



## **Competition Brief**

### **Competition Title**

Net Zero Skills

### **Competition Overview**

This is a team competition that will research into how various technologies within the green technology sector can provide energy for homes and industry. For example, wind turbines, solar photovoltaic, tidal devices, hydro turbines and hydrogen.

The scope of the competition enables learners to develop and put into practice a variety of skills and knowledge that are required to develop a comprehensive strategy to reduce the carbon footprint and achieve net zero emissions in your school, community, or region.

Competitors taking part in this competition should, both individually and as part of a team, be able to:

- Generate ideas/spot opportunities
- Demonstrate creativity and innovation
- Develop appropriate strategies to problem solve and deal with difficult situations whilst working together
- Planning and managing resources
- Communicate effectively
- Working with others respectfully and effectively
- Demonstrate leadership skills (negotiation, persuasion and influence)
- Demonstrate self-confidence, self-belief and motivation
- Demonstrate solutions to sustainable energy options
- Demonstrate numeracy skills and understanding of costs
- Demonstrate presentation skills
- Identify and assess your individual and group strengths and weaknesses

The day will be split into a variety of tasks to allow each team to demonstrate their knowledge of Net Zero problem solving skills, both individually and as a team, which will be judged by a panel of Net Zero judges.

## Entry Criteria

This competition is intended for competitors who are working at all levels of education up to a Level 6.

## Entry capacity restrictions by organisation

Maximum of up to **2 teams per organisation consisting of up to 4 team members**.

**Reserves** may also be registered to account for potential absences or withdrawals.

This is the maximum number of entries permitted by an organisation for this competition. This is determined by 'location' and 'organisation'. 'Organisation' refers to the competitors' training provider/employer. 'Location' refers to a site where the competitor studies / is employed.

This competition may be subject to a selection process if competitor registration numbers exceed the host venue capacity. Where capacity is identified in a competition the reserve competitors may be invited to compete. The decision will be made following a consultation between Skills Competition Wales and the competition lead after registration closes. All parties will be notified of any changes.

For further guidance on these capacities, [click here](#).

## Brief

**The competition is based on the following:**

The competition is based on the following challenge:

Your team has been appointed as sustainability consultants to develop an innovative and practical strategy to help a school, college, community or region reduce its carbon emissions and work towards achieving net zero.

This challenge will test your ability to research, analyse information, solve problems creatively and work collaboratively within a set timescale to produce a realistic and achievable proposal.

**Preparation work leading up to the competition day:** To be submitted via an online portal by **Friday the 15th January 2027**.

Create a **single-slide visual concept board (mood board)** representing your team's initial ideas for achieving net zero within your chosen school, college, community or region.

Your concept board may include:

- Images
- Key words or phrases

- Initial ideas
- Sketches or diagrams
- Examples of technologies, initiatives or sustainable solutions

The concept board should:

- Be created as a single Microsoft PowerPoint slide
- Include your team name
- Be in standard 4:3 format

The purpose of this activity is to demonstrate your initial thinking and creativity. Teams should be prepared to refine or adapt their ideas following the competition brief issued on the competition day.

## **Competition Day Brief**

### **The Challenge**

On the day of the competition, you will receive additional information to refine your solutions. Using this information, your team will have **four hours** to develop a practical, evidence-based proposal that responds to the challenge.

Your proposal should address the following key areas:

### **Solution Design**

- Outline your proposed strategy for achieving net zero, including realistic timescales
- Explain how your proposal addresses the challenge.
- Describe the initiatives, technologies and behavioural changes you plan to implement
- Justify why these solutions have been selected and how they are tailored to your school/college/community/region.

### **Environmental Impact**

- Consider the expected reduction in greenhouse gas emissions
- Consider wider environmental benefits, such as improved air quality, biodiversity, energy efficiency and waste reduction.
- Identify any environmental risks and explain how they would be managed.

### **Cost Analysis**

- Provide a detailed budget for implementing your strategy
- Include initial investment costs and ongoing operational expenses
- Demonstrate how your proposal represents value for money.

