

# Visibility of Actions - Trading

**Ruth Young**  
Senior Energy Trader

# Trading in 2016

A review of trading activity, trends and consequences in 2016

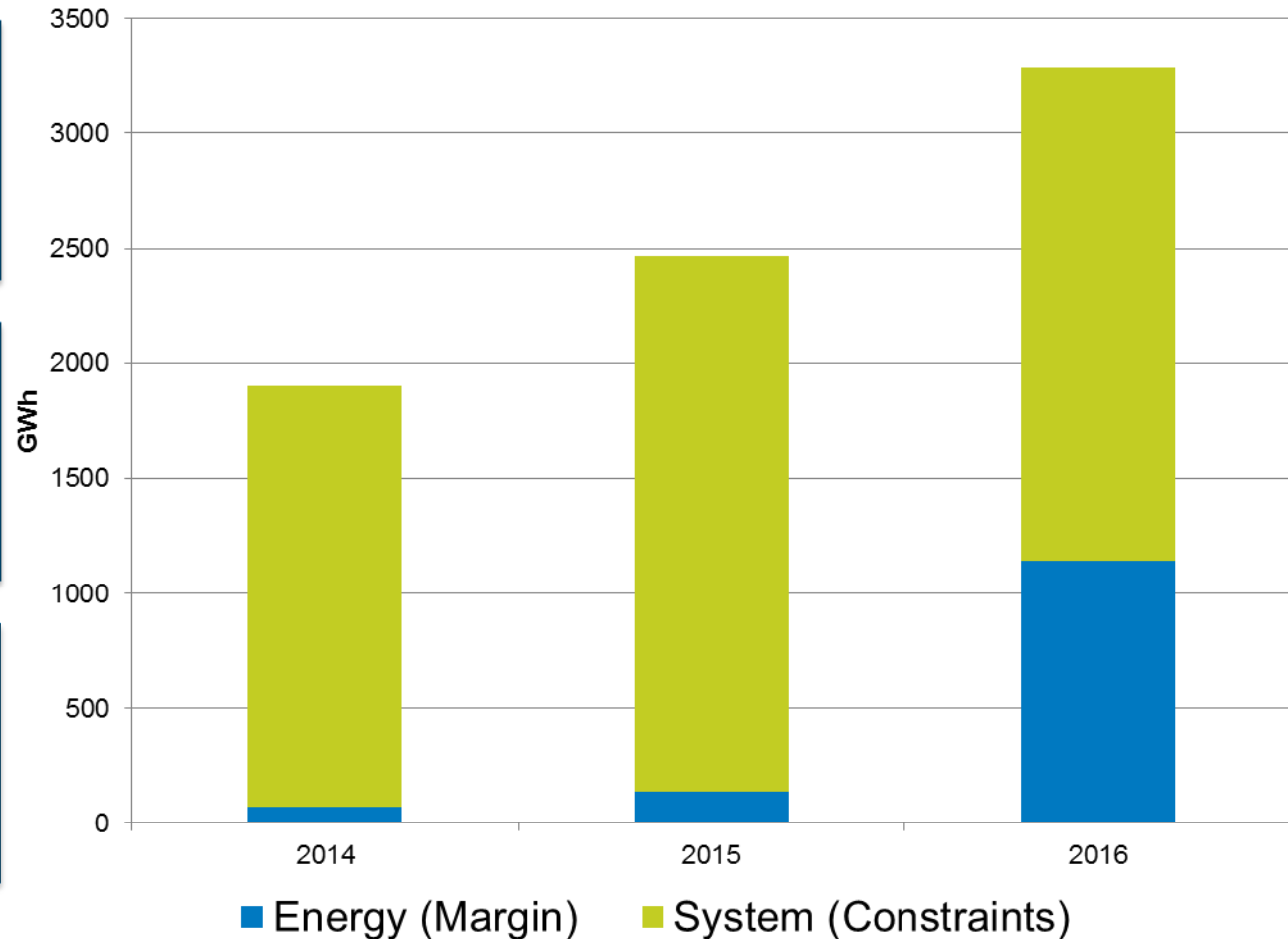
# 2016 in numbers

2500  
trades

3300  
GWh

£168m

## Activity by Trade Reason



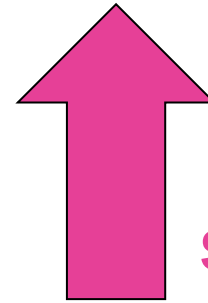
## Trade reason: Voltage Control

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In 2016 there were

**480**

voltage trades

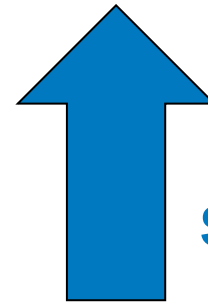


**21%**  
since 2015

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The value of these trades were

