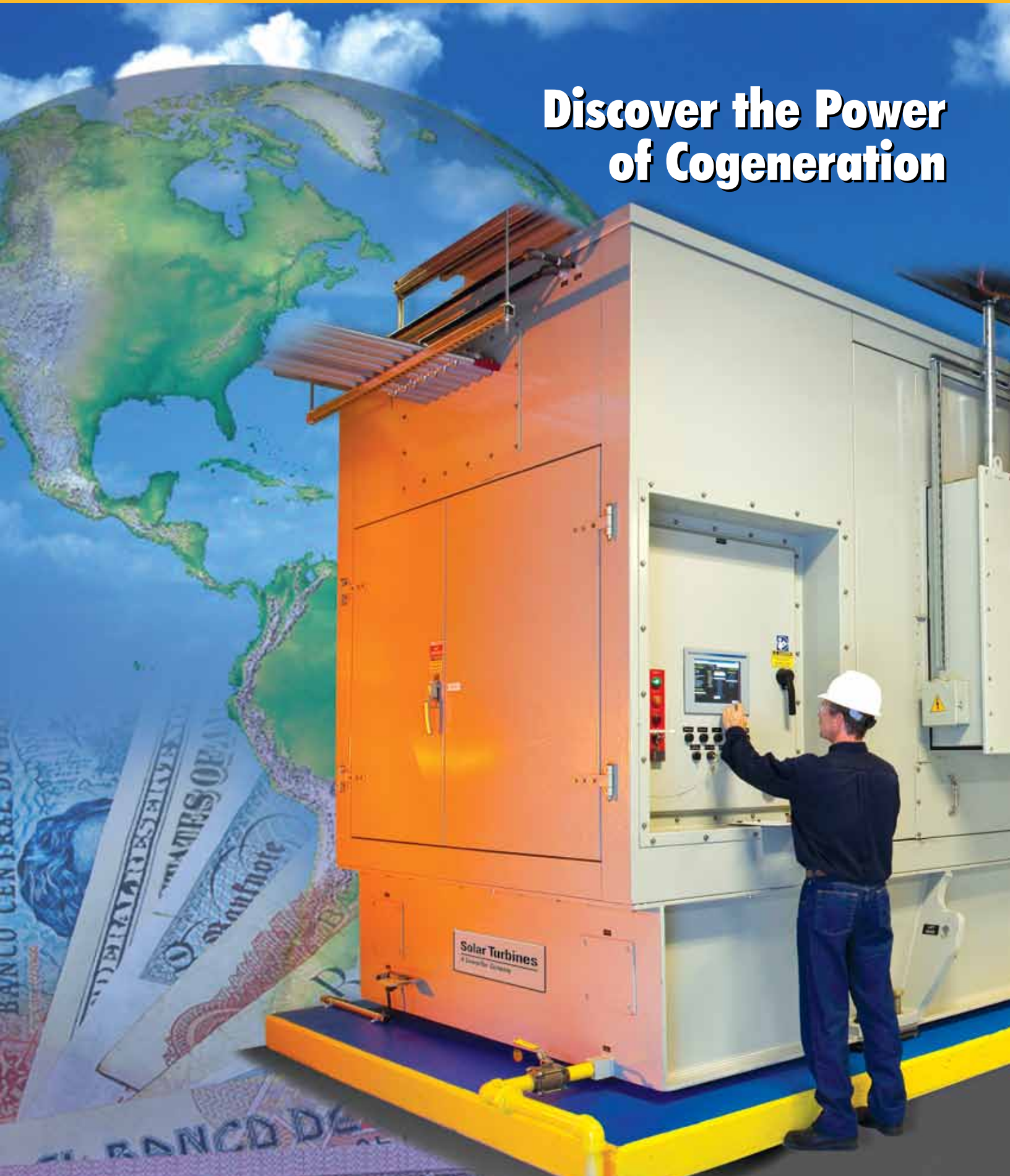


Solar Turbines

A Caterpillar Company

POWERING THE GLOBAL ENERGY DEMAND

Discover the Power of Cogeneration



Solar Turbines
A Caterpillar Company

Your Competitive Edge

MAKE ENERGY WORK HARDER. TAKE CONTROL OF YOUR FUTURE.

