|  |  |
| --- | --- |
| DBFZ |Torgauer Straße 116|D-04347 Leipzig | DBFZ Deutsches Biomasseforschungszentrum  gemeinnützige GmbH  Torgauer Straße 116 04347 Leipzig  Tel.: +49 (0)341 2434-112 Fax: +49 (0)341 2434-133  info@dbfz.de [www.dbfz.de](http://www.dbfz.de/)  Bearbeiter:  Nadja Rensberg  Tel.: +49 (0)341 2434-459, biogas@dbfz.de |
| Klicken Sie hier, um die Adresse einzugeben |
|  |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
|  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Status der Biogasanlage | | | | | | | | | | | | in Betrieb  in Planung  in Bau  z.Zt. außer Betrieb  stillgelegt | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **BHKW /Stromerzeugung** ( | | | | | | | | | | | | BHKW 1 | | | | | | | | | BHKW 2 | | | | | | | | | BHKW 3 | | | | | | | | | | | | | weitere BHKW | | | | | | | Turbine / Kessel | |
| installierte el. Leistung [kWel] | | | | | | | | | | | |  | | | | | | | | |  | | | | | | | | |  | | | | | | | | | | | | |  | | | | | | |  | |
| Inbetriebnahme [Monat/Jahr] | | | | | | | | | | | |  | | | | | | | | |  | | | | | | | | |  | | | | | | | | | | | | |  | | | | | | |  | |
| Betriebsstunden 2016 [h/Jahr] | | | | | | | | | | | |  | | | | | | | | |  | | | | | | | | |  | | | | | | | | | | | | |  | | | | | | |  | |
| EEG-vergütete Strommenge in 2016 [kWhel/Jahr] (inkl. Direktvermarktung) | | | | | | | | | | | |  | | | | | | | | |  | | | | | | | | |  | | | | | | | | | | | | |  | | | | | | |  | |
| Satelliten-BHKW | | | | | | | | | | | | ja | | | | | | | | | ja | | | | | | | | | ja | | | | | | | | | | | | | ja | | | | | | |  | |
| Ausfallzeit Gesamtanlage | | | | | | | | | | | | Tage/Jahr | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Vergütung nach EEG und Direktvermarktung** (falls vorhanden) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vergütung nach EEG:  EEG 2000  EEG 2004  EEG 2009  EEG 2012  EEG 2014  Gülle-Kleinanlage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Marktprämienmodell | | | | | | | kWel | | | | | | | | | | | | | | | | | | Anmeldung geplant:  ja  nein | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Flexibilitätsprämie | | | | | | | kWel | | | | | | | | | | | | | | | | | | Anmeldung geplant:  ja  nein | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Strommärkte und Regelenergie | | | | | | | kWel | | | | | | | | | | | | | | | Primärregelleistung  Sekundärregelleistung  Minutenreserve | | | | | | | | | | | | | | | | pos.  neg.  pos.  neg. | | | | | | | | Anmeldung geplant  ja  nein | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Planen Sie für die Zeit nach der EEG-Vergütung einen Weiterbetrieb der Anlage? | | | | | | | | | | ja | | | | | | nein  aktuell keine Planung hierzu | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | wenn ja, wie? | | | | | | Teilnahme an Ausschreibungen  Eigenstromnutzung | | | | | | | | | | | | | | | | | lokale Direktvermarktung  Aufbereitung zu Biomethan  sonstiges | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Eigenstrom- und Wärmebedarf** | | | | | | | | | | | | | | Menge | | | | | | | | | | | | | | | Anteil [%] | | | | | | | | | | | | | | | Art | | | | | | | | |
| Eigenstromverbrauch der Anlage [kWhel/Jahr] | | | | | | | | | | | | | |  | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | Eigendeckung  Fremdbezug | | | | | | | | |
| Eigenwärmeverbrauch der Anlage [kWhth/Jahr] | | | | | | | | | | | | | |  | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | |  | | | | | | | | |
| **Externe Wärmenutzung** (ohne Fermenterbeheizung) | | | | | | | | | | | | | | Menge [kWhth/Jahr] | | | | | | | | | | | | | | | Anteil [%] | | | | | | | | | | | | | | | externe Wärmenutzung, weitere | | | | | | | | |
| Art: | | | | | | | | | | | | | |  | | | | | | | | | | | | | | |  | | | | | | | | bez. auf Gesamtwärme-erzeugung | | | | | | |  | | | | | | | | |
| Art: | | | | | | | | | | | | | |  | | | | | | | | | | | | | | |  | | | | | | | |  | | | | | | |  | | | | | | | | |
