



# **Workshop on APEC Coal Supply Security**

## **MONGOLIAN COAL SECTOR, TRENDS 2015**

**BAYARSAIKHAN DAVAASUREN**

**AMC LLC**

2008/4/9 20:14

# CONTENTS

1

- **Mineral Resource Potential and Coal reserves, quality of coal**

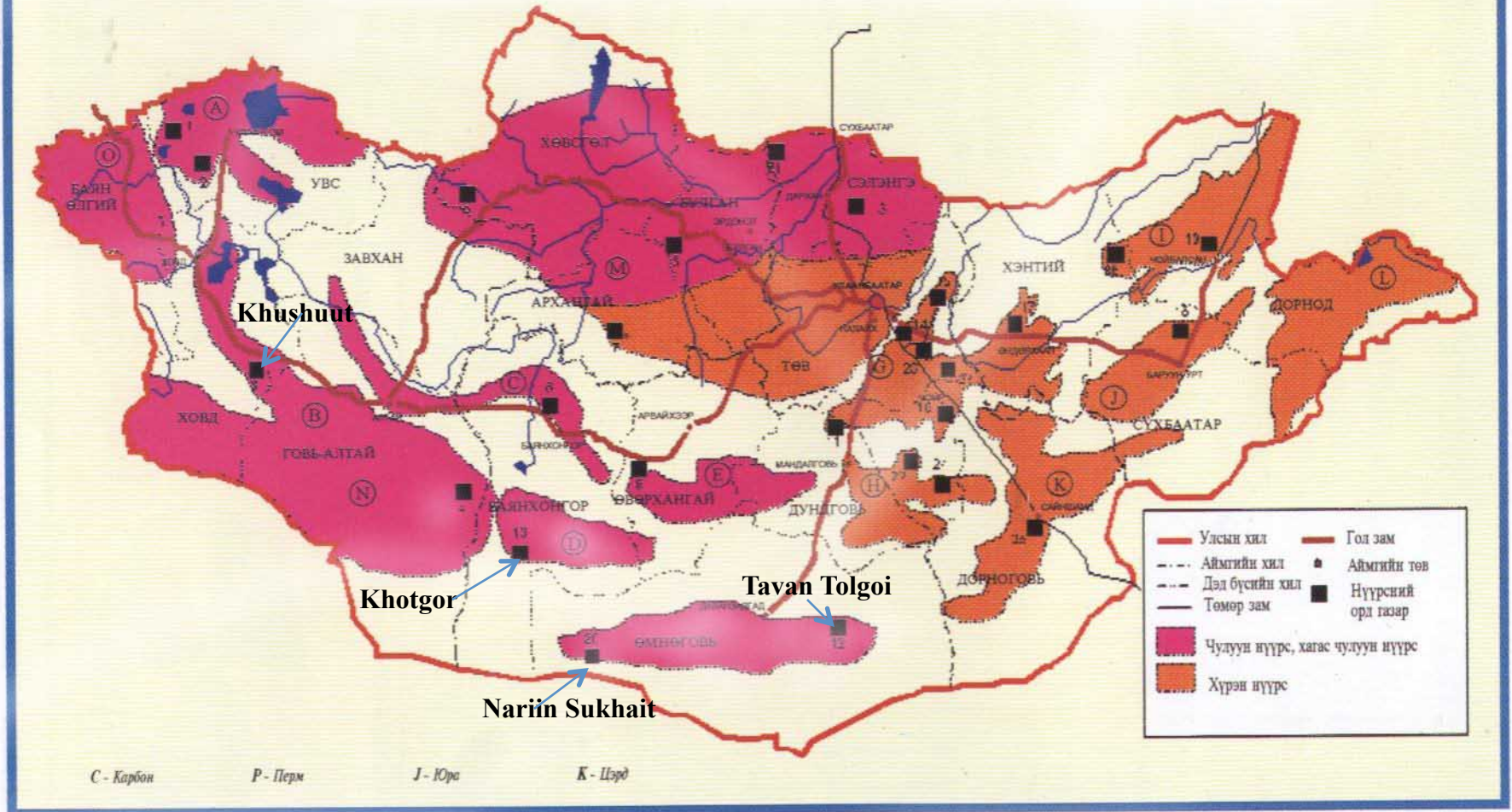
2

- **Coal mining industry current situations of Mongolia**

3

- **Mining industry economics and coal mining trends**

# Coal Deposits and Coal Occurrences MAP in MONGOLIA



## Tavan tolgoi coal field

- 6.0 billion tons of coal, out of which:
- 1.4 billion tons of coking coal
- 4.6 billion tons of thermal coal

## Nariin Sukhait Coal field reserves 370 mill

Khushuut Coal Field – 80 mill, hard coking coal

Khotgor Coal Field – 200 mill coking coal,

# Mongolian Coal Reserves, Resources and Coal Quality

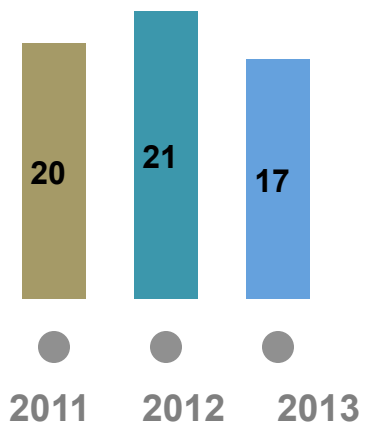
- Mongolia has over 300 known coal deposits with an estimated 152 billion tons of coal resources.
- 31.7 billion tons of coal reserves in M+I classifications
- 1.8 bill tons of coking coal in M+I reserves in South Gobi coal basins.
- Coking index ranked between 4-8 FSI in ASTM

<b>Descriptions</b>	<b>Metallurgical and Coking coal reserves</b>	<b>Thermal coal</b>
<b>Calorific value:</b>	<b>6500-8500 kcal</b>	<b>4500-5500 kcal</b>
<b>Sulfur %</b>	<b>0.6%</b>	<b>0.8%</b>
<b>Ash %</b>	<b>10%</b>	<b>20-33%</b>
<b>Moisture%</b>	<b>8.5%</b>	<b>8.5%</b>
<b>Phosphorus %</b>	<b>0.01-0.06%</b>	<b>0.01-0.06%</b>

