



**Local & Regional
Europe**

Green Corner

Sustainability:










Best practices from CEMR members


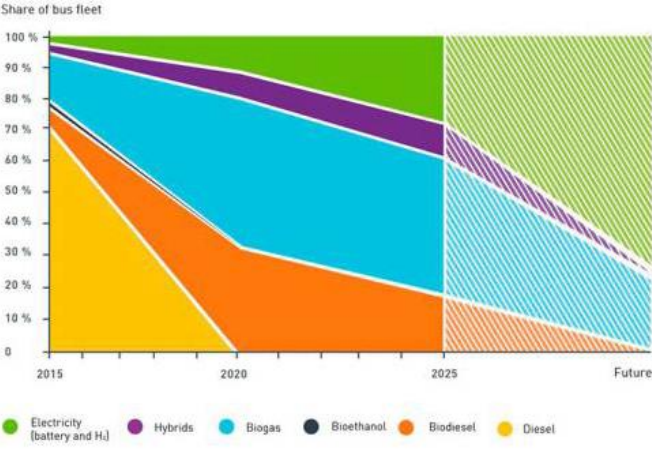


| December 2017

LIST OF 15 CONTRIBUTIONS

CEMR Member	GU issue	TOPIC
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 <p>Swedish Association of Local Authorities and Regions</p>	N 9	<p>Renewables (biofuels)- Östergötland – A successful region where biofuels contribute to industrial growth, increased opportunities for the farming sector and drive the transformation to a fossil-free society</p>  <p>Biofuel field, Östergötland</p>
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		 <p>MuniFin, credit institution offering green bonds</p>
	N 18	<p>Renewables and circular economy (energy from waste) - Local waste management association in the District of Leoben</p>  <p>Fluidised bed process , District of Leoben</p>
	N 19	<p>Energy efficiency and renovation- InnovationCity Ruhr serves as the perfect model for integrated energy and climate action in an urban space</p>  <p>Inauguration of the VIVAWEST Future House</p>
	N 20	<p>Renewables (bike transport) : Municipality of Altllengbach initiates “Bikeline”.</p> <p>Helmsticker & Terminals</p>  <p>Die Fahrten der SchülerInnen werden vollautomatisch erfasst; es müssen weder Listen ausgefüllt noch Eintragungen auf Webpages gemacht werden. Ermöglicht wird dies durch kleine elektronische Sticker, die auf den Helmen (Helmpflicht!) der BIKEliner befestigt werden.</p> <p>In der Schule angekommen, checken die Jugendlichen dann bei einem Terminal ein und registrieren somit vollautomatisch ihre Fahrten.</p>
	N 21	<p>Renewable energies -(electric transport on water) - EV AMPERE, SOGNEFJORD, The world's first zero emission electrical car ferry</p>  <p>EV AMPERE ferry</p>

	<p>N 22</p>	<p>Renewable energies (bus transport)- Ruter#: fossil free 2020, Oslo area all public transport on renewable energy</p>  <p>Share of bus fleets in Norway using renewables</p>
	<p>N 23</p>	<p>Climate and Finance- Strong and Sustainable Communities-Aberdeenshire Council and Carbon Budgeting</p> 



FULL CONTRIBUTIONS

General Info of the CEMR member ISSUE 7	
CEMR Member Name (name of the association who contributes and name of the individual person who writes the short article)	Judith McGregor, from COSLA
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Description best practice/ project/ food for thought	
A first stakeholder workshop at CoR on EU Strategy on Adaptation to Climate Change	
<div style="display: flex; align-items: center; justify-content: space-around;">   </div> <p>In April, COSLA attended a first stakeholder workshop at the Committee of the Regions on the evaluation of the EU Strategy on Adaptation to Climate Change. It offered opportunity to discuss regional and local views on implementation to guide the evaluation and consider also the European Climate Adaptation Platform (CLIMATE-ADAPT) which aims to support Europe in adapting to climate change through data and information.</p> <p>This is an important issue in Scotland where there are several pressing challenges including biodiversity loss and degradation of ecosystem services, sea level rise, storm surges and flooding. Adaptation and protection of critical infrastructure such as power, road and rail networks which may be particularly vulnerable to climate change is crucially important for Local Authorities.</p> <p>Scottish Local Authorities are committed to addressing climate change and its impacts through mandatory public climate change reporting (Climate Change (Scotland) Act 2009) and have also demonstrate leadership by making voluntary commitments (Scottish Climate Change Declaration). The Scottish Climate Change Declaration set out Local Authorities' intent to work across all areas in order to drive the behaviour and technological changes necessary to reduce carbon emission levels and meet national targets.</p> <p>Climate change affects all citizens, but certain effects have a stronger direct and indirect impact on more vulnerable parts of the population. Going forward, demonstrating the socio-economic benefits of climate action will be key to ensure that governments commit adequate resource. By focusing on more than just the effects on the physical environment but also the socio-economic benefits and potential for climate justice the case will be strengthened further. Tools for demonstrating economic, environmental and social benefits of climate adaptation should be better explored at EU level.</p> <p>In order to ensure that EU support is available, special attention should be given to simplifying funding streams and making them more user friendly to ensure that local and regional actors can fully benefit. Although many financial instruments exist (ESIF, H2020, LIFE, EU Solidarity Fund, Natural Capital Financing Facility, etc.), accessing sources of funding for the implementation of adaptation measures is still the biggest challenge for Local Authorities.</p>	

Mapping where Member States have underutilised EU funds for adaptation would also be helpful.

Also important in the view of CEMR, was that adaptation should be more mainstreamed into territorial cohesion policies (Territorial Agenda post 2020) and in general all other EU strategies, policies and directives. There is also need to strengthen links and dialogue in the transposition of national strategies, between the Commission and Member States, but also with full involvement of Regional and Local Government.

There will be further opportunity for CEMR members to participate in the Commission's evaluation of the Adaptation Strategy, which was first adopted in 2013. The evaluation will examine progress achieved in implementing the strategy, identify lessons based on what has worked well and what has not, and offer recommendations for its future development. It will cover the relevance, effectiveness, efficiency, coherence and EU added value of the strategy.

