



Curtin University

INSTITUTE FOR ENERGY
TRANSITION

Decarbonise WA Day

Monday 9 December 2024

Summary report of the first
Decarbonise WA event.

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ACKNOWLEDGEMENTS

We would like to acknowledge all of the participants that attended the day and shared their thoughts and ideas so willingly.

Thank you to all the table scribes for their work in recording and facilitating the conversations that took place over the course of the day.

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CONTENTS

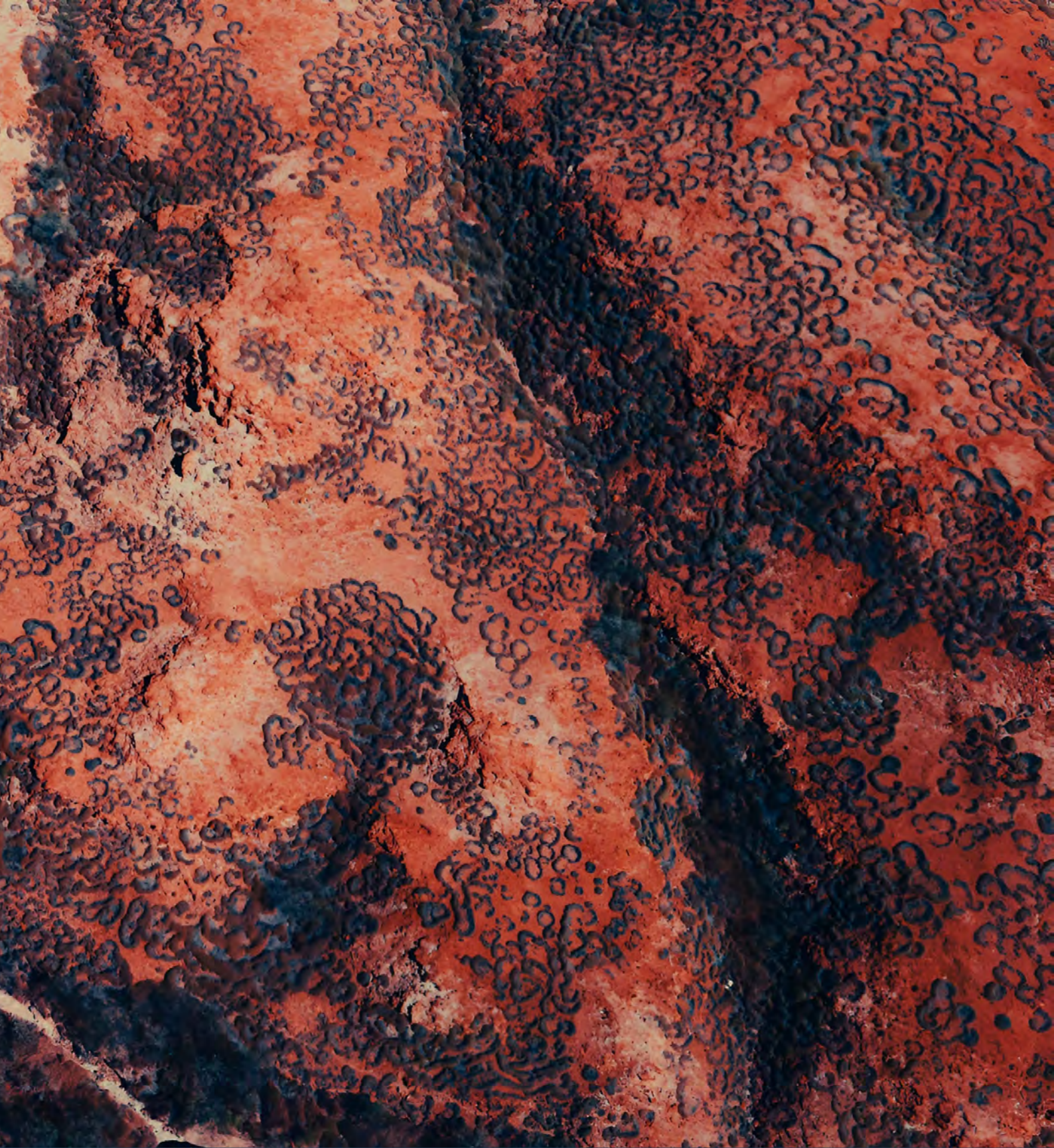
Acknowledgement of Country	4
Introduction	5
Responses	8
Summary of table discussions	11
Cross-cutting themes and questions	14
Next steps	16
Attendees	17
Feedback	19

APPENDICES

[Appendix 1: Prof. Clark Miller's slides - *Net Zero Plus*](#)

[Appendix 2: Assoc. Prof. Simon Smart's slides - *Pathways to Net Zero WA*](#)

[Appendix 3: Decarbonise WA Policy Landscape](#)



Acknowledgement of Country

We respectfully recognise the Whadjuk Elders past and present as the Traditional Owners of the Nyungar boodja on which the Curtin Institute for Energy Transition is located.

