Lytchett Matravers Parish Council

A proposal to Install Electric Vehicle Charging Points in the Recreation Ground Car Park

November 2019

# Introduction

* In the last decade the number of electric cars licensed for use in the UK has increased by a factor of about 100, and there are now about 200,000 electric cars on the road. This growth is expected to continue, with more and more manufacturers bringing new models onto the market.
* The UK is supporting this trend, for two main reasons. Firstly, poor air quality is the "biggest environmental risk to public health in the UK", and secondly the burning of fossil fuels in road vehicles is a major contributor to the nations Greenhouse Gas Emissions. In 2019 the Government introduced a ban on new petrol and diesel cars from 2040, but is under pressure to bring this deadline forward and ban all sales of new petrol and diesel cars by 2032.
* One of the factors acting to slow down the rate of growth is a perception that the UK infrastructure for charging electric vehicles is underdeveloped. To overcome this, Local Authorities are taking steps to install Electric Vehicle Charging Points (EVCPs) at places of work, public car parks, etc., and in some cases are requiring the installation of EVCPs as a Condition of Planning Consents for new housing developments.
* Hampshire County Council has put in place a Framework Agreement with Joju Solar for Electric Vehicle Charging Points across the Central Southern Region. This agreement allows public sector organisations in Hampshire, Berkshire, Devon, Dorset, Oxfordshire, Surrey, West Sussex, Wiltshire, and the Isle of Wight to access Joju Solar’s services. One of the objectives for this Framework Agreement is to ensure that consistent charging technology is put in place in all locations throughout this region under the control of local government, which will represent a significant benefit to the users of electric vehicles.
* JoJu Solar have carried out a Feasibility Study to assess the viability of installing EVCPs at Lytchett Matravers under the terms of this agreement.

# Joju Solar Feasibility Study of Installing Electric Vehicle Charging Points in Lytchett Matravers

JoJu Solar have considered the viability of installing EVCPs as part of the Parish Council’s project to extend and upgrade the eastern end of the Recreation Ground Car Park. The brief given to JoJu Solar was for 8 EVCPs. The following key points emerge from the Feasibility Study:

* The charging points proposed by JoJu are 22kW Fast Charge units manufactured by Alfen in Amsterdam. 45,000 Aflen units have been installed worldwide.
* JoJu are partnered with Vattenfall UK, one of whose objectives is to enable fossil free living within one generation. Vattenfall UK own iSupplyEnergy who supply electricity that is 100% renewable. Vattenfall would be the electricity supplier for the EVCPs.
* In addition to being the electricity supplier for the EVCPs installed by JoJu, Vattenfall are also acting as a funding partner, and as such will provide finance to cover the costs of purchasing and installing the EVCPs, which includes the cost of connecting the units to the electricity grid.
* Once installed, the costs of running the EVCPs comprise the electricity costs, the “Back Office” costs (essentially a help desk service), and maintenance costs.
* JoJu have studied two options in terms of the number of EVCPs to be installed in the Recreation Ground Car Park. These options, together with their respective installation costs, are as shown in the table below.

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| --- | --- | --- | --- | --- | --- | --- | --- |
| Option | Number of Charge Points | EVCP Purchase & Installation Costs | Connection Costs | Total Purchase & Installation | Back Office Costs per annum | Maintenance Costs per annum | Annual Running Costs |
| 1 | 2 | £8,000 | £602.30 | £8,602.30 | £140.00 | £150.00 | £290.00 |
| 2 | 8 | £32,000 | £602.30 | £32,602.30 | £576.00 | £600.00 | £1,176.00 |

