

# THE °CLIMATE GROUP

## SMARTER ENERGY USE

Businesses Doing More with Less

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EP100 Progress and Insights Report, July 2019

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EP 100 by THE °CLIMATE GROUP

in partnership with





**HELEN CLARKSON**  
Chief Executive Officer,  
The Climate Group

Improving energy productivity – using less energy to achieve higher economic output – can unlock faster decarbonization of the global economy, and the private sector holds the key.

The International Energy Agency (IEA) estimates that improvements in energy efficiency can deliver over 40% of the greenhouse gas (GHG) emissions reductions needed to meet global climate goals<sup>1</sup>. In addition to enabling a faster shift to renewables, energy efficiency improvements add enormous value to global GDP and boost companies’ bottom lines.

The Climate Group<sup>2</sup>’s global EP100<sup>3</sup> initiative, delivered in partnership with the Alliance to Save Energy<sup>4</sup>, now brings together 50 leading companies with over US\$382 billion in combined revenue, all publicly committed to making smarter use of energy.

In this first EP100 Progress and Insights Report, we learn how members are integrating smarter energy use into their growth strategies and working toward their targets at speed. They are driven by financial opportunity, environmental impact and reputational advantages.

To date, members have avoided using over 730 terawatts (TWh) of energy – nearly half the annual electricity consumption of India<sup>5</sup>. I congratulate each and every one of them and thank them for sharing their stories and inspiring others to take action.

Since joining EP100, members have collectively saved over US\$131 million. With many citing a payback period for efficiency improvements of as little as 2-4 years, and generating savings on top, the business case for saving energy is clear. Energy-smart companies are re-investing in strategic projects, with more and more joining The Climate Group’s RE100<sup>6</sup> and EV100<sup>7</sup> initiatives on renewable power and electric transport

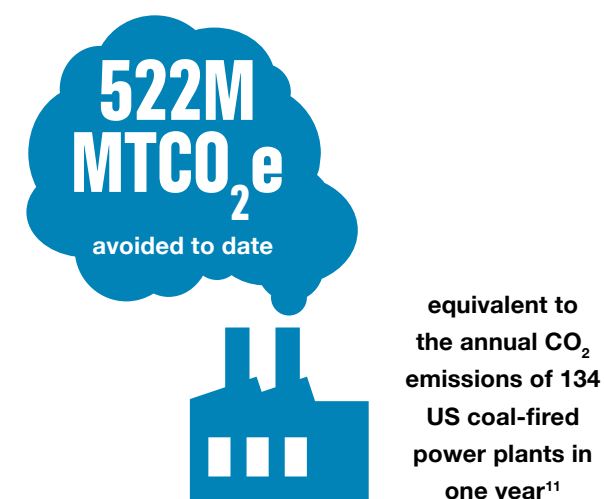
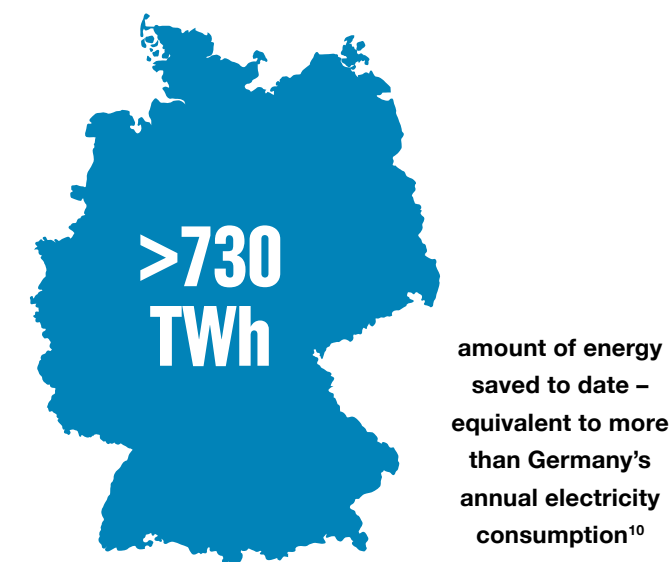
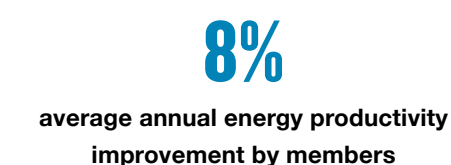
But the pace of change is crucial. Globally we are falling behind the United Nations’ goal of a 2.7% improvement in energy efficiency per year<sup>8</sup>. The immediate years ahead are critical for transforming our economy in time to limit global warming to 1.5°C. It is imperative that companies around the world follow the example of EP100 members and accelerate improvements to their energy productivity.

## KEY FINDINGS

This report showcases the progress made by EP100 members signed up to Double Energy Productivity or Implement an Energy Management System (EnMS) – two of three commitment pathways in the EP100 initiative, with qualitative information provided by selected signatories of the Net Zero Carbon Buildings (NZCB) Commitment<sup>9</sup> ahead of the first reporting cycle for this pathway in 2020 (See p.5).

The report covers data from 23 member companies reporting from their chosen baseline year (see annex).\*

*\*excluding two members with less than two years of energy data.*



## KEY DRIVERS:

1. Financial savings
2. Reducing GHG emissions
3. Reputational benefits

# WHAT IS ENERGY PRODUCTIVITY?

Energy productivity is the ratio of economic output to energy consumption – so improving energy productivity means getting more economic output out of every unit of energy consumed.

## ECONOMIC OUTPUT ENERGY CONSUMPTION

Focusing on improving energy productivity (rather than reducing energy intensity) provides companies with a positive goal. It enables them to apply a financial lens to their energy use and empowers them to align their business growth with their sustainability targets.

By implementing energy efficient technology, digitalizing systems and changing operational behavior, businesses maximize the ‘services’ provided by each unit of energy they consume, helping to increase overall productivity.

Monitoring energy performance enables companies to identify the greatest opportunities to improve their productivity and increase their economic output. EP100 members choose a metric that best fits their business model, such as ‘units produced per energy consumed’ or ‘revenue per energy consumed’.

Beyond business benefits, improving energy productivity is a vital step to creating the clean energy

systems of the future. Global energy demand is growing but through continued improvements in energy productivity this rise can be offset<sup>12</sup>.

At the country level, energy productivity can support energy access, increase energy security and reduce reliance on imports, while ‘decoupling’ GDP from energy consumption – critical for reaching sustainable development goals<sup>13</sup>.

Energy productivity is an exciting narrative that resonates across boardrooms, boiler rooms and policy makers’ desks.

“IMPROVING ENERGY PRODUCTIVITY IS THE DOMINANT FORM OF MITIGATION THAT A CORPORATION CAN CONTRIBUTE TO... USING MORE ENERGY THAN REQUIRED IS LITERALLY LIKE BURNING MONEY AND ENVIRONMENTAL RESOURCES.”

– Anirban Ghosh, Chief Sustainability Officer, Mahindra Group



Inside of a boiler room system

# INTRODUCTION TO EP100

Launched in 2016 in partnership with the Alliance to Save Energy, The Climate Group’s EP100 initiative brings together a growing group of leading companies committed to smarter energy use.

