eBPa (Energy Best Practices Area)
Participation Guidelines
and Project Selection Procedures

Astana, 2015

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1. GENERAL INFORMATION

1.1. Introduction

In 2017, Kazakhstan's capital Astana will host **the International Specialized Exhibition (Astana EXPO-2017)** under the aegis of International Bureau of Exhibitions (BIE). Kazakhstan chose **"Future Energy"** as the theme of EXPO-2017 in order to help bring together the global community in their efforts to take action in response to global energy challenges. Both through physical infrastructure, as well as in the messages it conveys, "Future Energy" promotes the adoption, implementation and use of the best energy practices for sustainable development. "Future Energy" also raises awareness regarding energy as an inherent asset of humanity that should be used responsibly and efficiently.

Energy Best Practices Area (eBPa) - will be a symbolic center of the Astana EXPO-2017, demonstrating the best technologies, projects, and strategies in different areas of sustainable energy: energy production, storage, and use, combatting climate change, and providing access to energy in developing countries.

eBPa is closely associated with the "Future Energy" theme. It is a pathway to excellence and innovation through the exhibition of energy related practices and projects that have been implemented with good results.

The eBPa will demonstrate the technological and intellectual breakthrough on energy issues of the 21st century.

1.2. Venue

eBPa will be located in a two-floor pavilion with the total area of 3 000 sq.m. on the territory of the EXPO-2017 site.

1.3. The International Selection Committee (the ISC)

The organizer of Astana EXPO-2017 will form an International Selection Committee to select projects that will be presented in the eBPa. The ISC is composed of the representatives of the organizer (Astana EXPO-2017 National Company), BIE, leading experts in the field of energy and sustainable development, prominent scientists, representatives of international organizations, international research centers, and academic institutions. The BIE secretary general will serve as a chairman of the ISC.

To ensure the comprehensive and objective review of submitted projects, as well as for the evaluation and preliminary selection of projects, the ISC may establish a special **working group** consisting subject matter experts.

1.4. Participants of eBPa

Participation in eBPa is open to:

- governments, central and local government agencies, and their associations;
- intergovernmental and non-governmental organizations;
- public organizations or associations (NGOs, associations, public or private funds);
- representatives of the business community (small and medium enterprises (SME), large companies, micro/public companies and their associations);
- universities and research organizations;
- public-private partnerships;
- individuals possessing intellectual property rights (e.g. patent holders).

1.5. Thematic sections and categories of eBPa

The eBPa participants allocation will be organized on a sectoral basis (rather than the geographic distribution that is traditionally popular at international exhibitions). eBPa will be organized around five **thematic areas**:

1**. Renewable and alternative energy**:

- wind energy;
- bio fuels;
- solar energy;
- hydropower;
- geothermal energy;
- storm energy;
- controlled thermonuclear fusion;
- hydrogen energy;
- cosmic energy;
- extraction and use of natural gas (methane) from coal deposits and shale gas as alternative fossil fuels.

2**. Energy efficiency and traditional energy**:

- energy-efficient lighting;
- energy-efficient buildings construction and reconstruction;

- energy-saving innovations in the automotive industry;
- energy-efficient modernization projects of companies;
- accounting and monitoring of energy saving and consumption of fuel and energy resources.

3. **Energy Storage**:

- chemical energy storage;
- biological energy storage;
- electrochemical energy storage;
- electrical energy storage;
- mechanical energy storage;
- thermal energy storage.

4. Energy distribution:

- energy loss reduction in power transmission;
- smart electricity grid;
- planning and ensuring efficient operation of grids;
- improving the service quality;
- transfer of high voltage direct current;
- flexible AC transmission systems;
- substations based on GIS (gas-insulated switchgear, complete);
- superconductors / cables (high temperature superconducting cables);
- regional monitoring systems.

5**. Using natural energy resources:**

- rational use of natural resources and processing of raw materials and products;
- technologies and methods of restoring of mineral resource bases and water resources;
- technologies of development of mineral resources;
- technologies of raw materials and products processing;
- technologies of new materials synthesis;
- basic research in the field of raw materials and products processing;
- solutions for the mining industry;
- increased efficiency and readiness for processing plants;
- efficiency and safety in production and processing of metal ores.

Each of these areas may be considered in the **following categories**:

- sectors (industry, transport, agriculture, etc.);
- advanced solutions and innovations;
- strategies (local, regional, national);
- projects of international cooperation.

