

January 26, 2021

Mr. Andrew Levinson, Acting Director
Directorate of Standards and Guidance
Occupational Safety and Health Administration
U.S. Department of Labor

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Dear Mr. Levinson:

RE: Docket No. OSHA-2021-0009

I. Introduction and Background

The National Rural Electric Cooperative Association (“NRECA”) appreciates the opportunity to provide a response to OSHA’s Advanced Notice of Proposed Rulemaking “*Heat Injury and Illness Prevention in Outdoor and Indoor Work Settings*”, published in the Federal Register on October 27, 2021. By way of background, NRECA is the national trade association representing nearly 900 electric cooperatives and other rural electric utilities. America’s electric cooperatives are owned by the people that they serve and comprise a unique sector of the electric industry. From growing regions to remote farming communities, electric cooperatives power 1 in 8 Americans and serve as engines of economic development for 42 million Americans across 56 percent of the nation’s landscape.

Electric cooperatives operate at cost and without a profit incentive. NRECA’s member cooperatives include 62 generation and transmission (G&T) cooperatives and 831 distribution cooperatives. The G&Ts operate power plants that generate and transmit power to distribution cooperatives that provide it to the end of line co-op consumer-members.

NRECA members are eligible to participate in the organization’s Rural Electric Safety Achievement Program (“RESAP”). RESAP, our national safety program in partnership with statewide and cooperative safety leaders, utilizes a framework for continuous improvement to develop and enhance safety performance and culture. The program requires written executive commitment, regular audits of safety programs conducted by third parties, and development and update by participants of safety improvement plans. The safety improvement plans include a system of accountability for the completion of specific targets documented in the plan and communicated to all employees on a regular basis.

II. General Comments

Electric cooperatives are aware of and responding effectively to potential heat related illnesses and injuries resulting from the work electric cooperatives perform. Data from Federated Rural Electric Insurance Exchange, an entity that provides workers compensation insurance coverage for approximately 60% of America’s rural electric cooperative workforce, shows a very low number of heat related claims for the years 2016 to 2020. The results are summarized in Table 1 below:

Table 1

Year	Total Employees Covered by Federated Rural Electric Insurance Exchange	Number of Heat Related Claims Filed with Federated	Percentage
2016	42,600	25	.05
2017	42,600	26	.06
2018	43,200	21	.04
2019	43,200	21	.04
2020	43,200 (est)	19	.04

The data above is presented graphically in Appendix A to these comments.

Below we answer some but not all of OSHA’s specific questions on heat illness and injury protection as experienced in the electric cooperative program. The questions to which we provide answers deal directly with our industry and its operations.

III. Answers to some of OSHA’s Specific Questions

2. *What sources of data are important to consider when evaluating occupational heat-related illnesses, injuries, and fatalities?*

In preparing the responses to OSHA’s questions, NRECA and its members looked at data on the incidence of heat-related illness, injury and fatalities from the electric cooperative statewide organizations as well as from Federated Rural Insurance Exchange, the cooperative that provides workers compensation coverage to many NRECA members. The Federated data clearly shows the low incidence of heat related illnesses and injuries occurring in the electric cooperative program.

6. *What factors lead to the underreporting of occupational heat- related illness, injuries, and fatalities of which OSHA should be aware?*

We are not aware of underreporting of occupational heat related illness, injuries, or fatalities in the electric cooperative program.

11. *What are current and best practices for protecting workers in various types of work arrangements, including temporary and multi- employer work arrangements, from hazardous heat exposure?*

Electric cooperatives adhere to several policies and programs that protect workers from heat injury or illness. These include rigorous and frequent training programs, detailed job briefings including information on weather and terrain, the use of designated observers to determine whether workers are performing work properly and are not suffering from ill health. In many cases, electric cooperatives have stop work policies under which any worker can stop work if unsafe practices are observed. This would include stopping work if a worker or workers are exhibiting signs of heat stress.

It is important to note that a portion of electric cooperative line work requires donning rubber gloves and sleeves to protect workers from high voltage electrical contact. This equipment can cause a worker to experience a fair amount of heat. The fact that workers have to wear this equipment to do their work necessitates careful observation and communication among employees to monitor and ensure that employees do not over-heat. This practice has been going on for decades and has increased electric cooperative awareness of and sensitivity to potential heat related issues.