At the time of publication, EP100 has 50 members spanning nine sectors, from retail and real estate to cement and auto manufacturing. They operate in more than 130 markets, and collectively represent over US\$382 billion in annual revenue.

Membership has grown quickly over the last year, with companies joining from Europe, North America, South Asia, Australia, South Africa, and the Middle East.

These influential companies are positioning themselves as leaders in the clean energy transition. Through EP100, The Climate Group provides a global platform for them to showcase their leadership and innovation, share best practice, and demonstrate progress on energy productivity.


By championing the business benefits they experience, such as cost savings and long-term competitiveness, members underline the business case for increasing energy productivity and inspire their peers to follow.

“WE SEE EP100 AS A COALITION OF GAME CHANGERS AND INFLUENCERS TO COMBAT CLIMATE CHANGE.”


– Ibrahim Al Zu’bi, Chief Sustainability Officer, Majid Al Futtaim

## HOW TO JOIN EP100


The EP100 initiative offers companies a choice of three commitment pathways:

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**1. Double Energy Productivity**

A company commits to doubling its economic output from every unit of energy it consumes globally within 25 years, with a baseline year of 2005 at the earliest. The company chooses a relevant energy productivity metric (e.g. revenue/gigajoules (GJ) of energy) to track and report.
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**2. Implement an Energy Management System**

A company commits to implementing an energy management system (EnMS) in each of its facilities within 10 years and commits to an energy productivity target. Deploying an EnMS is a foundational step toward improving energy productivity.
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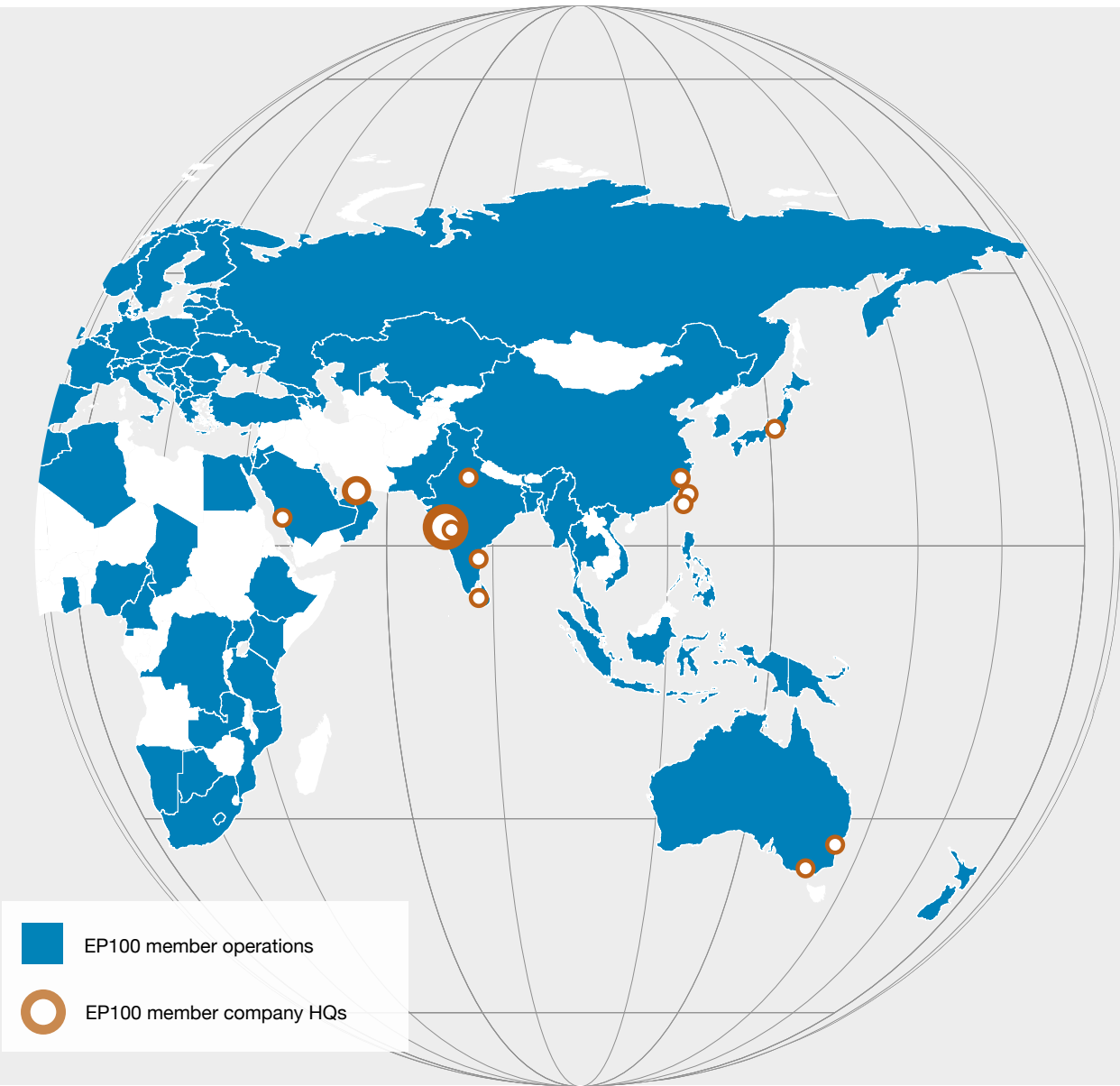
**3. Net Zero Carbon Buildings**

A company commits to owning, occupying and developing buildings that operate at net zero carbon emissions by 2030. A net zero carbon building reduces energy demand, is highly energy efficient and is fully powered by renewable electricity. This pathway gives insight to a company’s emissions, energy demand reductions, and renewable energy solutions from an asset and portfolio level. The NZCB Commitment is led by the World Green Building Council <sup>14</sup>; this report does not include data from companies signed up to this commitment pathway.



# EP100 MEMBERS BY MARKET

This map shows the markets covered by member operations and their headquarters



22 companies doubling energy productivity



8 companies implementing an energy management system (EnMS)



