

A Guide for Rural Regions to Deep Dives on the Green Deal

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General Context

The European Green Deal¹ is a first major step towards the EU becoming the first climate-neutral continent. It aims at nothing less than the transformation of the economy to address the climate crisis and achieve its overall ambition of achieving net zero by 2050.

This requires new thinking about growth and development, to drive a transformation that is green, digital, and 'just', that is new models of the economy based on natural capital and biodiversity.

To achieve this goal, all sectors must be transformed. That transformation includes the decarbonization of food and agriculture, the development of an enhanced role for forestry, and recognition of the wide range of ecological products and services provided mainly by rural regions and on which all living systems depend.

The goal is that the European Green Deal will transform the EU into a modern, resource-efficient, and competitive economy, ensuring

- no net emissions of greenhouse gasses by 2050,
- economic growth decoupled from resource use,
- no person and no place left behind.

This is expected to create new jobs and opportunities for entrepreneurs while reducing energy poverty and external energy dependency, as well as improving the overall health and wellbeing of citizens. These overall goals are valid for both cities and regions, in particular rural regions.

More specifically it aims to achieve this by providing:

- fresh air, clean water, healthy soil, and biodiversity
- renovated, energy efficient buildings
- healthy and affordable food
- more public transport
- cleaner energy and cutting-edge clean technological innovation
- longer lasting products that can be repaired, recycled, and re-used
- future-proof jobs and skills training for the transition
- globally competitive and resilient industry

These long terms goals have been translated into short term intermediate goals including

- 55% reduction of emissions from cars by 2030
- 50% reduction of emissions from vans by 2030
- 0 emissions from new cars by 2035
- 35 million buildings renovated by 2030
- 160,000 additional green jobs could be created in the construction sector by 2030
- 40% new renewable energy target for 2030
- 36-39% new 2030 energy efficiency targets for final and primary energy consumption

All 27 EU Member States are committed to these goals and have pledged to reduce emissions by at least 55% by 2030, compared to 1990 levels. The overall vision on how to achieve this is summarized in legislation referred to as "Fit for 55²."

Specific links between the Green Deal and the Common Agricultural Policy are explored in a study commissioned by the AGRI Committee of the European Parliament, published in November 2020, and

¹ https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

² <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021DC0550>

entitled “The Green Deal and the CAP: policy implications to adapt farming practices and to preserve the EU’s natural resources³.”

It is worth pointing out that the CAP itself is in the process of being reformed, and the details of its final form have yet to be worked out. Much of the relevant details of this final form will be determined by member states, in principle in close consultation with the regions and relevant stakeholders. The focus is on the adaptation of farming practices, and much more may need to be said, especially post-COVID on broader aspects of the developments of rural economies.

This has implications for the regional Foresight initiatives of the POLIRURAL project in the sense that they should not feel constrained by existing positions of central governments on the national CAP strategies, which are in some cases, at odds with those of the sectoral stakeholders and the regions. The regional Foresight initiatives should project into the future and explore future outlooks, not with a view to being shaped by the current positions and ongoing high-level dialogue, but with a view to shaping those conversations and influencing eventual outcomes.

This document starts by describing two recent but highly relevant events. The EU Week of the Cities and Regions, held from 11 to 14, October 2021, and the EU Sustainable Energy Week held from November 25 to 29, 2021. Key messages from these which should have an impact on the work of the regional Foresight actions of POLIRURAL projects include the following:

- Climate change is both a global and a local (regional) phenomenon
- 90% of the funds made available via the Green Deal must be spent at city and regional level.
- There is a need to adapt or transform the national green deals (NRRPs) into Local Green Deals.
- Many of the instruments that have been developed primarily to support the transformation of cities are also available for use by regional authorities.

The transition is not just about the climate, it is also about biodiversity and digitalization. This is at the heart of a fundamental change in the way we think about the economy and society.

The last section is about “funding and finance.” The majority of Foresight initiatives do not lead to action because insufficient attention is given to execution, and in particular to finance. So, we have emphasized the role of finance in the POLIRURAL project. It is worth noting that there has been a lot of innovation in finance in the last decade, and this is changing the way regions operate in at least two ways. In how regions can raise the money they need to finance their regional growth and development projects. Also, in the range of new instruments that are then deployed locally for the benefit of local communities, entrepreneurs including social entrepreneurs and for vulnerable groups at risk of being left behind by the rapid and large-scale changes that are underway.

³ [https://www.europarl.europa.eu/thinktank/en/document.html?reference=IPOL_STU\(2020\)629214](https://www.europarl.europa.eu/thinktank/en/document.html?reference=IPOL_STU(2020)629214)

The European Week of Regions and Cities

The European Week of Cities and Regions⁴ from October 11 to 14 2021, was attended by 17,000 participants and featured over 300 sessions⁵. All of the presentations were recorded. The recordings and the slides are available online.

This year's event focused on the COVID recovery. It called for

- Greater cohesion, based on greater **participation of citizens in decision making at local level**
- The **digital transformation of cities and regions** in a way that avoids creating a digital divide
- The **green transformation of cities and regions** that is fair and benefits all citizens.

The two transformational themes are closely linked. We learned about the importance of digitalization during COVID, when we saw the big differences that still exist between regions, in terms of access to high quality internet. The green deal will transform all aspects of our lives. The way we live and work, the way we consume, heat our homes or commute. All of these transformations will be to a large extent enabled by digital technologies.

Many actions are determined at the central government level, but their impact is felt locally. They cannot be well designed without the involvement of local populations, the citizens that are meant to benefit from these changes.

Elisa Ferreira, Commissioner for Cohesion and Reform spoke of the importance of avoiding a digital divide. She referred to a Greek initiative which brought broadband access to 5,000 remote communities, partly funded by the EU, at a cost of €200M, whose infrastructure is owned by the state, but managed by third-party telcos⁶. ON the same topic she also referred to NADINE⁷ a platform funded by H2020 that has created an online platform for migrant integration across Europe.

She spoke of the need for a just transition, the importance of citizen involvement in inclusive policy processes and the mixing of top-down and bottom-up approaches to achieving a fair transition.

The Fundamental Role of the Regions in the NRRP

Apostolos Tzitzikostas, the president of the European Committee of the Regions, also underlined the importance of the role of cities and regions in the development of the member state recovery plans, pointing out that if regions and cities are not involved in the design of those plans, the danger is that the money will not go to where it will have the greatest impact or to where it is needed most. He pointed out that many citizens are frustrated with the slow pace of change and feel that city and regional administration is not moving fast enough, especially on issues related to the climate emergency. His two most salient points were that

- Climate change is both a global and a local (i.e., regional) issue, and that
- 90% of the measures of the green deal will be implemented by cities and regions.

⁴ <https://europa.eu/regions-and-cities/>

⁵ https://europa.eu/regions-and-cities/programme/past-sessions/2021_en

⁶ https://ec.europa.eu/regional_policy/en/projects/major/greece/closing-the-broadband-gap-in-greece

⁷ <https://nadine-project.eu/>

The Importance of Local Green Deals

Whereas the initiative at EU level has been referred to as the EU Green Deal, all that the EC can do is establish general principles of what this means and provide a framework within which member states can make it happen.

