

Workshop “Development of the electricity market and strengthening of electricity grid in the High North Region”

**BASREC,
Saint Petersburg, February 28, 2014**

**Report by Oksana B. Dubrovskaya
SO UPS, Russia**

The WS was organized on the basis of the Communiqué, adopted at the ministerial meeting in Berlin on 14-15 May 2012. The purpose of the WS was to share information and exchange opinions on transmission grid development in the High North Region, regarding possibilities for further cooperation within BASREC activities.

The workshop took place in Saint-Petersburg, Russia on February 28, 2014. 28 people from 7 countries of the Baltic region – Finland, Norway, Denmark, Poland, Germany, Latvia and Russia representing 20 organizations.

Workshop participants were welcomed by BASREC representative; Chairman of the Management Board, SO UPS JSC and Head of the Division, International Relationships Department, Ministry of Energy of Russia.

Workshop Agenda

Annex 1

Participants

Annex 2

WS materials

<http://basrec.net/projects/electricity-market-and-grid-in-the-high-north/>

1. Major Issues of the electricity market and grid development

The tendency for the oil & gas production expansion sets a challenge to elaborate a common approach to the High North Region grid infrastructure evolution. To work out a complex view of the development strategy it is important to analyze the potentiality of the regional cooperation of the Russian Federation and European Union. The electrical grid strengthening and creation of new cross-border connections to use the Russian and EU power systems for reserves in the region at

emergencies and also working out of the methodology of the possible wholesale markets coupling for implementation of the cross-border projects are considered to be the most prospective issues for discussion.

Studies indicate that there is a need for large expansion of the transmission grid as well as increase of transmission capacity in the High North region, especially in the medium and long term. The energy industry of the region lacks the information exchange as well as coordination of power system planning development, including infrastructure and market scenarios. Therefore the primary goal of the workshop is to create a platform for the identification and discussion of necessary conditions in order to provide sustainable grid operation and expansion, reinforcement of interconnections, increase of transmission capacity and markets integration in the region.

2. Review of the Workshop presentations

Welcome speech

The WS was opened by Mr. B. Ayuev – Chairman of the Management Board, SO UPS JSC, Mr. H. Lipponen – Chairman of BASREC Group of Senior Energy Officials – Ministry of Employment & the Economy and Mrs. N. Nozdrina – Head of the Division, International Relationships Department, Ministry of Energy of Russia.

They welcomed the participants of the workshop and marked the importance of such events as a platform for the professionals in the electric power and oil & gas field first of all to exchange information & views on vital issues concerning development and coordination of the infrastructure of the neighboring EU countries – BASREC members and enhance investments in the electrical power industry as well. They also expressed hope that this WS will result in further common experts' activity and helps shift from discussion into practice.

Presentations

<http://basrec.net/projects/electricity-market-and-grid-in-the-high-north/>

1. Mr. Hannu Lipponen (BASREC)

In his presentation “*BASREC activity: goals, achievements, challenges*” gave information on BASREC history, directions of activity, goals and tasks in the view of the general development of the Baltic Sea region energy industry.

2. Mr. Audun Severin Hustoft (Statnett SF, Norway)

In his presentation “*Projects and plans in Northern Norway*” gave general information on the Statnett SF, its activity and current cross-border projects. The future possible bidirectional power exchange project Nickel – Skogfoss evaluated together with InterRAO is in progress. Planning can continue, but conditions for start of operation will be set by the Norwegian Government and this will take uncertain period of time. During discussion it was discussed possibilities for further development of cooperation with the focus on planning and research activity. The representatives of SO UPS, JSC suggested organizing the joint expert crew to explore in details engineering, technological issues like for example calculations & analysis, telemetry parameters. The idea was supported by colleagues from INTER RAO and EA Energy Analysis (Denmark).

3. Mrs. Karina Tsurkan (INTER RAO, Russia)

In her presentation “*Current and prospect electricity exchanges between countries of the Northern Region*” gave a survey of the INTER RAO activity in the Baltic Sea Region and High North Region in particular. The emphases was made on necessity to actualize the information exchange and shift from general discussions of the grid infrastructure development plans to planning and solving of the technical issues. This may help to facilitate the process of the cross-border projects evaluation by the governmental authorities and speed up the launching of the project.

