Informational Webinar

October 19, 2023

Presented by: National Renewable Energy Lab

"I really like this program! So many other [similar competitions] are extremely labor and time intensive, and [EnergyTech UP] is a **great introduction to this sector**"

-Student Participant

Webinar Will Begin Shortly

My favorite part of EnergyTech UP was **learning how to frame my research** in the perspective of a business model."

-Student Participant

"I enjoyed learning about other technologies and **ideas from other teams.**"

-Student Participant

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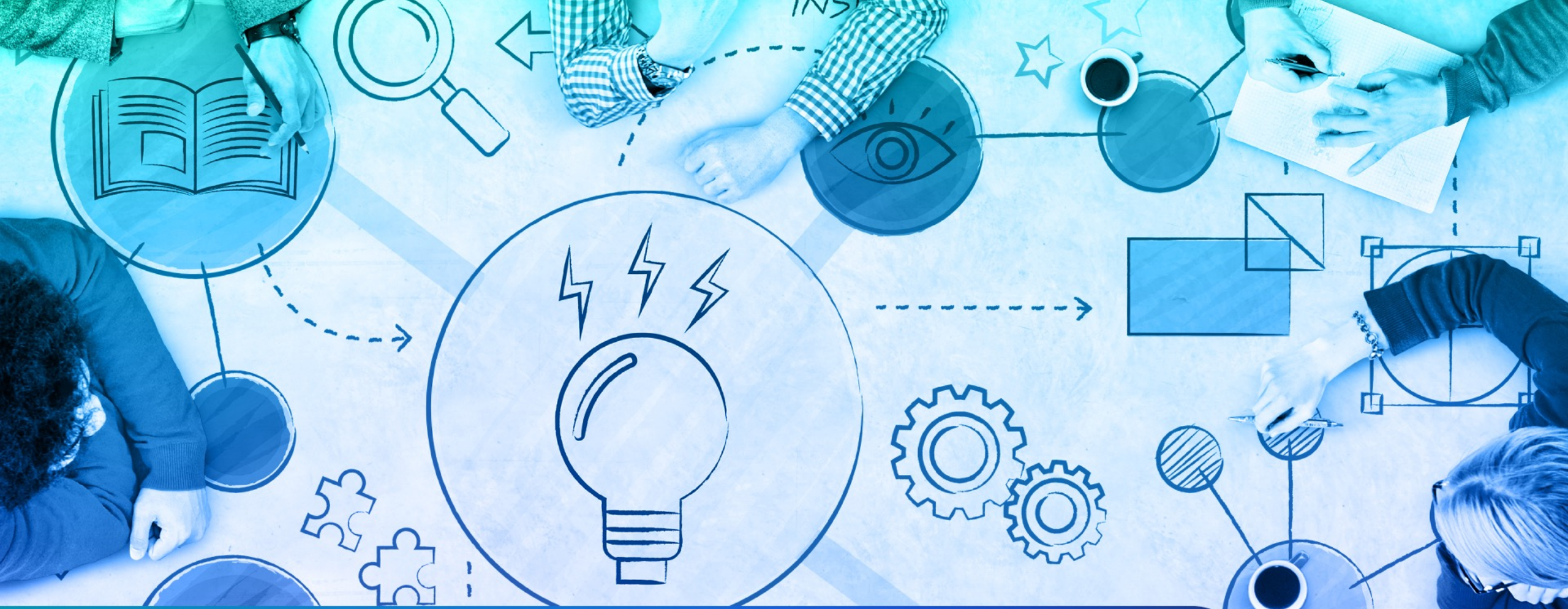
Housekeeping

- Two Options for Audio (select audio mode):
    1. Listen through your computer:
       Click the ‘up arrow’ next to the “mute” button in the bottom left corner.
       Under “Select a Speaker,” click “Same as System.”
    2. Listen by telephone:
       Click the ‘up arrow’ next to the “mute” button in the bottom left corner.
       Click “Switch to Phone Audio.”
- Panelists – reminder to mute your audio device when not presenting.
- To Ask a Question:
    - Select the ‘Chat’ button at the bottom of your screen and type in your question.
- Having Trouble with the Webinar?
    - A video/audio recording of this webinar and the slide deck will be made available.

AGENDA

1. Introduction to EnergyTech UP
2. Welcome from the Office of Technology Transitions
3. Perspectives from Alumni
4. About the Student Track
5. Bonus Prizes Available
6. About the Faculty Track
7. Highlights from the 2023 Competition
8. About the Pitch Event
9. Spreading the Word
10. Closing Remarks, Questions, & Answers



Energy Enables our World

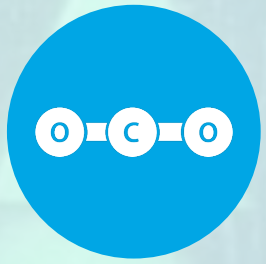
EnergyTech UP
OTT Office of Technology Transitions
AMERICAN MADE
U.S. DEPARTMENT OF ENERGY

Innovation is Needed

Growing New Generation and Integration

Creativity Around Time-and-Place of Energy

Transportation and Logistics Modernization



Innovations in Material Science

Cybersecurity and Finance Challenges

EnergyTech University Prize

Tasking student teams to craft and present a business plan using National Laboratory-developed or other high-potential energy technologies.

Tasking faculty to incorporate or expand energy technology commercialization and entrepreneurship topics into their institution's educational activities.

Photo courtesy of the EnergyTech UP 2022 University of Miami Structural Piezoelectric Supercapacitors Team

Goals of the Program

- Build engagement between colleges, universities, the Department of Energy, national labs, and industry.
- Inspire others on the possibilities for leveraging energy technologies.
- Increase commercialization of energy technologies and help to launch careers.
- Support and improve energy technology education at institutions across the U.S.

Photo courtesy of the EnergyTech UP 2022 Appalachian State University Solar Shepherds Team

Student Track

- Registration closes on February 1, 2024.
- Regional Explore Events occur on February 27, 28, and 29, 2024.
- Regional and Bonus Prize Finalists each receive $3,000
- National Pitch Event occurs April 15, 2024.
- At the National Event, prizes are $50,000 for 1st place, $20,000 for 2nd Place, $10,000 for 3rd place, and $22,000 for each of 11 technology Bonus Prizes, the undergraduate-only Bonus Prize, and the National Lab IP Licensing Bonus Prize.

Faculty Track

- Faculty who submit by January 5 are eligible for Faculty Explorer awards.
- Any faculty can submit to the Implement Phase, even if they did not submit to the Explore Phase.
- Winners announced as part of the National Pitch Event, which occurs April 15, 2024.
- $4,000 to each of the Faculty Explorers and $60,000 in prizes for the Implement Phase.

Low Barrier to Entry

- Students can register with just a 200-word summary.
- Students present virtually to judges about 4 weeks later.
- Students do not need to have an established startup.
- Students do not need to control the IP to present.
- Students are evaluated based on the quality of the plan.
- Student finalists win $3,000 and are invited to the national competition, where over $400,000 in prizes are provided.
- Faculty who submit information about themselves and their interests by January 5 are eligible to be selected as one of 10 Faculty Explorers and receive funding.
- Any faculty can submit an implementation plan by April 5 to be eligible for a share of $60,000 in funding.

Students and faculty from any institution, anywhere in the U.S., are welcome and encouraged to compete.

Welcome!

Edward Rios

Commercialization Executive

U.S. Department of Energy's

Office of Technology Transitions

EnergyTech UP | OTT Office of Technology Transitions | AMERICAN MADE U.S. DEPARTMENT OF ENERGY

Office of Technology Transitions

EPIC Round 3
Energy Program for Innovation Clusters
Powered by the Office of Technology Transitions

The **Mission of the Office of Technology Transitions** (OTT) is to expand the public impact of the department's research, development, demonstration, and deployment (RDD&D) portfolio to advance the economic, energy and national security interests of the nation. OTT is the front door to U.S. Department of Energy's (DOE) products, facilities and expertise. The office integrates "market pull" into its planning to ensure the greatest return on investment from DOE's RDD&D activities to the taxpayer.

