



Endangered Wildlife Trust

Perspective on the Impact of Renewable Energy Installations

The Endangered Wildlife Trust's (EWT) mission is to conserve threatened species and ecosystems in southern Africa to the benefit of all people.

This statement represents the EWT's position on the installation and operation of industrial-scale renewable energy facilities including wind energy, photovoltaic energy, all forms of concentrated solar power (CSP) and the associated impacts resulting from the construction of renewable energy sites. The EWT acknowledges the demand for energy from efficient renewable sources and supports the shift to a more diverse energy mix in South Africa, as this will decrease the consumption of fossil fuels in the long term. The EWT is also aware of the various potential negative impacts associated with renewable energy technology and associated infrastructure. However, we believe that these impacts can be managed using suitable remedial actions to the point where the benefits of deriving energy from renewable sources surpass their negative impacts on the environment.

The EWT considers the following risks that may result in significant long-term biodiversity impacts if not correctly managed. Several of these risks are common to all types of renewable energy installation. We note the following **risks** that must be considered:

General risks (including associated infrastructure)

- Displacement and disturbance of the landscape, with habitat loss due to the construction of the associated infrastructure that all forms of renewable energy require to perform optimally. This infrastructure has a considerable footprint, over large areas – including roads, power lines and meteorological masts – and increases the potential impact on biodiversity. Electrocutions and collisions of wildlife with power lines are widespread issues globally.

Wind Power

- Direct impact of wind turbines on birds and bats: initial operational monitoring reports across South Africa clearly illustrate how some bird and bat species are fatally impacted through collision with turbines.



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- The use of “power tower” technology, using a central receiving tower surrounded by heliostats (mirrors that track the movement of the sun), results in the heliostats being placed at distances of over one kilometre from the “power tower”. The area between the heliostats and the tower is occupied by solar flux and this concentration of solar energy is fatal to birds and insects flying through the area. Internationally, installations report that thousands of birds succumb to burn injuries annually.

Given these risks, and with reference to specific renewable energy sectors, we note the following **remedial actions** that should be taken to reduce the negative impacts of renewable energy installations:

General actions.

- Follow established mitigation methods to ensure that the impact of roads, meteorological masts, and all other associated infrastructure impacts are addressed proactively.
- Conduct comprehensive environmental assessments (particularly related to bird and bat species in the case of both wind power and CSP) at potential development sites.
- Ensure that generation sites and areas impacted by associated infrastructure are of low ecological importance.
- Ensure that developers adhere to recommendations made by biodiversity specialists. These may include the provision for no-go areas, species-specific conservation actions and additional monitoring requirements.
- Only consider developments outside the boundaries of protected areas (including but not limited to nature reserves, national parks, Ramsar sites) and Important Bird and Biodiversity Areas (IBAs), including species-specific buffer zones around these areas.
- Ensure that the area surrounding a development is able to support biodiversity that is displaced from the development footprint.



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- When selecting sites, consider the proximity of existing substations so that the distance of new power lines linking the facility to the national grid is minimised.
- Restore the habitat at a site once technology becomes obsolete or when landowner agreements expire.

Wind Power

- Only consider developments **away** from major migration routes, or habitats where wind turbines are known to pose high collision risks to birds, such as wetlands, mountain ridges and roost sites.

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- Plan solar farms so that they are not developed in linear, uninterrupted arrays that cause barriers in the landscape.

In summary, it is the EWT's opinion that the continued development of renewable energy facilities will play a crucial role in establishing a balanced energy mix in South Africa, provided that this is done in a responsible manner, taking cognisance of the ecological and environmental impacts of such developments. As with any development, this should be undertaken within the framework of legislation, current best practice, and should adopt the precautionary principle wherever information is lacking or uncertainties persist. Doing so will contribute to South Africa's growing energy needs while minimising impact on the environment.

The EWT bases its perspectives on the best available information and data available at the time. Our positions and opinions may change as more information and data become available.