



MGC's Investment in Brunei Methanol Project

February 28, 2008

Mitsubishi Gas Chemical Co., Inc.

Mitsubishi Gas Chemical Co., Inc. and Consolidated Subsidiaries

- Established : 1971
 - Employees : 4,561
 - Paid-in capital : US\$ 356 million
 - Net Sales : US\$ 4,088 million
 - Net Income : US\$ 339 million
- 1US\$=118.05JPY**
(as of March 31,2007)



MGC's Business Segments

Natural Gas Chemicals Division

- Commodity chemicals
- Organic chemicals
- Energy Resources
- Others

Methanol, Ammonia, Formaldehyde
Amines, Polyols, MMA
Exploration & Development for Gas & Oil, Geothermy
Biochemical, Technology Sales

Aromatic Chemicals Division

- Commodity Aromatic Chemicals
- Speciality Aromatic Chemicals

Paraxylene, PTA, Phthalic anhydride,
Orthoxylene, Plasticizers
MXDA, MX nylon, Aromatic aldehydes, Aromatic
polycarboxylic acid

Specialty Chemicals Division

- Inorganic Chemicals
- Engineering Plastics

Hydrogen peroxide, Sodium hydrosulfide,
Hydrazine hydrate, Persulfates
Polycarbonate, POM, m-PPE, Reny

Information & Advanced Materials Division

- Electronic Materials
- Info-Advanced Materials
- Oxygen Absorbers

BT Resin and Epoxy copper clad laminates
Magnetic garnet single crystal
AGELESS, Anaeropac, RP systems

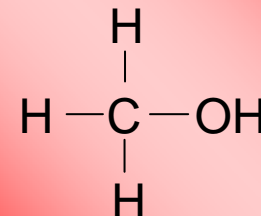
Methanol Business for MGC

- **Methanol is one of MGC's core business**
- **MGC is**
 - **One of the prominent methanol technology licensors.**
(MGC, Johnson Matthey, Lurgi, Haldor Topsoe)
 - **One of the leading synthetic catalyst suppliers.**
(MGC, Johnson Matthey, Sued-Chemie, Haldor Topsoe)
 - **One of the major methanol marketers.**
(MGC, Methanex, SABIC Marketing, Methanol Holding Trinidad, National Petrochemical Company)
 - **One of the major methanol tanker operators.**
(Kokuka Sangyo(MGC Group), Mitsui OSK Lines, Ino Lines, NYK Line)

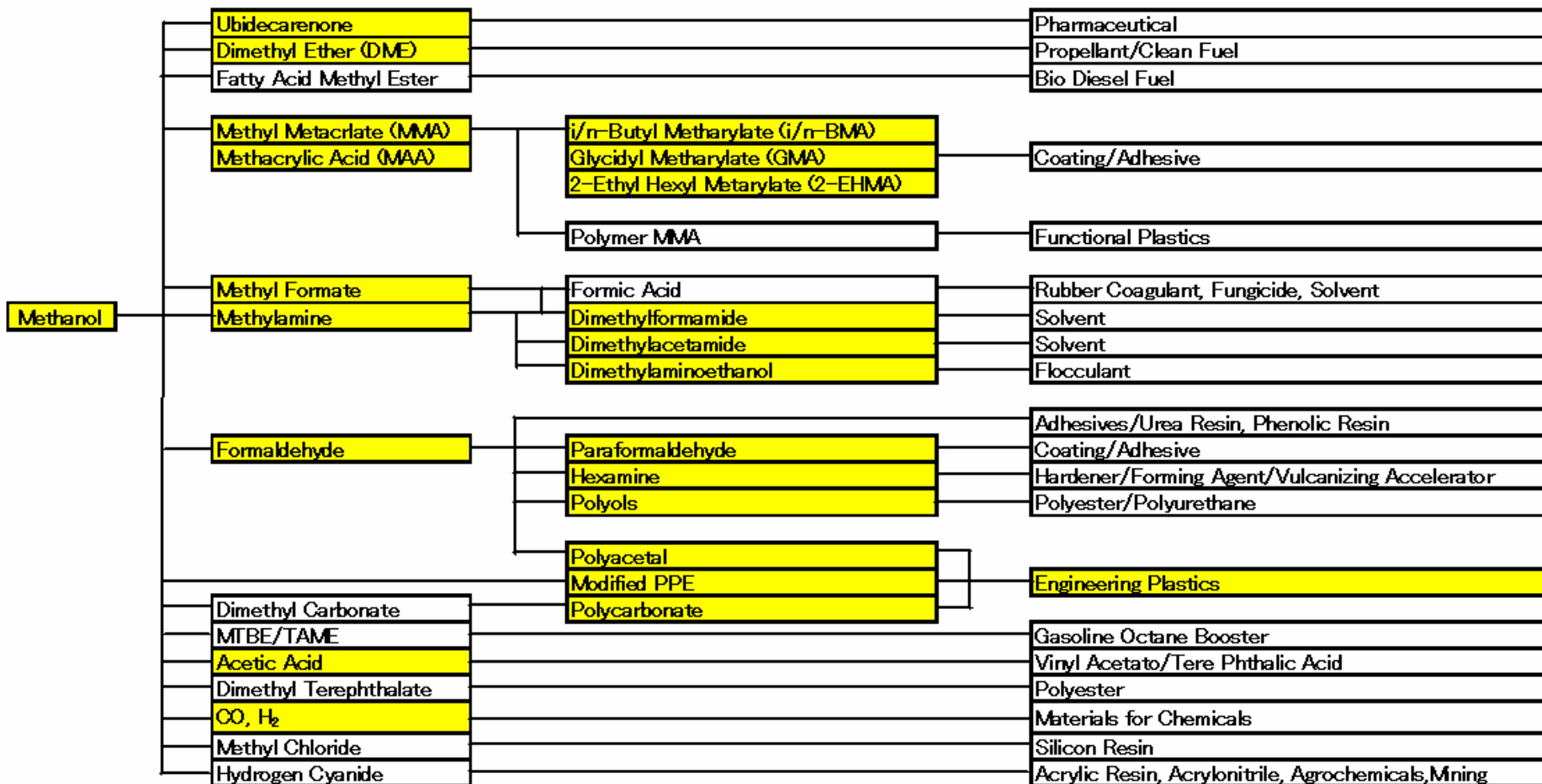
What is Methanol ?

