

---

**CARBON MANAGEMENT UPDATE: SOLAR PV IN SCHOOLS**

---

**1.0 EXECUTIVE SUMMARY**

The main purpose of this report is to provide a further update on the installation of solar photovoltaic panels at 8 Non NPDO schools and 5 NPDO schools and advises the way forward, particularly in relation to the NPDO schools.

The report reminds Council of the background and previously agreed governance arrangements for the installation of solar pv panels in schools and highlights the progress that has been made to date.

The Council is asked to note:

- The excellent progress with the solar pv installations at the non NPDO schools and that the final installation at Park Primary School should be completed during the school holiday period in October 2014.
- That the projected Full Business Case for the NPDO Schools indicates that prudential borrowing capital funding of circa £943,273 is required for the 5no. NPDO solar pv projects at Dunoon Grammar, Rothesay Joint Campus, Hermitage Academy, Oban Primary Campus and Lochgilphead Joint Campus to proceed to the implementation/delivery stage.
- That the projected Full Business Case shows an aggregated simple payback period of 10 years for the 5no. NPDO solar pv projects which is well within the 14 year payback limit accepted by Council on 26 June 2014.
- That on conclusion of an NPDO contract variation, expected early in September 2014, the Executive Director of Customer Services will be in a position to accept tenders on behalf of the Council for the installation of solar photovoltaic panels at the NPDO schools based on the previously agreed delegated authority.
- That a further update paper will be presented to Council on completion of the project.

**CARBON MANAGEMENT UPDATE: SOLAR PV IN SCHOOLS**

---

**2.0 INTRODUCTION**

- 2.1 This paper provides a further update on progress with the installation of solar photovoltaic panels at a number of Argyll and Bute Council Schools and makes recommendations for the way forward.

**3.0 RECOMMENDATIONS**

Members are asked to note:

- 3.1 The excellent progress with the solar pv installations at the non NPDO schools and that the final installation at Park Primary School should be completed during the school holiday period in October 2014.
- 3.2 That the projected Full Business Case for the NPDO Schools indicates that prudential borrowing capital funding of circa £943,273 is required for the 5no. NPDO solar pv projects at Dunoon Grammar, Rothesay Joint Campus, Hermitage Academy, Oban Primary Campus and Lochgilphead Joint Campus to proceed to the implementation/delivery stage.
- 3.3 That the projected Full Business Case shows an aggregated simple payback period of 10 years for the 5no. NPDO solar pv projects which is well within the 14 year payback limit accepted by Council on 26 June 2014.
- 3.4 That on conclusion of an NPDO contract variation, expected in early September 2014, the Executive Director of Customer Services will be in a position to accept tenders on behalf of the Council for the installation of solar photovoltaic panels at the NPDO schools based on the previously agreed delegated authority.
- 3.5 That a further update paper will be presented to Council on completion of the project.

## 4. DETAIL

4.1 **Background:** The Council considered the Outline Business Case for up to 26no. solar pv projects in August 2013 and arising from this 13 projects were taken forward. These projects are:

- 8no. non NPDO schools (approved by Council in March 2014);
- 5no. NPDO schools (Provisional Full Business Case presented to Council on 26 June 2014)

Although reducing to 13no projects, it was possible to increase the scale of the proposed solar pv panel installations, particularly on the NPDO schools, to maintain a broadly similar generating capacity.

4.2 At the Council meeting on 26 June 2014 it was decided, based on the Provisional Full Business Case (impact, affordability, deliverability and risk) for the 5no. NPDO projects, that conditional delegated authority be afforded to the Executive Director of Customer Services to accept tenders on behalf of the Council for the installation of solar photovoltaic panels at the NPDO schools subject to the development of:

- A Full Business Case presenting an aggregated simple payback period of under 14 years; and
- An acceptable NPDO contract variation.