1.6. Categories and number of applications selected for eBPa

Preliminary distribution of the eBPa projects:

1. Major projects/exhibits (exhibition area from 15 to 50 sq.m.);

2. Small projects/exhibits (exhibition area up to 15 sq.m.).

The **projects/exhibits** demonstrating **best practices** refer to ongoing (implemented) projects/ programs/technologies/equipment/devices, etc. that use the most advanced solutions **in the aforementioned thematic areas, and in the field of CO_2 emissions reduction, energy conservation and efficiency, access to sustainable energy**.

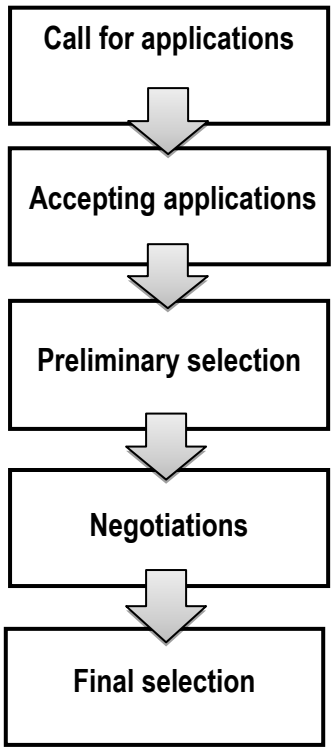
1.7. Selection criteria

The experts (ISC and working group members) will evaluate submitted applications against the following criteria:

No	Criterion	Score*
1	**Relevance and social importance** – Is the problem addressed by the project relevant and socially significant? – Does the project successfully address key socio-economic issues (e.g., overcoming energy poverty, reduction of emissions, energy efficiency, etc.)? – Does the project have an impact on the development of new methods/technologies/solutions for achieving sustainable development goals, for use in other energy-related fields?	(5) - highest score (an expert can decisively reply to all questions positively) (1) - lowest score
2	**Attractiveness of the project (exhibit), its novelty and scientific-technical level** – Is the project (exhibit) visually spectacular and interactive (possibility to interact with the exhibit)? – Is the project innovative, have modern technologies been used to develop it?	(5) - highest score (an expert can decisively reply to all questions positively) (1) - lowest score
3	**Sustainability and impact on environment** – Will the project improve the quality of life of people when using available natural resources? – What impact does the project have on environment, are natural resources, renewable energy sources used rationally? – Will the project remain relevant and will it be in demand in the long term perspective?	(5) - highest score (an expert can decisively reply to all questions positively) (1) - lowest score
4	**Feasibility and possibility of further implementation of the project** – Is the project realistic/feasible regarding the necessary material resources and necessary technologies? – Can the project be repeated at the regional and global levels?	(5) - highest score (an expert can decisively reply to all questions positively) (1) - lowest score

** Minimum passing score for participation in eBPa is 60% of the total score (12 out of 20 points). The score is calculated as the average of scores (points) received from experts (ISC members, working group members).*

2. PARTICIPATION PROCEDURES



Announcement of the competition for the selection of projects for eBPa - **December 2015**

Applications will be accepted until **31 March 2016**

The ISC selects the applications based on the recommendations of the working group and approves the list of applications that have passed the preliminary selection **– first decade of April 2016**

Negotiating on main conditions of participation in eBPa with applicants – **April – May 2016**

Approval of the final list of selected projects – participants of eBPa **– May 2016**

2.1. Call for applications

Call for eBPa applications will be announced by the Organizer after the approval of the composition and the first meeting of the ISC.

2.2. Accepting applications

The call for applications will be announced on the official Internet resource of the Organizer www.energybestpracticesarea.org, and applications will be accepted until March 31, 2016. Applications in hard copies submitted to the Organizer (postal address of the Organizer TBA) will be taken into consideration too. The draft eBPa application form is presented in Annex 1.

The ISC Secretariat shall collect all received applications and ensure their compliance with the formal requirements for participation in eBPa (conditions stipulated in paragraphs 1.4, 1.5, 1.6, submission of duly completed application form, submission of the application before the specified deadline). The applications that passed the compliance check will be sent for the review to the members of the working group and the ISC members. The draft evaluation report form is presented in Annex 2.

The application deadline may be extended by the decision of the ISC upon the approval by the Organizer.

2.3. Evaluating projects/Working group

Each application is evaluated by at least three experts, who are selected based on their experience and competence.

