

# Unlocking major project return through focused development strategies & international partnerships

Corporate Presentation

June 2024



# DISCLAIMER

THE INFORMATION CONTAINED IN THIS CONFIDENTIAL DOCUMENT (“PRESENTATION”) HAS BEEN PREPARED BY ORACLE POWER PLC (THE “COMPANY”). IT HAS NOT BEEN FULLY VERIFIED AND IS SUBJECT TO MATERIAL UPDATING, REVISION AND FURTHER AMENDMENT. THIS PRESENTATION HAS NOT BEEN APPROVED BY AN AUTHORISED PERSON IN ACCORDANCE WITH SECTION 21 OF THE FINANCIAL SERVICES AND MARKETS ACT 2000 (“FSMA”). ANY PERSON WHO RECEIVES THIS PRESENTATION SHOULD NOT RELY OR ACT UPON IT.

While the information contained herein has been prepared in good faith, neither the Company nor any of its shareholders, directors, officers, agents, employees or advisers give, have given or have authority to give, any representations or warranties (express or implied) as to, or in relation to, the accuracy, reliability or completeness of the information in this Presentation, or any revision thereof, or of any other written or oral information made or to be made available to any interested party or its advisers (all such information being referred to as “Information”) and liability therefore is expressly disclaimed. Accordingly, neither the Company nor any of its shareholders, directors, officers, agents, employees or advisers take any responsibility for, or will accept any liability whether direct or indirect, express or implied, contractual, tortious, statutory or otherwise, in respect of, the accuracy or completeness of the Information or for any of the opinions contained herein or for any errors, omissions or misstatements or for any loss, howsoever arising, from the use of this Presentation.

This Presentation may contain forward-looking statements that involve substantial risks and uncertainties, and actual results and developments may differ materially from those expressed or implied by these statements. These forward-looking statements are statements regarding the Company's intentions, beliefs or current expectations concerning, among other things, the Company's results of operations, financial condition, prospects, growth, strategies and the industry in which the Company operates. By their nature, forward-looking statements involve risks and uncertainties because they relate to events and depend on circumstances that may or may not occur in the future. These forward-looking statements speak only as of the date of this Presentation and the Company does not undertake any obligation to publicly release any revisions to these forward-looking statements to reflect events or circumstances after the date of this Presentation.

Neither the issue of this Presentation nor any part of its contents is to be taken as any form of commitment on the part of the Company to proceed with any transaction and the right is reserved to terminate any discussions or negotiations in that regard. In no circumstances will the Company be responsible for any costs, losses or expenses incurred in connection with any appraisal or investigation of the Company. In furnishing this Presentation, the Company does not undertake or agree to any obligation to provide the recipient with access to any additional information or to update this Presentation or to correct any inaccuracies in, or omissions from, this Presentation which may become apparent.

This Presentation should not be considered as the giving of investment advice by the Company or any of its shareholders, directors, officers, agents, employees or advisers. In particular, this Presentation does not constitute an offer or invitation to subscribe for or purchase any securities and neither this Presentation nor anything contained herein shall form the basis of any contract or commitment whatsoever. Any decision to subscribe for the Company's securities must be made only on the basis of the information contained in an admission document (or similar) in its final form relating to the Company, which may be different to the information contained in this Presentation. Each party to whom this Presentation is made available must make its own independent assessment of the Company after making such investigations and taking such advice as may be deemed necessary. In particular, any estimates or projections or opinions contained herein necessarily involve significant elements of subjective judgment, analysis and assumptions and each recipient should satisfy itself in relation to such matters.

You should be aware of the risks associated with an investment in the Company and that in emerging markets, such as Pakistan, the risks are far greater than in more developed markets (including significant legal, economic and political risks) and that the Company could potentially lose the benefit of its assets in Pakistan. You acknowledge the high number of expenses and difficulties frequently encountered by companies in the early stages of development, particularly companies operating in emerging markets, and you should be aware that this may lead to the loss of an individual's entire investment.

Neither this Presentation nor any copy of it may be (a) taken or transmitted into Australia, Canada, Japan, the Republic of Ireland, the Republic of South Africa or the United States of America (each a “Restricted Territory”), their territories or possessions; (b) distributed to any U.S. person (as defined in Regulation S under the United States Securities Act of 1933 (as amended)) or (c) distributed to any individual outside a Restricted Territory who is a resident thereof in any such case for the purpose of offer for sale or solicitation or invitation to buy or subscribe any securities or in the context where its distribution may be construed as such offer, solicitation or invitation, in any such case except in compliance with any applicable exemption. The distribution of this document in or to persons subject to other jurisdictions may be restricted by law and persons into whose possession this document comes should inform themselves about, and observe, any such restrictions. Any failure to comply with these restrictions may constitute a violation of the laws of the relevant jurisdiction.

# COMPANY OVERVIEW

## RECOGNISING & REALISING VALUE



An international natural resources & energy project developer listed on London's AIM market (L.ORCP)



Currently active in Pakistan & Australia



Led by an experienced team with extensive experience in major projects in the UK, Australia, Middle East, Pakistan & South America



Robust relationships with industry giants, which have financial capability, technological expertise & development experience

## FOCUSED ON...

GROWTH  
& DIVERSIFICATION

PROJECT  
OPTIMISATION

SHAREHOLDER  
VALUE

# TEAM TO DELIVER

THE RIGHT COMPOSITION OF INDIVIDUALS TO DELIVER ON OUR LONG-TERM STRATEGY & SHORT-TERM OBJECTIVES



**Mark Steed**  
Non-Executive Chairman

Involved in major projects both in the UK & in emerging markets. With +35 years' experience in the Securities industry, he is a member of the Institute of Chartered Accountants, the Chartered Institute of Securities & Investment & the Chartered Institute of Marketing.



**Naheed Memon**  
Chief Executive Officer

A member of the Prime Minister of Pakistan's Committee on Coal Development & served as the Chairman of the Sindh Board of Investment, Government of Sindh. She holds several directorships, has founded a number of businesses & worked in private banking amongst other roles.



**David Hutchins**  
Non-Executive Director

A highly experienced corporate mining & commodities professional with +30 years in the industry. He has held several executive roles for both listed & private companies & is currently the Chair of the FTSE Gold Mines Index Committee and a director Wishbone Gold Plc.



**Dr Naveed Akhtar**  
CTO - Hydrogen

A leading expert in the Hydrogen Energy/Fuel Cells field with a LORCH multidisciplinary academic background. He holds several prestigious awards & fellowships, has published +28 papers in scientific journals & 11 patents in the field of fuel cells. He is the founder of Hy-Hybrid Energy.



**Nicholas Lee**  
CFO / Company Secretary

Extensive capital markets experience and is actively involved in AIM. He has advised a range of companies across a number of different sectors both as a director and in his previous capacity as a corporate financier.



**Zahid Nasrullah**  
Advisor - Green Energy

A seasoned diplomat with a career over 3 decades. Ambassador of Pakistan to Korea & Afghanistan and extensive experience in policy making, implementation & negotiations at the highest level with interlocutors in public, private & international organisations.



**Ed Meade**  
Geologist - Gold

A geologist with +25 years' experience in gold & base metals exploration, mine development & mine production. He has identified & secured numerous projects for public companies in Australia & internationally & is on the board of several ASX listed companies.