We acknowledge the tens of thousands of years of Indigenous knowledge, culture and insight into living sustainably and caring for the natural world that have shaped this land and our ongoing research.

1.



INTRODUCTION

On Monday 9 December 2024, The Curtin Institute for Energy Transition hosted a one-day workshop as part of the Decarbonise WA initiative.

The overarching goal of this initiative is to catalyse collaboration among government, industry, Traditional Owners, and civil society stakeholders to advance progress toward carbon neutrality in Western Australia (WA). Over 90 stakeholders from across the state with an interest in the energy transition participated in the workshop.

The day's conversations centred around the question:

What aspects of regional decarbonisation most require thoughtful coordination across sectors, investors, employers, and communities, and what are the strategies and implementation pathways for making sure that coordination happens?

The event opened with three keynote addresses designed to focus attention on the key pathways to deep decarbonisation of the WA economy, the challenges of ensuring a just transition and providing community benefits, and the opportunity to leverage the energy transition to achieve wider societal goals.

Prof. Clark Miller challenged participants to go beyond their organisational focus of “how to get net zero done” to incorporate the implications of the energy transition for wider society and the economy. Clark argued for the opportunity to pursue a Net Zero Plus agenda “to creatively imagine, invest in and advance net zero futures

that catalyse social progress, uplift human lives and livelihoods, and ensure no one is left behind”, recognising that all responses will be unique and place-based. He argued that all net zero pathways will incorporate social and economic transformation – hence, factoring social and economic criteria into net zero pathway design makes sense.

Keynote speakers

- Clark Miller, Professor, Arizona State University, *Net Zero Plus: Deep Decarbonisation, the Electricity Transition, and the Pursuit of Social Progress*
- Simon Smart, Associate Professor, University of Queensland, *Pathways to Net Zero: Western Australia*
- Sharan Burrow AO, former General Secretary, International Trade Union Confederation, *Community Benefits and Just Transition*

He stressed that with an all-electric transition, there will be a corresponding shift in the social power and responsibility of the electricity industry, which will need to be well managed while focusing on equity and justice principles. Clark provided a design guide for achieving Net Zero Plus which acknowledges:

- There are many possible net zero futures - design choices matter,
- Energy transitions occur across the full complexity of interdependent systems,
- Technology changes drive social, economic and environmental outcomes, and
- Go beyond co-benefits to identify people centred goals to supplement net zero.

Clark offered three examples of how the transition could transform human outcomes including: i) ending the energy poverty nexus by possibly redesigning rate structures, creating ownership of distributed energy assets, enhancing the social and economic value of energy, or other relevant strategies; ii) considering ways to integrate solar into urban and rural communities and landscapes that bring meaningful energy and non-energy benefits, including harnessing a variety of sizes, scales, and configurations of solar systems; and iii) identifying opportunities to charge electric vehicles (EVs) during the day to improve the upside of having so many EVs in the system.

Assoc. Prof. Simon Smart presented insights on the *Pathways to Net Zero: Western Australia* based on modelling from the Net Zero Australia project. Key takeaways from the models include that delivering an energy transformation at unprecedented scale and pace will require large investment in solar and wind resources, with offshore wind playing a large role only when solar deployment becomes constrained on land. Batteries will dominate electricity storage, and although gas use decreases, the modelling suggests 2–4 GW of new gas capacity will be needed for firming. Carbon, capture, utilisation and storage (CCUS) is also set to expand rapidly in WA for both blue hydrogen and some direct air capture.

Similarly, transforming our exports will require approximately four times the energy required for WA's domestic transition, with solar replacing natural gas to produce hydrogen or clean minerals. Under a net zero emission export system, WA's export potential is highest when it makes direct reduced iron (DRI) onshore with hydrogen. However, this requires new industrial complexes, trading partners and community acceptance. Simon also warned that the models indicated that a small increase in capital costs in WA will very quickly move the export potential to other lower-cost states such as Queensland.

