

EPEX SPOT & Local Flexibility

GOPACS developments

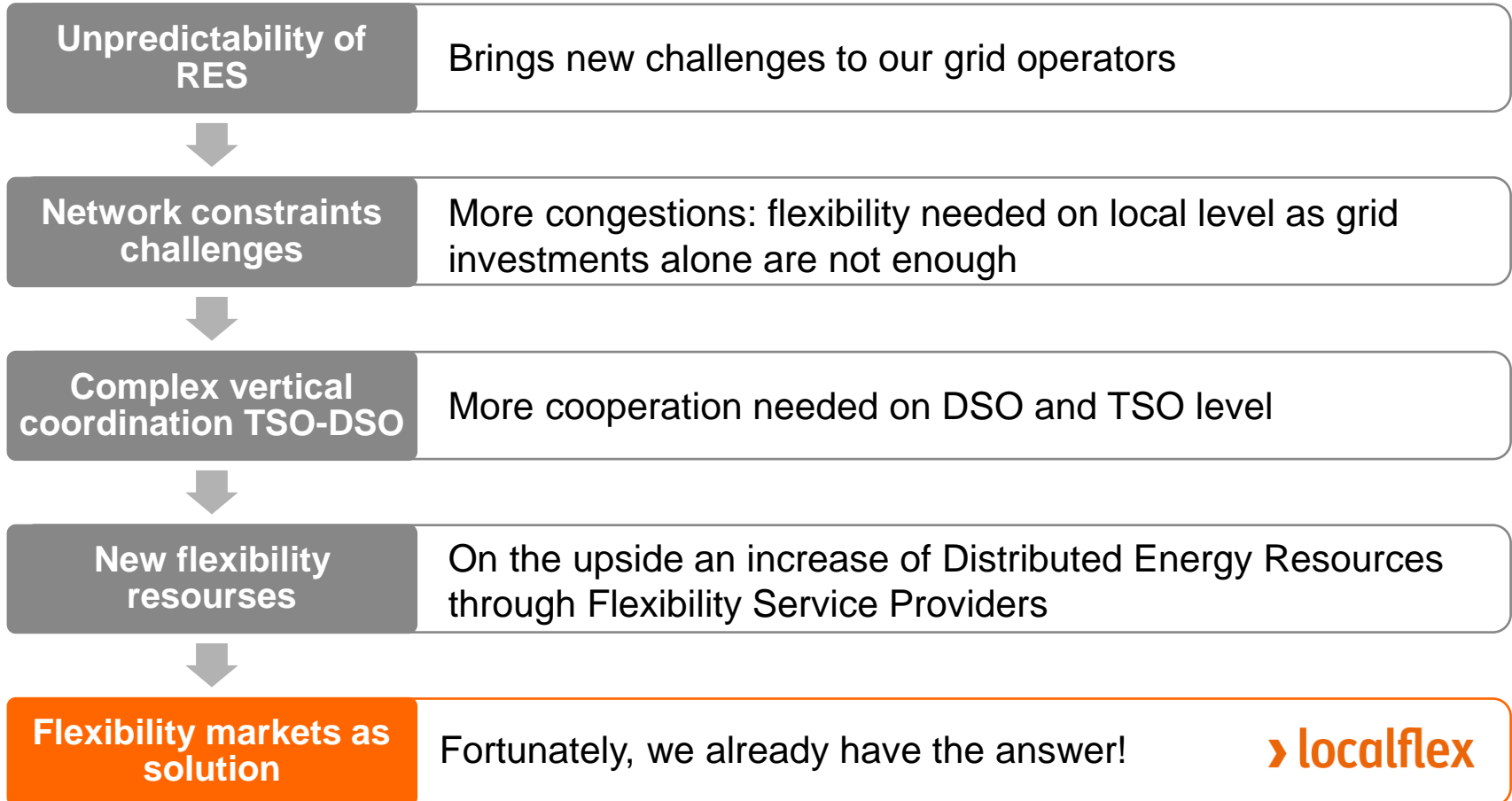
Flexcon break out session

26 September 2024

Nicolas van Sprang

The logo for localflex, featuring a stylized orange chevron symbol followed by the text 'localflex' in a bold, lowercase sans-serif font, where 'local' is black and 'flex' is orange.

