

**Defenders of Wildlife * Earthjustice * National Audubon Society
Natural Resources Defense Council * Sierra Club * Union of Concerned Scientists
Western Resource Advocates * The Wilderness Society**

**Key Principles:
Balancing Renewable Energy Development and
Land Conservation in a Warming World**

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The nation's growing addiction to fossil fuels coupled with the unprecedented threats brought about by global warming imperil the integrity of natural resource conservation. Meeting the nation's anticipated energy needs with clean energy over the next decade and beyond will require a significant investment that must start immediately. We believe the nation needs to enact additional energy conservation measures, implement more efficient technologies, and obtain more energy from clean renewable sources. New utility-scale renewable generation facilities and delivery through expanded electrical transmission lines will be required, as many of the richest renewable energy resources are far from major population centers. The nation cannot meet future energy demand in ways that reduce carbon emissions to levels needed to avoid the worst effects of global warming without combining these resources with smaller scale distributed generation and very ambitious efficiency gains in our buildings, appliances, industries and transportation.

The transition to a sustainable energy economy must safeguard our natural resources that help keep American communities safe, healthy, and prosperous. The United States has a unique natural heritage that provides key services to society including supporting biodiversity and protecting air and water quality. By storing carbon, the nation's forests, grasslands, and intact ecosystems are also an essential defense against global warming. There must be a balance between addressing the near-term impact of siting renewable energy facilities with the long-term impacts of climate change on our biological diversity and natural landscapes. Given the vast scale of this development, it will be essential to site and configure new energy infrastructure to avoid and minimize environmental impacts and to prevent undue and unnecessary degradation across the landscape.

To address opportunities and challenges posed by renewable energy resources, we believe:

1. The nation must transition to a sustainable energy economy by moving away from fossil fuels as quickly as possible. Fossil fuel dependence poses enormous threats to the health and vitality of the country including global warming, national security risks, and economic volatility. Global warming in particular poses an unprecedented threat to the survival of ecosystems and wildlife, and ultimately human health and communities that depend on the

services these systems provide. The nation must act immediately to begin to reduce our dependence on traditional fossil fuels by enacting swift and deep cuts to our greenhouse gas emissions, eliminating waste and moderating demand for energy through energy efficiency measures and demand-side management practices, and by rapidly developing and deploying clean, renewable energy technologies.

2. Clean, renewable energy generation must be developed and deployed immediately to assist in this transition. A robust national clean energy strategy must include very ambitious efficiency gains in our buildings, appliances, industries and transportation, as well as continued public education to reduce energy consumption. However, new sources of power will be required and the nation must aggressively develop clean renewable sources to meet demand including replacing carbon emitting sources of energy. Capitalizing on our nation's renewable resources will require both siting facilities and developing transmission specifically designed to expand renewable generation.
3. Clean energy offers significant opportunities for creating jobs and contributing to our economic prosperity. Investments in transforming our energy infrastructure and training our workforce will yield significant economic growth and job creation. In fact, one study shows on average green investments create more than twice as many jobs per dollar invested than fossil fuel generation technologies. Clean energy investments redirect money previously sent overseas or wasted on inefficient energy transmission toward advanced technology, modern infrastructure, and skilled labor. Moreover, renewable energy development on private lands offers benefits to landowners through sale or lease of their lands, and local communities can enjoy the tax benefits of locating such projects on private lands.
4. Renewable energy is required at different scales across the landscape. There are significant opportunities for smaller-scale generation, such as rooftop solar panels. However, these strategies alone can't provide the clean and sustainable energy the country will require. Our nation has traditionally relied on large-scale centralized generation and a far-reaching transmission network to bring energy to the load centers where users live and work, and will likely continue to do so for the foreseeable future. New utility-scale generation capacity and associated transmission will be needed. Even at a large scale, renewable energy development can be compatible with other land uses such as agriculture or grazing, although even on these lands development may impact wildlife and other resources.
5. Properly sited transmission projects and upgrades should connect clean renewable energy resources—not facilitate carbon-heavy generation—and avoid or minimize impacts to sensitive resources. New transmission lines should be specifically planned, designed, and sited in order to serve renewable resources, not expand the carbon-intensive electrical generation that is linked to global warming.
6. The social and ecological impacts of renewable energy development must be assessed through science-based planning processes, with opportunities for robust public involvement. In order to ensure high-quality, legitimate, and non-controversial development decisions, renewable development planning must be science-based and include opportunities for public engagement. As with any development that occurs in predominantly natural systems, large-scale renewable energy projects have the potential to cause a range of adverse impacts.

Planning should assess ecological and social impacts at appropriate spatial and biological scales, linkages between habitats, and cumulative effects across administrative boundaries including human health impacts.

7. The impacts of renewable energy development should be viewed in the context of the full range of the nation's energy supply and development. Traditional energy facilities can involve serious, permanent, and even catastrophic effects. Renewable energy facilities, by deferring and displacing existing and proposed traditional facilities, can help avoid many of the effects of those other options. Many types of renewable energy facilities also require little or no water for their operations, compared to traditional energy facilities that have much larger impacts on water quality and supplies. Such relative impacts should be fully considered in assessing renewable energy projects.
8. Land that has already been disturbed should be preferred for development. Whether in private or public ownership, land that has already been developed for industrial, agricultural, or other intensive human uses is generally superior to "greenfield" sites in term of reduction of environmental degradation. Redevelopment of disturbed sites offers opportunities to improve lands that may not otherwise be reclaimed, but it is imperative to consider and address the effects of renewable energy development, both positive and negative, on minority and low-income populations.
9. Renewable energy should be given priority over fossil fuels on public lands. A dramatic and rapid shift to renewable energy is needed to avoid catastrophic climate change, but energy development on public lands has been exceedingly unbalanced in favor of oil and natural gas development in recent years. Thus, appropriately-sited renewable energy development on public lands should be given priority over carbon-intensive fossil fuel development.
10. Given the multiple benefits that wildlands provide, rapid development of renewable energy resources should avoid impacts on these sensitive and unique lands. The nation's wildlands play an important role in addressing global warming by sequestering carbon and by facilitating ecological adaptation. Any role the nation's wildlands may play in supporting the transition to clean energy generation must strike a balance in both the near- and long-term between the protection of attributes, including biodiversity, habitat connectivity, carbon sequestration, and other ecosystem services upon which we depend, and the needed development of renewable energy generation and transmission infrastructure.