General Info of the CEMR member ISSUE 9	
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Website link or references if available	Agroethanol in Norrköping: www.agroethanol.se/en/Bioethanol Other useful links/references FAO: www.fao.org/bioenergy FAO expert Olivier Dubois presentation 2016, including key messages: http://www.ieabioenergy.com/wp-content/uploads/2016/05/P02-What-FAO-thinks-and-does-about-sustainable-bioenergy-Dubois.pdf FAO Policy brief on Energy-smart food systems 2011: www.fao.org/3/a-i2456e.pdf Eurostat database: EU "fallow land" and deserted farm land http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do
Picture of the CEMR member who sends the information or picture of the project/similar	
Description best practice/ project/ food for thought	
Östergötland – a successful region where biofuels contribute to industrial growth, increased opportunities for the farming sector and drive the	

transformation to a fossil-free society.

Description of the project/best practice/food for thoughts can include: objective the project and link to the EU context, impact on the local context, reflections on a EU matter,...

Sweden is a European leader on renewable energy and our municipalities and regions are at the forefront of this development. They are increasingly deploying renewables in their energy production as well as in their transport systems. Renewables currently account for 75 percent of the fuel used in public transport and one quarter of the local and regional authorities' car fleets.

The renewable energy mostly comes from renewable electricity and from biofuels, including from ethanol, biogas and biodiesel based on food and feedstuff based crops. These biofuels, although coming from the first generation, demonstrate excellent climate and environmental performance. One such an example is the agro ethanol produced in Norrköping in Sweden, which produces bioethanol with 95% carbon reduction. This figure is higher than normally for grain-based ethanol due to several things. It is produced in a highly efficient process where both ethanol, animal feed protein and carbon dioxide (with an industrial use as carbonic acid) is produced from wheat and food waste. The process is supplied with renewable energy from a nearby combined heat and power plant and the excess heat goes straight back to the district heating system to heat the homes of the nearby living citizens. The protein being used for animal feed, makes Sweden less dependent on soya flour imports from other parts of the world.

This kind of biofuel fall under the category of so called "first generation's biofuels" or "food and feedstuff based biofuels", which currently are subject to a heated debate on European level. In the revision of the Renewable Energy Directive, the Commission proposes to phase out support for biofuels coming from the first generation, based on the assumption that there is not enough land available to grow both energy crops and food, with biofuels having indirect land-use change effects. In this discussion, it is important to bring to mind that the UN Food and Agricultural Organization (FAO) has a more balanced view including possibilities for both food and fuel. In fact, there is a lot of available land in Europe - abandoned arable land has increased by about 20 million hectares since 1991 and there are about 7 million hectares of agricultural land in fallow, according to Eurostat. The cultivated area decreases due to higher yields.

The FAO also advocates that biofuels should be assessed on their climate performance and environmental impact and not on the raw material they are made of. For this reason, the Commission's categorical breakdown in first and second generation of biofuel is problematic. To phase out crop-based fuels hampers investments in sustainable and renewable biofuels based on a wide range of sources, including crops, agricultural residuals and other waste products at a time when we need more – and not less – renewable energies in order to phase out fossil fuels. When a first generation biofuel demonstrates good carbon reduction performance and is produced in a sustainable way, it should not be penalized. Rather, it should be promoted – as an increased cultivation of energy crops can promote food production by facilitating the introduction of modern farming methods, bring investment capital and provide revenue to farmers. Experience from Sweden shows how food production increases in connection to energy crop projects. Growing crops for biofuels promotes a living countryside, employment opportunities, biodiversity, energy security and future food security.

General Info of the CEMR member

ISSUE 10

CEMR Member Name (name of the association who contributes and name of the individual person who writes the short article)


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<p>Picture of the CEMR member who sends the information or picture of the project/similar</p>	 <p>Ignalina surrounding</p>
<p>Description best practice/ project/ food for thought</p>	
<p>Ignalina municipality–renovation leader in Lithuania</p>	
<p>Description of the project/best practice/food for thoughts can include: objective the project and link to the EU context, impact on the local context, reflections on a EU matter,...</p> <p>Energy efficiency is one of the main strategic objectives in Lithuania. <i>In particular, one of the biggest potential to save energy is in the building sector, as recently Maroš Šefčovič, Vice-president of Energy Union, recalled that 75% of EU’s housing stock is not energy efficient. Back in 2004, the Lithuanian Multi-Apartment Building Renovation (Modernization) Programme was approved by Government. The main aim of the programme was to increase energy efficiency in multi-apartment buildings and to ensure that the cumulative annual heating costs and the return on investment cost after the renovation do not exceed the heating costs before renovation.</i></p> <p>The best results in renovation have been reached in the last five years:according to the Housing Energy Efficiency Agency, 1566 multi-apartment buildings have been renovated since 2013, and the majority (796 buildings) were renovated last year. At present, more than 400 multi-apartment buildings are under refurbishment.</p> <p>The decision to involve Lithuanian local authorities as main partner in the process is the main reason for the significant renovation success. Due to active municipalities participation, approximately 1507 multi apartment buildings have been renovated since 2013. Especially if we compare the amount of building renovated to the much lower number of apartments renovated between 2005,-2012 (479), the present is a huge success.</p> <p>Now, after refurbishing their houses, hundreds of thousands of Lithuanian residents enjoy nicer surroundings and lower bills for heating. In the renovated buildings, more than 40% of the energy for heating is saved, another step towards the preservation of the environment and a rational consumption of natural resources.</p> <p>The absolute leader in renovation at local level is Ignalina municipality, a small municipality of 18085 inhabitants. Ignalina was one of the first municipalities to start public and residential buildings renovation. The achievements are remarkable: from 2008 to 2015 40 public buildings (hospitals, schools, kindergarten, other public buildings) have been renovated using different financial programmes with approximately 10 mln euros of cost.</p> <p>This not only changed the aesthetic appearance of the buildings, but also improved the working conditions and reached up to 45% of heating energy savings.</p>	



Ignalina municipality launched a successful multi apartment buildings renovation in 2010. However at the beginning it was difficult to show the benefit to citizens and to find agreement with the building owners whose financial contribution was only 15-20% . After the renovation of the first 17 buildings, the benefit became obvious: energy savings were 45-50 percent and then the renovation process accelerated and 78 additional buildings were renovated. The municipality is seeking to renovate still 20 buildings in next two years and to reach hundred percent result.



