

Regional Stakeholder Workshop

South Wales

Our Views.....Your Views

Thursday 17th July 2008

Stakeholder Consultation Process Explained

- As part of the price setting process WPD has prepared its draft business plan for 2010-2015
- Ofgem will consider our plans during 2009
- We want to invest efficiently and deliver the service our customers expect
- We want to hear customers' views on our draft business plans
- We intend to review those plans based on the feedback we receive

Format For The Day

- An overview of WPD and our role in South Wales
- Our expenditure plans for the electricity network 2010-2015
- Our view of the security and reliability of the network
- Our view of potential future challenges
- Your views and how you can get involved

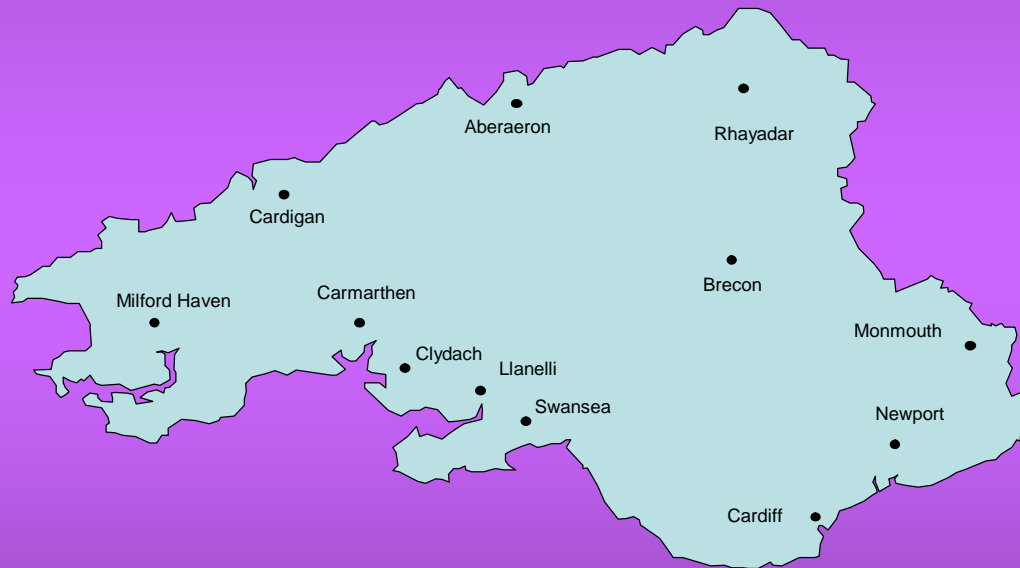
Electricity in South Wales 2010 – 2015

Alison Sleightholm

WPD

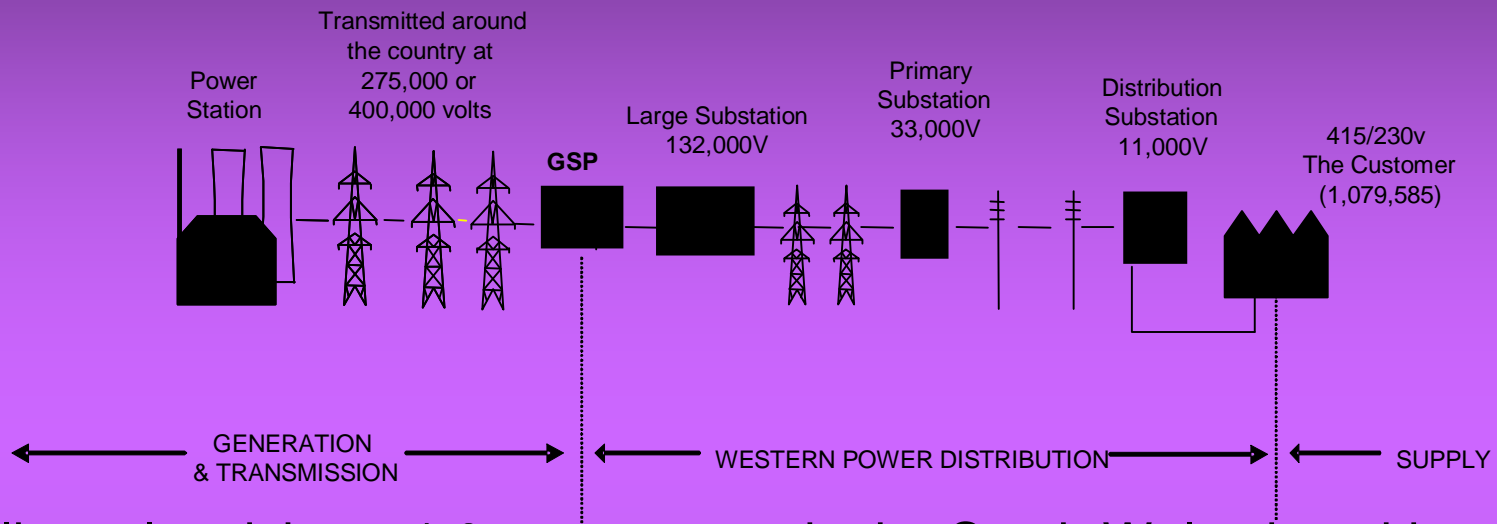
Who Are WPD ?

- We distribute electricity to 1.0 million customers



