



HILTCRC



HEAVY INDUSTRY LOW-CARBON TRANSITION

**YEAR TWO IN REVIEW
OCTOBER 2022-2023**



[HILTCRC.COM.AU](https://www.hiltcrc.com.au)

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ABOUT HILT CRC

In its second full year of operation, the Heavy Industry Low-carbon Transition Cooperative Research Centre (HILT CRC) has continued to bring together industry, research, and government to develop and de-risk technologies that will facilitate a low-carbon heavy industry sector.

We are targeting the processes and policies needed to decarbonise the iron and steel, alumina and cement and lime sectors to enable net zero by 2050. This has the potential to unlock billions of dollars of annual revenue and investments, safeguard over 300,000 existing jobs, create thousands more, and revolutionise heavy industry – all while mitigating CO₂ emissions.

The urgency to meet net-zero by 2050, and decarbonise heavy industry is greater than ever. Through our industry led research programs and projects, together with access to world class researchers, we can solve the technical challenges for heavy industry to take this journey.

VISION

A PROSPEROUS HEAVY INDUSTRY SECTOR AT THE FOREFRONT OF THE GLOBAL LOW-CARBON TRANSITION.

MISSION

TO DE-RISK THE TECHNOLOGY PATHWAYS NEEDED BY AUSTRALIA'S HEAVY INDUSTRY TO BE INTERNATIONALLY COMPETITIVE IN THE TRANSITION TO LOW-CARBON PRODUCTS.

SECOND YEAR KEY ACHIEVEMENTS

6 NEW PARTNERS JOINED IN 2023
WITH 2 NEW PARTNERS IN PROGRESS

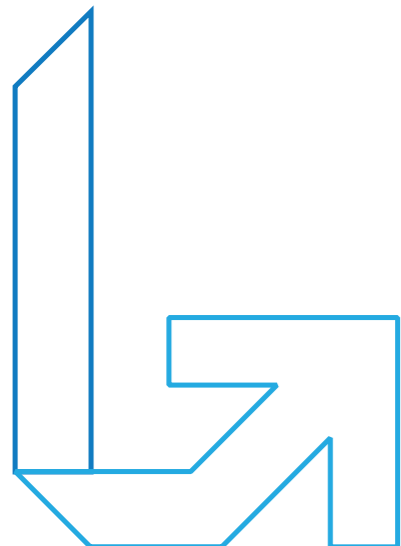
4 MORE INDUSTRY PHD'S COMMENCED

16 QUICKSTART PROJECTS EXECUTED AND COMPLETED

\$6.7M PROJECT INVESTMENT VALUE (CASH AND IN KIND)

14 NEW PROJECTS APPROVED
INCLUDING 12 EVALUATION PROJECTS AND 2 THREE-YEAR TECHNOLOGY DEVELOPMENT AND DEMONSTRATION PROJECTS

\$11.1M PROJECT INVESTMENT VALUE (CASH AND IN KIND)





MESSAGE FROM THE CHAIR

I am delighted to present my second Chair's report on behalf of the board of HILT CRC. Our mission is to de-risk the technology pathways needed by Australia's heavy industry to be internationally competitive in the transition to low-carbon products. Over the last few years, we've seen dramatic climate related fires, droughts, ice melts and cyclones. With recent record-breaking high temperatures over much of the northern hemisphere, the need to decarbonise to contain global warming within 2 degrees makes our mission even more critical.

With just over two years since the incorporation of HILT CRC we have all made great progress. This progress has been achieved with a united spirit of collaboration, innovation, and commitment from all involved. We said goodbye to Felicity Lloyd this year who had a large impact overseeing the establishment phase of HILT CRC during her time as CEO, and we welcomed the appointment of our new CEO, Jenny Selway, our Strategic and Initiatives Partnerships Director Jordan Parham, and our Research Portfolio Manager, Scott Groom. We also announced the appointment of Brian McDonald from Roy Hill as our Steering Committee Chair replacing David Cochrane upon his retirement. I'd like to take this opportunity to thank David for all his hard work with chairing the Steering Committee in HILT CRC's early establishment phase and wish him all the best for his retirement. Furthermore, we welcomed Dian Olwagen from Grange Resources who commenced in the role as Industry Chair for Program 1.

