

Cooling demands in buildings in EU28

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EU28 cooling demands according to action 2.3 in the Stratego work programme

Total cooling demand depends on

1. Building floor spaces
2. Specific cooling demands in residential and service sector buildings
3. Saturation rates in residential and service sector buildings

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Content

1. Input: Building floor spaces
2. Input: Specific cooling demands
3. Input: Saturation rates
4. European map of average cooling demands for service sector buildings
5. Average cooling demands in residential buildings
6. Average specific cooling demands in Europe
7. Current cooling demands (2010-12)
8. Total cooling potential
9. Conclusions

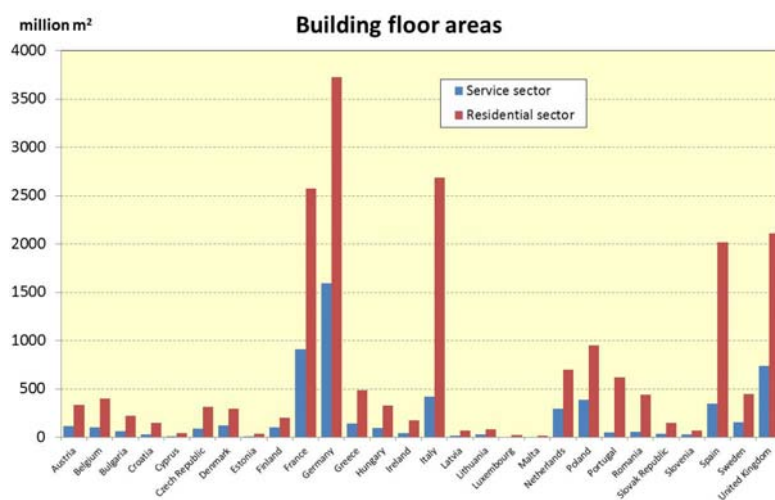
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1. Building floor spaces

6.0 billion m² in the service sector and 19.7 billion m² in the residential sector.

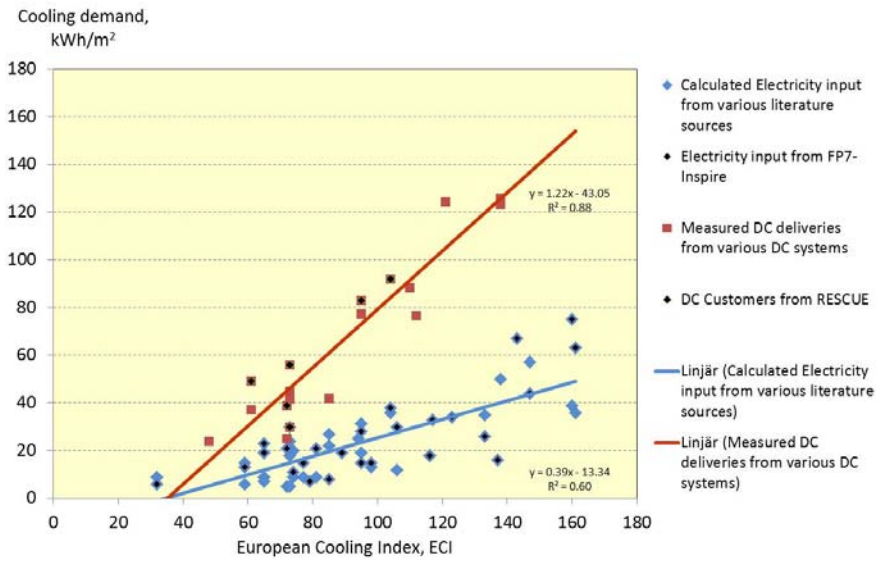


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2. Specific cooling demands: Service sector

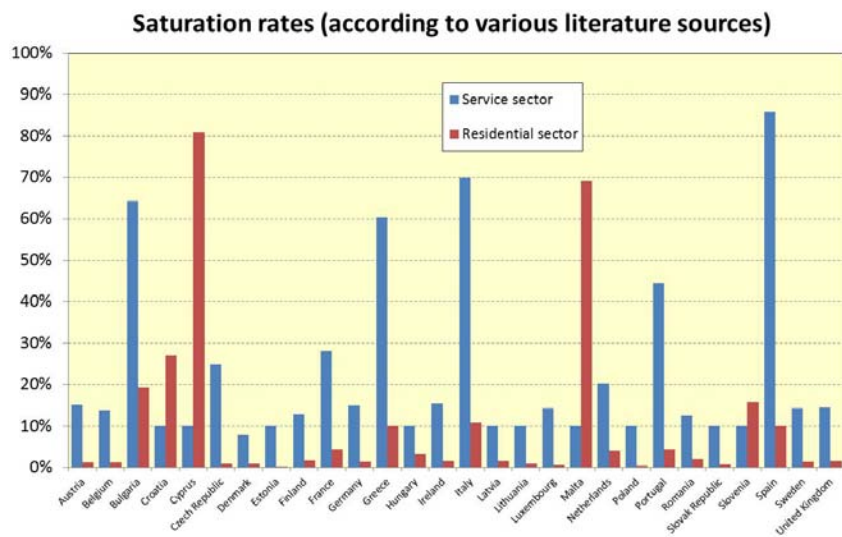


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3. Estimated saturation rates



