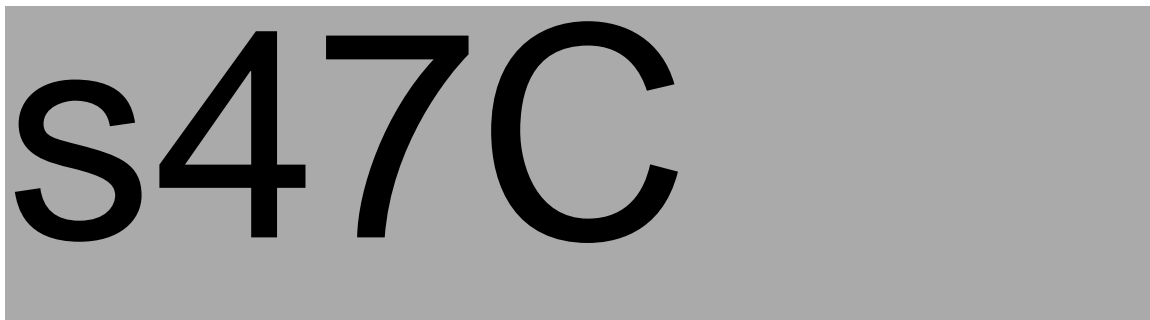
- On 21 February, BAEconomics released a 4 page report on a Computable General Equilibrium (CGE) modelling exercise to show the impacts of emissions reduction policies on the Australian economy (<http://www.baeconomics.com.au/wp-content/uploads/2019/02/Australian-climate-policy-webpage-21Feb19.pdf>).
- The report identified three scenarios: a reference (BAU) case, a 26-28 per cent emission reduction on 2005 levels, and a 45 per cent reduction on 2005 levels.

s47C

- The modelling exercise purports to choose the least cost way of meeting the emission reduction targets. The report does not identify which individual policies are modelled in each scenario.
- The report does not comment on which sectors the emissions reductions are coming from, so it is difficult to compare to other modelling which prioritises reductions in the energy sector.
 - It would be reasonable to assume that the electricity sector is reducing emissions by more than 45 per cent on 2005 levels because there are likely more low cost abatement opportunities in that sector.
- The report recognises that international permit trading would significantly reduce the economic impact of achieving the emissions targets because the international carbon

price (estimated in the report at \$42 USD/tCO₂-e in 2030) is well below the marginal abatement costs in Australia.

- The report does not mention whether emissions-intensive trade-exposed (EITE) industries have been exempt from the impact of emissions policies.
 - EITE exemptions can significantly reduce the economic impact of achieving emission reduction targets.



- The report mentions the assumption that new variable renewables will require firming, with costs based on the ARENA report on dispatchable renewable energy (<https://arena.gov.au/projects/dispatchable-renewable-electricity-options/>).
 - The report does not mention how much firming is assumed to be needed. Excessive firming will increase the cost of renewables and drive up electricity prices.
- Note the Government has said publicly they believe the 26-28 per cent target would be achieved in the NEM without further Government intervention, suggesting this would come at no cost beyond business as usual.
- The Department projects the national share of renewable energy generation in 2030 will be 35 per cent, which is consistent with the BAE analysis (which predicts a 36 per cent share).

Key modelling results	Reference case	26-28% target	45% target
Share of renewables (Australia-wide)	Unknown*	36%	At least 50%**
Wholesale electricity price in 2030	\$81/MWh	\$93/MWh	\$128/MWh
GDP growth to 2030	2.9% per year	2.8% per year	2.3% per year
GDP loss in 2030 relative to the reference case***	NA	\$19 billion	\$144 billion
Cumulative GDP loss relative to the reference case (2021-2030, NPV)	NA	\$69 billion	\$472 billion
Fall in real wages for full-time worker in 2030 relative to reference case	NA	\$2,000	\$9,000
Loss of full-time jobs			

relative to the reference case	NA	78,000	336,000
Marginal cost of abatement in 2030	NA	\$90/tCO ₂ -e	\$300/tCO ₂ -e

Dollars are all Australian (presumably 2018 dollars, but this is not stated in the report).

* The Departments latest Projections estimated a 35 per cent renewable share in 2030 (including rooftop PV)

** This scenario assumes a 50 per cent renewable energy target, but renewables could exceed 50 per cent in the context of a 45 per cent national emissions reduction target.

*** Australia's GDP in 2017-18 was around \$1.8 trillion.

From: s22
To: s47F
Cc: s22
Subject: BAEconomics modelling report on the cost of climate change policies
Date: Wednesday, 20 March 2019 3:30:37 PM

Hi everyone

For those interested please see below a summary and analysis of the BAE economic modelling report diligently put together by s22 . BAEconomics and its principal Dr Brian Fisher yesterday released an economic modelling report comparing the costs of the Coalition and Labor's climate change targets. The report is here:
<http://www.baeconomics.com.au/wp-content/uploads/2019/03/Climate-Policy-Report-14March19.pdf>

The climate change targets considered were:

- **Coalition:** 26-28% emissions reductions by 2030 on 2005 levels.
- **Labor:** 45% emissions reductions by 2030 on 2005 levels and 50% renewables by 2030.

It also explored the impact of two "flexibility measures." These are:

- Allowing "**carry over**" of overachievement of Australia's pre-2020 targets to the 2021-30 Paris target. This refers to the fact that Australia's targets are legally cumulative over a period of years (rather than just the final year's emissions) and Australia is expected to beat its pre-2020 targets by 367 million tonnes. This means that under the Coalition's target, around half the required cumulative emissions reductions for the 2021-30 Paris target (around 700 million tonnes) can be "met" by administratively applying the carry over from pre-2020, rather than physically reducing emissions.
- Allowing **international permits** (up to 25% in this case). This limits the price of emissions reductions (assumed at \$US42).

A large, bold, black text 's47C' is centered on a grey rectangular background. The text is in a sans-serif font and is significantly larger than the other text on the page.

Key findings

- Both parties' targets impose economic costs (reductions in Gross

National Product):

- **Coalition:** A reduction of \$80b to \$293b over 2021-30 (depending on if flexibility measures are adopted).
- **Labor:** A reduction of \$254b to \$1237b over 2021-30 (depending on if flexibility measures are adopted).
- Both targets impose shadow carbon prices on the economy. Note that this is not an explicit carbon price (such as the previous carbon tax), but rather a proxy for the economic cost on the economy of decarbonising.
 - **Coalition:** \$73-\$263 per tonne in 2030.
 - **Labor:** \$97-\$696 per tonne in 2030.
- Allowing either of the “flexibility measures” considerably reduces the cost of achieving all targets.

Note that while the NEM is pretty much expected to meet a 26% target already due to the renewable build, this modelling looks at the whole of economy target, which is not expected to be met business as usual.

Electricity sector results

Generation mix (Australia wide)

The modelling finds electricity (and transport) do a disproportionate share of the emissions reductions task.

Coal falls from 60% of national electricity generation today to 40% in 2030 under a reference case (the reference case is no further policies than existing today i.e. failing to meet targets). With the climate targets, coal falls to:

- **Coalition:** between 23-34% in 2030
- **Labor:** between 12-26% in 2030

Gas increases from 19% today to 23% in 2030 under a reference case. With the climate targets, gas's share rises to:

- **Coalition:** between 29-38% in 2030
- **Labor:** between 22-37% in 2030

Renewables increase from 19% today to 36% in 2030 under a reference case. With the climate targets, renewables increase to:

- **Coalition:** between 36-38% in 2030
- **Labor:** between 50% in 2030

There is no detail on impacts on specific power stations, technologies such as pumped hydro nor detail on whether Snowy 2.0 proceeds. Information is in percentages and not MWs of build. Gas is assumed to be A\$10-12/Gj and it assumes no gas volume constraints.

Wholesale electricity prices

Australia-wide wholesale price increases compared to reference case are:

- **Coalition:** 12-38% in 2030
- **Labor:** 37-94% in 2030

The modelling does not appear to assume additional network costs to connect remote renewables. However, it does assume costs to firm intermittent generation, gradually increasing to \$45/MWh when wind and solar reach 35 per cent of total generation (and \$200/MWh for a 75 per cent share – which is the number the public reaction has focused on).

