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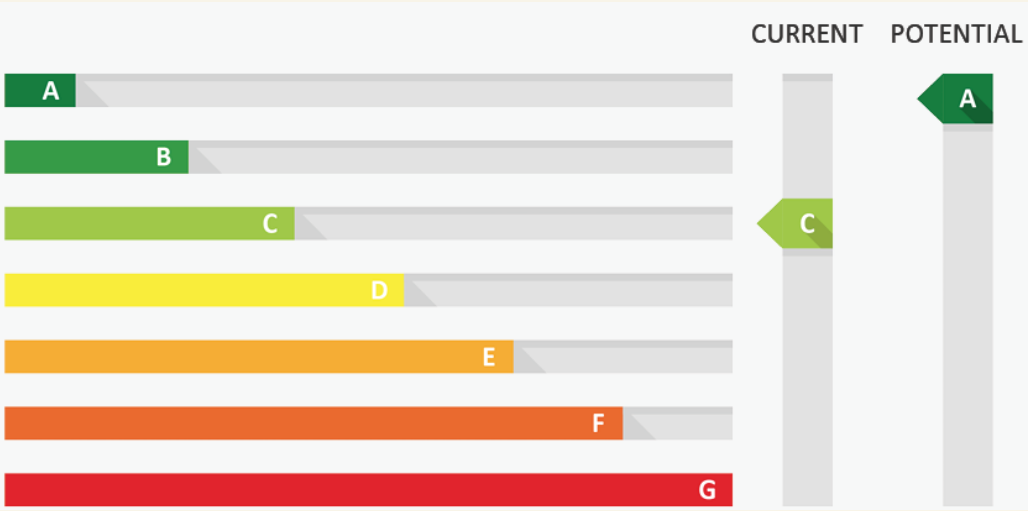
BRIEFING PAPER JUNE 2017

EFFICIENCY FIRST SCORECARD

IS THE EU'S ENERGY UNION ON TRACK?



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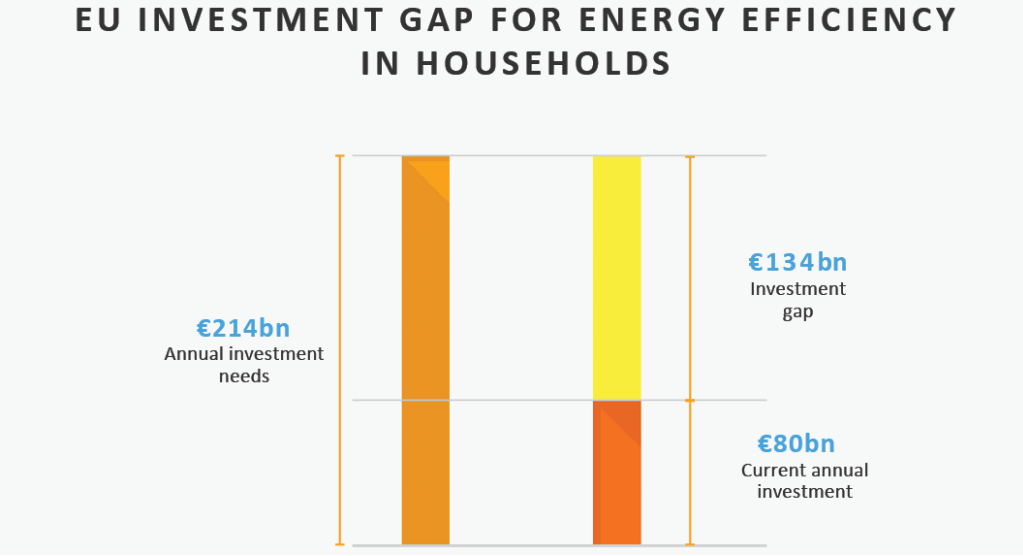
Introduction

This briefing paper assesses the progress made in delivering Efficiency First in the EU's Energy Union. We do this by assessing the Commission's proposals included in the Clean Energy For All Europeans package against what is needed to achieve Efficiency First. The benchmark for achieving Efficiency First is set out in a separate report "Governance for Efficiency First: "Plan, Finance, Deliver"[1].

Overall, a 'C' grade is awarded out of a rating from A to G, with the potential to upgrade to an 'A'. The proposals are a good start. However, more needs to be done to strengthen the proposals and create the conditions for capital to flow at the scale needed to close the annual investment gap. Estimates published in the Clean Energy For All Europeans package set the annual investment gap for efficiency improvements in EU households alone at €134 billion[2]. Further investments are also needed in the industry and services sector to achieve the 30% EU energy savings target by 2030[3] (see below figures)**.**

