- Planning and Zoning Board Commission Meeting September 26, 2023
  - Room 107 @ 7 pm

- Members in attendance:
- Ken Stromberg - via Zoom Don Merriman Shaun Alverez
- Mike Trow (Co-Chair) Bret Ferguson Duane Flaherty (Chair)
- Members Absent:
- Chi Woodrich Paul Finnell Leslie Berndt
- Staff in attendance:
- Tim Hamilton – P&Z Coralee Murphy – P&Z Michelle Wies – SaCo EM Director
- Phillip Smith-Hanes – SaCo Admin Hannah Bett – SaCo Dep. Admin
- Public in attendance:

Rowan Mitton	Ben Wisel	Paul Rogers	Jamie McAllister	Timothy Rogers
Daniel Brennen	Nate Bell	Mitch Robinson	Roleta Henry	Mike Henry
Tammy Waddle	Bruce Waddle	Wade Waddle	Jerry Houchin	Scott Nichols
Brooke Swisher	Emily Swisher	Uriah Swisher	Bernie Johnson	Robyn Johnson
Rodger Sparks	Shane Pearson	Melody Pearson	Carolyn Sichley	Mark Sichley
Duane Tinkler	Jason Tinkler	Rita Tinkler	Rany Ziegler	Drew Rathbun
Stan Chipperfield	Helen Chipperfield	Ron Kinkelaar	John Robb	Mack Robb
Sabrina Ozisik	Angie Gehardt	Abe Dugar	Robert Sauber	John Spaeny
Scott Dixon	Keith Sauber	Charles Soash	Marilyn Soash	Ken Aoe
Gene Unruh	Nancy Scanlan	Deb Fall	Roger Stumpf	Calvin Kelsey
Brent Felzson	Trina Riffel	Jake Riffel	Warren Myers	Gary Olson
Melony McClure	Gary McClure	Joe Hay Jr.	William Silby	

- Chair calls the meeting to order and explains the code of conduct for the meeting.
- Chair states that participants will have 5 minutes each to come to the podium and express their questions and concerns, but you may only come up one time. Chair states that he has received many phone calls about the issue, and explains to the public the Open Meetings Rules, which states that the Commissioners cannot discuss cases outside of the meeting time and place. Stating that any comments that the public would like heard needs to be heard by the Commission as a whole, instead of calling the Commissioners, please forward any communications and information to Staff and they will relay the message to the Commissioners.
- Approval of the agenda for September 26, 2023
  - *D.M. motions for the approval of the agenda as written.*
  - *B.F. seconds the motion.*
- VOTE 6-Ayes 0-Nays MOTION CARRIES
- Approval of the minutes from August 22, 2023, Planning and Zoning Commission meeting
  - D.M. requests to correct the spelling of Dave Nowak's name, in the previous meeting minutes.
  - *M.T. moves to approve minutes as amended.*
  - *K.S. seconds the motion.*
- VOTE 6-Ayes 0-Nays MOTION CARRIES

