

**Gebührenbedarfsberechnung**  
**für die dezentrale Schmutzwasserbeseitigung**  
**in**  
**der Stadt Luckenwalde und der Gemeinde**  
**Nuthe-Urstromtal**

**mit Grundgebühren**

## dezentrale Schmutzwasserbeseitigung

Gebührenbedarfsberechnung zur BV B-7300/2021  
Kalkulationszeitraum: 01.01.2022- 31.12.2023

| I. Ausgaben                                                                                            |                                                          |            |            |       |            | in Euro (brutto)                         |                               |
|--------------------------------------------------------------------------------------------------------|----------------------------------------------------------|------------|------------|-------|------------|------------------------------------------|-------------------------------|
|                                                                                                        |                                                          |            |            |       |            | PLAN gesamt                              |                               |
| 1.                                                                                                     | fixes Betreiberentgelt                                   |            |            |       |            |                                          |                               |
|                                                                                                        | a) Fäkalien aus Sammelgruben (SG):                       | 697.699,38 | € pro Jahr |       |            | 697.699,38                               |                               |
|                                                                                                        | b) Fäkalschlamm aus KKA:                                 | 2.896,46   | € pro Jahr |       |            | 2.896,46                                 |                               |
| 2.                                                                                                     | variables Betreiberentgelt                               |            |            |       |            |                                          |                               |
|                                                                                                        | a) Fäkalien aus Sammelgruben:                            | 75.000     | cbm a      | 1,72  | €/cbm      | 129.288,44                               |                               |
|                                                                                                        | b) Fäkalschlamm aus KKA:                                 | 300        | cbm a      | 10,52 | €/cbm      | 3.155,88                                 |                               |
| 3.                                                                                                     | Überschussvortrag 2020 Sammelgruben                      | -9.950,07  |            |       | Faktor 0,5 | (4.975,03)                               |                               |
| 4.                                                                                                     | Überschussvortrag 2020 KKA                               | -39,80     |            |       | Faktor 0,5 | (19,90)                                  |                               |
| Ausgaben gesamt:                                                                                       |                                                          |            |            |       |            | 828.045,23                               |                               |
| II. Einnahmen                                                                                          |                                                          |            |            |       |            | PLAN gesamt                              |                               |
| 5.                                                                                                     | Gebühren für Abwasserentsorgung aus Sammelgruben         |            |            |       |            |                                          |                               |
|                                                                                                        | E aus Grundgebühren (E Gb)                               |            |            |       |            | 120.294,00                               |                               |
|                                                                                                        | E aus Schlauchgebühr (E SGb)                             |            |            |       |            | 35.203,74                                |                               |
|                                                                                                        | E aus Mengengebühren                                     | 75.000     | cbm x      | 8,89  | €/cbm      | 666.515,05                               |                               |
| 6.                                                                                                     | Gebühren für Klärschlamm Entsorgung aus Kleinkläranlagen |            |            |       |            |                                          |                               |
|                                                                                                        | E aus Mengengebühren                                     | 300        | cbm x      | 18,97 | €/cbm      | 5.690,15                                 |                               |
|                                                                                                        | E aus Schlauchgebühr (E SGb)                             |            |            |       |            | 342,29                                   |                               |
| Einnahmen gesamt:                                                                                      |                                                          |            |            |       |            | 828.045,23                               |                               |
| III. Gebührenkalkulation                                                                               |                                                          |            |            |       |            | a) Gebühr f. Wohn- u. Gewerbegrundstücke |                               |
| Ermittlung Mengengebührensatz:                                                                         |                                                          |            |            |       |            |                                          |                               |
| $\frac{I1.a.a + I2.a.a + I3. - II 6. E Gb - II 6. E SGb}{\text{durchschnittliche Schmutzwassermenge}}$ |                                                          |            |            |       |            | $\frac{666.515,05}{75.000}$              | Euro = 8,89 €/cbm             |
|                                                                                                        |                                                          |            |            |       |            |                                          | c) Gebühr f. Kleinkläranlagen |
| $\frac{I1.b + I2.b + I5. - II 8. SGb}{\text{durchschnittliche Schmutzwassermenge}}$                    |                                                          |            |            |       |            | $\frac{5.690,15}{300}$                   | Euro = 18,97 €/cbm            |

