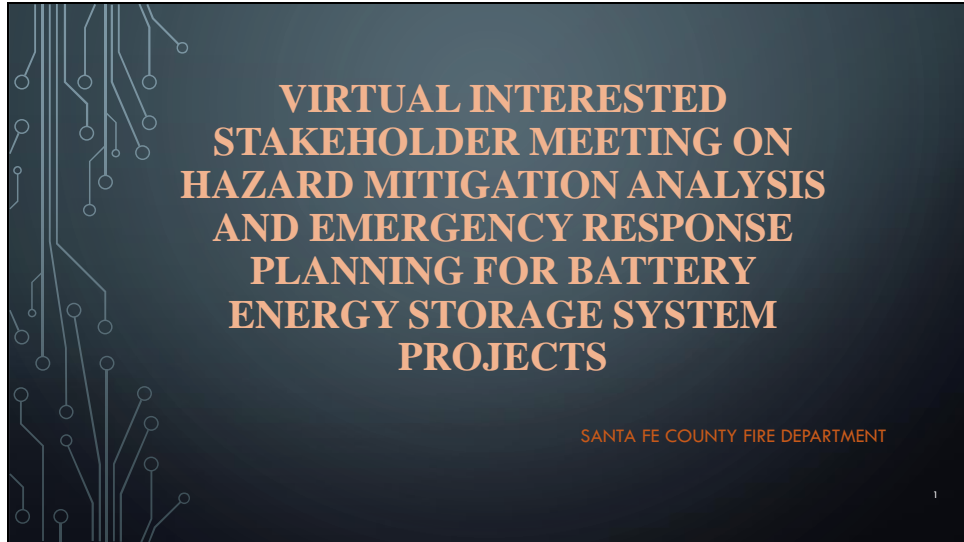


Slide 1

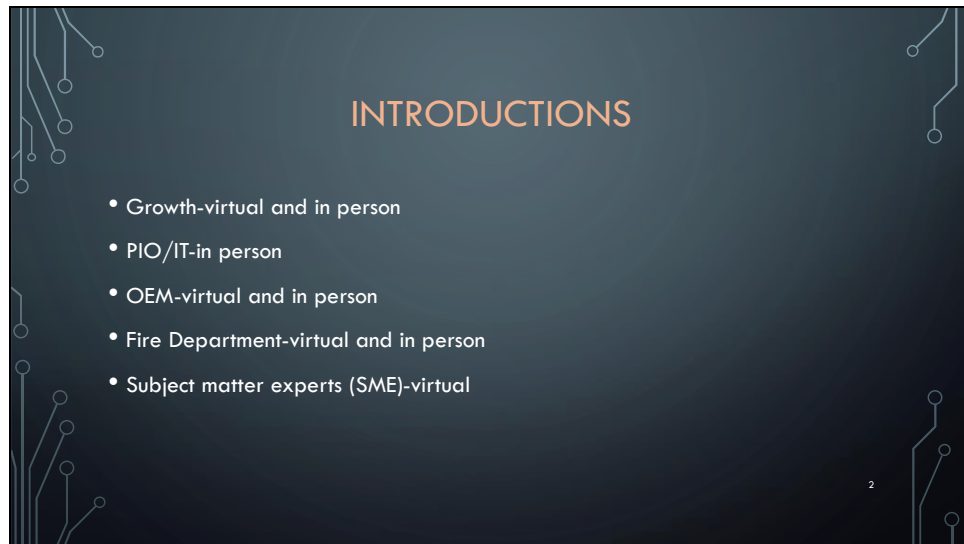


**VIRTUAL INTERESTED
STAKEHOLDER MEETING ON
HAZARD MITIGATION ANALYSIS
AND EMERGENCY RESPONSE
PLANNING FOR BATTERY
ENERGY STORAGE SYSTEM
PROJECTS**

SANTA FE COUNTY FIRE DEPARTMENT

1

Slide 2

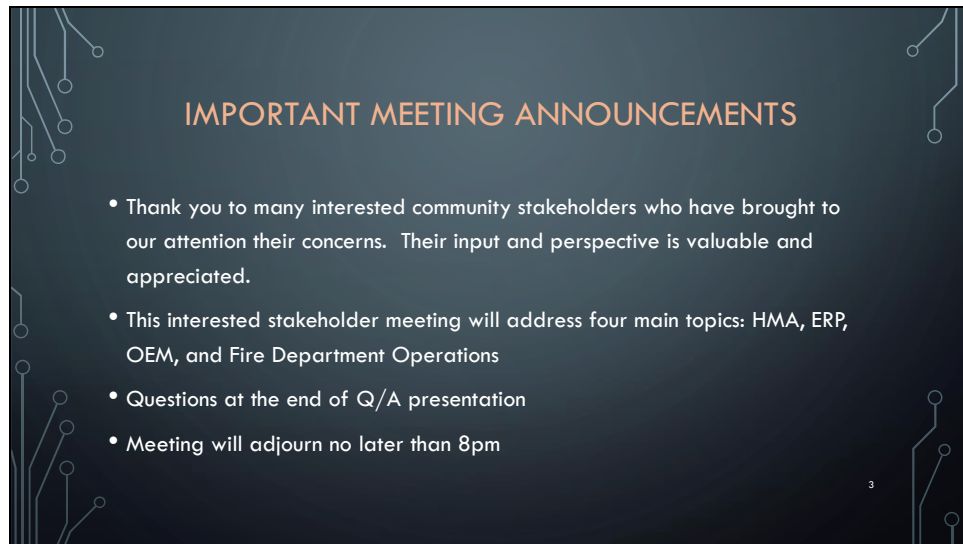


INTRODUCTIONS

- Growth-virtual and in person
- PIO/IT-in person
- OEM-virtual and in person
- Fire Department-virtual and in person
- Subject matter experts (SME)-virtual

2

Slide 3



IMPORTANT MEETING ANNOUNCEMENTS

- Thank you to many interested community stakeholders who have brought to our attention their concerns. Their input and perspective is valuable and appreciated.
- This interested stakeholder meeting will address four main topics: HMA, ERP, OEM, and Fire Department Operations
- Questions at the end of Q/A presentation
- Meeting will adjourn no later than 8pm

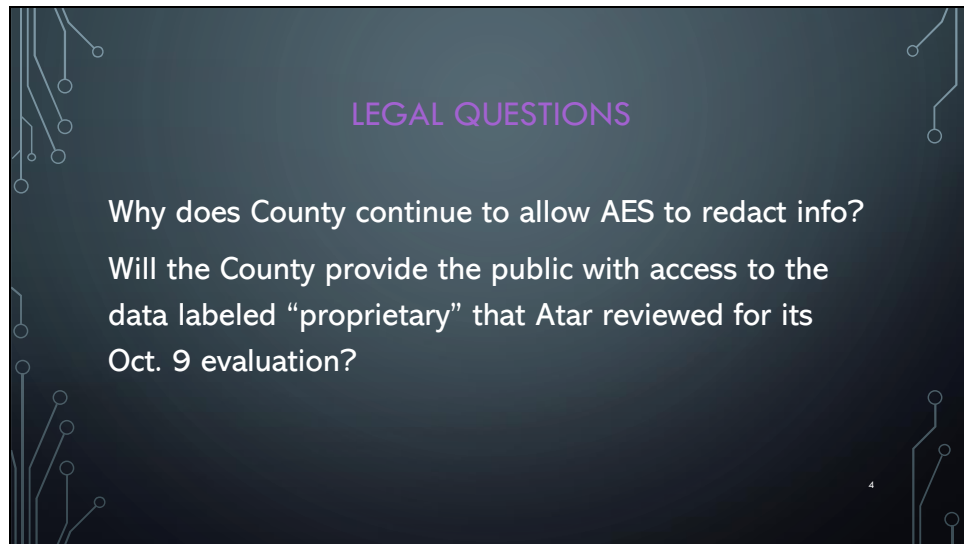
3

Today's meeting is not a public hearing as contemplated by the SLDC or by the County's Open Meetings resolution. It is an informal meeting to share and discuss appropriate standards for fire departments and other emergency response teams, particularly regarding solar facilities and battery energy storage systems pursuant to National Fire Protection Association (NFPA) 855 Annex G, which provides best practices for Fire Departments nationwide. While these best practices provided by the NFPA are not mandatory, these are useful guidelines to follow. To be clear, information provided this evening is not part of the record in any pending application. It is not evidence in any pending application. And while we strive to be accurate and transparent, information is subject to change with the passage of time and as circumstances change.

We have received well over 100 questions in advance of this evening's meeting. We will not be able to answer all questions but will focus on those questions that were most frequently asked and are most directly related to the topic for this meeting.

Some of our discussion will focus on the unique attributes and risks associated with battery energy storage systems (BESS) and the standards that have been adopted and/or suggested for such facilities, such as NFPA 855. Please understand, however, that we will not discuss the specific application for the Rancho Viejo Solar project. It is inappropriate to discuss a pending application with interested third parties outside of the public hearing framework, particularly when the applicant is not present.

Slide 4



LEGAL QUESTIONS

Why does County continue to allow AES to redact info?

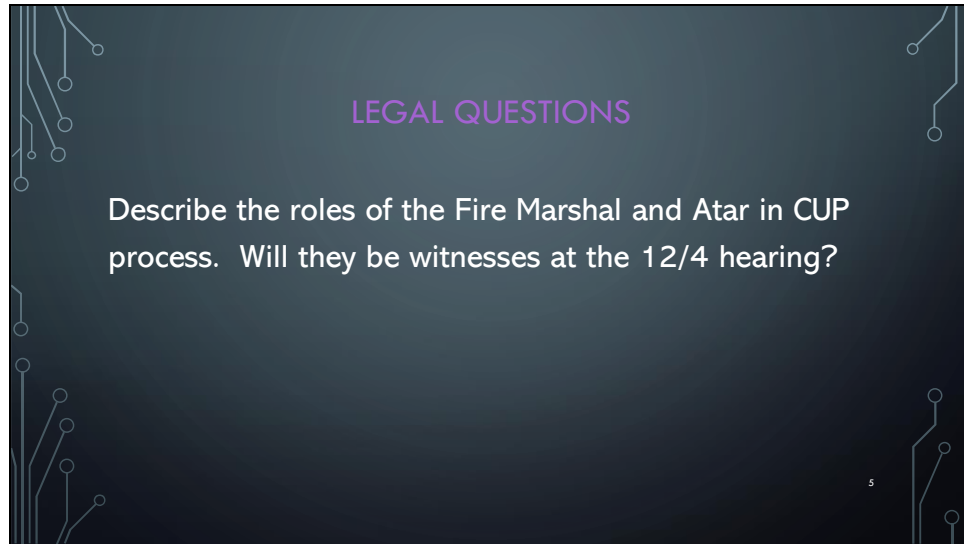
Will the County provide the public with access to the data labeled “proprietary” that Atar reviewed for its Oct. 9 evaluation?

4

The County neither allows nor disallows the redaction of documents. Occasionally an applicant provides documents as part of an application, and notifies the County that it considers certain information contained in the documents to be confidential. In those instances, if a request that covers such documentation is made under the Inspection of Public Records Act, the County notifies the applicant of the request. At that time, the applicant can elect to seek protection of such information through judicial proceedings. If an applicant goes that route, the County will abide by whatever resolution is reached in that proceeding. If an applicant does not seek to protect such information, the records will be released.

There has been no ruling from the First Judicial District Court declaring that any member(s) of the public is/are entitled to information or documents in the Rancho Viejo Solar application.

Slide 5



LEGAL QUESTIONS

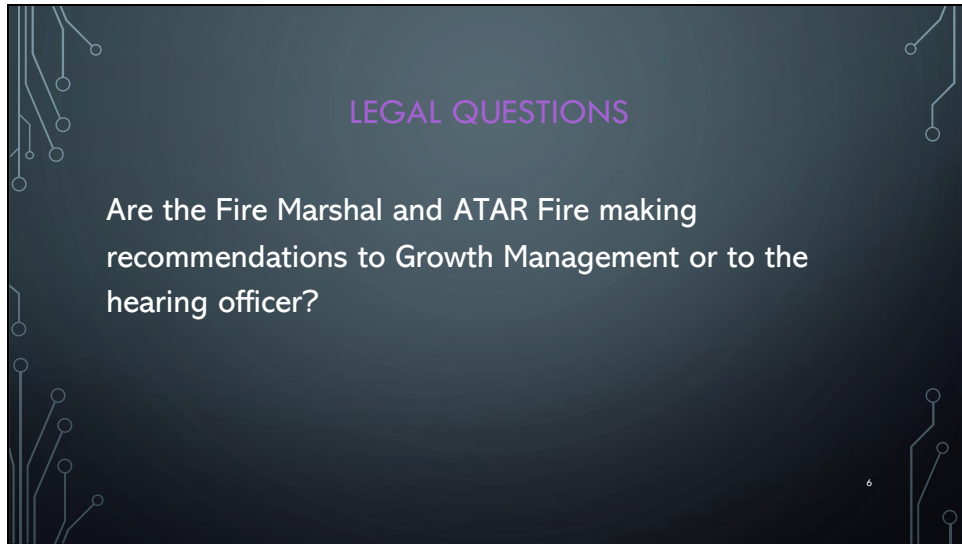
Describe the roles of the Fire Marshal and Atar in CUP process. Will they be witnesses at the 12/4 hearing?

5

Neither office has been notified that it will be called on to testify. We are still four weeks before the hearing, so that might change.

