


HandiHeat
3rd Full Partner Meeting
Mayfield Lake Development, Claremorris, Mayo
22nd & 23rd May 2019

In Attendance:


Robert Clements	Northern Ireland Housing Executive (NIHE) (Chair)
Stephen Hill	Northern Ireland Housing Executive (NIHE)
Jenny Irvine	ARC Healthy Living Centre
Alma Gallagher	Clár I.C.H.
Finola Fleming	Clár I.C.H.
Marcus Hirvonen	Karelia University of Applied Sciences
Ville Kuittinen	Karelia University of Applied Sciences
Alda Marín Kristinsdóttir	Austurbru ses
Jón Steinar Gardarrson Mýrdal	Austurbru ses
Erika Winguist	LUKE
Davide Ragaglia	PURE
Catherine Savage	Northern Ireland Housing Executive (NIHE)
Gemma Cowles	Northern Ireland Housing Executive (NIHE)

DAY 1		
Item	Minute	Action
1.0	Welcome and Apologies Robert welcomed partners to the 3 rd Partner Meeting hosted by Clár I.C.H. at the Mayfield Lake Development, Co. Mayo. Apologies were received from Saija Rasi (LUKE), Robert Prinz (LUKE) and Daniel Aklil (PURE).	
2.0	Welcome by Clár I.C.H. Alma welcomed Partners to Mayo and provided a strategic overview of Clár I.C.H. and the sheltered housing scheme at Mayfield Lake Development, Claremorris.	
3.0	Minutes from last meeting Robert reviewed minutes and actions from the last meeting. No actions were outstanding. Partners agreed date of the 4 th Partner meeting in Iceland. Catherine will circulate details of next Partner meeting in Iceland.	Catherine
4.0 4.1	Work Package updates: Work Package 1 - Management including eMS (NIHE) Robert reported on NIHE Partner Report for Period 1 Report (1 October - 31st March 2019) and asked for an update from each Partner. Partners were asked to be mindful of the 8 week reporting period for each of the reporting periods and were asked to submit reports to the respective FLC's as soon as possible. Catherine and Stephen updated Partners on the progress of Period 1 Partner Reports and asked Partners to complete and	All

	<p>submit reports to the First Level Controller. Ville advised that the FLC could take up to 3 weeks to approve.</p> <p>Robert advised that a procurement process is in place for a Training and Audit Compliance Service. It is hoped that the tender will be awarded by September 2019. The Lead Partner will invite the tender winner to the next Partner meeting in Iceland.</p> <p>Robert asked for more interaction from all Partners and asked for more interaction on the demonstration pilots and added that both pilot schemes should be providing frequent updates to Clár I.C.H. for Ezine.</p> <p>Robert confirmed the format of the Full Partner meetings going forward. Day 1 will be a full meeting to review the deliverables of each Work Package while Day 2 will incorporate site visits and engagement with stakeholders and local community groups as enablers of HandiHeat within the NPA region.</p> <p>Robert asked each Partner to submit a 1-2 page financial report to the Lead Partner on their respective Work Packages, noting:</p> <ul style="list-style-type: none"> a. progress on all activities and deliverables within their respective Work Package b. update on financial spend and commentary on any over/underspend c. any request for moving finance across budget lines in each partner, noting the restrictions within the NPA T&Cs. <p>Dropbox is now active with the purpose to share current and related information and documents to all Partners. Catherine will issue a link to all Partners following the Partner meeting in Mayo.</p>	
4.2	<p>Work Package 2 - Evaluate Existing Best Practice (Austurbru ses)</p> <p>Jón issued a template to collect fuel data from 2007 based on ratio of fuels by heated area in each region per year. At the 2nd Full Partner meeting it was agreed to collect data from the following regions: Austurbru ses - Iceland, Greenland and Faroe Islands; LUKE - Finland, Norway, Sweden; PURE - Scotland and Norway (suggested); NIHE - Northern Ireland and Clár I.C.H –Republic of Ireland. Finland and Sweden have submitted data sheets. Jón reported difficulties trying to source data from Greenland and Faroe Islands. Robert confirmed that data is required for 9 countries across the NPA region. Robert asked Partners to submit all outstanding fuel mix data sheets to Austurbru ses by 5th June 2019. Jón will continue to progress best practice.</p>	All
4.3	<p>Work Package 3 - Demonstration Pilots (Karelia & NIHE)</p>	