We hit some key milestones and moved beyond the establishment phase and observed how the multi-skilled Board and its Committees, the CEO and her team, and the Research Advisory Committees and the Steering Committee structure has successfully developed, approved and delivered our Quickstart projects. We are now working together as we develop our research programs for the future.

I am constantly impressed by the output from our small management team, who maintain high standards of professionalism and the collaborative approach they each bring to HILT CRC as we work together to decarbonise heavy industry.

Some of my personal highlights from this year include:

- The successful completion of our 16 Quickstart projects and their outcomes, which have now led to longer term research projects.
- Witnessing the enthusiasm from our research and industry partners as we move into our 3-year project development phase.
- Welcoming our 6 new partners who join our current partners, and new head office staff.

The extraordinary progress we have made this year is due to the hard work of our all our Partners and staff, and I'd like to personally thank everyone for their energy, commitment and consistency in driving HILT CRC forward.

I look forward to continuing working with you all and achieving our vision that **Australia's heavy industry sector not only survives, but thrives over the coming decades with improved technological capabilities and cost competitiveness.**

SUSAN JEANES
Chair
HILT CRC



MESSAGE FROM THE CEO

I am thrilled to be writing this report as Chief Executive Officer of HILT CRC. Well into our second year, HILT has moved past the establishment phase and is now fully focussed on delivering on our strategy.

It is an exciting time as our Quickstart project results come in. We are demonstrating that Australian iron ores are suited to decarbonised iron ore and steel processes through careful consideration and de-risking of processing pathways. Bauxite processing into Alumina can incorporate variable renewable electricity, combined with storage options and recycling of steam to enable net zero operations. Carbon capture, utilisation and storage and supplementary cementitious materials may be utilised to reduce emissions from the cement and lime sector. We have a range of green heat, alternative fuel and hydrogen projects that cut across our industries and demonstrate that circular thinking is fundamental to decarbonise these hard to abate sectors. And our Facilitating Transformation program is delivering research into enabling factors such as carbon mapping, global trade policy implications, and market factors for green products.

To visualise these results, we have built diagrams demonstrating the "patchwork quilt" of processing pathways and industrial linkages. These are facilitating development of the next phase of our research where we will have fewer, longer projects and a focus on project management compared to development. We pride ourselves on our industry lead governance structure, and are proposing changes to become more efficient, while ensuring flexibility and the ability to pivot in this new phase.

This year has also seen continued progression of the Education and Training program with the commencement of 4 higher degree research scholarship students and an additional 7 student agreements in progress.

"AS CEO IT IS BOTH HUMBLING AND INSPIRING TO CONSIDER THAT WE HAVE OVER 100 RESEARCHERS AND 30 INDUSTRY PARTNER REPRESENTATIVES, ALL COMMITTED TO COLLABORATION THROUGH HILT TO DE-RISK DECARBONISATION OF HEAVY INDUSTRY."

We have kicked off our short course program, with 3 courses approved and expected to start this financial year. Our internships program has received renewed focus, and we are hoping to place our first students this summer.

Beyond short-term program delivery, HILT is well placed to deliver on our long-term vision. We welcomed six new partners this year with an additional two in progress. Our P3 roundtables and Queensland Hub provided excellent networking opportunities, and HILT management has met with several state and commonwealth government representatives to strengthen our relationships with external stakeholders. HILT has been represented at 13 conferences domestically and internationally, and we continue to benefit from our facilitation of Australia's co-leading role of the Net Zero Industries Mission of Mission Innovation. We are also considering HILT's potential role in the coordination of pilot and demonstration plant infrastructure in future years. Combined, these form part of our longer-term strategy to deliver a heavy industry sector at the forefront of the global low-carbon transition.

