



**powernext**  
Powering the next markets

18 July 2014

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Deputy CEO

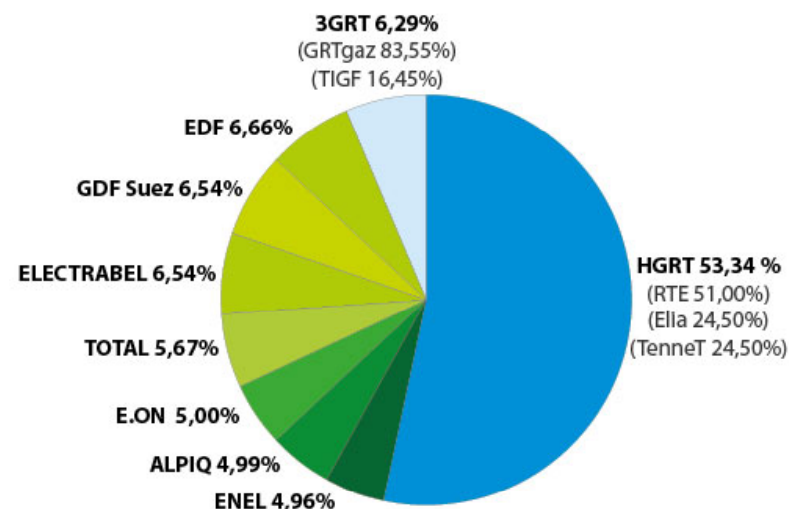
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# About Powernext

- Created in July 2001 and owned by major energy actors, Powernext is a commodity exchange focused today on energy

- Key 2013 figures :

- Powernext SA Capital: 11,9 m€
- 41 employees



- Powernext is recognized as Regulated Market and is therefore under the control of financial authorities (AMF, ACPR)

- Powernext is also in close contact with all national energy regulators (CRE, CREG, etc..) and the European Commission

# Historical development of Powernext

## 2001

- 30 July: Creation of Powernext SA

## 2004

- 18 June: Launch of Powernext Futures

## 2005

- 24 June: Launch of Powernext Carbon

## 2007

- 12 April: Launch of Powernext Balancing GRTgaz platform
- 21 December: Transfer of Powernext Carbon to NYSE Euronext

## 2008

- 26 November: Launch of Powernext Gas
- 31 December: Creation of EPEX Spot SE with EEX (German Energy Exchange)

## 2009

- 1<sup>st</sup> April: Creation of EPD with EEX

## 2011

- 1<sup>st</sup> July: Coupling initiative Sud / Nord with GRTgaz

## 2012

- 10 January: Launch of Powernext Energy Savings

## 2013

- 1<sup>st</sup> February: Launch of gas contracts on the Dutch delivery area
- 1<sup>st</sup> May: Powernext is designated as the National issuing body for electricity guarantees of origin in France
- 29 May: Launch of PEGAS cooperation with EEX

# Corporate structure, markets and services

## Powernext

- Develops and operates its own markets
- Establishes partnerships to help other exchanges setting up new markets (“Powering the Next Markets”)
- Owns shares in various exchanges or companies in the commodity sectors
  - EPEX Spot**: Power Spot exchange (France, Germany, Austria, Switzerland)
  - EEX Power Derivatives**, Power derivatives exchange (France, Germany, Romania, Switzerland, Italy, Netherlands, Belgium)

### Markets

- Powernext Gas Spot
- Powernext Gas Futures

### Services

- National registry for guarantees of origin
- EPD
- EEX (PEGAS)
- GRTgaz coupling & balancing
- VPP EDF
- HUPX



# The role of an organized market

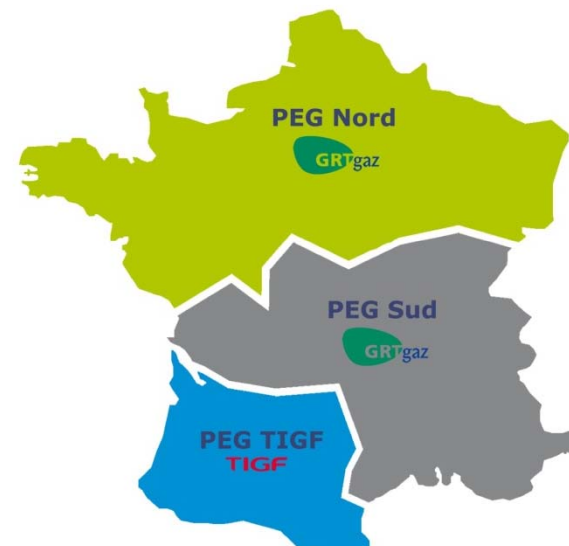
- Transactions on wholesale market can be concluded
  - **Bilaterally** (long term contracts, incident management, off-market prices)
  - Via **Brokers** (voice or screen)
  - Or on an **Organized Market** (Exchange)
- An organized market offers to its participants an access to
  - **A simplified market access:** one unique contract allows access to a whole community of market players without having to sign numerous bilateral EFET contracts
  - **Anonymity and non discriminatory treatment:** negotiation on the platform is anonymous, admission and tariffication are common for all market participants, no discrimination can be made between members, all of them can see and trade the best possible prices, etc.
  - **Securization:** a clearing house sits in between the market parties and ensures the handling of the transactions (daily margin calls to ensure financial counterparty risks, nomination controls to ensure physical counterparty risks)
  - **Transparency:** all those rules allow the computation and publication of transparent price references (audited by financial and energy regulators)

