

Warming oceans make parts of world 'uninsurable', say insurers

By Alistair Gray and Pilita Clark in London

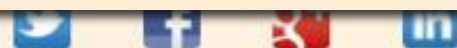
Insurers have issued a rare warning that the speed at which the oceans are warming is threatening their ability to sell affordable policies in a growing number of places around the world.

Parts of the UK and US state of Florida were already facing "a risk environment that is uninsurable", said the global insurance industry trade body, the Geneva Association.

They were unlikely to be the last areas with such problems, said John Fitzpatrick, the association's secretary-general.

He said governments needed to invest more in flood defences and tighten building restrictions in risky locations to mitigate the fallout from extreme weather hazards, citing losses from superstorm Sandy, which struck particularly hard in New York and New Jersey last October and cost the economy about \$65bn.

COMPANIES VIDEOS



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US emissions plan faces court challenges

'Climate bomb' warning over China coolant release



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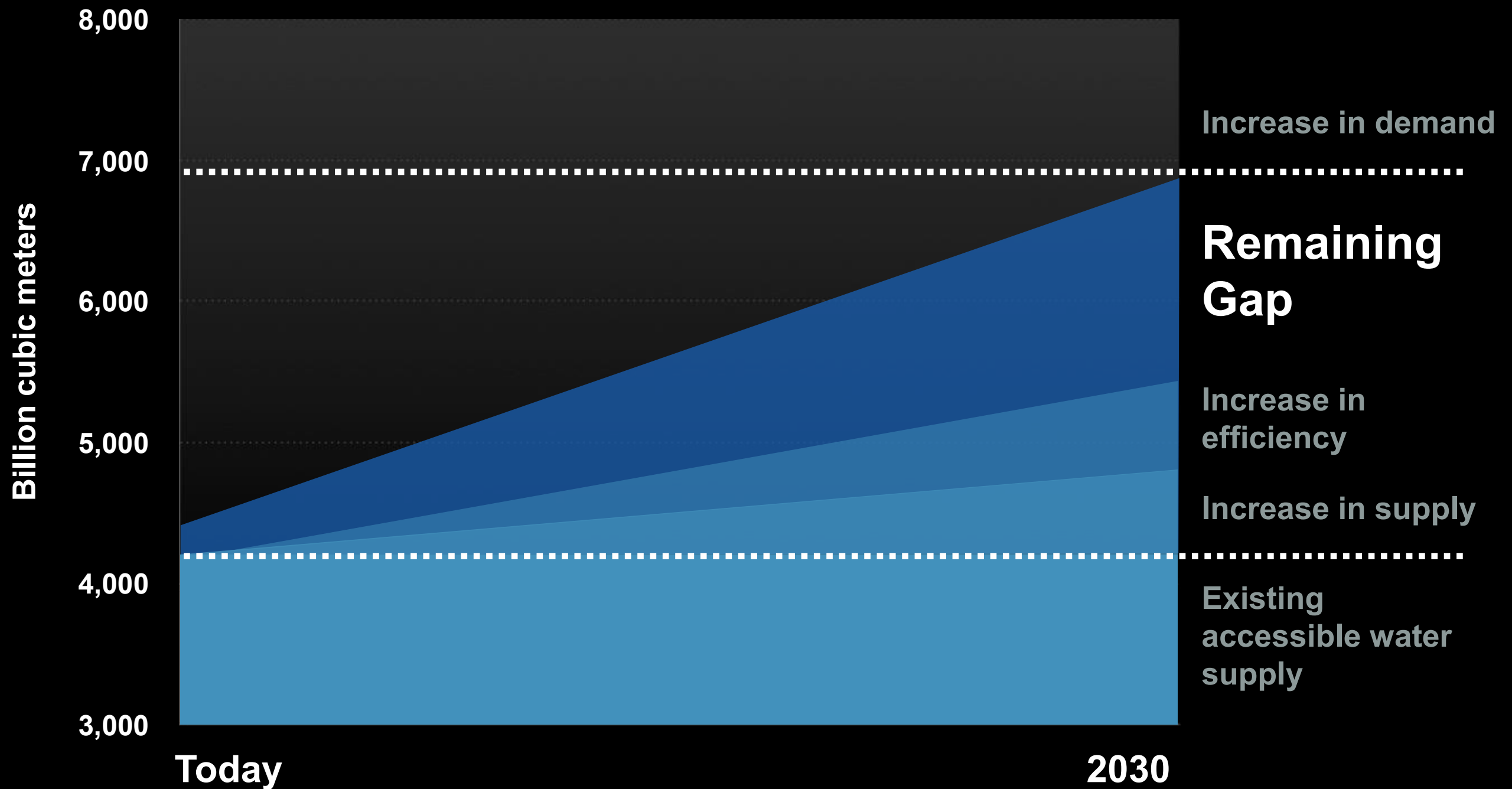
[Profit vs principles](#)

[Japan's future depends on reform](#)

Southwest Kansas

At the current rate of depletion,
“35% of the southern High Plains will be unable to
support irrigation within the next 30 years.”

Meeting Our Water Needs



Every National Academy of Science of Every Major Country in the World Confirms Anthropogenic Global Warming

**African Academy
of Science**

Australia

Belgium

Brazil

Cameroon

Canada

The Caribbean

China

France

Ghana

Germany

Indonesia

Ireland

Italy

India

Japan

Kenya

Madagascar

Malaysia

Mexico

Nigeria

New Zealand

Russia

Senegal

South Africa

Sudan

Sweden

Tanzania

Turkey

Uganda

United Kingdom

United States

Zambia

Zimbabwe

National Academies *Rejecting* the Science of Anthropogenic Global Warming

None

Every Major Scientific Society in the World in Fields Related to the Study of Global Warming Confirms the Consensus

American Academy of Pediatrics

American Association for the Advancement of Science

American Association of Wildlife Veterinarians

American Chemical Society

American College of Preventive Medicine

American Geophysical Union

American Medical Association

American Meteorological Society

American Public Health Association

American Physical Society

American Quaternary Association

American Society for Microbiology

**And we have
the solutions
at hand...**

World's Largest Wind Turbine Goes Online

Østerild, Denmark
October 6, 2012

Deployed offshore,
this turbine can
power 6,000 homes



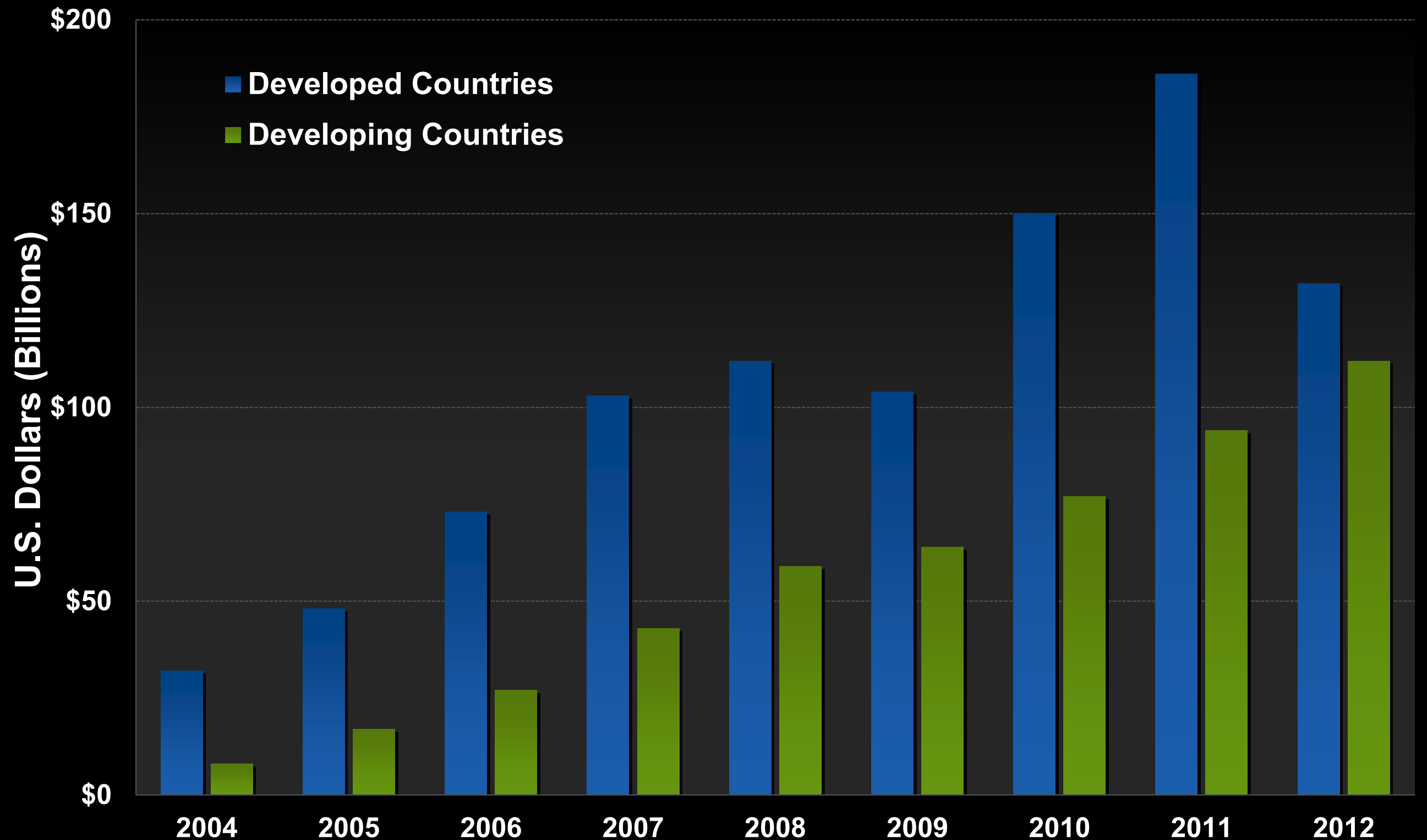
The London Array, England



The world's largest offshore wind farm, the London Array, can power **470,000** homes

New Investment in Renewable Energy

2004 – 2012



Source: © 2013 Frankfurt School of Finance & Management gGmbH, "Global Trends in Renewable Energy Investment 2013," Fig. 4
Data: UNEP, Bloomberg New Energy Finance

