

Terms and conditions
of the technology contest “First element. Earth”
for purposes of the National Technology Initiative¹

¹ This document is the translation of the Russian version of «Terms and conditions of the technology contest “First element. Earth” for purposes of the National Technology Initiative», and contains the references to regulatory documents that may be available only in Russian. In case of any queries on these documents, compliance with the requirements or other questions, please contact the organizing committee by email: challenges@upgreat.one.

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1. General information

1.1. These Terms and Conditions of the technology contest "First element. Earth" for purposes of the National Technology Initiative (hereinafter referred to as the "Conditions") determine goals, tasks and procedure of the technology contest "First element. Earth" (hereinafter referred to as "Contest").

1.2. The Contest is held according to the Rules of organizing and conducting of the technology contests within the National Technology Initiative, and the Rules of granting subsidies from the federal budget for organizing and conducting of the technology contests within the National Technology Initiative. These documents are approved by the Decree of the Government of the Russian Federation dated April 3, 2018 No 403 (hereinafter referred to as Decree).

1.3. The Contest is held according to the Rules of organization and holding of the technology contests in order to implement technological initiative and the Rules of granting subsidies from the federal budget for organization and holding of technology contests in order to implement the National Technology Initiative approved by the Decree of the Government of the Russian Federation dated April 3, 2018 No 403 (hereinafter referred to as Decree).

1.4. Contest goal is to overcome technological barrier in the field of hydrogen fuel cells.

1.5. Main tasks of the contest:

1.5.1. development of the power unit based on fuel cells using hydrogen as a fuel for medium-sized motor vehicles;

1.5.2. building and support of the teams able to overcome technological barriers in the perspective segment of hydrogen energy;

1.5.3. gathering of scientific and technological developments, search for and resolution of the breakthrough scientific and technological problems in the field of hydrogen energy;

1.5.4. increase of attractiveness of private investments in scientific and technological research, developments and production of the advanced products in the field of hydrogen energy.

1.6. The subject of the Contest is a selection of the best solution exceeding significant technological barrier in the field of hydrogen energy based on fuel cells.

1.7. The Contest is organized by Joint Stock Company "Russian Venture Company" (RVC), in cooperation with the Non-commercial Organization Fund for Development of the Center for Elaboration and Commercialization of New Technologies (Skolkovo Foundation) and Autonomous non-commercial organization "Agency for Strategic Initiatives to Promote New Projects" (ASI). RVC is the technology contests operator under the Decree (hereinafter referred to as the "Operator").

1.8. Information about the Contest, list of available documents and materials (or references to them), actual information on terms, place of final events is published on the Contest official website.

1.9. Contest official language is Russian.

1.10. Basic definitions and terms:

1.10.1. **Jury** is a collegial body created in order to ensure scientific, methodological and expert support of the Contest activity, to hold expertise and approve intermediate and final test results of the Participants' developments, decide on the Contest winners and awardees. The technology contest committee approves operating procedure and Panel of Judges in order to implement the National Technology Initiative acting under the order of the Ministry of education and science of the Russian Federation dated May 15, 2018. No. P-429 (hereinafter referred to as "Contest Committee").

1.10.2. **Applicant** is a Russian or foreign legal entity or group of such entities that submitted an application to participate in the Contest.

1.10.3. **Product, Power unit** - power unit based on fuel cells developed by the Participant to solve the Contest Technological problem.

1.10.4. **Team** is a team of developers, specialists and employees headed by the manager. A team acts on behalf of the Contest Participant at the attendance-based Product test stages at the testing area and off it.

1.10.5. **Contest** is a technology contest "First element. Earth" that is an open contest of the scientific and technological problem in the field of hydrogen energy.

1.10.6. **Contest Terms and conditions, Conditions** - this document. The main document to determine purposes, tasks and procedure of the Contest, and is approved by the Contest Committee.

1.10.7. **Operator** is Joint stock Company "Russian Venture Company" under the Decree of the Government of the Russian Federation dated April 3, 2018 No. 403 assigned with the functions of technology contest operator for the purposes of implementation of the National Technology Initiative and carrying out organizational, technical and information support of technology contests.

1.10.8. **Organising Committee** is a collective deliberative assembly carrying out coordination activity related to preparation and holding of the contest. Organising committee activities and its members are determined by the operating procedure of the Organising committee approved by the Operator.

