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WHEREVER INNOVATION FLOWS

At Energy Recovery, we develop award-winning, industry-leading energy recovery products that offer innovative solutions to global industries. Our products and solutions transform industrial fluid flows and pressure cycles into reusable energy, using advanced technologies that adapt to the water, oil & gas, and chemical industries; making it possible to harness energy from almost any high-pressure fluid process.

Our corporate headquarters is located in California, in the United States. This facility houses our administrative, engineering, manufacturing and sales departments.

energy recovery™

energy recovery™

Energy Recovery in the Oil & Gas Sector from High Pressure Fluid Flows and Pressure Cycles

PROFIT
FROM
PRESSURE

MAXIMIZE LOSSES, **MAXIMIZE GAINS**

Performance, Production and Profits

In today's oil & gas industry success is measured by performance, production and profits and with margins tightening waste is simply not an option – whether it is upstream, midstream or downstream.

Generating Greater Energy Efficiencies
One of the central tenets of oil & gas economics today is the need for greater energy efficiencies. Efficient energy use not only reduces costs across the supply chain but makes energy more affordable to the end user.

While energy efficiencies have increased significantly since 2007, thanks to investments in new technologies (source: IPIECA), there has also been a corresponding increase in energy-intensive processes. This includes the need to drill deeper; the growth in older fields and the need for enhanced oil and gas recovery and water reinjection techniques; the increased volumes of crude oil and gas being processed; the rise in sour gas fields; and the need to minimize the space, footprint and energy consumption on offshore infrastructure, such as Floating, Production, Storage and Offloading (FPSO) units. Furthermore midstream industrial processes such as the vital role of gas sweetening, where amines are used to remove H2S and CO2 from gases, also consume significant amounts of energy at high costs.

From Liability to Asset – A Changing Mindset
Just as consumers, businesses and governments the world over are looking to get a grip on their energy costs and recover energy from core industrial processes, these activities are also being mirrored by the world's principal generator of energy – the oil & gas sector itself.

It is this evolving climate of cost and environmental pressures that are leading to a rapidly changing mindset across the industry. Processes and outcomes, once viewed as liabilities and a drag on revenues, are now being viewed as potential assets.

And there's no better example of a liability becoming an asset than in the case of pressure....

50%

OF THE TOTAL COST OF REFINING IS REPRESENTED BY ENERGY COSTS

Source: European Forum for Science and Industry

From the well-stream to refinery to distribution pipelines, pressure is everywhere within the oil & gas lifecycle today. Yet all too often, pressure has been viewed as just a ‘throw-away’ by-product of the oil & gas production process rather than something which has an economic value.

$1 BILLION

SAVINGS EACH YEAR THROUGH ENERGY RECOVERY SYSTEMS
SAVING 10 BILLION KILOWATT HOURS OF ENERGY ANNUALLY

HARVEST THE POWER OF PRESSURE

Pressure brings with it its own set of challenges. High pressure fluid flows and temperatures down hole are often considered a liability and a threat to equipment and production, whereas reservoirs with too little pressure have to call upon enhanced oil recovery techniques, such as artificial lift. Gas sweetening also requires high pressures to facilitate the removal of H2S and high pressure environments are vital to many other industrial processes.

Yet, to date, the value of pressure as a potential source of energy in its own right and a key contributor to reduced operational costs and increased environmental compliance has largely been ignored.

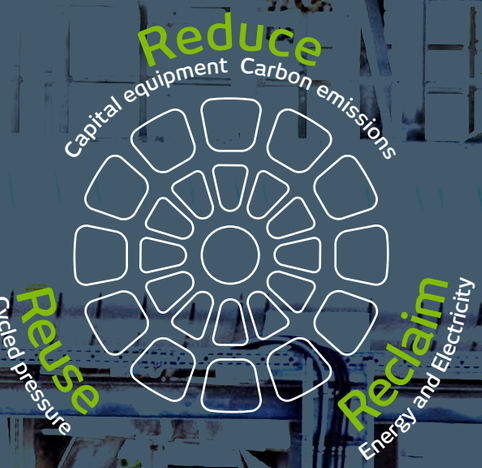
Energy Recovery has invested years in research and development and millions of dollars to provide the most efficient energy recovery devices available today – solutions that turn pressure from a liability into a key asset and economic driver and solutions that often outlast the lifetime of the plant.

