Energy service companies have been around for decades, working with municipalities to renovate public buildings such as schools, hospital and swimming pools in exchange for a guaranteed return on investment in the form of energy savings.

With the EU’s building renovation wave coming soon to your local town hall, has the time finally arrived for the energy services industry? In this special report, EURACTIV takes an overview of the challenges and opportunities facing the sector.
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Only ‘slight growth’ reported in energy efficiency services

Expert: ‘Lack of trust’ hampers energy efficiency services industry

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Companies offering energy performance contracts to municipalities saw only moderate growth last year, despite a renewed push at EU level to boost energy savings and building renovation.

A survey of energy services providers in 15 European countries showed that most companies in the sector (41%) experienced only "slight growth" in 2019, while 31% reported "little change" in activity. "Lack of trust" in the industry and the high cost of projects were the main factors hampering growth in the sector, according to the online survey, which covered Austria, Belgium, Bulgaria, the Czech Republic, France, Germany, Greece, Italy, Latvia, the Netherlands, Portugal, Slovakia, Slovenia, Spain, and the UK.

By far the most dynamic market in 2019 was the Netherlands, where almost 60% of firms reported "major growth", followed by Belgium and the Czech Republic. But that was mostly offset by other markets like Spain, Germany and Austria where 20-30% of firms reported a "major decline" in business activity.

In countries like Slovakia, a dearth of public subsidies was identified as "a big barrier" to the uptake of energy efficiency services. But in other countries like Germany, the survey highlighted "lack of demand" as the main barrier, more than a lack of trust or finance.

"Energy is pretty cheap in Germany so clients don’t see the need to invest money in implementing energy saving measures," said Stefan Schulze-Sturm from ASEW, the largest network of energy suppliers in Germany. [Tiffany Von Arnim / Flickr]

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“In other countries, the increase in energy price was a key driver. So we would need that as well in Germany” to boost demand for energy efficiency services, Schulze-Sturm told an online seminar last Wednesday (17 June).

Energy providers in Germany are also “very risk averse” and “they’re not very keen to give guarantees” to clients on energy savings gained from building renovation and refurbishing programmes, he said.

**ENERGY PERFORMANCE CONTRACTS**

Energy performance contracts commit service providers to the achievement of energy savings over a set period of time, often in public buildings like hospitals, municipal offices, schools or swimming pools.

The main advantage of these contracts is that they offer guaranteed savings to municipalities: when energy savings objectives are not met, the service provider must reimburse the client or carry out additional work to fill the gap.

But “the complexity of the concept” and a “lack of information” on the expected outcomes are fuelling scepticism about the industry, said Jana Szomolányiová, from the Energy Efficiency Center in Prague (SEVEn), who presented the results of the survey during last week’s online seminar.

Lack of information and trust is among the “recurring themes” that have come up in surveys carried out on a regular basis since 2013, said industry expert Nick Keegan, who moderated last week’s online seminar.

To improve trust, the European Commission put together the QualitEE project, which aims to develop a standardised set of quality criteria that can be applied across the industry.

The most successful companies are those which carry out preliminary energy audits with their clients, accompanied by clear measurement and verification of energy savings to achieve the expected outcomes, the survey found.

As a result, energy service providers that obtain a quality assurance scheme “would probably gain a competitive advantage on the market,” said Szomolányiová, who took part in the QualitEE project.

However, the costs associated with quality assurance schemes is a main drawback and should be limited as much as possible in order not to create a new market barriers, she cautioned.

**ENERGY EFFICIENCY DIRECTIVE REVIEW**

The quality of energy services will feature among the topics addressed in the upcoming review of the EU’s Energy Efficiency Directive, expected in June 2021, said an EU official at the European Commission’s energy directorate who took part in the online seminar.

“All indicators should now be pointing in the right direction to drive growth” in the energy services industry, said Nick Keegan who was involved in supervising the EU’s QualitEE project.

Looking forward, he said greater standardisation should help grow the industry and start attracting smaller building renovation projects, in addition to municipalities.

“The untapped potential in terms of energy savings is huge,” Keegan told EURACTIV in an interview.

“So, the more we can drive standardisation, the more these small-sized projects can be aggregated. And that could make a big difference in terms of reducing our energy consumption and reaching our long-term climate goals,” he said.
Lack of trust and information about energy performance contracts are the most frequently cited reasons why some municipalities have become sceptical about energy service companies (ESCOs). In the future, greater standardisation should help overcome issues, says Nick Keegan.