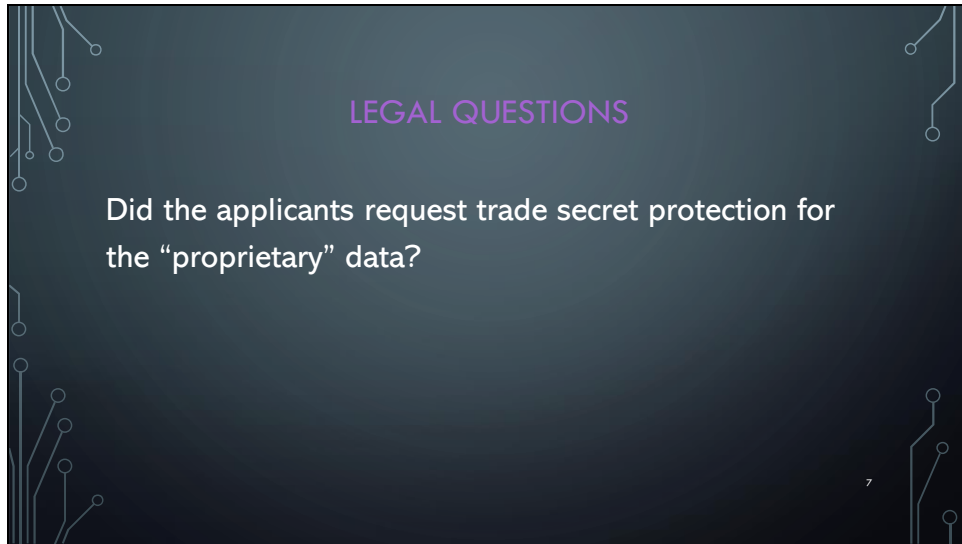
Ordinance 2023-06 Section 7 C states "103.1 General. The Fire Prevention Division of the Santa Fe County Fire Department (the "Division") is under the direction of the Fire Marshal. The function of the Division includes implementation, administration and enforcement of the Fire Code."

Slide 6



No. As reflected in the 10-11-24 CUP Plan Review from Fire, the Fire Dept. and Atar Fire simply concluded that a sufficient level of information has been provided by the applicant to validate the issuance of a Conditional Use Permit.

Slide 7



The applicant simply notified the County that it considers the information to be proprietary/confidential. As stated above, if it seeks to avoid disclosure of the information, the request will be made in a judicial proceeding and not to the County. The County will not make a determination regarding the protection or disclosure of such information.

Slide 8

COMMON THEMES

- Purpose: To hear perspective and input pursuant to NFPA 855 Annex G from interested stakeholders
- Fire Code Official authority lies in the enforcement of the SFC fire code as adopted by the Board of County Commissioners, and other state and national laws and regulations.
- Homeowners insurance
- Research other jurisdictions/states

8

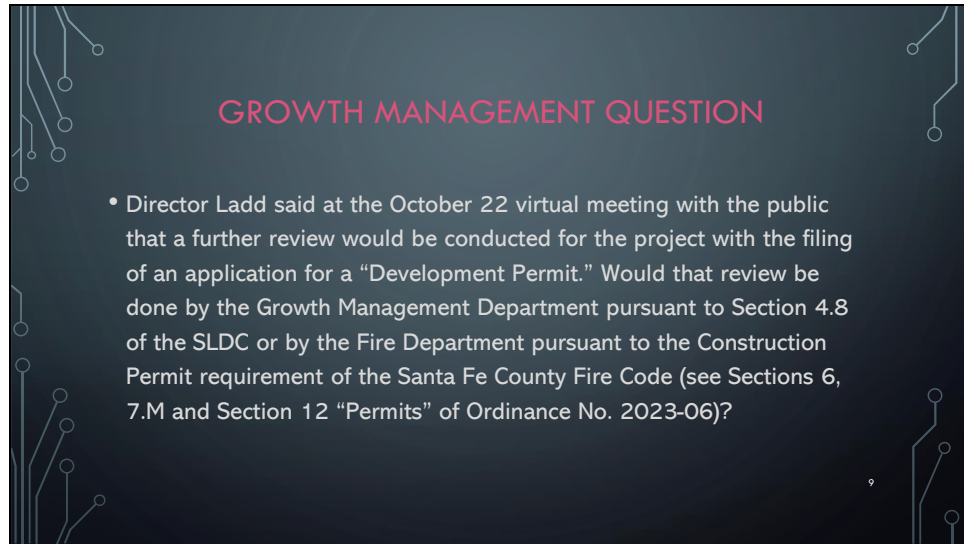
Please be aware Annex G of NFPA 855 guidelines are “best practices” that identify useful standards and procedures, but which is not mandatory.

Approval of a CUP application is at the discretion of the SFC governing body; for example, Planning commission or Board of County Commissioners.

SFC is aware of many homeowners facing challenges relative to home insurance, but the cause does not seem to be link to BESS installations.

Fire Departments across the nation have adopted or are in the process of adopting the latest version of the International Fire Code and NFPA 855. Submittal of both a Hazard Mitigation Analysis and Emergency Response Plan, including staff and emergency responders training to the Authority Having Jurisdiction is required.

Slide 9

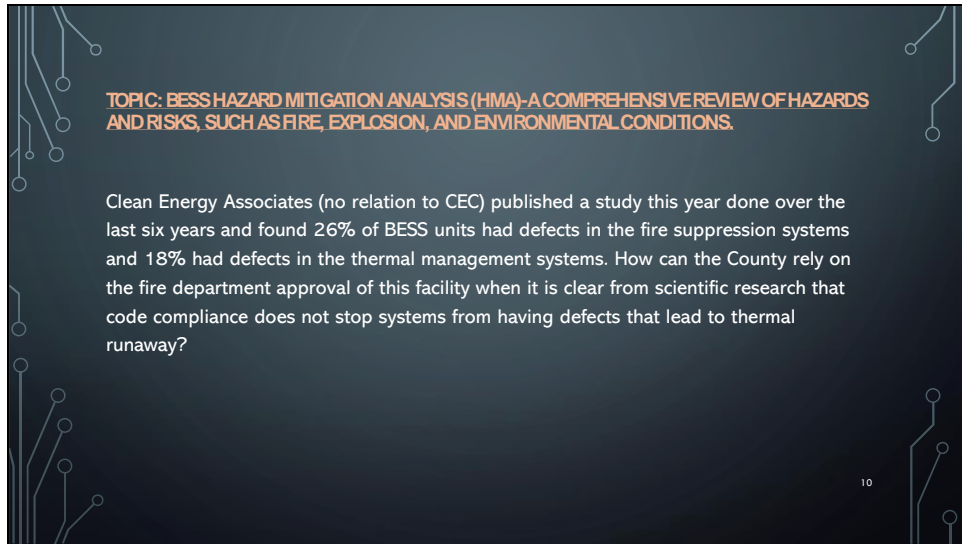
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GROWTH MANAGEMENT QUESTION

- Director Ladd said at the October 22 virtual meeting with the public that a further review would be conducted for the project with the filing of an application for a "Development Permit." Would that review be done by the Growth Management Department pursuant to Section 4.8 of the SLDC or by the Fire Department pursuant to the Construction Permit requirement of the Santa Fe County Fire Code (see Sections 6, 7.M and Section 12 "Permits" of Ordinance No. 2023-06)?

Should this CUP application be approved by the governing body, the fire department, in collaboration with SME, will exhaustively and rigorously review and evaluate for compliance with the highest level of safety in accordance with local, state, and national codes and standards, as are all projects within Santa Fe County. The full and complete construction document package would be submitted for review and approval by the SFCFD prior to commencing project construction. This is established in Chapter 1 of the Fire Code as adopted by the SFCFD.

Slide 10

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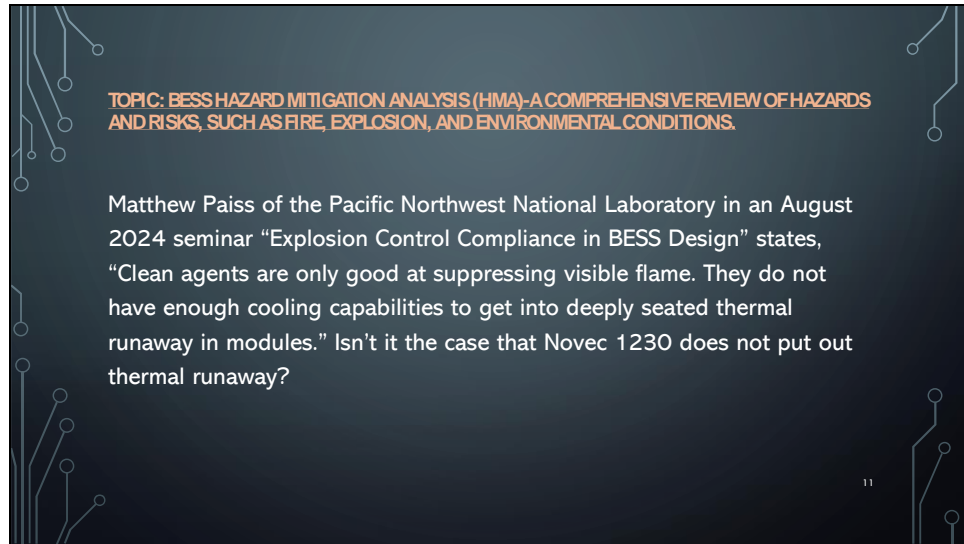
TOPIC: BESS HAZARD MITIGATION ANALYSIS (HMA)-A COMPREHENSIVE REVIEW OF HAZARDS AND RISKS, SUCH AS FIRE, EXPLOSION, AND ENVIRONMENTAL CONDITIONS.

Clean Energy Associates (no relation to CEC) published a study this year done over the last six years and found 26% of BESS units had defects in the fire suppression systems and 18% had defects in the thermal management systems. How can the County rely on the fire department approval of this facility when it is clear from scientific research that code compliance does not stop systems from having defects that lead to thermal runaway?

10

Issues identified by the CEA report can be mitigated through commissioning and ongoing inspection, testing, and maintenance, which is required by NFPA 855. The CEA identified issues at factories. These systems were not yet in the field and tested/commissioned.

Slide 11



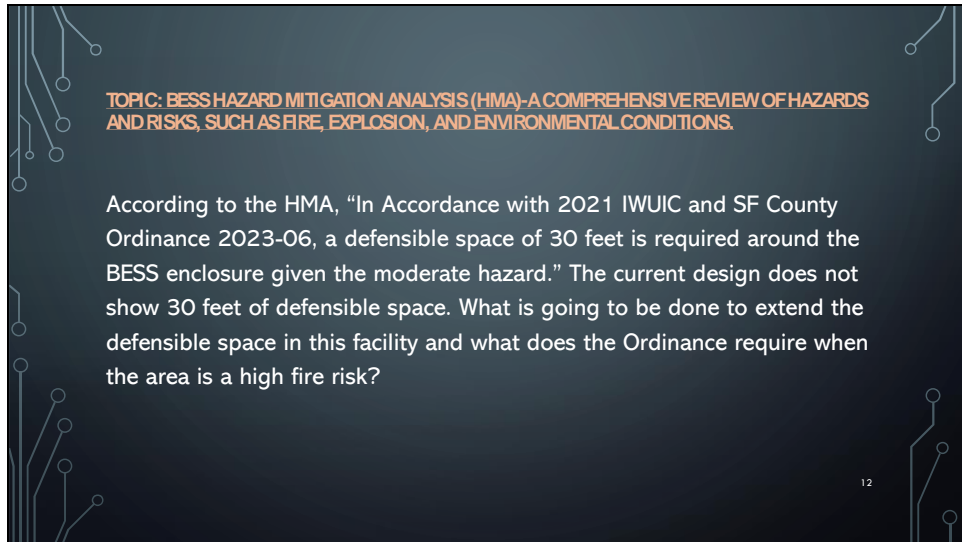
TOPIC: BESS HAZARD MITIGATION ANALYSIS (HMA)-A COMPREHENSIVE REVIEW OF HAZARDS AND RISKS, SUCH AS FIRE, EXPLOSION, AND ENVIRONMENTAL CONDITIONS.

Matthew Paiss of the Pacific Northwest National Laboratory in an August 2024 seminar “Explosion Control Compliance in BESS Design” states, “Clean agents are only good at suppressing visible flame. They do not have enough cooling capabilities to get into deeply seated thermal runaway in modules.” Isn’t it the case that Novec 1230 does not put out thermal runaway?

11

The proposed system is not classified as fire suppression or extinguishing system as it pertains to NFPA 855. It is a thermal runaway propagation prevention system. The NOVEC is injected at a module level, not at a container level. Matt Paiss is referring to container level fire suppression. Container level fire suppression is not provided on this project. The proposed NOVEC system has been validated via UL 9540A testing. Installation and Unit Level testing for this project has indicated that when a single cell goes into thermal runaway, it does not spread to adjacent cells due to the NOVEC direct injection system.

Slide 12



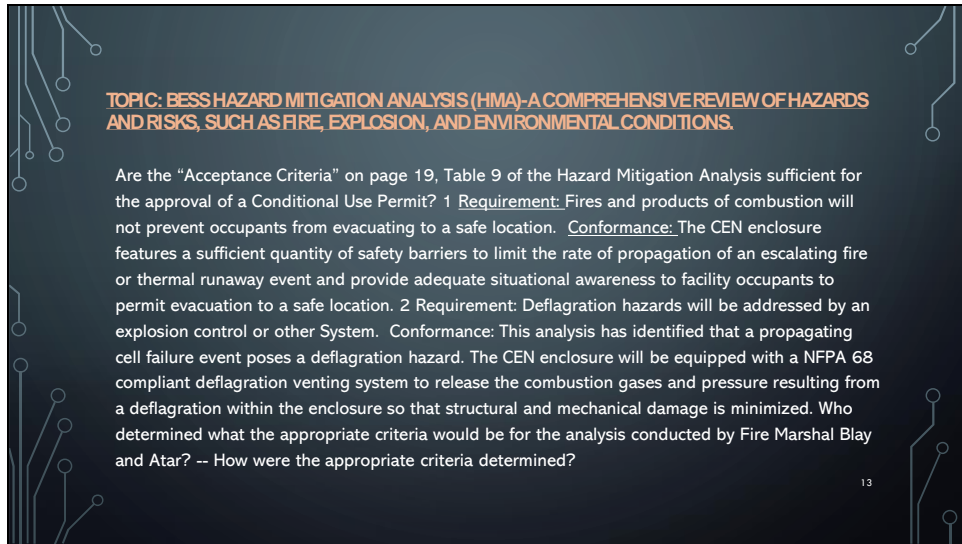
TOPIC: BESS HAZARD MITIGATION ANALYSIS (HMA)-A COMPREHENSIVE REVIEW OF HAZARDS AND RISKS, SUCH AS FIRE, EXPLOSION, AND ENVIRONMENTAL CONDITIONS.

According to the HMA, “In Accordance with 2021 IWUIC and SF County Ordinance 2023-06, a defensible space of 30 feet is required around the BESS enclosure given the moderate hazard.” The current design does not show 30 feet of defensible space. What is going to be done to extend the defensible space in this facility and what does the Ordinance require when the area is a high fire risk?

