

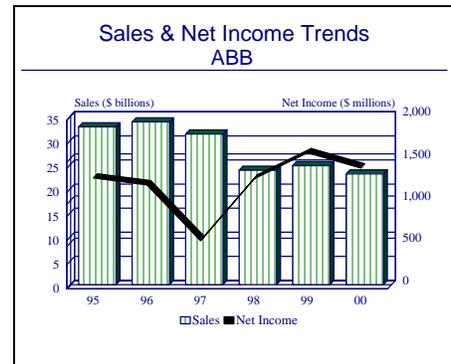
# ARCHIVED REPORT

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## ABB Asea Brown Boveri Ltd – Archived 09/2002

### Outlook

- ABB serves manufacturing, process and consumer industries, utilities, and the oil and gas sector
- ABB divested its share of ABB Alstom Power to Alstom and finalized the sale of its nuclear activities, completing its exit from the large-scale power generation field
- With these transactions, ABB has divested its last major interest in the aerospace and defense industry



### Headquarters

ABB Asea Brown Boveri Ltd  
PO Box 8131  
CH-8050 Zürich  
Switzerland  
Telephone: (41 1) 317 71 11  
Web site: <http://www.abb.com>

ABB Asea Brown Boveri Ltd, a company with roots stretching back over 100 years in Sweden, Switzerland and Germany, was established as a holding organization in 1988 by ASEA AB of Sweden and BBC Brown Boveri of Switzerland. The move consolidated the operations of roughly 800 subsidiary companies under the equal 501 percent control of the Swiss and Swedish firms.

ASEA AB, or Allmänna Svenska Elektriska Aktiebolaget (*Aktiebolaget* is the Swedish term for joint-stock company), was established in 1883 in Sweden. The name was simplified to ASEA AB in 1976. Brown, Boveri & Cie was first established in Baden, Switzerland, in 1891. In 1900, the firm became a joint-stock (public) *Aktiengesellschaft*, and the name BBC Aktiengesellschaft Brown, Boveri & Cie was instituted. The same year, Brown, Boveri & Co

Aktiengesellschaft (AG) was founded in the German city of Mannheim; the Mannheim operation was operated as a wholly owned subsidiary of Baden-based Brown, Boveri & Cie, and today the Mannheim-based unit, in addition to the Swiss and Swedish operations of ABB, forms one of the central operating units of the ABB group.

In 1999, the Boards of Directors of ABB Asea Brown Boveri Ltd, ABB AG of Switzerland and ABB AB of Sweden unanimously approved a plan to create a unified, single-class ABB share. The single-class share, one share, one vote, replaced the four classes of shares of ABB AB (formerly Asea) and ABB AG (formerly Brown Boveri), with their varying voting rights and nominal values. Trading began June 28, 1999, in Zurich (ABB), Stockholm, London, and Frankfurt.

Today, the ABB group has developed into an organization which brings together over 1,300 subsidiary companies and scores of products in the electrotechnical, transport and environmental control industries. ABB currently employs an estimated 160,818 people.

### Structure and Personnel

Jörgen Centerman  
President and Chief Executive Officer

Eric Drewery  
Corporate Transformation

Andrew Eriksson  
Corporate Processes  
Renato Fassbind  
Chief Financial Officer  
Gorm Gundersen  
Oil, Gas and Petrochemicals  
Jouko Karvinen  
Automation Technology  
Dinesh C. Paliwal  
Process Industries  
Jan Roxendal  
Financial Services

Jan Secher  
Manufacturing and Consumer Industries  
Richard Siudek  
Utilities  
Peter Smits  
Power Technology Products

## Product Area

ABB Asea Brown Boveri has mastered the technologies of a number of product areas, and today the firm is one of the world's most significant producers of electro-technical products, services, and technologies. The company manages its numerous operations with the following structure:

1. Utilities
2. Process Industries
3. Manufacturing and Consumer Industries
4. Oil, Gas and Petrochemicals
5. Power Technology Products
6. Automation Technology Products
7. Financial Services

**Utilities.** This business segment covers the electric utilities, power generation and water industries.

**Process Industries.** Process Industries services the mining, chemical, metals & foundry, pharmaceuticals and pulp and paper industries.

