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# **Business Council for Sustainable Energy**

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*July 2014 • Washington, DC*

# About the BCSE

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- The Business Council for Sustainable Energy (BCSE) is a coalition of companies and trade associations from the energy efficiency, natural gas and renewable energy sectors.
  - The Council advocates for policies at state, national and international levels that:
    - increase the use of commercially-available clean energy technologies, products and services
    - support an affordable, reliable power system
    - reduce air pollution & greenhouse gas emissions
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# BCSE Mission Statement

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*BCSE advocates policies that promote clean, efficient, and sustainable energy products, technologies and services*

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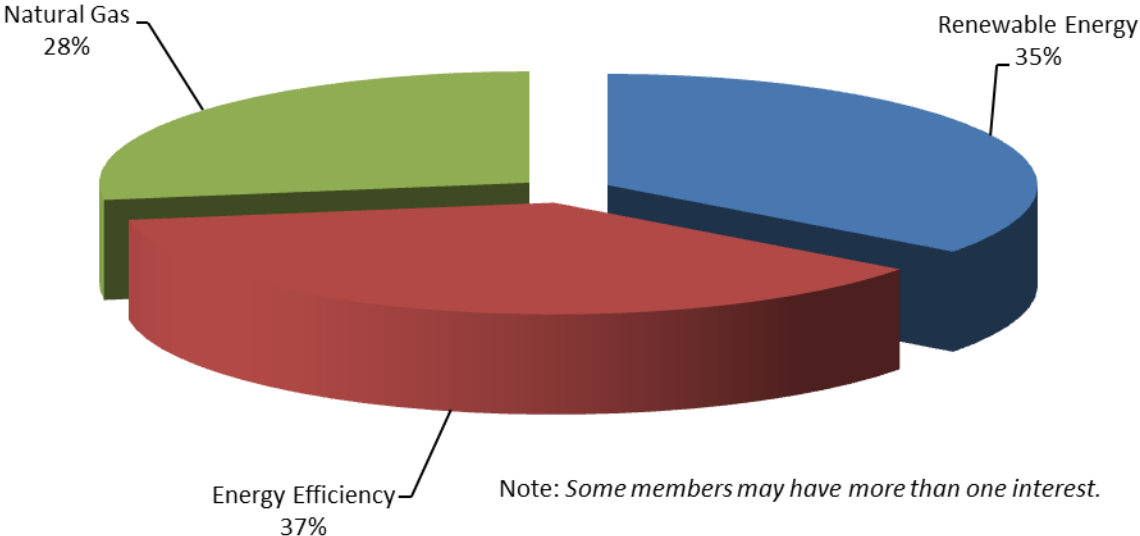
# 2014 BCSE Members



# Membership Facts: 51 BCSE members

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**BCSE Membership by Sector Interests**



2014

# Sustainable Energy in America

FACTBOOK

2014

# Sustainable Energy in America

## FACTBOOK

The Business Council for  
**Sustainable Energy**



JUPITER OXYGEN CORPORATION



# US IN THE MIDST OF ENERGY TRANSFORMATION

## Changes in how we produce energy

- Natural gas met 28% of US electricity in 2013, up from 22% in 2007
- Gas production is at all-time high
- Renewable generation, including large hydro, grew from 8% to 13% of US mix over 2007-13
- PV costs down by 80% since 2008; wind projects signing PPAs for \$20-35/MWh in some regions
- Distributed generation has emerged as a transformative phenomenon
- More than \$250bn invested in US clean energy over last five years

## Changes in how we consume energy

- Total annual energy use fell 5.0% while GDP grew by 6% over 2007-13
- Gas consumption is at all-time high
- Energy efficiency financing from utilities complying with state standards and from ESCOs is on upward trend, with \$12bn invested in 2012
- Decreasing energy intensity in industrial sectors
- Intelligent homes and a more intelligent grid on the horizon; 53m smart meters deployed
- Hybrid and plug-in electric vehicle sales in US totalled 600,000 in 2013

## 2013 developments

- Transformation continues – eg, natural gas production and consumption increased; cumulative solar capacity grew by 50%; efficiency policy and financing moved forward
- ...albeit with some detours – eg, total clean energy investments down from 2011 peak; energy consumption and emissions ticked up

