

# Environmental Profile

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Landis+Gyr enables people, organizations and communities to 'manage energy better'. This is the Company's mission that it aims to accomplish in a deliberate and responsible manner. In financial year 2012/13, the Group reduced its CO2 emissions from 1.9 kg to 1.7 kg per USD 100 turnover. Since 2007, the first year the emissions were recorded, this was the sixth improvement in a row. Landis+Gyr successfully reduced its carbon footprint year over year, decreasing its greenhouse gas emissions by 39% over the entire period.

### **Five-year Key Figures**

	2008	2009	2010	2011	2012/13
KgCO <sub>2</sub> e/USD100turnover	2.4	2.3	2.0	1.9	1.7
Turnover in USD billion	1.4	1.4	1.5	1.6	1.7
Employees	5,070	4,850	5,140	5,210	5,300
tCO <sub>2</sub> e*	39,512	35,461	35,238	35,060	33,921

\* Total Scope 1, Scope 2 and Scope 3

# Landis+Gyr Group

Landis+Gyr is the leading global provider of integrated energy management products tailored to energy company needs and unique in its ability to deliver true end-to-end Advanced Metering Infrastructure solutions. Today, the Company offers the broadest portfolio of products and services in the electricity metering industry and is paving the way for the next generation of the Smart Grid.

With annual sales of USD 1.67 billion, Landis+Gyr, an independent growth platform of the Toshiba Corporation (TKY: 6502) and 40% of which is owned by the Innovation Network Corporation of Japan (INCJ), operates in 30 countries across five continents and employs 5,300 people with the sole mission of helping the world manage energy better. More information is available at www.landisgyr.com

# **Committed to Sustainability**



"Landis+Gyr is highly committed to sustainable development. With its green products and service offering, the Company contributes to a healthy society and the responsible use of natural resources. However, Landis+Gyr is even more proud of the energy efficiency gains made possible by its innovative solutions. Smart metering infrastructure allows end-consumers and utilities to reduce their  $CO_2$  emissions by thousands of tons. Knowing that two-thirds of today's electricity is generated from fossil resources, as statistics from the OECD and IEA show, this is a relevant amount in the fight against climate change." Andreas Umbach. President and CEO Landis+Gyr is dedicated to environmentally conscious manufacturing of environmentally innovative products. The Company is proud to provide technologies and solutions to utilities and end-users that enable them to manage energy better. These product offerings allow for significant energy efficiency gains, thereby effectively reducing greenhouse gas emissions.

In addition to the carbon footprint analysis prepared since 2007, Landis+Gyr expanded its reporting scope to include water, waste and chemicals data in 2012/13, thereby harmonizing its efforts with the guidelines of the Toshiba Group. This year's report therefore includes additional data expressing total originated waste and the amount of water used. The chemical data serves as a baseline for future reduction efforts. This year's report is the second report following the acquisition of the Landis+Gyr Group by the Toshiba Corporation in 2011. One of the consequences of the acquisition on this year's carbon reporting is the change in the reporting period from the previous calendar year to align with Toshiba's fiscal year, which runs from 1 Aprilto 31 March.

The ultimate goal of Landis+Gyr is to make a substantial contribution to the conservation of natural resources and environments:

- Avoiding the use of harmful materials, thereby minimizing pollution
- Integration of life cycle and recycling planning as an integral factor of the product design process
- Reduction of waste to a minimum
- Compliance with relevant health, safety and environmental regulations and standards, among them ISO 9001, ISO 14001, BS 18001

### Landis+Gyr leading by Example

Landis+Gyr acts in accordance with all relevant health, safety and environmental regulations, codes and standards. In addition to ISO 14001 certification throughout the Company and at all its key suppliers, Landis+Gyr addresses life cycle and recycling aspects as an integral factor of its product design process.

Each year Landis+Gyr employees around the world are invited to help to improve the organization's energy efficiency. One example of this employee engagement comes from the Stockport plant in England, where Landis+Gyr was helping turn the Greater Manchester area a little bit greener by planting the first of 500 trees at its Orion Business Park site. In total the 500 trees will offset over 450 tonnes of CO<sub>2</sub> over their lifetime, equivalent to taking 100 cars off of the streets of Manchester. The tree varieties include Elders, Guelder Roses, Silver Birches and Common Hazels and have been recommended by the local forestry commission, in conjunction with Landis+Gyr's horticultural specialist and the CSR team of parent company Toshiba.



The Asia Pacific region laid a special focus on green initiatives and implemented the following projects:

- Energy efficient lighting in Sydney and Melbourne, Australia
- -On-off switches on all new production lines in Sydney, Australia
- -Smartair-conditioning in Zhubai, China
- Recycling and waste office programs at the Australian, New Zealand and Chinese sites
  Various environmental education initiatives.

# 2012/13: Expansion of Data Recording to Water, Waste and the Use of Chemicals

Since Landis+Gyr joined the Toshiba Group in August 2011, the two organizations have harmonized and synchronized their environmental reporting framework.

