



# SUMMARY OF PROCEEDINGS

## RENEWABLE ENERGY DEVELOPMENT IN UZBEKISTAN

## РАЗВИТИЕ ВОЗОБНОВЛЯЕМЫХ ИСТОЧНИКОВ ЭНЕРГИИ В УЗБЕКИСТАНЕ



Ташкент, Узбекистан

A Renewable Energy workshop was held organized in Tashkent on December 5 and 6.

**Venue:** Radisson Blu Hotel, Tashkent

**Objective:** To support the Government of Uzbekistan scale-up renewable energy deployment through discussion of good practices in renewable energy development strategy, policy, regulations, institutional measures, modern technologies, and project preparation and implementation adopted around the world. It would inform the development of renewable energy roadmap in Uzbekistan.

The workshop was organized by the Ministry of Economy and IFC/WB, and was supported by ESMAP, IRENA and the Austrian Ministry of Finance. It turned out to be a pivotal event in recovering the Bank's momentum with the government on the RE sector and triggered additional requests for support.

The workshop was well attended with about 90 people (including the WBG team) from about 45 agencies from the Government, the utility, research institutes and industry, as well as other IFIs. DPM Sultanov opened the workshop and stayed for the first few sessions. DPM Sultanov met with the World Bank after the workshop to discuss the conclusions and next steps.

There was a lot of discussion among participants, particularly on the second day when the focus shifted to project-level planning and processing. Among the main areas of concern raised by participants: the possible negative impacts of variable RE on the stability of the system, and on energy prices. There was quite a bit of discussion on pros and cons of the prevailing low natural gas prices, and on RE's economic benefits in terms of enabling natural gas resources to be used over a longer timeframe (and for exports).

Day 1 of the workshop largely focused on policy and financing while day 2 was focused on technical issues with project preparation and implementation. Day 1 of the workshop was opened by the deputy prime minister with oversight responsibility of the energy sector, who once more highlighted the government's commitment to improve energy security through diversification of the generation mix.

Participants actively engaged in discussions on Day 2 with concerns covering the possible negative impacts of variable RE on the stability of the system, energy prices, feed-in tariffs versus auctions, and institutional readiness. There was interest in the continued support from the Bank Group on other technologies including hydro and biogas, and also more targeted assistance on various aspects of RE development.

The following next steps on RE development were discussed: (a) upgrade and enact the proposed RE law (this will include several key aspects such as roles and responsibilities, medium and long term targets, pricing framework – feed-in tariff or competitive auctions, etc.), (b) identify lead institution on RE, (c) progress on secondary legislation and grid code, (d) decide role of private sector in RE development, (e) undertake key preparatory studies, and (f) commence project preparation.

The event was well covered by the local media: see [here](#) (Russian media), [here](#) (Azeri media), [here](#) (the main government newspaper in UZ), [here](#) and [here](#) (key English-speaking media in UZ) and [here](#).

*Local TV channels also covered the event in their news blocks. For instance, the country's main channel reported about this at the prime time. You can watch it [here](#) in Uzbek between 40.10 – 43.50, and [here](#) in Russian between 18.52-21.15. I will post this video at Facebook later after having it edited.*

ESMAP's contribution was acknowledged and appreciated. The agenda is included in subsequent pages.

