Hello and Good afternoon, sir. I am Sujeev from Techno Creators and I am Saurabh Astya from Techno Creators. Today we are going to present you a product idea, that is InvertUPS. InvertUPS is a on/off grid inverter that features battery packs made out of recycled lithium-ion cells. This inverter also includes IoT feature like current/voltage, load and temperature monitoring over the network with the help of Raspberry Pi.

You can read out names of the Techno Creators in the screen.

Jaise ki screen me mentioned kiya hei, ye product still ideation stage mei hei. So, no prototyping is done till now.

Moving Forward, what is an E-Waste?

Koi bhi electronic device jo use nahi horaha hei ya unwanted hei due to malfunction or anything else. Toh inn devices ko hum E-Waste bolte hei. Lithium-ion batteries are one of such E-Wastes. For example: Kuch time use karne ke baad agar aap ka laptop ki battery sahi se kaam nahi kar rahi hei toh aap kya krte hoo ki you change the whole laptop battery. Then jo who app ka purana battery pack tha that is considered as an E-waste. But Sometime kya hota hei ki the battery pack might fail due to the fault of a single or couple of cells. So, the main ideas behind the product is that we will collect such battery packs and recycle the good cells out of them.

These are the 4 major steps that we have planned to do.

Recycling, Grading, Grouping, Battery Pack Conversion.

So, this is how we are planning the things that are to be done.

First, well collect the battery packs from different repair shops, manufacturer, junk yards, etc. and bring them into our warehouse.

Secondly, hum unn packs to strip out krke individual cells nikalenge aur unn cells ka grading process start Krenge

Toh Third step mei hum jo graded cells hei unko usi hisab se grouping krenge aur jiska efficiency will be more than 60/70% we will forward them for battery pack conversion.

Then hum BMS aur inverter circuit source krenge from different manufacture. But, hum ek prototype pe work karrahe hei aur within some period of time the circuit will be ready.

Then we will assemble all the battery packs and all the circuits along with the integration of IoT with the help of Raspberry Pi and test the product.

After testing, the product will be ready to be sold for the market.

Before speaking about the features of inverter, I would like to talk about out battery pack. Hum 12V 25Ah ke individual battery pack banayenge and we will be using 4 of them in the inverter to make the overall capacity of 100AH. Each pack will have its own balance connectors. The special feature of our battery pack is that ki hum spring tension mechanism use krenge instead of using spot welding. So, it will be more easily repairable.

Now talking about the features of InvertUps.

The first one is Pure Sine Wave. So, jo normally power stations se hamare gharo tak AC current aata hei that is in the Pure Sine Wave. But cheap inverter companies’ jo hote hei woh square wave technology use krte hei jiske waja se there is a lot more noise in the signal. Toh hum apne product mei Pure Sine Wave Technology provide krenge.

Second one is recycled components. Jaise ki mei neh pahele bataya, we are using battery packs made out of recycled lithium-ion cells. So, this is really good for our environment.

Third is Lithium-ion battery is much more efficient than lead acid batteries in a smaller form factor and we are not dealing with exposed chemicals. So, it is also really safe.

The main feature of this product is IoT integration. So hum inverter ke data jaise ki total input/output power, battery percentage, battery charging time, remaining time, etc. display krenge either in the 5” screen that is built in the inverter or through the smartphone.