

ACER White papers about DSOs

An economic point of view

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DSO past and futures activities

Past DSO missions

1. Managing Grid short time
2. Managing grid expansion
3. Grid access transparent
4. Investment - planning
5. Maintenance

→ Multiple organisational models

- Up to 2400 DSO in EU => huge diversity of passive DSOs
- Local tariff design are very different (% kW / % kWh) with or without time and space differentiations

Future active and integrated

- 1-5 +
 - 6. Neutral market facilitator
 - 7. Innovation enabler for RES
 - 8. Strong Coordination with TSO
 - 9. Local Energy Communities friendly (blockchain solutions ?)
 - 10. Allowing empowering consumers
- => Active DSO = part of TSO?
=> What tariff design?

Issues from an economic standpoint

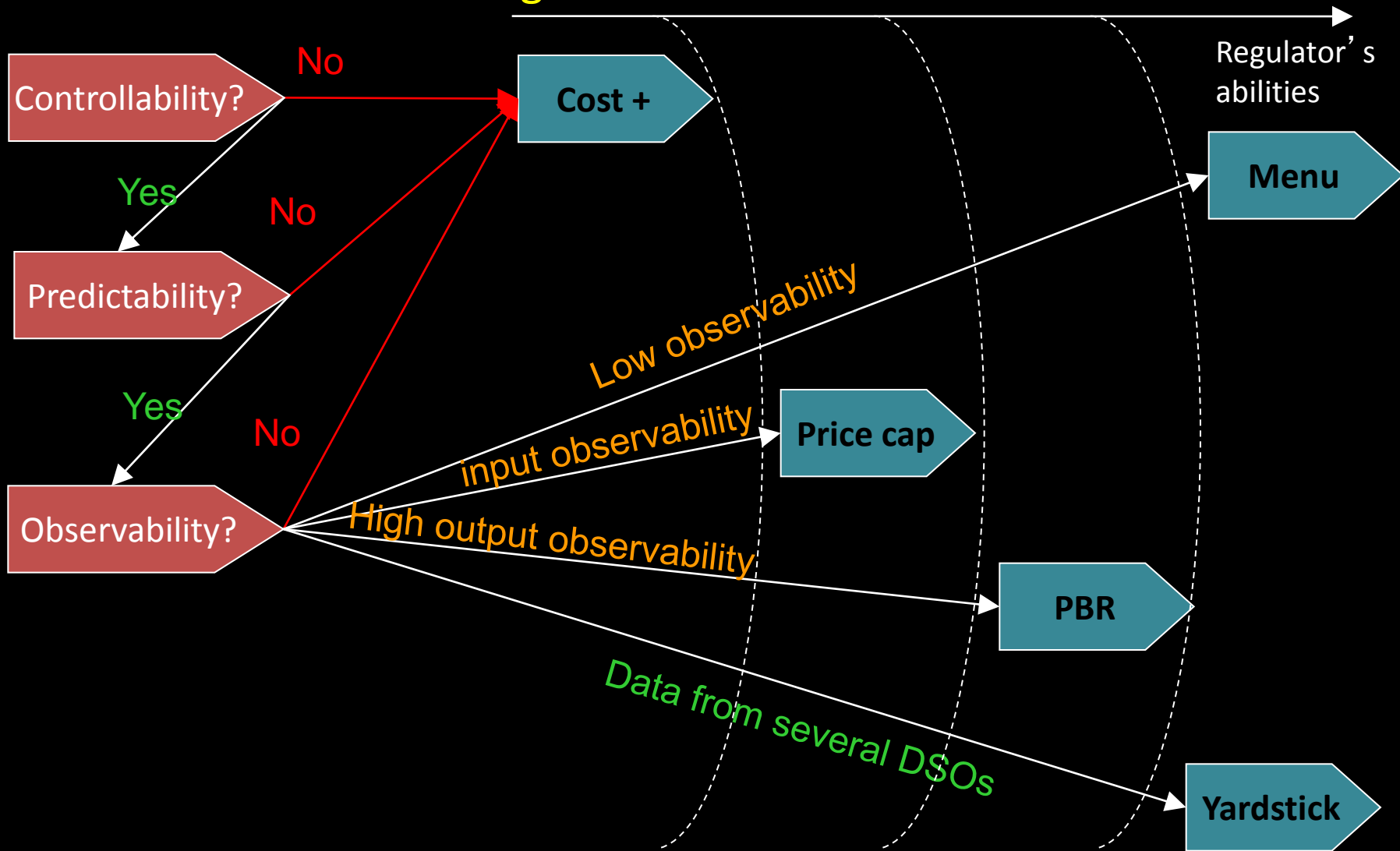
- Logical problem is: Need to align regulatory tools to do the 10 different tasks... With multiple supervisors (NRA's / ACER)
 - R 1: Homstrom on Multitasking = Average remuneration is a good way to have some performance in each of the tasks
 - R 2: Tirole on contract theory: if each task is incentivized => “you will get only what you paid for”
- ⇒ Tariff Definition have to be fine tuned with evolving conditions
 - ⇒ Tariff function of (time – location – innovation – decreasing passive consumers based – sunk cost allocation...) = Nodal pricing for DSOs?

2 mains issues

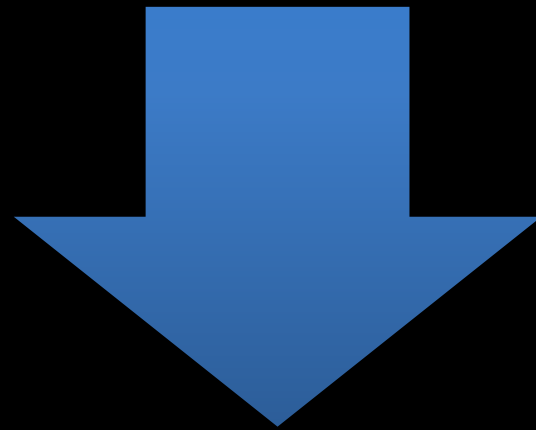
How NRA's and ACER will do it?

What are the risk of misalignment?

Glachant, al. (2013). The regulatory tool to implement depends on the characteristics of the targeted cost/task and the regulator's abilities



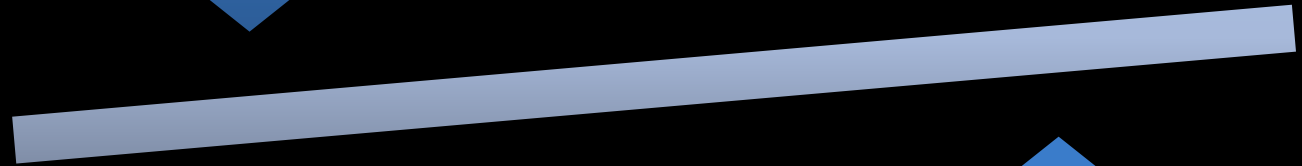
Tariff misalignments with new tasks / old tasks



Decrease revenue

1. PV (less kWh)
2. Energy efficiency
3. Smart buildings
4. LECs

...



For each tariff
(%) kW
(%) kWh

Increase revenue

1. Evs (more kW and kWh)
2. Investment and maintenance deferral with IoT

...



DSO and 4 D (Decentralization – Digitalization - Decarbonization - De-integration) => do we still need DSOs ?



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ACER White papers comments

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