

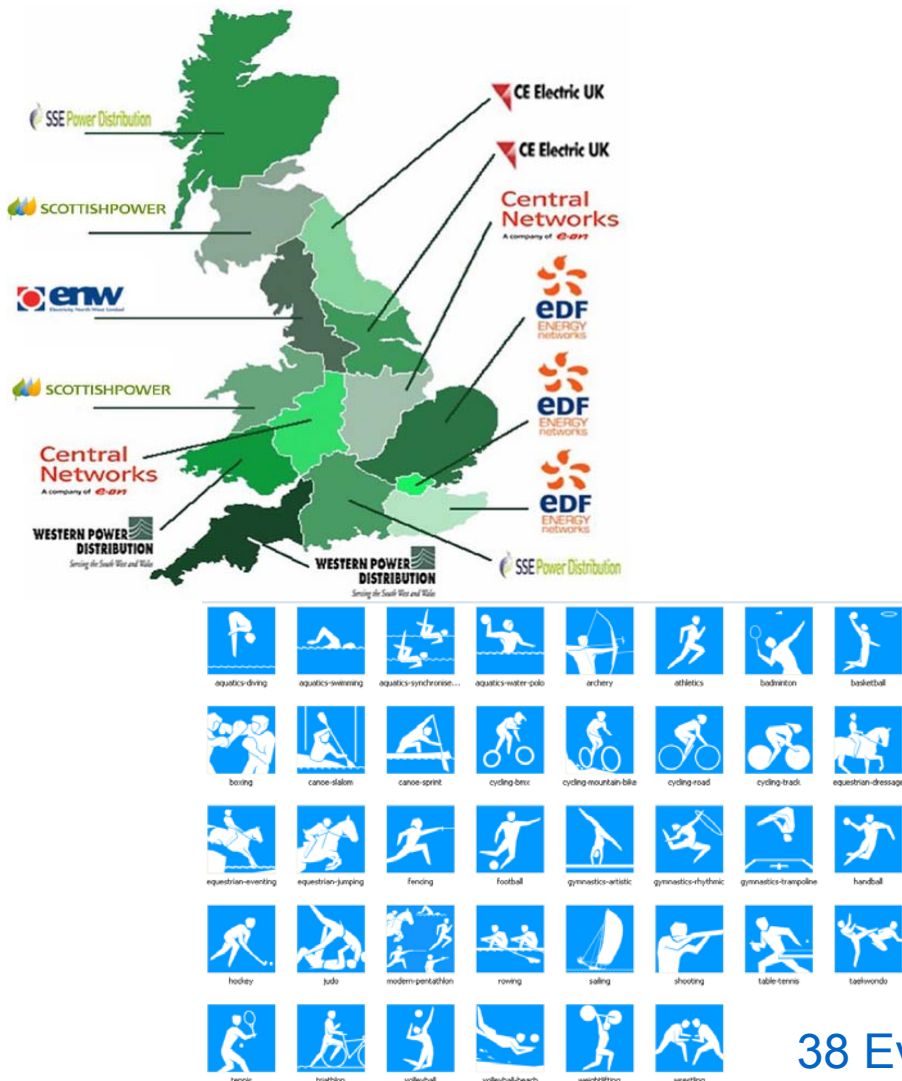
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The Industry Effort Towards the Optimum Solution