**£73m**

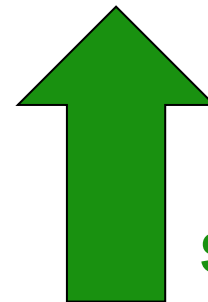


**52%**  
since 2015

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The volume of these trades were

**900GWh**



**32%**  
since 2015

## Trade reason: Interconnectors

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Volume of interconnector trades

**Doubled**

in 2016

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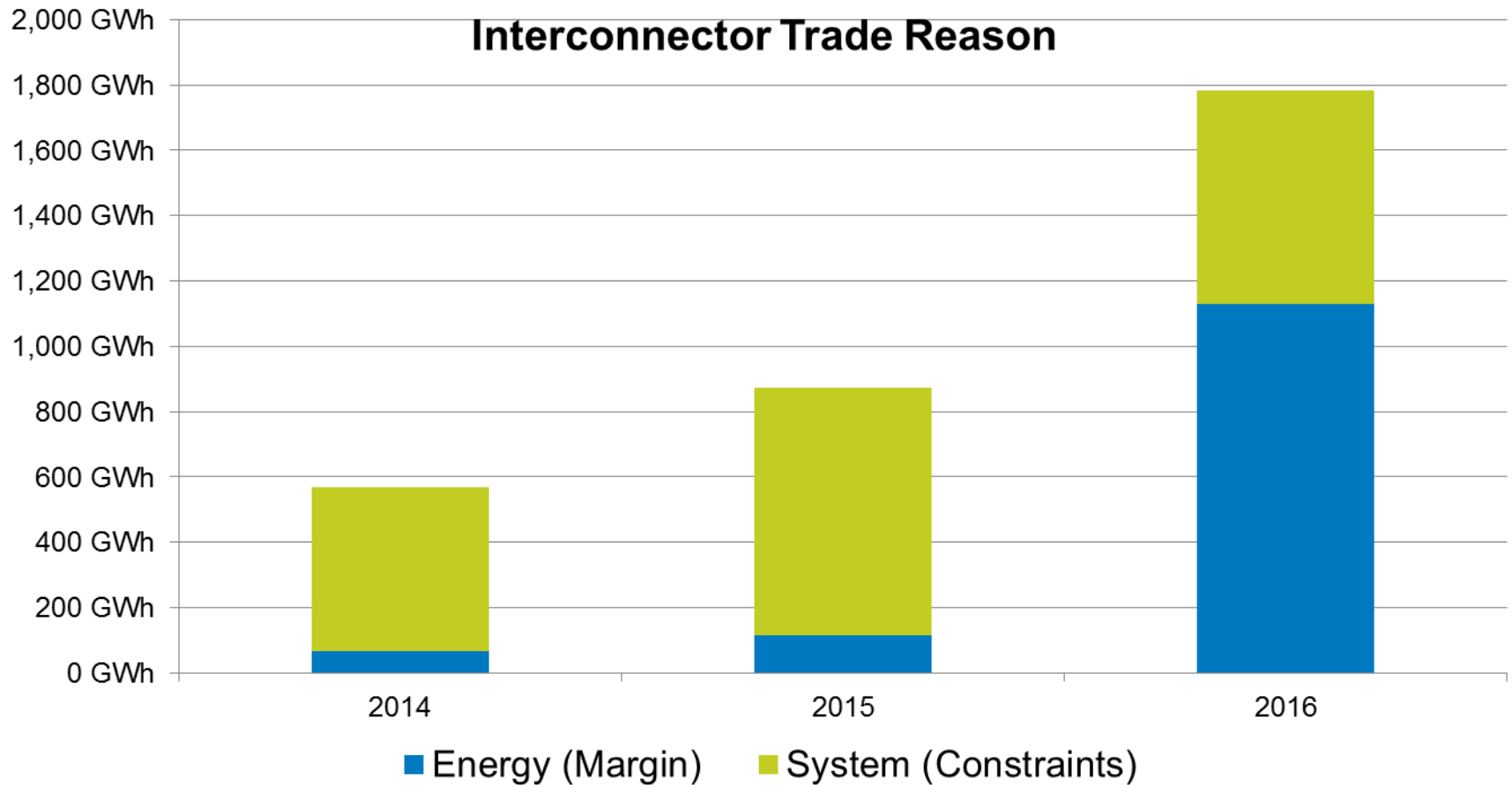
***Constraints*** have  
remained constant

