

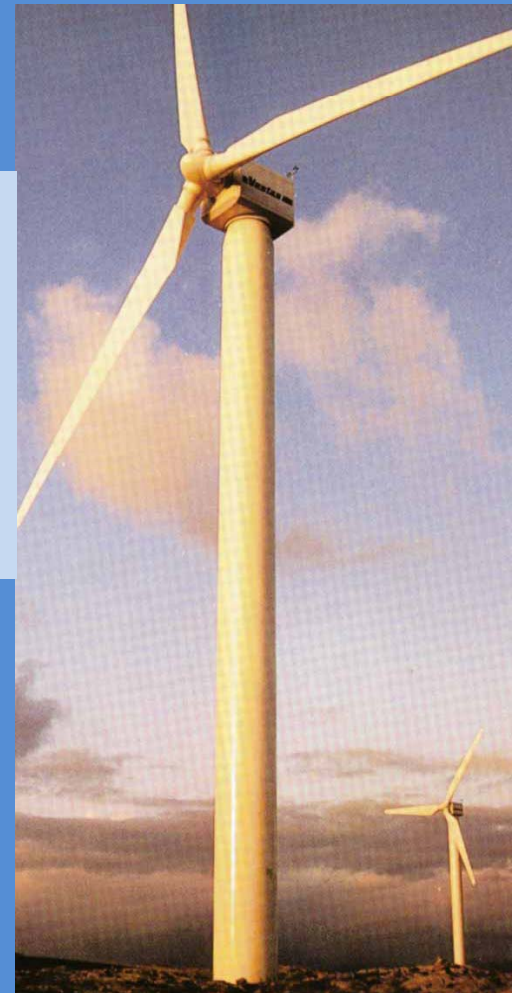


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**climAtlantic**  
local and regional actions  
for carbon footprint reduction

## ClimAtlantic Forum Ourense 1<sup>st</sup> October 2014

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South-East Ireland



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# Renewable Energy Action Plans

*Message from RE Action Plans of EU Member States*

To achieve targets we need a big expansion in production of energy from:

- Wind
- Biomass
- Biodiesel

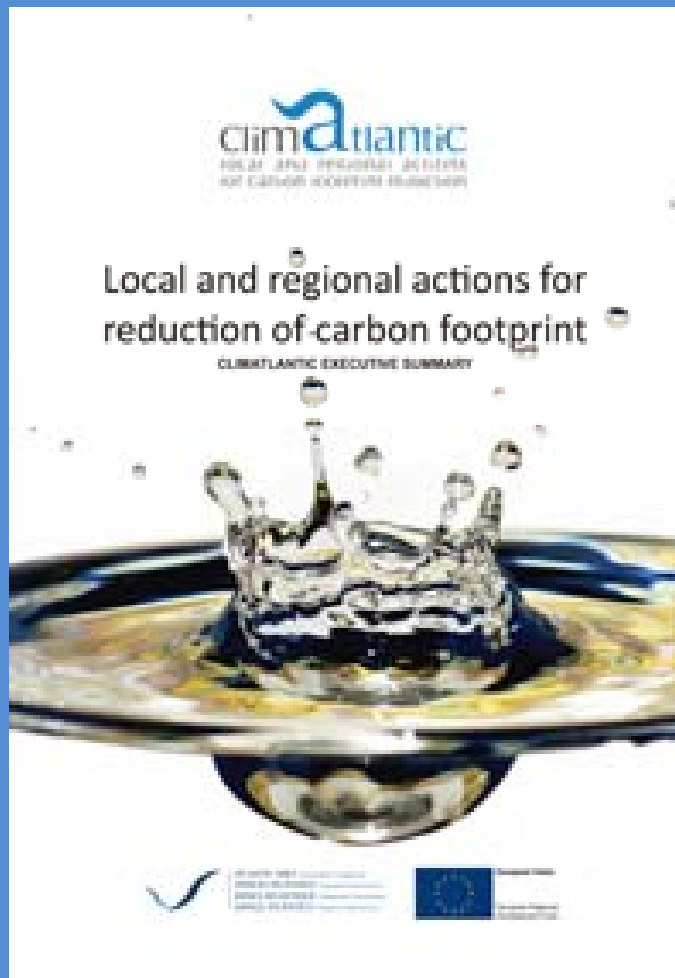
Also need advances in energy efficiency –

