



ENERGY COOPERATION BETWEEN THE EU, THE LITTORAL STATES OF THE BLACK & CASPIAN SEAS AND THEIR NEIGHBOURING COUNTRIES



**REPORT: AHEF TASK AM.103 WORKSHOP,
CAPACITY BUILDING for FINANCING of EE/RES PROJECTS
February 25-March 1, 2014,**

Yerevan, Armenia

by the Sustainable Energy Component of the New ITS Project

**“INOGATE Technical Secretariat & Integrated
Programme in support of the Baku Initiative and
the Eastern Partnership energy objectives”**

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All training materials are electronic and can be found at the INOGATE web-site:

http://www.inogate.org/index.php?option=com_inogate&view=activity&layout=documents&pid=72&cid=327&Itemid=75&lang=en

1. EXECUTIVE SUMMARY

To increase investments in sustainable energy (SE), the expert team of the INOGATE New ITS Project held a workshop in Yerevan, Armenia, from February 25 to March 1, 2014, on SE financing for loan officers and credit analysts of the Union of Credit Organizations of the Republic of Armenia (UCORA). This workshop was delivered together with USAID and included senior staff from USAID as lecturers on specific topics. The workshop increased the bankers' awareness of new, European style, SE financing methods. Thirty participants attended the workshop. Twenty two met all requirements and received certificates.

This workshop achieved its objective of enhancing the credit organizations' capacity to capitalize the EE/RES sector in Armenia. Instructors introduced bank officers to skills specific for evaluating EE/RES projects by applying international standards: a) how to identify and mitigate risks through support and guarantee mechanisms, b) how to perform a sensitivity analysis, and c) how to create optimal financing tools, conditions and monitoring plans.

Loan officers	13 (55%)
Heads of Units	3 (15%)
Deputy CEO	2 (10%)
Executive Directors	2 (10%)
Financial Specialists	2 (10%)
Total	22 (100%)

Participants (above & below)



The workshop included 20 hours of instruction spread over 5 days. It had lectures with group exercises. The team of instructors, experienced in EE/RES projects in the EU and INOGATE PCs, intentionally designed the group work to encourage internal exchange of ideas. Each workshop exercise included a hidden pitfall (erroneous assumption or gap in information), which groups had to identify and propose a solution for. The presentation of the solution to the audience by each group led to fruitful discussions on the subtleties of EE/RES financing. Thus, bank officers became familiar with the EU experience. Now they can apply their improved evaluation skills to EE/RES projects.

ITS also delivered a presentation on effective communication and awareness raising of sustainable energy issues, highlighting the potential role and engagement of banks in building their own market. Spreading SE awareness to customers improves business.

All training materials, including spreadsheet tools, appear on the INOGATE website:

http://www.inogate.org/index.php?option=com_inogate&view=activity&layout=documents&pid=72&cid=327&Itemid=75&lang=en

The following table, taken from the application, shows the beneficiary's commitment to achieve SE investment results in terms of ITS aggregated indices.

TASK RESULTS	RESULTS	COMPONENT INDICATORS	AGGREGATED INDICES
Component C - Sustainable Energy:			
After the subject training the number of EE/RES projects financed by UCORA's members are to be increased as a result of increased speed of identifying and processing EE/RES projects. Expected number of additional loans granted as a result of current workshop: 16 for 2014.	Increased local and EU investments in the field of RES/EE	<ul style="list-style-type: none"> No. of EE/RES investment projects 	Tonnes GHG reduction/abated
As the training is expected to increase awareness of bankers in the field of EE, the number of projects financed by will increase, causing subsequent increase in the utilization level of our facilities from IFIs in this field.			
Expected amount of loans granted as a result of current workshop for the six coming months: EUR 1 000 000 – 1 200 000, for 2014.		<ul style="list-style-type: none"> € invested Fossil energy consumption decreased (EE) Increase of RES energy produced 	
Expected number of jobs created as a result of current workshop during the six coming months – 60, for 2014 – more than 100 for 2014.			
Capacities of 17 policy makers increased in SE legislation; Knowledge on SE issues of 1 media representative increased	Strengthened capacity of institutions in the field of SE	<ul style="list-style-type: none"> SE curricula developed and implemented SE programs established 	No. of professionals trained in the field of SE

2. METHODOLOGY

The broad objectives were to improve the EE/RES investment climate and increase capitalization of EE/RES sector in Armenia. Following the experience of the ITS combined banking workshop and study tour last year in Vienna, this event made participants actively work to find solutions, not just listen. The UCORA, submitted the application for this workshop in Armenia. The credit organizations' goals are threefold: a) to familiarise the credit officers with the skills to expand the bank's operation into a new niche – energy efficiency; b) to apply the training material for further training of more bank officers, and c) to introduce international standards of evaluating EE/RES projects, so loan officers will be better prepared to build up that business segment within their respective organizations, potentially including financing under existing credit lines involving EBRD, IFC and KfW.