Dave Folkerd
EDF Energy
Operations London 2012
Systems Manager

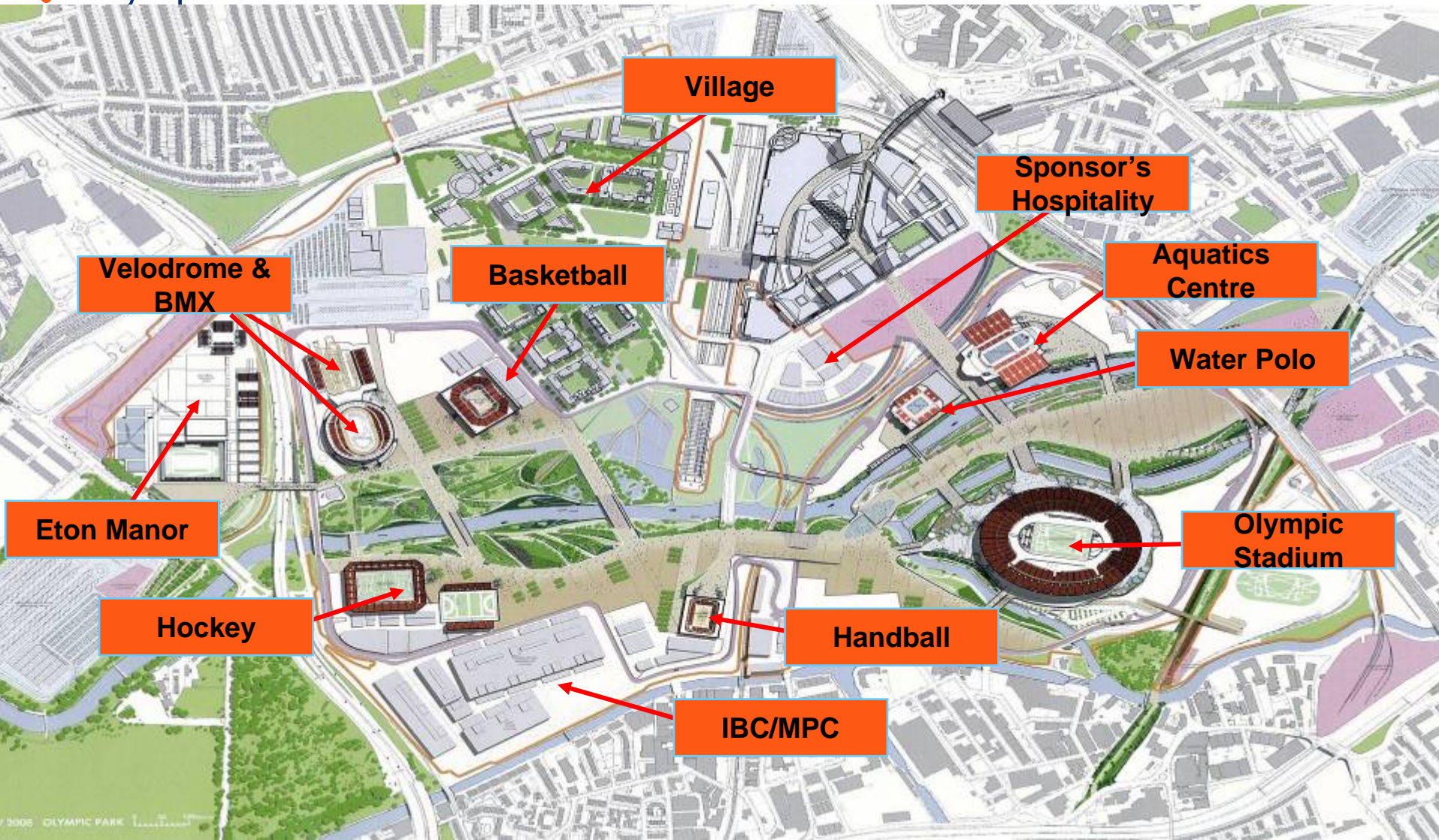


UK Olympic Venues



38 Events, Nation wide

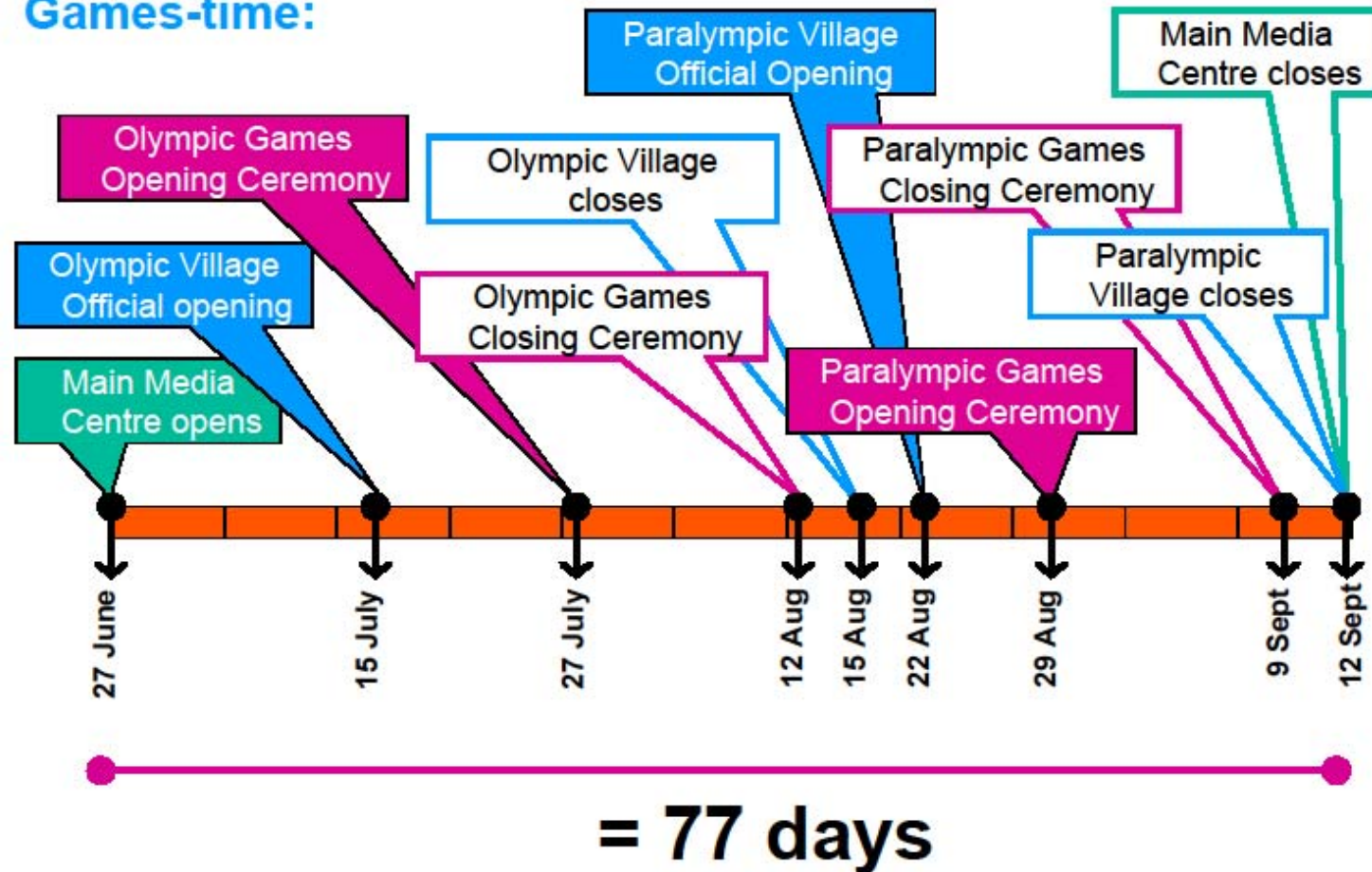
⋮ Olympic Park Venues



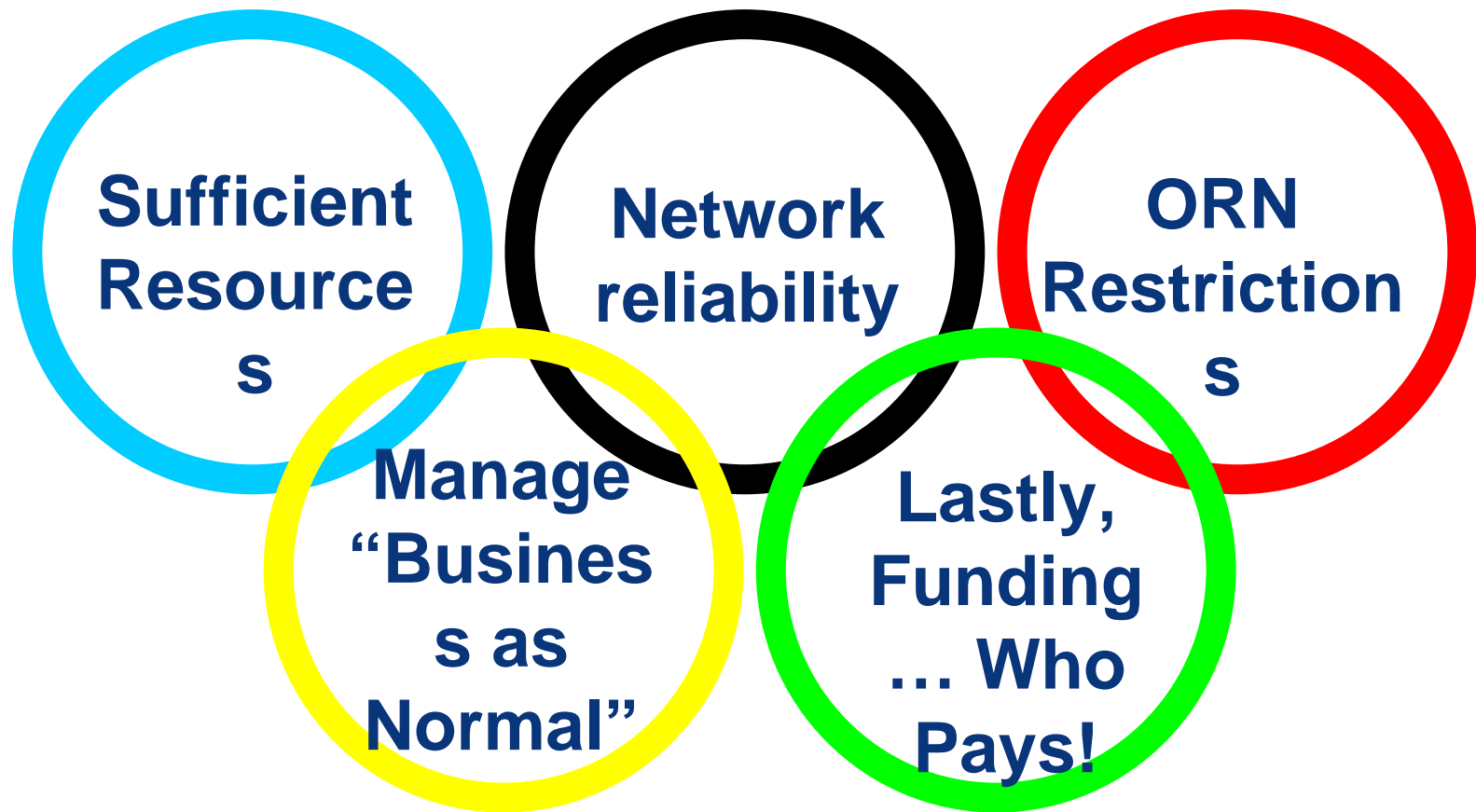
Games Time

We need to **keep the lights ON** for **77 Days**, not just for 16 days of the Games!

Games-time:



Olympic Readiness: The Big Issues:



Vancouver 2010: The numbers