\$47C

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From: s22
To: James White; s22
Subject: Brian Fisher modelling [SEC=UNCLASSIFIED]
Date: Tuesday, 12 March 2019 9:39:01 AM

Hi all

The Australian this morning claims to have the “final report” of BAEconomic’s modelling on climate policy. It doesn’t seem to be online yet, with the most recent report on their website the short note from a few weeks ago.

The findings reported in the Australian are:

- To meet a 45% target, coal-fired generation would fall 60% by 2030, including the closure of 9 coal-fired power stations
- To meet a 26% target coal-fired generation would fall 20%, including the closure of 3 coal-fired power stations
- Gas would increase to fill the gap
- A 26-28% target would cost \$70 billion in cumulative economic losses and a 2% reduction in real wage growth
- There are 6 modelling scenarios, with different resulting energy mixes, 3 of which are described in the article:
 - 26% without Kyoto carryover
 - Coal 23 %
 - Gas 38%
 - Renewables 38%
 - 26% with Kyoto carryover
 - Coal 32%
 - Gas 29%
 - Renewables 36%
 - 45% without Kyoto carryover
 - Coal 12%
 - Gas 37%
 - Renewables 50% (I think as an input to meet Labor’s target)

<https://www.energycouncil.com.au/media/15618/coal-plants-to-plummet-under-labor.pdf>

<https://www.energycouncil.com.au/media/15616/baeconomics-modelling-tele.pdf>

s22

Energy Transition Section
Clean Energy Branch | Energy Division
Department of the Environment and Energy

☎ s22

✉ s22 [@environment.gov.au](mailto:s22@environment.gov.au)

BAEconomics - Economic consequences of some alternative Australian climate policies

On 21 February, BAEconomics released a report on the impacts of emissions reduction policies on the Australian economy under a 26-28 per cent reduction target and a 45 per cent reduction target.

The report highlighted some headline results for each scenario compared to a BAU scenario.

26-28 per cent	45 per cent target
<ul style="list-style-type: none"> • Renewable energy contributes 36 per cent of electricity generation by 2030 • An implicit carbon price of \$90/tonne in 2030 • A reduction in GDP growth from 2.9%/annum in the reference case to 2.8%/annum, equivalent to \$19 billion less by 2030. Cumulative losses were calculated at \$69 billion for the decade to 2030. • Average real yearly income in 2030 of \$2000 less than the reference case • The smaller economy results in 78,000 fewer jobs than the reference case • Wholesale electricity prices rise due to increased firming and integration costs for renewables, from \$81/MWh under the reference case to \$93/MWh 	<ul style="list-style-type: none"> • Renewable energy set at 50 per cent of electricity generation by 2030 • An implicit carbon price of \$300/tonne in 2030 • A reduction in GDP growth from 2.9%/annum in the reference case to 2.3%/annum, equivalent to \$144 billion less by 2030. Cumulative losses were calculated at \$472 billion for the decade to 2030. • Average real yearly income in 2030 of \$9000 less than the reference case • The smaller economy results in 336,000 fewer jobs than the reference case • Wholesale electricity prices rise due to increased firming and integration costs for renewables, from \$81/MWh under the reference case to \$128/MWh

Comments

- The BAEconomics report includes no underlying assumptions for any of their scenarios.
 - Firming costs were based on the 2018 ARENA *Comparison of dispatchable renewable electricity options* report, but BAEconomics does not comment on what level of firming they assumed was required, or what mix of firming options they used.
 - Household electricity demand assumptions, or any reference to rooftop PV investment were not included.
- The report uses Computable General Equilibrium (CGE) modelling, which is a high-level, whole of economy model, and not detailed modelling of the wholesale electricity market.
 - AEMO and industry modelling used more granular dispatch modelling to more accurately report on changes in the wholesale market.

- The report does not comment on which sectors emissions reductions are coming from, so it is difficult to compare to other modelling which prioritises reductions in the energy sector.
- The report comments that the high calculated implicit carbon price (compared to \$US42 international carbon price) implies there could be strong advantages to participating in international carbon markets.
 - However the report does not attempt to quantify the effect of international emissions trading on the economic results of each scenario.
- The Department's 2018 emissions projections expect renewable energy (including rooftop PV) to supply 35 per cent of national electricity demand by 2030 under BAU.

From: s22
To: James White; Energy Transition Section
Subject: FW: For review: CGE modelling project interim report [DLM=For-Official-Use-Only]
Date: Wednesday, 13 March 2019 12:15:47 PM
Attachments: image005.png
image006.png
Cadence Economics Presentation (Interim Report).ppbx
image007.png

FYI – attached is a slide pack showing the preliminary results from Cadence economics s47C



s22

From: s47F @industry.gov.au
Sent: Wednesday, 13 March 2019 9:58 AM
To: s47F s22 ; Ross Lambie ; s47F ; s22
Cc: s47F
Subject: RE: For review: CGE modelling project interim report [DLM=For-Official-Use-Only]
For those dialling in, please see attached for the slides that Cadence will be running through today.
Many thanks
s47F

For Official Use Only

From: s22
Sent: Tuesday, 12 March 2019 6:31 PM
To: s47F @TREASURY.GOV.AU>; s47F @TREASURY.GOV.AU>; s47F s47F @industry.gov.au>; s22 <s22 @environment.gov.au>; s22 @environment.gov.au>; s47F @industry.gov.au>; s22 @environment.gov.au>
Cc: s47F @industry.gov.au>; s47F @industry.gov.au>; s47F @industry.gov.au>; s47F @industry.gov.au>
Subject: RE: For review: CGE modelling project interim report [DLM=For-Official-Use-Only]

Good evening
It appears that most of the panel will be attending the presentation in person tomorrow, including Treasury. External attendees, please dial s47F on arrival at the reception, and for those that are dialling in, the details are below. We encourage and look forward to the panel's participation in a robust discussion.
For your information, please see attached for some preliminary internal notes on the interim report, including a comparison of the key results against other recent studies.
Many thanks
s47F
Dial-in number: s47F
Participant passcode: s47F

For Official Use Only

From: s47F
Sent: Tuesday, 12 March 2019 9:19 AM
To: s47F @TREASURY.GOV.AU>; s47F @TREASURY.GOV.AU>; s47F s47F @industry.gov.au>; s22 @environment.gov.au>; s22 @environment.gov.au>; s47F @industry.gov.au>; s22 @environment.gov.au>; s47F @industry.gov.au>
Cc: s47F @industry.gov.au>; s47F @industry.gov.au>; s47F @industry.gov.au>

Subject: For review: CGE modelling project interim report [DLM=For-Official-Use-Only]
Good morning
Please find attached the interim report — it is a combination of the previous technical report and with an additional section on the results. Cadence have indicated that they're still in the process of reviewing the results and sectoral and regional levels, but don't expect results to change substantially by the final report.

For those that are unable to attend or dial into the presentation and discussion tomorrow, we would appreciate any feedback and comments by **COB Thursday 14 March.**

Many thanks

s47F

Assistant Manager

Resources Economics

Economic Advice Service

Economic and Analytical Services Division

s47F s47F @industry.gov.au

Department of Industry, Innovation and Science | www.industry.gov.au/oce



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

For Official Use Only

From: s22
To: s22
Subject: FW: CGE Modelling panel [DLM=For-Official-Use-Only] [SEC=UNCLASSIFIED]
Date: Tuesday, 15 January 2019 3:07:34 PM
Attachments: [image005.png](#)
[Cadence Economics proposal.pdf](#)

Fyi – I'm attending this meeting on Friday afternoon.

If you have any comments on the attached proposal (in terms of methodology or approach), please let me know.

s22

From: s47F [mailto:s47F@industry.gov.au]
Sent: Tuesday, 15 January 2019 10:53 AM
To: s47F@industry.gov.au; s47F
<s47F@industry.gov.au>; s22@environment.gov.au; s47F@TREASURY.GOV.AU; s47F@industry.gov.au
Cc: s47F@industry.gov.au; s47F@industry.gov.au
Subject: CGE Modelling panel [DLM=For-Official-Use-Only]

Good morning all,

A reminder that the first CGE modelling panel meeting will be held this Friday 18th at 2-3pm at Industry House. Cadence Economics has been selected as the provider for the project. Please see their project proposal attached.

