



Energy Agencies Leading the Energy Transition

2017 - 2020 publishable report

In Brief

ManagEnergy is the European Commission's initiative dedicated to **local and regional energy agencies**, led by the Limerick Institute of Technology and managed by an ambitious consortium of leading European energy agencies (B.&S.U., Berlin Energy Agency, OÖ Energiesparverband, REGEA, Tipperary Energy Agency) and their network (FEDARENE). It was restarted in 2017 to assist energy agencies in **becoming leaders in the energy transition** and increasing sustainable energy investments in regions and cities.

The ManagEnergy initiative is based on the idea that more **energy efficiency and renewable energy investments** are needed at the local/regional level in Europe and that energy agencies are in a unique position to support the energy transition in their regions and cities. This is why we provide information, know-how, visibility and networking opportunities, to support local and regional energy agencies in delivering new services or boosting existing ones.

Lots has been achieved in three years. Our support to energy agencies mostly took the form of capacity-building and networking activities. **8 Master Classes, 21 Expert Missions, 3 Networking Events** were organised, involving 85 energy agencies from 25 countries. Our **3 ManagEnergy Talks** alone have gathered 525 stakeholders from the sustainable energy field. Over all expert mission activities, 680 attendees were present, including both energy agencies' management and staff, as well as stakeholders of the region. **In total, the initiative thus gathered a crowd of over 1500 attendees.**

As a result, many agencies were felt empowered to boost sustainable energy and energy efficiency investments in their cities and regions. In total, **more than € 750 million of investments** were **triggered** by ManagEnergy participant agencies. With these investments, European cities and regions will benefit from more efficient buildings and public lighting; more comfortable and healthier homes; cleaner air; increased supply of green energy and more sustainable transport.

Over the last three years, ManagEnergy has also strengthened its **community**. Regular events were hosted to stimulate debate, engagement and knowledge sharing. This was also augmented with our active online presence and through social media. The **ManagEnergy website** has become a reference point for stakeholders of the EU sustainable energy sector, providing dozens of good practices and resources. Our newsletters were read by hundreds of staff from local and regional energy agencies.

If there was one thing to remember from our journey, it is that local and regional energy agencies have a key role to play in the **decarbonisation** of the European Union. They have the capacity to be the **bridge** between all actors of the energy transition: citizens, public authorities, private companies... **They have to be aware of this force and publicly claim and own this role.**

In the following pages, the evidence to back up this ambition is presented. You will learn more about the definition and role of energy agencies, the activities undertaken by ManagEnergy over the last three years, our achievements and recommendations for the future.



ManagEnergy in Brief



350

local and regional energy agencies represented

2500

Staff across the EU



1500

participants involved



> € 750

Millions of Investments triggered

8

Master Classes

174

Attendees

70

Energy agencies

21

Expert Missions

680

Attendees

including energy agencies & stakeholders

3

Networking Events

125

Participants

3

ManagEnergy Talks

525

Participants

1650

Views on YouTube



3500

Twitter Followers



98%

Satisfaction rate



Energy Agencies

Europe's Key Drivers for the Energy Transition

ManagEnergy is a service dedicated to **local and regional energy agencies**. There are **over 350 organisations** of this type in Europe, representing a **workforce of 2500**. Energy agencies are organisations working at the local and regional level to facilitate the energy transition and implement renewable energy and energy efficiency measures. They are **knowledge centres** for sustainable energy, advising and providing services to public authorities, citizens, market stakeholders... Their roles may vary, but the most critical ones relate to sustainable energy investments, energy management, provision of advice and information, training and supporting the implementation of regional and local energy programmes.

Local and regional energy agencies are in a **unique position to support the energy transition** in their regions and cities. Filling the roles of project developers, aggregators and facilitators, energy agencies are key partners for public authorities, while retaining their autonomy. This places them **at the forefront of energy investments in Europe**,

and this is also the founding principle behind the ManagEnergy Initiative: local and regional energy agencies have a key role to play in Europe's decarbonisation by catalysing green investments. To lead them on this path, we have developed a comprehensive engagement through Master Classes, Expert Missions and Networking events, in order to raise energy agencies' skills on financing and project development, ultimately making them leaders in the energy transition and increasing sustainable energy investments in Europe.

