European Sustainability Guide

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Welcome

Delivering good sustainability performance is essential for developers, investors and occupiers alike, as they look to enhance their corporate governance, reduce operational costs and make their buildings more attractive to work in.

Although the principles for improving sustainability performance in countries across EMEA are broadly the same, each member country has applied legislation to meet these objectives in different ways. This presents a challenge for those organisations who wish to operate on a pan-European basis, or those looking to identify the most suitable location from which to operate. Having an understanding of these variations at their fingertips can help our clients make informed decisions as to where they want to operate or invest.

We at DTZ are well placed to support and advise our clients throughout Europe and wider regions through our global reach. Our clients are involved in all aspects of property, and to support them in meeting their own sustainability objectives we have embedded sustainability into all of our skill lines. We have in-house experts who are able to provide advice on both strategic and technical sustainability issues, including:

- Energy/Carbon Reduction & Cost Benefit Analysis
- Strategic portfolio advice
- Impact on value and marketability
- Renewable options and investment appraisals
- Policy development & implementation
- Sustainability Audits
- Green ratings, including BREEAM, LEED and SKA
- Development of EMS
- Advice on planning and construction
- Compliance services
- Green financing

We are very excited to launch this inaugural guide, the first of its kind, to provide clients with an overview of sustainability practice across European countries. We hope that it will assist you in implementing your sustainable property strategy and provide an incentive for us to work with you in the future.

Paul Brown

Head of Health, Safety and Sustainability, EMEA

paul.brown@dtz.com

+44 (0)20 3296 3812

Welcome to this first edition of our 'European Sustainability Guide' whose aim is to provide a general understanding of sustainability practices in real estate across the European Union for occupiers, investors and developers.

Where sustainability is concerned there are two different aspects to consider. The first relates to the proper adoption of building regulations at local level based on the European Union's Energy Performance of Buildings Directive (EPBD) – obligatory to all member states. The second is more voluntary and relates to the use of rating tools stemming from certifications such as BREEAM, DGNB, LEED and HQE amongst others.

The guide includes:

- a short introduction of the main tools set up across Europe to measure the energy performance of buildings in order to allow investors and occupiers to apply the right process for obtaining a "green" certification
- a European overview of key indicators of sustainability: energy cost per country, most widely implemented "green" certifications, and number and volume of green buildings across the region.
- Information on building regulations (definition of low energy building, energy certificate, implementation of green leases, certifications schemes) at country level.

We hope you find this publication both interesting and useful.

Magali Marton

Head of CEMEA Research

magali.marton@dtz.com

+33 (0)1 4964 4954

Karine Woodford

Head of Occupier Research

karine.woodford@dtz.com

+44 (0)20 3296 2306

Introduction

Sustainability rating tools can be useful to compare buildings, cities or countries. Industry standards for valuing buildings exist across Europe. However when it comes to sustainability standards the situation is more diverse. This adds a layer of difficulty for property investors and occupiers who are trying to assess sustainability practices in different markets across the region.

Sustainability is a broad concept involving three objectives: social, economic and environmental. So, a low energy consumption building is necessary but not sufficient for a sustainable approach in real estate. Environmental and social aspects must also be taken into consideration to achieve the 'ultimate' sustainable building.

For real estate, sustainability is not only about reducing the energy consumption of buildings but also the integration of these buildings into such environmental and social aspects as the manufacturing of their construction materials and how the occupiers subsequently use the premises.

Are rising energy costs catalysts for low energy buildings?

Demand for energy is centrally driven both by economic growth and an established industrial framework, which, correspondingly, relates to productivity, population, and economic development. However, the rise and development of energy efficient technologies also has a reducing effect on energy use. This is reinforced by the continuous increase in electricity prices, up by an average 26% in Europe over the last five years.

We have considered the driving force behind increases in energy costs across Europe. The pressure on occupational costs and on energy consumption overall could be a catalyst for a more proactive approach to sustainable or low energy performance buildings. We could expect to see more pressure on the implementation of low energy building regulations, where energy consumption by inhabitants is high and prices are more expensive.

The map overleaf shows the final energy consumption of electricity per '000 inhabitants and electricity prices per kWh of industrial consumers. This highlights several interesting trends across the different European countries:

- The Nordics account for the highest level of energy consumption of electricity in the region (in particular Sweden, Finland and Norway), with a ratio ranging between 1,130 to 1,978 TOE (tone of oil equivalent) - two to three times the European average which currently stands at 472 TOE. However, often higher electricity consumption is counterbalanced by cheaper prices, ranging between €0.092/kWh to €0.115/kWh in the case of the Nordics, against an average of €0.145/kWh for the Eurozone as a whole.

-Belgium, France and the Netherlands present some common trends, with electricity consumption levels above the European average (+20 to +30%) and relatively attractive pricing. Among the most mature economies, Germany is unique in that the electricity price is extremely high, reaching €0.170/kWh in mid 2012, 17% higher than the European average.

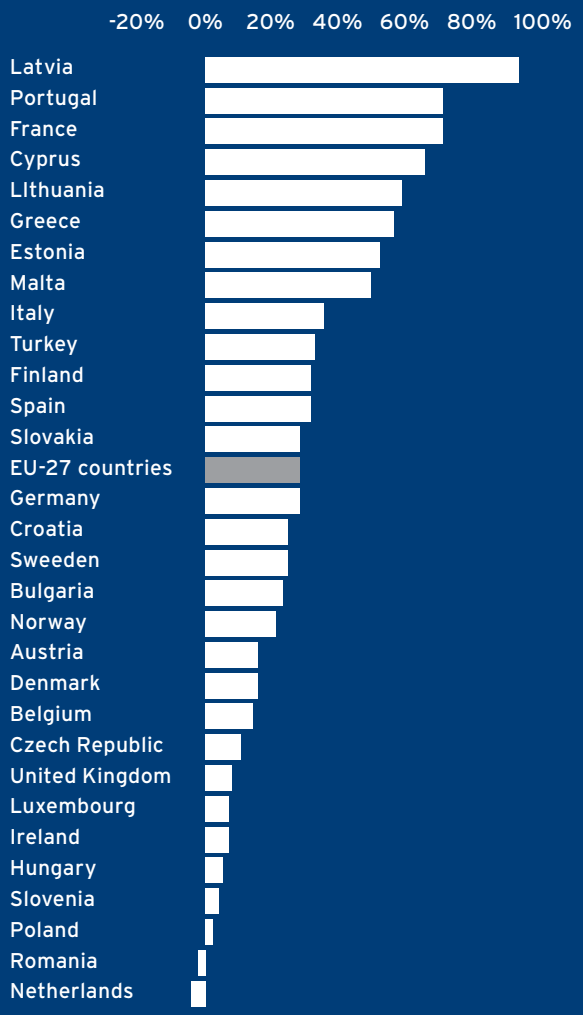
- In the UK and Spain electricity consumption and pricing for industrial consumers are slightly below the European average figures, easing financial pressure on the overall performance of the real estate sector. The situation is less positive in Italy where electricity prices - which stand at €0,211/kWh - are the second highest in the region. Economic pressure on energy costs could speed up the implementation of the EPBD directive, offering more control on the energy performance of buildings.

- Hungary, Poland and Turkey consume the least electricity across the region. Their GDP growth is expected to generate more demand and energy consumption going forward. Poland and Turkey benefit from lower prices in electricity, whilst Hungary is already more or less in line with the European average.

Figure 1

Electricity price Industrial consumer

Changes from 2007 to 2012



Source: Eurostat

Map 1

Final energy consumption of electricity and electricity prices in Europe - Industry*

per 1000 inhabitants

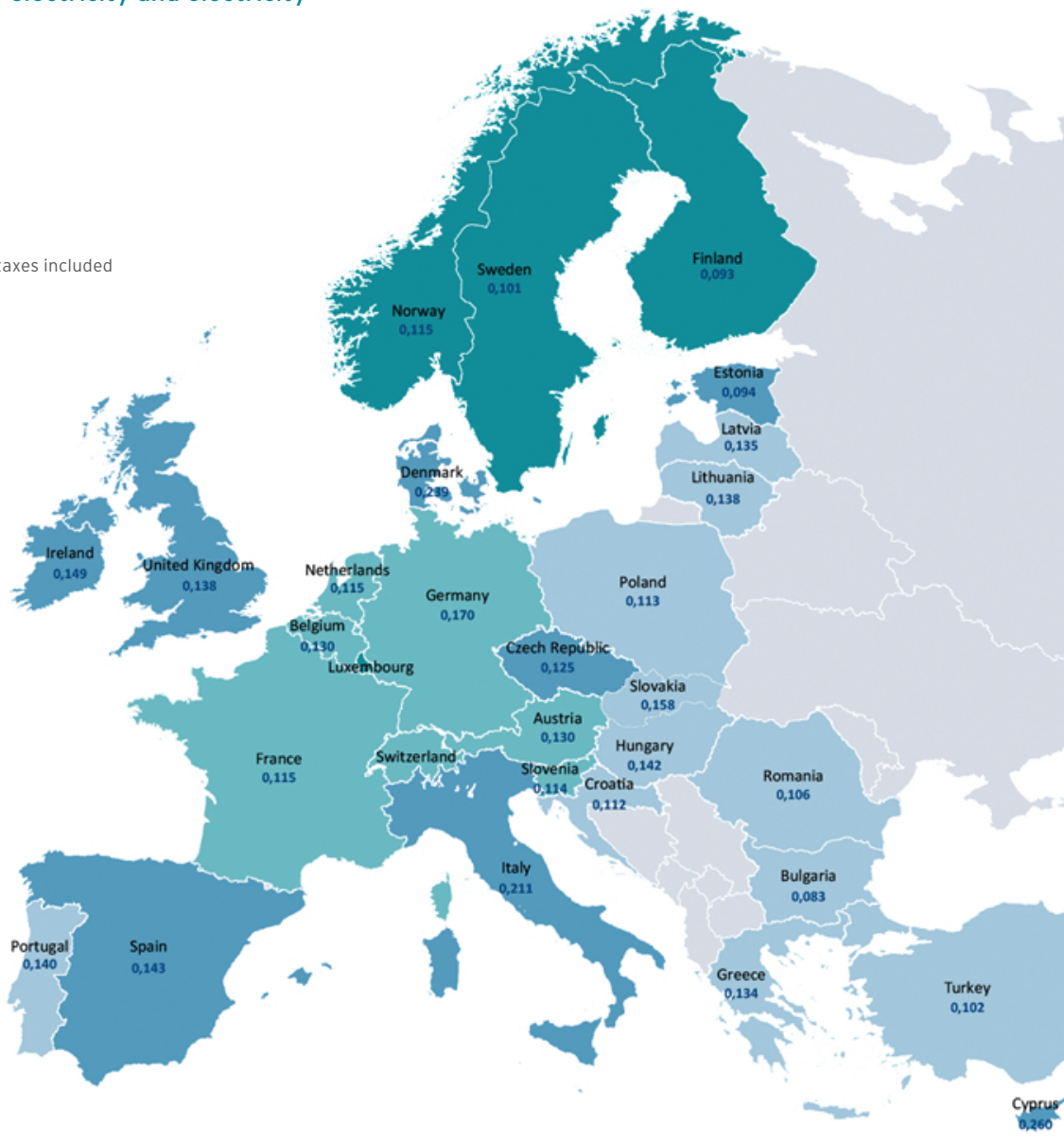
- < 400
- 400 to 500
- 500 to 1000
- > 1000

