Danish Energy Agency

# SUB-APPENDIX 5.B

# Examples of Subsidy Rate & Annual Settlement calculations

Contract on subsidy for carbon capture, transport, and Storage

***Instructions for tenderers***

*The tenderers shall not fill in or complete this Appendix and it should not be submitted as a part of the tenderer's offer.*

*Sub-Appendix 5.B contains examples of the calculation of deductions in the calculation of the Subsidy Rate and examples of calculations made in connection with the Annual Settlement. The Sub-Appendix is provided solely for illustrative purposes and to present non-exhaustive examples of the subsidy calculation. In case of any discrepancies between this Sub-appendix and Appendix 5, Subsidy and economy scheme, Appendix 5 shall prevail.*

*This guidance text will be deleted by the DEA in connection with conclusion of the Contract.*

# Content

## 1. INTRODUCTION

This Appendix contains examples of the calculations of the Subsidy Rate and examples of calculations made in connection with the Annual Settlement.

All examples in this Appendix are made without indexation to illustrate how the mechanisms for the determination and calculation of the Subsidy Rate deductions work in principle. This means that the Offered Rate and baseline values are used in the examples without calculation af the indexed value in order to keep the examples simple and illustrative. Reference is made to clause 5 in Appendix 5, Subsidy and economy Scheme, for a detailed description of which variables are subject to indexation and how these calculations are made.

It is emphasized that the examples are not an exhaustive representation of all possible scenarios.

The colored squares in the table of each example highlights the variables that may affect the calculation of the deductions and of the Subsidy Rate in the specific scenario.

Capitalised terms used in this Appendix shall have the meaning ascribed to them in Appendix 2, Definitions.

## 2. EXAMPLES OF DETERMINATION AND CALCULATION OF SUBSIDY RATE DEDUCTIONS REGARDING TOTAL EUA & CO2-RELATED TAX SAVINGS (FOSSIL $CO_2$)

A total of seven examples have been included in order to illustrate the calculation of possible deductions in the calculation of the Subsidy Rate when the provisional EUA savings per tonne and/or provisional tax savings per tonne differ from the Baseline EUA Savings Per Tonne and/or Baseline Tax Savings Per Tonne.

The examples are based on an operator, who:

- capture and store fossil $CO_2$ subject to EUA, and $CO_2$-related taxes;
- has not specified a Baseline Total Carbon Credit Income, nor specifies a Forecast Total Carbon Credit Income; and
- has an Offered Rate of 850.00 DKK.

The examples reflect the determination and calculation of Subsidy Rate deductions regarding total EUA & $CO_2$-related tax savings as set out in clause 7 of Appendix 5 Subsidy and economy scheme.

The examples also reflect calculation of the Subsidy Rate based on the assumptions above[1] and without taken into account any future leglisation regarding biogenic allowances, for operators that might be subject to such future legislation with respect to a biogenic fraction of the Contracted Quantity.

This means that the examples reflect a calculation of the Subsidy Rate as set out in clause 3.6.1 – where the "*Excess income carbon credits*" is 0 (zero) and without indexation in accordance with clause 5.

**Example 2.1: Market value of EUA is higher than Baseline EUA Value**

| *Variables & parameters* | … | *Baseline values* | *Forecast Values* | … |
|---|---|---|---|---|
| Baseline Fossil EUA Fraction | | 50% | | |
| Baseline EUA Value | | 750.00 | | |
| Baseline EUA Savings Per Tonne | | 375.00 | | |
| Forecast Fossil EUA Fraction | | | 50% | |
| Market value of EUA | | | 850.00 | |
| Provisional EUA savings per tone | | | 425.00 | |
| Difference between provisional EUA savings per tonne & Baseline EUA Savings Per Tonne ("subtotal one") | | | 50.00 | |
| … | | | | |
| Baseline Tax Savings Per Tonne | | 375.00 | | |
| Provisional tax savings per tonne | | | 375.00 | |
| Difference between provisional tax savings per tonne & Baseline Tax Savings Per Tonne ("subtotal two") | | | 0.00 | |
| … | | | | |
| Subsidy Rate deduction (subtotal one + subtotal two) | | | 50.00 | … |
| Offered Rate | | | 850.00 | |
| Subsidy Rate | | | 800.00 | |

[1] And without the calculation of indexed value of Offered Rate and baseline values, see clause 1.

In example 2.1 the market value of EUA has proven to be 100.00 DKK higher than the Baseline EUA Value. The Forecast Fossil EUA Fraction remains at 50% - the same as the Baseline Fossil EUA Fraction. This means that the operator has increased EUA savings of 50.00 DKK.

Since the Baseline Tax Savings Per Tonne and the provisional tax savings per tonne are of equal value, the total increased EUA and $CO_2$ related tax savings also amount to 50.00 DKK per tonne.

As this means that the operator has increased total EUA and $CO_2$-related tax savings compared to baselines of the offer, the calculation of the Subsidy Rate shall be subject to a deduction equal to this increase of savings. The Subsidy Rate will therefore be 50.00 DKK less than the Offered Rate of 850.00 DKK. As a result, the Subsidy Rate is calculated to be 800.00 DKK.

**Example 2.2: Market value of EUA is lower than Baseline EUA Value**

| *Variables & parameters* | … | *Baseline values* | *Forecast Values* | … |
|---|---|---|---|---|
| Baseline Fossil EUA Fraction | | 50% | | |
| Baseline EUA Value | | 750.00 | | |
| Baseline EUA Savings Per Tonne | | 375.00 | | |
| Forecast Fossil EUA Fraction | | | 50% | |
| Market value of EUA | | | 650.00 | |
| Provisional EUA savings per tonne | | | 325.00 | |
| Difference between Provisional EUA savings per tonne & Baseline EUA Savings Per Tonne (“subtotal one”) | | | -50.00 | |
| … | | | | |
| Baseline Tax Savings Per Tonne | | 375.00 | | |
| Provisional tax savings per tonne | | | 375.00 | |
| Difference between provisional tax savings per tonne & Baseline Tax Savings Per Tonne (“subtotal two”) | | | 0.00 | |
| … | | | | |
| Subtotal one + subtotal two | | | -50.00 | |
| Subsidy Rate deduction | | | 0 | |
| Offered Rate | | | 850.00 | |

| | | | | |
|---|---|---|---|---|
| Subsidy Rate | | | 850.00 | |

In example 2.2 the market value of EUA has proven to be 100.00 DKK lower than the Baseline EUA Value. The Forecast Fossil EUA Fraction remains at 50% - the same as the Baseline Fossil EUA Fraction. This means that the operator has a decrease of EUA savings of 50.00 DKK.

Since the Baseline Tax Savings Per Tonne and the provisional tax savings per tonne are of equal value, the total decreased EUA and $CO_2$-related tax savings also amount to 50.00 DKK per tonne of $CO_2$

As the operator does not have increased total EUA and $CO_2$-related tax savings, the calculation of the Subsidy Rate is not subject to any deduction. This means that the Subsidy Rate will be equal to the Offered Rate of 850.00 DKK.