But how can an energy agency succeed in leading the Energy Transition? This is the question the ManagEnergy Team asked itself and its participants, and the question that guided all ManagEnergy activities for the past three years. Now, we are able to share the success factors identified.

Energy agencies face an exciting and demanding future given the dramatic changes which will occur in society and the economy if Europe is to reach its energy transition goals. As the sustainable energy



Energy agencies are often the brightest examples of how to use sustainable energy at global scale. They bring EU policy alive by providing practical, local examples of how European policies and programmes relate to citizens in their own regions.

Julije Domac

REGEA

ManagEnergy expert and trainer





© Tipperary Energy Agency

Tipperary Energy Agency The Success Story

sector grows and expands, they will need to reshape their position and strategy within this dynamic environment, notably:

- Make sure their **role and identity** are clearly defined, and position themselves as indispensable partners of sustainable energy initiatives at local, regional, and European level to unlock investments. They have to **build new relationships** with relevant stakeholders, expand their network and make their voice heard.
- Further develop their **strategy for the future**, including ideas on potential new services and activities, and necessary skills. Such services will need to align with the many new innovative solutions and services being provided by private sector actors. The strategy has to be translated into an appropriate **business model**.
- Working on **projects of scale** which have significant impact should be considered and pursued, as it is a sign of stability and capability in answering energy efficiency challenges.
- Strengthening ties with **policy makers** to be at the forefront of informing new policies locally, nationally and within the EU.

Tipperary Energy Agency's mission statement is to **lead the delivery of sustainable energy solutions** in Tipperary and beyond, by advocating, educating, and innovating on climate action. The vision is that all communities, businesses and citizens participate in the energy transition and achieve carbon neutrality.

Tipperary Energy Agency prides itself as an **agency of firsts**. The agency piloted the first residential grants in Ireland and the first deep retrofit residential grants. They supported the first community renewable energy generation project in Ireland. They designed the first renewably heated school through heat pumps and the first leisure centre retrofit to A2 standards on the BER scale.

Over the years, they have become **one of the leading energy agencies in Europe**, notably through their work on residential retrofit. Tipperary Energy Agency was one of the first agencies to engage in energy management in Ireland. In 2015, they set up a dedicated building services design team to provide a one-stop shop for energy efficiency services, leading to the creation of the **SuperHomes** project. Since its inception in 2015, SuperHomes has delivered deep retrofits for more than 300 homes.

Tipperary Energy Agency's expertise also includes community energy generation. The agency had a key role in the set-up of **Ireland's first Community-owned Wind Farm** in Templederry. One of the key issues affecting wind farm development is the acceptability by the local community. By supporting the creation of the Templederry Community Group, they ensured local support and community ownership of the project. The agency also supports **Community Power**, Ireland's only community owned electricity supplier which grew out of Templederry Community Wind Farm.

These impressive achievements and its extensive experience are the reason the agency was selected as one of the trainers of the ManagEnergy Initiative. With ManagEnergy, we aimed to encourage local and regional energy agencies to follow the example of pioneers like Tipperary Energy Agency in order to lead the Energy Transition.



Behind the Initiative

Collaboration Models in Financing



The ManagEnergy initiative aims to answer the needs of energy agencies by increasing their skills in developing new investment projects and services. But how can we do this? Our answer is simple: **training, more training, and networking!**

Master Classes

The Master Classes consist of 3-day **interactive training sessions** delivered in Brussels by **leading experts** from energy agencies. Participants were invited to join each of the 3 modules of the programme: 1 - Market Facilitation and Project Aggregation; 2 - The Involvement of Banks and Mobilising Private Investment; 3 - Risk Analysis and Development of Guarantee Schemes. The number of participants per Master Class was around 25. The experience and knowledge on financing investments varied greatly from one participant to the other. The main objective of the trainers was to open the door of the finance world to participants, teaching them how to become facilitators and intermediaries between banks, financial institutions and public authorities. In total, 174 participants from 70 agencies took advantage of this offer.



The Master Classes are a significant opportunity to learn what other energy agencies are doing in other countries, but also how to develop new projects, promote investments at local level and use innovative financial schemes.



