European Energy Network

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German Energy Agency

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National Energy Agencies in Europe on Parameters for Realising the Targets of the Energy Union

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Executive Summary

Delivering the Energy Union poses various challenges to stakeholders across countries and sectors. Just like its individual member states (MS), the European Union is facing the major task of creating an economically expedient energy system, which will have a far better security of supply in the future with markedly reduced energy consumption and imports. The EU is setting course for achieving its 2020 and (re-discusses its) 2030 targets by reviewing key legislation, such as the Energy Performance of Buildings Directive (EPBD), the Energy Efficiency Directive (EED) and the Renewable Energy Directive (RED). The European Commission intends to continuously evaluate the effectiveness of previous EU energy-saving policies and proposes further activities and guidelines on this basis.

*An alliance of national energy agencies in Europe, the European Energy Network (**E^{n}R**) closely follows the development of EU climate and energy policies as well as the Energy Union and aims at contributing with the expertise and experience available within the network, helping to assure the continued discourse and work on realising the European energy transition.*
In order to contribute constructively to these debates and developments, the E^{n}R is submitting this consultation paper.[1]
Some of the most vital E^{n}R findings in this consultation paper are summarised in the following. E^{n}R will examine the Winter Package published by the European Commission on 30 November in the light of the findings and principles outlined in this Paper and calls on the Commission and MS to proceed the same way.

The current review processes of EED, EPBD and RED offer the **opportunity to reflect and describe a concrete policy path towards 2050 and the directives and will therefore add focus to an outlook which is presently vague and without clear direction**. Accordingly, 2030 EU goals should be reviewed in the process and directives should give explicit and targeted emphasis to the principle of 'Energy Efficiency First' where applicable. Being major instruments for EU energy and climate policies reaching MS levels, the directives are key to integrating EU prospects and goals into national efforts and strategies. However, the review process also allows for this to work the other way around – a possibility MS should use at any opportunity.

Determining an **EU efficiency goal through to 2050** will require more transparency of MS' roadmaps and goals as well as a comparison of these. Some countries have mapped a national 2030 or even 2050 outlook and path, while others are in the process of developing such perspectives. There are MS that have goals on a regional in place, but yet not on a national level. Others entirely lack such long-term commitments for various reasons.

[1] This document does not claim to be exhaustive nor does it necessarily reflect or represent the positions of all E^{n}R members. Note that E^{n}R member agencies have submitted individual contributions to recent public consultations on EED, EPBD and RED.

The MS should develop **energy efficiency strategies** which observe and incorporate existing EU directives and policies and involve all major stakeholders to ensure effectiveness and acceptance. These long-term strategies must illustrate which subsidy, market and regulatory instruments and/or adjustments – based on the current status quo – are required on the timeline by 2050 to promote energy efficiency. Additionally, continuous monitoring, evaluation and adjustment processes must be introduced as a fixed component of this strategy.

Furthermore, it is imperative that the **EU provide a concretised path and outlook for 2050** in order to actively support stakeholders and MS in developing and implementing energy efficiency (EE) strategies (sectorial as well as MS levels).

Generally, E^nR registers the need for a closer and more frequent exchange at EU levels on incentive and obligation policies. At the same time, the usage of readily available tools and communication channels at national and EU levels must be maximised.

The EU has set the **goal to considerably reduce CO_2 emissions**. Apart from the power sector, heating, cooling and transport are other areas in which fossil fuels are to be gradually replaced with renewables. The share of renewable energies shall increase by simultaneously decreasing the share of fossil fuels.

The **approach of sector coupling** – or Integrated Energy – can help to reach this target. The idea is to increasingly use electricity from renewables for heating, cooling and for driveline technology with the aim of eliminating the need for fossil fuels.
This concept has found the support and attention of E^nR, which is why the **E^nR dedicates an outlook section to sector coupling in this Paper**. E^nR is determined to thoroughly investigate the potential and possibilities that sector coupling offers, as well as place major emphasis on the topic in the network's future activities, working groups, projects and discourses.
Sector coupling needs to be recognised and considered as an important topic for EU-funded projects, for example in upcoming Horizon 2020 calls. Future regulations should help facilitate a level playing field that gives a **fair chance to real innovation**.

