

Managing Nuclear Knowledge

CQI Nuclear SIG

Berkeley Power Station

20th January 2010

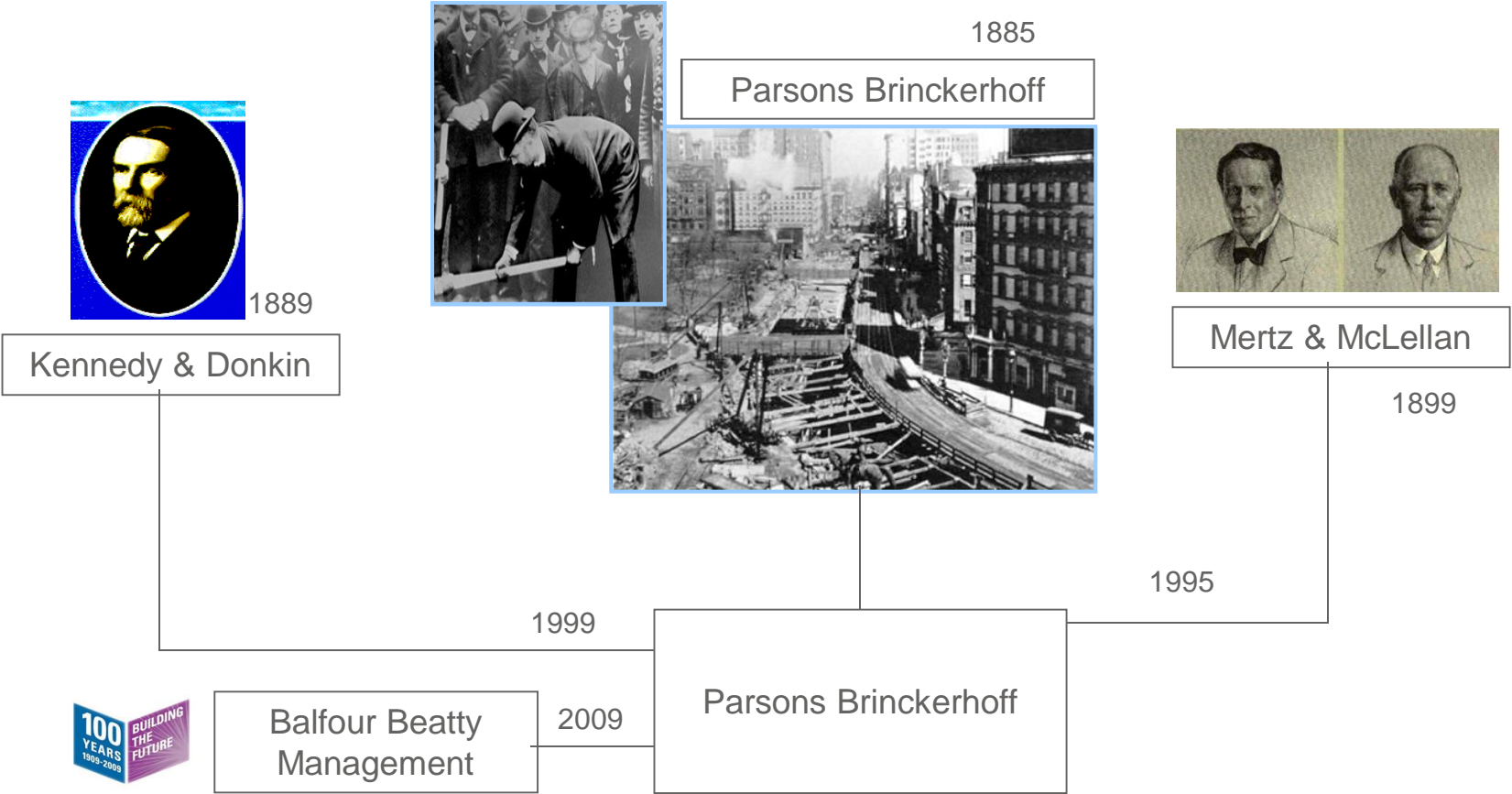
PARSONS BRINCKERHOFF

Knowledge Management Practices in a Large Engineering Consultancy

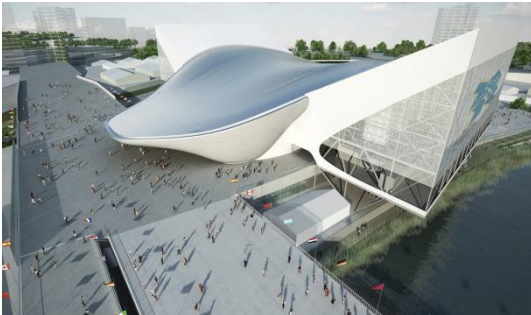
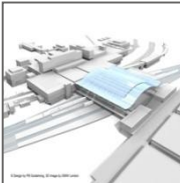


