



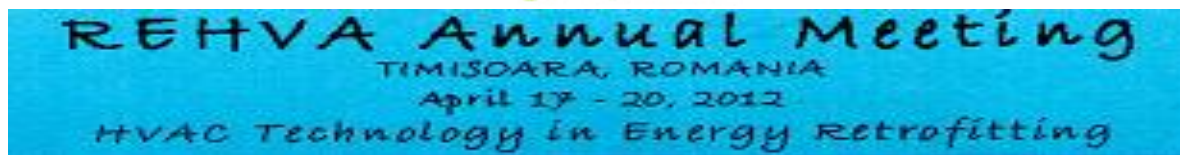
IMPLEMENTATION EU POLICIES AND REGULATION IN THE ROMANIAN POLICY AND REGULATION FOR BUILDING RETROFITTING

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Before EU accession, Romanian Government has adopted a series of measures for reducing the energy consumption of residences and tertiary buildings.

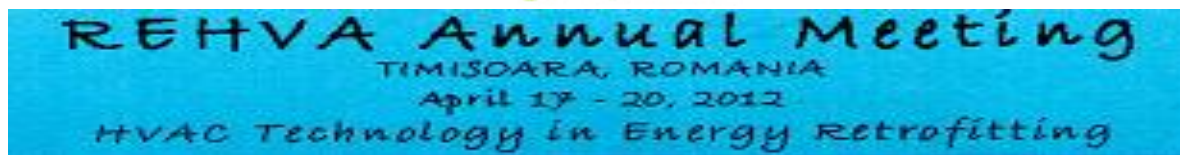
In 2000, in the Coordination of the Ministry, INSTALLATION ENGINEERS ASSOCIATION OF ROMANIA has elaborated a series of documents on which basis the Ministry has promoted the draft of 29/2000 Government Resolution “Thermal rehabilitation of existing buildings and stimulation of thermal energy saving”.



In 2002, no. 29/2000 GO is approved the no.325/2002 Law regarding “Thermal rehabilitation of existing buildings and stimulation of thermal energy saving”.

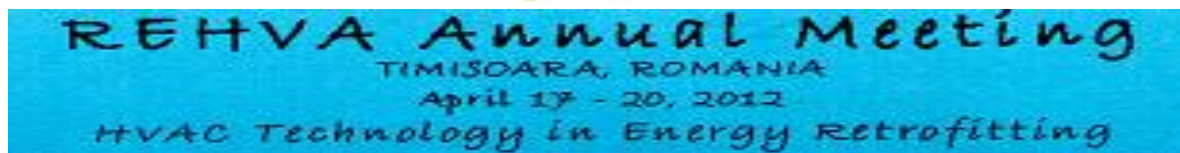
Romanian Government has taken a series of measures for reducing energy consumption for residences and tertiary buildings.

No. 325/2002 Law, has established legal frame for thermal rehabilitation and modernisation of buildings and afferent installations with the purpose:



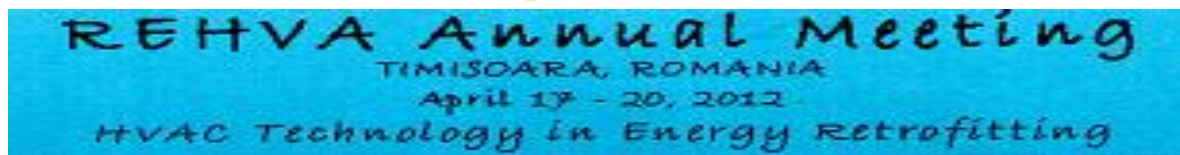
- increasing the hygiene and higrothermal interior conditions;
- reducing the heat lose for heating and supply of domestic water.

In compliance with no. 325/2002 Law, on basis of energetical policy of the State, the Government has adopted the anual national program for rehabilitation and thermal modernisation of buildings and afferent installations.



For the substantiation of the rehabilitation programs and thermal modernisation of buildings and afferent installations the following measures were taken:

- **elaboration of studies for establishing the priority order of thermal rehabilitation measures;**
- **elaboration of national programs harmonized with international treaties stipulations regarding energetical efficiency and environment protection following the durable development principle;**



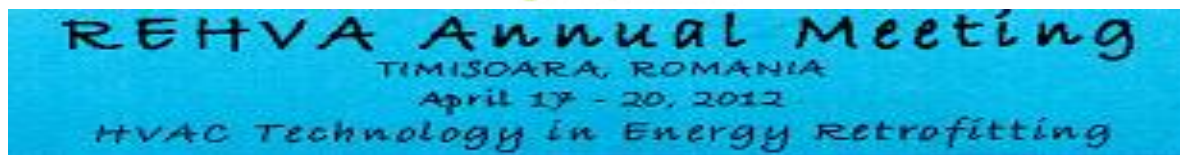
- revision of technical prescriptions and directory projects regarding design of building's envelope and installations afferent to the building;
- elaboration of norms regarding technical and energetical expertise energetic audit and energetic certificate for buildings.

