

## **Solar Incentive Structures and the Impacts of PV Performance and Costs**

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### **Introduction**

This poster presents the results of a study conducted by Itron for the California Public Utilities Commission (CPUC) to examine the relationships between solar photovoltaic (PV) performance, costs, and PV incentive structures. Information is presented in two areas. First, the study provides a baseline of PV performance and costs using actual performance data and reported costs from a large number of PV systems installed and operating in California. Second, the study provides information on the manner and extent to which differences in PV performance and projected PV cost reductions can influence PV incentive payments. This study should help provide policy makers responsible for developing PV incentive programs with information that will result in incentive structures that fairly and transparently reward improved PV cost and performance while simultaneously providing a reasonable pathway to move PV towards an incentive-free market environment. PV performance monitoring data for over one hundred operating commercial, industrial, and institutional solar PV systems are combined with projected electricity retail rates and future PV costs within a breakeven levelized cost model to produce associated PV incentive levels. Preliminary results for 39 prototype PV market scenarios provide insights into how PV incentive levels can be set to take advantage of utility-specific electricity retail rates, PV configuration and location, and projected PV cost reductions while facilitating the development of PV systems that can compete without incentives. Potential implications of these performance and cost-effectiveness results are provided with respect to PV incentive programs and PV markets.