



Solar Combi+



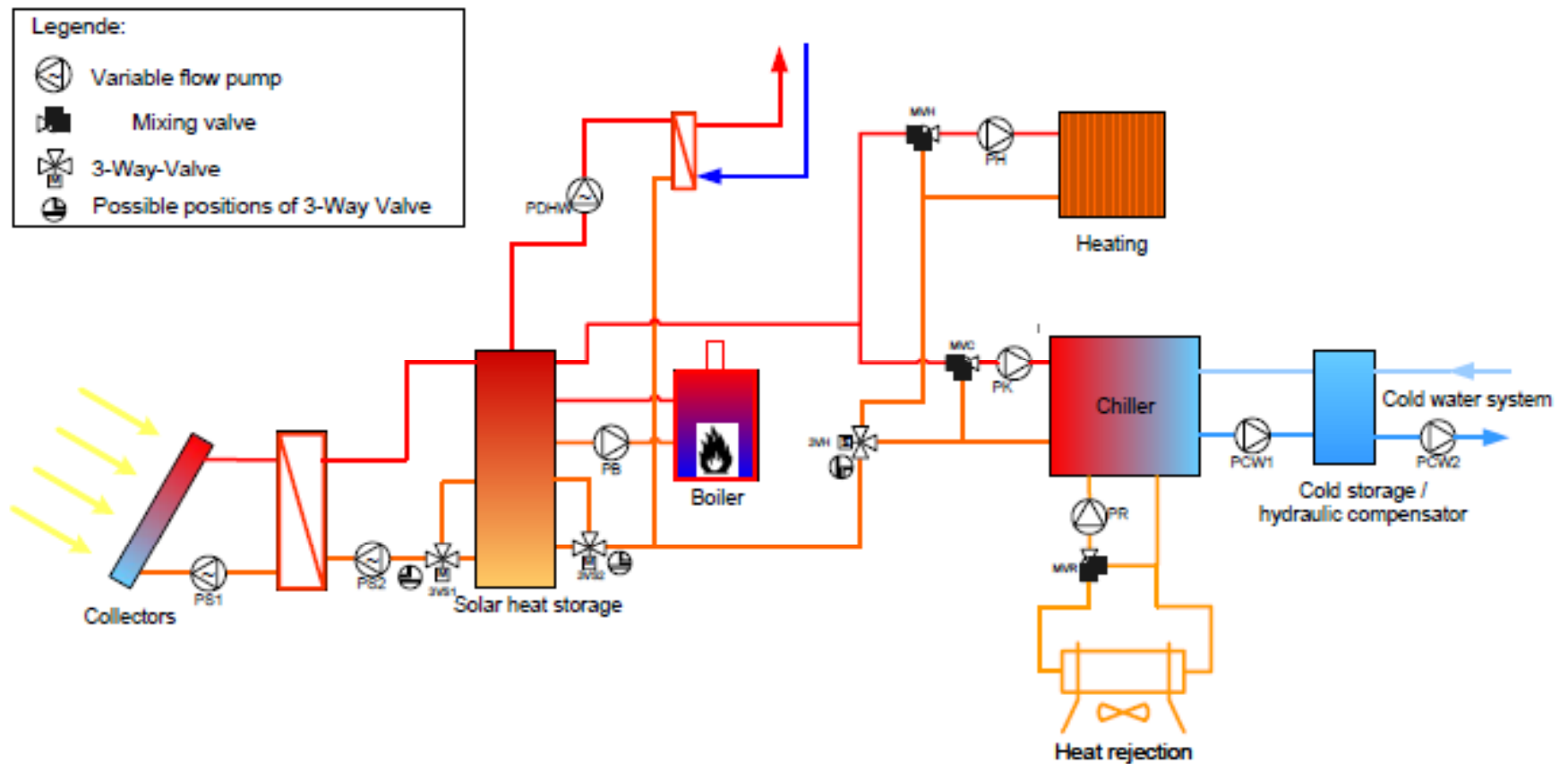
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4th Meeting: 3-4 March 2009, Bergamo

