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# Energy Security Board Data Strategy Consultation Paper

## *IEEFA's Response*

### Introduction

The Institute for Energy Economics and Financial Analysis (IEEFA) is a global research think tank that examines energy markets, trends, and policies. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy.

IEEFA is grateful for the opportunity to respond to the Energy Security Board's (ESB) Data Strategy Consultation Paper, released in October 2020.

There are two parallel forces that are shaping global economies: digital transformation and energy transition. This is more apparent in Australia than anywhere else. All indications are that distributed rooftop solar and large-scale variable renewable energy (wind and solar), combined with the pending retirement of coal-fired generation and the diminishing role for gas, will continue to shape the National Electricity Market (NEM).

As IEEFA has indicated in our recent submissions in response to the Energy Security Board *DER Standards* and *Post-2025 Market Reform* consultation papers, we believe that economics will be the primary driver of the transition to clean energy. In the near future, when millions of generators and demand response enabled loads are operating in the NEM, highly advanced data systems and digital technologies will be required to manage the supply/demand balance, while maintaining reliability at an affordable price for end users.

The *Data Strategy* consultation paper is timely in this regard, as it is critical now that the energy sector in Australia embraces the digital transformation in order to avoid unnecessary costs and sub-optimal market performance.

### *Glimpses of a Renewable Energy Future*

Despite the notion of a gas-led recovery, our recent analysis shows that gas is in decline<sup>1</sup> and according to the Grattan Institute, it is likely to only have a minor role in the NEM and will inevitably decline as an energy source for homes and industry.<sup>2</sup>

The Australian electricity market could shift to a high penetration of renewable energy much earlier than previously thought. Recently, we have seen glimpses of this future, when parts of the NEM have attained high levels of renewable energy

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<sup>1</sup> IEEFA. *It was a gas while it lasted but the love affair is over*. 17 November 2020.

<sup>2</sup> Grattan Institute. *Flame out: the future of natural gas*. 15 November 2020.

supply. For example, it was recently reported that solar power met 100% of demand in South Australia<sup>3</sup> for a short period of time.

Inevitably, many of the processes and operations in the NEM will become more complex in the future, and data combined with advanced digital technologies will be needed to manage them.

### *The Importance of Data Strategy*

The ESB's consultation paper on Data Strategy is comprehensive in its elucidation of the relevant issues and gaps in relation to energy data. It marks the beginning of a much-needed reform process for data in the energy sector.

Many of the market reforms outlined in other consultation papers by the ESB are well-understood and can be analysed by market participants. Data, on the other hand, is a more difficult proposition, as many of the data applications are new and there are few, if any, precedents. Data analytics, real-time control of Distributed Energy Resources (DER), machine learning and artificial intelligence, cyber security systems, and other related technologies all have a role to play in the NEM. All these factors make the Data Strategy a vitally important aspect of market reform.

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<sup>3</sup> Renew Economy. [Solar meets 100 per cent of South Australia demand for the first time](#). 12 October 2020.

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## IEEFA's Response to ESB Consultation Paper Questions

### *High Level Questions*

*a) The strategy's coverage of the key issues for data reform in the energy sector - are there concerns un-addressed?*

The energy sector is seeing increasing penetration of variable renewable energy (VRE), distributed solar PV, demand side participation (DSP), electric vehicles (EVs) and battery energy storage systems (BESS). These new technologies are disrupting information flows in the grid. Information is now shared between a larger number of components and stakeholders in a multidirectional manner and the state of the energy market is changing rapidly within short timeframes. Therefore, a dynamic and flexible energy system and a more effective means to forecast, track and monitor the system must be developed. A new data strategy for the NEM is therefore crucial to deliver on these changing needs. The key issues for data reform in the energy sector are comprehensively outlined by the ESB.

*b) The strategy's framework and the proposed leadership arrangements to drive the change required - are there alternatives to make this transition more effective?*

We recommend against an overly exhaustive (expensive and time consuming) review of the current regulatory framework as it is already well understood and known to be inadequate. Rather than build off of what exists, it could be beneficial to take a fresh approach and consider what the future NEM requires and design the strategy to address the needs rather than fix the existing shortcomings. The strategy should *not* be burdened by legacy systems, current legislation, incumbent actors, or market influences. It should be bold and futuristic. The global energy transition is likely to progress faster than expected. The change should enable the anticipated Post-2025 market reforms.

