



Purchase of an Emergency Electricity Supply for Civil Protection

Procurement Office of the German Federal
Ministry of the Interior

- Operating costs as award criterion
- Fuel savings and thereby CO₂e savings



Benchmark

- 31 l diesel per hour
- 25,6 t CO₂e during period of use
- 8,0 toe

GPP 2020 Tender

- 19,8 l diesel per hour
- 16,4 t CO₂e during period of use
- 5,1 toe

Conclusion

- 2,9 TOE energy saved (over 15 years)
- 9,3 t CO₂e saved (over 15 years)

Contract tendered

- Tender of a stationary emergency electricity supply to replace an old device. The tender was carried out by the Procurement Office of the German Federal Ministry of the Interior.
- Contract volume: ca. 70.000 € (excl. VAT)
- The offers were evaluated by, among others, consideration of the exhaust emissions and the longevity of the system
- Besides the purchase costs, the operating costs were also taken into account

Procurement Approach

Tendering followed the open procedure:

Stationary Emergency Energy Supply	
Technical Specifications <ul style="list-style-type: none"> - Provision of a total output of 130 kW - Fully-automatic network supervision and alternative supply - Collecting basin for fluids in device (water protection). 	Award Criteria <u>Lowest price:</u> Purchasing costs + operating costs (calculated for 10 years at 20 hours running time per year – including diesel fuel costs).

Criteria development

The technical specifications were developed in cooperation with the end user. The operating costs have also been taken into account by the procurement office prior to this tender. Due to the relatively low running time per year, the purchase costs far outweigh the running costs.

Results

The offer of a competitor was selected as the benchmark. In the following table the energy and greenhouse gas savings are displayed. These led to the purchase of the most energy efficient device on offer, rather than the less energy efficient model.

	CO ₂ emissions (t CO ₂ e/ 15 years)	Energy use (toe/ 15 years)
Competing offer	25,6	8,0
Accepted Offer	16,4	5,1
Savings	9,3 t CO ₂ e/15 years	2,9 toe/15 years



Calculation Basis

Benchmark: device with a consumption of 31 l diesel per hour

Low-carbon solution: device with a consumption of 19,8 l diesel per hour

Annual running time: 20 hours

Diesel emissions factor: 2,755 kg CO_{2e}/l diesel

Diesel energy content: 36 MJ/l

Further environmentally-relevant conclusions



- The device will be used for flood protection.
- Fuel consumption was not the only factor leading to the acceptance of the successful offer, although the aforementioned table shows major differences between the bids.
- In addition, the installation of a system with an emissions output in accordance with stage IIIB will lead to a reduction in emissions compared with the system currently in operation and thus to a reduction in environmental impact..
- With a sound power level LWA of 65 dB(A) at 7m distance, the noise pollution level for those living in close proximity to the emergency generator can be significantly reduced.

Lessons learned

The slightly greater procurement costs of this energy-saving device will not be redeemed within the planned 10 year period of use. If the running time per year exceeds predictions (due to more frequent power failures), then an amortisation becomes more likely.

In the present tender, it was possible to reduce the emission of greenhouse gases.

Other innovations are conceivable: e.g. photovoltaic systems in combination with wind power and storage.

Contact

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About GPP 2020

The project “GPP 2020“ aims to encourage climate-friendly tendering processes throughout Europe and in doing so, to contribute to the achievement of the EU-specified goals for 2020: a 20% reduction of greenhouse gas emissions, an increase in the proportion of renewable energy sources to 20% and a 20% increase in energy efficiency.

GPP 2020 will carry out over 100 climate-friendly tendering processes to directly ensure a significant reduction in CO₂ emissions. Additionally, it offers educational and networking events on environmentally friendly public procurement in the energy sector. –

www.gpp2020.eu/de



About PRIMES



PRIMES
Green Public Procurement

The project seeks to support communities in six European countries, Denmark, Sweden, Latvia, Croatia, France and Italy, which suffer from a lack of capacity and knowledge, to overcome the hurdles in GPP processes. – www.primes-eu.net



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