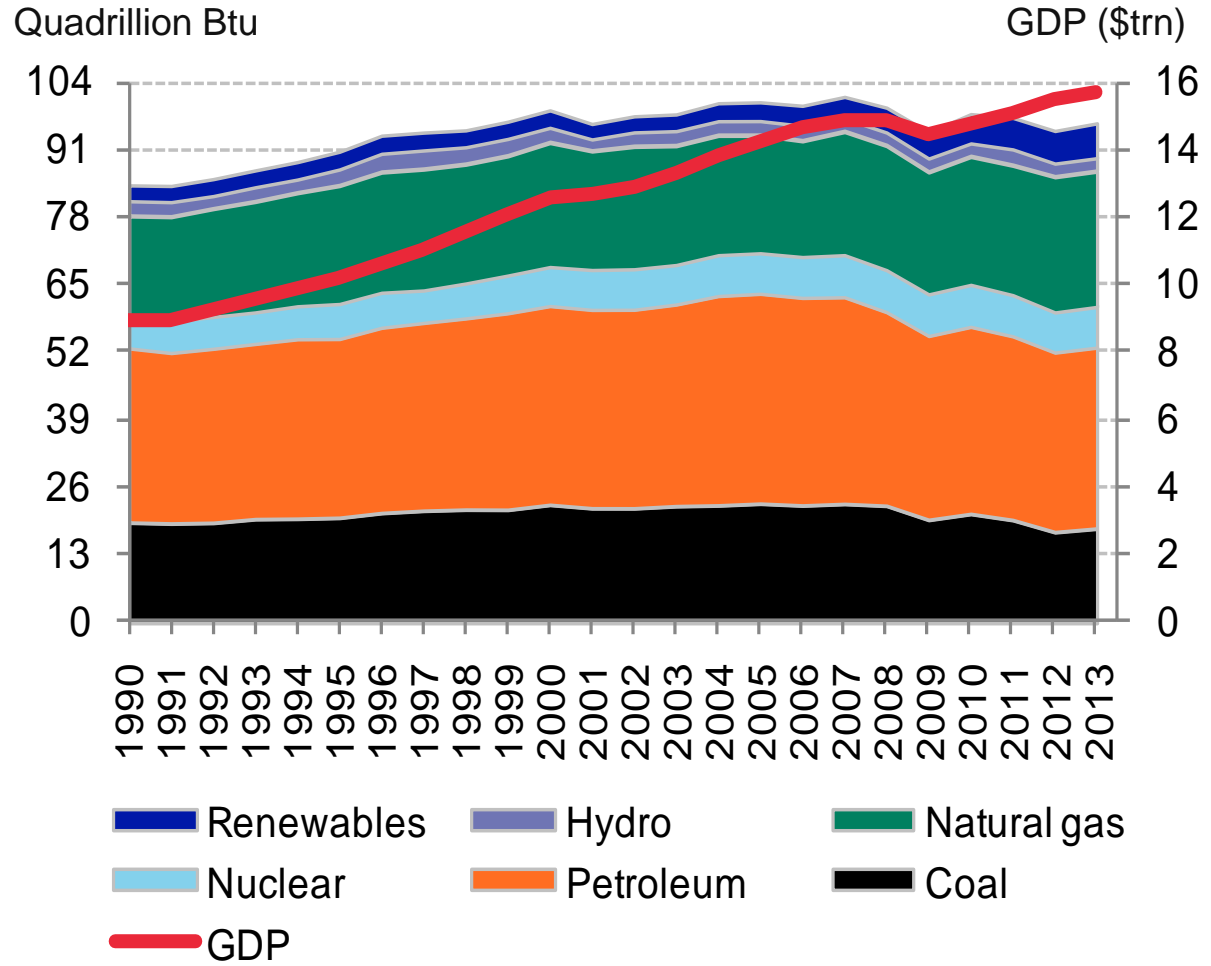


# THE FACTBOOK...

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- Aims to augment existing, reputable sources of information on US energy
- Focuses on **renewables, efficiency, natural gas**
- **Fills important data gaps** on areas such as the contribution of distributed generation and investment trends for all sectors
- Is **current** through 2013 wherever possible
- Employs Bloomberg New Energy Finance data in most cases, augmented by EIA, FERC, ACEEE, ICF International, LBNL, and other sources where necessary
- Contains the very latest information on **new energy technology costs**
- Has been graciously underwritten by the Business Council for Sustainable Energy
- Is in its second edition (first published in January 2013)

