

EFFECT OF ORIENTATION OF THE RAYS- RECEIVING SURFACE ON EFFICIENCY OF SOLAR MODULE

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The dependence of the choice of constructive solutions to the solar power plants solar modules (fixed or tracking system for the position of the sun) on the latitude location and temporal period of operation (date of year and time of day) are considered.

Calculated and presented graphically data on changes in the length of daylight throughout the year for latitudes 570 and 400 are compared .. timelines of solar batteries: fixed at a latitude of 450 and tracking the position of the sun for latitudes 400 and 570 held an indicative calculation specific stationary power generation plant and the installation of a tracking system for the position of the sun to compare their energy efficiency.

Held an indicative calculation of specific electricity generation fixed installation and installation of a tracking system for the position of the sun to compare their energy efficiency. The results are presented as graphs which analysis shows that solar battery with precise tracking of the position of the sun produces electricity per year 1.32 times larger than the corresponding stationary midsection area of solar battery with planar units but in the first case the structure is complicated device system tracking, additional structural elements, additional electrical switching, etc.

At the same time with the stationary solar battery generates concentrators relative to the planar solar battery is 19% less power per year, but its design has a much lower photoconverters (proportional to the concentration ratio of the unit).

When installing stationary solar panels on the roofs and walls of buildings proposed to use some formula of this technique to assess the energy efficiency de-

pending on the length of light hours from the time of year for areas at different latitudes and in view angles roof slopes and azimuthal orientation.