Alstom in Morocco

Alstom a long-time partner in Morocco’s infrastructure projects

Alstom’s presence

- Rabat – Tramway depot and office
- Mohammadia – Maintenance facility
- Roches Noires – ONCF/Alstom locomotive maintenance facility
- Fez – Cabliance JV – Wiring and electrical harness plant
- Ain Beni Mathar – Maintenance facility
- Casablanca – Alstom Maroc head office
- Casablanca – Alstom Transport head office
- Casablanca – Alstom Power head office
- Casablanca – Alstom Grid head office
- Sidi Moumen – Tramway maintenance and infrastructure facility
- Jorf Lasfar – ONCF/Alstom locomotive maintenance facility
- Jorf Lasfar – Maintenance facility
- Fez – Cabliance JV – Wiring and electrical harness plant
- Ain Beni Mathar – Maintenance facility
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- Fez – Cabliance JV – Wiring and electrical harness plant

Key figures: (April 2014)
- 235 employees at Alstom Maroc & 120 employees at ‘Cabliance’ JV
- 10 facilities spread across the country

History

1997: First Alstom office opens
2001: First Alstom Grid office opens
2003: First Alstom Thermal office opens
2011: Cabliance joint venture formed by Alstom and Nexans: Manufacturing plant for low-voltage electrical wiring, harnesses and boxes

Alstom Maroc, April 2014
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Partnerships

**Corporate**

- January 2011: Industrial Strategic Partnership Agreement signed with the Ministry of Industry and the Ministry of Transport and Facilities
- July 2011: 3 Support Agreements, signed with the Mohammedia School of Engineering, the Hassania School of Civil Works, and Mohammed V Agdal University.

Corporate Social Responsibility

Support provided to the “Initiative” Charity to renovate and reequip schools located in Casablanca’s underprivileged neighborhoods.

Power

**Thermal Power**

Alstom equipment has been integrated into power stations representing about 45% of the power capacity installed and over 50% of the national production.

**References**

- **2012 – Gas**: Major Inspection Contract for General Electric GTo0EM F6B gas turbines in three ONEE power plants (Tetouan, Trit Melill and Laâyoune)
- **2009 - Gas**: Long-term contract to operate and maintain the 470MW combined-cycle thermo-solar Gas Power Plant in Ain Beni Matar
- **2009 - Coal**: Maintenance contract for turbines and alternators at the JLEC 1320MW, 4-unit Thermal Power Plant in Jorf Lasfar
  - Constant attendance with over 40 people working at the facility
- **2007 – Heating Oil & Coal**: Refurbishment Contract for turbines and alternators at the ONEE’s 600MW Thermal Power Plant in Mohammedia

**Projects underway**

- Systematic review of 4 × 1320 MW units of auxiliary boilers for Jlec Power plant
- **Industry**: Turnkey Contract to extend and to retrofit the OCP (Cherifian Phosphate Office) seawater pumping station located near Jorf Lasfar
- Major servicing performed on OCP Maroc Phosphate turbo-alternators, as well as the modernisation of regulation systems.
- Crushers rehabilitation contract for OCP (Safi site)

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Renewable Power

Reference
- **2005 - Hydro:** STEP Afourer, 470 MW: energy transfer pumping system

Project underway
- Contract with NAREVA for the "Akhfennir" wind farm, including the supply of 61 ECO 74 wind turbines generating 100 MW total power by June 2013. Alstom is delivering turbines to Morocco and Ethiopia intended for a "Sahara-like" environment, and creating a Desert Climate Kit complete with a cooling system to tolerate high temperatures.

Transport

References
- 2011: Tramway Rabat-Salé, 44 double Citadis, 18 km line in service
- 2007: Contract for 20 electric locomotives PRIMA

Projects underway
- 14 Euroduplex trains for the Tangier-to-Casablanca line
- Casablanca tramway, with 74 Citadis trams, 23 substations (including energy and buildings), the railway signalling system covering 31 km (48 substations), and two 5-year maintenance contracts (infrastructures and rolling stock)
- 2-year Maintenance Contract for 7 BB36000 electric locomotives for Akiem (OCP supplier) (Cherifian Phosphate Office) (ALSTOM 1999)
- 3-year Technical Standardisation Contract for 27 E1300/50 electric locomotives (ALSTOM 1992/99)
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Grid

Since 1984, has been providing a variety of high-voltage and very-high-voltage products as well as making installations (Circuit breakers, Selector switches, Transformers, Measurement instruments, Command control systems etc.) to supply the needs of 400KV, 225KV and 60KV transmission grids.

References

- **2010**: Supplying, assembling and commissioning three (3) transformers (100MVA 225/60KV each) in Khouribga (OCP)
- **2009**: Repairing transformers (80MVA Lydec and 420MV) in Jlec.
- **2008**: Building the gas-insulated (GIS) substation (225KV) in Ain Harrouda to boost Casablanca’s electric power grid
- **2007**: Selouane: Maintaining and renovating the 225KV circuit breakers (ONE)
- **2006**: Refurbishing the air-insulated (AIS) substation (60/20KV) in Tanja El Balia (AMENDIS)
- **2005**: “Maroc 400KV” Project (ONE):
  o Mediouna 400KV: AIS substation to cover the Casablanca region
  o Melloussa 400KV: AIS substation to clear energy from the combined-cycle plant at Tahadart and for the Morocco-to-Spain connection
  o Oualili 400 KV: AIS substation to cover the North-Eastern region
  o Bourdim 400KV: AIS substation to reinforce the Morocco-to-Algeria interconnection

Projects underway

- **2012** Contract for the construction of the air isolated substation of Chemaia 400KV to serve the region of Marrakech and strengthen power transmission in the south (ONEE)
- **2012** Contract for supply, installation and commissioning of three (3) Transformers 100MVA each Jorf Lasfar Phosphate Hub (OCP).
- **2012** Agreement for high and medium voltage network expertise Jorf Lasfar (OCP)
- **2012-2013** Various contracts for the expansion and construction of sub stations 225KV & 60kV Tiznit and Loucous (ONEE), FES (DAREEF) and Substation for the proposed seawater desalination Jorf Lasfar (OCP)
- **2013** Agreement for the construction of 400KV/225KV substation processing technical AIS in Agadir to serve the region and strengthening the National THT network
- **2013** Project for the construction of the AIS 400 kV substation in Tantan for strengthening and improving the quality of network National transmission in the compensation of reactive power.
- **2013** Contract for the construction of the transformation substation 225/400KV to GIS in Laâyoune to serve the region, improving the quality of network transmission and the evacuation of wind energy to the north
- **2013** Supply installation and adaptation of a 420MVA transformer at the JLEC Power plant
- **2013-2014** Various contracts for the expansion and construction of 225KV & 60KV substations Allal Tazi, Ghanem, Igli Glalcha

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