- **Chemical Structure : CH₃OH**
- **Clear Liquid Chemicals**
- **One of the Essential Commodity Chemicals**
- **Wide Variety of Derivative Chemicals**
- **Global Demand per year(2007) : 38mil MT/Y**
- **Market Growth Rate : 3-4%**
- **Produced mainly from Natural Gas**

Methanol



Product Flow of Methanol



***MGC's Product

Major Usage of Methanol

Estimated methanol demand

• **Formaldehyde**

14 mil MT/Y

• **Acetic Acid**

4 mil MT/Y

• **MTBE/TAME**

6 mil MT/Y

• **Methyl Methacrylate (MMA)**

1 mil MT/Y

(As of 2007)

MGC's Methanol History

- 1952: **First company in Japan to synthesize Methanol from Natural Gas**
- 1969: **Started 200,000MT/Y methanol plant in Niigata, Japan**
- 1975: **Started 300,000MT/Y methanol plant in Niigata, Japan**
- 1983: **Started 700,000MT/Y methanol plant in Saudi Arabia (Ar-Razi I)**
- 1991: **Started 700,000MT/Y methanol plant in Saudi Arabia (Ar-Razi II)**
- 1994: **Started 750,000MT/Y methanol plant in Venezuela (METOR I)**
- 1997: **Started 850,000MT/Y methanol plant in Saudi Arabia (Ar-Razi III)**
- 1999: **Started 850,000MT/Y methanol plant in Saudi Arabia (Ar-Razi IV)**
- 2001: **Licensed 850,000MT/Y methanol plant technology to Equatorial Guinea**
- 2008: **Will start 1,700,000MT/Y methanol plant in Saudi Arabia (Ar-Razi V)**
- 2010: **Will start 850,000MT/Y methanol plant in Venezuela (METOR II)**
- 2010: **Will start 850,000MT/Y methanol plant in Brunei**

MGC's Methanol JV Company

<u>Location</u>	<u>Capacity</u>	<u>Start</u>	<u>Remarks</u>
Saudi Arabia			J/V between SABIC & Japan Consortium led by MGC
	700,000 MT/Y	1983	AR-RAZI I
	700,000 MT/Y	1991	AR-RAZI II
	850,000 MT/Y	1997	AR-RAZI III
	850,000 MT/Y	1999	AR-RAZI IV
	1,700,000 MT/Y	2008 2Q	AR-RAZI V (Under Construction)
Total	4,800,000 MT/Y		
Venezuela			J/V with Pequiven & Mitsubishi Corporation
	750,000 MT/Y	1994	Metor I
	850,000 MT/Y	2010 1Q	Metor II (Under Construction)
Total	1,580,000 MT/Y		
Brunei			J/V with PB Petrochemical Co.& ITOCHU
Darussalam	850,000MT/Y	2010 2Q	(Under Construction)
Total Capacity	7,230,000MT/Y in 2010		