**Alan Knott, Technical Director,
Parsons Brinckerhoff**
knott@pbworld.com, +44 (0) 161 200 5151
www.pbworld.com/ea

History of Parsons Brinckerhoff



Infrastructure Engineering Consultancy



Infrastructure Projects

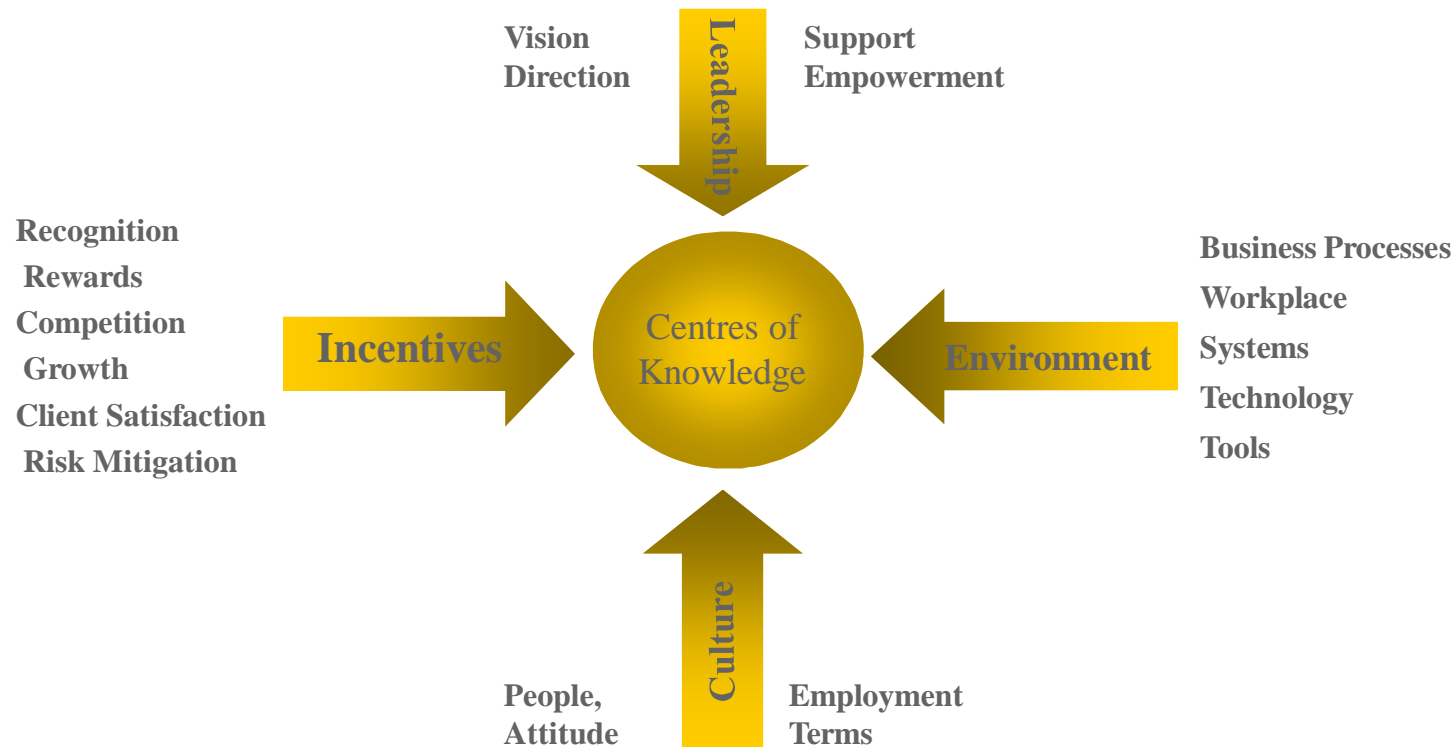


What questions will need an answer?



