

ISO/Gridcos versus Transcos: What, Why and Who Cares?

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Agenda

The Basic Functions in Electricity

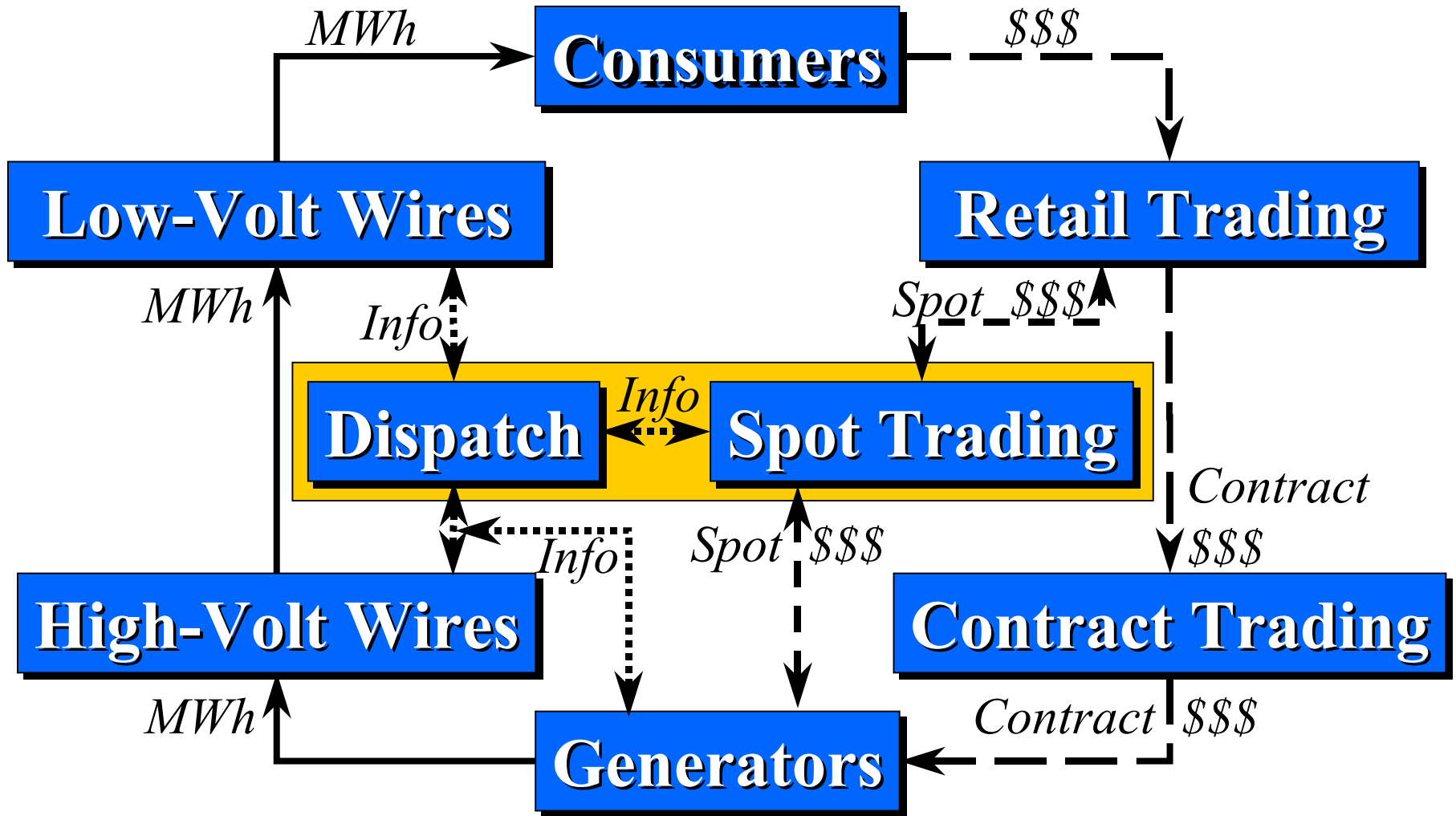
An ISO/Gridco System

What Is a Transco?