CONCLUSIONS – STRATEGIC DIRECTIONS

<p>OPTIONS</p>	<ul style="list-style-type: none"> • Accelerate all options that could make a material contribution to decarbonisation. • Strengthen deployment drivers of renewables, transmission, and electricity storage. • Build a large fleet of gas-fired peaking generation to help accelerate renewable growth, and close coal power on time. • Do not factor nuclear power into renewable, storage, and firming targets. • Work with other states to prepare CCUS networks and basins for large-scale use.
<p>EXPORTS</p>	<ul style="list-style-type: none"> • Western Australia should pursue both clean energy and clean processed minerals as export opportunities. • A clean energy export framework will be needed to ensure that we phase out fossil fuel exports and grow clean energy exports in an orderly, fair, and net zero-compatible transition
<p>IMPACTS</p>	<ul style="list-style-type: none"> • The speed of land use change will be essential and requires proactive management, particularly for First Nations communities and farming communities. • Minimising public impacts requires orderly asset closures, supported by multiple policy mechanisms. • Low-income households and fossil fuel regions will need support to mitigate impacts.
<p>ROLES</p>	<ul style="list-style-type: none"> • Governments must stimulate and coordinate private action, and decide who pays, and how. • Private sector investment risk will be too high in many cases, unless mitigated by government. • Building net zero workforces and supply chains requires a certain, large, and long investment pipeline. • Net zero must be a high national priority for decades, requiring sustained leadership and collaboration.

Figure 1 - Excerpt Page 21: Pathways to Net Zero: Western Australia, December 2024

What aspects of regional decarbonisation most require thoughtful coordination across sectors, investors, employers, and communities, and what are the strategies and implementation pathways for making sure that coordination happens?



Professor Peta Ashworth kickstarting the day's presentations (Photo: Ezra Alcantra)

Finally, to invest in our people and land WA's land sector is likely to require more offsets rather than become a source of them. Projects for gross energy sector employment could increase to 175–245,000 by 2060. Simon finished with some suggestions for strategic directions (see Figure 1).

Sharan Burrow AO opened with a focus on the need to keep people at the centre of the transition and noted a lack of ambition to transition at the pace and scale required, suggesting that with the projected global warming levels, many regions will become unsafe and unliveable. Sharan reinforced the need to ensure the co-creation of place-based opportunities to achieve a just energy transition which included the recognition of First Nations People as rightsholders. Sharan argued that this requires a shift in mindset beyond seeking consent from First Nations People for projects to greater consideration of equity and co-ownership arrangements. Sharan stressed that transactional social licence to operate is no longer enough and that to avoid projects failing there is

a need to co-create new economic futures for all. Sharan also highlighted that while the transition requires new jobs in clean energy and associated industries, these will not necessarily be in the same places as existing jobs causing further disruption and challenges to ensure a smooth transition.

Sharan argued there is a need for greater inclusion and benefit sharing in the processes to allow more people to have power and influence over their future. From a financial perspective, there is a need for upfront investment through various forms of start-up finance including patient capital, debt venture funds, loans and equities and think differently about how such finance mechanisms can support people, by not only aligning with net zero outcomes but also to ensure just transitions. Regardless, to ensure a successful transition, there is a need to involve as many individuals as possible in the dialogue to build trust, social licence, and shape the discourse across national, state and local levels.

2.



RESPONSES

Reactions, challenges and opportunities

Following the presentations, participants discussed their reactions to the presentations, including what they saw were the ongoing challenges and opportunities arising from the presentations and how they fit with what they are currently working on. Responses included:

A need to change our conceptualisation of the problem using more open-minded thinking that examines things through a holistic lens and develops a longer-term framework for action. However, this must be coupled with the need for the immediate actions required through intermediate targets rather than a sole focus on 2050. This includes consideration of existing roadmaps and frameworks to prevent wasted effort while addressing gaps in current projects.

A successful transition requires a well-defined strategy that integrates technical, social, and economic factors. This strategy must be informed by comprehensive data, given the high stakes of long-lived assets and the risks of costly missteps. The approach must balance emissions reductions with location-specific social, nature and land considerations.

WA's economy is closely tied to exports. As a result, WA's decarbonisation goals and plans are inevitably tied to decarbonisation ambitions in Europe and across Asia, the global shipping industry and global financial and investment markets. Hence, there's a need to both monitor and shape international markets and policies well beyond Australia's borders.

