Energy policy and climate change
Low carbon London

Narrator
The threat of global warming means that developed nations now need to act decisively to reduce the carbon footprint of their economies.

Low and zero carbon technologies in homes and cities and at national level, are a key part of the long term solution to climate change.

In this video we will look at initiatives in London, that promise a cleaner, most sustainable energy supply and we will consider the potential for realising a zero carbon future.

Allan Jones
The world's cities are responsible for 70% of the world's CO2 emissions, they are most at risk from climate change, they are the ones causing climate change and they are the ones best placed to tackle climate change.

Ashok Sinha
And what climate change does I give us a really big wake up call, that means that we should really get real about renewable energy and sustainable energy policy in this country and, and let's understand the scale of action we need now.

Narrator
London consumes as much energy annually as Greece, if the city can radically reduce its carbon emissions it will set an example for urban environments across the world.

Mark Watts
As one of the world's leading cities people note what we do here in the capital. And if London is able to show that it's possible to have a low carbon or even a zero carbon future, then other cities around the world and indeed maybe governments will, will recognise that this isn't a fantasy, this is possible, it's possible to have a successful economy, a vibrant city and yet be low carbon.

Narrator
Some projects have already illustrated possible ways forward to a sustainable energy future, the Beddington Zero Energy development or BedZED in the London borough of Sutton, is designed to produce at least as much energy from renewable sources as it consumes.

In Woking, near London, the borough council has reduced its CO2 emissions by 77% since 1990, using renewables, combined heat and power generation and its own private distribution network.

Allan Jones who pioneered the scheme is now working to implement similar plans on a much larger scale in London as part of the mayor's strategy.

Allan Jones
Woking came to the eye of the mayor and he included the setting up an establishment of a climate change agency for London in his 2004 election manifesto. And I was appointed by the mayor towards the end of 2004 and I suppose in loose terms we refer to this as doing a Woking in London.

The primary aims of the London Climate Change Agency is to re, reduce carbon dioxide or carbon dioxide equivalent er.. er.. emissions er.. in London. We want to er.. er.. long term make London self sufficient. So as part of what we are doing we are, we are, we are looking

to the future and future proofing the types of technologies that we, we, we want to put in or, or are putting in.

Narrator
The London Climate Change Agency aims to demonstrate the climate friendly solutions can be commercially viable, through providing locally produced energy services.

Mark Watts
We established our London Climate Change Agency for two reasons, one because we wanted to demonstrate to the private sector that delivering decentralised energy was both efficient and economic and indeed that the private sector could make a profit out of it. And secondly because we just feel providing decentralised energy in London is simply going to be the most efficient way of providing heat and power for London's future. It's been absolutely critical to the success of the agency that we have formed a commercial partnership with EDF Energy and the fact that they have taken a serous, sort of hard-headed business look at the prospects for an energy company based on decentralised energy in London and decided that it is a going concern I think really sends a very strong message to the rest of the market.

Narrator
The London Energy Services Company or ESCO has been established as a public private joint venture between the London Climate Change Agency and EDF Energy.

Miles Hearn
The London ESCO project I think is exciting in its own right and certainly it's an innovative approach that the mayor of London has initiated, so we have taken the significant number of projects in the pipeline, about 40 or so, and we have prioritised those on the basis of determining which will have the greatest impact towards carbon reductions.

Narrator
Part of EDF Energy's generation portfolio is the Barkantine heat and power company, it's an efficient energy generating plant, located right in the heat of a housing estate in Tower Hamlets.

Miles Hearn
Barkantine project is a, a local combined heat and power project, it's got a district heating scheme, which enables us to use the surplus heat from the electricity generation process, to serve in this case about 500 local residencies. One of the key benefits of this process is that it gives the end consumers a net carbon reduction of about 2 tonnes per residence, so it has a benefit in CO2 terms by using this waste heat from the process. Within the mayor's energy plan for London it's a requirement for developers and others with infrastructure to look at the opportunity for CHP applications, where this waste heat can be used and we can have an overall more efficient generation process, and through this new requirement there's a real demand in the market place now, for this type of CHP and district heating scheme.