**Manufacturing and Consumer Industries.** This segment designs and manufactures automotive components as well as a wide range of electrical and mechanical products and systems used in industrial and commercial facilities. This unit also provides telecommunication and data network services.

**Oil, Gas and Petrochemicals.** This segment is responsible for activities harvesting and refinement of oil and gas products.

**Power Technology Products and Automation Technology Products.** This segment covers all generic product needs within the ABB Group.

## Facilities

ABB Asea Brown Boveri Ltd, Affolterstrasse 44, PO Box 8131, CH-8050 Zürich, Switzerland. Telephone: (41 0) 317 7111. The international headquarters of ABB is located in Zürich at this address. ABB's operations for design, development, manufacturing, administration and support are spread throughout the world. With over 1,000 subsidiary company operations and thousands of products throughout the regions of the world, ABB has far too many facilities to list in this

report. ABB operates in all economic regions of the world and is a leading supplier of the products, services and technologies with which the group is involved. In Europe, where ABB has the most prominent presence, facilities are located primarily in Austria, Belgium, Denmark, Finland, France, Germany, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

## Corporate Overview

ABB serves manufacturing, process and consumer industries, utilities, and the oil and gas sector. ABB divested its share of ABB Alstom Power to Alstom of France and finalized the sale of its nuclear activities, completing its exit from the large-scale power generation field.

### New Products and Services

No new defense or aerospace related products or services have been announced by ABB in the past year.

### Plant Expansion/Organization Update

Segments Restructured. In January 2001, ABB replaced its current business segments with four customer segments serving end users, working closely with two product segments that also serve all external

channel partners, and a financial services segment. The four customer segments, Utilities, Process Industries, Manufacturing and Consumer Industries, and Oil, Gas and Petrochemicals, will provide end users with faster and easier access to the full range of ABB's products, services and solutions. The two product segments, Power Technology Products and Automation Technology Products, will cover all generic product needs within the ABB Group. The product segments will also directly serve external channel partners, such as distributors, wholesalers, system integrators, and OEMs (original equipment manufacturers). The Financial Services segment continues to provide services and project support for ABB and for external customers.

### **Mergers/Acquisitions/Divestitures**

**Stake in ABB Alstom Power Sold.** In May 2000, ABB concluded the sale of its 50-percent share in ABB Alstom Power to Alstom. The move was undertaken as ABB seeks to transform its operations into one more focused on information and service-based businesses.

ABB and Alstom merged most of their respective power generation activities to create the joint 50-50 company in June 1999. After obtaining regulatory approvals for the divestment of its 50 percent to Alstom, ABB received an undisclosed cash payment reflecting the valuation of its share as well as outstanding issues between ABB and Alstom.

Earlier in the month, ABB finalized the sale of its nuclear activities to BNFL of the UK for \$485 million.

**Elsag Bailey Acquired.** In January 1999, ABB completed its plan to acquire Elsag Bailey Process Automation NV from Finmeccanica SpA, in a deal valued at \$2.1 billion. The acquisition makes ABB a leading player in the global automation market. The agreement called for Finmeccanica to sell to ABB all issued shares that it holds in Elsag Bailey. Finmeccanica owns approximately 53 percent of the outstanding equity of Elsag Bailey.

ABB President and CEO Göran Lindahl said the acquisition "confirms our commitment to quickly achieving our strategic growth objectives. We have targeted the Automation segment as a growth business and Elsag Bailey clearly complements our automation activities in its geographic scope, customer base, and technology. Combining the businesses also holds significant synergy potential, which we expect to amount to some \$200 million a year on an operating earnings level in three to four years after the acquisition is completed."