# Powernext® Gas market model: tradable products

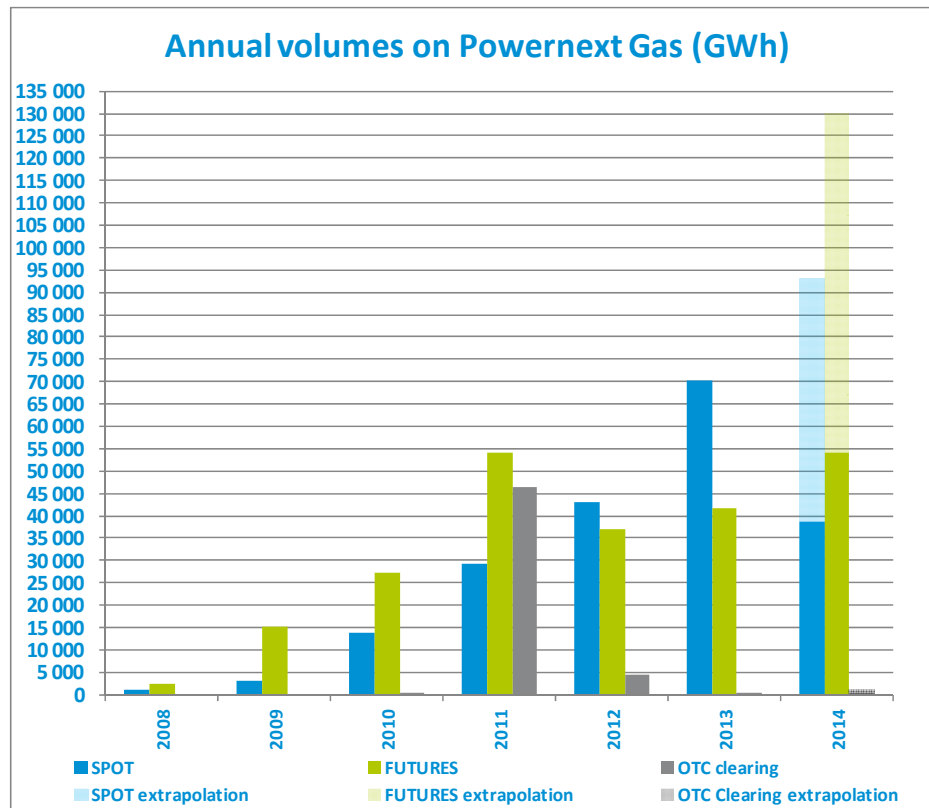
## Powernext Gas offers :

- ▶ **Spot contracts on all three PEGs (Nord, Sud, TIGF)**
  - ▶ Within-Day
  - ▶ Day-Ahead
  - ▶ WE
- ▶ **Futures contracts with physical delivery on PEG Nord**
  - ▶ The next 3 Months
  - ▶ The next 2 Quarters
  - ▶ The next 3 Gas Seasons
- ▶ **OTC Clearing services on Futures**

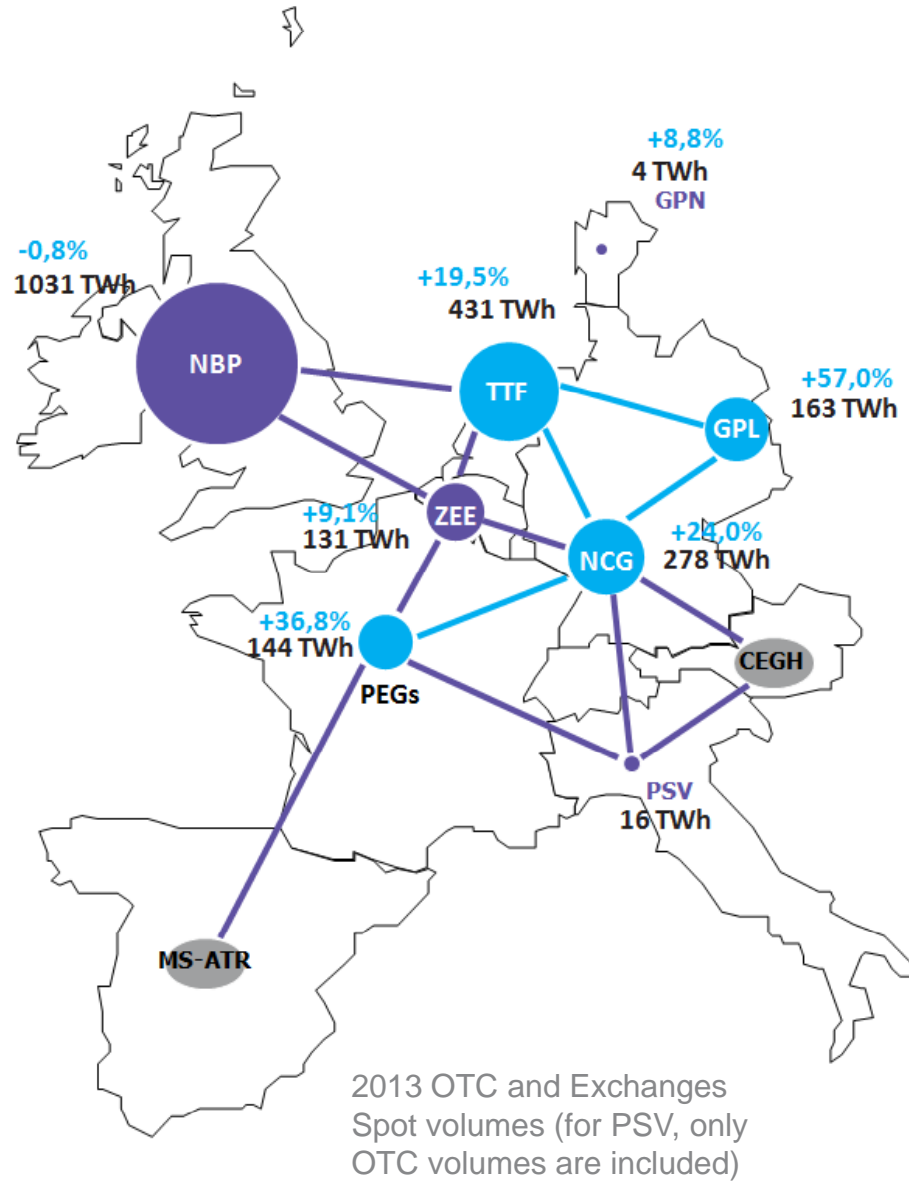
		GRTgaz			TIGF
		Nord	PEG Sud/PEG Nord	Sud	TIGF
Spot	WD				
	DA				
	WE				
Futures	Months	3			
	Quarters	2			
	Seasons	3			



