

Developing responsible renewable energy projects

FuturEnergy Ireland

The Challenge

- Build a GIS system to evaluate potential sites for renewable power generation
- Create efficient GIS-led processes to enable the delivery of 1GW of clean energy by 2030

The Benefits

- Optimum sites identified for renewable power
- Accelerated planning and development processes
- Improved community relations
- Close collaboration in geographically dispersed teams
- Sustainable working practices

FuturEnergy Ireland has used ArcGIS Online, from its first day of operation, to help it achieve its target of generating 1GW of clean, renewable electricity by 2030. A pivotal business system, ArcGIS advances the company's ability to identify optimum sites for renewable energy projects, accelerate the wind farm development process and share information with local communities.

The Challenge

FuturEnergy Ireland was founded in November 2021 with the aim to develop more than 1GW of renewable energy by 2030. A joint venture between Coillte and ESB, it primarily focuses on developing responsible wind energy projects across Ireland.

From the outset, the organisation realised that geographic information system (GIS) technology would be a critical resource for supporting the spatial functions of the business, including site identification, wind farm development and community engagement.

The Solution

FuturEnergy Ireland held a number of scoping workshops with Esri Ireland to define the requirements of the new business. Through this process, it discovered that ArcGIS Online would deliver the functionality that users needed and, at the same time, be more cost-efficient than an on-premises system. As a hosted solution, ArcGIS Online also aligned with the company's ICT strategy to build all its core IT systems in the cloud.

In the months leading up to the company's launch, the FuturEnergy Ireland team worked with specialists from Esri Ireland's Professional Services Group to build a series of map viewers with ArcGIS Online that meets the needs of different user groups. These map viewers consolidate data from multiple sources relating to proposed wind farm sites and can be accessed via a single landing page, developed using ArcGIS Experience Builder. Employees use the map viewers to gain easy access to the accurate spatial data needed to plan and develop renewable energy projects, whether they are working in the office or the field.

In addition, Esri Ireland helped set up ArcGIS Field Maps to enable FuturEnergy Ireland's employees to conduct surveys in the field and upload information directly to the company's map viewers in real time. The ArcGIS Field Maps are now widely used by teams including community liaison officers, who collect local data on features such as new dwellings, unregistered monuments or small watercourses. Community liaison officers also have dedicated map viewers for each project, which they use to share information visually with local residents and demonstrate proximity to different features.

Finally Esri Ireland helped the company to set up a series of ArcGIS Dashboards to share information with relevant stakeholders around the business. The Esri Ireland consultants also used the ArcGIS Web AppBuilder tool to set up a series of filter and query widgets that allow users within the organisation to visualise different data sets.

Esri Ireland

Dublin

Block B | Ashtown Gate
Navan Road | Dublin 15 | D15 NP9Y
T +353 (0) 1 869 3928 | F +353 (0) 1 869 3901

Holywood

Twisel River Studios | 18 High Street
Holywood | BT18 9AD
T +44 (0) 2890 767336
E mapsmakesense@esri-ireland.ie
W esri-ireland.ie

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Colm O’Kane, Resources Manager, FuturEnergy Ireland

“ ArcGIS helps us to understand the local environment, share information, start conversations and build good relationships within communities. ”

Janine Thomas, Communications and Media Manager, FuturEnergy Ireland

The Benefits

Optimum sites identified for renewable power

ArcGIS Online enables the team at FuturEnergy Ireland to visualise, explore and analyse a vast amount of high-quality spatial data, on everything from topography and landscape to ecology and hydrology, and identify optimum sites for renewable power generation. “Spatial information is critical to everything that we do,” explains Colm O’Kane, Resources Manager at FuturEnergy Ireland. “Our ArcGIS Online map viewers help us to consider and analyse a large amount of spatial information so that we can design responsible projects that are sensitive to the environment and local communities.”

Accelerated planning and development processes

The efficiencies delivered by ArcGIS are helping FuturEnergy Ireland to progress projects from initial site identification through to development. In particular, staff can work efficiently in the field, as all the information they need is on their mobile devices and they don’t need to upload data when they get back to the office or rely on GIS specialists to create bespoke maps. “With ArcGIS, we can efficiently share information across teams, accelerating our planning and development processes,” says O’Kane.

Improved community relations

ArcGIS Online is proving especially valuable to the company’s community liaison officers, who now use project-specific map viewers to help their community engagement efforts. “ArcGIS helps us to understand the local environment, share information, start conversations and build good relationships within communities,” says Janine Thomas, Communications and Media Manager at FuturEnergy Ireland. “We are always looking for new ways for technology to improve our community engagement programme for individual projects, which also includes Virtual Exhibitions and webinars.”

Close collaboration in geographically dispersed teams

Used by 60-70% of employees at FuturEnergy Ireland, ArcGIS Online plays a key role in facilitating remote working for the company’s geographically dispersed teams enabling them to work together effectively. The online map viewers enable employees to share live information easily with others in their team on the GIS platform, wherever they are working. “All members of the team – not just the GIS specialists – have easy access to spatial information and can use ArcGIS to gain a better understanding of projects,” O’Kane says.

Sustainable working practices

Significantly, the use of ArcGIS Field Maps removes the requirement for paper-based mapping in the field and reduces the amount of paper used by the business. “We are a renewable energy company, so we aim to work in the most eco-friendly way possible,” explains Thomas. “ArcGIS Online removes the need for us to print maps and helps us to work in a more sustainable way.”

Esri Ireland
Dublin
 Block B | Ashtown Gate
 Navan Road | Dublin 15 | D15 NP9Y
 T +353 (0) 1 869 3928 | F +353 (0) 1 869 3901
Hollywood
 Twisel River Studios | 18 High Street
 Hollywood | BT18 9AD
 T +44 (0) 2890 767336
 E mapsmakesense@esri-ireland.ie
 W esri-ireland.ie



The screenshot shows the 'FuturEnergy Ireland GIS Platform' landing page. It features a dark header with the company logo and a navigation menu. The main content area includes a welcome message and a list of web applications: Renewable Energy Viewer, PIF Viewer, Environmental Viewer, and Forest Viewer. Each application has a corresponding thumbnail image and a 'Click here to navigate' link.

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