



WGB/BHSC

ENERGY REVIEW

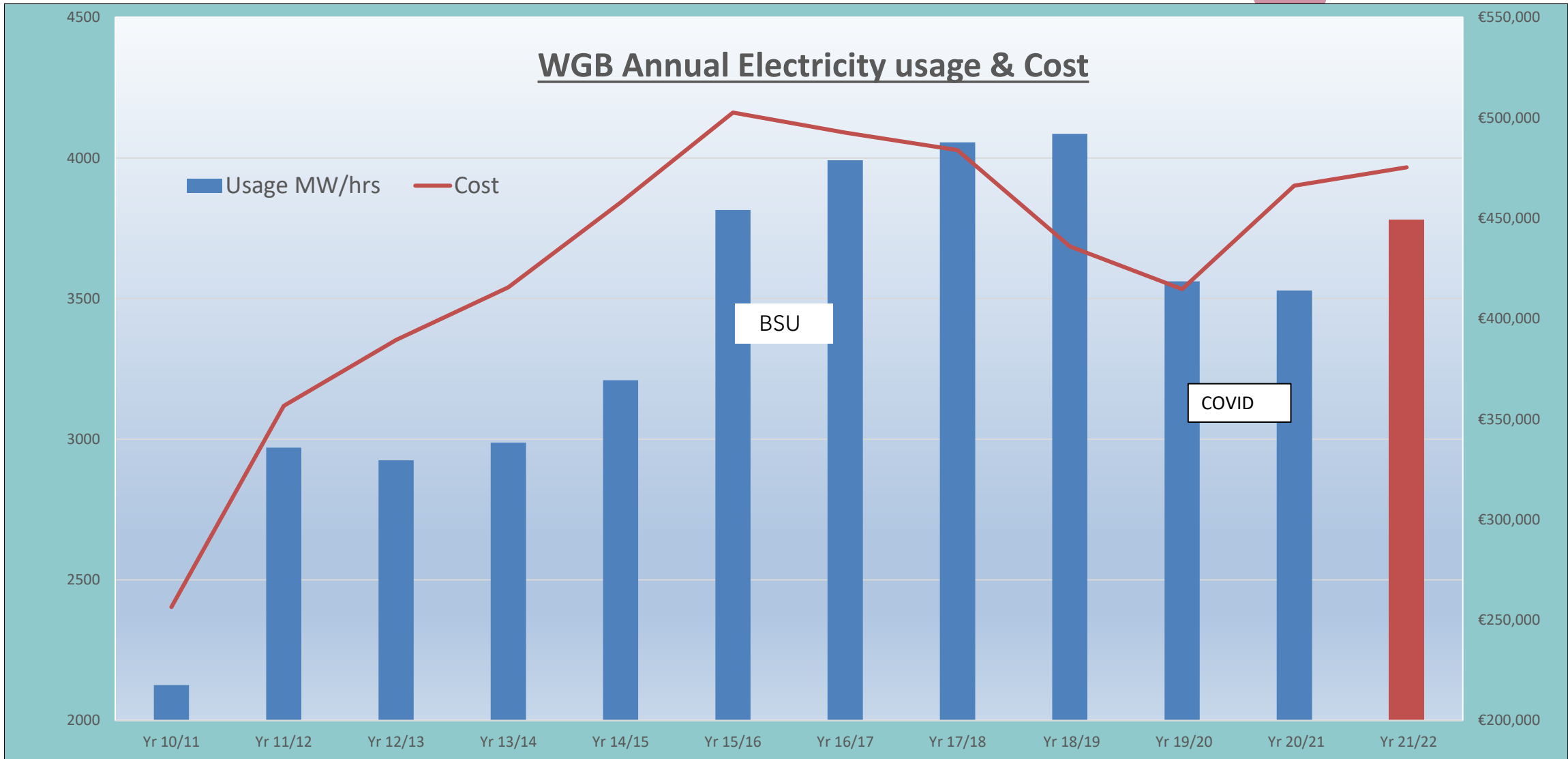
Sept 2022



Western Campus SEU;