# Powernext gas volumes



# Spot gas traded volumes in Europe

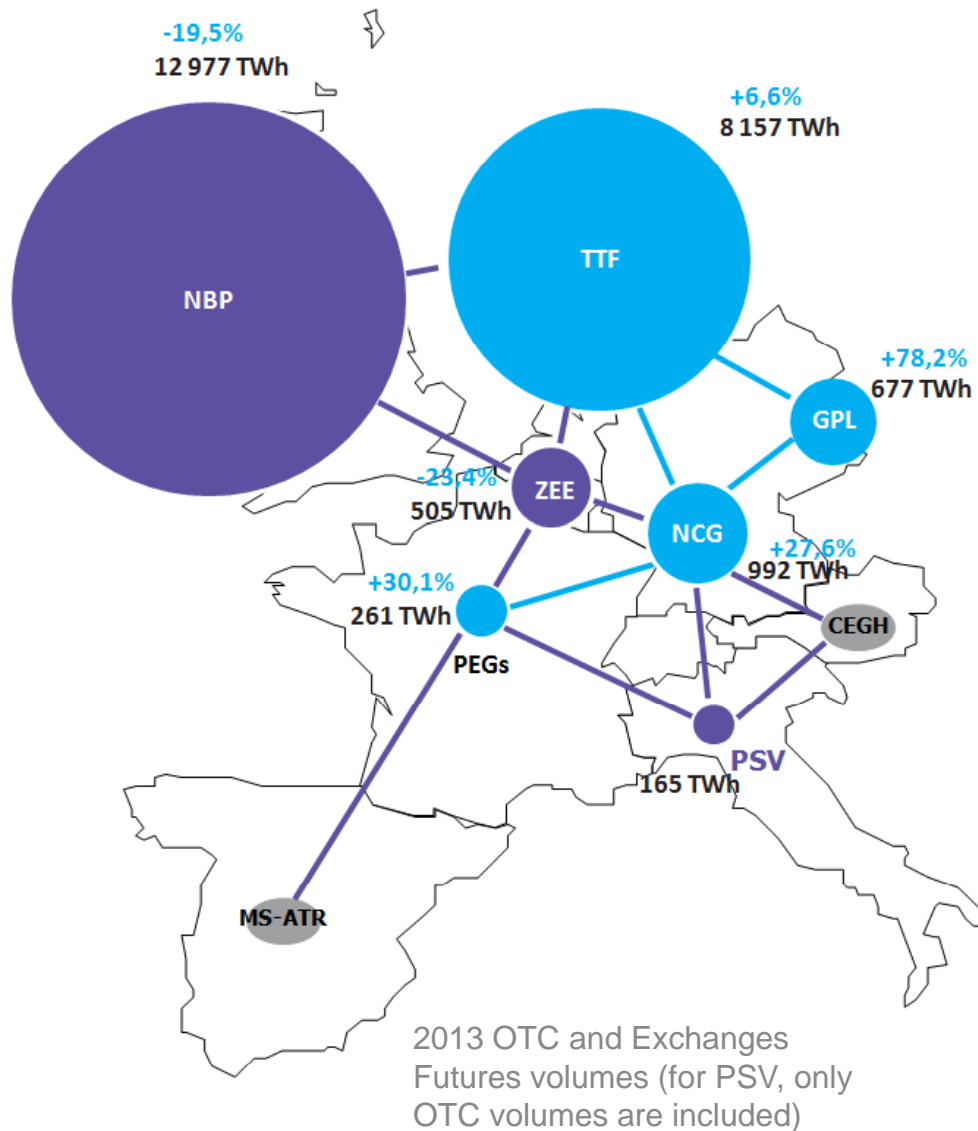


Spot growth	2012	2013
NBP	4,9%	-0,8%
TTF	41,3%	19,5%
NCG	9,4%	24,0%
GPL	31,3%	57,0%
PEGs	19,0%	36,8%
ZEE	0,2%	9,1%

- NBP liquidity is stabilizing, even decreasing
- With the development of hub based balancing, the continental gas hubs remain very dynamic, with Gaspool and PEGs registering the highest growth rates



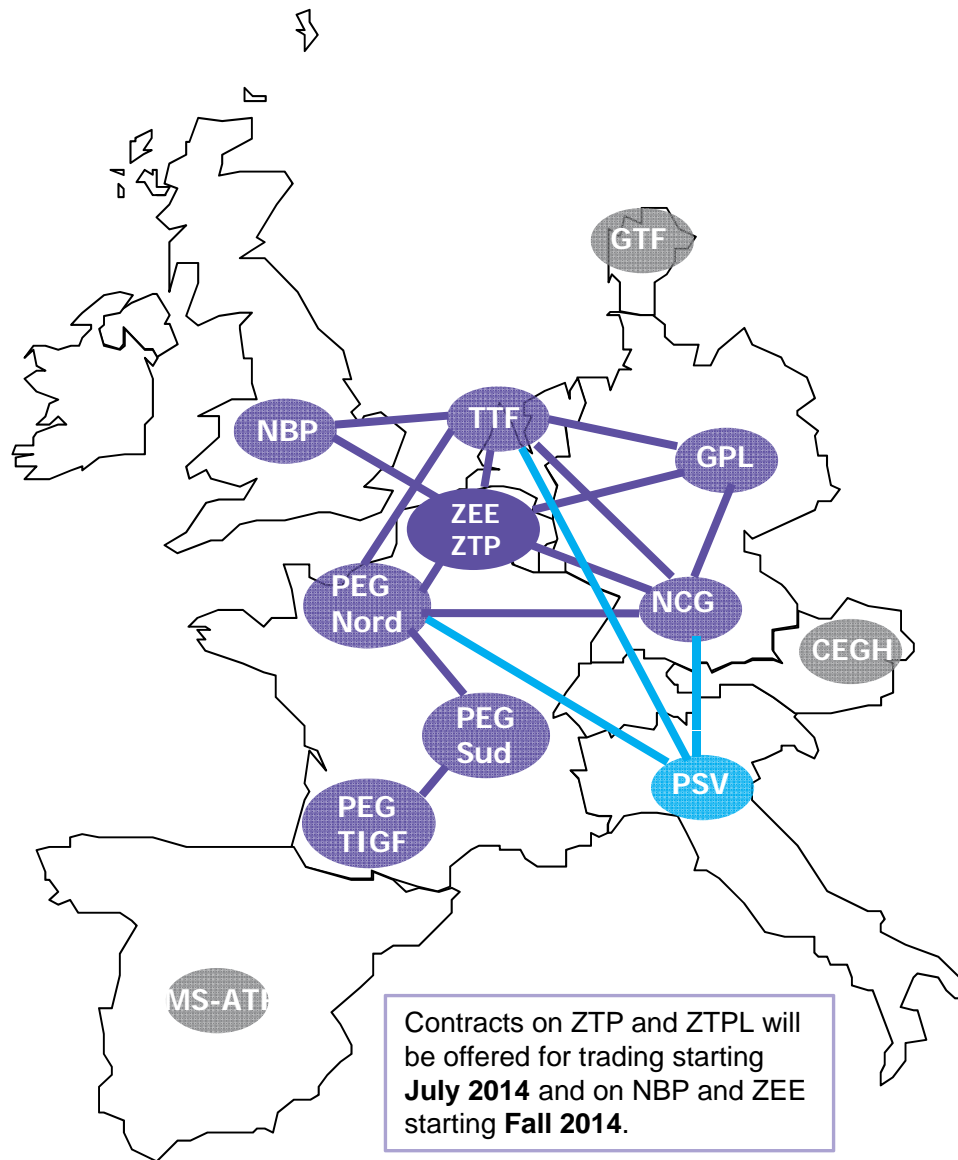
# Futures gas traded volumes in Europe



Futures growth	2012	2013
NBP	-1,8%	-19,5%
TTF	27,6%	6,6%
NCG	20,0%	27,6%
GPL	79,1%	78,2%
PEGs	-18,6%	30,1%
ZEE	-7,7%	23,4%