# OUR PORTFOLIO

DELIVERING GROWTH FROM EXCEPTIONAL PROJECTS & STRONG PARTNERSHIPS



## NORTHERN ZONE GOLD PROJECT

### WESTERN AUSTRALIA

25km east of major gold mining centre, Kalgoorlie

Maiden exploration target of 2.5Moz - 4.8Moz gold

Farm in with ASX listed Riversgold Ltd for accelerated development & potential JV to give shareholders large upside with limited risk exposure

Completed diamond drilling of entire central cross-section to 450m vertical depth validating previous exploration model targets

Drilling campaign currently ongoing, proving up the resource potential of the asset and moving towards a maiden JORC Estimate in 2024



## GREEN HYDROGEN PROJECT

### PAKISTAN

Strategic MoU with State Grid Corporation of China, for 400MW hydrogen production plant, targeting c.150,000 kg green hydrogen production per day

To target markets of China, Japan, Korea

Advanced with H<sub>2</sub>/NH<sub>3</sub> feasibility studies & FEED plans to be completed soon



## HYBRID RENEWABLE PROJECT

### PAKISTAN

Developing a 1.3 GW Hybrid (solar & wind) plant

LOI obtained from the Government, permitting to produce hybrid power

Advanced with power/transmission, environmental and ground studies

7,000 acres of land in the Jhimpir wind corridor, with abundant renewable resources



## THAR SOLAR PROJECT

### PAKISTAN

Developing a 1GW solar park

Co-operation Agreement with Power China to collaborate on potential development

Focus on sustainability



## THAR BLOCK VI COAL PROJECT

### PAKISTAN

30-year lease over one of the largest lignite resources in the world

Ongoing development of coal based 1,320MW power plant in CPEC, which has secured provisional offtake from K-Electric, & development facilitation with GoS

Ongoing development of CTG/L in CPEC to produce urea & liquid hydrocarbons in cooperation with China National Coal

# CLEAR STRATEGY

OUR VISION IS TO BE A LARGE INTERNATIONAL PROJECT DEVELOPER IN THE NATURAL RESOURCES & ENERGY SECTORS, THROUGH A GROWING PORTFOLIO OF HIGH RETURN PROJECTS

1.

Develop selected early-stage projects in sectors with high global demand and aligned with worldwide economic and environmental trends.

2.

Deliver bankability, by de-risking projects and then proceed to seek out timely and profitable exits to accrue shareholder value and income.

3.

Be jurisdiction agnostic and invest in projects that can be developed most competitively, on account of operational bandwidth and resource abundance.

4.

Diversify to mitigate commodity & market long term risks & trends.



# NORTHERN ZONE GOLD PROJECT

WESTERN AUSTRALIA





# SNAPSHOT

## WORLD CLASS OREBODY

Acquired highly prospective gold project license located in Western Australia in Q4 2020

25km east of the major gold mining centre of Kalgoorlie, the home of the 'Super Pit' mine, which is the second largest gold mine in Australia

Exploration targeting 2.5Moz - 4.8Moz (pre JORC) gold resource

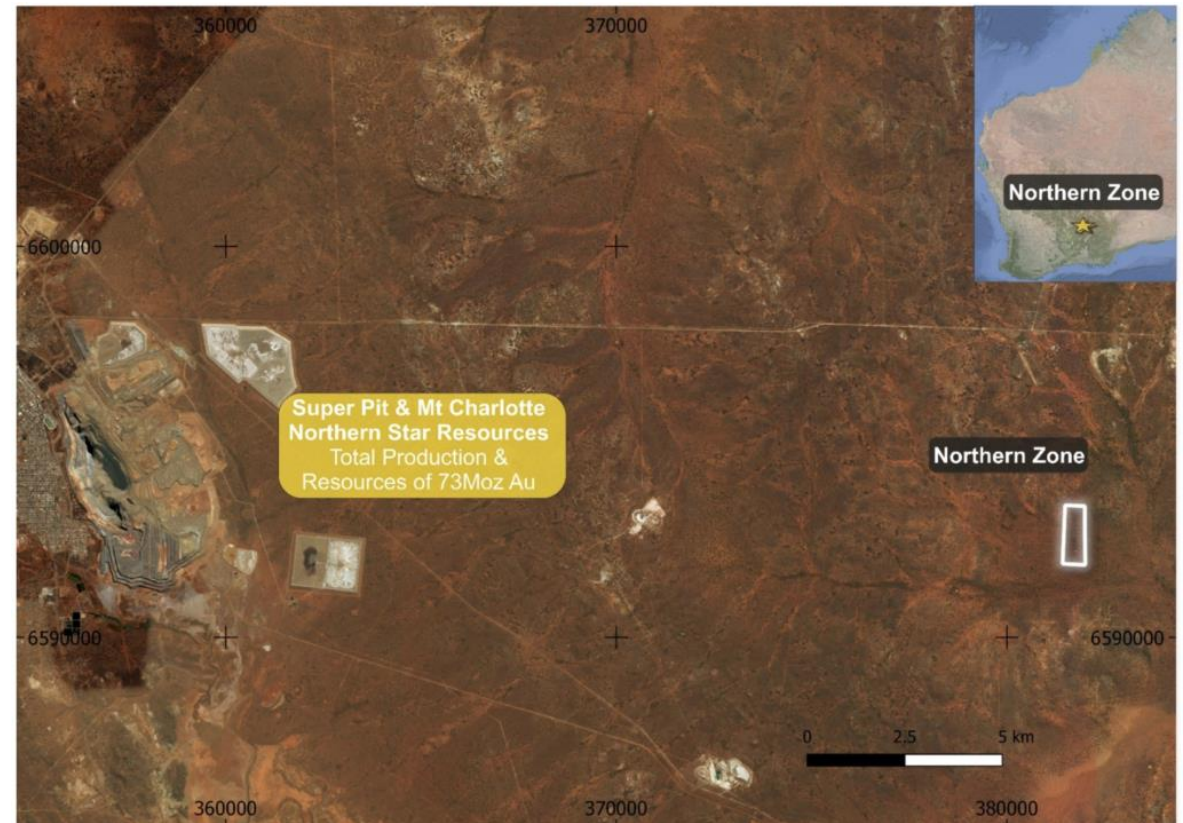
Under active exploration in partnership with ASX listed Riversgold through a farm-in agreement signed in Q2 2023

Completed diamond drilling of entire central cross-section with reverse circulate drilling and air core drilling campaign currently ongoing, proving up the resource potential of the asset and moving towards a maiden JORC Estimate in 2024

Prospective JV expected near term would give Oracle shareholders 20% of project



ASX Code: RGL







# DEVELOPMENT TIMELINE

## NEAR-TERM TIMELINE TO PRODUCTION

Q4 2020

Project acquisition

Q4 2021

Reverse Circulation drilling concluded

2022

Positive results =>IRGS with target 2.5-4.8Moz Au  
Tests return very high gold recovery rates

Q2 2023

Farm in HoT agreement with ASX listed Riversgold

Q3 2023

Riversgold Diamond Drilling concluded assays in laboratory

Q4 2023

Diamond drilling has validated previous exploration model and targets of 2.5-4.8Moz Au

2024

RC and AC drilling campaign ongoing, moving towards a maiden JORC Estimate

+

Commercial Operation Date (COD)



# GREEN HYDROGEN PROJECT

PAKISTAN





## SNAPSHOT

ORACLE ENERGY IS THE SPV FOR THE GREEN HYDROGEN PROJECT & IS FUNDED ON A 70:30 BASIS BY KAHEEL ENERGY (100% OWNED BY HIS HIGHNESS SHAIKH AHMED DALMOOK AL MAKTOUM THROUGH HIS PRIVATE OFFICE) & ORACLE POWER RESPECTIVELY

