

EDF draft response to the EC “Renovation Wave” consultation, June 2020

<https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12376-Commission-Communication-Renovation-wave-initiative-for-the-building-sector/public-consultation>

Deadline: 9 July

1. In your view, what elements describe best a building renovation?

Please note that question 15 at the end of this survey offers you the opportunity to rate a detailed list of concrete technical solutions towards climate neutral and sustainable residential and non-residential buildings according to their importance.

at least 1 choice(s)

- Improving the energy performance of buildings by improving the energy efficiency of one or more building elements (including the building envelope – roof, windows, façade- , heating and air-conditioning systems, domestic hot water system, lighting, appliances, etc.), by optimal operation and maintenance, and by deploying renewables;
- Improving the preparedness for climate impacts, including climate-related events such as flooding, hail, windstorms, sea-level rise (e.g. carrying out structural reinforcement of buildings) or climate adaptation (e.g. improving response to higher summer temperatures);
- Improving the preparedness for events such as earthquakes and fires by carrying out structural reinforcement of buildings;
- Improving the sanitary conditions of dwellings by removing harmful substances, such as asbestos;
- **EDF response: Improving the usability of the building (including accessibility for persons with disabilities and elderly people), its market value and adapting to new uses;**
- Applying circular economy principles, such as reuse or high-quality recycling of construction materials, phasing out hazardous substances, ensuring building performance last longer to avoid numerous renovations, incorporate waste treatment and pollution prevention principles;
- All of the above;
- **EDF response: Other [up to 500 characters]**

Please specify:

500 character(s) maximum

EDF response: All of the above are part of renovation but when investing in renovation particularly the long-term usability and sustainability should be considered. Only looking at one aspect of sustainability is not enough, if money is invested now in making buildings more energy-efficient, they should also be made

more accessible. Otherwise resources are wasted if a second “renovation wave” has to be done in a few years to improve other aspects of the building, such as accessibility. It is more resource and time efficient to do both at the same time.

2. Barriers to building renovation that slow down the transformation of the existing building stock

2.1. For all buildings (residential and non-residential), please rate the barriers to renovation to improve building performance according to their importance.

- Very important
- Important
- Slightly important
- Not important at all
- No opinion

EDF note: Please note, only answers we consider as ‘very important’ are highlighted in this draft. In the survey, you will be required to rate all the points.

- Lack of or limited understanding of building renovation technology
- Lack of or limited trust in building renovation products and the benefits of renovation
- EDF response: Lack of or limited resource to finance building renovation
- Lack of interest because energy renovation does not pay off in an immediately evident way or it takes too long
- EDF response: Different interests between house owner and house occupant
- Disagreement between several owners (e.g. multi-apartment buildings)
- Physical inconvenience during renovation works
- EDF response: Difficulties in planning building renovation works, including obtaining permits required, obtaining financing, insurances, etc.
- Complexity related to managing separate contracts with architects, installers, etc.
- Lack of capacity of construction contractors to deliver technically and/or in time and/or to the expected level of quality (lack of skills, lack of staff, etc.)
- EDF response: Other [up to 500 characters]

Please specify:

500 character(s) maximum

EDF response: Barriers related to renovation for better accessibility and usability of buildings is that accessibility is not seen as a priority by (private and public) owners. It is still seen as “luxury” that not many people require while actually the demand for accessible buildings is very high. Considering that almost 100 Million persons with disabilities live in the EU plus the even greater number of older persons, which will increase in the coming years, accessibility must be a priority. Making buildings accessible from the beginning or as part of a bigger renovation project is less costly and should be routine procedure. Accessible buildings do not have any negative impact on persons without disabilities so why not make all buildings accessible? Other barriers are lack of public funding due to political unwillingness (after all CRPD

requires states to promote accessibility), and lack of legal compliance even when there are rules on built environment accessibility (here is a very recent example: <https://www.brusselstimes.com/all-news/belgium-all-news/118299/147-buildings-tested-for-accessibility-in-flanders-all-fail/>)

2.2. Would you like to rate a more detailed list of barriers to buildings renovation according to their importance?

- Yes, I would like to rate the barriers to renovate residential buildings in more detail [please move to 2.3 and 2.5].
- Yes, I would like to rate the barriers to renovate non-residential buildings in more detail [please move to 2.4 and 2.5].
- EDF Response: Yes, I would like to rate the barriers to renovate both residential and nonresidential buildings in more detail [please move to 2.3., 2.4 and 2.5].
- No, I proceed to the next section of the questionnaire [please move to section 3].

2.3. For residential buildings, please rate the following barriers to renovation to improve building performance according to their importance.

- Very important
- Important
- Slightly important
- Not important at all
- No opinion

EDF note: Please note, only answers we consider as 'very important' are highlighted in this draft. In the survey, you will be required to rate all the points.

- Insufficient understanding of energy use and savings related to different energy efficiency measures
- Lack of understanding/trust in the technologies and solutions on the market
- EDF response: Lack of trust or guarantee that renovation will deliver the energy and money savings or other benefits, lack of quality assurance
- Lack of interest – renovation to decrease energy consumption is not attractive for me, need for additional advantages
- Energy renovation does not pay off in an acceptable timeframe
- EDF response: The performance does not (sufficiently) impact the value of the building
- Low energy prices
- EDF response: Lack of information/low awareness of available public and/or private financing products for building renovation
- Lack of simple, attractive and accessible private financing products for renovation (e.g. loans)
- EDF response: Lack of simple, attractive and easily accessible public incentive measures for renovation (e.g. grants or tax incentives)
- Cumbersome procedures and/or financial constraints for accessing private financing (e.g. high collateral requirements)
- EDF response: Cumbersome procedures and/or financial constraints for accessing public financial support

- Fear of losing the renovation investment to natural or man-made disasters (e.g. climate-related events such as flooding, hail, windstorms, sea level rise, earthquakes)
- EDF: Different interests between house owner and house occupant
- Disagreement between several owners (e.g. multi-apartment buildings)
- EDF: Construction of new buildings regarded as a lower risk/more attractive than renovation
- Risks and uncertainties of renovation, e.g. cost increases due to discovery of hazardous materials Disturbance related to renovation works (physical inconvenience during works)
- Regulatory and administrative barriers and complexity in planning, including permits required, etc.
- Contracting difficulties of managing separate contracts with architects, installers and bridging potentially different interests
- EDF: Perceived lack of government support, unambitious policies
- Local/regional buildings codes hinder cost-effective renovation
- Lack of trust in the quality of building renovation products, technological and nature-based solutions
- Lack of capacity of construction contractors to deliver technically and/or in time and/or to the expected level of quality (lack of skills, lack of staff, etc.)
- Other [up to 500 characters]

Please specify:

500 character(s) maximum

2.4. For non-residential buildings such as offices, shops, hospitals, schools, please rate the following barriers to renovation to improve building performance according to their importance.