Figure 1



Source: European Commission – Impact Assessment of Energy Efficiency Directive

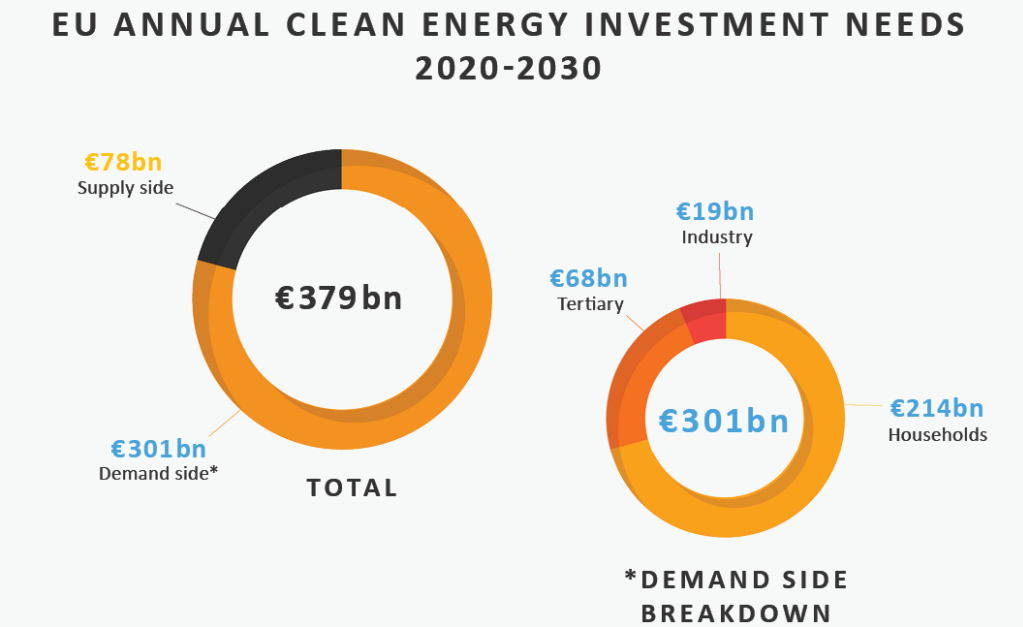
[1]European Climate Foundation (2016) **Governance for Efficiency First: "Plan, Finance and Deliver"**

[2]European Commission (**SWD(2016) 405**) Part 1 – Impact Assessment accompanying the EED. It is estimated that €214 billion of investment in households in needed annually between 2021-2030 to achieve the 30% EU energy saving target; EC (**SWD(2016) 405**) Part 2 Impact Assessment accompanying the EED. Current estimates for energy efficiency investments in buildings are €80 billion per year.

[3]European Commission **(SWD(2016/405**) Part 1 - Impact Assessment accompanying the EED. To reach the EU's 2030 climate and energy targets, around €379 billion needs to be invested annually between 2020-2030 (excluding transport). Of this, €301 billion needs to be invested into demand-side measures, of which over 70% (€214 billion) is in households.

This briefing has been produced to provide a useful sense-check as the Council of the European Union and European Parliament debate the content of this package. The assessment is structured as follows. For each of the principles for achieving Efficiency First – 'Plan', 'Finance' and 'Deliver'[4] – we give an overall assessment of the package, followed by a breakdown of the key measures proposed and our recommendations for how these can be strengthened. A rating is applied to each individual measure based on the methodology set out in the annex. These are collated to rate each principle and provide the overall score above.

Figure 2



Source: European Commission – Impact Assessment of Energy Efficiency Directive

[4]See European Climate Foundation (2016) **Governance for Efficiency First: "Plan, Finance and Deliver"**; the principles were developed by experts in this field.

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Assessment

1. Plan

Prioritising opportunities to invest in energy efficiency and demand response within forward energy system planning.

Overall assessment: MODERATE 'C'

Plans made now to future-proof decisions about energy infrastructure investment across Europe and to deliver system-wide efficiencies to end users are key to delivering greenhouse gas cuts and energy security at least cost in the long term. **Delivering Efficiency First in energy system planning will realise the most cost-effective transition to a low-carbon energy system possible to 2030 and 2050 while creating millions of jobs[5].**

Achieving the full potential of efficiency (demand side reduction and flexibility) to deliver least cost services within the energy system must start by clarifying the level of energy demand reduction expected in 2030. The 30% EU binding energy efficiency target the Commission has proposed for 2030 does not represent the full potential of cost-effective energy savings[6], but does represent a boost to 2020 ambition. The binding nature of the target proposed is helpful since it provides a clear starting point for governments, regulators and market participants to work back from to determine how best to deliver the energy needs in 2030. Transparency could be further increased with nationally binding targets. **The 30% EU binding energy efficiency target is a defining component of Clean Energy For All Europeans package and should at least be retained if not upgraded to 40%.**

The requirement for Member States to develop integrated National Energy and Climate Plans within the proposal for Governance of the Energy Union Regulation **provides the structure for considering the full potential of energy efficiency in the energy system**. However, proposals could be strengthened significantly.

Breakdown of measures proposed

EU binding 30% energy efficiency target – MODERATE 'C': The Clean Energy For All Europeans package includes proposals to clarify expectations on the level of future

[5]Coalition for Energy Savings (2015) **"State of Energy Savings"** – For example, a 40% energy efficiency target at 2030 would create and or maintain over 11 million jobs.

[6]Fraunhofer ISI (2014) - **Study evaluating the current energy efficiency policy framework in the EU and providing orientation on policy options for realising the cost-effective energy efficiency/saving potential until 2020 and beyond.** The cost-effective efficiency improvements across all sectors of the EU economy represent, the EU 40% of its overall energy demand by 2030.

energy demand and where energy savings should be prioritised. These are included in the **revised Energy Efficiency Directive (EED), which introduces an EU binding energy efficiency target of 30% in 2030**[7]. This falls short of the full cost-effective potential of energy efficiency by some way, estimated at 40% in 2030[8], but it is an increase from the European Council's agreement in 2014 of at least 27% for 2030[9].

