

CEEC Annual Report 2020



ABOUT CEEC

CEEC helps deliver positive change by collaborating, communicating and celebrating outstanding and inspiring advances across industry worldwide.

Since 2011, our not-for-profit work has helped industry actively share site best practices and improvements, and support step-change innovation. The focus is on energy-efficient comminution and processing, integrated across mining steps, to reduce footprint, enhance efficiency and productivity.

CEEC provides free tools, CEEC Medal success stories, and a resource centre that link users to peer-reviewed site case studies and demonstrated advances. Our Global Energy Curves program provides a suite of tools that enable sites to independently benchmark their energy usage, and plan, track and demonstrate improvements.

Companies use our resources to improve site performance and footprint, and maximise shareholder value and community support.

With the support of our visionary sponsors, we continue to build a global network, provide the latest resources, and communicate cuttingedge advances.

Please contact our team and keep the conversation going on LinkedIn and Twitter. Mike Battersby, Chair: mbattersby@maelgwyn.com Alison Keogh, CEO: admin@ceecthefuture.org Clare Edwards, Events and Stakeholder Coordinator: events@ceecthefuture.org Communication and media enquiries: comms@ceecthefuture.org



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NOTE FROM THE CHAIR

I am pleased to say that CEEC has gone from strength to strength during the year. This is despite having to deal with the difficult working environment that occurred with the arrival of the COVID-19 pandemic during the second half of CEEC's financial year. We continue to have extremely strong support from our sponsors, with existing sponsors renewing with purpose and new sponsors committing with enthusiasm. It demonstrates that CEEC's vision and mission are firmly established in the minds of our industry.

A few of the activities achieved for the year were the delivery of the METS Ignited project, the enhancement of the Energy Curves, the continuation of the ever-increasing industry esteem of the CEEC Medal and then establishing water conservation, in addition to energy, as a key facet of CEEC's objectives.

The Board of Directors have been hard working as ever. In addition to Director's duties, they have contributed to the various behind-the-scenes working committees that assist the CEO with her deliverables. The membership of the Board continues to be stable but with a view to succession planning and broadening CEEC's horizons. This year we welcomed Bryan Rairdan (pictured, centre), who is based in Canada and Technical Director with Teck Resources Limited. Finally, I wish to thank our CEO, Alison Keogh (pictured), for all her hard work, especially through the challenges of the pandemic. Being not-forprofit, CEEC is a lean organisation and continues to be a success not least due to the amazing efforts of Alison.

Michael Battersby



FROM THE CEO'S DESK

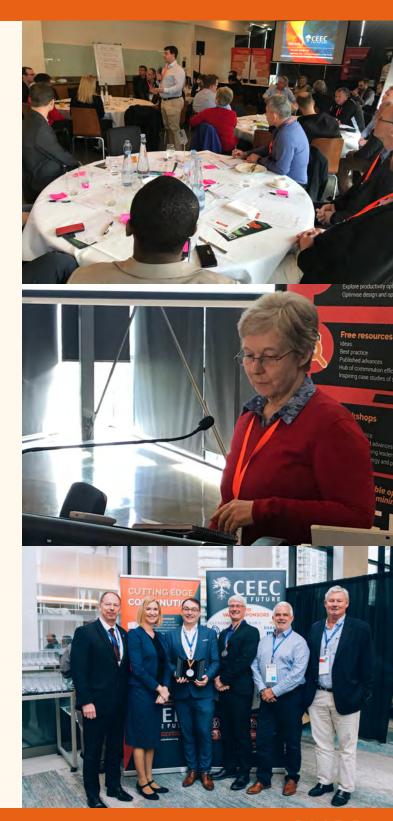
I am pleased to report on our year ending June 2020 – a time of active delivery, growth and change.

Delivery to our network: CEEC completed a highly successful METS Ignited-funded project, delivering five workshops around Australia and 10 enhancements to the Energy Curves program. On the international stage we presented 2019 winners their CEEC Medals in Canada at the SAG Conference and in Australia at the combined MetPlant and World Gold conferences. Directors presented and hosted Roundtables at Mines & Technology London and we ran a highly successful workshop in Vancouver.

Stronger support: Support for CEEC grew, with strong engagement through our workshops and growth in our sponsor group. Current CEEC sponsors at November 2020 are listed at the back of this report, and we were pleased to welcome the following new sponsors announced or joined during the 19/20 financial year:

- Teck Resources
- Lundin Mining
- ME Elecmetal
- Molycop
- University of Adelaide IMER
- Newcrest
- Hudbay Minerals
- · Thermo Fisher Scientific

Since then more sponsors have joined, and we are proud to have a growing, strong, and active group of visionary leaders who support



CEEC's work to drive energy efficient approaches across industry. Key benefits cited by our sponsors are to support our public good work, including our Energy Curves program, unique industry role, networking, professional development in comminution and processing best practices and advances, and practical support for ESG actions. Our role is being increasingly acknowledged through mining media, social media and company statements, such as Lundin Mining's recognition of CEEC sponsorship in their 2019 Sustainability Report.

Workshops and pivot to online: Participant feedback was excellent, with attendees reporting excellent and very good feedback on most aspects, as shown later in this report. With the pandemic onset, like all organisations, CEEC implemented COVID-safe plans, stopping travel and we are in the process of pivoting our events to online. CEEC also ramped-up regular, active sponsor meetings and planned the first online presentations, workshops and webinars which will begin to be delivered in financial year 20/21.

Emerging water theme: In the beginning of a new chapter for CEEC, together with CMIC we held a first workshop in Vancouver focused on water, with strong support from Teck Resources Ltd. to host and KPMG to facilitate. Participants were highly engaged and provided expert input and insights to help shape a new project on Water Curves which will benefit industry. The aim is to build on Energy Curves with a new tool that helps industry collaborate, benchmark and improve water usage, with a focus on the water intensity of key mineral processing steps. Funding commitments and project start have been delayed by the pandemic.

A 14-month project has been planned to develop pilot curves ready for industry feedback. Early work is promising and exciting, with an approach focused on water intensity of unit processes. The aim is a new benchmarking tool to better understand opportunities to improve water usage and recycling, and promote sharing of best practices, equipment options and approaches across industry.

Industry change: As we approach an exciting milestone - our ten year anniversary in 2021 - we see a changing world and industry. Even with the challenges of the pandemic, there is strong interest in ESG actions, from investors, communities and leaders. During a time where operations have skeleton staff and COVID-safe measures, improvement work and collaboration continues amongst many of our sponsors. There is much greater understanding that mining and processing approaches must change.

New technologies integrating preconcentration with smarter comminution are increasingly being piloted and installed around the world. The acceleration in technology uptake is being enabled by new data science and platforms, sophisticated sensors, Al and advanced control systems. Industry is also embracing installations and developments in coarse flotation, ultrafine grinding and improved classification. There are more industry co-creation partnerships and innovative research on breakthrough comminution technologies such as microwave, high-voltage and alternative comminution devices.