Lindahl said the process automation market is expected to show average growth at about 5 to 6 percent a year over a business cycle. Current growth in this market is estimated to be around 2 to 3 percent, he added.

### **Teaming/Competition/Joint Ventures**

**ABB Alstom Power.** In June 1999, ABB Alstom Power, began operations following the formal signing of the final agreements between ABB and Alstom, the co-owners of the 50-50 joint venture. The new group will employ some 58,000 people in more than 100 countries. About 37,000 employees are joining the global joint venture from ABB, which contributed most of its Power Generation segment to the new company. With pro-forma revenues in 1998 of about \$11 billion, ABB Alstom Power is the largest power generation group in the world.

The President and Chief Executive Officer of the new group is the former Deputy CEO of Alstom, Claude Darmon. The management board also includes Alexis Fries, previously head of ABB's Power Generation business, and Nick Salmon, up till now head of Alstom's Energy Sector.

The joint venture merger was originally announced in March 1999.

**ABB Daimler-Benz Transportation.** In October 1995, the European Commission gave the final go-ahead for the planned merger of the railway activities of ABB and Daimler-Benz AG. In March 1995, both parent companies announced their intention to combine their railways in a new 50-50 joint venture under the name of ABB Daimler-Benz Transportation. A holding company was set up in Berlin, Germany, and international group coordination centers were established in Berlin, Germany, Brussels, Belgium, and Zürich, Switzerland. According to the companies, ABB Daimler-Benz Transportation will be the world's most complete provider of railway systems. The product range includes electric and diesel locomotives, high-speed trains, inter-city and regional trains, trams and underground trains, people movers, signal engineering and infrastructure installations, as well as servicing and maintenance. The joint venture, known as Adtranz, was formally established on January 1, 1996.

In January 1999, DaimlerChrysler agreed to acquire ABB's share of their 50-50 joint venture, Adtranz, for \$472 million in cash.

**PT ABB Energy Systems Indonesia.** In April 1995, ABB announced plans to form a joint venture to expand powerplant manufacturing in Indonesia. ABB is forming the company with PT PAL Indonesia and PT Barata Indonesia, two state-owned companies. The new

company, PT ABB Energy Systems Indonesia, which will be 80 percent owned by ABB, will be located in Surabaya, East Java, and will initially employ 450 people. ABB plans to invest approximately \$35 million in a new factory in Surabaya and raise the work force to 1,000. In addition to building boilers for power utility and industrial markets, the new firm will build air pollution equipment and provide services for power plants.

**ABB Nevsky.** This joint venture was formed in early 1994 in St. Petersburg. ABB Nevsky, a company in which ABB has a majority stake, will manufacture the latest ABB designs of power generation equipment for the Russian market.

**Ansaldo.** ABB's Power Plants business segment engaged in a series of new joint ventures in 1990. For the development of the Pius Reactor in Italy, ABB is

teamed in a joint venture with Ansaldo and Fiat. ABB cooperation with Ansaldo also extends to the application of ABB technologies by Ansaldo in the fields of generators and steam turbines.

