



# Reforming Subsidies for Electricity Markets in the GCC

## Session 3 – Impact on Electricity Markets

Dennis Colenutt

NERA, London

17 December 2015

# Subsidy issues to address



Significant consumer subsidies bring two serious downsides:

- they encourage consumers to use electricity inefficiently, and so artificially stimulate demand for power; and
- they can encourage wasteful use of fuel and other resources

Though important, these are not my main concern today.

The key issue today is:

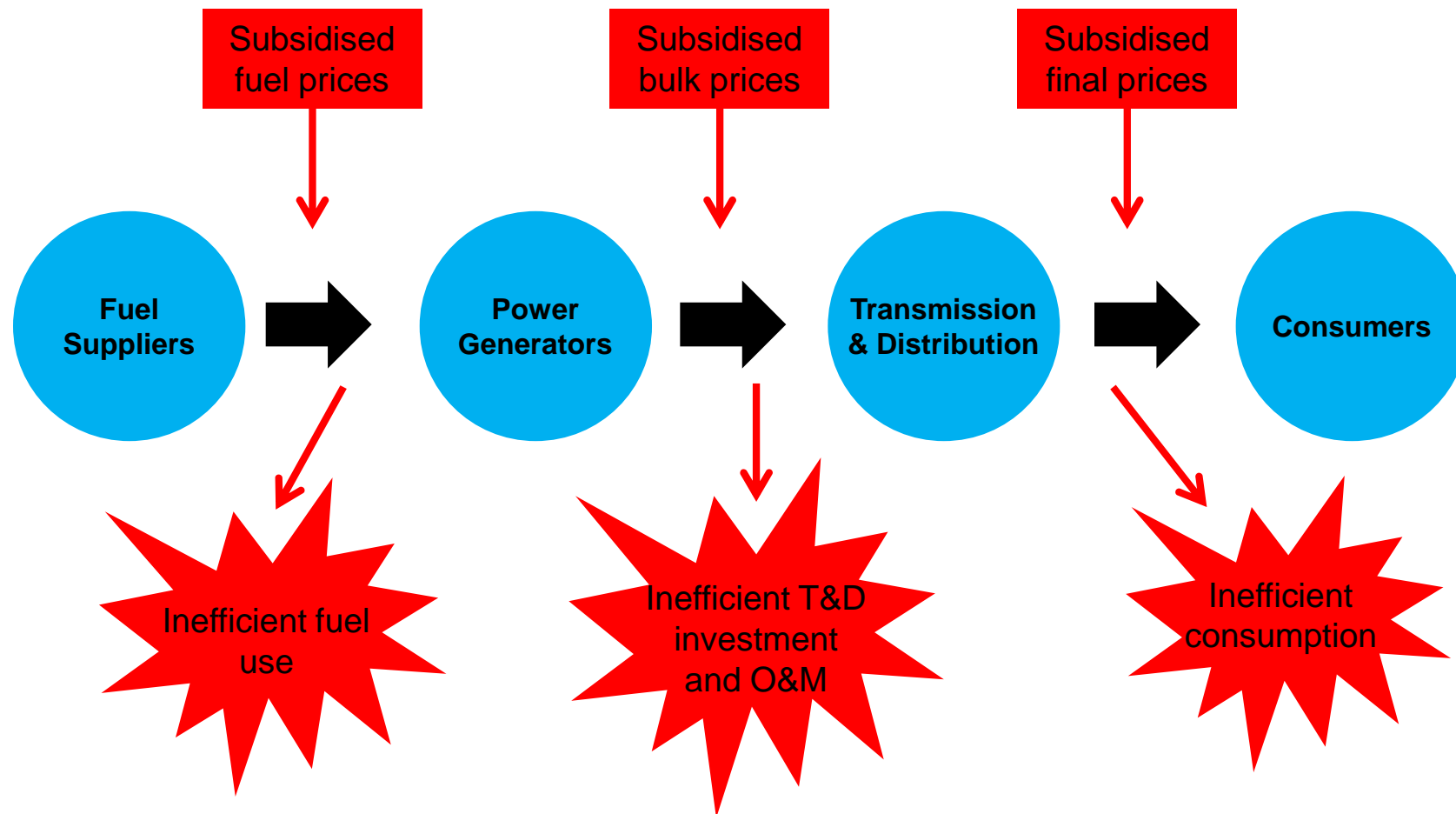
---

Significant subsidies can distort the supply chain and make the introduction of power markets and power trading difficult or impossible

