

## IFC commission SgurrEnergy solar experts



Ben Lumby, solar expert, SgurrEnergy assessing solar panels on site

**The International Finance Corporation (IFC), part of the World Bank Group, has commissioned SgurrEnergy's solar technical experts for an eighteen month assignment to carry out knowledge management activities for multi-megawatt scale solar power projects in India.** The project includes the development of a comprehensive

guidebook for developers and investors of photovoltaic and concentrating solar power plants, construction monitoring of multi-megawatt scale solar projects, market analysis, training and dissemination activities. Drawing on extensive experience in the more developed European solar market, SgurrEnergy's engineering consultants will also carry out technical due diligence of multi-megawatt scale PV power plants and develop best practice and lessons learned material for IFC staff and stakeholders within the fast growing Indian solar industry. Project manager at SgurrEnergy,

Ben Lumby, stated "this is an exciting project that demonstrates the strength and adaptability of SgurrEnergy's solar capability. We are delighted to be involved in multinational development bank projects. Our well connected global network of offices includes China and India and so we are well placed to provide on-site support and knowledge transfer throughout the region."

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## SgurrEnergy advise on Chinese wind farm portfolio



Chinese wind farm

**SgurrEnergy, a world leading technical advisory consultancy remains at the forefront of wind power in China. SgurrEnergy has**

**been engaged by a major Chinese renewable power company, owned by one of the five largest power producers in China, to produce an independent technical report on an extensive portfolio of Chinese wind farms.** The portfolio comprises over 50 operational wind farms and a significant development pipeline. The project is being undertaken primarily by dedicated staff based in SgurrEnergy's Beijing Office. As part of the assignment SgurrEnergy conducted site visits to 11 wind farms spread across Shandong, Jilin and Inner Mongolia Provinces and Shanghai Municipality. Renewable Energy Consultant Molly Iliffe

was seconded to SgurrEnergy Beijing from the UK Headquarters to support the assignment. Molly provided expert due diligence advice from her international experience in Asia, Europe and the US. She stated, "This project builds on SgurrEnergy's expanding role in China, with our Beijing consultants currently involved in due diligence, wind measurement, energy yield prediction and construction monitoring work. To date our Beijing consultants have undertaken technical adviser and due diligence work for more than 2000 MW of installed capacity."





Sgurr (pronounced Skoor) Scottish Gaelic meaning peak, pinnacle or summit. We are very proud of our Scottish roots and our reputation for engineering excellence.

## SgurrEnergy Inc. expands to deliver



**Portland, Maine, USA, the new larger home of SgurrEnergy Inc. With the renewable energy sector booming in the states**

**SgurrEnergy has responded to client demand for its services by moving into a larger office space leased from the Gulf of Maine Research Institute (GMRI).** GMRI is a world-class marine research and educational organisation. Ian Irvine, Co-founder, commented, "Our business in the states is enjoying a strong period of growth as the brand becomes synonymous with leading independent technical advice for wind farm developers and independent power



SgurrEnergy Inc, Portland, Maine, USA

producers across the country. The independent technical expertise we provide is invaluable to the development

of profitable wind farm projects in the long term." Jim Tolan, President, US Operations, stated, "Our roles in the Cape Wind Project and a Mid-Atlantic offshore project, as well as our due diligence support for leading US financial institutions, has provided significant growth opportunities for SgurrEnergy in the US. Our clients are appreciative of our ability to provide insightful information on fast track assignments. Also, European lessons learned are of tremendous use to US projects and provides a real point of differentiation for SgurrEnergy."

## Indian offshore wind roadmap



**Richard Boddington, Wind Measurement and Analysis Manager at SgurrEnergy recently spent some time in India discussing the potential for offshore wind farms along India's coastline. Richard was invited to speak at a workshop held by India's Ministry for New and Renewable Energy, which aimed to lay down a road map for developing the offshore wind industry in India.** "It was an excellent event," Richard commented. "The move from onshore to

offshore wind is not at all straightforward, and it's important that all the key players from both the policy and the technical sides sit down and work out clearly exactly what their objectives are. We've done a lot of work looking at the feasibility of offshore wind in China, and there are a lot of similarities so my main objective was try and share some of our findings from our work there. There's always a tendency to focus too much on the wind resource, and of course that is important but there



Richard Boddington

are dozens of other issues that need to fit into place to make offshore wind feasible." While he was in India, Richard also spent some time in SgurrEnergy's Pune office. "It's great to see the way our business in India is growing. We've got a really great team there now, and they're really busy – not just on wind projects, but also lots of solar work, which is really taking off."