- Conditional Use Permit - C.U.P. 23-103:
    - A request by Mountain Peak Energy Storage, LLC (also known as Plus Power) to establish a battery-based electrical storage and distribution facility located on a portion of land zoned agricultural in Section 28, Township 15, Range 2 containing approximately 40 acres at the SW corner of the intersection of McReynolds Road and Simpson Road.
    - *D.M. – motions that the application is removed from the table for further discussion and possible action.*
    - *M.T. – seconds the motion.*
- VOTE 6 Ayes - 0 Nay MOTION CARRIES
    - Tim states that the Commission had been forwarded several items that have been from the applicant and the public that were for this meeting from staff, but other than those documents there is no other update to the case. States he has gone over the appeal process and the general conditions by which the Commission can approve the CUP, which are spelled out in our Code 13-06-08. The applicant would like to address some of the concerns raised.
    - Chair calls forward the applicant.
    - Ben Wisel – Director of Permitting for Plus Power - appears for the applicant – gives a presentation, states for the record that Plus Power is only in the business of what is proposed to the Commission and does not construct, own, or operate, any wind or solar projects in the area, in Kansas or in the United States. We only build battery-based electrical storage systems that are connected to the grid. We have no connections to wind or solar energy. We are developing similar facilities in over 25 states. Our company intends to construct, operate, and own the facility for 20-plus years, being a good neighbor and operating a safe facility are key to establishing our reputation with the Community, and also our long-term success. We have successfully developed 3 facilities in Texas that are of similar size to the project proposed tonight, these facilities have been operating continuously for the last 2 years. In two weeks' time the site in Hawaii will be turned on, and we are currently constructing 2 sites in Arizona, and 3 sites in Texas, all which are a similar size to this site, and are set to be operational in 2024. These high level battery sytems allow for the storage of electricity, during times of day of peak electrical supply, i.e. during the night hours, we charge the batteries, then during hours of peak electrical usage, i.e. in the day when everyone is home, the batteries will discharge the electricity back on to the electrical grid for usage in your homes, or businesses, helping to ensure that your lights stay on. These batteries are lithium iron phosphate cells that are stored in modules, which are placed in racks, the racks are then stored in individual enclosures, we are not installing one large building of batteries, we are installing many different enclosures, that are approximately 8' tall x 5' 5" wide and 30' long. We intend to use Tesla Megapack II enclosures and a project substation, all located on concrete foundations and surrounded by crushed stone and a security fence. As I mentioned before we will be constructing a short electrical line that will allow us to connect to Evergy's existing electric substation. As you can see on the aerial of our property, within ¼ mile of our facility there is one home, within ½ a mile there are 3 homes, the SES Highschool, is approximately 2 miles away, and there will be minimal to no impact on our neighbors, or the surrounding community for the following reasons. The nearest Megapack will be set back 1170 ft from the nearest home. This facility will be barely visible from the middle of S.Simpson Rd looking west, second, during operations there will be no emissions or pollution of any kind, in terms of traffic we anticipate 3-5 vehicles per week visiting the site for operational and maintenance purposes. There are fans located in the enclosures, we have provided a sound study, that determines our fan system will not be audible to the surrounding areas. There will be no water needed for operations, and security lights will be turned off at night. There are 3 main benefits of our project for the community, the system will be able to store 300 mega watts and Saline County typically uses 200-300 mega watts, so it will hold more electricity than Saline County uses at any given time. Second would be property taxes, as mentioned previously, we anticipate our system to be operational for 20-30 years, as part of due diligence, our team reached out to the Kansas Dept. Of Revenue, and were informed that our project falls under Class 2 Personal Property, for Kansas tax pourposes. The Kansas Dept of Revenue calculation has been provided directly to the County, based on these findings we have calculated for every year of the 20-30 years that this project will be operational,

we will pay the County over $1,000,000.00 in property taxes each year. In terms of where that money goes, 50% goes to USD 306, 38% goes to Saline County, and 6.257% goes to the Fire District. Third, jobs; the facility will take 12-16 months to construct, during this time frame we anticipate to have 125-150 construction workers, who will be staying in Saline County Motels and helping to boost the economy in Saline County consistently for 12-14 months. Once the site is complete and operational, we will have employees coming to the site. For operations and maintenance during the week, these permanent employees will be living in or near Saline County. Regarding the timing, the reason we need 3 years, is as follows; the interconnection process takes time, we will be connecting into Evergy's Substation, this process includes system reliability studies, which take time to prepare, and we do not control the timeline for those studies. We will also need to receive financing for this project, which also takes time. The biggest part of this is procurement of equipment, the transformer for this project will take 30 months to build. The reason that we are asking for this time is largely due to this. We are requesting permissions that fall under County Code 13a-13.06.10. We understand that the members of the public have many questions about safety, safety is fundamental to the operations of our energy systems as a whole, while each compound produces its own risks, from transformers, and electric lines, to natural gas lines and coal plants, the minimization of risks as it relates to these components are critical, to providing the electricity we rely on safely. Battery Energy storage is no different. With proper design, compliance with National Safety Regulations and other best practices, we will discuss tonight. Our facility will operate safely while minimizing risk and supporting reliable electrical service. With us tonight to talk about safety, are LT. Paul Rogers and Dr. Jamie McAllister. LT Paul Rogers served as a firefighter for New York City FD and is a subject matter expert in energy storage systems. Dr. Jamie McAllister is a licensed fire protection engineer, toxicologist, and certified safety professional. Both Lt Rogers and Dr McAllister are here tonight to demonstrate the following; 1st – our facility will be designed, constructed and operated in compliance with the latest fire safety codes and standards. 2nd –The facility will include state of the art security systems, and use the highest quality batteries being produced today. That will dramatically reduce the risk of a thermal event occurring in the first place. 3rd – the batteries planned for this energy system have undergone extensive testing which proves that in the unlikely event of a safety incident the proposed facility will fail in a way that keeps the surrounding community safe.