# Mongolian Mining Sector in Country Economics

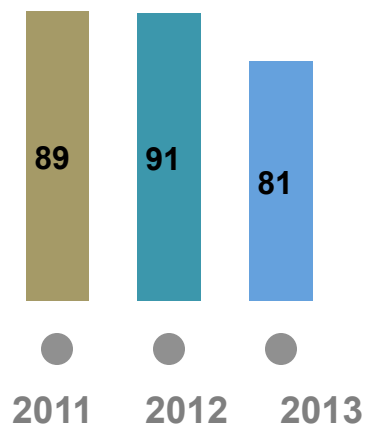
in GDP

**18.7%**



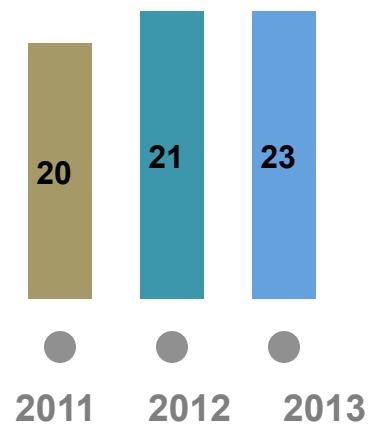
In Export

**83%**



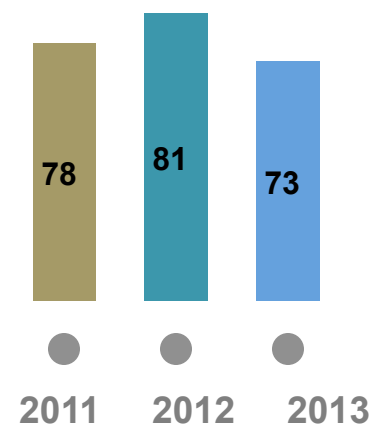
In state Budget

**22%**

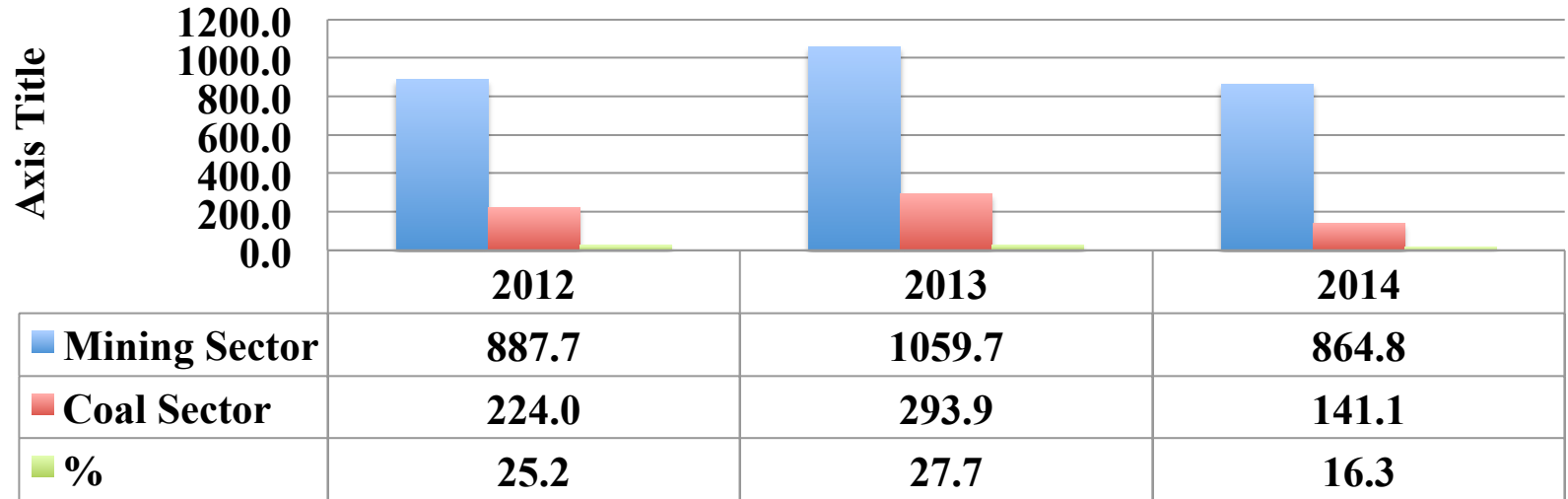


Foreign Direct Investment