WP 3: Virtual Case Studies

6 System E1



WP 3: Virtual Case Studies

$$A_{\text{cool}} \Leftrightarrow V_{\text{store}} / \text{CC and FC}$$

Pref – EAW SE15

CC: 13.39 kW

FC: 8.95 kW

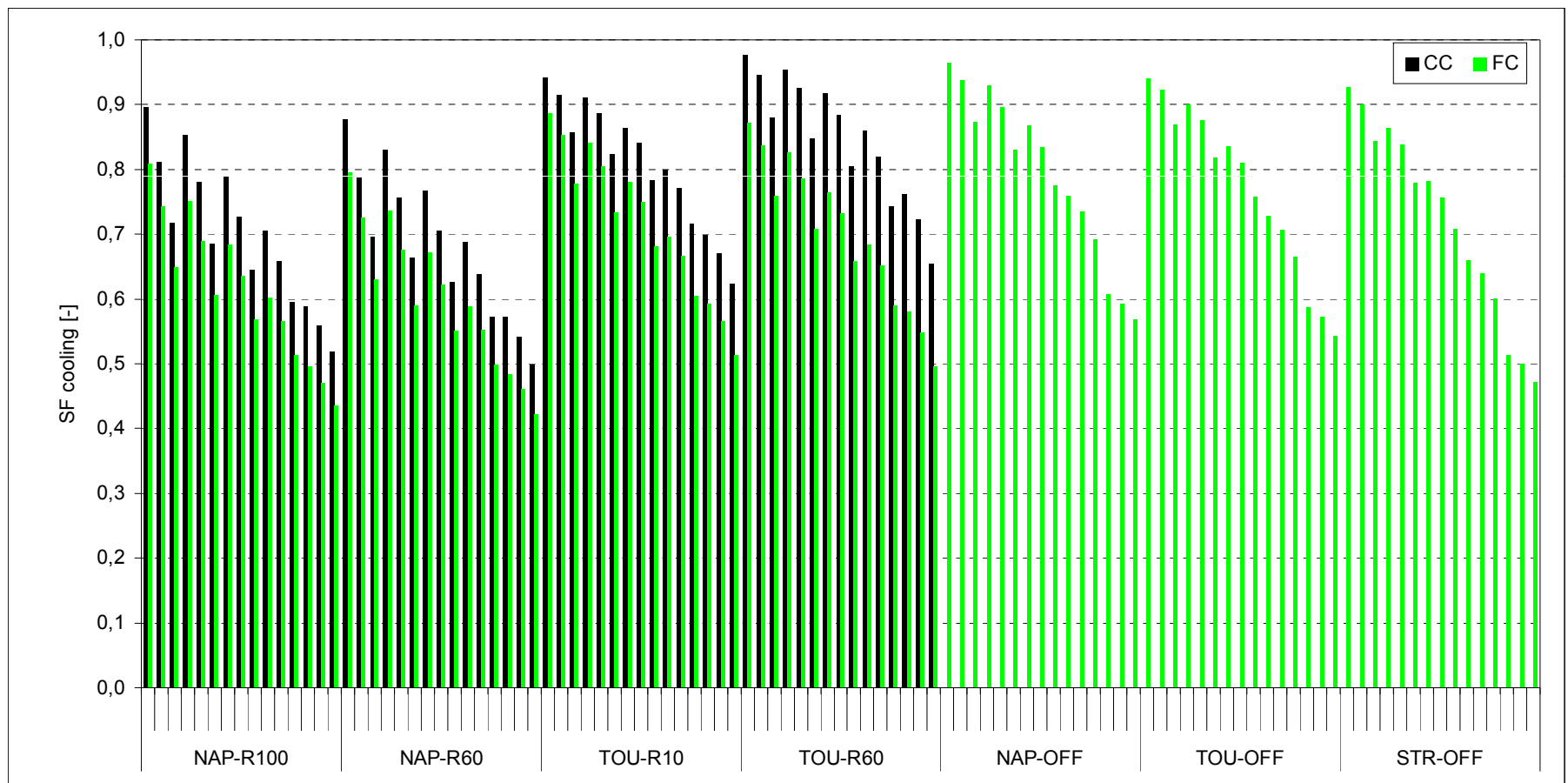
Pref
m ² /kW
2
2,75
3,5
4,25
5

CC	
A_coll [m ²]	V_store [m ³]
67	5,0
67	3,3
67	1,7
57	4,3
57	2,8
57	1,5
47	3,5
47	2,3
47	1,2
37	2,8
37	1,9
37	1,0
27	2,0
27	1,4
27	0,7