| Art: | | | | | | | | | | | | | |  | | | | | | | | | | | | | | |  | | | | | | | |  | | | | | | |  | | | | | | | | |
| Ist ein Wärmemengenzähler vorhanden? | | | | | | | | | | | | | | nein  ja, Erfassung der extern genutzten Wärme  ja, Erfassung des Eigenbedarfes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Fermentersystem und Rührtechnik** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fermentersystem | | | | | | | | | | | Rührkessel | | | | | | | | | | | | | Lagune | | | | | | | | Ring-in-Ring | | | | | | | | | | | | | Beregnungssystem | | | | | | | |
|  | | | | | | | | | | | Pfropfenstrom | | | | | | | | | | | | | Pfefferkorn | | | | | | | | weitere: | | | | | | | | | | | | | | | | | | | | |
| Fermenter/ Nachgärer (beheizt, isoliert) | | | | | | | | | | | Anzahl:      Volumen (gesamt inkl. Nachgärer):       m³ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Wie oft beginnt am Tag eine Durchmischung im Fermenter (Intervall)? | | | | | | | | | | | | | | | | | | | | | | | | | | mal am Tag  kontinuierlich | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Umwälzdauer | | | | | | | | min/h | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Gibt es Probleme bei der Durchmischung? z.B. Sink- oder Schwimmschichten, ungleichmäßige Temperierung | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ja  nein | | | | | |
| Wenn ja, in welchem Behälter treten die Probleme hauptsächlich auf und welche Rührtechnik wird dort eingesetzt? | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Behälter | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | Tauchmotorrührwerk mit Propeller (schnell lfd.) | | | | | | | | | | | | | | | | | Tauchmotorrührwerk mit Groß­flügel (langsam lfd.) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Zentralrührwerk | | | | | |
|  | Langwellenrührwerk mit Großflügel (langsam lfd.) | | | | | | | | | | | | | | | | | Langwellen- Propellerrührwerk (schnell lfd.) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Pneumatische Durch-  mischung mittels Gas | | | | | |
|  | Paddel- o. Haspelrührwerk (horizontal/ vertikal) | | | | | | | | | | | | | | | | | Hydraulisch mittels Druck­aufbau (Pfefferkorn-Prinzip) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | |
|  | Hydraulische Durchmischung mittels Pumpe | | | | | | | | | | | | | | | | | weitere, | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Wurden in der Vergangenheit Veränderungen an den Rührsystemen vorgenommen? | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | nein  ja, warum? | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Messtechnik Füllstand Gasspeicher | | | | | | | | | Seilzug  hydrostatisches Messprinzip (Schlauchwaage)  Druck  Ultraschall | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Gasspeicher Gesamtvolumen | | | | | | | | | m³ | | | | | | | | | | | | | | Zielfüllstand Gasspeicher:       % (im Normalbetrieb) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fackel Laufzeit 2016 | | | | | | | | | automatische Erfassung:      h/Jahr Schätzung:      h/Jahr | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fackel | | | | | | | | | automatisch startend  manuelle Zündung | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Auslösen der Fackel durch | | | | | | | | | BHKW-Ausfall  Füllstand Gasspeicher, ab %  Gasdruckerhöhung | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Detektion von Gasleckagen | | | | | Fremd-,  Eigenleistung | | | | | | | | | | | | | | Häufigkeit:       pro Jahr | | | | | | | | | | | | | | | | Methodik:  IR-Kamera  Handgerät  Andere | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Gärrestlager** (nicht beheizt) | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | |  | |  | | | | | | | |  | | | | |