AR-RAZI No.1 Plant (1983)



AR-RAZI No.2 Plant (1991)



AR-RAZI No.3 Plant (1997)



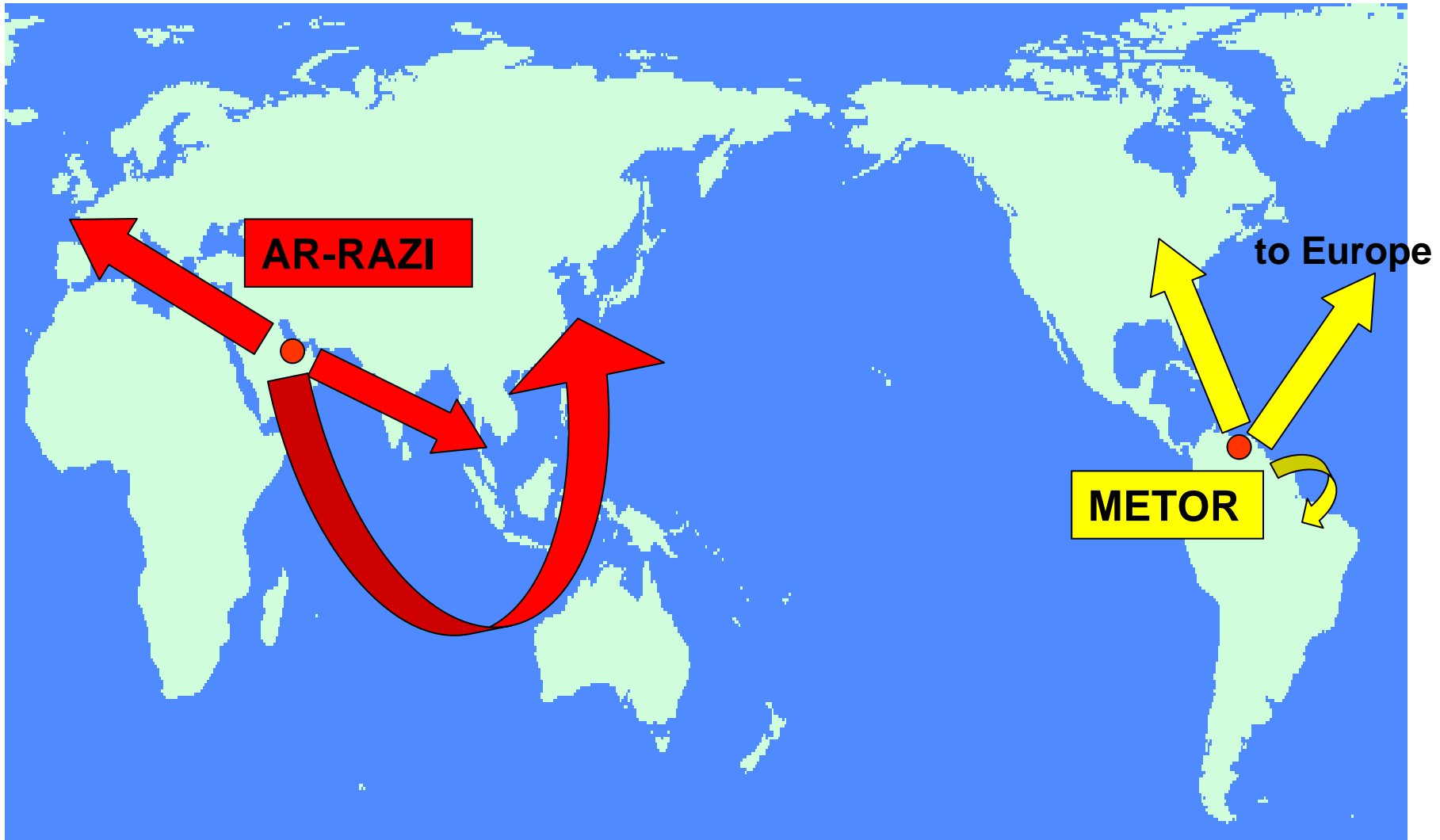
AR-RAZI No.4 Plant (1999)



METOR Plant (1994)



Marketing & Logistics Networks of Ar-Razi & METOR



Target Market of Brunei Methanol Project



Brunei Darussalam is located in the center of Asia

Why Brunei Invites Foreign Investors ?