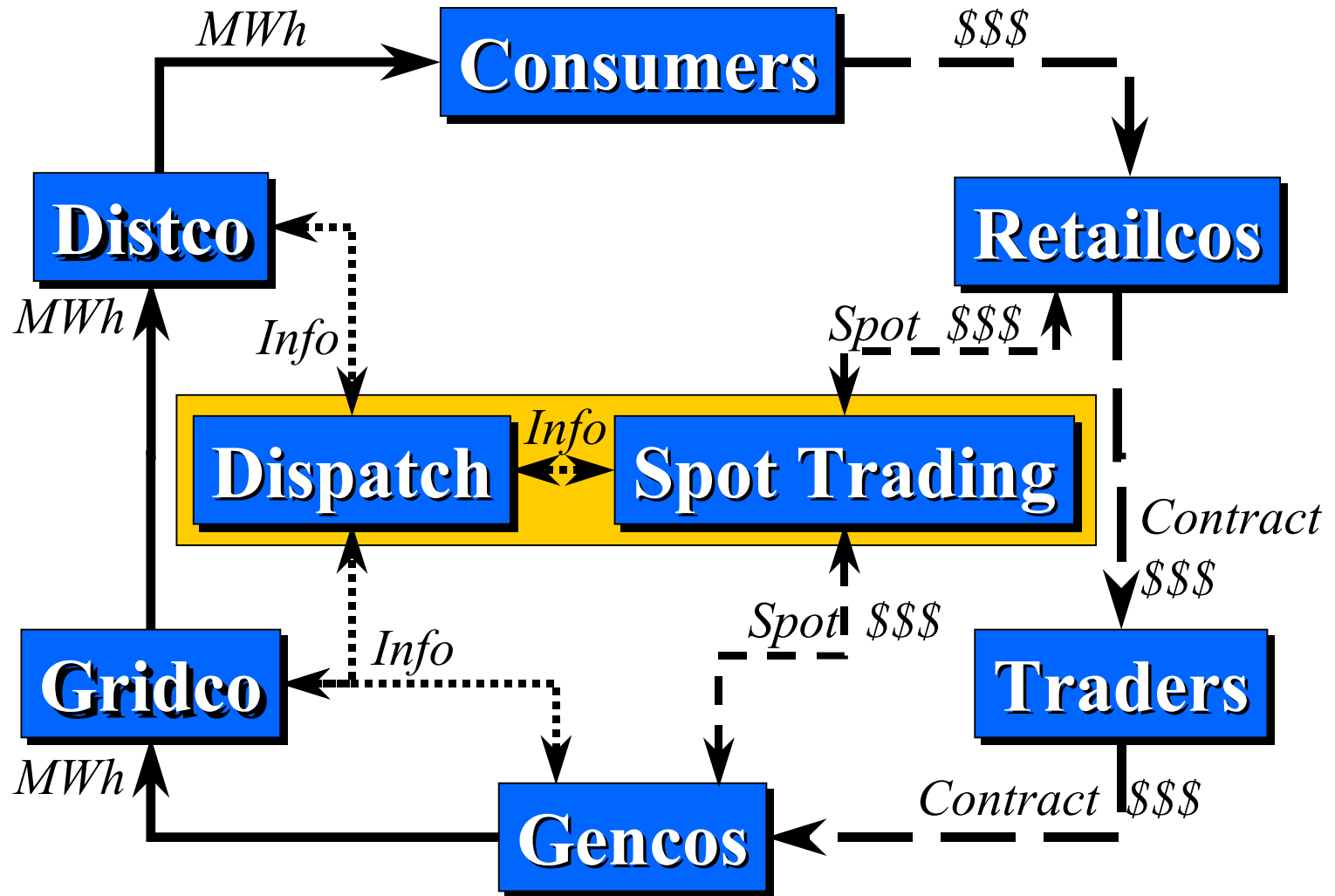
Other Stuff

Conclusions

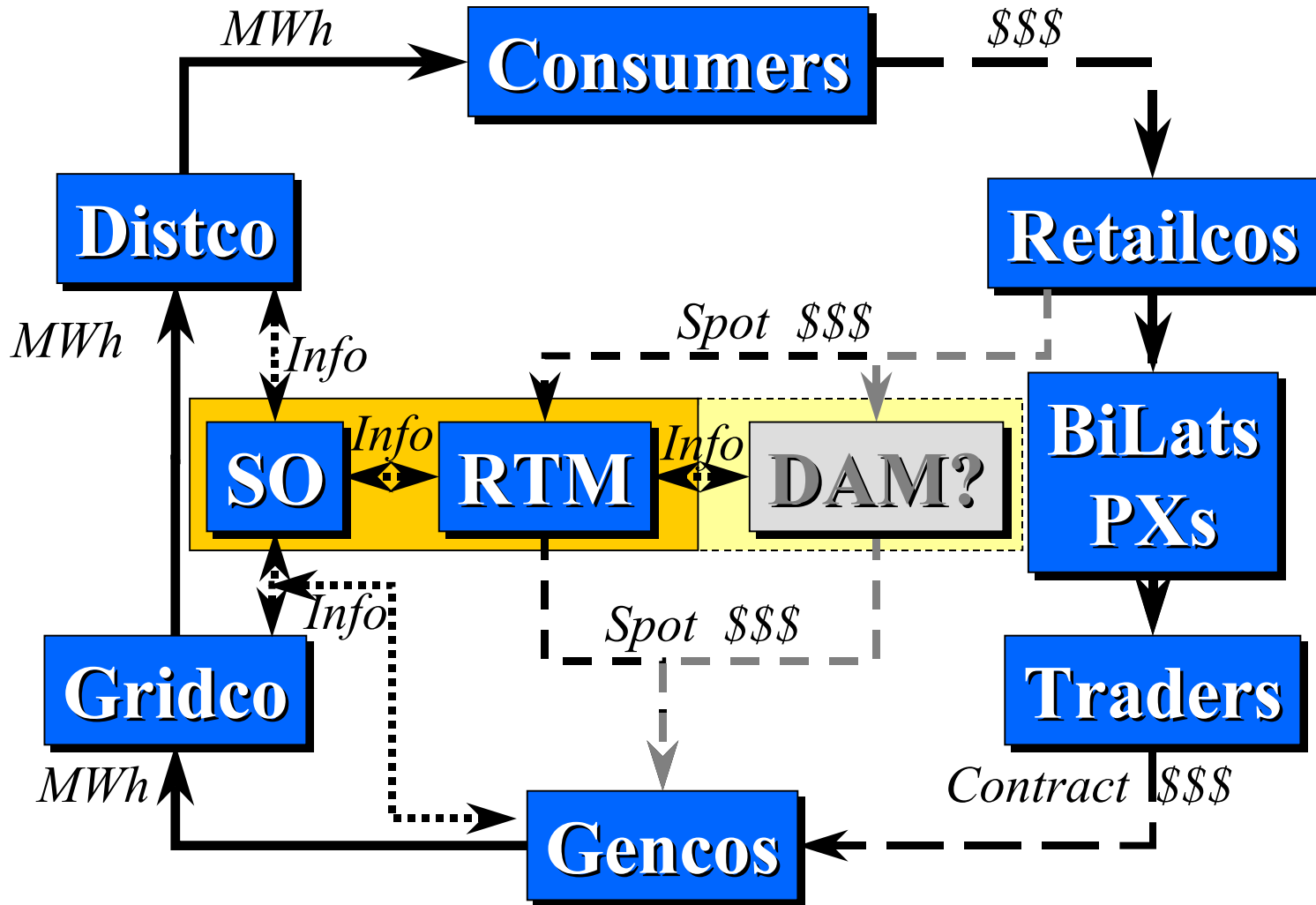