Our position now: CEEC has built to a stronger position with greater than twelve months

operational expenditure in reserve, positioning us well to weather the COVID-19 challenges. With a loyal following, well-respected role in industry, and sound sponsor support, we expect to continue our role and are managing our expenses carefully during this time. We are thankful for our founding and current sponsors who make our continued work possible, and for an active and engaged global Board.

Role and strategy: CEEC is a trusted organisation that has a track record for independence and influence and can play a role in helping companies. We are targeted in our work to accelerate eco-efficient comminution and processing and provide good resources and a network to support knowledge sharing and best practices. CEEC is seen as important in playing a role in supporting industry's work to become more efficient and productive with a lower footprint.

Whilst CEEC's core work remains focused on knowledge-sharing of advanced comminution approaches, our strategic focus is now shifting. We are expanding from our focus on energy efficient comminution to mineral processing practices and technologies that can reduce energy, emissions and water. This fits neatly within our original purpose – to accelerate ecoefficient comminution – and builds on it.

Finances

Each year, CEEC produces independent audited financial statements, reporting at our AGM, then lodging these publicly via the Australian Not for Profits and Charities Commission portal (ACNC). This year we have rotated auditors for good governance, with continued positive auditor

opinion (Appendix 1). Income was strong at AUD 323K, with record sponsorship funds of AUD239K and the last METS Ignited funding for workshops and research received. A higher amount of AUD47K pre-paid sponsorship was received from new sponsors choosing to sponsor for three years up-front, compared to AUD27K last year – reflected in our Balance Sheet. Accruals timing reallocated this to future funds, so while our P&L for this year indicates overall loss on paper these pre-payments boosted our cash flow. This is an excellent achievement, particularly considering the impact of the coronavirus in the second half of this year.

New sponsorships slowed in the first half of 2020 as a consequence of the pandemic. Positively, this combined with our drop in government funds after the METS Ignited project finished, and so enabled CEEC to qualify for and benefit from government assistance of AUD31K via JobKeeper subsidy and COVID-19 cash flow boost for non profits. Since year-end we have begun to see new sponsorships restart, and renewal payments begin to flow in. The Board made a decision to set a more modest FY2021 Budget and also set a contingency budget. This allows us to monitor and scale back expenditure if needed, should income slow more than anticipated.

Our AUD331K expenditure reflects our activities which largely focused on delivering workshops and the Advanced Energy Curves tools to industry. This required more staff and contractor support, travel and marketing. We invested in a face-to-face strategy meeting when most Board members were in Western Australia for MetPlant and World Gold.

We also funded attendance at other key conferences such as SAG 2019 and boosted industry involvement via our collaborative Canada workshop on Water Curves.

Our Board set a reserves policy of at least six months operational expenses and our finance subcommittee is monitoring progress of this and sponsorship renewal regularly. We are exceeding this goal, with current position of greater than 12-months operational expenditure in reserve. Cash in bank and trends, and income and expenditure breakdown summaries, are shown in Figure 1 on page 10.

Our dedicated staff and contractors have worked as an enthusiastic team to bring CEEC's deliverables to industry. I thank our skilled Board for their tireless voluntary contributions above and beyond their paid roles, and our our Advocates and Patrons. But most of all, the Board and I thank our sponsors and new sponsors for their visionary financial support of CEEC's work. Together, our sponsors, volunteers and team champion the benefits of industry knowledge-sharing to help all of industry.

More than ever, our global network sees the benefits of working together to improve and innovate – to deliver better ESG and productivity faster across industry. It's a privilege to be a part of this charitable organisation, and I'm proud to work with you all to communicate, collaborate and celebrate eco-efficient comminution and processing, and help lead change.

Alison Keogh



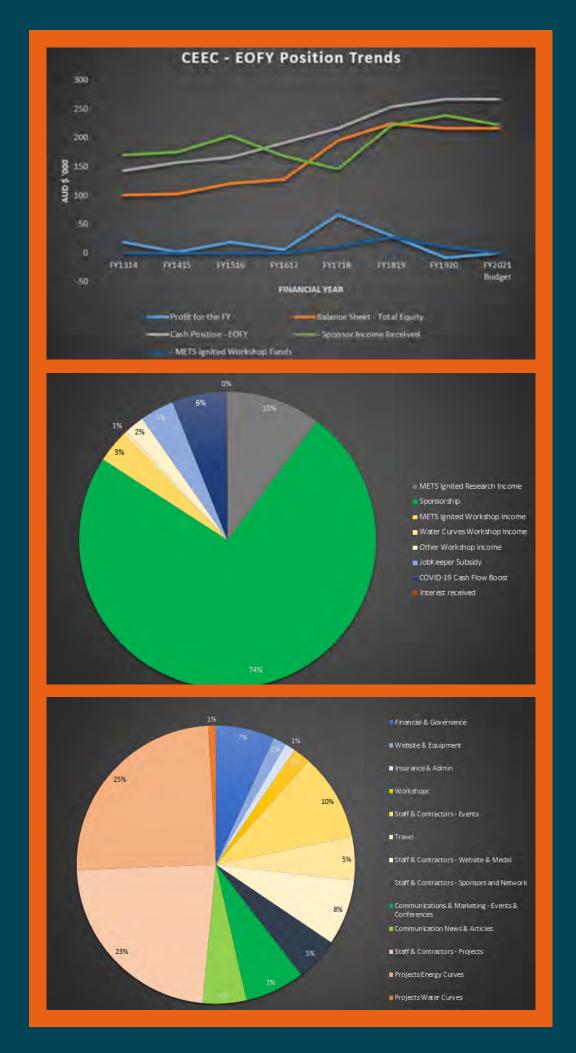


Figure 1: CEEC Annual Financial Trends and CEEC Audited FY1920 P&L Income & Expenses Breakdown Summary



Event spotlight - workshops

ADELAIDE

Our first event in South Australia, with 50 percent grid renewables and the world's largest battery.

Outcomes:

- 45 people heard from the MD of OZ Minerals, BHP, global experts and other senior industry leaders
- Importance of partnerships and collaboration to accelerate change
- Cutting-edge site comminution and processing improvements shared, plus latest energy/water efficient technologies and their impact
- New knowledge shared from successful roll out of lower footprint new gen energy to mines and plants by companies and communities.

Top: CEEC CEO Alison Keogh with keynote speaker OZ Minerals CEO and MD Andrew Cole Centre: Keith Barker, Executive GM, EDL Energy on hybrid and renewables

Bottom: Some of the Adelaide workshop speakers

and organising committee



VANCOUVER

Fifty-three participants helped plan Water Curves industry needs at Teck Resources, facilitated by KPMG.

