

# REGULATION ON INTELLECTUAL TEAM CONTEST: STUDENT ENERGY CHALLENGE

## 1. General provisions

This Regulation sets out the rules and procedures for conducting the Student Energy Challenge intellectual team contest (hereinafter - the Regulation).

## 2. Basic terms and concepts to be used herein

**Student Energy Challenge Intellectual Team Contest** (hereinafter - the Contest) – activity organized in order to identify the most promising projects submitted by students.

**Contest organizers** - KAZENERGY Association and Shell Kazakhstan.

**Contest participants** – teams made of students from universities aged 18 - 29. The team is to consist of three - five people (as well as an academic supervisor from university's teaching staff). Teams are encouraged to strive towards gender balance, with teams to represent both genders.

**Academic supervisor** – counselor from a team's university teaching staff, who is to oversee the team. Academic supervisor shall provide overall project leadership, monitor how well assignments are fulfilled, and keep track of the way the team performs at the Contest, drawing on their knowledge and experience, and assist the team in its research and experiments\*

**Mentor** - an independent adviser and consultant who is welcome to participate, but *not a must*, with tasks to include analysis and evaluation of the team's project potential, assistance in setting goals and designing ways to achieve them, demonstrating one's example in delivering similar projects, startups, psychological support, evaluation and giving recommendations to the team on what to do next (for example, commercialization potential). \*\*

**Team captain** – team's leading member with additional responsibilities as a leader who is in charge of overall leadership, organization and briefing in order to achieve the team's key result in the contest.

**Registration** – submission of a team's application on the website: <http://kazenergy.com> by the deadline established by the organizers.

**Selection committee** - a commission consisting of the organizers, which is to include independent experts who will select twelve teams at stage 3.

**Project expert evaluation** - assessment of relevance, commercialization potential, possible technical and business risks, commercial attractiveness, as well as project uniqueness (plagiarism). Projects are evaluated by contracted independent experts.

*\*Travel and accommodation expenses of an academic supervisor will be covered only during the final critical review, at the fourth stage.*

*\*\*Organizers do not cover mentors' costs*

**Expert** – an individual that produces an expert opinion on projects and has a university degree, with total work experience of at least ten years or at least five years of research; scientific degree of Candidate of Science, Doctor of Science and Ph.D. in the area concerned is recommended.

**Jury members** – a group of experts from the oil and gas/energy industries, research institutions, including Shell Kazakhstan, KAZENERGY Association and/or attended by representatives of state bodies, research institutions having their say in awarding contest prizes.

**Contest winners** – teams declared as winners based on jury members' decision.

**Project results** - innovative and transferable knowledge, technologies, solutions, etc. – as adapted to the modern economy conditions – produced by the project delivery, including those in hardcopy and electronic media.

**Jury's decision** - the protocol containing information about the decision and the prize to be awarded, which is to be on score sheets of the jury members at the final stage of the contest.

**Prize** - money that three teams are entitled to by the judges' decision.

### 3. Aim

It is to support the potential that the young students of Kazakhstan can utilize in addressing energy challenges innovatively.

### 4. Objectives

- to assist in the development of professional and personal talent pool of students of Kazakhstan;
- to instill a broader understanding of the importance of energy and associated challenges;
- to support engineering thinking and creativity;
- to contribute to stronger relationships, sharing experiences and exchanging knowledge among the participants;
- to transfer advanced practices and technical skills from the industry to local students;
- to cultivate ability to accumulate and capitalize on competences in favor of future participation in large grant-driven projects, as well as to motivate students to seek research and entrepreneurial activities, etc.

### 5. Solution/project's participation eligibility and procedure

#### Areas for contest assignments\*.

#### 1. Energy conservation and energy efficiency in the oil and gas industry:

- a) Oil and gas exploration and production;
- b) Oil and gas transportation;
- c) Oil and gas refining.

#### 2. Reduction of environmental emissions:

- a) Air quality monitoring;
- b) Particle capture;

c) Improving environment in big urban areas.

