As requested by the European Directive 31/2010, important measures are needed to increase the number of buildings which not only fulfill current minimum energy performance requirements, but are also more energy efficient, thereby reducing both energy consumption and carbon dioxide emissions.

For this purpose European countries have been requested to draw up national plans for increasing the number of nearly zero-energy buildings and regularly report such plans to the Commission.

The achievement of NZEB targets requires a wide range of technologies, systems and solutions with different degrees of complexity and sophistication, depending on the location and environment conditions, but also on local legislation and market situation. In particular, for mediterranean climate conditions, how can the NZEB design challenge be summarized?

A careful building planning permits to obtain indoor comfort conditions both in winter and summer with very low energy consumptions, but an important role is played by heating and air-conditioning installations, by the application of energy from renewable sources, by the passive heating and cooling elements, shading, by the thermal comfort and the indoor air quality with adequate natural light and satisfactory indoor noise level.
May, 10th 2017 — PRELIMINARY PROGRAMME

9,00 a.m. Participants registration

10,00 a.m. Opening Ceremony and Plenary Session
   Welcome addresses
   Francesca R. d'Ambrosio, AiCARR President
   Raffaello De Ruggieri, Major of Matera
   Aurelia Sole, President of Matera 2019 Foundation, Dean of University of Basilicata

11,00a.m. General introductory speeches:
   Livio de Santoli, President of Scientific Committee

11,30a.m. Stefano P. Corgnati, REHVA President

11,45a.m. Bjarne Olesen, ASHRAE President-elect
   Lecture:
   12,00p.m. The italian strategy on NZEB buildings
      Carmine Marinucci, ENEA Roma

12,40p.m. REHVA Award for design

1,00 p.m. Lunch

2,30 p.m. Technical simultaneous sessions

4,00 p.m. Break

4,15 p.m. Technical simultaneous sessions
   Lecture:
   5,30 p.m. Long term investments for the transition to energy efficiency
      Franco Bassanini, President of ASTRD Foundation

6,00 p.m. Closure of the day’s work

7,30 p.m. Welcome Cocktail

May, 11th 2017 — PRELIMINARY PROGRAMME

8,00 a.m. Participants registration

9,00 a.m. Technical simultaneous sessions

10,15 a.m. Break

10,30 a.m. Technical simultaneous sessions

1,00 p.m. Lunch

2,30 p.m. Workshop: Commissioning (Sala Grande)
      AiCARR, ASHRAE, CIBSE

2,30 p.m. Workshop: Working Group NZEB (Sala della Musica)
      REHVA—AiCARR

4,15 p.m. Technical visits

Simultaneous translation is provided exclusively in Sala Grande
Wednesday, 10th May

TECHNICAL SESSION 1 SALA GRANDE

New buildings in the Mediterranean climate

Chairman: Paolo Baggio, Dip. Di Ingegneria Civ. amb. e mecc., Università di Trento

2,30 p.m. Air cooled heat pump coupled with Horizontal Air-Ground Heat Exchanger (HAGHE) for Zero Energy Buildings in the Mediterranean climate

Cristina Baglivo, Paolo Maria Congedo, Domenico Laforgia, Department of Engineering for Innovation, University of Salento, Lecce

2,45 p.m. New strategies towards nearly zero energy in existing buildings: the ABRACADABRA project

Giovanni Sempri, Department of Industrial Engineering, School of Engineering and Architecture, University of Bologna

Annarita Ferrante, Elena Cattani, Anastasia Fotopoulos, Department of Architecture, School of Engineering and Architecture, University of Bologna

3,00 p.m. Radiation protection considerations on radon and building materials radioactivity in near Zero Energy Buildings

Giada Gandolfo, Luigi Lepore - Andrea Pepperosa
- Romolo Remetti, Department of Basic and Applied Sciences for Engineering, SAPIENZA Università di Roma

Daniele Franci, Regional Environmental Protection Agency, Roma

3,15 p.m. Obtaining a NZEB in Mediterranean climate by using only on site renewable energy: is it a realistic goal?

