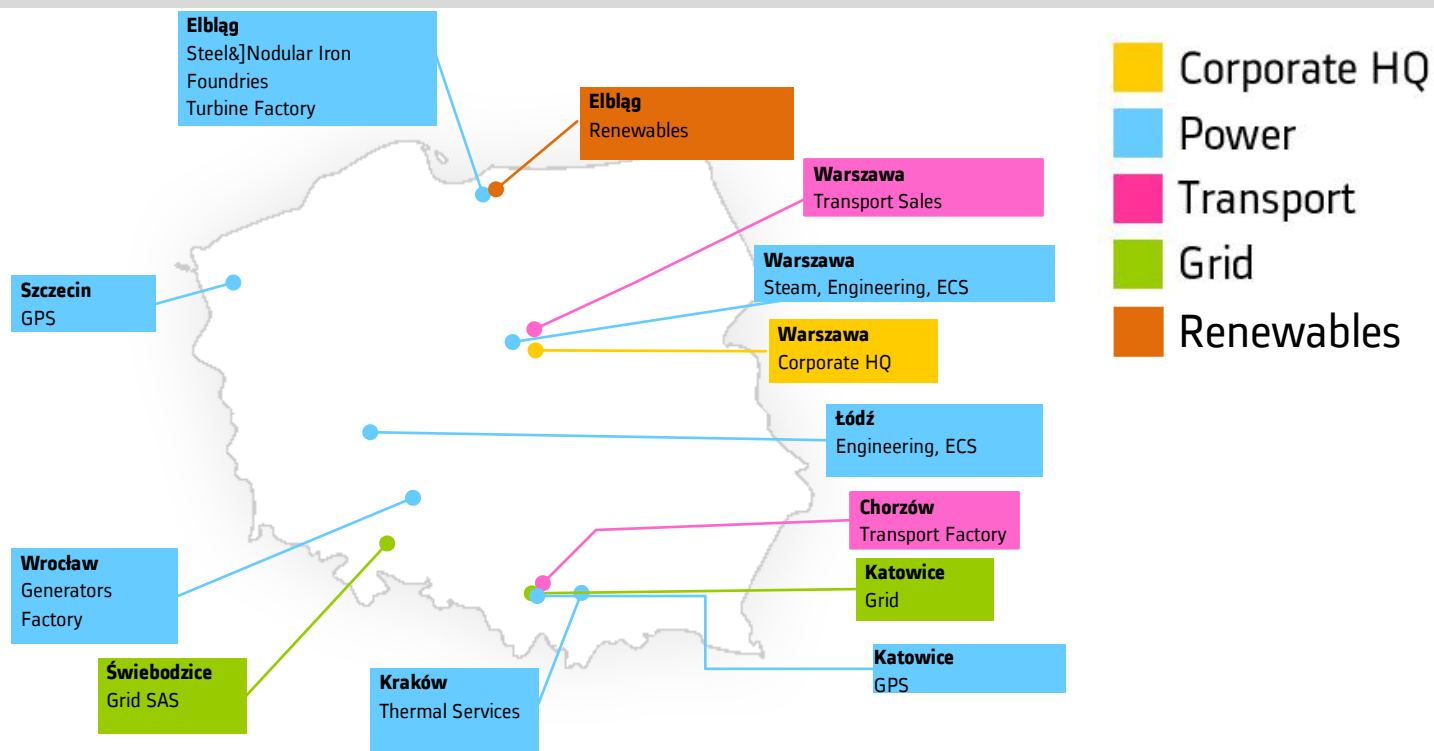


Alstom in Poland

Alstom' contribution to development of Polish economy



Alstom's Presence



KEY DATA

- 3200 employees in power generation, grid and transport sectors
- 13.5 million EUR investments in the years 2011/2012
- State-of-the-art manufacturing base in Poland
- Poland is a key sourcing country for Alstom
- Alstom's European excellence centre for turbogenerators is located in Wrocław
- Alstom is the leader of coal EPC projects
- Alstom Konstal supplies railway equipment to major European operators

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History of Alstom

1990: Acquisition of Zamech in Elblag and Dolmel in Wroclaw by ABB

1997: Acquisition of Chorzowska Wytwórnia Konstrukcji Stalowych by Alstom (presently ALSTOM Konstal S.A).

2000: Creation of ALSTOM Power Sp. z o.o. company (headquarters in Elblag)

2001: Merger of ALSTOM Power Generators Sp. z o.o. (Wroclaw) and ALSTOM Power Sp. z o.o. (Elblag).