Matteo Mazzolini

Friuli Venezia Giulia Energy Agency
Master Class participant



© Energieagentur der Regionen

Expert Missions

In parallel to the Master Classes, the ManagEnergy experts also visited 21 selected energy agencies across Europe. These missions lasted for 3 days and provided them with **tailor-made support on strategic and business planning**, with a focus on creating or expanding services to trigger additional energy investments.

The Expert Missions went one step further than the Master Classes as they enabled the entire agency team to participate and focused on actions



© Tartu Energy Agency

of key importance for the agency as well as their organisation's long-term strategy. Each Expert Mission also included a meeting with key local/ regional **stakeholders**, generating discussion, for example, on the opportunities and barriers for sustainable energy investments.

Overall, 680 attendees were involved in the Expert Mission activities, including energy agencies as well as local and regional stakeholders. Regarding the latter, 341 participated in workshops and 68 in one-on-one coaching sessions.



© Cyprus Energy Agency



At each Expert Mission I carried out, I found a team of dedicated colleagues. As energy agencies, our structures and political contexts might differ, but our goal is the same: making the energy transition reality.

Christiane Egger
 OÖ Energiesparverband
 ManagEnergy expert and trainer





Networking Events

In addition to gaining new skills in project financing and development, ManagEnergy participants all highly valued **peer exchange** between agencies. This is why ManagEnergy organised yearly Networking Events for energy agencies, in order to **increase cooperation and knowledge sharing**.

These half-day events – organised in the framework of bigger European and International conferences – focused on important issues for the survival and development of energy agencies across Europe: embracing new opportunities from EU policies and programmes; designing a vision for the future; new services, large scale projects and the visibility of energy agencies.

As always with ManagEnergy activities, an interactive learning approach allowed participants to actively engage in discussions with each other, trying to solve practical exercises and to extract common issues and solutions. In total, 125 participants took part in these events.

ManagEnergy Talks

Another stepping stone on the ManagEnergy journey consisted of **Keynote speeches** delivered by well-known **climate and energy experts** followed by **thought-provoking discussions** with the audience. The ManagEnergy Talks served a dual objective: open the discussion to all stakeholders of the field and stimulate critical thinking. They explore innovative, ambitious and transformative actions led by local/regional actors and seek to inspire others to spearhead the drive for investment and action on sustainable energy. The audience was invited to take a step back from day-to-day issues to focus on larger overlying questions and values. ManagEnergy Talks were highly successful, attracting a crowd of **over 500 people** over its 3 events.



The ManagEnergy Guide for Success

- 1. Follow the Master Classes.** 3 modules were provided: 1) Market Facilitation and Project Aggregation, 2) The Involvement of Banks and Mobilising Private Investment, 3) The Development and Use of Financial Instruments.
- 2. Apply for an Expert Mission.** In addition to Master Classes, energy agencies could request the visit of an expert to receive tailor-made support for their services.
- 3. Trigger investment.** All the provided support serves a purpose: building agencies' skills to trigger more sustainable energy investments. At this stage, it is time to apply the acquired expertise and convince stakeholders to join forces with their organisation.
- 4. Share your achievements with your peers.** At the ManagEnergy Networking Events, local and regional energy agencies had the opportunity to share their successes with other agencies and exchange on recent policy and market developments.
- 5. Get inspired.** By participating in our ManagEnergy Talks, stakeholders of the sustainable energy field got to meet inspirational figures and hear about their innovative actions.
- 6. Review, Improve and Continue.** The more opportunities you seize and the more projects you develop, the stronger and more successful your agency will be.

The ManagEnergy learning journey was highly appreciated by participants who attributed a satisfaction rate of 98% to the Master Classes and Expert Missions.



Our Achievements

Thanks to the numerous capacity-building activities hosted by ManagEnergy, many agencies felt empowered to boost sustainable energy and energy efficiency investments in their cities and regions. In total, **more than € 750 million of investments** were stimulated. Here are a few examples.