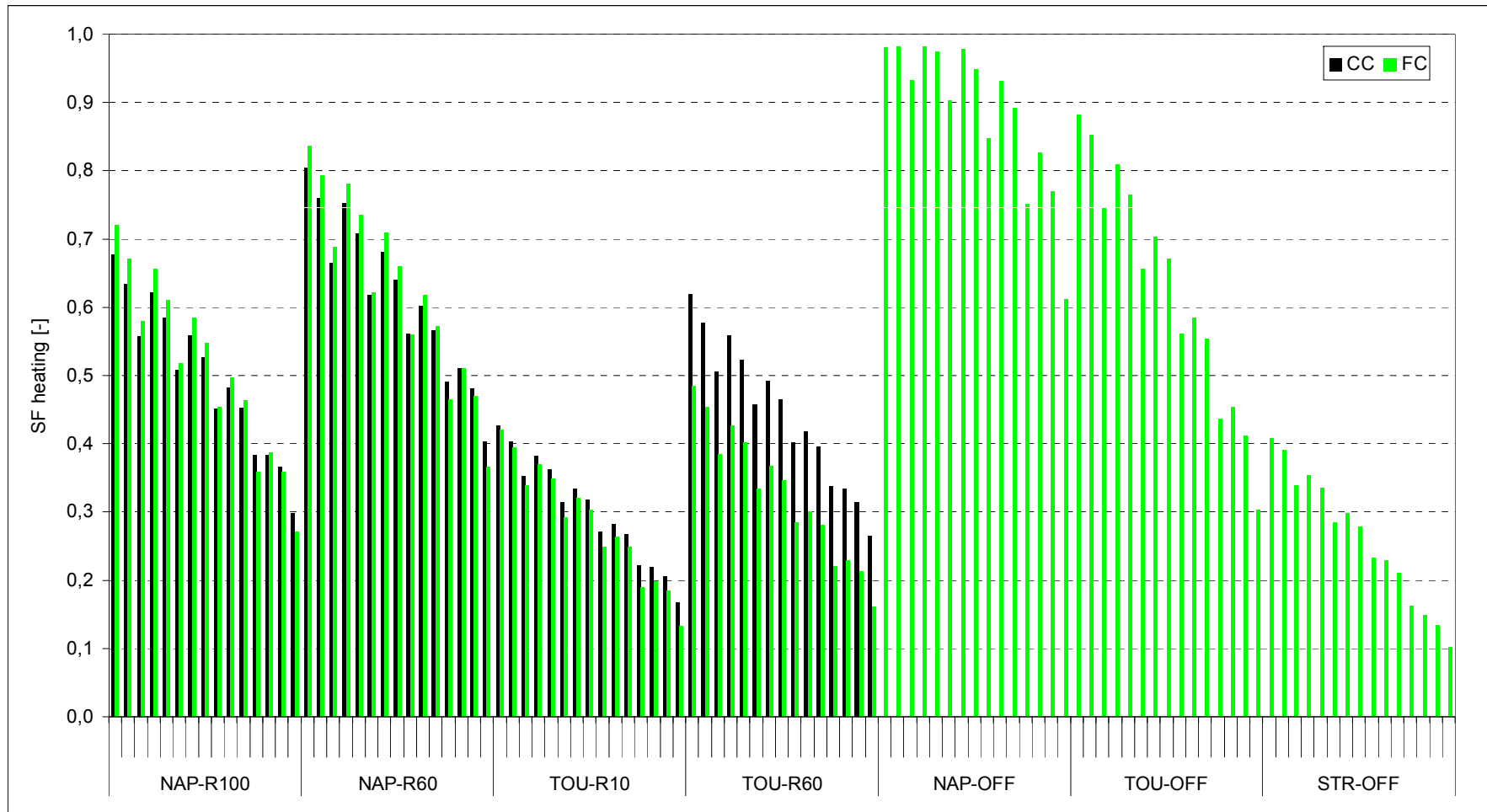
FC	
A_coll [m ²]	V_store [m ³]
45	3,4
45	2,3
45	1,2
38	2,8
38	1,9
38	1,0
31,5	2,3
31,5	1,6
31,5	0,8
24,5	1,9
24,5	1,3
24,5	0,6
18	1,4
18	0,9
18	0,5

