

IEA SHC Task 53 Kick off meeting

New Generation Solar Cooling & Heating systems
(PV or solar thermally driven)

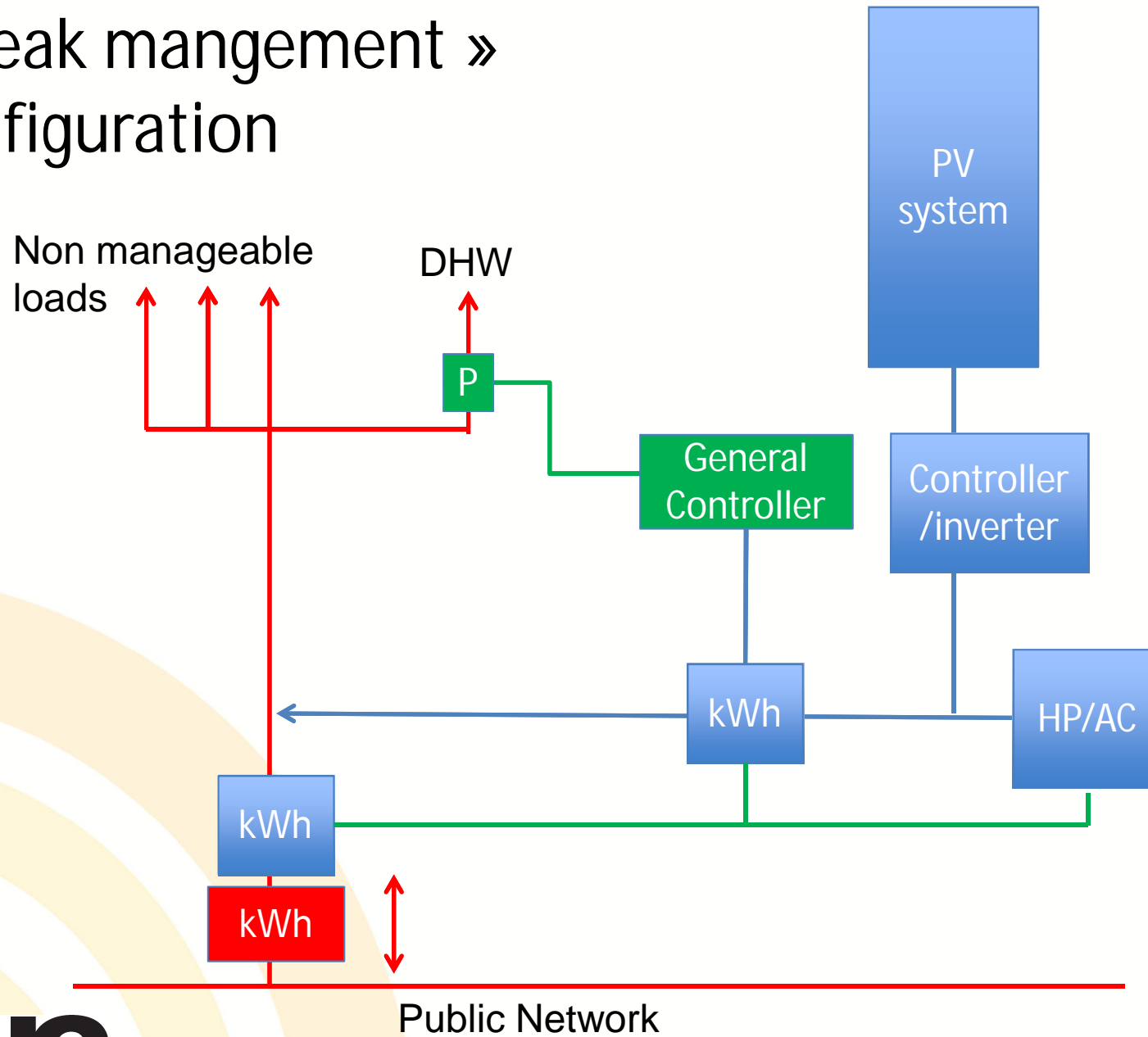
Latest calculations from France