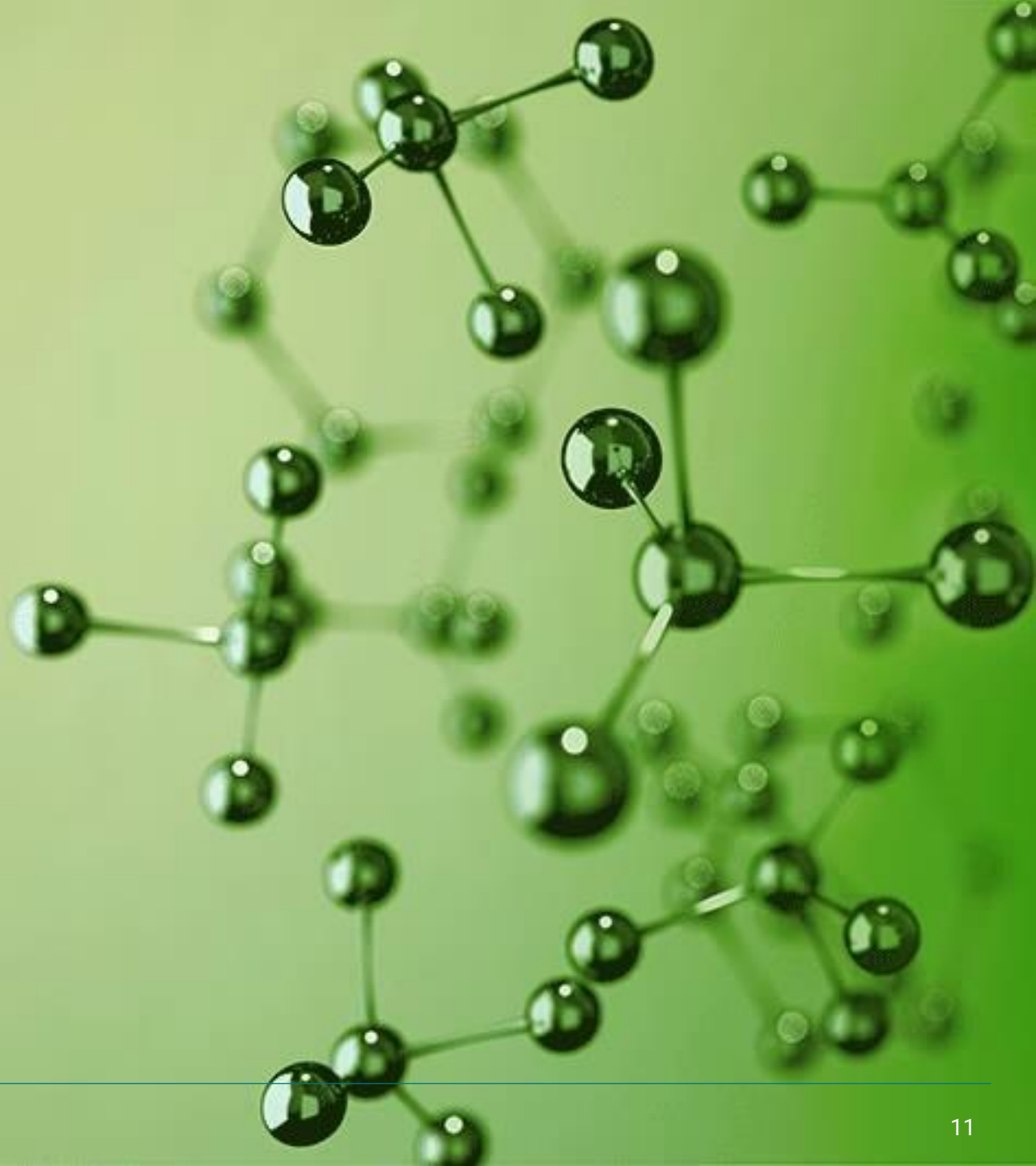
Strategy to be Pakistan's first hydrogen facility, establishing the country as one of the main green hydrogen & green ammonia suppliers in the region

28.3 sq. km land in the wind corridor in Jhimpir, which has an annual wind power generation capacity of +50,000 MW with average wind speeds of up-to 8 m/s

LOI from the Government permitting the production of 1.2GW of hybrid power

Targeting annual output of ~55,000 tonnes high purity green hydrogen or ~275,000 tonnes of green ammonia, potentially using a hybrid solar/wind renewable system, along with adequate battery storage

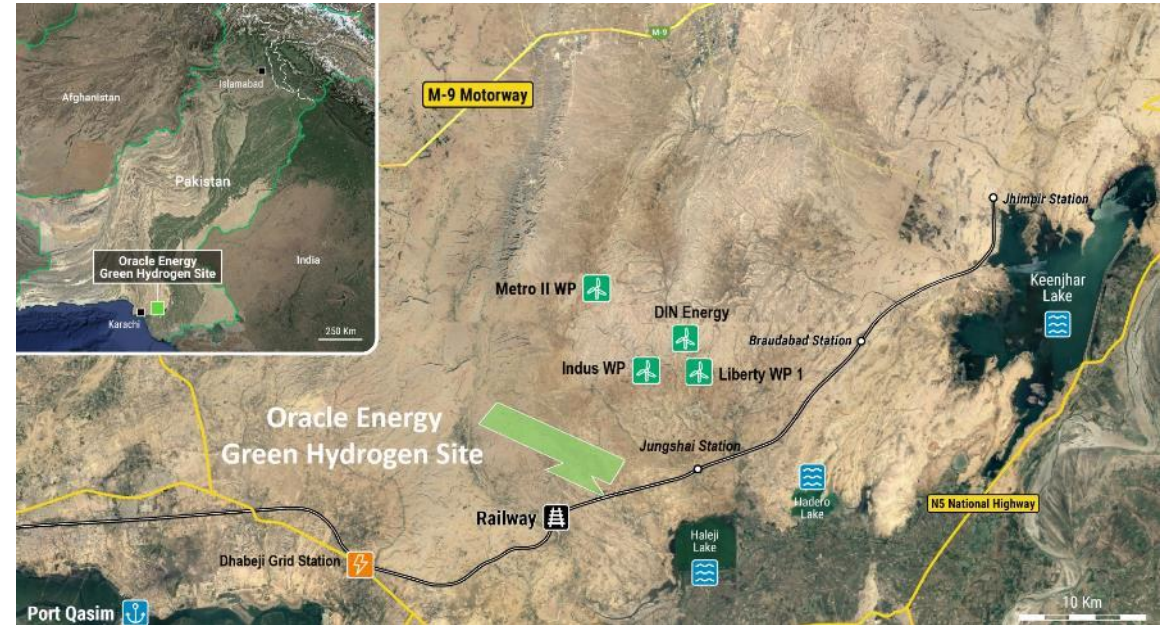
Advancing studies & developing strategies to fast-track path to production



# LOCATION

7,000-ACRE AREA, CLOSE TO N5 HIGHWAY, WHICH CUTS THROUGH THE CENTRE OF PAKISTAN FROM THE COASTAL KARACHI TO THE NORTHERN REGIONS

- N5 highway connects the project to the two largest ports in Pakistan: 35km to Port Qasim & 70km to Karachi Port
- Within a radius of 20km, +350MW of renewable power is already commissioned, owned by international, multilaterals & private sponsors, including CDB, IFC, & DEG
- c.6km from the national railway Jungshai station
- c.12km & 33km from Haleji and Keenjhar fresh water lakes respectively, providing ease of access to water supplies