A mindset shift is essential to address broader issues beyond climate challenges. This includes transition risks and opportunities like green exports and downstream commodities. Ensuring renewable

energy affordability, reliability, and security is a key priority.

WA's identity and risk appetite shape its investment strategies. Rethinking infrastructure funding, coordination, and ownership models are key to supporting the transition.

Effective leadership is paramount for reducing uncertainty and accelerating progress. However, leadership is currently hampered by short-term election cycles. To ensure we can address the long-term challenges we need to be more coordinated to give greater clarity and transcend the politics surrounding climate and energy here in Australia.

Uncertainty surrounding responsibility, especially financial responsibility, has led to a lack of willingness to go first and lead. Coordination across sectors will reduce duplication and better utilise existing work. Improved disclosures and sharing of information along with greater collaboration between industry and government will help to inform decisions.

Alignment between federal, state, and local governments and partnerships with industry and communities are critical to achieve. They are necessary to effectively manage the scale of transformation required for the energy transition. Reinforcing the need for a balanced narrative about transition needs, supported by streamlined policies to enable effective central planning and to bring communities on board.

The results from the table discussions subsequently informed the afternoon sessions where participants were organised into a series of small group conversations around key topics that surfaced through the morning to help with decarbonising WA, including:



Professor Clark Miller delivering his presentation on 'Net Zero Plus' (Photo: Ezra Alcantra)

- Transition planning and decision-making
- Vehicles for financing the transition
- Co-creation of strategies and the provision of community benefits
- A framework for delivering the transition
- Key infrastructure requirements
- Technologies that will get us to net zero
- Skills and workforce development
- The Pilbara as a microcosm
- Community electrification
- Enhancing our export potential

Summary of the day's conversations

Participants engaged in wide-ranging conversations about the diverse requirements to transition WA to a carbon-neutral economy.

In all conversations, there was clear recognition that WA's future is closely wrapped up with progress toward a net zero economy both locally and globally. Current and future decisions taken by Australia's regional partners in Asia, along with the European Carbon Border Adjustment Mechanism, present significant implications for WA's long-term export

potential in agriculture, mining, and energy. However, concerns were raised about the slow progress and lack of a unifying vision to accelerate the transition so as not to miss potential opportunities.

It was recognised that WA is well-positioned to leverage extensive renewable energy opportunities including solar, onshore and offshore wind, storage (both grid-connected and distributed depending on location) and access to traditional energy resources, minerals, and vibrant innovation for advancing deep decarbonisation. With such opportunities, it was highlighted that WA can not only green its own economy but also provide substantial inputs to global clean energy needs, including carbon-neutral chemical energy, carbon storage capabilities, green steel, and diverse critical minerals. However, developing these resources requires substantial leadership, financial investment, strategic infrastructure development, and thoughtful engagement and collaboration with Traditional Owners, landowners, and other communities throughout the state.

Throughout the day, opportunities in which decarbonisation can deliver substantial value to WA were identified. Some of these included:

- Reducing energy bills for WA populations, creating a future of low-cost, renewable electricity for the region while improving energy security for remote communities and households.
- Eliminating WA's contributions to climate change and climate risks to plot the most effective transition pathways for net zero.
- Diversifying revenue streams for agricultural communities and making them more stable and resilient to market and climate fluctuations, especially by integrating renewables into agricultural landscapes and operations, rather than substituting renewables for other land uses.
- Ensuring we enable a planned transition for the future shape of WA exports (ie as demand for oil and gas reduces, decarbonisation of iron/steel, agriculture) to one that is in line with IPCC projections.
- Growing and diversifying mining opportunities for a clean energy future, that ensures the sustainability of our large industries.
- Creating thriving futures for Traditional Owners that are aligned with their values and create enduring partnerships led by Traditional Owners.
- Thoughtful urban growth planning which supports the transition to net zero while improving livelihoods and lifestyles.
- Strengthening WA communities through thoughtful place based approaches which increases overall wellbeing for those living in WA.

Essential to informing a strategy for decarbonising WA are the immediate priority and near-term actions that WA enterprises and government agencies have the potential to take to substantially move the needle toward decarbonisation. Notwithstanding current activities that are underway, to do this it was agreed there was a need to bring together stakeholders and key decision makers, post the state election, to confirm the key priority areas that arose from the workshop and where collaboration can drive greater ambition and outcomes and establish working groups around each of the topics. Ensuring continual feedback to the overarching group steering the project will be key.