The energy transition requires a more flexible power system



EPEX SPOT's initiatives in the flexibility space for congestion management



- 1 DSO
- 85 flexibility service providers // 17000+ flexible assets // 810+ MW of flex
- Short-term energy and long-term capacity
- Close-gate auction: day-ahead energy auction + (bi-)yearly reservation auction
- 129 zones



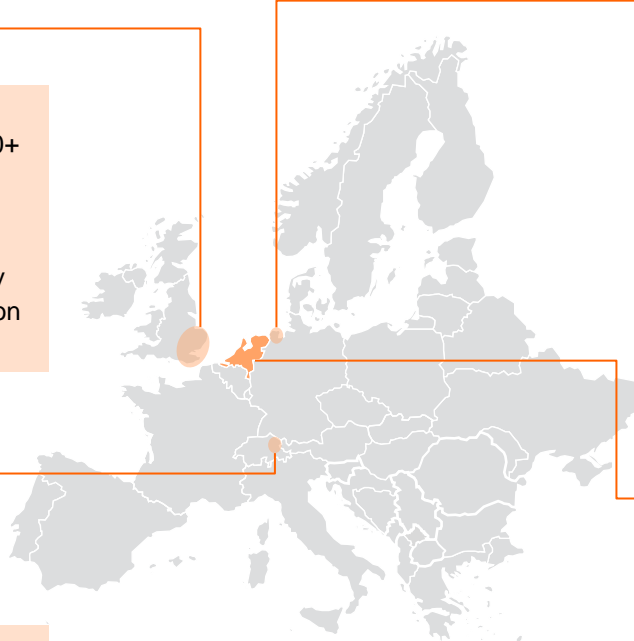
- 1 TSO and 2 DSOs with T&D coordination
- 6 flexibility service providers // 360+ MW of flex
- Short-term energy
- Continuous matching
- 4000+ orders submitted
- 130+ transactions
- 23 local market areas



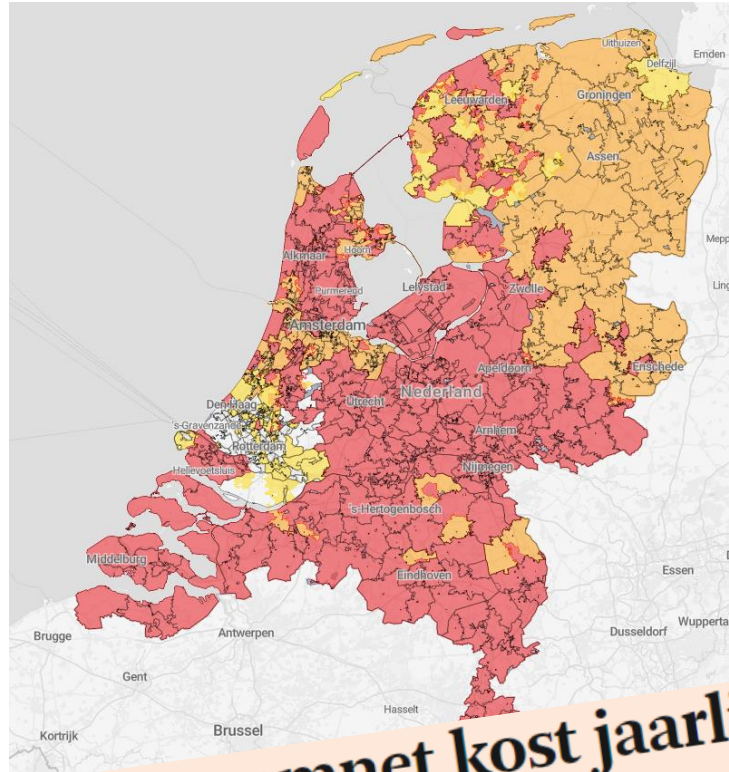
- 1 DSO
- Design being finalised
- Short-term energy
- Auction-based: day-ahead energy auction + intraday energy auctions



- 1 TSO and 6 DSOs with T&D coordination
- ~20 flexibility service providers
- Short-term energy
- Continuous matching
- 37+ GWh activated yearly



