



OPENING PLENARY SESSION

Dateline 2030: How could the future energy landscape impact the business of energy efficiency?

@toSaveEnergy #EEGlobal





2014 ENERGY EFFICIENCY GLOBAL FORUM

KATERI CALLAHAN

President

Alliance to Save Energy

@KateriCallahan @toSaveEnergy





Using less. Doing more.



Welcome to EE Global 2014!

Kateri Callahan

President, Alliance to Save Energy



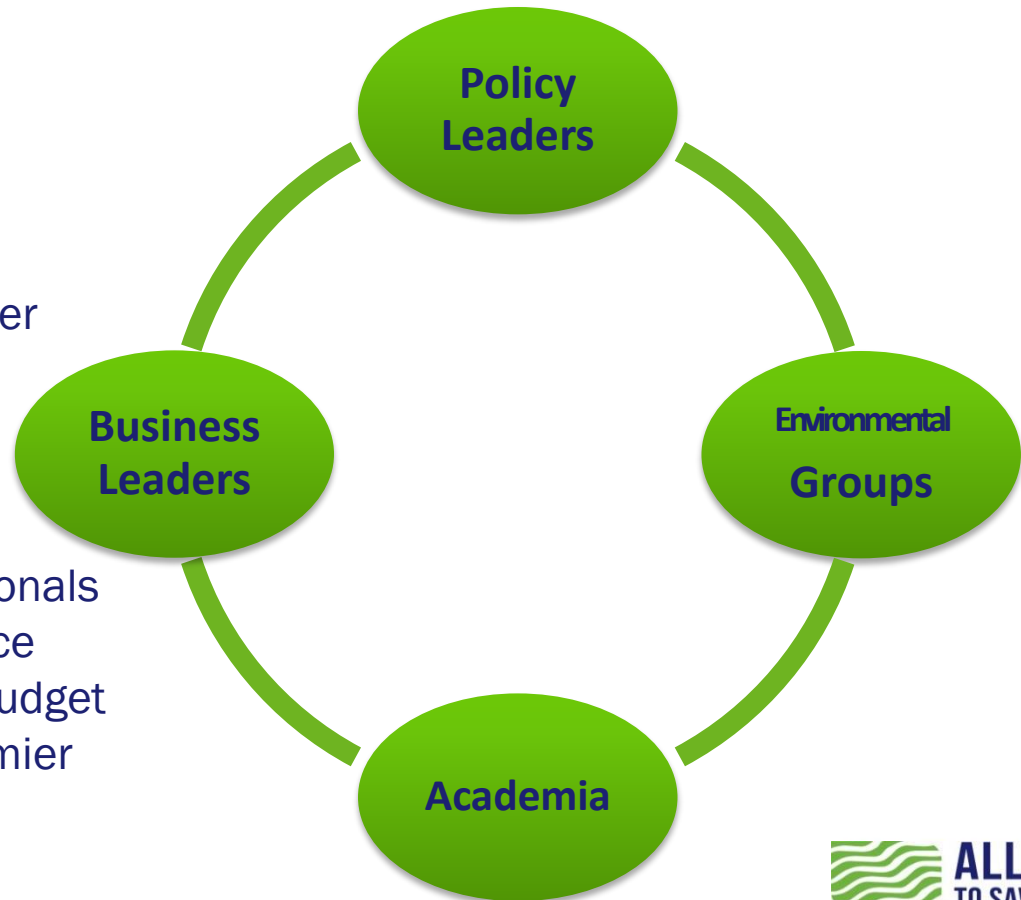
What is the Alliance to Save Energy?

Mission:

To promote energy efficiency worldwide to achieve a healthier economy, a cleaner environment, and greater energy security.

Organization:

- Staff of 40+ professionals
- 36 years of experience
- \$10 million annual budget
- Recognized as a premier energy efficiency organization



What is the Alliance to Save Energy?

Nonprofit organization headquartered in U.S.; operations worldwide

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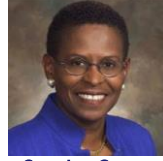
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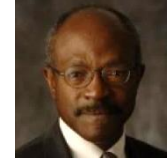
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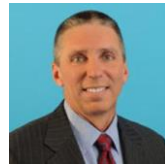
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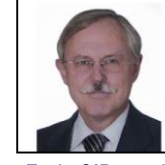
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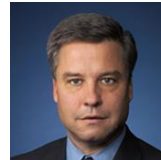
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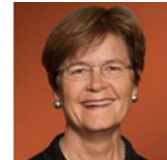
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Whirlpool



Susan Tierney
Analysis Group

Working With and Across All Sectors of the Economy

Business ■ Government ■ Public Interest



Using less. Doing more.