- Effective Utilization of Natural Resources
- Diversification of Industries & Development of Downstream Industries in Brunei Darussalam
- Development of Local Business Enterprises
- Employment Opportunities for Local Bruneians
- Development of Special Skills & Experience for Bruneians

Why MGC decided to invest in Brunei ?

- Abundant Natural Gas Resources
- Competitive Gas Price
- Accessibility to the Growing Asian Market & Western Part of North America
- Stable Political Condition & Economy
- Well-Educated People
- Tax Holiday for Pioneer Companies
- Industrial Park Preparations by Brunei Government
- English as common language

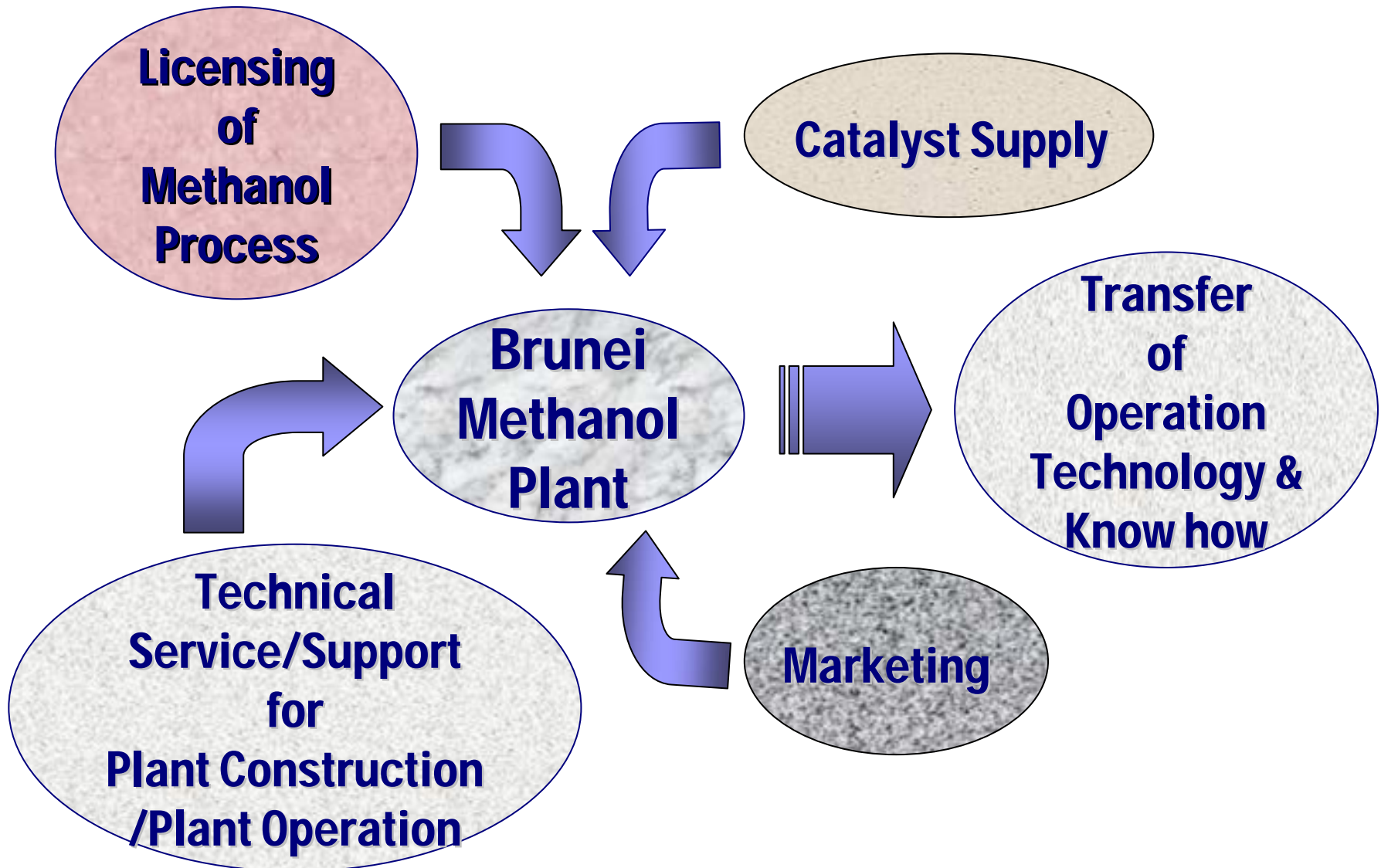
Brunei Methanol Project History

- 1994 : First contact with Brunei government
- 2004. 8 : Methanol Project was selected as one of the Brunei's Natural Gas Downstream Projects
- 2005.11: Concluded Joint Venture Agreement
- 2006. 2 : Concluded Cooperation Agreement
- 2006. 3 : Established Joint Venture Company, Brunei Methanol Company Sdn. Bhd. (BMC)
- 2007. 3 : Concluded EPC Contract with Mitsubishi Heavy Industries, Ltd.
*Construction on the stand-alone basis, separate from other Downstream Projects
- 2007. 4 : Concluded Agreements such as Gas Sales Agreement, Land Lease Agreement, License Agreement, Technical Service Agreement, & Marketing Agreement
- 2007. 5 : Concluded Finance Agreement with Japan Bank for International Corporation (JBIC) and Commercial Banks
- 2008. 2 : Now under Plant Construction
- 2009.12: Plant Mechanical Completion
- 2010. 4: Will start Commercial Operation

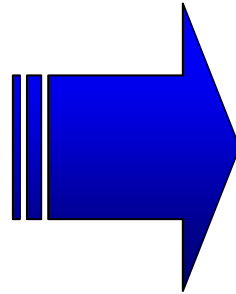
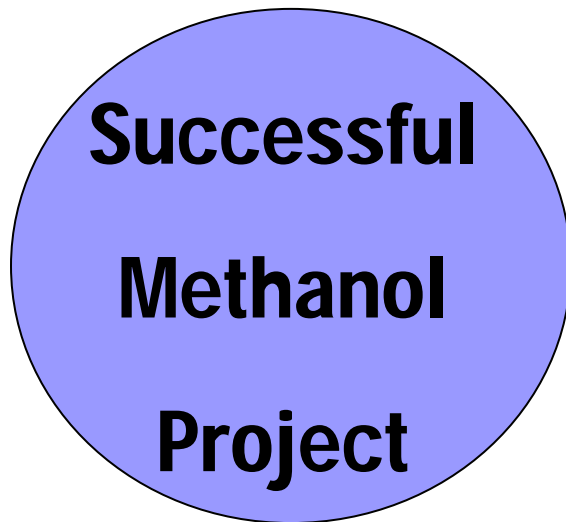
Brunei Methanol Project's Outline

- Shareholder : Mitsubishi Gas Chemical Co., Inc. 50%
PB Petrochemical Company Sdn. Bhd. 25%
ITOCHU Corporation 25%