**If a 14-year-old
boy can build
a working
windmill to
power his
village in
Malawi, we
can solve the
climate crisis**



Solar-Powered Laptops

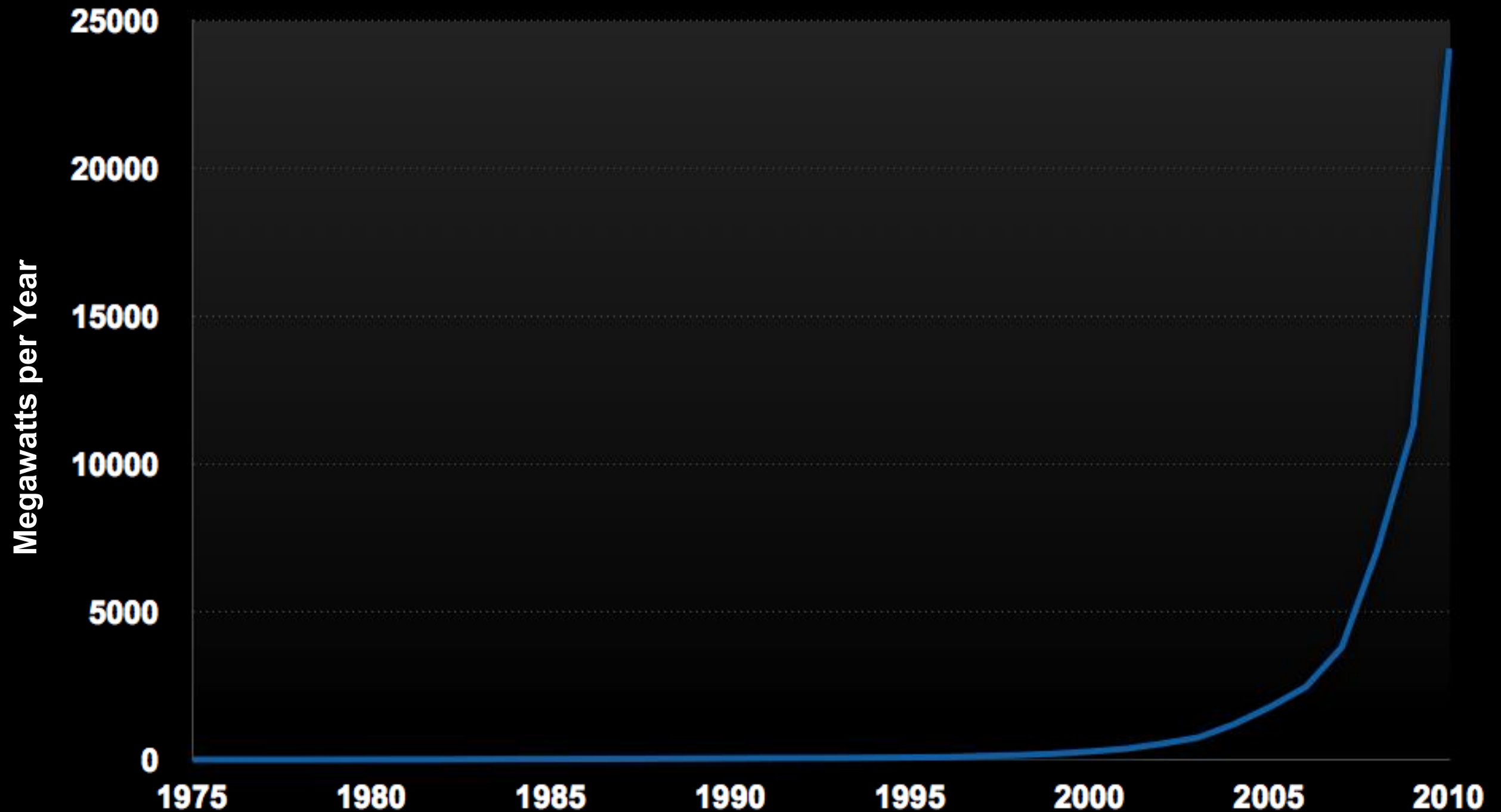
Sierra Leone, Africa





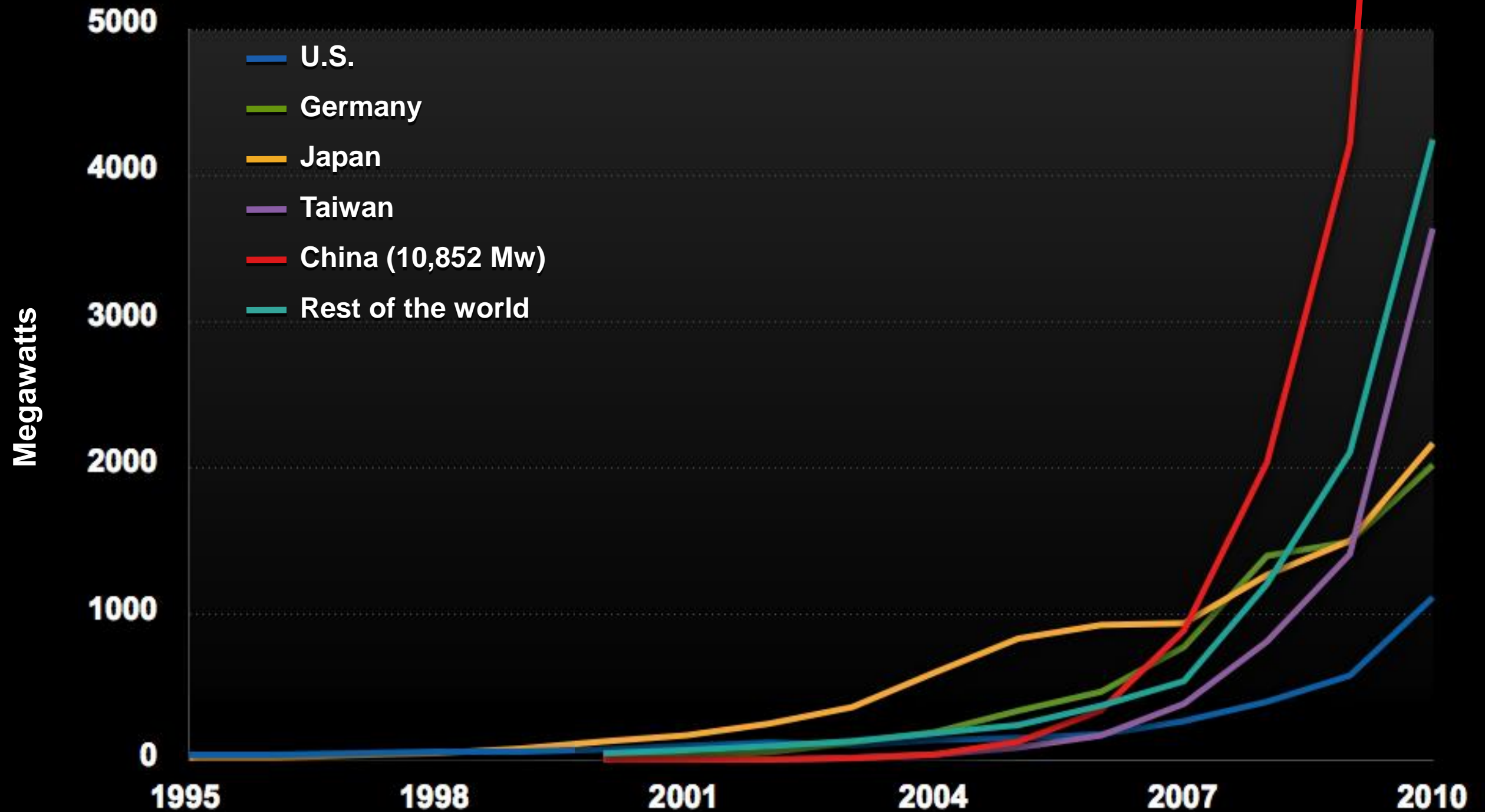
World Solar Photovoltaics Production

Annual Production 1975 – 2010



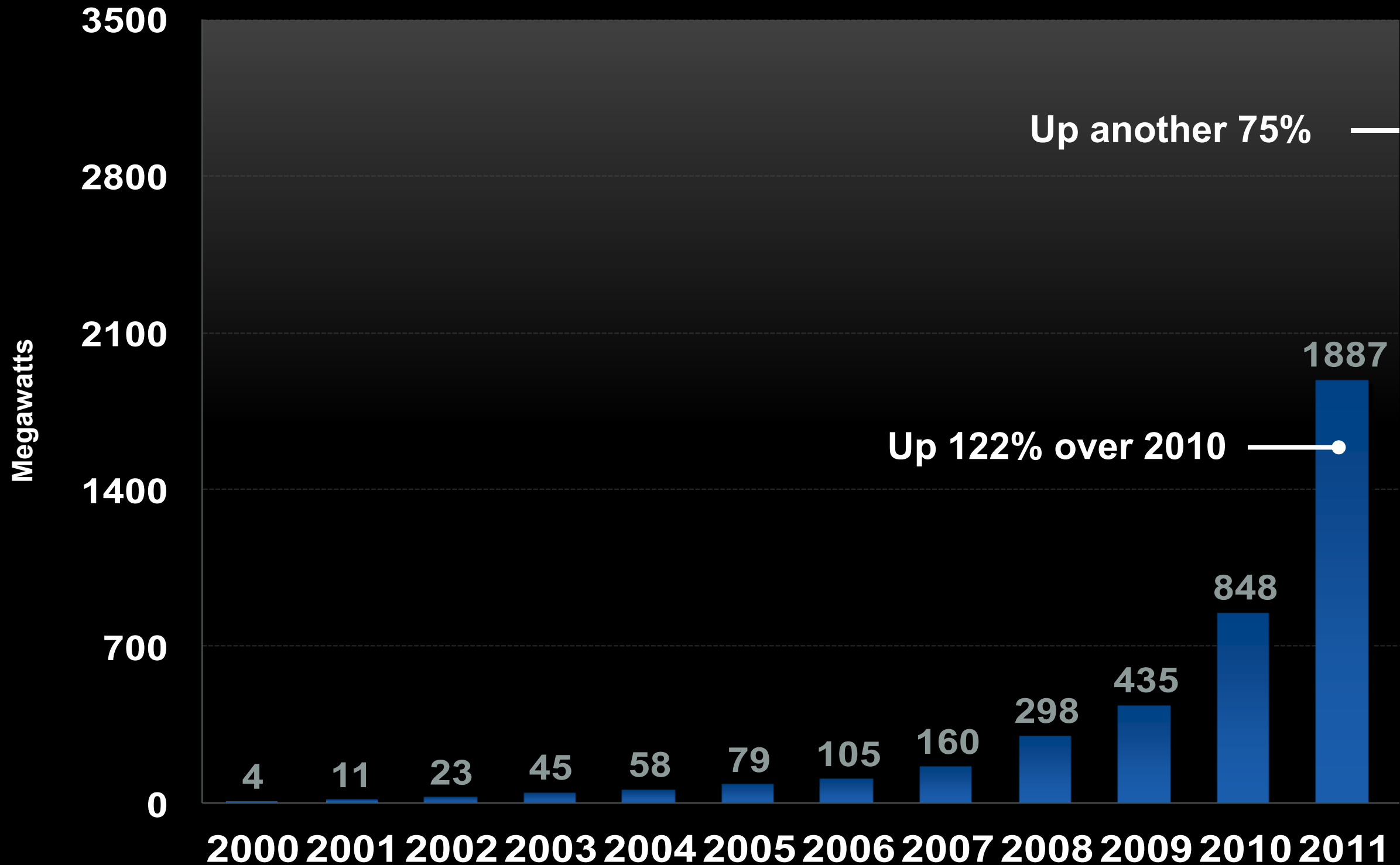
Annual Solar PV Production by Country

1995 – 2010



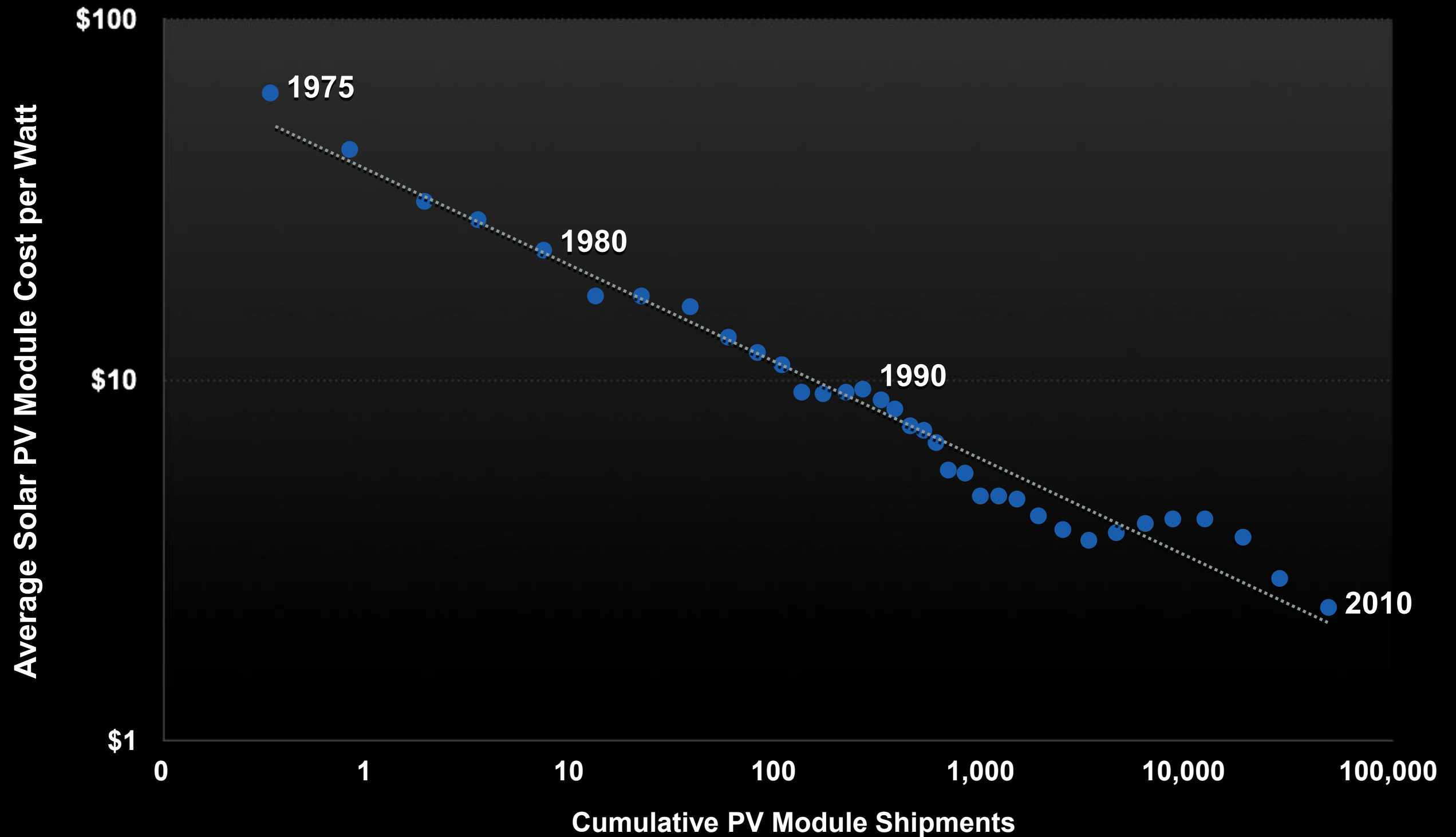
U.S. Solar PV Installations

Each Year, in Megawatts



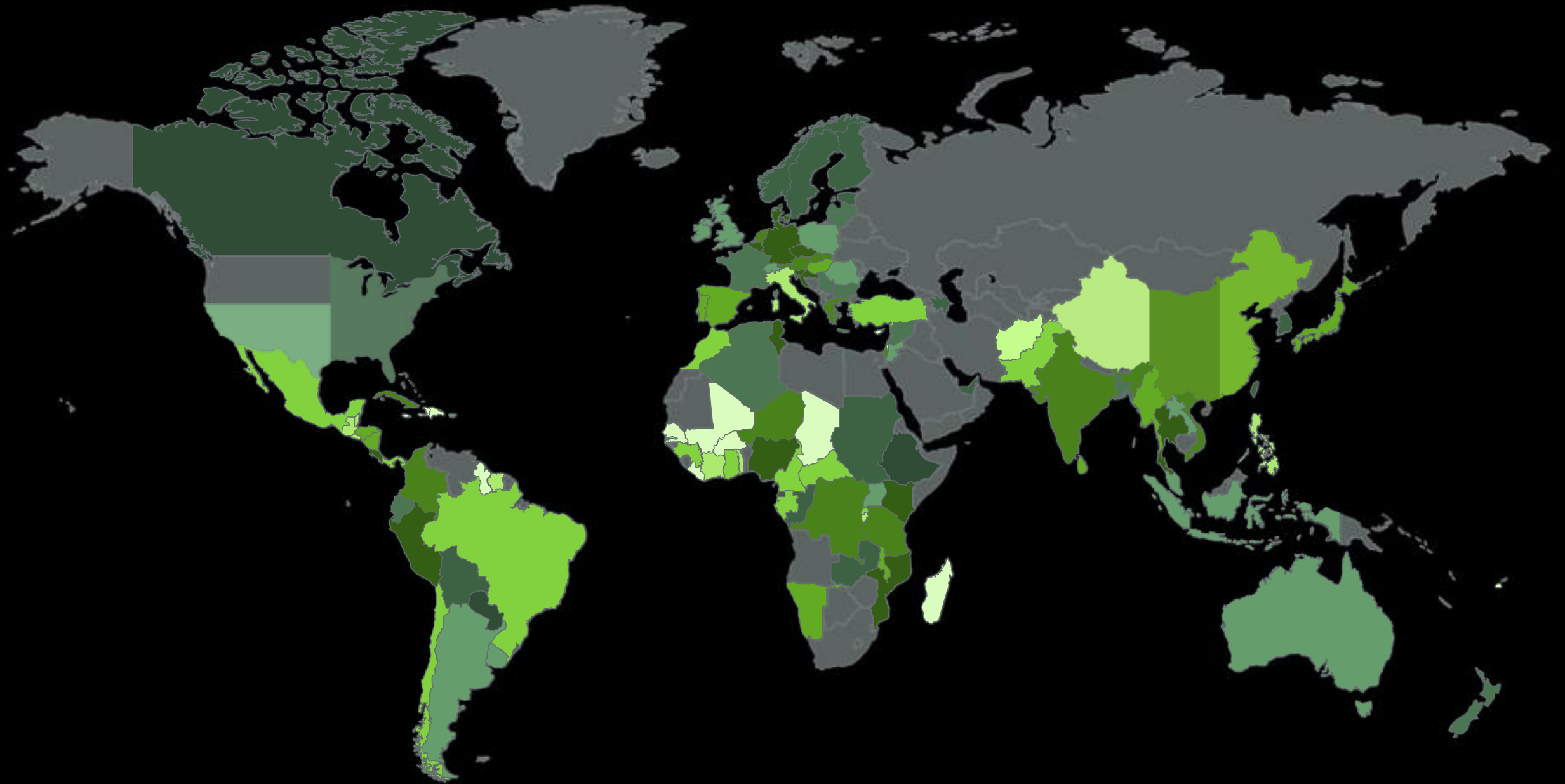
Solar Photovoltaics Cost

Cost Declines as Production Increases



Countries Achieving Solar Grid Parity