Landis+Gyr follows the basic communication guidelines of Toshiba that outline the Group's engagement in its efforts regarding:

- Greening of Processes (environmentally conscious manufacturing)
- Greening of Products (environmentally conscious products)
- -Greening by Technology (energy and environmental technology).

Beginning in 2013, Landis+Gyr's environmental data will be integrated and reported via Toshiba's corporate environmental report. Landis+Gyr's emission reduction targets are aligned with Toshiba Corporation's environmental policies, initiatives and Environmental Vision 2050.

http://www.toshiba.co.jp/env/en/index.htm

At the same time, Landis+Gyr continues its own proven initiatives. While Toshiba compiles the emission data of its major production plants, Landis+Gyr expanded its data recording of water, waste and the use of chemicals across all its sites. By using alternatives and improving processes, the Group is further reducing usage of the targeted substances.

# **Multiple Awards for Go Green Program**



The local Go Green team is proud of the awards it has received in recognition of its efforts during the past years.

The Go Green project is another initiative conceived by the Group's employee engagement program. The Go Green committee at the Landis+Gyr site in Reynosa (Mexico) was formed five years ago with the mission of reducing energy consumption. The team meets on a regular basis to study electricity, water and gas consumption, to brainstorm ideas on how to reduce consumption, and to develop plans for implementing those ideas.

In 2012/13 the Go Green team received the following awards in recognition of its efforts:

- The Environmental Leadership Program Award from the Mexican Federal Environmental Agency
- Bronze Award Environmental Management Award from the State of Tamaulipas Environmental Agency.

Below is a sample of the projects it has implemented:

- A hygroscopic roof covering project that reduced internal building temperature and
- A/C maintenance and energy costs – A lighting project that reduced energy
- consumption by 25%
- Projects to collect rainwater and A/C condensation water for use by lawn irrigation systems were implemented to reduce freshwater consumption
- Automatic shut off devices and sensors were implemented throughout the facility to reduce water and energy consumption.



The facility uses sub metering throughout the facility to gage energy usage. Energy usage is measured from different collection points throughout the facility. The data is studied by the Go Green team for energy reduction opportunities.



The Reynosa plant recycles more than 500 tons of material per year. Proceeds from recycled material are used to fund special employee events such as the annual picnic.



"Our Go Green program in Reynosa Mexico has been a huge success. The team continues to exceed expectations and is viewed by many of the 250 manufacturing plants in Reynosa Mexico as the benchmark for energy conservation."

Aubrey Williams, Vice President Operations, Landis+Gyr North America.

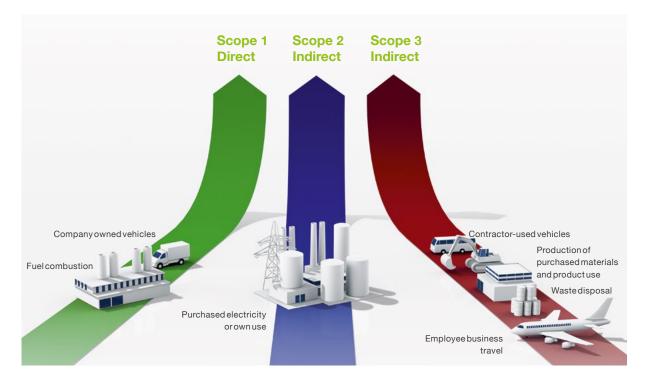
# **Carbon Footprint**

The carbon footprint analyses were undertaken for the sixth consecutive year (2007 to 2012/13) to quantify the greenhouse gas (GHG) emissions of Landis+Gyr. Progress is monitored by collecting detailed emission data and by analyzing this data to define further improvement potential. The web-based SoFi software and reporting system was used for data capture, aggregation and analysis. The SoFi system is now well integrated across the Landis+Gyr Group and its sites worldwide and is currently being expanded to capture a broader range of sustainability indicators. After Toshiba's acquisition of Landis+Gyr in 2011, emissions' reporting has now changed from a calendar year basis (January-December) to Toshiba's fiscal year basis (April-March).

Due to the acquisition of Landis+Gyr by the Toshiba Corporation in 2011, no independent verification of Landis+Gyr's activity data – forming the basis for the carbon footprint analysis – was carried-out by an independent audit company for 2012/13. However, the data and analysis did receive a thorough assessment by PE International, a specialized consulting company in the area of sustainability management, and Landis+Gyr's previous auditor of this data. Landis+Gyr selected the Operational Control Approach to determine which sites are to be included in the corporate carbon footprint. The application of the operational control approach implies that GHG-relevant impacts of activities are accounted for at those sites, subsidiaries or operations which are controlled by the Company. Landis+Gyr's corporate carbon footprint includes all of its R&D, Sales and Manufacturing sites.

