



**Task 45 Large Systems**



**First Semi-Annual Status Report**

**Large Systems**

**Large solar heating/cooling systems,  
seasonal storages, heat pumps**

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**Annex**  
January 10, 2011

Editor: JE Nielsen

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**Work Plan, revision 2**  
May 22, 2011

Editor: JE Nielsen

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Subtask A: Collectors and collector loop



**Detailed Work Plan Subt:**  
May 18, 2011

Editor: Simon Furbo

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**Detailed Work Plan Subtask C, revision 1**  
May 17, 2011

Editor: Sabine Putz



## Task 45 Large Systems



## Task 45 in short

### Overall objective

- ❑ Assist in a strong and sustainable market development of large solar heating and cooling systems.

### Scope

- ❑ "MW size": Collector field  $> 0.5 \text{ MW} \approx 700 \text{ m}^2$
- ❑ Focus on district heating applications (but district cooling not excluded)
- ❑ Includes seasonal storage and heat pumps (chillers)

### Time schedule

- ❑ 3 years



## Task 45 Large Systems



## Progress report

- ✓ Restructuring - from 4 sub tasks to 3 subtasks.
- ✓ Co-ordination with upcoming tasks on industrial application and cooling
- ✓ First Task meeting (Barcelona April 2011)
- ✓ Detailed planning of activities - discussed and agreed at the Task meeting
- ✓ Common workshop with Task 44 (solar & heat pumps - the Task meeting was held in conjunction to a Task 44) meeting - and in between the two Task meetings a common workshop was organized.
- ✓ Establishing website



## Restructuring

- |                                      |                                   |                    |
|--------------------------------------|-----------------------------------|--------------------|
| ✓ Subtask A (DTU/DK)                 | Collector fields                  | No changes         |
| ✓ Subtask B (SOLITES/DE)             | Storages                          | Delayed start      |
| <del>✓ Subtask C (SOLID/AT)</del>    | <del>Heat pumps / chillers:</del> | <del>Deleted</del> |
| <del>✓ Subtask D (Chalmers/SE)</del> | →                                 |                    |
| ✓ Subtask C (SOLID/AT)               | Systems                           | Changed leader     |



## Task 45 Large Systems



## Co-ordination with upcoming tasks

### News tasks underway:

- Industrial applications
- Cooling / air-conditioning

### Outcome of constructive discussions:

- Task 45 will focus on district heating systems (however district cooling systems are still within scope)
- Task 45 will deal with the issues related to large collector fields
- Task 45 will focus on large storages (seasonal storages)
- The OA's of the three tasks will continuously coordinate activities to avoid overlap and double work.



## Task 45 Large Systems



## Meetings and workshops

### Done

- ✓ **Kick-off meeting in Barcelona – April 2011**
  - 32 experts from 9 countries
- ✓ **Joint workshop with Task 44 (Heat Pumps) in Barcelona**

### Next

- **Next meeting Canada – October 2011**

## Website

- ✓ **Running well – thanks to Randy**



**Task 45 Large Systems**

**Status of participation**

**From last ExCo meeting:**

| Country     | Maybe | Yes | Participation Letter |
|-------------|-------|-----|----------------------|
| Austria     |       | X   |                      |
| Canada      |       | X   |                      |
| Denmark     |       | X   |                      |
| Germany     |       | X   |                      |
| Spain       |       | X   |                      |
|             |       |     |                      |
| Belgium     | X     |     |                      |
| Netherlands | X     |     |                      |
| Norway      | X     |     |                      |
| Sweden,     | X     |     |                      |
| Switzerland | X     |     |                      |
| USA         | X     |     |                      |
|             |       |     |                      |