12

The fuel modification distances increase as the fire hazard severity area increases, with a minimum distance of 30 feet. The intent of fuel modification is to create a defensible space so that an approaching wildland fire cannot easily move through the defensible space and ignite the structure. The defensible space also provides fire fighters an area to set up hose lines between the structure and the approaching fire. Reducing the density of brush and undergrowth is necessary to reduce the intensity of the fire, reduce flame lengths and reduce radiant heat.

Slide 13



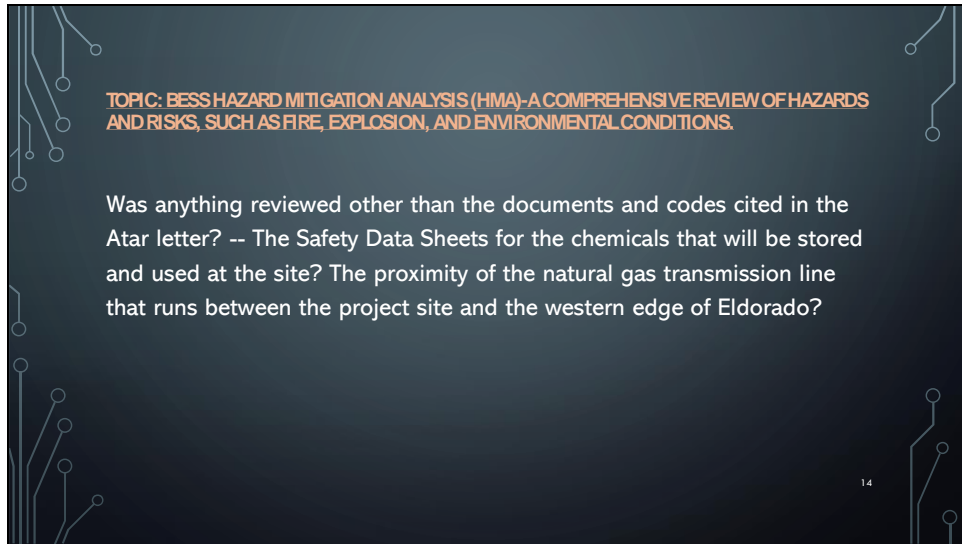
TOPIC: BESS HAZARD MITIGATION ANALYSIS (HMA)-A COMPREHENSIVE REVIEW OF HAZARDS AND RISKS, SUCH AS FIRE, EXPLOSION, AND ENVIRONMENTAL CONDITIONS.

Are the "Acceptance Criteria" on page 19, Table 9 of the Hazard Mitigation Analysis sufficient for the approval of a Conditional Use Permit? 1 Requirement: Fires and products of combustion will not prevent occupants from evacuating to a safe location. Conformance: The CEN enclosure features a sufficient quantity of safety barriers to limit the rate of propagation of an escalating fire or thermal runaway event and provide adequate situational awareness to facility occupants to permit evacuation to a safe location. 2 Requirement: Deflagration hazards will be addressed by an explosion control or other System. Conformance: This analysis has identified that a propagating cell failure event poses a deflagration hazard. The CEN enclosure will be equipped with a NFPA 68 compliant deflagration venting system to release the combustion gases and pressure resulting from a deflagration within the enclosure so that structural and mechanical damage is minimized. Who determined what the appropriate criteria would be for the analysis conducted by Fire Marshal Blay and Atar? -- How were the appropriate criteria determined?

13

The acceptance criteria are defined by NFPA 855 (2023), Section 4.4 and the 2021 IFC Section 1207.1.4.2. These are national consensus standards.

Slide 14

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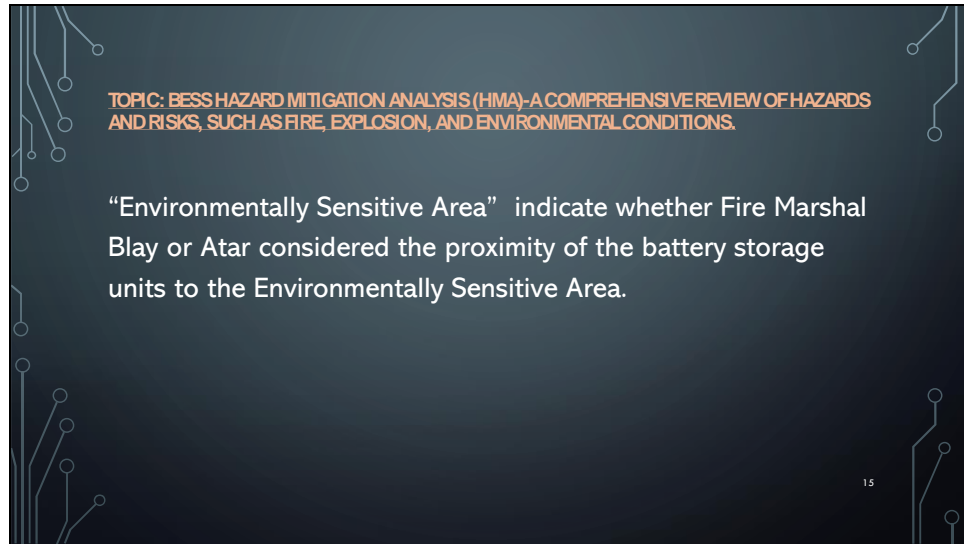
TOPIC: BESS HAZARD MITIGATION ANALYSIS (HMA)-A COMPREHENSIVE REVIEW OF HAZARDS AND RISKS, SUCH AS FIRE, EXPLOSION, AND ENVIRONMENTAL CONDITIONS.

Was anything reviewed other than the documents and codes cited in the Atar letter? -- The Safety Data Sheets for the chemicals that will be stored and used at the site? The proximity of the natural gas transmission line that runs between the project site and the western edge of Eldorado?

14

All items reviewed by Atar Fire are outlined in the review letter. The documents were then compared against the applicable codes and standards. NFPA 855 does not require review of SDS.

Slide 15

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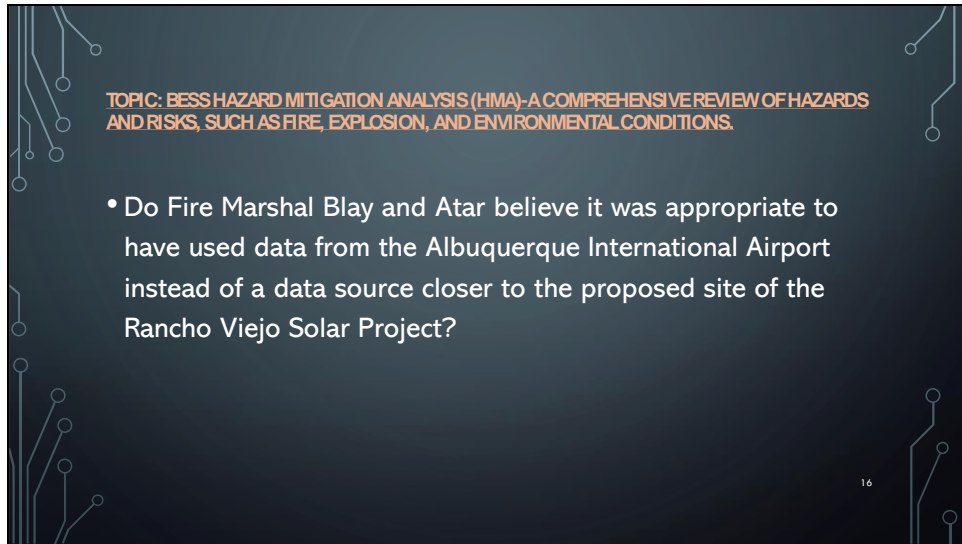
TOPIC: BESS HAZARD MITIGATION ANALYSIS (HMA)-A COMPREHENSIVE REVIEW OF HAZARDS AND RISKS, SUCH AS FIRE, EXPLOSION, AND ENVIRONMENTAL CONDITIONS.

“Environmentally Sensitive Area” indicate whether Fire Marshal Blay or Atar considered the proximity of the battery storage units to the Environmentally Sensitive Area.

15

NFPA 855 (2023) and the 2021 IFC do not provide explicit requirements regarding Energy Storage System installations and environmentally sensitive areas. Separation distances as required by the 2021 IFC and 2023 NFPA 855 have been adhered to.

Slide 16

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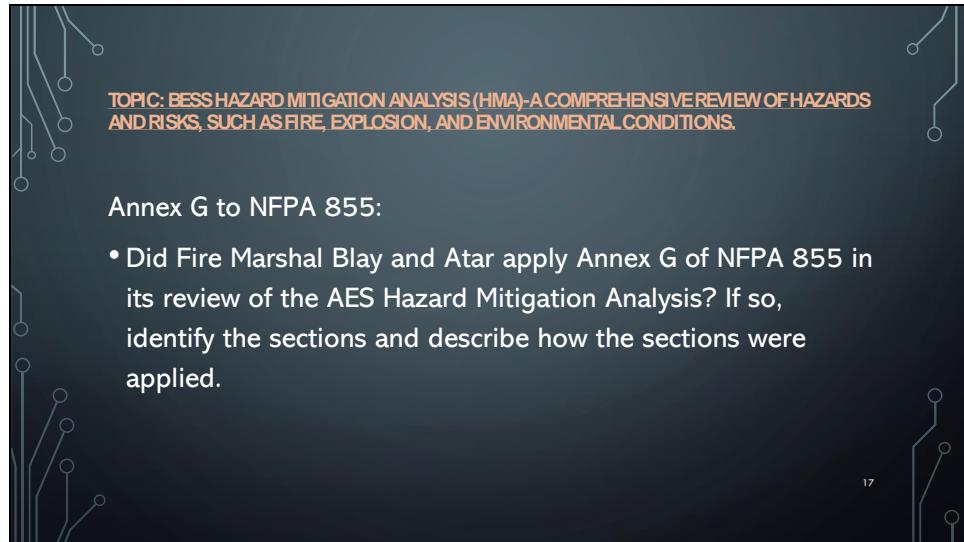
TOPIC: BESS HAZARD MITIGATION ANALYSIS (HMA)-A COMPREHENSIVE REVIEW OF HAZARDS AND RISKS, SUCH AS FIRE, EXPLOSION, AND ENVIRONMENTAL CONDITIONS.

- Do Fire Marshal Blay and Atar believe it was appropriate to have used data from the Albuquerque International Airport instead of a data source closer to the proposed site of the Rancho Viejo Solar Project?

16

Choosing a data source closer to the site is not expected to impact results of the HMA. Wind is not used for any modeling as part of the HMA and is used in a qualitative manner. ESS safety is a layered approach.

Slide 17



TOPIC: BESS HAZARD MITIGATION ANALYSIS (HMA)-A COMPREHENSIVE REVIEW OF HAZARDS AND RISKS, SUCH AS FIRE, EXPLOSION, AND ENVIRONMENTAL CONDITIONS.

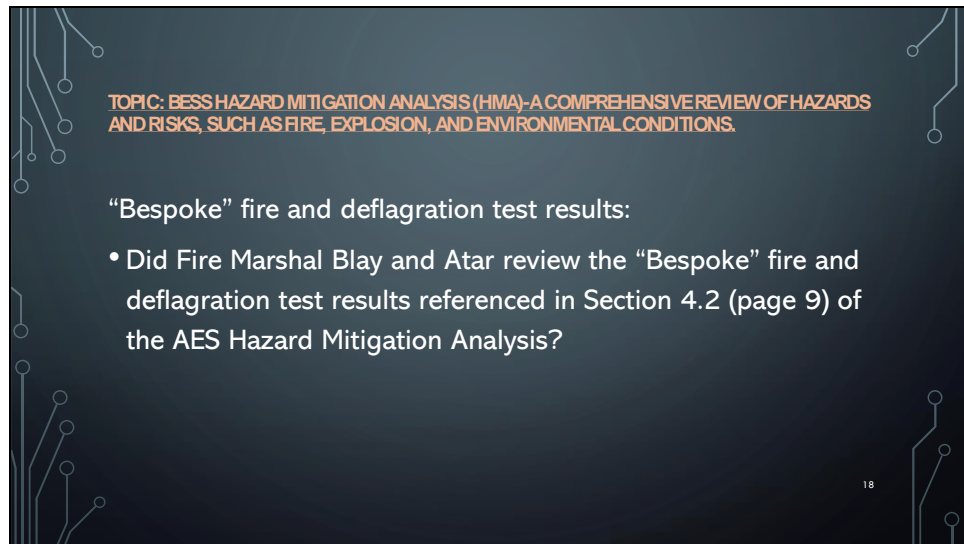
Annex G to NFPA 855:

- Did Fire Marshal Blay and Atar apply Annex G of NFPA 855 in its review of the AES Hazard Mitigation Analysis? If so, identify the sections and describe how the sections were applied.

17

Atar Fire considered Annex G conceptually. In some instances, it is referenced directly in review comments (for example, comments 13, 42, 83, 85). Annex G is nonmandatory text and is for information only. The NFPA 855 technical committee places items that do not rise to the level of a requirement, or are simply extra information, in the Annex. Note the absence of the use of the word 'shall' in Annex material. Also reference the NFPA Manual of Style for more information on the intent of Annex material.

Slide 18

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TOPIC: BESS HAZARD MITIGATION ANALYSIS (HMA)-A COMPREHENSIVE REVIEW OF HAZARDS AND RISKS, SUCH AS FIRE, EXPLOSION, AND ENVIRONMENTAL CONDITIONS.

