

# The IEA Electricity Security Action Plan

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# Oil: The good old tradition of a geopolitical risk



Libya, 2011

Russian empire, 1905

# “Keeping the lights on”

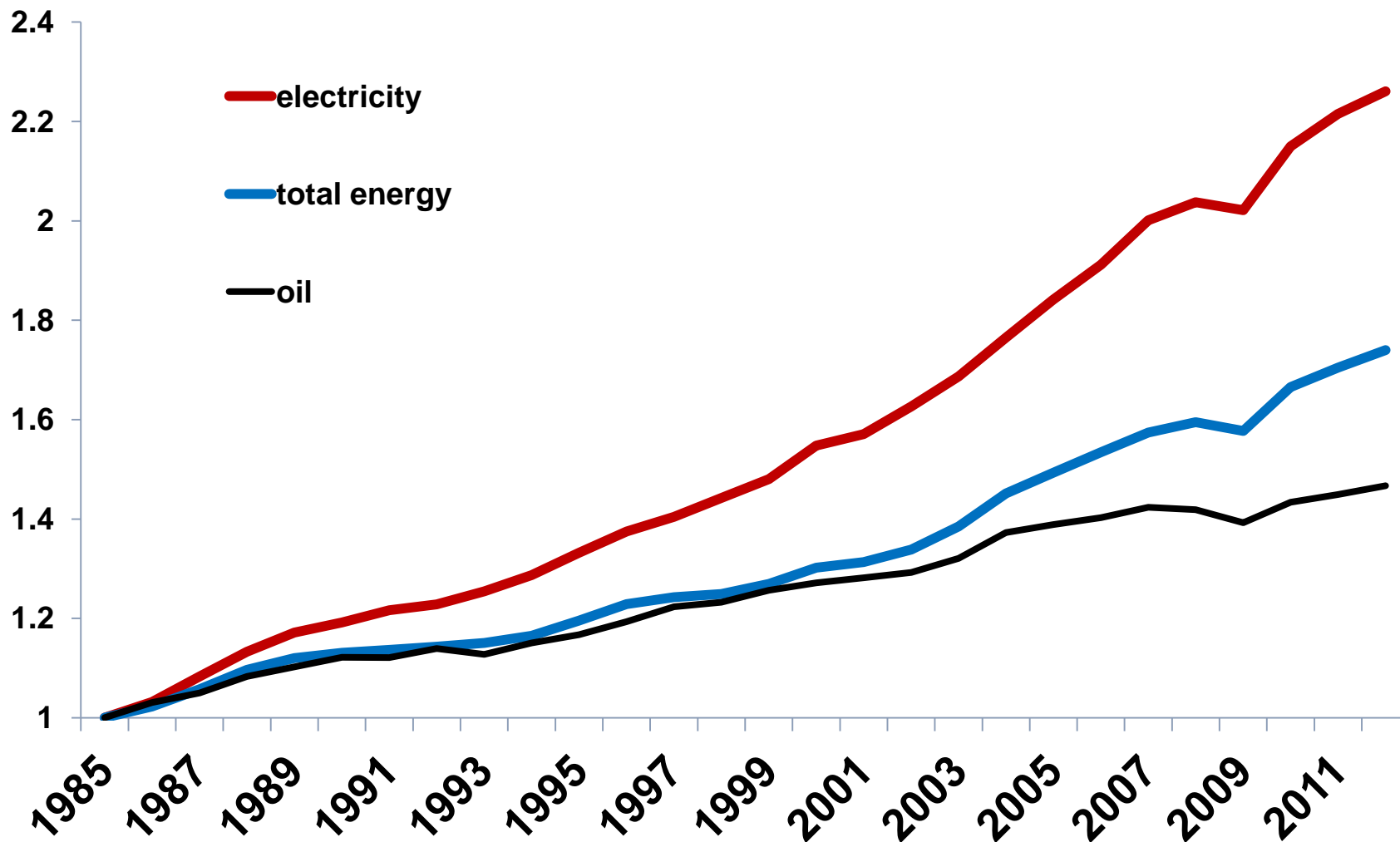




# Electricity is the energy source of industry and modernization

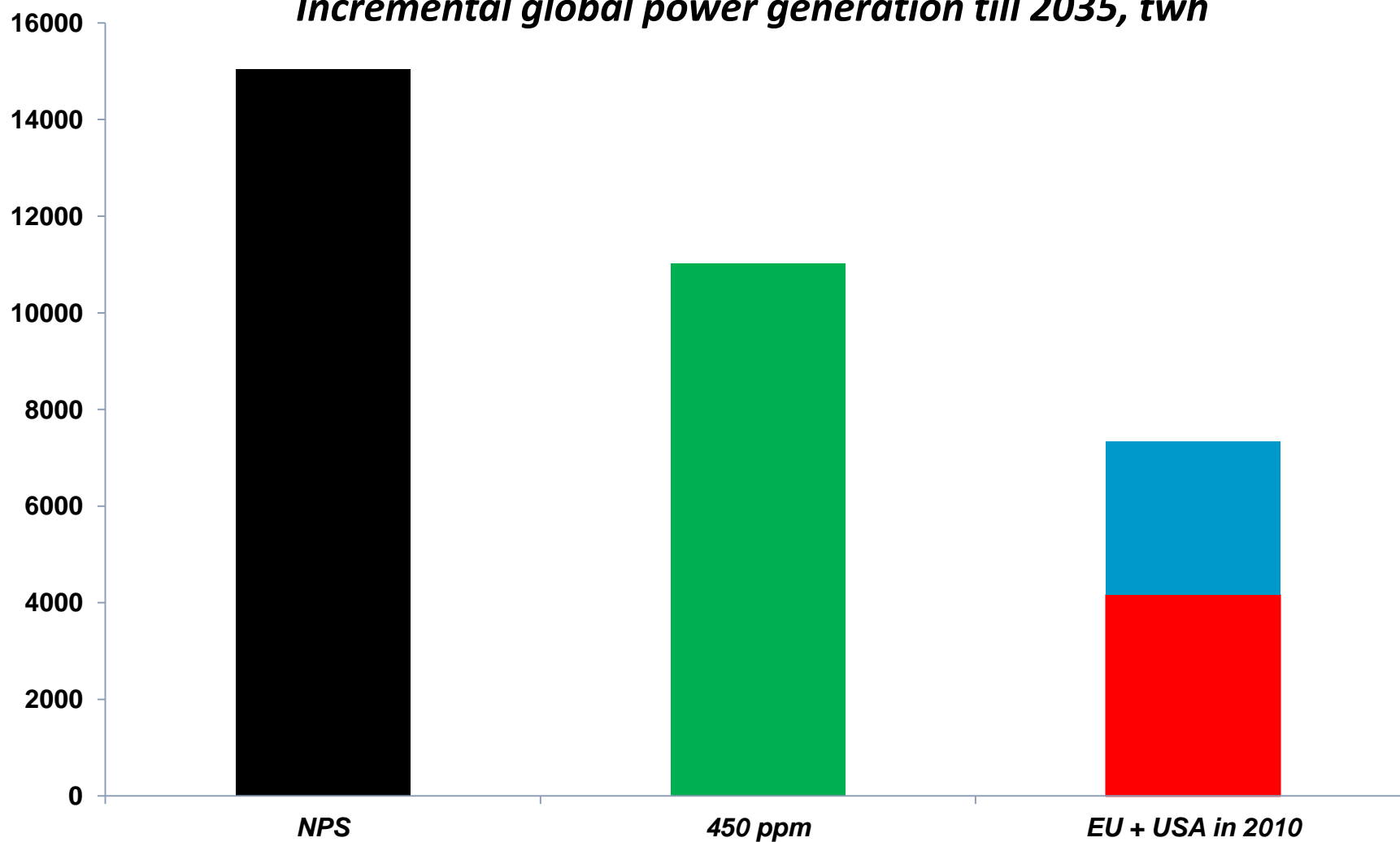


# Its importance increases every day

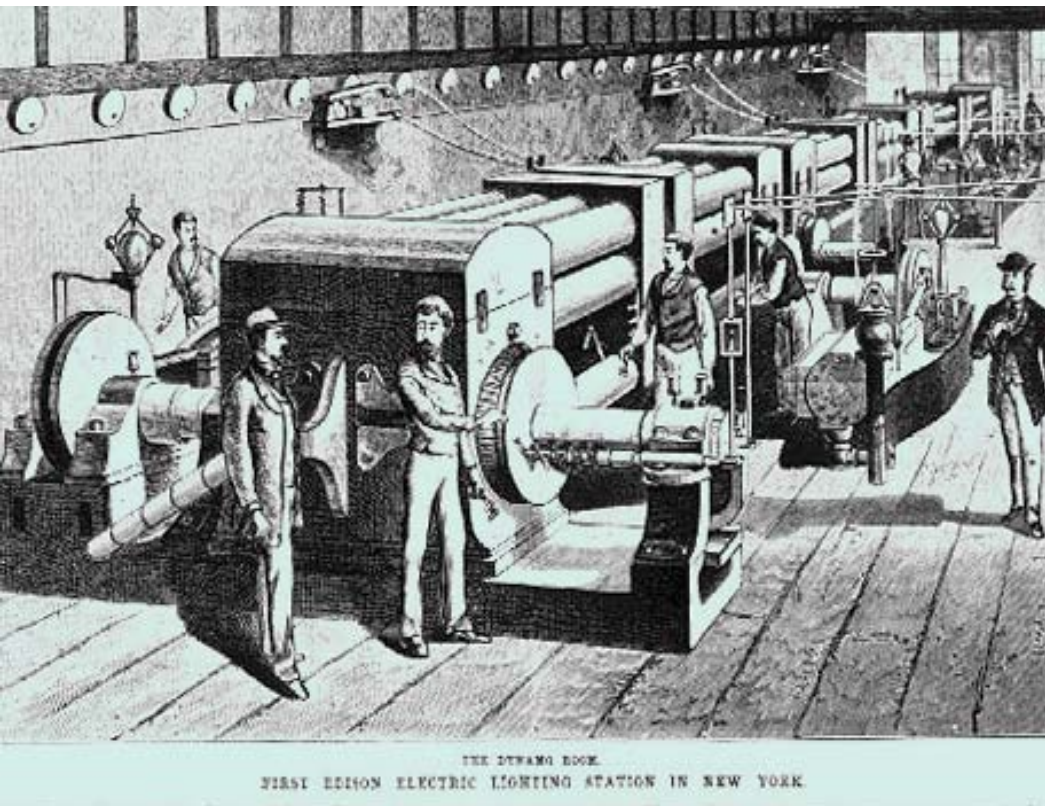