Continuing the Tradition of Building EE Capacity



Building Codes Assistance Project



2011 Graduate

European Alliance to Save Energy



2013 Graduate

Southeast Energy Efficiency Alliance

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Zolaikha Strong, Director, Sustainable Energy, Copper Development Association

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Pablo Moreno, Corporate Affairs Director, MABE
William Phillips, former Executive Director, Agencia Chilena de Eficiencia Energética
Hamilton Pollis, Executive Director, Latin American and the Caribbean Network for Energy Efficiency



Thank you, Sponsors



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EE Global 2014 Audience

- 488 Registrants
- 28 Countries Represented
- High-Level to Drive the EE Agenda Forward
 - 33% Executive Level
 - 35% Decision Makers
- Mix of All Sectors to Hit All the Angles
 - 40% Business/Industry
 - 38% NGOs/Trades/Universities/Nonprofits
 - 22% Government (Federal, State/Local, International)







The Alliance Team Behind EE Global





2014 ENERGY EFFICIENCY GLOBAL FORUM

ANDREAS SCHIERENBECK

CEO & Executive Chairman

ThyssenKrupp Elevator AG

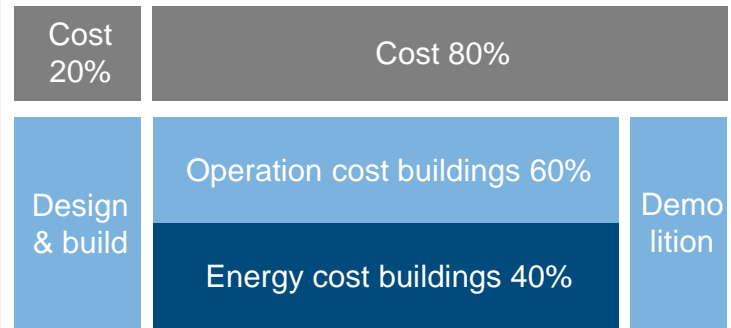
@thyssenkrupp_ir



40% of all energy world wide is consumed in buildings



Life cycle cost of a building

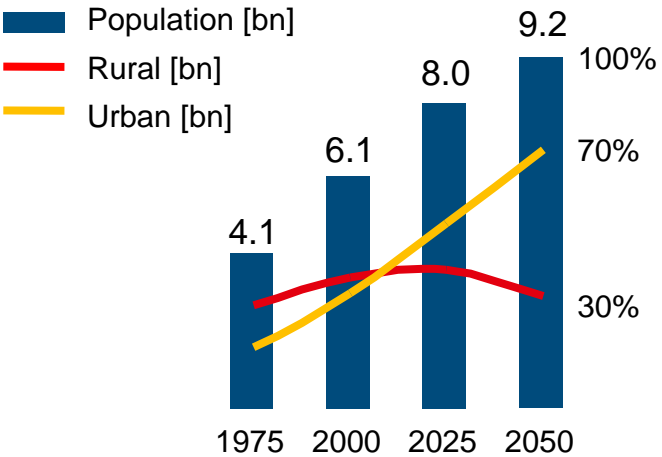


Elevators consume up to 10% of the total building energy

Urbanization



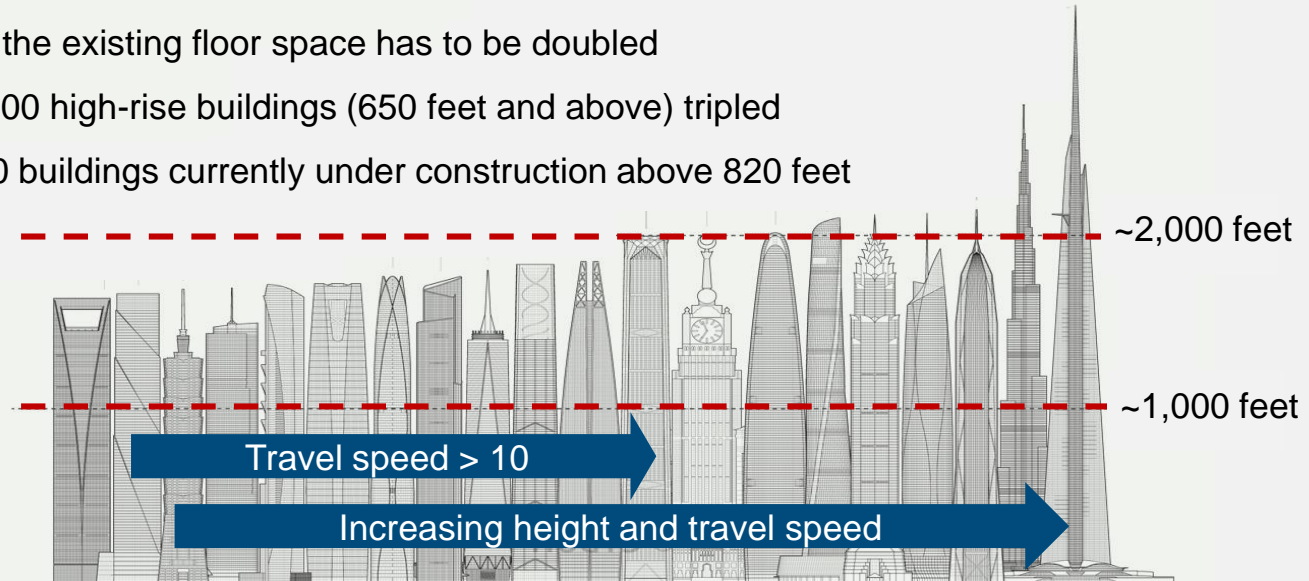
Development of city population



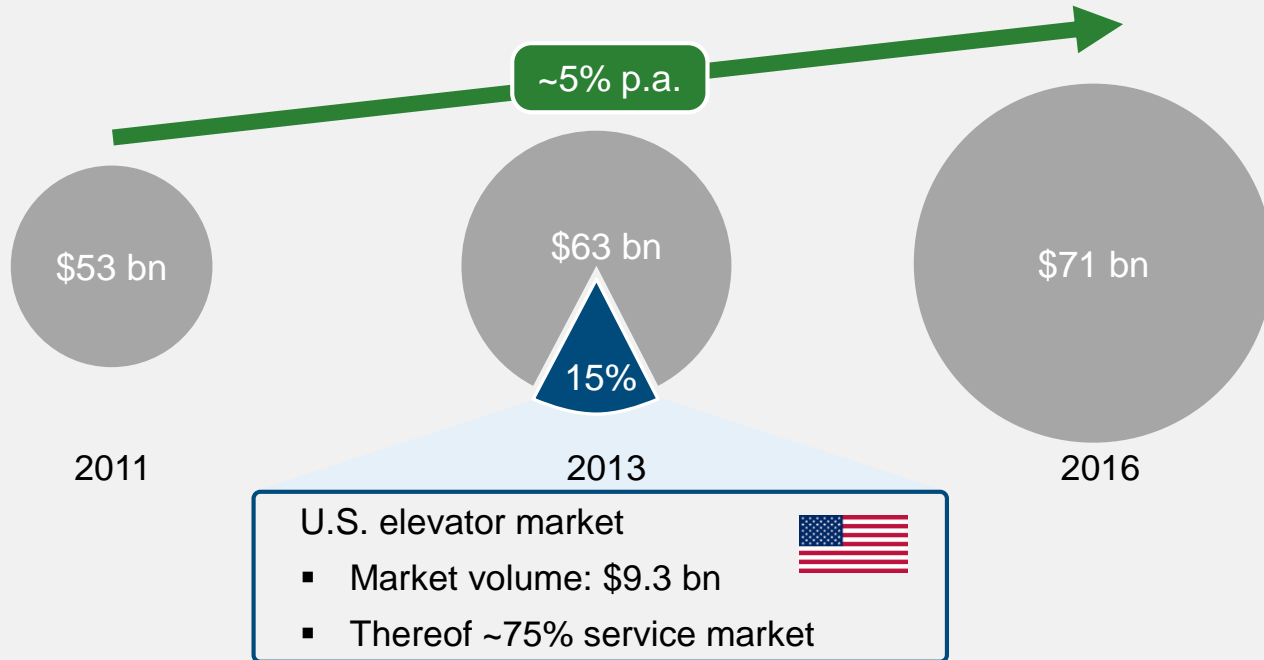
By 2050 urban populations will account for 70%

The 21st century is the first metropolitan century

- By 2025 the existing floor space has to be doubled
- Since 2000 high-rise buildings (650 feet and above) tripled
- Over 180 buildings currently under construction above 820 feet



World elevator market



What is the worldwide energy consumption of elevators?