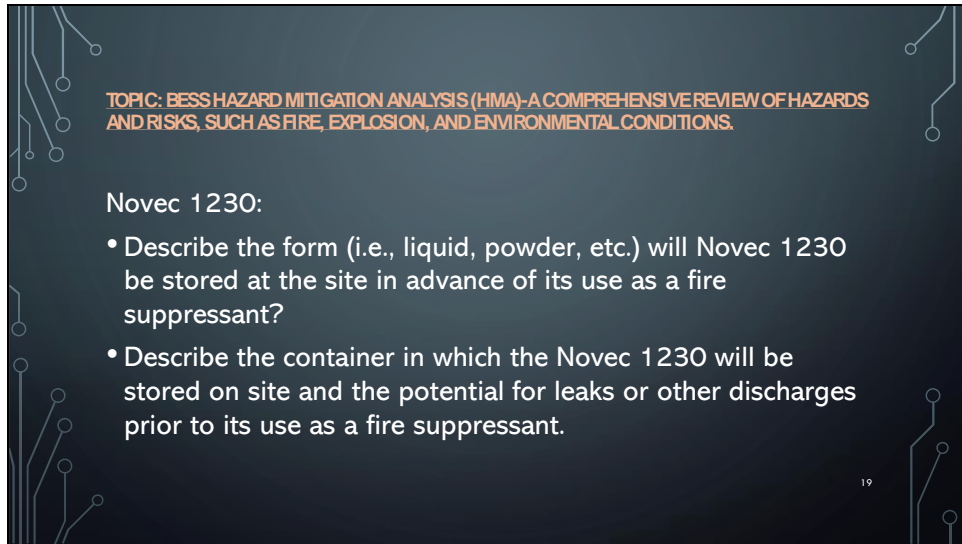
“Bespoke” fire and deflagration test results:

- Did Fire Marshal Blay and Atar review the “Bespoke” fire and deflagration test results referenced in Section 4.2 (page 9) of the AES Hazard Mitigation Analysis?

18

Yes

Slide 19



TOPIC: BESS HAZARD MITIGATION ANALYSIS (HMA)-A COMPREHENSIVE REVIEW OF HAZARDS AND RISKS, SUCH AS FIRE, EXPLOSION, AND ENVIRONMENTAL CONDITIONS.

Novec 1230:

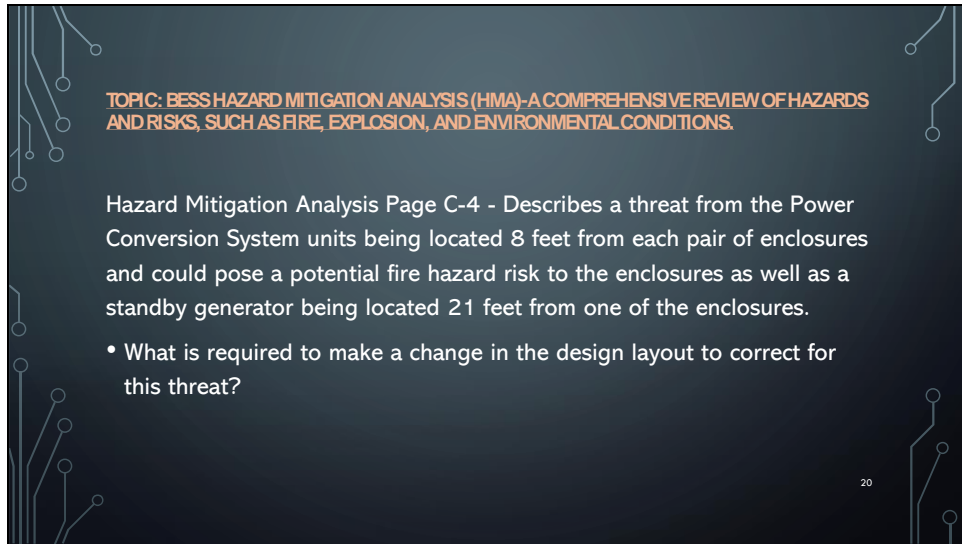
- Describe the form (i.e., liquid, powder, etc.) will Novec 1230 be stored at the site in advance of its use as a fire suppressant?
- Describe the container in which the Novec 1230 will be stored on site and the potential for leaks or other discharges prior to its use as a fire suppressant.

19

Gas.

Each container will have a dedicated NOVEC cylinder. The system will be inspected and commissioned in accordance with the manufacturer's instructions and the applicable portions of NFPA 2001, as is the accepted industry practice. All components of the NOVEC system are included in and have been evaluated as part of the Installation Level UL 9540A test.

Slide 20



TOPIC: BESS HAZARD MITIGATION ANALYSIS (HMA)-A COMPREHENSIVE REVIEW OF HAZARDS AND RISKS, SUCH AS FIRE, EXPLOSION, AND ENVIRONMENTAL CONDITIONS.

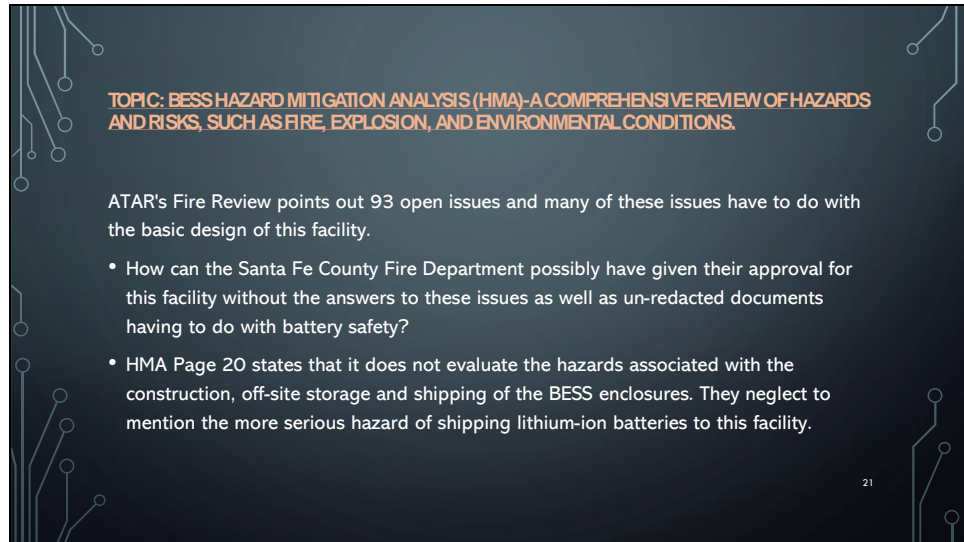
Hazard Mitigation Analysis Page C-4 - Describes a threat from the Power Conversion System units being located 8 feet from each pair of enclosures and could pose a potential fire hazard risk to the enclosures as well as a standby generator being located 21 feet from one of the enclosures.

- What is required to make a change in the design layout to correct for this threat?

20

Power Conversion Equipment, which is composed of electrical equipment, typically has low heat release rates (Reference NUREG 2178, for example). These heat release rates, and associated heat fluxes, are generally not sufficient to heat battery cells inside a metal insulated container 8 feet away to above the thermal runaway temperature.

Slide 21



TOPIC: BESS HAZARD MITIGATION ANALYSIS (HMA)-A COMPREHENSIVE REVIEW OF HAZARDS AND RISKS, SUCH AS FIRE, EXPLOSION, AND ENVIRONMENTAL CONDITIONS.

ATAR's Fire Review points out 93 open issues and many of these issues have to do with the basic design of this facility.

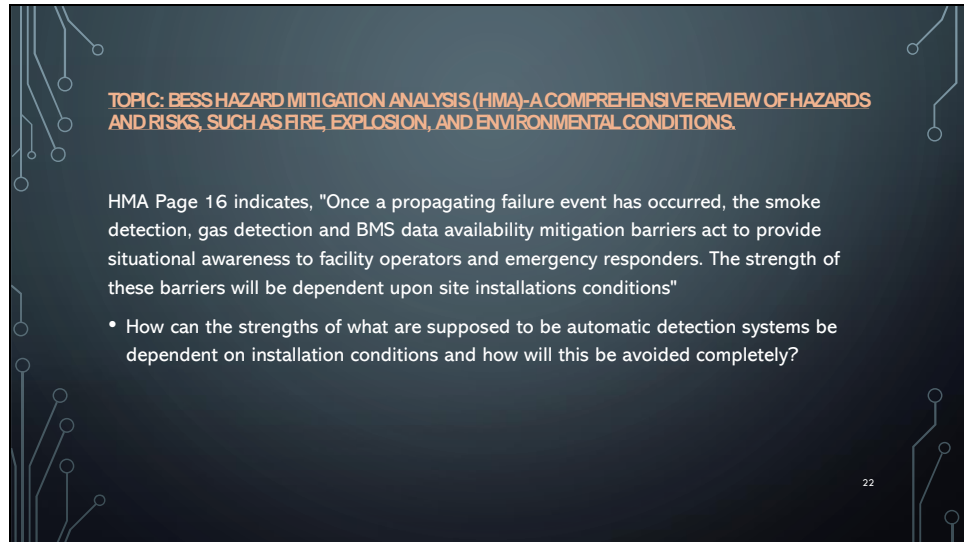
- How can the Santa Fe County Fire Department possibly have given their approval for this facility without the answers to these issues as well as un-redacted documents having to do with battery safety?
- HMA Page 20 states that it does not evaluate the hazards associated with the construction, off-site storage and shipping of the BESS enclosures. They neglect to mention the more serious hazard of shipping lithium-ion batteries to this facility.

21

The fire department has not given their approval; it has deemed the conditional use permit application complete based on the review by ATAR fire. However, all of the items in the review letter by ATAR Fire must be satisfactorily addressed prior to commissioning of the facility, should a CUP approval be granted by the Planning Commission or BCC.

Transport of lithium ion batteries is regulated by the Department of Transportation.

Slide 22

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TOPIC: BESS HAZARD MITIGATION ANALYSIS (HMA)-A COMPREHENSIVE REVIEW OF HAZARDS AND RISKS, SUCH AS FIRE, EXPLOSION, AND ENVIRONMENTAL CONDITIONS.

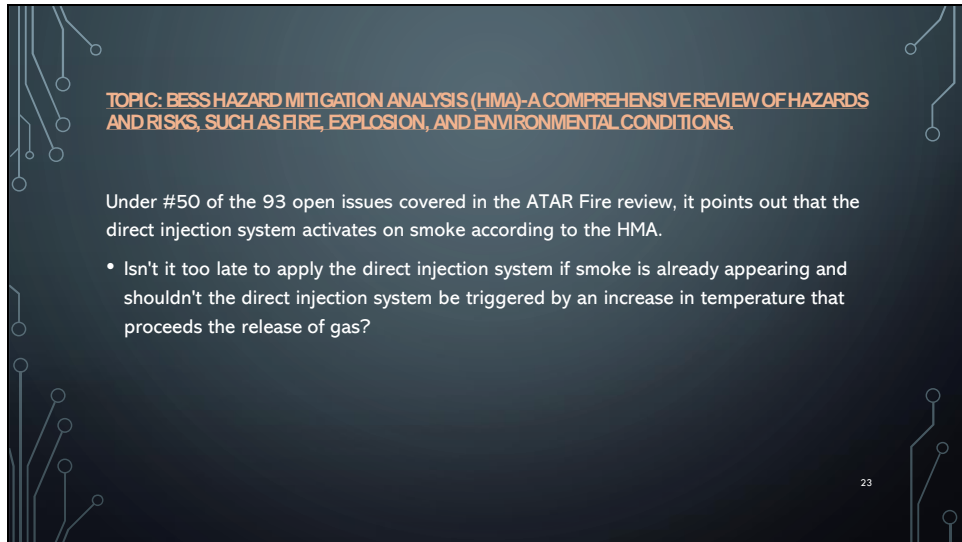
HMA Page 16 indicates, "Once a propagating failure event has occurred, the smoke detection, gas detection and BMS data availability mitigation barriers act to provide situational awareness to facility operators and emergency responders. The strength of these barriers will be dependent upon site installations conditions"

- How can the strengths of what are supposed to be automatic detection systems be dependent on installation conditions and how will this be avoided completely?

22

All systems will be reviewed for compliance with applicable nationally recognized standards, as well as inspected and tested.

Slide 23



TOPIC: BESS HAZARD MITIGATION ANALYSIS (HMA)-A COMPREHENSIVE REVIEW OF HAZARDS AND RISKS, SUCH AS FIRE, EXPLOSION, AND ENVIRONMENTAL CONDITIONS.

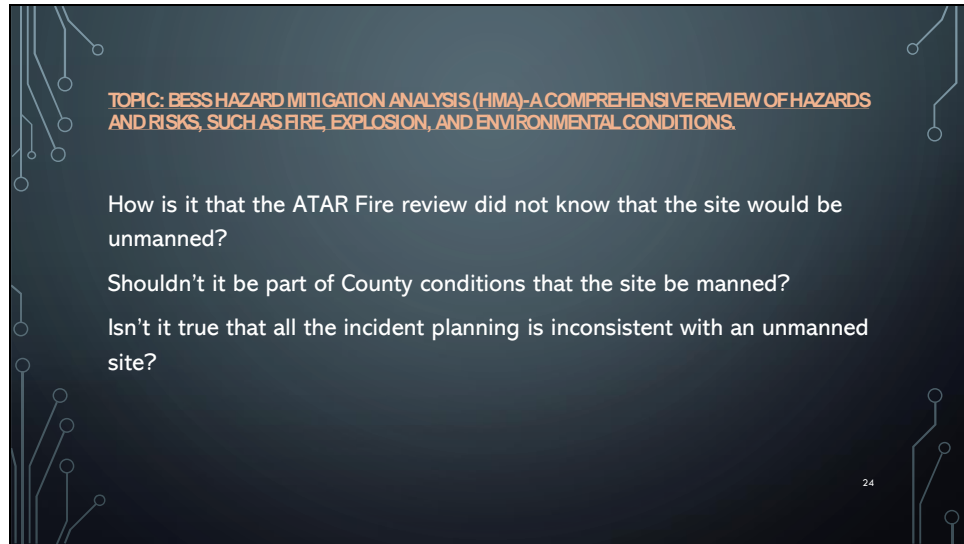
Under #50 of the 93 open issues covered in the ATAR Fire review, it points out that the direct injection system activates on smoke according to the HMA.

- Isn't it too late to apply the direct injection system if smoke is already appearing and shouldn't the direct injection system be triggered by an increase in temperature that proceeds the release of gas?

23

The performance of the system is validated by the UL 9540A testing as it pertains to mitigating cell to cell propagation. The comment pertains to something specific mentioned in the HMA regarding the statement that this will increase the amount of time of detection. Atar Fire disagrees with the statement, but it does not invalidate the performance and safety of the BESS as a whole. Comment #50 requires an editorial revision to the HMA.

Slide 24



TOPIC: BESS HAZARD MITIGATION ANALYSIS (HMA)-A COMPREHENSIVE REVIEW OF HAZARDS AND RISKS, SUCH AS FIRE, EXPLOSION, AND ENVIRONMENTAL CONDITIONS.