- NBP Futures liquidity continues to decrease
  - ◆ Switch toward TTF
  - ◆ Reduced bank activity
- TTF growth gas reduced (leading to increased competition between platforms):
  - ◆ Decrease of calendar product liquidity (low CCGT activity)
  - ◆ Shift of part of the liquidity toward satellite hubs, especially in Germany

# How could PEGAS, the Pan European Gas platform?



- All hubs available for trading on **one single Trayport screen**
- Cleared **locational Spreads**
- **Spot 24/7** (WD, DA, WE) and **Futures maturities**
- **Clearing** via European Commodity Clearing (ECC): **netting and cross-margining** with all energy products in Europe
- **Physical focus**, PEGAS is the balancing platform for European TSOs
- Gas dedicated staff and sales team in **London, Paris and Leipzig**, in very close relationship with market participants
- Powernext and EEX are both **Regulated Markets**

# Tradable contracts on PEGAS

PEGAS Members benefit from **one common gas trading Trayport platform** with access to all products offered by Powernext and EEX:

- ▶ Short-term or "Spot" contracts
  - ▶ « Within-Day », « Day-Ahead », « Week-end »
- ▶ Long-term or "Futures" contracts
  - ▶ « Month », « Quarter », « Season », « Calendar »
- ▶ Locational Spreads between delivery areas
- ▶ Registration of "OTC" transactions

		NCG NCG H NCG L	GPL GPL H GPL L	TTF	PEGN	PEGS	PEGT	GPL/NCG	NCG/TF	PEGN/NCG	GPL/TF	PEGN/TF	PGS/PGN
GAS SPOT	Within-Day	■	■	■	■	■	■	■	■		■		■
	Day-Ahead	■	■	■	■	■	■	■	■	■	■	■	■
	Weekend	■	■	■	■	■	■	■	■	■	■	■	■
GAS FUTURES	Months	3	3	3	3	1	3	3	3	3	3	3	1
	Quarters	3	3	4	3		3	3	3	3	3		
	Seasons	4	4	3	3		4	3	3	3	3		
	Calendar	3	3	3	1		3	3	1	1	1		

# PEGAS products and trading screen

- PEGAS products are available for trading on a single Trayport platform:

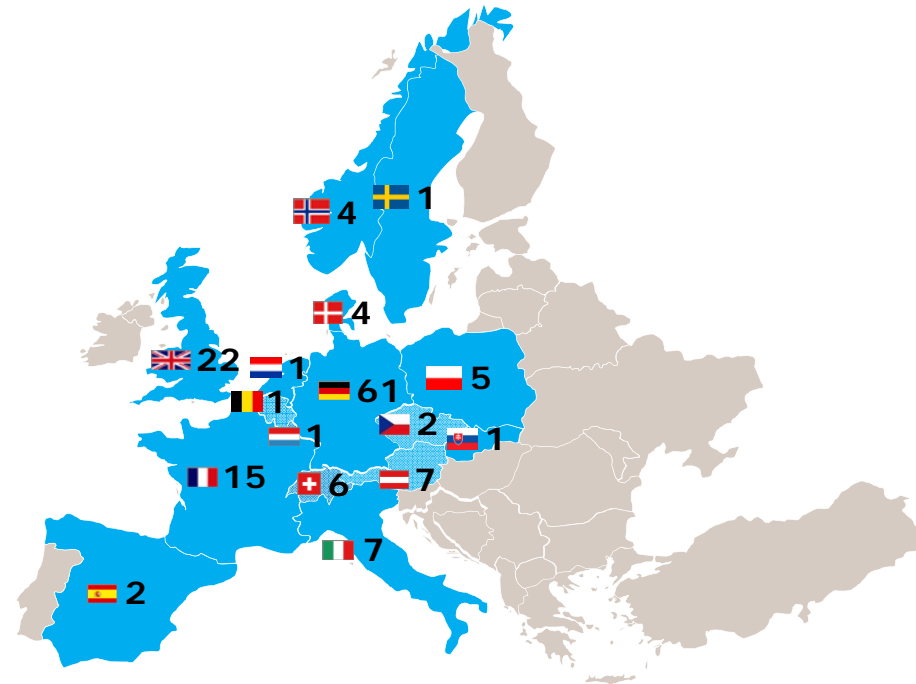
	TTF				NCG / TTF				NCG				PEG Nord / TTF				PEG Nord			
	Qty	Bid	Ask	Qty	Qty	Bid	Ask	Qty	Qty	Bid	Ask	Qty	Qty	Bid	Ask	Qty	Qty	Bid	Ask	Qty
WD	120	27,150	27,600	20	20	0,050	1,250	120	120	27,650	28,400	130					1 000	27,900	28,100	1 000
	300	27,100	27,750	90					90	27,600	28,400	120					750	27,600	28,150	1 000
	120	26,500	27,900	250					60	27,500	28,450	300					500	26,500	28,400	750
DA	60	27,550	28,250	60	60	-0,600	0,100	120	60	27,650	27,700	120	*1 440	-0,150	1,450	*1 440	*1 440	28,100	28,150	1 500
	60	26,700	28,700	240			1,000	60	10	27,625	27,775	30					1 500	28,000	28,150	*720
	120	26,200	27,750	100					80	27,625	28,350	60					1 500	28,000	28,200	1 000
WE											35,000	440								

