APSE Energy Webinar
Assessing service area carbon emissions
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What data do we need?
What do we report?

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Unusable data

- It is difficult for people to use any data you give them when:
  - Functions, buildings and assets are managed centrally
  - Controls are automated or remote access
  - Facilities, vehicles, etc. are shared.

- Getting data you can’t use can be frustrating, especially for the keen.

Usable data

- The opposite is true. People can more readily use data to make changes when things are:
  - Managed locally
  - Controlled manually
  - Exclusively used by a particular team.

- Too much freedom can lead to fighting for control of the thermostat.
- Don’t assume that everyone will use the data.

Usable data

- Your organisation will have a mix of centralised and local, manual and automated and shared and exclusive.
  - It might be useful to give energy data to the team running a care home or small library, but not a team based in a big shared headquarters building.
  - It might be more useful to share statistics on mileage claims or commuting, or fleet telematics and work with teams to help them use it.
- Make sure it is in a format they can use and work with them if you need to.

Hearts and minds

- Where you aren't giving people specific data they can use directly:
  - Make sure that you are keeping them updated on climate and ecology projects. Many of them are:
    - Interested
    - Concerned
    - Hungry for knowledge
    - Wanting to be proud of their employer
  - For the keen ones who express an interest, try and find ways to involve them even if they working in shared centralised automated workplaces.

Eight Way Tug of War

- To decarbonise the council quickly, different teams and services need to work together.
- Up until this year:
  - ‘You can’t give away free utilities when leasing out sites – that comes out of our budget’
  - ‘We don’t have the budget for that, so we won’t be doing it’
  - ‘But we have to do this because it is the only way to meet the financial target we have been given’
  - ‘We can’t do that until that other team does this’

Changing the rules of the game

- Now:
  - The key services all report to the same strategic director
  - We have the Bristol City Leap joint venture to leverage some funding and deliver works
  - The key services all meet at least once a month in working groups to figure out how to get it done
  - We have the City Leap Client Liaison team to facilitate discussions and planning.
  - Monthly working group reports are brought to the Sustainable City & Climate Change Manager.

Pulling in the same direction

- Now:
  - ‘We need to prioritise which sites we need to decarbonise first’
  - ‘Which of the potential bids to we take forward for this funding opportunity?’
  - ‘I’ve sent that information you asked for’
  - ‘We need to smooth out this project planning process a bit more’
  - ‘We need to sort out how to make multiple funding sources work together to jointly fund this project’

Oversight

- Now:
  - It is decided what climate and ecological emergency information to include in briefings to the monthly meetings of the management board and strategic board.
  - The management board contains service managers. The strategic board contains the political and paid service leaders, along with other key people at director level (e.g. from Finance).
  - The meetings should give them an overview of our progress towards carbon neutrality.

The need for data

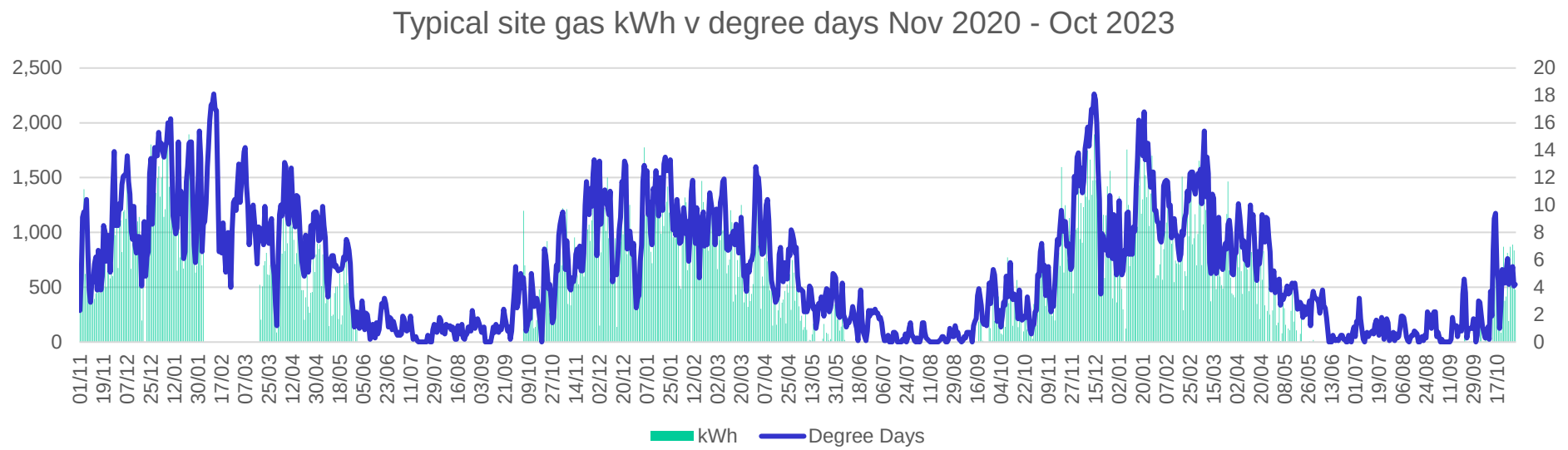
- Our structure, governance and procedures are now coming together well.
- We are finding new barriers as we try to get projects set up.
- We are needing better data to decide on our next moves.

