Progress in Medium- to Long-term Strategy and Future Initiatives

June 1, 2023

Kazuo Tadanobu
President & CEO,
Panasonic Energy Co., Ltd.

* Yarushika
A symbol representing our goal of creating a society that maintains harmony and balance between the pursuit of happiness and a sustainable environment.

Notes:
1. This is an English translation of the original presentation in Japanese.
2. In this presentation, “Fiscal 2024” or “FY3/24” refers to the fiscal year ending March 31, 2024.
Agenda

1. Progress in Medium- to Long-term Strategy
2. Future Initiatives
1-1. Medium- to Long-term Strategy

- Implement “two-pillar management” driven by in-vehicle business and industrial & consumer business, as well as “ESG management” to achieve sustainable growth
- Target of over ¥3 trillion in sales and an EBITDA ratio of 20% in FY3/31

**Two-pillar Management**

**In-vehicle Sales growth driver**
- Deploy proven cylindrical battery platforms
- Commercialize next-generation products

**Industrial & Consumer Profitability driver**
- Maximize value proposition with battery-applied systems
- Develop supply systems

**ESG Management**
- Reduce CO₂ emissions and address resource issues
- Promote human capital management / human rights DD (*3)

*1: Inflation Reduction Act

*2: Carbon footprint *3: Due diligence
### 1-2. FY3/23 Overview

- **Steady progress in growth investments in both in-vehicle and industrial & consumer businesses**
- Initial production plan in Kansas changed from 4680 to 2170, but **no change in enhanced production capacity** and **4680 will be mass-produced with higher energy density**

#### Growth Initiatives [Progress]

<table>
<thead>
<tr>
<th>In-vehicle Business</th>
</tr>
</thead>
<tbody>
<tr>
<td>Started construction of a new factory in Kansas, USA</td>
</tr>
<tr>
<td>Signed sales agreements with Lucid and Hexagon Purus</td>
</tr>
<tr>
<td>Start of mass-production of 4680 in Wakayama, Japan was reviewed to include new technology (From 2H FY2024 to 1H FY2025)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Industrial/Consumer Business</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth investment: <strong>High-capacity cells for infrastructures (Tokushima, Japan), lithium primary batteries (Wuxi, China), etc.</strong></td>
</tr>
</tbody>
</table>

#### Competitiveness

<table>
<thead>
<tr>
<th>In-vehicle Business</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achievement: better productivity and reduced production losses in Nevada (+10% vs. initial target)</td>
</tr>
<tr>
<td>Challenge: unable to counteract raw material price hikes by price pass-through and streamlining</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Industrial/Consumer Business</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achievement: expanded applications by improving modularization and systemization rates</td>
</tr>
<tr>
<td>Challenge: unable to counter the speed of market deterioration</td>
</tr>
</tbody>
</table>
1-3. FY24 / Medium-term Management Targets

- Increase sales and profit in FY3/24 and maintain medium-term management targets

**FY 3/24**

**Adjusted Operating Profit: Year-on-year Analysis**
(excluding IRA impact)

- Year-on-year +15.4 Billion

<table>
<thead>
<tr>
<th>FY3/23 Result</th>
<th>FY3/24</th>
<th>FY3/25 Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>¥39.6 Billion</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Medium-term (-FY3/25)**
(Excluding IRA impact)

- **Operating profit (FY3/25)**
  - ¥87 billion (+¥20 billion vs. FY3/22)
  - 9%

- **EBITDA (FY3/25)**
  - ¥150 billion (+¥30 billion vs. FY3/22)
  - 16%

- **Cumulative operating CF (FY3/23-3/25)**
  - ¥330 billion

- **ROIC (FY3/25)**
  - 12%

*Excluding new investment in Kansas and others

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*1: Exchange rate for FY3/24 business plan: USD 1 = JPY 130
*2: Including growth investments
Agenda

1. Progress in Medium- to Long-term Strategy
2. Future Initiatives
2-1. In-vehicle Business – Medium- to Long-term Strategy