Central directives

Improvements on a MS-level made regarding energy efficiency seem insufficient in the light of the potential and opportunities that EE represents. At present, directives occasionally turn out not to be sufficiently factored in to political and legislative measures and decisions on a MS level (yet) – even though the early attainment of the 2020 energy efficiency goals on EU level may lead to concluding the opposite. A strong legislative framework and high-level political support and commitment on both EU and MS level are needed to not only rhetorically - but practically - put energy efficiency first.

Generally, the directives represent a useful and potentially highly effective set of instruments reaching to the MS level. Despite the **need to review and adjust parts of the directives and their interplay and interconnection**, the EU is far beyond a situation where a start from scratch is needed. But there is potential to build on the instruments already available. Doing so, it will be crucial to check approaches and articles for their effectiveness on MS level, especially in national and internal markets. Developing and establishing a (centralised) energy savings evaluation and calculation system may support such efforts.

The existing directives were developed in parallel or separate processes. As a result, these do not correspond with each other sufficiently. This leads to overlaps and varying differentiations of terminology, approaches and requirements[2]. Accordingly, directives and requirements need to be harmonised and coordinated as thoroughly as possible. The process of interlinking the Eco-Design and Labelling Directives may serve as a foil for also increasing cross-reference and coordination between EED, EPBD and where applicable RED.

Close-up on directives

The **EED** constitutes the central instrument for achieving EU energy and climate goals. E^{n}R strongly supports the approach to pursue the directive in order to fulfil the 2030 efficiency targets as well as those beyond 2030. This support also contains pursuing EED Article 7 – including alternative measures – so as to provide for instruments and approaches to be consistent and ensure they are adequately developed and adjusted in the long-term.

E^{n}R agencies report from their national experiences with the implementation of **EPBD** that the impact of the directives' provisions on the building stock is too minor and the directive is lacking a long-term vision.

The new EPBD should focus on increasing the retrofit activities in the MS: Two thirds of all buildings in the EU date from a time when no, or only rudimentary, regulations regarding energy consumption were in place. The EED already requires the member states to introduce minimum criteria for energy audits to ensure quality. Such criteria must be developed further to include the building sector - independent processes must be embedded. High quality standards of energy consulting with regard to buildings will be crucial to paving the way to a climate-neutral building stock.

With regard to **RED**, experiences are widely positive. The implementation of the previous RED has helped many MS in the past to scale-up renewable energy sources (RES) in their energy mix and to develop RES markets and technologies. With different MS having different levels of implementation of RES, the new RED should put a focus on regional cooperation and cross-border projects. Allowing and fostering new business models can lead to more social acceptance and greater market uptake. This means empowering consumers and integrating prosumers into the energy system. Fostering local ownership of renewable energies may lead to more public engagement and acceptance. In order to drive cross-border projects and cross-border trade of renewable energies forward, guarantee of origin (OG) will play an important role.

Application and implementation of both, the **Eco-Design Directive** and the **Labelling Directive**, have contributed considerably to achieving EU climate goals and will be just as vital to meeting the 2030 targets. It will be crucial that the Commission now passes available decisions and processes swiftly and focuses decision processes on concerns of high political relevance and dimension, like defining new product groups for inclusion in the regulation.

[2] For example, EED clearly overlaps with EPBD (e.g. article 4 on building renovation, article 5 on exemplary role of public bodies' buildings and via article 8 on energy audits and energy management systems).

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Objectives

The EU's energy and climate policies are structured across many sectors. With regard to the legislation alone, there are numerous areas of action - in particular the emissions trade, development of renewable energy sources, various regulations regarding energy efficiency, e.g. for buildings, products, combined heat and power generation; but also in the transport sector (for example, CO_2 emissions from cars) as well as the EED. Moreover, there is a directive regarding the taxation of energy as well as activities surrounding the liberalisation of the energy markets.

The EU is not in all areas on the right path to goal attainment, e.g. with respect to reducing the dependence on energy imports or the diversification of the energy supply. While the EU met its 2020 energy efficiency target six years early, experts and studies question the reasons for this constant improvement; it may be affected by the economic downturn as much as specific efforts and instruments.[3]

With regard to the amendments suggested by the Commission, particularly regarding the EED, the Buildings Directive and the RED, it will be important to significantly strengthen their effects and interaction. Coinciding with the EU Heating and Cooling Strategy, the review process offers the opportunity to reduce content overlap and the introduction of coherent terminology and cross references within the central regulations and directives. This will help to improve national implementation and optimise reporting by MS. At the same time, discussions of the 2030 goals should be intensified in a timely manner.

