

WOMEN'S MONTH 2026

The women advancing coal research

Eight women, eight projects, three focus areas. Also in this issue: the Colloquium in Benoni, the merger of Mining and Coal Processing, and a new partnership with Investing in African Mining Indaba.

This Women's Month, the work speaks for the women doing it

August is Women's Month, and this issue leads with eight women whose projects run across all three of our focus areas. They are not a feature we assembled for the occasion. They are the programme: blast criteria, wearable safety technology, algae, mine water, battery metals, rare earths, resource mapping and coal ash. We are proud to put their names and their work first.

Beyond that, this has been a period of visible delivery. In May our research partners took the Colloquium stage and set out, in plain terms, what four research themes are producing. In July the membership gathered for the Annual General Meeting and heard two keynote addresses on where coal sits, nationally and globally.

Between those two events we did something structural. From 1 July our Mining and Coal Processing portfolios became a single Integrated Mining and Processing focus area, so that research follows the value chain rather than an internal boundary. Existing projects, contracts, service level agreements, membership and fees all continue unaffected.

We also concluded a partnership agreement with Investing in African Mining Indaba. Coaltech now sits on the [Indaba partner list](#), which means South African coal research will be represented at the continent's foremost mining gathering in Cape Town next February. We are thankful to the organising committee for the strategic partnership.

Our priority is not activity for its own sake. It is impact that matters, to our members and to the country.



Avhurengwi Nengovhela

CHIEF EXECUTIVE OFFICER

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Researchers presented at Colloquium 2026

15

Research projects active across the portfolio

3

Research focus areas from 1 July 2026

3

Masterclasses published in the period

WOMEN'S MONTH · AUGUST 2026

Their names belong on the research

This Women's Month, Coaltech recognises the women contributing to applied research across our three focus areas: Integrated Mining and Processing, Surface Environment and Future Technologies.

8

WOMEN RESEARCHERS

8

LIVE PROJECTS

3

FOCUS AREAS

6

INSTITUTIONS

Their projects are investigating practical industry priorities: blast induced ground vibration, wearable mine safety technologies, carbon capture and energy recovery with algae, mine water management, battery metals from local brines, rare earth element recovery, resource mapping and critical materials recovery from coal ash.

Eight researchers, eight projects

This Women's Month, Coaltech recognises the women contributing to applied research across our three focus areas: Integrated Mining and Processing, Surface Environment and Future Technologies. Their projects are investigating practical industry priorities including blast induced ground vibration, wearable mine safety technologies, carbon capture and energy recovery with algae, mine water management, battery metals from local brines, rare earth element recovery, resource mapping and critical materials recovery from coal ash.

The researchers and their projects are set out below, by focus area.



INTEGRATED MINING AND PROCESSING

- M2025-2 Matsobane Nong**
Safe criteria limits of blast induced ground vibration
WITS UNIVERSITY
- M2026-2 Alexandra Lugagne**
Wearable technologies for mine safety
RIIS



SURFACE ENVIRONMENT

- E2020-4 Karen Ssekimpi**
Carbon capture and energy recovery with algae
UNIVERSITY OF CAPE TOWN
- E2025-2 Lesego Madiseng**
Facilitating irrigation as a mine water management strategy
UNIVERSITY OF PRETORIA
- E2025-3 Alison Lewis**
Local brines as secondary sources of battery metals
UNIVERSITY OF CAPE TOWN



FUTURE TECHNOLOGIES

- F2025-2 Linda Jewell**
Ion exchange to recover rare earth elements from coal discards
UNIVERSITY OF SOUTH AFRICA
- F2026-1 Nicola Wagner**
Mapping dumps for resource recovery
UNIVERSITY OF JOHANNESBURG
- F2026-2 Agnes Modiga**
Critical materials recovery from coal ash
MINTEK

Happy Women's Month from Coaltech.

FEATURE

Colloquium 2026

On 28 May the industry came to Benoni to hear what the research is producing. Ten researchers reported on work in progress across four themes.

