

# **Mitsubishi Chemical Holdings Group**

## **Investors Meeting**

**December 9, 2008**

The forward-looking statements are based largely on information available as of the date hereof, and are subject to risks and uncertainties which may be beyond company control. Actual results could differ largely, due to numerous factors, including but not limited to the following: Group companies execute businesses in many different fields, such as petrochemicals, carbon and inorganic products, information and electronics, pharmaceuticals, polymers and processed products, and these business results are subjected to influences of world demands, exchange rates, price and procurement volume of crude oil and naphtha, trend of market price, speed in technology innovation, National Health Insurance price revision, product liabilities, lawsuits, laws and regulations.

## **In Attendance on Company Side:**

1. Mitsubishi Chemical Holdings Corporation  
Yoshimitsu Kobayashi  
Representative Director, Member of the Board, President  
  
Atsushi Baba  
Member of the Board, Managing Executive Officer  
  
Shotaro Yoshimura  
Member of the Board, Managing Executive Officer
2. Mitsubishi Chemical Corporation  
Shigeru Tsuyuki  
Managing Executive Officer,  
Chief Operation Officer, Performance Products Division  
  
Masanori Karatsu  
Executive Officer,  
Chief Operation Officer, Carbon Division

## **The following is a presentation delivered by President Kobayashi**

Good afternoon, ladies and gentlemen. Thank you very much for taking the time out of your busy schedules to be with us today.

Around six months has passed since we announced our mid-term management plan *APTSIS 10* (FY2008 to FY2010) on May 13, and conditions have changed drastically, however, we have not altered our basic strategy or numerical targets. I would like to focus on how we see our future prospects and explain about the current status of *APTSIS 10*.

Since the Health Care Segment is performing well, this time I would prefer to touch mainly on those areas that have diverged from our plan. Additionally, from among those businesses we have prioritized as the seven next-generation growth businesses, I will elaborate on white LED and lithium-ion battery materials. Finally, we will take the opportunity to review the carbon business, which has hitherto received limited focus but has produced excellent results.

### **Slide 5: Shifting Business Environment**

The concept behind *APTSIS 10* is the threefold strategy of “growing, innovating and leaping ahead.” “Growing” means organic growth, and we will invest in existing businesses to expand earnings. “Innovating” refers to our plans to create new businesses in the areas of the

seven next-generation growth businesses. While the means for “leaping ahead” will focus on alliances and mergers and acquisitions, this will include new businesses.

Looking at the timeline, we have set a vision of becoming a global company based on chemistry that enjoys a greater trust from society in terms of “sustainability,” “health” and “comfort” by 2025, and produced a schedule that applies to what we should be in 2015, as well as what needs to be focused on in the next three years to that end and numerical targets such as achieving operating profits of 190 billion yen.

As I mentioned before, only six months has passed since we formulated our mid-term management plan based on the assumption shown on this slide. However, as you are aware we are experiencing drastic changes and I believe we are at a turning point.

### **Slide 6: Business Portfolio – Current Status**

This slide reviews our business portfolio. Even our existing growth businesses that we identified six months ago are facing severe business conditions. Such businesses are high performance polyester films, electronics device components, C4 chemicals, polypropylene, and polycarbonate & bisphenol-A. On the other hand, pharmaceuticals, recording media, food ingredients and performance polymers are on target.

Today, I will focus mainly on the status of the petrochemicals business, white LED, lithium-ion battery materials and carbon business

### **Slide 7: General Business Environment for Petrochemicals**

In recognition of the overall business environment, the automobile and IT industries are undergoing dramatic changes and experiencing a sharp drop in demand. After a slight time lag, the chemical industry has begun to exhibit an appreciable effect since around

October-November. While our initial plan assumed a global economic growth rate of around 4.4%, the current expected growth rate is at 2.8% or lower. Although the presence of Middle Eastern players in Asia was in our original plan with assumption of that their presence will increase from 2009 onwards, we need to reconsider reduction in ethylene plant operating rates as a result of the sharp decline in demand. In particular, we need to reconsider how to proceed in such an environment under which we are forced to make comparable reductions in operating rates for C2 derivatives.

**Slide 8: Global Ethylene Supply/Demand Balance**

While we expected ethylene plant operating rates in the high 80s in assumptions made around May this year, this figure may be difficult to maintain given recent conditions.