ENERGY I-CORPS

OTT Office of Technology Transitions

Adoption Readiness Levels (ARL): A Complement to TRL

Practices to Accelerate the Commercialization of Technologies (PACT)
Office of Technology Transitions

LAB PARTNERING SERVICE

INNOVATION X LAB®

Pathways To Commercial Liftoff

Technology Commercialization Internship | OTT Office of Technology Transitions

Technology Commercialization Fund | OTT Office of Technology Transitions

DOE Emerging Tech Studio
powered by FEDTECH

EnergyTech UP | OTT Office of Technology Transitions | AMERICAN MADE U.S. DEPARTMENT OF ENERGY

EnergyTech UP

U.S. DEPARTMENT OF ENERGY | OFFICE OF Technology Transitions

as SO much fun and
really just once again, it is a

once in a lifetime

competition that comes with
a very explicit goal of educating students

AMERICAN MADE CHALLENGES

Perspectives from a former competitor

Kevin O’Sullivan

CEO, *Alpha Nur*

776 Climate Fellow

2022 EnergyTech UP Office of Nuclear Energy Technology Bonus Prize Recipient

EnergyTech UP | OTT Office of Technology Transitions | AMERICAN MADE U.S. DEPARTMENT OF ENERGY

Student Track Details

EnergyTech UP | OTT Office of Technology Transitions | AMERICAN MADE U.S. DEPARTMENT OF ENERGY

Up to 225 teams invited to present live across 15 regional Explore Events

2024 Explore Events

- ~15 regions across the U.S.
- ~12-15 teams per region.
- ~3-5 industry judges per region.
- 3 Explore Event dates:
  - East – February 27 from ~1–5 p.m. ET
  - Central – February 28 from ~1–5 p.m. CT
  - West – February 29 from ~1–5 p.m. PT

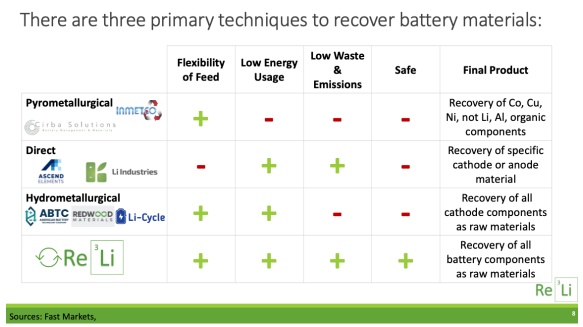
2024 Regional Conveners

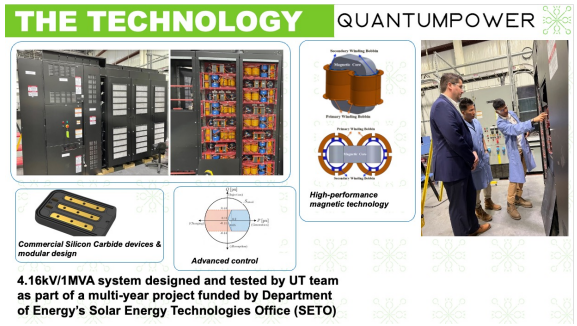
Regional Convener Name	Regional Explore Event
Rice Alliance for Technology and Entrepreneurship	Central – Feb 28
Evergreen Climate Innovations	
Grid Catalyst	
University of Kentucky and the Circular Venture Lab	
Russell Center for Entrepreneurship (RICE) Atlanta	
Florida High Tech Corridor	East – Feb 27
Wilton E. Scott Institute for Energy Innovation at Carnegie Mellon University	
Cleantech Open Northeast, NECEC	
Research Triangle Cleantech Cluster	
New York Tri-State (NY, NJ, CT)	
CleanTech San Diego/UC San Diego	West – Feb 29
University of Arizona Center for Innovation	
Clean Energy Institute - University of Washington	
Colorado School of Mines, McNeil Center for Entrepreneurship & Innovation and WY Ranch	
Cold Climate Housing Research Center, NREL, Alaska	

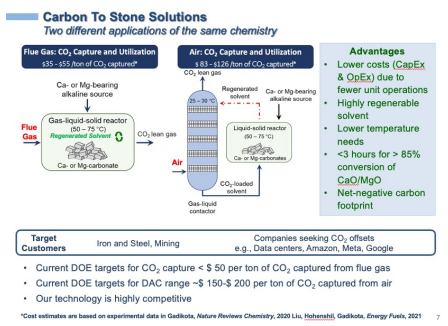
All energy technologies are welcome.

Technology Areas of Interest

- Student submissions must focus on technologies that produce and/or store energy, improve the efficiency of energy consumption or energy transmission, or increase the security and reliability of energy systems.
- Several DOE technology offices are offering technology bonus prizes for the best student entries in each technology office's respective fields.







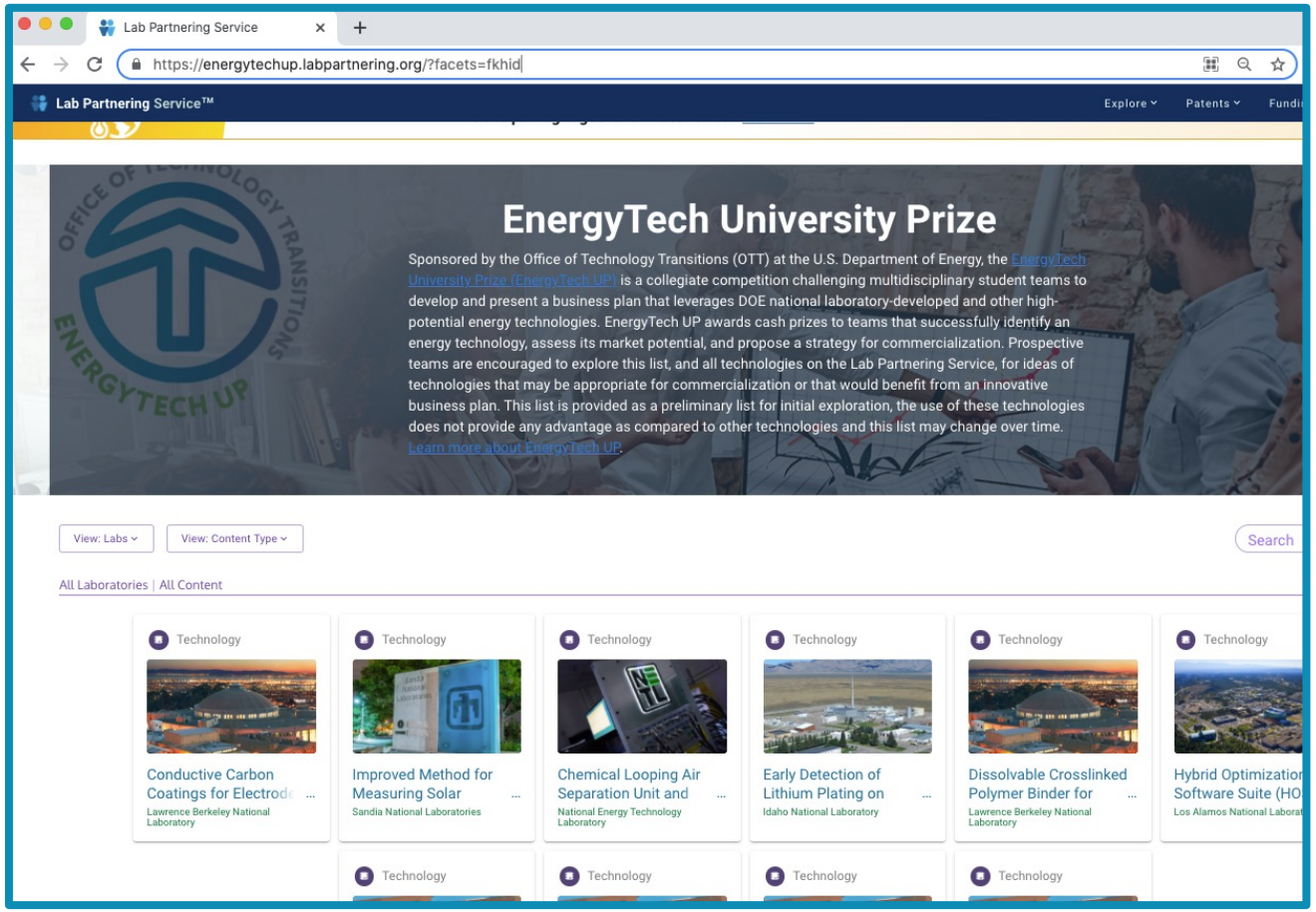
This is not a startup competition.

You don’t need to own or have a license to the IP.

You don’t need to have a business formed.

