A challenge

Source: http://sci.tech−archive.net/Archive/sci.physics/2007−11/msg00156.html

- *From*: Pranab <pranabjyoti_calcutta123@xxxxxxxxx>
- *Date*: Sat, 03 Nov 2007 06:52:27 −0700

There exists a very firm belief about the 2nd law of thermodynamics that trying to extract energy i.e. conversion of energy into usable form is impossible because that violates 2nd law of thermodynamics. Though no conclusive mathematical and experimental proof has been produced yet. But ask about this question to any physics graduate, 99% (perhaps more) will answer that this isn't possible because that violates 2nd law of thermodyanmics.
Now, I want to present a semi−imaginary experiment i.e. most of that is experimented and proofed, but some theoretically and practically possible addition and alterations. The experiment is given below.
I want to discuss about Carnots theorem with some little imaginary addition and alteration to real experiment. In a real experiment of Open−Cycle OTEC by Dr. L.A.Vega, it is found that with a temp. diff. of 20ºC (25ºC and 5ºC) and with a steam flow rate of 26 kg/sec, the gross output is 1838 kW. The energy spent in diff. stages are 334 kW for cold water pumping from a depth of 1000 m, 284 kW for hot water pumping, 80 kW for the compressors i.e. vacuum pumps and 14 kW for pumping desalinated water to the shore. In total, the net output is 1126 kW.
Now, lets keep the whole system intact but just replace the cold water pumping with a heat pump of c.o.p of 3 and an input value of 364 kW and the whole system will delver its heat to raise the temp. of the vapor. Then the output would be 1092 kW of heat and that means 260 kcal of heat and that will raise the temp. of the 26 kg vapor by 10ºC. then this hot vapor will be used to produce electricity and if a 20ºC temp. diff. can produce 1838 kW of electricity then 10ºC temp. diff. can produce 919 kW of electricity I suppose as per Carnots theorem on efficiency of heat engines without going into further complicated details. Then by subtracting all other energy expenditures, we can get a net output of 177 kW of electricity and that is done without using the released cold gas of the heat pump at the condenser for your satisfaction. I am very much sure that if the heat pump will be further used to cool the condenser at the same time, and then we can get at least a temp. diff. of 30ºC and the gross output would be 2757 kW and the net output of 2015 kW of electricity, certainly an improvement over 1126 kW of net output. The more the input in the heat pump, the more will be the net output.
This imaginary experiment clearly shows that even without violating laws of thermodynamics, machines and systems can be built that could

extract such heat from atmosphere and convert it into electricity with
a positive energy balance. Skeptics please try to clear your point
clearly; don't just say this machine violates laws of physics.
Can anybody tell me what is the flaw in the above−mentioned experiment
without just by saying that this violates laws of thermodynamics? I
want him/her to properly point out the flaw (and very much sanguine
that he/she couldn't).
N.B; don't disturb me by asking for T−S, P−V diagram etc. or entropy
calculation. If you wish, why don't you do that by yourself. I know,
when processes are real, their combination is also real and doesn't
violate any law of thermodynamics.
I will be waiting for responses.
If you wish, you can personally contact me at
pranabjyoti_calcutta@xxxxxxxxxxxxxx and
pranabjyoti_calcutta123@xxxxxxxxxx

.