## ICELAND

This cool North European country offers a warm welcome

## A Look From Abroad

For a country of just 315,000 people, Iceland is a dynamic hotbed of innovation and enterprise. At \$54,858, GDP per capita is among the top five in the world and growing at an annual rate of 5 percent.

Iceland, which produces 70 percent of its energy supply through renewable sources, is in expansion mode in government, business and education. While the traditional sectors of fishing and heavy industry continue to thrive, wealth and deregulation are thrusting new companies into the international spotlight in areas as diverse as banking, energy and tourism.

Iceland enjoys a long and amicable trading history with Japan, which Prime Minister Geir Haarde notes, "has traditionally been about the fishing and maritime industries, but may now be changing with the new developments in the country."

As the cod capital of Europe makes a name for itself in other areas, fantastic opportunities are opening up to Japanese investors. Hisao Yamaguchi,



Japanese ambassador to Iceland and Norway, says: "Iceland is a very experimental country and its people very clever. We really admire their achievements, especially in energy production."

Fishing still provides 40

percent of Iceland's export earnings — the country exports 95 percent of its catches — but the industry is vulnerable to declining fish stocks and lower global prices. Despite this, it is in good shape. As Minister of Finance Árni Mathieson notes: "The fishing sector is not declining, just the other sectors are outgrowing it. Japan is a very big trading partner. Anything positive happening there is positive for our fishing industry."

Japan and Iceland are among the world's top 10 fish-producing countries, standing at sixth and 10th place, respectively. Japan is also the world's largest fish importer, so an important market. Einar Gudfinnson, minister of fisheries and agriculture, says: "Japan was a pioneering market that enabled us to start processing new species. Our aim, then, is to continue the excellent economic relationship we have

We also want to organize our fishing industry in the most economic way. We have always practiced sustainable fishing and will try to make the industry more competitive."

Founded in 1942, Icelandic Group is one of the country's leading fish producers, producing high-quality products and outstanding service to clients at home and abroad. In recent years, the company has focused on broadening its range of products with an emphasis on fresh and chilled seafood. Although it does not actually catch fish, the company handles sales and marketing for secondary producers.

resource," says Icelandic Chairman Magnus Thorsteinsson, "so you need to make maximum use of what you get out of the sea. Icelandic Group handles about 500,000 tons of fish annually. We are a strong company and Japan is a very important market for us since they know what goodquality fish is and are willing to pay for a quality product."

"Fish is not an unlimited

Meanwhile, Minister of Industry, Energy and Tourism Össur Skarphédinsson is keen



to attract investors to the up-andcoming sectors. "Geothermal energy has still not come on the radar of the big nations, yet we have specialist knowledge we are willing to export," he says. "Japan has the finance to help us expand. We are also developother energy-producing techniques. I would like to see Japanese entrepreneurs put their money to work and create something similar to that which we have achieved."

Companies like Geysir Green Energy and Landsnet are making important contributions to Iceland's energy sector, and are keen to export their knowledge worldwide. Landsnet, which owns and operates Iceland's major electrical transmission lines, is currently on an energy-efficiency drive. "We are going to continue to seek innovative relationships with stakeholders domestically and internationally," says Thordur Gudmundsson, president and CEO. "The infrastructure in Iceland is very flexible in terms of decision making. We have a 'Let's do it!' attitude. The communication channels are very short and efficient."

Education is also an important growth sector and the Education Ministry is making internationalization a priority.

versary, Reykjavík University continues to raise its profile as an international business school and research center, and role model for forward-thinking universities worldwide.

With foreign collaborators such as Japan's Kyushu University, MIT in Massachusetts, Columbia University in New York and IESE in Spain on board, the university is on a mission to "fight brain drain and play brain gain," according to its president and rector Svafa Gronfeldt. "We are building one



of the elite campuses in Europe,"

Founded by the Reykjavík Chamber of Commerce in 1998, Reykjavík University works alongside industry to prepare Icelandic students, and a growing number of international scholars, for careers within law, business, health, education, computer science and engineering. Around 700 courses are offered — 160 at master's level —with places for more than 3,000 students. "We currently turn down 60 percent of applicants," says Gronfeldt, in relation to the university's growing popularity. "Our uniqueness is in our interdisciplinary approach, and strong ties to local and global

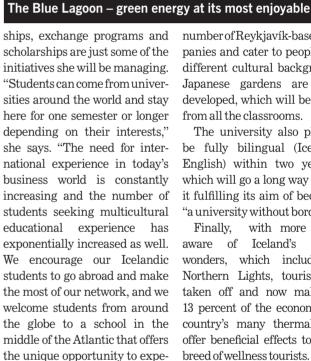
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industry. We have a staff of 500 from 23 countries, where more than half of the facility is actively involved in business and industry. Being a platform where East meets West, we have managed As it celebrates its 10th anni- to create a true melting pot of ideas and innovations clearly visible in our dynamic teaching methods."

> As a former executive of one of the world's largest generic pharmaceutical companies, Activis, Dr. Gronfeldt is more than qualified to lead Reykjavík University into its next phase of growth. International intern-





The "UniverCity" project, due to be completed in 2010, will thermal pool, an outdoor pool

rience insights from Europe,

America and Asia in one place."

number of Reykjavík-based companies and cater to people from different cultural backgrounds. Japanese gardens are being developed, which will be visible from all the classrooms.

The university also plans to be fully bilingual (Icelandic/ English) within two years which will go a long way toward it fulfilling its aim of becoming "a university without borders."

