GREEN SPARK AUTOMATION
Solutions for a Better Tomorrow
Smart Energy and Sustainable Growth

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Energy saving and carbon reduction
Win-win for the future

「Global recruitment for strategic partners」

Wolong Energy Saving Solutions

WOLONG
Power your future

Our Commitments

15%
Energy saving of the whole plant

3 years
Investment return period

3 weeks
Retrofit delivery time

Service Features

Free trial
Providing trial service of prototype equipment

Zero investment and high yield
Providing financial services for enterprises so to have high yield with zero investment

Total package solution Saves time , worry and effort.
Packaged energy saving solutions including auditing, scheming, implementation and maintenance.

Unattended, reducing manual operation and maintenance costs
Real-time motor status detection, intelligent control of operation and maintenance, safe and reliable, cost saving Keep, reduce labor costs and realize cost reduction and efficiency increase.

Remote monitoring to reduce downtime.
Remote real-time monitoring and consultation, diagnosis and other technical support to reduce downtime. Suddenly, the efficiency is improved, and lower carbon is used.

Help enterprises achieve dual carbon target
Comply with the green and low carbon development trend, and support to achieve dual carbon target

Leading Technologies

We combine intelligent drive control with the Internet of Things through permanent magnet motor direct drive + core algorithm, real-time adjustment to create the most advanced energy-saving retrofit solution

Permanent magnet direct drive
Adopt new permanent magnet material, no transmission friction loss, super efficient air duct design, more energy-saving and easy to cool; Sealed transmission, long life and simple maintenance; low noise, low vibration, compact size, light weight and larger torque.

Intelligent drive control
The intelligent control system for application scenarios is unmanned and super efficient.

Core algorithm
Relying on Wolong's stock market of more than 50 million motors in China, we learn and create a model by collecting a large number of real-time data.

Internet of things
Through the integration of Internet and wireless network, information can be transmitted in real time and accurately, and remote technical support can be realized.

Five Retrofit Modules

Intelligent, efficient, digital and modular solutions

Air conditioning cabinet

Air conditioning fan cabinet, fresh/exhaust fan, cleanroom FFU etc.

Environmental protection and industrial fan

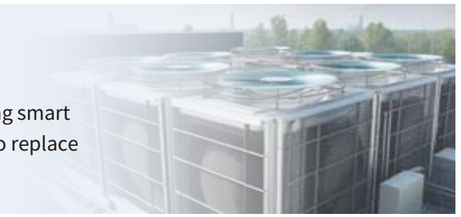
Environmental protection exhaust fan, boiler blower/induced draft fan, sewage pool aeration fan,vacuum/negative pressure system, low/medium voltage conveying fan

Intelligent water pump

The first stage: circulating water pump and chilled water pump of air conditioning/refrigeration system;
The second stage: primary and secondary water supply, process water supply, pulp pump etc.

Intelligent cooling tower

Including cross-flow tower and counter-flow tower, Wolong smart fan or permanent magnet direct drive+algorithm is used to replace and retrofit.



Power permanent magnet direct drive

Mixer, extruder, rotary kiln, belt conveyor, grinder, etc.

Core technology

- Permanent magnet
- Direct drive
- Algorithm
- Sensor
- Communication

30%+
Module energy saving rate

15%+
Energy saving rate of the whole plant

Photovoltaic/Energy Storage System

Focusing on photovoltaic storage business, providing clean energy services for government and enterprise customers.

Wolong renewable energy solution takes photovoltaic storage business as the core, and digital technology as the support, providing comprehensive energy management services covering investment, EPC construction and project operation.

- Save energy and reduce carbon emissions
- Lower down indoor temperature of buildings
- Long building life, 30 years for BIPV building
- By the end of 2021, the installed capacity of photovoltaic is about 300MW, and the annual power generation is about 300 million kWh.
- Help customers save about 4.2 MUSD in electricity expenses and reduce dioxygen.