**Example 2.3: Forecast Fossil EUA Fraction & Forecast Total Tax Savings are higher compared to the baseline values**

| *Variables & parameters* | … | *Baseline values* | *Forecast Values* | … |
|---|---|---|---|---|
| Baseline Fossil EUA Fraction | | 50% | | |
| Baseline EUA Value | | 750.00 | | |
| Baseline EUA Savings Per Tonne | | 375.00 | | |
| Forecast Fossil EUA Fraction | | | 65% | |
| Market value of EUA | | | 750.00 | |
| Provisional EUA savings per tonne | | | 487.50 | |
| Difference between provisional EUA savings per tonne & Baseline EUA Savings Per Tonne (“subtotal one”) | | | 112.50 | |
| … | | | | |
| Baseline Total Tax Savings | | 37,500,000.00 | | |
| Annual Quantity | | 100,000 | | |
| Baseline Tax Savings Per Tonne | | 375.00 | | |
| Forecast Total Tax Savings | | | 42,500,000.00 | |
| Annual Forecast Quantity | | | 100,000 | |

| | | | | |
|---|---|---|---|---|
| Provisional tax savings per tonne | | | 425.00 | |
| Difference between provisional tax savings per tonne & Baseline Tax Savings Per Tonne ("subtotal two") | | | 50.00 | |
| … | | | | |
| Subsidy Rate deduction (subtotal one + subtotal two) | | | 162.50 | … |
| Offered Rate | | | 850.00 | |
| Subsidy Rate | | | 687.50 | |

In example 2.3 the operator has submitted a higher Forecast Fossil EUA Fraction, and a higher Forecast Total Tax Savings compared to the corresponding baseline values. This results in a higher EUA and tax savings per tonne of $CO_2$ compared to the operator's projections at the time of submission of the offer. The higher EUA savings, due to the increase in the Forecast Fossil EUA Fraction, amount to 112.50 DKK per tonne of $CO_2$.

The operator has submitted a Forecast Total Tax Savings that is 5,000,000.00 DKK higher than the Baseline Total Tax Savings. When divided with the Annual Forecast Quantity and the Annual Quantity respectively (both 100,000 tonnes), in order to transform the total tax savings into an amount per tonne of $CO_2$, the higher $CO_2$-related tax savings amount to 50.00 DKK per tonne of $CO_2$.

Adding these two sums together amounts to increased EUA and $CO_2$-related tax savings of 162.50 DKK per tonne of $CO_2$.

As this means that the operator has increased total EUA and $CO_2$-related tax savings compared to baselines of the offer the calculation of the Subsidy Rate shall be subject to a deduction of an amount equal to the increase of EUA and tax savings. The Subsidy Rate will therefore be 162.50 DKK less than the Offered Rate of 850.00 DKK. As a result, the Subsidy Rate is calculated to be 687.50 DKK.

**Example 2.4: Forecast Fossil EUA Fraction & Forecast Tax Savings are lower compared to the baseline values**

| *Variables & parameters* | … | *Baseline values* | *Forecast Values* | … |
|---|---|---|---|---|
| Baseline Fossil EUA Fraction | | 50% | | |
| Baseline EUA Value | | 750.00 | | |
| Baseline EUA Savings Per Tonne | | 375.00 | | |

| | | | | |
|---|---|---|---|---|
| Forecast Fossil EUA Fraction | | | 40% | |
| Market value of EUA | | | 750.00 | |
| Provisional EUA savings per tonne | | | 300.00 | |
| Difference between provisional EUA savings per tonne & Baseline EUA Savings Per Tonne (“subtotal one”) | | | -75.00 | |
| … | | | | |
| Baseline Total Tax Savings | | 37,500,000.00 | | |
| Annual Quantity | | 100,000 | | |
| Baseline Tax Savings Per Tonne | | 375.00 | | |
| Forecast Tax Savings Per Tonne | | | 32,500,000.00 | |
| Annual Forecast Quantity | | | 100,000 | |
| Provisional tax savings per tonne | | | 325.00 | |
| Difference between provisional tax savings per tonne & Baseline Tax Savings Per Tonne (“subtotal two”) | | | -50.00 | |
| … | | | | |
| Subtotal one + subtotal two | | | -125.00 | |
| Subsidy Rate deduction | | | 0 | … |
| Offered Rate | | | 850.00 | |
| Subsidy Rate | | | 850.00 | |

In example 2.4 the operator has submitted a forecast containing a lower Forecast Fossil EUA Fraction and a lower Forecast Total Tax Savings compared to the corresponding baseline values due to a lower fraction of the Annual Forecast Quantity being subject to EUA and $CO_2$-related taxes.

As there is no difference between the Baseline EUA Value and the market value of EUA, this results in a lower EUA savings per tonne of $CO_2$ that the operator captures and Stores compared to the operator’s projection at the time of submission of the offer. The lower EUA savings, due to the decrease in the fossil EUA fraction, amount to -75.00 DKK per tonne of $CO_2$.

The operator has a Forecast Total Tax Savings that is 5,000,000.00 DKK lower than the Baseline Total Tax Savings. When divided with the Annual Quantity and the Annual Forecast Quantity respectively (both 100,000 tonnes), in order to transform the total tax savings into an amount per tonne of $CO_2$, the lower tax savings amount to -50.00 DKK per tonne of $CO_2$.

Adding these two sums together amounts to decreased EUA and $CO_2$-related tax savings of -125.00 DKK per tonne of $CO_2$ captured and Stored by the operator.

As the operator does not have increased total EUA and $CO_2$-related tax savings, the calculation of the Subsidy Rate is not subject to any deduction. This means that the Subsidy Rate will be equal to the Offered Rate of 850.00 DKK.

**Example 2.5: Market value of EUA is higher than Baseline EUA Value and Forecasted Fossil EUA Fraction & Forecast Total Tax Savings are lower compared to the baseline values**

| *Variables & parameters* | … | *Baseline values* | *Forecast Values* | … |
|---|---|---|---|---|
| Baseline Fossil EUA Fraction | | 50% | | |
| Baseline EUA Value | | 750.00 | | |
| Baseline EUA Savings Per Tonne | | 375.00 | | |
| Forecast Fossil EUA Fraction | | | 40% | |
| Market value of EUA | | | 1,000.00 | |
| Provisional EUA savings per tonne | | | 400.00 | |
| Difference between provisional EUA savings per tonne & Baseline EUA Savings Per Tonne (“subtotal one”) | | | 25.00 | |
| … | | | | |
| Baseline Total Tax Savings | | 37,500,000.00 | | |
| Annual Quantity | | 100,000 | | |
| Baseline Tax Savings Per Tonne | | 375.00 | | |
| Forecast Total Tax Savings | | | 32,500,000.00 | |
| Annual Forecast Quantity | | | 100,000 | |
| Provisional tax savings per tonne | | | 325.00 | |
| Difference between provisional tax savings per tonne & Baseline Tax Savings Per Tonne (“subtotal two”) | | | -50.00 | |
| … | | | | |
| Subtotal one + subtotal two | | | -25.00 | |
| Subsidy Rate deduction | | | 0 | … |

| | | | | |
|---|---|---|---|---|
| Offered Rate | | | 850.00 | |
| Subsidy Rate | | | 850.00 | |

In example 2.5 the market value of EUA and the operator's Forecast Fossil EUA Fraction and Forecast Total Tax Savings affect the calculation of Subsidy Rate deductions in opposite directions.

