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Environmental, Safety and Sustainability Insights

NOAA Safety and Environmental Compliance Office, Office of the Chief Administrative Officer

ZIKA VIRUS

By Ann Byar, Safety and Occupational Health Specialist, NOAA SECO

Facts about Zika

Principal vector (i.e., carrier) of Zika virus in the U.S. *Aedes aegypti* (commonly known as yellow fever mosquitoes) are typically concentrated in the southern U.S. as well as parts of the Southwest. Another vector for Zika virus is *Aedes albopictus* (commonly known as Asian Tiger mosquitoes), which are found in much of the southern and the eastern part of the U.S.

Aedes aegypti

Aedes albopictus

Aedes species mosquitos (Ae. aegypti and Ae. albopictus) can lay eggs in and near standing water in things like buckets, bowls, animal dishes, flower pots and vases, even bromiliad pools. Aedes species mosquitos prefer to bite people, can live ***indoors*** and outdoors near people, are aggressive ***daytime*** biters, although they can also bite at night.

Mosquitoes become infected when they feed on a person already infected with the virus. ***Infected mosquitoes can then spread the virus to other people through bites.*** Although bites from mosquitos are the primary mode of transmission, Zika can also be passed through sex from an infected person who has Zika to his or her partners. Working in a laboratory processing samples that contain Zika virus may put you at risk for becoming infected. Other modes of transmission are being investigated by CDC.

Zika Virus Infection

Zika virus causes mild illness in those infected. Infected individuals may experience: ***fever, rash, joint pain, conjunctivitis, muscle pain, headache***. Neurological and autoimmune complications are possible. ***Only one person in five is symptomatic.***

Zika virus can be passed from a pregnant woman who is infected with

the virus to her fetus. Infection during pregnancy can cause ***microcephaly and other severe fetal brain defects***. Microcephaly is a condition in which a baby's head is significantly smaller than expected, often due to abnormal brain development.

There is no vaccine or medicine available for Zika virus.

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ZIKA VIRUS (CONTINUED)

What can you do to protect yourself?

Measures of protection can include:

- Use of insect repellent
- Wearing appropriate personal protective equipment
- Treating clothing and gear
- Mosquito control
- planning for travel

These measures are described in detail in the following website: http://www.cdc.gov/zika/prevention/index.html

OSHA/NIOSH now has a fact sheet: "Interim Guidance for Protecting Workers from Occupational Exposure to Zika Virus":

https://osha.gov/Publications/OSHA3855.pdf

This factsheet provides detailed information for the following: Outdoor workers: at greatest risk; Healthcare and laboratory workers; Mosquito control workers; Any worker with suspected or confirmed Zika infection; and Travel to Zika-affected areas:
Currently, outbreaks are occurring in many countries and territories: http://www.cdc.gov/zika/geo/active-countries.html

Zika virus will continue to spread and it will be difficult to determine how and where the virus will spread over time
http://www.cdc.gov/zika/vector/range.html

Examples of NOAA Employees and Affiliates who may be at Risk:

- Employees and affiliates who work outdoors ***in areas affected by Zika virus*** (e.g. field researchers, electronics and facilities workers with outdoor maintenance activities).
- Employees and Affiliates who travel to areas affected by Zika.

STAY INFORMED: If you are in an "at risk" group, ***check these websites frequently*** for updates on Zika virus affected areas and any changes in guidance:
http://www.cdc.gov/zika/index.html
https://www.osha.gov/zika/index.html

CONSIDERATION OF GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE IN NEPA REVIEWS

By Anne Delp, Environmental Engineer, and Jennifer Melton, Environmental Engineer, NOAA SECO

On August 1, 2016, The Council on Environmental Quality (CEQ) issued "*Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act (NEPA) Reviews.*" The guidance provides clarity and consistency for Agencies to incorporate focused and effective consideration of climate change into environmental impacts analysis, through NEPA reviews. Comprehensive consideration includes evaluation of both: (1) the potential effects of a proposed action on climate change as indicated by assessing greenhouse gas (GHG) emissions, and (2) the effects of climate change on a proposed action and its environmental impacts.

The CEQ asserts that climate change is a well-established and "fundamental environmental issue" that falls within the purview of NEPA. They propose GHG emissions to serve as the proxy for assessing climate change. The CEQ defines GHGs as carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, nitrogen trifluoride, and sulfur hexafluoride.

