Revenue Protection Assessment Calculator v.7.2

Contents

Overview

This work instruction provides detail on the working of the assessment calculator. It will not provide guidelines on how the calculator is to be used.

The assessment calculator is used by the revenue protection officers to generate invoices for theft of energy or energy that has not registered on the customer's meter. It is an excel tool which relies on various complex calculations and VBA scripts.

This document provides detail on how the calculations work and is divided in different sections, corresponding to the different tabs on the excel tool and VBA scripts.

Whilst this document will provide a guide on the working of the assessment calculator, knowledge of excel formulae and basic VBA scripts is required.

The latest version of the assessment calculator, along with older versions and a version control document are stored in the Revenue Protection Team Site under RPU Team Areas – RPU Data Team

The password to unprotect the assessment calculator is currently '123'

Home

Section	Description
Gas Icon	Hyperlink to the Gas Home tab
Electricity Icon	Hyperlink to the Elec Home tab
Reset button	Runs the 'Restbutton' Macro in VBA Module 2. This will be described under the 'VBA - Module 2' section
Recalculate Invoice button	Runs the 'Recalculate_Invoice' Macro in VBA Module 3 when an assessment code has been entered in the 'Assessment Details' field. This will be described under the 'VBA - Module 3' section

Gas Home

Section	Description
Consumption History button	Hyperlink to the 'Gas Consumption History' tab
Appliances button	Hyperlink to the 'Gas Appliances' tab
Back button	Hyperlink to the 'Home' tab

Gas Appliances

Section	Description
Back button	Hyperlink to the Gas Home tab
Next button	Hyperlink to the Assessment Details tab
What Type of Property is it? field	Drop down field linked to cells K10, L10 & M10. Cell J10 determines the overall value of this field. If the field is left blank, then J10 automatically becomes "Private Property"
What Age is the property? field	Drop down field linked to cells K11 & L11. Cell J11 determines the overall value of this field. If the field is left blank, then J11 automatically becomes "Pre-1985"
Does the property have central heating? field	Drop down field linked to cells K12 & L12. Cell J12 determines the overall value of this field. If the field is left blank, then J12 automatically becomes "Yes"
Domestic Appliances – Quantity fields	Drop down field linked to cells K14 to DG14
Domestic Appliances – Daily kWh's field	Value of cells are determined by the appliance in column B and cells J10, J11 & J12 and provides the value from column B in the 'Lookups' tab

Domestic Daily kWh fields	Is the sum of the values in cells J15 to J26 and these are derived from the product of the quantity and daily kWh's values.
Commercial Appliances – Quantity fields	Drop down field linked to cells K14 to DG14
Commercial Appliances – Usage Hours (Daily) fields	Drop down field linked to cells M33 to AK33
Commercial Appliances – Kilowatts fields	Value of cells are determined by the appliance in column B provides the value from column D in the 'Lookups' tab
Commercial Daily kWh's field	Is the sum of the values in cells L34 to L76 and these are derived from the product of the commercial quantity, usage hours and daily kWh's values.
Custom Appliances – Quantity fields	Drop down field linked to cells K14 to DG14
Custom Appliances – Usage Hours (Daily) fields	Drop down field linked to cells M33 to AK33
Custom Appliances – Kilowatts fields	Free text field
Custom Daily kWh's field	Is the sum of the values in cells L84 to L93 and these are derived from the product of the custom quantity, usage hours and daily kWh's values.
'Total Daily kWh's' field	Is the sum of cells F28 (Domestic Daily Kwh), F78 (Commercial Daily Kwh) and F95 (Custom Daily Kwh) and is a whole number with no decimal places

Gas Consumption History

Section	Description
Back button	Hyperlink to the Gas Home tab
Next button	Hyperlink to the Assessment Details tab
'What Type of Consumption do you have?' field	Drop down field linked to cells K10 and L10
'Type of Meter' field	Drop down field linked to cells K11 and L11
'Meter Multiplier' field	Drop down field linked to cells K12, L12 & M12. Cell J12 determines the overall value of this field. If the field is left blank, then J12 automatically becomes 1
'Consumption' field	Free text field
'Start Date' field	Free text field
'End Date' field	Free text field
'Days' field	Is determined by value in cell K17. If the count of cell F15 is 1 then the cell value is F16 – F15 (i.e. the difference between the start and end dates). If the count of cell F15 is not equal to 1 then the cell value is the value in cell K18. This calculation is important, as it allows for the recreation of previously saved assessments from

	an older version of the assessment calculator
'Total Daily kWh's' field	Is determined by one of the values in cells D20, D21 or D22. If the value in cell F10 is 'kWh's' then the value of this field is D20. If the value in cell F10 is 'Units' and the value in cell F11 is 'Metric' then the value of this field is D21. If the value in cell F10 is 'Units' and the value in cell F11 is 'Imperial' then the value of this field is D22. If D20, D21 and D22 are zero, then the value of this field is 0. NB: Cells D21 and D22, convert the number of units in cell F14 into kWh. This uses a calorific value of 37.2 and a conversion factor of 1.02264. This calculation also relies on the value on cell J12

<u>Elec Home</u>

Section	Description
Consumption History button	Hyperlink to the 'Electricity Consumption History' tab
Appliances button	Hyperlink to the 'Electricity Appliances' tab
Back button	Hyperlink to the 'Home' tab

Electricity Appliances

Section	Description
Back button	Hyperlink to the Elec Home tab
Next button	Hyperlink to the Assessment Details tab
What type of usage does the property have? field	Drop down field linked to cells K10, L10 & M10. Cell J10 determines the overall value of this field. If the field is left blank, then J10 automatically becomes "Normal"
Domestic Appliances – Quantity fields	Drop down field linked to cells K12 to DG12
Domestic Appliances – Daily kWh's fields	Value of cells are determined by the appliance in column B and cell J10 and provides the value from column H in the 'Lookups' tab
Domestic Daily kWh field	Is the sum of the values in cells J13 to J31 and these are derived from the product of the quantity and daily kWh's values.
Commercial Appliances – Quantity fields	Drop down field linked to cells K12 to DG12
Commercial Appliances	Drop down field linked to cells M38 to AK38

– Usage Hours (Daily) fields	
Commercial Appliances – Kilowatts fields	Value of cells are determined by the appliance in column B provides the value from column J in the 'Lookups' tab
Commercial Daily kWh's field	Is the sum of the values in cells L39 to L104 and these are derived from the product of the commercial quantity, usage hours and daily kWh's values.
Custom Appliances – Quantity fields	Drop down field linked to cells K12 to DG12
Custom Appliances – Usage Hours (Daily) fields	Drop down field linked to cells M38 to AK38
Custom Appliances – Kilowatts fields	Free text field (numeric)
Custom Daily kWh's field	Is the sum of the values in cells L112 to L121 and these are derived from the product of the custom quantity, usage hours and daily kWh's values.
'Total Daily kWh's' field	Is the sum of cells F33 (Domestic Daily Kwh), F106 (Commercial Daily Kwh) and F123 (Custom Daily Kwh) and is a whole number with no decimal places