Long-term building renovation strategies – INADEQUATE 'D'**:** The Package includes proposals to **revise the Energy Performance in Buildings Directive**. They require Member States to develop long-term renovation strategies, including measures to deliver on the long-term 2050 goal to decarbonise their national building stock, with specific milestones for 2030[10]. **Given that 36% of EU CO_2 emissions[11] come from the building stock, this is a 'cornerstone' of the Member States' 2030 and 2050 decarbonisation strategy.**

Yet the proposal is still too weak. The definition of a 'decarbonised' building stock does not provide enough clarity to kick-start a massive renovation program in Member States. Also, there is nothing in the proposal to ensure timely implementation of the renovation strategies, such as trigger points[12] which would ensure a dynamic approach towards the renovation of the building stock. **The proposal falls short of delivering on-the-ground change that would make Efficiency First a reality[13].**

National Energy and Climate Plans (NECPs)– MODERATE 'C'**:** An important new piece of legislation is the **Governance of the Energy Union Regulation**[14]. This regulation requires Member States to develop integrated NECPs that include all climate and energy planning requirements to 2030. **It is a key tool to enable Member States and the EU as a whole to assess how ambitious it will be in meeting the Paris Agreement objectives[15]**. The integrated plans are the opportunity to better integrate impacts of energy efficiency and demand-side management policies onto the energy system and produce more accurate projections of what the future will look like. The Regulation sets out a requirement for Member States to take robust forward energy demand

[7]See European Commission (**2016/0376**) Proposal for amending Directive 2012/27/EU on energy efficiency - Article 1 establishes a common framework of measures to promote energy efficiency within the Union in order to ensure that the Union's 2020 20 % and 2030 30 % binding headline targets on energy efficiency are met.

[8]Fraunhofer ISI (2014) **- Study evaluating the current energy efficiency policy framework in the EU and providing orientation on policy options for realising the cost-effective energy efficiency/saving potential until 2020 and beyond.**

[9]European Council (2014) **Conclusions of the European Council of 23 and 24 October 2014**

[10]European Commission (**2016/0381**) Proposal for amending Directive 2010/31/EU on the energy performance of buildings. Article 1 in this Directive now includes a new article 2a setting this out.

[11]URBACT (2013) **Building Energy Efficiency in European Cities**

[12]BPIE (2017) **Trigger point as a "must" in national renovation strategies**. Trigger points refer to key moments in the life of a building (e.g. rental, sale, change of use, extension, repair or maintenance work) when carrying out energy renovations would be less disruptive and more economically advantageous than in other moments.

[13]EuroACE (2017) **How to make the most of it! Energy efficiency legislation in the 'Clean Energy For All Europeans' package**

[14]European Commission (**2016/0375**) Proposal for a Regulation on the Governance of the Energy Union. Article 3 states that by 1 January 2019 and every ten years thereafter, each Member State shall notify to the Commission an integrated national energy and climate plan.

[15]UNFCC (2015) **Paris Agreement**

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scenarios into account while planning their infrastructure deployment of the coming decade.[16] These requirements could be harnessed by Member States to 'build in' expectations of delivering the Commission's proposed 30% energy efficiency goal in 2030. **They can also facilitate the process of national governments clarifying for themselves, and for investors, how the remaining energy demand will be delivered by national power generation assets versus power supplied by other Member States (via interconnection) through the integrated single market[17].**

NECPs therefore present an opportunity to facilitate dialogue both within and between Member States on how national and EU energy needs can be met at least cost and in a way that maximises collective GHG cuts, energy savings and security and employment benefits. Given the biggest investment gap to meeting the 2030 climate and energy targets is energy efficiency, an annual progress assessment in closing this gap would be of great value. The assessment could be delivered through reporting requirements in the NECPs.

Long-term low carbon strategies – INADEQUATE 'D'**:** A further measure proposed in the Governance Regulation[18] is the requirement to develop long term low carbon strategies, which will be key to optimising infrastructure planning[19]. **How energy demand projections are developed, as well as what energy prices and discount rates are used to assess infrastructure investment costs can profoundly change views on what a cost-effective low carbon transition pathway looks like. Long-term strategies towards net-zero greenhouse gas emissions are crucial and should be the backbone of all energy planning.** This long-term focus is needed to ensure the compatibility of infrastructure choices with the goals of the Paris Agreement. It will help avoid wasting money on infrastructure that will become stranded.

These strategies should also meet a certain level of transparency by making them and their modelling assumptions public. This is needed to enable full scrutiny of how Efficiency First has been considered in the decision-making process.

Finally, the connection between long-term strategy and short-term planning is very weak. There is no requirement for consistency between the two. There is also no requirement for member states to identify today, in their 2030 NECPs, the infrastructure needed to deliver the 2050 targets, nor how the current pipeline of infrastructure is compatible with a low-carbon future.

[16]European Commission (**2016/0375**) Proposal on the Governance of the Energy Union – Article 8.

[17]European Commission (**2016/759**) Annexes to the Proposal on the Governance of the Energy Union. In Annex 1, the binding template for planning includes twice a requirement for 'policies and measures to be compatible with the energy efficiency first principle' as far as energy security and the internal energy market are concerned.

[18]European Commission (**2016/0375**) Proposal for a Regulation on the Governance of the Energy Union. - Article 3 states that by 1 January 2019 and every ten years thereafter, each Member State shall notify to the Commission an integrated national energy and climate plan.

[19]European Commission (**2016/0375**) Proposal for a Regulation on the Governance of the Energy Union. Article 14 states Member States to prepare and report to the Commission by 1 January 2020 and every 10 years thereafter their long-term low emission strategies with a 50 years perspective.

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Ecodesign Working Plan 2016-2019 - GOOD 'B'**:** The release of the Ecodesign working plan for 2016-2019 comes after a delay of 18 months that created confusion about the future of this successful policy. The Commission estimates that the seven new categories of products under consideration for a regulation by 2019 could save up to 75 TWh per year of primary energy by 2030, the equivalent of the annual energy consumption of Sweden[20]. The Commission should have included more products but the re-boot of the policy is welcome as Ecodesign plays a key role in delivering the 2030 climate and energy targets.