---

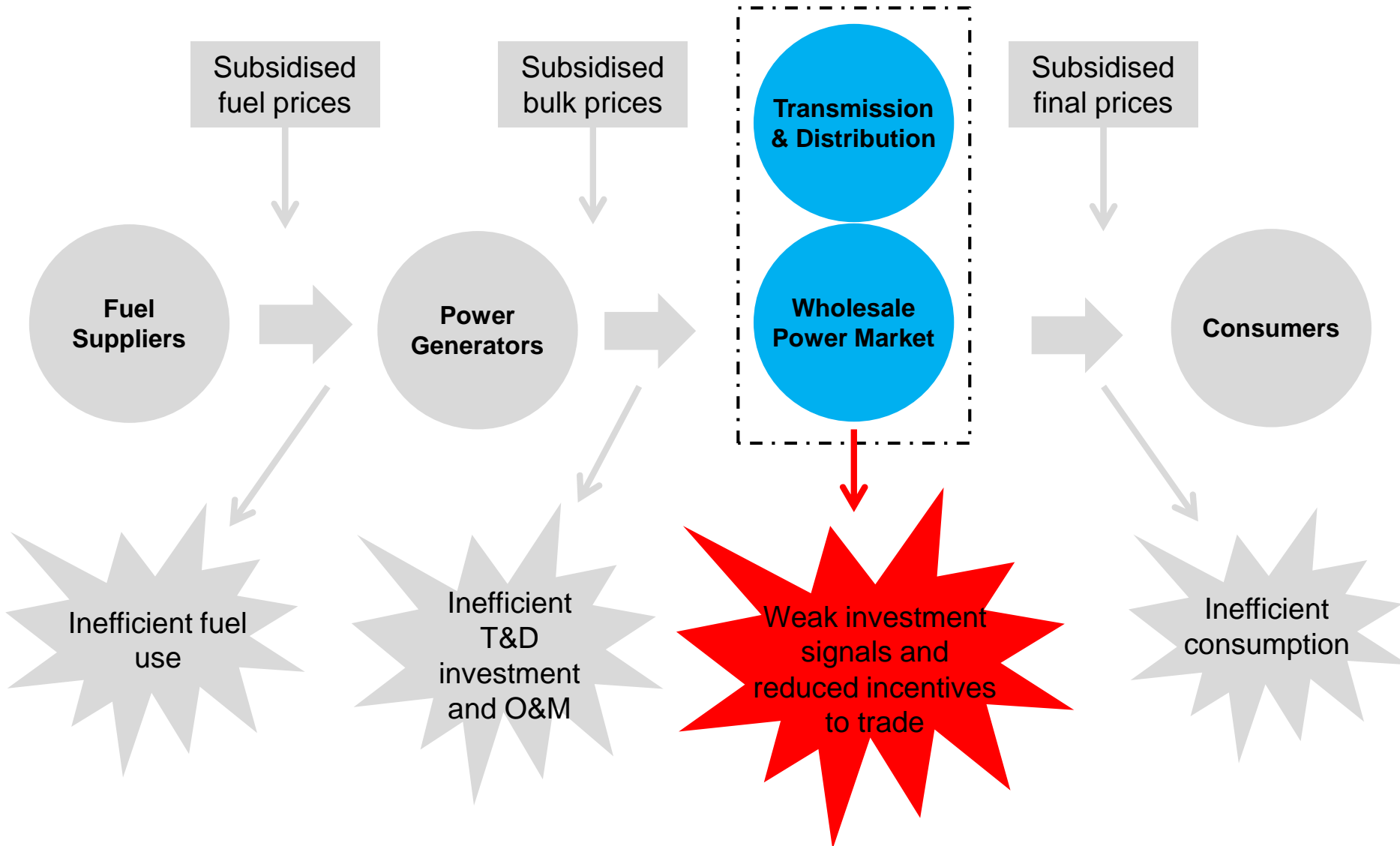
# The Electricity Supply Chain (1)

Even without power markets, subsidies can have adverse effects on all parts of the supply chain:



# The Electricity Supply Chain (2)

But in a power sector that allows power trading, subsidies can have further adverse effects:



# Electricity Subsidies Abroad



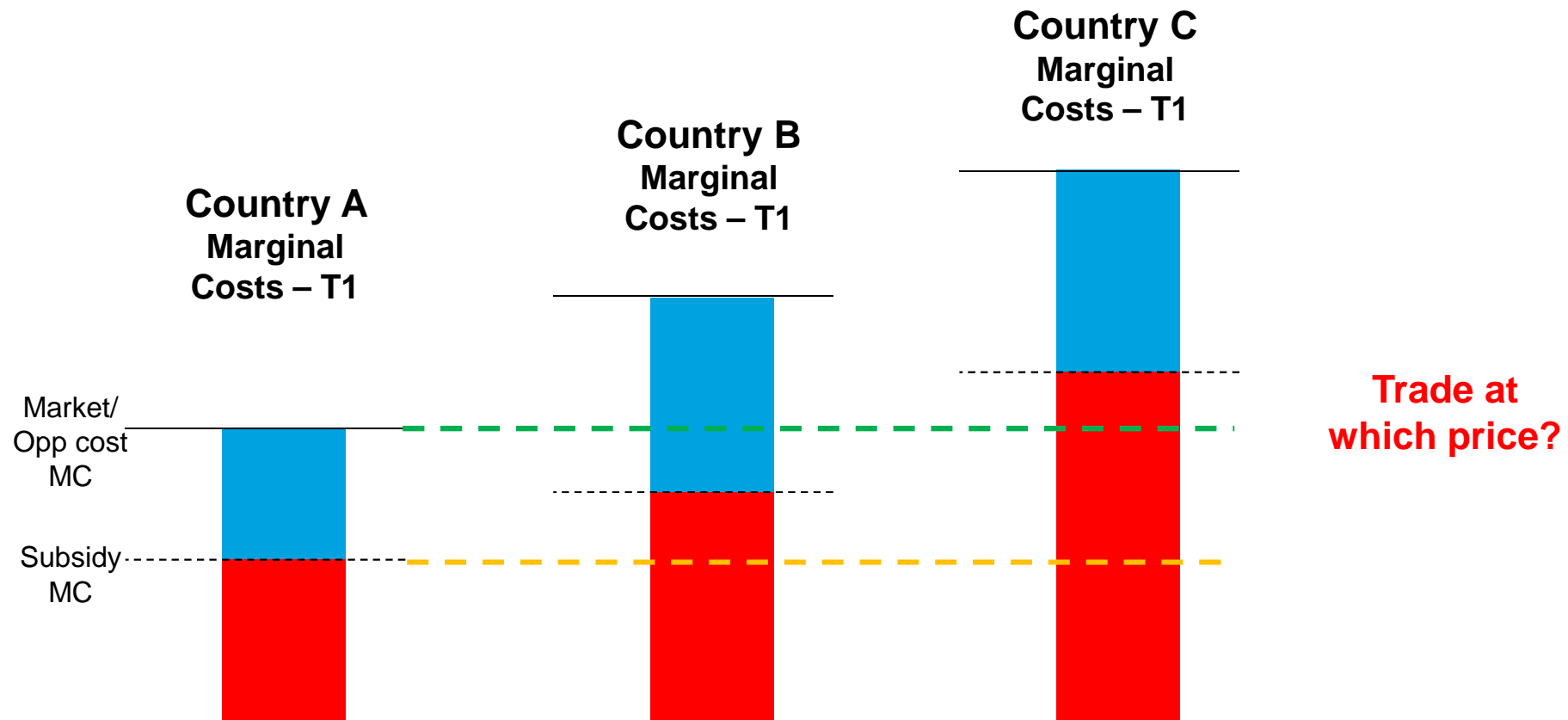
Significant subsidies are therefore very damaging to market operations

- On the “market price” definition of electricity subsidies, many jurisdictions no longer have them:
  - EU countries generally do not subsidise the power sector, except in respect of nuclear or renewables;
  - North American and Australasian jurisdictions similarly generally avoid power sector subsidies.
- The existence of significant power sector subsidies is generally limited to parts of Asia, parts of South America, the Middle East, and Africa
- This means there is little relevant current experience of operating power markets and subsidies in parallel