Regulation is essential but there is a high risk that it could stifle innovation, progress, and ultimately consumer benefits. Privacy, security, and risk will need to be fully addressed, but we suggest that the data framework is formulated first, to serve the needs of stakeholders, and then overlaid with the constraints to make it robust and fit-for-purpose.

There is a need to reform the framework to allow agencies to better manage the evolving market, but there needs to be compatibility that also allows competition and innovation in new private sector business models that rely on common and open data sources. As stated on page 40 of the consultation paper, "regulatory restrictions on the use of meter data has stifled progress on modernisation of the grid, which ultimately costs the consumer".

Put simply, the existing data management protocols should be replaced as soon as possible, and new rules put in place. The fact that barriers to data sharing within

Australia's National Energy Analytics Research (NEAR) program, and with potential beneficiaries of the work, has held up progress, is a case in point.

Referring to pages 42-44 of the consultation paper, and the noted work of KWM and Galexia, we urge the ESB to hasten the reforms proposed by the 'overhaul' recommendations. The pace of the transition will necessitate management of a flexible grid, dominated by renewables, fast-response storage, demand response, and distributed energy resources. Significant costs could be avoided by facilitating a digital transition to fully integrate with the energy transition. Data and digital technologies underpin DER orchestration and enhanced energy efficiency, which could prevent over-investment in new generation and transmission infrastructure.

We are concerned that the proposed pathway involving development of interim reforms in parallel with the overhaul reforms may be too slow. There is a risk that the process of reform itself bogs down while getting the interim reforms in place, further delaying the necessary overhaul process. Consideration should be given to focussing immediately on overhaul, making do for now with existing arrangements, and then implementing the overhaul recommendations earlier, in a progressive manner.

Referring to pages 48-50, Recommendation 22 is logical, but the whole process of adapting a broad Data Strategy to the consumer data right (CDR) process already underway would seem to be unnecessarily complicated and difficult from the outset. Consideration should be given to pausing the CDR implementation for the energy market, and re-purposing elements of it under a wider program of reform.

As outlined in our further responses below, we suggest that the Australian Energy Market Operator (AEMO) may be the most appropriate organisation to host a central data repository. However, the proposed gateway model should be carefully re-examined as it remains uncertain if this is truly the best arrangement for market and consumers when considering the full spectrum of data sources and users. It will be important for a new body, such as the proposed DataLAC, to have autonomy and to implement the Data Strategy and coordinate the data management in the interest of all stakeholders.

The proposed strategy appears to be framed around open data and improving efficiencies primarily for public sector stakeholders, with special permissions to be granted to other approved data users. The intent is to improve information sharing, operational and planning capabilities, and for data to be made available for research and policy development. In addition, the data sets will also be accessed by private sector businesses that intend to compete in the NEM under new Post-2025 market reforms. Whilst it may seem that such businesses could meet the privacy and 'public good' requirements, they may need to conceal, as proprietary information, how the data is used in the provision of services to consumers, agencies, or other market participants. There does not appear to be much consideration given to these participants in the consultation paper.

In relation to the organisational and leadership arrangements, we provide comments at Question 3 below.

*c) Many recommendations to resolve specific data issues are initial proposals, requiring further detailed design, analysis of costs/benefits and development through usual processes. Early stakeholder views on design issues, evidence to support costs/benefits analysis or proposed alternatives are welcome.*

Referring to page 22 of the consultation paper, the proposed Data Strategy approach involves four pillars. This is a logical approach under the circumstances, but we suggest that it may be reactionary. The approach assumes the current market environment as a starting point and proposes adaptations to improve data availability. In our view, data reforms will underpin the anticipated shift to distributed energy in the NEM and it is therefore essential that they are implemented early and openly. These reforms should be developed in close alignment with DER Standards and Post-2025 market reforms, so that the NEM is efficient. We do not propose an alternative framework but do suggest that the Data Strategy is not overly influenced by the structure of the agencies and their current jurisdictions, as these may change. It should stand alone as much as possible and be consistent and able to survive any kind of structural or market reform.