E^{n}R will further examine the Winter Package published by the European Commission on 30 November in the light of the findings in this Paper and calls on the Commission and MS to proceed the same way.

1) Energy efficiency target 2030

In October 2014, the European Council agreed to an indicative target of at least 27 per cent to **improve energy efficiency** by 2030 at an EU level.

- At the same time, this target was agreed to be reviewed by 2020 with a view to raising it to an EU-wide level of 30 per cent.
- In early 2016, due to pressure from the European Parliament, Commissioner Cañete assured that a 40 per cent goal would be reviewed as well.

[3] cf. http://www.euractiv.com/section/energy/news/eu-meets-energy-efficiency-target-six-years-early/

There is large consensus within the E^{n}R that the indicative target should be as ambitious as possible while being realistic and feasible at the same time. The **Paris Agreement** and its ambitions need to be observed in the process just as much as the often worded principle 'Energy Efficiency First' needs to be translated into EU policy and be clearly reflected in future targets and legislation to help tap existing, yet unrealised, potentials. A recent review of the current 2020 target of 27 per cent in the Commission's *Winter Package* resulted in increasing it to at least 30 per cent on EU level.

E^{n}R generally supports such ambitious energy efficiency targets. Just like the MS governments, however, E^{n}R agencies are at odds on the questions: 1) if the goal should be binding, and (2) on which level (EU/MS/sectorial level). Still, the majority acknowledges that binding goals have accounted for major success of energy efficiency and renewable energy measures in the EU. Furthermore, the E^{n}R members concur that, binding or not, an ambitious goal calls for **strong political support** and a strong, coherent legislative framework. **More transparency** regarding national progress and impacts is needed to facilitate comparability and foster productive exchanges between MS regarding their strategies, conditions and requirements while informing and stepping up dialogue between MS and the Commission.

- If binding of goals on a MS level are implemented, however, effective targets should be set in a way that they account for different situations and baselines in different MS; a 'one size fits all' approach appears difficult for responding to the diverse situations and financial conditions the MS face. MS should be provided with flexibility as to how to attain the goals (cf. UK 2008 Climate Change Act/ Carbon Budget Framework).
- Making energy efficiency efforts mandatory, independent of the economic situation and energy consumption in a country, calls for applying a methodology that still allows **for comparability** and **differentiation**.

The variety of different approaches and different levels of progress in the MS emphasise the need for at least some major direction towards 2050 on an EU-level so that national (existing and future) EU efforts and prospects can be aligned and consolidated at an early stage. Also, long-term goals and scenarios are likely to provide clarity and stability and will inspire commitment to measures and projects. However, they need to be realistic and followed-up while at the same time depending on strong political support - not only on the EU but also on the MS level. Both levels need to observe that required investments are recoverable in the mid- and long-term.

2) Implementation and interaction of central directives

The existing directives offer a comprehensive legal framework. It is due that MS now consistently implement and optimise instruments and measures at a national level and follow up and review their effects and impacts. Developing and establishing a (centralised) energy savings evaluation and calculation system may support such efforts.

Increased coordination and harmonisation of directives ensures complementarity, clarity and greater additionality, and may thus induce higher motivation and stronger commitment – which again helps to improve implementation and thus realising untapped saving potentials. On the other hand, an overlap of directives

results in a complex and confusing situation that may hinder efforts and measures; this also implies that where harmonisation does not catch on, delimitation is needed.

There is wide support for continuing to develop and implement EED Article 7[4], which should take into account the transport sector in the future too. This also means that the MS are ready to oblige to binding (sub-) goals where fitting and feasible, and where they provide due flexibility, for example, not on the time limit but on the time frame. A range of assistance and support services by the EU may be put in place to help MS' progress. Generally, attention should be given to reducing exemptions embraced by directives as they tend to jeopardise targets and common efforts.