	TTF				NCG / TTF				NCG				PEG Nord / TTF				PEG Nord			
	Qty	Bid	Ask	Qty	Qty	Bid	Ask	Qty	Qty	Bid	Ask	Qty	Qty	Bid	Ask	Qty	Qty	Bid	Ask	Qty
Dec 13	30	27,600	27,800	30	30	-0,100	0,225	30	30	27,700	27,825	30	720	0,325	0,650	*720	720	27,950	28,250	720
	30	27,950	27,925	*30					30	27,650	27,850	30	*720	0,150			*720	27,925	27,900	*720
			28,250	30						30	27,875	27,800	*30	720	0,375			720	28,500	27,950
Jan 14	30	27,850	28,100	30	30	-0,200	0,300	30	30	27,900	28,150	30	*720	0,350	0,850	*720	720	28,450	28,700	720
Feb 14	30	27,900	28,100	30	30	-0,150	0,300	30	30	27,950	28,200	30	*720	0,350	0,850	*720	720	28,450	28,750	720
Mar 14									30	27,550	27,900	30								
Q1 14	30	27,750	28,050	30	10	-0,100	0,300	10	10	27,950	28,050	10	*720	0,350	0,900	*720	720	28,400	28,650	720
	30	28,050	28,450	30					10	27,875	28,100	30					720	28,050	28,550	720
									30	27,850	28,050	30					720	27,850		
Q2 14	30	26,150	26,650	30													720	26,600	26,900	720
Q3 14	30	25,850	26,250	30					30	26,050							720	26,250	26,550	720
Q4 14	30	26,800	27,900	30					30	26,900										
Sum 14	30	26,000	26,250	30	10	0,025	0,425	10	10	26,275	26,425	10	*720	0,150	0,650	*720	720	26,400	26,650	720
	30	26,050	26,450	30					30	26,150	26,500	30			0,400	720	720	25,600	25,900	720
									10	26,250	26,425	10							26,050	*720
Win 14	30	27,150	27,450	30	30	-0,200	0,500	30	30	27,250	27,650	30	*720	0,300	0,950	*720	720	27,750	28,100	720
Sum 15	30	24,750	25,050	30	30	-0,150	0,550	30	30	24,900	25,300	30	*720	0,150	0,800	*720	720	25,200	25,550	720
Win 15									30	26,150	26,650	30								
Cal 14	10	26,650	26,900	10	10	-0,050	0,450	10	10	26,850	27,100	10	*240	0,250	0,850	*240	240	27,150	27,500	240
	10	26,850	27,150	10					10	26,850	27,025	10								
Cal 15	10	25,650	26,100	10					10	25,850	26,200	10								
Cal 16	10	25,100	25,450	10	10	-0,150	0,600	10	10	25,300	25,700	10								

- PEGAS offers its Members to see all prices (view-only), regardless of admission status (Spot, Futures, Hub agreements, etc.)

# The PEGAS community



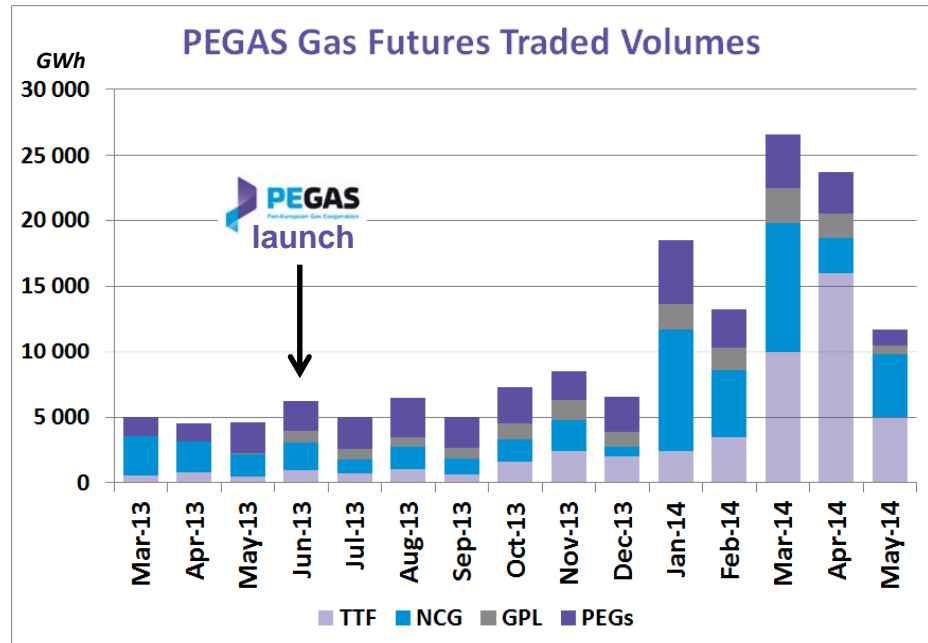
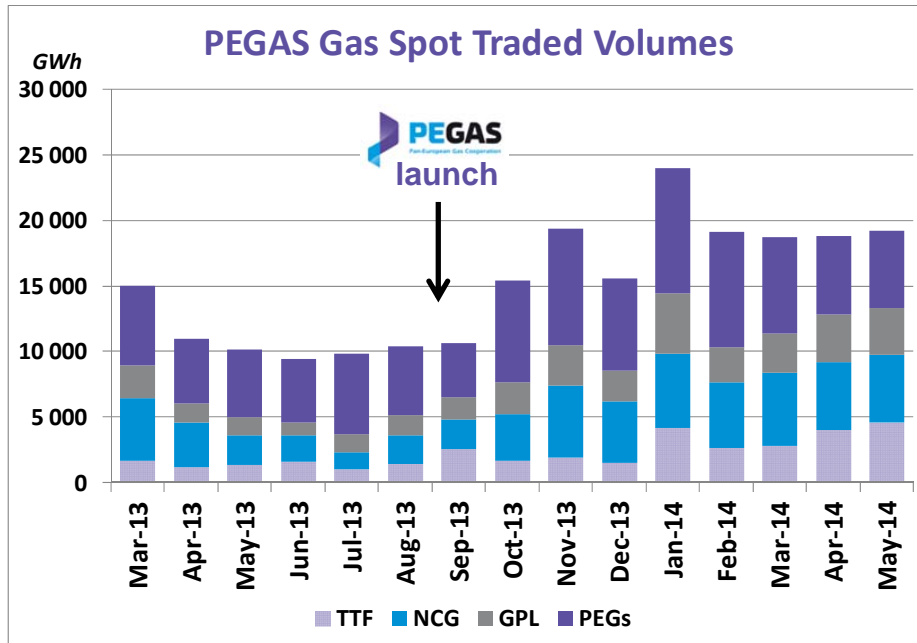
## ● 140 Members registered on PEGAS

