

# Data Strategy

2023-2026





# MESSAGE FROM THE CHAIR

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The Clean Energy Regulator plays a vital role in Australia's transition to a net zero economy.

Our activities accelerate carbon abatement for Australia and data is critical to everything we do. Data is a valued asset that helps manage compliance, inform policy and provide transparency to Australia's evolving carbon markets.

Appetite for our data is increasing. Our data helps unlock new business opportunities, understand progress in reducing emissions and evidence environmental claims.

This data strategy 2023-26 ushers in an exciting new phase in our evolution as a data-led agency.

It builds on our existing data capabilities and lessons learned and supports delivery of the agency's ambitious change program and growing responsibilities. It also responds to growing expectations that high levels of transparency and accountability are crucial if Australia is to be competitive in a decarbonising world.

Under the strategy we will continue to foster a data-led culture to encourage all employees to extend their data capabilities. By focussing on data as part of our workforce planning, we hope to attract, grow and retain a skilled workforce that can confidently use data in decision making, to drive operational efficiencies, detect and predict trends and potential non-compliance and communicate insights visually.

We will increase access to our data by building a data service to host our public facing registers, reports, data sets, infographics and data catalogues. This will help inform a vibrant carbon market and make it easier to find, understand use and share our data. Greater transparency lifts understanding about the work we do as an agency and creates trust in the integrity of our schemes. It also helps us to focus on data quality and delivery of repeatable, consistent data products that meet the needs of our stakeholders.

The strategy will guide our efforts to support the use of data tools. By ensuring our data assets are well managed, we will increase their value. And by establishing a clear pathway to production for proven concepts, we can unlock improved regulatory outcomes.

Data is the currency of the future. Every step we take to improve our data capabilities and increase data transparency is positive and will help the agency remain a practical, grounded, quick and commercially savvy regulator for Australia.

**Mr David Parker AM**



# MESSAGE FROM THE CHIEF DATA OFFICER

Data is a critical business asset with vast amounts of untapped potential. Our agency is custodian of Australia's key emissions, energy, and abatement data.

As Australian governments, industry and the community look for opportunities to decarbonise our economy, we are in a unique position through our data to support this transformation.

Data transparency is at the heart of changes to the Australian Carbon Credit Unit (ACCU) scheme, the Safeguard Mechanism, as well as new policies for a Guarantee of Origin scheme and mandatory disclosure of climate risk by Australian companies.

Better access to government data to improve policy and program delivery and support research is now facilitated by the Data Availability and Transparency Act 2022. Attention on action to reduce emissions is constant. Scrutiny of the work of the agency has increased. Industry is seeking to uplift its understanding of how carbon markets operate.

Accessibility and trust in our data is paramount if new markets in low emission products are to emerge and claims accepted as credible by investors, regulators, stakeholders and the community. Developing and sharing fit for purpose data products is a priority for the agency.

Third party data, data science and data sharing agreements with our regulatory partners are all being deployed to streamline experience for participants and boost compliance.

Sound data management has a key role to play in guiding upgrades to our IT infrastructure, streamlining our processes, easing the regulatory burden on participants and improving regulatory outcomes.

Exponential growth in data means the storage, use and connection of data sources are critical. In addition, data skills are in high demand across the public and private sectors, with skill shortages limiting our ability to maintain business operations and modernise regulatory compliance.

That is why the Data Strategy focuses on people, transparency and support to unlock value as Australia adapts to a low carbon world.

Successful delivery will depend on maintaining the momentum and collaboration made possible by the hard work and commitment of our people. Thank you to everyone who has contributed to the development of this Data Strategy.

## Authors



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# PURPOSE OF THE DATA STRATEGY

This Data Strategy outlines a vision and principles to create value through data for the agency and stakeholders. It builds on current maturity to drive data capability, efficiency and transparency and envisages a clear path towards common goals.

It recognises data initiatives underway through the Corporate Plan, Change Program and response to the Independent Review of ACCUs and supports the agency's strategic priority to build our data quality, sharing and accessibility.

The Strategy also aligns with the vision of the Australian Data Strategy to make more publicly held data available and APS reforms to put people and business at the centre of services and lift the data APS workforce.

By upskilling our people to develop a data-first mindset as our cultural norm and establishing a career pathway, we can attract, grow and retain data professionals interested in contributing to Australia's emissions reduction goals.

By encouraging data stewards and custodians to make more data publicly available, we will lift our focus on data quality, build understanding of our schemes and the carbon market and encourage trust in the agency. We will also improve the effectiveness of our data sharing arrangements.

By providing a data governance framework, we will set clear expectations on how we manage data over its lifecycle and ensure our people have the skills, tools and ongoing support needed to perform their roles.