Nick Keegan is a director at EEVS Insight, a leading UK provider of independent performance assurance services for energy projects, services and investments. The company is the UK partner for the EU-funded QualitEE project, which aims to drive investment in energy efficiency services through quality assurance schemes.

What are energy performance contracts? How long have they been around?

An energy performance contract commits a service provider to the achievement of energy savings at the premises of their client – often public buildings like hospitals, municipal offices, schools or swimming pools. [Fons Heijnsbroek / Flickr]
commits a service provider to the achievement of energy savings at the premises of their client – often public buildings like hospitals, municipal offices, schools or swimming pools.

That often takes the form of a guarantee, where a certain level of energy savings must be achieved over a given period of time. If that’s not met, then the service provider must reimburse the difference to the client.

Performance contracts may also take the form of a shared savings agreement where the cost savings are shared between the two parties at an agreed percentage.

Forms of these contracts have been around in the UK since the 1960s, where outsourced providers took over the operation of boiler houses for hospitals and industrial facilities.

The typical model for energy performance contracts we recognise today, which incorporate more of a focus on energy and carbon emissions savings, became mainstream in the USA in the 1990s.

In Europe, one of the first markets to emerge was the Czech Republic in 1993, and in the UK, there has been a resurgence in performance contracting since around 2009, when a scheme called Re:fit was implemented by the Greater London Authority.

In theory, these contracts are a win-win for the client and the service provider. So why have energy performance contracts struggled to pick up on a large scale?

There are a number of recurring themes that have come up in surveys that we’ve conducted on a regular basis as part of the QualitEE project since 2013.

One issue is a lack of trust in energy service companies (ESCOs), which is the second-highest ranked barrier to energy performance contracting business in our 2019 survey. I think this stems from client uncertainty about what to expect, and uncertainty in the outcomes. If this leads to a client reporting a negative experience the word can spread quickly and affect the reputation of the whole industry.

This links to another commonly cited issue – and the highest-ranked barrier in our latest survey – which is a “lack of information”.

From the conversations I’ve had around this issue, this means two things: insufficient information on the components of a high-quality service, and a lack of independent performance information on service providers and their projects.

I think the trust issue also comes partly from a general nervousness of outsourcing contracts. In the case of energy performance contracts, the service providers are typically responsible for reporting their own performance, despite having a vested interest in it. This structure often arouses suspicion on the part of the consumer and has led to demand for independent assurance services such as those we provide at EEVS.

The market is also quite heterogeneous, it’s not very standardised – on the one hand because the clients have different needs and issues with their buildings, and on the other, because providers take a variety of approaches to offering their services.

That means clients and energy service providers often find themselves reinventing the wheel with each new project. They sometimes have to put a lot of time and effort – including consulting costs – to get a project over the line.

These problems can add up and generate extra costs and delays. Indeed “high costs of project development and procurement” is another highly ranked barrier in our 2019 survey.

How can those issues be addressed? Is it mainly through standardisation?

As part of the QualitEE project, we have developed a set of quality assessment criteria for energy efficiency services through extensive stakeholder engagement and testing in 28 pilot projects across Europe.

These criteria allow clients to assess the different components of a service against a reference for the minimum standard of what they should be getting.

Both sides can then have a clearer common understanding of what constitutes a quality energy efficiency service, and its different components.

And that’s very helpful from the consumer perspective because they can do self-assessments all the way through a project. And on the other side, the service provider can do their own internal assessment as to whether they’re meeting quality criteria or not.

In itself, that should help build trust between the two parties.

At the end of the day, the objective is to make energy savings. And that’s a measurable objective, based on metrics and data. So how can disagreements possibly come up?

This has to do with performance measurement. One of the complexities of energy savings is that you can’t measure them in a way that’s 100% accurate.

You’re always making an estimate. First, you work out how much energy you would have used if you hadn’t implemented the energy performance contract – which is typically informed by detailed analysis of historical trends. And then you compare that with the amount of energy that you’ve actually used.

And that estimate of what you would have used can be manipulated, to some extent.

Yes, energy consumption may vary for various reasons year-on-year: maybe

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you’ve got more devices consuming electricity in your building or maybe the winter was particularly cold that year and you used more energy for heating...