Grid constraints jeopardize the energy transition



- 9400 companies on the waitlist to withdraw
- 10 000 companies on the waitlist to inject
- 68 GW of batteries requesting to get connected
- Electrification results in additional capacity needs
- 24.4 GWp of installed PV capacity (world champions!)
- Estimated costs for society running in the tens of billions
- Discussion becoming more political
- Short terms solutions vs long term investments

'Vol stroomnet kost jaarlijks tot €40 mrd, ingrijpendere maatregelen nodig'

Het stroomnet is vol: kost Nederland jaarlijks tientallen miljarden

GRID OVERLOAD: THE IMPACT OF THE ELECTRICITY GRID ON THE DUTCH ENERGY TRANSITION

Netbeheerder vreest dat overlast van vol stroomnet nog zeker tien jaar duurt

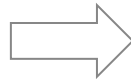
Gridlock: how the Netherlands hit capacity

Antwoorden op Kamervragen over 'Netcongestie'

Market design Localflex Continuous NL - a recap

EPEX SPOT launched the first Localflex market in M7 in June 2023, connecting Flexibility providers through out continuous trading system M7 to GOPACS

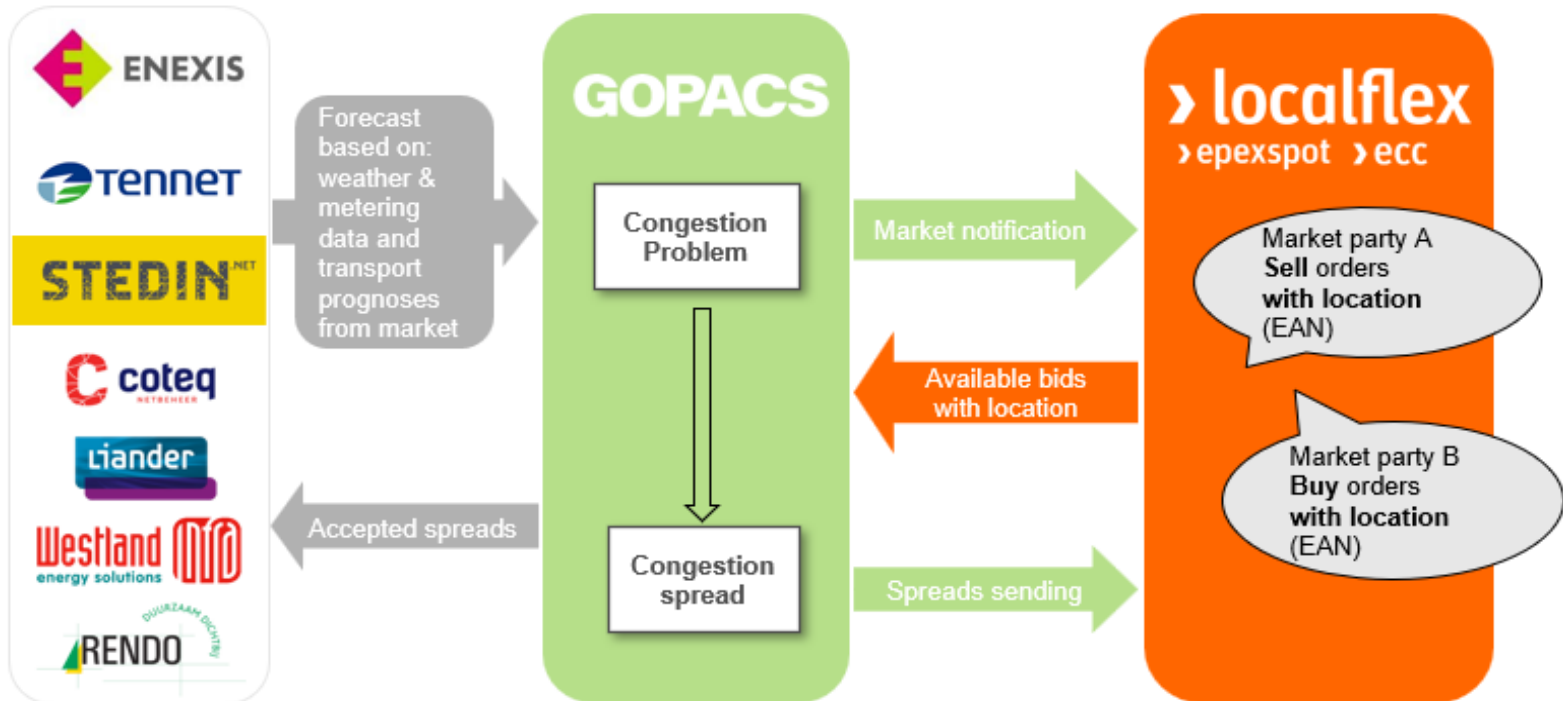
System operators **forecast congestions and notify** the market via IDCONS announcements