I would like to thank everyone involved for the outcomes described in this report. We are a small management team, but as CEO it is both humbling and inspiring to consider that we have over 100 researchers and 30 industry partner representatives, all committed to collaboration through HILT to de-risk decarbonisation of heavy industry.

I am excited to work with all of you to deliver on that vision.

JENNY SELWAY
CEO
HILT CRC

OUR PARTNERS

Together with our partners, we are seeking to develop and demonstrate low-carbon technologies that will help transition the steel, iron, alumina, and cement industries to decarbonise heavy industry and grow Australia's economy.

We currently have 50 partners, comprising of 9 research partners, 36 industry partners and 5 government partners.

The commencement and further development of three-year projects from 2023 will provide compelling opportunities for new partners to join us and play a key role in developing low-carbon technologies.

CORE PARTNERS



KEY PARTNERS



AFFILIATE PARTNERS



ASSOCIATE PARTNERS



OUR RESEARCH

Over the last 12 months, our teams of researchers have worked closely with industry to focus research on the practical challenges that companies face to de-risk the technology pathways needed to decarbonise their heavy industrial processes.

Our 16 completed Quickstart projects were largely scoping in nature with durations ranging from 6-12 months, providing results that have led to new longer duration projects.

We are now developing a framework for the next phase of our research programs that reflects a transition from HILT CRC's establishment phase to a strategic one that will manage a coordinated set of three-year projects. These projects will be designed to de-risk the technologies that are best aligned with the priorities of the heavy industry sector to accelerate its decarbonisation.

CIRCULAR ECONOMY

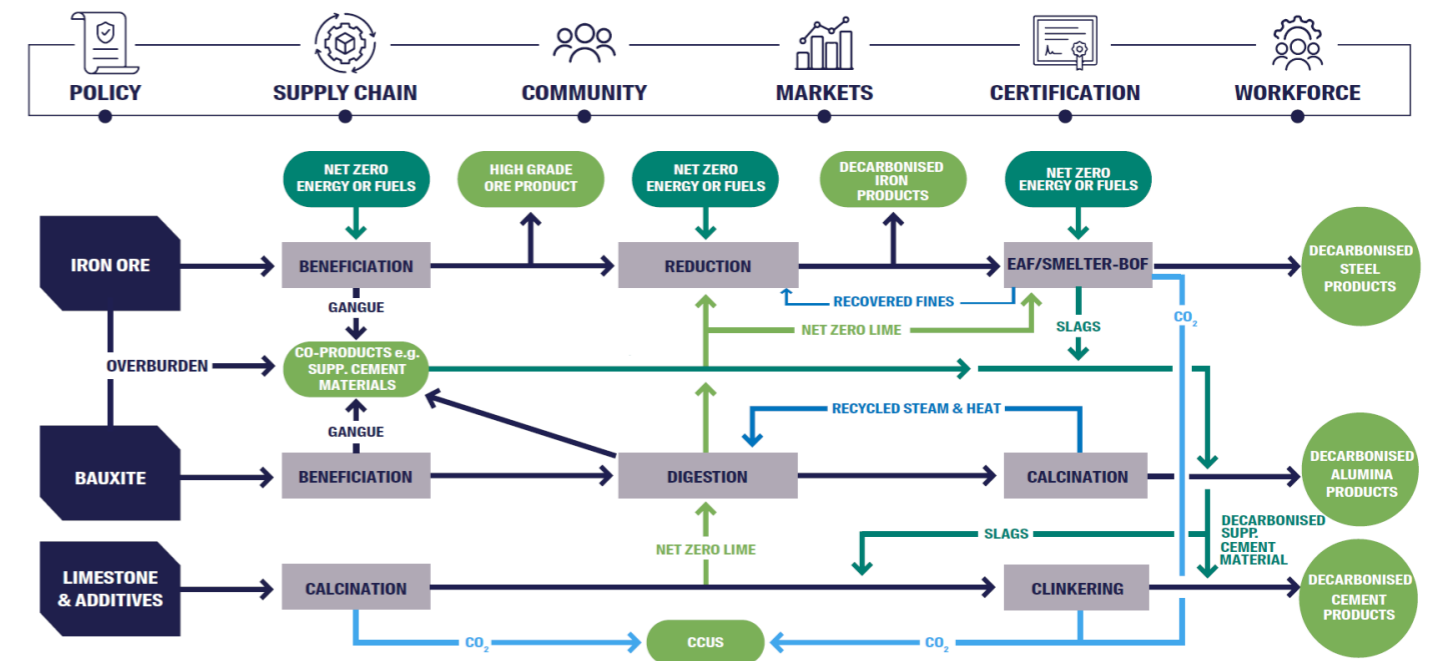
HILT is considering the complete industrial process from raw materials to end product, including waste and by-products, together with new linkages between these industries. Understanding and optimising the linkages between these processes is an important aspect of lowering the cost of decarbonisation.