When feasible, Agencies are to conduct evaluations that are quantitative in nature considering the foreseeable effects of the proposed action. This should include both direct and indirect GHG emissions and the CEQ does not establish a "*de minimis*" for consideration, but rather emphasizes the applicability to all projects already subject to NEPA review. When tools, methodologies, and data inputs are not readily available for quantitative analysis, then Agencies are encouraged to use qualitative analysis. The basis for either should be clearly explained within the NEPA document. The Guidance provides references of tools, methodologies, and data for developing quantitative and qualitative analyses.

The CEQ does not expect the implementation of this guidance will require agencies to develop new NEPA implementing procedures. However, the CEQ recommends agencies review their NEPA procedures and propose any updates they deem necessary or appropriate to facilitate their consideration of GHG emissions and climate change. The NOAA NEPA Office, within the Office of General Counsel, is reviewing this new Guidance to determine appropriate level of incorporation into NOAA's NEPA processes at the Corporate and Line Office levels.

DEMAND RESPONSE

By Aida Roxas, Energy Engineer, NOAA SECO

What is Demand Response?

Demand Response is an electric grid program that incentivizes consumer actions with respect to electrical consumption when responding to "demands" on the grid. Such "demands" can be triggered by over-all peak usage or pricing instances. To be able to appreciate the Demand Response Program, we have to imagine the peak times. Extreme hot or cold temperatures, maximum use of electrical appliances, or even raised prices for fossil fuel based on market trends. The electric power industry, or the grid, will still try to supply the required electricity to the consumer. When this happens, these events increases the $$$ the grid has to put up just to continuously supply electricity. However, black outs will also occur in the event that there is no electricity to supply.

Demand Response reverses the roles and puts consumers at the helm. Demand Response programs allows technologies to give consumers smart decision-making strategies to be able to avoid these peaks. In essence, the potential events will trigger notifications to consumers, who in turn can opt to voluntarily lower their electrical consumption. This approach is being widely used by electric system planners and operators as an increasingly valuable resource option to balance the supply and demand for their business.

So, how is Demand Response different from Energy Efficiency?

While Energy Efficiency aims for better use of resources all the time, Demand Response focuses on very specific times. In fact, Demand Response proves that using energy wisely is not just about how much energy you use, but when you use it.

It is also good to know that a recent Supreme Court ruling, on FERC Order 745, placed emphasis on compensation for demand reductions. The ruling stipulated that compensation must be similar as if the demand was generated. This means additional incentive in Demand Response participation and broader integration of products and services in the markets.

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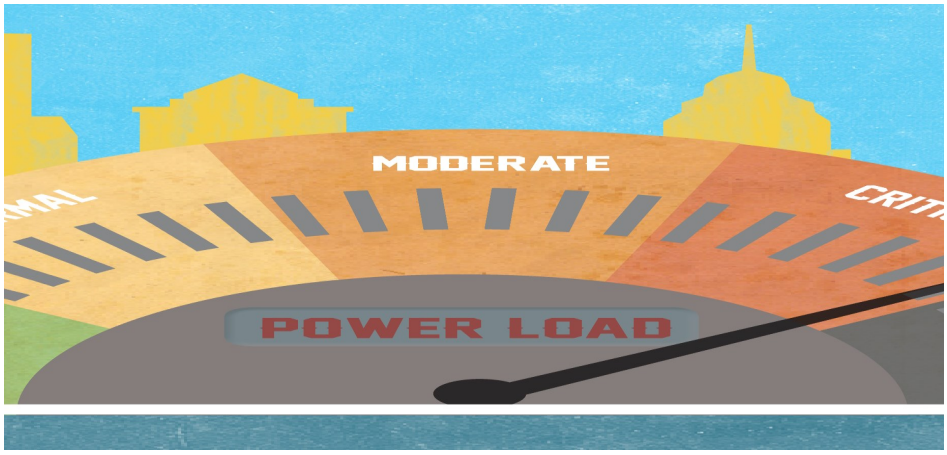
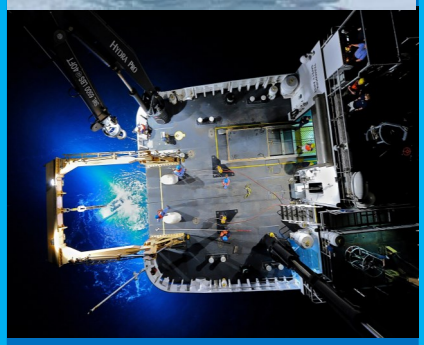




ENVIRONMENTAL, SAFETY AND SUSTAINABILITY INTRANET SITE

The NOAA Environmental, Safety and Sustainability Intranet site provides a wide variety of resources to assist leaders and environmental, safety, and sustainability managers with accomplishing their jobs. Please visit the NOAA Environmental, Safety and Sustainability Intranet site to access these valuable resources: **https://secure.seco.noaa.gov/** .

