The model of Central Trading & Purchasing Agency

A way towards the double decoupling

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***with Etienne BEEKER**

Three challenging objectives for an exhaustive reform

- Maintaining hourly markets to ensure short-term coordination inside the system and with the other systems (market efficiency)

- Decoupling short term price signals and long term signals for investment in low carbon technologies

    - Revenue guarantee contracts for sharing risks of investing in new equipment

- Insuring the consumer protection with quite stable retail prices by their quasi/alignment with long-term costs,

    - while keeping some price variability to incite consumers' reactivity (avoiding dilution of price signal)

Keeping total integrity of market architecture (day ahead, infra day, balancing, ancillary & market coupling)

Creation of an Independent public entity to assume 3 main functions

Upstream

- **1. Sharing market risks with low carbon producers** through CfD contracts for each equipment and through capacity contracts with flexible units (storages, gas turbines, etc.);

- 2. Organising the "long-term market" for the **allocation of these contracts by auctioning** in order to maintain competitive pressure

Downstream

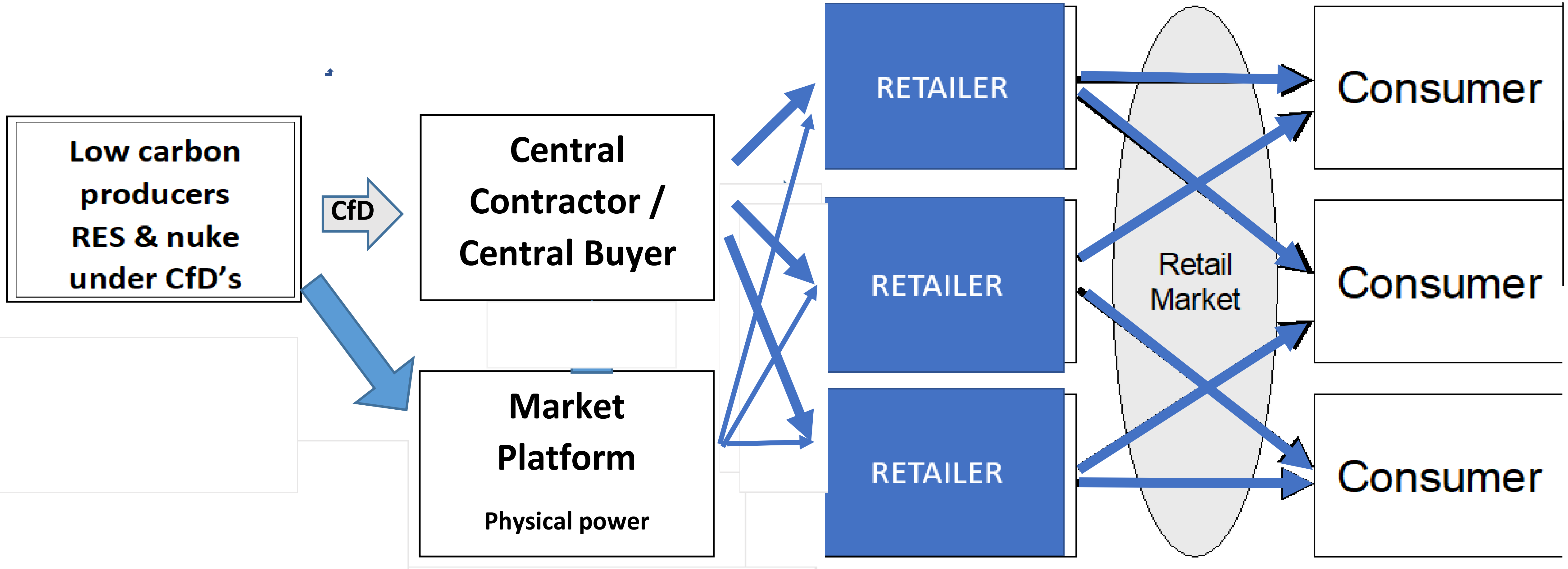
- 3**. Hedging major part of market risks for the suppliers** (and beyond for consumers) via the transfer mechanism of "positive and negative differences" of the double options
  - **Public entity acquires on the spot market the whole of MWhs** produced **by equipment covered by CfDs**
  - Definition of **transfer prices** to suppliers aligned **with long-term costs**

The rest of MWhs is sourced by suppliers on the spot market (correspondence to production by fossil generators & flex.)

