The Acquisition of ABB’s Power Grids Business

December 17, 2018

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Hitachi, Ltd.
1. Growth through Social Innovation Business

- Become a global leader through Social Innovation Business (OT × IT × Product)

**Adjusted Operating Income Ratio**

<table>
<thead>
<tr>
<th>Year</th>
<th>Operating Income Ratio</th>
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<tbody>
<tr>
<td>FY2012</td>
<td>4.7%*</td>
</tr>
<tr>
<td>FY2015</td>
<td>6.3%</td>
</tr>
<tr>
<td>FY2018</td>
<td>8.0% (Forecast)</td>
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</table>

- Resolving social issues and improving quality of life in the fields of ESG, SDGs and Society 5.0

**ESG**: Environment, Society, Governance

**OT**: Operational Technology

**IT**: Information Technology

**SDGs**: Sustainable Development Goals

**Resolving Social Issues**
- Urbanization, global warming, depletion of resources, low birth rate and aging population, aging social infrastructure, etc.

**Improving Quality of Life**
- Safe, secure, and comfortable life, health and longevity, working vigorously
2. Areas to Focus

- Acquire ABB’s power grids business to expand the energy solutions business globally as a core pillar of Social Innovation Business.
- Secure a global customer base and build an energy platform to realize the energy solutions business which Hitachi aims to expand.
### 3-1. What Hitachi Acquires

- Great opportunity to get the excellent assets of ABB’s power grids business

<table>
<thead>
<tr>
<th>Global Top Business*</th>
<th>Partnership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td>Nov. 2015 Hitachi ABB HVDC Technologies, Ltd. commenced operation</td>
</tr>
<tr>
<td><strong>10.0 B$</strong></td>
<td><strong>Manufacturing Sites (approx.) 100</strong></td>
</tr>
<tr>
<td>Operational EBITA</td>
<td><strong>Sales sites (approx.) 200</strong></td>
</tr>
<tr>
<td>(approx.)</td>
<td><strong>Employees (approx.) 36,000</strong></td>
</tr>
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</table>

- What Hitachi achieves with the excellent assets

  Expand and strengthen energy solutions business globally as a core pillar of Social Innovation Business

- How to realize
  - Leverage global customer base of ABB’s power grids business across Hitachi’s all business areas beyond the energy solutions business
  - Build an energy platform by combining global No.1 power grids business with Hitachi’s digital technology

*The revenues and EBITA are results for 2017. Other numbers are as of June 2018. Source: ABB EBITA: Earnings Before Interest, Taxes, and Amortization, HVDC: High-Voltage Direct Current Operational EBITA: a defined ABB term. See Note 23 in ABB’s FORM 20-F for full definition.

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3-2. Vision of Next-generation Energy Solutions

- Respond to the energy system decentralization and the change of business models with increased usage of renewable energy and electric vehicles.

Basic system

Cross-regional interconnection

Renewable energy connection

High voltage transmission system

Large-scale electric power system

Mega solar
Wind power

Improving “3E+S” through total optimization

Utilize the differences and characteristics of regions

Coordination

Local community

New Value


Life

Mobility

Industry

IT

Optimization of energy usage
4. Secure a Global Customer Base and Build an Energy Platform

Global Customer Base

- Power company (UK, Germany, France)
- T&D company (Germany, China)
- Gas company (UK, France, North America)
- Natural resources company (Netherland, UK, France)
- Mining company (Australia)
- Rail operator (Germany, UK)
- Train manufacturer (Germany, France, China)
- Machine manufacturer (North America)
- IT company (North America)

Energy Platform

Strong Products and Software

<table>
<thead>
<tr>
<th>Business</th>
<th>Market Share*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grid Automation</td>
<td>No.1</td>
</tr>
<tr>
<td>Grid Integration</td>
<td>No.2 (HVDC: No.1)</td>
</tr>
<tr>
<td>High Voltage Products</td>
<td>No.1</td>
</tr>
<tr>
<td>Transformers</td>
<td>No.1</td>
</tr>
</tbody>
</table>

- SCADA: Supervisory Control and Data Acquisition, GIS: Gas Insulated Switchgear
- Based on Hitachi’s analysis

LUMADA

- Methodology for Collaborative Creation (NEXPERIENCE, etc.)
- Domain expertise
  - Solutions
  - Customer cases (over 500)
- Platform products and technologies
5. Provide Next-generation Energy Solutions Leveraging Digital Technology

- Provide solutions leveraging acquired global customer base and energy platform

**Phase 1**
Expand energy solutions business by combining ABB’s power grids business with Hitachi’s digital technology (DSM, distributed power, etc.)