ESTIMATED AERIAL DISTANCES TO THE PROJECT (KM)

Infrastructure	Anchor	Wind Projects	Wind Turbine
Port Qasim	35	Indus Wind Power	8
Karachi Port	70	Liberty Wind Power I	11
M9 Motorway	27	DIN Energy	12
N5 National Highway	17	Metro II Wind Power	13
Keenjhar Lake	33		
Railway (Jungshai Station)	6	Grid Stations	Lightning Bolt
		Dhabeji Grid Station	17



# THE MARKET

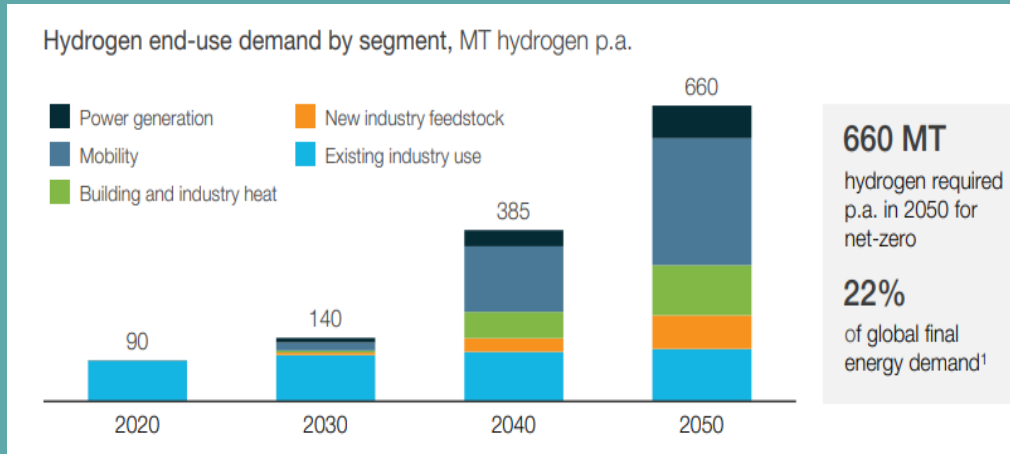
## GREEN HYDROGEN & GREEN AMMONIA MOLECULES HAVE GAINED BUSINESS & GOVERNMENT INTEREST WORLDWIDE

### GREEN HYDROGEN

Demand for clean hydrogen could reach 660 million metric tons in 2050, making up 22% of the final energy demand globally. Demand will increase exponentially in the mobility, industry & power sector (*Hydrogen Council, McKinsey & Company, 2021*)

The green hydrogen from the project potentially would be used as industrial grade gaseous hydrogen, high-purity mobility grade gaseous hydrogen, liquid hydrogen for end-users in Asia

Hydrogen can also be blended in the existing local national gas grid in Pakistan or can potentially be used as a blended gas for industrial power generation



Hydrogen Council, McKinsey & Company, 2021

### GREEN AMMONIA

Expected that the country-to-country traded ammonia market would grow from 18-20Mt to approaching 200Mt+ by 2050 (*Argus Media Consulting, 2021*)

Upside case pushes this up to ~300Mt

Ammonia produced at the project would likely be sold to Europe & Asia & for direct use or re-conversion to green hydrogen for end-users

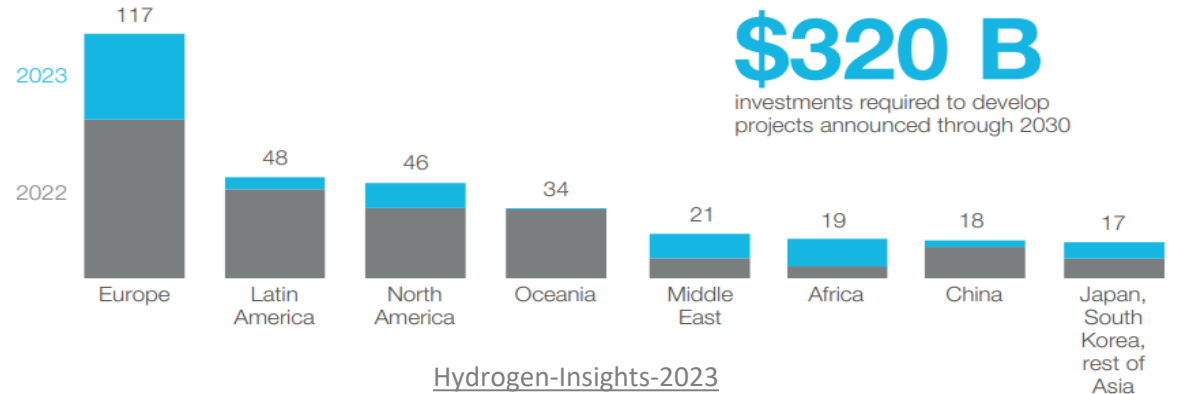
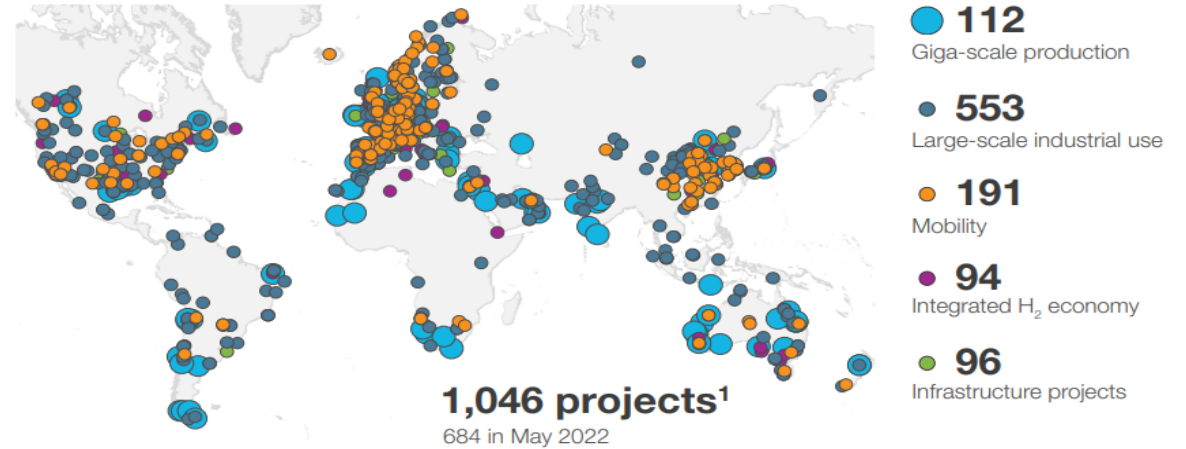




