AGENDA

Kazakhstan Renewable Energy Executive Exchange

November 10 – 19, 2017
Mexico City, Mexico
Denver, CO

Funded by
UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT (USAID)

Managed by
UNITED STATES ENERGY ASSOCIATION (USEA)
The goals of this executive exchange are two-fold:

1) to introduce key stakeholders in Kazakhstan involved in planning the country’s first energy auction, currently scheduled for 2019, to Mexico’s experience with energy auctions, identify best practices and provide some insights regarding different types and designs of auctions;

2) to familiarize the delegates with the latest renewable energy R&D and applications in the United States, with a focus on wind power and on integrating renewable power sources with the electric grid.

Topics to be discussed during the executive exchange include:

- Trends in energy auctions
- Auction type and design
- Market and regulatory frameworks
- Planning process
- Mexico’s experience with energy auctions: lessons learned
- Renewable energy R&D in the U.S.: current trends, breakthroughs and market applications
- Integrating renewable power sources with the electric grid

The executive exchange is designed to provide Kazakhstan delegates with opportunities to meet with principal stakeholders, government entities, and private sector companies involved in Mexico’s power auctions.

In Colorado, the delegates will meet with federal and state agencies, involved in the development and deployment of renewable energy technologies, and a major U.S. utility with a considerable renewable energy portfolio.
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<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Institution</th>
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<tbody>
<tr>
<td>Ms. Ainur S. Sospanova</td>
<td>Director, Renewable Energy Sources Department</td>
<td>Ministry of Energy of the Republic of Kazakhstan</td>
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<tr>
<td>Mr. Nurzhan K. Issenov</td>
<td>Director, Department of National Energy Network Development</td>
<td>JSC KEGOC (Kazakhstan Electricity Grid Operating Company)</td>
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<td>Mr. Zhanibek B. Kuanyshbayev</td>
<td>Director, Department of System Services</td>
<td>JSC KEGOC</td>
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<td>Mr. Yeralf T. Shinassilov</td>
<td>Director, National Control Center</td>
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<td>Ms. Aizhan Zh. Kassymbekova</td>
<td>Leading Specialist, Computations and Tariffs Department</td>
<td>Financial Settlement Center of Renewable Energy Sources, LLP</td>
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<tr>
<td>Mr. Yedil K. Kopenov</td>
<td>President</td>
<td>JSC KOREM (Kazakhstan Operator of Electric Power and Electric Energy)</td>
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<td>Mr. Yerzhan G. Madiyev</td>
<td>Vice President</td>
<td>JSC KOREM</td>
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<td>Mr. Bauyrzhan Yedilbayev</td>
<td>Chief Manager, Department of Energy</td>
<td>Kazakhstan Energy Associaton</td>
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<td>Mr. Sergey Yelkin</td>
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<td>Ms. Bayan Abylkairova</td>
<td>Deputy Chief of Party</td>
<td>Power the Future Central Asia</td>
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<td>Mr. Ignacio Rodriguez</td>
<td>Director</td>
<td>Tetra Tech</td>
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<td>Ms. Kristen Madler</td>
<td>Clean Energy Coordinator</td>
<td>USAID</td>
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<tr>
<td>Ms. Marina N. Barnett</td>
<td>Senior Program Coordinator</td>
<td>United States Energy Association</td>
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Delegates depart Astana, Kazakhstan:

- Lufthansa Flight 649, depart Astana Airport at 5:40, arrive at Frankfurt Airport at 7:15
- United Flight 906, depart Frankfurt Airport at 13:00, arrive at Chicago O'Hare Airport at 15:35
- United Flight 1547, depart Chicago O'Hare Airport at 19:15, arrive Mexico City Airport at 23:32

2 Delegates (Mr. Kopenov and Mr. Madiev) depart from Ashgabat, Turkmenistan:

- Lufthansa Flight 613, depart Ashgabat Airport at 3:10, arrive at Frankfurt Airport at 7:10
- United Flight 906, depart Frankfurt Airport at 13:00, arrive at Chicago O'Hare Airport at 15:35
- United Flight 1547, depart Chicago O'Hare Airport at 19:15, arrive Mexico City Airport at 23:32

USEA Program Coordinator will meet the delegation on arrival at the Mexico City Juarez International Airport and accompany to the hotel.

