Submission to AEMC Consultation Paper: Real-time data for consumers

From: **Compliance Quarter**
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Executive Summary

Compliance Quarter strongly supports the proposed changes to improve access to real-time data for consumers and their authorised representatives. We believe real-time data access is crucial for enabling consumers to effectively respond to pricing signals and optimise their energy usage. Through our experience in the Australian energy market, we have observed that immediate access to consumption data is essential for meaningful consumer participation in the modern energy landscape.

Our submission [made on our own behalf and not for a third party] particularly emphasises the importance of implementing standardised API access for real-time data, ensuring truly instantaneous data delivery, maintaining robust cybersecurity and privacy protections, and establishing clear frameworks for consumer authorisation and data access. These elements are fundamental to achieving the objectives outlined in the consultation paper.

Responses to Consultation Questions

Question 1: Benefits of improving access to real-time data

a) Anticipated use cases of real-time data

The implementation of real-time data access will enable several crucial use cases in the Australian energy market. First and foremost, it will allow consumers to respond instantly to pricing signals, which is particularly important as we see greater adoption of dynamic and time-of-use tariffs in the market. This capability is essential for meaningful demand response and cost management.

Phone:

Email.
info@compliancequarter.com.au

Address.
18 Brisbane Water Drive,
Kooolewong NSW 2257

Automated energy management systems will benefit significantly from real-time data access. These systems can optimise energy usage based on immediate consumption and pricing data, leading to more efficient resource utilisation and cost savings for consumers. The ability to make instantaneous adjustments based on real-time data is crucial for these systems to function effectively.

Real-time data access will also facilitate better integration of distributed energy resources. Through immediate monitoring and control capabilities, distributed energy resources can operate more efficiently and provide greater value to both participants and the broader energy system. This integration is particularly relevant as Australia continues to lead in residential solar adoption and battery storage implementation.

The availability of real-time data will enable more sophisticated demand response programmes with immediate feedback mechanisms. This capability is essential for maintaining grid stability and managing peak demand events effectively. Consumers participating in these programmes will benefit from immediate visibility of their response and its impact.

b) Value of benefits

The value proposition of real-time data access extends beyond immediate consumer benefits. While reduced energy costs through optimised consumption patterns represent a direct benefit, the broader market advantages are substantial. Enhanced grid stability through improved demand response capabilities will benefit all market participants, while increased transparency will foster a more competitive retail market.

Real-time data access will drive innovation in energy management services and products. Service providers will be able to develop more sophisticated offerings based on immediate data availability, leading to better outcomes for consumers. The Australian energy market has consistently demonstrated its capacity for innovation when provided with appropriate technical frameworks and access to data.

Question 6: Definition of real-time data

Regarding the definition of real-time data, we believe the standard should prioritise truly instantaneous access. While the proposed 300-second maximum latency provides an outer boundary, we recommend a more ambitious target for standard operations. The primary

Phone:

Email.
info@compliancequarter.com.au

Address.
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requirement should focus on data delivery within 1-2 seconds, with a longer maximum delivery acceptable under normal operating conditions.

A tiered approach to latency requirements would provide both ambitious targets for optimal operation and realistic allowances for technical constraints. This approach should specify standard operating parameters while acknowledging that occasional technical issues may require longer timeframes.

Question 7: Data access and sharing methods

We strongly advocate for an API-first approach to data access implementation. Modern APIs, built on standardised protocols and following REST principles, provide the most flexible and secure method for real-time data access- and are not constricted by the limitations that would otherwise be encountered with on-site only access. This approach allows for scalable implementation while maintaining necessary security controls.

The implementation should support multiple access methods to ensure resilience and flexibility. The framework should mandate standardised protocols for authentication, transport security, and data formatting. We recommend the implementation of OAuth 2.0 for authentication, HTTPS for transport security, and JSON for data formatting.

Question 10: Privacy and Security Considerations

Security and privacy considerations must be central to the implementation of real-time data access. We recommend implementing a comprehensive security framework that addresses authentication, data protection, and consumer control aspects while remaining practical and implementable. However, such a framework should be designed in such a way that consumers themselves are able to navigate. The responsibility for management of the exchange of data should rest with meter data providers with additional consideration given to identity verification.

Authentication and authorisation mechanisms should incorporate industry best practices, including multi-factor authentication for API access and regular credential rotation. The implementation of OAuth 2.0 for delegated access provides a robust framework for managing third-party access to consumer data.

Phone:

Email.
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Address.
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Data protection measures should include end-to-end encryption for all data transmission, and adherence to data minimisation principles. These measures must be balanced against the need for immediate data access and system performance.

Consumer control over data access should be paramount, with systems providing granular permission settings, transparent access logs, and straightforward access revocation mechanisms. These features ensure consumers maintain control over their data while enabling the benefits of real-time access.
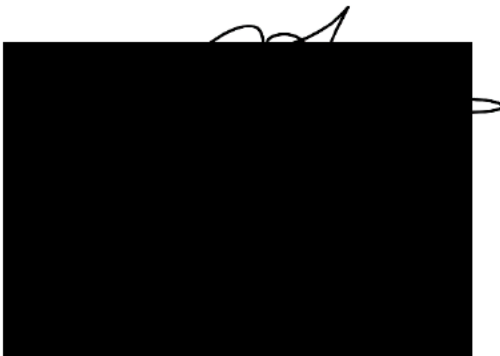
Conclusion

The implementation of real-time data access represents a fundamental step forward for the Australian energy market. The proposed changes, with our recommended enhancements, will create a robust framework for secure, efficient, and effective real-time data access. This will enable consumers to better manage their energy usage and costs while supporting broader market efficiency and innovation.

We encourage the AEMC to proceed with implementing these changes, with particular emphasis on API access and truly instantaneous data provision.

Please feel free to reach out if you require further clarification or assistance.

Kind regards,