Myself, s47F and s47F will be having an initial meeting with the team from Cadence on Thursday 17th. If there is anything you think we should raise with them at this meeting, please let me know. Otherwise will we be taking their questions and any issues raised to the panel for discussion when we meet the next day.

Kind regards,

s47F

Senior Analyst

Resources Economics

Economic Advice Service

Economic and Analytical Services Division

s47F | s47F@industry.gov.au

Department of Industry, Innovation and Science | www.industry.gov.au/oce

[Redacted]

For Official Use Only

From: s22
To: Jo Evans; Kristin Tilley; Chris Johnston
Cc: James White; s22; s22; s22
Subject: DIIS CGE modelling - interim results - comments due COB today [DLM=For-Official-Use-Only]
Date: Thursday, 14 March 2019 11:46:04 AM
Attachments: [CE Interim Report Draft.docx](#)
[Cadence Economics Presentation \(Interim Report\).pptx](#)
[Feedback to Cadence Economics.docx](#)

Hi Jo, Kristin and Chris – I wanted to provide you a brief update on the CGE modelling that has been commissioned by DIIS. DIIS' consultant, Cadence Economics have delivered their interim report (attached) and provided a presentation on the results to the Government panel which s22 and myself attended yesterday (slides attached).

I have pasted the key results below, s47C



Cadence now have two weeks to deliver the final report and DIIS are gathering a list of Government comments that we are contributing to. Our comments are aimed at asking Cadence to extract output parameters that may support some explanation of the results, and to contextualise the results.

- What is the electricity generation fuel mix in each scenario s47C
- What is the transport fuel mix in each scenario
- What are the emissions reductions sector-by-sector
- Compare results to recent similar exercises such as McKibbin 2015.

DIIS has assembled a draft list of comments which is also attached.

I have been given until **COB today to provide feedback**, so let me know if you had any comments or concerns you wanted me to share with DIIS.

s22

From: s22 [redacted]
To: s22 [redacted]
Subject: FW: Survey of climate change modelling - draft report [SEC=UNCLASSIFIED]
Date: Thursday, 7 March 2019 10:11:26 AM
Attachments: [CIE Draft review of modelling studies 2019.docx](#)

Hey s22

Could you have a look at this report and let me know if you have any thoughts on it.

Cheers.

s22 [redacted]
[redacted]

s22

s22

From: s22
To: [James White](#)
Subject: FW: Hidden carbon tax - Menzies report [SEC=UNCLASSIFIED]
Date: Tuesday, 12 March 2019 4:34:56 PM
Attachments: [A Hidden Carbon Tax MaCS.docx](#)
Importance: High

Hi James – can we discuss this?

From: s22
Sent: Tuesday, 12 March 2019 3:57 PM
To: s22
Cc: s22
Subject: FW: Hidden carbon tax - Menzies report [SEC=UNCLASSIFIED]
s22

Are you able to provide a clearer dot point as per Chris comment below?
s22

From: Chris Johnston
Sent: Tuesday, 12 March 2019 3:50 PM
To: s22 <s22@environment.gov.au>; s22 <s22@environment.gov.au>; s22 <s22@environment.gov.au>
Subject: FW: Hidden carbon tax - Menzies report [SEC=UNCLASSIFIED]

s47C

From: s22
Sent: Tuesday, 12 March 2019 2:41 PM
To: Chris Johnston <Chris.Johnston@environment.gov.au>
Cc: s22 <s22@environment.gov.au>; s22 <s22@environment.gov.au>
Subject: FW: Hidden carbon tax - Menzies report [SEC=UNCLASSIFIED]
Chris – draft attached for your clearance asap.
Thanks s22 for collating/coordinating.
s22

From: s22
Sent: Tuesday, 12 March 2019 2:14 PM
To: s22 <s22@environment.gov.au>; s22 <s22@environment.gov.au>
Subject: RE: Hidden carbon tax - Menzies report [SEC=UNCLASSIFIED]
Hi s22, attached is a one and a bit pagers using the s22 analysis.
I have left his text in blue and changed some of the text to be neutral.
Regards s22
s22
Mitigation and Climate Science Climate Change Division
s22

From: s22
Sent: Tuesday, 12 March 2019 1:02 PM
To: s22 <s22@environment.gov.au>; s22 <s22@environment.gov.au>

Subject: Fwd: Hidden carbon tax - Menzies report [SEC=UNCLASSIFIED]

Sent from my iPhone

Begin forwarded message:

From: s22 [redacted] <[redacted]@environment.gov.au>
To: s22 [redacted] <[redacted]@environment.gov.au>, s22 [redacted] <[redacted]@environment.gov.au>, s22 [redacted] <[redacted]@environment.gov.au>, s22 [redacted] <[redacted]@environment.gov.au>
Cc: "Chris Johnston" <Chris.Johnston@environment.gov.au>
Subject: RE: Hidden carbon tax - Menzies report [SEC=UNCLASSIFIED]

Hi all

s22 [redacted] has prepared a summary for our own purposes, which you can use for the one pager – see attached.

Cheers

s22 [redacted]

From: s22 [redacted]
Sent: Tuesday, 12 March 2019 12:47 PM
To: s22 [redacted] <[redacted]@environment.gov.au>; s22 [redacted] <[redacted]@environment.gov.au>; s22 [redacted] <[redacted]@environment.gov.au>; s22 [redacted] <[redacted]@environment.gov.au>
Cc: Chris Johnston <Chris.Johnston@environment.gov.au>
Subject: Hidden carbon tax - Menzies report [SEC=UNCLASSIFIED]

Hi all

Any pre-prepared points on this one?

s22 [redacted]

From: s22 [redacted]
Sent: Tuesday, 12 March 2019 12:39 PM
To: s22 [redacted] <[redacted]@environment.gov.au>; s22 [redacted] <[redacted]@environment.gov.au>
Subject: [SEC=UNCLASSIFIED]

Hi s22 [redacted] – paper in question linked below

https://docs.wixstatic.com/ugd/ab5c75_0b84a875dd7c4d58af51edd9833a40ff.pdf

Would be great if you could please provide a one-pager on the ‘findings’ (aware that it is based on the Brain Fisher modelling that was released in part a couple of weeks ago).

As discussed, in the next couple of hours would be great.

s22 [redacted]

[redacted]
[redacted]

s22

From: s22
Sent: Thursday, 21 February 2019 2:12 PM
To: Jo Evans; Kristin Tilley; Chris Johnston
Cc: Kushla Munro; s22
Subject: RE: Are we analysing this work / could we be ready to breif please [SEC=UNCLASSIFIED]

Hi Jo – yes we are. However, there is not much to go on other than the media articles and a 4 page summary that BAE have released:

<http://www.baeconomics.com.au/wp-content/uploads/2019/02/Australian-climate-policy-webpage-21Feb19.pdf>

PM+C put together some text for s47C this morning – I have passed these words below.



s47C

From: Jo Evans
Sent: Thursday, 21 February 2019 2:02 PM
To: Kristin Tilley <Kristin.Tilley@environment.gov.au>; s22 @environment.gov.au; Chris Johnston <Chris.Johnston@environment.gov.au>
Cc: Kushla Munro <Kushla.Munro@environment.gov.au>
Subject: Are we analysing this work / could we be ready to breif please [SEC=UNCLASSIFIED]

Can we make sure we know as much about this as we can / ready to brief.

Jo Evans
Deputy Secretary | Climate Change and Energy Innovation
Department of the Environment and Energy
P: +61 2 6274 1366 | s22

The Department acknowledges the traditional owners of country throughout Australia and their continuing connection to land, sea and community.

We pay our respects to them and their cultures and to their elders, past, present and emerging.

Follow the Department of Environment and Energy on social media:



From: s22
To: [Energy Transition Section](#)
Subject: FW: BAE report [DLM=For-Official-Use-Only]
Date: Tuesday, 19 March 2019 3:20:28 PM

FYI

From: s22

Sent: Tuesday, 19 March 2019 2:19 PM

To: 'helen.wilson@pmc.gov.au'

Cc: Jo Evans ; Kristin Tilley ; Chris Johnston ; James White ; s22

s22

Subject: BAE report [DLM=For-Official-Use-Only]

Hi Helen – please see some initial points on the BAE report released today.

