

## CASE STUDIES

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### Compilation of 10 final case studies

Energy Efficiency Watch 4 (EEW4) is a Horizon 2020 project aimed at supporting policy makers in EU Member States in enhancing effective implementation of policy instruments for energy efficiency, thereby contributing to reach the target of the Energy Efficiency Directive. Based on multiple inputs from policy makers, business stakeholders and energy experts collected through dedicated workshops and an online survey, EEW4 is identifying and developing argumentative drivers in public discourses that facilitate the adoption and effective implementation of energy efficiency policies in the EU.



*This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No. 847153.  
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## Introduction

The present ten case studies, are elaborated by the EEW4 project team on key themes distilled from the input received with a view to analyse and consolidate enabling narratives for energy efficiency that resonate in different national or regional contexts by linking to recognised benefits that, beyond energy and costs savings, may include aspects such as improvement in air quality, modernisation of buildings, job creation, climate protection, or energy security.

## Methodology

The case study first presents a summary of the key tenets of the identified narrative, then illustrates the case with the relevant input received before analysing the narrative's functioning principle and rationale. The analysis concludes with an assessment of the narrative's implications for policymakers and its transferability into other contexts. The analysis of the case studies is based on the methodology described in *Deliverable 3.1 Documentation of methodology* in which we conceptualise enabling narratives for energy efficiency broadly as a set of story lines about accepted benefits of energy efficiency in a country or a region.

# 1 Final Case Study - Communication, Dialogue and Participation

## Narrative summary

The effectiveness and added value of policies and measures – in the field of energy efficiency and beyond – can be enhanced significantly when these are grounded on meaningful communication with and involvement of stakeholders and society. In essence, this view builds on the recognition that policy frameworks as well as individual policy instruments deliver better results if those affected by them are given the opportunity to feed their views and expertise into the adoption and implementation process, e.g. by means of consultation processes, parliamentary hearings, moderated stakeholder dialogues, engagement processes for citizens, etc.

Key for success is acceptance among their envisaged target groups. Already when a policy is under preparation, decision makers should consider hearing the positions of relevant stakeholder groups, gain trust among consumers by thoroughly explaining the aims and effects of the planned measures, opening spaces for participation and options to become shareholders (e.g. prosumer models).

The expected benefits of administrations actively engaging with stakeholders and society on legislative and other initiatives comprise an improved understanding of the measures at hand among the constituency, in most cases coming along with a broader level of acceptance. Even if controversial decisions are due, societal actors involved will likely be more inclined to accept them when having sufficient insight into the complexity and rationale of differing views. For policymakers and the administration, on the other hand, consultation and engagement processes can provide valuable information as to who in relevant stakeholder communities has which interest and takes which position, e.g. who is in favour (and under which conditions), who against (and why in particular), who might become an ally, who might be won over, who is indifferent, etc. Crucially, these are all importance pieces of information for devising robust and well-functioning implementation processes.

Meaningful consultation and engagement processes thus provide an opening for stimulating buy-in and acceptance, as well as important opportunities for building and popularising inclusive narratives to support the policy measure at hand, while also having the potential to inform and enhance the quality of policymaking as such.

In the preparatory process for a policy instrument, it is essential to find a good balance between firm decision making on targets and functionality of an instrument and hearing and involving key stakeholders on whom the practical implementation of the policy will depend. In comprehensive transformation processes like the energy transition, initial positions between policy makers and stakeholders are likely to diverge. The aim of the dialogue should not necessarily be full consent of all involved parties, but understanding each other's position and thus setting the horizon helps all sides to get prepared for the envisaged change. If stakeholders are given the chance to make constructive suggestions, their buy-in at a later stage and active contribution to successful implementation of the referred becomes likelier, e.g. when developing business cases, taking investment decisions, fostering training an education etc. Formats by which stakeholder involvement can be supported are e.g. Parliamentary hearings and iterative dialogue platforms on impact monitoring and evaluation. Particular emphasis must be laid on transparency of the procedure towards the public, the selection of stakeholders and the roles in which they act.

Towards the citizens on whom, e.g. as end consumers, policies have an impact, it is advised to create maximum transparency at an early stage about aims and measures and similarly create a positive understanding and buy in. It is beneficial to explore and analyse the target group (e.g. in the case of subsidy schemes) regarding specific preferences and potential concerns and create platforms for participation. Where applicable, projects and business models should provide room

also for economic benefits (not only as compensation for negative impacts) and entrepreneurial participation (e.g. prosumer models). The citizen involvement process should be flanked through comprehensive and transparent communication into the broader public.

### Examples from the stakeholder input

Arguments and storylines underlining the relevance of substantial communication and dialogue between the policymaking and administration and stakeholder spheres featured prominently in the input the EEV4 project collected from stakeholders across several Member States. At the workshops held for Cyprus and Slovenia, for instance, business representatives identified deficits in the involvement of and communication with stakeholders and the broader public by policymakers and the administration. Both referred to inadequate levels and formats or platforms for structured communication. As an example, stakeholders criticised a lack of timely information on new legislation and missing opportunities to provide input before adoption or implementation, respectively. Considerations for the impacts on and needs of business models, consumers, and market potentials would therefore not be sufficiently reflected in policy decisions. Correspondingly, the absence of established communication channels would often prevent feedback e.g. regarding required policy reforms from effectively reaching policymakers or administrators.

As a result, e.g. Cypriot business stakeholders noted a mismatch between policy instruments with available market potentials and consumer needs, leading to non-action or sub-optimal outcomes. Policy measures would accordingly often lack an effective design that would make it easy for target groups to understand and work with those instruments. Even worse, policy or administrative interventions were predominantly perceived as taking the form of 'hard' enforcement such as fees and sanctions, therefore antagonising regulated subjects and fuelling negative narratives against the policy at hand. In Slovenia, too, business stakeholders emphasised the need to make consultation or dialogue formats an integral part of the policy process, notably on the level of local authorities. In this view, dialogue formats could be used to enhance trust between decision-makers and stakeholders, as well as between businesses and energy service providers.

As a more general obstacle, the structure of local administration was mentioned. For instance, Cypriot stakeholders identified the fragmentation of local authority with about 350 municipalities, pursuing different approaches and a general lack of communication and coordination among them as a significant obstacle.

In the testing phase, the key importance of both citizen involvement and stakeholder dialogue were unanimously confirmed. The positive role of adequate and timely citizen engagement was highlighted e.g. for the case of Amsterdam, where the city's authorities planned and implemented the installation of charging points for electric vehicles together with the inhabitants of the respective quarters.

Furthermore, it was stressed that stakeholder dialogues were broadly aimed at as an overarching element in new EU legislation same as in that of several member states, e.g. on typically controversial topics like infrastructure planning. It was recommended to consequently expand these activities and intertwine them with the energy transition, not only applying them in case of assumed conflicts but also to proactively create upfront buy-in from citizens. The aspect of participation in the sense of becoming shareholder (e.g. prosumer models, energy communities etc.) was added to further strengthen ownership among citizens, e.g. propagated by stakeholders from the Slovenian workshop. Also here, not only compensation for disadvantages but forward looking shareholdership should be fostered.

### Functioning principle and rationale

Arguments advocating for structured and meaningful involvement of stakeholders in the policymaking process of course speak to broader system-level and institutional issues and the

way the policy process is organised in particular. As such, they link to broader themes of legitimacy, participation and institutional representation of democracy. Yet as evidenced by the stakeholder input received, involving stakeholders and society become even more important when it comes to implementing transformative frameworks and instruments aimed at accelerating pathways to climate neutrality, energy efficiency being a key element thereof. Generating understanding, broadening acceptance, and creating opportunities for buy-in seem even more important in the light of real or perceived uncertainties and fears of loss related to transformational challenges.

Potential for active engagement and developing enabling narratives in the sense outlined above may be seen in new 'energy citizens' who actively engage in the energy transition and want to control their energy supply, e.g. through energy communities, as Slovenian stakeholders pointed out. Digitalisation and decentralisation of the energy system are regarded as key trends with a potential to activate and empower an active role of consumer/ prosumers and stakeholders not just with regards to the energy system but also for the policy process. The related hopes are that these new actors can play a key role in advancing enabling narratives for energy efficiency and the carbon-neutral transformation as a whole, and effectively engage and demand meaningful and trusted communication with the administration and decision-makers.

## Policy implications

When comparing the situation in various EU-member states, it becomes evident that participatory elements such as parliamentary hearings or other forms of stakeholder engagement are often only rudimentarily developed, leading to deficits in communication and leaving potentials for developing enabling narratives untapped. In these contexts, such elements should therefore be made part of policy packages for implementation of policy instruments or introduced even more systematically across policy fields. Importantly, introducing or strengthening formats for communication and dialogue should not be misinterpreted as weakening the executive, nor should they be confused with allegations of taking decisions without proper democratic legitimation. Rather, they should be seen and handled as thoroughly moderated additional advice for complex and comprehensive policy processes with the aim of maximising policies' effectiveness and impact, thereby also enhancing the public's trust in the administration. Particularly in contexts where regulated subjects may feel alienated by a perceived overemphasis on enforcement and sanctions, offering a dialogue to those concerned may be instrumental to stimulate more inclusive, enabling, forward-looking and collaborative approaches. Strengthening effective communication and dialogue with citizens can also be leveraged to better promote the uptake of energy efficiency measures on consumer and household levels. Prosumer models and other forms of economic participation can also help building bridges for mobilizing private investment.

Several of the recommendations to enhance communication and dialogue with stakeholders and citizens that the EEW4 project received from stakeholders focus on the local level in particular. In this regard, the development and implementation of local energy and climate plans can be an excellent vehicle for authorities to engage and consult with stakeholders and citizens to stimulate buy-in and to set the strategy on a broader footing. As political commitment and backing are key for the success of these plans, grounding them on robust alliances with stakeholders can be a strong enabler, particularly in light of the medium to long-term perspective of these strategies.

## Context and transferability

### EU context

European institutions put a strong emphasis on transparency and broad stakeholder and citizen consultation and involvement for the policymaking at EU-level. Encompassing consultation processes are well established as part of the better regulation framework and required for all

major legislative action. Moreover, the European Commission as the *de jure* agenda-setter goes to great lengths to announce and develop reforms in a transparent fashion often first in non-legislative acts such as communications, green or white papers to stimulate the debate and receive input before drafting actual legislative proposals.

How national policy processes are structured in this regard is of course the remit of Member States. Yet, with the EU's 2030 climate and energy framework and the governance regulation of the Energy Union, the EU introduced requirements for the consultation of governments' National Energy and Climate Plans containing their national targets and measures to achieve them. While this is just one example, the broader trend towards integrated, bottom-up governance schemes such as the one of the Energy Union might provide further impetus from the EU to strengthen consultation, communication, and dialogue processes and formats also at national level. Stakeholders contributing to the EEW4 project, e.g. in Cyprus, stated that EU policies are perceived as a driver of change at national level, however at times with a focus on obligations and requirements, hence wishing greater emphasis on opportunities and benefits in the way these are communicated. From this view, more communication between the EU and sub-national levels and according initiatives should also be encouraged. Also, a stronger impulse for prosumer models, energy communities and other forms of economic participation should be fostered more actively.

#### **Transferability across Member States**

While the foundations are laid and citizen and stakeholder engagement can generally be expected to become more common over time, the actual degree of this being practiced in the various member states varies considerably. Decision-makers' capacity for meaningful engagement also hinges on the administrative structure of a given jurisdiction. Structure and allocation of competencies across the different levels of governance heavily impact the conditions for establishing or expanding of dialogue and communication formats in the above sense, going together with the broader administrative culture and historically grown understanding and practice of how state power is exercised and communicated, e.g. across the spectrum of centralised, top-down versus decentralised and open for bottom-up input. Lastly, meaningful involvement of stakeholders in the policy process is also conditioned on the perceived legitimacy of civil society as representing the entire spectrum of interests, e.g. not being restricted to or captured by a few vested interests. Putting aside those differences, it is encouraging to see good practice examples for successful engagement of both civil society and relevant stakeholders in a constructive manner, subsequently leading to a differentiated and often positive view on the transition – and accordingly supportive narratives. It is worthwhile highlighting and sharing good practice for mutual learning.

## 2. Final Case Study - Independent and transparent data

### Narrative summary

Key for acceptance of energy efficiency and new energy technologies is the availability of independently generated data, transparency on its sources and the way they are processed and used. This allows the public to better understand the technological and economic potential, both regarding a cost-benefit comparison and on macroeconomic level. Performance of projects, e.g. successful and cost efficient energy saving, becomes visible, the degree of market deployment can be illustrated in combination with further policy measures and its underlying reasoning.

Traditional energy statistics typically do not pay attention to the specifics of energy efficiency and renewable energies, lacking granularity and not delivering tailored data sets to measure e.g. the competitive progress against conventional energy technologies. Thus, this can lead to the impression that new energy technologies were not a good choice compared to the established.

If data are not available in the required quality, the risk occurs that stakeholders either use own, not independently verified data in order to illustrate their view on the energy transition and thus influence the debate. Misleading selections of figures (e.g. cost-benefit relations), wrong contextualization and in some cases even fake facts can create a hostile climate for change. Lack of transparency on the data sources makes it hard for the public to form their own opinion even if not per se opposed to the energy transition.

Therefore, when policy instruments are implemented, attention should be paid to attaching to them a robust and independently verified process of data gathering for monitoring of the target achievement of that policy and its degree of success, to be used for evaluation and regular adjustment. These data can also in a broader sense serve as a source of reference, gradually aggregating over time and allowing to give the public an insight into progress of policies, market deployment and successful projects. It will also help correcting erroneous or false statements (e.g. non contextualized statements on extreme cost of change) and in the public opinion increase acceptance and trust in the transition processes.

### Case

#### Introduction and evidence

Business stakeholder workshops in Poland, Ireland and France as well as the Parliamentary workshop in Ireland revealed that a lack of transparency often undermines the credibility and acceptance of energy efficiency measures and hinders the development of new business models. Public perception of the economic impacts of energy efficiency is often determined by simplistic, randomly selected or even false data foundations. Typically, short term payback considerations outweigh the mid to longer term perspective. In many contexts the factual base of narratives remains intransparent due to lack of independent guidance.

Positive features of energy efficiency are less evident compared to e.g. benefits of renewable energy generation, as actual savings in combination with further economic benefits (e.g. integral improvement of the production cycle) are more difficult to quantify and compare with a 'no measures' scenario. Where clear and transparent reference data are lacking, counter narratives based on randomly picked figures and statements (e.g. claiming a bad cost-benefit relation of energy efficiency) can lead to a negative image of energy efficiency.

Improving transparency around the impacts of energy efficiency policies and investments is a prerequisite to enable the broader energy efficiency narrative and is required to improve the acceptance and popularity of specific energy efficiency measures. Moreover, improved transparency is required to enable new business models. Showing energy efficiency impacts needs to be based on a proper definition of baselines, adequate monitoring of impacts and access to the generated information. In addition, such information needs to be properly contextualized to

be comprehensible for the target audiences.

## Functioning principle and rationale

### Creating fact-based communication around energy efficiency

Since the impacts of energy efficiency measures are not always directly visible, they are easily subject to uncertainty and even speculation. Uncertainty emerges over the actual impacts (energy savings, higher energy productivity, etc.) which in turn makes energy efficiency investments appear risky on a business level. Also, the public perception of energy efficiency programs is heavily impacted by a lack of transparency: spending public money on energy efficiency programs hardly gains support, if the impacts are not clearly known and communicated. Moreover, a lack of clarity on energy efficiency impacts creates ground for speculation around the proper use of public funds and the overall aim of energy transition measures. In the worst case, this can feed into broader opposition narratives against energy transition aims.

Against this background, creating the right framework for a fact-based discourse and narratives on energy efficiency measures is crucial. Only when policy and project impacts are properly monitored (based on transparent data with an adequate methodological background) and the results made accessible to adequate target groups, trust in such measures can be (re-)gained.

### Creating solutions to improve transparency

There is a range of elements required to improve transparency around energy efficiency measures and thus to improve the framing of the public discourse in that respect.

- **Reliability:** impacts need to be assessed and communicated based on defined quality standards and clear rules. There must be processes in place that credibly enforce the proper definition and implementation of such rules (e.g. for energy audits).
- **Independence:** Data and the assessment of impacts need to be perceived as (and be in substance) impartial to improve their credibility. Evident principle-agent issues (where the project assessment is financed by the firm making the investment) must be avoided where possible.
- **Data availability:** making real-time data available (e.g. by means of smart metering) is seen as a necessary step towards improved transparency. In this context and for the purpose of public acceptance, it is important to properly address data security and protection issues. Otherwise the attempt to improve transparency may be perceived as a means to datamining.
- **Communication:** Once facts on the impacts of projects and measures are established, their proper communication is crucial. Results need to be presented in a manner tailored to target groups and be easily accessible and, as much as possible, verifiable.