# So its recent growth is just a taste of things to come

*Incremental global power generation till 2035, twh*



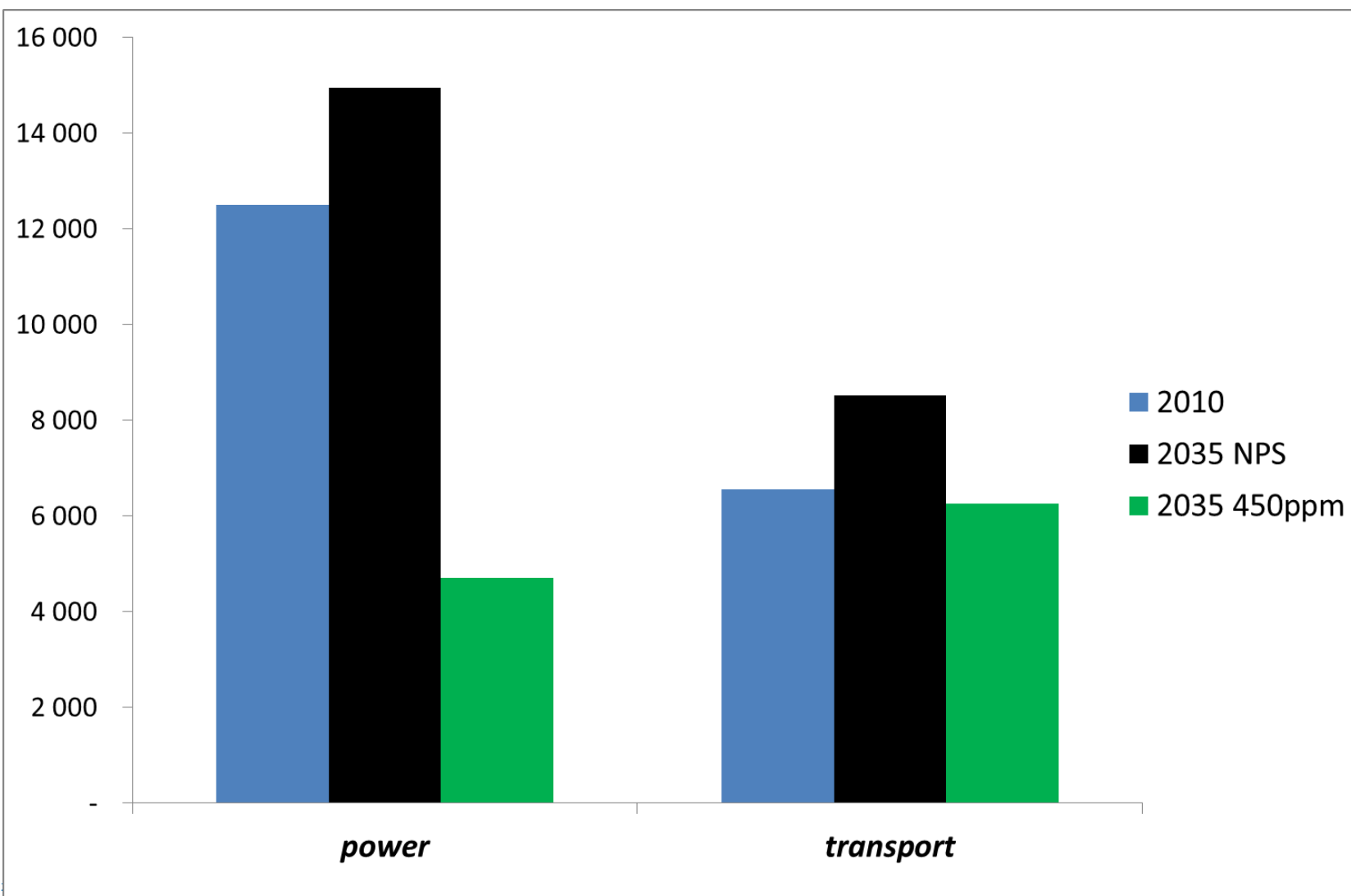
# 1890-1990: a remarkably stable technological and management paradigm





