Alstom in Japan

Over 100 years of contribution to Japan

Alstom’s Presence

Key Data
- ALSTOM Power Japan K.K.
- ALSTOM Grid Japan K.K.
- 4 Power sites
- 3 Grid sites
- 1 Transport site
- 140 employees
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## History

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1907</td>
<td>Swedish Trader K. Gadelius started operation in Japan</td>
</tr>
<tr>
<td>1919</td>
<td>Incorporation of Gadelius Trading</td>
</tr>
<tr>
<td>1927</td>
<td>Initiated domestic sale of imported Ljungstrom® air preheater</td>
</tr>
<tr>
<td>1929</td>
<td>Supplied domestically-produced Ljungstrom® air preheater</td>
</tr>
<tr>
<td>1951</td>
<td>Established a cooperative relationship with Flakt for the environmental equipment</td>
</tr>
<tr>
<td>1953</td>
<td>Supplied first imported Electrostatic Precipitator</td>
</tr>
<tr>
<td>1961</td>
<td>Supplied first domestically-produced Electrostatic Precipitator after establishment of license agreement with Flakt</td>
</tr>
<tr>
<td>1988</td>
<td>Joined ABB Group</td>
</tr>
<tr>
<td>1999</td>
<td>Joined Alstom Group</td>
</tr>
<tr>
<td>2002</td>
<td>First GT26 combined cycle power plant delivered to JFE Chiba Mill</td>
</tr>
<tr>
<td>2003</td>
<td>Acquired assets and business operations associated with HV Switch Gear and established T&amp;D business activities</td>
</tr>
<tr>
<td>2005</td>
<td>Established air-preheater heating element manufacturing facility in Shanghai, China</td>
</tr>
<tr>
<td>2007</td>
<td>Celebrated the 100th Anniversary in Japan</td>
</tr>
<tr>
<td>2009</td>
<td>Established Wind business unit providing O&amp;M service for the existing 8 units of Ecotècnia wind turbines</td>
</tr>
<tr>
<td>2010</td>
<td>Established ALSTOM Grid Japan K.K., former T&amp;D business activities</td>
</tr>
<tr>
<td>2012</td>
<td>Contracted total 35MW Wind projects with TEPCO and EURUS Energy</td>
</tr>
<tr>
<td>2013</td>
<td>Set-up ALSTOM Transport business development office within ALSTOM K.K. Tokyo branch office</td>
</tr>
<tr>
<td>2014</td>
<td>Demerger of the company and newly established ALSTOM Power Japan K.K. after carving out of Heat Exchanger Business</td>
</tr>
</tbody>
</table>

## Partnerships

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1974</td>
<td>Equity portion taken in Kajiwara Iron Works, a manufacturing facility of main components of Flakt Electrostatic Precipitators</td>
</tr>
<tr>
<td>2011</td>
<td>Establishment of general business cooperation MoUs with Toshiba for thermal power business and grid business</td>
</tr>
<tr>
<td>2013</td>
<td>MOU &amp; MDA with J-TREC (Japan Transport Engineering Company), of the business agreement for Japanese tramway market</td>
</tr>
</tbody>
</table>

## Awards and Certification

**Power:** ALSTOM Power Japan K.K. / Steam-ECS and Thermal Service are certified ISO 9001-2008.

**Grid:** ALSTOM Grid Japan K.K. is certified ISO 9001-2008
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Thermal Power

Alstom Power Japan had supplied more than 950 units of Electrostatic Precipitators (ESP) and 500 units of Fabric Filters (FF) to Japanese industrial/utility/waste incineration/iron & steel/pulp & paper markets. In addition, Alstom Power Japan is one of the leading suppliers of Thermal Oxidizers in Japan with more than 700 units’ deliveries to various industrial markets nationwide. Alstom Power Japan provides customised operation supports/maintenance solutions of its own installed base of air quality control systems/equipment and gas turbines (1xGT11N2, 1xGT26) with O&M contracts. Furthermore, Global Power Sales in Alstom Power Japan is actively dealing with Japanese Trading Houses and EPC providers as power sales representative targeting global IPP/EPC projects in all fuels.