4. Mrs. Maarit Uusitalo (ENTSO-E / Fingrid, Finland)

In her presentation “*ENTSO-E Regional Grid Planning*” she gave information on the ENTSO-E organization and main functions and tasks with focus on the grid planning, the 10-year Network Development Plan (TYNDP) characteristic features and main principles & procedures of its composing. Mrs. Uusitalo also presented a review of the perspectives and main drivers for grid development and internal energy markets integration as well as two different markets (Russian and EU) coupling. During the discussion the participants asked to specify the TYNDP application procedure especially referring to the third party projects and projects of common interest (PCI). There was also discussed the barriers in two different markets coupling. It was marked that there are two different models of the markets and one of the main and quite challenging task today is to work out a mechanism allowing two different market

models to interoperate. The mechanism should consider all peculiarities of the different market models. The discussion tended to suggestion that the different markets coupling mechanism issue should be handled within the organized a few years ago joint expert group (experts from SO UPS, FGC UES, ENTSO-E) and it will be a good call for further discussions.

5. Mr. Alexey Molskiy (Federal Grid Company, Jsc, Russia)

The presentation “*Prospects of the cross-border network development in the Baltic Sea and High North Region*” gave general information on the company and main principles of the grid network development. The focus was made on the plans on the reconstruction, maintenance and commissioning of the transmission lines in the Northern region.

The participants also discussed the possibility to start common project on commissioning of the 110kV line (Russia – Latvia) that was disconnected 8 years ago.

6. Mr. Hando Sutter (Nord Pool Spot, Norway)

At the beginning of his presentation “*Nord Pool Spot – leading the power markets integration*” Mr. Sutter briefly presented North-West Europe project (NEW-project) launched on February 4, 2014. The project is aimed to finalize the day-ahead markets integration on the territory from France to Lithuania. It means that the pricing will be done in one-run at the same time basing on the same algorithm, same rules, same calculations. Then Mr. Sutter gave characteristic of the Nord Pool Spot activity, history, stakeholders, location, and ideas for further development. He also mentioned that now when flows from Russia more and more influencing pricing in Nordic & Baltic areas, the Nordic area players need more understanding of pricing formation on the Russian market to be able to foresee the price fluctuations and work out strategy. During general discussion it was highlighted by the Russian representatives that Russian market is one of the most transparent and cleared so far and it has clear market rules followed by all market players as well as in the Nordic area. Comprehensive information on the Russian market operation is located on the web-sites of the relevant organizations of the industry on open access.

Further speaking on the perspectives of the Nord Pool and Russia markets integration Mr. Sutter marked that there are a lot of good opportunities from both sides. It is

cheaper to trade using the existing network opportunities than to build new generation or invest in the new interconnection capacity.

The participants of the WS considered the interest of the foreign players in Russian market as a positive sign and possibility to attract new investments. It was suggested BASREC together with Nord Pool Spot holding the WS where exchange exhaustive information on the principles of pricing formation and market operating in Russia and Nordic & Baltic areas and discuss the mechanism allowing two different market models to interoperate.

7. Mr. Dmitry Afanasyev (SO UPS, Jsc, Russia)

In his presentation “*SO UPS Experience in cross-border projects realization*” Mr. Afanasyev marked global process of the markets integration, political and economical processes, necessity to diversify energy supply and strengthen the grid infrastructure as driving forces for cross-border projects initialization. The common cross-border projects could help to create the technological infrastructure for different market models coupling, organize mutual assistance at emergency and provide high reliability of the power system operation and optimal use of generation capacity and primary resources. The joint realization of the cross-border studies was marked as one of the important aspects for further development of cooperation in the Northern & Baltic area since the participants of the study would gain experience in interaction of different judicial fields, power systems with their own regulations and technical requirements and market models. Mr. Afanasyev presented information on experience of the realization of the “Feasibility Study on the Synchronous interconnection of the IPS/UPS with the UCTE”.

8. Mr. Andrey Shishkin (NK Rosneft, Jsc, Russia)

In his presentation “*Border Infrastructure Development in Russia and Norway While Ensuring Industrial and Environmental Safety*” Mr. Shishkin attracted attention to the growth demand in the reliable power supply in the Northern region especially in the view of the rapid increase of the exploration off-shore drilling and new fields commissioning. Offshore projects development in the Arctic requires respective coastal infrastructure. Infrastructure reliability is a key prerequisite for safe development of natural resources. It was marked that creation of cross links will

provide the required redundancy reserve, as well as open new opportunities for power exchange at peak load hours. Mr. Shishkin suggested carrying out a joint study for detailed estimations of the possible economical effect and increase of the power supply in the Northern region. The study will focus on examination of the rapidly changing industry demands and possible variants of optimizing the network infrastructure by linking Russian and Norway power lines of 330 and 400 kV in a large power ring surrounding the Kola Peninsula.

9. Mr. Vladimir Shkatov (NP Market Council, Russia)

In his presentation “Looking Beyond the Horizon” Mr. Shkatov pointed out that market development process faced the necessity to develop the new method of the long-term planning. As one of the possible solutions it was suggested to carry out the general analysis of the country in terms of the energy clusters and set up the energy balance for these clusters, with consideration of the following aspects: specific features of the area, population, financial possibilities. The model based on such analysis allowing making forecasts of the demands and financial abilities. Using such technology it is possible to examine the infrastructure density, assess the equipment condition etc. This makes possible to forecast the cost of the electric power for example for big industrial enterprises for the 10-year period.

