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ANNEX 2

ANNEX

Action to boost the clean energy transition

to the

**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN
PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL
COMMITTEE, THE COMMITTEE OF THE REGIONS AND THE EUROPEAN
INVESTMENT BANK**

Clean Energy For All Europeans

Most of the actions of this paper are those that will have an impact over the short to medium term. In the framework of the annual State of the Energy Union, the Commission will report on implementation of these actions and set out the course for new actions as needed.

1. Socially fair transition and new skills

Energy is a critical good and service, absolutely essential for full participation in modern society. A number of instruments already exist and will need to be deployed to ensure that the clean energy transition is fair and takes into account its transformative impact on sectors, regions or vulnerable members of society negatively affected by the transition.

The key tools in this respect are the **European Structural and Investment Funds**, including the European Social Fund, that support adjustment in affected sectors and regions and the transition to new business models and job profiles. At least EUR 1.1 billion from the European Social Fund will be dedicated in the period 2014 – 2020 to improving education and training systems necessary for the adaptation of skills and qualifications and for the creation of new jobs in sectors related to energy and the environment. The European Social Fund is also used by some Member States to alleviate energy poverty, as a complement to the EUR 5.2 billion allocated from the European Regional Development Fund and the Cohesion Fund for energy efficiency investments in housing. Within these allocations, a number of Member States have chosen to target social housing and households in need, thus contributing to long-term solutions addressing energy poverty for almost 1 million households. Improving the energy efficiency of buildings is one of the major tools to make energy more affordable and fight against energy poverty. In addition to the measures proposed in the legislation¹, the Commission will also set up an Energy Poverty Observatory to produce reliable statistics on the number of energy poor households in each Member State and contribute to the dissemination of good practices.

Dedicated actions in terms of knowledge transfer, skill acquisition and promotion of innovative solutions in relation to efficient energy use and production are funded under Rural Development policy. For example, 99,000 beneficiaries (mainly farmers and forestry holders) are expected to be trained in relation to energy related issues in period 2014 – 2020.

Specifically to support solidarity in the clean energy transition, the Commission proposed, as part of the revision of the **EU Emission Trading System**² to allocate resources to address the particularly high additional investment needs in lower income Member States. The new Modernisation Fund aims to facilitate investments in modernising the energy systems and improve energy efficiency. Moreover it is also proposed that 10% of the allowances to be auctioned by the Member States will continue to be distributed to the benefit of certain lower-income Member States. Finally, the Commission proposes that Member States also use revenues from emission trading to promote skill formation and reallocation of labour affected by the transition of jobs in a decarbonising economy, in close coordination with social partners.

This should be complemented by a dedicated initiative which will provide further and more tailor-made **support for the transition in the coal and carbon-intensive industrial regions**. The aim is to kick-start and/or further boost the region's planning process for the structural changes linked to the energy transition and exchange with other regions presenting similar

¹ See the proposal to amend the Directive on the Energy Performance of Buildings, COM(2016) 765.

² Proposal amending Directive 2003/87/EC to enhance cost-effective emission reductions and low-carbon investments, COM (2015) 337.

situations. As a first step, the Commission will bring these regions together to discuss possible planning processes, facilitate the sharing of best practices and examine which support instruments are available.

The Smart specialisation approach under the EU Cohesion policy, in particular the dedicated platforms³, can provide relevant assistance to regions. As a bottom-up process engaging especially industry, the research, development and innovation community and public authorities, it can enable regions to develop and implement their energy transition strategy.

Clean energy transition offers durable job creation opportunities. However, the successful transition requires re-skilling of workers, better planning and anticipation of changes and skills and a better skills matching. The European Social Fund can support these efforts at all stages of life from raising children's awareness at schools, to supporting training for relevant skills and clean energy-related entrepreneurship and also social inclusions through relevant careers. Under its **Skills Agenda for Europe**⁴ the Commission launched effort to help tackle such skills challenges and address skills shortages in specific economic sectors (the so called "Blueprints for Sectoral Cooperation on Skills"). Based on the experience with the pilot Blueprints launched this year (notably the automotive and maritime technology sectors), such schemes represent an opportunity to address skill needs for the clean energy transition. The ongoing Blueprint for sectoral skills cooperation in the maritime sector already involves off-shore wind and ocean energy and can be a particularly relevant test-case for the second wave in sectors like renewables or construction.

