

Introduction

Specifiers and Contractors, who design Heating and Hot Water systems for new buildings or major refurbishment projects, need to ensure that the system and equipment complies with Building Regulations. Each country within the UK has its own version of Building Regulations; the requirements for Direct Gas-fired Water Heaters (DGFHW's) are the same. The specific Building Regulations references are:-

- England – Part L2
- Wales – Part L2
- Scotland – section 6
- Northern Ireland – F2

Details of all requirements are available in the relevant Non-Domestic Building Services Guide(s). Those involved in the design of hot water systems use software to show compliance with Building Regulations, with SBEM (Simplified Building Energy Modelling) being probably the most well known.

DGFHW's and SBEM

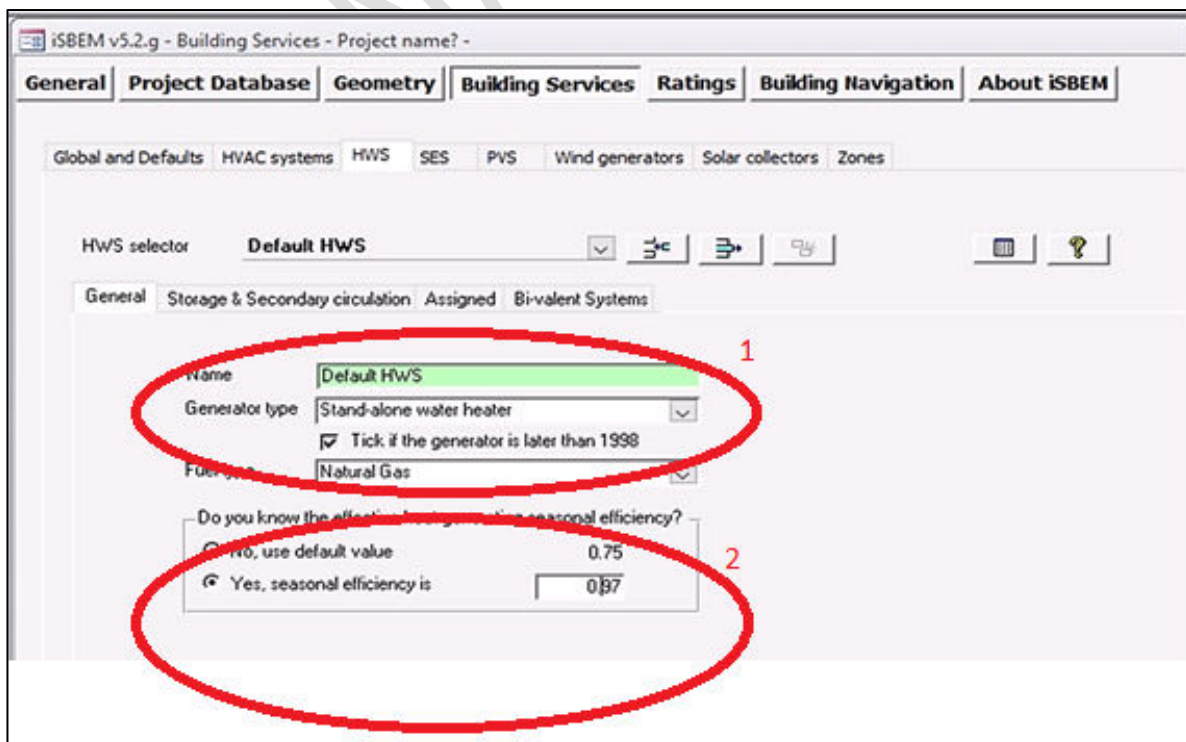
These products have been supplied in the UK for more than 40 years and are well established as an efficient method of generating hot water for commercial and industrial buildings. DGFHW's should usually result in a 'pass' as far as Building Regulations compliance is concerned, but data needs to be entered correctly, and where applicable additional credits included.