1.10.9. **Partner** is a legal or private entity providing, upon an agreement with the Operator, financial and/or non-financial support aimed at achievement of the purposes and assignments of the Contest, at creation of the Contest prize fund and/or announcement of the customized nominations within the Contest framework.

1.10.10. **Testbed** is a venue provided by the Operator or Partners to conduct qualification and final Contest rounds.

1.10.11. **Prize** is a monetary Prize approved by the Contest Terms and Conditions and paid to the winner and awardees for account of federal funds.

1.10.12. **Contest website** is an official Contest website containing complete actual information about the Contest <http://en.1element.upgreat.one/>.

1.10.13. **Technical Guideline** is a document determining requirements to the testing procedure, Products and other technical parameters of the Contest. Technical Guideline is approved the Contest Operator.

1.10.14. **Technological problem** is the requirement to technical characteristics that the Product should have and developed by the Contest Participants.

1.10.15. **Contest Participant** is a Russian or foreign legal entity or a group of such entities which application for participation in the Contest the Organising Committee approved.

2. Topicality

2.1. Market segment

The Contest focuses on the market segment of power units based on fuel cells using hydrogen as a fuel for ground and amphibious vehicles (ground manned vehicles and unmanned motor vehicles of medium size: motorcycles, motor vehicles, light boats), that require high power supply capacity in combination with high power in limited size of the power unit.

2.2. Theme relevance

Task of development of the efficient substitution for the traditional fuel is one of the most important for transport industry all over the world - starting from railway and sea transport and ending with motor cars and unmanned aircrafts on the public market. Preconditions:

- transportation companies and motor vehicle producers constantly in search for the ways to decrease expenses for fuel that are, depending on transport type, up to 50% of operational costs;
- necessity to decrease hazardous substances emissions into the atmosphere (carbon dioxide, nitrogen oxide, hyposulphurous oxide, etc.): thus, about 25% of carbon dioxide emissions to the atmosphere fall at work of various types of transport;
- instability in the carbon dioxide markets, strive for energy independence of different countries is also a reason for intensive search for substitution for the carbon dioxide fuel (oil products and natural gas).

Along with that, there is a constant growth of electric engines share in motor vehicles, which creates, from one side, demand for new types of power accumulators for motor vehicles (where Russian developers and producers have no chance to take the technological lead), and, on the other side, create the demand for new power units for vehicles among which the most commercially perspective are hydrogen fuel cells (where Russian developers have leading positions in the world taking into consideration that this market has just started its development).

Hydrogen fuel cells can both generate energy for vehicle engine and can be used to provide power supply for motor vehicle equipment. Advantages of hydrogen power units based on fuel cells:

- significantly higher power efficiency of hydrogen fuel element comparing to explosion engines;
- safety for environment as the engine does not emit any hazardous substances into the atmosphere;
- possibility of flexible design configuration to apply in wide range of motor vehicles – from sea boats to bicycles.

Limitations for wide use of hydrogen fuel cells are the limitations of the existing power units design which determines higher cost and shorter life cycle of hydrogen power unit based on fuel cells. Today, a real race is started around the world for being the first who is able to solve these problems and present the design of widely used unit.

Motor vehicles based on hydrogen cells are developed and tested by Toyota Mirai (that presented the first hydrogen hybrid engine on fuel cells), Ford (FCV), Honda (Honda FCX), Hyundai (Tucson FCEV), Nissan, Toyota, Volkswagen, General Motors, Daimler AG, and other producers in China, Brazil and other countries.

In order to implement hydrogen fuel cells in sea transport in Europe the following consortiums were created: FellowSHIP (Fuel Cells for Low Emissions Ships), including DNV, Eidesvik Offshore, MTU CFC Solutions, Vik-Sandvik and Wärtsilä Automation Norway, and Fuel Cell Boat BV, including Alewijnse, Integral, Linde Gas, Marine Service North and Lovers. In Germany, Siemens has already started production of submarines of U-212 class with fuel cells, orders for which were submitted not only by Bundeswehr, but also from Greece, Italy, Korea, Israel. A submarine works under water on hydrogen and almost doesn't make noise.

In aviation transport, developments are actively conducted in the USA and Europe both for traditional airplanes and unmanned aircrafts. Thus, in autumn 2016, in Stuttgart, a German aircraft on hydrogen fuel cells HY4 (consortium of Pipistrel, Hydrogenics, Ulma University and Institute of technical thermodynamics of the German Space Center) was tested. Boeing develops Boeing Phantom Eye, a long-distance high unmanned aircraft on hydrogen fuel that is able to stay in air for 4 days (the first prototype was demonstrated in March 2010) and perspective unmanned aircraft Phantom Ray with flight duration of more than 10 days.