Way forward

Realising the most cost-effective transition to a low-carbon energy system to 2030 and 2050 will require strengthening the proposals as follows:

- The EU should adopt a target of 40% energy savings, which represents the cost-effective potential for the block.
- The EPBD should include an implementation mechanism to deliver long-term building renovation strategies as well as a precise definition of a what constitutes a decarbonised building stock.
- In the Governance regulation, member states should use robust energy demand projections as the basis of projections for infrastructure and security of supply. They should include details of the assumptions underpinning those projections – including oil and gas price projections. This information should be make public to ensure compliance.
- The policies and measures put forward to meet the goals set out with the NECPs should include:
    - Appropriate social discount rates used to assess costs – reflecting the social, environmental and health benefits of energy efficiency – beyond GHG cuts.
    - Assumptions about energy demand and modelling so the Commission and stakeholders can evaluate whether all cost-effective savings are achieved – and, if not, propose further measures to be adopted.
- The long-term strategies under the Governance Regulation could be reinforced by the inclusion of 2050 targets for renewable energy and energy efficiency, including a decarbonisation goal for the EPBD to clarify the role of building renovation in reducing GHG emissions in each Member State.
- The 2050 low carbon strategies emerging from the NECP process should help inform the design of shorter term (2030) targets, policies and measures, ensuring that infrastructure will be fit for purpose to deliver a net-zero emission future as soon as possible.

In addition, given the cross-cutting nature of delivering Efficiency First the Commission should consider the establishment of an Expert Group to advise on how to develop an Action Plan setting out the short, medium and long-term actions

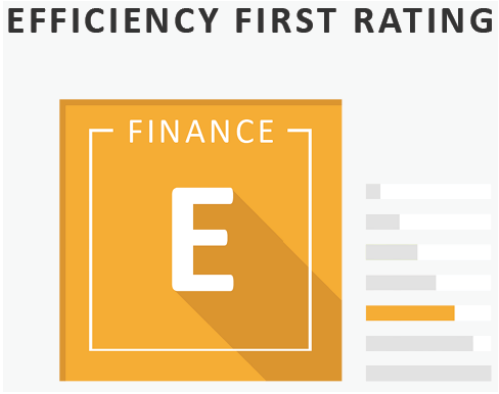
[20]EC press release (30th Nov 2016) - **Putting energy efficiency first: consuming better, getting cleaner**

needed to implement, monitor and deliver Efficiency First. This could contribute as a key element of its Circular Economy Agenda.

2. Creating the conditions to enable financing

Removing economic and institutional barriers to deliver financeable efficiency projects at scale.

Overall assessment: POOR 'E'



There is a gap between the theoretical economic attractiveness of energy efficiency (and demand side management) and its financeability. To reach the EU's 2030 climate and energy targets, around €379 billion needs to be invested annually between 2020-2030 (excluding transport). Of this, **€301 billion needs to be invested into demand-side measures, of which over 70% (€214 billion) is in households**[21]. As the work of the Energy Efficiency Financial Institutions Group (EEFIG) has set out, there are a range of market, institutional, economic and financial barriers to scaling up energy efficiency investment[22]. Some of the key recurring barriers are state aid treatment of energy efficiency investments; accounting treatment of investments delivered through Energy Performance Contracts; and insufficient capacity to develop project pipelines. Some moves are being made to address these gaps – but much more is needed.

Various measures proposed within the Clean Energy For All Europeans package will assist with scaling up efficiency financing and closing the investment gap[23]. The proposals to develop innovative approaches to risk-sharing through blended instruments, and aggregate projects to make them attractive for capital market financing represent a series of welcome market and institutional interventions to address market failures. However, there is not sufficient effort to tackle the economic and institutional barriers, which will limit the impact of the other measures. The rating for this principle is lowered to reflect this weakness.

[21]See **EC (2016/405)** Staff working document - Impact Assessment for the amendment of the Energy Efficiency Directive, (investment figures excluding transport sector). Investments on the demand side, include energy equipment (covering appliances in households and tertiary sector, vehicles, industrial equipment etc.) and direct energy efficiency investments (covering renovation of buildings improving their thermal integrity).

[22]Energy Efficiency Financial Institutions Group (2015) **Energy Efficiency – the first fuel for the EU Economy**

[23]European Commission (**2016/0381**) Proposal for amending Directive 2010/31/EU on the energy performance of buildings. The directive includes a requirement for Member States to facilitate investments in buildings through introducing mechanisms for: the aggregation of projects, to make it easier for investors to fund the renovations, de-risking energy efficiency operations for investors and the private sector; and the use of public funding to leverage additional private-sector investment or address specific market failures. EC (**2016/0379**) Proposal for a revised electricity Regulation. The regulation includes a requirement for Member States, national regulatory authorities, transmission system operators, distribution system operators, and market operators to deliver appropriate investment incentives for generation, storage, energy efficiency and demand response to meet market needs and thus ensure security of supply.

Breakdown of measures proposed

Within the package, the main proposal focused on finance for energy efficiency is the smart finance for smart buildings communication[24]. The following measures, cited in this communication, are new finance measures which set out to realise the sustainable energy potential in buildings[25].

Extension of the duration of the European Fund for Strategic Investments (EFSI 2.0)[26] – GOOD 'B'**:** The Commission's **proposals to extend the duration of the EFSI aim to unlock private investment for a sustainable Energy Union[27].** In the first phase of the initiative, the EFSI Regulation focused on boosting energy efficiency investment[28]. Since its creation in 2015, €2.6 billion (12.3%) of the available funding has been channelled into energy efficiency projects[29]. The EFSI 2.0 proposal goes further[30], stating that energy interconnection priority projects and energy efficiency projects will be increasingly targeted[31]. More concretely, the European Investment Bank (EIB) shall target at least 40% of EFSI financing under the infrastructure and innovation window to support projects with components that contribute to climate action, in line with the EU's commitment to the Paris Agreement.

