



Highlands WILDERNESS

Generators

Premise

Highlands is a nature area and as such the avoidance and reduction of man-made noise have high priority.

Background

The original expectations raised by the developer regarding electricity caused some of the very first people to build, to opt for designs which are reliant on the supply of electrical power from Eskom. While the original rules placed a total ban on the use of generators, pragmatic necessity forced people to move outside of the rules. Though rules are made in the best interest of all parties concerned and are made taking into consideration special conditions and circumstances at the time, it may sometimes be necessary to make changes to these rules so that they are suitable and more practical – this being due to changes in circumstance and conditions. With a development such as Highlands it would be very difficult to have these rules cast in concrete and might even be short sighted and impractical. This is the case with the installation of generators on the Highlands premises. Management now acknowledges that the original rule was made for a different reality. We have therefore done research and revised the rule so that it is now both practical and environmentally friendly.

Determining your need

For the reason that no Eskom power supply (or unreliable Eskom supply) is possible to most of the households on Highlands, or should we say this is not possible at an affordable cost, the energy design of the household should be planned with great care and consideration to ensure that:

- The rules of Highlands are met – especially with regard to the required noise level specification
- You live in harmony with your neighbours
- You have a practical and workable design which is not cumbersome or costly

Listed below are some of the limiting factors to be kept in mind when designing the energy requirements – it is the responsibility of the homeowner to ensure that his design meets the rules laid down by Highlands plus all statutory requirements. ·

- No electrical supply from Eskom
- Thatch roof – preferably not naked lights
- Shortcomings of solar power – life of batteries, no power when there is no sunlight, theft
- Supply from generator to meet rules – limited hours and limited noise levels
- Containers for diesel/petrol to be SABS approved so that no spillages occur and thus environmental hazards are limited to a minimum.

Supply options



- Gas geysers
- Gas stove
- Gas Fridge/Freezer – these can be costly
- Low wattage lights
- Solar panels for lights and plugs
- Generators
- UPS – used together with solar panel or generator
- Batteries and voltage inverters
- Wind generators

Rational behind the rules

- Nobody wants to listen to multiple generators while watching the sunset or enjoying a bushveld braai, so generators may only run from 8:00 – 17:00.
- Even during day time the serenity of Highlands needs to be protected and therefore generators, even when used between 08:00 and 17:00 may not exceed a noise level of 75dB measured at 10m away from the generator.

Implication for solar

In order to make provision for no-sun days, owners should have sufficient battery capacity and large enough battery chargers to be able to sufficiently charge the batteries during the daytime to be able to serve them over night.

Implication for generators

Sound damping will be needed for generators. Manufacturer claims for generators sold as “silent generators” typically vary between 55dB and 75dB. Should such a generator now be placed in a weatherproof construction with some insulation, the level should easily fall within the required limit. Standard generators typically run between 85dB and 98dB. To dampen these calls for custom made damping measures. We could not find an as-is commercial product but do it yourself options are available. The complication comes because sound damping typically limits air flow. Air cooled generators need special provision for the supply of cooling air and the removal of the exhaust heat.

Suggestions

Management will help owners to determine the level of their generators and with rudimentary advice on the damping options – however the onus lies with the homeowner to ensure that the correct dB levels are achieved using damping options of their choice and design – proof of the dB level is to be provided to the management. However, we strongly advise that you start off by buying a silent generator in the first place. Further, keep noise level in mind when selecting the size of such a generator. Should you opt not to go the silent generator route we advise you to do research beforehand as damping calls for special building design and typically a modification to the exhaust manifold of the generator.

Implementation schedule



All homes completed after 01 January 2008 will need to comply with this rule before taking occupation. Houses completed before 01 January 2008 will have a period of 6 months in which to bring the noise levels down to below 85dB and a further 12 months to make provisions to meet the standard at 70dB.