| Ermittlung der Grundgebühren mobile Abwasserentsorgung 2022/2023 |         |        |        |             |            |
|------------------------------------------------------------------|---------|--------|--------|-------------|------------|
| Größe                                                            |         | Anzahl | Faktor | Grundgebühr |            |
|                                                                  |         |        |        |             | gesamt     |
|                                                                  |         |        |        |             |            |
| nach MID                                                         |         |        |        |             | €/Mon.     |
| QN 1,5                                                           | Q3- 2,5 | 1.619  | 1,0    | 5,00        | 97.140,00  |
| QN 2,5                                                           | Q3- 4   | 197    | 1,7    | 8,50        | 20.094,00  |
| QN 3,5                                                           | Q3- 6,3 | 3      | 2,3    | 11,50       | 414,00     |
| QN 6                                                             | Q3- 10  | 6      | 4,0    | 20,00       | 1.440,00   |
| QN 10                                                            | Q3-16   | 3      | 6,7    | 33,50       | 1.206,00   |
| QN 15                                                            | Q3- 25  | 0      | 10,0   | 50,00       | 0,00       |
| QN 25                                                            | Q3- 40  | 0      | 16,7   | 83,50       | 0,00       |
| QN 40                                                            | Q3- 63  | 0      | 26,6   | 133,00      | 0,00       |
| QN 60                                                            | Q3- 100 | 0      | 40,0   | 200,00      | 0,00       |
| QN 100                                                           | Q3- 160 | 0      | 66,7   | 333,50      | 0,00       |
| QN 150                                                           | Q3- 250 | 0      | 100,0  | 500,00      | 0,00       |
| Gesamt                                                           |         | 1.828  |        |             | 120.294,00 |

**Mengenverhältnisse gesamte mobile Abwasserentsorgung**

|                  | Abfuhrmenge in m <sup>3</sup> | Abfuhrmenge in % |
|------------------|-------------------------------|------------------|
| Sammelgruben     | 75.000,00                     | 99,60            |
| Kleinkläranlagen | 300,00                        | 0,40             |
| <b>gesamt</b>    | <b>75.300,00</b>              | <b>100,00</b>    |

# Ermittlung der Zusatzgebühr für das Auslegen des Saugschlauches über 10m hinaus im Kalkulationszeitraum 2022/2023

|                                                       |           |                        |                            |
|-------------------------------------------------------|-----------|------------------------|----------------------------|
| Stundenverrechnungssatz Fahrer in € (brutto)          | 60,69     |                        |                            |
| Zeitaufwand für das Auslegen des Saugschlauchs in min | 0,78      |                        |                            |
| Zusatzgebühr in €/m                                   | 0,79      |                        |                            |
| auszulegende Gesamtschlauchlänge in m pro Jahr        | 44.862,00 | 44.430,00              | 432,00                     |
| Erträge aus der Zusatzgebühr                          | 35.546,03 | 35.203,74              | 342,29                     |
|                                                       |           | Anteil<br>Sammelgruben | Anteil<br>Kleinkläranlagen |

**Betreiberentgelt Abwasser**

(alles Netto-Angaben)