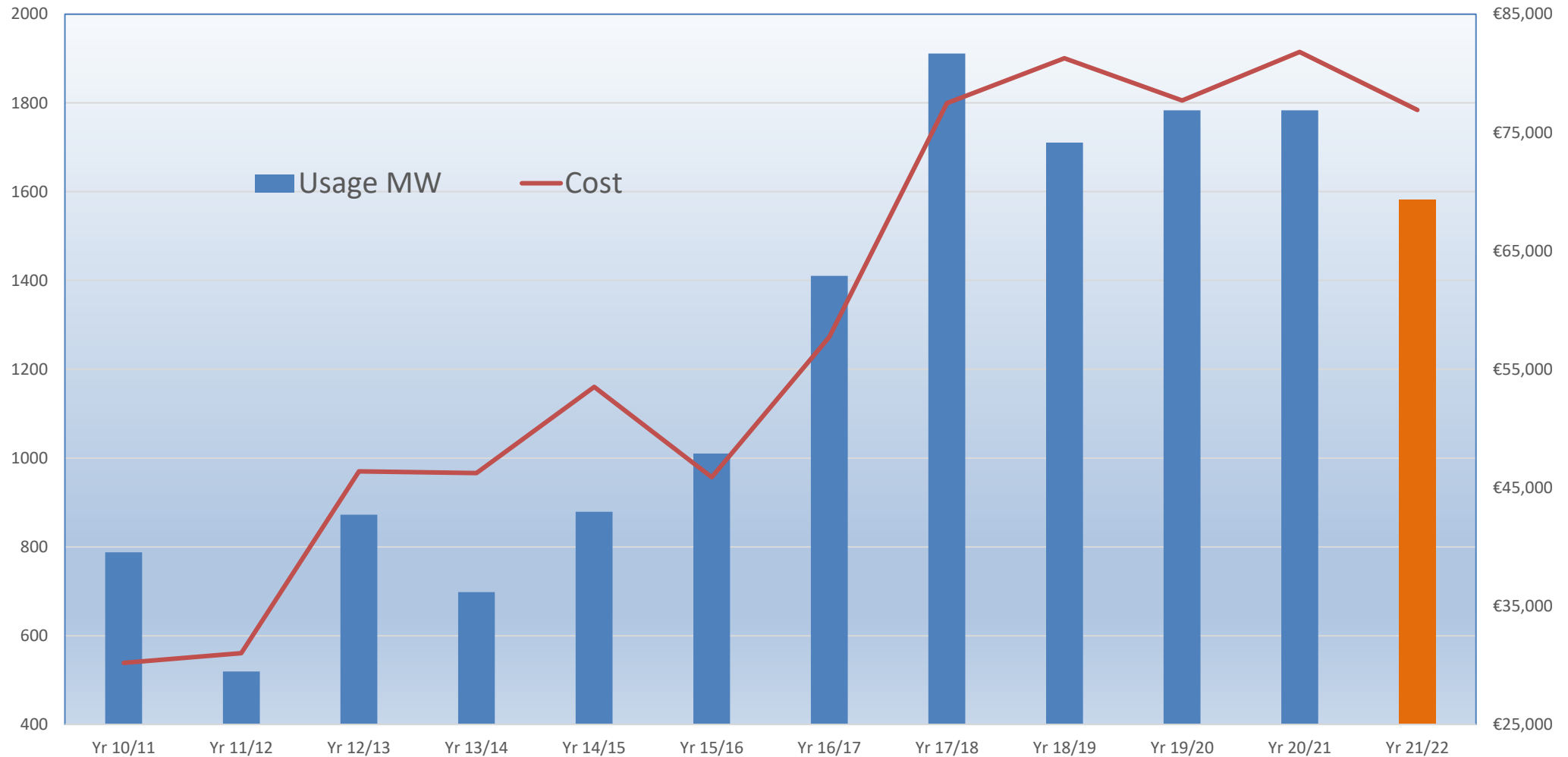
- **WGB;**
 - Largest electricity user in UCC estate.
 - 5th largest gas user in UCC estate.

- **BHSC;**
 - 6th largest electricity user in UCC estate.
 - 4th largest gas user in UCC estate.



