Findings from the Strategic Initiative ACE project

Recommendations on the production and consumption of renewable energy in North West Europe

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Report developed by Codema on behalf of the Academy of Champions for Energy with support from the INTERREG IVB North West Europe programme.
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Communiqué International
Ms Aibhlin McCrann of Communiqué International facilitated and was rapporteur at the ACE Strategic Initiative Workshop in Brussels on the 30th April 2015.

NWE Academy of Champions for Energy
The Academy of Champions for Energy, ACE, is a renewable energy initiative that was launched across several North West Europe countries to promote sustainable and renewable energy in the everyday lives of citizens, communities, local authorities and businesses. The project brought together 10 partners or “Energy Champions” from Ireland, the UK, France, Belgium and the Netherlands. These Energy Champions comprise of local and regional energy agencies, local and regional government, a research body and an NGO.

INTERREG IVB NWE Programme
The ACE project is co-funded by the INTERREG IVB NWE programme, which is a Programme of the European Union to promote the economic, environmental, social and territorial future of the North-West Europe area. It funds activities based on the cooperation of partners from eight countries: Belgium, France, Germany, Ireland, Luxembourg, The Netherlands, Switzerland and the United Kingdom.
Foreword

Message from Codema, lead partner of ACE
As the “Academy of Champions for Energy” (ACE) project comes to a close, we reflect on our achievements over the past 5 years, the lessons that we learnt and the collaborations we made.

ACE created a unique and innovative “Academy of Champions for Energy”, bringing together Energy Champions who lead the way for sustainable energy locally, regionally and internationally. The aim was to improve the co-operation and co-ordination of these Energy Champions in North West Europe (NWE) resulting in a more closely-linked EU network.

The 10 partners of the Academy of Champions for Energy see value in maintaining this collaboration and so the Academy will continue beyond the lifetime of the INTERREG IVB NWE funded project. We will continue to share our ideas and expertise and to communicate the importance of renewable energy for NWE.

As a Strategic Initiative, ACE joined Strategic Initiative Clusters, SIC adapt! and ENVIREO and strategic projects such as EnAlgae and ARBOR to address specific issues of strategic importance for the INTERREG IVB NWE programme. These issues include sustainable energy and climate change adaptation and mitigation.

A strategic geographical map (Figure 1) was developed representing over 180 organisations involved in these strategic projects. The map will facilitate further collaboration among these energy actors at local, national and regional level by increasing the organisation’s visibility and enhancing the impact of the strategic projects.

Collaboration with relevant energy experts across NWE and partners of the Strategic Initiatives (Table 1) helped the Academy of Champions for Energy identify common results which were then discussed and evaluated at a Strategic Workshop held in Brussels on the 30th April.

This publishable report documents key findings and recommendations to increase the production of renewable energy in NWE by building upon the common results of the strategic initiatives and the findings from a strategic workshop held in Brussels on the 30th April 2015.

Edel Giltenane
ACE Project Manager
Take a look at the ACE geographical map at http://www.aceforenergy.eu/partners/ace-geographical-map/

Here you will find organisations participating in energy and climate change actions across NWE.
Introduction

Academy of Champions for Energy
The Academy of Champions for Energy (ACE) is a renewable energy initiative that brought together 10 partners or “Energy Champions” from Ireland, England, France, Belgium and the Netherlands. These Energy Champions comprise of local and regional energy agencies, local and regional government, a research body and an NGO. These organisations brought a different range of skills within the energy sector with the objectives of:

- Improving the co-operation & co-ordination of energy agencies & energy actors
- Strengthening the collective capabilities of the Energy Champions
- Showcasing sustainable & innovative energy practices through demonstration projects

ACE is a “Strategic Initiative” that addressed the specific issue “production and consumption of energy from renewable sources”. The project supports the empowerment of citizens and communities and recognises the important role citizens play in the energy transition. ACE sets out to understand and highlight what supports are needed such as financing, technical expertise and evidence based information on renewable energy resources. ACE resources are available on the project website; www.aceforenergy.eu.