*d) There is a great deal of reform under way and many interlinkages between recommendations and issues in this Strategy and ongoing workstreams. Are there further workstreams or interlinkages not identified which the Strategy should engage with?*

Referring to the list of workstreams and reforms on page 25 of the consultation paper, we note that most of these involve regulatory bodies and research organisations. Referring to the diagram on page 26, it is evident that data sources are most lacking in the networks, demand/consumers area, and in retail markets. In order to address data gaps, we suggest that interlinkages be developed to involve additional market participants more directly. These would include original equipment manufacturers (OEMs), Distribution Network Service Providers (DNSPs), retailers and aggregators, third-party technology providers, financiers, and designers/engineers.

## **PILLAR 1: NEEDS TODAY – Fit-for-Purpose Data**

### **Question 1: Data Gaps and Priorities**

*The list and scope of issues presented in this paper is extensive. Are there key data gaps that we have not identified? Do stakeholders have views on which data issues take priority? Will some of these data issues be resolved by existing processes? Do stakeholders support the recommended actions? Are there alternative options? Further detailed questions are proposed in Appendix A-C.*

ESB presents a comprehensive view of the data gaps and priorities. IEEFA's view on the data gaps and priorities for key stakeholders in the NEM are outlined below.

**AEMO** is operating an increasingly complex energy market which requires control and coordination between more energy market actors. AEMO therefore needs better modelling, forecasting and data management capability. Increasing uptake of responsive technologies such as smart devices and BESS introduces more variables into the energy balance equation. Forecasting and monitoring battery charge/discharge profiles and demand side participation (DSP) will require dynamic modelling capability and extensive monitoring ability. The same can be said for the impact of EVs. Data will need to be shared between many system components and AEMO. AEMO will need to optimise all these new technologies working concurrently to ensure that supply/demand is balanced at each interval. They will also need to develop the forecasting capability to plan the network of the future.

AEMO's demand forecasting methodology may need to be revised as previous forecasts of increasing demand resulted in over-investment in the network. DER and energy efficiency are likely to significantly reduce the operational demand. DSP may somewhat reduce the need to forecast demand – however it will be impossible for demand to be 100% scheduled and therefore demand forecasting will remain a requirement of a reliable electricity grid.

AEMO could be given an expanded mandate to create and manage a central database. There is also a need for a more easily accessible website/data portal for other users to obtain data from the central repository. At present, data on the energy market is often difficult to find. AEMO can publish the data in an easily accessible manner for the rest of the energy industry and safeguard or deidentify any sensitive data. AEMO can provide access to stakeholders in the industry only when access is needed and have a robust process to ensure the right stakeholders have the right access permissions.

The **Australian Energy Regulator (AER)** and the **Australian Energy Market Commission (AEMC)** will need to focus on developing rules and regulations to increase access to data and centralise as much data as possible in one place, for energy industry stakeholders to access and use for the public good. The correct access, privacy and security will need to be upheld to protect consumers.

The **Australian Competition and Consumer Commission (ACCC)** and **Energy Consumers Australia (ECA)** can work to ensure consumer data needs are protected, while enabling energy data use for public good efforts. ECA should continue to ensure that the rights of the consumer, in particular privacy and security, are upheld, especially in this complex landscape where more consumer data exists.

Consumers need better visibility over their energy data. Consumers can end up on expensive energy contracts with no understanding that their bills could be lower. Consumers often don't know their consumption until they receive their quarterly energy bill. The industry needs to digitalise to enable consumers to access all their energy data in a centralised location and better understand each component of their energy bill(s). The Data Strategy should enable consumers to install DERs if they

desire, and to obtain the best retail offers for their own usage and generation patterns.

Networks will need to access DER data and meter data on an ongoing basis to ensure reliable operation of the network. Networks need strong standards around providing consumers with access to the meter data – and they also need better, ideally digital, platforms to provide the meter data to the consumer.

IEEFA agrees with the priority data gaps to be addressed as they are key issues faced by the industry. IEEFA's comments on the priority data gaps are outlined below.