- LT. Rogers called up to the podium by the applicant – Is it true that you worked in the New York City FD and retired as a Lieutenant? Yes -How many years were you a firefighter? 25 years with the NYC FD -Is it also true that while working for the NYC FD you were assigned to the Bureau of Fire Prevention to lead projects on energy storage systems? Yes -Do you currently sit on the National Fire Protection Association 855 technical committee servicing the fire industry related to battery storage safety. Yes – Can you please explain what NFPA is? The NFPA or National Fire Protection Association is a standard development organization that looks at safety of products that may go into an environment, there are prescriptive codes or guidelines that people must follow, in order to actually be compliant to safety, the fire alarm in this meeting room is compliant with NFPA standards, the electrical outlets and the electrical that runs through this building is also compliant with NFPA standards. So they are constantly looking at safety in buildings, and other environments, sprinkler systems are also included in this and so on. – In other words, we already rely on the NFPA to ensure that we are safe on a daily basis, we are safe right now based on the codes and standards of the NFPA? Yes – What is NFPA 855? NFPA 855 is another standard that was developed to put energy storage systems into the environment, it's a prescribed set of rules if you will that the NFPA suggests and recommends you follow, sometimes people adopt that as their code, and now it becomes a law., that they are now mandated to follow. NFPA is a standard development organization that puts the codes out there. – Does NFPA 855 include requirements that apply to the entire life cycle of energy storage systems? Meaning the design, commissioning, operations, and maintenance through decommissioning. Yes, the intent of the committee is to make sure that we looked at this from cradle to grave, from the time of its birth to the end of its life, that we would take care of it, commissioning plans and decommissioning plans that need to go into effect, and everything that falls in between that. -Is NFPA 855 the latest and one of the most comprehensive fire safety standards that exist

as related to battery storage systems? Yes, it's used worldwide. – Our company will be asking you to certify that the proposed battery storage facility complies with the requirements of NFPA 855, do you have the expertise to confirm this? Yes, I do. – Why is that? I have been sitting on this standard since it was created, so I am one of the authors of the actual standard itself. – In addition to the NFPA 855 Kansas has also adopted the 2006 International Fire Code, would our facility comply with that as well? Yeah, your facility will comply with the Kansas State Fire code and by using the NFPA 855 we will far exceed what the Kansas State Fire Code actually has. – Based on your testimony, you have stated that our facility will be built to comply with the latest codes and standards? That is correct. – I would like to talk about the Tesla Mega Pack 2 which is what we are planning on using, the Tesla Megapack 2 has safety features, I would like to go through them for the benefit of the public and the board members. What is a battery management system? The BMS is a layer of safety, Battery management system is known as BMS. It's the eyes and ears of the actual system. It's constantly monitoring the health and state of the battery, making sure that if the battery were to go outside of the safety parameters, it can shut the system down, it constantly monitors the system's health. – The Megapack 2 doesn't just take notice of the entire enclosure, it is able to establish the state every single cell? Yes, Tesla battery management system will go right down to each cell, and as we saw before on the slides, we have a group of cells to make up the module, and then the modules are in racks in the enclosure, so we can see down to the actual cell, which is the building block. – Can you talk about the thermal management system which is also a safety system of the Tesla Megapack 2? The thermal management system is used in energy storage systems to make sure the batteries don't overheat or get too cold. Maybe in between 68-72 Degrees Fahrenheit is a good operational temperature for this system, so if these things were to get too hot the air conditioner would turn on to cool them down, as well as warm them up with a heater if they got too cool. Making sure that they maintain the operating temperature. -Giving people a frame of reference, it has been pretty hot here in Kansas, leaving your cell phone on your dashboard, sometimes it will give you a message saying that it is too hot, and then it shuts down, is that similar to what you are referring to? Exactly, on the consumer product side they do have a BMS if you have an iphone, and if you have ever left your phone out on the beach or outside, and you go to look at it, it will tell you to take it (battery) out, that is actually the battery trying to save itself from degrading or going into some sort of failure. Usually when you take it out it will recover, and then you go from there, that battery does not have any type of thermal management system associated with it as opposed to what we see here in the Megapack 2. -In addition to these safety features, there is also operating centers, can you explain those? One thing that the code does require is network operation centers where they actually have to monitor the batteries, in this situation Tesla the manufacturer will monitor the batteries themselves, and then Mountain Peak LLC will also be monitoring the system. You have 2 entities monitoring the state of the health of the batteries at all times. -So, 24/7? Yes 24/7. – We have established that you are an expert in fire safety, this project complies with and exceeds the standards and has safety features, I would think that some would wonder if these safety features have been tested, to demonstrate they work the way they are designed to? Also required in the code is that every component must be listed. UL has a listing for the cell to the module, everything needs to be listed, for example your refrigerator in your house, actually carry a hazardous material in the back of it, freon, or refrigerant, and how we know that it is safe to go into your house, and there won't be a failure of that where it would leak in the house itself, they will test it against a prescribed checklist to make sure that everything is in place, and then it gets a listing, that process is similar to what we use with the batteries themselves. -Are you familiar with the Tesla Megapack 2's UL 9540A test results? So one of the criteria in the standard NFPA 55 is what they call large-scale fire testing, it is very expensive when we first demand that people do that to test if their systems are safe. The standard tries to prevent a fire from taking place. What UL 9540A does is intentionally make it fail, on a large-scale basis and see what happens, the goal of the test is to make sure that it does not spread within the actual unit itself. – So the large-scale fire testing creates an incredible worst-case scenario, so as part of this test, they charge the batteries to 100% charged, is that correct? Yes -Do they do anything else? Yeah, we charge them to 100% charge which is the most precarious time, when they have all that energy stored