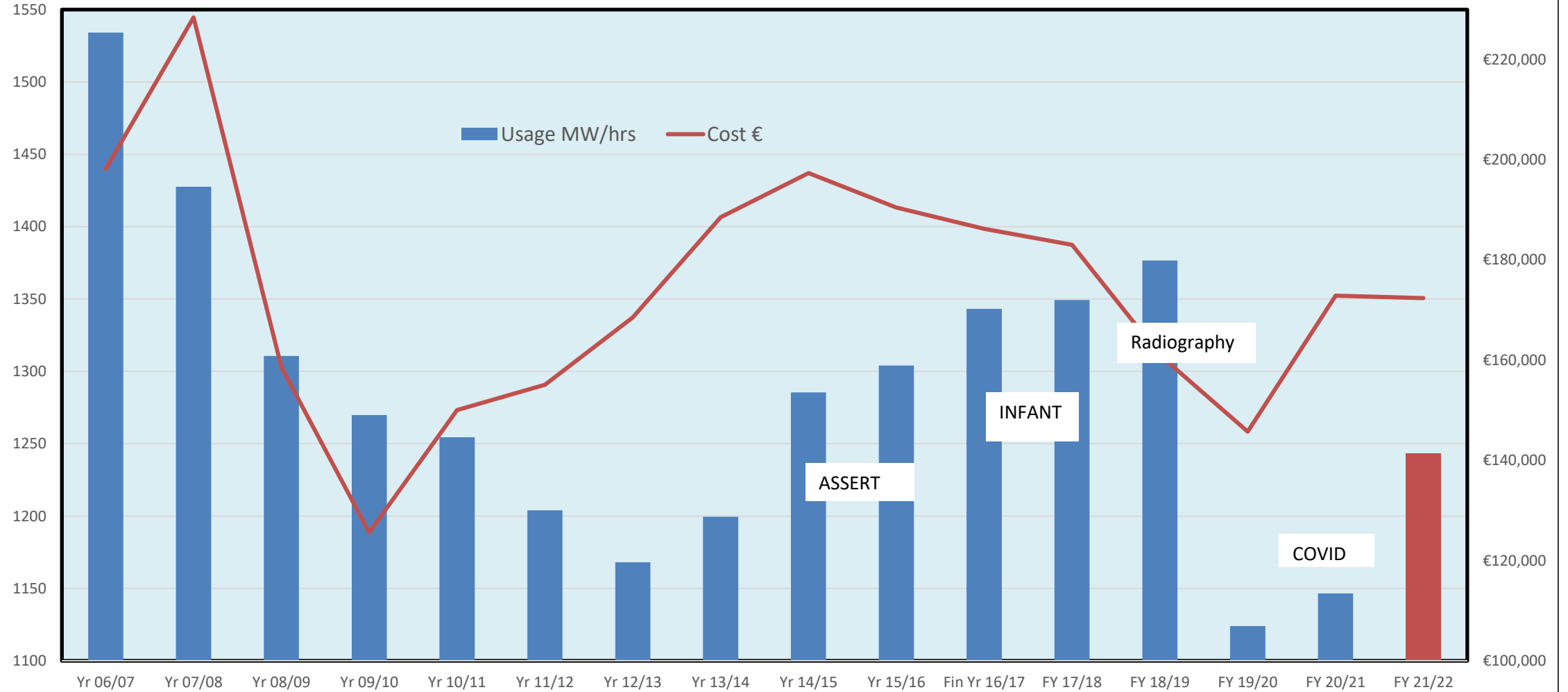
BSU annual Electricity usage = 880 MW (21% of total usage).