Ignalina’s example showed that the key element for success is municipality commitment and active role as well as good communication with owners and services providers. As mentioned Henrikas Siaudinis, Mayor of Ignalina, “Successful renovation has a substantial positive effect on sustainable economic growth and can improve the lives of many people”.

General Info of the CEMR member ISSUE 11	
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Picture of the CEMR member who sends the information or picture of the project/similar



Description best practice/ project/ food for thought

NAMRB agreed with the National Trust EcoFund on the implementation of green procurements in the National grant scheme for electric vehicles in Bulgaria

Between 24.01-20.04.2017 Bulgarian municipalities could apply for the purchase of electric vehicles with financial support under the innovative scheme of the National Trust Eco-fund (NTEF).

The National Trust Eco Fund (NTEF) is a legal person, organization with public-state management, established in 1995. Its statute and functions are stipulated by the Environmental Protection Act and Climate Change Mitigation Act. The Fund's main objective is the management of financial resources accruing from "debt-for-environment" and "debt-for-nature" swaps, from international trading of assigned amount units (AAUs) of greenhouse gases, from sale of allowances for greenhouse gas emissions from aviation activities, as well as such resources provided by governments, international financial institutions and other donors for environmental protection in the Republic of Bulgaria. Its Advisory Council consists of representatives of the governments and financial and other institutions which have provided financial resources or which render assistance to it, as well as of representatives of the greenhouse gas emissions buyer countries.

The total budget of the electric vehicles scheme is 1.7 million BGN. Each applicant may receive a subsidy for a purchase of up to 3 vehicles – beneficiaries may choose from few types of electric and/or hybrid vehicles. The subsidy per vehicle varies between 20 000 and 40 000 BGN depending on its category. Municipalities could apply for financial support for multipurpose/transport electric vehicles (including small vehicles and mini vans to deliver communal services). **The application guidelines were designed by the Eco-fund with the support of NAMRB in the framework of the project GreenS**, funded by the EU Program Horizon 2020, with an objective to encourage green public procurements in public sector, contributing to the efforts of Bulgarian local authorities to cooperate within European urban development networks.

NAMRB attracted NTEF to participate in the National Steering Committee of GPP stakeholders in Bulgaria, from its establishment. This partnership continued in other forums under the GreenS project and resulted in specific collaboration in preparing the design of the electric vehicles scheme of NTEF. For this purpose, NAMRB submitted to the Fund the technical term templates for vehicles, developed within the project and adapted regarding Bulgarian legislation, which was adopted.

The guidelines require municipalities to purchase these vehicles by **green procurement procedure** and **that the EU criteria for green public procurement in the transport sector are applied**. In addition, another key element of green procurement is the inclusion of **the criterion "Life cycle cost"** for selection of bidders.

The guidelines prescribe two options for award criteria: 1) the "traditional" lowest price of purchase and 2) the level of costs – cost effectiveness, including the **life cycle costs** of the product. **The Eco-fund will encourage municipalities to use the LCC criterion.**

The life cycle cost is a key element of the green public procurement concept – a leading European policy in the field of environment protection and energy efficiency. This is reflected as a legal option in the new Public Procurements Act, in force since April 2016.

*This award criterion, however, is new and still have to gain wider application in public procurement practices in Bulgaria. Yet, municipalities have used some of its elements so far. Its core significance is as follows: in the evaluation of offers one must not only check the purchase price, but also **all costs related to the use of the product – i.e. delivery costs, operational and maintenance costs, and end of life costs.***

In practice, municipalities have often used criteria, including the assessment of operation costs, for example electricity and fuel consumption, other consumables use, etc. However, in

many other cases of municipal practice, such as the closure of landfills, showed to us how high can be the costs of taking certain assets out of operation. The logic behind the LCC criterion is best summarized by the old adage “Often the cheapest purchase cost us dear later”.

In this regard we have to consider as well another important aspect – when we purchase assets through public procurement under European programs, this is done with grant money, whereas the costs for its subsequent maintenance are covered by our municipal budget. Thus, it is not hard to estimate the pros and cons – either choose an “initially” more expensive product with lower life cycle costs or vice versa.


Moreover, we constantly make this choice as ordinary consumers – whether it is for energy efficient light bulbs or heating appliances, or for cars of lower fuel consumption, etc. Why it is important and recommendable to use this criterion – in order to try to foresee as much as we can future expenditures and based on them to make an informed decision.

The indicators to assess the LCC of the electric vehicles have been designed jointly by NAMRB and the Eco-fund, in the same time making use of the Methodology adopted by the Ministry of transport for life cycle costing in transport (Ordinance H-18 / 2016).



In addition, the application process under the scheme is simplified as much as possible. Applicants must fill in a single form. The prioritization of applications shall be based on environmental benefits (reduction of emissions of harmful nitrogen and hydrogen oxides and of dust particles). The scheme also includes clear and unified evaluation of ecological and energy saving benefits from the implementation of each project.

With regard to the declared large interest by the local authorities, expectations are that this scheme will really boost the implementation of the National investment program on climate change mitigation and will encourage the use of green public procurements.

