

**APRIL MAINTENANCE  
&  
CAPACITY EXPANSION  
PROGRAMME  
Summer 2009**

**Final**  
Version 1

**nationalgrid**

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# 1 Introduction

This Final version of the Maintenance Programme has been produced by National Grid NTS to satisfy its obligations under Section L: 1.5 of the UNC – Transportation Principal Document (TPD) and Section G of the UNC- Offtake Arrangements Document (OAD).

In accordance with Section L: 3.2 “Content of Programme” the document includes tables for each Aggregate System Entry Point (ASEP), detailing the maintenance work in proximity to that ASEP and how it has been scheduled during the planned maintenance period, 1st April 2009 to 31st October 2009. The maintenance work includes that which is scheduled at compressor stations and on the National Transmission System (NTS) pipelines. An explanation of the compressor station or pipeline work has been provided.

Notification of affected NTS System Exit points will be through Maintenance Day notices sent directly to affected parties.

The included graphs show indicative capability for each ASEP, both excluding and including the effect of the annual maintenance schedule. The profiles are displayed in monthly tranches and are based on appropriate Seasonal Normal Conditions.

In generating the ASEP capabilities, no account has been taken of any supply side (DFO) maintenance outages.

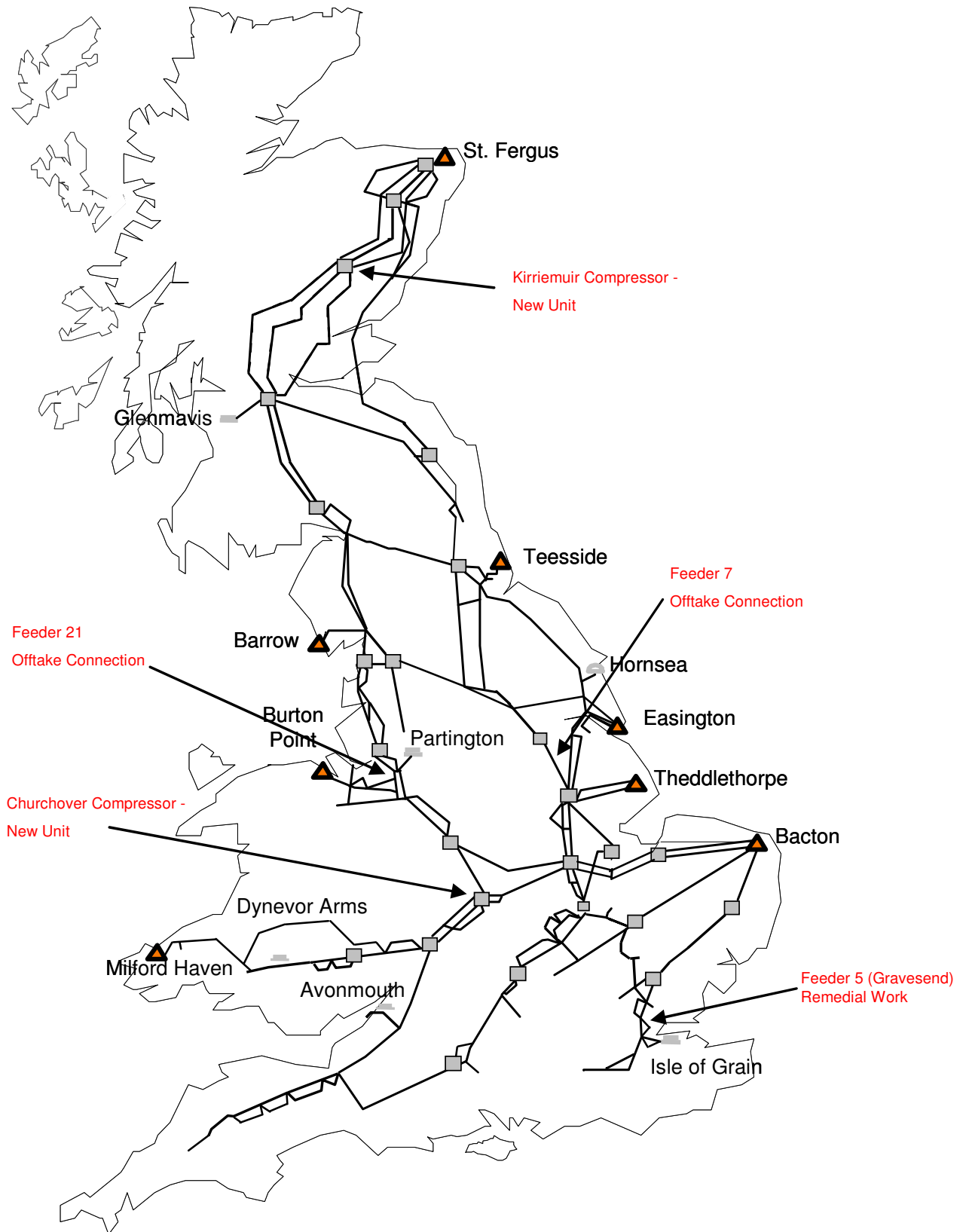
The capability profiles shown for the individual ASEP’s are indicative only. The amount of capability that may be available at any ASEP, on any given day, will depend on the level and distribution of demand and the level of supplies at other terminals.

This document only includes maintenance activities on the NTS, which are to be undertaken by National Grid NTS, as defined in Section L: 1.1.4 of the UNC (TPD) and UNC (OAD) Section G 1.2

It does not include maintenance carried out upstream of the NTS by Delivery Facility Operators (DFO’s) / Producers or downstream of the NTS by the Distribution Networks.

Any comments should be sent to Jacky Carroll, Physical Operations Manager, National Grid, Gas Operations, National Grid House, Gallows Hill, Warwick, CV34 6DA (Tel: 01926 653235).