Firstly, the market value of EUA of 1,000 DKK is higher than the Baseline EUA Value of 750.00 DKK. Secondly, the operator has submitted a Forecast Fossil EUA Fraction, that is ten percentage points lower than the corresponding baseline value.

Even though the operator now expects to Store less Fossil $CO_2$ subject to EUA than projected at the time of the offer, which – if the value of EUA were unchanged – would result in less EUA savings, the increase in market value of EUA outweighs this effect. The provisional EUA savings per tonne has therefore increased by 25.00 DKK per tonne of $CO_2$ compared to the Baseline EUA Savings Per Tonne.

Thirdly, the operator's Forecast Total Tax Savings is 5,000,000.00 DKK less than the Baseline Total Tax Savings. When divided with the Annual Forecast Quantity and the Annual Quantity respectively (both 100,000 tonnes), in order to transform the total tax savings into an amount per tonne of $CO_2$, the less tax savings amount to -50.00 DKK per tonne of $CO_2$.

Adding the increased EUA savings and decreased $CO_2$-related tax savings together amounts to -25.00 DKK, which is the total change in savings.

As the operator does not have an increase of total EUA and $CO_2$-related tax savings, the calculation of the Subsidy Rate is not subject to any deduction. This means that the Subsidy Rate will be equal to the Offered Rate of 850.00 DKK.

**Example 2.6: Market value of EUA is lower than Baseline EUA Value and Forecasted Fossil EUA Fraction & Forecast Total Tax Savings are higher compared to the baseline values**

| *Variables & parameters* | … | *Baseline values* | *Forecast Values* | … |
|---|---|---|---|---|
| Baseline Fossil EUA Fraction | | 50% | | |
| Baseline EUA Value | | 750.00 | | |
| Baseline EUA Savings Per Tonne | | 375.00 | | |

| | | | | |
|---|---|---|---|---|
| Forecast Fossil EUA Fraction | | | 65% | |
| Market value of EUA | | | 650.00 | |
| Provisional EUA savings per tonne | | | 422.50 | |
| Difference between provisional EUA savings per tonne & Baseline EUA Savings Per Tonne (“subtotal one”) | | | 47.50 | |
| … | | | | |
| Baseline Total Tax Savings | | 37,500,000.00 | | |
| Annual Quantity | | 100,000 | | |
| Baseline Tax Savings Per Tonne | | 375.00 | | |
| Forecast Total Tax Savings | | | 48,750,000.00 | |
| Annual Forecast Quantity | | | 100,000 | |
| Provisional sax savings | | | 487.50 | |
| Difference between provisional tax savings per tonne & Baseline Tax Savings Per Tonne (“subtotal two”) | | | 112.50 | |
| … | | | | |
| Subsidy Rate deduction (subtotal one + subtotal two) | | | 160.00 | … |
| Offered Rate | | | 850.00 | |
| Subsidy Rate | | | 690.00 | |

In example 2.6 the operator has increased provisional EUA savings per tonne despite a decrease in the market value of EUA compared to the Baseline EUA Value. The operators provisional tax savings per tonne have also increased compared to the Baseline Tax Savings Per Tonne.

Firstly, the market value of EUA of 650.00 DKK is lower than the Baseline EUA Value of 750.00 DKK. Secondly, the operator has also submitted a Forecast Fossil EUA Fraction that is 15 percentage points higher than the Baseline Fossil EUA Fraction.

Even though the Market value of EUA has turned out to be lower compared to the Baseline EUA Value, the operator now expects to Store more Fossil $CO_2$ subject to EUA than projected at the time of the offer, and this effect outweighs the impact of a lower Market value of EUA. The operator’s provisional EUA savings per tonne have therefore increased by 47.50 DKK per tonne of $CO_2$ compared to the Baseline EUA Savings Per Tonne.

Thirdly, the operator has submitted a Forecast Total Tax Savings that is 11,250,000.00 DKK higher Baseline Total Tax Savings. When divided with the Annual Forecast Quantity and the Annual Quantity respectively (both 100,000 tonnes), in order to transform the total tax savings into an amount per tonne of $CO_2$, the increase of $CO_2$-related tax savings amount to 112.50 DKK per tonne of $CO_2$

Adding the increase of EUA savings per tonne and increase of $CO_2$-related tax savings per tonne together amounts to 160.00 DKK per tonne, which is the total increase in savings.

As this means that the operator has increased total EUA and $CO_2$-related tax savings compared to baseline of the offer, the calculation of the Subsidy Rate shall be subject to a deduction of an amount equal to the increase of savings. The Subsidy Rate will therefore be 160 DKK less than the Offered Rate of 850.00 DKK. As a result, the Subsidy Rate is calculated to be 690.00 DKK.

**Example 2.7 Market value of EUA is lower than Baseline EUA Value and Forecast Total Tax Savings are higher than Baseline Total Tax Savings**

| *Variables & parameters* | … | *Baseline values* | *Forecast Values* | … |
|---|---|---|---|---|
| Baseline Fossil EUA Fraction | | 50% | | |
| Baseline EUA Value | | 750.00 | | |
| Baseline EUA Savings Per Tonne | | 375.00 | | |
| Forecast Fossil EUA Fraction | | | 50% | |
| Market value of EUA | | | 500.00 | |
| Provisional EUA savings per tonne | | | 250.00 | |
| Difference between provisional EUA savings per tonne & Baseline EUA Savings Per Tonne (“subtotal one”) | | | -125.00 | |
| … | | | | |
| Baseline Total Tax Savings | | 37,500,000.00 | | |
| Annual Quantity | | 100,000 | | |
| Baseline Tax Savings Per Tonne | | 375.00 | | |
| Forecast Total Tax Savings | | | 47,500,000.00 | |
| Annual Forecast Quantity | | | 100,00 | |
| Provisional tax savings per tonne | | | 475.00 | |

| | | | | |
|---|---|---|---|---|
| Difference between provisional tax savings per tonne & Baseline Tax Savings Per Tonne (“subtotal two”) | | | 100.00 | |
| … | | | | |
| Ssubtotal one + subtotal two | | | -25.00 | |
| Subsidy Rate deduction | | | 0 | … |
| Offered Rate | | | 850.00 | |
| Subsidy Rate | | | 850.00 | |

In example 2.7 the Forecast Total Tax Savings has increased compared to the baseline value, while the Forecast Fossil EUA Fraction remain equal to the Baseline Fossil EUA Fraction. This outcome may e.g. occur if legislative changes results in an increase of the Emission- and/or $CO_2$ Tax rates.

Furthermore, the market value of EUA has decreased compared to the Baseline EUA Value, amounting to 500.00 DKK. Consequently, the operator’s total EUA savings have therefore decreased by 125.00 DKK per tonne of $CO_2$.

The operator has provisional total tax savings that are 10,000,000.00 DKK higher than the Baseline Total Tax Savings. When divided with the Annual Quantity and the Annual Forecast Quantity respectively (both 100,000 tonnes), in order to transform the total tax savings into an amount per tonne of $CO_2$, the higher tax savings amount to 100.00 DKK per tonne of $CO_2$.