***Margin*** has increased  
by a factor of 9.7

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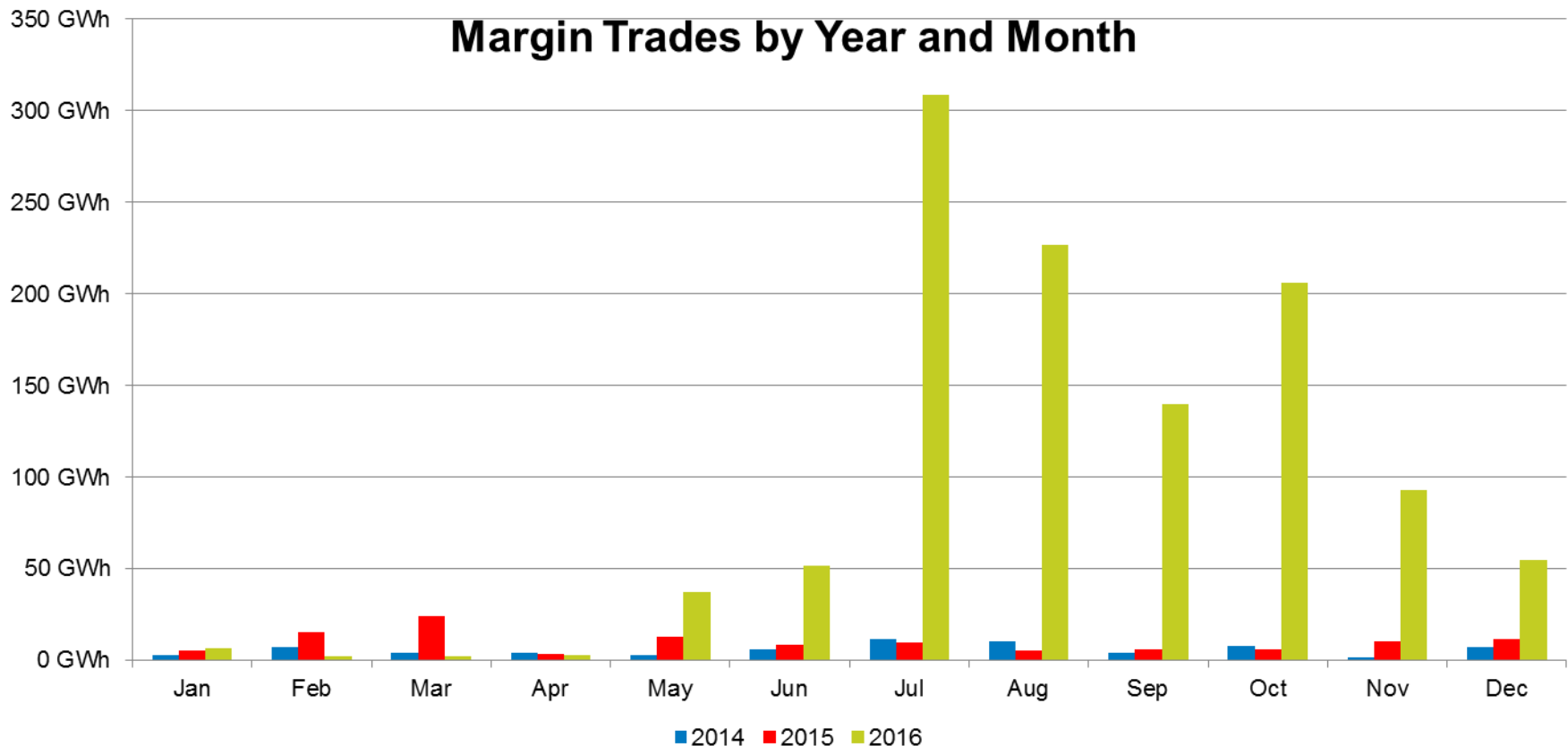
Value of these trades has increased by  
**173%**