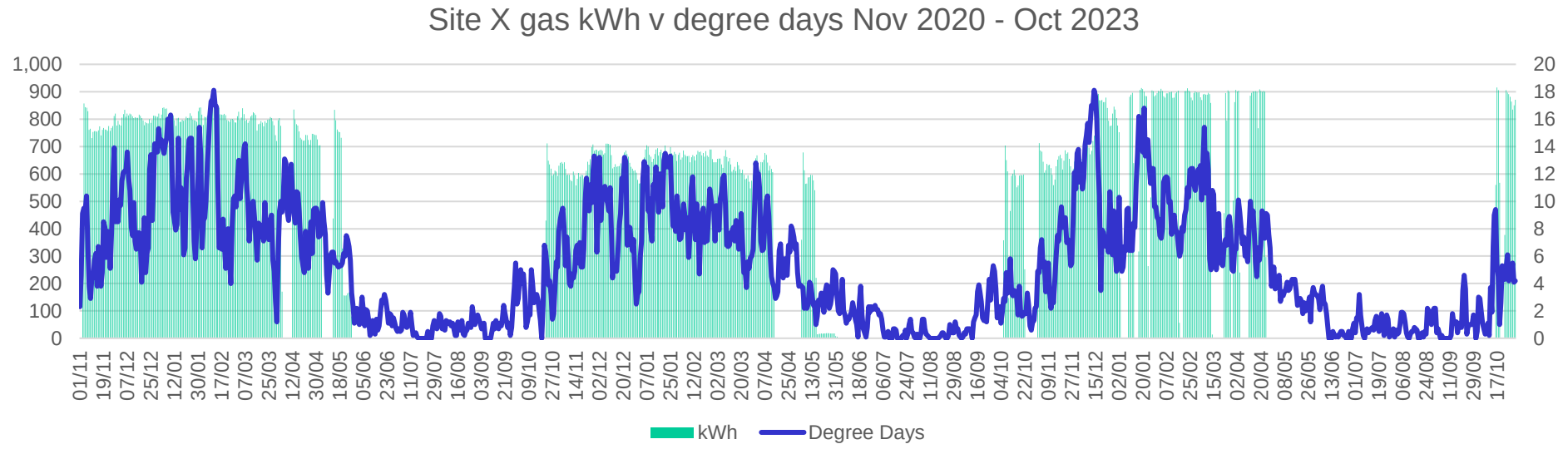
Energy data examples

- Where we are planning to decarbonise heating in buildings, we are finding the need to reduce heat demand beforehand to:
  - Reduce heat network connection and ongoing usage fees
  - Reduce heat pump capacity
  - Reduce the amount spent on electricity (higher unit cost than gas).