### **3. Waste management:**

- a) Solid wastes;
- b) Industrial wastes;
- c) Waste recycling.

### **4. Digitalization:**

- a) Smart field, Digital field;
- b) Production and business process automation in the oil and gas;
- c) Accounting systems for oil and gas production and transportation

\* *Recommended topics (a, b, c) are non-mandatory and may be interchanged within the areas.*

## **6. Project/solution's submission eligibility**

1. Each university can send several teams. Requirements for teams are described in Annex 1. A solution/project may be submitted in Kazakh, Russian and English in the form of a project passport shown in Annex 2, describing a team name, the way it is set up, and presenting each team member. If available, please attach information on project stages already delivered, drawings, diagrams, photographs, charts, letters of reference, and other.

2. Organizers encourage the twelve teams that are qualified for the 4<sup>th</sup> stage of the Contest to start looking for potential suppliers of visual effects to aid in preparing video presentations of projects in accordance with the guidelines (listed in Annex 6).

Organizers note that only **eight teams** that have reached the semifinal (stage 5) will need to get all the technical aspects addressed when ordering video presentations from suppliers, which will be reimbursed by the Organizers by due dates within the limited amounts.

These video presentations are to be shown by the eight teams at the 6<sup>th</sup> stage (final critical review).

## **7. Contest stages**

### **Stage 1:**

The organizer, which is KAZENERGY Association, will announce the contest in social media (video briefs), KAZENERGY's journal and newsletter, and circulate letters of invitation to domestic universities before **February 18, 2019**.

### **Stage 2:**

1. Applying students will set up a team from three to five people in **March 2019** and give it a creative name, with an academic supervisor and mentor to be specified (if any).

2. Team captain will register a team by **March 31, 2019** at [www.kazenergyforum.com](http://www.kazenergyforum.com) → Home → Registration → Fill out personal data → check "Yes" as an answer to "Are you a member of the Youth Forum?" → check "Yes" as an answer to "Are you the team captain?" → Next → Fill in the registration form for the participating team. The topic you select during registration can be changed and clarified before the video summary is submitted.

3. The rest of team members need to register via [www.kazenergyforum.com](http://www.kazenergyforum.com) → Home → Registration → Fill in personal data → check "Yes" as an answer to "Are you a member of the Youth Forum?" → check "Yes" → Next.

### **Stage 3:**

1. Organizer of the KAZENERGY Association will circulate registration confirmations to teams within three days from the date of registration, **until April 3, 2019**.
2. Organizer of the KAZENERGY Association will set up a selection committee **by April 10, 2019**.
3. Once the confirmation of registration is received, teams will submit to the Organizer, which is KAZENERGY Association, their video summaries as recorded by the entire team by **May 2, 2019, inclusive** (in compliance with the requirements given in Annex 1).
4. **Before May 6, 2019**, Organizer, which is KAZENERGY Association, will send a video summary, score sheet and video summary requirements to members of the selection committee (to their email addresses) to be reviewed.
5. **By May 22, 2019**, selection committee members will review the teams' video summaries, fill out and send a score sheet for each team to the Organizer, which is KAZENERGY Association (according to the form in Annex 4).
6. Organizer, which is KAZENERGY Association, will:
  - send selection committee members absentee vote ballots containing a list of teams by **May 27, 2019**;
  - collect absentee vote ballots by **May 30, 2019**;
  - select twelve teams that get to participate in the 4<sup>th</sup> stage based on voting results, and issue a protocol and publish names of these teams on the KAZENERGY's official website **by May 31, 2019**.

### **Stage 4:**

1. The twelve teams:
  - will continue to draft a project passport **from June 1, 2019 to July 22, 2019**;
  - will take part in the critical thinking skills training "Shell NXplorers" in Astana on **July 1-2, 2019**;
  - provide – **until July 22, 2019** – KAZENERGY Association with a project passport in Kazakh, Russian and English for review/study by experts (according to the form in Annex 2, subject to the requirements given in Annex 1).

