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Committee on Industry, Research and Energy

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DRAFT REPORT

on maximising the energy efficiency potential of the EU building stock
(2020/0000(INI))

Committee on Industry, Research and Energy

Rapporteur: Ciarán Cuffe

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MOTION FOR A EUROPEAN PARLIAMENT RESOLUTION

on maximising the energy efficiency potential of the EU building stock (2020/0000(INI))

The European Parliament,

– having regard to the Treaty on the Functioning of the European Union (TFEU), and in particular to Article 194 thereof,

– having regard to the European Pillar of Social Rights proclaimed by Parliament, the Council and the Commission at the Social Summit for Fair Jobs and Growth in Gothenburg on 17 November 2017,

– having regard to the Agreement adopted at the 21st Conference of the Parties to the United Nations Framework Convention on Climate Change (COP21) in Paris on 12 December 2015 (the Paris Agreement),

– having regard to the Commission communication of 11 December 2019 on the European Green Deal (COM(2019)0640),

– having regard to the Commission communication of 28 November 2018 entitled 'A Clean Planet for all – A European strategic long-term vision for a prosperous, modern, competitive and climate neutral economy' (COM(2018)0773),

– ***having regard to the Commission communication of 17 May 2018 entitled 'A Europe that protects: Clean air for all (COM(2018)0330),***

– having regard to the Commission communication of 10 March 2020 entitled 'A New Industrial Strategy for Europe' (COM(2020)0102),

– having regard to the Commission communication of 10 March 2020 entitled 'A new Circular Economy Action Plan - For a cleaner and more competitive Europe' (COM(2020)0098),

– having regard to the European Council conclusions of 12 December 2019,

– having regard to the Council conclusions of 25 June 2019 on the future of energy systems in the Energy Union to ensure the energy transition and the achievement of energy and climate objectives towards 2030 and beyond,

– having regard to Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, as amended by Directive (EU) 2018/2002 of the European Parliament and of the Council of 11 December 2018 amending Directive 2012/27/EU on energy efficiency[1],

– having regard to Directive 2010/31/EU of the European Parliament and of the Council

[1] OJ L 328, 21.12.2019, p. 210.

of 19 May 2010 on the energy performance of buildings, as amended by Directive (EU) 2018/844 of the European Parliament and of the Council of 30 May 2018 amending Directive 2010/31/EU on the energy performance of buildings and Directive 2012/27/EU on energy efficiency[2] ***and its requirements regarding the achievement of a healthy indoor environment,***

– having regard to Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources[3],

– having regard to Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU[4],

– having regard to Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity[5],

– having regard to Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC[6],

– having regard to Council Directive 2003/96/EC of 27 October 2003 restructuring the Community framework for the taxation of energy products and electricity[7],

– having regard to Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy[8],

– ***having regard to Directive 2008/50/EC of the of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe[9],***

– having regard to Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora[10],

– having regard to its resolution of 15 January 2020 on the European Green Deal[11],

– having regard to its resolution of 28 November 2019 on the climate and environment emergency[12],

– having regard to its resolution of 14 March 2019 on climate change – a European

[2] OJ L 156, 19.6.2018, p. 75.
[3] OJ L 328, 21.12.2018, p. 82.
[4] OJ L 158, 14.6.2019, p. 125.
[5] OJ L 158, 14.6.2019, p. 54.
[6] OJ L 88, 4.4.2011, p. 5.
[7] OJ L 283, 31.10.2003, p. 51.
[8] OJ L 327, 22.12.2000, p. 1.
[9] ***OJ L 152, 11.6.2008, p. 1.***
[10] OJ L 206, 22.7.1992, p. 7.
[11] Texts adopted, P9_TA(2020)0001.
[12] Texts adopted, P9_TA(2019)0078.

Commented [REHVA1]: REHVA would like to increase awareness on the indoor climate quality aspects when renovating the European building stock. Buildings are built for the people. The revised EPBD states to consider indoor climate quality improvements when developing LTRS-s. The renovation wave is the ultimate possibility to improve the health and comfort of people spending 90% of their time indoors. Indoor environment quality and energy performance improvements shall go hand in hand when deep energy renovation projects are implemented. Therefore, we added IEQ references to all possible points in the report.

