

The Mexican Experience in the Social Housing Sector and Programs for Green Housing

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Figure 1: Social Housing 1964 Tlatelolco housing complex

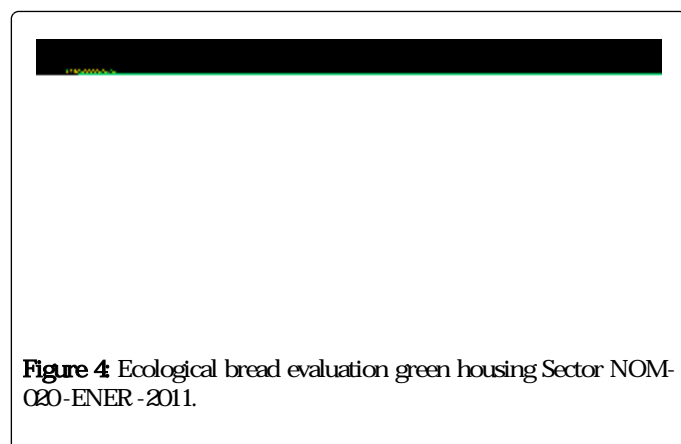


Figure 4 Ecological bread evaluation green housing Sector NOM-020-ENER-2011.

NOM-020-ENER-1011 establishes the minimum conditions to be met by limiting housing thermal heat gains to reduce the burden of refrigeration necessary and, therefore, the electrical system consumption

The labeling of edificos that meet the same standard should be displayed at the entrance of each

In the area of buildings, the NOM-020-ENER-2011 is the most impact. In his contexts have developed programs and tools especially for social housing in Mexico. The standard is required from the National Institutes of housing as a mandatory requirement for housing finance. This form generates a massive impact throughout the house that is being built with credits: forces the housing construction sector to develop houses with improved conditions and equipment as to guarantee a certain thermal comfort through a design) and the application insulating materials, also the installation of measures to save energy gas and water. The benefit is brought directly to the person entitled through savings in energy consumption and achieving climatic comfort in your home while the mitigated emissions are calculated and applied in international conventions and programs such as the Clean Development Mechanism CDM NANA, in the context of mitigation heating global.

In the regulatory framework also presented the Normatividades (NMX) techniques that define specifications: to date there are 13 norms that apply to the housing sector: 4 Rules are for equipment (water heater refrigerators, washing machines, bombast, 3 Rules relating to equipment Acondicionado air, 3 Rules to insulating materials and thermal envelope, and 3 Standards for lighting [9]. (Figure 4)

For being certification of products, processes and services and > DSTE CONUEE a Promotion Program certification; FIDE (Fidecomiso for Amoco Energy Electrical that issues stamps to products that directly or indirectly in the energy saving electric & Infiniti posing list Eco technology suppliers to apply within the Green Mortgage. for the evaluation of sustainable housing Incite created the Sustainability of Housing (ISV) and a system for saving evaluation of energy and a home, housing system Evaluation Green (Sieved).

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In 2006 the first construction Integral Sustainable Urban Development (DUIS) to quarks, as part of the Federal Government cooperation with various Secretaries and national financial institutions. The OUS are defined as areas of integrally planned developments,

contribute to land use planning and promote a more orderly urban development. Just and sustainable. Sustainable developments are enriched with green areas, bikeways. Public squares and disposition of certain technical infrastructure, educative and social prevent Ambient connectivity public transport systems

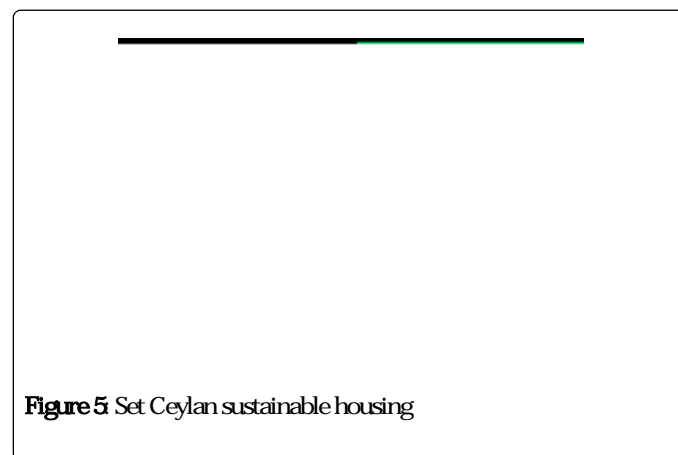


Figure 5 Set Ceylan sustainable housing

Azcapotzaco, Mexico DF a set abandoned in an industrial area, renovadopor Infiniti in 2012

740 apartments in 37 buildings 65m² 5 story 1,200m² green areas, and 5% local commercial plazas. Photovoltaic cells, treatment and recycling of rainwater and gray water, basic equipment for saving water and electricity, natural gas and flats ecology were installed.