Absolutely. We account for these by making ‘adjustments’ to the savings calculation. And it’s the negotiation on those adjustments, which can sometimes alter the end result and create tensions.

This is why we’ve built criteria in our processes on how to approach that. There are two parts in those criteria:

- First is the performance measurement and verification process itself. Getting that right relies on having a measurement plan upfront, and using that plan to collect the right data.
- Second is a good communication process between the supplier and the client, based on regular, transparent reporting and well-structured meetings.

Once you’ve built trust in the reporting, both sides have a clearer view of the outcomes. It is then clear when the service provider has underperformed and needs to make up shortfall either through a cash payment or by doing some further work to improve the savings.

Can digital technologies support that process? For instance, the measurement and reporting can be partly automated, I guess?

There is indeed automated metering and monitoring equipment that can be brought into software platforms online. This can help provide more frequent and transparent reporting to service providers and consumers so they are better informed, and so they can react more quickly to underperformance issues or events that may require an adjustment. Better data also reduces the scope for disagreement around these adjustments.

All together this helps build trust in the outcome of the projects.

Do you expect data and digitalisation to be a major enabler for future savings in buildings? Or do you see it as just one component among others?

Yes, certainly. The reporting and communication process will be enhanced by those technologies and help build trust but they will need expertise and good specification to ensure effective use.

I’d say they will provide a major upgrade to the toolkit but they’re not silver bullets on their own.

Energy performance contracts have been around for decades. Do you think they are now ready to make some kind of breakthrough in the coming years and enter the mainstream?

It could happen if we succeed to institutionalise the quality assurance criteria, for example with labelling schemes to accredit that a service provider can achieve a certain level of quality.

Schemes like this can simplify the approval process for consumers helping them to get their business cases over the line more quickly.

And that’s what we’ve started to address in another part of the QualitEE project: project partners have

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developed business cases for quality assurance schemes in 11 European countries and many of these are on their way to implementation. It’s been very interesting to see the different approaches that can be taken.

Quality assurance schemes may also provide a centralised source of case studies that are independently verified, which tackles issues of lack of information I mentioned earlier. This is certainly a feature of the energy performance contracting provider accreditation scheme we are working on in the UK with the Energy Services & Technology Association.

Over time, this should help drive standardisation in the industry reducing project development and procurement costs.

But I’m not sure this will result in an immediate step change in the ESCO industry, rather a gradual acceleration in uptake as market confidence grows.

Other factors are also setting the scene for an increase: The drive for net-zero emissions by 2050 means something needs to be done urgently to reduce the energy consumption of buildings. And at the EU level, there is the European Green Deal and the upcoming building renovation wave, which could provide a welcome boost to energy efficiency projects.

In my view, energy efficiency services have a vital role to play here: these turnkey services can bring expertise and experience from specialists at the forefront of what will be a dramatic and continuous evolution of policy and technology, along with personnel resources and finance to grow consumers’ ambitions for their energy-saving initiatives.

So, all indicators should now be pointing in the right direction to drive growth in the ESCO industry.

**Most energy service companies now deal with large-scale public building projects – like schools, hospital, etc. Do you expect companies now to also enter the market for private households?**

Yes, smaller-sized projects should start to come in – if energy service companies manage to standardise their offer and lower their set-up costs.

But I’m not sure we’re quite there yet. This is the subject of much research right now: how we can tackle smaller organisations, like SMEs and private households.

Often, the upfront cost can be an issue for clients in small projects like these. And ESCOs aren’t usually attracted by those projects because the returns are small compared to the amount of effort they need to put into them.

But small projects also represent a potentially huge market if you aggregate them all together. And the untapped potential in terms of energy savings is huge.

So, the more we can drive standardisation, the more these small-sized projects can be aggregated. And that could make a big difference in terms of reducing our energy consumption and reaching our long-term climate goals.
The European Commission has recently stated its will to put the European Green Deal at the heart of the Recovery Plan. After the worldwide COVID-19 crisis, which has heavily affected the European economy, it has clearly appeared that Europe needed to find cost-effective solutions to achieve its 2050 climate targets. This urging necessity has put an emphasis on the Renovation wave, recognising that the building sector had a huge untapped potential in terms of both energy and emissions savings.

