



Australian Industry Energy Transitions Initiative

SUMMARY OF WORK PROGRAM | JULY 2020

Acknowledgements

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Introduction

The Australian Industry Energy Transitions Initiative (Australian Industry ETI) aims to accelerate informed action by Australian industry towards the achievement of net zero emissions in hard-to-abate sectors by 2050, while managing the transition to thrive in a decarbonised global economy.

The initiative presents an integrated effort for industry to explore, develop and build action towards net zero emissions in key industrial supply chains. Through the Australian Industry ETI, participants from hard-to-abate sectors, energy suppliers and investors will establish an influential network that will work with leading Australian and international experts on energy transitions. Participants will develop a shared understanding of the potential for industry supply chains to reach net zero emissions, the actions needed to get there and build momentum and capability towards this goal through tangible on-the-ground decarbonisation projects and initiatives.

Australian Industry ETI is designed around three phases. These build from each other to progressively create a credible knowledge base, an expanding portfolio of actions and an integrated network of Australian industry focussed on net zero emission supply chains nationally, and with a particular regional focus on Western Australia.

An initial phase, "Current situation and future possibilities", will identify and analyse the technologies needed to reach net zero emissions supply chains and the obstacles to be overcome to deploy them at scale. It will map key actors, networks, policies, regulations and standards to identify opportunities for high impact in the

short to medium term. This mapping will inform a call for expressions of interest in early actions and support the development of promising projects by linking proponents to research, financing and funding support.

The second phase, "Promising pathways", will create credible pathways for industry to transition to net zero emissions through a rigorous technological and economic analysis of opportunities in each supply chain, including an analysis of systems capable of providing low-cost, reliable, net zero emissions energy. Through this phase, mutual interests will be identified across the portfolio of implementation projects, leading to the establishment of further possible action.

The third phase, "Enabling transitions", will identify practical actions for net zero emissions transitions to drive investment and industry development to ensure positive outcomes of the pathways can be realised. As the portfolio of implementation projects grows, knowledge from across this network will influence, shape and frame the conversation on efforts in decarbonisation.

Throughout the initiative, engagement and communication will be key. Australian Industry ETI will create a space for coordinated learning, debate and experimentation as well as regular outreach to policy makers, researchers, innovators and the broader business community. Research findings and analytical insights, endorsed by an industry steering group, will be published to share findings, knowledge or recommendations with a broader network of stakeholders and decision-makers.

Objectives

The objective for the Australian Industry Energy Transitions Initiative (Australian Industry ETI) is to accelerate informed action by Australian industry in hard-to-abate sectors towards the achievement of net zero emissions supply chains by 2050, while managing the transition to thrive in a decarbonised global economy. The initiative will support industry to develop pathways and take action towards this goal.

The Australian Industry ETI delivers on this objective by working with key industry stakeholders to:

- Undertake research and analysis, drawing on global and local expertise to develop pathways to net zero emissions supply chains across critical sectors of the Australian economy.
- Investigate the opportunities and challenges specific to Australian industry in a decarbonised global economy.
- Identify portfolios of tangible early action projects and implementation projects that can drive investment and development of net zero emissions industries in Australia.
- Publish the findings of this work in accessible formats throughout the initiative.

The initiative will focus on five supply chains that are going to be critical to the goals of the Paris Agreement (that is, keeping temperatures 'well below 2°C' and pursuing efforts to limit the temperature increase to 1.5°C).

This is given their significance to global emissions and the relatively higher abatement costs associated with them. The supply chains identified by the initiative are:

- Iron & steel
- Aluminium
- Liquefied Natural Gas (LNG)
- Other metals (copper, nickel, lithium, etc)
- Chemicals, in particular fertilisers and explosives

Despite the challenges associated with reaching net zero emissions in these hard-to-abate sectors, they also provide significant opportunities for Australia in the energy transition. As the recent disruption caused by COVID-19 has highlighted, resilient supply chains will be important to lay the foundation for a strong economy and healthy environment. Australia could potentially capture significant additional value by increasing its downstream presence in key supply chains such as lithium and green steel. This would build on Australia's formidable renewable energy resource, established expertise in exporting energy and material resources critical in a decarbonised global economy powered by clean energy, and a sophisticated financial services sector capable of deploying significant capital to finance a transition to net zero. If well harnessed, these advantages could position Australia for low carbon competitiveness.



