



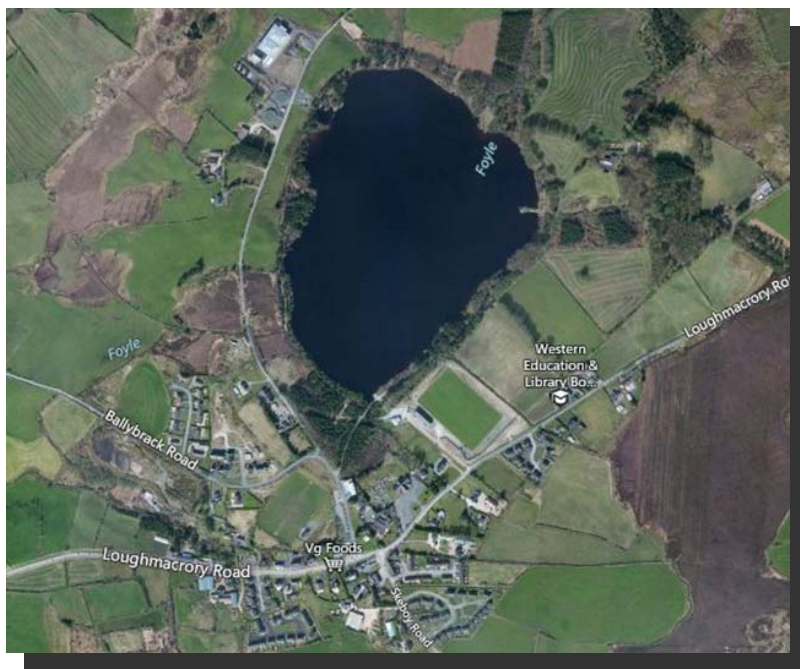
# WARES PROJECT

LOUGHMACRORY PILOT SITE

**Action Renewables**  
*the future of energy, today*



# LOUGHMACRORY COMMUNITY DEVELOPMENT ASSOCIATION: BACKGROUND 1 - OVERVIEW



# LOUGHMACRORY COMMUNITY DEVELOPMENT ASSOCIATION: BACKGROUND 2 - ASSETS



- Gaelic Football Field
- NI WATER LEASED SITE AREA = 75 ACRES (55 LOUGH, AND 20 ACRES SURROUNDING LOUGH)
- APPROACHED NI WATER ABOUT LEASING FURTHER LOUGHS
- POTENTIAL ROOF MOUNTED PV SYSTEM = 50KWP (ON CLUB HOUSE)
- POSSIBLE SITE FOR 225KWP WIND TURBINE
- Gaelic Football Club House
- Community Development association

# LOUGHMACRORY PILOT SITE: SOLAR PV ON G.F.C. CLUB HOUSE - 1

## SITE DETAILS

- USABLE ROOF AREA (FACING SOUTH WEST) = **560M<sup>2</sup>**
- POTENTIAL KWP FOR 560 M<sup>2</sup> = **80KW**
  - **ASSUMED 50KWP INSTALLED** (TO RECEIVE 4 ROCS - MAXIMISING FINANCIAL INCENTIVES)
- TOTAL COST OF 50KWP INSTALLED = **£70,000 APPROX.**
- TOTAL GENERATION PER YEAR = **37500KWH**



Month	Ed	Em	Hd	Hm
Jan	35.10	1090	0.89	27.6
Feb	64.70	1810	1.67	46.7
Mar	106.00	3280	2.79	86.5
Apr	150.00	4510	4.10	123
May	176.00	5440	4.84	150
Jun	164.00	4930	4.59	138
Jul	152.00	4700	4.26	132
Aug	133.00	4140	3.71	115
Sep	109.00	3270	2.94	88.2
Oct	67.90	2110	1.79	55.4
Nov	44.50	1340	1.15	34.5
Dec	30.00	929	0.76	23.6
Year	103.00	3130	2.79	85.0
Total for year		37500		1020

# LOUGHMACRORY PILOT SITE: SOLAR PV ON G.F.C. CLUB HOUSE - 2

## SITE ENERGY USAGE, AND VALUE FROM PV

- ANNUAL ELECTRICITY USAGE = **37,800KWH**
  - ASSUMED 50% OF GENERATION WILL BE USED ON SITE
- ANNUAL ELECTRICITY SAVINGS OF = £2,251
- INCOME OF = £6,300 (ROCS VALUE) + £1,031 (EXPORT PAYMENTS)
- TOTAL ANNUAL VALUE = **£9,581**

