

# Sam Adetunji - Internship feedback

## Charlie

The major piece of work I asked Sam to work on with me was to understand how transmission charging works (taking Cockenzie as a specific example) and prepare:

1. A table showing the annual charges
2. A comparison of the annual charges if the project has a single connection or two shared connections
3. A comparison of the relative merits of paying the “one off” charges up front, or spreading them over 15 or 40 years

Transmission charges are quite complex, and I gave him a memo to review and a comparison table prepared by Blake Clough. He studied these quite autonomously and with a few check-ins with me he prepared an excel file for items 1 and 2. His understanding of the charges was pretty good. He picked up some items I had not picked up, but also missed a few items which I was aware of and pointed out to him. The presentation of the information in the excel was not as clear as I would have liked – I had asked for it to be easily followable by a reader new to the subject.

In general, he understood the tasks well and asked questions if he did not understand. However sometimes it turned out he did not seem to have understood it that well after all.

He understood and worked autonomously well, keeping me updated on progress. Given he did not have much excel experience before Gresham, he seems to have picked this up well. Going forward, he would benefit from improving presentation within Excel, i.e. grouping the inputs and the outputs together, with tidy labelled workings on other sheets.

## Tom

During his time at Gresham House Sam helped with a variety of tasks in the Data Science team, this culminated in the production of a PowerBI dashboard displaying market data for wholesale electricity and ancillary services procured by National Grid, and a technical paper that describes the relation between a number of variables and the State of Health of grid scale battery systems under Gresham House’s ownership.

Sam quickly picked up the intricacies of the mechanisms used to extract and process data, the back end of his project producing a PowerBI dashboard was completed largely unaided despite not having experience in this area and contained a sophisticated pipeline that extracted, formatted, and pushed data to PowerBI using Microsoft Azure, the final deliverable was automated from start to finish. Sam also picked up the data processing portion of the State of Health project very quickly, which involved navigating through a large and confusing API.

Areas where Sam could improve are largely confined to the scientific area of his work. Defining short term goals and learning about executing scientific methodologies will help significantly in this area as Sam can get distracted by other ideas that aren’t directly related to the problem. In addition, improvement can be made with an increased attention to detail by being hyper-critical of all aspects of his work, in particular with work

that is presented and Sam's own knowledge of what is being presented.

### **Annelies**

- Good work ethic - not afraid to take on tasks
- Good with following up tasks - eg writing formal report on task that was been given
- Eager to learn

As discussed with Sam this week - constructive feedback for future endeavours:

- eg with Rent review - make sure that he always keeps reference of where the information is coming from (links, screen shots, ...) in case questions are asked afterwards or other stakeholders have different outcomes. Then it will be easier to have a constructive discussion afterwards.
- Don't be afraid to ask questions and question why tasks are given
- Question yourself what the ultimate outcome of the task is and how can you get the best results

Overall, seen a lot of growth in the past 12 weeks and deemed a successful internship

### **Harry**

It has been great having Sam work in the team for the last 12 weeks. Life at Gresham can be fast paced and require in depth industry knowledge so for a new joiner to both asset management and the BESS market this can be a daunting prospect. Sam has readily embraced the challenges he has been presented with and has always sought to learn and grow throughout. I've been impressed by his constant optimism and resilience.

Sam is very keen to ask questions to seek to understand how he can improve. However, I would advise that before asking questions, take a step back and understand what it is that he is trying to get help on and how to convey the request concisely to whom he is talking with. If the other person's response isn't clear or the message is misunderstood, seek clarity before continuing to avoid further miscommunication. A way to improve this is to always keep in mind what the purpose of a piece of work is and then organise tasks and questions to achieve that efficiently.

Sam has an excellent ability to self-teach and I've been very impressed in how he has taught himself both PowerBI and how to use macros in Excel in such a short space of time. Self-sufficiency is a key attribute to success in any career. I would add here that sometimes learning independently is not the most efficient use of time. I'd encourage Sam before starting on a task where he knows he has skill gaps to assess whether there are other people in the team that could help to fill those skill gaps or suggest a better route to solve a problem. This will ultimately help Sam to learn quicker from those around him.

Sam completed a project analysing degradation of batteries over the course of his internship. The final report produced was of a high quality and had useful outcomes. Of particular interest was the work on cycle rates and how this affected battery degradation. Sam performed useful work to show how, despite the increased cost of the additional degradation, going from 1 cycle a day to 2 cycles resulted in a profit for the battery as the additional revenue achieved from the extra cycle more than compensated the lost capacity. I'd encourage Sam when conducting any scientific research to spend time at the start of the project fully understanding the assignment and the data he is using rather than diving straight into getting results. Being

more analytical and questioning early on will steer a project in a better direction from the outset and improve the end quality of his research. With this project it would have meant that the state of charge metrics could have been dropped earlier on giving more time to perform analysis on the cycling data.

Overall, I've been really pleased with Sam's progress over the last 12 weeks. He has worked hard to improve throughout and this tenacity to learn will serve him well going forward.

## **James**

Thank you for all your hard work over the past 12 weeks. You have shown good growth, taking time to understand the industry and our portfolio and the technical details of our assets.

The output you presented this week showing SOH impact against cycling over a 30-day period was a great example of delivering against a brief as you clearly answered the question of does level of cycling impact state of health in a battery. Sometimes you strayed a little further from the task and as a result at times were not able to fully answer the question set, a suggestion would be to keep reviewing what the question you are working on is and does the work you are currently doing help to answer that. This should help keep you guided in your work and avoid unnecessary deviations. All that being said I enjoyed your creative thinking and exploration of the questions set, efficiency of delivering work and precision of answers will no doubt come with more experience so keep up the good work ethic!