

ESB AND SENIOR OFFICIALS – JOINT STAKEHOLDER FORUM

TRANSMISSION ACCESS REFORM – PROJECT UPDATE

23 March 2023





ACKNOWLEDGEMENT OF COUNTRY

AGENDA

TIME	ITEM
09:45	Welcome, acknowledgement of country and forum overview – Anna Collyer, ESB
09:50	Update from Ministers meeting – Paul Johnson, DCCEEW (on behalf of Senior Officials)
09:55	Project update - Anna Collyer, ESB
10:10	Modelling results of the congestion relief market (CRM) design – Amanda Sinden, ESB
10:20	Cost benefit analysis of transmission access reform – Jess Hunt, ESB
10:30	Q&A – Anna Collyer



Australian Government

Department of Climate Change, Energy,
the Environment and Water

Energy Ministers

- February meeting Energy Ministers agreed:
 - ESB immediately implement enhanced information reforms
 - Develop the voluntary CRM and the priority access model
- Energy Ministers to consider detailed design mid-2023

PROJECT UPDATE



Achieve policy objectives at lower cost

- Avoid wasting solar and wind investments
- Support and strengthen jurisdictional REZ schemes
- Achieve emissions savings by making greater use of existing renewables resources



Reduce the cost of capital

- Investment is more expensive than it should be because the additional risk and uncertainty adds to the cost of capital faced by generation investors.



Boost storage and hydrogen

- New opportunities for batteries and flexible demand (e.g. hydrogen) by rewarding behaviour that benefits customers.



Get more value from our transmission investments

- Maximise the value of investment in interconnectors
- Avoid overspend in building the transmission network that customers (or taxpayers) pay for



Less expensive dispatch outcomes

- Ensure that we aren't using more expensive forms of generation (e.g. fossil fuels or storage) when we could be using wind or solar instead.



Deliverable	Indicative timing
Publish draft detailed design for consultation	Late April 2023
Public forum/webinar and workshops	May 2023
Submissions due	Late May 2023
Submit detailed design and final policy recommendations to Energy Ministers	Mid 2023

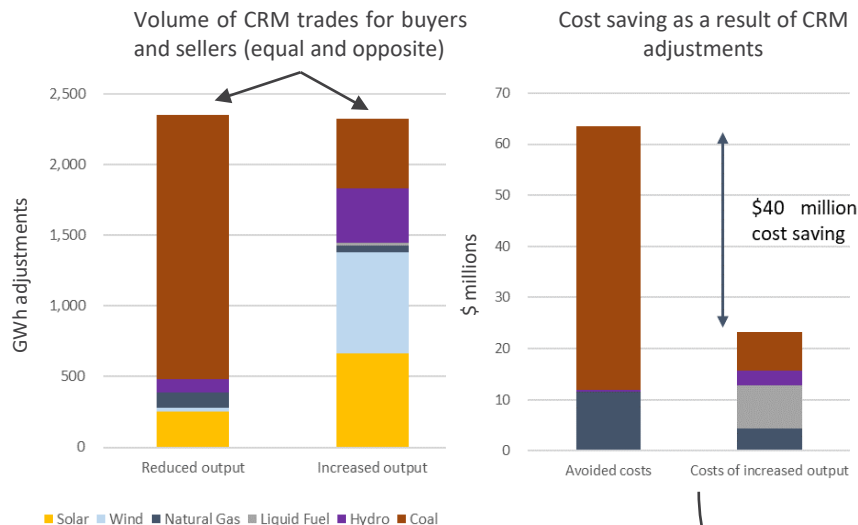
If Ministers accept the ESB's final policy recommendations, the ESB would consult on draft amendments to the National Electricity Rules.