It was suggested these might take the form of both sub-regional and cross-cutting working groups.

Different sub-regions within WA face different decarbonisation challenges and require different strategies to create thriving futures. While there is a need for coordination across WA, the shape of that coordination needs to be driven by what is critical for each of the different sub-regions. A bottom-up approach, centred on each of the sub-regions and its place within broader, region-wide decarbonisation and economy, will help to ensure that decarbonisation planning and policy proceeds from a clear understanding of place-specific sub-regional goals that delivers valuable outcomes for each area.

At the same time, a bottom-up approach needs coordination across the sub-regions to ensure that cross-regional opportunities can be taken advantage of in ways that reduce overall costs, enhance region-wide benefits, leverage synergies to accelerate change, and avoid technological, political, or environmental disconnects at the level of larger interconnected systems.

3.



TABLE DISCUSSION SUMMARIES

1. Transition planning and decision-making

There is high demand for informed, transparent, and substantive decision making that mobilises action at scale, demonstrating the urgent need for leadership on the energy transition. Decision makers can help build support and social licence for the energy transition by integrating other important societal goals, for example, reducing energy poverty or ensuring Indigenous participation, sovereignty, and economic benefits. Developing a stakeholder-engaged vision and strategy that fosters collaboration will be key to achieving the end goal of net zero plus. This requires building capacity for effective transition leadership and decision-making across all sectors, groups, and organisations.

2. Finance vehicles

Financing the transition is complex and requires a long-term view. Some projects will have lower return on investment, but it is essential to illuminate investment as a loss leader in the short term that will eventually lead to improved environmental and corporate sustainability and business outcomes. Responsibility for funding technology expansion is also unclear, and key stakeholders are reluctant to contribute at this stage. Derisking, of both finance and technology throughout the supply chain, is crucial for attracting investment. Options for funding major projects, including lobbying superannuation, private investment, startup, patient capital, joint ventures, and loan guarantees must remain open. Similarly, alternative models for owning and operating transmission infrastructure need to be reconsidered and informed by case studies from elsewhere in Australia and overseas.

3. Co-creation and community benefits

A localised and regional approach to co-creating community benefits is required, with benefits extending beyond financial models to address broader issues such as housing, roads, water and equity between towns and neighbours. Local governments also need to play a greater role in directing community benefits and providing guidance to communities during the planning process. Improved communication with the wider public is crucial to improving community understanding of the urgency of transition and feeding into regional narratives about who communities are and how they envision their futures.

The lack of effective policy in WA is causing frustration in communities – guidelines need to be specifically developed for WA while recognising there is an opportunity to learn from other regions. For example, Scotland's regional trust model is a useful way to ensure funds are managed appropriately and directed according to local needs. Providing free energy for locals may also provide a different form of benefit, but these need to be place-based and decided with the community.

4. A framework for delivering the transition

To effectively work together, there is a need for agreement on where to start and a comprehensive, long-term strategy to facilitate future change. Transparent processes, including active and ongoing participation in the Decarb WA model, are required to make all parties accountable and ensure fairness. Clear governance structures that manage decision-making and project approval will simplify the planning and approval process.

Unifying government agencies, industry representatives, researchers and other stakeholders around these defined common priorities and shared infrastructure aspirations will be key in reducing duplication of efforts, building trust and coordinating impact. This could take the form of a centralised planning model, using either an independent Agency or Board, that works to advance progress utilising the bottom up place based approach as well as respond directly to communities' needs and questions as a kind of "one stop shop".

5. Key infrastructure requirements

Before determining new infrastructure requirements, there is a need to map all existing resources available to identify what is needed in terms of technology, R&D, financial investment and education to move the agenda forward at the pace required, while maintaining energy security. Prioritisation of key areas, including ports, housing, roads, power and water, must be agreed upon to avoid unnecessary red tape. Long-term versus short term needs and the life cycle of infrastructure must also be taken into account, particularly when considering investment timelines.

Challenges include: obtaining a social licence to operate from impacted communities and Traditional Owners; navigating the large distances of WA's rural and remote areas; developing realistic timelines prior to project commencement; understanding the cost implications and how best to allocate finite resources. This includes going beyond financial approaches that silo costs and benefits rather than operating system-wide, so that systems-level cost reductions can help finance individual projects. Specific regional plans that incorporate the required mix of technologies, underpinned by information sharing and collaboration between key stakeholders, as well as learning from experiments carried out throughout WA and in other parts of the world, will be key to resolve these challenges.