- Strengthen competitiveness and supply chain to reach 200 GWh production capacity
- Next production site in North America to be determined during FY3/24

Sales and EBITDA Ratio

<table>
<thead>
<tr>
<th>Sales (¥ trillion)</th>
<th>EBITDA ratio (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY3/23</td>
<td>9%</td>
</tr>
<tr>
<td>FY3/26</td>
<td></td>
</tr>
<tr>
<td>FY3/31</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Strategy Framework and Major Initiatives

- "North America" & "Cylindrical cells" are the key to respond to the rapidly growing market
  - Global production capacity to be boosted to 200 GWh in FY3/31

**Major Initiatives**

- **Competitiveness**
  - Higher battery capacity
  - Higher productivity and investment efficiency
  - Improve development efficiency and boost resources

- **Supply Chain Enhancement**
  - Procurement localization in North America
  - Recycled materials / CFP reduction

- **Boosting Production Capacity**
  - New site location in North America to be determined by the end of FY3/24
2-2. In-vehicle Business – Boosting Competitiveness 
(Technology/Manufacturing)

- Lead the LIB industry with high-capacity technology as a pioneer in battery development
- Further enhance manufacturing at the new Kansas factory by utilizing our production experience in North America

**Boosting Energy Density**

Development of energy density for Panasonic Energy's LIB

- More than 3 times vs. 1st generation
- 1,000 Wh/L
- 800 Wh/L

<table>
<thead>
<tr>
<th>Year</th>
<th>Volumetric energy density (Wh/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>800</td>
</tr>
<tr>
<td>2025</td>
<td>800</td>
</tr>
<tr>
<td>2030</td>
<td>1,000</td>
</tr>
</tbody>
</table>

**Boosting Productivity/More Effective Investments**

- Continued improvement of production capacity
  - Production volume: +5%
  - Transition to next-generation battery cells

- Improving human productivity
  - Workforce per GWh: -20% (vs. Nevada Factory)

- Reducing capital investment amount
  - -10% per GWh (vs. Nevada Factory)

- Establish next-generation cells
  - Cell energy density: +5% vs. previous products
  - New materials: higher capacity & longer life

- Adopt higher-capacity technology for the Wakayama model
  - Apply advanced technologies of 2170 to 4680

- Pursue further advancements at the new factory

**Nevada Factory**

- Continued improvement of production capacity
  - Production volume: +5%

**Kansas Factory**

- Improvement of production capacity
  - Production volume: +5%

- Transition to next-generation battery cells

- Improving human productivity
  - Workforce per GWh: -20% (vs. Nevada Factory)

- Reducing capital investment amount
  - -10% per GWh (vs. Nevada Factory)

- Establish next-generation cells
  - Cell energy density: +5% vs. previous products
  - New materials: higher capacity & longer life

- Adopt higher-capacity technology for the Wakayama model
  - Apply advanced technologies of 2170 to 4680

- Pursue further advancements at the new factory

**Production Capacity (GWh)**

- FY3/26 +10%
2-3. In-vehicle Business – Boosting Competitiveness
(Enhancing development efficiency and boosting resources)

- Accelerate development of next-generation cells and manufacturing technology by consolidating and enhancing bases for R&D / technology development

**Kadoma – New facility (planned for 2025)**
- Concentrate functions of **cell technology development** in one location
- Create a one-stop base covering **from development of next-generation materials/processes to new products**

**Suminoe – New building (planned for 2024)**
- Concentrate **production equipment / process development functions** in one location
- Establish a central development base providing support from **next-generation manufacturing development to productivity improvement of existing equipment**

**Personnel will be increased by 1,000 people in Japan by FY3/26 (vs. FY3/23)**
as part of our efforts to enhance core human resources in technology and manufacturing
2-4. In-vehicle Business – Supply Chain Enhancement

- Build a supply chain that supports capacity expansion in terms of **quantity and quality** (environmental performance)
- Scheduled to secure procurement volumes for future production in Kansas (up to FY3/26)

**Production boosting plan and procurement structure**

- **200 GWh**
  - Developing new supply Partners
  - Approx. 50 GWh

**Secure material volumes**

- Local procurement in North America
  - Signed MOU w/ NMG(Canada)
    - NMG: Nouveau Monde Graphite Inc.
    - MOU: Memorandum Of Understanding
  - Nickel, lithium, graphite

- Strategic offtake agreements
  - Nickel, lithium, graphite

- Recycled materials
  - Collaborating with Redwood Materials(U.S.)