- Very important
- Important
- Slightly important
- Not important at all
- No opinion

EDF note: Please note, only answers we consider as 'very important' are highlighted in this draft. In the survey, you will be required to rate all the points.

- Insufficient information on energy use and savings related to different energy efficiency measures, never completed an energy audit
- EDF response: Lack of interest - Sustainability not a priority and thus public/private entities lacking or not allocating sufficient financial resources (equity, debt) for building renovation
- Energy renovation does not pay off in an acceptable timeframe
- The performance does not impact the value of the building
- Low energy prices
- EDF response: Different interests (owner-tenant) and ownership relationship (e.g. different budgets for investment and operations)

- EDF response: Investors perceive construction of new buildings as a lower risk/more attractive than renovation
- Technical complexity of comprehensive renovation
- Disturbances related to renovation works (disturbance to business operations, etc.)
- Regulatory and administrative barriers, planning and contracting difficulties, including permits required, separate contracts with installers, etc.
- EDF response: Perceived lack of government support, unambitious policies
- Lack of capacity of construction contractors to deliver technically and/or in time and/or to the expected level of quality (lack of skills, lack of staff, etc.)
- Lack of trust in the quality of building renovation products, technological and nature-based solutions
- Lack of information/knowledge/advice on financing building renovation
- EDF response: Lack of attractive and easily accessible financial incentives (loans, grants, tax incentives etc.)
- Lack of financing products for building renovation tied to the property rather than the user and reflecting the benefits of increased energy performance of the building
- Lack of mainstream financing products (such as energy efficiency mortgages) that offer also covering the building renovation costs in a single package
- EDF response: Low awareness of available public and private financial solutions for building renovation
- Insufficient access from public /private entities to Energy Performance Contracts
- EDF response: For publicly owned buildings: lack of funding
- Restrictive rules on procurement, annual budgeting and accounting
- Most cost-efficient measures (lowhanging fruits) already implemented => more complex and costly packages needed
- EDF response: Lack of staff in public/private entities with skills to deal with the renovation process (i.e. bundling or pooling a larger number of units, identifying legal, technical and contractual solutions, etc.).
- Other [up to 500 characters]

Please specify:

500 character(s) maximum

2.5. In case you have had any direct experience with the use of EU funds for building renovation, you are invited to share your experience.

- EDF response: I have direct experience with the use of EU funds for building renovation and would like to share specific issues encountered [up to 1000 characters].
- I have direct experience with the use of EU funds for building renovation, but I prefer not to share any specific issues encountered [please move to section 3].
- No direct experience with the use of EU funds for building renovation [please move to section 3].

Please specify:

1000 character(s) maximum

EDF response: We have no direct experience with the use of EU funds for building renovation, as we are not aware of specific EU funding for improving accessibility of buildings. Given that there is no EU legislation on accessibility of the built environment, lack of such financial instruments (or awareness of those) is not surprising. However, we are aware of EU funded transport infrastructure projects under the TEN-T Regulation with CEF funds. Even though TEN-T requires transport infrastructure under its scope to comply with the relevant requirements laid down in Union law on accessibility, this does not always ensure accessibility of infrastructure, given that there are big gaps in Union accessibility laws (e.g. Directive (EU) 2019/882 (EAA) leaves many aspects of transport and built environment uncovered), and there are no measures in place under TEN-T to monitor whether accessibility of new infrastructure is ensured. So, we see that even when creating new infrastructure with EU money, accessibility is still not guaranteed, which is unacceptable.

3. Facilitating mechanisms for mobilising building renovation

3.1. What are the key policies necessary to mobilise building renovation?

at least 1 choice(s)

- EDF response: Information and advice about all aspects of building renovation
- Implementation support for building renovation (e.g. one-stop shop)
- Simplification of administrative procedures
- EDF response: Increase in the availability of appropriate public incentives (grants or fiscal measures) for building renovation
- EDF response: Increase in the availability of attractive and easily accessible public financing
- EDF: Increase in the availability of attractive and easily accessible private financing
- Changes in energy taxation or carbon pricing to internalise the cost of greenhouse gas emissions
- EDF: Regulatory requirements for building renovation
- None of the above
- EDF: Other [up to 500 characters]

Please specify:

500 character(s) maximum

EDF: Clear requirements will drive building renovation in a more efficient way. There is urgent need for coherent EU rules on accessibility of buildings, to ensure a harmonised approach to accessibility and concrete action across the Union, making all new and existing public buildings, including public housing, accessible. There should also be incentives and quotas for private buildings. Strong EU legal requirements must be supported by robust funding and enforcement mechanisms.

3.2. Would you like to further rate a more detailed list of policies and measures to accelerate renovation to improve building performance according to their importance?

- EDF: Yes [please move to sub-sections 3.3, 3.4 and 3.5.]
- No, I proceed to the next section of the questionnaire [please move to section 4]

3.3. Please select those existing regulatory and administrative policies and measures which you think would be the most relevant to strengthen in order to accelerate renovation investments to lower energy consumption, or to achieve other performance improvements, in all building types (residential and nonresidential) and rate them accordingly.

- Very important
- Important
- Slightly important
- Not important at all
- No opinion

EDF note: Please note, only answers we consider as 'very important' are highlighted in this draft. In the survey, you will be required to rate all the points.

