21° IJ BG Meeting

Working Group

Energy! Challenges for the XXI Century

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Company Profile

New Units

- EPC
- Equipment
- Gas Turbines
- Generators
- Steam Turbines

Service

- OEM and non-OEM (OSP™)
- Long Term Service Agr’nts
- Upgrades/Revampings
- Spare Parts
- Repairs
- Field Service
- Training

Nuclear

- New Power Plants
- Services
- Waste Mgmt
- Decommissioning

Renewables

- Fuel Cells
- Microturbines
- Photovoltaic
- Geothermal
- Hydrogenerators

- A worldwide recognized brand in Power Generation with an installed capacity of more than 170,000 MW over 1,700 projects completed, in over 90 countries
- Headquartered in Genoa (Italy) with major regional offices in USA, Africa, Gulf, India and about 3,000 employees
- Key Financials 2008 (rounded): Orders 2B€, Revenues 1.3B€, EBIT 9%, Headcount 3,300

Achieve a Sustainable Growth by providing a Flexible and Innovative Portfolio of Solutions to match future Global Energy Needs
Worldwide Presence and Installed Fleet

Thermoelectric Power Plants
127,170 MW

Hydroelectric Power Plants
45,747 MW

Steam Turbines
94,261 MW

Gas Turbines
25,964 MW

Turbogenerators
106,000 MVA

Hydrogenerators
26,506 MVA

Headquarters
Local Presence (i.e.: Branches, Sales/Project Offices)

Affiliates
Renewable Energy
Pilot Project #1.3: Feasibility study for applications of syngas in power generation and distributed generation

- **Objective**: to develop a feasibility study for applications of syngas in power generation and distributed generation (e.g. gas turbines, gas microturbines, fuel cells etc):
  - Refinery by-products
  - Steelmaking by-products
  - Gasification of wastes and biomass
  - Etc.

- **Expected output**: development of specific rotating equipment and burners technology

- **Potential partners**: Mitsubishi Heavy Industries; Marubeni; Toshiba; Hitachi-GE; Sharp
1.4 Pilot Project #1.4: Solar Power & Desalination

- **Objective**: feasibility study of innovative power+desalination plants, applying a combination of renewables (photovoltaic/thermodynamic) and conventional technologies

- **Expected output**: development of small solar-power-based desalination plants

- **Potential partners**: ERG RENEW; Sharp; Mitsubishi Heavy Industries; Marubeni; Toshiba; Hitachi-GE
Pilot Project #1.5: “Direct Drive” Generators for Wind Power

- **Objective**: development of a Direct Drive generator for 300kW-1MW class applications

- **Expected output**: set-up a 300kW-1MW class for distributed applications (household, industrial)

- **Potential partners**: Mitsubishi Heavy Industries; Marubeni; Toshiba; Hitachi-GE; Sharp
Pilot Project #1.6: Waste-To-Energy (WTE) Applications

- **Objective**: development of oxy-fuel combustor for WTE applications
- **Expected output**: extend the application of oxy-fuel combustion systems currently used for coal to WTE applications
- **Potential partners**: Mitsubishi Heavy Industries; Marubeni; Toshiba; Hitachi-GE; Sharp
Nuclear Energy
Pilot Project # 3.1: Development of Steam Turbine-Generators for Nuclear Power Plants

- **Objective**: joint-development design of 1.0-1.6 GW class steam turbine and generator equipment for nuclear power plants

- **Expected output**: ranging from basic-design development to setting joint manufacturing facilities for all major equipment

- **Potential partners**: Mitsubishi Heavy Industries, Toshiba, Hitachi-GE