MODELLING RESULTS



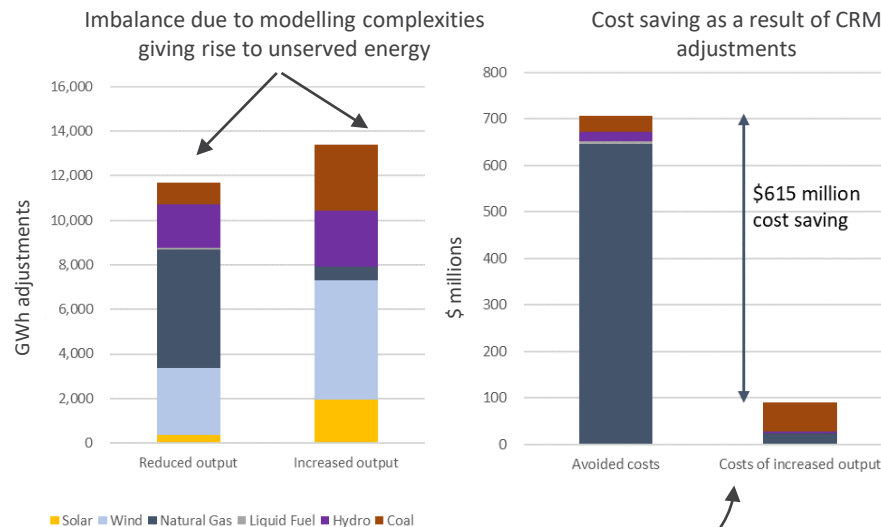
CRM trading leads to a significant reduction in dispatch costs.

Dispatch adjustments and costs by technology, 2023



The volume of GWh relates to CRM adjustments only. It represents ~1% of the volume of the energy market dispatch in 2023.

Dispatch adjustments and costs by technology, 2033



The dispatch saving is higher in 2033 compared to 2023 since most of the must-run coal capacity has retired and gas has displaced coal at the margin. There are also more opportunities for efficiency gains from the increased interconnector flows enabled by the QNI expansion.



The efficiency gain from lower dispatch costs is shared between generators and customers.

The efficiency gain is shared between CRM participants (generators and scheduled load) and customers through an “efficiency dividend”.

The “customer” component relates to a change in settlement residue which is passed through to customers.

All CRM participants will receive an efficiency dividend; non-participants will not.

The CRM still provides efficiency gains and dividends even if there is substantial non-participation, although these gains are reduced.

Breakdown of efficiency gain

Annual amount	2023		2033	
	\$m	%	\$m	%
Generator dividend	13	32.5%	538	87.5%
Customer dividend	27	67.5%	77	12.5%
Efficiency gain	40	100%	615	100%