- This allows to **keep some prices variability** to influence consumers' behaviour during scarcity moments and gas price spikes

1. Decoupling long term signal for investment and short term market price

A Central Trading Agency



In grey : financial transactions

In blue: physical transactions

A Central Trading Agency

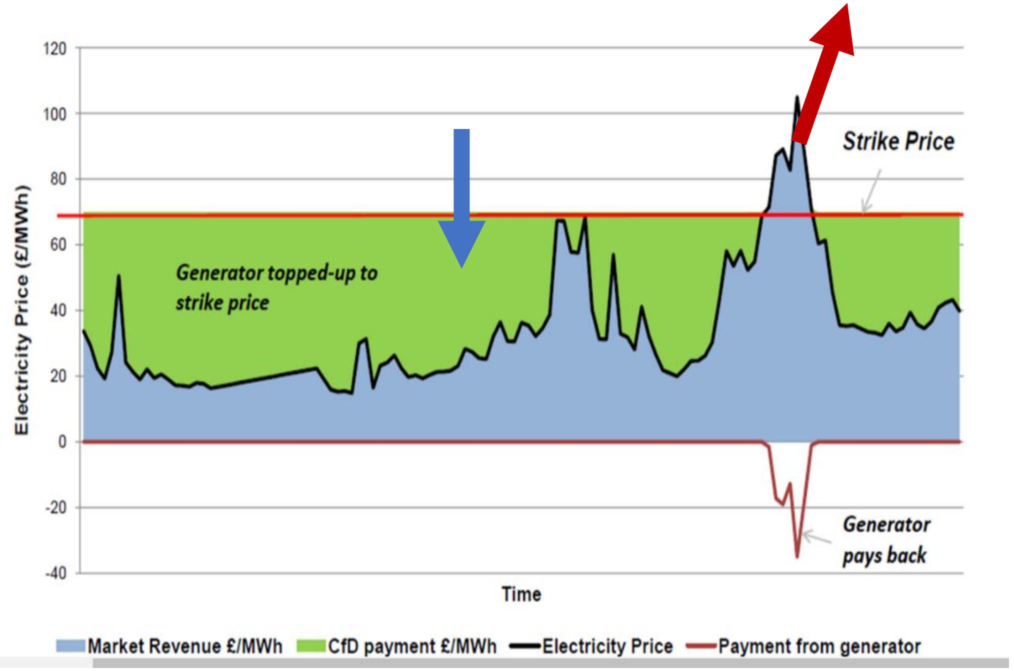
The public entity = a private limited company owned by government