### **Stage 5:**

1. KAZENERGY will send the project passports of twelve teams for expert evaluation **by July 25, 2019**, and make sure that expert evaluation takes place within fifteen calendar days.
2. After reviewing the projects, experts will appraise each project via an expert opinion to be drawn up in a free form, and fill in the score sheet (according to Annex 5), which must be submitted **before August 8, 2019**.
3. Once project passports are expert reviewed, KAZENERGY will set up a ranked list and select eight teams that are qualified for the semifinals and will submit their projects to critical review.
4. **Before August 14, 2019**, KAZENERGY will need to:
  - circulate invitation letters to the qualifying eight teams;
  - circulate information letters to the four teams that have not been selected for the semifinals, which are to reflect the expert evaluation results;
  - make sure that service providers selected by the teams are contracted to create video presentations on projects so that advance payments are made in due time.

5. Eight teams that have been selected for the semifinals will start creating their video presentations (according to Annex 6) **from August 15, 2019**, in order to visualize their projects and focus the jury on the project's key points; **the deadline for video presentations to be completed and presented is September 15, 2019**. The teams will also have to come up with an oral presentation and pitch in order to be ready to have their projects challenged by final critical review.

### **Stage 6:**

1. KAZENERGY will need to:

- circulate passports and expert opinions on the eight projects to jury members before **September 12, 2019**;
- make sure that the Effective Presentation webinar takes place and is attended by eight teams before **September 16, 2019**;

2. Eight teams will have their projects challenged by the final critical review (time limit is 15 minutes) on **September 26 2019**.

3. Captains of the final teams (three tentatively winning teams) will have come in front of jury members with their projects in an elevator-pitch style (time limit is 3 minutes) on **September 27, 2019**.

## **8. Project appraisal**

In order to select the three best teams, the jury will be put in place, including representatives of the KAZENERGY Association and Shell Kazakhstan (possibly with participation of governmental authorities and member companies of the Association). The jury will appraise teams by completing score sheets for each team (according to Tables 1 and 2 in Annex 7)\* at each relevant stage and pick the winners in accordance with eligibility requirements (listed in Annex 2).

*\*0.5 points to be awarded if all the team members attend the webinar.*

*1 point to be awarded for participation in the critical thinking skills training "Shell NXplorers".*

*Teams from the regions (with the exception of the cities of Astana and Almaty) are to be awarded an additional not more than 1 point.*

## **9. Awards**

Winning teams will be announced and awarded by the jury on September 27, 2019 in Astana, at the 11<sup>th</sup> KAZENERGY Youth Forum.

Prize pool (equivalent in tenge, including taxes):

- 1<sup>st</sup> place - 10,000 US dollars;
- 2<sup>nd</sup> place - 5,000 US dollars;
- 3<sup>rd</sup> place - 3,000 US dollars.

## **10. Training and contest costs covered**

1. At stage 4, in order to enable 12 teams to attend critical thinking skills training "Shell NXplorers" in Astana, the organizers will pay for:

- their two-way tickets to and from Astana (*organizers are to decide if pay for railway or air*);

- accommodation;
- food.

2. At stage 4, in order to assist eight teams in preparing video presentations (according to Annex 6), KAZENERGY will contract with visual service providers and pay them limited considerations. It is up to teams what company they want to select for their video presentation task.

3. At stage 4, in order to enable eight teams to have their projects challenged by the final critical review in Astana, the organizers will pay for:

- their two-way tickets to and from Astana (*organizers are to decide if pay for railway or air*);
- accommodation;
- food.

*Note: During the contest, the organizers may make minor changes, of which participants will be notified in advance.*

**Team requirements**

1. Only teams made up by domestic students at the age of 18 to 29 (undergraduate and graduate programs) are allowed to participate in the competition.
2. Winning teams of previous Student Energy Challenges with similar topics or solutions may not participate.
3. The team must consist of three to five people (as well as an academic supervisor from the university teachers, and a mentor, if available) and represent one of the national universities (any study fields and careers are allowed).
4. Teams are encouraged to seek gender equality, and incorporate both genders.
5. Team captain shall be responsible for all his/her team members to the extent of the contest rules (responsible for his/her actions to the organizers) and ensure that the entire team participates at all stages of the contest (including attending the Create an Effective Presentation webinar, as well as participation of at least two people from each team in the Shell NXplorers training).
6. Any messages communicated to the team captain during the contest are deemed as if they have been communicated to the entire team.
7. In order to make sure information on project is communicated well, the teams undertake to equally inform both project organizers (Shell Kazakhstan and KAZENERGY Association).
8. Teams must follow certain requirements when using the brands of both organizers such as logos in video and presentation materials.