How is it that the ATAR Fire review did not know that the site would be unmanned?

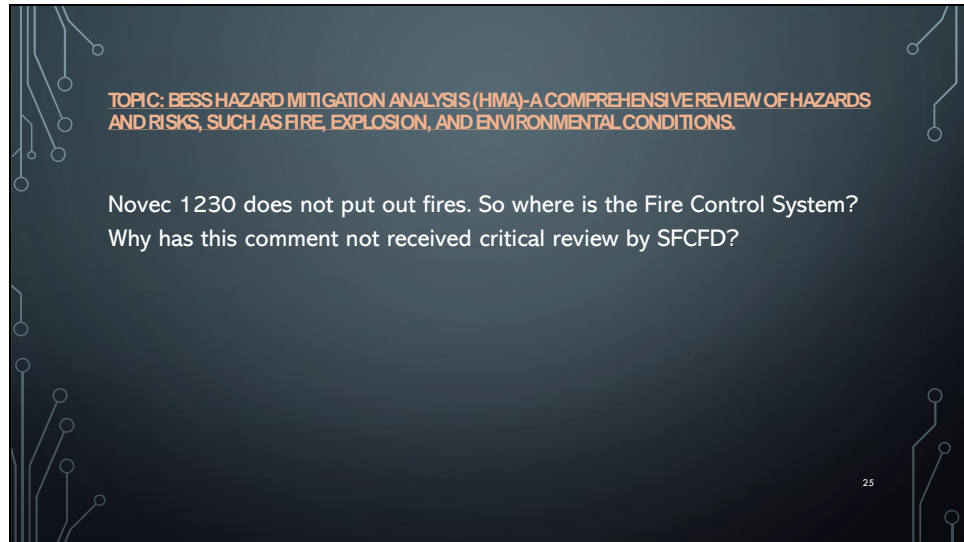
Shouldn't it be part of County conditions that the site be manned?

Isn't it true that all the incident planning is inconsistent with an unmanned site?

24

Atar Fire did not assume the site would be manned, rather, was requesting an update to the ERP based on information presented in the CUP application. NFPA 855 (2023) and the 2021 IFC do not require an ESS site to be 'manned'. Data from various systems are monitored by a constantly attended location as required by NFPA 855 and the IFC.

Slide 25



TOPIC: BESS HAZARD MITIGATION ANALYSIS (HMA)-A COMPREHENSIVE REVIEW OF HAZARDS AND RISKS, SUCH AS FIRE, EXPLOSION, AND ENVIRONMENTAL CONDITIONS.

Novec 1230 does not put out fires. So where is the Fire Control System?
Why has this comment not received critical review by SFCFD?

25

This comment is requesting an editorial clarification in the HMA. Atar Fire agrees Novec 1230 does not extinguish lithium-ion fires when used for container based fire suppression. The NFPA 855 committee has recognized this. Future editions of NFPA 855 will prohibit this (reference the NFPA website, NFPA 855 Next Edition tab, 'View Public Comment' for Second Draft' Section 4.9 has been revised to remove NFPA 2001 and NFPA 2010 systems). NOVEC 1230 is provided at a module level to mitigate cell to cell propagation and is considered a thermal runaway propagation prevention system. The NOVEC system being provided by AES is not required by code, yet has demonstrable benefits via UL 9540A testing showing it limits cell to cell propagation to a single cell.

Slide 26

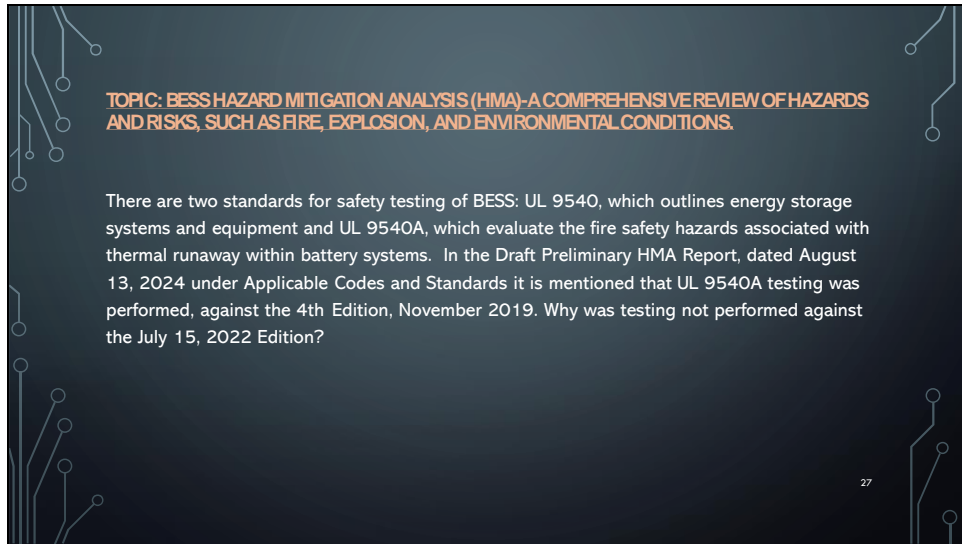
TOPIC: BESS HAZARD MITIGATION ANALYSIS (HMA)-A COMPREHENSIVE REVIEW OF HAZARDS AND RISKS, SUCH AS FIRE, EXPLOSION, AND ENVIRONMENTAL CONDITIONS.

Since the fire risk is, among others, depending on the number of structures, has AES made public how many solar panels will be placed, how many BESS containers with how many battery cells, and where the containers will be located?

26

The HMA provides details on the number of containers, the location of the containers, and the number of cells in each container and module. These items, among many others, are considered in the HMA. Solar panels are remotely located from the BESS containers.

Slide 27



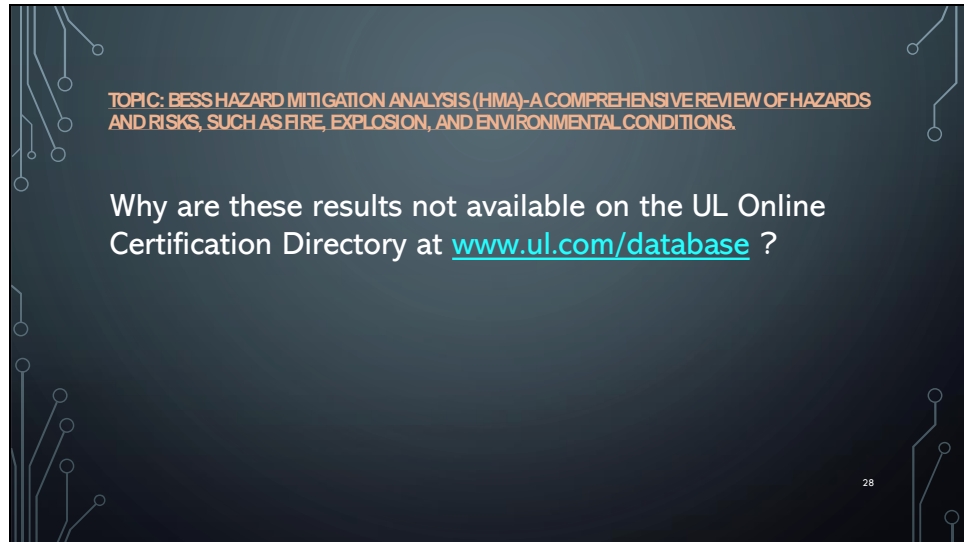
TOPIC: BESS HAZARD MITIGATION ANALYSIS (HMA)-A COMPREHENSIVE REVIEW OF HAZARDS AND RISKS, SUCH AS FIRE, EXPLOSION, AND ENVIRONMENTAL CONDITIONS.

There are two standards for safety testing of BESS: UL 9540, which outlines energy storage systems and equipment and UL 9540A, which evaluate the fire safety hazards associated with thermal runaway within battery systems. In the Draft Preliminary HMA Report, dated August 13, 2024 under Applicable Codes and Standards it is mentioned that UL 9540A testing was performed, against the 4th Edition, November 2019. Why was testing not performed against the July 15, 2022 Edition?

27

The latest published edition of UL 9540A is the 4th Edition, dated November 12, 2019. The testing under this project has been performed to UL 9540A, 4th Edition. The latest published edition for UL 9540 is the 3rd Edition, dated June 28, 2023.

Slide 28



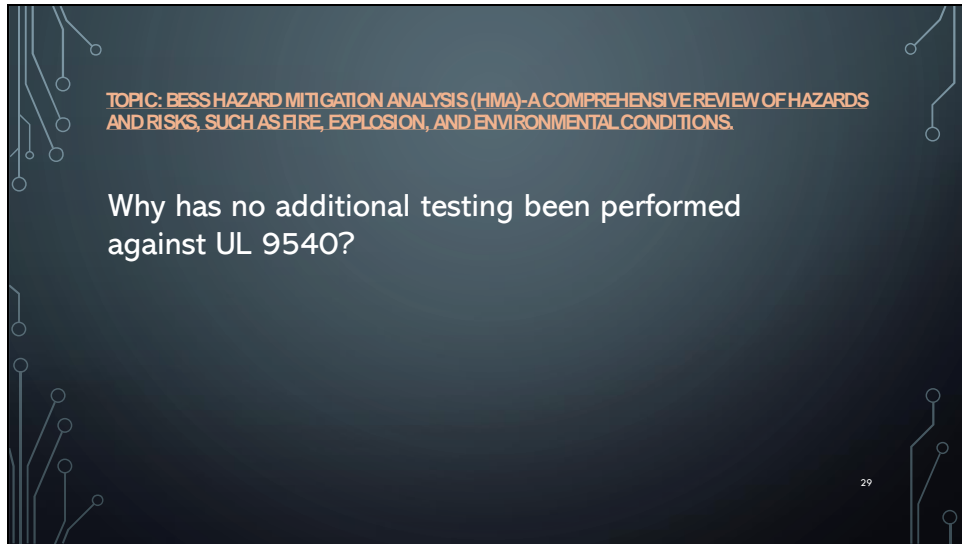
TOPIC: BESS HAZARD MITIGATION ANALYSIS (HMA)-A COMPREHENSIVE REVIEW OF HAZARDS AND RISKS, SUCH AS FIRE, EXPLOSION, AND ENVIRONMENTAL CONDITIONS.

Why are these results not available on the UL Online Certification Directory at www.ul.com/database ?

28

UL 9540A is a test, not a Listing or Certification. UL 9540A results are not typically published by Nationally Recognized Testing Laboratories online. Results are given to the client that requests the test. Regarding the product certification standard, UL 9540, UL 9540 Listing can be achieved through Underwriters Laboratories or any other Nationally Recognized Testing Laboratory (NRTL), that is certified by OSHA to UL 9540. For this project, AES has used the NRTL called SGS for the UL 9540 Listing. The UL Online Certifications directory only shows products listed specifically by Underwriters Laboratories (and not other OSHA NRTL such as SGS, CSA, TUV, etc)

Slide 29



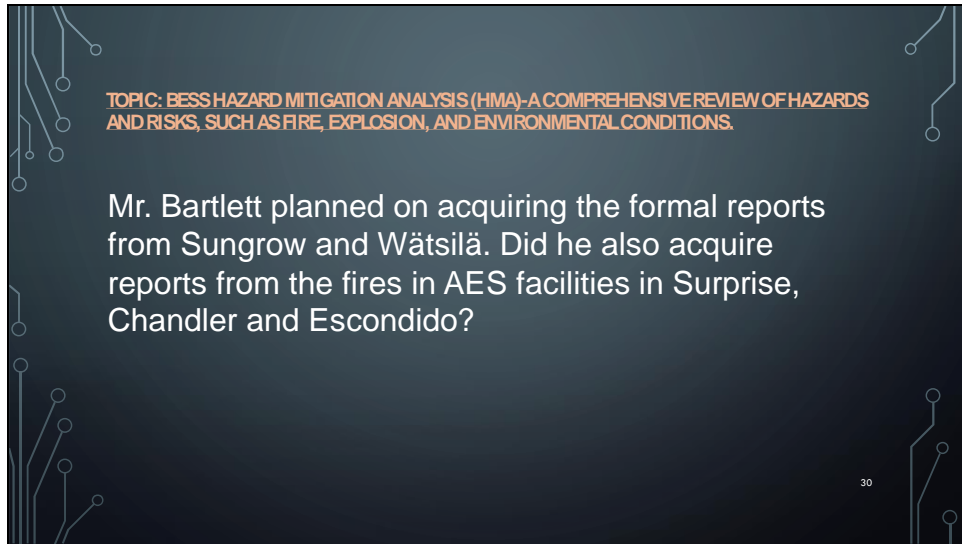
TOPIC: BESS HAZARD MITIGATION ANALYSIS (HMA)-A COMPREHENSIVE REVIEW OF HAZARDS AND RISKS, SUCH AS FIRE, EXPLOSION, AND ENVIRONMENTAL CONDITIONS.

Why has no additional testing been performed against UL 9540?

29

Testing is currently being performed and is nearly complete. The BESS units used on this project will be UL 9540 Listed. Certification is in progress.

Slide 30

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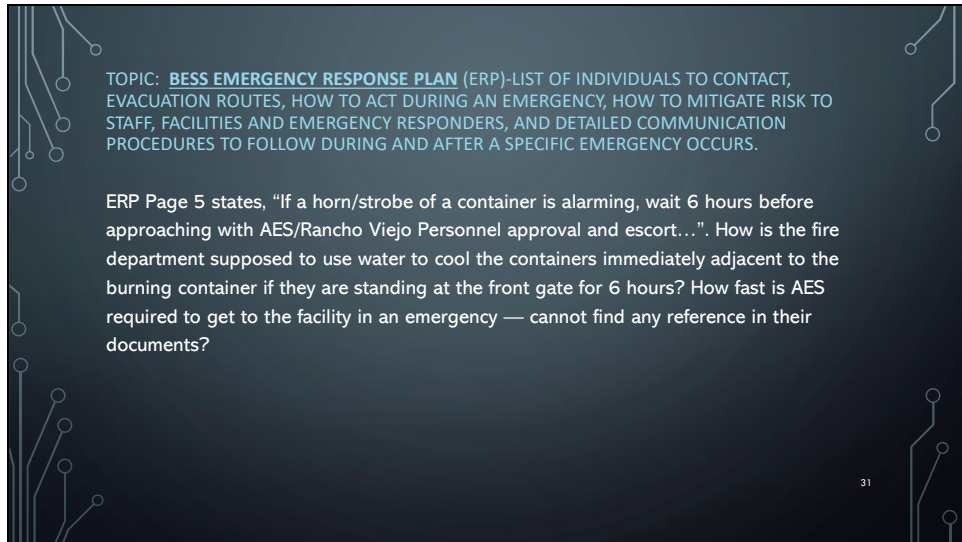
TOPIC: BESS HAZARD MITIGATION ANALYSIS (HMA)-A COMPREHENSIVE REVIEW OF HAZARDS AND RISKS, SUCH AS FIRE, EXPLOSION, AND ENVIRONMENTAL CONDITIONS.

