

## Task 4.1 / D4.1 - WP4 : Local study and action plan



**Amt für Umweltschutz**

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Innovative Financing for Local Sustainable Energy Solutions

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## Foreword

The INFINITE Solutions (INnovative FINancing for Local SusTainable Energy Solutions) is a project launched in February 2014 under the Intelligent Energy Europe (IEE) programme from the European Commission.

Local authorities involved in the INFINITE Solutions project aims to implement a contracting (intracting) scheme to finance energy efficiency and renewable energy projects in their city or region. Based on the good experience with the internal contracting, the city of Stuttgart plans to extend the scheme and develop an integral service to boost the energy refurbishment of non-municipal buildings.

This will require strong technical, financial, legal skills and expertise which are currently lacking and therefore hindering policy implementation. Thanks to the Infinite Solutions project, participative local authorities can share their experience and train each other. The target is to reach by January 2017 an efficient running scheme.

This local study presents status quo of regular contracting models in Germany. It also include what are the current barriers and opportunities to implement a contracting scheme in the city of Stuttgart.

## 1) Legal and financial framework in Germany

To achieve the aim of reducing primary energy by 20 % until 2020 the European commission adopted the Energy Efficiency Directive in 2011. Due to the directive there are numerous environmental and efficiency measures which have to be taken by the Member States with the help of national legislation.

For the practical implementation of this directive Germany focuses on three key elements to meet the energy saving targets. These are regulatory policy, promotional programmes of the Federal Government, State Governments and municipalities as well as different market instruments such as energy performance certificates.

**Table 1 Pillars of German energy policy<sup>1</sup>**

Regulatory policy	Promotional programmes	Market instruments
Energy standards for buildings in the Energy Conservation Ordinance ( <b>Energiesparverordnung/EnEV</b> ) and requirements for the use of renewable energies in the Renewable Energy Heat Act ( <b>EEWärmeG</b> )	Federal Government: <b>KfW</b> (individual measures and complete refurbishment) + <b>BAFA</b> (heating systems using renewable energies)	Market and provider overviews
Energy Services Act (Energiedienstleistungsgesetz/EDL-G)	State Governments and municipalities	Energy performance certificates
Energy Products Act (Energieverbrauchsrelevante-Produkte-Gesetz/EVPG)	Energy suppliers	Pilot projects
		Information & motivation
		Qualification of specialists

Regarding the refurbishments of the building stock the energy standards of the Energy Conservation Ordinance (Energiesparverordnung/EnEV) and Renewable Energy Heat Act (EEWärmeG) as well as the promotional programmes have the greatest significance.

### a) Legal framework for energy standards of buildings

The maximum primary energy demand of new buildings is limited by legal regulations. This value was progressively reduced since the first Thermal Insulation Regulation (Wärmeschutzverordnung/WSVO) in 1977 to about 50 kWh/m<sup>2</sup>a today (EnEV 2012/2014). In addition to that there are regulations for energy refurbishments of existing buildings. In case of extensive modernisations the primary energy demand of the renovated building shall not be more than 15 % greater than the energy demand of a comparable new building. If only single measures are implemented the building owner has to take maximum values for heat transmission of the renovated components into account.

<sup>1</sup> Cf. Energieeffizienz-Online (2014)

The aim of the Federal Government is a nearly climate-neutral building stock by 2050. For this reason the heat demand of the residential building stock shall be reduced by 20 % between 2008 and 2020. Furthermore primary energy demand is aimed to be reduced by 80 % until 2050. The planned rise of the renovating rate from 1 % to 2 % has to contribute significantly to meet these goals.<sup>2</sup>