Environmental Control Systems in Japan:

Major References
- Nakayama Steel / Nagoya, ESP for coal power plant, 2014
- Toray / Ehime: Thermal Oxidiser, 2014
- JFE Steel / Kurashiki, ESP for Sinterband, 2013
- Toray / Korea 1: Thermal Oxidiser, 2012
- Somatech / Sendai: Regenerative Thermal Oxidiser, 2012
- Nippon Steel/ Nagoya: Fabric Filters for Sintercooler, 2011
- Hokkaido Electric / Naie: Fabric Filters for coal fired power plant, 2009

Ongoing Projects
- Talin, Taiwan: 2x800 MW, SWFGD and FF, awarded in 2012
- Toray Korea 2: Thermal Oxidiser, awarded in 2012
- Linkou, Taiwan: 3x800 MW, SWFGD and FF, awarded in 2011

Services:
- Kodaira Murayama Yamato Fabric Filter Short Term Maintenance Contract
- Saitama Osaki Fabric Filter Short Term Maintenance Contract
- Komaki Iwakura ESP/FGD Short Term Maintenance Contract
- JFE: 15-year O&M contract for GT26 unit at JFE Chiba Mill (1x391 MW) since 2002
- JFE: long term maintenance contract for GT11N2 unit at JFE Kurashiki (1x82 MW) cogeneration plant till 2022
- Kyushu Electric: maintenance order for the world-class PFBC combined cycle power generation plant (360 MW)
- Hokkaido Electric: ESP rehabilitation for 600 MW in Tomataotsuma
- Nippon Paper / Suzukawa, Yatsushiro, Ishinomaki, ESP rehabilitation and maintenance service
Renewable Power

Alstom has over 30 years’ experience in providing all-round wind power solutions. There are over 3,000 Alstom turbines installed or under construction in more than 150 wind farms, delivering over 3,800 MW, around the world.

In Japan, a local Wind business unit has been established in 2009 with 13MW installed references of ECo74 WTGs. Since then, Wind business has been successfully growing and today total delivered capacity is 100MW including 3 new Wind Firms under construction. (TEPCO / Higashi Izu II WF, EURUS Energy / Kawazu WF and GPI / Hamada WF).

Supported by the new FiT program with generous tariff implemented in 2012, Japanese Wind market is emerging. Leveraging our technical advantage of “Alstom Pure Torque®” concept, which is perfectly suitable to complex terrain area, Alstom Japan has received many of business opportunities for new WF developments and aiming to increase total capacity up to 200MW in 2016.

With the increase of the total capacity and installed number of WTGs, a local O&M organization and service capability has been reinforced in 2014. Our wind O&M team can provide the long term operation and maintenance service for all wind firms.

Major References

On-shore Wind Turbine:
- Daimachi Wind Power (former Ito Country Club), Japan: 1x ECO44 (640kW), 2001
- Satomi Wind Farm, Japan: 6x ECO74 (10.0MW), 2006
- Mito Wind Power, Japan: 1x ECO74 (1.7MW), 2007
- Ishikari Citizen Wind Power, Japan: 1x ECO74 (1.7MW), 2007

Ongoing Projects

On-shore Wind Turbine:
- Tokyo EPCO: Higashi Izu II, Japan: 11x ECO74 (18.4MW), under commissioning in 2014
- Eurus Energy Japan: Kawazu, Japan: 10x ECO74 (16.7MW), under construction in 2014
- GPI/Mitsui/SB Energy: Hamada, Japan: 29xECO74 (49,3MW), under construction in 2014

Electrical Grid

Alstom Grid is the only company who is deeply rooted in Japan with a local manufacturing site among foreign makers. It is a key success factor in the market, which ensures the quality, credibility and reliability and proximity service, the most important elements in our business.

Alstom Grid provides High Voltage Circuit Breakers, High Voltage Substation packages, Gas Insulated Switchgears, Power Transformers to Japanese utility, industry and re-export markets.

Under changing of power market, Smart Grid, HVDC, Network Management Systems, etc., are utmost important technologies to come. Alstom Grid has those technologies and experience for their being well developed and proven at leading market, Europe and the USA.

Major References in Japan
- 66kV GIS Substation for Mega Solar Project x 2
- 66 kV AIS Substation for Mega Solar Project x 7
- 66kV AIS Substation for Wind Firm Project x 2
- 66/72kV Circuit Breaker Total more than 9000

Alstom in Japan, March 2015
Alstom in Japan

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Rail Transport

Alstom Transport was pre-selected as one of the potential suppliers for JR East (East Japan Railway) Joban Local Line CBTC Signalling Renewal project in 2012 together with another European competitor, and participated to the tender after 1 year technical negotiations in 2013.

Alstom Transport looks forward to having new transport business in Japan, delivering our innovative technology and solution to Japanese customers, which especially are Signalling, Tram and train components.

Ongoing Projects

- Joint marketing activity, together with J-TREC (JR East Group), to local potential Tram market.

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Careers at Alstom & submission of resumes, visit http://www.alstom.com/careers/

The contact below is exclusive for the use of the press. Non-press related requests will be disregarded.
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