

# EMPOWER

## Energy Poverty Good Practice

### Energy Cloud

### *Ireland*

**3 Counties Energy Agency - Energy Poverty Consultant**  
**Energy Cloud, Ireland**



[www.3cea.ie](http://www.3cea.ie)

# Good Practice Description

- **Description**

- Main objective of the project is to reduce renewable energy wastage.
- Divert it for social good to help households living in fuel poverty in Ireland. (*estimated 461,000 in 2019*).
- Redistributes surplus energy from wind and solar to fuel poverty citizens, via partnerships between utilities, Local Authorities, housing associations & charity partners.
- It's a social enterprise that aims to create solutions for communities and environmental benefits that are financially sustainable.
- Estimated that over €50 million of renewable energy wasted in 2019, could have been used in Ireland & Northern Ireland. This is due to the periods when we create more renewable energy than our grid can handle, leading to curtailment.
- **Use this surplus energy to reduce fuel poverty and reduce reliance on fossil fuels.**

- **Installation**

- Utilises existing infrastructure in the home, such as the hot water tank, to receive surplus renewable energy at times when it is not needed, and otherwise wasted.
- The use of existing infrastructure in the home reduces the capital expenditure required for this project and allows for organisations to quickly upgrade their properties to avail of this surplus renewable energy.”



# Benefits

- Reduce renewable energy wastage
- Develops innovative and practical solutions that can be activated at a small scale in communities but also scaled nationally and globally.
- These solutions have the potential to address critical issues in the national clean energy system of the future including constraint, flexibility, and resilience
- Opportunity to capture some of this surplus renewable energy and redistribute it to citizens living in fuel poverty.
- This technology solution could also provide a model whereby excess renewable energy, which would otherwise be curtailed, could be diverted into all homes in Ireland, helping to displace our use of fossil fuels, and also potentially address localised constraint issues.
- Heat the dwellings hot water with Renewable Energy.
- Reduce Fuel poverty
- Reduce resilience on fossil fuels
- Improve quality of living, thermal comfort of energy poor dwellings.



# How transferable/replicable is the Good Practice

- Project could be replicated nationally, internationally, to reduce wastage of Renewable Energy, and help vulnerable citizens living in Energy Poverty,

The infographic is titled "Smart Immersion - How it works..." and is divided into four horizontal sections. The top section, "Step 1", shows a professional installer replacing an existing tank with a Smart Immersion Controller and a temperature probe. The second section, "Step 2", shows a user scheduling hot water on a wall-mounted hub or a smartphone app. The third section, "Step 3", shows a user monitoring hot water levels in their tank via the app. The bottom section, "Free Hot Water Top Ups", shows a user receiving free hot water top-ups during surplus energy on the grid. Each step includes an illustration of the hardware and a smartphone app interface.

**energycloud** **cloud housing**

**Smart Immersion - How it works...**

**Step 1**  
A professional installer will replace your existing Tank / Bath Switch with your new complete Smart Immersion Controller and fit temperature probes to your existing hot water tank.

**Step 2**  
Schedule your hot water on your easy to use timer. This can be done on the wall mounted hub or your smart phone app. Our timer is based on the original time clock making it the easiest time clock in the world to set.

**Step 3**  
View how much hot water is in your tank at anytime anywhere. Start a bath when you return, why not boost directly from your app. By knowing how much hot water is in your tank you can save by only heating what you need.

**Free Hot Water Top Ups**  
There are times when there is surplus energy on the grid. Currently this energy goes to waste. We have built technology into your smart immersion controller that will allow to avail of regular free hot water top ups.