Developments of hydrogen rolling stock is actively carried out in the USA (with participation of the Ministry of Defence (DoD) for non-tactical military targets and commercial use), Japan (Hitachi, Kinki Sharyo, Railway research and technological institute), Europe (where in Denmark, for example, the first hydrogen train already goes between Vemb, Lemvig and Thyboron).

Contest will make it possible to create a new breakthrough design of hydrogen power unit on fuel cells that will allow Russian vendors to take the first place on the strategically important global segment of the volume of several billion dollars a year.

3. Terms and conditions

3.1. The Contest involves several rounds:

- 3.1.1. Qualification round (remote).
- 3.1.2. Qualification round (attendance-based).
- 3.1.3. Products testing (attendance-based).
- 3.1.4. Final round (attendance-based).

3.2. Technological barrier in the sphere of hydrogen power energy is to overcome the value of specific energy density ($W \cdot h/l$) of the unit 500 (five hundred) $W \cdot h/l$ in compliance with general requirements to the product set forth in clause 3.4

3.3. Contest Assignment is to create a working power unit of nominal capacity 15 kW and specific energy density of 500 (five hundred) $W \cdot h/l$. Total volume of the power unit should not exceed 150 l (this volume should also include a fuel supply system and a source of hydrogen).

3.4. General requirements to the Product

Total volume of the power unit considering fuel supply system and hydrogen balloon	<150 litres
Hydrogen storage vessel	High-pressure tank, the maximum pressure in the tank is not more than 300 atmospheres
Total operation time	Not less than 3 hours
Nominal capacity	15 kW
Maximum capacity	Not less than 30 kW
Running time at maximum capacity	Not less than 10 runs of 3 minutes each
Output characteristics	Direct current, voltage 96V with maximum deviation of 5%, variable duty (0-30kW)
Fuel	Hydrogen of technical mark A according to GOST 3022-80
Oxidizing agent	Atmosphere air
Maximum pressure in any system zone	300 atmospheres
Minimum requirement to own scientific and production base	Own production of fuel cell batteries
Maximum starting time of the power unit	Not more than 30 minutes

* Participants may be involved during the Product operation only in case of emergency.

3.5. The Contest is undertaken by competing of the teams in overcoming the technological barrier.

3.6. Participants shall provide the Products developed at the Contest for expertise and tests set forth by these Conditions and Technical Guideline.

3.7. Use of the third party Products including foreign power units by the Participants that were not created by the Participant is not allowed; control of compliance with this requirement is carried out by the Jury by way of examination of the scientific and production base of the Participant.

4. Participants

4.1. Russian and foreign legal entities are eligible for participation in the Contest.

4.2. Associations (multidisciplinary teams and group of companies) including Russian and foreign legal entities are eligible to participate in the Contest.

4.3. The same legal entity cannot be a part of two and more teams that participate in the Contest.

4.4. A participant forms a team for the representation in attendance-based contest rounds

4.5. Private individuals cannot participate in several Teams at the same time.

4.6. One team representing a Participant on the attendance-based rounds can have only one Power energy unit at the Testbed for the entire period of any of the rounds.

4.7. Participants develop the Power energy unit at their own expense, compensation of the costs incurred in this relation is not provided.

4.8. By submitting an application and participating in the Contest, the Participants agree with the Contest terms and conditions that are included in this document, Technical Guideline and other documents on organization and conducting of the Contest, published on the Contest website, and are obliged to follow them.

4.9. Participants have the right to attract sponsors and partners in the process of development and construction of the Products.

4.10. In order to take part in the Contest the Applicant should fill in an electronic form at the Contest website.

4.11. Participation in the Contest is free for the Participants.

4.12. Non-compliance with the requirements of these Conditions or Technical Guideline can be a reason for a disqualification of the Participant from the Contest.

5. Procedure

5.1. Contest timeline and rounds

Qualification round (remote)	3 July 2018 – 1 November 2018
Qualification round (attendance-based)	20 November 2018 – 20 December 2018
Product Testing (attendance-based)	March 15-30, 2019
Final round (attendance-based)	May 10-31, 2019

5.2. Qualification (remote) round

5.2.1. The purpose of the Qualification round is to select the Participants and carry out a preliminary assessment of the capabilities of the proposed solutions for the Technological problem through evaluation of the set of documents and other materials provided by the Participants.