... and how will we answer them?

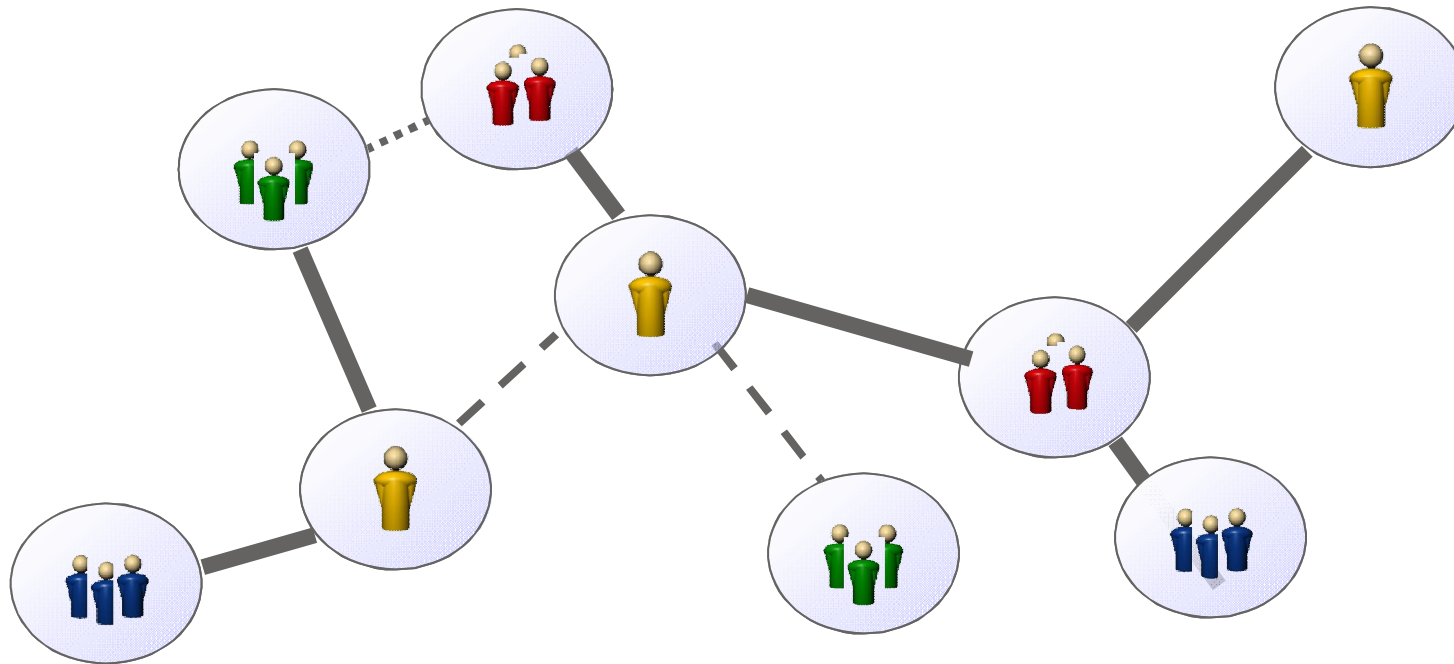
Knowledge Assets / Centres



Leadership, Incentives, Environment & Culture

- Fellowships Awards
- Research & Innovation Program
- Competitions - Papers and Projects
- Professional Recognition
- Technical Exchange Seminars
- Technical Succession Program
- Knowledge Practice Program
- Knowledge Exchanges, Sharing Sessions & Transfers
- Knowledge Networks – PANs & CoPs
- PB University
- KM System - Hub

Knowledge Networks PANs & CoPs



Knowledge Networks

PANs & CoPs

Practice Area Networks (41)

