



Innovation: considering efficiency











Assessment Criteria



How does your design compare and improve on solutions that are currently available to your target end-user?

Judges will want to see that you have demonstrated and understood the technological context that you are targeting, and that you have gone through a wellinformed design process to improve on solutions currently available to the end user.

- · What is the potential of your design to improve energy efficiency compared to existing alternatives? Consider how you define energy efficiency (energy used per service provided) and what the baseline is for comparison.
- What is the potential of your design to reduce production costs compared to existing alternatives? Consider materials used, price of components and cost of assembly.
- What is the potential of your design to improve usability compared to existing alternatives? Consider its ease of use, reliability and safety.



How does your design contribute to a positive impact on the environment?

Judges will want to see that you have understood

the effects your solution demonstrate you contributes to achie

- Is your design r throughout its alternatives? Co materials used, r
- How were vo greenhouse gas other technologi the sustainability manufacturing, d scalability.
- How does your design contribute to the Sustainable Development Goals (SDG), in particular SDG7 - Affordable and clean energy? How well have you demonstrated you understood the potential connections with the other 17 SDGs and its associated targets? Consider how the different areas of this assessment framework are contributing to this.

Social impact

What difference does your design make to people's lives?



Scalability

How feasible is it that your design could get to market at scale?

> ee that you have considered ling considering the market arket size, for your solution,

> > sidered the potential market der the target customer, size value proposition.

eople will be able to access

isidered how people will be ord your product? Consider customer payment models

and existing financial models.

How well has your business model considered affordability, payment models, existing supply chains, manufacturing, distribution channels, local partners and services associated? Consider the pricing and costs strategies to make your business model commercially viable.

What is the potential of your design to improve energy efficiency compared to existing alternatives? Consider how you define energy efficiency (energy used per service provided) and what the baseline is for comparison.

improvement your design will bring to them.

How well has your design considered the Sustainable Development Goals' commitment to 'Leave no one behind'? In particular, consider gender equality and disability inclusion.



Agenda

- Introductions
- Guest Speakers
 - Muhammad Shehryar
 - **►** Md. Ershadullah
 - Richard Atwal
- Q&A
- Survey and Closing



Meet our speakers



Muhammad Shehryar – Harness Energy



Md. Ershadullah – Bengal Solar



Richard Atwal – Renewit



Muhammad Shehryar – Harness Energy

13 minutes





Md. Ershadullah – Bengal Solar

13 minutes





Richard Atwal – Renewit

13 minutes



Renewit Solar Limited

What has Renewit **Done**?

- We are a leading design and manufacturing company with our own manufacturing facilities in China and office and partnerships across the globe.
- We have our own in house design, development, tooling, engineering and manufacturing. This is key to being a flexible manufacturer offering suitable solutions for different programs.
- As well as allowing companies to own brand our product we also do OEM manufacturing for several other solar companies.
- We are an associate member of the World Bank Lighting global program.
- Have a diverse customer base from Governments, telecom companies, private distributors, farming co-operatives and many more.
- We have an extensive R & D and product design program to bring solar to areas such as agriculture, education, health and aid and development. We have established assembly plants for solar and LED lighting with partners in Africa.

Our Design Process

Our Design process is focused on delivering results. Clients have the option of using our services from any part of this process



Strategy

Competitive research Evaluation Design benchmarks Strategic mapping Design drivers Consumer targets Brainstorm sessions Design brief



Ideation

Concept generation Sketch exploration Initial CAD Design Specs Style drivers Trend drivers Product language



Design

CAD work
Reference drawings
Engineering
Prototyping
Design specs
Client reviews



Engineering

Mechanical design
Design evaluation
2D reference drawings
Prototyping
Final Product spec
Factory quotations
Project handover



Suppliers

Supplier liaison
Production engineering
Tooling drawing review
Engineering sample
Tooling release
Tooling debug
Production samples
Production reviews

Our Products are Lighting Global Qualified and ISO Certificated







Our products are available to order in any color and branding specification.

This product meets the **Lighting Global** Quality Standards.

Home **Power** Systems

Our HPS range provides a versatile and flexible range of products capable of powering all the house hold accessories. Our systems start at 10W providing basic lighting and charge features and expand up to 100W providing enough power for fridges, TV and a full range of LED lighting.



Working on Aid projects?

- We have several products that have been used in Aid and Development projects.
- These have mainly been through large tender projects with international organisations won by our clients.
- As a manufacturer we can provide product to meet an exact tender requirement.
- We have worked directly to provide product to governments working with displaced peoples such as in Ethiopia.
- We have realised there is a knowledge gap on what product can be manufactured so often organisations are trying to shoe horn in an existing product that may not be 100% suitable.

What would we like to see?

- More involvement in the ideas process at an earlier stage. We believe this is key to getting the right product at the right price. For example if you take a camp situation why don't we work with the tent or building providers to make correct sized solar solutions. So we can for example design the correct fittings to hang solar panels.
- Need to identify needs of different groups of displaced people from border crossing refugees to long term camp residents. We can work with displaced people to identify what they want and build accordingly.
- Keep things simple plug and play and low maintenance so often we see outdated tender requirements with over complicated requirements. for example often they require non standard sizes say of battery causing costs to increase.
- How do we create commerce? We have created a "High Street" of solar powered shops for camps. we have solar soccer pitches etc here we need to have more engagement with organistaions to develop requirements.

Short feedback survey



Bit.ly/EforADCFeedbackSurvey2021-22

Newsletter sign up:



bit.ly/DesignChallengeNewsletter