Rest, Water and Shade are practiced widely by electric cooperatives and many electric cooperatives provide additional cooling technology for use during high heat periods. Additional cooling technology includes cattle fans and pop up tents with fans used for underground work. Vehicles are air conditioned and many electric cooperatives have installed turbine ceiling fans in warehouses.

Electric cooperatives provide employees PPE that serves to reduce heat stress. Examples include flame resistant retro reflective shirts that allow for one layer of clothing instead of several to protect against arc flashes. The latest generation of flame resistant clothing worn by field personnel has better wicking and cooling effects than the original versions of this PPE.

Many electric cooperatives adopt seasonal work hours to avoid having workers experience the height of the heat of the day. Starting work in the very early morning during the summer months means that workers can stop work before extreme heat in the afternoon.

Most electric cooperatives do not have temporary or multi-employer situations.

13. How are employers in businesses of various sizes currently preventing heat-related injury and illness in workers?

The majority of electric cooperatives are classified as small businesses under the North American Industry Classification System. The programs and policies that electric cooperatives follow to minimize and mitigate heat stress are described in our responses to questions 11, 38 and 57.

17. Do regions with traditional and pervasive heat hazards address the hazard differently than regions with more episodic exposures (e.g., heat waves in a normally temperate region)?

Electric cooperatives operate in all regions of the country and are located in 48 of the 50 United States. Addressing heat hazards in the various regions is a matter of focus and intensity. While virtually all electric cooperatives have some type of heat illness and injury policy, the application of it may vary with geographic regions. Electric cooperatives have a robust mutual assistance network that aids in response to and recovery from natural disasters. Depending on the size and duration of the disaster, electric cooperatives may travel long distances to aid their fellow cooperatives. When this happens, as was the case most recently for Hurricane Ida, crews from more temperate regions travelled to very hot and humid Louisiana. Part of the safety protocols for this response included information and training on heat stress. Bird dogs and observers were careful to monitor crews for any signs of heat stress.

27. Are OSHA's existing efforts and authorities adequate or effective in protecting workers from hazardous heat in indoor and outdoor work settings?

We believe that OSHA's existing efforts and authorities are both adequate and effective in protecting electric cooperative workers from hazardous heat. Given the low incidence of heat related injury and illness in our industry, our view is that adequate protections are in place.

We note that the OSHA-NIOSH Heat Safety Tool has provided a very useful tool for use by electric cooperatives and their workers. In addition, OSHA's Water, Rest, Shade campaign has been emphasized by electric cooperatives.

28. *What additional efforts or improvements should be undertaken by OSHA to protect workers from hazardous heat in indoor and outdoor work settings?*

As stated above, we believe OSHA's existing efforts and authorities are sufficient to prevent heat illness and injury in the electric cooperative program. We encourage OSHA to continue to develop innovative tools such as the Heat Safety Tool and the Water, Rest, Shade campaign to assist employers.

29. *What are the gaps and limitations of existing applicable OSHA standards, as well as existing campaign, guidance, enforcement, and other efforts for preventing occupational heat-related illness in indoor and outdoor work settings?*

Our view is that there are neither gaps nor limitations in applicable OSHA standards for preventing occupational heat-related illness.

38. *What efforts are employers currently taking to prevent occupational heat-related illness in their workplace? Please provide examples and data.*

Electric cooperatives provide employee training to recognize the signs and symptoms of heat illness. Many cooperatives offer prevention program consisting of acclimating employees, access to water, shade and air conditioning as well as work/rest cycles based on Heat Index levels. Electric cooperatives notify employees when work/rest cycles are enacted based on current heat index levels. Many electric cooperatives adopt adjusted work schedules to avoid employees being outside during the hottest part of the day.

39. *How effective have employers been in preventing occupational heat-related illness in their workplaces, and how are employer-driven heat injury and illness prevention programs being evaluated?*

The Workers Compensation statistics from Federated Rural Electric Insurance Exchange shown in Table 1 and Appendix A indicate that electric cooperatives are successful in preventing occupational heat-related illness. Further, the minimal number of heat illnesses and injuries experienced by electric cooperatives supports the claim that the employee training, job briefings, use of dedicated observers, following Rest, Water and Shade guidelines and provision of PPE are effective in preventing electric cooperative worker heat-related illnesses.

40. *What metrics are currently being used to monitor and assess hazardous heat exposure in the workplace (e.g., heat index, ambient temperature, WBGT)?*

Generally electric cooperatives are using heat index based on local temperature and humidity.

