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crescendo
NEW ENERGY FOR GROWING COMMUNITIES

The power of building concepts

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FP6-513563



A SUSTAINABLE ENERGY SUPPLY FOR EVERYONE

Agenda

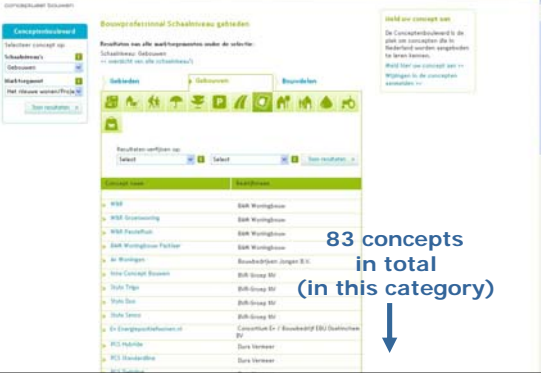
Time	Topic	Place
PART I	Building concepts in general	
PART II	Building concepts in cRRescendo	

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Housing concepts



83 concepts in total (in this category)

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Sustainable housing concepts



Home | Wat is een zonnewoning? | Stappenplan | Motivatie | Meer info | Nieuws | Didámer

Duurzaam, comfortabel en energiezuinig wonen: willen we dat niet allemaal? Het concept de **Zonnewoning** biedt daarvoor de oplossing.

Deze website informeert u over de Zonnewoning. Een geïntegreerd woningbouwconcept dat comfort combineert met de toepassing van duurzame materialen en energiezuinige technieken.

Een zonnewoning heeft een **certificaat** wat garandeert dat het aan een aantal **heldere kwaliteits- en duurzaamheidsdoelen** voldoet. Zo heeft elke woning:

- een EPC van minimaal 15% lager dan gesteld in het vigerende bouwbesluit!
- Dit zijn slechts twee eisen, voor een compleet overzicht van alle eisen klik hier.

Deze website is ontwikkeld voor gemeenten, projectontwikkelaars en woningbouwcorporaties en beoogt de bouw van Zonnewoningen verder te bevorderen.

Er zijn al meerdere Zonnewoningprojecten opgeleverd of zijn momenteel in de plan- of bouwfase, een selectie van deze projecten treft u aan de site onder **voorbeeldprojecten**. Daarnaast krijgt u de opinies van bewoners te lezen en wordt u geïnformeerd om Zonnewoningen te (laten) ontwikkelen. Via deze website kunt u het informatiepakket, met achtergrondinformatie, aanvraagformulieren, het resumé van het informatiepakket van de **BRL 5016** en presentaties, downloaden.

Deze website is ontwikkeld voor alle belangstellenden die zich willen laten informeren over het concept, de zonnewoning en het bijbehorende certificaat. In het bijzonder is informatie uitgewerkt voor projectontwikkelaars en gemeenten die het concept willen ontwikkelen en realiseren.

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Sustainable housing concepts

A package of energy saving measures, compact and mould friendly, simple HVAC systems, optimized orientation, energy demand reduction of ventilation system, smart system, flexible, reduced by as much as 80%.

So, what do you buy?

Careful construction for climate, Thorough attention for climate, Compact and mould friendly, Simple HVAC systems, optimized orientation, energy demand reduction of ventilation system, smart system, flexible, reduced by as much as 80%.

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Buyer of a sustainable housing concept



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CONCEPT	OWNER	CORE-BUSINESS	AMBITION	DELIVERABLE	TEST	CERTIFICATE	NOTE
W&R Woning Passief	BAM	Contractor	Passive house	PH Standard	PHPP	No	Communication towards house-owner(s)
Multi-comfort house	Isover	Insulation	Passive house	PH Standard	PHPP	No	
MassiefPassief huis	Wienerberger / Recticel	Clay-products / Insulation	Passive house	PH Standard	PHPP	No	Traditional architecture
Passivhaus	Passivhaus Institut	Knowledge	Passive house	PH Standard	PHPP	Yes	
PCS Hybride	Dura Vermeer	Contractor	EPC 0,4	EPC 0,4	EPN	No	
SurPlus ECO	TBI Koopmans	Contractor	EPC 0,4	EPC 0,4	EPN	No	Pre-fabricated elements
PlusWonen Passief	Volker-Wessels	Contractor	Passive house	PH Standard	PHPP	No	
Prestatiehuis	VDM Woningen	Contractor	Passive house	PH Standard	PHPP	No	Renovation
Zonnewoning	SKW Certificatie	Certifying body	-/15% (EPC 0,5)	BRL 5015	BRL 5015	Yes	Seven simple requirements
Zonnehaardwoning	BOOM	Knowledge	-/15% (EPC 0,5)	BRL 5015	BRL 5015	Yes (Zonnewoning)	Zonnewoning based on proven technology

Notes:

1. Certificate issued = No: Website of the concept does not mention (issuing of) a certificate or no independent certificate.
2. EPN (EPC) = Dutch energy performance code for buildings. BRL 5015 = Dutch guideline inspection-certificate Zonnewoning.