in charge of contracting and auctioning

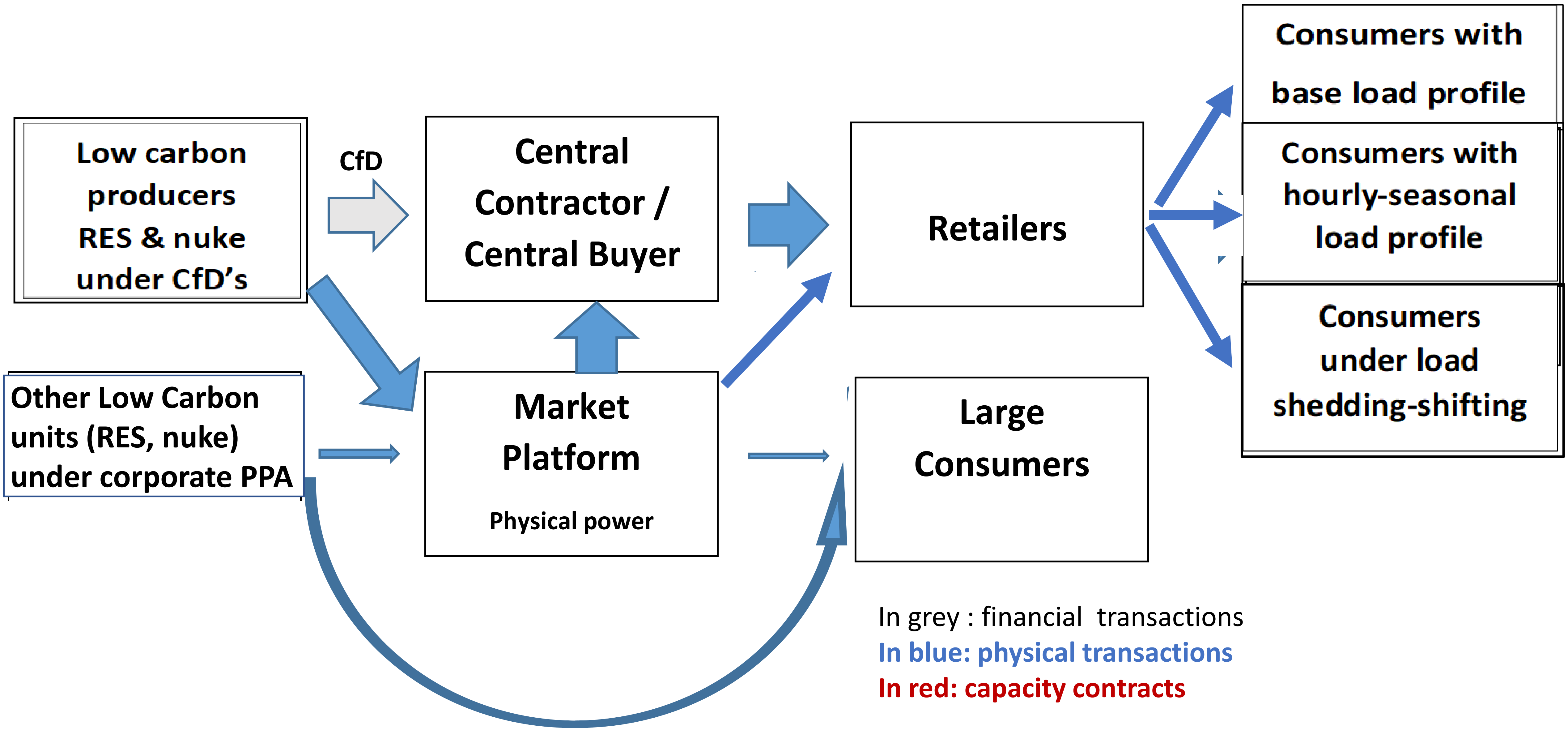
- Long-term contracts with **new low carbon equipment**, but also with **existing low carbon assets** (RES, Hydro, nuke, etc)
- In order to preserve EU wholesale spot markets, contract design is financial "Contract for difference" (CfD)
- Auctioning of contracts (strike prices)
- Each generator is on the spot
- Importance of having a commercial company: Clearing house

  Guarantee of credibility of the transfer mechanism on differences

  No risk of government discretion



CfDs and PPAs for Low Carbon Contracting



Freedom of low carbon generators to be outside Agency's hedging umbrella

No mandatory CfDs on low carbon investors in new RES and nuclear equipment

Open way for PPAs between low carbon developers (RES, nuclear) and large buyers

Rules to avoid opportunistic behaviour from developers and buyers commited in PPA

Strong beliefs that PPAs are **(or should be)** the main arrangements to hedge the investors' risks in low carbon / high CAPEX technologies

- Buyers' motivations :
  - search of stable prices and « green image » in the case of RES corporate PPAs.
  - But in fact obligation to contract a share of green sourcing (Spain) or subsidies, or else commitment to CO_2 reductions (USA), etc