When adding the decrease of EUA savings and the increase of tax saving, the sum amounts to -25.00 DKK, i.e. a decrease of the total EUS and tax savings.

As the operator does not have an increase of total EUA and $CO_2$-related tax savings compared to baselines of the offer, the calculation of the Subsidy Rate is not subject to any deduction. This means that the Subsidy Rate will be equal to Offered Rate of 850.00 DKK.

## 3. EXAMPLES OF DETERMINATION AND CALCULATION OF SUBSIDY RATE DEDUCTIONS REGARDING CARBON CREDIT INCOME AND OTHER ALLOWANCES SAVINGS (BIOGENIC AND ATMOSPHERIC CO2)

The following examples illustrate the calculation of possible deductions in the calculation of the Subsidy Rate when the operator submits a forecast containing a Forecast Total Carbon Credit Income that differs from the Baseline Total Carbon Credit Income.

Example 2-6 also illustrate the possible impact on calculation of the Subsidy Rate in scenarios where future legislation entails that participation in the EU Emissions Trade Scheme (ETS), or a similar EU-mandated trade scheme, becomes either mandatory for emitters of Biogenic $CO_2$ or voluntary for emitters of Biogenic $CO_2$ and operators capturing Atmospheric $CO_2$.

The examples are based on an operator, who:

- capture and store biogenic $CO_2$; and
- does not store fossil $CO_2$ not subject to EUA and $CO_2$-related taxes; and,
- has an Offered Rate of 850.00 DKK.

The examples reflect the determination and calculation of Subsidy Rate deductions regarding Carbon Credit income (as set out in clause 8 of Appendix 5, Subsidy and economy scheme) and other allowances savings (as set out in clause 9 of Appendix 5, Subsidy and economy scheme).

The examples also reflect calculation of the Subsidy Rate based on the assumptions above and without the calculation of indexed value of Offered Rate and baseline values.

This means that the examples reflect calculation of the Subsidy Rate as set out in the formulas in clause 3.6 [2] where $(\Delta Savings_{EUA} + \Delta Savings_{tax})$ is 0 (zero) and without indexation in accordance with clause 5.

**Example 3.1 Forecast Carbon Credit Income is higher than Baseline Total Carbon Credit Income**

| *Variables & parameters* | … | *Baseline values* | *Forecast Values* | … |
|---|---|---|---|---|
| Baseline Total Carbon Credit Income | | 15,000,000.00 | | |
| Forecast Total Carbon Credit Income | | | 20,000,000.00 | |
| Annual Forecast Quantity | | | 100,000 | |
| Provisional excess Carbon Credit income per tonne | | | 50.00 | |
| 90% of provisional excess Carbon Credit income per tonne | | | 45.00 | |
| … | | | | |
| Subsidy Rate deduction | | | 45.00 | |

[2] Example 1 reflects the formula in clause 3.6.1, example 2, 3 and 4 reflect the formula in clause 3.6.2 and example 5 and 6 reflect the formula in clause 3.6.3.

| | | | | |
|---|---|---|---|---|
| Offered Rate | | | 850.00 | |
| Subsidy Rate | | | 805.00 | |

In example 3.1 the operator has specified a Baseline Total Carbon Credit Income of 15,000,000.00 DKK. The operator has furthermore submitted a Forecast Total Carbon Credit Income of 20,000,000.00 DKK. The difference between the forecast and the baseline is 5,000,000.00 DKK.

The provisional excess Carbon Credits income per tonne is the difference (5,000,000.00 DKK) divided by the Annual Forecast Quantity (100,000 tonnes). In this example that amount equals 50.00 DKK.

The calculation of the Subsidy Rate is subject to a deduction of 90% of such excess income. This means that the Subsidy Rate will be 45.00 DKK less than the Offered Rate of 850.00 DKK. As a result, the Subsidy Rate is calculated to be 805.00 DKK.

**Example 3.2 Calculation of a Subsidy Rate deduction if participation in the ETS becomes mandatory (Biogenic CO2) – no income from Carbon Credits specified**

| *Variables & parameters* | … | *Baseline values* | *Forecast Values* | … |
|---|---|---|---|---|
| Baseline Total Carbon Credit Income | | 0.00 | | |
| Forecast Total Carbon Credit Income | | | 0.00 | |
| Annual Forecast Quantity | | | 100,00 | |
| Provisional excess Carbon Credit income per tonne | | | 0.00 | |
| … | | | | |
| Forecast Biogenic Allowances Fraction | | | 50% | |
| Market value of Biogenic Allowances | | | 750.00 | |
| Provisional Biogenic Allowances Savings | | | 375.00 | |
| … | | | | |
| Subsidy Rate deduction | | | 375.00 | |
| Offered Rate | | | 850.00 | |
| Subsidy Rate | | | 475.00 | |

In example 3.2 Biogenic $CO_2$ has become subject to EU ETS (mandatory) and the operator has not specified any income generated by Carbon Credits in the offer or in the forecast.

This means that only a deduction regarding the provisional biogenic allowances savings will apply in the calculation of the Subsidy Rate. The provisional biogenic allowances savings amounts to 375.00 DKK, calculated by multiplying the Forecast Biogenic Allowances Fraction of 50% with the market value of biogenic allowances of 750.00 DKK.

As this means that the operator has savings of biogenic allowances per tonne $CO_2$ the calculation of the Subsidy Rate shall be subject to a deduction of an amount equal to the increase of savings and the Subsidy Rate will therefore be 375 DKK less than the Offered Rate of 850.00 DKK. As a result, the Subsidy Rate is calculated to be 475.00 DKK.

**Example 3.3 Calculation of a Subsidy Rate deduction if participation in the ETS becomes mandatory (Biogenic CO2) – inclusion in the ETS has negatively affected the operator's Carbon Credit income**

| *Variables & parameters* | … | *Baseline values* | *Forecast Values* | … |
|---|---|---|---|---|
| Baseline Total Carbon Credit Income | | 15,000,000.00 | | |
| Forecast Total Carbon Credit Income | | | 0.00 | |
| Annual Forecast Quantity | | | 100,000 | |
| Provisional excess Carbon Credit income per tonne (”subtotal one”) | | | -150.00 | |
| … | | | | |
| Forecast Biogenic Allowances Fraction | | | 50% | … |
| Market value biogenic allowances | | | 750.00 | |
| Provisional Biogenic Allowances Savings (subtotal two) | | | 375.00 | |
| … | | | | |
| Subsidy Rate deduction (subtotal two + subtotal one) | | | 225.00 | … |
| Offered Rate | | | 850.00 | |
| Subsidy Rate | | | 625.00 | |

In example 3.3 the operator has specified a Baseline Total Carbon Credit Income of 15,000,000.00 DKK. However, after the operator's (mandatory) inclusion into the ETS,[3] the Forecast Total Carbon Credit Income (and thus the provisional excess Carbon Credit income) has dropped to 0 DKK. The difference between the forecast and the baseline is therefore -15,000,000.00 DKK.