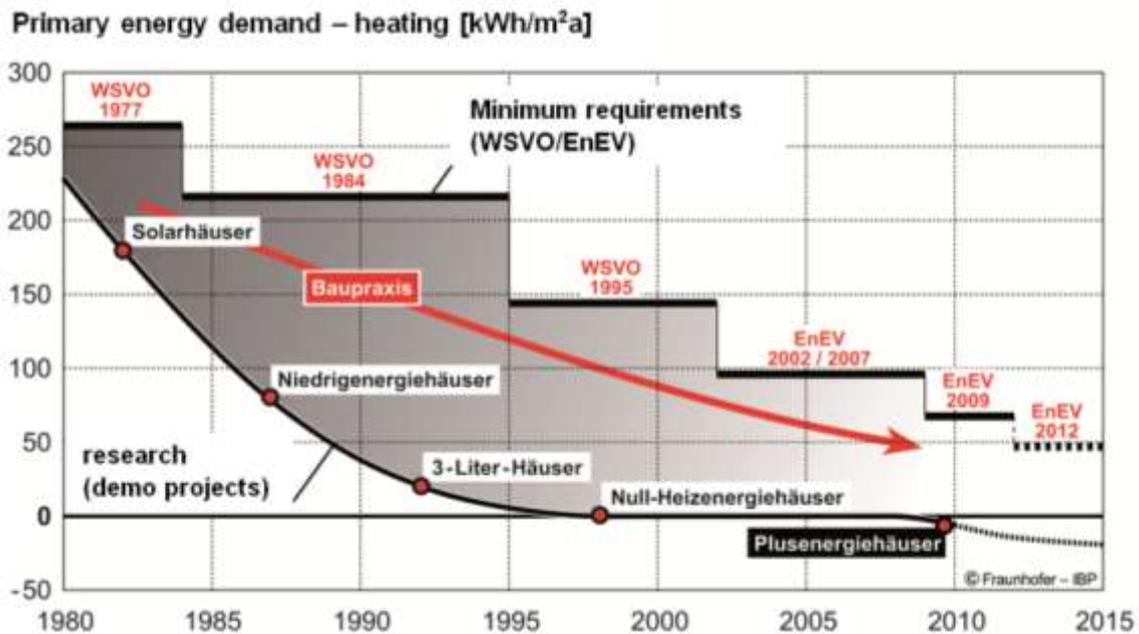


Figure 1 Efficiency standards for heating of residential buildings<sup>3</sup>

The Energy Conservation Ordinance is complemented by the Renewable Energy Heat Act, which obliges homeowners to use renewable energy sources partly in the energy supply of new buildings. The percentage depends on the sort of renewable energy source used. If the building owner decides for solar energy at least 15 % heating and cooling energy have to be produced by solar systems. In case of using biomass or geothermal energy the percentage amounts to 50 %. Moreover compensation measures as the combined heat and power production are allowed.<sup>4</sup>

In the state of Baden-Württemberg there exist additional minimum requirements for heating modernisation of existing buildings. If key components of the heating systems are exchanged the heat production has to integrate 10 % percent of renewable energy sources afterwards.<sup>5</sup> In 2015 this percentage shall be raised to 15 %.

### b) Financial Framework for energy refurbishment

In Germany numerous promotional programmes for energy refurbishments are offered. Nationwide the programmes of the German development bank (Kreditanstalt für Wiederaufbau/KfW) and the market incentive programme of the Federal Office of Economics and Export Control (Bundesamt für Wirtschaft und Ausfuhrkontrolle/BAFA) are accesible.

<sup>2</sup> Cf. Bundesregierung (2010)

<sup>3</sup> Cf. Fraunhofer IBP (2014)

<sup>4</sup> Cf. EEWärmeG (2008)

<sup>5</sup> Cf. EWärmeG (2007)

The German development bank promotes overall refurbishments of private buildings as well as individual measures such as the thermal insulation of walls or the renewal of windows. In addition to that homeowners receive grants from the BAFA programme for replacing their old heating system with a new one using renewable energies (solar, biomass or wood pellets, heat pumps). The combination of KfW and BAFA promotions is permitted in the case of an overall refurbishment into a "KfW Efficiency House". However, for the individual measures the applicants have to decide for one programme.

**Table 2 Overview of KfW and BAFA promotional programmes**

	KfW overall refurbishment	KfW individual measures	BAFA promotion
Refurbishment measure	Refurbishment into a "KfW Efficiency House"	Different refurbishment measures	Solar thermal systems, heating with biomass or wood pellets, some heat pumps
Type of promotion	Favourable loan + repayment bonus or grant	Favourable loan or grant	grant

The highest support is given to homeowners implementing a refurbishment with KfW Efficiency House standard. The higher the efficiency standard, the more extensive the promotion. The definition of a "KfW Efficiency House" derives from the specific energy requirement of a new comparable building. A KfW Efficiency House 100 corresponds exactly to the energy level of a new building, while a KfW Efficiency House 55 is only allowed to have 55 % of the energy consumption.

The following table shows the support in dependence of the KfW efficiency class. If the homeowner needs a loan, he can apply for a repayment bonus as promotion. Otherwise the homeowner pays the refurbishment on its own and can get a grant.

**Table 3 KfW promotional programme „Energieeffizient Sanieren“<sup>6</sup>**

Niveau	KfW55	KfW70	KfW85	KfW100	KfW115
Favourable loan + repayment bonus	12,5 %	10 %	7,5 %	5 %	2,5 %
Grant	20 %	17,5 %	15 %	12,5 %	10 %

If the landlord for example refurbishes to the level of a Efficiency House 85 (exemplary measures: heating with a gas condensation boiler and solar thermal system, external wall insulation, roof insulation, double glazed windows) he receives a maximum repayment bonus of 5.625 € or grant of 11.250 €, since the subsidised costs are limited to 75.000 €.