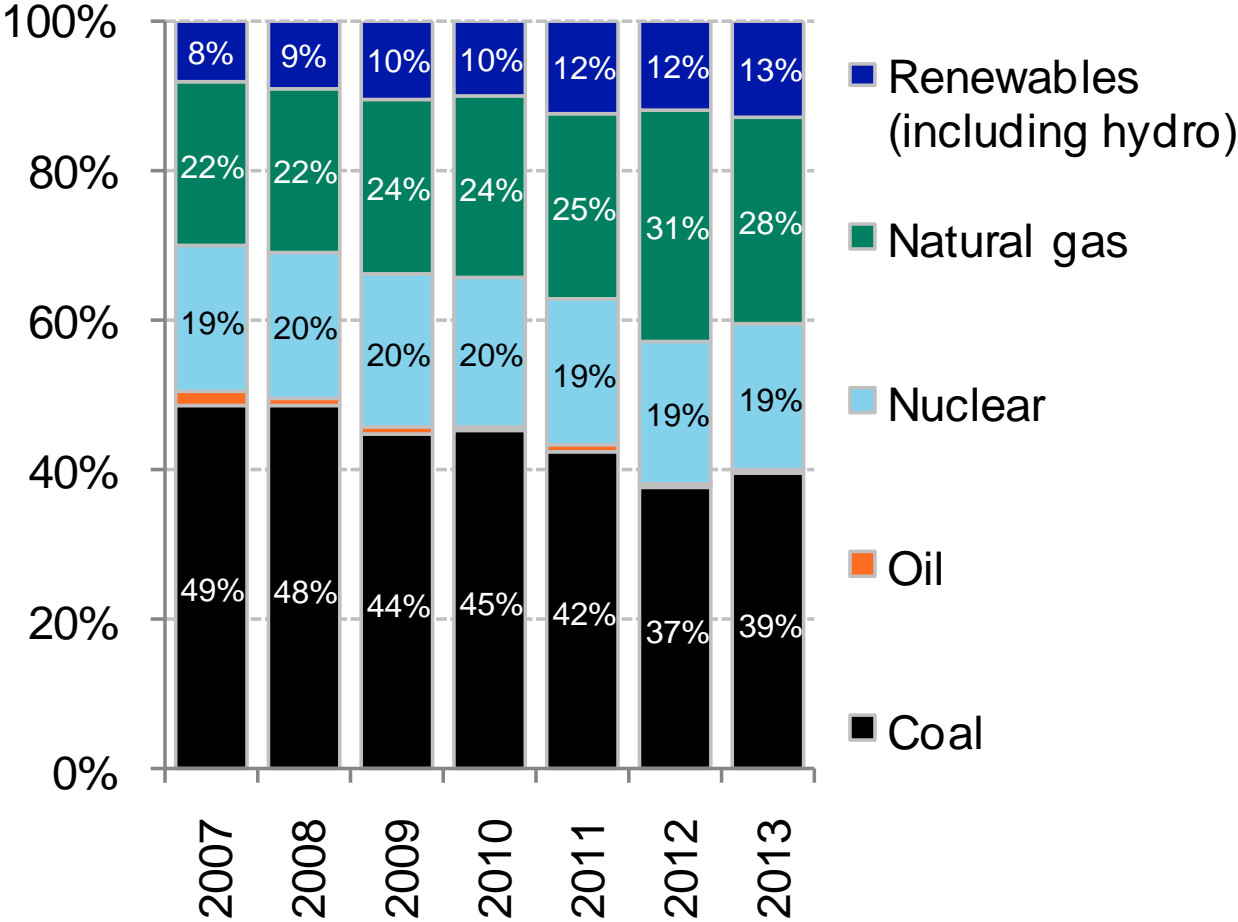
# US PRIMARY ENERGY CONSUMPTION VS. GDP, 1990-2013



Notes: GDP is real and chained (2009 dollars); 2013 value is based on economic forecasts from Bloomberg Terminal. Values for 2013 are projected, accounting for seasonality, based on latest monthly values from EIA (data available through October 2013).