[Energy Efficiency Directive](#) (2012/27/EU)

*SERA – Leader of the Energy Think Tank in the  
ClimAtlantic Project*



# CLIMATLANTIC Strategy Document



## Seven Priorities identified:

1. **To increase the use of Renewable Energy and promote Energy Efficiency**
2. To improve mobility patterns within the Atlantic Area
3. To control urban and rural sprawl
4. To enhance the role of the Atlantic Façade to reduce greenhouse gas emissions at the EU level
5. To develop education and communication campaigns in order to disseminate the carbon footprint reduction approach of the Atlantic Regions
6. To foster research and development in order to generate the scientific and technological foundations needed for carbon footprint reduction
7. To include carbon footprint-reduction-based projects as a new priority axis in transnational, interregional and cross-border cooperation programmes

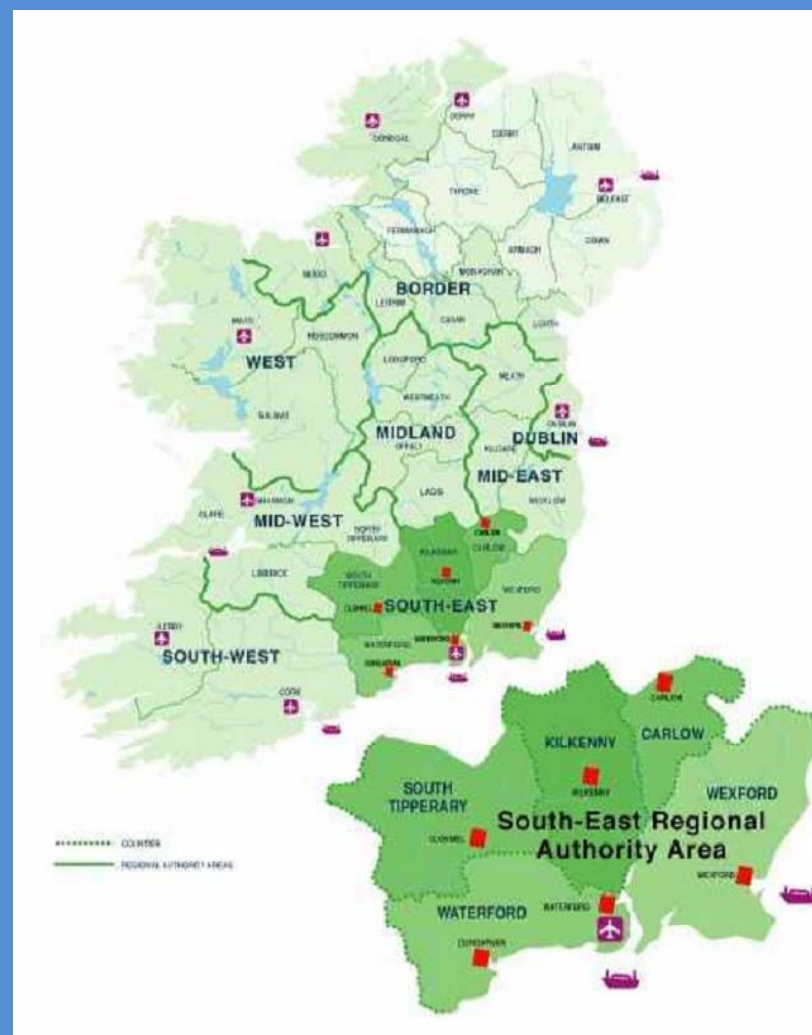


# Validation of Strategies

## Energy Pilot Action – South-East Ireland

*Assessment and demonstration of measures to reduce electricity consumption by Municipal Authorities*

- SERA worked with Carlow County Council and Carlow Kilkenny Energy Agency – commitment to reduce energy consumption by 3% p.a. to 2020
- 9 Energy Saving Activities in the LAs main electricity consuming activities (in Water Plants, Wastewater Plants, Local Authority Buildings)
- Energy Training provided to caretakers of water treatment and wastewater treatment plants
- Monitoring of savings: 1.5% reduction in energy consumption during 2012 and will continue to deliver savings throughout life cycle
- Monitoring has led to a number of key recommendations