Energy Recovery will ensure that pressure is never wasted through unnecessary pressure drops and will capture kinetic energy and generate electricity from these high pressure fluid flows, leading to energy efficiencies as high as 90%.

Each year, through this ingenious blending of science and economics, Energy Recovery solutions save customers US$1 billion in reduced energy costs with 10 billion kilowatt hours of energy saved.

Energy Recovery offers you:

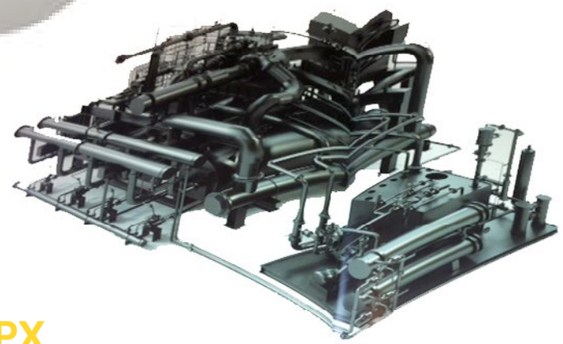
- Improved performance and productivity
- Reduced operational and capital costs
- Reduced carbon footprint.



KEEP THE PRESSURE, PRESERVE THE ENERGY

90%

ENERGY EFFICIENT



ENERPX

The Energy Recovery's EnerPX incorporates award winning technology to provide a 90% energy efficient system.

Major gas processing operators are already enjoying more productive and profitable operations with significant pay backs in under 4 years.

Ideal for operators who want a more traditional and mechanical approach, EnerBoost is able to sustain energy in isobaric pressure processes at up to 70% efficiency.

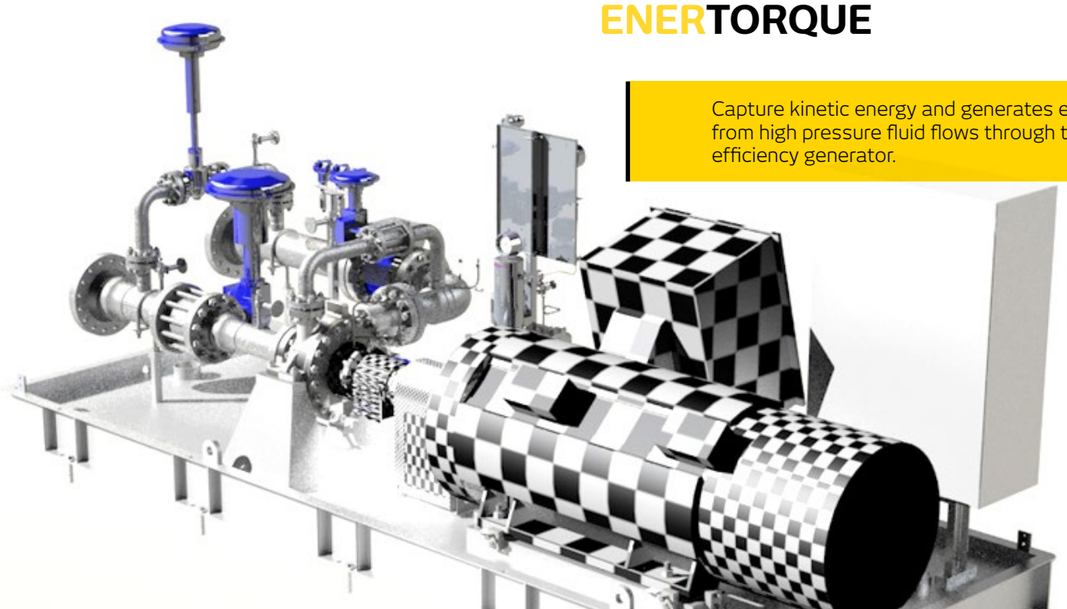
- Turbine and industrial pump rolled into one with maximum flexibility.
- Optimum efficiency with 3D geometry impellers.
- Volute insert technology for field flexibility.
- Minimal installation time, operator training and plant design due to compact footprint and turnkey solution.
- Ability to be installed in any direction – no need for other instrumentation or ancillary equipment.
- Robust all-metal construction.
- High quality, precision manufacturing.

ENERBOOST

- Easy to install
- Minimal changes to existing operations

ENERTORQUE

Capture kinetic energy and generates electricity from high pressure fluid flows through this high efficiency generator.