Source: Bloomberg New Energy Finance, Bureau of Economic Analysis, EIA

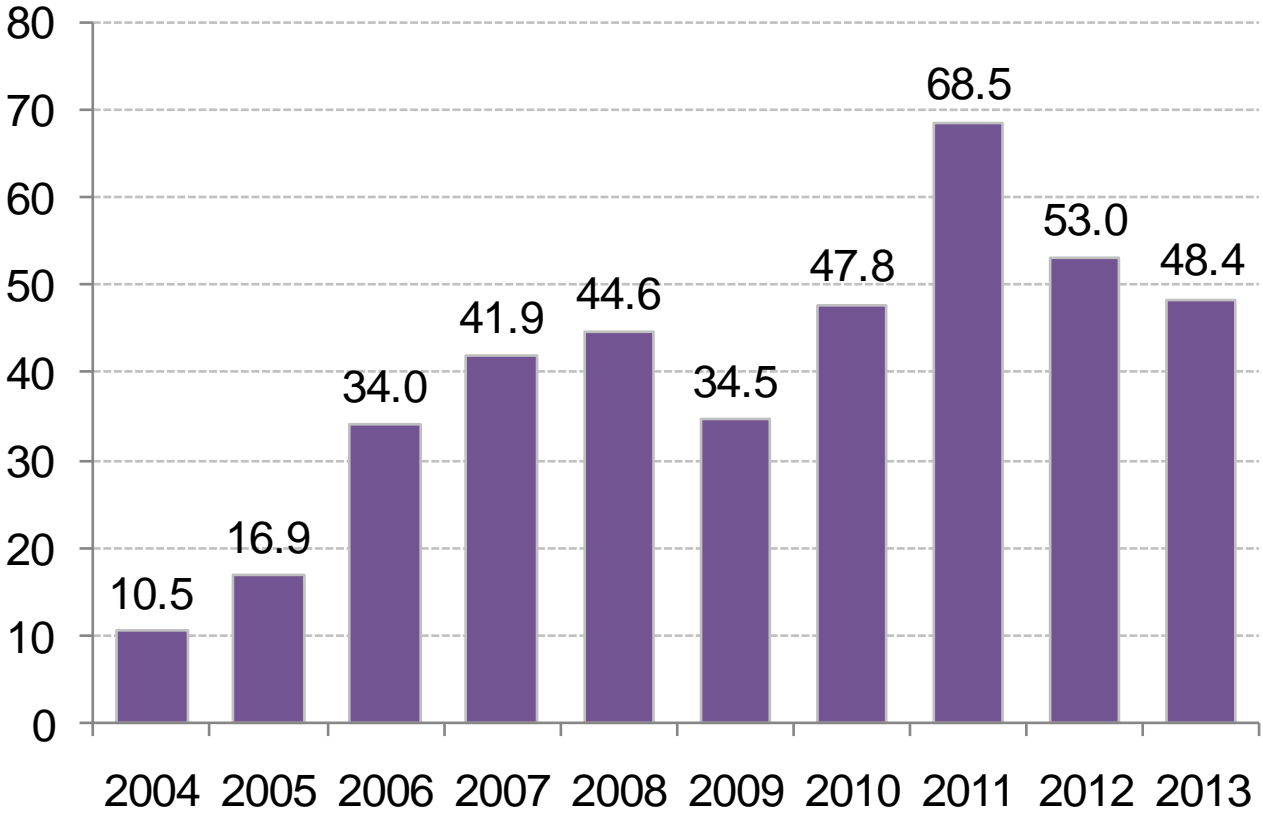
# US ELECTRICITY GENERATION BY FUEL TYPE, 2007-13 (%)



Notes: Contribution from 'Other' is not shown; the amount is minimal (<0.4%) and consists of miscellaneous technologies including hydrogen and non-renewable waste. The hydropower portion of 'Renewables' includes negative generation from pumped storage. Values for 2013 are projected, accounting for seasonality, based on latest monthly values from EIA (data available through October 2013).