- We cover an area of 11,826km²

The Electricity Network



- We deliver electricity to 1.0m customers in the South Wales by taking electricity from the National Grid
- We earn income by charging electricity suppliers who are responsible for sending out bills and reading the meters
- We are regulated by Ofgem (Office of Gas and Electricity Markets) who set our prices

The Electricity Network

- Our network is over 34,000km long
- We have over 39,000 transformers

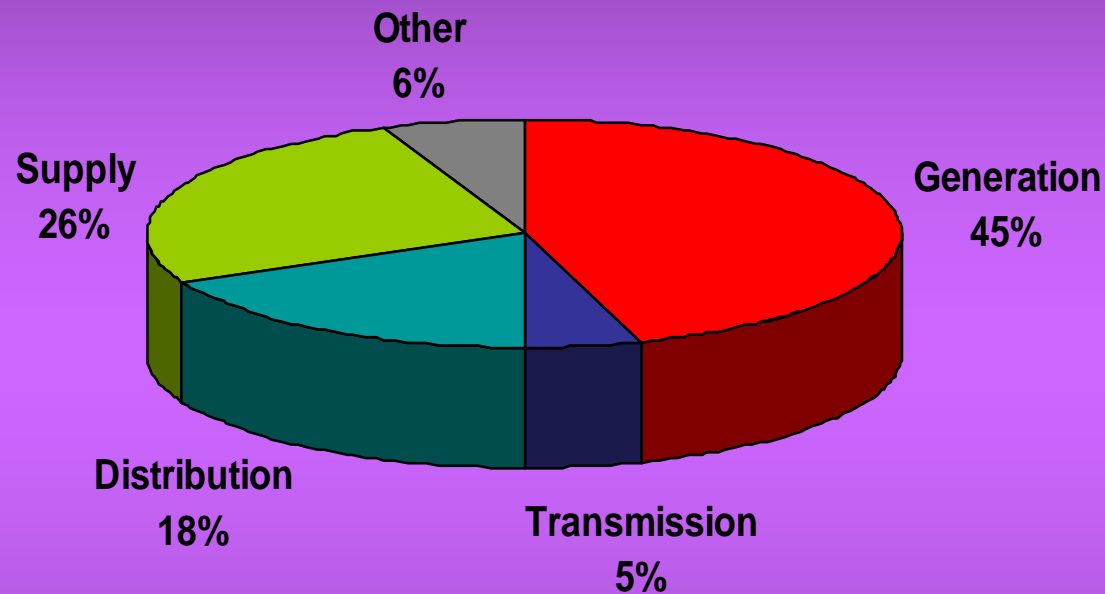


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The Electricity Bill



- The average domestic customer pays £83 per year for our service

Our Priorities

- Safety – the general public, our workforce, our contractors
- Customer service – treat people the way we would want to be treated
- Network reliability – reducing the number and duration of outages
- Cost efficiency
- Minimising our impact on the environment

