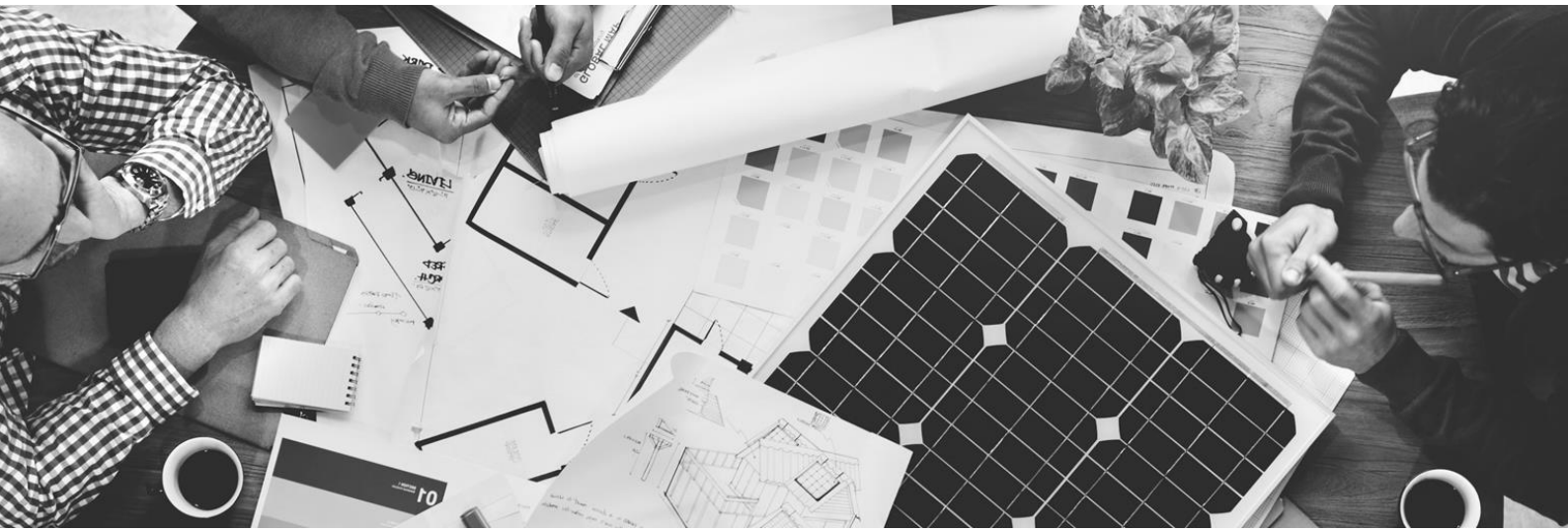

ANNEX: RE100 PROGRESS AND INSIGHTS ANNUAL REPORT, NOVEMBER 2018

This annex presents information disclosed by RE100 members for the RE100 Progress and Insights Annual Report, November 2018. The annual reporting is carried out through either the RE100 reporting spreadsheet or the CDP Climate Change Questionnaire. For those companies that joined after the close of the reporting cycle in August 2018, basic data is extracted from their RE100 joining form.

At the time of publishing (November 15, 2018), 155 companies have joined RE100, led by The Climate Group in partnership with CDP. The report and annex show the electricity consumption of these members during the 2017 reporting year.

Not all members report using the RE100 reporting spreadsheet (which provides greater detail regarding the geographical breakdown of companies' electricity consumption and their sourcing strategies than the CDP Climate Change Questionnaire) and not all companies provide a response to every question. A breakdown of the data included in the analysis is provided below:

- 154 companies have provided their total electricity consumption data
- 150 companies have provided their renewable electricity consumption data
- 98 companies provided in-depth data through the RE100 reporting spreadsheet
- 97 companies provided a regional breakdown of their electricity consumption data
- 111 companies provided renewable electricity procurement data
- 63 companies provided self-generation of renewable electricity data

Our analysis is based on information self-reported by companies. Thorough checks and corrections are undertaken to ensure that the quality of companies' submissions is in line with RE100 requirements.