Mr. Bartlett planned on acquiring the formal reports from Sungrow and Wätsilä. Did he also acquire reports from the fires in AES facilities in Surprise, Chandler and Escondido?

30

The full scale fire testing performed by Sungrow and Wartsila is under NDA and has not been released to Mr. Bartlett. There has not been an investigation report issued for Escondido.

Slide 31

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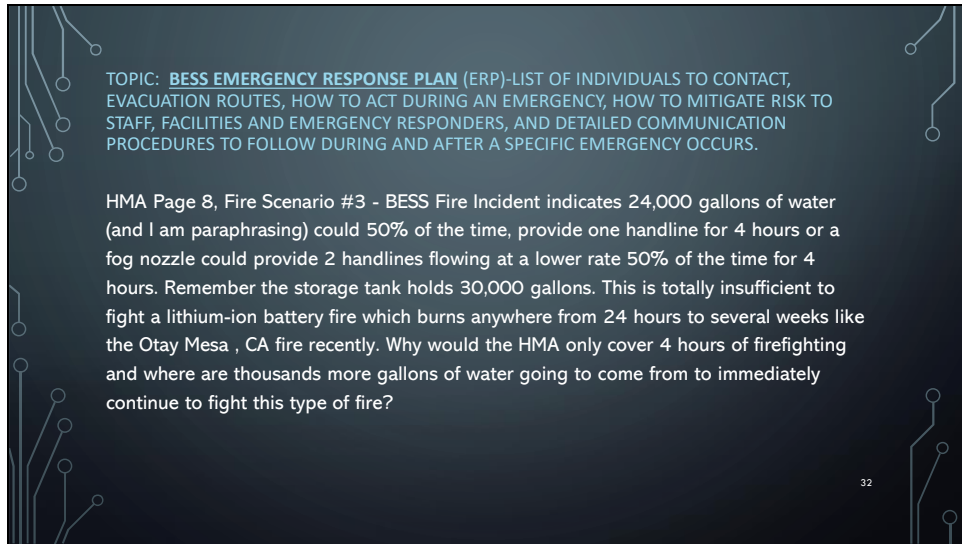
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ERP Page 5 states, “If a horn/strobe of a container is alarming, wait 6 hours before approaching with AES/Rancho Viejo Personnel approval and escort...”. How is the fire department supposed to use water to cool the containers immediately adjacent to the burning container if they are standing at the front gate for 6 hours? How fast is AES required to get to the facility in an emergency — cannot find any reference in their documents?

31

The fire department is in the process of developing Standard Operating Procedures and Guidelines to address this and other potential scenarios. Should this application be approved by the SFC governing body, the ERP shall undergo further evaluation of more specific guidelines.

Slide 32



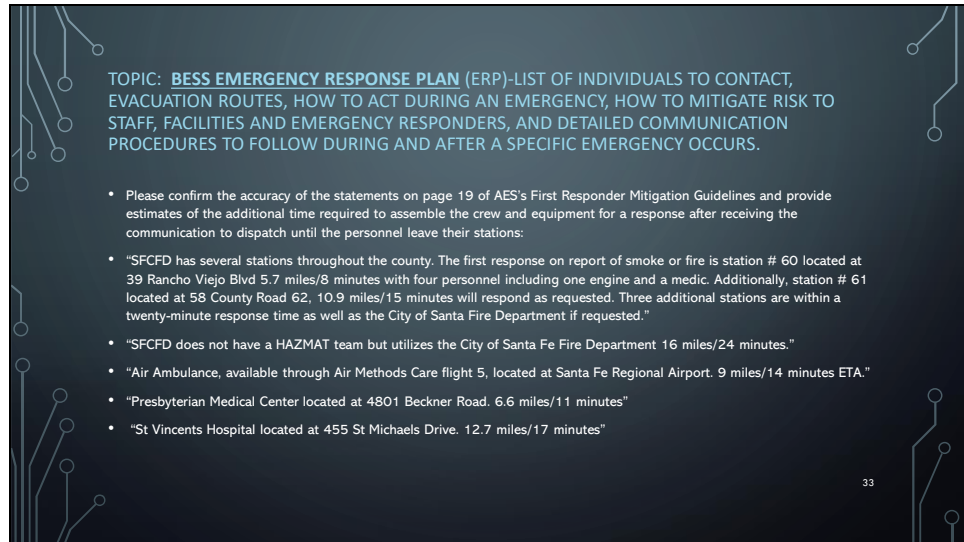
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HMA Page 8, Fire Scenario #3 - BESS Fire Incident indicates 24,000 gallons of water (and I am paraphrasing) could 50% of the time, provide one handline for 4 hours or a fog nozzle could provide 2 handlines flowing at a lower rate 50% of the time for 4 hours. Remember the storage tank holds 30,000 gallons. This is totally insufficient to fight a lithium-ion battery fire which burns anywhere from 24 hours to several weeks like the Otay Mesa , CA fire recently. Why would the HMA only cover 4 hours of firefighting and where are thousands more gallons of water going to come from to immediately continue to fight this type of fire?

32

The fire department has the capability to bring water to any location in Santa Fe County by way of tanker shuttle operations. In addition to the 30,000 gallons at the site, the average water brought to the scene by First Alarm responding units is 10,000 gallons. When a Second Alarm is issued, an average of 5,000 additional gallons of water is brought to the scene. Once on scene a tender shuttle operation will be put into operation to maintain 250 gallons of water per minute for 2 hours.

Slide 33



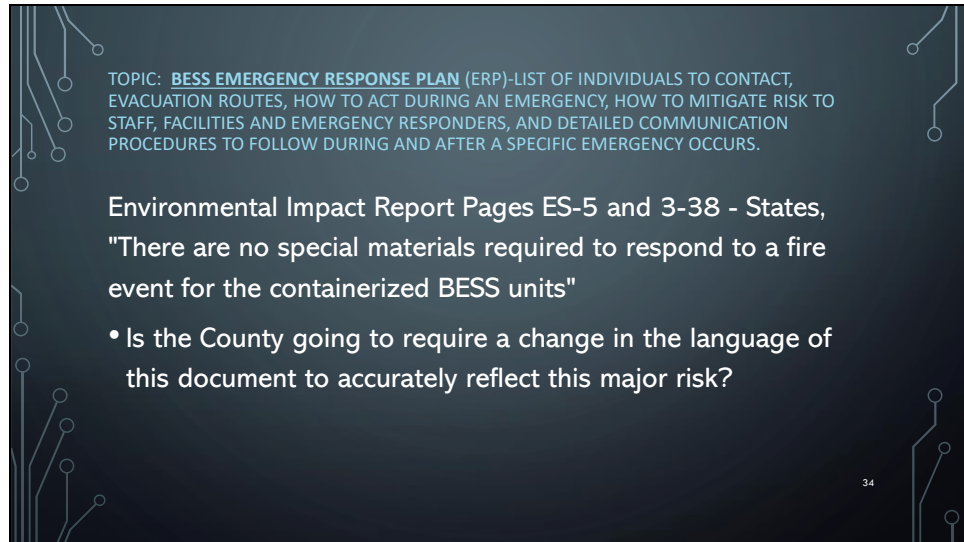
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- Please confirm the accuracy of the statements on page 19 of AES's First Responder Mitigation Guidelines and provide estimates of the additional time required to assemble the crew and equipment for a response after receiving the communication to dispatch until the personnel leave their stations:
- "SFCFD has several stations throughout the county. The first response on report of smoke or fire is station # 60 located at 39 Rancho Viejo Blvd 5.7 miles/8 minutes with four personnel including one engine and a medic. Additionally, station # 61 located at 58 County Road 62, 10.9 miles/15 minutes will respond as requested. Three additional stations are within a twenty-minute response time as well as the City of Santa Fe Fire Department if requested."
- "SFCFD does not have a HAZMAT team but utilizes the City of Santa Fe Fire Department 16 miles/24 minutes."
- "Air Ambulance, available through Air Methods Care flight 5, located at Santa Fe Regional Airport. 9 miles/14 minutes ETA."
- "Presbyterian Medical Center located at 4801 Beckner Road. 6.6 miles/11 minutes"
- "St Vincents Hospital located at 455 St Michaels Drive. 12.7 miles/17 minutes"

33

We also have district members (volunteers) who could provide additional resources. We also have mutual aid agreements with the City of Santa Fe and other neighboring fire departments when needed. The SFC Office of Emergency Management would coordinate with the Red Cross, Sheriff's Office, and other agencies as needed. In the event of a shelter-in-place order, OEM would issue a reverse 911 system call that allows them to notify a specific area by text or automated phone call, providing residents with the necessary safety information. Concerning our response times, several factors can affect them, including ongoing calls or incidents such as structure fires, wildland fire or standard medical calls, etc. However, we have systems in place to ensure the next available closest crew is dispatched to these emergencies as efficiently as possible. This applies not only to a potential incident involving the battery storage project but to all emergencies the fire department responds to daily. We are fully committed to maintain the highest standards of safety and readiness.

Slide 34



TOPIC: **BESS EMERGENCY RESPONSE PLAN (ERP)**-LIST OF INDIVIDUALS TO CONTACT, EVACUATION ROUTES, HOW TO ACT DURING AN EMERGENCY, HOW TO MITIGATE RISK TO STAFF, FACILITIES AND EMERGENCY RESPONDERS, AND DETAILED COMMUNICATION PROCEDURES TO FOLLOW DURING AND AFTER A SPECIFIC EMERGENCY OCCURS.

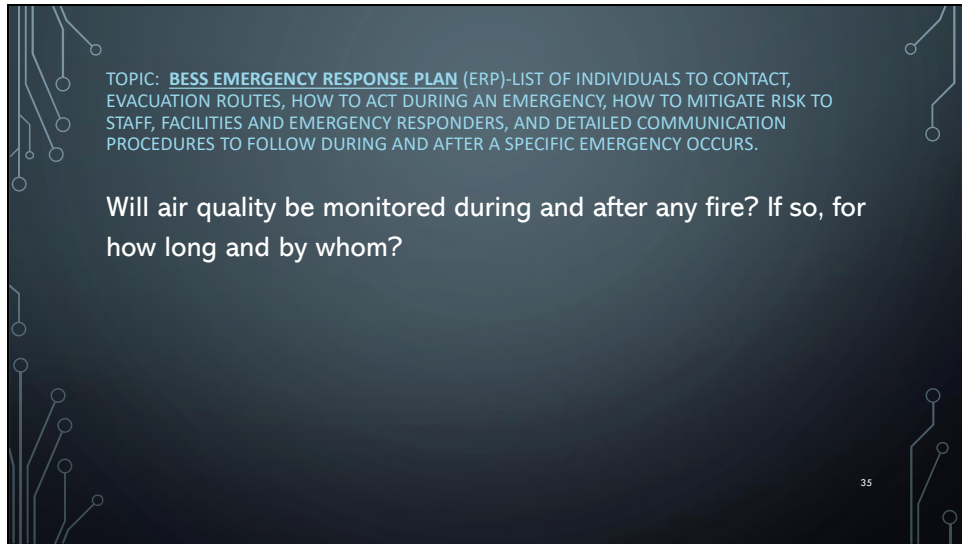
Environmental Impact Report Pages ES-5 and 3-38 - States,
"There are no special materials required to respond to a fire event for the containerized BESS units"

- Is the County going to require a change in the language of this document to accurately reflect this major risk?

34

Since we would not be fighting a BESS fire directly, our current firefighting gear should be sufficient. What we may need to do is upgrade our gas metering devices (air monitoring) for the specific gasses that could be produced in these fires. We are currently looking at some of the new meters for home battery systems and electric vehicles, which, if they cause a lithium-ion fire, we would need to monitor. For the most part fires at this facility would be treated as a defensive fire (Protecting exposures). The fact is we will not commit our firefighters into the facility unless there was an immediate life threat. Risk a lot to save a lot, risk nothing to save nothing.

Slide 35



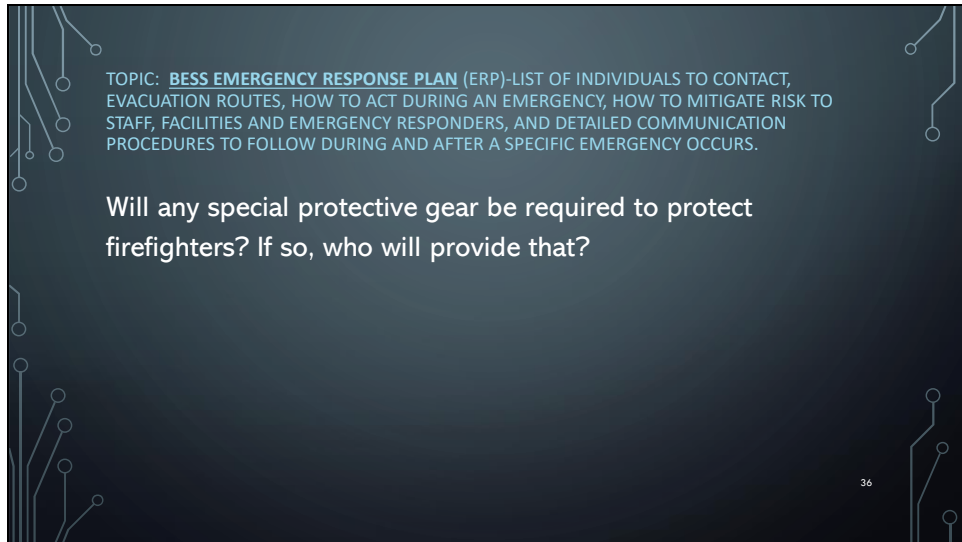
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Will air quality be monitored during and after any fire? If so, for how long and by whom?