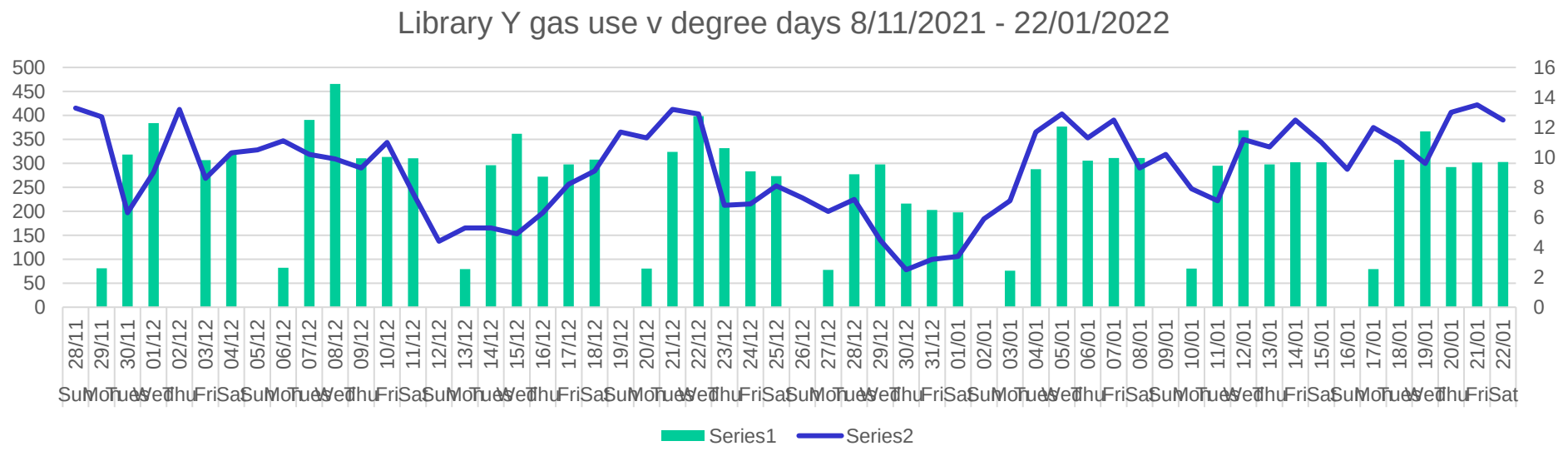
- So we need data.

