~ Realization of a high-profit specialty chemical company with a global presence ~

Medium-Term Management Plan
GS-STEP (FY2015-FY2017)

December 24, 2014

KURARAY CO., LTD.
INDEX

I. Review of Previous Medium-Term Management Plan GS-III (FY2012-FY2014)

II. Overview of New Medium-Term Management Plan GS-STEP (FY2015-FY2017)

III. Objectives of GS-STEP
1. Expansion of core business regions and domains

Four-point global rollout of the vinyl acetate derivatives business:

**Acquisitions and construction of production bases**

- Invested in PVA production capacity expansion in Europe and in new PVA plant in North America
- Invested in EVAL production capacity expansion in North America
- Invested in optical-use PVA film production capacity expansion in Japan
- Invested in PVB film production capacity expansion in Europe
- Acquired MonoSol, LLC and invested in water-soluble PVA film production capacity expansion
- Acquired glass laminating solutions/vinyls business (GLS) of DuPont (Production bases: United States, Europe, Asia)
1. Primary Objectives & Measures

1. Expansion of core business regions and domains

Global expansion of isoprene business
- Started feasibility studies for construction of new overseas plants for isoprene and GENESTAR

Expansion of business fields
- Expanded the dental materials business through integration of Noritake Dental Supply Co., Ltd.

2. Creation and expansion of new business

- Launched new grade of GENESTAR for LED reflectors
- Made progress in customer evaluations of new liquid farnesene rubber (LFR)
- Invested in production capacity expansion of VECSTAR liquid crystalline polymer film for high-speed printed circuit boards
- Invested in new plant for BIOCARBOTRON anode material for lithium-ion batteries
- Invested in Vitriflex, Inc., which develops ultra-barrier films
I. Review of Previous Medium-Term Management Plan GS-III

2. Performance Trend

Net Sales (Billion of yen)

<table>
<thead>
<tr>
<th>Year</th>
<th>FY2011</th>
<th>FY2012</th>
<th>FY2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLS sales</td>
<td>369.0</td>
<td>369.4</td>
<td>413.5</td>
</tr>
<tr>
<td>GS-III</td>
<td>54.7</td>
<td>49.2</td>
<td>49.5</td>
</tr>
</tbody>
</table>

Op.Income (Billion of yen)

<table>
<thead>
<tr>
<th>Year</th>
<th>FY2014 forecast (4/14-3/15)</th>
<th>GS-III FY2014 target</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLS sales</td>
<td>515.0</td>
<td>85.0</td>
</tr>
<tr>
<td>GS-III</td>
<td>57.0</td>
<td>54.0</td>
</tr>
</tbody>
</table>

OP margin (%)

- FY2011: 14.8%
- FY2012: 13.3%
- FY2013: 12.0%
- FY2014: 10.5%
Basic Policies of GS-STEP

Corporate Culture: “Contributing to the world and individual well-being through actions that others are unable to produce”

Goal: A high-profit specialty chemical company with a global presence

1. Bring GS-III measures to fruition to achieve high profits
2. Steadily build a management foundation for future business expansion
3. A medium-term management plan focused on achieving our long-term vision

GS-STEP

Growth Strategy with
Synergy, Technology, Eco-friendliness and Profitability
Main Management Strategies of GS-STEP (1)

**Growth Strategy**

- **Synergy**
  - Deepening of core businesses
  - Optimum allocation of management resources

- **Technology**
  - Technological innovation
  - Next-generation growth model

- **Eco-friendliness**
  - Contribution to the environment

**Profitability**
# Main Management Strategies of GS-STEP (2)

## Deepening of core businesses
- Vinyl acetate: Produce results from effects of M&A and other investment
- Isoprene: Lay the groundwork for further growth

## Technological innovation
- Establish new products/applications/processes
- Create new businesses

## Next-generation growth model
- Secure new business domains through alliances/M&A
- Establish an innovative business model

## Optimum allocation of management resources
- Allocate management resources optimally around the world
- Proactively use overseas personnel

## Contribution to the environment
- Expand range of products that contribute to the global environment
- Provide products using processes that reduce environmental load
### Performance Targets

<table>
<thead>
<tr>
<th></th>
<th>FY2014 Forecast</th>
<th>FY2017 Plan (GS-STEP)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(Adjusted April 2014- March 2015 period)</td>
<td></td>
</tr>
<tr>
<td><strong>Net sales</strong></td>
<td>515.0 billion yen</td>
<td>650.0 billion yen</td>
</tr>
<tr>
<td><strong>Op. income</strong></td>
<td>54.0 billion yen</td>
<td>90.0 billion yen</td>
</tr>
<tr>
<td><em>(OP margin)</em></td>
<td>10.5%</td>
<td>13.8%</td>
</tr>
<tr>
<td><strong>Net income</strong></td>
<td>31.0 billion yen</td>
<td>57.0 billion yen</td>
</tr>
</tbody>
</table>

