

**Green Futures
Hinchcliffe Technology Park
Sefton Williams Drive
Lidcombe
NSW 2141**

Designers! Your chance to make a difference with sustainable energy.

Green Futures is calling for design responses to the challenge of integrating wind generation and solar energy into a single roof-mounted module suitable for suburban and rural domestic dwellings. Generators, solar panels and electronic circuitry is available, but the way to tie it all together has not been done. That is your challenge.

Project: Integrated Energy Module (IEM)

Client: Project Development Branch, Green Futures

General Information:

The development of high-output wind turbines in recent years has led to the possibility of widespread electricity generation in certain geographic areas. Coupled with advances in solar cell efficiency, it is believed that both these sources of sustainable energy can be harnessed.

The wind turbines are unique in that they are small enough to be housed in a bank with appropriate ducting, with the surface area covered in solar panels.

Project Specification:

Simply, come up with a design (and scale model) of the IEM suitable for regular rooftops. Turbine diameters range from 350mm to 500mm, and it is believed that a minimum of two square meters is sufficient area for the solar panels. Module must be able to rotate 360 degrees in the horizontal plane according to the wind direction, and consideration must be given to reduce the noise and vibration of the unit in high wind conditions.

The scale model needs to be feasible, but working models are not necessary as the technology is proven. Examples that have aesthetic appeal and include digital images of the IEM as it would appear on location will be highly favoured by the review panel.

Be prepared to 'sell' your design!

Designers are encouraged to discuss design concepts and clarify any questions as they develop their ideas.