The GHG protocol provides the three 'scopes' (scope 1, scope 2 and scope 3) in order to help delineate direct and indirect emission sources, improve transparency and provide utility for different types of organizations and different types of climate policies and business goals. The carbon footprint is expressed in  $CO_2$  equivalents ( $CO_2e$ ). The unit of measurement is metric tons, and all GHG emissions are converted to metric tons of  $CO_2e$ , using appropriate GWP (Global Warming Potential) factors as published by the Intergovernmental Panel on Climate Change (IPCC). This allows for the aggregation of all GHG emissions in one single indicator, expressed as the carbon footprint.

- Landis+Gyr Group is a sustainable and environmentally conscious corporation to the benefit of customers, current and potential future shareholders, employees, suppliers and other stakeholders
- Carbon footprint records since 2007
- In 2012/13 Landis+Gyr reduced its GHG emissions by 3.2%



Scope 3

# Scope 1

Direct emissions from sources that are owned or controlled by the Company:

- Energy carriers for the generation of electricity, heat and steam
- -Diesel for the operation of emergency generators
- Direct GHG emissions attributable to chemical/ physical processing
- Energy carriers consumed in transportation (Landis+Gyrfleet only).

### Scope 2

Indirect emissions associated with the generation of purchased electricity consumed by the Company as well as district heating and process steam.

All other indirect emissions that occur as a consequence of the activities of the Company from sources not owned or controlled by the Company. Landis+Gyr used business air travel as an indicator of its scope 3 emissions.

- Scope 1 emissions decreased by 1.8%
- Scope 2 emissions decreased by 5.2%
- Scope 3 emissions increased by 4.4%
- 65% (22,000 t) of total scope 1+2+3 emissions stem from the Group's electricity

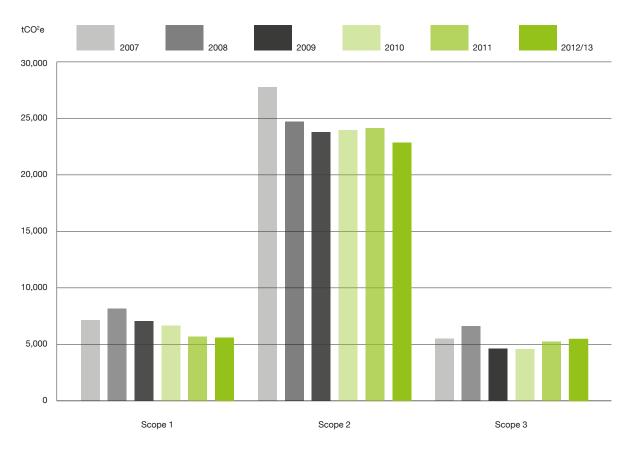
### 2012/13 Results

In total, the Landis+Gyr Group emitted 33,900 tonnes of  $CO_2e$  in 2012/13. This is 1,100 t or 3.2% less than in 2011, or 3.8% (1,300 t) less than in 2010.

In accordance with accepted global standards, the carbon footprint has also been allocated by category: Scope 1 (direct emissions) amounts to 5,600 t  $CO_2e$  (16% of total). Scope 2 (indirect emissions) represents the largest component with 22,900 t  $CO_2e$  (67%). Business air travel, as part of scope 3, only contributes a relatively small component (5,500 tor 16%) to the total carbon footprint.

With around 13,700 t  $CO_2e$ , North America generates the largest proportion of overall emissions (40%), followed by EMEA with 11,300 t  $CO_2e$  (33%), the Asia-Pacific region with 7,200 t  $CO_2e$  (21%), and South America with 1,700 t (5%). As expected these percentages align quite closely with the regional revenue mix.

# Total CO₂e emissions of the Landis+Gyr Group 2007–2012/13 Per Scope





# 2012/13 Breakdown by Source

Global 1+2+3 emissions: 33,921 tCO<sub>2</sub>e



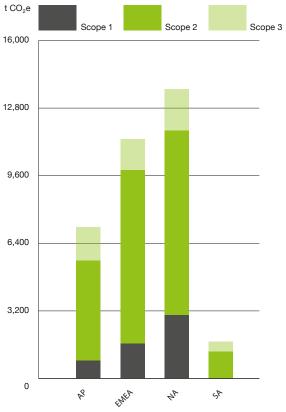
Electricity/District Heating	67.42%
Fuels (diesel oil)	2.22%
Fuels (natural gas, LPG)	2.90%
Direct process emissions	0.15%
Roadtravel	11.19%
Airtravel	16.12%

67% (22,000 t) of total scope 1+2+3 emissions stem from the Group's electricity consumption.

### 2012/13 Regional Breakdown

The Landis+Gyr Group has sites in its four regions worldwide: Asia-Pacific (AP), Europe, Middle East and Africa (EMEA), North America (NA) and South America (SA).

With around 13,700 t  $CO_2e$ , North America generates the largest proportion of overall emissions (40%), followed by EMEA with 11,300 t  $CO_2e$  (33%), the Asia-Pacific region with 7,200 t  $CO_2e$  (21%), and South America with 1,700 t (5%).