We are continuing to look at the report and will send through any further points when we have them.

s22

Analysis of BAEconomics report, ‘Economic consequences of some alternative Australian climate policies’.

- On 19 March 2019, BAEconomics released a 25 page report on a Computable General Equilibrium (CGE) modelling exercise to show the impacts of emissions reduction policies on the Australian economy (<http://www.baeconomics.com.au/wp-content/uploads/2019/03/Climate-Policy-Report-14March19.pdf>)
- The report identified six scenarios in addition to the reference (BAU) case:
 - Scenario 1: -27% from 2005 by 2030
 - Scenario 2: -27% from 2005 by 2030 with use of Kyoto carryover
 - Scenario 3: -27% from 2005 by 2030 with use of carryover and permit trading
 - Scenario 4: -45% from 2005 by 2030 and 50% renewables
 - Scenario 5: -45% from 2005 by 2030 and 50% renewables with use of carryover
 - Scenario 6: -45% from 2005 by 2030 and 50% renewables with carryover and trading
- The report does not comment on which sectors the emissions reductions are coming from, so it is difficult to compare to other modelling which prioritises reductions in the energy sector.
 - It would be reasonable to assume that the electricity sector is reducing emissions by more than 45 per cent on 2005 levels because there are likely more low cost abatement opportunities in that sector.
- The report recognises that international permit trading would significantly reduce the economic impact of achieving the emissions targets because the international carbon price (estimated in the report at \$42 USD/tCO₂-e in 2030) is well below the marginal abatement costs in Australia.

s47c

- The report mentions the assumption that new variable renewables will require firming, with costs based on the ARENA report on dispatchable renewable energy (<https://arena.gov.au/projects/dispatchable-renewable-electricity-options/>).
 - intermittency costs are assumed to gradually increase from zero to \$45/MWh when the share of generation from wind and solar increases from 20 per cent to 35 per cent. The intermittency and integration costs are assumed to peak at \$200/MWh when the share of generation from wind and solar exceeds 75 per cent.
- The Department projects the national share of renewable energy generation in 2030 will be 35 per cent, which is consistent with the BAE analysis (which predicts a 36 per cent share).

		26-28% target			45% target		
		Scenario 1 -27% from 2005 by 2030	Scenario 2 -27% from 2005 by 2030 with carryover	Scenario 3 -27% from 2005 by 2030 with carryover and international units	Scenario 4 -45% from 2005 by 2030	Scenario 5 -45% from 2005 by 2030 with carryover	Scenario 6 -45% from 2005 by 2030 with carryover and international units
Share of renewables (Australia-wide)	36%	38%	30%	29%	At least 50%*	At least 50%*	At least 50%*
Wholesale electricity price in 2030	\$81/MWh	\$112/MWh	\$93/MWh	\$91/MWh	\$157/MWh	\$128/MWh	\$111/MWh
GDP growth to 2030	2.91% per year	Not reported	2.8% per year	2.81% per year	0.88% per year	2.3% per year	2.65% per year
GDP loss in 2030 relative to the reference case**	NA	~\$80 billion	\$19 billion	~\$19 billion	~\$435 billion	\$144 billion	~\$50 billion
Fall in real wages for full-time	NA						

worker in 2030 relative to reference case		\$5,000	\$2,000	~\$2,000	\$24,000	\$9,000	\$3,000
Loss of full-time jobs relative to the reference case	NA	227,000	78,000	~78,000	586,000	336,000	~180,000
Marginal cost of abatement in 2030	NA	\$263/tCO ₂ -e	\$92/tCO ₂ -e	\$63/tCO ₂ -e	\$696/tCO ₂ -e	\$326/tCO ₂ -e	\$97/tCO ₂ -e

- Dollars are all Australian (presumably 2018 dollars, but this is not stated in the report).
- * This scenario assumes a 50 per cent renewable energy target, but renewables could exceed 50 per cent in the context of a 45 per cent national emissions reduction target.
- ** Australia's GDP in 2017-18 was around \$1.8 trillion.

s22

From: s22
Sent: Monday, 3 December 2018 3:49 PM
To: Chris Johnston
Cc: s22
Subject: DIIS modelling [DLM=For-Official-Use-Only]

Hi Chris – s22 and I met with s47F and s47F from DIIS regarding the CGE modelling today.

Key points that came out of the discussion were:

s47C

- DIIS were seeking direction to the most recent/up-to-date MAC curves to use in their modelling. DEE suggested that it would be good for them to talk to the Treasury about this question as well as commercial providers and CSIRO because DEE itself has not had recent work undertaken.
- Following advice from DEE, s47C

s47C

s22

From: s22
To: s22
Cc: s22
Subject: FW: Hidden carbon tax - Menzies report [SEC=UNCLASSIFIED]
Date: Tuesday, 12 March 2019 2:18:46 PM
Attachments: [RE Menzies Page report SECUNCLASSIFIED.msg](#)

s22 for your info. The Menzies report relates to electricity prices under 45% target. Seems to draw from Brian Fisher modelling of a few weeks back.

From: s22
Sent: Tuesday, 12 March 2019 1:01 PM
To: s22 @environment.gov.au; s22 @environment.gov.au; s22 @environment.gov.au; s22 @environment.gov.au
Cc: Chris Johnston <Chris.Johnston@environment.gov.au>
Subject: RE: Hidden carbon tax - Menzies report [SEC=UNCLASSIFIED]

Hi all

s22 has prepared a summary for our own purposes, which you can use for the one pager – see attached.

Cheers

s22

From: s22
Sent: Tuesday, 12 March 2019 12:47 PM
To: s22 @environment.gov.au; s22 @environment.gov.au; s22 @environment.gov.au; s22 @environment.gov.au
Cc: Chris Johnston <Chris.Johnston@environment.gov.au>
Subject: Hidden carbon tax - Menzies report [SEC=UNCLASSIFIED]

Hi all

Any pre-prepared points on this one?

s22

From: s22
Sent: Tuesday, 12 March 2019 12:39 PM
To: s22 @environment.gov.au; s22 @environment.gov.au
Subject: [SEC=UNCLASSIFIED]

Hi s22 – paper in question linked below

https://docs.wixstatic.com/ugd/ab5c75_0b84a875dd7c4d58af51edd9833a40ff.pdf

Would be great if you could please provide a one-pager on the 'findings' (aware that it is based on the Brain Fisher modelling that was released in part a couple of weeks ago).

As discussed, in the next couple of hours would be great.

s22

s22

s22

From: s22
To: [Energy Transition Section](#)
Subject: FW: Menzies & Page report [SEC=UNCLASSIFIED]
Date: Tuesday, 12 March 2019 10:22:49 AM
Attachments: [A Hidden Carbon Tax - Menzies Research Centre.pdf](#)

FYI – s22 assessment of the Menzies and Page paper referred to in the media on Sunday last week. The report links to the BAEconomics (Brian Fisher) study of 26-28% and 45% targets mentioned in media three weeks ago.

Cheers

s22

From: s22
Sent: Monday, 11 March 2019 12:18 PM
To: s22
Cc: s22
Subject: RE: Menzies & Page report [SEC=UNCLASSIFIED]

Hi s22

I have finally located the Menzies/Page “modelling” report from last week (it seems it may have been released on Thursday but I couldn’t see it on the website). Happy to discuss if you have any questions.

s47C . This is what I could glean:

- The report aims to translate the wholesale electricity price impacts of the 26-28% and 45% targets into retail price impacts.
- The analysis starts with AEMC’s retail price projections published in December 2018, which project retail electricity prices in each region out to 2020-21.
- The report states that the retail prices have been “adjusted in line with findings” of the recent BAEconomics modelling report, which estimates the impact of *economy-wide* 26-28% and 45% scenarios.
 - Presumably, they have applied the projected wholesale price growth rates under the 26-28% and 45% targets to the wholesale component of retail prices.
- They have also “factored in” achievable savings from the ACCC’s recommendations in its *Retail Electricity Prices Inquiry* report.
 - It is unclear whether the savings have been applied to both scenarios or only to the 26-28% scenario.
- The results show that, in all regions, prices are significantly higher under the 45% scenario in 2030 than they are today, and under the 26-28% scenario they are significantly lower.
 - The results show retail prices under each scenario in each region and estimated quarterly bills for a representative customer in that region.