## Day 1 (December 5, 2017): Enabling environment for renewable energy investments

Time	Topics	Speakers
8:30 – 9:00	<b>Registration</b>	
9:00 – 9:30	<b>1. Opening Remarks</b>	- <b>Deputy Prime Minister</b> , Cabinet of Minister  - <b>Sameer Shukla</b> , Practice Manager, WB
9:30 – 10:30	<b>2. Overview of renewable energy sector in Uzbekistan and World Bank Group's Support</b> <ul style="list-style-type: none"> <li>• Resource availability</li> <li>• Government strategy and progress of RE deployment</li> <li>• Institutional arrangements (decision making &amp; implementing agencies)</li> <li>• World Bank Group's support for RE development</li> </ul>	- <b>First Deputy Minister</b> , Ministry of Economy  - <b>Sameer Shukla</b> , Practice Manager, WB
10:30 – 11:00	<b>3. Renewable energy technology overview and market trends</b> <ul style="list-style-type: none"> <li>• Overview of technologies (wind, solar, others)</li> <li>• Market trends (installed capacity, pricing)</li> <li>• Economic viability of renewable energy</li> </ul>	- <b>Hameed Safiullah</b> , Program Officer, IRENA
11:00 – 11:30	<b>Coffee break and group photo</b>	
11:30 – 12:30	<b>4. Overview of renewable energy support policy worldwide</b> <ul style="list-style-type: none"> <li>• RE targets</li> <li>• Strategy and policy framework on RE development</li> <li>• Good practices on RE institutional reforms</li> <li>• Incentivizing schemes</li> <li>• Legislative and regulatory requirements</li> </ul>	- <b>Pedro E. Sanchez</b> , Lead Energy Specialist, WB (former Minister of Energy and Mines of Peru)  - <b>Sushil Soonee</b> , former CEO, Power System Operation Corporation (POSOCO), India
12:30 – 13:30	<b>Lunch</b>	
13:30 – 15:00	<b>5. Grid integration of variable renewable energy</b> <ul style="list-style-type: none"> <li>• System planning, optimum capacity requirements</li> <li>• Dispatch and balancing</li> <li>• Voltage and frequency control, power regulation</li> <li>• Reserve margin</li> <li>• Forecasting</li> <li>• Capacity regulation</li> </ul>	- <b>Koji Nishida</b> , Senior Energy Specialist, WB  - <b>Nickolas Frydas</b> , Senior Energy Specialist, IFC (former European Network of Transmission System Operators for Electricity, ENTSOE)  - <b>Luis Imaz</b> , former Manager of Spanish Transmission System Operator
15:00 – 15:15	<b>Coffee break</b>	

<b>15:15 – 16:30</b>	<b>6. Financing of renewable energy investments</b> <ul style="list-style-type: none"> <li>• Financial models and mechanisms of RE projects sector interests</li> <li>• Private sector financing and project procurement options</li> <li>• Risk mitigation instruments</li> </ul>	- <b>Pedro E. Sanchez</b> , Lead Energy Specialist, WB (former Minister of Energy and Mines of Peru)  - <b>Marijan Rancic</b> , Energy Specialist, IFC  - <b>Alibek Abdurakhmanov</b> , PPP Advisory Services, Consultant, IFC
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<b>16:30 – 17:00</b>	<b>7. Q&amp;As, discussion, and wrap-up for Day 1</b>
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**Day 2 (December 6, 2017): Wind and solar project planning and implementation**

<b>Time</b>	<b>Topics</b>	<b>Speakers</b>
<b>8:30 – 9:00</b>	<b>Registration</b>	
<b>9:00 – 10:15</b>	<b>8. Project planning and preparation: PPP and EPC</b> <ul style="list-style-type: none"> <li>• Planning for projects</li> <li>• Resource and other preparatory assessments</li> <li>• Procurement and contract management</li> <li>• Environmental and social considerations</li> <li>• Public communications</li> </ul>	<b>Soren Krohn</b> , Renewable Energy Consultant, WB
<b>10:15 – 10:30</b>	<b>Coffee break</b>	
<b>10:30 – 12:00</b>	<b>9. Project procurement and implementation: PPP</b> <ul style="list-style-type: none"> <li>• Procurement and contract management</li> <li>• Regulations and responsibilities (grid interconnection agreements, RFP, PPA)</li> <li>• Implementation</li> <li>• Logistics</li> </ul>	<b>Soren Krohn</b> , Renewable Energy Consultant, WB
<b>12:00 – 12:30</b>	<b>10. Q&amp;As</b>	
<b>12:30 – 13:30</b>	<b>11. Wrap-up of the Workshop</b>	
<b>13:30 – 14:30</b>	<b>Lunch</b>	