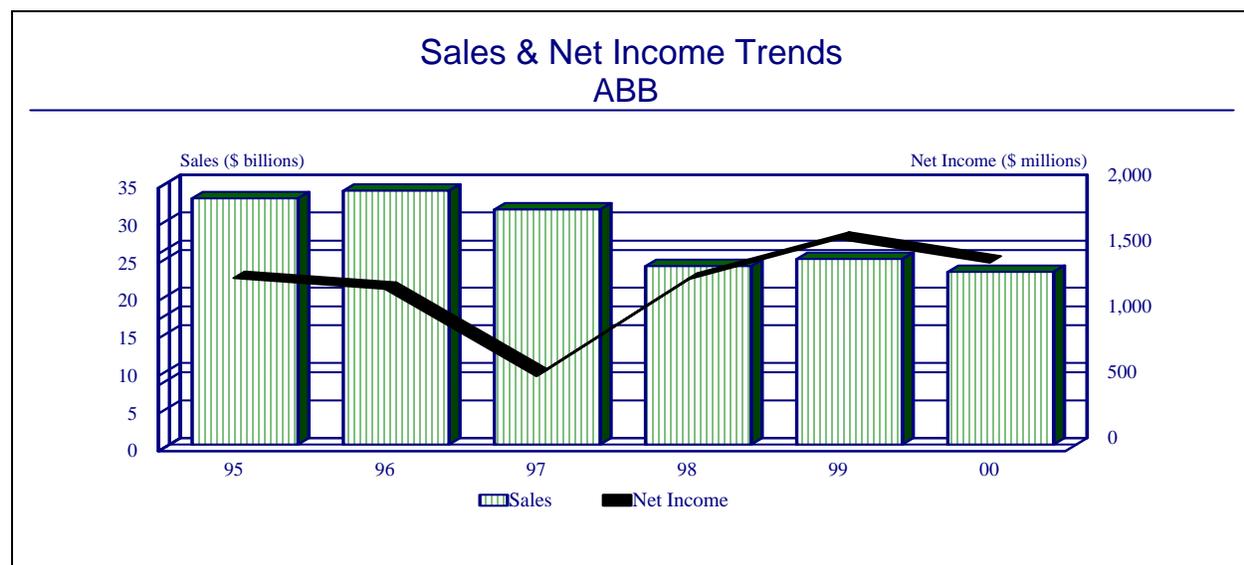
**Central and Eastern European Joint Ventures.** ABB efforts in the new democracies of Central and Eastern Europe include two joint venture companies in Poland: ABB Zamech and ABB Dolmel. In addition, ABB has established a joint venture firm in Hungary known as ABB LANG.

**EJF.** ABB's Power Distribution Business Segment entered into a new joint venture company with the Czechoslovakian firm EJF. The 1990 agreement between ABB and the Czechoslovakian supplier of medium-voltage circuit breakers, switchboards, and miscellaneous electrical products allows ABB new access to an undeveloped market.

## Financial Results/Corporate Statistics

ABB posted net income of \$1.4 billion on sales of 22.9 billion for 2000. The lower income in 1997 was due to a restructuring charge of \$903 million taken in late 1997. Latest year statistics are provided below. 2000 figures have not been restated to conform to the company's current presentation.

Y/E December 31	1995	1996	1997	1998	1999	2000
(\$ millions)						
Net Sales	32751	33767	31265	23733	24681	22967
Net Income	1315	1233	572	1305	1614	1433
Orders Received	35163	33884	34803	24511	25379	25440
R&D Expenditure	2627	2638	2657	1946	2077	703