### **Community Engagement**

- Describe how you will involve local stakeholders in your initiative

- Outline education and awareness programs to promote community participation
- Discuss potential partnerships with local businesses, communities and government

### **Implementation Timeline**

- Provide a phased approach for implementing your strategy
- Identify key milestones and deadlines
- Discuss potential challenges and contingency plans

### **Innovation and Scalability**

- Highlight any innovative aspects of your proposal
- Explain how your solution could be adapted, replicated or scaled in other schools, colleges or communities.

### **Monitoring and Reporting**

- Explain how progress towards net zero would be measured.
- Identify suitable Key Performance Indicators (KPIs).
- Describe how results would be monitored, evaluated and reported to stakeholders.

### **Presentation Format**

Prepare a 10-minute presentation summarising your proposal, followed by a 5-minute Q&A session with the expert panel.

Presentations should be professional, well-structured and visually engaging, clearly communicating the team's proposal, supporting evidence and recommendations.

Teams will be assessed on their communication and presentation skills. Where presentations are delivered through the medium of English, teams should make use of incidental Welsh where appropriate, for example through a greeting, introduction or closing.

Previous competition briefs are available to view and download via the Skills Competition Wales website, please [click here](#) to access.

### **Infrastructure List**

Laptop/Chromebook, translation resources, paper/pens/calculators for group work, laptops with Microsoft office and access to the internet for research.

### **Competition day activities**

Each team will be expected to undertake the following as part of the competition day:

1. Review and analyse the competition scenario.
2. Consider the additional information provided on the day.
3. Refine or adapt their initial ideas
4. Update an extended bid template based on new information and new considerations
5. Produce a costed implementation plan.

6. Prepare a 10-minute presentation of the team's proposal to the panel
7. Respond to questions from the judging panel.

## Competition Rules

For full terms and conditions of entry and competition rules [visit](#).

### Conduct of competitors during the live competitions:

- All teams will participate in all tasks and questioning by the Judges.
- Competitors will start and finish work/tasks as instructed by competition organisers and/or judges.
- The use of offensive behaviour of language will not be permitted; competitors could be excluded from continuing in the competition.
- The panel's decisions will be quality assured by the ISEiW Team before winners are announced.

### Generic competition rules

- Mobile phones can be used during the tasks for research purposes but are to be switched off during any presentations.
- Listening to music via headphones is not permitted during competition activity.
- Any questions during competition activity should be addressed to the competition lead.
- It is the responsibility of each group of competitors to arrive on time for each competition session. No additional time will be allowed if you arrive late.
- Technical failure of your equipment should be reported immediately to the competition lead. Additional time will be allocated if the fault is beyond the control of the competitor.

## Marking and Assessment

Marking and judging of this competition will be done by a team of experts from Industry, Further Education or Training Provider, using a marking criteria and allocated marks to ensure consistency.

Competitors will be assessed on the quality, practicality and justification of their proposals. Marks will not be awarded solely on the depth of technical knowledge, recognising that competitors may be studying at different qualification levels.

Competition Assessment criteria:

|   |                                                 |     |
|---|-------------------------------------------------|-----|
| A | Feasibility and practicality of the proposal    | 15% |
| B | Creativity and Innovation of the approach       | 15% |
| C | Justification of decisions and use of evidence  | 15% |
| D | Effectiveness of the teamwork and collaboration | 15% |

|   |                                                                               |             |
|---|-------------------------------------------------------------------------------|-------------|
| E | Value for money                                                               | 15%         |
| F | Environmental impact                                                          | 15%         |
| G | Presentation and communication (including incidental Welsh where appropriate) | 10%         |
|   | <b>Total</b>                                                                  | <b>100%</b> |

## Feedback and Recognition

Individual and Group verbal feedback will be provided at the end of the competition. No results or awards will be awarded on the day as marking will be quality assured.

All competitors will be issued with a Participation Certificate on the competition day. First, second, third and highly commended awards will be announced during the celebration event. The highly commended award recognises all competitors who have achieved above average. The celebration event will be held on Thursday 18th March 2027, further details will be communicated to competitors and their points of contact by email.

