

NOV 2022

# TMK ENERGY LIMITED

ASX:TMK

Developing the South Gobi's Significant  
Natural Gas Resources



Brendan Stats  
CEO

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**COMPETENT PERSON'S STATEMENT** The information in this document that pertains to the estimates of Contingent Resources and Prospective Resources for the Gervantes XXXV CSG Project have been taken from a report provided by Netherland, Sewell & Associates (NSAI) on 3 November 2022 and 16 August 2021, undertaken on behalf of the Company. The resources included in the report have been prepared using definitions and guidelines set forth in the 2018 Petroleum Resources Management System (PRMS) approved by the society of Petroleum Engineers (SPE). The resources information included in this report are based on, and fairly represents, information and supporting documentation compiled by Mr. John Hattner, an employee of NSAI. Mr Hattner is a Qualified Petroleum Reserves and Resources Evaluator (QPRRE) and is qualified in accordance with the requirements of ASX Listing Rule 5.41 and consents to the inclusion of the information in this report of the matters based on this information in the form and context in which it appears.

The Resources were independently estimated by NSAI as of 31 October 2022. The Contingent Resources are classified in three categories of 1C, 2C and 3C based on the level of confidence that NSAI has with respect to the recoverability of gas from both the Upper Coal Seam package and Lower Coal Seam package that were intersected in the recent five well Snow Leopard drilling program and have been calculated by NSAI using deterministic methods.

The Prospective Resources have been determined by NSAI using probabilistic methods and are dependent on a CSG discovery being made. If a discovery is made and development is undertaken, the probability that the recoverable volumes will equal or exceed the unrisks estimated amounts is 90 percent for the low estimate, 50 percent for the best estimate, and 10 percent for the high estimate. The risks 1U, 2U, and 3U Prospective Resources have been aggregated by arithmetic summation; therefore, these totals do not include the portfolio effect that might result from statistical aggregation.

For further details on the Resource estimates presented in this report, refer to the 9 November 2022 ASX announcement. The company is not aware of any new information and that all material assumptions and technical parameters underpinning the Resources estimate continue to apply and have not materially changed.



# COMPANY OVERVIEW



# TMK ENERGY SNAPSHOT

Significant gas discovery on the border of the largest global energy market

## CORPORATE OVERVIEW

LISTED	2008 <sup>1</sup>	PRINCIPLE PROJECT	Gurvantes XXXV
HQ	Sydney, Australia	LOCATION	South Gobi Basin
MKT CAP	\$75.4m	TENURE	PSC Exploration License
NET CASH	A\$2.5m <sup>2</sup>	TENEMENT SIZE	8,400km <sup>2</sup>
TICKER	ASX:TMK	RESOURCE (CSG) GROSS 100% <sup>3</sup>	1.2 TCF (2C) 5.3 TCF (2U)

## PROJECT LOCATION – MONGOLIA



● PROJECT LOCATION

## EXECUTIVE SUMMARY



Largest Contingent CSG Resource in Mongolia of 1,214 BCF



Strategically located in close proximity to Chinese Energy Market & Infrastructure



Exploration significantly de-risked with acquisition of 2,500 drillhole dataset covering a significant area of license area



100% success rate on maiden drilling campaign comprising seven exploration wells



Initial data highlights a world class resource with superior coal thickness, gas content and permeability in comparison to developed projects worldwide



Clear pathway to commercialisation with farm-in partner secured, de-risking funding through key value add stages



Memorandum of Understanding secured with PetroChina providing a potential pathway for Project Development and access to Chinese market