Facilitating increased communication between MS about successful and feasible – as well as on hindering – aspects of directives can trigger the development of solutions and dissemination of best practices. At the same time, continuous dialogue between the Commission and MS on instruments, progress and implementation is needed to (further) develop suitable instruments and increasingly pay attention to the quality of existing instruments and approaches. Exchanges should not be limited to discussing and developing the central directives, but also focus on overarching contexts and topics, e.g. financing structures and motivation campaigns (cf. 3).

3) Incentive policies

Investment in energy efficiency requires acceptance by investors and (e.g. house or facility) owners. Detailed obligations or requirements, for example relating to the mandatory use of renewable energy sources in existing buildings, may have the opposite effect to the original goal: Experiences in some MS show that it is not compulsion and obligations in the first place that pave the way to higher levels of energy refurbishment, but rather dependable information, consulting and planning combined with specific state incentives. It is advised to take this into account to continue on this path.

- A comprehensive and assembled mix of regulations (obligations), incentives (grants, tax incentives, financing mechanisms and funds) and information provision is required on a MS-level to scale up and foster energy efficiency efforts and RES use. Long-term projectable goals and strategies should be embedded and underlie a respective set of measures and instruments. The EU is called upon to support respective steps and strategies with (existing) communication tools and advice.
- While not all MS have incentive and/or obligation policies in place (yet), there is strong support among E^{n}R members to employ, both in a coordinated and integrated way, to ensure EE targets can be attained and to motivate respective efforts by MS. However, regulatory mechanisms and requirements should be used wisely. A voluntary, technology- and energy source-open system broadly based on incentives is largely considered preferable as it relies on the national market mechanisms.

[4] EED Article 7 obliges MS to achieve their targets through developing an Energy Efficiency Obligation (EEO) scheme and/or using alternative policy instruments. According to Article 7, "[the saving] target shall be at least equivalent to achieving new savings each year from 1 January 2014 to 31 December 2020 of 1.5 per cent of the annual energy sales to final customers of all energy distributors or all retail energy sales companies by volume, averaged over the most recent three-year period prior to 1 January 2013."

- Both, regulation and grants/incentives (incl. targeted national programmes and schemes), have shown large effects in practice and should be underpinned by advice and information for all relevant stakeholders. An important factor for the success and acceptance of advice and information measures is the quality and objectivity of the advising party.
- To build trust in the stakeholders, MS need to ensure high-quality energy consulting. This aspect also needs to be considered and integrated in EPBD. Here is also a key to enhancing and developing sophisticated and broad scale behavioural change and scouting, beyond the building sector
- Information campaigns and advice are particularly important to small consumers (households, small businesses). High-level support for awareness campaigns needs to be stepped up considerably, their relevance and potential remains underscored in public and political debates. Deploying media formats, especially TV, to reach consumers and inform them about funding or schemes has proven most successful in many countries.[5]
- On the MS-level, the finance sector remains a challenge in developing EE in that many retail banks do not consider EE investments a sufficiently large and financially promising market. National instruments may turn out to be more effective.
- Generally, the E^{n}R clearly emphasises the relevance of fiscal and financial incentive policies (incl. establishing national Energy Efficiency Funds), complemented by facilitated access to EU funds. Increasing ESCO activities and development of the energy services market might offer a good strategy for many countries. One idea is that MS develop and establish national instruments for funding, e.g. private/public/third party financing operators. National funds could provide not only soft loans, but equity and guarantees for such operators, the credit and banking sector, as cost and risk coverage of refinancing is crucial in this context.
- To ensure coherence, the EU should improve in coordinating energy policies with other policy areas and facilitate the promotion of new financial mechanisms for EE measures. Continuing to monitor the progress of MS is crucial.

As mentioned earlier, also with regard to a balance incentive and obligations policy, there remains much room for a closer dialogue between the EU and MS. This will benefit improved and coordinated implementation of EU and MS legislation. A requirement for MS to provide information and trigger motivation by documenting good and best practice examples in centralised national databases may be considered in this context. This would add to comparability (especially of MS strategies, required/mobilised financial means, impact assessment) and facilitate the exchange on specific experiences and areas between MS.

[5] E^{n}R agencies and many MS have experience with successfully organising and implementing motivation and awareness campaigns, e.g. with regard to individual refurbishment roadmaps or campaigns for retrofitting and refurbishment in industry. More high-level awareness and support is needed to multiply and disseminate such examples and expertise on a broader scale.

