

# Sino Gas & Energy Holdings Limited (ASX:SEH)



## An Established Gas Company, Fully Funded to Development

- An Australian-listed company focused on developing two of the largest foreign PSCs in China:
   Linxing and Sanjiaobei, located in the Ordos Basin
- Tier 1 exposure to Chinese Gas Demand

Sino Gas & Energy Holdings Limited (Sino Gas) has all the hall marks of a world class gas producer:



#### Size & Scalability

- Currently 3.7 tcf of Gross Reserves & Resources<sup>1</sup> with Sino Gas' attributable Net Reserves & Resources of 1.05tcf
- Significant upside remains, with only 40% of the blocks explored
- PSC area covers 2,998 km² (740,822 acres)



#### Funding Secured

- All PSC expenditures funded by MIE Holdings Corporation for the next US\$90m
- Funding is anticipated to deliver PSCs through CRR and ODP submission



#### **Exceptional Economics and Low Cost Access to Market**

- Strong pricing regime to deliver high margins
- Ready access to existing pipelines which traverse the PSCs
- Current un-optimised IRR of 49%<sup>1</sup>



#### **Expertise to Deliver**

- Multi decades of technical and management experience in delivering Tier 1 projects
- In-country experience and benefiting from strategic partner's proven track record of delivering ODP

## The Business Plan



# Maximise value of existing PSCs

- Move resources to reserves
- Move prospective to reserves and resources
- Establish positive cash flow
- Utilize fit-for-purpose technology
- Explore remaining acreage

# Company and markets

- Optimise commercial structure
- Effective communications with markets

# New business development

- Build on existing relationships and capability
- Seek value accretive, complementary opportunities

## **Sino Gas Board and Management**





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Executive Chairman

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- Previous roles include President of Premier Oil Indonesia, President of Hess Indonesia, and Managing Director of Eureka Energy Limited

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## **Executing the Plan**



2006 - 2011Proving the Concept

- 701.5 km seismic lines completed
- 15 wells drilled, 11 wells tested, all flowed above commercial rates
- 2011 reserves report by RISC, 3.7tcf of gross reserves and resources
- Commercial viability proved. Moved from exploration to appraisal phase
- Joint venture strategic partnership with MIE completed 6 July
- Sanjiaobei seismic program completed 100km
- Linxing seismic program in progress 170km completion due late Sept
- Linxing No. 9 and No. 5 spud in Aug, Linxing No. 2 and No. 8 spud in Sept
- Sanjiaobei drilling program delayed due to floods catch up program initiated
- Total 2012 program: 17 wells (7 drilling rigs), 270km seismic, US\$ 25m
- Update independent 3<sup>rd</sup> party reserves report based on 2012 work program
- Drill 15 to 20 wells, including horizontal and exploration wells
- Run 600km seismic lines
- Begin LNG pilots
- Submit CRR and ODP for 3 out of the 4 projects
- Book at least ~0.5tcf contingent resources to 2P reserves

2012 Work Program Delineating the Area

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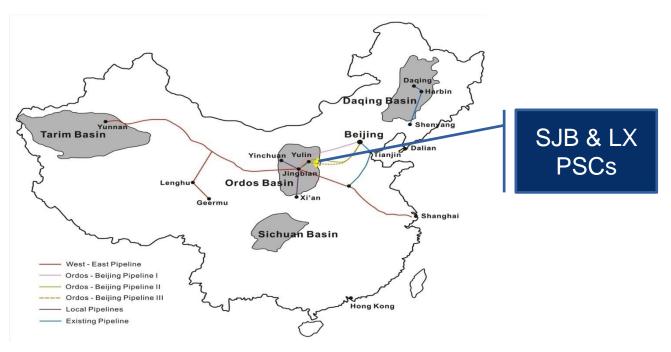
2013 Preliminary Plan CRR & ODP submission

Future work program dependent upon results of 2012 work program.

