



WORKSHOP

The Potential for Powerfuels

DECEMBER 9TH 2019

AFRICAN ENERGY LEADERSHIP
CENTRE AT WITS BUSINESS SCHOOL

JOHANNESBURG SOUTH AFRICA

in cooperation with

WITS
UNIVERSITY



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The domestic & global potential for Powerfuels in South Africa

In the previous decades, the South African electricity sector has developed at a rapid pace, more than doubling total power generation since 1980. However recently, this has not been without challenges in guaranteeing security of supply to meet rising energy needs. At the same time, the cost of renewable energy generation has dropped considerably worldwide, making it competitive with fossil generation in many places. Due to the large potential for both wind and PV, renewables are set to become a key pillar not only in the power sector, but also beyond¹. Several studies², have identified South Africa as one of the best locations worldwide to produce powerfuels (renewable electricity-based fuels and feedstocks).

We believe, powerfuels can provide several benefits for South Africa. They create valuable products out of abundant sun and wind available in South Africa. They can also contribute to the local beneficiation of South Africa's mineral resources such as platinum. Developing these resources is further set to enrich energy research programs like HySA. Furthermore, existing assets and expertise in fuel production such as SASOL's Fischer-Tropsch plants, can be utilized and made future-proof.

As the global energy transition progresses, powerfuels become increasingly important in meeting climate goals. Several European countries have acknowledged the importance of powerfuels and the business opportunity they present. First studies are determining key powerfuels supply locations and policy makers are starting to strategically develop bilateral relations.

The aim of our technical workshop is to explore the potential of the powerfuels economy and identify hurdles that could hinder the establishment of South Africa as a major supplier. Furthermore, we would like to assess the possibilities for the local use of powerfuels as our goal is to identify and help develop projects on a

pre-industrial scale in South Africa. Finally, as a follow-up, a legal study could be conducted to explore the feasibility of necessary regulatory changes within South Africa.

We would like to formally welcome you to this workshop and look forward to hearing your perspective. We believe that by attending this workshop you can shape the development of a topic which will play a significant role in the energy transition, not only in South Africa but also worldwide.

Thank you and enjoy the proceedings.



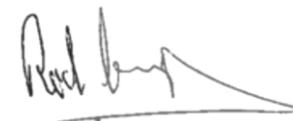
Andreas Kuhlmann

Chief Executive, German Energy Agency (dena)
Speaker of the Global Alliance Powerfuels



Diego de Radigues

Chairman, EU Chamber of Commerce and Industry
in Southern Africa



Rod Crompton, Director of the African Energy
Leadership Centre at Wits Business School

