



www.servecommunity.ie



Sustainable Energy Communities

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29th of July 2009, Cloughjordan




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Context

- SERVE Project stimulated by wish to maximise the impact of the eco-village in North Tipperary
- Key Objectives
 - Energy efficiency and renewable energy upgrades in the residential sector, including micro generation
 - Biomass/solar district heating demonstration
 - Create a rural zone which is an example of energy efficiency and sustainability
- CONCERTO Funding secured and project started in November 2007
 - Single Community in Ireland
 - Only Rural CONCERTO Project in the EU





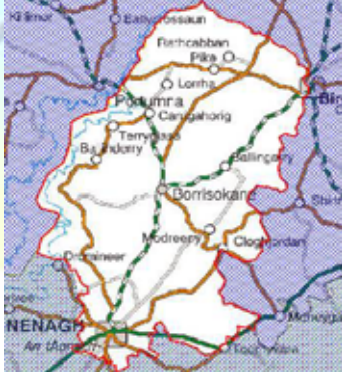
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SERVE

SERVE Region

- Rural
- 600 square kilometres
- 10,000 people
- 6,000 Dwellings
- 60% constructed pre 1981

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Tipperary Institute

the village Sustainable Projects Ireland Ltd

North Tipperary County Council

Renewable Energy Management Services

Tipperary Energy Agency Ltd

Surface Power Technologies

THE CIRCA GROUP

CIRCA Group Europe

senenergy

FEDARENE

ENERGY CONSULTING NETWORK

NORTH-WEST ORGATA ENERGY AGENCY

Ayuntamiento de El Franco

EUROPEAN UNION

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Core Project Activities

- **Retrofitting for Existing Houses and Buildings**
 - Target 400 homes and 50 non-residential buildings
 - Reduce Energy Consumption by 30-40%
 - Increase use of renewables by 100%
- **New Buildings**
 - Build 132 highly efficient new buildings in eco-village
 - A new sustainable community
 - 100% Supply of Heat from Renewables
- **Monitor** what we do and prove results
- **Research** on socio-economic impacts and sustainable electricity options
- **Train** people to build up skills




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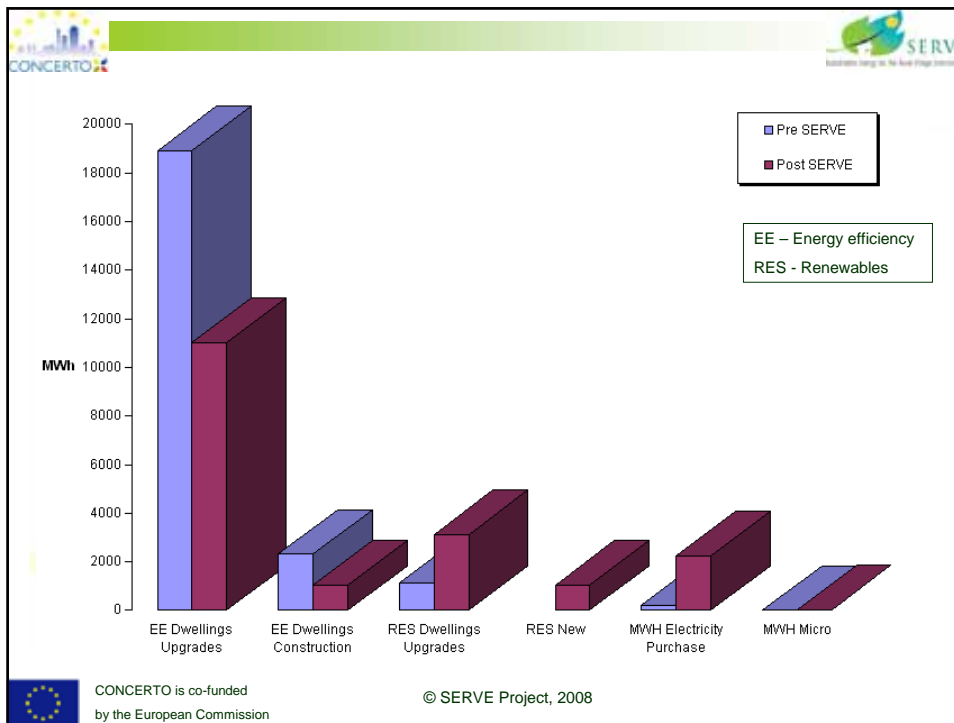
SERVE Targets