It is up to each member state to decide what to do and how to do it, within this framework. An important part of this framework is the RRF or reliance and recovery fund, which along with the traditional EU budget provides €1.8T for financing a range of activities intended assist member states in their COVID recovery, accelerate progress in tackling climate change and in navigating the transition to a new post-carbon economy.

The Green Deal or more precisely the NRRPs put forward by the member states, is not without criticism, but it will evolve. The Club of Rome among other organizations is of the view that the proposed measures are too timid and that the response to the climate crisis requires a much more radical approach than that proposed in “Fit for 55.” There has also been criticism of member states’ response in terms of their National Recovery and Resilience Plans. These NRRPs have been submitted by member states to the European Commission in order to get access to the first allocations of the recovery and resilience fund. They have been criticized by both the European Commission and by various NGOs. These issues will continue to be debated and will continue to evolve in the coming years. It is useful to be familiar with the criticism, as it might indicate ways to improve your regional response to the combined COVID and climate crisis.

Through the EU Green Deal, the European Commission has set the ambitious target of making Europe the world’s first climate-neutral continent by 2050. Key to reaching that goal is ensuring that the EU’s 80 000 towns and cities develop plans to implement the idea of the Green Deal locally through Local Green Deals. Although the NRRPs put forward by the member states represent a first step in the implementation of the green deal, there is still a need to complete these at regional and city level, based on local processes of consultation and participative governance and the co-design of strategies to be implemented at local level. For this reason, the EC has introduced the idea of a local green deal, or local blueprints for action⁸.

To provide a strong starting point for this, the ICLEI - Local Governments for Sustainability⁹, as part of the ICC or Intelligent Cities Challenge¹⁰ developed a guide entitled “Local Green Deals – A Blueprint for Action.”¹¹ This provides cities with a guide and good practice case studies to support them with creating Local Green Deals. It outlines the rationale behind Local Green Deals, and provides the key principles, levers, and steps for cities, stakeholders, and local communities to implement them.

The guide was launched during this year’s EU Week of the Cities and Regions, during an online event for European Mayors, hosted by the European Committee of the Regions together with the ICC project¹². Although all of this is framed from a city perspective, much of it is directly applicable to the case of regions.

⁸ <https://www.intelligentcitieschallenge.eu/news/local-green-deals-blueprint-action>

⁹ <https://www.iclei.org/>

¹⁰ <https://www.intelligentcitieschallenge.eu/>

¹¹ <https://www.intelligentcitieschallenge.eu/sites/default/files/2021-06/Local%20Green%20Deals-8.pdf>

¹² https://www.up2europe.eu/calls/local-green-deals_6051.html

City Programs Open to Regions

To some extent the green transition is treated as a city-centric phenomenon, with structures such as the Covenant of Mayors for Climate and Energy playing an important role. There is a notable absence of comparable institutions and structures to encourage and support the transition for non-urban areas. This is an issue that needs to be addressed. Nevertheless, the point was often made during this year's Week of Cities and Regions that all regions have a role to play and not just cities, and many representatives of projects and programs ostensibly created to support the transition for cities and municipalities, can also provide support for regions, including rural regions. I will mention here just a small number of these, but those leading Foresight initiatives in the POLIRURAL project, would be wise to look more broadly at what has been done and approach those instruments for support, irrespective of any impression they might give that they are for cities alone.

The European City Facility

The EUCF¹³ presents itself as a mechanism that provides grants to local authorities for amounts of the order of €60k for the procurement of technical assistance needed to create strategies or set up energy and climate projects. These are not one-off grants and some authorities have made multiple applications, to obtain total packets of assistance of up to almost €500k. The main message at the EUWCR event was that the facility has been underused, and local authorities have been encouraged to apply. The facility presents itself as having been “made by cities for cities” and this is an undeniable fact. But that does not mean that the facility is only available for cities. In principle any local authority can approach it for support via its periodic calls. The best is to make contact by phone in advance and clarify what you intend to do and heed the advice that is given.

The Smart Cities Marketplace

The Smart Cities Marketplace¹⁴ was created by merging the two former Commission projects “Marketplace of the European Innovation Partnership on Smart Cities and Communities” (EIP-SCC) and the “Smart Cities Information System” (SCIS) into one single platform. It is a major market-changing undertaking that aims to bring cities, industries, SMEs, investors, researchers, and other smart city actors together. The initiative provides services for

- **Matchmaking:** Services and events for both cities and investors on creating and finding bankable smart city proposals by using our Investor Network and publishing calls for projects
- **Community:** Made up of a series of Action Clusters and Initiatives with a variety of activities to help shape the market for Smart Cities in Europe.
- **SCALE Cities:** A city-led initiative that will provide large-scale, long-term support for the cities and projects involved in the H2020 Smart Cities and Communities Lighthouse Group with 18 projects and 128 cities participating.

¹³ <https://www.eucityfacility.eu/home.html>

¹⁴ <https://smart-cities-marketplace.ec.europa.eu/>

- **EU initiatives:** Other adjacent initiatives focused on making European cities better places to live and work.

The matchmaking is for finding ‘finance’ not ‘funding.’ They have a project maturity level, ranging from PML1 to PML6 (check). They are interested in receiving concept notes for projects at PML3 or PML4. They will provide feedback, advice, training, coaching, and introductions to a network of investors.

A major issue is that investors require projects to be of a certain size, to avoid excessively high transaction costs. So, they often advocate for the bundling of projects and the use of standard contracts or proposal formats to make the ‘project’ more finance-friendly. Joule Assets¹⁵ is one of the members of the investor network, along with CiviESCO¹⁶ and the EEEF or European Energy Efficiency Fund¹⁷. Joules Assets is driving many very interesting innovations in energy project finance that address many of the real-world issues that limit the uptake of energy funding opportunities.

Although this is called the “smart city marketplace” it is not in fact limited to cities. Several regional governments have started to use it as well. The advice given during the Week for Cities and Regions was that whether someone represent a city or a region, they should make contact and support will be provided regardless.

Cascade Funding

One of the innovative financing mechanisms, mentioned several times during the EWCR, was ‘Cascade Funding’ also known as FSTP. This is worth retaining as a model for how a region could provide support for its local SMEs, or startups in new and emerging areas such as circular economy. This came up primarily in the context of a presentation of the I4MS¹⁸, an umbrella project supporting Innovation for manufacturing SMEs. This initiative is coordinated by Funding Box¹⁹. They described their financing model based on the use of a “cascade funding” scheme to support SMEs in Croatia. Also known as Financial Support for Third Parties (FSTP), it is a European Commission mechanism to distribute public funding in order to assist beneficiaries, such as start-ups, scale-ups, SME and/or mid-caps, in the uptake or development of digital innovation. This funding method aims at simplifying the administrative procedures, creating a light, SME-friendly application scheme, by allowing that some EU-funded projects may issue, in turn, open calls for further funding. New schemes must “cascade” at least 50% of their funds to SMEs. They make available some funds for ‘hubs’ to improve themselves.