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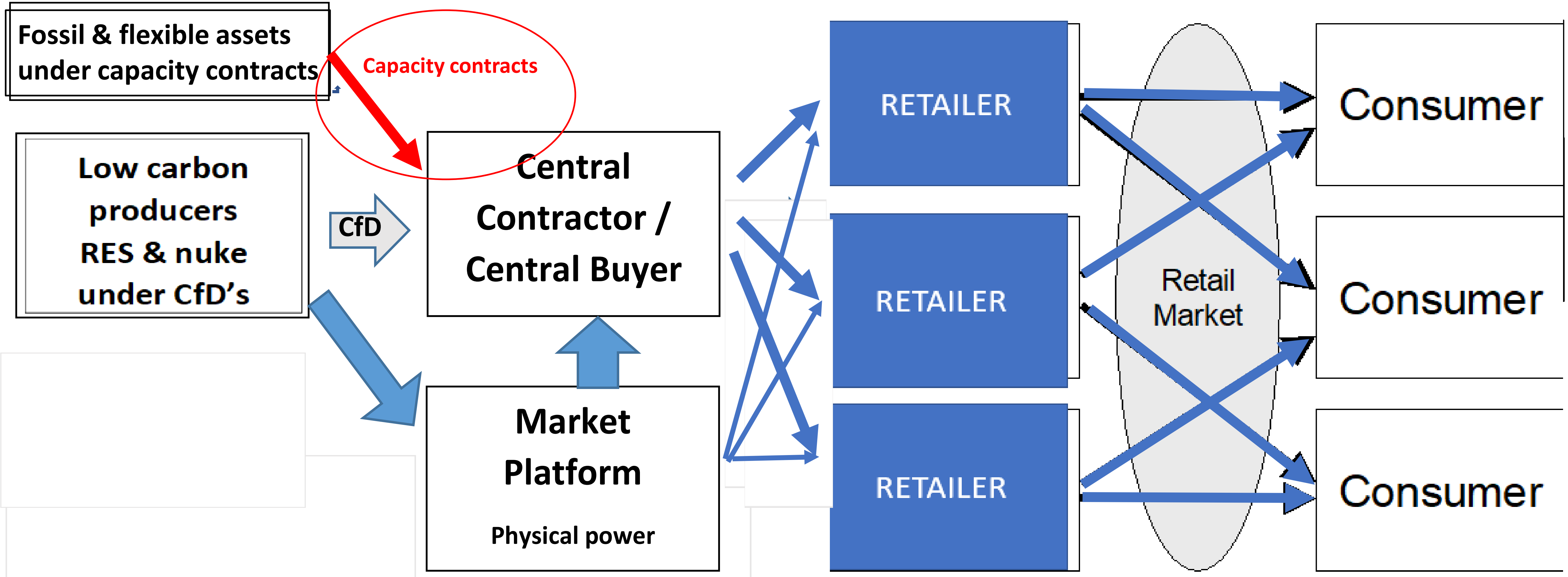
On the side of buyers, corporate PPA is very risky for them: **need to balance its consumption profile with the VRE 's outputs…**

Cannot be the main route for hedging the developers, unless rejection of CfDs by government

Contracting on Capacity with the Agency



In grey : financial transactions
In blue: physical transactions
In red: capacity contracts

Contracting on capacity with fossil equipment (peaking units, back up) and flexibility sources (storage)

Collective goods: forward capacity contracts in view of SoS (capacity adequacy) and system stability (flexibility, etc.)

Auctioning of contracts with equipment in relation to flexibility services and guarantees of availability in critical periods

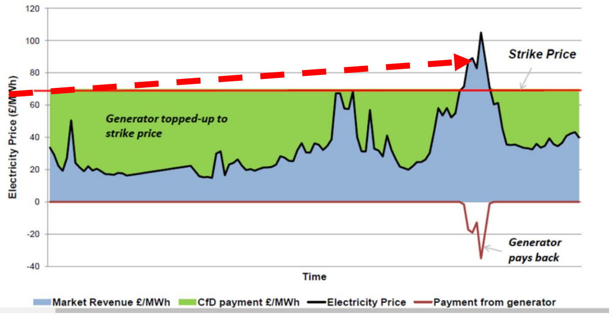
- Energy revenues not relevant to trigger investment decisions in high Capex flexible sources
- Contracts for capacity remuneration (annuity covering the capital cost)
- Incentive to be available
- Different maturity of contracts between new and existing plants

Integration in capacity remuneration mechanism (CRM) in countries with auctioned forward capacity contracts CRM

