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Self-consumption and Net-metering schemes in Europe

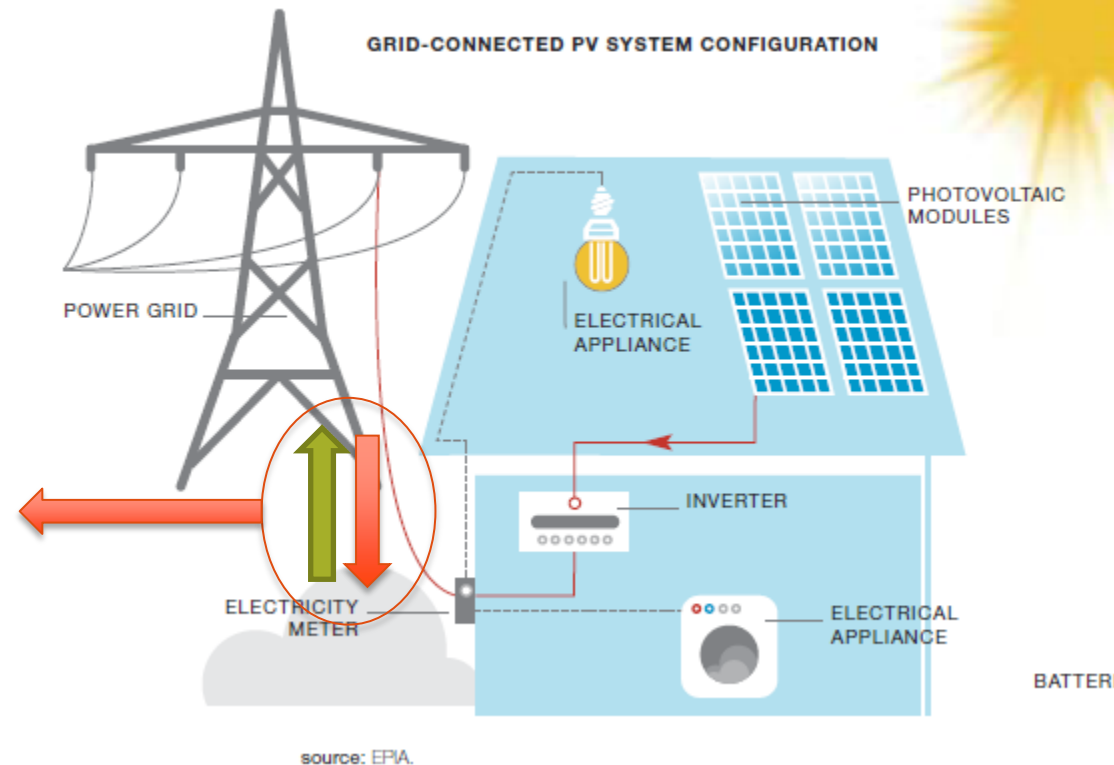
International PV Associations Meeting

Munich, 13 June 2012



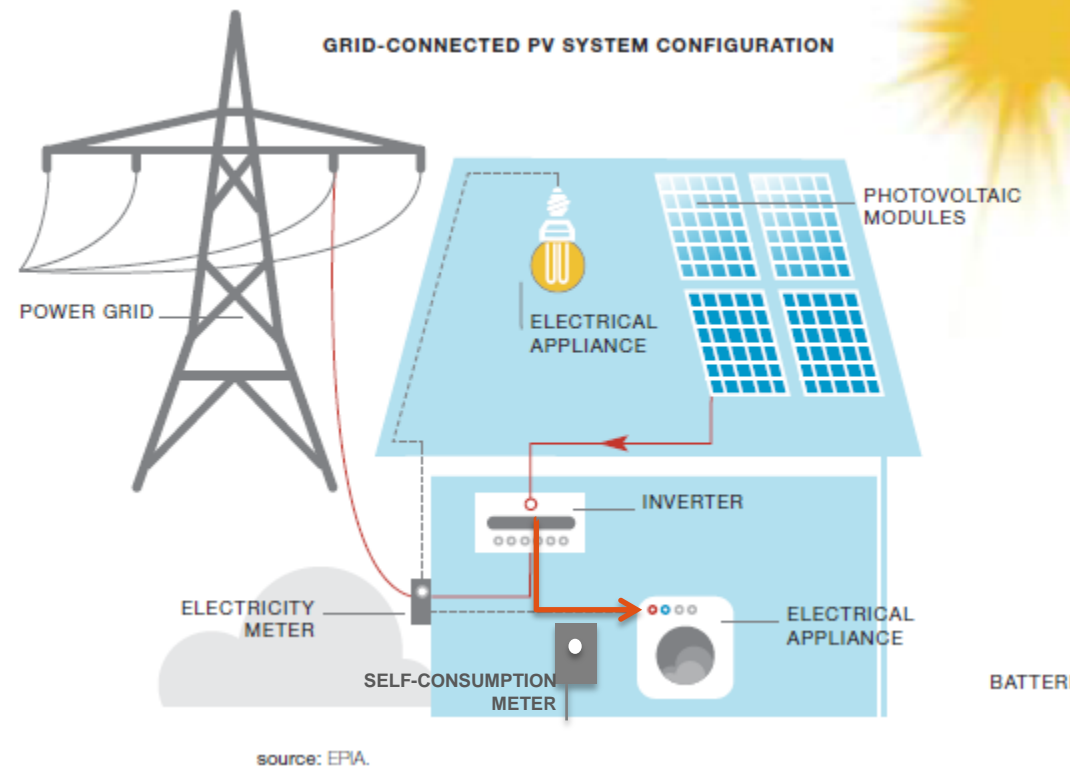
NET METERING

- Netting of PV production in excess and additional electricity demand **OVER A LONG PERIOD** (month/year)
- (Meter is turning backwards)