electricity price as at H1 2012 €/kWh/all taxes included
Average of EU : 472

Source: Eurostat

Final energy consumption of electricity covers any electricity delivered to the end user's door (i.e. industry, transport, households and other sectors...) for all energy uses. It excludes deliveries for transformation and/or own use of the energy producing industries, as well as any network losses.

*The price of electricity is expressed in € and includes all the taxes for industrial consumers, with annual consumption ranging between 500MwH and 2,000 Mw.



Mandatory certification – EPBD and EPCs

With buildings accounting for 40% of energy consumption, the EU has introduced legislation aimed at improving the energy performance of buildings within the EU. The EPBD (Energy Performance of Buildings Directive), first published in 2002, requires all EU countries to enhance their building standards and roll out Energy Performance Certificates (EPCs). EPCs rate buildings according to their energy performance in various categories, including hot water, heating, cooling, fans and lighting, and are required to be made available when a building is constructed, sold or rented out.

It is important to note that the EPC has been designed to rate the energy performance of a building only – it does not assess the overall sustainability of a building.

The categories covered by the EPC vary from country to country:

Energy performance is defined through common standards in the majority of the countries covered in our European Sustainability Guide (16 out of 22). Energy performance includes energy used for hot water, heating, cooling, fans and lighting.

There are a number of local criteria to be adhered to in the energy performance assessment, including:

- Exclusion of hot water production in Belgium, Finland, France and Ireland

- Exclusion of fans in Italy

- Exclusion of lighting in Belgium, Finland, France, Ireland and Italy.

Beyond these exclusions, the rating obtained by using the EPC varies between countries, preventing investors or tenants of using it as a common tool to evaluate the energy performance of buildings on a consistent and comparable basis. Buildings are classified into categories with the number of categories varying from 7 (for the majority of countries) to a maximum of 9. There is no consistency between ratings across Europe. Therefore two buildings with the same rating could in fact have very different levels of energy efficiency.

The EPC is mandatory in most European countries for any sale or leasing of buildings, meaning that the EPC should be included in any building advertising. This requirement for publicity allows occupiers and landlords to compare the energy efficiency of buildings against each other at country level. This is an achievement in itself but does not suggest that a more proactive management approach has been implemented to investors' whole asset portfolios.

According to the Energy Act 2011, there will be a Minimum Energy Standard requirement for all properties to be let by 2018, although this has not yet been confirmed. The assumed rating level is a 'E' rating, so 'F' and 'G' rated properties will not be able to be let post 2018 unless they have implemented all the measures under the Green Deal Assessment.

In France, a step by step approach for improving the energy performance of existing buildings is at a very advanced stage. Owners are obliged to start renovation/refurbishment work to improve the energy performance of their buildings with the objective to:

=> Upgrade the performance by 2 ranges for the buildings classified as H and I,

=> Upgrade the performance by 1 range for the buildings classified as D, E, F and G,

=> For buildings already classified as A, B and C, facility management should be optimized.

Table 1

EPC standards in Europe

Countries	Hot Water	Heating	Cooling	Fans	Lighting	Other
Belgium	X	√	√	√	X	X
Czech Republic	√	√	√	√	√	√
Denmark	√	√	√	√	√	X
Estonia	√	√	√	√	√	√
Finland	X	√	√	√	X	X
France	X	√	√	√	X	X
Germany	√	√	√	√	√	√
Hungary	√	√	√	√	√	√
Ireland	X	√	√	√	X	X
Italy	√	√	√	X	X	X
Latvia	√	√	√	√	√	X
Lithuania	√	√	√	√	√	√
Luxembourg	√	√	√	√	√	X
Netherlands	√	√	√	√	√	√
Norway	√	√	√	√	√	√
Poland	√	√	√	√	√	X
Romania	√	√	√	√	√	X
Spain	√	√	√	√	√	X
Sweeden	√	√	√	√	√	√
Switzerland	√	√	√	√	√	X
Turkey	√	√	√	√	√	X
United Kingdom	√	√	√	√	√	X

Source: DTZ Research from local energy performance assessment bodies

Voluntary certifications

Aside from the EPC ratings which are mandatory, investors and occupiers can choose to go one step further towards obtaining sustainable buildings by applying for voluntary certification schemes. There are different certification schemes in operation across Europe.

Main green rating systems

Four green rating systems are predominant in Europe judging by their number of certified buildings.

BREEAM

The Building Research Establishment's Environmental Assessment Method (BREEAM) is the oldest and most widespread certification system around the world. Launched in the United Kingdom in 1990 it has certified nearly 250,000 buildings and is now used in more than 50 countries. Some country-specific BREEAM certifications schemes have been set up in Netherlands, Spain, Norway, Sweden and Germany.

HQE

The Haute Qualité Environmentale (HQE) certification is a green building standard created in France in 1996 by the HQE Association. Since 2006 a certification can be obtained through the Certivea organisation. It is mainly a local standard and the rare international certifications are made in other French speaking countries.

LEED

LEED stands for Leadership in Energy and Environmental Design, developed by the United States Green Building Council (USGBC) in 1998, and the certification has evolved since. The most recent version corresponds to a set of criteria defined in 2009 and is referred to as the LEED 2009 Rating System. It is the second most adopted assessment method worldwide with more than 11,000 buildings certified around the world with this system and around 300 in Europe.

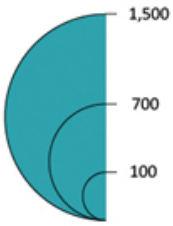
DGNB

Launched by the German Sustainable Building Council in 2008 the DGNB certification is among the most recent in Europe. Similar to the LEED and BREEAM systems it accords more importance to the life cycle assessment of the building than to actual credit allocations.

Mainly used for local projects it has gained international momentum over the course of the years. To this day roughly 500 buildings have been DGNB certified around the world, half of which are located in Germany.

