SUSTAINMENT AND RESILIENCY DIVISION

VOLUME 3 | ISSUE 2
JANUARY 2022

IN THIS ISSUE:

ADDRESSING CLIMATE CHANGE THROUGH SUSTAINABLE AND RESILIENT INFRASTRUCTURE

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The threat of climate change has been a hot topic for many years now and scientific data continues to validate that it requires action on all levels – whether it be federal, state, privately-owned businesses, and even through personal choices. The U.S. military takes this threat seriously as Secretary of Defense Lloyd Austin has stated, "We face all kinds of threats in our line of work, but few of them truly deserve to be called existential. The climate crisis does…Climate change is making the world more unsafe and we need to act." The Army Reserve Installation Management Directorate has laid the groundwork over the past ten years in anticipation of a climate strategy, and with the newly-released Army Climate Strategy, sustainable and resilient infrastructure projects will remain a priority to ensure Soldier and Mission readiness.

Why has the Army Reserve prioritized infrastructure projects that provide stability and continuity of critical operations? Increasing natural disasters alone have caused devastating infrastructure damage to numerous U.S. military installations and facilities. The Army's presence in the South Pacific was impacted in September 2009 when two earthquakes struck within minutes of each other between Samoa and American Samoa and sent devastating tsunami waves over the islands. Fort Buchanan, Puerto Rico experienced Hurricanes Irma and Maria (both category 5 storms) in 2017. In the same year, the Army Reserve conducted water re-supply, provided shelter, and performed emergency evacuations in Houston, Texas during Hurricane Harvey. In 2018, super Typhoon Yutu, the strongest typhoon recorded to impact the Mariana Islands, struck Tinian and Saipan, as well as other islands, territories, and countries. More recently, Army Reserve facilities in California are experiencing wildfire seasons that start earlier and end later each year. According to the California Department of Forestry and Fire Protection, climate change is considered a key driver of this trend.

Another concern we must consider is how near-peer competitors of the United States are preparing for the impacts of climate into the future. There is no denying our adversaries take climate change very seriously and recognize the strategic importance of preparation in order to leverage this reality globally. Climate change will continue to disrupt our operations, logistics, and supply chains, impact resource availability including water and energy, and have an impact on our ability to train, mobilize, and deploy from our military facilities. If we do not address these challenges and leverage technology in the same way as our adversaries, we will be at a strategic disadvantage to defend our interests.

So how do we increase sustainability and build resilience at our Army Reserve facilities? Specific to installations and infrastructure, the new Army Climate Strategy focuses on adapting infrastructure and natural environments along with securing access to training lands and reducing green-house emissions. Through our infrastructure, we have an opportunity to not only help mitigate the effects of climate change through sustainability practices, but continue to adapt to those effects through resilience initiatives. Mitigation will address the causes and reduce the impacts of climate change and its related effects. Adaptation will enable us to anticipate and prepare for the challenges of climate change. This holistic approach at the installation and tactical level ensures our Soldiers can remain ready and always have the resources needed to mobilize and deploy.

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SRD SNAPSHOT

Through our sustainability programs and the Army's Integrated Strategic and Sustainability Planning (ISSP) process, the Army Reserve has established the foundational concepts to address climate change. Our internal strategies enable us to pivot as needed and implement solutions and technologies that serve as a blueprint across the Army. One example is our Installation Energy and Water Plans (IEWPs) that we have been developing over the last three years to identify resiliency measures that will reduce the likelihood of disruptions and further enhance our ability to operate our critical facilities independent of energy and water resources outside the fence line. We are aggressively planning, programming, and implementing microgrids, battery storage, and renewable energy and water technologies at these facilities, while leveraging partnerships to optimize funding. We continue to install enterprise building control systems in our facilities to better conserve energy and water for maximum efficiency, and we are laying the foundation for an all-electric non-tactical vehicle fleet.

This is only the beginning. As we take steps to identify and fund climate projects through upcoming planning cycles, the Army Reserve will continue to find opportunities to pilot Army initiatives, utilize new technologies, and build stronger partnerships to lead the Army's efforts in mitigating and adapting to climate change. As ever more frequently occurring natural disasters continue to create a strain worldwide, we must act now to protect our resources, our Soldiers, and our mission.