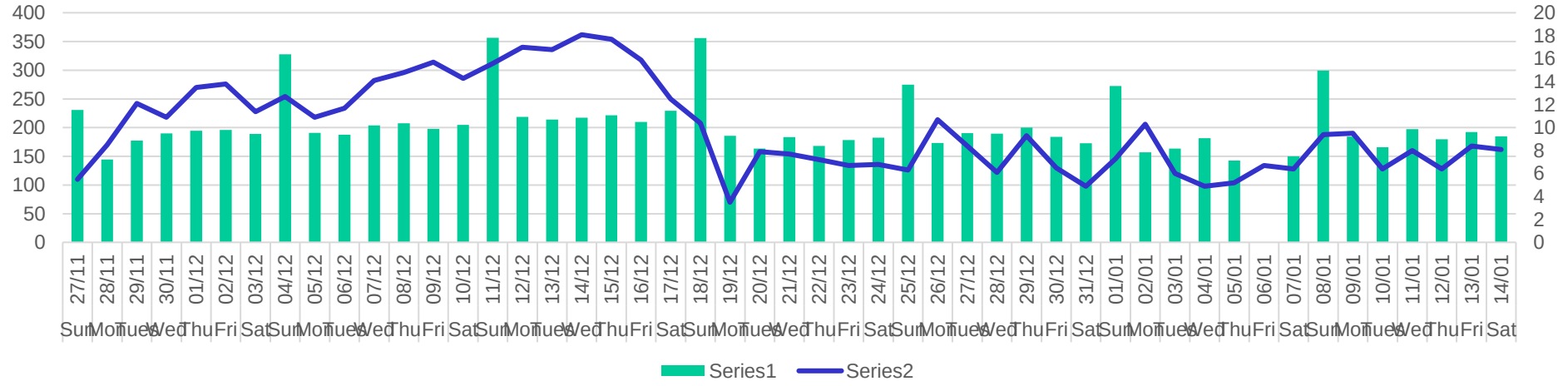
Energy data examples





Energy data examples





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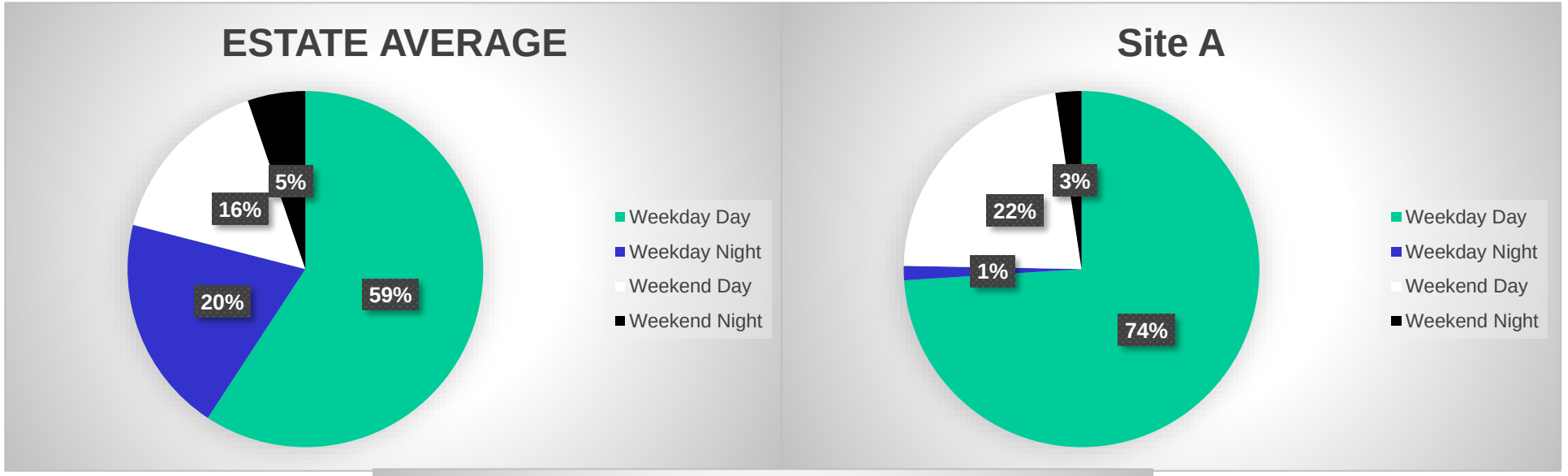

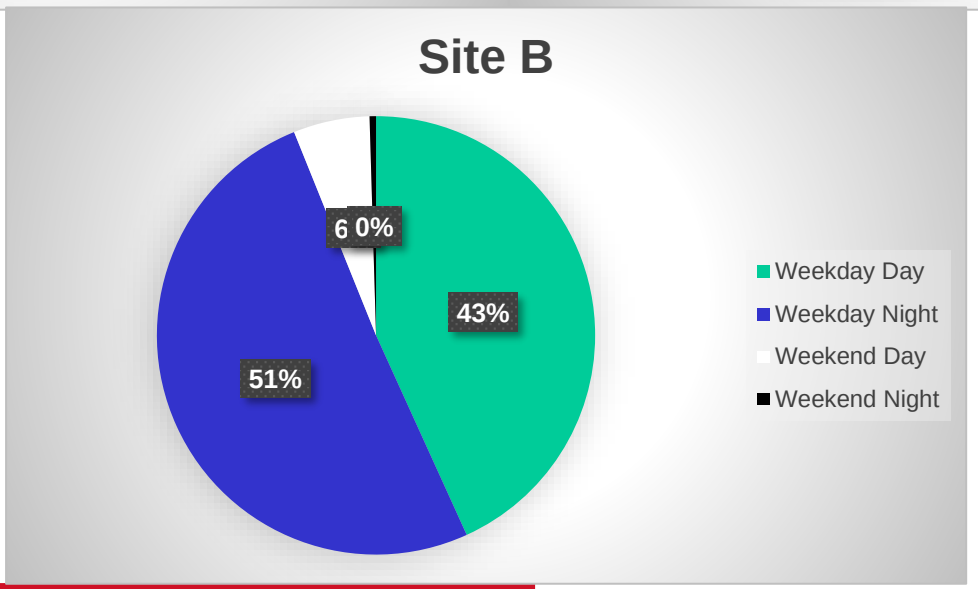

Energy data examples

- Prioritise the key decarbonisation sites
- Plot heating fuel use against degree days
- Look at monthly and daily data
- Look a data for different years
- Does energy use match opening days?
- Do the day/night, weekday/weekend energy use splits show what you expected?
- Can you see any patterns in linear regression graphs?

Energy data examples

- Think about it and ask questions:
  - Is the primary heating fuel used for other things (should it be compared with something other than degree days)?
  - Remember that R^2 can be affected massively by closed days or seasons, or outliers
  - Remember that monthly and daily data will show different things happening.
  - Control issues could be faulty equipment, poor staff understanding, lost messages to change the settings. You need to find out which it is.

Energy data examples

- Make sure the data leads to action:
  - Has it been given to the right team or person to deal with? Staff training, repairs and replacement equipment may be different people.
  - Has the person doing the analysis got time to follow up, or should it be someone else?
  - How will this be flagged to become part of decarbonisation plans?

Notes

- This has come out of years of trial and error by my team.
- I have learnt a lot more since taking over the working with data at using it in different ways.
- We are still learning and don’t get it all right.