At the heart of EnerPX is a high purity aluminum oxide rotor that turns at up to 1,000 rpm in an almost frictionless hydrodynamic bearing. It is this single, rotating ceramic piece that can be used in a wide variety of industrial applications to recycle stranded energy from high pressure fluids and deliver energy efficiencies of 90%.

Key benefits of the EnerPX system include:

- Maximum reliability (99.8%) and minimal maintenance through a single moving part and the lowest lifecycle costs of any energy product on the market today;
- Vertical and horizontal configurations due to its compact and flexible design;
- Unrivalled durability and performance in a wide range of temperatures and pressures, due to the advanced ceramic components three times harder than steel;
- Minimal installation requirements, quick start-up and optimum scalability due to the simplicity and modularity of the design.
- Immediate gains without changes or disruptions to existing operations.

EnerPX provides high value engineering, precision manufacturing and technologies that outlast the plants where they are installed in the most demanding of oil & gas environments.

PROFITABLE ENERGY ISOFLO

One moving part

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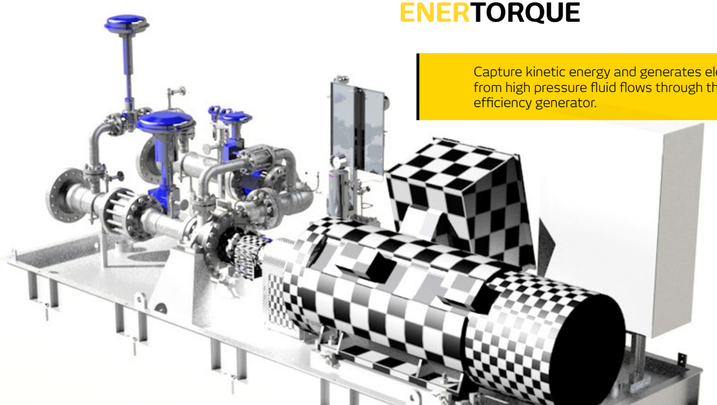


MAKING PRESSURE WORK HARDER

Energy Recovery provides a complete and seamless end-to-end solution for all its energy recovery products from initial R&D through to design and engineering, testing, manufacturing, installation and then support throughout the lifetime of the product. Its products have been developed and honed over 25 years experience in key sectors from water desalination to chemical processing and oil & gas.

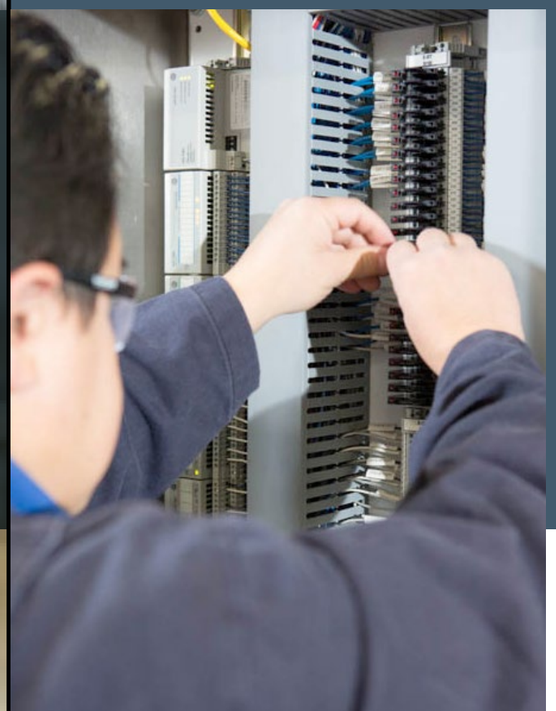
Energy Recovery's industrial expertise, technical 'know-how' and blending of science and economics is built on a culture of continuous innovation with R&D investment taking on average 10% of annual revenue.

A Complete Service-Focused Solution
Energy Recovery's solutions are not just about the hardware and end products – they are about the people, information, workflow, training and support which create a complete service-focused solution that harnesses the power of pressure.

The Energy Recovery team is located worldwide with operations in the Americas, Asia, Middle East and Africa /Europe, all providing on-site product support and operational training.

A team of highly trained engineers and technicians, collaborate with you throughout the design, manufacturing, testing and installation process to fully understand and support your project needs.