### A comprehensive view on energy efficiency impacts (link to real business case and EE and integral improvement of the production cycle)

Another topic discussed in the workshops is broadening the view on energy efficiency impacts. This aspect relates to several other identified narratives, such as case 3 (real business case) and case 1 on (integral improvement of the production cycle). Improved transparency on energy efficiency measures means to communicate very clearly in the economic and non-economic impacts. Economic impacts should include additional aspects beyond energy use, return of investments and payback times, such as value increases through energy efficiency investments in buildings. However, these need to be clearly monetized to be included in the economic business case. Other non-monetizable impacts may also be referred to, but should be clearly distinguished from the core economic impacts of investments. Having a broader view on energy efficiency impacts while clearly differentiating between economic and non-economic benefits is key to improve transparency.

## New business models

Given the numerous technical energy efficiency solutions, the scattered nature of their application and the - sometimes challenging - business case (e.g. long payback periods), new business models can play a crucial role in the rollout of energy efficiency solutions. Apart from creating trust in and public acceptance for energy efficiency measures, improving transparency is also paramount to enabling new business models. New business models are dependent on the reliability, independence and availability of data and impact assessments. This is the case as the profitability of new business models depends on the visibility of the economic impacts. Moreover, end consumers need to be able to see and react to their energy-relevant behaviour, which in turn can then unfold an economic impact on them. Being economically impacted by energy-related behaviour is key to creating a framework in which new business models can emerge.

Once transparency is improved, tailored client advice based on measuring energy consumption can be provided.

## Policy implications

The most obvious policy implication of this case study is to ensure that the narrative on the benefits and achievements of energy efficiency is backed by clear and transparent reference data and a subsequent solid argumentation. Attention is required to the availability and accessibility of according data and appropriate methodologies which sufficiently contextualize achievements in energy efficiency (e.g. not only considering – in an isolated manner per measure - the payback period in comparison versus a business-as-usual scenario, but add further quantitative economic data such as future price developments, contribution to technological transformation etc.). These methodologies need to be fully transparent, in order to build robust argumentation on them and allow to unveil random, misleading or even fake information.

In most country specific contexts and on EU level, data to serve as a transparent foundation already exist, but more effort is needed to select and further standardize across and within EU Member States to ensure their comparability.

A key element to improve transparency is supporting the organizational and institutional capabilities in Member States, i.e. enabling them to collect and verify data and make them accessible. In addition, strengthening the institutional capacities in Member States should aim at enhancing their communication capabilities: national and local institutions need to be able to properly interpret and contextualize the available data to support credible and reliable narratives. This also may involve procedural aspects of data and report verification, potentially with the involvement of EU-level organisations.

An effective way of data gathering is incorporating it in the setup of new policy instruments, e.g. by an accompanying monitoring and evaluation process run by an independent, qualified institution.

## Context and transferability

### EU context

The EU Green deal and the subsequent Fitfor55 package proposed by the EC imply a significant increase in ambition level of climate and energy policies in Europe. This broad push evidently also includes energy efficiency and may provide the context for strengthened energy efficiency narratives on national and local level. However, a major acceptance risk arises if the credibility of energy efficiency policies and measures is not ensured. The European energy sector has good foundations for further strengthening its transparency, but data quality and availability differs between the EU Member States.

### Transferability across Member States

Improving transparency around energy efficiency policies and measures will generally resonate across all Member States. However, the specific state of data availability and accessibility as well



as the proper communication of such data differs between the EU Member States and depends on national statistics and related market and policy conditions. In addition, data collection and use are accepted to different extent. In some Member States, there is pronounced scepticism towards the collection and use of data, with possible negative impacts on improving transparency. In other Member States there may be less public hesitance against using data, but the institutional foundations may be less established and robust. I.e. trust in public institutions and organisations and their published data varies greatly among EU Member States. Thus, improving transparency will have to tackle these specific circumstances in each case and establish an awareness for the relevance of this supportive aspect to policies.



## Annex – selected input collected in Energy Efficiency Watch

### Business stakeholder workshop, Poland<sup>1</sup>:

- Effective successes of EE policies not broadly visible / subject to massive questioning, as no independently compiled data base available / where partially given, not recognizable as objective and independent
- Entry point for all sorts of fake facts and random interpretation
- Points of attention: independent data gathering AND refinement; more and better data generation, e.g. through direct metering, apps, etc.; targeted communication of saving success coming along with policy measures

### Business stakeholder workshop, Ireland, 6 May 2020<sup>2</sup>

- Access to metered data is key
- Generate e.g. through auditing / in general through smart combination of measures

### Business stakeholder workshop, France, 8 June 2021

- Apparently theories about microwaves via smart metering devices exist in France and trigger resistance against data collection devices.

### Parliamentary Workshop, Ireland [Date and Link]

- In relation to implementation of CO2-tax: if this is supposed to become successful, it is an important precondition for end clients to have full transparency about their actual, time-sharp consumption
- If not (usual once-a-year billing), all attempts for creating acceptance / understanding of compensation payments (whether appropriate / attractive / just) are likely to fail / be constant subject of questions and diverging interpretations

### Other country examples:

- Smart metering often does not have best reputation: suspected to be ‘data mining’, strategy to monopolize the market (often very limited number of suppliers, offering package of devices and metering facilities), general issues on data security...

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<sup>1</sup> EEW4 External Event Report, available at: <http://www.energy-efficiency-watch.org/media/publications/EEW4-External-Event-Report-POL-Business-Stakeholder-WS.pdf>

<sup>2</sup> EEW4 External Event Report, available at: <http://www.energy-efficiency-watch.org/media/publications/NAVIGANT-National-Business-Stakeholder-Workshop-in-Ireland.pdf>

### 3. 'What makes a real business case for energy efficiency'

#### Narrative summary

When the first policy instruments for energy efficiency were created, it was expected that business cases would gradually develop and become stronger when demand was increasing. What in fact was the case for renewable energy upscaling often remained very scattered in the more complex field of energy efficiency. Here, the amount of viable business cases is not only a function of cost degeneration of technical solutions but requires a comprehensive level playing field in relation to both competing solutions, energy prices, counter-productive subsidies etc., which have often not been addressed to the degree needed. Thus, many energy efficiency business cases remained niche solutions. To broaden their range, a positive narrative is built around non-economic 'co-benefits' (assuming that customers may want to e.g. contribute to cleaner air). However, this well-meant, often altruism-based narrative may reach the opposite: it frequently contributes to the counter-productive impression of just putting gloss on a per se non-convincing business case (here, a link can be made to the case study on independent and transparent data).

Various EEW workshops have shown that comprehensive business cases must be developed and presented. While this includes accounting for business impacts beyond direct energy costs, these additional impacts need to be incorporated into the economic business case. Added value to the client may include convenience, process modernization, or upgrading a firm brand. This added value should be monetized as much as possible to achieve a comprehensive view on the business case. Any other, non-monetizable, benefits may be referred to, but should be presented as separate from the economic business case.

Focusing on the "real business case" helps to further strengthen an honest, transparent and credible narrative about what the business case is - and what it is not. It similarly adds clarity where political steering is needed for levelling the playing field.

#### Case

##### Introduction and evidence

Business stakeholder workshops in Ireland, France, Cyprus, Italy and Germany all alluded to the impression that the way business cases of energy efficiency investments are built and communicated has often been flawed – sometimes being overly optimistic, often incomplete and most of the time not driven by hard economic facts. Insufficient ambition levels in policy making were often leading to situations where business cases would not make it out of their initial market niche (e.g. performance contracting). Instead of creating a level playing field allowing for expansion of innovative approaches and broad market deployment, in the view of the stakeholders often counter-productive campaigns were run: "add some marketing on its greenness and the niche solution will sell although not really competitive".

Professionalizing the way business cases are assessed and communicated is, according to the workshop participants, required to enable an economy-driven rollout of energy efficiency measures.

##### Functioning principle and rationale

##### Co-benefits to polish up poor business cases

In the various workshops, participants expressed the notion that energy efficiency investments are being sold by relating them to a range of economic and non-economic benefits. However, these are often mingled together and aspects like savings in energy cost are presented next to the overall "greenness" of an investment. This way of presenting the case for energy efficiency attempts to add a range of arguments to the decision making, which effectively touches upon very different types of benefits and relevant considerations. Instead of supporting an objective decision on an investment, this narrative approach tends to cloud the core economic issue at hand. This lack of transparency in presenting the case for energy efficiency is perceived as an attempt to

cover-up for the potentially poor performance of energy efficiency business cases.

### **The real business case**

In contrast to compiling and presenting (alleged) business cases in an undifferentiated and imprecise manner, a transparent assessment and presentation is required.

The real business case includes, firstly, not to present only energy and emission savings as such, but the economic/business impact thereof. In addition, business impacts beyond direct energy costs should be included in the analysis. This added value should be monetized as much as possible to achieve a comprehensive view on the business case. These may include convenience, process modernization, upgrading a firm brand or increasing the value of a property or house. In addition, the real business case requires transparency around the payback times of investments. To polish up energy efficiency offers, sometimes unrealistic assumptions are made, while the value add effectively unfolds over a longer period.

Any other, non-monetizable, benefits may be referred to, but should be presented as separate from the core economic business case. The real business case may indeed include a whole package, including key economic impacts and co-benefits. But a very clear and transparent presentation of the economic added value for the client is always required. In this context, general “green features” of an investment may be used for marketing purposes but being transparent that it is marketing and not the core economic reason to buy, is paramount.

The other non-economic benefits related to energy efficiency may in the end even be the key driver for an investment decision, such as in the case of improved convenience resulting from energy efficiency measures in buildings (e.g. better heating and indoor climate). However, when selling “convenience” (rather than “avoided energy use”) it is equally important to make this aspect the core of the service/product.

In sum, the real business case is about distinguishing clearly between the different types of impacts of an energy efficiency investment and the potential key selling points, instead of simply adding very different arguments in favour of energy efficiency while losing sight of the core economic impacts.

### **Policy implications**

Promoting energy efficiency business cases should be convincing by their economic performance. Where this is not or only marginally given due to insufficient policy framework, the focus must be laid on further levelling the playing field and thus broadening the viability of more ‘real’ business cases not reliant on non-economic ‘co-benefits’.

Various concrete policy implications can be derived from there: Firstly, the Commission may consider publishing and updating guidelines for assessing the business case for Energy Efficiency investments - beyond the “multiple benefits” approach and focusing on the core business case. In addition, further standard setting in energy audits and energy consultancy could be considered. This relates to the need to further develop the adequate skills and qualifications to properly assess energy efficiency business cases (also see the separate case study on “skills and qualifications”). Apart from the policy implication itself, also the presentation of energy efficiency policies and their impacts (on the economy as a whole and on businesses) needs to be sharpened, i.e. clearly distinguishing core business impacts from broader non-economic side effects of energy efficiency investments.

In addition, transparency standards (data collection, comparability and accessibility) may have to be improved. See for this aspect the separate case study on “independent and transparent data”. In order to support such “real business cases”, the legal framework needs to allow for business models to emerge and grow:

- Long-term views on market developments, such as energy prices and CO2 prices.
- The right legal framework to create transparency (e.g. via smart metering)
- Market-based instruments rather than straight-forward grants, such as white certificate schemes.



- Long-term security on the development of incentives.
- A framework for education and trainings that allows for the implementation of new business models (in sometimes very traditional business revolving around the housing sector).

## Context and transferability

### EU context

In the EU context energy efficiency policies undergo regular scrutiny in terms of their overall economic benefits. The recently proposed Fitfor55 package and the subsequent proposals (e.g. on a revision of the EPBD) all undergo a structured Impact Assessment. Being as credible, precise and transparent as possible in these assessments is paramount to creating trust in the economic case for energy efficiency policies.

Europe is seen globally as a frontrunner in climate action, proving that economic growth and sustainability can and should go hand in hand. This means that also on individual business level the business case for energy efficiency needs to be robust. Only such business-related robustness will provide the European approach of combining business with climate change mitigation with the required credibility.

### Transferability across Member States

Generally speaking, a robust narrative around the business case for energy efficiency should be easily transferable to all Member States. However, different Member States have different foci on typical business cases. These may be elaborated per member state for different sectors. In the housing sector, the business case for energy efficiency investments will depend on the existing housing structure and the climate and weather context, among others. Likewise, for the commercial and industrial sectors, the typical business cases will depend on the economic activity and industrial production processes will require entirely different approaches than the tourism sector. Thus, while the general call for a professionalized approach towards business cases is universally applicable, its specific application will depend entirely on the respective context. Despite all differences to be considered, the focus of policy making needs to be on an enabling environment, allowing policies to expand and not remain in market niches.



## Annex – selected input collected in Energy Efficiency Watch

### Business stakeholder workshop, Ireland, 6 May 2020<sup>3</sup>

- Never try to sell EE for a non commercial reason
- People will see / appreciate co-benefits, but decisive for their willingness to buy is commercial viability / an attractive package
- This is important to stress, as often obvious non-attractiveness is tried to compensate for or to fill up with 'green-ness' of product
- This will only appeal to minorities with this special priority, but does not help the business case in the end / may even be counter productive
- "you cannot sell EE (I.e. less of something, in this case energy), so don't!"
- Sell convenience
- Couple energy saving with avoided cost
- Sell a package that may comprise aspects classified as co-benefits, but be sharp about the economic added value for the client
- Use green features or other aspects on top for marketing purposes, but be clear it IS marketing and not the core economic reason to buy
- EE: upgrade of commercial brands
- In the focus of required policy action: level playing field - legal framework needs to be re-shaped in targeted manner, allowing for more commercially attractive EE business cases
- One of the initial mistakes (also from the direction of the EC): assumption that 'business cases will develop' / over time prices and payback times would go down without major supportive action
- Often unrealistic payback times expected / envisaged
- Don't further nourish this but manage expectation towards payback times easily above 6 years
- Good client messaging under these conditions: "better do now WITH grant than later WITHOUT"

### Business stakeholder Workshop, Cyprus, 15/16 June 2020<sup>4</sup>

- Entrepreneurial potential for innovative business given, but lack of informedness about legislative measures and framework in which this can be implemented

### Business stakeholder workshop, France, 8 June 2021

- EC left too many countries alone with "business cases will develop"
- How does 'Green Deal' help my business

### Business stakeholder workshop, Italy 27/28 April 2020<sup>5</sup>

- New business models are key
- Policy framework under which they can grow
- To certain extent successful under Ita White Cert Scheme
- Sell 'good life' to customers
- For stable business, predictability is needed on cost and market incentives

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<sup>3</sup> EEW4 External Event Report, available at: <http://www.energy-efficiency-watch.org/media/publications/NAVIGANT-National-Business-Stakeholder-Workshop-in-Ireland.pdf>

<sup>4</sup> EEW4 External Event Report, available at: <http://www.energy-efficiency-watch.org/media/publications/NAVIGANT-National-Business-Stakeholder-Workshop-in-Cyprus.pdf>

<sup>5</sup> EEW4 External Event Report, available at: <http://www.energy-efficiency-watch.org/media/publications/NAVIGANT-National-Business-Stakeholder-Workshop-in-Italy.pdf>



Business stakeholder Workshop in Germany, 28 January 2020<sup>6</sup>

- Important to establish long-term view on return on investment. Not just short-termed payback time, but longer-term value of, for instance, real estate.
- Mid-caps play a core role and help in developing new business models.

There are linkages of energy efficiency with digitalisation, innovation and new lifestyles, as well as a nexus between regulation and freedom or local economic benefits

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<sup>6</sup> EEW4 External Event Report, available at: <http://www.energy-efficiency-watch.org/media/publications/NAVIGANT-National-Business-Stakeholder-Workshop-Germany.pdf>

## 4. Successfully communicate the shift away from outdated technologies

### Narrative summary

Phasing out of inefficient and emission-intensive appliances and technologies is the focus of a significant number of policies and support schemes throughout EU member states. Namely in the field of heating, a high potential of efficiency gains and thus emission reduction can be tapped, e.g. by replacing old electric storage heaters or oil heating systems. Most instruments to promote energy efficient technologies are based on a mix of **regulatory measures** and **financial incentives**. If target achievement is lagging behind, it is often assumed that the level of support was insufficient for levelling the cost difference to efficient technologies. However, examples show that socio-economic analysis of the target groups allows for a more differentiated reading of appropriate instruments needed. Especially the image associated with certain appliances or technologies and the related popular perception can have substantial positive or negative impact on target achievement, independent from or even counter-indicative to the available financial support. With regard to regulatory measures put in place to replace outdated technologies, the image factor can also have a positive impact regarding acceptance and compliance. Tailored communication is key especially for those not responding to financial incentives.

