Testimony of

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House Energy and Commerce Committee

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Mr. Chairman and members of the Subcommittee, my name is John I. Taylor. I am Senior Vice President at LG Electronics USA, Inc. I also serve as Chairman of the High-Definition Television (HDTV) Committee of the Consumer Electronics Association (CEA) and Vice Chairman of CEA's Video Division. I also represent LG Electronics as a founding member of the new Digital Television Transition Coalition. I welcome the opportunity to appear before you today to speak about the exciting transition to digital television (DTV).

LG Electronics USA is the North American subsidiary of LG Electronics, a $48-billion multinational electronics and communications firm. One of the world's largest manufacturers of television sets and of TV flat-panel displays, LG Electronics has established itself as a global digital leader, and its LG brand is among the fastest-growing in the United States.

LG Electronics also is the parent company of Zenith Electronics Corporation (Zenith), the U.S. technology company that developed the "VSB" (Vestigial Side Band) digital transmission system adopted by the Federal Communications Commission as the centerpiece of the Nation's DTV broadcast standard.

Decades ago, Zenith was instrumental in the founding of both the National Association of Broadcasters (NAB) and CEA. In addition to its long-time leadership in digital HDTV, Zenith pioneered industry standards for black-and-white and color television and is credited with the invention of countless industry-leading innovations, including Stereo FM radio, television stereo sound, television remote controls and flat color picture tubes, to name a few. Zenith was one of the first developers of HDTV technology, beginning in 1988. In 1993, Zenith helped found the Digital HDTV Grand Alliance, which developed the Advanced Television Systems Committee (ATSC) DTV broadcast standard.

Building on this extensive experience, and the combined strengths of LG Electronics' worldwide engineering and production capabilities and the Zenith R&D capability in the United States, LG Electronics has led the industry in optimizing DTV broadcast reception. In particular, LG Electronics' fifth-generation VSB chips, which eliminate multipath interference concerns, are considered top performers by both broadcasters and consumer electronics industry analysts.

As part of our commitment to driving the DTV transition to a successful conclusion, LG Electronics and its U.S. R&D lab, Zenith, partnered over the past two years with the NAB and the Association for Maximum Service Television in a joint effort to develop prototype high-performance, low-cost digital-to-analog converters to enable existing analog TVs to continue to receive free over-the-air broadcasts after the Nation's switch to all-digital broadcasting in 2009. This alliance with broadcasters accelerated LG Electronics' product development timetable, resulting in prototypes that meet the goals set forth by the National Telecommunications and Information Administration (NTIA) and the establishment of a state-of-the-art reference design for the industry. So, I believe, it is obvious that LG Electronics has a significant stake in the digital transition.

The Committee is focused today on the status of the Nation's transition to digital television technology. Mr. Chairman, LG Electronics shares your view that successfully concluding this transition is of critical importance. This Committee has been instrumental in advancing DTV's deployment, and as a result, today we are seeing exciting marketplace developments involving digital technologies. Digital transmission offers incredible high-resolution video, and anyone who has experienced HDTV becomes an instant believer in this technology. In addition to these benefits, the digital transition provides an opportunity to return spectrum for important governmental objectives (including public safety and homeland security needs) and to deploy new commercial technologies for consumers.

Many important issues are associated with the DTV transition, including manufacture of boxes compliant with NTIA's requirements; government assistance to help consumers purchase boxes capable of converting free, over-the-air DTV broadcast signals for viewing on their existing analog TV sets; and consumer education. Please permit me to address these three areas this morning.

When LG Electronics testified before this Subcommittee in 2005, we stated that factors such as the level of technology and unit sales volume influence any estimate of converter box costs. NTIA now has issued technical specifications for converter boxes eligible to be covered by the coupon program, giving manufacturers the certainty we need to prepare for mass production of these devices. The NTIA rules help manufacturers to know what we must build and to have some ability to estimate the cost of our converter boxes.

Consistent with the intent of Congress, NTIA's specifications provide an appropriate level of features necessary to provide reliable reception and to enable consumers to use the boxes

satisfactorily. Some of NTIA's converter box elements are required, while others are permitted (but not mandatory). NTIA addressed encoding; output formats; Program and System Information Protocol (PSIP) processing; the range of capability for receiving radio channels; radiofrequency input and output requirements; composite output; and interference levels. Also, NTIA required that converter box equipment must display all channels; must provide closed captioning, emergency alert systems, and parental controls; will include a remote control; and must meet energy efficiency standards. These parameters should yield converter boxes sufficient for average, non-technical consumers to enjoy the DTV experience.