Energy Renovation and Management in the Municipality of Celje

Agency: KSSENA (Slovenia)

Project: LEK Celje

Financial instrument: EPC with the support of ELENA¹

Time frame: 2018-2019

€ invested: 4 054 573,16

Contact: info@kssena.velenje.eu

Celje deals with heavily polluted air, which is the result of several factors such as industrial activity, heavy transit traffic, high number of **old and inefficient individual heating systems and building stock**, and unfortunate climate conditions related to its location in a valley. The municipality was thus in great need of developing a **new local energy concept (LEK)** and strategy to reduce Celje's energy consumption and CO₂ emissions and to increase its use of renewable energy sources (RES), ultimately improving the overall air quality.

The development of LEK Celje began in September 2018 and ended in February 2019. To bring the LEK into realisation, a long period of **data collection** and analyses was required, involving several stakeholders from different governance levels. KSSENA Energy Agency and the municipality of Celje collected data from different sources (municipal databases, databases of sectoral agencies and local energy agencies, private and public company databases - both energy consumer companies and energy providers - and KSSENA's own data from surveys, measurements and fieldwork).

Celje's new local energy concept suggested **more than 30 measures** to be implemented, notably: connecting individual households to a district heating system; the energy refurbishment of public buildings; renovation of public lighting; building of new traffic infrastructure for transit traffic; encouraging environmentally friendly public transport; increasing the use of RES; implementation of better energy management; encouraging the implementation of energy audits and energy bookkeeping in companies; etc. The **expected results** of the successfully implemented measures are estimated to be (baseline year is 2017):

- a **12% reduction of heating energy consumption** by 2028;
- a **5% reduction of electricity (power) consumption** by 2028;
- a **3% increase of RES production** by 2028;
- a **reduction of CO₂ emissions** (from both electricity and heating consumption) **under 1,11 tonne per inhabitant**.

To achieve these ambitious goals, KSSENA used the

¹ ELENA – European Local ENergy Assistance provides technical assistance for energy efficiency and renewable energy investments targeting buildings and innovative urban transport. This service is provided by the European Investment Bank (EIB).

knowledge gained at the ManagEnergy Master Classes and Expert Mission, as well as the insights from several EU funded projects. Both KSENA and Celje have practical experience in Energy Performance Contracting (EPC) and energy renovation of buildings. In the past years, **8 buildings were successfully renovated through an EPC project** with pulling principle, where buildings with lower savings potential were successfully added to the EPC project and fully renovated.

The final list of buildings was set in a public tendering process (competitive dialogue), and selected buildings were:

- 4 primary schools;
- 1 kindergarten;
- 1 representative historical building (cultural heritage building).

Total project costs for deep energy renovations were **€ 4.054.573,16**, and financial sources are split among: Private partner – Energetika Celje, d.o.o. (49%), Municipality of Celje's budget (11%), grants for preparation of investment documentation (ELENA 0,7%) and Ministry of Infrastructure of Slovenia (EU and national funds - 39,3%).

For the coming years, KSENA and Celje aim to facilitate new energy renovation projects to renovate all energy insufficient public buildings of the municipality.

Peer to peer learning and **exchange of experience** such as the one provided in **ManagEnergy is crucial** to provide the best value for the public budget, create a healthy environment for all and increase the resilience of the public infrastructure.



© KSENA



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New Financial Instrument for Building Renovation in Extremadura

Agency: Extremadura Energy Agency (Spain)

Project: HousEInvest

Financial instrument: Creation of Guarantee Fund with the support of ERDF and PDA²

Time frame: 2018-2021

€ invested: 35 167 250

Contact: agenex@agenex.org



ManagEnergy taught us how to communicate with financial institutions and homeowners. We have learnt how to translate energy projects' technical and economic data into their own language and vocabulary, which are two very different things!

Rachel Tully
AGENEX

Extremadura has been working on the definition of a **new financing model to retrofit buildings** that allows covering the lack of specific financing products for complete renovations. From the analysis of Extremadura's residential building stock it was observed that more than half (60%) were built over 40 years ago without consideration for energy efficiency, as insulation requirements were not included in the building code until 1979. From the buildings built before this date, 14% are considered to be in a very poor state of conservation.