Outcomes:

- Key metrics to develop new, practical Water Curves tools for industry to benchmark and improve mining/processing water use
- Leading change with keen interest globally for vital industry need, the project is unique in its approach to look at water intensity of unit processes common to processing plant flowsheets, with global industry collaboration for a new benchmarking tool
- New CMIC-CEEC-industry project planned to commence with research experts Canada/Australia.

Top: Teck Resources' Bryan Rairdan, now a CEEC Director, presenting in Vancouver Centre: Participants at the 2019 CMIC-CEEC Global Water Curves workshop, hosted by Teck Bottom: KPMG Partner Alan Peretz presents at the event, facilitated by KPMG



KALGOORLIE

Sixty people attended CEEC's first event in Australia's leading gold-nickel region at WA School of Mines.

Outcomes:

- Miners, METS and university leaders shared best practice and innovative technologies for efficient, productive processing designs and at sites
- Presentations on latest comminution, processing and filtration technologies
- · Panel discussion on leading change
- Excellent speakers during MetFest week, strong mining company input.

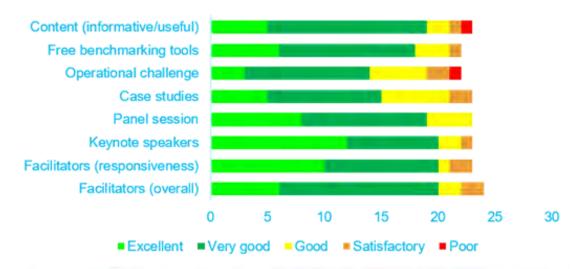
Top: A panel discussion chaired by Matt Pyle (Ausenco), with John O'Callaghan (Newcrest), Chris Gianatti (MetFest Chair), Ross Dankbaar (Agnew), Dr Luke Keeney (CRC ORE), Dr Paul Shelley (Molycop) and Dr Laurence Dyer (WA School of Mines)

Centre: Activities shared high impact energy efficient advances and site examples with all workshop participants

Bottom: Sixty people attended the event, which included interactive group activities to share and capture practical solutions and advances from leading thinkers



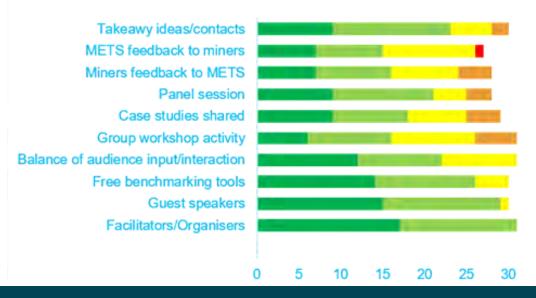
CEEC Melbourne Workshop Survey feedback responses



CEEC Brisbane Workshop Survey feedback responses



CEEC Adelaide Workshop Survey feedback responses

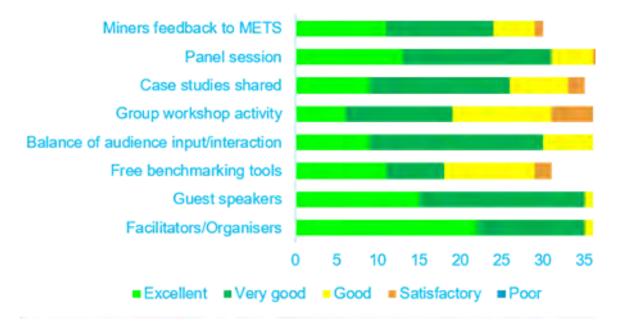


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CEEC Mount Isa Workshop Survey feedback responses



CEEC Kalgoorlie Workshop Survey feedback responses



WATER **CURVES SUMMARY**

Our water challenge

50%

of the world population could be impacted by water shortages by 2050, according to a UN study

4 billion

gallons per day are withdrawn by the mining industry across the United States of America

\$2-5/m3

the average cost of pumping and desalinating water at mines in Chile due to government regulations (USD)





s provides technical experts with the tools to effect mmunicate the importance of later-related technologies and

increasing our underest use in mining can help us to sprove water related safety for those on elle, in nearby minunities, and for the rest of the world

The Global Water Curves Action Plan

The following action items were identified as key next steps to help retain the momentum from the first Global Water Curves (GWC) workshop and to help realize the full vision and value of the tool.



Securing Buy-In

- Continue to engage key industry stakeholders e.g. webiners, workshops, etc.
- Secure industry partners to form a
- Secure funding partners
- □ Achieve Quick Wins where possible with the GWC e.g. focus on a small initial group of key metrics and develop actionable insights



Data Sharing & Collection

- Develop a data survey / submission form for mine sites
- ☐ Build a data gathering and data submission strategy

Determine validity of data

- Gather industry data and benchmarks.
- Explore opportunities with how inte industry water data can be utilized



Tool Develo

- Use similing work and pulsicity ayasse data to inform metrics and groupings

METS IGNITED PROJECT SUMMARY

PROJECT FEEDBACK

"I have had many discussions with industry mid-tier personnel, and many are passionate about reducing the total power required for their operations, even if for the only reason that it makes their operation more competitive" – Kalgoorlie

"It (the Energy Curves) provides a novel benchmarking tool for everyone in the industry. Those who are serious about increasing their energy efficiency can now see where they sit among their peers "-

Brisbane, Adelaide and Kalgoorlie workshop participant

"The Energy Curves are an excellent way of bench marking site performance potentially on a global scale" – **Adelaide**"Some people in Weir Minerals are referring to Energy Curves already. I would like to advertise their availability more widely across the division" – **Adelaide**

WORKSHOP FEEDBACK

"Plenty of experience gathered, future perspectives, indices" –

Brisbane

"Great mix of industry reps and consultants" - Brisbane

"Definitely good BDM opportunity" - Mount Isa

"Improved understanding of different needs of miners and METS, and how to bridge the communication" – **Mount Isa**

"Engaging, collaborative, strategic" - Melbourne

"Good to understand opportunities from miners" - Adelaide

"Fantastic sharing of technology ideas" - Kalgoorlie

"Definitely identified some useful options/test work that can be investigated" - Kalgoorlie

"High calibre of attendees with expert knowledge in the area and excellent discussions held. Also a productive collegiate atmosphere in the room" – project evaluation survey response

75%

of respondents indicated they can now help sites save costs or increase productivity through energy efficient approaches. This includes collaboration, understanding challenges, developing solutions, demonstrating impact using the Advanced Energy Curves, or quantifying costs.

62%

of respondents indicated the workshops brought good new business opportunities and contacts. Almost 20 percent obtained significant or important business connections.

50%

of all respondents indicated the Advanced Energy Curves are useful to industry

62%

indicated they were likely to recommend or use them.



