Development of an HFC Industry in SA





Background on HySA Programme

Programme Implementation

• Specific Projects

• Way forward



- Develop local cost competitive hydrogen generation solutions based on renewable resources
- Wealth Creation through value added manufacturing of PGM catalysis with a goal of supplying 25% of PGM catalysts demand by 2020
- Promote equity and inclusion in the economic benefits of South Africa's resources
- Strong focus on Human Capital Development in line with DST's broader HCD Strategy



HySA Centres of Competence





Implementation Phases

2008 - 2013	2014 - 2018	2019 - 2023
Establish R&D Capability	Demonstrate and Validate Technology	Commercialise South African Innovation
Recruit mission- critical staff	Establish critical supply chain capability	Contribute to international
► Identify initial	 Deliver first products 	innovation
markets	to market	Compete successfully
Develop first-pre	► Demonstrate	on world market
commercial	capabilities in pilot	► Capture 25% of
technologies	markets	global catalysis value
		chain in hydrogen
		science



HySA/Catalysis Technology Overview





H2 and FC Value chain



Hydrogen production, storage and delivery



Technology Development Matrix and Funding Instruments





Fuel cell Launch at Eastern Cape Schools: June 2015



Fuel cell unit at Mvuzo Primary School and (below) Minister inspects and agricultural project supported by DST at Arthur Mfebe school





Minister Pandor launches a fuel cell unit at Arthur Mfebe School (above) and signs agreement with Air Products and Anglo Platinum to support fuel cell project



Windsor East Clinic Fuel Cell Launch: July 2015



DDG Muofhe addresses delegates at the launch







Inaugural HySA Technical Meeting: August 2015



Delegates participate in the Inaugural HySA Technical Meeting in Cape Town





Presentation of Best Poster Award



science & technology

Department: Science and Technology REPUBLIC OF SOUTH AFRICA

Deputy President's Visit to Japan: August 2015



Deputy President Ramaphosa engages with Masimo



Deputy President and Minister Pandor are driven in the Mirai



HySA Delegation visits the Toyota innovation Centre



Fuel Cell Value Chain and roles of stakeholders



Way Forward

- Increase the number of postgraduates in HFCT to enhance knowledge creation
- Encourage technology providers to co-invest in the demonstration of hydrogen fuel cells in strategic application areas
- Continue public awareness of HFCT through extension of pilot projects but with focus on incorporating locally developed components
- Engage public and private sector to create Industry cluster
- Explore options to attract more corporate investors in order to create the necessary infrastructure to support national roll out



Thank you

Dr Cosmas Chiteme

Department Science and Technology Director, Hydrogen and Energy

Telephone: +27 12 843 6541 Mobile: +27 82 325 2105 Email: <u>cosmas.chiteme@dst.gov.za</u>

