

EtaPRO™ Predictor™ Installations

Company	Facility Name (Country)	Facility Type	Fuel	Capacity (MW Etc.)	Machines Monitored	Year
POWER GENERATION						
Abu Dhabi Water & Electricity Authority (ADWEA)	Al Taweelah B * (UAE)	Power and Desalination	Gas	2,000 + 160 MIGD	Brine Pumps for 9 Desal Units (MSF)	2005
					92 MIGD, FD Fans Brine Pumps For 4 Desal units (MSF) 65 MIGD, FD Fans	2006
Alliant Energy (Wood Group IPS)	Emery (US)	Combined Cycle	Gas	602	GT 2 x 173 MW GE 7FA, Generators	2005
Alstom Hydraulique	Chicoasen (MX)	Hydro	Water	2,430	Hydro Turbines 3 x 310 MW Francis, Generators	2004
	Dniprodzerzhinsk * (UKR)	Hydro	Water	392	Hydro Turbines 8 x 49 MW Kaplan Vertical, Generators	2000
	Kakhovka * (UKR)	Hydro	Water	228	Hydro Turbines 4 x 57 MW Kaplan Vertical, Generators	2000
	Kiev * (UKR)	Hydro	Water	440	Hydro turbines 8 x 22 MW Bulb Kaplan Horizon, Generators	2000
	Kremenchuk * (UKR)	Hydro	Water	696	Hydro Turbines 12 x 58 MW Kaplan Vertical, Generators	2000
Alstom Power	Machu Picchu * (PE)	Hydro	Water	100	Hydro Turbines 3 x Alstom Pelton	2002
	Neubrandenburger Stadtwerke * (D)	Combined Cycle & Cogen	Oil and Gas	77	GT-10 ABB, ST ABB, Compressors, Pumps	2003
China Datang Corporation	Harbin No. 1 Heilongjiang (CHN)	Rankine Cycle	Coal	1,200	ST Generator Sets 2x 300 MW	2008
	Qitaihe (CHN)	Rankine Cycle	Coal	1,200	ST Generator Sets, 2x 600 MW	2007
	Wuan Power Plant (CHN)	Rankine Cycle	Coal	600	ST Generator Set 1x 300 MW	2012
China State Grid (Formerly Alstom Hydraulique)	Bailianhe (CHN)	Hydro	Water	1,200	Hydro Turbines, 4 x 300 MW Kaplan Vertical, Generators	2006
China Southern Grid (Formerly Alstom Hydraulique)	Huizhou (CHN)	Hydro	Water	2,400	Hydro turbines 8 x 300 MW Kaplan Vertical, Generators	2006
DONG Energy (Formerly Elsam A/S)	Herning CHP (DK)	Rankine Cycle	Gas	89	ST BBC, Generator	2005
	Skaerbaek CHP * (DK)	Rankine Cycle	Gas	400	ST Alstom 400, GEN, Turbo Expander, Pumps, Fans, Compressors	1999
Electricité de France (EDF)	Aramon (FRA)	Rankine Cycle	Coal		2 ST GEN, BOP	2011
	Cordemais (FRA)	Rankine Cycle	Coal		3 ST GEN, BOP	2010
	Blenod (FRA)	Rankine Cycle	Coal		2 ST GEN, BOP	2008
	Bouchain (FRA)	Rankine Cycle	Coal		1 ST GEN, BOP	2008
	Brennelis (FRA)	Rankine Cycle	Coal		1 ST GEN, BOP	2008
	La Maxe (FRA)	Rankine Cycle	Coal		2 ST GEN, BOP	2007
	Le Havre (FRA)	Rankine Cycle	Coal		3 ST GEN, BOP	2008
	N. Fluminense (BR)	Combined Cycle	Gas	780	GT W501FD	2004
	Porcheville (FRA)	Rankine Cycle	Coal		4 ST GEN, BOP	2008
	Vitry (FRA)	Rankine Cycle	Coal		2 ST GEN, BOP	2008
Electricidade de Portugal (EDP)	Sines (P)	Rankine Cycle	Coal	1,190	ST Ingersoll-Rand, Gearbox, Pumps	2004
Eletronuclear	Angra (BRA)	Nuclear	Nuclear	650 MW	1 ST GEN	2007
Endesa	Compostilla (ES)	Rankine Cycle	Coal	1,312	ST MHI, Mills, Pumps, Fans	2001
First Energy Corp.	Richland (US)	Simple Cycle	Gas	330	GT ABB 11 N2	2001
Gas Natural Fenosa	Albarellos (SP)	Hydro	Water		1 HT GEN	2011
	Arrubal (SP)	Combined Cycle	Gas	775	2 GT-ST-GEN	2010
	Belesar (SP)	Hydro	Water		3 HT GEN	2011
	Besos (SP)	Combined Cycle	Gas	400	1 GT-ST-GEN	2010
	Bolarque (SP)	Hydro	Water		4 HT GEN	2012
	Cartagena (SP)	Combined Cycle	Gas	1,200	3 GT-ST-GEN	2010
	Castrello (SP)	Hydro	Water		2 HT GEN	2011
	Friera (SP)	Hydro	Water		2 HT GEN	2010
	Málaga (SP)	Combined Cycle	Gas	400	1 GT-ST-GEN	2010