6. Skills and workforce

The fragmentation of skills and training needs to be resolved, to create seamless pathways from schools through to vocational education and training (VET). Courses must be designed to meet the needs of industry, maintain flexibility and future-proof graduate capabilities for a changing landscape, both domestically and internationally. New business models may be required, with industry playing a greater role in funding and delivering education courses through partnerships. Innovation and adaptability in educational institutions will also be needed as skills and capabilities evolve alongside the transition. Communication and awareness of the

roles of the future are fundamental, not just among current workers already in the sector, but across the parents and teachers who will guide the paths of the next generation of workers.

A cross-sectoral approach is required to maintain and grow the workforce, considering the need for construction of new houses, schooling, child-care and more to both attract and retain workers in regions. Migration is also a key consideration with an increasingly mobile workforce, as is access to international institutions. Spatial and temporal understandings of industries' needs, educational opportunities and existing and new workforce skills are crucial. The role of new and advancing technologies, such as AI, is also important when planning for the future of work and skills development.

7. Pilbara as a microcosm

The Pilbara was identified as both a challenge and an opportunity for a successful transition. As a traditional area of mining and major projects, there is the opportunity to capitalise on existing common user infrastructure and the local workforce, while learning from successful examples such as Karratha. The challenge presented is how to move away from the business as usual model and the requirement to incentivise operations, especially shared operations, to one that is sustainable for businesses in the Pilbara. This requires data sharing, policy development, financing and incentives to take up 'first mover' opportunities despite risks and costs to increase business outputs and expansion.

Understanding the specific footprint of the Pilbara was identified as being key to achieving a successful, place-based transition. Key considerations include: the sheer size and level of isolation; the resultant cost of operation and to build new infrastructure; the difficulty in attracting and maintaining a workforce; as well as building a social licence to operate (SLO) with Traditional Owners and other communities that ensures all those living in the Pilbara share in better futures overall. It is important to map the key systems, stakeholders and industry participants to understand the social, environmental, and economic risks and vulnerabilities of the region.

8. Technologies for net zero

A range of technologies were discussed including batteries and other storage technologies, including long-duration storage, as well as solar, hydrogen, direct air capture and carbon capture, utilisation and storage (CCUS). Key considerations for each of the technology options included their level of technology readiness, bankability versus risk appetite and the level of net-zero incremental effort they will

bring. The need to adopt an agnostic, longer-term perspective to keep all feasible technological options on the table was reinforced by many. However, it was stressed that the focus should be on existing and proven technologies.

Opportunities include improving the technology mix and integration within the energy system to resolve issues such as interoperability. There is an opportunity to consider what parts of renewable technologies could be manufactured onshore and whether there is an opportunity to do this in parallel for some components. Pilot projects were considered important for developing proof of concepts and testing technologies.

9. Community electrification (reimagining energy, localised systems, nested systems)

Deeper electrification of communities, both for domestic and transportation energy use, is fundamental for a successful and lower cost net zero transition. Yet, throughout the day we heard that different communities have different needs and that effective community electrification needs to be community-led, supported by technology, governance and policy. Primary challenges for isolated communities include co-locating power solutions, developing and scaling regional energy hubs, and working with mining and energy companies to develop community benefit schemes that balance community and company needs. In metropolitan areas like Perth, priorities include strategies for electrification of homes, businesses and transport, and developing nested energy systems that support larger commercial and industrial practices.

Ongoing challenges for achieving electrification include the need for different infrastructure, available technologies, new policies and regulations, and people – both as a skills resource but also as participants accept new ideas and ways of doing things.

WA's isolated and disconnected grid system adds complexity to the electrification challenge, as does the lack of a localised energy framework. Collaboration between the private sector, government and international partners will be crucial, but attracting large-scale investment from these groups is also a challenge.

10. Enhancing our export potential

WA is well known for its significant exports and future export opportunity potential including critical minerals, green iron, low-carbon food, manufacturing / domestic processing, low-carbon fuels (H₂, NH₃, CO₂) and exports related to the blue economy. However, threats to future exports include the EU Carbon Border Adjustment Mechanism (CBAM), other low-carbon expectations, and the impact on competitiveness that high-cost clean energy could have, as well as net zero plans and trajectories across the many parts of Asia. Enhancing WA's export potential will rely on customer willingness to pay for green products and its overall competitiveness. WA's advantages include experience in R&D and rich clean energy and critical minerals resources. However, to develop a thriving export sector, WA will require low-cost clean energy and coordinated governance across the public and private sector to ensure product certification, a price on carbon, industrial hubs, land access agreements, and appropriate workforce and training.