The social partners play a crucial role in mapping skills needs and anticipating and managing changes. They are already associated to the work on the Energy Union at EU level and need to be closely involved in the process but also in the discussions on the integrated national energy and climate plans.

In order to support a socially fair clean energy transition and new skills:

- *The Commission will examine how to better support coal and carbon-intensive regions going through the clean energy transition. To this end, it will work in partnership with the actors of these regions, provide guidance, in particular for the access to and use of available funds and programmes, and encourage exchange of good practices, including discussions on industrial roadmaps and re-skilling needs, through targeted platforms.*
- *Member States should use their integrated national energy and climate plans to reflect on the social, skills and industrial impact of the clean energy transition.*
- *Based on the experience with the pilot schemes, in 2017 the Commission will roll out two new Blueprints for Sectoral Cooperation on Skills for new technologies - within the area of renewable energy at large and for the construction sector with a focus on low carbon technologies.*
- *The Commission calls on the Member States to closely involve social partners in the discussions on energy transition, in particular in the context of the integrated national energy and climate plans.*

³ <http://s3platform.jrc.ec.europa.eu>.

⁴ Communication "A New Skills Agenda for Europe: Working together to strengthen human capital, employability and competitiveness", COM (2016) 381.

2. EU financing to deliver for the real economy

Financing of the energy transition will have to combine private investments with public financing that leverages private investments and addresses market failures. Private investments will be facilitated by the legislative proposals in this package and the proposal to reform the EU Emission Trading System. Functioning energy and carbon markets will be the key facilitator in meeting the investment challenge, as will regulatory stability and policy transparency.

In addition, the EU's financial instruments are making a significant contribution to support the clean energy transition, as demonstrated by the **European Fund for Strategic Investments**. The Fund is firmly on track to deliver on mobilising at least EUR 315 billion in additional investment in the real economy by mid-2018. The latest figures reached EUR 154 billion. With the launch of the second phase of the European Fund for Strategic Investments the Commission proposed to strengthen and extend the European Fund for Strategic Investments. It is proposed that at least 40% of the investments in the infrastructure and innovation window should be climate, energy and environment relevant and contribute to the achievement of the objectives of the Paris Agreement.

In line with the EU objective to spend at least 20% on climate action in the **EU budget in the period 2014 – 2020**, the reformed Cohesion policy⁵ also plays a crucial role in delivering the Energy Union objectives, with relevant financial allocations of EUR 68.8 billion. This will be complemented by national public and private co-financing, reaching an estimated total of EUR 92 billion⁶. In addition, rural development programmes provide support for targeted investments in renewable energy and energy efficiency (almost EUR 6 billion). While early indications for Cohesion policy funds show progress in implementation in 2016⁷, urgent action is now needed to accelerate the implementation of these funds in a number of Member States. The Commission will continue to offer technical support to Member States with implementation issues.

Simpler and more flexible rules, as proposed by the Commission in the mid-term review of the Multiannual Financial Framework 2014-2020, will also contribute to accelerating the implementation of this funding. As part of the review, the Commission launched a broader simplification agenda on the rules governing EU funds. This includes facilitating the combination of the European Fund for Strategic Investments with other sources of Union funding, including the European Structural and Investment Funds. One objective is to reinforce the take-up of the European Fund for Strategic Investments in less developed and transition regions. Under European Structural and Investment Funds, Member States and regions already plan to invest almost EUR 6.4 billion via **financial instruments** in the area of low-carbon, mainly for energy efficiency. This is a more than eight-fold increase of allocations compared to the 2007-2013 period, and first indications are that progress is already well underway⁸. In order to encourage a higher uptake of financial instruments, the Commission is also providing Member States with support via the fi-compass platform for

⁵ Cohesion policy is delivered through the European Regional Development Fund, the Cohesion Fund and the European Social Fund, which are all part of the European Structural and Investment Funds.