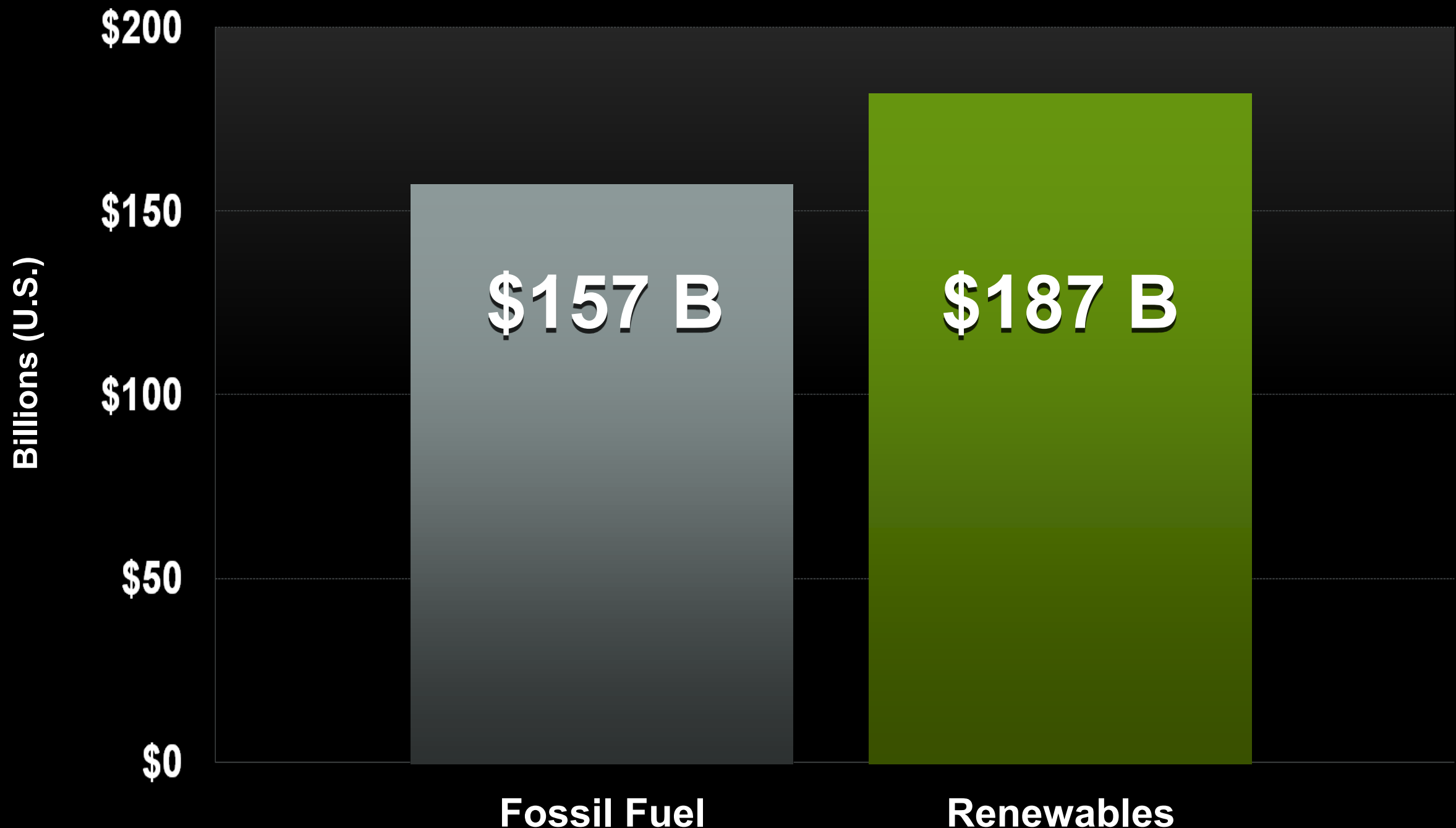
Residential



2010 • 2011 • 2012 • 2013 • 2014 • 2015 • 2016 • 2017 • 2018 • 2019 • 2020


In 2010, Renewable Investments Exceeded Those in Fossil Energy for the First Time

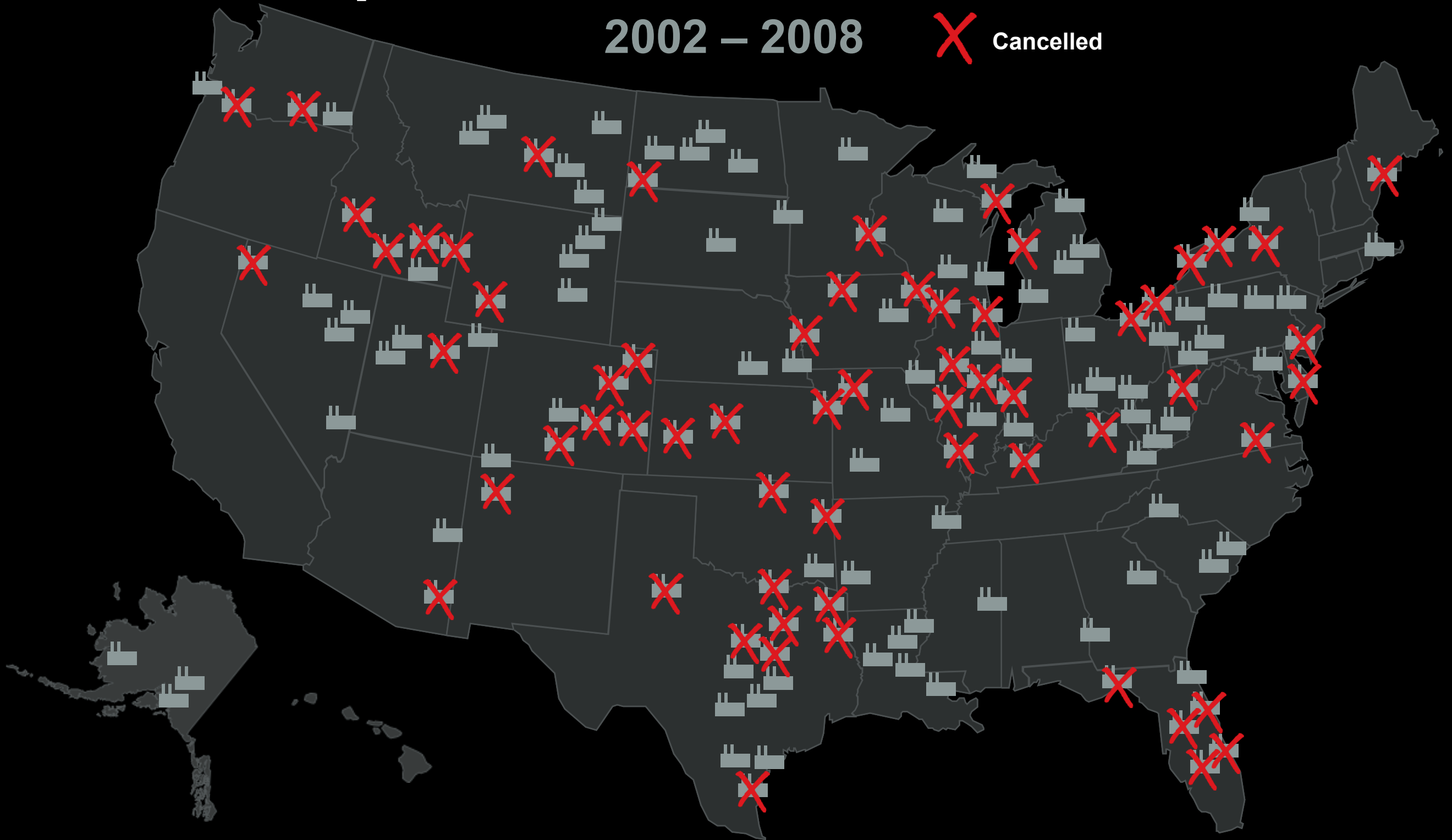
Global Investment in Energy Projects



Proposed New U.S. Coal Plants

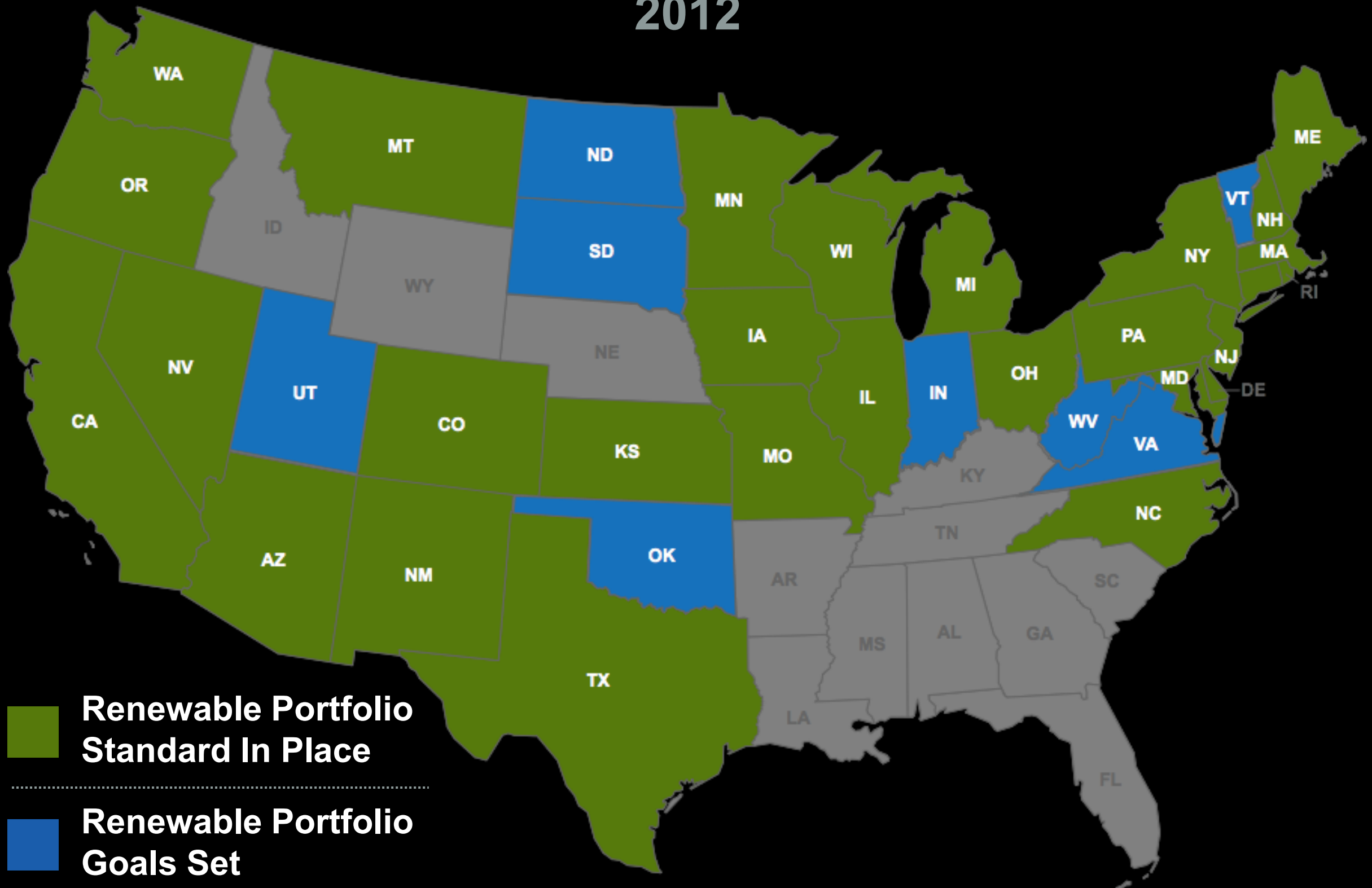
2002 – 2008

 Cancelled



Renewable Energy Policies by State

2012



Green Energy Progress

How Do Projections Compare With Reality?

1999 Projection

U.S. wind
capacity will
reach 10
gigawatts (GW)
by 2010

Reality

Goal met in 2006

In 2010 we
exceeded it by

4x

Green Energy Progress

How Do Projections Compare With Reality?

2000 Projection

**Worldwide
wind capacity
will reach 30
GW by 2010**

Reality

**By 2011 that goal
was exceeded by
a factor of**

7

Green Energy Progress

How Do Projections Compare With Reality?

2000 Projection

China will
install 2 GW of
wind by 2010

Reality

China exceeded
that goal by

22x

And may reach
150 GW by 2020

Green Energy Progress

How Do Projections Compare With Reality?

2002 Projection

The solar
energy market
will grow 1 GW
per year by
2010

Reality

The market is
now growing

17x

faster

Green Energy Progress

How Do Projections Compare With Reality?

