

# Energyzing Insch

## Case study

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### Overview

**Community Group:**

Insch Renewable Energy Consortium Ltd. (IREC)

**Location:**

Insch, Aberdeenshire

**Starting date:**

March 2015

### Background

IREC was formed in 2012 to investigate the opportunities for community-based renewable energy developments in and around Insch. Its aim is to generate an annual income for the benefit of the Friends of Insch Hospital and their plans to redevelop Insch Hospital.

In 2014, IREC was granted planning permission for a 500 kW turbine. However, the project was quoted £1.8 to £2.3 million for a full grid connection for the turbine. With this cost for connection, the development was not financially viable.

At around the same time, the Scottish Government created the Local Energy Challenge Fund. As a result of the grid constraints at Jericho and the possibility of Challenge funding, IREC decided to take control and design its own local energy system for its community. This became the Energyzing Insch Project.

In late 2014, IREC was successful in the first phase of the Challenge Fund application process and was awarded £30 k to research the feasibility of the Energyzing Insch Project.

The Energyzing Insch Project integrated locally based electricity and heat generation with distribution, supply, storage and a fibre optic network forming a local community grid. Electricity for the grid was to be generated by wind turbines, a proposed solar panel array and one or more combined heat and power (CHP) units. The CHP units would also provide heat all through the year with biomass boilers providing the extra heat needed during the winter.

Battery storage and an electric vehicle (EV) charging point were also to form part of the grid.

The fibre optic network that was to follow the electricity and heat cable routes was an essential part of the local grid. It was to provide reliable, fast and secure two way data transmission, essential for active grid management and to give the opportunity of receiving superfast broadband to connected users.



## Progress

The project began very well but it quickly became obvious that there were several key issues that could potentially cause problems:

### Regulatory/legal issues regarding the sale of electricity to customers

The regulation of the electricity market from both a safety and business angle is complex and detailed. The key issue for Energyzing Inch was that the project's aim was to supply and distribute electricity to both domestic and non-domestic customers. However, under the Electricity Act 1989, it is an offence for a person or an entity to supply or distribute electricity without being in possession of a valid licence or being within an exemption principally under the Electricity (Class Exemptions from the Requirement for a Licence) Order 2001. And, in addition, where a licence is required, the same entity is prohibited from holding both a distribution licence and a supply licence.

IREC were aware of this when they put in their application to the Challenge Fund and one of their first actions was to commission energy consultants and lawyers to come up with a solution that would allow IREC to distribute and supply electricity to domestic and non-domestic customers whilst meeting the regulatory and legal requirements.

The conclusions of the consultants' and lawyers' reports was that IREC should be able to obtain an exemption from both a distribution and supply licence due to the nature and scale of the proposed local grid. The key conclusions were:

1. IREC may be able to benefit initially from Class C Schedule 3 exemption to distribute electricity to non-domestic customers only. However, once it commenced distribution to domestic customers, this exemption would not be applicable. The lawyers concluded that,

subject to confirmation of the actual technical parameters of the plant and network and the actual MW levels which were to be distributed and supplied to both domestic and non-domestic customers, IREC may be able to benefit from Class B and Class A exemptions. However, the lawyers pointed out that there was some interpretative doubt due to the unclear nature of the drafting of the Exemption Order.

2. IREC may be able to benefit from the Class A of Schedule 4 exemption as a small supplier supplying an aggregate volume of electricity not exceeding 5MW (of which not more than 2.5MW could be supplied to domestic customers) where the electricity supplied was generated by IREC or one of its associated companies.
3. Finally, it was also noted that, in addition to the exemptions available under the Exemption Order, the Electricity Act 1989 in section 5(1)(a) empowers the Secretary of State to issue an exemption order to a particular person. It was suggested that IREC could apply for a specific exemption from the Secretary of State on the basis that the Inch project was a leading demonstrator of how a future approach to community energy could be implemented.

### **Network Rail**

The construction of the local grid required cables to be laid underneath or carried over the Aberdeen to Inverness railway line. Although a solution was found using directional drilling equipment, it took months of negotiation with Network Rail to get to this stage. From Network Rail's point of view, the project was an issue it could do without and we found that the default answer to all our questions seemed to start with a 'no'. We had to keep pushing to get answers.

### **BT**

Within the community of Inch, BT had been in receipt of government money to upgrade the broadband service. Due to state aid rules, that meant that IREC could not use further government money on the broadband service in the village. Anything that the project did with respect to broadband could only be to do with the control systems, it could not be for domestic broadband connections. Any new broadband connection work would have to be funded privately. This was a problem for the Energizing Inch project because, as a community group, they had no money of their own for funding broadband 'extras'. It was therefore decided that, in the first phase of the project, broadband connections to domestic customers could only be provided in rural areas. Within the village of Inch, upgrading the service to give domestic connections would have to wait until the project generated some funds. However, the main infrastructure of the fibre network would be there to develop as it was needed for network management purposes.

### **UK Government policy**

Over 2015, the UK Government made a number of sweeping changes to the UK renewable energy support schemes. This had a negative impact on the projected finances of the Energizing Inch project.

### **Oil price**

When the Energizing Inch project was proposed, the price of domestic heating oil was over 60p a litre. As a result, many people were struggling to meet their heating costs. Helping these people was a key aim of the project. However, over 2015, much to many people's surprise, the oil price slumped dramatically.

## **Outcome**

Although the issues with the electricity supply regulatory regime, the railway line and broadband connections were resolved, the changes in government renewable energy policies and, most importantly, the oil price had a huge effect on the financial viability of the Energyzing Insch project.

Although no one expects the oil price to remain low in the long term, the project had to be financially viable from the start which, with the oil price where it was at the start of 2016, it was not. As a result, and with great sadness, IREC decided to bring the Energyzing Insch project to a close at the end of the feasibility study.

## **What has been learnt?**

1. Everything takes 3 or 4 times longer than you think.
2. Don't expect other companies and people you deal with to be as positive about the project as you are.
3. But, there are a lot of helpful people around, if you can explain your plans clearly, other people will share your enthusiasm.
4. Use websites and social media to share what you are doing. Public support can be really important.
5. Be flexible and willing to change things as circumstances change.
6. Detailed project planning is essential.
7. Ask for help when you need it, it is not a sign of weakness.
8. Consultants charge a lot of money. Make sure the ones you commission are genuinely proficient in the areas that you need them to be.
9. Getting along with people is really important. Work on your social and collaboration skills!