* JoJu have also looked at two options in terms of funding of the purchase and installation of the EVCPs. The first option is for Vatenfall to fund the units, and the second option is for the Lytchett Matravers Parish Council to fund the units. The following conditions apply to these two options:
  + Vatenfall fund the purchase and installation
    - Vatenfall do not believe there will be sufficient usage to justify 8 EVCPs. They are therefore only willing to pay for 2 EVCPs to be installed. However, if usage is sufficient, additional EVCPs could be added in the future.
    - We have asked JoJu to explore with Vatenfall whether they would be willing to fund 4 EVCPs instead of only 2.
    - Vatenfall will charge users 30p per kWh. This is within the typical range of prices for commercial EVPCs.
    - Vatenfall would pay the Annual Running Costs and the costs of providing the electricity.
    - Vatenfall would pay 10% of the value of the electricity used to the Lytchett Matravers Parish Council.
    - Based on various assumptions, including the occupancy of each EVCP parking bay, and an electricity tariff of 12p per kWh, the forecast income and profit in year 1 for 2 Charge Points would be as shown in the table below.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Option | Number of Charge Points | Estimated kWh per annum | Annual Electricity Costs | Year 1 Income | Year 1 Profit | Year 1 Payment to LMPC |
| 1 | 2 | 3608 | £432.96 | £1,082.32 | £316.10 | £43.30 |

* + - The Parish Council would be required to introduce a Traffic Regulation or Traffic Management Order to ensure that the EV Charging Bays are used solely by electric vehicles using the EVCPs. The procedure for putting TROs/TMOs in place involves a 21 day public consultation period.
    - Vatenfall’s target is to achieve a cumulative profit (income minus all relevant costs) of 6 times the purchase and installation costs. JoJu use a number of escalation factors to calculate forecast income and profit after year 1, and the resulting forecast is that the cumulative profit would reach Vatenfall’s target after about 23 years. Vatenfall would retain ownership of the EVCPs throughout this period, but will then transfer ownership to the Parish Council.
  + LMPC fund the purchase and installation
    - LMPC would have to pay all purchase, installation, and running costs
    - LMPC could choose how many EVPCs to install
    - LMPC would own the EVPCs from the outset
    - LMPC can charge users whatever it likes.
    - There is no requirement for the Parish Council to introduce a TRO or TMO.
    - If the Parish Council charged 30p per kWh, the forecast income and profit in year 1 for both 2 and for 8 EVCPs would be as shown in the table below. Using JoJu’s escalation factors yields forecasts for subsequent years which indicate that the Parish Council might secure sufficient cumulative profit to payback the purchase and installation costs in 6 or 7 years.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Option | Number of Charge Points | Estimated kWh per annum | Year 1 Electricity Costs | Year 1 Income | Year 1 Profit |
| 1 | 2 | 3608 | £432.96 | £1,082.32 | £359.39 |
| 2 | 8 | 14432 | £1,731.71 | £4,329.27 | £1,421.56 |

# Availability of Grant Funding to Cover Installation Costs

The UK Government Office for Low Emission Vehicles (OLEV) is responsible for a series of grant funding programmes to support the electric vehicle market. One of these is the On-street Residential Charging Point Scheme, which is available to local government for grants of up to 75% of the costs of installing EVCPs up to a maximum of £7,500 per EVCP. OLEV has allocated £4.5million to this scheme for this year and also for next year, which will be awarded on a first come first served basis. While the scheme is primarily intended for on-street parking, OLEV is willing to consider applications for chargepoints situated in car parks owned by local authorities where the car park is located in or near a residential area where residents are unable to charge their vehicles at home due to a lack of off-street parking.

# Recommendations and Next Steps

The Parish Council are invited to approve the following:

1. The proposal that EVCPs be installed as part of the project to extend and upgrade the Recreation Ground Car Park, with the preferred option being for Vatenfall to fund the purchase and installation costs (on the basis that this protects the Parish Council from the risks involved and conserves the Parish Council’s resources for Neighbourhood Plan projects).
2. The preparation and submission of an application for an On-Street Residential Charging Point grant.
3. Proceeding to work with JoJu to develop and implement a joint project plan for the purchase and installation of EVCPs.

Councillor Carswell

Councillor Watts