



Sustainable Energy for the Rural Village Environment

SERVE

*e-Newsletter*

*Creating a rural community which is a leading example in both energy efficiency and renewable energy in a region located in North Tipperary (Ireland)*

## News from the SERVE region



One of SERVE's main target is to retrofit 500 houses within the SERVE region in order to reduce their energy consumption through insulation and heating control measures. After a first call for expression of interest, energy consumption of 170 has been analysed. The home owners were then proposed a list of measures to improve the energy efficiency of their house, and offered a grant to partly cover the costs of the proposed measures. Concrete works have started. Dozens of homes are being retrofitted, delivering the first actual energy savings as an result of the SERVE project.

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## News from the Eco-village in Cloughjordan



Among the other main focus areas of the SERVE project is the support to the building of an Eco-Village in Cloughjordan. The planning phase of the very first houses of the eco-village is now drawing to its end. To help the members of the Eco-village in meeting both SERVE's targets and the Eco-Village charter requirements, SPIL, the organisation that manages the Eco-village, has hired Shane Barrett as Energy Advisor. He answers our questions for SERVE's e-newsletter.

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## Around SERVE



Last December, a [first "socio-economic workshop"](#), organised under the framework of the SERVE project allowed for a first exchange of views between experts and SERVE region's civil society representative, helping fine tuning the tools that will be used for SERVE socio-economic analysis; Find out about the [training activities](#) that are organised as part of the SERVE project; Learn how SERVE helps [greening the electricity](#) in the SERVE region.

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## What's next



What are the main highlights on SERVE's agenda for the next few months? After completing SERVE Phase I, North Tipperary County Council and the Tipperary Energy Agency are preparing SERVE phase II. In the Eco-Village, construction works for Ireland's first 100% RES district heating system are about to begin...

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## From the SERVE region...



### Feedback from SERVE Phase I

SERVE "Phase I" refers to the first call for Expression of Interest, which was open in April/May 2008 to all homeowners from the SERVE Region to have an energy assessment of their home undertaken. 191 people responded to the call, out of which 170 energy assessments were actually completed by the Tipperary Energy Agency, in cooperation with Sustainable Energy Ireland (SEI), the Irish national energy agency. The results were unexpected:

- the average energy consumption in the surveyed houses is 367kWh/m<sup>2</sup> /annum versus an expected 210 kWh/m<sup>2</sup> /annum.
- the wall and roof insulation is poorer than anticipated.
- the boiler efficiency and heating system controls are poorer than anticipated.
- window quality is as expected.



The energy assessments were followed up by a report detailing measures to improve the buildings' energy performance, with clear indications of the impact of each proposed measure on overall energy consumption. The works could be partially supported by grants, presented in a letter of offer accompanying the report. While 42 letters of offer were accepted, some 128 were rejected, mainly due to an inability of the homeowner to have the necessary retrofitting works completed in the short timeframe of the pilot project.

Works are now underway, with some 42 houses already retrofitted. Upgrades have so far resulted in average reductions of 55 kWh/m<sup>2</sup>/year or 8,500 kWh per annum. At the level of the SERVE regions, this means savings of hundreds of megawatts primary energy and several tonnes of Co<sub>2</sub>.

4 Case studies prepared by Tipperary Energy Agency give a very concrete picture of what has been achieved. They show that, through very simple - and relatively cheap - measures such as wall and attic insulation, boiler improvement, hot water cylinder replacement or installation of heating control systems (among others), energy savings ranging from 32 up to 62% could be achieved. These result in a remarkable lowering of the energy bills for the homeowners, with an average payback period, for the works undertaken, of 5-6 years. You can download these case studies [here](#).

The homes that completed the Phase I eco-building retrofitting may be eligible for SERVE Phase II, which will notably enable the integration of renewable energies.



**For more information**, please contact Seamus Hoyne, SERVE Project Co-ordinator, Tipperary Energy Agency - [info@servecommunity.ie](mailto:info@servecommunity.ie)

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## From the Eco-village in Cloughjordan...



### 3 questions to Shane Barrett

Shane Barrett has recently been appointed as Energy Advisor with Sustainable Projects Ireland Ltd (SPIL), the Eco Village project in Cloughjordan. He answers our questions for the SERVE newsletter



#### *What is the role of SPIL "Energy advisor" to the Eco-Village?*

The role of the Energy Advisor is to assist Eco Village members to meet the requirements of both the SERVE project and the Eco Villages 'Ecological Charter'. Sample targets of the Ecological Charter include a Building Energy Rating Average of 85 kWh/m<sup>2</sup>/year, maximisation of daylight and use of low energy lighting, a target of 1 air change per hour.

The Energy Advisor is also responsible for reviewing and appraising submissions to the Eco-Village's pre-planning panel, specifically for assessing the check list relating to the ecological charter, monitoring building and documenting the installation of heating control technology in each home.

#### *Specifically how do you put things into practice?*

My specific actions include:

- The provision of an information pack for members on relevant energy measures
- Information Service for members through the provision of seminars and one to one sessions with eco village members
- Assessment of eco village members checklists as completed during planning process

The initial work of the Energy Advisor has been to work with a number of groups to collate information in relation to the building programme for the Eco Village. This involved coordination of sales, planning and energy data. Having collated this data, surveys of building types and ability to build were completed. The information pack is now completed and available to the members. The Energy Advisor also advises the project coordinator on progress against SERVE targets and produces reports required by SERVE.

#### *Speaking about SERVE, can you tell us some more about the aspects of your work that connects with SERVE?*

SERVE Work Package 2 is directly related to building of energy efficient houses in the Eco-village. It notably foresees to construct 132 residences and three community buildings as well as monitoring and publication on energy in order to demonstrate the cost-effectiveness of a holistic design approach and provide feedback to energy users.