	<p>Ville provided an overview of the pilot scheme in Finland using compressed biogas for heating for buildings. Karelia is trying to pilot this model in eastern and northern Finland where there is no actual market for biogas. Ville reported that biogas is the only current sustainable fuel available in heating and vehicle fuel which was seen as an enabler for different products. Ville reported having difficulties with the pilot demonstration site and this has led him to seek solutions with a range of technology providers. Karelia has tried 3 pilot locations without success as none of the 3 sites are proving viable. In order to progress the pilot an intern from Finland and Holland are conducting a thesis study to research the economic feasibility of biogas. A draft report will be circulated to all partners in due course. Ville reported that for the purpose of the pilot, hybrid solutions are necessary. Eco-products from a cluster of companies located near the pilot are being considered as a hybrid solution.</p>	
4.4	<p>Presentation by NIHE – 2nd pilot demonstration site</p> <p>Robert updated partners on the 2nd demonstration pilot located in a rural setting in Lisnaskea, Co. Fermanagh. The Lead Partner has scheduled a meeting with tenants in Fermanagh to discuss the pilot on 30th May 2019. Project meetings are ongoing with pilot partners Power On and Ulster University. The pilot will operate in 1970’s social housing stock and will give consideration to cavity wall construction, poor insulation, oil heating systems, old oil boilers and double glazing units. The current SAP reading of 60 is grade band D which denotes ‘average’. Robert reported that NIHE may have to use a pure heat pump for the pilot demonstration (requested by Ulster University) with electric storage (Power On) in two houses. Robert added that thermal storage is cheaper to manage with the water tank using water and excess solar pv will generate hot water.</p>  <p>20190520-NIHE HANDIHEAT 3rd Meet</p> <p>In accordance with the Proposed Works Content a kit will be installed into 5 houses in July 2019. Simple data will be obtained from tenants household bills in order to ascertain the level of expenditure needed. The Department for the Economy have asked for clear data from Ulster University to inform policy decisions going forward. Tenant cooperation is required and tenants will be trained on the use of the pilot technology.</p>	
4.5	<p>Presentation by Power On – Eddie McGoldrick</p> <p>Eddie McGoldrick co-founder of PowerOn Technologies http://theelectricstoragecompany.com/ gave a presentation on domestic battery storage solutions targeted at people on low incomes and those living in rural areas. PowerOn is an early stage growth company who collects data with energy to provide affordable and sustainable energy solutions for customers by installing battery storage in domestic buildings</p>	




	<p>using <i>Sonnen</i> technology http://sonnenbatterie.co.uk/. Eddie explained that once <i>Sonnen</i> is installed in domestic properties data is gathered from the device every 10 seconds and downloaded onto a financial trading platform. This data informs customer usage, generation of pv panels and what the network is doing in terms of power quality. Householders will gain benefits by reduced electricity bills. Eddie went on to explain that excess energy could be used to charge electric vehicles.</p>	
<p>4.6</p>	<p>Presentation by Davide Ragaglia – PURE WP3 – ESCO and Roadmap</p> <p>Davide provided an update on the ESCO and Roadmap solutions for communities based in Shetland. The Shetland scenario illustrates that the heat problem faced by the community cannot be resolved on its own, and must be tackled in parallel with the overall energy problem. There is a need for a different approach to solving heat problems in solutions where natural gas and other forms of hydrocarbon based heat solutions are expensive and difficult to access. The research and development innovative solution for WP3 must combine and mix heat, electric and fuel and Davide outlined the proposed innovative Roadmap through the production of hydrogen energy storage which may provide a cost-effective basis to produce ammonia and hydrogen peroxide that have a capability to supply a potential local market such as fertilizer production and fisheries, with the income from these two markets used to support the heating community financial deficit. The involvement of local communities would be through direct interaction and documentation of their concerns and perception about the project idea.</p> <p>PURE are currently developing models based on the renewable and energy storage solution which include heat, electrical and H2 derivative gases to produce a model which will consist of many different technology based models for use by communities. A detailed report will be produced with how to use the model and the description of the different options explored.</p> <p>Eddie reported that the UK grid can accept 30% of energy from renewable resources while the grid in Ireland can accept 65% and aiming for 75% and added that while this may be challenging for Shetland but should be considered as an option. Robert confirmed that an interactive toolkit would be developed for the NPA regions.</p> <p> Pure Energy Centre Handiheat 2nd meetir</p>	
<p>4.7</p>	<p>Presentation by Ericka Winquist - LUKE</p> <p>Ericka explained the purpose of using biogas and discussed its production and potential in UK, Ireland and Finland. She outlined the pressure for more</p>	