|                                              |           | Ist 2020     | Kalk. | 2020/2021    | 2022         | 2023         | Ø | 2022/2023                  | Niederschlags-<br>wasserbesei-<br>tigung<br>öffentlicher<br>Bereich | Fäkalien aus<br>Sammel-<br>gruben | Fäkal-<br>schlamm aus<br>KKA | Becken-<br>abwasser | Zentrale<br>Abwasser-<br>beseitigung |
|----------------------------------------------|-----------|--------------|-------|--------------|--------------|--------------|---|----------------------------|---------------------------------------------------------------------|-----------------------------------|------------------------------|---------------------|--------------------------------------|
|                                              |           |              |       |              |              |              |   |                            |                                                                     |                                   |                              |                     |                                      |
| <b>Fixes Entgelt</b>                         |           |              |       |              |              |              |   |                            |                                                                     |                                   |                              |                     |                                      |
| Abschreibungen                               |           |              |       |              |              |              |   |                            |                                                                     |                                   |                              |                     |                                      |
| ./. Auflö. KAB / Erstattg. HA                | (TEUR)    | 1027         |       | 1.200        | 1.454        | 1.999        |   | 1.727                      |                                                                     |                                   |                              |                     |                                      |
| ./. Auflö. FM                                | (TEUR)    | 382          |       | 387          | 271          | 218          |   | 245                        |                                                                     |                                   |                              |                     |                                      |
|                                              | (TEUR)    | 94           |       | 93           | 94           | 94           |   | 94                         |                                                                     |                                   |                              |                     |                                      |
| + Aufw. für bezogene Leistungen              | (TEUR)    | 550          |       | 405          | 580          | 581          |   | 581                        |                                                                     |                                   |                              |                     |                                      |
| + Personalkosten                             | (TEUR)    | 1365         |       | 1.383        | 1.731        | 1.670        |   | 1.701                      |                                                                     |                                   |                              |                     |                                      |
| + Kalkulatorische Zinsen                     | (TEUR)    | 124          |       | 309          | 313          | 312          |   | 313                        |                                                                     |                                   |                              |                     |                                      |
| + Sonstiger betrieblicher Aufwand            | (TEUR)    | 276          |       | 217          | 259          | 253          |   | 256                        |                                                                     |                                   |                              |                     |                                      |
| ./. Erträge aus aktivierter Eigenleistung    | (TEUR)    | 0            |       | 0            | 0            | 0            |   | 0                          |                                                                     |                                   |                              |                     |                                      |
| ./. Sonst. betriebl. Erträge                 | (TEUR)    | 53           |       | 43           | 31           | 31           |   | 31                         |                                                                     |                                   |                              |                     |                                      |
| (Vermietung, Nebenleistung, Kostenersatzung) |           |              |       |              |              |              |   |                            |                                                                     |                                   |                              |                     |                                      |
| ./. Zins-, Skontoerträge, Mahngebühren       | (TEUR)    | 5            |       | 5            | 5            | 5            |   | 0                          |                                                                     |                                   |                              |                     |                                      |
| + Sonst. Steuern                             | (TEUR)    | 7            |       | 7            | 10           | 11           |   | 11                         |                                                                     |                                   |                              |                     |                                      |
| + Wagnis- und Gewinnaufschlag (1%)           | (TEUR)    |              |       | 30           | 39           | 45           |   | 42                         |                                                                     |                                   |                              |                     |                                      |
| = Fixe Kosten                                | (TEUR)    | 2.815        |       | 3.023        | 3.985        | 4.523        |   | 4.254                      |                                                                     |                                   |                              |                     |                                      |
| + Steuern (GewSt)                            | (TEUR)    | 38           |       | 20           | 40           | 2            |   | 21                         |                                                                     |                                   |                              |                     |                                      |
| = <b>Fixes Entgelt</b>                       | (TEUR)    | <b>2.853</b> |       | <b>3.043</b> | <b>4.025</b> | <b>4.525</b> |   | <b>4.275</b>               | <b>96.634</b>                                                       | <b>586.302</b>                    | <b>2.434</b>                 | <b>32.633</b>       | <b>3.556.997</b>                     |
| <b>Variables Entgelt</b>                     |           |              |       |              |              |              |   |                            |                                                                     |                                   |                              |                     |                                      |
| Aufw. für Roh-, Hilfs- und Betriebsstoffe    | (TEUR)    | 426          |       | 475          | 450          | 460          |   | 455                        |                                                                     |                                   |                              |                     |                                      |
| + Abwasserabgabe                             | (TEUR)    | 88           |       | 80           | 80           | 80           |   | 80                         |                                                                     |                                   |                              |                     |                                      |
| + Sonstiger betrieblicher Aufwand            | (TEUR)    | 54           |       | 50           | 97           | 108          |   | 103                        |                                                                     |                                   |                              |                     |                                      |
| (Fahrzeuge, Porto, Telefon)                  | (TEUR)    |              |       |              |              |              |   |                            |                                                                     |                                   |                              |                     |                                      |
| ./. Sonstige betriebliche Erträge            | (TEUR)    | 45           |       | 9            | 14           | 14           |   | 14                         |                                                                     |                                   |                              |                     |                                      |
| (Periodenfremde, Sonderverträge; ohne RW)    | (TEUR)    |              |       |              |              |              |   |                            |                                                                     |                                   |                              |                     |                                      |
| + Wagnis- und Gewinnaufschlag (1%)           | (TEUR)    |              |       | 6            | 6            | 6            |   | 6                          |                                                                     |                                   |                              |                     |                                      |
| = variable Kosten                            | (TEUR)    | 523          |       | 602          | 619          | 640          |   | 630                        |                                                                     |                                   |                              |                     |                                      |
| + Steuern (GewSt)                            | (TEUR)    | 2            |       | 1            | 4            | 0            |   | 2                          |                                                                     |                                   |                              |                     |                                      |
| = <b>Variables Entgelt</b>                   | (TEUR)    | <b>525</b>   |       | <b>603</b>   | <b>623</b>   | <b>640</b>   |   | <b>632</b>                 |                                                                     |                                   |                              |                     |                                      |
|                                              | (TEUR)    |              |       |              |              |              |   |                            |                                                                     |                                   |                              |                     |                                      |
| Abwassermenge                                | (cbm)     | 996.476      |       | 950.000      | 960.000      | 960.000      |   | TEUR pro Jahr              | <b>0</b>                                                            | <b>108.646</b>                    | <b>2.652</b>                 | <b>0</b>            | <b>520.702</b>                       |
| = <b>Entgelt pro Kubikmeter</b>              | (EUR/cbm) |              |       |              |              |              |   | <b>Kubikmeter pro Jahr</b> |                                                                     | <b>75.000</b>                     | <b>300</b>                   | <b>15.000</b>       | <b>960.000</b>                       |
|                                              |           |              |       |              |              |              |   |                            |                                                                     | <b>1,44861</b>                    | <b>8,84000</b>               | <b>0,00000</b>      | <b>0,54240</b>                       |

