



#### What We Do

- We save time you and worry!
- Ensure PV delivers on target, e.g. 100kWp down for one quarter = £2,500
- Get the investment back on your PV system!
- Automatic bills for solar electricity being used e.g. PPA for your tenants
- Claim your Feed In Tariff, if appropriate no more readings! (Nb. FIT ended 2019)

#### Some Clients...

Glastonbury Festival – Worthy Farm – Many Others!



















**RWG SOLAR** 

Meter-based Monitoring



Welcome



# What is the PV Problem?



- Monitoring is key to understanding the efficiency of the PV system
- How do we monitor that? Solution! simple & cost effective,
- UNIVERSAL so not hardware or manufacturer specific
- Identify if a system is underperforming, faulty, or maliciously turned off
- Get advice when things go wrong

# What is the Admin Problem?



- It is difficult, time consuming, and costly to physically visit and or to check PV performance regularly!
- A tenant or premises may have agreed to have a PV system installed.
- This is to have access to cheaper solar electricity.
- MAY Need PPA Billing?
- Commercial large systems faults have a much larger effect, even more reason!
  - Landlord or Investor lead installs on commercial properties
  - Community groups are a perfect FIT



### Meter Based Monitoring

- Fully automated system installed by your PV installer (e.g.new) or can be RWG Consulting (retrofit)
- Automatically sends data to remote web page
- 60 months data and submissions Included & Beyond 60 months costs will be nominal

### Eyes on Service



- Monitoring is done 2 x per working week
- I have 2 staff who do this looking at performance constantly

- Time consuming and regular requirement
- Reports done monthly
- We check performance against expected generation monthly.
   (Uses performance data e.g. from PVSol)
- We can assist and advise on getting PV things fixed when they go wrong.
- Its up to the Owner to proceed or not, with this based on budgets etc.
- Usually Time and Materials, Electricians, we have wisdom and can advise with most situations

# Tried and Tested Solution



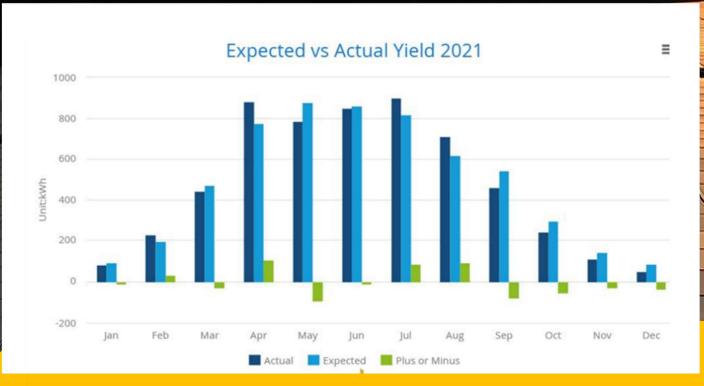
- IT IS SECURE AND MORE RELIABLE THAN THE INTERNET
- System currently monitoring over 35,000 PV systems in the UK and an Extremely Reliable Solution
- These range from small domestic systems
- To mainly commercial rooftops and Solar Farms.
- Our Organistion is stable and has long experience
- Our Portal System is likewise

# Tried and Tested Solution



- System currently monitoring over 35,000 PV systems in the UK and an Extremely Reliable Solution
- Flintshire County Council 800+ domestic PV systems
- Wrexham Council 1500+ domestic and commercial PV
- Wigan & Leigh 1500+ PV and ASHP monitoring
- Waltham Forest 1000+ domestic PV systems
- Ecotricity 800+ PV systems

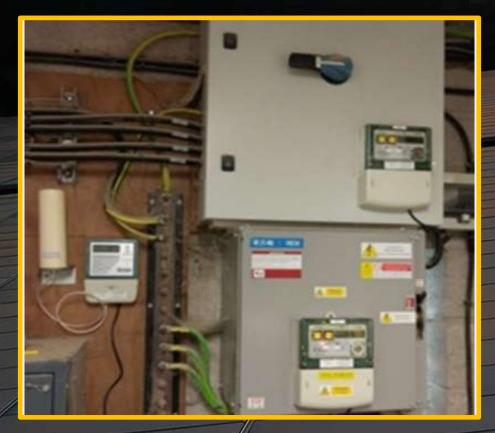
## See Expected, Versus Actual Performance Monthly!