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Gas Natural Fenosa	Meirama (SP)	Rankine Cycle	Coal/Lignite	563	ST BBC	2004
	Palos (SP)	Combined Cycle	Gas	1,200	3 GT-ST-GEN	2009
	Peares (SP)	Hydro	Water		3 HT GEN	2013
	Sagunto (SP)	Combined Cycle	Gas	1,200	3 GT-ST-GEN	2008
	San Roque (SP)	Combined Cycle	Gas	390	1 GT-ST-GEN	2010
	Tambre (SP)	Hydro	Water		1 HT GEN	2013
Göteborg Energy	Velle (SP)	Hydro	Water		2 HT GEN	2010
	Göteborg Energy (S)	Heat Pumping	Electricity	261	Heat Pumps	2002
Guangdong Electric	Zhanjiang (CHN)	Rankine Cycle	Coal	1,200	ST GEN Set, 1 x 300 MW	2008
Guangdong Yudean	Meixian * (CHN)	Rankine Cycle	Coal	675	ST 135 MW Shanghai, GEN Jinan	2006
	Shajiao (CHN)	Rankine Cycle	Coal	1,200	ST 300 MW Shanghai, GEN Jinan	2006
	Shaoguan * (CHN)	Rankine Cycle	Coal		4x Coal Grinding Mill	2006
Helsinki Energy	Vuosaari B * (FIN)	Combine Cycle	Gas	470	GT Siemens, 2 x 160KW, KWU V94.2, Gen. Siemens, ST ABB 170 MW, Pumps	1998
Hitachi Ltd.	Hitachi Katsuta (JP)	Combined Cycle	Oil	204	GT HTC H25	2004
	Rinkai (JP)	Combined Cycle	Oil	106	GT HTC H25, ST ShinNippon	2005
Ignalina	Ignalina * (LT)	Nuclear	Nuclear	1,500	ST K750/65-3000, Generator, Pumps	1997
Italtrend srl	Smolensk * (RUS)	Nuclear	Nuclear	2,775	ST 3 x 925 MW, GT 1000, Pumps	2003
Petrobras	Barbosa L. Sobrinho	Combined Cycle	Gas			2012
	Celso Furtado	Combined Cycle	Gas		1 GT GEN, 1 ST GEN	2012
	Euzébio Rocha	Combined Cycle	Gas		1 GT GEN, 3 ST GEN	2012
	Jesus Soares Pereira	Simple Cycle	Gas		2 GT GEN	2012
	Rômulo Almeida	Combined Cycle	Gas		3 GT GEN, 1 ST GEN	2012
PetroChina, Daqing Petroleum Administration	Lamadien Power Plant (CHN)	Combined Cycle	Gas	100	GT GE Frame 6, Philadelphia Gear, GE Generator	2008
	Port Said East Power (EG)	Rankine Cycle	Gas	682	ST 2 x 341 MW Toshiba, Pumps	2003
Scottish Power	Suez Gulf Power Station (EG)	Rankine Cycle	Gas	682	ST 2 x 341 MW Toshiba, Pumps	2003
	Damhead Creek * (UK)	Combined Cycle	Gas	800	GT MHI 701F x2, ST MHI 270 MW, Generators MHI	2003
Scottish & Southern and British Gas	Seabank Power * (UK)	Combined Cycle	Gas	1,140	GT 3x 255 MW Siemens V94.3a2 ST 2x265 MW Siemens, GEN Siemens	2003
Sonelgaz	Hamma (ALG)	Single Cycle	Gas	209	GT Siemens V94.3A	2006
Stadtwerke Bielefeld	Bielefeld * (D)	Combined Cycle	Gas	69	GT AEG KanisF5, ST Escher Wyss, ST BBC, Fans, Blowers	2001
Sulzer Turbo Services	Pervomayskaya (RUS)	Combined Cycle	Gas		2 GT GEN	2011
	Syzran (RUS)	Combined Cycle	Gas		2 GT GEN	2012
I/S Vestforbrænding	Vestforbrænding * (DK)	Combined Cycle Heat & Power	Waste	22	ST Allen, Generator Peebles Electric, Gearbox Allen	2000
Viborg Kraftvarme	Viborg * (DK)	Combined Cycle Waste-to-Energy	Gas	57	GT GE, ST Allen/PR, Gear, Coupling, Generator, Converter, Starter	2000
Westinghouse	Chernobyl * (UKR)	Nuclear	Nuclear	1,000	ST, Pumps	1999