# Electricity is the key battlefield

## *CO<sub>2</sub> emissions in the main sectors*





# What was the last time you heard good news about nuclear or CCS?



- A meaningful carbon price
- A policy/social acceptance
- A financing framework keeping WACC down
- Management of tail risks

## Renewables are on track



***But they lead to new system operation challenges***

# Competition and electricity security: the Master Yoda principle



*“Do. Or don’t do.  
There is no try.”*

***It is not competition, but half hearted, half finished market opening with bad regulation that causes blackouts.***



# Electricity security: building blocks



## Fuel Security

- Ensure continued fuel supply of gas, coal and uranium



## Adequacy

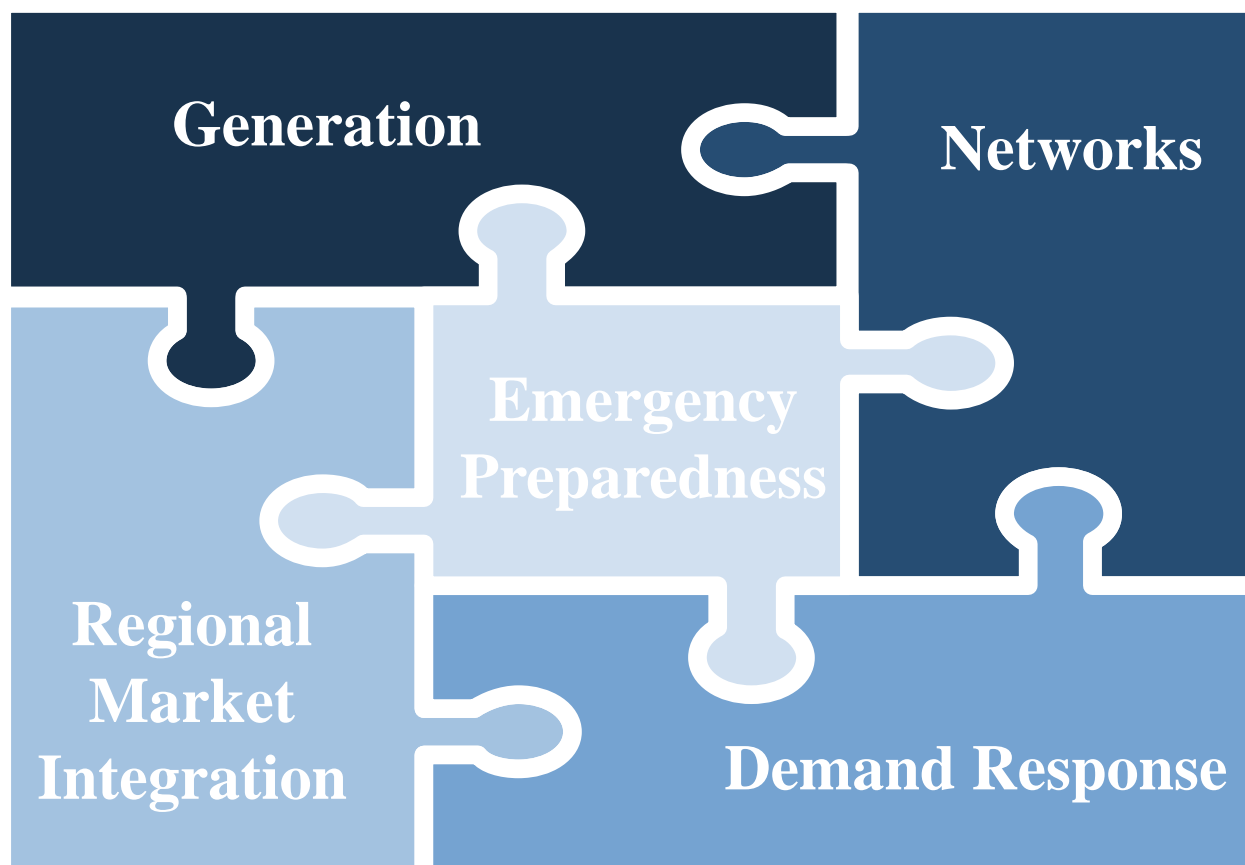
- Generation capacity
- Network infrastructure



