



**I DIG. I HAUL.
THAT'S ALL.**

HITACHI

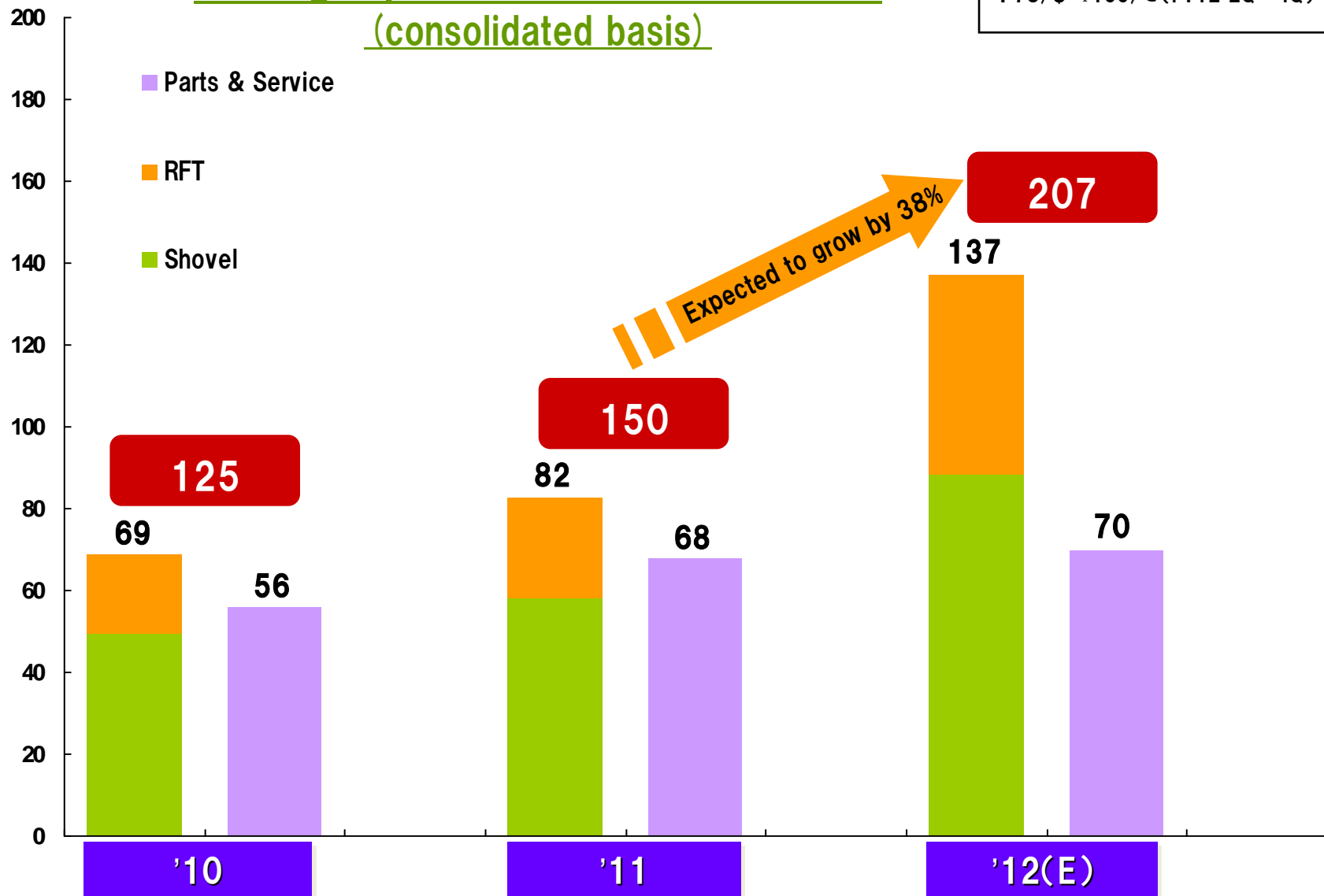
**Hitachi Construction Machinery
Mining Business Update**

