

1 February 2021

## RE: AEMO 2020-21 Planning and Forecasting Consultation on Inputs, Assumptions and Scenarios

The AEMO Integrated System Plan (ISP) effectively provides one cohesive plan for the NEM, enabling coordinated infrastructure planning and development in a fast-moving industry. Institute for Energy Economics and Financial Analysis (IEEFA) welcomes the opportunity to comment on the Inputs, Assumptions and Scenarios for the 2022 ISP. Overall, the scenarios proposed by AEMO have thoroughly considered the NEM market context, however IEEFA notes that the large-scale wind and solar project list might not include all planned generators.

New policies and projects are announced frequently in the fast-moving NEM, and forecasts become outdated quickly. Underestimating the renewables installation can lead to insufficient planning, policies, and infrastructure build, therefore a comprehensive list of all planned projects is essential. IEEFA cross-checked AEMO existing, committed and anticipated generator list against Green Energy Market's renewable energy project list, and projects that appear to be excluded from the AEMO list has been identified.

In Table 1 IEEFA has highlighted additional renewables projects that should potentially be included in AEMO's assumptions, referring to AEMO 2021 Inputs and Assumptions Workbook, tab "Generator Summary - Existing, Committed and Anticipated Generators". In total there are 802MW of solar projects and 621MW of wind projects that are potentially omitted from AEMO's assumptions. These projects have been announced in the market and appear likely to go ahead. Only generators above 30MW have been included in the below, as generators below 30MW are covered through other sets of AEMO assumptions.

*Table 1: Renewables projects seemingly absent from AEMO 2021 Inputs and Assumptions Workbook, tab "Generator Summary - Existing, Committed and Anticipated Generators"*

CER Project Name	CER Owner	Capacity	Accreditation date	Fuel Source	State
<b>Clarke Creek Wind Farm Stage 1</b>	Lacour Energy and Goldwind	450	PPA not committed	Wind	QLD
<b>Columboola Solar Farm</b>	Hana Financial Investment	162	Under construction	Solar	QLD
<b>Cultana Solar Farm</b>	SIMEC Energy	280	PPA not committed	Solar	SA
<b>Karara Wind Farm</b>	CleanCo Queensland	103	PPA not committed	Wind	QLD
<b>Kiamal Solar Farm Stage 2</b>	Total Eren	150	PPA not committed	Solar	VIC
<b>Riverina Solar Farm</b>	Suntech	40	PPA not committed	Solar	NSW
<b>Silverleaf Solar Farm</b>	Engie	120	PPA not committed	Solar	NSW
<b>Vales Point Solar Farm</b>	Enernet Global	50	PPA not committed	Solar	NSW
<b>Woolsthorpe Wind Farm</b>	Elecnor	68	PPA not committed	Wind	VIC
<b>Total Solar</b>		<b>802</b>		<b>Solar</b>	
<b>Total Wind</b>		<b>621</b>		<b>Wind</b>	
<b>Total Capacity</b>		<b>1423</b>		<b>All</b>	

Note that Karara Wind Farm may be included as part of MacIntyre Wind Farm in AEMO's assumptions, but it is unclear, thus has been included in the table above in case of omission from AEMO's assumptions. Other projects may appear with different names in AEMO's assumptions, but all potentially excluded projects are included for completeness.

Other renewable energy projects which may not be accounted for are company policies such as Alinta Energy's commitment to install 1500MW of renewable capacity by 2025 and Woolworths 100% renewables by 2025. It is unclear where these kinds of private sector driven renewables installation announcements are included in the AEMO assumptions. With increasing amounts of policies like these in existence it is increasingly important to add them into consideration.

It is important to model scenarios where variable renewable energy (VRE) and distributed energy resources (DER) uptake is very high in order to plan for extreme scenarios which would require more extensive planning, infrastructure build out, and new modes of operation. The 2022 ISP scenarios of "Export Superpower" and "Sustainable Growth" could assume very fast build of large-scale renewable generators and very high uptake of DER. There is a higher risk associated with underestimating, rather than overestimating, the pace of transition from thermal generators to renewable generators. Underestimation could lead to a grid that is tied to historical patterns of operation and cannot manage the dynamic, flexible operation profiles of intermittent renewable generators and storage.

IEEFA supports AEMO's proposal to model scenarios in which coal plant closures occur faster than originally planned. The ESB has noted in January 2021 that "the lowering of the future expected energy price may make it difficult for thermal plants to maintain commercial viability. It is therefore likely to lead to exits of thermal plant faster than anticipated."<sup>1</sup> Modelling the impact of early coal plant closures in each key state is important. AEMO has proposed to model early VIC and NSW coal closures however IEEFA notes that QLD early closure modelling may also be necessary, as many QLD coal plants have a reasonably high short run marginal cost and are therefore potentially exposed to low wholesale electricity prices. This will help the industry understand the scale of the impact of closures in different locations, and therefore develop adequate policy mechanisms to prevent any adverse impacts on price and/or reliability.

IEEFA supports the ISP process and will continue to follow the consultation and discussions closely.

Kind regards,

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<sup>1</sup> ESB *Directions Paper* January 2021

## About IEEFA

The Institute for Energy Economics and Financial Analysis (IEEFA) examines issues related to energy markets, trends and policies. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy. [www.ieefa.org](http://www.ieefa.org)

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