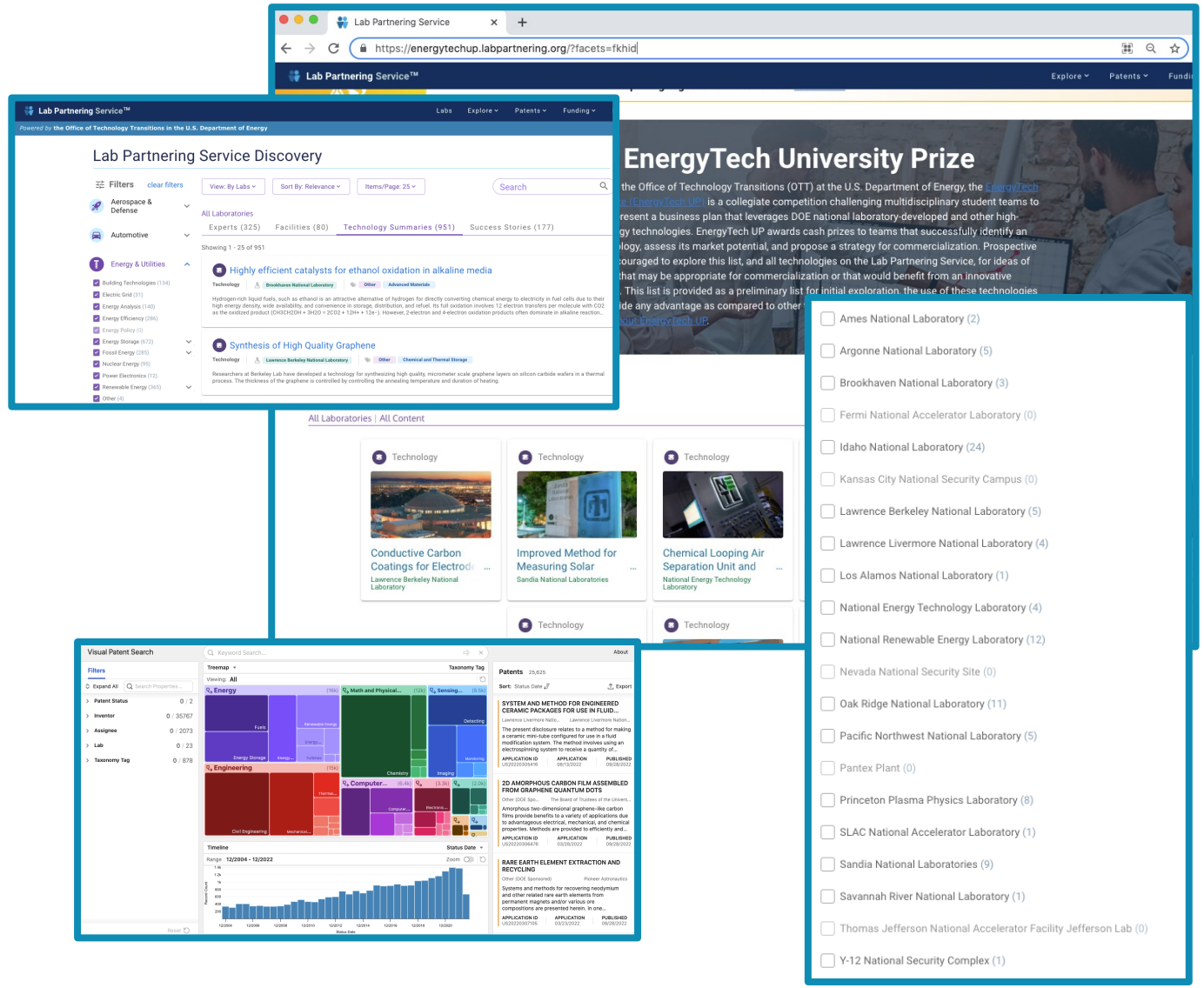
IP Ownership or License Not Required

- Technology you or your team members developed.
- Your institution's technologies.
- National lab-developed technologies via the Lab Partnering Service.
- Emerging technologies of interest to you and your team.



Lab Partnering Service

- Nearly 2,000 technologies available for license from DOE's national labs are summarized.
- About 100 energy technologies highlighted for consideration by EnergyTech UP competitors.
- Teams are not restricted to the technologies highlighted.

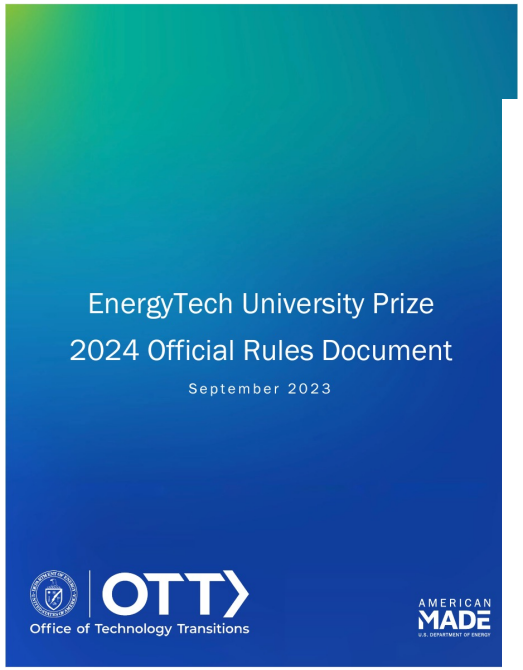


The Rules indicate:

Topics of interest
What you'll do
How winners are determined

Competition Rules

- Released Sept. 27.
- Available on HeroX under “Resources”.
- Define eligibility, technologies areas of interest, prizes to win, how to enter, what to submit, and how winners are determined.



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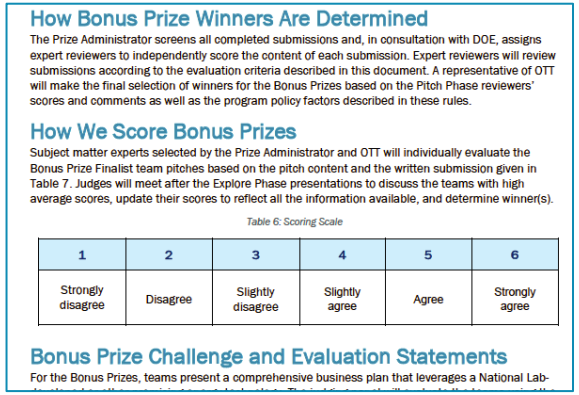


How Bonus Prize Winners Are Determined

The Prize Administrator screens all completed submissions and, in consultation with DOE, assigns expert reviewers to independently score the content of each submission. Expert reviewers will review submissions according to the evaluation criteria described in this document. A representative of OTT will make the final selection of winners for the Bonus Prizes based on the Pitch Phase reviewers’ scores and comments as well as the program policy factors described in these rules.

How We Score Bonus Prizes

Subject matter experts selected by the Prize Administrator and OTT will individually evaluate the Bonus Prize Finalist team pitches based on the pitch content and the written submission given in Table 7. Judges will meet after the Explore Phase presentations to discuss the teams with high average scores, update their scores to reflect all the information available, and determine winner(s).

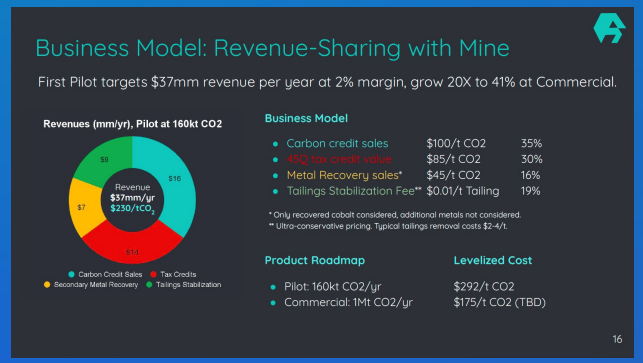
Table 6: Scoring Scale

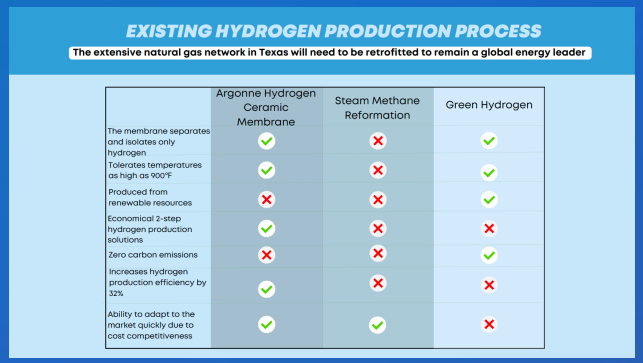
1	2	3	4	5	6
Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree

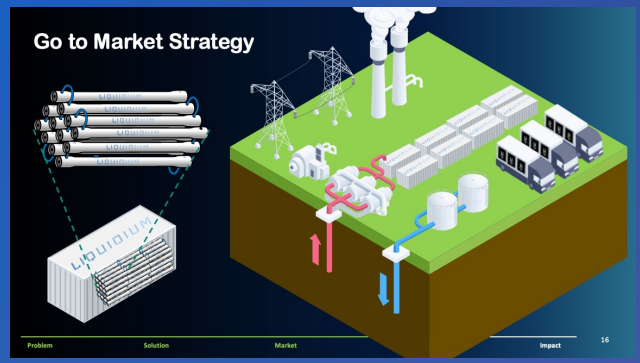
Bonus Prize Challenge and Evaluation Statements

For the Bonus Prizes, teams present a comprehensive business plan that leverages a National Lab-

Winners are determined based on the strength of the plan presented.