# GLOBALY ANNOUNCED GREEN HYDROGEN PROJECTS

ORACLE ENERGY'S GREEN HYDROGEN PROJECT IS THE FIRST ANNOUNCED PROJECT OF MEGA SCALE WITHIN THE INDO-PAK REGION

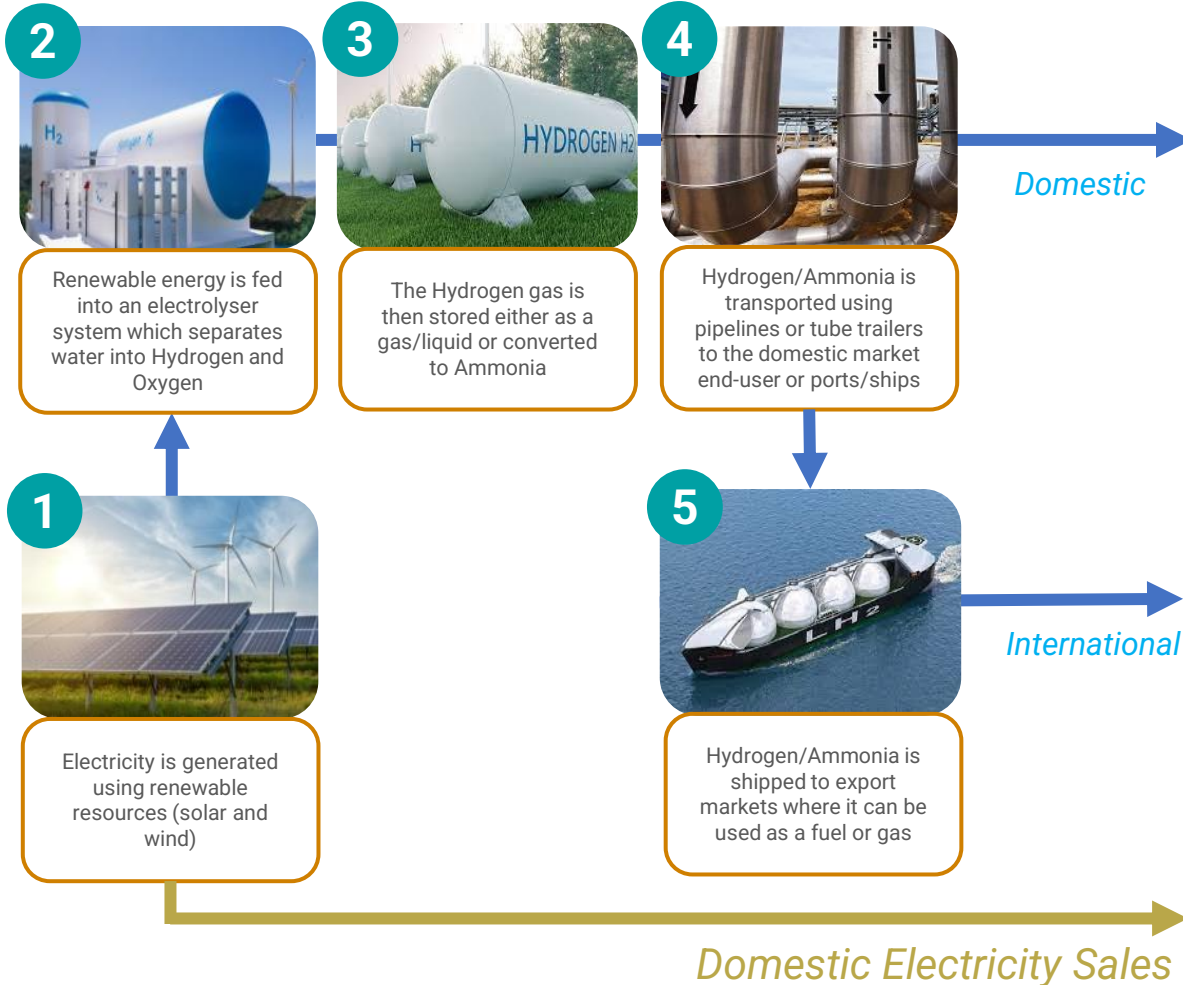
- +1,000 project proposals have been announced globally as of the end of January 2023
  - 795 aim to be fully or partially commissioned through 2030 & represent a total US\$320bn of direct investments into hydrogen value chains through 2030
- The Neom Green Hydrogen project aims to develop a large-scaled 2GW Hydrogen production facility in the Neom region, Saudi Arabia,
  - Targeted capacity of c. 4GW of renewable power for sustainable hydrogen production
- The HYPOR T Duqm Green Hydrogen Project in Oman is a significant undertaking, envisioning a green hydrogen production and distribution hub in Duqm
  - Plans to develop a 500MW capacity green hydrogen & green ammonia facility powered by a hybrid 1.3GW of renewable power generation capacity
- To be on track to net zero in 2050, more than a doubling of announced investments is needed by 2030 – these need to be matured & deployed (*Hydrogen Council - Hydrogen Insights, 2023*)





# PLANNED PRODUCTION FACILITY

## HYDROGEN SUPPLY CHAIN



- Project is in Pakistan's Sindh province, a region abundant with larger solar and wind renewable resource and good infrastructure. Company plans to develop project as follows:

- Hybrid Renewable Energy Production & Storage** - solar & wind power facilities with a capacity of 800 MW and 500 MW respectively, battery storage of 450 MWh and grid. The Company could also sell surplus power to national grid or private buyers
- Green Hydrogen/Ammonia Production** - plant with a capacity of 400 MW and an estimated production of ~55,000 tonnes of Green Hydrogen or ~275,000 tonnes of Green Ammonia annually
- Storage, Transformation & Transportation** – hydrogen produced will be exported to regional markets for industry & utilities. Excess may be utilized for domestic market (gas consumption/ammonia/ fertilizer production)

			<b>H<sub>2</sub></b>	<b>NH<sub>3</sub></b>
800MW	500MW	450MWh	55Ktpa	275Ktpa



# FEASIBILITY STUDIES

## GREEN H<sub>2</sub> & GREEN NH<sub>3</sub> STUDY

Undertaken by Thyssenkrupp Uhde, a global leader in chemical plant engineering, study confirmed project development viability:

- Assessed that with 800MW solar & 500MW wind power, a 400MW electrolyser capacity is required to produce ~150 tonnes/day of green hydrogen.
- Included a detailed techno-economic analysis, covering costs, processes, technology, & carbon intensity.
- Evaluated factors like hydrogen & ammonia production methods, plant location, renewable energy utilisation, & assessed markets including Asia (China, Japan, Korea) & Europe.



## HYBRID RENEWABLE POWER & TRANSMISSION STUDY

Study undertaken by State Grid Corporation of China in collaboration with Shanghai Survey, Design & Research Institute (SIDRI):

- Confirmed commercial viability at competitive energy prices, with very attractive returns for investors.
- Established commercial and technical feasibility of hybrid renewable power on the project site. The study cites the richness of solar energy resource at the site as Grade A, i.e., "the richest". The Gharo-Jhimpir wind corridor is also classified as one of the most lucrative regions in the world.
- Findings provided a detailed roadmap for efficient integration of this significant 1.3 GW of renewable energy into Pakistan's power grid, to meet national demand.