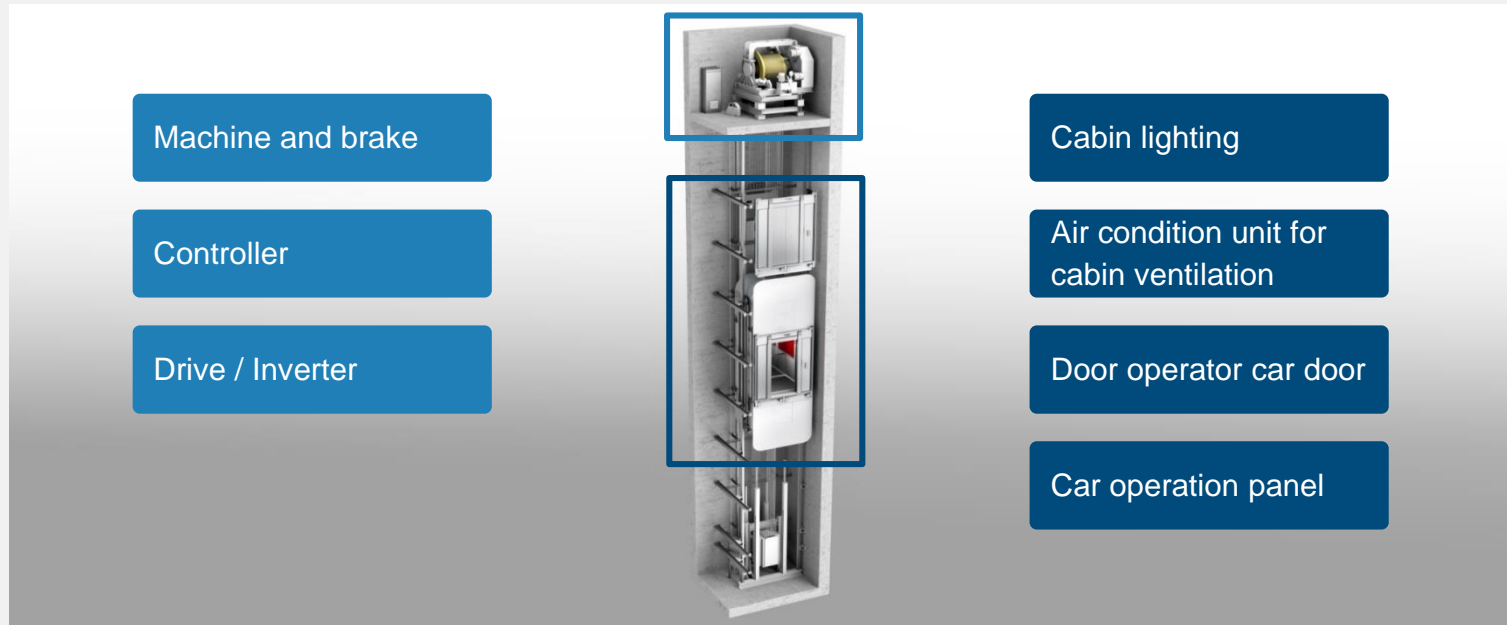


Elevators worldwide: ~36.300 GWh/a



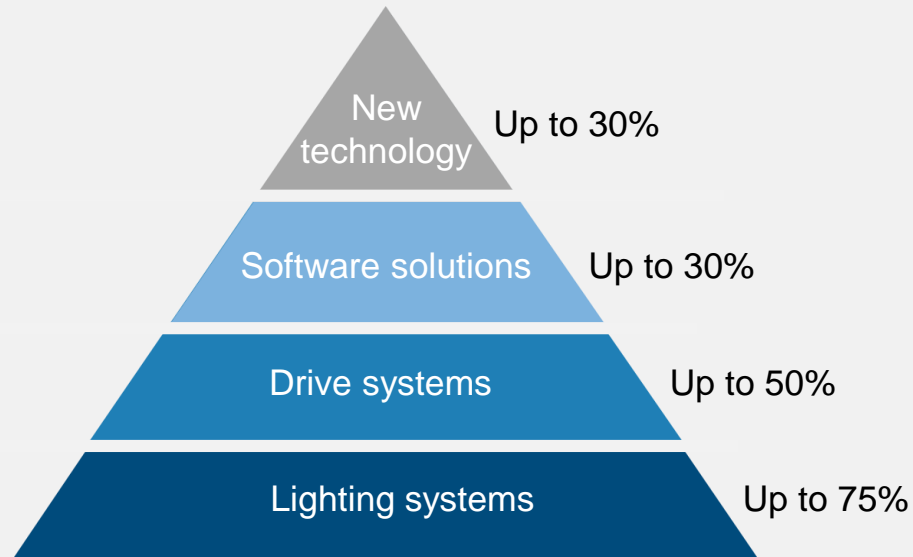
~1.5 x Las Vegas (~23.000 GWh/a)