- Mandatory minimum energy performance requirements (whole building)
- Mandatory minimum energy performance requirements (building elements, technical building systems)
- EDF response: Mandatory minimum equipment requirements (e.g. building automation and control systems, renewable energy, charging stations, smart systems for selfconsumption)
- EDF: Mandatory inspection and audit schemes
- EDF: Mandatory follow up of inspections or energy audits, including as part of voluntary agreements
- EDF: Renovation targets, including as part of voluntary agreements
- Climate change adaptation targets
- Clean air objectives or air quality plans
- Materials reuse or recycling or recovery targets
- EDF: Improving accessibility for persons with disabilities and elderly people
- EDF: Other [up to 500 characters]

Please specify:

500 character(s) maximum

EDF: Improving accessibility should be a priority policy measure, supported by the other points highlighted above: mandatory minimum equipment should also include lifts, automatic and accessible doors, etc., audits should not only focus on energy but also on accessibility, the same is true for renovation targets. The upcoming European Standard on accessibility and usability of the built environment (EN17210) can be used to prove compliance with policy requirements.

3.4. Please select those existing financing tools which you think would be the most relevant to strengthen in order to accelerate renovation investments to lower energy consumption in all building types (residential and non-residential) and rate them accordingly:

- Very important
- Important
- Slightly important
- Not important at all
- No opinion

EDF note: Please note, only answers we consider as 'very important' are highlighted in this draft. In the survey, you will be required to rate all the points.

- EDF: Non-repayable rewards, such as national or regional public grants and subsidies
- EDF: Non-repayable rewards, such as EU grants and subsidies
- EDF: Debt and equity financing: loans/soft loans, revolving funds, green leasing, energy service agreements, Energy Performance Contracting, etc.
- Energy efficiency loans and/or mortgages offered by commercial banks
- EDF: A combination of public grants and finance mechanisms (loans, guarantees, etc.)
- EDF: Tax reductions and deductions for building renovation: income tax credit/deductions, property taxation (including local property taxation), lower VAT rates, etc.
- Innovative financing models for repaying the upfront investment, such as repayment of investments to the utility bill (on-bill financing), municipal bonds to finance renovation (on-tax financing), energy efficiency as a service model
- Innovative methods for raising funds, such as crowdfunding for energy efficiency, insurance for energy savings, etc.
- Use of revenues from the Emission Trading
- System (ETS) for building renovation programmes
- Indirect financial incentives e.g. lower insurance premiums for renovated resilient buildings
- EDF: Other [up to 500 characters]

Please specify:

500 character(s) maximum

EDF: All public funding from Member States and EU must set accessibility as award criteria. If a residential building or hospital is being renovated to improve its energy efficiency, accessibility of the building should be ensured as well. Otherwise, the building will become not usable for millions of people in the near future, given increasing numbers of persons with disabilities and older persons in Europe. Additionally, targeted funding for accessibility improvement would also be useful.

3.5. Please select those existing tools to enhance information, communication, technical assistance, as well as skills and knowledge which you think would be the most relevant to strengthen in order to accelerate renovation investments to lower energy consumption in all building types (residential and non-residential) and rate them accordingly:

- Very important
- Important

- Slightly important
- Not important at all
- No opinion

EDF note: Please note, only answers we consider as 'very important' are highlighted in this draft. In the survey, you will be required to rate all the points.

- Advice and assistance in legal, planning, technical, administrative and financing matters, implementation support to building owners and operators
- Specific "brokerage" of financing for building renovations
- Development of energy audits, information via energy performance certificates, energy labelling, informative metering and billing, etc.
- EDF: Enhanced knowledge on renovation benefits, including wider benefits such as health (indoor and ambient air quality), comfort, higher disposable income, preparedness to climate impact
- EDF: Up- and re-skilling of workers/staff through training or education, cooperation with education & training institutions to improve building performance
- Information on overall environmental performance of building materials and technical systems, including water efficiency, energy efficiency, presence /emission of hazardous chemicals, repairability/reusability/recyclability
- EDF: Other [up to 500 characters]

Please specify:

500 character(s) maximum

EDF: In order to ensure minimum harmonised requirements for accessibility across the EU, there should be raised awareness and use of upcoming European Standard on accessibility and usability of the built environment (EN17210), complemented by national rules and standards when those are more demanding and detailed.

4. Further policies and measures to boost building renovation rates and depth: how to increase demand and foster innovation

4.1. For residential buildings, please select policies and measures in terms of their effectiveness to achieve residential building transformation. Please rate them accordingly:

4.1.1. Regulatory and administrative tools

- Very important
- Important
- Slightly important
- Not important at all
- No opinion

EDF note: Please note, only answers we consider as 'very important' are highlighted in this draft. In the survey, you will be required to rate all the points.

- EDF: Mandatory renovation targets at the level of

- EDF: Member States, regions or cities and municipalities
- Targets for average performance of the residential stock Mandatory minimum energy performance requirements at transaction points, such as sale, rental, lease, refinancing, change in use, non-energy related renovations, etc.
- Requirements to implement cost-efficient renovation measures at transaction points, such as sale, rental, lease, refinancing, change in use, non-energy related renovations, etc.
- EDF: Housing laws to ensure that homeowners associations have easy and efficient decision-making procedures
- Measures to ensure building performance impacts the value of the building
- EDF: Measures to create incentives for building renovation instead of demolition and newbuilding
- Measures relevant to heritage conservation that include improvement to buildings' energy performance whilst respecting their heritage values
- Measures to bridge different interests on the rental markets between owners and tenants (occupants) of buildings and share the benefits of building renovation
- Ban on sale or use of fossil fuel heating systems by a certain date
- Planned replacement of fossil heating systems with renewables at transaction points, such as sale, rental, lease, refinancing, change in use, non-energy related renovation
- Binding air quality standards
- EDF: Other [up to 500 characters]

Please specify:

500 character(s) maximum

EDF: Sufficiently high quotas for accessible private and public housing stock should be mandatory in all EU Member States. New or renovated housing should be constructed to be accessible from the beginning. Accessibility is an asset to make housing "future-proof" in an ageing society and will increase its demand. Residents will be able to stay in their homes for longer and live more independently. Accessibility is essential for persons with disabilities and beneficial for larger society (e.g. step-free access to or lift in a building is vital for a wheelchair-user but also helpful for parents with strollers).

