

“EEFIG Tool” List of Demand and Supply Drivers

Please see below the list of support and understanding reference terms used in EEFIG National Demand and Supply drivers.

<p>1</p> <p>“Green Premium” / Brown Discount</p>	<ul style="list-style-type: none"> • Energy efficient buildings are more valuable as they have a lower operating cost than energy inefficient buildings (where all other features are constant) - the enhancement in asset value can also be named as :“Green Premium”; • Buildings for which the potential of energy efficiency measures has not been explored face higher operating costs and face reduction in asset value (“Brown Discount”) 	<ul style="list-style-type: none"> • Energy efficiency measures on a building have a positive impact on the asset value - this can potentially create demand and supply for financing;
<p>2</p> <p>(Individual / Owner) Payment Capacity</p>	<ul style="list-style-type: none"> • Individuals in many MS are relatively highly indebted and are not keen to take-on more loans. This limits their individual payment capacity. 	<ul style="list-style-type: none"> • In MS which have suffered housing booms, or foreign currency mortgage scandals or where personal indebtedness is high, the fact that EE renovations are loan-products will be unattractive to these individuals and therefore they will not have interest in an EE renovation.
<p>3</p> <p>Availability of Data</p>	<ul style="list-style-type: none"> • Transparency in the sense of availability of information on different aspects relating to energy efficiency projects and measures (sector, financing, energy savings) is a powerful driver for demand as well as supply. • Driver for demand: it constitutes a meaningful basis of information in preparation of an investment decision/ the required framework conditions for an investment decision. • Driver for supply: the availability of a data track record (including project performance) allows for educated investment and finance decisions); • The information should relate to the projects 	<ul style="list-style-type: none"> • We assume that the level of data available in many Member States is insufficient for the EE industry to make attractive commercial proposals to buildings owners and managers • As energy efficiency projects and measures are carried out in very diverse sectors (incl. building subsectors) with different stakeholder groups involved, there is not that one evident party to take care of data collection. • We believe that Government intervention can add great transparency to this data procurement as is illustrated by US DOE's "Green Button" and other similar initiatives.
<p>4</p> <p>Awareness at Key Decision Maker Level & Leadership</p>	<ul style="list-style-type: none"> • There is a lack of awareness of the benefits of energy efficiency measures at decision making level. 	<ul style="list-style-type: none"> • A broad awareness at the key decision maker level with regard to economic and environmental benefits of energy efficiency on the basis of a thorough understanding of what energy efficiency means for the specific sector or industry has the potential to be a powerful driver for the demand for financing for energy efficiency. • Main reason for this is the power at decision maker level to take strategic decisions and make sure the capacity and resources are made available

<p>5</p> <p>Awareness of appropriate timing for energy efficiency measures within the traditional building cycle</p>	<ul style="list-style-type: none"> • There are a few “ideal” moments to include EE measures into the “investment cycle” of a building’s history (e.g. Purchase/ sale; refurbishment; façade upgrade etc.) and at this point an “optimal” approach can be recommended, not just minimum standards compliance; 	<ul style="list-style-type: none"> • Energy Efficiency Measures are most efficiently installed in the natural buildings renovation and upgrade cycle. There must be ways to encourage the inclusion of these measures at "marginal cost" within this natural cycle and thereby increase the demand for EE Finance.
<p>6</p> <p>Awareness Communication & Marketing</p>	<ul style="list-style-type: none"> • There is very low awareness of energy efficient buildings renovation alternatives and of the benefits (direct and indirect) which these renovations deliver. There exists different levels of trust with different of the sector stakeholders in the Member States and good practice in communication should be identified and shared. 	<ul style="list-style-type: none"> • More successful awareness and marketing campaigns will drive demand for energy efficiency renovations.
<p>7</p> <p>Behavioral Economics (personal priorities)</p>	<ul style="list-style-type: none"> • Customer behavior (Buildings Owner and Tenant, Owner's Association, Public Authority) has a huge impact on the demand for Energy Efficiency Renovation and therefore the demand for EE Finance. • This behavior is not governed purely by the actions of an "economically rational entity" but more the complex dynamics of consumer behavior and behavioral economics. 	<ul style="list-style-type: none"> • Natural demand for Energy Efficient buildings renovations is lower than is "economically optimal" for buildings owners and occupants and for society as a whole. Government intervention is required to stimulate this demand and there is the beginnings of "best practice" being developed in various markets across Europe.
<p>8</p> <p>Body of Evidence (including Social benefits and Costs)</p>	<ul style="list-style-type: none"> • A "Body of Evidence" means a set of comprehensive a reliable information/data creating an evidence on the effects (economic, environmental) as well as performance of energy efficiency projects and measures. This is of relevance both for demand and supply of finance - as important as the availability of data. • A "Body of Evidence" considering also the social/societal benefits and costs of energy efficiency measures (and the lack of them) would broaden the perspective of decision makers and contribute to the full understanding of the economic/social/environmental motivation of and reasoning behind energy efficiency measures. 	
<p>9</p> <p>Buildings Regulation, Certification and Energy Performance Certificates</p>	<ul style="list-style-type: none"> • A stricter implementation of existing regulation instead of more regulation would reduce regulatory risk and lead to improvement of investment environment. 	<ul style="list-style-type: none"> • A broader scope of topics regarding building regulation needs to be discussed: • Case Study: Finland – “the only EU country where the Buildings regulations are effective”? • Buildings Design Enforcement (both new build and renovation) - • Measurement, Reporting and Verification (MRV) • How can/ should Public or Public-Sourced monies be used in this area?

