Harborough Solar Projects Annual Output Summary

14AUG21/DJR/v1.4 (FINAL)





Harborough Energy is a not for profit cooperative formed in 2014 via Sustainable Harborough which is now ...



OUR PURPOSE

• To engage local organisations and businesses in the opportunities offered by installing low carbon systems like solar panels, battery storage, biomass and heat pumps to generate clean energy

• To show how the local community can work together to generate its own clean energy, improve energy efficiency in homes and facilitate access by all to affordable clean energy

• To generate greater community benefit through our wider energy related work, such as reducing energy costs and improving the carbon footprint of local businesses, schools and public facilities



OUR CURRENT PROJECTS Harborough Solar - Project 1 (installed mid 2016)



Links to our case studies for <u>Woodnewton</u> and <u>Archway</u>

Woodnewton Academy - Corby 56.2 kW installation across 4 roofs



Archway House - Harborough 10.3 kW installation



OUR CURRENT PROJECTS Harborough Solar - Project 2 (installed end 2018)

Link to our news article about <u>NBJ</u>

NBJ Joinery - Sibertoft Road, Husbands Bosworth 102.6 kW ground mounted installation





Harborough Solar - Summary Solar PV Output

Our 170 kW of community owned installations at Woodnewton, Archway and then NBJ have generated 524,000 kWh* of clean electricity since our first installations in AUG 2016 - saving 237 Tonnes of CO2*



* As at 02AUG21 - based on data from The Energy Meter Information Gateway (<u>eMIG</u>)

Host Site Output (Capacity / Started)	Woodnewton Roof 1&2 (20kWp 23AUG16)	Woodnewton Roof 3 (20kWp 31AUG16)	Woodnewton Roof 4 (17kWp 31AUG16)	Archway House (10kWp 23SEP16)	Project 1 Total for Year (kWh)	Capacity Factor % (kWh Output / kWp Cap Per An)	Project 2 Total for Year (kWh) NBJ (103kWp 15DEC18)	Capacity Factor % (kWh Output / kWp Cap Per An)	Rolling Total Output (kWh)
AUG16-JUL17	14,945	15,764	12,682	6,897	50,288	9 %	-	-	50,288
AUG17-JUL18	16,960	18,284	14,688	8,821	58,753	10%	-	-	109,041
AUG18-JUL19	16,813	18,068	14,501	8,763	58,145	10%	56,951	11%	224,137
AUG19-JUL20	17,528	18,570	15,565	9,206	60,869	10%	108,116	12%	393,122
AUG20-JUL21	14,750	14,548	14,059	8,516	51,873	9 %	79,626	9 %	524,621

Notes - 'Capacity Factor' indicates relative efficiency independent of size (avg. was 10.8% for UK solar PV in 2019) - Project 1 output approx. 11 mths of 16/17; Project 2 output approx. 7 mths in 18/19.

81,027.93 kWh (36,407.47 kg CO₂) Last reading Woodnewton Aug 2, 2021 12:59 PM received at 20.48 kg CO₂ Last 24 hours 45.59 kWh Installation Details 63.64 kg CO₂ Last Week 141 63 kWh 852.18 kg CO2 SIM Enabled 1 896 61 kWh Last Month Meter ID 6,627.50 kg CO₂ 16079837 Last Year 14,750.07 kWh Installed Aug 23, 2016 Registered on Aug 24, 2016 8:46 AM eMIG kW Peak 19.76 kW CO₂ saving based upon 0.44932 kg CO₂ / kWh

HOW ARE WE PERFORMING?

WOODNEWTON ROOF 1&2 - 02AUG21



WOODNEWTON *ROOF 3* – 02AUG21



Last reading	85,465.02 kWh	(38,401.14 kg CO ₂)			Wa	DODNEWTON a learning community
received at	Aug 2, 2021 2:57 PM					metani di artificio di artifici
Last 24 hours	48.99 kWh	22.01 kg CO ₂				inden Er Erlert Standardin 1996 - Er Erlert Standard 1999 - June Henry comme förstadst
Last Week	363.98 kWh	163.54 kg CO ₂				
Last Month	1 959 97 kWh	880.66 kg CO ₂		SIM Enabled		
Last Year	14,548,30 kWh	6,536.84 kg CO ₂		Meter ID	16038858	
	,			Installed	Aug 31, 2016	
				Registered on	Aug 30, 2016 1	2:39 PM
				eMIG	kW Peak	19.76 kW
CO ₂ saving base	d upon 0.44932 kg CC	D ₂ / kWh				

