# BBC

## Strategy Manager Drives Potential 49% TV Energy Savings Nationwide

*Colin Warhurst is a Strategy Manager at the BBC, the national broadcaster of the UK and the world's oldest and largest by number of employees. Colin works in the BBC's Blue Rooms, delivering education sessions to visitors from across the BBC covering the latest trends and technologies.*

## A passion for data visualisation

Colin's role as an educator is equal parts technical and creative. Being able to present relevant data and create an immersive learning experience are just as important to his success as finding a good story to tell. And data visualisation is a major part of keeping his team's Blue Room sessions clear and engaging.

Although he wasn't working with data everyday when he enrolled in the Data Analyst Apprenticeship in February 2021, Colin saw the programme as an opportunity to further realise his passion for data visualisation. The programme included modules in Power BI, Tableau and coding that he says would tie together and solidify his data visualisation knowledge.

> " I wanted to do data visualisation, but I felt that coding was a stumbling block. Since I understood data, it was like I had all the pieces there, but I was missing the manual. And coding was the manual."

**Colin Warhurst**
Strategy Manager

## Learner Profile

**Company**: The BBC
**Job function**: Education
**Job title**: Strategy Manager
**Industry**: Mass Media
**Company Size**: ~21,000 employees
**Programme**: Level 4 Data Analyst
**Programme Duration**: 14 months

## Unlocking potential energy savings

One day a colleague asked Colin for his help in creating a chart of different TVs and their energy use. This led them to consider that more advanced TVs achieve better contrast by powering down groups of pixels on the screen, saving energy. An estimated 5-10% of all digital radio listening in the UK happens on TV. Colin and his colleague devised a way to save energy for some TVs operating in this radio state.

All radio stations that also broadcast over digital TV display placeholder graphics on the screen while users are listening to the audio. Colin's team theorised that radio stations could save users energy on certain types of televisions, by substituting darker graphics for the brighter ones that were then in current use. All Colin needed to do was convince BBC stakeholders to make a change.

## Building a case with data

Colin and his colleague analysed 204 energy readings using different types of TVs with different radio graphics displayed. Colin then applied his learnings from the apprenticeship to create a barbell chart in Tableau that clearly showed the difference in energy consumption between the current radio graphics and darker alternatives.

Presenting their findings with the clarity of Colin's data visualisation led to almost immediate buy-in from heads of radio and other stakeholders. And the radio graphics were soon replaced with  alternatives, potentially saving up to 49% in average TV energy use.

## Results

**Up to 49% reduction in average TV energy use across the UK** achieved by analysing and presenting the effect of darker radio graphics on energy use

**Potential energy-saving standard for EU** achieved by demonstrating UK energy savings by modifying graphics

> When we turned up to the meeting with the infographic, buy-in was so quick... We sat down with the head of audio marketing, and he was sold on it after 10 minutes. And then I sent him some screenshots, and he got buy-in from all the heads of radio straight away."

**Colin Warhurst**
Strategy Manager

## Influencing EU policy

Besides the immediate impact on UK energy consumption, Colin's efforts have led to applications outside of radio. The same concept of replacing graphics to save energy could apply to menu and holding screens, for example.

And BBC Radio, BT and the European Broadcasting Union (EBU) are currently experimenting with darker alternatives to the traditionally bright bars and tones screens used in broadcasting and cable  television. Depending on the outcome, the EBU may adopt a new standard, spreading energy savings across the EU.