The provisional excess Carbon Credits income per tonne is this difference (-15,000,000.00 DKK) divided by the Annual Forecast Quantity (100,000 tonnes). This amount equals -150.00 DKK. The operator has no excess income from Carbon Credits, but instead a decreased Carbon Credit income per tonne, and the amount is a negative number.

The operator's provisional biogenic allowances savings amounts to 375.00 DKK, calculated by multiplying the Forecast Biogenic Allowances Fraction of 50% with the market value biogenic allowance of 750.00 DKK.

As the operator has no excess income from Carbon Credits, the only possible deduction is the savings of biogenic allowances but taking into account the decreased income of Carbon Credits.

The decreased Carbon Credit income per tonne (a negative amount) will be added to the biogenic allowances saving. This amount, 225.00 DKK, will be the deduction in the calculation of the Subsidy Rate.

As this means that the operator has a higher savings of biogenic allowances per tonne $CO_2$ than the decrease in Carbon Credit income, the calculation of the Subsidy Rate shall be subject to a deduction of an amount equal to the difference between the provisional biogenic allowances savings and the decrease of Carbon Credit income, i. e the Subsidy Rate will be 225 DKK less the Offered Rate of 850.00 DKK. As a result of the deduction, the Subsidy Rate is calculated to be 625.00 DKK.

If the operator had had a loss of income from Carbon Credits exceeding the Provisional Biogenic Allowances Savings (375.00 DKK), meaning that the sum of these amounts would be a negative amount, the calculation of the Subsidy Rate would not be subject to a deduction, as the Subsidy Rate cannot exceed the Offered Rate[4]. In such an example, the Subsidy Rate would be equal to the Offered Rate, i.e. 850.00 DKK.

**Example 3.4 Calculation of a Subsidy Rate deduction if participation in the ETS becomes mandatory (Biogenic CO2) – inclusion in the ETS has not affected the operator's Carbon Credit income**

| *Variables & parameters* | … | *Baseline values* | *Forecast Values* | … |
|---|---|---|---|---|

[3] This may occur if e.g. the operator's ability to sell carbon credits is directly inhibited by the operator's inclusion into the ETS.

[4] Note, the Subsidy Rate cannot exceed the Offered Rate adjusted in accordance with clause 5.2, Appendix 5, but for the sake of simplicity the examples are without the indexation.

| | | | | |
|---|---|---|---|---|
| Baseline Total Carbon Credit Income | | 15,000,000.00 | | |
| Forecast Total Carbon Credit Income | | | 20,000,000.00 | |
| Annual Forecast Quantity | | | 100,000 | |
| Provisional excess Carbon Credit income per tonne | | | 50.00 | |
| 90% of provisional excess Carbon Credit income per tonne (“subtotal one”) | | | 45.00 | |
| … | | | | |
| Forecast Biogenic Allowances Fraction | … | | 50% | … |
| Market value biogenic allowances | | | 750.00 | |
| Provisional biogenic allowances savings (“subtotal two”) | | | 375.00 | |
| … | | | | |
| Subsidy Rate deduction (subtotal two + subtotal one) | | | 420.00 | … |
| Offered Rate | | | 850.00 | |
| Subsidy Rate | | | 430.00 | |

In example 3.4 the operator has specified a Baseline Total Carbon Credit Income of 15,000,000.00 DKK. Inclusion into the ETS has not negatively affected the operator’s Carbon Credit income. The operator has therefore submitted a Forecast Total Carbon Credit Income of 20,000,000.00 DKK. The difference between the forecast and the baseline is 5,000,000.00 DKK.

The provisional excess Carbon Credits income per tonne is the difference (5,000,000.00 DKK) divided by the Annual Forecast Quantity (100,000 tonnes). This amount equals 50.00 DKK. The calculation of the Subsidy Rate is subject to a deduction of 90% of this excess income, equal to 45.00 DKK.

Furthermore, the calculation of the Subsidy Rate is also subject to a deduction equal to the savings of biogenic allowances. The provisional biogenic allowances savings amount to 375.00 DKK, which is calculated by multiplying the operator’s Forecast Biogenic Allowances Fraction of 50% with the market value of the biogenic allowances of 750.00 DKK.

As this means that the operator has a higher income from Carbon Credits and savings from biogenic allowances per tonne $CO_2$ compared to the offer, the calculation of the Subsidy Rate shall be subject to a deduction of an amount equal to the sum of the increase of Carbon Credit income and the biogenic allowances savings. The Subsidy Rate will therefore be 420.00 DKK less than the Offered Rate of 850.00 DKK. As a result, the Subsidy Rate is calculated to be 430.00 DKK.

**Example 3.5 Calculation of a Subsidy Rate deduction if participation in the ETS becomes <u>voluntary</u> (Biogenic and Atmospheric $CO_2$) – no income from Carbon Credits specified**

| *Variables & parameters* | … | *Baseline values* | *Forecast Values* | … |
|---|---|---|---|---|
| Baseline Total Carbon Credit Income | | 0.00 | | |
| Forecast Total Carbon Credit Income | | | 0.00 | |
| Annual Forecast Quantity | | | 100,000 | |
| Provisional excess Carbon Credit income per tonne | | | 0.00 | |
| … | | | | |
| Forecast Biogenic Allowances Fraction | | | 50% | |
| Market value biogenic allowances | | | 750.00 | |
| Provisional biogenic allowances savings | | | 375.00 | |
| 90% of excess income per tonne | | | 337.50 | |
| … | | | | |
| Subsidy Rate deduction | | | 337.50 | |
| Offered Rate | | | 850.00 | |
| Subsidy Rate | | | 512.50 | |

In example 3.5, the operator has chosen to participate in the voluntary ETS. The operator has not specified an income from Carbon Credits in the offer or forecast. The possible deduction of the Subsidy Rate will therefore be calculated only on the basis of the operator's expected biogenic allowances savings.[5] The deduction in the calculation of the Subsidy Rate will be 90% of savings of biogenic allowances.

The operator's provisional biogenic allowances savings amount to 375 DKK, which is calculated by multiplying the operator's Forecast Biogenic Allowances Fraction of 50% with the market value of the biogenic allowances of 750.00 DKK.

[5] For the purpose of this example, it is assumed that the operator only captures and Stores Biogenic $CO_2$. However, the same example would be applicable if the operator captured and stored Atmospheric $CO_2$.

90 % of such excess savings per tonne will be the deduction in the calculation of the Subsidy Rate. This means that the Subsidy Rate will be 337.50 DKK less than the Offered Rate of 850.00 DKK. As a result, the Subsidy Rate is calculated to be 512.50 DKK.