Mr. Shkatov also stressed that on condition of the constant tendency of the population welfare and electric power demand to grow, decrease of the nuclear power use and increase of the RES implementation there are serious lack in human resources and aging of the equipment and infrastructure in general.

10. Mr. Ainars Mengelsons (Public Utilities Commission, Latvia)

In his presentation “*Regulation Development in Latvia & Challenges in an Open Electricity Market*” gave a general picture of the types of the markets exist in Latvia, the process of pricing formation, the structure, mission and functions of the Public Utilities Commission and acting legislation (recent changes). During discussion the participants considered the rules and practices of new customers connection to the grid applied in different countries, the regulation of the tariffs.

Conclusions

All the participants recognized the usefulness of such form of interaction since it gives the opportunity to get information from the first hand on the markets regulation rules and perspectives of further integration and coordination of the grid infrastructure development scenarios.

The BASREC workshop on “Development of the electricity market and strengthening of electricity grid in the High North region” held on February 28 in Saint-Petersburg, Russia was well organized and gave an impulse to continue discussion and hold the next workshops in Norway (BASREC & Nord Pool Spot) on market functioning rules and in Germany on RES connection to the grid challenges. There was also made a suggestion to launch a study to consider possible variants of the network infrastructure optimization by linking Russian and Norway power lines in a large electric power ring surrounding the Kola Peninsula and estimate in details the economical effect and increase of the power supply in the Northern region. The participants also discussed the possibility to start common project on commissioning of the 110kV line (Russia – Latvia) that was disconnected 8 years ago.

Program
**“Development of the electricity market and strengthening
of electricity grid in the High North Region”**
BASREC Workshop
Saint-Petersburg
February 28, 2014

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| February 28 th | 9:30 registration of the WS participants | Radisson Royal Hotel, <i>Glinka</i> conference hall, 1 st floor |
| 10:00-10:15 | Opening – welcome speech Mr. Hannu Lipponen – Chairman of BASREC Group of Senior Energy Officials – Ministry of Employment and the Economy, Finland Ms Natalia Nozdrina – Head of the Division; Ministry of Energy, Russian Federation Mr. B. Ayuev – CEO, JSC, System Operator for UPS of Russia, Russia | <i>Glinka</i> conference hall, 1 st floor |
| 10:15-10:30 | <i>Presentation</i> “BASREC activity: goals, achievements, challenges” Mr. Hannu Lipponen – Chairman of Group of Senior Energy Officials Ministry of Employment and the Economy, Finland | <i>Glinka</i> conference hall, 1 st floor |
| 10:30-11:00 | <i>Presentation</i> “Development of the electric grid infrastructure at the Russian – Norway border providing industrial and environmental security” Mr. Andrey Shishkin , vice-president JSC, NK Rosneft, | <i>Glinka</i> conference hall, 1 st floor |
| 11:00-11:20 | <i>Presentation</i> “Projects and plans in Northern Norway” Mr. Audun Severin Hustoft , President Arctic Program, Statnett | <i>Glinka</i> conference hall, 1 st floor |
| 11:20-11:40 | <i>Presentation</i> «Current and prospective electricity exchanges between countries of the Northern Region” Mrs. Karina Tsurkan , Member of the Board, Head of the Trading Division, INTER RAO for UES | <i>Glinka</i> conference hall, 1 st floor |
| 11:40-12:00 | <i>Presentation</i> “ENTSO-E Regional Grid planning” Mrs. Maarit Uusitalo – Manager, Power System Planning, Fingrid, | <i>Glinka</i> conference hall, 1 st floor |