Extension of the CRM to low carbon technologies

2. Decoupling retail prices from wholesale prices

A central trading **and purchasing** agency



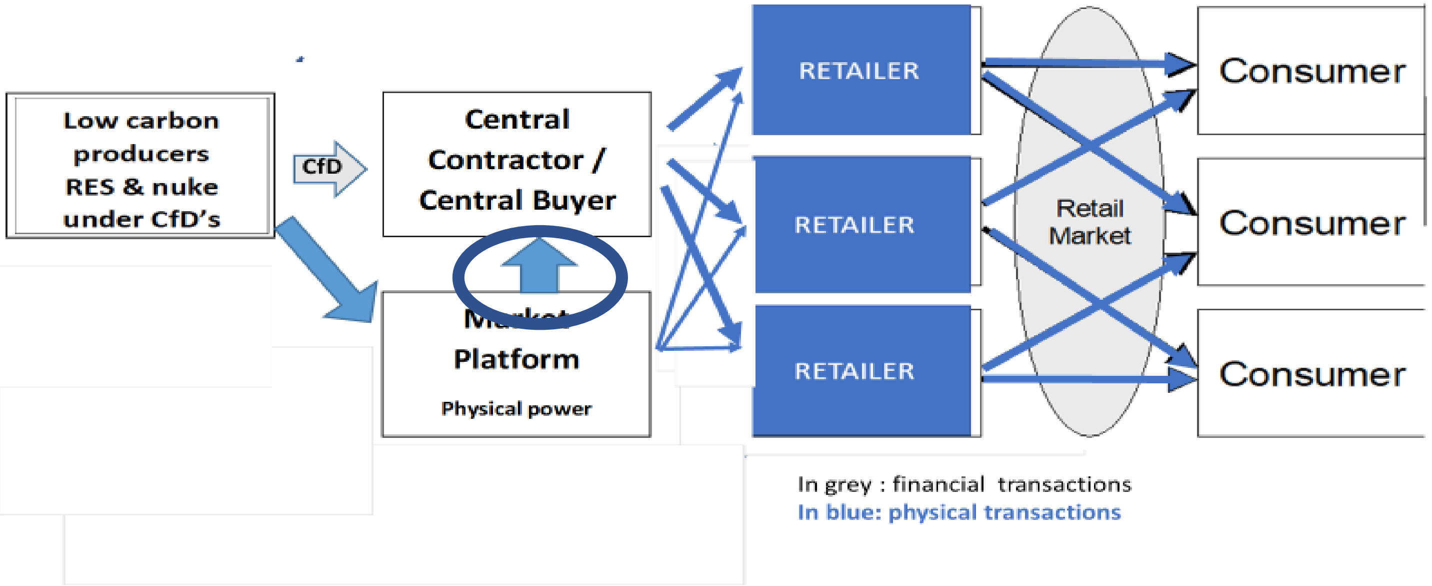
First notice : CfDs is a way to capture infra-marginal rents

- Each equipment (low carbon, fossil) sell their production on the spot market
- Public entity is also a

  central purchasing agency

  of every low carbon MWh related to CfD's contractors
- Objective: to be able to resell MWh's

  at price strictly aligned with long term costs



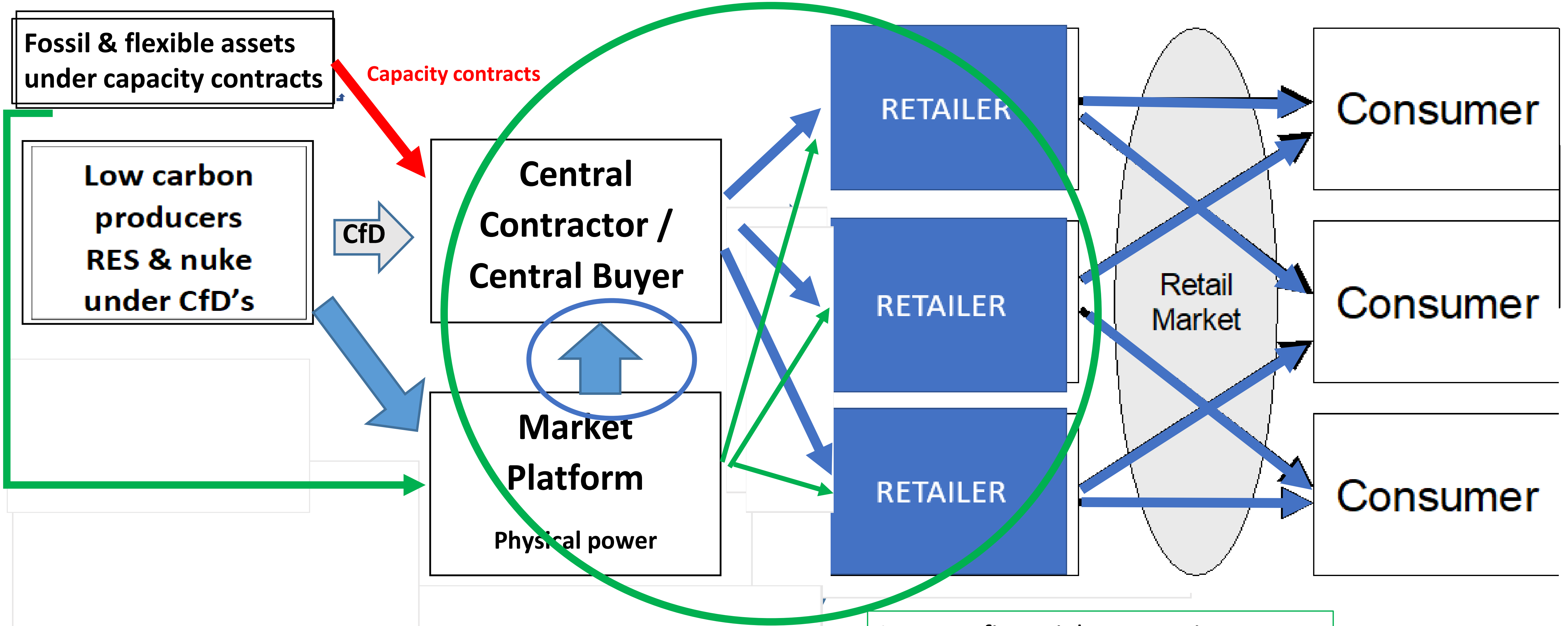
Relation between wholesale and retail prices (1)
1. Procurement of low carbon MWhs to the Agency