From 200th began the first national programs for sustainable housing with the program ' This is Your Casa de CONAVI and laHipoteca Verde' Infiniti.

The 'This is Your Casa Program started in 2007 for people with low incomes and mess 2009s define sustainability guidelines and parameters as a function of the typology of housing and bioclimatic zone. Considering five categories: Site analysis, efficient use of energy, efficient use of water. Proper waste management and maintenance of equipment and facilities on their results and the design of the program in partnership with Green Mortgage, CONAVI and INFONAVIT were galardonados in 2009 with the International Award for Energy Efficiency to Save Energy (Alliance to Save Energy).

In 2012 separation of housing included location, facilities (health centers, garden of children, primary and secondary schools), residencies (typology, density, living space) and competitiveness (free areas, systems transpose, eco technology).

To determine the amount of subsidy, considering the value of the home and the score awarded based on information obtained with the Single Housing Register (UVR). (Foundation IDEA. 2013). (Figure 5)

RIN9ktr0 (4X) Housing - RUV nitro The RUV was developed in 2004 in Infiniti established for housing in Mexico, based on this tool can Lamar strategic decisions and project a plane chin development and housing finance.

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Infiniti mansion in 2007 a program also photo of al- lipoteca Verde ' to boost housing supply with ecological criteria. The beneficiaries could purchase additional credit to install environmental technologies

that generate diminution energy consumption and aque gas compared to traditional homes [10].

Hipnreca Verde is an additional credit amount Infiniti stops the entitled, according to their purchasing capacity. You can buy a home that has Eco technologies yielding savings on household spending by the decrease in the consumption of electricity, gas and aque. Fielismth Materials, accesodos and equipment that generate savings in the consumption of gas, water and electricity in economic benefit of accredited, certified by a competent authority in compliance with national standard, if dictums techno efficiency and quality or interactional standards.

The packages to install environmental technologies in housing according to all 3 zones definition climatic that qualified for the Mexican Reptilian and were as follows (Table 1):

Eco-technology	Cool climates	Normal Climate	warm climate
saving keys	x	x	x
Watered shutter	x	x	x
Toilet valvuladoble	x	x	x
POWER SAVE Lamps	x	x	x
Solar Heater			
Heater gas passing			
air conditioning (AA)			

program recognized nationally and this international level and several Latin American countries have to develop program assimilates interns.

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The edification housing is one of the more dynamic industrial scan Mexico and contributes about 50% in the EIP of the communication industrial. Granting a Million my green credits contributes positively to this trend. The private sector contributes between 2 and 5% of cases ecological, baroque the construction will cost between 10 and 20% expensive than my construction conventional, reason why most of my shipments to sustainable architecture consulting certifications (engaged i.e. for LEED certification) and contests for projects construction really organic. (Figure 6)

The scheme for sustainable social housing is to give small additional credits that must be repaid within a period of 5 anuses to be a viable project. The economic unarm and interest rates determine the range of eco-technologies and thus the potential economic savings. The connection between micro-level beneficioeconómicos for accredited and ecological benefits at the macro level to mitigate greenhouse gas this well done, edema directly benefit the citizens in improving thermo comfort of your home and having housing plus alpha thanks to my economic maintenance. Seguin this scheme, programs will still work the Green Mortgage, Eco Home, Housing and Name Otrosque has the opportunity to be successful in other countries.

Meanwhile, Mexico still has one of the schemes month pollutants among the countries of the Organization for Eco technology Cooperation and Development (OECD). CO₂ emissions pot kilowatt in electricity generation and heat for alms nth Mexico are the average of the OWE. Ornamented 5% of the energy produced in renewable Mexico's PEA, 2011. Energetic Reform The 2013 promises many new jobs, promises a change of non-renewable energies and renewable energy my clean. Replace the non-renewable energy to renewable energy is the second step, the first half is also implementer changing patterns pemnican reduce energy consumption, the Segiln said. Energy is best not to use".

Regarding the prevention and reduction of energy and resource sector Ulm think less of buildings technology although ecological, YMES are appointed to constructive solutions.

First of all you must include a good CLIMATE design in social housing especially constructive Solar protection the gaps) natural options (trees and open spaces) and shading and the involvement (preferably with material almost nonexistent in the Mexican market), also in distended interiors (Natural preferment limacine and sufficient feature in warm zones), rather than the diesis still minimize my social housing económicas remissions that predetermine developers and

- 4 (2010) Soluciones verdes para el sector vivienda. Comisión Nacional de Vivienda, CONAVI, México.
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- 6 Corral Sánchez JAM (2008) La vivienda "Social" en México. Pasado-Presente-Futuro? Sistema Nacional de Creadores de Arte Emisión, México.
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