35

The fire department would initially monitor the air while on-scene; applicant is to provide responders that are specialized in these systems.

Slide 36

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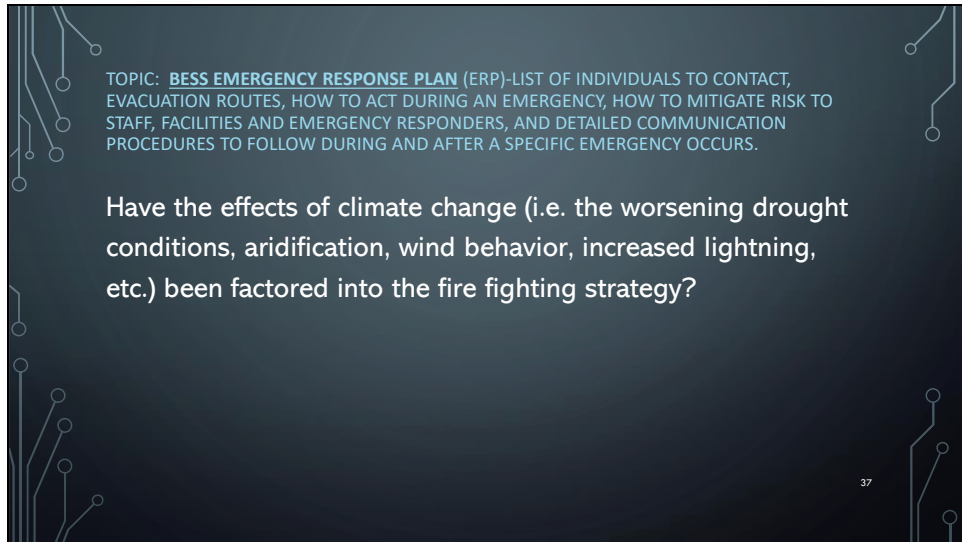
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Will any special protective gear be required to protect firefighters? If so, who will provide that?

36

Our current protective gear should be sufficient *see previous answer.

Slide 37



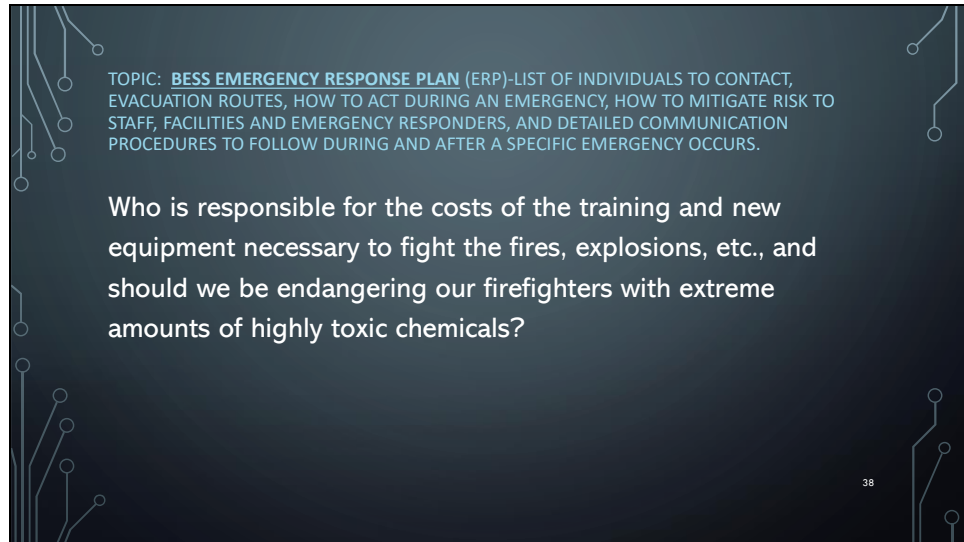
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Have the effects of climate change (i.e. the worsening drought conditions, aridification, wind behavior, increased lightning, etc.) been factored into the fire fighting strategy?

37

The fire department was concerned about these conditions long before BESS in the county. We cannot change these weather events, but we have taken steps to provide more safety for our staff. One example is a robust firefighter rehabilitation policy. Additionally, what climate change has truly caused is we have shifted from a fire 'season' to a year round fire risk in our state. This has been acknowledged and is contributing to different mitigation approaches.

Slide 38



TOPIC: **BESS EMERGENCY RESPONSE PLAN (ERP)**-LIST OF INDIVIDUALS TO CONTACT, EVACUATION ROUTES, HOW TO ACT DURING AN EMERGENCY, HOW TO MITIGATE RISK TO STAFF, FACILITIES AND EMERGENCY RESPONDERS, AND DETAILED COMMUNICATION PROCEDURES TO FOLLOW DURING AND AFTER A SPECIFIC EMERGENCY OCCURS.

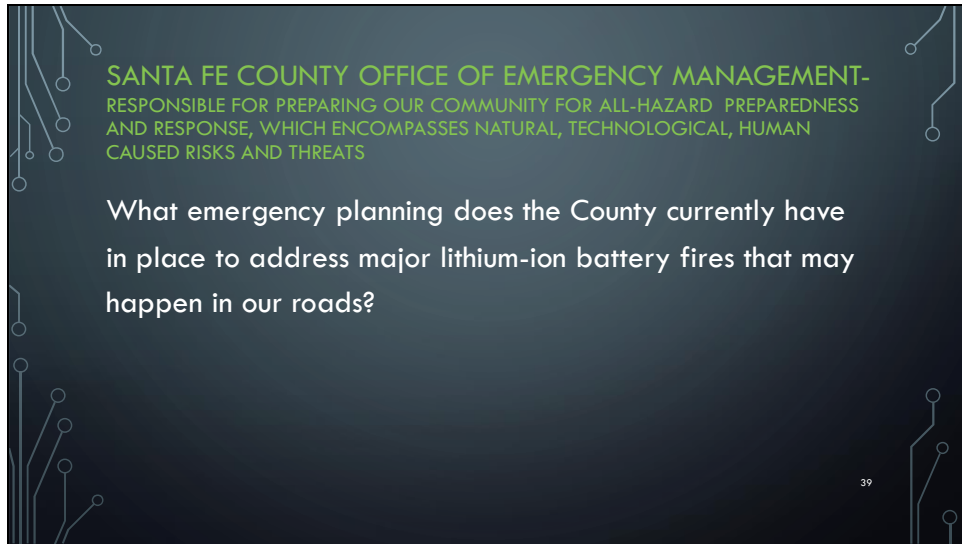
Who is responsible for the costs of the training and new equipment necessary to fight the fires, explosions, etc., and should we be endangering our firefighters with extreme amounts of highly toxic chemicals?

38

Firefighters are already exposed to many, if not all, of these harmful substances. We have policies and procedures to reduce the harm to our staff. Second sets of gear and industrial extractors are at the stations—SCBAs to prevent inhalation of gases.

Concerning our response times, several factors can affect them, including ongoing calls or incidents such as structure fires, wildland fire or standard medical calls, etc. However, we have systems in place to ensure the next available closest crew is dispatched to these emergencies as efficiently as possible. This applies not only to a potential incident involving the battery storage project but to all emergencies the fire department responds to daily.

Slide 39

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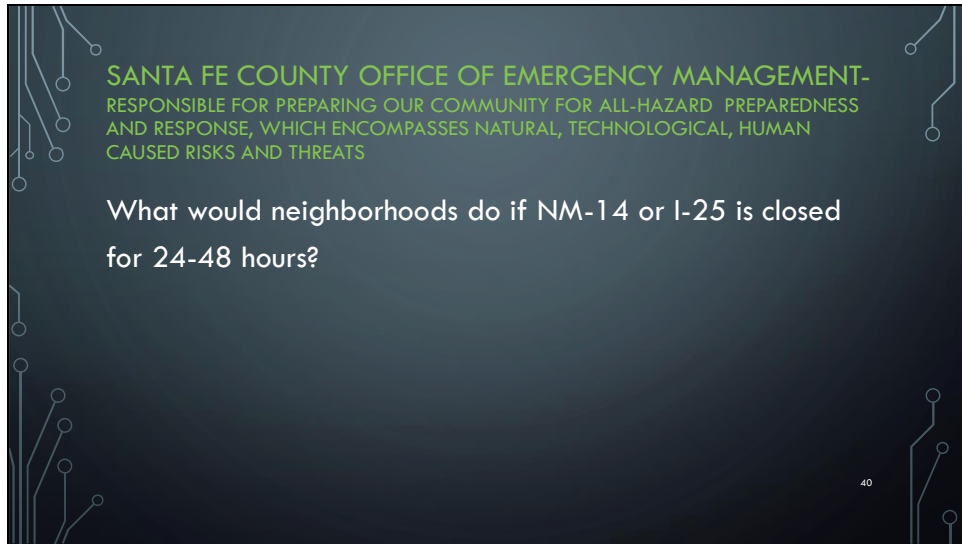
SANTA FE COUNTY OFFICE OF EMERGENCY MANAGEMENT-
RESPONSIBLE FOR PREPARING OUR COMMUNITY FOR ALL-HAZARD PREPAREDNESS
AND RESPONSE, WHICH ENCOMPASSES NATURAL, TECHNOLOGICAL, HUMAN
CAUSED RISKS AND THREATS

What emergency planning does the County currently have
in place to address major lithium-ion battery fires that may
happen in our roads?

39

These concerns are being addressed on the traffic congestion/road closure side in the current rewrite of the Emergency Operations Plan that is currently taking place.

Slide 40



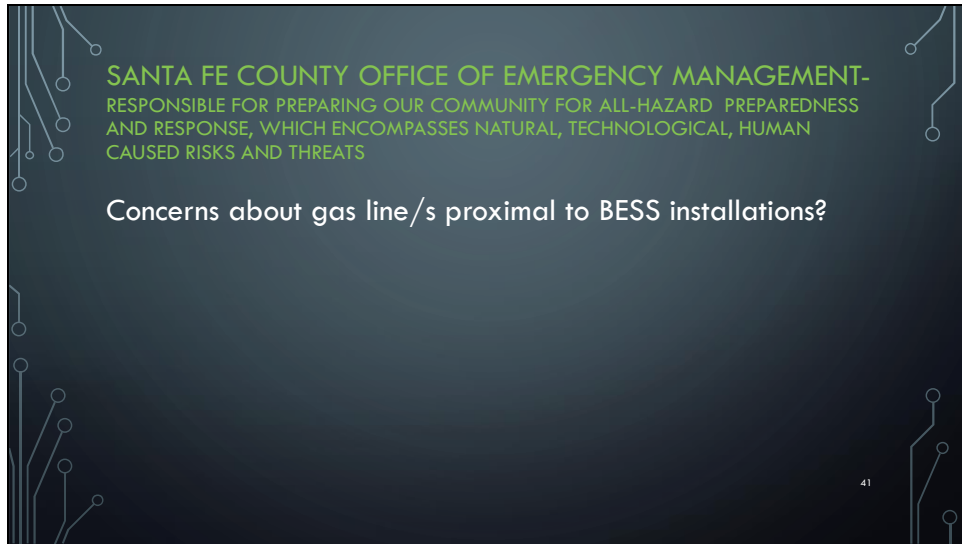
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AND RESPONSE, WHICH ENCOMPASSES NATURAL, TECHNOLOGICAL, HUMAN
CAUSED RISKS AND THREATS

What would neighborhoods do if NM-14 or I-25 is closed
for 24-48 hours?

40

Depending on the location traffic would be diverted to seek alternate routes such as NM 285 to NM 41 or I 25 or NM 14; all of which have access to I 40 and therefore able to reroute traffic depending on the location of the incident/emergency.

Slide 41

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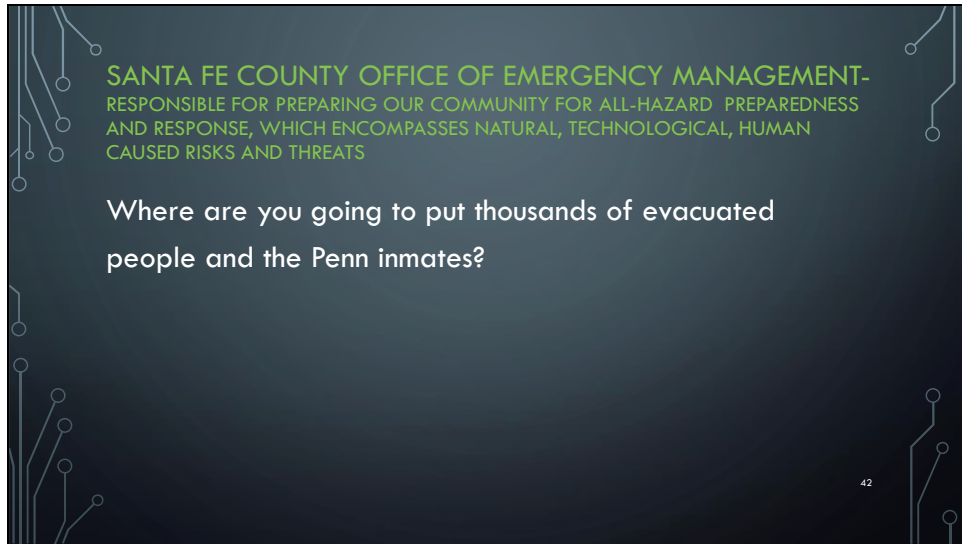
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CAUSED RISKS AND THREATS

Concerns about gas line/s proximal to BESS installations?

41

OEM and responding officials would utilize the Emergency Response Portal to identify and collaborate with pipeline owners before, during, and after an emergency.

