

Workshop on Prospective Generation Costs until 2050

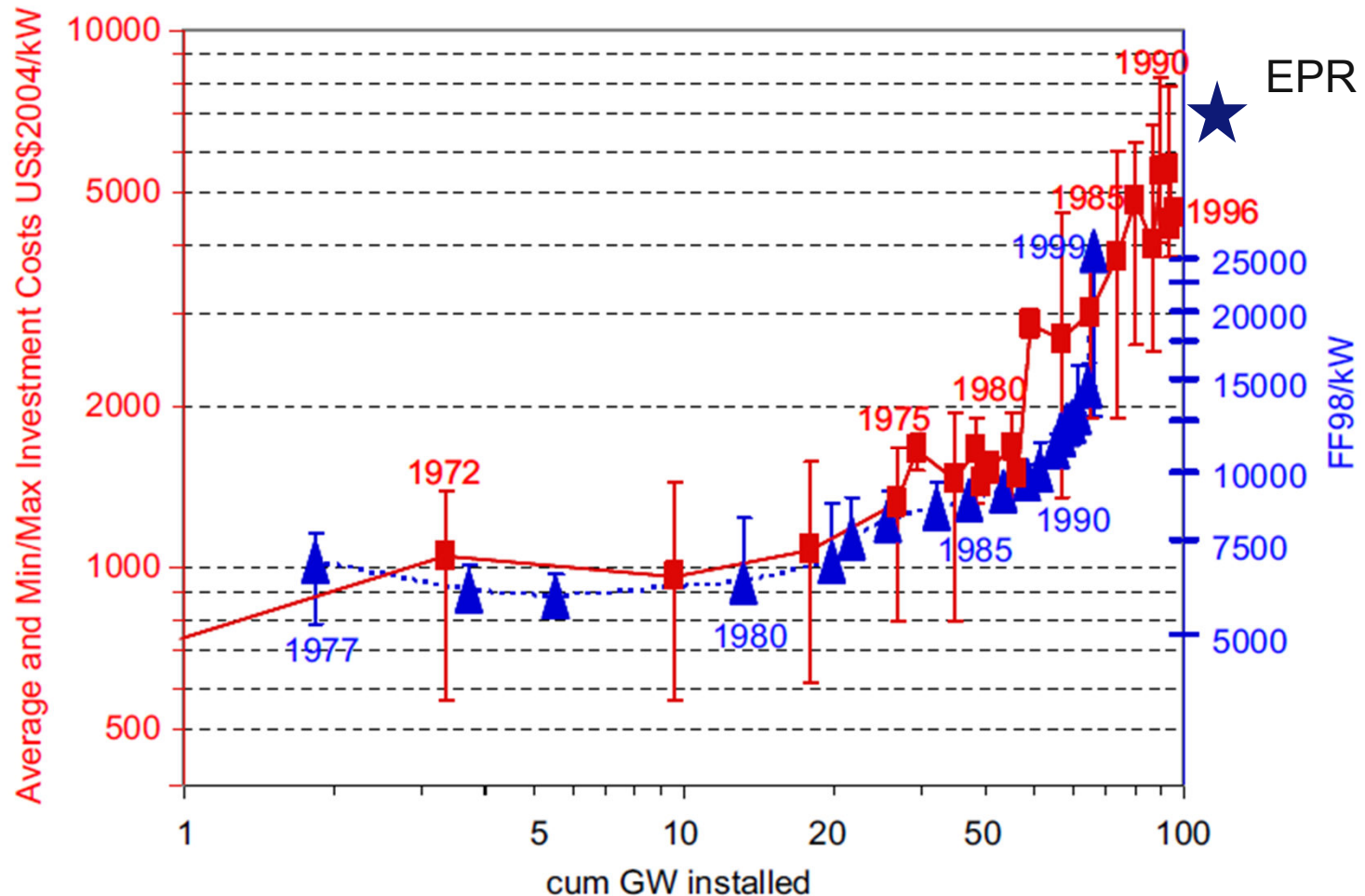
---

# Discussion of Topic 4: Nuclear

Thure Traber  
Berlin, 8.3.2013

A: Projected decline in investment costs in line with IEA seems optimistic

## Discussion of Topic 4: Nuclear – Construction Cost: „Negative Learning“ in France (blue) and US (red)



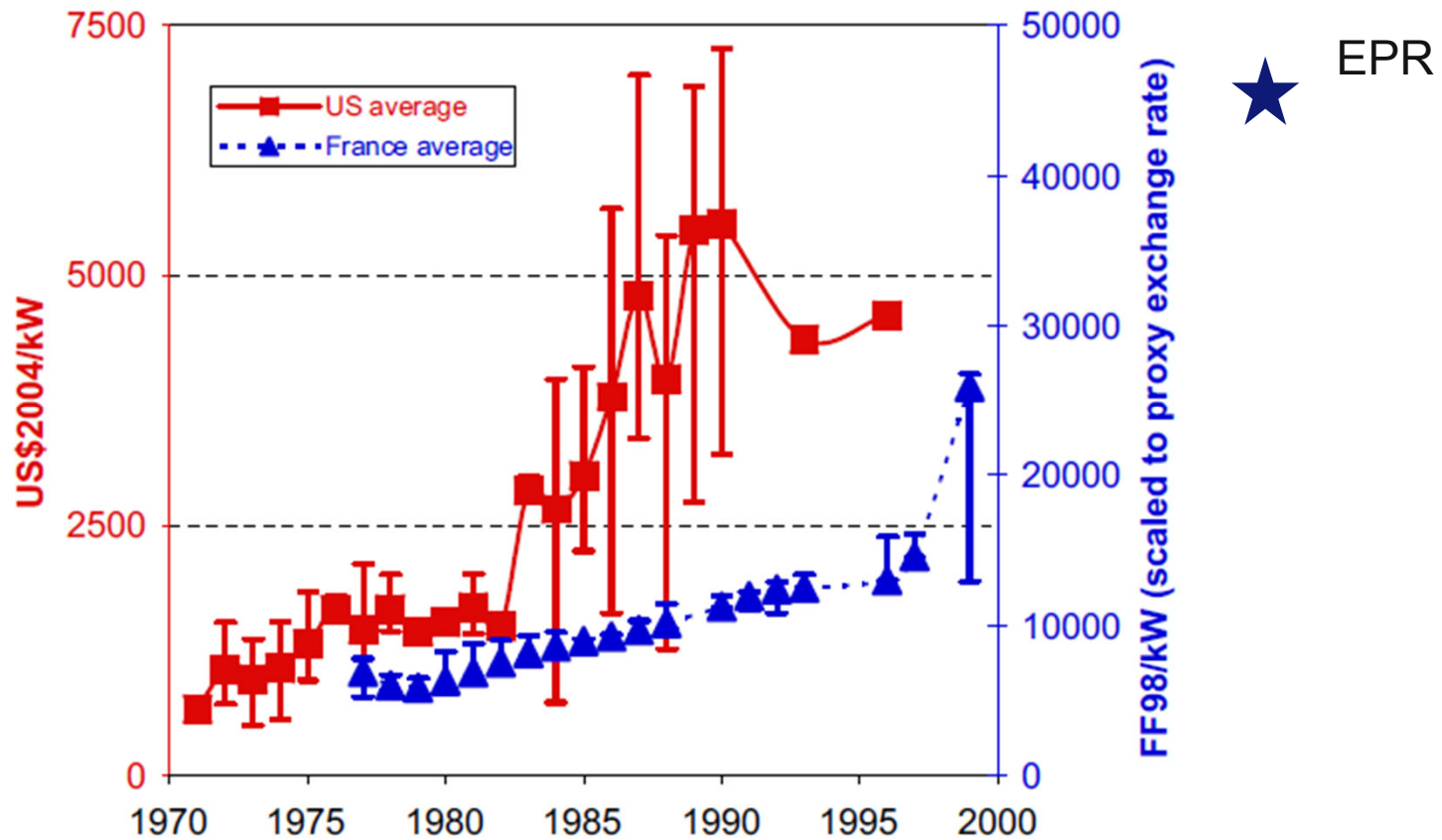
Source: Grubler (2010): The costs of the French nuclear scale-up: A case of negative learning by doing, Energy Policy (38), p 5186, own illustration

B: Regulatory regime impacts costs:

a) Large scale roll out with its regulatory stability and unified, nationalized, technically skilled agents (Fr) vs. liberalized energy market (US).