We are pleased that NTIA did not mandate additional features that are not required to convert a digital over-the-air signal, as that would have increased the prices of converter boxes by a significant margin. Rather, NTIA permitted manufacturers to include a limited range of "no frills" functions in eligible converters so that they will be easy to use and perform well.

For example, NTIA permitted the optional inclusion of a simple electronic program guide (EPG), and this adds very little to a converter box's price. But the EPG will make the box much easier to use, and this is especially important because digital broadcasters can "multicast" or transmit multiple programming streams via their DTV signals. This multicasting greatly expands the number of program offerings made available to over-the-air television viewers. Allowing simple EPGs in eligible boxes will enable these viewers to navigate multicast channels and thereby maximizes the number of viewers able to enjoy the benefits of DTV technology.

In addition, we are pleased that NTIA's rules help to ensure that the performance quality of the converter boxes eligible for the coupons remains at a high level consistent with the needs and expectations of consumers. By adopting minimum performance requirements, NTIA has

enhanced significantly the likelihood of success for the overall program by helping to assure that the devices eligible under the coupon program perform to the satisfaction of American consumers. NTIA's specifications are now clear, and at LG Electronics, we are moving forward rapidly to comply with these standards as quickly as possible.

Regarding government assistance for consumers to purchase converter boxes, we are pleased that NTIA provided that households with analog-only sets reliant on over-the-air TV services are not excluded from participating in the coupon program initially. By NTIA's expanding the definition of households eligible to participate in the coupon program beyond that proposed in its original notice, the program should attract more interest and benefit consumers.

NTIA has recognized that many consumers may neither need nor want a coupon to purchase a converter box. Between now and February 2009, according to CEA estimates, American consumers will purchase more than 60 million television receivers and set-top boxes with over-the-air DTV tuning capability, independent of the converter box program. This is in addition to the 50 million DTVs purchased by consumers in the past five years (2002-2006).

While it is unclear how many of these have actually displaced or will displace older analog-only TVs, these receivers no doubt will impact the number of American households needing a low-cost converter box under the coupon program. Given the rapidly growing number of households that are expected to have access to digital signals – either over-the-air, via cable or by satellite – well before the transition's end in 2009, we are hopeful that sufficient funds will be available in the coupon program to ensure that converter boxes are provided to all households that need them.

With regard to the price of converter boxes, LG anticipates that its converter boxes meeting NTIA's specifications should be available to consumers for around $60. Manufacturers anticipate producing tens of millions of converter boxes. Given this number, and with the certainty provided by NTIA's specifications, LG Electronics thinks that boxes can be available in our $60 price range for retail distribution by early 2008.

Finally, we are pleased that, pursuant to Congressional direction, NTIA addressed the critical need for a vibrant consumer education effort related to the DTV transition. As you probably know, there is a cross-industry consumer education effort related to NTIA's program and the DTV transition generally.

Spurring consumer interest in the converter box program and ensuring that consumers' participation in the program is not burdensome will require a broad-based effort that involves the government and multiple industries and stakeholders. As an active participant in the new DTV Transition Coalition, LG Electronics is fully committed to working with the government, our major retailers, and our colleagues in the consumer electronics and broadcast industries to facilitate the program's success.

In particular, we are intensifying our own sales training efforts with retailers and collaborating with broadcasters to promote DTV technology. We also maintain an informative DTV website guide (http://us.lge.com/GuidetoHDTV/what/index.html), which introduces consumers to the features available through DTV technology. We will update this website on an ongoing basis with valuable information about the DTV transition and the converter box program.

Consistent with NTIA's efforts to encourage manufacturers and retailers to provide adequate information to consumers to ensure that they fully understand how to install and use

their converter boxes, LG will implement a special toll-free number that consumers can call to receive assistance with installing and connecting their new LG converter boxes. LG's converter boxes also will feature an easy-to-follow installation guide that includes simple instructions in multiple languages. We anticipate that these efforts will help consumers to use the devices, and prevent them from unnecessarily returning boxes to retailers.

Of course, the converter box program is just one aspect of the digital transition effort. By 2008 there will be a range of options, including very affordable integrated DTV receivers. Those who want high definition reception and other features will pay more, just as they do today for progressive-scan DVD players. Manufacturers such as LG Electronics are doing our part to offer consumers a wide array of quality DTV products at affordable prices. Product prices will continue to decline, as they have done since DTV's introduction in 1998, and this will speed the transition.

LG Electronics commends this Committee for its efforts to advance the digital transition, and for its attention to avoiding potential disruption to consumers when the final switch-over to digital broadcasting occurs. We look forward to continuing to work with you to ensure that all Americans are able to enjoy the tremendous benefits of digital television.

I am, of course, pleased to respond to any questions you may have, and I appreciate the opportunity to appear before you today.