- Simple billing/calculation arrangement
- Incentive = savings



SELF-CONSUMPTION

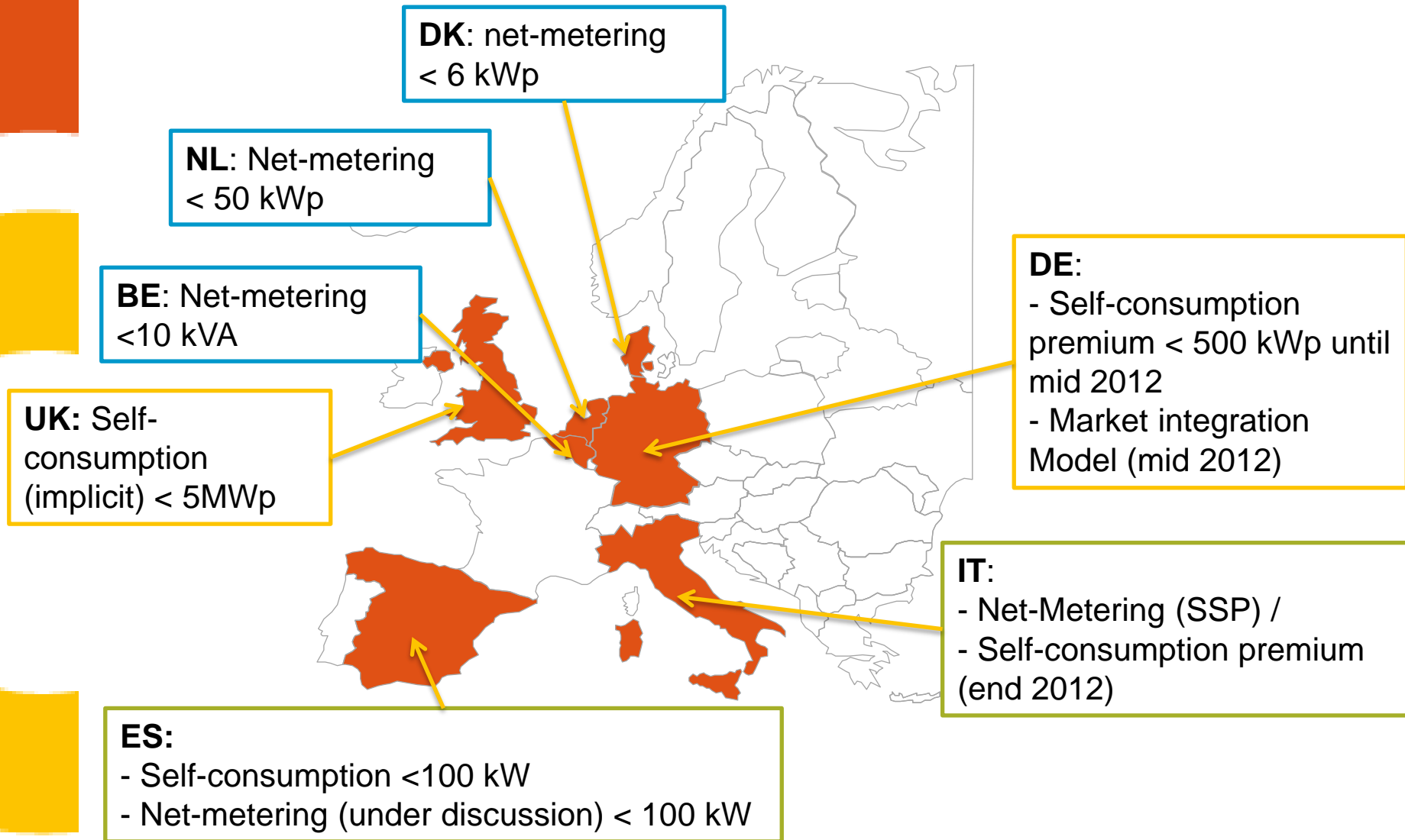
- Self-consuming PV production is natural:
- It corresponds to the PV production that a « prosumer » consume in **REAL TIME**
- **Two types of policy incentives:**
 - Direct: Self-consumption premium
 - Indirect: limit to fed-in electricity (Market integration model, Germany)



