

CLEAN ENERGY FINANCE CORPORATION

Solar 2014 Conference and Expo

Presentation by Oliver Yates, CEO CEFC

9th May 2014



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

Solar 2014 Outline

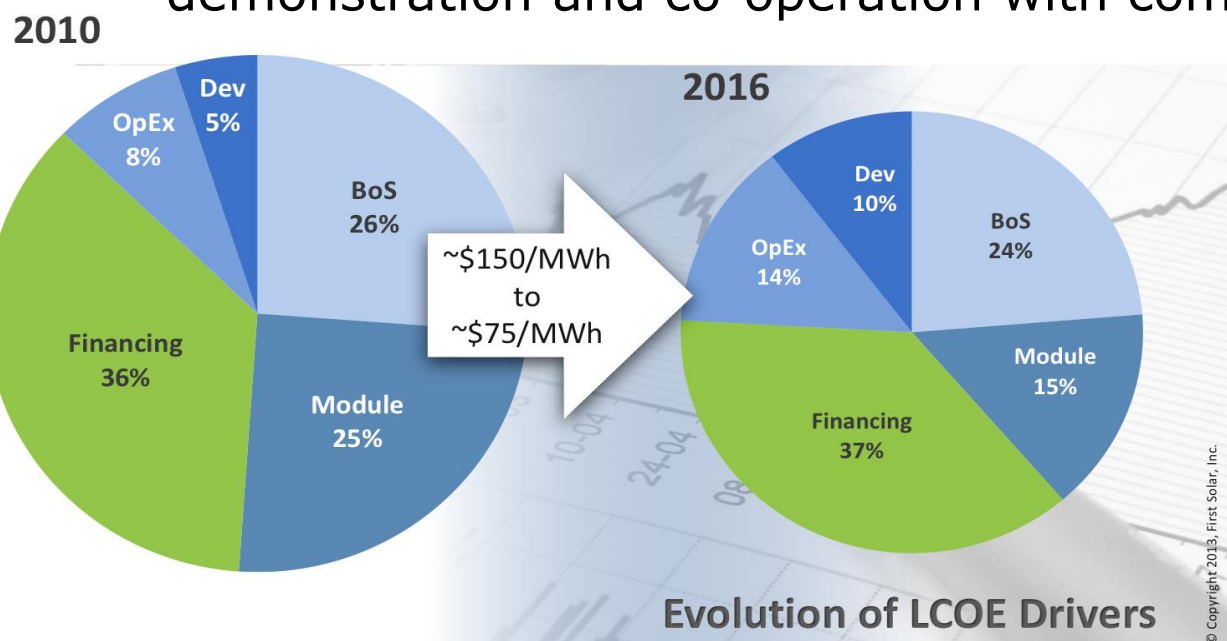
1. Access to finance is critical
2. Introduction to CEFC
3. The CEFC and the Solar Industry
4. Solar case-studies
5. Future of Solar and CEFC – new financing models, new technologies.



Access to finance is critical for solar

More than one third of the LCOE for Solar = financing

- Both large-scale and small-scale solar investments require substantial upfront capital due to high up-front fixed cost.
- Require financing that can match long pay-back period, so revenue or cost-savings can be used to make loan repayments.
- CEFC seeking to lower risk premiums required to finance Solar through demonstration and co-operation with commercial banking sector.



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- A collage of eight images arranged in a circular pattern, each representing a different industry or sector. The images include: wind turbines, a street lamp, a close-up of a turbine blade, a worker on a roof, solar panels, a cityscape, a close-up of a turbine engine, and a worker on a large industrial tank.

CEFC & the Australian Solar Industry

Seeking to address key gaps in solar financing market and further advance development of solar industry:

- **Term** – longer term financing
- **Liquidity** – bring more financing to solar industry
- **International financial market interest**
- **New technologies**
- **Catalysing small projects** – aggregation funding
- Bring globally successful **business models** to Australia
- **Power Purchase Agreement (PPA)** – limited appetite to accept merchant risk
- **Increase distributed PV take up** across SME, corporate & govt



Projects the CEFC can finance in the Solar sector

LOCAL COUNCILS

- Solar PV on council buildings & facilities

COMMERCIAL PROPERTY

- Solar thermal heating for buildings
- Solar PV for office & industrial buildings

MANUFACTURING

- Solar PV for manufacturers

AGRIBUSINESS

- Solar-thermal greenhouses for agricultural producers
- Solar PV in rural areas for agribusinesses