Mitsuhiro TABEL, Vice President and Executive Officer

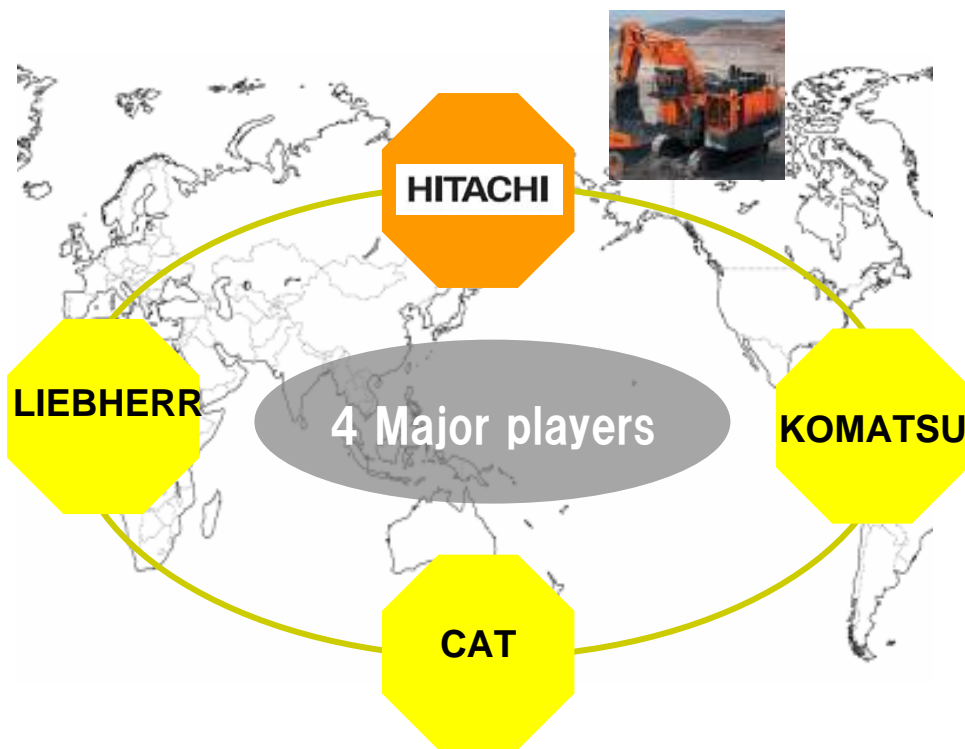
Mining Operation Sales Outlook (consolidated basis)

¥75/\$ ¥100/€ (~FY12 1Q)
¥78/\$ ¥100/€ (FY12 2Q~4Q)

(Billion Yen)

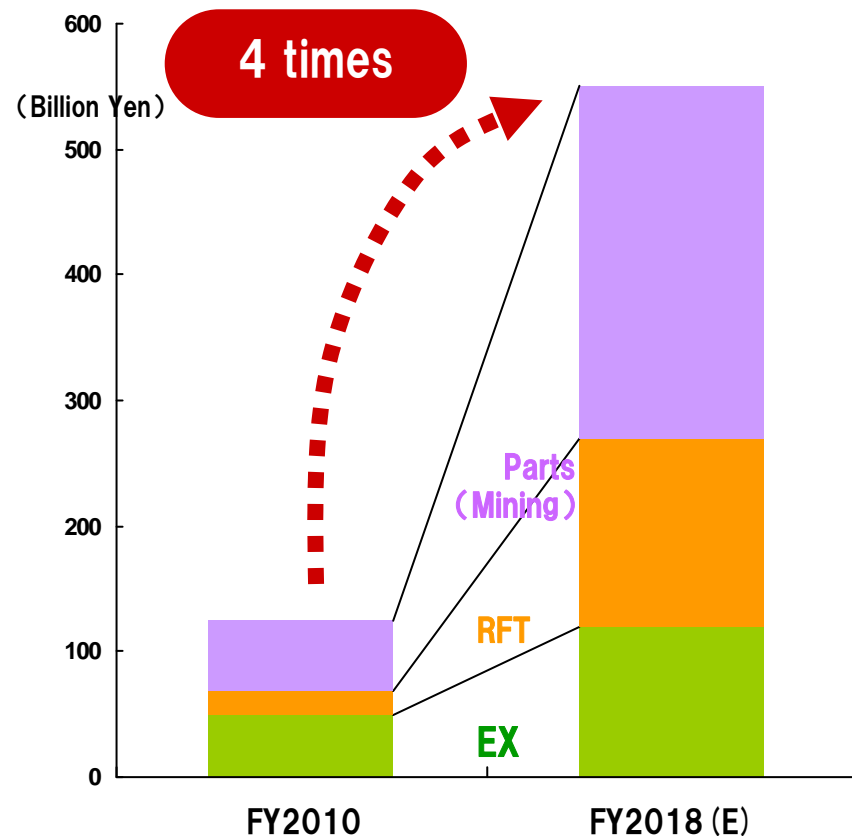


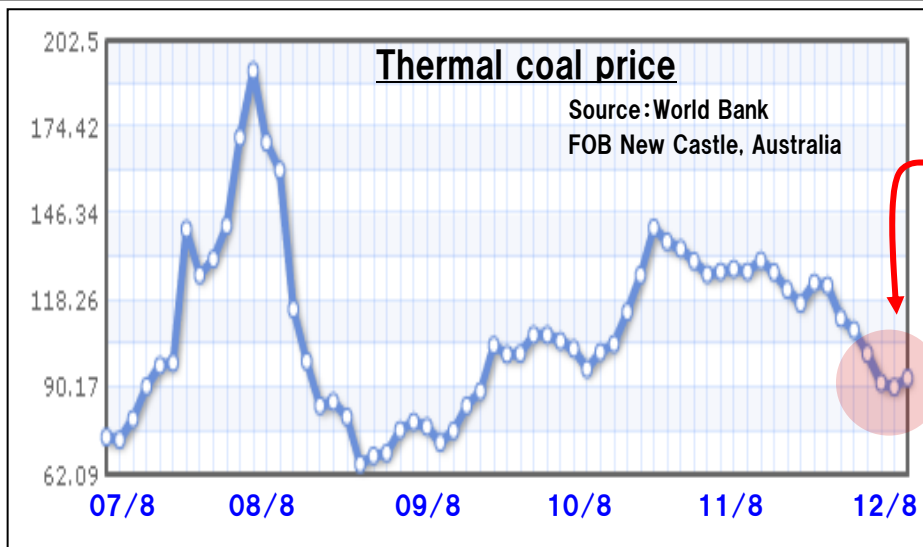
◆ Mining market is dominated by 4 major players