Connected parties are **notified to participate** and if relevant can **offer their flexibility**



If the orders of two Market parties solve a congestion they will be **settled as two separate trades** between the system operator and the market party



Localflex NL one year later



So far **≈20 members subscribed**, a mix of different company profiles



Overall **volumes** down for the year to do relieved constraints but **expected to pick up the coming years**



Growing interest from a learning and developing market

- ✓ Informing on the value Localflex can bring in the stacking of revenues
- ✓ Educating on the advantages of voluntary market-based flexibility procurement
- ✓ Introducing new type of companies to the workings and possibilities of spot power markets



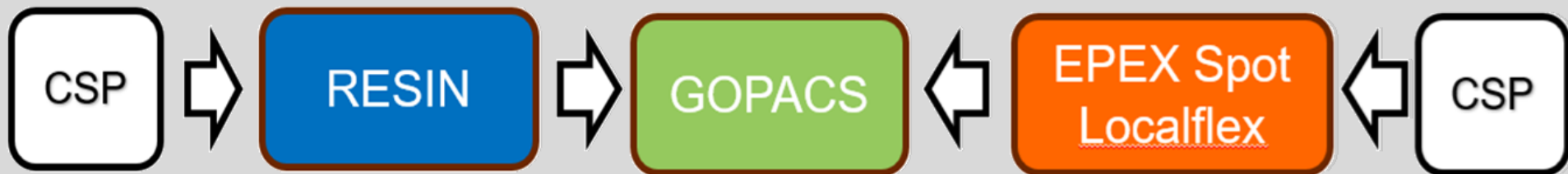
Challenges of a young market, tackled one at a time



- **Non delivery risk** led to GOPACS **suspending the BritNed interconnector** to the UK for Localflex NL trading
- EPEX Spot worked with GOPACS on possible solutions and **BritNed came back online for Localflex trading in April 2024**

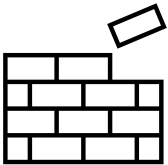
Split liquidity:

- Currently **multiple venues are used for redispatch in the Netherlands**: directly with TenneT (Resin) or GOPACS through connected exchanges.
- **Matching between different venues** is currently **not possible** while the number of solutions are limited.
- **TenneT channel strategy** will change this with all Dutch redispatch volumes **channeling into GOPACS**. Simultaneously, **cross platform activation** between connected exchanges will be implemented.
- **Cross platform activation** between connected exchanges and Resin is currently expected at the **end of the year**.



Challenges of a young market, tackled one at a time

Aggregation:



- Flexibility needs occur at **all voltage levels**
- To effectively integrate smaller assets **aggregation needs to be facilitated also between assets in different BRPs**
- EPEX Spot is currently studying how proposed **transfer of energy solutions** can be facilitated
- **Barriers to enter** to participate in wholesale markets **need to be reduced** to facilitate a changing community

Value stacking:

- For many business, **flexibility requires a change** in their traditional way of operating
- The **financial incentives** of being active on only a single market often **do not** sufficiently **compensate opportunity costs**
- **Optimizing assets** over multiple markets and timeframes the **maximum value** can be created
- That way **new flexibilities in the system** can be activated



EPEX One-Stop-Shop extended to Flexibility to facilitate cross-market optimization of assets

