

# CLEAN ENERGY FINANCE CORPORATION

## Case Studies and Emerging Market Characteristics for Rooftop Solar and Storage

Simon Brooker, Executive Director – Corporate and Project Finance



### **CEFC Mission**

Accelerate Australia's transformation towards a more competitive economy in a carbon constrained world, by acting as a catalyst to increase investment in emissions reduction

# Case Studies & Emerging Market Characteristics in Rooftop solar & Storage

## Agenda

1. Overview of the CEFC
2. CEFC Support to Date
3. Role of Finance in Delivering Value to the Customer
4. Emerging Opportunities



## What the CEFC looks for...

- A sponsor with sufficient equity at risk
- A commercial business proposition
- Experienced counterparties
- Scale:
  - \$20m + direct to the opportunity
  - \$20m + via aggregation platform
- A commercial return on its investment



## What CEFC is bringing to the table

- A significant source of senior debt
- Fixed rate, but prepayable at no cost after an initial deployment period
- Longer tenor than traditionally available
- Sector knowledge
- Flexible and varied structuring solutions
- Preparedness to take performance risk (PPA product) in addition to credit risk (loan product)
- Sole underwriting where bank appetite does not exist



# Rooftop Solar and Storage

## Agenda

1. Overview of the CEFC
- 2. CEFC Support to Date**
3. Role of Finance in Delivering Value to the Customer
4. Emerging Opportunities



## Programs CEFC is supporting

- PPA and guaranteed lease programs being brought to market by:
  - SunEdison
  - ET Solar
  - Lighthouse / Tindo
- Solar loan financing via CBA bank partnership
- CEFC is currently developing:
  - Corporate loan programs to support the corporate roll out of solar
  - Securitisation programs to assist solar financing



# Rooftop Solar and Storage

## Agenda

1. Overview of the CEFC
2. CEFC Support to Date
- 3. Role of Finance in Delivering Value to the Customer**
4. Emerging Opportunities





# What Drives the Customer's Finance Rate ?

- The risk being taken by equity
- The return required by a debt financier's - driven by:
  - Market base rates
  - Margin to compensate for lender risk
- The relative levels of debt and equity (which determines the "weighted cost of finance")

		Gearing		50%		Debt Rate
Financier ROE		4.5%	5.5%	6.5%	7.5%	8.5%
10%		7.3%	7.8%	8.3%	8.8%	9.3%
12%		8.3%	8.8%	9.3%	9.8%	10.3%
14%		9.3%	9.8%	10.3%	10.8%	11.3%
16%		10.3%	10.8%	11.3%	11.8%	12.3%
18%		11.3%	11.8%	12.3%	12.8%	13.3%
20%		12.3%	12.8%	13.3%	13.8%	14.3%
22%		13.3%	13.8%	14.3%	14.8%	15.3%

		Gearing		60%		Debt Rate
Financier ROE		4.5%	5.5%	6.5%	7.5%	8.5%
10%		6.7%	7.3%	7.9%	8.5%	9.1%
12%		7.5%	8.1%	8.7%	9.3%	9.9%
14%		8.3%	8.9%	9.5%	10.1%	10.7%
16%		9.1%	9.7%	10.3%	10.9%	11.5%
18%		9.9%	10.5%	11.1%	11.7%	12.3%
20%		10.7%	11.3%	11.9%	12.5%	13.1%
22%		11.5%	12.1%	12.7%	13.3%	13.9%

		Gearing		70%		Debt Rate
Financier ROE		4.5%	5.5%	6.5%	7.5%	8.5%
10%		6.2%	6.9%	7.6%	8.3%	9.0%
12%		6.8%	7.5%	8.2%	8.9%	9.6%
14%		7.4%	8.1%	8.8%	9.5%	10.2%
16%		8.0%	8.7%	9.4%	10.1%	10.8%
18%		8.6%	9.3%	10.0%	10.7%	11.4%
20%		9.2%	9.9%	10.6%	11.3%	12.0%
22%		9.8%	10.5%	11.2%	11.9%	12.6%



## Risk Factors Equity and Debt Consider

For small scale solar / behind the meter equipment key risk factors include:

- Customer default risk
- Sponsor credit risk (in the case of banks)
- Counterparty performance risk
- Regulatory risk
- Equipment performance risk
- Production risk

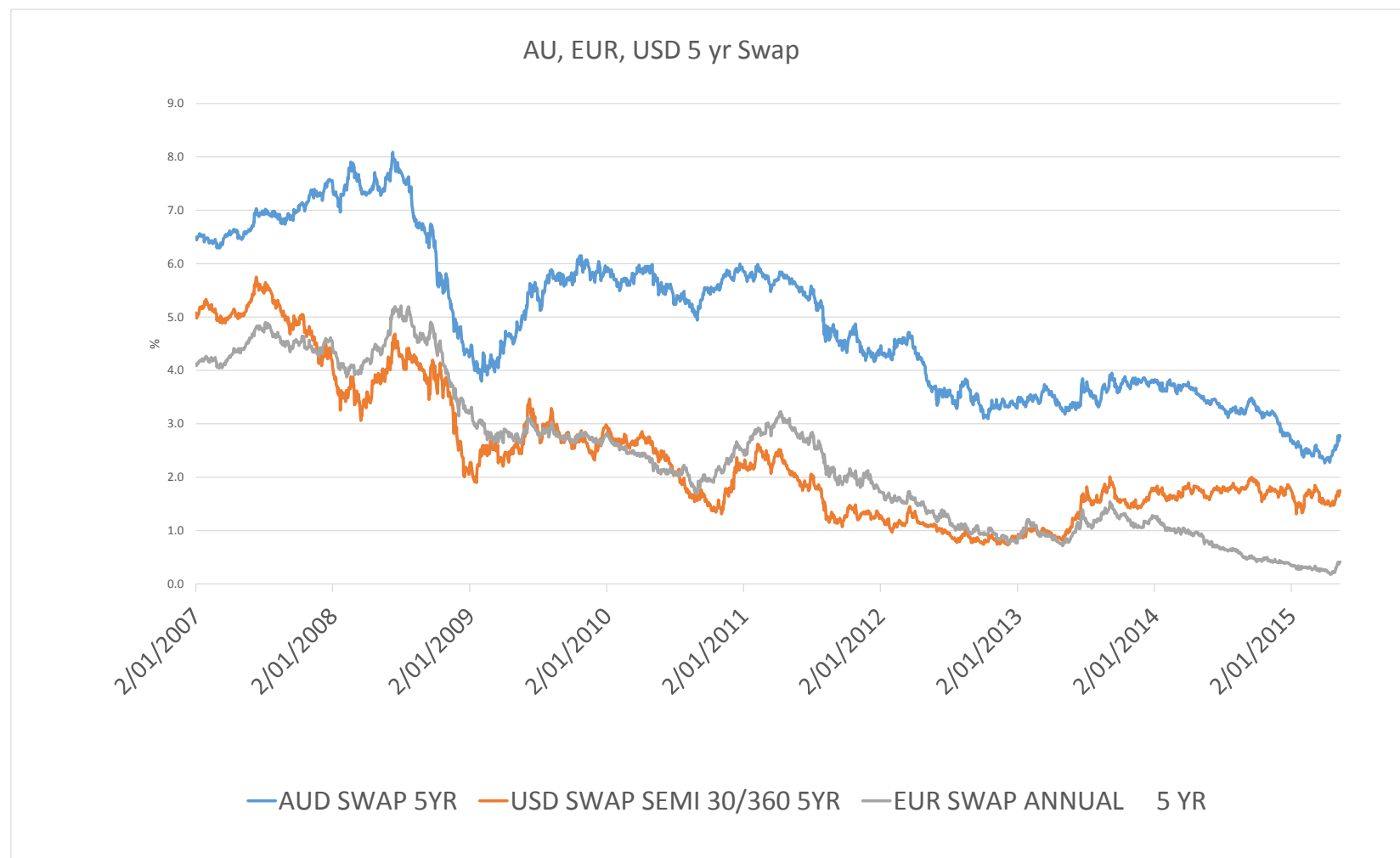


## The weighted cost of capital should come down

- Internationally, investors are seeking out the solar asset class:
  - Project equity yield-cos expanding rapidly
  - Rapid development of solar loan programs to complement PPA offerings
  - Securitisation of solar PPAs is happening
  - Banks are providing big warehouse funding programs – securitisation will follow
- Deal flow and asset class familiarity is driving
  - Higher leverage
  - Lower required equity returns and
  - Lower margins;
- Plus - debt Base Rates are at historic lows