WGB Gas Usage & Cost

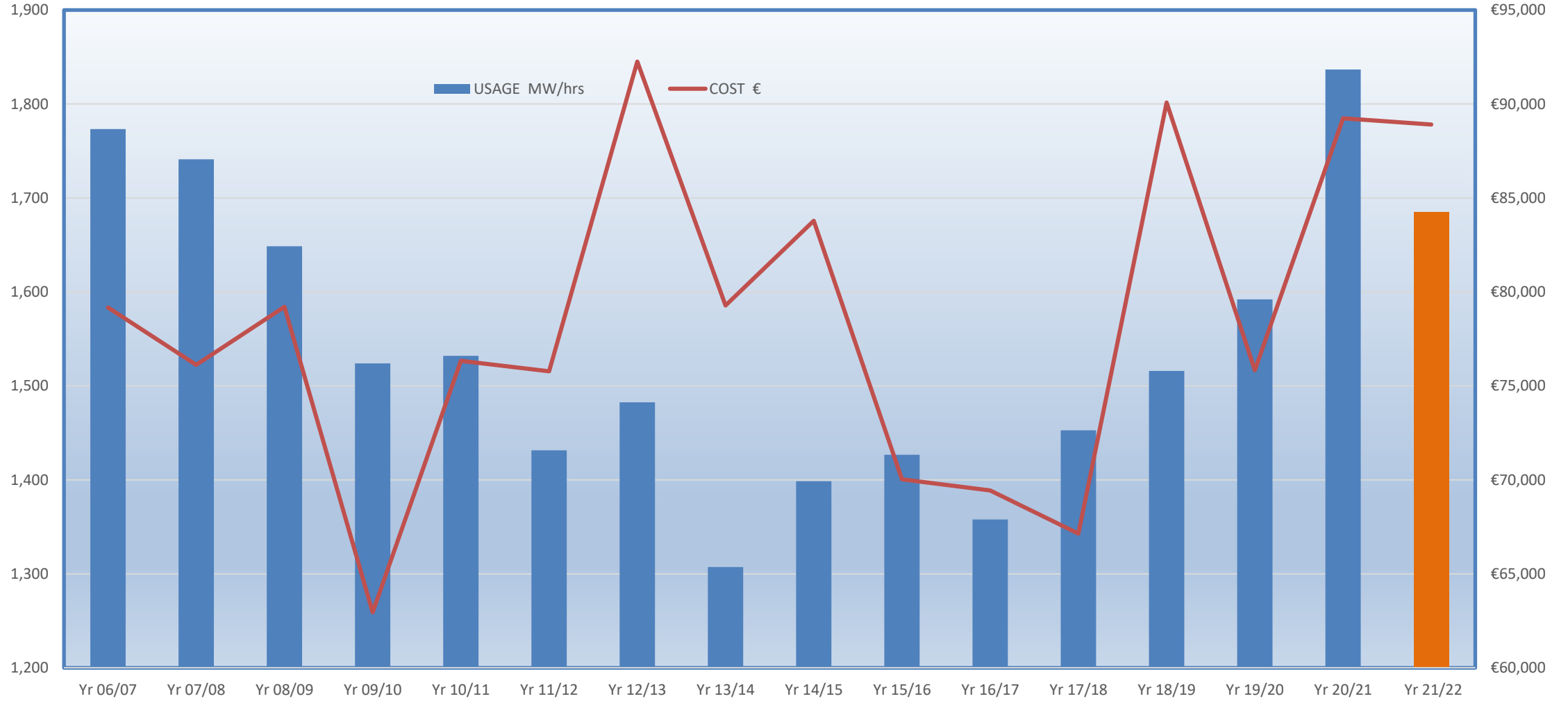


BSU annual Gas usage = 1,000 MW (60% of total Gas usage).

BHSC Electricity Usage & Cost



BHSC Gas Usage & Cost



SUMMARY 2018

	Electrical Usage per m2/yr	Gas Usage per m2/yr	Total kWh/m2/yr
WGB _{minus} BSU 25,680	125 kWh/m2/yr	34 kWh/m2/yr	159 kWh/m2/yr
BSU 740 m2	1,181 kWh/m2/yr	1,120 kWh/m2/yr	2,301 kWh/m2/yr
WGB _{total} 26,420 m2	155 kWh/m2/yr	65 kWh/m2/yr	220 kWh/m2/yr

	Electrical Usage per m2/yr	Gas Usage per m2/yr	Total kWh/m2/yr
BHSC 15,000m2	92 kWh/m2/yr	101 kWh/m2/yr	193 kWh/m2/yr

Operational Energy Monitoring:



Review Utility usage every morning on the BMS front end. Focus on energy wastage, examples, - strobic fans, temperature deviations.



Weekly FM meeting, - issues raised & actions agreed. Future projects discussed to further reduce energy usage.



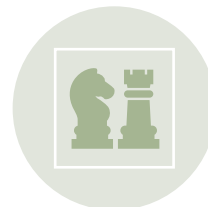
Weekly report/audit from Energy Office.