Through the **HouseEInvest** PDA project (H2020), AGENEX has focused on the **regional market of multi-family dwellings** built prior to 1980, with little or no insulation and with central heating. These target buildings have a greater need to implement actions, they also have a **greater potential for savings and energy efficiency improvements**, and they are currently presenting complex thermal problems that cannot be solved with smaller investments; so the solution lies mainly in a deep rehabilitation of the entire building. The implementation of these actions in a comprehensive way reduces the payback periods of investments that are not so profitable themselves (as could be improvements in the façade). Until now, consumers are highly dependent on non-repayable grants, which could still be integrated in the financial model when available, reducing the risk of unpayment.

The **market analysis** carried out proved the **scarce offer of financial products** available for homeowners' communities. The few products in the market and their characteristics highlight the risk that is perceived by the banks in these operations, caused to a large extent by the lack of knowledge in energy efficiency projects and

due to the high periods of decision making and agreements to be reached on the homeowners' side. The project consortium is composed of the key players of the Spanish home energy renovation sector (decision makers, public financial companies, demand-side associations, construction and energy business associations, and private legal and financial advisors) who are joining forces to overcome the existing barriers.

As a result, a **portfolio guarantee instrument** has been proposed combining a set of innovative tools to achieve standardisation, risk pooling, investment pooling and risk-eliminating systems that will provide security both to financial institutions and to homeowners' communities. The newly created Guarantee Fund for Energy Efficiency in Extremadura's Households will first receive public funding (ERDF) for two years; After that, contribution will come from the regional budget. HouseEInvest's financial instrument will ensure that the ERDF funds assigned to the guarantee product will **mobilise energy investments** in the region **worth € 35 million**.

Thanks to HouseEInvest and the new Guarantee Fund, homeowners won't have to depend on costly and risky bank loans to retrofit their houses. Through a public procurement process, HouseEInvest will select the best financial products/offers to be partially supported by the fund, while the rest will be covered by the institution itself. From a technical point of view, the energy savings will be guaranteed by the construction company or ESCO, providing security to the owners. The consortium partners are now looking to achieve an investment bundling to improve the contracting conditions.

² The Project Development Assistance (PDA) facilities aim to bridge the gap between sustainable energy plans and real investment through supporting all activities necessary to prepare and mobilise investment into sustainable energy projects. It was set up by the European Commission.



Jump from 70s to Future - Building Renovation in Tartu



© City of Tartu

In July 2020, the **renovation of 17 apartment buildings** of Tartu's city centre occupying a total area of 32 071 m², was completed. All renovated housing formerly characterised as *khrushchyovkas* (quick-build, low-cost structures with low energy performance) were also decorated with wall paintings. It is the **biggest renovation project in Tartu** to date.

The Tartu Regional Energy Agency (TREA) was the partner responsible for technical renovation solutions and for advising housing associations. The objective was ambitious and two-fold: first, setting **high energy and indoor climate standards** with the **lowest costs** possible, and second, pushing technical designers and the construction market to raise the level of ambition regarding the energy performance of buildings. A plan was developed in cooperation with the municipality and other partners to **turn the soviet-era low-quality buildings into next-generation smart homes**. The goal was to retrofit them to low-energy smart buildings, with consumption from 250 kWh/m² to 90 kWh/m² per year.

TREA's participation in ManagEnergy activities helped design the best **financing model** possible. Notably, the Expert Mission they hosted focused on the blending of resources, enabling homeowners to access loans with good lending conditions. The SmartEnCity project thus managed to use a combination of different resources: Horizon 2020 funding (ca. 43%), national support scheme for renovation activities (ca. 25%), and additional loans taken by the dwelling owners themselves (ca. 32%).

The planned retrofitting package tackles **one of the greatest challenges of Europe's existing building stock** – rapidly deteriorating precast panel apartment buildings quickly produced in response to housing shortages in the sixties and seventies. The **market and replicability** of the respective solutions is huge, as evidenced by the variety of panel buildings in different Eastern European countries. In Estonia alone, there are ca. 6,000 *khrushchyovka*-type apartment

Agency: Tartu Regional Energy Agency (Estonia)

Project: SmartEnCity

Type of funding: grants + bank loan

Time frame: 2017-2020

€ invested: 14 931 000

Contact: info@trea.ee

buildings that were built between 1961-1990.