The Social Climate Fund

The new Social Climate Fund will support EU citizens most affected or at risk of energy or mobility poverty. It will help mitigate the costs for those most exposed to changes, to ensure that the transition is fair and leaves no one behind.

¹⁵ <https://www.jouleassets.com/>

¹⁶ <https://www.civiesco.it/>

¹⁷ <https://www.eeef.lu/home.html>

¹⁸ <https://i4ms.eu/>

¹⁹ <https://fundingbox.com/>

The EU Sustainable Energy Week

This has been a busy period for week-long events aimed at regional administration. The 16th edition of the annual EUSEW event was held from November 25 to 29, 2021. This year's theme is 'Towards 2030: Reshaping the European Energy System.'

Issues addressed in the EUSEW21 related to renovation wave include a wide range of projects intended to develop, demonstrate or scale-up innovative approaches to dealing with all aspects of energy efficiency. There was a significant focus on the renewal of the built environment, based on the renovation of existing building, the demolition of older buildings for which renovation does not make financial sense, and the construction of new buildings based on new legislation.

Relevant key legislation includes

- EED: The Energy Efficiency Directive²⁰
- RED: The Renewable Energy Directive²¹
- EPBD: The Energy Performance of Buildings Directive²²
- CPR: The Construction Products Regulation²³
- And a roadmap for the introduction of a WCL or 'Whole Carbon Lifecycle' approach to building design and maintenance, to be published by the EU in 2022²⁴.

The energy efficiency of buildings is a key component of the EU strategy to achieve net-zero in 2050. Nevertheless, the general feedback on progress includes observations that progress is currently not being made at the pace required to reach net-zero in 2050, or more precisely to reach intermediate goals for 2030. Based on the current response of member states to the opportunity provided by the RRP in terms of their NRRPs, member states have not responded with the sense of urgency required.

One of the most significant issues raised is that of social equity, the idea that the whole of society needs to benefit from the transition, ultimately moving o cleaner, safer and more comfortable homes, and places of work. The major themes include

- Energy poverty
- Affordability of renovation services
- Access to renovation services, a term that refers to the fact that traditional grants, paid only when work is already completed and paid for, are not suitable for many people and families, even so-called middle-class families, and therefore need to be re-designed.
- Renoviction, a new term that refers to the phenomenon hereby renovated buildings experience rent-hikes with many tenants being evicted or forced to move, when they are no longer able to afford the rent.
- Innovation in finance for renovation by tenants, building owners and commercial real-estates operators, for individuals, public institutions and collectives or housing coops.

²⁰ https://ec.europa.eu/energy/topics/energy-efficiency/targets-directive-and-rules/energy-efficiency-directive_en

²¹ https://ec.europa.eu/energy/topics/renewable-energy/directive-targets-and-rules_en

²² https://ec.europa.eu/energy/topics/energy-efficiency/energy-efficient-buildings/energy-performance-buildings-directive_en

²³ https://ec.europa.eu/growth/sectors/construction/construction-products-regulation-cpr_en

²⁴ <https://www.bpie.eu/publication/whole-life-carbon-challenges-and-solutions-for-highly-efficient-and-climate-neutral-buildings/#>

- One Stop Shops (OSS), local legislative reform, participative design process, as well as training and technical assistance to public authorities.

All of the sessions have been recorded and are available along with slide presentations on the EUSEW21 site²⁵.

A Vision for the EU Energy System in 2050



The ETIP-SNET was created in 2016²⁶. The SNET in ETIP-SNET stands for “Smart Networks for the Energy Transition.” Building upon a series of earlier initiatives to address research and innovation issues related to the development of smart electricity grids, this ETIP²⁷ takes a ‘whole energy system’ approach that goes beyond electricity to address not only innovation challenges of the entire energy system, but the market development challenges needed to achieve climate protection and **renewables integration, while guaranteeing** affordability and security of the energy supply.

A more readable version of this image²⁸ and the full text of the vision document²⁹ can be downloaded from the ETIP-SNET site. Entitled “**ETIP SNET Vision 2050**” it was launched in June 2018. it defines further research and innovation needs in the transition from today towards Europe’s

²⁵ <https://eusew.eu/>

²⁶ <https://www.etip-snet.eu/>

²⁷ European Technology Innovation Platform

²⁸ https://www.etip-snet.eu/wp-content/uploads/2018/05/ETIP-SNET_infographic.pdf

²⁹ <https://www.etip-snet.eu/wp-content/uploads/2018/06/VISION2050-DIGITALupdated.pdf>

energy systems of the future³⁰. It refers to a Europe of 2050 in which the energy system is low-carbon, fully-integrated, circular and pan-European, with electricity from renewable sources as its backbone. This image and the vision it represents provides a good starting point for discussions at regional level about the future of the regional energy system.

The new model is based on a “system of systems.” This includes systems at regional and national level, joined up across Europe, involving smart networks for the production, storage and distribution of energy and related services including:

- Electricity (from RES, wind, hydro, solar ...)
- Natural Gas (from organic waste...)
- Liquid bio-fuels
- Thermal services (District heating and cooling, storage...)
- Hydrogen (from RES...)

An important enabler of these services is a set of networks for energy related data. That is data about the nature of the service, its usage and availability, associated emissions, and pricing. Some of this data is produced by the energy systems themselves, more of it is produced by consumers or users of the services. This data will be used by an eco-system of data service providers that will use the data to optimize the functioning of the system. The goal of optimization can vary. It could mean optimizing the efficiency of the system, making it more reliable, more efficient, and more flexible or resilient. It could also mean optimizing the cost of energy for the end-user, or the revenues it might obtain as a prosumer.

In a meeting on the future of the energy system at regional level, it may be useful to set the scene and describe what this system will look like in 2050, the current status of the energy system in the region and the options available for its development in the future.

The kinds of issues that may need to be discussed, include those that were discussed at this year’s EU Sustainable Energy Week. It is useful to involve local energy experts that understand the basic ideas and are able to help animate and facilitate a debate about how energy demand will grow in the coming years, and the changes that must take place to realize the ETIP-SNET vision for 2050.

The issues that will need to be addressed include the production, storage, and distribution of renewable energy of different kinds

- Electricity from wind, solar and other sources
- Gas from organic waste (farms, factories, kitchens, domestic sources)
- Bio-fuels