DATE

28 May 2026

VENUE

ANEW Hotel, Benoni

THEME

Impact That Matters

Ten researchers, one stage, four themes

The programme was built so that each theme was carried by the people doing the work. Keynote address by Mr Mike Teke, Group Chief Executive of Seriti Resources and Chairman of [FutureCoal](#), with the member address delivered by Mr Veli Sibiya, Senior Vice President of Sasol Mining.

SAFETY AND GEOTECHNICAL INTEGRITY

Riaan Bergh

Mechanical Engineer, CSIR

Coal dust explosibility

Johan Hanekom

Chief Rock Engineer, CSIR

Fall-of-ground prevention

WATER AND BRINE STEWARDSHIP

Dr Ryan Merckel

Bioprocess Specialist, Mintek

Biological brine treatment

Lesego Madiseng

PhD Candidate, University of Pretoria

Mine water irrigation

LAND, CARBON AND REHABILITATION

Prof Wayne Truter

Research Professor, University of the Free State

Carbon farming

Karen Ssekimpi

Scientific Officer, University of Cape Town CeBER

Carbon capture using algae

VALUE FROM COAL, WASTE AND EMISSIONS

Dr Juarez Amaral Filho

Researcher, University of Cape Town CeBER

Coal materials for recovery

Reatile Pitso

Senior Researcher, CSIR

Coal waste in asphalt

Dr Mike Masukume

Principal Researcher, CSIR HySA and CCU

High Efficiency Low Emissions technologies

Juan du Plessis

Climate Change Advisor, Promethium Carbon

Scope 1 and Scope 2 emissions

WITH THANKS TO OUR HEADLINE SPONSORS



A full room, and a sector in good spirits



COLLOQUIUM 2026
28 MAY · ANEW HOTEL,
BENONI
NOW ON **COALTALK**

Opening address, Chairperson Phillip
Mulder. [Watch](#)

Every session from the day is on the
Coaltech channel. [Watch the playlist](#)

Thank you to our exhibitors

The exhibition floor was where much of the day's real work happened. Between sessions, delegates moved from stand to stand and the conversation turned practical, about equipment, methods, data and the problems each organisation is solving. Thank you to the eighteen organisations who exhibited at Colloquium 2026. The day would not have worked without you.



Each logo links to the organisation's website. Interested in exhibiting at the next Colloquium? Write to Carmen Bergman-Ally at cbergman@coaltech.co.za.

The membership met on 24 July 2026

The Chairperson, Mr Phillip Mulder, presented the Chairperson's report for the year ended 31 March 2026, and the audited annual financial statements were recommended to members for adoption. Two keynote addresses framed the year ahead, one national and one global.

CHAIRPERSON'S REPORT

Mr Phillip Mulder

Chairperson, Coaltech



COALTECH AGM 2026



KEYNOTE ADDRESS

**Coal in South Africa:
The National Reality
Against Global Trends**

Ms Caroline Shirindza

Executive Head: Coal, Exxaro Resources



KEYNOTE

Ms Caroline Shirindza

Executive Head: Coal, Exxaro Resources

Coal in South Africa: the national reality against global trends.

COALTECH AGM 2026



KEYNOTE ADDRESS

**The Global Coal Conversation:
Reframing the Narrative
Through Evidence and
Pragmatism**

Ms Michelle Manook

Chief Executive, FutureCoal



KEYNOTE

Ms Michelle Manook

Chief Executive, FutureCoal

The global coal conversation: reframing the narrative through evidence and pragmatism.

WHAT THE MEETING DEALT WITH

REPORTS AND ASSURANCE

The Chairperson's and Chief Executive's reports were taken, opening on the unqualified audit opinion, alongside the board changes, the new Intellectual Property Governance Framework and the Standard Project Cost Guidelines.

FUNDING THE PROGRAMME

Members discussed the ten percent increase in primary member contributions for 2026/27, and the strategy that sets the course to a self funding association by 2030.