## 2 Map of National Transmission System – Key Projects for 2009



### **3 Drivers for Maintenance & Capacity Expansion**

The primary investment drivers for the NTS are

- Increased peak entry capacity for supplies.
- Increased peak exit capacity for generic growth, interconnectors and large specific loads.
- Ongoing serviceability of the network to ensure supply security and meet legislative requirements.
- Projects to deliver additional flexibility and security.

The maintenance outages, which have been scheduled for Summer 2009, are for routine and non-routine compressor maintenance, pipeline work and reinforcement. Together these meet the drivers outlined above.

## 4 ASEP Capability Profiles

The included graphs show indicative capability for each ASEP up to the obligated baseline capacity level, both excluding and including the effect of the Summer 2009 Maintenance Programme. The profiles are displayed in monthly tranches and are based on appropriate Seasonal Normal Conditions.

In generating the ASEP capabilities, no account has been taken of any supply side (DFO) maintenance outages.

### Maximum Monthly ASEP Capability - Excluding Maintenance

The green bar represents this figure.

This is the potential maximum ASEP capability for each month. It is based on Seasonal Normal Demand conditions for the week in the month that has scheduled maintenance that most adversely affects the particular ASEP's capability. The maximum figure has been generated by National Grid and assumes the particular ASEP is favoured at the expense of other terminals. The figure excludes any effect of the Summer 2009 Maintenance Programme.

### Monthly ASEP Capability - Including Maintenance

The blue bar represents this figure.

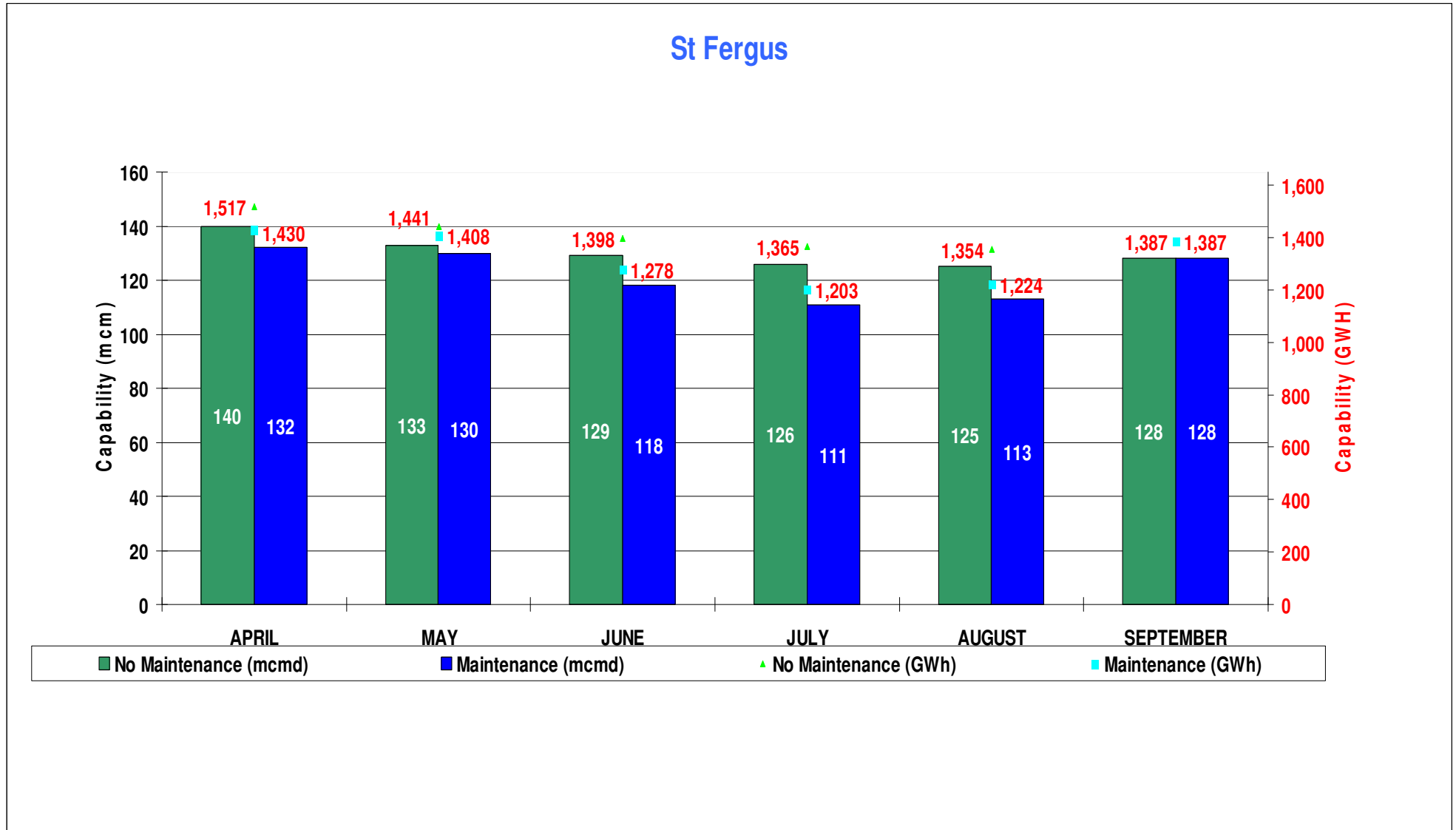
This is the ASEP capability for each month that includes any effect of the Summer 2009 Maintenance Programme. It is based on Seasonal Normal Demand conditions for the week in the month that has scheduled maintenance that most adversely affects the particular ASEP's capability. The figure has been generated by National Grid and assumes the particular ASEP is favoured at the expense of other terminals.