	<p>environmentally and resource efficient agriculture for reducing emissions and combining good energy efficiency methods.</p> <p>Ericka made reference to a map of Europe which identified collective farm manure and biogas potential in Europe (Scalat et al.2018). The figure illustrated collective farm manure over a 20km radius and the derived biogas potential. The leading country in biogas is in Germany where energy crops used as an option to manure. UK is the leading biogas country in biogas but is not collecting manure but rather landfill gases. Ericka outlined the potential in using manure. Finland is producing manure which could be used as a fuel alternative with its 90 biogas plants and 20 small scale plants using manure. As a comparison in Finland, energy consumption at farms (11,4 TWh) with total biogas production potential (10.2 Twh). Ericka reported that there is interest in farm scale biogas products in Finland however this market needs investment support. Two established providers for farm scale plants in Finland are Metener Ltd and Demeca Ltd. A freely available biogas planning tool might lower threshold for farmers. This planning tool for farm scale biogas production will be available in English and Finnish using 3 technologies. The 4 options for biomass utilisation are heat, heat and electricity CHP, biogas upgrading and feeding to the grid as well as biogas upgrading and selling as traffic fuel. To determine the economic feasibility, default values are based on Finnish values, however it lends itself to the user to add own values. The tool is still in development and should be available by December 2019.</p> <p>Eddie expressed an interest in the biogas planning tool and stated that there was a market for biogas in NI given the availability of good feedstocks for energy from waste, removal of waste and energy generation. Ericka clarified that the feature in the biogas tool source must be mixed waste and includes a feature which alerts the user of high nitrogen content so they can use a different technology. Eddie reported that there is a potential to create a cooperative to manage this model. Jenny stated that due to legislative changes in NI there is an existing issue with slurry in that slurry will have to be injected rather than spread and with this costs will increase and farm management practices will be affected.</p>	
4.8	<p>Presentation by Power On Technologies – Anne Marie McGoldrick</p> <p>Anne Marie gave an overview of PowerOn Technologies Ltd and their products trading as ‘The Electric Storage Company’ which focuses on rural poor and fuel poor solutions. PowerOn operate a ‘tell and fit’ model with the grid with 300 battery storage installations and operate an analytics platform to manage data from storage batteries in housing. Excess storage is now trading on the open market. A video demonstrating the <i>Sonnen</i> battery explained how storage operates, based on solar pv and renewable technologies designed to save an average of 75% on energy bills.</p>	

	<p>Eddie demonstrated a field trial of a ‘<i>pronsumer</i>’ and reported that customers are driving change by installing solar pv’s and using electric cars. Eddie – demonstrated a field trial ‘<i>What does being a prosumer mean?</i>’ Customers are driving change by installing solar pv and using electric car and are given an app for individual customer data. Electrical solutions are coming down the line to feed into options. Data from individual customers is tracked every 10 seconds and is interested in monitoring the voltage and frequency of electricity and green area is when it is within standard and red is outside power quality.</p> <p>Eddie reported that wholesale electricity price in Irish market changes on half hour basis and while a large company can trade in electricity market PowerOn are trialling devices on a small commercial basis for communities. In Ireland the highest proportion of renewable energy coming onto grid in the world. NI electricity networks have the same principle for all power companies in NI. Traditionally NI builds a network to allow customers to come on to network. DSO customers are passive consumers. The challenge for PowerOn is to be customer concentric, not network asset centric.</p> <p>Eddie reported that market transition is happening. Power companies are working towards a Smart Grid (McKinsey & Company) and are considering how residential energy storage could help support the power grid. NI’ is that networks are dealing with old power networks and rural housing stock.</p>	
4.9	<p>Work Package 6 - Communication (Clár I.C.H.)</p> <p>Alma provided an update on the deliverables and referenced the sectors involved in Handiheat and the purpose of Handiheat to influence policy change. Clár I.C.H. is generating a register of stakeholders and interested parties e.g. SEAI, utility companies etc in order to communicate message and compile data centrally for e-zine publication. A discussion took place regarding the distribution of information to individual stakeholders. It was agreed Clár I.C.H. will receive and manage the data on behalf of the Handiheat Partners. It was agreed that the e-zine would be published every quarter with a 2 week deadline.</p> <p>Darragh McGale delivered a presentation on the HandiHeat website. Suggestions were raised in relation to posting presentations, a News Tab and e-zine pictures. Links will be required. Alma will forward links to Partner websites. It was agreed that permission should be sought from NPA to create a link and a link back to NPA. Consideration was given to tutorials/quarterly updates/toolkits and interactive tools together with a device system to enable local community groups to access best practice solutions. The webpage is to be reviewed and uploaded by the end of May 2019. All Partners were asked to provide Alma with feedback on the Social Policy by 12th June 2019.</p>	<p>All</p> <p>All</p>