In order to foster a positive image and perception of energy efficient technologies among individuals and households, a targeted, clear, and multi-level communication strategy is essential. Also, socio-economic aspects that affect the decision-making process of the target group need to be considered in devising the communication strategy. Pertinent communication can pursue different strategies:

- One is to focus on the positive impact of new technologies, e.g. by speaking to target groups' interest in enjoying high technological standards and a resulting increase real estate value. Further benefits such story lines can mobilise comprise higher quality of living, lifestyle aspects (being modern, using cutting-edge innovations), enhanced aesthetics of renovated buildings as well as improved safety, reliability and easier maintenance.
- Another strategy is to emphasise negative impacts of outdated technologies (e.g. safety risks, higher costs, higher maintenance), but such strategies should nonetheless also refer to the benefits of alternative available technologies as a remedy.
- In addition, a specific narrative needs to be developed in cases decarbonisation technologies are associated with a prevalent negative image, marked not by lack of market maturity or high costs but rather cultural or historical reasons. In certain Eastern European contexts, for example, a negative image is associated with wood heating as a sign of poverty, scarcity and backwardness.

Against this background, different lines of argument for persuading consumers gain priority over energy or emission savings, levelled cost difference etc. These need to be carefully assessed before tailoring a target group focussed communication strategy. New technologies must be appealing beyond cost arguments associated with cost-value relation, safety etc. on the one hand, on the other hand convenience, innovation and modern lifestyle, in order to address different layers of perception.

### Cases

A pointed statement during one of the stakeholder workshops named the commonly known dilemma of underperforming support schemes: "Don't throw money at people if they haven't understood why they should want a new heating". Rather the situation of the target group to be

addressed should be analysed and understood first, and then a mix of incentives and dedicated image campaign could deliver much better results.

### Upper Austria – Campaign "AdieuÖl" to eliminate oil heating

In addition to banning oil heating in new buildings (brought into force in Upper Austria in 2019) and providing attractive financial incentives to replace oil, gas, coal and direct electric heating, further measures were implemented to speed up progress. In 2019, the large-scale information and stakeholder campaign "AdieuÖl" was developed and launched.

As first step, a market analysis was carried out to identify and better understand the target group. Among others, it revealed that communication would need to focus on other elements than climate protection and energy cost savings, which were previously mostly used and had not motivated these oil-heater so far. Efforts were put into finding arguments and a language they could relate to. Emphasis is particularly put on an image component and on replacing oil heating in view of keeping their building "modern" (oil heating as "outdated"), improving their quality of life (no more oil odour) and maintaining the value of their property (ex: for the next generation).

The campaign follows a multi-level approach including municipalities, associations, schools and local enterprises as supporters, and provides specific materials. It reaches out to people in their social environment, motivates them to participate in multiple ways, and uses the power of civil society and community to build up momentum for the energy transition. The campaign turned out to be more successful than the support policy alone.



Source: ÖÖ Energiesparverband

### Slovenia – negative image of wood heating

Although Slovenia has abundant wood resources to be used for heating at competitive costs, new or renovated buildings tend to be equipped mainly with modern gas boilers or heat pumps. As Slovenian stakeholders explained, this is due to the negative image associated with wood heating as a sign of poverty and backwardness, rooting in the experience of shortage and lack of modern technologies during the communist era.

### Cyprus – create positive image for economically viable technologies

Cypriot business stakeholders stressed that plenty of technologies that were already fully competitive under the local conditions, e.g. solar hot water and heating support, were not used - mainly for the absence of a positive image attached to them (the starting point not being a negative connotation but more indifference to it). They suggested to include people who deployed solar energy systems or implemented building insulation in promotion campaigns as "ambassadors" for their energy efficiency measure to raise awareness of the benefits.

## Functioning principle and rationale

In many cases it can be observed that the shift from outdated technologies to new energy efficient technologies progresses very slowly although extensive financial incentives are provided, or regulatory measures being in place. A clear and graduated communication strategy is key, considering the following principles:

- Have a clear picture of the market segments that shall be addressed with the communication strategy and a clear understanding of e.g. their income structures, motivation to invest as well as attitudes and views based on the socio-economic and cultural analysis. Different channels of (social) marketing can be used and various actors at different levels can be integrated in this approach to act as ambassadors to promote new technologies such as state level and municipalities, schools, companies, sector associations, agencies etc.
- Make it as specific as possible in terms of technology and areas of application and embed it in a broader context. This can be accompanied by forming pictures in the mind that have different hooks than previously used. Where costs are not the key issue, work with emotion, empathy and perspective of success.
- Use key differentiators in communication per market segment or target group when communicating and visualising new or outdated technology and the respective impacts. Reach out to the target groups with the appropriate form of presentation and statements that forms the image which primarily affects the decision-making.

## Policy implications

In all policy instruments aiming at replacement of outdated technologies, the level of subsidy or other available funding is ascribed a key role. It should for sure not be too low, but it is a known fact in policy making that there is no linear correlation between subsidy level and the according effect, i.e. the willingness to change on the side of the target group. Too high subsidy levels can, besides economic inefficiency, even negatively affect the reputation of technologies and the programmes to foster them.

Policy makers therefore are recommended to combine target group analysis and subsequent specific communication strategies with selected structures of financial incentives. It must be acknowledged that the image or perception of a technology fundamentally depends on socio-economic and cultural environment of the target group. Therefore, a mix of appropriate instruments is needed, cost arguments are not always the crucial factor to replace an outdated technology. Apart from financial incentives and regulatory measures image campaigns and associated altered perceptions can significantly increase the target achievement to shift away from outdated technologies. When designing those image campaign all relevant socio-economic and cultural aspects need to incorporate to make it successful.

Another key vector is to contextualise the narrative and highlight which technologies can be applied where, which positive or negative trigger points exist, what can be used respective need to be avoided in communication with the specific target groups. In the end, a mix of different policy instruments is needed that complements each other and fit well into the overarching strategy to shift away from outdated technologies.

## Context and transferability

### EU context

At EU-level, mostly regulatory measures to phase down or out inefficient and outdated technologies are in place, just to mention some of those: The proposal of revised Energy Efficiency Directive contains the article on energy obligation schemes and its related Annex V which, for example, excludes the accountability of energy savings from policy measures regarding the use of direct fossil fuel combustion technologies. The CO<sub>2</sub> regulation of passenger cars and light commercial vehicles sets EU fleet-wide CO<sub>2</sub> emission targets applying from 2020, 2025 and 2030 and includes a mechanism to incentivise the uptake of zero- and low-emission vehicles. Finally, the EU sustainable finance taxonomy regulation will enable investors to re-orient investments towards more sustainable technologies.

Apart from these regulatory measures, the EU can encourage Member States to develop adapted narrative and targeted communication strategies to support the shift towards new technologies.

### Transferability across Member States

As it was discussed in the business stakeholder workshops, the perception of certain technologies, communication patterns and established narratives differ from one Member State to another depending on the socio-economic structure of the target groups, communication behaviour, cultural influences, historical background, etc. In this context, it is for instance important to understand what is viewed and understood as ‘modern’ and what is regarded as ‘outdated’ in each Member State and for each market segment in order to create the most impactful communication strategy. This requires an adapted approach for each Member State but the functioning principles described above can be generally applied.

## Annex – selected input collected in Energy Efficiency Watch 4

### Overarching:

- Although many policies and support schemes replacing outdated inefficient technologies are in place target achievement is often lagging behind.
- Levelling the cost difference to efficient technologies doesn't always get to the heart of the decision-making to replace a technology.
- Including a socio-economic analysis of target groups shows a more differentiated choice of appropriate instruments, esp. the image/specific interest associated with a certain technology can have substantial positive or negative impact on target achievement.
- Campaign focusing mainly on the negative impact of outdated technologies or the positive impact of new technologies, e.g. oil heating systems (interest in high technological standards, value development of real estate, quality of life incl. image component), Eastern European context: negative image associated with wood heating as a sign of poverty and backwardness
- Eastern Europe (a.o.): saving is associated with scarcity
- Coming from there: “more is better” is a still dominating paradigm
- The ‘new more’ can and should be gradually transformed into ‘less mass, more quality’, less egoistic behaviour, more collective freedom / safety from abuse (e.g. consider speed limit not as

less freedom but more safety / quality for everybody; consider stricter regulation on emissions not as restriction but measure to ensure freedom of future generations

- When using such argumentation, don't fall into the trap of selling something that is not a real business case (link to case study 'only sell a real business case')

#### Cyprus – selected recommendations from business stakeholders:

- Marketing for energy efficiency measures could be improved. It has been suggested to include people who deployed solar energy systems or implemented building insulation in promotion campaigns as “ambassadors” for their energy efficiency measure to spread awareness of the benefits, e.g. lower energy bills.
- Narratives and communication strategies highlighting the benefits of energy efficiency for the tourism industry would be of great value in Cyprus. COVID-19 can be a chance for the tourism sector to develop new business models. Image campaigns focusing on energy efficiency and sustainability could raise awareness for the topic, e.g. in the hotel and travel industry.

#### Slovenia – selected recommendations from business stakeholders:

- Re-consider image campaigns for good technologies
- Focus less on single technologies, e.g. wood boilers, as it might be difficult to overcome their traditional image
- Combine e-mobility, storage, PV, EE as central element for smart metering => make it desirable, associated with a modern, innovative and smart image, life-style
- Not only to individual clients but also to general public, e.g. associated with fostering modern industries and manufacturers in the country
- Expand educational programmes and incentives for stakeholders and broader public, e.g. in form of company programmes to reward the best diplomas in the field or competitions rewarding change of individual behaviours. New technologies to be made desirable beyond cost arguments, e.g. through campaigns/marketing to create appeal or convenience (e.g. link mobile app with smart meters)
- Promote easy access to energy data for consumers (good example: portal on EV charging stations)
- Embed energy efficiency as a centrepiece in the industrial strategy and develop a smart combination of innovative technologies (e.g. storage, EV, local production, ...) that connects with the existing industrial structure
- Appealing to political/ PR benefits of energy efficiency measures can be key vector, notably vis-à-vis local decision-makers (example: esthetical appeal of renovated buildings in a town).

#### Austria – network input from ESV

- It is crucial to know and understand your target group (e.g., their income structure, knowledge levels and motivations).
- Developing tailored narratives for different target groups is key.
- Money is not the key issue as often as we think. It is necessary to follow a "market segmentation approach" (e.g., low/mid incomes). Also work with emotions, image, perspective of success
- Focus on benefits of interest to your target group (e.g., quality of life, not wanting to be seen as "not modern", convenience etc.)



## 5. 'Good to be a front-runner'

### Narrative summary

Perhaps the strongest of all overarching narratives is societal consensus that being a front runner on the energy transition is congruent with national interest. In such case, cost-benefit comparisons of single projects and approaches stand back behind the bigger picture of public welfare and macro economic gain through innovation, being an early adopter of new technologies and thus strategically positioning on new markets. Where this overall consent is reached, policies are much less likely fail or become subject to ideological dispute but will be judged pragmatically on the degree to which they contribute to the overarching modernization target.

While it can be argued that the preconditions for such societal consensus cannot be created by energy policy alone, it can be recognized that also gradual approaches have considerable success. There are examples for single sectors and specific technologies receiving high levels of positive connotation: confidence in their economic potential and thus higher welfare, pride on technological progress and image building quality e.g. for changing regions. Working with these and, by presenting success stories, showing transferability to other sectors and technologies can significantly help to establish a positive narrative for structural change and the according potential of the energy transition (see also case "Just Transition").

### Front-running Member States – the case of Denmark

Denmark is widely perceived to pursue leading energy efficiency and renewable energy policies, as illustrated by Danish policymakers and experts in statements such as: *"Denmark is really a front-runner in energy efficiency. [...] the core narrative consists of the conscience that it is good for us."*<sup>7</sup> This perception is confirmed by the results of the surveys carried out by the Energy Efficiency Watch project in recent years, in which energy experts rank Denmark among the top two EU Member States regarding energy efficiency policies (second in the 2020 edition of the EEW survey and first in the 2015 edition).<sup>8</sup>

As showcased by Denmark, consistency between rhetoric and action over time is a key dimension and enabling factor. Similarly, it is also key to operationalise general principles established in policy strategies or even regulation to implement them in tangible measures. A case in point is the 'energy efficiency first' principle that is widely acknowledged but one that is being translated into relevant policies rather successively at the time of writing.

To the extent that it sets a benchmark for implementing policy measures, communication around a claimed leadership role could even be leveraged as a starting point to demand accountability by interested stakeholders, as was stated at the Parliamentary Workshop of Energy Efficiency Watch in Italy.<sup>9</sup> Similar implications can be expected of enshrining ambitious long-term targets for carbon neutrality in Member States' national frameworks which provide a suitable starting point for anchoring narratives aimed at advancing swift decarbonisation. Embedding such target frameworks in a shared narrative is key to stimulate broad support and buy-in for the changes needed from businesses and consumers.

Key factors highlighted by Danish policy makers and stakeholders to underpin this view comprise:

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<sup>7</sup> Input received at the EEW4 Danish Parliamentary Workshop, held on 29 May 2020. The full summary is available in the event report at <http://www.energy-efficiency-watch.org/media/pdf/EUFORES-Danish-National-Parliamentary-Workshop.pdf>.

<sup>8</sup> Cf. summarised presentation of the EEW4 Survey, available at: <http://www.energy-efficiency-watch.org/media/publications/EEW4-survey-slides.pdf>

<sup>9</sup> Event Report: [EEW4 EVENT REPORTING EUFORES NATIONAL WORKSHOP ITALY.docx](#)

1. Denmark's ambitious, widely consensual targets and policy instruments (e.g. its energy efficiency obligation scheme);
2. Denmark's strong track record in sustainable energy, e.g. demonstrated by the decoupling of economic growth from greenhouse gas emissions and water consumption;
3. the recognition that pursuing ambitious policies for expanding sustainable energy helped to develop key industries with a strong innovation and export potential that created significant employment on all levels;
4. the recognition of synergies between developing energy efficiency and renewable energies, with the latter also covering a large share of the energy supply.

Danish stakeholders also pointed to the historical background of the oil crisis in the 1970s as a starting point for strategic reflexions on how to enhance resilience to such shocks, progressively leading to the paradigm of pioneering the development of renewable energy and energy efficiency technologies. Strong and multifaceted considerations for the resilience of society, e.g. also including aspects of health, social cohesion, competitiveness, environmental protection etc., thus form the bedrock on which the front-running narrative builds.

Business stakeholders also in other workshops, e.g. Poland, Slovenia or Cyprus, highlighted the relevance of narratives and communication strategies underlining the benefits of energy efficiency in terms of innovative business and qualified jobs for individual industrial sectors. Here not individuals or end-users are the recipients of the narrative but the general public. In Poland, for example, electric mobility is very popular and is ascribed a great potential for modern industry, manufacturers and for generating well-qualified jobs. It is perceived as a chance for maintaining and modernizing the traditional car component manufacturing. Thus, leap frogging is here a centrepiece of a positive narrative rather than the threat of old industries. Overall, energy efficiency must be comprehensively embedded in industrial strategies and showcased as a smart combination of innovative technologies (e.g. e-mobility, storage, heat pumps, etc.) that connects with the existing industrial structure and local production.

### Functioning principle and rationale

As evidenced by its consistency over time and documented by the input received from the Danish policy community, the perception of Denmark as a frontrunner appears to hold regardless of the respective ruling coalition and changes in government. In fact, the government is perceived as actively striving to maintain Denmark's leading role for promoting sustainable energy.

Relatedly, the Danish energy policy community consistently called for ambitious EU targets for energy efficiency and renewable energies, cross-border collaboration and progress on the EU energy market integration for creating a level playing field. This would benefit Denmark, e.g. for exporting excess renewable energy, sustainable energy technologies and for creating jobs: *"We need to sell our energy and we need an EU renewable energy market; we need to be able to sell jobs and technologies. The EU represents a chance for this."* Given its capacity to promote sustainable energy (both on the supply and on the demand side), market integration and collaboration, the EU is therefore seen as an important vehicle for leveraging Denmark's competitive edge in sustainable energy technologies, thereby strengthening employment in leading domestic industries, whilst *"saving the world"* at the same time. Beyond driving business performance, this story therefore also helped stimulate societal acceptance for energy efficiency and the energy transition more broadly.