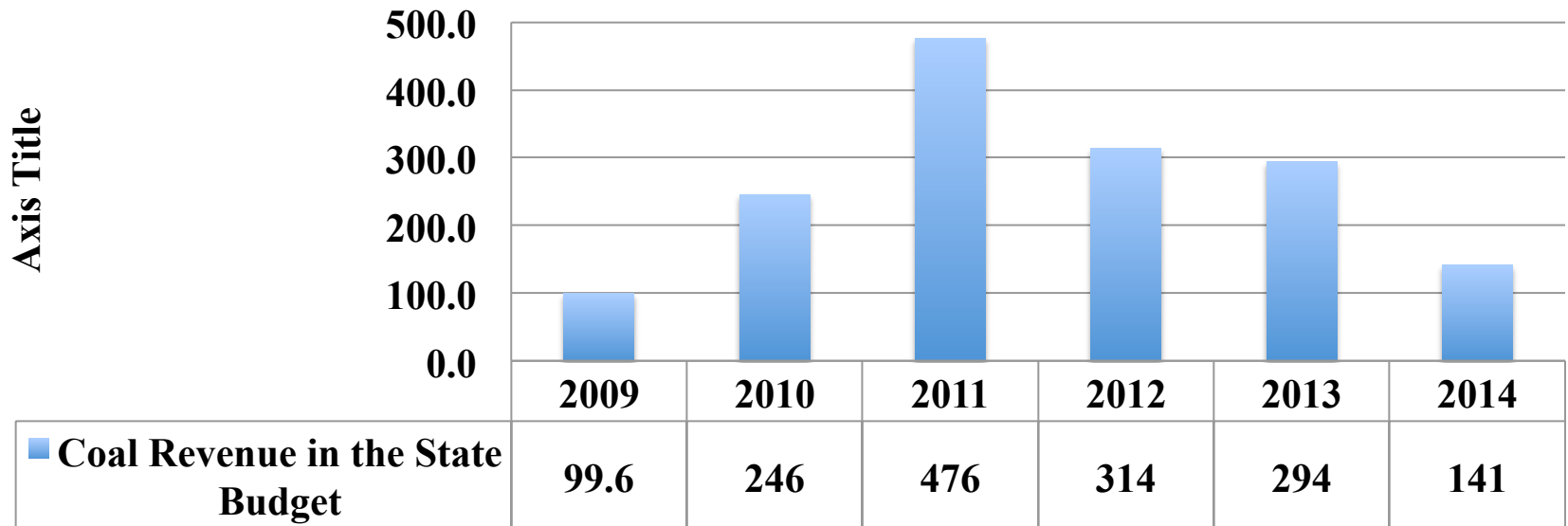
**53%**



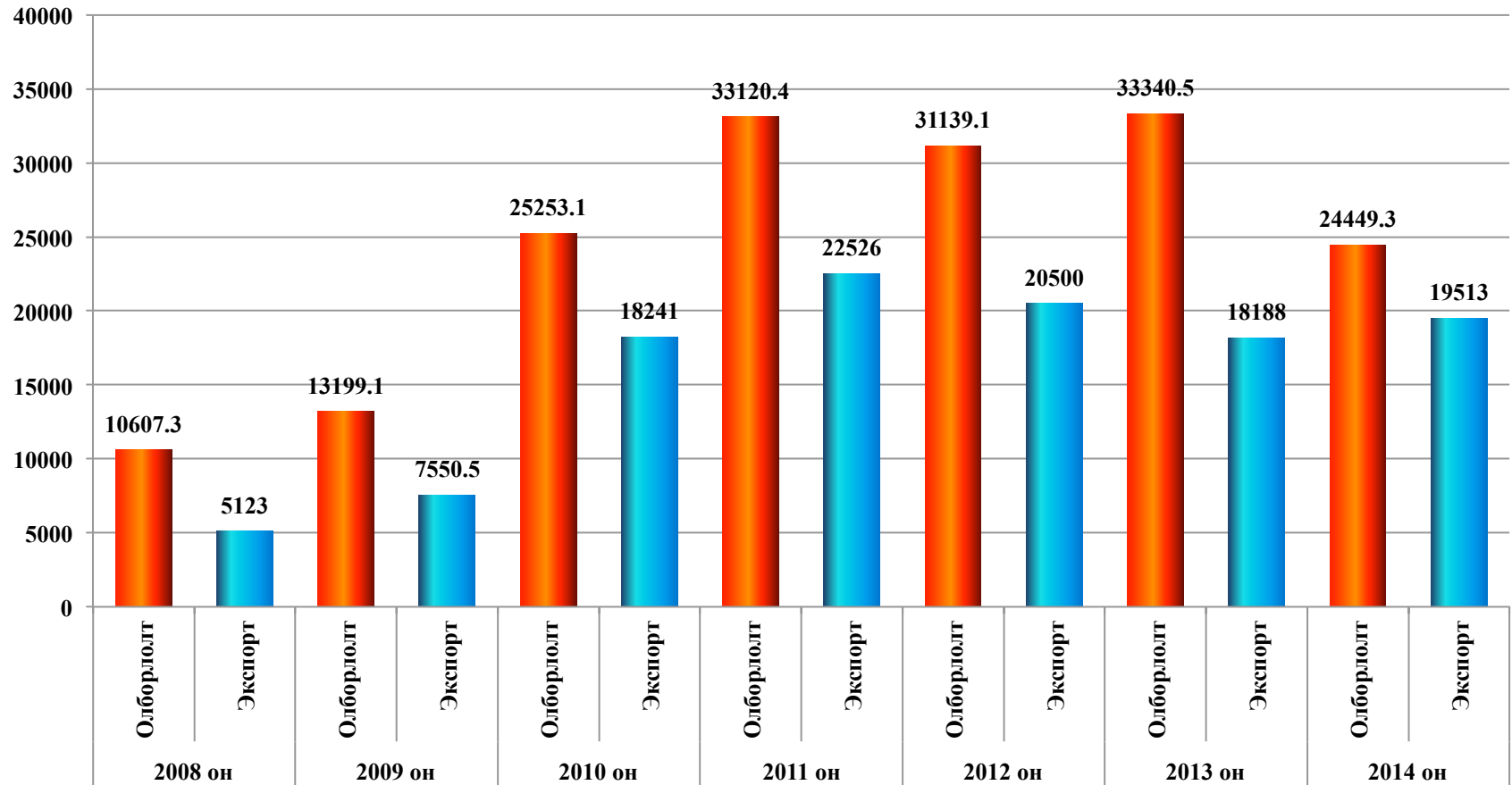
## Mining Sector's contribution in the State Budget