### *Retail Transparency*

- Retailers should offer new and innovative energy tariffs which incentivise efficient consumption and support the changing energy landscape in which we see increasing amounts of solar, storage, EVs and DSP (DERs). Retailers must ensure tariffs optimise outcomes in the grid (reliability, affordability, lowest possible emissions). They should design their tariffs to reach the objectives. The tariffs on offer need to be effectively communicated to the consumer.
- Retailers can digitalise their processes and customer touchpoints to provide all energy data to the consumer in a more easily accessible and understandable manner. Many consumers do not fully understand the contents of their energy bills. It is difficult for consumers to determine if a retail offer is good value or not. It may become even more challenging in the future as tariffs may become more complex with increasing DER and flexibility in the grid. The tariffs and consumption data of the consumers should be accessible, transparent, and visible so consumers can understand if they are paying a reasonable price for electricity. They should be notified of any potential new offers that could be financially beneficial for them. Consumers should also be assisted to select tariffs that best suit their consumption and generation profiles.
- Retail price and margin data should be freely available to the public, and should be tracked, analysed, and reported on regularly by an energy industry body in order to ensure that consumers are protected from price gouging. All companies selling electricity must publish their offers on the AER's Energy Made Easy price comparison website. Commercial comparison sites should not provide higher priced options than direct offers; in the past it has been found "prices in the offers available through the commercial sites were 5%-12% higher than offers the retailers made directly."<sup>4</sup> Campaigns could advertise the government run price comparison websites to ensure consumers understand that these services exist.

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<sup>4</sup> Renew Economy. [Energy Price gouging exposed by new regulations](#). 14 January 2019.

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### *Understanding Consumers and Demand*

- IEEFA agrees that access to electricity and gas meter data for public-good research will help ensure adequate planning and forecasting. Access should only be increased in a manner that ensures privacy and security for the consumer.
- Electricity meter data should be more accessible to the consumer so they can see their usage at the maximum level of detail possible in as close to real time as possible. This will help consumers make more informed decisions on their energy consumption, especially relevant if they are on time-of-use tariffs. The consumer should have access to the same data that the network service provider or retailer has access to. They should be able to readily access this data and download or use for their own purposes (not through a request and provide process, but rather through a digital platform where the data is automatically uploaded).
- Gas meter data management, transparency and access is increasingly important for Australia. In a world in which Australia's key trading partners are aiming towards net zero emissions (including China, Japan, South Korea and others), in due course it is highly likely that key trading partners will require emissions reports. It will be expected that Australia has full visibility over gas consumption, losses and related emissions. Gas meter data at the point of distribution and at the point of consumption should be made more widely available. This would enable energy industry bodies to understand the losses and emissions in the system from distribution to consumption. Privacy protections or access limitations would need to be put in place to prevent consumers from adverse impacts of having their gas meter data available to wider audience. However, overall, more visibility is needed on gas consumption throughout the whole supply chain to make sure that Australia can quantify the emissions associated with gas. Gas demand transparency will also assist energy researchers to understand the potential additional demand which electrification of Australia's energy systems could create.
- Increasing transparency around gas prices is also important to ensure gas affordability and help policymakers design efficient instruments for gas markets. At present it is difficult for researchers to find an average contract or spot price for gas sold across Australia. Data from each gas hub needs to be analysed individually. ACCC does publish average gas prices from previous time periods, however, because this is not real-time, the user is looking at out-of-date information. AEMO or another energy industry body should bring together all the gas data and provide two key pieces of data via an online platform:
  - **Gas spot price indicator:** which could be the weighted average spot price across all hubs
  - **Gas contract price indicator:** which could be the weighted average contract price

The indicative gas price data should be available on an online platform to be downloaded for analysis, and it should be easily accessible to all.

The US Energy Information Administration has a website on which gas prices are published daily. This enables higher transparency and therefore greater understanding of pricing in the gas market. Australia can look to the U.S. as an example for how to easily provide gas prices in an online format and enable much higher price transparency in the Australian gas market.

Real gas contract prices would be commercial-in-confidence and therefore an indicator price is needed. That indicator could be the weighted average price, or another sort of indicator.

Providing this gas price data via an online platform would enable independent research to be done, to compare Australian gas prices against international prices and to determine if Australian consumers are getting a good deal for gas. At present, there is divergence between LNG netback prices and domestic prices, much to the concern of the ACCC, as outlined in its' Gas Inquiry 2017-2025 July 2020 Interim Report.<sup>5</sup> As the ACCC outlined: "The effects we are seeing in the East Coast Gas Market increasingly indicate a limited degree of competition in key parts of the supply chain. The cumulative effect of dysfunction at the production, commodity gas sales and pricing, and gas transportation levels of the market is significantly affecting gas users at the end of the supply chain." There are often large differences in prices from hub to hub, and the seller is often privy to more price information than the buyer. This information dissymmetry can lead to price gouging. Providing the gas spot and contract indicator prices through an online, easily accessible platform is crucial to ensure affordability in Australian gas markets.