41. *What are the advantages and disadvantages of using each of these metrics (e.g., heat index, ambient temperature, WBGT) in indoor and outdoor work settings? Are there any challenges associated with training employers and employees on these different metrics?*

As stated above, electric cooperatives generally use a heat index program to monitor heat stress. The heat index is well understood and electric cooperatives train on the index, thus no disadvantages are noted.

44. *Are there industries implementing exposure monitoring for indoor and outdoor occupational settings?*

To the extent that exposure monitoring includes observing employees for alertness and signs or symptoms of heat stress, use of the buddy system to monitor fellow workers and the use of designated observers, electric cooperatives are monitoring for indoor and outdoor settings.

45. *Does application of certain heat metrics require more training than the use of other heat metrics?*

The use of WetBulb Globe Temperature would require more training to implement. As we state above, the low number of incidents of heat stress across the electric cooperative program would indicate that the use of heat index is sufficient to monitor and mitigate hazardous heat exposure.

46. *What factors, beyond those discussed above, contribute to heat stress in outdoor and/or indoor occupational settings?*

There are several personal factors that can contribute to an individual worker's exposure to heat stress. These include: obesity (body mass index great than or equal to 30 kg/m²), diabetes, high blood pressure, heart disease, low level of physical fitness, use of certain medications such as diuretics and some psychiatric and blood pressure medicines. In addition, some medications can result in a worker's inability to feel heat conditions and/or the ability to sweat so symptoms of heat stress may not be as evident. Other personal factors contributing to an individual worker's experience of heat stress include alcohol use, and use of illicit drugs such as opioids, methamphetamine, or cocaine. For these reasons and more, cooperatives spend a great deal of time communicating with employees about the importance of hydration, rest, and good health in general. Electric cooperative employees are very aware of the negative impact that drug and alcohol use can have not only on their health, but also their employability in our industry.

47. *Is air conditioning provided in employer-provided or sponsored housing?*

Electric cooperative field workers travel in and have access to air-conditioned utility trucks. While electric cooperatives do not generally sponsor housing for workers, when electric cooperative crews travel to provide mutual assistance for power outages caused by natural disasters, housing by the host electric cooperative is typically provided. This housing – either hotels or in some cases tent cities – is air-conditioned (or heated as appropriate).

48. *Are there existing employer efforts or programs to ensure that employees have the ability to adequately cool at night in order to recover from occupational heat?*

As noted above in the response to question 47, when housing is provided to electric cooperative crews during mutual assistance events, air-conditioned housing (if appropriate) is provided.

50. *Are there other individual risk factors that contribute to the risk of heat-related illness?*

As we note in response to question 46, there are several personal factors that can contribute to an individual worker's exposure to heat stress. These include: obesity (body mass index great than or equal to 30 kg/m²), diabetes, high blood pressure, heart disease, low level of physical fitness, use of certain medications such as diuretics and some psychiatric and blood pressure medicines. In addition, some medications can result in a worker's inability to feel heat conditions and/or the ability to sweat so symptoms of heat stress may not be as evident. Other person factors contributing to an individual worker's experience of heat stress include alcohol use, and use of illicit drugs such as opioids, methamphetamine, or cocaine.

52. *Are there existing employer-led heat prevention programs that consider individual-level risk factors in their prevention guidance? If so, how are they implemented? What are the challenges associated with this?*

Electric cooperatives train workers on personal risk factors that may increase the risk of heat related illness or injury. One challenge is that workers may not follow the guidance during non-work hours thus potentially elevating their risk of heat related illness or injury.

53. *What are the elements of a successful employer-led heat injury and illness prevention program? How are these programs implemented? What are the challenges associated with them? Please provide examples and data.*

As we state in our response to question 38, electric cooperatives provide employee training to recognize the signs and symptoms of heat illness. Many cooperatives offer prevention program consisting of acclimating employees, access to water, shade and air conditioning as well as work/rest cycles based on Heat Index levels. Electric cooperatives notify employees when work/rest cycles are enacted based on current heat index levels. Many electric cooperatives adopt adjusted work schedules to avoid employees being outside during the hottest part of the day.

57. *What engineering controls, administrative controls, or PPE can be used to prevent heat-related illness in indoor and outdoor work settings? Have the qualitative or quantitative effectiveness of these controls been evaluated?*

Engineering controls used by electric cooperatives include fans on trucks at work sites and air-conditioned trucks. Administrative controls include modifying work hours to reduce heat exposure and providing training on recognizing the signs of heat stress. PPE includes light color uniforms, and cooling neck wraps. These controls are continuously evaluated during job site observations. Recognizing the signs and symptoms and how to prevent illness in the first place is the most effective way to prevent heat illness. If the employees are effectively trained in prevention and mitigation, this drastically reduces heat-related illness.