Glastonbury Festival – Worthy Farm – Many Others!







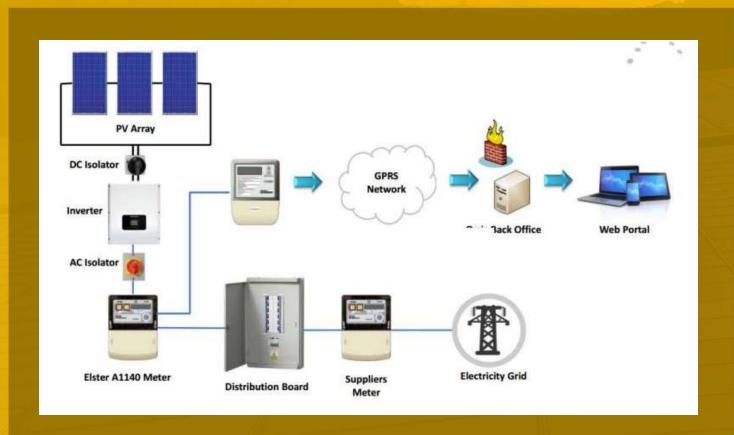






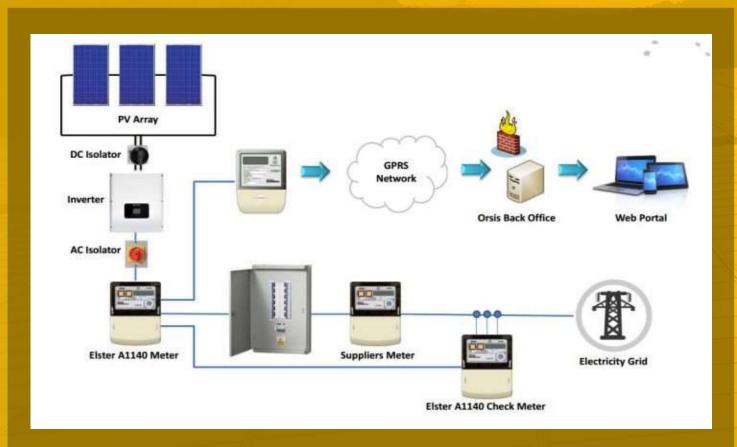
#### **PV Performance METERING**





#### Tenant / PPA Billing + PV Performance







Low Carbon Gordano Limited The Coach House 2 Upper York Street Bristol

BS2 8QN

VAT No.

Address Where Meter Installed:

Bill Payer Address (if different):

Invoice Number:

Invoice Date:

Payment Due Date:

LCG1032

02 October 2019

01 November 2019

Meter Serial Numbers:

Start Reading:

End Reading:

17061874 Generation 17018693 Export

79485.926 38823.275

21 Pel 2019 21 leg.2019 83238.503

40147.991

Directors. \$2.04E.2016

Billing Period

Cost per kWh

Total Consumption (kWh):

