

# **Electronics and Electrical Engineering**

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## Safe your electricity bill up to 30% safe our nation from carbon

Md Kamrul Hasan YOUTH Technologies Limited, Bangladesh

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The waste that your air conditioning unit or system makes can have a huge impact not only your energy bills but on the environment. The commercial, hotel and leisure industries are one of the largest industry sectors and consumers of air conditioning products and services yet many are still unaware of the damage they are doing both financially and globally. The problem you face is both from the life span of your air conditioning unit and the demand for air conditioners around the world matching the increasing temperature levels as global warming effects many countries at an alarming rate. The cost you may encounter to replace, maintain and of course run your air conditioning systems will continue to increase with the rise in energy bills to combat this demand and strain on resources.

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# **Bose-Einstein condensation**

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The occupation of a single quantum state by a large fraction of bosons at low temperatures was predicted by Bose and Einstein ninety years ago. The theory of Bose-Einstein condensation (BEC) of atoms is now well accepted, following on ingenious experiments, on dilute ultra cold gases of atoms with many laboratories showing new effects. In direct contrast, the occurrence of BEC in quasiparticles (magnons, excitons, polaritons, etc) has raised many heated discussions and very different opinions have been expressed about its nature. Snoke has presented criteria for excitons he believes are needed to qualify as a BEC. With magnons, Bunkov and Volovik do not accept the claim of the observation of BEC of magnons, whether in antiferromagnetic insulators (ladder compounds) or in pumping experiments or confined in nanoparticles. Mills has explicitly objected to the appearance of BEC in ladder compounds. It took many years for physicists to accept London's argument that super fluidity is a BEC phenomenon. P. Anderson noted that "Fritz London's single-minded thinking led him to surpass even Einstein, as he believed correctly that quantum mechanics was right at all scales including the macroscopic."

### Notes:

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