59. *Are certain controls that are more effective or more feasible than others? If so, which ones? Do effectiveness and feasibility of controls differ due to setting (indoor/outdoor, business size, arrangement of work, etc.)?*

The engineering and administrative controls and PPE discussed above are equal in effectiveness and feasibility for electric cooperative workers. As we state in the response to question 57, providing and reinforcing training on prevention and mitigation of heat stress are the most effective tool for electric cooperative field workers.

60. *What are the limitations associated with implementing water, rest, and shade effectively in indoor and outdoor work settings?*

Every person is affected by heat differently. Weight, health, and many other factors discussed in our response to question 46 above play into how an individual is affected by the heat. One limitation to water rest and shade may be employees' non-work behaviors.

61. *How are work-rest cycles currently implemented in indoor and outdoor work settings? What are the limitations for implementation?*

Electric cooperative employees are typically trained (and retrained) to determine when water, shade or rest is required.

63. *How do productivity or output based payment schemes affect the ability of workers to follow heat illness and injury prevention training, guidance or requirements?*

Electric cooperative workers typically are not subject to productivity or output based payment schemes.

64. *How do productivity or output based payment schemes affect employer implementation of heat illness and injury prevention training, guidance or requirements?*

As we state in our response to question 63, electric cooperative workers are not compensated on productivity or output.

66. *What are current and best practices for implementing acclimatization in various industries and across businesses of various sizes?*

Training is key to ensuring that employees are aware of the need to acclimate and when it is recommended. Most electric cooperative heat illness and injury training includes training on acclimatization.

69. *Are there unique concerns or approaches for implementing acclimatization for a small versus large business?*

We do not believe that there are unique concerns or approaches for implementing acclimatization for small vs. large business. While electric cooperatives that are not classified as small businesses may need to have more personnel monitoring the need for acclimatization and may need to offer more training sessions due to geographic extent of service territories, these are simply variations, not unique concerns or approaches.

71. *Are there industries or individual employers implementing exposure, medical, and/or physiological monitoring to assess workers' health and safety during hazardous heat events?*

Electric cooperatives typically monitor by observing employees for alertness and signs or symptoms of heat stress. Electric cooperatives also monitor using the buddy system and assigning a designated observer to work sites. During pre-job safety briefings, all hazards are discussed, including the potential of heat-related illness.

82. *How do organizations in both indoor and outdoor work environments currently deal with heat-illness emergencies if they arise?*

For outdoor work crews, members of the crew are trained in CPR, First Aid, and the use of Automatic Defibrillator Devices. Crew trucks are stocked with water and first aid kits. Crew members have company issued cell phones and truck radios that can be used to call for emergency services.

83. *What are current best practices in workplace response to occupational heat-illness emergencies?*

For the type and duration of work performed outdoors by electric cooperative workers, we believe the practices mentioned in response to question 82 (CPR, First Aid, AED, water and first aid kits on trucks and communication devices to call for help if needed) are best practices. Field crew are trained to recognize heat stress and treat it accordingly. Crews move any employee showing signs of heat stress to a cool area, loosen and/or remove clothing, cool with water or massage with ice, fan vigorously to improve evaporation. Crew members are trained not to hesitate to call EMS if the heat stress rises to the level of a medical emergency. Following accepted first aid guidance, EMS is activated anytime heat exhaustion symptoms do not improve or seem to get worse. EMS is activated immediately when heat stroke symptoms are present. Given the low/no number of reportable cases of heat stress and the very low incidents of workers compensation claims due to heat stress, our work practices would appear to be working.

84. *What are the challenges with responding to a heat-illness emergency in various work environments (e.g., indoor settings, outdoor settings, remote locations)?*

Electric cooperatives are generally rural in nature. Some of the field work that is performed by electric cooperative crews can take place in remote locations, in rough terrain and away from paved roads.

85. *What should be included in an employer's heat emergency response plan?*

A heat emergency response plan for an electric cooperative should incorporate the communications plan with field crews, CPR and First Aid training, education and training on heat stress signs and symptoms and ensuring that addresses for the nearest hospital or clinic are readily known and noted in the pre-job briefing.