Electricity Consumption History

Section	Description
Back button	Hyperlink to the Elec Home tab
Next button	Hyperlink to the Assessment Details tab
'Meter Multiplier' field	Drop down field linked to cells K10 & L10. Cell J10 determines the overall value of this field. If the field is left blank, then J10 automatically becomes 1
'Consumption' field	Free text field (numeric)
'Start Date' field	Free text field (date)
'End Date' field	Free text field (date)
'Days' field	Is determined by value in cell K15. If the count of cell F13 is 1 then the cell value is F14 – F13 (i.e. the difference between the start and end dates). If the count of cell F13 is not equal to 1 then the cell value is the value in cell K16. This calculation is important, as it allows for the recreation of previously saved assessments from an older version of the assessment calculator
'Total Daily kWh's' field	Is determined by the value in cell F17, which is the product of cells F12 and J10, divided by cell F15. The cell is a whole number with no decimal places

Assessment Details

Section	Description
Back button	Hyperlink to one of the following: Gas Appliances, Gas Consumption History, Electricity Appliances or Electricity Consumption History. This is dependent on the previous page that the user was on. Please refer to VBA Module 2
'Expected consumption was calculated using' field	This field will look up the value in cell K9 (which is auto populated dependent on the previous page that the user was on – referred in VBA Module 2) and it will return the value from column F in the 'Lookups' tab
'Expected Daily kWh's field	Is determined by the value in cell P13. The value in this cell takes the value from the 'Total Daily kWh's' field in ether Gas Appliances, Gas Consumption History, Electricity Appliances or Electricity Consumption History. It determines which of these sections to take the value from based on the value in cell K9
'What type of consumption do you have?' field	Drop down field linked to cells K15 & L15.
'Type of Meter' field	Drop down field which is linked to cells K16 – P16. The value in cell A9 determines which values are displayed; K16 and L16 if A9 = Gas and M16, N16 and O16 if A9 = Electricity. (NB: A9 is

	determined by cell K9)
'Meter Multiplier' field	Drop down field which is linked to cells K17 – O17. The value in cell A18 determines which values are displayed; K17 and L17 if A9 = Gas and M16, N16 and O16 if A9 = Electricity. (NB: A9 is determined by cell K9). Cell J17 determines the overall value of this field. If the field is left blank, then J10 automatically becomes 1.
'Consumption' field	Free text field (numeric). The value in cell J18 will determine the overall value of this field for further calculations.
'Start Date' field (under Registered Consumption section)	Free text field (date)
'End Date' field (under Registered Consumption section)	Free text field (date)
'Days' field (under Registered Consumption section)	Is determined by the value in cell K20, which is the difference between cells F20 and F19.
'Registered Daily kWh's' field	Is determined by cells F15 and F16. If F15 = Units and F16 = Metric then the value of this field will be the value in cell N14. If F15 = Units and F16 = Imperial then the value of this field will be the value in cell N15. If it is neither of the above, then the value of this field will be the value in cell N13. (NB: Cells N14 and N15 convert units into kWh and in doing so, takes into account a calorific value of 37.2)
'Start Date' field (under Assessment Details section)	Free text field (date)
'End Date' field (under Assessment Details section)	Free text field (date)
'Days' field (under	Is determined by the value in cell K29, which is the difference

Assessment Details)	between cells F29 and F28.
'Customer Type' field	Drop down field which is linked to cells K32 and L32.
'Payment Type' field	Drop down field which is linked to cells K33 and L33.
'VAT Split – Domestic Use' field	Drop down field which is linked to cells K34 – U34.
'Night Units (% of consumption)' field	Drop down field which is linked to cells K34 – U34.
'Evening / Weekend Units (% of consumption)' field	Drop down field which is linked to cells K34 – U34.
'Customer Name' field	Free text field
'Business / Property Name' field	Free text field
'Property No.' field	Free text field
'Street' field	Free text field
'City' field	Free text field
'Post Code' field	Free text field
'Investigation Fees' field	Free text field (numeric)
'Other Fees (Meter Related Warrant etc)' field	Free text field (numeric)
'Discount Applied' field	Free text field (numeric)
'Total Unregistered kWh's' field	Is determined by the value in cell Q13. If the difference between cells P13 and O13 (i.e. expected daily kWh minus registered daily consumption) is less than zero, then this value will be zero. Otherwise the value of this cell will be the difference between cells P13 and O13 multiplied by cell K29

'View Invoice' button	Hyperlink to the Invoice tab (This also runs the VBA Module 1 – detailed further on)
'Create Searchlight Code' button	Hyperlink to the HHT Info tab ((This also runs the VBA Module 1 – detailed further on)

Lookups

The Lookups tab provides values to various cells throughout the Assessment Calculator and is referred throughout this document

	A	B	C	D	E	F	G	H
1	Gas Domestic Appliance	kWh's	Bains Marie (Open)	11.7	1	Gas Appliances	LowAir Conditioning	0.84
2	Back Boiler & FirePrivate PropertyPre-1985	59.82	Bains Marie (Wet & Dry)	6.6	2	Gas Consumption History	NormalAir Conditioning	1.4
3	Back Boiler & FirePrivate PropertyPost-1985	46.57	Boiling Pan (Dual Purpose)	13.3	3	Electricity Appliances	HighAir Conditioning	1.96
4	Back Boiler & FireLocal Authority HousePre-1985	56.2	Boiling Pan (Jacketed)	20.5	4	Electricity Consumption History	LowComputer	0.33372
5	Back Boiler & FireLocal Authority HousePost-1985	46.57	Boiling Table (Open Top) HD	5.85	5	Assessment Details	NormalComputer	0.5562
6	Back Boiler & FireLocal Authority FlatPre-1985	35.33	Boiling Table (Open Top Front) MD	5.5	6	Home	HighComputer	0.77868
7	Back Boiler & FireLocal Authority FlatPost-1985	32.52	Boiling Table (Open Top Rear) MD	3.15			LowDishwasher	0.5556
8	Cooker	6.42	Boiling Table (Solid Top) MD	11			NormalDishwasher	0.926
9	Fire (Living Room) MainYes	8.03	Boiling Table (Solid Top) HD	15.5			HighDishwasher	1.2964
10	Fire (Living Room) OtherYes	1.2	Boiling Table (Stockpot Stand) HD	10.35			LowFreezer	0.5622
11	Fire (Living Room) MainNo	24.09	Brat Pan	14.65			NormalFreezer	0.937
12	Fire (Living Room) OtherNo	12.04	Burner (Open Top Front) MD	5.5			HighFreezer	1.3118
13	Fire (Log Basket) Main	37.74	Burner (Open Top Rear) MD	3.15			LowFridge	0.36822
14	Fire (Log Basket) Other	10.76	Burner Range (4 Solid Top) MD	5.6			NormalFridge	0.6137
15	Fire (Valour HomeFlame) Main	25.93	Burner Range (6 Solid Top) MD	8.05			HighFridge	0.85918
16	Fire (Valour Home Flame) Other	7.39	Burner Range (Open Top) HD	5.85			LowHeating (per room)	0.81042
17	Hob	3.21	Burner Range (Solid Top) HD	15.5			NormalHeating (per room)	1.3507
18	RadiatorPre-1985	9.84	Deep Fat Fryer (Counter Top)	16.4			HighHeating (per room)	1.89098
19	RadiatorPost-1985	7.53	Deep Fat Fryer (Freestanding)	31.65			LowHob	0.44052
20	Shower	5.22	Dishwasher	20.3			NormalHob	0.7342
21	Wall Heater	12.04	Griddle Plate (Counter Top)	6.3			HighHob	1.02788
22			Griddle Plate (Freestanding)	13.2			LowImmersion Heater	1.34958

