

Spreadsheets Aren't Databases – Is It Time To Change?

Submitted by: Team Energy

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Ensuring your data is good quality, consistent and reliable is important to be able to understand and report on your energy data. Choosing the correct system to do this is key to successfully utilising your data to identify anomalies, optimise your energy efficiency and make cost savings.

Despite spreadsheets being a popular tool to manage energy data due to their flexibility and easy to use calculations, using them to keep large amounts of data can lead to big problems. This was proven during the beginning of the COVID-19 pandemic when Public Health England used a spreadsheet to keep track of COVID cases, leading to the loss of 16,000 COVID-19 test results in England.

So, what are the limitations of spreadsheets? And why should they not be used as a replacement for databases?

What are the limits of Spreadsheets?

Spreadsheets have some great qualities, they are flexible and easy to understand, with the ability to integrate with other platforms, meaning they can easily be shared with multiple users. More people are familiar and comfortable in using spreadsheets as a tool, however there is a limit to the data it can hold.

Spreadsheets are not built to hold lots of data or to produce results and reports on a large scale. Due to their functionality, data entry is not limited unless there is a specific formula set, meaning there is a greater room for errors and misinformation.

Additionally, spreadsheets do not offer intuitive and agile data monitoring to alert you to anomalies or errors in your billing, nor can it predict a forecast for your consumption, both automated tasks that are useful for energy professionals. With this, functions that can be automated in energy management systems become manual tasks in spreadsheets, using more of your time, costing you resource and delaying other important projects. The security of your energy information assets can also be at risk, with the potential for someone to change information or delete the spreadsheet entirely, and also greater room for error or loss of data.

Essentially, if you're working with a lot of data and need to produce reports to understand the information you are dealing with then spreadsheets are not the best way to store the data or to help you make sense of it.

What can databases provide?

Databases act as a single data repository to hold all the data you need; they are far more structured systems with the ability to store extensive amounts of data either on a computer or in the cloud. With the ability to be easily accessed, modify and store data, databases certainly make for a superior system over spreadsheets.

If you require a system to store a lot of data for example to manage your energy data and monitor your carbon emissions, databases provide the ability to turn that information into visuals. This can mean that you can present your data in an easy to understand format, such as charts and graphs, to stakeholders within your business. This helps energy teams to create business cases and use the data to support them in gaining funding and creating initiatives within their organisation.

Often when viewing a spreadsheet, especially if it has been created by someone else, there can seem to be a lot of information without much explanation; databases offer the ability to streamline the important and required data onto dashboards, allowing everyone that needs to see it to also understand it. This can also encourage and allow wider business buy-in on energy efficiency measures from stakeholders within your organisation as the information has been presented clearly.

Although databases require training to support users with understanding how it works, they offer data integrity, quality data and security. Databases often have automated backups and data recovery to ensure you do not risk the loss of important data. This is something that cannot be guaranteed with spreadsheets, with cells so easy to edit data can be changed, with no ability to get the correct information back.

Spreadsheets are also at risk of being deleted, databases are often saved to the cloud and therefore cannot be deleted. Additionally, when inputting data, databases can tell if the wrong type of information has been inputted, alerting you to the fact, allowing for clean, quality data.

What can a database do to help support your energy management?

Managing your energy during a time when reporting and understanding your carbon emissions is more important than ever, can be a difficult task. Ensuring you have a database that can support with this will make managing your energy and carbon emissions easier, and will reduce the resource needed to maintain quality data.

Databases can empower users to manage, analyse and share consumption through dashboards that can be shared across multiple devices, whilst maintaining data integrity and avoiding any loss of information through user error. Through a robust data foundation, database users can ensure accurate, complete, consistent and timely data; helping organisations to transform the way they look at energy management and carbon emissions.

The need for good quality data is integral to the success of monitoring, managing, and reducing your carbon emissions. An effective decarbonisation plan needs to be supported by a monitoring and targeting process across your Scope emissions (<https://www.teamenergy.com/team-energy-consultancy/greenhouse-gas-reporting-service/scope-emissions/>) in order to understand where and how to reduce your carbon output. Scope 3 (indirect) emissions, which can account for 90% of your overall emissions, involves collating a lot of data from multiple sources. Doing this in spreadsheets can make identifying how to reduce carbon, tracking your progress, and reporting on it tricky. An energy management system can make this process much easier.

Understandably investing in a database can be a big step for many organisations, you need to find a

system that integrates with your business solutions, and a partner that takes the stress out of data migration, but the benefits far out way the journey to implementation.

With the UK's target to become net zero by 2050, there is a growing expectation on organisations to set and achieve carbon reduction targets, a task that will be so much easier with a reliable database with clean, quality data. So, when thinking about your organisations decarbonisation plans ask yourself, will spreadsheets help you accomplish your goals, or is it time to change?

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Notes to Editors

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About TEAM

TEAM Energy is a leading supplier of carbon and energy management solutions. We specialise in energy management software, energy bureau services and energy consultancy.

TEAM's customers come from the private sectors including retail, transport and banking, and public sectors such as education, government, NHS and the emergency services. Public sector organisations can also benefit from TEAM's services under various pre-tendered government frameworks.

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