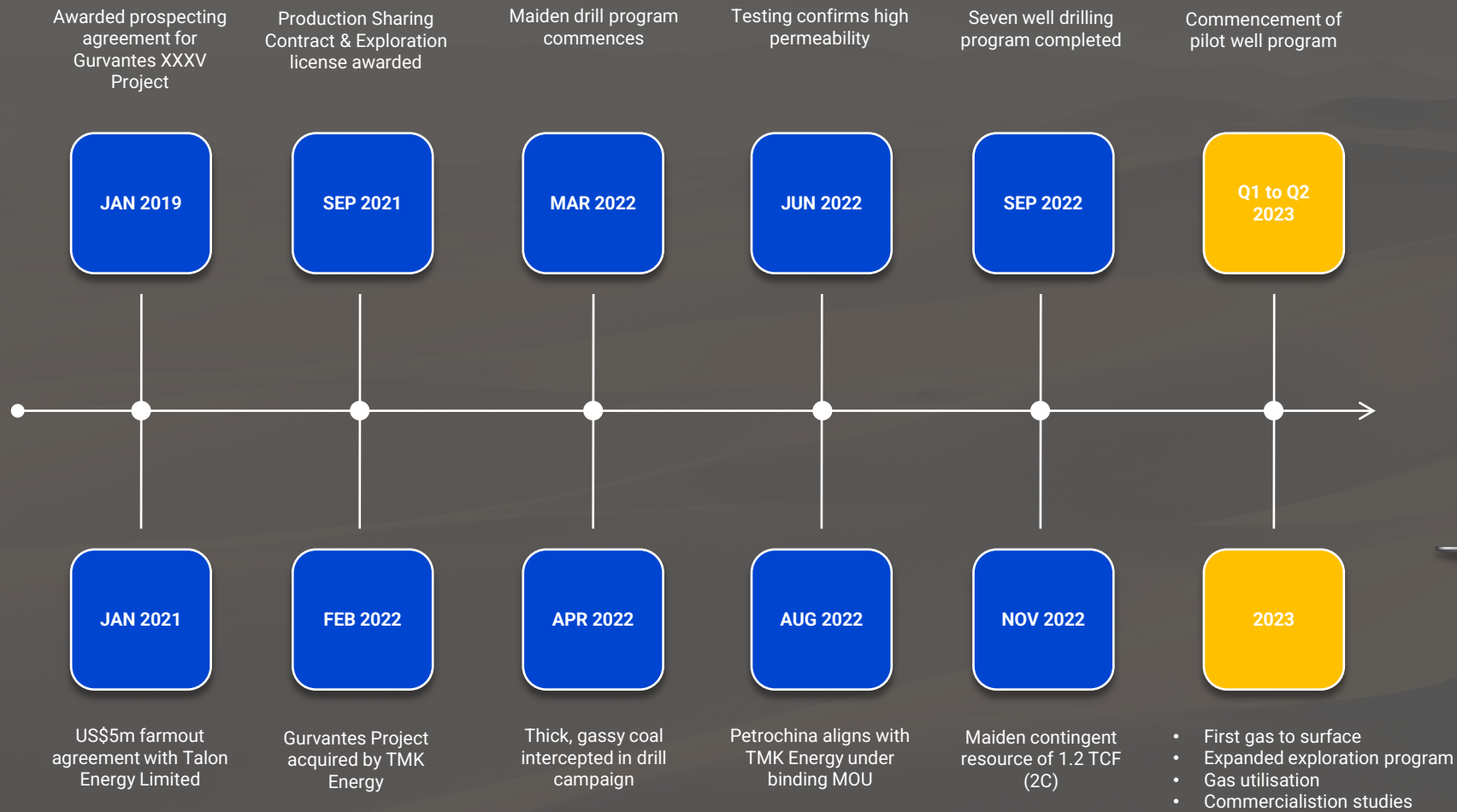
Mongolian based operations and shareholders driving on-ground management & state based relationships



Management has significant experience in Coal and CSG in Mongolia and abroad

# GURVANTES XXXV PROJECT TIMELINE

Project has been materially de-risked following a staged approach to exploration, drilling & commercialisation







# RESULTS OVERVIEW & COMPARISON

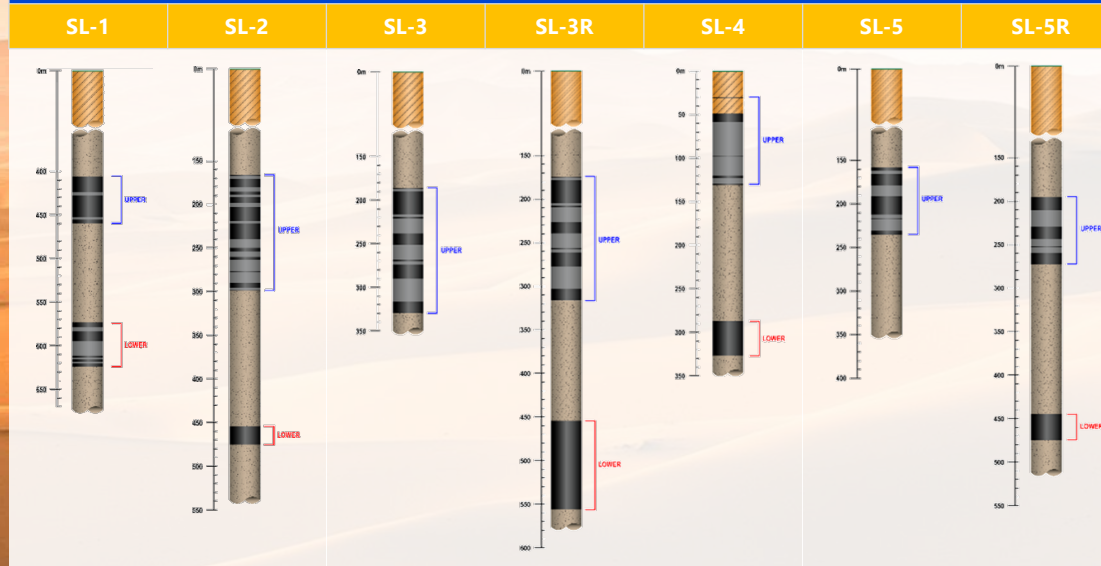
# DRILLING RESULTS

All seven maiden exploration wells show significant CSG prospectivity with 100% success rate