Project spotlight -Advanced Energy Curves

ENERGY CURVES

CEEC funds and provides a portal for free Energy Curves which enable mines to independently benchmark the energy efficiency of their comminution circuits. This helps communicate the significant value that can be harnessed by improvements across mine sites.

Funded and initiated through CEEC in collaboration with industry, the CEEC Energy Curves were developed by Dr Ballantyne and Professor Malcolm Powell at The University of Queensland's Julius Kruttschnitt Mineral Research Centre (JKMRC) in response to workshop ideas to help accelerate improvements in comminution. Industry use of the Energy Curves was boosted with funding to proactively seek copper and gold operational site data. The Energy Curves now include almost 60 percent of the world's copper operations and 30 percent of the world's gold operations, and many other commodities.

To respond to further industry requests for development of the tools, an Advanced Energy Curves Project was funded through METS Ignited, the Queensland Government and industry. This project has been very successful, with feedback from senior mining and METS leaders indicating the benefits of the workshops and the Energy Curves.

Top: CEEC CEO Alison Keogh and UQ SMI Director Prof Neville Plint (centre) with new Energy Curves team members (I-r) Assoc Prof Marcin Ziemski, Dr Cathy Evans (Team Lead) and Dr Vladimir Jokovic Centre: Dr Cathy Evans presenting in Adelaide Bottom: Energy Curves Chief Investigator Dr Grant Ballantyne with Alison Keogh and Director UQ JKMRC Prof Alice Clark



ADVANCED ENERGY CURVES

Funding for a two-phase project included \$94,513 through the METS Ignited Collaborative Projects Fund for the first phase, which was a series of workshops. The second phase was research to enhance the Energy Curves. The Queensland Government provided \$200,057.85 for the research and an additional \$40,000 for two Queensland workshops. CEEC provided \$134,513 in matched funding from industry.

The Government's objectives of the Advanced Energy Curves Project were to advance mineral processing energy efficiency initiatives and create opportunities for METS by extending the CEEC Energy Curve Program into METS companies capable of supplying energy reduction goods and services to mining operations in Australia and internationally as exports.

CEEC successfully completed the two-phase Advanced Energy Curves Project over two and a half years from late 2017 to early 2020. Led by Dr Grant Ballantyne, during the term of a project, a new Energy Curves team was appointed and the work is now led by Dr Cathy Evans. Ten enhancements to the existing Energy Curves have now been added. This provides options for industry to gain more insights on their site performance with additional information on energy cost, ancillary equipment, commodity curves, embodied energy, circuit configurations, fine grinding calibration, equipment choice, mining and blasting method impact, liberation and recovery and global ore hardness measures. The workshops around Australia provided an opportunity to release the new Advanced Energy Curves options to industry with examples of use as they were delivered by UQ.

Miners and METS now have access to the Advanced Energy Curves to demonstrate options that may help mine sites, providing an avenue for approaching miners with different technology and services.

A final project report has now been completed for the government. Updates to CEEC's website and future publicity articles are planned to further promote the use of these new tools.

THE CEEC MEDAL

The CEEC Medal celebrates and recognises the contribution of outstanding research and field work on beneficial strategies for energy-efficient comminution, and has now grown to a globally prestigious award with strong recognition.

The 2019 CEEC Medal for Technical Research was officially presented to Laureate Professor Graeme Jameson and Dr Cagri Emer at AusIMM's MetPlant Conference in Perth, Western Australia, on 10 September 2019. The researchers, from the Centre for Multiphase Processes at the University of Newcastle, NSW, were recognised for their publication "Coarse chalcopyrite recovery in a universal froth flotation machine".

Jameson and Emer's CEEC Medal winning paper was published in *Minerals Engineering* in January this year and documents a novel flotation device, the NovaCell, which features a fluidised bed for coarse particle collection and a high shear aeration zone for ultra-fines separation.

Top: Janine Herzig, Alison Keogh, Greg Lane present the 2019 Technical Research medals to Laureate Professor Graeme Jameson AO and Dr Cagri Emer. Also pictured Mike Battersby and Joe Pease

Centre: SAG Conference Chair Greg Rasmussen and Alison Keogh (left) with 2019 Operations winners Omar Arafat and Kyle Bartholomew. Joined by CEEC Directors Nick Wilshaw and Chris Rule. Co-winner Rob McIvor was absent

Bottom: Kyle Bartholomew accepting the award at SAG 2019 with co-winner Omar Arafat (left), Alison Keogh, CEEC Director Simon Hille and conference organisers



The 2019 CEEC Medal for Operations was awarded to Kyle Bartholomew, Rob McIvor and Omar Arafat for their paper "A guide to maximising ball mill circuit classification system efficiency (CSE), for operators and equipment designers".

The exceptional work by Bartholomew, McIvor and Arafat provides a succinct, clear, systematic approach to practical operational improvements that not only helps inform operations of the efficiencies that can be achieved, but also demonstrates the economic case for change.

Three High Commendations were also awarded:

Technical research

 Hamid Manouchehri for a paper titled "How Far the Crushing Performance Can be Pushed? Cone Crusher vs Vertical Shaft Impactor (VSI)" presented at Comminution '18, in Cape Town, South Africa.

This paper presented an adept comparison of the conventional cone crusher and the VSI in a fine crushing duty, and third and fourth stage crushing duty. His trials conducted at pilot scale and at laboratory showed the VSI produced more fines, and in some cases product of higher porosity, reducing downstream power consumption.

Top: CEEC CEO Alison Keogh

Centre:

Bottom: The CEEC Medal



Operations

 A paper titled "Advanced mine to mill application at the Barrick Cortez Mine" by Malcolm Powell, Sarma Kanchibotla, Vladimir Jokovic, Marko Hilden, Benjamin Bonfils, Anand Musunuri, Pamela Moyo, Sam Yu, Jace Young, Paul Yaroshak, Emrah Yalcin and Barun Gorain.

This paper was presented at the 14th AusIMM Mill Operators' Conference 2018 in Brisbane, Australia. The CEEC Medal Evaluation judges commented that this was an outstanding paper building on the commonly applied mine-to-mill optimisation where grade deportment and dilution, as well as blast movement during high intensity blasting, is considered and evaluated.

 A paper titled "Mount Milligan Mine Performance Update" by Berge Simonian, presented in January 2019 at the 51st Annual Canadian Mineral Processors Operators Conference, Alberta, Canada.

This was an excellent paper detailing the optimisation and debottlenecking of a relatively new mineral processing circuit. Efficiency gains achieved through modification to secondary crushing screening, SAG mill lifter design and ball mill charge optimisation enabled the circuit to operate at throughput beyond design.