Most of all, participants appreciated the workshop's practical assignments. Class discussions showed these bankers what to do under various conditions. Werner Weihs-Raabl's discussions especially drew active participation. He showed how SE business is done in the EU and how to find practical, alternative solutions particularly relevant in the Armenian context. In particular he pointed out the lessons to be learnt and how to avoid consequences of the most relevant critical financing parameters such as: lack of equity, unproven technology issues and weak project sponsors. He specifically recommended the inclusion of export credit agencies in larger scale RES projects and urged participants to build a databank within each member of UCORA into which key data for any RES project is being stored in an organized way to better provide benchmark data for similar projects to be analysed going forward.

3. ACTIVITIES

The most important activities of each day follow:

1st day

- Short quiz
- Lecture topics: OECD plan, risk mitigation options, SE business specifics in Armenia, financial modelling in practice, EE/RES technologies



ITS Key Expert, Larry Good, providing a lecture on OECD plan

2nd day

- Lecture topics: Main risks in construction & operational phases, risk mitigation options, financial modelling in practice, SE technologies and business, corporate vs. project financing, bankability criteria, risks & mitigation, project structure, feasibility study
- Tools: risk identification and evaluation, extensive data base of crucial project parameters, benchmarking of project scenarios



EU Expert Werner Weihs-Raabl providing a lecture on financial planning

3rd day

- Lecture topics: Residential Energy Efficiency Lending, due diligence, financial engineering, financial modelling, key ratios, mandatory project documents, sensitivity analysis with practical exercise to apply it to real RES projects, monitoring projects
- Tools: Project LCC short analysis, Feasibility assessment of EE/RES projects via life cycle cost analysis



ITS expert Vahan Babajanyan and USAID Expert Ruben Gevorgyan providing lectures on project sensitivity analysis

4th day

- Group presentations and discussions
 - Group 1 – lighting (EE)
 - Group 2 – biogas (RES)
 - Group 3 – pumps (EE)

 - Group 4 – pre-insulated pipes (EE)
- Lecture topics: EU experience, how to structure projects, how to foresee and mitigate risks, awareness raising
- Group work: preparing financing schemes, lending conditions and monitoring plans



ITS Expert Vahan Babajanyan explaining group exercise on biogas to participants

5th day

- Group presentations and discussions
 - Group 1 – Wind park lending terms and conditions (RES)
 - Group 2 – IT Centre lending terms and conditions (EE)
 - Group 3 – Congestion system lending terms and conditions (EE)
 - Group 4 – Small HPP lending terms and conditions (RES)
- Awareness raising
- Final quiz
- Awarding of certificates
- Train the trainers session

ITS Expert, Bagrat Bagratunyan, explaining group exercise on heating to participants



4. PARTICIPANTS

The training was planned for the Union of Credit Organizations of the Republic of Armenia to improve member organizations' capacity to evaluate EE/RES projects, especially for EBRD, IFC and KfW credit lines. The focus was on training credit officers from SME credit offices. Most participants were therefore either the financial specialists, risk managers or the client executive officers. Seven participants were Heads of Units/CEO which handle IFI's and corporate's credit lines.



Larry Good, ITS Key Expert, Werner Weihs-Raabl, Erste Bank, and Stephen Strauss, USAID/FED awarding certificates to participants

It became evident that most of the participants have limited actual project finance know-how but were eager to develop this mostly in the context of financing requests for specific HPPs and PV projects. This interest was taken care of by running two specific case studies for these sectors.

5. INSTRUCTORS

The key instructors were Larry Good, ITS Key expert on SE, Vahan Babajanyan, ITS banking expert, Werner Weihs-Raabl, Head of Infrastructure Finance of Erste Bank, Austria, Stephen Strauss and Ruben Gevorgyan from USAID, Khatuna Didbaridze ITS expert for awareness raising. Werner Weihs-Raabl has significant experience in EE/RES projects in Central and Eastern Europe as well as in some INOGATE Partner Countries.