One of the most significant innovations that EFSI has generated is the greater flexibility conferred on the EIB to work – both in terms of technical assistance and capital provision – with project developers and bring forward investment programmes. **This has enabled two significant new programmes to set up in France, with a further six in development in other Member States**[32]. It is vital these programmes continue and are replicated elsewhere in Europe, as they are key to scaling up investment. They help create the technical capacity to deliver investable plans and promote the use of blended finance[33].

[24]See EC (**2016/860**) Annex 1 - Accelerating clean energy in buildings' communication.

[25]Other measures cited in this proposal contain insufficient detail to be able to assess and therefore are not included in this briefing. These include: a new initiative to further boost investments by public sector entities, energy services companies, SMEs/midcaps and households in energy efficiency and smart buildings; A mechanism to encourage Member States to develop dedicated local or regional one-stop shops for project developers.

[26]European Commission (**2016/0276**) Extension of the duration of the European Fund for Strategic Investments.

[27]EFSI Regulation (**EU 2015/1017**) supports development of the energy sector in accordance with the Energy Union priorities, including the 2020, 2030 and 2050 climate and energy frameworks and the European Investment Advisory Hub (a part of EFSI) provides technical assistance in the areas listed in Article 9(2), in particular energy efficiency, TEN-T and urban mobility.

[28]EFSI Regulation (**EU 2015/1017**).

[29]E3G analysis of the EIB's EFSI project list last updated on 16.05.2017- see http://www.eib.org/efsi/efsi-projects/index.htm. Total EFSI finance reported is €21.6 billion which is different **to the EFSI dashboard** of EUR36.9 billion as not all projects have finance disclosed of EIB's website and the dashboard includes 9bn of **EIF-approved finance (**SMEs, RDI, Digital and social).

[30]European Commission (**2016/0276**) - Article 9 paragraph 2. The onus is on the EFSI Steering Board to provide detailed guidance on how this should be achieved.

[31]Ibid Recital (8), which states Energy interconnection priority projects and energy efficiency projects should also be increasingly targeted

[32]EIB press release (23 October 2015) **France: Nord-Pas de Calais Region set to support the third industrial revolution**. Discussions with EIB staff.

[33]See EC (**2016/860**) Annex 1 - Accelerating clean energy in buildings' communication - states an aim to create flexible energy efficiency and renewable financing platforms enabling local banks, financial intermediaries, energy service companies or other

Support for national financing platforms – MODERATE 'C'**:** Within the smart finance for smart buildings proposal, the Commission will support the development of flexible energy efficiency and renewable financing platforms at national or regional level. Support is given by embedding greater flexibility in the capital provided by the EIB to project developers. Three mutually reinforcing elements will be delivered to the entities willing to finance portfolios of sustainable energy investments:

1. Up-scaled EIB debt financing via the European Fund for Strategic Investments;
2. A risk-sharing mechanism to mitigate the risk of sustainable energy building investments portfolios and to enable more attractive lending conditions to final recipients and technical expertise; and
3. Assistance for rolling out lending programmes.

Reinforcing existing Project Development Assistance facilities[34] at EU level – MODERATE 'C'**:** As of 2017 the **Commission proposes to increase the budget of the EU Project Development Assistance from €23 million in 2015 to €38 million per year.** The budget of the EU Project Development Assistance (technical assistance) for 2016-2017 is expected to trigger up to €3bn of sustainable energy building investments (i.e. wider than just efficiency)[35].

Launching the De-risking Energy Efficiency Platform – MODERATE 'C'**:** The disclosure of the risks and benefits of investing in sustainable energy buildings is needed to help grow the market for energy efficiency**. The European Commission has launched a De-risking Energy Efficiency Platform[36]** to do this based on market evidence and performance track record. For this to have a large-scale impact on the development of the demand-side of the energy market it will have to be significantly upscaled. There needs to be a requirement for project developers, financiers, and investors to further populate the open-source database.

Reviewing the state aid rules for efficiency – EXTREMELY POOR 'G'**:** The Commission has **proposed launching an initiative with favourable state aid rules for investments in energy efficiency and smart buildings**. This proposal sets out to support investments by public sector entities, energy services companies, SMEs/midcaps and households in energy efficiency and smart buildings. The proposed initiative also contains other regulatory and administrative advantages, for example regarding public procurement, co-financing obligations as well as reporting and *ex-ante* assessments. However, the proposal contains very little detail on the initiative or when it will be launched. Beyond this initiative, a wide-ranging revision of the guidelines on state aid for environmental protection and energy 2014-2020 should be undertaken.

entities pooling investments to deploy attractive sustainable energy financing products to a large number of final recipients in the area covered by the platform.

[34]ELENA Facility and the PDA call under the Horizon 2020 Programme.

[35]See EC (**2016/860**) Annex 1 - Accelerating clean energy in buildings – Pillar II of Smart Finance for Smart Buildings section.

[36]Ibid. See Project developers, financiers, and investors are invited to further populate this open-source database and benefit from its benchmarking features and peer-to-peer learning.

The current state aid rules for energy efficiency and demand response projects (included in the guidelines for environmental protection and energy 2014-2020) are very complex to interpret for Member State authorities and dis-incentivise the design of larger energy efficiency support programmes (those above €200 000 – the cap for projects eligible for *de minimis* aid)[37]. The constraints placed on aid intensities (the proportion of aid in the overall cost) for energy efficiency measures are also the lowest of all environmental aid measures[38] and there is a lack of guidance on what process public authorities should follow[39]. The Commission makes reference in the Clean Energy For All Europeans package to reviewing the guidelines to stimulate innovation in renewable energy technologies and solutions[40], however there is no reference to energy efficiency.