**Phase 2**
Expand digital solution leveraging ABB’s customer base

**ABB**
- Power grids
- Customer base

**HITACHI**
- Domain expertise
- Digital technology

DSM: Demand Side Management
### 6-1. Outline of the Acquisition (1)

| Acquired Business | • ABB’s power grids business  
<table>
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<tr>
<th></th>
<th>(Revenues: 10.0B$, Operational EBITA: 1.0B$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure</td>
<td>• Hitachi and ABB will set up a JV after ABB spins off its power grids business</td>
</tr>
</tbody>
</table>
|                   | • Ownership ratio: Hitachi 80.1%, ABB 19.9%  
|                   | (Hitachi is planning to make the JV a wholly-owned subsidiary 3 years after closing) |
| Valuation of Acquired Business | • 11.0B$  
|                   | (The amount of investment to the JV is estimated to be 6.4B$, which is the 80.1% of 8.0B$, the equity value of the acquired business) |
## 6-2. Outline of the Acquisition (2)

<table>
<thead>
<tr>
<th>Finance</th>
<th>Solvency</th>
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| • Acquisition funds will be prepared using cash on hand and borrowings | • Impact on the Consolidated Balance Sheet (estimate):  
  - Total Assets + JPY 1,900B  
  - Goodwill + JPY 590B  
  - Intangible Assets + JPY 510B  
  (Amortization expense: approx. JPY 30B per year) |

- Maintain debt-to-equity ratio less than 0.5 times and secure financial stability
- Increase profits quickly by generating cost synergy and top-line synergy through utilization of digital technology
### 6-3. Timeline

<table>
<thead>
<tr>
<th>Date and Period</th>
<th>Activities</th>
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<tbody>
<tr>
<td>December 17, 2018</td>
<td>• Signing definitive agreements</td>
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</table>
| From January, 2019 to the first half of 2020 (tentative) | • Spin off the power grids business from ABB  
| | • Obtain clearance relating to competition laws |
| The first half of 2020 (tentative) | • Set up the JV (closing) |
THE FUTURE IS OPEN TO SUGGESTIONS

Hitachi Social Innovation

Delivering new value to society through collaborative creation with our customers and partners
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- fluctuations in the price of raw materials including, without limitation, petroleum and other materials, such as copper, steel, aluminum, synthetic resins, rare metals and rare-earth minerals, or shortages of materials, parts and components;
- the possibility of cost fluctuations during the lifetime of, or cancellation of, long-term contracts for which Hitachi uses the percentage-of-completion method to recognize revenue from sales;
- credit conditions of Hitachi’s customers and suppliers;
- fluctuations in product demand and industry capacity;
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- uncertainty as to Hitachi’s ability to attract and retain skilled personnel;
- increased commoditization of and intensifying price competition for products;
- uncertainty as to Hitachi’s ability to achieve the anticipated benefits of its strategy to strengthen its Social Innovation Business;
- uncertainty as to the success of acquisitions of other companies, joint ventures and strategic alliances and the possibility of incurring related expenses;
- uncertainty as to the outcome of litigation, regulatory investigations and other legal proceedings of which the Company, its subsidiaries or its equity-method associates and joint ventures have become or may become parties;
- the possibility of incurring expenses resulting from any defects in products or services of Hitachi;
- the possibility of disruption of Hitachi’s operations by natural disasters such as earthquakes and tsunamis, the spread of infectious diseases, and geopolitical and social instability such as terrorism and conflict;
- uncertainty as to Hitachi’s ability to maintain the integrity of its information systems, as well as Hitachi’s ability to protect its confidential information or that of its customers; and
- uncertainty as to the accuracy of key assumptions Hitachi uses to evaluate its employee benefit-related costs.

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