

Alaska Department of Labor and Workforce Development  
Research and Analysis Section ~ Unemployment Insurance Research

## Alaska Unemployment Insurance Tax System

### The UI Tax Calculation Cookbook

Step by step through the UI tax calculation process, with legal citations, and an explanation of each calculation. The calculation of the 2022 tax rates is the example.

#### UI Tax Rate Calculation Procedures, 2022

There are three major steps to the calculation of UI tax rates, with several sub-steps.

Step 1. Calculation of the Average 3-year Benefit Cost Rate (ABCR).

Step 2. Calculation of the Trust Fund Solvency Adjustment.

Step 3. Calculation of employer and employee tax rates.

This explanation of the tax rate calculation may be clearer if you follow the actual calculations in the [Tax Rate Calculation](#) worksheet and the [Tax Base Calculation](#) worksheet. The "**Line**" references below refer to the **Rate Calculation** worksheet. We suggest that you print a copy of the worksheets, and follow along through this detailed explanation of the tax rate calculation process.

#### Step 1. Calculation of Average Benefit Cost Rate (ABCR)

##### Step 1a. (Benefit Costs)

**The Law:**

**AS 23.20.290(e)** The department shall determine the average benefit cost rate as follows:

- (1) the department shall determine the amount of benefits paid to insured workers during the last three computation years;
- (2) the department shall subtract from the amount determined in (1) of this subsection the amount of any benefits reimbursed to the fund and the amount of interest earned on the trust fund balance during those computation years;

**Translation:**

Calculate the amount of benefits paid to employees of taxable employers plus the net amount of benefits paid to employees of reimbursable employers, minus interest earned on the fund balance, for the past three state fiscal years (July-June). The result is benefits costs.

**Calculation:**

\$ 77,546,641	SFY 2019
\$169,809,774	SFY 2020
\$244,109,145	SFY 2021
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<b>\$ 491,465,560</b>	Line 4

### Step 1b. (Total Wages & Ratio of Benefit Costs to Total Wages)

**The Law:**

(3) the department shall divide the amount determined in (2) of this subsection by the total wages paid by all employers required to pay contributions under this chapter during the first three of the last four computation years;

**Translation:**

Calculate the amount of wages paid to employees of taxable employers during the first three of the past four years, then divide the result into the benefits paid as calculated in Step 1a. The result is the ratio of benefit costs to total wages.

**Calculation:**

\$12,330,954,293	SFY 18
\$12,917,570,719	SFY 19
\$13,110,886,403	SFY 20
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<b>\$ 38,359,411,415</b>	Line 5

$$\text{\$ 491,465,560} / \text{\$ 38,359,411,415} = \mathbf{0.012812} \quad \text{Line 6}$$

### Step 1c. (Taxable Wages)

**The Law:**

(4) the department shall determine the amount of total wages subject to contributions under this chapter paid during the preceding computation year;

**Translation:**

Calculate the amount of taxable wages paid in the past year.

**Calculation:**

<b>\$ 7,843,238,759</b>	Line 3
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### Step 1d. (Total Wages of Taxable Employers)

**The Law:**

(5) the department shall determine the amount of all wages paid insured workers during the preceding computation year;

(6) the department shall subtract from the amount determined in (5) of this subsection the

amount of wages paid during the preceding year by employers who elect to reimburse the department under AS23.30.276 and 23.20.277;

**Translation:**

Calculate the amount of wages paid to employees of taxable employers in the past year; this is same wage series used in the step 1.b calculation above, just a differently worded definition.

**Calculation:**

**\$12,695,944,252**      Line 2

### Step 1e. (Ratio of Taxable Wages to Total Wages)

**The Law:**

(7) the department shall divide the amount in (4) of this subsection by the amount determined in (6) of this subsection; and

**Translation:**

calculate the **ratio of taxable wages** (from Step 1c) **to total wages** (Step 1d).

**Calculation:**

**\$ 7,843,238,759 / \$12,695,944,252 = 0.617775**      Line 7

### Step 1f. (Average Benefit Cost Rate)

**The Law:**

(8) the department shall divide the amount determined in (3) of this subsection by The amount determined in (7) of this subsection.

**Translation:**

Calculate the final Average Benefit Cost Rate (ABCR) by dividing the ratio of benefit costs to total wages (from Step 1b) by the ratio of taxable wages to total wages (from Step 1e).

**Calculation:**

**0.012812 / 0.617775 = 0.020739** Line 8

## Step 2. Calculation of the Trust Fund Solvency Adjustment

**The Law:**

**AS 23.20.290(f):**

An employer shall pay a fund solvency adjustment surcharge if the reserve rate is less than three percent. The surcharge is a percentage equal to the difference between three percent and the reserve rate, rounded to the nearest 1/100 of one percent. An employer shall receive a fund solvency adjustment credit if the reserve rate is greater than 3.3 percent. The credit is a percentage equal to the difference between 3.3 percent and the reserve rate rounded to the nearest 1/100 of one percent. The solvency surcharge may not be greater than 1.1 percent, and the

solvency credit may not be greater than 0.4 percent. However, an employer's fund solvency adjustment surcharge may not increase more than three-tenths of one percent from one year to the next.