Any questions on the content of this annex or the main report can be sent to info@re100.org.

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CONTENT

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1. Growth of RE100

TABLE A: Membership by HQ location

Company HQ	November 2018		December2017	
	Number of companies	% of RE100 membership	Number of companies	% of RE100 membership
US	51	33%	41	34%
UK	29	19%	22	18%
Rest of Europe	25	16%	24	20%
Japan	13	8%	3	3%
France	8	5%	6	5%
Switzerland	8	5%	9	8%
Netherlands	7	5%	7	6%
India	5	3%	3	3%
China	2	1%	2	2%
Taiwan (China)	2	1%	0	0%
Australia	1	<1%	0	0%
Canada	1	<1%	1	<1%
Singapore	1	<1%	1	<1%
Mexico	1	<1%	0	0%
Turkey	1	<1%	0	0%
Total	**155**	**100%**	**119**	**100%**

37[1] companies have joined RE100 since the start of 2018, committing to source 100% of their global electricity use from renewable sources. This brings the total membership to 155 companies at the time of publishing (November 15, 2018)[2]. Five of the 37 companies are headquartered in four geographies not previously represented by RE100 (Australia, Mexico, Taiwan and Turkey). The US remains the most represented country in terms of membership HQ's, followed by the UK and the rest of Europe. Japan saw a significant increase in membership, going from three to 13 members in less than a year, and is now the third most represented country.

[1] 3 of those 37 companies joined in January 2018 and were included in our previous RE100 Annual Progress and Insights Report (January 2018)

[2] J Safra Sarasin left the initiative in September 2018.

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TABLE B: Membership by sector

Sector[3]	Number of companies	% of membership	% of total electricity consumption
Financials	39	25%	8%
Consumer Discretionary	33	21%	14%
Consumer Staples	23	15%	39%
Information Technology	21	14%	17%
Industrials	16	10%	4%
Materials	7	5%	7%
Health Care	6	4%	2%
Telecommunication Services	6	4%	10%
Real Estate	4	2%	<1%
Total	**155**	**100%**	**100%**

RE100 members from the Financials sector see the greatest representation, , making up 25% of total membership. In this year's reporting, a new sector of 'Real Estate' has been used in our company classification[4]. This sector was previously included under 'Financials', represented by one company in 2017 and four companies in 2018.

In terms of total electricity consumption, the Consumer Staples sector represents 39% of the members' total electricity consumption, more than double the share of the second largest sector, Information Technology (17%).

This breakdown is broadly in line with the data presented in our previous RE100 Progress and Insights Report (January 2018), showing that the growth in membership reflects the existing composition of sector representation.

[3] Based on the Global Industry Classification Standard (GICS) - https://www.msci.com/gics
[4] Sectors are classified using the Global Industry Classification Standard (GICS).

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2. Progress towards RE100 goals

TABLE C: Progress by sector

Sector	2017			2016
	Electricity consumption (MWh)	Renewable electricity consumption (MWh)	% renewable	% renewable
Information Technology	31,754,244	23,185,430	73%	60%
Financials	15,223,655	8,783,309	58%	37%
Materials	12,405,184	5,427,118	44%	34%
Health Care	3,553,398	1,477,468	42%	27%
Telecommunication Services	17,991,362	6,761,984	38%	60%
Consumer Discretionary	25,880,754	10,562,771	41%	39%
Industrials	8,050,464	2,513,967	31%	26%
Real Estate	630,049	119,639	19%	n/a
Consumer Staples	72,611,341	13,008,147	18%	14%
Total	**188,100,451**	**71,839,833**	**38%**	**32%**

On average, 155 RE100 members are sourcing 38% of their electricity from renewables, compared to 32% in the previous year. This is an encouraging increase, given that half of the companies joining RE100 in 2018 were right at the beginning of their renewable electricity journey (<5% renewable). It shows that companies that joined the initiative in previous years progress at pace towards their goal. The 122 companies included in our previous RE100 Progress and Insights Report (January 2018) were 42% renewable in 2017, against 32% in 2016.