# 2016 - Interconnector Activity



**“Margin” includes both up and down margin trades. “Constraints” is mostly trades for RoCoF.**

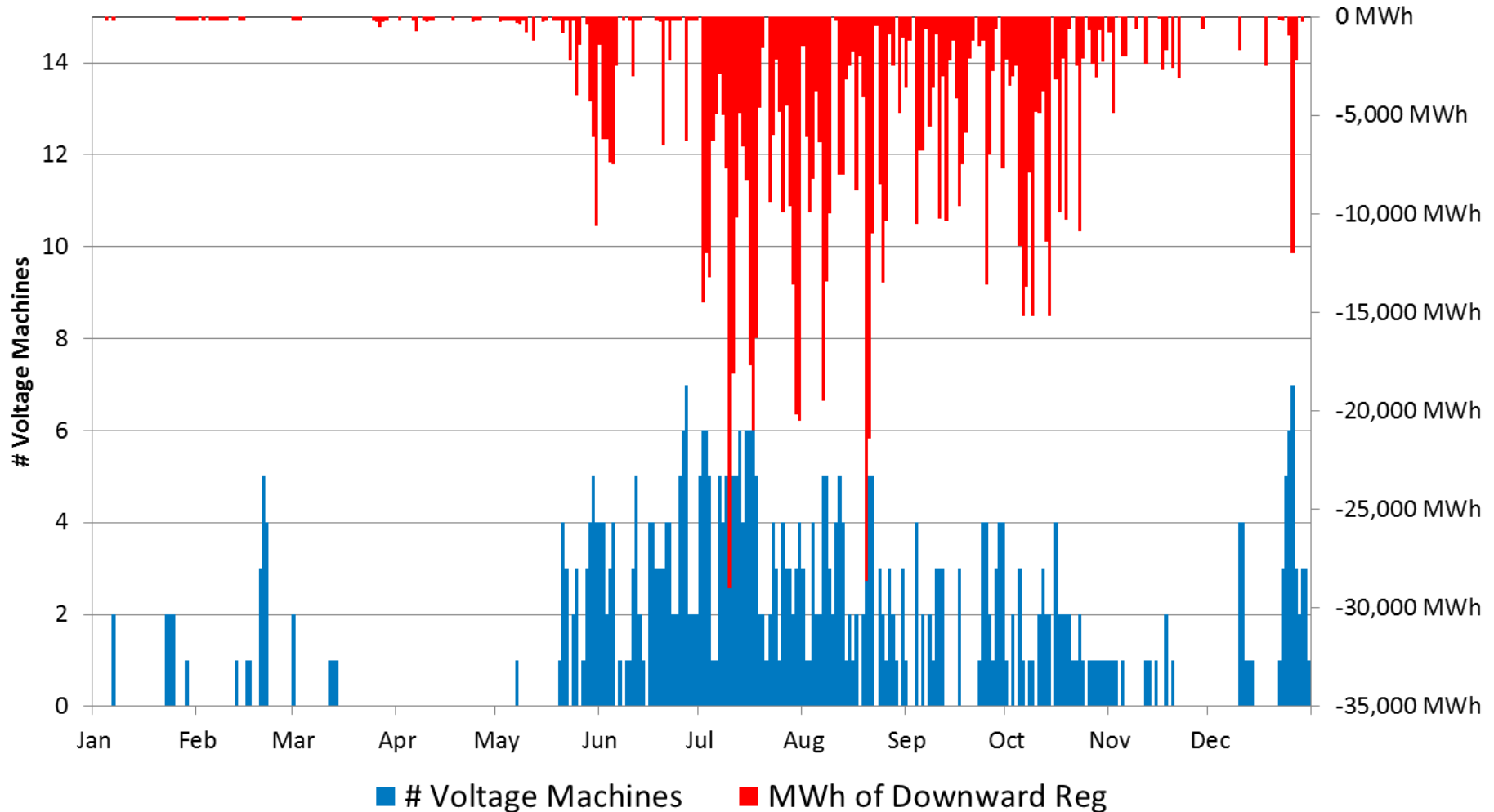
## Why the increase in activity?



