

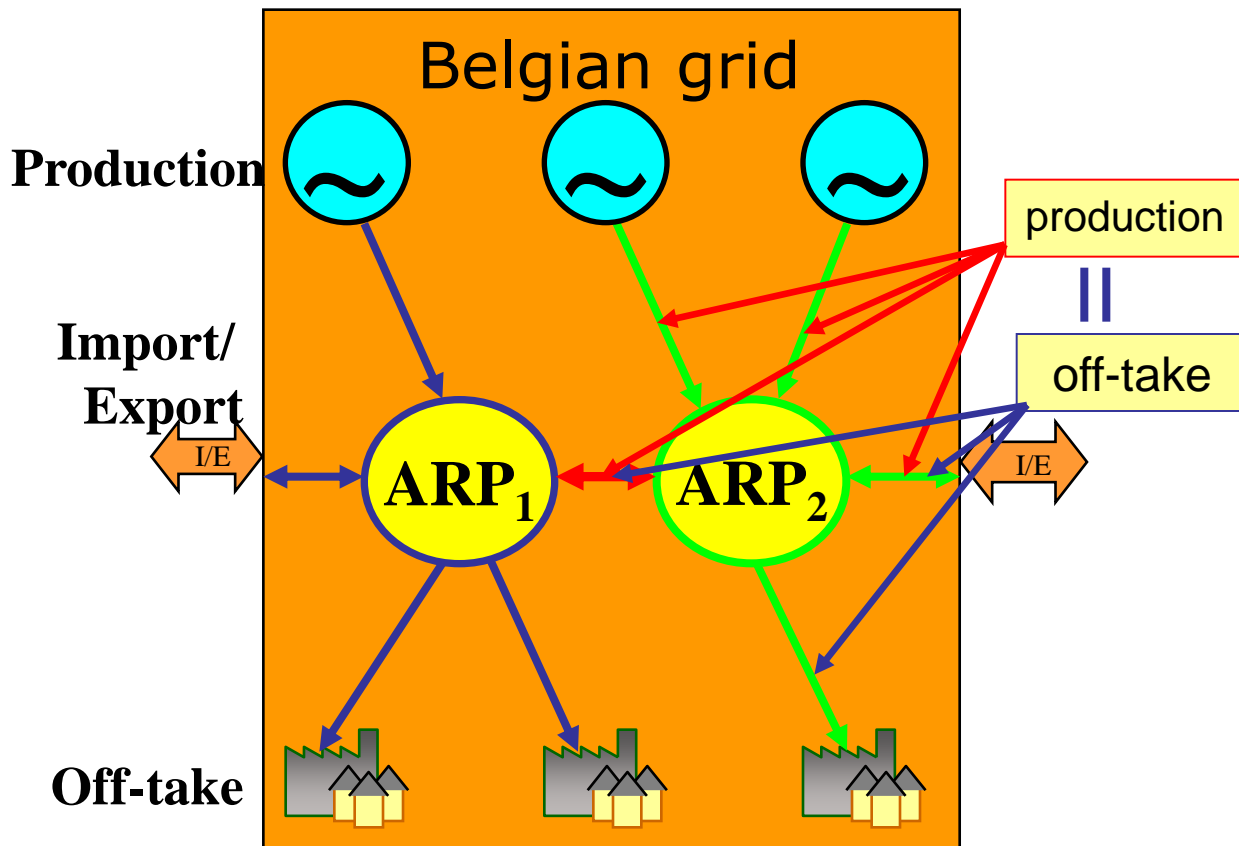


ARP: role & responsibility

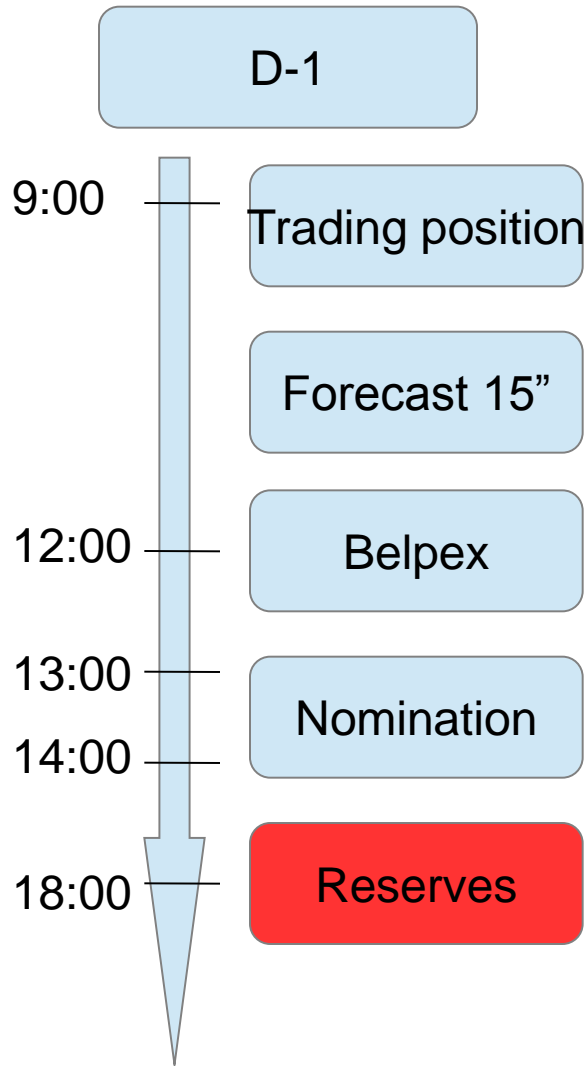
ARP: mechanism

Elia's responsibility: facilitating the balance control of the grid through fair market mechanisms