Our Activities

- Maintaining the network
- Delivering a reliable supply
- Restoring power quickly when faults occur
- Connecting new demand and generation across the region
- Reinforcing the network to cope with changes in demand

Our Network

- We manage:
 - 18,234 km overhead line
 - 16,591 km underground cable
 - 39,952 items of switchgear
 - 39,494 transformers
- We take electricity from the National Grid at 10 locations and deliver to 1.0 million customers
- We have enough electricity circuit to go once around the world
- It would cost £3,300m to replace the network

Our Investment Plans

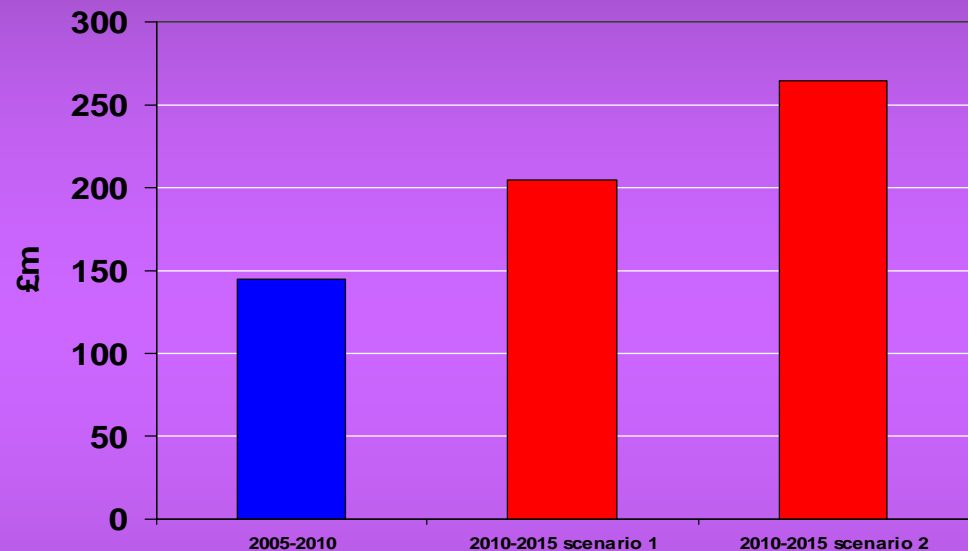
- Between 2005 and 2010 we are going to invest approximately £145m in the South Wales network
- In putting together our business plan for 2010 – 2015 we need to consider
 - New and existing legal obligations
 - The requirements of our customers and our service levels
 - Providing our services in a sustainable and environmentally responsible way
 - New challenges such as climate change
 - The long term future, 2020 and beyond

Expenditure Forecast

- Our expenditure plans for 2010 – 2015 are designed to maintain our current service levels