Aspirations to pursue ambitious energy efficiency policies and to be perceived as front-runner feature an economic rationale at their core, i.e. they strongly link to considerations of competitiveness, trade benefits and employment in the Danish case. This also correlates with the EEW4 survey, according to which industrial competitiveness, employment, and the country's international image are ranked as the three most important topics in the general public debate in

Denmark in the context of energy efficiency.<sup>10</sup>

## Policy implications

It is a strong enabling narrative if a country wants to be front-runner on energy efficiency. Therefore, the key question is what is needed to support EU Member States in identifying why, in which area and by which concrete measures they want to become front-runners.

Grounding strategies and policies on claims or aspirations for leadership in the public debate bears a significant credibility component. Fundamentally, policy measures need to be in line with the claimed ambition or leading role to ensure consistency between rhetoric and action.

The case argues that ambitious and credible targets, prior achievements in implementation, and shining lighthouse projects with demonstrated benefits, also in the broader economic and societal sense, are key vectors to build on the recognition and associated narrative around the theme of 'it is beneficial to be a front-runner'. In such a context, marketing bold energy efficiency policies with story lines around this theme then significantly facilitates their adoption and effective implementation. Perceptions and narratives of 'being or becoming a front-runner' are likely to take time to build. Indicators for their success can inter alia be seen in:

- clear and recognised economic benefits from energy efficiency business cases that may include technological leadership and developing industry sustainability champions;
- broad agreement across society and industry regarding the benefits of bold energy efficiency measures;
- consistency over time of such societal agreement that also translates into a stable political orientation and framework regardless of changes in government;
- government efforts to develop and maintain a leading role in energy efficiency in the sense of a credible advocate at both national and EU level.

To sustain effectiveness, narratives pertaining to 'being a front-runner' should not be used to argue against taking further measures needed for the transformation, e.g. along the lines of 'we are already best', which could be a potential temptation for certain fractions of the political spectrum. Instead, the narrative should be leveraged to emphasise that efforts to maintain leadership in sustainability are needed to sustain the economic success conditioned on the former.

## Context and transferability

### EU context

The aspiration to lead the fight against climate change and to pioneer the carbon-neutral transformation features prominently in the EU's strategy and communication. Notably in the context of its positioning in international climate negotiations, the EU is sometimes characterised as a (green) normative power, able to leverage its governance architecture in the sense of a multi-level reinforcement.<sup>11</sup> Domestically, too, the EU conveys the pioneering ambition prominently with the European Green Deal, framed as Europe's "man-on-the-moon moment" to contextualise the mobilisation for achieving carbon neutrality by 2050. As such, the European Green Deal both widened the discursive space and upgraded the strategic policy outlook, creating windows of opportunity for moving transformational narratives and policies ahead, as documented by expert

<sup>10</sup> Full Survey Report: <http://www.energy-efficiency-watch.org/media/publications/EEW4-survey-report.pdf>

<sup>11</sup> Miranda Schreurs, Yves Tiberghien (2007), Multi-Level Reinforcement: Explaining European Union Leadership in Climate Change Mitigation, *Global Environmental Politics* 7(4): 19-46.

input collected in EEW4.<sup>12</sup> Even if discourses centring on the pioneering theme might not resonate effectively in all Member States, the EU's efforts to ground the objective of climate neutrality both in legislation as well as in discourse sets the scene and provides a robust overarching reference for connecting narratives enabling ambitious measures in national debates.

#### **Transferability across Member States**

In order to resonate effectively with society, enabling narratives need to be adapted to the specific national or regional contexts. Generally, we can expect narratives that speak to considerations for job creation, industrial competitiveness and modernisation or infrastructure investments to resonate effectively in many societies across the EU. In the context of energy efficiency, these are found to be the three most important topics in the general public debate for 27%, 20% and 14% respectively, as found by the over 1,200 energy experts consulted by the EEW4 survey from across all the EU-27.<sup>13</sup> To the extent that narratives centring on the aspiration for a front-running role effectively incorporate or link to such economic rationales, one could expect them to have a potential for advancing energy efficiency in the public discourse also in other contexts than those elaborated on in more detail above.

Also in ongoing transition processes, the front-runner narrative can serve to over-write fear of loss by pride to be at the forefront of transformation. E.g. former mining areas diversifying their structure not necessarily lose their identity but can transform it into 'new energy region'.

Overall, we expect public acceptance for energy efficiency policies to roughly correlate with the (perceived) progress already made. Policymakers can build a perceived aspiration for leadership for energy efficiency and the carbon neutral transformation as a whole in different ways, including through ambitious targets and policies and a corresponding track record, promoting lighthouse technologies and projects and sustainable national industrial champions (potentially also abroad) and also through governments' positioning at EU-level.

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<sup>12</sup> Cf. <http://www.energy-efficiency-watch.org/media/pdf/NAVIGANT-Workshop-Capturing-narratives-in-energy-efficiency.pdf>

<sup>13</sup> Full Survey Report: <http://www.energy-efficiency-watch.org/media/publications/EEW4-survey-report.pdf>

## Annex – selected input collected in Energy Efficiency Watch 4

### Denmark - National Parliamentary Workshop held on 29.05.2020 – selected points from the Event Report:<sup>14</sup>

- *Several speakers agreed on the need of sharing Danish ambitious targets at EU level, create a common European energy market and standards and creating a level playing field among Member States*
- *The Danish government plans to continue pushing Denmark at the frontrunner.*
- *Denmark wants a strong EU policy in energy, and an increase of the targets because the country has a lot of renewable energy and wind energy. Last year more than 50 % of electricity came from green sources, especially wind. They produce more of what was consumed and with the two energy islands, they will be able to export their energy to other EU countries.*
- Denmark needs ambitious collaboration in the EU, and ambitious targets (at least 55% of climate target) to reach the objective of having a Climate Neutral Europe by 2020.
- If we influence the EU and push for an ambitious EU, we can change the world
- We need to sell our energy and we need an EU renewable energy market; we need to be able to sell jobs and technologies. The EU represents a chance for this.
- Denmark has been able to decarbonise growth with reducing CO2 energy and water consumption.
- Danish Energy Efficiency Scheme has been in place for several years. Is a scheme based upon a voluntary agreement between the government and the utility companies. Three schemes are foreseen for the period 2021-2024 period.
- In Denmark we managed to create new jobs. We will create new jobs in creating windmills and solar panels and we can show in practice that we are creating jobs for regular people on the same time that we are saving the world.
- We can be competitive and efficient on same time.
- Denmark is really a frontrunner on energy efficiency. On narratives building, the core narrative consists on the conscience that it is good for us.

### Italy - National Parliamentary Workshop held on 23.04.2020 – selected points from the Event Report:<sup>15</sup>

- Governments should be held accountable for their claimed comparative leading position regarding the energy transition; challenge them if claimed leading role is unfounded (Monica Frassoni, European Alliance to Save Energy):
  - o *The usual narrative of the Italian government is “we did well, and we are very advanced compare to others”, but this is not true. To beat the narrative, we need to present facts.*
  - o *In Italy there are unspent money in energy efficiency, and this fact could be used as a narrative.*
- Therefore: the credibility of official narratives on being a frontrunner is key / narrative could be used by civil society to demand accountability

### Germany – Business Stakeholder Workshop held on 28.01.2020 – selected points:<sup>16</sup>

<sup>14</sup> <http://www.energy-efficiency-watch.org/media/pdf/EUFORES-Danish-National-Parliamentary-Workshop.pdf>

For the speaker lineup and their PowerPoint presentations, cf. <http://www.eufores.org/index.php?id=307>

<sup>15</sup> Event Report: [EEW4 EVENT REPORTING EUFORES NATIONAL WORKSHOP ITALY.docx](#)

<sup>16</sup> Event Report: [EEW Business Stakeholder Workshop Germany Event Report.docx](#)

- Idea of “good to be a frontrunner” could also be applied to level of individual consumers and businesses [cf. SI and PL for the latter], in the sense of energy efficiency as part of *the new generation’s lifestyle that embraces environmental awareness, health and new technologies. This provides opportunities to connect energy efficiency with the benefits of the new lifestyle, e.g. home office implying less traffic and more available office space and comfort, no commuting time, etc. Energy efficiency is something everyone can do and could be contextualised as a bottom-up movement.*

Slovenia – Business Stakeholder Workshop held on 27-28 May 2020 – selected points:

- *Arguments and challenges highlighted with regards to businesses and investors:*
  - *Costs reductions and improving competitiveness are key drivers for investing in energy efficiency.*
  - *Social responsibility/ performance in sustainability is an additional incentive for energy efficiency measures e.g. for certain owners/investors as it can be leveraged as an asset through PR.*
  - *Getting a “green profile” was also mentioned as one incentive for some SMEs at the Polish Workshop.*
- *Arguments and challenges highlighted with regards to authorities and decision-makers:*
  - *Biomass energy from wood and timber production have potential for development; significant wood exports for heating but little domestic processing, also a matter of competitiveness vis-à-vis industries in other Member States. Linking concessions for forestry exploitation to conditionality for investment in timber processing capacities suggested as a lever to develop timber industry and promote local value creation; need for the right incentives.*
- *Arguments and challenges highlighted with regards to households:*
  - *Shifting to electric vehicles (EV) often triggers holistic reflection of energy use and sources by households and enterprises, e.g. leading to installing PV systems to feed private charging infrastructure and buildings.*

## 6. Energy efficiency as integral improvement of the production cycle

### Narrative summary

Energy efficiency investments are typically assessed against their potential to provide energy cost savings. Investment decision-making in the private sector often focuses on short-term profitability based on a one-dimensional assessment of payback times, determined by cost of energy and required investment.

Awareness among company leaders and policy makers needs to be raised that energy efficiency investments tend to pay off in the longer term and contribute to a sustained competitive advantage not only through cost reduction but also due to higher process efficiency and improved product and service quality.

Understanding energy efficiency in terms of opportunities for innovation and growth can be achieved when embracing a more holistic view on energy efficiency. This includes state-of-the-art technology options, cutting-edge digital solutions, the potential to improve the production cycle and output quality through well-considered energy efficiency measures. Thus, energy efficiency ought to be understood as an integral improvement of the production cycle instead of a purely energy-focussed issue, e.g. reduction of consumption.

Awareness for the broad business improvement potential and innovative character of energy efficiency measures can be triggered by more supportive audit regulation. This potential for business improvement can only be tapped when companies do not regard audits primarily as a formal obligation to comply with but as providing valuable insights on how to modernize the value creation of a firm. To improve the benefits of audits, they should provide decision makers in businesses and industries with integrated and profound guidance rather than generic recommendations. Supportive energy efficiency audits can create significant added value to ensure international competitiveness of EU companies and industries and making them ready for the future on their path towards decarbonization.

Tapping into this potential from a policy angle requires clearer rules on auditing, when and how to do them, how they can be considered meaningful, which reporting lines to establish, etc. The aim should be to have audit results presented at board level, making them part of the financial KPIs of a company and not just a matter of compliance with environmental regulations. Once this happens, the narrative on the relevance of energy efficiency for the production cycle becomes an integral part of the entrepreneurial strategy.

### Case

#### Introduction and evidence

The potential of energy efficiency to sustained business improvement and an optimized production cycle in addition to energy savings is often disregarded in the communication of policymakers and expert statements. The current understanding of energy efficiency is partially outdated and needs to be replaced by a more dynamic and holistic view on the interdependence of industrial production and efficient use of energy.

The role of energy efficiency for the improvement of the production cycle was predominantly expressed during business stakeholder workshops in Italy and Ireland but also mentioned by stakeholders in other Member States. Especially participants of the Italian Business Stakeholder Workshop expressed that the implementation of innovative and energy efficient processes can improve product quality and contribute a positive company image. Further, the importance of audits as well as the potential of digitization has been highlighted as means to reveal potential for energy efficiency and process optimization.

## Functioning principle and rationale

### Current understanding of energy efficiency

Often, a simplistic picture determines the idea of energy efficiency. The predominant approach in industrial policy typically includes material, labour, time and energy as input factors. This prevailing linear analysis of value chains and production processes in industry models is outdated and needs to be complemented by an environmental dimension and product quality.

Still, namely in the area of industrial production, the cost of energy efficiency measures is considered the key factor for investment decisions. An investment is considered profitable if the monetary savings for energy outweigh the investment. Since energy is considered just as one production factor out of many, the importance of saving is ranked low – even more, if a negative interference with the quality of output is assumed.

From an economic perspective, payback time decides on the business case, determined by cost of energy and required investment. However, if cost of energy is just one out of many elements in the price of a product, even a measure with a per se attractive payback period may be postponed, as higher energy cost may not be perceived as crucial in the overall competitive picture.

Investments of organizations are strongly influenced by routines and a priori rules that frame and control decision-making that fail to incorporate the complexity of multiple production factors and other dimensions such as legislative framework, environment and product improvements. In accordance to the predominant shareholder value, companies tend to opt for investment decisions with high short-term profitability. Based on typical investment routines, an investment in the private sector must bear its own costs in short pay-back times, e.g. of two years, which excludes most energy efficiency measures as those are typically characterized by longer pay-back period. This perception simplifies energy efficiency as mean to cut costs, typically with a one-dimensional connection of investment costs and energy savings.

A frequently observed additional feature to this pattern are decision makers delaying investments in energy efficiency to maintain an attuned production process and to avoid varying output quality. The implementation of energy efficiency and process improvements typically requires a readjustment of the production cycle that implies transaction costs and might entail that outputs need to be monitored for the required quality after the implementation of the change. Often, companies are hesitant against this risk and therefore tend to delay investments in energy efficiency until production processes are planned or modernization cycles are necessary anyway.

### A new and more holistic view on energy efficiency

Thus, a new and more holistic view on energy efficiency investments beyond cost savings needs to be established. An adequate payback-time strategy in today's transformative economy would not only be limited to energy cost savings, but would also include benefits beyond energy cost savings, e.g. reduced cost of labor, and the monetary implications of quality and process improvements as well as reduced environmental impact. Interrelations between input factors, environment and product output will need to be considered, as for example rising carbon prices will increase the cost of carbon intensive input material.

Besides low-hanging fruits such as lightning replacement, investments in energy efficiency are characterized by longer pay-back times, especially when it comes to production process improvements. In many branches, investment cycles for process equipment and machinery run to over 20 years.<sup>17</sup> Companies will consequently feel the impact of today's investment decisions until almost the middle of the century. Starting early on the company-internal path towards decarbonization, reduces the carbon price risk and still assures that value chain and production processes can successively be adjusted towards a low-energy and carbon-neutral production cycle.

Combining the chances of digitization with those of the 'new world of energy' can help to bridge the gap between production, energy management and maintenance. This can be enabled through intelligent and adaptable advanced analysis tools. Ensuring seamless integration of data and information across the plant combined with state-of-the-art production control algorithms and artificial intelligence are important means to deal with increasing volatility in production, energy and raw material availability. To realize energy and cost savings through optimizing the production cycle, planning models must be expanded to cover larger problem instances and energy consumption, e.g. to allow for industrial demand-side management.

Optimization of production processes through digitalization offers tremendous potential for higher energy efficiency and an overall improvement of the production cycle. Digitalization allows for improved process control and operation with machinery and electrical equipment becoming radically more integrated. New measurement approaches and algorithms increase the confidence of condition monitoring techniques and reduce the need for periodic maintenance rendering production processes more efficient. Integrating energy efficiency with equipment management and input material optimization offers huge potential for businesses and industries to a sustained reduction of energy costs and improved output quality with a positive impact on international competitiveness.

Broad business improvement potential and innovative character of energy efficiency can be triggered by more supportive audit regulation. Supportive audits are based on a holistic company perspective with the objective of helping decision takers to reduce complexity of the decision environment. To persuasively illustrate the huge potential for business improvement that lies in energy efficiency, audits should provide guidance towards beneficial energy efficiency measures with highly specific recommendations on technological options and digital solutions tailored to each individual type of industry and business.

State-of-the-art auditing shows that identifying saving potentials often comes along with optimization not only of the energetic performance but of the overall production cycle, and thus positive implications on quality of output, cost of production and lifetime of equipment. However, this potential for business improvement can only be tapped, when companies do not regard energy audits as formal obligation to comply with but as valuable new insight, they are willing to work with.