The Basic Functions in Electricity



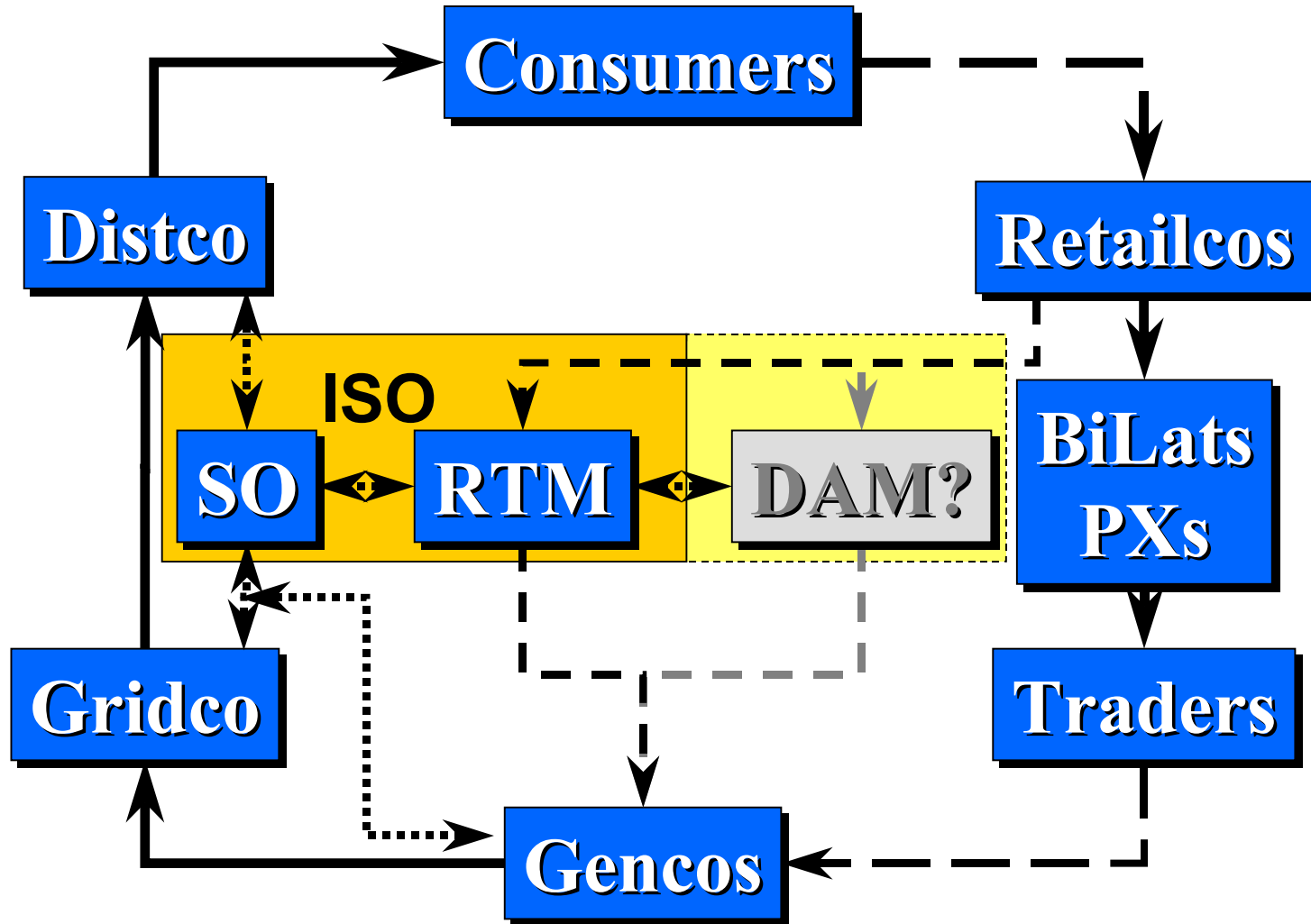
Functional Entities in a Competitive System



The Critical Dispatch/Market Functions



An ISO/GridCo System



An ISO/Gridco System

The (Perhaps-for-Profit) ISO:

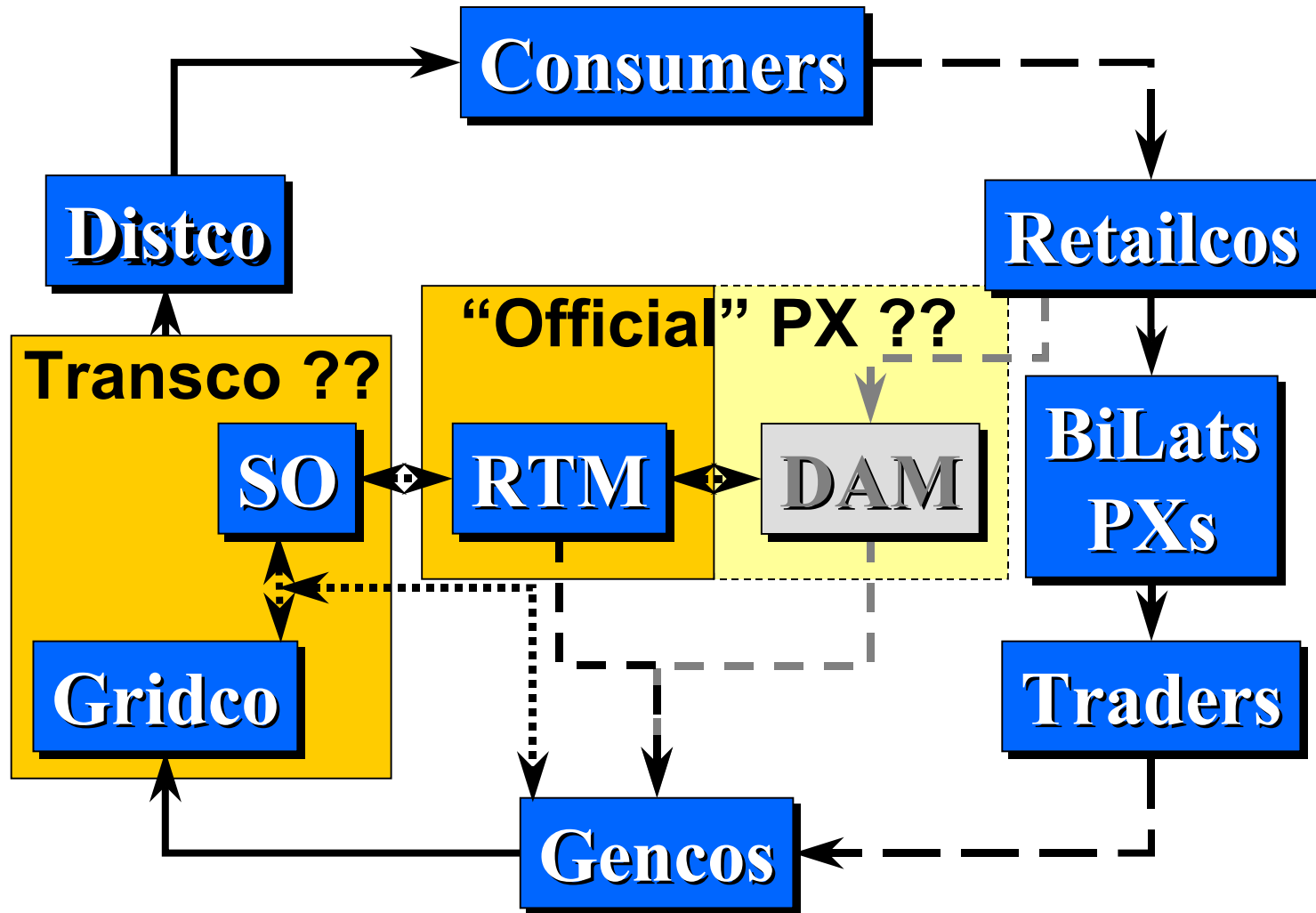
- Operates dispatch/ markets processes designed and governed by stakeholder-selected board
- Leads system planning/solicitation processes

Gridco(s) Are For-Profit Companies that:

- Own and operate grid under “lease” with ISO
- Have PBRs to motivate efficiency
- Provide planning info to ISO
- Do not unilaterally plan or invest in grid
- May compete in ISO-run solicitations

Separate ISO and Gridco provide checks and balances on each other

?? Transco = Gridco + SO ??