# Ordos Basin - The Right Place at the Right Time



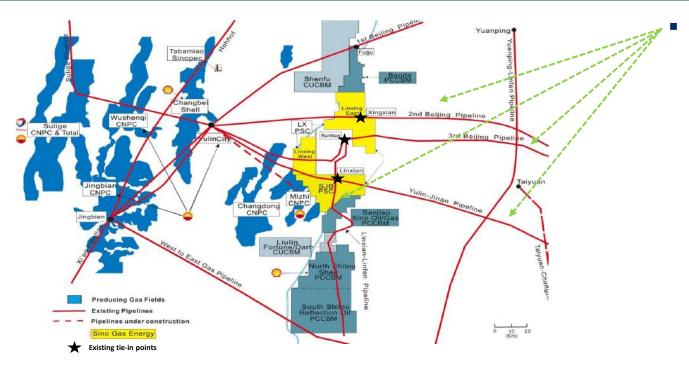
- Rated one of the world's largest gas basins¹
- Current production ~1.5 bcf/day
- Operators include TOTAL, SHELL, CNPC, SINOPEC, etc.
- China's 12<sup>th</sup> Five Year Plan stipulates accelerated development of Ordos Basin gas
- Sino Gas' Linxing PSC specifically designated to be fast tracked



1 - Source: Wood Mackenzie, UBS Research

## **Accessible Routes to Market via Existing Pipelines**





Multiple gas
pipelines with
existing tie-in points
will provide market
access for Sino Gas'
pipeline quality gas



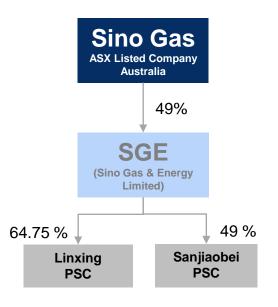
- Key transcontinental gas transport hub
- Above ground infrastructure with ample spare capacity
- Existing and planned demand far exceeds supply
- Shanxi Province alone (population ~ 35 million) underpins supply



# Two PSCs – Multiple Projects



Only 40% of the total acreage in the two PSCs has been explored

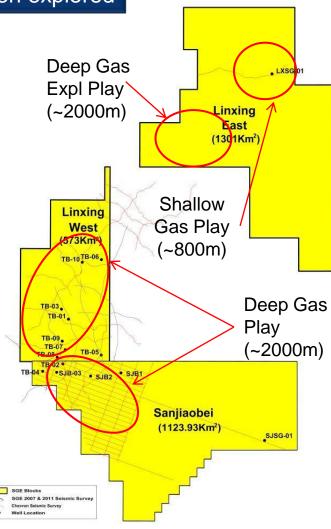


### Linxing

- SGE (64.75%), CUCBM (30.0%) <sup>1</sup>
   (50% owned by CNOOC), CBM
   Energy (5.25%) <sup>2</sup>
- Area of ~1,874km<sup>2</sup> (463,076 acres)
  - Linxing East (1,301km²) & Linxing West (573km²)
- Linxing East remains underexplored

### Sanjiaobei

- SGE (49%), CNPC (51%)<sup>1</sup>
- Area of ~1,124km² (277,746 acres)
- Central and Eastern portion remain underexplored



<sup>1 –</sup> Percentages assume SOE partner back-in rights exercised on ODP.

<sup>2 -</sup> Assumes CBM Energy exercise option to acquire 5.25%.

## **Booking Reserves and Establishing Production**



- Total Project Reserves and Resources of 3.7 tcf (100%) <sup>1</sup>
- Sino Gas' attributable Net Reserves and Resources of 1.05 tcf
- Fully Funded development plan to deliver significant resource maturation through CRR and ODP submission

#### Sino Gas' Attributable Net Reserves & Resources 2

	1P Reserves (Bcf)	2P Reserves (Bcf)	3P Reserves (Bcf)	2C Mid Case Contingent (Bcf)	Mid Case Prospective (Bcf)	Total Mid Case (Bcf)
Linxing East	-	-	-	15	88	103
Linxing West	1	4	8	407	181	588
Sanjiaobei	1	2	5	113	204	358
Total	2	6	13	535	473	1,049
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### **Work Program Focused on Converting Resources to Reserves**

	2012 Work Program			2013	2014
	Wells	Fracs	Seismic		
Linxing East	9	5	170km	CRR Approval / C	DDP Approval
Linxing West	2	2		CR	R Approval/ ODP Approval
Sanjiaobei	6	10	100km	CRR Approval/ O	DP Approval
Total	17 wells	17 fracs	270km seismic	3 CRR Approvals	3 ODP Approvals

<sup>1 –</sup> Figures are 100% project mid-case for Linxing West & Sanjiaobei

# **Exceptional Returns with Significant Upside**



#### Sino Gas' Net Returns

\$US 1.1bn1

RISC Independent Economic Valuation as at 1/1/12 (Risked, P50 Discovered + Prospective, NPV10) 2

