CLAIMS:

1. A dual axis solar tracker comprising:

a first longitudinal beam comprising a first mechanical system;

a second longitudinal beam offset from the first longitudinal beam comprising a second mechanical system; and

at least one rotatable transverse beam extending between the first longitudinal beam and the second longitudinal beam, the transverse beam comprising:

a rotatable shaft inside the transverse beam;

a plurality of solar collector nodes each comprising a collector node mechanical element;

a first end comprising a first transverse beam gear for engaging with a worm drive in the first mechanical system to effect rotation of the transverse beam around its axis;

a second end comprising a second transverse beam mechanical element for engaging with the second mechanical system to tilt the plurality of solar collector nodes relative to the transverse beam through the collector node mechanical elements in the solar collector nodes; and

a hollow cross section comprising a conduit connecting each of the plurality of solar collector nodes.

2. The solar tracker of claim 1, wherein the first longitudinal beam, the second longitudinal beam, or the first longitudinal beam and the second longitudinal beam comprise a hollow cross section connecting to the conduit in the transverse beam.

3. The solar tracker of claim 1 wherein the conduit is one or more of an electrical conduit and a fluidic conduit.

4. The solar tracker of claim 3, wherein the fluidic conduit fluidly connects the plurality of solar collector nodes to a thermal cogeneration system.

5. The solar tracker of claim 1, further comprising a first motor connected to the first mechanical system for controlling the first mechanical system and a second motor connected to the second mechanical system for controlling the second mechanical system.

6. The solar tracker of claim 1, further comprising a plurality of solar energy harvesting elements connected to the plurality of solar collector nodes.

7. The solar tracker of claim 6, wherein the plurality of solar collector nodes comprise one or more photovoltaic light collection cells, thermal collection cells, combined photo-thermal cells.

8. The solar tracker of claim 1, wherein the conduit in the transverse beam is a fluid conduit and the plurality of solar collector nodes comprise an integrated thermal fluidic conduit connected to the fluid conduit.

9. The solar tracker of claim 1, wherein at least one of the first longitudinal beam and the second longitudinal beam comprises a longitudinal electrical main, and the plurality of solar collector nodes are electrically connected to the longitudinal electrical main.

10. The solar tracker of claim 1-9, wherein at least one of the first longitudinal beam and the second longitudinal beam comprises a fluid conduit main, and the plurality of solar collector nodes are fluidly connected the longitudinal fluid conduit main.

11. The solar tracker of claim 1, wherein the rotatable transverse beam comprises a plurality of worm drives for engaging with worm gears on the plurality of solar collector nodes.

12. The solar tracker of claim 1, further comprising a plurality of transverse beams.

13. The solar tracker of claim 1, further comprising a mounting structure for raising the solar tracker relative to a mounting surface.

14. The solar tracker of claim 13, wherein the mounting structure is capable of adjusting an angle of the solar tracker array relative to the mounting surface.

15. The solar tracker of claim 1, wherein the the conduit in the at least one rotatable transverse beam is an electrical conduit electrically connecting each of the plurality of solar collector nodes to an electrical main.

16. The solar tracker of claim 1, further comprising a plurality of solar cells, each solar cell connected to one of the plurality of solar collector nodes.