## Technical Advisor for Glenkerie wind farm



L-R Alasdair Miller, Engineering Group Manager and Steve McDonald, Implementation Director, SgurrEnergy

**Infinis, one of the UK's leading renewable energy generators, has appointed SgurrEnergy, leading independent engineering consultancy to provide Technical Advisor services throughout the construction phase of Glenkerie**

**wind farm, near Biggar in southern Scotland.**

Services will include:

- On site supervision of all aspects of construction
- Technical support covering mechanical, electrical, civil, geotechnical and hydrological aspects
- Health and safety and environmental management

The project recently secured financing from Lloyds and BNP Paribas in the form of a project debt facility of up to £32 million (\$48 million). This marks a significant achievement, as the credit crisis has made it difficult for developers, especially smaller ones, to

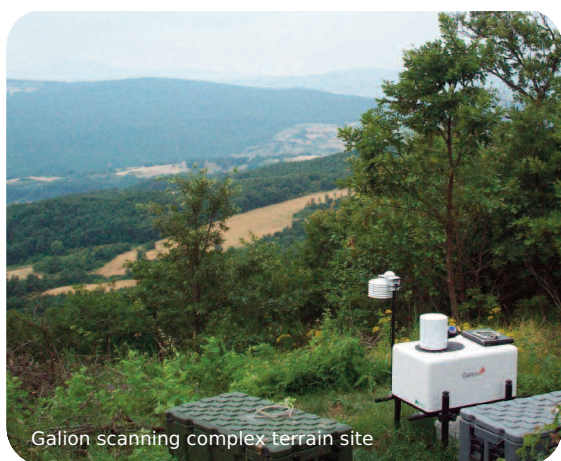
arrange funding for new renewable energy projects. Alasdair Miller, SgurrEnergy's Engineering Group Manager, said, "Being selected for this project demonstrates the wealth of SgurrEnergy's construction supervision capabilities. Delivery of such projects reinforces our position at the forefront of technical advisor expertise worldwide."

The project is expected to become operational in 2011, it will comprise 11 wind turbines and have a capacity of up to 22 MW. For further information about our Engineering Consultancy and Technical Advisor services available worldwide please contact us on +44 (0) 141 227 1700.





## Cutting edge modelling for complex terrain



Galion scanning complex terrain site

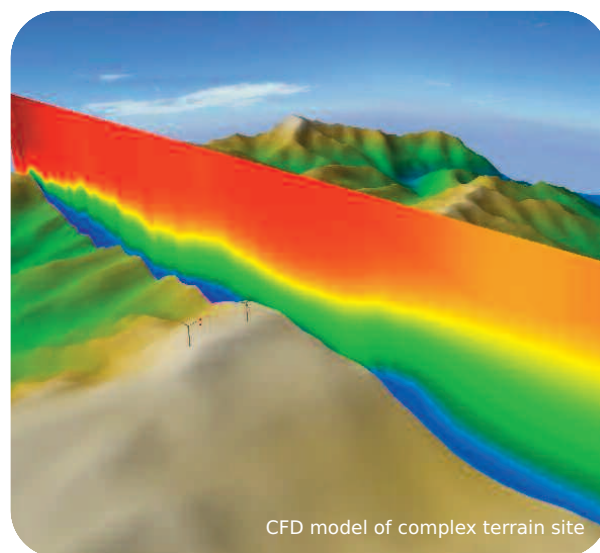
**With more wind farms being developed in complex terrain and forestry there is an ever increasing requirement for advanced modelling techniques. SgurrEnergy has always been at the forefront of complex modelling, using comprehensive wind measurement campaigns to calibrate our wind flow models. Increasingly we have been using computational fluid dynamics (CFD) modelling to deliver even higher quality wind regime assessments.**