20 companies owning, occupying or developing net zero carbon buildings

9 sectors

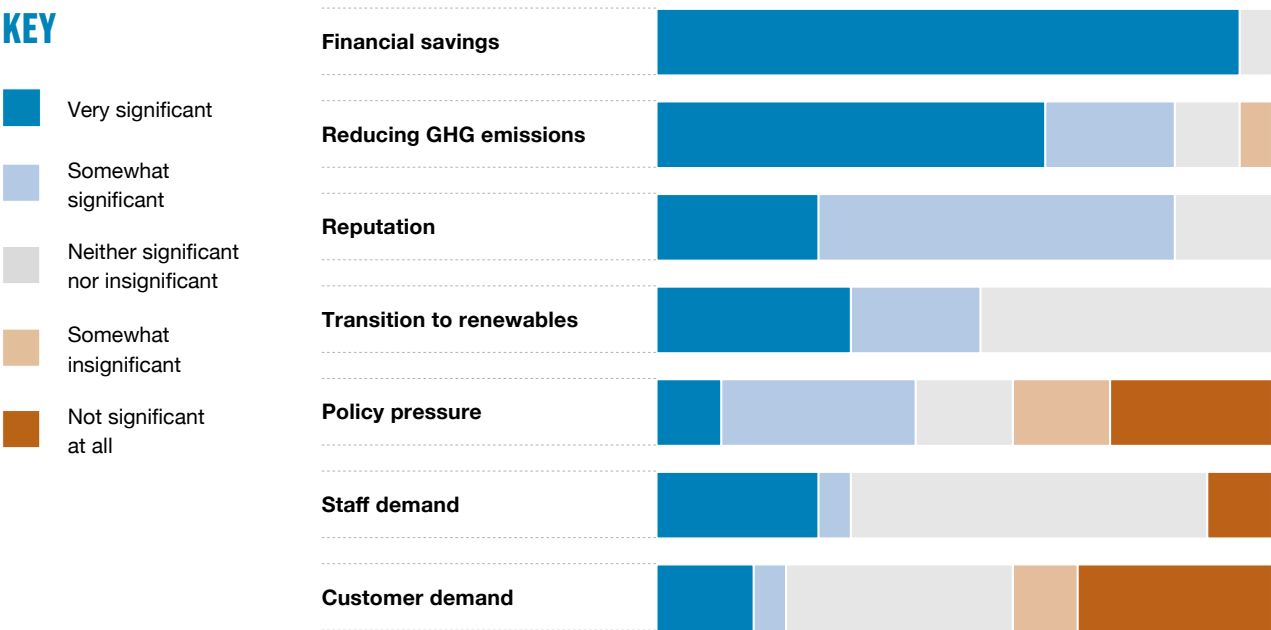
133 markets

Over  
**US\$382 BILLION**  
in annual revenue

**>1.5 MILLION**  
employees

DRIVERS

There are many reasons why companies choose to increase energy productivity. In our survey, EP100 members cite financial savings (95%), reducing GHG emissions (84%) and reputational benefits (84%) as the top drivers, considering them to be ‘very significant’ or ‘significant’.



FINANCIAL SAVINGS

Financial savings were cited as a ‘very significant’ driver by 95% of respondents.

For a company, energy efficiency improvements are a critical component of a long-term GHG emission reduction strategy. By working to increase energy productivity, the company benefits from **lower energy costs and greater energy security, while future-proofing its operations.**

South African listed retailer, Woolworths Holdings Ltd, expects to save close to US\$10 million in the next 5-10 years from just one of its energy savings initiatives – using closed-door refrigeration across its stores. A smart energy plan that positions energy productivity

at its core supports strategic business objectives through **more effective labor, total factor productivity, and economic growth.**

The IEA has estimated that energy efficiency measures can yield benefits up to 2.5 times the value of avoided energy costs, freeing up resources for other investments and thereby improving competitiveness<sup>15</sup>.

Since 2009, Johnson Controls has made great progress toward its target of doubling energy productivity, complementing its strategy of increasing investment in renewable energy consistent with science-based targets.

CASE STUDY: MAHINDRA GROUP

USING INTERNAL CARBON PRICING TO FINANCE ENERGY-SAVING PROJECTS AND DELIVER SIGNIFICANT RETURNS

The Mahindra Group companies Mahindra & Mahindra Ltd, Mahindra Heavy Engines Ltd, Mahindra Vehicle Manufacturers Ltd, Swaraj Engines Ltd, and Mahindra Holidays & Resorts Ltd have all committed to doubling their energy productivity within 25 years.

Chairman Anand Mahindra has also set a goal to make Mahindra Group carbon neutral by 2040. In addition to reducing emissions, a key driver is the need to mitigate risk. With energy costs on the rise in India and persistent fuel scarcities, improving energy productivity is a sensible business decision.

Mahindra’s EP100 commitment to doubling energy productivity has led to a more structured way of optimizing energy consumption. All Mahindra manufacturing plants now have ‘**energy champions**’ that oversee energy monitoring and staff training. Champions are encouraged to push ahead with streamlined project plans which now receive faster approval from executives.

Funded through an **internal carbon pricing initiative**, many of these energy efficiency projects have a payback period of only 1.5 years. Over the last six years, around 450 projects across the Mahindra Group have **saved US\$38 million.**

High density light-emitting diode (LED) lighting has been installed and electric motors have been upgraded with variable frequency drives. **Digitalization** has also been key – energy management software enables the plants to track their energy use and compare progress, while working toward annual targets.

For Mahindra, there are numerous co-benefits of energy productivity. Bladeless fans for example, which use 30% less energy than other fans, also

improve airflow, require less maintenance, can be replaced without affecting production levels, and have **increased safety and reduced noise along busy assembly lines.**

Mahindra Vehicles Manufacturers Ltd has achieved over 40% energy productivity improvement in only three years. The lessons learned are being shared across the Mahindra Group and with other companies.

“MAHINDRA COMPANIES ARE JOINING EP100 AND SHARING LEARNINGS TO DRIVE FORWARD INTERNAL CHANGE – DEMONSTRATING OUR COMMITMENT TO CLIMATE ACTION, OUR EMPLOYEES, AND NATION AT LARGE.”

– Anand Marathe, Deputy General Manager, Sustainability, Mahindra Group

## GHG EMISSIONS AVOIDANCE

84% of survey respondents cited emissions avoidance as a ‘very significant’ or ‘significant’ reason for increasing their energy productivity.

Energy efficiency improvements and transitioning to renewable energy are the main approaches to reducing energy-related carbon emissions. Demonstrating climate

action is just as important as the business case for companies aiming to position themselves as leaders in the clean economy – particularly those in heavy emitting sectors such as cement production and automotive manufacturing. The building sector meanwhile is the highest end-use electricity consumer and generates nearly 40% of annual global GHG emissions<sup>16</sup>.



## CASE STUDY: ULTRATECH

### LEADING THE WAY ON EMISSIONS AVOIDANCE IN THE CEMENT SECTOR



Arvind Bodhankar, Chief Sustainability Officer, UltraTech Cement

“Right now, there’s a lot of focus on the cement sector and our response to climate change – **it’s something investors care about.**”

Sustainability is integrated into our core business strategy, and although we are already among the most energy efficient plants in the world, we see EP100 as a bold opportunity to reduce our climate impact, ensure energy security and achieve low carbon growth. It also helps us to **benchmark ourselves with global companies** on energy productivity.

We achieved senior level buy-in by meeting with all C-suite level employees and building consensus on the benefits, such as **long-term competitiveness**, demonstrating leadership in the cement sector, and financial savings. With 30-35% of our costs coming from energy, it was clear that **doubling our energy productivity** would increase our overall productivity as a business.

The cement sector is cost sensitive, so we have to be mindful with expenditure. But our energy efficiency

projects are showing a fast return on investment and meeting our internal financial criteria for investments. We are working with our planning and budgeting teams to work out our roadmap going forward.

Nobody knows which technologies are going to deliver the energy savings the cement sector needs to make. So, at UltraTech we are trialling different options, such as Expert Optimizer, a computer system for **digitalizing and automating** our industrial processes. We’re also investing in waste heat recovery systems and solar power generation.

We’re already over half way towards our EP100 goal of doubling our energy productivity – well ahead of time. Across our own operations we’ve prevented **over 30 million metric tons of greenhouse gas emissions since 2010**, our baseline year, and **saved US\$4.5 million** in the last year alone.

As a leader in this field we definitely have **an influencing role** to play towards peer companies in the region and welcome the opportunity to share what we are doing and learn from others.”