## OBJECTIVE

## GEOLOGY

## 2022 DRILLING RESULTS



## WELL LOCATIONS



W ← → E

## COAL RANK QUALITY

## COAL THICKNESS

## GAS CONTENT (AR)

## GAS COMPOSITION (CH<sub>4</sub>)

## PERMEABILITY

## High Quality Bituminous

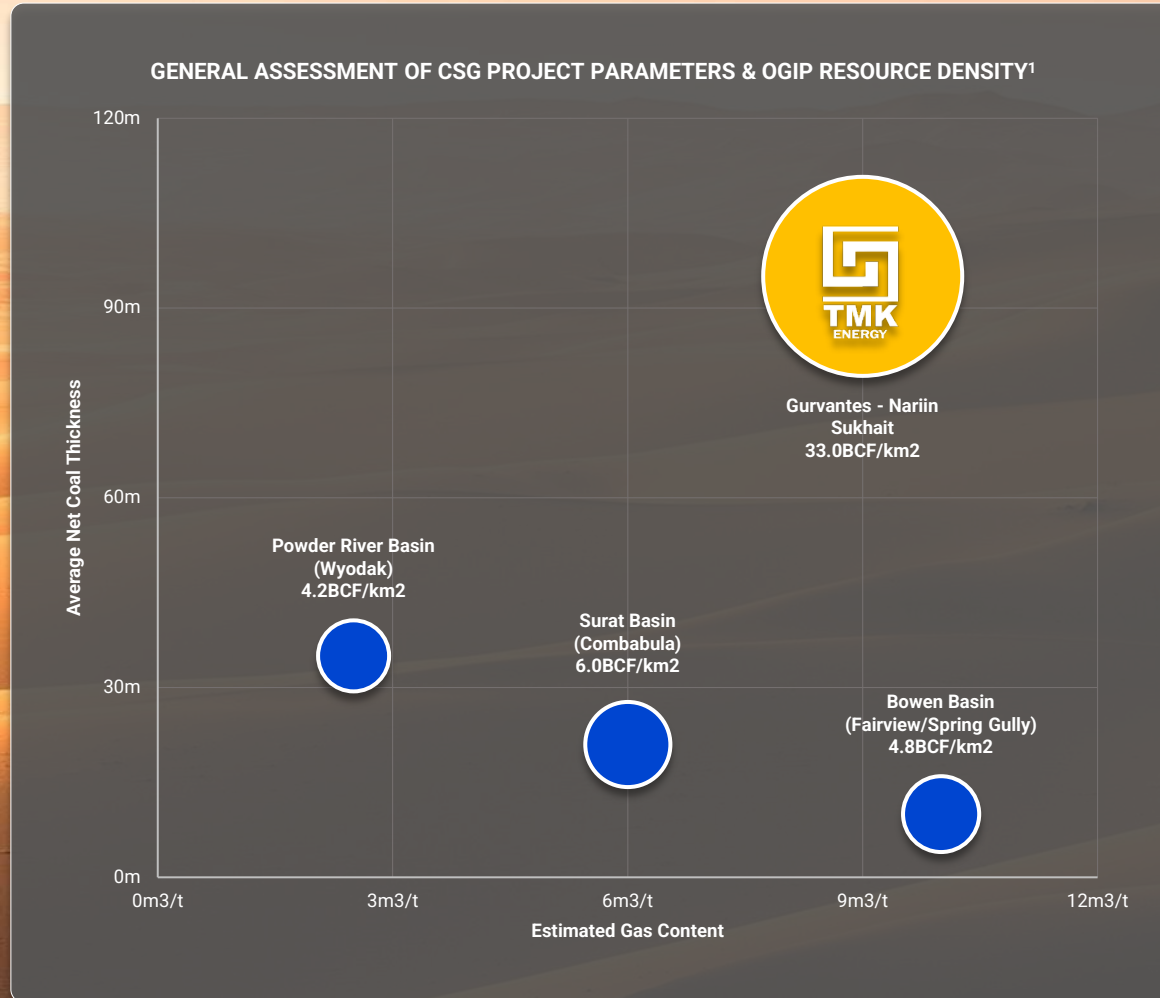
60m	91m	60m	175m	40m	40m	59m
13.2m <sup>3</sup> /t	9.3m <sup>3</sup> /t	9.8m <sup>3</sup> /t	7.5-12.5m <sup>3</sup> /t	5-7.5m <sup>3</sup> /t	5-7.5m <sup>3</sup> /t	5-7.5m <sup>3</sup> /t
96%	97%	95%	92%	98%	97%	99%
0.1mD	47mD	20mD	-	0.13mD	-	56mD

✓	Ideal rank and quality for CSG project
✓	Very thick coal (thicker than any major developed CSG Project) results in higher resource concentration
✓	High gas content and gas saturation associated with high productivity
✓	Suitable for use without processing. Low CO <sub>2</sub> , cleaner energy source relative to current energy supply in Mongolia.
✓	High permeability is associated with high production and recovery from unstimulated production wells



# COAL SEAM GAS FIELD COMPARISON

Gurvantes XXXV represents a world class coal seam gas Project, comparing favourably to existing world leading CSG basins