Furthermore the state-owned bank of Baden-Württemberg (L-Bank) offers favourable loans and grants for refurbishment measures and the use of renewable energies. Additionally some energy suppliers support the renewal of the heating systems with grants.

<sup>6</sup> Cf. KfW (2014)

## Subsidies of the municipality of Stuttgart

To provide incentives for refurbishments in the local context Stuttgart offers an additional programme. After the start of the programme in 1998 the city of Stuttgart gave grants until June 2013 in a total amount of 24,0 million € for energy refurbishment in 13.536 flats. In consequence the fund triggered an investment of 249 million € in the local building trade.

The promotional programme is divided into two parts (version of 16.05.2013)<sup>7</sup>:

### **1. Overall energy refurbishment with energy consulting**

With the help of the energy consulting of the local energy advice center possible refurbishment measures are shown to the homeowners. Depending on the implemented combination of measures and the attained efficiency level the applicant receives a grant between 6 % - 20 % of subsidised costs per flat. In average a grant of 3,010 € is given per flat.

### **2. Individual measures of the building envelope or improved technical building equipment**

The municipality gives lump-sum support per square meter of refurbished building envelope:

- Roof 25 €/m<sup>2</sup> component surface
- Facade 10 €/m<sup>2</sup> component surface
- Windows 50 €/m<sup>2</sup> component surface.

Moreover individual measures with regard to technical building equipment are promoted with a lump-sum support:

- Condensing boiler central heating systems 750 €/flat
- Solar thermal systems 50 €/m<sup>2</sup> gross collector area
- Decentralised efficiency pump 200 €/flat.

The described grants can be combined with the programmes of KfW and L-Bank.

To sum up the financial framework for refurbishments in Stuttgart is currently very favorable. Nevertheless many homeowners are concerned by the frequently changes in the legal situation and the various different funding resources with the consequence that they are adopting a "wait and see" stance.

## **2) Residential building stock in Stuttgart**

### **a) Analysis of residential building stock**

In 2013 Stuttgart counted about 586.000 inhabitants. According to the results of the „Mikrozensus-Zusatzerhebung“, the biggest official household survey in Germany, there were 298.300 flats in 74.100 residential buildings. Compared to other German cities Stuttgart consists of a low proportion of one-family houses (34 %) but has a significant share of two-family houses (15 %). Due to the

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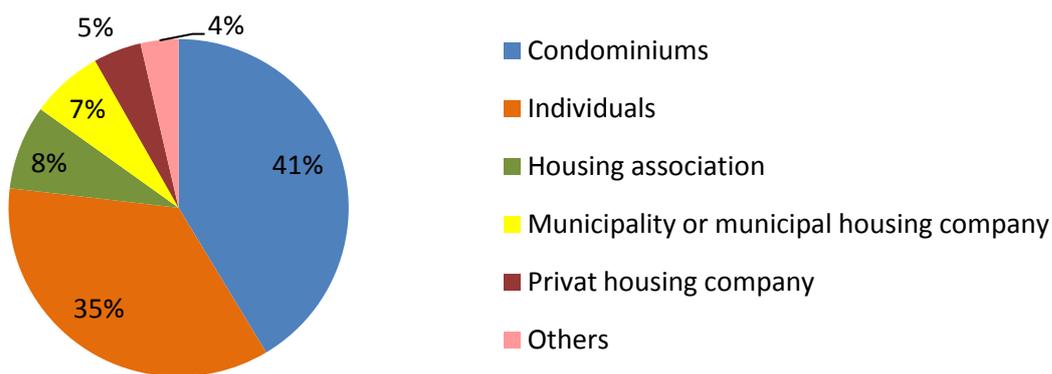
<sup>7</sup> Cf. Landeshauptstadt Stuttgart (2013)

topographical position and the increasing density in the city centre Stuttgart can be seen as a city characterized by multi-storey apartment buildings. About 4 % of the houses are unoccupied. If this number is deducted from the total number of flats, this leads to an ownership rate of 31 % (91.000 flats).

**Table 4 Key figures for the residential building stock in Stuttgart**

Residential buildings	number	74.107 (of which 49 % one- and two-family houses)
Flats	number	298.307 (of which 84 % in multi-family houses)
Ownership rate	%	31,0
Vacancy rate (flats)	%	3,7

In addition to that it is possible to make statements about the form of ownership of the residential buildings in Stuttgart. More than three quarters of the buildings are owned by private subjects. This number is divided into individuals (35 %) and condominiums (41 %).



