CLAIMS

1. An array of photovoltaic panels (10, 20) comprising a first photovoltaic panel (20) and a second photovoltaic panel (10) having a first side edge, and a second side edge opposite to the first side edge, wherein

the first (20) and the second (10) photovoltaic panels have an upper layer (21; 11) and a lower layer (23; 13), wherein

the upper layer (21; 11) is offset with respect to the lower layer (23; 13) at the first and second side edges, such that the upper layer (21) of the first photovoltaic panel (20) partially overlaps the lower layer (13) of the second photovoltaic panel (10), and the array characterized in that the array further comprises

a seal assembly (15) for arrangement between the first (20) and second (10) photovoltaic panels, wherein the seal assembly (15) comprises:

an upper abutment part (16) for abutting the upper layers (21; 11) of the first and second photovoltaic panels,

a lower abutment part (18) for abutting the lower layers (23; 13) of the first and second photovoltaic panel, and

an intermediate part (14) connecting the upper abutment part (16) with the lower abutment part (18) and configured for being arranged between the upper layer (21) of the first photovoltaic panel (20) and the lower layer (13) of the second photovoltaic panel (10)

2. The array of photovoltaic panels according to claim 1, wherein a top edge of the upper abutment part (16) of the seal assembly (15) is substantially level with a top surface of the first photovoltaic panel (20) and a top surface of the second photovoltaic panel (10).

3. The array of photovoltaic panels according to claim 1 or 2, wherein a lower edge (14B) of the intermediate part (14) of the seal assembly (15) comprises a plurality of protrusions (19) to form a labyrinth seal.

4. The array of photovoltaic panels according to claim 1 -3, wherein a length of the seal assembly (15) is larger than a length of the first side edge of the first and second photovoltaic panels (20; 10).

5. The array of photovoltaic panels according to claim 1 - 4, wherein the first and second photovoltaic panels (20; 10) further comprise a third side edge and a fourth side edge opposite to the third side edge, wherein

the upper layer (21) and the lower layer (23) of the first photovoltaic panel (20) at the third and fourth side edges are not offset, and wherein

the upper layer (11) and the lower layer (13) of the second photovoltaic panel (10) at the third and fourth side edges are not offset.

6. The array of photovoltaic panels according to any of claims 1 - 5, wherein the upper layer (21; 11) of the first and second photovoltaic panels comprises a glass plate.

7. The array of photovoltaic panels according to any of claims 1 – 6, wherein the lower layer (23; 13) of the first and second photovoltaic panels comprise a solar back sheet.

8. The array of photovoltaic panels according to any of claims 1 – 7, wherein the first and the second photovoltaic panels comprise a plurality of photovoltaic cells (17) encapsulated in a polymer matrix.

9. The array of photovoltaic panels according to claim 8, wherein the photovoltaic cells (17) are crystalline cells.

10. The array of photovoltaic panels according to claim 8 or 9, wherein the polymer matrix comprises Ethylene-vinyl acetate (EVA).

11. The array of photovoltaic panels according to any of claims 8 – 10, wherein the encapsulated photovoltaic cells (17) are arranged between the upper (21; 11) and the lower layer (23; 13).

12. A roof structure for a building comprising

a supporting framework, and

the array of photovoltaic panels (10, 20, 40, 50)according to any of claims 1 – 11.

13. The roof structure according to claim 12, wherein the supporting framework comprises a top beam (36), a bottom beam (38), a plurality of vertical beams (32A, 32B, 32C) extending between the top beam (36) and the bottom beam (38), and a plurality of lateral beams (34A, 34B) which are arranged substantially in parallel with the top beam (36) and the bottom beam (38), and

wherein the first and second photovoltaic panels are attached to one or more of the beams of the supporting framework, specifically

wherein the first and second photovoltaic panels are attached to one of the lateral beams.

14. The roof structure according to claim 13, wherein the first and second photovoltaic panels are attached to one of the beams of the supporting framework with one or more metal brackets.