You pay a great deal for electricity and fuel. Cogeneration with a gas turbine can help you get much more from your energy investment – and strengthen your business in other ways, too.

Why look at cogeneration now? Because evolving technology has made this solution more versatile and more cost-effective than ever. And because changes in natural gas and electricity markets create more sound business reasons to control a part of your energy supply.

Today, you can have all the benefits of cogeneration, also called combined heat and power (CHP), with none of the daily duties of operation and maintenance. Solar Turbines can design a system that satisfies your financial criteria and meets your business goals, then take complete care of it while you focus on your mission.

A POWERFUL TOOL FOR YOUR BUSINESS.

Cogeneration with a *Solar*® gas turbine system is a simple concept: You turn clean-burning natural gas into cost-effective, reliable electricity – plus steam for production processes, heat for water and building space, or even heat to drive absorption chillers for seasonal or process cooling. It's like getting two or three forms of energy for the price of one.

Financial returns on energy savings can easily justify a cogeneration investment. But in today's markets, your benefits can extend much further. By controlling a major source of electric power, you gain advantage in an industry increasingly driven by market forces, thus more volatile and less predictable than before. With turbine-based generation in place, you can:

- Insulate yourself against spikes in market power prices.
- Increase power reliability, thus lessening risk of critical process downtime.
- Create opportunities to sell surplus power at a profit.

It all adds up to one thing:

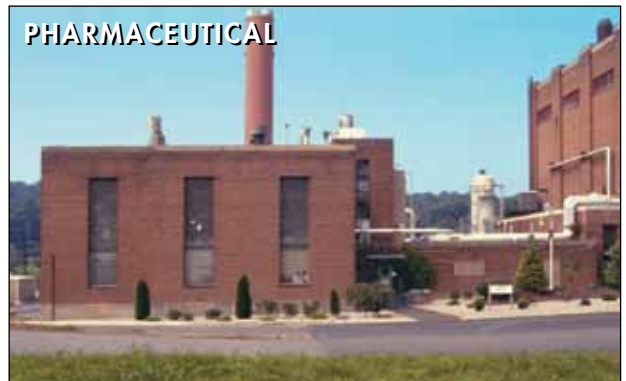
A competitive edge for your business.



A 5.2 MW *Taurus*™ 60 generator set with *SoLoNOx*™ technology provides power and steam for a university campus in Pittsburgh, Pennsylvania, U.S.A.



Two 5.2 MW *Taurus* 60 gas turbines provide cogeneration at this medical center on a United States military base in San Antonio, Texas, U.S.A.



Two 9.4 MW *Mars*® 90 gas turbines provide cogeneration at this pharmaceutical manufacturing plant in Pearl River, New York, U.S.A.



Two 5.2 MW *Taurus* 60 *SoLoNOx* generator sets provide district energy to downtown St. Louis, Missouri, U.S.A., as well as electric power to the wholesale market.

A SOUND ENERGY STRATEGY, PROVEN WORLDWIDE.

Decades of experience prove it: Cogeneration works. It delivers results every day in thousands of turbine generation installations at commercial, industrial and institutional sites in the United States alone.

If you need electricity and thermal energy simultaneously, a cogeneration system can meet your requirements at a highly favorable return on investment. With gas turbine-driven cogeneration, you can capture more than 80 percent of the energy in the fuel you buy – versus 30 percent to 45 percent in stand-alone power production. Many owners report simple payback on their investment in three to five years, or even less.

Cogeneration is also environmentally friendly: Higher fuel efficiency reduces pollutant emissions to the air. Further, every percentage point gain in efficiency proportionally reduces emissions of the greenhouse gas – carbon dioxide.

In more than 4900 installations worldwide, *Solar* gas turbines generate clean electrical power from natural gas with power generation packages designed to limit the impact on the environment, protect people who operate the equipment, and respect people who live nearby. Operating on the least carbon-intensive fossil fuel, our products can provide significant reductions in greenhouse gas emissions by displacing power generated from more carbon-intensive sources, while at the same time maintaining very low pollutant emissions levels.

Cogeneration is growing. Find out how it can help grow your business.



Complete Cogeneration Systems

A BROAD RANGE OF TECHNOLOGIES IN A WIDE WORLD OF APPLICATIONS.