With Hitachi hi-tech truck, we plan to expand our sales worldwide

Mining Sales & Profit ('18 consolidated basis)

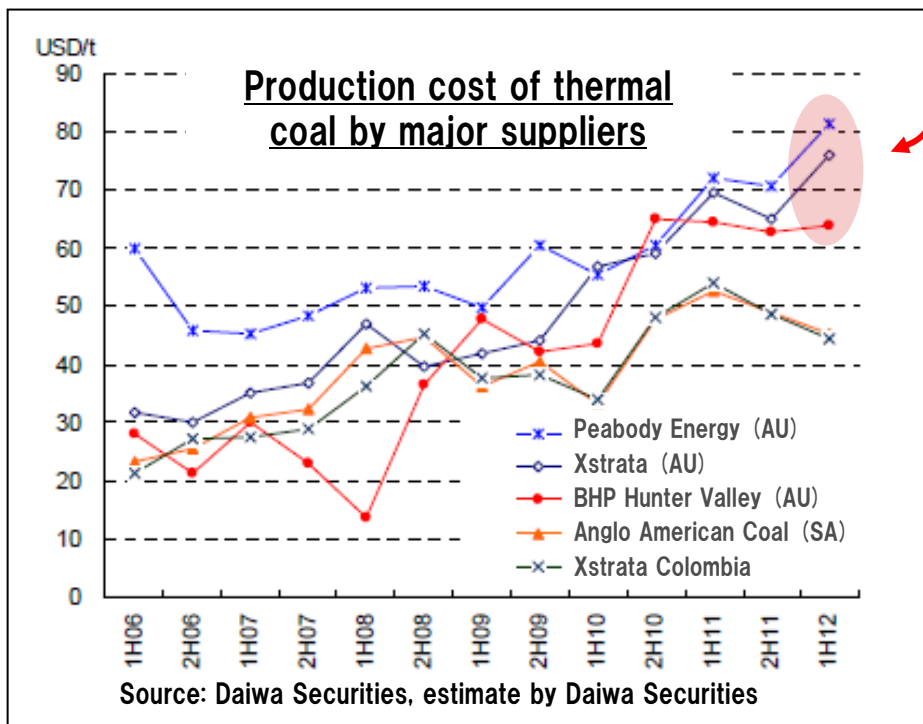




◆ Price of Thermal Coal

Price of thermal coal seems to hit the bottom. It is still weak but there is a sign of rebound.

Estimated cost of production by Australian suppliers is approx. US\$70-80 which is squeezing their profit whereas the cost of Colombian and S. African coal is around US\$50 which brings them reasonable profit.