In 2017, all but one of the sectors increased the proportion of their electricity sourced from renewables. Information Technology was the best performing sector (73% renewable), followed by Financials (58%), Materials (44%) and Healthcare (42%). The share of renewable electricity in those four sectors increased by a minimum of 10 percentage points compared to 2016. Telecommunication Services is the only sector which did not make overall progress on renewables. This is due to the two large companies in this sector, that joined RE100 in 2018, being at the start of their renewable electricity journey (<15% renewable) in the reporting year (2017), lowering the sectoral average.

TABLE D: Progress by geography

Country/Region	Electricity consumption (MWh)	Renewable electricity consumption (MWh)	% renewable
US	29,045,374	16,314,691	56%
UK	9,794,022	7,993,645	82%
Switzerland	885,990	719,860	81%
Denmark	508,961	475,810	93%
Rest of Europe	23,848,612	12,482,940	52%
India	2,485,349	801,485	32%
China	3,889,512	975,493	25%
Japan	3,280,144	273,387	8%
Africa	1,563,207	39,822	3%
Central and South America and Caribbean	6,843,395	1,399,683	20%
Other North America	2,546,848	927,936	36%
Other Asia	5,961,641	547,108	9%
Oceania	574,250	8,899	2%
Total	**91,197,305**	**42,960,759**	

97 companies provided detailed data on the geographical breakdown of their electricity consumption, based on the countries where they have operations.

The top three countries[5] where members are sourcing the highest proportion of renewable electricity are Denmark (93%), the UK (82%) and Switzerland (81%). Including these countries, Europe leads on regional progress with 62% of electricity coming from renewable sources. Europe was also the leading region for corporate renewable electricity sourcing in 2016, due to the existence of a strong renewable electricity tracking mechanism (Guarantees of Origins), favourable market conditions for renewable electricity investments, and, for the UK, the existence of a mature market for corporate PPAs. Following Europe is the US at 56%, double 2016's number[6].

India and China both showed encouraging progress in 2017, with India reaching 32% renewable electricity sourcing in 2017 (21% in 2016) and China reaching 25% (16% in 2016). By contrast, Japan went from 18% in 2016 to 8% in 2017. This is explained by the significant increase in companies headquartered in Japan joining RE100 in 2018 (10). These companies have joined at an early stage in their renewable electricity journey (5% renewable or below). Africa and Oceania lag furthest behind other regions at 3% and 2%, respectively.

[5] Based on countries where RE100 members are using a minimum of 0.5 TWh of electricity.

[6] Due to a small number of large consumers largely based in the US not having reported detailed geographical data for their electricity consumption this year, the number for total electricity consumption in the US is lower than in the previous RE100 Progress and Insights Report (January 2018, covering 2016 data).

3. Drivers and barriers

TABLE E: Drivers for renewable electricity sourcing

Driver	Very important	Important	*Total important*	Not important	Irrelevant	No response
Management of GHG emissions	80%	15%	*95%*	0%	0%	4%
Corporate Social Responsibility	74%	21%	*95%*	1%	0%	4%
Economics of renewable energy	37%	43%	*80%*	12%	2%	5%
Energy management	29%	48%	*77%*	18%	1%	4%
Policy	34%	38%	*72%*	14%	3%	10%
Shareholder request	21%	51%	*72%*	8%	10%	11%
Air quality	25%	47%	*72%*	18%	4%	5%
Client request	12%	54%	*66%*	10%	15%	9%

84 RE100 members responded to the question on drivers for renewable electricity sourcing.

The management of greenhouse gas (GHG) emissions and Corporate Social Responsibility were listed as 'very important' or 'important' drivers for renewable electricity sourcing by 95% of responding members. Following this, the economics of renewable energy was cited by 80% of responding members as a 'very important' or 'important' driver for sourcing renewable electricity. These findings are broadly in line with what was reported in our previous RE100 Progress and Insights Report (January 2018).