inside of them, and then they will shut off any active safety system, and then they will purposely put the cells into failure. They will put heating tape on the back of a cell to heat up the battery, and one of the requirements of this testing is that you must put as many cells into a thermal event as possible until it spreads to another cell, they want to see if the spreading continues through the actual module, or in some cases the unit itself. – As I mentioned earlier in the presentation, we are not building a large building of batteries. That is correct, - We are building enclosures, so in the worst-case scenario version, did a safety event go from one enclosure to another one? – No what happened is they had to put six cells into an event and per the standard you have to at least get one other cell to go into a thermal runaway event. They started with 6 and it spread to the 7th which satisfied the criteria, there was no further spread after that, basically, it was a benign test with good results. There was no flaming outside the unit at all, no flying debris, no leaks were observed, and no flames were observed outside of the enclosure. – After construction is complete, our company will ask you to take on a continuing role on the safety issues of this project, what will that likely involve? That will involve making sure that the FD is up to date on what is going on at the site, there will be site-specific training to be done at the site itself. -You already met with the FD in Saline County correct? I did yes. Thank you, Lt.

- Applicant calls Dr. McAllister to the podium for questions. -Please state your name. Dr. Jamie McAllister. -Are you a fire protection engineer? I am. – How and when did you get involved with fire protection engineering? I joined the fire service when I was in high school and fell in love with it and had a passion for fire safety, so I pursued a degree in fire protection engineering. – How many years have you been a fire protection engineer and toxicologist? Over 23 years. – Are you familiar with the Tesla Megapacks? I am. – We just spoke about the Tesla Megapack 2's safety features, and how they reduce the likelihood of a safety event happening, can we talk about what would happen in the unlikely event of a worst-case scenario were to occur? Sure, as you heard from Lt Rogers, it took 6 cells simultaneously to get propagation to one cell within the unit. There was no flaming observed outside of the unit and what I focused on was what kind of gasses were produced and what we could expect to see in and around the enclosure, in the air. For that test probes and measurement devices were set up 20 feet upwind and 5 feet downwind from the enclosure. They measured for 27 different metals, and they also measured for many volatile organinc carbons (i.e. benzine, phormaldahide, acetone, etc.) they also measured for hydrogen floride as well. The findings were only 2 measurements of volitle organic compounds were found, and hydrogen floride was found. The consentrations of what was found were below any thereshold limit values, and those values are what would be a concern if someone were to be exposed to it over an extended period of time. The values I looked at were essientially work place values, so if you were exposed to this for the lifetime of your work, you would not be harmed by these levels, as they were well below the threshold levels. -So what you are saying is 20 feet upwind, and 5 ft downwind trace amounts of these gases were detected, that were all below the lowest level of concern for human health? Correct, and the gasses detected, to be clear were; acetone, methylene chloride and hydrogen fluoride, and they were all below levels of concern. -Is it fair to say that the amount of gas would get even more diluted with distance? Yes, so what happens with gasses is they diffuse in the air, so as you move further away from the source further awy from the enclosure, we will see lower and lower concentrations until dissipation. -So as I mentioned before the closest house is is over 1,100ft away located on the East side of S Simpson Rd, at 1,100 ft what can we expect the gas levels to be at that distance? I wouldn't expect to see any measurable concentrations at that distance, given that we were already at such a low state right at the source. – As I mentioned before SES High School is located approximately 2 miles from our site, at approximately 2 miles what could we expect the levels to read? The same answer, I would not expect to see any measurable concentrations present there. – In other words, the measurements would be lower if any at all. Correct. -Durjing and after the testing was there any liquid run off observed from the Megapack 2 into the ground? No. -What can you conclude form that? Based on the fact that there was no fluids leaking out of the enclosure, we can conclude that there would be no impact to the soil and water around the enclosures. -Thank you very much.