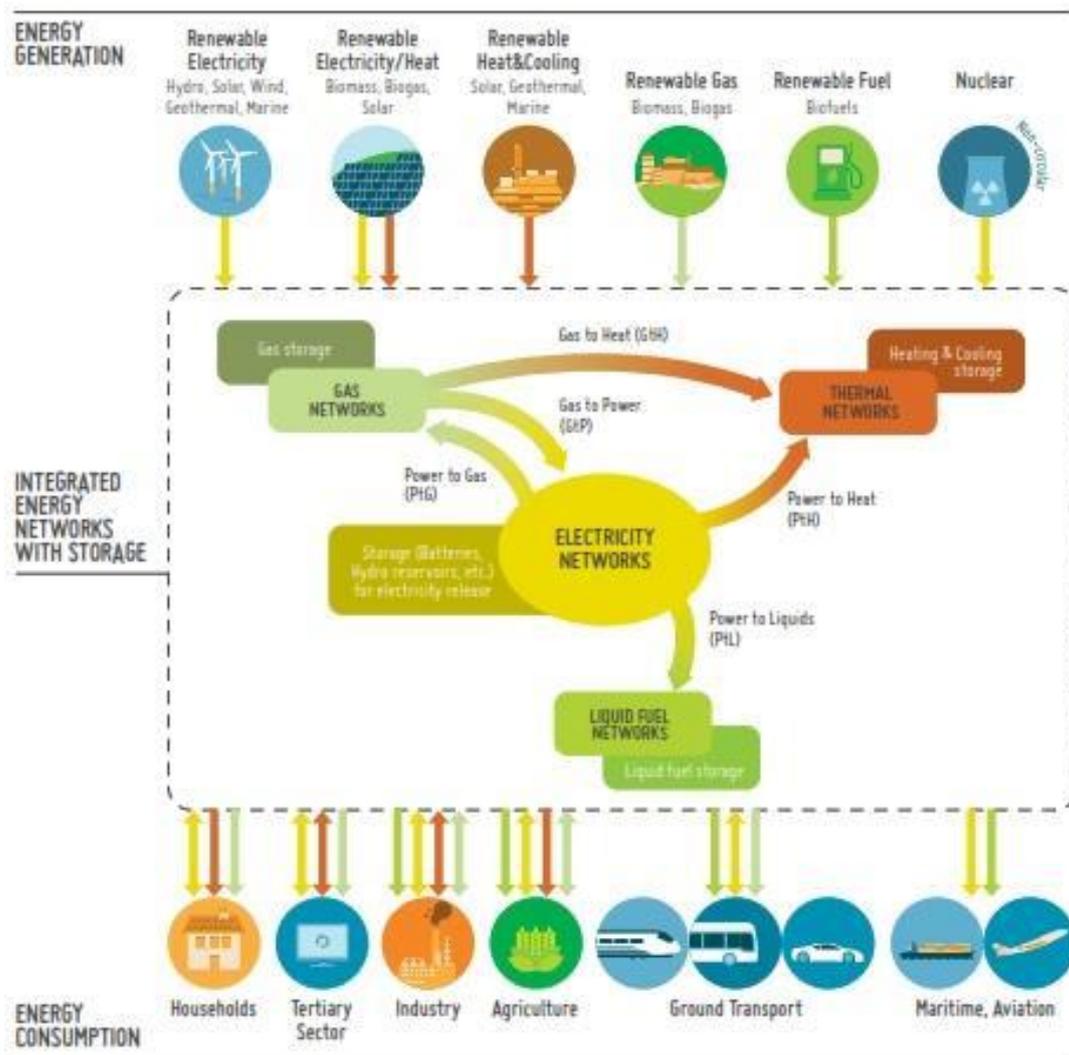
They also include a wide range of energy services specific to different sectors such as

- Housing and more generally the built environment, where services such as district heating and cooling need to be developed. By 2050 most buildings will be smart, high-performance buildings use IoT based systems to optimize energy efficiency and keep down costs. They will qualify as ‘zero energy’ or ‘energy positive.’
- Transport, based primarily on electric vehicles, including commercial vehicles, heavy goods vehicles and in rural areas, electric farm-machinery.

According to Vision 2050, the energy system of the future will look something like this³¹.

³⁰ <https://www.etip-snet.eu/etip-snet-vision-2050/>

³¹ Extract from the ETIP-SNET Vision 2050



It is worth noting the absence of any reference to energy derived from fossil fuels such as coal and oil. Many of these systems already exist, are in a mature state of development and are ready to deploy, so it is possible to start to build out regional energy systems based on this vision. Many of the needed technologies are in development and will be available quite soon.

But technologies are just partial solutions. Important elements of these systems are the common standards needed to facilitate integration and optimize performance. These include data standards, design principles and practices intended to establish and maintain an open, accessible, and competitive market for data services. They also include legislation that enables integration, the emergence of the energy related service eco-system and protects the basic rights of individuals, especially those on modest incomes.

Such standards and practices are emerging. The construction of the energy systems of the future requires visionary planning, as well as experimentation, piloting and scaling of what is best for local communities.

Key concepts that are an important part of this discussion include

- Bi-directional networks, grid, smart grid, micro-grid distribution technologies
- Prosumer networks, service pricing, feed-in, flexible tariffs, off-peak tariffs
- EaaS or Energy as a Service, and MaaS or Mobility as a service
- Peer-to-peer trading of energy and storage services

- Smart charging, hyper-charging (for heavy vehicles), charging-on-the-go, on-street and off-street charging, AC-charging, DC-charging, charge points for homes, fleets, and public places such as parking places, shops, EV as storage...
- Integration of charging infrastructure into the grid, V2G (vehicle to grid) systems
- Load shifting to manage intermittency and increase energy efficiency of the network
- The energy prosumer (producer- consumer) experience, the economic model, the savings to be made, the revenues to be earned,
- Data-services for finding charge points, trip-planning...
- Protection against high energy prices...
- The energy related service eco-system
- Legislative issues that constitute barriers to participation in energy communities
- Ownership of data, control over data sharing, choice of service provider, transparency of contracts, convenient
- Carbon tracing, the creation of data related to carbon (emissions) content of services.

Actions Supported by the Green Deal

The Green Deal anticipates financing for a wide variety of actions . The standard graphic laying out the areas covered by the Green Deal is as follows. Priorities for the period 2019 to 2024³² have been decided. Plans exist outlining the investments needed and the tools available for financing actions under each of these headings.

Details of the actions needed and available financing tools as well as regular updates along on each of these areas are provided at the following links

- Promoting clean energy³³ and renewable energy³⁴
- Environment³⁵ includes actions on soil and land, water, waste, and plastics...
- Mobility and transport³⁶ including actions on logistics, autonomous vehicles, and drones ...
- Regional policy and the low-carbon economy³⁷ where the ERDF requires member states to allocate a mandatory minimum proportion of the available funding to the low-carbon economy
- Sustainable finance³⁸ includes measures on climate reporting by companies and measures to increase the amount of private capital invested in environmentally sustainable ventures
- Industrial policy³⁹ includes measures related to supply chain resilience, clusters and alliances, innovation, and skills...
- Trade and sustainable development⁴⁰ includes measure related to social justice, respect for human rights, high labor standards, and high environmental standards.

³² https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/delivering-european-green-deal_en

³³ https://ec.europa.eu/energy/home_en

³⁴ https://ec.europa.eu/energy/topics/renewable-energy_en

³⁵ https://ec.europa.eu/environment/index_en

³⁶ https://ec.europa.eu/transport/home_en

³⁷ https://ec.europa.eu/regional_policy/en/policy/themes/low-carbon-economy/

³⁸ https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance_en

³⁹ https://ec.europa.eu/growth/industry/policy_en

⁴⁰ <https://ec.europa.eu/trade/policy/policy-making/sustainable-development/>

- Sustainable development goals⁴¹ including tools for policy mapping as well as measures on engagement with civil society and achieving a just transition.
- Research and innovation on climate change⁴² which includes many of the calls of the Horizon Europe program, as well as new mechanisms for the financing of start-ups and entrepreneurs for example based on mechanisms such as cascade funding⁴³. Also known as Financial Support to Third Parties or FSTP, this mechanism delegates to local actors the selection and financing of ventures in a way that avoids much of administrative burden of centralized program management by the EC. This distributes public funds to local actors allowing them to support the creation of new companies and increase their scalability. It targets SMEs or mid-cap companies, and currently has a focus on digital innovation.



