

The Amateur Yacht Research Society

Some Members' Projects

Wingsail + Electric

I am developing an environmentally friendly wingsail/electric boat. These two forms of motive power integrate very effectively together. Instead of being confined to use only electric power or only wind, combining the two brings advantages; for example: an electric boat can have a much greater range and does not have to carry so many batteries, if it can obtain power from any available wind, and a wind-powered boat can have the advantage of instantly available smooth electric power for tacking and manoeuvring in forward or reverse in harbour or to moor.

I have already started tests on a boat equipped in this way see. Details of this and videos can be seen on my website <http://www.sailwings.net>

Wingsail power increases the viability of augmenting battery charge with renewable sources, like solar power and wind turbine, since power requirements are less.

Automatic Wingsail/Electric

A simple speed switch can manage the integration of the two forms of power. If there is available wind and the speed increases beyond a predetermined value the electric motor cuts out, saving power. If and when speed falls below this value the electric motor cuts in again. Very useful for tacking or sailing on wooded rivers! The wingsail control lever and the electric throttle can be combined.

With this setup all that is needed to set sail, is to release the mooring ropes and set the control lever to drive. That's all there is to do, if there is enough wind you will be sailing on windpower alone and conserving battery power, if not, you will be cruising using the electric motor.

Peter Worsley

Website (with videos) and email <http://www.sailwings.net>



AYRS - *Where the ideas are !*

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