5.2.2. The stage is remote.

5.2.3. In order to participate in the Contest the Applicant should submit an application on the contest website until **October 1, 2018**.

5.2.4. An Applicant should obtain all rights, permissions and consents necessary to submit an application.

5.2.5. When submitting an application the Participant agrees with the requirements of these Conditions and becomes obliged to comply with them.

5.2.6. The application contains the following information:

- name of the Contest the application is submitted for;
- name of the Applicant's team;
- name of the organization the Applicant represents, or a list of legal entities included in the association, if the application is submitted on behalf of a such association;
- short description of the Applicant team (in 5 sentences maximum) with specification of the existing groundwork and main purposes of participation in the Contest;
- Contact information: legal address, physical address, phone, internet website, email;
- contact person to communicate with the Organising Committee: Full name, contact phone number, email.

5.2.7. Application Form is in the Annex No.1 to this document.

5.2.8. Organising Committee shall within 10 business days check the applications for compliance with the following criteria:

- Completeness and reliability of the provided information;
- Clarity.

5.2.9. After the application is reviewed, the Applicant receives the Participant status via a notification to the email specified in the application.

5.2.10. Participant must provide to the Organising Committee supporting documentation including **until October 10, 2018**.

5.2.11. Supporting documentation should contain detailed information about Product development submitted to the Contest:

- technological plan (not more than 11 pages) should contain general description of the Product with disclosure of the information about country of origin of the Product, materials and technologies and its potential to solve Contest Technological problem;
- expected Product capacity;
- biography of the Participant team members (not more than 2 pages): Full name; role in the team; description of functions, tasks, works performed by every team member at the Contest; key experience relevant to Contest topic; education (University, speciality, etc.), science degree, title.
- list of expected financing sources, sponsors, partners (not more than 2 pages);

5.2.12. Content of the supporting documentation is confidential.

5.2.13. Content of the supporting documentation can include additional materials, for example tables, photos, number values and videos. However, all necessary information should be included in the main text of supporting documentation.

5.2.14. The participant is completely responsible for reliability of information contained in the supporting documentation.

5.2.15. It is recommended that the participants comply with the following principles when preparing the supporting documentation:

- Be clear: it will be used to prove feasibility of the technical plan of the Participant;
- Be brief: information is logic and concise, information relevance is evaluated, not its volume;
- Be convincing: information leads to sound and convincing conclusions of its importance in the field of solution of the Contest Technological problem.

5.2.16. The Participant can make any changes into the supporting documentation until the submission deadline.

5.2.17. Supporting documentation should be provided via email earth@upgreat.one.

5.2.18. Organising Committee checks supporting documentation for compliance with the formal requirements including comprehensiveness, completeness and relevance to the Contest Terms and Conditions during 5 business days.

5.2.19. Supporting documentation recognized as non-complying with the formal criteria set forth by this document is declined and is not considered any longer, the Organising Committee notifies the Participant about the disqualification. The Participant has the right to submit another application and supporting documentation that is not equal to the previous one not later than the end date of Qualification round.

5.2.20. Supporting documentation recognized as complying with the Contest requirements is forwarded to the Jury.

5.2.21. The Jury evaluates supporting documentation and determines:

- compliance of the supporting documentation with the requirements to the Product;
- feasibility of creation of the declared Product.

5.2.22. Jury, based on the supporting documentation of the Participant by voting makes decision on admission to the next Contest round.

5.2.23. Information provided by the Participant should not break any third party rights including intellectual property rights, right of image. If the Participant needs to use intellectual property of any third party, the Participant must enter into a contract with the copyright holder of granting the right to use results of the intellectual activity and equivalent means of individualization of legal entities, products, works, and services. When Testing the Participant should be completely responsible for break of the specified intellectual rights to the copyright holders or other third parties.

5.2.24. Jury reserves the right to request through the Organising Committee additional documents and (or) information from the Participant during any Contest round.

5.2.25. A list of Participants that passed through Qualification round is published at the Contest website within 5 business days after Jury makes the decision.

5.2.26. Organising Committee reserves the right to extend period during which applications and supporting documentation can be submitted.