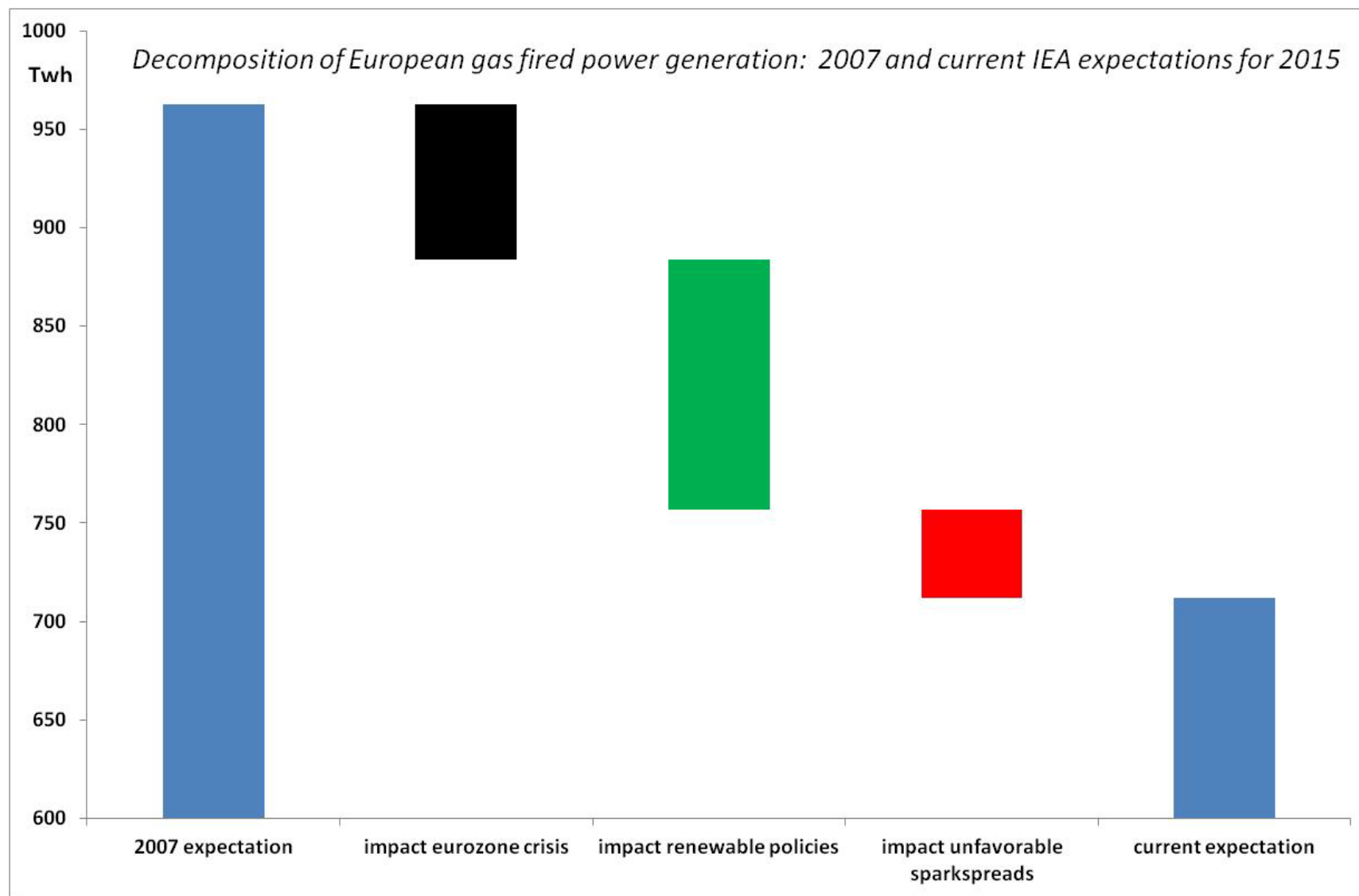
## System Security

- Network operations
- Emergency protocols

# Electricity Security