SHEPHERD+ WEDDERBURN

Energy from waste and Ofwat's reforms

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Ofwat 2020 reforms: overview

- **Competition in water. Waste.**
- **What?** STWs produce sludge. Treatment and disposal of sludge from STWs. Monopoly with limited competitive pressure.
- **Aim. WaSCs more efficient.**
  - Waste to energy.
  - Scale.
  - Sale of sludge. Farmers.
  - Trading with WaSCs and other organic waste, (OOW), companies.
- **Why?** Ofwat say lack of competitive pressure on WaSCs to reduce costs.

What do Ofwat propose?

- **Step 1. Separate price control/business.** Revenue control to incentivise efficiency. Some volume risk. Investments after 2020 at risk.
- **Step 2. WaSCs publish details to generate market interest and bids.** Per STW data includes:
  - Sludge quality and volume
  - Onward sludge reuse, recycling or disposal route
  - Tanker size, storage constraints
  - Other, e.g. unusual sludge constituents, planning constraints, freshness etc.
- **Step 3. WaSCs publish accepted bids.** Bid product or service (standard product or non-standard).
- **Step 4. Scrutiny by Ofwat.**
  - WaSCs record all bids.
  - Examine trades with other WaSCs/OOWs.
  - Adoption of new technology and new methods, e.g. larger treatment centres.
- **Opportunities? Use Step 2 information. Purchase and treatment. Working with WaSCs?**

Opportunity 1: Power and gas to grid

- Examples, Wessex, Northumbrian and Yorkshire. Use larger plants. Gas to grid and CHP.
- Veolia. 2015: 846 GWh of power. Potential for 1697 GWh per year. NGET UK Total Energy Demand 2020 1471TWh. Small proportion.
- Ofwat. 60% of all sludge treated using AD/AAD in 2010-11. 80% in 2014 - 15. Rising proportion of AAD.
- Options:
  - Power generation with WaSCs. Either build and transfer to WaSC or build and operate with PPA.
  - Onsite generation – avoided network costs.
  - *But* Ofgem embedded benefits review. Non-domestic Renewable Heat Incentive and Government energy policy. CfD. Competes vs offshore wind.
- Are there other options? Transport costs, Ofwat models on 50km.
- **Not a "big bang"? Worth a look?**

Opportunity 2: Convergence with other organic waste sector

Ofwat say: *"expectation is that the sludge sector reforms… will lead to… further innovation and integration with the OOW sector..."*

"… using spare capacity and improving the composition of the waste they feed to their anaerobic digesters."

Barriers.

- **Structural?**
- **Geography.** 50km radius?
- **Volumes.** A source of feedstock? Ofwat, 1,353 potential trades between WaSCs and OOW centres. 52,800 tonnes annually.
- **Environmental.**
  - EU and domestic law. Range of permits and permitting regimes.
  - Informal EA comment suggests that WaSCs have lower costs due to legal framework.
  - Review required.
- **Regulatory.**
  - Potential for sludge licences so that new entrants could compete with WaSCs? Unclear if DEFRA will bring into force.
- Ofwat want to see what happens.

Discussion points: what are your views?

- Ofwat asking the question.
- Power. Not a “big bang” but projects worth pursuing.
- Convergence with OOW.
  - Singapore PUB pursuing.
  - Pennon Group and Wessex.
  - Need to look at overall regulatory framework.
  - Is there Government/legislative capacity to remove barriers?
  - A longer term project?
- Are there other opportunities with innovation and new technology e.g. district heat schemes etc? Key issue public buy in?

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