If you haven't considered cogeneration lately, it's time to take another look. The technology is more efficient and flexible than ever. Today, it delivers attractive returns even where heat and power demands fluctuate with the seasons or during the workday.

No one understands cogeneration better than Solar Turbines. We have designed, installed, maintained and operated systems in hundreds of facilities across a wide variety of industries and applications, each with unique energy requirements.

Our heat recovery systems suit numerous purposes. For example, you can:

- Capture exhaust heat directly for product curing and drying.
- Heat water or industrial process fluids.
- Produce steam for space heating, district heating or industrial processes.
- Create steam to drive absorption chillers for space cooling or refrigeration.

Our technologies include traditional combined-cycle systems, capable of 40 percent to 50 percent electrical efficiency and as high as 85 percent overall fuel efficiency with exhaust heat recovery.

One of the advantages of gas turbines in CHP mode is the ability to insert a duct burner between the gas turbine and heat recovery equipment. This arrangement greatly increases the CHP system's ability to serve variable heat and power demands and decouple power generation from heat generation while dramatically increasing overall efficiency.

There also is growing interest in trigeneration – a highly flexible technology that recovers exhaust energy for both heating and cooling. Look at the sampling of case studies in this brochure for ideas on how Solar Turbines' extensive cogeneration experience can help you. We would welcome the chance to put our technologies and expertise to work for your business.





TEXTILES

A 10.6 MW *Mars 100* generator set provides heat and electricity for this textile mill in Ontinyent, Spain.



CERAMICS

This ceramic products manufacturing plant in Surabaya, Indonesia, relies on a cogeneration system powered by a 4.6 MW *Centaur® 50* generator set.



MINING

Four 5.2 MW *Taurus 60* generator sets provide steam and electricity at this mine in Western Australia. Solar also provides asset management services at the facility.



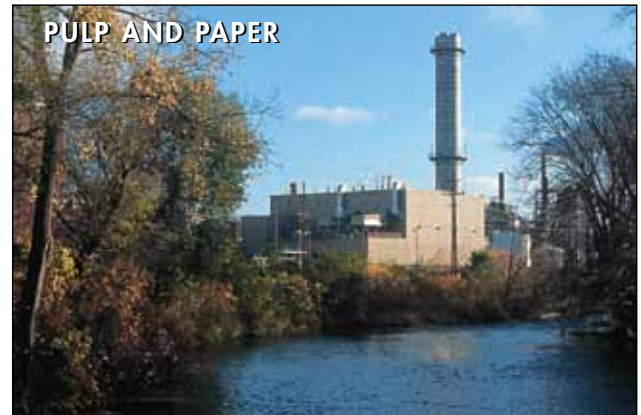
LANDFILLS

Three *Mercury™ 50* generator sets running off landfill methane gas. Los Angeles County Sanitation Districts' Calabasas gas to energy facility. Agoura, California, U.S.A.

SOLUTIONS FOR YOUR INDUSTRY.

Here are just some of the markets in which cogeneration can help drive down energy costs and improve business performance.

- | | |
|------------------------|-----------------------|
| Agricultural products | Healthcare |
| Airports | Hotels |
| Brewing/winemaking | Landfills |
| Ceramics | Laundries |
| Chemicals | Meat and poultry |
| Commercial real estate | Pharmaceuticals |
| Communications | Plastics |
| Convention centers | Printing |
| Dairying | Prisons |
| District heating | Pulp and paper |
| Electric utilities | Residential complexes |
| Food processing | Rubber |
| Forest products | Schools |
| Glass | Supermarkets |
| Government buildings | Textiles |
| Greenhouses/nurseries | Universities |



PULP AND PAPER

Two 10.7 MW *Mars 100* generator sets with *SoLoNOx* low emissions technology provide cogeneration at this pulp and paper mill in Otsego, Michigan, U.S.A.



HEALTHCARE

This cogeneration power plant, featuring two 5.2 MW *Taurus 60* generator sets, serves a university medical center in San Francisco, California, U.S.A.

World-Class Support



A leading industrial manufacturer in Deer Park, Texas, U.S.A., commissioned four 5.2 MW *Taurus 60* generator sets to provide steam and electricity.