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TABLE F: Barriers to renewable electricity sourcing

Barrier	Very important	Important	*Total important*	Not important	Irrelevant	No response
Regulatory uncertainty and complexity	30%	48%	*78%*	8%	1%	13%
Cost-competitiveness of conventional electricity over renewables	36%	40%	*76%*	9%	2%	13%
Lack of wholesale renewable electricity markets that facilitate price transparency and direct participation	36%	31%	*67%*	10%	6%	18%
Lack of government support mechanisms such as tax exemption or incentives	20%	41%	*61%*	19%	3%	17%
Inability to claim renewable electricity uses with suitable market instruments	18%	37%	*55%*	19%	8%	19%
Difficulty to deal with multiple geographies	23%	29%	*52%*	20%	11%	17%
Company growth	10%	39%	*49%*	27%	3%	21%
Lack of information	6%	41%	*47%*	27%	6%	21%
Access to finance	6%	30%	*36%*	33%	11%	20%
Uncertainty over long-term grid use charges	11%	24%	*35%*	38%	9%	18%
Power grid curtailment	9%	23%	*32%*	37%	12%	19%
Not having access to grid transmission infrastructure	10%	21%	*31%*	26%	24%	19%

Policy **Financial** **Technical**

80 RE100 members responded to the question on barriers to renewable electricity sourcing. Barriers have been grouped based on whether they belong to 'Policy', 'Financial' or 'Technical' categories.

Policy barriers are most commonly cited as obstacles to renewable electricity sourcing, with 'regulatory complexity and uncertainty' cited as 'very important' or 'important' by 78% of responding RE100 members. Following this, 'cost-competitiveness of conventional electricity over renewables' was cited as a key barrier by 76% of responding members, suggesting that the decrease in renewables costs observed globally might not have materialised for all corporate buyers and that further decrease remains necessary to unlock corporate investment in renewables sourcing.

4. Evolving sourcing strategies

TABLE G: Renewable electricity per sourcing strategy

Sourcing strategy	2017 (MWh)	2017 (%)	2016 (%)
Unbundled energy attribute certificate purchase	24,947,048	46%	40.4%
Contract with suppliers (green electricity tariffs/products)	19,200,806	35%	41%
Direct procurement from offsite grid-connected generators (PPA)	8,951,954	16%	13.1%
Direct line to an offsite generator with no grid transfers	444,359	1%	<1%
Purchase from onsite installations owned by a supplier	287,329	1%	<1%
Self-generation and consumption	350,935	1%	3%
Other	138,293	<1%	1.5%
Total	**54,320,724**	**100%**	**100%**

111 RE100 members provided information on their renewable electricity sourcing strategies in their reporting.

In 2017, 46% of the renewable electricity procured by members was purchased using unbundled energy attribute certificates. The second most popular sourcing strategy was having a green electricity contract with suppliers, with 35% of renewable electricity sourced in this way. This is a slight change from 2016, when green electricity products came just ahead of unbundled energy attribute certificate purchases (41% against 40.4%).

The proportion of electricity sourced using power purchase agreements (PPAs) reached 16% in 2017, continuing the growth observed in 2016 (when this was at 13.1%, against 3.3% in 2015). This 3-percentage point increase represents an additional 4 TWh of renewable electricity – an 86% increase compared to 2016.

The method of accounting for self-generated electricity for the purpose of this reporting has changed between this report and the publication of the previous RE100 Progress and Insights Report (January 2018), covering 2016 data (see table I). This explains the decrease in the total amount of renewable electricity sourced through this method between 2016 and 2017.

A final interesting trend is the increase in the amount of electricity sourced through a direct line to an offsite generator with no grid transfer, growing from 22,089 MWh in 2016 to 444,359 MWh in 2017 – a twentyfold increase.

TABLE H: Procured renewable electricity per technology type

Technology	2017 (MWh)	2017 (%)
Wind	27,687,507	62%
Large hydro (>25 MW)	5,146,738	11%
Small hydro (<25 MW)	1,639,396	4%
Solar PV	880,852	2%
Biomass (including biogas)	1,483,530	3%
Geothermal	75,645	<1%
Solar CSP	18,005	<1%
Other	7,780,200	17%
Total	**44,711,877**	**100%**

107 RE100 members provided information on the technology types used for procuring renewable electricity. These figures do not include technology types used for self-generation of renewable electricity. This information is provided in Table J.