- 131 registered Members on PEGAS Spot, 931 trading accounts
- 114 registered Members on PEGAS Futures, 554 trading accounts

## ● Among Powernext Members

- 3 Industrials (Dalkia, Solvay, Petroineos)
- 6 Financials (Barclays, Goldman Sachs, JP Morgan, Macquarie, Morgan Stanley, Société Générale)

# PEGAS activity overview



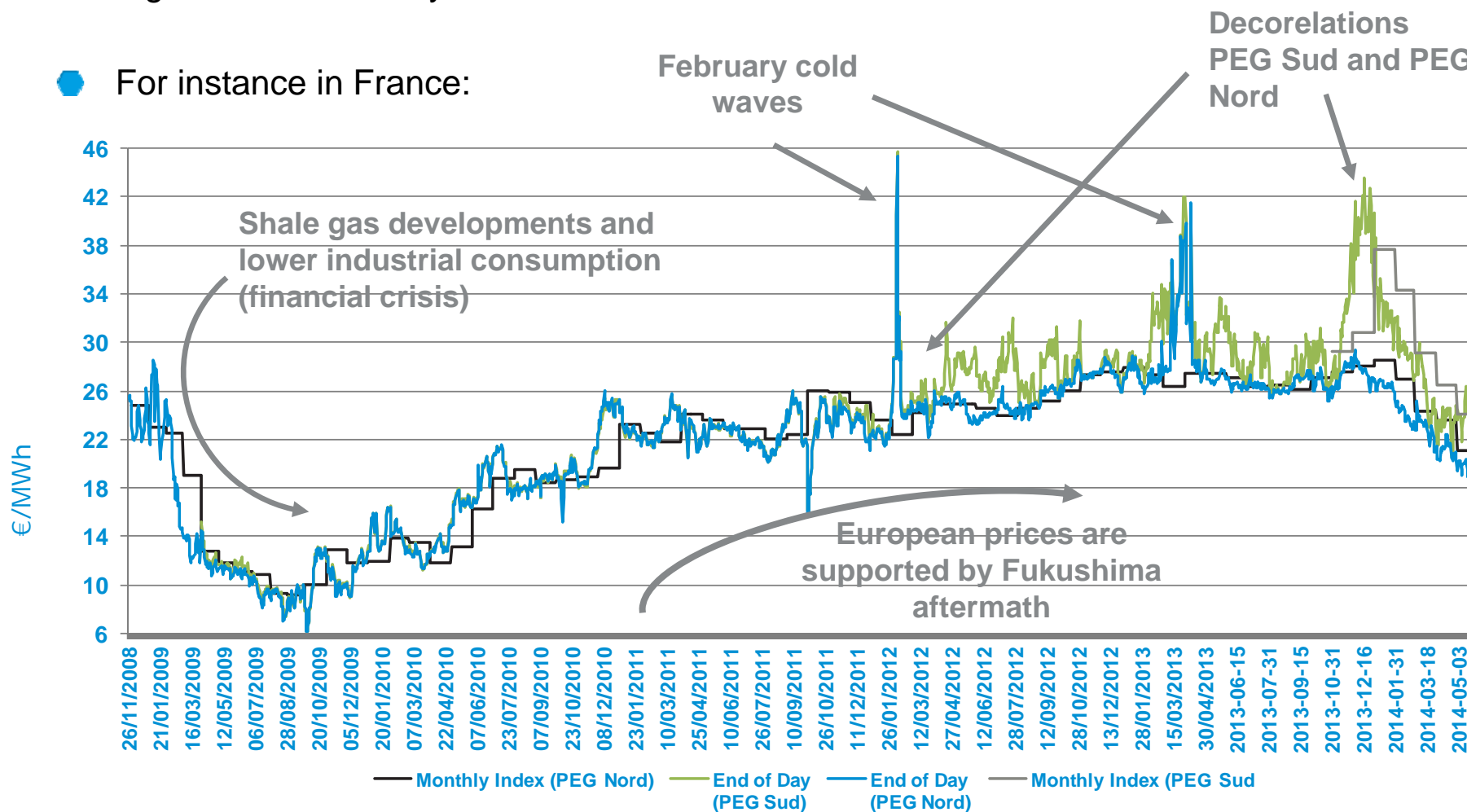
May 2014: volumes until 27/05

- 140 registered members on PEGAS Spot – 820 trading accounts
- 116 registered members on PEGAS Futures – 486 trading accounts
- PEGAS records very high levels of liquidity on Spot** (e.g. 60% market share on PEGs)
- PEGAS obtained the support of **key participants acting as Market Makers** (they provide bid-ask spreads and liquidity). This had **strong effects on the Futures liquidity** over the past three months