Action Plan (ESAP): a two-years work programme

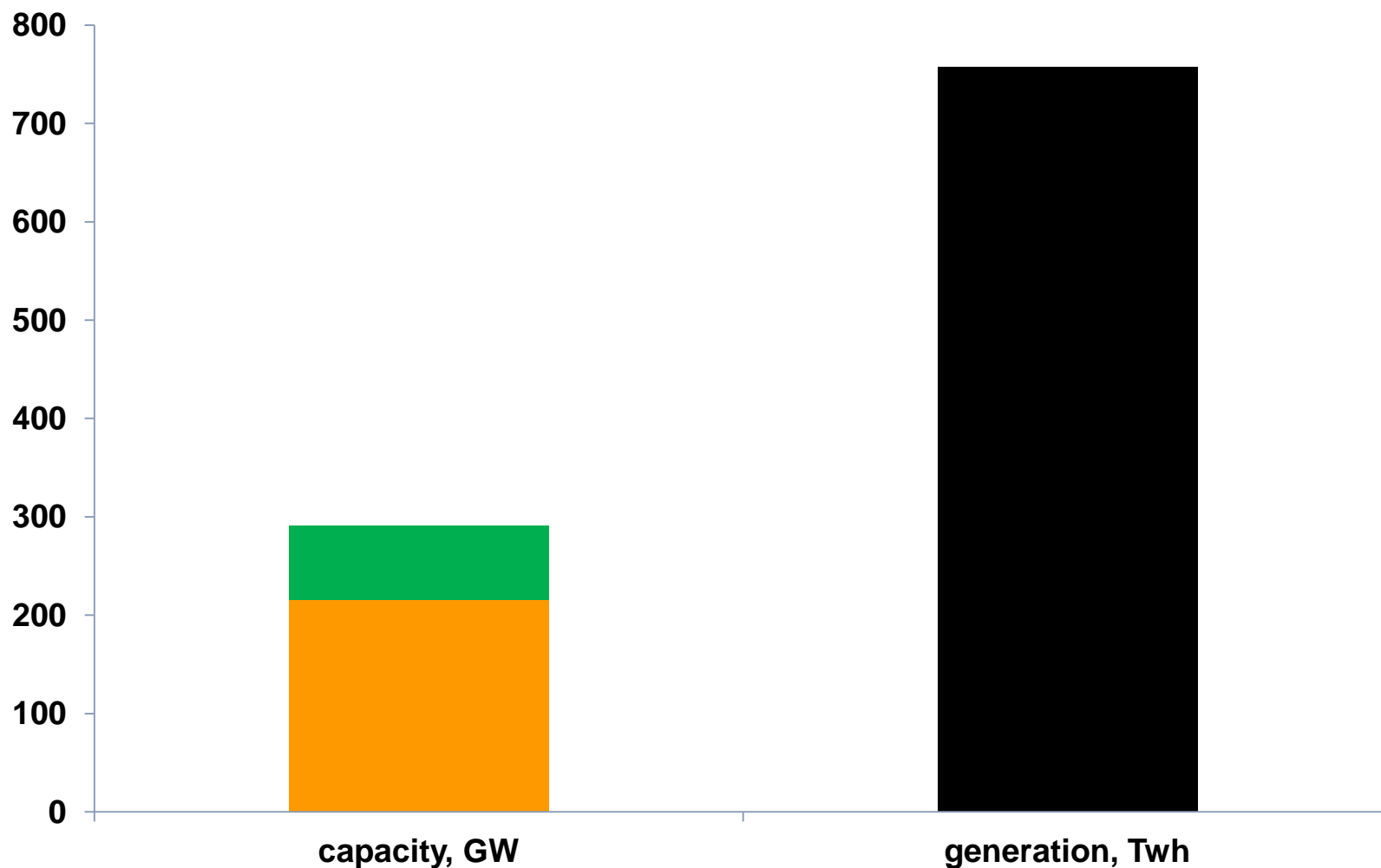


# Who killed EU gas fired power generation?





