



SustainCo
Sustainable Energy for Rural Communities

Intelligent Energy Europe Programme

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D6.3 Report on experience exchange and follow-up activities

Project Coordinator: *North-West Croatia Regional Energy Agency (REGEA)*

Report prepared by Eva Crespo Sánchez



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The SUSTAINCO project

The SUSTAINCO project aims to support ambitious European vision for the energy performance of its buildings. An important activity of SUSTAINCO will be to increase the visibility of front-runners, for both new build and/or renovation, with the aim of capacity and confidence building in the public sector. Most members of consortium are among the best known European energy agencies from Austria, Ireland, UK, Romania and Croatia, all of which have successful track records and numerous on-going or completed projects in area of sustainable buildings. Through focusing on key results from SERVE and other projects access to approaches, case studies and data to achieve cost optimum NZEB solutions will be highlighted.

SUSTAINCO is coordinated by:

North-west Croatia Regional Energy Agency

Andrije Zaje 10,

10 000 Zagreb, Croatia

Julije Domac, Marko Vlainić & Ivan Przulj

jdomac@regea.org

mvlainic@regea.org

iprzulj@regea.org

Tel. +385 1 3098 315

About this document

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Intelligent Energy Europe

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1.1.1 Experience exchange

- *Detail the experience exchange process in to two paragraphs.*

To address the promotion in a municipal level was considered that due to the functional structure of Catalonia the best option was to contact with the councils and pull through them the dissemination about the energy efficient strategies towards the municipalities.

The provincial Council is a local government institution that promotes the progress and welfare of the citizens of its territory. It acts directly providing services and especially in cooperation with the municipalities. The ongoing collaboration with municipalities even in a big city or a town with few inhabitants extends the action done in the territory from the proximity.

Once contacted the four councils of Catalonia (Barcelona, Tarragona, Lleida and Girona); we decided to focus all the resources in the Tarragona Provincial Council (DIPTA) which has the biggest delay of municipalities attached to the CoM and for having a wide ratio of municipalities in the SustainCo work area.

The other Councils have been dismissed due to in Barcelona most of the area is outside the SustainCo program and regarding it is a council with a powerful entity with its own particular inertia, Girona due to other European Projects has been already developed there are municipalities already working on it and finally Lleida because they have some actions on an advanced stage and they have Girona's neighbourhood as reference. Thus that, ASCAMM contacted the people in charge of carrying out the tasks of promoting the Covenant of Mayors (CoM) and after the meeting results analyzed. DIPTA perform the territorial CoM coordination role since September 27th 2013 and right this moment it has been developing the Sustainable Energy Action Plans (SEAP); to realize that was considered as the best option that ASCAMM develop the toolkits describing the nZEB concept.

- The participants

Barcelona provincial Council: reaching 311 municipalities.

Carme Melción: Area of sustainability and Territory

Núria Parpal: Environmental Program Manager

Lleida provincial Council: reaching 311 municipalities.

Joan Buchaca. Economical Promotion

Girona provincial Council: reaching 221 municipalities.

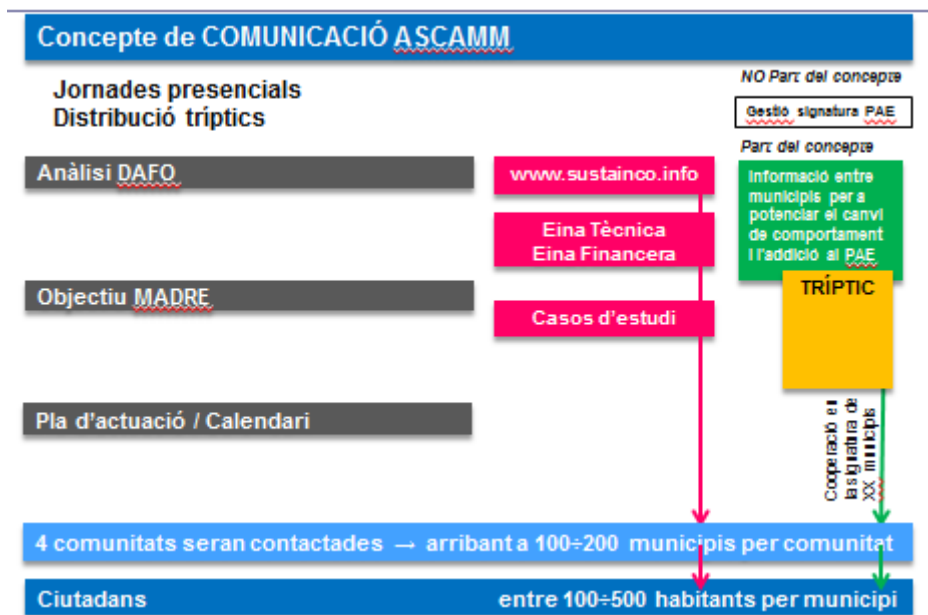
M^a Teresa Egea and Anna Camp. CILMA - Girona's local Region initiatives Council for the Environment. Integrated by a high number of councils, regional councils and the Girona's Provincial Council.