- So, if subsidised fuel prices and power prices have adverse effects on power market development, **what should be done?**
- Two broad options might be considered:
  - **Option 1:** A system of adjusted generation costs, based on a consistent set of (“market-related”) fuel prices, modelled across Member States, to help identify trading opportunities
  - **Option 2:** Restructuring and refocussing of subsidies, to eliminate generation fuel price subsidies and allow bulk trading at market prices

# Option 1 – Adjusted Trading Prices

- Modelling using a consistent set of “market-related” prices may help MSs identify trading opportunities that are efficient from a resource perspective:



# Option 1 – Adjusted Trading Prices

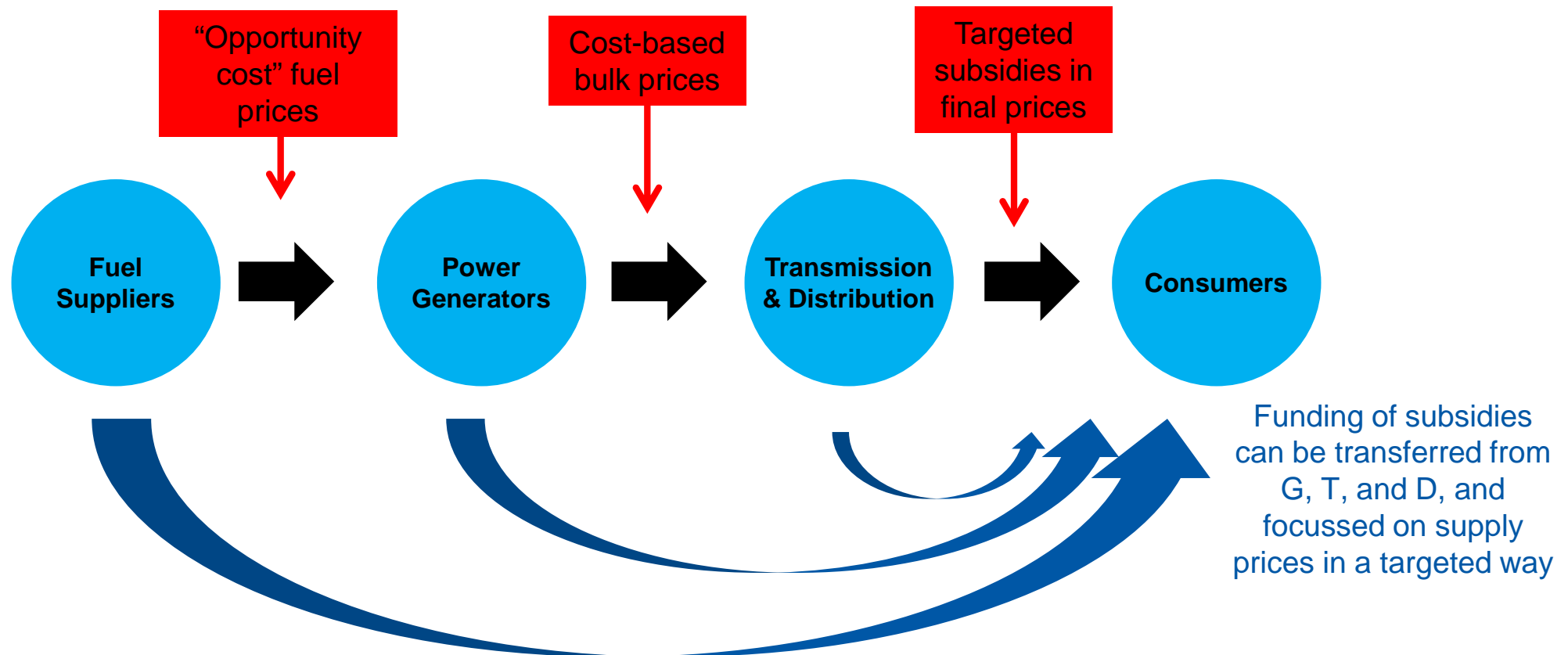


- Differing conditions in their oil and gas sectors, may mean MSs have **inconsistent views on the opportunity cost** of fuel
- They may disregard the modelling results and be reluctant to follow the advice emerging from modelling
- Even if they follow the modelling guidance, the price at which trades take place between MSs is crucial:
  - Even within MSs there is sometimes a problem of distortion of the relative prices of fuels, as well as the absolute prices
- The modelling-based approach also does not tackle the wider issue of inefficient dispatch:
  - Even within MSs there is sometimes a problem of distortion of the relative prices of fuels, as well as the absolute prices
  - If the despatch (and trading) is to be efficient, the variable costs offered by all generators should, as far as possible, reflect “opportunity cost” or market fuel prices



