



Sizing the challenge

An overview of the scale of the decarbonisation challenge
in the humanitarian sector

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Understanding the challenge

Understanding the challenge is a challenge itself!

- Data is scarce (numbers, costs, usage...)
- Diversity of contexts (offices, logistics centres, settlements...)
- The scale is global (countries, organisations, mechanisms)

We need to estimate the size and scale of the challenge to help understand how to address it

Understand the challenge



Estimate the scale



Identify ways to address it



Implement solutions

Estimating the scale

Worldwide:
c. 11,000
generators

- Consultation with six UN agencies and ICRC
- Estimate of number of generators worldwide

How
generators
are used

- Estimates of usage, efficiency, operation, costs, emissions
- Ranges of parameters accounts for uncertainties

Statistical
modelling

- Account for variability in situations
- Global-scale costs, emissions and potential decarbonisation

Impacts and
pathways

- Effects of different EE and solar targets
- Financing needed

Estimated global impacts

Annual fuel costs: \$120 million
Annual fuel GHGs: 225 ktCO₂
+ Grid: \$60 million & 250 ktCO₂

Example decarbonisation pathway

- Global target: 80% CO₂ reduction
- 30% EE + 70% solarisation
- Total investment: \$580 million
- Annual savings: \$145 million
- Annual offset: 377 ktCO₂



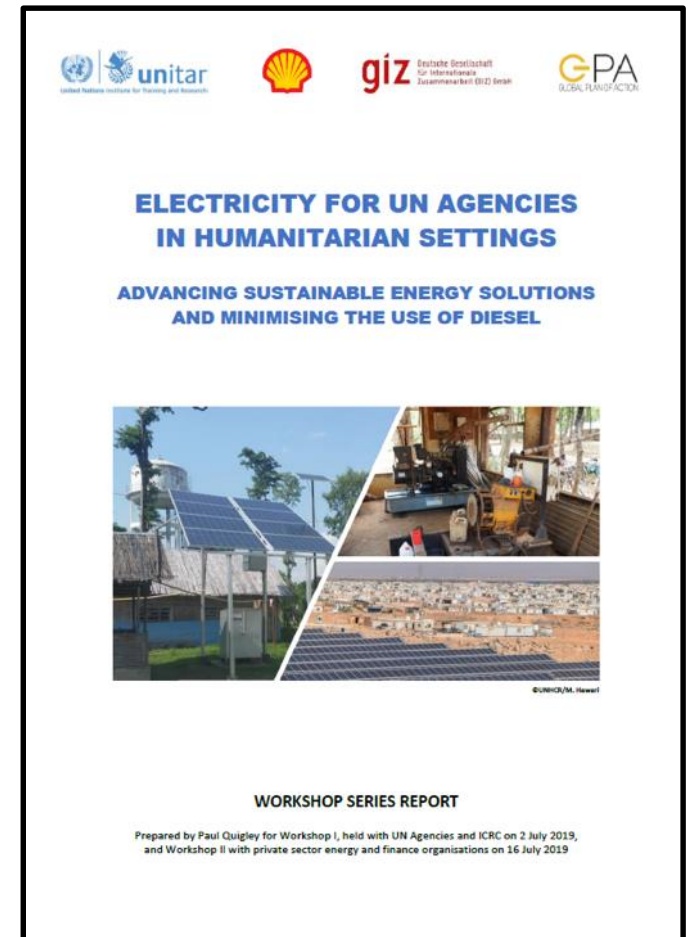
Strongly dependent on inputs

Why hasn't decarbonisation happened?

Issues include:

- High capital cost
- Donor interest
- Annual budget cycles
- Status quo
- Small projects

Opportunities for **energy as a service**



What is energy as a service?



Usually takes the form of an energy off-taker having an energy service contract (Power Purchase Agreement (PPA) or Lease Agreement) with an energy service company, who own and operate an energy system that delivers the desired amount of electricity

- ✓ Energy provider covers risks, responsibilities and financing
- ✓ System warranties and service guarantees provided by the energy provider
- ✓ Improved management and sustainability during Operation and Maintenance Phase
- ✓ Increase in resource efficiency, lower costs and faster project delivery
- ✓ Accessing know-how, management and experience from private sector
- ✓ Livelihoods opportunities and skills transfer to local population

What are the challenges?

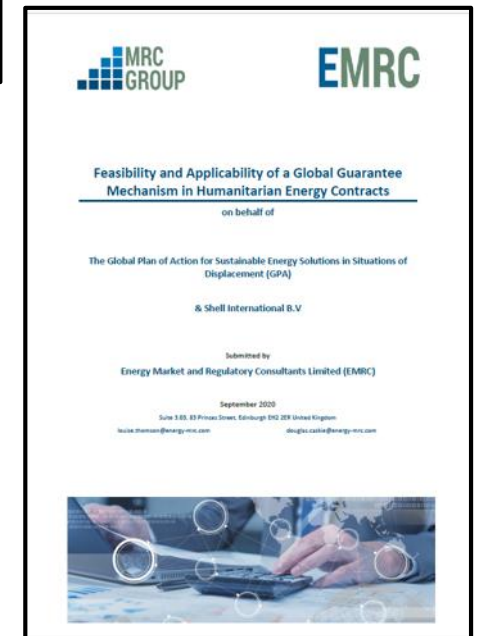
Opportunities hindered by:

1. Different approaches to contractual arrangements and risk profiles
2. UN standard termination clause allowing termination of a contract at any point



Standard set of contractual terms for energy service contracts developed by GIZ, in collaboration with UN and private sector

Derisking Mechanism developed by GPA, to protect private sector investment from the UN Contractual Termination Clause



How does the de-risking mechanism work?



Phase One: A short-term **liquidity facility**

- Post-termination cashflow to the energy service company (up to 12 months)
- Provide an opportunity to explore alternative uses and/or users of the energy system
- Offset termination liabilities and act as a time buffer for the UN Agency to draw down on the guarantee mechanism



Phase Two: If no alternative solution identified a **guarantee mechanism** would cover the costs of termination

Reduced risks

More bids

Anchors

Focus

Examples in action



- IOM: Malakal, South Sudan (implemented)
- UNHCR: 10 sites across Ethiopia, Kenya and Uganda (EOI completed)
- Multi Agency Decarbonisation Project in Nigeria



- Accounting Procedures: leasing is flagged as a possible loan under International Public Sector Accounting Standards



- High-level modelling suggest a guarantee fund of just \$6 million could underwrite an investment of \$65 million
- Translates approximately 700 humanitarian facilities (c. 70 MW)

Conclusions

- Decarbonising the humanitarian sector will be is a huge challenge
- Energy as a service, standard contractual terms and de-risking mechanisms can facilitate implementation
- Opportunities and benefits should be shared with communities



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Thank you

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