COST BENEFIT ANALYSIS



KEY FINDINGS OF COST BENEFIT ANALYSIS

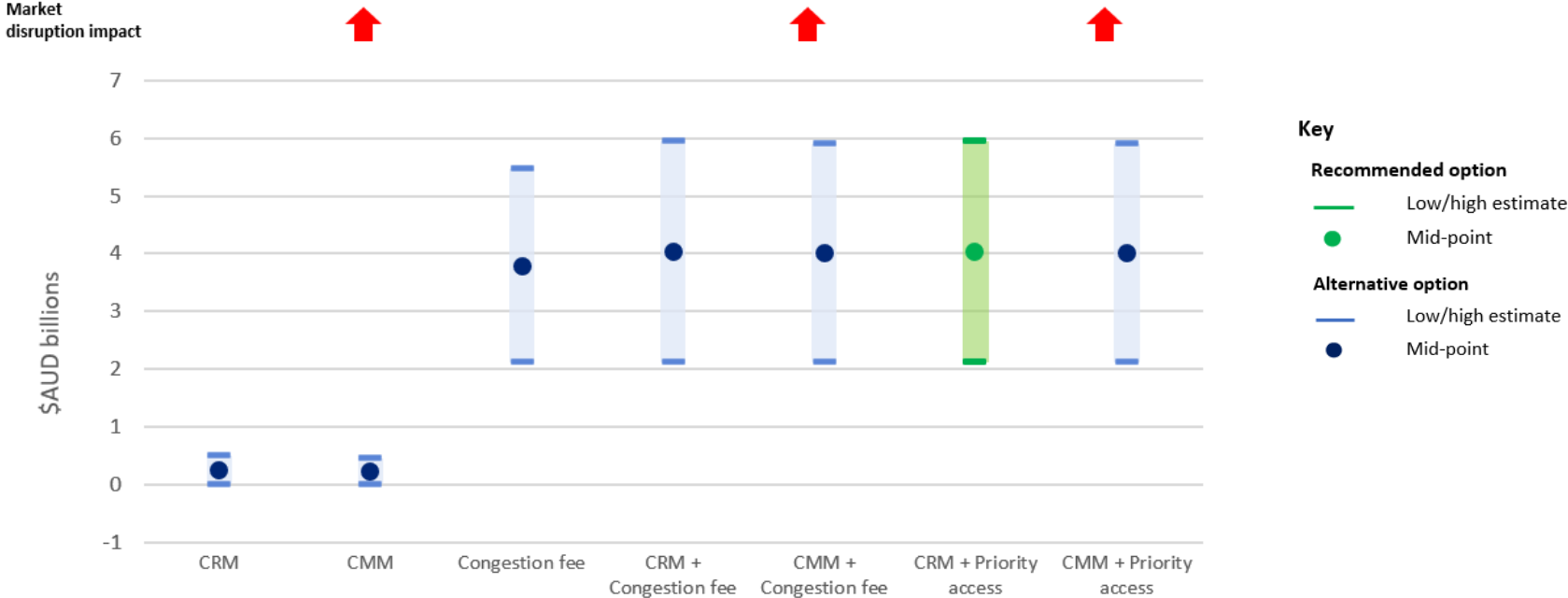
Preferred model is priority access and congestion relief market

- Quantified net benefits estimated at \$2.1-5.9 billion in NPV terms
- Possible reduction in the cost of capital for storage and generation investors
- Emissions reductions of 23 million tonnes
- Avoids need to redistribute value between existing market participants

- Benefits come from dispatch efficiency gains under the CRM and CMM, and investment efficiency gains under the congestion fees or priority access models.
- Cost estimates are lower than preliminary indicative estimates, which drew from COGATI.
- Various hybrid models have similar quantitative net benefits so qualitative factors are key.



RANGE OF NET FINANCIAL BENEFITS OF MODEL OPTIONS (\$ BILLIONS 2022)





SUMMARY OF TOTAL IMPACTS, MID POINT NPV 2023-2050 (\$ BILLIONS 2022)

	CRM alone	CMM alone	Congestion fee alone	CRM + congestion fee	CMM + congestion fee	CRM + priority access*	CMM + priority access*
Operational benefits	\$0.49	\$0.42	\$0.00	\$0.49	\$0.42	\$0.49	\$0.42
Capital and fuel cost savings from more efficient locational decisions	\$0.00	\$0.00	\$3.80	\$3.80	\$3.80	\$3.80	\$3.80
AEMO costs	\$0.06	\$0.01	\$0.01	\$0.07	\$0.02	\$0.08	\$0.02
Participant costs	\$0.18	\$0.19	\$0.00	\$0.18	\$0.19	\$0.18	\$0.19
Net benefits	\$0.24	\$0.22	\$3.79	\$4.03	\$4.01	\$4.03	\$4.00
<i>Net benefits exclude the following changes in market disruption and emissions</i>							
Market disruption; redistribution of wealth between existing generators	-	↑	-	-	↑	-	↑
Change in CO ₂ emissions (tonnes)	-23m	-21m	-	-23m	-21m	-23m	-21m

* On a stand-alone basis the priority access model is unlikely to have the highest net benefit (and may have net costs) because it may not improve operational efficiency (and may decrease operational efficiency) for reasons outlined in section 3.4.2. For these reasons the costs and benefits of implementing it on a standalone basis have not been determined.

Note: Rounding difference in table for CRM, CRM + congestion fee and CMM + priority access.

Q&A

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