U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

Welcome

2017 DOE SSL R&D Workshop

January 31, 2017

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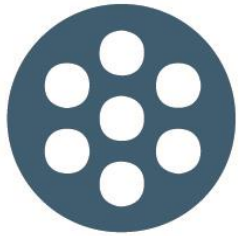
U.S. Department of Energy

Results-Oriented R&D

270
Patents



220
Products

280
tBtu

2.8
Billion

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Looking Forward

	LED	OLED
Goals	250-350 lm/W chip 200 lm/W luminaire	190 lm/W panel 160 lm/W luminaire
Challenges	Droop Green gap	Light extraction Stable blue emitter
	Color rendition, form factors, connected lighting, glare, action spectrum	
Payout	5.1 quads, $50B annual savings in 2035	

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2016 Solid-State Lighting R&D Plan, http://energy.gov/eere/ssl/technology-roadmaps
2016 SSL Forecast, http://energy.gov/eere/ssl/ssl-forecast-report

The Remaining Challenges Are Harder

For more information and full videos:

www.energy.gov/eere/ssl/led-rd-challenges

For more information and full videos:

www.energy.gov/eere/ssl/oled-rd-challenges

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LED Potential

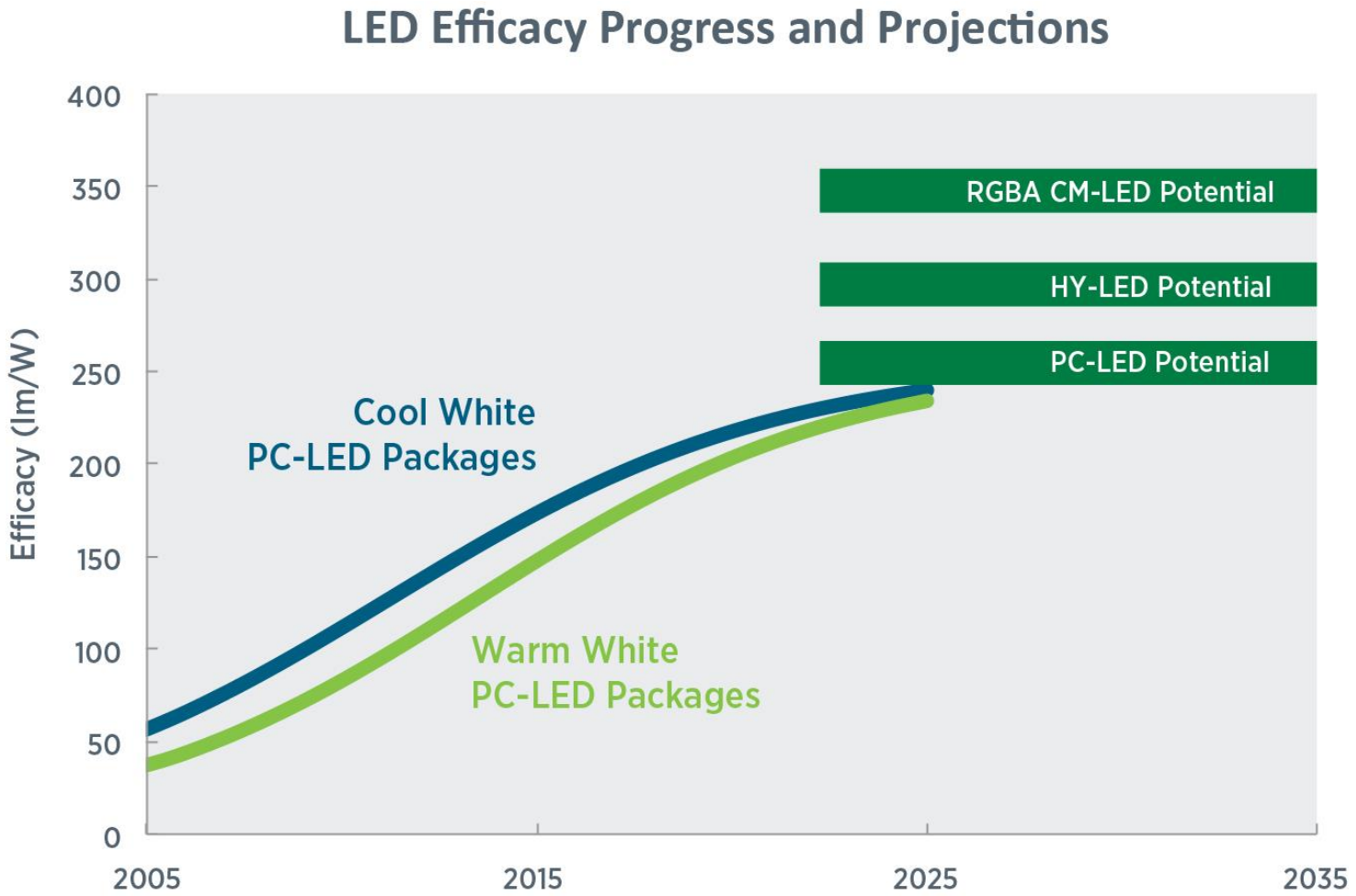

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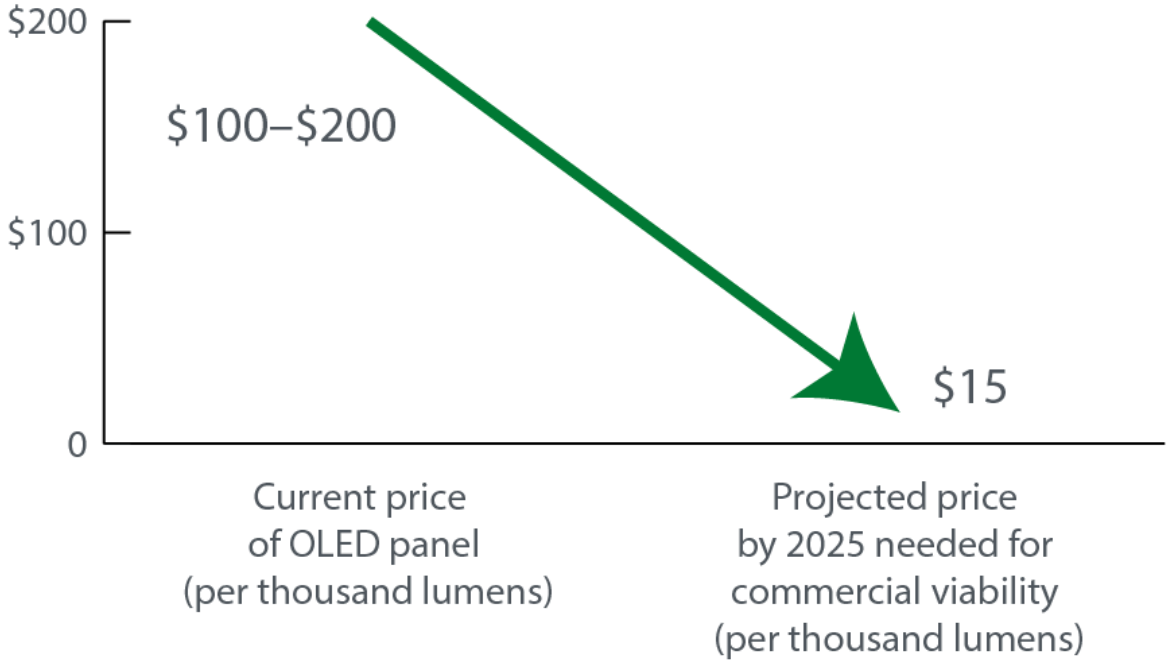
Figure 5.4, 2016 Solid-State Lighting R&D Plan, http://energy.gov/eere/ssl/technology-roadmaps

OLED Challenges



INNOVATIONS ARE NEEDED TO:

Continue increasing the efficiency, lifetime, and light output of OLED devices.

Reduce costs through efficient manufacturing technologies (including roll-to-roll and printing processes) and improved yields.

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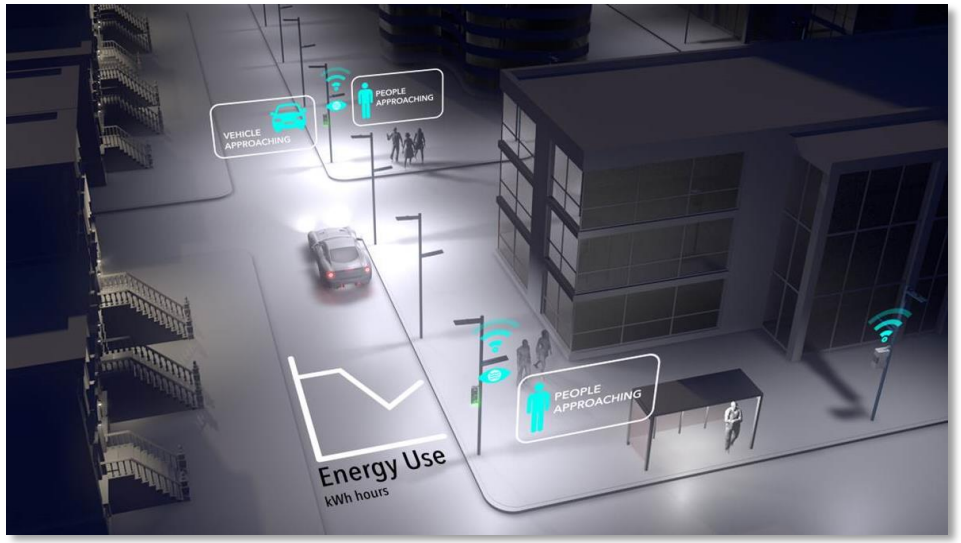
New Opportunities Challenge Old Thinking



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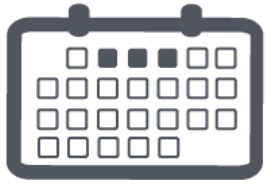
Let’s Get Started



3

Packed Days

60

Expert Speakers

60

Posters

NON-STOP

Networking

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The difficult is what takes a little time;
the impossible is what takes a little longer.

– Fridtjof Nansen, Explorer