Entering Information into SBEM

1. CHOOSE STANDALONE WATER HEATER (DO NOT USE DEDICATED BOILER)
2. ENTER EFFECTIVE HEAT GENERATING SEASONAL EFFICIENCY



REMEMBER
INCLUDE ANY ADDITIONAL CREDITS (SEE SBEM DATA SHEET)



iSBEM v5.2.g - Building Services - Project name? -

General | Project Database | Geometry | Building Services | Ratings | Building Navigation | About iSBEM

Global and Defaults | HVAC systems | HWS | SES | PVS | Wind generators | Solar collectors | Zones

HWS selector: Default HWS

General | Storage & Secondary circulation | Assigned | Bi-valent Systems

Name: Default HWS

Generator type: Stand-alone water heater

☒ Tick if the generator is later than 1998

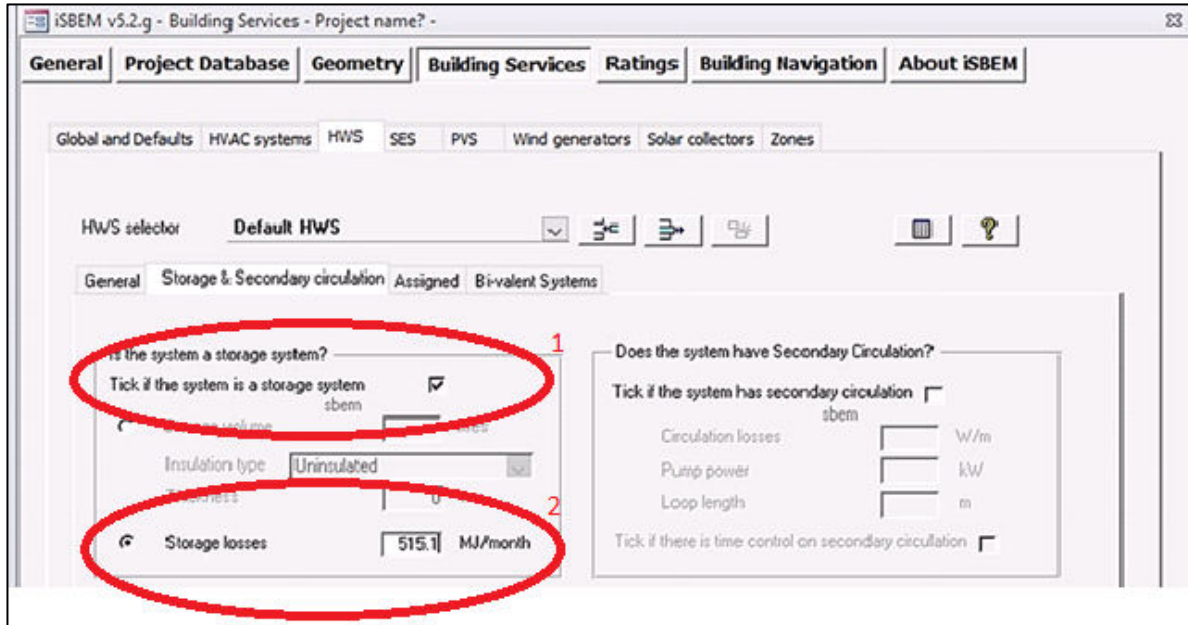
Fuel type: Natural Gas

Do you know the effective heat generating seasonal efficiency?

☐ No, use default value 0.75

☒ Yes, seasonal efficiency is 0.97

1. TICK STORAGE SYSTEM
2. ENTER STORAGE LOSSES (MAINTENANCE CONSUMPTION VALUES) IN MJ/MONTH (SEE SBEM DATA SHEET)



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HWS selector: Default HWS

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Is the system a storage system? ☒ 1

Tick if the system is a storage system ☒ sbem

Insulation type: Uninsulated

Storage losses: 515.1 MJ/month 2

Does the system have Secondary Circulation? ☐

Tick if the system has secondary circulation ☐ sbem

Circulation losses: W/m

Pump power: kW

Loop lengths: m

Tick if there is time control on secondary circulation ☐



REMEMBER

THE MEASUREMENT FOR HEAT LOSS ON DIRECT GAS FIRED WATER HEATERS IS THE MAINTENANCE CONSUMPTION VALUE IN MJ/MONTH AS CALCULATED UNDER EN89:2015

Renewable energy

Some local authority planning regulations require more than a pass within SBEM, these will usually require additional measures to be taken such as adding a renewable element to the domestic hot water design. We can supply a fully integrated system using DGFWH and either Air Source heat pumps, Gas absorption heat pumps or solar thermal.