

Carbon Content of Electricity

We wish to bring to your attention that the way we are calculating the carbon content of electricity will be changing. This reflects EcoMerit's continued efforts to ensure its carbon measurements reflect best practice.

Electricity has carbon emissions since most of Ireland's electricity generation comes from gas and peat powered plants. They convert the heat from burning these fossil fuels into electricity. While Ireland does have a high amount of wind-based electricity, due to the grid limitations, only 70% of our power can come from wind energy at any given time. This is because if the wind were to suddenly stop, the amount of electricity being produced from the wind also drops. The fossil fuel plants must be kept on in the background, to increase their output to compensate for a sudden drop in wind. This avoids black outs and damage to grid infrastructure.

Previously, EcoMerit has used figures published by the Commission for Regulation of Utilities (CRU) to calculate the carbon emissions that come from the generation of electricity. These calculations involve the use of Guarantees of Origin (GOs) to reduce the emissions associated with electricity. It is the opinion of EcoMerit that Guarantees of Origin do not actually reduce the carbon content of electricity.

When energy is produced from a renewable source in the EU, the amount of energy produced is tracked. For example, a hydroelectric dam in Sweden produces 100 units of electricity per year. The owner of this dam can then sell the rights to this electricity to anyone in the EU. The idea is that the company who buys the rights to this electricity can say they got all of their electricity from a "zero-carbon" source (the dam), giving their electricity no carbon emissions. There are two main problems with this.

1. It does not account for the fact that the electricity was produced on a foreign grid.

If a company in Ireland buys GOs from this dam in Sweden and then claims that all of their electricity came from this dam, there is a very long way for the electricity to travel. It will have to go from the dam in Sweden through various EU countries until it gets to either France or the Netherlands, go through an interconnector to Britain and then a further interconnector to Ireland. The GOs do not account for any losses going along the thousands of kilometres of cables that the electricity would have to travel through to get to Ireland.

2. It does not account for the time that the electricity was produced.

If the company in Ireland was using electricity at a time when the Swedish dam wasn't generating electricity, it is impossible to have been using electricity from it. GOs do not match time of production with time of consumption.

Overall, when using electricity in Ireland, a company is using whatever electricity is being supplied to the Irish grid at the time, which as mentioned above is never more than 70% green. Therefore, if GOs are used to calculate the carbon content of electricity, it is not a true reflection of the carbon content of electricity.

Therefore, EcoMerit from this point on will be using figures provided by the Sustainable Energy Authority of Ireland (SEAI), which do not use GOs in their calculations. This will cause a slight rise in the carbon content of electricity, but it is a more accurate measure and in keeping with the ethics of the EcoMerit community.