



## TRAINING WORKSHOP ON HIGH PERFORMANCE BUILDINGS

### Jointly organized by

United Nations Economic Commission for Europe (UNECE) and United Nations Development Programme (UNDP) in partnership with International Passive House Association (iPHA) and Passive House Institute with support of Urban Development Committee of the Republic of Armenia

**21-22 November 2019**  
**Ani Grand Hotel, Yerevan, Armenia**

Under the auspices of the UNECE Joint Task Force on Energy Efficiency Standards in Buildings

### Thursday, 21 November (Day 1)

09:00 – 09:30	<b>Registration</b>
09:30 – 09:45	<b>Opening remarks</b> <ul style="list-style-type: none"> <li>– <b>Mr. Armen Ghularyan</b>, Deputy Chairman of the Urban Development Committee, Armenia</li> <li>– <b>Ms. Mihaela Stojkoska</b>, Deputy Resident Representative, UNDP Armenia</li> <li>– <b>Mr. Oleg Dziubinski</b>, Regional Adviser, Sustainable Energy Division, UNECE</li> </ul>
09:45 – 11:00	<b>Session 1: Passive House fundamentals / refresher</b> <b>Training facilitator: Mr. Edward Lowes</b> , Research Associate, Passive House Institute
11:00 – 11:15	<b>Coffee break</b>
11:15 – 12:30	<b>Session 2: Passive House components: construction systems and windows / facades</b> <b>Training facilitator: Mr. Edward Lowes</b> , Research Associate, Passive House Institute
12:30 – 13:30	<b>Lunch break</b>
13:30 – 14:45	<b>Session 3: Passive House components: air tightness and HVAC systems</b> <b>Training facilitator: Mr. Edward Lowes</b> , Research Associate, Passive House Institute



14:45 – 15:00	<b>Coffee break</b>
15:00 – 16:00	<b>Session 4: Introduction to PHPP and designPH - software demonstration</b> <b>Training facilitator: Mr. Edward Lowes</b> , Research Associate, Passive House Institute
16:00 – 17:00	<b>Session 5: Introduction to thermal bridge simulation – software demonstration</b> <b>Training facilitator: Mr. Edward Lowes</b> , Research Associate, Passive House Institute
17:00 – 17:30	<b>Wrap-up and Conclusions of Day 1</b>

## Friday, 22 November (Day 2)

09:00 – 09:30	<b>Registration</b>
09:30 – 11:00	<p><b>Session 1: Countries' experiences in applying High Performance Buildings principles in practice</b></p> <p><b>Round table discussion</b></p> <p><i>The session will analyze and discuss the lessons learned from Day 1 of the workshop and exchange opinions on how High Performance Buildings principles and Passive House standard can be applied in practice. Main challenges in development and implementation of energy efficiency standards in buildings in UNECE member States.</i></p> <p><b>Moderator: Mr. Aleksandar Dukovski</b>, Chair, UNECE Group of Experts on Energy Efficiency</p> <p><b>Questions to panelists and workshop participants</b></p> <ul style="list-style-type: none"> <li>– How can information from the training can be applied in practice in your country?</li> <li>– What are the challenges in implementing High Performance Buildings principles and Passive House standard in your country?</li> <li>– What are the missing links for adoption of more advanced energy efficiency standards in buildings in your country?</li> </ul> <p><b>Panelists:</b></p> <ul style="list-style-type: none"> <li>– <b>Ms. Yevgenya Atayan</b>, Adviser on housing stock management and communal infrastructures, Urban Development Committee, Armenia</li> <li>– <b>Ms. Tamar Sabelashvili</b>, Senior Specialist, Energy Policy Department, Ministry of Economy and Sustainable Development, Georgia</li> <li>– <b>Mr. Maksat Amiraev</b>, Head, Department of Development and Monitoring of Housing and Communal Services, State Agency on Architecture, Construction and Housing and Communal Services, Kyrgyzstan</li> <li>– <b>Mr. Ion Coropcean</b>, Head of Section, Department of Urban Planning, Construction and Housing, Ministry of Economy and Infrastructure, Republic of Moldova</li> <li>– <b>Mr. Leonid Danilevski</b>, Deputy Director, Institute of Housing NIPTIS named after Atayev S. S., Belarus</li> <li>– <b>Mr. Andrii Ovcharenko</b>, CEO &amp; Founder, NEOACRE Premium Construction, Ukraine; Certified Specialist, Passive House Institute</li> </ul>