## CASE STUDY: SALESFORCE

### REDUCING OPERATIONAL AND EMBODIED CARBON IN THE BUILT ENVIRONMENT

Amanda Von Almen, Global Manager, Sustainable Built Environment, Salesforce

“In 2015, Salesforce set ambitious goals of reaching net-zero greenhouse gas emissions and achieving 100% renewable energy for our global operations\*. In 2017, we reached our goal of delivering all customers a carbon neutral cloud and operating as a net-zero greenhouse gas emissions company. As of June 2019, we are over halfway to our 100% renewable energy goal.

But our work doesn’t end there. At the Global Climate Action Summit last fall, Salesforce helped Mission 2020 launch the Step Up Declaration, a new alliance of companies dedicated to catalyzing the climate action the world needs now and ensuring a turning point by 2020. As part of the Step Up Declaration, Salesforce announced our own EP100 commitment; committing **to owning and operating assets that are net zero carbon in operation by 2030.**

To reach this goal, all major office interiors will align with LEED Platinum v4 standards after 2020 and pursue net zero carbon certification by 2030. We have also aligned with ILFI Zero Carbon Certification: which has four criteria: energy use reduction, electrification, 100% renewable energy, and measuring and reducing embodied carbon in our interior offices.

Salesforce has been growing rapidly which means a growing real estate footprint, and we are hyper focused and committed to ensuring that growth is sustainable. Our offices are a physical expression of our company’s values which is why we integrate **green building practices** throughout our entire real estate process from strategy, green leasing, design, healthy materials, construction, and operations.

**Green leasing** presents the best opportunity

**to align with landlords and developers** on sustainability goals and start the energy efficiency conversation. Additionally, through our design standard, we’ve set intentional measures to ensure employees have access to natural light, biophilic design (bringing nature inside), high energy and water efficiency, as well as waste reduction – certifying almost all projects to minimum LEED Gold and increasingly LEED Platinum for our larger offices.

Salesforce has already achieved or is pursuing green building certification for 65% of our global office spaces. We have a robust energy management program where we collaborate globally with our Real Estate and Workplace Services team to monitor energy usage, **arming us with data** to help us understand if the space is performing as designed, as well as drive efficiency during operations and make continuous improvements – increasing our energy productivity.

Being transparent and collaborative, internally and externally, allows us to learn from others, share best practices and can speed up the low carbon transition.”

*\*100% renewable electricity (RE100)*



Salesforce office



## REPUTATIONAL ADVANTAGES

The third most commonly cited reason to improve energy productivity is reputational benefits – considered to be ‘very significant’ or ‘significant’ by 84% of respondents.

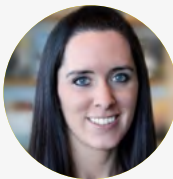
Customers are increasingly paying attention to the actions that companies take to decarbonize their operations. As noted by Ian O’Connor of John Sisk & Son, the largest construction company in Ireland, “the tide is turning, and I can see energy efficiency becoming more and more important to clients.”

Cost-savings for a company can translate to cost savings for its customers, in turn increasing reputational benefit. Landsec, one of the UK’s largest property companies (and a member of RE100 and EV100), has improved energy productivity by 17% since 2014, equating to US\$3.8 million in annual savings for customers. Using the EP100 commitment to start conversations with tenants about energy management opened up the opportunity for co-funding projects like LEDs and dividing financial risk.



## CASE STUDY: HILTON

### EMPOWERING CUSTOMERS THROUGH INNOVATIVE TECHNOLOGY



Caitrin O’Brien - Senior Manager, Corporate Sustainability, Hilton

“Installing a smart energy management system is a win-win for our business. Since rolling out our Corporate Responsibility measurement system LightStay in 2008, we have already achieved cumulative **savings of more than US\$1 billion**, and reduced our energy, water and waste footprint. The benefits go far beyond cost savings though – there’s **value for our employees and hotel guests too**.

All Hilton hotels are required to set annual reduction targets and measure progress to reduce energy, water and waste in alignment with our Travel with Purpose 2030 goal to cut our environmental footprint in half. LightStay provides us with a full overview of our properties, gives us a **digital touch-point to share best practice** on energy management with our employees in hotels around the world.

Since 2008, Hilton has improved our energy productivity by 38 percent – saving over 7.8 million MWh, which is equivalent to preventing

an estimated 5.5 million metric tons of CO<sub>2</sub> equivalent. We are now focused on more **innovative technologies that do more with less**. For example, we are implementing Connected Room, the first ‘**mobile-centric hotel room**’ that enables hotel guests to control the temperature, lighting and air conditioning in their rooms all from their mobile devices. Through innovations such as Connected Room, our hotels making use of this app are achieving even further energy reductions.

Engagement with our guests is crucial to really embed sustainability into Hilton’s business strategy. We **conducted a survey** in 2018, which showed that roughly one of three respondents research a hotel’s social and environmental efforts before booking a room. This tells us loud and clear that **guests want to stay in sustainably run properties** and makes the business case for both cutting energy waste and engaging our customers on the journey even stronger.

Our business strategy continues to grow with every energy reduction target we reach.”



## CASE STUDY: WOOLWORTHS

### MEETING CUSTOMER EXPECTATIONS, BOOSTING REPUTATION AND GENERATING FINANCIAL RETURN

“Joining global movements such as EP100 has allowed us to tap into the benefits of collaborating with like-minded organizations globally, and it also holds us accountable on a larger scale. Our energy efficiency journey continues to show great return on our investments.” – Feroz Koor, Group Head of Sustainability

The Woolworths Holdings Limited Group, a leading retailer operating in South Africa, Australia and 11 Sub Saharan African countries, has already **doubled its energy productivity** from a 2005 baseline, well before its target year of 2020.



Woolworths supermarket fridge door

Government tax incentives for energy saving initiatives helped secure **buy-in from senior management** for investing in more energy efficient technologies, and the retailer has **saved close to US\$400 million** on electricity since 2008 thanks to improvements across its facilities, recoveries from incorrect billing, as well as tax rebates.

Woolworths is focusing its efforts on long-term projects across more than 1,300 stores. After **surveying its customers** during a trial, the retailer decided to roll out closed-door refrigeration in 2012 and has since been expanding this to as many stores as possible. The project has high up-front costs but is expected to save as much as **US\$10 million over 5-10 years**.

Another key measure has been replacing incandescent store lighting with energy efficient options including LEDs, resulting in energy savings of up to 20% across stores that have been retrofitted and **cost savings of approximately US\$765,000**. In addition, real-time and automated energy monitoring has enabled Woolworths to identify inefficiencies and take steps to address them.