- **Design & Modelling** – Design Visualisation, Software Engineering & Applications, Virtual Design & Construction, Geospatial Services, CAD Applications
- **Engineering Services** – Systems Engineering, Telecommunications Services, Electrical Engineering, Geotechnical, Underground & Tunnelling
- **Environmental** – Hazardous Materials, Contamination & Waste Management, Climate Change
- **Power & Energy** – Conventional Thermal Generation, HV Transmission & Distribution Systems, Oil & Gas Processing, Storage & Distribution, Power System Planning, Analysis & Restructuring
- **Transportation** – Fixed Guideway Transit Facilities Design, Intelligent Transportation Systems, Highway Design, Bridge Design & Engineering
- **Building & Development** - Sustainable Development, Architecture & Urban Design, Sports & Entertainment Facilities
- **Management & Consulting** – Program Management, Construction Management & Inspection, Safety, Reliability & Risk Management
- **Corporate Services** – Quality, IT, Office Administration

Communities of Practice (39)

- **Water** – Groundwater, Hydrogeology, Surface Water
- **Engineering Services** – Mechanical, Noise, Civil, Structural

Internal Knowledge Systems

Address: http://ea.hub.pbworld.com/default.aspx

Welcome Knott, Alan | Change Region

Address: http://ea.hub.pbworld.com/Support/KM/default.aspx

EA Home Resources Support Networks Locations About PB People

EA Home > Support > Knowledge Management EA > Knowledge Exchanges, Sharing and Transfers

Knowledge Exchanges, Knowledge Sharing Sessions and Knowledge Transfers

Knowledge Exchanges are semi-formal events organised in our offices for sharing knowledge. They are sometimes referred to as 'Brown Bags' (aka 'bring your own food') and usually take place at lunchtimes. Each office should have a page on their Hub website for the local Knowledge Exchanges and a local representative (or two) who helps organise the events (the Knowledge Exchange Co-ordinator). We try to obtain maximum value from the efforts of the presenters and organisers by capturing the material used, together with a list of attendees, on the Hub site so that people who couldn't make the actual event can review the content and ask questions of other attendees 'off-line'. It also makes it easier for the event to be re-run in other locations and/or at other times.

See below for a summary of what is happening (or not) in your office and contact your local Knowledge Exchange Co-ordinator to find out more and to share your knowledge and experiences.

- Manchester - Tim Legerton
- London - Tracey Chong
- Newcastle - Tony Appleton
- Godalming - Dan Hyde

A Knowledge Sharing Session (KSS) is an event brought into PB by our BBM colleagues and this uses a combination of webcast and teleconference technology to deliver regular presentations (usually about 40 minutes around lunchtimes) to both individuals at their desktop PC or laptop and to larger audiences in office conference rooms. The KSS is captured and made available on the intranet for all to access. We are currently working to provide access to recent KSS's and to announce planned KSS's via this part of the Hub so watch this space

Knowledge Transfers are events organised for external audiences, such as Clients and Partners, presented by our senior technical and business leaders. These have been successfully used on projects such as the East London Line Project for Transport for London.

Godalming Knowledge Events | Godalming CPD Events | Manchester Office Knowledge Events | London Office Knowledge Events | Newcastle Office Knowledge Events

Godalming: Knowledge Exchange

Knowledge Sharing Sessions

Here is a screen shot of the KSS facility on BBMine - the BBM Intranet which we will be integrating into Hub. In the meantime we have made some 'hot spots' on the image below for the industry sectors for which we have KSS presentations already on the Hub.

Knowledge Transfers

Click on the relevant Knowledge Transfer event below to see the presentations given by senior PB staff (mainly as part of the East London Line Project to TfL Clients).

- Presenter:** Jim Lammie
Title: Project Management Overview
Date: Feb 2008
- Presenter:** Ray Hornbuckle
Title: Interface Management and Systems Integration
Date: May 2008
- Presenter:** Bruce Podwal
Title: Katy Freeway Project Overview and Project Management Good Practices (+PM One-liners)
Date: Aug 2008
- Presenter:** Tony Lancellotti

View All Site Content

- Documents
- PB Papers Library
- Lists
- Discussions
- Sites
- People and Groups
- Cross Industry KSS
- Recycle Bin

Internal Knowledge Systems

The screenshot displays the internal knowledge systems website for Parsons Brinckerhoff, accessed via Microsoft Internet Explorer. The main page is titled "Hub" and features a navigation menu with options like "EA Home", "Resources", "Support", "Networks", "Locations", "About PB", and "People". A search bar and "Advanced Search" button are visible. The page is personalized for "Welcome Knott, Alan" and includes a "Change Region" dropdown.