- Through upgrade programmes **reduce energy consumption by 5,000MWh**
 - Through insulation, heating and lighting upgrades
- Achieve average of **C1** in 400 existing dwellings
 - Current average is E1/E2
- Install **600-700 renewable energy heating systems**, producing 2,000MWh of energy per annum
- Build **132 homes in the eco-village** all heated by a biomass and solar district heating system
- CO2 savings of **3,880 Tonnes** per annum

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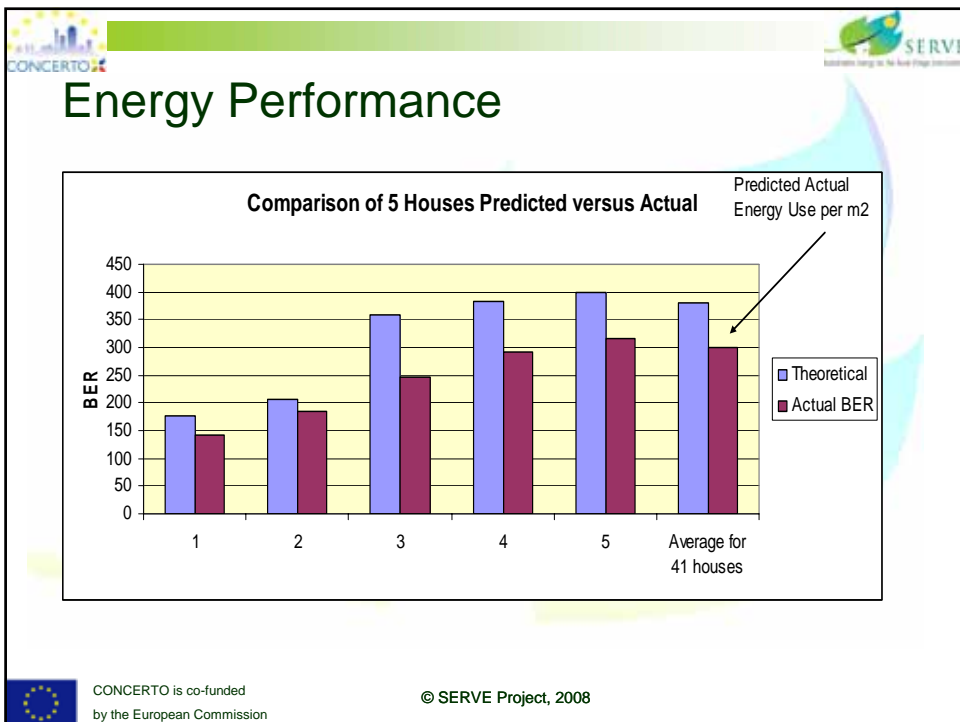
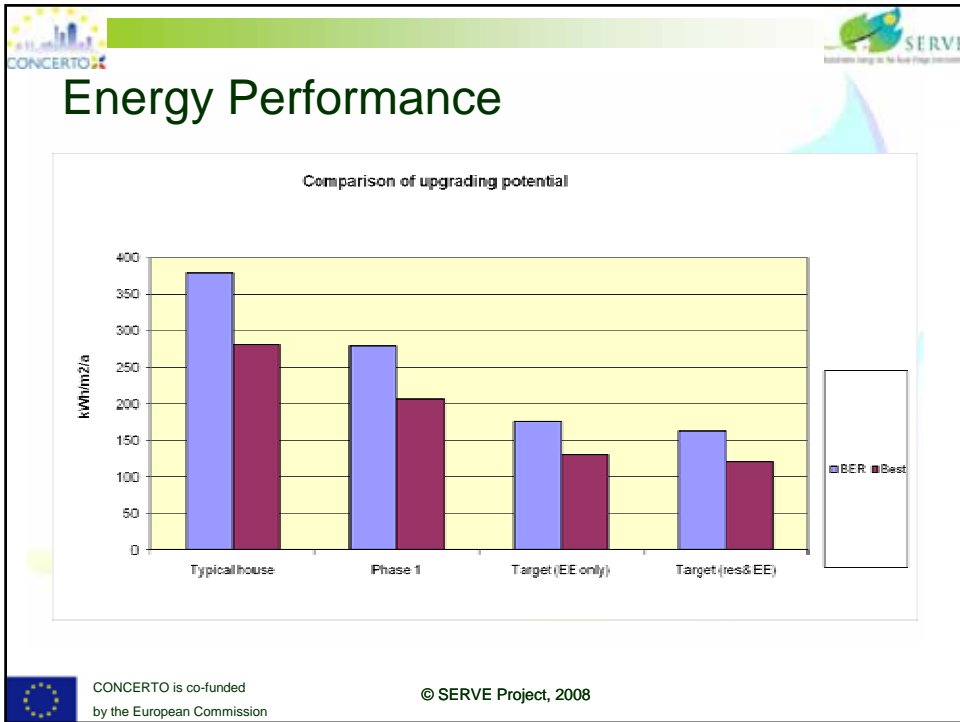
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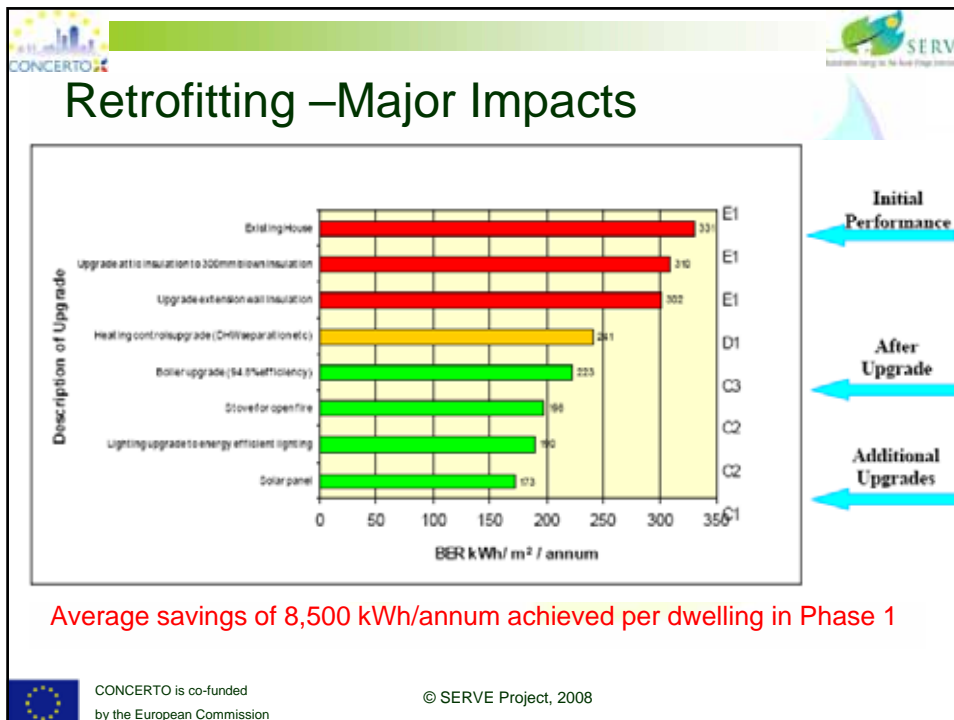