⁶ Estimate based on weighted average co-financing from financial tables of the operational programmes 2014-2020 for the thematic objectives "supporting the shift towards a low-carbon economy" and "promoting sustainable transport and removing bottlenecks in key network infrastructures".

⁷ Project selection data by end 2016 will be available in early 2017.

⁸ The first annual summary of progress of financial instruments under European Structural and Investment Funds 2014-2020 will be produced by end November 2016.

advisory services, and off-the-shelf instruments providing standard terms and conditions which are compatible with European Structural and Investment Funds regulations and State aid rules and seek to combine public and private resources.

One example of a successful project under the European Fund for Strategic Investments in combination with the European Structural and Investment Funds is the investment platform in the French region of Hauts-de-France, exemplifying how a wide range of public and private actors can pool their knowledge and expertise and how different funds can be combined to trigger significant private sector investment in low-carbon energy projects. Another example is Private Finance for Energy Efficiency (PF4EE)⁹ which provides risk-protected debt financing via local commercial banks, enabling the banks to provide better financing conditions for energy efficiency projects in buildings and SMEs. It also provides specific expert support enabling local banks to develop and market new energy efficiency financing products tailored to customer needs.

The **Cleaner Transport Facility** will make use of financial instruments and blending to deploy innovative low carbon technologies to accelerate the shift to low-emission mobility. The possible market potential for the renewal of buses and coaches is around 3500 vehicles or EUR 875 million added investment per year.

In order to further scale up and shift investment in support of the clean energy transition:

- *The Commission is today launching a smart financing for smart buildings initiative (see Annex I) to support investment in clean energy buildings. This initiative will support the development of investment platforms enabling the combination of public funds and the deployment of attractive financing products for market actors in all Member States in 2017. It will also reinforce technical assistance to further develop and aggregate small scale projects and will rollout de-risking activities for energy efficiency investments.*
- *In the context of the Investment Plan for Europe, the Commission has recently launched pilot projects to pursue, at EU level, a stronger convergence of the timelines of the different procedures regarding strategic infrastructure investment projects. The pilot covers, in a first stage, Belgium and Slovakia. Based on an assessment of these projects, the Commission will extend this experience to other Member States, in the course of 2017, with the ambition to create an effective "one-stop-shop" for all Member States, bringing together all responsible Commission services – including its Representation offices in the Member States – in a single investment policy team.*
- *The Commission calls on the Member States to speed up the deployment of European Structural and Investment Funds to support clean energy transition.*
- *The Commission is launching on 1 December 2016 a Cleaner Transport Facility together with the European Investment Bank to support investment into clean, energy efficient transport and integrated energy and transport infrastructures.*

3. Setting the right incentives for investment in the clean energy transition

⁹ Private Finance for Energy Efficiency is an EU financial instrument, developed by the Commission, funded under the LIFE Programme and deployed by the European Investment Bank.

Deploying renewable energy sources or energy efficiency measures is capital intensive. It requires up-front investments in the form of savings from households, equity from businesses, or debt financing from lending institutions, in order to benefit from reduced energy bills or revenues in the future.

The current economic context with a low cost of capital is favourable to unlock private investment at a larger scale and channel capital expenditure into clean energy, energy efficient solutions and sustainable assets. This is an opportunity for citizens, companies, public authorities and investors to get a higher return on capital than from savings.

To support this major shift in investment towards the clean energy transition, Member States' **integrated national energy and climate plans** - part of the Energy Union Governance on which the Commission presents a proposal today¹⁰ - will also serve as "investment roadmaps", identifying the required public and private investments for the clean energy transition.

A favourable and coherent structure of economic incentives is also key to drive private investments in the clean energy transition. Effective **carbon pricing and a phase-out of fossil fuel subsidies** are both very important to remove harmful market distortions, internalise the environmental and societal costs of a "business as usual" scenario and help price the associated risks for different investment opportunities.

The Commission already proposed a reform of the EU Emission Trading Scheme for the post-2020 period.¹¹ The EU is also supporting setting up emissions trading systems through bilateral cooperation¹² and participation and funding of multilateral initiatives with our international partners¹³.