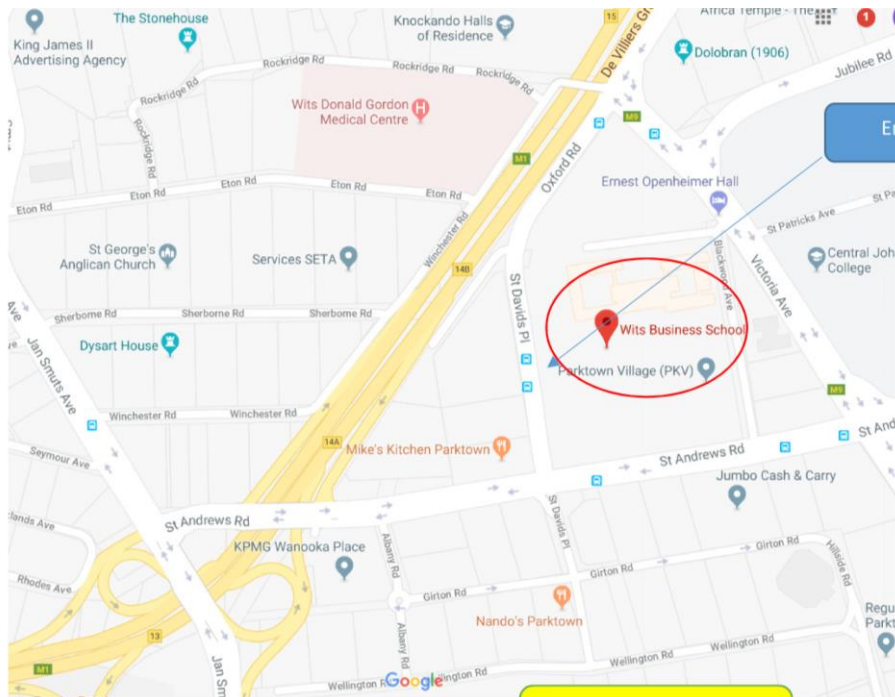
¹ See [100% RE Study](#), p. 115/137

² such as [World Energy Council 2018](#) "International Aspects of a Power-to-X-Roadmap"; Fasihi & Breyer's [analysis on hybrid PV-wind based production](#)

Agenda

9:00	Registration						
9:30	Welcome address Prof. Rod Crompton, Director of the African Energy Leadership Centre at Wits Business School						
9:40	Welcome address Thabo Molekoa, Board Member, EU Chamber of Commerce and Industry in South Africa and CEO Sub-Saharan Africa Region, thyssenkrupp						
9:50	<p>The Role of Powerfuels in the Energy Transition</p> <p>Electrons and molecules: Powerfuels as a missing link for the energy transition Stefan Siegemund, Head of Department, German Energy Agency</p> <p>The need for electrification and hydrogen in the global energy transition Cédric Philibert, formerly International Energy Agency</p> <p>Renewable potentials in South Africa and Europe Tobias Bischof-Niemz, Head of Corporate Business Development, Enertrag</p> <p>A Sasol perspective on Sustainability and Powerfuels Theo Pretorius, Vice President: Technology Management, SASOL</p> <p>Beneficiation of South African renewables: Industrial policy perspective TBD, Department of Trade and Industry (Requested)</p> <p>Moderation: Prof. David Walwyn, University of Pretoria</p> <p><i>Discussion</i></p>						
12:30	Lunch break						
13:40	From plans to plants: towards commercial viability Jens Baumgartner, Business Development Manager Electrolysis, sunfire <i>Discussion</i>						
14:15	<p>Powerfuels applications & projects in the European-South African context</p> <p><i>Workshop Session</i></p> <table border="1"> <thead> <tr> <th>Group 1 Powerfuels in industrial uses</th> <th>Group 2 Powerfuels in aviation</th> <th>Group 3 Powerfuels in Road Transport</th> </tr> </thead> <tbody> <tr> <td>Co-Chairs: Benoit Decourt, UCL Sarushen Pillay, SASOL</td> <td>Co-Chairs: Tjasa Bole-Rentel, WWF Kilian Crone, dena</td> <td>Co-Chairs: Gaylor Montmasson-Clair, TIPS (tbc) Stefan Siegemund, dena</td> </tr> </tbody> </table>	Group 1 Powerfuels in industrial uses	Group 2 Powerfuels in aviation	Group 3 Powerfuels in Road Transport	Co-Chairs: Benoit Decourt, UCL Sarushen Pillay, SASOL	Co-Chairs: Tjasa Bole-Rentel, WWF Kilian Crone, dena	Co-Chairs: Gaylor Montmasson-Clair, TIPS (tbc) Stefan Siegemund, dena
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16:00	Coffee Break						
16:15	<p>Criteria for project development in the European-South African perspective Presentations of main results by the workshop chairs</p> <p>Moderation: Cédric Philibert, formerly International Energy Agency</p> <p><i>Discussion</i></p>						
17:00	Conclusion & Outlook Cédric Philibert, formerly International Energy Agency Stefan Siegemund, Head of Department, German Energy Agency Prof. Rod Crompton, Director of the African Energy Leadership Centre at Wits Business School						
17:30	Networking Reception						
19:00	End						

Directions



Parking & Directions

Parking Bert Wessels Lecture Theatre 1 (first floor)



Contact

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