

Africa Sustainability Forum Site Visit

26th March 2025 | Mintek



On behalf of Mintek, we are delighted to welcome you to South Africa's leading research and development organisation in mineral processing and extractive metallurgy. Your upcoming visit will provide an exclusive opportunity to explore South Africa's pioneering advancements in hydrogen fuel cell technologies.

Together with Hydrogen South Africa (HySA) Catalysis Programme, Mintek has successfully developed high-performance platinum-based electrocatalysts that matches the quality of leading global suppliers such as Johnson Matthey, Tanaka, Umicore, and Heraeus. Their expertise in catalyst engineering enables their capacity to produce customised formulations, incorporating platinum-group metals (PGMs) and advanced carbon supports to enhance performance and durability in hydrogen fuel cell applications.

What you can expect during the visit

During your visit, you will gain first-hand insights into:

- **Financing Hydrogen Fuel Cell Technologies** – Learn about the investment landscape and financial mechanisms that support hydrogen fuel cell development.
- **Critical Mineral Innovation & Sustainability** - South Africa is one of the world's largest producers of PGMs, which are essential for fuel cell catalysts. Discover how Mintek's research enhances their efficiency and durability.
- **Commercial and Industrial Applications** – Discover how Mintek's fuel cell catalysts are applied in industries, for example, hydrogen-powered transportation, backup power systems, and industrial energy solutions.



- **South Africa's Renewable Energy Economy** – Understand how Mintek's Hydrogen Technology contributes to South Africa's renewable energy economy.
- **Challenges & opportunities Outlook** - Discuss supply chain risks, alternative materials research, and the need for sustainable mining practices to support the hydrogen transition.

Mintek's hydrogen fuel cell technology is at an advanced Technology Readiness Level (TRL 7-9), meaning it has successfully undergone pilot testing and real-world demonstrations. With strong patent protection and proprietary trade secrets, Mintek is positioned as a key player in the global hydrogen transition, offering opportunities for licensing, collaboration, and investment.

Agenda

Departure (13:00 – 13:30)

- **Pick-up Location:** Gallagher Convention Centre, 19 Richards Dr, Halfway House, Midrand, 1685, South Africa
- **Identification:** Please bring a valid form of identification (ID or passport)
- **Departure Time:** 13:00 PM, 26th March 2025
- *(Please arrive 15-20 mins before departure)*

Arrival (13:30 – 14:00)

- Location: Mintek (Main gate), 200 Malibongwe Dr, Praegville, Randburg, 2194, South Africa
- Activity: Arrival and security check

Welcome & Brief Introduction (14:00 – 14:30)

- Location: G4 Room, Mintek
- Agenda:
 - Welcome from CASI secretariat (3 min)
 - Welcome from Mintek – Dr. Keneiloe Khoabane (5 min)
 - Mintek Corporate Video (6 min)
 - Mintek Hydrogen & Fuel Cell Technologies Presentation – Dr. Olivia Barron (10-15 min)

Site visit (14:30 - 15:30)

You will be assigned to one of the following groups on the day. Please follow the guidance of Mintek colleagues.

Group 1

- Walk to the Membrane Electrode Assemblies (MEA) prototyping laboratory
- MEA prototyping laboratory tour & talk
- Walk to Fuel Cell (FC) demonstration site
- FC Demonstration site tour and talk

Group 2:

- Walk to FC demonstration site
- FC Demonstration site tour and talk
- Walk to the MEA prototyping laboratory



- MEA prototyping laboratory tour & talk

Networking, Q&A, and Refreshments (15:30 – 15:55)

You are welcome to ask questions during the site visit. Any additional discussions can take place during this networking session, where refreshments will be provided.

SARB Note of Thanks (15:55 – 16:00)

Following the networking and refreshments session, representatives from the SARB will deliver a brief note of thanks to conclude.

Return (16:00-16:30)

We will depart from Mintek at approximately 16:00 to return to Gallagher Convention Centre.