**HYATT REGENCY MEXICO CITY**
Campos Eliseos No. 204 Polanco Chapultepec
Mexico City, Mexico, 11560
Phone: + (5255) 5083-1234

**Saturday, November 11**
Executive Time, Mexico City

10:00 Welcome and Security briefing

_We will meet in the hotel lobby to go over the agenda and logistical arrangements for the trip, discuss security precautions and safety protocols, and distribute per diem._

13:00 Visit to the National Museum of Anthropology (optional)

Executive time

**Sunday, November 12**
Site Visit and Executive Time, Mexico City

8:30 Meet USEA Program Coordinator in the hotel lobby for departure

9:00 **Visit to the Archaeological zone of Teotihuacan: Sponsored by Tetra Tech**

20:00 Return to the hotel
Monday, November 13
Meetings in Mexico City

8:00 Meet USEA Program Coordinator in the hotel lobby for departure

9:00 **National Energy Control Center (CENACE): Meeting with the Directorate of the Wholesale Electricity Market Administration**

CENACE manages planning of the national electricity system, inclusion of smart electricity network elements, proposes the expansion and modernization of the national transmission network and general distribution networks in the wholesale market, and incorporation of strategic electricity infrastructure projects needed to fulfill national energy policy. CENACE is under the control of Mexico's energy ministry Sener.

Topics:
- Background on CENACE
- CENACE's role in power auctions
- Auction design and operation (Working Group)
- Auction platform
- Market clearinghouse in the 3rd Auction
- Auction simulation

12:00 Depart for the next meeting

13:00 **CENACE: Visit to the Operations’ Center**

15:30 Adjourn

18:30 Meet USEA Program Coordinator in the hotel lobby for departure

19:00 Welcome Dinner at La Hacienda de Los Morales
Av Juan Vázquez de Mella 525, Del Bosque, 11510 Miguel Hidalgo, Mexico City, Mexico
Meet USEA Program Coordinator in the hotel lobby for departure

*Tetra Tech*

Tetra Tech is a leading provider of consulting and engineering services. It supports government and commercial clients by providing innovative solutions focused on water, environment, infrastructure, resource management, energy, and international development. Tetra Tech is collaborating with the Government of Mexico (GOM) to support the development and implementation of a national low emissions development strategy (LEDS) and implement clean energy interventions.

Topics:
- Introduction to energy auctions: applicability, type and design
- Sector reform: Mexico
- Design and results of Mexico auctions

Depart for the next meeting

Lunch

Depart for the next meeting

*Aklara*

Aklara designed the platform for the first two power auctions in Mexico. The company specializes in the design and implementation of structured contests to generate efficiency and end-to-end transparency of the procurement process.

Topics:
- Background on Aklara
- Designing the power auctions platform: best practices

Depart for the next meeting

*Asociación Mexicana de Energía Solar Fotovoltaica (Asolmex)*

The Mexican Association of Photovoltaic Solar Energy brings together operators, shareholders, vendors and developers of photovoltaic solar plants on a large scale and distributed generation. Currently Asolmex has 286 projects in Mexico with solar photovoltaic technology in operation, under construction or in an advanced stage of development.

Topics:
- Solar energy in Mexico: latest R&D and applications
- Integrating solar power sources with the electric grid: Mexico’s experience
- Solar energy project financing

Adjourn. Transportation provided back to the hotel
Wednesday, November 15: Meetings in Mexico City

12:00   Meet USEA Program Coordinator in the hotel lobby for departure

13:00   **The Mexican Wind Power Association (AMDEE)**
The Mexican Wind Power Association was established in 2005 to promote the industry and the transition to renewable energy resources. Today it represents multiple and most important members in the industry.