4.1.2. Economic instruments and financing

- Very important
- Important
- Slightly important
- Not important at all
- No opinion

EDF note: Please note, only answers we consider as 'very important' are highlighted in this draft. In the survey, you will be required to rate all the points.

- EDF: Attractive and easily accessible financing packages for building renovation combining different types of funds (EU and national, regional and local public

funds, and private funds), including in the context of the recovery plan after Covid-19

- EDF: Facilitating the access to financial products (grants, loans/soft loans, guarantees, mortgages, etc.) and to new business and financing models (energy communities, housing associations, etc.), including in the context of the recovery plan after Covid-19
- Deployment of attractive and easily accessible renovation lending products (unsecured loans) and/or enabling the mass scale property financing products (energy efficiency mortgages) to cover also the renovation costs at the same conditions by commercial banks
- EDF: Tax regimes and fiscal instruments to promote building renovation (e.g. tax incentives or targeted redistribution of local tax revenue)
- Energy taxation and/or carbon pricing reflecting the external costs of energy
- Standardisation of contracts and clauses in financing to reduce performance risk (loan standards for finance products, standard guarantee clauses, standardisation of contracts for local authorities, large property owners, etc.)
- Lower insurance premiums for renovated resilient buildings
- EDF: Other [up to 500 characters]

Please specify:

500 character(s) maximum

EDF: All above mentioned financial schemes and incentives must require meeting minimum accessibility requirements. Targeted funding aimed at improving accessibility would also be useful to make existing residential buildings accessible. It is important to highlight that the aim should be to make all buildings accessible, and not 'special' separate residents for persons with disabilities, as this would be violation of EU's human right obligations under the UN CRPD.

4.1.3. Technical assistance, aggregation and information and communication

- Very important
- Important
- Slightly important
- Not important at all
- No opinion

EDF note: Please note, only answers we consider as 'very important' are highlighted in this draft. In the survey, you will be required to rate all the points.

- EDF: One-stop shops for citizens as independent, transparent and accessible advisory tools to inform and assist efforts for building renovation and ease access to financing
- Mainstreaming the deployment of dedicated energy efficiency or renovation lending products (unsecured loans, mortgages) by commercial banks
- EDF: Bundling renovations by larger numbers of buildings: aggregation of projects and packaged solutions for joint planning, permitting, financing and contracting
- Facilitate public-private-community sector partnerships (e.g. energy communities)

- Information campaigns (e.g. enhanced role of energy agencies, schools, local authorities, etc.)
- Energy Performance Certificate/energy label databases to identify more clearly and prioritise potential for energy saving and pollution reduction and estimate costs
- EDF: Integrate environmental, social and governance performance criteria into investment decisions and procurement processes
- Other [up to 500 characters]

Please specify:

500 character(s) maximum

4.1.4. Skills and knowledge

- Very important
- Important
- Slightly important
- Not important at all
- No opinion

EDF note: Please note, only answers we consider as 'very important' are highlighted in this draft. In the survey, you will be required to rate all the points.

- EDF: Building skills, education and training: upskilling of architects and installers, engineers, heritage professionals and construction workforce and/or reskilling to energy, resource and water efficiency (including avoiding hazardous materials), pollutant emission reduction, building integrated and related renewable energy, resilience to climate change impacts, urban green and blue infrastructure, digitalisation and innovation, including in the context of the recovery plan after Covid-19
- EDF: Capacity building for public authorities at all levels (national, regional and local) and their mandated bodies to engage strongly with citizens for faster take up of home renovation
- Capacity building for commercial banks to increase the availability of dedicated energy efficiency or renovation lending products (unsecured loans, mortgages)
- EDF: Qualification and certification schemes for the construction workforce
- EDF: Other [up to 500 characters]

Please specify:

500 character(s) maximum

EDF: Building skills and capacity of public authorities and professionals should include expertise on accessibility. Only with comprehensive knowledge can the project be successful and not risk of wasting resources by neglecting accessibility during renovation. Accessibility must be done correctly by experts on the subject. Authorities must also have at least basic understanding of accessibility, its importance and ways to improve it during renovation.

4.2. For non-residential buildings, please select policies and measures in terms of their effectiveness to achieve non-residential building transformation. Please rate them accordingly.

4.2.1. Regulatory and administrative tools

- Very important
- Important
- Slightly important
- Not important at all
- No opinion

EDF note: Please note, only answers we consider as 'very important' are highlighted in this draft. In the survey, you will be required to rate all the points.

- EDF: Mandatory renovation targets at the level of Member States
- EDF: Ensure that adequate resources are allocated to the renovation of public buildings, e.g. in line with renovation targets
- EDF: Targets for average performance of the nonresidential stock
- Minimum energy performance requirements at transaction points, such as sale, rental, lease, refinancing, change in use, nonenergy related renovations, etc.
- Requirements for implementing costefficient energy measures at transaction points, such as sale, rental, lease, refinancing, change in use, non-energy related renovations, etc.
- Measures to ensure building performance impacts the value of the building
- Measures to bridge different interests on the rental markets between owners and tenants (occupants) of buildings and share the benefits of building renovation
- Measures to promote green walls and roofs and other measures supporting biodiversity
- Measures to promote rain harvesting and water re-use
- Ban on sale or use of fossil fuel heating systems by a certain date
- Inclusion of planned replacement of fossil heating systems with renewables at transaction points, such as sale, rental, lease, refinancing, change in use, nonenergy related renovation.
- Measures to create incentives for building renovation instead of demolition and newbuilding
- Binding air quality standards
- EDF: Other [up to 500 characters]

Please specify:

500 character(s) maximum

EDF: Same arguments as for residential buildings apply.

4.2.2. Economic instruments and financing

- Very important
- Important
- Slightly important

- Not important at all
- No opinion

EDF note: Please note, only answers we consider as 'very important' are highlighted in this draft. In the survey, you will be required to rate all the points.