OUR RESEARCH AT A GLANCE

16 QUICKSTART PROJECTS WITH A TOTAL VALUE OF **\$6.7M** ENGAGING 29 HILT CRC PARTNERS
CASH AND IN KIND FUNDING

14 NEW PROJECTS APPROVED IN 2023 (12 EVALUATION AND 2 DEVELOPMENT PROJECTS) ENGAGING 23 HILT CRC PARTNERS
CASH AND IN KIND FUNDING

AVERAGE OF **7 PARTNERS** PER NEW PROJECT



PROJECT HIGHLIGHTS

16 Quickstart projects have been completed in 2023 with a total value of \$6.7M, engaging 29 HILT CRC Partners. Refer to hiltcrc.com.au for more details on each project.

Highlights of these project outcomes include:



PROGRAM 1 PROCESS TECHNOLOGIES

PROJECT	INDUSTRY	PROJECT OUTCOMES	PROJECT LEAD	HILT CRC PARTNERS
RP1.001 Understanding and eliminating adverse materials behaviour during and after direct reduction in shaft and fluidised bed processes Total Project Value (Cash and In Kind): \$329,006	Iron Ore & Steel	Adverse Iron ore fines material behaviours in fluidised beds (Sticking) potentially controllable through coatings and temperature control. This result has led to a new 3-year project 1.012: Prevention of Sticking in H ₂ fluidised bed DRI production	Associate Professor Tom Honeyands, The University of Newcastle	CSIRO, Fortescue, Liberty, Roy Hill, The University of Newcastle
RP1.004 Impact of Hydrogen DRI on Melting in an Electric Furnace Total Project Value (Cash and In Kind): \$401,642	Iron Ore & Steel	Competitive green steel production is potentially feasible using lower grade Australian ores but requires de-risking of several technologies. Further projects are being developed into smelter technology.	Professor Geoffrey Brooks, Swinburne University of Technology	Australian National University, Fortescue, Grange Resources, Liberty, Roy Hill, Mitsubishi Heavy Industries Group, Swinburne University of Technology
RP1.005 Hydrogen Ironmaking: fluidised bed H ₂ DRI with Australian focus Total Project Value (Cash and In Kind): \$405,912	Iron Ore & Steel	Competitive green steel production is potentially feasible using lower grade Australian ores but requires de-risking of several technologies. Further projects are being developed into smelter technology.	Associate Professor John Pye, Australian National University	Australian National University, Fortescue, Grange Resources, Liberty, Roy Hill, Mitsubishi Heavy Industries Group, Swinburne University of Technology