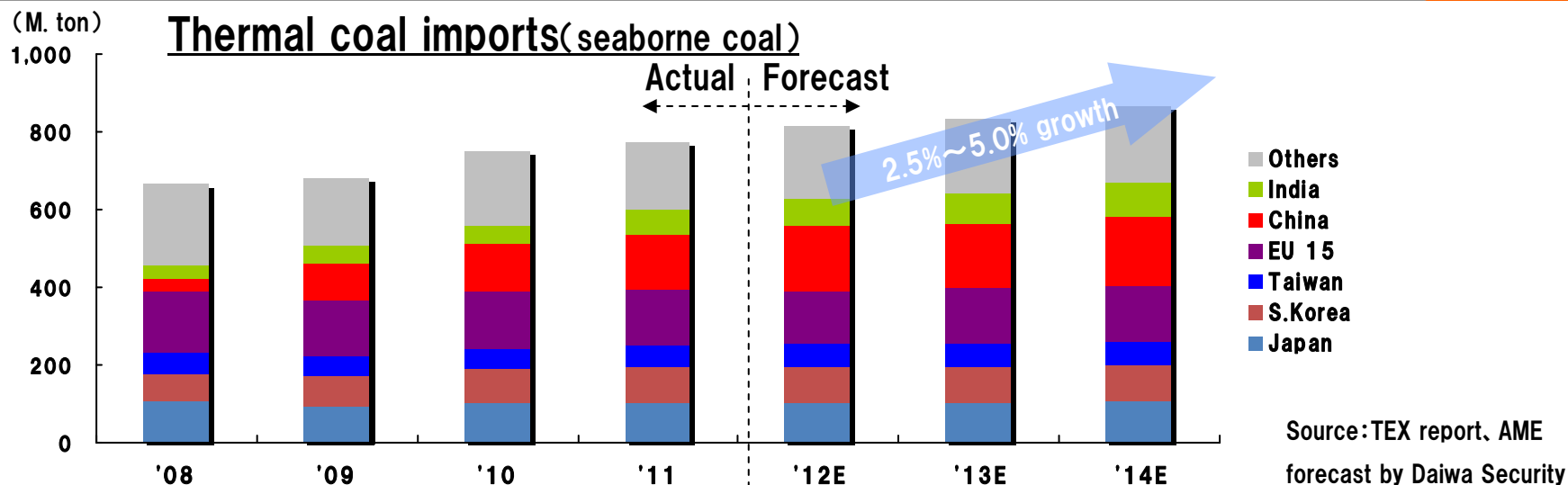


◆ Outlook

Recent mass investments in suppliers made the supply shortage situation to a balanced situation. The balance may gradually start to rebound to a shortage of supply in 2H 2013.

China has increased their purchase of coal by 9% on month to month basis due to coming high winter season demand for energy.

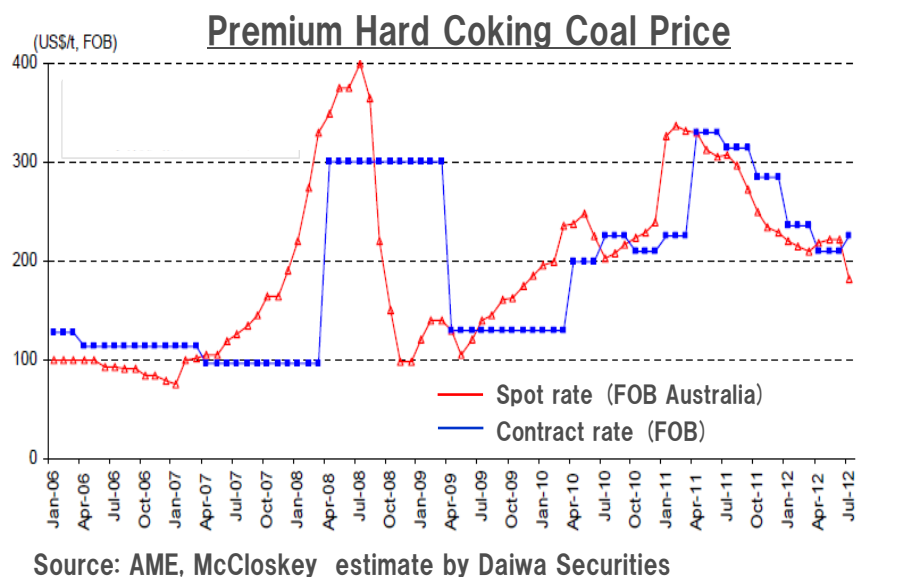
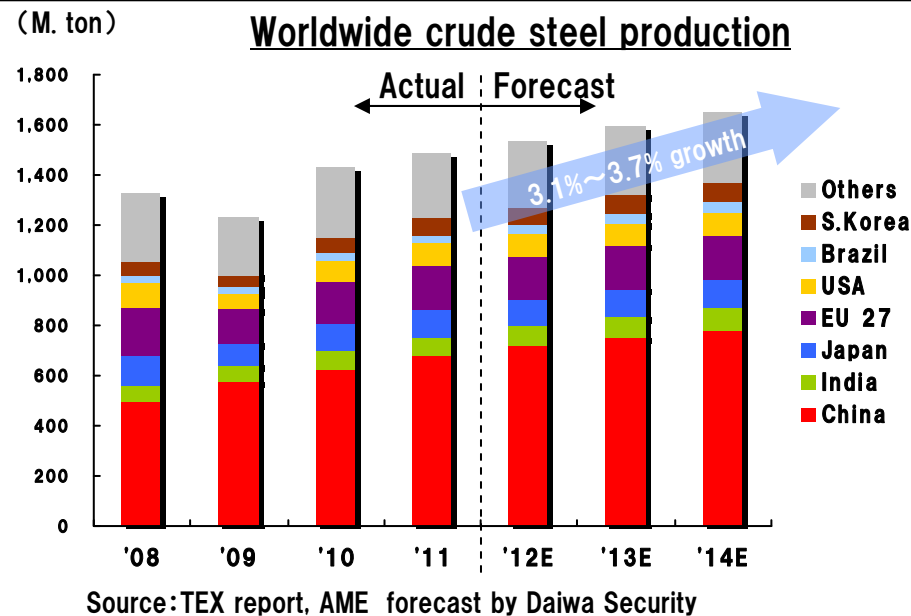
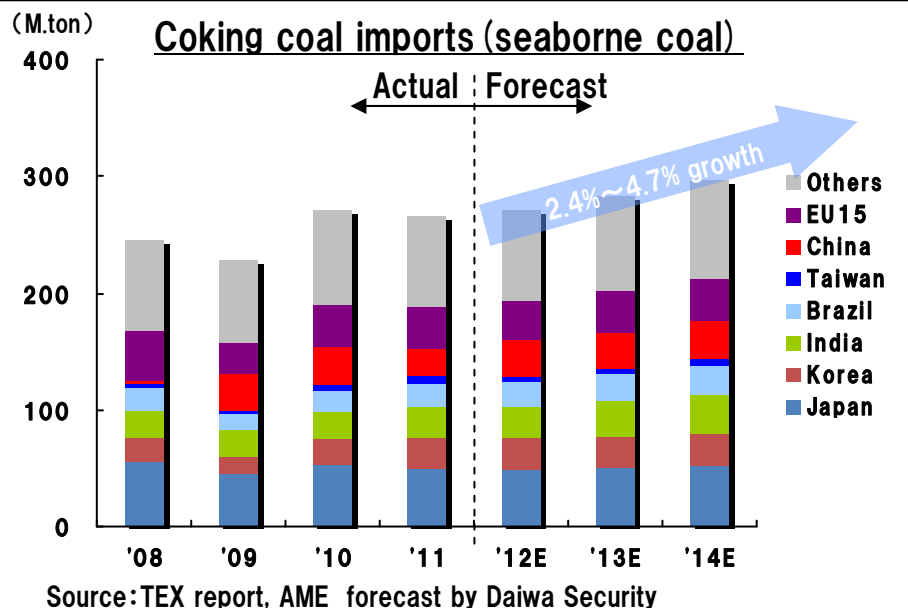
Germany has emerged for burning coal due to power price increase.



