# Solar Myth Busting

**Solar panels produce glare which can be disruptive to neighbors and roads.**
Modern solar panels are designed to absorb sunlight, not reflect it. The anti-reflective coatings on the panels ensure that they convert as much sunlight into electricity as possible, minimizing glare. Furthermore, solar farms undergo a legislated glare assessment during the planning phase to ensure they don't pose a hazard to nearby roads or airports and go through regulatory scrutiny to ensure glare mitigations are implemented for public safety.

**Solar panels destroy the land they are installed on.**
Solar farms are designed with the environment in mind. The panels are typically mounted on piles driven into the ground, ensuring minimal disturbance to the soil. The land underneath remains dormant, allowing it to rejuvenate for future growth. Moreover, many solar developers, including Northern Renewables Ltd., implement biodiversity management plans. These plans often involve planting native species around the panels, promoting local flora and fauna and enhancing the site's ecological value. In Alberta, new solar farms must provide agrivoltaics plans, which ensure energy production strikes a balance with the preservation of agricultural land.

**Solar farms ruin the landscape and are an eyesore.**
While beauty is subjective, solar developers go to great lengths to ensure solar farms blend into the natural landscape. Strategic landscaping, like planting trees and shrubs, can screen the panels from view. Additionally, the low profile of solar panels (typically no more than 8-10 feet high) means they don't dominate the skyline like many other industrial structures. Northern Renewables Ltd. undergoes stakeholder engagement and sightline risk mitigation studies to ensure its solar farms are not an eyesore.

**Solar farms will be abandoned, like oil and gas wells, and left for the public to pay for long-term remediation.**
In Alberta, solar farm owners are not permitted to abandon solar farm equipment in the fields. Solar farm owners are required under government regulations to establish remediation funds during the operating life of the project. Those funds are held in trust until the end-of-life of the solar plant, so reclamation costs are covered during the decommissioning phase of the plant.

**Solar panels contain harmful chemicals that can leach into the ground.**
Most solar panels are made from silicon, glass, and aluminium, all of which are non-toxic. While some older or specific types of panels may contain trace amounts of heavy metals, these are sealed and pose no risk to the environment. No leaks can occur when solar panels are in operation, and there is no risk to human health. Globally, solar panels are crystalline silicon or cadmium telluride panels, not commonly referenced heavy metals like arsenic, gallium, and germanium. While trace amounts of lead may exist in solar panels, they can be carefully managed during decommissioning and recycling. Moreover, strict regulations ensure the safe disposal or recycling of solar panels at the end of their lifespan.

**A major problem with solar panels is they cannot be recycled.**
Solar panels can be redeployed and reused without ending up in landfills. The Alberta Recycling Management Authority (ARMA) collects solar panels for free and tests their performance. Even panels that are not working optimally can be sent to municipalities or community members for reuse, such as ice fishing huts. If reuse is not possible, the panels can be recycled, and costs are included in the end-of-life remediation trust fund. According to the Canadian Renewable Energy Association, up to 90% of the mass of a solar panel – including metals and glass – can be recycled. There are currently several commercial solar recycling facilities in Alberta. Further, companies such as Sunset Renewables, and Solar cycle are partnering with commercial

developers, to create a secondary market for solar panels and establish a circular economy center.

**A solar farm developer does not take responsibility for weed and vegetation management.**
Northern Renewables Ltd. recognizes the importance of controlling weeds and vegetation on project lands to ensure operation of solar projects, reduce costs, and prevent growth that may impact equipment or shade solar panels. As part of its Alberta Utilities Commission (AUC) application, Northern Renewables Ltd. will create a weed management plan within the environmental protection plan. Northern Renewables Ltd. will comply with the Weed Control Act to manage noxious weeds and address local nuisance weeds using best management practices, like those used by farmers. Northern Renewables Ltd. will be engaging Greenview and the local agricultural community to co-ordinate weed control plans.

**It takes more energy to make a panel than it produces.**
Solar panels produced today only need to operate for 4-8 months to make up for their manufacturing emissions. Since the average panel has a lifespan of 25-30 years, it runs emission free for most of its life span. There are many sources of study of lifecycle energy use. Solar panels produce 3-10 times more energy over its life than it takes to produce, install, and operate them.

**Solar farms are an expensive source of electricity.**
The cost of solar panels and other equipment is decreasing with increased efficiency and economy of scale of manufacturing. In Alberta, the market structure is an hourly settlement market, and there are times when solar energy is purchased by energy retailers and large users of energy at $0 / MWh. The cost of electricity with solar has declined considerably and is one of the lowest cost, and fastest, to market forms of new power generation in Alberta.

**Solar panels only last 10 years.**
Solar farm panels are now being guaranteed for 25 years for performance and can last even longer. Expected life span of most high-quality solar panels (from Tier 1 producers) are 25 years or more.

**Solar panels are not resilient to strong weather conditions.**
Solar panels are built to withstand hail to an extent. Quality solar panels are equipped with a thick layer of laminated tempered glass, providing protection against substantial impact. The robust glass cover protects internal solar panel components and is engineered to withstand significant hail impact. There are industry standards for manufacturing testing for hail resistance.

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