#### *LV-DER Visibility*

- While net meter data is provided to the network service providers and AEMO, often the individual profiles of solar generation, load consumption, and battery profiles are not available to AEMO or the network service provider, and the data is owned by the monitoring organisation (e.g. the inverter manufacturer or the battery manufacturer). This makes understanding, modelling, and forecasting DER difficult. Ideally, AEMO could access some or all of this information to effectively optimise DER across the network. AEMO could work with various providers to secure more extensive access to data, through certain programs or agreements, or it could be regulated that this data must be provided to AEMO in instances where it is required to ensure grid stability. This would need to be undertaken in a safe manner ensuring consumer privacy and security, and without jeopardising various organisations' business models and commercial contracts.
- The value of network investment to enable increased DER should be considered in DER investment decisions – potentially using CSIRO's Value of Distributed Energy Resources (VaDER) methodology. A common method for

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<sup>5</sup> ACCC Gas Inquiry 2017–2025. July 2020 Interim Report.

valuing network investment to enable DER should be used across the energy industry.

## PILLAR 2: FRAMEWORK – New Data Governance

### Question 2: Regulatory Reforms

*Do stakeholders support the proposed reforms and guidelines, noting they require detailed design and would go be developed and undergo further consultation through usual processes? Further detail PILLAR questions are proposed in the legal review at Appendix D.*

Referring to pages 40-41 of the consultation paper, it is noted that Australia lags behind other countries in the data reforms related to modernising the energy sector. We suggest that a first step in planning the Strategy could be to examine the state of the art in this field. It will be advantageous if we can quickly overhaul Australia's data practices to bring them into line with the best practice. Referring to the diagram on page 44, IEEFA recommends moving directly to the 'Legislative overhaul' framework, enabling the achievement of the "Future State" before 2025.

## PILLAR 3: CAPABILITY – Drive Leadership, Coordination and Capability

### Question 3: Leadership and Coordination

*Is a Data Leadership and Coordination group the right approach to drive change? Are there alternatives within existing arrangements?*

A group or organisation of some description is a sensible approach. It should have authority and be directive. It would need to be adequately resourced so that it can contract the agencies, consultants and other service-providers to deliver systems and procedures, and to provide oversight if AEMO (or another organisation) is commissioned to host the data repository.

*Should it be limited to the core agencies or have a wider representation (for example the ACCC, representatives of Energy Ministers or consumers)?*

It should have a wider representation, but not necessarily by Energy Ministers or the ACCC.

*Is a collaborating group, with identified terms of reference and public deliverables to Energy Ministers, sufficient? Or is a more formal governance arrangement necessary?*

A more formal governance arrangement is necessary in our view. There is a risk that a collaborating group may not agree on all matters, and without authority, it could become ineffective. The energy data management authority should have some autonomy from the agencies and should be able to take the interests of all data stakeholders into consideration, including consumers.

*Is the DUG likely to be necessary and/or effective? Are there other alternatives to a formal reference group, such as regular stakeholder engagement processes?*

The Data Users Group (DUG) may be helpful, but similar objectives could likely be achieved by an advisory panel or reference group administered by the main data management authority.

*What else is required to ensure wider stakeholder needs are met?*

As mentioned, the coordinating body (eg. DataLAC) should have some degree of autonomy, with representation from various stakeholder groups. It could be funded by membership, with special privileges provided to members - similar to how AEMO is funded (but on a smaller scale) - and have authority to manage the data resources of the NEM for the benefit of all users. The data management could involve commissioning another party to host a data portal and provide data services. We believe that AEMO may be an appropriate data host organisation.

#### **Question 4: Data Visibility**

*Should the DataLAC and DUG be tasked with curating/managing a list of relevant data sets and activities? What could be done to ensure that this is helpful rather than a burden? Is a meta-portal worth considering? Could an existing site be expanded to play part of this role (such as one of the core agency sites, NEAR or AREMI)?*

A mega-portal is worth considering. With so many datasets in so many different locations, under the remit of different organisations, it is exceedingly difficult to understand where data is and what data is available. Often the depth and quality of analysis done by researchers is dictated by the data that is available, and with poor visibility on the data that is available, there may be key issues or solutions being overlooked by the industry.