General Info of the CEMR member ISSUE 12	
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Picture of the CEMR member who sends the information or picture of the project/similar	



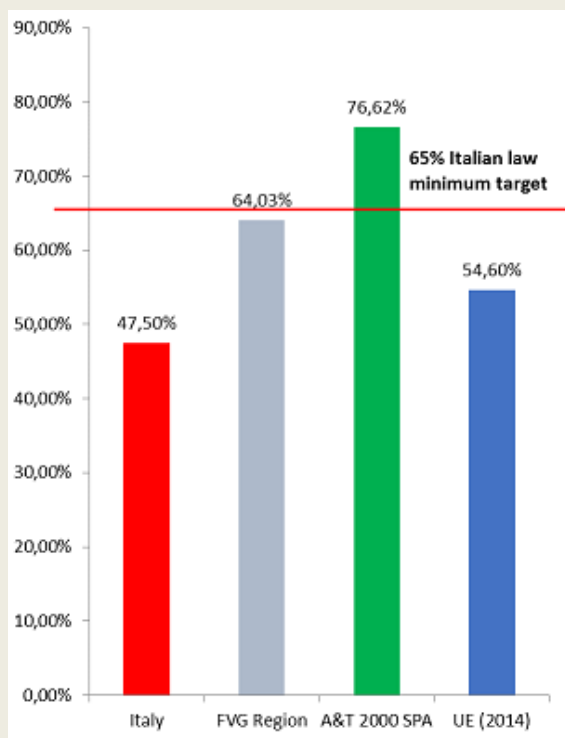
Description best practice/ project/ food for thought

Closing the loop: increased waste management in Friuli Venezia Giulia Region, Italy

A & T 2000 is a public owned company, which deals with the integrated waste cycle management in the territory of 50 municipalities in the province of Udine (Medio Friuli, Friuli Collinare, Gemonese) and 1 municipality of the province of Trieste.

In the autumn of 2007, A & T 2000 started collecting waste "door to door" in the territory of 6 municipalities: with the new system, these municipalities recorded a significant increase in the separate collection that led them to be among the more virtuous at national level with differentiated collection rates of more than 75%.

In the wake of the positive results achieved, in the following years almost all the municipalities served by A & T 2000 adopted the door-to-door system, reaching the highest differentiated collection targets at national level:





Results achieved:

- **per capita production of undifferentiated waste is very low** (average 2016: 77.48 kg / inhabitant / year); Especially in the municipalities where punctual charging has been introduced, in addition to the door-to-door system, there is still a significant reduction in residual dry production (approximately 50 kg / inhabitant per year).
- **High levels of differentiated collection:** municipalities served by A & T 2000 rank first at national level (the average percentage of differentiated collection was 76.62% in 2015, 77.54% in 2016);
- **High quality of collected material with significant sales revenues**, which are relocated to individual municipalities based on the quantities collected and which contribute to offset collection costs.
- **National acknowledgments** for both the high percentage of separate collection and the low residual dry yields. This excellence was acknowledged as part

of the National Prize National Award Ricicloni, initiative of Legambiente with the patronage of the Ministry of the Environment and the Protection of the Territory and the Sea, which each year rewards numerous municipalities served by A & T 2000 (all below 75 Kg / ab / year of residual waste production and with differentiated collection rates of over 65%).

Beyond these remarkable results, over the last few years A & T 2000 has introduced innovative system in collection centers. Besides the simple identification of users, it allows to monitor the waste delivered, avoiding abuse and checking the possible overruling of the limits set by municipal regulations for certain types of waste. The device allows A & T2000 an optimal management of the collection center through the handling functionality of take-up requests, reports and real-time abnormalities and inventory of the materials on the pitch.

Thanks to this procedure, collection centers become as a matter of fact, the main access point for users and a fundamental point of contact between waste manager and citizen.

General Info of the CEMR member ISSUE 13	
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Website link or references if available	<i>Useful links/references:</i> http://www.lifeseadapt.eu/it/ Home Eensulate.eu http://www.adriawealth.eu/project/sea-r/
Picture of the CEMR member who sends the information or picture of the project/similar	 
Description best practice/ project/ food for thought	
Marche Region engagement in fighting climate change	
<p>Marche Region (Center of Italy) is engaged in fighting climate change and improving energy efficiency: below some closed, ongoing and starting projects in which the Region is actively involved:</p>	
<ol style="list-style-type: none"> 1. <u>LIFE SEC ADAPT (ongoing) on climate adaptation:</u> LIFE SEC ADAPT project aims to study strategies for adapting to climate change at the municipal and regional level, in the framework of Mayor Adapt Convention, for the exchange of good practice among partners. Among objectives there is increased awareness of local decision makers on importance and urgency of adaptation strategy and the adoption of Climate Change Adaptation Strategies and Plans by the 17 Beneficiary Municipalities. Among the participants: 2 municipalities of the Marche, 6 Croatian municipalities in the Istrian region, 	

- one municipality in the Murcia region and the Development Agency of the municipality of Patras (Greece).
2. **EENSULATE (ongoing) on building retrofitting:** the objective is the development of innovative lightweight, highly insulating energy efficient components and associated enabling materials for cost-effective retrofitting and new construction of curtain wall facades.
 3. **SEA-R (finished) on renewables energy in Adriatic Sea region:** The SEA-R project aimed at the development and diffusion of renewable energies, as well as the introduction of energy efficiency measures between partners and was divided into three main themes, inspired by energy resources available in the Adriatic Euro region (solar and sea energy). Among project results: the implementation of 4 photovoltaic plants in 3 different Adriatic regions; the opening of 5 Energy Demo Info Points; the prototyping of a plant for the production of biogas from algae.
 4. **PROGETTO ITI (starting soon) on building retrofitting:** Palazzo Ricci's (the Pesaro-Fano municipal property and corpus of the future Music Campus) energy efficiency measures are aimed at improving the sustainability of the building and promoting energy efficiency through interventions on electrical and thermal systems. Expected results are: saving of energy and heat consumption and consequent economic savings; reduction of CO₂ emission and other greenhouse gases; improving quality and health, developing innovative systems and control logic to improve building management; Implementation of a sustainable building management model and user behavioral guidelines, which can also be transferred to other historic buildings.

