



# **INTELLECTUAL TEAM COMPETITION «STUDENT ENERGY CHALLENGE»**

**Astana city, 2018**





«Royal Dutch Shell plc» is an international concern comprising of energy and petrochemical companies, whose Head quarter is located in The Hague, Netherlands. Currently Shell is one of the largest foreign investors in the RoK's economy. Shell Kazakhstan Company has been operating in Kazakhstan since 1993 and as an active member of KAZENERGY since 2006.

As one of the largest investors in the country, Shell Kazakhstan Company has invested more than \$ 8 million in voluntary social projects aimed at supporting entrepreneurs, conducting STEM education programs and road safety.

[www.shell.com](http://www.shell.com)

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**Ж Ы Л ШЕЛЛ ҚАЗАҚСТАН**  
1993-2018







KAZENERGY Association unites over 80 companies of oil and gas and energy sector of the country, including mining and transport, service and geophysical, uranium and other transnational companies. KAZENERGY Association has significant experience in implementing projects aimed at the development of educational systems and support of young talent.

Since 2007 KAZENERGY has implemented a number of educational programmes, including scholarships for graduates, with the objective of stimulating the involvement of youth in creative and professional achievements conducted competitions for the development of innovative projects, intellectual games, debating tournaments and other activities.

[www.kazenergy.com](http://www.kazenergy.com)



# «STUDENT ENERGY CHALLENGE»

## **Objective:**

the support development of innovative solutions to energy problems among Kazakhstan's student youth.

## **Purposes:**

- to promote development of professional and personal potential of students;
- to promote a broader understanding of the importance of energy and related problems;
- to support the development of engineering thinking and creativity;
- to promote the strengthening of relationships, the exchange of experience and the acquisition of relevant knowledge among participants;
- to transfer the best practices and technical skills of the industry to Kazakhstani students.

## **Organizers:**

Shell Kazakhstan Company and KAZENERGY Association

## **Participants:**

Student teams of technical specialties of higher educational institutions of the Republic of Kazakhstan

## **Dates :**

Start – April, 2018

Final part – October, 2018

**Venue:** Astana city



# «STUDENT ENERGY CHALLENGE»

## Competition Themes (to choose\*):

1. Generation of energy (of the future)
2. Accumulation of energy (of the future)
3. Energy transmission (of the future)
4. Energy consumption (of the future)

## Themes and focus areas that can potentially provide solutions to energy problems\*:

### GENERATION OF ENERGY

- a. Energy production from waste. Receiving energy from urban sewage;
- b. Individual Wind Turbines;
- c. Innovative energy-saving oil and gas production and transportation systems.

### ACCUMULATION OF ENERGY

- a. Lithium is the «white oil» of Kazakhstan;
- b. Autonomous thermal energy complexes with alternative energy sources for the oil and gas industry;
- c. Development and operation of solar systems (a device for converting the energy of solar radiation into other types of energy convenient for use (for example, thermal or electric through thermal).

### ENERGY TRANSMISSION

- a. Wireless power transmission technology;
- b. Smart Networks, Smart Grid, Net Metering, Quantum Computing;
- c. The use of modern equipment for the distribution of electrical energy and management of technological processes of automation of the oil and gas industry.

### ENERGY CONSUMPTION

- a. Energy-efficient housing services utilities of the future. Thermal insulation materials. Construction of housing with zero waste effluent;
- b. Increase in energy efficiency and equipment durability;
- c. Application of digital and smart technologies in the oil and gas industry using artificial intelligence methods.

*\* The proposed themes (a, b, c) are of an advisory nature and can be changed within the framework of the main directions*

# STAGES OF THE INTELLECTUAL TEAM COMPETITION «STUDENT ENERGY CHALLENGE» IN 2018

## • 1 stage

Make a team of  
3-5 people  
*deadline: April*



Come up with the  
creative team name  
*deadline: April*



Fill out the form and  
register your team  
*deadline: till 15th  
May*

## • 2 stage

Receive confirmation  
of the registration  
*key date: up to 3 days  
from the date of  
registration*



Take part in a webinar on  
«How to work in a project  
team?»  
*key date: at the beginning  
of June*



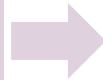
Prepare a video resume  
about the project  
*deadline: June*



Send the video resume  
to organizers  
*deadline: till 15th  
June*

## • 3 stage

Receive confirmation  
about passing the  
stage  
*key date: till 10th July*



Take part in a webinar on  
«How to make effective  
presentations»  
*key date: at the beginning  
of July*



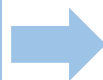
Submit a project passport  
of the established sample  
*deadline: till 25th  
August*



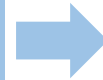
Take part in a webinar  
on «Attention. Time.  
Pitch»  
*key date: September*

## • 4 stage

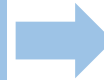
Submit projects  
to organizers  
*deadline: till 20th  
September*



Presenting project  
to the jury  
*key date: 2nd October,  
Astana city*



Presenting project with an  
elevator pitch and award  
winners  
*key date: 2nd October,  
Astana city*



Participate in a  
workshop NXplorers  
«New thinking  
technologies»  
*key date: 4-5 of  
October, Astana city*