

<b>Achieving nZEB: Design Essentials</b>	
<b>Time</b>	<b>Speaker</b>
<b>08:45am</b>	<b>Registration</b>
<b>09:15am</b>	<b>Derek Blackweir (LIT) - SustainCo Introduction</b>
	An overview of the SustainCo project, looking at general nZEB philosophy & the practical aspects associated with nZEB design. The session will also introduce the SustainCo website, in particular the technical and financial toolkits. The session will conclude with a look at the unpinning European and Irish legislation.
<b>10:00am</b>	<b>Seán Armstrong (DECLG) - Cost Optimisation</b>
	An overview of cost optimisation principles and why cost optimal solutions are required. The current status of cost optimisation in Ireland.
<b>10.45am</b>	<b>Tea/Coffee</b>
<b>11.15am</b>	<b>Gerhard Lutz (KOMZET) - Building physics</b>
	An introduction to the importance of three aspects of building physics when designing an nZEB building 1) Air tightness - how it is achieved and design consideration; 2) ventilation why it is required, how it is achieved and issues to be considered; 3) Moisture movement - why it is important to control movement of moisture in the structure and through the building.
<b>12.00pm</b>	<b>Alexandra Hamilton (TEA) - Renewables</b>
	A brief outline of the various renewable technologies suitable to Irish domestic & non-domestic buildings, and how to integrate them to achieve NZEB standards in both retrofit and new build settings.
<b>12.45pm</b>	<b>Q&amp;A</b>
<b>13.00pm</b>	<b>Lunch</b>
<b>14.00pm</b>	<b>Paul Kenny - Case studies</b>
	Gurteen Agricultural College, Co. Tipperary. Gurteen underwent large retrofit of its buildings to reduce energy consumption. In addition, a 600kW biomass boiler and 50kW wind turbine now produce 100% of heating and 20% of electrical energy demand.
<b>14.30pm</b>	<b>Michael Bell - Case studies</b>
	Serve Domestic Housing Upgrades, Nenagh, Co. Tipperary. 347 houses across Nenagh were deeply retrofitted as part of the EU CONCERTO SERVE Project, reducing household energy consumption by an average of 44%
<b>15:00pm</b>	<b>Adrian Gallagher - Case Studies</b>
	Irish Eco Homes. A new build domestic building in Co. Galway, built in 2009. It consists of a lightweight but highly insulated timber frame construction, with greatly reduced thermal bridging and an airtight envelope. Space & water heated by a 7kW solid wood stove, along with solar gains & heat recovery ventilation system.
<b>15:30pm</b>	<b>Panel Q&amp;A - Time provided to discuss the case studies</b>
<b>16:00pm</b>	<b>Conference Close</b>