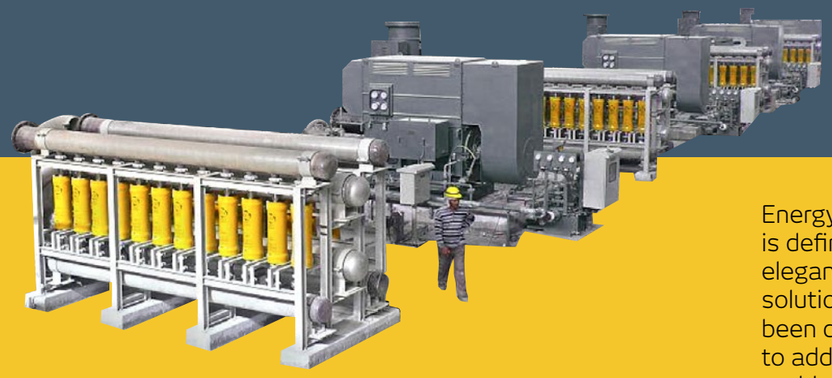
Operational Excellence
Energy Recovery has the track-record, capabilities and service-focused ethos to become your energy recovery partner, delivering profitability, productivity and a reduced carbon foot print.



Energy Recovery's technologies have already revolutionized the water sector, making desalination a viable economic solution and recycling large amounts of otherwise wasted fluid energy. They are also now crossing sector, environmental and economic boundaries to have the same impact in the chemical and oil & gas sectors.

Simplicity & Versatility
It is the simplicity yet versatility of Energy Recovery's solutions that enable them to cross boundaries into different sectors and deliver energy savings from industrial processes, whether it be water treatment, chemical processing or gas processing.

Staying Constant
A central theme of Energy Recovery's solutions are isobaric processes which ensure that pressure stays constant rather than allowing the rapid pressure fluctuations seen in many industrial applications today. Keeping pressure constant results in significant energy savings and is the reason why isobaric processes are key to Energy Recovery technologies.



Energy Recovery is defined by smart, elegant and simple solutions that have been developed to address complex problems.

CROSSING BOUNARIES

Materials for All Environments
Debris, temperature, and corrosive chemicals create an environment that most engineering materials struggle to withstand for no more than a few years. Whether it's high alloy stainless steels and exotic metals through to the synthesis and precision machining of the EnerPX's highly engineered ceramics, Energy Recovery's solutions are built to last.

All ceramic components – three times harder than steel - are manufactured in-house, go through rigorous, in-house testing, and simulated operations, and can perform in the harshest of industrial and seawater environments for 25 years or more. The custom-formulated spray-dried powders are compacted at extreme pressures and then sintered at temperatures of more than 1600°C to create the machineable blocks that become rotors in EnerPX devices.

Award-winning technologies are harnessing and transforming more reusable energy from industrial fluid flows and pressure cycles than anything else in the energy recovery field today.