A few further comments:

- Since the BAEconomics report was based on economy-wide emissions reduction targets, we cannot be sure what level of emissions reductions is actually being achieved in the electricity sector itself.
- The results suggest that retail prices under the two scenarios will diverge almost immediately.
 - For example, in 2019-20 retail prices in NSW are expected to be 20 per cent higher under a 45% target than the 26-28% target (29c/kWh compared to 24c/kWh). By 2020-21, prices are 45 per cent higher under the 45% scenario (29c/kWh compared to 20c/kWh).
 - As a comparison, the AEMC project NSW retail prices to be around 28c/kWh

(\$2018) in 2020-21. This suggests Menzies/Page are expecting much bigger price reductions in the 26-28% scenario than recently forecast by the AEMC.

- The retail price differences between the two scenarios in 2030 seems much larger than the wholesale price differences published in the BAEconomics report.
 - The BAEconomics report projected wholesale prices at \$93/MWh under the 26-28% scenario, and at \$128/MWh under the 45% scenario, a \$35/MWh difference (equivalent to 3.5c/kWh).
 - The Menzies/Page report shows retail prices differing by 9-14c/kWh (equivalent to \$90-140/MWh), suggesting that the price difference is not just been driven by wholesale price differences.
- The Menzies/Page does not seem to use the BAEconomics reference scenario, where wholesale prices are lower than either target scenario.
 - The Menzies/Page report uses current prices as its reference point.

https://docs.wixstatic.com/ugd/ab5c75_0b84a875dd7c4d58af51edd9833a40ff.pdf

s22

From: s22

Sent: Thursday, 7 March 2019 11:09 AM

To: s22 <[REDACTED]@environment.gov.au>

Subject: Menzies & Page report [SEC=UNCLASSIFIED]

Incidentally, once we've dealt with the MO request, could you see if the Menzies & Page report has been released? PM&C were hoping to get a copy, too, and they will probably be interested in our initial thoughts.

Cheers

s22

From: s47F
To: [Kristin Tilley](#); [Jo Evans](#); [Kushla Munro](#); [Chris Johnston](#); s22
Cc: [Brad Archer](#); s22
Subject: On good Authority [SEC=UNCLASSIFIED]
Date: Friday, 22 February 2019 3:50:33 PM
Attachments: [Brian Fisher's op-ed.pdf](#)
[Minister Taylor's op ed.pdf](#)

Hi all,

For info, excerpts from the Authority's weekly round-up are below.

On good Authority

This week the team provides an overview of s22 and BAEconomics modelling of emissions reduction targets.

A large, bold, black graphic of the text 's22' is centered on a grey rectangular background. The 's' is a simple, rounded shape, and the '22' consists of two identical, thick, curved strokes.

BAEconomics modelling of emissions reduction targets

On Wednesday, BAEconomics released a [summary](#) of its preliminary results from modelling emissions reduction targets of 26-28 per cent and 45 per cent below 2005 levels by 2030. The key results are:

- *Australia's economy continues to grow under all scenarios: at 2.9 per cent per year between 2020 and 2030 under business as usual, 2.8 per cent under the 26-28 per cent target and 2.3 per cent under the 45 per cent target,
- *Under both emissions reduction targets, real wages and jobs decline and electricity prices increase relative to business as usual.

Dr Brian Fisher, principle of BAEconomics wrote a piece in The Australian (also attached) in which he highlighted two key points:

- *Unrelated to the modelling, Australia alone cannot positively influence the climate.
- *There is an economic cost to action on climate change.

In a [Sky News interview](#) on Thursday and editorial published in The Australian on Friday (see attachment), Minister Taylor said BAEconomics modelling is consistent with that of the Climate Change Authority, which shows at 2030:

- *a \$6,000 hit to wages (decrease of 6 per cent)
- *a carbon price of \$135
- *an increase in electricity prices of 78 per cent
- *a decrease in the economy of 4 per cent.

As outlined in a previous 'On good Authority', Minister Taylor is referring to the [modelling](#) commissioned by the Climate Change Authority in 2013 to inform the 2014 targets and progress review. The modelling shows Australia's real wages and real GDP continue to grow under

scenarios analysed.

Erwin Jackson responds to the modelling results in this [Guardian article](#). He emphasises that:

- * the economic modelling does not include the costs of climate change and the benefits of reducing climate impacts (Other [studies](#) show the economic benefits of taking action on climate change far outweigh the costs)

- * economic models have had a long history of overestimating the costs of environmental regulations (primarily due to an inability to accurately forecast cost declines and innovation)

- * the economic costs projected by the modelling needs to be put in the context of continuing economic growth (for more on why the presentation of economic modelling results matters see this 2008 [speech](#) by David Gruen)

s22

Have a great weekend,

s47F

| Reviews and Research



CLIMATE CHANGE AUTHORITY
GPO Box 787, Canberra ACT 2600

s47F

s47F [@climatechangeauthority.gov.au](https://climatechangeauthority.gov.au)

From: s22
To: s22
Subject: FW: Summary of BAEconomics modelling report [SEC=UNCLASSIFIED]
Date: Friday, 22 February 2019 2:00:02 PM

s22 team have done a good job here.

From: s22
Sent: Thursday, 21 February 2019 5:59 PM
To: s22 Chris Johnston
<Chris.Johnston@environment.gov.au>
Cc: s22 @environment.gov.au; s22
James White <James.White@environment.gov.au>
Subject: FW: Summary of BAEconomics modelling report [SEC=UNCLASSIFIED]

Hi Chris and s22

Following the reporting of Brian Fisher's analysis of the 26-28% target and Labor's 45% target, we've looked at the report and provide a summary of our analysis (from an electricity sector perspective) below.

We're keen to get your thoughts on this, as it relates more to broader economy emissions reductions.

Cheers

s22

s22

A/g Director
Energy Transition Section
Clean Energy Branch
s22

s22

s22

s22

s22

From: s47F
To: s22
Subject: RE: BAE modelling [SEC=UNCLASSIFIED]
Date: Thursday, 21 February 2019 1:46:41 PM

s47C

(It's possible he was referring to an international inventory to compare emissions across countries, s47C

From: s22

Sent: Thursday, 21 February 2019 1:38 PM

To: s47F ; s22

Subject: RE: BAE modelling [SEC=UNCLASSIFIED]

s47C

And, RE only gets to 36% in the -27% scenario by 2030 (while the baseline projections get to 35% RE in 2030)

From: s47F

Sent: Thursday, 21 February 2019 1:30 PM

To: s22 <@environment.gov.au>; s22

<@environment.gov.au>

Subject: BAE modelling [SEC=UNCLASSIFIED]

Interesting:

<http://www.baeconomics.com.au/bae-studies-economic-consequences-of-some-alternative-australian-climate-policies>

<https://readnow.isentia.com/Temp/104415-12137354/1081524601.pdf>

<https://readnow.isentia.com/Temp/104415-53026414/1081425702.pdf>

From: s22
To: s22
Subject: RE: BAEconomics report [SEC=UNCLASSIFIED]
Date: Tuesday, 19 March 2019 1:23:47 PM

s47C

From: s22
Sent: Tuesday, 19 March 2019 1:23 PM
To: s22
Subject: RE: BAEconomics report [SEC=UNCLASSIFIED]

s47C

From: s22
Sent: Tuesday, 19 March 2019 1:18 PM
To: s22 <s22@environment.gov.au>
Subject: RE: BAEconomics report [SEC=UNCLASSIFIED]
Yeah I'm reading through it now... it doesn't really seem to add much to the prelim report they released 2 or 3 weeks ago

From: s22
Sent: Tuesday, 19 March 2019 1:16 PM
To: s22 <s22@environment.gov.au>
Subject: BAEconomics report [SEC=UNCLASSIFIED]
Have you seen this? All over the Murdoch and (former) Fairfax papers this morning. s47C

<http://www.baeconomics.com.au/wp-content/uploads/2019/03/Climate-Policy-Report-14March19.pdf>

s22

Assistant Director | Wholesale and Networks
Electricity Branch | Energy Division

Department of the Environment and Energy

PO Box 787, CANBERRA, ACT 2601

s22 <s22@environment.gov.au> | Environment.gov.au

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

From: James White
To: s22 ; Energy Transition Section
Subject: RE: For review: CGE modelling project interim report [DLM=For-Official-Use-Only]
Date: Wednesday, 13 March 2019 1:52:02 PM
Attachments: image007.png
image014.png
image015.png