	<ul style="list-style-type: none"> <li>– <b>Mr. Tigran Sekoyan</b>, Senior Expert on Energy/Energy Efficiency, UNDP-GCF Project, Armenia</li> <li>– <b>Mr. George Abulashvili</b>, Director, Energy Efficiency Centre (EEC) Georgia</li> </ul>
11:00 – 11:15	<b>Coffee break</b>
11:15 – 12:30	<p><b>Session 2: International organizations' experience in assisting countries in implementing High Performance standards in buildings</b></p> <p><i>The session will provide an opportunity to discuss the role of international organizations in assisting countries in development and implementation of High Performance standards in buildings and improving energy efficiency in buildings.</i></p> <p><b>Moderator: Mr. Aleksandar Dukovski</b>, Chair, UNECE Group of Experts on Energy Efficiency</p> <p><b>Questions to panelists and workshop participants</b></p> <ul style="list-style-type: none"> <li>– What role can international organizations have in helping countries with advancing energy efficiency in buildings?</li> <li>– Can good examples from other countries with different socio-economic conditions be used in developing policy options and business models for increasing energy efficiency in buildings?</li> <li>– Could international organization foster an intranational dialogue (Government – NGOs – Business and financial sectors – Expert community – Citizens) for enhancing energy efficiency standards in buildings and policy development?</li> </ul> <p><b>Panelists:</b></p> <ul style="list-style-type: none"> <li>– <b>Ms. Bilyana Chobanova</b>, Project Manager, EU4Energy Project Unit, Energy Charter Secretariat</li> <li>– <b>Ms. Svitlana Karpushyna</b>, Deputy Head of Unit / Renewables and Energy Efficiency Expert, Eastern Partnership Assistance Unit, Energy Community Secretariat</li> <li>– <b>Mr. Arsen Karapetyan</b>, National Expert on Housing Policy and MAB Management, UNDP-GCF Project, Armenia</li> <li>– <b>Mr. Oleg Dziubinski</b>, Regional Adviser, Sustainable Energy Division, UNECE</li> <li>– <b>Mr. Romanas Savickas</b>, Senior Adviser, Copenhagen Centre on Energy Efficiency, UNEP-DTU Partnership</li> <li>– <b>Mr. Edward Lowes</b>, Research Associate, Passive House Institute</li> </ul> <p><b>Q&amp;A</b></p>
12:30 – 13:30	<b>Lunch break</b>
13:30 – 14:45	<p><b>Session 3: De-Risking and Scaling-up Investment in Energy Efficient Building Retrofits</b></p> <p><b>Moderator: Mr. Vahram Jalalyan</b>, UNDP-GCF Project Manager</p> <p><b>Building Codes, Standards, EE Label, Energy Audit Methodology</b>  <b>Mr. Tigran Sekoyan</b>, Senior Expert on Energy/Energy Efficiency, UNDP-GCF Project, Armenia</p> <p><b>Energy Audits of Public and Residential Buildings in Armenia</b>  <b>Mr. Artur Tsughunyan</b>, National Expert on Energy Audits, UNDP-GCF Project, Armenia</p>



	<p><b>UNDP in Armenia: Promotion of Energy Efficiency in Public Buildings</b>  <b>Mr. Andre Ohanian</b>, National Expert on Building Engineering and EE/ Renewable Energy, UNDP-GCF Project, Armenia</p>
14:45 – 15:00	<b>Coffee break</b>
15:00 – 16:15	<p><b>Session 4: De-Risking and Scaling-up Investment in Energy Efficient Building Retrofits (cont.)</b></p> <p><b>Moderator: Mr. Vahram Jalalyan</b>, UNDP-GCF Project Manager</p> <p><b>Financing energy efficiency measures in apartments and single-family houses in Armenia</b>  <b>Mr. Edmond Vardumyan</b>, Director, National Mortgage Company, Armenia</p> <p><b>Financing schemes for retrofitting multi-apartment buildings in Armenia</b>  <b>Mr. Sergey Sayadyan</b>, Financial Incentive Task Leader, UNDP-GCF Project, Armenia</p> <p><b>Gaps and shortcoming of the legislation for MABs management sector and recommendations for improvement</b>  <b>Mr. Armen Baghdasaryan</b>, Legal Expert, UNDP-GCF Project, Armenia</p> <p><b>Survey among residents of multi-apartment buildings in Yerevan</b>  <b>Ms. Astghik Mirzakhanyan</b>, National Expert on Social Vulnerability Assessment, UNDP-GCF Project, Armenia</p>
16:15 – 16:45	<p><b>Municipal Energy Management System in Stepanavan</b>  <b>Mr. Vitaly Bekker</b>, EE/Energy Management Expert, Russia  <b>Mr. Andrey Dodonov</b>, HVAC/EE/Energy Management Expert, Russia</p>
16:45 – 17:45	<p><b>Wrap-up and Conclusions of the Workshop</b></p> <p><i>Outcomes of the workshop, prospects for implementation of High Performance standards in buildings, and next steps for the Joint Task Force on Energy Efficiency Standards in Buildings.</i></p> <ul style="list-style-type: none"> <li>– <b>Mr. Aleksandar Dukovski</b>, Chair, UNECE Group of Experts on Energy Efficiency</li> <li>– <b>Mr. Oleg Dziubinski</b>, Regional Adviser, Sustainable Energy Division, UNECE</li> <li>– <b>Mr. Vahram Jalalyan</b>, Project Manager, UNDP-GCF, Armenia</li> </ul>