- Project Site : Sungai Liang Industrial Park
- Total Investment : 550 mil USD
- Financing Bank : Japan Bank for International Corporation (JBIC)
The Bank of Tokyo-Mitsubishi UFJ, Ltd.,
Mizuho Corporate Bank, Ltd.,
Sumitomo Mitsui Banking Corporation
Standard Chartered Bank
- EPC Contractor : Mitsubishi Heavy Industries, Ltd. (MHI)
- Capacity : 850,000MT/Y (2,500MT/D)
- Process : Mitsubishi Methanol Process developed by MGC & MHI
- Commercial Operation : April, 2010

MGC's Role in Methanol Project



Contribution to Brunei Darussalam



- Employment Opportunity**
- Transfer of Technology**
- Small & Medium Enterprises**
- Spin-off Industries**
- Community Development**

Support by Brunei Darussalam

- Smooth Legal Approval & Consent for the Project
- Industrial Site Preparations
- Utilities (Water & Electricity) Supply Services
- Shipping Facility Arrangements
- Long-term Stable Supply of Natural Resources
- Tax Holiday for Pioneer Companies

Notes to Foreign Investors

- Consorting with Brunei Governmental Policies
- Harmonization with Brunei Local Communities & Culture
- Preservations of Brunei Nature & Environment
- Utilization of Brunei Local Enterprises
- Employment of Brunei Nationals
- Conformity with Health, Safety and Environmental Standards
- Win-win Business Relationship with Brunei Local Enterprises

Collaboration with Brunei Darussalam

Realization of Methanol Project & Brunei's Industrialization

Collaboration

BRUNEI DARUSSALAM

- Natural gas resources
- Industrial Site Preparations
 - Utilities supply
 - Preferential taxation
- Well-educated nationals


And so on...

MGC & ITOCHU

- Proven technology
- Marketing capability
- Reliable project management & operation
- Technology transfer

And so on...

Thank you for your attention.

 Mitsubishi Gas Chemical Co., Inc.