

Dear Reader,

Despite a year marked by increasing global turmoil, barbarism, and climate-related challenges, we continue to see important advances in science, technology, and organizational management. Integrating these advances into force modernization, analytical systems, physical infrastructure, and human systems will improve the ability of the United States and its Allies and partners to work together in defense against adversaries who seek to destabilize a democratic world order. Our Fall 2023 issue considers some lessons we are learning from today's conflicts and highlights the benefits of recent scientific and technological research and development.

In our lead article, Matthew Galamison and Michael Petersen delve into Russian aerospace forces' (VKS) technological capabilities, training, doctrine, and operational concepts, revealing significant deficiencies. As NATO nations modernize their air forces, they can and should learn the lessons behind Russia's air campaign failures in Ukraine.

Turning to renewable energy, Nate Olsen argues the best way to ensure energy grid sustainability and readiness at overseas US military bases is to generate power through renewable microgrids. Multiple forms of renewable energy, tailored to specific geographic regions, will provide the United States and its Allies with uninterrupted power to maintain power down range. As the world pays increasing attention to climate change, Lauren McQuone asserts that advances in meteorological analysis can highlight differences between adversary and friend vulnerabilities. An assessment of capabilities, risk, and behavioral norms and anomalies can help our forces determine the marginal advantage in operational planning.

Threats—climate or otherwise—to installations are persistent today. Brandon Dinkins argues a new US Air Force Security Forces framework is needed to modernize the forces and create a comprehensive security posture for our physical installations. This framework will mitigate personnel shortfalls as well as mental and physical health factors that impede the readiness and capabilities of our Defenders.

Adding further context and the view of an Ally to the questions posed by Galamison and Petersen for NATO, our issue concludes with a contribution focused on France's participation in US and Allied air and space operations. David Pappalardo and Andy Hamann remind us of France's key role in the Alliance in providing critical airpower capabilities, and they highlight the importance of interoperability and potential future collaboration in space efforts.

As always, thank you for taking the time to read this issue of *Air & Space Operations Review*. We hope you find it engaging and informative.

~ The Editor

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