| Kläranlagenkosten                   |              | Gesamtkosten<br>Kläranlage |              | KA Gesamt    | Kanal-<br>abwasser | Becken-<br>abwasser | Fäkalien         | Klärschlamm<br>aus KKA |
|-------------------------------------|--------------|----------------------------|--------------|--------------|--------------------|---------------------|------------------|------------------------|
| Menge auf KA                        | m³/a         |                            |              | 1.050.300    | 960.000            | 15.000              | 75.000           | 300                    |
| Mengenanteil auf KA                 | %            |                            |              | 100,00       | 91,40              | 1,43                | 7,14             | 0,03                   |
| Schmutzstoffe CSB                   | kg/m³        |                            |              | -            | 0,97               | 0,00                | 1,70             | 20,00                  |
| Schmutzfracht CSB                   | kg/a         |                            |              | 1.064.700    | 931.200            | 0                   | 127.500          | 6.000                  |
| Frachtanteil auf KA                 | %            |                            |              | 100,00       | 87,46              | 0,00                | 11,98            | 0,56                   |
|                                     |              | Kalk.                      |              |              |                    |                     |                  |                        |
|                                     |              | Ist 2020                   | 20/21        | 2022         | 2023               | 2022/2023           |                  |                        |
| <b>Fixes Entgelt in TEUR</b>        |              |                            |              |              |                    |                     |                  |                        |
| Abschreibungen                      | 255          | 466                        | 476          | 784          | 630                |                     |                  |                        |
| Abschreibungen AV 2020              |              | 255                        | 255          | 255          |                    |                     |                  |                        |
| aus Invest                          |              | 26                         | 163          | 471          |                    |                     |                  |                        |
| aus Invest 2020 KA                  |              | 53                         | 0            | 0            |                    |                     |                  |                        |
| aus Invest 2021 KA (Mechanik)       |              | 33                         |              | 0            |                    |                     |                  |                        |
| aus Invest 2021 KA (Belüftung)      |              | 15                         |              | 0            |                    |                     |                  |                        |
| aus Invest 2021 Fäkal. auf KA       |              | 27                         | 55           | 55           |                    |                     | 55               | 55                     |
| aus Invest 2020 Straße auf KA (70%) |              | 3                          | 3            | 3            |                    |                     | 3                | 2                      |
| + Fremdleistungen                   | 364          | 235                        | 370          | 370          | 370                |                     |                  |                        |
| + Personalkosten                    | 571          | 596                        | 579          | 587          | 583                |                     |                  |                        |
| + Zinsen                            | 44           | 72                         | 60           | 60           | 60                 |                     |                  |                        |
| + Sonstiger betrieblicher Aufwand   | 41           | 25                         | 40           | 40           | 40                 |                     |                  |                        |
| + Sonst. Steuern                    | 5            | 5                          | 5            | 5            | 5                  |                     |                  |                        |
| + Wagnis- und Gewinnaufschlag (1%)  |              | 14                         | 15           | 18           | 17                 |                     |                  |                        |
| = Fixe Kosten für Gemeinkosten      | 1.280        | 1.540                      | 1.703        | 2.330        | 1.700              |                     |                  |                        |
| + 13 % Gemeinkosten                 |              | 172                        | 221          | 303          | 262                |                     |                  |                        |
| + Steuern darauf (GewSt)            |              | 4                          | 3            | 4            | 4                  |                     |                  |                        |
| <b>= Fixes Entgelt</b>              | <b>1.280</b> | <b>1.716</b>               | <b>1.927</b> | <b>2.637</b> | <b>2.282.000 €</b> | <b>32.633 €</b>     | <b>162.993 €</b> | <b>742 €</b>           |