“If we did not know how much energy we are using, we would continue paying more money for energy than needed. There is strong economic benefit to monitoring energy consumption.” – Feroz Koor

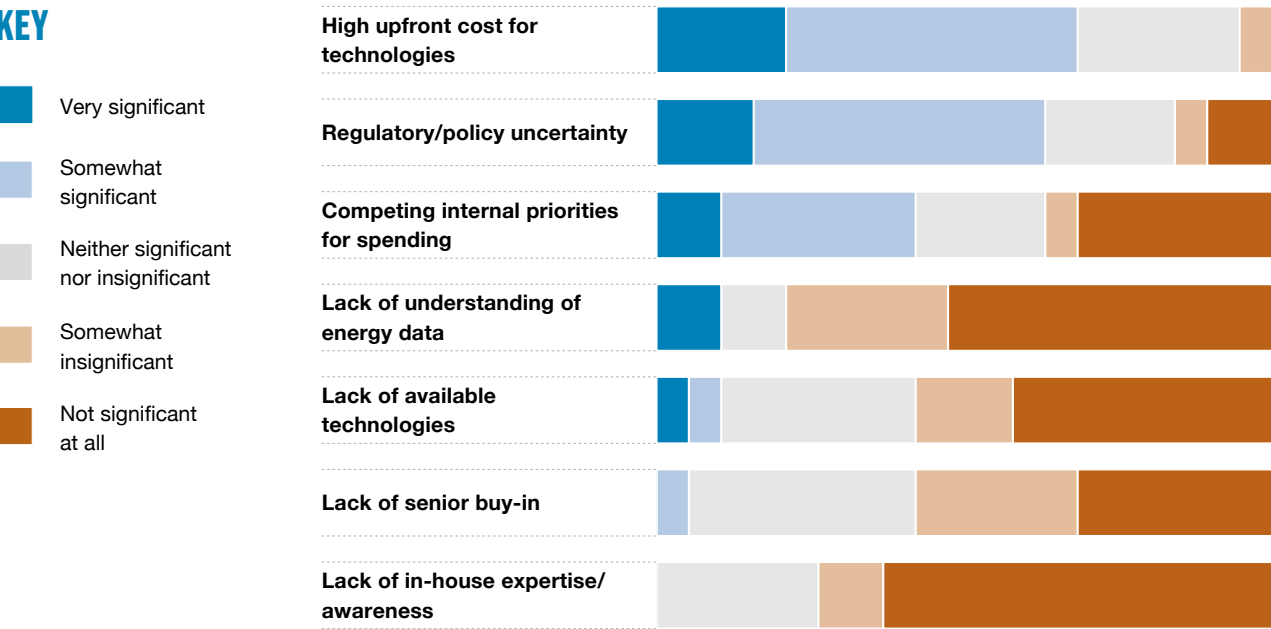
Woolworths applies an internal **green building protocol** during the construction and refurbishing of every facility to ensure that it has sustainable features and operate efficiently.

Being part of a global movement on smarter energy use through EP100 **drives innovation**, with Woolworths achieving Africa’s First 6-Star Custom Existing Building Performance rating by the Green Building Council of South Africa. The store serves as a blueprint for energy efficiency innovations across the business.

Woolworths is now well positioned to comply with more stringent carbon legislation such as the National Building Regulations Standards and carbon tax regulations – helping the retailer to **future-proof its business** against oncoming risks.

# BARRIERS TO ACTION

EP100 members cited the high upfront cost of installing energy saving technologies (68%), regulatory and policy uncertainty (63%), and competition for capital expenditures (42%) as the key barriers experienced when seeking to improve energy productivity, considering them to be ‘very significant’ or ‘significant’.



Nevertheless, members have been able to overcome these challenges in various ways.

## HIGH UPFRONT COSTS

Some energy efficiency projects have high upfront costs and do not always meet a company’s capital expenditure criteria, but there are many **low-cost projects with high yielding opportunities**. Mahindra & Mahindra reported a 24% return on investment (ROI) within two years across various energy productivity initiatives.

Taking into account direct savings and other operational gains, Johnson Controls has **saved US\$33.5 million since 2011** by implementing more than 1,000 low-cost or no-cost projects across its manufacturing plants.

**LED lighting installation generally has a fast payback period and offers co-benefits** such as reduced maintenance requirements. LEDs also reduce cooling requirements since they emit minimal heat compared to incandescent bulbs, which can release 90% of their energy as heat<sup>17</sup>.

## COMPETITION FOR CAPITAL EXPENDITURE

For 42% of members, energy efficiency projects often compete against core business for capital allocation. **Better energy monitoring** can help companies apply insights from data to financial decisions, allowing investments for energy efficiency to become a higher

priority. In 2018, John Sisk & Son began to utilize telematics to monitor the efficiency of machinery. Data from telematics provided information never known before and secured buy-in from senior management on upgrades.

## REGULATORY AND POLICY UNCERTAINTY

Regulatory and policy uncertainty is also considered to be a barrier by member companies, highlighting **the importance of government action** in accelerating energy productivity improvements across the private sector.

Policies set by local and national governments are often vital for enabling companies to successfully implement energy efficiency measures within their operations. There currently exists a plethora of policy tools deployed in various markets around the world, which range from appliance standards to buildings codes to financial incentives (e.g. rebates) and programs, which mandate and/or incentivize companies to become more energy efficient.

However, in many markets, there are still inadequate policy frameworks compared to the relatively diverse range of energy efficiency technologies that are now available. Information gaps are also commonly faced by companies who do not have full understanding of whether the financial and regulatory policies are applicable to their specific business, or how long they will be in place.

As EP100 grows in membership, we will be further examining the policy challenges faced by companies and feeding our findings into various policy workstreams such as United Nations Industrial Development Organisation (UNIDO)’s Industry Working Group, which focuses on end-user perspectives on policy and program design.

“INFORMATION SUCH AS IDLING TIME, ENGINE SPEEDS AND FUEL CONSUMPTION WAS A REAL EYE-OPENER. WITH TELEMATICS WE ARE NOW DEMONSTRATING THE BENEFITS OF INCREASING ENERGY PRODUCTIVITY – ONCE THEY ARE REALIZED, ENERGY PRODUCTIVITY WILL BECOME MORE OF A CULTURE.”

– Ian O’Connor, Energy Manager, John Sisk & Son



Montague Gardens distribution centre





## CASE STUDY: MAJID AL FUTTAIM

Overcoming policy challenges and finding innovative new ways to finance energy projects

Majid Al Futtaim, the leading shopping mall, communities, retail and leisure pioneer, and EP100 member under the **Net Zero Carbon Buildings** Commitment pathway, has become the first company in its sector in the Middle East to pledge to operating net positive in carbon and water by 2040.

The innovation required for this type of commitment can sometimes run into **local policy challenges**, from lack of regulation on importing new technology to restrictions on selling power back to the grid. This has **presented an opportunity** for Majid Al Futtaim to work with the UAE government on finding solutions.

Majid Al Futtaim continues to make great strides, becoming the world's first benchmark corporate Green Sukuk and the first Green Sukuk in the UAE region. The Sukuk is valued as US\$600 million and **attests to investors interest** in sustainable investment. The proceeds will finance the company's green buildings, renewable energy, sustainable water management, and energy efficiency.

**“IF WE NEED TO IMPORT A TECHNOLOGY SUCH AS ADVANCED CHILLERS FROM ANOTHER COMPANY BUT THERE IS NO REGULATION FOR THAT, IT CAN TAKE ME MONTHS TO EXPLAIN THE VALUE TO THE GOVERNMENT. I THINK WE’VE PROVEN THE BUSINESS CASE FOR ENERGY EFFICIENCY IN THE REGION – YOU CAN DO WELL BY DOING GOOD, BENEFITING THE BOTTOM LINE.”**

– Ibrahim Al Zu’bi, Chief Sustainability Officer, Majid Al Futtaim.