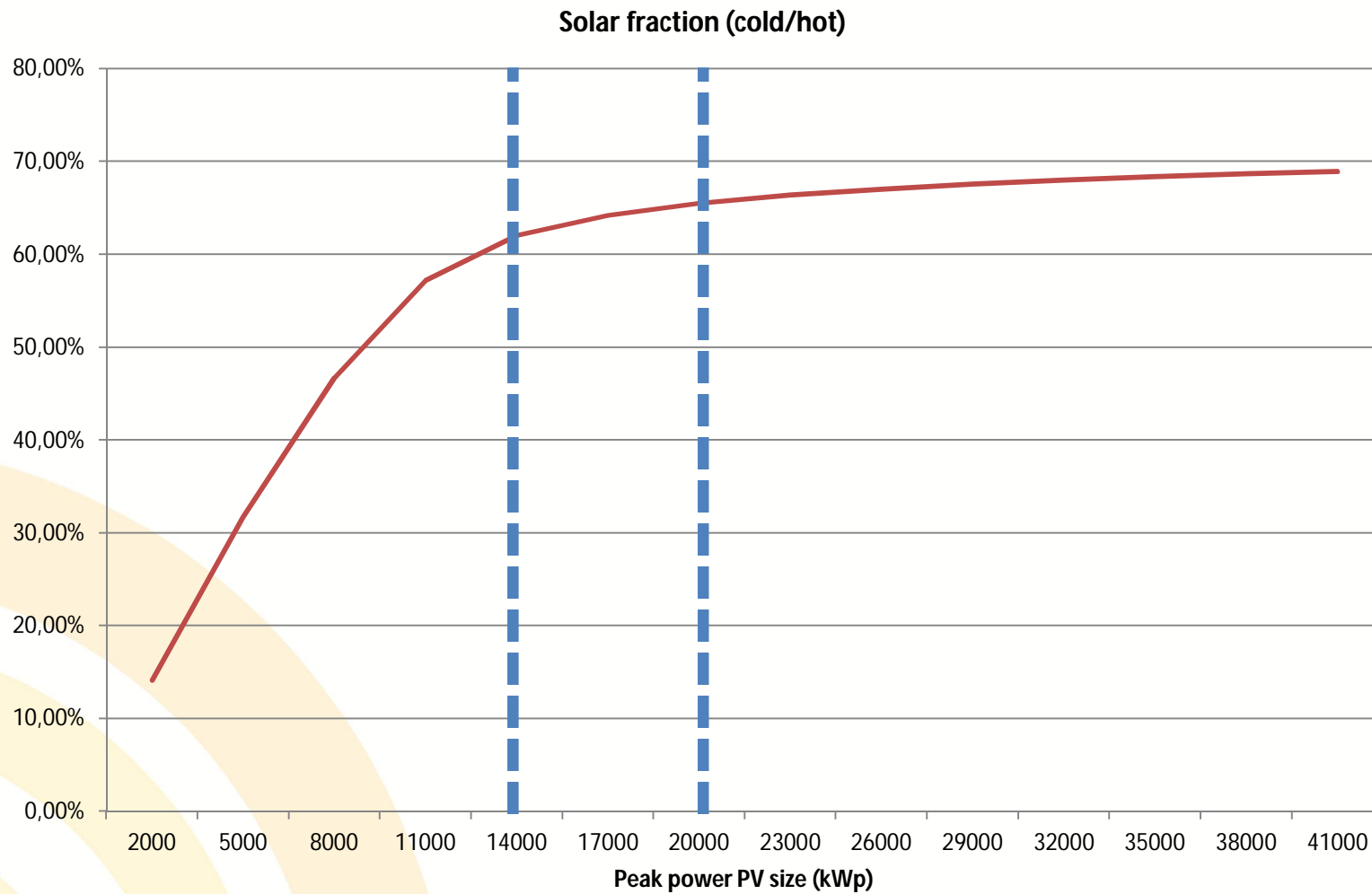
Daniel MUGNIER/Damien Arasa – Vienna, 18/03/2014

- Solar heating/cooling/DHW in Madrid
- Residential building (multifamily)
- Thermal cooling load : 25 kWpeak