IRR~ 49%

Mid Case for Linxing West and Sanjiaobei development projects<sup>2</sup>

#### ~\$250 million annual net revenue

3 Year ramp-up. Planned development steady state production of Sanjiaobei 200mmscf/day (100%) and Linxing 250mmscf/d (100%) with a phased development. 1st Phase ~90 wells<sup>3</sup>

#### **Economic assumptions**

EUR Per Well 2 Bcf Well Head Gas Price \$7.64/mscf P50 Lifting Cost (opex + capex) \$1.80/mscf

Average Cost Per Well \$2.1m

Average Flow Rate Per Well 430,000cf/d

Significant Upside Potential Still to be Evaluated

Pad Drilling

Horizontal Wells

60% Unexplored Acreage

<sup>1 -</sup> Net mid-case for the Linxing West & Sanjiaobei PSCs attributable to Sino Gas.

<sup>2 -</sup> Project NPV<sub>10</sub> is based on a mid case gas price of US\$7.64/mscf. Lifting costs (opex+capex) ~US\$2/mscf mid case.

<sup>3-</sup> Based on internal model generated using RISC's reserves and cost assumptions.







Tier 1 de-risked exposure to the Chinese gas market



Funded and planned program to CRR & ODP submission



Experienced management team with proven delivery history



Clearly defined value creation through CRR and ODP and production



Ongoing analyst coverage from Patersons and Argonaut





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**Gavin Harper Executive Chairman** 

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# **Appendices**



- A. Sino Gas
- B. Strategic Partnership
- C. MIE
- D. PSCs
- E. China
- F. Ordos Basin

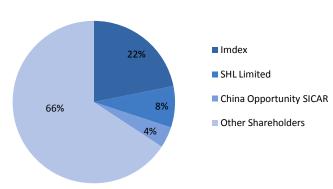
# **Company Snapshot**



### **Corporate Information**

As at 4 September 2012	
Share Price (ASX:SEH)	6.7c
Market Cap	A\$76.1m
Issued Shares	1,120m
Listed Options (ASX:SEHOC)	334.3m @ A\$0.125 (31 Dec 12)

### **Key Shareholders (undiluted)**

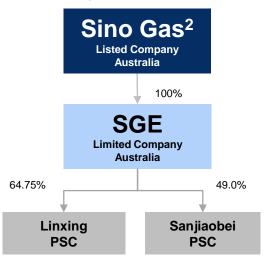






# **History of Sino Gas & Energy Holdings Limited**

- Sino Gas & Energy Holdings Limited (Sino Gas) is an ASX listed (ASX: SEH) gas exploration company focused on two PSCs, Linxing and Sanjiaobei, in the Ordos Basin, China. Gas assets acquired from Chevron in 2006, after Chevron acquired Texaco China.
- Established and operating in Beijing since 2005 through subsidiary Sino Gas & Energy Limited (SGE). Staff of 30 people, majority of sub-surface and operations team ex Conoco Philips, Schlumberger and CNPC.
- Admitted to the Official List of the ASX on 9<sup>th</sup> September 2009, and began trading as SEH on 15<sup>th</sup> September 2009.
- In July 2012, Sino Gas and MIE Holdings Corporation ("MIE") closed a strategic partnership deal to jointly develop the Sanjiaobei and Linxing PSCs<sup>1</sup>.



# **Sino Gas Board and Management**





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# Sino Gas and MIE Form Strategic Partnership

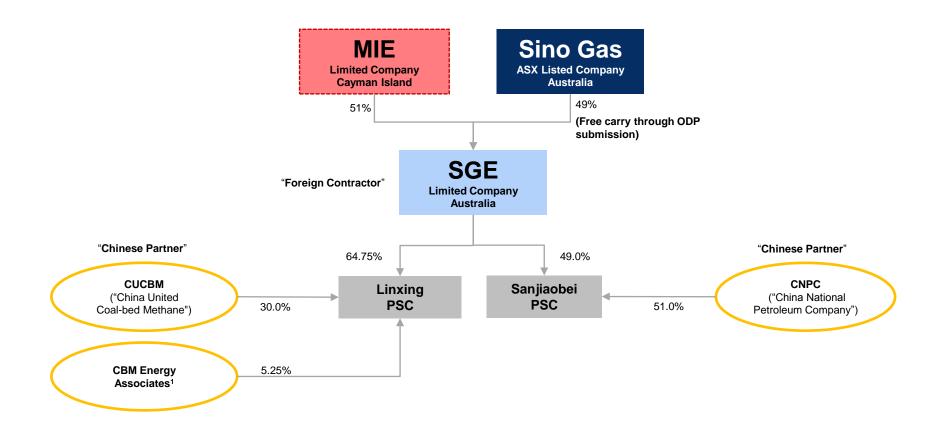
- Sino Gas and MIE Holdings Corporation ("MIE") announced on 27<sup>th</sup> June 2012 a strategic partnership to develop the Sanjiaobei and Linxing PSCs in Shanxi Province, China, which was completed on 6 July 2012
- The partnership combines MIE's financial strength, on-ground operational capability and Chinese regulatory experience with Sino Gas' world class gas projects and technical expertise