As consequence of GO 29/2000 stipulations, Ministry has disposed the elaboration by the Research Institute in Constructions, INCERC, of the respective normatives.



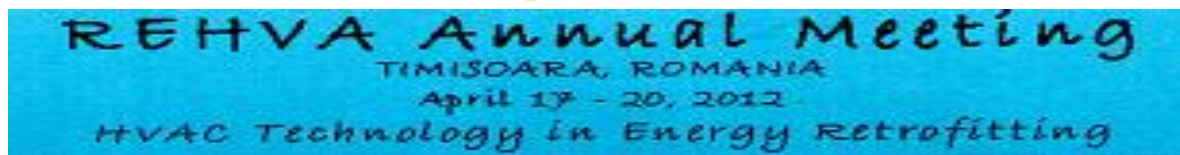
There were elaborated:

- **Normative for energetic audit realization of the existing buildings and heating and preparation of domestic hot water NP 047/2000;**
- **Normative for thermal and energetical expertise of existing buildings and of heating and preparation of consumption hot water NP 048/2000;**



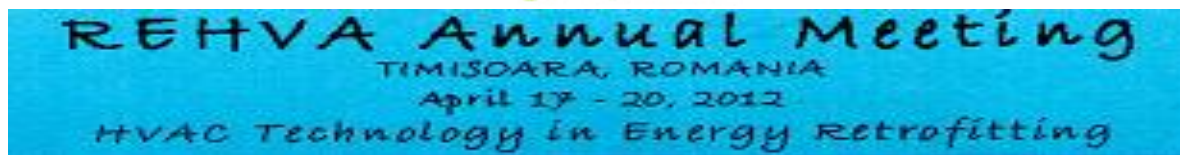
- Normative for elaboration and granting the energetical certificate of the existing building NP 049/2000.

By no.550/2003 Order of Ministry, it was approved the Guidance of attestation of energetic auditories for constructions and installations. On basis of this order it started the organisation of attestation for energetic auditories from Romania, having up to present 1000 specialists with attestation.



On basis of EC Directive 91/2002, Ministry has constituted a comission made up mostly from specialists from AIIR, who elaborated the materials on which basis was proposed for approval Law No. 372/2005.

No. 372/2005 Law, regarding energetical performance of buildings has as purpose promotion of increasing the energetic performance of buildings considering the exterior climateric conditions and placement, interior temperature and economic efficiency.



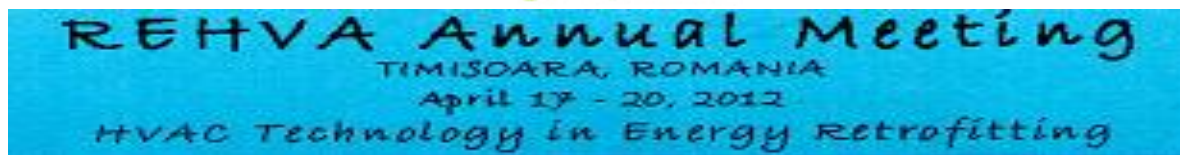
Law has established conditions regarding:

- **general frame of calculation methodology regarding buildings energetic performance;**
- **aplication of minimum energetic performance requirements for new buildings;**
- **aplication of minimum energetic performance requirements for existing buildings which are subject of modernisation works.**

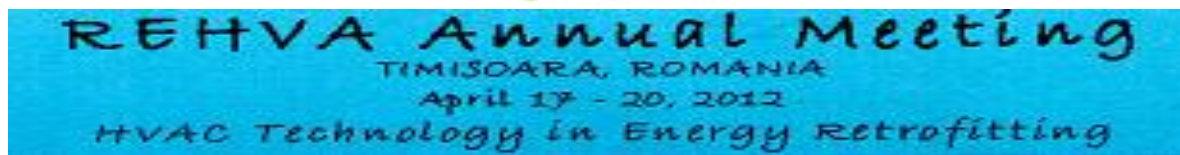


- energetical certification for buildings;
- periodical technical checking of boilers and inspection of systems/installations of climatization, evaluation of heating installations to which the boilers are older than 15 years.