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strategic long-term vision for a prosperous, modern, competitive and climate neutral economy in accordance with the Paris Agreement[13],

– ***having regard to its resolution of 13 March 2019 on a Europe that protects: Clean air for all[14],***

– having regard to its resolution of 25 October 2018 on the deployment of infrastructure for alternative fuels in the European Union: time to act![15],

– ***having regard to its resolution of 31 May 2018 on the implementation of the Ecodesign Directive[16],***

– having regard to its resolution of 6 February 2018 on accelerating clean energy innovation[17],

– having regard to its resolution of 13 September 2016 on Towards a New Energy Market Design[18],

– having regard to its resolution of 13 September 2016 on an EU Strategy on Heating and Cooling[19],

– ***having regard to the WHO guidelines for indoor air quality and complementary guidelines and standards from reputed European and global organisations,***

– having regard to Rule 54 of its Rules of Procedure,

– having regard to the report of the Committee on Industry, Research and Energy and the opinion of the Committee on the Environment, Public Health and Food Safety (A9-0000/2020),

A. whereas buildings are responsible for approximately 40 % of energy consumption and 36 % of CO_2 emissions in the EU;

B. whereas the World Health Organisation (WHO) estimates that people spend approximately 90% of their time indoors in residential and non-residential buildings;

Neighbourhoods and communities

1. Highlights the role of neighbourhoods and communities in integrated renovation programmes (IRPs) in order to achieve a climate-neutral building sector by 2050;

2. Demands that building policies be holistic and inclusive, include IRPs that integrate social services, mobility, industrial and energy functions of buildings, and enable on-site renewables production, ***good indoor environmental quality, continuous***

Commented [REHVA2]: There are many relevant guidelines from professional organisations on the topic of indoor air quality that could be referenced. Some important guidelines/standards are listed below:
1. Heath based ventilation guidelines (HealthVent project)
2. JRC report on Promoting healthy and highly energy performing buildings in the European Union
3. EN/ISO EN 16798–1 standard: Indoor environmental input parameters for design and assessment of energy performance of buildings addressing indoor air quality, thermal environment, lighting and acoustics
4.Other REHVA resources

[13] Texts adopted, P8_TA(2019)0217.
[14] ***Texts adopted, P8_TA(2019)0186.***
[15] Texts adopted, P8_TA(2018)0438.
[16] ***OJ C 76, 9.3.2020, p. 192.***
[17] OJ C 463, 21.12.2018, p.10.
[18] OJ C 204, 13.6.2018, p. 23.
[19] OJ C 204, 13.6.2018, p. 35.

performance improvement and demand-side flexibility***;***

3. Is concerned by the gentrification and ‘renoviction’ of neighbourhoods driven by investment capital interests, and by the rising numbers of citizens in energy poverty, gender disparity, and marginalisation; considers that a community approach in addition to safeguards at a regulatory level could reduce the level of destruction of existing communities;

4. Highlights the success of one-stop-shops, capacity building for municipalities, and the active involvement of local actors such as energy communities, consumer organisations and housing cooperatives;

5. Welcomes the European Green Deal proposal on platforms; stresses that they must be inclusive and gain consensus on the basis of community needs;

6. Calls for a policy to facilitate IRPs at community level providing for deep renovations; calls on the Commission to step up work on the Covenant of Mayors for Climate and Energy and the EU City Facility;

7. Calls on the Member States to prioritise marginalised communities when designing IRPs;

8. Calls on the Commission to immediately launch inclusive IRP platforms, accompanied by EU initiatives circulating best practices on the replicability of programmes, the dissemination of capacities, sector integration, and safeguards for communities in energy poverty;

Finance

9. Highlights that initial investment costs, complex finance schemes, split incentives, medium/long-term payback times, and a lack of a stable and ambitious policy framework act as significant barriers to investments;

10. Considers that more than EUR 75 billion a year in EU incentives is required to ensure an energy-efficient building stock by 2050;

