

The Evolution of Ivanpah Solar

Foreword

By Robert Redford

When I first encountered Jamey Stillings' photographs of Ivanpah Solar in the Mojave Desert, I was captivated not only by their stark beauty, but by the questions his work raises in our quest to balance the growing demands of a consumer-based culture with the need to preserve Earth's natural spaces and resources. As the impacts of global climate change become clear, we must grasp that the sum of our human activities is having a huge and negative impact on this planet. Since the dawn of the Industrial Revolution, we have drilled, mined, and transformed much of Earth's wilderness, while burning enough coal, oil, and gas to radically raise the temperature of the atmosphere and oceans—a process that threatens to disrupt life, as we know it, by the end of the century. We face the urgent need to shift away from fossil fuels to energy sources that can profoundly reduce our greenhouse gas emissions.

Renewable energy is an essential part of our move toward a sustainable future. Yet, the challenging decisions we must make for its development are neither simple, nor clear. They require working through difficult sets of nuanced choices that force us to confront larger and sometimes contradictory issues about our priorities and the preservation or utilization of land and natural resources. Large utility-scale energy projects, in particular, must be weighed within the context of our continued fossil fuel dependence, while balancing local impacts with the Big Picture. Ivanpah Solar is symbolic of the challenges we face in assessing such issues. Before construction commenced on the alluvial slopes between Interstate Highway 15 and Mount Clark, fourteen square kilometers of public land were still part of the natural world—home to many species of flora and fauna, including the desert tortoise, listed as “threatened” under the Federal Endangered Species Act. To mitigate this issue, Ivanpah Solar's owners have spent millions of dollars to study and relocate the tortoises.

Now complete, the solar plant has become part of our growing human-altered landscape. At first blush, this shift seems antithetical to environmental efforts to limit our impact on the land. However, the trade-offs associated with this solar plant are more complex. All energy projects impact birds. Ivanpah Solar is no exception. But context and perspective are everything. A recent study estimates that bird deaths per gigawatt hour of electricity are seventeen times higher for fossil fuels, than for wind power, and while comprehensive statistics are not yet available for concentrated solar, initial data is closer to wind than to fossil fuels.

Compared with electricity from natural gas and coal, Ivanpah reduces carbon dioxide emissions by 400,000 and 850,000 tons per year, respectively. How, then, do we weigh the positive impact on global flora and fauna of reducing our carbon footprint by ten to twenty-one billion tons over a period of twenty-five years?

As a long-time environmental activist and supporter of the arts, I find Jamey's work compelling for its ability to observe and respect both nature and human-made environments, while drawing us to the dynamic energy and tension created at their intersections. Storytellers have the power to broaden our minds and shift the way we think about complex environmental issues. Through his continued documentation of renewable energy development, Jamey enters into the cast of characters shaping the way we navigate our energy future.