



Subject:	Roof Top Solar Photovoltaic (PV) Potential in Belfast
Date:	10 th August 2023
Reporting Officer:	Debbie Caldwell
Contact Officers:	Claire Shortt, Monitoring, Learning and Reporting Officer, Climate Team

Restricted Reports	
Is this report restricted?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
If Yes, when will the report become unrestricted?	
After Committee Decision	<input type="checkbox"/>
After Council Decision	<input type="checkbox"/>
Some time in the future	<input type="checkbox"/>
Never	<input type="checkbox"/>

Call-in	
Is the decision eligible for Call-in?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

1.0	Purpose of Report or Summary of Main Issues
1.1	The aim of this report is to update Members on a Shared Island funded project that is underway in a partnership between Belfast City Council and Cork City Council to explore the potential for solar PV on council buildings.
2.0	Recommendations
2.1	The Committee is asked to note the contents of this update and agree to a presentation of its findings at a future meeting.
3.0	Background
3.1	Solar photovoltaic (PV) technology is a renewable energy technology that converts sunlight into electricity using thin sheets of semiconducting materials, such as silicon. When sunlight falls on the solar panel, the photovoltaic cells absorb the energy and release electrons which

	<p>generate a flow of electricity. These panels can either be installed on rooftops or installed in large-scale solar power plants</p>
3.2	<p>The use of solar PV is likely to be a key element of the decarbonisation of the city and the organisations progress to net zero by reducing dependence on fossil fuels. This project is likely to inform future plans in conjunction with the Belfast Local Area Energy Plan, Retrofit Programme and other key projects working towards net zero.</p>
3.3	<p>The potential application of solar PV across Belfast City Council properties is a first step to inform at scale climate change policies and renewable energy strategies by Belfast City Council, particularly in response to the recent introduction of Northern Ireland’s formal Climate Change Act (Northern Ireland) 2022 and the targets it sets for the region.</p>
3.4	<p>Belfast City Council, working with Cork City Council has secured Shared Island funding 35,000 euros to undertake three pieces of work: 1) a solar PV assessment of 10 council buildings in Cork and Belfast; 2) a desk-based solar PV rooftop assessment across a number of Belfast City Council owned properties; and 3) a study examining the potential for docklands regeneration in both cities focusing on innovation, tourism, culture, heritage. There will be a separate report on the docklands regeneration project to update Committee at a later date.</p>
3.5	<p>1. Solar PV assessment of 10 council buildings in Cork and Belfast</p> <p>Through this Shared Island funded initiative an assessment of 10 buildings is taking place, with 5 of those being in Belfast, 5 in Cork. This research includes a structural assessment of the assessed buildings and will be undertaken by a company called JBB. The results of both studies shall be integrated into a final report which captures the learning for Belfast and Cork.</p>
3.6	<p>2. Desk-based solar PV rooftop assessment across a number of Belfast City Council owned properties using VUCity software</p> <p>Belfast City Council holds a licence with VUCity and has used the platform extensively to visualise planning applications and regeneration initiatives. It has been used in council to assess proposals for new buildings, particularly the Major developments in and around the city centre. Planners can view architects model proposals in the VU.CITY 3D model and this is accurate to 15cm. The Regeneration team have also used this software.</p>

3.7	For this project VUCity incorporates a desk-based solar PV rooftop assessment across a number of Belfast City Council owned properties with the analysis undertaken by a company called Gordon Ingram Associates (GIA). This study uses cutting-edge 3D modelling, bespoke spatial analysis tools, and expert daylight modelling techniques. The properties chosen were those with the highest current energy consumption. GIA will be giving a presentation of their research to date on these buildings from this desktop study.
3.8	Belfast City Council have also worked with the Department for the Economy (DfE) on an additional solar PV potential project in Belfast. DfE used the same software company – VUCity to scope the solar PV potential of more than 50 buildings across the city. The report will be published on the department’s website in the near future.
3.9	Including the Shared Island funded projects and those included within the DfE study, 24 council buildings have been studied to determine their solar PV potential.
3.10	Combined, the installation of panels on all of these buildings have been estimated to save as much as 1,255.9 tonnes CO2/KWh annually. This would equate to approximately 7% of the Council’s estimated annual emissions. Six of the biggest potential generators of solar PV alone could help to avoid 401.29 tonnes of CO2/KWh annually.
3.11	<p>Next Steps</p> <p>The next steps will be to use the findings and data generated by these studies to investigate and secure further capital funding for installation on those buildings that are most suitable.</p>
4.0	Financial & Resource Implications
4.1	At this point there is no additional funding needed as it has been provided by the Shared Island Funding. Further opportunities for funding for the delivery of the recommendations will be investigated by the Climate team.
5.0	Equality or Good Relations Implications/Rural Needs Implications
5.1	None
6.0	Appendices
6.1	None