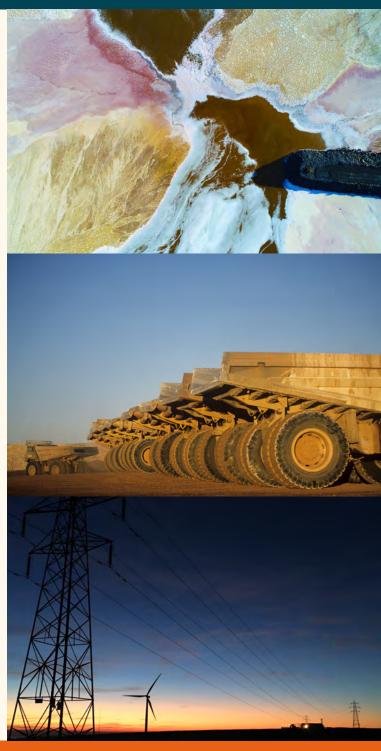
CEEC STRATEGY DAY

CEEC held a face-to-face strategy day in September 2019. We discussed key topics including CEEC's growth, industry changes and focus on sustainability, trends to reducing water usage, and we began to review CEEC's mission, vision, future focus areas and key messaging.

Our Board, staff, key Advocates and supporters will build from this in a series of online strateg sessions in the first half of 2021.

We have begun proactively seeking Sponsor, Director and Advocate input into the focus of our new webinar series and future activities via SurveyMonkey and Zoom discussions, and plan to continue this important engagement as we plan new initiatives.

In 2021 we aim to scope and cost future developments to the Advanced Energy Curves such as Site Energy Curves, Emissions Curves and Water Curves, seek further stakeholder input, then review funding and resourcing options. We also plan to review Roadmap progress and set five-year goals or targets with industry input.



MARKETING COMMUNICATIONS

Networking

This was cited as one of the top benefits of attending CEEC workshops and events and we plan to continue facilitating important connections through our sponsor network.

Publications

We added a number of news and social media posts to LinkedIn, Twitter and our website. We shared a number of media releases to announce new sponsors and Medal winners and completed feature articles on comminution for *International Mining*, hydrogen electric, preconcentration and more.

Website and resource centre

We now have well over 750 quality abstracts available via our resource centre. This year we added more than 50 quality abstracts and 16 senior speaker presentations during the year.

Social and mining media presence

We were pleased to have our numerous media releases picked up by international mining publications such as *Mining.com*, *The Intelligent Miner*, Reuters, *Mining Magazine*, *EMJ*, *International Mining* and more. Our social media presence has grown considerably, reaching many CEOs, Directors, leaders and professionals globally. We estimate our combined readership is now well over 100,000 per annum.



OUR THANKS

Thanks are extended to the CEEC Board, Advocates Sponsors, in-kind and media Supporters.

CEEC Board

Chair

Mike Battersby (pictured, top right)

Directors

Joe Pease

Marc Allen

Greg Lane

Chris Rule

Nick Wilshaw

Zeljka Pokrajcic

Simon Hille

Bryan Rairdan

CEO

Alison Keogh

CEEC Patrons

Owen Hegarty

Elizabeth Lewis-Gray

Jim Gowans

CEEC Advocates

Vladmir Kronemberger Alves

Romke Kuyvenhoven

Peter Amelunxen

Laurie Reeymeyer

Robert McIvor

Levi Guzman Rivera

Michael Myllynen

John Visser

Chih-Ting Lo

In-kind and media supporters

Our thanks to Amira Global, Austmine, UQ Sustainable Minerals Institute and The AusIMM. CEEC media partners include *Minerals Engineering International* and *The Intelligent Miner*.

Sponsors

Anglo American

Ausenco

Centerra Gold**

CRC ORE

Eriez

FLSmidth

Freeport McMoRan

Gekko Systems

Glencore Technology

Hatch

Hudbay Minerals*

Lundin Mining*

Magotteaux

ME Elecmetal*

Molycop*

Newcrest Mining*

Newmont Corporation

OZ Minerals

PETRA Data Science

Teck Resources*

Thermo Fisher Scientific*

TOMS Institute

University of Adelaide IMER*

Weir Minerals

Wheaton Precious Metals

^{*} Joined or announced as sponsor in FY1920

^{**} Announced after FY1920

CEEC SPONSORS



GLENCORE TECHNOLOGY

centerragolo





lundin mining



































APPENDIX 1

Audited CEEC Financial Reports for Financial Year 19/20

METS Research

Financial Statements

For the year ended 30 June 2020

CORMAC SHARKEY & CO
CHARTERED ACCOUNTANTS
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NEDLANDS WA 6909
Phone: (08) 9383 3488 Fax: (08) 9383 3455

Email: cormac@cormacsharkey.com.au

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Directors' Report 30 June 2020

The directors present their report on CEEC International Ltd for the financial year ended 30 June 2020.

Information on directors

The names of each person who has been a director during the year and to the date of this report are:

Mr Marc Allen

Qualifications Bachelor of Engineering (Chemical)

Experience Technical Director at engeco

Mr Michael Battersby

Bachelor of Science (Mineral Processing) at Cardiff University and Graduate Qualifications

Diploma (Innovation & Enterprise) at Swinburne University of Technology

Co-founder and Managing Director of Maelgwyn Mineral Services Ltd Experience

Mr Simon Hille

Qualifications Bachelor of Science (Extractive Metallurgy)

Experience President at Whytecliff Mining Corp.

Mr Greg Lane

Bachelor of Applied Science (Applied Chemistry), Master of Science Qualifications

Chief Technical Officer, Ausenco and Director of NQ Minerals PLC Experience

Mr Joe Pease

Bachelor of Engineering (Metallurgical) and Bachelor of Economics Qualifications

Experience Principal Consultant, Mineralis Consultants Pty Ltd and Director of CRC ORE

Dr Zeljka Pokrajcic

Bachelor of Engineering (Metallurgical), RMIT University and Doctor of Philosophy (Comminution Circuit Design), University of Queensland **Qualifications**

Technical Director at PETRA Data Science Experience

Mr Bryan Rairdan

Qualifications Bachelor of Science in Metallurgical Engineering, University of Alberta, Master of

Business Administration, Simon Fraser Institute

Technical Director, Processing - Teck Resources Limited Experience

Director Term Commenced 21 May 2020

Mr Chris Rule

Qualifications BSc Hons Mineral Processing, University of Wales (University College, Cardiff, UK),

MSc Extractive Metallurgy (Royal School of Mines, UK) and DIC (Diploma Imperial College) (Imperial College of Science and Technology, University of London, UK)

Experience Director Seymet Pty Ltd and Director Cenotec South Africa Pty Ltd

Mr Nick Wilshaw

Qualifications

MSc Mineral Processing (Queens University, Ontaria, Canada) and BSc Honours

Mineral Processing (Camborne School of Mines, UK)

Experience

Owner and Managing Director, Grinding Solutions Ltd

Directors have been in office since the start of the financial year to the date of this report unless otherwise stated.

