


# SCALING UP SOLAR INCENTIVE MARKETS

## Standards to Unlock Innovation, Investment and Value



BY STEVEN EISENBERG, CEO & LEWIS WAGNER, CTO

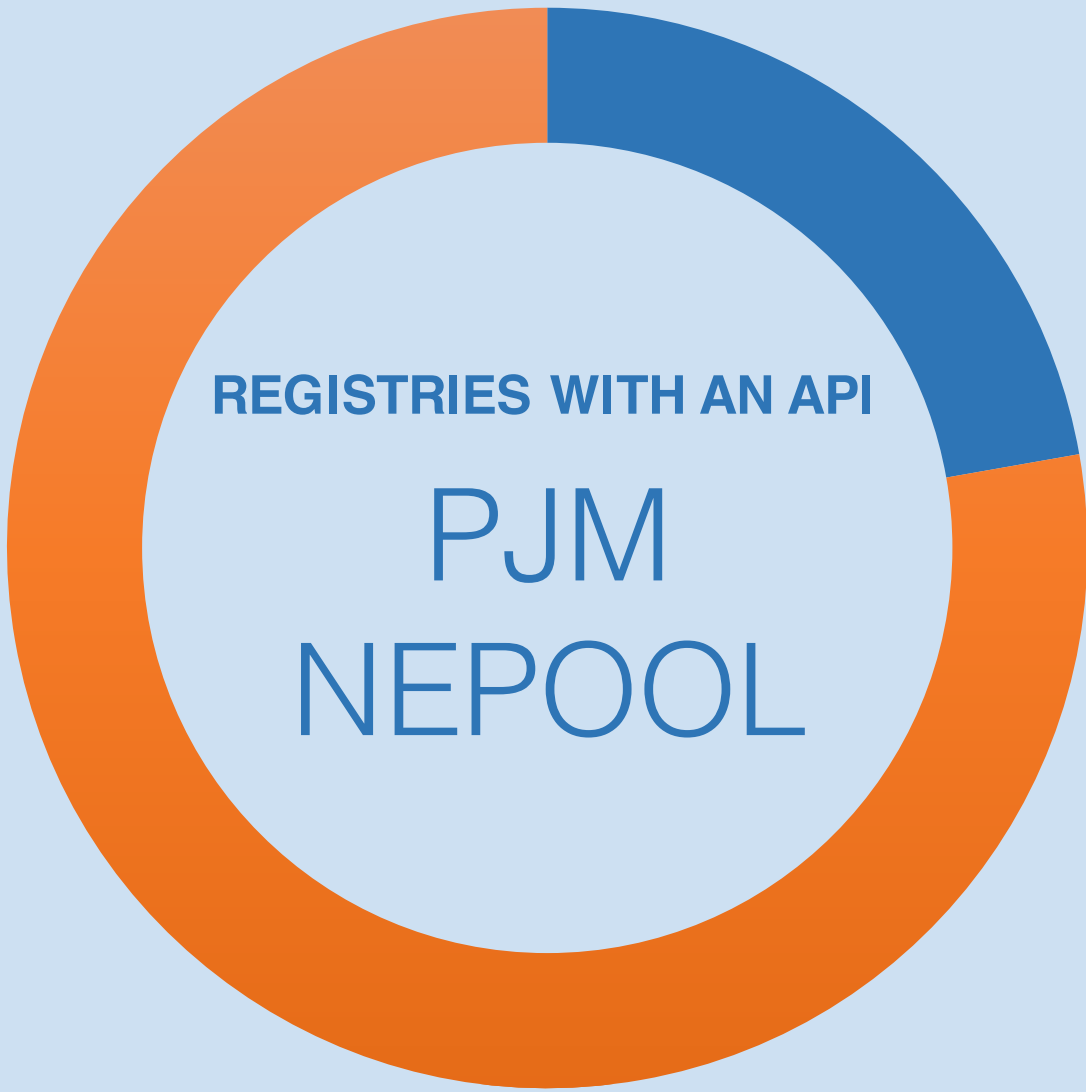
A lack of standards and access to underlying incentive data fuels complexity, and in turn increases risk and ultimately the cost of doing business. A drive towards open data communication will unlock innovation, investment and value across the market.



### Open & Equitable Access To Underlying Registries

#### Access Data

Open and equitable access places the burden of innovation on the market and reduces the ability for a central authority to decide market winners.



REGISTRIES WITH AN API  
PJM  
NEPOOL

#### WHAT IS AN API?

Application Programming Interface is a protocol to facilitate machine-to-machine communication.

#### WHY APIS?


1. Support market innovation
2. Build niche functionality
3. Increase operational efficiency
4. Connect multiple tools & databases

#### Foster Innovation

Monopolistic access to data increases costs to participants and stifles innovation that would otherwise lead to reduced costs in the market.

#### BUILDING CONNECTIONS

Connecting multiple tools and data sources fuels collaboration and efficiency.



CRM / ERP   ACCOUNTING & FINANCE   MONITORING   ASSET MANAGEMENT   EMAIL & CHAT   REGISTRY   OTHER APIS & DATABASES

#### Reduce Soft Costs

While hardware costs have been steadily decreasing, soft costs have not followed and now account for up to 64% of the total price of residential solar systems. Restricted access has increased soft costs as organizations build bloated teams to manage complex portfolios.

