
Non-Domestic Energy Efficiency Framework (NDEEF) Progress Update

1.0 EXECUTIVE SUMMARY

- 1.1 This report provides a brief progress summary of Argyll and Bute Council's Scottish Government Non-Domestic Energy Efficiency Framework project (NDEEF1) which is delivering a range of energy efficiency projects at 12no. Council properties. The delivery of these projects has been instrumental in reducing energy costs and has made a significant contribution to the Council meeting Climate Change Carbon Reduction targets.
- 1.2 The project gained approval in March 2021 and utilized provisions made in the overall Council Budget in previous years for investment in energy efficiency and climate change of up to £1.1m. Further capital block allocations totaling £0.27m for previously identified asset sustainability projects were added into the NDEEF project giving an overall project budget of £1.37m.
- 1.3 The new award of £640,000 which was approved as part of the Council Budget in February 2023 combined with the £500,000 announced in February 2022 will facilitate a continuation of this programme and deliver further energy efficiency for our estate. This report also outlines the scope of some of the projects likely to progress and be supported by this additional capital funding that will be further developed into detailed business cases.
- 1.4 To date the NDEEF project has delivered 47no. out of the 50no. individual energy efficiency mini projects identified at the start of the project in 2021. Savings of £111,831 per annum with annual carbon savings of 357 Tonnes have been delivered to date.
- 1.5 On completion the project will deliver total savings of £134,630 per annum with annual carbon savings of 421 Tonnes.

2.0 RECOMMENDATIONS

- 2.1 That the Policy & Resources Committee:-
 - 2.1.1 Note the progress made to date on the NDEEF project completing 47no. out of 50no projects so far: and
 - 2.1.2 Note and consider the climate change projects outlined at Section 4 that

will be developed in 2023 onwards and will form NDEEF Project 2 that will commit a further £1.5m into projects relating to energy efficiency, reducing reliance on fossil fuels and increasing efficiency.

3.0 DETAIL

- 3.1 **Background** – Scotland is transitioning to a net-zero emissions outcome for the benefit of our environment, our people, and our prosperity. Scotland’s climate change legislation sets a target date for net-zero emissions of all greenhouse gases by 2045. The Scottish Government is currently updating its Climate Change Plan to reflect the increased ambition of the new targets set in the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019. The Council’s Climate Change Board and Climate Change Environmental Action Group also seek to reduce greenhouse gas emissions by the Council both directly and indirectly.
- 3.2 Carbon emissions associated with the Council’s estate and buildings accounts for over 20% of the Council’s overall carbon footprint. These emissions arise from use of electricity, gas, heating oil and water in premises. Whilst a number of energy efficiency projects like insulation and switching to LED lighting or generating renewables have already been achieved more can be done. Switching to more efficient technologies will not only benefit both energy consumption and energy cost but will also improve ‘green credentials’.
- 3.3 Approximately £1.37m of viable project work was identified across 12no. assorted premises and a tender exercise was carried out utilizing the Scottish Government’s ‘Non-Domestic Energy Efficiency Framework (NDEEF)’. Framework providers were required to offer a level of energy performance guarantees. This robust energy performance contracting approach provided the opportunity to reduce carbon emissions, achieve substantial guaranteed energy savings, and cut costs through energy efficiency and energy generation measures.
- 3.4 The NDEEF was developed by the Scottish Government to provide a route to market for the effective delivery of retrofit energy efficiency works to existing non-domestic public buildings.
- 3.5 The framework has been developed over the past seven years by the Scottish Futures Trust (SFT), a public funded infrastructure delivery body, combined with assistance from the international engineering consultants Mott MacDonald. Further information is provided at:

<https://www.scottishfuturestrust.org.uk/page/energy-efficiency>
- 3.6 The framework is managed by Scottish Procurement, who are part of the Scottish Government, and has been developed to help public sector bodies progress their energy efficiency projects within their estates in order to achieve the legislated 2045 emission targets. The framework provides a list of eleven pre-selected

contractors that the public sector can call-off to retrofit energy efficiency works. Further information is provided at:

<https://www.gov.scot/publications/non-domestic-energy-efficiency-procurement-framework-buyers-guide/>

- 3.7 **NDEEF1 Approach** – A Commodity Sourcing Strategy for Energy Efficient Solutions was conducted and approved the use of the NDEEF as the preferred delivery mechanism. Subsequently, Procurement and Energy and Building Services Team staff engaged with Mott MacDonald to prepare an Invitation to Mini Competition (ITMC) for the delivery of various energy efficiency works at 12no. Council properties.
- 3.8 The Council conducted a mini competition amongst the Contractors who were party to the Framework Agreement.
- 3.9 Following this competitive tendering process, Asset+ Energy Performance Ltd were appointed as the Energy Services Company (ESCo) to deliver the full programme of works. Investment Grade Energy Audits were carried out across all 12no. buildings, detailed surveys were carried out, firm quotations received, energy calculations undertaken and stakeholders engaged with. This ensured that the figures contained within the final Investment Grade Proposal were fixed and guaranteed through the life of the payback by Asset+. Any shortfall between the agreed level of energy consumption savings and those achieved as determined through an internationally agreed approach to Measurement and Verification (M&V), conducted by an independent M&V Specialist, is deducted from payment otherwise due to be made to Asset+.
- 3.10 **NDEEF1 Financials** – The use of the framework on this occasion was targeted at 12no. Council buildings and when fully complete will deliver 50no. energy efficiency mini projects totaling a value of £1.37m which will deliver annual energy savings of £134,630 and annual carbon savings of 421 Tonnes.
- 3.11 **NDEEF1 Detail** - The properties which are ultimately being delivered in the NDEEF1 project, the Energy Conservation Measure (ECM), the cost of works, the savings and the completion dates comprise;