Initiative Name	Location	Expected Annual Energy Savings	Actual Annual Energy Savings & Comments	Estimated Annual Cost Savings
Server Room Cooling – Virtual Server with New Air-Conditioning Unit	Carlow County Hall	50%	New air-conditioning unit was undersized	Further monitoring required
Efficient Lighting Retrofit (T8 to T5 Fluorescent Tubes)	Carlow County Hall	31%	48% or 10,000kWhs	€1,800 for 420 individual fluorescent tubes
Pano Zero Client Computers	Carlow County Hall	96%	95% or 10,875kWhs	€9,772 for 300 units
Wastewater Treatment / Aeration Comparisons	Old Leighlin / Fenagh / Rathoe	40%	86% difference between best and worst practice	Not calculated
Automatic Pumping Control - Installation of MultiSmart Pump Station Manager (MPSM)	Abbeywells Pumping Station	15%	MPSM not functioning properly	Further monitoring required
Pump Replacement & Controls	Royal Oak Water Treatment Plant	60%	43% or 29,476kWhs	€4,730 (2 x 7.5kW replaced 2 x 18kW pumps)
Dehumidification in Water Treatment Plants – Dehumidifiers vs Storage Heaters	Rathvilly Water Treatment Plant	60%	39% or 72,275kWhs	€5,490
Water Pumping – Speed Control in a Reservoir System using Variable Speed Drives (VSDs)	Bagenalstown Water Treatment Plant	16%	VSDs did not reduce energy consumption	Further monitoring required
Water Pumping – Night Time Pressure Reduction	Oak Park Water Treatment Plant	15%	8% or 15,768kWhs	€1,260 Reduced MIC: savings of €3,500

# Example Energy Saving Projects



**Table 3 – Replacing 300 Desktop Computers with Pano Computers**

	<b>Electrical Rating (kW)</b>	<b>Operating (hrs)</b>	<b>Electricity Consumption (kWh)</b>	<b>No. of Units</b>	<b>Total Consumption (kWh)</b>
Desktop Computer	0.085	2,250	191	300	57,300
Pano Computer	0.0045	2,250	10	300	3,000
<b>Total Energy Savings</b>					<b>54,300 kWh</b>
<b>Total Cost Savings</b>				@ ~0.18c/kWh	<b>€9,774</b>

# Example Energy Saving Projects

## *Dehumidification: Rathvilly Water Treatment Plant*

- A dehumidifier with heat recovery was installed as a replacement for storage heaters in Rathvilly WTP supplying and treating water for Carlow town and vicinity (circa 23,000 inhabitants)
- The energy consumption, temperature and humidity of the water plant was monitored before and after installation – aim was to compare the energy consumption of the dehumidifier compared to the storage heaters
- The humidity of the gallery area is set to 50-55% with a +/- 2°C variation
- An e-Tracker Energy Monitor was used to monitor energy consumption of the dehumidifier





# Example Energy Saving Projects

## Dehumidification: Rathvilly Water Treatment Plant

**Table 6 – Energy Use and Payback Period**

		Power (kW)	hrs/yr	Energy consumption (kWh/yr)	Cost (€)
Old Load	Storage heating (Gallery Area only)	50	2,190	109,500	9,381
New Load	Load 1	13.5	1,300	17,550	1,931
	Load 2	9	950	8,550	941
	Steady State Cycle	2.5	2,050	5,125	564
	Winter heating			6,000	456
	Total (new load)			31,225	3,435
Energy & cost savings (old load – new load)				72,275	€5,490