THE MERGER

The principal announcement was the merger of Mining and Coal Processing, presented as a strengthening of oversight, with the assurance that members' own projects, contracts, service level agreements and fees are untouched.

RESOLUTIONS CARRIED

Adoption of the audited financial statements for the year ended 31 March 2026, and confirmation of the director appointments and rotations required by the Memorandum of Incorporation.

A SIGNIFICANT MILESTONE

Coaltech joins the Mining Indaba partner list

Coaltech has concluded a partnership agreement with Investing in African Mining Indaba and now appears on the **Indaba partner list**. For an association of our size this is a significant outcome. It places South African coal research, and the case for a safe and sustainable coal sector, in front of investors, industry leaders and decision makers from across the continent and beyond. We are thankful to the organising committee for the strategic partnership.

WHAT IT GIVES MEMBERS

A platform at the continent's foremost mining gathering, where the research members fund is put in front of capital and policy.

WHY IT MATTERS NOW

Coal's role in a blended energy system is being argued in rooms Coaltech has not always been in. The partnership gets us into them.

STANDING ON RECORD

The Chief Executive already sits on the Indaba speaker list, and spoke on critical minerals and energy access earlier this year.



Investing in
African Mining
Indaba

8 TO 11 FEBRUARY 2027
CTICC, CAPE TOWN

RESEARCH

Practical research placed inside industry conversations.

CONNECTION

Researchers, mining leaders and decision makers in one room.

IMPACT

Shared knowledge driving progress for African mining.

ALSO ON THE NATIONAL STAGE

The Chief Executive spoke at the 8th Coal and Energy Transition Day

Avhurengwi Nengovhela joined the agenda of the Coal Indaba, held under the theme Meeting Energy Needs for the Future. The event brought coal producers, government, state owned entities, investors, logistics operators and renewable energy voices into one room to examine how the country moves toward cleaner energy without undermining energy security. The opening conversation set out that the debate should not be reduced to renewables against coal.

22 JULY 2026 COUNTRY CLUB JOHANNESBURG, AUCKLAND PARK

One value chain, one focus area

Coaltech has brought its Mining and Coal Processing portfolios together into a single Integrated Mining and Processing research focus area. Coal does not stop being coal at the plant gate, and the research should not either.

Mining

Human factors in autonomous mining · real time equipment monitoring · drilling, blasting and fragmentation control · predictive safety technologies · roof control and geotechnical engineering · dust management · reining of old workings · drones for underground safety

Coal Processing

Production and handling of fines · plant energy efficiency · wet and dry processing · digitalisation and online measurement · repurposing and monetisation of discards, ash dumps and other processing waste

Integrated Mining and Processing

ONE FOCUS AREA · ONE COMMITTEE

01

One point of contact

Members engage one focus area instead of two, with a single prioritisation process.

02

No stranded value

Research follows the ore across the boundary where efficiency, safety and waste problems actually sit.

03

Faster decisions

Duplication at the overlap falls away, and budget concentrates on the clearest returns. The committee meets at least every second month.

WHAT THIS MEANS FOR MEMBERS

Existing projects, contracts, service level agreements, membership and fees all continue unaffected. Surface Environment and Future Technologies are unchanged. The merger streamlines how research is commissioned and governed, it does not alter any obligation to or from a member.

LEADERSHIP OF THE NEW FORUM

● CHAIRPERSON

Gavin Silver

● VICE CHAIRPERSON

Teboho Dibate

Mining stream

● VICE CHAIRPERSON

Vicky van Schalkwyk

Processing stream

Sandra Magagula moves across to Future Technologies, where she takes up the role of second Vice Chairperson.

Three focus areas, fifteen active projects



Integrated Mining and Processing

Explosibility and dust, roof control and geotechnics, in situ stress, yield and beneficiation, and value from discard and ultra-fines.



Surface Environment

Mine water and brine treatment, irrigation research, carbon farming, rehabilitation and productive after use of land.