Lab manager forum, - 2 way communication on good practices.



ISO & SEU audits.

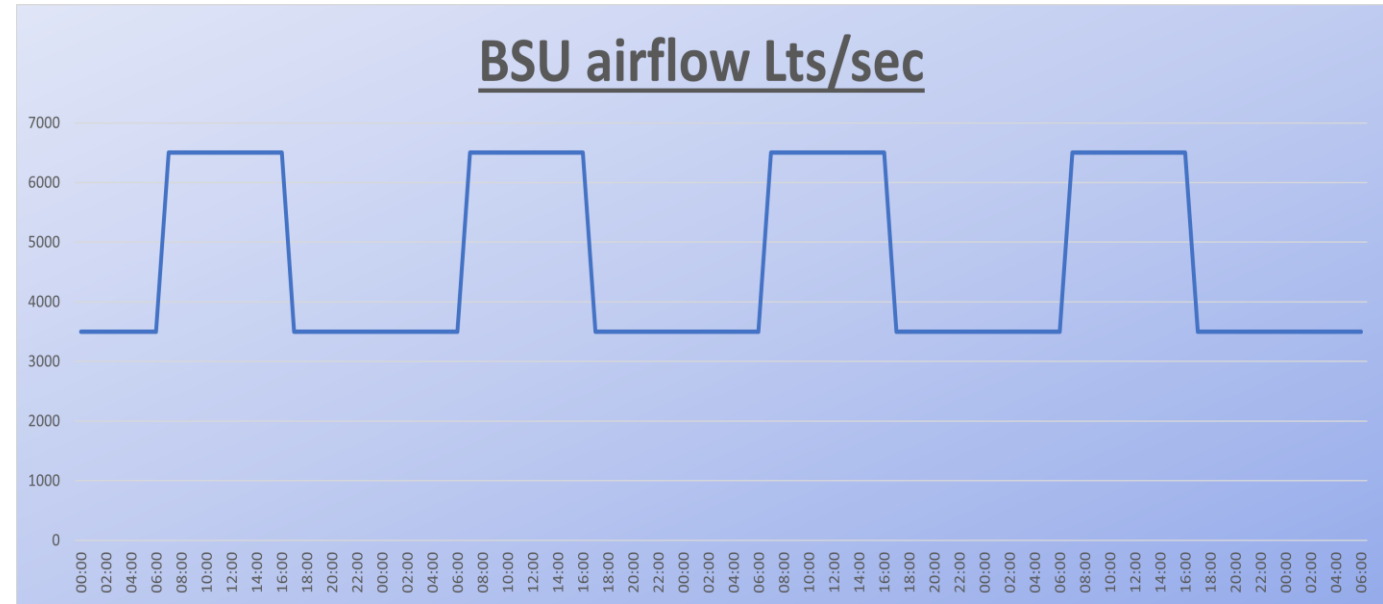


Strategic planning.
Disaster Recovery Data Centre
CCTV servers

ENERGY Projects (WGB)

BSU:

- Set Back Mode (airflow reduction out of hours)
- Humidification/De-Hum strategy
- BSU TO disabling rooms that are not in use.



ATRIUM LIGHTING

TREND BMS controller & LUX sensors

400 light fitting

Cascade control from 4th to 1st floor.

Each floor = 5 KW

Max daily saving = 300 kWh

Payback = 2 years



Energy projects (BHSC);

- Temp/CO2 sensors & associated control improvements ongoing since 2011.
- AHU frost strategy controls change.
- Close control on timetables v timeclocks - future occupancy sensors (BMS constraints)
- Decarbonising summer DHW - gas to electric in creche & therapies.
 - Future project on DHW heat pumps for main building.
- Future retrofitting of VSD's on AHU fans to control on IAQ sensors - recirc closed as COVID 19 prevention measure.
- Increased PPM on primary plant to ensure efficiency.

Circulation areas lighting upgrade to LED.

- 205 (T5 56W) replaced with 71 (LED 36W)
- 78% reduction in energy (812 kWhr saved per wk)
- Project payback = 1.5 yrs.
- Reduced maintenance
- Modernised the corridors.



Thank you
ANY QUESTIONS.