Marksheets will be available upon request via [info@skillscompetitionwales.ac.uk](mailto:info@skillscompetitionwales.ac.uk) to competitors after the celebration event.

## Competition Lead

Lead Contact: Lewis Jones  
L.Jones1@merthyr.ac.uk

## Our partners

This competition is delivered in partnership with





## Briff y Gystadleuaeth

### Teitl y Gystadleuaeth

Sgiliau Sero Net

### Trosolwg o'r Gystadleuaeth

Cystadleuaeth tîm yw hon a fydd yn ymchwilio i sut y gall technolegau amrywiol oddi mewn i'r sector technoleg werdd ddarparu ynni ar gyfer cartrefi a diwydiant. Er enghraifft, tyrbinau gwynt, solar ffotofoltäig, dyfeisiau llanw, tyrbinau dŵr a hydrogen.

Mae cwmpas y gystadleuaeth yn rhoi cyfle i ddysgwyr ddatblygu a defnyddio amrywiaeth o sgiliau a gwybodaeth sydd eu hangen i ddatblygu strategaeth gynhwysfawr i leihau ôl troed carbon a chyflawni allyriadau sero net yn eich ysgol, cymuned neu ranbarth.

Dylai cystadleuwyr sy'n cymryd rhan yn y gystadleuaeth hon, yn unigol ac fel aelod o dîm, allu:

- Cynhyrchu syniadau/Canfod Cyfleoedd
- Arddangos creadigrwydd ac arloesedd
- Datblygu strategaethau priodol er mwyn datrys problemau ac ymdrin â sefyllfaoedd anodd wrth gydweithio
- Cynllunio a rheoli adnoddau
- Cyfathrebu'n effeithiol
- Gweithio gydag eraill a hynny'n barchus ac effeithiol
- Arddangos sgiliau arwain (trafod, perswadio a dylanwadu)
- Dangos hunanhyder, hunangred a chymhelliant
- Arddangos atebion i opsiynau ynni cynaliadwy
- Arddangos sgiliau rhifedd a dealltwriaeth o gostau
- Arddangos sgiliau cyflwyno
- Nodi ac asesu eich cryfderau a'ch gwendidau unigol ac fel grŵp

Bydd y diwrnod yn cael ei rannu'n amrywiaeth o dasgau er mwyn galluogi pob tîm i arddangos eu gwybodaeth am sgiliau datrys problemau Sero Net, yn unigol ac fel tîm, gaiff eu beirniadu

gan banel o feirniaid Sero Net.

## **Meini Prawf Mynediad**

Bwriedir y gystadleuaeth hon ar gyfer cystadleuwyr sy'n gweithio ar bob lefel ym maes addysg hyd at Lefel 6.

## **Cyfngiadau ar gapasiti mynediad fesul sefydliad**

Uchafswm o hyd at **2 tîmau fesul sefydliad, yn cynnwys hyd at 4 aelod tîm**. Gellir cofrestru **cronfeydd wrth gefn** hefyd i gyfrifon absenoldeb neu dynnu'n ôl os bydd angen

Dyma uchafswm nifer y ceisiadau cofrestru a ganiateir gan sefydliad ar gyfer y gystadleuaeth hon. Pennir hyn gan 'leoliad' a 'sefydliad'. Mae 'Sefydliad' yn cyfeirio at ddarparwr hyfforddiant/cyflogwr y cystadleuwyr. Mae 'Lleoliad' yn cyfeirio at safle lle mae'r cystadleuydd yn astudio / yn cael ei gyflogi.

Gall y gystadleuaeth hon fod yn destun proses ddethol os yw'r niferoedd cofrestru cystadleuwyr yn fwy na chapasiti'r lleoliad cynnal. Lle nodir bod capasiti ar gyfer y gystadleuaeth, gellir gwahodd cystadleuwyr wrth gefn i gystadlu.

Bydd y penderfyniad yn cael ei wneud yn dilyn ymgynghoriad rhwng Cystadleuaeth Sgiliau Cymru ac arweinydd y gystadleuaeth ar ôl i'r cofrestru gau. Bydd pob parti yn cael gwybod am unrhyw newidiadau.