PROGRAM 1 PROCESS TECHNOLOGIES

PROJECT	INDUSTRY	PROJECT OUTCOMES	PROJECT LEAD	HILT CRC PARTNERS
RP1.006 Scoping study of the viability of high flux thermal pre-treatment of low-grade iron ores for improved liberation, beneficiation, and quality Total Project Value (Cash and In Kind): \$420,371	Iron Ore & Steel	Efficient heating of crushed ore prior to grinding can yield significant net benefits in beneficiation, reducing energy by grinding >30%, while increasing magnetism and Fe content, with high Fe recovery (>70%). This result has led to a new project RP1.008: Green pyromet/hydromet beneficiation pathways, to investigate this further.	Dr Alfonso Chinnici, The University of Adelaide	CSIRO, Fortescue, Liberty, Roy Hill, The University of Adelaide
RP1.002 Evaluation of Thermal Storage and MVR use to allow variable renewable input for steam in alumina production Total Project Value (Cash and In Kind): \$402,860	Alumina	Promising opportunities to increase viability of variable renewable energy for steady steam supply in the Bayer process through the use of combinations of solar and wind energy inputs with either Thermal Energy Storage or Compressed Air Energy Storage, and coupled with efficient recycling of energy within the process.	Dr Andrew Beath, CSIRO	CSIRO, South32, The University of Adelaide, Worley
RP1.007 Preliminary assessment of technical and economic feasibility of key options for low carbon alumina calcination Total Project Value (Cash and In Kind): \$518,537	Alumina	Plausible pathways to recover steam from both calcination and Bayer circuit in alumina processing have been identified with strong potential to increase viability of net zero operation.	Dr Woei Saw, The University of Adelaide	CSIRO, South32, The University of Adelaide, Calix, Worley, 1414', Queensland University of Technology, TEK7
RP1.003 Scoping study assessing potential of clay, bauxite residue and iron making by-products for producing alternative construction materials for HILT partners Total Project Value (Cash and In Kind): \$526,963	Cement & Lime	Red Muds and Clay residues from iron ore and bauxite mining has opportunity as a supplementary cementitious material.	Dr Woei Saw, The University of Adelaide	Adbri, CSIRO, The University of Adelaide, Calix, FCT Combustion



PROGRAM 2 CROSS-CUTTING TECHNOLOGIES

PROJECT	INDUSTRY	PROJECT OUTCOMES	PROJECT LEAD	HILT CRC PARTNERS
RP2.001 RP2.001 Green hydrogen supply modelling for industry Total Project Value (Cash and In Kind): \$120,456	Hydrogen Alumina Cement & Lime Iron Ore & Steel	A modelling tool has been developed to allow industry to estimate local costs of green hydrogen production, with storage, for their requirements. Assumptions from this project will be tested in more depth in the follow-on study RP2.006: Hydrogen supply within HILT regional hubs.	Associate Professor Joe Coventry, Australian National University	Australian National University, Grange Resources, 1414, Hatch
RP2.005 Hydrogen utilisation in industrial processes: understanding technical risks and impacts on demand Total Project Value (Cash and In Kind): \$425,900	Hydrogen Alumina Cement & Lime Iron Ore & Steel	Investigated hydrogen utilisation in Vertical shaft furnaces for green iron pellet production in Australia.	Dr Liezl Schoeman, CSIRO	CSIRO, Grange Resources, Worley, Hatch, Queensland University of Technology
RP2.003 Green Heat for Industry Total Project Value (Cash and In Kind): \$812,652	Thermal Energy Storage Alumina Cement & Lime Iron Ore & Steel	Thermal Energy Storage is a promising option for continuous supply of heat to industry (excluding co-location and transportation issues).	Associate Professor John Pye, Australian National University	Adbri, Australian National University, CSIRO, Fortescue, Grange Resources, South32, The University of Adelaide, Mitsubishi Heavy Industries Group, Worley, Hatch, Heliogen, WSP
RP2.002 Assessing carbon utilisation and recycling opportunities for the Australian heavy industry sector from a regional hub perspective Total Project Value (Cash and In Kind): \$515,705	Carbon Capture, Utilisation & Storage Alumina Cement & Lime Iron Ore & Steel	Developed a multi criteria analysis tool to assess CO ₂ utilisation options, identifying mineral carbonation as a promising pathway for the iron ore and steel industry.	Professor Greg Metha, The University of Adelaide	Adbri, The University of Adelaide, The University of Newcastle, DIMER
RP2.004 A roadmap for carbon capture, utilisation and storage for production of low emission cement and lime in Australia Total Project Value (Cash and In Kind): \$454,894	Carbon Capture, Utilisation & Storage Alumina Cement & Lime Iron Ore & Steel	Developed a roadmap for CCUS from cement and lime considering carbonisation, fuels, chemicals, geo-storage etc.	Dr Hai Yu, CSIRO	Adbri, CSIRO, The University of Adelaide, Calix, UNO Technology, Cement Industry Federation