## Coal Revenue in the State Budget



# COAL EXPORT DATA 2008-2014



# **Current market overview of Coal industry in Mongolia**

- No domestic coking plant yet, only washed
- All coal are exporting to Chinese Market
- Main market for coking coal - northern Chinese Metallurgical Plants
- Coal transports by trucks to the border and railway to end user in China.
- Paved road for coal trucking constructed
- Five coal producers are currently operating for coal exporting to China



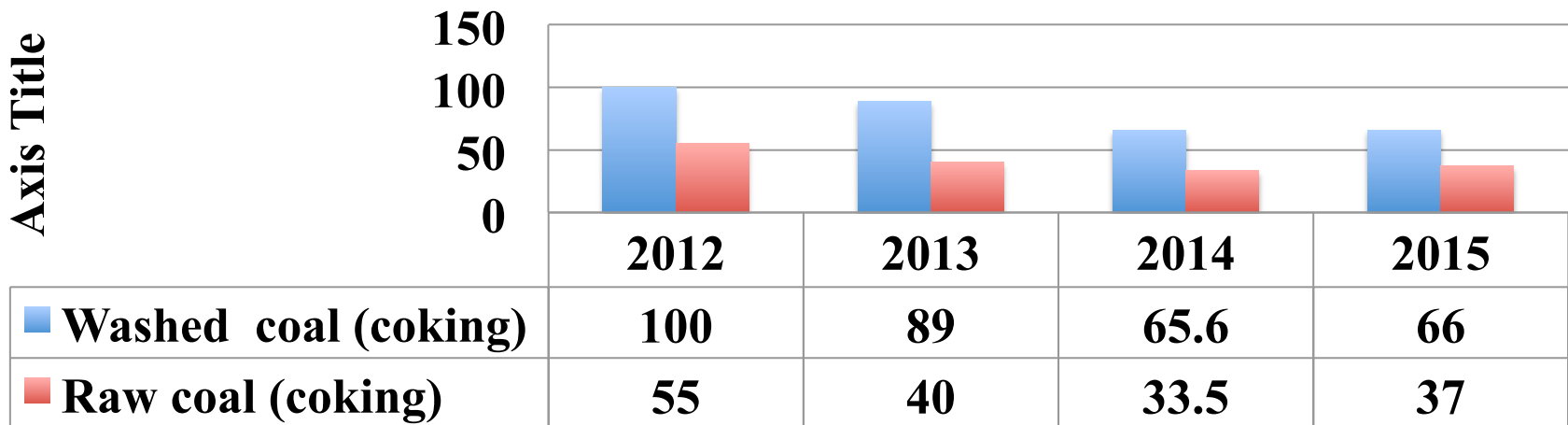
# Major Players in this market and competitiveness

