

Energy Efficiency Retrofit Religious Buildings

Case study highlighting the upgrades and savings of Churches across Carlow & Kilkenny

The 3 Counties Energy Agency (3cea) have worked closely with the religious orders in Carlow & Kilkenny on a number of Better Energy Community (BEC) projects to improve the efficiency and comfort of their religious buildings. Over the past three years 3CEA have worked to develop award winning projects that have included insulation, heating and lighting upgrades in some of the county's most historical religious buildings.



Completed Measures



One of the largest energy efficiency projects to be carried out was at **St. Mary's Church** Bagenalstown under BEC 2013. The project involved full upgrade of the heating system, floor insulation, attic insulation and lighting. The original oil system was very inefficient and wasn't capable of providing adequate heat within the building. This system was upgraded with an Air Sourced Heat Pump combined with underfloor heating. The heat pump allows the church to maintain the desired temperature all year round whilst also maintaining the integrity of the building. As part of the upgrades the attic and floor were also insulated to current building standards. There was also a large lighting project which involved replacing of all fittings with high efficiency LED fittings.

Another project that received energy efficiency funding was the restoration of **St. Mary's Cathedral** it was carried out under the BEC 2014 and was one of five projects that have been carried out by the Diocese of Ossory between 2014 - 2015. Four of the projects were roof insulation projects where 300mm of ridged insulation was placed between the rafters and impressive savings have been achieved. The final project involved both heating and insulation upgrades to a parochial house where both internal comfort conditions and energy savings have been achieved.



Getting Involved

For more information, please contact Sian Crane +353 (0)56 779 0856 E-mail: admin@3cea.ie

Feedback from our beneficiaries:

"We are really happy with all the work that was carried out, and for the first time ever the building is warm. Before we had the heat pump we were using a lot of oil and getting no real benefit, since we installed the heat pumps and insulation we have used the church a lot more and hold all our meeting and events, the church has once again become a focal point within the community. We were so impressed with all the works and the contractor was very understanding and was sensitive with the works that were completed. The grant made such a difference and made the project feasible. Since the project was finished we have had a lot of interest from different churches up and down the country looking to carry out similar projects, and we have recommended it in every instance."

Rev. Kevin Ronne & Gilbert Smyth, St. Mary's Church, Bagenalstown

"The works that have been carried out across the Diocese have made a dramatic influence to both the running cost and comfort levels within our buildings. All the staff in the energy agency are really helpful and make the application process very straight forward. We are looking forward to working with the energy agency again and have already identified more projects for the BEC 2016 application"

Joe Meagher, St. Patrick's Church, Kilkenny

"The difference that the insulation has made to the church is amazing, never did I think that savings of over €1,250 could be achieved off our energy bills, and the level of comfort within the church is a great improvement. It is great to hear the positive feedback from the parishioners. Both the contractor and the energy agency were very proactive and made it easy for the parish to go ahead with the project. I couldn't give enough praise to the entire project"

FR. Laurence Wallace, Parish Priest, St Brendan's Church, Muckalee

Savings:

Across all six of the projects there has been project funding of just under €100 thousand with a further €46 thousand coming from the sale of energy credits to the various electrical providers. A detailed case study has been completed on the most extensive retrofit at St. Brendan's Church, Bagenalstown. This project involved the installation of an air to water heat pump, floor insulation and attic insulation.

Tendered cost Per Property	€66,550
SEAI Grant @ 43.2%	€28,750
Other Grant & Energy Credits Sales	€18,900
Final Cost of project	€18,900 (71.6% Grant Aided)

The upgrades have resulted in a six fold increase in the hours of heating within the building and 60% saving on annual heating costs.

Pre Upgrades Energy Spend	€5,430 (270 heating hours)
Post Upgrades Energy Spend	€2,172 (1,843 heating hours)
Final Cost of Project	€18,900 (71.6% Grant Aided)
Energy Savings	€3,250
Payback in Years	5.8 Years

Project contractor:



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