**Video summary requirements**

Video summary is a short video presentation about the team and the project (2-4 minutes long). It is to be recorded in a free form in a horizontal resolution by any device available. Video summary is an initial and important stage of the contest. You are welcome to produce a creative video summary. Video editing is allowed.

Questions to be addressed by teams in their video summaries:

- 1) Aims of your project. How are you going to accomplish them?
- 2) Why have you selected this area out of all the topics? Justify your choice. Tell us about your accomplishments in this area.
- 3) What is so unique about the project's idea? Tell us what novelties you may utilize in order for you project to be accomplished.
- 4) What is an expected economic and environmental effect from your project if further realized?
- 5) Do you believe that your project is attractive for investments?
- 6) Why do you think your team is better than others?
- 7) Tell us briefly about each of the participants, their hobbies and accomplishments.
- 8) Why do you want to take part in the contest?
- 9) Your expectations from participating in the contest?

**Hardcopy design requirements**

1. Languages are Russian, Kazakh and English.
2. Total volume is 10 to 20 pages.
3. Please submit your projects in an electronic form in Microsoft Word format, Times New Roman font, size - 14, indentation - 1.25 cm, spacing - 1, full justification. Margins: left - 2.5 cm, right - 1.5 cm, upper and lower - 2.5 cm. No hyphenation. Page to be numbered at the top, centered.

4. Title design - all lines in bold. The first line (right-margin justification) is to indicate the name of the team. The second line is to carry the name of the university. The third line is for the theme of the project.

**PROJECT PASSPORT**

1. Project name \_\_\_\_\_  
 2. Project value and relevance \_\_\_\_\_  
 Environmental rationale \_\_\_\_\_  
 Economic rationale  
 (economic effect, commercialization potential) \_\_\_\_\_

**Your project:**

- Which category does your project belong to?
- Project title (max 50 words).
- Total project scope – from 10 to 20 pages.
- Project's brief description (max. 1200 words).
- Provide project details (max. 1200 words).
- What problem can your proposal resolve? How does it work?
- What is the expected outcome/benefit produced by your project (max. 1000 words)
- What is the end result (product, process, service, technology, etc.)
- How can your product/process/service/technology fill in the gaps in the market?
- Has your product been offered for any contests? If so, which ones? What was the result?
- Has any market research been done on your product? If yes, please describe (max. 600 words).
- Is your product under review by any third parties? If so, who?
- Please provide requisite supporting documentation, if available (max. 5 pages in A4 format).
- Please identify the market/consumer group for your product.
- Economic justification, commercialization potential

**Your team**

- University's name.
- Team's name.
- Please include the team captain's contact details - email, phone/fax, mailing address.
- Please include contact details, academic supervisor and mentor (if available) - email, phone/fax, mailing address.
- Please list all members of your team and include a short biography for everyone, including the major, academic supervisor/mentor's qualifications (if available), academic data and role in the team (max. 500 words per person biography).

Please note that any products, processes, services, technologies or any other intellectual property developed for the contest will remain the property of the authors.