WOODNEWTON *ROOF* 4 – 02AUG21



Last reading	71,713.01 kWh	(32,222.09 kg CO ₂)			Wo	DODNEWTON a learning community
received at	eived at Aug 2, 2021 1:57 PM					sedani of acforder on your (yog ang Optica • dia action • dia action • dia action • dia action • dia action • generation • generation • generation • generation • generation
Last 24 hours	44.95 kWh	20.20 kg CO ₂				Josh I and Sama Ang San Juan Chann La San Juan Chan Juan Chan Sama La San Sama Sama Juan Chan La Sama Sama Juan Chan Sama Sama Sama Juan Chan Sama Sama Sama Sa
Last Week	369.21 kWh	165.89 kg CO ₂		Installation I	Details ——	
Last Month	1,008 55 k\//h	897,99 kg CO ₂		SIM Enabled		
Last Year	14,059.50 kWh	6,317.21 kg CO ₂		Meter ID	16038857	
				Installed	Aug 31, 2016	
				Registered on	Aug 30, 2016 1	12:37 PM
CO ₂ saving based	1 upon 0.44932 kg CC	D ₂ / kWh			kW Peak	16.64 kW

ARCHWAY HOUSE - 02AUG21



////					
	Last reading	42,294.58 kWh	(19,003.80 kg CO ₂)		
	received at	Aug 2, 2021 2:5	8 PM		
	Lact 24 hours	20 92 kW/b	13.85 kg CO ₂		
	Last Week	223 02 kWh	100.21 kg CO ₂		_ Instal
	Last Month	1 199 71 k\//h	539.05 kg CO ₂		SIM Ena
	Last Year	8,516.52 kWh	3,826.64 kg CO ₂	5	Meter ID
					Register
					eMIG
	CO ₂ saving base	d upon 0.44932 ka C	O ₂ / kWh		



Installation Details						
SIM Enabled						
Meter ID	16079836					
Installed	Sep 23, 2016					
Registered on	Sep 21, 2016 2:36 PM					
eMIG	kW Peak	10.26 kW				





Woodnewton Rf1&2 – JAN20 to JUL21



PV Generation ENE:00040 Roof 1 & 2 , 20kw Woodnewton School, Corby Roof 1 - 54 panels Roof 2 - 22 panels





PV Generation ENE:00038 Woodnewton School - Roof 3 -19.76KW Split over two roofs HARBOROUGH

ENERGY



Woodnewton Rf4 – JAN20 to JUL21



PV Generation ENE:00039 Woodnewton School - Roof 4 16.64kW - Split over 3 Roofs



Archway – JAN20 to JUL21



PV Generation ENE:00041 Sustainable Harborough - Archway Natural Health Centre Market Harborough - 38 Panels - 10.26kW



NBJ – *Previously JAN19 to JUL20*







NBJ Joinery - Harborough Solar 1

HARBOROUGH

ENERGY

NBJ – Major outage during APR/MAY21



ENERGY



NBJ – From 01AUG20 to 30JUL21



NBJ Exported Energy (01AUG20 to 31JUL21)







Note: In addition to regular payments from our hosts under their Power Purchase Agreement (PPA), Harborough Solar One are paid quarterly (via <u>Good</u> <u>Energy</u>) for our generated electricity and for the electricity '**exported**' by the host site (at rates set by the Government in our Feed in Tariff agreements).

This is either:

- 'Deemed' at 50% for Woodnewton and Archway (reported via <u>EMIG</u>) or
- 'Metered' as with NBJ (via Stark)

HOW ARE WE PERFORMING? NBJ Exported Energy (01AUG20 to 31JUL21)



Annual Energy	Exported (available to Consumers via Grid)	4,799 kWh	Month	kWh Year Ending Jul 2021	kg CO2e Year Ending Jul 2021
5	Energy consumption equivalent to:		Aug Sep	3,690 1,739	93 44
	1 litre kettles boiled	217,533	Nov Dec Jan	462 340 266 205	8 6 4
	Energy saving light bulbs in use all year	142	Feb Mar Apr May	1,353 1,598 3,594 3,427	31 37 83 80
Energy consumption	Electricity Conv. Factor for : 0.233 kg CO2a/kWh; : 0.253 kg CO2a/kWh (from UK G for boiling 1L water in kettle = 0.114kWh based on value from which? (http://www.which.co.uk); Energy saving	overnment CO2e (including Scope 3)) light bulb power rating equal to 20W	Jun Jul	3,758 4,367	87 1,01
Annual CO2e E	missions Saved (by Grid Consumers) 5,9	17 kg CO2e		24,799	5,91
	Emissions equivalent to:		kg CO kg co2e	2e Year Ending Jul 2	021
	Number of hot air balloons filled	1.2	800-		
	No times round the Farth in a car	0.7	400.		
	Volume of Typical Hot Air Balloon at 2500m ¹ ; Average	Car amissions 0.20282 kg CO2a par km	Aug	Oct Nov Jan Feb Ma	r May Jul Month

For further details,

please visit our website:

www.HarboroughEnergy.co.uk

Or contact us on:

Info@HarboroughEnergy.co.uk



Our Generation data is provided by The Energy Meter Information Gateway (<u>eMIG</u>) an online tool for remotely measuring

and monitoring energy generation.

Our Export data is provided by **STARK** – a <u>specialist platform</u> for energy data and analytics.