Description of work

The Australian Industry ETI is unique in bringing together multiple industries across different supply chains to engage together on research and analysis and to implement actions and projects focussed on achieving net zero emissions by mid-century. This initiative will adapt to the changing context and needs of industry over the next two years with a delivery plan that builds in flexibility and adaptability.

The “research and analysis workstream” has been designed to provide robust knowledge of the transition to net zero across the supply chains. Jointly developing research questions and insights with industry, it builds on an existing knowledge base and literature and ensures the focus of research is highly relevant and can be deeply embedded within organisations. This effectively contributes to overcoming the knowledge barrier in the transition to net zero emissions in these supply chains.

The “implementation workstream” takes a systems-transitions perspective with a focus on understanding the dynamics of different supply chains and the barriers and opportunities for change. This workstream is guided closely by the needs and interests of industry participants and other important stakeholders including the public sector. Experimentation, demonstration and shared learning from on-the-ground decarbonisation experience are critical elements for accelerating the transition towards net zero emissions supply chains by 2050. This workstream takes its cues from the interests and needs of industry and other stakeholders and leverages results from research and analysis.

Implementation will engage industry participants and other important stakeholders to identify, develop, initiate and learn from transition projects. This will include both early action projects and larger multi-stakeholder demonstration projects within and across supply chains. These projects will contribute to aligning interests, accelerating shared learning and ideally result in tangible decarbonisation in the medium term. Key themes for projects may be guided by place-based needs, regional development goals, joint infrastructure initiatives, circular economy, new markets such as hydrogen and new forms of collaboration as well as finance and business models.

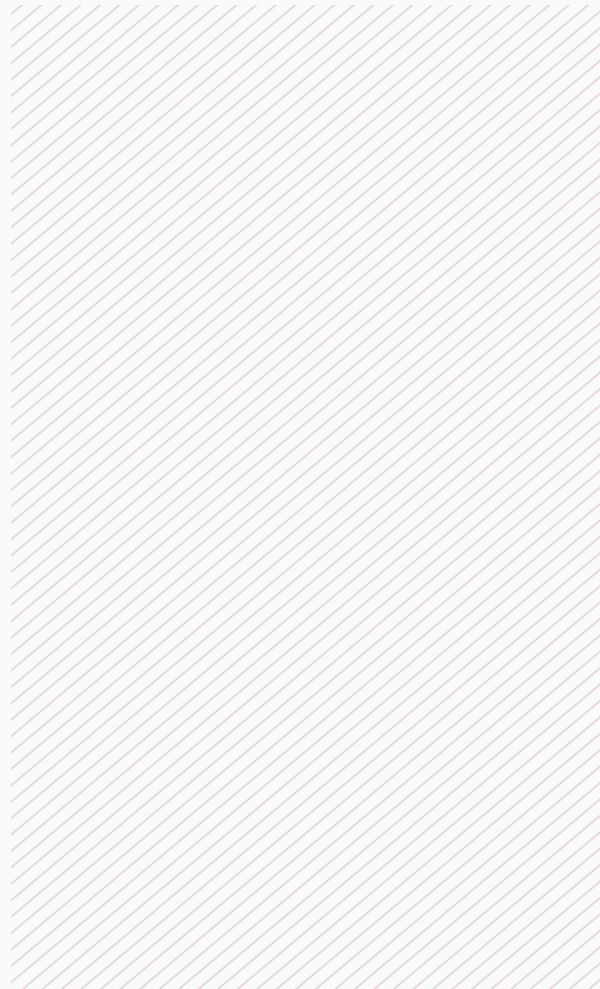
Strong engagement and communications will be key to supporting informed action by industry stakeholders towards achieving net zero emissions supply chains.