**Slide 9: Measures for C2 Derivatives**

After reviewing *APTS/S 10* measures under the drastically changing environment, we concluded that we need to accelerate the following measures. To go over this briefly, we will consider the following: (1) raising profitability by approximately 10 billion yen with measures including withdrawal from weak C2 businesses, (2) measures in the polyethylene business focused on consolidating production facilities, (3) streamlining utilities by approximately 10 billion yen through reductions and optimization, and (4) a reduction of approximately 200 billion yen through reduced inventories, share transfers and business withdrawals as an asset lean strategy. The selling of shares in Techno Polymer Co., Ltd. to JSR Corporation (ABS resin producer), or our withdrawal from the  $\alpha$ -olefin business, can be cited as recent examples of this asset lean strategy.

**Slide 10: Restructuring of Petrochemical Complexes**

This slide shows the timeline for the restructuring of petrochemical complexes. The blue text at the top of the table shows the main measures undertaken over a two year period from 2006. Some positive news are merging with Advanced Plastics Compounds Company in April 2008 and making Japan Polyethylene Corporation a consolidated subsidiary. On the other hand, measures such as closure or dissolution of linear alkyl benzene, acrylonitrile, melamine, acrylic acid, acrylic ester, polystyrene, polyvinyl chloride and styrene monomer have been taken.

In a recent example was our decision to shut down production of  $\alpha$ -olefin, higher alcohol and ethoxylate, with plans for a complete shutdown in FY2009. In the ABS resin business, we will sell shares and make a withdrawal from the business. From here on, reviewing and deciding on the shutdown of other C2 businesses will be an issue to tackle in the short term.

As a somewhat larger structural transformation, while last week saw the announcement of a large-scale merger in the petroleum and refining industry, we intend to move forward in pursuing ideas for the restructuring of petrochemical complexes based on ethylene cracker.

**Slide 11: Building a Competitive Business Structure**

I would like to give a detailed explanation of our business expansion efforts that focus on competitive derivatives, including information on locations. We are studying the possibilities of consolidating production facilities to rebuild petrochemical complexes through partnerships etc. The Kashima Complex will be rebuilt into an olefin aroma center focusing mainly on high performance polypropylene and polyethylene, ethylene oxide and bisphenol-A. For the Mizushima Complex, it will be rebuild so as to specialize in competitive derivatives such as high performance polypropylene,

polyethylene and oxo products. For the Yokkaichi Plant, no significant changes are planned from its production of 1,4-BG, polyethylene terephthalate, compounds and films. For overseas facilities, we plan to specialize in comparatively advantageous businesses, and see ourselves at the stage of considering alliances with the most promising companies in each region in the C4 chemicals, polycarbonate, polypropylene and polypropylene compound businesses.

Another development is accelerated research and development into raw material conversion aimed at reducing dependence on naphtha. We are considering advancing a number of technologies that eliminate the need for naphtha to the stage of actual use in plants, including raw material conversion that produces benzene and propylene from coke oven gas, the production of butadiene from butene through a newly developed process using an oxidized dehydrogenation catalyst, converting basic cost structures, enhancing the operating base for 1,4-BG and polytetramethylene ether glycol (PTMG), and by completing bench-scale testing for research and development of 1-Hexene, which is the copolymer raw material for polyethylene.

#### **Slide 12: Future Measures for Individual Businesses**

With respect to measures at individual businesses, I would like to address the C4 chemicals, polycarbonate & bisphenol-A, and terephthalic acid businesses which are causing concern.

#### **Slide 13: C4 Chemicals**

- Increasing and maintaining market exposure in the expanding Asian market -

Prospects have become clear with an approximately 200 ton-per-year pilot plant that turns the butene produced from naphtha cracker and petroleum refining into butadiene through a "butene to butadiene" process. Reducing the cost of butadiene, whose price currently

fluctuates wildly, will create an enhanced operating base for the 1,4-BG and PTMG businesses. In addition, we intend to contribute to the supply of raw materials for green sustainable plastic, or *GS Pla* (a copolyester derived from succinic acid and 1,4-BG), whose demand is expected to grow.

#### **Slide 14: Polycarbonate and Bisphenol-A**

- Business expansion targeting the high performance market in China -

The No. 2 polycarbonate production facility (KP2) at the Kurosaki Plant was almost completed in April 2008, and until November any further action was suspended. In fact the operational launch will be frozen until 2010 and approximately 50,000 tons of diphenyl carbonate will be then supplied to the joint venture commencing in the second quarter of 2010 with SINOPEC in China. Moreover, we have decided to procure 150,000 tons of bisphenol-A from SINOPEC, to be combined with 60,000 tons of melt process polycarbonate to operate the Kurosaki KP2 plant.