General Info of the CEMR membre ISSUE 14r	
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Website link or references if available	Link to English version of the report 'The Green Hydrogen Economy in the Northern Netherlands' http://verslag.noordelijkeinnovationboard.nl/en Director Northern Innovation Board; Denisa Kasova kasova@noordelijkeinnovationboard.nl

Picture of the CEMR member who sends the information or picture of the project/similar



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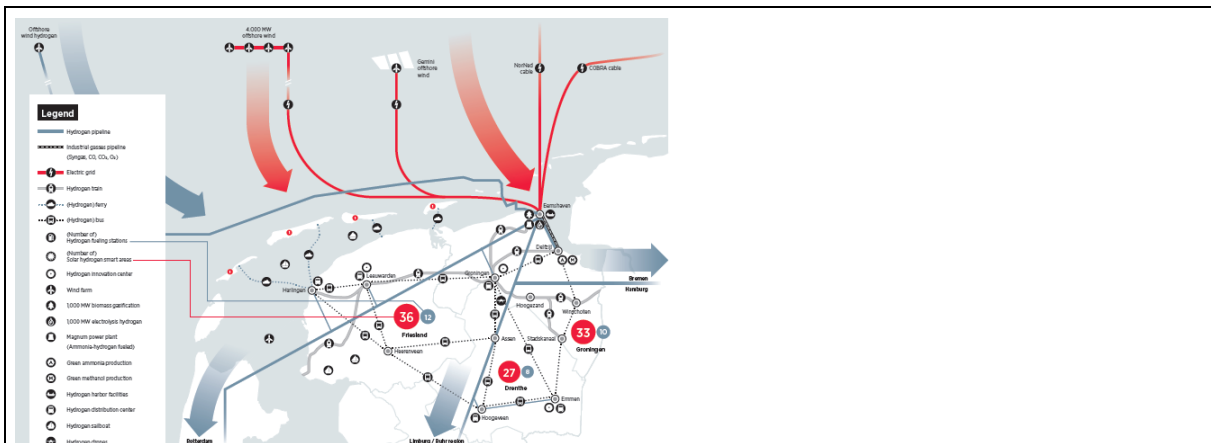


Description best practice/ project/ food for thought

The Northern Netherlands on its way to a hydrogen economy
Europe's sustainable power point

*Thanks to the natural gas field beneath the Northern provinces, the Netherlands has been one of Europe's largest energy suppliers for fifty years. The area is now rapidly switching to sustainable energy sources. **The North is preparing for the full transition to a green, hydrogen economy.** The three Northern provinces of Groningen, Friesland, and Drenthe call themselves the "Energy Valley". Dutch gas is used in large parts of Europe. The Northern Netherlands is an international distribution junction for gas and electricity; a genuine energy hub. The North has a pivotal position with regard to infrastructure and knowledge for making Europe's energy supply self-sufficient. We are creating a new economy here.*

*More than anywhere else in the world, our residents and companies are motivated to save and generate clean energy. We have expressly opted for a regional approach, as the usefulness and necessity of new energy sources can literally be felt here: the ground moves beneath our feet as a result of the gas extraction. The Northern Netherlands has a high share in the production of wind energy and solar energy, as well as the number of innovations and jobs in the sustainable sector. We have opted for the transition from classic energy management to a fully green, hydrogen economy. The Northern Netherlands is uniquely positioned for this purpose. **Huge amounts of electricity will enter the country in the Energyport in Eemshaven during the next few years.** The energy comes from Norwegian hydropower, Danish wind, and new Dutch and German wind farms in the North Sea. **The excess of sustainably generated electricity is suitable for large-scale production of green hydrogen, using electrolysis.** The high-quality and high-capacity natural gas grid in the Northern Netherlands can quickly switch to hydrogen distribution. Now that the international high voltage grid's capacity has been limited, green hydrogen will become the go-to method for storing and transporting sustainable energy in the years to come. Another advantage of using the existing gas infrastructure is that we can sell hydrogen internationally at low costs. The required process knowledge and the companies up to the task are all located here.*



Map which shows all parts of the hydrogen economy

The large-scale production of green hydrogen, as we have envisioned it, will result in competitive pricing and a growing demand. It will have a strong positive impact on the economy and employment. The petrochemical industry in the Netherlands and neighbouring Germany can make green ammonia and green methanol from now on. The North is already a strong favourite to become the producer of sustainable products such as green electricity, green syngas, green carbon dioxide, bio pellets, pure water, and oxygen. It will lead to the faster development of new, clean modes of transport based on fuel cells: cars, busses, trains, planes, boats, and drones with zero emissions. Green electricity and green hydrogen are also the core elements for creating clean heating for our cities and towns, and for living on the Wadden islands. **The North expects to be ready for the complete transition to a hydrogen economy by 2030.** We want to be the international green power source.

Maros Sefcovic, vice president of the European Energy Union acknowledges and appreciates this: "The cooperation between the Northern Netherlands and Lower Saxony with regard to energy is unprecedented, and a crucial step towards an internal European energy market."

As an industry leader, we are happy to share our insight, knowledge, and experience with regard to the new hydrogen economy with other ambitious areas in Europe.

General Info of the CEMR member ISSUE 16	
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Picture of the CEMR member who sends the information or picture of the project/similar



Venlo City Hall

Description best practice/ project/ food for thought

Title: Sustainable public procurement for cradle-to-cradle design in Venlo City Hall, The Netherlands

Description of the project/best practice/food for thoughts can include: objective the project and link to the EU context, impact on the local context, reflections on a EU matter,... (400/ 500words maximum, corresponding to half of a A4 page)

The easiest way for local and regional authorities to stimulate the take-up of circular economy approaches and solutions is to lead by example. As consumers, local and regional authorities can include circular economy considerations in their purchasing decisions by using green public procurement criteria and mechanisms such as pre-commercial procurement.

The Cradle-to-Cradle (C2C) framework seeks to create production techniques that are not just efficient, but are essentially waste-free. In cradle-to-cradle production, all material inputs and outputs are seen either as technical or biological nutrients. Technical nutrients can be recycled or reused with no loss of quality and biological nutrients composted or consumed.