The content area is divided into several sections:

- Knowledge Network:** Provides immediate access to global knowledge and includes information about CoP & PANs, User Groups, and Affinity Groups.
- Welcome to PAN 65:** A section for Systems Engineering Practices & Solutions (SEPS) PAN Site, describing its purpose in providing access to SE knowledge and expertise through collaboration and expert resources.
- Discussions:** A table listing discussions with columns for Category, Subject, Keywords, Replies, Created By, and Created. One discussion is visible: "Operation and Maintenance Planning for the Guangzhou Metro Network - experience from established metro systems sought by James Pang".
- News & Announcements:** A section for updates, including "EUSEC2010 - Deadline for Papers extended".
- Events:** A section for upcoming events, including "INCOSE UK 155 WG Meeting".
- The Knowledge Bank:** A section providing useful information and tools to help System Engineers deliver the best service to clients. It includes a "Click on an option below to go to the relevant area" section with icons for Body of Knowledge, Reference Library, SEPS Wiki, Lessons Learned, and Toolbox.

The right sidebar contains a "View All Site Content" section with links to PAN Home, Documents, Glossary of Terms & Definitions, Reference Material, About Our PAN, Need Help?, Career Resources, Events, News & Announcements, Expertise Finder, Knowledge Bank, Networking, and Recycle Bin. Below this is a "Site Contacts" section and "Shortcuts" for About Knowledge.

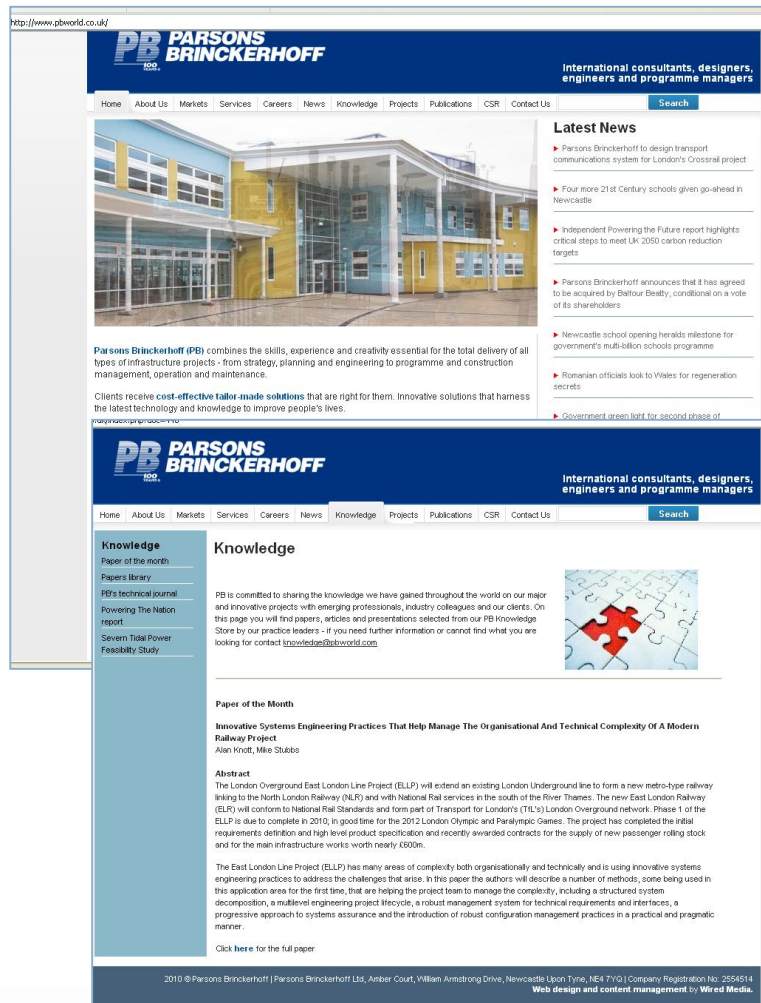


External Facing Knowledge Sharing

- Capability Statements
- PB Notes
- Technical Journal – PB Network
- Professional Papers
- Technical Articles
- Industry Reports
- Industry & Professional Interest Groups