## 4

# Discussion of Topic 4: Nuclear construction costs development



Source: Grubler (2010): The costs of the French nuclear scale-up: A case of negative learning by doing, *Energy Policy* (38), p.5185

B: Regulatory regime impacts costs:

a) Large scale roll out with regulatory stability and unified, nationalized, technically skilled agents (Fr) vs. liberalized energy market (US).

b) Discount rates of private market might be 8 -10 percent

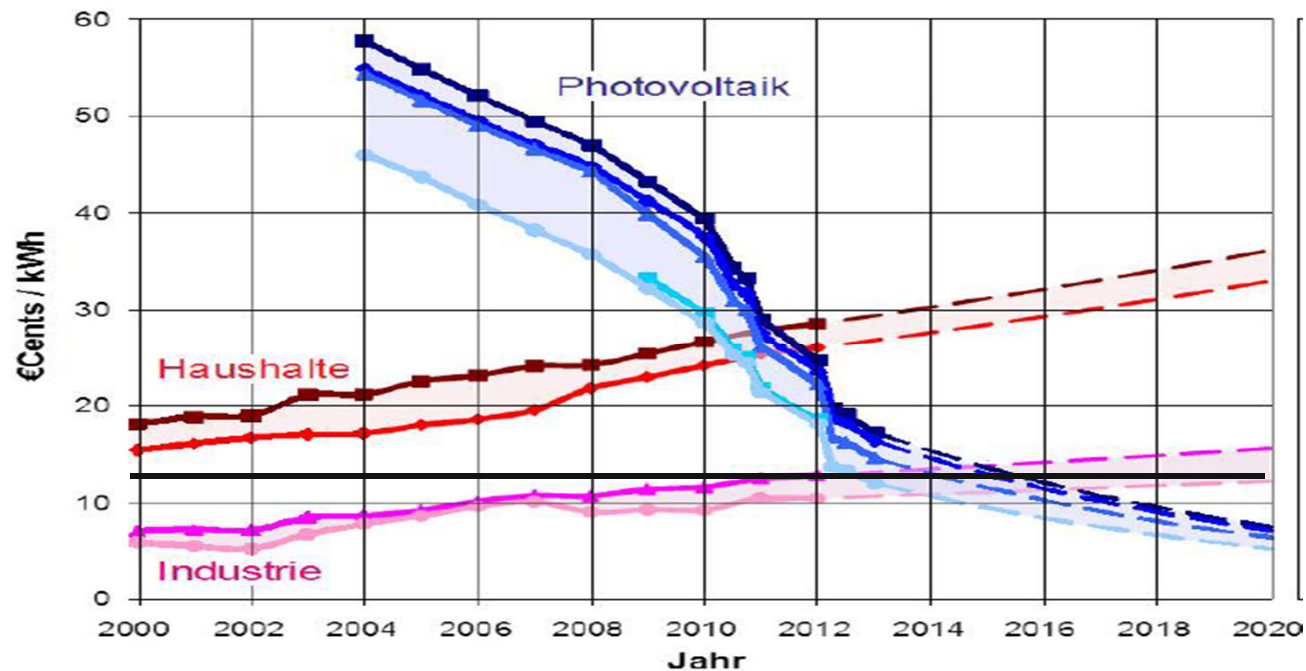
(government funded loans even cheaper, e.g. France pre Liberalization), **while equity financing requires much higher returns, possibly 15%?**

Moreover, C: New designs of EPR, ABWR should increase risks and introduce risk premium, - total discount rate **15+x%?**

D: Decrease in full load hours 2022 with CWE more than 150 GW PV & Wind

-> part load and new starts with increased depreciation and fuel costs

Regime shift when RES get upper hand: the time window for nuclear scale effects may close soon



Estimated necessary price for UK EPR - Hinkley

Source: Fakten zur Photovoltaik, Fraunhofer ISE 2013



Vielen Dank für Ihre Aufmerksamkeit.

---



**DIW Berlin — Deutsches Institut  
für Wirtschaftsforschung e.V.**  
Mohrenstraße 58, 10117 Berlin  
[www.diw.de](http://www.diw.de)

**Redaktion**  
Thure Traber, [ttraber@diw.de](mailto:ttraber@diw.de)

---