**Example 3.6 Calculation of a Subsidy Rate deduction if participation in the ETS becomes <u>voluntary</u> (Biogenic and Atmospheric $CO_2$) - participation in the ETS has negatively affected the operator's Carbon Credit income**

| *Variables & parameters* | … | *Baseline values* | *Forecast Values* | … |
|---|---|---|---|---|
| Baseline Total Carbon Credit Income | | 15,000,000.00 | | |
| Forecast Carbon Credit Income | | | 10,000,000.00 | |
| Annual Forecast Quantity | | | 100,000 | |
| Provisional excess Carbon Credit income ("subtotal one") | | | -50.00 | |
| … | | | | |
| Forecast Biogenic Allowances Fraction | | | 50% | … |
| Market value biogenic allowances | | | 750.00 | |
| Provisional biogenic allowances savings ("subtotal two") | | | 375.00 | |
| … | | | | |
| Excess income (subtotal two + subtotal one) | | | 325.00 | … |
| 90% of excess income | | | 292.50 | |
| … | | | | |
| Subsidy Rate deduction | | | 292.50 | |
| Subsidy Rate | | | 850.00 | |
| Invoice Subsidy Rate | | | 557.50 | |

In example 3.6 the operator has chosen to participate in the voluntary ETS.[6] As the operator has no excess income from Carbon Credits, the only possible deduction in the calculation of the Subsidy Rate shall be 90% of the savings of biogenic allowances but taking into account the decreased income of Carbon Credits.

The operator's provisional biogenic allowances savings amount to 375.00 DKK, which is calculated by multiplying the operator's Forecast Biogenic Allowances Fraction of 50% with the market value of the biogenic allowances of 750.00 DKK

The operator has specified a Baseline Total Carbon Credit Income of 15,000,000.00 DKK, which amounts to 150.00 DKK per tonne based on the Annual Quantity of 100,000 tonnes.

However, the operator's participation in the ETS has negatively affected the income from Carbon Credits. Therefore, the operator has, submitted a lower Forecast Total Carbon Credit Income compared to the Baseline Total Carbon Credit Income.

The operator has specified a Baseline Total Carbon Credit Income of 15,000,000.00 DKK. The operator has then submitted a Forecast Total Carbon Credit Income of 10,000,00.00 DKK. The difference between the forecast and the baseline is -5,000,000.00 DKK.

The provisional excess Carbon Credit pr tonne income is this difference (-5,000,000.00 DKK) divided by the Annual Forecast Quantity (100,000 tonnes). This amount equals -50.00 DKK. The operator therefore has no excess Carbon Credit income and the -50.00 DKK reflects the decrease of Carbon Credit income.

In order to determine whether a reduction shall apply the provisional biogenic allowances savings is added together with the amount equal to the decrease in the income generated by Carbon Credits. This amounts to 325.00 DKK.

The calculation of the Subsidy Rate is subject to a deduction of 90% of this sum of the biogenic allowances savings and the decrease of the Carbon Credit income. This means that the Subsidy Rate will be 292.50 DKK less than the Offered Rate of 850.00 DKK. As a result, the Subsidy Rate will be calculated to be 557.50 DKK.

[6] For the purpose of this example, it is assumed that the operator only captures and Stores Biogenic $CO_2$. However, the same example would be applicable if the operator captured and stored Atmospheric $CO_2$.

## 4. EXAMPLES OF DETERMINATION AND CALCULATION OF A SUBSIDY RATE DEDUCTION FOR OPERATORS WITH A CARBON CREDIT INCOME WHO ALSO STORE FOSSIL CO2 SUBJECT TO EUA

These examples reflect the determination and calculation of Subsidy Rate deductions regarding carbon credit income (as set out in clause 8 of Appendix 5, Subsidy and economy scheme) and other allowances savings (as set out in clause 9 of Appendix 5, Subsidy and economy scheme).

The examples also reflect calculation of the Subsidy Rate based on the assumptions below and without the calculation of indexed value of Offered Rate and baseline values.

### 4.1 Example 4.1 Higher EUA & tax savings and higher Carbon Credit Income

This example one illustrates a scenario where the following apply:

- Market value of EUA is higher than Baseline EUA Value
- Forecast Fossil EUA Fraction and provisional tax savings per tonne are higher compared to the baseline values
- Forecast Total Carbon Credit Income is higher than the Baseline Total Carbon Credit income
- No inclusion of Biogenic/Atmospheric CO2 in ETS
- The Offered Rate is 850.00 DKK.

| *Variables & parameters* | … | *Baseline values* | *Forecast Values* | … |
|---|---|---|---|---|
| Baseline Fossil EUA Fraction | | 50% | | |
| Baseline EUA Value | | 750.00 | | |
| Baseline EUA Savings Per Tonne | | 375.00 | | |
| Forecast Fossil EUA Fraction | | | 65% | |
| Market value of EUA | | | 850.00 | |
| Provisional EUA savings per tonne | | | 552.50 | |
| Difference between provisional EUA savings per tonne & Baseline EUA Savings Per Tonne (“subtotal one”) | | | 177.50 | |
| … | | | | |

| | | | |
|---|---|---|---|
| Baseline Total Tax Savings | | 37,500,000.00 | |
| Annual Quantity | | 100,000 | |
| Baseline Tax Savings Per Tonne | | 375.00 | |
| Forecast Total Tax Savings | | | 48,750,000.00 |
| Annual Forecast Quantity | | | 100,000 |
| Provisional tax savings per tonne | | | 487.50 |
| Difference between provisional tax savings per tonne & Baseline Tax Savings Per Tonne (“subtotal two”) | | | 112.50 |
| … | | | |
| Subsidy Rate deduction regarding EUA savings and CO2-related taxes (subtotal one + subtotal two) | | | 290.00 |
| … | | | |
| Baseline Total Carbon Credit Income | | 15,000,000.00 | |
| Forecast Total Carbon Credit Income | | | 20,000,000.00 |
| Annual Forecast Quantity | | | 100,000 |
| Provisional excess Carbon Credit income per tonne | | | 50.00 |
| Subsidy Rate deduction of 90% of excess Carbon Credit income per tonne (“subtotal three”) | | | 45.00 |
| … | | | |
| Subsidy Rate deduction (subtotal one + subtotal two) + subtotal three | | | 335.00 |
| Offered Rate | | | 850.00 |
| Subsidy Rate | | | 515.00 |

In example 4.1 the operator stores both Fossil and Biogenic CO2 and has a Baseline Carbon Credit Income. The Subsidy Rate is subject to two possible deductions; 1) the sum of the EUA savings and CO2-related tax savings and 2) 90% of the excess income from Carbon Credits.

The market value EUA has proven to be 100.00 DKK higher than the Baseline EUA Value. The operator has furthermore submitted a forecast containing an increase in the Forecast Fossil EUA Fraction compared to the Baseline Fossil EUA Fraction. Both of these factors lead to a higher provisional EUA savings per tonne compared to the operator’s Baseline EUA Savings Per Tonne. The increased savings amount to 177.50 DKK per tonne of CO2.

The operator has also submitted a forecast containing a Forecast Total Tax Savings that is 11,250,000.00 DKK higher than the Baseline Total Tax Savings. Dividing this total by the Annual Quantity of 100,000 tonnes, the operator's provisional tax savings per tonne amount to 115.50 DKK. This means that the operator now saves 112.50 DKK per tonne of $CO_2$ more on CO2-related taxes compared to the operator's projections at the time of submission of the offer.

The sum of 1) the difference between provisional EUA savings per tonne and the Baseline EUA Savings Per Tonne, and 2) the difference between the provisional tax savings per tonne and the Baseline Tax Savings Per Tonne, is 290.00 DKK and represents the deduction regarding EUA saving & $CO_2$ related tax savings in the calculation of the Subsidy Rate.