Knowledge Sharing Company Websites

http://www.pbworld.co.uk/



PARSONS BRINCKERHOFF
100

International consultants, designers, engineers and programme managers

Home About Us Markets Services Careers News Knowledge Projects Publications CSR Contact Us Search

Latest News

- Parsons Brinckerhoff to design transport communications system for London's Crossrail project
- Four more 21st Century schools given go-ahead in Newcastle
- Independent Powering the Future report highlights critical steps to meet UK 2050 carbon reduction targets
- Parsons Brinckerhoff announces that it has agreed to be acquired by Balfour Beatty, conditional on a vote of its shareholders
- Newcastle school opening heralds milestone for government's multi-billion schools programme
- Romanian officials look to Vides for regeneration secrets
- Government green light for second phase of...

Parsons Brinckerhoff (PB) combines the skills, experience and creativity essential for the total delivery of all types of infrastructure projects - from strategy, planning and engineering to programme and construction management, operation and maintenance.

Clients receive cost-effective tailor-made solutions that are right for them. Innovative solutions that harness the latest technology and knowledge to improve people's lives.

PARSONS BRINCKERHOFF
100

International consultants, designers, engineers and programme managers

Home About Us Markets Services Careers News Knowledge Projects Publications CSR Contact Us Search

Knowledge

Paper of the month

Papers Library

PB's technical journal

Powering the Nation report

Savern Tidal Power Feasibility Study

Knowledge

PB is committed to sharing the knowledge we have gained throughout the world on our major and innovative projects with emerging professionals, industry colleagues and our clients. On this page you will find papers, articles and presentations selected from our PB Knowledge Store by our practice leaders - if you need further information or cannot find what you are looking for contact knowledge@pbworld.com

Paper of the Month

Innovative Systems Engineering Practices That Help Manage The Organisational And Technical Complexity of A Modern Railway Project

Alan Knott, Mike Stubbs

Abstract

The London Overground East London Line Project (ELLP) will extend an existing London Underground line to form a new metro-type railway linking to the North London Railway (NLR) and with National Rail services in the south of the River Thames. The new East London Railway (ELR) will conform to National Rail Standards and form part of Transport for London's (TfL) London Overground network. Phase 1 of the ELLP is due to complete in 2010, in good time for the 2012 London Olympic and Paralympic Games. The project has completed the initial requirements definition and high level product specification and recently awarded contracts for the supply of new passenger rolling stock and for the main infrastructure works worth nearly £600m.

The East London Line Project (ELLP) has many areas of complexity both organisationally and technically and is using innovative systems engineering practices to address the challenges that arise. In this paper the authors will describe a number of methods, some being used in this application area for the first time, that are helping the project team to manage the complexity, including a structured system decomposition, a multilevel engineering project lifecycle, a robust management system for technical requirements and interfaces, a progressive approach to systems assurance and the introduction of robust configuration management practices in a practical and pragmatic manner.

Click here for the full paper

2010 © Parsons Brinckerhoff | Parsons Brinckerhoff Ltd, Amber Court, William Armstrong Drive, Newcastle Upon Tyne, NE4 7YQ | Company Registration No: 2554514
Web design and content management by **Wired Media**