**AS 23.20.310(7):**

"reserve rate" means the ratio of the total amount available for benefits in the unemployment trust fund on September 30, immediately following the computation date, to the payroll of employers required to pay contributions under the provisions of AS 23.20.165 for the 12 consecutive calendar months ending on the computation date, expressed as a percentage.

**Translation:**

Calculate the reserve rate as the trust fund balance on September 30 divided by total wages as calculated in Step 1d above. If the reserve rate is between 3.0 and 3.3 percent, then no adjustment is implemented. If the reserve rate is below 3.0 percent, then calculate the difference between 3.0 and the current rate, the adjustment shall be equal to this difference (rounded to the nearest 1/100<sup>th</sup> of a percent) up to a maximum increase of .3 percent in one year. If the value of the fund is above 3.3 percent then the adjustment shall be equal to the corresponding difference.

**Calculation:**

$$\$378,747,610 / \$12,695,944,252 = \mathbf{0.029832} \quad \text{Lines 9-11}$$

### Step 3. Calculation for Employer Rate Classes, and for Employees

**The Law:**

**AS 23.20.290:**

(c) The rate of contributions for each employer is a percentage of the average benefit cost rate multiplied by the employer's experience factor set out in column C of the table in this subsection opposite the employer's applicable rate class set out in column A plus the fund solvency adjustment required under (f) of this section. That percentage is 76 beginning January 1, 2009, and 73 beginning January 1, 2010. However, the rate of contributions for an employer **may not be less than one percent or more than six and one-half percent**. The rate of contributions for an employer in rate **class 21 may not be less than 5.4 percent**. The rate of contributions for an employer must be rounded to the nearest 1/100th of one percent.

(d) The rate of contributions payable by each employee of an employer who is subject to AS 23.20.165 is a percentage of the average benefit cost rate as determined in (e) of this section rounded to the nearest 1/100th of one percent. That percentage is 24 percent beginning January 1, 2009, and 27 beginning January 1, 2010. However, the rate of contributions for an employee **may not be less than one-half percent or more than one percent**.

**Translation:**

Calculate the employer's share of the Average Benefit Cost Rate (ABCR) as 73%, and the employee's share as 27%. The employer's tax rate at each rate class is equal to 0.73 times the ABCR times the experience factor of the rate class plus the TFSA.

**Calculation:**

The employee tax is:  $(0.27 \times 0.020739) = 0.56\%$ ; therefore **0.56%**

The average tax rate is:  $(0.73 \times 0.020739 \times 1.00) + .0002 = 1.53\%$   
(classes 10 and 11)

The employer rate for all tax classes, **bold** values indicate min/max in effect:

Tax Class 1	$(0.73 \times 0.020739 \times 0.40) + .0002$	= <b>1.00%</b>
Tax Class 2	$(0.73 \times 0.020739 \times 0.45) + .0002$	= <b>1.00%</b>
Tax Class 3	$(0.73 \times 0.020739 \times 0.50) + .0002$	= <b>1.00%</b>
Tax Class 4	$(0.73 \times 0.020739 \times 0.55) + .0002$	= <b>1.00%</b>
Tax Class 5	$(0.73 \times 0.020739 \times 0.60) + .0002$	= <b>1.00%</b>
Tax Class 6	$(0.73 \times 0.020739 \times 0.65) + .0002$	= <b>1.00%</b>
Tax Class 7	$(0.73 \times 0.020739 \times 0.70) + .0002$	= <b>1.08%</b>
Tax Class 8	$(0.73 \times 0.020739 \times 0.80) + .0002$	= <b>1.23%</b>
Tax Class 9	$(0.73 \times 0.020739 \times 0.90) + .0002$	= <b>1.38%</b>
Tax Class 10	$(0.73 \times 0.020739 \times 1.00) + .0002$	= <b>1.53%</b>
Tax Class 11	$(0.73 \times 0.020739 \times 1.00) + .0002$	= <b>1.53%</b>
Tax Class 12	$(0.73 \times 0.020739 \times 1.10) + .0002$	= <b>1.69%</b>
Tax Class 13	$(0.73 \times 0.020739 \times 1.20) + .0002$	= <b>1.84%</b>
Tax Class 14	$(0.73 \times 0.020739 \times 1.30) + .0002$	= <b>1.99%</b>
Tax Class 15	$(0.73 \times 0.020739 \times 1.35) + .0002$	= <b>2.06%</b>
Tax Class 16	$(0.73 \times 0.020739 \times 1.40) + .0002$	= <b>2.14%</b>
Tax Class 17	$(0.73 \times 0.020739 \times 1.45) + .0002$	= <b>2.22%</b>
Tax Class 18	$(0.73 \times 0.020739 \times 1.50) + .0002$	= <b>2.29%</b>
Tax Class 19	$(0.73 \times 0.020739 \times 1.55) + .0002$	= <b>2.37%</b>
Tax Class 20	$(0.73 \times 0.020739 \times 1.60) + .0002$	= <b>2.44%</b>
Tax Class 21	$(0.73 \times 0.020739 \times 1.65) + .0002$	= <b>5.40%</b>

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