Topics:
- Background on AMDEE
- Issues affecting power auctions: investors' views

14:00   **The Ministry of Energy (SENER)**
Sener is the Mexican ministry of energy which is responsible for conducting the national energy policies, so as to grant the safe supply of energy services under the required quality, economic, environmental and legal standards. Sener also promotes the research on new technologies and the efficient use of alternative energy sources; and carries out efforts on the development of an additional electrical system, the sustainable use of energy, hydrocarbons exploration and exploitation bidding, and cooperation with North American countries.

Topics:
- Background on SENER
- Mexican regulation standards
- Electricity market reforms: lessons learned
- SENER’s role in reverse power auctions
- Reverse power auctions: the Government’s perspective

16:15   Depart for the next meeting

17:00   **Energy Regulatory Commission (CRE)**
Mexico’s energy regulatory commission CRE is the entity in charge of regulating in a transparent, impartial and efficient way the gas industries, the refined oil products and electricity. Among its responsibilities include the promotion of healthy competition, encouraging adequate coverage for customers, and ensuring the quality and security of the gas supply, as well as the delivery of competitive prices to the user.

Topics:
- Background on CRE
- Energy auctions
- Clean energy certificates

18:30   Adjourn. Transportation provided back to the hotel

20:00   **3rd Auction Bid Award Ceremony (2 Kazakhstan delegates to attend)**
Thursday, November 16
Travel from Mexico City to Denver, CO

6:30 Check out of the hotel, depart for the airport
- United Flight 1025, depart MC Airport at 10:05, arrive at Houston Airport at 12:23
- United Flight 825, depart Houston Airport at 16:20, arrive at Denver Airport at 17:54

Check-in to the hotel:

THE ART HOTEL
1201 Broadway, Denver, CO 80203
Phone: (303) 572-8000; http://www.thearthotel.com/

Friday, November 17
Meetings in Denver, CO

8:00 Meet USEA Program Coordinator in the hotel lobby for departure

9:00 National Renewable Energy Laboratory (NREL)
NREL is the only federal laboratory dedicated to research, development, commercialization, and deployment of renewable energy and energy efficiency technologies. It advances the science and engineering of energy efficiency, sustainable transportation, and renewable power technologies and provides the knowledge to integrate and optimize energy systems.

Topics:
- An overview of renewable energy R&D in the U.S.: current trends, breakthroughs and market applications
- Wind energy: systems and components
- Grid integration: solving the challenges of integrating renewable power sources with the electric grid

12:00 Lunch: Schnepf’s Restaurant
3050 Illinois Street, Golden, CO, (303) 277-8755

13:30 Xcel Energy: Lookout Dispatch Center, Golden, CO
Xcel Energy Inc. is a utility holding company based in Minneapolis, Minnesota, serving more than 3.3 million electric customers and 1.8 million natural gas customers in Minnesota, Michigan, Wisconsin, North Dakota, South Dakota, Colorado, Texas and New Mexico. It consists of four operating subsidiaries: Northern States Power-Minnesota, Northern States Power-Wisconsin, Public Service Company of Colorado, and Southwestern Public Service Co.

Topics:
- Background on Xcel energy: operations, training
- Renewable energy integration and interconnection
- Xcel Energy’s transition from thermal to wind and solar: lessons learned

16:30 Adjourn. Transportation provided back to the hotel
Saturday, November 18
Site Visit in Colorado

8:20  Meet USEA Program Coordinator in the hotel lobby for departure

9:00  Site visit to the Xcel Energy Cherokee Generating Station, Denver, CO
Because of its strategic location within the Denver city area, Cherokee provides crucial electrical generation as well as grid accuracy within the distribution system to keep Denver and the surrounding area humming. Cherokee was built as a coal-fired plant, but has undergone a complete makeover as part of Colorado Clean Air-Clean Jobs legislation. A new natural gas combined cycle plant went online in 2015, capable of producing almost 580 megawatts of cleaner energy. The new gas-fired facility is comprised of two combustion turbines, two heat recovery steam generators and a steam turbine. Original coal fired Units 1, 2 and 3 have been retired. Unit 4 will be converted from coal to natural gas by the end of 2017.