#### **Slide 15: Terephthalic Acid**

- Thorough cost reduction and alliances -

In the terephthalic acid business, we are considering strategic alliances with regionally-based companies in India, China, Indonesia and elsewhere. Additionally, streamlining and variable cost reduction efforts are proceeding to improve cost competitiveness and meet the pressing need of securing profit with a 150 dollar-per-ton spread. Studies are currently underway on the future of unprofitable production facilities that are under review.

As a major change, we are considering establishment of a global headquarters overseas in a complete and dynamic fashion, including procurement, sales and technology for paraxylene and terephthalic acid.

**Slide 16: CAPEX and Investment & Loan**

While the present situation does not call for changes to major *APTSIS 10* strategies, through prioritization, CAPEX and investment & loan will be reduced by 160 billion yen (FY 2008-2010), from 590 billion yen to 430 billion yen. While the breakdown of reductions includes no changes to Health Care domain, reductions will be made to a part of Performance Products domain, petrochemical businesses in Chemicals domain (70 billion yen of which is investment in safety measures and rationalization, with 30 billion yen as new investment) and other areas including low urgency infrastructure investment in Corporate.

Meanwhile, though R&D expenses will be largely maintained, we intend to prioritize projects in terms of importance and allocate resources to the likes of white LED and the lithium-ion battery materials for HEVs.

We plan to actively pursue mergers and acquisitions, without being restrained by the target allocation of 250 billion yen.

**Slide 17: Prioritization of the seven next-generation growth businesses**

In the seven next-generation growth businesses, we plan to prioritize the two areas of white LED and lithium-ion battery materials for HEVs in terms of time and management resources.

**Slide 18: White LED**

The size of the white LED market is expected to grow to around one trillion yen in the year 2010. Mitsubishi Chemical Corporation retains technologies related to gallium nitride substrates, phosphors and sealants as well as chip and, ultimately looking towards the production of white LED lights. Furthermore, in addition to their application in the white LED market, gallium nitride substrates also hold great promise for other areas, including short-wave laser diodes such as those used in

Blu-ray devices, switching devices for automobiles and power semiconductor devices.

**Slide 19: White LED Project Business Expansion**

For the market for LED lamp, lighting equipment and back light for LCD, we will deliver gallium nitride substrates, phosphors, chips, white LED, and even white LED lamp for both in-house manufacturing and external sales. Furthermore, gallium nitride substrate has a promising expectation to substitute automotive transistor.

**Slide 20: Update on the Gallium Nitride Substrate Business (Vapor deposition method)**

Yield rates for 2-inch c-plane substrates produced through the vapor deposition method were improved enough to commence full-scale sales, making Mitsubishi Chemical Corporation the second to launch in the market. In addition, the ongoing joint development project with Professor Nakamura of the University of California, Santa Barbara has resulted in the successful development of m-plane non-polar and semi-polar crystal planes. These extremely high-efficiency substrates are now undergoing careful examination on the way to mass production next year.

**Slide 21: Update on the Gallium Nitride Substrate Business (Liquid phase growth method)**

Our research in the liquid phase growth method targets production of gallium nitride at an even lower cost than the next generation vapor deposition method. Currently we have two crystal formation projects running simultaneously. One is with Professor Nakamura and the other is using our proprietary G-CHEM process. Both of which confirms to have similar luminescence of those produced through the vapor deposition method. In the future, liquid phase growth method technology will enable ultra low cost and large diameter production.

If we are successful in m-plane substrates for mass production, we believe it will be a driver to expand the next -generation transistor market.

**Slide 22: Update on the White LED Phosphor Business**

Moves such as those to use phosphors in LED lighting and in LED backlights for LCD televisions are highly promising. We enjoy a world wide share in the market for red phosphors, and is steadily improving its market share in green phosphors.

On the organizational side, Kasei Optonix, Ltd. will be merged with Mitsubishi Chemical Corporation in April 2009 and incorporate its business to accelerate expansion through integration of sales, production and R&D.

**Slide 23: Sales Plan for White LED**

While sales currently stand at between two and three billion yen, we consider this as a promising future business.