A 5.2 MW *Taurus 60* cogeneration system with on-skid controls serves this pharmaceutical research facility in Wallingford, Connecticut, U.S.A.



A cogeneration system based on a 5.2 MW *Taurus 60* generator set serves this sprawling major hotel complex in Nashville, Tennessee, U.S.A.



A 3.5 MW *Centaur 40* generator set provides electrical power and cogeneration for this petrochemical plant in Merak, Indonesia.

PROVEN TOOLS FOR FINANCIAL PERFORMANCE.

In the end, it's all about economics. Solar Turbines can help you build your cogeneration system at an attractive return while preserving capital for investments in your core business.

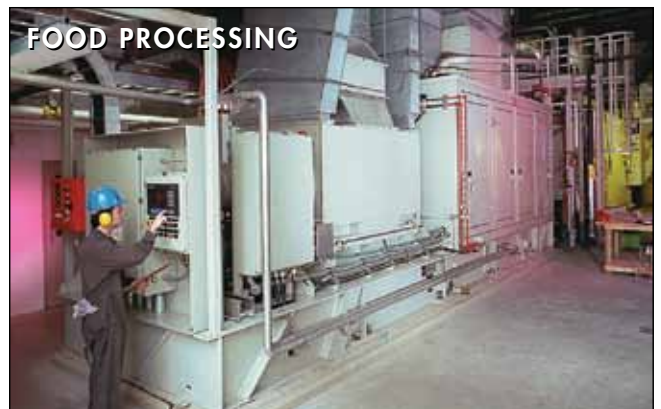
At the outset, we provide a complete, realistic analysis of your project's financial outlook, using your preferred financial criteria – simple payback, net present value, life-cycle cost or internal rate of return. Then we can assemble a financing package that makes acquisition as easy as possible.

We offer a variety of financing programs: flexible leasing, project financing, tax-exempt government leasing, conditional sales contracts and traditional financing. Often, we can structure financing to provide immediate positive cash, right from start-up.

All our financing plans are designed with one purpose: To help you take advantage of cogeneration under the terms most advantageous for your business. The right financing is just one more tool to help make cogeneration work for you.

THE TIME IS RIGHT. CALL TODAY.

There has never been a more opportune time to review your energy strategy and see if cogeneration is right for you. Contact Solar Turbines at 1 619 544-5352 or email your project requirements to cogen@solarturbines.com. We'll answer your questions and tell you how you can get a cogeneration feasibility study.



This food processing plant in Ontario, Canada, relies on a *Taurus 60* generator set for process heat and electricity.

OPTIMIZING EQUIPMENT VALUE, ANYWHERE AND ANYTIME.

Solar provides products and services that meet customer expectations for performance, reliability and availability. Your success depends on uptime and output, and Solar's comprehensive service offerings ensure that when you need support, Solar is available around the clock and only a phone call or click away.

With support centers and knowledgeable personnel located around the world, Solar's Customer Services organization brings an uncompromising commitment to customer satisfaction by providing comprehensive maintenance programs, field service, overhaul, refurbishment and *Solar Certified Parts*, as well as a wide variety of technical training courses.

This commitment ensures customers' maximum productivity, extending equipment life cycle while reducing operating costs.

MACHINERY MANAGEMENT SOLUTIONS.

InSight System[™], Solar's comprehensive online approach to equipment health management, includes the industry's most advanced remote monitoring and predictive diagnostics system. Using *InSight System*, maintenance is based on equipment condition rather than traditional time intervals. This saves time and money on maintenance and repair, resulting in more uptime, greater productivity and optimized life cycle.



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A Caterpillar Company

EXPERIENCE YOU CAN COUNT ON.

Solar has been a pioneer in the design, manufacture and packaging of gas turbine systems for more than 60 years and is a world leader in the mid-range industrial gas turbine business. We stand on our experience gained from more than 13,900 turbine packages in 98 countries with more than 1.7 billion hours of operation. We offer worldwide support from 43 strategic locations: overhaul centers, parts depots, field service offices and training facilities. As a result, customers spanning the globe know they can depend on Solar to provide rugged, reliable turbomachinery systems, responsive service and unrivalled technical assistance no matter where they are.

FOR MORE INFORMATION

For more information on cogeneration systems from Solar Turbines, please contact:

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