[Ref.] Exchange rate 108 yen/US$ 120 yen/US$
II. Overview of New Medium-Term Management Plan GS-STEP

Cash flow
- Secure 220 billion yen in cash flow over three years

Capital expenditures
- Decision basis: 200 billion yen planned over three years
  (incl. about 60% for new construction/expansion)
- Payment basis: 170 billion yen scheduled over three years

Shareholder returns
- Total payout ratio: 35% or higher (FY2015-FY2017)
- Annual dividends: 36 yen per share or higher
- Retirement of treasury stock: 20 million shares or more
## Sales and Operating Income by Business Segment

(Billions of yen)

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Vinyl Acetate</td>
<td>265.0</td>
<td>49.5</td>
<td>330.0</td>
</tr>
<tr>
<td>Isoprene</td>
<td>61.0</td>
<td>6.5</td>
<td>73.0</td>
</tr>
<tr>
<td>Functional Materials</td>
<td>58.0</td>
<td>2.0</td>
<td>65.0</td>
</tr>
<tr>
<td>Fibers and Textiles</td>
<td>48.0</td>
<td>3.0</td>
<td>56.0</td>
</tr>
<tr>
<td>Trading</td>
<td>113.0</td>
<td>3.5</td>
<td>130.0</td>
</tr>
<tr>
<td>Other Business</td>
<td>65.0</td>
<td>3.0</td>
<td>92.0</td>
</tr>
<tr>
<td>Adjustment</td>
<td>(95.0)</td>
<td>(13.5)</td>
<td>(96.0)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>515.0</strong></td>
<td><strong>54.0</strong></td>
<td><strong>650.0</strong></td>
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</tbody>
</table>
Main Business Strategies by Segment: Vinyl Acetate

**PVA resin, PVB film**
- Rapidly generate synergy with GLS
- Expand sales of PVA resin in Europe and the U.S.
- Increase profitability by raising the proportion of high-value-added products

**PVA film**
- Expand optical-use PVA film to meet growing demand for LCD panels
- Add value to optical-use PVA film
- Develop new applications and expand geographic coverage for water-soluble PVA film

**EVAL**
- Accelerate opening of markets in emerging countries and development of new applications
- Develop next-generation barrier materials
Main Business Strategies by Segment: **Isoprene**

**Isoprene chemicals**
- Shift to high-value-added products
- Give serious consideration to new plants in order to expand the business

**Elastomers**
- Increase profitability by developing high-value-added products and new products
- Global rollout of applications for tires
- Increase adoption of liquid farnesene rubber (LFR)

**GENESTAR**
- Expand the market by developing new brands
- Expand automotive applications in the U.S. and European markets
Main Business Strategies by Segment: **Functional Materials**

**Methacrylic resin**
- Develop new fields and new applications using original materials and technologies
- Shift to functional products
- Reduce costs

**Medical**
- Promote substitutes for metals by enhancing the lineup of organic and inorganic materials through integration
- Expand the market by maximizing use of CAD/CAM

**CLARINO**
- Establish a business foundation for TIRRENINA

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### Net Sales (Billions of yen)

<table>
<thead>
<tr>
<th></th>
<th>FY2014 Forecast</th>
<th>FY2017 Plan</th>
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<tbody>
<tr>
<td></td>
<td>58.0</td>
<td>65.0</td>
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### Operating Income (Billions of yen)

<table>
<thead>
<tr>
<th></th>
<th>FY2014 Forecast</th>
<th>FY2017 Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.0</td>
<td>6.5</td>
</tr>
</tbody>
</table>
Main Business Strategies by Segment: **Fibers and Textiles**

**Fibers and industrial materials, living goods and materials**

- Improve profitability by optimizing brand mix and reducing costs
- Implement new production processes *KURALON VIP, VECTRAN*
- Pioneer new applications
New Business

**VECSTAR**
- Roll out business in line with market/technological trends
- Make liquid crystalline polymer film the de facto standard
- Increase production capacity by constructing new plant

**BIOCARBOTRON** anode material for lithium-ion batteries
- Accelerate development for electric vehicle applications
- Promote market development using a 1,000 ton/year plant
- Add facilities to deal with increasing adoption

**Aqua business**
- Expand wastewater treatment business in industrial, water supply and medical fields by developing high-performance membrane modules
- Promote sales of gel and equipment for processing food residue (raw garbage)
### GLS Performance Targets