We estimate additional investment of £60-£120m or

£6-12 per customer per year



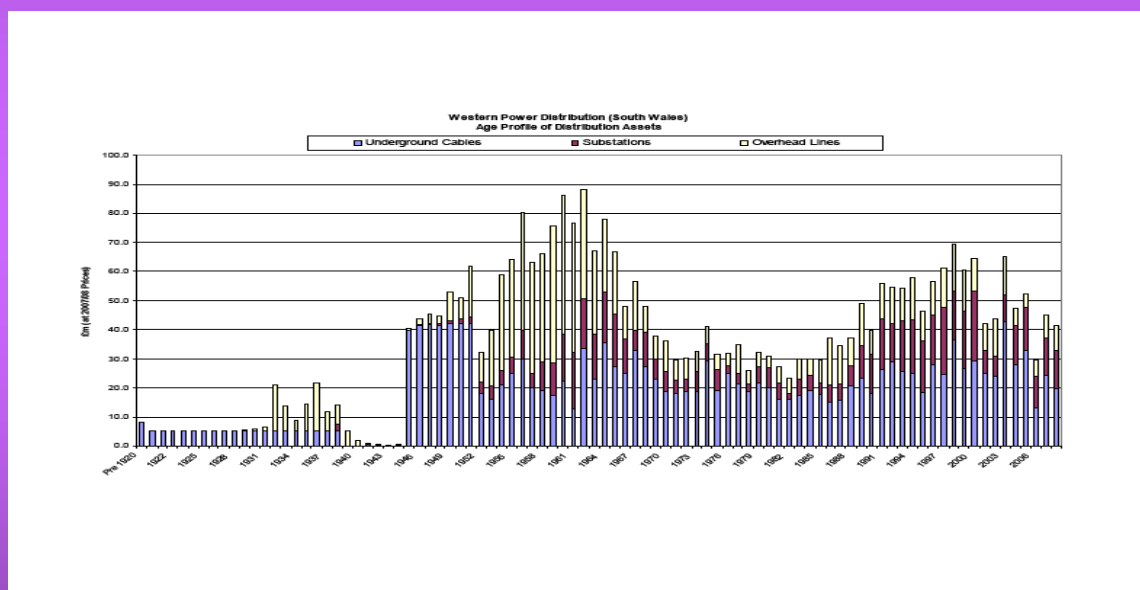
- We are also consulting on a range of optional service extras
- We need to demonstrate that there is a clear need for such investment and that there is strong stakeholder support

Key Drivers Of Our Expenditure Forecast

- Replacing assets due to age and condition
- Inspecting and maintaining existing assets
- Repairing them when they go wrong
- Expenditure associated with load changes
- Meeting our legal and licence obligations
- Future challenges we may face

Network Replacement

- This is the largest component of our investment programme
- All electrical equipment wears out over time and much of our asset base was installed in 1950-1970



- Replacement is based on condition and risk as well as age

Inspection And Maintenance

- We have statutory duty to inspect
 - Safety
 - Environmental monitoring
- We collect additional data for condition assessment
 - To identify the risk of failure
 - To identify patterns and trends in equipment deterioration
- Our maintenance programme is designed to optimise the replacement cycle

Repair

- On a typical day we deal with:
 - 5 incidents on the High Voltage network affecting on average 300 customers
 - 16 incidents on the Low Voltage network affecting on average 13 customers
 - 7 planned incidents where we disconnect supplies to carry out essential maintenance
- The main causes of faults on our network are:
 - 34% - Weather and environment
 - 14% - Damage by third parties
 - 25% - Age and wear
- Our investment plan assumes we maintain existing fault rates

Load Related Expenditure

- Two key elements
 - Connecting new commercial and domestic customers
 - Reinforcing the network to accommodate changing demand
 - We expect to connect 10,000 new properties a year plus new commercial properties



- We cover this in more detail later

Future Challenges

- We have identified three main areas that we believe will require additional investment:
 - Improving the quality of supply
 - Investment to support changes in demand and generation, especially an expansion of distributed energy
 - New investment to provide network security and initiatives to address climate change