The operator has specified a Baseline Total Carbon Credit Income of 15,000,000.00 DKK. The operator has submitted a Forecast Total Carbon Credit Income of 20,000,000.00 DKK. The difference between the forecast and the baseline is 5,000,000.00 DKK.

The provisional excess Carbon Credits income per tonne is this difference (5,000,000.00 DKK) divided by the Annual Forecast Quantity (100,000 tonnes). This amount equals 50.00 DKK.

The Forecast Total Carbon Credit Income is higher than the Baseline Total Carbon Credit Income, resulting in an excess income, and the calculation of the Subsidy Rate will be subject to a deduction of 90% of the excess income which is equal to 45.00 DKK.

As this means that the operator has both higher savings from EUA and CO2-related taxes and excess income generated by Carbon credits compared to the offer, the calculation of the Subsidy Rate shall be subject to a deduction equal to the increase of total EUA and tax savings and a deduction equal to 90 % of the increase of Carbon Credit income. The Subsidy Rate will therefore be 335.00 DKK less than the Offered Rate of 850.00 DKK. As a result, the Subsidy Rate is calculated to be 515.00 DKK.

### 4.2 Example 4.2 Higher EUA & tax savings and lower Carbon Credit Income

This example two illustrates a scenario where the following apply:

- Market value of EUA is higher than Baseline EUA Value
- Forecast Fossil EUA Fraction and provisional tax savings per tonne are higher compared to the baseline values
- Forecast Total Carbon Credit Income is lower than Baseline Total Carbon Credit Income

- No inclusion of Biogenic/Atmospheric CO2 in ETS
- The Offered Rate is 850.00 DKK.

| *Variables & parameters* | … | *Baseline values* | *Forecast Values* | … |
|---|---|---|---|---|
| Baseline Fossil EUA Fraction | | 50% | | |
| Baseline EUA Value | | 750.00 | | |
| Baseline EUA Savings Per Tonne | | 375.00 | | |
| Forecast Fossil EUA Fraction | | | 65% | |
| Market value of EUA | | | 850.00 | |
| Provisional EUA savings per tonne | | | 552.50 | |
| Difference between provisional EUA savings per tonne & Baseline EUA Savings Per Tonne (“subtotal one”) | | | 177.50 | |
| … | | | | |
| Baseline Total Tax Savings | | 37,500,000.00 | | |
| Annual Quantity | | 100,000 | | |
| Baseline Tax Savings Per Tonne | | 375.00 | | |
| Forecast Total Tax Savings | | | 48,750,000.00 | |
| Annual Forecast Quantity | | | 100,000 | |
| Forecast Tax Savings Per Tonne | | | 487.50 | |
| Difference between provisional tax savings per tonne & Baseline Tax Savings Per Tonne (“subtotal two”) | | | 112.50 | |
| … | | | | |
| Subsidy Rate deduction regarding EUA savings and CO2-related taxes (subtotal one + subtotal two) | | | 290.00 | |
| … | | | | |
| Baseline Total Carbon Credit Income | | 15,000,000.00 | | |
| Forecast Total Carbon Credit Income | | | 5,000,000.00 | |
| Annual Forecast Quantity | | | 100,000 | |
| Provisional excess Carbon Credit income | | | -100.00 | |
| Excess income (“subtotal three”) | | | 0.00 | |
| … | | | | |

| | | | | |
|---|---|---|---|---|
| Subsidy Rate deduction (subtotal one + subtotal two) + subtotal three | | | 290.00 | |
| Offered Rate | | | 850.00 | |
| Subsidy Rate | | | 560.00 | |

In this example, the operator stores both Fossil and Biogenic CO2 and has a Baseline Carbon Credit Income. The Subsidy Rate is subject to two possible deductions; 1) the sum of the EUA savings and CO2-related tax savings and 2) 90% of the excess income from Carbon Credits.

The market value EUA has proven to be 100.00 DKK higher than the Baseline EUA Value. The operator has furthermore submitted a forecast containing an increase in the Forecast Fossil EUA Fraction compared to the Baseline Fossil EUA Fraction. Both of these factors lead to a higher provisional EUA savings per tonne compared to the operator's Baseline EUA Savings Per Tonne. The increased savings amount to 177.50 DKK per tonne of CO2.

The operator has also submitted a forecast containing a Forecast Total Tax Savings that is 11,250,00.00 DKK higher than the Baseline Total Tax Savings. Dividing this total by the Annual Quantity of 100,000, the operator's provisional tax savings per tonne amount to 487.50 DKK. This means that the operator now saves 112.50 DKK per tonne of $CO_2$ more on CO2-related taxes compared to the operator's projections at the time of submission of the offer.

The sum of 1) the difference between provisional EUA savings per tonne and the Baseline EUA Savings Per Tonne, and 2) the difference between the provisional tax savings per tonne and the Baseline Total Tax Savings Per Tonne, is 290.00 DKK and represents the deduction regarding EUA saving & $CO_2$ related tax savings in the calculation of the Subsidy Rate.

The operator has a Forecast Total Carbon Credit Income of 5,000,000.00 DKK and a Baseline Total Carbon Credit Income of 15,000,000.00. The difference between the forecast and the baseline is -10,000,000.00 DKK (i.e. a negative amount).

The provisional excess Carbon Credit income per tonne is this difference (-10,000,000.00 DKK) divided by the Annual Forecast Quantity (100,000 tonnes). This amount is equal to -100.00 DKK. The operator therefore has no excess Carbon Credit income but instead the -100.00 DKK reflects the decreased Carbon Credit income. As the difference is a negative amount a reduction will not apply. and the sub-total three (in the calculation above) is therefore set at 0 (zero).

As this means that the operator has a higher savings from EUA and CO2-related taxes but no excess income generated by Carbon credits compared to the offer and the calculation of the Subsidy Rate shall be subject to

a deduction equal to increase of the total EUA and tax savings (290 DKK). The Subsidy Rate will therefore be 290.00 DKK less than the Offered Rate of 850.00 DKK. As a result, the Subsidy Rate is calculated to be 560.00 DKK.

## 5. EXAMPLES OF ANNUAL SETTLEMENT CALCULATIONS

### 5.1 Example 5.1 Calculation of Actual Subsidy Rate

This example 5.1 illustrates a scenario where the DEA will calculate an Actual Subsidy Rate in accordance with step 3 in Appendix 5, Subsidy and economy scheme, since at least one of circumstances stated in clause 11.3, occur in the given year.