The Municipality of Venlo used C2C principles in the design and procurement of the new Venlo City Hall. *The bidders were requested to take into account the use of appropriate, safe and healthy materials that can be recycled after their lifetime, the enhancement of air and climate quality, the production and use of only renewable energy and the enhancement of water quality. C2C design accounted for 30% of the overall scoring of the bids and a C2C specialist was involved in the assessment body. The 'Total Cost of Ownership' over 10 years accounted for a further 30% of the score, which estimated not only the direct costs of products but also indirect ecological and social costs. Bidders were required to offer a take-back system for their products*

After a period of ten years and to consider the financial residual value of these products, including maintenance. Over a time period of 40 years, the Municipality of Venlo will have realised a return on investment of around EUR 17 million.

General Info of the CEMR member ISSUE 17	
CEMR Member Name (name of the association who contributes and name of the individual person who writes the short article)	Association of Finnish Local and Regional Authorities (AFLRA)
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Website link or references if available	https://www.munifin.fi/green-bond
Picture of the CEMR member who sends the information or picture of the project/similar	



Description best practice/ project/ food for thought

Title Supporting local economy via green bonds

Description of the project/best practice/food for thoughts can include: objective the project and link to the EU context, impact on the local context, reflections on a EU matter,... (400/ 500words maximum, corresponding to half of a A4 page)

*According to the Finnish Climate Change Act from 2015, **Finland is engaged to reduce greenhouse gas emission by at least 80% by 2050, compared to 1990 levels.***

MuniFin started to offer green financing – loans and leasing – for the environmentally friendly projects of its customers in the beginning of 2016. Green financing is offered to selected projects that promote the transition to low-carbon and climate resilient growth. These projects seek to mitigate or adapt to climate change.

*MuniFin’s Green Financing is exceptional in the global marketplace because of the fact that the lending is offered to customers at a margin discount. With the help of discount, MuniFin encourages its customers to make more pro-environmental choices. **Customers are municipalities and cities, municipal federations, municipally owned companies and housing organisations with a non-profit status..***

MuniFin’s Green Framework divides projects into seven categories: Renewable energy, Energy efficiency, Sustainable public transportation, Waste management, Water and waste water management, Sustainable buildings and Environmental management incl. nature conservation. The majority of the eligible projects are long-term projects with maturities varying from 5 to 41 years.

***In 2016, annual estimated energy savings** from climate mitigation projects corresponds to the average annual electricity consumption of some **17,500 double room** (50 m2) apartments in Finland. MuniFin’s eligible projects also have significant indirect impacts. For example, the Länsimetro rail system extension will make possible to densify land use near the metro stations. It has been studied by the Helsinki Region Environmental Services Authority that densification of urban areas can reduce approximately 330,000 tonnes of CO2 emissions per year in the Helsinki metropolitan area.*

In March 2017, MuniFin received the Climate Bonds Initiative’s Green Bond Pioneer Award for its pioneering issuance and its work for reaching the Finnish climate goals.

**General Info of the CEMR member
ISSUE 18**

<p>CEMR Member Name</p>	<p>Austrian Association of Cities and Towns</p>  <p>Österreichischer Städtebund Contact : Simona Wolessa: stb-bxl@skynet.be</p>
<p>Good practice from</p>	<p>District of Leoben Website : www.abfallwirtschaft.steiermark.at Contact : Alfred Krenn alfred.krenn@leoben.at</p>

Pictures



District of Leoben

Fluidised bed process ,

Description best practice/ project/ food for thought

Local waste management association in the District of Leoben

A good practice of waste management combined with heat recovery is coming from the District of Leoben, in Austria.

In this area about 12.300 tons of municipal waste were buried without any energy recovery until 2003. As a result, areas were polluted and abandoned.

Since 2004 the Landfill regulations prescribes a pre-treatment of waste before landfill deposit. Leoben has opted Thermal treatment using the heat budget for fluidised bed process.

Residual waste and bulky waste are treated via thermal treatment using the heat budget, using fluidised bed process – paper industry. Lightweight packaging is sorted and used as a substitute fuel in the cement industry.

Thanks to this new process of waste treatment, since 2004 the energy content is used and waste is made inert. At the end the volume of the original municipal waste is reduced to a quarter.

An energy amount of almost **5 million liter of heating** oil is used instead of buried.

Energy importation is reduced and the money remain in the region.

The safety and economic lifetime of landfills increases.

**General Info of the CEMR member
ISSUE 19**

CEMR Member Name

Deutscher Städtetag - Association of German Cities
Friederike Pischnick



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Website link

<http://www.icruhr.de/index.php?id=3&L=1>

Picture of the CEMR member who sends the information or picture of the project/similar



Inauguration of the VIVAWEST Future House

More pictures at: <https://www.flickr.com/photos/icruhr/>

Description best practice/ project/ food for thought

Title: InnovationCity Ruhr serves as the perfect model for integrated energy and climate action in an urban space

In 2010 the InnovationCity Ruhr concept was brought forward by an affiliation of about 70 leading companies within the Ruhr area, which belongs to the German state of North Rhine-Westphalia. **The InnovationCity Ruhr has been developing innovative ideas and solutions as to how the challenges of climate and structural change can be faced in an urban space. After a region-wide competition, the city of Bochum was chosen to be the model city.** For the project a complete district of the city of Bochum with about 70.000 inhabitants and 14,474 buildings is being turned into a model district for energy efficiency by 2020. The overarching goal is to reduce CO2 emissions by 50 percent by climate-adapted urban reconstruction whilst safeguarding the industrial location and enhancing the overall quality of life of the residents.

The fundamental concept behind InnovationCity Ruhr is „Energy Transition (Energiewende) from the bottom“. This means that **households which had only been energy consumers are now becoming energy producers as well.** The energy-related modernisation measures and the use of innovative technologies, such as cogeneration of heat and electricity, power storage and renewable energies, save resources and increase the energy efficiency of individual buildings and in the district. Linking these buildings by means of intelligent energy management systems leads to the fact that locally generated power and heat can be supplied to surrounding houses.

On account of an extensive consultation offer for house owners, **it was possible to refurbish more than seven per cent of the residential buildings in the pilot area** from an energy-related aspect up to the end of 2013. Thus, the energy-related redevelopment quota in the model city of Bottrop is distinctly over the German federal average by about one per cent. In addition, the increase in energy efficiency in industrial and commercial areas is also part of the field of action.