◆ Increases in inventory may ease after Q2 2013

The impact of shale gas made US suppliers to export and extensive investments by global players also brought excess in supplies. A slow down in Chinese economy eased the balance in demand & supply in '12. However, Australian coal still has power to determine the coal price due to its quality. Current price of US\$90 is considered as bottom as their production cost is in a range of US\$70-80.

Chinese economy on the other hand seems to seek for a soft landing but looking at the seriousness of electricity supply, coal demand would naturally increase gradually from Q2 2013.



◆ Outlook on coking coal

<Imports>

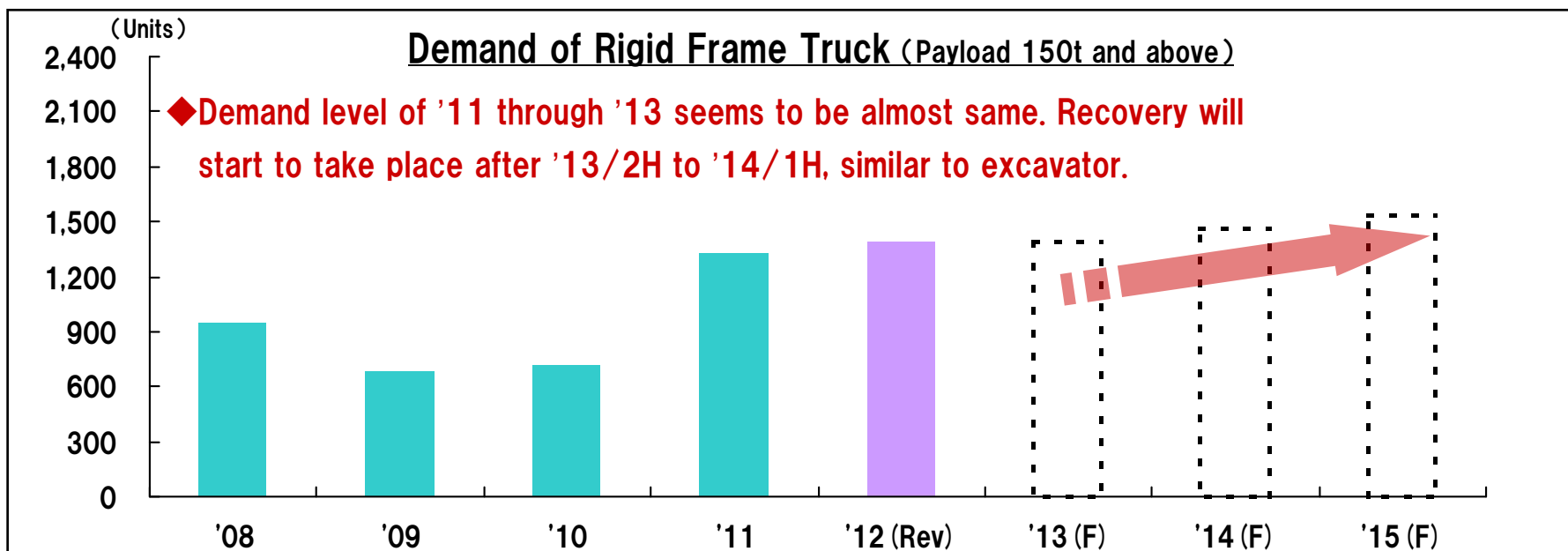
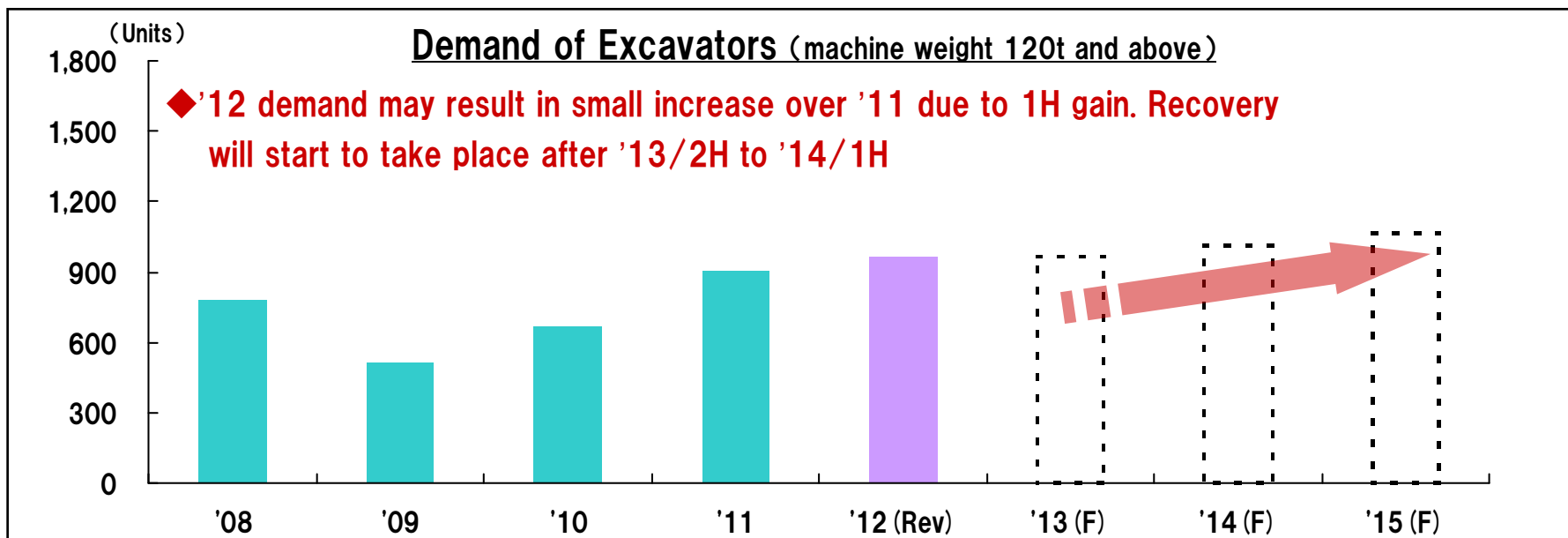
Expected to grow by 2.4% to 4.7% annually