5.3. **Qualification (attendance-based) round**

5.3.1. Purpose of the Qualification round is to select Contest participants to take part in Final round based on the attendance-based evaluation of the Participant's Products by passing through qualification tasks.

5.3.2. Attendance-based examination of the Product and examination of the scientific and production base of the Participant is carried out at the scientific and production base of the Participant.

5.3.3. Schedule of examination and evaluation of scientific and production base of the Participant are set up upon agreement with the Participant within Contest time frames.

5.3.4. Requirements to the Product to pass through the Qualification round:

- specific energy density of the power unit is not less than 300 W*h\|;
- power unit shouldn't exceed 70 l (this volume includes the complete power unit system except hydrogen vessel);

- own production of fuel cell batteries.

5.3.5. Within the agreed terms, Jury representative carries out attendance-based evaluation of the scientific and production base of the Participant and expertise of the Product according to the Requirements to the Product in order to pass through qualification stage and General requirements to the Product.

5.3.6. According to the results of expertise of every participant, the expertise protocol is prepared and signed by the Jury representative that carried out examination.

5.3.7. Measuring parameters to pass the qualification stage:

5.3.7.1. In order to measure the start time, the Organizers provide the Participants with a limited hydrogen source that is designed for work of PEI with capacity of 15kW during 3 hours. Positive pressure of the hydrogen source is 0.5 atm. Fuel source connection module - quick-release split fitting with double-type gland Camozzi series 8000 for the pipe with external diameter of 10 mm. Participant's Product should have fuel output as a pipe of the corresponding external diameter or a quick-release piping component for this pipe. Natural air is used as oxydizing agent. Connection module for loading device of the Organizer is screw and nut to fix conductor with cross section enough for passage of current generated by the power unit.

5.3.7.2. Contest participants begin start procedure of the power unit from the storage state (temperature of all modules from +10°C to +30°C, fuel supply is switched off, consumers are turned off), inform the Contest Jury on it and move it to operating condition in which all further parameters will be measured. After that power measurement is made.

5.3.7.3. For measurement, electronic loading device is used that creates loading up to 30 kW; the device is provided by the contest Organizer or analogous device of the contest Participant subject to a document certifying registry entry and certificate of scheduled examination.

5.3.8. In case the expertise that determines Product parameters at the qualification stage revealed incompliance of the Product to the requirements or Product nonoperation, Additional expertise is possible, upon agreement with the Jury in order to access the Product to testing and final examination, if the Participant provides working Product not later than the end of qualification stage.

5.3.9. A list of Participants that passed through qualification stage is published at the Contest website within 5 business days after Jury makes the decision.

5.4. Product Testing (attendance-based)

5.4.1. Testing stage task is to provide to the Participants an opportunity to test the Product in work with the standard equipment that will be used at the final tests.

5.4.2. There is no selection of the Participants during the testing stage.

5.4.3. The Testbed is located in Moscow.

5.4.4. Participant that passed through qualification stage is eligible for the testing stage.

5.4.5. Testing is carried out attendance-based at the Testbed and with the use of the equipment provided by the Operator.

5.4.6. The participant passes through Product technical admission, installs it on the standard equipment, testing and de-unit.

5.4.7. Technical specifications for power units location on the testing equipment and testing procedure are set forth in the Technical task not later than 3 months prior to the stage start.

5.4.8. Testing schedule is determined by the Organising Committee and announced to all Participants not later than March 1, 2019.

5.5. Final (attendance-based) round

5.5.1. Purpose of the final stage is to determine the winner and awardees of the Contest.

5.5.2. Final stage location - Russian Federation.

5.5.3. Participant that passed through qualification stage participant in the final stage.

5.5.4. Final stage consists of:

5.4.2.1. technical admission;

5.4.2.2. final tests at the Testbed:

- 1st stage - equipment bench tests;
- 2nd stage - Product tests on the standard equipment (mobile platforms) in simultaneous race mode.

5.5.5. Technical admission is performed by the Jury members that examines the Product for compliance with the requirements:

5.4.2.3. total volume of the power unit considering fuel supply system and hydrogen balloon can not exceed 150 l;

5.4.2.4. working voltage 96V with maximum deviation of 5%, variable duty (0-30kW);

5.4.2.5. fuel - hydrogen of technical mark A according to GOST 3022-80.

5.5.6. At the first stage of final testing the power unit is connected to the electronic stand that creates fluctuating load up to 30kW during 3 hours. Product continuous run time and power are measured.

