SOLAR ANSWERS FOR LANDOWNERS

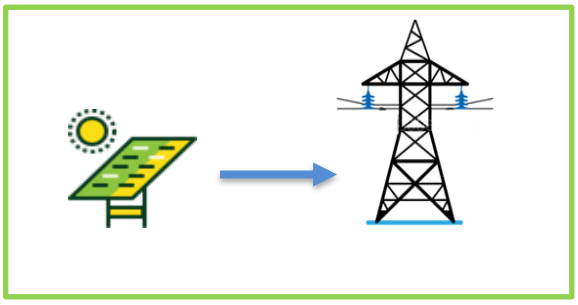
Louth Callan Renewables
EMPOWERING A BRIGHTER FUTURE ™

Solar Photovoltaics (PV)

Solar photovoltaics (PV) have been used in energy generation for decades and have quickly become the preferred technology of energy generators and utilities. Solar has vaulted to the forefront of energy generation due to improvements in module efficiencies and the ease with which they can be scaled to fit a range of energy solutions.

Unlike most other technologies, solar installations (often known as “solar farms”) are quiet, produce no emissions, and do not increase road traffic. Instead, they quietly go about generating energy for years to come, helping to power our homes and businesses while providing a steady income for the property owner.

The Basics



Solar technology provides a clean, sustainable energy solution that complements other land uses. The photovoltaic modules are fixed to steel racking and arranged to absorb the maximum amount of sunlight during daylight hours. Each of the PV modules converts sunlight into clean energy, which is then passed through transformers and an inverter and injected onto the utility electrical grid. This clean, renewable energy powers our local businesses, schools, and homes.

Safety First

Solar panels are an extremely safe technology that are made of non-toxic components. They don’t erode or cause emissions and panels carry a strong warranty, which means they are immediately disposed of and replaced if they ever break. Louth Callan Renewables utilizes only Tier 1 panels for every project as certified by Bloomberg New Energy Finance (BNEF).

DEVELOPMENT STEPS

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Development of the Site

Louth Callan Renewables has the experience and expertise to steer the solar project through all the development steps.

1. **Property Diligence -** This step involves doing the necessary environmental and legal diligence to ensure the site can host a project.
2. **Design of the Installation** - Our master engineers design a system that uniquely fits your property.
3. **Zoning Approvals** - Louth Callan's zoning team works with local and state agencies to obtain required permits.
4. **Interconnection Permission –** Our experts coordinate with the utility to ensure seamless interconnection of the project to the electrical grid.

Once the necessary property research is done, the system designed, and the approvals received, we'll ready the property for construction.

Responsible Maintenance

Each site is operated and maintained to the highest standards for the lifetime of the project. Louth Callan Renewables hires crew to ensure that regular mowing and weed maintenance occurs throughout the Spring, Summer, and Fall.

In addition, each site has top-of-the-line monitoring technology that informs the company in real-time when any project component is working sub-optimally. When that happens, technicians are immediately scheduled to promptly fix or replace the equipment.

Often, the land topography allows construction of the project with minimal grading and soil disturbance. Any wiring on-site runs underground and the site is protected with fencing in order to ensure the safety of neighbors and surrounding wildlife.

STEWARDSHIP

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Stewarding the Land

Solar projects can prove beneficial for the land, especially when sited on low-producing areas of a farm property. Solar allows farmers or other land owners to make significant, consistent income from that portion of the property, while allowing the land to lie fallow and regenerate over time.

Productive Agriculture

Studies have shown that allowing land to fallow provides many long-term benefits including raising the organic content levels of the soil and improving its moisture holding capacity. This is another benefit of going solar since the site will be decommissioned at the end of the lease period and the land returned to productive agriculture under the landowner's control.

Pollinators

Crop Growth

In addition, where it makes financial and ecological sense, Louth Callan will grow pollinator-friendly plantings on the site. These plantings increase the aesthetic appeal of the project and promote a local pollinator population, vital to crop growth. In fact, studies show that the increase in pollinator populations resulting from these plantings can raise both the yield and size of crops in nearby farms.

RESPONSIBLE PRESERVATION

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Protecting Wildlife

The National Energy Code requires fencing to keep large animals like deer and bears out of the installation. However, the solar farm can be a protective benefit to smaller animals, like squirrels, birds, and rabbits that freely pass through the site, giving them shade and freedom from human interference. For safety, all wires are fortified with conduit protections and foam sealing at entry points into equipment.

No Glare

Solar modules are treated with an anti-glare coating which increases absorbed sunlight and decreases reflected light. In fact, modules have a similar reflectivity to farm ponds, natural wetlands, and even some types of rocks and soil. Generally, the light is reflected towards the sky since the panels are racked and tilted skyward in order to maximize sunlight exposure.

Finally, the minimal skyward reflection is at a level that is perfectly safe for planes and other aircraft. All applications for large-scale solar projects must be approved by the Federal Aviation Agency (FAA), which has approved many solar projects on airport properties and near highways.

Site Decommissioning

As part of our commitment to our landowners, all site equipment is removed and the land is returned to a natural state once the project reaches its useful end, usually 25-years.

Decommissioning includes removing, recycling or re-selling all modules, racking, wiring, electrical equipment and fencing, and then reseeding the area with a healthy grass cover.

Audibility

Solar projects are much quieter than nearly any other source of noise on-site, including farming, industry, or other energy generating technology. They produce a low-level noise during peak daylight hours, heard only at distances greater than 150 feet and they make no noise at all during night hours.