# POTENTIAL OFFTAKERS

## STRONG RELATIONSHIPS WITH INTERNATIONAL CONGLOMERATES



**PetroChina**

- Agreement for cooperation & commercialisation signed with PetroChina International (Middle East) (PCME)
- PCME
  - A significant player in the oil trading industry and a major subsidiary of PetroChina International Co. Ltd, one of the largest oil and gas producers in Asia
  - Focused on developing its business through new energy sources such as Green Hydrogen
- PCME is expected to offtake the green hydrogen output & carbon credits from the project
- Partnership sets up potential route to market for the project

**EGA**

الإمارات العالمية للألمنيوم

MOU with Emirates Global Aluminium, a leading global aluminium producer, for the potential supply of 50,000 tonnes of green hydrogen

The two parties continue to collaborate for the supply of green hydrogen and green ammonia to EGA

MOU is a significant step towards advancing the use of sustainable energy sources in the aluminium production industry

Relationship highlights the potential for Pakistan to become a major supplier of green hydrogen, contributing to the country's export revenues



# PLANNED DEVELOPMENT TIMELINE

FOCUSED ON PROJECT OPTIMISATION

2021 – 2022	Q1 2023	Q2 2023	Q3 2023	Q4 2023	2024	2025 – 2026	2027
<p>Pre-feasibility study completed</p> <p>JV Kaheel Energy</p> <p>LOI approved for renewable power generation</p> <p>7000 acres land acquired</p>	<p>Emirates global aluminum offtake MOU</p> <p>State Grid Investment MOU</p>	<p>PetroChina offtake MOU</p>	<p>Hydrogen / ammonia feasibility completed</p> <p>Topography completed</p>	<p>Renewable power study completed</p>	<p>ESIA/ Geotechnical study completed</p> <p>Grid Interconnection and Transmission study ongoing</p> <p>Negotiation with lenders &amp; investors</p>	<p>Financial close</p> <p>Plant operational</p>	<p>COD</p>



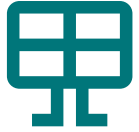
# PROGRESS HIGHLIGHTS

- **Pre-Feasibility Study completed** by Power China International for 400MW GH production & 1.2 GW hybrid power generation
- **LOI issued by GoS for Renewable Power Generation** consisting of hybrid solar and wind power
- **7000 Acres Land Acquired** - in the Gharo-Keti Wind Corridor, which has an annual generation capacity of up to 50,000MW of wind power. According to world bank, it is one of the most lucrative sites for wind turbines with average wind speeds of around 8 m/s
- **Investment MOU signed with State Grid Corporation of China** which mandates CET (subsidiary of State Grid) to potentially develop, finance, construct/acquire, operate, and maintain the Green Hydrogen project in Pakistan
- **Thyssenkrupp Feasibility Study for Green Hydrogen & Green Ammonia Completed** considering different applications e.g., industrial grade gaseous hydrogen, high-purity mobility grade gaseous hydrogen, liquid hydrogen for end-users in Asia, in addition to ammonia for users in Europe & Asia & for direct use or re-conversion to green hydrogen for end-users
- **Commercial and Technical Renewable Power Study Completed** by SIDRI (Shanghai Survey, Design and Research Institute) and State Grid for 1.3GW of RE power comprising of 800MW of solar and 500MW of wind and 450MW of battery
- **Interconnection and Transmission Study commissioned** to Power Planners International, reputable transmission sector firm, for report on grid connectivity and integration grid analysis. The study is expected to be completed soon
- **Topographic Survey Completed** by FUGRO, a global geo-intelligence expert, for the project site. Leveraging cutting-edge drone technology, the survey gathered precise terrain data across a vast 28 km<sup>2</sup> area, delivering critical insights for project design and confirmed suitability
- **ESIA Study Completed** by SGS, a global integrated service provider. The study includes establishing environmental baseline, field surveys, scoping session and a comprehensive wildlife survey on the extensive land site for the renewable power plant at Jhimpir, Sindh
- **GTS and Electrical Resistivity Survey Completed** by F&M, a leading engineering and testing service provider, to inform structural design for FEED study
- **Offtake MOU**
  - > Emirates Global Aluminium (a leader in global aluminium production), for decarbonisation Green H<sub>2</sub>
  - > PetroChina International (Middle East) Company (a subsidiary of CNPC, a leading state-owned oil and gas producer in Asia for carbon offsetting in international markets)



# HYBRID RENEWABLE PROJECT

PAKISTAN



# SNAPSHOT

STRATEGIC PROJECT TO MEET COUNTRY'S AMBITIOUS RENEWABLE TARGET IN LINE WITH FOCUS ON SUSTAINABILITY & NATIONAL GOALS




Positioned to meet Pakistan's ambitious solar development target of 10GW to contribute to increasing renewable power by up to 30% by 2030 in the national energy mix

Energy produced anticipated to be integrated into the national power grid or sold to K Electric operating within the grid framework

Collaboration with one of the largest power developers, and investors, bringing the expertise required to arrange financing & advance project to COD

At current national tariffs potential revenues are expected to be much higher than global industry standards

- Project is in Pakistan's Sindh province, a region abundant with larger solar and wind renewable resource and good infrastructure. Company plans to develop project as follows:
  - **Hybrid Renewable Energy Production & Storage** - solar & wind power facilities with a capacity of 800 MW and 500 MW respectively, battery storage of 450 MWh and grid.
  - Project is located in the renewable resource rich region in Sindh, which has power connectivity and proximity to load centers
  - An all-in-one station of 220kV will be built on the site. The power generated will be transmitted to the substation via the on-site collector line, and then transmitted to the 220kV Jhimpir-II or to another suitable nearby grid station

		 <i>(Optional)</i>
800MW	500MW	450MWh

# LOCATION

7,000-ACRE AREA, CLOSE TO N5 HIGHWAY, WHICH CUTS THROUGH THE CENTRE OF PAKISTAN FROM THE COASTAL KARACHI TO THE NORTHERN REGIONS

- N5 highway connects the project to the two largest ports in Pakistan: 35km to Port Qasim & 70km to Karachi Port
- Within a radius of 20km, +350MW of renewable power is already commissioned, owned by international, multilaterals & private sponsors, including CDB, IFC, & DEG
- c.6km from the national railway Jungshai station
- c.12km & 33km from Haleji and Keenjhar fresh water lakes respectively, providing ease of access to water supplies



ESTIMATED AERIAL DISTANCES TO THE PROJECT (KM)

Infrastructure	Anchor	Wind Projects	Wind Turbine
Port Qasim	35	Indus Wind Power	8
Karachi Port	70	Liberty Wind Power I	11
M9 Motorway	27	DIN Energy	12
N5 National Highway	17	Metro II Wind Power	13
Keenjhar Lake	33		
Railway (Jungshai Station)	6	Grid Stations	Lightning Bolt
		Dhabaji Grid Station	17

# FEASIBILITY STUDIES

## HYBRID RENEWABLE POWER & TRANSMISSION STUDY

Study undertaken by State Grid Corporation of China in collaboration with Shanghai Survey, Design & Research Institute (SIDRI):

- The Shanghai Survey, Design and Research Institute (SIDRI), in collaboration with State Grid, successfully completed the Renewable Power Study for 1.3GW of solar and wind power and confirmed commercial viability at competitive energy prices, with very attractive returns for investors
- The study has established commercial and technical feasibility of significant renewable power production through wind and solar plants, on the project site in Jhimpir
- The comprehensive study assessed the wind and solar energy resource, analysed engineering geology, conducted equipment selection, layout design, electrics, civil works plans, construction management programme, environmental protection guidelines, soil and water conservation, labor safety, industrial hygiene, energy-saving strategies, and estimated all project costs, amongst other aspects
- The findings have provided a detailed roadmap for efficient integration of this significant 1.3 GW of renewable energy into Pakistan's power grid, to help meet national demand