Industry Applications

- Electronic/electromechanical
- Semiconductor
- Food/beer/grain processing
- Biopharmaceutical
- Textile
- Packaging and printing
- Commercial buildings
- Paper
- Energy & Power
- Chemical
- Metallurgy
- Others

Customers

The world's leading supplier of circuit boards	The world's leading semiconductor manufacturer	Global top 500 enterprises in electronic information industry	Top 500 food and beverage enterprises in the world
TOP4, the world's largest printing company	Global top 500 automobile manufacturers	World famous fishing gear manufacturing company	Global top 500 food and beverage manufacturers
Famous beer brands, top 500 in the world.	National high-tech compressed air energy storage technology enterprise	State-owned large-scale key enterprises	Well-known food brands, top 500 in the world
National important antibiotic production base	One of the world famous vitamin manufacturers.	A world-renowned home care product company.	TOP10 engineering plastics enterprises in the world

References Of AHU Air Cabinet Retrofit

Sanzheng Banshan Hot Spring Hotel

Energy-saving transformation of high-efficiency EC fan

Energy saving rate 52%

The hotel meeting room has loud noise and high energy consumption in the air conditioning system, which affects consumer experience.
After retrofit, the running power is reduced by more than half while the air volume is increased, and the energy saving rate is obvious. Meanwhile, the cooling effect of the meeting room is better, and the abnormal vibration and noise problem caused by the aging of the original ventilator is eliminated.

RR Donnelley Printing Co., Ltd.

Energy-saving transformation of permanent magnet direct-drive fan

Energy saving rate 51%

By comparing before and after the retrofit, the daily electricity consumption is reduced from 342.7kWh to 168.3kWh, and the daily electricity consumption can be saved by 174kWh, and the energy saving rate reaches 51%.

References Of Smart Water Pump Retrofit

Rifa Electronic Technology Co., Ltd

Energy-saving transformation of chilled water pump

Energy saving rate **42%**

Under the actual operating conditions, with the same flow rate, 55kW Wolong high-efficiency water pump replacing the original 75kW water pump to reduce electricity current from 150A (overload operation) to 87A, and energy saving rate reaches 42%.

Sanying Packaging (Jiangsu) Co., Ltd.

Energy-saving transformation of chilled water pump

Energy saving rate **65%**

Through the replacement of efficient and intelligent permanent magnet direct-drive water pump, the average daily power consumption of the pump decreased from 784.5kWh to 280.15kWh, and the daily power consumption could be saved by 504.3 kWh, and the comprehensive average energy saving rate of the pump could reach 65%. Take the electricity price of 0.8 yuan /kWh as an example.
One water pump can save 134,000 yuan in electricity bill a year.

References Of cooling Tower Retrofit

Pepsi Food (China) Co., Ltd.

Energy-saving transformation of high-efficiency EC fan

Energy saving rate **60%**

Retrofit including replacing 2pcs of 7.5kW belt fans with 4pcs of 2.2kW EC fan, and replacing 2pcs of 30kW belt fans with 12 pcs of EC fans.
Through intelligent frequency conversion, we can realize the control of constant speed, constant torque and constant air volume. Final energy saving rate reaches 60%, and the annual cost can be saved by 31.5 KUSD.

Chongqing BOE Science and Technology Group

Energy-saving transformation of cooling tower fan

Energy saving rate **59%**

Compared with the original equipment fan, Wolong EC axial flow fan has small rated power and air volume. The installation is simple and convenient.
Comparing the input electric power of the fans before and after the retrofit, the actual energy consumption and operation efficiency of 12 ATB EC900 axial flow fans are higher than that of an original pulley propeller shaft fan.
Energy saving rate is as high as 59.6%.

References Of Environmental Protection Fan Retrofit

SIIX Electronics Co., Ltd.

Energy-saving transformation of environmental protection fan

Energy saving rate 49%

Replacing the original 23 belt-driven fans with 23 Wolong efficient permanent magnet direct-drive fan, and the manual frequency modulation is upgraded to intelligent automatic control. By comparing the data before and after the retrofit, the average running power is reduced from 194kW to 100kW per hour, and the energy saving rate is 49%.
After the transformation, the air volume and pressure of the equipment are larger, which can meet the needs of enterprises to add activated carbon boxes. Demand, to provide protection for subsequent production.

Wolong Group Headquarter

Energy saving renovation of dust explosion-proof fan

Energy saving rate 47%

Consisting of explosion-proof permanent magnet motor, explosion-proof impeller, and intelligent control system, a safe and efficient explosion-proof energy-saving retrofit solution is built up. After retrofit, the intelligent fan can switch between manual and automatic operation, has the ability to self-control operation, perfectly adapts to the operation conditions, and is in the high-efficiency operation range, greatly reducing energy waste. The energy-saving rate of the transformation reaches 47%. The fan takes adopts a comprehensive explosion-proof design, ensuring the overall safety of operation.