In cases during the maintenance period where the blue and green bars have the same value, this indicates that the maintenance scheduled for the time has no adverse effects on the ASEP capability.

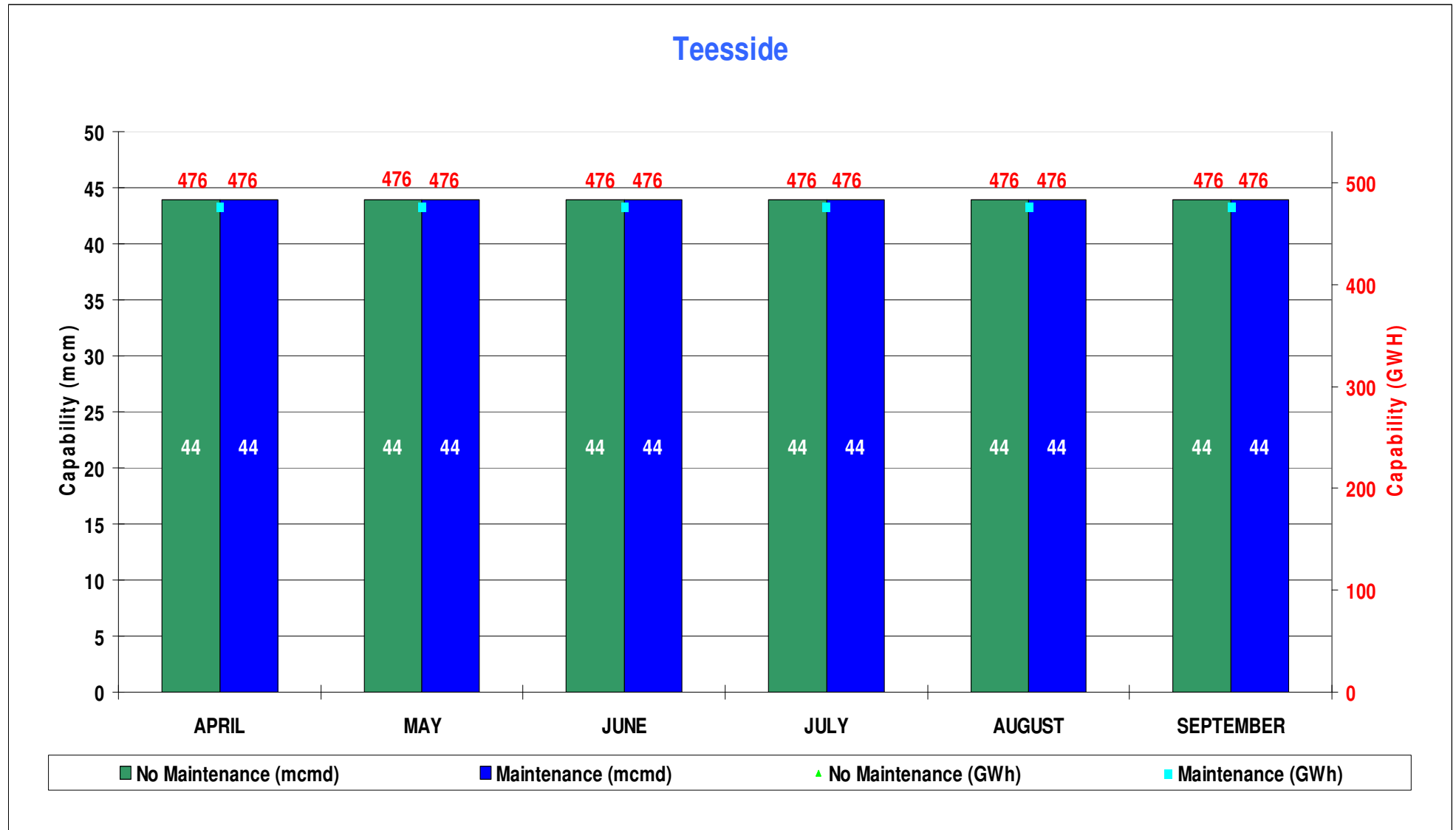
The capability profiles shown for the individual ASEP's are indicative only, but do represent a consistent operational view.

On any given day, the amount of capability that may be available at any ASEP will depend upon the level and distribution of the demand and the level of supplies at other terminals. In cases where scheduled maintenance has an adverse effect on an ASEP's capability, National Grid may be able to make additional capability available up to the Maximum Capability - Excluding Maintenance.