- Central buyer assumes the major part of retailers' sourcing
  - Position to control long term costs of every low carbon unit (RES, nuke)

  It pays spot prices + differences of CfD (when strike price >spot prices) for each MWh from low carbon units

- Transparent mode of definition of **transfer pricing to suppliers based on long term costs**
  - Regulator's guidelines on the mode of pricing of different energy blocks (posted prices' definition)
  - Possiblity of auctioning energy blocks (in open descending auctions with start price > posted price)

Complementary sourcing on the spot



In grey : financial transactions
In blue and green: physical transactions
In red: capacity contracts

Relation between wholesale and retail prices (2)

Retailers’ complementary sourcing on the spot market

- Mainly during hourly tensions between supply and demand
  - Complementary sourcings correspond to MWh’s from back-up fossile generation and flexbility sources

- Variability of retail prices during equilibria in tension on the wholesale market

- Incentive to develop demand response contracts

At the end **competition between retailers** (& possible aggregators)

The 2 retailers’ sourcings: some parallel with the Keay-Robinson ‘s market splitting

Main competitive force: Ability to match their two different sourcings with their price and service offers to customers of different load profiles

PART 3.
Desirability and feasibility of the Central Trading & Purchasing Agency model

Central Buyer model = achievement of both objectives of acceleration of the transition and consumers protection by the double decoupling

" Such a targeted market design changes can be proposed and implemented quickly"
(Wording of the Non Paper 20 October proposing generalisation of CfDs to every low carbon units as infra-marginal equipment in order to reallocate rents to consumers)

Evident compatibility with EU rules

- Upstream competition on the wholesale market and downstream competition on the retail markets
- Market integration of the systems through spot markets
- RES developers' freedom to choose between PPAs between private parties and CfDs with the public agency
- Capacity mechanisms are now considered as non-temporary

But…

Two adaptations needed

- 1. Disconnection of retail prices from wholesale spot prices : the article 5.2 to be adapted.
- 2. Need of standardisation of contracting with State for every low carbon technology, and not only RES units (State Aid regime to be amended)

And an intrinsic obstacle

Model does not allow cross contracting between “central buyer” and large external purchasers attracted by eventual lower prices allowed by efficient choices of energy mix

But this falls within the exercise of national sovereignty : Power mix plan is defined for supplying national loads

Possible accommodation for compensating price gap between industrial prices in large consuming sectors (redistributive)

Notice a recent statement of the non-Paper of 20 October underlining that

Consumers in a country which “develops rapidly RES capacities with the help of CfDs’ hedging, would benefit of prices aligned with the lower costs of renewables in line with their share in the electricity mix”

Back up

1. Need of a strong governance for long term choices

A blind spot: an issue completely ignored by any proposal of market design reform while market cannot coordinate long term choices