Besides significantly increasing the energy efficiency of the pilot buildings, providing a stable interior climate through temperature control and ventilation as well as increasing the aesthetic appeal of the buildings, the project aimed to **encourage behavioural changes** in the way residents consume energy and adapt to new technologies. Indeed, changes need the cooperation of the users to be implemented. In order to boost participation and interest in the project, several measures were taken including regular information meetings, technical consultations, study trips to similar construction sites and forum discussions. As the retrofit activities are now completed, these awareness-raising actions will now be replaced by a social innovation model focusing on how to motivate residents to use the installed smart devices and save energy.

Perspectives for the Future

Local and regional energy agencies are already paving the way to Europe's Energy Transition. Their role could further be enhanced, becoming vital allies of EU Institutions in implementing climate & energy policies. Our suggestions to make it happen:

Bridging the Finance and Energy Worlds

Energy agencies have to position themselves as a critical bridge between the project and finance worlds thus speeding up project delivery and mitigating risk. In particular, Agencies will need to engage with banks, investment funds and private finance experts, as new and innovative means to finance investments emerge. Sustaining the financing of agency services, such as project development and market facilitation, is crucial for the future of durability of agencies.

Capacity-building & Networking

Continuous capacity building will be required to address the knowledge gaps that exist (technical, financial, economic, policy etc.) and this can be supported by deeper exchanges between agencies and their peers. There is a continued need for networking between energy agencies, training and support in increasing the visibility and impact of energy agencies.

Becoming Policy Advisors

Energy agencies could play a stronger role as link between governmental policies and implementation (i.e. offering guidance and capacity building activities, facilitating exchange between actors/regions/countries).

Investing in the Future

The ability of energy agencies to diversify their portfolio of activities is decisive if they want to be leaders in the energy transition.

“As energy agencies evolve and respond to their fast changing environment, they need to build new skills and strategies to scale up and speed up action. ManagEnergy is a key enabler for energy agencies, building their capacity, showcasing their achievements and deepening their connections with stakeholders of the energy transition.

Seamus Hoyne

Limerick Institute of Technology - ManagEnergy trainer & coordinator



Who we are

The ManagEnergy Initiative is managed by an ambitious consortium of leading European energy agencies coordinated by Limerick Institute of Technology. The strong online presence of the initiative is the result of cooperation between IT and communication experts together with FEDARENE - a vibrant and strong network of energy agencies in Europe (BE),



Limerick Institute of Technology (LIT) is a leading third level education and training provider in Ireland. LIT is to the forefront in ensuring that the region's economy continues to have the requisite array of leading-edge skills demanded by our knowledge-based industries.



Beratungs- und Service Gesellschaft Umwelt (B.&S.U. mbH) is an independent company that provides services focusing on energy efficiency, renewable energy, local climate protection in municipalities, sustainable urban development, mobility and European funding programmes.



The Berlin Energy Agency (BEA) is a modern energy service company, which develops and implements innovative projects in line with their clients' requirements that reduce both energy costs and CO2 emissions.



The OÖ Energiesparverband is the regional energy agency of Upper Austria. It drives the energy transition by providing comprehensive services to households, businesses and municipalities.



The North-West Croatia Regional Energy Agency (REGEA) was established in 2008 by the City of Zagreb and three Croatian Counties - Zagreb, Karlovac and Krapina - Zagorje. Today it is a leading energy centre of South-East of Europe.



A social enterprise, Tipperary Energy Agency has been successfully supporting Tipperary to reduce its energy demand for over 20 years. The agency has a proven ability in enabling people, communities and the public sector to become more sustainable in their energy use.



Cognita is a company specialized in developing and implementing collaborative e-learning solutions with more than 10 years of experience, the longest in the field in Croatia.



Millenium Promotion (MPR+) is the leading Croatian Integrated Marketing Communications Agency, providing the full scale of communication services in the domain of Public Relations, Public Affairs, Digital Communications, Marketing, Analytics, and Educations.



FEDARENE is the premier European network of local and regional agencies and regions, counting over 80 members from 23 European countries. Since 1990, it has been bringing Europe and its regions closer together in their transition towards clean and efficient energy.



ManagEnergy

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