Getting started on Your Local Green Deal

The first step for any region intending to develop an action plan to implement its Local Green Deal (LGD), is to find out what the central government has applied for. Information about the Recovery and Resilience Facility can be found online⁴⁴. Copies of the National Recovery and Resilience Plans or

⁴¹ https://ec.europa.eu/info/strategy/international-strategies/sustainable-development-goals_en

⁴² https://ec.europa.eu/info/research-and-innovation_en

⁴³ <https://eucalls.net/blog/what-is-cascade-funding>

⁴⁴ https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility_en

NRRPs can be found here⁴⁵. It is also worth considering the independent assessments of the NRRPs provided by Bank Watch⁴⁶ and E3G⁴⁷ based on its green recovery tracker⁴⁸.

In what follows, I focus mainly on projects in energy, building renovation and transport.

Energy Projects

An important area for development of the regional economy is that of energy. This is much broader than it appears at first sight, and it goes to the heart of the climate crisis and is a key component of the energy transition. The situation is summarized in the following diagram.



The logic is that climate change is caused by an excessive amounts of CO2 or other greenhouse gases being emitted into the atmosphere. As explained by the IEA⁴⁹, reversing this process sufficiently to avoid permanent and catastrophic change to the climate requires urgent action on three fronts.

- Replacing energy derived from fossil fuels such as coal and oil with energy derived from renewable energy sources such as the sun, wind, and hydro.
- Reducing both direct and indirect energy usage through energy efficiency measures and by reducing our consumption of products and services, all of which contribute indirectly to energy consumption and CO2 emissions
- Capturing carbon either for use or for sequestration either by 'nature-based solutions' or by direct capture from the air and the sea of point of production.

We need to act in all three areas to achieve the goal of net zero.

For a variety of reasons, technical, financial, and political, national energy systems are not able to move quickly enough on the switch to renewables. The regions and cities therefore have a very important role to play in his transition through the development of local energy systems. These may

⁴⁵ https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility_en#national-recovery-and-resilience-plans

⁴⁶ <https://bankwatch.org/blog/last-chance-for-member-states-to-include-biodiversity-in-recovery-plans>

⁴⁷ <https://www.e3g.org/news/a-recovery-with-green-elements-but-not-a-green-recovery/>

⁴⁸ <https://www.greenrecoverytracker.org/>

⁴⁹ The International Energy Agency, see its site at <https://www.iea.org/>

be on-grid or off-grid and are often owned and managed cooperatively by local energy communities. They play a dual role in the new economy, not only as accelerators and boosters of the transition but as additional sources of income and cost savings and revenues for the communities that support them.

Energy is a very complex issue and there may be a need to identify local experts, and even for local expert to upgrade their own knowledge of what has been going on and how real-world options have been maturing over the last decade.

The most important point that everyone must now understand is that energy is no longer the sole reserve of central government and that former monopolies must now accommodate, support, and encourage the development of new energy companies, needed to accelerate the transition. The new energy system will no longer be entirely owned and controlled by central or regional government but by also by coalitions of citizens and businesses generally referred to as “energy communities⁵⁰,” which will own and manage the system through cooperative arrangements and new modes of local governance⁵¹.

The next most important issue is that the energy system in no way resembles the old one where energy is produced in a small number of places, and then distributed to very many through an inflexible unidirectional distribution system. The new model is a prosumer model⁵² where in principle every actor in the system is both a producer and a consumer not only of energy but of energy related services including storage. This is technically a very different kind of energy system from before. The transition is both costly and necessary and must be done in phases. It will also be an important creator of jobs, entrepreneurial opportunity, cost savings and new sources of revenues.

Any deep dive on energy must take time to introduce these new concepts and let them sink in and interpret these wide array of opportunities from a local point of view. Additional steps may include

- Taking stock of the existing system, what it produces, imports and exports, as well as existing demand for the different forms of energy consumers require, and for different purposes.
- Examining how demand will evolve in the future, its impact on climate change, and transition pathways to net-zero. Most likely studies have already been done on the potential energy yield in the region based on renewable sources such as wind, solar and natural gas from organic (farm) waste. New elements in this will be the level of new demand due to electrification of industrial boilers, transport, and machinery.
- Examining the fitness and flexibility of local legislation with regard to the location, ownership, and operation of different energy services.
- Exploring the economics of energy in terms of the cost of deployment and maintenance, options for financing and investment, feed-in, pricing and tariffication, employment creation, direct and indirect benefits (co-benefits) of different solutions, contribution to the public goods, energy poverty and consumer protection.
- All of this should be linked back to the impact on the environment and natural capital, the climate and carbon emissions as well as the key targets established at local, national, and European level. It also needs to be integrated into a global vision of how the regional energy system will integrate aspects of
 - Renewable energy production, storage, and distribution

⁵⁰ https://ec.europa.eu/energy/topics/markets-and-consumers/energy-communities_en

⁵¹ <https://www.rescoop.eu/>

⁵² <https://en.wikipedia.org/wiki/Prosumer>

- Energy efficiency, including embedded energy savings based on recycling and resource efficiency and circular economy measures
- The capture and sequestration of carbon.

At some stage a comprehensive energy plan for the region will be needed. This can be developed in parallel with the realization of initial pilot projects intended to support learning by the system that will have to adapt and make way for something very different.

Energy projects include projects for production, storage, and distribution of energy of different kinds and on different scale, on-grid, and off-grid. They include projects that decarbonize or boost-the-efficiency-of energy intensive services such heating, cooling, and drying, for agricultural, industrial, or domestic environments. They include projects for the electrification of systems based on fossil fuels, such as

- Production
 - Wind power (many options on different scales and adapted to different contexts)
 - Hydro-electric and wave power
 - Solar thermal Solar PV
 - Biofuels, waste to energy systems and organic waste to natural gas
 - Hydrogen
- Storage and related services
 - Large-scale storage of energy (electricity, natural gas, bio-fuels)
 - Local prosumer-oriented storage in homes, cars, places of work
 - Battery storage lithium Ion and other technologies
 - Physical storage systems
 - Storage as a Service
- Distribution and energy related services
 - District heating and cooling system
 - Electric micro-grids
 - Gas micro-grids
 - Bio-fuels
 - Hydrogen

The initial tendency is to establish pilot projects to demonstrate and evaluate solutions or provide proof of concept. These tend to provide ‘partial’ solutions to the energy transition challenge. The implementation of such projects require innovative approaches to project finance, governance, and even new legislation. They are by their nature, far from the complete solutions required to implement the energy transition. At some point a local energy strategy is required that maps out what the future energy system will look like and identify the steps that need to be taken to achieve that vision at some time in the future, for example in 10 or 20 years. The material provided earlier such as Vision 2050 provide by the are all important background material. A lot can be learned from a perusal of the increasingly long lists of research, innovation, and demonstration projects in these areas, already financed under programs such as INTERREG and H2020.