Thank: s22 | s47C

From: s22
Sent: Wednesday, 13 March 2019 12:16 PM
To: James White ; Energy Transition Section
Subject: FW: For review: CGE modelling project interim report [DLM=For-Official-Use-Only]



s22

From: s47F @industry.gov.au
Sent: Wednesday, 13 March 2019 9:58 AM
To: s47F @TREASURY.GOV.AU>; s47F @TREASURY.GOV.AU>; s47F @industry.gov.au>; s22 @environment.gov.au>; s22 @environment.gov.au>; s47F @industry.gov.au>; s22 @environment.gov.au>
Cc: s47F @industry.gov.au>; s47F @industry.gov.au>; s47F @industry.gov.au>; s47F @industry.gov.au>

Subject: RE: For review: CGE modelling project interim report [DLM=For-Official-Use-Only]
For those dialling in, please see attached for the slides that Cadence will be running through today.
Many thanks

s47F

For Official Use Only

From: s47F
Sent: Tuesday, 12 March 2019 6:31 PM
To: s47F @TREASURY.GOV.AU>; s47F @TREASURY.GOV.AU>; s47F @industry.gov.au>; s22 @environment.gov.au>; s22 @environment.gov.au>; s47F @industry.gov.au>; s22 @environment.gov.au>
Cc: s47F @industry.gov.au>; s47F @industry.gov.au>; s47F @industry.gov.au>; s47F @industry.gov.au>

Subject: RE: For review: CGE modelling project interim report [DLM=For-Official-Use-Only]

Good evening

It appears that most of the panel will be attending the presentation in person tomorrow, including Treasury. External attendees, please dial s47F on arrival at the reception, and for those that are dialling in, the details are below. We encourage and look forward to the panel's participation in a robust discussion.

For your information, please see attached for some preliminary internal notes on the interim report, including a comparison of the key results against other recent studies.

Many thanks

s47F

Dial-in number: s47F

Participant passcode: s47F

For Official Use Only

From: s47F
Sent: Tuesday, 12 March 2019 9:19 AM
To: s47F @TREASURY.GOV.AU>; s47F @TREASURY.GOV.AU>; s47F @industry.gov.au>

s47F [redacted]@industry.gov.au>; s22, s47F [redacted]@environment.gov.au>; s22, s47F [redacted]@environment.gov.au>; de
s47F [redacted]@industry.gov.au>; s22 [redacted]@environment.gov.au>; s47F, s22 [redacted]
[redacted]@industry.gov.au>

Cc: s47F [redacted]@industry.gov.au>; s47F [redacted]@industry.gov.au>; s47F [redacted]@industry.gov.au>

Subject: For review: CGE modelling project interim report [DLM=For-Official-Use-Only]

Good morning

Please find attached the interim report — it is a combination of the previous technical report and with an additional section on the results.

Cadence have indicated that they're still in the process of reviewing the results and sectoral and regional levels, but don't expect results to change substantially by the final report.

For those that are unable to attend or dial into the presentation and discussion tomorrow, we would appreciate any feedback and comments by

COB Thursday 14 March.

Many thanks

s47F [redacted]

[redacted]

Resources Economics
Economic Advice Service
Economic and Analytical Services Division

s47F [redacted]@industry.gov.au

Department of Industry, Innovation and Science | www.industry.gov.au/oce

[redacted]

[redacted]

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

For Official Use Only

From: [Rachel Parry](#)
To: [James White](#); [Rob Heferen](#)
Subject: RE: For review: CGE modelling project interim report [DLM=For-Official-Use-Only]
Date: Wednesday, 13 March 2019 2:09:33 PM
Attachments: [image007.png](#)
[image014.png](#)
[image015.png](#)

Thanks James – will definitely need a 101 on this report and its findings! I am assuming our CC colleagues have full visibility of this report, even if it's in draft?

Thanks
Rachel

From: James White
Sent: Wednesday, 13 March 2019 1:43 PM
To: Rob Heferen <Rob.Heferen@environment.gov.au>; Rachel Parry <Rachel.Parry@environment.gov.au>
Subject: FW: For review: CGE modelling project interim report [DLM=For-Official-Use-Only]

Hi Rob, Rachel,

Just for visibility at this stage, as there's still a way to go with the DIIS modelling project. These are draft economy-wide results from Cadence Economics.



My team is more specialised in assessing electricity market modelling than CGE modelling, but Treasury s47F in particular) and Ross Lambie s47F will be able to interrogate this closely.

Kind regards,
James W



s22

From: s22
To: s22
Subject: RE: Hidden carbon tax - Menzies report [SEC=UNCLASSIFIED]
Date: Tuesday, 12 March 2019 11:01:16 PM
Attachments: [A Hidden Carbon Tax MaCS - s22 comments.docx](#)

Hey s22

My suggested edits are attached. I'll try to give more thought on the best option for modelling comparison, but I need to get to bed now.

s22

s22

s22

From: s22
To: s22
Cc: s22; [James White](#)
Subject: RE: Hidden carbon tax - Menzies report [SEC=UNCLASSIFIED]
Date: Wednesday, 13 March 2019 9:20:28 AM
Attachments: [A Hidden Carbon Tax MaCS - s22_comments.docx](#)

H s22

I've made a few suggested changes to the note to better represent the actual results.

s47C

Happy to discuss.

s22

s22

s22

s22

From: s22
To: s22
Subject: RE: Input for branch update at the Div meeting please [SEC=UNCLASSIFIED]
Date: Wednesday, 20 March 2019 9:08:20 AM

Awesome, thank you!

From: s22
Sent: Tuesday, 19 March 2019 6:28 PM

s22

- **BAEconomics paper** – this paper, titled ‘*Economic Consequences of Alternative Australian Climate Policy Approaches*’, has received quite a bit of media coverage. We’re doing some analysis of the electricity sector elements in the paper, which claims cumulative GNP losses of up to \$1.2 trillion by 2030 under a 45% economy-wide target. s47C
- [Redacted]
- [Redacted]

s22

s22

From: s22
To: s47F @pmc.gov.au"
Subject: RE: Menzies & Page report [SEC=UNCLASSIFIED]
Date: Thursday, 14 March 2019 3:47:06 PM

Hi s47F – can you please give me a call re the analysis I sent through on Tues?

Cheers

s22

A/g Director
Energy Transition Section
Clean Energy Branch

s22

s22

From: s22
Sent: Tuesday, 12 March 2019 1:03 PM
To: s47F @pmc.gov.au'
Subject: FW: Menzies & Page report [SEC=UNCLASSIFIED]

H s47F

Here's the Menzies & Page report (attached) and our assessment of it (below).

Cheers

s22

s22

s22

From: s22
To: s22; ICCEID – International Branch
Subject: RE: PM in the news carryover, units, modelling [SEC=UNCLASSIFIED]
Date: Wednesday, 20 March 2019 1:48:11 PM

Also, Guardian is reporting rumours and hearsay re. Butler's views on carryover:
https://www.theguardian.com/australia-news/2019/mar/19/labor-signals-it-wont-use-kyoto-credits-in-final-emissions-policy?utm_source=CP+Daily&utm_campaign=8cfef9e47e-CPdaily19032019&utm_medium=email&utm_term=0_a9d8834f72-8cfef9e47e-110276917

Labor signals it won't use Kyoto credits in final emissions policy

Mark Butler says Labor wants genuine decarbonisation and is not interested in 'dodgy accounting tricks'

The shadow climate change minister, Mark Butler, has given a strong hint at a candidates' forum in a key Victorian marginal seat that Labor won't use carry-over credits from the Kyoto period in its final emissions policy.

According to an attendee at the forum held in the electorate of Corangamite on Monday, Butler told the gathering he was not personally keen to use carry-overs if Labor won the coming federal election.

Carry-over credits are an accounting system that allows countries to count credits from exceeding their targets under the soon-to-be-obsolete [Kyoto protocol](#) periods against their Paris emissions reduction commitments for 2030.

Marian Smedley, a Greens candidate in last year's Victorian election, told Guardian Australia Butler told the forum Labor was still taking submissions on carry-overs but he was not keen to use "dodgy accounting".