4.3 **Progress Non NPDO Schools:** Excellent progress has been made with the installation of the solar pv systems in the non NPDO schools and over the school summer recess the installations at the following schools have been completed:

- Hermitage Primary School;
- Inveraray Primary School;
- Islay High School;
- Parklands School;
- Tarbert School;
- Taynult Primary School/Pre-5 Unit; and
- Tobermory School

It was anticipated that the installation at Park Primary School would also have been finished, however this was dependent on the programme for roof upgrade works and solar pv works linking to achieve a combined completion at the end of the school summer recess. This linking was not technically possible and as a result the solar pv installation has been re-programmed for the school holiday period in October 2014. Delivery of the project in this timescale should be achieved, based on the sound performance of the installation contractor over the school summer recess.

To date a total generating capacity of 293kW has been installed with an associated annual carbon reduction of 123Tonnes. On completion of Park Primary School, the total generating capacity in the 8 non NPDO schools will rise to 329kW with an associated annual carbon saving of 138Tonnes.

- 4.4 **Progress - NPDO Schools Full Business Case:** The Full Business Case cannot be completed, and installation contract awarded, until the NPDO contract variation is agreed and final costs determined. The tendering exercise for the installation of the solar pv panels, the most significant project cost, was however completed in June 2014 so the aggregated simple project payback is now forecast to be 10 years (see Appendix 1). The prices received from competitive tendering have effectively improved the business case so the project payback will be well within the 14 year payback limit accepted by Council on 26 June 2014.

The payback period is calculated utilising a simple analysis based on the ratio of capital investment to net annual revenue savings (electricity cost savings, plus FIT income less maintenance costs).

- 4.5 **Progress - NPDO Schools Contract Variation:** There has been significant discussion between Special Projects, Brodies (the Council's external legal advisers) and legal representatives from Mitie/ABC schools to bring the contract variation to a conclusion. It is anticipated that once matters relating to insurance risk and roof warranties are agreed by all parties that the contract variation will be adopted. It is anticipated that this will conclude in early September 2014.

- 4.6 **Progress - NPDO Schools Way Forward:** It is now anticipated that the solar pv installations on the NPDO schools will have to be undertaken during term-time to ensure delivery this financial year. As a result, discussions with the Education Service are taking place to minimise the impact on their service delivery. Where there are any site specific constraints (e.g. space for scaffolding at Oban Primary Campus) works will be programmed for the school holiday period in October 2014 where possible.

On completion of the solar pv installations in the NPDO Schools they will contribute a generating capacity of 702kW and an associated annual carbon saving of 294Tonnes.

## 5. CONCLUSION

- 5.1 Excellent progress has been made with the installation of the solar pv systems in the non NPDO schools. On completion of Park Primary School the total generating capacity of installation in non NPDO schools will be 329kW with an associated annual carbon saving of 138Tonnes.

- 5.2 The Full Business Case for the 5no. NPDO projects will be concluded following agreement of the NPDO contract variation, but it is expected that the business case will achieve the highest possible rating of 4 in accordance with the Councils Capital Programme Planning and Management Guide and therefore be suitable for acceptance.
- 5.3 The installation of solar pv at the NPDO schools offer: a significant reduction in the Council's carbon footprint; reduced reliance on fossil fuels; and a cheaper fuel source with less price volatility.
- 5.4 The projects in the NPDO schools are currently forecasted to have a solid aggregated payback of circa 10 years.
- 5.5 The implementation of the 5no. NPDO solar pv projects (702kW) along with the 8no. non NPDO solar pv projects (329kW) equates to an installed solar pv capacity of over 1MW and an associated annual carbon saving of 432Tonnes.