Calculations

The calculations tab is crucial in the calculation of the assessment calculator invoice. This combines relevant tariffs and periods, which are applied to the invoice.

Column Name	Description
Period/Active Date	Combines data from the User Period, Price_Active_Date, Fuel and Region columns
CCL Period	Combines data from the User Period and CCL Active Date columns
Date	Cell C2 is taken from the Assessment Details date in cell B70 and this relates to the start date of the assessment period. Subsequent cells in this column are an increase of the start date by 1 day, unless the date exceeds the assessment end date (value in cell B71 from the Assessment Details tab) or cell C2 is zero
User Period	Will always be 1 unless the data in the Date column is zero
Price_Active_Date	Looks for the relevant price change date from columns X to AC for each date in column C. The value of this cell depends on the customer type (Commercial or Domestic – taken from cell B65 in the Assessment Details tab) and fuel (Gas or Electricity – taken from cell

	B66 in the Assessment Details tab).
Consumption (Kwh)	Is the total unregistered kWh's, taken from cell B72 in the Assessment Details tab
Daily Usage (kWh)	Is the daily usage calculated by taking the consumption from column F and dividing by the number of days of the assessment (Subtraction of cells B71 and B70 in the Assessment Details tab plus 1)
Night Consumption (kWh)	Is the total night usage taken from cell B73 in the Assessment Details tab. (NB: If the fuel type in B66 is Gas, then this value will be zero, otherwise it will be the value in M2 multiplied by the Night percentage in cell F35)
Evening/Weekend Consumption (kWh)	Is the total evening/weekend usage taken from cell B74 in the Assessment Details tab. (NB: If the fuel type in B66 is Gas, then this value will be zero, otherwise it will be the value in M2 multiplied by the Evening/Weekend percentage in cell F36)
Daily Night Usage (kWh)	Is the daily night usage calculated by taking the consumption from column H and dividing by the number of days of the assessment (Subtraction of cells B71 and B70 in the Assessment Details tab plus 1)
Daily EW Usage (kWh)	Is the daily night usage calculated by taking the consumption from column I and dividing by the number of days of the assessment (Subtraction of cells B71 and B70 in the Assessment Details tab plus 1)
Fuel	If the fuel in cell B66 in the Assessment Details tab is Gas, then the value of this cell is the combination of cells B65 and B66 otherwise it is the combination of cells B65, B66 and B68.
Region	Returns the region from cell B69 in the Assessment Details tab. The region is determined by the post code entered in cell B80 and it uses the lookup table in columns L and M in the Lookups tab.
Payment Type	If the customer type is commercial in cell B65 in the Assessment Details tab, then this is blank, otherwise it is the value in cell B67 in the Assessment Details tab (either Prepayment or Credit)
T1	This is the tier 1 tariff to be used in the invoice. This is derived by looking at the reference in column T and comparing it to column A in the Price History tab, returning the value in column E

T2	This is the tier 2 tariff to be used in the invoice. This is derived by looking at the reference in column T and comparing it to column A in the Price History tab, returning the value in column F
TN	This is the night tariff to be used in the invoice. This is derived by looking at the reference in column T and comparing it to column A in the Price History tab, returning the value in column G
TEW	This is the evening/weekend tariff to be used in the invoice. This is derived by looking at the reference in column T and comparing it to column A in the Price History tab, returning the value in column H
Threshold	This value provides the tier threshold at which to charge the tier 1 tariff. This is derived by looking at the reference in column T and comparing it to column A in the Price History tab, returning the value in column I and then dividing this by 365 (to obtain the daily threshold)
Reference	This cell is important as it provides the lookup for obtaining the relevant prices to apply to the assessment invoice. The value of this cell is a combination of the values in columns L, N, M and E. (Note that there are no spaces)
CCL_Active_Date	This uses the Date column (column C) to determine which CCL Price change date to apply and it obtains the relevant date from column AD
Price Change Dates Commercial (Gas)	These are all price change dates for BGB gas customers (to obtain recent price change dates, our current contact is Mark Scott from the BGB Pricing Team)
Price Change Dates Commercial (Elec)	These are all price change dates for BGB electricity customers (to obtain recent price change dates, our current contact is Mark Scott from the BGB Pricing Team)
Price Change Dates Domestic Credit (Gas)	These are all price change dates for BGR Credit Gas customers (to obtain recent price change dates, these are taken from the Pricing Matrix Tool at http://intranetsp/bgas/oppc/Pages/pricinglibrary.aspx)
Price Change Date Domestic Credit (Elec)	These are all price change dates for BGR Credit Electricity customers (to obtain recent price change dates, these are taken from the Pricing Matrix Tool at

	http://intranetsp/bgas/oppc/Pages/pricinglibrary.aspx)
Price Change Date Domestic Prepayment (Gas)	These are all price change dates for BGR Prepayment Gas customers (to obtain recent price change dates, these are taken from the Pricing Matrix Tool at http://intranetsp/bgas/oppc/Pages/pricinglibrary.aspx)
Price Change Date Domestic Prepayment (Elec)	These are all price change dates for BGR Prepayment Electricity customers (to obtain recent price change dates, these are taken from the Pricing Matrix Tool at http://intranetsp/bgas/oppc/Pages/pricinglibrary.aspx)
CCL Change Dates	These are all CCL price change dates as per HM Customs & Excise. For CCL price change dates visit http://customs.hmrc.gov.uk/channelsPortalWebApp/channelsPortalWebApp.portal?_nfpb=true&_pageLabel=pageExcise_ShowContent&id=HMCE_PROD1_031183&propertyType=document

Price History

The Price History tab holds all current and historic prices for both BGB and BGR customers. Whenever there is a price change, the new prices need to be added within this tab

Column Name	Description
Reference	This cell is the key link between the Reference column in the Calculations tab in order to provide the relevant prices to be applied to the assessment invoice. It is made up of Customer Type, Fuel, Region and price change date in a numeric format. Whenever there is a new price change date, a new reference row needs to be created.
Fuel	This column is not used in any calculations, but is a combination of the fuel type and meter type (e.g. single rate, two rate etc.)
Region	This column is not used in any calculations, but provides the region for each price line.
ActiveDate	Is the date the prices are applicable from. Each time there is a price change a new date needs to be entered
T1	This is the tier 1 tariff to be used in the invoice.

