SAA
Scottish Assessors Association

# Revaluation 2023

# Public Utilities Committee

## Practice Note 4
## Valuation of Conventional Hydro Generators

## 1.0 Introduction

1.1 This Practice Note is to assist with the valuation of conventional hydro electricity generation subjects for the 2023 Revaluation.

1.2 This Practice Note provides guidance on the valuation of conventional hydro electricity subjects with a total installed generation capacity of up to 5MW, used to generate electricity where the power generated is mainly or exclusively for distribution for sale to consumers and are, unsubsidised or in receipt of either Renewable Obligation Certificates (ROCs) or Feed-In Tariffs (FITs) as administered by the Office of Gas and Electricity Markets (Ofgem).

1.3 Subjects with a generating capacity of 50 kw or less are defined as micro generation per The Valuation (Plant and Machinery) (Scotland) Amendment Regulations 2008. In terms of this legislation certain items of plant and machinery defined as having “micro generation capacity” are excluded from valuation for rating. Consideration should be given to making an entry in respect of any buildings or other relevant rateable plant and machinery if applicable. Rateable items of plant and machinery should be valued on the Contractor’s Basis with reference to guidance and replacement costs contained in the 2023 Rating Cost Guide Scotland.

1.4 This Practice Note is not intended to cover the valuation of hydro pumped storage facilities. Guidance should be sought from Lanarkshire Valuation Joint Board in relation to the valuation of such subjects.

## 2.0 Basis of Valuation

2.1 Subjects are to be valued by reference to the Receipts and Expenditure Method.

This basis of valuation firstly determines the gross profit by taking the gross receipts less cost of purchases (direct costs). Working expenses (operating costs) are then deducted to give operating profit, this is then adjusted for depreciation of tenant's assets to arrive at the divisible balance. The divisible balance represents the amount to be shared between the tenant (tenant's share - return on capital/risk/profit) and landlord (landlord's share - the rent payable or the rateable value).

2.2 For sites where full costs and accounts are available it may be appropriate to carry out a full receipts and expenditure valuation rather than applying the model scheme detailed below.

## 3.0 Valuation Considerations

### 3.1 Site Accreditation

3.1.1 Financial support has been available to eligible hydro schemes in the form of Renewable Obligation Certificates (ROCs) since 2004 and Feed In Tariffs (FITs) since 1 April 2010.

3.1.2 ROCs were introduced in 2004 and give financial support to qualifying hydro schemes.

3.1.3 FITs, introduced on 1 April 2010, give financial support for qualifying installations generating up to a maximum capacity of 5MW. The amount of support varies depending on the total installed generation capacity and date of accreditation. The FIT tariff is generally set when a scheme receives preliminary accreditation, up to two years before a site is commissioned. If a scheme misses this deadline it falls to be valued on the prevailing FIT tariff at the time of commissioning. Once a FIT tariff has been set it runs with the subject. As FIT tariffs have varied since their introduction - care should be taken ascertaining the correct FIT tariff. The FIT scheme closed to new applicants from 1 April 2019, with some exceptions.

### 3.2 Total Installed Generating Capacity of the Site

3.2.1 The valuer should establish the Total Installed Generating Capacity of the Site (TIGC) in megawatts (MW) from the operator. As a check this information is also available publicly on the Office of Gas and Electricity Markets (Ofgem) website which lists all accredited stations.

### 3.3 Output of the site expressed as Megawatt Hours

3.3.1 The volume of trade or business produced by any given site is determined by the output. The unit of measurement is megawatt hours (MWh). Where possible the valuer should seek documentary evidence from a return of information form which will assist in determining the level of MWh the site is likely to generate per annum.

## 4.0 Valuation

4.1 This valuation firstly requires the calculation of the gross profit.

### 4.1.1 Gross Receipts

Total income for each site is dependent upon the wholesale electricity price, the scheme to which it is accredited (if it is accredited) and embedded benefits.

The total income will vary dependent on accreditation and the date of any accreditation.

The table below gives the adjusted income per MWh to be applied to the output to arrive at the total adopted gross receipts.

| Accreditation Type | | Income per MWh (£) |
|---|---|---|
| Unsubsided | | £65 |
| ROC Accredited | | £115 |
| FITs Accredited | Pre-accreditation Date | - |
| 50kW - 100kW | 01/04/2010 - 31/03/2014 | £307 |
| | 01/04/2014 - 30/09/2014 | £295 |
| | 01/10/2014 - 31/03/2015 | £272 |
| | 01/04/2015 - 30/09/2015 | £249 |
| | 01/10/2015 - 07/02/2016 | £231 |
| | 08/02/2016 - 31/03/2016 | £162 |
| | 01/04/2016 - 30/06/2016 | £152 |
| | 01/07/2016 - 30/09/2016 | £152 |
| | 01/10/2016 - 31/12/2016 | £152 |
| | 01/01/2017 - 31/03/2017 | £149 |
| | 01/04/2017 - 30/09/2017 | £151 |
| | 01/10/2017 - 31/12/2017 | £151 |
| | 01/01/2018 - 31/03/2018 | £148 |
| | 01/04/2018 - 30/06/2018 | £151 |
| | 01/07/2018 - 30/09/2018 | £151 |
| | 01/10/2018 - 31/12/2018 | £150 |
| | 01/01/2019 - - | £148 |
| | 01/04/2010 - 31/03/2013 | £215 |
| | 01/04/2013 - 31/03/2014 | £256 |