11. Welcomes the available financing possibilities, Member States’ good practices using the EU emissions trading system (ETS) revenues blending, conditionality, and using EU regional funds as guarantees and revolving funds; stresses that there is the possibility to finance training under the Just Transition Fund;

12. Underlines the need to increase absorption rates of funds by removing barriers, especially through technical assistance;

13. Considers that all IRPs should set aside funds for marginalised citizens;

14. Acknowledges the role that new business models such as energy performance contracting and energy service companies can play in renovations;

15. Calls on the Commission to regularly revise energy efficiency targets upwards, propose binding minimum annual renovation rates for buildings and policy measures ensuring

Commented [REHVA3]: Buildings are complex systems themselves, made up of technical components which should work together to deliver performance at system or district level. Integration means also to ensure that the components operate together efficiently at system level, not only in reaction with the grid.

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deep renovations creating financial triggers and investment stability;

16. Calls for stepping up the capability of the European Local Energy Assistance (ELENA) facility and the European Investment Bank to give technical assistance to local authorities;

17. Calls on the Commission to revise EU State aid rules in order to foster IRPs;

Construction technologies and building materials

18. Highlights the need to decrease costs, speed up duration, effectivity, reliability and integration to increase IRPs through creating renovation markets, industrially produced, prefabricated elements, and to engage in serial and district renovations;

19. Underlines the importance of the energy efficiency first principle in decarbonising heating and cooling, electrification of residual demand through renewable energy combined with heat pumps or efficient district heating ***and cooling*** systems ***and integrated storage***, as well as in load management and flexibility; underlines the need to plan IRPs in order to achieve synergies;

20. Considers that energy-efficient buildings should be safe and sustainable, ***noting that energy efficiency should additionally aim to improve indoor environmental quality***; underlines the importance of embodied energy, sustainability in buildings, resource efficiency, and life-cycle approaches in line with the circular economy;

21. Calls on the Commission to further identify best practices for IRPs to also include heritage buildings, while ensuring real savings through verification;

22. Calls on the Member States to maximise the reuse, recycling, and recuperation of materials in their procurement strategies;

22. Calls on the Member States to maximise the reuse, recycling, and recuperation of materials in their procurement strategies;

Standards and skills

23. Underlines the importance of co-benefits with renovation requirements at trigger points; highlights that minimum energy performance standards (MEPS) for worst-performing rented buildings especially benefit occupants that are at risk of energy poverty.

23 a) Considers the performance assessment procedures described in the set of ISO/CEN EPB standards, referenced in the revised EPBD as important instrument to improve the energy efficiency of the European building stock in a transparent way;

24. Is convinced that the introduction of a building renovation passport to track continued improvement and to monitor renovation depth, energy performance ***and indoor environmental quality*** benefits for house owners, and building operators;

25. Calls on the Commission to launch an EU skills initiative in the renovation sector, which includes a gender dimension, in order to engage with stakeholders in retraining, upskilling and capacity building, with a focus on employment;

Commented [REHVA4]: District cooling and local storage technologies are equally important in this regard.

Commented [REHVA5]: REHVA would like to point out with disappointment the lack of reference to the set of EPBD related European standards in this report. We are convinced that the EPB standards are instrumental in improving the energy performance of the existing building stock and shall be considered as a major tool in the renovation wave. The European Parliament should support with all means the proper, ambitious, and transparent implementation of the EPB standards.

26. Calls on the Commission to release in-depth impact assessments of building, occupier and tenure typologies by 2022 for the introduction of MEPS for buildings;

Digitalisation

27. Considers digitalisation as an enabler for distributed generation, storage, flexibility and sector integration;

27 a) ***Recognises the need to digitise national EPC databases, and construction information to be available as BIM models moving towards a digital building passport. Recognises that standardised/replicable design, manufacturing and construction processes are necessary to achieve the 2050 renovation target.***

27 b) ***Recognises that digital technical monitoring of technical building systems can facilitate inspections, continuous commissioning and control to increase building energy efficiency and indoor environmental quality.***