Two motivations

1. Need of **rational planning of investments** in the technology mix **at the national level**

- Inconsistency of the EU energy climate policy based on "technology" objectives (political criteria)
- Ignorance of other low carbon technologies
- No role for carbon price and ignorance of marginal costs of emission reduction

2. Need of a strict long term coordination

   a. between dispatchable low carbon units and variable
   b. between deployment of variable RES and flexibility sources.
   c. between investment in generation & transmission & distribution grids
   d. between centralized and decentralized generation sources

So need of a **special "planning" agency** with large competences in the modelling of complex power systems

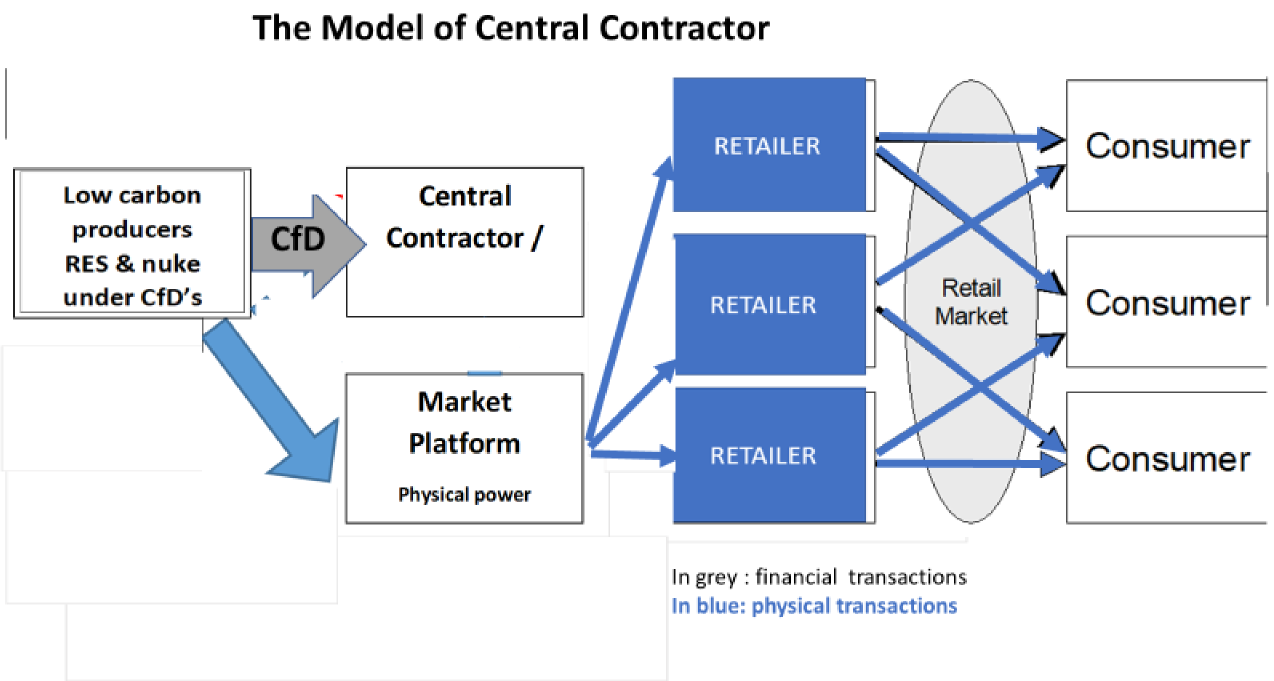
- Impartiality in the advice to government who chooses
- Examples of the Brazil and Ontario ' hybrid planning & market regime

Conditions

Explicit delegation of long term governance to Member States (Art. 194 (2) TFEU on sovereignty in matter of energy mix)

Should we have a recognition of the pre-eminence of planning upon market for long-term coordination ?