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<sup>17</sup> Agora (2020). Sustainable Industry - Working with the industry to ensure the development and commercialisation of key decarbonisation technologies. Available at: <https://www.agora-energiewende.de/en/projects/sustainable-industry>

## Policy implications

Audits tailored to the needs of businesses and industries are a key lever to promote the implementation of innovative and sustainable production processes. Two key elements for improving the impact of audits can be derived:

### **Way in which audits are made mandatory**

A key aspect for ensuring responsiveness within companies is the level of reporting. When audit results must be discussed at board level, chances for a substantial implementation of suggested measures are significantly higher than if dealt with at subordinate levels.

### **Way of reporting in companies**

With respect to the (policy) design of audit schemes, the success rate increases when not only focusing on the yes-no question (has an audit taken place or not) but on the quality and level of detail, in combination with subsequent implementation. Training programs for auditors and an industry-specific professional focus of auditors on new technologies and process innovation as well as on investment and costing can be a strong lever raise the awareness among decision takers in companies to take forward-looking investments and to avoid stranded assets.

### **Communication & awareness**

Broad awareness raising on the overarching business (not solely energy related) benefits needs to start, by explicitly communicating improvements of the overall production cycle that were achieved originating from energy audits. On the one hand, competitors are likely to follow interesting examples, on the other hand, and probably more importantly, in the era of digitization, sector coupling and resulting competitive effects, it will sharpen the attention that energy is no longer to be regarded as a linear factor in the production cycle but a highly dynamic element within complex economic processes and requires according consideration.

### **From audits to energy management systems**

Policy instruments should, besides providing guidance on how to make audits meaningful, also give incentives on subsequently establishing energy management systems, to trigger the full chain of 'insight – decision – action - communication'.

## Context and transferability

### EU context

To support EU companies and industries becoming the world's sustainable industry frontrunners and remain globally competitive in the long term long-term, strategic planning is urgently required. Appropriate and predictable carbon emission prices are essential to enable companies and other energy consumers to take future-oriented investment decisions. Support programs for energy-efficient production processes, e.g. via Carbon Contracts for Difference (CfD), can close the gap in industries where carbon prices do not yet trigger the technology and process investments that will be necessary to reach the agreements among the international community. Pilot projects and project evidence as well as best-practices are important means to deliver technology prototypes for energy and cost savings at the scale of production processes and can support companies to introduce new technologies and process innovations. Also, there is a need for further research to address current technology gaps and training to improve the effectiveness of audits.

### Transferability across Member States

The value of audits can be improved through specialisation of auditors on particular technologies, industries and digital solutions. Allowing for steady relation building between industry and auditors instead of one-off contacts is key to increasing the quality of audits and developing tailored services and according business models. Long-term relations are also essential for energy service providers to reduce the cost risks of clients, e.g. through energy performance contracting and by including success fees, internalizing external costs in energy prices and balancing costs of electrical and thermal energy. Frequent changes in support schemes and other policies should be avoided to facilitate the development of convincing and consistent business models. Dedicated



support for favourable behaviour of energy consumers or for using audits and energy-efficient process optimization can be incentivized, e.g. through tax reduction.

## Annex – selected input collected in Energy Efficiency Watch 4

### Ireland – Business Stakeholder Workshop held on 6 May 2020 – selected points:

- Bringing communication about audit results to board level is key. Anchoring energy considerations deeper into organization's procedures, e.g. on board-level and in finance departments, can help to increase the broader relevance of energy efficiency for profitability. Mandatory corporate carbon reporting was suggested as a potential lever to increase awareness for energy efficiency in companies.
- In all companies, tax is dealt with at board level, cost of energy typically not => paradigm needs to be changed
- Often, the bigger plan / full potential for optimizing the production cycle is only seen when an audit is completed => have it read by the right people to mobilize investment
- Some companies start to work with an (for now assumed) internal carbon price and reflect it in cost assessment and investment decisions => triggers cautious listening at board level
- Energy audits are a chance to create client relations and to reveal unknown energy efficiency potentials. Stakeholders suggest that energy audits should be combined with an obligation scheme for closer relation and constant exchange between companies and auditors.
- Apps showing EE impact are really good for helping post-audit-action
- Also apps reducing time for monitoring / cost assessment processes => work more with that; support broad enrollment

### Italy – Business Stakeholder Workshop held on 27-28 April 2020 – selected points:

- Energy is often a central cost factor for businesses, industries and public services but still energy efficiency is not a priority, e.g. due to sometimes long payback periods or perceived complexity of proposed measures, among SMEs in particular.
- The implications of energy efficiency measures should be explained in monetary terms instead of energy values to convince decision makers. Highlighting economic benefits of improving energy efficiency is essential.
- Focus on the client perspective as a policy maker or ESCO: monitoring energy performance and key performance indicators allow for process improvements, e.g. in production. Communicate measures for the support of energy efficiency investments to reduce payback time. Highlight effective business models.
- Establishing long-term relations is essential for ESCOs to reduce the cost risks of clients, e.g. through energy performance contracting and by including success fees, internalising external costs in energy prices and balancing costs of electrical and thermal energy.
- Frequent mistake: potential of digitization to make EE potential / other optimization potential visible is often neglected / underestimated
- The implementation of innovative and energy efficient processes can contribute to a company's positive image, e.g. quality improvements through digitalisation and automation.
- Energy efficiency policies and measures do not have a negative impact on the company in terms of outages.

### Italy - National Parliamentary Workshop held on 23.04.2020 – selected points from the Event



Report:<sup>18</sup>

- We have sold the wrong messages to the users, we should say more that improving energy efficiency means improving the quality of life
- During the Italian Parliamentary Session, attendees asked the Italian Parliament to be more supportive towards energy innovation.
- A very important wave is the building innovation one, important because it will create jobs.
- The public administration is not ready to manage this innovation.

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<sup>18</sup> Event Report: [EEW4 EVENT REPORTING EUFORES NATIONAL WORKSHOP ITALY.docx](#)

## 7. Empowering research and innovation for carbon neutral transformation

### Narrative summary

Research and Innovation plays an – often underestimated – key role in the energy transition. On the one hand, it creates the basis for technological and economic innovation and thus contributes to competitiveness, on the other hand it has a significant impact / forms part of a narrative. If through research and technological innovation new approaches are developed in a country, these create an echo in public debates as interesting future option and contribution to modernisation. Traditional patterns of public perception (e.g. not seeing alternatives to established energy generation and consumption) and fear of loss are put into new perspectives. Depending on the depth of research results, they can be over-written by a new narrative: a) change is possible, b) it provides concrete chances and c) they may have the potential to outweigh the loss of old industry branches. In addition to the public debate in general, there is a considerable multiplier effect through young researchers graduating from technical colleges and universities. Junior staff engaged in research on technological innovation will develop into agents of change and lay important foundations for gradual opening of societies for new thinking. Or, on the contrary: if there is no chance for junior staff to get in touch with innovative approaches through research, this may result in a massive lock-in risk of outdated technologies and according lack of popularity of energy transformation.

Stakeholders highlighted the relevance of the research, development, and innovation landscape in EU Member States for advancing the energy efficiency narrative in multiple dimensions, underlining in particular:

1. research and development as fundamental vectors to develop – and help to popularise – the innovations, technologies and processes needed to deliver the transformation;
2. the central role of research and development institutions, innovating businesses, and the supporting funding bodies in stimulating a market uptake of innovative sustainable technologies and processes;
3. its elite building function, influencing societal debate on energy efficiency and energy transformation as aspects of technological innovation and contribution to industrial modernisation.

As a way forward, the input received by EEW4 suggests that only an effective and inclusive collaboration between education, academia, research organisations and businesses will enable the sector to deliver its full potential for powering the uptake of energy efficiency solutions and the carbon neutral transformation as a whole.

### Case: conceptualising an inclusive innovation infrastructure

Business stakeholders found that the research and innovation landscape in Member States is not tapping the full potential in the sense of popularization of the energy transition, stimulating market uptake and according elite building. Among the hampering factors applying to the respective national contexts, stakeholders identify 1) a missing involvement of businesses and organisations outside a restricted circle of institutionalised academia by the research sector and relevant public funding lines; and 2) a constrained capacity of the research and development sector to bring innovations to the market and stimulate broad market uptake, or to respond to rapidly evolving processes, technologies and markets.

Most prominently, stakeholders from Bulgaria expressed a concern regarding the institutional landscape in their country in particular fostering old technologies, but also in other workshops, namely during the one held for France, it was mentioned that structural conservatism of

institutions and according policies to establish research programmes and platforms for innovation (e.g. HighTech Parks) are an obstacle to opening the public debate and promoting agents of change to the extent it is needed for the dimension of transformation in the energy sector.

Innovation as the bedrock of energy efficiency policies and markets to pave the way to the carbon neutral transformation – this storyline permeates key points and suggestions made by Bulgarian stakeholders received by the EEW4 team, e.g. in that ‘transformations, including the energy transition as a transformative process, should be based on innovation’.<sup>19</sup> Stakeholders emphasised that businesses are willing and ready to be front and centre for driving innovation processes for products and services. From an economic standpoint, business-driven innovation is also identified as a key vector to address and improve issues of limited competitiveness.

Stakeholders in Bulgaria and France highlighted that the research landscape was focusing too much on old technologies, continuing to promote them despite different priority setting in energy policy and thus also giving misleading signals to young researchers. Besides potentially problematic impacts on establishing new technologies, this was also a missed chance for narrative development, using young professionals as innovation carriers and promoters of change in the ‘new world of energy’.

Relatedly, the institutionalised research landscape was found to have a strong focus on education and fundamental research and, importantly, missing opportunities for collaboration for research, development, and innovation with actors outside institutionalised academia. Inadequate involvement of businesses is also seen as key issue regarding public research programmes and initiatives. As an example, initiatives to establish excellence centres and regional innovation centres did not succeed to deliver on expectations. The procedure for the latter was launched twice but then abandoned given that it could not involve universities only. Ensuring reliability and trust in programmes supporting research and innovation would therefore be crucial, as well as limiting administrative hurdles:

‘The major requirement was for a new legal body – and many of the potential beneficiaries went through a lot of administrative and legal procedures to formalise their partnerships. At the end of the day, the procedure was terminated, and all these efforts turned out to have been in vain. This sent a bad message for businesses.’

Stakeholders identified a lack of understanding on the political and administrative levels in Bulgaria and wider Eastern Europe for the need of innovative pilot projects involving businesses – even though tangible best practices are deemed more convincing than political commitments.

## Functioning principle and rationale

Arguments and storylines presented above explicitly refer to topics of research, development, and innovation and underline the need for synergies and collaboration between the three. More implicitly for some, they also speak to related themes of infrastructure development, modernisation, stability of policy initiatives and improving competitiveness which may be regarded a another, deeper driving force in contexts such as Bulgaria.

Narratives and storylines that highlight opportunities in these thematic areas as key drivers for energy efficiency and the carbon neutral transformation as a whole are clearly not yet institutionalised in ways that would allow them to structure public discourses, at least regarding the exemplary case examined in this case study. These narratives rather appear to be a stage where they would need to be developed and promoted further so that they better motivate adoption and effective implementation of corresponding policies and measures as a result.

At the same time, the input received indicates that exploring links and embedding or linking energy

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<sup>19</sup> Statement from the EEW4 Business Stakeholder Workshop in Bulgaria. Full Event Report available at: <http://www.energy-efficiency-watch.org/media/publications/EEW-Business-Stakeholder-Workshop-BG-Event-Report-ext.pdf>.

efficiency policies to the broader topic of research and innovation policy would be effective in contexts such as the one described for Bulgaria. Corresponding storylines and narratives would have significant potential to resonate with society and the business community in particular. This can also be seen in the results of the EEW4 survey of energy experts carried out in 2020 with over 1,200 respondents from all across the EU-27.<sup>20</sup> In the survey, modernisation and infrastructure investments, employment, and competitiveness and innovation are identified as the three most important general topics in the public debate in Bulgaria for instance, confirming the salience of the issue as well as the potential for leveraging it in storylines in the context of sustainable energy and energy efficiency.

## Policy implications

The stakeholder input received provides indications for how narratives encouraging energy efficiency in the context of research, education, and innovation can be translated into effective action. In order to be credible and effective, initiatives to enhance the research, education, and innovation landscape – including for energy efficiency solutions – would need to be:

1. robust, i.e. well designed, coordinated across relevant levels of governance and supported by the central administration;
2. inclusive, i.e. stimulate involvement of innovating businesses and collaboration between them and research and education institutions;
3. integrative, i.e. involve local communities to enhance acceptance, exploit synergies, and nurture local ecosystems and support them to grow into tech parks or similar ecosystems to enhance market competitiveness;
4. target-oriented, i.e. be in line with the current and foreseeable objectives and requirements of the carbon neutral transformation.

Importantly, a clear need for action is seen for opening opportunities for participation and collaboration of research and innovation actors from the business community in national research and innovation schemes. As noted for the case of Bulgaria, this may include access to public support programmes and funding lines, and related administrative requirements, such as the classification as research institutes, or application procedures. Having the institutional recognition or classification on the national level can also have implications regarding access to EU research and innovation programmes. Generally, relevant experience and expertise should constitute the key selection criteria, not necessarily being a traditional academic body or a university, as stakeholders emphasised. The underlying vision would be to stimulate a productive interplay between education, academia, research, and business innovation as a potent enabler for the carbon neutral transformation.

Moreover, tangible pilot and lighthouse projects involving market actors are highlighted as a key vector to generate market uptake, buy-in, and replication throughout the private sector. Accordingly, these should be encouraged through adequate levels political support, funding, and exposure to maximise their impact as multipliers. Related opportunities for cross-border projects, peer-learning or teaming can be highlighted. For instance, stakeholders in Bulgaria see in regional industrial parks in Spain a successful approach to learn from for the Eastern European space. Narratives advocating for greater collaboration between research, education, and market innovators should of course not be confused with arguments nor make the case for privatisation of research and education, which may rather stir opposition than resonate in supportive ways. In order for related storylines not to backfire, innovators and stakeholders should also be clear regarding investment risks related to innovations, particularly in an SME or start-up context.

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<sup>20</sup> Full Survey Report available at: <http://www.energy-efficiency-watch.org/media/publications/EEW4-survey-report.pdf>

## Context and transferability

### EU context

The European Green Deal attributes a central role to research and innovation in accelerating and navigating the necessary transitions, as well as in deploying, demonstrating and de-risking solutions and engaging citizens in social innovation. Research, innovation and competitiveness also constitute one of the EU's Energy Union core dimensions.<sup>21</sup> This field of action is therefore prominently anchored in the EU's overarching transformation strategy and discourse, consistent with it being a demonstrated key area in terms of direct support. Horizon Europe and LIFE are just two of the EU's multiple funding programmes for research and innovation that also feature a strong sustainable energy and energy efficiency component.

The NextGeneration EU fund provides additional resources to promote energy efficiency in the context of modernisation, innovation and infrastructure development. This would also contribute to achieving the scheme's share of 37% earmarked for climate expenditure. Member States' Recovery and Resilience Plans are a great opportunity to stimulate the sector and develop the innovation infrastructure where needed, e.g. innovative tech parks in Bulgaria, and to include approaches such as the Teaming programme to create or update centres of excellence by coupling them with a leading scientific institution, as stakeholders' input to EEW4 confirmed.

### Transferability across Member States

In order to resonate effectively with society, enabling narratives need to be adapted to the specific national or regional contexts. Generally, we can expect narratives that speak to considerations for industrial competitiveness and innovation as well as modernisation and infrastructure investments to resonate effectively in many societies across the EU, as these were ranked among the top three of the most important topics in the general public debate by the over 1,200 energy experts consulted by the EEW4 survey from across all the EU-27.<sup>22</sup> The fact that investments and competitiveness are the topics most linked to energy efficiency (ibid.) points to the potential for narratives connecting the two, whereas linkage to themes of competitiveness would seem particularly promising given that these are already predominantly positively discussed in the context of energy efficiency, as indicated by the survey (cf. *Figure 1* below).

Regarding implementation of the narrative into actual measures and policies, the transferability of narratives linking innovation and energy efficiency themes would also depend on the existing structure of the research and innovation landscape. In contexts of long-established systems that experienced little change or reform over time, it might be harder to translate such narratives into action compared to countries where the research and innovation is more used to dynamics of reform and adaptation.

