



## Development of Prototype Air Water Generator to Condense Water from Atmospheric Moisture

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**Abstract:** To solve the issue of water scarcity, other than ground water and surface water resources alternative is the use of atmospheric water which is equivalent to 6 times of water present in all rivers on earth. This manuscript deals with design and testing of atmospheric water harvesting device i.e. Air Water Generator (AWG) used to condense water from the abundant atmospheric moisture. This system is based on Thermo Electric Cooler (TEC) or Peltier principle with the help of 12 volts Peltier modules, 110 cubic feet per minute DC brushless fan, heat sinks. This design creates an environment which is capable of condensing atmospheric moisture, but the water productivity from the device is not satisfactory due to very less humidity. Although the design is able to decrease the ambient temperature up to 20°C and able to condense water if the inlet ambient temperature is 25°C and the relative humidity is above 50%. The proposed system is a small step towards the water scarcity in the Anantapur district but the prototype should be run test once in the high humid conditions.

**Keywords:** Atmospheric water harvesting, Air Water Generator (AWG), Thermo Electric Cooler (TEC), Peltier's, Humidity

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