COAL COMPARISON			
LOW QUALITY		HIGH QUALITY	
LIGNITE	SUBBITUMINOUS	BITUMINOUS	ANTHRACITE
Brown coal, the lowest grade coal with the least concentration of carbon typically used for power generation	Lower grade coal containing 35-45% carbon and mainly used for electricity generation. Suitable for CSG	Black coal, has high heating properties and is used in steel production. Suitable for CSG	Hard coal, containing a high percentage of fixed carbon and low percentage of volatile matter
		GURVANTES XXXV	

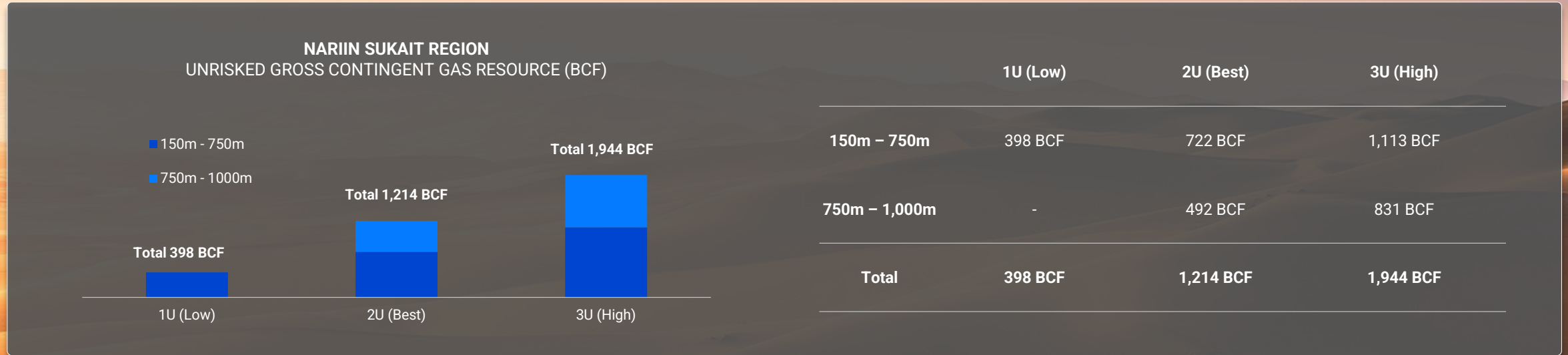
- Based on net coal thickness, gas content, and estimated OGIP resource density, the Gurvantes XXXV prospect compares very favourably to leading CSG fields worldwide
- The Gurvantes XXXV Project represents a potential world class discovery with technical parameters equal to or better than existing CSG fields worldwide
- The results point to relatively simple and low cost development, high operating margin
- Very few surface constraints, supportive jurisdiction for developing natural gas

<sup>1</sup>Plots sized for Estimated OGIP Resource Density (BCF/km<sup>2</sup>)



# MAIDEN CONTINGENT RESOURCE

Maiden Resource of 1.2 TCF (2C) is the largest Contingent Natural Gas Resource in Mongolia



## MAIDEN RESOURCE HIGHLIGHTS



Largest CSG Contingent Resource in Mongolia of 1.2 TCF (2C)



Resource delivered in 9 months based on 5 drill locations at cost of US\$1.5m to Talon Energy (Farmout Partner)



1.2TCF Contingent Resource from only 60km<sup>2</sup> which is less than 1% of the total Project area



Very high recoverable Resource (2C) Concentration 20bcf/km<sup>2</sup> which suggests lower extraction costs cost and high operating margins



