

Grain LNG Secondary Capacity Access Phase 1

14th December 2007

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Background

- ◆ Phase 1 Development
 - ◆ Initial construction started end 2002
 - ◆ Plant commissioned June 2005
 - ◆ Reuse and revalidation of existing assets
 - ◆ Fast track delivery – speed to market
 - ◆ £130million – low cost facility
 - ◆ Capacity represents < 3% peak daily demand
 - ◆ Built and operated under exemption from rTPA granted by Ofgem and EU in 2004/05

Current Status Of Development



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Grain LNG Terminal Overview

Phase 1

Conversion of 4 existing storage tanks

Jetty Construction

Cryogenic import line from Jetty

Long term capacity rights sold to BP/Sonatrach

Contracted send-out 13mcm/d
4 tanks @ ~21,000 tonnes each
(~150,000 m³ of usable space)



Grain LNG Terminal Overview

Phase 2

**Construction of
three new tanks**



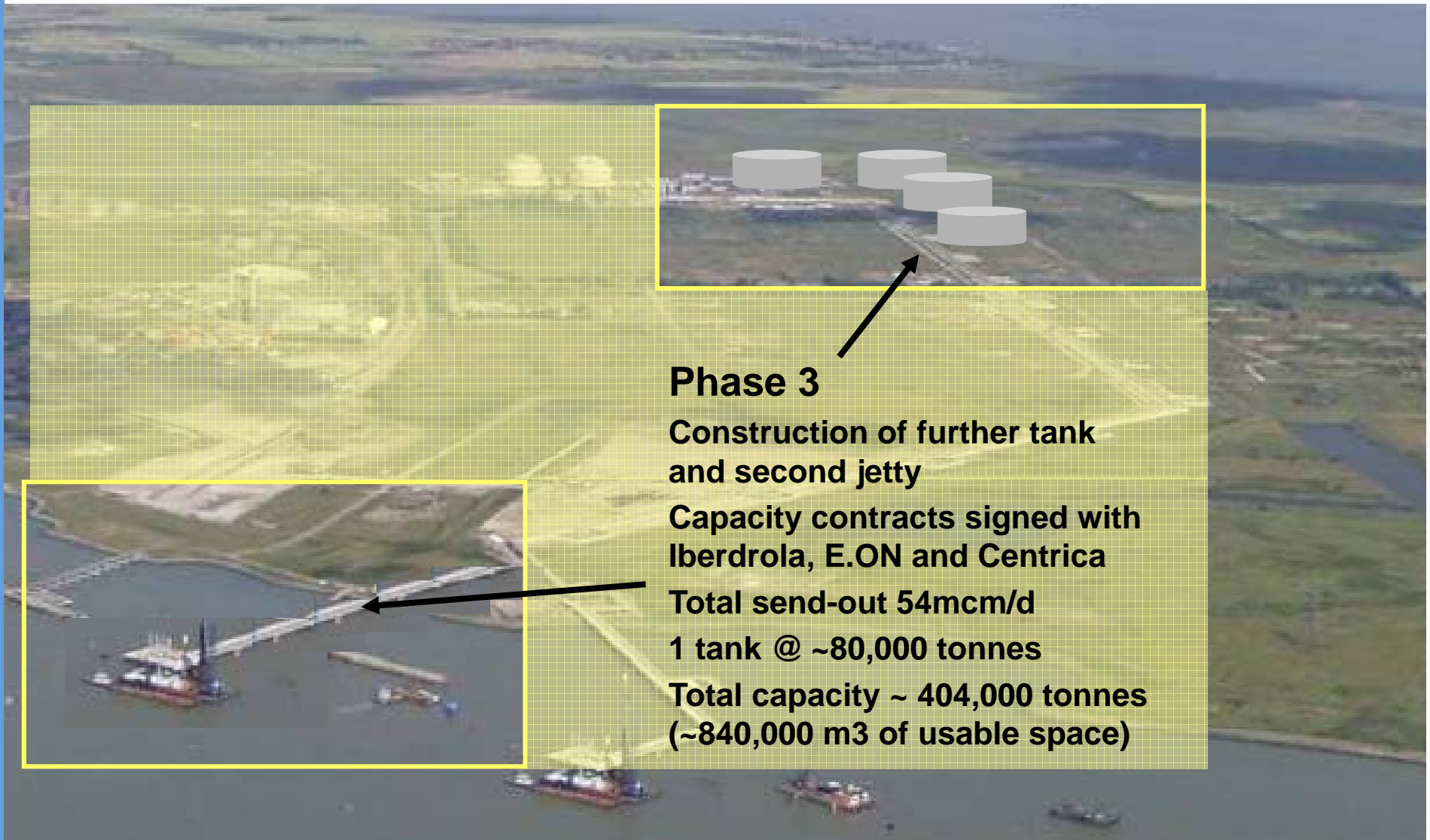
**Capacity contracts signed with GdF, Centrica and
Sonatrach**