Diana D’Agostino, Barbara Cuniberti, Isabella Maschio, Joint Research Centre, European Commission, Ispra, Varese

3,30 p.m. Analytical modelling of breathing walls: experimental verification by means of the dual air vented thermal box lab facility

Andrea Alongi, Adriana Angelotti, Livio Mazzarella, Dipartimento Energia, Politecnico di Milano

3,45 p.m. Insights into the effects of occupant behavior lifestyles and building automation on building energy use

Valentina Fabi, Verena Marie Barthelmes, Stefano P. Corgnati, Department of Energy, Polytechnic of Turin

TECHNICAL SESSION 1 SALA DELLA MUSICA

The existing buildings: audit and restoration

Chairman: Manuel Gameiro da Silva, Department of Mechanical Engineering, University of Coimbra, Coimbra, Portugal

2,30 p.m. Problems for the upgrading NZEB of public buildings in Zone B: case study of a primary school in Catania

Giuliano Cammarata, Massimiliano Cammarata, Marco Caponnetto, Liberi Professionisti, Catania

2,45 p.m. Criteria and structure of harmonized data collection for NZEB retrofit buildings in Europe

Dela D’Agostino, Barbara Cuniberti, Isabella Maschio, Joint Research Centre, European Commission, Ispra, Varese

3,00 p.m. Façade retrofitting: from energy efficiency to climate change mitigation

Paola Lassandro, Silvia Di Turi, Construction Technologies Institute, Italian National Research Council, ITC-CNR - Bari

3,15 p.m. NZEB target for existing buildings: case study of historical educational building in Mediterranean climate

Fabrizio Asciione, DII - Department of Industrial Engineering, University of Napoli Federico II, Napoli

Rosa Francesca De Masì, Filippo De Rossi, Silvia Ruggiero, DING, Department of Engineering, University of Sannio - Benevento

3,30 p.m. From the experience to the design, from the selection to the maintenance: an ideal air conditioning approach to help a building to achieve nearly zero energy

Luigi de Rossi, Giacomo Favaro, Chiara Tisato, Mitsubishi Electric Hydronics and IT cooling System spa, Treviso

3,45 p.m. NZEB, cost and comfort optimal retrofit solutions for an Italian reference Hotel

Tiziana Buso, Cristina Becchio, Stefano P. Corgnati, TEBE Research Group, Department of Energy, Politecnico di Torino

TECHNICAL SESSION 1 SALA DEI TAROCCHI

Energy metering and BACS

Chairman: Mauro Strada, Steam srl, Padova

2,30 p.m. Balancing system and control of differential pressure in hydraulic systems: a step towards energy saving and comfort

Roberto Torreggiani, Alberto Montibelli, Giacomini spa, San Maurizio D’Opaglio, Novara

2,45 p.m. Eco-efficient sustations

Paolo Arrus, Daniele Davide Del Boca, Marco Rosa Brusin, Giacomini spa, San Maurizio D’Opaglio, Novara

3,00 p.m. Building monitoring system in a large social housing intervention in northern Italy

Marco Filippi, Elisa Sirombo, Department of Energy, Politecnico di Torino

Antonio Catalano, Delta Controls Italy s.r.l. - Milan

Andrea Sica, InvestRE SGR spa – Milan

3,15 p.m. Application of a technological system of monitoring and continuous analysis of energy efficiency data, in the sector of large multipurpose buildings, for energy diagnosis and design renovation

Alberto Lodi, EGE Industry UNI CEI 11339, Milan

Roberto Salimbeni, BlackBox Green (BBG), Modena

Sergio Alabiso, BlackBox Green (BBG), Lodi

3,30 p.m. Development and experimental validation of a model for energy recovery

Marco Tarantini, Freelance Engineer, Consultant of “National Energy Technology Cluster (Di.T.N.E.)”, Lecce

Domenico Laforgia, Professor of “Macchine I, Macchine II ed energetica” in “Università del Salento”; previous Rector of “Università del Salento”, Lecce

3,45 p.m. From the experience to the design, from the selection to the maintenance: an ideal air conditioning approach to help a building to achieve nearly zero energy

Luigi de Rossi, Giacomo Favaro, Chiara Tisato, Mitsubishi Electric Hydronics and IT cooling System spa, Treviso
TECHNICAL SESSION 2 SALA DELLA MUSICA

The existing buildings: audit and restoration
Chairman: Livio Mazzarella, Dip. Di Energia, Politecnico di Milano

4,30 p.m. Integrated smart system for energy audit: methodology and application
Stefano Galli, Sandra Dei Svaldi, ICIE-Cooperative Institute for Innovation, Applied Research and Technology Transfer, Bologna

4,45 p.m. Energy saving concept development for the more-connect pilot energy renovation of apartment blocks in Denmark
Ove Christen Marck, Cenergia, Kuben Management, Copenhagen, Denmark

5,00 p.m. Criticalities in the NZEB retrofit of scholastic buildings: analysis of a secondary school in centre Italy
Daniele Testi, Michele Rocca, Elena Menchetti, Simona Comelato, Department of Energy, Systems, Territory and Constructions Engineering (DESTEC), University of Pisa