Total Resources 2C + 2U (risked) increased by 500BCF



1.2 TCF (~1,280PJ) of gas at US\$10/GJ equates to US \$12.8 billion




















# COMMERCIALISATION STRATEGY






# 2023 WORK PROGRAM

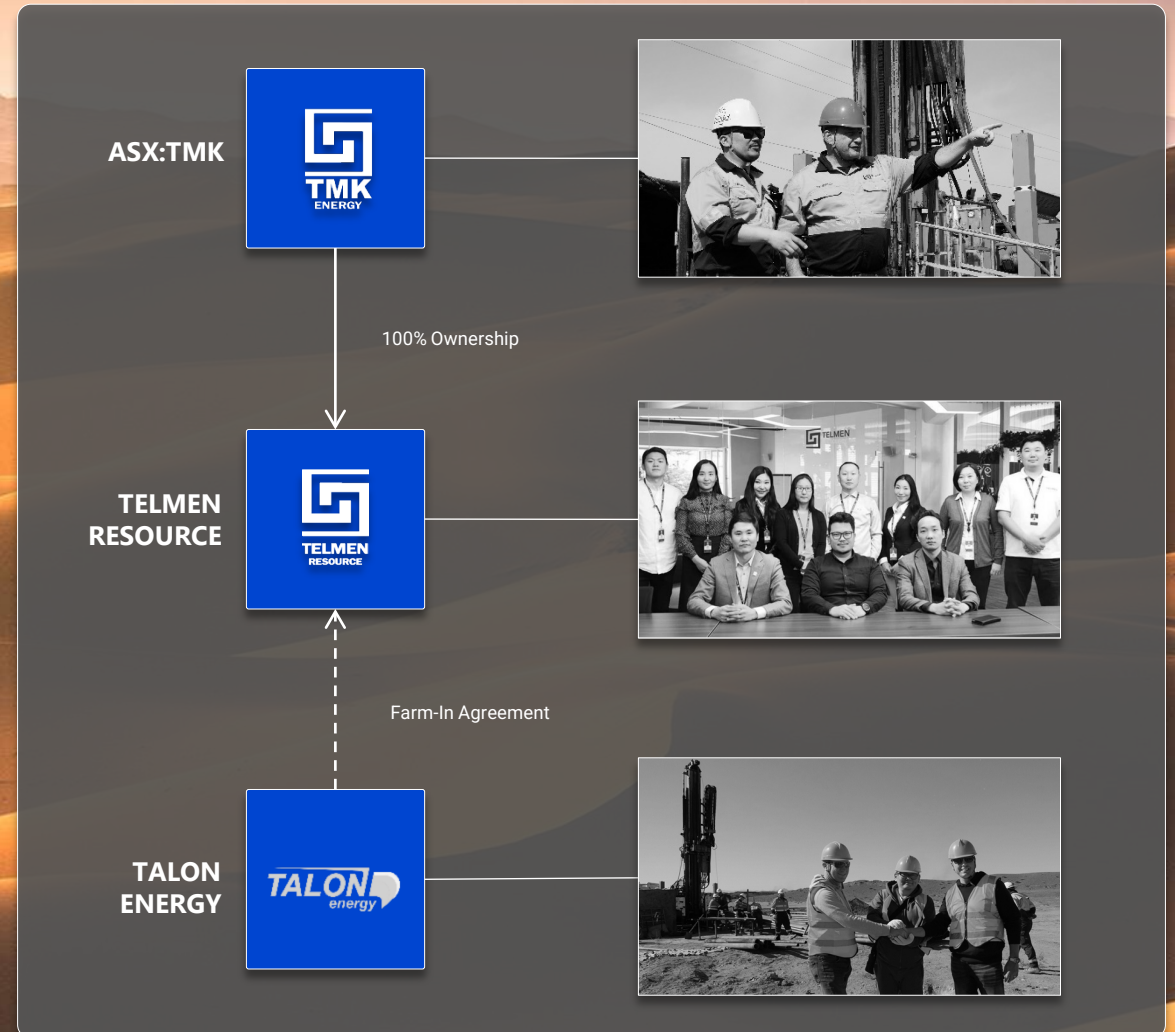
Clear pathway from exploration to pilot production at Gurvantes XXXV with several near-term milestones

WORK PROGRAMS	ACTIVITY	CY22				CY23			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
 <b>2023 PILOT WELL PROGRAM OBJECTIVES</b> a) Flow gas to surface b) Confirm production profiles c) Demonstrate commerciality aspects of the Project	Environmental Impact Approval								
	Exploration Drilling								
	Testing Program								
	Maiden Contingent Resource								
 <b>2023 EXPLORATION PROGRAM OBJECTIVES</b> a) Explore significant potential outside core area b) Grow Contingent Resource within licence area c) Demonstrate scale	Pilot Well Program								
	Feasibility Studies (Early Commercialisation)								
	2023 Exploration Program								
	Production Well Program								
	Exploitation Licence								
	First Stage Commercialisation (Local Power Operation)								

# Development Framework

Established relationships, legal framework, and funding solutions to drive commercialisation



FARMOUT AGREEMENT		
Overview	TALON ENERGY LIMITED (ASX:TPD)  Farmout agreement with Talon Energy Limited (ASX:TPD) which requires Talon to spend US\$4.65m to earn a 33% working interest via a two-stage farm in.	PROGRESS  
STAGE ONE		
Terms	Fund 100% of the drilling costs of at least four core holes up to US\$1.5m	
Use of Funding	Funding has now been used to deliver a 1.2TCF Contingent Resource	
STAGE TWO		
Terms	Talon can elect to proceed with the second stage on or before 25th December 2022	
Use of Funding	Fund 100% of the initial US\$3.15m for the Pilot Well Program	





# Development Framework

Established relationships, legal framework and funding solutions to drive commercialisation

GOVERNMENT FRAMEWORK		PROGRESS
PSA Overview	Production Sharing Agreement (PSA) - contract between TMK subsidiary Telmen Resource LLC (local subsidiary) and the Mineral Resource Petroleum Authority of Mongolia (MRPAM)	
Royalty & Profit Share	<ul style="list-style-type: none"><li>a) 5.5% Royalty</li><li>b) Profit share (after cost recovery) subject to production rates</li><li>c) Attractive fiscal terms in comparison to other jurisdictions</li></ul>	

## EXPLORATION CAMP





# Domestic Supply Opportunity

Significant opportunity exists for TMK to cement themselves as a key supplier of gas and power to Mongolia

MONGOLIAN GAS OPPORTUNITY



Mongolia is one of the world's fastest-growing economies largely driven by the massive wealth of mineral resources