4) Vision – energy efficiency strategies

Many MS may have targets (relating to EE, decarbonisation) but still lack policies or roadmaps together with a set of required measures and processes to map out a clear and transparent path to reach them. This void can -and already does- result in uncertainty and a lack of trust, especially on the side of industry and consumers (e.g. house owners). Establishing and communicating long-term carbon budgets for MS may help as long as governments are granted flexibility on the way to meeting the set targets.

Each and all MS should develop **energy efficiency strategies that** observe and incorporate existing EU directives and policies and involve all major stakeholders to ensure effectiveness and acceptance. These long-term strategies must illustrate which subsidy, market and regulatory instruments and/or adjustments – based on the current status quo – are required on the timeline by 2050 to promote energy efficiency. In addition to this, a continuous monitoring, evaluation and adjustment process must be introduced as a fixed component of this strategy. The progress – e.g. for the building sector in terms of refurbishment rates – should be documented at appropriate intervals in an implementation report, submitted by the MS to the Commission and published.

Improved monitoring as well as accurate data and status transparency (e.g. through public progress reports), and therefore an evaluation of the EU measures and directives, are only possible with good data available from all of Europe. The EU should assess **whether MS can be supported appropriately** in the necessary expansion of implementing monitoring, e.g. with **EU funds or provision of forums for dialogue to share effective approaches**.

In this context, it has to be borne in mind that MS have different prerequisites and not few have struggled with financial and economic difficulties (or still do so). While some MS have clear strategies in place and are developing or providing roadmaps (on one or both timelines, 2020 and/or 2030/50), others are yet at an earlier stage where guidelines have been published, or will soon be at hand, that partly include outlooks for 2040/2050. Many have aligned – or intend to do so – their strategies with major aspects of EU strategies, e.g. on energy security, competitiveness, environmental protection and climate change, focussing attention on 'Energy Efficiency as the first fuel'. There are MS that have strategies on regional instead than federal levels.

This alone results in a lack of comparability and indicates that 'one fits all' approaches also in promoting national energy strategies are almost certain to fail. While ambitions are often high and preference lies on legally binding targets/measures, means are limited for a number of MS and thus goals and legislation less strong compared to an EU perspective.

To reiterate here what has been mentioned before, a suitable approach for supporting national EE strategies and policies could be to establish/pursue legally binding targets, e.g. regarding commitments to long-term decarbonisation or Article 7 of EED while providing the flexibility on how to meet them as well as individual targets for intervals before reaching the end of the timeline[6].

[6] cf. UK – 2008 Climate Change Act/ carbon budget approach

Outlook

In the mid-term future, a coordinated approach towards reaching the energy and climate goals between all sectors is needed. The core idea of sector coupling, or Integrated Energy, is the use of renewable power outside of the classical areas of power users. The scope of the concept is not limited to power-to-heat technologies or e-mobility but also includes the transformation of renewable power into gaseous and liquid fuels (power-to-gas, power-to-liquid), thus completing the crosslinking of the energy use for power, heat, mobility and chemicals.

For a successful and cost-efficient transition toward an energy system mainly fueled by renewable energy generation, system optimisation is absolute key. A coordinated sector-bridging approach can help to steer toward the central goals of CO_2-reduction and increased independency on fossil fuels. In this context, it is also important to follow the 'Efficiency First' principle.

Significant research on the effects of the rising demand for renewable energy in the heating and transport sectors on the power system is necessary.

Sector coupling should be recognised as an important topic for EU-funded projects - for example in upcoming Horizon 2020 calls. The solution to sector coupling will not be a masterplan or a single technology. Therefore, upcoming regulations should help to facilitate a level playing field that gives a fair chance to real innovation.

E^nR is determined to closely look into and tap the potential and possibilities sector coupling implies, as well as dedicating E^nR future activities, working group meetings, projects and discourses to the topic.

Close-up on selected measures

In the following, agencies discuss selected and major aspects of the directives with regard to the need for amendments in the process of reviewing the directives so as to foster and facilitate implementation and goal attainment.