28. Underlines that housing and consumer rights require social safeguards, data protection and consent;

Renovation wave

29. Views the renovation wave as an opportunity to achieve an energy-efficient and climate-neutral building stock by 2050 through an action plan for IRPs with a focus on communities, especially for those in energy poverty, and to provide healthy, decent, affordable and energy efficient buildings where people can reach their full potential in line with the European Green Deal;

29 a) ***Considers the renovation wave as an opportunity and necessity to improve indoor environmental quality (IEQ, human-centric lighting, indoor air quality, acoustic, thermal, and visual comfort) in buildings. Strongly recommends the consideration of harmonised legislative minimum requirements for indoor environmental quality;***

30. Highlights that the renovation wave may mitigate the impact of the COVID-19 crisis, by fostering high-quality jobs in the construction and renewable energy industries and supporting small and medium-sized enterprise (SME) workers;

31. Requires an ambitious implementation of the Clean Energy Package; underlines the role of national energy and climate plans (NECPs) in maximising opportunities in the building sector;

32. Welcomes the Member States' long-term renovation strategies (LTRSs) in setting out milestones towards the climate neutrality objective;

33. Welcomes the announcement made by the Commission to promote renovations in schools, hospitals and housing for those in need; yet highlights the challenge of addressing the large residential building stock;

Commented [REHVA6]: Digitalisation is much a wider trend not only energy distribution and grid related. Digitalisation is a major need and an ongoing transformation that is affecting the entire construction sector value chain from design to operation of buildings. The digital transformation should be accelerated for the renovation wave to be possible. REHVA recommends more attention on this aspect and calls for support to the much-needed digitisation and digitalisation process with appropriate policies.

Commented [REHVA7]: The most urgent need in terms of digitalisation is the digitisation of the national EPC databases and building data registers which often don't include numeric data, but pdf-files etc., thus they are not machine-readable documents. The same applies for the processes related to building construction and renovation permits. The volumes of the renovation wave are not procedurally possible if these processes will not be digitised and digitalised for having construction information presented as BIM models instead of pdf or paper drawings.

The renovation wave will need digitised, digitalised, and standardised design for both manufacturing and construction processes which should considerably improve the productivity, otherwise there will be a lack of workforce at all levels.

Commented [REHVA8]: Buildings are getting more and more complex and digitalisation changes the whole industry. Digital engineering can monitor quality and increase energy performance of European buildings. Digital technical monitoring, relying on data from building automation and control systems allow for cost effective, data-driven monitoring services. This will contribute to closing the gap between designed and in-use energy performance and significantly increase the energy efficiency potential of the European building stock.

Commented [REHVA9]: REHVA advocates support and a strong mandate for the EC to establish minimum IEQ requirements and indicators displayed in EPCs.
IAQ minimum requirements can also reduce COVID-19 type of virus spread in buildings by avoiding superspreading events in poorly ventilated and crowded spaces.

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34. Calls on the Commission to enshrine the renovation wave's measures into EU law and increase the 2030 climate and energy targets while ensuring that the renovation of buildings is integrated as a key policy to fill the gap in the 2030 targets;

36. Calls on the Commission to assess the LTRSs and issue recommendations to the Member States, which should revise their LTRSs every 5 years, to make sure that the objective of an efficient**,** climate neutral**,** ~~and~~ ***healthy and safe*** building stock by 2050 is met;

37. Calls for the inclusion of the building sector and related industries, especially SMEs, in recovery packages ***and notes the productivity gains associated with improvements in indoor environmental quality***;

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° °

38. Instructs its President to forward this resolution to all EU institutions and the Member States.

Commented [REHVA10]: The safe operation of building systems in terms of air quality and health is very important, the recent COVID-19 crisis just underlines this aspect.

EXPLANATORY STATEMENT

Now, more than ever, citizens require and deserve a healthy and safe place to call home. Investing in energy efficiency can deliver quality homes with lower energy bills. It can improve the health of our communities and reduce our contribution to climate change.

This report examines the potential of energy efficiency in buildings, and, in the context of the current crisis suggests that a European renovation wave could assist with an economic recovery by creating local jobs, upskilling workers, and creating resilient communities.