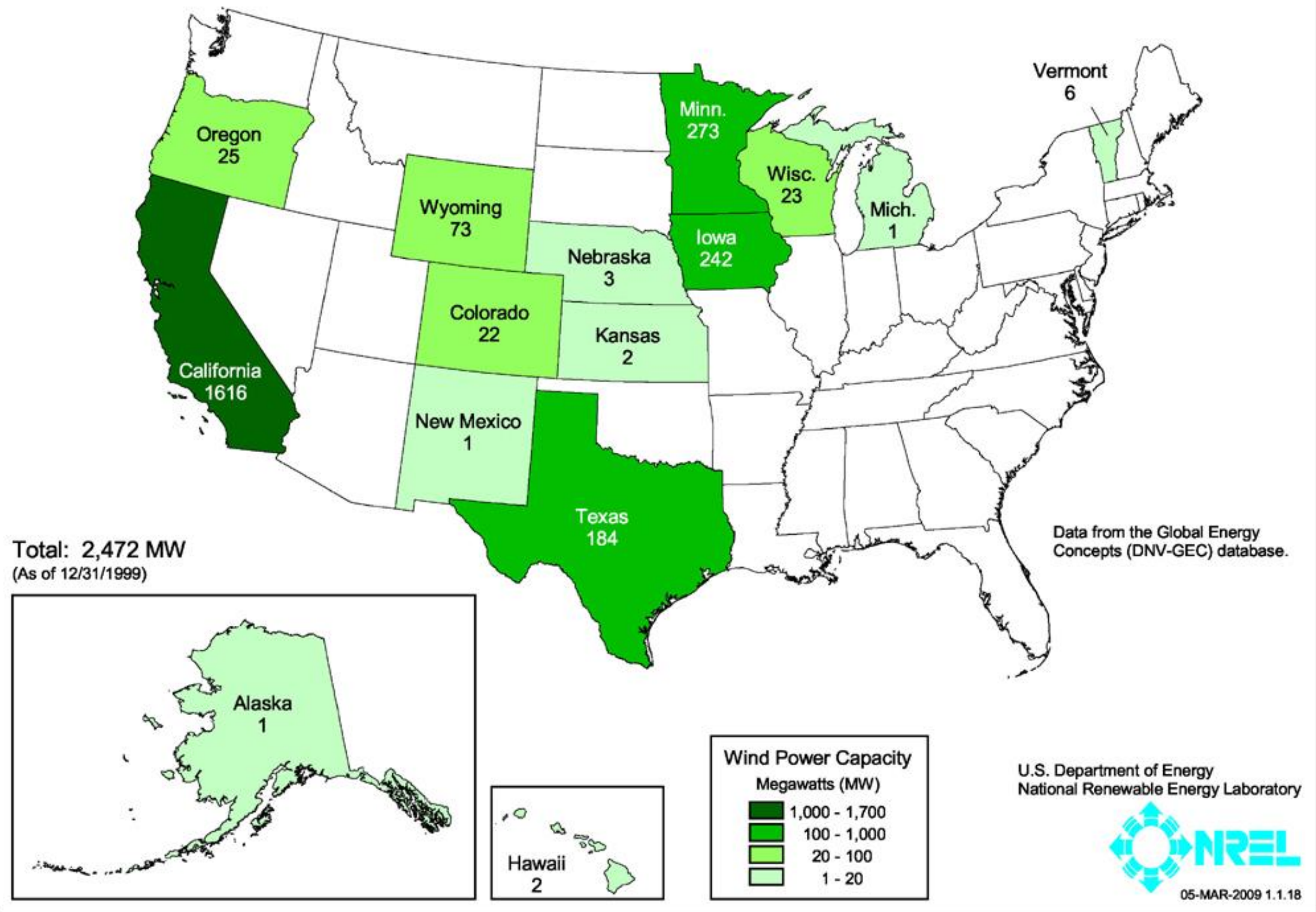
1996 Projection

China will
install 500
megawatts of
solar by 2020

Reality

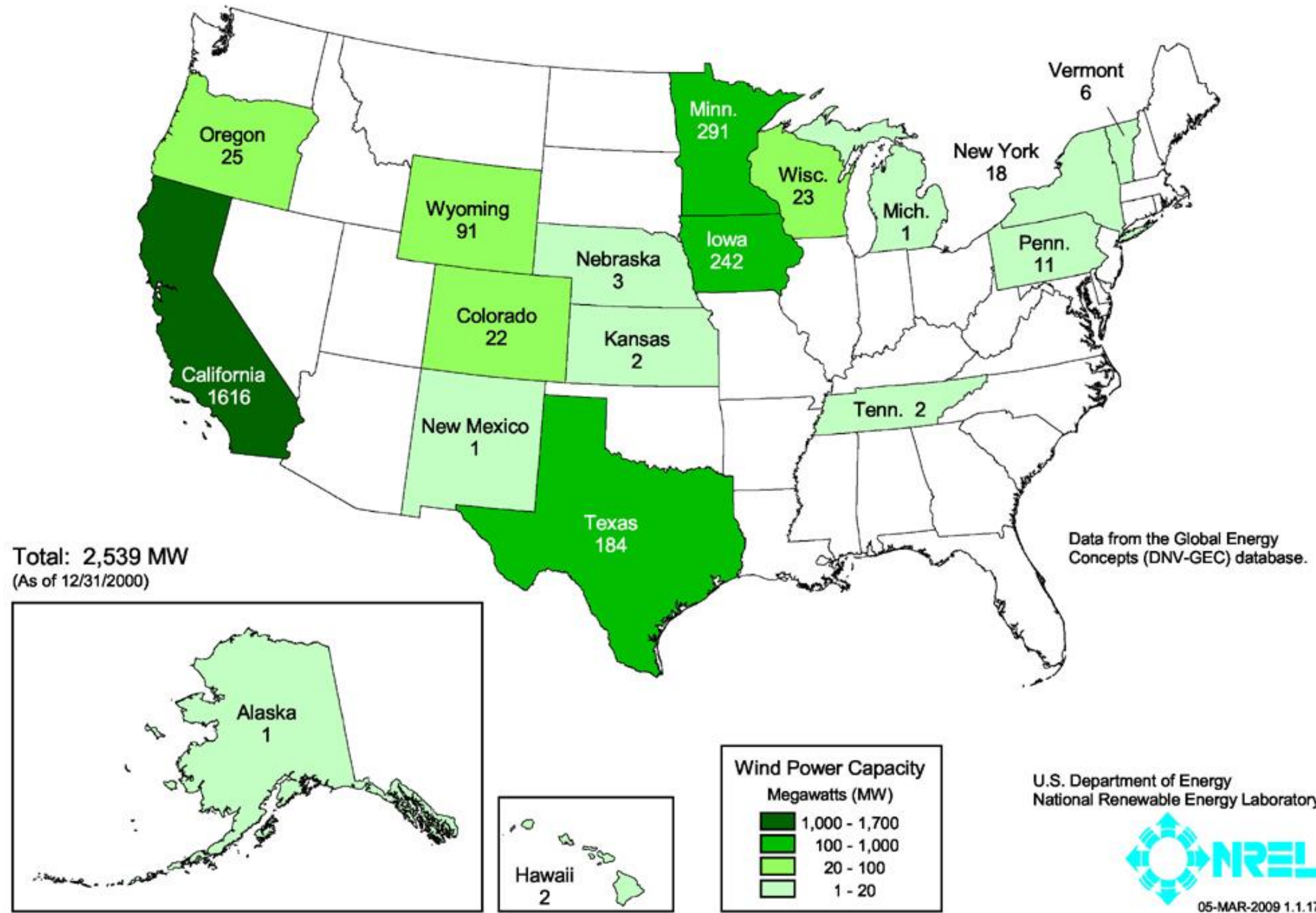
They reached
**Almost
Double**
that amount
by 2010