**Figure 2 Residential building stock by form of ownership in Stuttgart<sup>8</sup>**

To gain insight into the energetic standard of the buildings it is worthwhile looking at the construction age. About 80 % of the buildings were constructed in time periods prior to the existence of the first Thermal Insulation Regulation in 1977, which means without a legal standard for thermal insulation. As a consequence a very large energy saving potential remains unexploited.

<sup>8</sup> Cf. Zensus (2011)

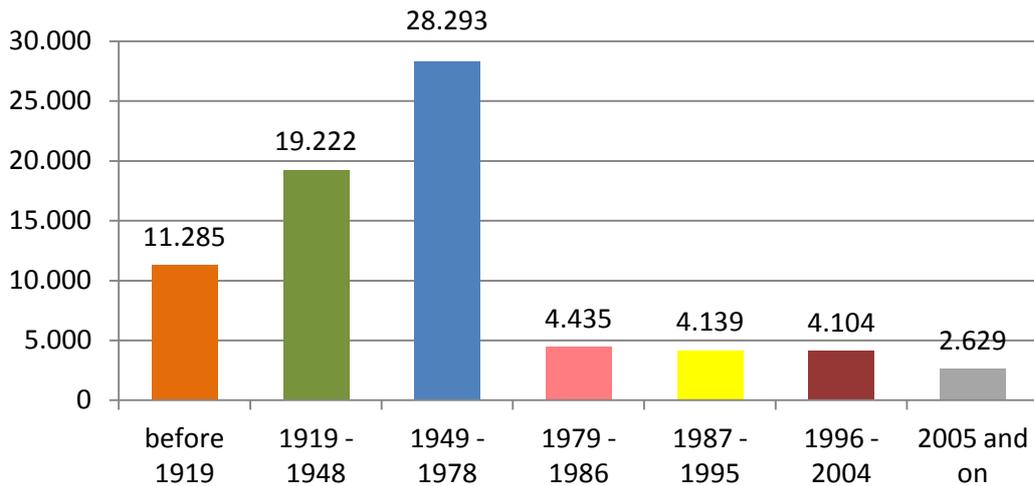


Figure 3 Construction age of residential buildings<sup>9</sup>

Other important data is provided by the local survey on the housing market (Mietspiegel- und Wohnungsmarktbefragung), which is carried out by the Statistical Office of Stuttgart once every two years. For this purpose the office selects 12.000 households at random (owners and tenants), who are asked to fill in a questionnaire with 51 questions on flats (equipping, size, rent amount), location of flat and terms of the leases. In light of past experience about 3.500 households participate in the survey.<sup>10</sup>

In 2012 about two third of the residential buildings in Stuttgart used gas for heating. The other shares were represented by oil (17 %), electricity (10 %) and district heating (5 %). Only 2 % of the residential buildings (generally one-family houses) had a heating system based on renewable energies such as biomass, solar energy or geothermal energy.

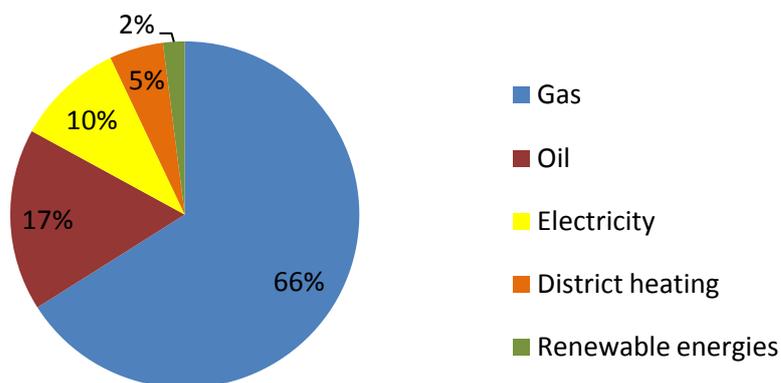


Figure 4 Heating energy for residential buildings in Stuttgart 2012<sup>11</sup>

<sup>9</sup> Cf. Zensus (2011)

<sup>10</sup> Cf. Statistisches Amt Stuttgart (2012b)

<sup>11</sup> Cf. Statistisches Amt Stuttgart (2012c)

## Refurbishment activities in Stuttgart

In this context the local survey on the housing market was also evaluated with view to refurbishment activities with the help of the question on energetic and non-energetic refurbishment measures since 1998 in buildings older than 1998. The survey participants could choose between the following statements:

- (in case of) energetic measures: renewal of heating system, wall insulation, roof insulation, basement ceiling insulation.
- (in case of) non-energetic measures: renewal of the floor, bath room, electrical system and water pipes.