How Explore Phase Regional Finalists are Determined

- Regional pitches – virtual.
  - 5-minute pitches, 3-minute Q&A.
  - Initial idea and opportunity.
  - 1 regional finalist from each region.
- Finalists win $3,000 each and are invited to the Refine and Pitch Phases of the competition.

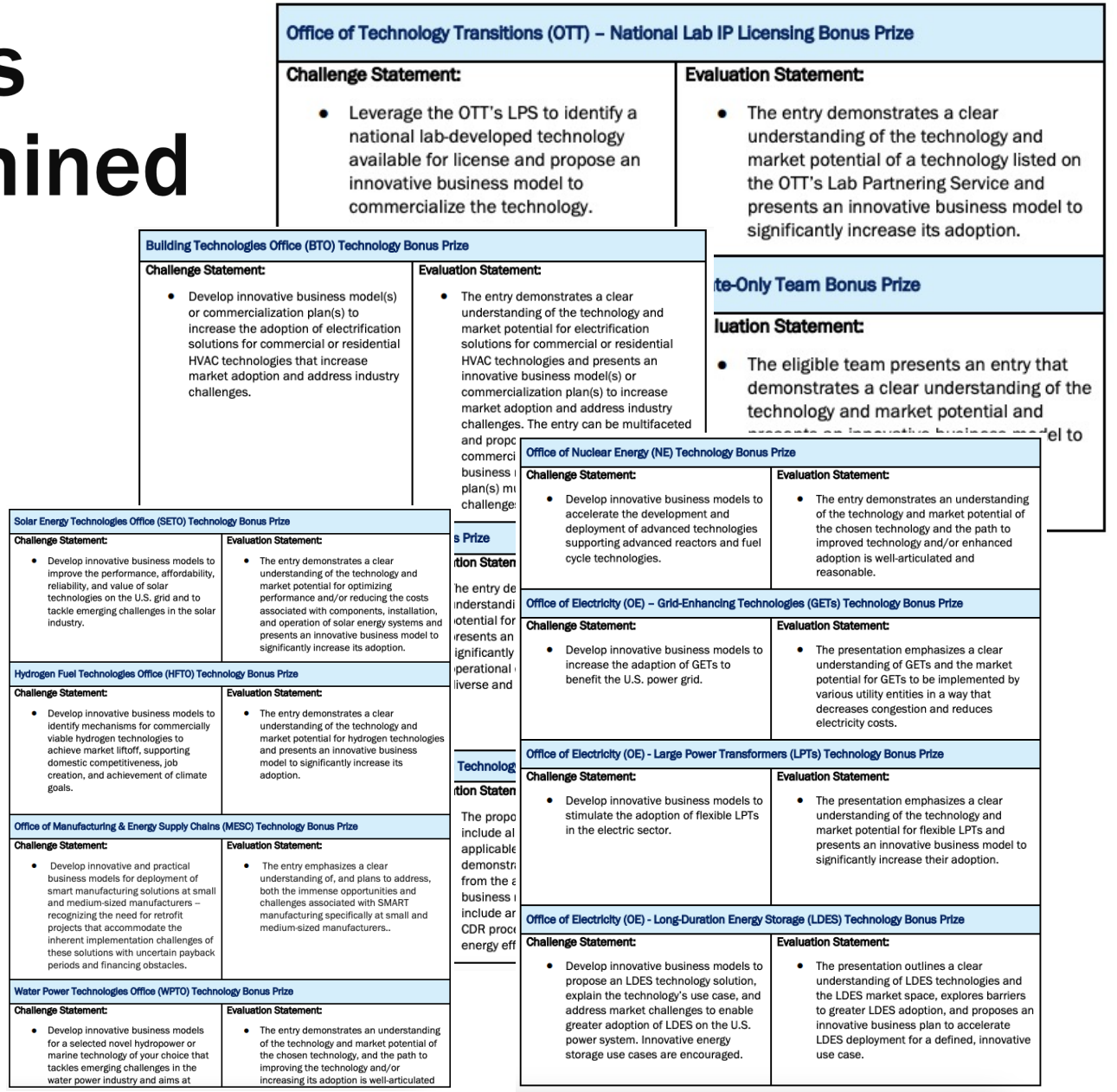
Table 3: Scoring Scale

1	2	3	4	5	6
Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree

1. Technology Identification	
Suggested Content: A. What is the energy technology to be leveraged?	**Evaluation Statement:** The team deeply understands their technology of choice and explained it clearly.
2. Market Assessment	
Suggested Content: A. Who will buy the product or service and why do they need it? B. Who is currently serving this market and how? C. What unmet market need will this technology help to fill?	**Evaluation Statement:** The team understands the relevant market, potential competitors, and customers for their identified technology, including what pain points this technology might solve for the customer.
3. Economic Feasibility Analysis	
Suggested Content: A. What might customers be willing to pay for this product or service? B. How much might it cost the business to produce this product or service?	**Evaluation Statement:** The team's analysis is credible and has identified what the customer is willing to pay for the product, thoroughly justifying their product/service's cost of production and understanding its implication on their profit margins.
4. Potential Impact	
Suggested Content: A. Who will benefit should this business succeed? B. What role will this business play in the energy transition?	**Evaluation Statement:** The proposed business includes thoughtful and specific activities that will advance equity and inclusion, including for members of disadvantaged communities[4] (e.g., those
	that are affected by persistent poverty, job loss due to the energy transition, etc.), and the team has outlined a realistic vision for the role they see this business playing in the energy transition.
5. Overall Business Plan	
Suggested Content: A. How is success defined? B. What people and resources are needed to put this plan into action?	**Evaluation Statement:** The team's definition of success is reasonable, and the business, if implemented as proposed, would be likely to achieve the specified metrics of success, including personnel, equipment or other assets, and partnerships necessary.

How Explore Phase Bonus Prize Finalists are Determined

- Program office staff watch recorded regional pitches.
  - Up to 1 finalist identified for each Bonus Prize.
- Finalists win $3,000 each and are invited to the Refine and Pitch Phases of the competition.



Office of Technology Transitions (OTT) – National Lab IP Licensing Bonus Prize

Challenge Statement:	Evaluation Statement:
• Leverage the OTT's LPS to identify a national lab-developed technology available for license and propose an innovative business model to commercialize the technology.	• The entry demonstrates a clear understanding of the technology and market potential of a technology listed on the OTT's Lab Partnering Service and presents an innovative business model to significantly increase its adoption.

Building Technologies Office (BTO) Technology Bonus Prize

Challenge Statement:	Evaluation Statement:
• Develop innovative business model(s) or commercialization plan(s) to increase the adoption of electrification solutions for commercial or residential HVAC technologies that increase market adoption and address industry challenges.	• The entry demonstrates a clear understanding of the technology and market potential for electrification solutions for commercial or residential HVAC technologies and presents an innovative business model(s) or commercialization plan(s) to increase market adoption and address industry challenges. The entry can be multifaceted

Solar Energy Technologies Office (SETO) Technology Bonus Prize

Challenge Statement:	Evaluation Statement:
• Develop innovative business models to improve the performance, affordability, reliability, and value of solar technologies on the U.S. grid and to tackle emerging challenges in the solar industry.	• The entry demonstrates a clear understanding of the technology and market potential for optimizing performance and/or reducing the costs associated with components, installation, and operation of solar energy systems and presents an innovative business model to significantly increase its adoption.

Hydrogen Fuel Technologies Office (HFTO) Technology Bonus Prize

Challenge Statement:	Evaluation Statement:
• Develop innovative business models to identify mechanisms for commercially viable hydrogen technologies to achieve market liftoff, supporting domestic competitiveness, job creation, and achievement of climate goals.	• The entry demonstrates a clear understanding of the technology and market potential for hydrogen technologies and presents an innovative business model to significantly increase its adoption.

Office of Manufacturing & Energy Supply Chains (MESC) Technology Bonus Prize

Challenge Statement:	Evaluation Statement:
• Develop innovative and practical business models for deployment of smart manufacturing solutions at small and medium-sized manufacturers – recognizing the need for retrofit projects that accommodate the inherent implementation challenges of these solutions with uncertain payback periods and financing obstacles.	• The entry emphasizes a clear understanding of, and plans to address, both the immense opportunities and challenges associated with SMART manufacturing specifically at small and medium-sized manufacturers..

