

# DEVELOPMENT OF RAIN ENERGY HARVESTER FOR LOW LOAD APPLICATION

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**i-ENVEX '15**  
 Universiti Malaysia Perlis  
 CLASS A  
 AGRICULTURE & ENVIRONMENTAL AND RENEWABLE ENERGY

## INTRODUCTION

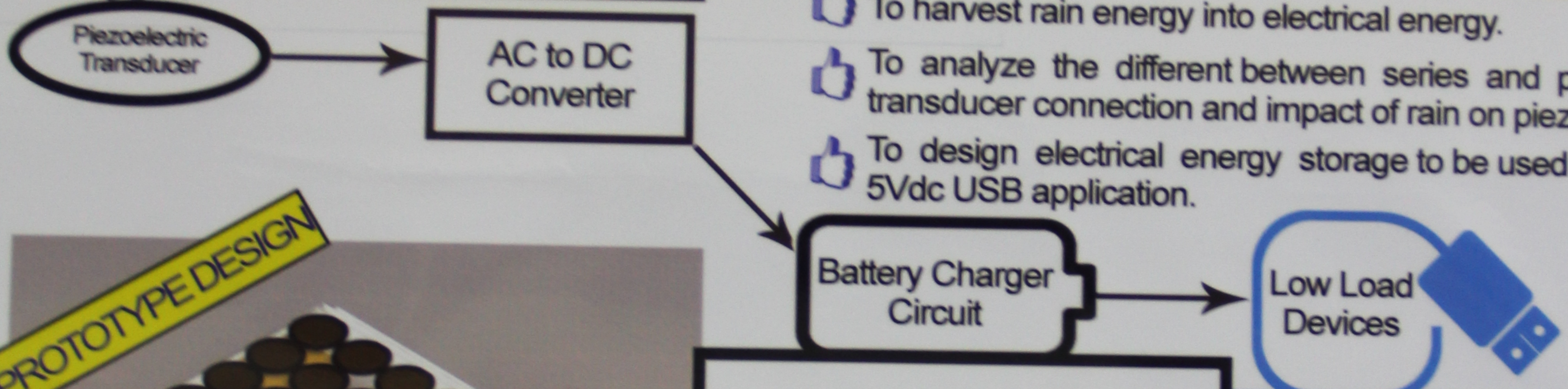


This project is about implementation of energy harvesting from the free source which is rainfall by mechanical vibration as alternative source towards renewable energy. With the concept of transducer, the mechanical vibration by the respected frequency will produce an electrical energy. The objective of this project are to produce an output voltage of +5Vdc to be use on universal serial bus (USB) to power up low load application devices. The project design will follow the latest standard roof dimension for real application. Due to the rainfall is not consistence in Malaysia, the storage element need to be implemented in this project. The advantage of this project is free maintenance, save cost and environmental friendly. Other than that, the USB socket can be used by many low load devices such as home bell, low voltage wireless cctv, movement sensors and alarm detector.

