UK solar:
Past, Present and Future

Overview of UK solar market

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David Pickup
Policy Manager, Solar Trade Association

Introduction to the STA

Who are we?

- UK solar industry voice
- Established in 1978
- Wide range of member companies, including distributors, manufacturers, installers, investors and developers

What do we do?

- Focus on policy, lobbying and media.
- Also work on events, marketing and PR.
- Recent work includes STA £1 Plan, business rates, VAT
- The go-to voice of solar for the media.

UK solar market - overview

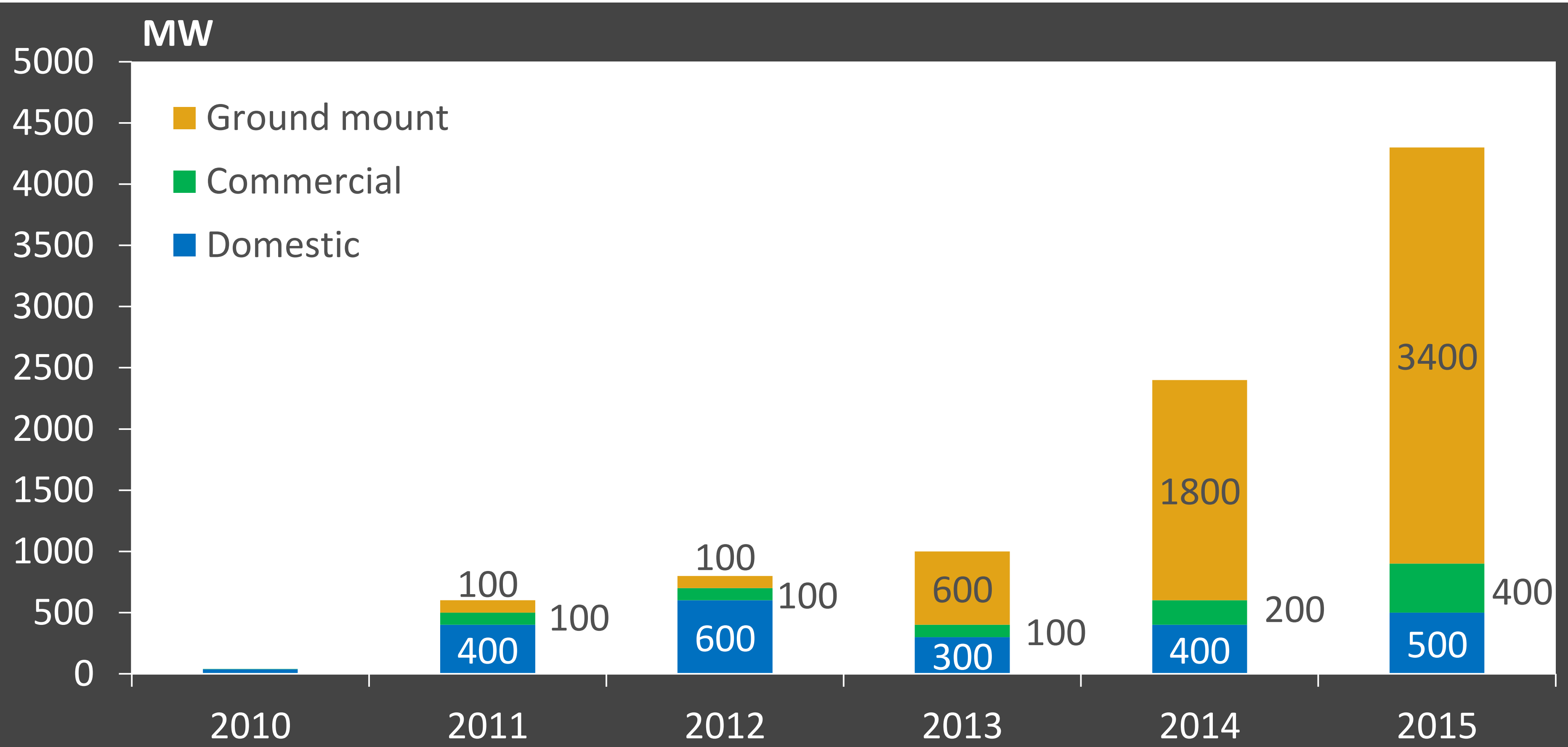
Growth since 2010, due to supportive policies (10GW in 5 years)

In particular, significant growth in ground-mount solar farms (6GW since 2013)

