

RWE

Revenue source emergency generator

In most cases, emergency power generators are not used apart from trial operation. However, the systems can cover much more than just a very rare power failure.

With the support of RWE, you can use your emergency power generator to reduce your operating costs and even generate additional revenue. Of course, the primary function of the emergency generator supply remains unaffected.



How to earn money with your emergency power generator

By having RWE optimise the use of your emergency power generator at just **a few times a year**, you can convert its output into cash. The infrequent use of your emergency power generator, optimised by RWE, replaces the test runs that are necessary anyway ("optimised trial operation").

As one of the leading energy suppliers in Europe, RWE is able to offer you significantly more options than its competitors with up to **3 product modules**, which can be implemented individually or in combination, depending on the case. Based on **a comprehensive personal consultation**, we work with you to develop the optimum solution for your individual case.



We are convinced that we can utilise your system profitably. **RWE therefore waives any fixed service payments.** Instead, only the profit generated by the optimised use of the emergency power generator is shared between the partners.

In addition, RWE also participates in the costs for the use of the gensets (e.g. equipment with telecontrol technology or fuels). **Costs and revenues are borne by you and RWE according to the profit share**, so that both sides have an equal interest.

RWE product modules for individual optimisation

Balancing energy marketing

You receive guaranteed remuneration for allowing us to use your emergency power generator to provide balancing energy. This is based on the published average power price for the provision of positive secondary control power.

RWE bears the full risk as to whether the plants can actually be successfully utilised on the balancing power market and the fuel costs required for this.

Revenue potential

Approx. 128,000 €/MW/p.a

(Average performance price for positive SRL with surcharging)

Cost indication

Approx. 3,000 €/MW/p.a

(telecontrol technology)



Peak load shaving

Decentralised feed-in

Your genset is technically and economically suitable for covering the peak load of your upstream distribution grid operator if it was commissioned before **1 January 2023**. If your gensets have fed in at the time of the annual peak load of the connection grid operator, they reduce its costs from the upstream grid level. RWE can predict the time with a high degree of accuracy using a tried-and-tested load forecasting model.

The grid fees avoided through this optimisation must be paid to you by the connection grid operator.

Revenue potential

20,000 - 60,000 €/MW/p.a

(Exemplary for medium voltage; depending on your grid operator & grid level)

Cost indication

Approx. 5,000 €/MW/p.a.

(For fuel costs in which RWE participates)



Reduction in Grid charges

By using your emergency power generators only a few times during periods of high peak loads, you can generally realise considerable savings on grid charges and thus significantly reduce the costs for your electricity supply from the public grid.

RWE is also examining the extent to which further improvements can be realised or secured through individual grid fees.

Revenue potential

60,000 - 160,000 €/MW/p.a

(Exemplary for medium voltage; depending on your grid operator & grid level)

Cost indication

5,000 €/MW/p.a

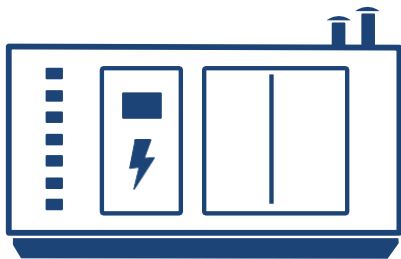
(For fuel costs in which RWE participates)



On request, this module can also be implemented without remote access, but via deployment recommendations by e-mail.

Realisation of attractive revenues with only 50 h/a

Exemplary commercial evaluation



- 5 MW power in total
- Medium voltage of Westnetz GmbH
- Moment of annual peak load is hit as expected
- Peak load of your grid consumption can be reduced by 1 MW

Balancing energy marketing

5 x 128.000 € = 640.000 €

Peak load shaving

Decentralised feed-in

4 x 47.000 € = 188.000 €

Reduction in grid fees

1 x 162.000 € = 162.000 €



~1.000.000 €/p.a
revenue potential

Your advantages at a glance

Your cooperation with RWE to optimise the operation of your emergency power generators offers many advantages.