5) Energy Efficiency Directive (EED)

The Energy Efficiency Directive (2012/27/EU) came into effect on 4 December 2012, replacing the hitherto existing EU energy services and combined-heat-and power directives. The EED incorporates a multitude of measures aimed at reducing annual primary energy consumption in Europe by 20 per cent by 2020. Energy efficiency obligations are a central instrument. They obligate MS to ensure that between 2014 and 2020, an annual 1.5 per cent of the average annual set-off of final energy in the years 2010 till 2012 is saved. MS are free to choose if they commit energy supply companies to achieving these savings of final energy, or if they apply instruments such as support schemes or energy taxation to achieve this result.

Also, MS are required to report on measures for improving energy efficiency as well as expected and achieved energy savings by way of publishing national energy efficiency action plans (NEEAP – the next

being due in April 2017) every three years. In addition, MS must inform the European Commission about the fulfilment of national energy efficiency goals in annual progress reports.

Current information regarding the directive and its implementation in the MS is available online via the European Commission at: http://ec.europa.eu/energy/en/topics/energy-efficiency/energy-efficiency-directive.

The EED will be subject to a review process in 2016/2017 for further development. It will be essential in the course of the process to observe that MS remain flexible in the arrangement and organisation of measures as well as in reporting on implementation. However, regulations need to become simpler, more transparent and more demarcated with regard to the other directives on energy efficiency.

- The EED should remain the central instrument for achieving EU energy and climate goals. E^nR strongly supports the approach to pursue the directive in order to fulfil the 2030 efficiency target.
- Experiences with implementation so far make it quite clear that there is a need for a coordinated energy savings evaluation and calculation system among all MS. It should be noted that harmonised calculation methods should be accompanied by a homogeneous and transparent monitoring and verification scheme for all MS. Projects like Odyssee-Mure (led by ADEME and developed in their responsibility as Chair of the E^nR Working Group Monitoring Tools) have contributed and demonstrated feasibility and will continue on this path. Other initiatives like IEA and ISO are along the same lines.
- Generally, Article 7 can be considered as an effective tool for the fulfilment of the energy savings targets, but has some limitations; because effectiveness is relative and depends on several factors, such as initial conditions and framework, choice and kinds of instruments etc. Thus, the option to identify and use alternative measures for fulfilling the requirements is of major importance to introduce regulations and approaches that sufficiently observe and consider differing national conditions.
    - The obligation for large enterprises to regularly carry out energy audits defined in Article 8 is an important point of discussion here. Experience in different MS shows that defining and differentiating SME and non-SME enterprises has not led to a harmonised and comparable approach across different MS. An alternative approach is suggested, namely by defining the obligation for energy audits on the basis of an enterprise's energy consumption as clear criterion instead of the current differentiation between SME and non-SME.
- EED provisions on metering and billing have proved to be insufficient in providing all consumers with easily accessible, appropriately frequent, detailed and understandable information on their own consumption of energy. Various issues should also be tackled and clarified, such as the financial justification which is required to ensure that individual energy consumption is measured and displayed in detail.

6) Energy Performance of Buildings Directive (EPBD)

The EPBD was introduced in 2002 and recast in 2010. An evaluation and review of the existing EU Buildings Directive (EPBD) should take place by January 2017. More information about the EPBD from the European Commission is available at: https://ec.europa.eu/energy/en/topics/energy-efficiency/buildings.

A vision for the whole building sector is essential and should be the key in the new EPBD:

- Focus on retrofit stock resp. increase of retrofit rates: Two thirds of all EU buildings were built when there were no, or only rudimentary, regulations regarding energy consumption. The new EPBD should therefore focus on increasing the retrofit activities in the MS.
- The refurbishment progress should be documented at appropriate intervals in an implementation report by the MS, submitted to the European Commission and published to clearly show progress and derive corrective approaches in a timely manner.
- Energy consulting quality campaign: Qualified energy consultants will be increasingly important on the way to a climate-neutral building stock. Only a qualified, comprehensive and independent energy consultation can assess a building as a holistic system and give the owners in-depth answers on which refurbishment measures make technical and economic sense for the building in question. The EED already requires the MS to introduce minimum criteria for energy audits. They must be developed further for the building sector and independent processes must be embedded.

7) Renewable Energy Directive (RED)

The European Union is aiming at setting up a comprehensive climate and energy policy with the long-term objective to moving towards a low carbon economy by reducing its greenhouse gas emissions by 80-95 per cent by 2050 compared to 1990s levels. An important milestone in reaching the European Union's energy and climate 20/20/20 targets is the Renewable Energy Directive from 2009 (RED 2009/28/EG).