Army Reserve Electric Vehicle Pilot Program

As climate change and near-peer adversary innovations demand the Army diversify energy sources, the Army Reserve is focused on increasing energy efficiency and resilience. Recently, a multi-phase infrastructure acquisition plan launched to pilot an electric vehicle (EV) program and transition non-tactical vehicles (NTV) to an all Battery Electric Vehicles (BEV) and Plug-In Hybrid Electric Vehicles (PHEV) fleet. This will enable the Army Reserve to meet Executive Order 14057 (Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability) to have 100% zero emission vehicles by the end of FY27.

"The Army Reserve EV pilot program will install 27 Level 2 EV charging stations with multiple charging ports/adapters at three Army Reserve facilities located in Washington and California," explained Laura Pirtle, Services Branch chief, Sustainment and Resiliency Division, Army Reserve Installation Management Directorate. "Nearly 60 additional BEVs and/or PEHVs will be added to these sites and will be acquired through the General Service Administration's Customer Acquisitions Module process. By utilizing a phased acquisition rollout and the lessons learned in the pilot program, the Army Reserve will be able to maximize collaboration with personnel across the enterprise, adjust the course as needed, and leverage a wider aperture of expertise."

The Phase 1 Army Reserve EV pilot program will conclude in FY23. Phase 2 will add 96 vehicles to 9 facilities, Phase 3 will more widely rollout 934 vehicles to 101 facilities, and Phase 4 will add 962 vehicles at the remaining 650 facilities. The future all-electric Army Reserve NTV fleet will include over 2,000 vehicles at 763 total facilities.

The transition to EVs is one of many projects supporting the Army Reserve's focus on increasing energy resilience. In FY21, the Army Reserve increased renewable energy production by 36% compared to FY20 and broke ground on two multi-million dollar microgrid projects in California. Additionally, the 9th Mission Support Command put into operation its first fully-functioning energy microgrid at Pele U.S. Army Reserve Center located on Tutuila Island, American Samoa.

"While technological complexities make transitioning to tactical EVs on the battlefield many years away, we can leverage commercial success now to reduce NTV fuel consumption and emissions," added Pirtle. "While access to power grids on the battlefield are not an option, we can easily equip our installations and sites with charging stations for government vehicles. And while these charging stations will not be for use by privately-owned vehicles, we are hopeful to see Level 3 charging stations installed at federal facilities for privately -owned vehicles in the future." Pirtle, along with the U.S. Army Reserve Command NTV Team, will continue to lean forward and convert the Army Reserve fleet into the future.

For more information about the EV pilot program, please contact Laura Pirtle.

SRD SNAPSHOT

Environmental Disposals & Liabilities Training

The annual Environmental & Disposal Liability (E&DL) training will address the FY22 Deputy Chief of Staff (DCS), G-9 Installations Data Call expectations and processes, applicable E&DL guidance, and organizational lessons learned. The training will also include an extensive review of best practices across the enterprise. All installation Cost Estimator and Peer Reviewer roles (as defined in the latest DCS, G-9 Cost to Complete Guidance) are required to attend one annual session. Virtual training dates are:

- 09 February
- 17 February
- 22 February
- 24 February
- 01 March
- 03 March
- 07 March

For more information and/or to register, please visit the Army Environmental Command training site:
https://army.deps.mil/army/cmds/imcom_USAEC/Training/SitePages/Home.aspx

EARTH DAY

The Army Reserve is committed to protecting the environment and the health of our Soldiers, Families, and communities. In honor of this, we celebrate Earth Day each year on 22 April. As we prepare for the 2022 observance and the theme for the Army Reserve signed message, we want your ideas!

In 2021, the Army Reserve theme highlighted how innovation supports readiness and modernization, and ensures that our installations will continue to have the infrastructure needed for training, mobilization, and deployment. For 2022, let us know about your installation or RD's environmental efforts and what Earth Day means to you.

Have an idea for the Army Reserve theme for Earth Day? Send your ideas to the SRD Strategic Communicator by 18 February.

Upcoming Teleconferences

Energy and Water Managers Teleconference	Environmental Leadership Forum	Solid Waste Program Teleconference
9 February	10 February	16 February
1500 - 1630 EST	1500 - 1630 EST	1430 - 1600 EST