*How could this be resourced and funded?*

It could be funded through membership fees and government sponsorship.

#### **Question 5: Data Access and Supporting Resources**

*How do we ensure that systems and analytical capabilities are available to support better data access? Who is best placed to support this capability?*

In an increasingly dynamic energy system, which has more data collected, more components connected, and a larger possible number of outcomes every 5 minutes, it is crucial to develop more dynamic forecasting, modelling, and data collection capability. AEMO is currently best placed to provide the central database (to be the

centralised data holder) for the operational NEM data, as AEMO already collects data over the largest number of energy assets and with the largest geographic range. Network service providers, retailers, CER and other stakeholders should channel all required data through to AEMO's central database. Under the advice of the DataLAC (or similar), the AEMC and AER should develop the rules and regulations to enable this.

AEMO will need additional capability to expand their central database and this should be a priority over the coming years. In many instances, it is not desirable for AEMO to hold the data, and other stakeholders have more reason to do so (e.g. AER holds a large proportion of the retail price data, consumer rights groups have consumer survey data). Both data held by AEMO and data held by other organisations should be documented in a taxonomy/map. A clear taxonomy showing all the data available, where it is available, and which stakeholders have rights to that data, should be developed. A mega-portal should be developed to provide access to all these datasets for the appropriate stakeholders.

*How do we ensure that stakeholders eligible for appropriate data access don't find resourcing a barrier?*

To ensure that the stakeholders who are eligible for data access do not find resourcing a barrier to access, the data should be available in an easily accessible manner (e.g. through an online platform) and de-identified as necessary. This will undoubtedly be a significant challenge, but one that will help the energy market in the long term.

*For access to outcomes from high-value AEMO datasets, does AEMO need specific obligations or support to ensure resourcing or prioritisation are not a barrier?*

AEMO will need to develop a system to provide the right data access to the right players, in a readily accessible manner, without compromising the needs of the consumer (including privacy and security). AEMO can employ automation or digital platforms with the correct access restrictions to reduce strain on resourcing, and where this is not possible, resources will need to be augmented. Existing AEMO datasets currently available on the website can be difficult to find. A taxonomy of all the energy data and who holds it should be developed alongside a portal for data access.

## Question 6: Data Impact and Resourcing Analytics

*How do we ensure that key research and analytical needs can be met, to maximise consumer outcomes?*

AEMO should hold a central database (with data about the NEM, as much as possible, included on the database) with a portal for other stakeholders to access the data. The correct permissions should be enabled on the portal for security and privacy. This database could also include data from other energy industry bodies for the sake of completeness. Automation should be used as much as possible for the upload of the datasets. It should be easily accessible to ensure that other

stakeholders can access the data without requiring resourcing from AEMO. Where AEMO resourcing is required for more analytical tasks, AEMO resources should be augmented, and potentially funded via the DataLAC (or formal organisation). For the analytics on the data which are completed by various other stakeholders, a method to share the analytical models and results should be developed. The central database may also include analysis output, models, reports and summaries, as well as all the raw data. The platform would enable access to the database. The taxonomy would indicate what exists on the database. This would prevent duplication of analysis and duplication of data gathering. It would enable higher quality discussions and better planning in the energy industry.

*Who is the best party to support analytical services and build capability? Is this best undertaken internally by all parties or is some central or third-party expert capability advised?*

Decentralised research and analytics can deliver originality and new thinking in the industry. However, duplication of analysis exists. Ideally, as much analysis as possible could be undertaken by AEMO. The analysis that is not done by AEMO can be based on AEMO's data and uploaded to a central database and included in a taxonomy. It can be the responsibility of each stakeholder to upload the files to the central database and determine where it would fit in the taxonomy. Then the taxonomy can be automatically updated each time a new piece of analysis is added. The appropriate privacy and security systems will need to be put in place.