Bahrain supermarket LED lights

Although regulatory and policy uncertainty was cited as the second biggest barrier by member companies, some are accelerating action on energy productivity due to external factors such as the increasing importance of sustainability within global value chains.

Taiwanese companies TCI Co., Ltd and TRIDL, for example, are both manufacturers of products for global cosmetic retailer Sephora. They have each joined EP100 and will focus on implementing energy management systems throughout their operations over 10 years. TCI Co., Ltd is committed to improving its energy productivity by 35% by 2040 from a 2016 baseline,

while TRIDL is committed to improving its energy productivity by 30% by 2048 from a 2018 baseline.

Increasingly, our members are also engaging their suppliers on energy productivity efforts – something we expect to see more of in future.



## CASE STUDY: H&M GROUP

Working with suppliers to increase overall impact

H&M Group (also an RE100 member) has committed to **double its energy productivity** and has invested greatly in energy efficient lighting within its own operations, delivering 11% savings in electricity use in one year.

Recognizing the opportunity to increase energy productivity along its value chain, the company **set an internal target to enroll all suppliers and factories into an energy efficiency program**. To date, 30% of suppliers have enrolled. By sharing its own success with its suppliers, H&M Group is building the business case for its factories to upgrade technology and switch to LEDs – and is supporting them through technical assistance and training.

For manufacturers in hot climates that rely on manual labor, especially in those without temperature-controlled operations, LED lighting results both in **large energy savings** and **positive impacts for worker comfort and productivity**.

Already 6.3 TWh of energy has been saved by 30 of H&M Group's suppliers – equivalent to the CO<sub>2</sub> emissions of more than 500 million gallons of gasoline.



Worker at Seduno Cambo Knitting factory in Cambodia. Photo credit: Tiffany Tsang

# LOOKING AHEAD

In the wake of the 2018 Intergovernmental Panel on Climate Change (IPCC) report<sup>18</sup>, the need for the private sector to drive forward energy-smart solutions and accelerate wider market change is more urgent than ever.

As EP100 members have showcased in this report, companies can achieve great economic growth while reducing their environmental impact.

Without energy efficiency efforts, members' total annual site energy use would be 146 TWh higher than it is now. It would take a forest twice the size of the UK to sequester the additional CO<sub>2</sub> emissions over the course of a year<sup>19,20</sup>.

Beyond saving energy, smarter energy use can bolster bottom lines, drive innovation and competitiveness, and contribute to successful growth strategies.

The Climate Group will continue to expand the EP100 membership globally by highlighting the business case for action. We also will increase our efforts to engage companies from hard-to-abate sectors, which will play a vital role in achieving net-zero carbon emissions by 2050<sup>21</sup>.

We call on major companies across the globe to make smarter use of energy, from implementing energy management systems and owning, occupying or developing net zero carbon buildings, to doubling their energy productivity.

*To learn more about EP100 and to make a commitment, visit [TheClimateGroup.org/EP100](https://TheClimateGroup.org/EP100), or follow #EP100 on Twitter.*

“I’M THRILLED TO SEE MORE AND MORE COMPANIES FROM AROUND THE WORLD JOINING EP100. FROM LOWER EMISSIONS TO FINANCIAL SAVINGS, MAKING SMARTER USE OF ENERGY IS A WIN-WIN FOR A BUSINESS FROM THE BOILER ROOM ALL THE WAY UP TO THE BOARDROOM.”

– Jenny Chu, Head of Energy Productivity Initiatives, The Climate Group



Without energy efficiency efforts, it would take an area of forest 2x the size of the UK to sequester the additional CO<sub>2</sub> emissions of EP100 members

# ACKNOWLEDGEMENTS

We would like to thank the 23 EP100 members who participated in our first annual reporting process: Covestro AG, Cree, Daiwa House Industry Co, Danfoss, GILAC, Hilton Worldwide, H&M Group, Hongbo Group, John Sisk & Son, Johnson Controls, Landsec, Mahindra & Mahindra, Mahindra Heavy Engines Ltd, Mahindra Holidays and Resorts India Ltd, Mahindra Vehicle Manufacturers Ltd, Nippon Telegraph and Telephone, Sasol Ltd, Schneider Electric, Swiss Re, TCI Co., Ltd, TRIDL Technologies, Ultratech Cement, and Woolworths Holdings.

We would also like to thank Salesforce and Majid Al Futtaim – signatories of the NZCB commitment – for providing qualitative information about their experiences.

Since our annual reporting process, we have welcomed 11 additional members to EP100, bringing our total membership up to 50. These companies are: Aeroporti di Roma, AESG, Airport Authority Hong Kong, Armstrong Fluid Technology, Brandix, Foster + Partners, Local Government Super, Royal Bank of Scotland (RBS), SSE, Swaraj Engines Ltd, and Yanbu Cement Company (YCC).

The Climate Group is grateful for the support of ClimateWorks Foundation, Heising-Simons Foundation and New Venture Fund/We Mean Business.

## TEAM

**Content:**  
Maria Rojas, Marie Reynolds, Jenny Chu (The Climate Group), Laura Van Wie McGrory, Mikelann Scerbo, Rebecca Price (Alliance to Save Energy)

**Regional support:**  
Atul Mudaliar, Ajitraj Singh (The Climate Group)

**Design:**  
Oliver Whittall (The Climate Group)

**Project management:**  
Maria Rojas (The Climate Group)

**Data analysis:**  
Mikelann Scerbo (Alliance to Save Energy), Maria Rojas (The Climate Group)

## DOUBLE ENERGY PRODUCTIVITY

| MEMBER                         | GICS SECTOR            | JOINING DATE | HEADQUARTERS   | METRIC  | BASELINE YEAR | TARGET YEAR | PERCENTAGE IMPROVEMENT (Since baseline) |
|--------------------------------|------------------------|--------------|----------------|---|---------------|-------------|---|
| Covestro AG                    | Materials              | 11/5/2016    | Germany        | tons product/MJ of primary energy equivalents | 2005          | 2030        | 55%                                     |
| Cree                           | Consumer Discretionary | 5/5/2017     | United States  | Lumens produced per kWh                       | 2014          | 2020        | 71%                                     |
| Daiwa House Industry Co., Ltd. | Consumer Discretionary | 3/1/2018     | Japan          | Net sales/GJ energy                           | 2015          | 2040        | 17%                                     |
| Dalmia Cement (Bharat)         | Materials              | 9/9/2016     | India          | Cement revenue (INR)/Joules                   | 2010          | 2030        |   |
| Danfoss A/S                    | Industrials            | 30/05/2016   | Denmark        | EURm net sales/ GWh                           | 2007          | 2030        | 73%                                     |
| GILAC                          | Consumer Staples       | 27/08/2018   | India          | Mass of product (Tons)/ GJ                    | 2011          | 2030        | 39%                                     |
| H&M Group                      | Consumer Discretionary | 19/04/2017   | Sweden         | Sales area (sq.m)/ GJ                         | 2016          | 2030        | 9%                                      |
| Hongbo Group                   | Consumer Discretionary | 9/6/2016     | China          | N/A   | N/A           | N/A         | Data not available                      |
| John Sisk & Son                | Industrials            | 20/03/2018   | Ireland        | Turnover (£)/kWh                              | 2014          | 2039        | 3%                                      |
| Johnson Controls Inc           | Industrials            | 3/5/2016     | United States  | Revenue (US\$ Million)/GJ                     | 2009          | 2030        | 45%                                     |
| Landsec                        | Real Estate            | 30/12/2016   | United Kingdom | sq.m of floor area/ kWh                       | 2014          | 2034        | 17%                                     |