Future Technologies

High Efficiency Low Emissions combustion, rare earth element recovery, greenhouse gas accounting and digital evaluation.

NOW ON THE WEBSITE

Publications are now filed under the three focus areas, and a Current Projects page has been added to the main navigation. A new Data and Tools menu carries the Energy Transition Twin, now live, with a Mining Digital Twin in development. Media has been split into YouTube and LinkedIn, and Press Releases.

Eight projects delivered, fifteen running

Delivery is measured against the project tracker rather than intent. Eight projects have closed out, and fifteen are running across the three focus areas. Colour denotes the focus area: Integrated Mining and Processing, Surface Environment, Future Technologies.

● Delivered ○ Running Colour denotes the focus area

Integrated Mining and Processing

9 4 DELIVERED · 5 RUNNING

- Stress measurements for fall of ground prevention
CSIR
- Building components from coal waste
Wits University
- Repurposing coal waste for concrete and segmental pavements
CSIR
- Coal stockyard management
CI Group
- Safe criteria limits of blast induced ground vibration
Wits University
- Digital twin for coal mining operations
DigitalTwin
- Wearable technologies for mine safety
RIIS
- Waste to resource, washability for a circular economy
UCT
- Discard dewatering technologies
North-West University

Surface Environment

6 2 DELIVERED · 4 RUNNING

- Biological treatment of brine wastes
Mintek
- Carbon farming model for rehabilitated land
University of Pretoria
- Irrigation of natrophile grass species
University of Pretoria
- Irrigation as a mine water management strategy
University of Pretoria
- Local brines as secondary sources of battery metals
UCT
- Waste liner innovation for mine closure
ARC-Innovations

Future Technologies

8 2 DELIVERED · 6 RUNNING

- Scope 1 and 2 emissions management in coal mining
Promethium
- HELE circulating fluidised bed feasibility and pre-EPC design
CSIR
- HELE circulating fluidised bed, Phase 2
CSIR
- Agrivoltaics for rehabilitated mine soils
University of the Free State
- Ion exchange to recover rare earths from coal discards
UNISA
- Mapping dumps for resource recovery
University of Johannesburg
- Critical materials recovery from coal ash
Mintek
- Viability of ash based rare earth extraction
Wits University

THE DISCIPLINE BEHIND THE NUMBERS

Fewer, larger projects, each with a route from research into operation, and each tracked to close-out.

Where the work sits

The same figures run in every issue, so members can see what moved since the last one.

BY FOCUS AREA

Delivered Running

Integrated Mining and Processing		4 / 9
Surface Environment		2 / 6
Future Technologies		2 / 8



The hall in session, Colloquium 2026.

If a project on the previous page affects your operation

Ask to be put in touch with the research team directly. Members can join a project reference group, sit in on progress reviews, or host a site trial.

ROUTE EVERYTHING THROUGH

Carmen Bergman-Ally

Projects Coordinator
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The HELE Circulating Fluidised Bed localisation programme

Coaltech's High Efficiency Low Emissions programme set out to build a credible local evidence base for lower emission coal technology, with the Council for Scientific and Industrial Research, Eskom and the South African National Energy Development Institute as programme partners. Phase 1 ran the feasibility study and pre-EPC design work for a circulating fluidised bed demonstration facility, and closed in July 2026.

LAUNCHED**1 July 2025****PHASE 1 COMPLETED****July 2026****PHASE 2 COMMENCES****Third quarter**

WHAT PHASE 1 ESTABLISHED

A pathway that fits the national plan

Coal remains part of a resilient and diverse energy mix. The work targets fleet efficiency, reliability and system flexibility, supporting a gradual and responsible shift rather than an abrupt one.

Capability beyond a single project

Pilot readiness, local supplier development and specialist skills, and scientific data to guide future policy and diversified energy decisions.

Discard and ultra-fines as feedstock

Circulating fluidised bed combustion can take low grade material, so the emissions question and the discard legacy are addressed together.