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<sup>21</sup> [https://ec.europa.eu/energy/topics/energy-strategy/energy-union\\_en](https://ec.europa.eu/energy/topics/energy-strategy/energy-union_en)

<sup>22</sup> Full Survey Report: <http://www.energy-efficiency-watch.org/media/publications/EEW4-survey-report.pdf>

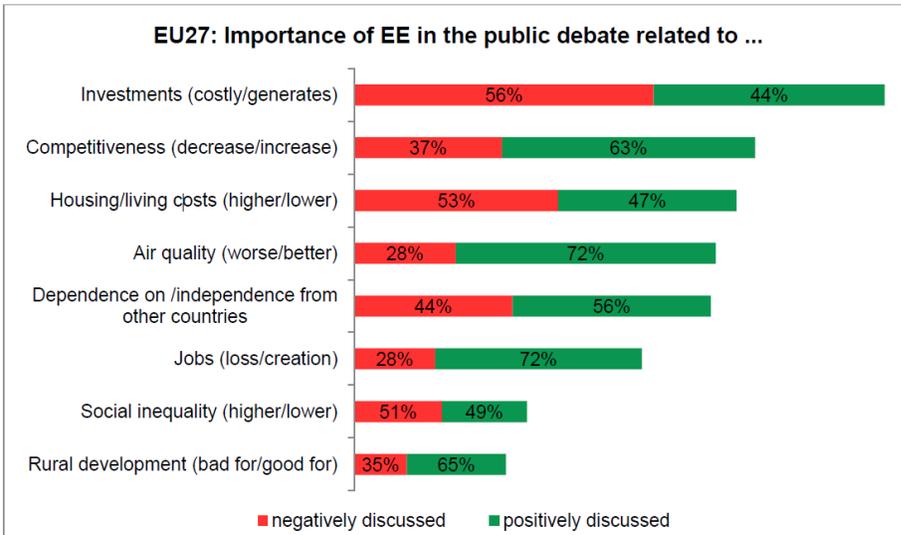


Figure 1: Importance of topics related to energy efficiency in public debates (EEW4 Survey 2020)

## Annex – selected input collected in Energy Efficiency Watch

### Bulgaria – Business Stakeholder Workshop held on 7-8 April 2021 – selected points on research and innovation from the Event Report:<sup>23</sup>

- Implementation of good practices is difficult due to a lack of understanding for the need of pilot projects with involvement of businesses in Bulgaria and Eastern Europe; best practices are more convincing than political commitments.
- Businesses are willing to be part of innovation processes for products and services
- Need to develop R&D infrastructure with a more prominent role for businesses in R&D landscape to tap into innovation potential, e.g. innovation clusters, technology/industrial parks (to be considered in EU funding)
- Transformations, including the energy transition as a transformative process, should be based on innovation.
- Bad example: the national procedure for innovative clusters – there was a call open twice and cancelled twice due to different reasons. This sent a bad signal towards the businesses that spent significant time preparing their applications.
- Due to lack of innovations in the companies/businesses, the economy is facing issues with limited competitiveness.
- Bulgaria lacks innovation structures (excellence centers, tech parks, etc.) and the Recovery Plan is a great way to address this.
- There should be a synergy between the businesses and the local communities in developing innovations, because the businesses may find their interests implemented only through the acceptance of the local communities.
- Nurturing the local business ecosystems and supporting them to grow into tech parks or similar ecosystems will improve their market competitiveness.

<sup>23</sup> Full Event Report available at: <http://www.energy-efficiency-watch.org/media/publications/EEW-Business-Stakeholder-Workshop-BG-Event-Report-ext.pdf>.



- Good practices for innovations are related to the existence of pilot projects. And in Bulgaria and Eastern EU Member States, there is a lack of understanding on political and administrative level for the need for pilot projects with the participation of businesses. Usually, this understanding is related to the universities and their lab prototypes. A recommendation would be to send out a message that more pilot projects are funded, through which adequate good practises are established and promoted.
- **There is a strong need for infrastructure for research or for development of innovations and their market uptake.** In Bulgaria, there is just one example – the HighTech park in Sofia. There was an idea that the Park is replicated in Plovdiv – where there are many universities, companies, clusters - but it did not receive support from the national level (although on local level there is some support).
- There may be some possibilities in universities and research institutes, but their capabilities are very limited and represent isolated research pieces that are not in cooperation with the businesses.
- The Teaming opportunity is currently not included in the Bulgarian Recovery Plan, so we would like to send the EC a message that we wish to have more opportunities for the Teaming programme and that there should be representatives of other research and development bodies, different from the traditional university bodies and academic bodies in the Bulgarian Academy of Sciences. **The feeling is that there is some understanding for supporting the academic bodies only.** The major criteria for selection should be relevant experience and not necessarily being a traditional academic body or a university.
- The universities are mostly oriented towards education, not R&D. If we rightly identify business as drivers of the innovation, then the market uptake will happen more quickly. **An example are the excellence centers created throughout the country – currently, they are not operational, whereas the “Innovative Clusters” procedure was a success. Another failed procedure is the one for regional innovation centers – it was launched twice and then cancelled.** It turned out that it cannot be launched only for the universities and it was transferred to the OP “Competitiveness and Innovation”. There was a cheer from the regions, because usually most things happen for the Capital and not for the regions. The major requirement was for a new legal body – and many of the potential beneficiaries went through a lot of administrative and legal procedures to formalise their partnerships. At the end of the day, the procedure was cancelled and all these efforts turned out to have been in vain. It was a bad message for the businesses.
- There is a good example with the regional industrial parks in Spain that can be followed in Bulgaria and other Easter EU countries.

## 8. Education, training and upskilling for carbon neutral transformation

### Narrative summary

Acceptance of energy efficiency and new energy technologies is influenced to a large extent by the trust of end clients in the competence of planners, builders and installers. This starts with getting the right advice on how to newly build or modernize, making the right choices on best available technologies and building techniques and have installations made and work implemented accordingly. Currently, however, planners and installers whose professional education and training dates back several years or decades, are not sufficiently familiar with new applications and may thus, also fearing a risk of making mistakes, advise their clients the use of solutions which are no longer state of the art. Besides these concrete deficits, also the pace of adjustment in upskilling does not meet the requirements of the energy transition. This is problematic mainly in two ways: on the one hand for the technology and carbon lock-in, combined with loss of property value on the clients' side, and on the other hand in the context of narratives, weakening the case of energy innovation.

The overarching narrative of observed deficits in education and qualification and related challenges encompasses different strands of arguments that may also depend on the context in which these are articulated. They include references to:

- Lack of technical knowledge and skills to deliver climate-friendly innovations but also available well-established solutions in key industries, for instance in the buildings sector, due to missing opportunities for continuous training and development. In the absence of incentives for change, this is complemented by a certain habitual inertia along the lines of 'we have always done it this way'.
- A vicious circle of a supply side lacking know-how for providing state-of-the-art climate-friendly solutions and a demand side having little trust in the quality of available innovative market offerings, thereby leading to lock-in effects.
- This issue seems particularly relevant in the context of rising complexity of efficiency solutions in general and of highly fragmented markets in particular. Comprehensive home renovations to improve energy performance are a case in point, considering the significant transaction costs arising from the need to coordinate multiple crafts they often entail for consumers.
- On a more general level, a mismatch perceived between the focus of the education system and the qualifications needed to implement the energy transition.
- Overall, insufficient incentives and requirements found to foster training and upskilling in certain contexts.

The examples and lines of argument explored in this case study are particularly relevant for sectors of the economy whose workforce faces a need of enhanced continuous training and upskilling, for regions with a carbon-intensive or post-industrial background undergoing structural change where reskilling and requalifying staff from declining industries is a priority, as well for general education and basic training, respectively.

Therefore, educating and training professionals and future professionals to have the qualifications and skillsets needed to deliver the transformation to climate neutrality is essential at societal level. Planners, builders and installers are needed also as empowering multipliers and ambassadors for change and innovation. Policy instruments aiming at establishing energy efficient and other innovative energy solutions need to create strong links to professional training, foster the establishment of upskilling programs, implement curricula for technological qualification and new job profiles together with according educational institutions and relevant industrial branches.

## Case evidence from EEW4 on education, training and upskilling

### Training and upskilling needed to transform the buildings sector

Given that three in four buildings in the EU are not considered energy efficient while 85% to 95% of today's buildings will still be in use in 2050<sup>24</sup>, the sector represents a key challenge the EU needs to address in order to reach climate neutrality by mid-century. The buildings industry is also the sector stakeholders providing input to EEW4 most prominently highlighted regarding the need to develop knowledge and skills of professionals. Business stakeholders from Italy, Ireland and Germany all expressed concerns about the impact of inadequate training of groups of building professionals and a negative image sometimes associated with certain building renovation techniques. Both are viewed as major stumbling blocks preventing them from promoting or even offering optimal solutions both from an environmental and financial standpoint, with adverse effects e.g. on the renovation depth when building energy performance is to be improved.

Very practically, stakeholders in Ireland for instance pointed to poor skills regarding wall and roof insulation especially for older buildings, and a lack of proper guidance on the best solutions to implement. In combination, these issues exacerbate the predominance of conventional approaches unfit to deliver the climate-neutral transformation, often justified along the lines of 'we have always done it this way'. Storylines like these may even become a self-fulfilling prophecy when clients insist on ambitious or novel renovation solutions anyway, thereby exposing themselves to the risk of obtaining suboptimal quality in execution at higher costs. Lock-in effects in terms of conventional renovation and constructions approaches are observed as a result. EU-level analysis confirms that intermediaries, i.e. installers, architects, energy advisors etc. who interact directly with consumers are driven both by their own motivation, possibly including environmental concerns, yet in many cases also by the most hassle-free delivery, installation and after-care.<sup>25</sup> These aspects are influenced by the quality and service offered by manufacturers of components and technical building systems, contributing to strong links between them and installers or main contractors. Consequently, narratives aimed at empowering the buildings industry to decarbonise need to address the entire value chain of the sector and the full bandwidth of market actors.

Particularly when seeking to contract services for deep energy retrofits<sup>26</sup>, consumers face great difficulties in finding market offers with the needed expertise and experience, as stakeholders recognised. This of course also links to the traditional fragmentation of the market with the multiple separate crafts (installers, brick layers, carpenters, plumbers, electricians, etc.) that typically need to work hand in hand for such encompassing assignments. Importantly, the market structure with the prevalence of SMEs often implies limited resources available to invest in continuous training and development opportunities for staff. At corporate level, this may in turn result in missing new market opportunities and the risk of losing competitiveness and on the other hand an overall pace of change lagging behind ambition at macroeconomic scale.

In Germany, the expected massive shift from gas heating to electrical heat pumps puts up a major challenge, as heat pump planning and installation requires a very different job qualification than that of traditional heating installers. It is therefore key for the success of the envisaged change to rapidly establish new technological education programmes to meet the upcoming demand, same as for integral consideration of the building envelope when advising for the right combination of

<sup>24</sup> Cf. [https://ec.europa.eu/energy/topics/energy-efficiency/energy-efficient-buildings/renovation-wave\\_en](https://ec.europa.eu/energy/topics/energy-efficiency/energy-efficient-buildings/renovation-wave_en)

<sup>25</sup> Cf. *European Commission (2019), Comprehensive study of building energy renovation activities and the uptake of nearly zero-energy buildings in the EU, prepared by Ipsos and Navigant*, available at <https://op.europa.eu/en/publication-detail/-/publication/97d6a4ca-5847-11ea-8b81-01aa75ed71a1/language-en/format-PDF/source-119528141>

<sup>26</sup> I.e. renovations that significantly reduce energy use, e.g. by more than 60%.

insulation, modernization and heating system. An example for success in another sector is the job profile of 'mechatronic', a combination of mechanical and electronics engineer, which was jointly established by technical universities and key industrial stakeholders.

### **Aligning education and training systems with the carbon neutral transformation**

Education and training institutions are key to raise awareness, empower agents of change and to provide relevant skills and qualifications. However, stakeholders e.g. in France observed a certain mismatch between the focus of the education and vocational training system compared to the qualifications and job profiles needed for the energy transition. Certain technical qualifications such as mechatronics for instance would not be sufficiently developed nor valued, even though they have a key role in delivering sustainable solutions. From a societal perspective, this potential needs to be activated to accelerate the transformation in line with the overarching climate objectives.

Stakeholders across the board also identified a need to expand general education on the energy transition and energy efficiency e.g. at school and university with a view to raise awareness, encourage climate friendly behaviour and spark interest in professions that drive the transformation. Possible ways of doing so could comprise adapting curricula, introducing new courses or establishing new programmes. As evidenced by their civic engagement for robust climate action, young generations are gaining significant traction as agents of change. This is a potential to be tapped not only in education and vocation training schemes but also in research and innovation in order to develop the solutions needed that are still missing (for more on topic, cf. EEW4 Case Study 8 on empowering research and innovation to fuel the carbon neutral transformation).

### **Functioning principle and rationale**

Beyond personal and professional development, the need for adequate education, training and upskilling links to broader themes relevant on both societal and corporate levels, i.e. job creation and retention, modernisation on the one hand and innovation, new business models and competitiveness on the other. To move forward, the key is to break vicious circles, e.g. between low supply and demand for innovative climate-friendly solutions, and to turn these into virtuous circles. Showcasing best practice approaches, debunking myths and preconceptions by proven facts and leveraging demonstrated benefits of climate-friendly solutions are the recommended instruments for achieving this on the operational level, as indicated by stakeholders.

More generally, transformative narratives need to address the individual, corporate and policy levels, e.g. by highlighting the potential for new and better jobs, for new or expanded business models as well as the aggregate benefits for society. When it comes to the buildings sector, the energy transition for instance requires a more integrated view e.g. on energy renovation, but also across the entire building life cycle. The need for integrated home renovation services, for efficient equipment, automation and control systems provides significant business opportunities for market services in this regard. Of course, the regulatory framework should not stand in the way of these opportunities and provide incentives where needed.

### **Policy implications**

In key instances, the energy transition is not yet supported by adequate deployment of qualification and training measures. The need for training and upskilling, in the buildings sector and beyond, is acknowledged not only by stakeholders and consumers but also by many regulators by now. This opens windows of opportunities to build alliances to promote narratives that frame education, training and upskilling as a strategic vector of the carbon neutral transformation.

The theme is all the more relevant for transforming carbon-intensive regions, or regions

undergoing processes of industrial transformation, and for making the related narrative of a 'just transition for all' deliver in practice, as policymakers highlighted in the EEW4 parliamentary workshops.<sup>27</sup> Experience in many European industrial regions that underwent processes of structural change offer plenty of insights and examples from the ground to learn from. These include reskilling professionals for available future-proof employment, but also establishing new or expanding existing research and education institutions in these regions as agents of change as part of a forward-looking strategy. In general, education and training institutions should be empowered to take an active role in the transformation. More than ever, close interaction between education, academia, research and businesses is needed to stimulate the change and innovations needed for the transformation.

Capacity building and training should generally not be considered as a detached element which just follows other processes, but rather be understood as a constitutive part of the transformation and clearly embedded in the overarching strategy. Crucially, the need for training, upskilling and reskilling should be addressed from early on, i.e. whenever possible before disruptive changes materialise. Policymakers have a role to play for assessing the need to devise incentives, programmes or requirements to improve capacity and skills in the areas where deficits are prevalent.

Taking the example of the buildings sector, evidence indicates that the intermediaries, i.e. architects, installers, contractors etc., are a key target group to address in order to enhance the uptake and impact of deep energy retrofits. Above all, these are the actors seek and obtain advice from when deciding about the extent and depth of energy efficiency measures.<sup>28</sup> Typically, they are also the main point of contact when consumers encounter necessary maintenance, replacement or inspections, all of which constitute key trigger points for households to undertake energy efficiency measures. These groups of professionals should therefore have the skills, capacity and motivation to act as ambassadors for promoting energy renovation of technical building systems.

When setting up new policy instruments, their correlation to education, training and upskilling should per default be considered and tackled, e.g. in form of an overarching policy package.

## Context and transferability

### EU context

The EU clearly recognises the potential for leveraging learning and upskilling as part of its broader transformation strategy. Key actions, approaches and initiatives planned until 2025 are compounded in the [European Skills Agenda](#). The five-year plan aims at helping individuals and business develop more and better skills. Ensuring sustainable competitiveness, social fairness and providing access to education, training and lifelong learning and enhancing resilience to react to crises are highlighted as the strategy's key objectives that also interlink with the European Green Deal and the European Pillar of Social Rights. As the first of the flagship actions under the agenda, the European Commission launched the [Pact for Skills](#) to reach out to both public and private organisations to join forces and take concrete action to upskill and reskill people in Europe through a joint charter and promoting individual commitments. EU funding for investments in skills is mobilised through the European Social Fund Plus and the Erasmus programme in particular, as well through InvestEU scheme and other schemes.

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<sup>27</sup> For more on the topic of just transition, cf. the EEW4 Case Study 10 on transformation policies in line with social justice.