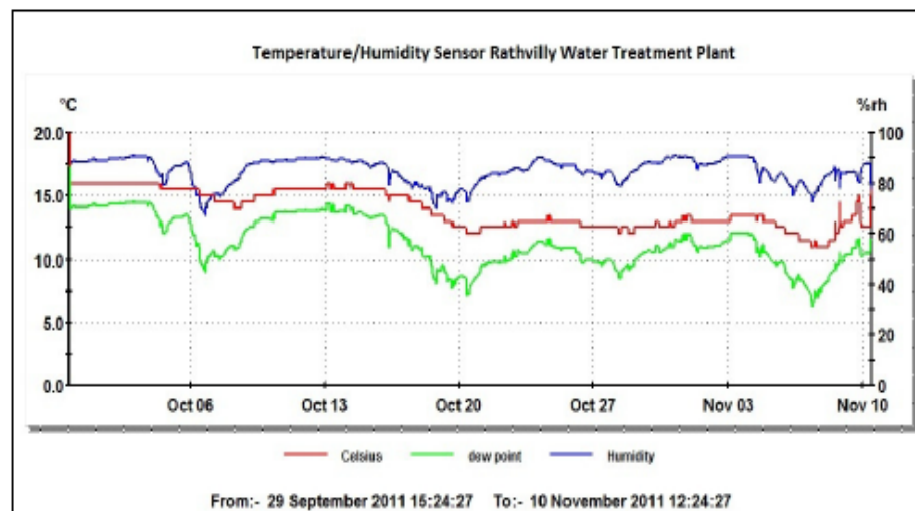


Figure 39 – Temperature/Humidity Sensor Rathvilly WTP *before installation*

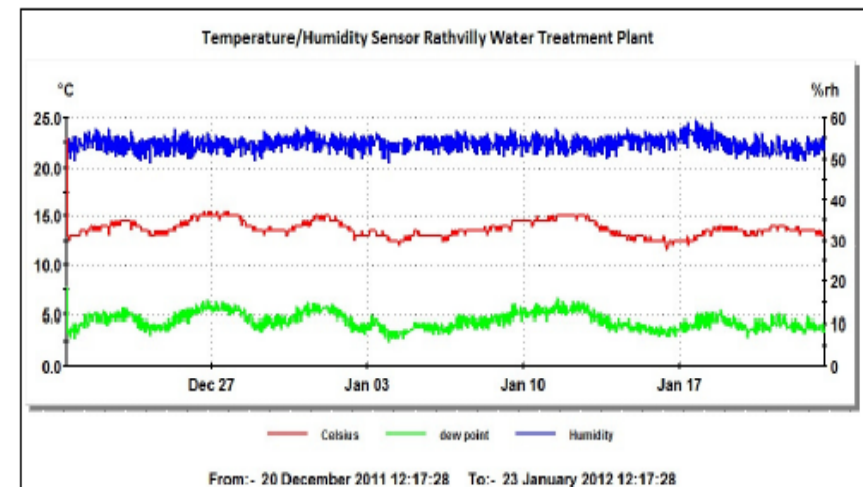


Figure 40 – Temperature/Humidity Sensor Rathvilly WTP *after installation*





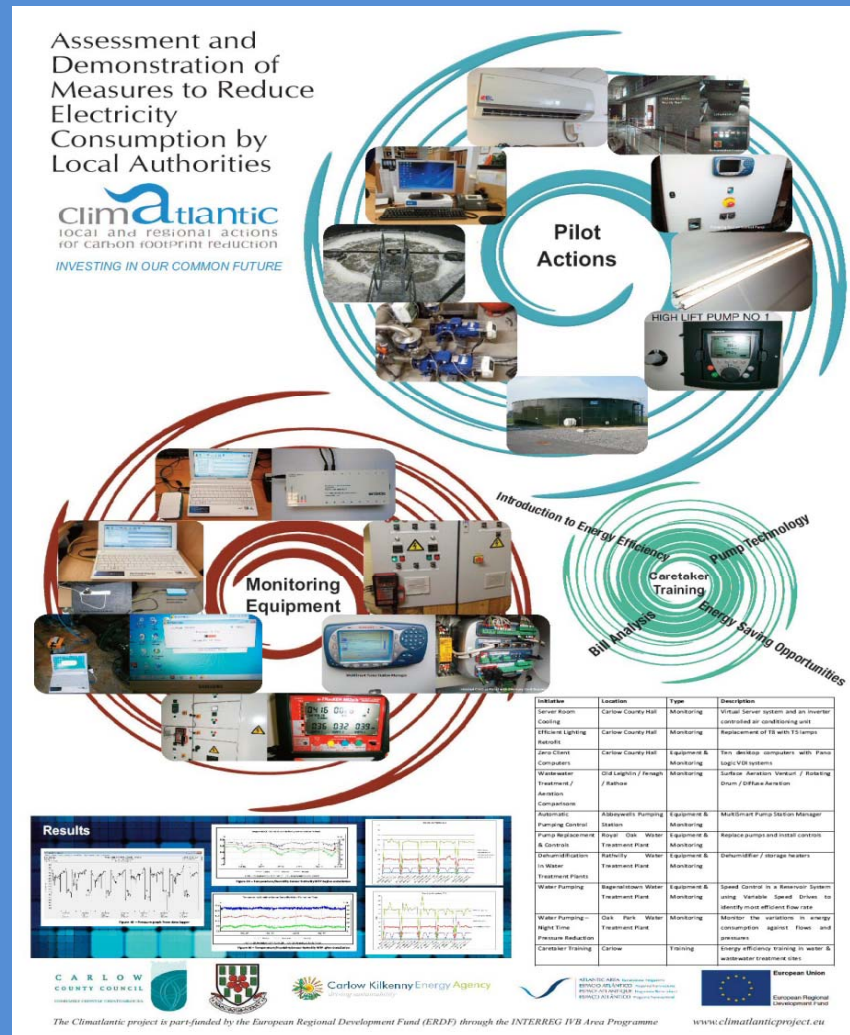
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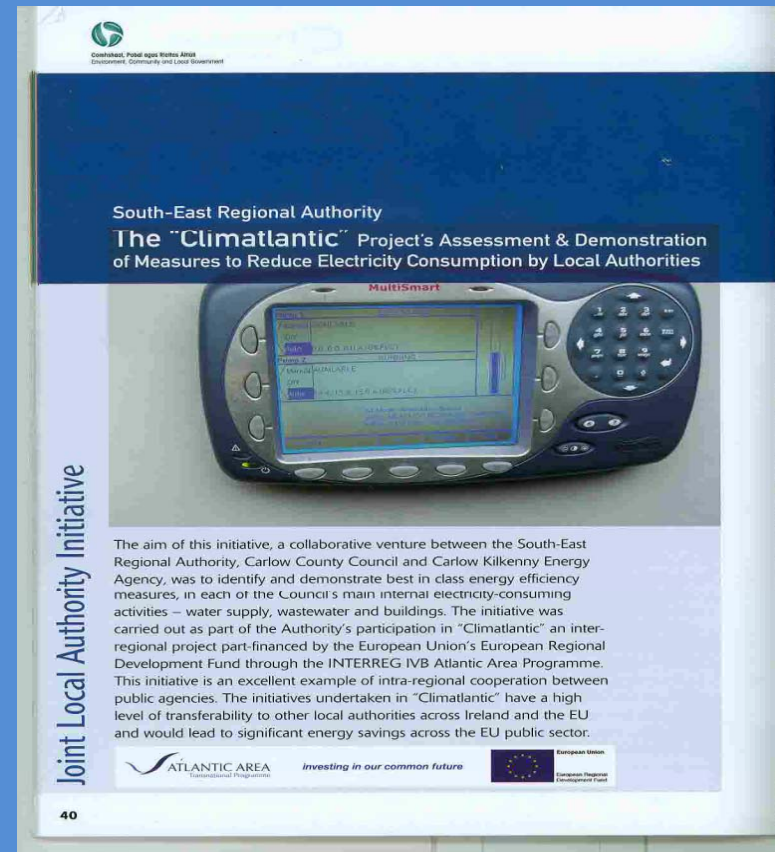


- CKEA produced a booklet and uploaded it to SEAI Energy Link (forum for Energy Professionals in the Public Sector in Ireland). This received good feedback and has been downloaded frequently from the website
- Pilot action presented at World Sustainable Energy Days, Wels, Austria
- Ongoing promotion of the pilot actions through daily engagement with both local authorities in Carlow and Kilkenny, in terms of energy efficiency measures and actions.

## *'Assessment and Demonstration of Measures to Reduce Electricity Consumption by Local Authorities'*

- Shortlisted for a national award in the Joint Local Authority Initiative category in the Excellence in Local Government Awards (Chambers Ireland) and awarded a commendation certificate
- Selected by the COOPENERY as a Best Practice example of collaboration between regional/local public body partnership on sustainable energy planning

[www.coopenergy.eu](http://www.coopenergy.eu)



Bioenergy Seminar 9<sup>th</sup> April 2014

*Bioenergy Cooperatives in Ireland and Experiences from Within the EU*

## REGISTRATION

There is no charge for this site visit and seminar

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TELEPHONE: 053 - 1752 449

Directions to Dunhill Eco Park can be found at:  
[www.dunhillcopark.com/map-direction.html](http://www.dunhillcopark.com/map-direction.html)