Slide 42



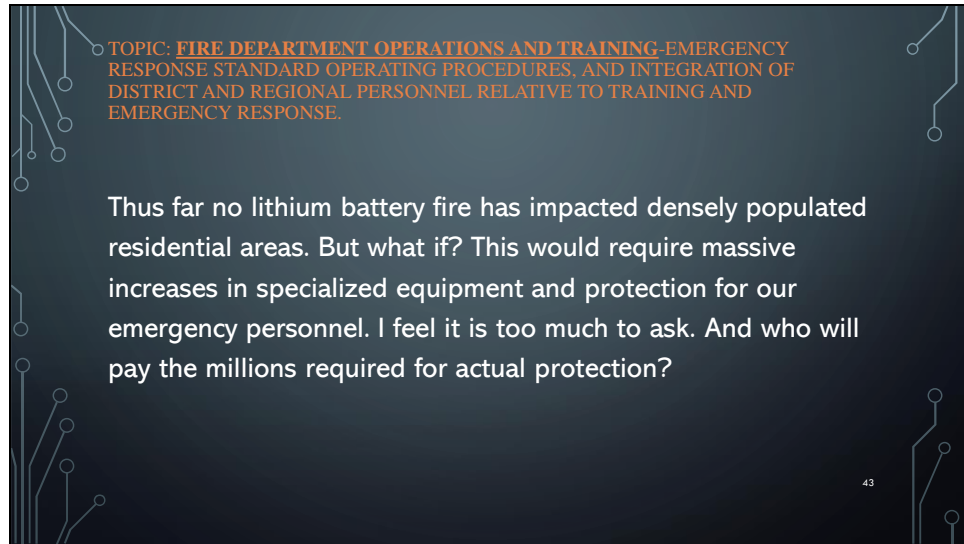
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RESPONSIBLE FOR PREPARING OUR COMMUNITY FOR ALL-HAZARD PREPAREDNESS
AND RESPONSE, WHICH ENCOMPASSES NATURAL, TECHNOLOGICAL, HUMAN
CAUSED RISKS AND THREATS

Where are you going to put thousands of evacuated
people and the Penn inmates?

42

Evacuated plans are also part of the rewrite of the Emergency Operations Plan (EOP) along with implementation of Evacuation Zones. Collaboration with the New Mexico State Corrections Emergency Manager would also be available if needed.

Slide 43



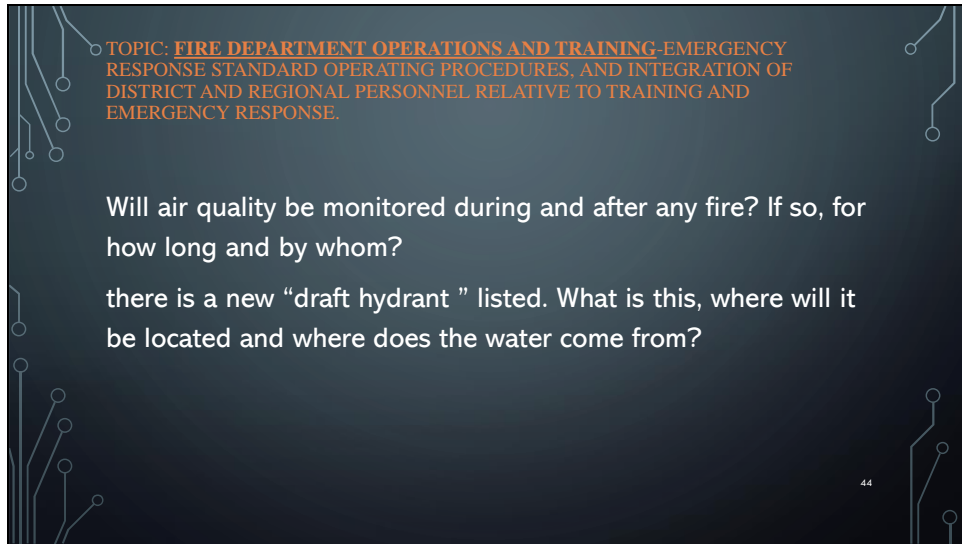
TOPIC: FIRE DEPARTMENT OPERATIONS AND TRAINING-EMERGENCY RESPONSE STANDARD OPERATING PROCEDURES, AND INTEGRATION OF DISTRICT AND REGIONAL PERSONNEL RELATIVE TO TRAINING AND EMERGENCY RESPONSE.

Thus far no lithium battery fire has impacted densely populated residential areas. But what if? This would require massive increases in specialized equipment and protection for our emergency personnel. I feel it is too much to ask. And who will pay the millions required for actual protection?

43

The best practice for fighting a BESS facility is to take a defensive posture and protect the exposures. This tactic does not require a great deal of specialized equipment and is a practice we currently use when the safety of our staff demands it. The Fire Department would not directly engage the BESS fire but protect the surrounding area. I would expect the Department to need equipment to alert/monitor for hazardous gases produced by burning BESS components. I don't know the cost of this equipment, but I doubt it would be in the millions. Since the owner of the BESS system must respond with a team/expert, it would stand to reason that their team would have the ability to monitor the environment.

Slide 44



TOPIC: **FIRE DEPARTMENT OPERATIONS AND TRAINING-EMERGENCY RESPONSE STANDARD OPERATING PROCEDURES, AND INTEGRATION OF DISTRICT AND REGIONAL PERSONNEL RELATIVE TO TRAINING AND EMERGENCY RESPONSE.**

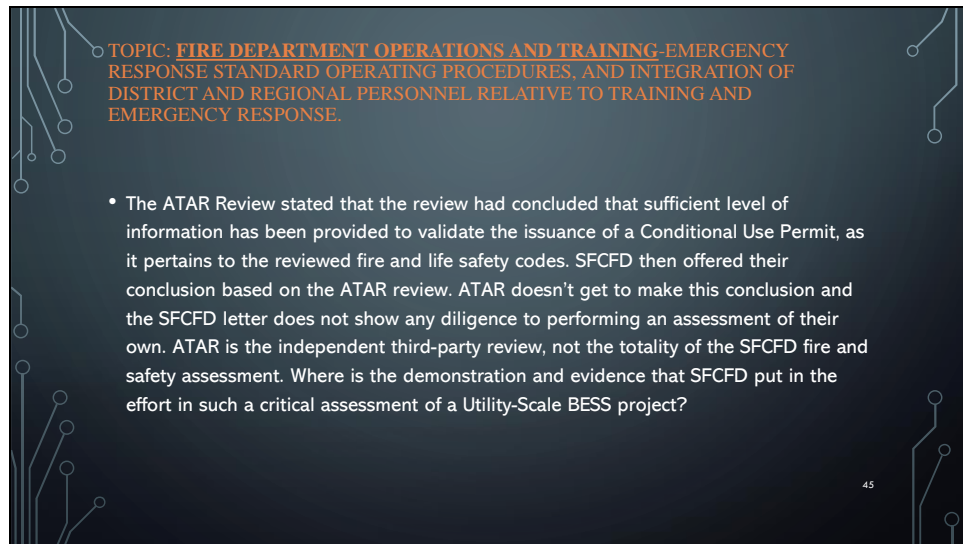
Will air quality be monitored during and after any fire? If so, for how long and by whom?

there is a new “draft hydrant ” listed. What is this, where will it be located and where does the water come from?

44

The fire department would initially monitor the air while on-scene; applicant is to provide responders that are specialized in these systems.

A draft hydrant will be attached to a 30,000 gallons water storage tank located near the access road that leads to the BESS. Draft fire hydrants are used by fire departments to draft/suction water from a storage tank for fire protection and mitigation measures



TOPIC: FIRE DEPARTMENT OPERATIONS AND TRAINING-EMERGENCY RESPONSE STANDARD OPERATING PROCEDURES, AND INTEGRATION OF DISTRICT AND REGIONAL PERSONNEL RELATIVE TO TRAINING AND EMERGENCY RESPONSE.

- The ATAR Review stated that the review had concluded that sufficient level of information has been provided to validate the issuance of a Conditional Use Permit, as it pertains to the reviewed fire and life safety codes. SFCFD then offered their conclusion based on the ATAR review. ATAR doesn't get to make this conclusion and the SFCFD letter does not show any diligence to performing an assessment of their own. ATAR is the independent third-party review, not the totality of the SFCFD fire and safety assessment. Where is the demonstration and evidence that SFCFD put in the effort in such a critical assessment of a Utility-Scale BESS project?

45

The fire department diligently adopted the latest edition of the IFC and NFPA 855 2020 edition on August 29th 2023 by way of SFC Ordinance 2023-06. Weeks after the aforementioned adoption, the fire department received suggestions from interested stakeholders that the newer 2023 edition of NFPA 855 would be better suited to ensure the latest requirements on fire and life safety mitigation measures. The fire department responded by diligently and swiftly adopting the 2023 edition of NFPA 855, and subsequent newer editions as they are published, on December 13th 2023 via SFC Ordinance 2023-09. The fire department has also attended BESS webinars and training courses. The fire department does not claim to be an expert on the BESS subject matter, hence why Santa Fe County Fire Department (SFCFD) retained the services of ATAR Fire to leverage the expertise of their personnel as it pertains to Battery Energy Storage System (BESS) fire and life safety aspects. We recognize that not every Fire Department can have the detailed expertise required across the totality of fire and life safety hazards that may be present in various projects. Similar to other Jurisdictions' protocols, SFCFD retained the services of an outside, third-party engineering firm with specific technical expertise in BESS. This is commonplace for many Fire Departments, even those in large cities, as this method provides an economically prudent method of having specialized technical expertise available as needed, rather than retaining a large and permanent staff that burdens the county's limited funds. This also ensures financial prudence of our constituents' tax dollars.

ATAR Fire personnel are licensed Fire Protection Engineers in the State of New Mexico (and others), and collectively have been working in the Fire Protection Engineering field for more than 40 years. They have specific expertise in BESS, with the Principal Engineer for

ATAR Fire being a voting alternate on the NFPA 855 Technical Committee, as well as being a technical member of battery related product safety standards such as UL 9540, UL 9540A, UL 1973, UL 1487, and CSA C801. ATAR Fire personnel have written Hazard Mitigation Analysis, performed 3rd party reviews Hazard Mitigation Analysis and overall ESS projects, written Emergency Response Plans, trained over 100 fire department personnel in hands on energy storage system response, and are experienced in the design of all safety systems related to energy storage system systems. Both Fire Protection Engineers providing support through ATAR Fire serve or have served as Authorities Having Jurisdiction (AHJ's) for over 10 years, have experience teaching NFPA 855 and the International Fire Code (having taught NFPA 855 to over 600 AHJs and engineers in 2024), and in reviewing project construction documents for BESS installations. ATAR Fire personnel have presented at national battery safety conferences such as the 2024 Energy Storage Safety and Reliability Forum.

Whereas the ATAR Fire Report concluded that issuance of the Conditional Use Permit (CUP) was reasonable based on documents submitted for review, the ATAR Fire Report did not state that the project was at this point compliant with the breadth of applicable Codes and Standards. The project construction documents still require full and complete development, which are not typically available during the CUP process. The CUP process grants the applicant the authority to pursue the development of project documents for construction; however, it does not grant the applicant a construction permit. The CUP application approval authority lies with the SFC Planning Commission or Board of County Commissioners. Should this CUP application be approved by the governing body, the fire department will exhaustively review, in collaboration with SME, and require compliance with the highest level of safety in accordance with local, state, and national codes and standards. The full and complete construction document package must, then, be submitted for review and approval by the SFCFD prior to project construction commencing. This is established in Chapter 1 of the Fire Code as adopted by the SFCFD. The project documents that will be submitted for construction permit will be, again, rigorously evaluated for compliance with the adopted Codes and Standards, as are all projects within Santa Fe County. ATAR Fire's scope is for their expertise in the fire and life safety hazards specific to BESS installations. Santa Fe County personnel retain the additional project scope expertise in house.

The ATAR Fire Report does not approve the CUP application, nor will future reports approve the construction drawing package. The retention of ATAR Fire by the SFCFD ensures that Fire Protection Engineers with specific experience, knowledge, and expertise in the BESS field are engaged to support the SFCFD. This will ensure an elevated level of safety, scrutiny, and transparency of the project for our constituents. The SFCFD is knowledgeable in the fire and life safety hazards associated with BESS installations; however, we believed it was prudent in this case to take the extra steps of hiring outside experts who have a detailed and experienced level of understanding of these complex systems.

The fire department is not recommending for or against this CUP application. The ultimate purpose of this meeting is to engage with SFC interested stakeholders, as described in the

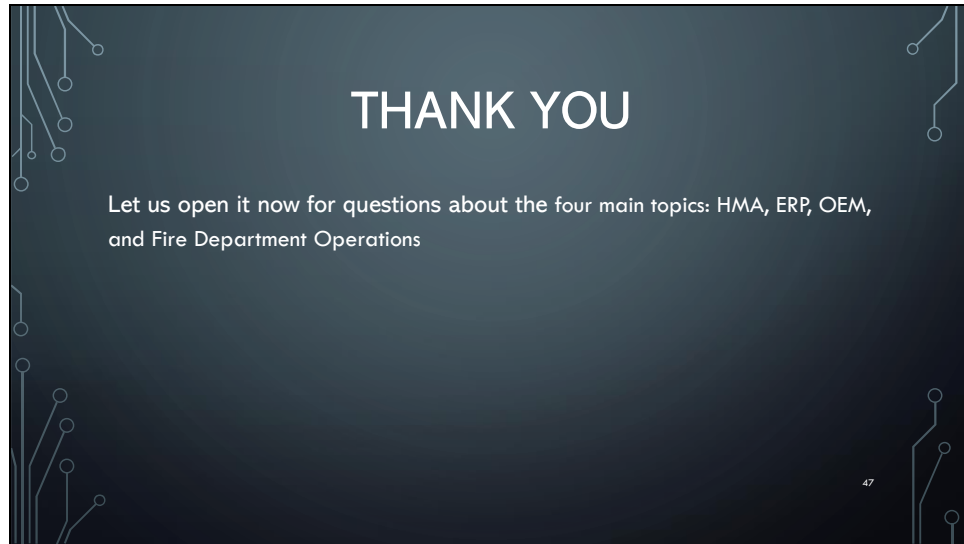
2023 edition of NFPA 855 Annex G.3, to hear their perspective and input on this matter and to ensure transparency.

Slide 46

TOPIC: FIRE DEPARTMENT OPERATIONS AND TRAINING-EMERGENCY RESPONSE
STANDARD OPERATING PROCEDURES, AND INTEGRATION OF DISTRICT AND REGIONAL
PERSONNEL RELATIVE TO TRAINING AND EMERGENCY RESPONSE.

If you have other questions related to the fire department not covered in this meeting, please submit them for our review.

Please understand, however, that we will not discuss the specific application for the Rancho Viejo Solar project. It is inappropriate to discuss a pending application with interested third parties outside of the public hearing framework, particularly when the applicant is not present.



THANK YOU

Let us open it now for questions about the four main topics: HMA, ERP, OEM,
and Fire Department Operations

47