REMOTE MONITORING CENTERS

Company	Facility Name (Country)	Facility Type	Fuel	Capacity (MW Etc.)	Machines Monitored	Year
Electricité de France (EDF)	Grenoble Monitoring Centre (FR)	Remote Monitoring				2005
	Paris R&D Centre (FR)	Remote Monitoring				2004
Petrobras	Rio de Janeiro CMD (BRA)	Remote Monitoring			61 GT GEM, 12 ST GEM, 11 COM, 49 ENG	2012
Sulzer Turbo Services	Lomm (NI)	Remote Mon.			4 GT GEN	2011
	Moscow (RUS)	Remote Mon.			4 GT GEN	2013
Taqa (Formerly BP)	Hague (NI)	Remote Monitoring			3 GT COM	2003

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OIL AND GAS						
Petrobras	Cacimbas UTGC (BRA)	Gas Compression	Gas		8 GT COM	2010
	P43 (BRA)	Floating Production & Offloading Unit (FPSO)	Gas	150,000 BPD	4 GT generators @ 20 MW, 4 water injection pumps, 3 centrifugal compressors	2008
	P48 (BRA)	FPSO	Gas	150,000 BPD	4 GT GEN, 4 WIP, 4 COM	2012
Sinochem	Quanzhou Refinery (CHN)	Refinery		241,000 BPD	3 ST Driven Compressors	2013
Taqa (Formerly BP)	Alkmaar (NI)	Underground Storage	Gas		1 GT COM	2004
	PI5D * (NI)	Gas Compression	Gas		2 GT COM, GT Solar Mars, Compressor Siemens Delaval Stork	2003
Yanchang Petroleum	Yan An Refinery (CHN)	Refinery		160,000 BPD	3 ST Driven Compressors 7 Piston Compressors	2008
MARITIME						
Company	Vessel Name	Vessel Type	Fuel	Capacity	Machines Monitored	Year
A.P. Moller - Maersk Group	M/S EMMA MÆRSK (DK)	Container Vessel	Heavy Fuel	11,000 teu	Diesel Engine Wärtsilä, 14RT-flex96C	2006
APL/Neptun Orient Lines	APL Alexandrite (SNG)	Container Vessel	Heavy Fuel	3,800 teu	Diesel Engine MAN B&W 9K90MC-C	2007
APL/Neptun Orient Lines	APL Amazonite Almandine (SNG)	2 Container Vessels	Heavy Fuel	3,800 teu	Diesel Engines MAN B&W 9K90MC-C	2007
Chinese Navy, South China Sea	Zhanjiang Navy Vessel (CHN)	Vessel			Bearing Wear	2006
CMA/CGM	White Shark (FR)	Container Vessel	Heavy Fuel	5,000 teu	Diesel Engine MAN B&W 10K98MC-C Turbocharger Mitsubishi MET 83SE II	2007
Confidential	7 Container Vessels (DK)	Container Vessels	Heavy Fuel		Diesel Engine Wärtsilä, 14RT-flex96C	2006
Confidential	Container Vessel (DK)	Container Vessel	Heavy Fuel	6,000 teu	Diesel Engine MAN B&W, 12K90MC-C	2006