T2	This is the tier 2 tariff to be used in the invoice.
TN	This is the night tariff to be used in the invoice (only applicable for two rate or evening/weekend 2 rate electricity meters)
TEW	This is the evening/weekend tariff to be used in the invoice (only applicable for evening/weekend 3 rate electricity meters)
T1th	This value provides the annual tier threshold at which to charge the tier 1 tariff.
Climate Change Levy	These three columns (Fuel, ActiveDate and Price) provide detail on all climate change levy rates for both gas and electricity supplies. Each time there is a change to the climate change levy rate, a new price line needs to be entered.

Charges Summary Data

The Charges Summary Data tab splits out each price period that will be applied to the assessment invoice. The number of populated lines determines the number of price change periods applied to the invoice.

Column Name	Description
Cell A1	The value in this cell is the number of pricing periods for this assessment
Column A (No Name)	The value in this cell will be 1 unless the value in the adjacent cell under column B is 0 or 0-00/01/0000
Column B (No Name)	This is an important column as it separates each pricing change period taken from column A in the Calculations tab. The number of populated rows in this column will determine how many pricing periods appear on the assessment invoice
Period	The values in this column is already populated between 1 and 50
Start	The value in this cell is the start date of the pricing period specific to column A in the Calculations tab and it takes the date from column C in the Calculations tab
End	The value in this cell is the end date of the pricing period specific to column A in the Calculations tab and it takes the date from column

	C in the Calculations tab
Days	The number of days in the pricing period
Apportioned Usage (kWh)	The total daily unregistered kWh is split across each pricing period and the apportioned usage reflects this. This is calculated by taking the number of days in the pricing period and multiplying this by the daily usage in the Calculations tab.
Apportioned Night Usage (kWh)	The total night unregistered kWh is split across each pricing period and the apportioned usage reflects this. This is calculated by taking the number of days in the pricing period and multiplying this by the daily night consumption in the Calculations tab.
Apportioned EW Usage (kWh)	The total evening/weekend unregistered kWh is split across each pricing period and the apportioned usage reflects this. This is calculated by taking the number of days in the pricing period and multiplying this by the daily EW consumption in the Calculations tab.
Daily Multiplier	The daily multiplier determines how many kWh's we charge against each price. This varies depending on whether the assessment is commercial or domestic and gas or electricity. The daily multiplier is 15.52 for commercial gas, 5.48 for commercial electricity and will be the threshold in column S under the Calculations tab for domestic gas and electricity assessments
Tier1 Threshold	The value of this cell is not used in the calculation of the invoice. Please see Rate 1 Units below.
Rate 1 Units	This cell determines how many kWh's we charge at the tier 1 rate. This is calculated by taking the number of days in the pricing period and multiplying this by the daily multiplier. For commercial assessments, if the pricing period is after 14 Oct 2011 then the Tier 1 Threshold is the total apportioned usage for that pricing period. For domestic electricity prepayment 2 rate assessments, if the pricing period is after 14 Nov 2012 then the Tier 1 Threshold is the total apportioned usage for that pricing period.
Rate 1 Price	This is the rate 1 unit charge and is taken from the T1 column in the Calculations tab
Rate 2 Units	This cell determines how many kWh's we charge at the tier 2 rate. This is the difference between the apportioned usage and the Rate

	1 Units	
Rate 2 Price	This is the rate 2 unit charge and is taken from the T2 column in the Calculations tab
Night Units	This is the number of kWh we charge against the night unit rate and is the value in the Apportioned Night Usage cell
Night Price	This is the night unit charge and is taken from the TN column in the Calculations tab
EW Units	This is the number of kWh we charge against the evening/weekend unit rate and is the value in the Apportioned EW Usage cell
EW Price	This is the evening/weekend unit charge and is taken from the TEW column in the Calculations tab
Rate 1 Cost	This is the total Rate 1 cost (in £'s) for the relevant pricing period and is the Rate 1 Units multiplied by Rate 1 price
Rate 2 Cost	This is the total Rate 2 cost (in £'s) for the relevant pricing period and is the Rate 2 Units multiplied by Rate 2 price
Night Cost	This is the total night cost (in £'s) for the relevant pricing period and is the Night Units multiplied by Night price
EW Cost	This is the total evening/weekend cost (in £'s) for the relevant pricing period and is the EW Units multiplied by EW price
Column X (No name)	The value of this cell is the start date of the pricing period in a numeric format and is used in the calculation of the Rate 1 Units (please refer to the formula in the Rate 1 Units cell)

CCL Data

The CCL Data tab splits out each Climate Change Levy pricing period that will be applied to the assessment invoice. The number of populated lines determines the number of CCL price changes during the assessment period.

Column Name	Description
Column A (No Name)	The value in this cell will be 1 unless the value in the adjacent cell under column B is 0 or 0-00/01/0000
Column B (No Name)	This is an important column as it separates each pricing change period taken from column B in the Calculations tab. The number of populated rows in this column will determine how many CCL price change dates there are.
Period	The values in this column is already populated between 1 and 50
Start	The value in this cell is the start date of the CCL pricing period specific to column B in the Calculations tab and it takes the date from column C in the Calculations tab
End	The value in this cell is the end date of the CCL pricing period specific to column B in the Calculations tab and it takes the date

	from column C in the Calculations tab
Days	The number of days in the pricing period
Apportioned Usage (kWh)	The total daily unregistered kWh is split across each pricing period and the apportioned usage reflects this. This is calculated by taking the number of days in the pricing period and multiplying this by the daily usage in the Calculations tab.
Apportioned Night Usage (kWh)	The total night unregistered kWh is split across each pricing period and the apportioned usage reflects this. This is calculated by taking the number of days in the pricing period and multiplying this by the daily night consumption in the Calculations tab.
Apportioned EW Usage (kWh)	The total evening/weekend unregistered kWh is split across each pricing period and the apportioned usage reflects this. This is calculated by taking the number of days in the pricing period and multiplying this by the daily EW consumption in the Calculations tab.
CCL Rate	This is the Climate Change Levy price and is taken from the Climate Change Levy section under the Price_History tab (columns K, L & M). The price will vary dependant on the value in column D and if the assessment is gas or electricity.
CCL Cost	The value of this cell is the total climate change levy cost for the relevant pricing period and is the CCL rate multiplied by the total apportioned usage if the VAT Split Domestic value is zero in cell B82 in the 'Assessment Details tab'. If the VAT Split Domestic value is not zero then the value of this cell is the CCL rate multiplied by the total apportioned usage and VAT commercial split (i.e. 1 – VAT Split Domestic).