UTILITIES

- Large-scale on-grid solar farm with tracking technology

MINING

- Remote off-grid generation projects on mine-sites

RETAIL/SMALL BUSINESS

- Solar PV for small businesses & supermarkets

NOT-FOR-PROFIT

- Solar PV for sports clubs and community organisations

HOUSEHOLDS

- Rooftops Solar PV for households

CEFC Solar Finance: A range of structures to suit businesses & technology developers

PROJECT FINANCE

For large scale solar & solar thermal

- Large one-off projects usually >\$20m
- E.g. Large solar farm

ENVIRONMENTAL UPGRADE AGREEMENTS

Solar PV for commercial property

- Loan to help building owners implement upgrades
- Loan repayments through local council charge on land.

ON-BILL FINANCING

Solar PV for businesses

- Offered with Origin Energy
- No upfront cost, regular repayments through energy bills
- Ownership transferred on last payment

LEASE FINANCING

Solar PV for businesses

- Offered with Flexi-commercial
- No upfront payment, regular lease payments.

ENERGY EFFICIENCY LOANS

Solar PV for businesses

- Offered with Commbank
- Projects \$0.5 - \$5m

Outcomes

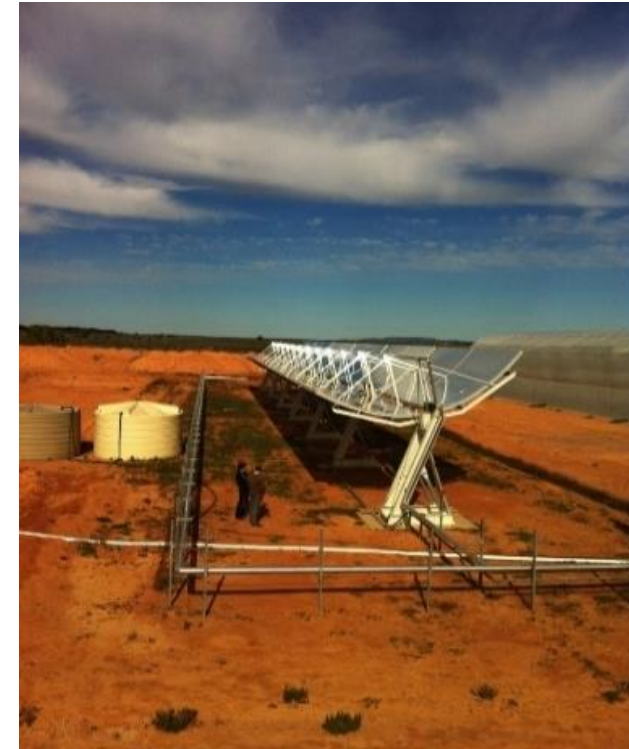
- Provided over \$700m in finance for over 50 projects worth \$2.5b in total value. Helping deliver:
 - Lower energy costs for businesses, helping improve competitiveness
 - 500MW of clean electricity generation capacity
 - Emissions reduction of 3.9 million tonnes CO₂e annually.
 - Unlocking lowest cost emissions reduction - cost of abatement is negative (i.e. net return/benefit to taxpayer) of \$2.40 per tonne.
 - Investments are profitable for businesses we work with.



CEFC Financing for Innovative Agribusiness to bring New Financiers to the Market

Sundrop Farms - Solar Thermal Greenhouse

- \$40m in finance to Sundrop Farms for a “world first” project providing important demonstration impact
- Will enable sustainable food production using solar thermal energy for heating, cooling and irrigation from desalinated water.
- Innovative deal where CEFC was a catalyst in helping to raise private sector finance
- Creates 200 local jobs



Meeting a Funding Gap

Moree Solar Farm

- One of the first utility scale Solar PV developments in Australia
- \$60m for development and construction of 56 MW Moree Solar Farm
- CEFC **underwrote the senior debt**
- Investment will enable further development of **on-grid, large scale solar** (in particular **single axis tracking**)
- CEFC taking **merchant power price risk** – lack of PPA had previously stymied efforts to secure funding
- Project also has the benefit of **ARENA grant**