Figure 2: Academy of Champions for Energy
Strategic Initiatives

Strategic Initiatives can be defined as a process to address specific issues of strategic importance for the Programme. Table 1 presents an overview of relevant Strategic Initiatives.

This was a novel approach for project development in a limited number of strategic fields which effectively combined a strategic top-down perspective with the traditional bottom-up involvement of key actors. This approach took into the consideration the geographical and socio-economic distinctiveness of the NWE area and promoted a strategic response to significant thematic and territorial gaps in the Programme area.

As a Strategic Initiative, ACE joined Strategic Initiative Clusters, SIC adapt! and ENVIREO and Strategic projects such as EnAlgae and ARBOR to address specific issues of strategic importance for the INTERREG IVB NWE Programme such as sustainable energy, climate change adaptation and mitigation. Collectively, the projects have developed tools and strategies for:

- Assessing impacts of climate change (e.g. SIC adapt!)
- Raising awareness, improving communications & changing attitudes (e.g. ACE)
- Sustainable retrofitting of buildings (e.g. ENVIREO)
- Addressing policy issues & energy planning (e.g. SIC adapt!, ENVIREO, ACE, EnAlgae, ARBOR, SAFE-ICE)
- Piloting investments with the ambition to replicate (e.g. ACE, EnAlgae, ARBOR)

Strategic Initiative Workshop

A Strategic Initiative workshop was held on the 30th April 2015 in Brussels which brought together these experts in the field of energy and climate change in order to share and evaluate the projects’ results, strengthen the strategic impact of the strategic initiative projects and provide direction for what is required in the future, beyond the duration of the projects. The theme of the workshop was to attract follow-up activity for the production and replication of future renewable energy projects and as is seen later in this report, the discussions naturally converged on citizen participation in the energy transition.

Figure 3: ACE Strategic Initiative workshop, Brussels, April 2015
### Table 1: Strategic Initiative Overview

#### Academy of Champions for Energy

**Project Duration:** 2010 - 2015  
**No. of partners:** 10  
**Budget:** €4,188,938

**Investments:**
- 5Cube renewable energy design installation & dedicated renewable energy space in Kevin St. library (Dublin, Ireland)
- Loenen Energy Neutral village (Loenen, the Netherlands)

**Main Outputs:**
- Staff Exchanges
- Blueprint: The Loenen Way for Energy Transition
- On-line Citizen Engagement tool
- NWE ACE Awards

#### ENVIREO Strategic Initiative Cluster

The aim of **ENVIREO** was to improve conditions for reduced energy consumption in buildings and greenhouse gas emissions through accelerating knowledge development and dissemination regarding sustainability and climate neutrality across a wide range of building types.

**Project Duration:** 2010 - 2014  
**No. of partners:** 4  
**Budget:** €478,978

**Main Outputs**
- Promotion of living examples of sustainably-built or renovated buildings that received funding from INTERREG IVB

**Main Outputs:**
- Suite of recommendations for research institutions, policy makers, information centres, architects & advisors, the construction sector, building owners & project managers on all aspects of sustainable buildings

**LinkedIn:** Academy of Champions for Energy  
**Twitter:** @AceForEnergy  
**Website:** www.aceforenergy.eu

**Twitter:** @Envireo_SIC  
**Website:** www.envireo.eu
### SIC adapt! Strategic Initiative Cluster

**SIC adapt!** is concerned with the adaptation to the spatial impacts of climate change, with the aim to establish and promote measures, call for action and to share knowledge for efficient adaption to the expected spatial impacts of climate change in NWE.