Finally, with more people aware of Iceland's natural wonders, which include the Northern Lights, tourism has taken off and now makes up 13 percent of the economy. The country's many thermal pools offer beneficial effects to a new breed of wellness tourists. Laugar Spa, a health spa and resort in Reykjavík, for example, features an Olympic-size indoor pool, a

This report can also be read online at www.japantimes.co.jp/international-reports

## Geysir Green Energy — bringing geothermal solutions to the world

In a world hungry for clean and sustainable energy solutions, Geysir Green Energy is a breath of fresh air.

The Icelandic company, set up just over a year ago, specializes in geothermal energy, making full use of Iceland's unique "fire and water" landscape to provide this low polluting, autonomous energy that can be used in a variety of disciplines, including swimming pools, spas, snow melting, agriculture and aquaculture.

While other companies may have the expertise but lack the financial resources to bring capital-intensive geothermal projects to fruition, Geysii Green Energy can provide access to both and is determined to play an active part in the climate solution. Ásgeir Margeirsson, CEO of Geysir says: "We have already invested more than \$650 million in geothermal projects around the globe. We are following the renewable energy trend, and offering our services in the form of partnerships so that the resource can be utilized where it is not currently available."

As well as looking for market opportunities, Geysir also invests in the development and construction of geothermal plants, acquires geothermal plants currently owned by power utilities and participates in the privatization of energy companies all over the world. So far, the company is present in the U.S., Germany, Canada, China, the Philippines, Central America, New Zealand and of course Iceland. It is now planning to double its asset base, "Iceland offers impressive statistics when it comes to geothermal power," Margeirsson explains. "Eighty-nine percent of its heating energy is from geothermal supplies. Geothermal power increased tenfold from 1997 to 2007. There is nowhere else in the world where geothermal energy contributes to so great a part of a nation's energy supply."

The ambition to harness this unique know-how and invest in this underused energy resource around the world prompted three Icelandic companies to set up Geysir — namely, the FL Group, an investment company with



Electricity has been generated from geothermal resources for around 100 years, and new plants can run at over 90 percent capacity. A report published by the U.S. Geothermal Energy Association last year estimated that the number

of countries producing power from geothermal resources could increase 120 percent, from 21 in 2000 to as many as 46 in 2010. "We could do a lot of business with Japan," Margeirsson says. "In fact, if Iceland and Japan were to cooperate on renewable energy/geothermal projects around the world, you could not form a stronger team."

Financially speaking, geothermal projects require relatively high upfront investment costs and carry high drilling and exploratory risks. The projects are often small and located in rural areas, which increases transaction costs. The economic yields, however, are considerable. As with other renewable energy technologies, the high capital costs provide a lifetime supply of fuel and free up foreign currency otherwise used for fuel. Meanwhile, lifecycle costs are low and sustainably managed reservoirs can yield harnessable energy for many decades.

## Other significant Geysir projects include:

ICELAND DRILLING (100%) — Iceland Drilling has grown significantly in recent years and is now the largest geothermal drilling company in the world. Significant investment in machinery has allowed Iceland Drilling to increase its activities abroad.

Iceland Drilling was born out of the Icelandic geothermal industry and maintains long and successful working relationships with all of Iceland's energy companies. The company also owns subsidiaries

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Ásgeir Margeirsson, CEO, Geysir Green Energy

a specific interest in the sector; Glitner Bank, a bank operating exclusively within the renewable energy sector; and leading engineering consultants VGK Hönnun, which has extensive geothermal expertise, and more than 250 specialists in its extended team of founders and investors.

This expertise, along with Iceland's well-known open and entrepreneurial culture must surely afford Geysir excellent credentials for partnership. As Margeirsson says: "Generally, we need four things in place for a project to become a reality. We need geothermal resources, a market, knowledge and capital. We have the knowledge and capital in-house, so we go in search of the resources and markets at home and abroad."

The company already has strong links to Asia, having joined with PNOC Energy Development Corporation — the Philippines' largest geothermal power producer — and Enex in China. Margeirsson says: "Enex China is jointly held (33.3 percent) by Enex, Orkuveita Reykjavíkur and Geysir Green Energy. Together with Shanxi CGCO Energy Development Construction Co. Ltd. (held partly by Chinese firm Sinopec), Enex China recently completed the first phase of what may become the largest geothermal district heating system in the world, with the potential to provide heating for more than 500,000 people."

ICELAND DRILLING UK LTD., which has successfully drilled for projects in the United Kingdom and the Portuguese-owned Azores, and **HEKLA ENERGY GmbH**, which is involved in low-temperature geothermal

EXORKA INTERNATIONAL (66 percent) — A technology and project developing company that is soon to be a generating company. It has the rights to the utilization of Kalina technology, which allows electricity to be produced from a low-temperature geothermal resource. The technique uses an ammonia/water mixture for steam production and is used in a 2.1MW Kalina power plant built in northern Iceland in 2000.

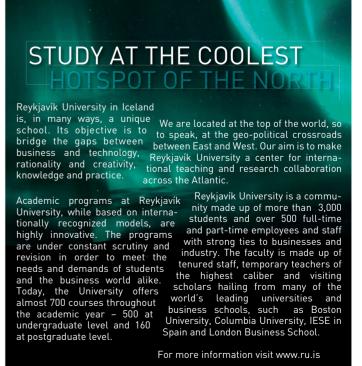
**ENEX (73 percent)** — Founded in 1969 by Iceland's largest energy and engineering companies, Enex is an active participant in geothermal projects. Enex's largest shareholders are Geysir (73 percent) and Reykjavík Energy Invest (26 percent).

HITAVEITA SUDURNESJA (32 percent) — Iceland's second-largest provider of geothermal electricity and district heating through its two plants in southwestern Iceland. The company has been a pioneer of new methods and technologies since it started providing geothermal water to users in 1977.





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