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This is what most seem to mean by a “Transco”

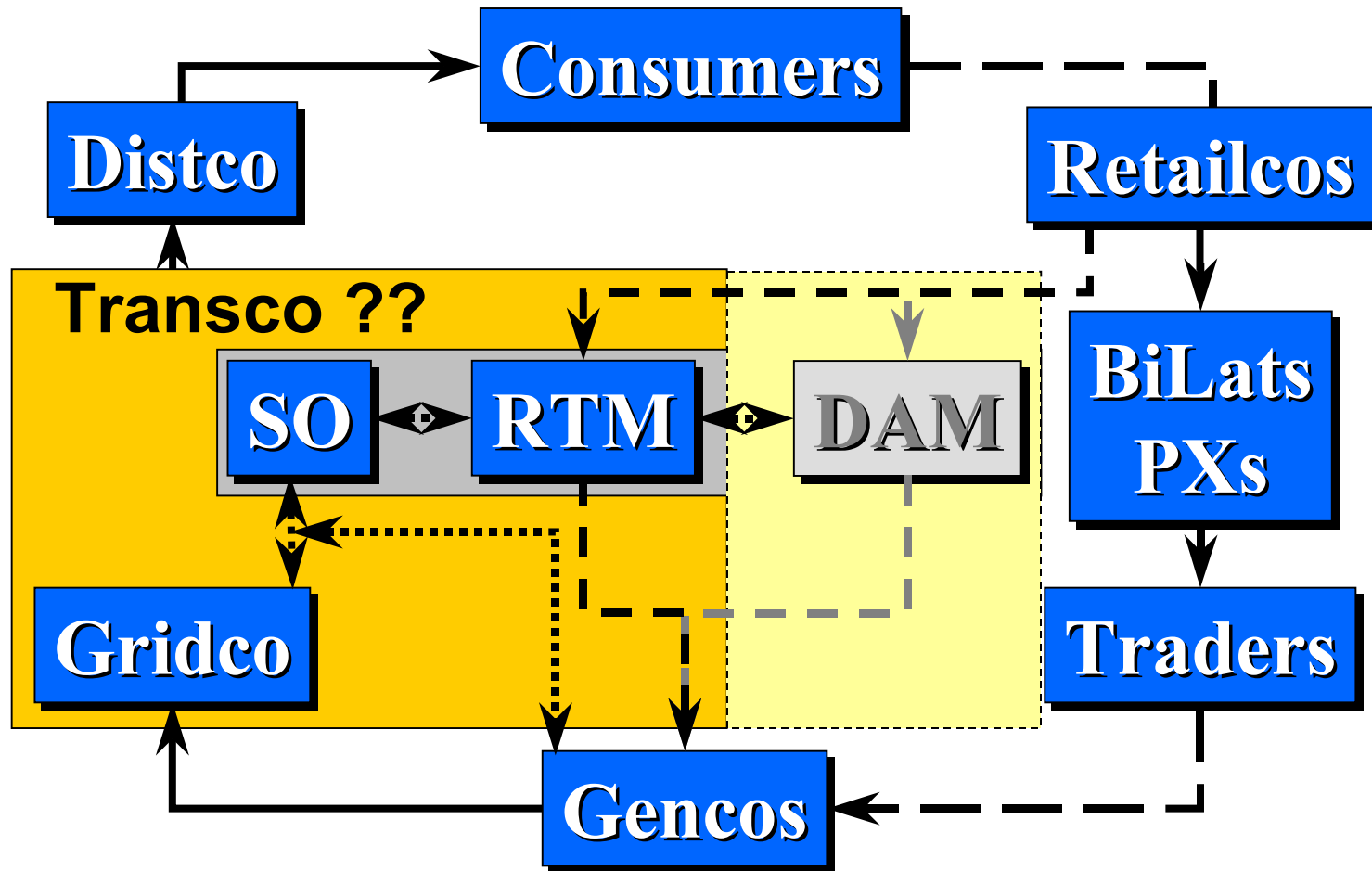
- Combines grid and system operations (SO)
- Does not mess around with markets (even RTM)

But if Transco’s SO does not operate even a RTM:

- How are real-time operations managed?
- How are imbalances & congestion priced?
- How are transmission rights defined/administered?