- EDF: Attractive and easily accessible financial packages for building renovation combining different types of funds (EU and national, regional and local public funds, and private funds), including in the context of the recovery plan after Covid-19
- EDF: Facilitating the access to financial instruments (loans/soft loans, guarantees, mortgages, etc.) for energy performance contracting and to new business and financing models (energy communities, housing associations, etc.), including in the context of the recovery plan after Covid-19
- EDF: Tax regimes and fiscal instruments to promote building renovation (e.g. tax incentives)
- Lower insurance premiums for renovated resilient buildings
- Energy taxation and/or carbon pricing reflecting the external costs of energy
- Standardisation of contracts and clauses in financing to reduce performance risk (loan standards for finance products, standard guarantee clauses, standardisation of contracts for local authorities, large property owners, etc.)
- EDF: Other [up to 500 characters]

Please specify:

500 character(s) maximum

Same arguments as for residential buildings apply.

4.2.3 Technical assistance, aggregation and information and communication

- Very important
- Important
- Slightly important
- Not important at all
- No opinion

EDF note: Please note, only answers we consider as 'very important' are highlighted in this draft. In the survey, you will be required to rate all the points.

- EDF: One-stop shops for public authorities and businesses as independent, transparent and accessible advisory tools to inform and assist efforts for building renovation and ease access to financing
- Mainstreaming the deployment of dedicated energy efficiency or renovation lending products (unsecured loans, mortgages) by commercial banks
- EDF: Bundling renovations by larger numbers of buildings: aggregation of projects and packaged solutions for joint planning, procuring, permitting, financing and contracting
- Facilitate public-private-community sector partnerships (e.g. energy communities)

- Information campaigns (e.g. enhanced role of energy agencies, local authorities, etc.)
- Energy Performance Certificate/energy label databases to identify more clearly and prioritise potential for energy savings and pollution reduction and estimate costs
- EDF: Integrate environmental, social and governance performance criteria into investment decisions and procurement processes
- EDF: Other [up to 500 characters]

Please specify:

500 character(s) maximum

EDF: Same arguments as for residential buildings apply.

4.2.4. Skills and knowledge

- Very important
- Important
- Slightly important
- Not important at all
- No opinion

EDF note: Please note, only answers we consider as 'very important' are highlighted in this draft. In the survey, you will be required to rate all the points.

- EDF: Building skills, education and training: upskilling of architects and installers, engineers and construction workforce and /or reskilling to energy, resource and water efficiency (including avoiding hazardous materials), pollutant emission reduction, building integrated and related renewable energy, resilience to climate change impacts, urban green and blue infrastructure, digitalisation and innovation, including in the context of the recovery plan after Covid-19
- EDF: Capacity building for public authorities at all levels (national, regional, local) and their mandated bodies to structure large scale renovation programmes
- Capacity building for commercial banks to increase the availability of dedicated energy efficiency or renovation lending products (unsecured loans, mortgages)
- EDF: Other [up to 500 characters]

Please specify:

500 character(s) maximum

EDF: Same comment as above for private buildings

5. Building renovation in the context of post-Covid19 economic recovery

How do you see building renovation in the context of post-Covid19 economic recovery?

at most 2 choice(s)

- EDF: Building renovation is fundamental for economic recovery. It should be central to any recovery plans (EU, national, regional, local)

- Building renovation has a positive impact in the context of economic recovery. It should be part of recovery plans, but should not be prioritised over other economic activities
- Building renovation has a neutral impact in the context of economic recovery.
- Building renovation should not be part of recovery packages, but existing schemes should be kept
- EDF: Other [up to 500 characters]

Please specify:

500 character(s) maximum

EDF: Policy priorities and funding should continue increased focus on improving accessibility of buildings during post-Covid-19 recovery. Accessible infrastructure can in addition support public health measures: for example, automatic doors will ensure greater access for many persons with disabilities but also help reduce transmission of virus through door handle surfaces in case of coming pandemic waves.

6. Key enabling factors for supportive policymaking and delivering on building renovation

Please select the key enabling factors that can increase building renovation rate and depth. Please rate them accordingly.

- Very important
- Important
- Slightly important
- Not important at all
- No opinion

EDF note: Please note, only answers we consider as 'very important' are highlighted in this draft. In the survey, you will be required to rate all the points.

- EDF: Newly introduced obligation to set targets for mandatory renovation at the level of Member States, sectors, etc.
- EDF: Requirements to set roadmaps for building renovation (per building type, class, construction year, etc.)
- Mandatory energy audits for all buildings, or specific segments
- Mandatory follow up of improvements identified as part of inspections or energy audits or of recommendations included in energy performance certificates at transaction points, such as sale, rental, lease, refinancing, change in use, non-energy related renovations of buildings, etc.
- Simplification of administrative procedures related to building renovation at local and national levels
- Strengthen the requirement on public sector to lead by example (e.g. compulsory targets and adequate resources allocated to the renovation of public buildings)
- EDF: Support capacity building of public authorities and their mandated bodies to structure renovation programmes and foster uptake of successful examples
- Active engagement and interest of the private sector (Energy Service Companies, energy communities, housing associations, financing institutions and communities, etc.)

- Active involvement of public and private lenders and investors in development and roll out of attractive, accessible, mass-market financing products that include renovation costs without additional burden or additional collateral requirements
- EDF: Emphasis on building renovation in the context of the recovery plan after Covid-19
- Emphasis on building renovation in the context of efforts to adapt to climate impacts
- Link financial support to energy performance increase levels in terms of efficiency improvements and/or savings achieved, renewable energy increase
- Use of the EU taxonomy to identify sustainable energy efficiency investments and direct finance to such investments
- Facilitate easy combinations of public and private financing for renovation
- Ensure reliable, consistent and comparable building data: Energy Performance Certificates (EPC) and their extended use, possibly in combination with Building Renovation Passports; availability of EPC ratings and potential use of the certificates as reliable evidence for financial institutions
- Ensure reliable, consistent and comparable environmental sustainability information for building materials and technical systems
- Use of data and digitalisation for energy, resource and water efficiency and flexible renewable energy use in buildings, data-based energy management; enabling the consumers to be rewarded for efficient behaviour
- General awareness raising and media campaigns
- EDF: Targeted support to facilitate upskilling and/or reskilling of workers
- EDF: Targeted support to project development units and advisory services on building renovation and financing, investment platforms, etc.
- EDF: Capacity building, education and training for stakeholders not directly involved on-site (e.g. administration, managers, financial sector)
- Guarantees in terms of energy savings and/or money savings and/or reduced pollutant emissions and/or other benefits
- EDF: Other [up to 500 characters]

Please specify:

500 character(s) maximum

EDF: Same comment as above on capacity building and audits focussing on accessibility apply.

