

# **Energy and the Military: Convergence of Security, Economic, and Environmental Decision-Making**

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In this Working Paper we explore the evolving relationship between energy issues and defense planning, and show how these developments have implications for military tactics and strategy and for civil energy policy.

Energy considerations have always been core to mission delivery of armed forces worldwide. Military considerations range from bases, both foreign and domestic, to in-theater operations, to securing supply chains and denying them to enemies. Historical examples and recent developments are examined.

It has become axiomatic that modern energy policy seeks to balance three competing goals: security of reliable supplies, affordability and reduced environmental impacts. These three factors also shape energy decisions associated with the military, but with particular prioritizations and optimization differing significantly from non-military concerns. Military planners are confronting a

broadening and complicating range of energy issues. In this working paper, we argue that the operational experience of the wars in Afghanistan and Iraq, a re-evaluation of the energy resilience of home-country installations, and the ability to improve defense economic and environmental metrics, have contributed to a shift toward ever-more integrated energy decision-making in modern defense planning and operations. This shift appears to be lasting, significant, and will likely affect the energy space in both military and non-military domains.

The interaction between military energy issues and non-military energy issues is not often explicitly treated in the literature or media, although in the last decade there has been some increase driven especially by the issues of clean energy. It is recognized that the military has for more than a hundred years taken a leadership role in terms on research and development (R&D) of specific energy technologies—most commonly where they have been applicable in theater. More recently that R&D leadership has extended to include the energy efficiency of home-country bases, and the development of renewable energy projects.

This working paper provides an overview of a set of issues rarely considered in either the energy policy or defense policy literatures – in effect the issues are the impact of energy on military options and the impact of the military on energy options.

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