Significant push to decarbonise Mongolia's energy sector, with political desire to seeking greener forms of energy generation



Mongolia currently has no gas production resulting in significant issues around energy security and reliability



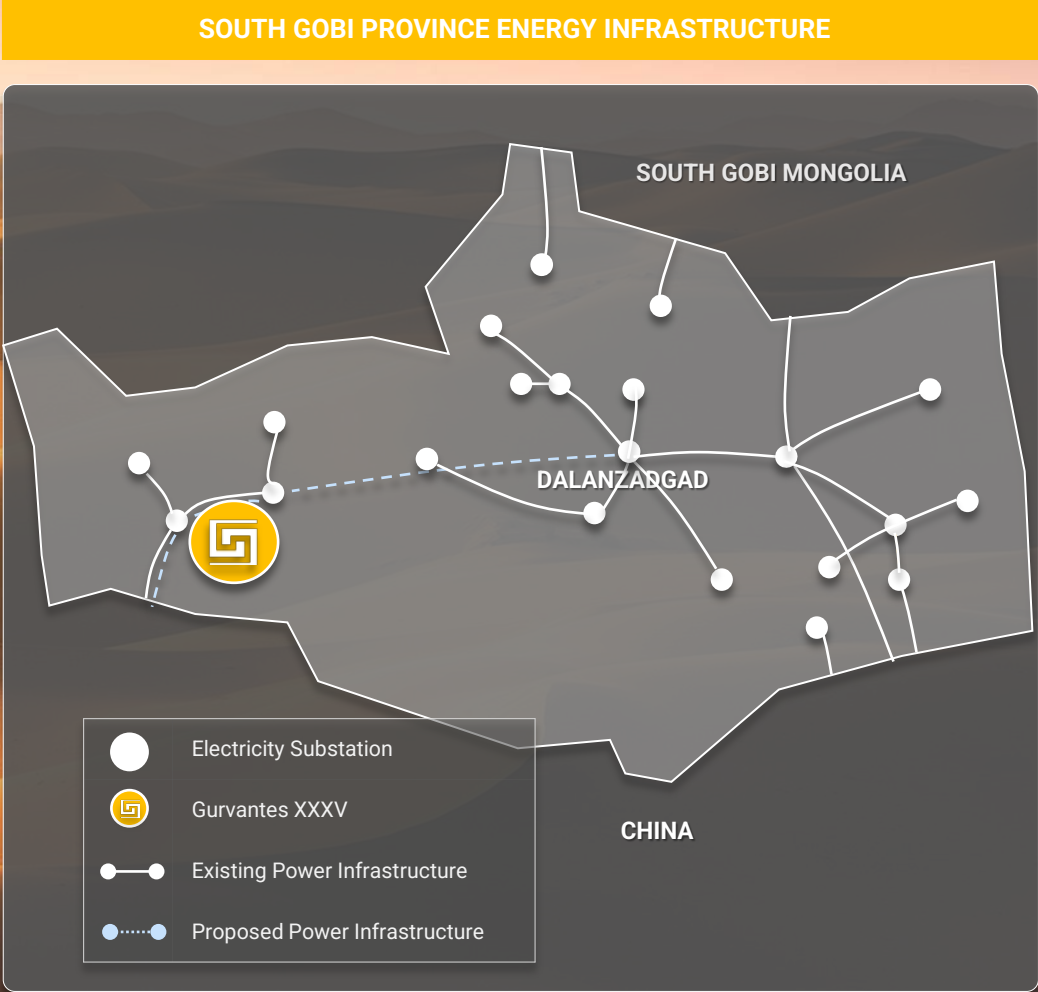
Strong political desire to develop natural gas industry to reduce pollution and address energy security, reliability, and independence



Mongolia currently imports all gas products leaving significant growth potential for local production



Mining accounts for 40% of Mongolia's energy consumption, with South Gobi Region including:  
Oyu Tolgoi (Rio Tinto)  
Tavaan Tolgoi Coal Mines  
Nariin Sukhait  
(60 - 70MW forecast demand)





# CHINA SUPPLY OPPORTUNITY

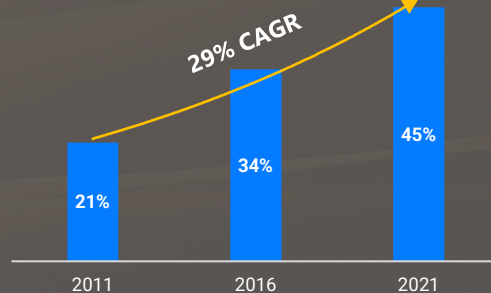
China is the largest energy user globally with significant gas infrastructure in close proximity to Gurvantes XXXV



## CHINESE ENERGY MARKET

Chinese natural gas demand rising continuously for last 20 years and estimated to double by 2040