<sup>28</sup> Cf. *European Commission (2019), Comprehensive study of building energy renovation activities and the uptake of nearly zero-energy buildings in the EU, prepared by Ipsos and Navigant*, available at <https://op.europa.eu/en/publication-detail/-/publication/97d6a4ca-5847-11ea-8b81-01aa75ed71a1/language-en/format-PDF/source-119528141>

More specifically regarding the buildings sector, the EU's Skills Agenda and the Pact for Skills are also referenced in the European Commission's [Renovation Wave](#) that describes the strategy for decarbonising the EU's existing building stock in line with the overarching climate objectives. Through platforms such as the [BUILD UP Skills initiative](#) the EU has also directly supported training and upskilling projects in Member States. With the initiative of the [New European Bauhaus](#), designed as a forum for exchange on climate-friendly architecture, the EU also puts forward the cultural and social dimensions of building design.

In sum, the EU takes significant action to address skill gaps and to promote lifelong learning. However, Member States, sometimes regional administrations, depending on national constitutions, remain the key actors directly in charge of education and training, given both the legal distribution of competences across governance levels and the resources they operate.

### Transferability

The challenge of providing adequate skills and qualifications for the carbon neutral transformation is one that transcends national boundaries, as evidenced by the stakeholder input received. While the buildings sector stands out as particular priority in this regard, it is not the only one requiring attention. For instance, narratives taking up this topic were also found relevant for the tourism sector and to develop sustainable tourism in particular, as Cypriote stakeholders highlighted. Similarly, a better integration of climate and energy efficiency subjects in general education was found to be priority across the board regardless of the country context.

The transboundary and cross-sectoral nature of the challenge suggests that narratives aimed at enhancing education and training in line with the prerequisites of the carbon neutral transformation should a priori have a good potential to resonate effectively across Member States. This is also indicated by the strong links of this theme to considerations for employment, industrial competitiveness and modernisation – given that these are found to be the three most important topics in the general public debate for 27%, 20% and 14% respectively, as found by the over 1,200 energy experts consulted by the EEW4 survey from across all the EU-27.<sup>29</sup> In the end, the specific focus and focus of enabling narratives still needs to be adapted to the specific national or regional contexts of course to maximise impact.

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<sup>29</sup> Full Survey Report available at: <http://www.energy-efficiency-watch.org/media/publications/EEW4-survey-report.pdf>

## Annex – selected input collected in Energy Efficiency Watch 4

### Slovenia, Business Stakeholder Workshop held on 27-28 May 2020

- Advances in building's efficiency are hampered by insufficient expertise of renovation contractors. Capacity building programmes for constructors and renovation contractors are needed to increase the effectiveness of energy efficiency investments.
- Expand educational programmes and incentives for stakeholders and broader public, e.g. in form of company programmes to reward the best diplomas in the field or competitions rewarding change of individual behaviours. New technologies to be made desirable beyond cost arguments, e.g. through campaigns/marketing to create appeal or convenience (e.g. link mobile app with smart meters)
- Use pilot projects and involve local communities to improve acceptance of energy projects as there is increasing interest in self-consumption, energy autonomy etc.

### France - Business Stakeholder Workshop held on 8 June 2021

- The job impact of energy efficiency needs to be better communicated. Creating educational and transformational jobs, educating pupils on the energy transition and energy efficiency issues, convincing young people to choose related professions, and developing new jobs (e.g. mechatronics, craftsmen) is key. Energy efficiency and energy savings measures should be a focus of education and training.

### Greece, Business Stakeholder Workshop held on 22-23 March 2021

Extensive discussions about the energy renovation of residential buildings, specifically the *Exoikonomo-autonomo* scheme for improving energy efficiency in residential buildings.

Success factors identified:

- The program experienced very wide communication throughout the supply chain, e.g. through public communication, industry advertisement, word of mouth advertisement by households. The scheme is established as a key reference in the market.
- Broad scope, easy access and long duration of the scheme allowed for wide communication and have improved acceptance
- Good match between needs and programme
- “Green DNA” of the scheme
- Found to be good example and very popular scheme throughout the buildings value chain
- increased transparency for the costs and benefits of energy
- The programme also benefited and received support from the construction industry, particularly in the beginning.

Potential for improvement identified:

- Develop better award criteria to enhance credibility
- Expand scope, potentially to commercial buildings
- Shorter intervals of calls for projects – or introduce continuous process
- Improve design of selection process, e.g. through better alignment with the main target of the policy and stronger focus on quality in eligibility and selection criteria; better criteria will improve the acceptance of the scheme
- Improve communication and transparency on the use of funds, e.g. “first come, first served” is not the approach anymore which is still not known broadly; also the technical details are not yet well known by public



- Establishing a feedback platform would be helpful to further expand the application and to improve acceptance
- Exclude support for fossil energy sources as single measures (e.g. for gas meter only in combination with a renewable solution)
- Financial products require further development

#### Bulgaria, Business Stakeholder Workshop held on 7-8 April 2021

On the topic of energy renovation and smart cities:

- In Bulgaria, the state grant for energy renovation of multi-family buildings provides funding at a 100%-rate which makes the citizens passive actors, typically not seeking other opportunities for deep renovation and for more funding of ambitious measures. It would be a mistake that in the new programming period, again a 100% is granted to all households without differentiation.
- Need for development of One Stop Shops for energy renovation services in the municipalities in which all local actors are represented (incl. businesses).
- The current Energy Renovation programme does not have EP mechanism. It aims at C-class of energy efficiency of the building and thus does not call for ambitious measures.
- There should be investment in the new buildings as well so that they can become near zero or energy positive. Currently, even in the new buildings in Bulgaria, there are not innovative energy solutions that may help it be energy independent.
- Cities need to be a stage for more ambitious projects. This is lacking in Bulgaria.
- There is a need for energy positive zones and buildings, smart cities, smart installations and buildings.
- The understanding of energy efficiency gets limited to the infrastructural projects only – putting insulation and changing windows. There are no smart solutions as energy management or smart heating services. This creates an attitude of neglect in the citizens and they say “Is this your energy efficiency? Insulation and windows?”
- The EU framework may support us to impose some mandatory measures such as energy management, renewable energy for heating, photovoltaics, geothermal energy, etc. Through these a better and more innovative refurbishment of the buildings may happen. The municipalities are a medium for innovation development through public finance and this public finance may be put to very good use.

#### Cyprus, Business Stakeholder Workshop held on 15-16 June 2020

- Municipalities and local authorities should be actively involved and drive Energy efficiency within the community. Strategies and policies for the tourism and transport sector are needed and should be implemented effectively. Education programs considering environmental protection and energy efficiency for all ages are important to bring forward changes.
- Image / marketing factor of energy efficiency / ecotourism has a lot of potential but is still underdeveloped
- Capacity building on all levels is a big problem, both for managers developing the concepts and business models and for staff dealing with appliances etc.
- So far few incentives / policy requirements in place which directly foster changes on qualification



- Key relation between skills / qualification and narratives: no narrative => no change driver; no successful examples => no narrative which further people can follow; no skills / qualification => no convincing performance / change agent

#### Italy, Business Stakeholder Workshop held on 27-28 April 2020

- Negative narrative in the building sector: low skills with builders => makes builders themselves often do not promote them. If they do, clients are sceptic / hesitant as they fear to get bad quality for a high price => lock-in of conventional way of construction / renovation
- How to break this vicious cycle of low training? Needs to be beaten by facts to convince clients
- Create best practice / strengthen innovative approaches and show case them

#### Ireland, Business Stakeholder Workshop held on 6 May 2020

- Typical problem in building sector: poor skills on proper insulation of walls, especially in older buildings / discussions whether sealing or infiltration is better.
- belief-based building techniques (we've always done it this way) are predominant
- No proper guidance on what is right or wrong
- Massive difficulty to get right expertise for right job
- Not supported at right pace by qualification and training measures
- Has negative impact on narrative: builders set the story based on their way of doing it
- Self-fulfilling: if clients insist on ambitious EE renovation, they are running a risk to get poor quality => low trust

#### Germany, Business Stakeholder Workshop held on 28 January 2020

- Traditionally: building sector is characterised by separate crafts needing to collaborate (brick layers, carpenters, plumbers, electricians...)
- Most of them are SMEs with little to no ability to form larger, more comprehensive businesses
- Little to no room for expanding / updating traditional skill set
- => slow pace of change, risk of losing competitiveness / missing new market opportunities
- Renovation wave and other aspects of the energy transition require integral view on buildings and technical equipment => need for integrated services, comprehensive understanding and according technical skills to install / implement best available technology
- Strong impact on narrative: if client demand not met, trust will be lost / if innovation takes place, good examples will further popularise EE / the energy transition
- => needs political attention and concrete measures



## 9. Communicate on price effects and social compensation

### Narrative summary

The political feasibility of the green economy transformation depends above all on the acceptance by society. A socially balanced distribution of its costs and benefits and complementary social policies are essential, especially to ensure the acceptance of carbon pricing as the central instrument on the EU-level to mitigate carbon emissions.

Carbon prices can be expected to increase significantly over the coming years. Increasing electricity and fuel prices will be challenging for vulnerable households and will need to be addressed by social policies. Enabling vulnerable households to lower their energy use is another elemental lever to counteract the carbon-price-induced increase of energy prices. Smart and effective energy efficiency measures will need to be supported and can play an important role to reduce the impact of rising carbon prices on households' income.

From the narrative angle, particular attention must be paid to the aspect of transparency. Social compensation mechanisms structurally face the risk that – due to the complex composition and externally driven volatility of energy prices – end consumers may not be able to judge to which extent they are compensated, and for which part of excess cost. First opinion polls and studies, e.g. from Switzerland, suggest that even though for lower income households compensation outweighs the extra burden of the CO<sub>2</sub>-tax, end customers perceive being negatively affected.

To make compensation mechanisms work, they need to be accompanied by comprehensive and illustrative information on the price effect of the CO<sub>2</sub>-tax and the directly related redistribution. Such narrative element needs to be an essential part of any CO<sub>2</sub> price and compensation policy package to ensure its success.

### Case & Evidence

Business stakeholder workshops in Bulgaria and France alluded that energy poverty is a central issue for vulnerable households that needs to be addressed, also relating to matters of social housing, affordable energy renovations and financial tools for thermal renovation of houses and condominiums. In addition, significant discrepancies between rural and urban populations have been conveyed regarding perceptions of affordability and environmental considerations of mobility.

With the protests of the “yellow vests” movement, the *gilets jaunes* in France and beyond from 2018 onwards, the argument that vulnerable households are particularly affected by rising carbon prices as they spend a higher share of their income for energy gained prominence. A detailed analysis of the distributional impact of carbon pricing, however, shows that such accounts are often simplistic and predominantly unsupported by facts. To the contrary, in many cases carbon pricing can reduce the gap between rich and poor, as shown by a meta-study led by the Mercator Research Institute on Global Commons and Climate Change (MCC) in cooperation with the German Institute for Economic Research (DIW).<sup>30</sup>

In Germany, the introduction of a national emissions trading system in 2021 has been highly influenced by the *gilets jaunes* debate in France. Keeping the national carbon pricing socially fair has been a key priority of the government leading to strong social compensation accompanying the launch of the scheme via a decrease of the renewable energy levy and a raise of the commuter tax relief.

### Functioning principle and rationale

Designing and communicating transformation policies in line with social justice and ensuring a

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<sup>30</sup> Ohlendorf, N., Jakob, M., Minx, J., Schröder, C., Steckel, J., 2020, Distributional Impacts of Carbon Pricing, Environmental and Resource Economics. Available at: <https://doi.org/10.1007/s10640-020-00521-1>

fair distribution of costs and benefits is essential for bringing the green economy transformation to success. As carbon prices will continue to increase in order to achieve climate targets, vulnerable households need to be protected and enabled to lower their energy use and hence their exposure to higher carbon prices.

In many countries, discourse on carbon pricing is typically hindered by the perception that market-based climate protection via increasing carbon prices is socially unfair per se. This argument is in particular cultivated by representatives of fossil-fuel industries because the profitability of their investments decreases with more ambitious climate policy and rising carbon prices.

The willingness to accept a certain carbon price depends to a large extent on political, economic and cultural convictions as well as on trust in institutionalised politics. For example, citizens in Germany and China are more willing to pay a higher carbon price if they have a higher level of education.<sup>31</sup>

For the success of the green energy transformation it is essential that rising carbon prices do not contribute to increasing inequality in the industrialised nations. The current design of carbon pricing schemes, e.g. in the EU and Germany, does not include effective mechanisms to compensate citizens for the additional burden on their income. For the acceptance of rising carbon prices, it will, however, be important that citizens associate compensation mechanisms and the according benefits directly with the carbon pricing scheme.

The introduction of a national carbon price in Germany was accompanied by effective compensatory measures which, however, will not be associated with the carbon pricing scheme as carbon prices increase. To compensate the additional financial burden of carbon prices for households, the German government announced the decrease of the renewable energy levy and a raise of the commuter tax relief. It has been found that the German approach succeeds to compensate the distributional impact of the national carbon pricing scheme.<sup>32</sup> Still, it is to be expected that there will be no positive impact regarding the acceptance of increasing carbon prices from the complementary social policies as those are not directly associated to the national carbon pricing scheme.

It is essential to ensure acceptance that households will not perceive carbon pricing as another constantly increasing tax. Citizens need to feel that carbon pricing is intended not only for the benefit of the climate but also for their individual advantage. This can only be achieved through an effective and transparent compensation mechanism directly associated to the carbon pricing scheme, e.g. in the form of an annual payment cheque to citizens with a *carbon pricing bonus* for the redistribution of the carbon pricing revenues.

Communication that emphasizes the advantages of carbon pricing is essential for the political acceptance of carbon prices. The annually recurring payment cheques are an excellent occasion for explaining the reasons of carbon pricing and the source of the annual payments to the citizens. It should be highlighted that rising carbon prices are good deal as this will increase the annual cheques.

## Policy implications

The acceptance and a socially balanced distribution of costs is essential for carbon prices which are the central instrument to avoid carbon emission on the EU-level. It is advisable to be transparent on how income generated from carbon pricing is used and to compensate vulnerable households to raise acceptance. Transparency can be achieved by earmarking the income for specific purposes, a transparent tax policy or with an annual check for the compensation payment to each citizen. Providing vulnerable households with the necessary infrastructure and information

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<sup>31</sup> Ohlendorf, N., Jakob, M., Minx, J., Schröder, C., Steckel, J., 2020, Distributional Impacts of Carbon Pricing, Environmental and Resource Economics. Available at: <https://doi.org/10.1007/s10640-020-00521-1>

<sup>32</sup> MCC (2020). Carbon Pricing - Das deutsche Klima-Finanzpaket. Available at: <https://blog.mcc-berlin.net/post/article/das-deutsche-klima-finanzpaket.html>

is another important element to improve transparency on their energy use, carbon impact and resulting costs, e.g. through comprehensive and accessible information smart meters and energy bills. To maintain social and political acceptance, carbon pricing should be complemented by policies for social compensation at EU and national level.

Another lever to assure the acceptance of carbon prices is to reduce the energy use of households. Providing support and guidance for implementing smart and effective energy efficiency measures reduces the impact of rising carbon prices on household's income. Measures such as energy-efficient social housing and support for energy-saving retrofits provide long-lasting solutions for vulnerable households as they permanently lower energy bills. Addressing the landlord-tenant dilemma is another important element to align incentives for the implementation of energy efficiency to decrease energy costs and thus the impact of carbon prices.

## Context and transferability

### EU context

To ensure acceptance for rising carbon prices on EU level, revenues should flow back to EU citizens. The income from carbon pricing or a particular share could be passed on to Member States earmarked for social policies and/or energy efficiency measures for vulnerable households. Poland's proposal to create an Energy Solidarity Fund to support programmes that decrease the energy expenses of vulnerable households shows one possible approach for implementation. Earmarking the revenues from carbon pricing for annual payments to citizens, to be paid via Member States, are another option to ensure acceptance.

### Transferability across Member States

Social protection systems play an important role on national level in mitigating the impact of energy costs on vulnerable households. Social benefits such as unemployment benefits and minimum income schemes tackle energy costs indirectly by increasing the disposable income of vulnerable households. Direct support to decrease the energy costs can be provided through energy bill subsidies and reduced tariffs. National policies and social programmes are another instrument to address rising energy and fuel costs taking account the varying exposure of vulnerable households compared to wealthier income groups. An advisable option to ensure the acceptance are annual checks to return carbon pricing income to citizens.