Valérie Plainemaison is the Secretary General of EFIEES, the European Federation of Intelligent Energy Efficiency Services, which is the voice of energy service companies (ESCOs) and their national associations in 12 EU Member States, representing over 130.000 professionals engaged in the design and implementation of energy-efficiency solutions.

In this context, Energy Efficiency Services will be key to effectively reduce energy consumption and emissions from the building sector, which accounts for half of the energy consumption in Europe. Energy Efficiency Services provide energy management solutions at the levels of both demand and supply, with long-term contractual arrangements often including an energy performance guarantee. Operation and maintenance over the implementation of the contractually agreed energy efficiency improvement are also key to ensure actual and continuous energy and emissions’ savings.

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The latest TEG's Taxonomy report, which includes recommendations to the European Commission on the adoption of the first delegated act on Sustainable Finance, recognises that such solutions are sustainable and thus should be eligible under the Taxonomy. The Technical Annex to the report, lists indeed typical energy efficiency services, such as energy performance contracting (EPC), in the section on "Individual measures and professional services" contributing to climate change mitigation in the building sector.

In a moment when it is essential to increase our climate ambition, it is hard to ignore that COVID-19 crisis has put huge constraints on public budgets. To make sure that economic recovery gets along with fight against climate change, Europe must focus on the most cost-effective measures which will allow to have quick yet effective emissions reductions. In the building sector, economic recovery and emissions reductions both mean an urgent need to focus on energy savings. The Renovation wave will be the occasion to create new policies and tools, as well as to reinforce current legislation to ensure that energy savings are real (i.e. both measurable and verifiable) and that energy performance is maintained overtime. Energy Efficiency Services are solutions which do deliver these benefits, as they include a combination of actions, mostly with guaranteed energy efficiency performance, which go far beyond single technical renovation measures and allow to monitor and keep improvements over time, thanks to proactive energy management. Moreover, in such an economic context, it is important to emphasise that energy efficiency services do create local and sustainable jobs, hence supporting Europe's not only green, but also socioeconomic recovery.

For all these reasons, we believe that Energy Efficiency Services and their solutions, particularly Energy Performance Contracts, should be further supported and promoted alongside other measures which aim to reduce the environmental impact of the building sector. Hence, it is of utmost importance to fully include Energy Efficiency Services in any renovation strategy, as their energy management solutions are a necessary complement to renovation measures, since they ensure that the improved energy performance is kept and even contractually guaranteed overtime. Moreover, it is important to understand that in some specific situations, in which (deep) renovation is neither feasible nor necessary, energy efficiency services represent the most cost-effective alternative. It is indeed essential to ensure that energy consumption is optimised and emissions reduced, even when the moment for a deep renovation has not arrived yet. As CO2 emissions have a cumulative effect over time, it is crucial to take all opportunities to reduce them as soon as possible.

Energy Efficiency Services and among them EPCs have been around for several years now. These markets are already quite developed in some European countries, and continuously increasing. Yet, remaining barriers hamper the effective uptake of these key solutions. It is indeed sometimes hard for potential clients and citizens to understand what is behind an Energy Performance Contract and Energy Efficiency Services in general, even more since energy management solutions are partly not tangible. This lack of understanding and visibility also generates a lack of trust.

This is the reason why EFIEES has been previously engaged in the Transparence project and now in the QualitEE project. With Transparence, the aim was to create an European Code of Conduct for EPCs. It was finalised in July 2015 and, ever since, it defines the basic values and principles that are considered fundamental for the successful preparation and implementation of EPC projects. Although this Code of Conduct has been running very well for several years now, it appeared that we needed to do more in order to increase trust in EES and ESCOs. This was done through QualitEE. This H2020 project has started in 2017 and is ending this month. Its aim was to increase investment in energy efficiency services in the building sector within the EU and improve trust in service providers. To achieve these aims, quality assessment criteria and business cases for quality assurance schemes have been developed by the project partners and tested through pilot projects all other Europe.

These European projects have paved the way to further promote and support EES and ESCOs. However, they cannot and will not replace European wide policy actions. This is why we believe that, apart from increasing renovation rates, a solid Renovation Wave should promote and support Energy Efficiency Services and energy management solutions which deliver energy savings and improved performance over time while remaining cost-effective and generating sustainable jobs.