**The following is a presentation delivered by Masanori Karatsu, Chief Operation Officer, Carbon Division**

While the carbon business is primarily made up of the core blast furnace coke business, existing growth business in graphite, as well as applications in coke oven gas looking forward, I would also like to take this opportunity to explain about the history of the carbon business.

**Slide 26: Carbon Business and its Product Chain**

When Mitsubishi Kasei Corporation—the predecessor to Mitsubishi Chemical Corporation—was founded in Kurosaki, it began operations in the three businesses of coke, fertilizer and dyes. Coke operations began from 1938 and have been maintained as the basis of the

business for 70 years. Carbon covers an extremely wide range of substances from diamonds to nanotubes and fullerene.

The current operated blast furnace coke plants in Sakaide and Kakogawa produce a total of 6.4 million tons, equivalent to 15% of domestic market share. 9.3 million tons of raw materials are imported primarily from Australia. The 1.3 billion cubic meters of coke oven gas produced is supplied as fuel for power generator to Shikoku Electric Power Company by the Sakaide plant and to Kobe Steel, Ltd. by the Kakogawa plant, with an electric-generating capacity of 350,000 kilowatts. In addition, the Sakaide plant produces needle coke and carbon fiber from purified coal tar pitch. Creosote oil from the coal tar is also taken to Yokkaichi and Kurosaki to produce carbon black used in ink and tires.

Among these operations, needle coke and carbon fiber are positioned as existing growth businesses in *APTSIS 10*.

**Slide 27: Carbon Division Domestic Bases**

Domestic steel works are spread out from Muroran in the north to as far south as Kyushu. Starting with a coke oven plant in Kurosaki in 1938, Mitsubishi Chemical Corporation expanded to Amagasaki in 1956 and Onahama in 1959. It also built large-scale coke oven plants in Kakogawa in 1968 and in Sakaide in 1969. At present, operations in Kurosaki, Onahama and Amagasaki have been shut down with production continuing only at Kakogawa and Sakaide, and supplying coke to Yahata, Kokura, Kure, Kakogawa and Kobe, which are steel works in the Pan-Seto Inland Sea.

**Slide 28: Performance in the Carbon Business**

I would like to look back on the long-term trend in the history of the carbon business. Until recent years, the price of coal did not move from a range of \$40 to \$50. Meanwhile, the performance in the carbon business has

undergone significant change. Until 1990, iron and steel enjoyed a period of extended demand as well as high profitability. In the decade that followed, decisions were made to shut down operations at the Kurosaki, Onahama and Amagasaki plants. More recently, Japan's domestic production of crude steel posted a low of 98 million tons in 1997, and has exceeded 100 million tons since 2002, recording 120 million tons last year. While production looks set to break 120 million tons in 2008 as well, extremely harsh conditions in the second half of FY2008 have made the future uncertain. At times when crude steel production is expanding coal prices soar, and prices in 2008 rose steeply to \$300. Our business also makes significant gains from this process of rising coal prices, and sales for FY2008 are expected to exceed 300 billion yen. However, from the second half of the fiscal year onwards, into 2009 and 2010, considering how to proceed poses great difficulty.

**Slide 29: Sakaide Plant**

The Sakaide Plant takes up 1.75 million square meters of land and plans to expand operations mainly in blast furnace coke, coal tar distillation and needle coke.

**Slide 30: World Crude Steel Production**

Under conditions where world crude steel production has flattened out at 200 million tons in Europe, 120 million tons in Japan and just short of 100 million tons in the US, China has greatly expanded its production output. However, in October 2008 the Chinese government revised its forecast downward to 480 million tons from its initial forecast of 540 million tons made at the start of 2008. Even in the face of an imminent decline in demand, we can understand that crude steel production has been kept at an extremely high level due to China's growing demand.

**Slide 31: Coke Prices**

While crude steel production is also growing, China also produces an immense volume of coke, and exports its surplus volume to Europe and the US. As a result, our export coke prices are also affected by China's coke exports. While current coke prices are falling after reaching a high of almost \$800, we expect that it can ensure profits in FY2008 due to contracts already concluded at prices between \$400 and \$500.

**Slide 32: The Carbon Business and APTSIS 10**

We have a long history dealing with blast furnace coke, which forms the pillar of its carbon business, and has built relationships of trust with domestic and overseas steel manufacturers. The utilization of coke oven gas (COG) and coal tar – which are produced as a by-product of coke – is key to maintaining and expanding the coke business. While COG is currently used as a fuel, from the viewpoint of substituting the use of naphtha, we are proceeding with the transition of COG to benzene/methanol, and COG to propylene. In addition, we are also looking into utilizing carbon dioxide gas as chemical feedstock.