## 6. IMPLICATIONS

- 6.1 **Policy:** Failure to deliver the projects would inhibit delivery of a 20% target reduction in carbon emissions.
- 6.2 **Financial:** There is a requirement to identify funding from prudential borrowing of circa £943,273 to deliver the 5no. self-financing NPDO solar photovoltaic projects.
- 6.3 **Legal:** Legal agreements are required where third parties are involved e.g. NPDO schools (MITIE/ABC Schools).
- 6.4 **HR:** None
- 6.5 **Equalities:** None
- 6.6 **Risk:** Various risks assessed within the risk section of the FBC.
- 6.7 **Customer Service:** None

## APPENDICES

Appendix 1 Renewable Sourcing Strategy (RSS): NPDO Solar PV Projects – Interim Update

**Executive Director of Customer Services  
Policy Lead**

27 August 2014

**For further information contact:** Malcolm MacFadyen, Head of Facility Services  
Tel: 01546 604412; E-mail – [malcolm.macfadyen@argyll-bute.gov.uk](mailto:malcolm.macfadyen@argyll-bute.gov.uk)

# Appendix 1 Renewable Sourcing Strategy (RSS): NPDO Solar PV Projects – Interim Update

Renewable Sourcing Strategy (RSS): NPDO Solar PV Projects - Interim Update on FBC Development August 2014 (includes confirmed tender costs; NPDO contract variation remains to be finalised)

	Site	Size (kW)	EPC Rating	Confirmed Tender Cost	Tendered Cost per kW	Planning Fee	Building Warrant Fee (dependent on project cost)	Acceptance of Grid Connection Offer	Structural Engineer Fee	Ecology Survey (excludes works arising)	Asbestos Survey (excludes works arising)	Renewable Energy Consultant Fee	Internal Fee	Third Party Management Fees (i.e. MITIE, legal + admin)	Contingency (5% Capital Cost)	Total Project Cost (inc. contingency)	Yield (kWh/annum)	Energy Saving (£/annum)	FIT Income (£/annum)	Maintenance (£/annum)	Revenue Summary / Savings per Annum (£)	Simple Payback (years)	CO <sub>2</sub> Savings (tonnes)
1	Dunoon Grammar	106	C	£ 111,847	£1,055	£382	£980	£1,985	£1,118	£559	£0	£4,474	£8,389	£20,422	£6,487	£156,642	84,800	£6,360	£8,768	£950	£14,178	11.0	44
2	Rothesay Joint Campus	246	C	£ 215,290	£875	£1,146	£1,480	£1,985	£2,153	£1,076	£0	£8,612	£16,147	£32,835	£12,394	£293,118	196,800	£14,760	£19,464	£1,650	£32,574	9.0	103
3	Hermitage Academy	250	C	£ 240,578	£962	£764	£1,680	£1,798	£2,406	£1,203	£0	£9,623	£18,043	£35,869	£13,805	£325,769	200,000	£15,000	£19,780	£1,650	£33,130	9.8	105
4	Oban Primary Campus	50	C+	£ 57,451	£1,149	£0	£640	£250	£575	£287	£0	£2,298	£4,309	£13,894	£3,290	£82,994	40,000	£3,000	£4,852	£450	£7,402	11.2	21
5	Lochgilphead Joint Campus	50	D+	£ 58,794	£1,176	£0	£640	£250	£588	£294	£0	£2,352	£4,410	£14,055	£3,366	£84,749	40,000	£3,000	£4,852	£450	£7,402	11.4	21
<b>NPDO Site Totals:</b>		<b>702</b>		<b>£683,960</b>		<b>£2,292</b>	<b>£5,420</b>	<b>£6,268</b>	<b>£6,840</b>	<b>£3,420</b>	<b>£0</b>	<b>£27,358</b>	<b>£51,297</b>	<b>£117,075</b>	<b>£39,343</b>	<b>£943,273</b>	<b>561,600</b>	<b>£42,120</b>	<b>£57,716</b>	<b>£5,150</b>	<b>£94,686</b>	<b>10.0</b>	<b>294</b>

Key:

**Note:** The Planning fees of £0 for the Oban Primary Campus and Lochgilphead Joint Campus reflect the fact that the work proposed at these locations is deemed to be permitted development.

Building Warrant fees are linked to project cost

FIT rate based on rate available to 1st October 2014

EPC rating of level D or above is no longer required for community projects, schools and further education colleges, although an EPC certificate must still be submitted as part of the application. Non-domestic buildings outwith this exemption require a level D or better rating to meet the requirements of the higher rate FIT.