



Ministry of Economic Affairs,  
Agriculture and Innovation



# Dutch energy innovation: a new approach

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Ministry of Economic Affairs,  
Agriculture and Innovation

Dutch energy innovation | June 19, 2012



# Agenda

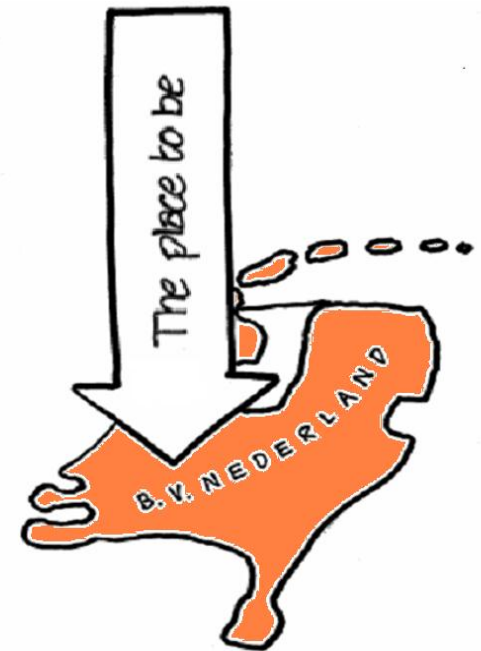
- Dutch policy on innovation
- Topteam Energy
- Innovation in solar energy





## New Industry and Innovation policy

- Ambition: the Netherlands in top-5 of Global Competitiveness Index of the World Economic Forum (2010: 8, 2011: 7)
- R&D at 2.5% of GDP (currently: 1.8%)
- Intensified collaboration between industry and knowledge centres by means of public-private partnerships





## First policy line: generic

- Less subsidies, more generic tax reductions: research and development deduction (RDA)
- Improved access to financing: Innovation fund MKB+ (credits and seed capital, later-stage capital)
- Fewer obstructing rules and regulations





## Second policy line: top sectors



- Industry and researchers in charge: demand-driven
- “Golden Triangle”: industry, knowledge centres and government (incl. local and regional gov.) form Top-consortia for Knowledge and Innovation (TKI), at least 40% financed by industry
- A common research and innovation agenda (innovation contracts) based on societal challenges and economic opportunities
- Extra R&D deduction for industry that participates financially in TKI: deduction for non-personnel costs



7 Energy focus areas / TKI:

1. solar
2. offshore wind
3. gas
4. industrial efficiency
5. efficiency in built environment
6. bio energy
7. smart grids



# Energy innovation

Seven 'innovation contracts' and seven TKI's (Top-consortia for Knowledge and Innovation) responsible for R&D-programmes

Key issues:

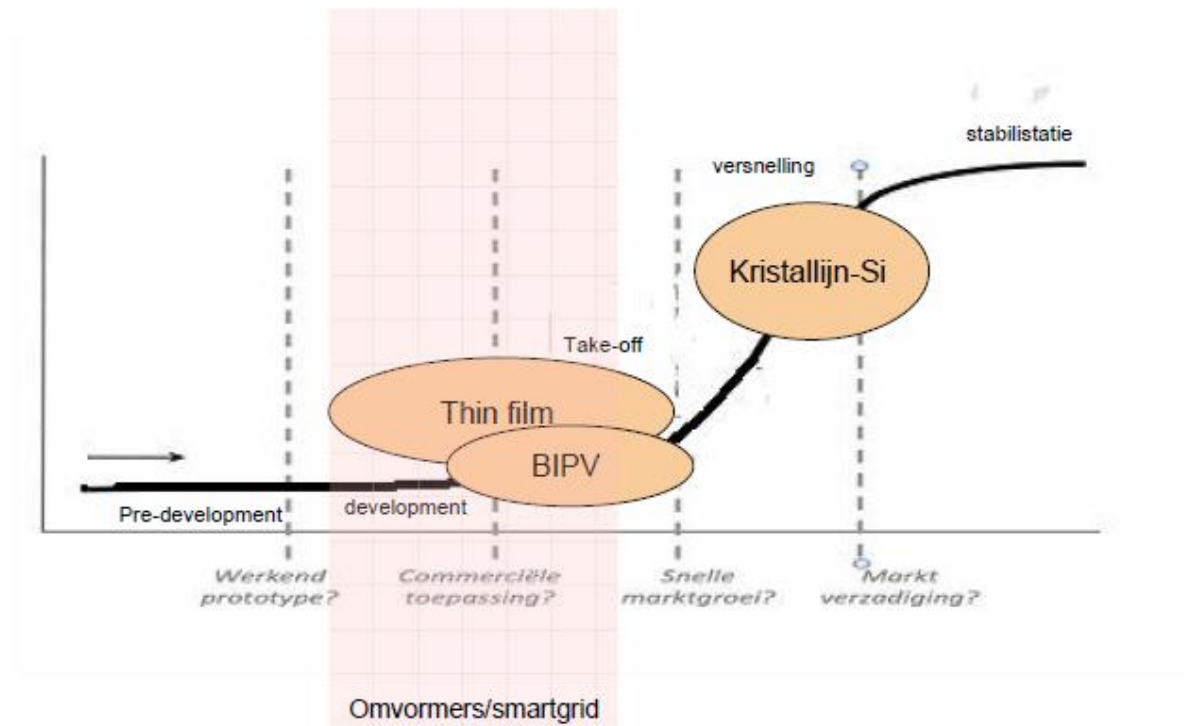
- R&D programmes (demand driven)
- Human capital agenda
- International cooperation and marketing

