

Committee:	Date:
Corporate Asset Sub-Committee	18 November 2016
Subject: Half Yearly Energy Performance Report (2016/17)	Public
Report of: City Surveyor	For Information
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Summary

This report provides half yearly performance update on energy reduction targets set out in the Carbon Descent Plan 2015 (CDP-15). The performance update covers the six month period from April to September 2016.

The latest analysis shows an overall energy consumption increase of 0.1% compared to the same period in 2015-16. Even though there were reductions in places like Markets and Open Spaces there were areas where the demand was higher (due to an increased demand of the facilities) which resulted in an overall marginal increase in consumption.

An increase of 0.1% until now means the Corporation is unlikely to meet its annual reduction target of 2.25% for 2016/17. To mitigate this current performance gap a number of work streams have been put in place including:

- The Strategic Energy Review (SER) Board focussing on implementing the 14 AECOM recommendations;
- Launch of the Energy Efficiency Loan Scheme in July 2016 (aims to invest £2.5m over five years) encouraging departments to come forward with energy efficient projects; and
- Targeting available resources to provide assistance to those departments where there is no material reduction, or an increase.
- Most importantly the Corporate Energy Team has started working towards developing a corporate wide Energy Strategy which will cover various themes including benchmarking City's targets with peers, ways to improve on our current monitoring and targeting strategy, streamlining energy compliance delivery, gap analysis of resources necessary to achieve corporate objectives and ways to lower City's energy costs in general and improve upon energy efficiencies. In addition the Energy Strategy further aims to align the Energy initiatives with other on-going corporate initiatives such as the Strategic Asset Management review.

Recommendation

It is recommended that Members note the report.

Main Report

Performance Monitoring

Current Performance

1. The table below shows that the weather corrected energy consumption for April to September 2016 is 0.1% higher than 2015-16.

Table 1: Half yearly performance comparison (2016/17 with 2015/16)

Departments	16/17 Q2	Diff. kWh	Diff. %
Markets ¹	29,668,687	-312,934	-1.0%
Guildhall	22,211,683	-36,407	-0.2%
Barbican Centre	16,487,817	231,089	1.4%
Courts	8,009,911	215,975	2.8%
Police	5,899,028	103,143	1.8%
Open Spaces	5,649,926	-118,100	-2.0%
GSMD	7,346,258	68,640	0.9%
CoL Freeman's	3,870,897	-45,399	-1.2%
Culture, Heritage & Libraries	3,754,469	-8,841	-0.2%
Built Environment	7,244,167	-84,153	-1.1%
CoL Boys	3,021,508	159,307	5.6%
Walbrook Wharf	1,791,431	-26,165	-1.4%
Mansion House	2,040,490	55,788	2.8%
CoL Girls	2,113,869	-50,321	-2.3%
Grand Total	119,110,140	151,622	0.1%

Commentary

2. Two energy related KPIs are set out in the City Surveyor's Business Plan (2015-19):-

KPI 6 (a) - To pursue corporate wide energy reduction

An overall energy consumption increase of 0.1% for April to September 2016 compared to 2015/16. Even though there were reductions in places like markets (following a resolution of chilled water distribution inefficiencies from last year) and Open Spaces (less demand in Crematorium this season) there were areas where the demand was higher (due to an increased demand of facilities) which resulted in an overall marginal increase in consumption.

KPI 6 (b) – To pursue energy reduction in Guildhall and Walbrook Wharf

3. Performance has improved with average energy consumption 0.3% lower compared to the same period last year.
4. Walbrook Wharf is 1.4% lower as a result of continued good housekeeping at the site plus some adjustments made on the Building Energy Management System (BEMS). Guildhall has reduced by 0.2% overall a result of lower electricity consumption for the West Wing related to control improvements installed on the chilled water distribution pumps earlier this year.
5. For other departments' commentary please refer to Appendix 1.

¹ Data for Markets have been split between the City of London and tenants use. Please refer to Appendix 1 for more information.

Development of the Energy Strategy

6. The Energy team is also progressing towards developing an Energy Strategy for the Corporation. The work is in very early stages and at present a benchmarking exercise is being carried out in which some of the key questions such as existing energy targets, aspirations behind setting these targets and emerging themes within the energy industry are being explored.
7. This exercise is being conducted with a view to ascertain the best practices and current trends existing in both the private and public sector which will inform the overall Energy Strategy in the near future. So far companies like British Land, Land Securities and Better Building Partnership, Broadgate Estates, GVA, British Properties Federation, LB Islington, London School of Economics and City University have been contacted.