Reviewing the accounting rules for energy performance contracting –VERY POOR 'F': The Commission is analysing, in close cooperation with the Member States and Eurostat, **the impact of the public accounting treatment on the market for energy performance contracting.** The working group looking into the issue was supposed to identify solutions and propose them to member states before late spring 2017[41] yet this is already behind schedule and it is unclear whether the changes proposed will be enough to stimulate the EPCs market.

Disregarded by many as a 'technical issue', accounting is of fundamental importance for the functioning of the financial system as it determines how assets are evaluated on the balance sheet of companies and governments. This in turn has profound ramifications for capital needed. **Accounting is therefore a deeply policy-relevant issue.** There are numerous examples of willing Energy Services Companies able to provide the technology, engineering and finance needed to develop retrofit programmes for both public programmes (e.g. social housing in Italy[42]) and private programmes (e.g. Schipol airport[43]) at no upfront cost to the recipient of these energy services and with repayment costs fixed in a way that saves them money. **Yet these investments have failed to go ahead because they would appear on the balance sheet of the service user.**

Accounting rules, specifically IFRS9, as interpreted by the European Commission statistical agency EUROSTAT, **require energy performance contracts to be declared**

[37]Concerted Action Energy Efficiency Directive (2016) **Financing energy efficiency: dealing with State Aid rules** CA EED (2016) **Financing energy efficiency: dealing with State Aid rules**

[38]European Commission (**2014/C 200/01**) Guidelines on state aid for environmental protection and energy 2014-2020. Aid intensities of 30-50%, dependant on the size of the enterprise, for energy efficiency compared to 100% aid intensity for energy infrastructure and CCS.

[39]E3G (2016) **Energy efficiency as infrastructure**

[40]European Commission (**2016/860**) Annex 2 - Action to boost the clean energy transition. The Commission will 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.

[41]European Commission (**2016/860)** Annex 1 - Accelerating clean energy in buildings. Pillar I of Smart Finance for Smart Buildings section.

[42]CITYNVEST (2015) **Increasing capacities in cities for innovating financing in energy efficiency**

[43]Philips (2015) **Philips provides light as a service to Schipol airport**

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on the balance sheet of the developer despite the fact the capital is provided and the risk is borne by the Energy Service Company (ESCO). The challenge appears to be that EUROSTAT is unwilling to deviate from the 'norms' that the international statistical community have developed around the treatment of these types of arrangements. This is not the only example of statistical norms being challenged because they prevent the allocation to capital to productive uses. **There is a growing consensus that International Financial Reporting Standards rules may not – in some circumstances – be fit for purpose and are a barrier to sustainable long-term investment, such as in energy efficiency.**

Way forward

Delivering the step change in investment in energy efficiency and demand-side measures needed to tackle the investment gap will require swift resolution of the issues with accounting rules and state aid rules:

- On state aid, the Commission needs to go much further than temporary measures[44]. A systemic review of the state aid guidelines for environmental protection and energy 2014-2020 is needed, removing the restrictions and disincentives for investments in energy efficiency and demand-side measures.
- On accounting rules, a fundamental change to how IFRS 9 is applied in an EU context is needed. There are two routes forward. Acknowledging that energy efficiency investments undertaken using EPCs will deliver a known amount of savings over a known amount of time, EUROSTAT should either:
    - Simply classify well-structured EPCs as services procured and as such off-balance sheet;
    - Consider an amendment to the interpretation of IFRS rules and recognise cash savings from energy efficiency investment programmes and EPCs in the 'scoring' of investments.

The aim is to make more effective use of public funding, develop innovative approaches to risk-sharing through blended instruments, and aggregate projects to make them attractive for capital markets financing. However, more needs to be done to build the confidence of private sector investors, whose activities are still 'at the margins'[45]:

- The move to extend EFSI, should go a step further, making all EFSI financing climate-aligned with a larger proportion going to energy efficiency and demand-side measures to fill the void in investment where it is needed most.

[44]European Commission (**2016/860**) Annex 1 - Accelerating clean energy in buildings. Text states the Commission will launch an initiative to further boost investments by public sector entities, energy services companies, SMEs/midcaps and households in energy efficiency and smart buildings. It states several regulatory and administrative advantages will be connected to the use of an EU solution, for example regarding state aid, public procurement, co-financing obligations, as well as reporting and ex-ante assessments.

[45]European Commission (**2016/860**) Annex 1 - Accelerating clean energy in buildings' communication. "banks seldom consider energy efficiency as a distinct market segment. This results in a lack of adequate and affordable commercial financing products for energy efficiency or renewables energies investments in buildings, in In particular heating and Cooling solutions, solar panels in rooftops, and heat pumps."

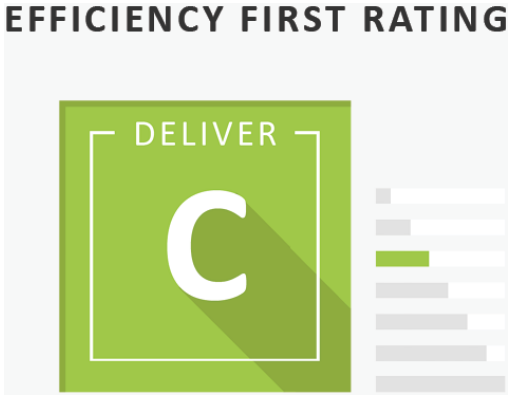
- The renewed focus on building the technical capacity to bring projects forward for financing and scaling impact through national financing platforms can be further accelerated by removing the barriers outlined above as well tackling institutional capacity issues (see section 3 - Deliver).