Water Power Technologies Office (WPTO) Technology Bonus Prize

Challenge Statement:	Evaluation Statement:
• Develop innovative business models for a selected novel hydropower or marine technology of your choice that tackles emerging challenges in the water power industry and aims at	• The entry demonstrates an understanding of the technology and market potential of the chosen technology, and the path to improving the technology and/or increasing its adoption is well-articulated

Office of Nuclear Energy (NE) Technology Bonus Prize

Challenge Statement:	Evaluation Statement:
• Develop innovative business models to accelerate the development and deployment of advanced technologies supporting advanced reactors and fuel cycle technologies.	• The entry demonstrates an understanding of the technology and market potential of the chosen technology and the path to improved technology and/or enhanced adoption is well-articulated and reasonable.

Office of Electricity (OE) – Grid-Enhancing Technologies (GETs) Technology Bonus Prize

Challenge Statement:	Evaluation Statement:
• Develop innovative business models to increase the adaption of GETs to benefit the U.S. power grid.	• The presentation emphasizes a clear understanding of GETs and the market potential for GETs to be implemented by various utility entities in a way that decreases congestion and reduces electricity costs.

Office of Electricity (OE) - Large Power Transformers (LPTs) Technology Bonus Prize

Challenge Statement:	Evaluation Statement:
• Develop innovative business models to stimulate the adoption of flexible LPTs in the electric sector.	• The presentation emphasizes a clear understanding of the technology and market potential for flexible LPTs and presents an innovative business model to significantly increase their adoption.

Office of Electricity (OE) - Long-Duration Energy Storage (LDES) Technology Bonus Prize

Challenge Statement:	Evaluation Statement:
• Develop innovative business models to propose an LDES technology solution, explain the technology's use case, and address market challenges to enable greater adoption of LDES on the U.S. power system. Innovative energy storage use cases are encouraged.	• The presentation outlines a clear understanding of LDES technologies and the LDES market space, explores barriers to greater LDES adoption, and proposes an innovative business plan to accelerate LDES deployment for a defined, innovative use case.

Up to 28 different teams can win a share of $450,000 in prizes.

Prizes are awarded for your work in this competition and come with no IP or ownership transfer, no further obligations, and no reporting requirements.

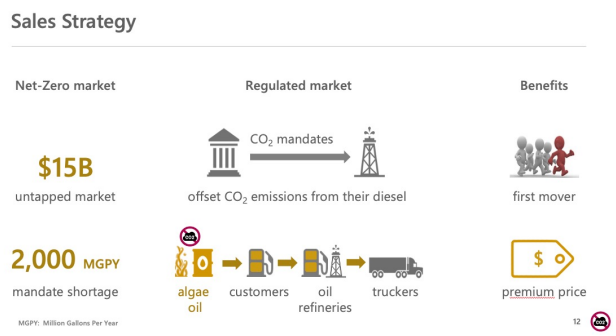
Prizes Available to Student Teams

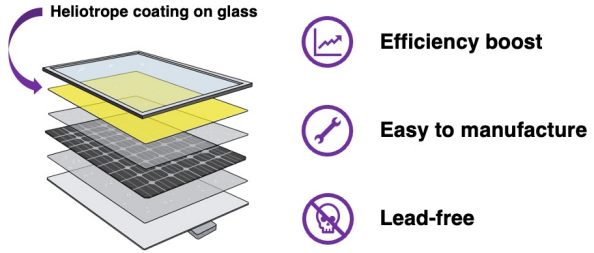
Category	Amount	Number Awarded	Total
Regional Finalist (up to 15)	$3,000	15	$45,000
Bonus Prize Finalists (up to 1 per prize)	$3,000 each	Up to 13	$39,000
All Finalists Eligible for Any of the Prizes Below			
1st place	$50,000	1	$50,000
2nd place	$20,000	1	$20,000
3rd place	$10,000	1	$10,000
Technology Bonus Prizes	$22,000 each	Up to 11	$242,000
National Lab IP Licensing Bonus Prize	$22,000	Up to 1	$22,000
Undergraduate-Only Team Bonus Prize	$22,000	Up to 1	$22,000

Students from anywhere in the U.S., pursuing any degree at any level, are welcome and invited to compete.

Eligibility

- A team composed of two or more enrolled students.
  - Accredited U.S.-based collegiate institution.
    - 2-year, 4-year, and/or graduate institutions invited.
  - Any level student (undergraduate or graduate level).
  - Team captain must be a U.S. citizen or permanent resident.
  - Only students can present to judges.
- Following the close of registration on February 1, teams will be assigned to a regional convener's Explore Event to enable an equitable competition.
- Business plans that have not previously received notable funding may receive preference by the prize administrator. Competition is seeking new ideas and plans.





Student Track Bonus Prizes

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$325,000 in Bonus Prizes available to all teams in addition to Explore Phase prizes and national Pitch Phase prizes.

Bonus Prizes

$3,000 to each finalist
$22,000 to each winner

- Building Technologies Office: HVAC Electrification
- Geothermal Technologies Office: Innovation and Inclusiveness
- Hydrogen Fuel Technologies Office: Innovation and Inclusiveness
- Office of Electricity: Grid-Enhancing Technologies (GETs)
- Office of Electricity: Large Power Transformers (LTPs)
- Office of Electricity: Long-Duration Energy Storage (LDES)
- Office of Fossil Energy and Carbon Management: Carbon Dioxide Removal (CDR)
- Office of Manufacturing & Energy Supply Chains: Smart Retrofit Manufacturing
- Office of Nuclear Energy: Accelerated Development and Deployment
- Solar Energy Technologies Office: Performance, Affordability, Reliability, and Value of Solar Technologies
- Water Power Technologies Office: Powering the Blue Economy
- Office of Technology Transitions: National Lab IP Licensing
- Office of Technology Transitions: Undergraduate-Only Team

New Faculty Track Details

EnergyTech UP | OTT Office of Technology Transitions | AMERICAN MADE U.S. DEPARTMENT OF ENERGY

Faculty are invited to compete for a share of $100,000 in cash prizes for the successful development and implementation of educational activities that engage an increasing number of students on energy technology commercialization and entrepreneurship topics at their institution.

Faculty Track

- Faculty who submit by January 5 are eligible for Faculty Explorer awards.
- Any faculty can submit to the Implement Phase, even if they did not submit to the Explore Phase.
- Winners announced as part of the National Pitch Event, which occurs April 15, 2024.
- $4,000 to each of the Faculty Explorers and $60,000 in prizes for the Implement Phase.

Sample Activities

- The integration of new key educational modules into an existing course(s)/program.
- The development of a new course(s)/program.
- The creation of an accelerator or incubator program.
- Creative co-teaching situations involving faculty from different disciplines.
- Creative distance learning modules/course(s).
- The creation of new student-centered materials that actively engage learners in the classroom.
- The development of new content presentation materials (for in-person or online learning), or any other approach determined to be impactful by the faculty and supported by their department/administration.

Up to 10 faculty (or faculty teams) who submit by January 5, 2024, will be identified as Faculty Explorers and receive $4,000 each.