5,15 p.m. Influence of comfort expectations on building energy need
Francesco Madonna, Energy System Development Department, RSE spa Ricerca sul Sistema Energetico — Department of Energy, Politecnico di Milano

5,15 p.m. Performance evaluation of a building integrated photovoltaic (BIPV) system combined with a wastewater source heat pump (WWSHP) system
Mustafa Araz, Arif Hepbasli, Emrah Biyik, Department of Energy Systems Engineering, Faculty of Engineering, Yasar University, Turkey
Mehdi Shahrestani, Running Yao, Emmanuel Essah, Li Shao, School of Construction Management and Engineering, The University of Reading, UK
Armando C. Oliveira, Mechanical Engineering Department — FEUP, University of Porto, Portugal
Orhan Ekren, Solar Energy Institute, Ege University, Turkey
Huseyin Gunerhan, Department of Mechanical Engineering, Ege University, Turkey
Thursday, 11th May

TECHNICAL SESSION 3 SALA DELLA MUSICA
The existing buildings: audit and restoration
Chairman: Stefano P. Corgnati, Dip. Energia, Politecnico di Torino
9,00 a.m.

TECHNICAL SESSION 3 SALA DEI TAROCCHI
HVAC system technologies
Chairman: Gerhard Zweifel, University of Lucerna, Svizzera
9,00 a.m.

TECHNICAL SESSION 3 SALA GRANDE
New buildings in mediterranean climate
Chairman: Valentina Serra, Dipartimento di Energia, Politecnico di Torino
9,00 a.m.

9,00 a.m. Occupant behavior lifestyles and effects on building energy use: investigation on high and low performing features
Verena Marie Barthelmes, Valentina Fabi, Cristina Becchio, Stefano P. Corgnati, Department of Energy, Polytechnic of Turin
9,15 a.m. Impact and reliability of EPCs in the real estate market
Ramon Pascual, Giulia Paoletti, Roberto Lollini, Institute of Renewable Energy of European Academy of Bolzano, EURAC Research – Bolzano
9,30 a.m. Towards NZEB by optimizing HVAC system configuration in different climates
Cristina Becchio, Stefano P. Corgnati, Giulia Crespi, DENERG, Politecnico di Torino – Torino
Michele Vio, RHQOS Consultant – Arquà Polesine, Rovigo
Leonardo Prendin, Micaela Ranieri, RHQOS, Gruppo IRSAP – Arquà Polesine, Rovigo
9,45 a.m. Energy refurbishment in existing buildings: thermal bridge correction according to DM 28/6/15 limit values
Stefano Bergero, Anna Chiarla, DAD - Department of Architecture and Design, Polytechnic School, University of Genova
Paolo Cavalletti, DIME - Department of Mechanical Engineering, Polytechnic School, University of Genoa
10,00 a.m. From high energy demands to NZEB: the retrofit of a school in Catalonia, Spain
Umberto Berardi, Mauro Manca, Department of Architectural Science, Ryerson University, Toronto, Canada
Pau Casaldiga, Felipe Pich-Aguilera, Pich-Aguilera Architects, Barcelona, Spain

9,00 a.m. Proposal of a methodology for achieving a LEED O+M certification in historic building
Elena Mazzola, Tiziano Dalla Mora, Fabio Peron, Piercarlo Romagnoni, Department of Design and Planning in Complex Environments, University IUAV of Venice
9,15 a.m. Cost optimal measures for renovation of existing school buildings towards NZEB
Tiziano Dalla Mora, Fabio Peron, Alessandro Righi, Piercarlo Romagnoni, University IUAV of Venice
9,30 a.m. Application of an integrated design methodology for regenerative process of the existing buildings
Renato Morbiducci, Clara Vite, Department of Architecture and Design, Polytechnic School, University of Genoa
9,45 a.m. Cost-optimal approach to transform the public buildings into NZEBs: an European cross country comparison
Simona Paduos, Vincenzo Corrado, Department of Energy, Politecnico di Torino
10,00 a.m. A new procedure of energy audit and cost analysis for the transformation of a school into a nearly zero energy building
Vincenzo Corrado, Ilaria Ballarini, Simona Paduos, Lidia Tulipano, Department of Energy, Polytechnic of Turin