We were staggered at the logistics behind the Vancouver Winter Olympic Games..... and 2012 is going to be a different order of

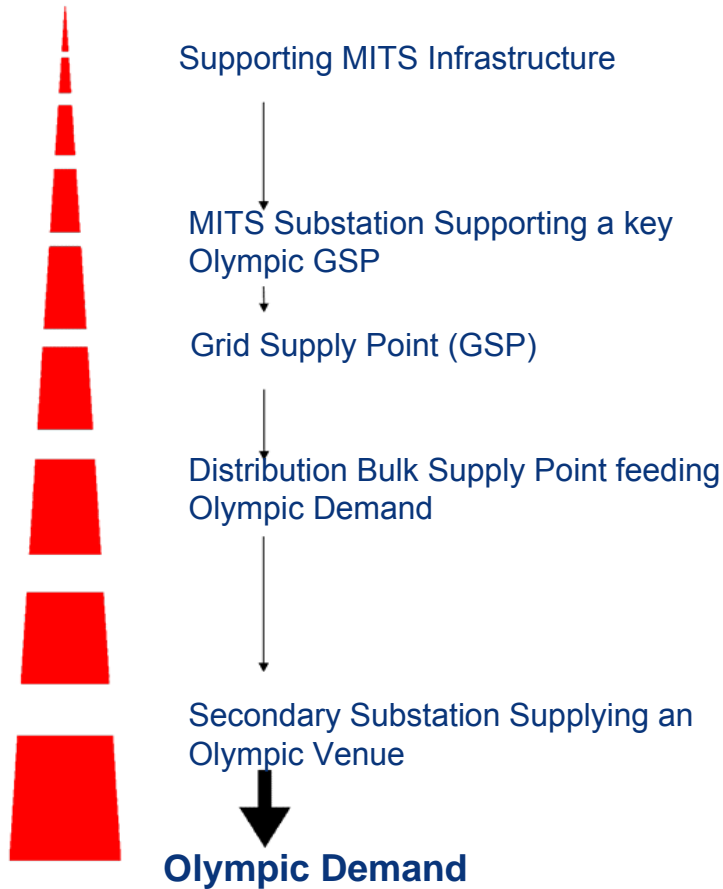
Magnitude

Vancouver numbers		Beijing/2012 numbers
5,550	Olympic athletes and team officials	10,050
1,350	Paralympic athletes and team officials	4,200
80+	Participating countries — the Olympic Games	200
40+	Participating countries — the Paralympic Games	146
1.6 million	Tickets available for 2010 events	7.7 million
25,000	Games volunteers	70,000
3 billion	Television viewers	4.7 billion
10,000	Accredited media	20,000



❖ E3C Areas of Review

Identifying Key Electricity Assets



- Similar Approach taken for Sydney 2000 & Beijing 2008
- Crucially sensitive, as the scale of all network preparedness determined by scope of key assets
- Demand priority-driven approach, taken with steerage from CPNI on venue / demand prioritisation
- Harmonised where possible between Transmission & Distribution
- Actions taken on each network, and within each category will vary accordingly.