The applications are sent to experts in batches (up to 10 applications accepted by the ISC Secretariat). The experts carry out the evaluation of projects on a reimbursable basis, experts' remuneration and terms of engagement are defined and approved by the organizer/or special task force for the development of the content and the thematic activities and facilities of the International Specialized Exhibition EXPO-2017 in Astana.

An expert to have one business day to evaluate one application; upon completing the evaluation, the expert fills out "The expert evaluation report form" and sends it to the ISC Secretariat.

2.4. Preliminary selection

The decision of the ISC on the preliminary selection of projects for eBPa will be made within 20 (twenty) calendar days after the application submission deadline. The members of the ISC, having considered the received applications, guided by the selection criteria outlined in paragraph 1.7 and the recommendations of the working group, approve the list of applications that have passed the preliminary selection.

If the application that passed the pre-selection stage has not passed the negotiations stage (see. paragraph 2.5), it may be replaced by another application with the highest score.

If necessary, the ISC may recommend the authors of two or more applications to combine their applications and participate in the selection as a single applicant.

2.5. Negotiations

The Organizer sends notifications of preliminary selection for participation in eBPa to the project authors, as well as to the official representatives of the participating countries no later than 10 (ten) calendar days after the approval of the list of applications that have passed the preliminary selection.

Official notification of the preliminary selection for participation in eBPa is also an invitation for the applicants to prompt interaction with the ISC Secretariat on negotiating the conditions of participation in eBPa. The ISC Secretariat will hold technical talks with potential participants on terms and conditions of participation in eBPa, including logistics and practical arrangements.

2.6. Final selection

As a result of the negotiations with pre-selected applicants on terms and conditions of participation in eBPa, the ISC Secretariat will prepare a list of projects, which will be presented at the meeting of the ISC for the final selection.

Within 20 (twenty) calendar days after completing the negotiations with applicants, the ISC members consider and approve the final list of eBPa projects/participants.

The final list of the eBPa projects/participants will be submitted to the Organizer and published on its web-site. The Organizer will also send official invitations to the authors of the selected eBPa projects/participants.

3. INSTALLATION AND DISMANTLING OF THE EXHIBITS

3.1. Engineering and technical information about eBPa

A. Description of interior finishing;

B. Description of the pavilion (zoning, allocated space, etc.);

C. Ceiling: *(Description)*;

D. Floor: *(Description)*.

E. Load capacity: *(Description)*;

F. Electricity: *(Description)*.

G. Gas *(Description)*.

H. Water supply *(Description)*.

I. Drainage: *(Description)*.

J. Heating and air conditioning: *(Description)*.

K. Telecommunications: *(Description)*.

L. Sewage: *(Description)*.

M. Lighting *(Description)*.

N. Fire alarm and fire fighting equipment: *(Description)*.

O. Evacuation: *(Description)*.

3.2. Recommendations on the content of eBPa

Recommendations for compliance with the general arrangement of eBPa:

It is preferable to use popular and accessible methods of presenting information and provide an opportunity to interact with the exhibits;

It is necessary to ensure the interrelation between various elements of the exhibition. Also, exhibits should be organized to impress the participants and achieve the maximum visual effect;

Since eBPa will be housed in one of Astana EXPO- 2017 pavilions, it is important to ensure the consistency with the overall design of the pavilion.

Recommendations on the types of exhibits:

Science and technology: the introduction of interesting technologies, observations and discoveries related to energy (working models, simulations in real-time, interactive exhibits, etc.);

Industry and business: opportunity to personally interact with the exhibits, use of touchable objects, demonstration of publicly beneficial futuristic solutions;

Energy policy: demonstration of vision in the field of energy to maintain a balance between the development and preservation of the environment, the development of these principles in the ideal paradigm through various initiatives, campaigns, events, and bilateral relations.

General guidelines for exhibits:

It is preferable to present eBPa in the story format - it assumes the consistency and presence of an attractive narrative plot;

Experimental exhibits that demonstrate the possibility of a solution in an interesting and interactive format are welcome;

When creating informative exhibits, it is desirable to use a combination of images and touchable objects for more interesting content;

Give priority to analog (not digital) approach – use models, rare samples, and experimental models;

Focus on the educational effect to provide specialized reports, detailed information, and knowledge, avoiding monotonous and routine methods of presenting information;

Provide accessible interpretation and explanation of project to the public;

Prepare and disseminate reference materials so that visitors have the opportunity to use the information after the exhibition;

Conduct demonstrations and seminars to maximize the effect of the exhibition and enhance the interest of both professionals in the energy sector and public.