## INSTALLATION COST

- **£70,000**

## 20 YEAR RETURN ON INVESTMENT

- 20 YEAR ROI (ASSET FINANCED) = **£128,537** \* USING INSTALLER FINANCED LOAN AT 6% A.P.R. FOR 5 YEARS
- 20 YEAR ROI (SELF FINANCED) = **£133,435** \* USING INTEREST FREE CARBON TRUST LOAN (£6,300)
- 20 YEAR ROI (RENT A ROOF) = **£54,693**





# LOUGHMACRORY PILOT SITE: 225KW WIND TURBINE ON LAND SURROUNDING LOUGH – 1

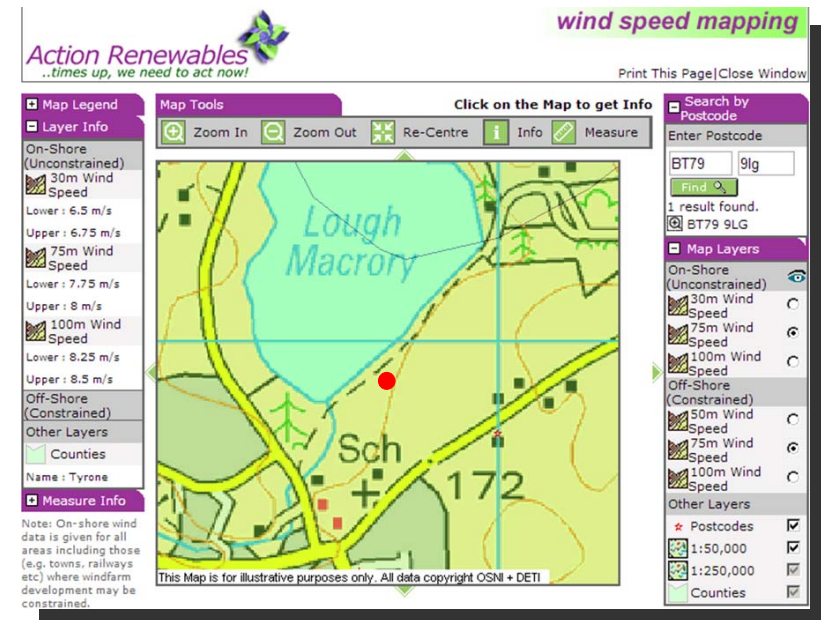
## SITE DETAILS

- SITE (PICTURED) CONSIDERED FOR WIND TURBINE INSTALLATION
- TURBINE = **ENDURANCE 225KW**
  - **UNDER 250KW TO RECEIVE 4 ROCS - MAXIMISING FINANCIAL INCENTIVES**
- WIND SPEED AT 30M ABOVE GROUND LEVEL = **6.5 – 6.75MS**

•APPROXIMATE GENERATION = **370,000KWH**

## INSTALLATION COST

- TOTAL COST (COMMERCIAL LOAN FINANCED) = **£636,904**
- TOTAL COST (SELF FINANCED) = **£500,000 APPROX.**



## LOUGHMACRORY PILOT SITE: 225KW WIND TURBINE ON LAND SURROUNDING LOUGH - 2

### SITE ENERGY USAGE, AND VALUE FROM WIND TURBINE

- ANNUAL ELECTRICITY USAGE = **37,800 KWH**
- **ASSUMED 10%** OF GENERATION WILL BE USED ON SITE
- ANNUAL ELECTRICITY SAVINGS OF = £5,992
- INCOME OF = £62,914 (ROCS VALUE) + £18,537 (EXPORT PAYMENTS)
- TOTAL ANNUAL VALUE = **£77,443 (MINUS O&M)**

### 20 YEAR RETURN ON INVESTMENT

- 20 YEAR ROI (COMMERCIAL LOAN FINANCED) = **£813,371** \* USING 6% APR OVER 10 YEARS
- 20 YEAR ROI (SELF FINANCED) = **£1,076,104** \* USING INTEREST FREE CARBON TRUST LOAN (£125,829)