Who are the energy consumers at elevator systems?



Energy-efficient solutions for elevators

Energy saving potentials* in %



*) Energy savings compared to standard elevator systems

Elevators as power generators

1. World Trade Center

- 104 floors, 73 elevators & 11 escalators
- Fastest elevators in North America (10 m/s)
- Elevators operate as power generators
- Up to 30% energy reduction through regenerative drives

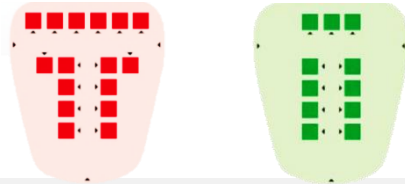


Regenerative elevators feed full lightning system of 1.WTC

New elevator technology

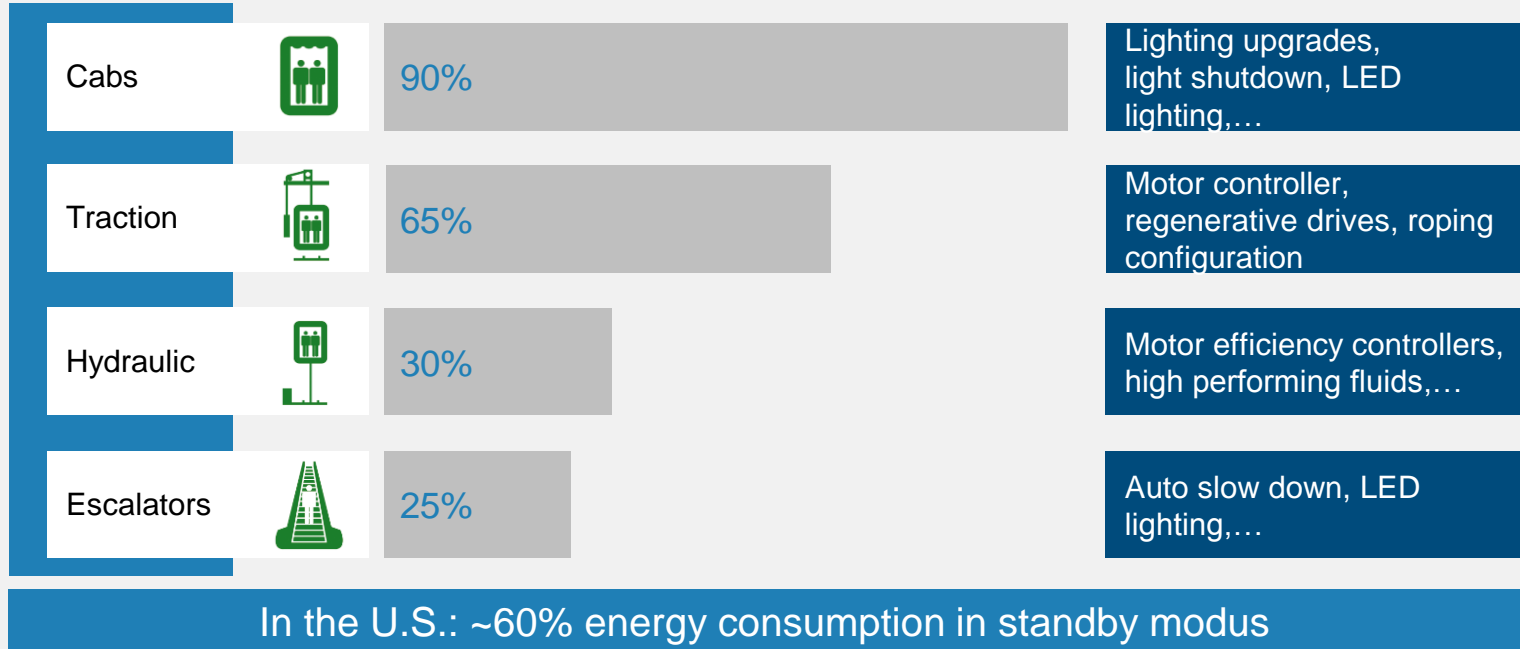
ThyssenKrupp TWIN systems

- Up to 30% reduced space requirements
- Up to 50% increased transport capacity
- Up to 50% reduced peak power consumption
- Cut electrical loads by half