# PLANNED DEVELOPMENT TIMELINE

FOCUSED ON PROJECT OPTIMISATION

2021 –  
2022

Pre-feasibility  
study completed

JV Kaheel Energy

LOI approved for  
renewable power  
generation

7000 acres land  
acquired

Q1 2023

State Grid  
Investment MOU

Q3 2023

Topography  
completed

Q4 2023

Renewable power  
study completed

2024

ESIA/ Geotechnical  
study completed

Grid Interconnection  
and Transmission  
study ongoing

Negotiation with  
lenders & investors

2025 –  
2026

Financial close

Plant operational

2027

COD





## PROGRESS HIGHLIGHTS

- **Pre-Feasibility Study completed** by Power China International for renewable power generation
- **LOI issued by GoS for Renewable Power Generation** consisting of hybrid solar and wind power
- **7000 Acres Land Acquired** - in the Gharo-Keti Wind Corridor, which has an annual generation capacity of up to 50,000MW of wind power. According to world bank, it is one of the most lucrative sites for wind turbines with average wind speeds of around 8 m/s
- **Investment MOU signed with State Grid Corporation of China** to potentially develop and finance the Renewable Power Project
- **Commercial and Technical Renewable Power Study Completed** by SIDRI (Shanghai Survey, Design and Research Institute) and State Grid for 1.3GW of RE power comprising of 800MW of solar and 500MW of wind and 450MW of battery
- **Interconnection and Transmission Study commissioned** to Power Planners International, reputable transmission sector firm, for report on grid connectivity and integration grid analysis. The study is expected to be completed soon
- **Topographic Survey Completed** by FUGRO, a global geo-intelligence expert, for the project site. Leveraging cutting-edge drone technology, the survey gathered precise terrain data across a vast 28 km<sup>2</sup> area, delivering critical insights for project design and confirmed suitability
- **ESIA Study Completed** by SGS, a global integrated service provider. The study includes establishing environmental baseline, field surveys, scoping session and a comprehensive wildlife survey on the extensive land site for the renewable power plant at Jhimpir, Sindh
- **GTS and Electrical Resistivity Survey Completed** by F&M, a leading engineering and testing service provider, to inform structural design for FEED study



# THE THAR SOLAR PROJECT

PAKISTAN

# SNAPSHOT

A STRATEGIC PROJECT TO UTILISE BLOCK VI IN THAR COVERING 66.3 SQ. KM, IN LINE WITH FOCUS ON SUSTAINABILITY & NATIONAL GOALS

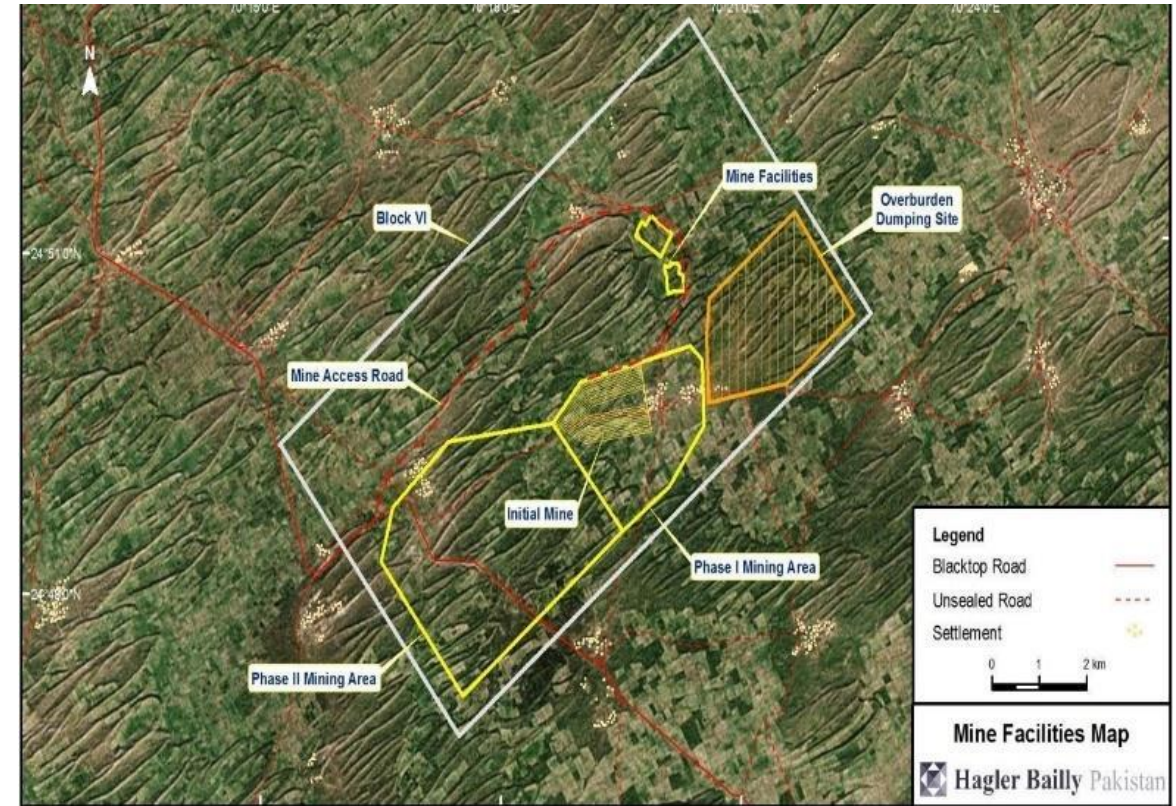
Conditional permission obtained from the Pakistani Government to established a 1GW solar farm on the Thar Block VI mine site

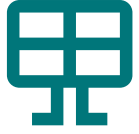
Positioned to meet Pakistan's ambitious solar development target of 10GW to contribute to increasing renewable power by up to 30% by 2030 in the national energy mix

Anticipated to provide renewable energy to the operating mining areas of Block I & Block II

Zero consumption of water for the cleaning of solar panels – strategy to utilise automatic cleaning robotic technology

Opportunity could create significant local employment - 2,500 people during construction & 700-1,000 during operation & maintenance





# PROSPECTS & MARKETS

## SIGNIFICANT OPPORTUNITIES

- Energy produced anticipated to be integrated into the national power grid or sold to K Electric operating within the grid framework
- Power could also be used for development of Thar Block VI itself, especially for the coal-to-gas & coal-to-liquid conversion process
- Collaboration with one of the largest power developers, PowerChina International, signed in April 2023, bringing the expertise required to arrange financing & advance project to COD
- Government of Sindh has affirmed its commitment, granting the provisional permission for the project's development
- At current national tariffs of 3.5-4c/kwh, potential revenues/kWh would be much higher than global industry standards





# PLANNED DEVELOPMENT TIMELINE

RAPID DEVELOPMENT WITH FULL SUPPORT OF THE GOVERNMENT

Q2 2022

Pre-feasibility for 1GW completed

Q4 2022

Conditional permission obtained from Government for project

Q2 2023

MOU with PowerChina signed (project announced)

+

1GW power COD



# THAR BLOCK VI COAL PROJECT

PAKISTAN



# SNAPSHOT

30-YEAR MINING LEASE FOR BLOCK VI, WHICH HAS +1.4 BILLION TONNES OF LIGNITE COAL (JORC)

Located in one of the largest coalfields in the world, Thar, 380km to the east of Karachi, 20km northeast of Islamkot town & airport

30-year mining lease for Block VI - 100% owned by Oracle Power's subsidiary Sindh Carbon Energy Ltd ('SCEL')

World class studies and reports by SRK Consulting, Wardell Armstrong, & Mort MacDonald have established the project's prospects for long term value

JORC 2012 feasibility study confirmed the coal's suitability for industrial applications

Several possible development paths

Positioned to provide significant contribution to the economy of Pakistan





# PROSPECTS

EXTENSIVELY DIVERSIFIED & ENHANCED INITIAL COAL TO POWER DEVELOPMENT AT BLOCK VI



73% proposed equity under Consortium Agreement



15% proposed equity under Consortium Agreement

Oracle Power

12% proposed equity under Consortium Agreement

## DEVELOPMENT PATHS

1.

1,320MW power plant

2.

Gasification for urea / Liquefaction for petroleum products

3.