1995 - 2005: Alstom Power conducted 'turnkey' modernisation of units 1-6 in PGE Turów PP

1997 - 2010: Alstom Transport delivered trams for several Polish cities as well as wagons for Warsaw metro

2000 - 2008: Execution of 'turnkey' project involving the supply of machine hall with 470MW supercritical turboset for Pątnów II PP

2005 - 2009: Alstom Power executed 'turnkey' package of machine hall together with cooling tower for PKE Łagisza PP

2010: Creation of new branch of ALSTOM Power Sp. z o.o. in Katowice (Alstom Grid)

Corporate Social Responsibility

Alstom Power in Poland carries out many valuable undertakings with respect to actions for the local community. Alstom has initiated social action: **"It's safer on the road with Alstom"** which was launched in 2002 in order to increase children's road safety and subsequently in 2009 was included into the European Road Safety Charter.

Numerous nominations for the title of Donor of the Year, Patron of Culture and Philanthropist of the Year confirm that Alstom in Poland is socially responsible organisation.

Awards and Certification

Quality certifications

- **Power:** ISO 9001:2000, ISO 14001:2004, OHSAS 18001:1999
- **Transport:** ISO 9001:2000, IRIS (International Railway Industry Standard certificates of French Railway SNCF, German Railway DB).
- **Grid:** PN-EN ISO 9001:2009 & PN-EN ISO 14001:2005

Awards

Power: Alstom awarded the "Golden Laurel in the field of Innovativeness 2012". Alstom received recognition in the "Electric power generation" category for the "Retrofit of 13K215 steam power turbine" innovative solution dedicated to Polish power plants.

Power: First prize in the competition held by the French Chamber of Commerce and Industry in area of the most innovative business solution for ACS system (Automatic Correction System) in 2011.

Power

Alstom Power leadership in coal EPC projects on the Polish market (since 1990)
Alstom is OEM for 95% of installed fleet.

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The biggest and the most efficient generating unit in the history of Polish power industry unit 858 MW in PGE Belchatow PP (CCS ready) was successfully executed by Alstom Power.

Key facts:

- Alstom Power plays a significant role in building modern power infrastructure in Poland.
- Innovativeness in the field of solutions offered by Alstom in Poland received prestigious awards.
- Over 320 medium-size and large –size steam and gas turbines installed in power plants all over the world had been produced by Alstom Power in Poland.
- Own modern manufacturing base: turbine factory in Elblag, steel and nodular iron foundries in Elblag and generator factory in Wrocław.
- The project – PGE Belchatow II CCS has been included in the EU Demonstration Program for CO2 Capture and Storage.

Steam

References:

- PGE Turów (units 3x235MW and 3x260MW) 1995-2005, rehabilitation
- Patnow II (unit 470MW) 2000-2008, turnkey project
- PKE Łagisza (unit 460MW) 2005-2009, turnkey package
- PGE Belchatow II (new unit 858 MW) 2006 -2011, turnkey project

Ongoing Projects:

- EDF Poland Rybnik (new steam plant 900MW) project temporarily suspended by the customer

Thermal Services

Key references:

- Kozienice 9&10: LMZ 500 MW ST main OH + modernisation
- Opole 1: Alstom 360 MW unit main OH + modernisation
- Turów 5: Alstom 260 MW ST main OH + modernisation
- Szczecin 1: Alstom 65 MW ST main OH+ modernisation
- Patnow PP: LTSA for new Alstom ST and GEN 470 MW
- Polaniec 8: Alstom 215 MW ST retrofit
- Burshtyn PP (Ukraine): LMZ 200 MW ST modernisation
- Prunero (Czech): Alstom 215 MW ST modernisation
- Kostolac 2 (Serbia): Alstom 348 MW ST main OH + modernisation
- Energoatom (Ukraine): 5x full rewind of 1000 MW GEN rotor
- PGE Belchatow unit 6: Integrated retrofit (boiler+STretrofit), unit 370MW
- EdF Kraków I: LP upgrade, 120 MW
- Janikowo (Ciech): DWFGD, 100MW
- Polaniec 8 (GdF Suez): ST (HP & IP retrofit) retrofit 220MW
- Siekierki CHP (PGNiG TERMIKA SA): modernisation of UK-50 type steam turbine

Ongoing Projects:

- PGE Belchatow 7-12: turbine and ESP retrofit on 6 units x370MW, NTP: 11/2010
- Patnow II: LTSA/ST scope, coal unit 470MW, NTP: 11/2010
- PGE Belchatow 7-12: generator retrofit on 6 units x 370MW, NTP: 03/2011
- Polaniec 2-7 (GdF Suez): modernization of 6 units, NTP: 04/2012

Transport

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Alstom Transport is represented in Poland by Alstom Konstal S.A in Chorzow (the company was established in 1864).