<table>
<thead>
<tr>
<th></th>
<th>GS-III</th>
<th>GS-STEP</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>FY2014 Forecast (June-December)</td>
<td>FY2015 Plan (January-December)</td>
</tr>
<tr>
<td>Net sales</td>
<td>35.0 billion yen</td>
<td>63.0 billion yen</td>
</tr>
<tr>
<td>Business income</td>
<td>1.3 billion yen</td>
<td>4.0 billion yen</td>
</tr>
<tr>
<td>+ Synergy</td>
<td>0.0 billion yen</td>
<td>1.0 billion yen</td>
</tr>
<tr>
<td>- Amortization of goodwill, etc.</td>
<td>(4.3 billion yen)</td>
<td>(3.5 billion yen)</td>
</tr>
<tr>
<td>Op. income (loss)</td>
<td>(3.0 billion yen)</td>
<td>1.5 billion yen</td>
</tr>
</tbody>
</table>

- **Amortization of goodwill, etc., after finalization**
  Annual goodwill amortization expense: 2.3 billion yen (FY2016-FY2020)

- **Synergy target** 10.0 billion yen (around 2020)
GLS Synergy

- Increase ratio of raw materials produced internally
  Effective utilization of vinyl acetate + 350,000 tons

- Expand products and markets
  Expand North American production bases for PVA resin, PVB resin and PVB film
  Expand PVB film production bases in the U.S. and Europe
  Expand sales of PVB film for automotive applications
  Accelerate development of water-soluble PVA film tracing back to PVA resin

- Optimize production

- Optimize sales and technical services, technical know-how, raw material procurement, distribution, etc.
Expansion of Overseas Business: Breakdown of Increase in Net Sales by Region

FY2013 Net Sales: 413.5 billion yen
Overseas ratio: 55%

FY2017 Net Sales: 650.0 billion yen
Overseas ratio: 68%

Japan: 186.5 billion yen
Asia: 146.0 billion yen
Europe: 144.0 billion yen
North America: 140.0 billion yen
ROW: 208.0 billion yen

Note: FY2013 is used as the point of comparison to include the effect of integration of the glass laminating solutions business.
Achieve High Profits

III. Objectives of GS-STEP

Enhance competitiveness

- Increase high-value-added products
- Develop new brands and optimize brand mix
- Improve product quality and drastically reduce costs
- Supply chain management

Increase the operating profit margin

FY2017 target: 13.8%
FY2014 forecast: 10.5%
(April 2014-March 2015)

Increase net earnings per share

FY2017 target: 163 yen
FY2014 forecast: 89 yen
(April 2014-March 2015)
III. Objectives of GS-STEP

Change in the Operating Profit Margin by Segment

- **Vinyl Acetate**
  - FY2017 plan: 23%

- **Isoprene**
  - FY2014 forecast (4/14-3/15): 11%
  - FY2017 plan: 14%

- **Functional Materials**
  - FY2017 plan: 10%

- **Fibers and Textiles**
  - FY2017 plan: 7%

- **Trading**
  - FY2017 plan: 4%

- **Other Business**
  - FY2014 forecast (4/14-3/15): 5%
  - FY2017 plan: 5%

- **Companywide**
  - FY2014 forecast (4/14-3/15): 10%
  - FY2017 plan: 14%
Main Capital Expenditures

Decision basis: 200 billion yen over three years

| Vinyl Acetate | • Increase vinyl acetate production capacity in North America  
|              | • Optical-use PVA film at Saijo Plant  
|              | • Expand facilities for PVB film in North America, Europe and Asia  
|              | • Expand facilities for water-soluble PVA film  
|              | • Increase production capacity for EVAL in North America and Europe  
| Isoprene     | • Build new isoprene chemical plant  
|             | • Expand facilities for SEPTON in North America  
| Functional Materials | • Increase production of original methacrylic resin at Niigata Plant  
| New Business | • Expand facilities for VECSTAR at Saijo Plant  
|             | • Expand facilities for BIOCARBOTRON anode material for lithium-ion batteries |
Current Medium-Term Environmental Plan

Main targets

- **Measures against global warming**
  Net sales/GHG (global greenhouse gas) emissions: 40% improvement

- **Emissions of chemical substances**
  Net sales/chemical substance emissions: 100% improvement

- **Efficient use of resources**
  Net sales/waste materials produced: 10% improvement

The targets of the current Medium-Term Environmental Plan were set in FY2010. Due to the integration of GLS business, environmental changes and other factors, we will revise the targets and implement them during the period covered by GS-STEP.
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