The example illustrates a scenario where the following apply:

- Actual Fossil EUA Fraction exceeds the Baseline Fossil EUA Fraction
- Actual Total Tax Savings exceed the Baseline Total Tax Savings
- Actual Total Carbon Credit Income exceeds the Baseline Total Carbon Credit Income
- No inclusion of Biogenic/Atmospheric CO2 in ETS
- The Offered Rate is 850.00 DKK

| *Variables & parameters* | … | *Baseline values* | *Actual Values* | … |
|---|---|---|---|---|
| Baseline Fossil EUA Fraction | | 50% | | |
| Baseline EUA Value | | 750.00 | | |
| Baseline EUA Savings Per Tonne | | 375.00 | | |
| Actual Fossil EUA Fraction | | | 70% | |
| Invoiced Quantity Q1 | | | 20,000 | |
| Invoiced Quantity Q2 | | | 30,000 | |
| Invoiced Quantity Q3 | | | 30,000 | |
| Invoiced Quantity Q4 | | | 20,000 | |
| Sum of Invoiced Quantities for the given year | | | 100,000 | |
| Proportional value of the Invoiced Quantity for Q1 | | | 20% | |

| | | | | |
|---|---|---|---|---|
| Proportional value of the Invoiced Quantity for Q2 | | | 30% | |
| Proportional value of the Invoiced Quantity for Q3 | | | 30% | |
| Proportional value of the Invoiced Quantity for Q4 | | | 20% | |
| Market value of EUA for Q1 | | | 840.00 | |
| Market value of EUA for Q2 | | | 845.00 | |
| Market value of EUA for Q3 | | | 855.00 | |
| Market value of EUA for Q4 | | | 860.00 | |
| Weighted market value of EUA | | | 850.00 | |
| Actual EUA savings per tonne | | | 595.00 | |
| Difference between actual EUA savings per tonne & Baseline EUA Savings Per Tonne (“subtotal one”) | | | 220.00 | |
| … | | | | |
| Baseline Total Tax Savings | | 37,500,000.00 | | |
| Annual Quantity | | 100,000 | | |
| Baseline Tax Savings Per Tonne | | 375.00 | | |
| Actual Total Tax Savings | | | 50,000,000.00 | |
| Verified Delivered Quantity | | | 100,000 | |
| Actual tax savings per tonne | | | 500.00 | |
| Difference between actual tax savings per tonne & Baseline Tax Savings Per Tonne (“subtotal two”) | | | 125.00 | |
| … | | | | |
| Subsidy Rate deduction regarding EUA savings and CO2-related taxes (subtotal one + subtotal two) | | | 345.00 | |
| … | | | | |
| Baseline Total Carbon Credit Income | | 15,000,000.00 | | |
| Actual Total Carbon Credit Income | | | 20,000,000.00 | |
| Verified Delivered Quantity | | | 100,000 | |
| Actual excess Carbon Credit income per tonne | | | 50.00 | |
| Subsidy Rate deduction of 90% of excess Carbon Credit income per tonne (“subtotal three”) | | | 45.00 | |
| … | | | | |

| | | | |
|---|---|---|---|
| Subsidy Rate deduction (subtotal one + subtotal two) + subtotal three | | | 390.00 |
| Offered Rate | | | 850.00 |
| Actual Subsidy Rate | | | 460.00 |
| … | | | |
| Subsidy Rate Q1 | | | 515.00 |
| Subsidy Rate Q2 | | | 515.00 |
| Subsidy Rate Q3 | | | 515.00 |
| Subsidy Rate Q4 | | | 515.00 |
| Invoiced subsidy Q1 | | | 10,300,000.00 |
| Invoiced subsidy Q2 | | | 15,450,000.00 |
| Invoiced subsidy Q3 | | | 15,450,000.00 |
| Invoiced subsidy Q4 | | | 10,300,000.00 |
| Total invoiced Subsidy | | | 51,500,000.00 |
| Actual Subsidy | | | 46,000,000.00 |
| Excess subsidy subject to repayment | | | 5,500,000.00 |

In this example, the operator stores both Fossil and Biogenic CO2 and has a Baseline Carbon Credit Income. The Actual Subsidy Rate is subject to two possible deductions; 1) the sum of the EUA savings and savings of CO2-related taxes and 2) 90% of the excess income from Carbon Credits.

The weighted market value of EUA is calculated to be 850.00 DKK based on the Invoiced Quantities in tonnes (Q1 = 20,000, Q2 = 30,000, Q3 = 30,000, Q4 = 20,000) and their respective proportional value (Q1 = 20%, Q2 = 30%, Q3 = 30%, Q4 = 20%) of the sum of quantities (100,000 tonnes) and the corresponding market value of EUA for each quarter (Q1 = 840.00, Q2 = 845.00, Q3 = 855.00, Q4 = 860.00) in DKK. The weighted market value of EUA is 100.00 DKK higher than the Baseline EUA Value.

The operator has submitted an annual report containing an Actual Fossil EUA Fraction that is 20 percentage points higher compared to the Baseline Fossil EUA Fraction.

Both of these factors lead to a higher actual EUA savings per tonne compared to the operator's Baseline EUA Savings Per Tonne. The increased savings amount to 220.00 DKK per tonne of CO2.

The operator has also submitted an annual report containing an Actual Total Tax Savings that is 12,500,000.00 DKK higher than the Baseline Total Tax Savings. Dividing this Actual Total Tax Savings by the Annual Quantity of 100,000 tonnes, the actual tax savings per tonne amount to 125.00 DKK. This means that the operator now saves 125.00 DKK per tonne of $CO_2$ more on CO2-related taxes compared to the operator's projections at the time of submission of the offer.

The sum of 1) the difference between actual EUA savings per tonne and Baseline EUA Savings Per Tonne and 2) Difference between actual tax savings per tonne & Baseline Tax Savings Per Tonne is 345.00 DKK and represents a deduction regarding EUA saving & CO2 related tax savings in the calculation of the Actual Subsidy Rate.

The operator has specified a Baseline Total Carbon Credit Income of 15,000,000.00 DKK. The operator has submitted an Actual Total Carbon Credit Income of 20,000,000.00 DKK. The difference between the actual value and the baseline is 5,000,000.00 DKK.

The actual excess Carbon Credits income per tonne is this difference (5,000,000.00 DKK) divided by the Verified Delivered Quantity (100,000 tonnes). This amount equals 50.00 DKK. A deduction of 90% of this excess income, equal to 45.00 DKK, will apply in the calculation of the Subsidy Rate.

As this means that the operator has both higher actual savings from EUA and CO2-related taxes and excess income generated by Carbon credits compared to the offer, the calculation of the Actual Subsidy Rate shall be subject to a deduction equal to the sum of the increase of total EUA and tax savings (i.e. 345 DKK) and a deduction equal to 90 % of the excess Carbon Credit income (i.e. 45 DKK). The Actual Subsidy Rate will therefore be 390 DKK less than the Offered Rate of 850.00 DKK. As a result, the Actual Subsidy Rate is calculated to be 460.00 DKK.

The operator's total invoiced Subsidy equals 51,500,000.00 DKK based on the Invoiced Quantities in tonnes (Q1 = 20,000, Q2 = 30,000, Q3 = 30,000, Q4 = 20,000) and the Subsidy Rate for each quarter being 515.00 DKK.

The operator's Actual Subsidy is calculated to be 46,000,000.00 DKK as a result of multiplying the Verified Delivered Quantity of 100,000 tonnes with the Actual Subsidy Rate of 460.00 DKK.

To determine whether the operator has received excess subsidy, the Actual Subsidy is subtracted from the total invoiced Subsidy. This difference amounts to 5,500,000.00 DKK which is the total amount of excess subsidy that has been paid to the operator for the given year and that must be repaid to the DEA.