Map 2

Number of certified* buildings



Most common certification

Source: DTZ Research

*based on the most common certifications in each country

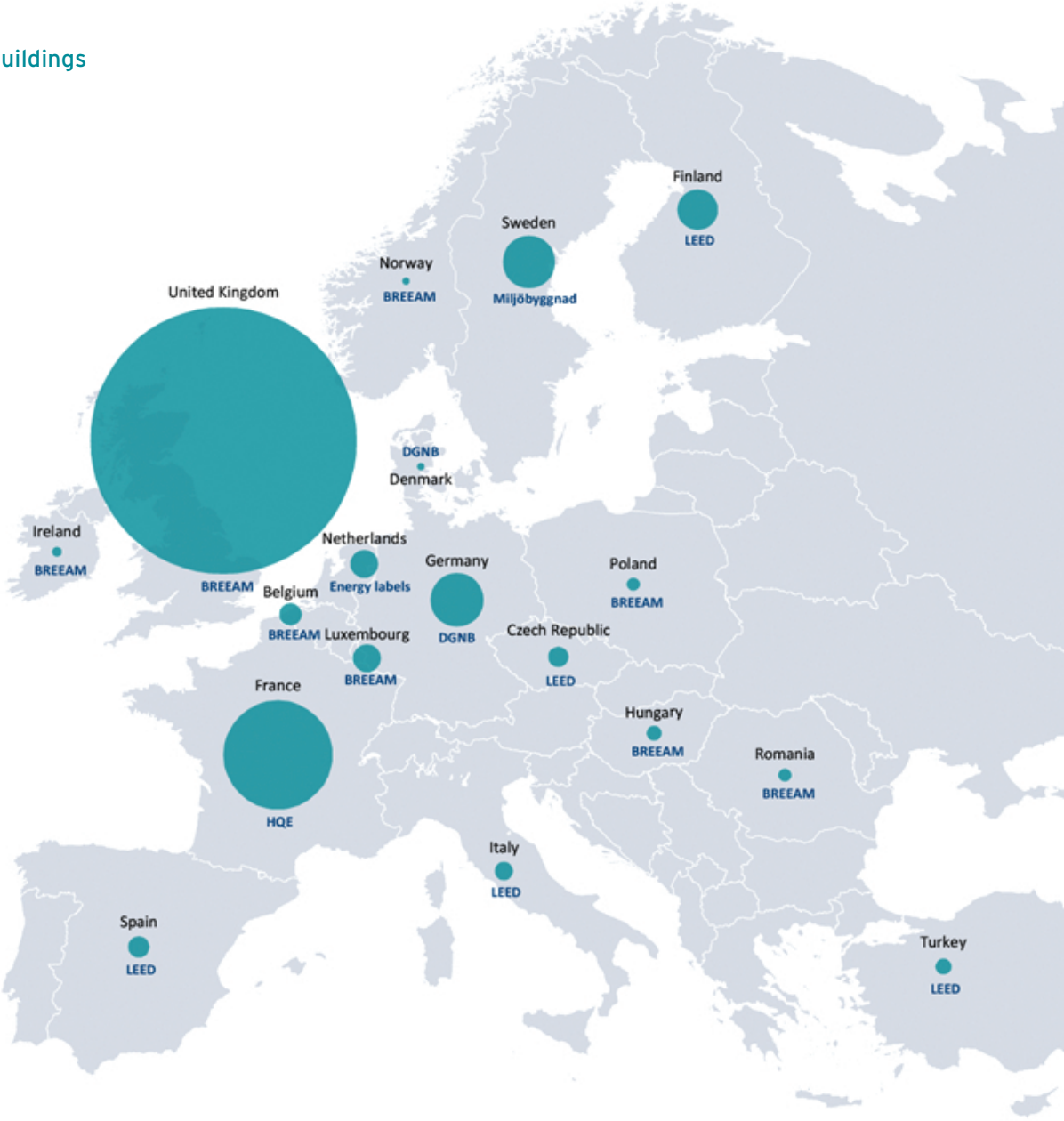


Table 2

Certification scheme descriptions

Valuation system	Countries	Total Cost in €*	Criteria	Levels of certification
LEED	US	Registration cost: €700 Audit cost: €10,000 Total cost: €10,700 (excluding cost of technical document translation)	-Sustainable sites -Water efficiency -Energy and atmosphere -Materials and resources -Indoor environmental quality -Innovation and design process	-Platinum: 52-69 pts -Gold: 39-51 pts -Silver: 33-38 pts -Certified: 26-32 pts
BREEAM	UK	Registration cost: €900 Audit cost: €2,700 Total cost: €3,600 (excluding cost of technical document translation)	-Management -Energy use -Health and well-being -Pollution -Transport -Land-use -Ecology -Materials -Water	-Outstanding -Excellent -Very Good -Good -Pass
HQE	France	Registration cost: €1,900 Audit cost: €23,800 Total cost: €25,700	-Relationship between buildings and their close environment -Choice of construction processes and products -Low nuisance of building site -Energy management -Water management -Waste management -Maintenance management -Heat comfort -Acoustic comfort -Visual comfort -Olfactory comfort -Health quality of the areas -Health quality of water -Health quality of air	-Very good -Good -Basic
DGNB	Germany	Certificate is €3,000 to €18,000 EUR; plus Fee for Auditor; total costs could vary between €50,000 and €100,000.	50 sustainability categories for which topics are: -Economical quality -Ecological quality -Socio-cultural & functional quality -Technical quality -Quality of the process -Quality of building -Quality of location	-Gold -Silver -Bronze

*Costs indicated in the table above for LEED, BREEAM and HQE certification are for a new office building of 20,000 sq m. The certification cost is based project's rating system and size.

Source: DTZ Research

We must acknowledge the limitations to this benchmarking exercise.

Building regulation standards vary between countries and each rating tool has, as a minimum requirement, building regulations specific to each country. Therefore there is no guarantee that a building which attains the highest level of certification with one organisation will attain the same with another. For example, the US LEED system is based on fewer criterions than the UK BREEAM one. The highest level for LEED is 'Platinum' which roughly equates to a 'Very Good' in BREEAM.

Setting global standards across property portfolios is an understandable objective but in some countries choosing one particular global standard over another can lead to lower ratings than simply adhering the local certification. The green value debate is easier to undertake in the US and Australia where standard building regulations are much stricter than they are in Europe.

Globalisation of commercial real estate is leading investors to choose between several certifications in order to maximise the green impact of their buildings on potential tenants and future landlords. 6 of the 22 countries covered in our analysis have reported this trend - see the table below which presents the most common combination of certifications by country in Europe.

France, Germany, Italy and Netherlands all add an international certificate to the local ones. This makes sense when considering the weight of cross-border investment activity in these countries.

Table 3

Most common combination of "green" certifications used across Europe

Country	Most common certifications	Most common certification combinations
Finland	LEED	LEED-BREEAM
France	HQE	HQE-BBC / HQE-BREEAM
Germany	DGNB	DGNB-LEED
Italy	LEED	LEED-CASACLIMA
Netherlands	Energy Labels	BREEAM
Poland	BREEAM	LEED-BREEAM

Source: DTZ Research

Lifecycle coverage

The table below provides an overview on the type of buildings (new, renovated or existing) which can apply for certifications.

Table 4

Lifecycle coverage of building certifications

Country	New	Renovated	Existing
Belgium	√	√	√
Czech Republic	√	√	√
Denmark	√	√	X
Estonia	√	X	X
Finland	√	√	√
France	√	√	√
Germany	√	√	√
Hungary	√	√	√
Ireland	√	√	√
Italy	√	√	√
Latvia	√	√	√
Lithuania	√	√	√
Luxembourg	√	√	√
Netherlands	√	√	√
Norway	√	√	√
Poland	√	√	√
Romania	√	√	√
Spain	√	√	√
Sweeden	√	√	√
Switzerland	√	√	√
Turkey	√	√	√
United Kingdom	√	√	√

Source: DTZ Research

There are now a wide range of certifications in existence which cover all the different building types: from its construction to its renovation through its use by occupiers. However, most of the certifications obtained so far are for new buildings as they are the first ones to have been set up by private organisations, such as BRE (UK), US Green Building Council (US) or CERTIVEA (France). In less than a decade, the scope for green building certifications has been extended to also cover renovated and existing buildings.

Operational performance

Next to consider is the use of buildings by the end user, which is responsible for a large part (30%) of the energy performance. We have already identified a number of countries where a certification linked to the occupation of the building exists. For example it is the case in Finland, France, Hungary, Luxembourg and the UK.

Green office buildings in their market

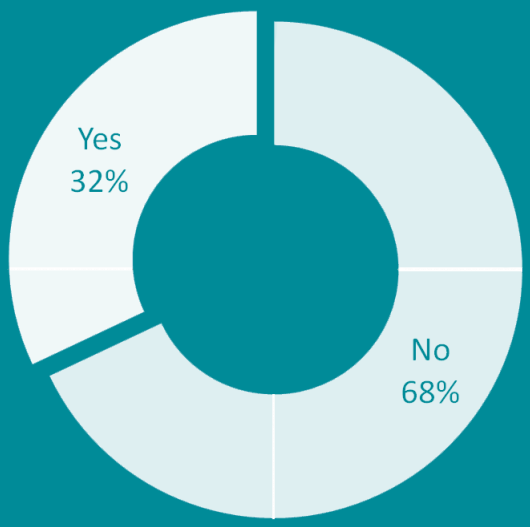
PRIME IS NOT YET GREEN IN EUROPE

Discussions around the value of 'green' have been ongoing for a number of years in the European Commercial Real Estate market. They started on the basis of the added cost to be paid by the tenant of green / low energy consumption buildings, without however demonstrating the added value of this new type of building.

The angle of the discussions has changed recently leading to a new definition of new prime buildings which considers energy performance levels. This new definition for prime buildings has come into force as high energy efficiency has started to spread across Europe with 7 (mainly Nordics, France and the UK) out of 22 countries covered in our analysis having already witnessed this change. These highlight that prime buildings are not yet 'green' or 'energy efficient' at a regional level. We should expect to see a growing number of markets integrating this new paradigm in the future as green certifications and labels will see their importance growing. Green office stock defined as buildings with green certifications accounts for only 24 million sq m across Europe, representing less than 5% of the overall stock.

Figure 2

Is your definition of prime office buildings based on energy efficiency?



Source: DTZ Research

MARKET VALUES

Our analysis of prime rents for low energy buildings against non low-energy buildings across Europe shows that there is not yet any clear differentiation in terms of pricing in most European countries. Higher prices for green buildings are broadly expected by market participants, although to date there has been little evidence of any green added value across different European countries.

There are, however, some countries which are now showing increased evidence of higher pricing in green buildings. For example this is the case outside central locations in Finland, Germany and Romania.

GREEN LEASES

Beyond the Energy Performance Certificate and the green certifications, the emergence of green buildings will also impact the relationship between tenants and landlords. An appendix focused on sustainable use of the buildings is now required for some leasing contracts in half of the European countries covered in our analysis. Green leases vary in terms of content or obligations for tenants and/or landlords; however their requirement for new or existing lease contracts is evidence that sustainability is expected to deeply impact the real estate market.

Country specific energy information

Belgium

BUILDING REGULATIONS

Official definition for low-energy buildings:

The definition is different depending on the region the building is located in. In general, the mandatory regulation defines standards to be reached for new buildings as well as for important refurbishments. In Brussels, the current standards imposed are: For new construction - the annual requirement for heating, cooling, ventilation, hot water and lighting must be lower than 75 kWh/sq m (in primary energy).