| MEMBER                                  | GICS SECTOR            | JOINING DATE | HEADQUARTERS   | METRIC                       | BASELINE YEAR | TARGET YEAR | PERCENTAGE IMPROVEMENT (Since baseline) |
|---|------------------------|--------------|----------------|------------------------------|---------------|-------------|---|
| Mahindra & Mahindra Automotive          | Industrials            | 15/02/2016   | India          | Equivalent Vehicle/ GJ       | 2009          | 2030        | 91%                                     |
| Mahindra & Mahindra Farm Sector         | Industrials            | 15/02/2017   | India          | Equivalent Tractor/ GJ       | 2009          | 2030        | 53%                                     |
| Mahindra Heavy Engines Limited          | Industrials            | 4/9/2018     | India          | Equivalent engine/ GJ        | 2015          | 2041        | 39%                                     |
| Mahindra Holidays and Resorts India Ltd | Consumer Discretionary | 13/09/2016   | India          | No. room nights booked/GJ    | 2009          | 2041        | 39%                                     |
| Mahindra Vehicle Manufacturers Limited  | Industrials            | 7/9/2018     | India          | Equivalent engine/ GJ        | 2015          | 2041        | 41%                                     |
| NTT - Nippon Telegraph and Telephone    | Communication Services | 29/10/2018   | Japan          | Data traffic (Gbit)/ GWh     | 2017          | 2025        | N/A due to recent baseline              |
| Schneider Electric SE                   | Industrials            | 29/11/2017   | France         | Revenue/MWh                  | 2005          | 2030        | 54%                                     |
| SSE                                     | Energy                 | 7/5/19       | United Kingdom | revenue (£)/GJ               | 2010          | 2030        | new member                              |
| Swiss Re                                | Financials             | 7/11/2016    | Switzerland    | Full time employees/kWh      | 2005          | 2020        | 147%                                    |
| Swaraj Engines Limited                  | Industrials            | 23/7/2019    | India          | Number of Engines/Gigajoules | 2015          | 2040        | new member                              |
| Ultratech                               | Materials              | 26/06/2018   | India          | Revenue/GJ                   | 2010          | 2035        | 59%                                     |
| Woolworths Holdings                     | Consumer Discretionary | 14/02/2017   | South Africa   | Area (sq.m)/kWh              | 2005          | 2020        | 245%                                    |

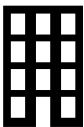




IMPLEMENT AN ENERGY MANAGEMENT SYSTEM

| MEMBER                  | GICS SECTOR               | JOINING DATE | HEAD-<br>QUARTERS | METRIC  | BASELINE<br>YEAR | TARGET<br>YEAR<br>FOR<br>TARGET | CURRENT<br>% OF<br>OPERATION<br>COVERED<br>BY ENMS | TARGET<br>YEAR<br>FOR<br>FULL<br>ENMS | %<br>IMPROVEMENT<br>Goal for EP | %EP<br>IMPROVEMENT<br>TOWARDS<br>GOAL |
|-------------------------|---------------------------|--------------|-------------------|---|------------------|---------------------------------|--|---------------------------------------|---------------------------------|---------------------------------------|
| Hilton<br>Worldwide     | Consumer<br>Discretionary | 9/12/2018    | United<br>States  | Revenue (\$) owned and managed hotels only/energy (MWh) | 2008             | 2030                            | 100%   | 2018                                  | 40%                             | 95%                                   |
| Sasol Ltd.              | Energy                    | 7/12/2018    | South Africa      | Production (ton)/energy (GJ)                            | 2010             | 2030                            | 95%  | 2028                                  | 30%                             | 74%                                   |
| TRIDL<br>Technologies   | Consumer<br>Staples       | 14/09/2018   | Taiwan            | Revenue/kWh   | 2018             | 2048                            | 94%  | 2019                                  | 30%                             | N/A due to recent baseline            |
| TCL Co., Ltd            | Consumer<br>Staples       | 1/8/2019     | Taiwan            | Revenue/kwh   | 2016             | 2040                            | 67%  | 2026                                  | 35%                             | 137%                                  |
| Airport<br>Authority HK | Industrials               | 7/23/2019    | Hong Kong         | Revenue/MWWh  | 2015             | 2030                            | 80%  | 2020                                  | 30%                             | new member                            |
| Aeroporti di<br>Roma    | Industrials               | 21/05/19     | Italy             | PAX* <sup>2</sup> m2/TOE                                | 2006             | 2026                            | 100%   | 2019                                  | 150%                            | new member                            |
| RBS                     | Financials                | 24/04/2019   | United<br>Kingdom | FTE/GWh   | 2015             | 2025                            | 100%   | 2019                                  | 40%                             | new member                            |
| Yanbu<br>Cement Co      | Industrials               | 7/23/2019    | Saudi Arabia      | Clinker (tons)/2010                                     | 2010             | 2025                            | 30%  | 2020                                  | 30%                             | new member                            |

NET ZERO CARBON BUILDINGS



| MEMBER                                   | GICS SECTOR            | JOINING DATE | HEADQUARTERS         | TARGET YEAR |
|--|------------------------|--------------|----------------------|-------------|
| AMP Capital Wholesale Office Fund (AWOF) | Real Estate            | 15/08/2018   | Australia            | 2030        |
| Berkeley Group                           | Consumer Discretionary | 17/08/2018   | United Kingdom       | 2030        |
| Bruntwood                                | Real Estate            | 16/10/2018   | United Kingdom       | 2030        |
| Cbus Property                            | Real Estate            | 6/12/2018    | Australia            | 2030        |
| Cundall                                  | Real Estate            | 2/8/2018     | United Kingdom       | 2025        |
| Dexus                                    | Real Estate            | 8/11/2018    | Australia            | 2030        |
| Frasers Property Australia               | Real Estate            | 8/8/2018     | Australia            | 2028        |
| GPT Wholesale Office Fund                | Real Estate            | 30/08/2018   | Australia            | 2030        |
| Integral Group Inc.                      | Industrials            | 8/28/2018    | United States        | 2030        |
| Kilroy Realty Corp                       | Real Estate            | 8/2/2018     | United States        | 2030        |
| Majid Al Futtaim Holding LLC             | Consumer Discretionary | 8/12/2018    | United Arab Emirates | 2030        |
| Nightingale Housing                      | Real Estate            | 26/11/2018   | Australia            | 2030        |
| Salesforce                               | Information Technology | 9/10/2018    | United States        | 2030        |
| AESG                                     | Industrials            | 28/05/19     | UAE                  | 2030        |
| Local Government Super                   | Financial              | 28/05/19     | Australia            | 2020        |
| Foster + Parters                         | Industrials            | 28/05/19     | United Kingdom       | 2030        |
| Armstrong Fluid Technology               | Consumer Discretionary | 28/05/19     | United Kingdom       | 2030        |
| Brandix Apparel Soultions Limited (BASL) | Consumer Discretionary | 06/06/19     | Sri Lanka            | 2023        |
| Shaw Contract                            | Consumer Discretionary | 29/08/2018   | United States        | 2030        |
| Stockland                                | Real Estate            | 31/08/2018   | Australia            | 2030        |

