

Greener TV Studio Lighting:
Side by Side Comparison of
Lighting Studios with both
Low Energy Lighting Options
And Conventional Lighting



Panelists:

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MODERATOR:

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HD Quality Energy Efficient, Low Heat Broadcast Lighting



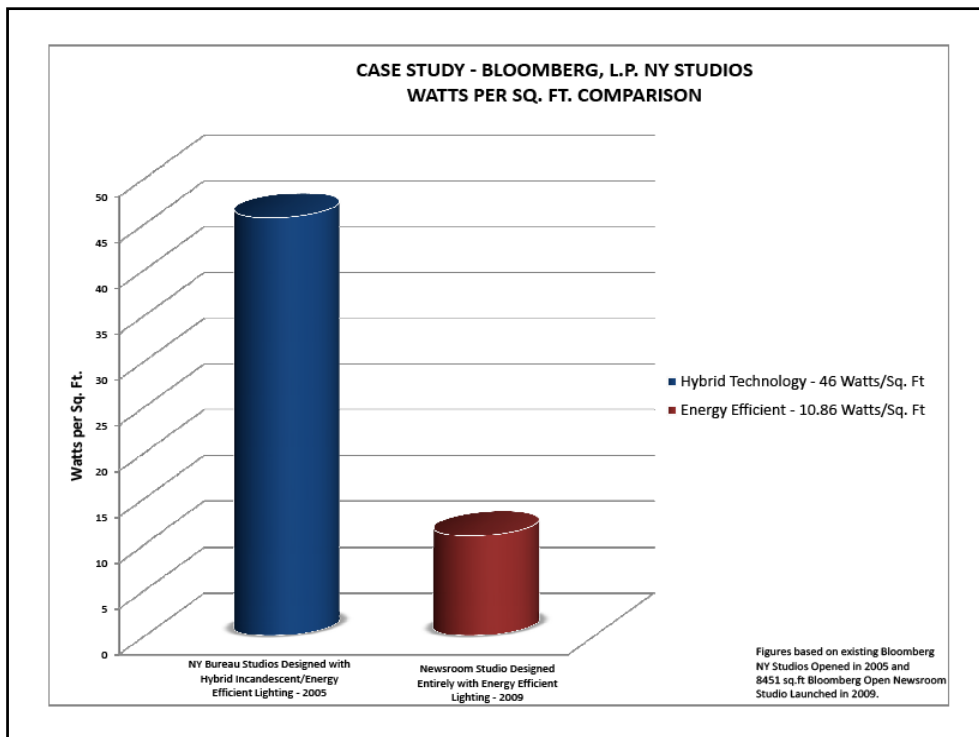
*Presented By: Mark London
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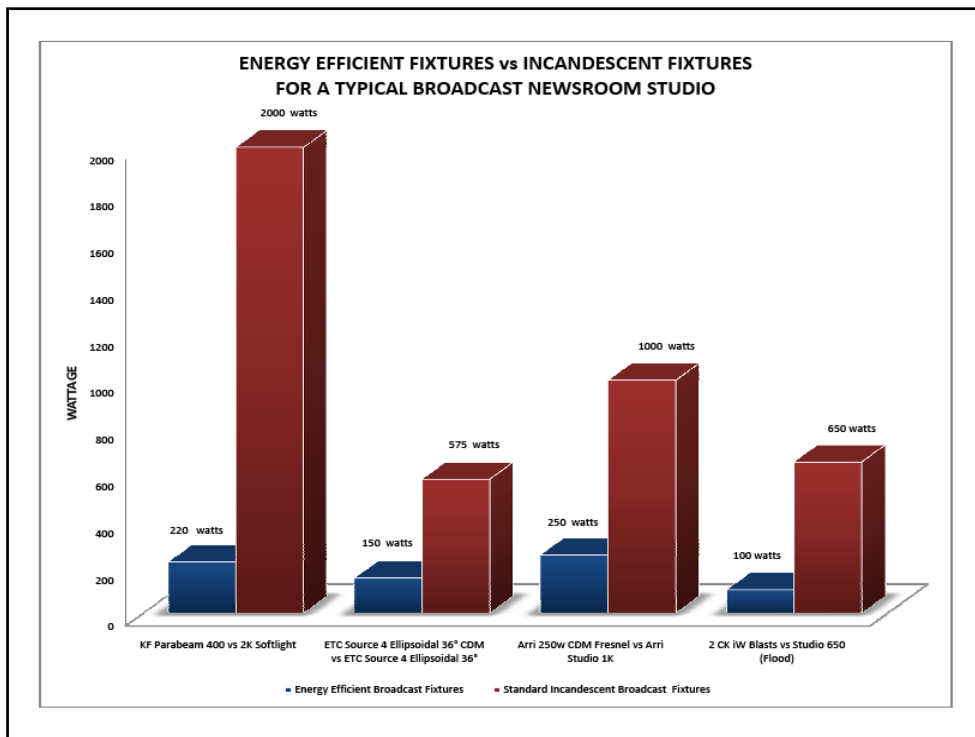
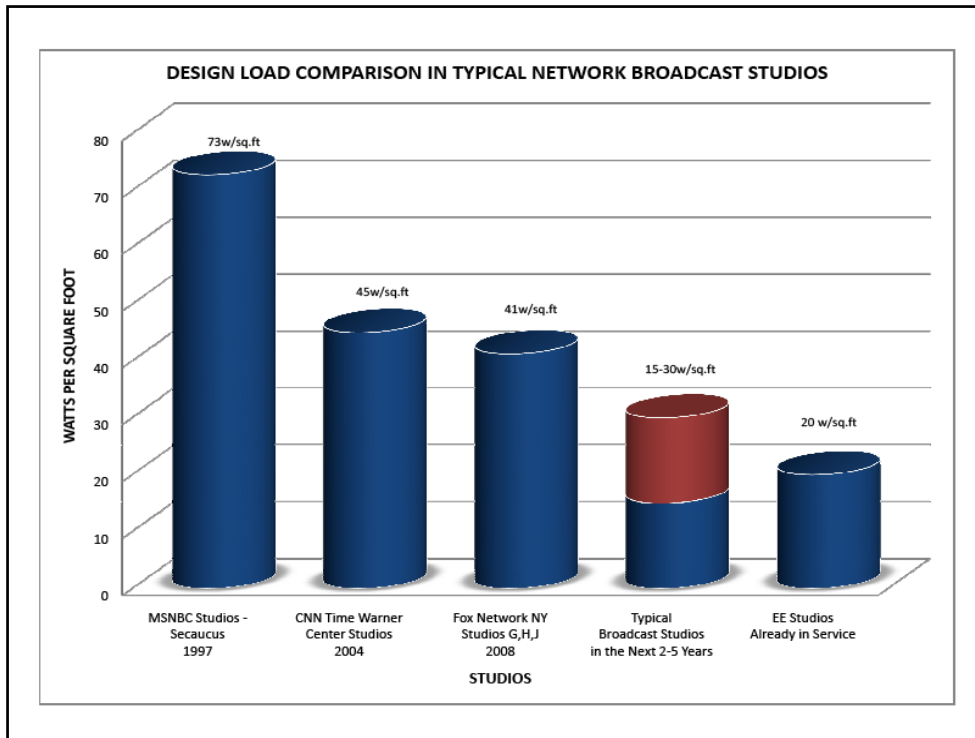
FLUORESCENT
BROADCAST
LIGHTING FIXTURES