Building Renovation

One of the most important measures under the general label of ‘energy efficiency’ is the renovation of buildings to improve their energy efficiency. The vast majority of buildings in Europe are of low energy efficiency. They cost too much to heat and cool. Currently, 97% of EU buildings need to be improved or retro-fitted in order to enable high levels of energy efficiency through good energy

management. To reach net-zero, the rate of building renovation in Europe must triple, and this rate must be maintained every year from now until 2050. Future renovations must improve energy efficiency. For many buildings this will require “deep-renovation.” Almost all buildings require attention, regardless of who owns them, public buildings, company buildings as well as privately owned or occupied homes.

This should provide immediate benefits in terms of energy savings, reductions in CO2 emissions, not to mention new jobs, indirect benefits such as improvements to health, safety, and comfort, as well as increases to the value of buildings.

It will be a challenge to carry out this work. It is not at all clear that the workers are available to do this, or if available, that they have the right skills to do what is required.

It will also be a challenge to finance this. Especially for small businesses, budget strapped public administration, home-owners who are retired, on modest pensions or with low levels of income. A lot has been done to develop new and innovative financial services to enable the transition and the European Commission has started the ball rolling by making available significant funds via the EU Green Deal, to leverage energy and climate related funds and related financial services, including new insurance products and services to de-risk lending and project finance.

Additional investment in building retro-fits of €185B a year is required from now until 2050. The EU has boosted its own budget for the period 2021-27 with an extra €750B with the COVID recovery fund. Much of this will be spend on climate and energy (C+E) projects, some of which will be used to leverage an extra €1T in private sector investment.

In addition to financial incentives such as these, the Commission proposes...

- That Member States renovate at least 3% of the total floor area of all public buildings annually
- A benchmark of 49% of renewables in buildings by 2030
- Increase the use of renewable energy in heating and cooling by +1.1 percentage points each year, until 2030

The new Social Climate Fund will support EU citizens most affected or at risk of energy or mobility poverty. It will help mitigate the costs for those most exposed to changes, to ensure that the transition is fair and leaves no one behind. It will provide EUR 72.2 billion over 7 years in funding for renovation of buildings, access to zero and low emission mobility, and even income support.

The basic renovation of a building often requires the installation of new climate friendly windows and doors, insulation for floors, walls, and roofs. It might provide occasion for changes to the structure of the building, the installation of heat pumps, the installation of solar thermal or PV, the installation of batteries for energy storage and charging points for EVs.

Ideally the renovation of buildings must take account of related issues that go beyond the basic issues of insulation and local power generation. It should also anticipate changes in the nature of the energy systems, and related ‘systems’ such as the transport system, which will rely increasingly on EVs. Furthermore, people will be encouraged to walk more and cycle more. They will commute less, and profit from an increased ability to WFH⁵³. More space will have to be set aside for walking and cycling, not only for personal transport but also for cycle logistics. Not only will vehicles cars, vans, and bikes, be predominantly electric, but in the coming decades, many of these will be autonomous.

⁵³ Work from home

The finance sector tends to focus on large projects, projects of the order of €20M-100M. Existing C+E funds say that they could invest in projects as small as €1M, but in reality their lower limit is more like €5M. However, the vast majority of projects that need to be implemented have values that lie between €50k and €250k. The challenge for the finance sector is to develop products, practices and partnerships that make investing in C+E projects as easy as getting a mortgage. Whereas some investments may be negotiated directly with the beneficiary, many are negotiated with ESCOs, the Energy Service Companies that design and implement the project and which may even take over energy management on behalf of the client or consumer, on an individual or collective basis. Financial institutions observe that these transactions tend to be unnecessarily long and complex, even to the point where negotiations are abandoned as a result of such high transaction costs.

A huge effort is being made to create innovative new services that take over the energy project so that the owner-occupier has little or nothing to do to make it happen, and where possible nothing to pay or invest to benefit from the upgrade.

ICCARUS, also known as 'Ghent Knapt Op,' is the name of a project whose goal is to transform the homes of vulnerable citizens⁵⁴. Funded under the UIA (Urban Innovative Action) program, it will renovate 100 homes of low income home-owners, in a pilot to address energy poverty and affordable housing. This experiment will allow the city of Ghent to develop a financial and social model for the transformation of homes, based on owners' participation in the design of the upgrade and a project financing based on a revolving fund. This is part of an URBACT + UIA initiative on "Cities engaging in the right to housing⁵⁵." A short video provides an overview of what it hopes to achieve and how⁵⁶. The goal of the city is to extend the program to a possible 10,000 homes. This is one of many innovative mechanisms being explored by pioneering cities and regions with a view to enabling and accelerating the transition.

Innovation in finance is therefore a very important part of the energy transition. A deep dive on this issue could start by setting aside time for an exploration of the new and emerging financing models that are expected to accelerate the transition, making investments by building owners affordable and accessible for all sectors of society, setting aside resources for social housing projects, and protecting renters from predatory practices such as unexpected and unreasonable rent hikes and unfair eviction, so called "renoviction."

Key concepts that may be new to many include

- EaaS, Energy as a Service
- Energy management services and service providers such as ESCOs
- Energy Performance contracts
- Off-balance sheet financing
- On bill financing
- Energy project bundling
- Energy efficiency audits
- Energy efficiency co-benefits
- Energy communities,
- Green mortgages,
- Energy justice.

⁵⁴ <https://www.uia-initiative.eu/en/uia-cities/ghent-call3>

⁵⁵ www.right2housing.eu platform

⁵⁶ <https://www.youtube.com/watch?v=5zH1HqAYoxg&t=2s>

A great number of pilot projects have already been executed. Many of these have been highly successful and in many cases the results are ready for widescale adoption, perhaps after the usual initial steps of local feasibility study and piloting by transition teams working for local administration before proceedings to full scale roll-out.

After this initial learning and open brainstorming phase, a deep-dive should establish the current status of the build environment, by gathering basic information on...

- The number of buildings in the region, along with a breakdown by
- Size and function, energy rating, and need for upgrade,
- Ownership, local and central government, public authorities, business, and industry, as well as real estate management companies,
- Possibility of retro-fit or renovation, demolition and rebuild or relocation,
- Labor, skill, and capital requirements to make this happen,
- Potential for energy savings and cost of the energy efficiency project,
- Financing options, impact on valuation, value or co-benefits and need for energy justice.

Effort is required to project into the future, based on demographic trends, as well as on changing to the way we live due to COVID. These changes include WFH, and the need to school kids at home. These changes have had a profound effect on the lives of people and for some living in modest and arguably crowded accommodation, it has not been easy to adapt to new patterns of living where in extremis two parents now work at home, juggling this with school-kids of different ages, all needing space and access to adequate bandwidth to perform. These trends may create need for further adaptations to homes, as well as for a new generation of social infrastructure and related social services, all provided at an affordable price.