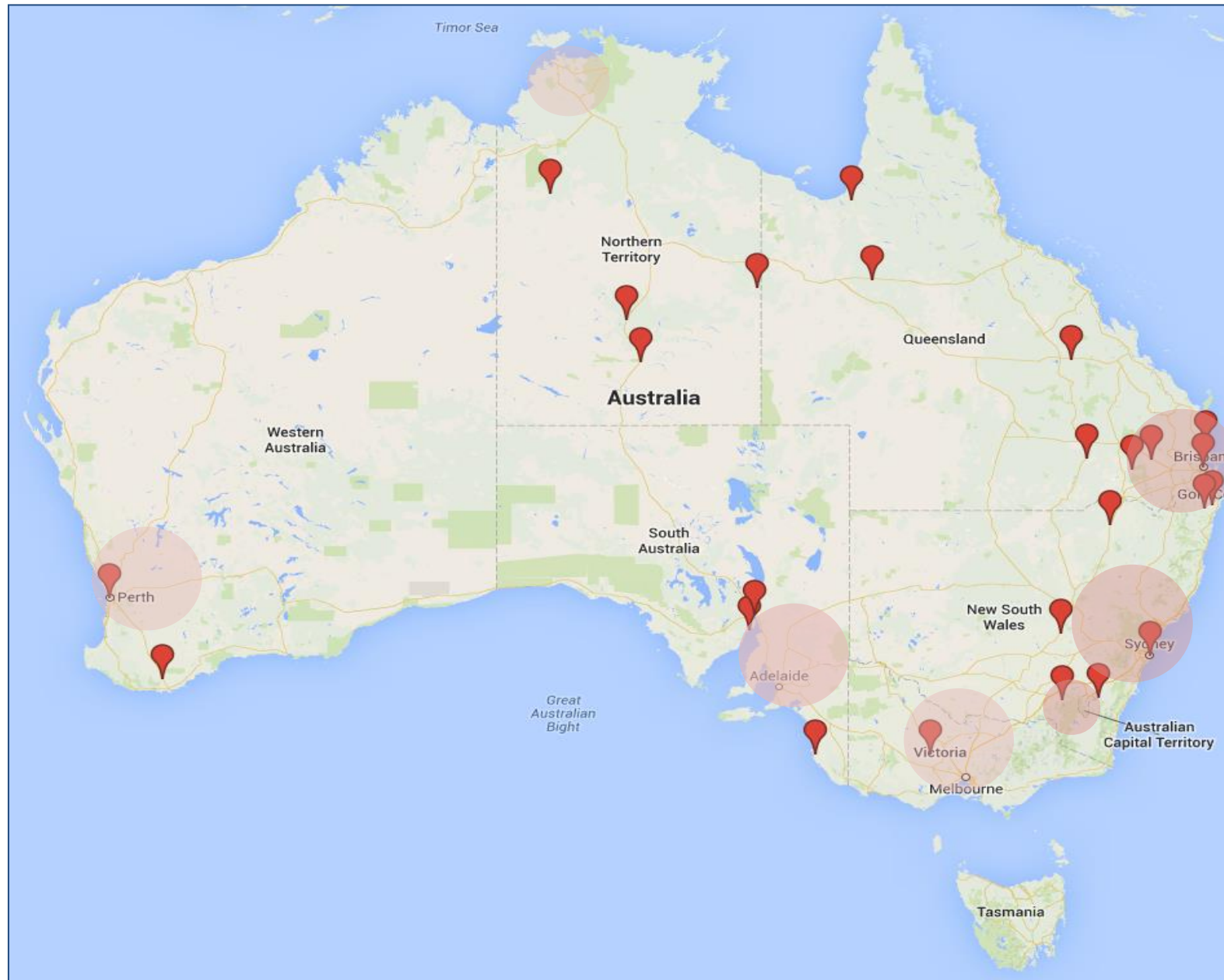


Specialised co-financing to widen technology take-up

- CEFC and NAB are co-financing \$990 000 installation for Australia's largest beef company, Australian Agricultural Company Limited (AACo), installed solar PV units across 15 grid-connected sites in Queensland
- Lowered their grid energy consumption and costs by around 30%.