- **Erdenes Tavan Tolgoi LLC under Mongolian Government**
  - **Tsankhi coal field project at Tavantolgoi Coal Deposit**
  - 15-20 mill tpy capacity per year which is 78% of coking.
  - Operation is started Jun 2011.
  - 245 km trucking to the border with paved road.
  - Quality is 6500-8500 kcal for Coking coal and 4500-5500 kcal for thermal coal
- **Energy resources under Mongolian Mining Corporation listed in HKG**
  - Project is **Ukhaakhudag coal mine at Tavantolgoi Coal Field**
  - 7.8-10 million tons capacity at 497 mill tons reserve which is 58% coking
  - Washing plant at 15 mill tpy and 24 MWt TPP at site.
  - Other small players in Mongolia are as follows:
    - a. South Gobi Energy resources – 200 mill tones reserve and 45 % coking
    - b. MAK – Nariin sukhait coal field – 120 mill tones reserve and 45 % coking
    - c. Chinhua MAK – 50 mill tones and 45 % coking
    - d. Mongolia Energy Corporation – 80 mill tones reserves and 65 % coking

# Current coal exporting data

- Coal transports by trucks to the border
- Cost for trucking US\$ 20 per tons
- Reload into railway to end user
- Coal import tax at Chinese border – 3%

## COAL PRICING HISTORY in US\$



# Tavan tolgoi deposit overview

## Reserves\*

- 6.0 billion tons of coal, out of which:
- 1.4 billion tons of coking coal
- 4.6 billion tons of thermal coal
- Main coal field in TT, Tsankhi, Ukhaakhudag, BT

## Location

- Gobi Region in southern part of Mongolia
- 540 km south of Ulaanbaatar, capital city
- 270 km from the Chinese border

## Infrastructure

- All infrastructures (electricity supply, railroads, roads, water, supply etc.) need to be developed

\*- Conversion of coal resource into JORC standard increases coal resource, in particular, coking coal