5.5.7. Fluctuating load schedule from 0 to 30 kW is provided to the contest Participants not later than 3 months prior to the testing date and is published at the Contest website.

5.5.8. Technical parameters of the test facilities for the Product, connection sizes, methods, criteria for evaluation are set forth in the Technical Guideline not later than 6 (six) months prior to tests start.

5.5.9. Participants whose Products, based on the results of the first stage of final tests, address to the following requirements are admitted to the second stage of final tests:

- specific energy density of the power unit is not less than 400 W*h/l
- Product power not less than 15 kW;
- working capacity of the power unit is not less than 3 hours;
- power unit volume cannot be more than 150 l;
- requirements to the hydrogen source set forth in clause 3.3.

5.5.10. At the second stage of final tests, participants Products are installed on the standard mobile platform that is, being in autonomous mode, moving according to the definite route during not less than three hours. Continuous run time of the mobile platform is measured.

5.5.11. Complete final tests procedure, evaluation procedure, technical requirements to the Product is determined by the Technical Guideline and published at the Contest Website not later than 6 (six) months prior to tests.

5.5.12. All contest Participants are provided with equal access to the equipment, measurement devices and parameters measure results of the other Participants units. Carrying out of the contests and Product work parameters measurement should be open for all interested persons including mass media and industry experts.

5.5.13. Awardees and winners are determined based on the results of tests carried out at second stage of final tests.

5.5.14. Winners' and awardees' products can be subject to expertise for the purpose of confirmation of their compliance with the requirements as provided in clauses 3.4 and 3.7.

5.5.15. Test results are forwarded to the Jury to execute a protocol of the Contest winners and awardees.

6. Results

6.1. Determining the winner and awardees

6.1.1. Based on the results of the tests at the final stage, the Jury determines values of energy density of the Participants' power units.

6.1.2. Contest Winner is a Participant whose development completely ensures overcoming of the technological barrier and demonstrates the highest value of power density in the performed tests.

6.1.3. Contest awardees are the Participants whose developments completely ensure overcoming of the technological barrier and demonstrate the second and third value of power density in the performed tests.

6.1.4. Based on the test results, the Jury approves a protocol of the Contest winners and awardees.

6.1.5. After the memorandum of the winners and awardees a list of winners and awardees as well as test results are published at the Contest website.

6.2. Appeal Committee

6.2.1. The Appeal Committee is created for the purpose of observance of the Participants rights and compliance with the common requirements while evaluating the Products and for the purpose of disputes resolution; the Chairman in accordance with the Appeal Committee Provision approved by the Operator heads the Appeal Committee.

6.2.2. Based on the results of every Contest round the Participant has the right to submit written official objection of violation of the set forth Contest procedure and (or) disagreement with the results.

6.2.3. The Participant team leader submits the objection in writing not later than 24 hours after round results are published and the objection is submitted against such results.

6.2.4. Appeal Committee shall accept and consider Participants' objections, makes final decision based on the objection consideration results, notifies a Participant that submitted the objection of the made decision.

6.2.5. Time for the consideration of the participant objection is 10 business days. In case if more time is required to consider the Participant's objection and to make a decision, Organising Committee notifies a Participant of extension of the time for consideration of the objection upon request made by the Appeal Committee.

6.2.6. Decision of the Appeal Committee is final and could not be revised.

6.2.7. Decision of the Appeal Committee is documented by the report signed by all Appeal Committee members considering the objection.

6.2.8. Decision of the Appeal Committee is documented in a report and announced to the Participant and, if necessary, is passed to the Jury for its approval and necessary changes to the Jury reports.

7. Prizes to the winner and awardees

7.1. Prizes are paid to the Winner and Awardees only in case the technological barrier is overcome. Overcoming of the technological barrier and solution of the Technological problem is confirmed by solving of the Technological problem at the final tests. In case none of the participants is able to overcome technological barrier and solve Technological problem, the prize is not paid to any of the Participants.

7.2. The Prize is paid to the Winner and Awardees on the Jury report of the winners and awardees by the Fund for support to the National Technology Initiative

7.3. In case the recipient of the money award is a group of legal entities, money award is divided between them in equal parts, if the agreement between such entities does not state otherwise.

7.4. The Prize paid for the account of the federal budget can be paid only to the Russian entities. In case the winner or one of the awardees or one of the legal entities included in the winner or awardee team is a foreign entity that is not tax resident of the Russian Federation, payment of the prize or its share for the account of the federal budget to such participant is not possible, the right to receive the prize is transferred to the other participants.