*ITS instructors (l. to r.):
Larry Good, Vahan Babajanyan, Werner Weihs-Raabl, Khatuna Didbaridze*

6. TESTING

ITS tested participants twice to find out what they knew before and after the workshop. The preliminary quiz and final quiz included the same 6 core questions. The final quiz also contained 4 additional questions, including two rather difficult calculation problems to solve. They required proposals on ways to deal with EE/RES financing problems. The four new questions evaluated the effectiveness of the seminar's new information. Participants applied their knowledge in practical exercises.

Scores:

6 CORE QUIZQUESTIONS	% correct answers
Correct answers at start of workshop	38%
Correct answers at end of workshop	89%

4 ADDITIONAL QUIZQUESTIONS	% correct answers
Correct answers at end of workshop	76%

7. AWARENESS RAISING

On the last day ITS Communication Expert Khatuna Didbaridze delivered a presentation on effective communication and awareness raising of sustainable energy the presentation highlighted the need and benefits of enhancing awareness of different target groups. Particular focus was placed on potential engagement and interest of financial institutions, such as banks and microfinance organizations, in SE awareness raising.



ITS Expert, Khatuna Didbaridze providing a lecture on awareness raising

Participants received information on examples of awareness raising and communication in SE financing such as Energocredit in Georgia. Some participants shared their experience and plans for informational support, communication and promotion of their financial products on SE. The session contributed to improving the participants' overall awareness of the importance of sustainable energy and the organization of information and awareness raising activities from the viewpoint of SE financing.

8. TRAIN the TRAINERS SESSION

To give the most interested participants more in-depth information, ITS conducted a train-the-trainers (TTT) session at the end of last day. In the future, these participants can better help others within their own organizations to understand the principles and techniques. Twelve out of 22 participants stayed for the TTT session, which focused extra attention on:

1. Specifics of SE financing for SME business
2. Specifics of sensitivity analysis for SE projects

3. Typical mistakes in financing EE/RES projects
4. New financial products/tools for cash flow optimization
5. Checking possible financial solutions to make RES projects feasible
6. Mitigating technological risks and financial risks in EE/RES projects

9. PARTICIPANT QUESTIONNAIRE

In the end, participants answered a questionnaire (see appendix). The consensus was positive. The following tables summarize seminar quality:

A. Event content (ITS)

Lectures	91%
Exercises	93%
Experts	96%
Help & guidance	93%
Discussions	91%
Translation	76%

B. Event organization (beneficiary)

Venue	86%
Meals	92%
Equipment	88%
Organization	84%

10. CONCLUSIONS

GENERAL

Most important is that participants plan to apply the new knowledge to their work in the future (Q 7). Further, based on the pre- and final quiz scores, the bankers greatly improved their capacity to mitigate risks in SE.

SPECIFIC

- 1) Participants said they will use what they learned in cash flow projection and sensitivity analysis, to develop risk management skills, and to convince clients to invest in SE (question 8). One way is to apply the newly acquired practical skills in feasibility evaluation (question 3). ITS will follow up every 6 months by asking participants exactly how they have done this. Benefits of the workshop will be measured by the number of new SE deals or money invested in SE projects.
- 2) Participants put a high value on solving problems in the group work and discussions, as well as formats of presentation (question 6). It led participants to find workable solutions to developing EE/RES projects. Exercises with hidden pitfalls and traps stimulated discussion of lending conditions and led to flexible, alternative solutions. ITS will continue to apply this approach in future training.
- 3) Interest in practical exercises (Q 10) and their discussions proved their value. Participants would like to see more exercises which include cash flow projection and

sensitivity analysis and more focus on financial / investment solutions in EE/RES projects in different areas of SE.

NEXT STEPS

- 1) As a result of participant demand from all recent audiences, ITS will add more focus on alternative solutions to the group exercises in future banking workshops. Exercises with project/solution sensitivity analysis and cash flow management, as well as exercises focused on using of combined financial tools and different sources are highly demanded.
- 2) This workshop identified an area in which the participants face many challenges, namely issues linked with due diligence. Thus it is expedient to organize a follow up seminar and study tour for the banks that have participated in the workshop on EE/RES financing. The subject topic for such an event would be due diligence and application of financial due diligence results into the relevant financial model and the resulting financial analysis.