As part of its Energy Union Framework Strategy, the Commission is now reviewing the RED to implement a new renewable energy package for the period after 2020. In 2014 the European Council agreed that by 2030 an EU-level renewables share in final energy consumption of at least 27 per cent has to be reached. Therefore, the new Renewable Energy Directive (RED II) for the period 2020 to 2030 is being developed, including an updated EU bioenergy sustainability policy. With the RED II being the key instrument to reach the 2030 targets, some major aspects need to be taken into consideration:

- Different implementation levels of the current RED across different MS
- Coordination with EED and EPBD required, which also includes demarcation where necessary
- Complementarity, clarity and greater additionality between the directives have to be ensured
- Regional cooperation and cross-border projects need fostering
- Allow for new business models to ensure social acceptance and greater market uptake.

In this context, E^{n}R recommends to observe and develop the following aspects:

- *Empowering consumers (including communities and cooperatives), self consumption and prosumers*

  Until now there has been a focus on support systems like feed-in tariffs, which means a focus on feeding electricity into the grid. At the same time, RES electricity like from PV is not necessarily generated when mostly needed. Many smaller systems feed into the grid at the same time, challenging grid stability. One solution is the empowerment of consumers, and producers to become prosumers (= producer and consumers of energy).

In the long run, load management, storage technologies and/or e-mobility all play an important role in making self-consumption economically viable and empowering consumers. Load management, storage and e-mobility should be considered parts of the overall picture for system optimisation of energy use patterns. Support schemes for load management systems combined with battery storage are an important step forward while e-mobility support schemes that are linked to the use of renewable electricity and can be an additional incentive for self-consumption, load shifting and storage in households.

There are several short- and long-term barriers to consumer empowerment. Administrative frameworks have to be simplified while creating a clear legal framework for self-consumption. Obstacles potential prosumers are currently facing in MS are: legal uncertainties around network charges, levies financing green electricity support schemes, authorisation procedures, taxes on self-consumption.

Some MS already have experience with self-consumption (load) management systems and self-consumption business models (i.e. the Netherlands, Croatia or Austria, for example support for PV storage solutions including load management). Others are lacking a clear legal framework that would allow households or businesses to become prosumers. Currently, self-consumption models are mainly based on PV electricity generation. In the future, solutions and business models are needed to make self-consumption economically viable. Allowing for landlords to deliver electricity to tenants is one example and model that will be implemented in Austria and is already in place in Germany.

- *Foster local ownership of renewable energies*

  Low public acceptance of renewable energies tends to go hand in hand with poor local engagement. Increased local ownership can lead to increased public acceptance. There are numerous different models for local ownership. Whereas some MS like the Netherlands, UK, Germany, Croatia, and Austria already have experience with local ownership models and programmes, others do not have supporting legislation in place to set up renewable energy projects based on local ownership. There is a distinct need to share experience, information and best practice across EU countries, not just on a legal and administrative level, but also in terms of feasible investment opportunities for public and alternative financing options (i.e. co-ownership, crowdfunding, etc.)[7]. Especially cooperatives have shown to be viable options for local ownership projects in renewable energies.

  A review of the interaction of state aid rules and locally-owned renewable energy projects would be helpful; currently, social enterprises that run locally-owned renewable energy are usually treated as commercial companies. Respective organisations and programmes have suffered disproportionately negative impacts from state aid ruling due to usually having less access to capital and balance sheet finance and generally having slower decision-making processes, which results from their democratic structures.

[7] Various European energy agencies already have a broad knowledge on local ownership models. Support is needed, however, for information exchange across EU countries regarding business models and structures for local ownership.

A further issue in auction and tendering schemes is the limited possibility and enablement for small actors to participate in RES projects[8]. Policy measures should be enacted at EU or national level to allow local ownership projects to participate in calls for tenders. Given the complexity of the procedures, small actors should receive advice when applying for a tender. Also, tender procedures should provide for easier material prequalification and hedge against the risks of costly project development.