Options for Improving Services 2010 – 2015 Alison Sleightholm WPD

Customer Service

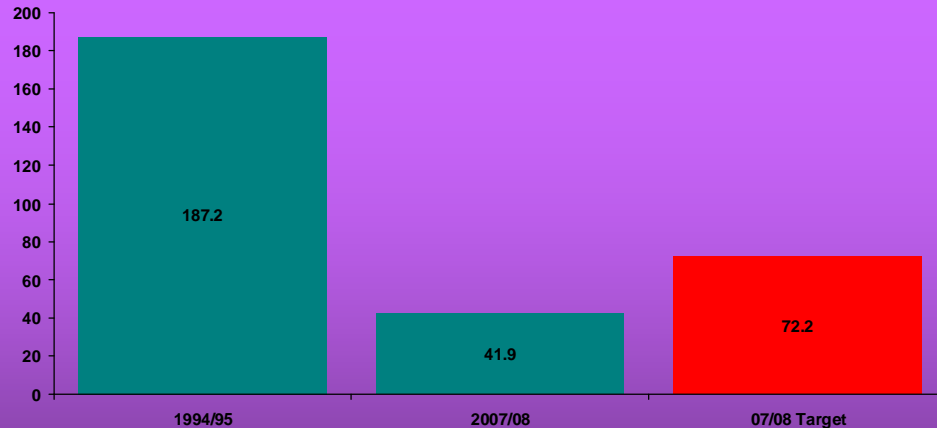
- Our expenditure plans are based on delivering the level of service that our customers expect
- Customers tell us their most important priorities are :
 - A reliable network
 - Prompt restoration when faults occur
 - The ability to contact us quickly and easily in the event of a problem

Customer Service Levels

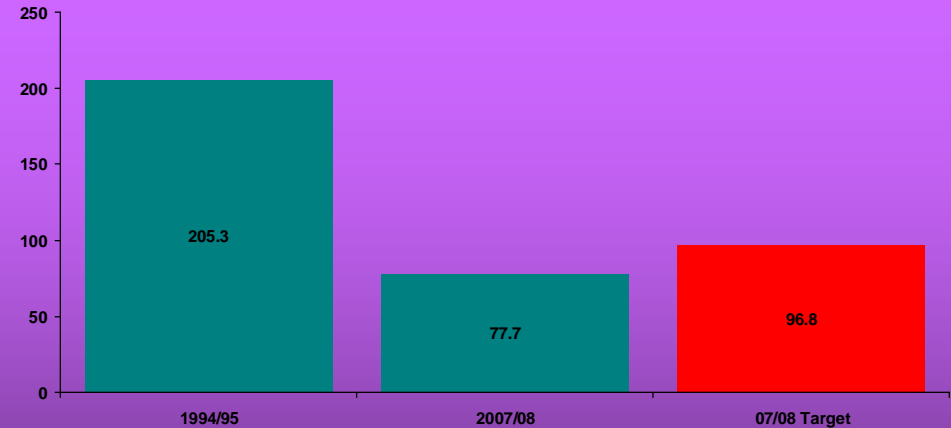
- The electricity supply in the South Wales is available 99.998% of the time
- The average customer in the South Wales experiences