A shared funding base

Co-funding arrangements for Phase 2 are under discussion with the programme partners.

WHY IT MATTERS

The programme is designed to build local industrial capacity, not only a single project: pilot readiness, local supplier development and specialist skills, and scientific data to guide future policy and diversified energy decisions.

What members can now do at **coaltech.co.za**

The site has been rebuilt around one question: can a member find what the programme has produced without asking the office. The library, the portfolio, the recordings and the diary are all current.

Research library

Every Coaltech report since 1999, searchable and filtered by focus area.

[BROWSE THE LIBRARY →](#)

Media hub

Masterclasses, Colloquium sessions and interviews, published as they happen.

[WATCH →](#)

Current projects

The live portfolio for the financial year, project by project.

[SEE THE PORTFOLIO →](#)

Events diary

What is coming up, and recordings of what has already happened.

[CHECK THE DIARY →](#)

Also refreshed: [Members and Partners](#), [How We Work](#) and [About Us](#).

ONE ADDRESS

Everything the programme has produced, and everything it is producing now, sits at **coaltech.co.za**.

Two new members join the association

Coaltech closed the reporting year with 33 member organisations. Since then two further members have joined, and we are pleased to welcome them into a research programme that belongs to its members.



Hlela Energies

MIDDELBURG, MPUMALANGA

Part of the Hlela Group of companies, a Mpumalanga based mining, management and engineering consultancy delivering integrated project management and engineering services, together with renewable energy solutions.



The Minerals Processing and Beneficiation Industries Association of Southern Africa

INDUSTRY ASSOCIATION

The association brings the minerals processing and beneficiation industries of the region into the Coaltech membership, a constituency that sits squarely alongside the new Integrated Mining and Processing focus area.

ON COALTALK THIS PERIOD

3 May 2026	Coal gasification, with Dr Shehzaad Kauchali	Masterclass
29 June 2026	Mining transitions, from closure to regeneration, with Dr Henk Coetzee	Masterclass
30 June 2026	Colloquium 2026 opening address, by Chairperson Phillip Mulder	Colloquium
31 July 2026	Rare earth elements in coal ash, with Dr Denise Levitan	Masterclass



Members on the exhibition floor, Coaltech Colloquium 2026, ANEW Hotel Benoni.

Research that moves the industry

09



Coaltech

FY2027 CALL FOR PROPOSALS

Coaltech FY2027 Research Programme | 2027/28 funding cycle

RESEARCH THAT MOVES THE INDUSTRY

CALL FOR PROPOSALS

ISSUED AUGUST 2026

IMPACT THAT MATTERS.
Applied research that solves real operational problems in South Africa's coal sector.

Integrated Mining & Processing | **Surface Environment** | **Future Technologies**