Providing opportunities for industry to come together for shared learning can accelerate the process of experimentation and learning that characterises the early stages of system transitions. Creating opportunities for shared learning is the emphasis of the engagement workstream.

The program has been designed across the three broad phases from March 2020 (already underway) to June 2022. The Phases of work are:

- **“Current situation and future possibilities”**
March 2020-March 2021
- **“Promising pathways”**
April 2021-September 2021
- **“Enabling transitions”**
October 2021-June 2022

These phases are designed to build momentum throughout the initiative while focussing on the highest priorities for the industry partners.



Outputs

Outputs and deliverables have been designed to support the initiative objectives across the three phases, which will include a combination of formal reports, as well as informal outputs to facilitate discussions, and source input and review with industry partners. The initiative will take an adaptable and flexible approach throughout, informed by evolving industry needs.

Reports will be developed to capture findings across the three workstreams, designed for delivery at the end of each phase, with an Australian and Western Australian focus. Reports and other outputs developed from the program will be published in accessible formats, communicated in simple, plain language. Findings will be backed by credible analysis and endorsed by the industry steering group. The reports and program communications will be aimed at target audiences in industry and government, anticipating some findings will also interest broader audiences.

Engagement

- Steering Group meetings, four to six per year, to create effective learning opportunities and support program governance
- Targeted or technical working group sessions with industry participants and other relevant stakeholders, including workshops, interviews and learning forums to explore cross-cutting themes or areas of interest
- Stakeholder map, engagement plan and activities for broader stakeholder groups including expert advisors, policy makers, and other relevant initiatives
- Network outreach events/activities
- Focussed outreach with Western Australian decision-makers and influencers through WA forums.

Research and analysis

The main outputs from the research workstream will be an assessment of technology options, pathways and actions towards achieving net zero emissions across each supply chain.

The research and analysis effort will be supported by one to two outputs per phase, produced at regular intervals, documenting early findings, insights and knowledge. This is designed to facilitate discussions and share insights with industry participants, including outputs focussed on Western Australia. Importantly, these will

include industry input on an ongoing basis to ensure validity and relevance of the research outputs.

Outputs for Phase 1 “Current situation and future possibilities” will include:

- A document summarising technology and energy options towards achieving net zero emissions supply chains
- A document summarising critical scenario parameters and plausible ranges for low emissions energy and technology routes
- Inputs to analysis in subsequent phases, for example baseline production, energy use and emissions by supply chain, and performance and cost projections for key low emissions technologies.

Outputs for Phase 2 “Promising pathways” will include:

- Modelled outputs covering a range of supply chain specific and Australia-wide analysis for net zero emissions, including technology, financial, energy system, economic, etc.

Outputs for Phase 3 “Enabling transitions” will include:

- Summary findings from modelled outputs and additional analysis undertaken during this phase
- Contributions (of available research findings) to the development of priority actions and any other activities/outputs undertaken in the initiative during this phase.

Implementation

- Pipeline of early-action projects taken from project ideas through to funding, with an aim of two to three projects seeking funding
- Pipeline of large, multi-stakeholder, demonstration projects taken from project ideas through to funding, with an aim of one to three project concepts at funding-ready stage, one of which focusses on WA
- Portfolio sensemaking workshops, one to two per phase, to support regular knowledge sharing and sensemaking that will enable rapid shared learning and foster project connections
- Insight reports, one to two per phase, designed for internal sharing of knowledge through project development process
- Engagements that catalyse system-transition action

Timeline

The initiative formally commenced in March 2020 and will run through to June 2022 (see page 7).

People and organisations

Industry participants from across the five supply chains will create a core group of industry and business representatives, who share an ambition of accelerating action towards achieving net zero emissions supply chains by 2050.

This will include engaging with a wide range of industry and business representatives from across supply chains as well as the public sector, broader business community, research and innovation community, education sector and non-government organisations.

The initiative is jointly convened and the program team is staffed by ClimateWorks Australia and Climate-KIC Australia. It will draw on the expertise of key delivery partners Rocky Mountain Institute and CSIRO, as well as the Energy Transitions Commission's experience and network.