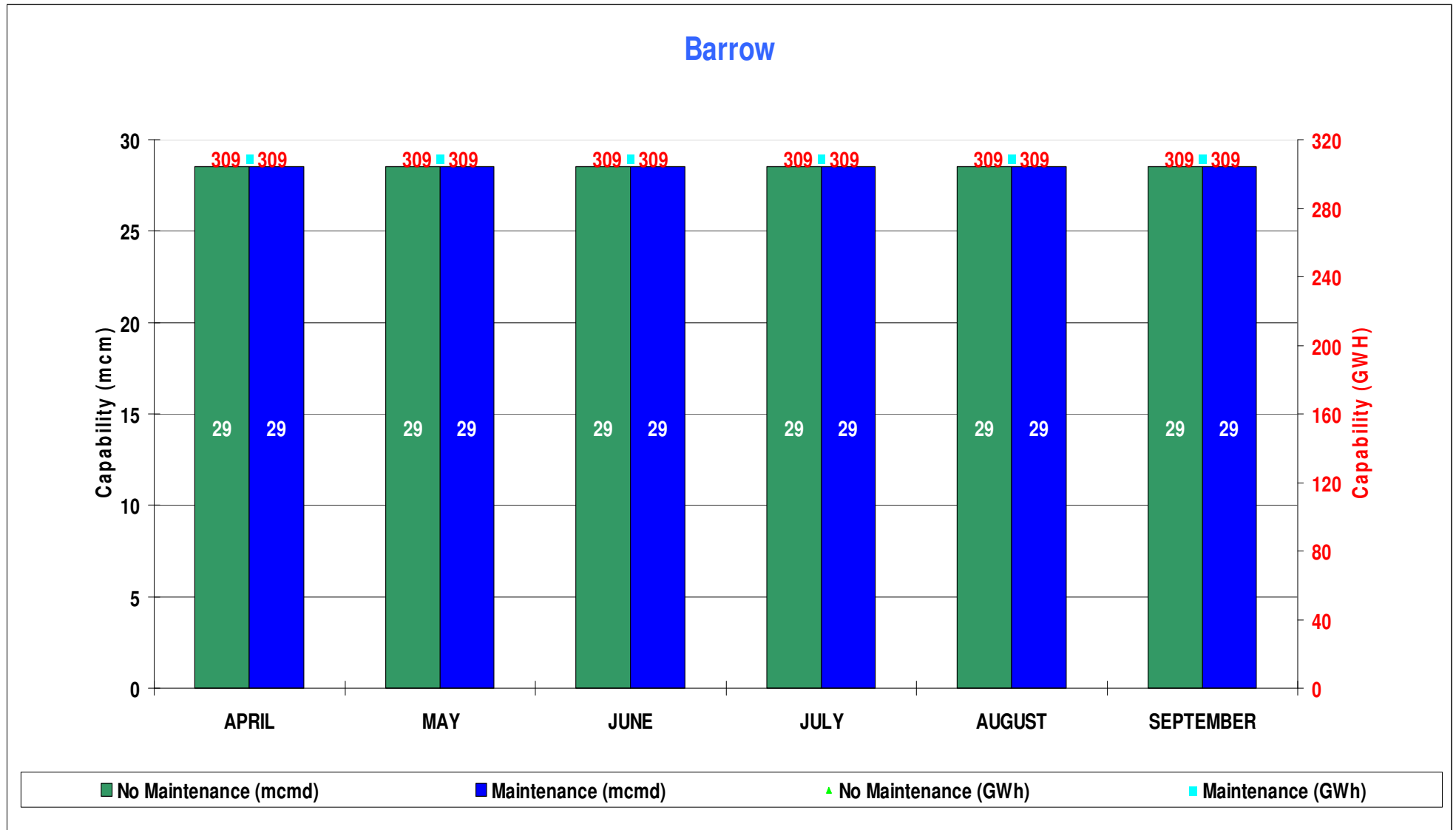
# St Fergus



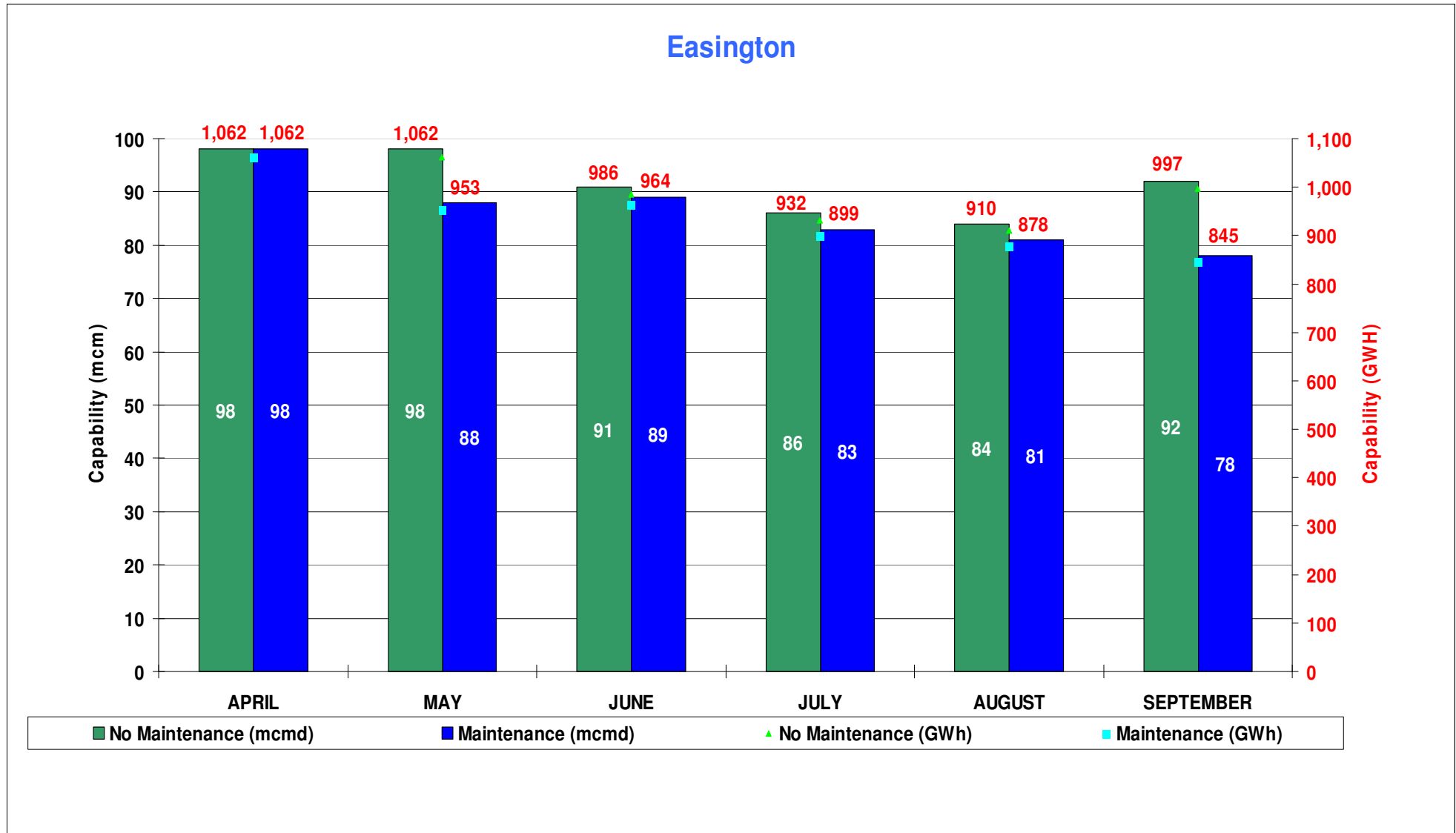