| Abdeckung Gärrestlager und Volumen  Volumen Gärrestlager je nach Abdeckung eintragen. | | | | | | | | | | | | | | | m³ offen | | | | | | | | | | | | | | | | | | | | | | | | m³ gasdicht (techn.) abgedeckt | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | m³ abgedeckt, nicht gasdicht | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Gärrestaufbereitung vorhanden? | | | | | | | | | | | | | | | nein  ja wenn ja, welche: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Substrate** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kreuzen Sie bitte jeweils an, ob die Mengen-angaben sich auf Silage oder frische Ernte beziehen. | | | | | | | | | | | | | Ø Ertrag [tFM/ha] | | | | Substrat-aufschluss  (wenn ja, welcher?) | | | | | | | | | | **Eigenproduktion/Anbau** | | | | | | | | | | | | | | | **Zukauf/von extern** | | | | | | | | | mittlere Transport-entfernung [km] | |
|  | | | | | | | | | | | | |  | | | |  | | | | | | | | | | Menge [t/Jahr]  Frischmasse | | | | | | Kosten [€/tFM]  frei BGA | | | | | | | | | Menge [t/Jahr] Frischmasse | | | | | | Preis [€/tFM] frei BGA | | |  | |
| Gülle ( Rind  Schwein) : | | | | | | | | | | | | |  | | | |  | | | | | | | | | |  | | | | | |  | | | | | | | | |  | | | | | |  | | |  | |
| Festmist ( Rind  Schwein) : | | | | | | | | | | | | |  | | | |  | | | | | | | | | |  | | | | | |  | | | | | | | | |  | | | | | |  | | |  | |
| Geflügel : | | | | | | | | | | | | |  | | | |  | | | | | | | | | |  | | | | | |  | | | | | | | | |  | | | | | |  | | |  | |
| Mais : | | frisch | | | | Silage | | | | | | |  | | | |  | | | | | | | | | |  | | | | | |  | | | | | | | | |  | | | | | |  | | |  | |
| Ackergras : | | frisch | | | | Silage | | | | | | |  | | | |  | | | | | | | | | |  | | | | | |  | | | | | | | | |  | | | | | |  | | |  | |
| Grünland : | | frisch | | | | Silage | | | | | | |  | | | |  | | | | | | | | | |  | | | | | |  | | | | | | | | |  | | | | | |  | | |  | |
| davon Herbstschnitt (Ackergras + Grünland): | | | | | | | | | | | | |  | | | |  | | | | | | | | | |  | | | | | |  | | | | | | | | |  | | | | | |  | | |  | |
| GPS (Hauptfrucht), Art: | | | | | | | | | | | | |  | | | |  | | | | | | | | | |  | | | | | |  | | | | | | | | |  | | | | | |  | | |  | |
| Zwischenfrucht, Art: | | | | | | | | | | | | |  | | | |  | | | | | | | | | |  | | | | | |  | | | | | | | | |  | | | | | |  | | |  | |
| Getreidekorn: | | | | | | | | | | | | |  | | | |  | | | | | | | | | |  | | | | | |  | | | | | | | | |  | | | | | |  | | |  | |
| weitere: | | | | | | | | | | | | |  | | | |  | | | | | | | | | |  | | | | | |  | | | | | | | | |  | | | | | |  | | |  | |
| weitere: | | | | | | | | | | | | |  | | | |  | | | | | | | | | |  | | | | | |  | | | | | | | | |  | | | | | |  | | |  | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zugabe von Additiven | | | | nein  ja  Enzyme  Spurenelemente  Harnstoff  sonstiges | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | Produkttypen: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | |
|  | | | | Einsatzhäufigkeit:  kontinuierlich  nach Bedarf | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Denken Sie aufgrund schlechter Abbauleistungen über den Einsatz von Additiven nach? | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ja  nein | | | | | | | | | | | | | | | | |
| Haben Sie den Gasertrag mit KTBL-Richtwerten verglichen? | | | | | | | | | | | | | | | | | | | | | | | ja  nein | | | | | | | | | | | | | Wenn ja, welchen Wert erreichen Sie?       % | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Anbaufläche zur Biogasproduktion (eigen + extern) | | | | | | | | | | | | | | | | | | | | ha, davon Ackerland:       ha Grünland:       ha | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Vielen Dank für Ihre Unterstützung!** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ansprechpartner | | |  | | | | | | | | | | | | | | | | | | | | | | | | | Telefon | | | | | |  | | | | | | | | | | | | | | | | | | |
| Adresse | | |  | | | | | | | | | | | | | | | | | | | | | | | | | E-Mail | | | | | |  | | | | | | | | | | | | | | | | | | |