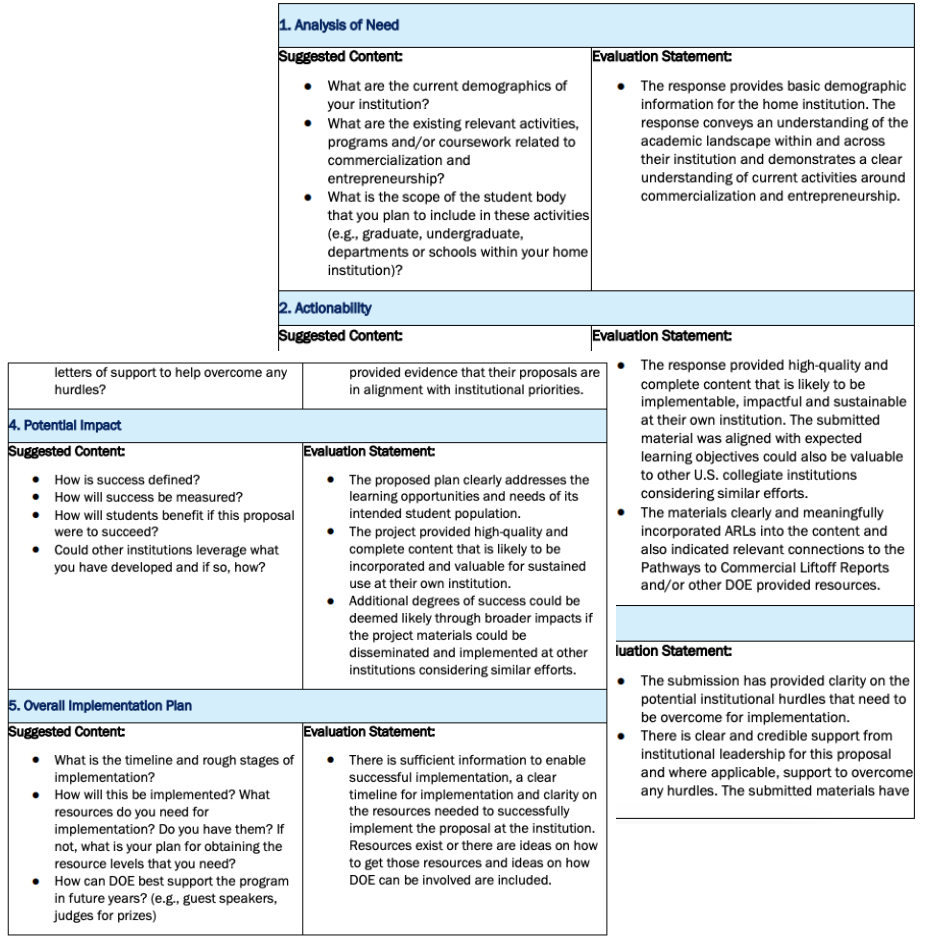
Faculty Explore Phase

- A project title and short summary.
- A single slide that summarizes the proposal.
- A three-page written document addressing the suggested content.
- A completed entry form.
- Resume or CV.

Faculty Registration Submission Evaluation Statement for Explore Phase	
Suggested Content: • Why are you applying to this program and why do you believe that your proposed educational activities will benefit students and your home institution? • How do you see your proposed activities fitting into and complementing current program(s) and student pathways at your accredited institution? • What are the foreseen challenges of implementing your proposed activities into existing program(s) and student pathways within the department/division? • Describe the level of commitment from your department and leadership for developing and implementing your proposed educational activities.	**Evaluation Statement:** • The faculty clearly articulated a credible interest, identified an unmet opportunity at their home institution for the proposed materials, and provided a convincing understanding of the likely benefit to students at their home institution. A vision for the role their plan could play in an equitable energy transition was evident. • The faculty articulated a clear understanding of the current program structure as well as the constraints and flexibility of student pathways leading to program/degree completion requirements. The response considered what would be necessary to achieve success, understands the learning objectives, and summarized the potential impact. • The faculty did not shy away from citing realistic challenges for the implementation of the proposed learning materials within boundaries of existing course(s), department/division/program. • The faculty secured and provided clear and convincing evidence of support from department and/or relevant academic leadership for the development and implementation of the proposed education activities.

Faculty Implementation Phase

- A project title and short description of the proposal.
- An implementation plan (up to 10 pages) addressing the suggested content.
- Letter or letters of support from department and/or institutional leadership.
- Resume or CV.
- A completed entry form.



1. Analysis of Need	
Suggested Content: • What are the current demographics of your institution? • What are the existing relevant activities, programs and/or coursework related to commercialization and entrepreneurship? • What is the scope of the student body that you plan to include in these activities (e.g., graduate, undergraduate, departments or schools within your home institution)?	**Evaluation Statement:** • The response provides basic demographic information for the home institution. The response conveys an understanding of the academic landscape within and across their institution and demonstrates a clear understanding of current activities around commercialization and entrepreneurship.
2. Actionability	
Suggested Content:	**Evaluation Statement:**
letters of support to help overcome any hurdles?	provided evidence that their proposals are in alignment with institutional priorities.
4. Potential Impact	
Suggested Content: • How is success defined? • How will success be measured? • How will students benefit if this proposal were to succeed? • Could other institutions leverage what you have developed and if so, how?	**Evaluation Statement:** • The proposed plan clearly addresses the learning opportunities and needs of its intended student population. • The project provided high-quality and complete content that is likely to be incorporated and valuable for sustained use at their own institution. • Additional degrees of success could be deemed likely through broader impacts if the project materials could be disseminated and implemented at other institutions considering similar efforts.
5. Overall Implementation Plan	
Suggested Content: • What is the timeline and rough stages of implementation? • How will this be implemented? What resources do you need for implementation? Do you have them? If not, what is your plan for obtaining the resource levels that you need? • How can DOE best support the program in future years? (e.g., guest speakers, judges for prizes)	**Evaluation Statement:** • There is sufficient information to enable successful implementation, a clear timeline for implementation and clarity on the resources needed to successfully implement the proposal at the institution. Resources exist or there are ideas on how to get those resources and ideas on how DOE can be involved are included.

	Evaluation Statement: • The response provided high-quality and complete content that is likely to be implementable, impactful and sustainable at their own institution. The submitted material was aligned with expected learning objectives could also be valuable to other U.S. collegiate institutions considering similar efforts. • The materials clearly and meaningfully incorporated ARLs into the content and also indicated relevant connections to the Pathways to Commercial Liftoff Reports and/or other DOE provided resources.
	luation Statement: • The submission has provided clarity on the potential institutional hurdles that need to be overcome for implementation. • There is clear and credible support from institutional leadership for this proposal and where applicable, support to overcome any hurdles. The submitted materials have

Winners are determined based on the analysis of need, actionability, support, potential impact, and overall implementation plan.

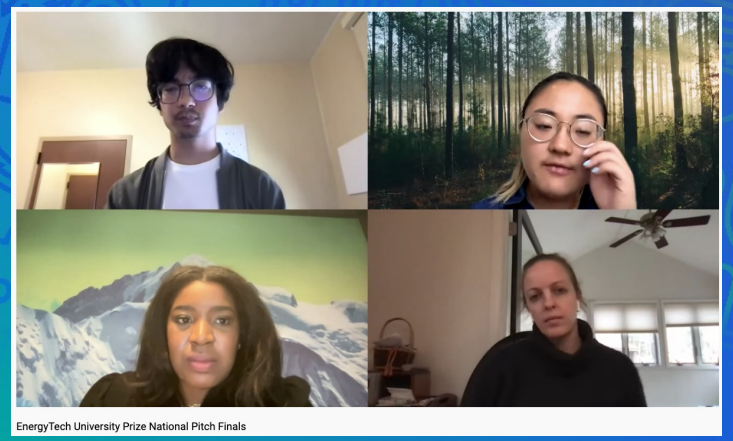
Prizes

Category	Amount	Number Awarded	Total
1st place	$25,000	1	$25,000
2nd place	$15,000	1	$15,000
3rd place	$10,000	1	$10,000
Runner-Up	$2,000 each	Up to 5	$10,000
Faculty Explorer	$4,000 each	Up to 10	$40,000

- In addition, a letter will be sent to each winner's institution on behalf of DOE announcing the prize award.

Competitors receive resources, mentorship, and support to help them succeed before, during, and beyond the competition.

Resources and Support You'll Receive


EnergyTech University Prize National Pitch Finals

- Highlighted energy technologies with business potential.
- Access to Energy I-Corps educational materials and Adoption Readiness Level framework training.
- Expert mentorship from DOE, industry, and/or lab staff.
- Example presentations from the 2023 competition.
- Cash prizes.
- Industry connections.