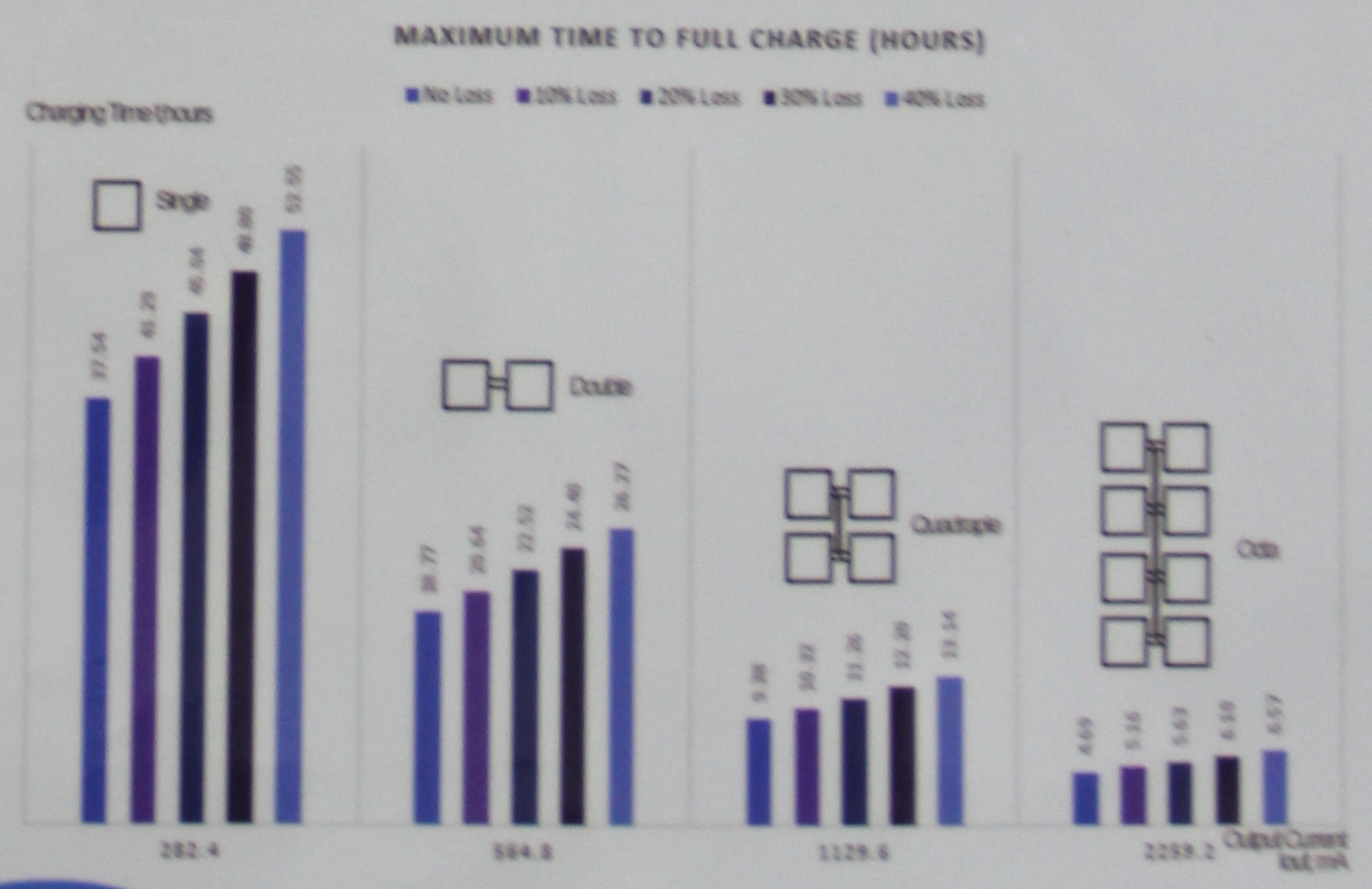
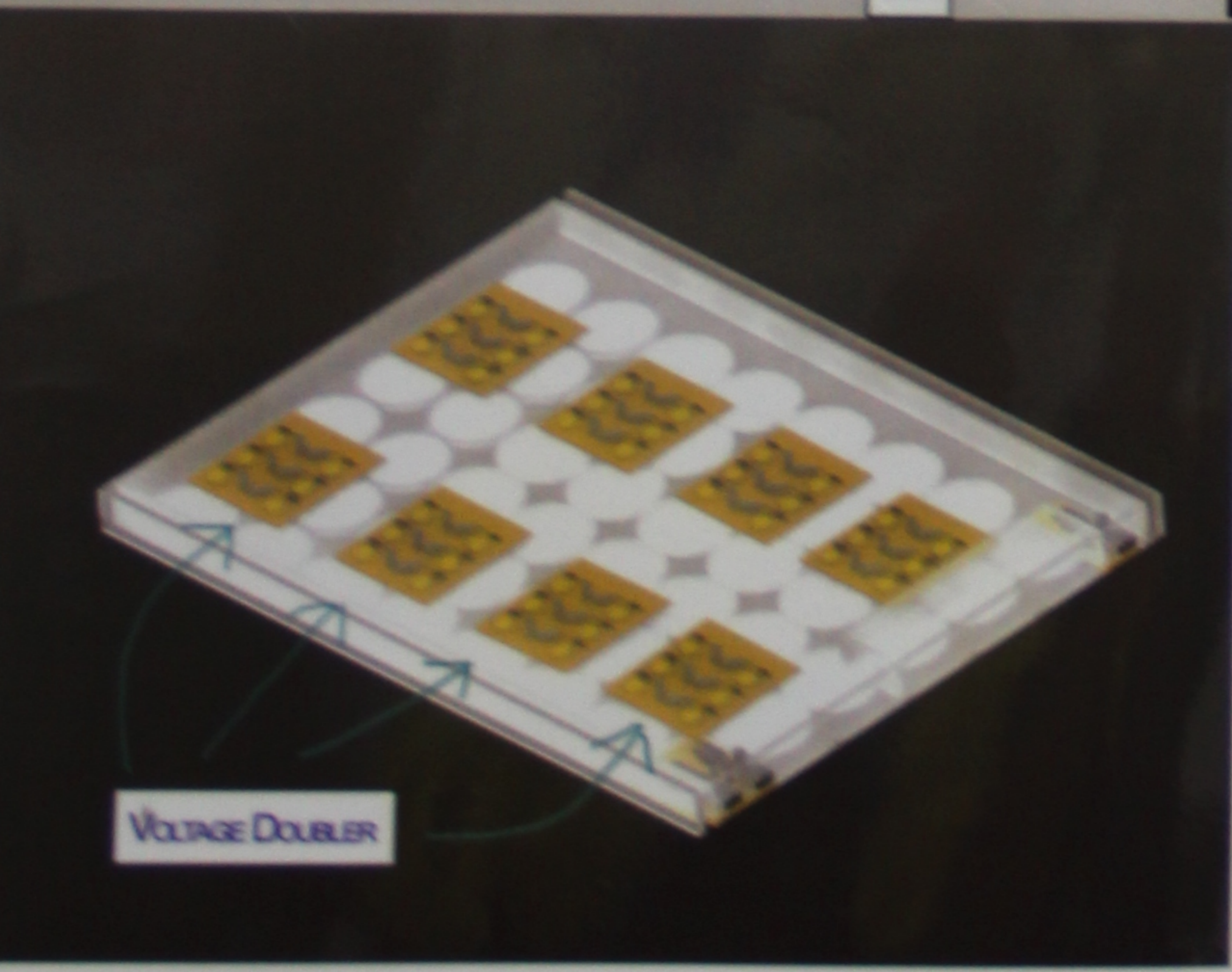
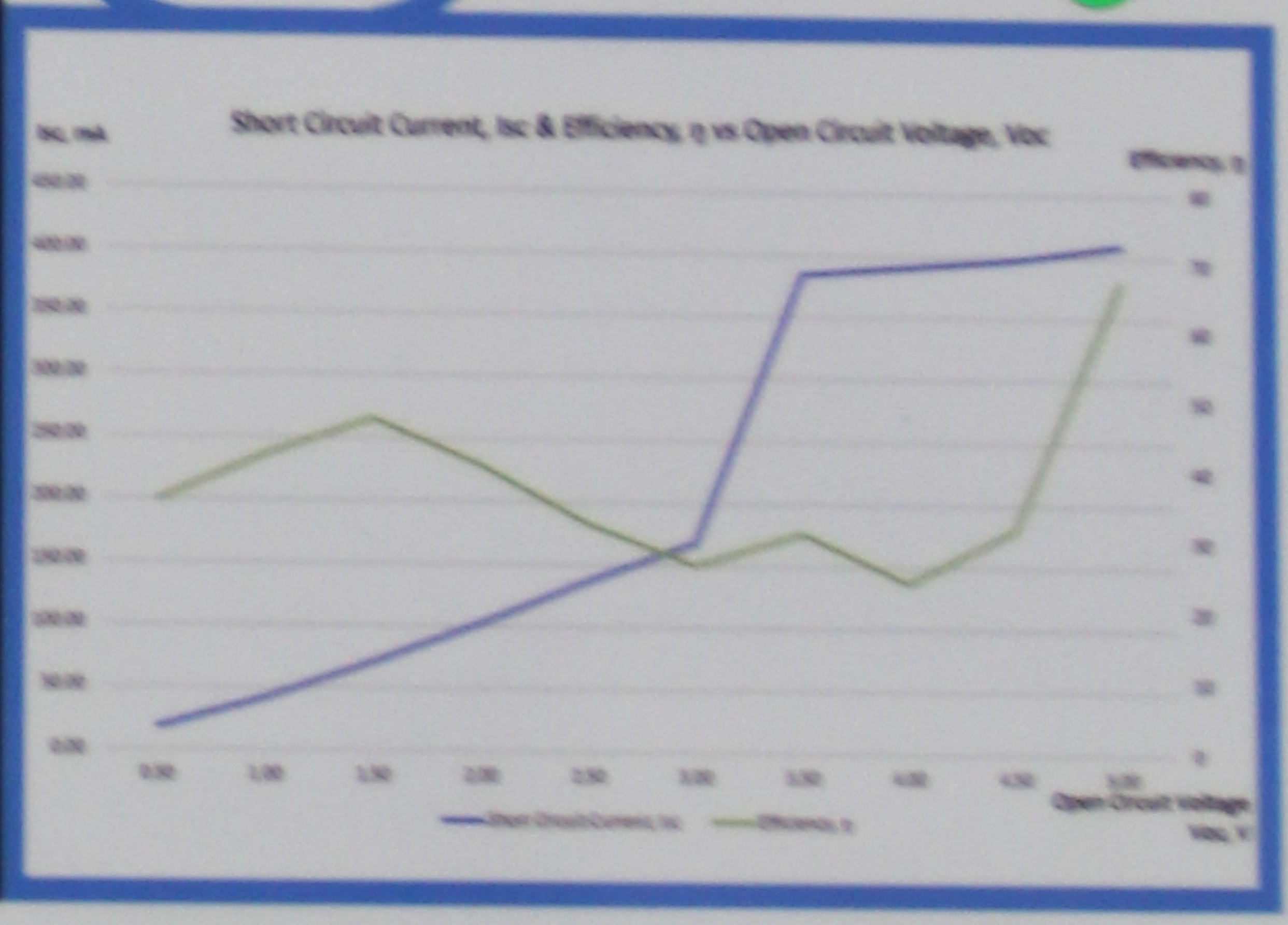
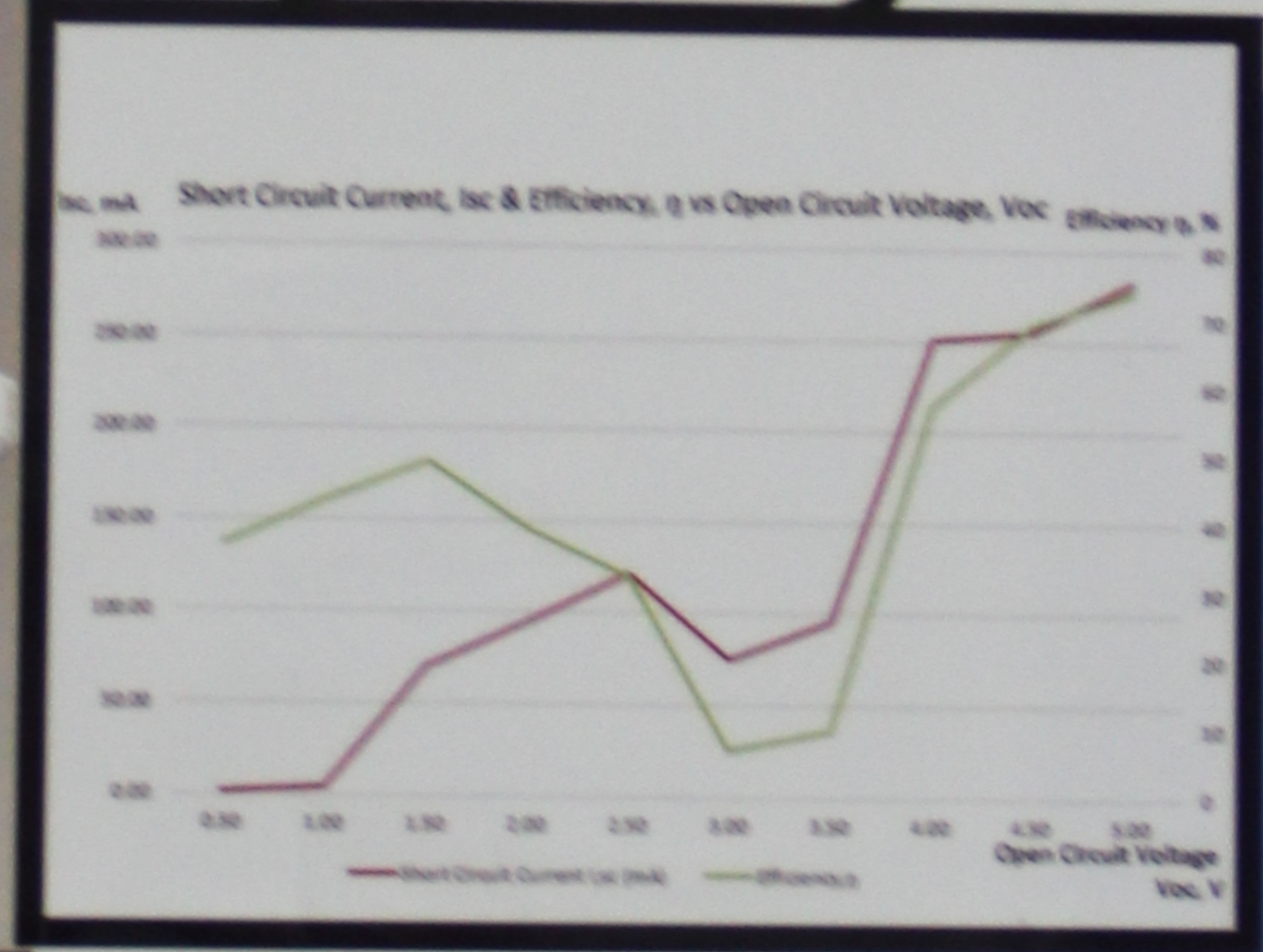