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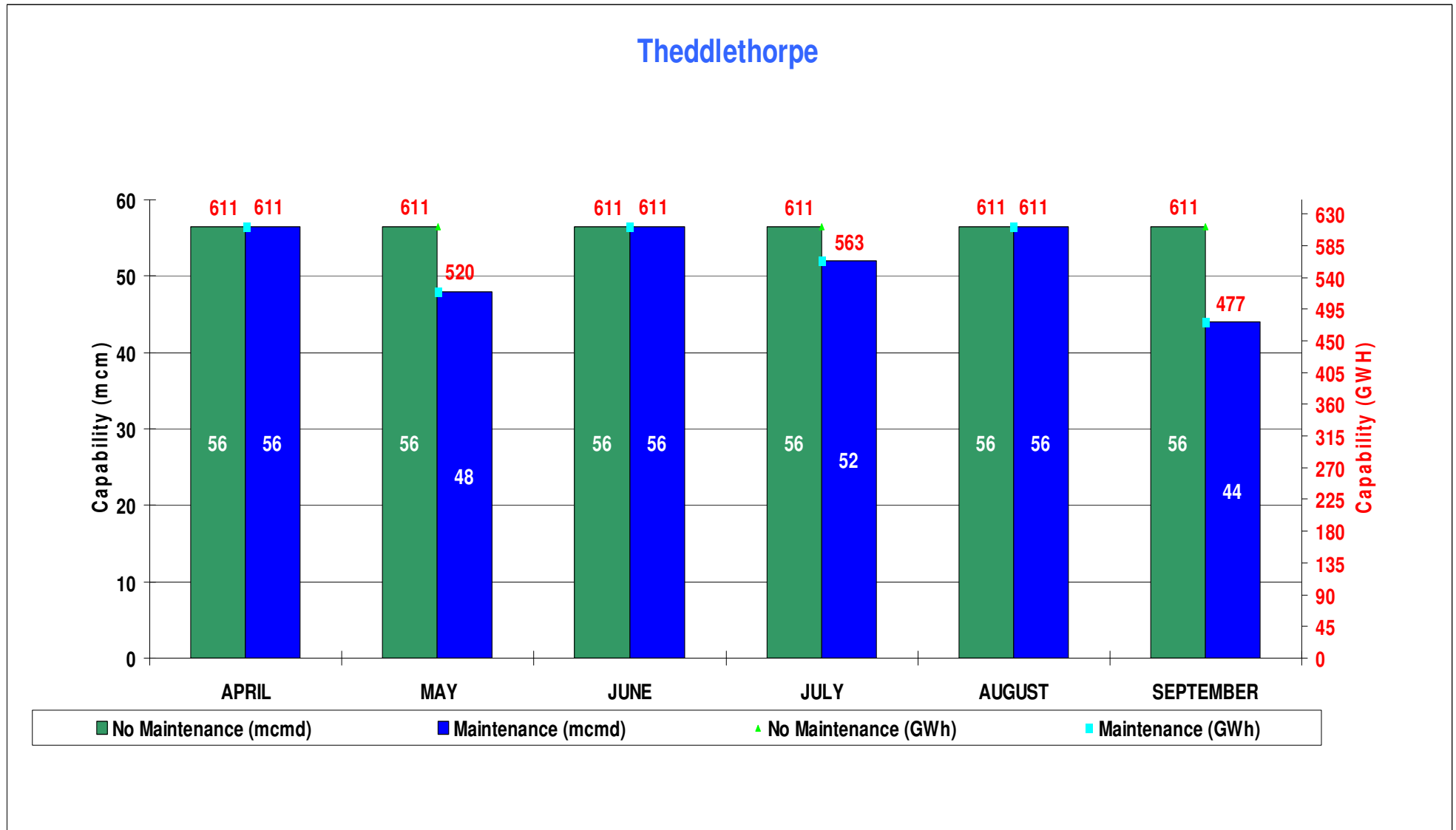
# Barrow