Address: http://www.pbworld.com/

WORLDWIDE LOCATIONS CONTACT PB LEGAL NOTICE SITE MAP HOME

PB WEBSITES Select a website SEARCH GO ADVANCED SEARCH

MARKETS SERVICES ABOUT US PEOPLE + CAREERS NEWS + EVENTS RESEARCH LIBRARY PROJECTS

Parsons Brinckerhoff

Address: http://www.pbworld.com/news_events/publications/

WORLDWIDE LOCATIONS CONTACT PB LEGAL NOTICE SITE MAP HOME

PB WEBSITES Select a website SEARCH GO ADVANCED SEARCH

MARKETS SERVICES ABOUT US PEOPLE + CAREERS NEWS + EVENTS RESEARCH LIBRARY PROJECTS

Publications

News + Events Publications

Address: http://www.pbworld.com/news_events/publications/network/

WORLDWIDE LOCATIONS CONTACT PB LEGAL NOTICE SITE MAP HOME

PB WEBSITES Select a website SEARCH GO ADVANCED SEARCH

MARKETS SERVICES ABOUT US PEOPLE + CAREERS NEWS + EVENTS RESEARCH LIBRARY PROJECTS

Research Library: PB Network

Prepared by and for the employees of Parsons Brinckerhoff

PB Network

www.pbworld.com/news_events/publications/network/

Our mission is to provide PB employees anywhere in the world with a means to present and discuss interesting and unique technical solutions they have developed and are applying to real-world problems. Our goals are...

- Promote technology transfer within the entire firm
- Encourage widespread dissemination and exchange of technical information for the sake of solving problems, creating new applications, and completing projects
- Educate employees on PB's new, developing, and emerging technical capabilities
- Broaden the understanding and usage of computer tools and information technology by PB staff
- Foster the professional development of employees by providing opportunities for writing and publication
- Support PB in becoming the premier provider of infrastructure services - worldwide.

Current and past issues are available in a convenient magazine format. Click on the links at left to browse more than 3,000 articles prepared by PB employees or search here:

Subscribe to PB Network and receive electronic and/or printed magazines at home or the office!

Change your subscription preferences or unsubscribe.

Current Issue | Past Issues | Subscriptions | Search

Contact pressroom@pbworld.com

Knowledge Sharing Special Websites

Powering the Future
Mapping our low carbon path to 2050

Home Background UK Sector Overview Findings Media Links

Powering the Future

Mapping our low carbon path to 2050

Powering the Future is a comprehensive report by global engineering consultancy Parsons Brinckerhoff. It focuses on the implications of meeting the UK government's carbon reduction targets for 2050 and highlights critical steps for tackling CO₂ reduction.

To protect the wellbeing of future generations, urgent action is vital to manage carbon dioxide emissions worldwide and reduce the likelihood of climate change. This presents a major challenge to the UK and its economy, which already faces less reliable supplies with many power stations scheduled to retire in the next decade.

The UK government has consulted on various strategies to meet the climate change challenge. It has adopted a position of leadership, committing to an 80% reduction in emissions by 2050 compared with 1990 levels. It has initiated work by the [Climate Change Committee](#) and received support from a wide range of interest groups and consultancies. The recently published [UK Low Carbon Transition Plan](#) and the [UK Renewable Energy Strategy](#) define a way forward to delivering the 34% reduction required to meet the first carbon budget for 2020. A roadmap for the period from 2020 to 2050 is being developed within government.

Powering the Future is the product of two years of independent study by a multi-disciplinary team of senior engineers at Parsons Brinckerhoff. The report centres on how the UK can meet the government's commitment of an 80% reduction in carbon emissions by 2050. It highlights the critical steps that must be taken across the UK economy and explores what actions will have the greatest effect across the [transport](#), [domestic](#), [industry](#), [commercial](#) and [electricity](#) sectors.

The full report and a summary version are available free for download

The Report

- Summary Points (819 KB)
- Summary Report (4 MB)
- Full Report (6.8 MB)

Get ZEPHYR READER

Links

- Parsons Brinckerhoff
- Renewable Energy Foundation
- The Carbon Trust
- Natural Environment Research Council
- Committee on Climate Change

Bookmarks

SHARE

Parsons Brinckerhoff
Project Visualization

COLUMBIA RIVER CROSSING

- >> PORTFOLIO
- >> ABOUT US
- >> SERVICES
- >> AWARDS
- >> CLIENT LIST
- >> CONTACT US

>> VIEW OUR DEMO VIDEO

>> CHOOSE THE RIGHT TOOLS

Our Focus

- >> REAL ESTATE
- >> ARCHITECTURE / ENGINEERING / CONSTRUCTION

© COPYRIGHT 2009 PB AMERICAS, INC.

What questions will need an answer?



... and how will we answer them?