# GLOSSARY

|                                  |  |
|----------------------------------|--|
| <b>CO<sub>2</sub></b>            | <b>Carbon dioxide</b>  |
| <b>CO<sub>2</sub>e</b>           | <b>Carbon dioxide (equivalent)</b>   |
| <b>EnMS</b>                      | <b>Energy Management System</b>  |
| <b>GDP</b>                       | <b>Gross domestic product</b>  |
| <b>GHG</b>                       | <b>Greenhouse gas</b>  |
| <b>GJ</b>                        | <b>Gigajoules</b>  |
| <b>GWh</b>                       | <b>Gigawatt hours</b>  |
| <b>LED</b>                       | <b>Light-emitting diode</b>  |
| <b>LEED</b>                      | <b>Leadership in Energy and Environmental Design</b>   |
| <b>MT</b>                        | <b>Metric tons</b>   |
| <b>MWh</b>                       | <b>Megawatt hours</b>  |
| <b>ROI</b>                       | <b>Return on investment</b>  |
| <b>SDG</b>                       | <b>Sustainable Development Goal</b>  |
| <b>Total Factor Productivity</b> | <b>– a measure of productivity determined by how efficiently and intensely the inputs are utilized in production</b> |
| <b>TWh</b>                       | <b>Terawatt hours</b>  |

# REFERENCES

1. International Energy Agency (2018) Energy Efficiency 2018 Analysis and outlooks to 2040 <https://webstore.iea.org/market-report-series-energy-efficiency-2018>
2. The Climate Group, [www.theclimategroup.org](http://www.theclimategroup.org)
3. The Climate Group, EP100 [www.theclimategroup.org/EP100](http://www.theclimategroup.org/EP100)
4. Alliance to Save Energy, [www.ase.org](http://www.ase.org)
5. International Energy Agency, Key World Energy Statistics 2018 <https://webstore.iea.org/key-world-energy-statistics-2018>
6. The Climate Group, RE100 [www.RE100.org](http://www.RE100.org)
7. The Climate Group, EV100 [www.theclimategroup.org/EV100](http://www.theclimategroup.org/EV100)
8. IEA, IRENA, UNSD, World Bank, WHO (2019), Tracking SDG 7: The Energy Progress Report 2019 <https://www.irena.org/publications/2019/May/Tracking-SDG7-The-Energy-Progress-Report-2019>
9. World Green Building Council, Net Zero Carbon Buildings Commitment <https://www.worldgbc.org/thecommitment>
10. Number of the week/total electricity consumption in Germany (2019), German Association of Energy and Water Industries (BDEW) <https://www.bdew.de/presse/presseinformationen/zahl-der-woche-gesamtstromverbrauch-deutschland/>
11. United States Environmental Protection Agency (2018), Greenhouse Gas Equivalencies Calculator <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>
12. International Energy Agency (2018) Energy Efficiency 2018 Analysis and outlooks to 2040 <https://webstore.iea.org/market-report-series-energy-efficiency-2018>
13. International Energy Agency (2017), Market Report Series Energy Efficiency 2017 <https://webstore.iea.org/market-report-series-energy-efficiency-2017-pdf>
14. World Green Building Council <https://www.worldgbc.org/>
15. International Energy Agency (2014), Capturing the Multiple Benefits of Energy Efficiency [https://www.iea.org/publications/freepublications/publication/Multiple\\_Benefits\\_of\\_Energy\\_Efficiency.pdf](https://www.iea.org/publications/freepublications/publication/Multiple_Benefits_of_Energy_Efficiency.pdf)
16. International Energy Agency and the United Nations Environment Programme (2018), 2018 Global Status Report: towards a zero emission, efficient and resilient buildings and construction sector <http://wedocs.unep.org/handle/20.500.11822/27140>
17. US Department of Energy, LED Lighting <https://www.energy.gov/energysaver/save-electricity-and-fuel/lighting-choices-save-you-money/led-lighting>
18. IPCC (2018), Special Report Global warming of 1.5°C <https://www.ipcc.ch/sr15/>
19. United States Environmental Protection Agency (2018), Greenhouse Gas Equivalencies Calculator <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>
20. The Commonwealth United Kingdom (2019) <http://thecommonwealth.org/our-member-countries/united-kingdom>
21. Energy Transition Commission (2018), Mission Possible Reaching Net-zero Carbon Emissions from Harder-to-abate Sectors by Mid-century [http://www.energy-transitions.org/sites/default/files/ETC\\_MissionPossible\\_FullReport.pdf](http://www.energy-transitions.org/sites/default/files/ETC_MissionPossible_FullReport.pdf)



## EP100

The Climate Group's global EP100 initiative brings together a growing group of energy-smart companies committed to doing more with less to improve their energy productivity. By integrating energy efficiency into business strategy, these leading companies are driving tech innovation and improving competitiveness while delivering on emissions reduction goals – inspiring others to follow their lead. EP100 is led by The Climate Group in partnership with the Alliance to Save Energy as part of the We Mean Business coalition and is delivered in association with the World Green Building Council's Net Zero Carbon Buildings Commitment. Visit [theclimategroup.org/EP100](http://theclimategroup.org/EP100) or follow #EP100 on Twitter.



## ALLIANCE TO SAVE ENERGY

Founded in 1977, the Alliance to Save Energy is a nonprofit, bipartisan alliance of business, government, environmental and consumer leaders working to expand the economy while using less energy. Our mission is to promote energy productivity worldwide – including through energy efficiency – to achieve a stronger economy, a cleaner environment and greater energy security, affordability and reliability.

## THE CLIMATE GROUP

### THE CLIMATE GROUP

The Climate Group's mission is to accelerate climate action to achieve a world of no more than 1.5°C of global warming and greater prosperity for all. We do this by bringing together powerful networks of business and governments that shift global markets and policies. We focus on the greatest global opportunities for change, take innovation and solutions to scale, and build ambition and pace. We are an international non-profit organization, founded in 2004, with offices in London, New Delhi and New York. We are proud to be part of the We Mean Business coalition and lead business initiatives on energy productivity (EP100), electric vehicles (EV100), and renewable energy (RE100). [www.TheClimateGroup.org](http://www.TheClimateGroup.org)



## WORLD GREEN BUILDING COUNCIL

The World Green Building Council is a global network of Green Building Councils in almost 70 countries. Collectively we are committed to reducing the building and construction sector's CO<sub>2</sub> emissions to reach net zero by 2050: to ultimately help limit global temperature rises to 1.5 degrees Celsius. This goal will help deliver on the ambition of the Paris Agreement. We are building a better future, and are committed to green buildings for everyone, everywhere.



## CONTACT US

The Climate Group Office

Second Floor, Riverside Building,  
County Hall, Belvedere Road, London,  
SE1 7PB, United Kingdom

+44 (0)20 7960 2970

[info@theclimategroup.org](mailto:info@theclimategroup.org)

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