Historically, the accuracy of CFD models

has been limited by the resolution of the computer models and the limited validation achievable using traditional cup anemometers. SgurrEnergy is now addressing both of these issues. We have recently made a significant investment in the computational resource for CFD modelling. Where CFD models are currently 1.5 – 2 million computational cells in size, our new computational facility provides a fourfold increase in computational model

size, with approximately 8 million cell models being achievable. Our improved processing power allows even the largest of models (i.e. 7 million+ cells) to be computed in less than 24 hours. This increased capacity provides an improved level of capture of wind flows arising from terrain features and more accurate representation of detailed forestry height information. In addition, we are using the

unique all sky scanning abilities of our Galion Lidar to make high resolution wind speed measurements over large surfaces that can be directly compared to the gridded output from our CFD models. This recent work reveals a whole new level of structure in the wind, and has shown that such detail can be critical in modelling wind flow accurately. We believe it's another step in reducing project uncertainty for our clients.



CFD model of complex terrain site

### SgurrEnergy expands its complex wind flow modelling capabilities using Galion Lidar and beefing up its computing power to undertake detailed model calibration

## Norway's first project financed wind farm



Norwegian flag

**SgurrEnergy has been very active in lenders engineer roles in recent months with a number of our assignments reaching financial close.** Involvement in these high profile projects reinforces the firm's reputation as the leading international consultancy for lenders engineer assignments and indicates that the renewable energy industry and associated financial institutes are seeing a marked upturn in deal flows in recent months. Simon Luby, Advisory Services Manager at SgurrEnergy

stated, "With regard to some of our current mandates, within only the last few weeks Norway's first onshore wind farm (Hog Jæren 74 MW) to obtain project financing successfully reached financial close, followed rapidly by major onshore projects in Sweden and Ireland, and closing on a major UK offshore wind farm is expected imminently." For further information on SgurrEnergy's due diligence services email [info@sgurrenergy.com](mailto:info@sgurrenergy.com) or call +44 (0) 141 227 1700.





# About SgurrEnergy

SgurrEnergy is a leading independent engineering consultancy specialising in renewable energy. The team includes over 100 highly skilled professionals with hands on experience both in the UK and internationally. We provide full life cycle knowledge encompassing feasibility, design, development, and implementation services. This ensures

successful project delivery in wide range of technologies including wind, bio-energy, wave, tidal, hydro and solar energy. Clients in the utilities, investment, manufacturing, construction, renewable energy development and government authority sectors have benefited significantly from our technical expertise.



## Hélène Bulté discusses the Glasgow rowing experience

**The River Clyde, training ground or I should say training water for eight sprightly SgurrEnergy consultants who are taking part in the annual Clydesdale Rowing Club Corporate Regatta on 21 August.** Organised by the oldest rowing club in Scotland the Corporate Regatta brings together 15 Glaswegian companies who will form crews and complete training for 6 weeks in the run up to the competition. Each crew consists of four rowers and a brave coach who also takes the coxswain role. The coaches are volunteers at the club who train their randomly selected team. In order to succeed on race day they must impart their finest



knowledge and skills to enable their crew to claim glory, or a more realistic objective could be to cross the final line without falling in the Clyde..... Two crews are being sponsored by

SgurrEnergy to participate. Hélène Bulté, Renewable Energy Consultant taking part in the race commented, "our training sessions are taking place weekly during the Glasgow 'summer.' Flash flooding witnessed earlier in July has restricted a few of the sessions and the crews have not managed to get their boats further than the river banks. However, despite the rain, the spirits are high and the teams are enjoying learning this challenging sport. The most important thing will be to stay synchronised, not panicking and hopefully enjoy a nice summer's day on the river. Maybe even one of the SgurrEnergy teams will bring back the trophy to the office on Monday morning..."

## Visit us

**SgurrEnergy will be exhibiting at the American Wind Energy Association Wind Resource & Project Energy Assessment Workshop in Oklahoma City, Oklahoma, USA 14 -15 September 2010.** SgurrEnergy's Dr Peter Clive, Technical Development Consultant has been invited to speak at the workshop for the session - "New Frontiers: Operational Assessment: Performance vs. Projections, Turbine Modeling. The following month you will have the opportunity to meet our staff at AWEA's North American Offshore Wind Conference & Exhibition held between 5-7 October in Atlantic City, New Jersey. Come and visit us at booth 325 to find out more about our independent technical services, our involvement with Cape Wind Associates and our cutting edge Galion Lidar.



Gareth Brown, Senior Renewable Energy Consultant, SgurrEnergy exhibiting at a recent wind energy event

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