DOMESTIC CONSUMPTION OF IMPORTED GAS

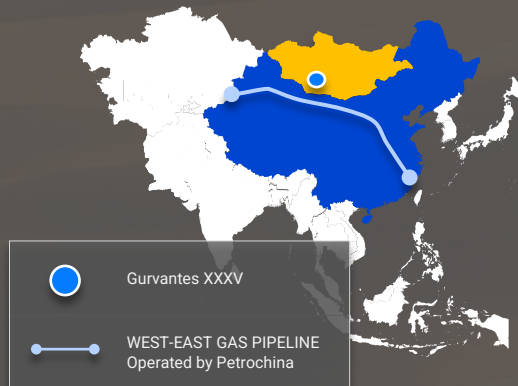


China now holds a forecast supply deficit of between 2.0 TCF and 7.6 TCF per annum



## NEIGHBOURING OIL & GAS INFRASTRUCTURE

Gurvantes XXXV is less than 20km from Chinese boarder and close to existing gas infrastructure in northern China



Mongolian gas has a significant cost advantage over current suppliers to China due to low production and delivery costs



## PETROCHINA MOU

Asia's largest Oil & Gas producer and China's second biggest oil producer, owning and operating gas infrastructure in both Northern China and Mongolia



Agreement to work together on a non-exclusive basis to "enhance and accelerate" the development of the Gurvantes XXXV project with a view to participate in the appraisal or development of the project

# APPENDIX





# Management Team

**A highly experienced Management team with a track record of developing Mongolian projects**



**Brendan Stats**  
Chief Executive Officer

Brendan is a Geologist with over fifteen years of experience in the Natural Resources industry. He holds a Bachelor of Science (BSc, Geology (hons)) from the University of Melbourne.

Brendan has been on the ground living or working in Mongolia since 2011 with a particular focus and expertise on coal projects located within the South Gobi basin. Brendan's role as CEO of TMK is to lead the Project development through the early stages of exploration and evaluation.



**Dougal Ferguson**  
Chief Commercial Officer &  
Company Secretary

Dougal is an experienced oil and gas executive with substantial international experience.

Former Managing Director of several ASX listed oil and gas exploration companies included XCD Energy Limited (ASX:XCD) and Elixir Energy Limited (ASX:EXR).

Dougal is a Member of the Australian Institute of Company Directors and has previously qualified as a Corporate Secretary and CPA.



**Tsetsen Zantav**  
Strategic Advisor to the Board  
(Mongolia Based)

Tsetsen is the founding Director of Telmen Resources LLC, the 100% owned subsidiary of TMK Energy Limited. Tsetsen held a number of corporate roles prior to founding the Telmen Group where he is currently the CEO (since 2007). The Telmen Group is responsible for a number of high profile, successful developments in Mongolia as well as in Russia and China.

Tsetsen was awarded the Polar Star by order of the President of Mongolia for his contribution to the low-income housing development in Nalaikh District. Tsetsen brings a wealth of experience and expert skills in Strategic Management, Business Leadership, Project Management, Contracts, and Negotiations.



**Ganzorig Vanchig**  
Chief Operating Officer  
(Mongolia based)

Ganzorig is General Manager of Telmen Resource LLC, the 100% owned subsidiary of TMK Energy Limited. Ganzorig is a Geologist with 12 years experience in the Resources Industry, working at Mongolian company Energy Resources LLC and Australian Stock Exchange listed RPMGlobal. Ganzorig holds a degree in Applied Science from the Mongolian University of Science and Technology.

Ganzorig has experience in providing project management, leading exploration projects, due diligence studies, feasibility studies and resource estimation. He has worked on many of the exploration and production projects in Mongolia and has also worked in Australia, Indonesia, Russia, Laos.

# Board of Directors

**A highly experienced Board with extensive capital market and energy industry experience**



**Brett Lawrence**  
Non-Executive Director

Mr Brett Lawrence has 15 years of diverse experience in the oil and gas industry. Mr Lawrence worked with Apache Energy for over eight years, performing roles in drilling engineering, reservoir engineering, project development and commercial management before seeking new venture opportunities with ASX listed companies.

Brett holds a Master of Petroleum Engineering, a Bachelor of Engineering (Mining) and Bachelor of Commerce (Finance) from Curtin University in Western Australia.



**Gema Gerelsaikhan**  
Non-Executive Director

Ms Gerelsaikhan has more than ten years of experience in marketing/communications and business development in real estate, mining and hospitality sectors.

Previously she was Director of Communications / Marketing at Shangri-La Hotel, Ulaanbaatar. She also headed the Singapore and Hong Kong offices of Asia Pacific Investment Partners (APIP) as Chief Marketing & Business Development Officer.

Prior to joining APIP, Ms Gerelsaikhan was Business Analyst at SouthGobi Resources, a TSX & HKEx listed coal mining company (TSX:SGQ & HKEx: 1878). She is a founding member of both Mongolian Chamber of Commerce in Hong Kong, as well as Mongolian Chamber of Trade and Commerce in Singapore (currently serving as President). She holds Master's and Bachelor's degree in Economics and Business Administration from Roskilde University in Denmark.



**Tim Wise**  
Non-Executive Director

Mr Tim Wise is a corporate executive experienced in the growth of early stage businesses, and providing strategic advice to a broad range of companies. He was a founder and CEO of The Tap Doctor and Kalina Power (ASX:KPO). Tim is currently a non executive director at Environmental Clean Technologies (ASX:ECT), entX Limited and Firesafe.