Some of this information will be available but not all. Estimates will be OK in a first instance. Such an overview should provide a “shock” in the sense that it will put in urgent perspective the huge task ahead, the magnitude of the opportunity it provides to create jobs and boost the quality of life of citizens, as well as the urgent need to start now.

Transport and Mobility projects

Transport and mobility is a major contributor to climate change. It accounts for 21% of global emissions, of which 75% is due to road transport. Global air pollution from both transport and more generally from the burning of fossil fuels for energy, causes more than 10 million deaths globally a year⁵⁷. The WHO estimates an annual toll of 400,000 deaths from transport related air pollution across the EU-28. Of these 75,000 are linked to pollution from diesel vehicles⁵⁸.

The case for decarbonizing transport is not just about the environment, it has a strong public health dimension as well. Furthermore, decarbonization strategies based on increased use of walking and cycling has additional health benefits in terms of its impact on rates of obesity, heart health and diabetes.

⁵⁷ <https://www.bloomberg.com/opinion/articles/2021-03-10/air-pollution-kills-far-more-people-than-covid-ever-will>

⁵⁸ <https://www.transportenvironment.org/discover/75000-deaths-largely-diesel-fumes-legacy-europes-lax-vehicles-limits-and-testing/>

For these and other reasons, the sector is undergoing rapid change. The most important of these being the electrification of transport. Many forces now act to accelerate the transformation of the transport sector. These include

- Introduction of EVs by almost all traditional automobile companies and by new ventures set up to operate entirely within the sector.
- The introduction of new vehicle concepts such as e-bikes for personal transport and logistics, scooters, small format models for urban living and local commuting, autonomous vehicles, and drones.
- The political aim of the EU to ban new fossil fuels cars from 2035⁵⁹
- Increased popular support for the banning of ICE car sales from 2030⁶⁰
- An explicit EU target of 30 million EVs on EU roads by 2030⁶¹

Between April and June of 2021, 1 in 12 cars sold across Europe ran on batteries alone. This rises to 1 in 3 when hybrid models are counted⁶². The introduction of EVs is not limited to urban areas. The electrification of farm-machinery is also proceeding apace, and several companies have already started to serve this market. The same is to be said of heavier vehicles such as HGVs⁶³.

Electrification of vehicles is not the only major trend. The other one is “smartification.” It is worth noting that one important European car maker tells me that it has [over 100 CPUs in its cars today, containing 350 million lines of code. By contrast Airbus has about 150 million lines of code.](#) That same company has been busy recruiting experts in AI. The point being that EVs are not just about engines and batteries, they are basically supercomputers on wheels. EVs are going through a phase that mobile phone went through several decades ago, whereby they serve a rapidly increasing number of roles, and support a rapidly expanding range of services, on the basis of SW Apps that can be downloaded and installed in the vehicle, operating in real time to exchange information with its owners and occupants, other vehicles, and the environment in which it operates. This will have an impact on the skills needed to sell, repair, maintain and operate them, along with the electrical networks needed to keep them “filled” with energy.

It is therefore important in any Foresight or structured conversation about the future, to examine such trends in detail and plan for the transformation of transport and mobility. Furthermore, such a deliberation on the transformation of the transport system must also consider its impact on the energy system, as well as on the built environment, along with post-COVID changes to behaviors due to new patterns of working and living, especially the WFH phenomenon.

Key concepts that may need to be evoked in a strategic conversation about the future of transport and mobility in the region include...

- Changes in demand for transport related services, post-COVID
- Increased walking and cycling and related infrastructure, its benefits, and co-benefits
- Incentives for phasing out old polluting vehicles, their disposal and recycling
- Incentives to encourage adoption of new climate friendly models
- Fuels in the form of batteries, natural gas from renewables, bio-fuels and hydrogen
- New forms of ownership, sharing and leasing

⁵⁹ <https://euobserver.com/climate/152452>

⁶⁰ <https://www.transportenvironment.org/discover/cities-63-support-eu-ban-petrol-and-diesel-car-sales-after-2030/>

⁶¹ <https://euobserver.com/green-deal/150335>

⁶² <https://www.ft.com/content/fb4d1d64-5d90-4e27-b77f-6e221bc02696>

⁶³ Heavy Goods Vehicles

- Bandwidth and digital infrastructure for traffic, fleet, and trip management
- Parking, charging and battery management, electric and electronic waste
- Mobility as a Service (MaaS), on demand public and private transport services

Funding and Finance

Over the next decade the EC has pledged to mobilize over €1T in sustainable investments across Europe. It requires that 30% of the multiannual budget of the EU for the period 2021 to 2028 will be allocated for “green” investments. Normally this money comes from a budgetary contributions of the member states, but member states are already ‘strapped for cash,’ so much of this money will be raised on international market by the issue of “green bonds.”

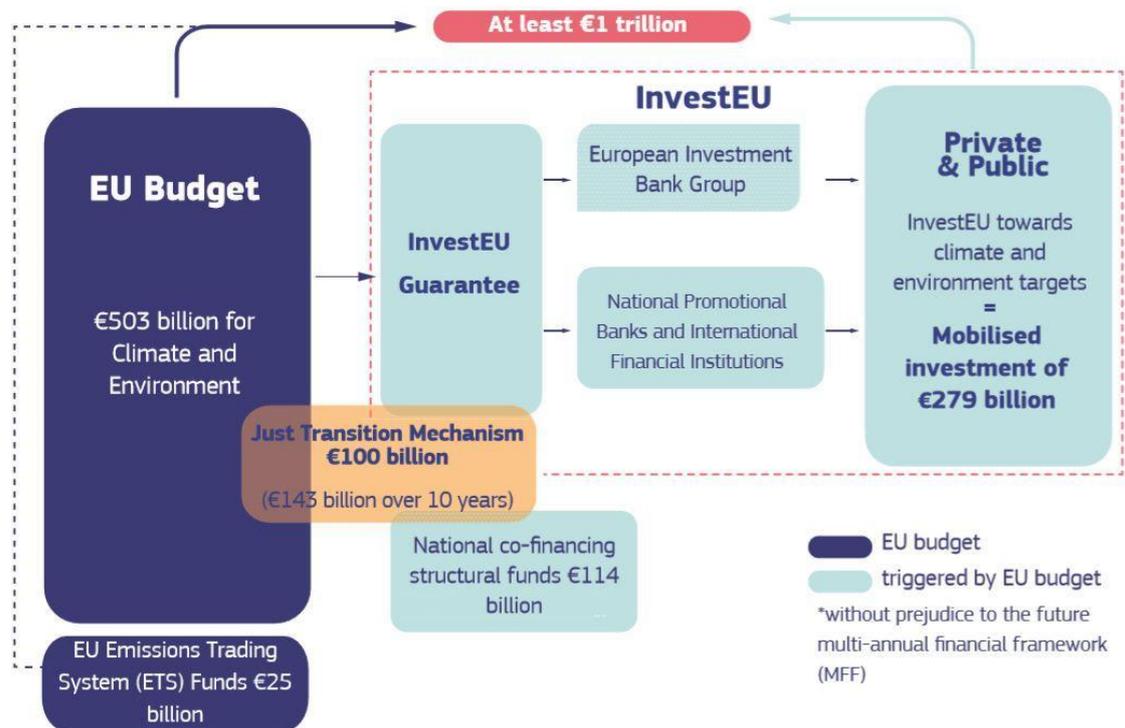
This money will not meet all needs and must be complemented by additional funds raised by member states, using a variety of mechanisms, which include national budgetary re-allocations, extra funds raised via green bond issues and funds raised from the private sector. In 2018, Belgium raised €4.5B on the bond market for green projects⁶⁴, and intends to increase the sums raised in this way to over €€10B by 2022⁶⁵. In principle every country has is or will do something similar and it is worth keep track of this money, and the kind of projects they are intended to finance.

