

Table of Contents

Foreword.....	iv
1 Introduction	1
1.1 General Scope.....	1
1.2 Background.....	1
2 Challenges to face in a Mediterranean climate.....	3
2.1 Market Tendency and Customary Practices	3
2.2 Lack of Specific Legal Framework	3
2.3 Advantages against the Challenges	4
2.4 Significance of the Future Challenges	4
3 NZEB	7
3.1 NZEB Definitions and System boundaries	7
3.2 Nearly-Zero Energy Buildings in Mediterranean climates	12
3.3 Definition of Reference Buildings.....	19
4 General Design Strategies	22
4.1 Building Envelope Solutions and Technologies.....	22
4.2 Opaque Building Envelope.....	24
4.3 Transparent Building Envelope	26
4.4 Shading	28
4.5 The solutions for opaque components (vertical walls and roofs)	29
4.6 Ventilation: natural and mechanical	38
5 Cost effectiveness – optimality	50
5.1 Description of the cost-optimal methodology	50
5.2 Analysis of occupant behaviour influences on cost-optimal level.....	56
APPENDIX - A	58
APPENDIX - B	64
APPENDIX - C	67
REFERENCES	70