

REFERENCE	UK Electricity Infrastructure
Title:	Technical Architecture (UK electricity distribution network infrastructure roadmap)
Date:	June 2005
Author:	Duncan Botting on behalf of IEE Power Systems and Equipment Professional Network
Funded by:	DTI/Ofgem - Distributed Generation Coordination Group
Hard copy reference:	The Office of Gas and Electricity Markets, 9 Millbank, London, SW1P 3GE & Department of Trade and Industry, V 299, 1 Victoria Street, London, SW1H 0ET
URL:	http://www.ofgem.gov.uk/Networks/ElecDist/Policy/DistGen/Documents1/10983-TA.pdf
Date accessed:	July 2006
Web Format:	pdf
IEA topics covered	VI.2 Electricity Transmission and Distribution VI.2.1 Electricity Transmission and Distribution VI.2.2 Other transmission and distribution R&D related to integrating distributed and intermittent generating sources into networks VI.2.3 All high temperature super-conducting research not covered elsewhere
Geographical focus:	UK
Brief Abstract:	The report sets out the steps that will be necessary to ensure the most appropriate use is made of legacy infrastructure, the opportunities that innovative technological, commercial, regulatory and environmental solutions can offer and a framework that will allow these solutions to be delivered in a liberalised context. The report proposes the processes needed and offers recommendations to achieve this goal.

OUTPUTS	
Short Report?	N
Major report?	Y
Visualisations?	Y
Information held on dedicated software?	N
- which package?	

ARCHITECTURE	
Timescales used:	Medium-term 2008-2012 Long-term 2013-2023 (under constant review in 18 to 24 months time periods)
Trends and drivers?	
- list	<ul style="list-style-type: none"> • Aging equipment and infrastructure • Uncertainty in future energy policies and the regulatory framework • Substantial recent decline in the level of research and development spending by the electricity industry • Relatively slow acceptance of new technologies • Reduction in skills base and relevant R&D capacity • Integration of renewable and other distributed generation as a response to climate change challenge (particularly EU) • Constraints in power supplies and delivery system to meet growth in demand (particularly US) • Difficulty in building investor confidence and attracting capital investment in industry (particularly US but more recently EU as well)
Enablers?	
- list	<ul style="list-style-type: none"> • DTI • Ofgem • IEE • Manufacturers • Utility Industry and Network Utility Associations
Performance measures/targets?	N
- list areas	
Mapping of RD&D activities?	Y
Critical assessment of capabilities?	Y

PROCESS	
Methods used:	
- Desk study?	Y
- Consultation	Y
- Interviews?	
- Facilitated workshop(s)	Y
- Working groups/task force	Y
- Integrated Process	Y
Stakeholders engaged:	
- University based researchers	Y
- Other public sector researchers	N
- Business – technology	Y
- Business – other	Y
- Government - energy	Y

- Government – SET	Y
- Government - other	Y
- NGOs	N
No of people engaged:	-
Budget (if known):	Not known
Commitment to re-visit?	Y

ACTIONS IDENTIFIED	
List of actions?	Y
Actions listed according to timescale?	Y
Actions prioritised?	N
Sequencing/dependencies identified?	N
Responsibility for actions identified?	Y
Types of actions identified:	
- Basic research?	Y
- list areas	
- Applied research?	Y
- list areas	
- Development & demonstration	Not explicit
- list areas?	
- Other types of action?	Y
- list other types	<ul style="list-style-type: none"> • Regulation and policy • Education training and awareness • Explore research priorities • Support collaborative (industry-academia) activities • International partnerships