1999 Year End Wind Power Capacity (MW)

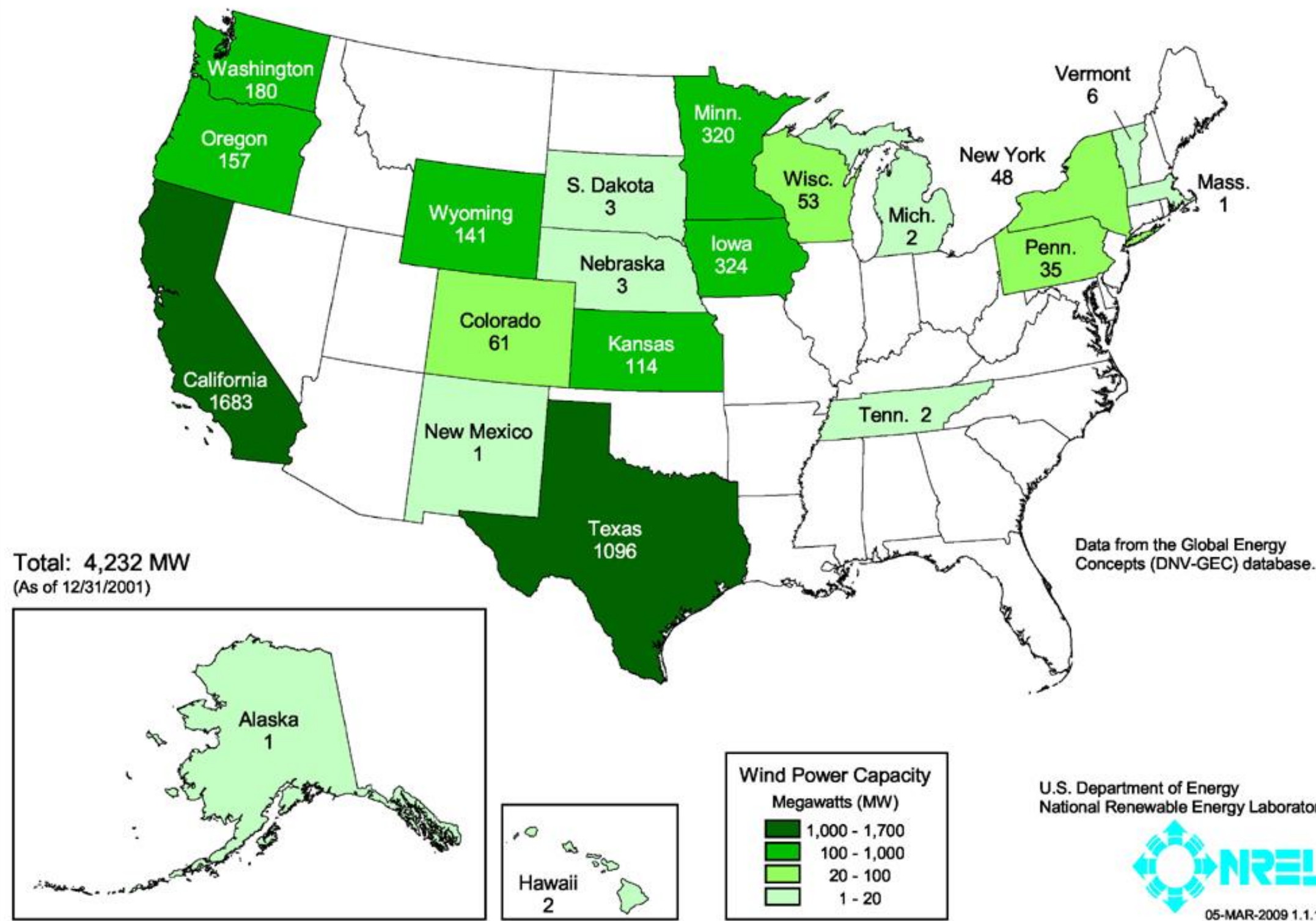


Source ERCOT

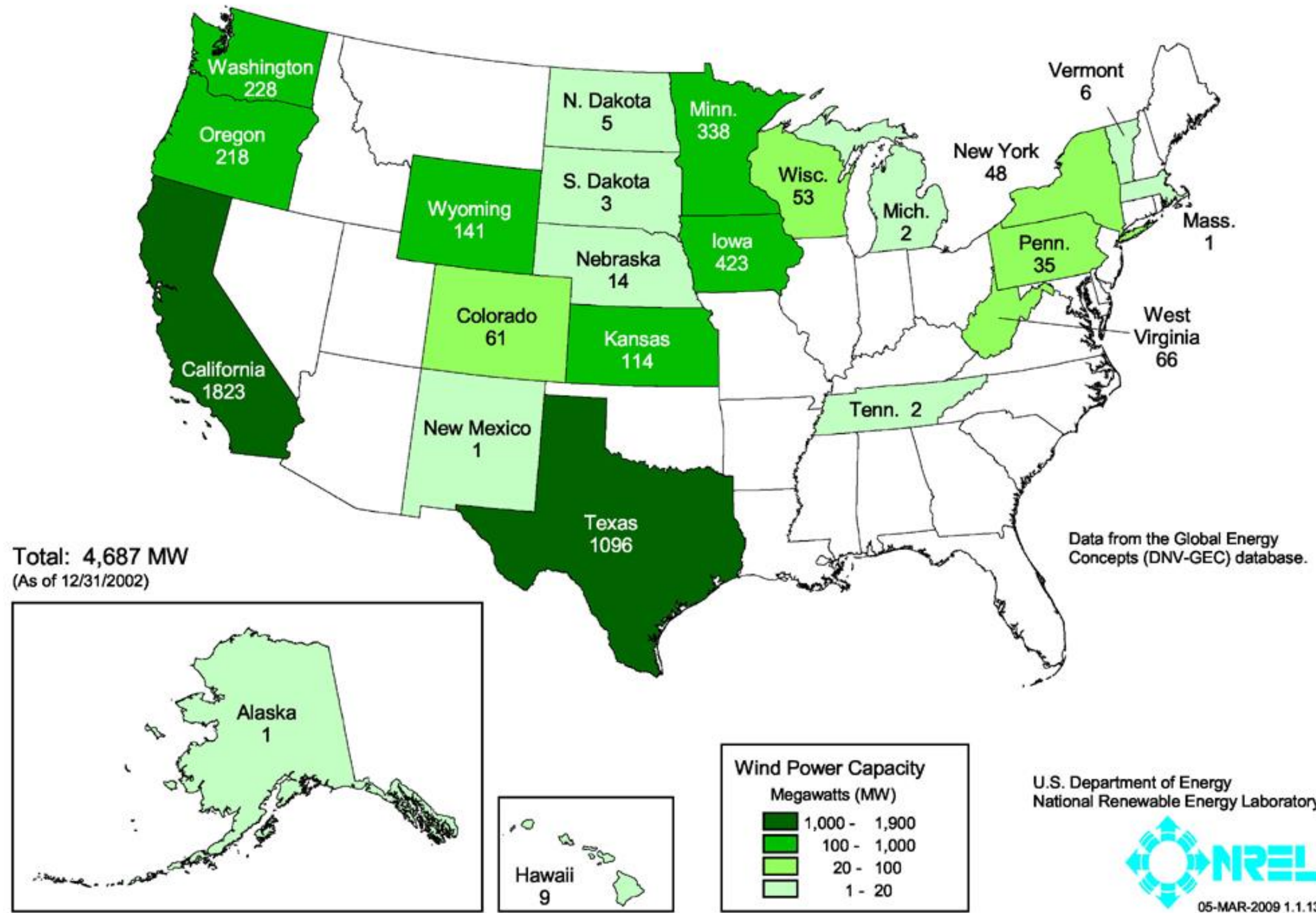
2000 Year End Wind Power Capacity (MW)



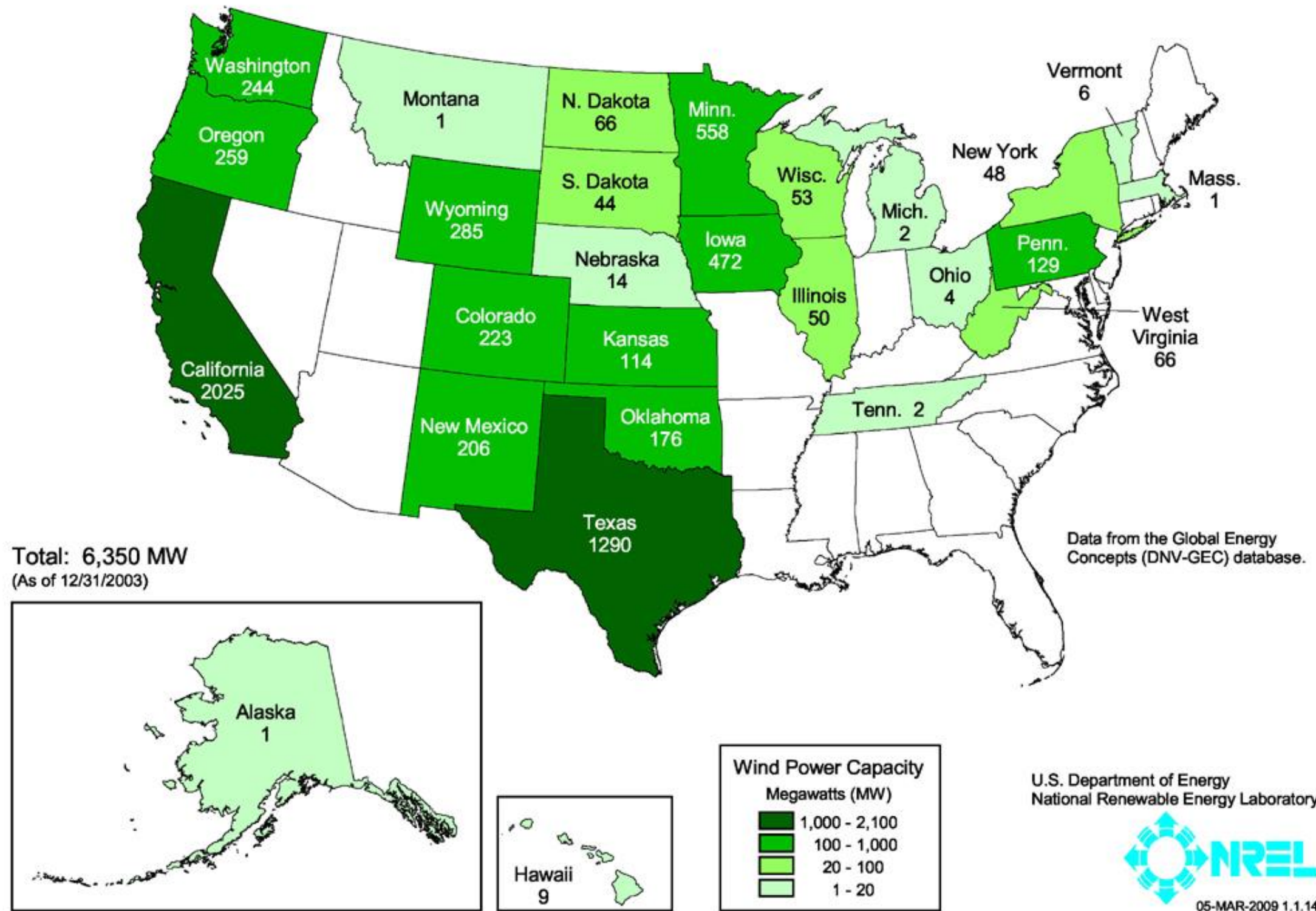
2001 Year End Wind Power Capacity (MW)