no vacuum tubes; no dry cooling

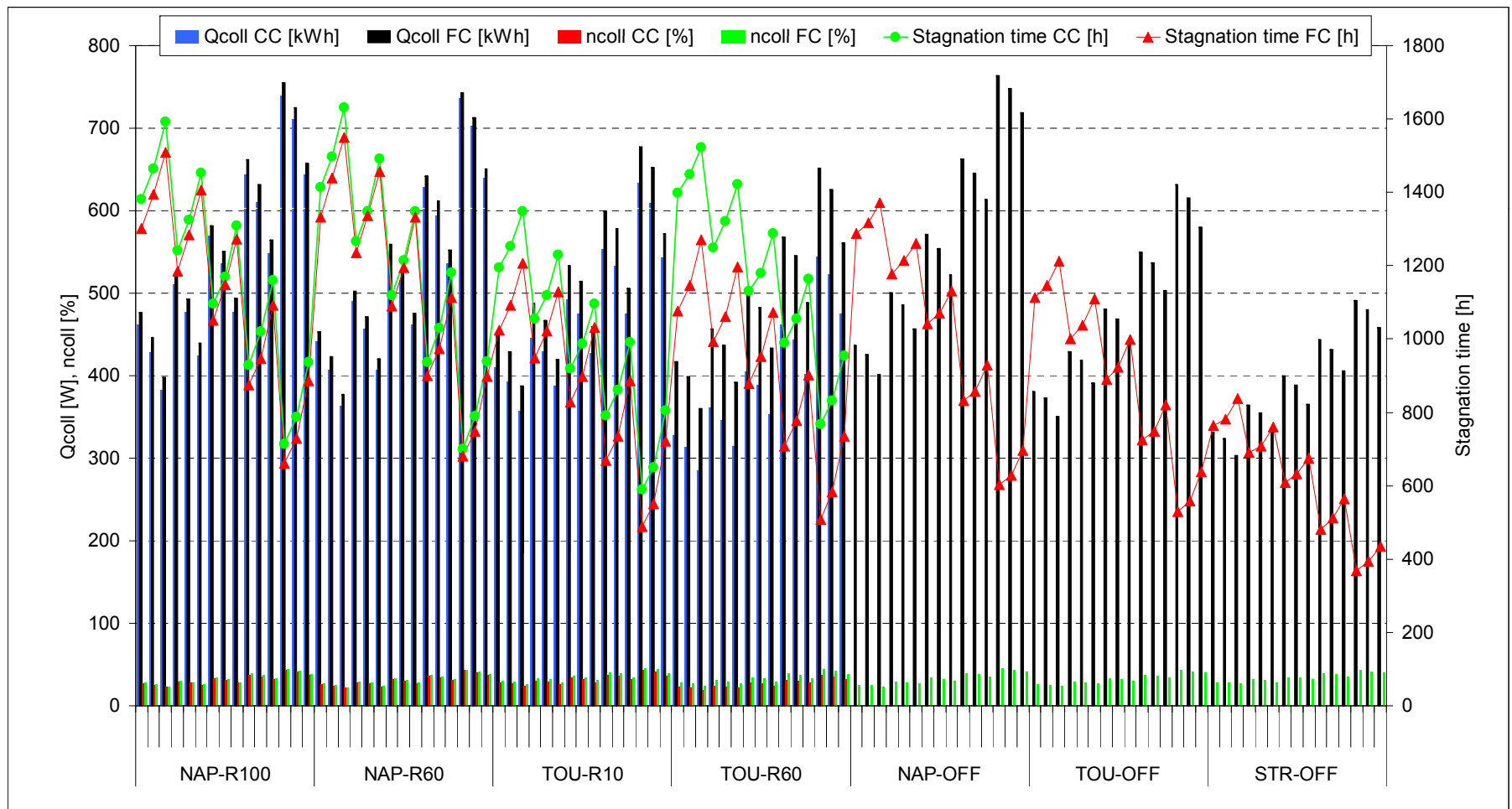
Solar Fraction – Cooling / CC and FC



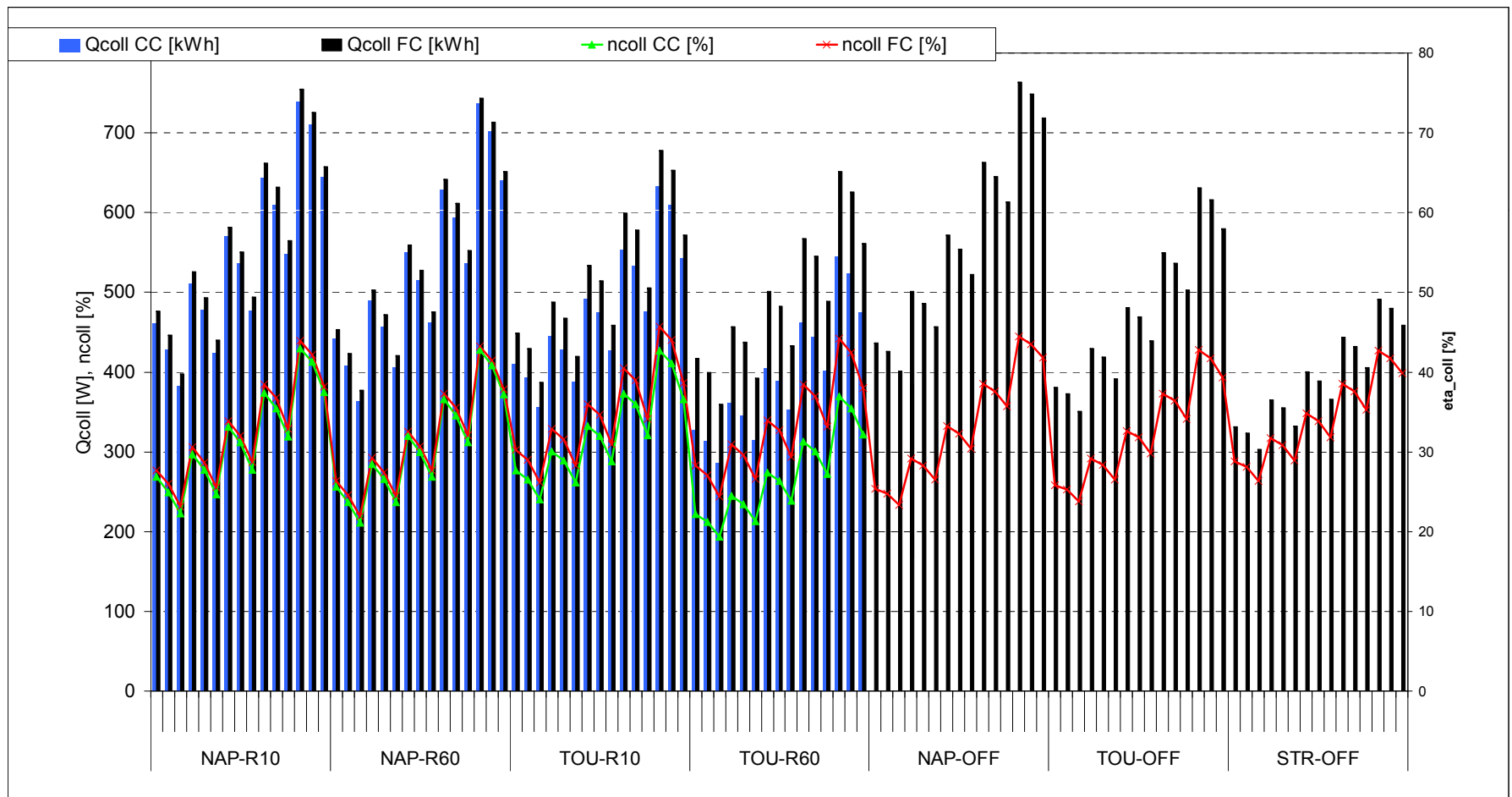
Solar Fraction – Heating / CC and FC



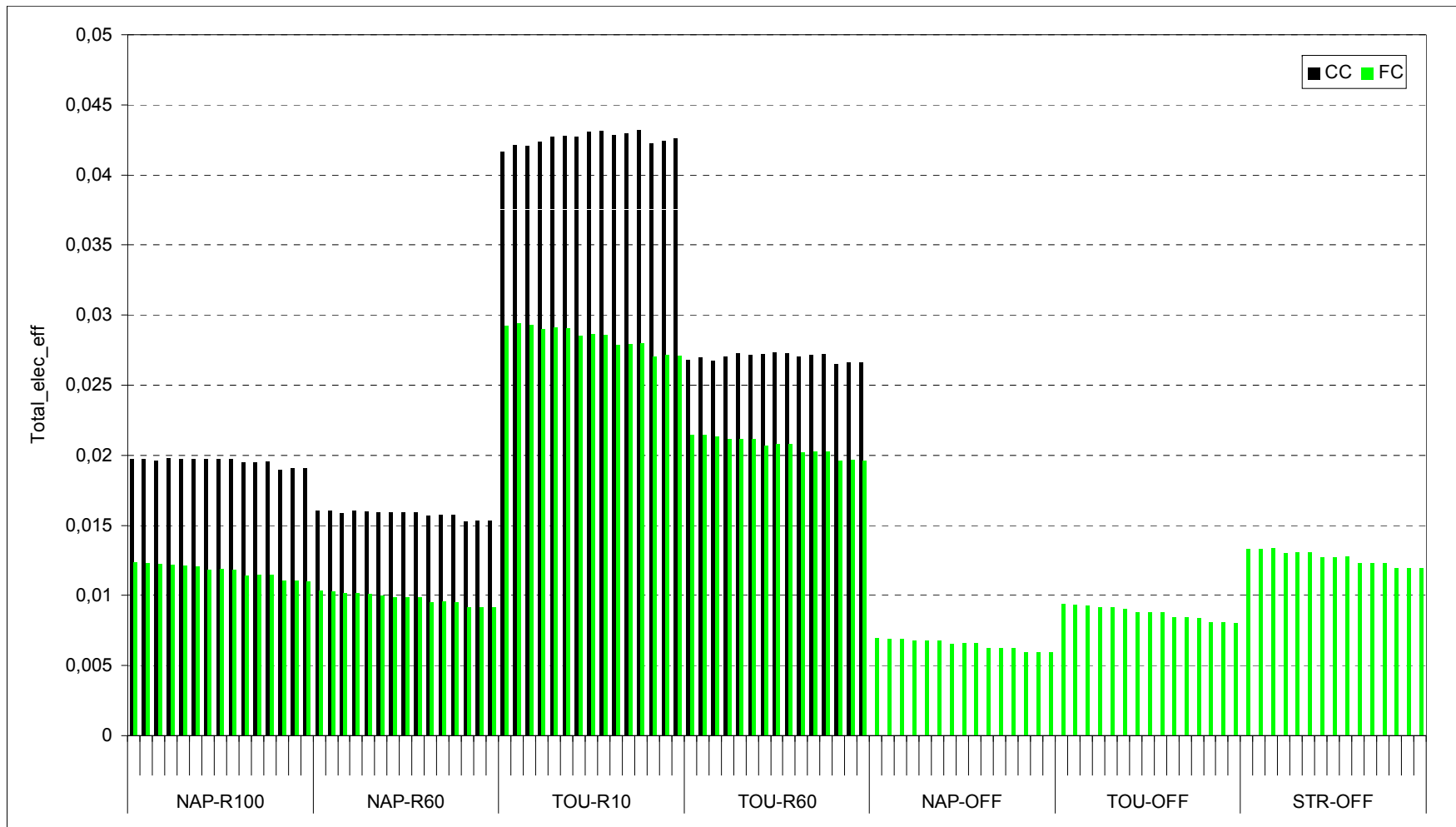
Solar Gain / Eta-Collector / Stagnation / CC and FC



Solar Gain / Eta-Collector / CC and FC



Total Electricity Efficiency / CC and FC





WP 3: Virtual Case Studies



Why R100 (instead of R10) in the Analysis Tool?
COP_thermal = quite high and constant for CC ??
COP_thermal = variable for FC !!

Minor influence of storage volume !?!

WP 3: Virtual Case Studies

COP_{thermal} / large \Rightarrow small / CC \Leftrightarrow FC ?!