**In July we traded 309GWh – more than in the previous 30 months combined, mostly Downward Regulation actions**

# 2016 - Volts & downward regulation

Voltage & Downward Regulation 2016



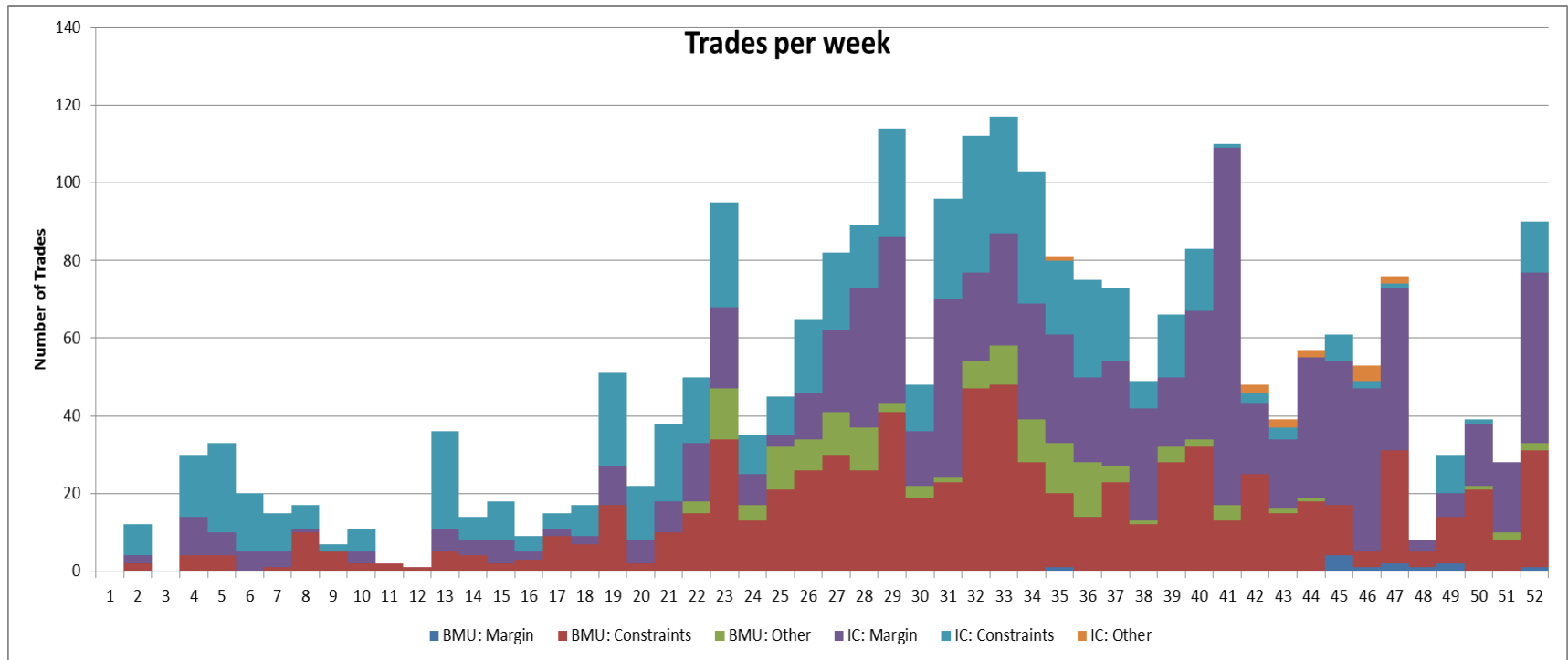


## Interacting requirements

- No 'Silver Bullet' to increasing complexity
- System requirements interact

Actions Available to the SO	Voltage	Downward Margin	Inertia	Response
Synch Additional Machines	Helps	Worsens	Helps	Helps
Desynch Machines	Worsens	Helps	Worsens	Worsens
Reduce Interconnector Imports		Helps	Helps	Worsens
Position Plant for response		Worsens		Helps