PROGRAM 3 FACILITATING TRANSFORMATION

PROJECT	INDUSTRY	PROJECT OUTCOMES	PROJECT LEAD	HILT CRC PARTNERS
RP3.001 Review of regional hub development (and the transition to a zero-carbon heavy industry) Total Project Value (Cash and In Kind): \$356,375	Alumina Cement & Lime Iron Ore & Steel	Investigated how hydrogen can best be utilised in HILT locations, as well as best practices for the establishment of hydrogen hubs. This has led to a new project further developing Hydrogen hubs in HILT locations: RP2.006: Hydrogen supply within HILT regional hubs.	Associate Professor Liam Wagner, Curtin University	Curtin University, The University of Adelaide, Department for Energy and Mining (SA Government), Fortescue
RP3.002 Lifecycle analysis of current Australian heavy industrial processes Total Project Value (Cash and In Kind): \$391,300	Alumina Cement & Lime Iron Ore & Steel	Specific cradle to gate carbon footprints have been calculated for Haematite ore, Magnetite concentrate; Steel; Cement and Alumina.	Professor Michele John, Curtin University	Curtin University, Fortescue, South32, The University of Adelaide, Queensland University of Technology
RP3.003 Review of Trade and regulatory implications (and emerging international government and trade policies in relation to emission-reduction objectives). Total Project Value (Cash and In Kind): \$346,120	Alumina Cement & Lime Iron Ore & Steel	Mapped trade impacts from decarbonisation policies for 10 countries. Biggest impacts for aluminium via financial subsidies in China & India; for Iron/Steel from US regulation; for Cement/Lime from tariffs.	Professor Peter Draper, The University of Adelaide	Curtin University, Fortescue, South32, The University of Adelaide, GPA

NEW PROJECTS

14 projects have been approved in 2023 with a total value of \$11.1M, engaging 23 HILT CRC Partners. Refer to hiltcrc.com.au for more details on each project.



PROGRAM 1 PROCESS TECHNOLOGIES

PROJECT	INDUSTRY	STATUS	PROJECT LEAD	HILT CRC PARTNERS
RP1.008 Green pyromet/hydromet beneficiation pathways Total Project Value (Cash and In Kind): \$1,047,024	Cement & Lime Iron Ore & Steel	Commenced 01 June 2023	Dr Alfonso Chinnici, The University of Adelaide	The University of Adelaide, Australian National University, Curtin University, South32, Fortescue, Roy Hill, Calix, Liberty
RP1.009 Testing of Australian Iron Ores in a hydrogen direct flash smelting process Total Project Value (Cash and In Kind): \$574,693	Iron Ore & Steel	Commenced 01 June 2023	Professor Geoff Brooks, Swinburne University of Technology	Calix, The University of Adelaide, Swinburne University of Technology, Fortescue, Grange Resources, Liberty, Roy Hill
RP1.010 Hybrid hydrogen direct and plasma reduction of iron ore Total Project Value (Cash and In Kind): \$530,483	Iron Ore & Steel	Commenced 01 June 2023	Dr Alireza Rahbari, Australian National University	Australian National University, Swinburne University of Technology, Roy Hill, Grange Resources, Fortescue, CSIRO
RP1.011 The upgrading of iron ore for DRI production using products from seawater RO brines Total Project Value (Cash and In Kind): \$622,000	Iron Ore & Steel	Commenced 01 August 2023	Professor Jacques Eksteen, Curtin University	Curtin University, The University of Adelaide, Fortescue, Roy Hill
RP1.012 (3-year project) Prevention of Sticking in H ₂ fluidised bed DRI production Total Project Value (Cash and In Kind): \$2,762,162	Iron Ore & Steel	Commenced 01 October 2023	Associate Professor Tom Honeyands, The University of Newcastle	The University of Newcastle, Australian National University, Swinburne University of Technology, Roy Hill, Fortescue, Grange Resources