Current situation:

- Legal formation TKI's
- Start-up R&D-lines
- Making regulations for financial support



# Where is Solar in the innovationprocess

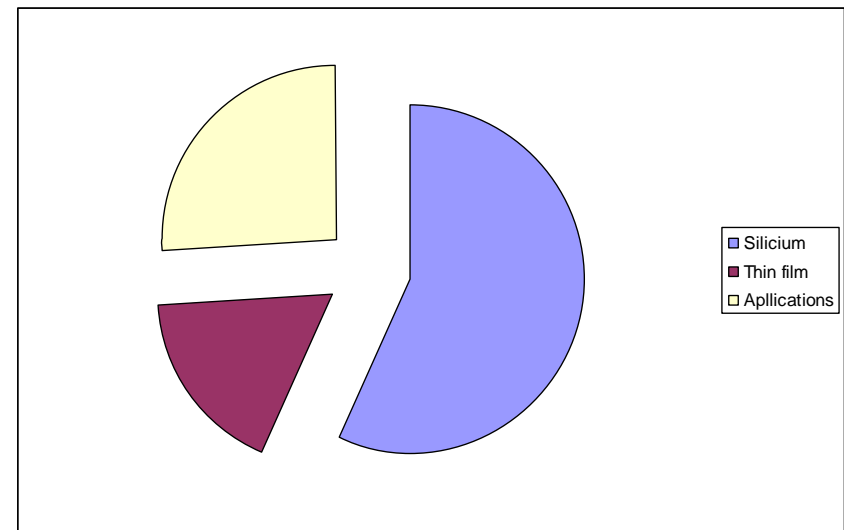
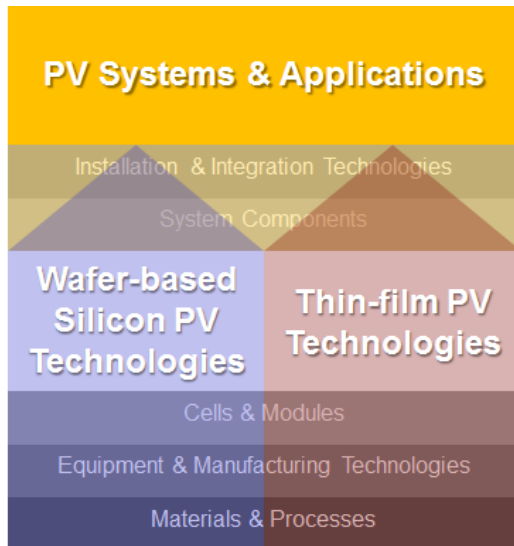






# Innovation contract Solar Energy

- 60 companies (production, machines, applications, etc)
- Universities, NWO, ECN, TNO, etc
- € 100 million private funding (cash and in kind) – 4 years
- Public funding: specific, ECN, TNO, NWO





## R&D lines in innovation contract Solar

### Solar Energy Applications:

- Building integrated photovoltaics
- Prefab solar roofs
- Integration of PV into infrastructure

### Silicium

- High performance PV modules
- Enabling industrial manufacturing technology

### Thin film

- Inorganic thin film modules (CIGS, thin film Si, CdTe, III-V)
- Organic thin film modules (focus on roll-to-roll manufacturing)



## International co-operation

- NL supports initiatives from industry and research to join forces with international peers
- Urban environment will be at the heart of challenges and opportunities: towards smart cities
- Major challenge lies in tackling (behavioural) factors behind real energy use and providing ways to influence this





# Questions



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