Send-out increased to 36mcm/d

3 tanks @ ~80,000 tonnes each

**Total capacity will be ~324,000 tonnes
(~670,000 m3 of usable space)**

Grain LNG Terminal Overview



Phase 3

Construction of further tank and second jetty

Capacity contracts signed with Iberdrola, E.ON and Centrica

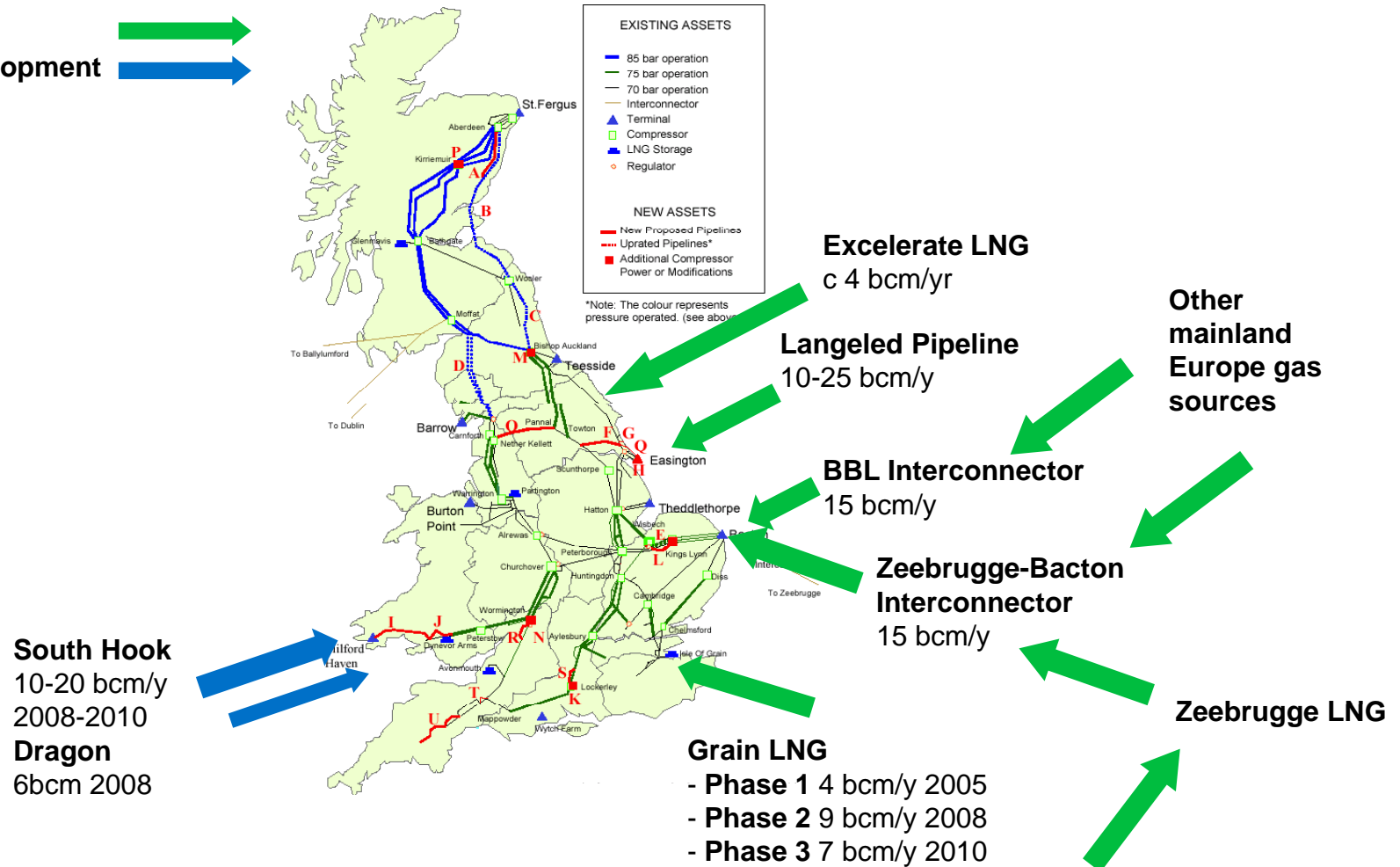
Total send-out 54mcm/d

1 tank @ ~80,000 tonnes

Total capacity ~ 404,000 tonnes
(~840,000 m³ of usable space)

UK Context – Committed Importation Projects