### **Asia-Pacific**

### Europe/Middle East/Africa (EMEA)



Electricity/DistrictHeating	66 %
Fuels	0%
Process emissions	11 %
Road travel	1%
Businessairtravel	22%

In the Asia-Pacific region, almost three-quarters (66%) of emissions are caused by consumption of electricity and district heating, followed by emissions caused by air travel (22%). The use of fuels for stationary power generation contributes 11% to the carbon footprint. Emissions from road travel amount to 1%, whereas direct process emissions are insignificant.

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Electricity/DistrictHeating	72%
E Fuels	4%
Process emissions	1%
Road travel	10%
Business air travel	13%

In Europe/Middle East/Africa (EMEA), 72% of emissions are caused by the use of electricity and district heating. The use of fuels (stationary combustion) only accounts for 4%. On the other hand, with 10% of the total, road travel in the EU is much more significant than in Asia-Pacific. Air travel contributes 13% of emissions.

### **North America**

### **South America**





Electricity/District Heating	64%
Fuels	3%
Process emissions	0%
Roadtravel	19%
Businessairtravel	14%

Emissions in North America are dominated by electricity consumption (64%). Emissions from travel are fairly high (especially road travel with 19%) due to the significant service operations, which require higher deployment and service work.

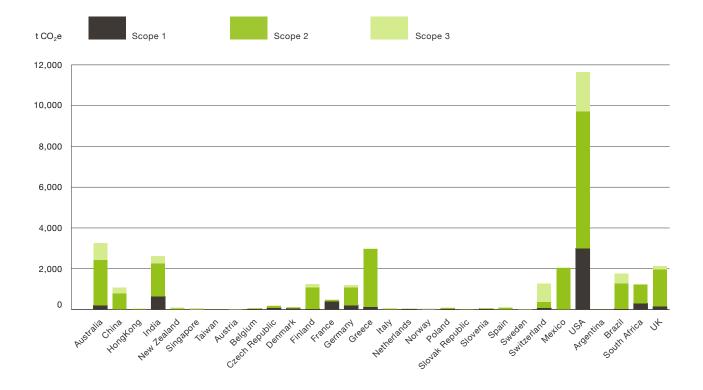
Electricity/DistrictHeating	71%
Fuels	2%
Process emissions	0%
Road travel	0%
Businessairtravel	27%

South America shows that the electricity component represents 71%. Other sources except air travel (28%) are insignificant.

# Carbon Footprint in Individual Countries

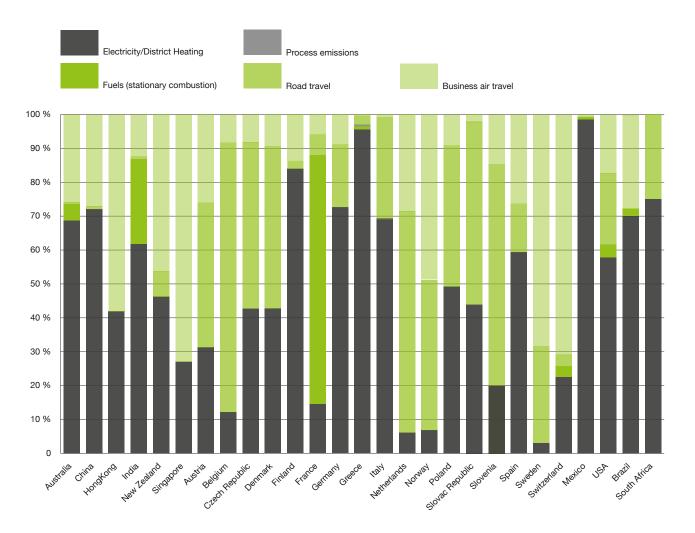
The USA is the greatest emitter of GHG's with 11,600 t of  $CO_2$ e followed by Australia and Greece, each with around 3,000 t of  $CO_2$ e. Next are India, Mexico and UK with between 2,000 and 3,000 t, followed by Brazil, Finland, Germany, Switzerland, South Africa and China (between 1,000 and 2,000 t). The emissions of all remaining countries are very low.

The reason for USA's high emissions is related to our service business model in US, whereas energy consumption for datacenter and field service support affect all three scopes.



# Breakdown of Each Country's Carbon Footprint by Source

In the US, 58% of the emissions are caused by the consumption of electricity and almost 40% are attributable to road and air travel.