As Belgium is a Federal State with competences and obligations split at regional level, each Belgian region (Flanders, Wallonia and Brussels Capital Region) has the right to set its own definition for the Energy Performance Building Criteria, in accordance with the European directive on this subject.

EPC* ASSESSMENT INCLUDES:

Hot Water	No
Heating	Yes
Cooling	Yes
Fans	Yes
Lighting	No
Other	No

*Energy Performance Certificate

EP certificates are mandatory in the country's three regions. Not only are these mandatory on sales of buildings but also on lettings. The goal is to allow buyers to compare buildings both for purchases and lettings.

GREEN RATING SCHEMES

Most common certification	BREEAM
New building	Yes
Renovated building	Yes
Existing building	Yes
Other certifications	HQE (France)
Most common combination	BREEAM only
Local assessment tool	Valideo
Number of certified office buildings	30 for 360,000 sq m

HEATING/COOLING METHOD

Heating method includes:

Electricity	Yes
Gas	Yes
Fuel	Yes

Cooling method includes:

A/C	No
Natural	No
Dual Flow Ventilation	Yes
Mechanical exhaust	No

MARKET OVERVIEW

Are green leases common practice in your market?	No	
Prime rents (€/sq m/year) - Brussels	**CBD**	**Outside CBD**
For "low-energy" buildings	285	195
For non "low-energy" buildings	275	185

KEY LOCAL INDICATORS

	Belgium	Europe	Rank
Average electricity cost, €/kWh	0.130	0.145	12
Average gas cost, €/Gigajoules	11.690	13.150	7
Private vehicle to work	52%	30%	1
Public Transportation to work	34%	34%	9
Bicycle use to work	5%	6%	6

Czech Republic

BUILDING REGULATIONS

Official definition for low-energy buildings:

Based on the Act 406/2000 a building with almost zero energy consumption is a building with very low energy demand, mostly covered from renewable resources.
The Decree No. 148/2007 Coll. Energy Performance of Buildings and the Czech technical standard CSN 730540 define:
-The requirements for energy efficiency of buildings, benchmarks and calculation methods
-The contents and the layout of the Energy Performance Certificate (EPC), including the use of previously conducted energy audits
-The extent of examinations to be passed by individuals with respect to the details to be included in the EPC of the building.

EPC* ASSESSMENT INCLUDES:

Hot Water	No
Heating	Yes
Cooling	Yes
Fans	Yes
Lighting	Yes
Other	No

*Energy Performance Certificate

The Decree No. 148/2007 gives the values of specific energy consumption. These specifics are divided into classes (from A to G); the C class contains the reference values. Class A and B buildings are considered energy efficient with A class the most energy efficient.

CERTIFICATION SCHEMES

Most common certification	LEED
New building	Yes
Renovated building	Yes
Existing building	Yes
Other certifications	DGNB, BREEAM
Most common combination	BREEAM for existing buildings, LEED for planned projects
Local assessment tool	SB Tool CZ in progress
Number of certified office buildings	24 for 343,000 sq m

HEATING/COOLING METHOD

Heating method includes:	
Electricity	Yes
Gas	Yes
Fuel	Yes

Cooling method includes:	
A/C	Yes
Natural	Yes
Dual Flow Ventilation	Yes
Mechanical exhaust	Yes

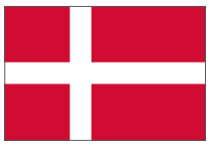
MARKET OVERVIEW

Are green leases common practice in your market?	Yes	
Prime rents (€/sq m/year) - Prague	**CBD**	**Outside CBD**
For "low-energy" buildings	252	210
For non "low-energy" buildings		

KEY LOCAL INDICATORS

	Czech Republic	Europe	Rank
Average electricity cost, €/kWh	0.125	0.145	11
Average gas cost, €/Gigajoules	11.168	13.150	4
Private vehicle to work	33%	30%	8
Public Transportation to work	43%	34%	4
Bicycle use to work	1%	6%	10

Denmark



BUILDING REGULATIONS

Official definition for low-energy buildings:

The minimum energy performance requirement for non-residential buildings is 95 + 2,200/A kWh/sq m (A is the heated gross floor area) including the electricity needed for the integrated lighting of the building.

Two energy classes are defined:
Low Energy Class 1: Calculated performance is 75% better than the minimum requirements
Low Energy Class 2: Calculated performance is 50% better than the minimum requirements

EPC* ASSESSMENT INCLUDES:

Hot Water	No
Heating	Yes
Cooling	Yes
Fans	Yes
Lighting	Yes
Other	No

*Energy Performance Certificate

GREEN RATING SCHEMES

Most common certification	DGNB
New building	Yes
Renovated building	Yes
Existing building	No
Other certifications	No
Most common combination	DGNB only
Local assessment tool	Bolig+ Passiv Haus Swan label
Number of certified office buildings	7 for 47,900 sq m

HEATING/COOLING METHOD

Heating method includes:	
Electricity	Yes
Gas	Yes
Fuel	Yes

Cooling method includes:	
A/C	No
Natural	No
Dual Flow Ventilation	Yes
Mechanical exhaust	Yes

MARKET OVERVIEW

Are green leases common practice in your market?	No	
Prime rents (€/sq m/year) - Copenhagen	**CBD**	**Outside CBD**
For "low-energy" buildings	250	250
For non "low-energy" buildings	260	150

KEY LOCAL INDICATORS

	Denmark	Europe	Rank
Average electricity cost, €/kWh	0.239	0.145	21
Average gas cost, €/Gigajoules	24.256	13.150	19
Private vehicle to work	29%	30%	10
Public Transportation to work	15%	34%	17
Bicycle use to work	31%	6%	1

Estonia

BUILDING REGULATIONS

Official definition for low-energy buildings:

In Estonia there are no initiatives regarding low-energy buildings other than those dictated by the EPBD directive.

Buildings are classified into 7 different classes ranging from A to G, with A representing the minimum consumption of energy and G the highest.

State support only exists for the renovation of multi-residential buildings and public buildings.

EPC* ASSESSMENT INCLUDES:

Hot Water	Yes
Heating	Yes
Cooling	Yes
Fans	Yes
Lighting	Yes
Other	No

*Energy Performance Certificate

GREEN RATING SCHEMES

Most common certification	LEED
New building	Yes
Renovated building	No
Existing building	No
Other certifications	No
Most common combination	LEED only
Local assessment tool	No
Number of certified office buildings	n/a

HEATING/COOLING METHOD

Heating method includes:	
Electricity	Yes
Gas	Yes
Fuel	Yes

Cooling method includes:	
A/C	No
Natural	No
Dual Flow Ventilation	Yes
Mechanical exhaust	No

MARKET OVERVIEW

Are green leases common practice in your market?	No	
Prime rents (€/sq m/year) - Talinn	**CBD**	**Outside CBD**
For "low-energy" buildings	n/a	n/a
For non "low-energy" buildings	180	130

KEY LOCAL INDICATORS

	Estonia	Europe	Rank
Average electricity cost, €/kWh	0.094	0.145	2
Average gas cost, €/Gigajoules	12.250	13.150	10
Private vehicle to work	26%	30%	11
Public Transportation to work	40%	34%	5
Bicycle use to work	4%	6%	7

Finland

BUILDING REGULATIONS

Official definition for low-energy buildings:

A description of a low-energy building is given in the Building Code, part D3, adopted in June 2007: In designing a low-energy building the calculated heat loss (building envelope, ventilation and infiltration) should not be more than 60 % of the heat loss calculated according to reference values stated in building regulations.

In the current practices, low-energy performance buildings minimise the energy consumption and the use of natural resources but also have healthy and user-friendly interior air and materials.

EPC* ASSESSMENT INCLUDES:

Hot Water	No
Heating	Yes
Cooling	Yes
Fans	Yes
Lighting	No
Other	No

*Energy Performance Certificate

Green leases are only required for new leasing contracts. There are no size requirements. Green leases are favoured for new constructions.

GREEN RATING SCHEMES

Most common certification	LEED
New building	Yes
Renovated building	Yes
Existing building	Yes
Other certifications	BREEAM
Most common combination	LEED - BREEAM
Local assessment tool	No
Number of certified office buildings	100 for 700,000 sq m

HEATING/COOLING METHOD

Heating method includes:	
Electricity	Yes
Gas	Yes
Fuel	Yes
Other	District heating
Cooling method includes:	
A/C	Yes
Natural	Yes
Dual Flow Ventilation	Yes
Mechanical exhaust	Yes
Other	District cooling

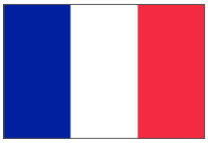
MARKET OVERVIEW

Are green leases common practice in your market?	Yes	
Prime rents (€/sq m/year) - Helsinki	**CBD**	**Outside CBD**
For "low-energy" buildings	n/a	300
For non "low-energy" buildings	360	264

KEY LOCAL INDICATORS

	Finland	Europe	Rank
Average electricity cost, €/kWh	0.093	0.145	1
Average gas cost, €/Gigajoules	16.160	13.150	17
Private vehicle to work	40%	30%	3
Public Transportation to work	27%	34%	12
Bicycle use to work	7%	6%	4

France



BUILDING REGULATIONS

Official definition for low-energy buildings:

The “arrêté ministeriel” dated 8th May 2007 defines regulatory requirements for the energy performance of buildings. 5 levels are defined: HPE, HPE EnR, THPE, THPE EnR, and BBC.