Conclusion

8. An increase of 0.1% until now means the Corporation is unlikely to meet its annual reduction target of 2.25% for 2016/17.
9. To mitigate this current performance gap the Corporate Energy Team has started working towards developing a corporate wide Energy strategy which aims to not only explore best practices available in the industry but also intend to link this work with other key initiatives currently underway in the Corporation.
10. In addition a number of existing work streams are being pursued:
 - The Strategic Energy Review (SER) Board focussing on implementing the 14 AECOM recommendations; and
 - The launch of the Energy Efficiency Loan Scheme in July 2016 (worth £2.5m over five years) encouraging departments to implement with energy efficient projects would also contribute towards the current targets. To support, the corporate energy team at present is liaising and carrying out site visits and assisting departments in identifying areas/ projects to develop that would have high impact overall.

Appendices

- Appendix 1 – Departmental performance commentary

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Appendix 1

Departmental commentary based on weather corrected data

Departments	16/17	Diff. kWh	Diff. %	Comments received from Departments
Markets (see below for the split)	29,668,687	-312,934	-1.0%	Electricity and gas have both risen slightly, but Citigen energy has reduced mainly due to a 13% reduction in chilled water for Smithfield related to the resolution of system issues (air trapped in the system).
Guildhall	22,211,683	-36,407	-0.2%	Electricity has reduced for the West Wing, related to improved pump controls installed earlier this year. There was a reduction in Citigen heat to GYE, related to improved control management. However hot water consumption for other areas increased and this is related to the demands from functions.
Barbican Centre	16,487,817	231,089	1.4%	Hot water usage increased due to increased demand from functions/events.
Courts	8,009,911	215,975	2.8%	Energy consumption is higher mainly due to electricity consumption for the Central Criminal Court (CCC) south wing which is related to the installation of additional small power loads. Further investigations are being made with the Site Manager.
Police	5,899,028	103,143	1.8%	Electricity remains the same, but gas has increased significantly at Bishopsgate Police Station since April-16 due to fixing of heating system problems which previously lowered usage.
Open Spaces	5,649,926	-118,100	-2.0%	Electricity has increased while gas has decreased. Electricity increased significantly for the Crematorium because of night charging of battery powered equipment at the workshops as confirmed by their site manager. Gas consumption was significantly lower due to reduced demand from the Cremators.
GSMD	7,346,258	68,640	0.9%	Electricity has increased slightly, but gas has decreased. A very minor change hence has not been investigated further.
CoL Freeman's	3,870,897	-45,399	-1.2%	Both electricity and gas have decreased. The Energy team is further investigating into it; at the time of preparing this report, no information was received.
Culture, Heritage & Libraries	3,754,469	-8,841	-0.2%	Electricity has increased, gas has decreased. Significant electricity increase continues at LMA due to poor plant control for annexe
Built Environment	7,244,167	-84,153	-1.1%	Electricity has decreased, with significant reductions at Tower Hill, Baynard Hse, London Wall and Upper Thames St. partly due to the replacement of lighting with higher efficiency LEDs.
CoL Boys	3,021,508	159,307	5.6%	Electricity and gas (for hot water) both increased. The Energy team is further investigating into it; at the time of preparing this report, no information was received.
Walbrook Wharf	1,791,431	-26,165	-1.4%	Electricity has reduced significantly, while gas has increased slightly. Electricity has been significantly lower since May for the industrial area and is likely related to more robust monitoring by indoor cleaners and security. Staff and contractors have been asked to also ensure they are switching off where necessary PC's. Further adjustments have also been made to the ventilation system control settings. Space heating has increased for the offices.
Mansion House	2,040,490	55,788	2.8%	Gas has increased significantly, mainly related to increase hot water during May because of increase in number of functions. Further investigations underway.
CoL Girls	2,113,869	-50,321	-2.3%	Electricity decreased but gas increased. Electricity has generally been lower since Dec-15, mainly due to better housekeeping/control of heating. Gas increased due to more functions in the catering department (i.e. cooking) and using slightly more hot water due to catering and also staff showing more due to Cycling/Running.
Grand Total	119,110,140	151,622	0.1%	The overall energy consumption has slightly increased by 0.1% which is 2.24% off annual target.

Split of consumption between CoL and Tenants for Markets

	16/17 kWh	Diff. kWh	Diff. %
M&CP CoL	7,322,421	265,421	3.8%
M&CP Tenants	20,873,787	-602,136	-2.8%
M&CP TBC	1,472,479	23,782	1.6%
Total	29,668,687	-312,934	-1.0%

TBC = To Be Confirmed (currently the split of some energy between tenant/landlord is still under investigation)