10	Clear Business Case	<ul style="list-style-type: none"> • There is a lack of a clear business case for energy efficiency in the different sectors. • With the existence of a transparent and clear business case including guaranteed energy (cost) savings, the demand for energy efficiency measures is stimulated and this also applies to financing. 	<ul style="list-style-type: none"> • A clear business case comprise all relevant information with regard to the energy efficiency projects and measures to be taken, expected energy savings, investment cost, financing as well as expected payback period.
11	Communication between market actors	<ul style="list-style-type: none"> • Market actors involved in the business case acting together to develop and provide building owners with "one-stop-shop" products including technical and financial solutions would support demand and supply for finance. 	<ul style="list-style-type: none"> • It would be a powerful driver for demand as well as supply if demand (building owners) and supply (investors) were brought together effectively (platform).
12	Definition and common understanding of the value of energy cost savings	<ul style="list-style-type: none"> • A common understanding/approach to define/ calculate the monetary counter value of energy efficiency effects/ energy cost savings is required to support the availability of financing 	<ul style="list-style-type: none"> • A common understanding and widely accepted approach regarding the calculation methods and assumptions of the energy cost savings achieved with energy efficiency measures would be highly supportive for the availability of financing as the savings would be accepted recognized as an asset
13	Effective enforcement of regulation	<ul style="list-style-type: none"> • Currently, the enforcement of the existing building codes is not really effective across Europe in the sense of a lack of effective surveillance and fines/consequences in case of non-transposition of the existing building codes or bad transposition. This makes is potentially easy to avoid the strict application of the regulatory rules. 	<ul style="list-style-type: none"> • Assume that greater/stricter enforcement of current buildings regulations would drive demand for energy efficiency measures and renovations as people would plan action/renovation conscious about potential fines/consequences of non/bad application of the building codes. We assume that an appropriate infrastructure in place ensure an effective regulation is missing.
14	Facilitation / Technical Assistance	<ul style="list-style-type: none"> • Currently, there is a lack of technical assistance and facilitation which would help to set up energy efficiency projects and enhance transparency of the economic effects of energy efficiency projects and which would help to create the business case. • Facilitation/ technical assistance could be provided in the form of resources / consultants made available to help to develop energy efficiency projects. 	<ul style="list-style-type: none"> • Facilitation/ technical assistance is an important contribution to help setting up a new market segment. The more support there is in this regard, the more this can stimulate the demand for finance.
15	Fiscal Support	<ul style="list-style-type: none"> • Fiscal support in form of tax relief for energy efficiency measures is a potential strong driver of demand as well as supply for financing. 	