7. Tackling worst performing buildings and energy poverty

Please select from the following measures those which you find the most relevant to tackle the worst performing buildings. Please rate them accordingly.

- Very important
- Important
- Slightly important
- Not important at all
- No opinion

EDF note: Please note, only answers we consider as 'very important' are highlighted in this draft. In the survey, you will be required to rate all the points.

- Minimum energy performance requirements for the building stock as a whole
- Minimum energy performance requirements for the most relevant segments
- Minimum performance requirements for climate change adaptation and health issues (indoor air quality and pollutant emissions to ambient air)
- Packages of policy solutions for renovation in low-income or vulnerable households with information, installation, financing (including in the context of the recovery plan after Covid-19), etc.
- Direct installation of free or subsidised retrofit measures e.g. to income eligible households, including in the context of the recovery plan after Covid-19
- Guidance and exchange of best practices on tackling energy poverty via building renovation, at both national and local level
- The use of renewable self-consumption, renewable energy communities and citizen energy communities rights
- Other [up to 500 characters]

Please specify:

500 character(s) maximum

8. Fostering the role of the central, regional and local authorities (procurement)

Please select from the following policies and measures those you find the most relevant to enhance the engagement of key interlocutors notably mayors, municipalities and local authorities, as well as central and regional authorities. Please rate them accordingly.

- Very important
- Important
- Slightly important
- Not important at all
- No opinion

EDF note: Please note, only answers we consider as 'very important' are highlighted in this draft. In the survey, you will be required to rate all the points.

- **EDF: Mandatory targets (e.g. renovation of X% of building area, minimum energy performance requirements)**
- Mandatory targets with regard to resource efficiency, climate change adaptation and health (indoor air quality and pollutant emissions to ambient air)
- Voluntary targets/commitments/agreements (e.g. renovation of X% of building area, minimum energy performance requirements)
- Voluntary targets/commitments/agreements with regard to resource efficiency, climate change adaptation and health (indoor air quality and pollutant emissions to ambient air)
- Revise local building codes to facilitate renovation and improve urban planning for renovation and promote green infrastructure
- Integrated planning for supply side and demand side measures in the building sector (e.g. district approaches, access to low-emission transport infrastructure,

alignment of local renovation strategies with the national energy and climate plans, building renovation chapter in the Covenant of Mayors)

- EDF: Coordination of regulatory requirements to ensure consistency across the different administrative levels
- Smart permitting approaches and/or simplified building renovation procedures
- Public procurement rules to take into account energy efficiency (e.g. by emphasizing lower operating costs over time), water and resource efficiency and overall environmental performance, renewable energy, climate adaptation, air quality, urban green and blue infrastructure and circular economy considerations
- Procurement by (groups of) municipalities of energy service contracts
- Fiscal decentralisation giving local authorities adequate and stable multiannual financing sources
- Enhanced deployment of energy performance contracting, e.g. via offbalance sheet financing
- EDF: Earmarking of funds for renovation (EU, national, regional or local), dedicated funds, including novel approaches for redistribution of local property taxes stimulating renovation investments
- EDF: One-stop shops, public-private partnerships to inform and assist efforts of public authorities for building renovation and ease access to financing
- EDF: Creation of dedicated building renovation project development units within public authorities at all levels, retention of skilled and experienced staff
- EDF: Facilitate and potentiate the exchange of best practices
- EDF: Other [up to 500 characters]

Please specify:

500 character(s) maximum

EDF: Public procurement is key to achieve the goal of more sustainable buildings. According to EU procurement rules, accessibility is already one of the criteria that has to be fulfilled. However, lack of practical guidance and monitoring has led to a situation which is not transparent and it is not clear, in how far the rules on public procurement are being applied correctly as regards accessibility. Therefore, active support of the authorities in the implementation of the rules is very important, together with the other factors highlighted above.

9. Scaling up the role of the private sector, new actors and industries (utilities, large property owners/managers), decentralised solutions for improved operational energy performance

Please select the following policies and measures, those you consider most necessary to engage industries, third party services such as Energy Service Companies, and new 'aggregators' (e.g. national promotional banks, commercial banks, mortgage lenders, utilities, renewable energy communities, citizen energy communities, industry consortia, consumer associations, energy agencies, etc.) to deliver faster and deeper building renovation. Please rate them accordingly.

- Very important
- Important
- Slightly important

- Not important at all
- No opinion

EDF note: Please note, only answers we consider as 'very important' are highlighted in this draft. In the survey, you will be required to rate all the points.

- Industrialisation and standardisation: building renovation in short time with limited inconvenience for occupants (e.g. with prefabricated modules and integrated technologies)
- Industrialisation and standardisation of building renovation on large scale (e.g. districts, large property owners)
- Standardisation of financial products for renovation
- Standardisation of contracts
- Development and deployment of massscale, simple, attractive and accessible financing products, such as energy efficiency mortgages, where the additional costs of renovation are covered by a single loan under the attractive conditions.
- Risk sharing instruments to facilitate financing
- Use of the EU taxonomy to identify sustainable investment opportunities and direct finance to such investments
- Public private partnerships, industry consortia, SME platforms, etc.
- Lower insurance premiums for renovated resilient buildings
- Financing formula and contractual models for energy communities
- Procurement by groups of municipalities
- Procurement by energy communities, cooperatives and citizens' purchasing groups
- Voluntary agreements with targets to renovate, achieve minimum energy requirements, etc.
- EDF: Reinforcement of advisory services, one stop shops to inform, motivate, facilitate and finance building renovation
- Technical assistance envelope dedicated to commercial banks, and to utilities, for rolling out building renovation
- EDF: Technical assistance for municipalities (e.g. project management and financing)
- Technical assistance for energy communities (e.g. project management and financing)
- Technical assistance for SMEs in the renovation and construction sector, and as building owners/occupants
- Integrated modelling and energy planning for municipalities, energy communities and other citizens groupings for aggregated refurbishment projects
- EDF: Data mapping: big data for improving the performance of the building stock (collecting, collating and usage of data)
- Other [up to 500 characters]