Vision

To accelerate implementation of eco-efficient comminution strategies through promotion of supporting data and industry benefits.

Mission and objectives

To raise awareness of research findings, alternative comminution strategies and installed outcomes. To accelerate information, knowledge and technology transfer with the objective of lower processing costs and reduced carbon footprint as a result of improved comminution practices.

Marketing strategy

The marketing strategy aligns with CEEC's objectives to accelerate uptake of eco-efficient comminution and mineral processing. It is actioned through three methods: Communicate, Collaborate and Celebrate:

- Communicate through website, newsletters, executive briefings, network meetings, conference representation and participation, social media, sponsor updates and press and media
- Collaborate through CEEC workshops, online webinars, sponsors, network and LinkedIn group, and through collaborative independent industry projects such as Energy Curves
- Celebrate by sharing case studies of success, learnings by experts and practitioners on sites, and CEEC awards including the prestigious CEEC Medal

Members' guarantee

CEEC International Ltd is a company limited by guarantee. In the event of, and for the purpose of winding up of the company, the amount capable of being called up from each member and any person or association who ceased to be a member in the year prior to the winding up, is limited to \$10 for members, subject to the provisions of the company's constitution.

Meetings of directors

During the financial year, 4 meetings of directors (including committees of directors) were held. Attendances by each director during the year were as follows:

	Directors' Meetings	
	Number eligible to attend	Number attended
Mr Marc Allen	4	4
Mr Michael Battersby	4	4
Mr Simon Hille	4	2
Mr Greg Lane	4	4
Mr Joe Pease	4	4
Dr Zeljka Pokrajcic	4	4
Mr Chris Rule	4	1
Mr Nick Wilshaw	4	3
Mr Bryan Rairdan	1	1

Auditor's independence declaration

The auditor's independence declaration in accordance with section 307C of the *Corporotions Act 2001*, for the year ended 30 June 2020 has been received and can be found on page 6 of the financial report.

Signed in accordance with a resolution of the Board of Directors:

Director

Mr Joe Pease

Director:

Mr Michael Battersby

My GBattersby

Dated:

9 November 2020

AUDITOR'S INDEPENDENCE DECLARATION

UNDER SECTION 307C OF THE CORPORATIONS ACT 2001

To THE DIRECTORS OF: CEEC International Ltd

I declare that, to the best of my knowledge and belief, during the year ended 30 June 2020 there have been :

- (i) no contraventions of the auditor independence requirements as set out in the Corporations Act 2001 in relation to the Audit; and
- (ii) no contraventions of any applicable code of professional conduct in relation to the audit

Cormac Sharkey & Co Audit Pty Ltd

Cormac Sharkey, CAANZ

Suite 7 Level 1 186 Hampden Rd NEDLANDS WA 6009

Dated: 13 November 2020

Income Statement For the year ended 30 June 2020

	Note	2020	2019
		\$	\$
Income			
METS Ignited Research Income		33,318	78,371
Sponsorship		239,015	222,337
METS Ignited Workshop Income		11,175	28,479
Water Curves Workshop Income		1,546	
Other Workshop income		7,050	27,428
JobKeeper Subsidy		12,000	
COVID-19 Cash Flow Boost		19,345	
Interest received		250	674
Foreign exchange profit		(432)	(3,417)
Total income		323,267	353, 872
Expenses			
Accountancy	3	7,853	7,470
Advertising & promotion	_	8,556	6,470
Annual leave		2,226	(8,052)
Bank fees & charges		255	65
CEEC expenses		10,291	3,464
Assets write off		777	, -
Computer expenses		3,331	2,469
Conference and workshop expenses		3,740	41
Contract payments		11,181	15,319
Depreciation - Other		1,205	1,507
Fringe benefits tax		7,473	7,4 7 3
Insurance		4,035	3,591
Postage		204	20 7
Printing & stationery		137	1, 7 28
Subscriptions		373	402
Superannuation		14,463	13,937
Telephone		2,540	1,127
Travel, accommodation & conference		16,812	7,640
Water Curves Overseas Travel Events		2,879	,,,,,,
UQ Services		81,897	98,705
Wages		145,953	134,055
Website design and hosting		1,812	1,230
Workshop expenses		2,877	25,347
Total expenses		330,880	324,195
Profit (Loss) from Ordinary Activities before	MARKET	330,000	34,133
income tax		(7,612)	29,677
Income tax expense	2(a)	_	All the state of t
Operating profit (deficit) after income tax		(7,612)	29,677

Statement of Financial Position As at 30 June 2020

	Note	2020	2019	
		\$	\$	
Assets				
Current Assets				
Cash assets	4	267,349	253,908	
Receivables		9,445	12,617	
Other		3,185	3,213	
Total Current Assets		279,980	26 9 ,738	
Non-Current Assets				
Property, plant and equipment	5 _	<u></u>	1,205	
Total Non-Current Assets		*	1,205	
Total Assets		279,980	270,943	
Liabilities				
Current Liabilities				
Trade and Other Payables	6	10,025	16,019	
Prepaid income		47,914	2 7,4 96	
Provision for annual leave	7	4,941	2,715	
Total Current Liabilities		62,880	4 6, 230	
Total Liabilities		62,880	46,230	
Net Assets		217,100	224,713	
Equity				
Retained profits		217,100	224,7 13	
Total Equity	***************************************	217,100	224,713	

Statement of Changes in Equity For the year ended 30 June 2020

2020	Retained Earnings
	\$
Balance at 1 July 2019	224,713
Profit for the year	(7,612)
Balance at 30 June 2020	217,100
2019	Retained
	Earnings
	\$
Balance at 1 July 2018	195,036
Profit for the year	29,677
Balance at 30 June 2019	224,713

Statement of Cash Flows For the year ended 30 June 2020

	Note	2020 \$	2019 \$
Receipts from customers		344,475	366,778
Payments to suppliers and employees		(331,285)	(327,783)
Interest received		250.21	674
Net cash provided by operating activities	8	13,441	39,669
CASH FLOWS FROM INVESTING	•		
ACTIVITIES:			
Purchase of property, plant and equipment		-	(2,387)
Net cash used in investing activities		-	(2,387)
Net increase/(decrease) in cash and cash equivalents held		13,441	37,282
Cash and cash equivalents at beginning of year		253,908	216,626
Cash and cash equivalents at end of financial year	4	267,349	253,908

Notes to the Financial Statements For the Year Ended 30 June 2020

The financial report covers CEEC International Ltd as an individual entity. CEEC International Ltd is a not-for-profit Company limited by guarantee, incorporated and domiciled in Australia.

The functional and presentation currency of CEEC International Ltd is Australian dollars.

Comparatives are consistent with prior years, unless otherwise stated.