- Low-CFP materials
  - Mining and processing with renewable energy

**Lower environmental impact**

- **Carbon Footprint Reduction**
  - Local procurement / recycled materials
    - FY3/22: 86%
    - FY3/31: 50%
  - Carbon neutrality etc.
    - FY3/22: 14%

* Per cell capacity of in-vehicle LIB produced at US factories
2-5. Industrial & Consumer Business – Medium- to Long-term Strategy

- Focus on social and lifestyle infrastructure expected to grow over the medium to long term
- Expand advanced system business based on reliability that meets safety standards (UL9540A)

Sales and EBITDA Ratio

<table>
<thead>
<tr>
<th>Year</th>
<th>Sales</th>
<th>EBITDA ratio</th>
<th>EBITDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY3/23</td>
<td>¥0.31 trillion</td>
<td>14%</td>
<td>¥0.6 trillion</td>
</tr>
<tr>
<td>FY3/26</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FY3/31</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Medium- and Long-term Strategies and Progress

<table>
<thead>
<tr>
<th>Strategy Description</th>
<th>Progress Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ Data Centers ]</td>
<td>- Received orders for next-generation products from major customers</td>
</tr>
<tr>
<td>- Long-term reliability and power saving for equipment</td>
<td>- Introduced new power-saving type products</td>
</tr>
<tr>
<td>- Module integration to differentiate from competitors</td>
<td></td>
</tr>
<tr>
<td>[ Residential Energy Storage ]</td>
<td>- Mass producing new energy storage systems</td>
</tr>
<tr>
<td>- Fewer duplicated functions and enhanced safety by unit integration for more competitiveness</td>
<td>Japan: Mass production to start in June 2023</td>
</tr>
<tr>
<td></td>
<td>U.S.: Scheduled to be introduced in 2H FY3/24</td>
</tr>
<tr>
<td>[ Construction machinery, motorcycles, etc. (electrification) ]</td>
<td>- Started demonstration tests with modules equipped with new technology</td>
</tr>
<tr>
<td>- Solution co-creation with industry-leading customers</td>
<td></td>
</tr>
</tbody>
</table>

Growing area

New area

IRA 25D Eligible
2-6. ESG – Environmental Contributions

- Contributing to 60 million tons of CO₂ avoided emissions as the core of Panasonic GREEN IMPACT
- Leading the LIB industry through environmental contributions toward a sustainable society

**CO₂ Avoided Emissions** (Contribution Impact)

Expanding contributions thanks to the adoption of EVs and other electrified mobility/machinery

- 1 million tons
- 59 million tons

<table>
<thead>
<tr>
<th>FY3/23</th>
<th>FY3/31</th>
</tr>
</thead>
</table>

Further reduction

**Achieving Carbon Neutrality** (Own Impact)

Aim to achieve domestically in FY3/26 and globally in FY3/29

- 10 out of 20 global sites have achieved as of May 2023
- Expand renewable energy utilization (PPA*), introduce hydrogen fuel cells
  *Power Purchase Agreement

- Exclusive solar power plant
- 10% of domestic electricity procured through renewable energy PPAs
- Operating in Wuxi, China
- Expanding to the domestic facilities

**Resource Circulation**

Accelerate initiatives in collaboration with partners

- Primary batteries
  - Shift away from disposability (shown right)
- Secondary batteries
  - Recycle cathode materials and copper foil (Redwood Materials)