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| | Member of ENTSO-E Regional Group Baltic Sea, Member of ENTSO-E Working Group Ten Year Network Development | |
| 12:00-12:30 | Coffee-break | lobby in front of the <i>Glinka</i> hall |
| 12:30-13:00 | <i>Presentation</i> <i>“Prospects of the cross-border network development in the Baltic Sea and High North Regions”</i> Mr. Alexey Molskiy , Deputy CEO, JSC FGC | <i>Glinka</i> conference hall, 1 st floor |
| 13:00-13:30 | <i>Presentation</i> <i>“Nord Pool Spot – leading the power markets integration”</i> Mr. Hando Sutter , Region manager Estonia, Latvia, Lithuania & Russia, Nord Pool Spot | <i>Glinka</i> conference hall, 1 st floor |
| 13:30-14:00 | <i>Presentation</i> <i>“SO UPS Experience in cross-border projects realization”</i> Mr. D. Afanasyev Deputy Director, Head of the Synchronous operation technologies Department, JSC, System Operator for UPS of Russia | <i>Glinka</i> conference hall, 1 st floor |
| 14:00-15:45 | Lunch | <i>Barbazan restaurant</i> , 1 st floor |
| 15:45-16:15 | <i>Presentation</i> <i>“Look beyond the Horizon”</i> Vladimir Shkatov , Deputy Chairman of the Management Board, NP Market Council | <i>Glinka</i> conference hall, 1 st floor |
| 16:15-16:45 | <i>Presentation</i> <i>“Plans of the network development in the North- West region up to 2020”</i> Mr. Vitaly Mazur , Head of the International & Congress-Exhibition activity Department, JSC Russian Grids | <i>Glinka</i> conference hall, 1 st floor |
| 16:45-17:15 | <i>Presentation</i> <i>“Regulation development in Latvia & challenges in an open electricity market”</i> Mr. Ainārs Meņģelsons , Public Utilities Commission, Director of the Energy Department, Latvia | <i>Glinka</i> conference hall, 1 st floor |
| 17:15-17:45 | Coffee-break | lobby in front of the <i>Glinka</i> hall |
| 17:45-18:15 | General discussion: usefulness of the information got at the WS, prospects for cooperation | <i>Glinka</i> conference hall, 1 st floor |

Participants
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| Baltic Sea Region Energy Cooperation (BASREC) | | |
| 1 | Hannu Lipponen | Chairman of BASREC Group of Senior Energy Officials – Ministry of Employment and the Economy, Finland |
| Ministry of Employment and the Economy, Finland | | |
| 2 | Bettina Lemström | Senior Adviser Energy Department |
| Ministry of Energy, Russian Federation | | |
| 4 | Natalia Nozdrina | Head of the Division |
| Murmansk Region Government | | |
| 5 | Sergey Gubich | Deputy Governor of Murmansk Region |
| Market Council, Russian Federation | | |
| 6 | Vladimir Shkatov | Deputy Chairman of the Management Board |
| Federal Ministry of Economics & Technology Germany | | |
| 7 | Joerg Kirsch, | Deputy Head of Division «International Energy Policy, External Energy Policy» |
| Ministry of Economy, Energy Department Republic of Poland | | |
| 8 | Henryk Buszta | Counsellor, Head of Trade & Investment Promotion Section, General Consulate of the Republic of Poland, Saint-Petersburg |
| Danish Energy Agency | | |
| 9 | Per Stokholm | Senior Energy Advisor |
| Public Utilities Commission of Latvia (PUC) | | |

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| 10 | Ainars Mengelsons, | Director, Energy Department |
| European Network Transmission System Operators for Electricity (ENTSO-E) | | |
| 11 | Maarit Uusitalo | Head of Grid Planning (Fingrid), member of ENTSO-E WG on TYNDP |
| NORD POOL SPOT | | |
| 12 | Hando Sutter | Region manager Estonia, Latvia, Lithuania & Russia |
| JSC Russian Grids (Russian Federation) | | |
| 13 | Vitaly Mazur | Head of the International & Congress-Exhibition activity Department, JSC Russian Grids |
| JSC NK ROSNEFT (Russian Federation) | | |
| 14 | Andrey Shishkin | Vice President |
| 15 | Boris Mekhanoshin | Independent expert |
| RAO Nordic Oy | | |
| 16 | Marja Rasi-Kurronen | Head of Department Cross-Border Trading |
| JSC Inter RAO UES (Russian Federation) | | |
| 17 | Karina Tsurkan | Member of the Board, Head of the Trade Division |
| JSC System Operator of the United Power System (JSC SO UPS) (Russian Federation) | | |
| 18 | Boris Ayuev | Chairman of the Management Board |
| 19 | Dmitry Batarin | Director, Communications & International Relations |
| 20 | Dmitry Afanasyev | Deputy Director, Synchronous Operation Technologies |
| 21 | Tatiana Telushkina | Head of the International Relations Department |
| JSC Federal Grid Company of Unified Energy System (JSC FGC UES) (Russian Federation) | | |
| 22 | Alexey Molsky | Deputy Chairman of the Management Board |
| 23 | Oleg Klinkov | Head of the Technical Development Department |
| STATNETT SF (Norway) | | |
| 24 | Audun Hustoft | President Arctic Program |

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| 25 | Turid Marit Siebenbrunner | Market Manager |
| EA Energy Analyses (Denmark) | | |
| 26 | Anders Kofoed-Wiuff | Partner |
| JSC Federal Grid Company of Unified Energy System branch office (JSC FGC UES) (Russian Federation) | | |
| 27 | Stanislav Novikov | Deputy General Director |
| Rosatom Overseas (Russian Federation) | | |
| 28 | Dmitry Andrushin | |