11:30  Adjourn. Transportation provided back to the hotel

Sunday, November 19
Travel from Denver, CO to Astana, Kazakhstan

11:30  Check out of the hotel

14:30  Meet USEA Program Coordinator in the hotel lobby for departure to the airport

- United Flight 8879, depart Denver Int'l Airport at 17:30, arrive at Frankfurt Int'l Airport at 11:05 (the next day)
- United Flight 9116, depart Frankfurt Int'l Airport at 13:20, arrive at Astana Airport at 11:55
BACKGROUND INFORMATION

U.S. ENERGY ASSOCIATION (USEA) COORDINATOR

Ms. Marina Barnett  
Senior Program Coordinator (bi-lingual, English and Russian)  
+1-703-347-5945 (mobile + WhatsApp)  
+1-202-312-1233 (office direct)  
Email: mbarnett@usea.org

DRESS CODE
The dress code for the program will be a mixture of business attire (e.g. suit and tie) and casual attire. In Mexico City: suite and tie. In Denver, CO: for meetings, the attendees will likely wear business attire. Business casual attire is recommended for a visit to a renewable energy facility. Any safety equipment necessary for site visits will be provided by the utilities/organizations. Comfortable shoes are recommended for travel days.

WEATHER
The weather in November in Mexico City, Mexico is expected to be comfortable with daily high temperatures averaging 22 degrees Celsius with average low temperatures of 10 degrees Celsius.

The weather in Denver, CO is expected to be chilly with daily high temperatures averaging 12 degrees Celsius with average low temperatures of – 6 degrees Celsius.

Please note that Mexico City is located at approximately 2250 meters above sea level, and Denver, CO, is at approximately 1609 meters (Astana is at 1138 meters). You might experience altitude sickness, typified by headaches, shortness of breath, nausea and/or fatigue. Make sure to drink more water than usual, curb alcohol and tobacco consumption, and limit physical activity.

LODGING
Mexico City: HYATT REGENCY MEXICO CITY  
Campos Eliseos No. 204 Polanco Chapultepec  
Mexico City, Mexico, 11560  
Phone: + (5255) 5083-1234  

Denver, CO: THE ART HOTEL  
1201 Broadway  
Denver, CO 80203  
Phone: (303) 572-8000  
http://www.thearthotel.com/

EMERGENCY
In Mexico: In case of police, fire, or ambulance emergencies, dial 060 or 080 from any phone in Mexico. This is the emergency telephone number in Mexico. Once you are safe,
please contact one of the USEA staff members to let us know about your situation and your location so that we can assist you. **Marina Barnett’s mobile phone number is +1-703-347-5945.**

**In the U.S.:** In case of police, fire, and ambulance emergencies, **dial 911 from any phone in the U.S.** This is the emergency telephone number throughout the United States. Once you are safe, please contact one of the USEA staff members on the exchange program to let us know about your situation and your location so that we can assist you.

**PROGRAM RULES AND GUIDANCE**

**Air Travel**
Your travel on this program is funded by the United States Government. Therefore, all travel must correspond with the official program agenda, and extended layovers or side trips for personal reasons will not be arranged through USEA and should not be considered.

Several important regulations associated with air travel on USEA programs should be noted:

1. U.S. law requires all delegates on programs funded by the U.S. Government to fly into and out of the United States on American “flag carriers,” airlines such as American, Delta, and United, or on codeshare flights, such as a Lufthansa flight that also has a U.S. airline flight number. This is only highlighted so you are aware of why some airlines and routings are chosen over others.