**BIOENERGY COOPERATIVES  
IN IRELAND AND  
EXPERIENCES FROM WITHIN  
THE EUROPEAN UNION**

Dunhill Eco Park, Dunhill, Co. Waterford

**Wednesday 9<sup>th</sup> April 2014**



The Climaatlantic project is part-funded by the European Regional Development Fund (ERDF) through the INTERREG IVB Atlantic Area Programme





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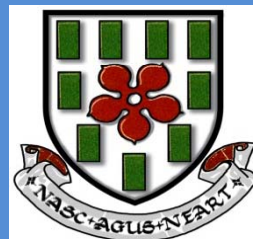
## Other ClimAtlantic Capitalisation Activities

### Energy Forum 12<sup>th</sup> March 2014 – RDS, Dublin, IRELAND

(Annual Energy Show organised by the Sustainable Energy Authority of Ireland)

#### Masterclass in Social Media Marketing

- How to use social media and digital marketing to develop product brand, promote, engage and sell renewable energy related products
- Skills to make the most of sites such as LinkedIn, Facebook, YouTube, Google, Pinterest, Twitter and blogs
- Create online profiles and online personas and connect with existing and potential clients and customers, privacy settings
- How to take full advantage of viral marketing i.e. referrals from online word-of-mouth





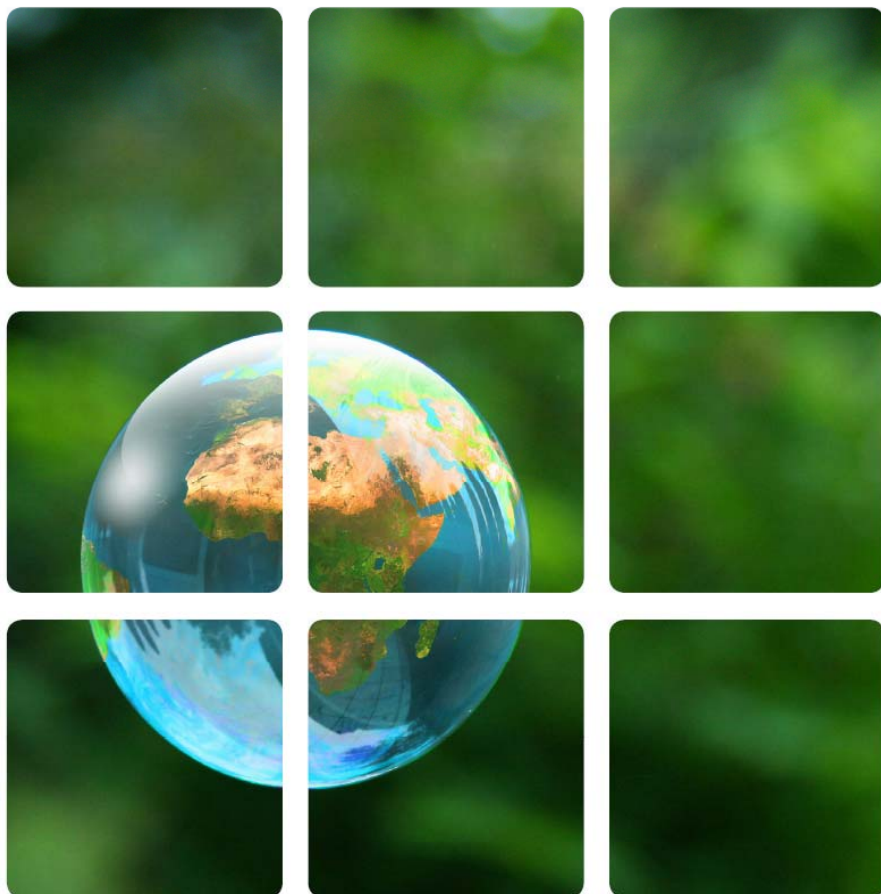
## Energy Forum 13<sup>th</sup> March 2014 – IRELAND

### Day 2: Stakeholder Workshop

- Update on ClimAtlantic Project
- Overview of South-East Region Bioenergy Implementation Plan 2013-2020
- Renewable Energy Policy in Ireland and Europe
- Discussion to formulate a *'Future Collaborative Opportunities Paper'*

## Climatlantic Outcomes and Future Opportunities South East Regional Authority

May 2014



Opportunities to build on  
the outcomes of  
Climatlantic Project

Promotion of pilot action  
at National and European  
level

Identify future actions,  
collaborations and funding  
streams

Identifies key stakeholders



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Thank You !

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