The initiative's steering group is chaired by Simon McKeon AO, Chancellor of Monash University, former CSIRO Chairman and public company director.

The Australian Industry ETI is funded by a combination of philanthropy, industry participants and the Australian Renewable Energy Agency (ARENA), on behalf of the Australian government.

There are a number of other initiatives that cover issues or sectors relevant to this initiative such as CRC's, NERA, Mission Innovation and LeadIT. The program team is in dialogue with other programs and areas of work to explore synergies, to ensure our work is complementary.

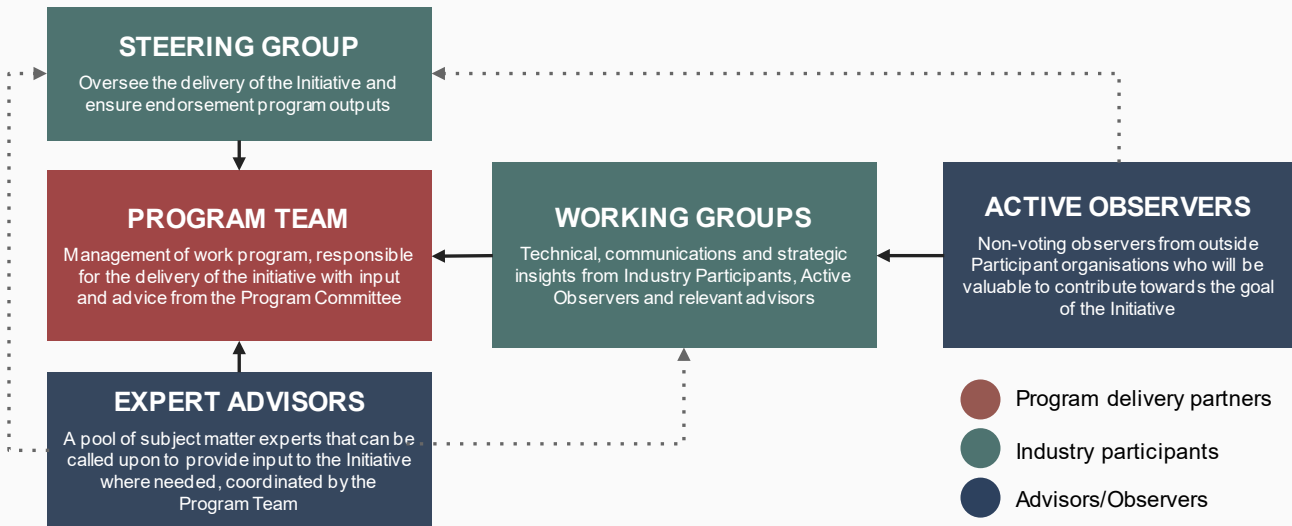


Governance

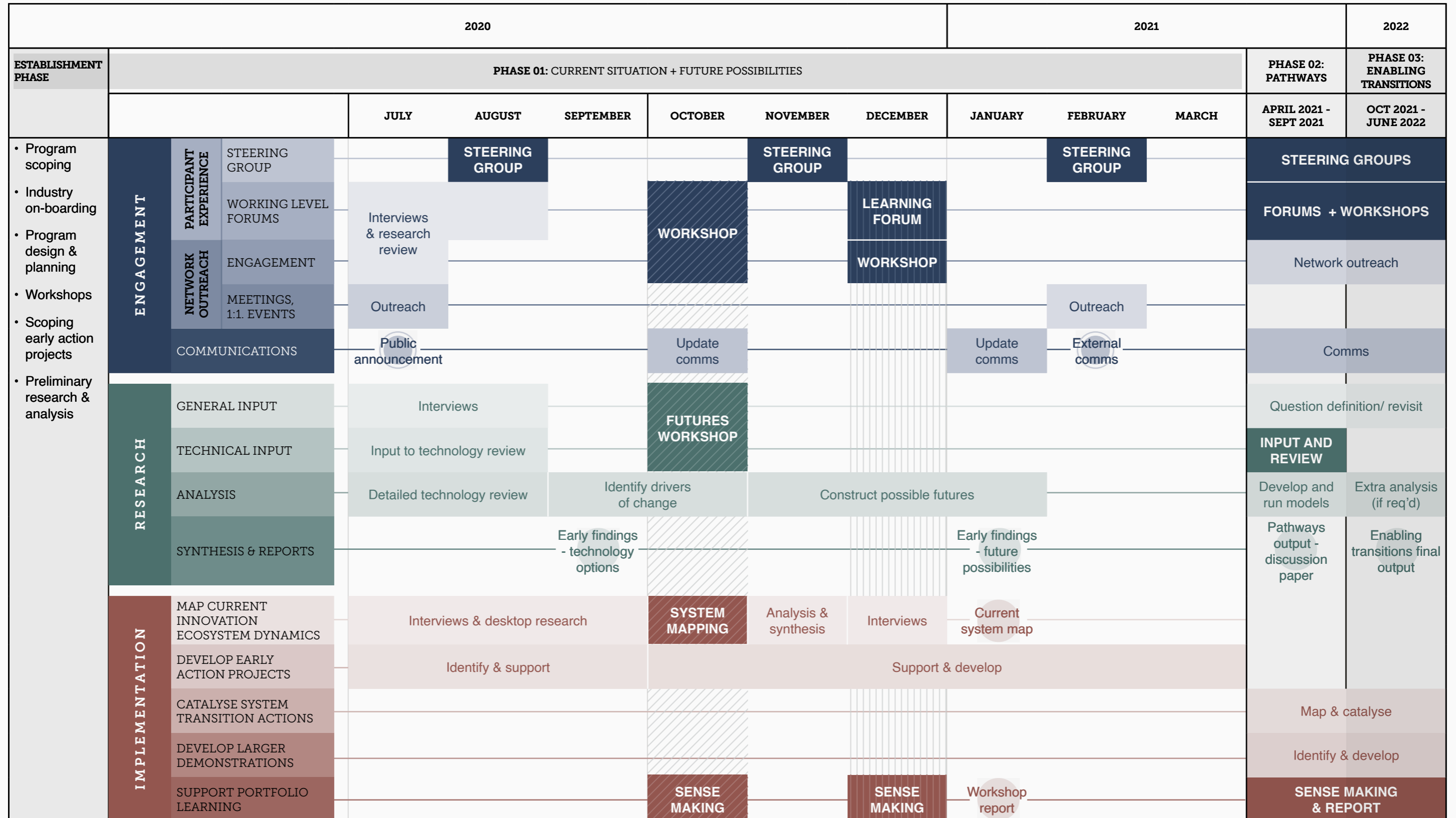
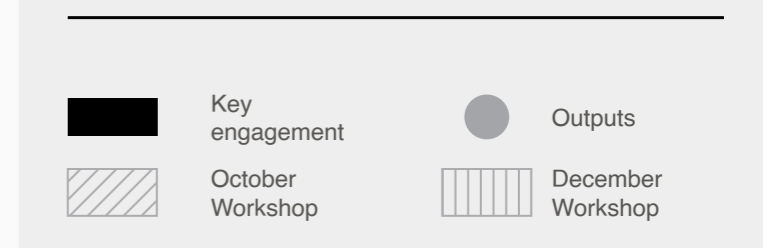
Participant organisations are essential to the functioning of the Australian Industry ETI. Each participant organisation nominates a representative for the steering group, which endorses the work program and formal outputs developed by the program team. The initiative will involve nominated representatives from participating organisations on the working groups and will also draw on subject matter experts from the advisory panel.

Supporting organizations such as AI Group and AIGN will contribute expertise to the initiative through working groups and may also be invited to observe the steering group meetings, however they will not have a role in decision making as part of the steering group.

The structure and interaction of these groups and a summary of their members, roles and responsibilities is presented below:



Work program timeline



FURTHER INFORMATION

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Australian Industry Energy Transitions Initiative

An initiative jointly convened by ClimateWorks Australia
and Climate-KIC Australia