Residential « Prosumer »: Consumption vs Production



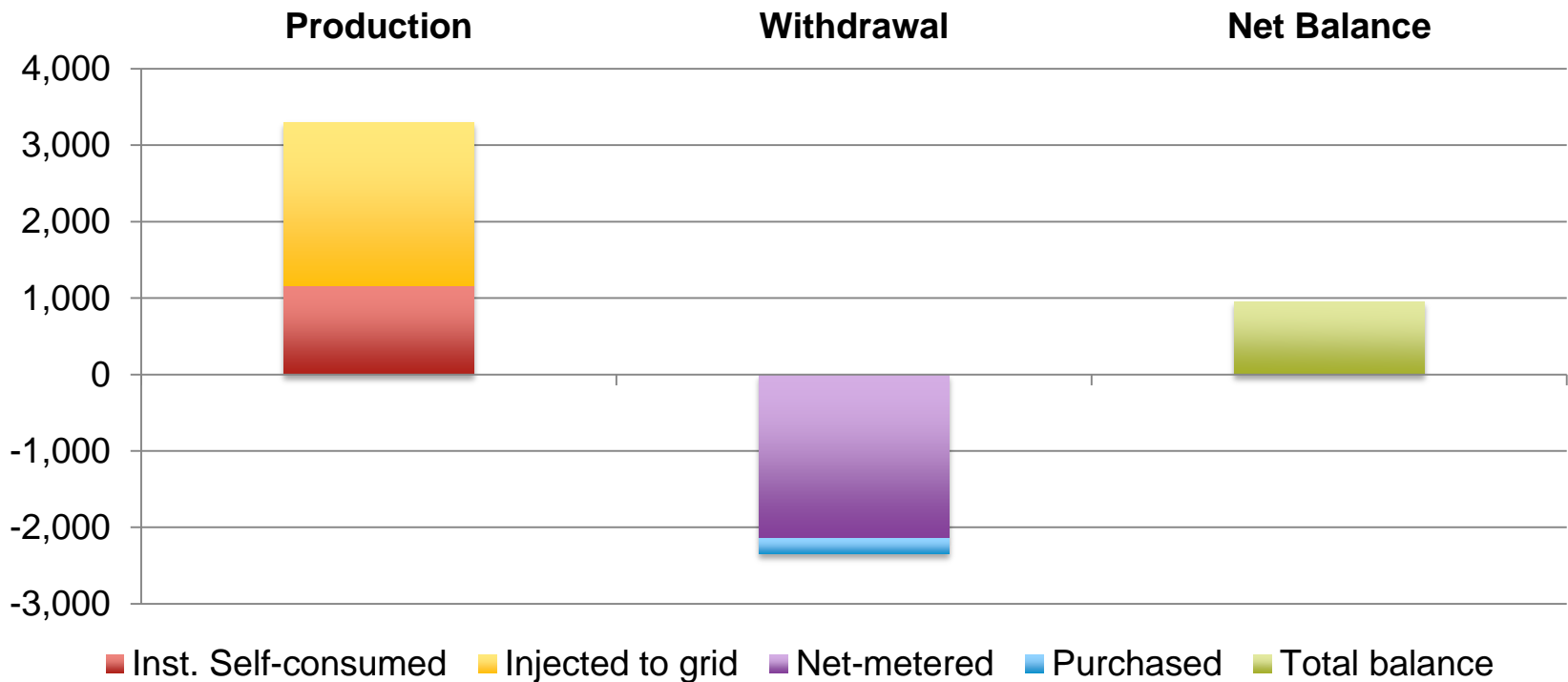
Overview of net-metering and self-consumption schemes in Europe



