TU/e Energy Landscape

Overview of energy research, including TRL level & cooperation

v1.0 (July 2015)
Introduction to the **energy landscape** of the TU/e

- One of the goals of **strategic area Energy** is to enable mutual learning and stimulate internal cooperation between the various research groups that work on the many aspects of the societal challenge ‘sustainable energy’

- For this reason we’ve made an overview of energy research that is performed at our university: **the energy landscape**

- For all topics also the **TRL range** of the work is indicated (slide 6)

- Finally a matrix shows the **main cooperation** between the various groups (slide 7)
Because of the huge variation in topics and fields of interest we’ve use an **external framework** to map all research projects; the five energy domains:

- Generation – Storage – Conversion – Distribution – Efficient usage

A total of **12 clusters** is used to further structure the work

Research topics are presented on **capacity group level**, meaning individual staff members are not mentioned

- Thickness of the lines indicates the number of projects ongoing
- Topics are described in **relatively general terms**, to facilitate readability by non-experts

On the last slide, the same research is shown, clustered by our **new four energy themes** (as also used in our annual research report 2014)

- Solar PV – Chemergy – Urban Energy – Nuclear Fusion
Energy domains: general description

**Generation**
- Mining (fossils), Electricity (wind, solar, hydro, ..), Nuclear, Heat, ...

**Storage**
- thermal, chemical, electrical, mechanical, electrochemical, ...

**Conversion**
- electricity from fossils, biomass, hydrogen / syngas production, ...

**Distribution**
- electricity grid, heat grid, gas network, ...

**Efficient usage**
- heating, cooling, lighting, industry, transport, ICT, ..
Cooperation in current TU/e research

Green cells represent ongoing cooperation between groups. The darker the shade, the more intensive is the cooperation.