9,00 a.m. Modeling and control of a free cooling system for data centers
Alessandro Beghi, Michele Lionelli, Mirco Rampazzo, Department of Information Engineering, University of Padova
Luca Cecchinato, Enrico Sisti, Everbyte s.r.l, Padova
Giuseppe Dalla Mana, Vertiv, Piove di Sacco, Padova
9,15 a.m. Experimental investigations on evaporative condensers performance
Maria Fiorentino, Decsa srl, Voghera, Pavia
Giuseppe Starace, Department of Engineering for Innovation–University of Salento, Lecce
9,30 a.m. Indirect evaporative cooling systems: an experimental analysis in summer conditions
Stefano De Antonellis, Cesare Maria Joppolo, Samanta Milani, Dipartimento di Energia, Politecnico di Milano
Calogero Leone, Paolo Liberati, Recuperator spa
9,45 a.m. Saving resources by going evaporative: how evaporative cooling technologies and water cooled chillers can significantly reduce energy demands
Francesco Scuderi, Eurovent association, France
Maria Elena Piroietti, Associlima , Milano
Nicola De Cardenas, Decsa srl
Alessandro Fontana, M.i.t.a. srl
Philip Montrasio, Evapco Europe srl
Antonio Visintini, Balticore srl
10,00 a.m. Indirect evaporative cooling systems: modeling and performance analysis
Paolo Liberti, Calogero Leone, Yakub Bawa, Recuperator SpA – Rescaldina, MI
Stefano De Antonellis, Cesare Maria Joppolo, Dipartimento di Energia, Politecnico di Milano
TECHNICAL SESSION 4 SALA GRAND
NZEB and sustainability
Chairman: Piercarlo Romagnoni, Università di Venezia, IUAV

10,30 a.m. The problems connected with the achievement of NZEB qualification for advanced tertiary buildings: guidelines and case studies
Matteo Bo, Giorgio Bo, Francesco Mantua, Prodim srl, Turin

10,45 a.m. Sustainable NZEB building in mediterranean area
Francesco Masciarelli, Free-lance Professional, Perugia

11,00 a.m. Thermal and mechanical characterization of panels made by cement mortar and sheep’s wool fibres
Tiziana Cardinale, Giuseppe Arleo, Franco Bernardo, Andrea Feo, Piero De Fazio, ENEA - Centro Ricerche Enea- Rotondella, Matera

11,15 a.m. Presentation: Supervised certification of Commissioning process of HVAC equipment
Erick Melquiond, Eurovent Certifia, France

TECHNICAL SESSION 4 SALA DELLA MUSICA
Quality of indoor environment
Chairman: Ioan Silviu Dobosi, Dosetimpex srl, Universitatea Politehnica Din Timisoara, Romania

10,30 a.m. The influence of daylighting in buildings with parameters NZEB: application to the case study for an office in Tuscany mediterranean area
Cristina Carletti, Gianfranco Cellai, Leone Pierangiolli, Fabio Scirupi, Simone Secchi, Department of Industrial Engineering, University of Florence

10,45 a.m. How to control the indoor environmental quality through the use of the do-it-yourself approach and new pervasive technologies

11,00 a.m. Energy saving potential with a double skin roof ventilated by natural convection in Djibouti
Abdou Idris Omar, Université de Lyon, CNRS, Université Lyon 1, Villeurbanne, France—Université de Djibouti, Faculté d’Ingénieurs, GRE, Djibouti

11,15 a.m. An adaptive dynamic neural network for thermal characterization of building components
Roberto Baccoli, Lorenza Di Pilla, Andrea Frottoillilo, Costantino Carlo Mastino, Department of Civil, Environmental Engineering, and Architecture, University of Cagliari

TECHNICAL SESSION 4 SALA DEI TAROCCHI
Cases study
Chairman: Cesare Mario Joppolo, Dipartimento Energia, Politecnico di Milano

10,30 a.m. Life cycle energy performances of a Net zero energy prefabricated building in Sicily
Giovanni Tumminia, Francesco Guarino, Sonia Longo, Maurizio Cellura, DEIM department University of Palermo

10,45 a.m. Retrofitting under protection constraints according to the nearly zero energy buildings (NZEB) target: the case of an Italian cultural heritage’s school building
Simone Ferrari, Department of Architecture, Built environment and Construction engineering (ABC), Politecnico di Milano

11,00 a.m. Radiant ceiling in Hospitals—The case history of the “Hospital De Mollet” in Spain
Abdou Idris Omar, Université de Lyon, CNRS, Université Lyon 1, Villeurbanne, France—Université de Djibouti, Faculté d’Ingénieurs, GRE, Djibouti

11,15 a.m. HVAC systems with variable primary flow: analysis on energy potential saving
Michele Vio, Rhoss - Israp Group consultant
Luca Germano, Michele Babuin, Rhoss spa - Codroipo, Udine
50th Internationa Conference May 10th-11th

CONFERENCE FEES

The registration fee includes Entrance to the Scientific Meeting and business Lunch

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50th International Conference + Climamed 2017

May, 10-11-12-13

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