# Low Interest Rate Environment



# A lower cost of capital Finance Rate translates to a lower implied cost of power (1)

But longer tenor financing is also critical

Long term finance not readily available

Which is where the CEFC can help

Energy Equivalent cost in c/kWh / for given financing term and WACC

100% self consumption assumed

Loan/Lease Term	WACC								
	8.00%	9.00%	10.00%	11.00%	12.00%	13.00%	14.00%	15.00%	
3	43.28	44.06	44.85	45.64	46.44	47.24	48.04	48.85	
4	33.67	34.43	35.18	35.95	36.72	37.50	38.28	39.06	
5	27.93	28.67	29.42	30.18	30.94	31.71	32.49	33.27	
6	24.13	24.86	25.61	26.36	27.13	27.90	28.68	29.47	
7	21.42	22.16	22.91	23.67	24.44	25.22	26.01	26.81	
8	19.41	20.15	20.91	21.67	22.45	23.24	24.04	24.85	
9	17.85	18.60	19.37	20.14	20.93	21.73	22.55	23.37	
10	16.62	17.38	18.15	18.94	19.74	20.55	21.38	22.22	
11	15.62	16.39	17.17	17.97	18.78	19.61	20.45	21.31	
12	14.80	15.58	16.37	17.18	18.00	18.85	19.70	20.58	
15	13.03	13.84	14.66	15.51	16.38	17.26	18.16	19.07	
20	11.36	12.22	13.10	14.01	14.93	15.88	16.84	17.82	
25	10.45	11.35	12.29	13.24	14.22	15.22	16.23	17.25	

## A lower cost of capital Finance Rate translates to a lower implied cost of power (2)

But a customer also needs to consider how much power they can actually use

Other commercial factors (connection costs, peak demand pricing) will influence effective cost of power in c/kWh

Energy Equivalent cost in c/kWh / for given financing term and WACC

70% self consumption, 6c FIT

net off export revenue from finance cost

Loan/Lease Term	WACC							
	8.00%	9.00%	10.00%	11.00%	12.00%	13.00%	14.00%	15.00%
3	59.25	60.37	61.50	62.63	63.76	64.91	66.06	67.21
4	45.53	46.61	47.69	48.78	49.88	50.99	52.11	53.24
5	37.33	38.39	39.46	40.54	41.63	42.73	43.84	44.96
6	31.89	32.95	34.01	35.09	36.18	37.28	38.40	39.53
7	28.03	29.09	30.16	31.24	32.34	33.45	34.58	35.72
8	25.15	26.22	27.29	28.39	29.50	30.63	31.77	32.93
9	22.93	24.00	25.09	26.20	27.33	28.48	29.64	30.82
10	21.17	22.26	23.36	24.48	25.63	26.79	27.97	29.17
11	19.75	20.84	21.96	23.10	24.26	25.44	26.65	27.87
12	18.57	19.68	20.81	21.97	23.15	24.35	25.58	26.82
15	16.04	17.19	18.38	19.59	20.82	22.08	23.37	24.68
20	13.66	14.88	16.14	17.44	18.76	20.11	21.48	22.88
25	12.35	13.65	14.98	16.35	17.74	19.17	20.61	22.08

# Rooftop Solar and Storage

## Agenda

1. Overview of the CEFC
2. CEFC Support to Date
3. Role of Finance in Delivering Value to the Customer
- 4. Emerging Opportunities**



# Emerging Opportunities



## Technology innovation (e.g. battery)

- Tesla announcement
- AGL announcement

## New Retailing Models

## ARENA / CEFC Partnership

- More efficient financing



## Solar focused efficiency upgrade agreements ("EUA") programs

## Bespoke solar loan product

## Green Bond financing





Visit our website for more information at:  
**cleanenergyfinancecorp.com.au**

Follow us on  
Twitter **@CEFCAus**

Follow us on  
**LinkedIn**

Follow us on  
**YouTube**