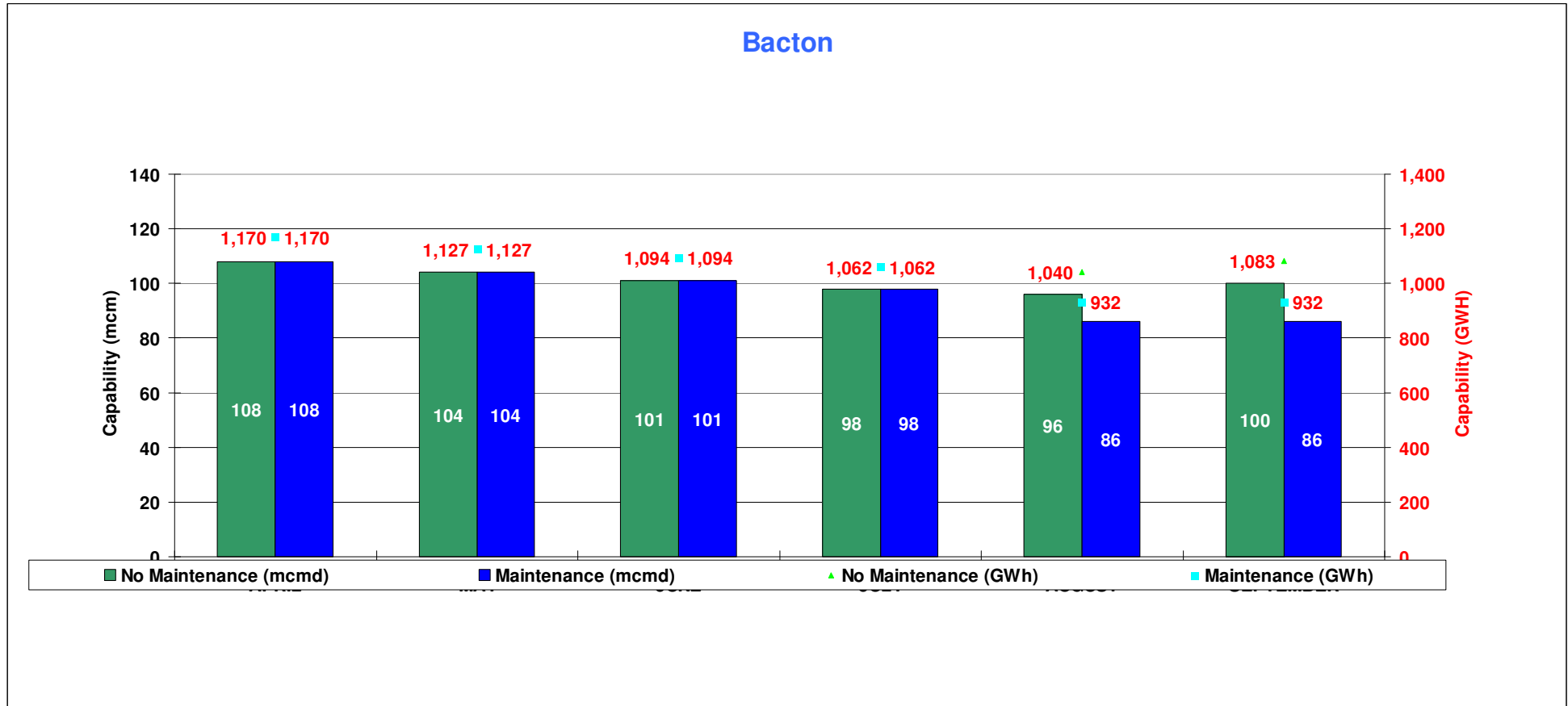
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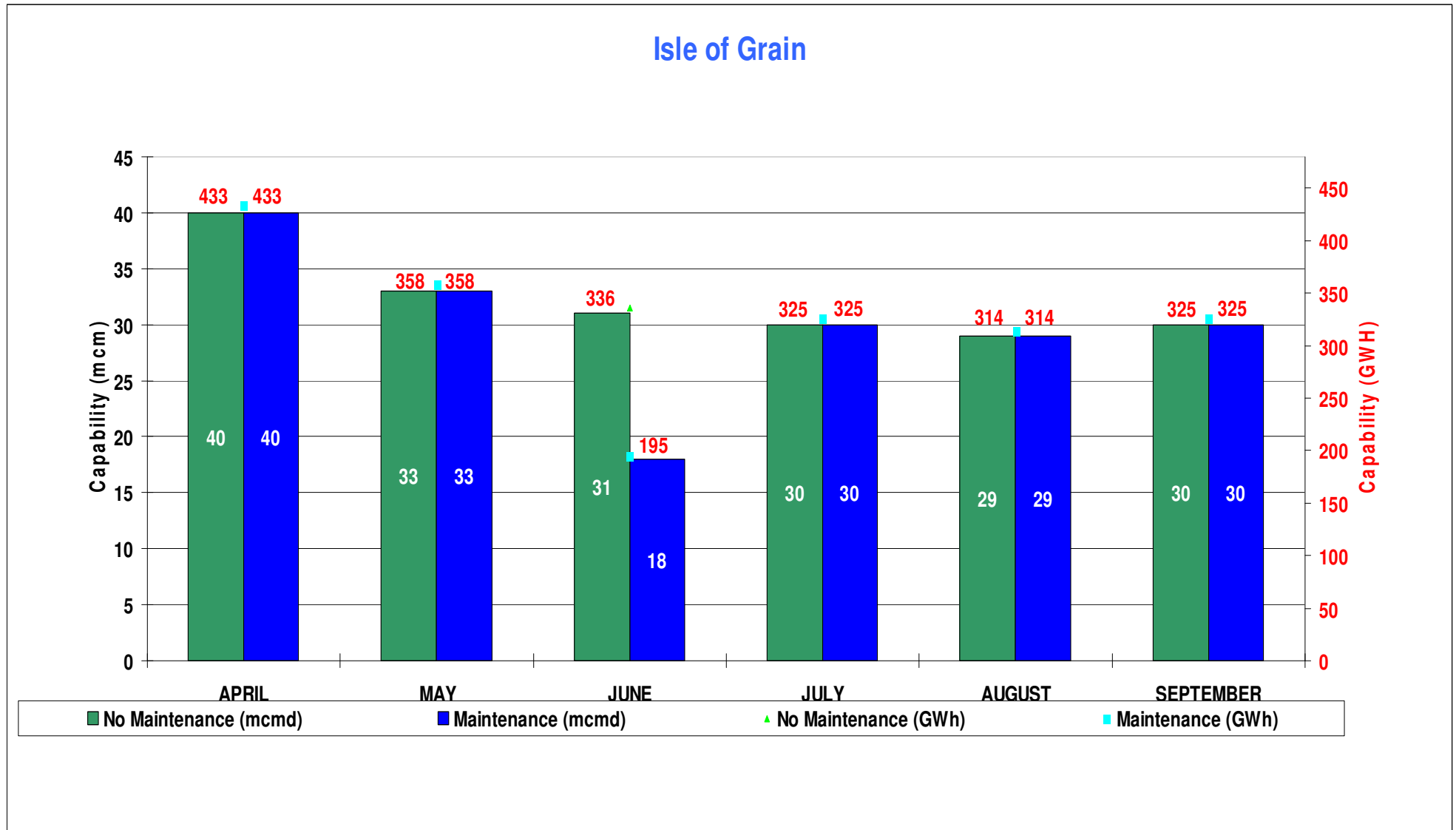
# Theddlethorpe