Up to 30% lower energy consumption

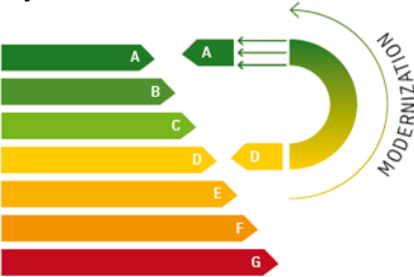
Modernization: How much energy can you save? Where?



Modernization of 40 years of elevators

Hyatt Place Waikiki Beach Hotel

- Gearless drives with regenerative power
- Modern controls
- Improved capacity
- LED lighting



Energy savings of 56% achieved

Facts and figures U.S. elevator market

U.S. energy consumption



Buildings
~48%



Industry
~24%



Transportation
~28%

Data Source: U.S. Energy Information Administration (2012)

~5 million existing buildings
~1 million running elevators

~50% older than 20 years
~3.300 GWh/a energy
consumption
(thereof ~60% in standby modus)

Thank you!

Developing the future.



ThyssenKrupp



DAVE SZCZUPAK

Executive Vice President, Global Product Organization

Whirlpool

@WhirlpoolCorp





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HELEN BURT

*Sr. Vice President & Chief Customer Officer
Pacific Gas & Electric Company (PG&E)*

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About PG&E





Investing in our Customers





Local Government Partnerships

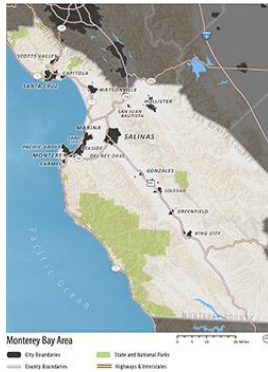


Association of Monterey Bay Area Governments (AMBAG) Energy Watch Program Results:

- \$7 million dollars in incentives
- Energy savings of 57.5 million kWh, 3.5 thousand kW and 200,000 therms
- Over 200 municipal facilities benchmarked

Climate and Energy Action Planning:

- Green House Gas Inventories





Water – Energy Nexus



Residential



Commercial



Agricultural



Industrial



Zero Net Energy



“Honda House” - Davis, CA



JEFF CASSIS

Sr. Vice President, General Manager Global Systems PLS

Philips Lighting Americas

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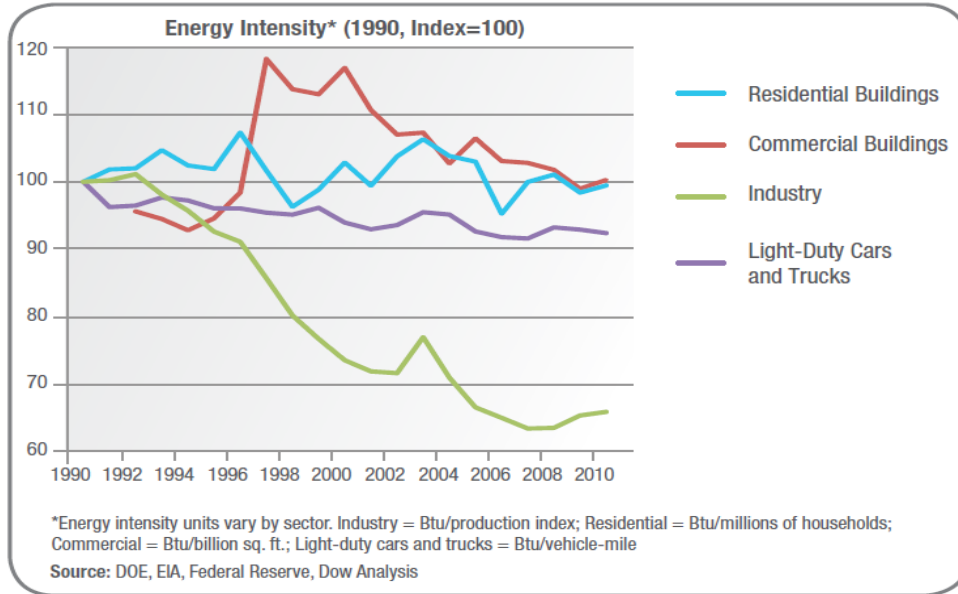
Business President of Dow Building & Construction

