

Bayer Cropscience Norwich

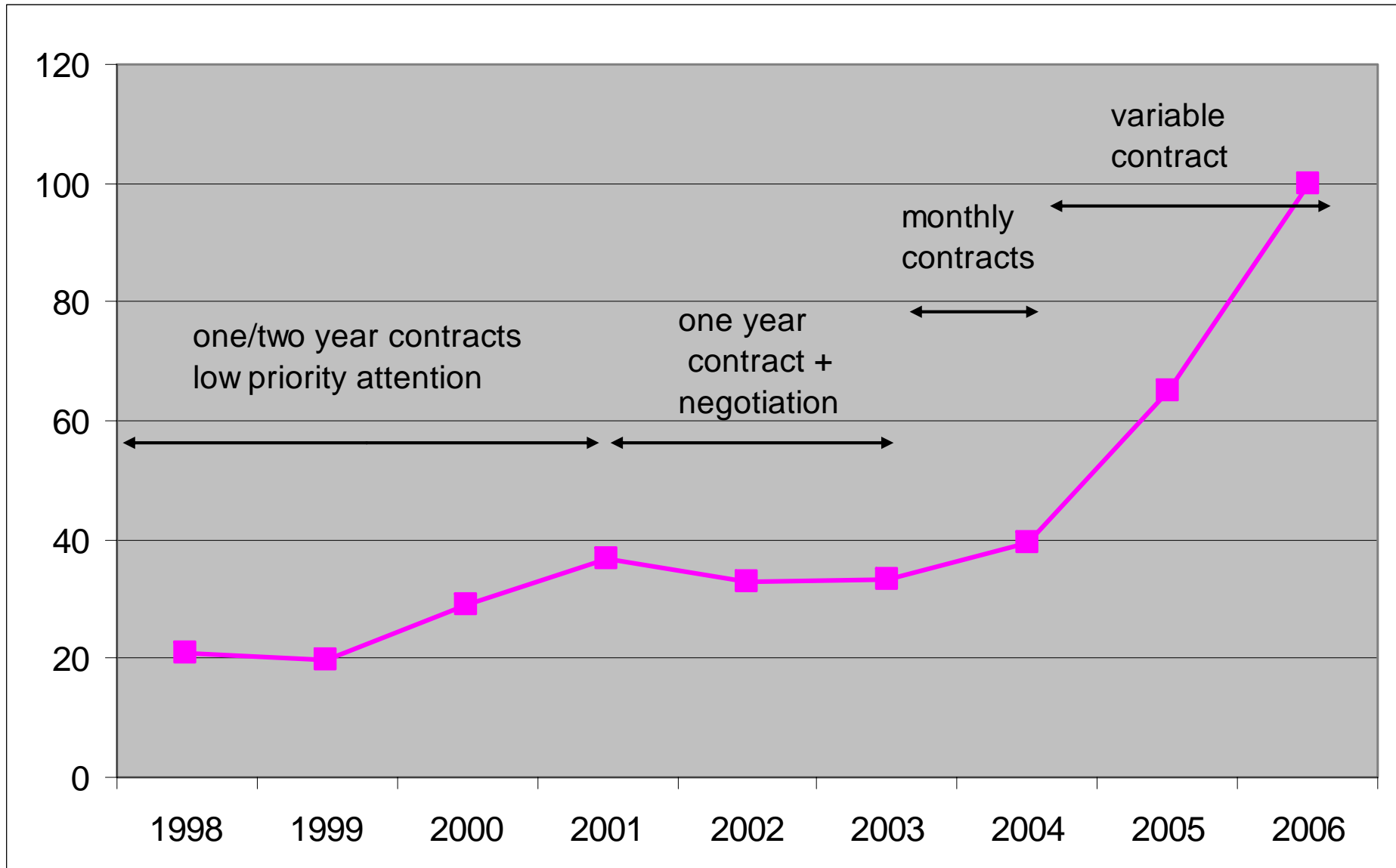
Content

- Overview of Bayer Cropscience Norwich
- Gas purchasing history
- Gas purchasing strategy
- Gas supply information
- National Grid website now
- National grid website in the future
- The first Gas Balancing Alert
- GBA action and cost comparison

Facts about site

- Covers ~115 acres
- 300 permanent employees
- 20 processes
- Mostly agrochemicals
- 4.4 MW CHP, 2.5 MW internal
- 17 tph steam – normal load about 10 t
- Prime energy source is gas
- Seasonal business - low summer demand
- Annual gas use about 130 to 140 GWhr

Gas Purchasing History as % of 2006



Gas Purchasing Strategy

- We do not think we did very well
- Perhaps if we were better informed we would have agreed long term contracts for 2004/5/6
- Company policy not to speculate
- Seemed to us that day ahead was always cheaper than month ahead
- We did not understand the market drivers
- Information did not seem not readily available
- The last two points are the most important
- Too late for 2007/8 ??????