# **Economic Intensity Ratios**

Ratio indicators provide information on performance relative to a business type and can facilitate comparisons between products and processes. Intensity ratios express the GHG impact per unit of physical activity or unit of economic output. In order to enable better comparison with other businesses, only scope 1 and scope 2 emissions have been used for the calculation of intensities. The indicators chosen to express GHG intensities are:

-Emissionsperproduct

-Emissionsperemployee

-Emissionsper10squaremetersoffloorspace

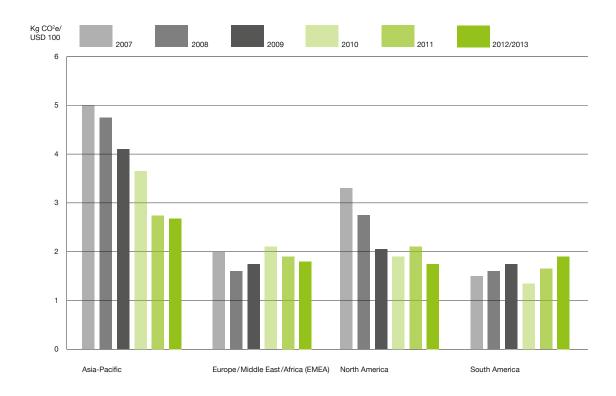
-EmissionsperUSD100 of turnover.

	2007	2008	2009	2010	2011	2012/13
kgperproduct	2.3	2.5	2.2	2.1	1.8	1.6
tperemployee	6.5	6.5	6.4	6.0	5.7	5.4
tper10m²floorspace	1.8	1.5	1.7	1.5	1.6	1.5
kgCO <sub>2</sub> eperUSD100turnover	2.8	2.4	2.3	2.0	1.9	1.7

The average Group emissions are 1.6 kg per (average) product, 5.4 t per employee, 1.5 t per 100 m<sup>2</sup> of floor space and 1.7 kg per USD 100 of turnover. The table also shows the values for the previous years. 'Emissions per turnover' is a key performance indicator and it is clearly trending lower. Over the five year timeframe between 2007 and 2012/13, Landis+Gyr has reduced emissions on a 'per turnover' basis from 2.8 kg per USD 100 of turnover (2007) to 1.7 kg per USD 100 (2012/13), or by 40 %. The indicator 'Emissions per employee' reduced (from 6.5 t in 2007 to 5.4 t in 2012/13). 'Emissions per product' also noticeably decreased (from 2.3 kg in 2007 to 1.6 kg in 2012/13).

# **Economic Intensity Ratios per Region**

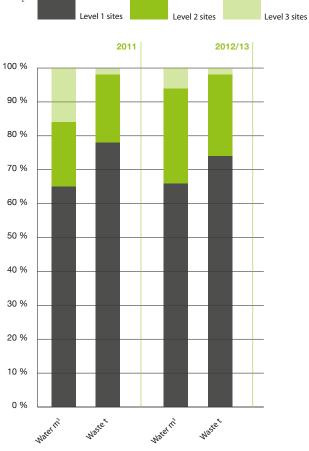
Looking at emissions per turnover, a strong trend towards a more 'carbon-efficient' performance is observable in the Asia-Pacific and North America regions (mainly between 2007–2011). This is in response to a combination of higher sales and increased energy efficiency. In EMEA, emissions per turnover have not changed significantly in recent years while in South America emissions per turnover appear to be rising slightly.



# Water, Waste and Use of Chemicals

Landis+Gyr Group reduced its water consumption t  $CO_2e$ by 21% to 132,710 m<sup>3</sup> in 2012/13 (2011: 167,239 m<sup>3</sup>). Thereof 94% was used by level 1 (production and major R&D centers) and level 2 (smaller production facilities) sites. In parallel the amount of waste was reduced by 7% to 2,164 t in 2012/13 (2011: 2,319 t). Thereof 98% came from level 1 and 2 sites.

Looking ahead, reducing waste and the usage of chemicals remains a high priority. A set of globally valid key performance indicators and the redesign of product manufacturing processes will support the Group in its efforts to further reduce these parameters.



absolute years     water m³     wastet       Level 1 sites     107963     1811     86986     1605       Level 2 sites     32571     474     37480     509       Level 3 sites     26705     34     8244     50       Total     167239     2319     132710     2164       in % values     Level 1 sites     655%     78%     666%     74%       Level 2 sites     19%     20%     28%     24%       Level 3 sites     16%     1%     6%     2%       Total     100%     100%     100%     100%       Total     28%     9%     94%     98%			2011		2012/13	
Level2sites     32571     474     37480     509       Level3sites     26705     34     8244     50       Total     167239     2319     132710     2164       in% values     20%     28%     24%       Level1sites     65%     78%     66%     74%       Level2sites     19%     20%     28%     24%       Level3sites     16%     1%     6%     2%       Total     100%     100%     100%     100%	absoluteyears	water m <sup>3</sup>	wastet	water m <sup>3</sup>	wastet	
Level3sites     26705     34     8244     50       Total     167239     2319     132710     2164       in % values	Level 1 sites	107963	1811	86986	1605	
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Level2sites     19%     20%     28%     24%       Level3sites     16%     1%     6%     2%       Total     100%     100%     100%     100%	in%values					
Level3sites     16%     1%     6%     2%       Total     100%     100%     100%     100%	Level 1 sites	65%	78%	66%	74%	
Total 100% 100% 100%	Level2sites	19%	20%	28%	24 %	
•••••••••••••••••••••••••••••••••••••••	Level3sites	16%	1%	6%	2 %	
Total Level 1+2     84%     99%     94%     98%	Total	100%	100%	100%	100 %	
	Total Level 1+2	84%	<b>99</b> %	94%	<b>98</b> %	