Buildings consume around 40%[20] of the EU's energy and are the single largest energy consumer in Europe. They emit 36%[21] of EU CO_2 emissions. Almost 75% of the building stock is energy inefficient, at the same time, only 0.4-1.2% of the building stock is renovated each year[22].

Renovation of existing buildings can lead to significant energy savings and could reduce the EU's total energy consumption by 26%[23] as well as achieve important co-benefits through integrated renovation programmes (IRPs). These include air quality improvements, emission reduction, lifting people out of energy poverty, cost savings, reduced import dependency, and more resilient energy systems.

Energy poverty affects millions of Europeans each year; 40 million Europeans cannot keep their home adequately warm in the winter[24], and 98 million Europeans cannot keep their home adequately cool in the summer[25]. Around 7 million Europeans receive disconnection notices

[20] European Commission
[21] European Commission
[22] European Commission
[23] Fraunhofer ISI
[24] EU-SILC, 2017
[25] EU-SILC, 2012

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per year[26], impacting on physical and mental health, particularly in the current crisis and confinement period, during which forced disconnections must stop. Targeted investment in worst performing buildings, especially on the rental market can assist people in vulnerable situations and energy poverty.

Investments in energy efficiency stimulate the economy, especially the construction and renewable energy industries, generating about 9% of Europe's GDP and directly accounting for 18 million direct jobs[27]. SMEs would benefit from a boosted renovation market, as they contribute more than 70% to the EU's building sector.

Furthermore, scaling up renovations to the level needed to achieve an 80% reduction in energy waste can create an additional 1.3 – 1.4 million direct local jobs[28]. This would provide a much-needed stimulus into the European economy, and lift people's spirits after the COVID-19 crisis.

The legislative framework adopted as part of the 'Clean Energy for all Europeans' package requires ambitious implementation at a Member State level. More action is needed to achieve the energy efficiency potential of the EU building stock and achieve climate neutrality at latest by 2050. Policy changes and supportive measures to launch integrated renovation programmes are needed to boost the energy performance of existing buildings. A tripling of current rates of renovation, a focus on deep renovations, as well as lifting national regulatory barriers that inhibit energy efficiency investment must be addressed in Member States long-term renovation strategies.

Energy efficient buildings can reduce energy poverty and carbon emissions. Targeted investment can assist the marginalised and the vulnerable and assist in reaching current EU climate targets.

The following areas are critical to the success of the creation of a renovation wave that will improve the lives of citizens, contribute to the quality of buildings, and help to achieve the EU's climate ambitions:

- **Neighbourhoods and communities**

Citizens must play the central role in the drive for energy efficiency. The European Commission's upcoming 'Renovation wave' initiative is part of the broader European Green Deal and can be significantly strengthened by actions at national, and critically, local level. Energy efficient buildings benefit all citizens; especially those at risk of energy poverty.

For this to succeed, best practices such as one-stop-shops for information, advice and financing, and as places to discuss specific community needs should be replicated in all Member States. Capacity buildings for municipalities, and the active involvement of local actors such as energy communities, housing cooperatives, local industries, and financial actors have also proven successful.

To this end, the proposed platforms on renovations are certainly a useful tool to develop inclusive community based integrated renovation programmes that can be replicated, scaled up

[26] ACER Market Monitoring Report 2015
[27] European Commission
[28] "How many Jobs?" and "Deep retrofit Hungary report"

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elsewhere, and help create value chains at local and regional level.

- **Finance**

Funding is key, and an annual expenditure of at least €75bn in EU financial incentives alone[29] is required to ensure that European buildings are sufficiently energy efficient by 2050. In this regard, the initiatives taken in some Member States such as *Energiesprong* in the Netherlands, the *New Greens Saving* initiative in the Czech Republic and district renovation schemes in Lithuania have been successful in funding renovations at a local level.

The Just Transition Fund and recovery packages can play a crucial role in financing the renovation wave. Existing instruments such as the European Cohesion Fund and European Regional Development Fund must continue funding energy efficiency and renewable energy programmes.
Take-up can be increased through technical and organisational support that reduces bureaucracy and through bundling projects together to attract funding. There is a role for enhanced funding for deep retrofits as mandated by the Energy Performance of Buildings Directive (EPBD).