Please specify:

500 character(s) maximum

10. Most promising approaches for targeting the residential sector at large

Please indicate the most effective future policies and measures that are necessary to achieve building renovation in the residential sector,

10.1. at European level:
500 character(s) maximum

EDF: There is a need for binding EU legislation on accessibility of buildings. All other measures can serve as incentives, including EU funding, but real change will only occur with binding rules. Accessibility is universal and does not depend on local or regional differences so it is reasonable to regulate this issue on EU level. A European Standard on accessibility and usability of the built environment will be adopted shortly and can serve to demonstrate compliance with much needed EU legislation on accessibility of the built environment.

10.2. at national level:
500 character(s) maximum

EDF: National legislation on accessibility of buildings should follow and complement the EU legislation mentioned above. In cases where national legislation is more comprehensive, national legislation must be allowed to prevail to surpass the EU legislation, but EU rules are necessary to ensure there is at least minimum level of accessibility assured across the Union.

10.3 at regional and local level:
500 character(s) maximum

EDF: Regional and local rules on accessibility of buildings should follow and complement the national and EU legislation mentioned above. In cases where regional and local rules are more comprehensive, they must be allowed to prevail to surpass the national and EU legislation. Coordination between all three levels and EU's role in creating a framework is vital, to make sure we don't end up with more fragmentation, which will hinder freedom of movement and independent living of persons with disabilities even more.

11. Most promising approaches for building renovation of affordable housing, social housing and tackling energy poverty

Please indicate what you consider to be the most effective future policies and measures for renovating affordable housing and social housing to improve its energy performance. Please consider energy poverty in your reply.

11.1 at **European** level:

Building renovation of affordable housing
500 character(s) maximum

EDF: See comments above

Building renovation of social housing
500 character(s) maximum

EDF: See comments above

Alleviating energy poverty through building renovation

500 character(s) maximum

EDF: PwD often spend disproportionately more time in their homes, having a higher energy use. The additional cost of using electricity-powered medical equipment, mobility devices, or assistive devices can increase energy cost. Not all PwD are automatically “vulnerable” but they can be. Understandable & accessible information about energy bills & contracts is important. Persons with intellectual disabilities e.g. must receive information in easy-to-read format and have support with the energy bills.

11.2. at **national** level:

Building renovation of affordable housing

500 character(s) maximum

Building renovation of social housing

500 character(s) maximum

Alleviating energy poverty through building renovation

500 character(s) maximum

11.3. at **local** level:

Building renovation of affordable housing

500 character(s) maximum

Building renovation of social housing

500 character(s) maximum

Alleviating energy poverty through building renovation

500 character(s) maximum

12. Most promising approaches for targeting small and medium enterprises (SMEs) (either for the renovation of their buildings, or to stimulate demand for their renovation services)

Please indicate the most effective future policies and measures that are necessary to achieve building renovation in relation to small and medium enterprises (SMEs),

12.1. at **European** level:

Renovation of buildings owned and/or occupied by SMEs

500 character(s) maximum

SMEs in the construction sector

500 character(s) maximum

12.2. at **national** level:

Renovation of buildings owned and/or occupied by SMEs

500 character(s) maximum

SMEs in the construction sector

500 character(s) maximum

12.3. at **local** level:

Renovation of buildings owned and/or occupied by SMEs

500 character(s) maximum

SMEs in the construction sector

500 character(s) maximum

13. Targeting schools and other educational institutions, hospitals and other public buildings

Please indicate the most effective future policies and measures, and best practices that are necessary to deploy building renovation in schools, hospitals, and other public buildings,

13.1. at **European** level:

Educational institutions

500 character(s) maximum

EDF: Binding legislation on accessibility is crucial. Accessibility of public buildings is a pre-requisite to enjoy those rights and should therefore be guaranteed by EU law. It is vital that all schools are accessible and public money is spent to make mainstream education accessible, and never used for creating new segregated schools for students with disabilities.

Hospitals

500 character(s) maximum

EDF: See comments above

Other public buildings

500 character(s) maximum

EDF: See comments above

13.2. at **national** level:

Educational institutions

500 character(s) maximum

EDF: See comments above

Hospitals

500 character(s) maximum

EDF: See comments above

Other public buildings
500 character(s) maximum

EDF: See comments above

13.3. at **local** level:

Educational institutions
500 character(s) maximum

EDF: See comments above

Hospitals
500 character(s) maximum

EDF: See comments above

Other public buildings
500 character(s) maximum

EDF: See comments above

14. Wider benefits of renovating the EU building stock

Please indicate the most important wider benefits of renovating the EU building stock and rate these accordingly.

- Very important
- Important
- Slightly important
- Not important at all
- No opinion

EDF note: Please note, only answers we consider as 'very important' are highlighted in this draft. In the survey, you will be required to rate all the points.