BBC means "Low Energy Consumption Building". For new buildings: the annual requirement for heating, cooling, ventilation, hot water and lighting must be lower than about 50 kWh/sq m (in primary energy) (40 kWh/sq m to 65 kWh/sq m, depending on the climatic area and altitude).

For other buildings: the annual requirement for heating, cooling, ventilation, hot water and lighting must be at least 50 % lower than what is required by the current building regulation for new buildings.

ENERGY PERFORMANCE COVERS:

Hot Water	No
Heating	Yes
Cooling	Yes
Fans	Yes
Lighting	No
Other	No

From July 2013, green leases are mandatory for new and existing leasing contracts on any office space over 2,000 sq m. Landlord and tenant obligations are the subject of the pending decree L125-9 of the Environmental Code

GREEN REATING SCHEMES

Most common certification	HQE
New building	Yes
Renovated building	Yes
Existing building	Yes
Others certifications	BREEAM, LEED
Most common combination	HQE-BREEAM
Local assessment tool	BBC, BEPOS
Number of certified office buildings	704 for 9.4 million sq m

HEATING/COOLING METHOD

Heating method includes:	
Electricity	Yes
Gas	Yes
Fuel	Yes

Cooling method includes:	
A/C	Yes
Natural	No
Dual Flow Ventilation	Yes
Mechanical exhaust	No

MARKET OVERVIEW

Are green leases common practice in your market?	Yes	
Prime rents (€/sq m/year) - Paris	**CBD**	**Outside CBD**
For "low-energy" buildings	820	590
For non "low-energy" buildings	750	530

KEY LOCAL INDICATORS

	France	Europe	Rank
Average electricity cost, €/kWh	0.115	0.145	9
Average gas cost, €/Gigajoules	12.800	13.150	12
Private vehicle to work	17%	30%	15
Public Transportation to work	33%	34%	10
Bicycle use to work	3%	6%	8

Germany

BUILDING REGULATIONS

Official definition for low-energy buildings:

There is no official definition for low-energy buildings.

According to the DGNB low-energy buildings are defined as: buildings which preserve nature, save resources, are functional and comfortable and integrate themselves in their socio-cultural surroundings.

The Passiv Haus definition is commonly used in Germany.

For a building to be considered efficient in its energy consumption, the total annual primary energy requirement must not exceed 120 kWh/sq m

EPC* ASSESSMENT INCLUDES:

Hot Water	Yes
Heating	Yes
Cooling	Yes
Fans	Yes
Lighting	Yes
Other	No

*Energy Performance Certificate

There are no official regulations or decrees regarding green leases in Germany. However, it is perceived in high regard to include arrangements concerning sustainability to the whole term of the lease

GREEN RATING SCHEMES

Most common certification	DGNB
New building	Yes
Renovated building	Yes
Existing building	Yes
Other certifications	LEED, BREAM
Most common combination	DGNB-LEED
Local assessment tool	Passiv Haus Regional initiatives
Number of certified office buildings	172 for 3 million sq m

HEATING/COOLING METHOD

Heating method includes:	
Electricity	Yes
Gas	Yes
Fuel	Yes

Cooling method includes:	
A/C	No
Natural	No
Dual Flow Ventilation	Yes
Mechanical exhaust	Yes

MARKET OVERVIEW

Are green leases common practice in your market?	Yes	
Prime rents (€/sq m/year) – Average on Top 5* markets	**CBD**	**Outside CBD**
For "low-energy" buildings	414	240
For non "low-energy" buildings		216

** Top 5 include, Berlin, Dusseldorf, Frankfurt, Hamburg, and Munich*

KEY LOCAL INDICATORS

	Germany	Europe	Rank
Average electricity cost, €/kWh	0.170	0.145	19
Average gas cost, €/Gigajoules	15.660	13.150	16
Private vehicle to work	34%	30%	7
Public Transportation to work	23%	34%	15
Bicycle use to work	13%	6%	3

Hungary

BUILDING REGULATIONS

Official definition for low-energy buildings:

There are no official definitions for low-energy buildings. Nevertheless buildings must be designed to be compatible with the legislations relating to thermal transmittance of doors and windows, specific heat loss, aggregated energetic parameters and risk of overheating during the summer.

New buildings larger than 1,000 sq m must pay attention to technical, environmental and economic parameters. A feasibility study should be undertaken to determine if it is possible to have: a decentralised energy supply system, district heating/cooling systems, block heating/cooling systems or heat pumps. The renovation of buildings larger than 1,000 sq m is also covered by this feasibility study.

EPC* ASSESSMENT INCLUDES:

Hot Water	Yes
Heating	Yes
Cooling	Yes
Fans	Yes
Lighting	Yes
Other	No

*Energy Performance Certificate

GREEN RATING SCHEMES

Most common certification	BREEAM
New building	Yes
Renovated building	Yes
Existing building	Yes
Other certifications	DGNB
Most common combination	BREEAM-LEED
Local assessment tool	No
Number of certified office buildings	13 for 195,300 sq m

HEATING/COOLING METHOD

Heating method includes:	
Electricity	Yes
Gas	Yes
Fuel	Yes

Cooling method includes:	
A/C	Yes
Natural	No
Dual Flow Ventilation	Yes
Mechanical exhaust	No

MARKET OVERVIEW

Are green leases common practice in your market?	No	
Prime rents (€/sq m/year) - Budapest	**CBD**	**Outside CBD**
For "low-energy" buildings	190	n/a
For non "low-energy" buildings		

KEY LOCAL INDICATORS

	Hungary	Europe	Rank
Average electricity cost, €/kWh	0.142	0.145	16
Average gas cost, €/Gigajoules	17.777	13.150	18
Private vehicle to work	20%	30%	14
Public Transportation to work	47%	34%	3
Bicycle use to work	1%	6%	10

Ireland

BUILDING REGULATIONS

Official definition for low-energy buildings:

The EU Directive on the Energy Performance of Buildings (EPBD) contains a range of provisions aimed at improving energy performance of residential and non-residential buildings, both new-build and existing. This Directive was adopted into Irish law as Regulation in 2006.

In Irish law, there is no official definition for a low-energy or passive building. However, in the description of the official Building Energy Rating (BER) Certificate it is stated that a A1 rated dwelling is the more energy efficient.

Since the 1st January 2009 BER ratings are to be required for any existing buildings offered for sale or rent, regardless of the age of the building. A BER certificate is valid for a period of up to 10 years while there are no changes made to the dwelling that will negatively affect its energy performance.

EPC* ASSESSMENT INCLUDES:

Hot Water	No
Heating	Yes
Cooling	Yes
Fans	Yes
Lighting	No
Other	No

*Energy Performance Certificate

GREEN RATING SCHEMES

Most common certification:	BREEAM
New building	Yes
Renovated building	Yes
Existing building	Yes
Others certifications:	None
Most common combination	BREEAM only
Local assessment tool	No
Number of certified office buildings	5

HEATING/COOLING METHOD

Heating method includes:

Electricity	Yes
Gas	Yes
Fuel	Yes

Cooling method includes:

A/C	Yes
Natural	No
Dual Flow Ventilation	Yes
Mechanical exhaust	No

MARKET OVERVIEW

Are green leases common practice in your market?	No	
Prime rents (€/sq m/year) - Dublin	**CBD**	**Outside CBD**
For "low-energy" buildings	312	n/a
For non "low-energy" buildings		

KEY LOCAL INDICATORS

	Ireland	Europe	Rank
Average electricity cost, €/kWh	0.149	0.145	18
Average gas cost, €/Gigajoules	11.600	13.150	6
Private vehicle to work	n/a	30%	n/a
Public Transportation to work	n/a	34%	n/a
Bicycle use to work	n/a	6%	n/a

Italy

BUILDING REGULATIONS

Official definition for low-energy buildings:

There is no official definition for low-energy buildings.

However, based on the CasaClima definition, buildings with a calculated heat demand of less than 10 kWh/sq m/ year is considered as passive and could be qualified as CasaClima Gold.

If this result is achieved only with natural insulation materials it is defined as Gold +.

EPC* ASSESSMENT INCLUDES:

Hot Water	Yes
Heating	Yes
Cooling	Yes
Fans	No
Lighting	No
Other	No

*Energy Performance Certificate

Work&Life symbolises the evaluation of the sustainability developed by the CasaClima Agency for office buildings, companies and providers of services. The seal takes into account a number of technical and strategic criteria in the three areas of sustainability: “nature” (ecology), “life” (socio-cultural aspects) and “transparency” (economy).

GREEN RATING SCHEMES

Most common certification	CASACLIMA
New building	Yes
Renovated building	Yes
Existing building	Yes
Other certifications	LEED
Most common combination	LEED - CASACLIMA
Local assessment tool	No
Number of certified office buildings	20

HEATING/COOLING METHOD

Heating method includes:	
Electricity	Yes
Gas	Yes
Fuel	No

Cooling method includes:	
A/C	Yes
Natural	Yes
Dual Flow Ventilation	No
Mechanical exhaust	No

MARKET OVERVIEW

Are green leases common practice in your market?	No	
Prime rents (€/sq m/year) - Milan	**CBD**	**Outside CBD**
For "low-energy" buildings	n/a	480
For non "low-energy" buildings	500	220-230

KEY LOCAL INDICATORS

	Italy	Europe	Rank
Average electricity cost, €/kWh	0.211	0.145	20
Average gas cost, €/Gigajoules	13.170	13.150	13
Private vehicle to work	n/a	30%	n/a
Public Transportation to work	n/a	34%	n/a
Bicycle use to work	n/a	6%	n/a

Latvia

BUILDING REGULATIONS

Official definition for low-energy buildings:

There is no official definition.

A rating of energy performance for buildings has been set up.