With respect to coal tar, we currently use coal tar as feedstock in the production of needle coke and high performance graphite. While 400 million tons of the 1.5 billion tons of worldwide crude steel production are produced in electric furnaces, electrodes for electric furnaces are in short supply, and a response to boost capacity is needed. In addition, since the demand for carbon fiber has also risen, we intend to continue to boost pitch purification capacity by 25% under APTSIS 10.

**Slides 33 and 34: High Performance Graphite, Needle Coke Applications**

High performance graphite is used in a variety of applications as artificial graphite. Needle coke (artificial

graphite) features heat resistance up to 3,000°C; resistance to acid, alkali and chemicals; electrical conductivity; and lubricant. Expanded demand is expected in a variety of applications, including electrodes for electric furnaces, motor brushes, semiconductor crucibles, nuclear reactor cores, pantographs and sealing materials in gas plants.

**Slide 35: High Performance Graphite – Capacity Increase**

With respect to the 25% capacity increase for high performance graphite, augmentations to coal tar distillation and pitch refining facilities will be completed in August 2009. In addition, facilities for delayed coking and calcinations are advancing towards their scheduled completion in August 2010. This is designed to boost our market share in fields such as needle coke and special carbon by 10%. Capacity increases of 10,000 tons for pitch base carbon fiber are now under way.

**Slide 36: The Fusion of Carbon Chemistry and Petrochemicals**

The composition of COG is 58% hydrogen and 28% methane. Though we have pursued research into the prospect of using the hydrogen as a form of clean energy for fuel cells, we have currently halted this practice due to the extreme difficulty in transporting the hydrogen. For methane, a pilot plant that converts methane into benzene was constructed in Sakaide and began operating from August 2008. Provided we are able to progress to methanol, dimethyl ether and propylene, we will have fulfilled our vision of substituting the need for naphtha.

**Slide 37: Coordination with Petrochemicals**

While there is a pilot plant in Sakaide for benzene and methanol, in Mizushima we hope to construct a pilot plant to verify the DME-to-propylene manufacturing

process.

**Slide 38: Coke Oven Hot-Renewal**

The question of whether the coke oven at the Sakaide Plant is still safe after being used for 40 years comes up often. Distortion and deterioration has developed in the brick section of the coke oven (the red-colored portion visible in the cross-section). Hot renewal of the brick sections from 2008 to 2012 is underway, and if the renewal process is repeated, the coke oven will be usable on a semi-permanent basis.

**Slide 39: Summary**

The point of the measures taken at plants is hot-renewal. We are proceeding with environmental measures, and intend to maintain and expand the carbon business by enhancing the added value of COG and coal tar.

**The following is a presentation delivered by Shigeru Tsuyuki, Chief Operation Officer, Performance Products Division**

**Slide 41: Lithium-ion (Li-ion) Battery Materials Business**

The Li-ion battery materials business is a priority next-generation growth business in the Designed Materials Segment.

**Slide 43: What is a Li-ion Battery?**

A Li-ion battery whose average voltage is three times that of a nickel-cadmium battery and a nickel-hydrate battery has a high energy density, making an ideal battery for reduced size and weight. The battery applies the principles that charge the battery when the lithium ions move from the cathode to the anode, and discharge it when the lithium ions move from the anode to the cathode.



**Slide 43: Structure of Li-ion Battery Materials**

The materials making up the battery are the cathodes as the positive electrode, and anodes as the negative electrode, with a separator of electrolyte solution set between both electrodes. With cylindrical cells, the structure is formed in strips.

**Slide 44: Applications for Li-ion Batteries**

Applications are classified into those needing high density for high capacity such as those used in consumer PCs, mobile phones and digital cameras, and those requiring low density and high power, such as those used in power tools and HEVs (hybrid electric vehicles).

**Slide 45: The Li-ion Battery Market**

The consumer market for compact Li-ion batteries, with the exception of the bursting of the IT bubble in 2001, has continued to grow steadily since 1995, and is now worth approximately 300 billion yen per year. Though feelings of uncertainty about the future have recently emerged, no manufacturers have made announcements concerning the postponement of plans for increased production that were announced in FY2008.