	<p>It was agreed that each Partner would nominate 1 person to manage Facebook following online training which will be provided. A suggestion was raised for each Partner to manage Facebook on a monthly basis and governance to be provided. Brochures, merchandise and pull-ups have been designed and produced. Pdf for the pull-up will be circulated to all partners. Alma confirmed that governance assurances can be put in place for HandiHeat website. It was agreed that directory of Regional Support Services should be developed amongst Partners.</p>	Catherine
4.10	<p>Work Package 5 - Existing Policy Gap Analysis (ARC Healthy Living Centre) Jenny provided an update to Work Package 5 which seeks to influence policy and try to make the case for change, particularly in relation to fuel poverty. Jenny stated that this is recognised by policy makers but NI policies aren't reflecting this position. Jenny referred to the processes in place in the Republic of Ireland to address cold and damp homes and made reference to Professor Rafael Bengoa (health reform specialist and author of the Bengoa Report) https://www.health-ni.gov.uk/publications/systems-not-structures-changing-health-and-social-care-full-report At an event hosted by Queens University in June 2018 Jenny made reference to a statement by Professor Bengoa that there is a need to bring together the agencies that can create the change and added that there is a need for policy makers and policy shapers to be brought together to influence change. Jenny stated the need to look at countries who are committed to reducing fuel poverty and improving warmth which can change life chances, educational attainment and life quality, and highlighted the need for infrastructures to be put in place in relation to health and equalities. Jenny reported that the Department of Health does not consider fuel poverty in their business remit. NIHE is a strategic partner who can link housing to health. Jenny reported that research does exist in the field of housing and health but fuel poverty doesn't interface with all policy areas. https://youtu.be/GWUGQi4RlvQ</p> <p>Robert referred Jenny to the Manchester model for Fuel Poverty.</p>	
DAY 2		
Item	Minute	Action
1.0	<p>Welcome and Apologies Robert welcomed partners and stakeholders to Day 2 of the 3RD Partner Meeting in Claremorris, Mayo. Apologies were received from John O'Connor, Chief Executive Officer, Housing Agency.</p>	
2.0	<p>Presentation by Robert Clements Robert provided a strategic overview of NIHE and outlined the role of HECA in NI and the HandiHeat project.</p>	

	 <p>20190520-NIHE HANDIHEAT 3RD Part</p>	
3.0	<p>Presentation by Tom Quinn – Energy Services Manager, Bord na Móna (BNM) https://www.bordnamona.ie/</p> <p>Tom provided an overview of energy poverty in rural Ireland. Most Bord na Móna (BNM) customers are energy poverty and have to transition away from peat and carbon products. BNM are enabling the transition for customers and communities to make the transition to a carbon free future by working with other agencies such as Clár I.C.H. and SEAI (Sustainable Energy Authority of Ireland) and partnerships embedded in communities to provide efficiency measures such as smart measures in homes through schemes such as the Communities Grant.</p> <p>Bord na Móna is committed to helping Ireland meet its renewable energy target of 16% by 2020 as set out in the EU Directive. Smart technology needs to be provided with a focus on localised power generation through community projects in the future from wind generation and solar pv.</p>	
4.0	<p>John Flynn – Programme Manager Better Energy Communities, SEAI (Sustainable Energy Authority of Ireland)</p> <p>John gave an overview of SEAI and its targets, progress ambition and impacts to transition Ireland towards a low carbon energy future through innovative solutions to meet the energy needs of Ireland and targets in 2030 and 2050. SEAI are leading the transition to smarter and more sustainable energy activities through its collaboration with citizens and government. It forecasts that approximately 13% of Ireland’s energy will come from renewable sources by 2020. John highlighted European and Irish energy policies and discussed the binding EU targets for renewable energy by 2020 by which 16% of final energy use in all sectors must be from renewable sources.</p>	
5.0	<p>David Sykes – Housing Agency</p> <p>David provided a strategic overview of the Housing Agency who works with and supports local authorities, approved housing bodies, Department of Housing, planning and local government and the private sector in the delivery of housing and housing services to a population of 5million people in the Republic of Ireland. David stated that rural Ireland is in decline and this poses a challenge for rural housing to become more energy efficient with location, practice (a high reliance on oil, turf and coal) and poverty. The fuel poverty rate of 20% in the RoI limits investment.</p>	
6.0	<p>Panel Discussion Session</p> <p>Robert chaired a panel discussion with John Flynn and Tom Quinn. Topics for discussion:</p>	