2 case studies - common assumptions

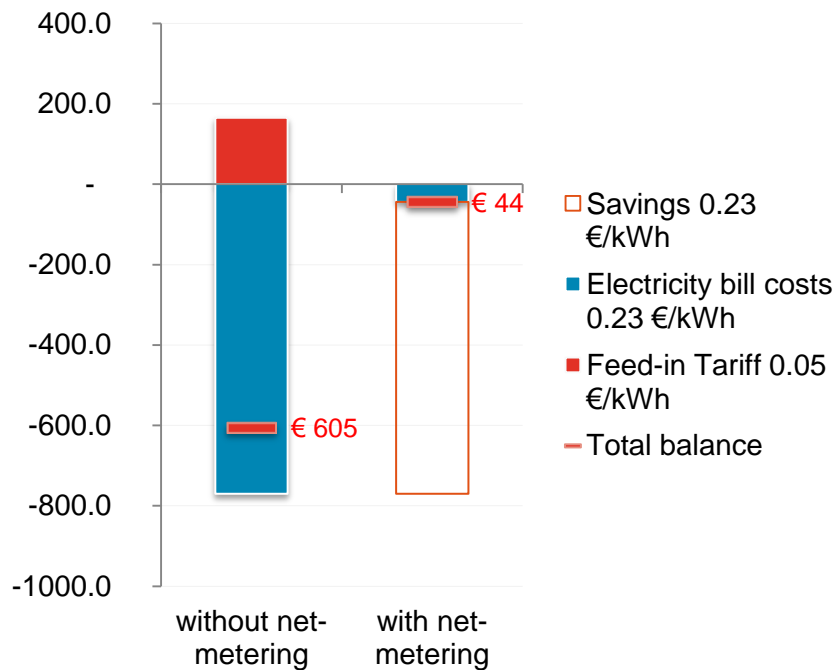
- Residential household
- Yearly consumption : 3,500 kWh
- PV yearly production : 3,300 kWh per year.
- 30% of production instantaneously self-consumed

One Year Electricity Flows Balance (kWh)

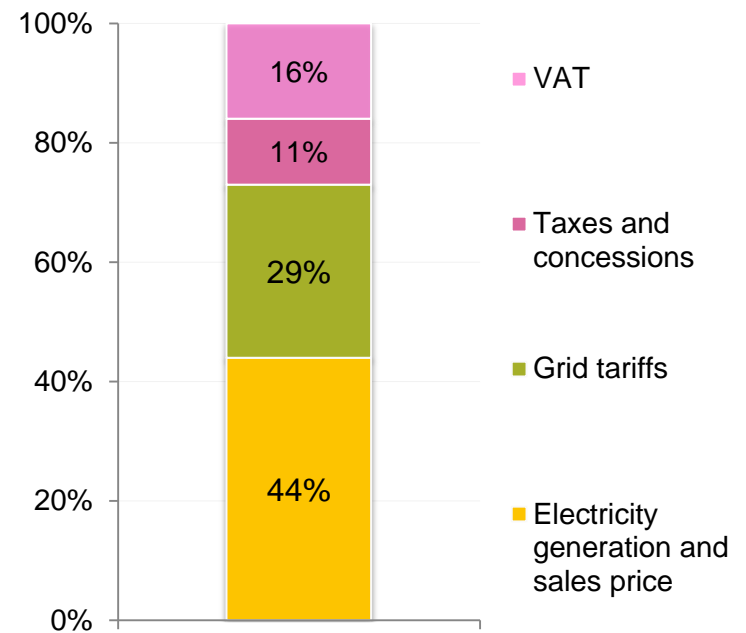


Netherlands - case study (2012)

Yearly cash flows balance [€/year]