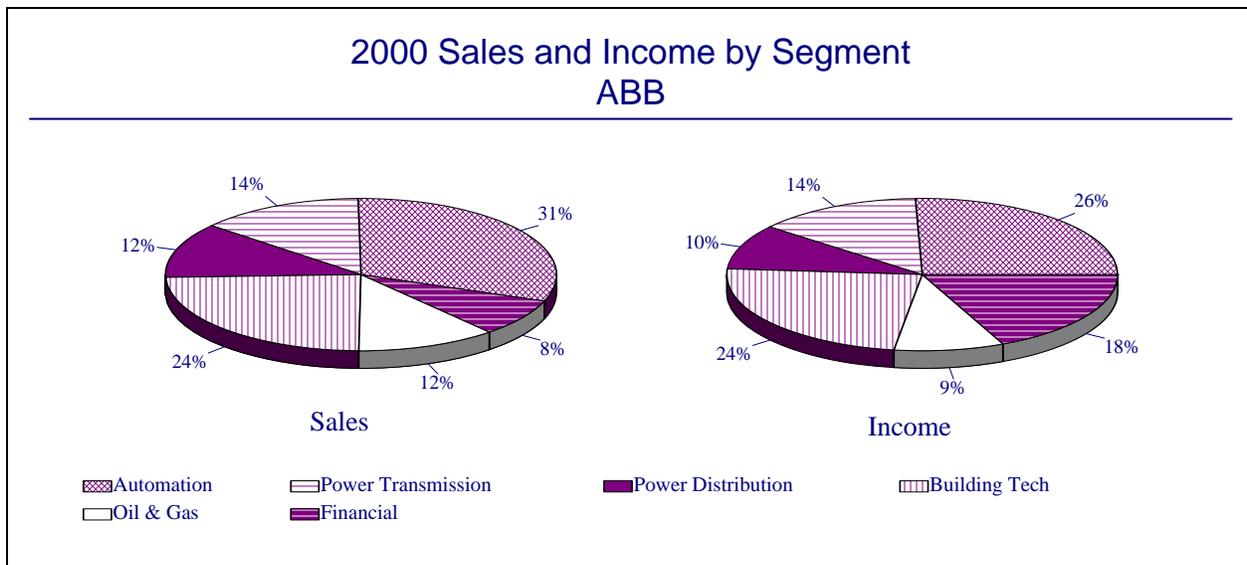


### Industry Segments

A breakdown of ABB's sales and income by major market segment for the past three years is given below. These figures conform to the company's recent presentation.

<b>SALES</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>
(\$ billions)			
Automation	7045	8236	7465
Power Transmission	4033	3712	3315
Power Distribution	2615	2875	2830
Building Technologies	6385	6324	5889
Oil, Gas & Petrochemicals	2856	3086	2796
Financial Services	1653	1687	1966
Corporate/Other	-1643	-1564	-1294
<b>TOTAL</b>	<b>22944</b>	<b>24356</b>	<b>22967</b>

<b>OPERATING INCOME</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>
(\$ billions)			
Automation	461	408	486
Power Transmission	292	309	262
Power Distribution	153	181	182
Building Technologies	379	394	456
Oil, Gas & Petrochemicals	167	165	169
Financial Services	410	337	349
Corporate/Other	-536	-672	-519
<b>TOTAL</b>	<b>1326</b>	<b>1122</b>	<b>1385</b>



### Strategic Outlook

The breadth of ABB's services is staggering. To enumerate the company's entire product line would be a considerable task, not only because it is involved in so many specialized market segments, but also because the company maintains over 1,000 subsidiaries operating in scores of countries worldwide. Certainly, the extent of ABB's operations have allowed the company to be less dependent on the economic and political situations of Switzerland, the country in which it is headquartered.

Not content to sit idle, ABB has embarked on a restructuring plan that will better prepare the company for the years ahead. Through a series of acquisitions, divestitures, and joint ventures, ABB is focusing itself on its core activities by building critical mass in high growth areas.

The most notable acquisition during the period was the purchase of Eltag Bailey from Finmeccanica in a \$2.1 billion dollar deal. The acquisition nicely complements ABB's existing automation operation and in one swoop

gives the company a dominant position in the process automation industry. The deal gives ABB access to key automation markets in the US, Germany, Japan, Italy and France.

Also as part of this refocusing, ABB has exited the gas turbine business via a joint venture with Alstom. Originally formed as a 50:50 operation in 1999, Alstom

has bought out its partner and assumed full control of the ABB Alstom Power operation.

With the sale of this operation completed, ABB has divested its last major interest in the aerospace and defense industry. As it looks to the future, ABB will continue the process of transforming itself into a information technology and services company rather than a manufacturing one.

## Prime Award Summary

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Information unavailable.

## Program Activity

**Business Interests.** ABB is involved in the design, development and manufacture of the following products:

- Gas turbine, steam, and hydro power plants and machinery
- Pressurized fluidized bed combustion systems
- Power plant control
- Fossil combustion systems and services
- Cables and capacitors
- Distribution plants and transformers
- Electric metering
- High-voltage switchgear
- Network control and relays
- Power systems and transformers
- Low- and medium-voltage apparatus and systems
- Drives
- Process automation and engineering
- Robotics
- Marine, oil, and gas industry systems and service
- Instrumentation and semiconductors
- Metallurgy
- Complete railway systems, signaling, and equipment
- Environmental control systems and services
- Telecommunications, communications and information systems
- Financial and support services

### Engine Programs

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These programs are now run by Alstom Power.