**Project Duration:** 2010 - 2013  
**No. of partners:** 8  
**Budget:** €879,525  
**Website:** [www.sic-adapt.eu](http://www.sic-adapt.eu)

**Main Outputs**
- Analysis of “Tools and Measures”
- Knowledge Platform

### ARBOR

The aim of the **ARBOR** project (energy from biomass) is to foster and accelerate development and use of biomass in North West Europe, to facilitate the sustainable achievement of 2020 energy objectives, and to make the EU a world-class centre for biomass utilisation.

**Project Duration:** 2009 - 2015  
**No. of partners:** 13  
**Budget:** €7,361,958  
**Website:** [www.arbornwe.eu](http://www.arbornwe.eu)

**Main Outputs:**
- Numerous reports including: A benchmark report for an up-to-date overview of biomass for energy in NWE
- Review on feed-in tariffs for electricity as well as the legal framework governing these subsidies
- A database of manufacturers of biomass conversion technologies, suppliers of biomass and related equipment in the UK
### EnAlgae

The project is developing sustainable technologies for algal biomass production, bioenergy and greenhouse gas (GHG) mitigation, taking them from pilot facilities through to market-place products and services.

**Project Duration:** 2009 - 2015  
**No. of partners:** 19  
**Budget:** €14,619,290

**Investments:**
- 9 algal pilot plants across NWE  
  - 3 macroalgae  
  - 6 microalgae

**Main Outputs:**
- Various reports:  
  - On markets & economics of algae cultivation & processing (11)  
  - Technology & expertise in NWE (6)  
  - Scientific papers (17)

**LinkedIn:** Enalgae  
**Twitter:** @EnAlgae_NWE  
**Website:** www.enalgae.eu

### SAFE-ICE

The aim of the SAFE-ICE cluster is to pull together the results and learnings from the participating projects to develop a common understanding of what the low carbon economy is across the 2-Seas region, highlighting good practice in terms of research, innovation & business support.

**Project Duration:** 2013 - 2015  
**No. of partners:** 20  
**Budget:** €654,263

**Main Outputs:**
- Low-Carbon Communications Style Guide  
- Green Procurement Guide & toolkit  
- Launch & testing of the Schiedam Omega Method

**Main Outputs:**
- Policy recommendations, training & workshops for improving business parks & districts  
- Cross-border symposium on heat networks and heat map for business

**Twitter:** @SAFEICE_EU  
**Website:** www.safe-ice.eu  
**Programme:** INTERREG IVA 2 Seas
Scope

Collaboration with relevant energy experts across NWE and partners of the Strategic Initiatives (Table 1) helped the Academy of Champions for Energy identify common results which were then discussed and evaluated at a Strategic Workshop held in Brussels on the 30th April.

This publishable report documents key findings and recommendations to increase the production of renewable energy in North West Europe by building upon the discussions at the strategic initiative workshop and through the lessons learnt from the projects. A list of reports is provided under “Supporting Material” section at the end of this report and these are available on the ACE website - www.aceforenergy.eu.

Common Results

The common results and achievements can be summarised under 4 headings:

1. EU projects influence policy
   The transnational projects have supported decision makers by utilising experience from the ground and evidence from across NWE. For example:
   - Regen SW was represented on two expert taskforces for the UK Government’s Department for Energy and Climate Change (DECC) Community Energy Strategy on shared ownership and grid, where evidence and potential solutions were drawn from the ACE partners
   - The methodology tested by the partners of SIC adapt! to develop climate change adaptation strategies across North-West Europe has fed into the EU Strategy for Adaptation to Climate Change, published in April 2013
   - ZKF, together with two other existing regional climate funds and other national stakeholders, is developing conceptual text for the GREEN DEAL Nationale koolstofmarkt’ (Green Deal national market Domestic offset). This Green Deal is an important step in the recognition of Domestic Offset and the model for regional climate funds that was developed within the framework of ACE
   - The Irish ACE partners contributed to Ireland’s Green Paper on Energy bringing the expertise and learnings from ACE and from Irish communities
2. **EU projects produce award-winning demonstrations and actions**

The exemplar work of the transnational projects has been recognised through various awards. For example:

- The ACE investment “Loenen Energy Neutral village” was a runner-up in the EUSEW Awards 2015
- SIC adapt! was nominated as a finalist in the 2012 edition of the Regio Stars Awards, organised by the Directorate General for regional policy of the European Commission
- The Arbor project was selected as a finalist in the Regio Stars Awards 2014, in the category of Sustainable Growth: Green growth and jobs through Bio-economy
- Zeeuws Klimaatfonds (ZKF) received a national energy award (P-Nuts) for ‘The best regional cooperation’ in the Netherlands for their project Energetic Sports Clubs which was made possible through ACE

3. **EU projects create transnational tools**

By working together, we have developed tools and strategies to facilitate communities in the energy transition and local authorities to prepare for climate adaptation. For example:

- **Business models** – The ACE project developed financially sustainable business models for community energy. More information can be found in the ACE report “Financially Sustainable Business Models for Community Led Sustainable Energy projects”
- **Citizen Engagement tool** – The citizen engagement tool was designed to help individuals and community groups build in citizen engagement as they initiate, plan and deliver projects with sustainable use of energy and resources at the core. For more information - www.aceforcommunities.net
- The eight projects involved in the SIC adapt! Strategic Initiative Cluster collectively developed **65 tools & 49 measures**. Further information on these tools and measures is available on the “Knowledge Platform” section of the SIC adapt! website - http://www.sic-adapt.eu/outputs/knowledge-platform.html. For example:
  - The **Adaptation Compass**, which is a practical tool for assessing vulnerability and adaptation options across different policy fields. It helps planners and experts in cities and water authorities to plan a step-by-step transition to creating climate-proof cities. The tool can be found on http://www.future-cities.eu/project/adaptation-compass/
4. EU projects enhance communication to EU citizens

- EU citizens are an important target audience for European projects but sometimes they feel far removed from the European Union. The Strategic Initiatives recognise the importance of citizen engagement and also about creating an understanding of the specific issues through improved communications which are innovative and creative. By working together we can learn from one another and develop new ways to communicate our message to communities and citizens.

Figure 4: The 5Cube in Dublin City, a renewable energy feature that represents 5 minutes of oil consumption in Ireland which inspires citizens to think of alternative energy. Photo by Ros Kavanagh
Key Findings

Citizen Empowerment

Empowering citizens to become pro-active in the energy transition rather than passive consumers is a critical key factor in moving towards a sustainable energy future. As we move from centralised to decentralised energy systems, citizens can have an active role in managing and producing their own energy. However, a lot of support and meaningful engagement is required to create the energy-empowered citizen.

Recommendations

1. **Renewable energy needs a positive media campaign**
   Media has a powerful role in influencing the public debate on climate change. We often hear misleading and contradictory information on renewable energy technologies or on the threats of climate change. Effective communication of reliable and evidence-based information is required to improve public perception and understanding.

2. **Meaningful citizen engagement**
   For meaningful engagement to take place it is important to:
   - Understand what motivates people - behavioural science can be applied to gain a real understanding on what motivates citizens and help promote behavioural change
   - Break down technical jargon and develop visual aids that help explain the issues in a clear and understandable way
   - Include children – they are masters of ‘pester power’
   - Be creative and have fun
   - Understand that the process is a slow one, requires a lot of time & resources

*Figure 5: Renewable energy demonstration by the school children of Loenen, the Netherlands*
3. **Local citizens need a voice in local planning**

Active public participation in local policy decisions is vital to secure public support. Citizen concerns should be addressed as real concerns rather than being dismissed too quickly as “NIMBYism”. Giving citizens a voice enables them to become part of the solution and empowers them to get involved.

It is also important to act upon and follow up on reports and strategies and ensure that they are made available to all relevant stakeholders.

