
Today we are launching a very important report. It clearly sets out the many and massive cumulative impacts resulting from the inefficiency of today’s network-connected devices, such as set-top boxes, printers and games consoles. And crucially, it offers a range of effective measures that we can take to get on top of what will otherwise become a major global problem.

The proliferation of connected devices brings many benefits to the world, but, clearly, right now the cost is far higher than it should be. Consumers are losing money in the form of wasted energy, which is leading to more costly power stations and more distribution infrastructure being built than we would otherwise need – not to mention all the extra greenhouse gases that are being emitted.

Today, a typical connected devise uses around 65% more energy than it needs to perform its functions. This can cost the average household many tens of dollars per year, per device. This may not sound like much. But in 2013, the cumulative impact of 14 billion such devices was a loss of around eighty billion dollars to consumers and the otherwise unnecessary operation of over 130 mid-sized coal plants producing around 400 terra watt hours of electricity and all the pollution and carbon emissions that goes with it.

What is already a major problem is set to explode. By 2020, there could be around 50 billion connected devices. On a business-as-usual basis, this would lead to unnecessary costs to consumers of around 120 billion dollars per year and the operation of around 200 mid-sized coal fired power plants producing 600 million tonnes of unnecessary carbon emissions. By 2025, it could balloon out to 148 billion a year, nearly 250 power plants and around 740 million tonnes of emissions.

This is especially important given that our analysis in this year’s Energy Technology Perspectives, shows that electricity is set to be the fastest growing part of the energy sector. Indeed, by 2050, we expect the electricity to be the largest energy carrier. Within this, network connected devices are part of one of the fastest growing segments.

The problem is not that these devices are often in standby mode, but rather that they typically use much more power than they should to maintain a connection and communicate with the network.

But it need not be this way. If we adopt today’s best available technologies we can minimise the cost of meeting demand as the use and benefits of connected devices grows. In fact, such devices could perform exactly the same tasks in standby while using around 65% less power.

So, just as our lives are becoming smarter and more connected, so to must our approach to energy efficiency.
This report describes technologies and technical solutions as well as a range of policy options that are available to reduce energy waste. It acknowledges that policy makers, standards development organisations, software and hardware developers, designers, service providers and manufacturers will all have a key role to play.

We already know that when all parts of the sector work together, massive savings can be realised on behalf of consumers.

Energy efficiency policies play an important role in galvanising action across the value chain to reduce unnecessary energy demand. For instance, Minimum Energy Performance Standard programmes and consumer labelling, such as the EnergyStar programme, have already realised many billions of dollars of savings for consumers across a wide range of product categories from washing machines to televisions.

Policies have also been effective in reducing standby energy consumption in non-connected devices following the launch of the IEA’s 1999 1-watt programme.

Time and again we have seen that manufacturers can innovate and come up with high performing, reliable and attractive products that are also energy efficient. They have proven that they are up to the challenge.

Today we see that efforts to improve the efficiency of mobile devices such as phones are fast becoming a major selling point. Indeed, I note that one well known mobile phone manufacturer is basing its current marketing campaign for its flagship phone around its ability to use an absolute minimal amount of power to maintain a network connection while in standby mode as a means of extending battery life.

This example shows that it is possible to deliver network connectivity at a very low energy cost.

So now is the time to establish a new global initiative dedicated to improving the energy efficiency of network-connected devices.

I’d now like to hand over to our Director of Sustainable Energy Policy and Technology, Didier Houssin, to take you through the detail of the report.