#### INSTALL SOFT COSTS


# 64%

Source: U.S Department of Energy website

#### INDUSTRY SOFT COSTS EXCEED

# \$10b

Source: GTM Research



### Buy or Build Software To Institutionalize Portfolio Knowledge

#### Manage Risk

Strong market growth has exposed many organizations to costly operational mistakes and strategic risk as it fails to capture institutional knowledge.

#### HIGH VALUE ASSETS

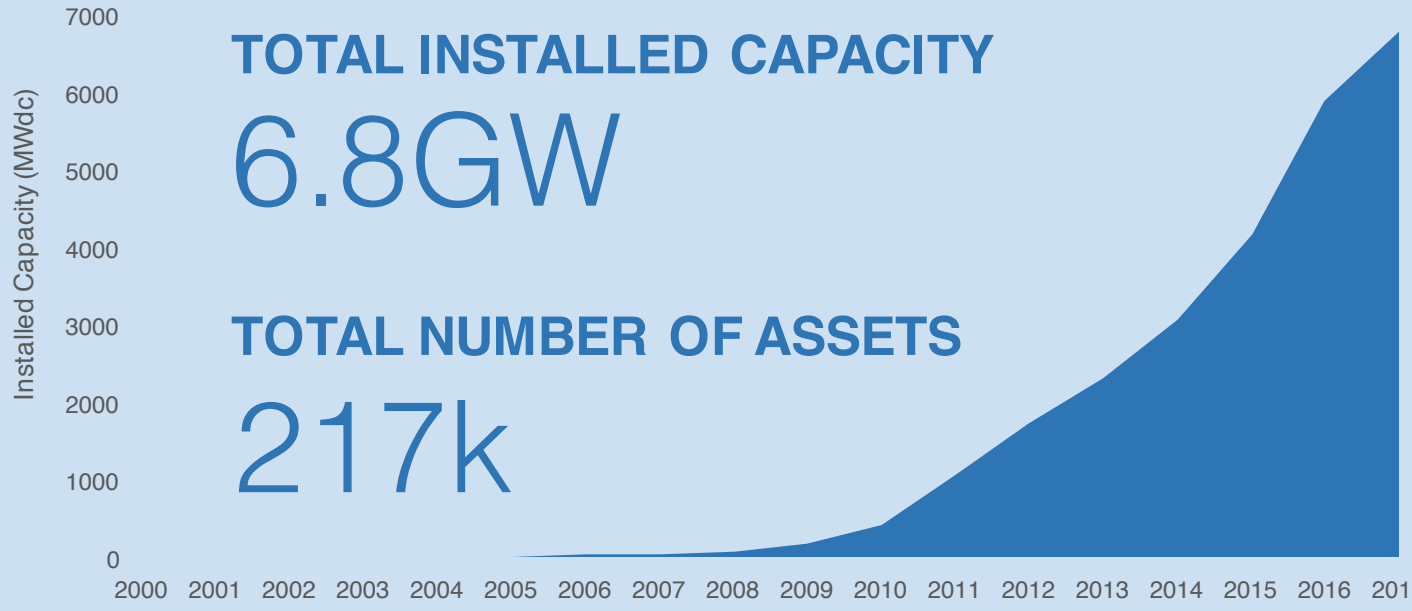
In 2017 the REC market will exceed \$2.7 billion in transaction value

# \$2.7b

Source: SRECTrade estimates for PJM and NEPOOL REC markets

#### INCREASING CAPACITY

PJM and MA solar shows a trend of strong and consistent growth



TOTAL INSTALLED CAPACITY  
**6.8GW**

TOTAL NUMBER OF ASSETS  
**217k**

Source: PJM-EIS AND MA DOER public reports as of July 2017

#### Institutionalize Knowledge

Institutional knowledge is the understanding of processes, systems, standards, cultures, values etc that are gained through the corporate experience.

#### WHY IT IS IMPORTANT

Capturing institutional knowledge protects organizations from losing valuable knowledge when employees leave. Using software to capture knowledge creates a central secure repository that can be built on and used to store, track and audit.

#### FAILURE TO CAPTURE

Organizations are often using Excel to record quantitative data but are failing to appropriately codify processes, standards and systems. Excel is not appropriate software to establish the institutional guardrails needed for managing high value assets at scale.

#### Increase Operational Efficiency

Using APIs unlocks operational efficiencies and reduces soft costs. Research shows using APIs available today could result in estimated efficiency gains of 88% for portfolio managers and could save the industry millions of dollars per year.

#### TIME SAVINGS FOR REC DELIVERIES

DELIVERIES MADE FOR 6.8GW

#### MANUALLY IN REGISTRY

17,831 HRS

#### WITH API

1,964 HRS

Source: SRECTrade estimates

SRECTrade, Inc.

201 California Street, Suite 630, San Francisco, CA 94111   (415) 763-7732   clientservices@srectrade.com   www.srectrade.com   © 2017 SRECTrade, Inc. All rights reserved.