



solarcombi+

# Solar Combi+

## WP3: Virtual Case Studies

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Identification of most promising markets and promotion of standardised system configurations for the market entry of small scale combined solar heating & cooling applications  
EIE/07/158/SI2.466793 09/2007 – 02/2010

Intelligent Energy  Europe

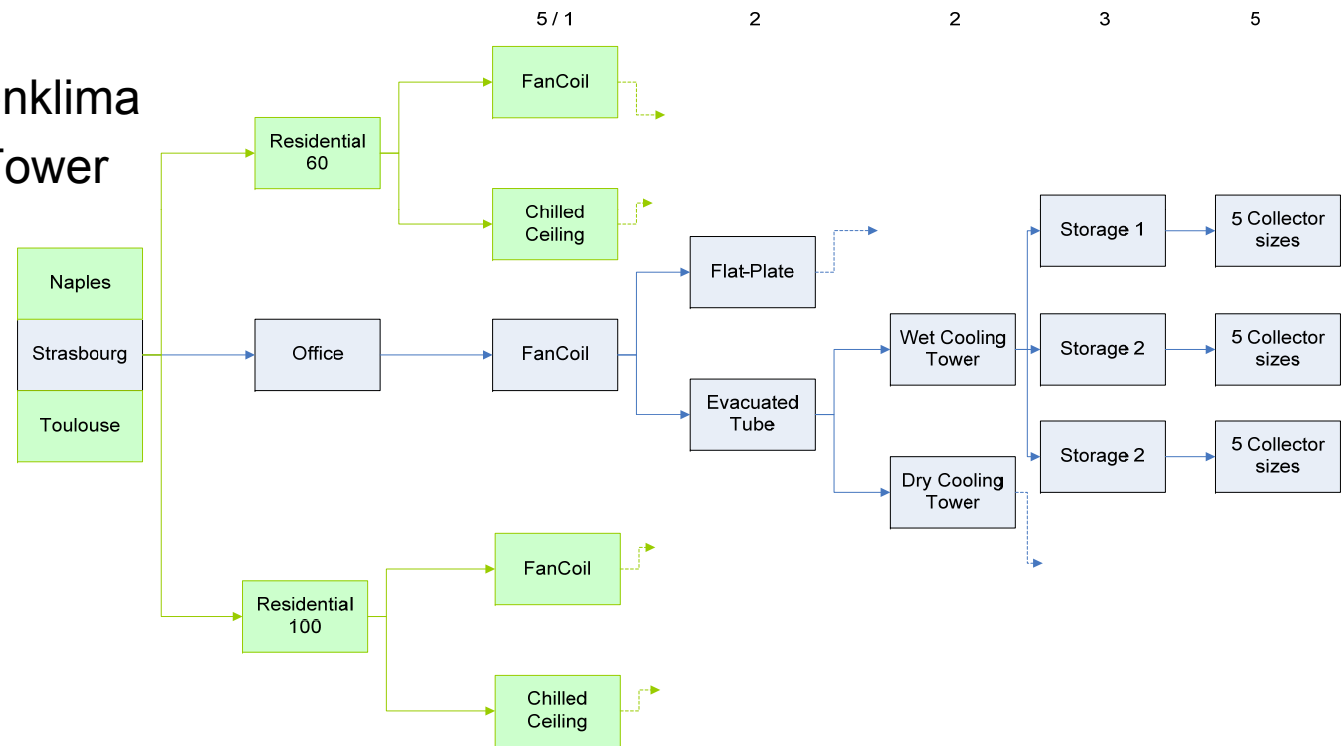
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# WP3: Virtual Case Studies

## Contribution of CRES

- System: C1
- Chiller: Sonnenklima
- Wet Cooling Tower



Total simulations = 330



## WP3: Virtual Case Studies

Current Status  
(Sonnenklima & Wet Cooling Tower)

1<sup>st</sup> Simulation Completed on 26/02/09

- Naples
- Office
- Fan Coils
- Flat Plate Collectors



# WP3: Virtual Case Studies

## Simulation Results:

- Collectors Area = 18 m<sup>2</sup>
- Tank Volume = 0.5 m<sup>3</sup>

<b>q_coll</b>	<b>552.79</b>	<i>kWh/m<sup>2</sup></i>
<b>eta_coll</b>	<b>0.32</b>	-
<b>COP_th</b>	<b>0.60</b>	-
<b>SF_cooling</b>	<b>0.36</b>	-
<b>SF_heating</b>	<b>0.52</b>	-
<b>SF_DHW</b>	-	-
<b>totalcoolingtime</b>	<b>1607.68</b>	<i>h</i>
<b>solarcoolingtime</b>	<b>535.55</b>	<i>h</i>

<b>coolingdemandtime</b>	<b>2468.68</b>	<i>h</i>
<b>waterconsumption</b>	<b>30.07</b>	<i>m<sup>3</sup></i>
<b>Q_aux_total</b>	<b>9075.70</b>	<i>kWh</i>
<b>P_el_total</b>	<b>2285.96</b>	<i>kWh</i>
<b>thermal_COP_el</b>	<b>9.18</b>	-
<b>relBoilerconsumption</b>	<b>0.91</b>	-
<b>ref_COP_el</b>	<b>2.67</b>	-