Invoice

The invoice tab is the actual assessment invoice that the Revenue Protection Officers print out and provide to the customers. The invoice combines all the calculations across the Charges_Summary_Data and CCL_Data tabs and presents them in a customer friendly invoice. There are many hidden pricing periods in this tab and cells that have a conditional format set against them. These are between cells B47 and J334 (see Breakdown of Charges below).

Cell Number	Description
British Gas Logo	This is a fixed logo for the invoice and is the latest company branding
Contact Info Logo	This logo is dependent on the assessment type. If the entry in cell B65 in the 'Assessment Details' tab is commercial, then the contact information logo is taken from the 'Logos' tab range A1 to E12, otherwise it is the logo taken from the 'Logos' tab range A13 to E23
Back Button	Is a hyperlink to 'Assessment Details' tab
G19	This is the customer's account number taken from cell B81 in the

	'Assessment Details' tab
C13	If the Business/Property Name is blank (value is zero in cell B76 in the 'Assessment Details' tab) then the entry in this cell is blank. If it isn't, then it is the Customer Name (cell B75 in the 'Assessment Details' tab)
C14	If the Business/Property Name is blank (value is zero in cell B76 in the 'Assessment Details' tab) then the entry in this cell is the Customer Name (cell B75 in the 'Assessment Details' tab), otherwise it is the Business/Property Name (cell B76 in the 'Assessment Details' tab)
C15	This is the customer's property number and street name (cells B77 & B78 in the 'Assessment Details' tab)
C16	This is the customer's City (cell B79 in the 'Assessment Details' tab)
C17	This the customer's postcode (cell B80 in the 'Assessment Details' tab)
B22	This will either be 'Summary of you gas consumption' or 'Summary of you electricity consumption', dependant on whether the value on cell B66 in the 'Assessment Details' tab is gas or electricity
A26	The value of this cell is taken from cell A1 in the 'Charges_Summary_Data' tab and represents the number of pricing periods for this assessment. This cells is important as it determines how many pricing periods are visible in the assessment invoice
B26	This will either be 'Gas you've used this period' or 'Electricity you've used this period', dependant on whether the value on cell B66 in the 'Assessment Details' tab is gas or electricity
E26	This is the total kWh's charged in this invoice and is the sum of the Apportioned Usage, Apportioned Night Usage and Apportioned EW Usage from the 'Charges_Summary_Data' tab across all pricing periods.
B27	This will either be 'Cost of gas used in this period ' or 'Cost of electricity used in this period', dependant on whether the value on cell B66 in the 'Assessment Details' tab is gas or electricity
E27	This is the cost of energy for the assessment invoice and is the sum of Rate 1 Cost, Rate 2 Cost, Night Cost and EW Cost from the

	'Charges_Summary_Data' tab across all pricing periods.
B28	The entry in this cell is 'Climate Change Levy' and is a conditional formatted cell. If the value in cell E28 is zero, then the value in this cell is hidden.
E28	This is the total CCL applicable to this invoice and only applies to commercial customers. If the customer is domestic or if the assessed kWh is less than 145 kWh per day for gas or 33 kWh per day for electricity, then this field will be zero and will be hidden.
B29	The entry in this cell is 'Subtotal'
E29	This is the subtotal value, which is the sum of the cost of gas/electricity used and the CCL
B30	The entry in this cell is 'VAT @' and will be hidden if cell C31 is 5% or if E30 is zero
C30	The entry in this cell is '5%' and will be hidden if cell C31 is 5% or if E30 is zero
D30	This is the amount that the VAT in cell C30 is based on and will be hidden if cell C31 is 5% or if E30 is zero.
E30	This is the total VAT at 5% on the cost of gas or electricity used. It will be zero and hidden if the VAT Split Domestic is great than 60%.
B31	The entry in this cell is 'VAT @'
C31	The value in this cell will be either 5% or 20%, dependant on the VAT Split Domestic value, whether the assessment is commercial or domestic and whether the daily usage is less than 145 kWh per day for gas or 33 kWh per day for electricity
D31	This is the amount that the VAT in cell C31 is based on.
E31	This is the total VAT at 5% or 20% on the cost of gas or electricity used.
B33	The entry in this cell is 'Other Fees' and will be hidden if the cell in E33 is zero
E33	This is the other fees value and is taken from cell B84 in the 'Assessment Details' tab. If this value is zero, the cell will be hidden

B34	The entry in this cell is 'Investigation Fees' and will be hidden if the cell in E34 is zero
E34	This is the investigation fees value, excluding VAT at 20%, and is taken from cell B83 in the 'Assessment Details' tab divided by 1.2. If this value is zero, the cell will be hidden.
B35	The entry in this cell is 'VAT @ 20% and will be hidden if the cell in E35 is zero
D35	This is the same amount as in cell E34 and is what the VAT at 20% is based on
E35	This is the total VAT at 20% on the Investigation Fees
E41	This is the sum of the Subtotal, VAT, CCL (if applicable), Investigation Fees (If applicable) and Other Fees (if applicable)
B46	This will either be 'Breakdown of your gas charges' or 'Breakdown of your electricity charges', dependant on whether the value on cell B66 in the 'Assessment Details' tab is gas or electricity

Breakdown of Charges

The values in the cells between B47 and J334 have a conditional format in that they will be hidden dependant on the value in cell A26. For example if the value in cell A26 is 3 then only 3 periods will be displayed (cells B47 to J73).

The charges are all obtained from the 'Charges_Summary_Data' tab and the period number acts as the look up for the relevant charges for that period.

The invoice page also has a footer, which is currently set at:

*'This is a VAT invoice. VAT registration no. 684 9667 62*

British Gas is a trading name of British Gas Trading Limited a Centrica company

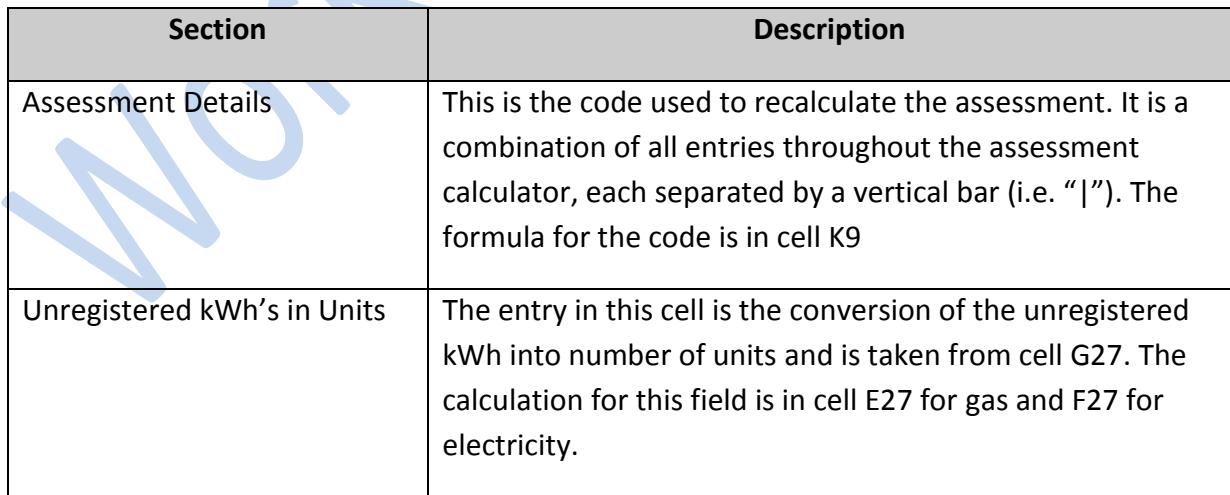*Registered in England and Wales No. 3078711*