## **PILLAR 4: NEEDS TOMORROW – Support Changes and Adaptability**

### **Question 7: Proactive Governance and Forward Review**

*Do we need more proactive approaches or clear responsibilities to resolve forward-looking technical challenges in data? Whose responsibility should it be?*

Yes, we suggest that proactive approaches are required, and the mandate of an autonomous organisation (DataLAC) would define these. The Key Performance Indicators (KPIs) for the organisation could be approved by a Board with the intent of ensuring that the outcomes align with the wider market reforms.

### **Question 8: Standards Governance**

*With the introduction of the proposed DER Standards Governance arrangements, DEIP processes and the new CDR standards body, many standards needs will be actively progressed.*

*Will these arrangements likely support most ongoing needs for data standards? Are there gaps or wider issues which need to be considered?*

These standards, and possibly others, will need to be progressively integrated into the data management protocols for the body/group/agency that has authority over the management of public data assets for the energy sector. It is highly likely that there will be gaps that will still need to be addressed.

## Question 9: Adaptable Arrangements

*Do stakeholders have views on how to ensure the design of Rules, guidelines and procedures consider the new data principles and the need to adapt more flexibly as technology and data requirements change?*

*Do stakeholders think more detailed Rules guidance, as proposed by KWM, is necessary? Are there alternatives?*

*Other processes have proposed a default to non-prescriptive approaches for certain types of Rules – is this workable in the case of data-related Rules?*

*Should the DataLAC have a role in providing advice on data issues and approaches in new Rules, guidelines and procedures? Could this be part of contributions in normal consultation processes or would it need a more formalised function (noting additional requirements may lengthen the time it takes to consider a Rule change)?*

In response to the above set of questions, we recommend that the DataLAC be formalised into an authoritative body, with its own resources, and that it be involved directly in the requests for new Rules involving data issues. This would allow all stakeholders to be consulted as part of the regular practice of the body, such that Rule requests were made in the best interest of stakeholders, including consumers.

## Question 10: Energy Data for Research

*Are there energy data challenges for researchers not effectively represented in this paper?*

The key challenge for researchers is knowing what data is available where, and how to get access to that data. An energy database, digital platform/portal for access and taxonomy to understand what data exists, where it is, and how to access it, would hugely assist with producing higher quality and better-informed research.

*How are researchers' interests best represented in the DataLAC/DUG? Do they require specific representation in the group, a focused sub-group or leveraging of a wider existing process? Are there sufficient levels of interaction and engagement in the existing research community regarding these issues?*

Energy researchers should be represented in the DataLAC/DUG group, perhaps as part of an advisory committee, to ensure that the design of the data strategy is appropriate for energy researchers' needs.

*If reforms proposed under Pillar 2 to allow more research access to data are progressed, would protected access to more real data be more useful than synthetic open data sets (as proposed in a range of ARDC ePlatforms)? Or do synthetic open datasets have alternative value through less constraints and sharing of tools?*

More research access to real data (where appropriate in terms of security and privacy) would be an ideal outcome of the ESB data strategy.

*Current data portals for energy research data seem limited in their usability and visibility, with much useful research and data getting underleveraged. Are there examples in other sectors of better ways ensure research is visible, easier to navigate and integrate?*

Australia can look to strong examples from other countries where data has been effectively centralised using a robust system. For example, Norway has a centralised meter data management system with machine learning, predictive maintenance, outage management, network self-healing and self-diagnosis extensions available, and a high proportion of renewables in the grid.<sup>6</sup>

With regards to gas data, the US Energy Information Administration publishes gas prices online, which greatly assist researchers. Australia can look to the U.S. as an example of how to disseminate gas price information to a wide audience.

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<sup>6</sup> Smart Energy International. [Norwegian utilities buy new software to centralize meter data management](#). 18 January 2016.

## About IEEFA

The Institute for Energy Economics and Financial Analysis conducts research and analyses on financial and economic issues related to energy and the environment. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy. [www.ieefa.org](http://www.ieefa.org)

## About the Authors

### Dr Tim Finnigan

Tim Finnigan is a guest contributor to IEEFA and is the former Director of CSIRO Energy.

### Johanna Bowyer

Lead research analyst for Australian electricity, Johanna Bowyer has previously worked for CSIRO, Solar Analytics and Suntech, and as a management consultant at Kearney. Johanna has research experience in microgrids, energy tariffs and distribution networks. She has a degree in Photovoltaics and Solar Energy Engineering from UNSW.

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