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## VISION STATEMENT

To help Australia reduce  
emissions and become a  
renewable energy leader  
through increased access  
and use of our data.



# PRINCIPLES

Data is a valued asset for compliance, policy and market development.

Data is actively managed, protected & used over its lifecycle according to its value.

Data quality is regularly monitored so it is fit for purpose.

Applying standards unlocks our data's full potential.

Data is findable, accessible, interoperable, and reusable.

Value-added data insights are proactively sought & shared.

Building data literacy and capability advances the agency's purpose.

Data is used and shared in effective and safe ways.



# BENEFITS

## COMMUNITY

### Accountable

Increased access to data to hold government and business to account.

### Trusted

Consumers more willing to pay a green premium when adequately informed by trusted data.

### Knowledge

Increased understanding of agency schemes and the carbon market.

## GOVERNMENT

### Informed

Contribute to high quality climate change scenario analysis & tracking through increased publication of agency data.

### Transparent

Increased access to data pre-empts and responds to citizen needs and reduces ad-hoc data requests.

### Accountable

Targeted collection and circulation of activity data supports cost-recovery & reduced impost on the budget.

## BUSINESS

### Credible

Supply chains, investors and public assured by publication of carbon accounts and emissions reduction claims.

### Investment Certainty

Supports capital raising through strong ESG story backed by evidence.

### Cost Effective

Reduced cost and complexity through re-use of frameworks and data.

### Commercial

APIs support B2B and G2B transactions, reducing time to receive benefits.

## AGENCY

### Efficient

Reduced effort & duplication through APIs, automation & better quality data.

### Quality

Improved data quality through increased data validation, APIs and data standards.

### Scalable

Equip the agency for rapid increases in the volume and complexity of data.

### Skilled

Increased data skills to support complex analysis, timely reporting, insights & regulatory outcomes.



# OPPORTUNITIES FOR CHANGE

While the specific data-related challenges faced in each area of the agency may differ, common themes were identified through research and consultation. Adjusting our ways of working to benefit from sophisticated tools and systems will allow us to better fulfill our agency objectives.

## Data Quality and Discoverability

Our people and stakeholders value clearly described consistent and accessible data.

Greater clarity on 'how we manage and use data in the agency' is sought with clear roles and responsibilities established for business, data and IT support.

Finding new ways to communicate scheme achievements and the state of play in the carbon market through our data is driving renewed focus on data quality and how to aid accurate interpretation.

Other government agencies are seeking our data as input to policy and program design, tracking progress and for compliance purposes. Simplified data sharing is desired.

## Automation and Assurance

Integrating data sets across schemes to form a consolidated picture of participants is viewed as increasingly important for compliance monitoring and understanding emerging carbon market patterns.

Improved ways to integrate, match and query diverse structured and unstructured data is seen as crucial to verify key attributes, streamline processes, address data quality at source, automate reporting, facilitate timely responses to adhoc data requests and better manage volume and risk.

Looking forward we expect rules engines to play a central role in assessments and want integration and automation approaches to be standardised and quicker to deliver results.

## Skills and Support

As we use data in new ways to deliver robust, repeatable and discoverable data analytics and products, better access to more timely data support is crucial.

Data assets require maintenance and rules for operation. Efficient and effective use of data needs improved data literacy and an expanded cohort of data champions.

Specialist skills are necessary to cleanse and migrate data, undertake sophisticated analysis, prototype innovative data solutions, map data needs for new schemes, integrate data sets, automate processes, and support our people in their data journey.

We also need the right data infrastructure to store our growing data sets and the right data tools to provide efficient and repeatable data services and support.



# PEOPLE AND CULTURE

## AIMS

Identifying the data skills needed to support the work of the agency and opportunities to practice and grow can provide a career pathway for attracting and retaining data professionals.

Upskilling our people in data collection, use, analysis and communication will enable us to identify and capitalise on opportunities to improve data quality, respond to emerging issues and evolve our data culture. Everyone in the agency creates, uses, or is informed by data in the normal course of their role.

Data literacy skills enable staff to understand data hygiene, quality, security, privacy, and ethical use appropriate to their role. Uplifting data skills and competency in priority areas for relevant people can drive business value and help fulfil learning and development goals.



## APPROACH

Develop a data & digital aligned workforce plan for the agency for key skills & capabilities.

Develop & validate Agency data personas as a key resource to guide training & recruitment.

Expand & tailor data literacy & tools training and support for new starters, data users, Data Custodians and Stewards.

Create a Data & Innovation Centre of Excellence (DICE) training program as a bootcamp for advanced data skills.

Recognise good data practices through communications.