- Reduce energy poverty, lower energy bills and increase monetary savings
- Increased engagement and commitment to climate, energy, water, air quality and other environmental and biodiversity objectives by citizens and communities
- Better comfort and sanitary conditions of dwellings to improve health, safety and air quality (including e.g. by replacing outdated heating installations, removing potentially hazardous materials, providing shading & natural cooling in heatwaves, increasing urban green spaces)
- Increased property value
- Contribute to the circular economy and thereby save energy, material and water, extend the service life of existing buildings, improve knowledge of materials' carbon contents and design and construct flexible buildings in a material and carbon efficient way

- Improve the resilience of the building stock and its users to climate change impacts (e.g. water retention by green roofs and walls reduces pluvial flooding)
- Improve transport and mobility aspects (installing charging points, providing safe bike parking space)
- Improve/allow connection to smart grids and energy communities
- Improve building adaptability to occupants' changing needs
- Job creation for economic recovery
- Availability of labour-market relevant skills, green skills for all professionals in the construction and buildings sector
- Improved security of supply
- Better disaster risk reduction preparedness
- EDF: Ensure accessibility for persons with disabilities and elderly people
- EDF: Other [up to 500 characters]

Please specify:

500 character(s) maximum

EDF: Accessibility for 100 million PwD is not a "wider benefit"! It is a key aspect of making buildings more sustainable! Wasting resources by investing primarily in energy efficiency and then being forced to retro-fit and start a new renovation wave in a few years to make the same buildings accessible does not make sense. Therefore, accessibility already must be considered an integral part of the current "renovation wave" to ensure that the buildings are future-proof once and for all.

15. Smart technologies and nature-based solutions for transforming today's buildings into the buildings of the future

15.1. For residential buildings, please indicate what would be your preferred solutions towards climate neutral and sustainable homes and rate these according to their importance.

- Very important
- Important
- Slightly important
- Not important at all
- No opinion

EDF note: Please note, only answers we consider as 'very important' are highlighted in this draft. In the survey, you will be required to rate all the points.

- Replace the current heating & cooling system by a more efficient and renewable based system (e.g. replace old boiler by a heat pump)
- Planned replacement programme for old or inefficient heating equipment using solid or liquid fossil fuels with renewable heating solutions
- Improve the thermal properties of the building's envelope through better insulation and windows
- EDF: Single deep renovation – a combination of measures carried out at the same time.

- Step-by-step deep renovation – a combination of measures carried out over time rather than in one single renovation
- Use nature-based solutions to improve air quality, combat the heat island effect, contribute to energy efficiency and health and provide habitat for biodiversity (e.g. green walls and green roofs and rain water harvesting and reuse)
- Use smart technologies and digital solutions for optimal operation and maintenance (e.g. building automation and control systems, smart thermostats and room temperature controls, smart meters, etc.) and enable consumer rewards for energy-saving/ or loadshifting behaviour
- Use renewable energy on-site (e.g. solar thermal, PV panels, geothermal, etc.) or off-site through district heating /cooling networks
- Use of sustainable construction materials with lowest carbon footprint
- Smart Sector Integration: integration of renewables that increase flexibility in buildings and in the wider energy system to which the building is connected, integration of waste heat supply solutions, installation of evehicle charging infrastructure, providing safe bike parking, thermal storage, connection to smart grids
- Integrated approaches maximizing the synergies between energy efficiency and renewable energy at the district level
- Integration of circular economy principles in any of the measures indicated above (such as reuse or high quality recycling of construction materials, phasing out hazardous substances, ensuring building performance last longer to avoid numerous renovations)
- EDF: Other [up to 500 characters]

Please specify:

500 character(s) maximum

EDF: Use of construction material must also take note of accessibility for persons with disabilities. For example, flooring material such as carpets or rugs, etc. must consider persons using walking frames, or wheeled mobility devices. Coming EN17210 can provide guidance on materials for ensuring accessibility of building interiors for example.

15.2. For non-residential buildings such as offices, shops, hospitals, schools, please indicate what you would consider as most relevant solutions towards climate neutral and sustainable buildings for building owners and rate these accordingly.

- Very important
- Important
- Slightly important
- Not important at all
- No opinion

EDF note: Please note, only answers we consider as 'very important' are highlighted in this draft. In the survey, you will be required to rate all the points.

- Use smart automatic technologies and digital solutions for optimal operation and maintenance (e.g. building automation and control systems, smart thermostats and room temperature controls, smart meters, etc.)
- Use nature-based solutions to improve air quality, combat the heat island effect, contribute to energy efficiency and health and provide habitat for biodiversity (e.g. green walls and green roofs and rain water harvesting and reuse)
- Apply energy management systems
- Introduce more energy efficient and/or automated lighting systems
- Introduce more energy efficient heating & cooling systems
- Improve the thermal properties of the building's envelope through better insulation and windows
- EDF: Single deep renovation – a combination of measures carried out at the same time
- Step-by-step deep renovation – a combination of measures carried out over time rather in one single renovation
- Recovery of energy that otherwise must be ventilated (waste energy)
- Use renewable energy on-site (e.g. solar thermal, PV panels, geothermal, etc.) or off-site through district heating /cooling networks
- Smart Sector Integration: integration of renewables that also increases flexibility in buildings and in the wider energy system to which the building is connected (e.g. solar roof panels), integration of waste heat supply solutions, installation of e-vehicle charging infrastructure, safe bike parking, thermal storage, connection to smart grids, enable consumer rewards for energy-saving, or load-shifting behaviour
- Integrated approaches maximizing the synergies between energy efficiency and renewable energy at the district level
- Integration of circular economy and environmental principles in building renovation in any of the measures above (such as reuse or high-quality recycling of construction materials, phasing out hazardous substances, ensuring building performance last longer to avoid numerous renovations)
- Other [up to 500 characters]

Please specify:

500 character(s) maximum

16. Further comments

Do you have any further comments on aspects relevant for building renovation and not covered above?

1000 character(s) maximum

EDF: Lack of accessible housing e.g. results in many PwD and older persons being "prisoners in their own homes". Accessibility will become even more important in the coming years with demographic change.

Separate solutions to 'fix' accessibility are more expensive and unsustainable.

Including accessibility from the planning and concept phase reduces costs and leads

to a better outcome.¹ While renovation is still relatively more expensive than accessibility in new buildings, there will still be economies of scale and the opportunity cost of doing a “complete” renovation instead of several small ones.

The Structural Funds Regulations already recognise the need to ensure accessibility – the EU must include the same provisions in the Green Deal. Most importantly, no EU funding should be spent to create new inaccessible buildings and infrastructure.

¹ “Barrierefreies Bauen im Kostenvergleich”, Terragon Wohnbau and the German Network of Municipalities and Cities (Deutscher Städte und Gemeindebund), 2017