According to the provisions of the No.372/2005 Law, there were elaborated:



- **Mc 001/ I-1 Calculation methodology of energetical performance of buildings (building envelope);**
- **Mc 001/ II-1 Calculation methodology of energetical performance of heating installations;**
- **Mc 001/ II-2 methodology of calculation of energetical performance of HVAC installat;**
- **Mc 001/ II-3 methodology of calculation for energetic performance of domestic hot water supply installations;**



- Mc 001/ II-4 methodology of calculation for energetic performance of illumination installations;
- Mc 001/ III-1 Energetic Audit and energetic certificate of buildings and installations

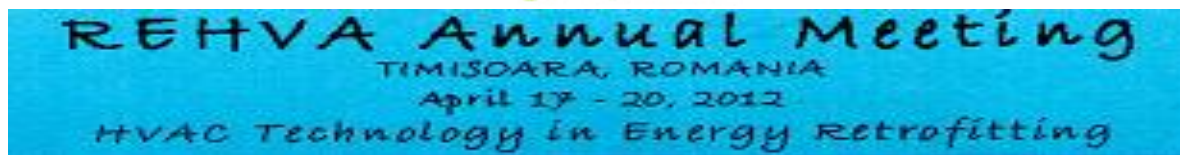
According to the provisions from No. 372/2005 Law, it was stipulated to be elaborated the “Application Methodology for 372/20 Law”



Application methodology of 372/2005 Law, was elaborated and published in OM on 12.10.2007.

By methodology are established data regarding energetic audit, energetic certificate, attributions of energetic auditors and technical experts.

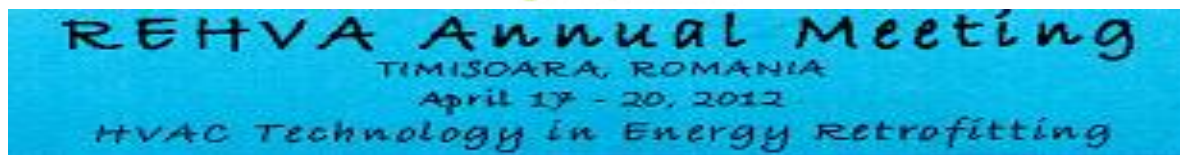
There are prescribed measures for thermal power plant, of HVAC installations.



- There are established also the cases where it is necessary, buildings' survey.

AIIR, has organized on 14 – 15 Aprilie 2005, through AIIR Banat Branch, the 14th Edition of Installations Conference.

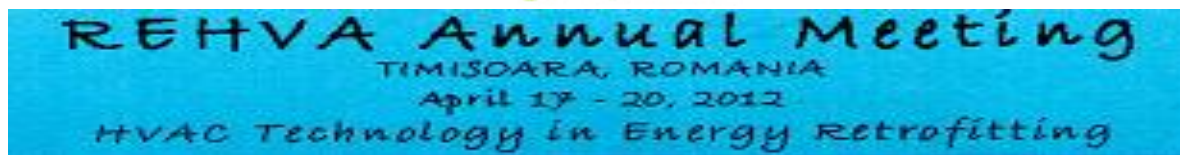
At conference attended Mr. Jaap HOGELING, Manager of ISSO from Rotterdam, responsible with elaboration of Eu standards for installations where he presented UC Committee Activity



concerning Directive of European Parliament, regarding energetical efficiency of buildings.

Mr. Eng. Jaap HOGELING has presented at the 17th Conference from IASI, July 2006: „Provisions of 40.011 standard regarding certification of companies which do the technical rehabilitation of buildings”.

As a result of the dialogue with Mr. Jaap Hogeling, there were received 33 standards, who were used for elaboration of the methodologies from Mc 001/I,II,III-1...4 series.



It has to be shown the fact that the specialists who elaborated the methodologies of calculation regarding the energetical performance of the above mentioned buildings had an important support from CA EPBD “Concerted action for Applying the Directive regarding Energetical Performance of buildings”

With CA – EPBD, AIIR, has connections starting with year 2005, since when, from two or three specialists, it participates to the Comission works starting with december 2005, from Nicosia session.



Starting with 2005, on a yearly basis there were held 2 working sessions of CA EPBD, where Romanian specialists were invited as observers and starting with 2007 as permanent members.

Within these sessions there are analysed the situation of application of 2002/91 Directive regarding energetical performance of buildings, difficulties that arise in application and the measures necessary for increasing the performances.



For thermal efficiency of the buidings during time there were ellaborated many laws and Government Ordinances.

Through No. 211/2003 Law it was approved GO No.174/2002 regarding setting up of special measures for thermal rehabilitation of some multilevel structures.