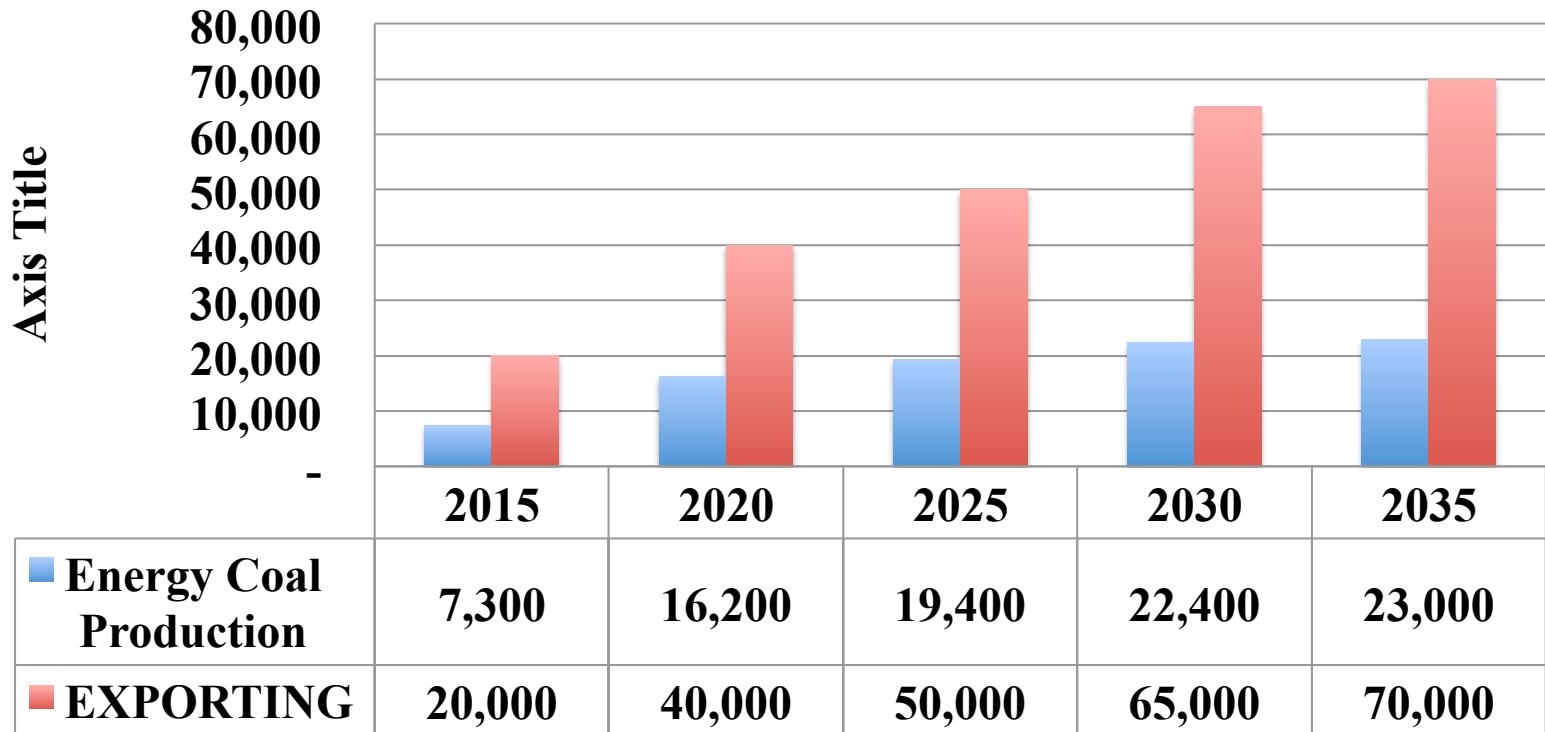
# Government Plan for Tavantolgoi

- Tender for TT development announced and selected international consortium. Negotiation with investor are under discussions.
- Develop open pit 30 mpy at Tsankhi coal field within 2 year
- Coal Washing Plant at 30 Mpy to be constructed
- Export 30 Mpy washed coal from TT
- Construct 270 km Railway line from TT to the border
- Current government debt to be paid as part of coal deal.

# GOVERNMENT POLICY - COAL SECTOR

- Coal Gasification Development MOU signed with China. Expected 50-80 Mpy coal to be gasified and export to China
- MOU with Chinese Government to export 1.0 billion in next 20 years
- Incentives and encourages coal processing and liquefaction industry investment
- Develop coal transportation route to reach coastal points to export internationally

# COAL MINING, EXPORTING PREDICTIONS (2014-2035 FORECAST)



# Challenges and Risks in Mongolia

- Infrastructure: electricity, water, transportation
- Finance: high interests, short term
- Lack of qualified personnel and equipment
- Inappropriate coal pricing and trading
- Border station capacity
- Environmental issues with coal production – Dust problems from mining operation to impact herder's lifestyle
- High Risk on water resource availability for coal washing
- The development of new capacity and increased exports from Mongolia will be highly dependent on long-term demand for coal from China.
- Unpredictable price on petroleum products

Thank you for your attentions:



Presented by Bayarsaikhan

AMC Mining Consulting Services LLC  
MONGOLIA