
ARECC News ● July 2018

ARECC Monthly Meeting

Sunday, July 8, 2018

**FIELD TRIP TO MAKERSPACE
SECOND-LIFE BATTERY
WORKSHOP!**

2:00 p.m. - Meet at ACEnet

2:15 p.m. - Carpool to MakerSpace

Invite Your Friends!

ARECC meetings are open to the public.

Anyone interested is invited to attend.



Progress on the Second Life Battery Project!

The Appalachian Renewable Energy Consumer Cooperative (ARECC) and Center for the Creation of Cooperation (CCC) are collaborating to develop a Second Life Battery Project to reuse Lithium Ion batteries. The development team composed of Morgan Hager, the project engineer, and Roger Wilkens, the project director, have been making steady progress. In the Initial Phase, they are developing processes and procedures for safely disassembling, testing and reassembling Lithium Ion Battery packs. They have made several trips to the new Athens MakerSpace and met with the Director as well as

with the Director of the parent organization, ReUse Industries. Both are quite interested in the Second Life Batteries Project, since the project intention is to grow it into a local business, which aligns well with the commitments of the MakerSpace.



During a recent visit to the MakerSpace, Morgan explained the process to Luke Black, the MakerSpace Director. She also introduced Luke to the VRUZEND DIY Battery Kit that will be used to prototype new battery assemblies.

The MakerSpace is not quite ready for us to set up our workstation for processing Second Life batteries. So, the project engineer, Morgan Hager, has begun processing our first batch of Second Life batteries in her garage. Recently, she invited ARECC to come out to her place to see how the processing is done.

During the field trip, Morgan showed how to start with a laptop battery pack and the steps for safely disassembling it, separating the individual cells out and testing them. She demonstrated the use of the single cell battery capacity tester that we are using.



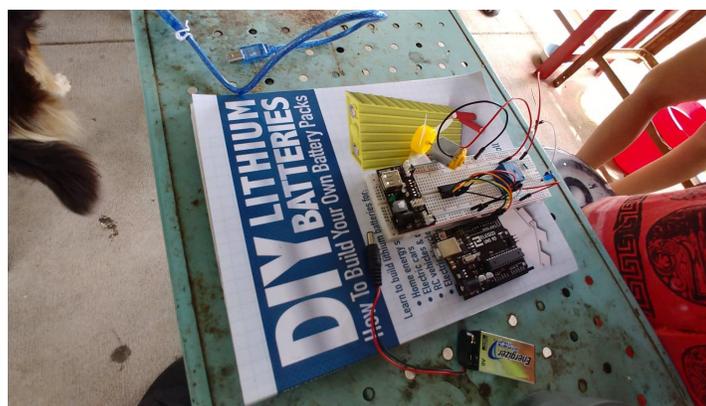
Then Morgan brought out the collection of 100 cells that she has already tested:



She then gave ARECC members a first look at the VRUZEND DIY Battery Kit that will be used in the prototyping process for reassembling Second Life batteries into new battery packs.

Over the past several weeks, the Development team has been delving deeply into the DIY Open Source Microcontroller technology called Arduino. The technology allows anyone to inexpensively construct a wide variety of devices that use electronic sensors and computer chips to control testing and small scale manufacturing processes, as well as many consumer appliances. The team first turned its attention to Arduino Technology when they began looking for a way to do capacity testing on dozens of battery cells simultaneously, rather than on at a time.

Dozens of companies and a very robust international community of users support Arduino Technology. It shows great promise for enabling the project to develop and prototype many small production processes as it scales up the Second Life Battery Project into small-scale production. Below is a picture of Morgan demonstrating an Arduino circuit at the recent ARECC Field Trip:



The connection with the MakerSpace holds great promise. Not only will it provide a workspace in close proximity to many other skilled, interested makers, and possible access to both TA and financial resources through its connection with the Innovation Center, but it may also aid in the project strategy of organizing a network of worker cooperatives. People who frequent the local MakerSpace may well include many who are interested in joining a newly forming worker co-op. Moreover, we recently learned in conversation with TechGrowthOhio Ohio, that the Athens MakerSpace is one of three members of a network of makerspaces in Southeast Ohio. So, organizing a worker co-op in one may open the door to organizing in the other two!

- Submitted by Roger Wilkens



In the News

[- Aquion Energy Back In The Salt Water Battery Business](#)

UPDATE 12 June, 2018. According to the [Battery Test Centre](#) (page 6 of the report): “Although Aquion was bought out in July 2017, it is not supporting existing products in any way, and all existing warranties are void. ”

[- Personal View: Clean energy is vital to the health and economic well-being of the Buckeye State](#)

The health of our community, environment and economy are directly linked. Clean energy is essential to all three, with benefits that ensure a thriving business community and a robust health care system here in Ohio. That is why Ohio businesses and health care institutions are increasingly embracing clean energy and calling on lawmakers to do the same.

[- Ohio Contractor Transitions From Nuclear and Coal to Solar](#)

An Ohio construction firm that got its start working on nuclear and coal-fired power plants is now experiencing steady growth from solar and energy efficiency projects for industrial and institutional customers.

Published for the Appalachian Renewable Energy Consumer Cooperative (ARECC). ARECC is organizing this network of energy cooperatives in Appalachian Ohio to help members transition from fossil fuels to renewable energy. First, we'll reduce energy consumption (conservation) and then work towards creating energy from renewable sources. ARECC is a non-profit cooperative operating in southern Ohio. Adeline Bailey, Editor

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