# Seasonality of requirements



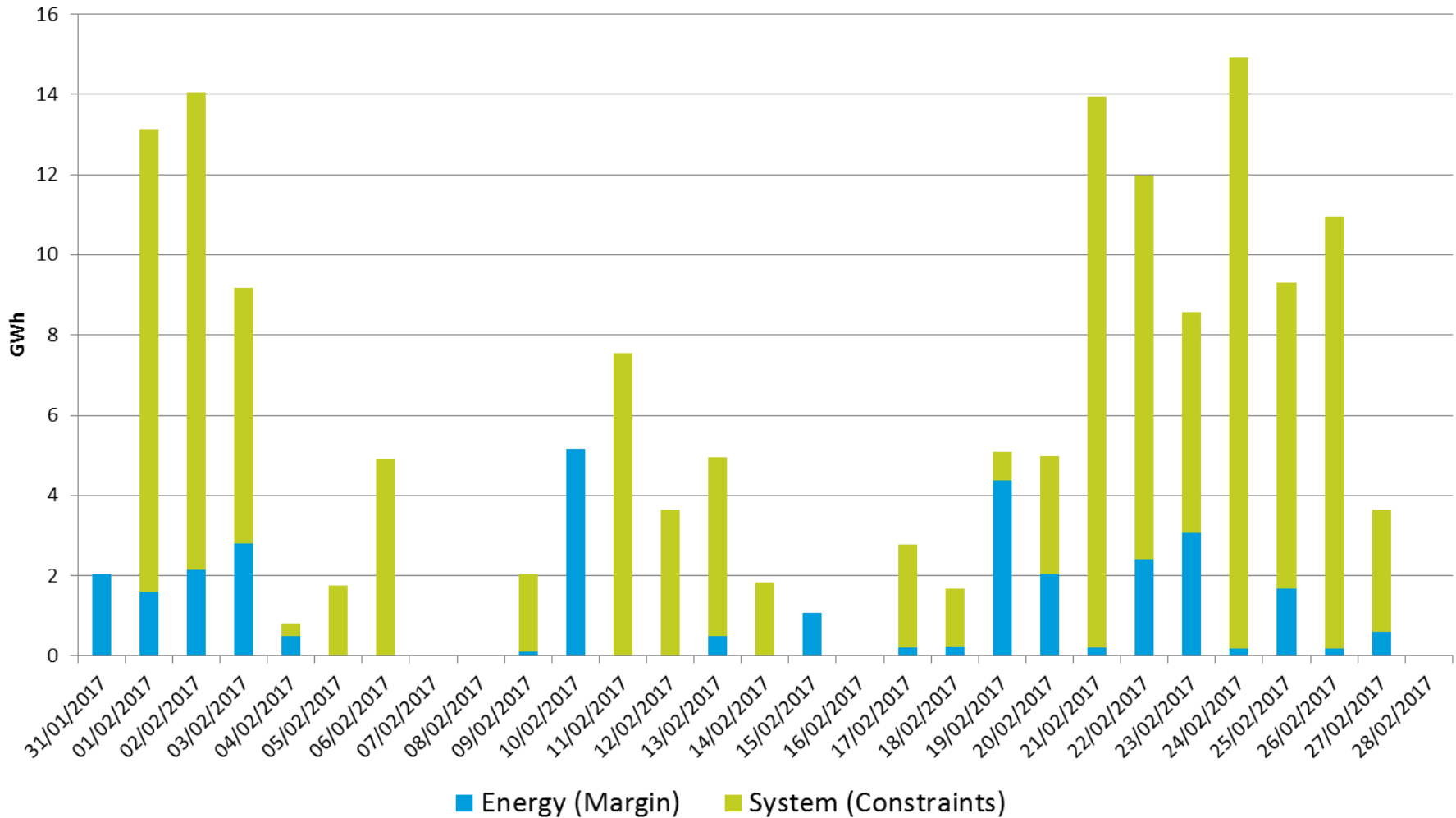
- ◆ **“BMU: Other”** is mostly **black-start**, hence its concentration in the summer when CDS were low
- ◆ **“BMU: Constraints”** is typically for **voltage** plant – again these are less likely to self-dispatch in the summer.
- ◆ **“IC: Constraints”** are mostly for **RoCoF** and we can see these requirements reduce when inertia is high during winter periods.
- ◆ **“BMU: Margin”** makes an appearance when **margins** are tight towards the end of the year.