1 Basis of Preparation

In the Directors opinion, the Company is not a reporting entity since there are unlikely to exist users of the financial statements who are not able to command the preparation of reports tailored so as to satisfy specifically all of their information needs. This special purpose financial report has been prepared to meet the reporting requirements of the *Corporotions Act 2001*.

The financial statements have been prepared in accordance with the recognition and measurement requirements of the Australian Accounting Standards and Accounting Interpretations, and the disclosure requirements of AASB 101 Presentation of Financial Statements, AASB 107 Statement of Cash Flows, AASB 108 Accounting Policies, Changes in Accounting Estimates and Errors and AASB 1054 Australian Additional Disclosures.

2 Summary of Significant Accounting Policies

(a) Income Tax

The Company is exempt from income tax under Division 50 of the *Income Tax Assessment Act 1997.*

(b) Revenue and other income

Revenue is recognised when the amount of the revenue can be measured reliably, it is probable that economic benefits associated with the transaction will flow to the Company and specific criteria relating to the type of revenue as noted below, has been satisfied.

Revenue is measured at the fair value of the consideration received or receivable and is presented net of returns, discounts and rebates.

All revenue is stated net of the amount of goods and services tax (GST).

Interest revenue

Interest is recognised using the effective interest method.

(c) Goods and services tax (GST)

Revenue, expenses and assets are recognised net of the amount of goods and services tax (GST), except where the amount of GST incurred is not recoverable from the Australian Taxation Office (ATO).

Receivables and payable are stated inclusive of GST.

The net amount of GST recoverable from, or payable to, the ATO is included as part of receivables or payables in the statement of financial position.

Cash flows in the statement of cash flows are included on a gross basis and the GST component of cash flows arising from investing and financing activities which is recoverable from, or payable to, the taxation authority is classified as operating cash flows.

(d) Property, plant and equipment

Each class of property, plant and equipment is carried at cost or fair value less, where applicable, any accumulated depreciation and impairment.

Plant and equipment

Plant and equipment are measured using the revaluation model.

Depreciation

Property, plant and equipment, excluding freehold land, is depreciated on a reducing balance basis over the assets useful life to the Company, commencing when the asset is ready for use.

(e) Financial instruments

Financial instruments are recognised initially on the date that the Company becomes party to the contractual provisions of the instrument.

On initial recognition, all financial instruments are measured at fair value plus transaction costs (except for instruments measured at fair value through profit or loss where transaction costs are expensed as incurred).

Financial assets

All recognised financial assets are subsequently measured in their entirety at either amortised cost or fair value, depending on the classification of the financial assets.

Classification

On initial recognition, the Company classifies its financial assets measured at amortised cost.

Financial assets are not reclassified subsequent to their initial recognition unless the Company changes its business model for managing financial assets.

Amortised cast

Assets measured at amortised cost are financial assets where:

- the business model is to hold assets to collect contractual cash flows; and
- the contractual terms give rise on specified dates to cash flows are solely payments of principal and interest on the principal amount outstanding.

The Company's financial assets measured at amortised cost comprise trade and other receivables and cash and cash equivalents in the statement of financial position.

Subsequent to initial recognition, these assets are carried at amortised cost using the effective interest rate method less provision for impairment.

Interest income, foreign exchange gains or losses and impairment are recognised in profit or loss. Gain or loss on derecognition is recognised in profit or loss.

The accompanying notes form part of these financial statements.

Impairment of financial assets

Impairment of financial assets is recognised on an expected credit loss (ECL) for financial assets measured at amortised cost.

When determining whether the credit risk of a financial assets has increased significant since initial recognition and when estimating ECL, the Company considers reasonable and supportable information that is relevant and available without undue cost or effort. This includes both quantitative and qualitative information and analysis based on the Company's historical experience and informed credit assessment and including forward looking information.

The Company uses the presumption that an asset which is more than 30 days past due has seen a significant increase in credit risk.

The Company uses the presumption that a financial asset is in default when:

- the other party is unlikely to pay its credit obligations to the Company in full, without recourse to the Company to actions such as realising security (if any is held); or
- the financial assets is more than 90 days past due.

Credit losses are measured as the present value of the difference between the cash flows due to the Company in accordance with the contract and the cash flows expected to be received. This is applied using a probability weighted approach.

Trade receivables

Impairment of trade receivables have been determined using the simplified approach in AASB 9 which uses an estimation of lifetime expected credit losses. The Company has determined the probability of non-payment of the receivable and multiplied this by the amount of the expected loss arising from default.

The amount of the impairment is recorded in a separate allowance account with the loss being recognised in finance expense. Once the receivable is determined to be uncollectable then the gross carrying amount is written off against the associated allowance.

Where the Company renegotiates the terms of trade receivables due from certain customers, the new expected cash flows are discounted at the original effective interest rate and any resulting difference to the carrying value is recognised in profit or loss.

Other financial assets measured at amortised cost

Impairment of other financial assets measured at amortised cost are determined using the expected credit loss model in AASB 9. On initial recognition of the asset, an estimate of the expected credit losses for the next 12 months is recognised. Where the asset has experienced significant increase in credit risk then the lifetime losses are estimated and recognised.

Financial liabilities

The Company measures all financial liabilities initially at fair value less transaction costs, subsequently financial liabilities are measured at amortised cost using the effective interest rate method.

The financial liabilities of the Company comprise trade payables, bank and other loans and finance lease liabilities.

The accompanying notes form part of these financial statements.

(f) Cash and cash equivalents

Cash and cash equivalents comprises cash on hand, demand deposits and short-term investments which are readily convertible to known amounts of cash and which are subject to an insignificant risk of change in value.

(g) Employee benefits

Provision is made for the Company's liability for employee benefits arising from services rendered by employees to the end of the reporting period. Employee benefits that are expected to be wholly settled within one year have been measured at the amounts expected to be paid when the liability is settled.

Employee benefits for annual leave are treated as current liabilities and are measured at their nominal values. Employee benefits for long service leave are recognised for all employees of the Company upon completion of 5 years of service, and are measured at their nominal values. Where long service leave is expected to be settled within one year it is recorded under current liabilities. All other long service leave is recorded under non-current liabilities.

Contributions are made by the Company to an employee superannuation fund and are charged as expenses when incurred.

(h) Provisions

Provisions are recognised when the Company has a legal or constructive obligation, as a result of past events, for which it is probable that an outflow of economic benefits will result and that outflow can be reliably measured.