❖ The Big Issue:



Faults: Clear up all faults on Trans. & Dist. Olympic circuits and the ORN

Maintenance: Oil & grease everything to make sure it works perfectly on the Olympic Transmission & Distribution Circuits and the ORN

<u>Key Olympics Electricity Site Categorisation</u>		Network Area / Responsibility					
		Supporting MITS Infrastructure	MITS Substation (Including Infeeds)	Grid Substation (GSP) (Including SGTs, and bars where owned by either Tx or Dx)		Distribution BSP / Primary Substation	11 kV Secondary Substation
		Transmission	Transmission	Transmission	Distribution	Distribution	Distribution
Demand	Olympic Related Supplies (e.g. Sporting Venues, LOCOG Command & Control Centre, International Broadcasting Centre)	A	A	A	A	A	A
	Critical Transport Supplies (Stansted, Gatwick, LUL, Heathrow) and other Critical Transport Infrastructure, Key Utilities, Broadcasting Sites, Government Establishments. Olympic Drug Testing Lab & Park Security		B	B	B	B	B
	Athletes Village, Sponsors Facilities on the Olympic Park		C	C	C	C	C
	Olympic Family Hotels & Training Venues, all remaining supplies in the Olympic Park.			D	D	D	D



“Virtual” Energy OMC

nationalgrid

The power of action:

Scottish and Southern Energy

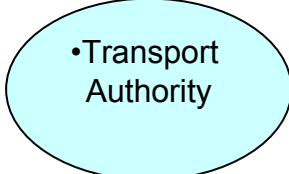
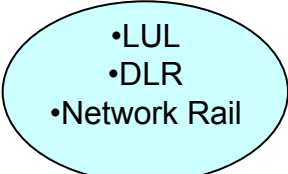
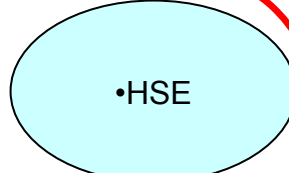
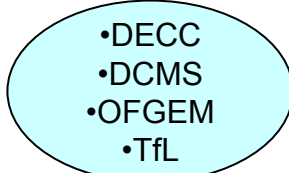
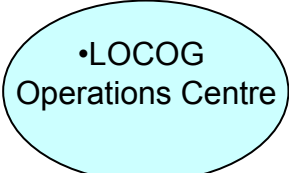
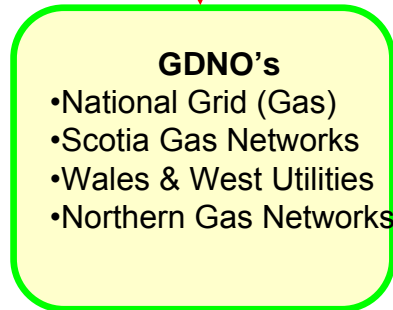
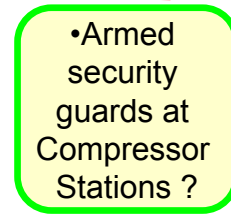
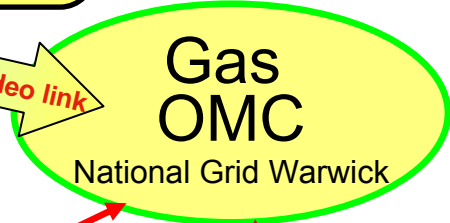
SCOTTISHPOWER