Key facts:

- In the years 1997-2005 Alstom Konstal was manufacturing and delivering Metropolis cars for Warsaw metro and tramways for more than 10 Polish cities, including Warsaw, Katowice, Szczecin and Gdańsk.
- Chorzow factory is the leading rolling stock exporter implementing numerous international projects, such as Citadis tramways for Istanbul and Metropolis metro cars for Budapest and Amsterdam.
- The implementation of the largest ever modernisation programme - over PLN 267 million (1997-2011).
- In 2012 Alstom Konstal opened two new production halls: a paint shop and a welding and erection shop. The total investment is worth approximately €8 million (PLN 32.8 million). The manufacturing capacity will increase in the field of carriage body painting from 20 to 40 carbody shells and the steel carriage body production from 20 to 40-50 per month.
- Alstom will deliver the first in Poland high speed trains for Polish PKP Intercity (in 2014). The foundation stone for high speed trains depot was laid in January 2013

References:

- METROPOLIS trains for Warsaw 18x6-car train sets
- CITADIS for Gdańsk (4 tramways) and Katowice (17 tramways)
- CITADIS for Istanbul – 37 tramways
- X'Trapolis for Melbourne (X'TRAPOLIS Platform), 270 painted body shells
- since 2002 – continuous CITADIS projects developed for several cities

Ongoing projects:

- Tram Train NG - 196 chassis frames for VPF
- Metropolis for Budapest (22 five-car trainsets + 15 four-car trainsets)
- Metropolis for Amsterdam – 26 trains
- Porter POLYVALENT (Regiolis) – components for 727 CBS – chassis, cabin, roof and wall components
- Lint Dieselnetz Koeln (DB AG) – 150 car bodies
- Lint LNVG VII – 56 car bodies
- Lint Dieselnetz Suedwest (Netinera) – 144 car bodies
- Lint Dieselnetz Suedwest (DB AG) – 76 car bodies
- Coradia Meridian (TRENITALIA) – 334 painted and pre-equipped car bodies

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Grid

Alstom Grid in Poland means experienced and highly qualified staff and high-end technologies applied in products and service.

Key facts:

- Strong focus in Poland on turnkey projects in the field of 220 kV and 400 kV switchgears

References:

- Łagisza 400kV substation based upon GIS technology
- IKEA Centre and Wierzchowice GIS turn key projects
- Stocznia 110 kV GIS (Eltel NetworkOlsztyn)
- Zegrze 110 KV for IKEA Centre Polska
- Michałowo and Hajnówka 15 KV (PGE Dystrybucja Białystok)
- 110 kV Żyrardów (PGE Łódź Teren)
- 110 kV Olecko (PGE Dystrybucja Białystok)
- S/S Białka Integrated Busbar Protection System (Tauron Bielsko – Biala S.A.)
- S/S RPZ8, Krynki and Wasilkow (Dystrybucja Białystok)

Ongoing projects:

- Abramowice 220kV GIS turn key project (PSE Operator S.A)
- Ustronie 110 kV GIS turnkey project (Tauron Dystrybucja SA)
- Łagisza - modernisation of 110 kV substation (Tauron Dystrybucja SA)
- 110 kV Huta Glogow (KGHM S.A)
- 220 kV Stalowa Wola (ZWSE Rzeszów)
- Ołtarzew S/S GIS switchgears 400 kV, 220 kV, 110 kV (PSE Operator SA)

Renewables

Renewables sector is represented by Industrial Steam Turbines facility located in Elblag (established in 2011). It focuses on power generation from renewable energy sources: geothermal, solar, biomass as well as wind and hydro energy.

Key facts:

- Growing market for 100 MW steam turbosets for combined cycles, "green energy" (i.e. biomass, Waste to Energy, geothermal etc.) as well as for steam turbosets up to 150 MW for solar applications manufactured in Elblag

Ongoing projects:

- Sengkang 2 (Indonesia) - 65 MW, scope: GRT turbine, generator, auxiliary systems, turbine controller, condensing system.
- South Boston (USA) - 50 MW, scope: GRT turbine, generator, auxiliary systems, turbine controller
- Crescent Dunes (USA) - 125 MW, delivery of first steam turbine solar application since 1990's, scope: turbine, generator, auxiliary systems, turbine controller
- Plainfield (USA) - 45 MW, scope: GRT turbine, generator, auxiliary systems, turbine controller
- DSW (Israel) - 61 MW, scope: GRT turbine, generator, auxiliary systems, turbine controller
- Altamita (Mexico) - 42 MW, scope: GRT turbine, generator, auxiliary systems, turbine controller

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