| Kläranlagenkosten                   |       | Gesamtkosten<br>Kläranlage |       | KA Gesamt | Kanal-<br>abwasser | Becken-<br>abwasser | Fäkalien    | Klärschlamm<br>aus KKA |
|-------------------------------------|-------|----------------------------|-------|-----------|--------------------|---------------------|-------------|------------------------|
| Menge auf KA                        | m³/a  |                            |       | 1.050.300 | 960.000            | 15.000              | 75.000      | 300                    |
| Mengenanteil auf KA                 | %     |                            |       | 100,00    | 91,40              | 1,43                | 7,14        | 0,03                   |
| Schmutzstoffe CSB                   | kg/m³ |                            |       | -         | 0,97               | 0,00                | 1,70        | 20,00                  |
| Schmutzfracht CSB                   | kg/a  |                            |       | 1.064.700 | 931.200            | 0                   | 127.500     | 6.000                  |
| Frachtanteil auf KA                 | %     |                            |       | 100,00    | 87,46              | 0,00                | 11,98       | 0,56                   |
|                                     |       | Kalk.                      |       |           |                    |                     |             |                        |
|                                     |       | Ist 2020                   | 20/21 | 2022      | 2023               | 2022/2023           |             |                        |
| Variables Entgelt in TEUR           |       |                            |       |           |                    |                     |             |                        |
| Aufw. für Roh-, Hilfs- und Betriebs | 275   | 300                        | 290   | 290       | 290                |                     |             |                        |
| + Abwasserabgabe                    | 88    | 80                         | 80    | 80        | 80                 |                     |             |                        |
| + Sonstiger betrieblicher Aufwand   | 9     | 7                          | 9     | 9         | 9                  |                     |             |                        |
| ./. Sonstige betriebliche Erträge   | 1     | 0                          | 0     | 0         | 0                  |                     |             |                        |
| + Wagnis- und Gewinnaufschlag (1%)  |       | 4                          | 4     | 4         | 4                  |                     |             |                        |
| = Variable Kosten für Gemeinkosten  | 371   | 391                        | 383   | 383       | 383                |                     |             |                        |
| + 13 % Gemeinkosten                 |       | 51                         | 50    | 50        | 50                 |                     |             |                        |
| + Steuern darauf (GewSt)            |       | 0                          | 0     | 0         | 0                  |                     |             |                        |
| = Variables Entgelt                 |       | 442                        | 433   | 433       | 433                |                     |             |                        |
|                                     |       |                            |       |           |                    | 378.702 €           | 51.873 €    | 2.425 €                |
|                                     |       |                            |       |           |                    | 2.464.450 €         | 214.866 €   | 3.167 €                |
|                                     |       |                            |       |           |                    | Summe:              | 2.715.000 € |                        |

| Betreiberentgelt Mobile Entsorgung |  |  |  |                   |                           |                      |                           |                      |                  |
|------------------------------------|--|--|--|-------------------|---------------------------|----------------------|---------------------------|----------------------|------------------|
| (alles Netto-Angaben)              |  |  |  |                   |                           |                      |                           |                      |                  |
|                                    |  |  |  | Ist 2020          | Kalk. 2021                | 2022                 | 2023                      | Ø                    |                  |
|                                    |  |  |  |                   |                           |                      |                           | 2022/2023            |                  |
| Transport Mobile Entsorgung        |  |  |  |                   |                           |                      |                           |                      |                  |
|                                    |  |  |  | Mobile Entsorgung | Fäkalien aus Sammelgruben | Fäkalschlamm aus KKA | Fäkalien aus Sammelgruben | Fäkalschlamm aus KKA | Betreiberentgelt |
|                                    |  |  |  |                   |                           |                      |                           |                      |                  |
|                                    |  |  |  |                   |                           |                      |                           |                      |                  |
|                                    |  |  |  |                   |                           |                      |                           |                      |                  |
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