Am arweiniad pellach ar y galluoedd hyn, [cliciwch yma](#).

## **Briff**

Mae'r gystadleuaeth yn seiliedig ar yr her ganlynol:

Mae eich tîm wedi'i benodi fel ymgynghorwyr cynaliadwyedd i ddatblygu strategaeth arloesol ac ymarferol i helpu ysgol, coleg, cymuned neu ranbarth i leihau ei allyriadau carbon a gweithio tuag at gyflawni sero net.

Bydd yr her hon yn profi eich gallu i ymchwilio, dadansoddi gwybodaeth, datrys problemau'n greadigol a gweithio ar y cyd o fewn amserlen benodol i gynhyrchu cynnig realistig y gellir ei gyflawni.

**Gwaith paratoi cyn diwrnod y gystadleuaeth:** I'w gyflwyno trwy borth ar-lein erbyn **dydd Gwener 15 Ionawr 2027**.

Creu **bwrdd cysyniadau gweledol ar un sleid (bwrdd syniadau)** sy'n cynrychioli syniadau cychwynnol eich tîm ar gyfer cyflawni sero net yn eich ysgol, coleg, cymuned neu ranbarth dewisol.

Gall eich bwrdd cysyniadau gynnwys:

Delweddau  
Geiriau neu ymadroddion allweddol  
Syniadau cychwynnol  
Brasluniau neu ddiagramau  
Enghreifftiau o dechnolegau, mentrau neu atebion cynaliadwy

Dylai'r bwrdd cysyniad:  
Gael ei greu fel un sleid Microsoft PowerPoint  
Cynnwys enw eich tîm  
Bod mewn fformat 4:3 safonol

Bwriad y gweithgaredd hwn yw dangos eich syniadau cychwynnol a'ch creadigrwydd. Dylai timau fod yn barod i fireinio neu addasu eu syniadau gan ddilyn briff y gystadleuaeth a gyhoeddir ar ddiwrnod y gystadleuaeth.

### **Briff Diwrnod Cystadlu**

#### **Yr Her**

Ar ddiwrnod y gystadleuaeth, byddwch yn derbyn gwybodaeth ychwanegol i fireinio'ch atebion. Gan ddefnyddio'r wybodaeth hon, bydd gan eich tîm **bedair awr** i ddatblygu cynnig ymarferol, sy'n seiliedig ar dystiolaeth sy'n ymateb i'r her.

Dylai eich cynnig ymdrin â'r meysydd allweddol canlynol:

#### **Dylunio Datrysiad**

- Amlinellu eich strategaeth arfaethedig ar gyfer cyflawni sero net, gan gynnwys amserlenni realistig
- Eglurwch sut mae eich cynnig yn mynd i'r afael â'r her.
- Disgrifiwch y mentrau, y technolegau a'r newidiadau ymddygiadol rydych chi'n bwriadu eu rhoi ar waith
- Cyfiawnhewch pam rydych wedi dewis yr atebion hyn a sut maen nhw wedi'u teilwra i'ch ysgol/coleg/cymuned/rhanbarth.

#### **Effaith Amgylcheddol**

- Ystyried y gostyngiad disgwylledig mewn allyriadau nwyon tŷ gwydr
- Ystyriwch fanteision amgylcheddol ehangach, megis gwell ansawdd aer, bioamrywiaeth, effeithlonrwydd ynni a lleihau gwastraff.
- Nodwch unrhyw risgiau amgylcheddol ac esboniwch sut y byddent yn cael eu rheoli

#### **Dadansoddi Cost**

- Darparu cyllideb fanwl ar gyfer gweithredu eich strategaeth
- Cynnwys costau buddsoddi cychwynnol a threuliau gweithredol parhaus
- Dangoswch sut mae eich cynnig yn cynrychioli gwerth am arian.