Economic advantages

As one of the leading energy suppliers in Europe, RWE can tap into significantly more sources of revenue than its competitors - with just **a few uses of** your emergency power generator. You and RWE share the costs, especially for upgrading and fuel, as well as the subsequent revenues according to a **fair and transparent profit-share model**, whereby both partners pursue a common goal.



Technical advantages

The infrequent use of your emergency power generator for grid services replaces the test runs that are necessary anyway and avoids the risk of damage to the grid by operating at full load "Wet stacking" and the associated system failures **The original function of your emergency power generator remains 100% intact** and is maximally accelerated by RWE's access.



Organisational advantages

RWE examines the individual technical and licensing conditions and develops a customised concept to utilise the output of your emergency power generator as profitably as possible. During "optimised trial operation", all requirements and regulations for the use of emergency power generators and in particular their operating times are complied with. Your individual restrictions can also be taken into account. In addition, the optimisation enables regulatory-compliant billing.



Ecological advantages

The optimised trial operation of your emergency power generators provides a **resource-efficient** grid service. The use of the regeneratively produced fuel "HVO 100" can also **reduce CO₂ emissions by up to 90%**; additional costs can be refinanced via the proceeds. By purchasing voluntary emission reduction (VER) certificates, the operation of the gensets can **also be made completely climate-neutral if required**.



TÜVNORD

TÜV Nord EnSys has tested our "Emergency power generator as a source of revenue" service. In their report, the experts confirm that the emergency power supply is not jeopardised by its use. **The DIN EN 50600 certification for data centres is maintained.**

Exemplary project process

We keep your participation at a moderate level

Initial product presentation

1 Customer specifics

- Examination of approval requirements
- Selection of units to be marketed
- Provision of reference load profile (1/4h)

2 Individual marketing concept

- Researching grid charges and remuneration for the customer's grid area
- Checking the customer load profile for peak load shaving incl. individual grid utilisation (7,000h or atypical)
- Assignment of the units with regard to Measurement concept for optimal profit expectations
- Preparation of a presentation of results

3 Consent of network operator

- **Initiation of an initial consultation**
- Preparation & moderation of the initial meeting
- Evaluation of the requirements for grid-parallel operation
 1. Unit certificate available
 2. Unconditional consent
 3. Individual verification procedure necessary
 4. Narrow interpretation VDE-AR-N-4110 (FRT)

4 Contract and telecontro technology

- Preparation of a draft contract
- **Negotiation of the contract**
- **Signing of the contract**

- **Tuning on signal range**
- Parametrisation of the Flex2Market Box(es)
- Dispatch of the box(es)
- **Connection of the box(es) to the system controller**

5 Measurement concept

- **Construction of counting devices**
- Allocation of the balancing group
- Connection utilisation agreement between RWE and the connection network operator

6 Start of marketing

I
Start of modules I & III (DZE/vNNE & peak load shaving)

II
Prequalification

III
Start of Module II (standard benefit)



To **optimise your system**, the following conditions must be met:

- Emergency power generators with a total output of at least 1 MW
- Requirements of your distribution grid operator for parallel grid operation
- Approval situation for optimised trial operation
- Existing gensets must have been commissioned before 1 January 2023 to qualify for the decentralised feed-in tariff

How RWE can support you with the implementation

- We create a customised marketing concept
- We help to check all the necessary criteria
- We hold discussions with your network operator to clarify network compatibility
- We install the necessary secure telecontrol technology



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Here, for example, we are already successfully marketing emergency power generators:

arvato

BERTELSMANN

Arvato Systems

aggreko



hannover
airport

UKD Universitätsklinikum
Düsseldorf

Düsseldorf
Airport **DUS**

eZV
Südholstein



MBS
MEDIA
BROADCAST
SATELLITE

Das Simulatorzentrum

KSG | Gfs