Less than one interruption each year lasting an average of 42 minutes

Minutes Lost

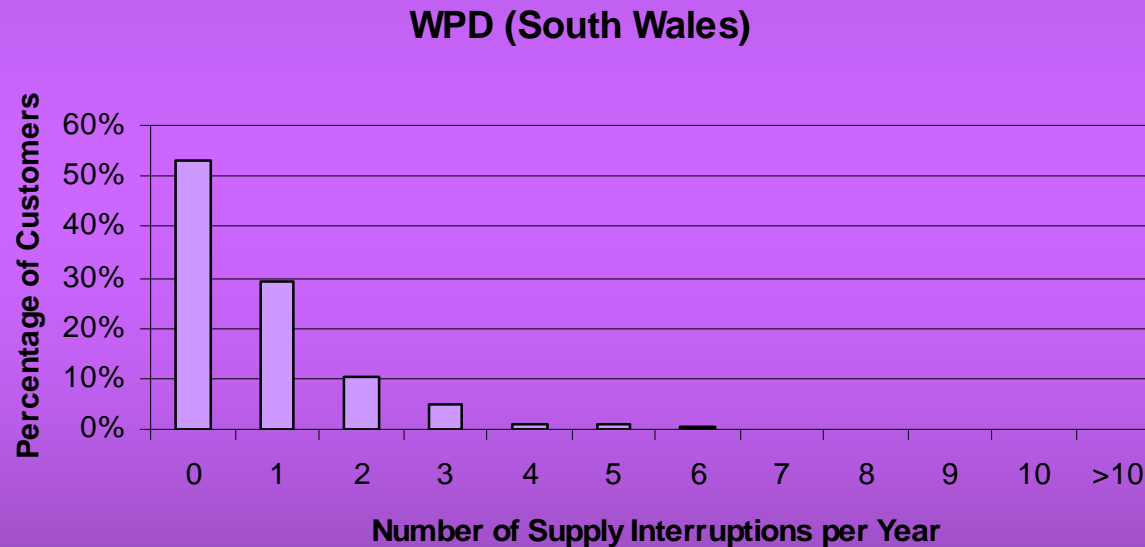


Interruptions



Network Reliability

- Almost 53% of customers do not experience a supply interruption during the year



Our Business Plan Allows for the Following Options

- Reducing the overall level of power cuts for all customers
- Improving the service to remote rural customers
- Minimising the risk of failure at commercial centre locations
- Improving resilience in severe weather

Reducing the Overall level of Power Cuts

- We have reduced the number of power cuts by 60%
- Further improvements planned are modest but benefit most customers

	Option 1	Option 2
Current average number of power cuts per customer per year	0.78	0.78
Target Improvement by 2015	10%	15%
Cost over 5 years	£9.1m	£25.0m
Amount extra on an average domestic electricity bill each year	90p	£2.50p

Do you agree ?

Which option ?

Improving Service to Remote Rural Customers

- Aimed at small pockets of rural customers who experience a higher than average number of power cuts
- Four options under consideration

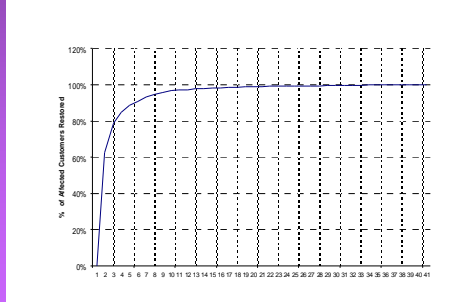


	Number of customers expected to benefit	Total cost over 5 years	Amount extra on an average domestic electricity bill each year
Option 1	1300	£1m	10p
Option 2	2900	£2m	20p
Option 3	3600	£4m	40p
Option 4	4000	£6m	60p

- Which option would you support ?

Improving Service in Severe Weather

- During poor weather conditions WPD have a good track record for restoring affected customers



- The length of the event depends on the high number of low voltage incidents
- We could improve the resilience of low voltage overhead lines by implementing a re-conductoring scheme

	Option 1	Option 2	Option 3
Km of overhead line	70km	140km	210km
Cost over 5 years	£2.5m	£5.0m	£7.8m
Amount extra on an average domestic electricity bill each year	25p	50p	80p

- How much should WPD spend so that supplies can be restored more quickly during severe weather ?

City Centre Substations

- Our network is designed to National Engineering Standard P2/6
- Large city centre substations are protected for failure when one item is out of service
- Cost £2.5m or 25 pence on the electricity bill
- Should we invest for the unlikely event of a second circuit outage ?

Undergrounding in National Parks

- The cost of undergrounding in National Park areas is approximately £100,000 per km
- To replace 1.5% of overhead lines in 5 years would cost £4.9m or 50 pence per customer
- WPD have rejected this option as we cannot see any direct customer benefit
- Our preference is to carry out improvements to the local network – both reliability and amenity