4.



CROSS-CUTTING THEMES & QUESTIONS

Place-based approaches

How do we ensure the different challenges being faced across the different sub-regions are addressed? How do we coordinate this approach within the wider Decarb WA action plan? How can policies help to enable this?

Traditional Owners

What role do they play? What benefits – and even more importantly future community and economic thriving – can they achieve from clean energy developments? How can the First Nations Clean Energy Strategy be implemented in WA?

Electrification

- **Mining and industry** – How can mining and industrial operations be electrified? How can mining electricity be decarbonised beyond the SWIS and NWIS grids? What role does solar and wind play in decarbonizing mining and industrial operations?
- **Transportation** – How can the adoption of light-duty electric vehicles be accelerated where appropriate, especially in the city? What are the distinct challenges of electrifying light-duty transportation outside of the Perth region? Are there opportunities for meaningfully electrifying heavy-duty transportation in WA (e.g., trains, trucks)?
- **Households** – How can the adoption of heat pumps, heat pump water heaters, and other electrical end use technologies be encouraged, especially with goals of enhancing energy efficiency alongside electrification? How can this be coordinated with distributed solar and storage adoption? How can low-income households access

these technologies in ways that reduce their long-term energy burdens? How can household policy be adapted to diverse sub-regions and their particular energy needs and societal/economic contexts?

- **Agricultural sector** – How do we support agricultural operations in the transition? What innovations have already been applied and are working in WA, around Australia and the world? What can we learn from previous agricultural innovations?

Renewable energy deployment, ownership, infrastructure, and co-benefits

Where and how will large-scale renewable energy be developed? How will local communities be engaged in strategic planning and siting of these developments? How do we ensure necessary infrastructure in local communities i.e. housing, water, sewerage to enhance local needs? Will they be granted co-ownership or other revenue sharing opportunities? What other co-benefits can potentially be achieved? How will the environmental impacts be assessed?

Transmission upgrades

How can we accelerate the upgrades to the SWIS and NWIS to ensure that all communities benefit? How do we ensure the integration of necessary short and long-duration storage to accommodate increased variable renewable energies? What is the role of smart grid technologies and AI to improve reliability of supply and distribution? Where is it appropriate to deploy standalone micro-grids and also to use micro-grids to enhance grid resilience for critical infrastructure?



The audience reflecting on the day's proceedings (Photo: Ezra Alcantra)

Carbon capture utilisation and storage (CCUS)

How can we support the use of CCUS to help some of the hard to abate industry sectors transition to renewable energy? What are the necessary policy drivers for this? How can we drive the application of CCUS in strategic industrial areas for increased efficiency? How can this be balanced with the environmental and health risks of continued carbon combustion?

Financing mechanisms for decarbonisation

What are the appropriate models that we can draw from to eliminate uncertainty for industry and accelerate decarbonisation practices without placing undue burden on society?

Policies and permitting

What policies exist to help fast track the transition? What are the bottlenecks within policy and permitting that need to be prioritised? What new policies need to be developed and prioritised? How can industry, community and wider stakeholder groups help to shape new policy frameworks?

Pilots, experimentation and reflexivity

How can we harness the ideas being generated to identify optimal solutions? Where are the synergies across regions, industries, technologies that can be combined and monitored? Where can research, monitoring and evaluation assist in fast tracking derisked solutions? How do we ensure reflexivity to maximise learning from the process?



5.

NEXT STEPS

There was a demonstrated willingness from all in the room to actively engage in conversations about the energy transition as well to keep the conversation moving.

Recognising that while there are some areas we may not agree on there is a large component where working collaboratively will help to reduce the current siloed approach to decarbonisation, improve efficiencies and ultimately fast track the path forward. Participants agreed there would be value in reconvening, post the March 8 election, to identify potential ways forward and establishing a multi-organisational initiative tailored to WA's unique context and needs. Key to its success would also be the establishment of a bipartisan steering group that would help any outputs transcend the politics of energy.