86. *What materials or supplies should employers have on-site to respond to a heat emergency?*

For electric cooperative field work, trucks have a plentiful supply of water and/or sports drinks, a cell phone or truck radio or other means of communication to summon help in the event heat stress is identified.

87. *When should employers refer employees for medical treatment or seek medical treatment for an employee who is experiencing a heat-illness emergency?*

When the heat illness exceeds the capacity of First Aid, employees should be referred to or brought to medical treatment. Recognizing the signs and symptoms of heat stress is covered in the First Aid training provided to employees per 29 CFR 1910.269.

Field crew are trained to call 911 when in doubt, or when the impacted employee shows confusion or slurred speech.

88. When and how do employers refer employees for medical treatment or seek medical treatment for them when experiencing a heat-illness emergency?

To the extent that the heat stress is minimal, employees may be referred to medical services. If the heat stress is acute, electric cooperatives call 911 unless the location is so remote that it makes sense for the crew to transport the heat stressed individual to an emergency room.

89. How do employers currently involve workers in heat injury and illness prevention?

Electric cooperative employees are involved in heat injury and illness prevention by participating in the buddy system and watching over and monitoring buddies for sufficient rest, shade, and water, and reporting suspected heat stress to supervisors. Electric cooperative employees that serve as designated observers at field sites provide additional observation and monitoring.

90. What types of occupational heat injury and illness prevention training programs have been implemented and how effective are they? What is the scope and format of these training programs? Are workers in non-traditional/multi-employer work arrangements included in these training programs?

Electric cooperatives offer CPR, AED, First Aid and recognition of heat stress training. Many offer safety meeting presentations on heat stress and some offer computer-based training on heat stress safety. The scope of the training typically includes training on how to minimize the potential for a heat related illness, how to recognize signs and symptoms of heat related illness, how to provide first aid in the event of heat stress, calling emergency services, providing clear and precise directions to the worksite.

91. What are best practices in worker training and engagement in heat injury and illness prevention?

Electric cooperatives offer formal presentations and some self-paced computer-based training on heat stress. These techniques, combined with job hazard briefings (including identifying heat stress as a potential hazard), field observations and use of the buddy system have, we believe, led to successful campaigns against heat stress, as evidenced by the very low/no incidents of heat stress among electric cooperative workers.

92. How do employers involve workers in the design and implementation of heat injury and illness prevention activities?

At electric cooperatives field workers are asked to evaluate cooling PPE and to perform jobsite observations. These activities are taken into consideration when designing presentations and training on heat stress at the cooperative.

94. OSHA requests any workers' compensation data related to heat-related injury and illness. Any other information on your workplace's experience would also be appreciated.

Please see Table 1 and Appendix A for data on workers' compensation claims related to heat-related injury and illness.

99. *Have you instituted programs or policies directed at mitigating heat-related injury and illness at your worksite? If so, what were the resulting benefits?*

Many electric cooperatives have instituted annual training and review of heat related hazards and prevention. In addition, heat stress risk is identified where appropriate in pre-job safety briefings. We believe the resulting benefits have been the low to no incidents of heat related illness or injury across the electric cooperative program.

105. *How does your workplace address the costs of any rest breaks necessary to prevent heat-related injury and illness?*

Electric cooperatives are not for profit entities that operate according to the seven cooperative principles. These principles are Open and Voluntary Membership, Democratic Member Control, Members' Economic Participation, Autonomy and Independence, Education Training and Information, Cooperation Among Cooperatives and Concern for Community. While electric cooperatives operate at cost and without profit and recognize that keeping costs down benefits the membership and communities, costs for rest breaks simply are not considered or addressed. If an employee needs a rest break, they take it without questions or penalties.

109. *Are there alternative regulatory or non-regulatory approaches OSHA could use to mitigate possible impacts on small entities?*

We recommend that OSHA continue its current programs (Rest, Water, Shade) to support employers in their goal to identify and treat heat injuries and illness. Additional regulation would not create additional benefits in dealing with heat injury and illness in the electric cooperative sector, as evidenced by the low incidence of heat stress in our sector.

IV. Conclusion

NRECA appreciates the opportunity to provide input into OSHA's rulemaking process. As we have demonstrated, electric cooperatives are well aware of the potential for heat injury and illness and are taking proactive measures to mitigate heat related illness and injury in the workplace. The small number of workers' compensation related claims for heat illness and injury reflect that the programs and policies developed and implemented to address heat illness and injury are effective.

Respectfully submitted,



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Appendix A