## Annex – selected input collected in Energy Efficiency Watch 4

### France – Business Stakeholder Workshop held on 08.06.2021 – selected points:<sup>33</sup>

- **Energy poverty** is regarded as one of the central issues in France. The cost issue needs to be addressed, especially with regards to the needs of low-income households. This includes matters of social housing, affordable energy renovations and financial tools for thermal renovation of houses and condominiums. Affordability and environmental considerations of mobility is another topic area with big discrepancies between rural and urban populations.
- There is a need to aggregate multifamily houses for upscaling energy renovations and to develop approaches on how to organise these on the level of regions.
- **Stimulating behavioural change** is seen as a further component of addressing energy poverty. Positive compensation of the individuals should be a focus, as well as developing attractive attributes and a corresponding image of energy efficiency solutions, e.g. with regards to smartness.
- **Trust** must be regained since the old narrative of the savings paying for the costs did not (always) deliver, participants found. Consequently, support of the economic actors of energy efficiency and for related policies was lost. The mainstream discussion focuses on deep renovation and technical issues, but the **financial perspective** is not a focus and therefore needs to be followed up upon in the discussion.
- **A just transition must be guaranteed:** the question of who will be paying (e.g. for renovations of residential buildings, necessary infrastructure like hydrogen pipelines etc.) needs to be solved and communicated. Funding in the framework of the Green Deal and Covid-19 recovery will play a key role.
- The **job impact** of energy efficiency needs to be better communicated. Creating educational and transformational jobs, educating pupils on the energy transition and energy efficiency issues, convincing young people to choose related professions, and developing new jobs (e.g. mechatronics, craftsmen) is key.

### Bulgaria – Business Stakeholder Workshop held on 7/8.04.2020 – selected points:<sup>34</sup>

#### Energy poverty (EP)

- Stakeholders asked for legislative and regulatory changes to accommodate the Energy Poverty definition
- The EP definition needs to be set on four criteria: income, energy price, building status, energy consumption behaviour.
- The definition may need in-depth study of the underlying EP factors and may turn out to be very fluid.
- First step to alleviate EP should be to develop a definition. The second step would be to develop new energy efficiency policies which in Bulgarian can be summarised in three categories: 1/ energy efficiency, establishing actions and measures for funding opportunities; 2/ mechanisms for informing the EP households about the process of liberalisation of the electricity market; 3/ measures for encouraging rational energy behaviour aimed at saving energy.

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<sup>33</sup> Event Report: EEW Business Stakeholder Workshop France\_Event Report.docx

<sup>34</sup> Event Report: EEW Business Stakeholder Workshop Bulgaria\_Event Report.docx



- The EP definition will allow for the development and establishment of mechanisms and policies for effective public spending and triggering energy responsible behaviours with a focus on the energy poor families.
- Example/proposal: if there is an EP definition, then it will allow for segmentation of the EP households so that they may get their renovation funded by the state at 100% whereas non-EP households may have to co-fund it at 50%
- Low-income households mostly live in single/multiple family houses are not aware of energy efficiency aspects (heating system with potential for improvement); need to reach out actively to them.
- Program run by Social Affairs Ministry (winter energy package, voucher for energy bills) didn't include behaviour changes.
- Good example: in the Plovdiv region, EAP and local businesses conduct EP campaign by providing energy saving equipment for EP households. The campaign can cover only about 100 households per season, but has a leverage factor of 3-4 times the initial investment, whereas the national policy does not have energy, environmental or financial effect. It only funds the energy bills of the applicants and thus does not motivate them to change their energy behaviour.

#### Energy renovation and smart cities

- In Bulgaria, the state grant for energy renovation of multi-family buildings provides funding at a 100%-rate which makes the citizens passive actors, typically not seeking other opportunities for deep renovation and for more funding of ambitious measures. It would be a mistake that in the new programming period, again a 100% is granted to all households without differentiation.
- Need for development of One Stop Shops for energy renovation services in the municipalities in which all local actors are represented (incl. businesses).
- The current Energy Renovation programme does not have EP mechanism. It aims at C-class of energy efficiency of the building and thus does not call for ambitious measures.
- There should be investment in the new buildings as well so that they can become near zero or energy positive. Currently, even in the new buildings in Bulgaria, there are not innovative energy solutions that may help it be energy independent.
- Cities need to be a stage for more ambitious projects. This is lacking in Bulgaria.
- There is a need for energy positive zones and buildings, smart cities, smart installations and buildings.
- The understanding of energy efficiency gets limited to the infrastructural projects only – putting insulation and changing windows. There are no smart solutions as energy management or smart heating services. This creates an attitude of neglect in the citizens and they say “Is this your energy efficiency? Insulation and windows?”
- The EU framework may support us to impose some mandatory measures such as energy management, renewable energy for heating, photovoltaics, geothermal energy, etc. Through these a better and more innovative refurbishment of the buildings may happen. The municipalities are a medium for innovation development through public finance and this public finance may be put to very good use.

## 10. 'Just Transition'

## Narrative summary

The term 'just transition' has become very prominent in the political debate across all member states from the moment when it became obvious that decarbonization until mid of the century was an inevitable political necessity and would have to be enforced. 'Just transition', as a short and catchy slogan, comprises in fact a broad range of associations and statements, which are all closely related with societal acceptance. The emphasis in the public debate that is laid on the term 'just' explains by historical experience of (often suddenly felt) structural change without social backing, occurring in numerous western European countries between the late 1970s and the early 1990s, and sharp structural breaks in eastern European countries after 1989. The impacts of these structural changes affected large parts of the respective populations and are often collectively remembered as painful and sometimes traumatic, leading to an emotional tone in the debate. Despite the validity of such experiences, they may create misleading narratives on the concept of transition.

1) Transition is inseparable from any economic action, so there is no 'opt-in' or 'opt-out' decision. 'Just' transition may be misunderstood in the way of a choice to be made: either you promise the transition will be 'just', or we will opt out. Against a tight timeframe for decarbonization, also the above order is problematic: first, financial compensation is to be promised, then societal consensus about decarbonization can follow.

2) The term 'just transition' may suggest that, without explicitly adding 'just', the transition would necessarily be unjust. It may thus downplay the compensatory effects (i.e. creation of new jobs and economic perspectives) and result in structurally exaggerated, upfront claims for compensation without a clear analysis of particular needs.

3) Whilst the problematic experience dominates the collective memory, on a macro level the transition processes of past decades have generated valuable insights on how to be well prepared and take adequate pro-active measures to avoid ruptures and actually outweigh them by opportunities. This is a big asset for future transformation processes.

Therefore, the debate around the 'just transition' should cautiously establish a narrative asking for acceptance of change and motivating for individual responsibility to take the opportunities of the green energy transformation. Assets of the change must be highlighted better: e.g. industrial regions affected by structural change tend to have good transport infrastructures and experienced workforce. If well managed, those can provide a promising market environment for new business development that will not heavily depend on social transfer. Justice must also be interpreted as inter-generational, i.e. the next generation will be burdened inappropriately if no action is taken now. The new narrative allows to frame adaption to something new in an environment of change as a strength and elemental contribution to achieve the green economy transformation. It illustrates the huge historical experience of various regions in Europe in managing structural change, which proves that the EU is globally well-positioned to navigate successfully through the green economy transformation.

## Case & Evidence

Economic policy in various countries in Europe has been historically characterized by protectionist elements with the objective of preserving jobs in economic sectors in decline. In the EU's industrialised societies, a static production and economy had traditionally been perceived as being robust and powerful.

Historical evidence, however, has proven that delaying structural change will lead to a negative job effect as observed in the hard coal and lignite extraction industry, e.g. in Belgium, the United Kingdom, the Netherlands and Germany. A rule of thumb based on the experience with structural change condenses the learnings: "one year of non-acting implies three years of pain"<sup>35</sup>. Today it is widely recognised that dynamic and adaptable economies tend to be economically successful.

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<sup>35</sup> Evidence to be identified

A new narrative needs to be established to prepare society that the green transformation is a huge task necessary to preserve our current way of living that can only be achieved if sectors in decline and its workers will take responsibility and chances offered by the new green economy. Narrative elements for the context of the Just Transition provide the foundation for this case study and have been developed during the Business Stakeholder Workshop in Bulgaria. The Just Transition has also been discussed with French Business Stakeholders. The documentation of the statements is attached in the annex of this case study.

### Functioning principle and rationale

The Just Transition narrative is used to communicate social policies with the objective of avoiding social imbalances in relation with the green economy transformation. It could, however, be argued that the Just Transition narrative is counterproductive.

Talking about “Just” Transition raises expectation that there will be no social imbalances during the green economy transformation, a transformative process that will impact all sectors of the economy for the next decades. The ongoing political and societal debate on how to achieve Just Transition delays necessary measures that need to be implemented to comply with the 1.5°C-target from the Paris Agreement. To proceed in the discussion on urgently necessary and effective climate protection measures in line with the Paris Agreement, it needs to be explained that it will be difficult to avoid discontent among all groups of society during the next decades of profound changes in all economic sectors implementing the green economy transformation. Accordingly, societies and policy-makers will inevitably have to choose whether they will be consequent in protecting workers in industries that need to decline or whether they want to take the necessary action to avoid the negative consequences of climate change.

Society needs to be prepared that our past and ongoing emissions have initiated a change that urgently needs to be dealt with. Emissions from fossil fuels and postponed action against climate change are the primary driver of job losses and social imbalances not structural change. The objective of a Just Transition will be achieved best if societal consensus will be reached that emissions must decline as soon as possible accepting that a broad transformative process implies change, possibly also with negative impact on particular industries and its workers but certainly with a future-proof long-term perspective.

Doubts about predominantly negative aspects of the green energy transformation are in no relation with chances for economic development and the extensive positive experience that has been made in EU Member States with successful structural change accompanied with supportive social policies.

Structural change typically occurs in geographic areas that used to be economic powerhouses with well-established infrastructure, e.g. a high-capacity electricity grid, well-connected transportation route as well as affordable space for commercial and industrial development. Often work force with high shares of skilled labour is available as an additional locational factor, altogether providing a gifted market environment for developing new ideas and businesses.

New jobs are being created by the green energy transformation every day. Renewables, which represent only one flourishing industry that has emerged with the green energy transition, have already created 11.5 million jobs worldwide with 500.000 additional jobs being created each year.<sup>36</sup> New industries will arise in addition to renewables with numerous jobs and new opportunities opening up.

This new narrative stimulates individual responsibility of both, regions in structural change and its workers, and allows to frame adaption to something new in an environment of change as a strength and elemental contribution to achieve the green economy transformation to avoid climate change and protect our future generation. It builds on today’s broadly accepted perception that

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<sup>36</sup> IRENA (2020). Renewable Energy and Jobs – Annual Review 2020. Available at: <https://www.irena.org/publications/2020/Sep/Renewable-Energy-and-Jobs-Annual-Review-2020>

adaptive and dynamic economies and companies tend to be successful and robust in their business strategy. Becoming an active driver of the green energy transformation allows for a positive framing of changes as progressive and forward-looking instead of something that is imposed by external forces. Establishing this progressive and positive future image instead of raising fears and preventing change is key to establish acceptance for structural change and the green energy transformation.

### **Policy implications & Transferability**

Just Transition implies the design of policies that avoid shifting the burden of the transformative process to prevent climate change onto social groups and milieus. Social policies to avoid negative impacts on particular groups of society should become part of a formalized policy design process for each transformative policy in the context of the green economy transformation.

In the communication of transformative policies, however, the component of transformative policies addressing social imbalances should not be in focus. Instead, policy makers should aim for illustrating the new chances offered by each policy associated with the green energy transition as tangible and anecdotic as possible to assure that societal groups negatively impacted by transformation will grasp their opportunities.

Also in ongoing transition processes, the front-runner narrative (EEW4 1. Case Study: 'It is beneficial to be a front-runner') can serve to over-write fear of loss by pride to be at the forefront of transformation. E.g. former mining areas diversifying their structure not necessarily lose their identity but can transform it into 'new energy region'.

#### **EU context**

On EU level, the topic of just transition is rather prominent in the political debate, mainly as its relevance for social peace is highlighted by numerous member states and stakeholder groups. Industrialized economies feel particularly vulnerable, also with respect to maintaining value chains and international competitiveness. For avoiding a 'race for compensation', an EU wide transformation pathway with clear perspectives for each member state needs to be developed, as envisaged in the EU Green Deal.

#### **Transferability across Member States**

Mutual learning and transfer of examples between member states is of relevance especially when sharing best practice on energy transition related projects leading to higher welfare in comparison with old industries. What should be avoided is a competition between member states about who expects to suffer most from the change and thus deserves the highest financial compensation. This must in anticipation be over-written by positive examples and according narratives.

## Annex – selected input collected in Energy Efficiency Watch 4

Bulgaria – Business Stakeholder Workshop held on 7/8.04.2020 – selected points:<sup>37</sup>

### Just transition

- Structural change and other specific circumstances of Eastern European areas have to be considered, transfer of experiences is needed.
- Coal is central to the Bulgarian society, the New Green Deal could be a chance, but a certain campaign is needed to convince citizens of this change
- Just transition funds cover three municipalities, where there are highly qualified people who are an asset for R&D and energy sector (away from coal); qualifications can be redirected to be also used in R&D sector
- Energy transition should be also based on innovation, not only investment, but innovation is typically riskier and harder to implement
- The local citizens are sensitive to the coal topic, because this has been their occupation for generations. Policymakers are trying to “play it safe” and avoid saying that these coal capacities need to be shut down and that preparations need to start now. Policymakers shy away from participating in debates on just transition; they do not want to start initiatives in this field because they believe it will give a negative sign for the future of these people. The debate is currently impossible to start and develop in a constructive way. The hopes are that the Green Deal may ease the strength on this process.
- The coal zones need to be revitalised and put to good use in the future – for example, with renewable energy capacities. There are possibilities for utilising waste from the coal pits, etc.
- There is a need for a larger campaign telling people what their future can be.
- Coal workers should not be afraid of the change, because they have strong educational background and long life experience in the energy sector and they should not be afraid that they will be unemployed as long as the state establishes other energy businesses and business environment to employ them. What the state plans to do remains to be seen, though.
- Energy businesses need to be involved in the just transition for these regions in Bulgaria, because people would rather trust actors with good practices and market experience behind their back rather than the political faces with promises.
- No matter what messages we send without the good example from the higher level, not only political, but also experts and social, the just transition may happen to be a painful process. So, examples must be given, practised and promoted. And to be generated.

### Research and innovation

- Transformations, including the energy transition as a transformative process, should be based on innovation.
- Bad example: the national procedure for innovative clusters – there was a call open twice and cancelled twice due to different reasons. This sent a bad signal towards the businesses that spent significant time preparing their applications.
- Due to lack of innovations in the companies/businesses, the economy is facing issues with limited competitiveness.

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<sup>37</sup> Event Report: EEW Business Stakeholder Workshop Bulgaria\_Event Report.docx

- Bulgaria lacks innovation structures (excellence centers, tech parks, etc.) and the Recovery Plan is a great way to address this.
- There should be a synergy between the businesses and the local communities in developing innovations, because the businesses may find their interests implemented only through the acceptance of the local communities.
- Nurturing the local business ecosystems and supporting them to grow into tech parks or similar ecosystems will improve their market competitiveness.
- Good practices for innovations are related to the existence of pilot projects. And in Bulgaria and Eastern EU Member States, there is a lack of understanding on political and administrative level for the need for pilot projects with the participation of businesses. Usually, this understanding is related to the universities and their lab prototypes. A recommendation would be to send out a message that more pilot projects are funded, through which adequate good practises are established and promoted.
- There is a strong need for infrastructure for research or for development of innovations and their market uptake. In Bulgaria, there is just one example – the HighTech park in Sofia. There was an idea that the Park is replicated in Plovdiv – where there are many universities, companies, clusters - but it did not receive support from the national level (although on local level there is some support).

France – Business Stakeholder Workshop held on 08.06.2021 – selected points:<sup>38</sup>

**A just transition must be guaranteed:** the question of who will be paying (e.g. for renovations of residential buildings, necessary infrastructure like hydrogen pipelines etc.) needs to be solved and communicated. Funding in the framework of the Green Deal and Covid-19 recovery will play a key role.

- The **job impact** of energy efficiency needs to be better communicated. Creating educational and transformational jobs, educating pupils on the energy transition and energy efficiency issues, convincing young people to choose related professions, and developing new jobs (e.g. mechatronics, craftsmen) is key. Energy efficiency and energy savings measures should be a focus of **education and training**.

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<sup>38</sup> Event Report: EEW Business Stakeholder Workshop France\_Event Report.docx