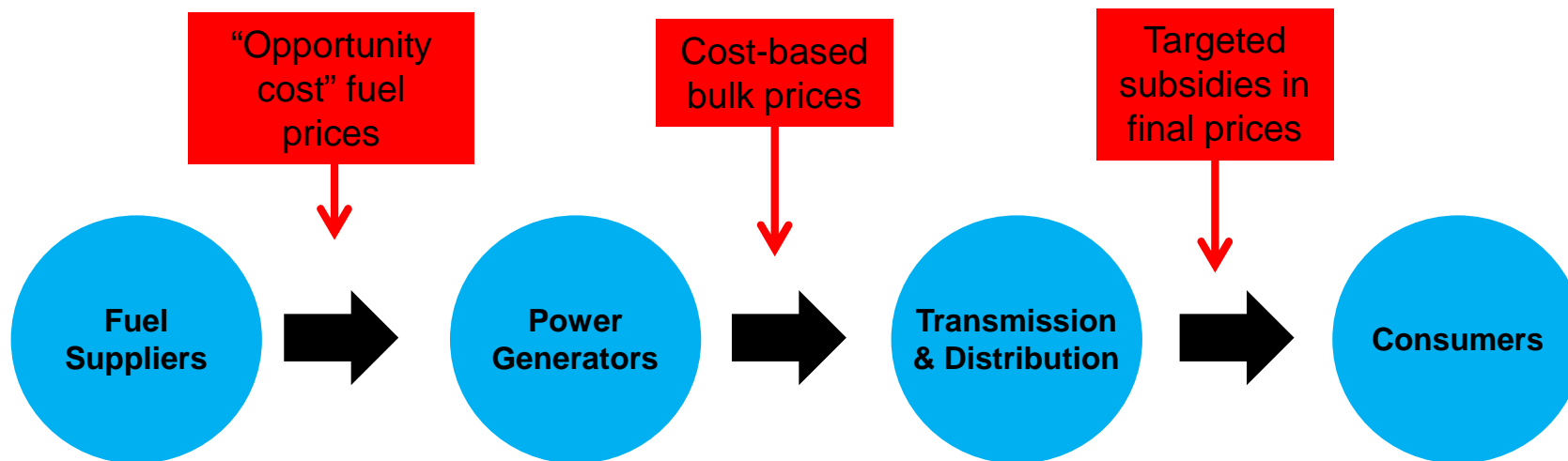
# Option 2 – Restructuring and Refocussing of Subsidies

- Reducing the impact of subsidies and allowing markets to operate does not require the elimination of consumer subsidies
- Subsidies and their funding can be restructured and redirected to achieve key social and industrial objectives, without harming power sector efficiency and market development:



# The Target Approach

- If subsidies and their funding can gradually be restructured and redirected towards targeted consumer subsidies, then power sector efficiency and market development will not be harmed



- This restructuring and redirection of subsidies does not mean consumer subsidies have to be changed or stopped – though that may be desirable for other reasons

# Summary on Tackling the Subsidies



- Pricing fuel at its opportunity cost/market price would bring significant benefits
  - Investment efficiency for the sector
  - Improved fuel efficiency in the sector
  - Proper incentives in the proposed wholesale market
- This change need affect only the generation sector:
  - Opportunity cost fuel pricing is not intended to undermine the present system of subsidised end-user tariffs
  - Indeed the efficiency gains provided would help sustain lower tariffs
- But will require a new system of transfer payments within the power sector to be implemented
- Further reform of final consumer prices would have an impact on total subsidies, and on the demand for electricity and levels of wasteful consumption



# Contact Us

Dennis Colenutt

NERA, London  
+44 (0) 20 7659 8500  
dennis.colenutt@nera.com

Vakhtang Kvekvetsia

NERA, London  
+44 (0) 20 7659 8746  
vakhtang.kvekvetsia@nera.com