Smedley said Butler told the event it "might not even be legal" to use carry-over credits.

Butler disputes he used that phrase. He told Guardian Australia he did not use the word legal. He said he told Monday's gathering it still wasn't clear how the Paris rule book would treat carry-over credits from Kyoto.

Butler said his language at Monday's forum was entirely consistent with many public comments he has made over a number of months.

On Tuesday morning Butler told the ABC Labor wanted genuine abatement, and was not interested in "dodgy accounting tricks" – a phrase he has used publicly several times in relation to Kyoto credits.

"We are interested in genuine decarbonisation of our economy, that's what everybody says we have to do, and we are not interested in dodgy accounting tricks," Butler said.

Butler said the final decision on Labor's policy would be public well before the election.

The Labor leader, Bill Shorten, said on Tuesday the opposition had not ruled out using international permits as part of its abatement policies.

Labor has already released its policy for reducing emissions in the electricity sector. Over

the coming weeks it is expected to unveil [a trading scheme](#) for liable entities – big polluters emitting more than 25,000 tonnes of carbon a year; new vehicle emissions standards to bring down pollution in transport; measures for agriculture; and its final position on the use of international permits and Kyoto credits.

The Coalition has confirmed it will bank a 367-megatonne contribution from carry-overs as part of its recently released [carbon budget](#), which details the emissions reductions from various programs that will be required to meet the Paris target.

As well as the chunk from carry-overs, the government is counting just under 100 megatonnes of abatement [from “technology solutions”](#), which have not been specified, and “other sources of abatement”.

The Investor Group on Climate Change, which represents institutional investors such as super funds, with total funds under management of about \$2tn, [has warned](#) against using carry-over credits as part of the emissions reduction toolkit for Paris.

“The use of carry-over to weaken Australia’s emissions commitments is also fundamentally at odds with limiting warming in line with the objectives of the Paris agreement and driving global momentum for coordinated, and increased ambition,” the group said.

From: s22

Sent: Wednesday, 20 March 2019 12:15 PM

To: ICCEID – International Branch

Subject: RE: PM in the news carryover, units, modelling [SEC=UNCLASSIFIED]

And a piece by the Australia Institute

<http://www.tai.org.au/content/flawed-assumptions-cast-doubt-dodgy-45-modelling>

“The Institute’s review shows that BAEconomics’ modelling is based on flawed assumptions and its conclusions are not valid.”

From: s22

Sent: Wednesday, 20 March 2019 12:05 PM

To: ICCEID – International Branch <ICCEIDInternationalBranch@environment.gov.au>

Subject: PM in the news carryover, units, modelling [SEC=UNCLASSIFIED]

Hi teams,

In a door-stop interview yesterday the PM said the below (full transcript attached). To note the reference as well to the BAE economics modelling being used by the Govt on Labors targets. The BAE report is also attached.

An article excerpt follows from AFR on the BAE report and Governments announcements is also below, although plenty of other media.

Our team will do some investigating should any support be required to CCD on its validity. Your thoughts are welcomed!

PRIME MINISTER: I set out several weeks ago how our Government is going to meet its 2030 emissions

reduction target of 26 per cent. I took the country through, tonne by tonne, how we're going to meet that

target, from our Climate Solutions Fund, our investments in Snowy Hydro 2.0, our energy efficiency

measures, our investment in the interconnector between Tasmania and Victoria which will enable more

clean hydro power to make its way onto the mainland and indeed potentially through the grid

and the system, even to South Australia. I've set that out. I made it very clear that under our Government, we turned around by 1.1 billion tonnes, 1.1 billion tonnes of carbon abatement deficit that we had under Labor. We've turned that around and we will now overachieve on our Kyoto targets by about 369 million tonnes. So we've overachieved in meeting our emissions reduction targets and I've said we are going to carry over that success in meeting our 2030 targets. I've said that we will not be using taxpayers' money to buy foreign carbon credits from the carbon traders wherever they are around the world. That's not how we're meeting our emissions reductions target. We're doing it by taking action on emissions reductions right here in Australia.

Now, Bill Shorten today cannot tell you - in fact he refuses to tell you - will he use the carry over credits?

Will he buy, using taxpayers' money, foreign carbon credits to meet his 45 per cent emissions reduction

target? Now, I can tell you telling on the BAE economics work that has been released today, that on his

target, already, if he were to carry over the credits under his current target of 45 per cent, that would lift

wholesale electricity prices in this country by around 56 per cent. If he doesn't carry over the carbon

credits, that figure is north of 90 per cent. So it's very important. I've levelled with the Australian people

about what our commitment is and about how we're going to meet it.

Bill Shorten refuses to tell Australians what the cost of his reckless emissions targets will be on the agricultural sector, on power prices, on jobs, on wages. That same economics report shows that even in the best-case scenario under Labor's plan, it will cost wages \$9,000 a year. So Bill Shorten needs to come clean on what the cost of his reckless emissions reduction targets are. We have sensible targets. We have plans to meet those targets, that don't cost our economy, that enable our economy to continue to grow and for jobs to be created. Bill Shorten has a plan to put up the cost of living on the basis of a reckless emissions target that he can't even tell you how he'll meet.

<https://www.afr.com/opinion/the-cost-of-political-abatement-is-coming-due-20190318-h1ciun>

Fisher does not attempt to measure the impact of climate change. He is more focused on attempting to work out the impact of different Australian government policies in different sectors of the economy and the energy mix by 2030, including the implicit or shadow carbon tax due to the proposed policy changes.

These estimates vary according to whether Australia's record of over-achieving on its Kyoto

emissions reductions targets can be used as a carry-over credit to buffer the level of reduction required under the Paris agreement.

In Fisher's view, that extreme scenario would lead to a 23 per cent drop in real wages by the end of the decade and job losses of well over half a million.

"The larger the emissions reduction by 2030, and therefore the higher the implicit carbon price, the lower the real wage rate," he states.

But if Labor allows for the flexibility of both international trading permits and counts Australia's excess reductions under Kyoto, the impact is far more muted.

Even so, Fisher estimates the use of renewables will still rise to around 36 per cent of electricity generation by 2030 without any change in policy, about the same as it would under the Coalition plans.

[Coal-fired power](#) would still provide about one-third of generation under Coalition proposals, compared to 40 per cent without the Paris agreement and a range of 12 per cent to 26 per cent under Labor.

Cheers

s22

A/g Assistant Director | Carbon Markets and Bilateral Engagement

Department of the Environment and Energy

s22

From: s22
To: [James White](#)
Cc: s22
Subject: RE: Summary of BAEconomics modelling report [SEC=UNCLASSIFIED]
Date: Thursday, 21 February 2019 3:29:45 PM

FYI – According the Dept of Industry, Brian Fisher hasn't engaged with them on the modelling exercise since the first meeting, so he may not be very involved at all in that exercise.

s22

From: s22
Sent: Thursday, 21 February 2019 3:09 PM
To: James White
Cc: s22
Subject: Summary of BAEconomics modelling report [SEC=UNCLASSIFIED]
Hi James

As discussed earlier, we have put together the summary email below of the BAEconomics report. Any comments would be appreciated.

s22

s22

s22

s22

Energy Transition Section

Clean Energy Branch

Department of the Environment and Energy

s22

From: s22 [redacted]
To: s22 [redacted]
Subject: RE: Summary of BAEconomics modelling report [SEC=UNCLASSIFIED]
Date: Thursday, 21 February 2019 3:11:33 PM

s22 s47C [redacted]

From: s22 [redacted]
Sent: Thursday, 21 February 2019 3:10 PM
To: s22 [redacted]
[redacted]
Cc: s22 [redacted]
Subject: FW: Summary of BAEconomics modelling report [SEC=UNCLASSIFIED]
FYI

s22

s22

s22

From: s22
To: s22
Subject: RE: Summary of BAEconomics report [SEC=UNCLASSIFIED]
Date: Thursday, 21 February 2019 3:01:40 PM

OK

s22

From: s22

Sent: Thursday, 21 February 2019 3:01 PM

To: s22

Subject: RE: Summary of BAEconomics report [SEC=UNCLASSIFIED]

Can you? s22

From: s22

Sent: Thursday, 21 February 2019 2:51 PM

To: s22 <s22@environment.gov.au>

Subject: RE: Summary of BAEconomics report [SEC=UNCLASSIFIED]

So will you share with James, or do I need to?

s22

From: s22

Sent: Thursday, 21 February 2019 2:51 PM

To: s22 <s22@environment.gov.au>

Cc: s22 <s22@environment.gov.au>

Subject: RE: Summary of BAEconomics report [SEC=UNCLASSIFIED]

Btw, I made the edits, no editing for you to do.