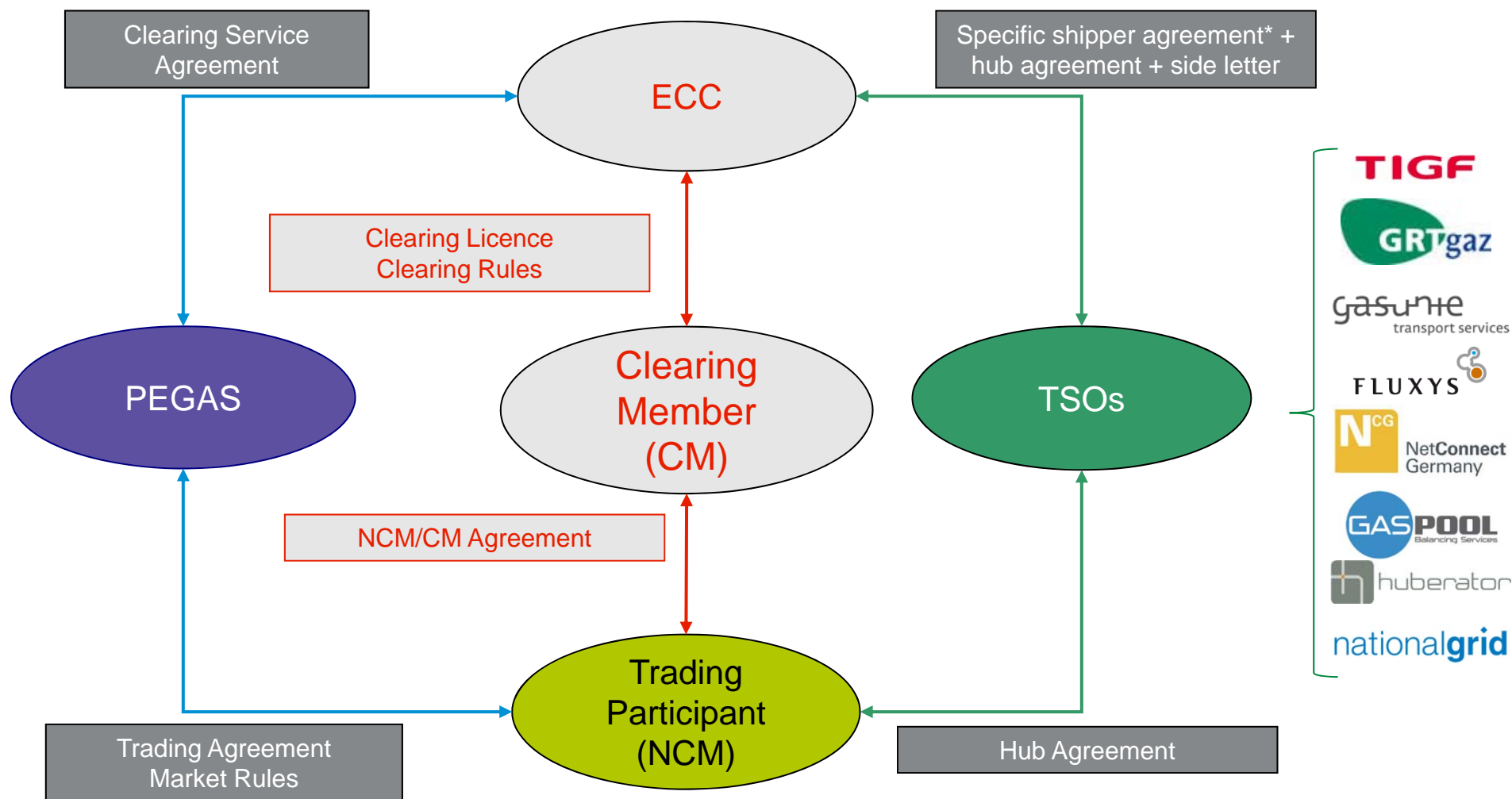
# Quality price references used by the industry

- PEGAS publishes price references every day for all its Spot and Futures products, together with monthly indices

- For instance in France:



# Contractual framework: Exchange, TSOs, Clearing House



\*This specific shipper agreement allows specific rights to ECC such as:

- Single sided nomination and firmness of trades
- Exemption of delivery fees and security
- Information rights and confidentiality agreements



## Clearing services by ECC

- As central counterpart, ECC is in charge of physical settlement and therefore is active as a shipper on all involved European TSOs
- Payment of the delivered energy is processed every day, therefore securities deposits are very small
- **Expert in risk management:**
  - Advanced margining models on Spot and Futures (daily settlement of profits and losses and a margin system comprising various security levels)
  - Minimized deposits thanks to cross margining (positions netting between different maturities / commodities)
  - Advanced IT systems and procedures (members acceptance, credit limit, default management)
- 372 market participants already active on ECC

Confidential

# PEGAS institutionalization

- **The physical and regulatory focus of Powernext and EEX is a key success factor of the PEGAS initiative**
- **Powernext partnership with French TSOs**
  - GRTgaz market based balancing since 12 April 2007
  - GRTgaz PEG Nord / PEG Sud market coupling initiative since 1<sup>st</sup> July 2011
  - TIGF balancing interventions since January 2012
- **EEX partnership with the German and Dutch TSOs**
  - NCG and Gaspool market based balancing since 2008
  - NCG purchase of L gas on TTF hub
  - Quality specific (H&L) gas products launched on October 1<sup>st</sup> 2013
- Strategic studies with major infrastructure operators are currently being run
  - Combined storage / transport / exchange services
  - International market coupling
  - CMP (overselling and buy-back)
  - Advanced balancing products (physical and locational products, extension of the 24/7 services)

# French Registry for Guarantees of Origin

- ▶ Powernext has been appointed as the **French Registry for Guarantees of Origin for electricity** since 1<sup>st</sup> May 2013 by the French Ministry.
  - ▶ Powernext has developed its own registry platform
  - ▶ The registry is now connected to the **AIB (Association of Issuing Bodies)**, enabling electronic exports and imports through Europe
  
- ▶ Since this date, **26 companies are Account holders**

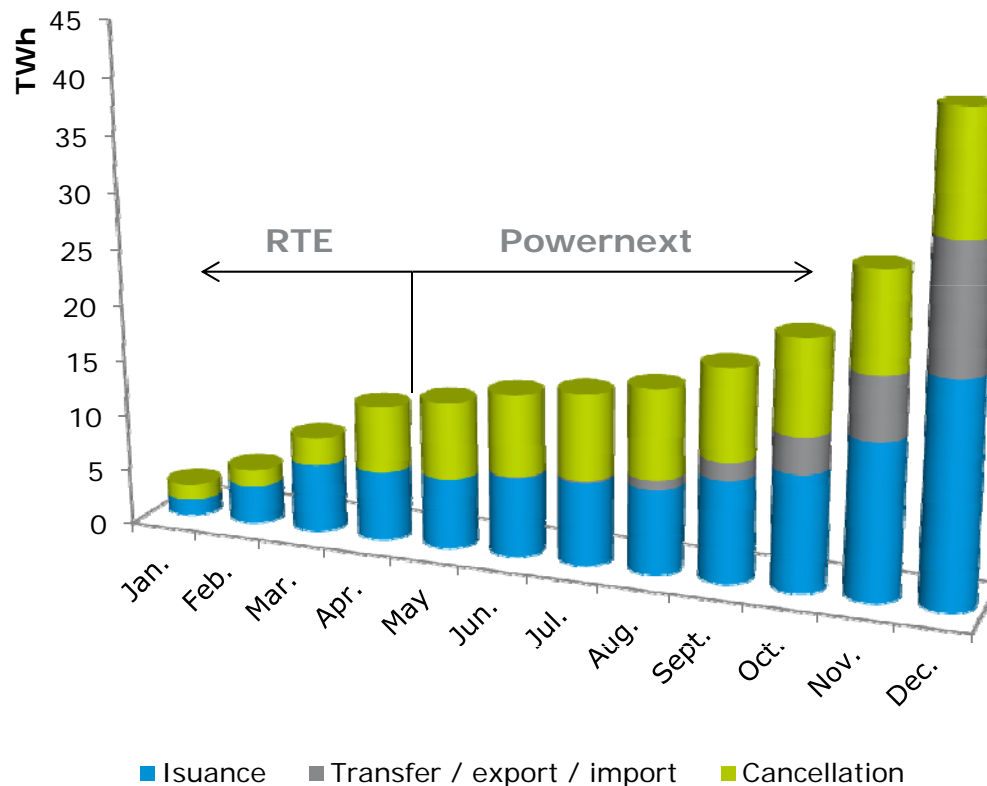
EDF	GreenAccess	Vialis
CNR	Hydronext	Poweo Direct Energie
GDF Suez	Objectif EcoEnergie	UEM
Wattvalue	SIG (Services Industriels de Genève)	Repower AG
RSEIPC	Sorégies	SMEG
Planète Oui	La Regie Municipale de LOOS	Nvalue
GEG Source d'énergie	Energie de Strasbourg	CIEG
STX Services	Amsterdam Capital Trading	Verbund
Enovos	HEX	