<p>16</p> <p>Mandatory Energy Audits</p>	<ul style="list-style-type: none"> The obligation to undergo a comprehensive energy audit can be a driver of demand for finance. An energy audit means an inspection, survey and analysis of the energy flows in a building, carried out with the objective to reduce the amount of energy input. Energy audits are foreseen under the EED (Art. 8) for large corporates. Their effectiveness depends on the customer group targeted. 	<ul style="list-style-type: none"> The results of an energy audit can motivate the owner of a building to take measures to improve energy efficiency. For individual homeowners, a standalone energy audit might probably not be cost effective.
<p>17</p> <p>Measurement, Reporting & Verification (MRV) and Quality Assurance</p>	<ul style="list-style-type: none"> Existence of / access to performance measurement data and reporting schemes will both drive supply of appropriate finance (long-term and low cost) and improve customer trust and thereby increase demand for EE Finance. 	<ul style="list-style-type: none"> The greater the body of dependable and verified data proving the economic case for energy efficiency, the easier it will be to get Financial Institutions involved.
<p>18</p> <p>Price of Energy</p>	<ul style="list-style-type: none"> The trend and expectation regarding the long term increasing price of energy/the cost of energy has a strong impact on the decision to carry out energy efficiency measures. 	<ul style="list-style-type: none"> The assumption is that energy prices will go and as a consequence, awareness for the need to take energy efficiency related measures will increase accordingly.
<p>19</p> <p>Regulation which impacts in timing and scope of renovation</p>	<ul style="list-style-type: none"> Regulation is a powerful driver for Energy Efficiency measures. As an example: Energy audits (article 8 Energy Efficiency Directive 2012/27/EU, "EED") – have increased the perception of the business potential associated with energy efficiency measures. 	
<p>20</p> <p>Regulatory Stability</p>	<ul style="list-style-type: none"> Stability and reliability of the regulatory framework (stability=reliability = predictability of the time horizon and potential timing and scope of changes) definition and effective implementation as well as enforcement of the 2013 and 2050 targets (Avoidance of retroactive retroactive changes) 	<ul style="list-style-type: none"> Stable and enforced regulations will lead to a more optimal - stable - investment environment (as the regulatory risk will more likely be assumed to be small) and better economic, social and environmental outcomes.
<p>21</p> <p>Rules on public authority accounting, procurement and reporting</p>	<ul style="list-style-type: none"> On-balance sheet financing for energy efficiency measures is highly constrained. Off-balance sheet finance for EE/ Energy Performance contracts is hard to structure due to accounting rules. This limits the ability to obtain financing for energy efficiency projects. 	<ul style="list-style-type: none"> We assume this can be addressed by regulatory changes (for example to the accounting rules) issue and that greater amounts of activity would be promoted if it can be solved.

<p>22 Standardization</p>	<ul style="list-style-type: none"> Standardization can be seen as a potentially powerful driver of demand and supply for finance: Standardization can apply to: <ul style="list-style-type: none"> - contracts - project data for financial due diligence - energy efficiency related data - performance measurement data reporting data The more advanced the standardization of framework conditions/reporting schemes for energy efficiency measures/projects is, the easier it is for financial institutions to make comparisons between different projects/financing options, build up a track record with project/performance related information. Availability of information is essential to build up knowledge and trust in a young market. 	<ul style="list-style-type: none"> We assume that to access low cost capital eventually EE assets will need to be securitized and if so their contracting form would need to converge to a standard The availability of a widely accepted set of standards for all/many aspects (contracts, conditions, performance measurements ...) for Energy Performance Contracting would be highly beneficiary for the availability of financing Eases the development of data of a transparent and standardized performance track record Enables the development of a performance history Eases the project analysis and the business case / project comparison by Investors / Credit decision makers
<p>23 Tailored Financial Product availability</p>	<ul style="list-style-type: none"> Demand for Finance is intimately linked to the supply of appropriate finance products as sector stakeholders, installers and project developers (large and small) will not invest their resources to build a pipeline until they are confident that appropriate financing exists. In countries where it is obvious that the supply of finance to buildings reform is lacking or very hard to access there is low investment in project development and therefore lower demand. 	<ul style="list-style-type: none"> Renovation project developers (installers, construction companies, ESCOs and others) will not dedicate their resources to develop customer projects until they see that finance supply issues have been resolved. The availability of a tailored offer of financial products is an important driver of demand as well as supply for financing.
<p>24 Transaction costs / simplicity</p>	<ul style="list-style-type: none"> Low transaction costs involved in setting up energy efficiency measures/projects and follow up on their performance can drive demand as well as supply. The perception of simplicity is a driver of demand as well as supply for finance. Demand: low level of complication; supply: easy to analyse/do the risk assessment 	