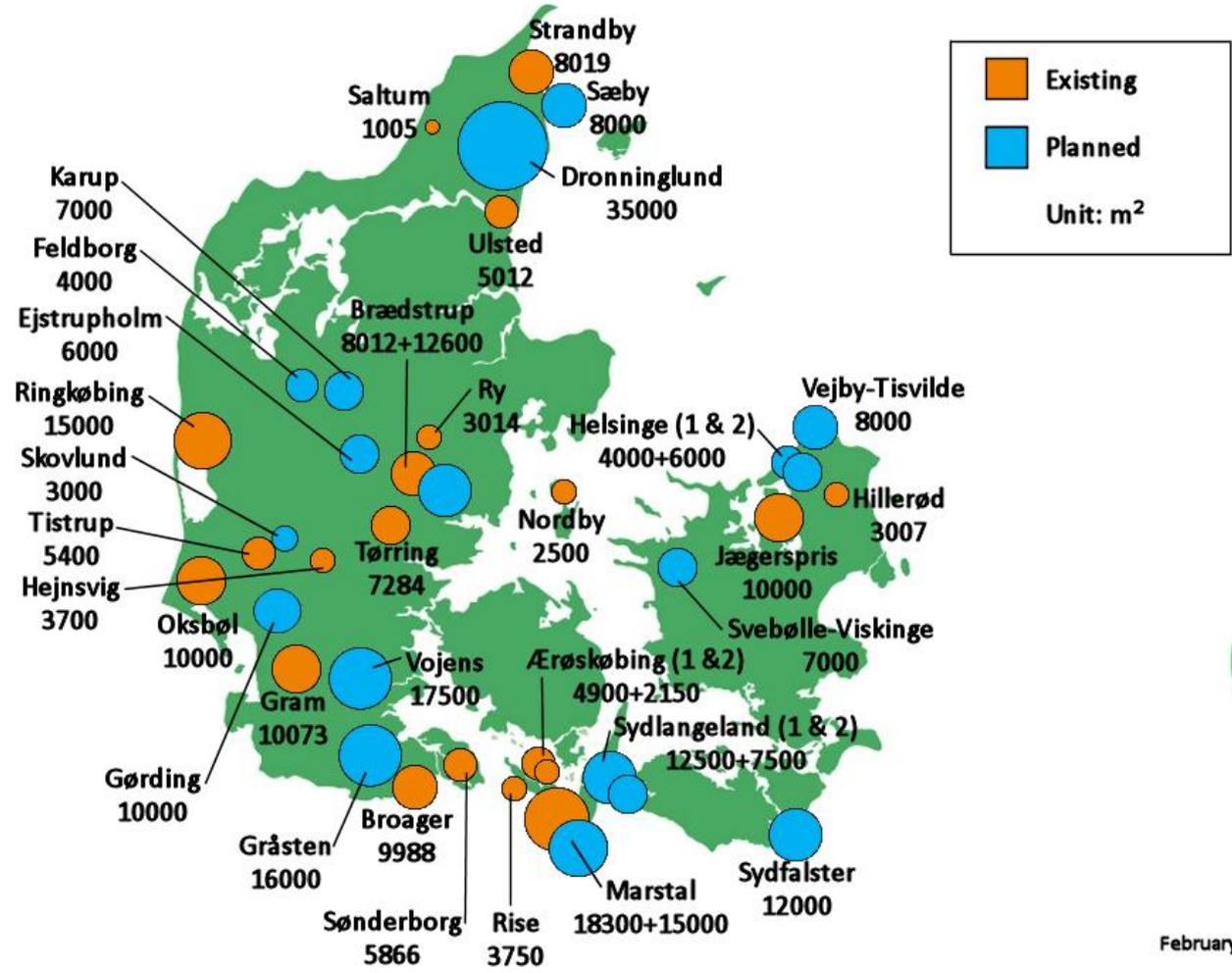
## Issues for the ExCo

- **Structural changes**
  - ❖ from 4 to 3 subtasks
  
- **Late start of subtask B**
  - ❖ half a year delay
  
- **Scope limitation due to coordination with new tasks on industrial applications and cooling/air-conditioning**
  - ❖ focus on district heating



**Task 45 Large Systems**

**Solar district heating in Denmark**



February 2011