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# **NASEO Finance Committee Call**

## **Insights from SAPC workgroup**

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# NREL Activities to Open Capital Market Investment and Bank Lending for Solar Deployment



**Presentation to Senate & White House Staff  
September 15 & 16, 2014**

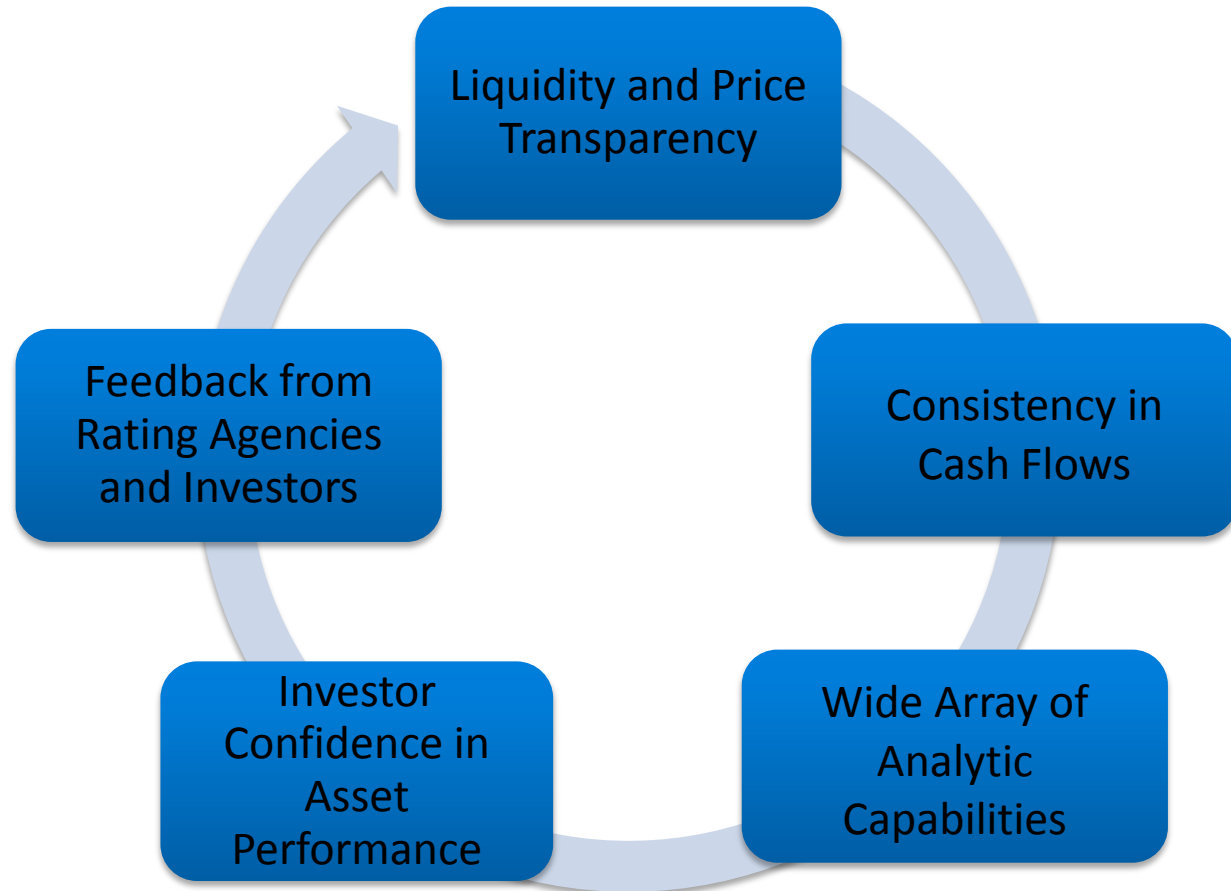
**Michael Mendelsohn, NREL  
John Joshi, Capital Fusion Partners**

NREL is a national laboratory of the U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, operated by the Alliance for Sustainable Energy, LLC.

# Capital market participation requires...

- i. **Asset and contractual consistency**, which allows project cash flows to be pooled into tradable and highly liquid securities, and
- ii. **Availability of data to conduct due diligence** necessary to build market confidence in the asset class.

*Which creates virtuous cycle of...*



# NREL Securitization Activities: Project History

## NREL / DOE Goal

Expand availability  
of capital

Lower cost  
of capital

Reduce  
transaction cost,  
time to  
access capital

## 3 Yr. DOE Award

*Under SunShot Initiative (FY '13 – '15)*

Organize the industry around:

- Standard documents
- Best practices
- Robust datasets

Comprehend  
opportunities and barriers

Promote adoption by developers,  
financiers, law firms, etc.

# SAPC Activities

- **Standard Contracts – first set available and in use:**

- Residential Lease (aggregated, disaggregated)
- Commercial Power Purchase Agreement (PPA)
- Residential PPA

Consistency in  
Cash Flows

- **Develop Best Practices**

- Installation, Operation & Maintenance (O&M)
- *First public releases due Q4 2014*

Investor  
Confidence in  
Asset  
Performance

- **Build Robust Datasets**

- System performance: oSPARC (Open Solar Performance and Reliability Clearinghouse) available here
- Credit performance

Wide Array of  
Analytic  
Capabilities

- **Develop Mock Filing to Rating Agencies**

- Residential mock presented to 5 rating agencies
- Commercial mock in development w/ innovative structure

Feedback from  
Rating Agencies  
and Investors

# Standard Contracts

## Benefits of Adoption:

- Facilitate cash flows to be pooled into securities to access capital market investment
- Lower transaction costs
- Speed deployment
- Improve customer protection
- Enable market liquidity of projects

## Adopters:

### • Developers

- SolarCity
- Clean Power Finance
- Sunrun
- One Roof Energy
- OnSwitch
- Altus Power

### • Law Firms

- K&L Gates
- Nixon Peabody

### • Financing / Risk Platforms

- Mercatus
- truSolar
- ModSolar

# Standard Contracts

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- **SAPC benefit:**
  - Standard contracts and best practices will facilitate asset consistency and improve liquidity of projects
  - Easier to buy and sell projects portfolios

# SAPC Mock Securitizations: Residential and Commercial

## Mock securitization benefits:

- *Legal term sheets* – lowering transaction costs for smaller entities to enter debt markets
- *Education* – of rating agencies & industry on risk perception, technology & credit performance
- *Structure* – tandem tax equity / debt structure could solve complex industry issue



# Are SAPC Goals being met?

## NREL / DOE Goal

Expand availability  
of capital



Solar industry  
continues to mature  
through operating,  
technical, and  
financial innovation

Lower cost  
of capital



DOE / NREL efforts to  
standardize, facilitate  
asset quality, and  
provide analytic tools  
is speeding that  
maturity

Reduce  
transaction cost, time  
to  
access capital