#### **Transaction Details**

- MIE acquired 51% of Sino Gas' subsidiary Sino Gas & Energy Limited ("SGE") that holds the Sanjiaobei and Linxing PSCs
- MIE through a newly formed, wholly owned subsidiary Asia Power and Energy Corporation ("Asia Power") will progressively invest US\$90 million in SGE to fund the PSC projects
- MIE also purchased US\$10 million of existing shares in SGE from Sino Gas

# **PSCs Ownership Structure**





# Representatives on SGE Board



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# **MIE Snapshot**



- MIE is an international oil and gas exploration, development and production company listed on the Hong Kong Stock Exchange (SEHK: 1555)
- Headquartered in Hong Kong, MIE has branches in China, United States and Kazakhstan
- MIE has grown rapidly over the past 10 years demonstrating solid progress and performance. It is regarded as one of the leading independent onshore upstream oil companies in China:
  - ✓ In 2011 drilled over 450 wells
  - ✓ Produced over 10,000bbls/day (net)
  - ✓ Realised an average price of \$110/bbl with lifting costs only \$7/bbl
  - ✓ Demonstrated ability to successfully deliver Sino-Foreign PSCs through the Chinese regulatory approval system, including CRR and ODP

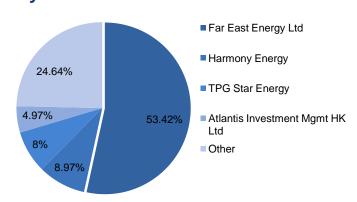
# SINO Gas & Energy An Emerging Clean Energy Company in China

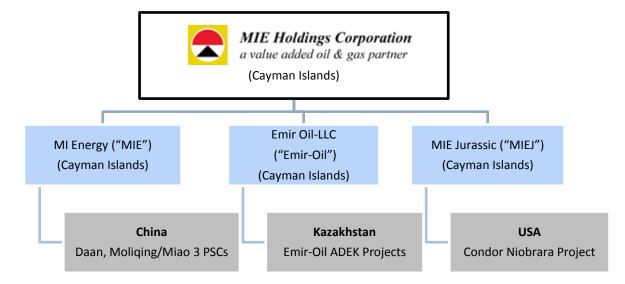
## **MIE Corporate Structure**

### **Corporate Information**

As at 29 June 2012	
Share Price (SEHK: 1555)	US\$0.24
Issued Shares	2,647.8m
Market Cap	US\$641.7m
Cash <sup>1</sup>	US\$85m
Debt <sup>1</sup>	US\$390m
Enterprise Value	US\$947m
EBITDA 2011	US\$326.1m