Flexible and adaptable scenarios and pathways should emerge from this overarching Decarb WA project, emphasising customised, place-based strategies that extend beyond WA. Such an initiative must be fact-based, incorporating technical trials and feasibility studies. To achieve this, significant investment is needed to revamp infrastructure, with concerns about the viability of new technologies and the financial feasibility of some projects. This was particularly important given WA's higher cost structures that require unique financing mechanisms to attract and retain industry.

The identified cross cutting themes highlight potential areas for establishing working groups to move the agenda forward. However, it was noted that these will need to be prioritised to ensure the most urgent are addressed first. The cross-cutting themes included:

1. Place-based approaches
2. Rights of Traditional Owners
3. Electrification
 - a. Mining and industry
 - b. Transportation
 - c. Households
 - d. Agricultural sector
4. Renewable energy deployment, ownership, infrastructure, and co-benefits
5. Transmission upgrades
6. Carbon capture utilisation and storage
7. Financing mechanisms for decarbonisation.
8. Policies and permitting
9. Pilots, experimentation and reflexivity

This will only be successful if a reflexive approach is adopted where the working groups report back on progress to the main working group which must be comprised of decision makers from respective organisations. Lessons from Collie highlight the importance of local energy, industry, and governance frameworks, alongside mapping value chains to foster resilience and sustainable development. This means support for local governments will be crucial along with effective leadership and decision-making. Finally, people-centred transitions require investing in knowledge and engaging communities to build goodwill, even without immediate benefits.

By doing this, WA can drive self-sufficiency and economic resilience, positioning itself as a leader in decarbonisation.

6.



ATTENDEES

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Glenton Moses, Pilbara Minerals
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Harry Sapsworth, Pilbara Minerals

Paul Scott, Fortescue
Dean Sharafi, Australian Energy Market Operator
Jessica Shaw, WA State Government
Harj Singh, Curtin University
Simon Smart, University of Queensland
Nigar Sultana*, Curtin University
Glenn Syme, ANZ
Sandrine Symons, Pilbara Minerals
Raquel Tardin-Coelho, CIET
Carlo Tassone, Landgate
Larissa Taylor, Savoir Consulting
Miranda Taylor, Wind With Purpose
Mellisa Teade, Augment
Chacko Thomas, Mineral Resources
Damian Tully, Mid West Ports
Kylie Turner*, Climateworks Centre
Liam Wagner*, CIET
Simon Wallwork, AgZero2030
Steele West, ATCO Australia
Keith Wilks, Southern Ports Authority
Nicole Wyche, WWF Australia

7.



FEEDBACK

Selected feedback received from participants following the Decarbonise WA Day. Feedback has been anonymised.

Congratulations to you and the team on hosting such an engaging and dynamic day. The breadth and depth of participants was excellent and the desire to proactively contribute was clear. Pleasingly, a very open and respectful challenging dialogue when needed for the tables I was on in the afternoon.

You brought together a great room of people ready to collaborate and set out a really brilliant challenge. The set up for the day with Clark, Simon and Sharan was brilliant, matching innovation, analysis and a human centred approach. A wonderful tone setting for the rest of the day being able to examine and explore the challenges and opportunities for WA.

Big congrats on the event Peta, the participation and commitment is a big testament to what you have achieved since you took up the Director role. A big congrats to your team too, it was a seamless day and I know how much planning and work that must have been.

As you know there have been various attempts to develop a shared view/ collaborative consensus for WA Decarb but I really feel like this one will be successful and influential. I can really see the outputs positioning CIET in a trusted advisor to government role and creating both pressure and support.

Of the conversations I had, I would definitely say that the finance aspect of unlocking investment into transmission infrastructure in the SWIS and NWIS struck me as the most important. It seems that government is stuck in its thinking and that a small coalition of finance and asset owners (Tx, gen and demand) to provide some case studies and potential models could be valuable.

Thank you very much for the event yesterday. It is amazing that you can gather such a large number of people from the WA industry to work on this important objective. It was organised very well, and I got to know a few others who work on the same objective in other sectors.

The Decarb WA Roundtable was a fantastic day.

At first I thought, ok lots of people, tricky problem, a lack of uniform understanding of the economic and technological constraints and trends, all parties with vested interests pushing party lines including the cottage industry of wise advisers.

But then as I listened to new perspectives and challenges, with a great tone setting and expansive thinking challenge from Clark from ASU, but also from lots of the participants, I started to move forward from preconceptions and heard some of the fundamental questions articulated in new ways. Making it about WA really brought the issues to life in a way that technology roadmaps and cost curves on IRENA and BNEF just can't do.



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