Source: Bloomberg New Energy Finance, EIA

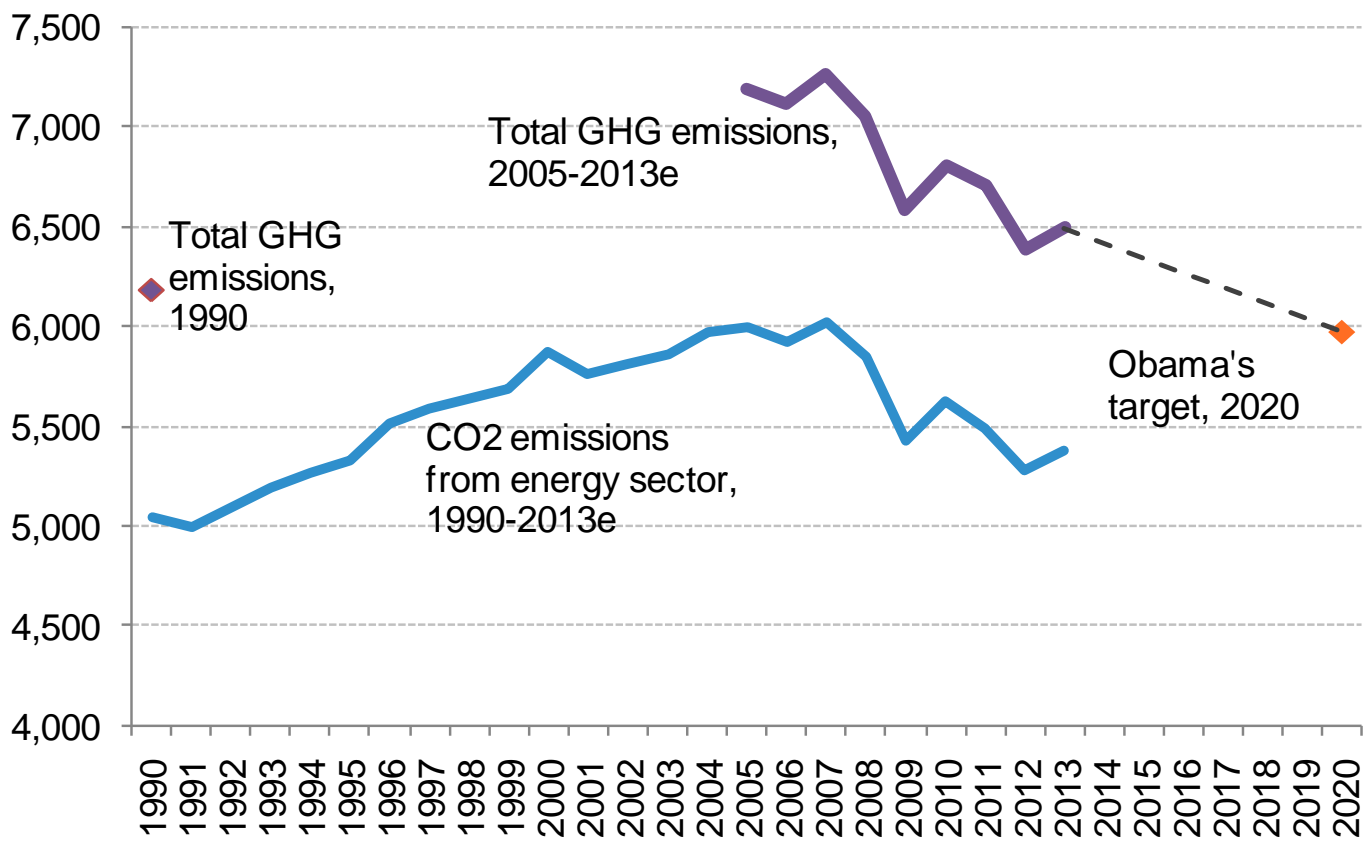
# TOTAL NEW US INVESTMENT IN CLEAN ENERGY



Notes: Shows total clean investment in the US across all asset classes (asset finance, public markets, venture capital/private equity), as well as corporate and government R&D and small distributed capacity. Values include estimates for undisclosed deals and are adjusted to account for re-invested equity. Values are in nominal dollars and are not normalized in any way. Clean energy here means: renewable energy, energy smart technologies (digital energy, energy efficiency, fuel cells, storage, advanced transportation), and other low-carbon technologies and activities (carbon markets value chain, companies providing services to the clean energy industry).

Source: Bloomberg New Energy Finance

# US GHG EMISSIONS, ENERGY SECTOR AND ECONOMY-WIDE (MTCO2E)



Notes: 'Copenhagen target' assumes 17% reduction by 2020 on 2005 levels of total GHG emissions. The actual language of the announcement left vague whether the reductions applied to economy-wide emissions or just emissions of sectors that would have been covered under a federal cap-and-trade scheme. Values for 2013 are projected, accounting for seasonality, based on latest monthly values from EIA (data available through September 2013). Data for total GHG emissions comes from EPA's Inventory of US Greenhouse Gas Emissions and Sinks (1990-2011), published April 2013. Data for CO2 emissions from the energy sector comes from the EIA's Monthly Energy Review.

Source: Bloomberg New Energy Finance, US EPA, US EIA.



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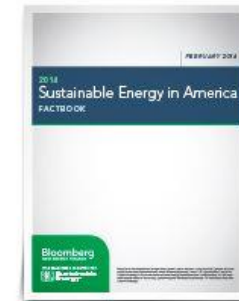
The Business Council for  
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## The *Sustainable Energy in America Factbook* provides the leading independent analysis and market intelligence for clean energy sectors in the U.S.

Today's energy mix in the United States is radically different from that of a generation ago.