Residential electricity price breakdown

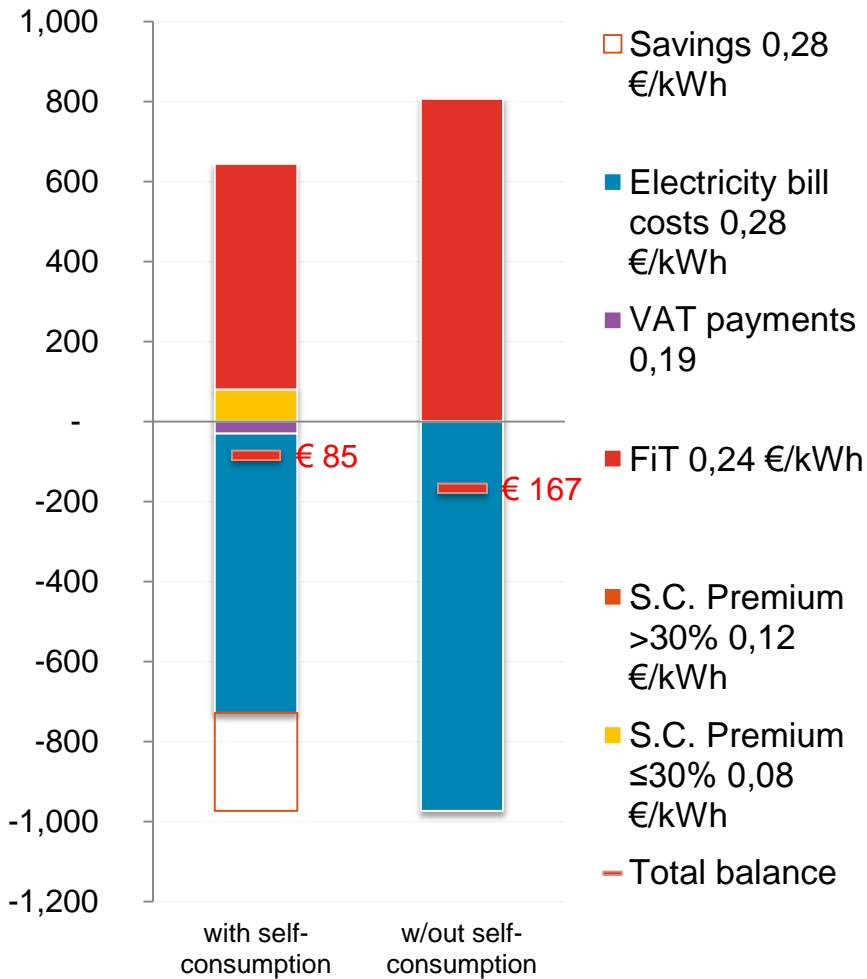


NOTES

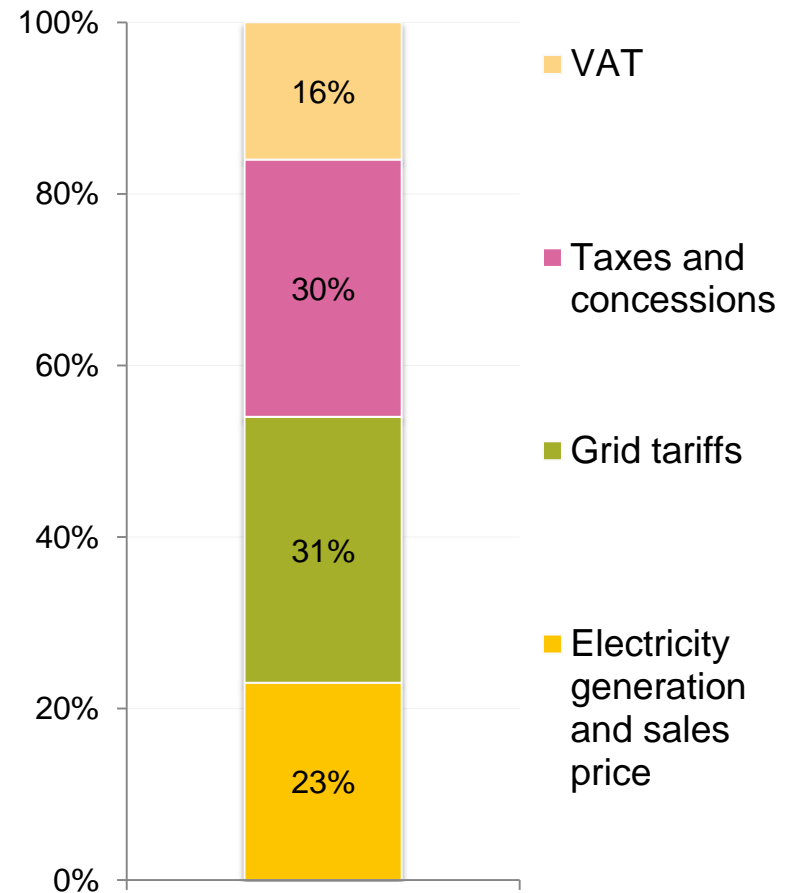
1. Source: EPIA, Holland Solar, CREG, dena.
2. Electricity Prices: EU Energy Portal (<http://www.energy.eu>) - November 2011