**Stuart Baker**  
Non-Executive Director

Mr Baker has more than four decades of experience in the oil and gas sector and currently provides independent advice to corporates and investors in the Australian oil and gas industry. Previously he was Executive Director, Morgan Stanley with dual roles as Co-Head Asia Oil, Gas and Chemicals Research and team leader, Australian energy, mining and utility research, with positions held over a 13-year period.

He also worked as a Petrophysical Engineer at Schlumberger Inc. based in Southeast Asia, rising to General Field Engineer. Mr Baker is currently a member of the investment committee of resource focused ASX listed Lowell Resources Fund (ASX:LRT). Mr Baker has been a director of Central Petroleum Limited (ASX:CTP) since 7 December 2018.

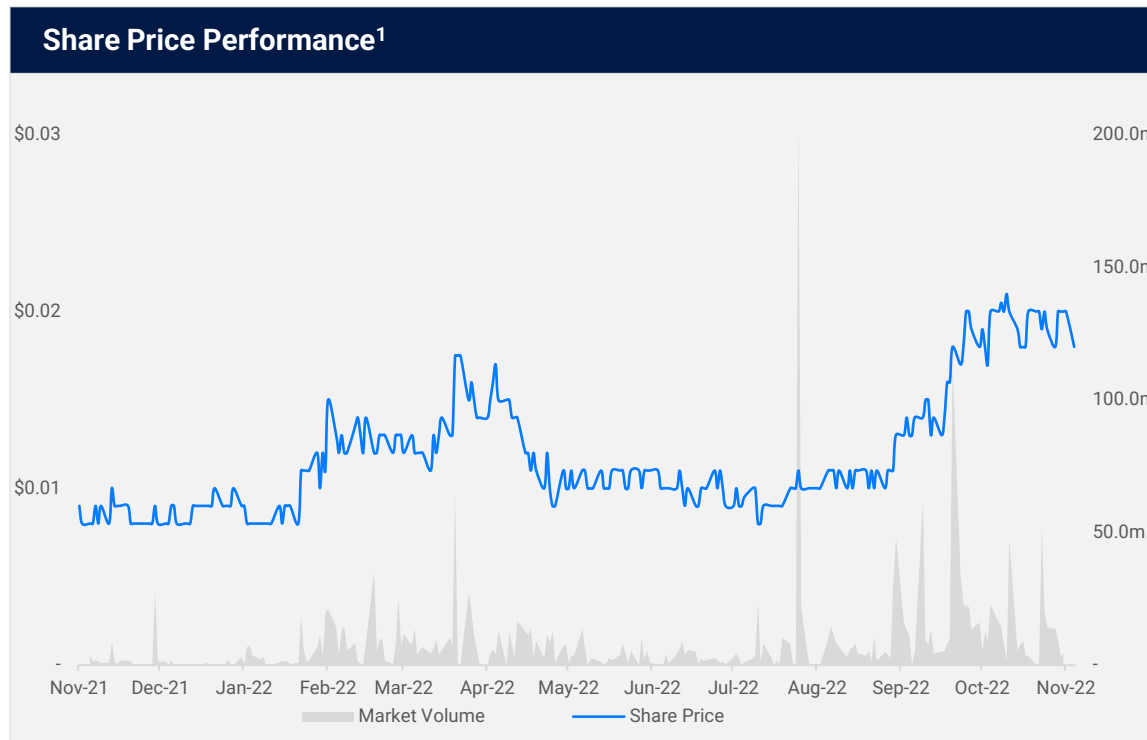


# Corporate Snapshot

**Strongly aligned Board & Management, with significant Mongolian ownership on the TMK register**

TMK Energy Limited (ASX:TMK)	
Share Price	\$0.019
Market Capitalisation <sup>1</sup>	\$75.4m
Enterprise Value (~\$2.5m cash as of 30 September 2022)	~\$73.0m

Capital Structure	
Shares on Issue (m)	3,970 m
Options / Performance Shares <sup>2</sup> / Performance Rights (m)	75m / 600m / 113m
Diluted Issued Capital (m)	4,758 m



Major Shareholders – 24 November 2022	
Shareholder	Shares (m)
TSETSEN ZANTAV	1,304.0m
GANZORIG VANCHIG	244.4m
BRENDAN STATS	234.0m
CRAIG IAN BURTON & ASSOCIATED ENTITIES	194.5m
DOUGAL FERGUSON & ASSOCIATED ENTITIES	155.9m
HSBC CUSTODY NOMINEES	80.1m
DELGERMAA ERKHEMBAYAR	65.0m
BOLORMAA ERKHEMBAYAR	65.0m

<sup>1</sup>Press 24/11/2022 <sup>2</sup>Performance Shares relate to the acquisition of 100% of Telmen Energy Limited, which held a 100% interest in the Gurvantes XXXV Coal Seam Gas Project





## CONTACT

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CEO

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This presentation was approved for release by the TMK Energy Board