7.5. Contest winner is paid Prize in the amount of 100 000 000 (one hundred million) rubles.

7.6. Contest awardees are paid Prize in the amount:

7.6.1. 2 place — 30 000 000 (thirty million) rubles.

7.6.2. 3 place — 10 000 000 (ten million) rubles.

7.7. Operator together with the Partners (Sponsors) of the Contest can give the other prizes not set forth in this document.

8. Additional terms

8.1. Environmental and Safety Regulations

8.1.1. Participants' Products should comply with the environmental standards and safety requirements valid in the Russian Federation.

8.1.2. At the Testbed, any acoustic, electro-magnetic, laser, optical and other radiation emissions should comply with the standards applicable in the Russian Federation.

8.1.3. Contest Committee announces to the Participants safety and environment protection regulations that should be read by all Participant team members and complied with.

8.1.4. The Jury reserves the right to disqualify the Participant in case of break of the requirements as provided in this section.

8.2. Intellectual property

8.2.1. Participants reserve the right to their intellectual property and copyright objects related to the Product.

8.2.2. Tests within the Qualification and Final rounds are open and imply presence of the audience and Mass Media representatives at the Testbed.

8.2.3. No actions of the Organising Committee and the Jury can be aimed at disclosure and distribution of the information about the technologies that can be patented by the Participants under the applicable legislation without the participant's consent.

8.2.4. Information about the Product, partners and sponsors of the participant transferred to the Operator by the Participant as well as information received during attendance-

based evaluation of the Product can be distributed only in part related to organization and safety of the contest, or upon Participant's consent.

This clause does not cover information that can be received by the audience and Mass Media representatives during Qualification and Final rounds.

8.3. Changes in Contest Terms and Conditions

8.3.1. Upon decision of the Contest Committee, the Contest can be cancelled or its terms and conditions can be changed, in case of the circumstances preventing Contest and (or) summing up the Contest and in case:

- less than two applications from the Participants are received or less than two Participants remain at any stage;
- technological barrier determined by the Contest Terms and Conditions is overcome by the persons that do not participate in the Contest and its solution is publicly announced (publicly demonstrated) before the Contest results are known;
- during the Contest, it is determined that solution of the Technology problem is impossible to get or additional time is required to get such solution that considerably exceeds Contest terms;
- force majeure circumstances prevent holding of the Contest.

8.3.2. any changes made to this clause are published at the Contest website.

9. Contest organising and funding

9.1. Organization and holding of the contest is done by the Operator for the account of the federal budget, own Operator and Partner funds (if available).

9.2. Amount of the federal budget subsidy provide to the Operator for financial provision of Operator's expenses for organising and conducting of the Contest is 71 000 000 (seventy one million) roubles.

9.3. Amount of the federal budget subsidy provide to the Operator for financial provision of Operator's expenses for the prize pool of the Contest is 140 000 000 (one hundred and forty million) roubles.

10. Contest activities

10.1. During the Contest, the Operator holds the following activities in 2018:

10.1.1. Official launch of the Contest.

10.1.2. Qualification round.

10.1.3. Qualification round including preparations to holding it.

10.2. During the Contest, the Operator holds the following activities in 2019:

10.2.1. Final round including preparations to holding it.

10.2.2. Summing up the Contest and payment of the Prizes (if winners are available).

10.3. For the purpose of optimization of subsidy funds expenditure, events specified in clauses 10.1. and 10.2. and separate expenses of the Operator related to their organization can be combined with the events and expenses related to the other technology contests organized by the Operator.

Annex No. 1 Contest application form
to Contest Terms and Conditions
of the technology contest «First element. Earth»
for the purpose of the National Technology Initiative

Form of the Application for participation in the Contest*

Name of the Contest the application is submitted for	First element. Air
Name of the Applicant's team	
Name of the organization the Applicant represents**	
Short description of the Applicant team (in 5 sentences maximum) with specification of the existing groundwork and main purposes of participation in the Contest	
Contact information of the legal entity: legal address, physical address, phone, internet website, email of the official representative of the legal entity**	
Contact person to communicate with the Organising Committee: full name, contact phone number, email.	

*Application is filled out as the web form at the contest website; the format may differ from the one provided.

**In case the application is submitted by the association of legal entities, information about all persons included in the association should be provided.