The majority (62%) of responding members reported using wind as a technology type, followed by large-scale hydro (11%).

TABLE I: Self-generation and consumption by region

Region	Total self-generation and consumption (MWh)	2017 (%)
Europe	151,572	43%
Asia	148,816	42%
Americas	38,898	11%
Africa	4,479	1%
Latin America and Caribbean	3,686	1%
Oceania	3,484	<1%
Total	**350,935**	**100%**

63 companies reported data on self-generation of renewable electricity. Table I shows, for each region, the amount of renewable electricity from self-generation that is directly consumed by RE100 members, or for which RE100 members retain the renewable energy attribute certificates.

Europe and Asia were the main regions in which RE100 members self-generated and consumed renewable electricity, accounting for 43 and 42% of the total, respectively. On its own, India represented 35% of the total.

The total amount of renewable electricity self-generated by RE100 members is much higher than the number included in this table. In total, RE100 members generated over 3.6 TWh of renewable electricity in 2017 – however, the largest share of this was sold back to the grid. Although RE100 members cannot always claim this electricity for their own consumption, it still constitutes a very significant contribution to the deployment of renewable electricity worldwide.

TABLE J: Self-generation and consumption by technology type

Technology	2017 (MWh)	2017 (%)
Solar PV	204,133	58%
Wind	120,778	34%
Biomass (including biogas)	18,474	5%
Mix of renewable technologies	1,141	<1%
Small hydro (<25 MW)	616	<1%
Large hydro (>25 MW)	210	<1%
Geothermal	95	<1%
Solar CSP	80	<1%
Other	167	<1%
Not reported	5,238	1%
Total	**350,935**	**100%**

63 companies reported data on self-generation of renewable electricity. Table J shows, by technology type, the amount of self-generated renewable electricity that is directly consumed by RE100 members.

As expected, the majority of self-generated and consumed renewable electricity is from solar PV (58%). This is followed by wind technology (34%) and biomass (including biogas – 5%). Other technologies make up less than 1% of the total.

TABLE K: Self-generation and consumption from solar PV by region

Region	2017 (MWh)	2017 (%)
Asia	122,693	60%
Europe	35,224	17%
Americas	34,572	17%
Africa	4,475	2%
Latin America and Caribbean	3,686	2%
Oceania	3,484	2%
Total	**204,133**	**100%**

37 companies reported using solar PV as a technology for self-generation and consumption of renewable electricity.

In total, 204,133 MWh of renewable electricity was generated and consumed from solar PV technology in 2017 by the 37 responding members. Of this, the majority (60%) was generated and consumed in Asia, followed by the Americas (17%) and Europe (17%). Once again, India stands out by representing 49% of the total.

TABLE L: Sourcing strategies in the US

Sourcing strategy	2017 (MWh)	2017 (%)	2016 (%)
Unbundled energy attribute certificate purchase	10,963,352	67%	59%
Direct procurement from offsite grid-connected generators (PPA)	3,204,828	20%	20%
Contract with suppliers (green electricity tariffs/products)	2,013,714	12%	13%
Other	90,819	<1%	<1%
Self-generation and consumption	32,388	<1%	5%
Purchase from onsite installations owned by a supplier	9,590	<1%	2%
Total	**16,314,691**	**100%**	**100%**

48 companies reported on their sourcing strategies for renewable electricity in the US.

Purchasing unbundled energy attribute certificates remained the preferred sourcing strategy of RE100 members in the US in 2017, and the overall breakdown was consistent with the trends observed in 2016. The amount of renewable power sourced through PPAs is expected to keep rising due to the high number of contracts signed in the US in 2017 and 2018.

TABLE M: Sourcing strategies in Europe

Sourcing strategy	2017 (MWh)	2017 (%)	2016 (%)
Contract with suppliers (green electricity tariffs/products)	13,504,863	62%	63%
Unbundled energy attribute certificate purchase	6,922,013	32%	29%
Direct procurement from offsite grid-connected generators (PPA)	1,000,391	5%	4%
Self-generation and consumption	151,572	<1%	3%
Purchase from onsite installations owned by a supplier	91,294	<1%	<1%
Other	816	<1%	<1%
Total	**21,670,949**	**100%**	**100%**

79 companies reported on their sourcing strategies for renewable electricity in Europe.