### **Key Shareholders**

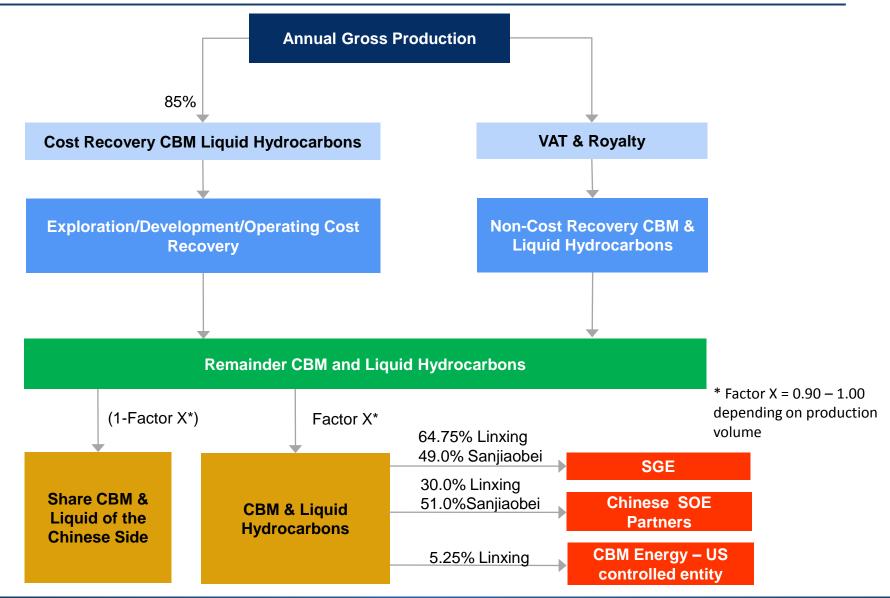




Source: MIE company presentations, Bloomberg

## **PSC Allocation Structure**





# **Project Economics**

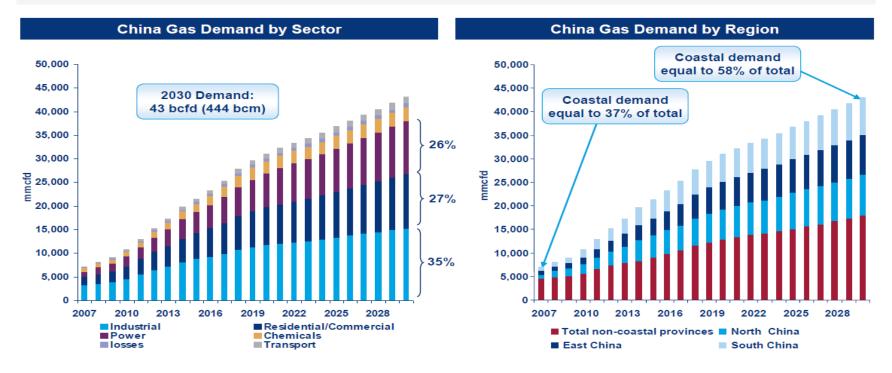






# Chinese Gas Market - a decade of growth ahead

- China is the World's 4<sup>th</sup> largest gas market after the US, EU and Russia
- China is targeting an increase in production of domestic origin gas by 2.5x in the next five years
- Government is actively investing in infrastructure to secure new supply
- Plans to gasify local Shanxi province in the next five years (Population: 33m) will underpin future gas demand
- Natural Gas to grow to 10% of China's energy mix by 2020¹

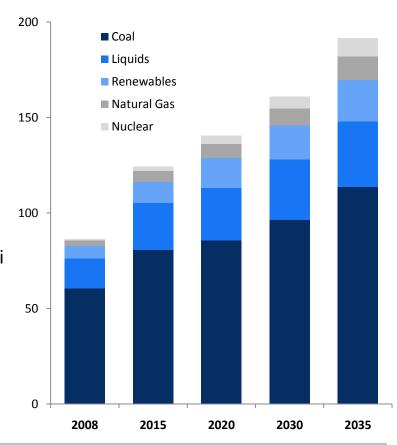


## China's 12th Five-Year Plan



- China's National Energy Administration ("NEA") released its 12<sup>th</sup> Five-Year Plan for Development and Utilization of Coalbed Methane on 31 Dec 2011
  - Focused on the development of two commercial bases:
     Qinshui Basin and Ordos Basin
  - Aims for a 17% reduction in carbon dioxide emissions by 2015, signaling promotion of clean energy
  - The National Development and Reform Commission ("NDRC") is targeting natural gas to make up 7.5% of total primary energy consumption by 2015 vs.3.7% in 2010
  - Current domestic gas supply will continue to increase but unable to keep pace with consumption growth
- By 2015 the production capacity of CBM in the Qinshui Basin and Eastern Ordos Basin should reach16 billion cubic meters
  - Additional proven CBM reserves should reach 1,000 billion cubic meters
- Strong support by the Chinese government to develop unconventional gas assets held under Sino-Foreign PSCs

# Forecast energy consumption in China by Fuel (Quadrillion BTU)



SGE's Linxing PSC is specifically mentioned in the 12<sup>th</sup> 5 year plan as one of the key projects in the Ordos Basin

# SINO Gas & Energy An Emerging Clean Energy Company in China

# **Chinese Natural Gas Pricing**

- In Dec 2011, the NDRC published a new gas pricing mechanism (market net back pricing) to replace the older or existing nation-wide gas pricing model (cost plus model).
- The new mechanism has been tested in Guandong and Guangxi provinces and is expected to begin to roll out nationally this year.
- Links domestic prices to global energy values, with imported fuel and imported LPG providing the key variables to the domestic model
- As a result Chinese domestic prices are set to fluctuate in line with global prices, thus meaning the discount between Chinese domestic assets and international equivalents, should start to narrow.