**Slide 46: Estimated Market for Li-ion Battery-Powered Cars**

We expect that the market for HEVs with Li-ion batteries will be launched in 2010, with their popularization from around 2015. While the auto industry is also facing bleak conditions in the short term, we expect each auto maker to accelerate their development of electric vehicles, primarily HEVs, in order to cultivate the new market, and we are also positioning its development to coincide with these moves.

**Slide 47: Estimated Market for Li-ion Battery Materials**

With consumers as its main emphasis, the market for Li-ion battery materials is currently worth 200 billion yen. The market for consumer Li-ion battery materials is experiencing favorable growth. While, the market for HEV battery materials expected to grow to five billion yen by 2010, a rise to 100 billion yen as it gets fully underway in 2015 and jump to 650 billion yen in 2020. The overall market will have doubled by 2015 and grown to five times the size by 2020. While our most recent sales of 10 billion yen give it a 5% market share, we plan to reach sales of 50 billion yen by 2015 to secure a market share of 12.5%.

**Slide 48: Our Business Activity**

We are working on producing the three materials electrolytes, anodes and cathodes. The industrial manufacture of electrolytes is carried out at the Yokkaichi Plant and in Suzhou Province of China, and has secured a market share of approximately 25%, which ranks second in the industry. Anodes are produced at Sakaide, and have secured a market share of around 10-15%. Cathodes are produced at a pilot plant in Sakaide with full-scale production planned at Mizushima, with a current market share of less than 5%. Mitsubishi Plastics, Inc. has succeeded in the development of a polyolefin series material for separators, and full-scale production is scheduled to commence from next year at its Nagahama Plant.

**Slide 49: Product Features in the Battery Materials Business**

In electrolytes, we will make use of its proprietary organic synthesis and battery evaluation technologies to meet the needs of customers through the development of high-performance additives. For anodes, we will develop customizable materials to accommodate

customers' high-power and high-capacity needs through carbon technologies which allow control of particle size, form and specific surface area. Our cathodes are well suited to high-power applications found mainly in automobiles due to their high levels of ion diffusion, and feature a low cobalt content while rich in nickel and manganese. For separators, film manufacturing technology of Mitsubishi Plastics, Inc. is applied to produce a solvent free micro porous structure with superior qualities including high power at low temperature, resulting in high cost-competitiveness.

**Slide 50: Competitive Edge in the Battery Materials Business**

In the battery materials business, a synergy of production development in the Mitsubishi Chemical Holdings Group (MCHC Group) is made possible by going beyond mere manufacturing and utilizing product design, battery performance evaluation technologies and our sales channels for the four materials.

**Slide 51: Capital Expenditures for the Battery Materials Business Planned during APTSIS 10**

With respect to capital expenditure planned during *APTSIS 10*, under the general framework for FY2008, 4.2 billion yen of capital expenditure will be planned on the basis of expected demand for HEVs in 2010. For electrolytes, a capacity increase of 2,500 tons will be implemented at the Yokkaichi Plant to develop production capabilities totaling of 8,500 tons. For anodes, a capacity increase of 2,000 tons will be implemented at the Sakaide Plant to develop production capabilities totaling 5,000 tons. With respect to cathodes, the launch of a mass-production plant at Mizushima with a capacity of 600 tons is planned. For separators, facilities with production capabilities of 12 million square meters will be developed at the Nagahama Plant of Mitsubishi Plastics, Inc. around July 2009.

**Slide 52: Safety Analysis**

Safety will be required when allowing for the growth in HEV batteries. We have established simulation technologies incorporating analysis and testing techniques, conduct safety analyses in conjunction with auto makers and battery makers, and is fully committed to the development of safer materials.

**Slide 53: R&D**

As a battery material manufacturer, Mitsubishi Chemical Corporation is characterized by its vast number of patent applications and research papers, and takes pride its extremely advanced technical capabilities.

**Slides 54 and 55: Business Model**

By not focusing on battery performance alone, and by proposing safety improvements from the perspective of material development, we seek to provide our customers with total solutions that optimize the four battery materials it produces.

**Slide 56: Summary**

As a diversified chemicals manufacturer, only the MCHC Group possesses the four technologies for electrolytes, anodes, cathodes, and separators as well as battery analysis technologies, making it a total solution provider of battery materials.

We are aiming for sales of around 50 billion yen and an operating margin of over 10% in 2015.