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CONCEPT	OWNER	CORE-BUSINESS	ENERGY	INTERIOR CLIMATE	SUSTAINABLE MATERIAL	USER INSTRUCTION
W&R Woning Passief	BAM	Contractor	V	V	X	V
Multi-comfort house	Isover	Insulation	V	V	X	X
MassiefPassief huis	Wienerberger / Recticel	Clay-products / Insulation	V	V	X	X
Passivhaus	Passivhaus Institut	Knowledge	V	V	X	V
PCS Hybride	Dura Vermeer	Contractor	V	X	X	X
SurPlus ECO	TBI Koopmans	Contractor	V	X	X	X
PlusWonen Passief	Volker-Wessels	Contractor	V	V	X	X
Prestatiehuis	VDM Woningen	Contractor	V	X	X	X
Zonnewoning	SKW Certificatie	Certifying body	V	V	V	V
Zonnehaardwoning	BOOM	Knowledge	V	V	V	V

Notes:

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Housing concepts and consumers

- Why should you buy a "concept"?
 - Cheaper due to efficient building process (and/or extra margin for the developer)
 - Description of deliverables (performance, measures)
 - Real life experience with performance of the concept
 - Independent check on performance and measures
 - Guaranteed (energy) performance

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Confusion



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CONCEPT	OWNER	CORE-BUSINESS	SPECIFIC DELIVERABLES	SPECIFIC PERFORMANCE	INDEPENDENT CHECK	GUARANTEED PERFORMANCE
W&R Woning Passief	BAM	Contractor	V	V	X	X
Multi-comfort house	Isover	Insulation	V	V	X	X
MassiefPassief huis	Wienerberger / Recticel	Clay-products / Insulation	V	V	X	X
Passivhaus	Passivhaus Institut	Knowledge	V	V	V	X
PCS Hybride	Dura Vermeer	Contractor	V	X	X	X
SurPlus ECO	TBI Koopmans	Contractor	V	X	X	X
PlusWonen Passief	Volker-Wessels	Contractor	V	X	X	X
Prestatiehuis	VDM Woningen	Contractor	V	V	X	X
Zonnewoning	SKW Certificatie	Certifying body	V	V	V	X
Zonnehaardwoning	BOOM	Knowledge	V	V	X	X

Notes:

1. Non-measurable (e.g. EPC) or non-defined qualifications not counted as specification.
2. Independent check includes description of testing methods and accredited certificate.

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Conclusions

- Consumers are overwhelmed by many building concepts and their marketing. This diminishes the power of building concepts.
- Housing concepts with guaranteed performance do not exist (yet).
- Housing concepts with independent checks are not (yet) offered by companies who also have interests in selling their concepts.
- There are a limited number of meta-concepts (= ~ambition level), like: "one step ahead", "passive" and "energy neutral"

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Recommendations

- Consumers should be more aware of meta-concepts and how they relate to various concepts you can buy.
- Develop guidelines and commissioning-procedures for each meta-concept to allow independent checks.
 - "One step ahead" (f.e. BRL 5015 - Zonnewoning)
 - "Passive house" (f.e. Passivhaus standard)
 - "Energy neutral" (f.e. ?)
- Make performance more specific or tangible.

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cRRescendo – De Verwondering, TBI



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Advantages of Solar House concept

- Certified (no own enforcement required)
- Clear and unambiguous demands (Guideline BRL 5015)
- Covers all aspects (energy, interior climate, material, user instruction)
- Guideline acts a juridical document between involved parties: City of Almere – project developer – architect/contractor – house-owner(s)

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cRRescendo – De Verwondering, TBI



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cRRescendo – Passive houses, AM/BAM



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cRRescendo – Passive houses, AM/BAM

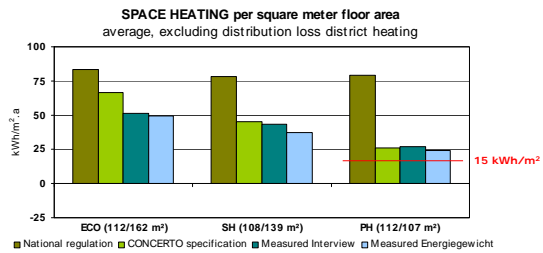


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Energy use



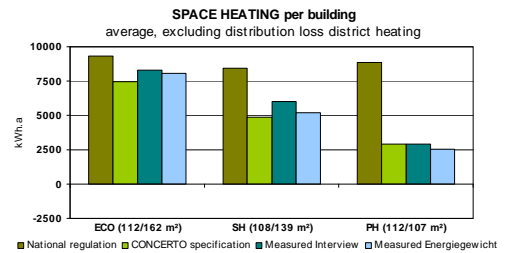
- Notes:
1. Preliminary results.
 2. ECO = ECO House, SH = Solar House, PH = Passive House
 3. PH: including 1 energy neutral dwelling.

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Energy use



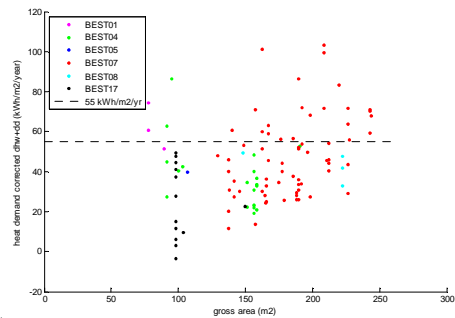
- Notes:
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Energy use; space heating per m²



- Notes:
1. Preliminary results.

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