Without reforms to remove economic and institutional barriers, the blended instruments introduced for energy efficiency investment will be difficult to scale, undermining the confidence of public authorities that they can meet annual energy savings targets such as those set out in Article 7 of the EED.

3. Deliver

Retaining and creating mechanisms to underpin the development of energy efficiency and demand-side response markets.

Overall assessment: MODERATE 'C'



Energy efficiency and demand side management solutions are highly dispersed and rely on a series of highly localized engineering solutions delivered across the built environment, industry and regulated into the design of new products. The ability to deliver retrofit solutions relies on it being someone's job to identify and deliver the investment potential 'on the ground'. This is why it is such a good source of localised employment[46]. **Achieving Efficiency First is intimately wrapped up with the institutional capacity in Member States to identify and deliver this investment.** Where programmes have been successful, for example in the Czech Republic, Bulgaria and more recently in France (funded by the EFSI), sufficient institutional capacity to both develop project pipelines and disburse funds have been key to success[47].

Extending the annual energy savings obligation[48] in the EED beyond 2020 is an important market signal and incentive of action to generate energy efficiency investment opportunities. Energy efficiency obligation schemes make it necessary for energy companies to achieve yearly energy savings of 1.5% of annual sales to final consumers. Such schemes can have a transformative effect on the role and activities of energy companies, as well as opening the market for energy services[49] and effectively expanding the capacity to deliver efficiency projects in Member States. The

[46]E3G (2014) **New Boost for Jobs, Growth and Investment: A focus of energy efficiency**; European Commission (2011) **Energy Efficiency Plan 2011** - Meeting Europe's 20% energy saving target will create up to 2 million new jobs

[47]CITYNVEST (2015) **Bulgarian Energy Efficiency and Renewable Sources Fund**; EIB (2016) **Energy Efficiency in residential buildings** (France), EIB (2015) **Czech initiative for energy efficiency and other priorities**

[48]Article 7 of the Directive states Member States shall achieve cumulative end-use energy savings at least equivalent to new savings each year from 1 January 2014 to 31 December 2020 of 1.5 % of annual energy sales to final customers by volume.

[49] Coalition for Energy Savings (2013) **EU Energy Efficiency Directive (2012/27/EU) Guidebook for Strong Implementation**

yearly energy savings goal of 1.5% should be retained but the loopholes need to be closed to strengthen the target's impact and provide certainty for investors.

The adjustments made to the market design rules (electricity Regulation and Directive) represent significant and positive steps forward to integrate Efficiency First into electricity market design and oversight. The proposals contribute to delivering the Efficiency First principle by strengthening the roles for system operators and regulatory authorities to drive its implementation, notably through demand side flexibility. However, attention should be paid to ensure capacity mechanisms do not preclude a shift to markets in which demand side measures play a more central role in energy service provision[50].

Breakdown of measures proposed

Extension of the energy efficiency obligation scheme – MODERATE 'C'**:** The EED includes a proposal to extend the energy efficiency obligation scheme (designated in Article 7) post-2020[51]. The extension of this flagship and successful measure[52] is consistent with delivering Efficiency First. Yet, this proposal goes together with the continuation of existing flexibilities and the introduction of the possibility to take into account the installation of new renewable energy technologies on or in buildings. These flexibilities undermine the effectiveness of the article. Member states can, for instance, exclude transport energy consumption from their baseline when calculating the energy savings needed to fulfil the 1.5% target. A study by Ricardo Environment showed transport savings could be more than five times higher than now, contributing to almost one quarter of the total energy savings under article 7 post-2020.[53]

Consumer participation in energy markets – MODERATE 'C': Within the proposal for a revised electricity Directive[54] **basic rights for consumers to participate in energy markets are offered**, enabling them to request a smart meter and dynamic electricity price contracts. This will enable consumers to become prosumers/energy citizens, manage their energy bills and contribute to providing flexibility. Member States will also be required to ensure the national legislation does not unduly hamper consumer participation in demand–side response[55]. **The policies proposed therefore aim at prohibiting any restriction to consumers' participation but they fall short in**

[50]European Commission (**2016/385**) Staff Working Document - Final Report of the Sector Inquiry on Capacity Mechanisms. The final report of the sector inquiry on capacity mechanisms presented a fair consideration of demand-side measures but developments will need to be watched going forward to ensure accurate implementation.

[51]Article 7 of the Directive states Member States shall achieve cumulative end-use energy savings at least equivalent to new savings each year from 1 January 2014 to 31 December 2020 of 1.5 % of annual energy sales to final customers by volume.

[52]Coalition for Energy Savings (2017) **Deploying the full energy savings potential of Article 7 of the Energy Efficiency Directive**. This measure is the single largest contribution to achieve the 2020 energy efficiency target.

[53]Ricardo Energy & Environment (2017) **Study on national policies reported in the transport sector under Article 7 of the Energy Efficiency Directive and energy savings potential for the period 2021-2030**.

[54]European Commission (**2016/0380**) Proposal for revised electricity Directive.

[55]European Commission (**2016/0380**) Proposal for revised electricity Directive. Article 3, paragraph 1.

encouraging such participation. There are not, for instance, strong provisions on aggregation and demand-response[56].