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Bloomberg L.P. New York 5th Floor Newsroom Studio
Power and Price Comparison: Energy Efficient vs. Incandescent Fixtures

Energy Efficient Fixture List

	Quantity	Type	Power (watts)	Total Power (watts)
1	1	Source 4 Leko (19)	375	375
2	11	Source 4 Leko (26)	375	4,125
3	6	Source 4 Leko (36)	375	2,250
4	11	Source 4 Leko (50)	375	4,125
5	1	300W Fresnel	300	300
6	145	CK iWhite Blast	50	7,250
7	2	Kino Flo Diva 400	220	440
8	39	Kino Flo Parabeam 200	110	4,290
			Total Wattage	23,155
			Wattage/Sq Ft in Studio	10.86
			Wattage/Sq Ft in Newsroom	0.84

Total List Price for Energy Efficient Fixtures*: **\$187,150.00**

*Pricing includes a Strand BakPak dimmer for all Lekos and City Theatrical PDS-750s as required for all CK iWhite Blasts.

Incandescent Fixture List

	Quantity	Type	Power (watts)	Total Power (watts)
1	1	Source 4 Leko (19)	375	375
2	11	Source 4 Leko (26)	375	4,125
3	6	Source 4 Leko (36)	375	2,250
4	11	Source 4 Leko (50)	375	4,125
5	1	300W Fresnel	300	300
6	145	650W Fresnel	650	94,250
7	2	2K Softlight	2,000	4,000
8	39	1K Softlight	1,000	39,000
			Total Wattage	148,425
			Wattage/Sq Ft in Studio	60.83
			Wattage/Sq Ft in Newsroom	5.69

Total List Price for Incandescent Fixtures: **\$114,545.00**

Estimated Price for Dimmer Racks and Raceways: **\$75,000.00**

Total List Price for Incandescent Package with Dimming: **\$189,545.00**

Operational Energy Cost Savings in Bloomberg Newsroom:	
Percentage Wattage Savings - Energy Efficient vs Incandescent Fixtures	84.4%
Daily Savings in Kilowatt Hours (kWh) - Energy Efficient vs Incandescent Fixtures Based on a 12 hour day and 60% Diversity	902
Daily Savings in \$ Based on Savings in kWh using commercial rates obtained from Con Edison (\$0.065/kWh(Supply) & \$0.065/kWh (Delivery))	\$117.25
Daily Savings in \$ Based on Savings in AC using commercial rates obtained from Con Edison (\$0.065/kWh(Supply) & \$0.065/kWh (Delivery))	\$50.01
Daily Savings in Power and Cooling	\$167.26

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ON THE HORIZON:



LED Fresnel



Plasma Fixture



LED Ellipsoidal Reflector Spotlight

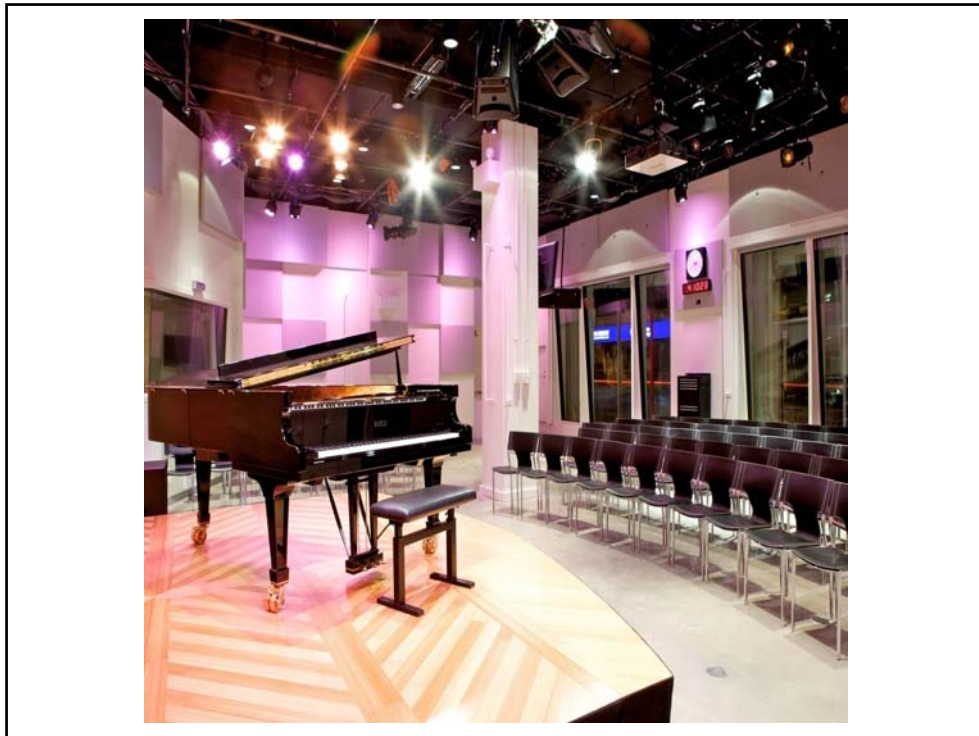


LED Wash Light

The Jerome L. Greene Performance Space
WNYC Radio – New York, NY



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Reuters – New York, NY



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Bloomberg L. P. – New York, NY



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Energy Efficiency In Lighting Design For Television

A Look at Two Projects

- ESPN NASCAR Pit Studio
- Comcast Sports Net Bay Area

ESPN NASCAR Pit Studio

ESPN NASCAR Pit Studio Design Criteria

- Ability to Change Color Temperature by “Magic”.
- Low Power Consumption.
- Must be Low Maintenance.
- Talent Comfort/No Heat

CFL vs. LED	
CFL	LED
<ul style="list-style-type: none">• Larger size• Could not change Color Temp.• Higher Power consumption• High Maintenance• Low Heat	<ul style="list-style-type: none">• Smaller in Size• Could change Color Temp.• Lower Power Consumption• Lower Maintenance• Low Heat

CFL vs. LED	
	LED
	<ul style="list-style-type: none">• Smaller in Size• Could change Color Temp.• Lower Power Consumption• Lower Maintenance• Low Heat

Selador Primary Fixture Choice

- Greater flexibility in Color Temperature Adjustment.
- No Magenta or Green Spikes.
- 20° and 30° Lenses used to control spill on other talent.



James Thomas Pixelbrick Secondary Fixture Choice

- Used as back lights.
- Smaller form factor.
- Closer to talent.
- RGBA provides a better color mix.





25-30 Amps (Actual Load)

Comcast SportsNet Bay Area

Comcast SportsNet Bay Area Design Criteria

- Compliance to Bay Area's strict Seismic Codes restricting available power
- Both Studios must be able to be run off of back up generator if there was a power outage.
- Client wanted to use latest technology to minimize environmental footprint.
- Must look like all other Comcast SportsNet studios in all other regions.

The Comcast SportsNet "Look"

- Same Scenic Design in all regions.
- Talent lit with Lekos.
- UV Lights used on set for effect.
- Fluorescent Light Boxes used on set.

The Comcast SportsNet Sets:

- Regional Sports News
- Regional Sports Talk Show
- Regional “Post Game Live”



Typical “Sports Nite”



Typical “Post Game Live”

To maintain a consistent look with the other Comcast SportsNets meant an all LED approach could not be used.

Tools used for Bay Area Studio A

- Conventional Lekos lamped down to 375
- Dimmed with SCRimmer Sticks
- 70w HID Lekos used for lighting scenery.
- Color Kinetics iW Blasts used for Wash and Back Lights.
- Color Kinetics iCoves with Bak Pak dimmers used for light boxes.



Bay Area "SportsNet Central"



Bay Area "Post Game Live"

Video Still Comparison



Conventional



Energy
Efficient

Power Usage Comparison with all sets "live"

Mid-Atlantic (Conventional)	Bay Area (High Efficiency)
630 Amps (Actual Load)	188 Amps (Actual Load)

Mid-Atlantic (Conventional)	Bay Area (High Efficiency)
.20 Amps/Sq. Ft.	.07 Amps/Sq. Ft.

Lighting Equipment Cost Comparison*

Mid-Atlantic (Conventional)	Bay Area (High Efficiency)
\$177,000	\$136,550

*Does Not Include Installation Labor

High energy efficiencies can be achieved today by combining several existing technologies, and exploiting their strengths.