4. **Communities need a lot of support**

The structure of community groups vary across different countries (co-operatives, social enterprises, community benefit enterprises, etc) which is determined by the legislative and fiscal incentives of each country. A common feature however is that community projects need a lot of support. Members of community groups are usually volunteers who do not necessarily have all the skills to prepare, plan and implement community projects. Much support is needed to increase the capabilities and knowledge capacity of the group. Examples include:

- Intermediary bodies, such as energy agencies, can act as facilitators, e.g. provide training and help with the planning process, technical expertise, funding & monitoring impact
- Peer-to-peer support should be encouraged where like-minded citizens share their experiences and learnings with one another
- Municipalities should also have a supporting or facilitating role
- Financial and policy supports are also necessary and are listed later in the report

![Figure 6: Peer-to-peer learning: NWE communities meet at the ACE Loenen visit on 28th November 2014](image)

5. **Benefits and ownership**

Community energy projects should benefit the local community and not just investors or members of a society or co-operative. Local ownership and local benefits are vital for public acceptance. Shared ownership should also be explored which can minimise the financial risk to the group while retaining financial and social benefits within the community, bearing in mind that community projects should be driven locally rather than commercially driven.
Policy Supports

Community energy has an important role to play in creating energy citizens who are actively participating in the energy transition which in turn helps to achieve national and EU energy targets. The following five policy recommendations promote the “production and consumption of energy from renewable sources” with a particular focus on citizens and communities.

Recommendations

1. **Facilitate communication between policy makers and citizens**
   Energy agencies and municipalities have an important role to play to bridge the gap between citizens and policy decision makers. Independent intermediary bodies can encourage and build confidence in local initiatives through research, local knowledge and technical expertise as well as acting as a liaison between policy makers and the local community.

2. **Knowledge building of politicians**
   Decision makers may not have technical backgrounds or intrinsic knowledge of renewable energy technologies or what benefits and opportunities they can bring locally, regionally and nationally. Study visits and tours to operational community and renewable energy sites will help create awareness and develop expertise among politicians where they can see first-hand the benefits and what policy changes are needed to drive renewables forward.

![Figure 7: The Templederry community invited the then Minister for Communications, Energy & Natural Resources Pat Rabbitte TD to officially open Ireland's first community-owned wind farm in Co. Tipperary](image-url)
3. **Remove barriers accessing the grid**
Access to the grid is a common issue for communities across NWE. It is a complicated, expensive and risky process for community groups that are often voluntary, with little expertise and financial backing. Positive discrimination is required for locally-owned projects to connect to the grid; community groups should be recognised as being distinct from the traditional, large energy suppliers and therefore they should receive proportionally different treatment that will ensure equality and allow new players to enter the market.

4. **Development of Smart Grids**
As we endeavour to meet our renewable energy targets, sufficient grid capacity to accommodate increasing electricity production from renewable energy is crucial. Pilots for smart grid projects that address the needs of the local community can help empower the citizen, giving them more control over their energy use and costs and facilitate the entry of new participants to the generation of electricity. Smart grids can help promote the pro-sumers; producing and consuming their own energy.

![Figure 8: The ACE 3D Sustainable House gives examples of how citizens can produce and manage their own energy (www.aceforenergy.eu/sustainablehouse/)](image)

5. **Long term energy policy that outlives election periods**
Energy policy needs a long-term plan and should not be bound to changes in political government. As political governments can change regularly, periods are too short to develop an efficient energy policy. A national long term vision for 2050 is required, e.g. the Danish Plan or German “Energie wende.”
Financial Incentives

The ACE project developed financially-sustainable business models for community energy which puts value on environmental, social and community objectives and not just revenue generated. These local community projects have different financial needs to that of larger commercial projects and therefore different supports are required to get their projects off the ground.

Community energy business models are influenced by the financial support mechanism within the country there are operating. Bearing in mind that financial mechanisms differ in each country, the following general recommendations were made based on discussions at the workshop and findings from the ACE Strategic Initiative project.