> **eex**

> **epexspot**



FUTURES > **CAPACITY** > **GOs** > **DAY-AHEAD** > **INTRADAY** > **LOCALFLEX** > **AFTER MARKET**

Year/Month/
Week before
delivery

Year(s)
before/ after
delivery

One day
before delivery

Until delivery

Until delivery

D+1 After
delivery

HEDGE
fluctuations

Value
**CAPACITY &
DEMAND
RESPONSE**

Value
**GREEN POWER
WITH OUR GOS
SPOT MARKET**

Value
**PRODUCTION
CONSUMPTION**

Value **GLOBAL
FLEXIBILITY**

Value **LOCAL
FLEXIBILITY**

Value **REDUCED
IMBALANCES**

> **ecc**

Integrated & Secure Clearing Solution



**MOST EXTENSIVE
MARKET DATA OFFER**



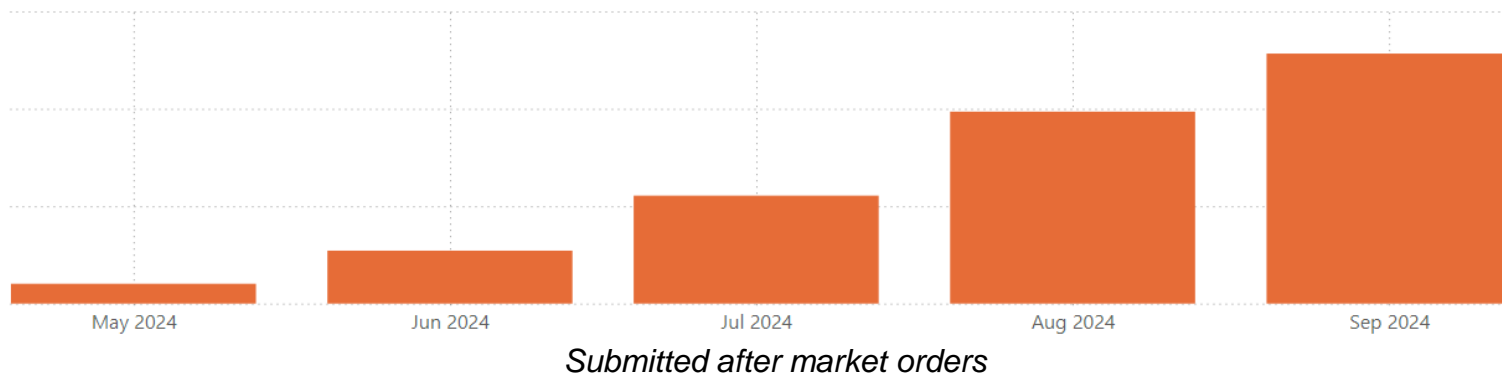
**REMIT
REPORTING**



**TRANSPARENCY
SERVICES (UMM,...)**

EPEX Spot aftermarket the final piece of the puzzle

- Side effect of the energy transition: an **increase in dual imbalance price periods**, especially in winter months
- **After market** trading **offers reduction in imbalance costs** during those periods
- Final step in optimizing assets or portfolios over multiple timeframes
- EPEX Spot Commercial efforts to boost the after market activities leading to a **strong growth in liquidity**
- Same trading system (M7) as Localflex and the Intraday market



Example of one-stop shop benefits of our NL flexibility market solution



ONE PROVIDER FOR YOUR NL MARKETS

EPEX SPOT NL offering: **SDAC, SIDC, Local Intraday Markets, After-Market (ex-post Trading), Localflex NL (GOPACS).**
 ► **Facilitate arbitrage strategies, operations and setups**



TRADING PLATFORM

EPEX Localflex NL on **M7 Trading platform** next to IDC with advanced functionalities

► **Easy extension of your current API implementation**



CLEARING SYNERGIES

Fully recognised licensed CCP Clearing House for physical & financial settlement and maximise synergies on your ECC account

► **Reduced collaterals, same EUR continuous trading limit**



REMIT SYNERGIES

Benefit from an EPEX REMIT Reporting services of Localflex Continuous products integrated with your other markets

► **Standard reporting, lower ACER REMIT fees**



OPERATIONAL SUPPORT

First in class availability standards
 24/7 operations based in NL

Thank you for your attention!

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