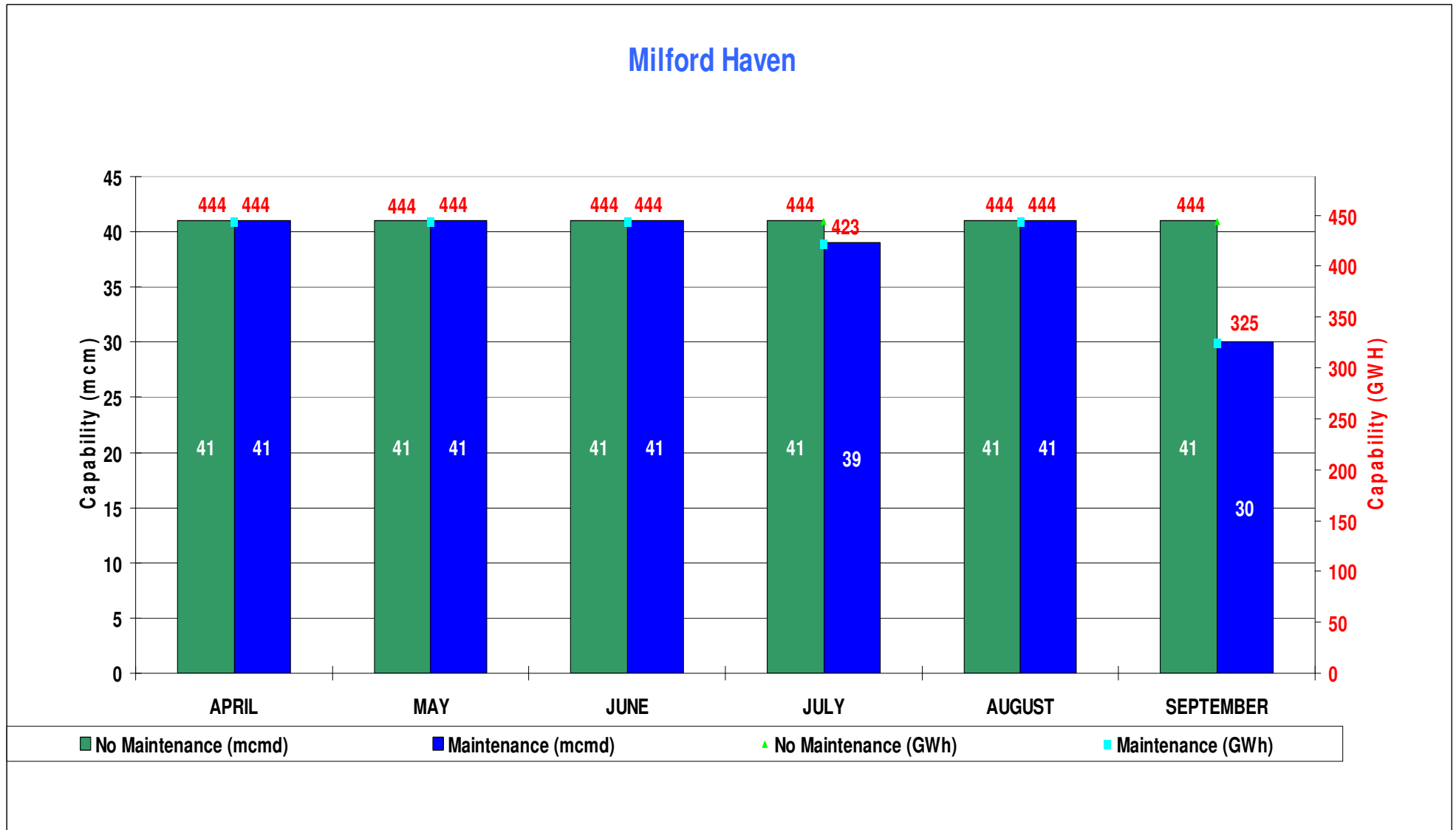
# Bacton



# Isle of Grain



# Milford Haven



## 5 Maintenance Work by Month

### April 2009

<b>Compressor Station Outages</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Moffat	13/04 – 26/04	SC	Routine maintenance
Warrington	27/04 – 29/04	NW	Routine maintenance
Churchover	30/03 – 27/09	WM	New unit and reverse flow modifications
Peterstow	30/03 – 19/04	SW	Routine maintenance

<b>Pipeline Work</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Feeder 10	06/04 – 19/04	SC	Weld inspections prior to pipeline diversion
Feeder 7	20/04 – 03/05	EM	Weld inspections prior to Minimum Offtake Tie in

<b>On Line Inspections</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Feeder 2	15/04 – 23/04	WA	Dowlais to Dyffryn Clydach

## May 2009

<b>Compressor Station Outages</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Bishop Auckland	11/05 – 07/06	NO	Routine maintenance and Non Return Valve removal
Carnforth	18/05 – 12/07	NW	Routine maintenance and Non Return Valve replacement
Alrewas	25/05 – 21/06	WM	Routine maintenance
Churchover	30/03 – 27/09	WM	New unit and reverse flow modifications