## **Ymgysylltu â'r Gymuned**

- Disgrifio sut y byddwch yn cynnwys rhanddeiliaid lleol yn eich menter
- Amlinellu rhaglenni addysg ac ymwybyddiaeth i hyrwyddo cyfranogiad cymunedol
- Trafod partneriaethau posib gyda busnesau, cymunedau a llywodraeth leol

## **Llinell Amser Gweithredu**

- Darparu amserlen raddol ar gyfer gweithredu eich strategaeth
- Nodi cerrig milltir a dyddiadau cau allweddol
- Trafod heriau posib a chynlluniau wrth gefn

## **Arloesi a Graddiadwyedd**

- Amlygu unrhyw agweddau arloesol ar eich cynnig
- Eglurwch sut y gellai eich datrysiad gael ei addasu, ei ailadrodd neu ei ddatblygu ar raddfa mewn ysgolion, colegau neu gymunedau eraill.

## **Monitro ac Adrodd**

- Eglurwch sut y byddai cynnydd tuag at sero net yn cael ei fesur
- Nodwch Ddangosyddion Perfformiad Allweddol addas.
- Disgrifiwch sut y byddai canlyniadau'n cael eu monitro, eu gwerthuso a'u hadrodd i randdeiliaid.

## **Fformat y Cyflwyniad**

Paratoi cyflwyniad 10 munud yn crynhoi eich cynnig ac yna sesiwn Holi ac Ateb 5 munud gyda'r panel arbenigol. Dylai eich cyflwyniad fod yn glir, yn gryno, ac yn ddeniadol.

Dylai cyflwyniadau fod yn broffesiynol, wedi'u strwythuro'n dda ac yn ddiddorol o safbwynt weledol, gan gyfathrebu cynnig y tîm yn glir, a defnyddio tystiolaeth ategol ac argymhellion.

Bydd timau'n cael eu hasesu ar eu sgiliau cyfathrebu a chyflwyno. Pan fo cyflwyniadau'n cael eu cyflwyno trwy gyfrwng y Saesneg, dylai timau ddefnyddio Cymraeg achlysurol lle bo hynny'n briodol, er enghraifft trwy gyfarchiad, agor neu gloi'r cyflwyniad.

Mae briffiau cystadleuaeth flaenorol ar gael i'w gweld a'u llwytho o'r wefan Cystadleuaeth Sgiliau Cymru, [cliciwch yma](#) i gael mynediad iddynt.

## **Rhestr Isadeiledd**

Gliniadur/*Chromebook*, adnoddau cyfieithu, papur/beiciau/cyfrifiaduron ar gyfer gwaith grŵp, gliniaduron gyda *Microsoft Office* a mynediad i'r rhyngrwyd ar gyfer ymchwil.

## **Gweithgareddau diwrnod cystadlu**

Bydd disgwyl i bob tîm gyflawni'r canlynol fel rhan o'r diwrnod cystadlu:

1. Adolygu a dadansoddi senario'r gystadleuaeth.
2. Ystyried yr wybodaeth ychwanegol a ddarperir ar y diwrnod

3. Mireinio neu addasu eu syniadau cychwynnol
4. Diweddarw templed cynnig estynedig yn seiliedig ar wybodaeth newydd ac ystyriaethau newydd
5. Cynhyrchu cynllun gweithredu wedi'i gostio.
6. Paratoi cyflwyniad 10 munud o gynnis y tîm i'r panel
7. Ymateb i gwestiynau gan y panel beirniaid.

## Rheolau'r Gystadleuaeth

I gael y telerau ac amodau mynediad llawn a rheolau cystadlu [ewch i](#).

### Ymddygiad cystadleuwyr yn ystod y cystadlaethau byw:

- Bydd pob tîm yn cymryd rhan ym mhob tasg ac yn y cwestiynu gan y Beirniaid.
- Bydd cystadleuwyr yn dechrau ac yn gorffen gwaith/tasgau yn unol â chyfarwyddyd trefnwyr y gystadleuaeth a/neu'r beirniaid.
- Ni chaniateir defnyddio iaith nac ymddygiad sarhaus; gallai cystadleuwyr gael eu gwahardd rhag parhau yn y gystadleuaeth.
- Bydd ansawdd penderfyniadau'r panel yn cael ei sicrhau gan Dîm ISEiW cyn y cyhoeddir enwau'r enillwyr.