80% of London's carbon footprint comes from buildings, London's infrastructure has to think about the efficiency of energy really from the top to the bottom.

Narrator
Strategic planning measures have been introduced to try to ensure that new buildings in London are designed and constructed in a most sustainable way.

Mark Watts
And the developers that get in now and build up a reputation for being able to deliver low and zero carbon developments, are going to do extremely well in the coming years. Those that, that don't recognise that that's the way the market's going are going to get rapidly left behind, the only new developments that are going to happen in London, where the mayor has any power over them, are going to be low and zero carbon developments, we are simply not going to allow anything else to be built in London of any scale.

Narrator
It's now widely recognised that integrating renewable technologies into the urban environment can play an important role in reducing carbon emissions.

Ashok Sinha
In terms of UK attitudes towards renewables, we have seen maybe in the last year a real change in public awareness of climate change and I think that has engendered an increased interest in renewable energy. And when you have got David Cameron saying that he's going to put a wind turbine on his house, it suddenly means that renewable energy has become mainstream, normal topic of conversation, and that's an important changed that's happened over I think about the last 12 months.

Narrator
The mayor's goals for renewable technologies, set challenging targets for planners and developers.

Mark Watts
Through the mayor's planning powers we have set targets for, for renewable energy use in all new developments in London, currently developers are required, after having installed the highest level of energy efficient building design, and then having used decentralised energy, combined heat power and cooling wherever possible, after that they are required that 10% of a developments energy use comes from renewable sources. We are currently consulting on a revision to that strategy that would require the level to be pushed up to 20%.

Narrator
A number of ground breaking projects are setting the standard for a sustainable energy future in London.

Narrator
Dagenham is home to London's first major wind park. These turbines generate enough energy to power 1200 homes.

Allan Jones
In the future there is a, there is a number of offshore wind farms going through the planning stage, one of those will be the largest wind farm in the world of 1,000 megawatts .

Narrator
Transport for London hopes to acquire 20% of its electricity from renewables and has encouraged the use of solar power by investing in photo voltaic installations such as this one at Vauxhall Cross Interchange.

Mark Watts
We are also trialling lots of new clean fuel technologies, the most obvious one is our wonderful fuel cell buses of which we have 3 which simply emit steam and look like a kind of, I don't know, it's sort of almost like a steam train as they go around London but it's just pure water vapour that's coming out of the top.

Narrator
Plans are being developed to introduce hydrogen into the transport infrastructure on a large scale.

Allan Jones
Hydrogen can be captured from renewable energy like wind and solar but by far the biggest element will be from waste. We need to tackle waste in any event it's regarded as a problem to be got rid of, in landfill or incineration but we are looking at it as a resource. And we have set up a number of agencies to actually capture this market so that we can work with private waste contractors and make proper use of the waste, in addition to the recycling, but what do we do with the residual waste, we can convert that into a form of renewable gas that we can use as the common energy carrot.

Narrator
Public perceptions also need to be addressed, to encourage changes in individual's attitudes and behaviour, that will help reduce carbon emissions.

Mark Watts
The public perception has been totally central to changing government attitudes around the world to, to climate change, it's in, incredible in our own polling, 95% of Londoners recognise that climate change is a problem and it ranks as one of the 4 or 5 things that they are most concerned about.

Narrator
By putting sustainable development at the heart of policy, London intends to become a key player in the new technologies and services that will be at the heart of a sustainable future economy. In doing so it could play a decisive role in setting an example for the rest of the world to follow.

Ashok Sinha
I think a zero carbon future is entirely realisable, I think we should be able to move towards a situation where all of our energy needs are met through renewable energy technologies, we have done the maths, it's well established that there is enough natural resource out there to meet our energy needs many times over. The issue here in the end is whether I think we are prepared to put the resource behind it and whether we are also prepared to address the changes to our lifestyles that will be ne, necessary so, so that we are not profligate in our use of energy.

Mark Watts
A zero carbon future is the only future that we can try and built because if we don't try and have a zero carbon future then we are going to be living on a planet that's very difficult for large numbers of the current human population to survive in and we have to recognise that a zero carbon future is a positive future, it's not something where we are going to have to reduce quality of life, standard of living for people, it's one where people's quality of life will improve.