In line with commitments made under the Paris Agreement on climate change and within G7 and G20, the EU has already taken a number of concrete steps to remove **fossil fuel subsidies**, however, the remaining but still significant public support for oil, coal and other carbon-intensive fuels continues to distort the energy market, creates economic inefficiency and inhibits investment in the clean energy transition and innovation.

According to the latest Commission's report on energy prices and costs, issued today as part of this package, EU direct fossil fuel subsidies for electricity and heating stood at 17.2 billion euros in 2012, while fossil fuel subsidies in transport were separately estimated at 24.7 billion euros¹⁴. According to the 2015 estimates of the International Monetary Fund, EU fossil fuel subsidies reach 300 billion euros when external costs are included. While this is still a relatively small proportion of the global amount of more than 4.8 trillion euros¹⁵, it is a significant economic burden for the EU. Current low oil and gas prices provide a window of opportunity for phasing out fossil fuel subsidies, including tax exemptions, without adverse effects on social welfare.

¹⁰ COM (2016) 759.

¹¹ COM (2015) 337.

¹² For example with China and Korea.

¹³ Under the Paris Agreement, around half of countries have indicated that they will use market mechanisms for delivery of their emission reduction pledges.

¹⁴ This includes subsidies for coal €9.7bn and gas 6.6bn; the subsidies came from the legacy of historical investment subsidies, fossil fuel investment grants, feed in tariffs, fuel tax exemptions, electricity production, and decommissioning and waste disposal. (Source: 2014 study on energy costs and subsidies. For transport (petroleum subsidies), the source is OECD inventory 2013).

¹⁵ International Monetary Fund, 2015.

In order to help redirect financial flows towards the clean energy transition:

- To ensure that the financial system can finance growth in a sustainable manner over the long term and avoid "lock-in" to high emissions infrastructure and assets, the Commission has established a high level expert group that will provide advice by the end of 2017 to develop sustainable finance.*
- Building on the Report on energy prices and costs published today, the Commission will reinforce transparency. It will continue to closely monitor energy prices and costs every two years and will reinforce its monitoring of fossil fuel subsidies in line with the EU's G7 and G20 commitment to eliminate inefficient fossil fuel subsidies.*
- In 2017, the Commission will carry out a REFIT evaluation of the EU legal framework for energy taxation in order to define possible next steps also in the context of the efforts to remove fossil fuel subsidies.*
- Member States' integrated national energy and climate plans will enable them to identify the investments needed for the clean energy transition. Member States should also use these plans to monitor the phase-out of fossil fuel subsidies.*
- The Commission will also examine, when reviewing the guidelines on State aid for environmental protection and energy 2014-2020 how those rules, together with the State aid rules for R&I investments, enable Member States to stimulate innovation in renewable energy technologies and solutions.*

4. Research, innovation and competitiveness

Research and innovation are key to support Europe's global competitiveness and leadership in advanced renewable energy technologies¹⁶ and energy efficiency solutions and enable their successful integration throughout the economy. The European Union participates in the Mission Innovation initiative launched at the 2015 Paris Climate Conference, bringing together countries committed to doubling their investment in clean energy research over 5 years.

Together with this package, the Commission is putting forward a dedicated **strategy on accelerating clean energy innovation**¹⁷. This Strategy brings stronger prioritisation and concrete actions to ensure that low-carbon innovation is deployed more widely and brought to market more rapidly. In doing so, the initiative will serve as test-bed for future new horizontal approaches on innovation and competitiveness.

By accelerating clean energy innovation, Europe can make the most out of the transition to a low-carbon economy: it can create opportunities for growth and job creation through increased exports and business creation and empower citizens through the integration of digital solutions.

Industrial initiatives also have an important role to play in driving EU innovation and global competitiveness. They are already an important element in the established Strategic Energy Technologies Plan (SET). Some good examples of these industry-led initiatives can be found for solar energy¹⁸ and in smart grids and storage¹⁹ sectors. Another good example is the

¹⁶ See also the proposal for a recast of the Renewables Directive, COM(2016) 767.