Germany: Self-consumption premium (2011-2)

Yearly cash flows balance [€/year]



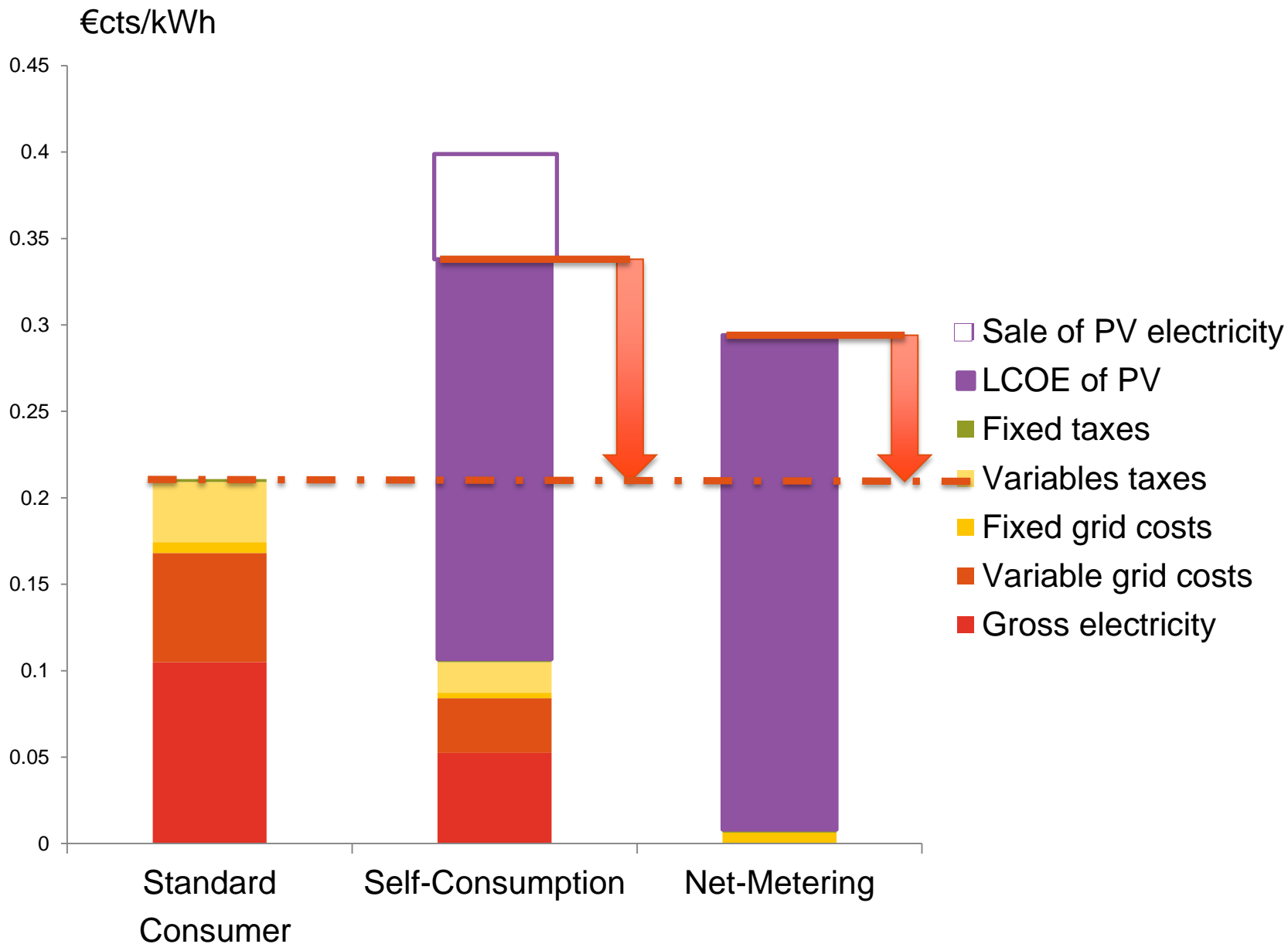
Residential electricity price breakdown