ECM	Capital		Savings		Date Completed
	£	kWh	CO ₂	£	
LED Lighting Upgrade					
Manse Brae Roads Office	19,322	37,150	10.30	3,269	Dec-21
Kilmory Castle & Estate	81,351	87,294	24.21	11,348	Jan-22
Lochgilphead CEC	10,276	12,921	3.58	1,137	Dec-21
Riverside Leisure Centre	8,824	7,804	2.16	1,014	Jan-22
Rothsay Leisure Pool	6,799	8,313	2.31	1,081	Sep-21
Graham Williamson IT Centre	9,161	10,513	2.92	925	Sep-21
Lochgilphead Resource Centre	10,284	10,305	2.86	907	Nov-21
Arrochar Primary School	17,648	20,890	5.79	1,838	Sep-21
Cardross Primary School	27,881	29,151	8.08	4,198	Aug-22
Kintyre House	29,767	30,780	8.54	4,001	Sep-21
Solar PV					
Kilmory Castle & Estate	81,246	38,329	10.63	5,519	Due April/May 23
Cardross Primary School	109,337	64,603	17.91	11,279	Due April 23
Blackhill Roads Depot	36,529	19,176	5.32	2,493	Jan-23
Rothsay Leisure Pool	51,023	34,620	9.60	4,501	May-22
Graham Williamson IT Centre	51,023	18,608	5.16	1,638	Oct-22
Lochgilphead Resource Centre	21,685	8,859	2.46	780	May-22
Kintyre House	31,889	20,470	5.68	2,661	Apr-22
BMS Optimisation					
Manse Brae Roads Office	1,870	18,706	4.82	1,033	Jul-22
Kilmory Castle & Estate	12,710	98,954	24.83	6,089	Jul-22
Lochgilphead CEC	1,870	12,843	3.31	721	Jul-22
Rothsay Leisure Pool	5,617	67,922	12.95	1,891	Jul-22
Strachur Primary School	2,125	6,863	1.77	380	Jul-22
The Moat CEC	1,870	12,843	3.31	721	Jul-22
Cardross Primary School	25,461	52,486	3.31	721	Jul-22
Lochgilphead Resource Centre	1,870	17,316	4.45	936	Jul-22
Kintyre House	6,820	12,628	3.50	1,642	Jul-22
Covert Oil Boiler to ASHP					
Cardross Primary School (Gas)	146,000	130,000	35.00	6,000	Due Jun/July 23
Manse Brae Roads Office	70,145	115,145	29.57	4,975	Final Comissioning Due Mar 2023
Lochgilphead CEC	67,928	107,588	27.63	4,648	Final Comissioning Due Mar 2023
Strachur Primary School	48,523	70,069	17.99	3,027	Final Comissioning Due Mar 2023
Lochgilphead Resource Centre	51,023	81,877	21.03	3,317	Final Comissioning Due Mar 2023
Arrochar Primary School	72,373	65,453	16.81	2,788	Final Comissioning Due Mar 2023
Boiler Optimiser					
Rothsay Leisure Pool	3,189	68,677	12.63	1,360	Oct-22
Fridge Optimiser					
Kilmory Castle & Estate	1,818	3,805	1.06	495	Oct-22
Strachur Primary School	620	1,183	0.33	104	Oct-22
Lochgilphead Resource Centre	950	1,809	0.50	159	Oct-22
Arrochar Primary School	621	1,183	0.33	104	Oct-22
Server Room Cooling Upgrade					
Kilmory Castle & Estate	92,959	114,581	31.77	16,500	Dec-22
Graham Williamson IT Centre	7,564	20,148	5.59	2,619	Mar-22
Pool Pump Control					
Riverside Leisure Centre	9,567	41,800	11.59	5,434	Mar-22
Rothsay Leisure Pool	9,567	28,500	7.90	3,705	Mar-22
Coolnomix A/C Optimisation					
Kilmory Castle & Estate	5,687	16,650	4.62	2,165	Jan-23
Riverside Leisure Centre	2,843	3,303	0.92	429	Jan-23
Rothsay Leisure Pool	2,843	3,303	0.92	429	Jan-23
Kintyre House	11,480	9,909	2.75	1,288	Jan-23
Self-learning eTRV					
Manse Brae Roads Office	1,276	2,285	0.63	201	Feb-22
Valve Wrap					
Kilmory Castle & Estate	15,446	34,938	0.55	1,781	Oct-22
Lochgilphead CEC	4,001	2,562	0.71	225	Oct-22
Strachur Primary School	638	556	0.15	49	Oct-22
Lochgilphead Resource Centre	638	1,165	0.32	103	Oct-22
TOTALS:-	1,291,958	1,686,836	421	134,630	

3.12 The properties were selected on the basis of perceived opportunities for energy efficiency savings and because previously identified capital works to replace the existing oil fired heating systems were required to be delivered at some of these locations.