New Challenges 2010 – 2015

Nigel Turvey

WPD

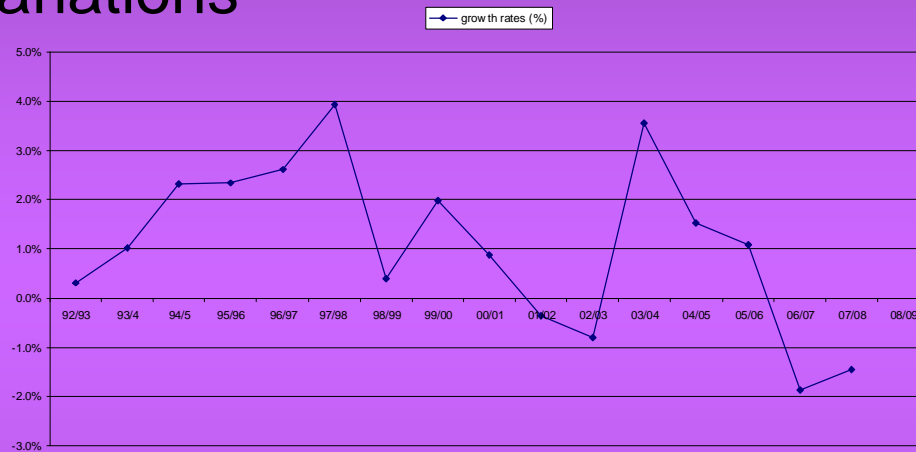


New challenges

- Our business plan needs to consider potential challenges arising from :
 - Changes in electricity demand
 - Increased role of distributed generation
 - Impact of climate change
 - Initiatives related to the environment and security

Changes In Electricity Demand

- Historically demand has grown at 1-2% per annum company wide with regional variations



- Likely future demand can be affected by
 - The impact of new demand and generation connections
 - Reinforcement for existing load growth

Factors We Have Taken Into Account In Forecasting Demand

- The number of new housing connections
 - Typically 10,000 per year
- The impact of zero carbon homes
- Rising energy costs
- Energy efficiency awareness
- Information from other bodies e.g. LAs, RDAs, developers
 - Our view is that load growth will remain at 1%
 - Are there any other factors we should consider ?
 - Is our assessment reasonable ?

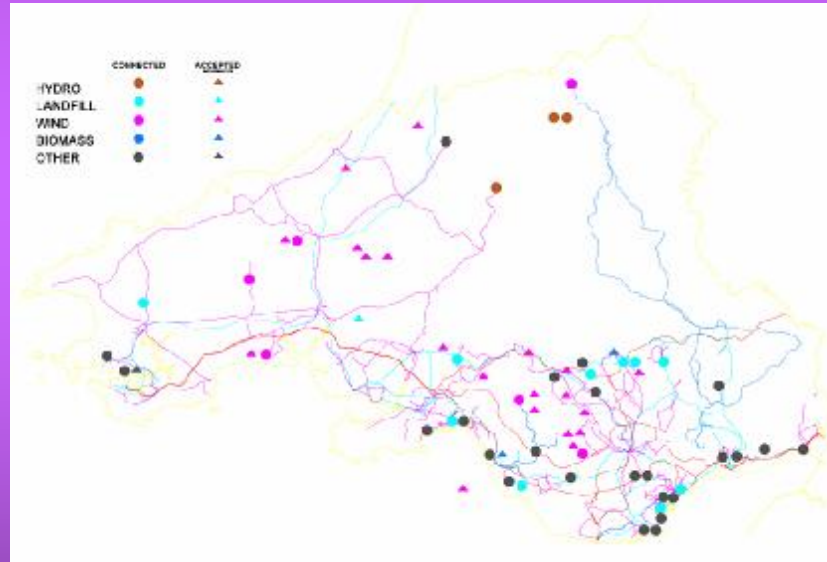
Distributed Energy

- Distributed Energy is generation connecting to the local network – typically wind, wave, solar, biomass or heat networks



Distributed Energy

- The UK has a 15% renewable energy target by 2020
- To achieve this almost 40% of the UK's electricity will need to come from renewable energy sources
- There are promising signs of growth in South Wales



- Our plan assumes steady growth but no radical network redesign

Climate Change

Climate change is expected to lead to more frequent and intense storms and flooding