A share of 13 % of all buildings which were constructed until 1998 received an overall energetic refurbishment since 1998 (three of the four measures mentioned above), 47 % were partially refurbished. In 40 % of these buildings no energetic measures were carried out. The most frequent measure was represented by the modernization of the heating system (75 %), about half of the buildings got an insulation of the roof or of the top-floor ceiling, 16 % received a basement ceiling insulation and for a proportion of 38 % the walls were insulated.

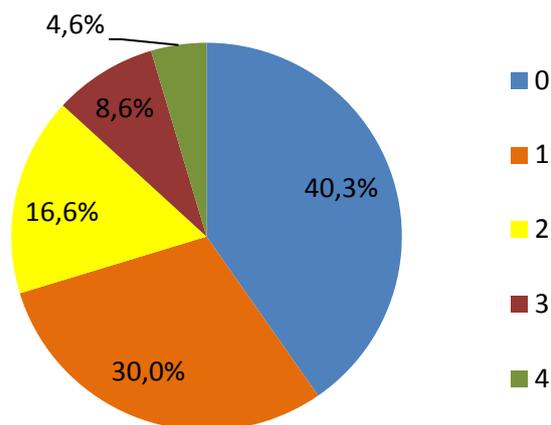


Figure 5 Number of energetic refurbishment measures in residential buildings since 1998<sup>12</sup>

If one divides the number of buildings with overall energetic refurbishments by the years passed between 1998 and 2012 (year of the household survey) this leads to a refurbishment rate of about 0,9 %.

### Influencing factors on refurbishment activity

Based on this query you can also analyze the refurbishment activity in light of the factors form of ownership, age of owner, number of owners, construction age and size of the building as well as quality of residential district.

<sup>12</sup> Cf. Statistisches Amt Stuttgart (2012a)

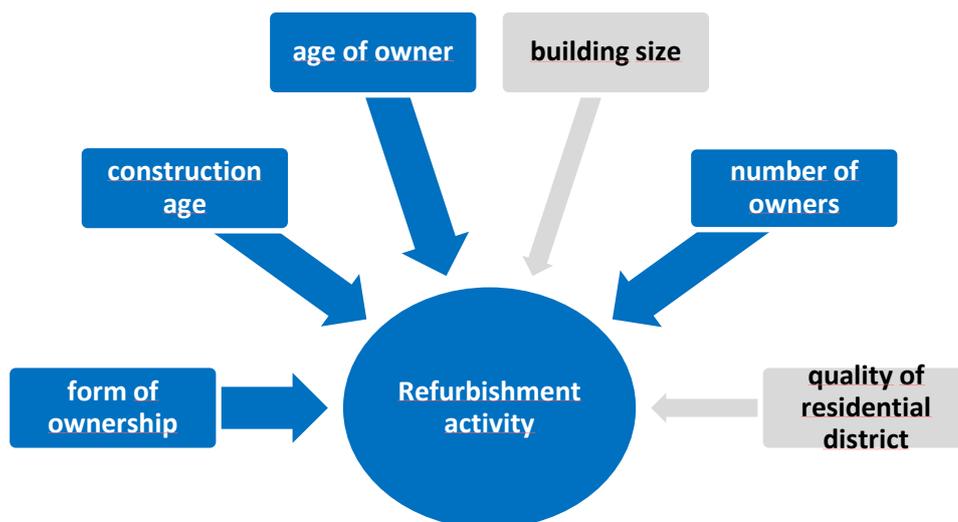


Figure 6 Influencing factors on refurbishment activity

No significant influence on the refurbishment activity could be detected by the factors size of the building and quality of the residential district (measured by income levels). Therefore only the effects of the other analyzed factors were described in the following sections. The rate of overall refurbishments is hereafter defined as the share of buildings with three and more energetic measures since 1998.

#### Form of ownership

Among the residential buildings (with construction age until 1998) there are 23 % tenement houses in private ownership, 67 % privately owned buildings where an owner lives in and 10 % institutionally owned buildings (housing associations, housing companies and other institutions).

The highest refurbishment rate is represented by privately owned buildings where at least one owner lives in the building (rate of overall refurbishment 15 %). This is followed directly by institutionally owned buildings (rate of overall refurbishment 14 %). The refurbishment rate of tenement houses is by far the lowest with a total of 6 %.

Table 5 Refurbishment activity by form of ownership

Number of energetic refurbishment measures	Privately owned building		Institutionally owned building	Total
	Owner lives in building			
	No	Yes		
0	52 %	36 %	48 %	40 %
1	33 %	30 %	26 %	30 %
2	10 %	19 %	12 %	17 %
3	4 %	10 %	8 %	9 %
4	2 %	5 %	7 %	5 %

### *Construction age of the building*

Buildings which were constructed before 1969 show exclusively an above-average overall refurbishment rate. Newer buildings only reach a maximum rate of 7 %. The buildings the most refurbished belong to the category 1919 to 1948 (rate of overall refurbishment 19 %), followed by the post-war constructions from 1949 to 1968 (rate of overall refurbishment 16 %). With regard to buildings with an age older than 1918 the rate of refurbishment is considerably lower (rate of overall refurbishment 12 %).