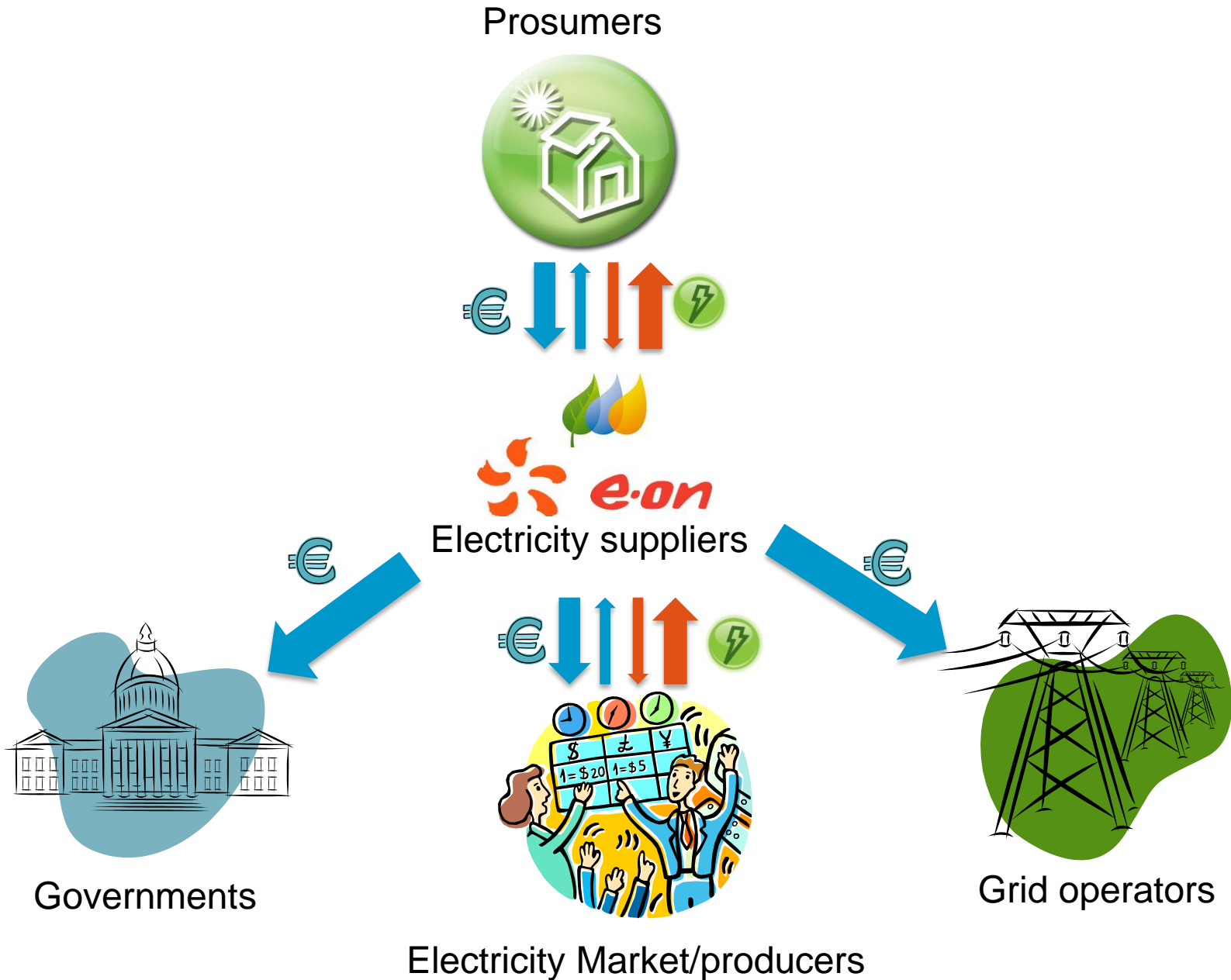
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1. Source: BSW, dena, EPIA.
2. Electricity Prices: EU Energy Portal (<http://www.energy.eu>) - November 2011