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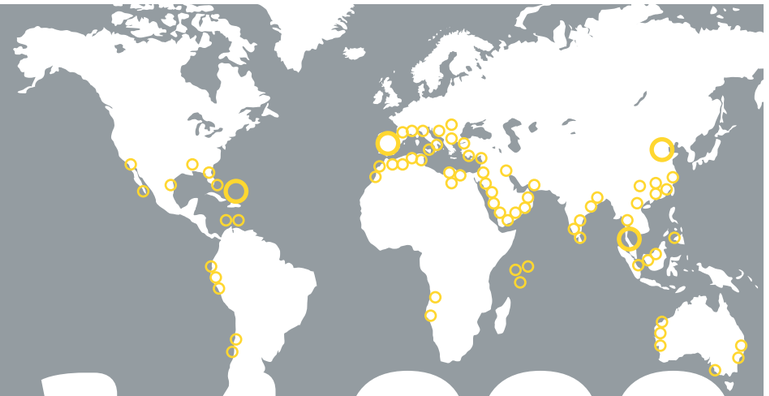
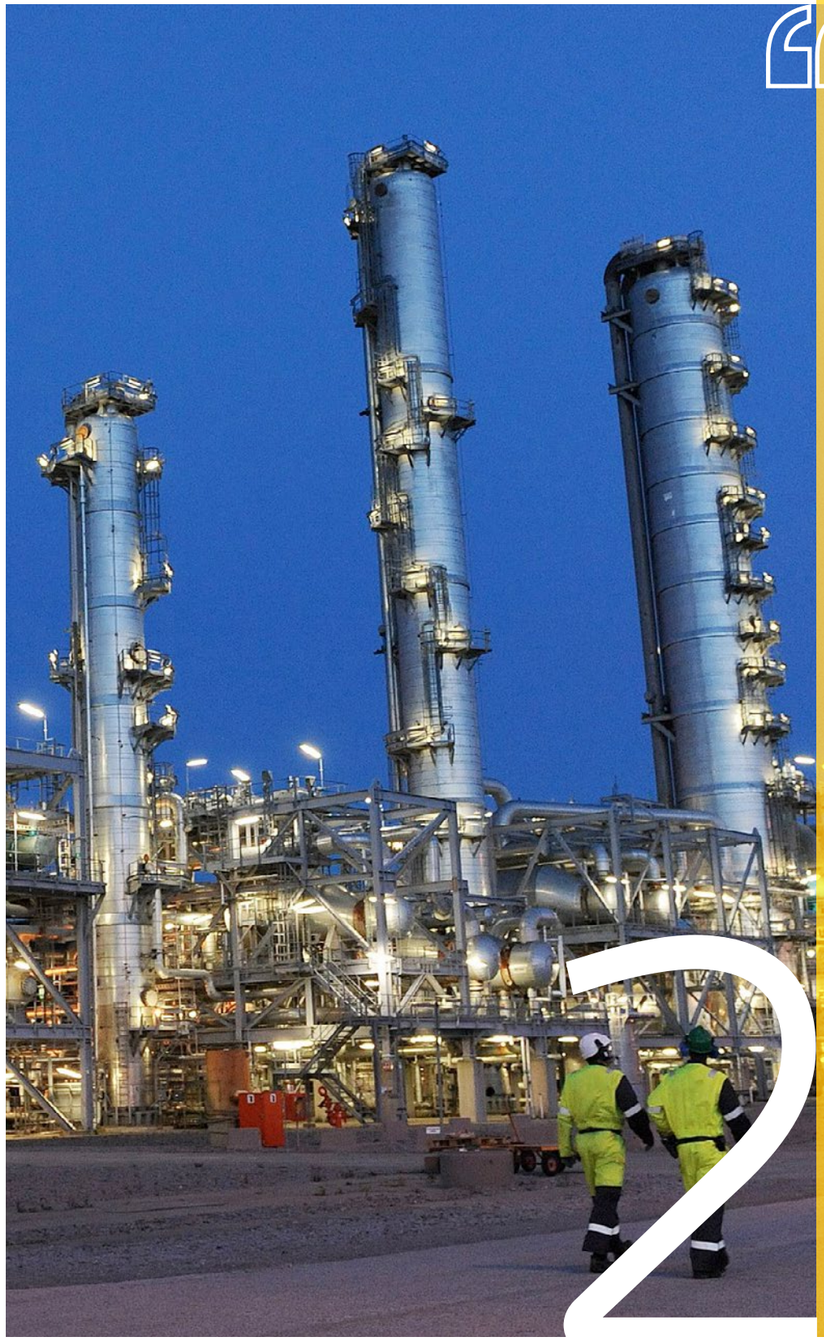
PROVEN ON A **GLOBAL SCALE**

With 14,000 installations worldwide, Energy Recovery is delivering increased profitability and productivity and a reduced carbon footprint to hundreds of companies' industrial operations worldwide.



14,000
INSTALLATIONS



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BOB SMITH **CHESAPEAKE**

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SANDRA BUCK
SAUDI ARAMCO

23%
INCREASED ENERGY EFFICIENCY

VALUED RESOURCE

The ground rules are changing in the oil and gas sector today with any practices considered wasteful or costly coming under greater scrutiny than ever before and liabilities being reviewed and considered as potential assets.

That's why Energy Recovery and its industry leading isobaric pressure systems are meeting these challenges head-on and delivering more profitable, productive and environmental sustainable oil & gas operations – in short operational excellence.

VALUABLE RELATIONSHIPS

From planning, to system design and implementation, we're there for you. With teams around the world, we offer support 24 hours a day and we will stop at nothing to ensure complete customer satisfaction.

PROFIT FROM PRESSURE

CONTACT ENERGY RECOVERY TODAY

Ismail Nawaz
Head of Sales Oil & Gas