**Team captain** \_\_\_\_\_ (signature)

**Academic supervisor** \_\_\_\_\_ (signature)

**Team's mentor** (if any) \_\_\_\_\_ (signature)

Registration form of a participating team			
Team's name			
Full names of team members		Faculty (major, course)	
Team captain			
Academic supervisor			
Mentor (if any)			
Project's theme <i>(may be changed and clarified before video summary is submitted)</i>	Select from the list ( <i>scroll topics down</i> ) The topic selected during registration may be changed and clarified before video summary is submitted.		
University	Select from the list ( <i>scroll universities down</i> )		

#### Agreement

*We, the above-mentioned team, hereby confirm our participation in the Student Energy Challenge. We have read the terms and conditions of participation in accordance with the Contest Regulation, and we bear full responsibility for the accuracy of the data we have included. We agree that the data specified during registration will be processed, and we give our permissions for photo and footage and we do not object to the use of materials by the organizers in order to promote the competition*

Confirmation \* (You must accept the conditions specified above)

We accept	√
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\*- required fields







### **Preparation and visualization guidelines for the project goals**

**Aim:** at the Stage 4 (**from August 15 to September 15, 2019**), in order to visualize their projects, the 8 teams will need to submit complete project proposals and speeches' main points in the form of presentations or in other forms

**The amount of design funds:** 220,000 (two hundred twenty thousand) tenge (including VAT) will be provided to each of the eight teams based on the Contract to be concluded between the Customer (KAZENERGY) and the Contractor (provider of visual creativity as selected by teams).

**Expected result:** A video presentation of 200-300 seconds using 2D graphics and animation (content, advisory, informational). The task is considered to have been completed if the video meets the stated requirements.

#### **Requirements for a presentation video:**

1. Description of a product, purpose, process, technology, etc. – up to 30 sec (name, the purpose, etc.);
2. Video must be made in a 2D format and demonstrate both the operating principles of a device model and design features (modeling of objects, mechanisms, structure, environment, moving/non-moving mechanisms, components, operating process, etc.) that enable goals to be accomplished, etc. (100-120 sec.);
3. Explain basic advantages of a device (50 sec);
4. Demonstrate device's operation through example (50 sec);
5. Submit a video on electronic media to the Organizers.
6. Visualization does not replace the project's final critical review by jury, but is an additional effective tool to help teams strengthen their positions in final critical review.





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*Annex 8  
to the Contest's Regulation*

Score sheet of Student Energy Challenge contest																			
Judging scores of jury members																			
Ref. No.	Team (university)		Jury chair		Jury member		Jury member		Jury member		Jury member		FINAL RATING (max. – 30 points)						
	(full name)		(full name)		(full name)		(full name)		(full name)		(full name)		Speech score overall	Elevator pitch	Project evaluation	Participation (1 score)	Scores for participation in webinars (0.5 score)	Additional score for regional teams (not more than 1 score)	FINAL SCORE
1	Speech score	Elevator pitch	Speech score	Elevator pitch	Speech score	Elevator pitch	Speech score	Elevator pitch	Speech score	Elevator pitch	Speech score	Elevator pitch							
2																			
3																			
4																			
5																			
6																			
7																			
8																			

**Information for the jury**

• If several teams have the same scores, the jury members will try to reach a unanimous decision. If consensus cannot be reached, the chair, who will be elected by the jury, will have the right to make a final decision;

- *In determining the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> places, it is recommended to pay special attention to the results of expert evaluation and visualization of the projects of three teams, and then to the results of the presentation as the main stages of the competition.*
- *0.5 points are awarded if the entire team participates in the webinar.*
- *1 point is awarded for participation in the Shell NXplorers training of development of critical thinking skills.*
- *Teams from the regions (with the exception of the cities of Astana and Almaty) are assigned an additional not more than 1 point.*

## Expert registration form

<b>EXPERT DETAILS:</b>			
<b>Full name:</b>			
<b>Citizenship:</b>			
<b>Degree:</b>			
<b>Expert knowledge, research and areas of interests:</b>			
<b>Experience, level of expert evaluation:</b>			
<b>Name of an institution and place of work (university, company, etc.):</b>			
<b>Contact details:</b>	Office phone number:		Cellphone number:
	<b>Email:</b>		<b>Website:</b>
<b>Fluency in English:</b>	<input type="checkbox"/> Native <input type="checkbox"/> Second language (please rate yourself) <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor		

\* By signing below, I consent to the processing of my personal data.

Signature \_\_\_\_\_

Date \_\_\_\_\_