GO solar CALIFORNIA

CSI RD&D PROGRAM

Distributed Energy Resources Integration

Grantee:
kW Engineering

Partners:
SolarNexus, SaveEnergy123, Solmetric, Geopraxis

CSI RD&D Funding:
$942,490

Match Funding:
$258,653

Project Timeframe:
2010-2012

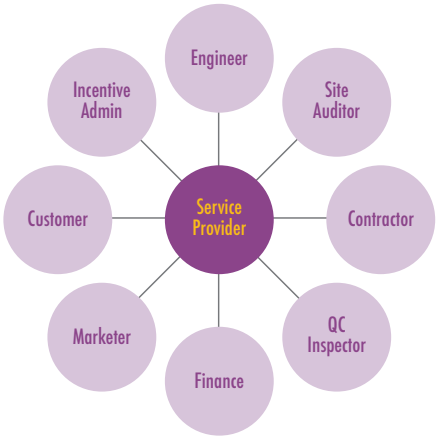
RD&D Project Portal:
calsolarresearch.ca.gov/csi/68

Itron | CSI RD&D PROGRAM MANAGER

Integrated Energy Project Model

OVERVIEW AND OBJECTIVES

The process of finding, documenting and communicating information on possible energy efficiency, and solar energy projects to customers is cumbersome and confusing and represents a barrier to the adoption of these technologies. The industry lacks tools that facilitate a comprehensive approach for integrating both energy efficiency measures and energy generation by solar photovoltaics (PV). Energy service providers often use tools to automate their business processes to market, bid, contract, and manage projects. Unfortunately, these tools are not integrated and lack a common standard to easily share information about customers, buildings, energy use, projects, products and services. The lack of a common data format for integrated energy project information prevents easy data transfer between software tools, resulting in redundancies, data entry errors and higher contractor and customer costs.



The IEP model is designed to capture and share common information among all involved stakeholders

The Integrated Energy Project (IEP) model was an effort to develop a new open-source extensible markup language (XML) format for information exchange that improves the speed and reliability of communications among stakeholders of integrated energy efficiency and renewable energy projects. The goal of this research project was to create an open format that enables all IEP stakeholders to easily collect, transmit, and store information about integrated energy projects through various software tools used within the energy industry.

This document provides a brief project description. For more detail on the project and the California Solar Initiative's (CSI) Research Development, Demonstration & Deployment (RD&D) Program, please visit calsolarresearch.ca.gov

The CSI RD&D Program is managed by Itron on behalf of the California Public Utilities Commission (CPUC).

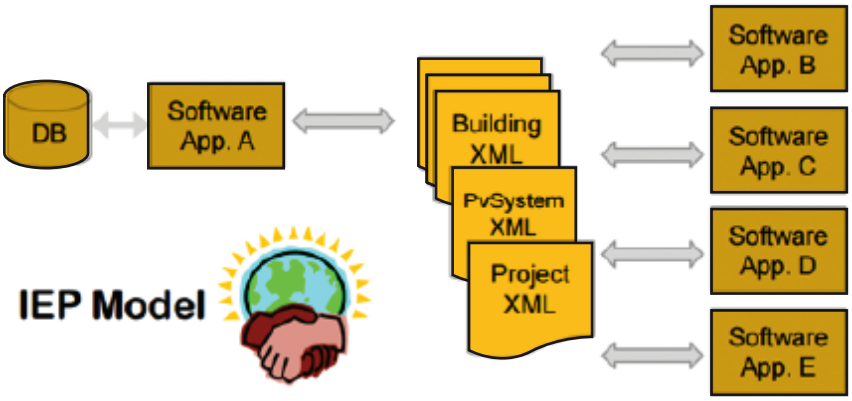
METHODOLOGY

The project consisted of three phases: initial research, development of the data model, and a demonstration deployment of IEP XML in two existing web applications.

IEP Model Software

The team conducted initial research to identify the business processes, software needs and required parameters of solar installers and energy service providers. This extensive inventory of parameters was used to organize and develop a comprehensive IEP Model. For the deployment phase, data exchanges using the IEP Model XML Schemas between the SolarNexus and SaveEnergy123 software tools were implemented to identify any potential deployment issues and identify any user interface changes needed for these software tools to support implementation of the IEP Model.

RESULTS AND OUTCOMES



Read and write IEP XML

The kW Engineering team leveraged their existing software products and skills to develop and test an IEP Model. This model integrates the building energy analysis process with the implementation of energy efficiency and solar projects. The model is expected to streamline the process of integrating energy efficiency and PV reducing time and costs for both consumers and contractors. The kW Engineering team described the model components, documented the communication interchange between systems, implemented a test version of the model, identified regions to conduct consumer and contractor tests, conducted a pilot test of the model, and documented the results. The final product is available for integration with other consumer energy efficiency audit, contractor bidding or project management tools on the market. For more information on the model, please visit: *http://www.iepmodel.net*.

PUBLIC BENEFITS

Received very positive feedback from numerous industry stakeholders involved with the model development.

Offers an open, flexible data communication standard that facilitates the transmission, analysis, and storage of integrated energy project information with the internal and external tools of any user group.

Avoids the redundancy of developing a service providers' own version of an existing tool and with the easy transfer of project data as well as more choices in vendors.

Provides the ability to maintain a history of many different energy projects.

Allows vendors to develop portable, audit, data collection tools that may be implemented on tablets and smart phones.