PROGRAM 2 CROSS-CUTTING TECHNOLOGIES

PROJECT	INDUSTRY	STATUS	PROJECT LEAD	HILT CRC PARTNERS
RP2.006 Hydrogen Supply within HILT Regional Hubs – H ₂ Cost and Synergistic Opportunities Total Project Value (Cash and In Kind): \$617,682	Alumina Cement & Lime Iron Ore & Steel	Commenced 01 June 2023	Dr Tara Hosseini, CSIRO	The University of Adelaide, Australian National University, Curtin University, South32, Fortescue, Roy Hill, Calix, Liberty
RP2.007 (3-year project) Feasibility combustion study to identify challenges and opportunities for hydrogen into iron and cement sectors Total Project Value (Cash and In Kind): \$1,848,868	Alumina Cement & Lime Iron Ore & Steel	Commenced 01 June 2023	Dr Alfonso Chinnici, The University of Adelaide	CSIRO, Grange Resources, Worley, Hatch, Queensland University of Technology
RP2.008 Lost production and variability Total Project Value (Cash and In Kind): \$289,219	Alumina Cement & Lime Iron Ore & Steel	Commenced 01 June 2023	Associate Professor John Pye, Australian National University	Australian National University, The University of Adelaide, Adbri, Grange Resources, Primetals
RP2.009 Advancing the viability of high-temperature thermal energy storage for industrial applications Total Project Value (Cash and In Kind): \$924,324	Alumina Cement & Lime Iron Ore & Steel	Commenced 01 July 2023	Associate Professor Joe Coventry, Australian National University	Australian National University, CSIRO, Queensland University of Technology, The University of Adelaide, Fortescue, South32, 1414', Liberty, Adbri
RP2.010 Utilisation of RDF in industrial processes: understanding the value proposition, risks and supply chains Total Project Value (Cash and In Kind): \$353,025	Cement & Lime Iron Ore & Steel	Commenced 01 June 2023	Dr Woei Saw, The University of Adelaide	The University of Adelaide, ResourceCo, CSIRO, Adbri, Sumitomo, Calix, University of Canterbury

NEW PROJECTS

PROJECT	INDUSTRY	STATUS	PROJECT LEAD	HILT CRC PARTNERS
RP2.011 Thermal Energy Recovery using High-Temperature Heat Pumps Total Project Value (Cash and In Kind): \$235,979	Alumina	Commenced 01 September 2023	Dr Azadeh Jafari, The University of Adelaide	The University of Adelaide, The University of Newcastle, South32
RP2.012 Opportunities for Bioenergy in Australian Heavy Industry Total Project Value (Cash and In Kind): \$340,585	Alumina Cement & Lime Iron Ore & Steel	Commenced 01 October 2023	Dr San Shwe Hla, CSIRO	CSIRO, Queensland University of Technology, Grange Resources, Forest Products Commission, The University of Adelaide