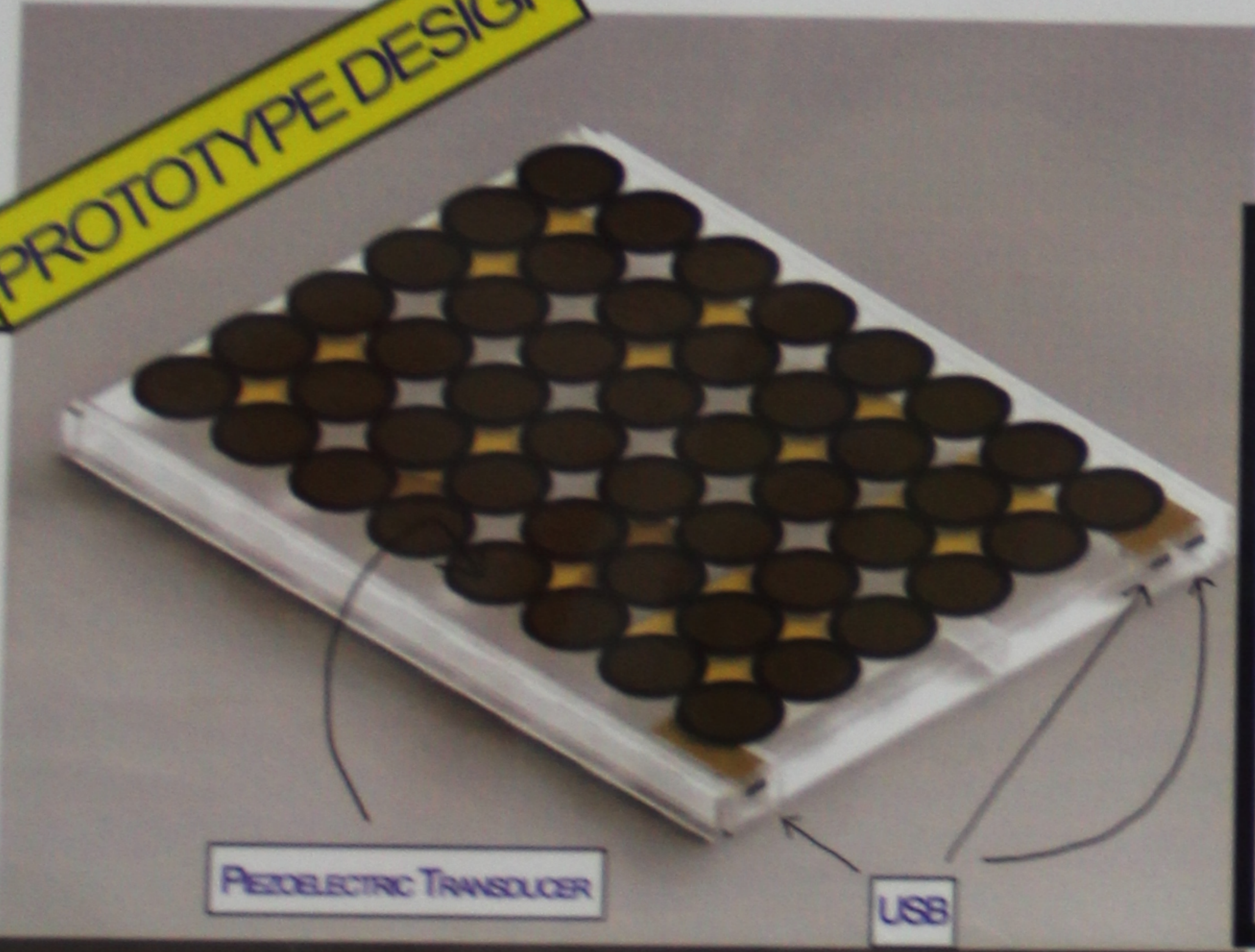
## OBJECTIVES

- To harvest rain energy into electrical energy.
- To analyze the different between series and parallel piezo-transducer connection and impact of rain on piezo-transducer.
- To design electrical energy storage to be used by low load 5Vdc USB application.

## BLOCK DIAGRAM



## PROTOTYPE DESIGN



Commercialization potential      Fabricate with roof top      Energy saving      Environmental friendly      Clean energy