esri Ireland

Case study

## Improving the accessibility of information on renewable energy resources

# The Sustainable Energy Authority of Ireland

### The Challenge

- Make sustainable energy data more accessible
- Publish data more time and cost effectively

### The Benefits

- Easier access to environmental data via online apps and web services
- Deeper insight to support decision and policy making
- Ongoing internal time and cost savings

**The Sustainable Energy Authority of Ireland uses Esri's ArcGIS platform to make its rich environmental data resources more accessible, in more formats. Consequently, the organisation is better able to support critical decisions about the development of new sustainable energy schemes in the country.**

### The Challenge

The Sustainable Energy Authority of Ireland (SEAI) has a vitally important mission. Working with government, researchers, business and homeowners, it aspires to help transform Ireland into a society based on sustainable energy structures, technologies and practices. To achieve this vision of a low-carbon future, the organisation needs to make environmental data accessible to a wide range of audiences, decision makers and policy makers, in formats that they can easily access and use.

For many years, SEAI had been using an open source geographic information system (GIS) to allow people to view its authoritative data on wind speeds, geothermal energy and bioenergy resources online, via its web site. However, the organisation still had to deliver data to partners and third parties on disks, in what was a time-consuming and repetitive process. Also there was no facility for SEAI to manage the data directly as any changes to the open source application relied on external support.

### The Solution

In 2014, SEAI went out to tender and, following the competitive process, Esri Ireland was appointed to redevelop SEAI's online GIS services using Esri's ArcGIS for Server and ArcGIS Online solutions. "The move gave us a flexible web-based solution that was easy to update and develop," says Mary Holland, data management executive at SEAI. "We can now update and add data ourselves and have more control over how our information is delivered to audiences."

Significantly, ArcGIS gives SEAI the ability to make its data available as open web services for the first time. Public and private sector organisations can, therefore, now stream SEAI data, in a choice of formats, directly into their own GIS applications and use the data internally, without having to order CDs, setup and load the data. In addition, any individual or organisation can view SEAI data for free using the upgraded GIS apps on the SEAI web site.

At present, SEAI uses ArcGIS to deliver and share three significant data sets:

- The Wind Atlas of Ireland, providing detailed information on wind speeds and wind farm sites
- Geothermal Maps, showing subsurface temperatures , geologic regions and rock types
- Bioenergy Maps, indicating areas suitable for the cultivation of bioenergy crops such as miscanthus, oilseed rape and willow.

**Esri Ireland**
**Dublin**
Block B | Ashtown Gate
Navan Road | Dublin 15
**T** +353 (0) 1 8693900 | **F** +353 (0) 1 8693901
**Belfast**
**T** +44 (0) 2890730165 | **F** +44 (0) 2890730167
**E** mapsmakesense@esri-ireland.ie
**W** esri-ireland.ie



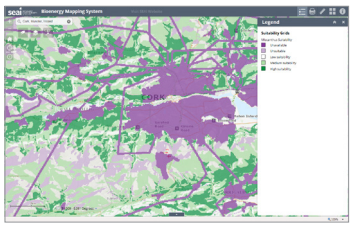
Learn more at: esri-ireland.ie

esri Ireland

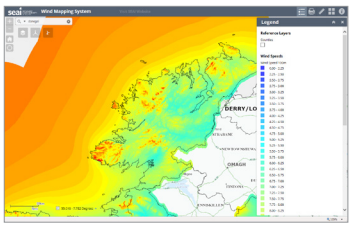
Case study

> Our valuable data resources are now more accessible, so that they can be used optimally to advance the development of sustainable energy in Ireland

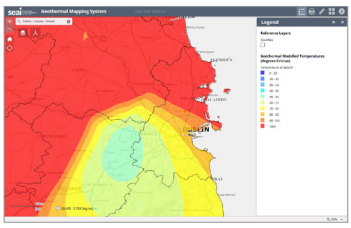
Mary Holland, data management executive, SEAI



Bioenergy Maps



The Wind Atlas of Ireland



Geothermal Maps

The migration to ArcGIS paved the way for SEAI to launch a new version of its online Wind Atlas with fresh data and added capabilities for users. For example, it has introduced a new 'wind data extract tool' to its online GIS app that allows users to select a point on the map and download hourly wind speeds over a specific period. "With the flexibility and enhanced features of ArcGIS, we can continually develop our online services to deliver a better experience for our users," Holland says.

## Benefits

### *Greater access to sustainable energy data*

SEAI anticipates that its new, full-featured GIS services will encourage more individuals and organisations to access and use its rich and unique data resources. In particular, the organisation expects local authorities, policy makers, researchers and market players, such as wind farm developers, to take advantage of its new web services to use SEAI data more extensively. "Our valuable data resources are now more accessible, so that they can be used optimally to advance the development of sustainable energy in Ireland," Holland says.

### *Improved insight to support decision making*

With intuitive features, SEAI's new GIS services make it easier for users to gain insight into the potential value of existing and new sustainable energy projects. People can find out about the suitability of a certain area of land for growing bioenergy crops, understand the potential for geothermal energy generation at a specific location or analyse wind speeds at possible new wind farm sites. "Users can take advantage of our GIS services to deepen their understanding of renewable energy constraints and opportunities," Holland explains. "Then, they can use this insight, along with other on-site assessments, to help them make decisions about potential new renewable energy schemes."

### *Internal time and cost savings*

Thanks to the introduction of the new web services, Holland and her colleagues no longer have to spend time burning, packaging and posting CDs, while providing an improved service for their stakeholders. At the same time, SEAI can develop its online GIS services more cost effectively in-house, as it is no longer dependent on external support to code and maintain the open source system. The organisation is already working on plans to publish additional data sets that will help to further promote the adoption of green energy in Ireland.

**Esri Ireland**
**Dublin**
Block B | Ashtown Gate
Navan Road | Dublin 15
**T** +353 (0) 1 8693900 | **F** +353 (0) 1 8693901
**Belfast**
**T** +44 (0) 2890730165 | **F** +44 (0) 2890730167
**E** mapsmakesense@esri-ireland.ie
**W** esri-ireland.ie



Learn more at: esri-ireland.ie