The SERVE Project will provide financial support to the home owners in the Eco Village to ensure that they achieve their energy targets. The supports are targeted at both design measures (Dwelling Energy Assessment Analysis - DEAP Analysis - to determine the building's energy rating, and air pressure tests) and specific energy efficiency measures (roof insulation and heating controls).

Support for the above measures will be provided to the Eco-village members once proof has been provided that the dwelling achieves the relevant energy standards and the relevant energy measures outlined above are implemented. The Energy Advisor will validate the implementation of these measures.

*Shane Barrett qualified as a Building Energy Rating Assessor from Tipperary Institute, in May 2007.*

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## Around SERVE...



### *SERVE First Socio-Economic workshop*

The socio-economic work undertaken under the SERVE project will seek to determine the additional benefits that occur in the SERVE region from the development of sustainable energy. This will include an assessment of local energy supply companies, job creation opportunities, health benefits and other factors. After completing an initial "baseline" survey among the SERVE regions inhabitants, the North-west Croatia Energy Agency (REGEA - SERVE partner in charge of the socio-economic analysis) and the Tipperary Institute organised, on Dec 6, 2008, the first socio-economic workshop. This was conceived as a first step in the process of engaging with relevant stakeholders in the SERVE region to ensure that the work undertaken is appropriate and backed up by local knowledge and information.

The meeting reviewed the work done so far, in particular the baseline survey and the draft stakeholders chart. After a few introductory presentations, ample time was dedicated to discussions. Participants, including representatives from the SERVE region's civil society and local organisations, engaged in very fruitful discussions that resulted in concrete outcomes and further refining of the research project and methodology.

Most notably, there was an overall feeling that the work undertaken so far concentrated too much on economic issues, and too little on social ones. This imbalance will be corrected. Stakeholders chart will be further refined, in order to better identify and reflect upon information and services/goods flows. Some possibilities for improvements to the next baseline surveys (interim and final) were also suggested.

Finally, the timing of the work was discussed, and adapted to the priorities of the stakeholders. The planned modelling of the opportunities for Energy Supply Companies (ESCOS) and Community Energy Supply Companies (CESCOS) within WP6 will be of significant benefit, and it was therefore proposed and accepted that this work would be done earlier than has been originally planned.

**For more information**, please contact Julije Domac, Managing Director, North-west Croatia Energy Agency (REGEA) - [jdomac@regea.org](mailto:jdomac@regea.org)

### *Bringing Green electricity to the SERVE region*

The SERVE project has a particular focus on developing a market for green electricity within the residential sector. When the SERVE project was conceived there was no potential for the residential sector to purchase Green Electricity. Recent changes in the market have meant that residential customers can now purchase green electricity at a competitive price. The SERVE partners will work with a range of utilities to progress this issue and investigate group purchasing schemes within the SERVE region

**For more information**, please contact Seamus Hoyne, SERVE project co-ordinator, Tipperary Institute - [info@servecommunity.ie](mailto:info@servecommunity.ie)

### *More SERVE training in sustainable energy*

The SERVE project has a particular focus on training in the field of sustainable energy also. As part of this the SERVE project has already provided support to students to attend a number of training programmes on sustainable energy within Tipperary Institute. 3 students are currently studying the Advanced Certificate in Renewable Energy and these were given financial support to attend this course. Training has also been provided to those involved in building upgrades on the topics of building regulations and building energy rating. The following training programme is planned for 2009

- Building Energy Rating for new dwellings – April 2009
- Retrofitting your home – Energy Efficiency and Renewable Energy Issues – May 2009
- Building Energy Rating – Technical Training for Architects (September 2009)
- District Heating – Implementation (June 2009)
- Eco-Village Development – (June 2009)

**For more information**, please contact Seamus Hoyne, SERVE project co-ordinator, Tipperary Energy Agency - [info@servecommunity.ie](mailto:info@servecommunity.ie)

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# What's next...



## SERVE Phase II

North Tipperary County Council, with its partner Tipperary Energy Agency, is currently progressing the development of Phase 2 of the SERVE Project Grant Scheme for retrofitting measures. Under Phase 2 it is planned that owners of residential and non-residential buildings will be eligible to apply for grant-aid to carry out energy efficiency (roof and wall insulation, heating controls) and renewable energy measures (solar panels, log stoves, photovoltaic and wind systems). All details regarding this second call in the next SERVE e-newsletter!

## RES District heating: works are starting!

The civil works for the 100% RES district heating for the Eco-village will start in April. This district heating will be composed of 2 woodchip-fuelled biomass boilers (500Kw each) and 500 sq. m. thermal solar park. The first step will be the building of the biomass boilers house. Boilers will then be commissioned in June 2009, in time for the first House occupations in July/Aug 2009. The solar park will be constructed in July / Aug 2009 and for the early houses will provide the bulk of the heat. Next SERVE e-newsletter will provide you with update on the construction process, as well as more technical details on the installation.

## An online tool for energy saving monitoring

With the first retrofitting done, it is now time to start monitoring the actual impact of the measures taken, and, where necessary, to identify areas for further improvement. It will be the task of EC-Net, a Denmark-based consultancy company which is partner of the SERVE consortium. It is proposed that the data collection process will use an online tool for energy consumption monitoring developed by a German non-profit consultancy company, CO2-Online. This tool, called the "home resources account", enables home owners to monitor their energy consumption. The tool, available for free, can be accessed here (in English - French and German versions are also available from CO2-Online website: [www.co2online.de](http://www.co2online.de)). Besides, SERVE and CO2-Online will also cooperate on another tool developed by CO2-Online, the "Heat Atlas", which provides a good opportunity to display the energy performance of buildings in the SERVE region.

For all these information, and more:

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### SERVE Project Leader



### SERVE Project Partners



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