In particular the UK experienced widespread flooding in summer 2007 affecting individual households as well as water and electricity infrastructure

Many areas are flooded as rivers and drains feel the strain of deluge

Summer rain just keeps pouring down

Water torture Britain

Summer deluge brings flood misery

Chaos as great deluge brings 3 inches of rain

Out with the sandbags again as West is lashed

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Climate Change - Flooding

- There has been a national review of electricity substation security following the 2007 floods
- Working with the Environment Agency we are assessing the risks to substations in South Wales
- Our plans include a 10 year programme to protect 50 key sites
- This will cost £8.5m or an additional 85 pence per customer per year

Substation Security

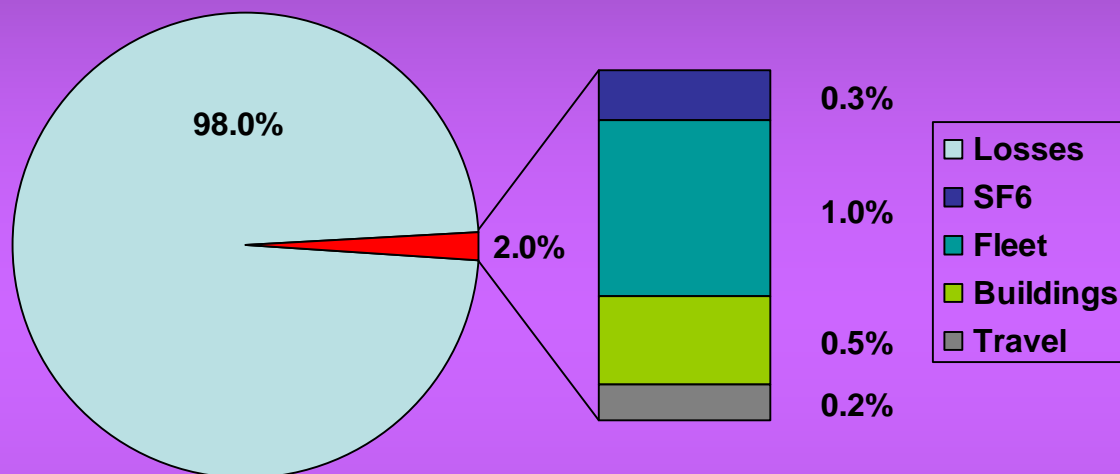
- The expenditure reflects increasing problems of copper theft, vandalism and other threats



- We want to spend £6.5m at 300 sites to reduce security threats
- This will cost an additional 65 pence per customer per year

Reducing Emissions

- Our carbon footprint is important and we have initiatives in place to minimise the impact of our day-to-day operations



we measure our carbon footprint each year

- Most of our carbon footprint is electrical losses
- We propose to spend £16m over 5 years to use lower loss equipment and non-tapered cables

£1.65 on an average domestic bill

Other Environmental Initiatives



Oil Filled Cables

We propose to spend £2.5m over 5 years
This is 25 pence per customer per year

Questions

Improving Services

- Have we identified the correct areas of performance improvement for our customers? Is there anything missing?
- What should our top priorities for additional expenditure be?
 - Maintaining service levels
 - Reducing power cuts
 - Improving service to remote customers
 - City Centre substations
 - Protecting the network in severe weather
 - Undergrounding in National Parks?

New Challenges

- Do you agree with our assessment of Distributed Generation? Is there anything else that we could do or should do to encourage generator connections?
- Have we identified the correct areas of potential new challenges? Is there anything missing
- What should our top priorities for additional expenditure in this area be?
 - Flooding
 - Security
 - Reducing the risk of emissions
 - Reducing our equipment carbon footprint

Next Steps

Alison Sleightholm

WPD

Stakeholder Engagement – How to get Involved

- Thank you for your views during today's workshop
- Slides and feedback will be posted on the website
- Respond to our on-line consultation www.westernpower.co.uk