e-on Central Networks

CE Electric UK

NEDL
YEDL

WESTERN POWER DISTRIBUTION
Serving the South West and Wales



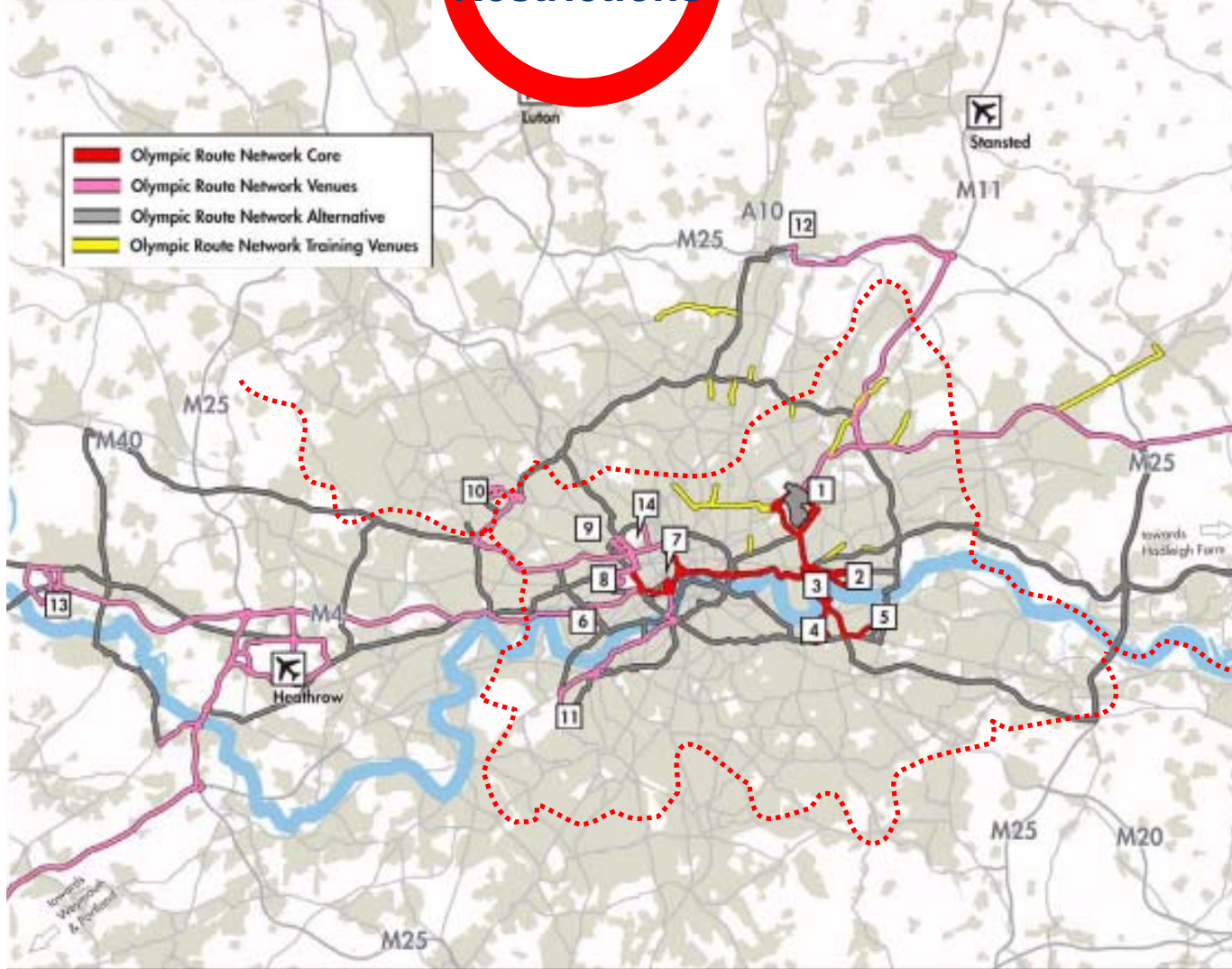


The Big Issue:

ORN Restrictions

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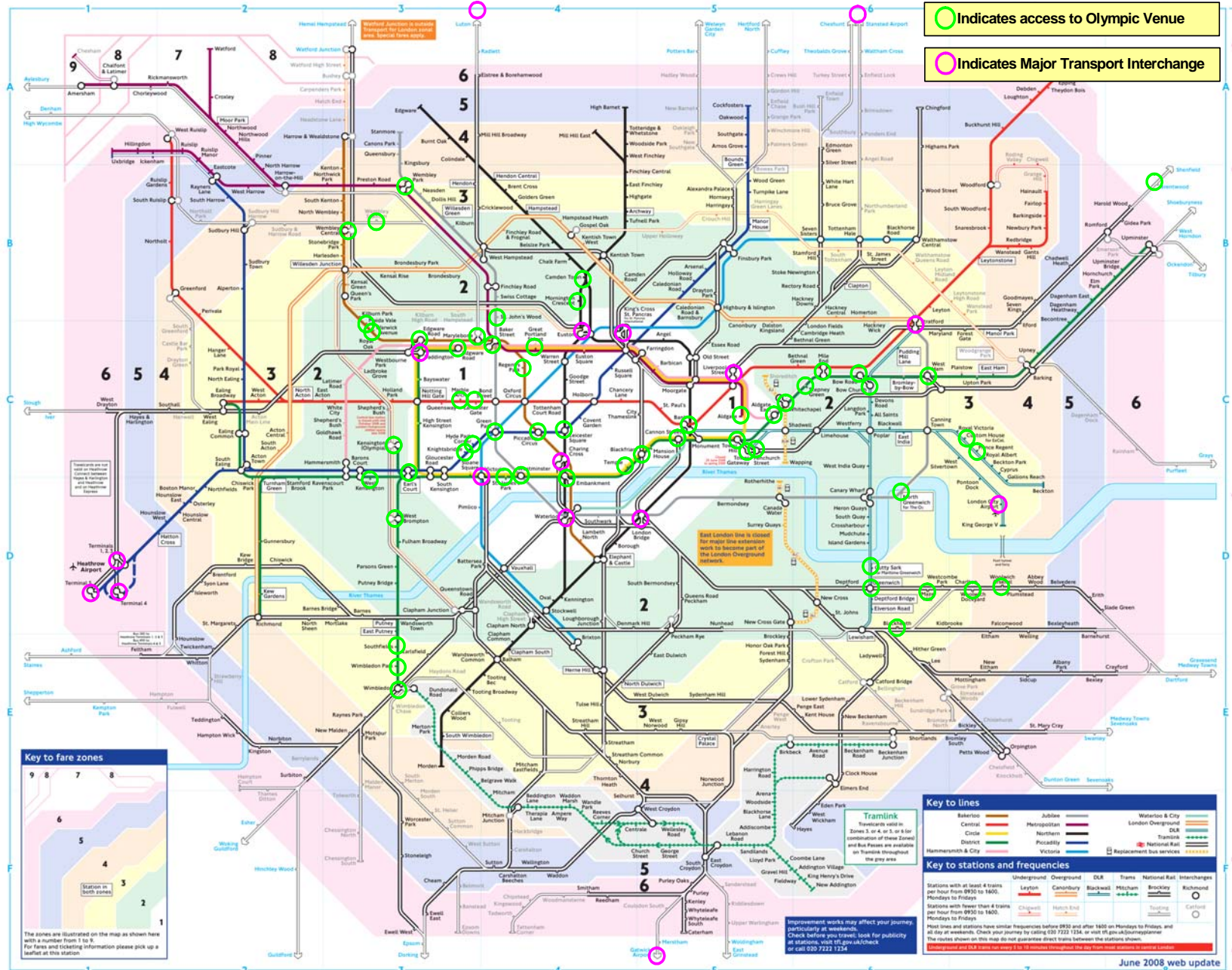
- Olympic Park
- ExCel
- Greenwich Peninsula
- Greenwich Park
- Royal Artillery Barracks
- Earls Court
- Horse Guards Parade
- Hyde Park
- Lord's Cricket Ground
- Wembley Stadium
- Wimbledon
- Broxbourne
- Eton Dorney
- Regents Park



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Olympic Supplies to Stations, Airports and Interchanges





Based on information from Transport for London (TfL), on the equivalent of the ORN from 27th July to 9th September 2008:

- **There were 200 “Emergencies” on the Core ORN during the Games period**
- **Distribution networks would expect to have circa 100 HV faults in the London area during the same period**
- A number of work streams have been set up by TfL with Electricity Supply Industry participation to try and reach a common sense

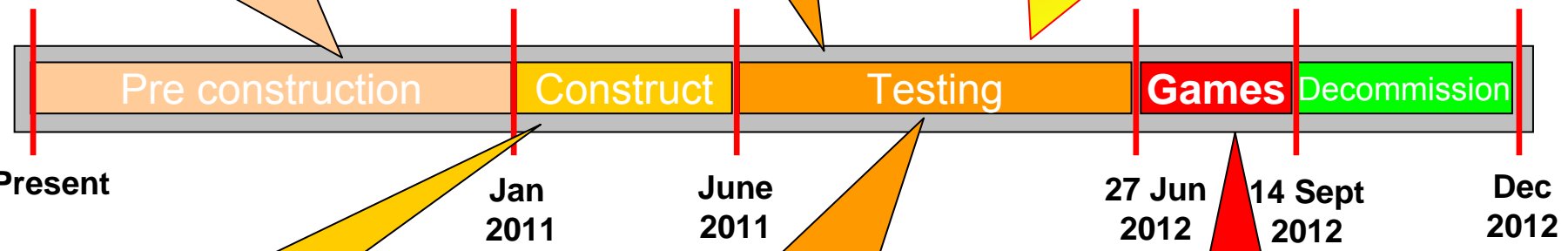
ORN: Significant impact



Preparation and installation of the many temporary traffic control measures (e.g. Controls on turnings or parking and installation of Olympic Lanes)

Exercises on specific but currently unknown dates to test journey times

i.e. Hyde Park to Olympic village circa **21mins!!**



Possible disruption during construction

Warning of Test events may be as little as **2 weeks** beforehand. If this occurs Utilities **MUST** be able to shut down any works within **1 week**

Use of the ORN by the Olympic family with emergency works **ONLY**, to minimise disruption to Olympic Vehicles.



❖ The Big Issue:

**Manage
“Business as
Normal”**

Staff: Problems for staff getting to and from work with the ORN restrictions and the increased “population” in London on public transport.