Gas Supply Knowledge

- First real eye opener for me was a seminar run by CIA
- Outlined source of gas
 - beach supply – north sea
 - pipelines – Scandinavian, European
 - storage - long, medium, short
 - LNG
- Indicated cost premium of above cf. beach
- Possible to see how errors in predictions could cause large cost hikes

The game has changed

- Supply predictions were too optimistic
- Whenever supplies become critical they do seem more prone to problems – maybe because of the “spotlight effect”.
- Very rapidly moved from an over supply to under supply situation.
- Purchasing becomes more sensitive

The Information Gap

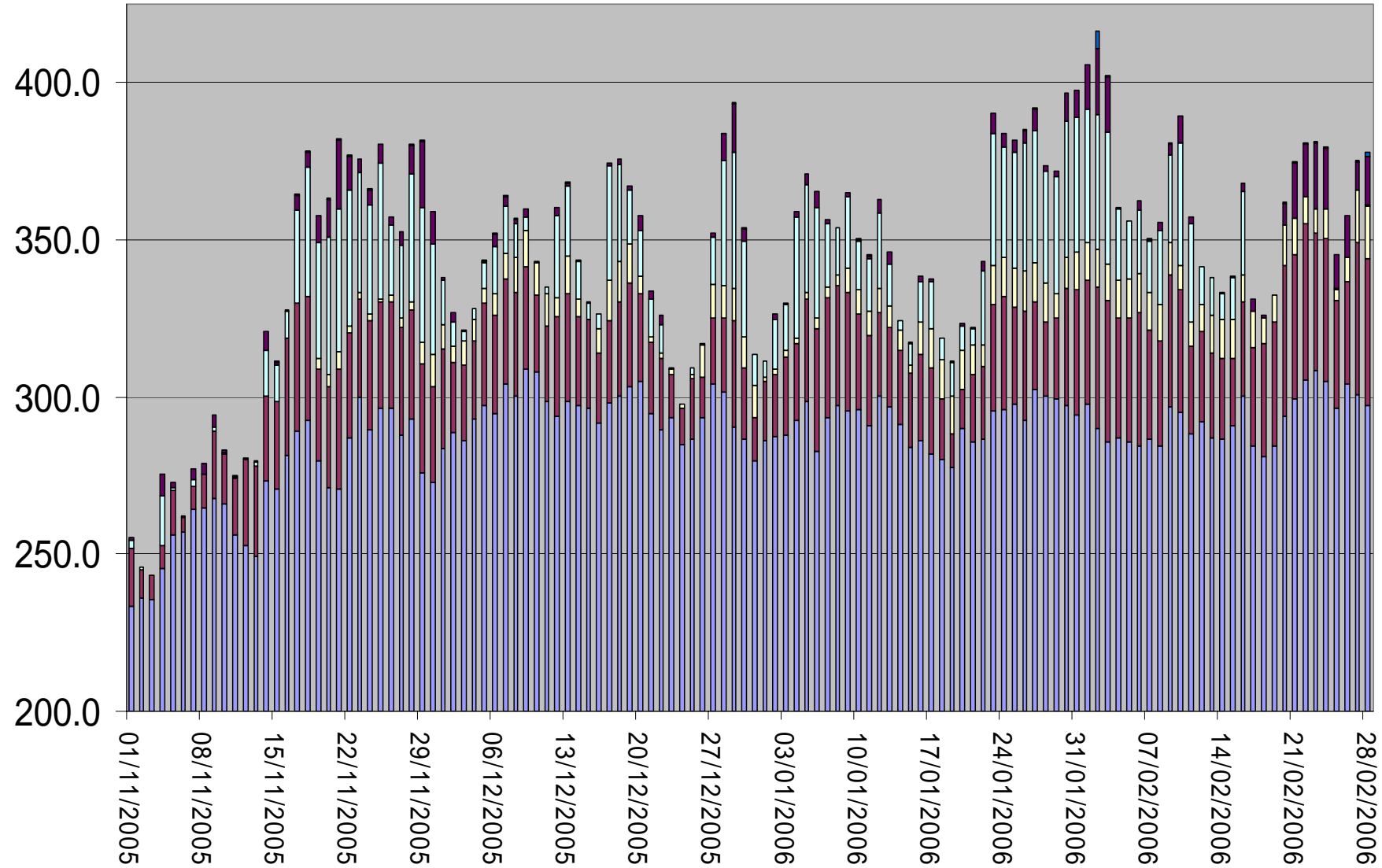
- One sided – traders have up to date detailed information – purchasers often have to rely on suppliers
- In this volatile situation purchasers need more up to date data.
- The Interim NG Website has partly filled the gap

Transco Website

- Supply information (comparable)
 - Beach
 - Interconnector
 - LNG
 - Storage
- ALL WITH HEALTH WARNING
- Temperature demand profiles
- Storage information
- Cost information at NBP