« Peak mangement » configuration



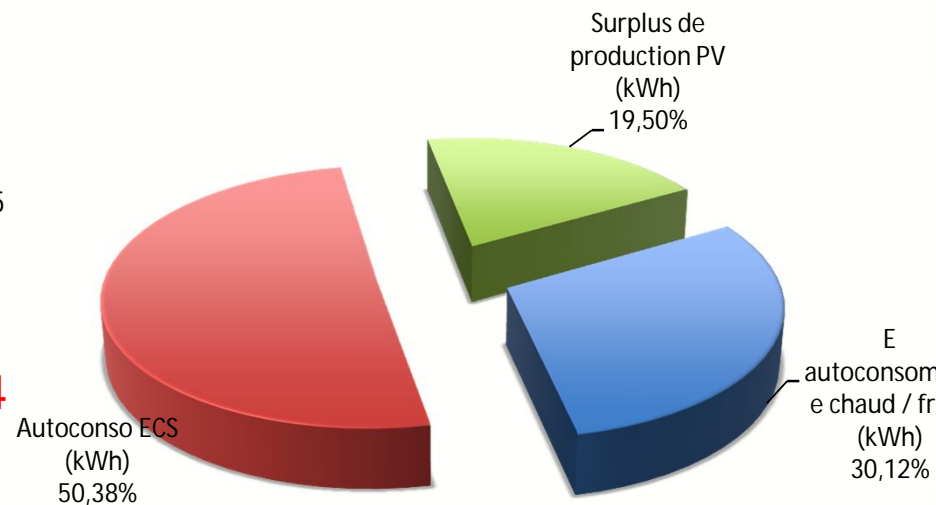
System sizing



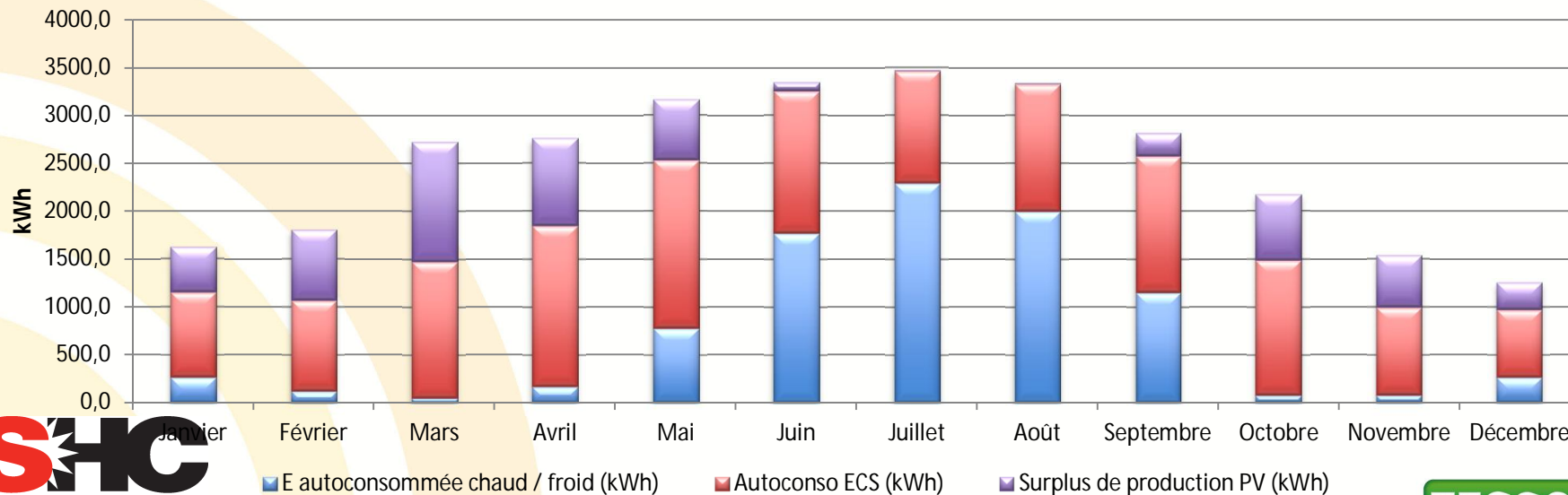
Install	20kWp	
COP	7,25	
besoins électriques annuel	13 765kWh	
besoins thermiques annuel	34 414kWh	ratio de 2,5
Energie réseau pour chaud/froid	4 749kWh	