To reduce CO2 emissions and air pollutants in the transport sector the model city of Bottrop is applying energy-efficient drives and is developing concepts like sustainable urban lorry routing in order to reduce inner-city traffic. In addition, climate-adapted urban reconstruction is also geared to reducing goods and passenger traffic by shorter routes or low-emission means of transport.

A cityscape worth living in and climate-friendly land use are promoted. Potential consequences of the climate change shall be countered by greening the town space and the optimisation of the water balance.



The project received ERDF funding and is therefore an excellent example of how cohesion policy is used to reach the overarching EU 2020 strategy in areas such as energy and environment.

**General Info of the CEMR member
ISSUE 20**

CEMR Member Name (name of the association who contributes and name of the

Austrian Association of Municipalities



individual person who writes the short article)	
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Website link or references if available	https://www.bikebird.at/BIKELine/
Picture of the CEMR member who sends the information or picture of the project/similar	<p>http://www.bikebird.at/BIKELine/</p> <h3>Helmsticker & Terminals</h3>  <p>Die Fahrten der SchülerInnen werden vollautomatisch erfasst; es müssen weder Listen ausgefüllt noch Eintragungen auf Webpages gemacht werden. Ermöglicht wird dies durch kleine elektronische Sticker, die auf den Helmen (Helmpflicht!) der BIKELiner befestigt werden.</p>  <p>In der Schule angekommen, checken die Jugendlichen dann bei einem Terminal ein und registrieren somit vollautomatisch ihre Fahrten.</p>

Description best practice/ project/ food for thought

Municipality of Attlengbach initiates "Bikeline".

The lower secondary school of Attlengbach is situated close to a bicycle-lane which is connecting the neighbouring villages, and thus most of the pupils' homes. After reflecting on the fact that few pupils were using their bicycle to come to school, the parents' association in cooperation with the municipality started the project "Bikeline" in 2013. Along the main routes to school the project coordinators were putting up bike-stops, indicating departure-times from each stop. Pupils and teachers were invited to meet at the stops and cycle to school together.

Pupils were motivated by receiving electronic chips (to be fixed to their helmet) that would collect data about cycled kilometres and altitude.

Since the beginning of the project in 2013, pupils in Attlengbach made 46.000 kilometres on their bicycles. This means 6.000 single journeys and a lot of carbon-dioxide emissions that could be saved. Approximately half of the 160-180 pupils take part in Bikeline.

The municipality is supporting the project with 2.000 € per annum, which comprises costs for electronic chips and school-events related to the project.



Attlengbach counts approx. 2.700 inhabitants and is situated in Lower Austria.

It forms part of an ever growing Bikeline-community in Austria.

General Info of the CEMR member ISSUE 21

CEMR Member Name (name of the association who contributes and name of the individual person who writes the short article)

Norwegian Association of Local and Regional Authorities

	
E-mail of reference	Stig.Bang-Andersen@ks.no
Website link or references if available	European Economic Area project called Polish-Norwegian cooperation platform for climate and energy conservation Website Report , Catalogue of Polish and Norwegian best practices in the field of energy efficiency and RES use. YouTube video:
Picture of the CEMR member who sends the information or picture of the project/similar	 <p>EV AMPERE ferry</p>
Description best practice/ project/ food for thought	
<p>EV AMPERE, SOGNEFJORD, The world's first zero emission electrical car ferry</p> <p>The project entitled "<i>Polish-Norwegian cooperation platform for climate and energy conservation</i>" has the objective to establish and strengthen bilateral cooperation between Polish and Norwegian local self-governments, covering the exchange of experience, knowledge, technologies and best practices in the area of energy efficiency (EE) and renewable energy sources (RES) use in the municipal sector (including municipal buildings and facilities).</p> <p>Among best practices identified in the project, we report here one example from the transport sector, in particular maritime transport. Norway's Ministry of Transport and Communications opened a competition to develop an environment friendly ferry. Norled won the competition, which granted the company the concession rights to operate in the route through to 2025. The new vessel established the viability of operating electric-powered ferries in 50 ferry routes within Norway and beyond.</p> <p>The ferry is designed as a catamaran with two aluminium hulls. It is 80 m long and 21 m wide. It accommodates up to 120 cars and 360 passengers. The advanced vessel operates on a 5.7 km crossing in the Sognefjord between the villages of Lavik and Oppedal, and is part of the E39 highway. It is the World's first of this size.</p> <p>As project results, the new environment-friendly ferry on the Sognefjord annually replaces the use of one million litres of diesel and offsets 570 t of carbon dioxide and 15 t of nitrogen oxide emissions compared to conventional ferries in service on the same route. The Ampere was granted the esteemed "Ship of the Year" award in an international trade show in September 2014.</p> <p>Hybrid and plug in hybrid ferries are now introduced in more ferry and boat connections. The next 100 % electrical ferry will operate from 2017. Internationally, these projects set the course for carbon-free shipping.</p>	

**General Info of the CEMR member
ISSUE 22**

CEMR Member Name (name of the association who contributes and name of the individual person who writes the short article)

Norwegian Association of Local and Regional Authorities



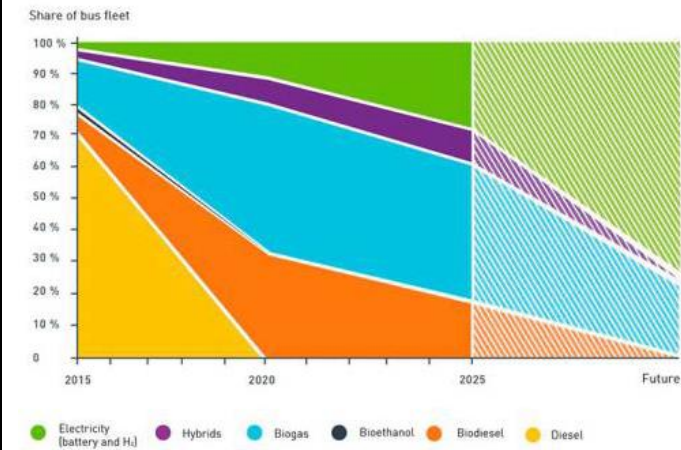
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Website link or references if available

European Economic Area project called Polish-Norwegian cooperation platform for climate and energy conservation
[Website Report](#), Catalogue of Polish and Norwegian best practices in the field of energy efficiency and RES use.
[Ruter's web site](#)

Picture of the CEMR member who sends the information or picture of the project/similar



Share of bus fleets in Norway

Description best practice/ project/ food for thought

RUTER#: FOSSIL FREE 2020, OSLO AREA ALL PUBLIC TRANSPORT ON RENEWABLE ENERGY

In Norway, the ambitions for public transport are high, and it is an agreed political goal that all growth in passenger traffic in major cities shall be met by public transport, cycling and walking. Handling traffic growth with environment-friendly mobility solutions is an important contribution to achieve Norway's climate goals and reduce local pollution.