| | | | | |
|---|---|---|---|---|
| 100kW to 500kW | 01/04/2014 | - | 30/09/2014 | £247 |
| | 01/10/2014 | - | 31/03/2015 | £228 |
| | 01/04/2015 | - | 30/09/2015 | £210 |
| | 01/10/2015 | - | 07/02/2016 | £196 |
| | 08/02/2016 | - | 31/03/2016 | £135 |
| | 01/04/2016 | - | 30/06/2016 | £135 |
| | 01/07/2016 | - | 30/09/2016 | £135 |
| | 01/10/2016 | - | 31/12/2016 | £134 |
| | 01/01/2017 | - | 31/03/2017 | £133 |
| | 01/04/2017 | - | 30/06/2017 | £134 |
| | 01/07/2017 | - | 30/09/2017 | £134 |
| | 01/10/2017 | - | 31/12/2017 | £134 |
| | 01/01/2018 | - | 31/03/2018 | £131 |
| | 01/04/2018 | - | 30/06/2018 | £134 |
| | 01/07/2018 | - | 30/09/2018 | £134 |
| | 01/10/2018 | - | 31/12/2018 | £132 |
| | 01/01/2019 | - | | £132 |
| 500kW to 2MW | 01/04/2010 | - | 31/03/2014 | £215 |
| | 01/04/2014 | - | 30/09/2014 | £207 |
| | 01/10/2014 | - | 31/03/2015 | £193 |
| | 01/04/2015 | - | 30/09/2015 | £179 |
| | 01/10/2015 | - | 07/02/2016 | £167 |
| | 08/02/2016 | - | 31/03/2016 | £135 |
| | 01/04/2016 | - | 30/06/2016 | £135 |
| | 01/07/2016 | - | 30/09/2016 | £135 |
| | 01/10/2016 | - | 31/12/2016 | £134 |
| | 01/01/2017 | - | 31/03/2017 | £133 |
| | 01/04/2017 | - | 30/06/2017 | £134 |
| | 01/07/2017 | - | 30/09/2017 | £134 |
| | 01/10/2017 | - | 31/12/2017 | £134 |
| | 01/01/2018 | - | 31/03/2018 | £131 |
| | 01/04/2018 | - | 30/06/2018 | £134 |
| | 01/07/2018 | - | 30/09/2018 | £134 |
| | 01/10/2018 | - | 31/12/2018 | £134 |
| | 01/01/2019 | - | | £132 |
| | 01/04/2010 | - | 30/11/2012 | £125 |
| | 01/12/2012 | - | 31/03/2013 | £120 |
| | 01/04/2013 | - | 31/03/2014 | £104 |
| | 01/04/2014 | - | 30/09/2014 | £104 |
| | 01/10/2014 | - | 31/03/2015 | £100 |
| | 01/04/2015 | - | 30/09/2015 | £96 |

| | | |
|---|---|---|
| 2MW to 5MW | 01/10/2015 - 07/02/2016 | £93 |
| | 08/02/2016 - 31/03/2016 | £115 |
| | 01/04/2016 - 30/06/2016 | £115 |
| | 01/07/2016 - 30/09/2016 | £115 |
| | 01/10/2016 - 31/12/2016 | £115 |
| | 01/01/2017 - 31/03/2017 | £114 |
| | 01/04/2017 - 31/12/2017 | £115 |
| | 01/01/2018 - 31/03/2018 | £113 |
| | 01/04/2018 - 31/12/2018 | £115 |
| | 01/01/2019 - | £114 |

In general, there will be no direct costs as the fuel in this type of generation is free, hence the adopted income (gross receipts), will also be the gross profit.

## 5.0 Operating profit

5.1 Operating costs are then deducted from gross profit to give operating profit.

### 5.1.1 Operating Costs

Operating costs were ascertained from return of information forms. Costs were analysed and a table of typical running costs for the hypothetical tenant per MW dependent on the size of the station was created. The figures should be interpolated between points.

| TIGC (MW) | Operating Cost per MW |
|---|---|
| 0.05 | £230,000 |
| 0.10 | £200,000 |
| 0.50 | £165,000 |
| 1.00 | £145,000 |
| 2.00 | £120,000 |
| 5.00 | £100,000 |

### 5.2 Depreciation

5.2.1 Depreciation is allowed on the tenant's assets, deemed to be 45% of the total costs. This reflects the items which are rateable in terms of The Valuation of Plant and Machinery (Scotland) Regulations 2000.

5.2.2 It is calculated on a straight-line basis over 30 years.

5.2.3 Depreciation on tenant's assets is calculated on the table of capital costs below. The figures should be interpolated between points.

| TIGC (MW) | Capital cost per MW |
|---|---|
| 0.05 | £6,500,000 |
| 0.10 | £6,000,000 |
| 0.50 | £4,900,000 |
| 1.00 | £4,000,000 |
| 2.00 | £3,500,000 |
| 5.00 | £2,500,000 |

## 6.0 Divisible Balance

6.1 The tenant's share may be regarded as the first call of the divisible balance. This share has to be sufficient to encourage the tenant to take tenancy of the lands and heritages and to provide an appropriate reward to achieve a profit, an allowance for risk and a return upon their capital.

6.2 To reflect the interest on capital, profit and risk associated in carrying out the undertaking, the tenant's share is increased by 10% for subsidised sites and 15% for unsubsidised sites.

6.3 Deducting the tenant's share from the divisible balance leaves the income available for rates and for the payment of rent i.e. the landlord's share.

## 7.0 Net Annual Value/Rateable Value

7.1 The remaining income is available for the payment of rent and rates. The rates payment will be stripped out and the resultant figure is the amount available for rent, this being the Net Annual Value/Rateable Value.