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# One Goal – Many Supporters Around the Globe

Each of Landis+Gyr's 5,300 employees plays a key role in the Company's constant pursuit of innovations and advances in sustainability by leveraging economic, social and environmental aspects of their individual tasks and challenges. With regard to the responsible use of natural resources and the protection of the environment, Landis+Gyr counts on a number of people around the globe who are highly committed and motivated to achieve and advance the Company's goals. Their efforts are coordinated by Hans Sonder, Director Technology Management and Process Excellence at the Group's headquarters in Zug, Switzerland.



"At the Brazilian operations we pursue a comprehensive and pro-active approach towards sustainability issues. As responsible for the Environmental Management System I develop and design new concepts to bring our local needs into alignment with Toshiba's and Landis+Gyr's worldwide environmental goals."

Naiana Conto, Environmental Specialist, Landis+Gyr, Curitiba-Paraná, Brazil



"Being responsible for the Integrated Management System, including quality, social and environmental aspects, I encourage and educate local communities and actively participate in environmental bodies so we can reduce our carbon emission footprint."

Vivek Namboodiripad, Deputy General Manager Quality Assurance, Landis+Gyr Kolkata, India



"The implementation of our Greening by Technology vision will improve our environmental performance throughout the lifecycle of our products. Based on our analysis we develop and integrate advances ranging from the product's specification all the way through to its marketing strategy."

Stefan Fischer, Head of Product Management Heat Metering, Landis +Gyr Nuremberg, Germany Natali Reimer, Product Management Heat Metering, Landis +Gyr Nuremberg, Germany



"Full compliance with the applicable health, safety and environmental regulations and standards is important for the reliability and reputation of our products and services in the market."

**Gina Collier**, Integrated Management System Engineer, Landis+Gyr Stockport, UK



"We are committed to assuring our Company is a leader in environmental affairs, serving the communities where we live and work, by reducing our carbon footprint and providing an example for others to follow."

Don Roberts, Director of Environmental, Health, Safety and Quality Systems, Landis+Gyr North America Emilio Sonderegger, Supervisor of Environment and Safety Programs, Landis+Gyr Reynosa Mexico John Mastarone, Manager of Environmental, Health, Safety and Quality Systems, Landis+Gyr Products Division, Lafayette Indiana, USA



# Appendix

# Table 1: Global Energy Consumption ofLandis+Gyr Group in 2012/13

Energyconsumption		L&G	AP	EMEA	NA	SA
Electricity (national grid mix)-daytime	[MWh]	27,797	4,079	10,579	11,375	1,764
Electricity (national grid mix)-nighttime	[MWh]	1,642	-	1,208	434	-
Electricity (renewable sources)	[MWh]	185	120	65	-	-
Electricity by on-site power generator	[MWh]	236	183	51	1	-
Steam (district heating)	[MWh]	2,945	-	2,945	-	-
Heavy fuel oil	[MWh]	145	-	145	-	
Light fuel oil	[MWh]	96	-	96		
Emergency power diesel	[MWh]	901	812	6	83	-
Town gas (natural gas)	[MWh]	4,625	871	2,126	1,628	-
LPG (50/50)	[MWh]	1	-	-	1	-
LPG (70/30)	[MWh]	184		_		184
Process emissions						
CO <sub>2</sub>	[kg]		······	······		 -
CH <sub>4</sub>	[kg]	1,622	······	1,622		
N <sub>2</sub> O	[kg]		······			
HFC	[kg]		······			
PFC	[kg]	-				
SF <sub>6</sub>	[kg]		-	-	-	
		•••••••••••••••••••••••••••••••••••••••	•••••••••••••••••••••••	•••••••••••••••••••••••••••••••••••••••	••••••••••••••••••••••	
Business Travel (own fleet)		••••••				
Gasolineconsumption	[m <sup>3</sup> ]	1,292	5	172	1,115	
Dieselconsumption	[m³]	183		183	0	
CNG consumption	[m³]	3		3		
Alcoholconsumption	[m³]					
Gasoline (< 1.4 l)	[km]	40,266	36,000	4,226		
Gasoline(1.4-2.0l)	[km]	308,882	48,200	260,682		
Gasoline(>2.0I)	[km]	340,832	139,991	195,956	4,886	
Diesel (1.4-2.0l)	[km]	546,391	51,494	494,897		
Diesel (>2.0 l)	[km]	233,032	19,551	209.755	3,726	
Truck Diesel (7.5 t)	[km]					
Business Travel (other)						
Airplane (short haul)	[pkm]	4,745,309	1,560,607	981,179	375,338	1,828,185
Airplane (long haul)	[pkm]	39,318,405	11,008,413	11,076,536	16,270,354	963,103

# Table 2: Total Group Emissions, by Scopeand Source (t CO2e)

The table illustrates the contribution of individual energy sources to the global carbon footprint: Electricity and district heating is the major contributor, accounting for 67% of the company's total emissi-

ons. On-site consumption of natural gas and other fuels accounts for an only minor part of overall GHG emissions.