**Table 6 Rate of overall refurbishment by construction age of the building**

before 1918	12 %
1919 to 1948	19 %
1949 to 1968	16 %
1969 to 1978	7 %
1979 to 1983	3 %
1984 to 1997	1 %

### *Age of owner*

To determine the impact of the age on refurbishment activity, the refurbishment rate of buildings with at least one owner living in it was analyzed. The age classification is conducted according to the age of the oldest owner in the building. Generally younger owners have a higher willingness to invest than older people. The refurbishment rate for people between the ages of 40 and 49 Jahre is with a value of 35 % the biggest. From the economic point of view this is no surprise as a overall modernization in old age has a unfavourable return on the investment relating to the remaining life expectancy (high levels of investment now, low returns in the remaining life). Another reason for avoiding the renovation is the long-term commitment of capital in contrast to the wish of accessing the savings within the short term.

**Table 7 Rate of overall refurbishment by age of owner in owner-occupied housing**

Age group	
18 to 29	24 %*
30 to 39	23 %
40 to 49	35 %
50 to 59	17 %
60 to 69	17 %
70 to 79	8 %
80 and older	8 %

\* sample size not representative

A significant obstacle for refurbishment in Stuttgart is the high proportion of elderly flat owners: 67 % of private owners who live in their own building are 60 years or older. It is to be expected, however, that from around 2020 numerous buildings become the property of the younger generations which will invest in refurbishments.

### Number of owners

Privately owned buildings with an owner living in them have the biggest refurbishment rate in Stuttgart. However, it is remarkable that the refurbishment rate varies from 16 % (one owner in the building) to 8 % (more than one owner in the building). Tenement buildings are refurbished even less, which can be seen by the rate of 6 %.

**Table 8** Rate of overall refurbishment by number of owners in the building

	No owner	One owner	More than one owner
2 flats	5 %	16 %	12 %*
3 to 5 flats	8 %	18 %	11 %
6 to 8 flats	6 %	8 %*	7 %
9 to 12 flats	4 %	1 %*	5 %
13 WE flats and more	5 %*	0 %*	7 %*
total	6 %	16 %	8 %

\* sample size not representative

Due to a low evaluation number of numerous flats in a building the impact on refurbishment activity is hard to determine for several combinations. It appears that condominiums in multi-family houses prefer a partially refurbishment to an overall refurbishment compared to sole decision-makers. In addition to that these buildings tend to be more frequently unrenovated if more than one owner lives in them.

#### **b) Barriers and recommendations**

The study shows that there is a significant potential for increasing refurbishment activity in Stuttgart. Great potential as well as high barriers can be stated for the following target groups:

- Private owners (but: 67 % of owners are 60 years and older)
- Condominiums (refurbishment rate halves if more than one owner lives in the building)
- Tenement houses (refurbishment rate is 2-3 times higher if an owner lives in the building compared to buildings without owners living in it)

With the help of literature research, assessment of statistics and surveys as well as initial discussions with experts and stakeholders of the housing market (local energy advice centre, Office of Buildings and Living (Amt für Liegenschaften und Wohnen), banks, energy provider, citizens) the following main obstacles were identified for energetic refurbishment in Stuttgart:

- Unclear requirement for refurbishment
- Untrustworthy providers / building damages
- High costs / lack of profitability
- Age of owner / risk transfer
- Dilemma of cost and benefit (owner <-> tenant)
- Financing difficulties
- High effort / overtaxing of owner
- Disturbance of inhabitants
- Difficult decision-making.

To overcome the barriers of refurbishment in Stuttgart solutions tailored to customer needs are developed in the present project.

### **c) Local stakeholders in housing market**

#### Municipality

Besides the energy management of the municipal properties the Office for Environmental Protection develops an energy concept for the entire city to reach the formulated targets by 2020 (reducing energy consumption by 20 % compared to 1990 and increasing renewable energy by 20 %). The considered subjects in the concept are energy supply, households, business and industry, municipality and traffic. In the field of private households Stuttgart offers a funding program for energetic building refurbishment and diverse information programs for the sensitization to energy savings.

#### Energy advice center

The Energy Advice Center Stuttgart (Energieberatungszentrum Stuttgart EBZ) was founded in 1999 as a result of a working group with municipal employees and private groups. It offers an independent consultation to private building owners who plan to refurbish their property. The advice center also developed the "Stuttgarter Sanierungsstandard" which was adopted by many craft services as a quality feature. Currently Stuttgart places the first chairman.