# Trading in 2017

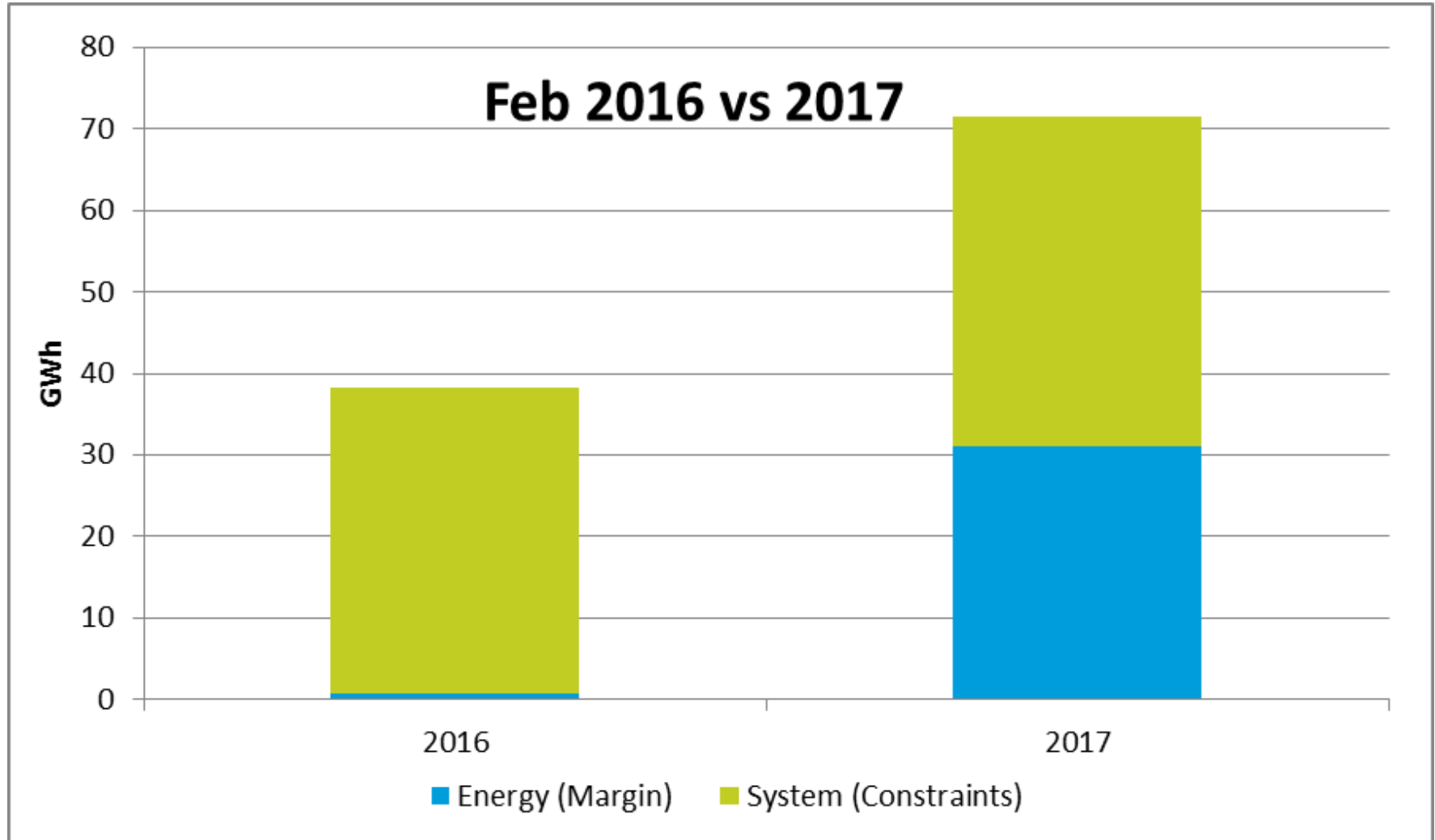
Overview of trading activity in February, including case Study