The building energy rating scale is divided into 5 zones - 3 base zones (green, yellow and red) and 2 transitional areas. The closer the building to attaining energy performance the closer it is to the green area.

The worse cases are the thermodynamic parameters of the building, which are close to the red zone. If the building is yellow or within the red scale area, it means more needs to be done with regards energy efficiency.

EPC* ASSESSMENT INCLUDES:

Hot Water	Yes
Heating	Yes
Cooling	Yes
Fans	Yes
Lighting	Yes
Other	No

*Energy Performance Certificate

GREEN RATING SCHEMES

Most common certification	BREEAM
New building	Yes
Renovated building	Yes
Existing building	Yes
Other certification:	No
Most common combination	BREEAM only
Local assessment tool	No
Number of certified office buildings	n/a

HEATING/COOLING METHOD

Heating method includes:	
Electricity	Yes
Gas	Yes
Fuel	Yes

Cooling method includes:	
A/C	Yes
Natural	Yes
Dual Flow Ventilation	Yes
Mechanical exhaust	No

MARKET OVERVIEW

Are green leases common practice in your market?	No	
Prime rents (€/sq m/year) - Riga	**CBD**	**Outside CBD**
For "low-energy" buildings	110-180	n/a
For non "low-energy" buildings		

KEY LOCAL INDICATORS

	Latvia	Europe	Rank
Average electricity cost, €/kWh	0.135	0.145	13
Average gas cost, €/Gigajoules	12.530	13.150	11
Private vehicle to work	n/a	30%	n/a
Public Transportation to work	n/a	34%	n/a
Bicycle use to work	n/a	6%	n/a

Lithuania

BUILDING REGULATIONS

Official definition for low-energy buildings:

According to the EU Directive 2002/91/EC on 2002-12-16, the Energy Performance of Building Directive (EPBD) in Lithuania accredited the Technical Regulation of Construction STR 2.01.09:2005 "Energy performance of buildings". Certifications of energy performance exist in order to use energy resources in a rational and economic way.

Low-energy buildings are those classified as Class A according to the Technical Regulation of Construction.

EPC* ASSESSMENT INCLUDES:

Hot Water	Yes
Heating	Yes
Cooling	Yes
Fans	Yes
Lighting	Yes
Other	Yes - Annual electricity consumption

*Energy Performance Certificate

GREEN RATING SCHEMES

Most common certification	Technical Regulation of Construction STR 2.01.09:2005
New building	Yes
Renovated building	Yes
Existing building	Yes
Other certifications	No
Most common combination	Technical Regulation of Construction STR 2.01.09:2005 only
Local assessment tool	No
Number of certified office buildings	509 for 1.1 million sq m

HEATING/COOLING METHOD

Heating method includes:	
Electricity	Yes
Gas	Yes
Fuel	No

Cooling method includes:	
A/C	Yes
Natural	No
Dual Flow Ventilation	Yes
Mechanical exhaust	No

MARKET OVERVIEW

Are green leases common practice in your market?	Yes	
Prime rents (€/sq m/year) - Vilnius	**CBD**	**Outside CBD**
For "low-energy" buildings	208	n/a
For non "low-energy" buildings	174	156

KEY LOCAL INDICATORS

	Lithuania	Europe	Rank
Average electricity cost, €/kWh	0.138	0.145	15
Average gas cost, €/Gigajoules	15.098	13.150	15
Private vehicle to work	38%	30%	4
Public Transportation to work	25%	34%	13
Bicycle use to work	1%	6%	10

Luxembourg

BUILDING REGULATIONS

Official definition for low-energy buildings:

Several texts have been adopted to define low-energy buildings, such as:

- Greater Duchey regulation amended in 2007 Nov 30th on Low Energy residential buildings
- Greater Duchey regulation amended in 2010 August 31st on Low Energy functional buildings.

Low-energy buildings are known as passive buildings, low-energy buildings or energy saving buildings.

EPC* ASSESSMENT INCLUDES:

Hot Water	Yes
Heating	Yes
Cooling	Yes
Fans	Yes
Lighting	Yes
Other	No

*Energy Performance Certificate

GREEN RATING SCHEMES

Most common certification	BREEAM
New building	Yes
Renovated building	Yes
Existing building	Yes
Other certifications	No
Most common combination	BREEAM only
Local assessment tool	No
Number of certified office buildings	47 for 1.4 million sq m

HEATING/COOLING METHOD

Heating method includes:	
Electricity	Yes
Gas	Yes
Fuel	Yes

Cooling method includes:	
A/C	Yes
Natural	Yes
Dual Flow Ventilation	Yes
Mechanical exhaust	Yes

MARKET OVERVIEW

Are green leases common practice in your market?	Yes	
Prime rents (€/sq m/year)	**CBD**	**Outside CBD**
For "low-energy" buildings	480	312
For non "low-energy" buildings		

KEY LOCAL INDICATORS

	Luxembourg	Europe	Rank
Average electricity cost, €/kWh	0.111	0.145	6
Average gas cost, €/Gigajoules	15.010	13.150	14
Private vehicle to work	n/a	30%	n/a
Public Transportation to work	n/a	34%	n/a
Bicycle use to work	n/a	6%	n/a

Netherlands

BUILDING REGULATIONS

Official definition for low-energy buildings:

There is no official definition.

Low-energy buildings could be defined as the ones classified as 'A' in the EPC (Energy Performance Contracting).

An energy label states the current sustainability of the building and states improvements as well.

In Amsterdam the local authorities are checking the implementation. If the results are disappointing building owners are financially forced to comply.

EPC* ASSESSMENT INCLUDES:

Hot Water	Yes
Heating	Yes
Cooling	Yes
Fans	Yes
Lighting	Yes

*Energy Performance Certificate

46 buildings have been certified by BRE so far, of which 34 through BREEAM-NL certifications launched in September 2009.

GREEN RATING SCHEMES

Most common certification	BREEAM
New building	Yes
Renovated building	Yes
Existing building	Yes
Other certifications	No
Most common combination	BREEAM only
Local assessment tool	BREEAM NL
Number of Office buildings certified	46

HEATING/COOLING METHOD

Heating method includes:	
Electricity	No
Gas	Yes
Fuel	No

Cooling method includes:	
A/C	n/a
Natural	n/a
Dual Flow Ventilation	n/a
Mechanical exhaust	n/a

MARKET OVERVIEW

Are green leases common practice in your market?	Yes	
Prime rents (€/sq m/year) - Amsterdam	**CBD**	**Outside CBD**
For "low-energy" buildings	n/a	n/a
For non "low-energy" buildings		

KEY LOCAL INDICATORS

	Netherlands	Europe	Rank
Average electricity cost, €/kWh	0.115	0.145	8
Average gas cost, €/Gigajoules	12.070	13.150	9
Private vehicle to work	38%	30%	5
Public Transportation to work	20%	34%	16
Bicycle use to work	22%	6%	2

Norway

BUILDING REGULATIONS

Official definition for low-energy buildings:

According to the official definition, low-energy buildings are those which consume less than 84 kWh/sq m/year.

EPC* ASSESSMENT INCLUDES:

Hot Water	Yes
Heating	Yes
Cooling	Yes
Fans	Yes
Lighting	Yes

*Energy Performance Certificate

If the Green lease applies to a new leasing contract, there are obligations on both sides (tenants and landlords).

GREEN RATING SCHEMES

Most common certification	BREEAM
New building	Yes
Renovated building	Yes
Existing building	Yes
Other certifications	No
Most common combination	BREEAM only
Local assessment tool	No
Number of certified office buildings	3 for 20,000 sq m

HEATING/COOLING METHOD

Heating method includes:	
Electricity	No
Gas	Yes
Fuel	Yes

Cooling method includes:	
A/C	Yes
Natural	Yes
Dual Flow Ventilation	Yes
Mechanical exhaust	Yes

MARKET OVERVIEW

Are green leases common practice in your market?	Yes	
Prime rents (€/sq m/year) - Oslo	**CBD**	**Outside CBD**
For "low-energy" buildings	570	375
For non "low-energy" buildings		

KEY LOCAL INDICATORS

	Norway	Europe	Rank
Average electricity cost, €/kWh	0.115	0.145	10
Average gas cost, €/Gigajoules	n/a	13.150	n/a
Private vehicle to work	36%	30%	6
Public Transportation to work	25%	34%	14
Bicycle use to work	5%	6%	6

Poland

BUILDING REGULATIONS

Official definition for low-energy buildings:

There is no official definition for low-energy buildings.

Energy performance certificates are required on all new buildings, as well as all buildings for sale.