<Crude Steel Production>

Expected to grow by 3.1% to 3.7% annually

<Coking Coal Price>

Current trend is same as thermal coal and expected to rebound after 2Q 2013



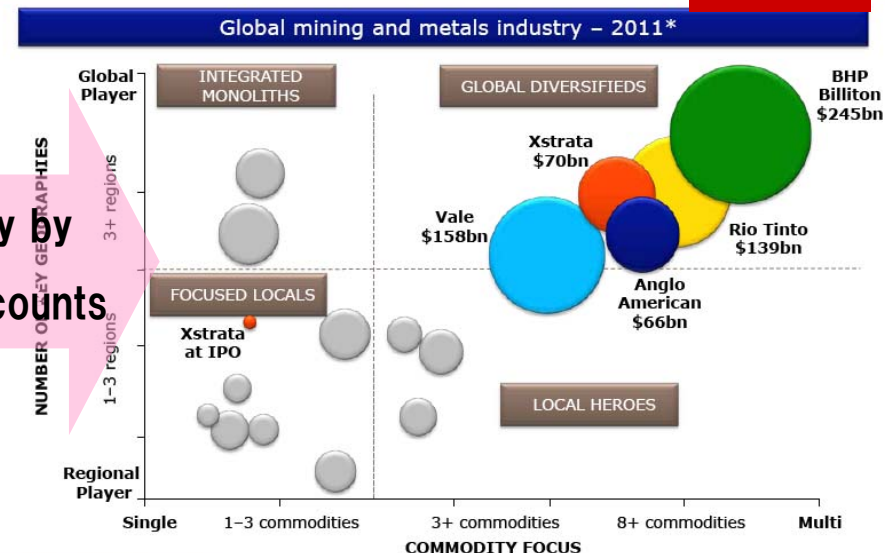
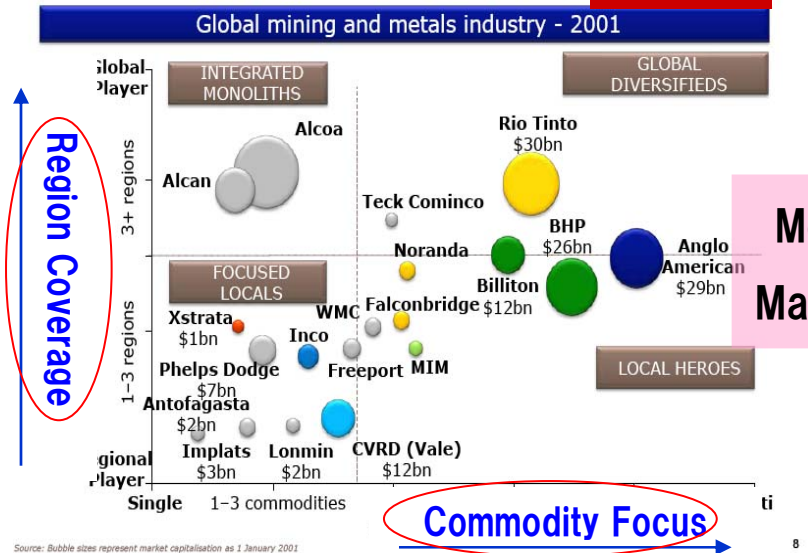
A Paradigm Shift in Major Mining Houses