# February 2017 – trade volume

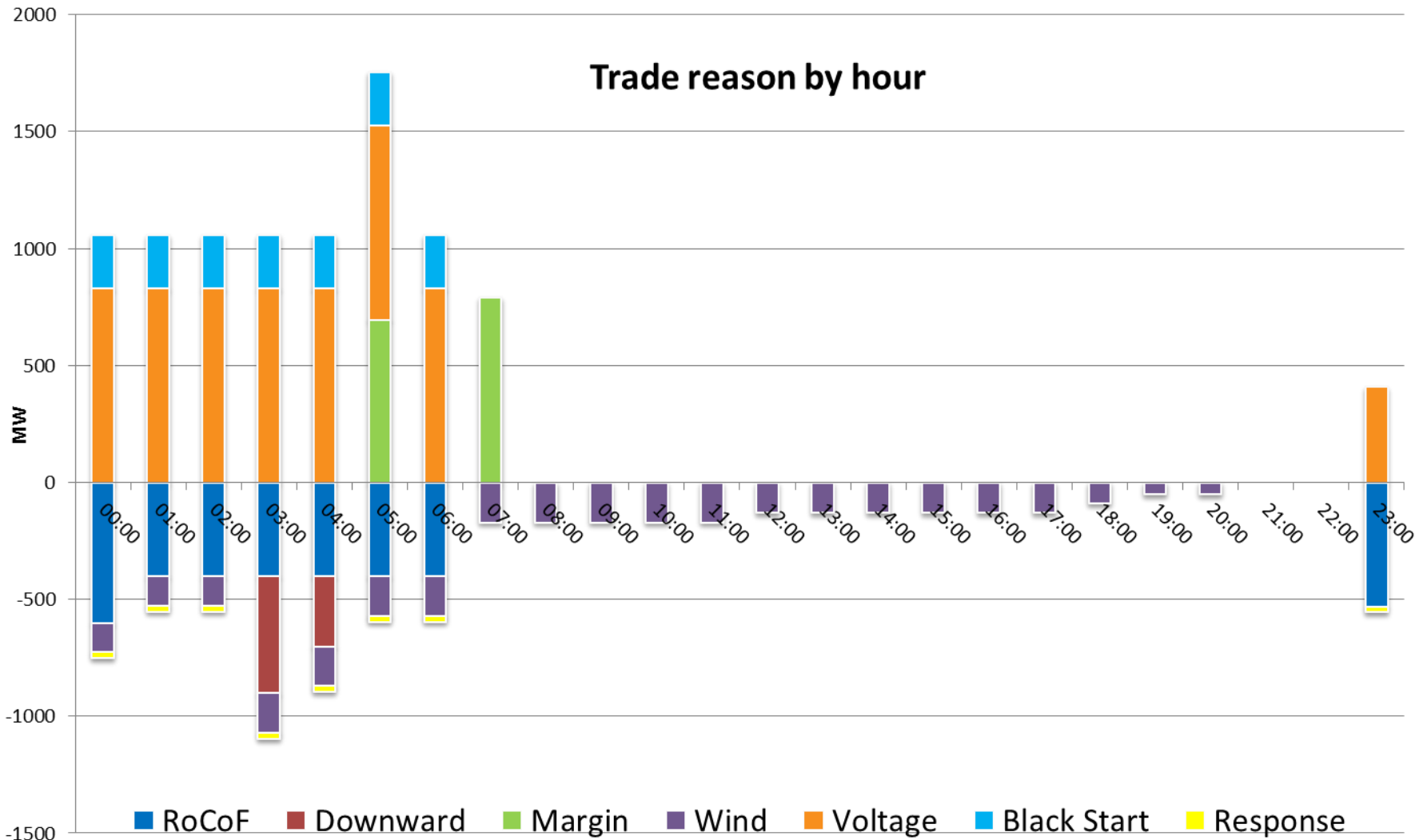
## Activity by Trade Reason



## A comparison: February 2016 vs 2017



# Case study: 22<sup>nd</sup> February 2017



## Case study: 22<sup>nd</sup> February 2017

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Typical  
**Summer**  
requirements in Winter

**3** Voltage units  
**3** GWh of RoCoF

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**Margin &  
Downward**  
on the same day

**1500** MWh D.Reg  
**800** MWh Margin

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Traded for  
**22 hours**  
of the day

Most activity  
**overnight**

## Looking forward in 2017

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We aim to improve in the following ways...

### 1. Work Patterns

We are increasing resource and moving to weekend working as standard

### 2. Commercial Solutions

We continue to look for new commercial solutions to our requirements

### 3. System Improvements

New systems such as EBS and a new trade-capture system will make us more efficient and improve our analysis

### 4. Transparency

A new system is being implemented for Summer which will publish trade data immediately following notification



