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Solar Photovoltaic System (PV) Usages on Residential Houses in the Absheron Peninsula Region of the Republic of Azerbaijan: Obstacles and Opportunities

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Abstract : Energy security and climate change comprise some of the most important concerns facing humankind today and probably in the future if they are not addressed appropriately. In order to stabilize the global climate, there is the need for the world to lessen its use of fossil energy, which requires enhancement of current energy efficiency as well as the development of novel energy sources, such as energy obtained from renewable sources. There is no doubt that the steady transition towards a solar-based economy is likely to result in the development of completely new sectors, behaviours, and jobs that are pro-environmental. Azerbaijan Republic as the largest nation state in the South Caucasus Region has the potential for using and developing the renewable sources of energy in order to support the environmental challenge resolution associated with the climate change, improving the environmental situation in the country. Solar PV comprises one of the direct usages of solar energy. In this paper, sustainable PV usage scenario in residential houses was introduced to reduce negative environmental effects of land use, water consumption, air pollution etc. It was recommended by an author that, PV systems can be part of function and design of residential building components: such as roofs, walls, windows.

Keywords : energy efficiency, environmentally friendly, photovoltaic engineering, sustainable energy usage scenario
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