Opening markets to demand-side flexibility – MODERATE 'C'**:** The proposals include new rules to promote fair competition and prevent discrimination between resources and market participants. It notably includes the requirement for Member States to "*ensure that national regulatory authorities encourage final customers, including those offering demand response through aggregators, to participate alongside generators in a non-discriminatory manner in all organised markets*", and asserts the right for aggregators to "*enter the market without consent from other market participants*"[57]. **The proposals on design principles for capacity mechanisms[58] should however be stronger in requesting Member States to alleviate the need for capacity mechanisms by pursuing alternative options such as developing energy efficiency, demand side flexibility and removing regulatory distortions.** They fall short of requesting all capacity mechanisms to be open to demand-side resources such as energy efficiency and demand side flexibility. This contradicts the findings from the sector inquiry on capacity mechanisms[59] - which concluded **demand response is a solution to remove the need for capacity mechanism, which can incentivise high carbon assets to remain 'online' for longer than they are needed** – adding cost for users and disincentivising the development of demand side markets[60]. The sector inquiry also found there were significant benefits to opening capacity mechanisms to all capacity providers.

Addressing resource adequacy – GOOD 'B': Regarding maximising the development of cost effective energy savings, the electricity regulation explicitly requests member states to identify regulatory distortions that may limit progress on energy efficiency and exacerbate resource adequacy concerns, as well as to publish a timeline to eliminate them[61]. Unfortunately, this only applies if the assessment has identified a resource adequacy concern. The regulation requires market rules to deliver appropriate incentives for energy efficiency and demand response but there is only a weak enforceability of this provision[62].

The role of distribution system operators (DSOs**)** – MODERATE 'C'**:** DSOs shall be provided with incentives for innovation solutions in their networks.[63] The text specifically mentions energy efficiency as one option. As noted elsewhere, DSOs

[56]European Commission (**2016/0380**) Proposal for revised electricity Directive. Article 2: dynamic price contracts focusing only on supply-side. European Commission (**2016/0379**) Proposal for revised electricity regulation – Article 51. No conditions are set for the new EU DSO charged with developing demand response.

European Commission (2016/0380**) Proposal for revised electricity Directive – Article 17.

[58]European Commission (**2016/0379**) Proposal for revised electricity regulation – Article 23.

[59]European Commission (**2016/385**) Staff Working Document - Final Report of the Sector Inquiry on Capacity Mechanisms.

[60]European Commission (**2016/385**) Staff Working Document - Final Report of the Sector Inquiry on Capacity Mechanisms.

[61]European Commission (**2016/0379**) Proposal for a revised electricity Regulation - Article 18.

[62]European Commission (**2016/0379**) Proposal for a revised electricity Regulation - Article 3.

[63]European Commission (**2016/0379**) Proposal for a revised electricity Regulation - Article 16.

should be required to assess all resources available, including energy efficiency, to choose the most cost-effective portfolio of resources available.[64]

Way forward

Developing sufficient institutional capacity to grow energy efficiency and demand-side response markets will require focus on the following elements:

- The proposal to extend the energy efficiency obligation scheme (designated in Article 7) with alternative measures post-2020 should be retained with a 1.5% annual target, but altered to remove loopholes.
- The basic rights for consumers and their active participation in the market as a demand-side resource should not only be allowed but encouraged. The dynamic pricing should explicitly include innovation on the demand-side of the market to incentivise innovation.
- The design principles for capacity mechanisms in the electricity Regulation should request Member States to report on progress in removing regulatory distortions and market failures to alleviate the need for capacity mechanisms. These principles should also explicitly request the open participation of demand-side resources on a par with supply-side options to choose the most cost-effective option, as the results of the sector inquiry point out.
- The parameters to create a European resource adequacy assessment to monitor the situation should explicitly integrate energy efficiency targets and the development of demand-side flexibility.
- Distribution system operators should be required to include demand-side flexibility and energy efficiency as part of their planning to secure the network.
- Knowledge-sharing between Member State regulators to work out how to achieve an equal footing for demand side business models and avoid market fragmentation through a 'patchy' approach will be key to success. The proposals on market design should mandate a high-level group of member states experts or infrastructure coordinators to achieve this[65].

[64] Rosenow et al, Assessing the European Union's energy efficiency policy: Will the winter package deliver on 'Efficiency First'?, Energy Research and Social Science 26 (2017).

[65] This exchange could take place within the framework of the **Council of European Energy Regulators**

E3G

Annex: Methodology

The principles – Plan, Finance and Deliver - that the Commission's Clean Energy For All Europeans package proposals are being rated against were developed in 2016 by experts[66]. The overall 'energy performance rating' reflects our assessment of how the actions and communications from the Package line up with the three principles for delivering Efficiency First. The ratings for each of the three principles have been combined into an overall rating.

The overall rating consists of two parts: the letter dimension (e.g. A), which reflects how actions already taken by the Commission line up with our principles, and the outlook (potential rating if all the recommended improvements were implemented) reflecting our assessment of the potential for the proposals to be strengthened. As with a conventional energy label, the scale runs from A (the highest rating) to G (the lowest). The table below defines each rating.

Rating		Description
A	Excellent	The proposed policies are fully consistent with the principles and are likely to be sufficient.
B	Good	The proposed policies largely comply with the principles but may not be sufficient.
C	Moderate	The proposed policies somewhat comply with the principles and are likely to be insufficient.
D	Inadequate	The proposed policies somewhat comply with the principles but are highly likely to be insufficient.
E	Poor	The proposed policies run somewhat against the principles and are likely to have a negative impact.
F	Very poor	The proposed policies run largely against the principles and may have a significant negative impact.
G	Extremely poor	The proposed policies run fully against the principles and are likely to have a significant negative impact.

[66]European Climate Foundation **Governance for Efficiency First: "Plan, Finance and Deliver"** and **Efficiency First: A New Paradigm for the European Energy System.**