Retrofitting Existing Houses

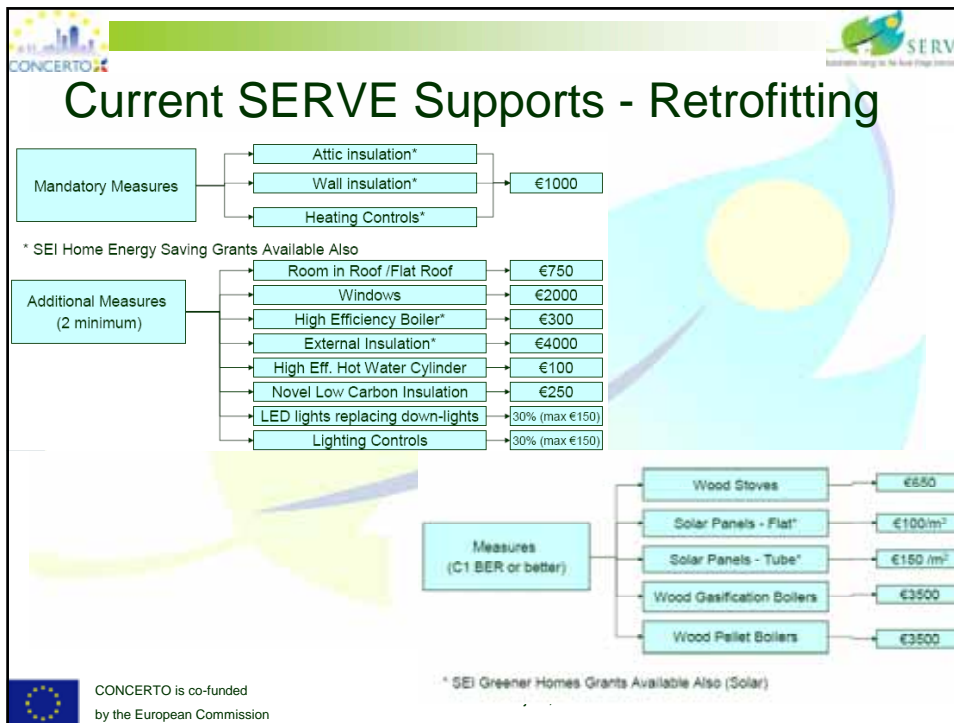
From Old (65% efficiency) → **To New (95% efficiency)**

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- ## SERVE Retrofitting and SEI Programmes
- SERVE Engaged with Pilot HES
 - 42 homes upgraded in 2008
 - National Home Energy Savings Scheme now addresses many SERVE objectives
 - SERVE had to revise EU contract and supports programme so that SERVE and HES Scheme are complementary.
 - SERVE Phase 2 Launched in June 2009.
 - Goes beyond HES and includes some new innovative measures
 - RES done in conjunction with GHS where appropriate
 - Specific supports for non-residential sector also
- 

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Eco Village

132 highly efficient houses
 Demonstrating best practice
 Range of building types

All heat from renewables
 Biomass and Solar District heating
 Fibre Optic Network to facilitate communications, metering

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Launch of Building Programme





SERVE Partners visit A Rated House





Energy Centre under Construction




A Rated House Construction with Hemp Lime Render

Eco Village – Progress to date






- Building has started
 - target of 6,000m2 of houses to be constructed by end of 2009
- Unique district heating system nearing completion
 - 2 x 500MW biomass boilers
 - 500m2 of solar panels supplied by Careys Solar - Nenagh
 - Distributed storage system to allow for community management of system
 - 2,500m of District Heating pipe
 - Installation and Commissioning in August/September
- First occupants in village in October 2009
- Green Enterprise Centre development




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Other Activities

- **Training**
 - TEA and TI completed range of training programmes in May and June
 - RETScreen – 80 people trained
 - Heating Controls – 20 people trained
 - Retrofitting Upgrade Standards – 15 people trained
- **Socio-Economic Research**
 - Data gathering for socio-economic model commenced
 - Job Creation, Economic and Socio Impacts
 - Review of ESCO options for Eco-Village

RETScreen International 






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Other Activities


- **Sustainable Electricity Research**
 - Analysis of options for electricity supply at eco-village
 - Community Purchasing Scheme being investigated
- **Monitoring**
 - Trial of metering technology being conducted with implemented plan for November 2009
 - Working with www.CO2online.co.uk to provide online energy management tool
 - Monitoring to occur until October 2012.



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Related activities



- Energy Map being implemented in TI and NTCC
 - TEA coordinated group tender for electricity supply for group of LAs - €1.7m in savings. Combined savings of €225,000 for NTCC and STCC
- SEEEP applications
 - NTCC 385 MWh savings
 - TI for 161 MWh savings
- CESBEM Training
 - TI sending 80 people from construction sector to Germany for training on Energy Efficiency and Timber Frame Construction


 

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The Next 18 Months

- Retrofitting
 - Achieving our target number of buildings
 - Continued cooperation with National Programmes
 - Meeting the challenges of investment in the current climate
- Eco Village
 - Completion of DH plant and system
 - Construction of buildings
- Monitoring
 - Implementation of monitoring system
- Meeting the challenge of convincing people to invest in sustainable energy in the current climate

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Thank you.

Questions?

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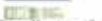
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Surface Power
Surface Power Technologies



Energy Power
EBCA Group Energy



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