#### ABB GTX100

This is a single-shaft, heavy-duty industrial gas turbine for simple and combined cycle power plants. Three had been sold by the end of 1998. At least two of the three have already been built.

#### Alstom Tempest

This is a single-shaft, light-duty industrial gas turbine for oil, gas and industrial power plants.

#### Asea Brown Boveri GT10

This is a compact twin-shaft axial-flow heavy-duty industrial gas turbine designed for utility and industrial power generation. Mechanical drive applications projected to arise. The machine is well suited for cogeneration and combined-cycle plants. ABB is also advertising the GT10 for marine/commercial ship propulsion.

#### Asea Brown Boveri GT24/GT26

On September 8, 1993, details of the GT24 (60Hz) and GT26 (50Hz) Advanced Cycle System (ACS) were disclosed by ABB at a series of worldwide meetings. The company states that the new gas turbine power plants would set new industry standards for efficiency and emissions. ABB said that the ACS would achieve gross combined-cycle efficiencies of up to 58.5 percent, while maintaining NOx emissions of approximately 25 ppmv. The power output of the ACS family extends the range of ABB's gas turbine offerings. The new machines are optimized for combined-cycle applications which result in compact, high-efficiency power plants rated at 251 MW and 365 MW, respectively, or multiples thereof. The core technology of ABB's Advanced Cycle System is the innovative application of the Sequential Combustion System. The GT24 attained production status at the end of 1994.

#### Asea Brown Boveri GT 35

The GT 35 is designed for electric power generation, especially base load power, and mechanical drives, including gas compression. The GT 35 machine is available in a mobile power package version. The GT 35 is also referred to as the GT 35 Jupiter. The first Asea Brown Boveri ABB STAL AB GT 35 machine

began life in 1954 as a 9000 kW machine designed for industrial generating applications. The design incorporates aviation concepts combined with the heavy-duty construction necessary for industrial operation. Built-in features include moderate firing temperatures and low stress levels for long life, and heavy bearings and large combustors for reliability. High-temperature coatings are available for the turbine components when the unit must operate in a hostile environment.

### **Asea Brown Boveri Types 8/9/11/13**

The ABB Asea Brown Boveri Types 8, 9, 11 and 13 are large, heavy-duty single-shaft gas turbines, all of the same basic configuration, and all designed for large-scale utility or industrial power generation. Types 8, 9, 11 and 13 gas turbines are normally sold as part of a complete, integrated power system, including the gas turbine, the generator (direct-driven from the compressor end), lubrication system, switchgear and breaker, starting motor, motor control center, handling skid, operating controls and fire protection system. All are enclosed within appropriate metal structures. Optional filtering and silencing equipment is available to specification. These turbines remain in production.

### **Solar Mars**

This is a heavy-duty industrial gas turbine designed for electric power generation, including continuous and standby duty; and mechanical drives, including gas compression, pumping, re-injection and lift. The prime manufacturer is Caterpillar Incorporated, Solar Turbines Incorporated. In late 1985, Solar and the then-Asea-Stal (now Asea Brown Boveri) concluded an agreement to cooperate in the field of industrial gas turbine machines: it gave Solar marketing and packaging rights to the Asea-Stal-developed GT35, designated "Jupiter" by Solar. In turn, Asea gained rights to package and market the Solar line of power generation equipment throughout the world outside North America. Solar builds the machines at its San Diego (California, USA) facility, and ships the machines to the ABB factory in Finspong, Sweden, for complete packaging. Engineering and marketing became the responsibility of ABB's UK division in Sutton, outside London. To date, the UK division has concentrated its efforts on sales in Europe, although it will expand efforts to other areas as the popularity of the Solar packages increases.

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