Registered Office: Millstream, Maidenhead, Windsor, Berkshire SL4 5GD'

Logos

The logos tab contains the contact info and is only used for the assessment invoice.
Please refer to the 'Contact Info Logo' under the Invoice section on page 30
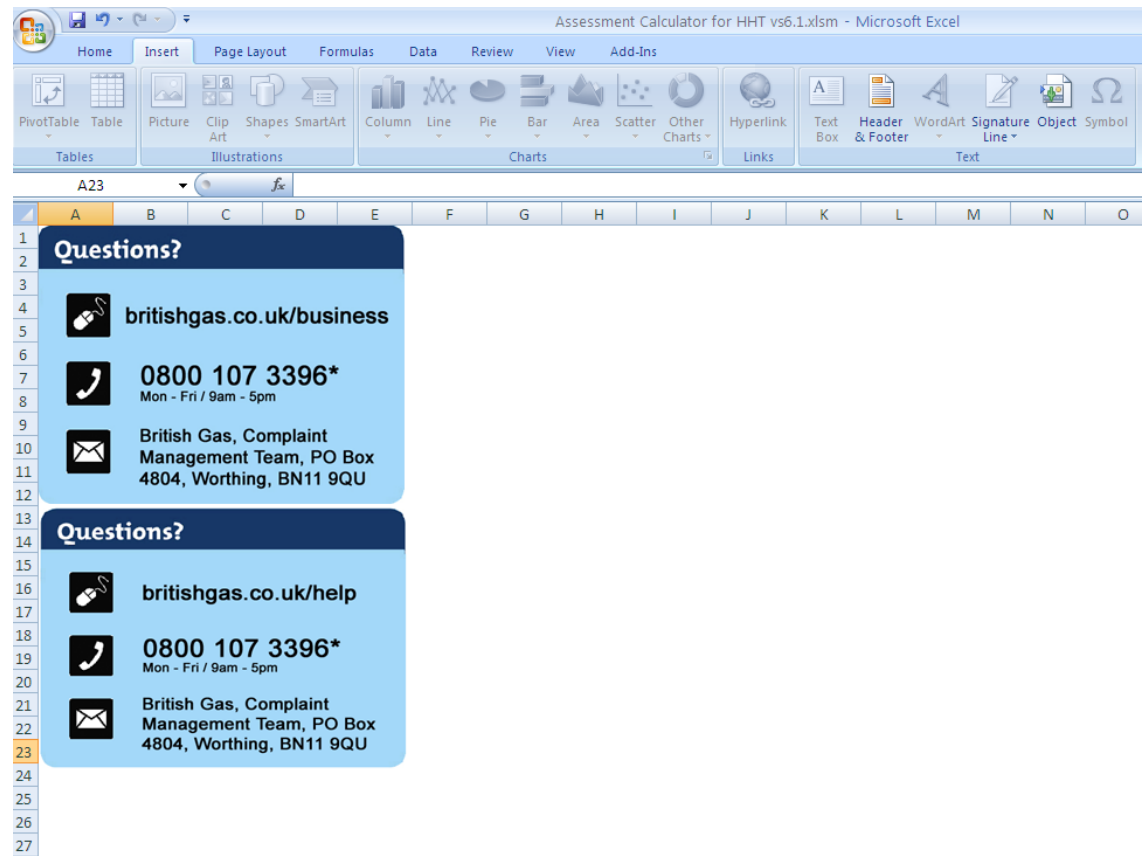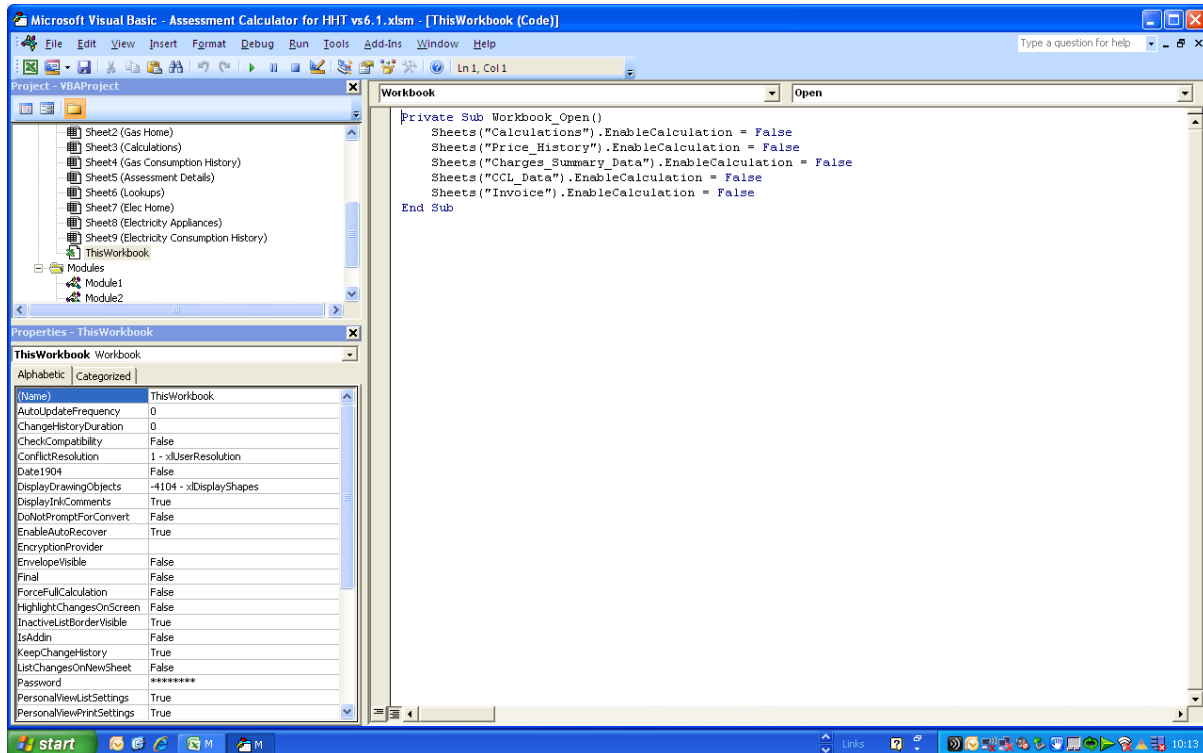
HHT Info

The HHT info tab provides the code used by the revenue protection officers to copy across into their job. The code is crucial in recreating the assessment. The recreation of the assessment is described under the 'VBA - Module 3' section

Section	Description
Assessment Details	This is the code used to recalculate the assessment. It is a combination of all entries throughout the assessment calculator, each separated by a vertical bar (i.e. "|"). The formula for the code is in cell K9
Unregistered kWh's in Units	The entry in this cell is the conversion of the unregistered kWh into number of units and is taken from cell G27. The calculation for this field is in cell E27 for gas and F27 for electricity.