Summer SEER (june-september) : 10,24

Annual repartition of solar energy

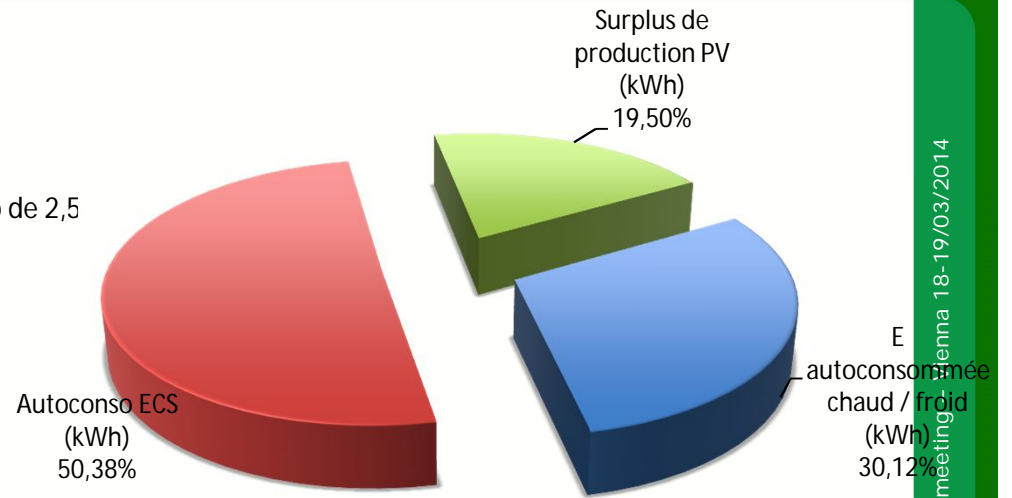


PV production repartition



Install	14kWp
COP	6,59
besoins électriques annuel	13 765kWh
besoins thermiques annuel	34 414kWh
Energie réseau pou chaud/froid	5 226kWh

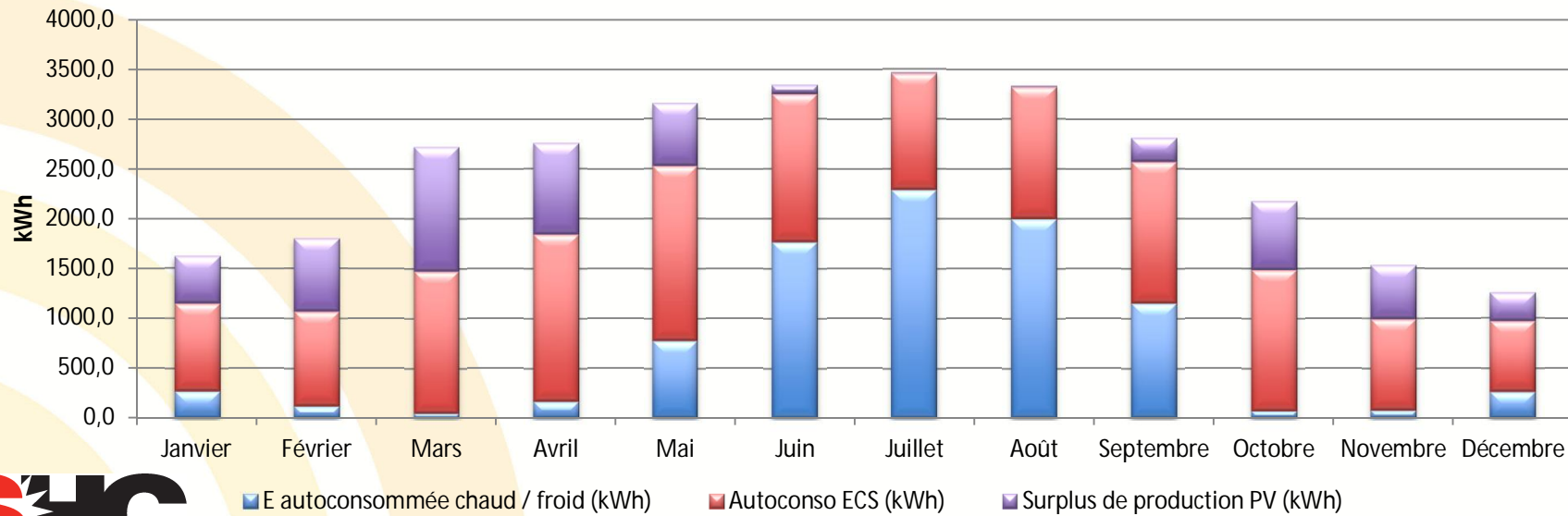
ratio de 2,5



Summer SEER (june-september) : 8,80

Annual repartition of solar energy

PV production repartition



Economical results

Part	Price €HT
PV+structure - 20 kWp	24 000,00 €
Controller/inverters	10 000,00 €
DHW storage tank 400 liters	1 800,00€
HP (modules intérieur et extérieur) - Power 20 kWc	1 5 000,00 €
Installation + wiring	10 000,00 €
Total	60 800,00 €

Payback < 10 years