3.13 Site pictures are included below to highlight some of the energy efficiency projects carried out;

1. Kintyre House LED Lighting Conversion



2. Strachur Primary School Air Source Heat Pump Install



Air Source Heat Pumps

3. Lochgilphead Learning Resource Centre Solar PV Install



4. Kilmory Castle Server Room Cooling Upgrade



4.0 NEXT STAGE – NDEEF2

It is proposed that the NDEEF framework is further utilized in 2023 to enhance our position by undertaking another project of similar size and scale. Data gathering and feasibility works are underway to fully define the site list and scope the potential energy efficiency opportunities. Currently 16no. unfunded projects are at initial case selection. Projects will be developed and investment business cases taken to point of commitment in 2023/24. Due to most sites being on Education estate most will await school holidays for actual installation to deliver. Contracts would be signed / committed in 2023/24 year. A list of projects currently under consideration for Business Case are:-

SITE	CLIMATE CHANGE / ENERGY EFFICIENT TECHNOLOGY
Carradale Primary School	LED Lighting, Solar PV, BMS Optimisation, Heating Optimisation
Hermitage Academy	LED Lighting, BMS Optimisation, Heating Optimisation
Lochgilphead Joint Campus	LED Lighting, BMS Optimisation, Heating Optimisation
Oban High School	LED Lighting, Solar PV, BMS Optimisation, Heating Optimisation
Dunoon Grammar School	LED Lighting, BMS Optimisation, Heating Optimisation
Rothesay Joint Campus	LED Lighting, BMS Optimisation, Heating Optimisation
Lismore Primary School	LED Lighting, ASHP, BMS Optimisation
Kirn Primary School	LED Lighting, Solar PV, BMS Optimisation, Heating Optimisation
Oban Joint Primary Campus	LED Lighting, BMS Optimisation, Heating Optimisation
Campbeltown Grammar School	LED Lighting, Solar PV, BMS Optimisation, Heating Optimisation
Tighnabruaich Primary School	LED Lighting, ASHP, BMS Optimisation
Port Ellen Primary School	LED Lighting, ASHP, BMS Optimisation
Lorn Resource Centre	ASHP, BMS Optimisation
Easdale Primary School	ASHP, BMS Optimisation
Keills Primary School	LED Lighting, ASHP, BMS Optimisation
Dalmally Primary School	LED Lighting, ASHP, BMS Optimisation

LED- light emitting diode (energy efficient lighting)

ASHP - Air Source Heat Pump (low carbon heating)

BMS - Building Management System

PLEASE NOTE NOT ALL OF THESE PROJECTS WILL BE ABLE TO PROCEED & ALL WILL BE SUBJECT TO BUSINESS CASE. THIS IS A SCOPING LIST THAT WILL BE REFINED DEPENDING ON THE BUSINESS CASE ANALYSIS

5.0 CONCLUSION

5.1 As the profile of energy and environmental issues continues to rise, this project has played a significant role in helping the Council to comply with increasingly challenging carbon reduction targets whilst integrating robust monitoring and verification procedures into its capital delivery program to validate savings achieved.

- 5.2 This delivery model has maximized best use of Council resources whilst ensuring best-in-class energy efficiency solutions were deployed resulting in value for money low carbon technologies across our built estate.

6.0 IMPLICATIONS

- 6.1 Policy – This paper content is entirely consistent with climate change policy and action at local, national and international level.
- 6.2 Financial – Capital and revenue investment is required to make our estate more energy efficient and to meet Climate Change obligations. More energy efficient buildings will also assist help reduce energy consumption and reduce or stabilize utilities costs. Outlines potential projects aligned to Council Budget decision relating to Climate Change.
- 6.3 Legal – Meeting requirements of Climate Change Scotland Act.
- 6.4 HR – None
- 6.5 Fairer Scotland Duty
- 6.5.1 Equalities – Protected characteristics – None
- 6.5.2 Socio economic Duty – Creating more efficient buildings that are cheaper to heat is a positive for all.
- 6.5.3 Islands – None specific
- 6.6 Climate change – Direct link to meeting net zero obligations for our Council.
- 6.7 Risk – Not addressing impacts or causes of climate change can lead to increased cost or censure if targets are not met.
- 6.8 Customer Service – Creating warmer or more efficient buildings that are cheaper to heat is a positive for all.

Douglas Hendry
Executive Director with responsibility for Commercial Services

Councillor Ross Moreland
Policy Lead Climate Change & Environment

5th April 2023

For further information contact:
Ross McLaughlin, Head of Commercial Services