VBA

The below describes each VBA module used within the assessment calculator.

ThisWorkbook

In order for the assessment calculator to work efficiently, upon opening it, ThisWorkbook module is ran and this disables the calculations in the 'Calculations', 'Price_History', 'Charges_Summary_Data', 'CCL_Data' and 'Invoice' tabs.
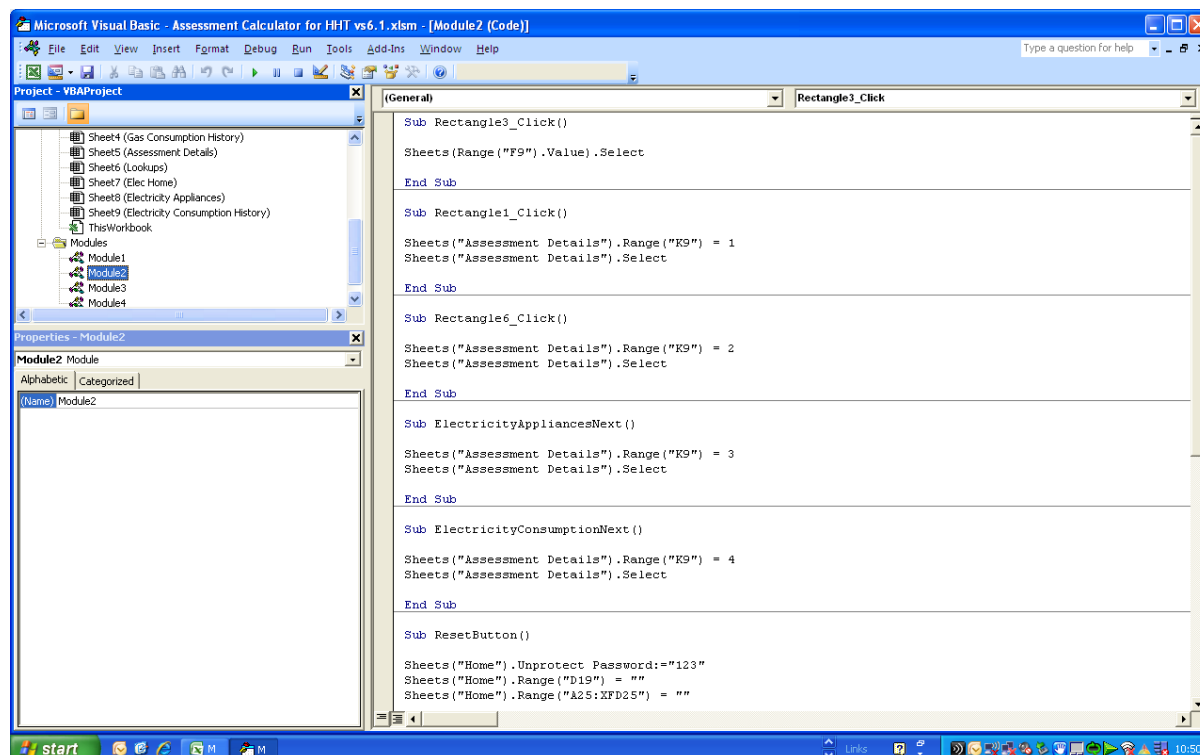
This is to allow the calculator to be used without all the calculations occurring within these tabs every time an entry is made.

Module 1

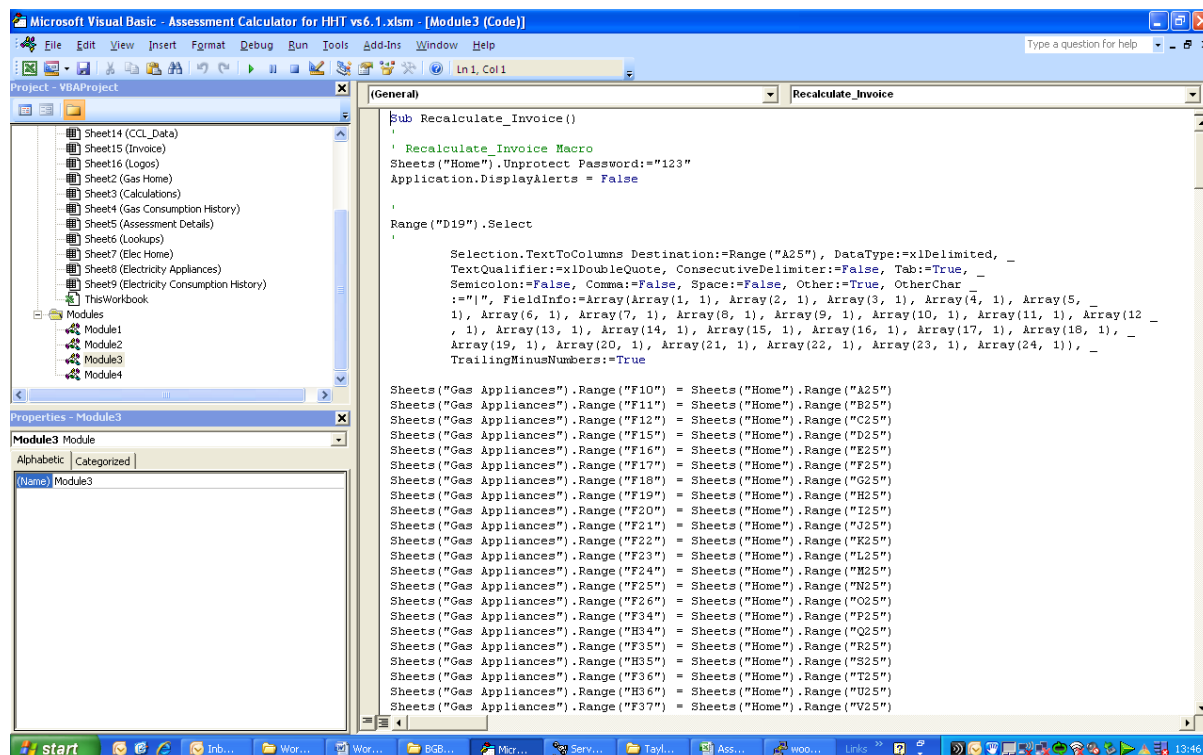| Macro Name	Description
Calculate_Invoice()	This macro is assigned to the 'View Invoice' button in the 'Assessment Details' tab. If certain cells do not have an entry or do not meet a certain criteria as specified within the macro, then a message box appears. By initiating this macro, the calculations in the 'Calculations', 'Price_History', 'Charges_Summary_Data', 'CCL_Data' and 'Invoice' tabs are also enabled and this allows all formulae within these tabs to calculate. These tabs are then immediately disabled. The user is then directed to the 'Invoice' tab.
AssessmentDetailHHTInfo()	This macro is assigned to the 'Create Searchlight Code' button in the 'Assessment Details' tab. As above, if certain cells do not have an entry or do not meet a certain criteria as specified within the macro, then a message box appears. By initiating this macro, the calculations in the 'Calculations', 'Price_History', 'Charges_Summary_Data', 'CCL_Data' and 'Invoice' tabs are also enabled and this allows all formulae within these tabs to calculate. These tabs are then immediately disabled. Cell range K9:O21 is copied and pasted into cell range E9:I21. The user is then directed to the 'Assessment Details' tab.