**CO₂ emissions from vehicle travel**

<table>
<thead>
<tr>
<th>Gasoline car</th>
<th>EV</th>
</tr>
</thead>
<tbody>
<tr>
<td>249g/km</td>
<td>77g/km</td>
</tr>
</tbody>
</table>

**CO₂ avoided emissions** attributed to EV adoption

- 172g/km

(*1) Amount of CO₂ avoided emissions by BEVs equipped with our batteries (when driven 140,000 km over 10 years)

(*2) Panasonic Energy's calculations based on the figures on 2020 Tesla Impact report
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### Reference – Financial Figures (P/L, B/S, C/F)

#### P/L

<table>
<thead>
<tr>
<th>(yen: billions)</th>
<th>FY3/23</th>
<th>FY3/24 (Target)</th>
<th>FY3/25 (Target)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>971.8</td>
<td>1,030.0</td>
<td>—</td>
</tr>
<tr>
<td>In-vehicle</td>
<td>654.1</td>
<td>706.0</td>
<td>—</td>
</tr>
<tr>
<td>Industrial/Consumer</td>
<td>310.7</td>
<td>334.0</td>
<td>—</td>
</tr>
<tr>
<td>Adjusted operating profit</td>
<td>39.6</td>
<td>(135.0)</td>
<td>55.0</td>
</tr>
<tr>
<td>In-vehicle</td>
<td>10.7</td>
<td>(101.0)</td>
<td>21.0</td>
</tr>
<tr>
<td>Industrial/Consumer</td>
<td>28.5</td>
<td>30.0</td>
<td>—</td>
</tr>
<tr>
<td>Other income/loss</td>
<td>-6.4</td>
<td>-2.0</td>
<td>—</td>
</tr>
<tr>
<td>Operating profit</td>
<td>33.2</td>
<td>(133.0)</td>
<td>53.0</td>
</tr>
<tr>
<td>(OP % to sales)</td>
<td>3.4%</td>
<td>(12.9%)</td>
<td>5.1%</td>
</tr>
<tr>
<td>Depreciation (tangible)</td>
<td>*1 65.3</td>
<td>71.0</td>
<td>—</td>
</tr>
<tr>
<td>EBITDA</td>
<td>*1 98.5</td>
<td>(204.0)</td>
<td>124.0</td>
</tr>
<tr>
<td>(EBITDA % to sales)</td>
<td>10.1%</td>
<td>(19.8%)</td>
<td>12.0%</td>
</tr>
</tbody>
</table>

* Figures in parentheses include IRA impact

#### B/S

<table>
<thead>
<tr>
<th>(yen: billions)</th>
<th>FY3/23</th>
<th>FY3/24 (Target)</th>
<th>FY3/25 (Target)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash and cash equivalents</td>
<td>120.2</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Trade receivables</td>
<td>261.6</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Inventories</td>
<td>204.2</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Other current assets</td>
<td>33.7</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>Current assets</strong></td>
<td><strong>619.7</strong></td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Property, plant and equipment</td>
<td>181.5</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Right-of-use assets</td>
<td>6.9</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Goodwill and intangible assets</td>
<td>3.1</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Other non-current assets</td>
<td>10.6</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>Non-current assets</strong></td>
<td><strong>202.1</strong></td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td><strong>821.8</strong></td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Trade payables</td>
<td>204.1</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Debt (1)</td>
<td>129.7</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Lease liabilities (2)</td>
<td>7.0</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Other liabilities</td>
<td>106.9</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>Liabilities</strong></td>
<td><strong>447.7</strong></td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Equity (3)</td>
<td>374.1</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>Invested capital</strong> (1)+(2)+(3)</td>
<td>510.9</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>ROIC</strong></td>
<td>5.0%</td>
<td>*2 5.4%</td>
<td>6.5%</td>
</tr>
</tbody>
</table>

* Figures in parentheses include IRA impact

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*1) Additionally adjusted with the amount equivalent to depreciation corresponding to underlying assets that are applied with Lease accounting treatment as a lessor

*2) FY23 ROIC includes IRA impact by 17.9%