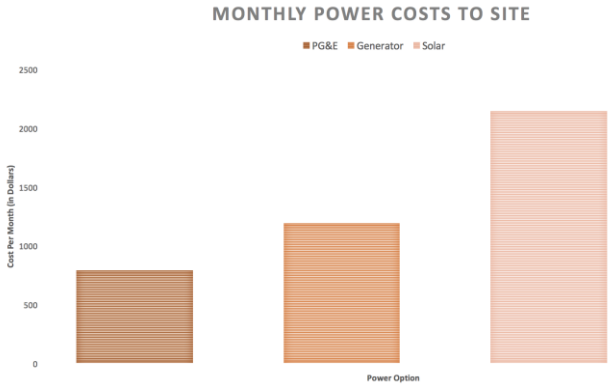
The Feasibility of Implementation of Solar Power on Construction Sites

Every construction site, no matter the size or location, has the requirement for temporary services including electrical, water, etc. Among the most important is electricity, as most every trade depends on it to some extent as well as site security and safety largely being supported on it until established power is brought to the site. Currently the two main sources to bring power to a site is either through temporary power brought to site by the local power authority or by renting generators for the duration of the project. The purpose of the research conducted in this project is to determine the feasibility of implementing solar on a construction site as means of providing power. Power requirements as well as costs from the established sources were compared to the current costs of solar, more importantly, to the current cost of the specific solar setup needed to provide consistent power to the site. As a baseline, the project power requirements were based of the requirements of the civil site the generator data was pulled from.

Keywords: Temporary Power, Solar Power, Site Sustainability, Civil Construction

Solutions To Onsite Power

Power Source	Benefits	Drawbacks
Temporary Power (PG&E)	Easy setup, cost effective	Availability dependent on site location
Generators	Mobility, no wiring needed	Operating costs, Pollution, multiples needed to meet demand
Mobile Solar Power	Mobility, limited operating costs, no pollution	High upfront cost, dependent on sun and battery performance



Provider	Month	Project Duration	Difference Over Cheapest Option
PG&E	$790	$11,060	
Generator Rental	$1,194	$16,716	34%
Mobile Solar	$2,148	$30,072	63%

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