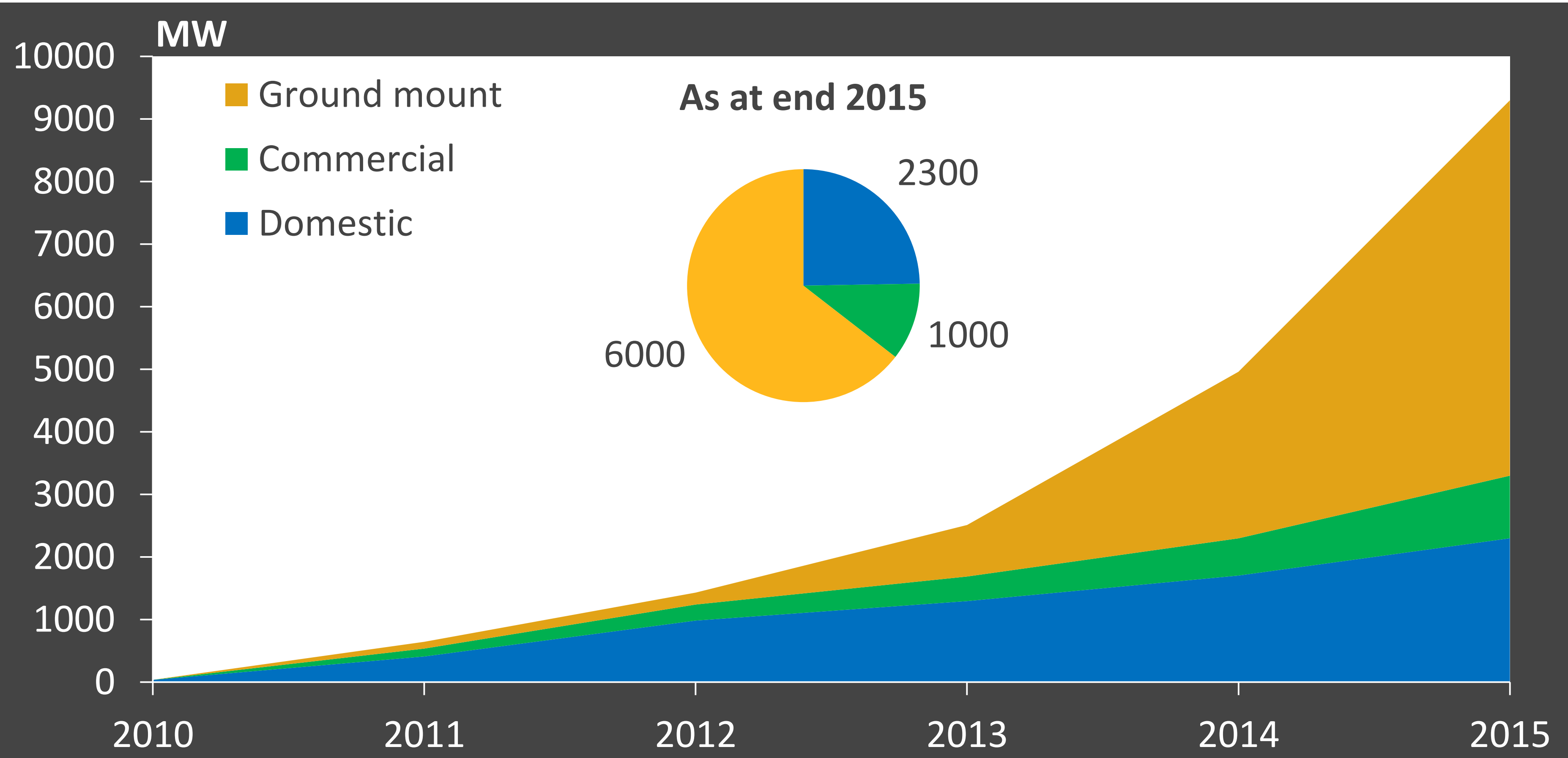
Mix of international players and home-grown UK businesses

City of London lawyers, investors and other financial services engaged

Yearly UK Solar Deployment



Cumulative UK solar deployment



Current political and policy climate

Lack of clarity in energy policy

- New government 'elected'
- New department – BEIS
- New ministers
- Brexit

Potentially reasons to be optimistic

- Blank page / review of policies
- Paris Agreement and associated carbon policy
- Growing consensus on solar integration costs
- Falling investment costs and subsidies for solar