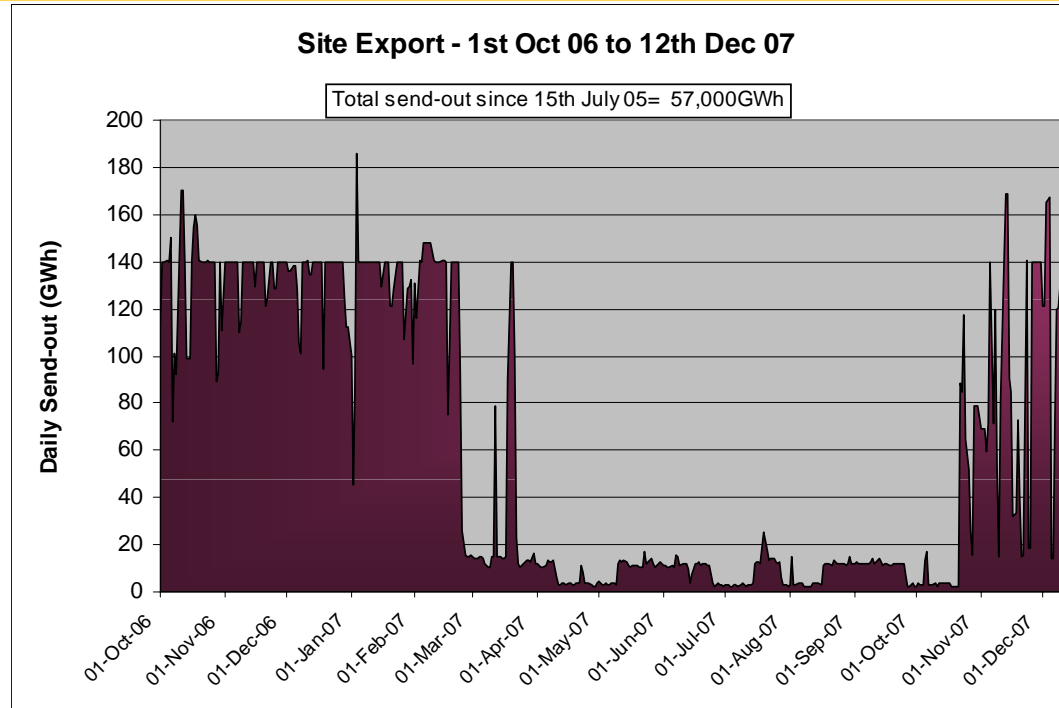
Online 
Under development 



◆ Grain LNG currently represents < 3% of peak day

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Winter operations to date



- ◆ Grain LNG - 7 out of 11 cargoes delivered during winter to date
 - ◆ Despite entry capacity uncertainty
- ◆ Average send-out 44% winter to date, 60% since 22nd October
- ◆ Teesside gas port – zero cargoes (to our knowledge)
- ◆ I(UK) flows – exporting early October, no significant imports