**EMPOWER**  
More carbon reduction by dynamically monitoring energy  
efficiency

# Thank You – Any Questions

## EMPOWER + Good Practice Register Form

<b>PROJECT PARTNER:</b>	PP3 – SOUTHERN REGIONAL ASSEMBLY
<b>CONTACT PERSON:</b>	ROSE POWER – RPOWER@SOUTHERNASSEMBLY.IE

### TEMPLATE

<b>GOOD PRACTICE</b> <i>Please provide a title</i>	Energy Cloud		
<b>Field:</b> <i>please tick those that is relevant</i>			
1 Energy monitoring	<input type="checkbox"/>	2 Energy Poverty	<input checked="" type="checkbox"/>
<b>Location</b>		<i>Name the city, region, state.</i>  Ireland	
		<i>Name type of the building (school, library, etc.) or type of energy poverty intervention (identification, reduction or behavioural change).</i>  Use of excess renewable energy diverted to homes suffering from energy poverty	
<b>Good practices categories:</b> <i>please tick those that are relevant</i>			
1 Good measurement devices (hardware)	<input type="checkbox"/>	5 Good data (energy and/or energy poverty and/or energy consumption) collection or identification system	<input type="checkbox"/>
2 Good software and smart software	<input checked="" type="checkbox"/>	6 Good energy and/or energy poverty indicators and/or ergonomoy	<input type="checkbox"/>
3 Good behavioural change initiative	<input type="checkbox"/>	7 Good data analysing system	<input type="checkbox"/>
4 Good organisation and management	<input type="checkbox"/>	8 Good use of data	<input type="checkbox"/>
	<input type="checkbox"/>	9 Good replication and easily transferred to other regions	<input checked="" type="checkbox"/>
	<input type="checkbox"/>	10 Quantify Good results to date e.g. emission reductions, number of users, number of units installed, number of participants, amount of funding influenced etc.	<input type="checkbox"/>
<b>Short description</b> <i>Please describe the main components or parts of the practice. Please describe your good practice in a way that other partners will be able to understand your good practice. Please provide a link to the good practice website if available</i>	EnergyCloud exists first and foremost to reduce renewable energy wastage – currently running at an estimated €50m per annum - and instead divert it for social good to help the estimated 461,000 households living in fuel poverty in Ireland. This is achieved by redistributing surplus energy from wind and solar renewable generators to fuel poverty citizens via partnerships between utilities, Local Authorities, housing associations & charity partners. This surplus energy would otherwise be curtailed. It develops innovative and practical solutions that can be activated at a small scale in communities but scaled nationally and globally. These		



	<p>solutions have the potential to address critical issues in the national clean energy system of the future including constraint, flexibility, and resilience. Its are a social enterprise that aims to create solutions for communities and environmental benefits that are financially sustainable.</p> <p>Through analysis of renewable data, it estimates that there was over €50 million of renewable energy wasted in 2019 alone that could have been used in Ireland and Northern Ireland. This is due to the periods when we create more renewable energy than our grid can handle, leading to curtailment. There is an opportunity to capture some of this surplus renewable energy and redistribute it to citizens on the island of Ireland who are living in fuel poverty. This technology solution could also provide a model whereby excess renewable energy, which would otherwise be curtailed, could be diverted into all homes in Ireland, helping to displace our use of fossil fuels, potentially address localised constraint issues, and achieve our national climate change goals. As a country with a focus on sustainable energy production and that is committed to implementing Ireland’s Climate Action Plan, EnergyCloud can put Ireland into a leadership position in creating solutions for surplus renewable energy rather than simply switching off wind turbines and solar panels which is what during periods of very high energy production. We also believe that there is an opportunity to share the solutions we develop with an international community to engage global action.</p> <p>Technology was installed in the first houses in May 2021.</p> <p>The simplicity of the approach to this project is that it can utilise existing infrastructure in the home, such as the hot water tank, to receive surplus renewable energy at times when it is not needed on the energy grid.</p> <p>The use of existing infrastructure in the home reduces the capital expenditure required for this project and allows for organisations to quickly upgrade their properties to avail of this surplus renewable energy.”</p> <p><a href="#">EnergyCloud and Clúid Housing announce renewable energy partnership - Clúid Housing Clúid Housing (cluid.ie)</a></p>
<p><b>Picture or Website link if applicable</b></p>	<p>Video <a href="https://www.energycloud.org/videos/energycloud.mp4">https://www.energycloud.org/videos/energycloud.mp4</a> and <a href="https://youtu.be/Y5drMIWK84w">https://youtu.be/Y5drMIWK84w</a> and website <a href="https://www.energycloud.org/">https://www.energycloud.org/</a></p> 





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