Through GO No. 187/2005 it was modified the GO 174/2002, through which:

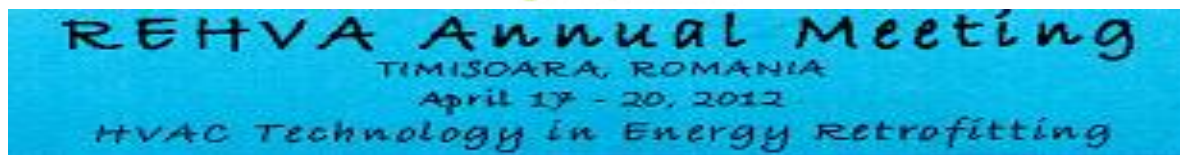


disappears the multilevel structures phrase.

It is foreseen equal participation to thermal rehabilitation of the: state budget, local budget and owners.

Through Law 260/2006 it was approved GO No. 187/2005.

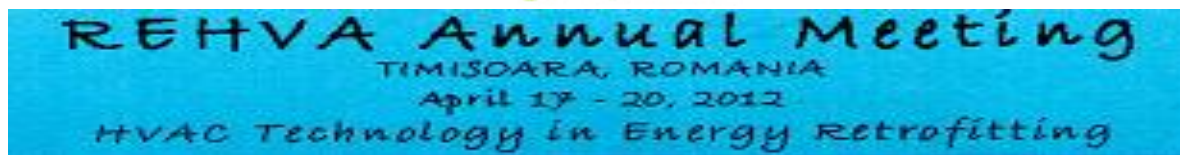
In year 2009 it was issued GO no. 18/2009 regarding energetical increase of condominium



In GO no. 18/2009 there were stipulated measures for financing the insulation works, beeing established the percent split for: state budget, local budget, and for the owner.

The financing of interventions it is stipulated to be done as it follows:

- **50% state budget within annual funds limits;**
- **30% local budget within annual funds limits;**
- **20% from repairs funds of Owners associations and/or from other legaly instituted sources.**



As an exception of the previous provisions, the authorities of public administration can insure within the limits of annually approved supplementary to the 30% above mentioned:

Partially or totally takeover of 20% share.

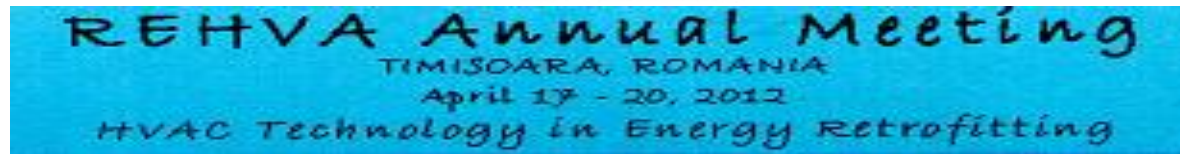
The Authorities of Local Public Administration can decide the measures of recuperation of the amounts.

Partially or totally takeover of the share corresponding to the owners in impossibility of payment;

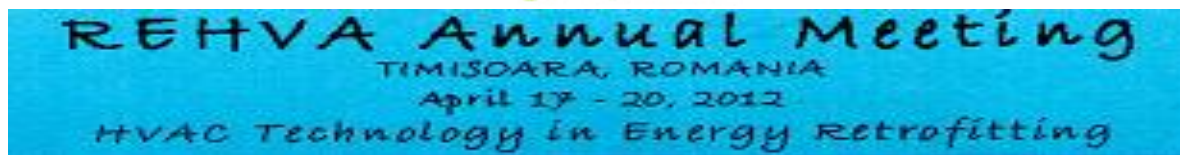


Through Government Ordinance no. 18/2009 regarding the increase of energetic performance of condominiums there are presented the intervention measures in the building envelope:

- thermal insulation of external walls;**
- replacement of the existing exterior windows and doors, including entrance doors;**

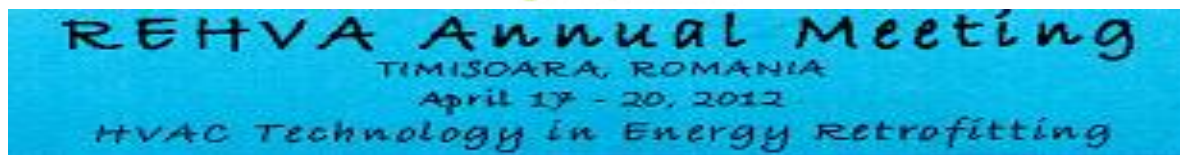


- Thermo-hydro insulation of terrace
- thermoinsulation of bridging for buildings with framework;
- Thermoinsulation of bridging over basement, when the apartments are in the ground floor;
- Assembling/disassembling works of installations and equipments existing on facades;
- Remaking works of envelope finishings.