- Applicant states that there are no further proactive comments, but are willing to answer any questions from the Commission or the community members.
- D.M.- If there is a failure of some sort, like Mr.Rogers spoke about, is there an alert to staff to let them know of the issue?
- Applicant- Absolutely, the operating center that I mentioned before is a 24/7 operatin center that is fully aware of the voltage, temperature, and the amperage of every cell. So if any of those rise above a certain level we will know and we will be able to make sure it's not a critical issue by sending out a technician to confirm.
- D.M. – Is there staff located within the County or close to it?
- Applicant – We are going to hire some one that lives with in 1 hour of the facility at the most, to ensure that they can get there as quick as possible.
- Chair – What about lightning strikes? How will that affect them?
- Applicant – The short answer is that it will not. Plus Power designs our battery energy source projects to safely mitigate direct and indirect lighting strikes to the substation and the battery yard, we design it according to the industry accepted standard of IEEE80 for safety for substation grounding, which will also apply to the battery yard. This involves implementing shielding systems to divert lighting currents around critical equipment, robust grounding sytems around the site to dissipate waiting energy into the ground, and surge protection to prtect electronics from induced overload.
- Chair – What does that mean to us common folk? If lighting were to hit, would that potentially cause an overload? Or are you hoping that the structure around it would take care of the lightning strike and not harm what is inside?
- Applicant- We aren't hoping, we designed it in complaiace with regulations that are prepared y the International Electrical Engineers Association. These are people who are experts in their field and they have determined that this is the way to protect our system.
- Chair – So traditionally a lightning strike should not affect what is inside?
- Applijcant- Correct.
- S.A. – Do you know when the last failure occurred with the BESS system in general?
- Applicant – The Tesla Megapack 2 has not failed.
- S.A. – Are the other systems like this one or are there differences?
- Applicant – There are major differences between systems.
- S.A. – The other systems that have failures are in compliance with the same guidelines is that correct?
- Applicant calls Lt. Rogers to answer – <u>It depends on when they were actually installed, it also depends on the state and what the state has adopted as their code. In other words, for instance, if we were to follow the 2006 codes, currently thatis in Kansas, we wouldn't have to give you listings, 95-40a or any of the stuff that we have provided. 2020 was the original bversion of the NFPA 855</u> -So in other words the facilities built before then were not built to have compliance from cradle to grave?
- I will go even further and say that the design prior to the code couldn't follow the code.
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- Chair opens floor to the public, and states that the participants have a total of 5 minutes to pose their questions each.
- William Silby – Gypsum - feeling invisible, safety history, not general objection to any kind of alternative energy or the benefits to the county, the benefits look great but at what cost.

- *Michael Trow - motions to table CUP 23-103*
- *Don Merriman – 2nds motion*
- <u>VOTE 3 AYES - 3 NAYS MOTION FAILED</u>
- Chair requests another motion.

- *Ken Stromberg motions to approve CUP 23-103 with conditions placed by staff.*
- *Don Merriman 2nds motion*
- VOTE 3 AYES - 2 NAYS – 1 ABSTAINS
- *Don Merriman motions to deny CUP 23-103.*
- *Shaun Alvarez seconds motion*
- VOTE 4 AYES - 1 NAYS – 1 ABSTAINS MOTION CARRIES
- *M. T. changes Abstained vote to Nay after voting is over.*
- Staff announcements:
    - October meeting will be held on October 24, 2023.
- Adjourn Meeting:
- *D.M. moves to adjourn the meeting.*
- *M.T. seconds motion*
- VOTE - 6 AYES – 0 NAYS MOTION CARRIES

- Approval of Minutes: _____
    - Tim Hamilton, Director of Saline County Planning & Zoning