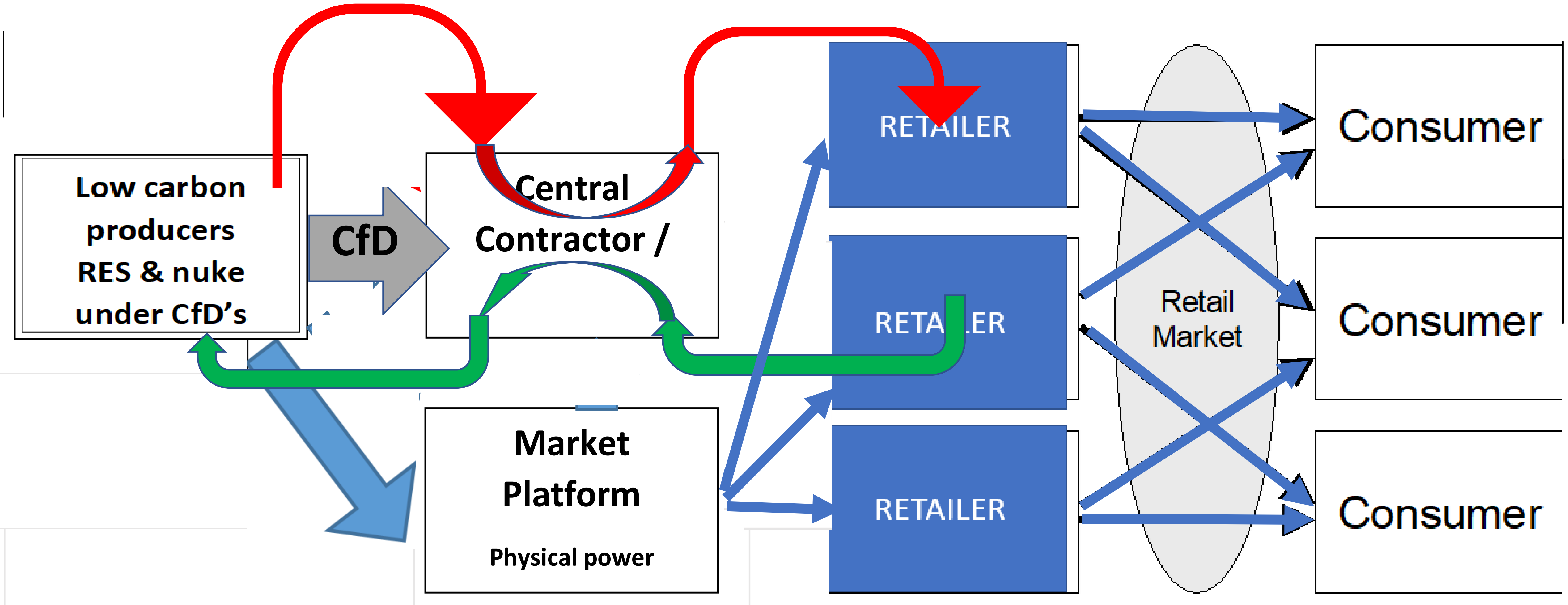
2. Variant of the Central Trading Agency model



- (Recent Commission's non-paper (20 oct.) on non-gas infra-marginal rents)
  - Generalisation of CfDs financial contracts to every RES and low carbon units
  - Progressive Extension to existing low carbon equipment
  - A way to align retail price on low long term cost of RES generators
  - Very easy to implement

French gov. 's Position Paper REFORMING THE ELECTRICITY MARKET TO FOSTER ENERGY TRANSITION, PROTECT CONSUMERS AND TO KEEP THE BENEFITS OF MARKET INTEGRATION AND MARKET COUPLING July 2022

Financial flows on « differences » of the CfDs



In grey : financial transactions
In blue: physical transactions
In red : payment of «positives differences » to suppliers
In green: payment of « negatives differences » by suppliers.

3 Comparison of Central Buyer model with the Dual Market proposal (Greece)

Greece proposal of splitting spot market

- RES productions sold at the strike prices of CfDs on one side
- Fossil generators’ MWh sold at marginal prices on the other side

Artificial splitting of the spot market

  - two steps of each hourly market
  - Complex rules of calculation (weighted average price each hour
  - CfDs mean that RES units are not paid at marginal prices

- Large possibility of rules gaming
  - to belong to the most favourable part of the market, for example VRE unit associated with storage
  - Costly arbitrages at individual level : it raises the system costs
- On the long term, interferences: by reducing RES rents, it discourages investment in RES and so favour gas investment

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Central buyer

- It preserves **spot market integrity**
- Keep efficient coordination by markets (day ahead, infraday, ancillary services, etc.)
- No distortion to invest in different technologies
- Preserve priceè incentives to adapt consumers’behaviour