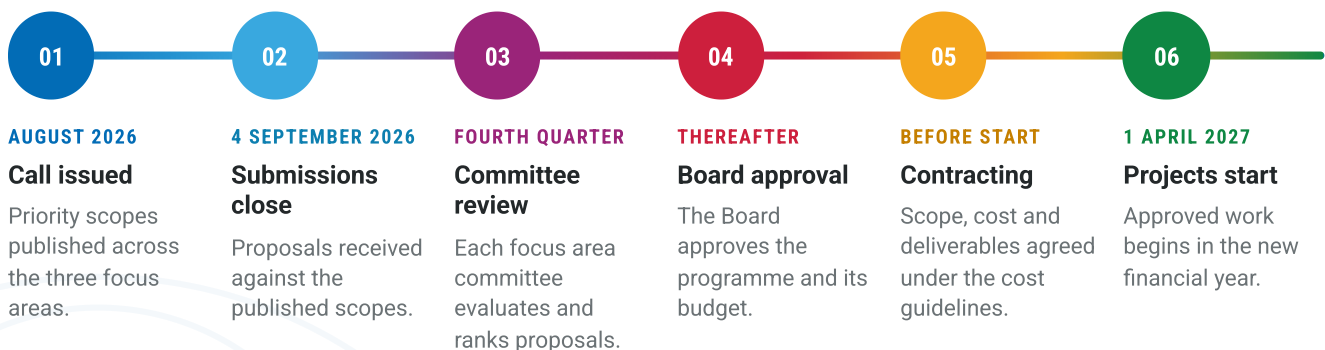
SUBMISSIONS CLOSE
4 SEPTEMBER 2026

PROJECTS START
1 APRIL 2027

🌐 www.coaltech.co.za | ✉ cbergman@coaltech.co.za | ☎ 011 498 7168

Priority scopes are set by the member committees ahead of every annual call, and funding is concentrated in fewer, larger projects rather than spread thinly across many small ones. We are looking for applied research that solves real operational problems in South Africa's coal sector, across all three focus areas.

FROM CALL TO CONTRACT



ENQUIRIES AND SUBMISSIONS

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LOOKING AHEAD

What comes next

4 SEPTEMBER

Call for proposals closes for the next research programme.

THIRD QUARTER

Phase 2 of the High Efficiency Low Emissions programme commences.

CONTINUING

The masterclass series and the **CoalTalk channel**, with further technical sessions to be announced.

ONGOING

Advancing the Zambia partnership as a technical partner for sustainable mining research across Southern Africa.

FEBRUARY 2027

Investing in African Mining Indaba, CTICC Cape Town, as a partner for the first time.

Coaltech exists so that members can fund together the research none would undertake alone. What counts is not how much research we run, but what it changes on the ground.



GET IN TOUCH

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ADVANCING THE FUTURE
OF SUSTAINABLE COAL

Our associate members

Associate members subscribe to the research programme and take part in the Steering Committees that direct it.

 ACRUX Sorting Technology Sensor based ore sorting that separates minerals particle by particle. acruxsorting.co.za	 Agreenco Rehabilitation and closure practitioners turning mining liabilities into assets. agreenco.co.za
 Ash Resources Classifies and supplies fly ash for concrete, cement and fillers. ashresources.co.za	 Blugrey Occupational Hygiene Occupational hygiene monitoring, ventilation, risk assessment and training. blugrey.co.za
 CDC Dust Control Dust suppression systems for continuous miners and road headers. cdcdustcontrol.com	 CEM Mining Geological exploration, mine planning and technical advisory. cemmining.com
 DMT Kai Batla Geological consulting and contracting for mining and exploration projects. dmt-group.com	 Enprotec Mineral processing engineering recovering ultra fine coal and minerals. enprotec.co.za
 EXM Environmental Science Environmental management, monitoring, mine closure and rehabilitation. exm.co.za	 FlowCentric Mining Technology Dust control, wastewater evaporation and spontaneous combustion solutions. flowcentric-mining.com
 Fraser Alexander Mining services covering tailings management across the value chain. fraseralexander.com	 GCS Water and Environmental Environmental, social and sustainability consulting for mining and energy. gcs-sa.biz
 Genet Mineral Processing Designs, fabricates and commissions modular coal processing plants. genet.co.za	 JCI Mining Opencast mining contractor for medium to large projects. jcimining.co.za
 Jones & Wagener Specialist engineering and environmental consultants. jaws.co.za	 Maptek 3D geological modelling, mine planning, scheduling and survey software. maptek.com
 MCS Production visibility and management systems for mining operations. mcsza.com	 Minopex Outsourced mineral processing plant operation and maintenance. minopex.com
 Nafasi Water Designs, builds and operates water and wastewater treatment plants. nafasiwater.com	 Phatsema Mining Dust suppression, equipment rental, haulage and steel services. phatsemamining.co.za
 Razor Labs AI predictive maintenance software for mining and heavy industry. razor-labs.com	 Timrite Timber, steel and polymer underground mine support products. timrite.co.za
 Namane Resources Coal producer operating in the Waterberg coalfield.	 Hlela Energies Coal and energy resources. hlelaenergy.africa