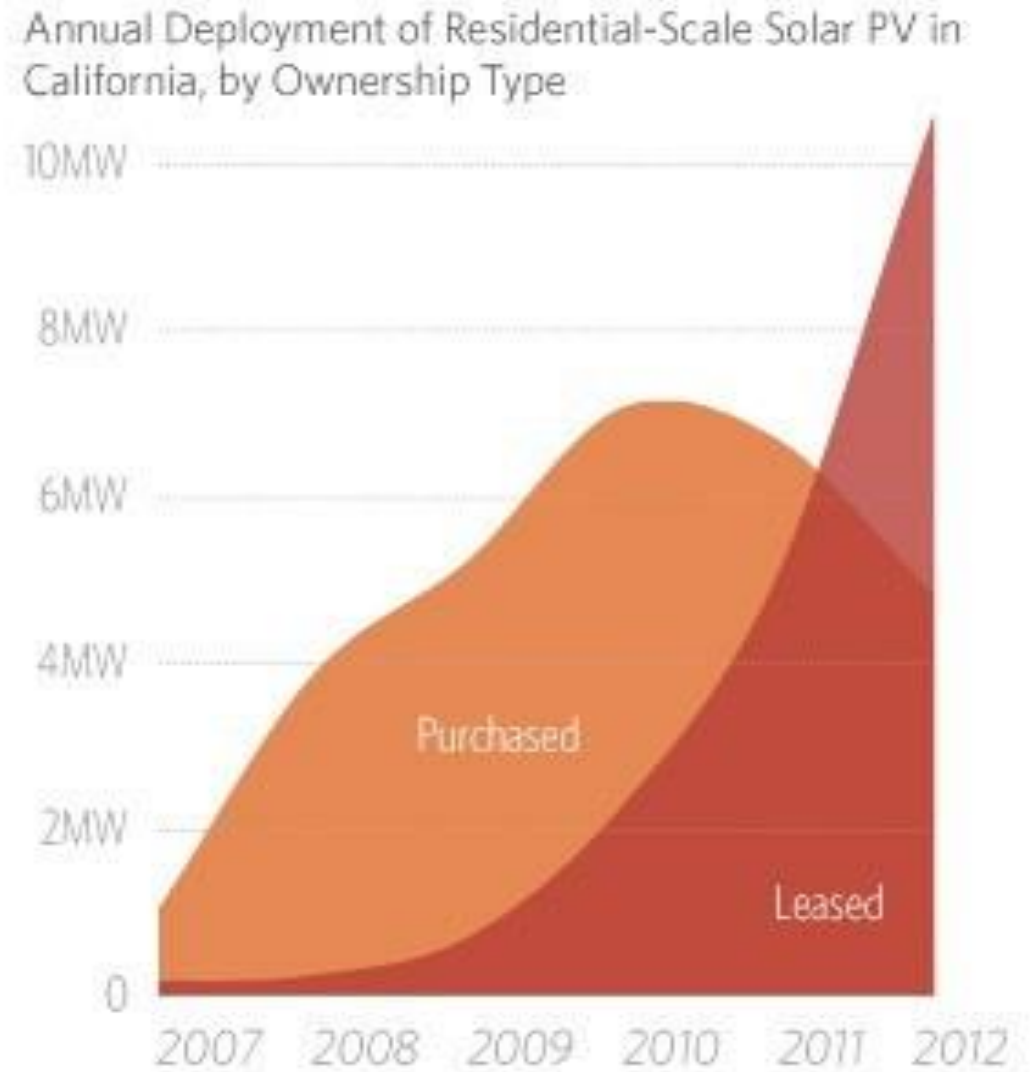


CEFC Solar Portfolio & Pipeline



Solar PV – Learning from the California Model

- Over 75% of new solar-homeowners in California are now leasing or buying solar under PPAs.
- Though different markets & different tax structures, lessons can be drawn.
- Owners will purchase power rather than panels when incentives are right to protect against future price rises
- Solar PV can be treated like a long term asset, and can be a long term market term market



Source: Climate Policy Initiative 2013

Potential for Concentrated Solar Power?

- Pilot/Demonstration Concentrated Solar Power (CSP) projects in Australia e.g. Mildura & Newcastle.
- Many commercial CSP power stations already in operation overseas.
- Industry in its infancy in Aus & not yet making a meaningful contribution to commercial power production.
- Potential as a hybrid & the ease storage could offer potential for the future, possibility of operating 24-7 and smoothing intermittency.



Potential for other new technologies...

Solar for Transportation fuels?