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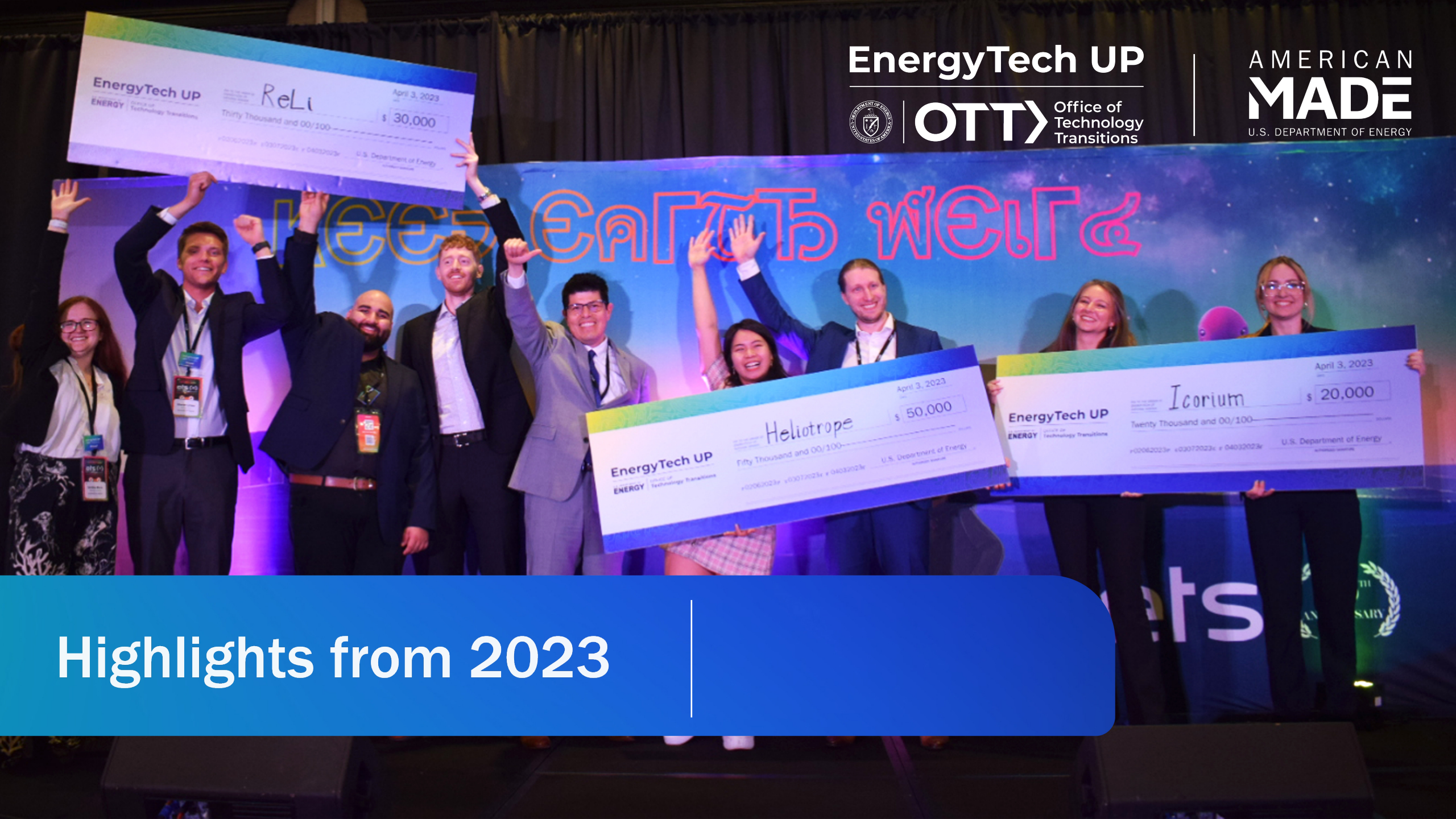

Highlights from 2023

Recap of 2023

- 635 student participants.
- 184 teams from 124 collegiate institutions.
- 44 states + DC + 2 U.S. territories.
- 17 regional conveners hosted 15 regional Explore Events.
- 23 teams were awarded a cumulative $345k in prizes.

"My favorite part of EnergyTech UP was **learning how to frame my research** in the perspective of a business model."

"I enjoyed learning about other technologies and **ideas from other teams.**"

"I really like this program! So many other [similar competitions] are extremely labor and time intensive, and [EnergyTech UP] is a **great introduction to this sector**"

Describe EnergyTech UP in one word:

84%

reported increased interest in an energy career (*up from 73% in 2022*)

90%

reported increased knowledge of skills required for technology commercialization (*up from 79% in 2022*)

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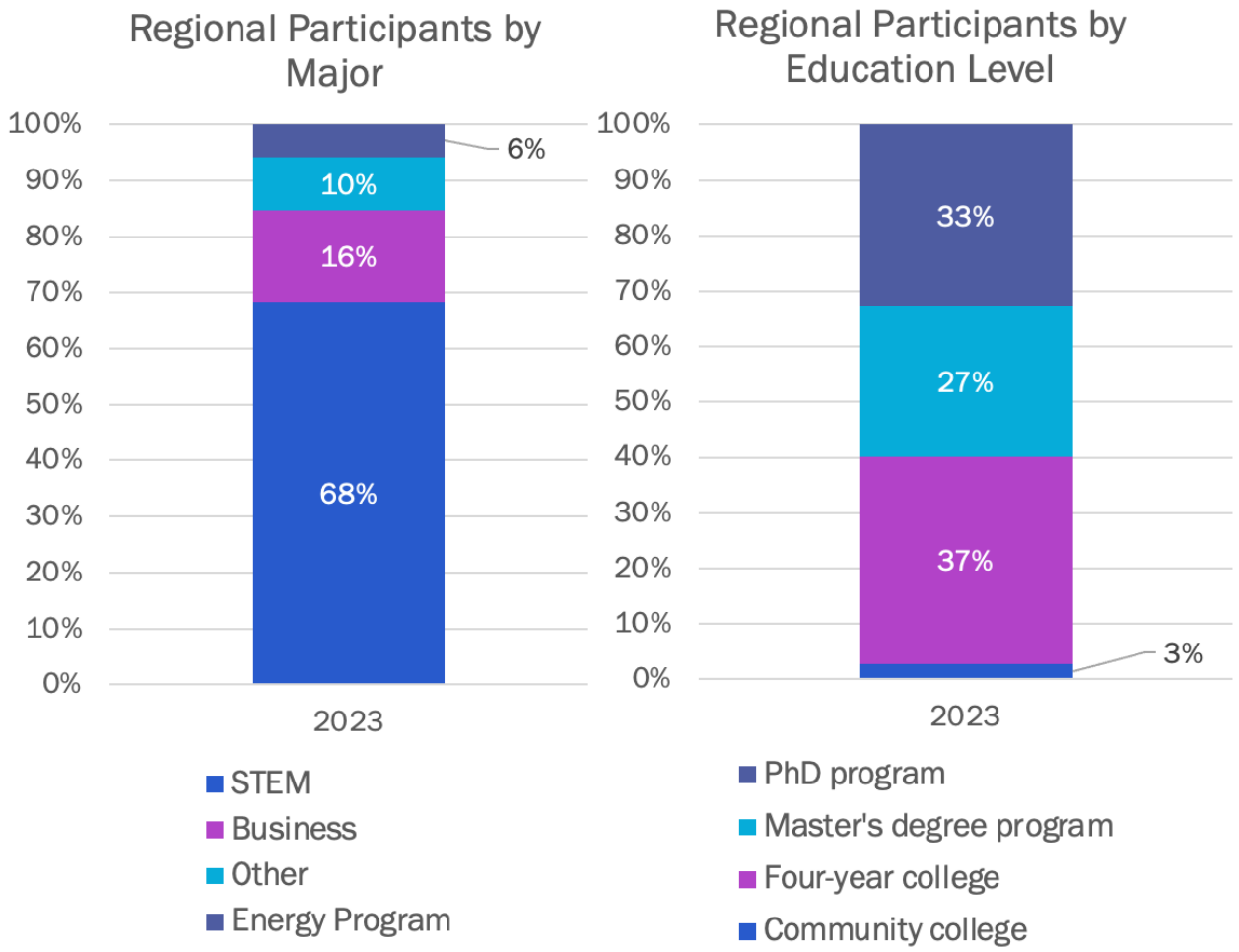
Based on 107 respondents from 2022/23 and 134 respondents from 2021/22.

Highlights from the 2023 competition

- In 2023:
  - ~80% of teams competing regionally leveraged a technology developed at their institution for their business plan, and the ~20% of remaining teams used a Lab Partnering Service technology.
  - 50+ industry leaders served at judges, sharing their perspectives & insights with student teams.
  - A survey of competing students showed that students found the program's networking, business plan development, pitch practice, and learning from others as the most valuable aspects of participation.

Many Different Types of Competitors & Reasons for Competing

- Different areas of study were represented, with some STEM students learning more about business and entrepreneurship & some business students learning more about energy.
- Different educational levels of student participants, with success achieved at all levels.
  - We have added an undergraduate-only bonus prize in this year's program.



Based on a feedback survey of 107 respondents

Success Stories from 2022 Inaugural Competition

- Some past competitors found new jobs.
- Some raised more money.
- Some secured IP.
- Some incorporated as a new business.
- Some secured SBIR funding.
- Some were accepted as Fellows to high-profile accelerators.
- Some were accepted into national lab commercialization programs.
- Some won follow-on pitch competitions.
- Some pursued higher education programs.

Image sources: https://engineering.tamu.edu/news/2022/06/engineering-graduate-students-startup-wins-2022-texas-new-ventures-competition.html
https://www.mit100k.org/accelerate
https://nybpc.org/news/2022/12/15/where-are-they-now-klaw-industries

Explore & Pitch Events

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Students Benefit from Pitching, Watching, and Networking

Dozens of Industry Judges Providing Feedback & Connections!