3 Accounting and audit fees

	2020	2019
	\$	\$
PPT Audit Pty Ltd		
- Audit of Statutory Financial Statements	1,550	1,450
PPT Professional Pty Ltd		
- Preparation of Statutory Financial Statements	1,650	1650
- Provision of FBT and Salary Sacrificing Advice	440	470
Kelly Hand		
- Bookkeeping	4,213	3, 9 00
	7,853	7,4 7 0

4 Cash and Cash Equivalents

		2020	2019
		\$	\$
	Westpac Cheque Account	32,538	100,470
	Westpac Cash Reserve	220,947	127,668
	Westpac METS Account	13,611	25,770
	Petty cash (foreign currency)	253	-
		267,349	2S3,908
5	Property, plant and equipment		
	At cost	-	2,386
	Accumulated depreciation	***************************************	(1,181)
		·	325
6	Trade and Other Payables		
	FBT Payable	1,868	1,868
	Superannuation payable	-,	(77)
	Other payables	839	3113
	GST payable	622	2830
	PAYG payable	6,696	8,285
		10,025	16,019
7	Provisions		
	Provision for Annual Leave	4,941	2,715
		4,941	2,715

8 Cash Flow Information

	2020	2019
(a) Reconciliation of result for the year to cashflows from operating activities	\$	\$
Profit for the year	(7,613)	29,677
Cash flows excluded from profit attributable to operating activities		
Non-cash flows in profit:		
Depreciation	1,205	1507
Changes in assets and liabilities:		
(increase)/decrease in trade and other receivables	3,172	7,986
(increase)/decrease in prepayments	27	(190)
increase/(decrease) in income in advance	20,418	2,291
increase/(decrease) in trade and other payables	(5,994)	6450
increase/(decrease) in employee benefits	2,226	(8,052)
Cashflows from operations	13,441	39,669

9 Statutory information

The registered office of the company is:

Level 2/271 William Street MELBOURNE VIC 4000

Directors' Declaration

The directors of the company declare that:

- 1. the financial statements and notes are in accordance with the Corporations Act 2001 and:
- (a) comply with Accounting Standards and the Corporations Regulations; and
- (b) give a true and fair view of the company's financial position as at 30 June 2020 and of its performance for the year ended on that date;
- 2. in the directors' opinion, there are reasonable grounds to believe that the company will be able to pay its debts as and when they become due and payable.

This declaration is made in accordance with a resolution of the Board of Directors.

Joe Pease Director

Michael Battersby Director

Dated: 9 November 2020

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Independent Auditor's Report

Report on the Audit of the Financial Report

Opinion

We have audited the financial report of CEEC International Ltd (the Company), which comprises the Statement of Financial Position as at 30 June 2020, the Income Statement, the Statement of Changes In Equity and the Statement of Cash Flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies, and the Directors' Declaration.

In our opinion, the accompanying financial report of CEEC International Ltd is in accordance with the Corporations Act 2001, including:

- (a) giving a true and fair view of the company's financial position as at 30 June 2020 and of its performance for the year then ended; and
- (b) complying with Australian Accounting Standards to the extent described in Note 1, and the Corporations Regulations 2001.

Basis for Opinion

We conducted our audit in accordance with Australian Auditing Standards. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Report section of our report. We are independent of the company in accordance with the auditor independence requirements of the Corporations Act 2001 and the ethical requirements of the Accounting Professional and Ethical Standards Board's APES 110 Code of Ethics for Professional Accountants (the Code) that are relevant to our audit of the financial report in Australia. We have also fulfilled our other ethical responsibilities in accordance with the Code.

We confirm that the independence declaration required by the Corporations Act 2001, which has been given to the directors of the company, would be in the same terms if given to the directors as at the time of this auditor's report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Emphasis of Matter – Basis of Accounting

We draw attention to Note 1 to the financial report, which describes the basis of accounting. The financial report has been prepared for the purpose of fulfilling the directors' financial reporting responsibilities under the Corporations Act 2001. As a result, the financial report may not be suitable for another purpose. Our opinion is not modified in respect of this matter.

Responsibilities of the Directors for the Financial Report

The directors of the company are responsible for the preparation of the financial report that gives a true and fair view and have determined that the basis of preparation described in Note 1 to the financial report is appropriate to meet the requirements of the Corporations Act 2001 and is appropriate to meet the needs of the members. The directors' responsibility also includes such internal control as the directors determine is necessary to enable the preparation of a financial report that gives a true and fair view and is free from material misstatement, whether due to fraud or error.

In preparing the financial report, the directors are responsible for assessing the company's ability to continue as a going concern, disclosing, as applicable, matters relating to going concern and using the going concern

CEEC International Ltd Independent Auditor's Report

basis of accounting unless the directors either intend to liquidate the company or to cease operations, or have no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of the Financial Report

Our objectives are to obtain reasonable assurance about whether the financial report as a whole is free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the Australian Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of this financial report.

As part of an audit in accordance with the Australian Auditing Standards, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.
- Conclude on the appropriateness of the directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial report or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial report, including the disclosures, and whether the financial report represents the underlying transactions and events in a manner that achieves fair presentation.

We communicate with the directors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

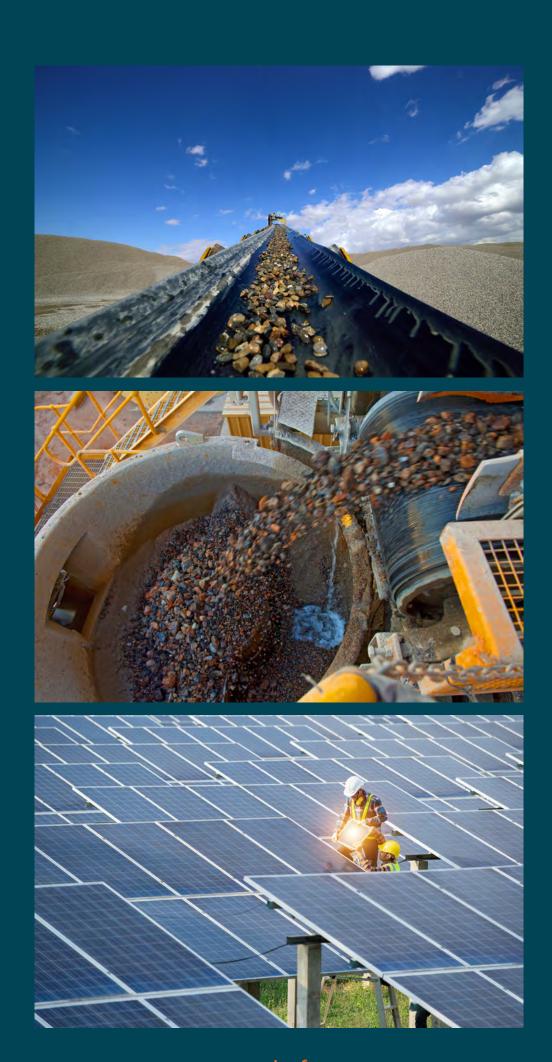
CEEC International Ltd Independent Auditor's Report

Signed on: 13 November 2020

Cormac Sharkey, CAANZ

Cormac Sharkey & Co Audit Pty Ltd

Suite 7 Level 1 186 Hampden Rd NEDLANDS WA 6009



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