# GOs activity in France in 2013

- Significant increase in the Guarantees of origin issuances, transfers and cancellations since May 2013

## GOs activity in 2013

- 19.6 TWh of green electricity certified in 2013
- 9.1 TWh of international transfer accross Europe since the connection to the AIB hub
- 10.6 TWh cancelled in France in 2013 to certify green offers

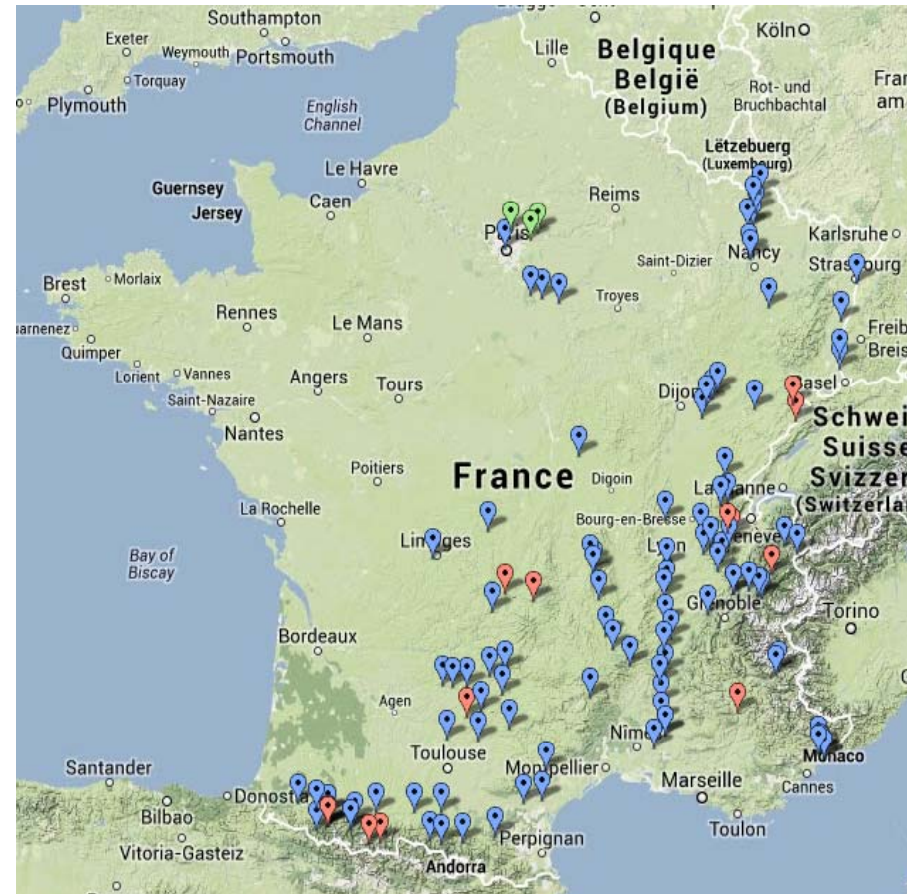





# 5 520 MW of installed capacity registered

- More than 130 production devices registered and activated

You can register a generation plant located in France:

- if you are the owner and the power production does not benefit from purchasing obligation,
- if you are buyer of its electricity within the framework of purchasing obligation, or
- if you have a binding mandate with the owner of this device for the issuance of guarantees of origin.



-  Hydropower – storage head installations
-  Hydropower – run-of-river installations
-  Thermal stations – biogas or municipal waste

# Powernext, provider of registry solutions to other issuing bodies

- Powernext has developed an **in-house taylor-made** registry software in a very tight schedule
  - connected to the **AIB hub**, enabling electronic exports and imports of guarantees of origin throughout Europe
  - hosted in the **highly secured Powernext IT architecture** in order to ensure the best confidentiality and integrity of the data.

The screenshot displays the web application interface for the National Registry for Guarantees of Origin. The user is logged in as 'GO-info@powernext.com'. The main navigation bar includes 'Home', 'Account Holder', 'Production devices', 'Guarantees of Origin', and 'Validations management'. The left sidebar contains a menu with options like 'Guarantees of origin list', 'Issuance request', 'Transfer request', 'Cancellation request', 'List of issuances', 'List of transfers', and 'List of cancellations'. The main content area shows 'Transfer of GO' with 'Holder information' fields: Registry of the counterpart (Germany / Oko-Institut), AIB code of the counterpart (01XW30H4G2), Name of the counterpart (OKO Counterpart), and Transfer account (Transfert). Below this, a table titled 'GO to be transferred' shows a total quantity of 2089 MWh. The table lists specific GO entries with details on device type, start/end dates, certified quantity, request date, label, account, status, and quantity to be transferred.

GO # (start - end)	Device	Start date	End date	Certified quantity (MWh)	Request date	Label	Account	Status	Quantity to be transferred
3613580000000000000000000058685 - 3613580000000000000000000060273	Hydro plant	01/08/2013	31/08/2013	1589	04/02/2014	TÜV SÜD Generation EE	Transfert 1	Pending validation	1589
64300240655590000000000004501 - 64300240655590000000000005000	International station	01/04/2013	30/04/2013	500	12/05/2013	No label	Transfert 1	Pending validation	500

*Flexible, efficient and robust software, enabling account holders registration, production devices recording and verification, issuance, internal and international transfers and cancellations.*

- Powernext can provide this registry solution to other issuing bodies