This is quite a departure from the BAU (business as usual) and has important implications for regional administration. These differences should be anticipated in the ‘package’ that each of the 12 Foresight action of the POLIRURAL project is expected to deliver.

⁶⁴ <https://www.greenfinanceplatform.org/policies-and-regulations/belgium-has-issued-eur-45-billion-green-bond>

⁶⁵ These bonds are referred to as OLOs, linear bonds, green OLOs
<https://www.debtagency.be/en/productoloinfo>

WHERE WILL THE MONEY COME FROM?



*The numbers shown here are net of any overlaps between climate, environmental and Just Transition Mechanism objectives.

For those who are used to the 'old' approach to support for development of rural regions, based on the CAP, they will have to learn a new set of concepts and get familiar with the role of the new instruments and mechanisms that have evolved to meet the challenge of the green transition⁶⁶.

- **NGEU:** The Next Generation EU investment instrument **to recover** from the pandemic⁶⁷.
- **RRF:** The Recovery and Resilience Facility, backed by a budget of €672.5B of which **37%** must be spent on climate related reforms and investments⁶⁸.
- **EGDIP (SEIF):** The European Green Deal Investment Plan, also known as the Sustainable Europe Investment Plan⁶⁹.
- **Invest EU:** A program for the creation of long-term financing mechanisms that leverage both public and private funds of which at least 30% must be spent on projects addressing climate objectives⁷⁰.
- **The Just Transit Mechanism:** A part of Invest EU focused on ensuring a fair and just transition to a green economy and will mobilize €100B for investment in the period 2021-2027 to support citizens in regions most impacted by the transition⁷¹. These include regions relying on coal mining and other fossil fuel intensive industries. A part of the just transition mechanism is an EIB loan facility where an initial contribution from the EU budget of €1.5 billion, will allow

⁶⁶ https://ec.europa.eu/commission/presscorner/detail/en/qanda_20_24

⁶⁷ https://europa.eu/next-generation-eu/index_en

⁶⁸ https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility_en

⁶⁹ https://ec.europa.eu/commission/presscorner/detail/en/qanda_20_24

⁷⁰ https://europa.eu/investeu/home_en

⁷¹ <https://eufundingoverview.be/funding/just-transition-fund-jtf-just-transition-mechanism>

the EIB to lend €10 billion to financial institutions which are then expected to use this to mobilize between €25 and €30 billion of public investments supporting just transition objectives over the period 2021-2027⁷².

This who are driving the Foresight initiative at regional level, need to be aware of these new and emerging mechanisms, as they correspond to new opportunities for the financial of policy measures, with which people in local administration may not yet be familiar. These mechanisms exist alongside other mechanisms with which the foresight teams will already be familiar such as...

- **SEIF:** A series of five European Structural and Investment Funds⁷³
 - **ERDF:** **The** European regional development fund to promote balanced development in the different regions of the EU.
 - **EAFRD:** The European Agricultural Fund for rural development which focuses on challenges facing EU's rural areas.
 - **ESF:** **The** European social fund which **supports** employment-related projects, investing in human capital, namely workers, its young people and all those seeking a job.
 - **CF:** The **Cohesion fund which supports** transport and environment projects in countries where the gross national income (GNI) per inhabitant is less than 90% of the EU average. In 2014-20, these are Bulgaria, Croatia, Cyprus, the Czech Republic, Estonia, Greece, Hungary, Latvia, Lithuania, Malta, Poland, Portugal, Romania, Slovakia, and Slovenia.
 - **EMFF:** The **European maritime and fisheries fund** to help fishermen adopt sustainable fishing practices, coastal communities to diversify their economies, and improve QoL along EU coasts.
- **EAGF:** The European Agricultural Guarantee Fund providing income support to farmers via mechanisms such as the basic payment scheme, green direct payments, and a payment for young farmers, on conditions of compliance with EU rules on food safety, environmental protection, and animal welfare⁷⁴.
- **HE:** Also known as Horizon Europe, the EU framework program for research and innovation⁷⁵.
- **LIFE:** The EU funding instrument for the environment and climate action. It covers actions related to Nature and Biodiversity, Circular Economy and Quality of Life, Climate Change Mitigation and Adaptation as well as the Clean Energy Transition⁷⁶.
- **INTERREG:** An inter-regional program that supports capacity building for policy makers and public authorities. It provides finance for innovative initiatives, as well as networking and learning opportunities for those working in public administration⁷⁷.

For those responsible for leading the transition at local government level, an increasing number of institutions have sprung up to provide support for learning and networking. The Covenant

⁷² <https://www.eib.org/en/press/all/2020-130-commission-proposes-a-public-loan-facility-to-support-green-investments-together-with-the-eib>

⁷³ https://ec.europa.eu/info/funding-tenders/funding-opportunities/funding-programmes/overview-funding-programmes/european-structural-and-investment-funds_en

⁷⁴ https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/financing-cap/cap-funds_en#eagf

⁷⁵ https://ec.europa.eu/info/research-and-innovation/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe_en

⁷⁶ The https://cinea.ec.europa.eu/life_en:

⁷⁷ <https://www.interregeurope.eu/>

of Mayors for Climate and Energy is one of those. The European Climate Pact⁷⁸ is another. This is an EU-wide initiative that invites people, communities, and organisations to “participate in climate action and build a greener Europe.” It supports connecting and sharing knowledge, learn about climate change, and encourages the development, implementation and scale-up of solutions⁷⁹. But many more exist, for example the **New European Bauhaus**⁸⁰, which attempts to bring a cultural and creative dimension to the European Green Deal. The reader is encouraged to peruse the recordings of events such as the European Week of the Cities and Regions, as well as the EU Sustainable Energy Week, to find out more and see what best fits your needs right now.

The International Dimension of the Green Transition

The Green Deal concerns not only the EU and its member states. A very large part of the carbon footprint of the EU lies with suppliers and other partners outside EU territories. EU energy and food security for example, as well as EU access to the mineral and other resources necessary for the transformation envisaged in the Green Deal, depends on international relations and so 30% of the EU's Neighborhood, Development and International Cooperation Instrument supports climate objectives. It is estimated that one third of the world's public climate finance comes from the EU and its Member States.

⁷⁸ https://ec.europa.eu/clima/eu-action/european-green-deal/european-climate-pact_en

⁷⁹ https://europa.eu/climate-pact/index_en

⁸⁰ https://europa.eu/new-european-bauhaus/index_en