SAP Appendix Q (SAP Q) Guidance Notes - For the calculation of Kelda's Air-Powered shower using the SAP10.2 method for the energy assessment of a dwelling.

The below guidance notes provide On Construction Domestic Energy Assessors (OCDEA) instructions how to model the energy savings of Kelda's Air-Powered shower using the 'SAP 10 Online Software' and 'SAP 10 - Appendix Q Calculation Tool – Air-Powered Shower.'

Please find spreadsheet link here: https://www.ncm-pcdb.org.uk/sap/page.jsp?id=18

Spreadsheet version: SAP-Q---Air-powered-shower-v2.xlsx

This spreadsheet can be used in dwellings with heat pumps, conventional or combi boilers (with or without flue gas heat recovery systems) and instantaneous Waste Water Heat Recovery Systems (WWHRS).

Instructions:

1. **SAP 10 Online Software:**
    a. When modelling a shower within the SAP 10 Online software, enter the current specified 'benchmark' shower(s) as a conventional mixer shower with flow rate (l/min). If an electric shower / instantaneous electric shower (IES), then enter its power output (kW) as normal.
    b. Run the SAP calculation with conventional mixer shower(s) and save the SAP10.2 DER output file.

2. **SAP Appendix Spreadsheet:**
    a. Step 0. Open the SAP Q spreadsheet and complete sections titled 'SAP Assessment Information'.
    b. Step 1. Confirm shower model qualifier number i.e. Deluxe Shower with Handset is 93XXXXX5, Void Shower System is 91XXXXX5. And confirm that the shower has the appropriate SAP Q label.
    c. Step 2. Input relevant data from the SAP10.2 DER output file within the spreadsheet.
        i. Assumed occupancy, N into Box (42).
        ii. Confirm whether cold water source is from mains or header tank, No. of baths, Total no. of showers installed, No. of Air-Powered showers installed.
        iii. Input 'Efficiency of water heater (%)' data from the SAP10.2 DER output file into box (217)m.
        iv. Record 'Annual energy saved' (negative figure) and 'Annual energy used' (electrical energy used by Air-Powered shower is shown as a positive figure) and note fuel type in each case. Please note, in this spreadsheet energy savings are shown as a negative, and energy used as positive. The specific SAP software convention may mean savings are entered as positive values.

3. 3. **SAP 10 Online Software:**
    a. Enter 'Annual energy saved' and 'Annual energy used' (electrical energy used by Air-Powered shower) in the Special Features section of SAP10.2. Please ensure the correct fuel type is specified and beware that specific SAP software may mean savings are entered as positive values.

End.