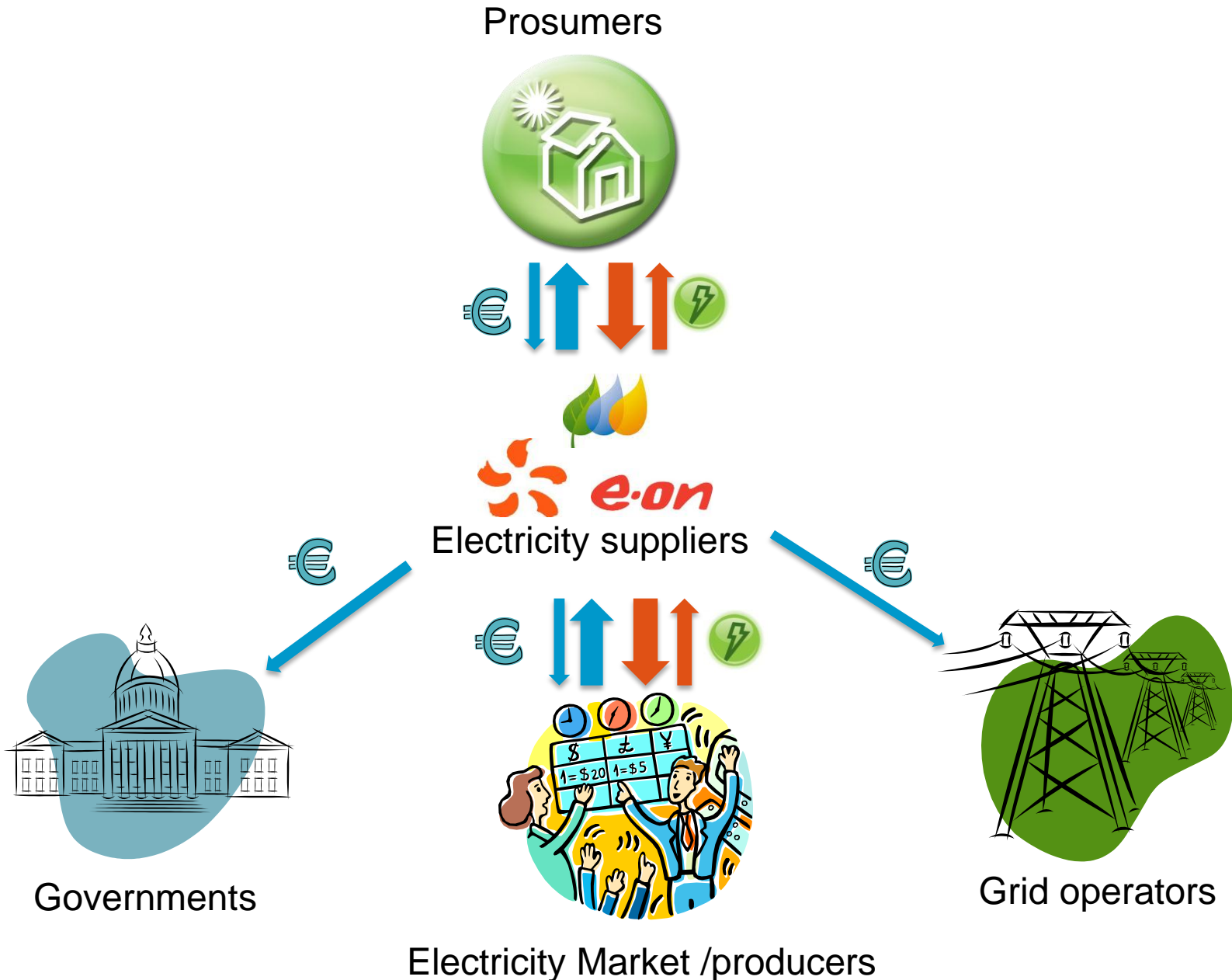
Profitability with self-consumption & net-metering vs conventional electricity



Self-consumption vs net-metering – different points of view



Self-consumption vs net-metering – different points of view



These schemes are alternative enablers to market development where there is consumption:

- **Net-metering:** to kick-off / restart a market
- **Self-consumption:** as transition with reduced /post FiT

Risks (opportunities) exist with certain actors:

- **Governments:** reduced incomes (taxes) / reduced support scheme costs
- **Grid Operators:** reduced incomes (grid fees) / reduced burden on grid (self-co)
- **Electricity producers:** reduced incomes (reduced volumes)

- IEA-PVPS Task 1
- Questionnaire to non European markets
- Workshop in EU PVSEC, Frankfurt

“Assigning a fair price to photovoltaic electricity”

Day: Thursday, 27th September, 2012

Time: 8:30 – 12:00

Site: To be decided

Access: Open to all registered participants of the 27th EU PVSEC



European Photovoltaic Industry Association

www.epia.org