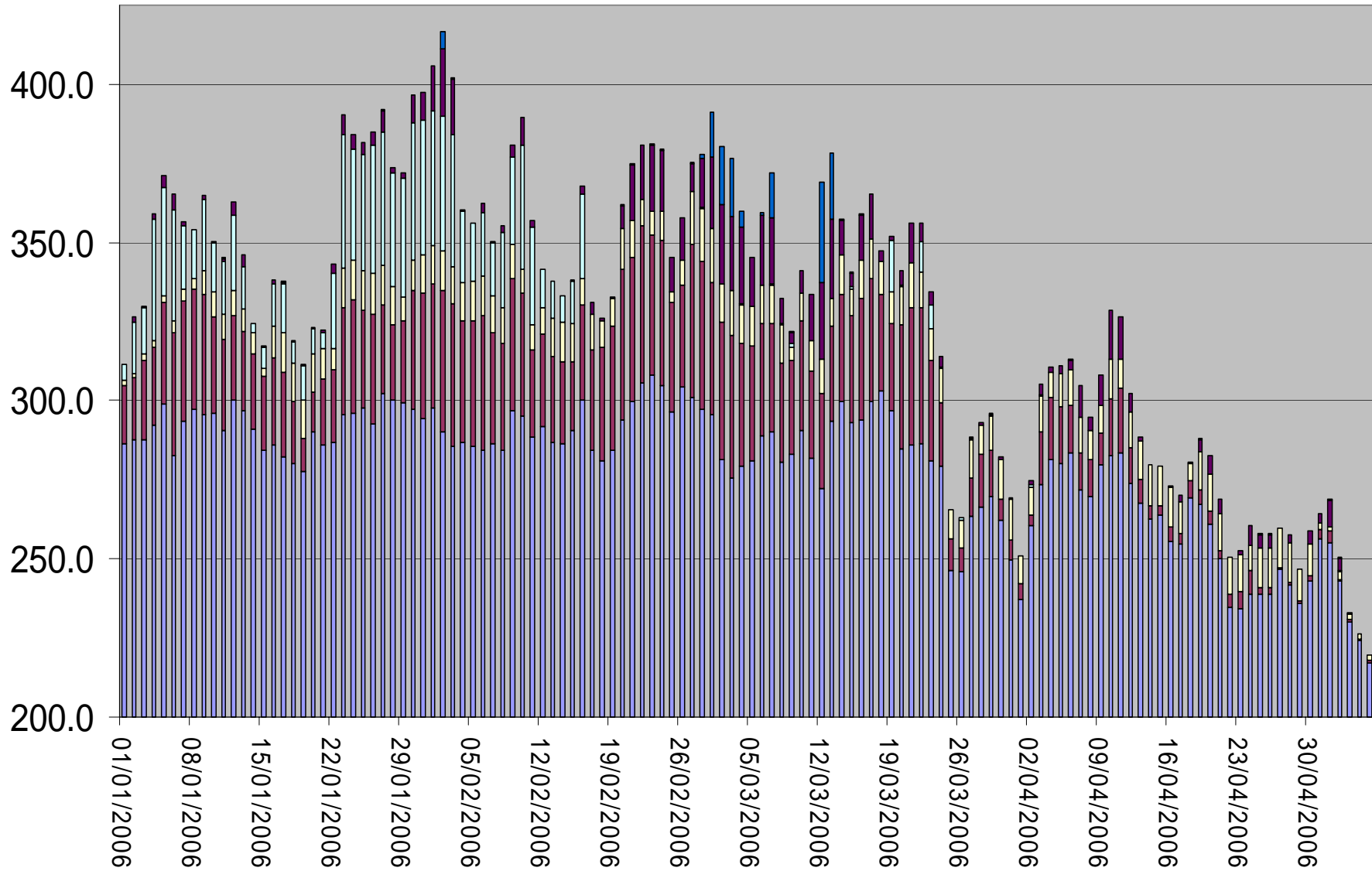
NTS INPUTS mcm/day

■ beach ■ interconnector ■ isle of grain ■ rough storage ■ medium storage ■ short storage



NTS INPUTS mcm/day

beach interconnector isle of grain rough storage medium storage short storage



Time line of data

- The website is currently 2 days behind
- Although this data helps to build a picture of happenings and consequences
- To be fair in a trading situation we all need the same information
- NG are being asked to make it within the hour???
- A notice board of events would also level the playing field

The first GBA

- Dateline 13/3/06 GBA issued 00:08 hrs
- Voluntarily reduced our load
- Prices escalating
 - 10/3/06 Heron day ahead 56.2
 - 13/3/06 Heron day ahead 183.3
- Way in excess of oil equivalent
- Change to oil
- Shut down CHP, import power, use SBB
- Resume normal working 21/3/06
 - 20/3/06 Heron day ahead 83.6

Comparative cost during GBA

	on gas	on oil
gas	158,568	27,551
oil	0	27,881
import	0	29,577
export	-14,335	0
	144,233	85,009

Supplier flexibility

- Supplier is flexible
 - Year, month, day ahead cumulative, BOM
- During GBA month offered daily weighted instead of cumulative average
- If we were on a fixed price contract we could have sold the high days back
- *LOTS A MONEY* (about 80k)