2. In most circumstances USEA can only purchase economy-fare tickets for program participants. Program participants are welcome to upgrade their tickets to a different class at their own or their employer’s expense.

3. Visitors whose travel is sponsored by USAID should always keep their boarding pass stubs and give them to USEA staff. The passes are required for the distribution of funds for meals.

**Passports, Agenda, & Visa Documentation**
You are strongly encouraged to carry these items with you at all times for the duration of your stay in Mexico and the United States.

**Lodging Rules**
USEA pays for hotel room & tax charges only. Delegates are responsible for all other charges. These incidental charges include meals which are not specifically paid for by USEA, telephone calls (both domestic and international), in-room movies, room service, laundry, baggage handling, and any bills charged to the room from restaurants, bars, and lounges. All incidental expenses charged to the hotel room are the responsibility of the visitor, and must be paid for at the time of checkout. USEA cannot pay for them.

In most hotels, guests who do not have a credit card may be asked to pay a security deposit in cash for possible incidental charges. This ensures the hotel that payment of any incidental charges will be guaranteed. Upon check-out you will receive your deposit, less the money spent by you for your incidental charges. If your incidental charges exceed your deposit, you are required to pay the hotel the difference at the time of check out. Please ask a USEA staff member about any questions regarding incidental charges upon your arrival.
**Ground Transportation**

In most instances, delegates are responsible for getting themselves to the airport in their home country. Ground transportation within Mexico and the U.S. will be arranged by USEA staff prior to your arrival, including airport transfers for your arrival in Mexico and departure from the United States. USEA staff (Marina Barnett) will arrange drivers and vehicles for meeting transportation throughout this Executive Exchange. All personal leisure travel is the responsibility of the delegate; you may use your per diem for this.

For travel on personal time in Mexico City you can utilize the public transit system.

**By Metro:** The subway system costs about 3 pesos/ride and it is open Monday to Friday 5am to midnight, Saturday 6am to midnight, and Sunday 7am to midnight.

**By Bus:** The cost is 4 pesos; try to have exact fare and/or coins when you board. Mexico City designates a number of city buses for women only, distinguished by pink placards. During peak hours, Mexico City’s subway system also designates the first three cars for women and children.

**Taxis:** In Mexico, it’s important to hail a taxi only at a designated “sitio” because those taxis are registered and designated safe. It is recommended that you use the hotel’s bell boy/captain to call a taxi for you and be sure to keep the “sitio” taxi number on you.

**Meals**

Participants are responsible for paying for their meals during a program using funds provided by USEA or their own employers. For this program, however, some meals will be paid for by USEA. Arrangements for such meals will be explained by your USEA program coordinator during orientation.

Please keep in mind that USEA is prohibited from paying for alcohol at any time. Therefore, delegates who consume alcoholic beverages will be responsible to pay for them. If you have any questions about meal arrangements, ask your USEA staff during orientation.

**Per Diem Cash Allowance**

According to U.S. Government regulations, you are entitled to a monetary allowance for each day that you are in Mexico and the United States to be used for meals and incidental costs not sponsored by USEA or training providers. This applies to U.S. Government-funded programs only.

This monetary allowance is known as "per diem" and is normally paid to you in U.S. dollars shortly after your arrival. The amount of money you receive is determined by the U.S. Government and varies according to location. The per diem allowance is intended to cover the following expenses: meals not sponsored by USEA or training providers, telephone calls, laundry, baggage handling, and tips/gratuities.

Please note that once your per diem allowance has been spent, no further funds can be provided by USEA.
**Program Attendance**
The purpose of your visit to Mexico and the United States is to safely and productively learn and experience as much as possible in a short period of time. You must participate in all events scheduled in the agenda for this to be possible. If there is a particular reason that you will not be able to attend an event, you must notify an USEA representative prior to or at the time of your arrival in the U.S. USEA strives to make adequate provisions for free time in the evenings and on days when no formal activities are scheduled.