Natural gas     878     1'054     1'       LPG (50/50)     117     64     1'       LPG (70/30)     24     78     1'       Process emissions     157     242     1'       Gasoline consumption     3,130     3,346     3,       Diesel consumption     1,198     1,282     1'       Gasoline (<1.4)     2     17     12       Gasoline (>2.01)     74     112     12	77       827     7       163     1'0       35     61       304     3       484     2.9       561     4       21     1       122     4       193     1	47 37 37 4 50 182 58 2,54 55 51	6     26       9     685       7     941       7     0       1     43       2     52       4     3,035	
Emergency power diesel     675     1'031       Natural gas     878     1'054     1'       LPG (50/50)     117     64     1'       LPG (70/30)     24     78     1'       Process emissions     157     242     24       Gasoline consumption     3,130     3,346     3,       Diesel consumption     1,198     1,282     17       Gasoline (<1.4.1)	827     7       163     1'0       35     -       61     -       304     3       484     2,9       561     4       21     -       122     4       193     1	93     729       58     957       47     31       37     4       50     182       58     2,544       55     51       0     -	6     26       9     685       7     941       7     0       1     43       2     52       4     3,035       1     489	
Natural gas     878     1'054     1'       LPG (50/50)     117     64     1'       LPG (70/30)     24     78     78       Process emissions     157     242     3       Gasoline consumption     3,130     3,346     3       Diesel consumption     1,198     1,282     3       Gasoline (<1.4.1)	163     1'0       35     61       304     3       484     2,9       561     4       21     1       122     4       193     1	58 957 47 33 37 4 50 182 58 2,54 55 51 0	7     941       7     0       1     43       2     52       4     3,035       1     489	
LPG (50/50)     117     64       LPG (70/30)     24     78       Process emissions     157     242       Gasoline consumption     3,130     3,346     3,       Diesel consumption     1,198     1,282       Gasoline(<1.4.1)	35       61       304     3       484     2,9       561     4       21     1       122     4       193     1	47 37 37 4 50 182 58 2,544 55 51 0	7     0       1     43       2     52       4     3,035       1     489	
LPG (70/30)     24     78       Process emissions     157     242       Gasoline consumption     3,130     3,346     3,       Diesel consumption     1,198     1,282       Gasoline(<1.41)	61 304 3 484 2,9 561 4 21 122 4 193 1	37 4 50 182 58 2,544 55 51 0	1     43       2     52       4     3,035       1     489	
Process emissions     157     242       Gasoline consumption     3,130     3,346     3,       Diesel consumption     1,198     1,282       Gasoline (<1.4 l)	304     3       484     2.9       561     4       21     1       122     4       193     1	50 182 58 2,544 55 51 0	2 52 4 3,035 1 489	
Gasoline consumption     3,130     3,346     3,       Diesel consumption     1,198     1,282       Gasoline (<1.4 l)	484     2,9       561     4       21     1       122     4       193     1	58 2,544 55 51 <sup>-</sup> 0	4 3,035 1 489	
Diesel consumption     1,198     1,282       Gasoline(<1.41)	561 4   21 122   193 1	55 51 <sup>-</sup> 0	1 489	
Gasoline(<1.4.1)     2     17       Gasoline(1.4-2.01)     74     112       Gasoline(>2.01)     145     202	21 122 4 193 1	0	• ••••••	
Gasoline(1.4-2.0l)     74     112       Gasoline(>2.0l)     145     202	122 4 193 1	·····	1 6	
Gasoline (>2.01) 145 202	193 1	52 240		
	· · · · · · · · · · · · · · · · · · ·		0 58	
Diesel (1.4-2.0 l) 67 99	100 1	77 13	1 85	
•••••••••••••••••••••••••••••••••••••••	126 1	60 176	6 78	
Diesel (>2.01) 44 29	14	40 45	5 46	
CNG(1.4-2.0I) 0 0	0	0 6	6 0	
Truck Diesel (7.5t) 10 21	37	0 0	0 0	
Total(tCO <sub>2</sub> e) 7,142 8,177 7,	.057 6,6	80 5,690	0 5,585	-1.8%
Scope2 2007 2008 2	2009 20	10 201 <sup>-</sup>	1 2012/13	Increase
Electricity 26,916 23,941 22,	924 23,2	51 23,387	7 22,018	
District heating 847 756	846 7	25 746	6 851	
Total(tCO <sub>2</sub> e) 27,762 24,698 23,	770 23,9	76 24,133	3 22,869	<b>-5.2</b> %
Scope 3 2007 2008 2	:009 20	10 201	1 2012/13	Increase
Airplane (short haul) 973 1,969	619 5	66 705	5 935	
Airplane (long haul) 4,547 4,668 4,	014 4,0	16 4,532	2 4,532	
Total(tCO <sub>2</sub> e) 5,521 6,637 4,	633 4,5	82 5,237	7 5,467	4.4%
Bysource 2007 2008 2	.009 20	10 201 <sup>.</sup>	1 2012/13	Reduction
•••••••••••••••••••••••••••••••••••••••	770 23,9	76 24,133	3 22,869	
	936 9	45 818	8 752	
Fuels (natural gas, LPG) 1,019 1,196 1,	.258 1,1	43 1,036	6 984	
•••••••••••••••••••••••••••••••••••••••		50 182	• •••••••	
	560 4,2	••••	••••••••••	
	633 4,5	••••	•••••••	• • • • • • • • • • • • • • • • • • • •
	460 35,2		•••••••	-3.2%