The 2014 edition of the *Sustainable Energy in America Factbook* – produced for the Business Council for Sustainable Energy by [Bloomberg New Energy Finance](#), provides up-to-date, accurate market intelligence about the broad range of industries — energy efficiency, renewable energy and natural gas — that are contributing to the country's move towards cleaner energy production and more efficient energy usage. Findings from the 2014 *Factbook* include:

- Natural gas and renewable energy provided over 40 percent of U.S. electricity generation in 2013, down slightly from 2012, but up 10 percent since 2007.
- U.S. energy use has fallen 5 percent from 2007 to 2013, while GDP is estimated to have grown by 6 percent. This demonstrates the increased energy productivity of the U.S. economy.
- Clean energy generation sources and energy efficiency improvements have driven U.S. greenhouse gas emissions down nearly 10 percent since 2005, dramatically reversing decades of increases. The U.S. is now more than halfway to reaching President Obama's goal of a 17 percent reduction from 2005 levels by 2020.



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### Industry Focus:

[Energy Efficiency](#) | [Natural Gas](#) | [Renewable Energy](#)

### Quick Facts on:

[Alternative Fuel Vehicles](#) | [Biomass/Waste-to-Energy](#) | [Carbon Capture and Storage](#) | [Combined Heat and Power](#) | [Fuel Cells](#) | [Hydropower](#) | [Smart Grid](#)

## Energy efficiency, natural gas and renewable energy are leading America's energy transformation.

**THE CLEAR PICTURE ON Sustainable Energy**

Find out what you need to know about state of America's clean energy transformation!

Natural gas and renewable energy sources are both gaining market share. Energy efficiency gains have reduced energy demand dramatically.

Use these resources to get an inside look at today's cleaner, more diverse energy mix.

- > Executive Summary
- > Factbook Highlights
- > Slideshow
- > Video: 2014 Factbook Trends - Michel Di Capua, BNEF



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## GET THE FACTS

To view the **Sustainable Energy in America 2014 Factbook**, visit the link below



[www.bcse.org/  
sustainableenergyfactbook](http://www.bcse.org/sustainableenergyfactbook)

# Social Media

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The Business Council for Sustainable Energy. A coalition of the renewable energy, energy efficiency, & natural gas industries.  
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Joined June 2011

225 Photos and videos

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BCSE Clean Energy @BCSECleanEnergy · 2h  
.@FirstSolar to construct 141 MW #solar plant in Chile's Atacama Desert w/ @OPICgov financing apne.ws/1m38Uuf

BCSE Clean Energy @BCSECleanEnergy · 4h  
J Blum, @PolyisoPIMA tours @AppState entry "Maison Reciprocity," 10 in of polyiso => "passive haus" thermal perf. ow.ly/i/64zkt

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.@PolyisoPIMA is a "kilowatt" sponsor of @Appstate Univ entry in #Solar Decathlon Europe @SDE2014, 1 of 3 US schools bit.ly/ViFuR0

RT @aga\_naturalgas Check out the latest issue of #NatGas Market Indicators by @RichardMeyerDC on @themotleyfool ow.ly/yxbSA

BCSE Clean Energy @BCSECleanEnergy · 5h  
Small window of time for #energy legislation to reach Senate floor this year (28 days) via @TheHill bit.ly/lvnWv3a

BCSE Clean Energy @BCSECleanEnergy · 5h  
New poll by @ACORE shows biz leaders' strong support for #renewables, carbon limits bit.ly/inYFEkV

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Business Council for Sustainable Energy  
Organization · Professional Services · Add A Category

332 Likes 1 Visit

Promote Your Page  
Reach up to 1,800,000 people near Washington

What have you been up to?

Business Council for Sustainable Energy shared a link.  
Renewables to Get Most of \$7.7 Billion Power Investments  
Renewable energy may reap as much as two-thirds of the \$7.7 billion in investment forecast for building new power plants by 2030 as declining costs make it more competitive with fossil fuels.

Business Council for Sustainable Energy shared a link.  
"Wind energy has been the primary source of new renewable energy in Michigan," John Quackenbush, Chairman Michigan Public Service Commission.  
One reason: It's about half as expensive to produce than utility companies initially expected, down to as little as \$0.04/kWh last year from more than \$100/MWh in 2009.  
Read more: http://bit.ly/1YqzGZ2

Michigan's wind energy industry soaring  
renewablebiz.com  
The shift to renewable energy sources in Michigan—particularly wind—has picked up in the past few years.





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***Thank you***

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