Together with the intervention works above mentioned, on basis of energetic audit, there can be done the following works:

- **reparation works to the construction parts which represent danger in exploitation;**
- **intervention works in the installations of heat transfer fluid distribution**



**In GO 18/2009, at art. 5 it is stipulated:
„Realization of the scheduled intervention
works has as purpose the increase of
condominium energetic performance such
that the yearly specific calculated
consumption for heating per year to decrease
below 100 kWh/mp useful area, under
economic efficiency conditions”.**

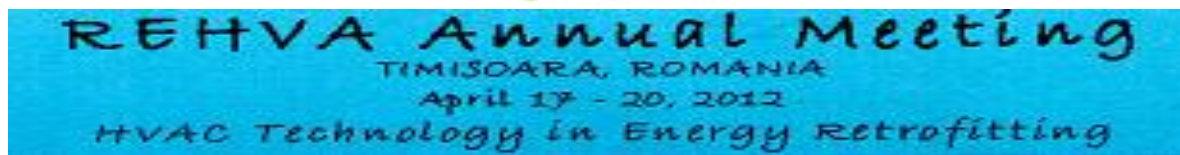
**In Methodological Norms of GO 18/2009
application, in the energetic audit report it is**



specified together with specific consumption the return of investment time, which will be less than 10 years.

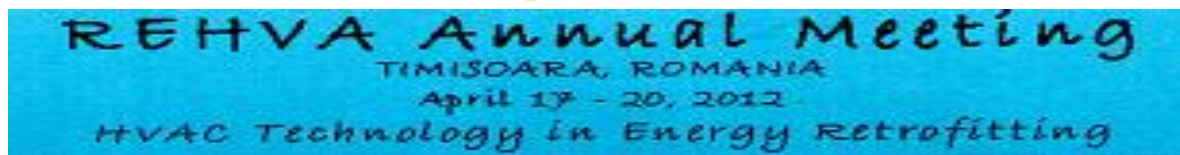
On 30 June 2010, it was approved GO 69/2010 regarding thermal rehabilitation of condominiums with Governmental Warranty bank credits.

The provisions of Government Ordinance can be applied to the beneficiary of the built condominiums with the reception done by the end of 2000.



The intervention works regarding the thermal rehabilitation which can be financed under the conditions of the Ordinance, withhold:

- thermal rehabilitation of the building envelope and afferent installations;
- introducing, on the case, of some alternative systems for partial/total ensurance of energy for consumption hot water, illumination and/or heating.

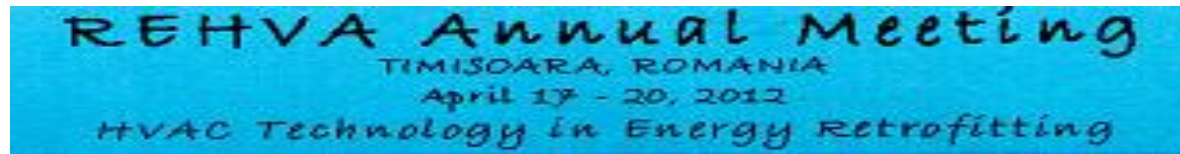


Execution of intervention works is financed:

- from proper sources of beneficiaries, representing minimum 10% from the value of execution of intervention works;
- from bank credits with subventioned interest 90% from the value of execution.

The reimbursement time of the bank credits with Governmental warranty and with subventioned interest is maximum 5 years.

Government warranty are payed from the state Budget, through the Tourism Ministry,



In present it is on pipe line the elaboration of documentation based on which it is to be revised Law 372/2005, according with provisions of EU Directive 2010/31.

According to Law No. 372/2005, there are ellaborated by specialists from AIIR the following works:

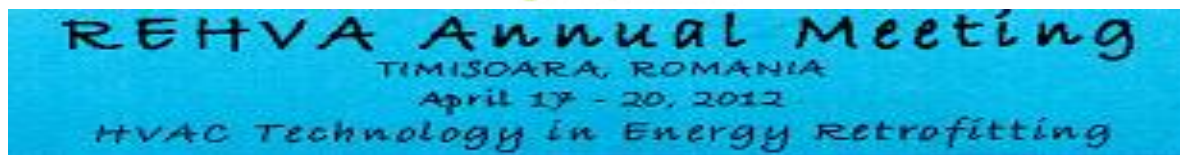
- Norms regarding the HVAC systems' inspections;
- Norms regarding the inspection of thermal power stations and heating systems of the buildings.



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Thank you for your attention!