## WHAT SUCCESS LOOKS LIKE

**More data professionals** – The agency attracts, grows and retains skilled data professionals.

**Data by Default** – Our people increasingly consider the data lifecycle in their work, find opportunities to uplift & verify quality at source and proactively plan and execute analysis, sharing and reporting.

**Support and Accountability** – New starters, data users, Custodians and Stewards are equipped to perform their respective data roles, with data responsibilities and accountabilities clearly outlined and can access specialist support through a data helpdesk.

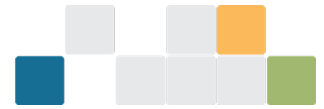
**Confidence and Capability** - Training programs for baseline and specialist skills scheduled and operating.

**Recognition** – Regular executive communications promote innovative and good data practices.

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# TRANSPARENCY & ACCESSIBILITY

## AIMS

Accessibility and trust in our data will be boosted through streamlined data sharing, timely reporting and a simpler, more reliable interface, aligning agency data practices with transparency reforms and our changing regulatory environment.

Knowing our participants, their business relationships and compliance history through access to a consolidated data view makes it easier for us to identify emerging pattern of behaviour within and across schemes, develop appropriate and timely responses and better manage risk.

Understanding and accurate use of our data, including for analytics and reporting will be aided through expanding coverage and functionality of our data catalogue & related dictionaries.

Increased use of geospatial tools are crucial to maintaining integrity in our schemes, identifying regional opportunities and supporting community expectations of increased transparency.

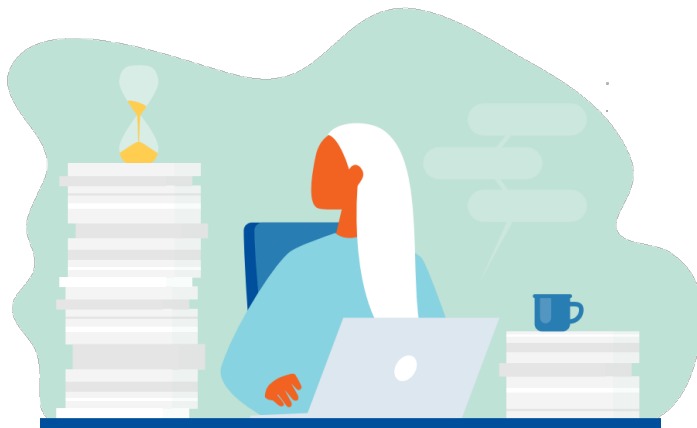
## APPROACH

Create a data hub so internal and external users can find and access up to date data and insights quickly and easily.

Develop a Single Participant View for a contemporary and comprehensive understanding of compliance behaviour.

Expand data catalogue coverage and functionality through Microsoft Purview.

Strengthen geospatial validation of rooftop solar & ACCU projects and automate reporting.



## WHAT SUCCESS LOOKS LIKE

**Single data interface** for agency data which is easy to access, navigate and update, that supports legislative reporting obligations, data sharing, business and government uploads (APIs) and is integrated with the website.

**Knowledge of our participants** through access to a standard overview of their scheme activity, compliance actions and flags which is automatically updated and has addressed duplicate records.

**Discoverable & described** data sets, linked to data stewards, metadata and quality attributes that aid interpretation and access, enable analytics, monitoring and reporting and link to the data hub, as appropriate.

**Assured geospatial data** to support assessments and compliance monitoring of rooftop solar and ACCU projects using machine learning; data matching and automated validations.

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# SYSTEMS AND TOOLS

## AIMS

The data landscape is becoming more complex as growing volumes and types of data collected and used require management. Data standards and policy frameworks will facilitate safe sharing of data and support robust data standards.

Foundational infrastructure tools and establishing a data migration capability have been identified as being most critical for business. Clear documentation, change management, and support arrangements will help promote consistent practices and less rework.

Expand and revitalise a central internal reference point for data resources, to ensure alignment with our strategic direction for data usage and clear expectations on how data is to be managed across its lifecycle in the agency.



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## APPROACH

Develop a Data Policy for guiding data handling, sharing and ethics across the agency.

Consolidate and refresh data governance for Microsoft Azure data tools and modelling documentation to ensure it is fit-for-purpose and facilitates re-use.

Establish a proof of concept to product delivery pathway to encourage innovation.

## WHAT SUCCESS LOOKS LIKE

**Confidence** - The Data Policy becomes the central reference for quality standards, procedures, ethical framework, and data sharing guidelines, increasing consistent data handling and reducing rework.

**Innovation** – New ideas can be rapidly prototyped and if successful, a business case developed and progressed through a known pathway to production with clear funding and support arrangements.

**Managed risk** – fit for purpose governance of data tools and documented modelling that encourages consistent and robust data practices, clear roles and responsibilities and identified owners for all data products.