EPC* ASSESSMENT INCLUDES:

Hot Water	Yes
Heating	Yes
Cooling	Yes
Fans	Yes
Lighting	Yes

*Energy Performance Certificate

GREEN RATING SCHEMES

Most common certification	BREEAM
New building	Yes
Renovated building	Yes
Existing building	Yes
Other certifications	LEED, EU Green buildings
Most common combination	BREEAM-LEED
Local assessment tool	Ongoing project to adapt BREEAM and LEED systems to the local polish conditions and regulations
Number of certified office buildings	48 for 419,357 sq m

HEATING/COOLING METHOD

Heating method includes:	
Electricity	Yes
Gas	Yes
Fuel	No
Coal	Yes

Cooling method includes:	
A/C	Yes
Natural	Yes
Dual Flow Ventilation	No
Mechanical exhaust	Yes

MARKET OVERVIEW

Are green leases common practice in your market?	Yes	
Prime rents (€/sq m/year) - Warsaw	**CBD**	**Outside CBD**
For "low-energy" buildings	300	190
For non "low-energy" buildings		

KEY LOCAL INDICATORS

	Poland	Europe	Rank
Average electricity cost, €/kWh	0.113	0.145	13
Average gas cost, €/Gigajoules	11.511	13.150	7
Private vehicle to work	24%	30%	12
Public Transportation to work	54%	34%	1
Bicycle use to work	1%	6%	10

Romania

BUILDING REGULATIONS

Official definition for low-energy buildings:

The Law No. 372/2005, which is the main normative act in the field of energy performance of buildings, entered into force in January 1st, 2007. The legislative proposal for the transposition of the provisions of the EPBD recast brings the following main modifications:

- Removal of 1,000 sq m threshold – high-efficiency alternative systems must be considered for all new buildings regardless of size. Furthermore, all buildings, regardless of size, have to meet minimum requirements after major renovations

- Energy performance certificates have to be handed over to the buyer when purchasing a building, under penalty of annulment of the sale agreement

- A 'take-over' certificate drafted at building completion which is not accompanied by a copy of the energy performance certificate of that new building is null and void

EPC* ASSESSMENT INCLUDES:

Hot Water	Yes
Heating	Yes
Cooling	Yes
Fans	Yes
Lighting	Yes

*Energy Performance Certificate

The Law No. 372/2005 is subject to a modification legislative proposal in order to comply with the new provisions of the EPBD recast. The new version is expected to come into force in 2013.

GREEN RATING SCHEMES

Most common certification	BREEAM
New building	Yes
Renovated building	Yes
Existing building	Yes
Other certifications	LEED, DGNB
Most common combination	No
Local assessment tool	No
Number of certified office buildings	9 for 245,749 sq m

HEATING/COOLING METHOD

Heating method includes:

Electricity	Yes
Gas	Yes
Fuel	Yes

Cooling method includes:

A/C	Yes
Natural	No
Dual Flow Ventilation	No
Mechanical exhaust	No

MARKET OVERVIEW

Are green leases common practice in your market?	No	
Prime rents (€/sq m/year) - Bucharest	**CBD**	**Outside CBD**
For "low-energy" buildings	n/a	222
For non "low-energy" buildings	252	204

KEY LOCAL INDICATORS

	Romania	Europe	Rank
Average electricity cost, €/kWh	0.106	0.145	5
Average gas cost, €/Gigajoules	9.018	13.150	2
Private vehicle to work	24%	30%	12
Public Transportation to work	53%	34%	2
Bicycle use to work	1%	6%	10

Spain

BUILDING REGULATIONS

Official definition for low-energy buildings:

Spain is currently in the process of implementing a directive and therefore much of the directive has already been transposed into the Spanish building code.

Energy performance certificates are only required for building permits requested after 31st October 2007.

An EPC can be issued using a calculated rating that is often produced using complex CALENER software, although not mandatory. The system rates building on a scale from 'A' (Very high performance) to 'G' (Very low performance).

EPC* ASSESSMENT INCLUDES:

Hot Water	Yes
Heating	Yes
Cooling	Yes
Fans	Yes
Lighting	Yes

*Energy Performance Certificate

GREEN RATING SCHEMES

Most common certification	LEED
New building	Yes
Renovated building	Yes
Existing building	Yes
Other certification	BREEAM
Most common combination	No
Local assessment tool	Verde
Number of certified office buildings	26

HEATING/COOLING METHOD

Heating method includes:	
Electricity	Yes
Gas	Yes
Fuel	Yes

Cooling method includes:	
A/C	Yes
Natural	Yes
Dual Flow Ventilation	Yes
Mechanical exhaust	No

MARKET OVERVIEW

Are green leases common practice in your market?	No	
Prime rents (€/sq m/year) - Madrid	**CBD**	**Outside CBD**
For "low-energy" buildings	n/a	n/a
For non "low-energy" buildings	260	120-190

KEY LOCAL INDICATORS

	Spain	Europe	Rank
Average electricity cost, €/kWh	0.143	0.145	17
Average gas cost, €/Gigajoules	11.840	13.150	8
Private vehicle to work	23%	30%	13
Public Transportation to work	38%	34%	6
Bicycle use to work	1%	6%	10

Sweden

BUILDING REGULATIONS

Official definition for low-energy buildings:

EPBD has been partially implemented into the Swedish law.

All buildings need to have an energy inventory certificate (Sw. "energideklaration") showing if it has high, medium or low energy consumption compared to similar buildings.

The most common Green certification in Sweden is the one managed by Miljö Biggnad which offers certification according to different grades: Gold, Silver and Bronze. The certification is used for both residential and commercial buildings, new builds as well as existing buildings.

EPC* ASSESSMENT INCLUDES:

Hot Water	Yes
Heating	Yes
Cooling	Yes
Fans	Yes
Lighting	Yes

*Energy Performance Certificate

Green lease is a standard contract which applies to office buildings but green lease can be tailored to any type of building.

GREEN RATING SCHEMES

Most common certification	Miljöbyggnad
New building	Yes
Renovated building	Yes
Existing building	Yes
Other certifications	LEED, BREEAM
Most common combination	No
Local assessment tool	Miljöbyggnad
Number of certified office buildings	140 for 480,000 sq m

HEATING/COOLING METHOD

Heating method includes:	
Electricity	Yes
Gas	Yes
Fuel	Yes
District heating	Yes
Air, Geothermal bedrock heating	Yes
Cooling method includes:	
A/C	Yes
Natural	No
Dual Flow Ventilation	Yes
Mechanical exhaust	No
District cooling	Yes

MARKET OVERVIEW

Are green leases common practice in your market?	Yes	
Prime rents (€/sq m/year) - Stockholm	**CBD**	**Outside CBD**
For "low-energy" buildings	*There is no difference in rents between the two different types of buildings*	
For non "low-energy" buildings		

KEY LOCAL INDICATORS

	Sweden	Europe	Rank
Average electricity cost, €/kWh	0.101	0.145	3
Average gas cost, €/Gigajoules	25.946	13.150	20
Private vehicle to work	17%	30%	15
Public Transportation to work	35%	34%	8
Bicycle use to work	1%	6%	10

Switzerland

BUILDING REGULATIONS

Definition for low-energy buildings:

No EPBD implementation as Switzerland is outside the European Union.

The official definition for low-energy buildings refers to the Minergie label: Minergie, Minergie-P, Minergie-A, Minergie P-Eco. Minergie A-Eco.

EPC* ASSESSMENT INCLUDES:

Hot Water	Yes
Heating	Yes
Cooling	Yes
Fans	Yes
Lighting	Yes

*Energy Performance Certificate

GREEN RATING SCHEMES

Most common certification:	Minergie
New building	Yes
Renovated building	No
Existing building	Yes
Others certifications:	LEED, BREAM, DGNB
Most common combination	No
Local assessment tool	No
Number of certified office buildings	1059

HEATING/COOLING METHOD

Heating method includes:	
Electricity	No
Gas	Yes
Fuel	No

Cooling method includes:	
A/C	No
Natural	Yes
Dual Flow Ventilation	Yes
Mechanical exhaust	Yes

MARKET OVERVIEW - GENEVA

Are green leases common practice in your market?	No	
Prime rents (€/sq m/year) - Geneva	**CBD**	**Outside CBD**
For "low-energy" buildings	800	450
For non "low-energy" buildings		

KEY LOCAL INDICATORS

	Switzerland	Europe	Rank
Average electricity cost, €/kWh	n/a	0.145	n/a
Average gas cost, €/Gigajoules	n/a	13.150	n/a
Private vehicle to work	30%	30%	9
Public Transportation to work	29%	34%	11
Bicycle use to work	6%	6%	5

Turkey

BUILDING REGULATIONS

Official definition for low-energy buildings:

Despite the fact that Turkey is one of the few countries which included environmental protection in its Constitution, no specific legislation currently exists on green buildings. These legal measures are assembled in the regulation on Energy Performance of Buildings (BEP-Y).

All buildings (over 1,000 sq m) will receive a document called 'energy identification', showing how much energy they save. They will be given a grade between A and G – a grade A for the most energy-efficient buildings (those easiest to heat and light and which release the least harmful gases) and G for the least energy efficient.

EPC* ASSESSMENT INCLUDES:

Hot Water	Yes
Heating	Yes
Cooling	Yes
Fans	Yes
Lighting	Yes

*Energy Performance Certificate

GREEN RATING SCHEMES

Most common certification	LEED
New building	Yes
Renovated building	No
Existing building	Yes
Other certifications	BREEAM
Most common combination	LEED-BREEAM
Local assessment tool	No
Number of certified office buildings	16 for 275,000 sq m

HEATING/COOLING METHOD

Heating method includes:	
Electricity	Yes
Gas	Yes
Fuel	Yes

Cooling method includes:	
A/C	Yes
Natural	Yes
Dual Flow Ventilation	Yes
Mechanical exhaust	No

MARKET OVERVIEW

Are green leases common practice in your market?	Yes	
Prime rents (€/sq m/year) - Istanbul	**CBD**	**Outside CBD**
For "low-energy" buildings	370	185
For non "low-energy" buildings		

KEY LOCAL INDICATORS

	Turkey	Europe	Rank
Average electricity cost, €/kWh	0.102	0.145	4
Average gas cost, €/Gigajoules	8.302	13.150	1
Private vehicle to work	n/a	30%	n/a
Public Transportation to work*	70%	34%	n/a
Bicycle use to work	n/a	6%	n/a

* Figures for Istanbul only

United Kingdom

BUILDING REGULATIONS

Official definition for low-energy buildings:

No official definition yet exists, although this is being worked for Zero Carbon Buildings.