Post-crisis investment in buildings and public infrastructure must be matched by investment in people, through upskilling tradespeople and professionals for the renovation wave.

- **Construction technologies and building materials**

Innovation will drive the renovation wave. New initiatives from energy service companies, citizen's energy communities and aggregators benefit consumers. New approaches to prefabrication and serial renovations reduce costs. Such approaches must be replicated and scaled up to reduce costs and create jobs.

As part of integrated renovations and for cost efficiency reasons it makes sense to address technologies allowing for flexibility and the installation of on-site renewable energy sources to cover residual energy demand at the same time as energy efficiency measures. Fixed quotas for renewable energy sources in buildings in line with potentials identified under the Renewable Energy Directive must be set to avoid additional disruption and costs and to achieve a climate neutral building stock.

The Commission's New Circular Economy Action Plan has highlighted the role of construction and building materials in generating over 35% of the EU's total waste. Recovery, recycling of building materials, a life-cycle assessment, and consideration of embodied energy must therefore be streamlined into EU legislation.

- **Standards and skills**

New skills benefit the renovation wave. This is an opportunity for much-needed local employment in regions and districts undergoing just transition. A European Skills Agenda is

[29] In accordance with calculations by the Buildings Performance Institute Europe (BPIE), Europe has app. 25 billion m^2 of floor space. Renovating 3% p.a. means renovating 750 million m^2 p.a. Deep renovation costs anywhere between 300 and 800 Euro/m^2, depending on local costs and the condition of the building. A subsidy of 100 Euro per renovated m^2 requires 75 billion Euros per year. 75 billion Euro/year for the next decade could support a deep renovation rate of 3%. This amount would support a deep renovation investment with 12 to 30%, in turn delivering at least 50% energy saving.

required, and should include a dedicated gender dimension to reap its full benefits. It should also combine existing funds with new possibilities under recovery packages and the Just Transition Fund.

The set of EPB standards developed by CEN under the Mandate 480 as referred in the revised EPBD 2018 describe the Energy Performance assessment procedures in a holistic way. Using these Energy Performance of Buildings assessment procedures described by this set of EPB standards throughout the EU will have a positive impact on the way energy efficiency measures are assessed. This, if properly implemented, will support the aligning of building performance assessment procedures in Europe via the use of these EPB standards. This will have a positive impact on the way energy relevant products, systems and services are awarded throughout Europe. This is expected to foster innovation by creating a level playing field for energy saving solutions and by improving the cost effectiveness of energy saving measures toward decarbonisation.

Simplified standards and clearer regulatory measures must be introduced across Member States. Minimum energy performance standards (MEPS) are essential to Europe's decarbonisation efforts. They have proven successful in the Netherlands, UK, and Belgium and tightened standards set out the pathway to 2050 climate neutrality in the building sector. If introduced at trigger points such as leasing or sale, they set a trajectory for the transition of each building segment over time, and enable policymakers to plan accompanying measures, technical assistance and financial support. They also give visibility and security to the market regarding the transformation of the existing building stock, and can help protect tenants against unhealthy buildings and high energy bills.

An in-depth study on creating a framework on progressively tightened MEPS for existing buildings, starting with worst performing buildings, would assist the renovation wave.

As per financial availability, building occupation and renovation strategies, renovations might have to be broken up into stages. The introduction of a building renovation passport as tool to track continued improvement and to monitor renovation depth and energy performance benefits house owners and building operators and should be made a requirement throughout the EU.

- **Digitalisation**

Digital technologies can increase the energy efficiency of a whole energy system and enable flexibility, sector integration and demand management. The emergence of the 'prosumer' if managed appropriately can empower citizens to be part of the energy transition and reap the benefits of participation in community energy projects or demand side flexibility. Smart meters and online applications increase energy efficiency and empower consumers, but regulatory safeguards are needed to protect housing and consumer rights.