- Electric vehicles with rechargeable batteries
- Or fuel-cell cars which produce electricity from hydrogen through a chemical reaction that emits no greenhouse gases
- US is pushing ahead with hydrogen cars under H₂USA program – first Hyundai fuel-cell cars already on the road

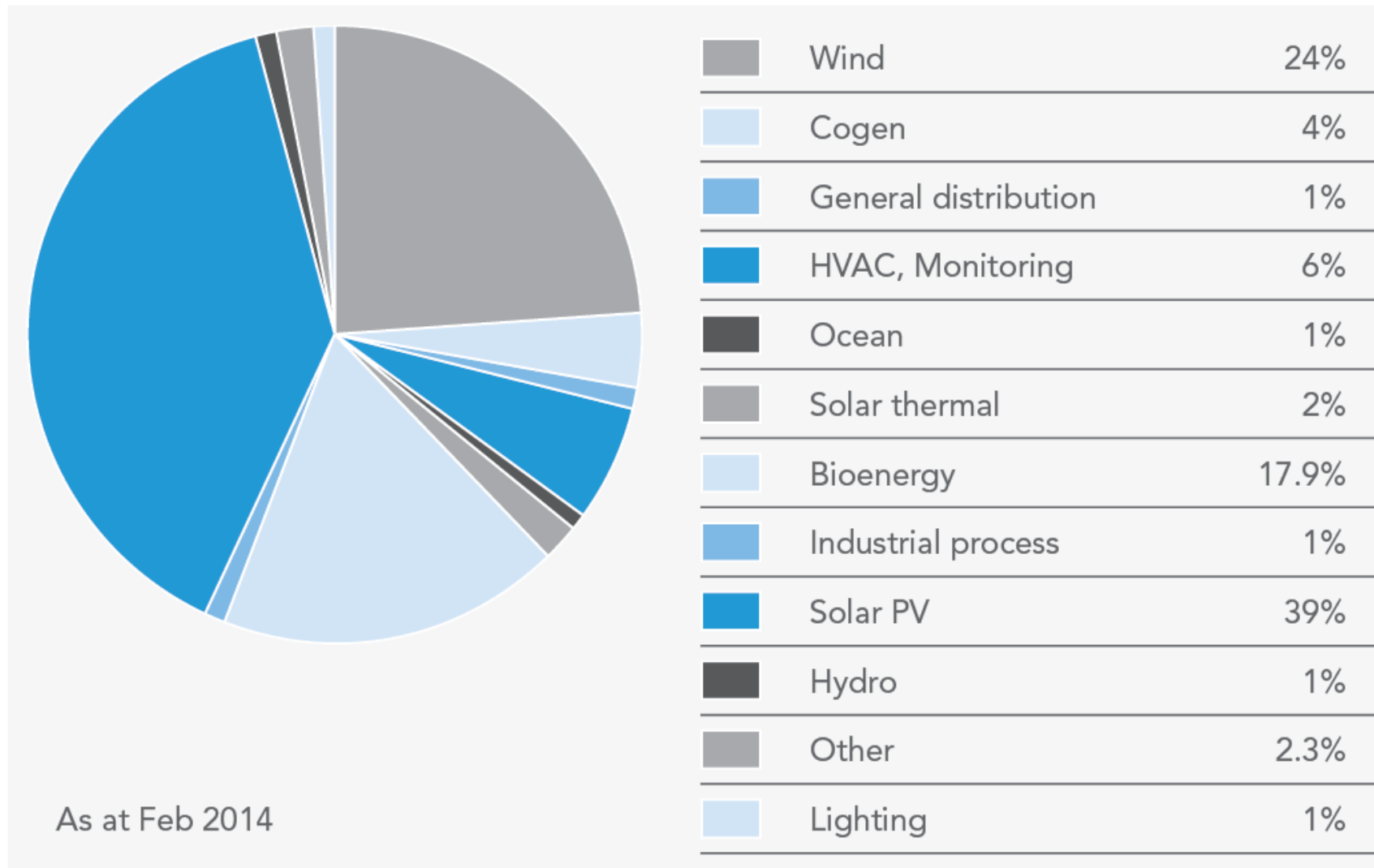
Storage & batteries potential game-changer for solar?

- Shift in costs?
- Give households & business power to control their electricity bills – potential to go completely 'off-grid'



The Future

- Strong pipeline: Over 150 proposals seeking CEFC finance of \$4 billion



Summary

- CEFC is open for business –here to help you to get Solar projects done
- Actively engaged in discussions with solar investment proponents for finance for projects
- Provide financing with terms that improve the capital structure for projects
- Assist in leveraging private sector funding into solar projects
- Contact us to talk about your project or portfolio of projects



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