From: s22

Sent: Thursday, 21 February 2019 2:50 PM

To: s22 <s22@environment.gov.au>

Cc: s22 <s22@environment.gov.au>

Subject: RE: Summary of BAEconomics report [SEC=UNCLASSIFIED]

Looks great, s22 and s22. Just a couple of minor edits below.

It could be worth adding one line about the Government's current line that it will meet 26-28 in the NEM and that the Dept projects that BAU would get us to 35% nationally.

Can you please share this with James and the team when you're done? I'll check in with James after he's had a read.

Cheers

s22

From: s22

Sent: Thursday, 21 February 2019 2:22 PM

To: s22 <s22@environment.gov.au>

Cc: s22 <s22@environment.gov.au>

Subject: RE: Summary of BAEconomics report [SEC=UNCLASSIFIED]

I just added one further caveat to the table.

s22

From: s22

Sent: Thursday, 21 February 2019 2:17 PM

To: s22 [redacted] <s22@environment.gov.au>
Cc: s22 [redacted] <s22@environment.gov.au>
Subject: Summary of BAEconomics report [SEC=UNCLASSIFIED]
Hey s22 [redacted]

I have set out a summary email below. Any comments would be appreciated.

s22

s22

From: s22
To: s22
Subject: Fwd: 190221 - Energy Minister - Media Release - The devastating cost of Labor's reckless targets [SEC=UNCLASSIFIED]
Date: Thursday, 21 February 2019 9:20:48 AM
Attachments: [image001.jpg](#)

Sent from my iPhone

Begin forwarded message:

From: s22 <[REDACTED]@energy.gov.au>
Date: 21 February 2019 at 8:58:20 am AEDT
To: James White <James.White@environment.gov.au>, s22 <[REDACTED]@environment.gov.au>, s22 <[REDACTED]@environment.gov.au>
Cc: James O'Toole <James.O'Toole@environment.gov.au>, s22 <[REDACTED]@environment.gov.au>
Subject: FW: 190221 - Energy Minister - Media Release - The devastating cost of Labor's reckless targets [SEC=UNCLASSIFIED]

s47C
[REDACTED]

From: s22, s47F
Sent: Thursday, 21 February 2019 8:24 AM
Subject: 190221 - Energy Minister - Media Release - The devastating cost of Labor's reckless targets [SEC=UNCLASSIFIED]



**THE HON ANGUS TAYLOR MP
MINISTER FOR ENERGY**

MEDIA RELEASE

Thursday, 21 February 2019

THE DEVASTATING COST OF LABOR'S RECKLESS TARGETS

Modelling released today has confirmed that Labor's reckless emissions reduction target will be a wrecking-ball through the Australian economy.

The work, released by BAEconomics's Managing Director Dr Brian Fisher, shows that Labor's 45% Emissions Reduction Target and 50% Renewable Energy Target will:

- cost the economy \$472 billion,
- slash more than 336,000 jobs,
- cut the average wage by over \$9,000, and
- increase wholesale electricity prices by more than 58%.

This is further proof that under a Bill Shorten Labor government, Australians will be poorer. Bill Shorten says Australians deserve a pay rise. Instead, he is promising them a massive pay cut.

Under Labor, Australians will pay more. We will pay more for basic necessities like food, housing, energy and transport.

And it will be harder for Australians to find a job under a Shorten Labor government.

Labor's targets will send energy-intensive industries offshore, where they will face less stringent environmental and safety regulations, **driving global emissions up.**

Bill Shorten has never come clean with Australians about the true damage of Labor's reckless targets on household budgets, small businesses, wages, industries and local economies. Now we know why.

Bill Shorten needs to come clean.

Which industries will he close first? Will it be agriculture or aluminium, mining or manufacturing? Which jobs will he export overseas first?

Labor's reckless targets will punish Australian families already struggling with cost of living pressures, and destroy the industries that have made our economy strong.

Only the Morrison Government has a sensible and balanced plan for meeting our emission reduction commitments. Only the Coalition can be trusted to keep our economy strong, to bring power prices down, and keep the lights on.

ENDS

Energy Minister's office: s47F

From: s22
To: [ICCEID – International Branch](#)
Subject: PM in the news carryover, units, modelling [SEC=UNCLASSIFIED]
Date: Wednesday, 20 March 2019 12:05:20 PM
Attachments: [078W1534.pdf](#)
[Climate Policy Report_D2.pdf](#)

Hi teams,

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<https://www.afr.com/opinion/the-cost-of-political-abatement-is-coming-due-20190318-h1ciun>

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Cheers

s22

A/g Assistant Director | Carbon Markets and Bilateral Engagement

Department of the Environment and Energy

s22

From: s22
To: James White; s22
Subject: RE: For review: CGE project draft technical report [DLM=For-Official-Use-Only] [SEC=UNCLASSIFIED]
Date: Monday, 11 February 2019 3:24:10 PM
Attachments: [image001.jpg](#)
[image002.jpg](#)
[image003.jpg](#)
[image004.jpg](#)
[image005.png](#)
[image006.png](#)
[image009.jpg](#)
[image007.jpg](#)

Yep, I agree. The main person on this project seems to be Bob Scealy who looks like he spent time in treasury, and they also have Brian Fisher on the team.

From: James White
Sent: Monday, 11 February 2019 3:22 PM
To: s22
Subject: RE: For review: CGE project draft technical report [DLM=For-Official-Use-Only] [SEC=UNCLASSIFIED]
One peripheral comment: Cadence don't look like complete newcomers. I was looking at their team and recognised Steve Brown. He was part of an ABARE team that did [CGE modelling work on Kyoto ratification](#) for us when I was at the NZ Ministry for the Environment in 2001. The ABARE work was good. Admittedly that was ABARE, and 18 years ago. But it indicates a fair depth of experience with the CGE modelling.
Kind regards,
James

From: s22
Sent: Monday, 11 February 2019 2:59 PM
To: James White <James.White@environment.gov.au>; s22 <s22@environment.gov.au>
Subject: FW: For review: CGE project draft technical report [DLM=For-Official-Use-Only] [SEC=UNCLASSIFIED]
Hi James and s22 – let me know if you have any comments or feedback on this document regarding DIIS' CGE modelling.
Also, if you are available to attend the meeting on 15 Feb, DIIS would be keen to have someone from Energy Division attend along with me.

s22

From: s47F <s47F@industry.gov.au>
Sent: Monday, 11 February 2019 2:24 PM
To: s47F <s47F@TREASURY.GOV.AU>; s47F <s47F@TREASURY.GOV.AU>; s22 <s22@environment.gov.au>; s47F <s47F@protected.environment.gov.au>; s22 <s22@environment.gov.au>; s47F <s47F@industry.gov.au>; s47F <s47F@industry.gov.au>
Cc: s47F <s47F@industry.gov.au>; s47F <s47F@industry.gov.au>

Subject: For review: CGE project draft technical report [DLM=For-Official-Use-Only]
Good afternoon
Please find attached the draft Technical Report from Cadence Economics for your review. Given the relatively tight project timeframes, we would like to get back to Cadence Economics by the

end of the week.

We would appreciate if panel members can review the draft report and respond by **Friday 15 February 12pm** with:

- Any comments, feedback and follow up questions that we can provide to Cadence Economics.
- Any issues that you would like to flag for discussion at the panel meeting on Thursday 21 February 2.30pm — an agenda will be distributed a few days before the meeting.

Lastly, s47F will be heading overseas in a few weeks, so I will be the key project management contact on this going forward.

Kind regards

s47F

Assistant Manager

Resources Economics

Economic Advice Service

Economic and Analytical Services Division

s47F [@industry.gov.au](mailto:s47F@industry.gov.au)

Department of Industry, Innovation and Science | www.industry.gov.au/oce



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

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