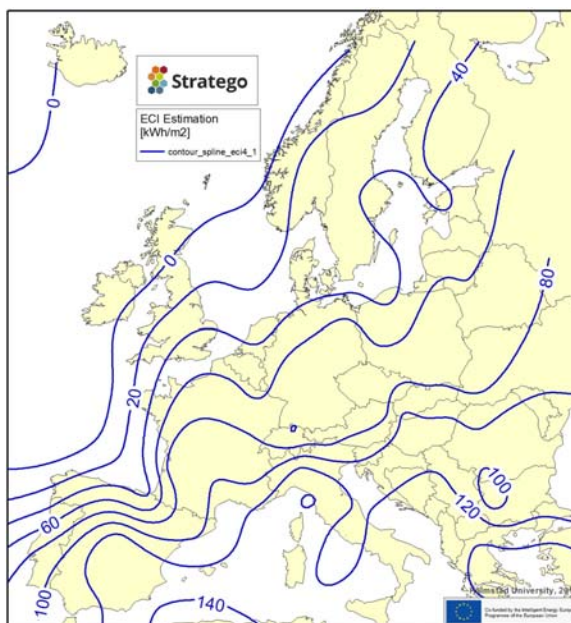
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4. European map with average specific cooling demands

Average specific cooling demands for service sector buildings based on 80 European locations with estimated ECI



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5. Average cooling demands in residential buildings

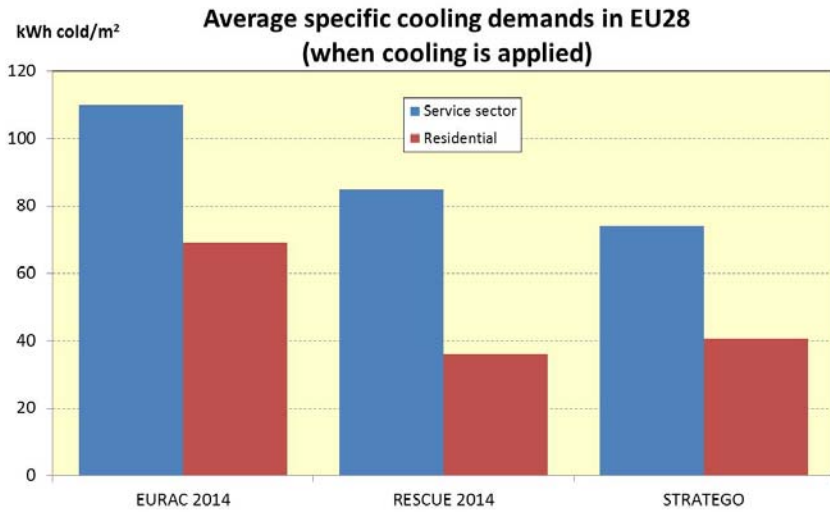
- Few actual measurements of cooling demands in the residential sector, since very low saturation rates in many countries.
- Simple assumption: Cooling demands in the residential sector is about half of the cooling demands in the service sector (estimation from other publications)

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6. Average specific cooling demands in Europe

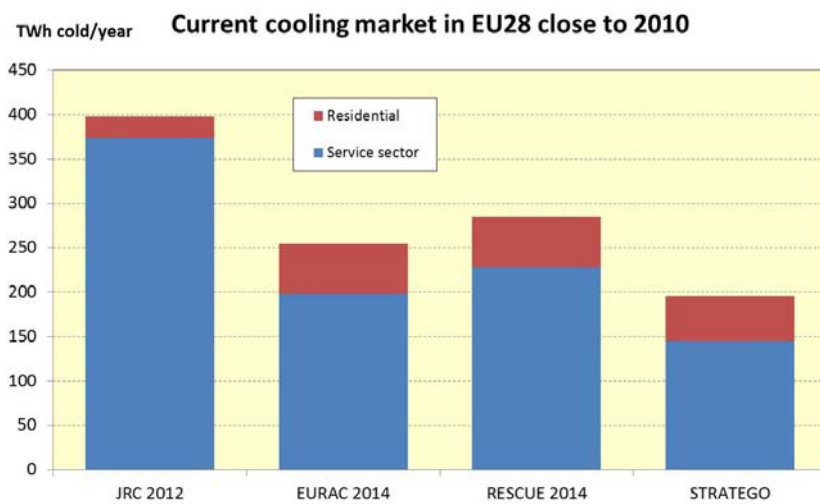


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7. Current cooling demands in Europe

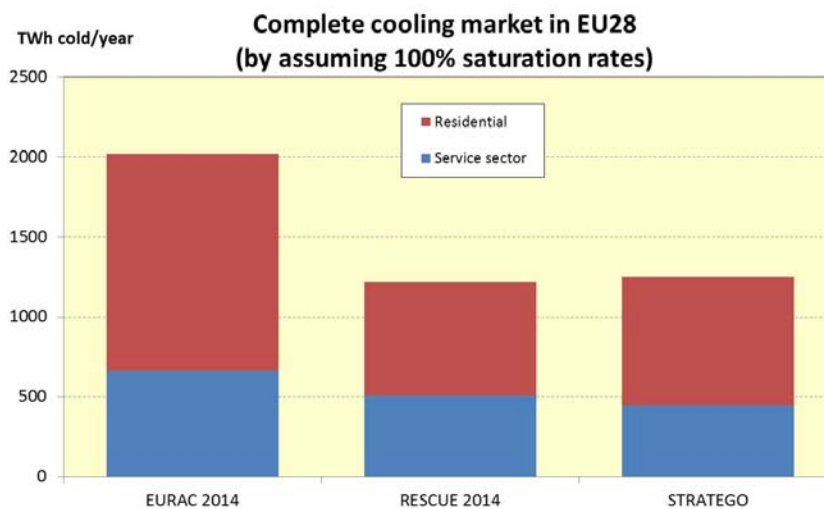


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8. Potential cooling demands in Europe



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9. Conclusions

- Based on about 20 annual measurements of district cooling deliveries and about 50 estimations of electricity inputs to various cooling devices.
- Comparisons of inputs indicate average SEER of about 3.1
- Our estimations are somewhat lower than other recent estimations of the EU28 cooling market.

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