PROGRAM 3 FACILITATING TRANSFORMATION

PROJECT	INDUSTRY	STATUS	PROJECT LEAD	HILT CRC PARTNERS
RP3.004 Intermediate product exports for Australia-China green steel Total Project Value (Cash and In Kind): \$487,489	Iron Ore & Steel	Commenced 01 June 2023	Dr Jorrit Gosens, Australian National University	Australian National University, Curtin University, Roy Hill, Fortescue, Grange Resources, Liberty
RP3.005 Market, cost and locational factors for green iron and steel in Australia Total Project Value (Cash and In Kind): \$525,136	Iron Ore & Steel	Commenced 01 June 2023	Professor Frank Jotzo, Australian National University	Australian National University, Swinburne University of Technology, The University of Adelaide, Queensland University of Technology, Liberty, Fortescue

STUDENT PROJECTS

RESEARCH PROGRAM	PROJECT TITLE	STUDENT	POSTGRADUATE PROGRAM	RESEARCH INSTITUTION	COMMENCEMENT DATE	EXPECTED COMPLETION DATE
1. PROCESS TECHNOLOGIES	Assessment of Hydrogen driven Alumina Calcination Process	Daniel Ang	PhD	The University of Adelaide	May 2022	March 2026
1. PROCESS TECHNOLOGIES	Low-Carbon Alumina Calcination	Siyun Ning	PhD	The University of Adelaide	August 2022	December 2024
1. PROCESS TECHNOLOGIES	CFD-DEM Modelling of the Direct Reduction of Iron Ore in a Shaft Furnace	Renae O'Hara	PhD	The University of Adelaide	May 2022	June 2026
1. PROCESS TECHNOLOGIES	CFD simulation of hydrogen plasma reduction ironmaking	Christopher Cooper	PhD	Australian National University	February 2023	August 2026
2. CROSS-CUTTING TECHNOLOGIES	Synthesis and Application of Metal-Organic Frameworks for Carbon Dioxide (CO ₂) Capture	Sofia Lazareva	PhD	The University of Adelaide	August 2023	January 2026
3. FACILITATING ACTIVITIES	Development of the first low-carbon transition roadmap for iron ore and steel	Matthew Rumsa	PhD	Curtin University	July 2022	October 2025
3. FACILITATING ACTIVITIES	Development of low-carbon transition plan for the alumina industry and HILT partners	Marcus Byrne	PhD	Curtin University	July 2022	December 2025
3. FACILITATING ACTIVITIES	Low-carbon transition roadmap for the Australian cement and lime industry	Elio Adragna	PhD	Curtin University	January 2023	July 2026
3. FACILITATING ACTIVITIES	Leadership and Governance of low-carbon Transition (LCT) for Australian Industry	Don Wijaysinghe	PhD	Curtin University	August 2023	February 2026

OUR PEOPLE
BOARD



SUSAN JEANES, CHAIR



ANTHONY WOOD, DEPUTY CHAIR



NEIL GOODMAN



RICHARD HILLIS



KYRA REZNIKOV



MIKKO HUPA



BILL TE KLOOT



RAY MOSTOGL

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ADRIEN GUIRAUD, CO-RESEARCH LEAD - PROGRAM 1



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PROFESSOR PETER ASHMAN, RESEARCH LEAD - PROGRAM 2



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PROFESSOR MICHELE JOHN, RESEARCH LEAD - PROGRAM 3



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PROFESSOR MAZIAR ARJOMANDI, EDUCATION AND TRAINING DIRECTOR



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LOUISE BEAZLEY, ADMINISTRATION MANAGER



JOANNE NIKOLAS, COMMUNICATIONS COORDINATOR





hiltcrc.com.au

General enquiries
enquiries@hiltcrc.com.au

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hiltcrc.com.au/connect

Acknowledgement of Country

HILT CRC would like to respectfully acknowledge the Traditional Owners of the ancestral lands throughout Australia and their continuing connection to the land, waters and culture and pay our respects to them, their cultures and to their Elders past, present and emerging.



Australian Government
Department of Industry,
Science and Resources

AusIndustry
Cooperative Research
Centres Program