# Table 3: Carbon Footprint for the FourRegions, 2009–2012/13

					AP					EMEA
	2008	2009	2010	2011	2012/13	2008	2009	2010	2011	2012/13
Scope3	1,161	987	1,094	1,236	1,576	2,100	1,426	1,371	1,477	1,470
Scope2	6,925	5,637	6,126	5,423	4,719	8,817	8,014	8,117	7,985	8,189
Scope1	1,486	1,167	1,094	970	866	3,270	2,028	2,023	1,524	1,659
					NA					SA
	2008	2009	2010	2011	2012/13	2008	2009	2010	2011	2012/13
Scope3	1,976	1,821	1,771	2,009	1,949	1,401	399	348	515	471
Scope2	7,626	9,144	8,580	9,427	8,728	1,329	975	1,152	1,298	1,234
Scope1	3,166	3,638	3,530	3,158	3,017	256	224	33	38	43

# Table 4: Carbon Footprint and PercentageContribution of the Four Regions

Region	2008		2009		2010		2011		2012/13	
	tCO <sub>2</sub> e	%								
AP	9,571	24.2%	7,791	22.0%	8,314	23.6%	7,629	21.8%	7,161	21.1%
EMEA	14,187	35.9%	11,468	32.3%	11,510	32.7%	10,985	31.3%	11,318	33.4%
NA	12,768	32.3%	14,603	41.2%	13,881	39.4%	14,594	41.6%	13,694	40.4 %
SA	2,986	7.6%	1,598	4.5%	1,533	4.3%	1,852	5.3%	1,748	5.2%
Total	39,512	100.0%	35,461	100.0%	35,238	100.0%	35,060	100.0%	33,921	100.0%

# **Table 5: Individual Greenhouse Gases** Emitted by Landis+Gyr Group in 2012/13

Scope 1	CO <sub>2</sub> (t)	CH₄(t)	N <sub>2</sub> O(t)	SF <sub>6</sub> (t)	HFC (t)	PFC (t)
Heavy fuel oil	41.50	0.00	0.00	0.00	0.00	0.00
Lightfueloil	25.57	0.00	0.00	0.00	0.00	0.00
Emergency power diesel	681.04	0.03	0.01	0.00	0.00	0.00
Naturalgas	935.79	0.05	0.01	0.00	0.00	0.00
LPG (50/50}	0.13	0.00	0.00	0.00	0.00	0.00
LPG (70/30)	41.74	0.04	0.00	0.00	0.00	0.00
Gasoline consumption	3,014.38	0.03	0.07	0.00	0.00	0.00
Dieselconsumption	486.12	0.00	0.01	0.00	0.00	0.00
CNG consumption	0.01	0.00	0.00	0.00	0.00	0.00
Alcoholconsumption	0.00	0.00	0.00	0.00	0.00	0.00
Gasoline(<1.4I)	4.27	0.00	0.00	0.00	0.00	0.00
Gasoline(1.4-2.0l)	42.09	0.00	0.01	0.00	0.00	0.00
Gasoline(>2.01)	62.37	0.00	0.00	0.00	0.00	0.00
Diesel (1.4-2.01)	64.47	0.00	0.01	0.00	0.00	0.00
Diesel (>2.0 l)	38.05	0.00	0.00	0.00	0.00	0.00
Truck Diesel (7.5t)	0.00	0.00	0.00	0.00	0.00	0.00
Processemissions	0.00	2.31	0.00	0.00	0.20	0.00

Scope2						
Electricity (national grid mix)	21,755.62	1.37	0.34	0.00	0.00	0.00
Total	27,213.16	1.53	0.45	0.00	0.00	0.00

Note that not all emissions data is split up into the Kyoto gases. This is why the total in this table differs from the Group's total emissions.



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