¹⁷ COM (2016) 763.

¹⁸ This initiative seeks to improve competitiveness and sustainability of the sector, facilitate large-scale and affordable expansion and integration into the electricity grid.

Ocean Energy Strategic Roadmap that aims at maximising private and public investment in ocean energy development by de-risking technology as much as possible.

In the Energy Union strategy²⁰, the European Commission announced an initiative on the pooling and making accessible of relevant **data, analysis and intelligence**. This should first and foremost enable the Commission to make a robust assessment of the global performance of EU clean energy technologies, not only in terms of research and innovation but also market share, imports/exports, employment, growth and investment. This competitive assessment should be periodically updated at the time of adoption of the State of the Energy Union and key priorities and actions reviewed accordingly.

To boost Europe's competitiveness and the deployment of clean energy technologies:

- *The Commission presents today an initiative on accelerating clean energy innovation, with a range of specific measures to improve the regulatory, economic and investment environment for innovation in clean-energy technologies and systems, and which defines key priorities for the use of EU financial instruments and programme, including Horizon 2020.*
- *The Commission will support industry-led initiatives to promote EU global leadership in clean energy technologies, to strengthen industrial linkages in the entire value chain and integrate non-economic actors, such as social partners and consumers organisations. The Commission will also discuss with relevant stakeholders the need to set up a "clean energy industrial forum", to bring together different sectors (energy-transport-manufacturing-digital) and optimize the benefits of the clean energy transition for the EU industry.*
- *The Commission will work with the industry, the research community and other key stakeholders to provide robust strategic intelligence on the EU global performance and its competitive position in low carbon energy and energy-efficient solutions. This competitive assessment will be updated periodically.*

5. Building the necessary physical infrastructure to support the free flow of energy and the clean energy transition

Today the European energy system is in transition. Energy networks must be upgraded and modernised to meet increasing electricity demand due to a major shift in the overall energy value chain and mix with increased integration of variable renewables. Dedicated infrastructure is also needed to support low-emission mobility.

Whilst the short term priority is to ensure proper functioning of the internal energy market by developing the missing interconnectors to achieve the existing **10% interconnections target for 2020**, by ending the isolation of a number of Member States and by removing internal bottlenecks, the energy infrastructure planned today must, at the same time, be compatible with longer term policy choices, including the transition towards low emission mobility.

¹⁹ The so-called "European Electricity Grid Initiative" which has recently transformed into the "European Technology and Innovation Platform for Smart Networks for the Energy Transition.

²⁰ COM (2015) 80.

This also means making sure that **energy efficiency**²¹ is taken into account in the planning of the overall energy system: actively managing demand so as to reduce energy consumption, costs for consumers, import dependency and treat investment in energy efficiency infrastructure as a cost-effective pathway towards a low-carbon and circular economy. Investment in increasingly smart and flexible infrastructures has been identified as one of the no-regret options.

In order to support the development of the necessary physical infrastructure to ensure clean energy transition and free flow of energy:

- *In the framework of the annual State of the Energy Union, the Commission will take stock of Projects of Common Interest which are delayed or postponed in view of facilitating their implementation. It may also address these issues in its recommendations to Member States, in particular as regards Projects of Common Interest identified in the framework of the high level groups on energy.*
- *The Commission, under the upcoming review of the TEN-E regulation in 2017, will look into improving the regulatory framework to further incentivise the completion of Projects of Common Interest.*
- *The Commission has established an expert group in order to provide the technical advice on how to break down cost-effectively the 15% electricity interconnection target into regional, country and/or border interconnection levels. The Commission will report on this in autumn 2017, together with adoption of the 3rd Union list of Projects of Common Interest.*

6. Digitalisation

The Commission's Digital Single Market Strategy of May 2015²² aims at creating the right environment and conditions for the deployment of advanced digital networks and services including in the Energy sector.