Customer Expectations: will need to be managed as our staff will have other constraints to deal with, preventing works being carried out.

“Normal” fault repairs: The response time to site may be delayed due to traffic congestion. Maybe we will get permission to use the ORN?

Major Incidents: Will still need to be managed with the available resources... what if we have major Incident during the Games?

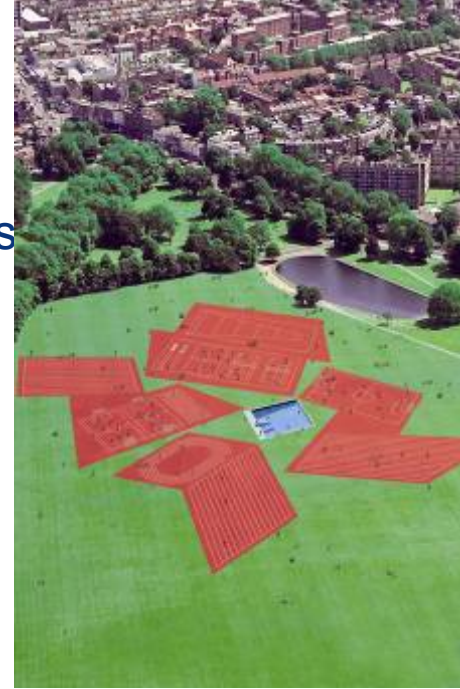
GSS: Will the Regulator be “sympathetic” if Guaranteed Service Standards get compromised as a result of the Olympics.

What life will be like for the **UK**

• in the summer of 2012?

- **Olympic Route Network** in force along with operating restrictions
- **Enhanced security surveillance** & guarding across the capital & at major transport infrastructure
- **20,000 media** will begin setting up from March onwards
- **Queens diamond jubilee** celebrations
- **Olympic Family** (Athletes, coaches, officials, sponsors), volunteers, sports enthusiasts, tourists arrive in June
- **All hotel rooms fully booked** in London and South East to accommodate Olympic family, sponsors, spectators & tourists
- **Demand on public transport** will increase by 40%
- **Grid lock of major roads** outside of ORN and south east City & street events across the UK ?
- **Major concerts** and street events throughout the UK
- **Test events** July 2011 to June 2012
- **Technical Rehearsals (TR's)** – 19th -25th March and 21st-25th May 2012

So Get out of town... Fast!!



What life **MAY** be like for the Electricity Supply

• Industry in the summer of 2012?

- **Network Lockdown:** Maybe only essential works on the network from June 2012?
- **Capital Programme** on Transmission & Distribution Network may cease for much of London for 3 months?
- **London Connections** market is likely to be artificially suppressed for the summer period?
- **No new Connections** will be possible on or near the ORN?
- **Planned maintenance** may cease as operational staff concentrate on the Olympic Readiness?
- **Every fault on the ORN** may be tackled on a 24hr basis from April 2012?
- **Substantial Executive and Senior Management** time focussed on 2012?
- **High level IOC enquiries** for every significant supply failure event across the South East and potentially world media interest?



❖ E3C Other Areas of Review

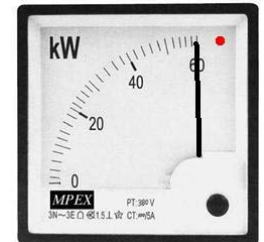
Strategic Spares

- Review of holdings in context of key assets
- Strategic locations? Large assets / long lead time
- Industry shared holdings at locations (realistic plant)
- Transportation issues – swifter routes?
- ORN impact?



Capacity

- Existing compliance levels: NETSSQSS / P2/6- sufficient
- Post fault action & timescales
- Level of Olympic demand? Network impact continually subject to change
- Resilience over compliance?
- Impact of construction works at key sites / delays.



❖ E3C Other Areas of Review

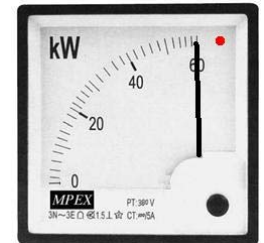
Security

- Vandalism, theft, protestors, terrorist attack, cyber attack....
- Working with CPNI to determine threat level / action required
- Fortification? Guarding
- Potential for significant cost, depending on appetite for risk to industry
- Do we have time to react?



Communications

- Monitoring & Control Communications
- Personnel / Voice Communications
- Emergency response impact
- “Olympics Monitoring Centre”



There's more....

- Venue Power Management
- Cross ESI Games period communication
- Improvements in cross ESI outage co-ordination
- Customer connections – expectation management



Thank You....

How do **YOU**
think our
industry should
be reacting?



❖ This hidden slide starts the presentation