#### Municipal energy service company

With the foundation of the municipal energy service company "Stadtwerke Stuttgart" in 2011 an affordable, sustainable and secure energy supply should be guaranteed for citizens of Stuttgart. The main area of responsibility of the Stadtwerke consists of the sale of electricity and gas, the construction of plants with renewable energies as well as combined heat and power (CHP) units. Private building owners were offered heat services like energy supply contracting and a lease model for solar systems.

Another important participant in the energy system of Stuttgart is the local energy supplier EnBW Energie Baden-Württemberg AG with its power plants and the network operation of the electricity and gas grids until 2013. Meanwhile the EnBW and the Stadtwerke build a joint network ownership and network operator company. With regard to the sale of electricity and gas they are in direct competition.

### 3) Analysis of German contracting market

#### a) Current market situation

The database for the contracting market in Germany is currently still limited. The available studies state a number of 550 companies that offer the service contracting. Actively engaged in the market is a number of 250 companies. The largest share of these are energy suppliers and municipal utilities with 42 % to 60 %. In second place there are energy-service providers with a proportion of 30 % to 36 %.

Table 9 Branch mix of contracting

Energy suppliers / municipal utilities	Energy-service provider („true“ contractors)	Others
42-60 %	30-36 %	16 %

85 % of all contracting projects in Germany are in the field of energy supply contracting. Energy performance contracting and operational contracting are still poorly represented.<sup>13</sup>

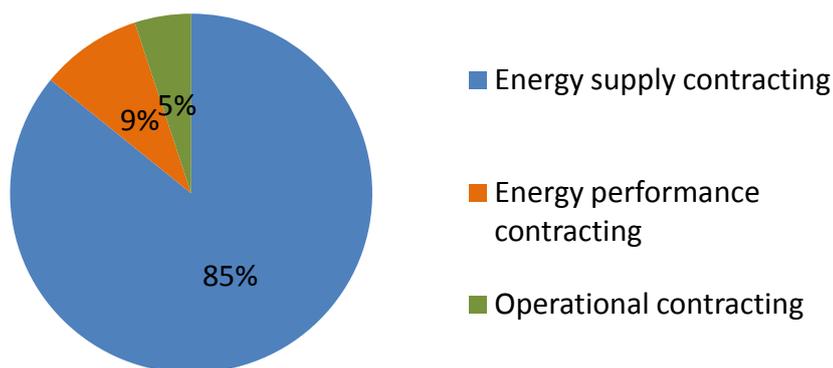
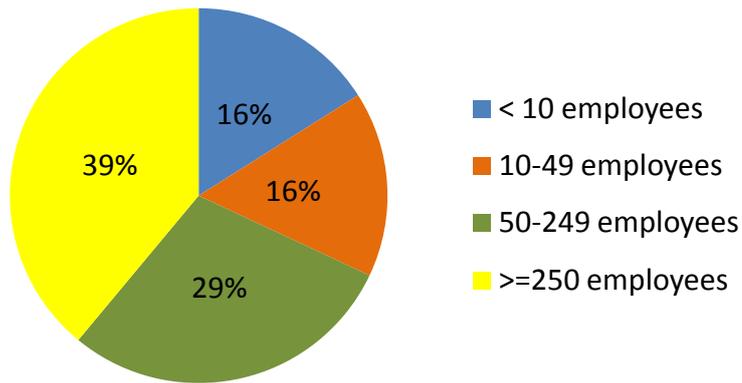


Figure 7 Implemented contracting projects in Germany 2011

39 % of the contracting providers are companies with more than 250 employees which is the largest group in the German market. One can see that the market share decreases with the number of employees. In contrast to that small and medium sized companies with less than 250 employees offer numerically the most contracting services.<sup>14</sup>

<sup>13</sup> Cf. Seefeldt et al. (2013)

<sup>14</sup> Cf. Bundesministerium für Verkehr, Bau- und Stadtentwicklung et al. (2009)



**Figure 8 Contracting providers by number of employees**

A minimum size of projects to be profitable for contractors is not clearly defined. The arithmetic average of a survey of contracting firms has shown a minimum size of 13 housing units (which is a living space of almost 1000 m<sup>2</sup>). This number is equal to the results of other studies. However, it has to be mentioned, that over the half of the respondents stated a dimension between 0 and 10 housing units.

In a study of 2008 the volume of sales which contractors achieve in the residential market is estimated at 1,2 billion € per year. This represents 60 % of the overall market. The greatest share with 1 billion € was generated in the stock of rented property. Assuming a growth of 10 % in the contracting market there is a total market volume of about 3 to 4 billion € by now.