Delivery on a **fair deal for consumers** will require innovative companies combining new energy technologies with digital technology (big data, cloud computing) and mobile communication technology (5G) to offer new products and services (decentralised electricity generation, energy management systems, smart appliances and smart controls; small scale storage including electric cars) that support active consumers and help to optimise energy consumption (reduction and shifting) and thus save money. In September 2016 the Commission proposed a review of EU telecoms rules to meet Europeans' growing connectivity needs by encouraging investment in very high-capacity networks. The Commission also presented a 5G Action Plan²³, which foresees a common EU calendar for a coordinated 5G commercial launch in 2020.

At the same time, the question about access to data, privacy and data protection must be pursued, as well as cybersecurity and issues of open standards and interoperability. Work on the later has been launched with the Commission communication of April 2016 on digitisation

²¹ See the proposal to amend the Energy Efficiency Directive, COM (2016) 761.

²² COM (2015) 192.

²³ COM (2016) 588.

of European industry.²⁴ This communication also launched a new European Cloud Initiative which has the potential to become the backbone for the new energy data system.

Ensuring resilience of the energy supply systems against **cyber risk and threats** becomes increasingly important as wide-spread use of information and communications technology and data traffic is becoming the foundation for the functioning of infrastructures underlying the energy systems. An Energy Expert Cyber Security Platform is currently analysing the specific needs for the security of energy infrastructure and will advise the Commission in this regard.

As part of the delivery on the Digital Single Market Strategy:

- *The Commission is preparing an initiative to advance a European data economy. This initiative, together with the proposal on Energy Market Design²⁵, will address the issues of data localisation as well as emerging issues such as ownership and liability, (re)usability, access and interoperability, and will be particularly relevant for data needed for energy processes and new energy services.*
- *The Commission is working on a review of the ePrivacy Directive to align it with the newly adopted rules on data protection. This will be relevant for handling of data from smart energy consumption.*
- *Based on the successful development of smart grids standards, the Commission will launch in 2017 a two years project to develop common secure communication standards which will ensure a free flow of energy-related data to relevant interested parties. The Commission will publish the results by the end of 2018.*
- *In 2017 the Commission will establish stakeholder working groups under the Smart Grids Task Force to prepare the ground for network codes on demand response, energy-specific cybersecurity and common consumer's data format. The Commission will report on the structure, scope and planning of the groups in spring 2017 and final results by the end of 2018.*
- *Based on the work of the Energy Cybersecurity Expert Group, the Commission will launch a consultation platform with stakeholders during 2017 and, if necessary, propose appropriate actions by the end of 2017.*
- *As follow up to the low-emission mobility strategy, the Commission is adopting an EU deployment strategy for Cooperative Intelligent Transport Systems, to enable EU-wide deployment of such systems by 2019 and accelerate the transition towards cooperative, connected and automated road transport.*

7. External dimension

External and development policies are important tools to support clean energy transition globally and help our partner countries, also in the EU neighbourhood, achieve their commitments under the Paris Agreement and the objectives of the 2030 Agenda for sustainable development.

²⁴ COM (2016) 180.

²⁵ The proposed market design initiative consists of a recast of the Electricity Directive (COM (2016) 864), a recast of the Electricity Regulation (COM (2016) 861), a recast of the ACER Regulation (COM (2016) 863), and a new Regulation on risk-preparedness in the electricity sector (COM (2016) 862).

This means increased EU engagement in multilateral initiatives and the promotion of a more robust and inclusive energy architecture worldwide - in line with the **EU's Energy Diplomacy Action Plan**.²⁶ The EU is an active member of the multilateral Clean Energy Ministerial, which is a high level global forum to promote policies and programmes that advance clean energy technology, to share lessons learned and best practices, and to encourage the transition to a global clean energy economy. The Commission will ensure that the transition to a low-carbon economy continues to be an integral part of the energy dialogue and cooperation in EU's bilateral and multilateral relations.