3.3. Approval of plans for the eBPa exhibits installation

Participants should prepare their exhibit installation plan/schedule and submit it to the organizer for approval. Details of the exhibit installation plan/schedule are elaborated during the technical negotiations between the organizer and the applicant.

3.4. Installation of exhibits

Any participant who plans to install a model or a touchable object, produced in advance, must obtain permission to install the exhibit. Any participant, who plans to install an exhibit, must register the exhibits installation plan with Organizer and follow the instructions.

3.5. Finalizing installation of exhibits

After installation, the participant must notify the Organizer and obtain permission for pre-start inspection. If the participant is unable to obtain permission for pre-start inspection, the participant must continue making adjustments until the permission is received. The pilot operation is allowed only after obtaining permission.

3.6. Operation of the exhibits

Having the plan for the pilot operation available, the Organizer conducts a trial run in the presence of the participant. Any errors or defects discovered during the test run should be corrected at least one week before the opening of the Exhibition. If problems occurr, the organizer undertakes to repeat the trial runs until the exhibit is ready for operation.

3.7. Dismantling of the exhibits

Any exhibit, owned by or passed to the organizer, should be dismantled or moved by the organizer, while the exhibit that belong to the participant, should be dismantled or moved by the participant.

4. OTHER PROVISIONS

The eBPa will provide the following preferential terms for all participants to actively attract international participants:

The organizer will provide exhibition space in the eBPa pavilion for each participant free of charge;

The organizer will consult each participant about investment in eBPa exhibits, and on the effective management of exhibits in the post-exhibition period (if necessary);

The organizer may provide support to promising non-profit organizations in the production and transportation of the exhibits, and other matters on the terms specified by the organizer (if necessary).

The organizer will provide participants with an express immigration service, tax incentives for the exhibits, accommodation and protocol support for their representatives, VIP-participants, etc.

The organizer will provide support for participants in the calculation of the eBPa participation costs.

Participants are advised to contact promptly the Organizer on any matters relating to exhibition and participation in eBPa.

Annex 1

eBPa Application Form

Full name: Enter text

Applicant category: Choose category

Organization (if applicable): Enter text

Project/exhibit name: Enter text

Thematic area: Choose area

- **Project/exhibit description:**

Enter text

(no more than 250 words)

- **Exhibit demonstration** (In what form will the project be presented? Output parameters: size of the exhibit, technical requirements (see paragraph 3.1) for installation/dismantling of the exhibit)

Enter text

(no more than 150 words)

- **At what stage is the project implementation?**

Enter text

(no more than 150 words)

Attach files:

Link to a video (if available): Paste a link

Attaching a file:

- Attach only one file
- Text files format: .doc, .docx, .pdf
- Presentations format: .ppt, .pdf

- Images format: .jpeg
- Video should be located on an external source with a link in a corresponding field
- Maximum size of one file: 5 MB
- Maximum size of attachments (all files): 20 MB
- All information should be submitted in English
- It is not allowed to have files password protected

For reference:

1. eBPa participation guidelines (provide a link)
2. Selection criteria (provide a link)

Expert Evaluation Report Form

Expert's full name: Enter
Name of project/application: Enter

Please evaluate the project using the scoring system and against the criteria outlined below

Highest score – 5 (an expert can decisively reply to all leading questions positively)
Lowest score – 1

1. Relevance and social importance: Choose a score

Is the problem addressed by the project relevant and socially significant? Does the project successfully address key socio-economic issues (e.g., overcoming energy poverty, reduction of emissions, energy efficiency, etc.)? Does the project have an impact on the development of new methods/technologies/solutions for achieving sustainable development goals, for use in other energy-related fields?

Comments:

Enter text

2. Attractiveness of the project (exhibit), novelty and S&T level Choose a score

Is the project (exhibit) visually spectacular and interactive (possibility to interact with the exhibit)? Is the project innovative, have modern technologies been used to develop it?

Comments:

Enter text

3. Sustainability and impact on environment Choose a score

Will the project improve the quality of life of people when using available natural resources? What impact does the project have on environment, are natural resources, renewable energy sources used rationally? Will the project remain relevant and will it be in demand in the long term perspective?

Comments:

Enter text

4. Feasibility and possibility of further implementation of the project Choose a score

Is the project realistic/feasible regarding the necessary material resources and necessary technologies? Can the project be repeated at the regional and global levels?

Comments:

Enter text