## Rheolau generig y gystadleuaeth

- Gellir defnyddio ffonau symudol yn ystod y tasgau at ddibenion ymchwil ond dylid eu diffodd yn ystod unrhyw gyflwyniadau.
- Ni chaniateir gwrando ar gerddoriaeth trwy glustffonau yn ystod y gweithgaredd cystadlu.
- Dylid cyfeirio unrhyw gwestiynau yn ystod gweithgaredd y gystadleuaeth at arweinydd y gystadleuaeth.
- Cyfrifoldeb pob grŵp o gystadleuwyr yw cyrraedd yn brydlon ar gyfer pob sesiwn cystadlu. Ni chaniateir amser ychwanegol os byddwch yn cyrraedd yn hwyr.
- Dylid rhoi gwybod ar unwaith i arweinydd y gystadleuaeth am fethiant technegol eich offer. Caiff amser ychwanegol ei neilltuo os yw'r nam y tu hwnt i reolaeth y cystadleuydd.

## Marcio ac Asesu

Bydd tîm o arbenigwyr o fyd Diwydiant, Addysg Bellach neu Ddarparwr Hyfforddiant yn marcio ac yn beirniadu'r gystadleuaeth hon, a byddant yn defnyddio meini prawf marcio a marciau a ddyrennir er mwyn sicrhau cysondeb.

Bydd cystadleuwyr yn cael eu hasesu'n seiliedig ar ansawdd, ymarferoldeb a chyfiawnhad eu cynigion. Ni fydd marciau'n cael eu rhoi'n seiliedig ar ddyfnder gwybodaeth dechnegol yn unig, gan gydnabod y gallai cystadleuwyr fod yn astudio cymwysterau ar wahanol lefelau.

Meini prawf asesu cystadleuaeth:

|   |                                                                          |            |
|---|--------------------------------------------------------------------------|------------|
| A | Dichonoldeb ac ymarferoldeb y cynnig                                     | 15%        |
| B | Creadigrwydd ac Arloesedd y dull gweithredu                              | 15%        |
| C | Cyfiawnhau penderfyniadau a defnyddio tystiolaeth                        | 15%        |
| D | Effeithiolrwydd y gwaith tîm a chydweithio                               | 15%        |
| E | Gwerth am arian                                                          | 15%        |
| F | Effaith amgylcheddol                                                     | 15%        |
| G | Cyflwyno a chyfathrebu (gan gynnwys Cymraeg achlysurol lle bo'n briodol) | 10%        |
|   | <b>Cyfanswm</b>                                                          | <b>100</b> |

## Adborth a Chydnabyddiaeth

Darperir adborth llafar i Unigolion a Grwpiau ar ddiwedd y gystadleuaeth. Ni chyhoeddir unrhyw ganlyniadau na gwobrau ar y diwrnod, gan y bydd ansawdd y marcio yn cael ei sicrhau.

Bydd pob cystadleuydd yn cael Tystysgrif Cyfranogi ar ddiwrnod y gystadleuaeth. Bydd gwobrau cyntaf, ail, trydydd a chanmolïaeth uchel yn cael eu cyhoeddi yn ystod y digwyddiad dathlu. Mae'r wobr canmolïaeth uchel yn cydnabod yr holl gystadleuwyr sydd wedi cyflawni sgôr uwch na'r cyfartaledd. Cynhelir y digwyddiad dathlu ar Dydd Iau 18 Mawrth 2027, bydd manylion pellach yn cael eu rhoi i gystadleuwyr a'u pwyntiau cyswllt trwy e-bost.

Bydd taflenni marciau ar gael ar gais drwy [info@skillscompetitionwales.ac.uk](mailto:info@skillscompetitionwales.ac.uk) i gystadleuwyr ar ôl y digwyddiad dathlu.

## Arweinydd y Gystadleuaeth

Lead Contact: Lewis Jones

L.Jones1@merthyr.ac.uk

## Ein partneriaid

Mae'r gystadleuaeth hon yn cael ei chyflwyno mewn partneriaeth â