01 Sep 2019 - 30 Sep 2019

5.38 p

2427.861

**Net Cost** 

£ 130.62

VAT 5.0%

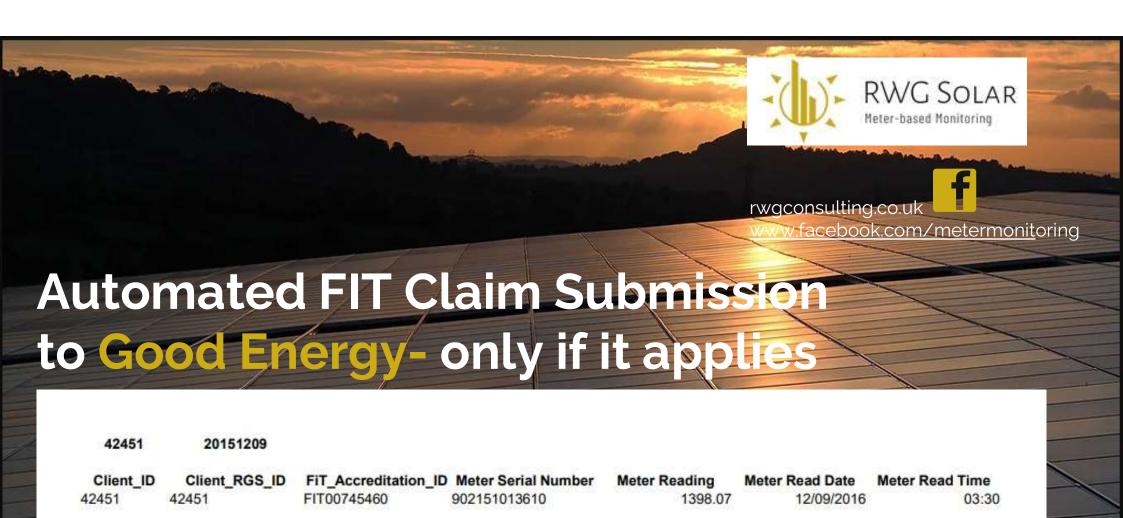
£ 6.53

**Total Amount Due** 

£ 137.15

Bill PPA sample









Eyes On Costs years 2-5			PER WEEK	WEEKS		per annum
Generic Site 3 Phase One PV Meter	EYES ON	3 Phase Meter	£4.80	52		£249.60
Generic Site 1 Phase One PV Meter	EYES ON	1 Phase Meter	£1.99	52		£103.48
Eyes On Costs years 6 onwards				1		per annum
Generic Site 3 Phase One PV Meter	PV METERS ONLY EYES ON	3 Phase Meter	£6.30	52		£327.60
Generic Site 3 Phase SINGLE BILL	BILLING COSTS - PER SITE	1	£3.00	52		£156.00
				THE REAL PROPERTY.		
Generic Site 1 Phase One PV Meter	PV METERS ONLY EYES ON	1 Phase Meter	£2.99	52		£155.48
	All are Current costs and so can rise w	vith inflation etc some	e costs beyo	nd our con	trol	
FOR EXAMPLE - STANDARD UNIT 2 METERS AND BILLING						
	Year 2- 5				QTY	per annum
Eyes on PV meter	EYES ON year -2-5	3 Phase Meter	£4.80	52	1	£249.60
					YEAR 2-5	£249.60
	Year 6 on					
Eyes On Costs years 6 onwards	INCLUDES DATA AND PORTAL ACCESS	AND BILL PRODUCTIO	ON		QTY	per annum
Generic Site 3 Phase One PV Meter	PV METERS ONLY EYES ON	3 Phase Meter	£6.30	52	1	£327.60
Generic Site 3 Phase SINGLE BILL	BILLING COSTS - PER SITE		£3.00	52	1	£156.00
					YEAR 6 ON	£483.60
111						



### Recap



- 5 years data and web included in installation cost.
- Unlimited Meter Warranty while in contract
- UNIQUE Automatic Monthly bill for PPA / Tenants for Solar electricity being used on site (for PV roof top investments)
- Reports make sure the system is delivering its target, no dead inverters or open circuit breakers
- e.g. 100kWp down loss for one quarter= £2,500 to 1MWp £25,000
- Get the investment back on your PV system!
- Reliable and 100% Secure
- Claim your Feed In Tariff no more readings! If applicable- eg Good Energy
- From £30 per month (monitoring)