Dow Chemical Company

@DowChemical



The Energy Demand and Efficiency Relationship

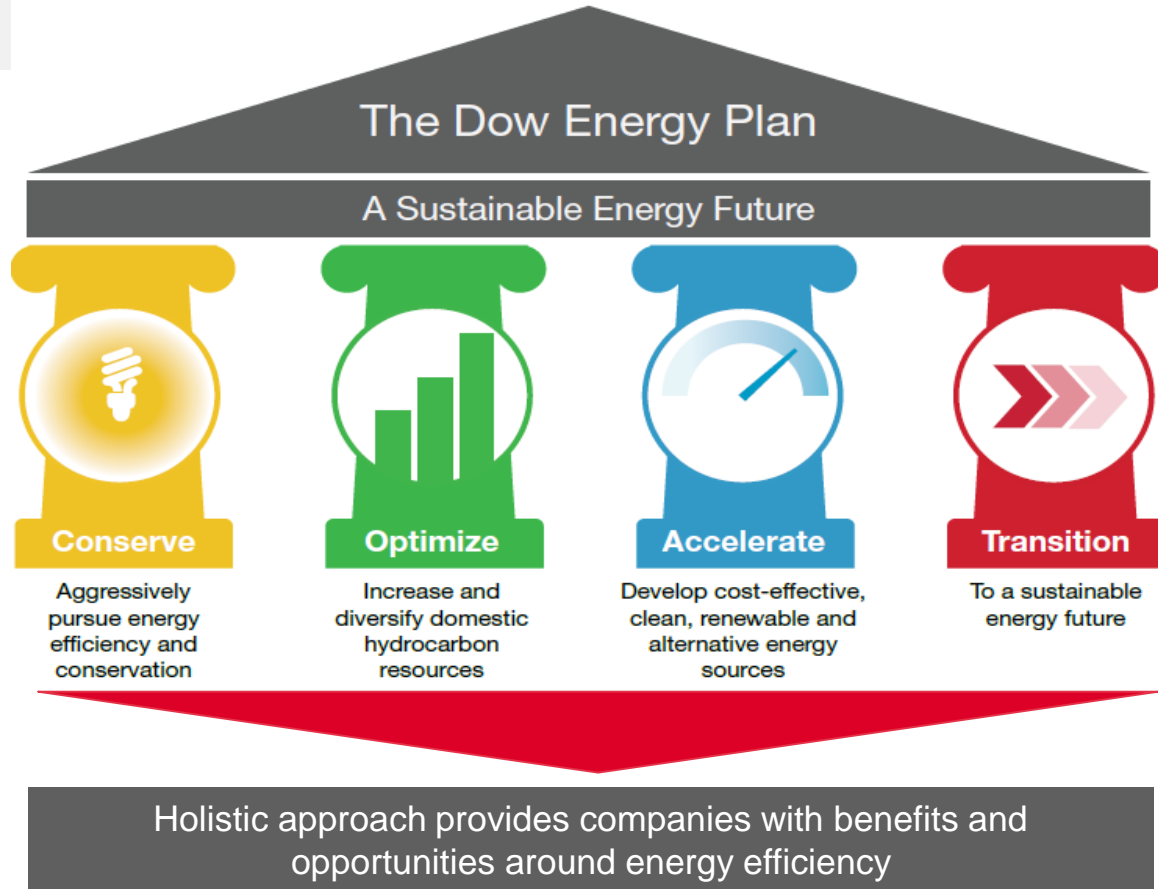


Global energy demand is expected to increase by 47% by 2035

Continued improvements in EE are essential to meeting growing demand

- Industry is 1/3 of Total U.S. Domestic Gas Demand and 1/4 of Total U.S. Domestic Electricity Demand
- Building sector energy consumption grew by > 50% between 1980 and 2010
- U.S. energy demand is expected to grow by 7 % by 2035

A Sustainable Energy Future





SENATOR JEANNE SHAHEEN

U.S. Senate

@JeanneShaheen @SenatorShaheen





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