The Commission has identified sustainable energy and climate action as key drivers in its proposal for the **new European Consensus on Development**.²⁷ Energy is a critically important development enabler and central to solutions for a sustainable planet, as recognised in the 2030 Agenda and in particular Sustainable Development Goals (SDGs) 7 "Affordable and clean energy" and 13 "Climate action".²⁸ The EU's strategic approach to energy in development cooperation policy is centred on three key priorities: i) addressing the lack of energy access, ii) increasing renewable energy generation, and, iii) contribution to the fight against climate change. Given the scale of investment needed, the EU will increase cooperation with public and private sector partners, to deliver on energy access, energy efficiency and renewable energy generation. This will go hand in hand with the EU's support to third countries for tackling climate change and developing low-carbon and climate-resilient economies in line with the EU's global leadership on reducing greenhouse gas emissions.

The Commission has proposed a **European External Investment Plan**²⁹ to provide an integrated financial package to finance investments outside the EU. The Plan would include a European Fund for Sustainable Development; technical assistance to develop sustainable projects and attract investors; and a set of development technical assistance programmes to improve the investment and policy environments in the countries concerned, in particular scale up private and public investments in low-carbon economy.

Energy is a major focus of **EU co-operation with its neighbours**, with a focus on regulatory reforms, promoting the use of renewable energies and energy efficiency. This is the case in the Energy Community, where the EU is helping to create a regional energy market in line with EU regulatory standards. In the Southern Neighbourhood the process of establishment of a Euro-Mediterranean market for electricity and gas is ongoing, and in the Eastern Neighbourhood the EU4Energy project offers support for reforms in the energy sector. These are in each case designed to create a favourable environment for investments in renewable energies and energy efficiency. In particular EU support helps create the regulatory framework for renewable power to be traded across borders.

²⁶ Council conclusions on energy diplomacy adopted by the Foreign Affairs Council on 20 July 2015 (10995/15).

²⁷ Communication on a Proposal for a new European Consensus on Development – Our World, our Dignity, our Future, COM (2016) 740.

²⁸ See also Communication "Next steps for a sustainable European future – European action for sustainability", COM (2016) 739.

²⁹ Communication "Communication: "Strengthening European Investments for jobs and growth: Towards a second phase of the European Fund for Strategic Investments and a new European External Investment Plan", COM (2016) 581.

One example of a successful project is the world's largest solar plant in Ourzazate, which will provide half of the Morocco's renewable energy demand by 2030, and possibly export electricity to the EU and towards the East³⁰.

The EU is strengthening cooperation with the Western Balkans, Turkey and the Southern and Eastern Neighbours on energy efficiency. In co-operation with the international financial institutions, the Commission will scale up energy efficiency investments in the building sector, starting with four pilot countries, Ukraine, Georgia, Serbia and Tunisia.

Africa is a privileged partner for the EU and the **Africa-EU Energy Partnership** provides the frame for joint energy co-operation. The EU is also supportive of the African Renewable Energy Initiative, an Africa-led initiative with the objective to increase Africa's renewable energy capacity by 10GW by 2020 and mobilise Africa's 300GW renewable energy potential by 2030. In order to unlock Africa's sustainable energy potential, emphasis will be on increasing generation capacity from renewable resources, improving cross-border interconnections and the governance of the energy sector.

As a member of the **World Trade Organisation**, the EU also actively promotes liberalisation of goods and services, which can deliver environmental benefits. It has been working closely together with sixteen other members of the World Trade Organisation representing the bulk of world trade in environmental goods, with the aim of concluding an ambitious environmental goods agreement. Also in its bilateral trade agreements, the EU pursues early liberalisation of environmental goods and services and facilitation of trade and investment in renewable energy generation.

Increased trade flows are expected to help the rapid spread of environmental goods, services and technologies around the world and the shift to a low-carbon economy. The EU is a world leader in exports and imports of environmental goods. In 2013, EU exports of the green listed products amounted to EUR 146 billion (around 8% of the EU's total) and imports to EUR 70 billion. European companies should aim to continue developing and exporting their innovation ingenuity and know-how.

Finally, the Communication on **ocean governance**³¹ sets out actions that will help create a global level playing field for the European ocean energy sector.