The digital transformation in a necessity in the entire construction sector value chain, a prerequisite for implementing the renovation wave. Digitalisation will improve productivity and thus will enable execution of the renovation works under the conditions of limited workforce. To have necessary capacity, practically all processes need to be digitalised with the necessary digital tools developed. This applies for the entire design, manufacturing, construction and building operation processes, as well as for issuing and handling EPCs and building permit processes moving towards an integrated digital EPC and building passport.

Commented [REHVA11]: REHVA would like to point out with disappointment the lack of reference to the set of EPBD related European standards in this report. We are convinced that the EPB standards are instrumental in improving the energy performance of the existing building stock and shall be considered as a major tool in the renovation wave. The European Parliament should support with all means the proper, ambitious, and transparent implementation of the EPB standards.

Commented [REHVA12]: Given the fact that the EU has developed a set of building performance related standards, REHVA recommends specifying what the term standards means I this context. With reference to the above comment and statement, we recommend not to talk about standards in this general term without first referencing the actual EN standards that are ready to be used to improve buildings energy performance.

Commented [REHVA13]: Digitalisation is a major need and ongoing trend that is affecting the entire construction sector value chain. Digital transformation has massive implications on the envisaged renovation wave. REHVA recommends increasing attention on this aspect and calls for support for the much-needed digitisation and digitalisation process with appropriate policies.

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- **The renovation wave**

For the European Green Deal to be a success, a framework is needed to guide both Member States and companies, as well as encompass a social dimension. In order to help industries and people recover, create new jobs and be further improved after the crisis, integrated policies must consider important co-benefits of building renovation such as rebuilding community structures and lifting people out of energy poverty.

In addition, policies cannot rely on the sharing of best practices and presentation of action plans alone but must be accompanied by concrete legislation, dedicating finances and setting out intended targets. Critically, an upward revision of the energy and climate legislation, including MEPS and other tools empowering investors and communities to engage in integrated renovation programmes must be undertaken now, in order to guarantee that our building stock is climate neutral by 2050.

Complete and ambitious implementation of the Clean Energy Package is required, as well as an adoption of the 'energy efficiency first' principle when seeking to drive the renovation wave. Member States should fully recognise the potential of increased energy efficiency in the building sector in their national energy and climate plans (NECP) and review and update their long-term renovation strategies (LTRS) every five years. This can help ensure targets are consistently and realistically being met. Failing to enact such reviews would only result in shifting current climate responsibilities to future generations.

The rapporteur thanks all those that helped in providing input to this report and looks forward to the challenge ahead.

ANNEX: LIST OF ENTITIES OR PERSONS FROM WHOM THE RAPPORTEUR HAS RECEIVED INPUT

The following list is drawn up on a purely voluntary basis under the exclusive responsibility of the rapporteur. The rapporteur has received input from the following entities or persons in the preparation of the draft report:

Entity and/or person
Buildings Performance Institute Europe – BPIE
SolarPower Europe
European Alliance of Companies for Energy Efficiency in Buildings – EuroACE
Renovate Europe
WWF European Policy Office
Climate Action Network – CAN Europe
Tipperary Energy Agency
European electrical contracting sector – EuropeOn
Smart Energy Europe – SmartEn
Coalition for Energy Savings
Friends of the Earth Europe – FOEE
RightToEnergy Coalition
Rockwool
European Federation of National Organisations Working with the Homeless – FEANTSA
European Builders Confederation – EBC
Gas Reseau Distribution de France – GRDF
European Commission: DG ENER, DG CLIMA, DG GROW, DG REFORM
Regulatory Assistance Project – RAP
European Geothermal Energy Council – EGEC
European Mineral Wool Manufacturers Association – EURIMA
Saint Gobain
Euroheat and Power
European Climate Foundation – ECF
Housing Europe
European Alliance to Save Energy – EU-ASE
Joint Research Centre – JRC
European Consumer Organisation – BEUC
European federation of renewable energy cooperatives – Rescoop
Knauf Insulation
Fire Safe Europe – FSEU
Modern Building Alliance
Energy Cities
Covenant of Mayors
Eurogas

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