Public procurement for low-carbon innovation

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Why look at PP for low-carbon innovation now?

• First diagnosis of how existing policy regulatory frameworks hinder climate policy
  – Public procurement possibly ‘misaligned’ with climate goals

• Sustainable Development Goals: 12.7
  – “Promote public procurement practices that are sustainable, in accordance with national policies and priorities”

• The Paris Agreement
  – Signatories, i.e. governments, should lead by example

• Some sectors slower at generating (or diffusing?) low-carbon innovation
Why does public procurement matter for the low-carbon transition?

General government procurement as percentage of GDP and as share of total government expenditures, 2013

EU: 14% of GDP

Source: OECD National Accounts Statistics (database). Data for Australia are based on a combination of Government Finance statistics and National Accounts data provided by the Australian Bureau of Statistics.
Some improvements in public procurement practices

From lowest cost of acquisition to...

- Total cost of ownership (e.g. acquisition + energy use over life-time)
- Life-cycle cost analysis (e.g. monetised externalities)
- MEAT (most economically advantageous tender), including quality attributes
- Tendering for services instead of products (can align supplier’s and customer’s incentive to save)

- Greener not necessarily more expensive
- All of the above compatible with EU 2014 Directives on PP

_These ‘smarter’ methods are not used everywhere yet_
“While achieving the best result for the best price, public procurement can also be used by the governments as a strategic instrument to promote innovation, achieve socio-economic and environmental policy objectives and address societal challenges”

OECD (2016), Public Procurement for Innovation

- Almost 80% of surveyed countries (OECD) take measures to support innovation procurement
- PP: long-recognised as a demand-side instrument of innovation policy
  - Adaptive PPI: diffuse an existing innovative product
  - Developmental PPI: create and diffuse
- Green or “sustainable” public procurement (a subset of PPI): not new, but not the default.
Examples of low-carbon innovation PP (1)

• **Ampère Electric Ferry (Norway)**
  – Tender:
    • Price: 60%
    • Quality (40%): energy use per car-km, total energy, CO$_2$, NO$_x$, and innovation
    • Winner: awarded a 10-year concession contract
  – Innovation: first ever electric ferry, aluminium catamaran
    – -89% in CO$_2$, 60% energy saving, -100% NO$_x$...
• First of its kind worldwide
Examples of low-carbon innovation PP (2)

- Infrastructure procurement (the Netherlands), Rijkswaterstaat (RWS)
  - Most Economically Advantageous Tender procedure
  - Two sustainability criteria:
    - CO2 performance ladder (CPL): rating of companies on energy savings, efficient use of materials. Discount applied to tendering price for ambitious contractors
    - DuboCalc: Sustainable building calculator provided to tenderers to assess environmental impact of materials used (a certified Life Cycle Analysis – production, transport, demolition, re-use, etc.) Includes CO2 and 10 other externalities \(\Rightarrow\) determines “Environmental Cost Indicator” units (ECI) and a discount
    - Both criteria lead to a deduction from the bidding price. The adjusted bidding price is used to select the winner
Examples of low-carbon innovation PP (2) - continued

• Example of RWS procurement

  Motorway exit. Estimated cost: €5 Mn
  – Winner: original bid price €2,98 Mn
  – With both environmental deductions (CPL and ECI): €2,43 Mn, i.e. -18% in fictional bid price
  – CO₂ savings compared to ‘worst case’: -39%

• The programme created a lead market for existing low-carbon materials, e.g. cement, now broadly used in all public infrastructure (adaptive PPI)

• Now discussing a Green Deal to foster breakthrough innovations in materials

• Unique (?) and promising example of public procurement driving low-carbon innovation in heavy industry

Source: GPP 2020, Construction of a low-carbon motorway exit, Rijkswaterstaat, the Netherlands
Processes for PPI and low-carbon innovation

- Market dialogues – procurers and private sector can discuss existing innovations.
- Prior information notice: outlines requirements ahead of PP process.
- Pre-commercial procurement
- EU’s Innovation Partnerships: development and subsequent purchase, based on pre-agreed performance and maximum costs
- Examples of internationally-coordinated PPI to generate a critical mass and influence supply
  - Paris and EU cities for CNG buses
  - C40 planning to acquire 45,000 clean buses
- Beyond PP, standards and regulations too can drive innovations – but design matters!
In closing

- Implementation of PP for Innovation is not without challenges: “risk aversion, management, personnel and skills capacity and political support” (OECD, 2016)
- Public procurement can be harnessed for low-carbon innovation:
  - There is a track record of effective PP for low-carbon innovation in many jurisdictions – with positive effects on heavy industry
  - The aligned interests of governments (low carbon, innovation) and private sector (new markets, innovation) should make PP a strategic tool of the low-carbon transition
  - EU Directives on public procurement include a number of tools in support of innovation (including public-private market dialogues)
  - International coordination is possible for greater market impact
  - PP needs to be elevated on the priority list of climate policy-markers, to drive change and raise capacity of public procurers to better reflect low carbon in their objectives
References

• Aligning Policies: http://oe.cd/lowcarbon
• OECD Round Table on Sustainable Development Documents on public procurement