CLIMATE & BIODIVERSITY SUB-COMMITTEE

Date: Wednesday 18th March 2020

Title: Renewable Energy

Contact Officer: Compliance and Environment Officer - Angus Whitburn

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BACKGROUND

The purpose of this is to inform Councillors about potential projects that could help Witney Town Council to reach its goal of becoming carbon neutral by 2028. The projects have been initially researched to ensure the technology is available and are financially viable to ensure they are creditable proposals. The second aim of the report is to provide ideas that have not been thought of to help reach our goal.

CURRENT SITUATION

Currently, Witney Town Council's buildings have no form of renewable energy except for Madley Park Hall, that has a solar PV water heating system. A solar feasibility study has been done on 5 buildings of which only 3 were judged as feasible sites for solar installations. The total estimated cost of these installations is £55,902.

- Langdale Hall, 12,256 KWh/Year, 23.0%
- Madley Park hall 12,410 KWh/Year, 22.8%
- Corn Exchange Witney 11,365KWh/Year 28.3%

Solar power is the fastest form of renewable energy being installed in a bid to cut carbon emissions. However, it is behind both Hydro and Wind Power for its efficiency. Both hydro and wind are often overlooked in areas they could be installed and both can provide more energy than that of solar. This report will cover both forms of energy and possible application for Witney Town council.

Renewable energy is only useful for electric supplied buildings and the use of gas should slowly be phased out and reduce where possible. Gas systems are installed in 4 of the council buildings Corn Exchange, Burwell Hall, Madley Park and Langdale Hall. 3 council buildings are entirely run on electricity the Town Hall, Leys Depot and Windrush Cemetery.

During the last gas service at Burwell Hall officers were informed parts for the boiler system cannot be sourced anymore. This would mean the system has to be replaced once the current system breaks down or efficiency drops below acceptable levels. Installing gas heating will be banned in new builds homes by 2025 but not businesses. For future environmental targets (phasing out fossil fuel

usage) The best form of future protection for the building would be to replace this system with electric alternatives. The heating in the building could be replaced with infra-red panel heaters and an electric water heater tank could be installed for the showers and taps.

MICRO HYDRO ELECTRICITY

Hydroelectricity has been reserved only for that of high-cost large scale installations, involving the massive damming of rivers. However, companies that have been providing hydroelectric to off-grid communities are branching out to more small scale installations. There is the chance and it would require more research that we could install a small system on the stream leading from Cowell brook into the River Windrush. As there are no WTC buildings in the area, the system would work on a feed-in tariff to offset our carbon footprint.

WIND POWER

The Leys Depot and Windrush cemetery is completely reliant on electricity. Both sites are not feasible sites for solar installations but are sites that in the near future could be running on 100% on renewable energy. The sites do not use excessive amounts of energy and should each be completely covered by a small 10m high wind turbine.

The sites would need a survey to see if they are feasible for wind turbine installations. Windrush imparticular is open to the wind but also away form surrounding residents so the impact of the installation is notably minimal.

ENVIRONMENTAL IMPACT

Having declared a Climate Change Emergency at its Council meeting on 26 June 2019 – with this in mind Councillors should have due regard to the environmental impact of any decisions they make with regard to its facilities and services it operates.

RISK

In decision making Councillors should give consideration to any risks to the Council and any action, it can take to limit or negate its liability.

FINANCIAL IMPLICATIONS

There is no financial implication arising directly from this report as of this time. However, there would be a possible financial implication to conduct initial feasibility studies, if the council members decide to commit officer hours to further research and develop the projects.

The council have set a budget of £10,000 for 2020/2021 finicial year. From initial research, this budget is significantly inadequate even for low KW renewable energy solutions

proposed. Members would be encouraged to come up with a plan between 2020 and 2028 so that annual budgets can be set accordingly going forward.

RECOMMENDATIONS

Members are invited to note the report and consider the following:

1. Agree once the Burwell Hall gas system needs replacing it will be replaced only with an electric system.
2. Whether to commit officer hours to research the micro-hydroelectric project hours.
3. Whether to commit officer hours to research the wind power project.
4. Be mindful of the current budget and future annual budgets to ensure it is sufficient to meet the target of being carbon-neutral by 2028.