	<ul style="list-style-type: none"> • Climate emergency • Solutions to stop fossil fuel • Low carbon heating • Practices across the NPA – Finland, Iceland etc. • How to make rural lives better <p>Stakeholders and representatives from Clár I.C.H. Board of Directors were present at the panel session.</p>	
7.0	<p>Site Visits</p> <p>The first site visit took partners to Mayfield community garden which is an organic garden project ‘<i>Growing Locally</i>’ situated in the Mayfield Lake Development, Claremorris. A second tour took the Partners to a rural village in Cong, Mayo.</p>	
8.0	<p>Date of Next Partner Meeting</p> <p>The 4th HandiHeat Full Partner meeting will be hosted by Austurbrúses in Iceland on the 24th & 25th September 2019.</p> <p>The next Work Package Conference Call will take place on Tuesday 25th June 2019 at 11.00 GMT. Catherine will issue a meeting request via Web-Ex in due course.</p>	<p>All</p> <p>All</p>

Summary of Agreed Actions:

1.0	Partners to ensure their 6 monthly project reports are submitted to their FLC in a timely manner to ensure FLC uploads the approved reports no later than 8 weeks after the project period end dates (Report 1: End date 31 st March 2019).	All
2.0	<p>The 4th Partner Meeting (in Iceland) will be the Year One Steering Committee Meeting, in preparation for Lead Partner annual meeting with NPA in October 2019. Each partner to ensure:</p> <ul style="list-style-type: none"> - Partner representative should have necessary authority from each partner to make decisions, where necessary regarding project reporting and budgets. - Each partner to submit a short report noting: <ul style="list-style-type: none"> A. progress on all activities and deliverables within their respective WP B. update on financial spend and commentary on any over/underspend C. any request for moving finance across budget lines in each partner, noting the restrictions within the NPA T&Cs. 	<p>Robert</p> <p>All</p>
3.0	Partners to respond to Partner requests/emails within 2 weeks.	All
4.0	Partners to send presentations to NIHE and Clár I.C.H. for HandiHeat website/Dropbox.	All
5.0	Partners were asked to complete and submit any outstanding Fuel Mix Data Sheets to Jón as soon as possible.	All

6.0	LUKE to progress toolkit, for assessment by December 2019 (AP Power On asked for viability of tool kit).	LUKE
7.0	Partners are asked to reply to the Social Media Policy issued by Clár I.C.H. within 2 weeks from 23rd May 2019.	All
8.0	On-line tool for training to be sourced and issued to Partners by July 2019 and completed before Clár I.C.H. provides partner access to Social Media platforms.	CS
9.0	ARC to review Job Description for Handiheat Research & Policy Officer.	ARC
10.0	Ezine to be issued every Quarter, all notes, reports to Clár I.C.H. on this basis, after requests from Clár I.C.H.	All
11.0	Handiheat website to be fully operational by the end of May 2019.	Clár ICH
12.0	ARC HLC to request Fuel Poverty policies across Partner countries (including all NPA countries).	ARC
13.0	Partners to populate contribution and forecast entries in progress reports.	All
14.0	Austurbrú ses to request Best Practice & Gap Analysis from each region.	All
15.0	Catherine to issue invitation to Dropbox to all Partners to upload documents and information.	CS