Confidential	Ocean-Going Freighter (CHN)	Supply Vessel / Tanker	Heavy Fuel		Diesel Engine MAN B&W 8L60MC	2006
Enzian Ship Management	2 new build vessels (CH)	Multipurpose Vessels	Heavy Fuel	2 x 18,000 dwt	Diesel Engines MAN B&W 6S50MC-C	2008
Euronav	Olympia Antarctica (FR)	VLCC	Heavy Fuel	318,000 dwt	Diesel Engine MAN B&W 6S90MC-C7	2008
Hapag-Lloyd	6 New Build Vessels (DE)	Container Vessels	Heavy Fuel	8,750 teu each	Diesel Engines MAN B&W, 3 x 12K98ME, 3 x 10K98ME	2008
Hapag Lloyd (CP Ships)	Liverpool, Glasgow, Dublin Express (DE)	3 Container Vessels	Heavy Fuel	4,000 teu	Diesel Engines Wärtsilä 9RTA96C, Turbochargers 3x4 Napier 357	2007
Millenia Maritime	4 New Build Vessels (GR)	Oil & Chemical Tankers	Heavy Fuel	2 x 51,000 2 x 40,000 dwt	Diesel Engines MAN B&W 6S50MC-C	2008
OSG	Overseas Silvermar (UK)	Crude Oil Tanker	Heavy Fuel	69,600 dwt	Diesel Engine MAN B&W 5S60MC, Turbocharger, Offline Mon. of 170 machines	2007
PRISCO	8 New Build Vessels (RUS)	2 Suezmax Tankers, 6 Aframax tankers	Heavy Fuel	2x166,000 dwt 6x100,000 dwt	Diesel Engines MAN B&W 2 x 6S70MC-C, 6 x 7S60MC-C	2008
Reederei F. Laeisz	8 New Build Vessels (DE)	Car Carriers	Heavy Fuel	8x11,760 dwt	Diesel Engines, MAN B&W, 9S50MC-C	2008
Scandlines	M/F Prinsesse Benedikte (DK)	Passenger, Car & Train Ferry	Heavy Fuel	1,140 pass.	Azimuth Thruster Rolls Royce 2.2 MW	2006
Torm	Oil Tanker (DK)	Oil Tanker	Heavy Fuel	73,000 dwt	Diesel Engine MAN B&W 6S60MC	2007
Trico Marine Services	8 New Offshore Supply Vessels (USA)	Multi-purpose vessels	Heavy Fuel	1,115 ft3 bulk 2,900 dwt	Tunnel Thrusters Kawasaki: 16 x KT- 88B3,590kW 16 x KT-103B3, 800 kW 8 Reduc. Gears Mekanorg 60pto	2008

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OTHER INDUSTRIES						
Company	Facility Name (Country)	Facility Type	Fuel	Capacity (MW Etc.)	Machines Monitored	Year
Cementos La Robla	La Robla (ES)	Cement Mills				2001
Mainova AG	Frankfurt Airport (D)	Refrigeration Systems		24	Motor ABB Turbo fluid cooler York	2004
Øresundsbro Konsortiet	Øresundsbron (SV)	Cable-Stayed Bridge				2004

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