2002 Year End Wind Power Capacity (MW)

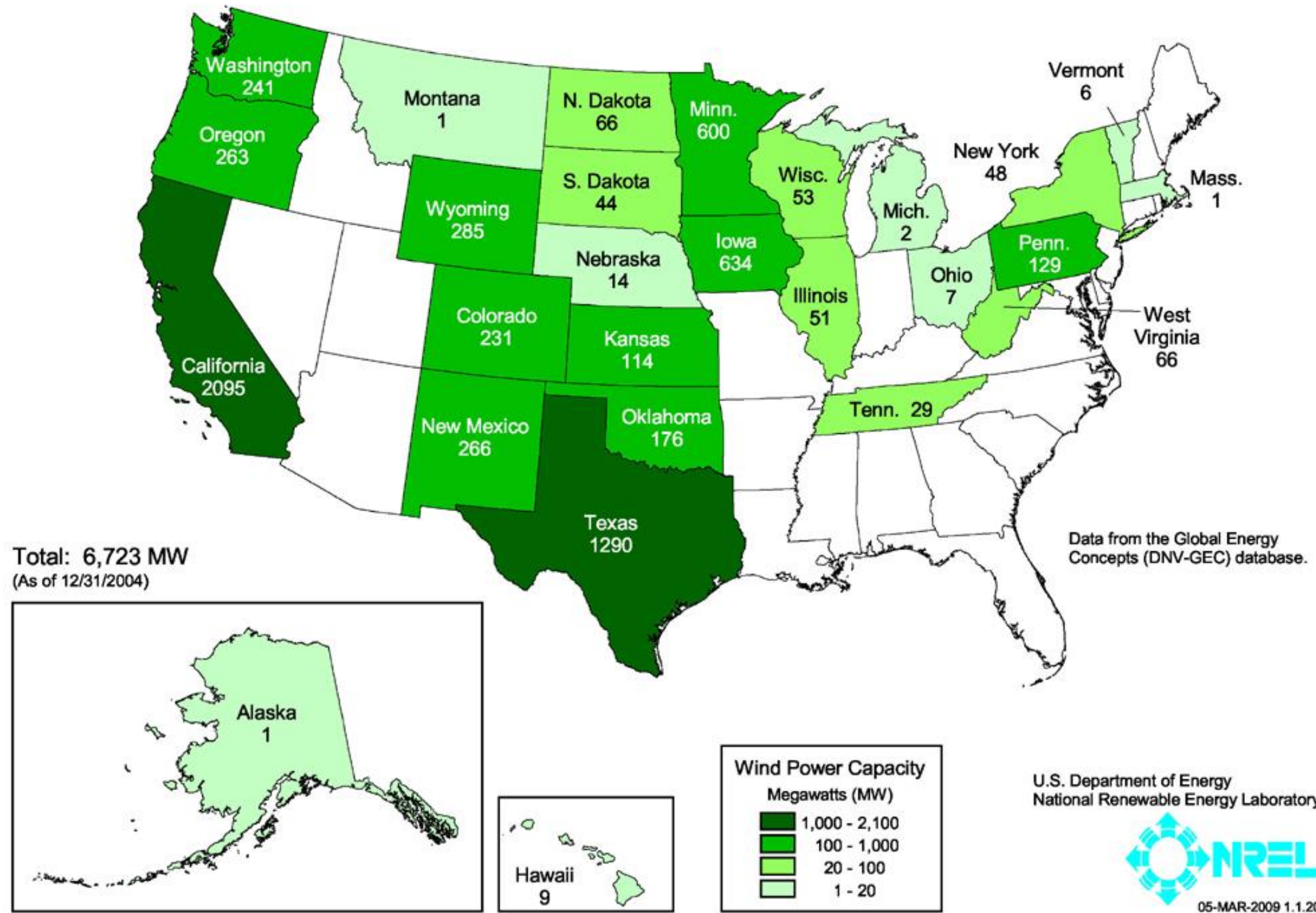


2003 Year End Wind Power Capacity (MW)

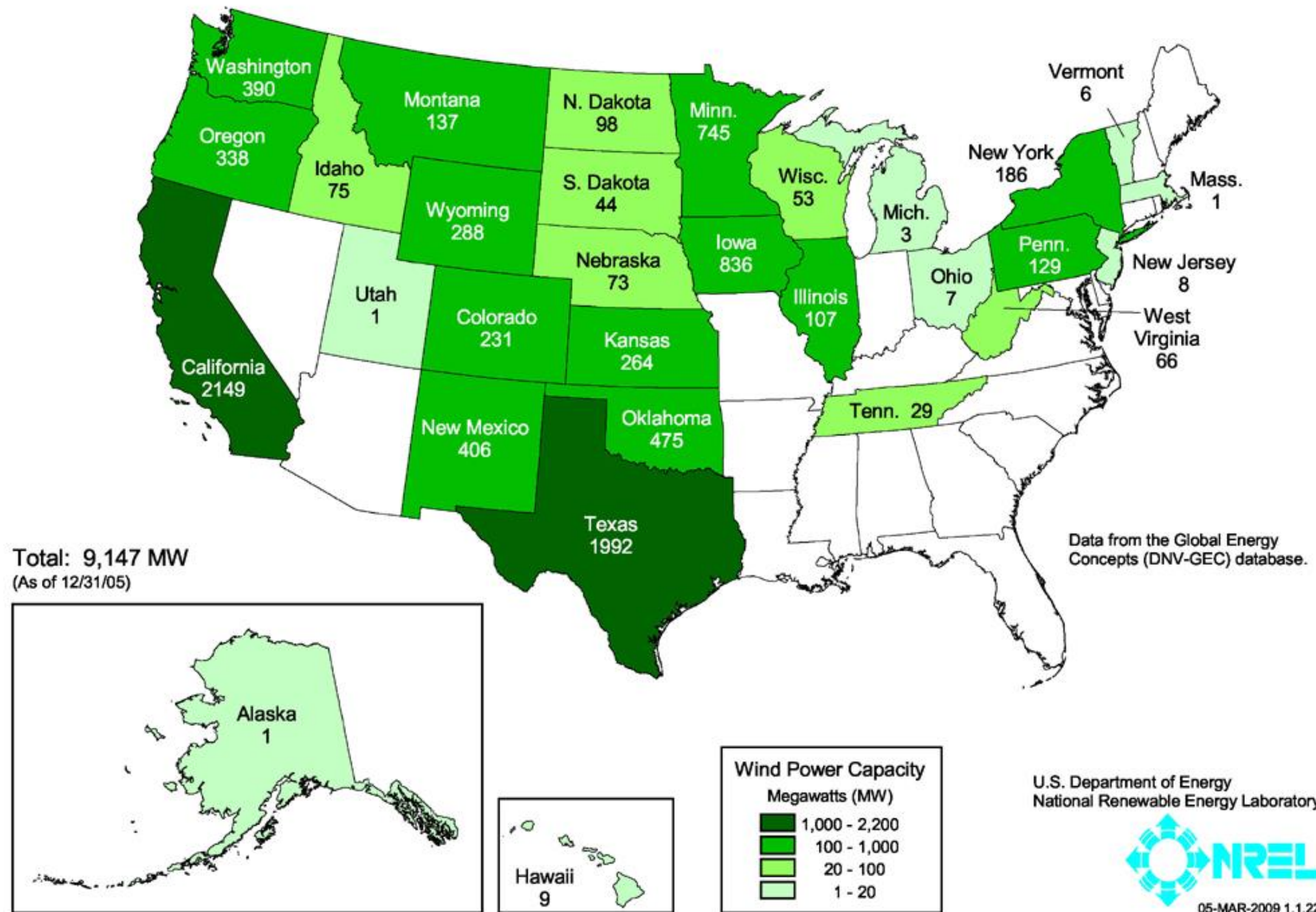


Source ERCOT

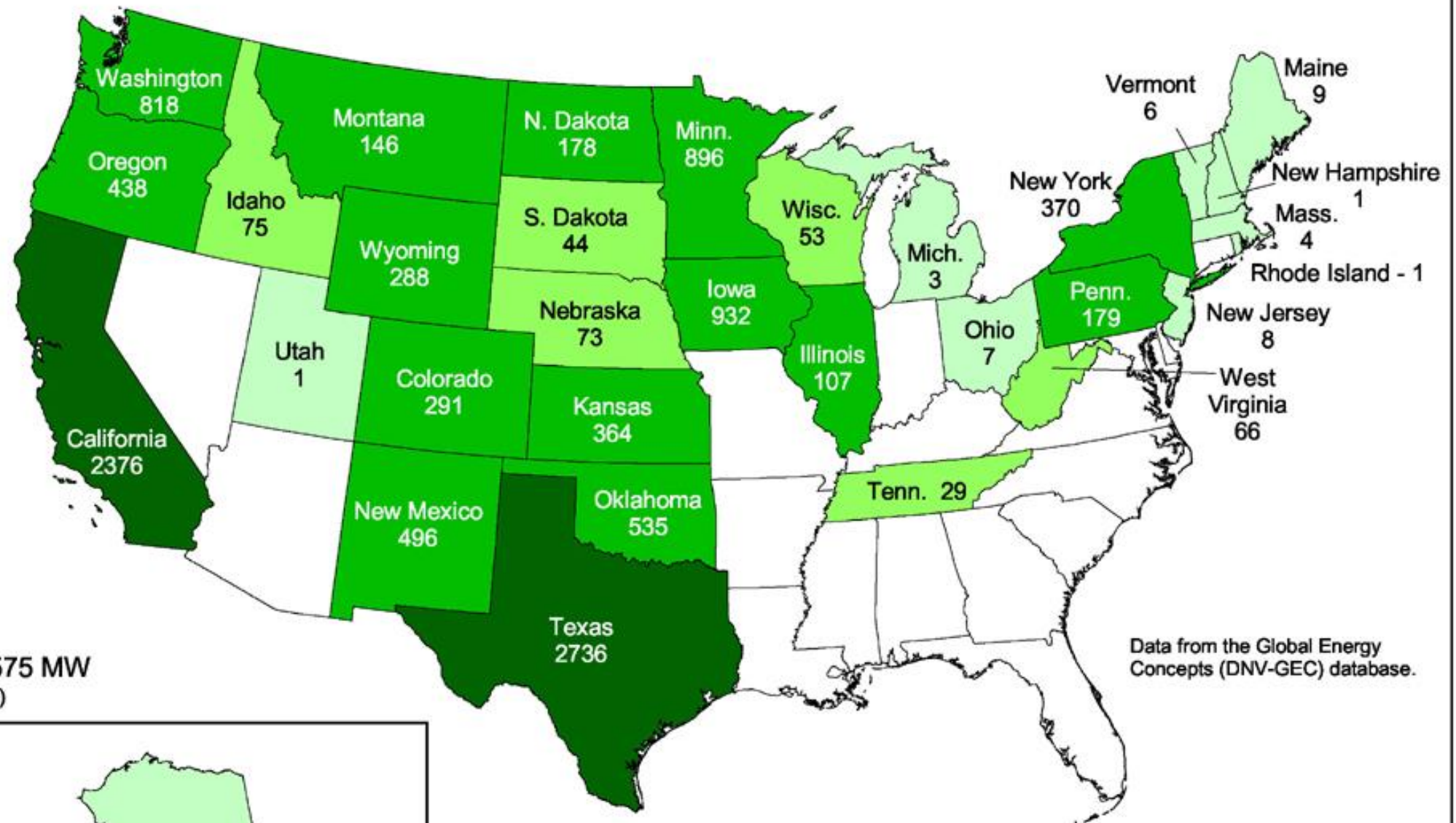
2004 Year End Wind Power Capacity (MW)



2005 Year End Wind Power Capacity (MW)



2006 Year End Wind Power Capacity (MW)



Total: 11,575 MW
(As of 12/31/06)

Data from the Global Energy
Concepts (DNV-GEC) database.