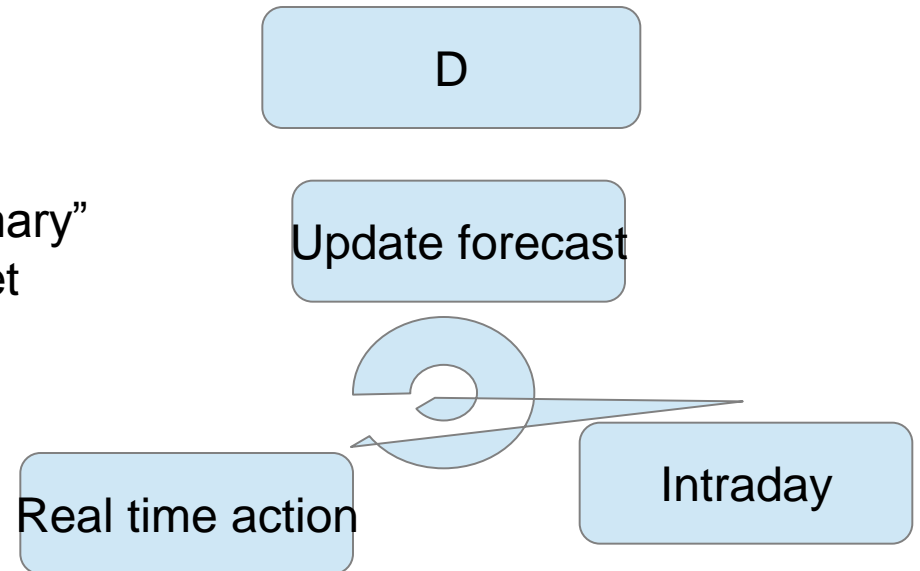
ARP responsibility: balancing the grid through the use of these market mechanisms



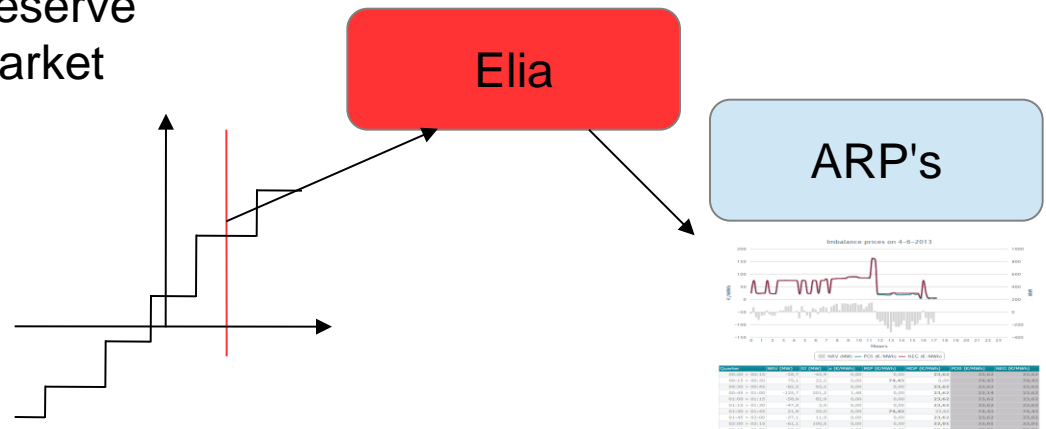
ARP – practical approach



“Ordinary”
market



Reserve
market



Up to D-1

- ✓ !!!Information exchange with consumers and producers!!!
- ✓ Forecasting tools (macro data on consumption, production,...)
- ✓ Position management through trading (Endex, OTC, CASC...)

D-1

- ✓ Detailed forecasting (solar, wind, production, consumption,...)
- ✓ Position balancing on Belpex
- ✓ Direct bidding from clients through trading options

During D

- ✓ Update forecasts (especially renewables, unplanned outages)
- ✓ Position management on intraday markets
- ✓ Market information (prices, ACE,...)

Real-time

- ✓ Actions on the imbalance price signal (no price certainty)
 - ✓ ARP pooling
 - ✓ CIPU: Free bids, APP (new)
 - ✓ Elia bid ladder (future)
- Important! For the moment, reserves (R3) can only be activated through Elia, no free bids!

- ✓ Fast evolving renewables: continues struggle for accurate data, and increased volatility
- ✓ Decentralisation: challenging production forecast (next to “historical” off-take)
- ✓ Distribution grid:
 - ✓ Distribution grid information
 - ✓ Flexibility market mechanisms on distribution grids
 - ✓ Access frame work on distribution grids
- ✓ International politics: interference with marginal unit costs
 - ✓ Changing RE support scheme
 - ✓ Capacity market schemes
 - ✓ ETS framework
 - ✓ Transport tariffs (injection)
- ✓ Market framework: price signals, time-to-process new

Combined with blanc checks in supply contracts

- ✓ Demand side management:
 - ✓ Industrial: Peak shaving, BSP, Day-night shifts
 - ✓ Residential?
- ✓ Smart grids/smart meters
 - ✓ Standard load profiles? (macro vs micro)
 - ✓ Prosumers: small (residential) producers?
- ✓ New technologies:
 - ✓ Electrical vehicles
 - ✓ Storage
 - ✓ Gulf energy, stratosphere wind turbines, super grids,...
 - ✓ Heat networks, Geo-technologies