**Health Coverage**
USEA provides limited health insurance coverage for the duration of your travel. When a medical issue arises during the course of a program, you should inform an USEA staff member as soon as possible.

Your health and accident coverage (HAC) provider for this exchange is GeoBlue. Each of you have been provided with an electronic version of your HAC insurance card, which includes your individual policy number and contact information for making a claim for medical costs that you may incur on your trip. You should always carry a paper printout version of your HAC insurance card with you in case of an emergency. That way, you can provide your insurance information to a hospital if you need to receive treatment in an emergency.

**GeoBlue Contact information:**
**Member Customer Service**
Toll free within the US: 1-844-268-2686
Outside of the U.S.: +1-610-263-2847
Email: customerservice@geo-blue.com

**SAFETY AND MONEY TIPS**
It is vital that you are always aware of your surroundings when traveling. While we can work to ensure that your entire stay is safe and problem-free, we ask for your assistance in avoiding unnecessary risks. Avoid taking long walks at night, consuming excessive amounts of alcohol, or visiting the homes or hotel rooms of strangers.

Some safety tips you may find useful are:

- Upon your arrival at the hotel, ask USEA staff or hotel concierge for a map of the city in which you are located. Familiarize yourself with your location. Always carry a copy of your hotel’s address and telephone number for your reference.

- We recommend that you do not carry all of your per diem or personal spending money with you during your daily activities. Instead, utilize the safety deposit boxes or hotel room safes at hotels when possible.

- We encourage participants to travel in groups outside the hotel, especially in the evenings.

- Do not stop to talk to homeless people or persons asking you for money. Never assume that strangers have good intentions.
• Always walk in well-lit areas, main streets and sidewalks with other pedestrians and open businesses.

• Always lock your hotel room door at night and do not open your door unless you are expecting someone and/or know the visitor. Call the front desk if you do not know someone who is at your door.

• Please leave valuables in a safety deposit box at the hotel front desk or in your hotel room safe. We discourage program delegates from bringing valuables on this exchange visit to the United States and cannot take responsibility for them in the event that they are lost or broken.

**Custom Regulations: Most Commonly Encountered Restrictions**

**In Mexico:**
- Some food items - especially plants and seeds
- Cigars and cigarettes - up to 20 packs per person
- Liquor and wine - up to 3 liters per person
- Medicine for personal use - must have a prescription if the medicine has been prescribed.

**In the United States:**
- Some food items – meats, fresh fruit and vegetables, plants, seeds
- Cigars and cigarettes – up to 2 cartons (20 packs) and 100 cigars per person
- Liquor and wine – up to 2 liters per person
- Merchandise from Cuba, Iran, Burma (Myanmar), and most of Sudan
- Medicine for personal use - must have a prescription if the medicine has been prescribed.

**Tipping/Gratuities**

Tipping is common practice both in Mexico and in the United States. As a courtesy, it is customary to "tip" for certain services. The practice of tipping is strongly encouraged because most service employees are paid minimal salaries and depend on tips to make a living. Remember that you are responsible for the payment of tips on your service purchases, not USEA.

Suggested tip amounts in Mexico:
- **Grocery Store Bagging Clerks:** 1 to 5 pesos.
- **Transfers:** 20-50 pesos for shared and 50 – 100 pesos for private.
- **Taxis:** People do not normally tip taxi drivers.
- **Restaurants:** 10 to 15% of bill without the value added tax (‘IVA’ or Impuesto al Valor Agregado on your bill). IVA is 16% tax that is added to all bills in Mexico.
- **Bartenders:** 20 pesos.

Suggested tip amounts in the U.S.:
- **Hotel Bell Boys/Airport Luggage Handlers:** $3 to $5.
- **Taxis:** 5 to 10% of bill.
- **Restaurants:** 15 to 20% of bill before tax.
- **Bartenders:** $1 per drink.