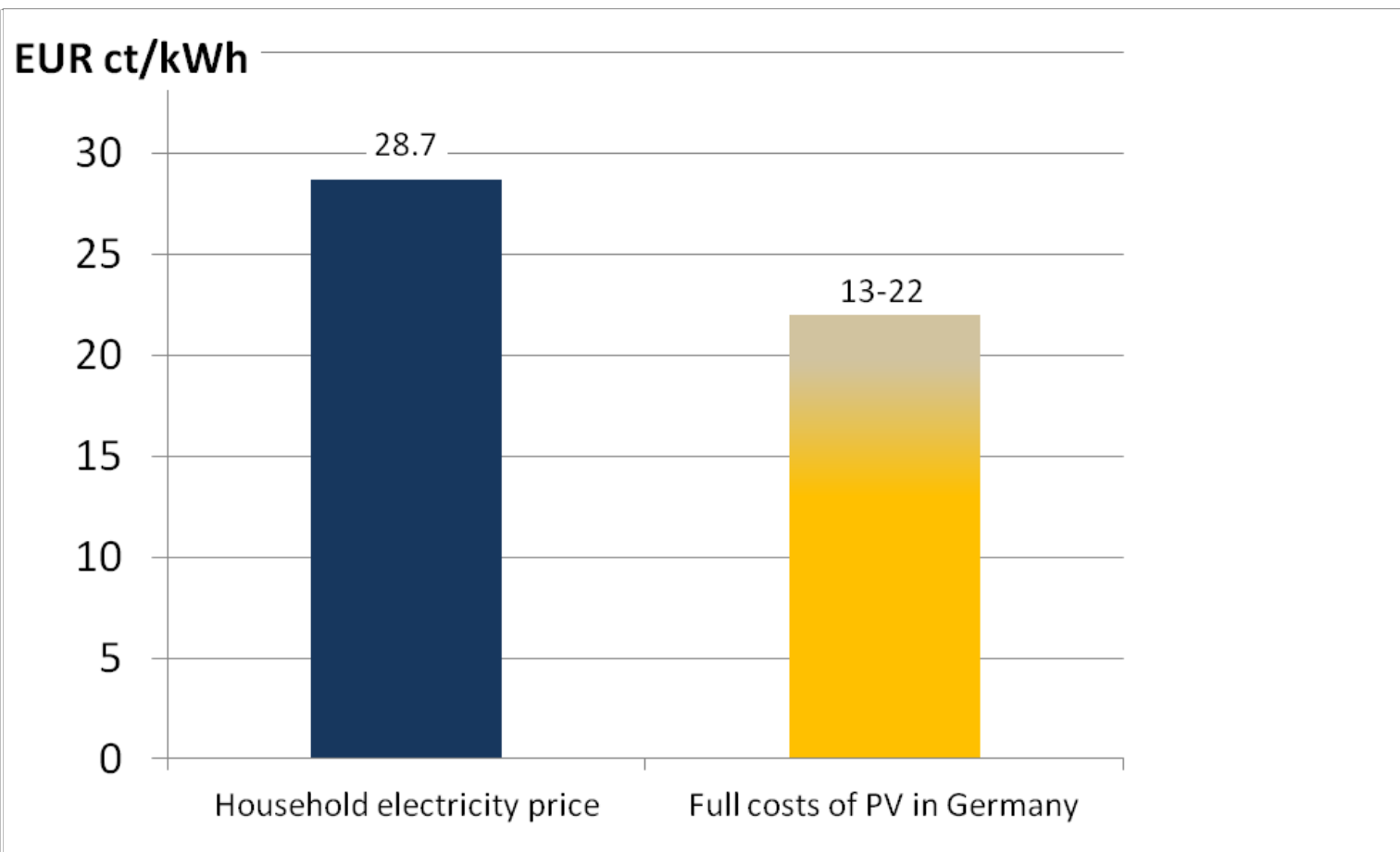
# Gas is used for system balancing: less power from more capacity