Key factors + how to improve them

Initial research

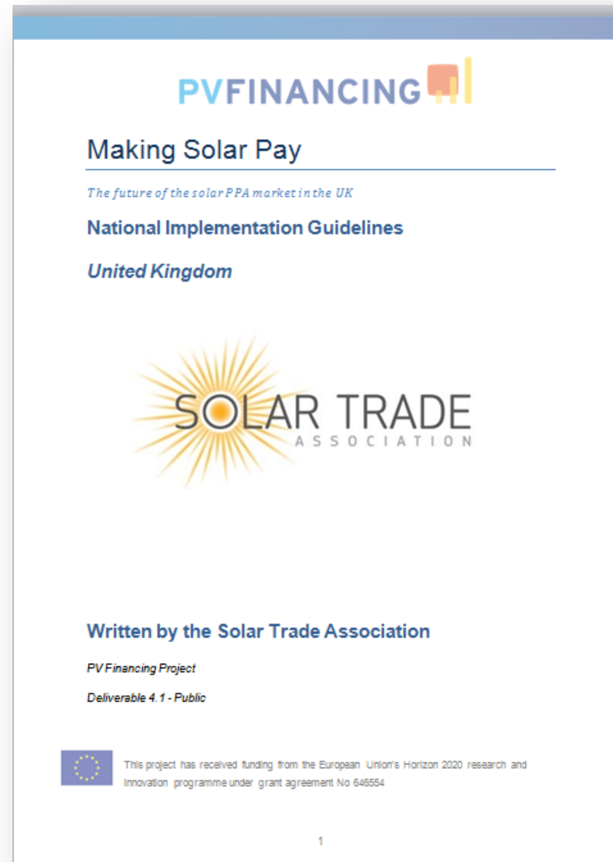
- Projects are difficult at the moment without subsidy
- Policy uncertainty a key risk

Positive factors

Reducing cost of capital	Reducing costs	Increasing revenue
• Alternative funding sources (e.g. crowdfunding) • Local authority or other public funding	• Minimum Import Price • Cost reduction through scale • O+M and asset management best practice	• Additional grid services from solar • PPAs higher value through linking with consumers directly (retail vs wholesale price)

Making Solar Pay report

- Major (60 page) report on PPA structures
- Covers the past, present and future profitability of different models
- Five different PPA structures covered:
    - Wholesale PPA
    - Sleeved PPA
    - Onsite direct wire
    - Mini utility
    - Synthetic PPA
- Comment on future changes in capex, opex and cost of capital
- Out soon (early Oct), freely available


PVFINANCING

Making Solar Pay

The future of the solar PPA market in the UK

National Implementation Guidelines

United Kingdom

SOLAR TRADE ASSOCIATION

Written by the Solar Trade Association

PV Financing Project

Deliverable 4.1 - Public

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 646554

1

The future of UK solar

The UK solar market has been affected by recent policy changes

The market will recover and grow again

In the long term, the UK is a very attractive and interesting market to get involved in

Many opportunities in storage and smart grids, as well as innovative models

Summary

UK market has matured over the last 5 years

Current policy environment is challenging

Business model innovation is happening

Long term prospects are positive

Appendix – information slides

- For extra information and context purposes
- Not used in presentation

New policy environment – 2015/16

Policy	Date	Domestic	Commercial	Large scale
Renewables Obligation (>5MW)	March 2015		No further solar projects eligible	No further solar projects eligible
Green Deal loan scheme	July 2015	"pay as you save" financing removed		
Zero carbon homes policy	July 2015	2016 carbon target for new build scrapped		
Levy Exemption Certificates	August 2015		LECs removed for existing + new plants	LECs removed for existing + new plants
Feed in Tariff cuts (<5MW)	January 2016	~60% cut in tariff	~70% cut in tariff	~70% cut in tariff
Renewables Obligation (<5MW)	March 2016		No further solar projects eligible	No further solar projects eligible
Contracts for Difference	2016			No further CfD rounds likely

Timeline of UK solar policy

	2010	2011	2012	2013	2014	2015	2016
Feed in Tariff	Policy introduced		**March** tariffs cut by ~50%				**January** tariffs cut by ~60%
Renewables Obligation	(Introduced in 2001)		Banding review, solar level for 2013-2017 reduced			**March** Eligibility removed for solar >5MW	**March** Eligibility removed for solar <5MW
Contracts for Difference				Policy developed, yearly auctions proposed	**October** First auction round	**February** Auction results, 5 winning solar projects	Uncertainty over future auction rounds for solar

Previous typical business models

Domestic	Self funded
	Loan
Commercial	Self funded
	Direct private wire PPA
Large scale	Wholesale PPA
	Direct private wire PPA

Emerging business models

Domestic	Bundled PPA
	Self-funded + maximising self-consumption
Commercial	Direct private wire PPA
	“Mini utility”
Large scale	Sleeved PPA
	Synthetic PPA

Policy Advisory paper

- Taking the insights from our implementation guidelines

- Clear policy recommendations for government to foster a successful low-subsidy environment for solar

- Likely to focus on:
  - Policy certainty
  - Breaking down barriers
  - Grid access and charging
  - Synergies with other technologies e.g. storage

- Timeline – end of the year

Upcoming Events

- Renewables and Storage Masterclass: Large Scale, 31st Oct
- Raising Standards In Solar PV Operations & Maintenance, 6th Dec

Contact details:

David Pickup

Policy Manager

Solar Trade Association

0203 637 2948

dpickup@solar-trade.org.uk