<b>SPEAKERS</b>	
<b>Derek Blackweir (LIT) - Sustainco Introduction</b>	
<p>Derek Blackweir has over 30 years' experience in the construction sector as a Building Surveyor in London specialising in the refurbishment and planned maintenance of properties ranging from listed buildings to medium and high rise apartment blocks, and as a Facilities Manager and Safety Officer for a third level college in Ireland. For the last two years, Derek has been working on a number of EU sustainable energy projects including the current SustainCo project. Derek was responsible for the development and management of the CPD accredited/recognised Retrofitting Multi Storey Buildings (REMSOB) Leonardo project. Academically, Derek has a BSc in Building Surveying, MSc in Occupational Health &amp; Safety Management and an MSc Architecture: Advanced Environmental Energy Studies.</p>	
<b>Seán Armstrong (DECLG) - Cost Optimisation</b>	
<p>Seán Armstrong is the Advisor of Building Standards for the Department of Environment, Community and Local Government DECLG. Seán is a Chartered Engineer with a Masters in Engineering. He is responsible for the development of Part L of Building Regulations and the implementation of the Recast Energy Performance of Buildings Directive in DECLG. He has 25 years of experience in engineering and construction in both the private and public sector. He represents DECLG and Ireland on a range of standards committees and EU working groups related to energy efficient buildings. He is also a member of the Build Up Skills Initiative Steering Committee and the Qualibuild Steering Committee.</p>	
<b>Gerhard Lutz (KOMZET) - Building physics</b>	
<p>Gerhard obtained a Masters in Engineering (FH) for Timber Technologies and has many years of experience. He is now the sub-professor for the Project Management/Civil Engineering Course and the fit-out works in Civil Engineering at the HBC.Hochschule Biberach, University of Applied Sciences, Germany. As a manager and lecturer for Timber Construction at the Gemeinnütziges Berufsförderungswerk des Baden Württembergischen Zimmerer u. Holzbaugewerbes he was involved in many National and International Projects notably, CESBEM and REMSOB held in conjunction with LIT. Cesbem was aimed at up-skilling the Construction Sector in the field of energy efficiency in buildings. Remsob provided technical training in the energy efficient refurbishment of multi-storey buildings, with an emphasis on building physics, energy efficiency, diffusibility and airtightness, ventilation systems and 3D scanning.</p>	
<b>Alexandra Hamilton (TEA) - Renewables</b>	
<p>Alex is an Energy Engineer with Tipperary Energy Agency and is working on the IEE funded SUSTAINCO project, the aim of which is to increase the visibility and understanding of the Near Zero Energy Building (nZEB) philosophy. She is involved with the Local Authority energy data analysis, including the monitoring and reporting of public sector consumption in line with SI 542 of 2009. She project manages a number of community and local authority energy efficiency and renewable projects, including biomass, PV and wind installations. Alex holds a first class Masters of Science in Sustainable Energy Engineering from Waterford Institute of Technology, where she specialised in micro-generation &amp; auto-generation renewable energy technologies. She also has an honours degree in Civil, Structural and Environmental Engineering from Trinity College, Dublin and a Postgraduate Certificate in Principles of Management from the Quinn School of Business in UCD. Previous to working at TEA, Alex worked in road design, construction and maintenance, and has 4-years teaching and research experience with UCD &amp; WIT.</p>	
<b>Paul Kenny (TEA) - Gurteen College Case Studies</b>	
<p>Paul is the CEO of the Tipperary Energy Agency, he has been with the agency since 2006 and is involved with both renewable energy (wind and bio-energy) and energy efficiency projects and programs. Paul has particular experience with domestic energy use, including teaching on several LIT sustainable energy programs and contributing to several domestic sustainable energy EU projects. Prior to joining the Agency in December 2006, Paul worked for Proctor &amp; Gamble as a Production Manager &amp; Engineer. Paul, a chartered engineer, holds a Degree in Mechanical Engineering and has also completed several post graduate certificates in Sustainable Energy. He is currently studying for a MSc. in Energy from Heriot Watt University, Edinburgh.</p>	
<b>Michael Bell – SERVE Domestic Retrofit Project Case Studies</b>	
<p>Michael is a Senior Energy Engineer, working for Tipperary Energy Agency since July 2010. His responsibilities involve Local Authority energy management, renewable energy development, project management and implementation of EU projects including SERVE, SMART REFLEX, FOREST and BioEnArea. Michael previously worked in project management and senior engineering roles for six years on complex construction projects. Michael holds an honours degree in Civil, Structural and Environmental Engineering from Trinity College Dublin, a Masters in Engineering Science from UCC, a Postgraduate Diploma in Project Management from TCD and a Postgraduate Certificate in Environmental and Energy Engineering from CIT. Michael is a chartered member of Engineers Ireland.</p>	

**Adrian Gallagher - M.D. Irish Eco Homes - Case Studies**

As a technology graduate of the University of Limerick, Adrian has worked in the low energy construction industry for over 15 years. Focusing on timber frame building design, low energy building solutions and sustainable construction methods. Adrian set-up his own business in 2005 to design manufacture and erect low energy timber framed buildings