<b>Pipeline Work</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Feeder 21	04/05 – 17/05	NW	Pipeline feature inspection
Feeder 7	18/05 – 31/05	EM	Pipeline feature inspection

<b>On Line Inspection</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Feeder 3	18/5 – 31/05	EA	Roudham Heath to Great Wilbraham
Feeder 7	04/05 – 17/05	EM	Eastoft to Keadby

## June 2009

<b>Compressor Station Outages</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Kirriemuir	01/06 – 28/06	SW	Routine maintenance and new unit
Bishop Auckland	11/05 – 07/06	NO	Routine maintenance and Non Return Valve removal
Carnforth	18/05 – 12/07	NW	Routine maintenance and Non Return Valve replacement
Alrewas	25/05 – 21/06	WM	Routine maintenance
Churchover	30/03 – 27/09	WM	New unit and reverse flow modifications
Scunthorpe	15/06 – 12/07	EM	Routine maintenance
Peterborough	29/06 – 19/08	EA	Routine maintenance
Lockerley	01/06 – 28/06	SO	Routine maintenance

<b>Pipeline Work</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Feeder 4	01/06 -21/06	NW	Plumley Block Valve removal
Feeder 5	13/06 – 17/06	SE	Gravesend remedial works

<b>On Line Inspection</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Feeder 18	15/06 – 28/06	EA	St Neots to Little Barford
Feeder 2	01/06 – 14/06	EM	Duddington to Churchover
Feeder 21	29/06 – 12/07	NW	Elworth to Mickle Trafford

## July 2009

<b>Compressor Station Outages</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Aberdeen	06/07 – 02/08	SC	Routine maintenance
Carnforth	18/05 – 12/07	NW	Routine maintenance and Non Return Valve replacement
Warrington	06/07 – 31/10	NW	Control system replacement
Churchover	30/03 – 27/09	WM	New unit and reverse flow modifications
Scunthorpe	15/06 – 12/07	EM	Routine maintenance
Hatton	20/07 – 09/08	EM	Routine maintenance
Peterborough	29/06 – 19/07	EA	Routine maintenance
Chelmsford	27/07 – 09/08	EA	Routine maintenance
Cambridge	06/07 – 19/07	EA	Routine maintenance

<b>Pipeline Work</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Feeder 2	06/07 – 19/07	WS	Pipeline feature inspection

<b>On Line Inspection</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Feeder 21	29/06 – 12/07	NW	Elworth to Mickle Trafford
Feeder 21	13/07 – 26/07	NW	Mickle Trafford to Deeside
Feeder 9	27/07 – 09/08	EM	Brocklesby to Stallingborough

## August 2009

<b>Compressor Station Outages</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Avonbridge West	03/08 – 24/08	SC	Routine maintenance
Avonbridge East	24/08 – 06/09	SC	Routine maintenance
Wooler	10/08 – 30/08	NO	Routine maintenance
Nether Kellet	10/08 – 23/08	NW	Routine maintenance
Warrington	06/07 – 31/10	NW	Control system replacement
Churchover	30/03 – 27/09	WM	New unit and reverse flow modifications
Hatton	20/07 – 09/08	EM	Routine maintenance
Wisbech	10/08 – 23/08	EA	Routine maintenance
Kings Lynn	24/08 – 13/09	EA	Routine maintenance
Diss	10/08 – 23/08	EA	Routine maintenance
Chelmsford	27/07 – 09/08	EA	Routine maintenance

<b>Pipeline Work</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Feeder 3	03/08 – 16/08	EA	Pipeline feature inspection
Feeder 11	10/08 – 30/08	NW	Pipeline feature inspection

<b>On Line Inspection</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Feeder 5	24/08 – 06/09	SE	Isle of Grain to Medway
Feeder 9	27/07 – 09/08	EM	Brocklesby to Stallingborough
Feeder 9	10/08 – 23/08	SO	Barton Stacey to Lockerley

## September 2009

<b>Compressor Station Outages</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Avonbridge East	24/08 – 06/09	SC	Routine maintenance
Warrington	06/07 – 31/10	NW	Control system replacement
Churchover	30/03 – 27/09	WM	New unit and reverse flow modifications
Huntingdon	31/08 – 13/09	EA	Routine maintenance
Aylesbury	14/09 – 18/10	SO	Routine maintenance
Wormington	31/08 – 27/09	SW	Routine maintenance
Kings Lynn	24/08 – 13/09	EA	Routine maintenance

<b>On Line Inspection</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Feeder 5	24/08 – 06/09	SE	Isle of Grain to Medway
Feeder 29	14/09 – 27/09	YO	Asselby to Pannal

## October 2009

<b>Compressor Station Outages</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Warrington	06/07 – 31/10	NW	Control system replacement
Aylesbury	14/09 – 18/10	SO	Routine maintenance

<b>On Line Inspection</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Feeder 29	28/09 – 11/10	YO	Easington to Asselby
Feeder 20	12/10 – 25/10	SW	Ilchester to Kenn (South)
Feeder 21	26/10 – 08/11	NW	Warburton to Partington

## **6 Maintenance Affected Exit Points**

Some Exit Points may have supply disruptions whilst NTS maintenance is being completed.

Where possible, maintenance impacting exit points is co-ordinated with the end user to avoid supply disruption.

Shippers, End-Users and Distribution Networks will be advised in accordance with the Uniform Network Code timescales.

Maintenance day(s) notifications have been issued to all relevant parties for the work detailed in this Final April 2009 Maintenance plan.

Should any changes or additions to the requested Maintenance days be required, all relevant parties will be notified as per the timescales detailed in the Uniform Network Code.