For Domestic buildings the proposal was for a Code For Sustainable Homes level 6 to be used for a 'Low Energy' Definition, but this was thought to be too difficult to achieve. The Current Proposal is for a hierarchy approach with Energy Efficiency being at the base level (with a standard for Energy Efficiency to be set), with Carbon Compliance forming the next stage (on-site generation and community heat connections) with the top stage being Allowable Solutions (other options to reduce the remaining emissions meeting a £/Tonne calculation limit)

EPC* ASSESSMENT INCLUDES:

Hot Water	Yes
Heating	Yes
Cooling	Yes
Fans	Yes
Lighting	Yes

*Energy Performance Certificate

Green Lease clauses can be added to new or existing leases with both parties consent.

GREEN RATING SCHEMES

Most common certification	BREEAM
New building	Yes
Renovated building	No
Existing building	Yes
Others certifications	No
Most common combination	BREEAM only
Local assessment tool	No
Number of certified office buildings	4,200 for 6 million sq m

HEATING/COOLING METHOD

Heating method includes:	
Electricity	Yes
Gas	Yes
Fuel	Yes
Biofuel	Yes

Cooling method includes:	
A/C	Yes
Natural	Yes
Dual Flow Ventilation	Yes
Mechanical exhaust	No

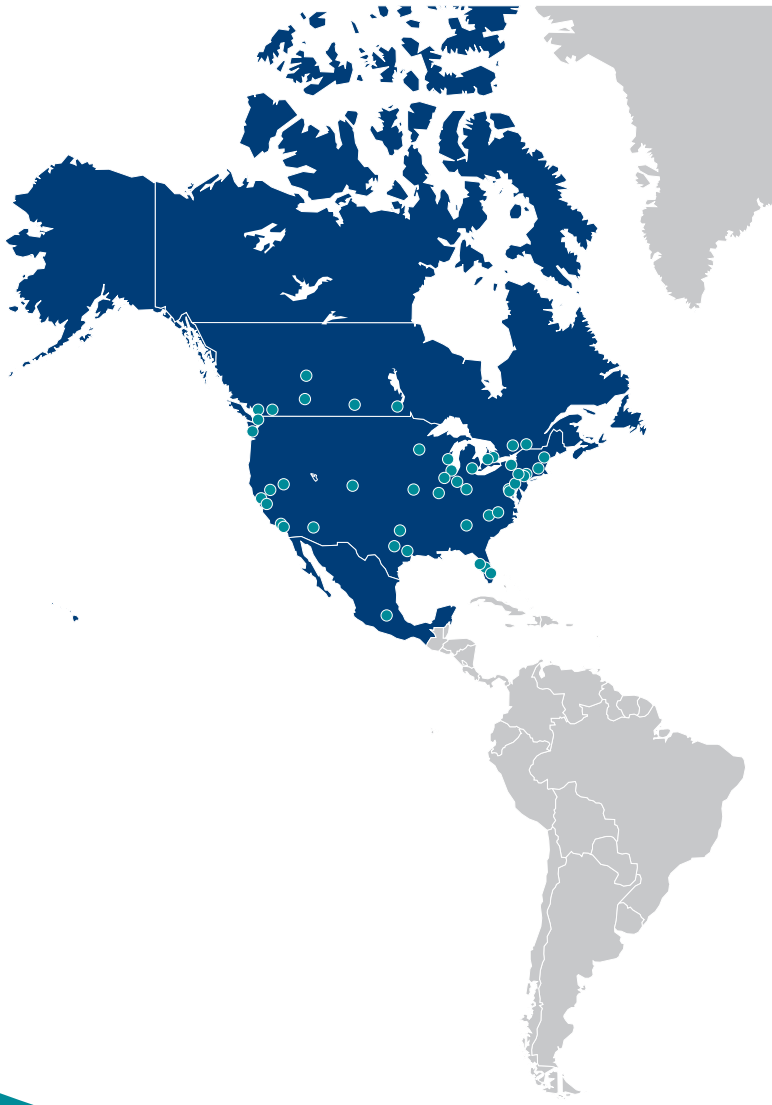
MARKET OVERVIEW

Are green leases common practice in your market?	Yes	
Prime rents (€/sq m/year) - London	**CBD**	**Outside CBD**
For "low-energy" buildings	1,284	494-724
For non "low-energy" buildings		

KEY LOCAL INDICATORS

	United Kingdom	Europe	Rank
Average electricity cost, €/kWh	0.138	0.145	14
Average gas cost, €/Gigajoules	10.362	13.150	3
Private vehicle to work	41%	30%	2
Public Transportation to work	37%	34%	7
Bicycle use to work	2%	6%	9

Global coverage



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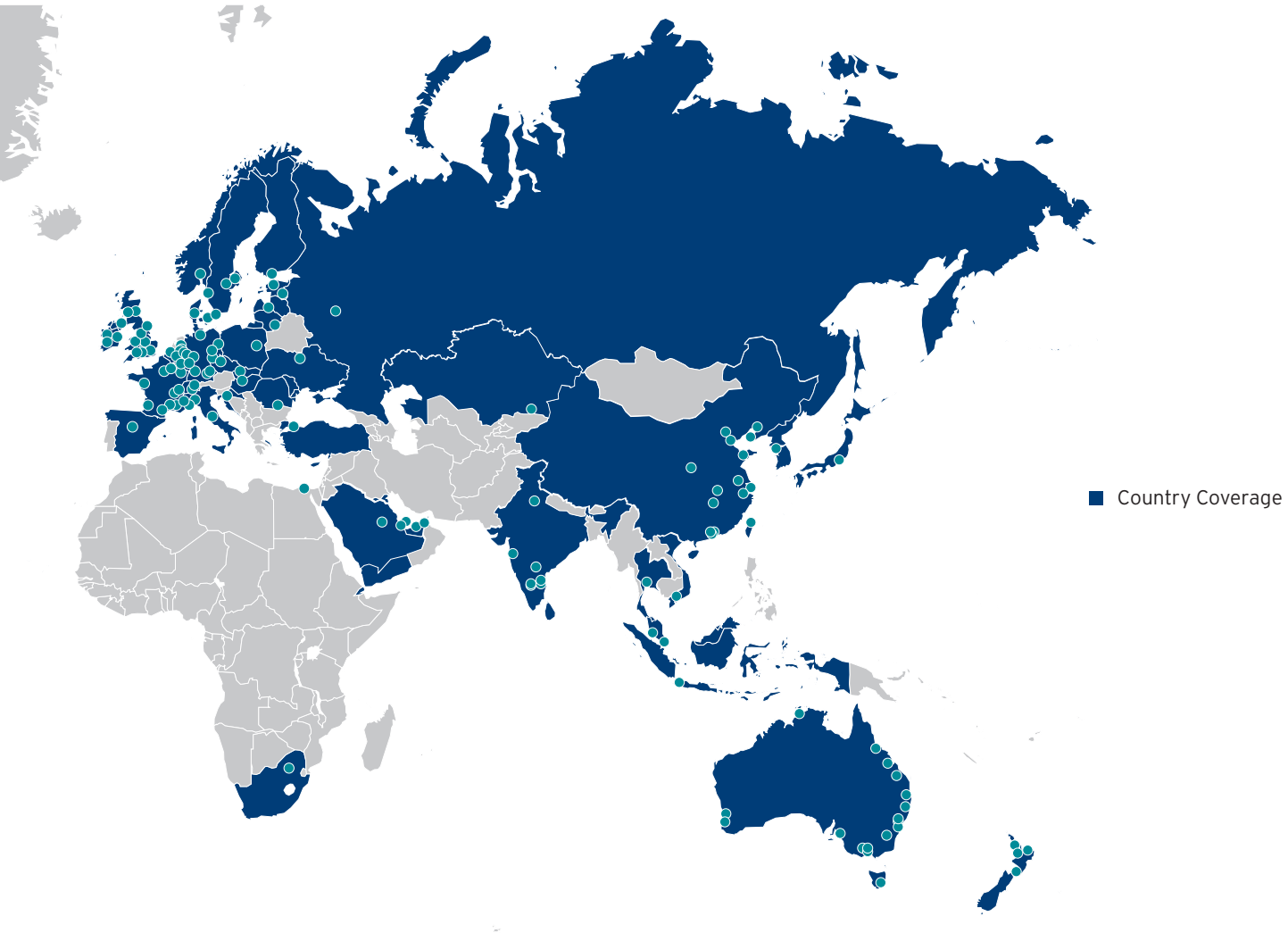
COUNTRY COVERAGE

Argentina
Australia
Bahrain
Belgium
Canada
China (including Hong Kong, Taiwan)
Croatia
Czech Republic
Denmark
Estonia
Fiji
Finland
France
Germany
Hungary
India
Indonesia
Ireland
Italy
Japan
Jordan
Kazakhstan
Kenya
Korea
Latvia
Lithuania
Luxembourg
Malaysia
Mexico
Netherlands
New Zealand
Norway
Pakistan
PNG
Poland
Qatar
Romania
Russia
Saudi Arabia
Singapore
Slovakia
South Africa
Spain
Sweden
Switzerland
Thailand
Turkey
United Kingdom
Ukraine
United Arab Emirates
United States of America
Vietnam



GLOBAL COVERAGE

26,000 employees
47,000 personnel including sub contractors
52 countries
208 office locations
194 cities
3.2B sq ft management portfolio
US $2.0B revenue
Los Angeles, CA, USA global headquarters

Contacts

FOR FURTHER INFORMATION PLEASE CONTACT:

PAUL BROWN
Head of Health, Safety and Sustainability, EMEA

+44 (0)20 3296 3812
paul.brown@dtz.com

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