Mining for power feedstock or for other industries

### Phase I

7.9Mtpa open-pit coal mine with a mine-mouth power plant of 1,320 MW

### Phase II

Expansion of coal mine up to 16Mtpa to support a coal gasification & coal-to-liquid facility parallel to Phase I power plant

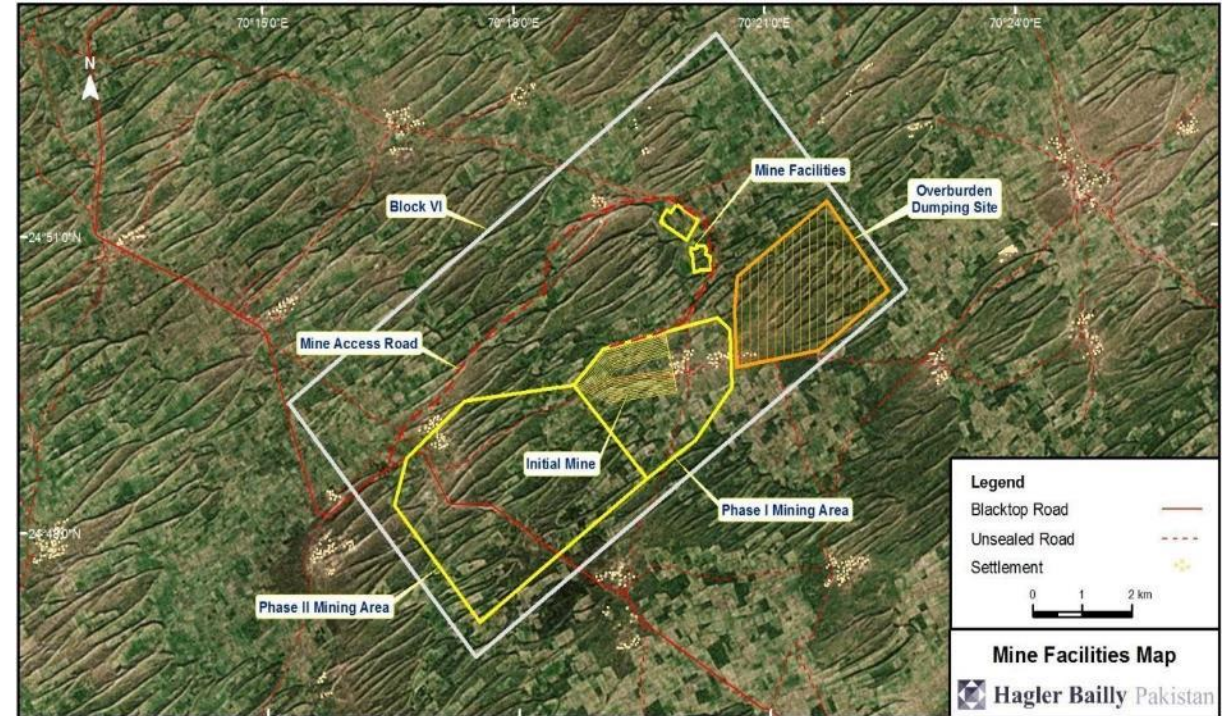


# COAL MINE

A WORLD-CLASS ASSET

February 2012, feasibility study (JORC) by SRK Consulting:

- 529 million wet tonnes of coal with a gross calorific value of 3,182 kcal/kg, making it ideal for power generation
- 23-year mine life, using an open-pit mining technique, with mining operations to extend down to a depth of 165 meters
- Coal has a calorific value of 3,182 kcal/kg (equivalent to 13.32 MJ/kg), with a volatile matter content of 33.7% for combustibility
- Fixed carbon is 15.14%, ash is 5.89%, & moisture is high at 46.1%, impacting efficient utilisation





# COAL POWER PLANT

## PREPARING A PATHWAY FOR THE DEVELOPMENT OF THIS IMPORTANT PROJECT

- MOU signed in May 2023 for the development of the 1.32GW Thar coal-fired power plant
  - Two units of 660MW each
  - K-Electric as the off-taker
  - Government of Sindh as a facilitator
  - Potential investor & PowerChina International as contractor
- Potentially located at mine site or at Port Qasim for ease of transmission & availability of water
- Coal to be sourced from exiting mines at Block I or II or VI in the future

## INTERNATIONAL PARTNERS





# COAL GASIFICATION (UREA/FERTILISER) & COAL-TO-LIQUIDS

ONGOING SUPPORT FROM THE GOVERNMENT OF PAKISTAN FOR MOBILISATION OF CTG/L DEVELOPMENT GIVEN PAKISTAN'S CRITICAL GAS CRISIS

- Coal Gasification Thar Block VI has the potential to provide urea for Pakistan's fertiliser production & assist in increasing national food security
- Pakistan's gas reserves are expected to deplete by 50% by 2025, which will make the demand for Thar Coal Gas as feedstock for urea very high & support commercial viability for Phase II of the Thar Project
- This initiative is part of a comprehensive effort by Pakistan to tackle the projected shortfall of 2.6Mtpa of urea by 2026-2027, as assessed by the Government of Sindh
- China Coal has completed a preliminary feasibility study for coal gasification at Thar Block VI aligned with the government's support for coal-to-gas and coal-to-liquid initiatives
- Oracle & China Coal's draft coal-to-gas & coal-to-liquid policy to establish regulated buy back framework, is under review for Government of Pakistan's approval, & when approved will trigger quick development of this project



Addressing stakeholders consultative conference, October 2021



Oracle & SSGC (Sui Southern Gas Company) MOU signing in January 2022 to explore syngas integration into SSGC's gas network



# INVESTMENT CASE

 **oracle**  
POWER

# INVESTMENT CASE

## COMMITTED TO GENERATING SHAREHOLDER RETURNS

### KEY PROJECTS

Four diverse, world-class projects specifically targeted to generate significant value & mitigate commodity & market long term risks & trends

### BUILDING VALUE

Maximising value through developing strategies to fast-track pathways to production across portfolio

### SUPPORT

Strong government & stakeholder support

### PARTNERS

Key relationships with international blue-chip companies

### SUSTAINABILITY

Committed to fostering a corporate culture imbued with strong ethics & dedicated to following stringent standards & compliance requirements

### TEAM

A team of individuals able to deliver on the Company's long-term strategy & short-term objectives



# Glossary of terms

Dictionary of terminology and acronyms

JV	Joint Venture	PCME	PetroChina International (Middle East Company)
CPEC	China-Pakistan Economic Corridor	MOU	Memorandum of Understanding
FEED	Front-End Engineering Design	EGA	Emirates Global Aluminium
JDA	Joint Development Agreement	ESIA	Environmental and Social Impact Assessment.
IRGS	Intrusion Related Gold Systems	COD	Commercial Operation Date
LOI	Letter of Intent	JORC	Joint Ore Reserves Committee
CDB	China Development Bank	CTG	Coal to Gas
IFC	International Finance Corporation	SRK	SRK Consulting
DEG	German Investment Bank	CTG/L	Coal to Gas/Liquid
INDO-PAK REGION	Region that includes both India and Pakistan.	HoT	Head of Terms
		GoS	Government of Sindh



[www.oraclepower.co.uk](http://www.oraclepower.co.uk)  
[info@oraclepower.co.uk](mailto:info@oraclepower.co.uk)

PR & IR Contact  
St Brides Partners Ltd  
[oracle@stbridespartners.co.uk](mailto:oracle@stbridespartners.co.uk)