A decade ago, the industry was fragmented with no clear winning business model

2001

Today mining is consolidated, with the Diversified Model proving best positioned to compete into the future

2011



Monopoly by Major Accounts

Major Accounts

- BHP B (Australia)
- VALE (Brazil)
- Rio Tinto (Australia)
- Anglo American (England)
- XSTRATA (Switzerland)

Local Heroes

- KPC (Indonesia)
- ADARO (Indonesia)
- BUMA (Indonesia)
- PAMA (Indonesia)
- Adani (Australia)
- Coal India (India)
- Shenhua (China)
- SUEK (Russia)
- Banpu (Thailand)

Contractors

- THIESS (Indonesia/Australia)
- LEIGHTON (Australia)
- PAMA (Indonesia)

● New products

◆ EX2600-6/5600-6: **Feb.2012 on Sale**
Increased Bkt Capacity, Enhanced Engine and pump

◆ EH5000AC-3 : **Sep 2012 Display@Minexpo**
Proto type
Hitachi AC Drive, 3rd Generation Hitachi Drive System

● EX8000 BH type

◆ EX8000-6
Line-up of BH front : **2012 end**

● Electric Shovels

◆ Line-up of EX-6 Electric Models
EX2600~8000-6E: **2012 Full Line-up**
EX1900-6E: **2013 end**

● (RFT) Trolley Trucks

◆ EH3500ACII Trolley: Started Operation
Mar 2012

Line-up of Hitachi AC Drive Trucks

EH3500ACII (190t) Aug.'08 on Sale	EH4000ACII (240t) Nov.'10 on Sale	EH5000AC-3 (290t) Jun'12 EXW
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Evolution to AC-3 Models

Line-up of Electric Shovels

	FY'12	FY'13
EX1900-6E		▲
EX2600-6E	EXW▲	
EX3600-6E	On Sale	
EX5600-6E	▲	
EX8000-6E	▲	

EH3500ACII Trolley Truck
started operation in FQM, Zambia

*First Hitachi Trolley Truck
24 units ordered



New Products / New Technology

■ Mining Trucks

- Trolley Assist
- New Hitachi Drive Control System

■ SkyAngle (viewing monitor)

■ Autonomous Trucks

■ Remote Control ~ Autonomous Excavators

TROLLEY ASSIST PROGRAM

First EH3500ACII trolley truck started test-run in March 2012 in Zambia, and released in July 2012



SkyAngle (viewing monitor) ①

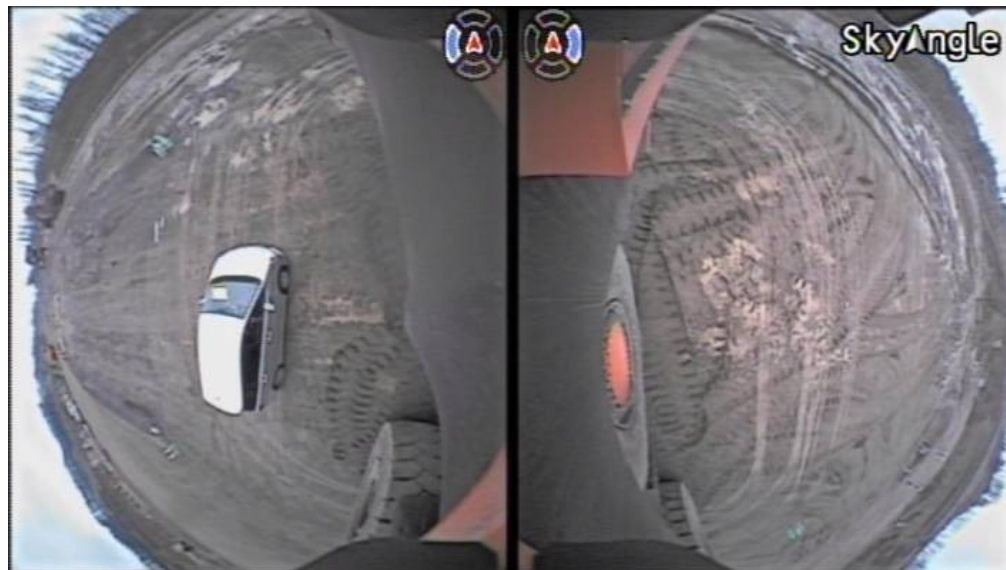
HITACHI

Reliable solutions

- Jointly developed by HCM & Clarion Co. Ltd. in Hitachi group
- Monitoring system to support and enhance operator safety checks surrounding machinery
- Released in October 2012 on dump trucks as an optional, and plans to release on ultra large hydraulic excavators on 2013