Ruter is responsible for transport services in Oslo and Akershus counties in Norway, serving 1.2 million people.

The ambition of the public transport sector in Oslo and Akershus is to use only renewable energy in 2020. This calls for wide-ranging changes to the bus fleet and to ferries in the region.

Currently, Ruter's view is that electrical busses and boats are especially promising. They are therefore looking into testing a large number of **electric busses and associated infrastructure** in regular service during 2016-20, and are now initiating a collaborative phase where they identify partners and concretize ambitions and plans for testing of electric busses.

As project results, significant environmental gains have been achieved, including reductions in local emissions (particulate matter (PM) and nitrogen oxides (NOx)), with the introductions of EURO I-VI requirements,. However, greenhouse gases (GHG, most critical is CO₂) are not part of the EURO emission requirements. To improve local emissions even further and to reduce fuel consumption as well as GHG-emissions, increased usage of new bus and boat technologies is needed.

Electric infrastructure maturity is still low, and further standardization is required. Biodiesel, biogas and bioethanol infrastructure solutions have high technical maturity and are already installed in the Oslo region.
Ruter's goal is for public transport to continue to be the most environmentally friendly choice, even when in emissions from private cars become low.

General Info of the CEMR member ISSUE 23	
CEMR Member Name (name of the association who contributes and name of the individual person who writes the short article)	Convention of Scottish Local Authorities (COSLA) 
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Website link or references if available	Video Link : STRONG and SUSTAINABLE COMMUNITIES Aberdeenshire Council Carbon Budget
Picture of the CEMR member who sends the information or picture of the project/similar	
Description best practice/ project/ food for thought	
Strong and Sustainable Communities- Aberdeenshire Council and Carbon Budgeting	
<p>Aberdeenshire Council is one of 32 unitary Local Authority municipal bodies in Scotland. The Council became the first in Scotland to develop and approve a Carbon Budget. COSLA recognised this achievement by awarding Aberdeenshire Council a Silver COSLA Excellence Award, in the Strong and Sustainable Communities category in October 2017. Aberdeenshire is a mostly rural authority in the North East of Scotland with a population of 261,960 just over 262,000.</p> <p>Aberdeenshire Council recognises that all of its functions and operations have an impact on the local and global climate and has recently implemented a range of measures to reduce its carbon emissions.</p> <p>New domestic climate change legislation in Scotland led sustainability officers at Aberdeenshire Council to consider what further could be done locally to embed climate change actions into the way the Council provides services. With the support of a politically led Sustainability Committee, it was decided to look at the option of Carbon Budgeting.</p> <p>The Carbon Budget is a tool that allows the Council to better manage how it works towards meeting emission reduction targets by ensuring each service area is accountable for reducing its own carbon emissions. It sets annual targets which are distributed across the Directorates by the Strategic Leadership Team.</p>	

The aim is to reduce the Council's carbon emissions and therefore the annual targets set decreasing allocations of carbon dioxide equivalent for the Local Authority to deliver services. Actions to reduce emissions are led by the relevant service, reported to Committee, and are scrutinised by Full Council, then reported annually within the framework of Scottish legislation.

Projects sitting within the Carbon Budget are monitored throughout the year to ensure reduction targets are being met. **All new projects now need to consider carbon emissions alongside financial costs and savings.** This innovative approach has empowered services to develop projects and plans that find reductions in emissions instead of leaving these ideas and responsibilities to services which generally do this work already.

Over time, the Carbon Budget will become better integrated with Financial Budgets. This will provide politicians with a clearer link in demonstrating costs and savings being made through carbon saving initiatives. This will include calculating the cost of per tonne of Carbon for every action presented. This will be an important step in assisting the Council to make decisions that allow it to meet its emission reduction targets with consideration of cost efficiencies.

Aberdeenshire Council remains committed to its part in tackling climate change. As an organisation it is important to lead by example and be open and transparent about local climate activity. The Carbon Budget is a great platform to do this from.

Aberdeenshire Council is a member of the Global Covenant of Mayors for Climate and Energy. Like Aberdeenshire, several Scottish Local Authorities have ambition to join the Covenant of Mayors, but face a number of common bottleneck issues.

The Covenant of Mayors requires resource in terms of officer time to collate all necessary information and deliver more technical aspects regarding Baseline Emission Inventory. Identifying and prioritising concrete climate actions in consultation with the community also takes time. Staff, knowledge, data and general resource make it difficult for Scottish Local Authorities and a small amount of financial resource would help address these issues and build economies of scale in local sustainability planning. COSLA will be working with Scottish Councils to lobby further on these grounds and welcomes correspondence from other associations dealing with the same challenges.

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About CEMR

The Council of European Municipalities and Regions (CEMR) is the broadest organisation of local and regional authorities in Europe. Its members are over 50 national associations of municipalities and regions from 41 European countries. Together these associations represent some 150 000 local and regional authorities.

CEMR's objectives are twofold: to influence European legislation on behalf of local and regional authorities and to provide a platform for exchange between its member associations and their elected officials and experts.

Moreover, CEMR is the European section of United Cities and Local Governments (UCLG), the worldwide organisation of local government.

Web: www.cemr.eu
Twitter: [@ccrecemr](https://twitter.com/ccrecemr)