Tarragona provincial Council: reaching 190 municipalities.

Núria Rovira and Montse Balcells Cabré: Environmental technician (Environment, Public health and Territory)

Jaume Mutlló Pàmies: Head of Municipal Architectural Area.
 Albert Gómez Masdeu: Head of Municipal Engineering Area.

- **Meeting agenda**



- *Indicate the used materials.*

All material has been designed to be used digitally and delivered by soft copy. ASCAMM considers that the main concept of this project basically tries to reduce and optimize the human being environmental step, we have been doing the conferences following this rule trying to reduce the hard copies which end in the garbage and increasing the soft copies and the internet communications system focused on the experts and technicians.

- *Conclusions of experience exchange.*

The limited public funds to promote activities in the field of building and the low volume of construction is based on the current crisis and makes it difficult to define strategies addressed to incentive the construction of high energetic buildings and the implementation of RES.

1.1.2 Follow-up activities

- *Indicate the communities for which you have conducted the follow-up activities (Indicate the number of inhabitants) and their stage in CoM adhesion process.*

ASCAMM has focused the activity in Tarragona council but due to the previous explanation non activities has been done yet, several meetings and all the clarifications has been done and also all the material has been delivered to the council to achieve the expected activities in the near future.

Tarragona has a total of 190 districts interested to belong to the SustainCo area which will be the ones prioritized to address the profile.

- Describe how you developed these activities, how you have guided and which materials you have made available for them.

Based on the last conversations with DIPTA has been finally considered that the best way to approach the NZEB concept in the development of SEAP would be a task of awareness and disclosure to achieve the maximum knowledge for most of the municipalities to let them develop the task, initially planned as a flyer template understandable to technicians and mayors and from now to the plain citizens a few of them involved in these issues, adding the 12 nZEB myths (from D6.2.) which are accessible to almost all audiences.

Concepte NZEB · Problemàtica ambiental

Per mitigar el canvi climàtic i la Directiva Europea d'Eficiència Energètica als Edificis (2010/31/EU), determina que al 2020 s'ha de:

- ↓ 20% el consum d'energia primària (EP).
- ↓ 20% les emissions de gasos d'efecte hivernacle respecte els nivells de 1990 (CO₂).
- ↑ 20% la contribució d'energies renovables (RES) respecte el consum.

Obtinguerem tots els edificis hauran de ser NZEB:

- al 31/12/2018 en publicitat oberta nova.
- al 31/12/2020 en publicitat oberta nova i existents.

Un edifici nZEB es defineix com "un edifici que té un rendiment energètic molt elevat, on la quasi nul·la o molt baixa quantitat d'energia requerida ha d'apar carregar, de forma molt significativa, per l'energia procedent de fonts renovables, entenent l'energia procedent de fonts renovables produïda en el propi emplaçament de l'edifici o en un entorn proper a l'edifici".

Mites

FALS CERT	1. No es possible obrir una finestra en un edifici d'energia cas zero.	FALS CERT	7. Un edifici d'energia cas zero no disposa d'un sistema de calefacció.
FALS CERT	2. La construcció d'un edifici d'energia cas zero és massa cara.	FALS CERT	8. Un edifici d'energia cas zero consisteix simplement en finestres.
FALS CERT	3. L'aire en un edifici d'energia cas zero sempre és sec.	FALS CERT	9. En tots els casos, amb una entrada d'1 kWh d'electricitat d'una bomba de calor es produirà 3 kWh de calor.
FALS CERT	4. Les cases hermètiques són saludables.	FALS CERT	10. El sistema de ventilació fa que hagi sensació de sequedat.
FALS CERT	5. Els murs no poden ventilar però per assegurar un clima interior saludable es necessita el suport dels sistemes de ventilació.	FALS CERT	11. El 40% de la potència consumida en una casa mitjana s'utilitza per a il·luminació.
FALS CERT	6. El clima interior en un edifici d'energia cas zero és excel·lent.	FALS CERT	12. Un edifici d'energia cas zero ha de tenir una arquitectura simple.