4 x Camera Mounting Positions



SkyAngle (viewing monitor) ②

HITACHI

Reliable solutions



Camera Monitor

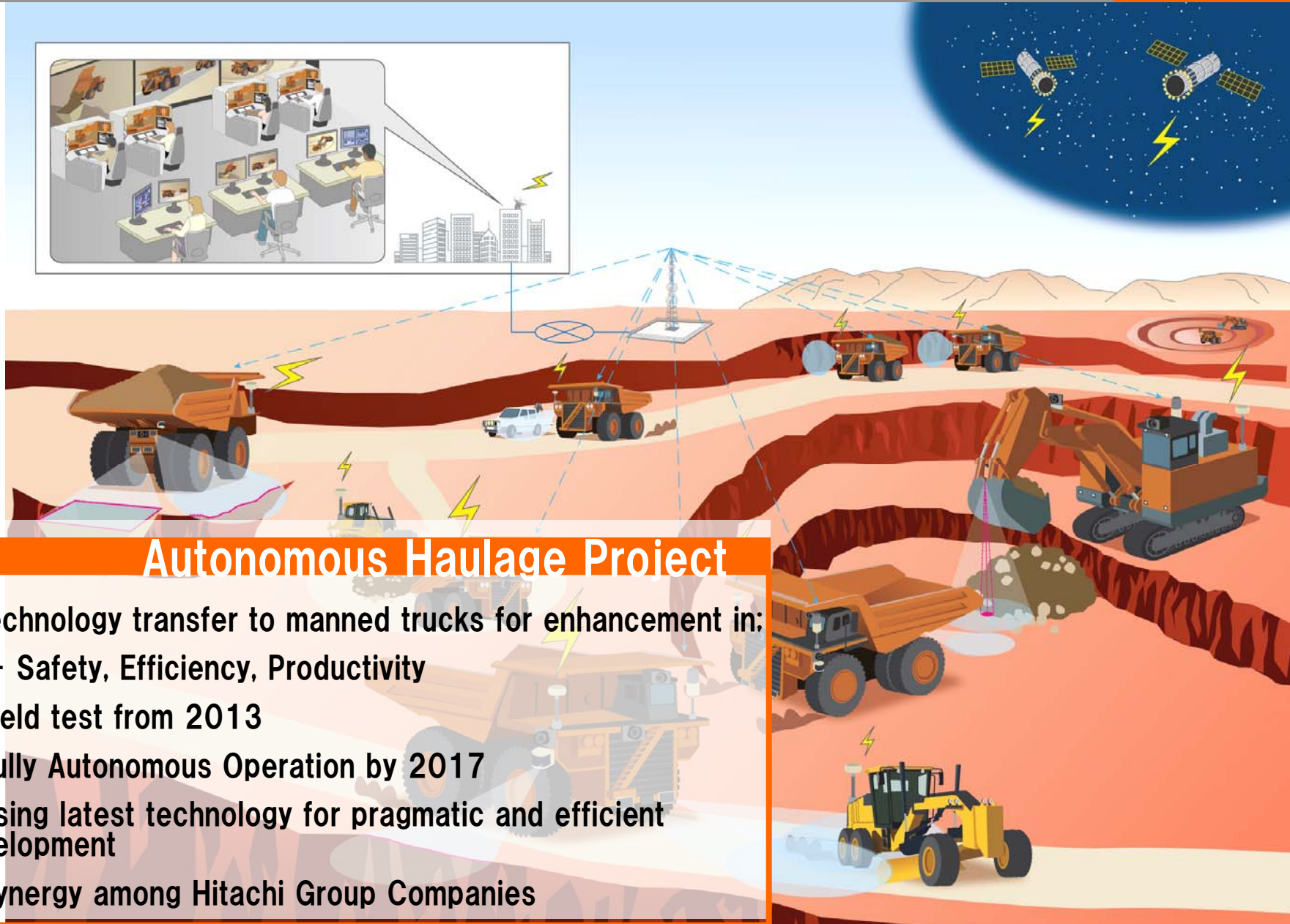


Five viewing angles on Neutral or Forward, and **Four viewing angles** on Reverse are selectable by the Screen Changeover Switch.



Screen Changeover Switch.





Autonomous Haulage Project

- ◆ Technology transfer to manned trucks for enhancement in:
 - Safety, Efficiency, Productivity
- ◆ Field test from 2013
- ◆ Fully Autonomous Operation by 2017
- ◆ Using latest technology for pragmatic and efficient development
- ◆ Synergy among Hitachi Group Companies

The End

Hitachi Construction Machinery Co., Ltd.
Mining Operations Group