- *Guarantee of origin (GO) system for renewable energies*

  GO has been established as an important tool to provide information on the source of electricity. All MS were required to establish and maintain a certification scheme (Article 3.9). However, this led to different systems in different MS, making cross-border trade more difficult.
  In the first step, it is important to make sure that consumers / citizens become aware of the GO system so as to stimulate the use of renewable energies and create greater involvement of suppliers. To date, only large consumers are aware of GOs, many of them only partially.
  Information that should be included in GOs is listed in Annex 2.

- *RED and the building sector (cf. paragraph 3 on EPBD above)*

  Goal of incentive policies without remediation obligation/obligatory vs. voluntary application of RES in building stocks: Investment in energy building refurbishment always requires acceptance by the owners. Detailed remediation obligations or requirements with an obligation to use renewable energy sources in inventory buildings can have the opposite effect: Experience has shown that, rather than compulsion and obligations, it is dependable information, consultation and planning combined with focused state incentives that pave the way to higher levels of energy refurbishment.

8) Eco-Design & EU-Labelling Directives

The current EU-Labelling Directive 2010/30/EU of 19 May 2010 has replaced the original Directive 92/75/EG, and has broadened the spectrum of validity from „household technology“ to include the so-called „energy-user devices”. Approximately 15 regulations have been implemented for 15 different product groups. These regulations have already led to a significant increase in the energy efficiency of devices. From 2020, these regulations in combination with the associated eco-design requirements will predictably result in an EU-wide annual saving of over 800 TWh.

The process of reviewing the EU Labelling Directive started in 2013 along with a wide-ranging consultation process and multiple target-group surveys. In the meantime, the European Commission presented their draft and decision papers to the European Parliament – and completion of the consultation process for a new guideline is due in 2017.

Currently, no major changes of the Eco-Design guidelines are scheduled.

[8] With several auction schemes, various permitting procedures need to be finalised by the time the auction starts. Furthermore, capital needs to be available that the auctioneers keep as a deposit until project operation starts or they sometimes keep it entirely in case of project cancellations. These factors render participation in tenders very difficult for smaller actors and community projects.

E^{n}R highlights the following aspects and needs for action regarding Eco-Design & EU-Labelling Directives:

- For successfully implementing the EU Labelling Directive, (recurring) changes in label classifications of products must be avoided, while close and continuous involvement of producers, trade and consumers must be ensured. At the same time, scaling must ensure that the best technologies are not graded lower than energy efficiency grade B. Otherwise, the directive may receive a low profile or be misinterpreted by consumers.
- The new directive should ensure a stronger consideration of digital opportunities in commerce and should allow for adequate opportunities (this has been shown to be effective in China).
- Regarding priorities in the implementation of both, the Eco-Design and Labelling Directives (according to the work plan 2015/2017), emphasis should be placed on products and devices with the highest energy saving potentials.
- To tap further energy efficiency potentials, the effectiveness of the EU Label needs to be secured by focusing on significant parameters and comprehensible information on the label.
- As a snapshot of the market, the MarketWatch project identified major discrepancies between the actual features of products (particularly refrigeration, dishwashers and lighting) and the claims written on their corresponding energy label. Market surveillance by MS needs to be strengthened using suitable instruments from the Commission. Increased collaboration between MS and the industry at the early stage of product design would be beneficial. The planned obligatory product data bank will support this aim. Other areas worth considering are stricter penalties and improved self-regulation (as per Australian and American models).
- Regular monitoring of market developments to identify violations or disadvantageous developments using data from GfK and the help of organisations and associations in the MS.
- Prevention of undesired preferences of individual technologies and market participants by means of a comprehensive impact assessment of directives.
- Energy efficiency of connected/networked products: Increased use of integrated products that have a higher energy-usage compared to products that are not integrated. The requirements for energy efficiency of these connected/networked products should be closely monitored to ensure that no loopholes for energy-drain can develop.

Annex 1

Information to be included in Guarantees of Origin (GO)
(cf. 7 on RED)

- Energy source
- Electricity/heat/bio-methane
- Place, type, capacity of RES plant
- Information about subsidies received by the RES plant
- Date of start of operation of the RES plant
- Date of issuing of GO
- Issuing country
- Unique identification number
- CO_2 emissions
- date of issue, issuing body and the country of said body, a unique identification number;
- the source of the electricity, indicating the initial and final date of its generation;
- the identity, location, type and capacity of the plant, the date when the plant was commissioned;
- if and to what extent the generation unit benefited from investment support or any other form of support while operational.