PAES

El Pacte d'Alcaldes (PAE) és una iniciativa de sostenibilitat energètica de la Comissió Europea (CE) per encoratjar els organismes públics a incrementar i potenciar les estratègies sostenibles al municipi, donant prioritat de models de rehabilitació a altres municipis i a actor privat. El Pla d'Acció d'Energia Sostenible (PAES) són els documents clau que posen de manifest l'abast al Pàrqu amb a cent per assolir l'objectiu europeu del 2020. La Diputació de Tarragona (DIPTA) és coordinadora territorial del Pacte d'Alcaldes des del 27 de setembre de 2013. Llistat d'acions:

ANÀLISIS de l'entorn per determinar les condicions climàtiques (temperatura, vent i soroll) i les ombres dels elements de l'entorn (edificis veïns i vegetació propera) per poder determinar el factor forma de l'edifici (compacte o dispers), la proporció d'obertures (mínimes en orientació nord i màximes a sud) i la realització de proteccions solars.

Vinculació l'organigrama funcional de l'edifici en l'ús del Formentor (posició amb els eixos de desviacions respecte al sud). Ubicant a sud les estances de llarga ocupació i el nivell de confort i a nord les estances de servei.

Estratègies globals entre les disciplines que intervenen en el desenvolupament i construcció de l'edifici.

Estratègies de disseny

- RENOVABLES:** Compensar el consum energètic de l'edifici amb fonts d'energia renovable com és el cas de: solar (termic i fotovoltaic), biomassa, eòlica, geotèrmica, hidroelèctrica...
- ACTIVES:** Sistemes d'alt rendiment d'eficiència energètica en la climatització (ventilació, refrigeració i calefacció), producció d'aigua calenta sanitària (ACS), llum, etc.
- PASSIVES:** Control de l'aïllament de la part opaca de la façana així com de les obertures, i donar continuïtat a tot l'envolupant eliminant qualsevol tipus de pont tèrmic. Potenciant l'entrada de radiació al hivern i evitant-la a l'estiu.

Estratègies d'implantació

- CONTROL DE QUALITAT:** Control exhaustiu de tot el procés d'execució de l'edifici, per evitar mancances en l'execució de l'envolupant i els sistemes.
- ASSAIGOS:** Determinar un protocol per establir les condicions amb l'ús de qualsevol tipus de l'edifici (Blower Door Test), la contribució de l'aïllament hermètic.
- MONITORTGE:** Implantació d'un sistema de recollida de dades per donar continuïtat del comportament de l'edifici i dels seus consums.

Estratègies de ús i gestió

- MANTENIMENT:** Un manteniment adequat garanteix consums més ajustats de moltes de les instal·lacions. Com el cas de les llàmpades, col·lectors solars, ...
- ÚS:** L'usuari ha de rebre les pautes de comportament adequades segons el disseny de l'edifici.
- GESTIÓ:** Sistemes de gestió coordinats amb el sistema de monitoratge per permetre l'optimització del consum real de l'edifici.

COST GLOBAL

- DISSENY
- CONSTRUCCIÓ
- EXPLOITACIÓ

EFICIÈNCIA I CONFORT a COST ÒPTIM

EDIFICI CONVENCIONAL → EDIFICI NZEB

After all that it will be consolidated with an online publication detailing the content of the flyer and based on the technical and financial toolkits and the case studies with the addition of the mentoring assessment experience.

Finally, foresight a future action to make some touring trip in all the municipalities based on panel boards that incorporate information from the book but more focused on the detailed case studies, explaining design strategies, explaining the objectives and the architects feedback to be taken in account for future actions and similar cases and not finding the same or any unforeseen.

- Recommendations for future work. Keep monitoring to verify that it is suitable to make the itinerant exposure in all municipalities about the studio object and by contacting the different councils to follow up the needs and requests to increase the activity in case of need.

1.1.3 Dissemination and Feedback

Dissemination will be realized based on the flyers done by Ascamm and submitted to the council by soft and hard copy.

Any feedback will be processed through the council, which would arrange all the specific outreach conferences in each municipality based on material developed by Ascamm for the project.

The main comments from municipal technicians are the problem with the low initial budget to address successfully a construction. They think that it will be more effective with specific subsidies by energetic actions.