### Why Change?

The government wants to establish a pricing mechanism that will minimise price inflation at the end user level whilst providing adequate margins in order for the upstream produces to maintain stable production

#### How is it calculated?

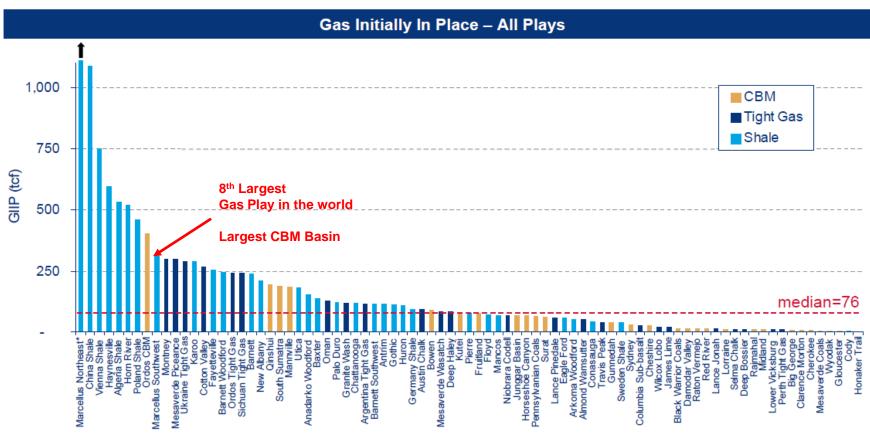
- Simplified formula:  $P_{gas} = 0.49 P_{fuel} + 0.27 P_{lpg}$  (basically, base price less transportation costs)
- If the imported price is US\$80/bbl, the gas base prices for Guangdong and Guangxi would be RMB2.74/m³ (or US\$12.3/mscf) and RMB2.57/m³ (or US\$11.6/mscf)
- Existing January 2012 gas prices at wellhead in Shanxi Province already ~ US\$7.50.

"The Shanghai hub price will set the price of gas in Asia and be a benchmark in the same way that Henry Hub prices are to North America" (Platts)

# SINO Gas & Energy An Emerging Clean Energy Company in China

## **World Class Asset in the Ordos Basin**

#### The Ordos Basin ranks as one of the world's largest known gas plays

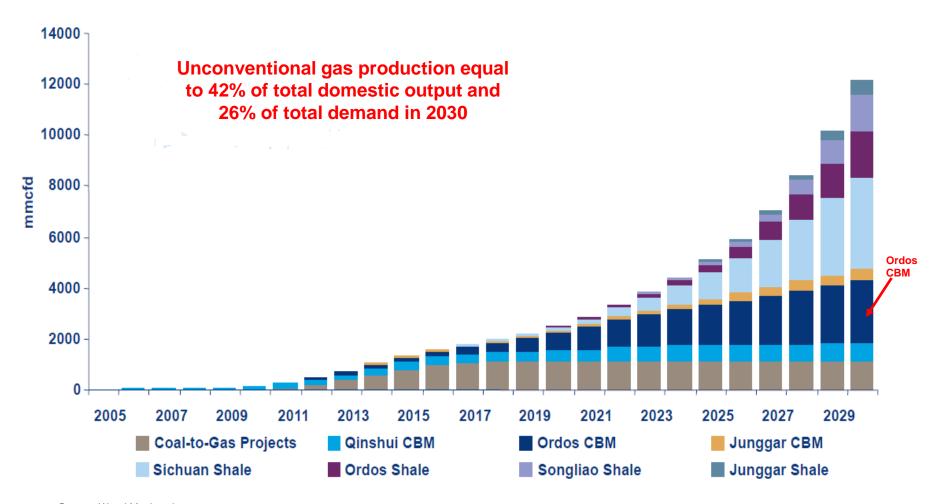


Note: \* Marcellus Northeast = 1,628 tcf

# SINO Gas & Energy

## **World Class Asset in the Ordos Basin**

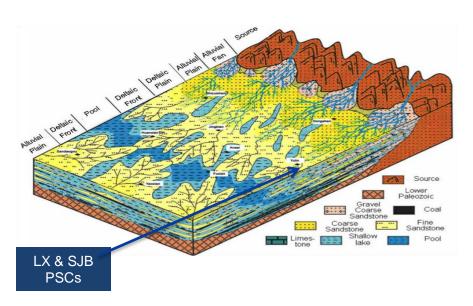
### **China Unconventional Gas Supply Potential**