Module 2

Macro Name	Description
Rectangle3_Click()	
Rectangle1_Click()	This is triggered by clicking on the Gas Appliances Next button. By clicking this button the user is directed to the Assessment Details tab and the cell value in K9 in the Assessment Details tab is changed to 1
Rectangle6_Click()	This is triggered by clicking on the Gas Consumption History Next button. By clicking this button the user is directed to the Assessment Details tab and the cell value in K9 in the Assessment Details tab is changed to 2
ElectricityAppliancesNext()	This is triggered by clicking on the Electricity Appliances Next button. By clicking this button the user is directed to the Assessment Details tab and the cell value in K9 in the Assessment Details tab is changed to 3
ElectricityConsumptionNext()	This is triggered by clicking on the Electricity Consumption History Next button. By clicking this button the user is directed to the Assessment Details tab and the cell value in

|	K9 in the Assessment Details tab is changed to 4
ResetButton()	This is triggered by clicking on the Home Reset button. This clears all values entered into the Assessment Calculator. Refer to the macro content to view the cells that are cleared or set to 0.

Module 3

Macro Name	Description
Sub Recalculate_Invoice()	This macro is triggered when the Recalculate button is selected in the Home tab. The first stage is that the Home tab is unprotected (with current password being "123") The macro copies the assessment code that would have been entered by the user in the Assessment Details field in the Home tab and splits each entry in the code and pastes them in row 25, starting from cell A25 (it uses the text to columns function with the vertical bar as the delimiter). Each entry in the code represents a field in the Assessment Calculator. Each field throughout the Assessment Calculator is then populated with the relevant cell values in row 25. Please refer to the macro to see which field is populated by the relevant value. The macro then enables the calculations in the 'Calculations', 'Price_History', 'Charges_Summary_Data', 'CCL_Data' and 'Invoice' tabs, which calculates the

	assessment invoice and once the calculations are complete it disables the calculation function in these fields.
	The Home tab is then protected with the same password "123" and it directs the user to the Invoice tab.

Module 4
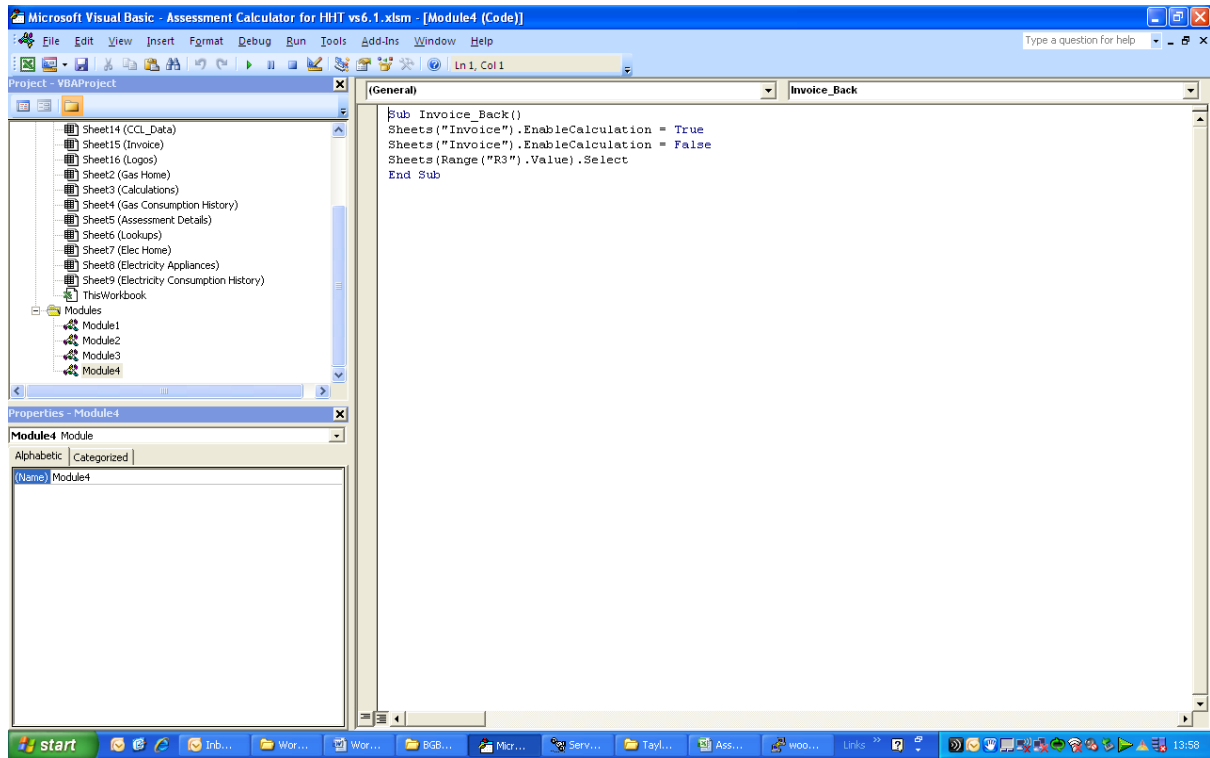
Macro Name	Description
Sub Invoice_Back()	This macro is triggered when the Back button is selected under the Invoice tab.

Updating a Price Change

Whenever British Gas announces a price change, the Assessment Calculator needs to be updated with the latest prices. These should be obtained directly from the appropriate pricing team or from the British Gas intranet. These prices are the current standard tariffs for each pricing region and do not include a standing charge.

There are various sections of the calculator that need to be updated and these are described below:

Section that requires updating	Description of update required
Price_History tab	A new pricing line needs to be entered for each region for customer type; commercial, domestic or both. Insert a row after the latest price date for each section and enter the appropriate details for that pricing line.
Calculations tab	The price change dates also need to be updated in these sections and these are to be updated under columns X through to AD.

NB: If there is a Climate Change Levy price change, then the prices and dates are only updated in the Price_History tab under columns K, L and M.