## The network will remain a scarce resource



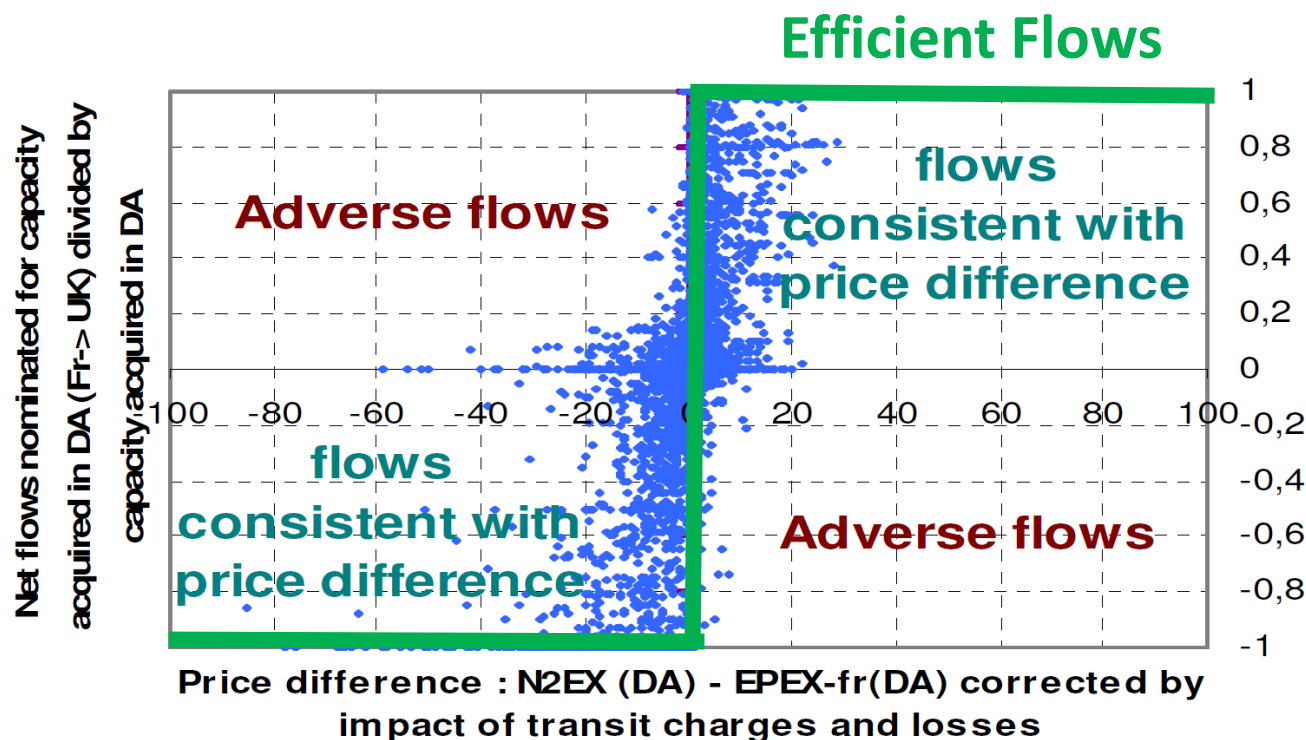
# “Grid parity” Who pays for whom?





# Efficient use of network infrastructure

## Adverse Flows on IFA (Jan.-June 2010)



Source: Booz, 2012

# Demand response: overcoming my laziness



<http://www.iea.org/topics/electricity/>