World LNG Situation

- ◆ LNG regasification
 - ◆ World regas capacity around twice liquefaction capacity
 - ◆ Utilisation rates of 33 to 50% should be considered typical
- ◆ LNG demand
 - ◆ Japan earthquake and nuclear shutdown
 - ◆ Asia price reported around \$13/mmbtu (c65p/therm) in November
 - ◆ China - prices offered as high as \$14.5/mmbtu
 - ◆ Southern Europe need for LNG for security of supply
- ◆ LNG supply
 - ◆ Nigeria LNG train 6 due on stream this month
 - ◆ Qatargas train 2 delayed to mid 2008
 - ◆ Cost of construction x4 since 1990s, long lead times, lack of resources and few new projects being sanctioned
 - ◆ Existing supplies with destination flexibility choosing highest price market

Access to the Grain LNG Terminal

- ◆ Long term contracts sold under Open Season process
 - ◆ Has led to 6 primary customers
 - ◆ Plus 7th (Cheniere) under Gaz de France swap deal
- ◆ A number of third parties have used the terminal via tried and tested upstream trading arrangements
 - ◆ Bi-lateral deals
 - ◆ Discussions can start months in advance of slot window
 - ◆ Right up to a few days in advance
 - ◆ Typically free on board cargo or sold at the rail to the primary shipper
 - ◆ Around 20% of cargoes delivered to Grain have been on a bilateral basis
 - ◆ Examples from trade press: GdF, DistriGas, Gazprom
- ◆ UIOLI has been in operation since July 2005
- ◆ Secondary Capacity in operation since 31st August 2007

UIOLI

- ◆ Implemented by Grain
- ◆ Offered publicly via website (GRAINLNG.COM)
- ◆ Bulletin board service for potential users to register interest
- ◆ Unused slot plus the available amount of temporary storage and deliverability for a fixed period
- ◆ Notice period dependent on release by primary capacity holder
- ◆ Contractual arrangement between Grain and the third party
- ◆ Terminal General Terms & Conditions apply
- ◆ Gas Quality variation from Base Specification available
- ◆ UIOLI arrangements and take or pay element of main contract incentivises Primary shipper to use or trade capacity

Secondary Capacity – Phase 1

- ◆ Arrangements put in place for sale by Primary Shipper to enhance access at the Terminal
 - ◆ Grain LNG party to necessary agreements
- ◆ Auction process administered by independent auction administrator
 - ◆ Questions on specific processes need to be directed to the Administrator
- ◆ Principles as set out in the “guide for prospective Secondary Shippers”:
 - ◆ Firm right to berth ship within scheduled slot
 - ◆ Firm right to unload quantity and quality specified in accepted bid
 - ◆ Firm temporary storage within terminal to extent required
 - ◆ Firm right to access gas at Grain entry point / NBP during six or seven day period following berthing slot

Secondary Capacity – Phase 1

- ◆ Secondary Shipper:
 - ◆ Post letters of credit
 - ◆ Bring in cargo within slot window
 - ◆ Deliver quantity and quality bid
 - ◆ Obtain NTS entry capacity for physical volumes
 - ◆ Payments include
 - ◆ Blending and other variable costs
 - ◆ Quality adjustment payment (QAP), if any
 - ◆ Compensation volume payment (CVP), calculated after D+7 using Heren Day Ahead index
 - ◆ Competitive bid price
 - ◆ Be clear of terminal at end of period

Summary

- ◆ Transparent, open anti-hoarding mechanisms in place
- ◆ Designed to complement traditional LNG trading arrangements (not replace) as final clearing mechanisms
- ◆ To enable sale of unutilised capacity when market conditions favourable but deal has not been struck via normal trading arrangements
- ◆ Several cargo deliveries via bi-lateral deals evidenced
- ◆ Terminal has seen high utilisation this winter particularly compared to Teesside gas port
- ◆ Against a backdrop of tight supply of World LNG and other high priced markets dictating where cargoes go
- ◆ Next winter – South Hook & Dragon on-stream plus Grain - all with anti-hoarding mechanisms - plus Teesside gas port
 - ◆ Numerous LNG trading counter-parties through which to access UK market

Questions ?

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