In the context of the commitment to make clean energy transition an essential element of the EU contribution to the implementation of the 2030 Agenda for sustainable development and of the Paris Agreement:

- *The Commission calls on the co-legislators to adopt the External Investment Plan legislative package as soon as possible.*
- *The Commission will privilege energy as one of the key topics of the 2017 Africa-EU Summit in Abidjan in November 2017.*
- *The Commission will organise a High Level Round Table Business Forum on Renewables Energies Investments in Africa in spring 2017 to increase understanding and awareness of the Commission's efforts and the private sector needs for*

³¹ International ocean governance: an agenda for the future of our oceans. Joint Communication by the Commission and High Representative of the Union for Foreign Affairs and security policy (JOIN(2016) 49 of 10 November 2016).

investments in renewable energies in Africa.

- In spring 2017, the Commission, in co-operation with the international financial institutions will take stock of the pilot exercise to scale up energy efficiency investments in the building sector in the four pilots with a view to extending it to other countries in due course.*
- The 2017 mid-term review of the strategic Neighbourhood multiannual programming of the European Neighbourhood and Pre-accession Assistance Instruments in order to integrate increased funding for energy efficiency in buildings as part of energy, climate and job creation investments.*
- The Commission will continue its efforts towards the conclusion of an environmental goods and services agreement (WTO) to reduce the costs of climate mitigation efforts.*

8. Governance and partnerships for effective delivery

The energy transition cannot be top-down. It needs policy action by **different levels of government** (local, regional, national, EU, international) **and other stakeholders**. The Governance of the Energy Union will help to ensure policy alignment and to ensure that the EU as a whole meets its energy and climate objectives, notably the 2030 targets.

The clean energy transition will not happen without multi-stakeholder action from civil society and regional and local level. The EU is uniquely placed to mainstream the clean energy transition through all sectors and levels of governance. It will, therefore, be important that cities, regions, business, social partners and other stakeholders become engaged in the design and implementation of the integrated national energy and climate plans.

Regional cooperation between Member States will help them meet the EU energy and climate objectives in an effective and cost-efficient way. The legislative proposals in this package will facilitate regional co-operation. The Commission will prepare Guidance to Member States on regional co-operation building on existing cooperation structures and mainstreaming regional cooperation across the five dimensions of the Energy Union.

Given that **cities and urban communities** are the place where a major part of the transformation will actually happen, the EU has been paying particular attention to these drivers of change. Work on facilitating city level action intensified in 2016, with the adoption of the "Pact of Amsterdam establishing the Urban Agenda for the EU", the creation of the Global Covenant of Mayors and the launch by the Commission of a web-based "one stop shop" for local authorities seeking customised information on EU urban initiatives, including on clean energy transition. The Covenant of Mayors for Climate and Energy, as the EU flagship initiative for city action against climate change, is gaining further momentum with a broader scope now including climate change mitigation, adaption and access to clean and affordable energy. The Commission is currently replicating this successful model to North America and Mexico; Latin America and Caribbean; Japan; China; India; South-East Asia; and sub-Saharan Africa under the Global Covenant of Mayors. Ambitious clean energy transition projects at city and regional level should be made more visible and could be replicated across the Union, including through the 2017 Energy Union Tour.

Rural areas also have an important potential to contribute to this transition, for example in terms of energy efficiency and renewable energy, including sustainable bioenergy.

Islands and island regions provide platforms for pilot initiatives on clean energy transition and can serve as showcases at international level, as, for instance, in the EU's outermost regions with the case of El Hierro (Canary Islands), 100% renewable energy island. The Commission would like to help accelerate the development and adoption of best available technologies on islands and island regions, including exchange of best practice in financing and legal and regulatory regimes, and in energy for transport. The first step is to bring the islands themselves together, regardless of their size, geography or their location.

To support the mainstreaming of clean energy transition:

- *The Commission calls on the cities, regions, business, social partners and other stakeholders to be actively involved in the discussions on energy transition, in particular in the context of the integrated national energy and climate plans to develop solutions which respond adequately to the needs of the different territories.*
- *In 2017 the Commission will come forward with Guidance to Member States on Regional cooperation to facilitate effective and efficient achievement of the Energy Union objectives.*
- *In the first half of 2017, the Commission will hold a high level meeting in Valletta on the clean energy opportunities and challenges for islands. This will launch a process to support islands in their clean energy transition.*