Contracting for private building owners is offered currently by about 50 providers. These providers are almost exclusively municipal utilities. The total number of clients in the private buildings sector is estimated at 25.000 to 30.000 in 2010.

The providers of contracting in Stuttgart are mainly energy-service providers. Secondly there are energy supply businesses and companies that are specialised in energy management. But also medium-sized heating businesses and craftsmen provide the service contracting. The LBBW Bank<sup>15</sup> mentions contractors in their funding instruments. But also local cooperative banks like the Volksbank show interest in supporting contracting in Stuttgart.

### **b) Examples of contracting projects**

There are a plurality of contracting projects in Europe and Germany, however, for the group of private building owners there are no models that include the building envelope.

Therefore an approach is examined that contains elements out of different models that already exist:

- Energy supply contracting (example „Heizung RundUm” offered by EnBW Energie Baden-Württemberg AG)

The contractor plans, finances and installs a new energy generation plant for example a heating system or takes over an existing installation. During the contract period that is mostly between 10 to

<sup>15</sup> A central bank for the savings banks in Baden-Württemberg, Rhineland-Palatinate und Saxony

15 years, the contractor is responsible for the proper maintenance of the installation and the procurement of energy. The customer pays for the service in monthly instalments.

An example for energy supply contracting in Stuttgart is the service “Heizung RundUm” from the energy supply business EnBW. They offer a package for one-family and two-family houses in which the heating system is replaced by an energy-efficient natural gas condensing boiler technology and the energy is supplied at a fixed heating tariff. The monthly instalments cover installation, maintenance, chimney sweep costs, repairs and a 24-hour service.

- Performance contracting with structural measures in a pool (example “Energiespar-Contracting” for the City of Plochingen offered by Cofely)

The contractor guarantees a certain energy saving in comparison to the previous consumption. To achieve this energy reduction the contractor plans, coordinates and finances the needed measures. The difference between the previous and the current energy costs is the instalment during the contract period which is mostly between 10 and 15 years. With the end of the contract period the building owner fully profits from the energy savings.

An example for a successful performance contracting project is the cooperation between the international operating corporation Cofely and the City of Plochingen. As part of this project 14 **municipal properties** like kindergardens, schools and the public bath have been modernised. Cofely renewed and financed the heating systems, water boilers and the switching and control technology. The result is a guaranteed energy cost reduction of 271.000 € a year which is equal to a saving of 42 %. Also the CO<sub>2</sub> emissions decreased by 33,5 %.

## 4) Conclusions

To achieve the aim of increasing refurbishment activities in Stuttgart there are several main challenges resulting from the present study to cope with:

- Identification of a anchor market segment which is promising for implementing the contracting model
- Integration of measures on the building envelope in contracting models
- Practicability / profitability of contracting projects for small residential buildings
- Identification and winning of possible providers
- Suitability of the business model for condominiums (importance of decision-making)

## 5) Action plan

	Activity	Month
1	Establishment of a <b>core team</b> responsible for the implementation of the financing scheme and <b>regular working meetings</b>	M2
2	Identification of:  - <b>Pilot SEAP priority measures</b> included in the category “ <i>Tertiary (non-municipal) buildings, equipment/facilities</i> ” or “ <i>Residential buildings</i> ” that will launch the scheme  - <b>Final beneficiaries</b> of the schemes (specific groups such as elder private landlords, housing associations, socially-vulnerable households)	M4
3	<b>Market study</b> targeting final beneficiaries aiming at clarifying their needs, priorities, financial situation and motivation to implement EE/RES measures. This will be based on a survey carried out via telephone, questionnaire (distributed and/or online)	M10
4	Development of the “ <b>business model</b> ” and support mechanisms best fitting the final beneficiaries	M12-18
5	Establishment of model contracts, a <b>high-quality energy standard charter</b> and partnerships with local stakeholders -banks, construction companies, utilities (serving as a training material for the local staff and future financing scheme users)	M18-24
6	Establishment of an <b>independent body</b> monitoring the high-quality energy standard achieved by building and construction companies and a local certification scheme	M28
7	<b>Training for local staff</b> (persons and/or departments) and city-owned local companies which will be involved in the implementation of the pilot SEAP priority measures via private contracting.  <i>Comment: More staff/local stakeholders who may use or replicate the scheme after the end of the project will be trained within WP4 capacity building activities</i>	M30
8	Regular <b>meetings with elected representatives</b> – presenting the intracting structure, its benefits, requirements for successful operation, progress done by the core team, etc.	M1-36
9	<b>Establishment of a public financial engineering support service for private contracting</b> for residential buildings owners	M32
10	<b>Implementation of the pilot SEAP priority measures</b>	M36

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