As always, SECO encourages your input. Please send suggestions, ideas, requests, and any cool tools and resource that we can share on the site to assist in managing safety, environmental compliance, or sustainability programs to **SECO**.

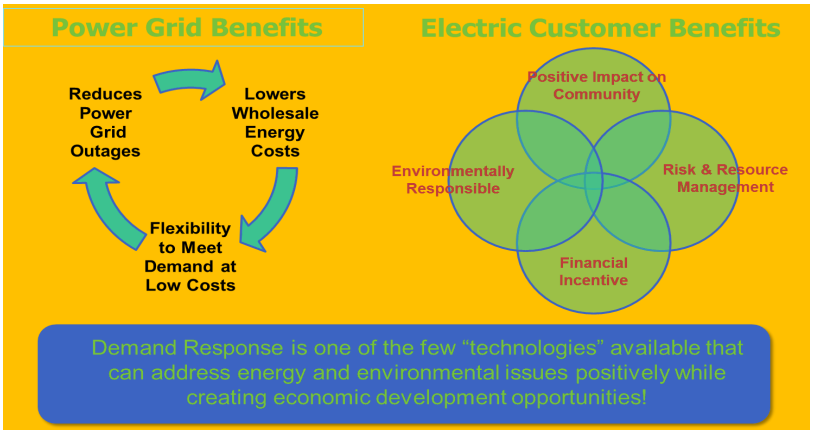
DEMAND RESPONSE (CONTINUED)

Why would NOAA want to participate in Demand Response?

The total NOAA FY 2015 electricity consumption was reported at 211 Gigawatt hours. Yikes! The alternative to not participating is causing so much stress on the grid and we get black outs. The Energy and Sustainability Division under the Office of the Chief Administrative Officer (OCAO), investigated this opportunity early this fiscal year. We are proud to say that we are working in coordination with NRG Curtailment Services and have enrolled Silver Spring Metro Center (SSMC) Campus in 2016 Summer Program. Other sites are also in the pipeline for investigation on feasibility to be enrolled for next years' program.

With this program, we were able to address three federally mandated issues:

1. Advanced Metering (EPAct 2005)- If a building participates in Demand Response, an advanced meter will be installed free of charge.
2. EPA Energy Star Portfolio Manager (EO 13693) - NRGCS's advanced meters allows for automatic data sync to EPA Energy Star Portfolio Manager.
3. Funding Energy Projects (EO 13693, 42 U.S. Code § 8256) - The financial incentives that participants receive is a possible revenue stream to fund other energy projects.



Demand Response is not new. The idea of Demand Response is not complicated. Recent technological advancements has even made this program very robust to the point of automation. Please reach out to your Energy and Sustainability points of contact if this program interests you.

MEET RICH CRUIKSHANK, SAFETY SPECIALIST, NOAA SECO

Hello. My name is Richard Cruikshank. I am a Safety Specialist in the Safety and Environmental Compliance Office (SECO), Office of the Chief Administrative Officer. I grew up in a small Arkansas town called Prairie Grove. After graduating high school I joined the Navy, and so began my obsession with travel. I have visited over 25 countries and do not plan to stop any time soon. The military opened my eyes to all that the world had to offer and helped guide me to where I am today. I began working in the field of safety as a Damage Controlman (shipboard firefighter/ emergency management specialist) and finished my career as a Navy Seabee (construction battalions). I have many years of experience in construction safety management and emergency response safety management and have also earned degrees in Construction Technology and Marine Engineering. Once I retired in 2012 I was hired as a Safety Specialist Intern with the Army Corps of Engineers. So the family and I moved to Seoul South Korea. While in South Korea I began volunteering with the Cub Scouts. I enjoyed it so much I became a scout leader and 3-1/2 years later I still do that here in Maryland. I enjoy the outdoors and the scouts are very active and allow for many opportunities to spend time exploring. Since coming to NOAA I have learned much in a relatively short time. The experience I am gaining with this organization is paramount for achieving my career goals, and will provide ample opportunities for personal and professional growth and my coworkers, and all NOAA employees for that matter, could not be better sources of education. Even though I have only been here a short time, this place feels vibrant and exciting. Well, that's a little about me. I hope to have a chance to meet more of you .

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