Recommendations

1. Grants and low interest loans
   There are many upfront costs at the early stages of project development from feasibility studies through to planning and grid connection applications and it can be very difficult for a local project to raise finance to fund these. Grant and grant-to-loan making facilities should be made available to provide funding for these upfront costs. For example, in England the Rural and Urban Communities Energy Funds offer grants and contingent loans to communities for planning and development costs and the loan will only be paid back if the project is successful.

2. Feed-In-Tariffs
   It is recognised that Feed-In-Tariffs can provide a fixed and reliable source of income for energy exporters to the grid and is the main mechanism by which communities who generate renewable energy can earn income. Community projects need additional tariffs to overcome the high administrative cost which is disproportionate to the scale of community projects. A similar tariff structure to that of Germany will encourage more community RES.

3. Tax incentives
   Tax rules that favour community-owned developments should be established. For example, tax relief for suppliers of locally-produced energy to the grid and investors of community companies, lower tax rate for consumers of locally-generated electricity and purchasers of energy efficient and RE technologies. A higher taxation of carbon could be ring-fenced for the roll-out of energy efficiency and renewable energy technologies through various grants, schemes and low-interest green funding.

Figure 9: Blueprint: The Loenen Way for Energy Transition
4. Innovative Business Models:

For a business model to be sustainable, communities will need to generate revenue from energy production to pay off loans and investors or even have a surplus that will be used as a revolving fund to invest into other activities that deliver on their company’s environmental and socio-economic objectives.

The ACE business models for community energy projects can be found in the ACE report “Financially Sustainable Business Models for Community Led Sustainable Energy. The experience of the village of Loenen, the Netherlands, on their journey to become an energy neutral village is shared in the report “Blueprint: The Loenen Way for Energy Transition.”

![Figure 10: Communities for Renewables Business Model](image)

The ACE Communities for Renewables (CfR) business model works with communities and help develop locally owned projects through a community benefit society or social enterprise structure. The CfR provides expertise from initiation to project delivery, help raise finance through a co-operative share offer and reduce risk. This model ensures community interests are protected and social benefits assured. Surplus profits are to be re-invested back into the local community.
Conclusions

The Academy of Champions for Energy, ACE, is a renewable energy initiative that was launched across several North West Europe countries to promote sustainable and renewable energy in the everyday lives of citizens, communities, local authorities and businesses.

Collaboration between the Academy of Champions for Energy and relevant energy experts across NWE, including the Strategic Initiatives, made possible the identification of common results which were evaluated at a Strategic Workshop and documented in this report.

The common results and achievements found that EU projects

- influence policy
- produce award-winning actions and pilots
- create transnational tools
- enhance communication to EU Citizens

Recommendations were made in the area of citizen empowerment and engagement, policy and financial incentives.

Empowering citizens to become pro-active in the energy transition rather than passive consumers is a critical key factor in moving towards a sustainable energy future. As we move from centralised to decentralised energy systems, citizens can have an active role in managing and producing their own energy.

Future energy policy should recognise the important role of community energy and how this holistic approach of energy consumption and generation can contribute to the 20-20-20 targets.

Local community projects have different needs to that of larger commercial projects and therefore different supports are required to get their projects off the ground. Communities need targeted financial incentives from project concept to implementation.

The 10 partners of the Academy of Champions for Energy and participants at the strategic workshop agreed that transnational European projects provide a valuable contribution in the promotion of sustainable and renewable projects across NWE. Through these co-operation projects, expertise was shared between partners, which in turn benefits local communities and provide evidence for political discussions.
Supporting Material

ACE Report “Research on market development barriers”
ACE Report “Blueprint: The Loenen Way for Energy Transition”
SIC adapt! “Discussion Paper: Findings and conclusions from the Cluster projects’ adaptation tools and measures”
SIC adapt! “Policy Recommendations: Adaptation to the spatial impacts of climate change”
INTERREG IVB North West Europe Programme Overview 2007 – 2013: “NWE in action - 12 Reasons to Engage”