In 2017, contracts with suppliers remained the preferred option for RE100 in Europe by far – a region where utilities have crafted offers that match companies' needs. This was followed by unbundled energy attribute certificates. As in 2016, PPAs only represented a small proportion of the total renewable electricity sourced in Europe by RE100 members, reflecting a less mature market for this approach in most European countries (other than the UK, the Netherlands and the Nordic countries) and some policy uncertainty. The new Renewable Energy Directive adopted by the European Union in 2018 will help provide clearer policy frameworks for PPAs across the continent.

TABLE N: Sourcing strategies in China

Sourcing strategy	2017 (MWh)	2017 (%)	2016 (%)
Unbundled energy attribute certificate purchase	933,624	96%	89%
Contract with suppliers (green electricity tariffs/products)	32,639	3%	4%
Self-generation and consumption	6,821	<1%	<1%
Purchase from onsite installations owned by a supplier	2,409	<1%	<1%
Other	0	0	6%
Total	**974,953**	**100%**	**100%**

23 companies reported on their sourcing strategies in China in 2017. Almost all the renewable electricity sourced by RE100 members in China was through unbundled energy attribute certificates. The regulated Chinese market does not offer as many options for companies to meet their RE100 commitment as other markets do - corporate PPAs, for example, can currently not be signed in China.

TABLE O: Sourcing strategies in Japan

Sourcing strategy	2017 (MWh)	2017 (%)	2016 (%)
Unbundled energy attribute certificate purchase	224,982	82%	No data
Contract with suppliers (green electricity tariffs/products)	44,615	16%	
Self-generation and consumption	3,790	<2%	
Total	**273,387**	**100%**	

16 companies reported on their sourcing strategies for renewable electricity in Japan. More than 80% of the renewable electricity sourced by RE100 members in Japan in 2017 was through unbundled energy attribute certificates, followed by contracts with suppliers.

TABLE P: Sourcing strategies in India

Sourcing strategy	2017 (MWh)	2017 (%)	2016 (%)
Direct line to an offsite generator with no grid transfers	341,307	43%	0%
Unbundled energy attribute certificate purchase	181,570	23%	31%
Direct procurement from offsite grid-connected generators (PPA)	136,630	17%	13%
Self-generation and consumption	122,788	15%	13%
Contract with suppliers (green electricity tariffs/products)	13,154	<2%	30%
Purchase from onsite installations owned by a supplier	6,035	<1%	2%
Other	0	0	11%
Total	**801,484**	**100%**	**100%**

21 companies reported on their renewable electricity sourcing strategies in India.

In 2017, India represented the most diverse breakdown of sourcing strategies, with four different strategies totalling over 10% of the total renewable electricity sourced by RE100 members. An interesting trend was the growth in renewable electricity sourced through a direct line to an offsite generator with no grid transfer – totalling 43% of the total renewable electricity sourced in India by RE100 members. Self-generation and consumption was also higher in India than in other regions –15% of the total.

5. Catalyzing further action

TABLE Q: Working with suppliers

Response	Total	%
Yes	35	23%
No	62	40%
No response	58	37%
	155	**100%**

RE100 members were asked if they are working with their suppliers to encourage them to use renewable electricity (and therefore increasing the uptake of renewable electricity in their supply chain). Overall, 23% of the entire membership responded that they are working with their suppliers. However, out of the 97 companies that directly responded to the question, the number was higher - 36% said they were working with their suppliers.

TABLE R: Target broader than electricity

Response	Total	%
Yes	26	17%
No	71	46%
No response	58	37%
	155	**100%**

RE100 members were asked whether they have a company target that is broader than electricity. This could be a 100% renewable energy target with a scope that includes electricity, heat and transport. Overall, 17% of members reported having a target broader than electricity. However, focusing on the 97 companies that directly responded to the question, 27% stated having a broader target.