Source: Wood Mackenzie

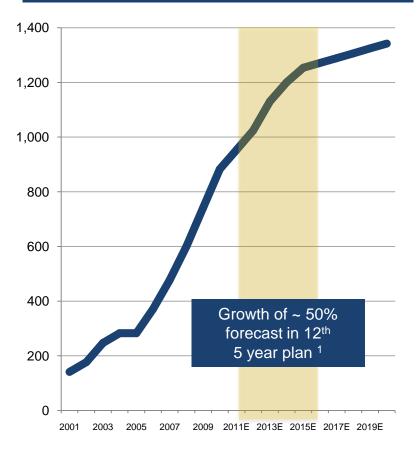
## **Ordos Basin - Geological Background**





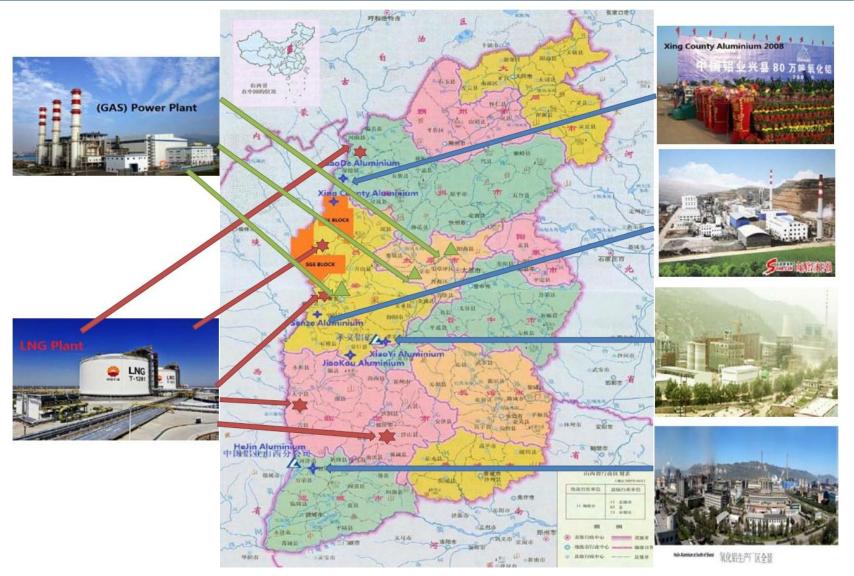
- Ordos Basin depositional environment
  - Shanxi and Shaanxi Provinces are prolific coal areas
  - Gas is methane sourced from coal seams underlying basin
  - Gas to be produced using proven unconventional gas extraction methodologies

## Ordos Basin production forecast (Bcf pa)



# SINO Gas & Energy

## **Planned Shanxi Province Infrastructure**



## **Disclaimer & Resource Statements**



Sino Gas & Energy Holdings Limited ("Sino Gas" ASX: SEH) is an Australian energy company focused on developing Chinese unconventional gas assets. Sino Gas holds a 49% interest in Sino Gas & Energy Limited ("SGE") through a strategic partnership completed with MIE Holdings Corporation ("MIE" SEHK: 1555) in July 2012 to develop two blocks held under Production Sharing Contracts (PSCs) with CNPC and CUCBM. SGE has been established in Beijing since 2005 and is the operator of the Sanjiaobei and Linxing PSCs in Shanxi province.

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#### **Resource Statements**

The statements of resources in this Release have been independently determined to Society of Petroleum Engineers (SPE). Petroleum Resource Management Systems (SPE PRMS) standards by internationally recognized oil and gas consultants RISC and NSAI. These statements were not prepared to comply with the China Petroleum Reserves Office (PRO-2005) standards or the U.S. Securities and Exchange Commission regulations and have not been verified by Sino Gas' PSC partners CNPC and CUCBM. All resource figures quoted are mid case - 100% for project unless otherwise noted.