References Of Permanent Magnet Direct Drive Retrofit

Zhejiang Hongsheng Chemical Co., Ltd.

Energy-saving transformation of permanent magnet direct drive equipment in crystallization kettle

Energy saving rate 32%

The original system has problems such as transmission gear box bearing oil leakage, high energy consumption etc. Permanent magnet direct drive retrofit completely eliminates the transmission gear box, lower down downtime and use a supporting frequency converter to control the motor operation, so as to achieve energy saving rate of 32.5%.

References Of Lithium Iron Phosphate Energy Storage

500KW/1MWH lithium iron phosphate energy storage project

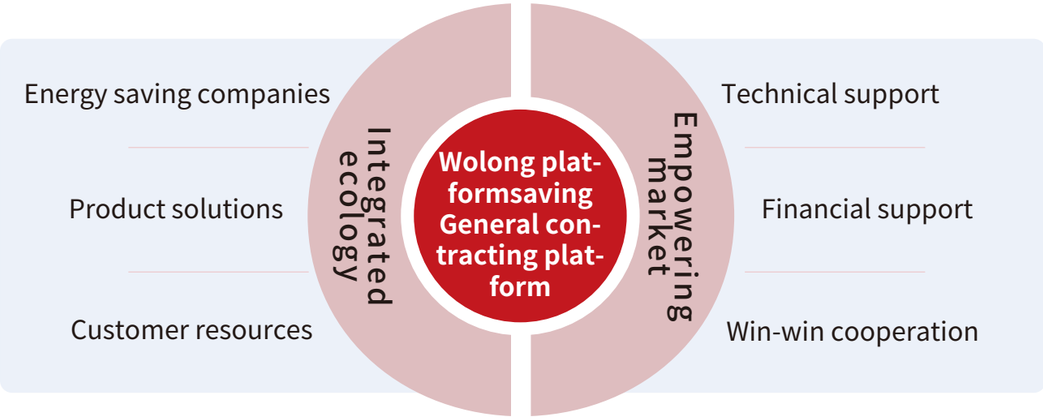
Key parameters

Total investment: 228 KUSD
Charge and discharge twice a day: charge at 1800 kWh in valley power and discharge at 1530 kWh in peak power.
Peak-valley electricity difference: 164.8 USD/day (0.04 USD/kwh for valley electricity and 0.16 USD/kwh for tip electricity) 54,428 USD/year (calculated by 330 days/year).
Investment payback period: 5 years (system design life is 10 years)
Other benefits: dynamic capacity expansion can reduce the capacity cost of transformer and improve the power factor.

Business Ecosystem

High-dimensional integration of energy-saving industry ecology, building a high conversion value network, creating efficient energy-saving product solutions, providing users with a comprehensive package of energy-saving and carbon-reducing services, and providing financial solutions to help users solve the problems of funds and risks, so that partners can create, share and win together through our platform for the benefit of society.

We find and recognize the value of our partners.



Service Process

Wolong aims at energy saving, intelligence and empowerment, helping enterprises to complete high-quality and intelligent energy-saving retrofit, empowering enterprises, helping enterprises to develop with high quality and creating maximum value for customers.

STEP 1	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6
Understand intention	Energy saving audit	Evaluation scheme	Cooperative signing	Delivery operation	Post maintenance

Collaboration Mode

Free trial

Our company can arrange the prototype trial use first, and then cooperate after achieving the expected effect. It also promises that the energy saving rate is 30%+. If the energy saving effect is achieved, the enterprise needs to keep the prototype.

One-time purchase

After the trial effect is achieved, the enterprise can adopt the cooperation mode of one-time purchase. Our company promises to complete the retrofit within 3 weeks and payback of the investment within 3 years. Meanwhile, our quality guarantee is 3 years.

Finance lease

Our company can provide third-party financial institutions for financial leasing, and financial institutions will invest to purchase our related equipment and services and lease them to enterprises for use, and enterprises only need to pay for the rent.

Energy-saving care-free sharing mode

Enterprises can also choose energy-saving sharing mode to cooperate, and our company will invest in the energy-saving retrofit project, and both parties agree to carry out contract energy management within a certain period of time. Free warranty maintenance is provided during the contract period, and your company will acquire the ownership of the equipment after the contract ends.

Five advantages energy saving and sharing

- Zero investment
- Electricity cost saving sharing
- Free maintainance
- Equipment ownership by the end of the contract
- Commitment of energy saving rate 30%+

Notes