Most Transco proposals assume/require non-market or flowgate-based congestion management and hence are a very bad idea whatever their other alleged advantages

?? Transco = Gridco + (SO + RTM) ??
= Gridco + ISO



$$\underline{\underline{?? \text{ Transco} = \text{Gridco} + (\text{SO} + \text{RTM}) ??}}$$
$$\underline{\underline{= \text{Gridco} + \text{ISO}}}$$

This would restore critical SO/RTM integration, but:

- Would create other problems
- Is not usually part of Transco proposals

Do FERC/stakeholders design/govern the ISO/RTM?

- “Yes” dilutes Transco incentives/accountability
- “No” is probably unacceptable (at least in US)

Combining Gridco and ISO creates:

- Conflicts of interest in operations, planning and solicitation processes
- Monolith that is difficult to manage and regulate

Grid Planning and Investment

A Transco that owns Gridco and is the ISO can/will:

- Monopolize information necessary for planning
- Favor grid over generation/demand-side
- Favor its Gridco over competitive grid investors

These inherent conflicts will require that:

- Somebody else – who?? -- do planning studies and choose among options and vendors; and/or
- Affiliated GridCos be excluded from competitive solicitations

Given concerns about conflicts, for-profit Gridcos will probably do better with an ISO than as part of a Transco

PBR of For-Profit TransCo

PBR will be very difficult, because a Transco:

- Monopolizes system information
- Provides complex services
- Has inherent conflicts of interest

Quantifiable measures of Transco performance:

- Are hard to imagine and lead to suboptimization
- Examples such as “maximize throughput” or “minimize congestion” are not encouraging

The “right” investment PBR would require fixed Transco revenue to cover total investment plus operating costs over 30+ years

Experience with NGC in England & Wales

NGC is a Transco (i.e., owns grid, is SO) that:

- Operated Pool until NETA started in March 2001
- Operates Balancing *Mechanism* (BM) now

Largely successful from most perspectives

- PBR → lower “uplift” in Pool, BM costs in NETA
- Grid has been expanded/upgraded
- Users seem happy (with the usual grumbling)
- NGC is very profitable (may be more so w. NETA)

But Brits are remarkably tolerant of:

- Opaque, powerful, very profitable monopolies
- Light-handed/wrong-headed, unappealable regulation

NGC would/will not do as well here

Efficiency, Risks, Liability and Incentives

Will for-profit Transcos be more efficient because they:

- Have large assets that can be put at risk?
- Are more sensitive to costs and profits?

In reality, Transcos are good at:

- Defining/using PBRs to get large upsides
- Avoiding liability for their actions
- Leveraging their monopoly to get unregulated profits

ISOs are not easy to control or motivate, but can be:

- Given management and profit incentives
- Governed in “the public interest” (for better or worse)

If it were easy to get efficient performance from monopolies, we would not be doing all this.

Merchant Transmission Investment

Why exclude merchant transmission if:

- “Good” market signals let it emerge?
- Investors put up their own money?
- It does not preclude efficient regulated options?

An ISO unaffiliated with any Gridcos could fairly:

- Evaluate competing merchant proposals
- Decide when a regulated option is better
- Solicit regulated and merchant investors

Again, for-profit Gridcos will probably do better with an ISO than as part of a Transco

Conclusions on ISO/Gridcos vs. Transcos

The critical issue is system operations and pricing

- If “Transco” → Non-market operations and precludes LMP, it is a very bad idea.
- If a Transco operates an RTM (+DAM?), some of its alleged advantages are reduced

Most of the alleged advantages of a for-profit Transco:

- Are at best unproven/overstated
- Could be obtained at least as well with a Gridco

It is unwise to claim or expect too much from any “solution,” given the inherent difficulty of motivating and controlling complex infrastructure monopolies