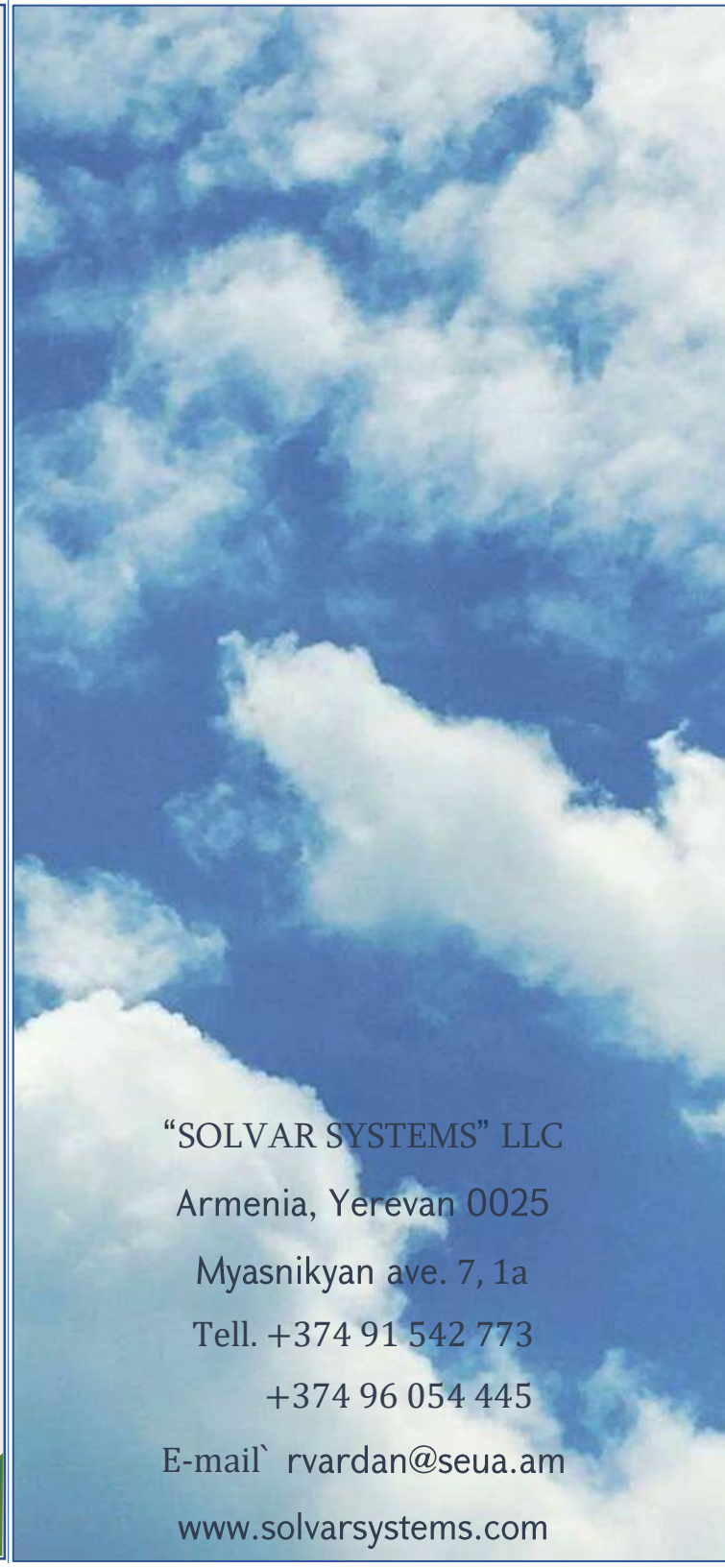


SMART PV BOOSTER

AUTOMATIC CLEANING SYSTEM OF SOLAR PHOTOVOLTAIC MODULES



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Cleaned



Dirty

Layer of snow



After cleaning



The developed cleaning system is economically profitable. It allows with a small investment to increase significantly the efficiency of photovoltaic modules, get more electricity, especially during the summer months, in the presence of bright Sun.

☞ Solar photovoltaic modules are usually covered with a layer of dust, so that the solar light does not penetrate into the solar cells, and the electricity produced is significantly reduced. That is why it is necessary to clean the photovoltaic modules regularly.

☞ The cleaning task is especially important during summer months, when in the presence of bright sun, due to the lack of rain the modules are covered with a layer of dust, the energy produced is reduced by up to 30-50%.

☞ However, the process of cleaning solar modules is laborious and dangerous, as the modules are usually placed in high positions on the roof.

“SolVar Systems” has developed an automated system for cleaning photovoltaic modules, which allows:

- to clean the surface of the modules with a high-pressure
- to clean the snow on the photovoltaic modules during the winter and restore the operation of the modules.

The cleaning system consists of a pipeline mounted on the top of the solar modules with micrometer size small diameter holes, an electronic control unit, a dust sensor developed by “SolVar Systems” and a remote control unit.



The cleaning system can be used in the following operating modes:

- By remote control. The operator carries out cleaning at any time through the remote control (from the house or yard).
- According to the periodicity entered by the operator in advance, the system automatically performs the cleaning
- Through the switch. Cleaning is carried out by means of a switch located on the electronic control unit, turning it on and off.
- Automatically. The system automatically performs the cleaning after receiving a signal from the dust sensor