

Floating Solar Photovoltaic Array With On-Board Energy Management System For Controlling And Powering Inflatable Support Pontoons, Water Quality, Air Compression And Mooring Devices

Abstract:

A floating solar photovoltaic array having an energy management power control system configured to send power clipped by an inverter to the at least one powered accessory device which can be an aerator, a diffuser, a sub-surface agitator, a sub-surface water circulator, a sub-surface positioning/mooring system, a water quality sensor; a panel washer, or a bird removal system. The array has inflatable pontoons and an air manifold system which is powered by the solar photovoltaic modules can be used to adjust the angle of inclination of the solar photovoltaic modules to the sun. The powered accessories can also be powered by unclipped power or on-shore power or combinations thereof which can be controllably adjusted by the energy management control system over time.

Figure 1