National Pitch Event: April 15 at the Energy Thought Summit

- All student finalists will present and compete for bonus and national prizes.
- Free access to the entire Energy Thought Summit will be provided, though you are responsible for your own travel and lodging costs.











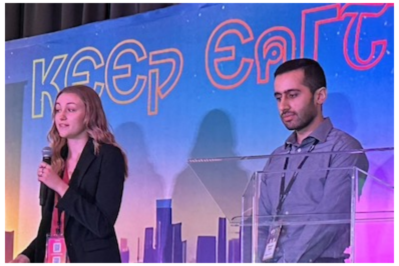

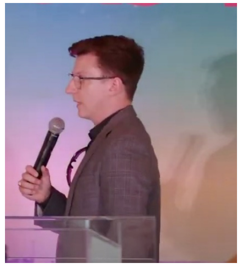


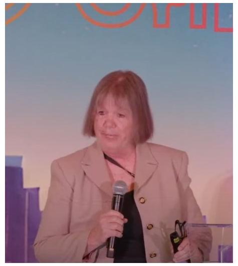
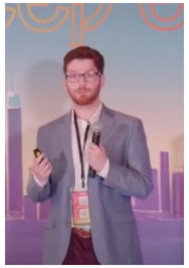


Full video of national pitches is available online: https://www.youtube.com/watch?v=Wt_Ik6u4p5M
Interview with ReLi (2nd place national winner: https://www.youtube.com/watch?v=vC6esmakWJ0&list=PLDnyxu9YaAUvvD-UaCCKP0qdCjF_YY86G&index=5
Interview with Icorium (3rd place national winner): https://www.youtube.com/watch?v=xJT9fNXZvrc&list=PLDnyxu9YaAUvvD-UaCCKP0qdCjF_YY86G&index=8

Images taken at the final event at the Energy Thought Summit in Austin, TX

How to Promote or Compete

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How to Get Involved

First…

- "Follow" the prize on HeroX.
- Read the Rules and determine how you want to participate.
- Spread the word using our "Promo Pack" of resources.
- Build your team.

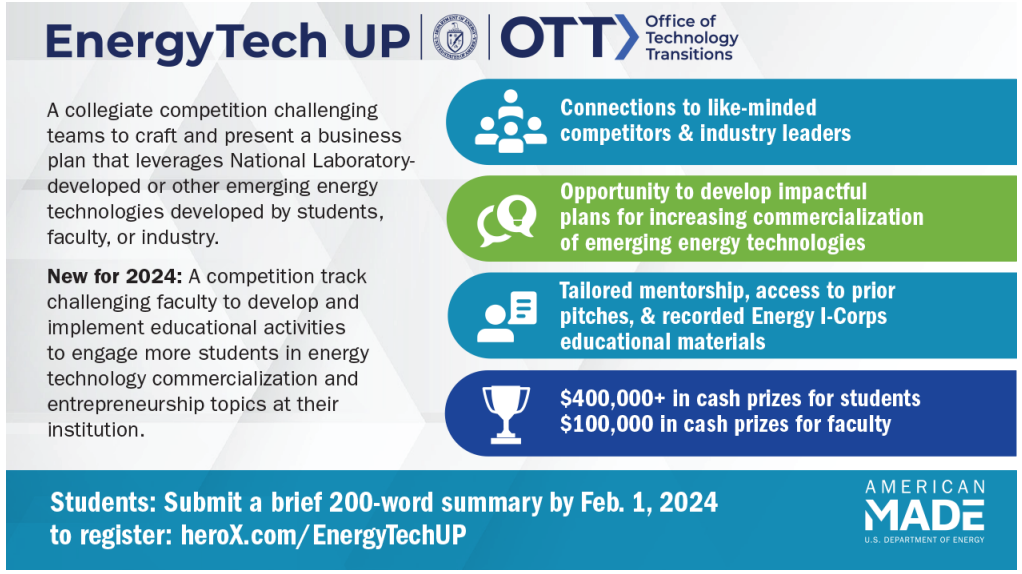
Then…

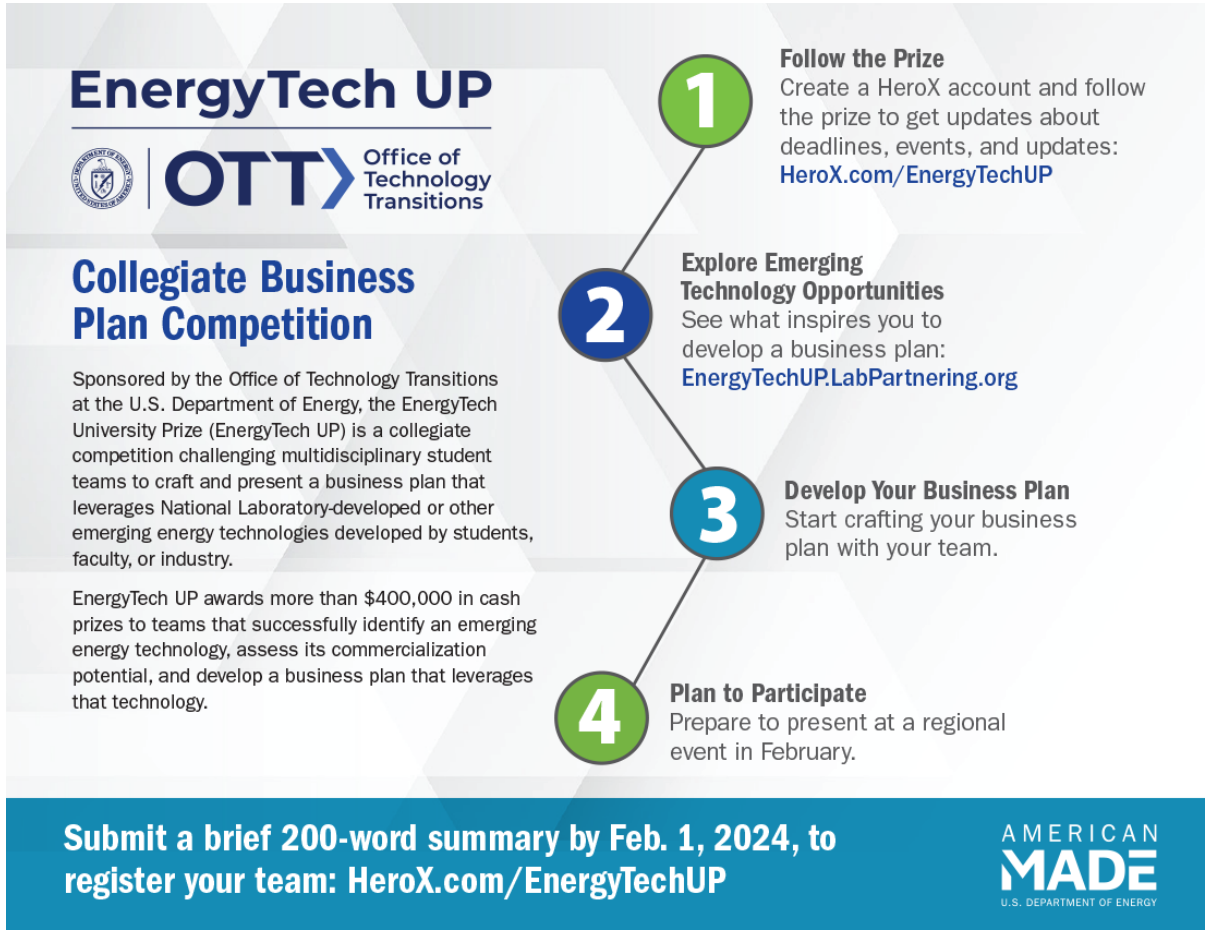
- Explore energy technologies.
- Click "Solve this challenge" and submit a "Register" entry by Feb. 1, 2024!

Photo courtesy of the EnergyTech UP 2022 University of Minnesota Twin Cities Ba-Tech Recycling Solutions Team

Leverage Resources to Recruit Students & Faculty

- Social posts.
- Newsletter content.
- Flyer.
- Web cards and graphics.





https://www.herox.com/EnergyTechUP/resources

Join us!

Faculty submit by January 5 to be considered for Faculty Explorer prizes and by April 5 for national prizes.

Students submit by February 1 to be invited to regional Explore Events.

[I learned how] Working with people of different technical skill sets really gave a different feel to the project. I like that it gives less focus to the technical side, but emphasizes practicality in implementation. It really gives people who aren't specialized in engineering or scientific topics a chance to make an impact and learn more about sustainability.

-Student Participant

Questions?

OTT.EnergyTechUP@nrel.gov

[I learned] How to be more optimistic about global warming - it can be an opportunity to create a more sustainable and equitable future.

-Student Participant