



[f sawindenergy](#)

[@_sawea](#)

[in groups/2977014/profile](#)

[admin@sawea.co.za](#)

SOUTH AFRICAN WIND ENERGY ASSOCIATION: POSITION STATEMENT ON WIND ENERGY IMPACT ON BIRDS IN SOUTH AFRICA

The South African Wind Energy Association (SAWEA) is committed to ensuring that wind farm development in South Africa is undertaken in a sustainable manner that minimises potential negative impacts whilst maximising potential social, environmental and economic benefits.

All types of development can have a potential negative impact on aspects of a local environment. SAWEA is particularly cognisant of these impacts as they relate to Wind farm development and pro-actively engages with national and provincial authorities and stakeholders to better understand, avoid or mitigate these impacts during the planning, construction and operational phases of development.

SAWEA advocates wind power development over traditional fossil fuel power sources such as coal, not least because of the comparatively smaller environmental effects. In particular, SAWEA recognises the net positive contribution wind power makes to the environment in the context of mitigating climate change, now viewed as one of the biggest threats to global biodiversity by the World Conservation Union.

SAWEA recognises that the continued development of a sustainable and environmentally-sensitive wind energy industry in South Africa can be achieved through responsible development and takes seriously the potential impact of wind farms on bird populations.

The South African wind industry's commitment to the environment is further demonstrated through SAWEA's own Code of Conduct for Wind Energy Development, which requires SAWEA members to follow international best practice during project development, implementation and operation. This ensures that developers do not solely rely on legislation to guide responsible development, which in some instances can take time to take effect.

BIRD AND WIND ENERGY BEST PRACTICE GUIDELINES

Since its establishment, SAWEA has worked collaboratively with the relevant stakeholders and authorities in South Africa, including Birdlife South Africa (BLSA), the Endangered Wildlife Trust (EWT) and the Department of Environmental Affairs, to better manage the risks associated with wind farm development.

An important initiative SAWEA has engaged with as a stakeholder is the development and periodic revision of the Bird and Wind Energy Best Practice Guidelines, most recently updated in 2015. These guidelines are in line with international best practice standards in avian monitoring and impact assessment for wind farm projects¹. The guidelines have been designed over a number of years with the specific objective of ensuring that wind farm developments are designed with full care for birds and responsibility towards their wellbeing. Specific attention has been afforded to species that may be sensitive to the potential impacts of wind farms, and those of general conservation concern.

The guideline requires wind farm developers to commission a qualified and experienced independent specialist ornithologist (registered with the South African Council of Natural Scientific Professionals) to conduct a minimum of 12 months of robust pre-construction (baseline) bird monitoring at the proposed site. The results of such monitoring significantly influences the ultimate design of the development and is a key consideration in the next stage of the process: Environmental Impact Assessment. Based on the initial monitoring findings, the developer may deem the associated risks at the site too high and consequently take a decision to invest no further in the project. A minimum of two years of post-construction monitoring (conducted by the same specialist) is required once a wind farm is operational, the results of which continue to influence the wind farm Environmental Management Plan in an effort to avoid, reduce and mitigate the potential negative impact on bird populations. Unusually in terms of global practice, post-construction monitoring data captured by developers is also shared with BLSA to inform and better understand the relationship between birds and wind farm development.

Beyond the overall guidelines, SAWEA works with BLSA on the development of species-specific guidelines, specifically for the Cape Vulture and Black Harrier which have been identified as being of particular conservation concern with regards to wind energy.

The very unfortunate six Cape Vulture fatalities recorded at wind farms in 2017 are acknowledged by SAWEA. The wind farms concerned were completed before BLSA and the Endangered Wildlife Trust's Best Practice Guidelines for monitoring and impact assessment were adopted. More rigorous impact assessments are now being undertaken where wind farms are proposed within the range of sensitive species such as Cape Vultures. In terms of the farms where fatalities were recorded, additional mitigation measures have since been implemented in an effort to reduce the risk of further Cape Vulture collisions.

¹ <https://www.iucn.org/theme/species/our-work/species-and-climate-change>

¹ <https://www.birdlife.org.za/documents/avian-wind-farm-sensitivity-map/804-birds-and-wind-bestpractice-guidelines-2015-final>

COMPARABLE IMPACT OF WIND FARMS ON BIRDS VS. CONVENTIONAL POWER

Whilst it is clear that Wind Farms can present a risk to birds, it is important that the risk is contextualised by comparing it with the risk presented by conventional power plants. A recent comprehensive study compared the avian deaths per GWh of electricity produced across three electricity technologies: wind farms, fossil fuelled power plants (coal, natural gas, and oil generators), and nuclear power plants². The study found that unlike wind farms, which generally impact on the environment in one location, fossil fuel and nuclear power plants spread their avian-related impacts across an entire fuel cycle, including the mining of raw materials, through collision and electrocution with operating plant equipment, poisoning and death caused by acid rain, mercury pollution, and climate change. The study confirmed that wind farms are responsible for an estimated 0.279 avian deaths per GWh, nuclear power plants 0.6 avian deaths per GWh and fossil fuel power plants 9.4 fatalities per GWh.

In summary, energy from fossil fuel sources has been shown to be about 35 times more dangerous to birds on a per GWh basis than wind and nuclear plants.

Bird fatalities at wind farms are also many orders of magnitude lower than those from other leading anthropogenic sources of avian mortality. Studies have estimated that in the United States between 97 and 550 million bird fatalities occur annually from building windows, 100 million from feral cats and approximately 67-72 million from pesticides^{3, 4, 5}. A 2005 study found that in the US, wind turbines were responsible for less than 0.01% of annual avian mortality from anthropogenic sources. Given that the potential avian impacts of a wind farm tend to be concentrated in one location, and are thus more visible and evident when compared to conventional power sources (whose avian impacts are spread across space and time).

CONCLUSION

Although it is evident that wind farms kill far fewer birds than many other anthropogenic activities (in particular other energy sources), SAWEA recognises the potential for wind farms to have a greater impact on large rarer bird species than other energy sources. The guidelines that Wind farm developers in South Africa apply are aimed specifically at minimising such fatalities and thus are helping to make the impact of wind farms on birds in South Africa even less than other energy sources.

SAWEA is committed both to the enforcement of best practice guidelines and ongoing research to inform improvements in the management of potential bird impacts brought about through wind farming.

³<https://www.sciencedirect.com/science/article/pii/S0960148112000857>

³ <http://www.wingpowerenergy.com/wp-content/uploads/2012/07/birdmortality.pdf>

⁴ <http://www.tandfonline.com/doi/pdf/10.1080/1943815X.2012.746993?needAccess=true>

⁵ <https://www.sciencedirect.com/science/article/pii/S0960148112000857>