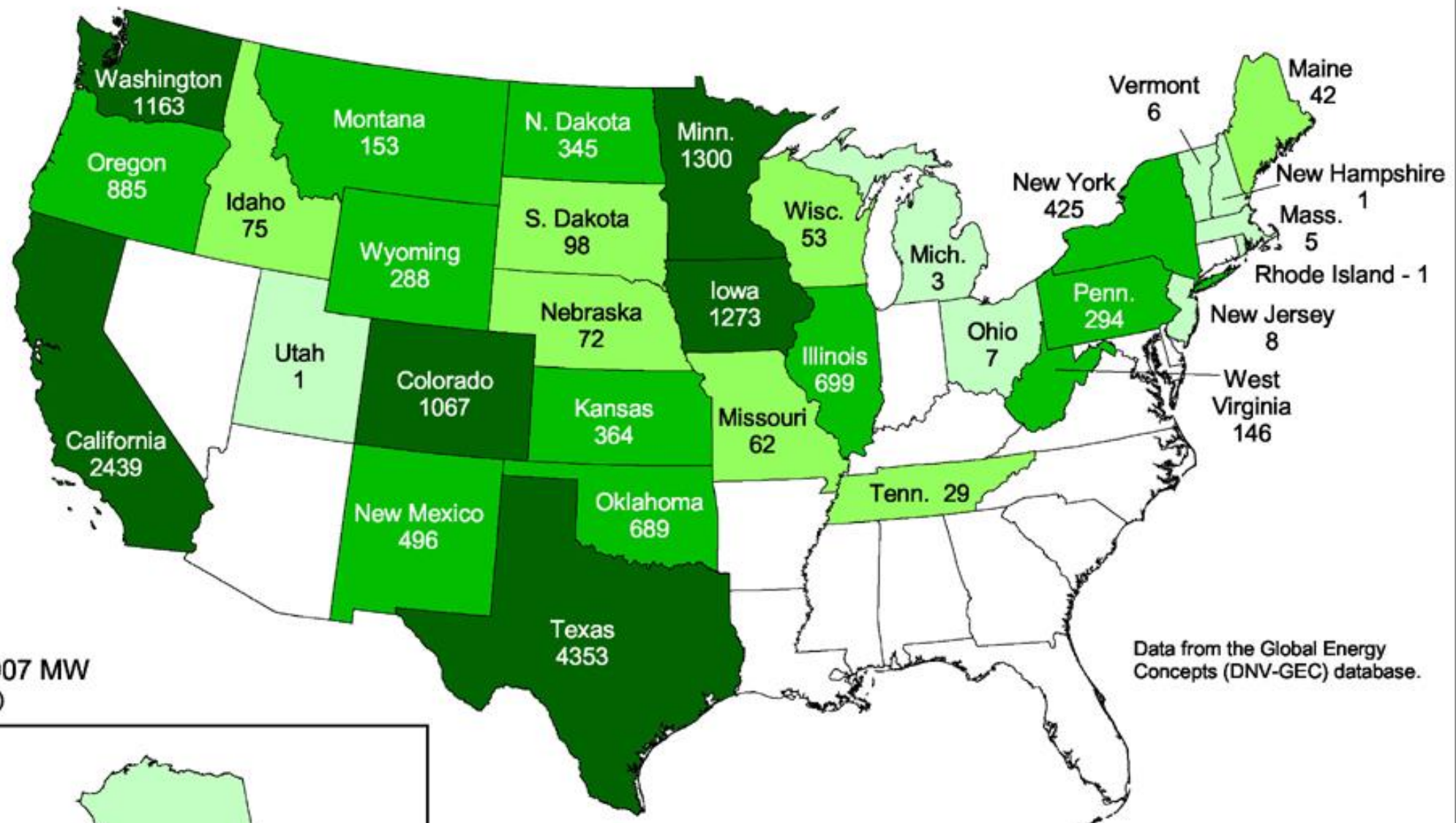


U.S. Department of Energy
National Renewable Energy Laboratory



05-MAR-2009 1.1.26

2007 Year End Wind Power Capacity (MW)



Total: 16,907 MW
(As of 12/31/07)

Data from the Global Energy
Concepts (DNV-GEC) database.

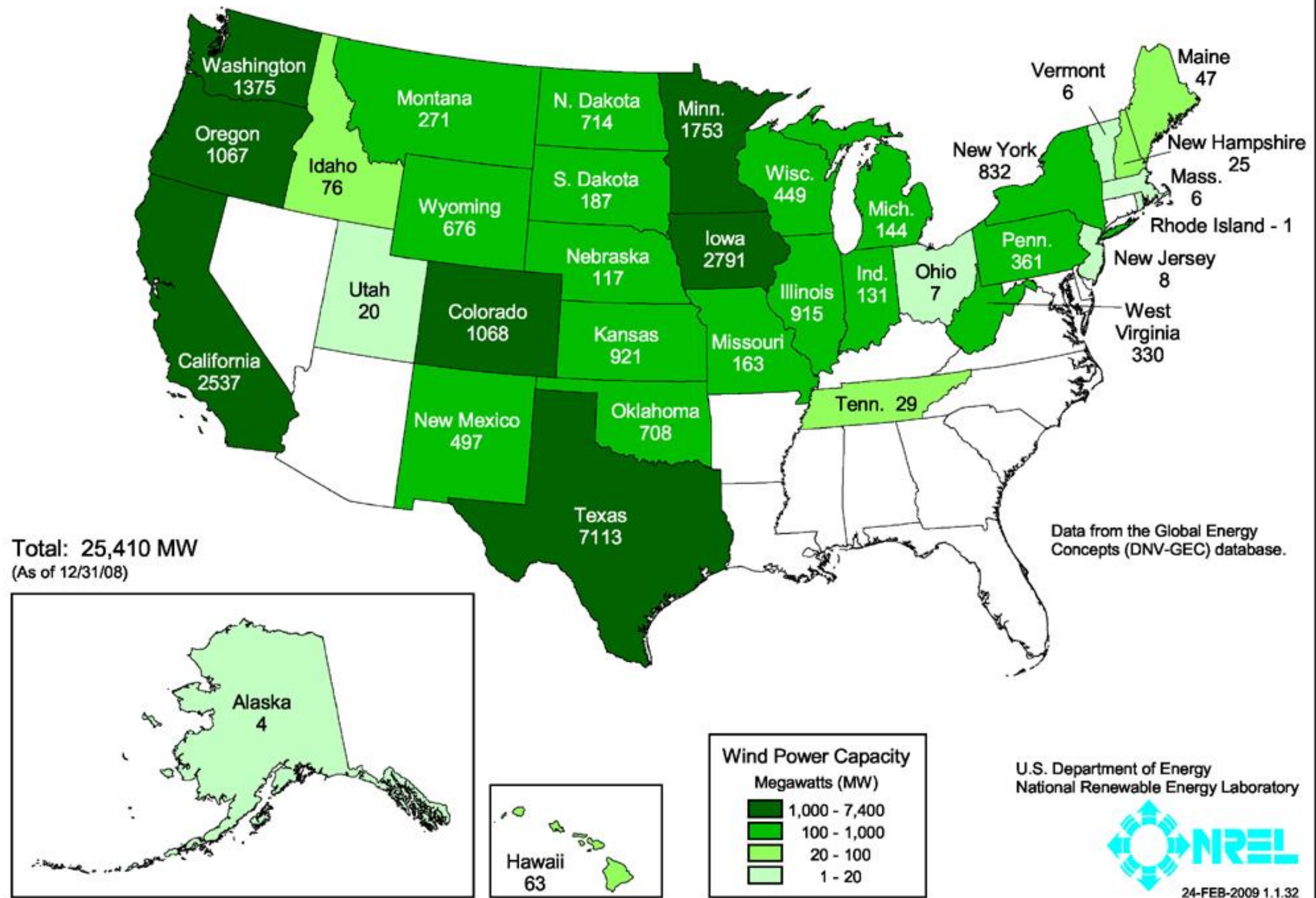


U.S. Department of Energy
National Renewable Energy Laboratory



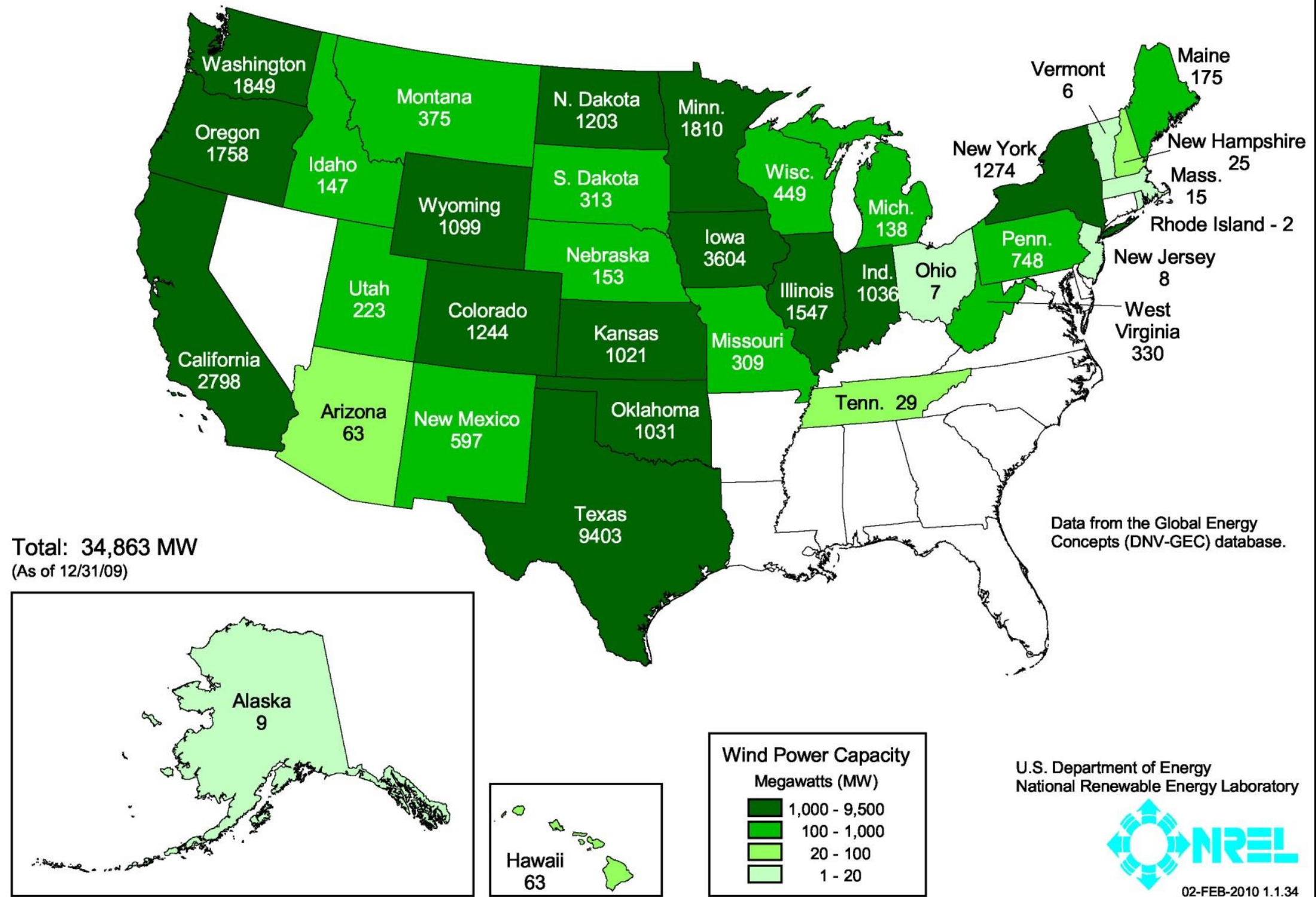
25-APR-2008 1.1.27

2008 Year End Wind Power Capacity (MW)



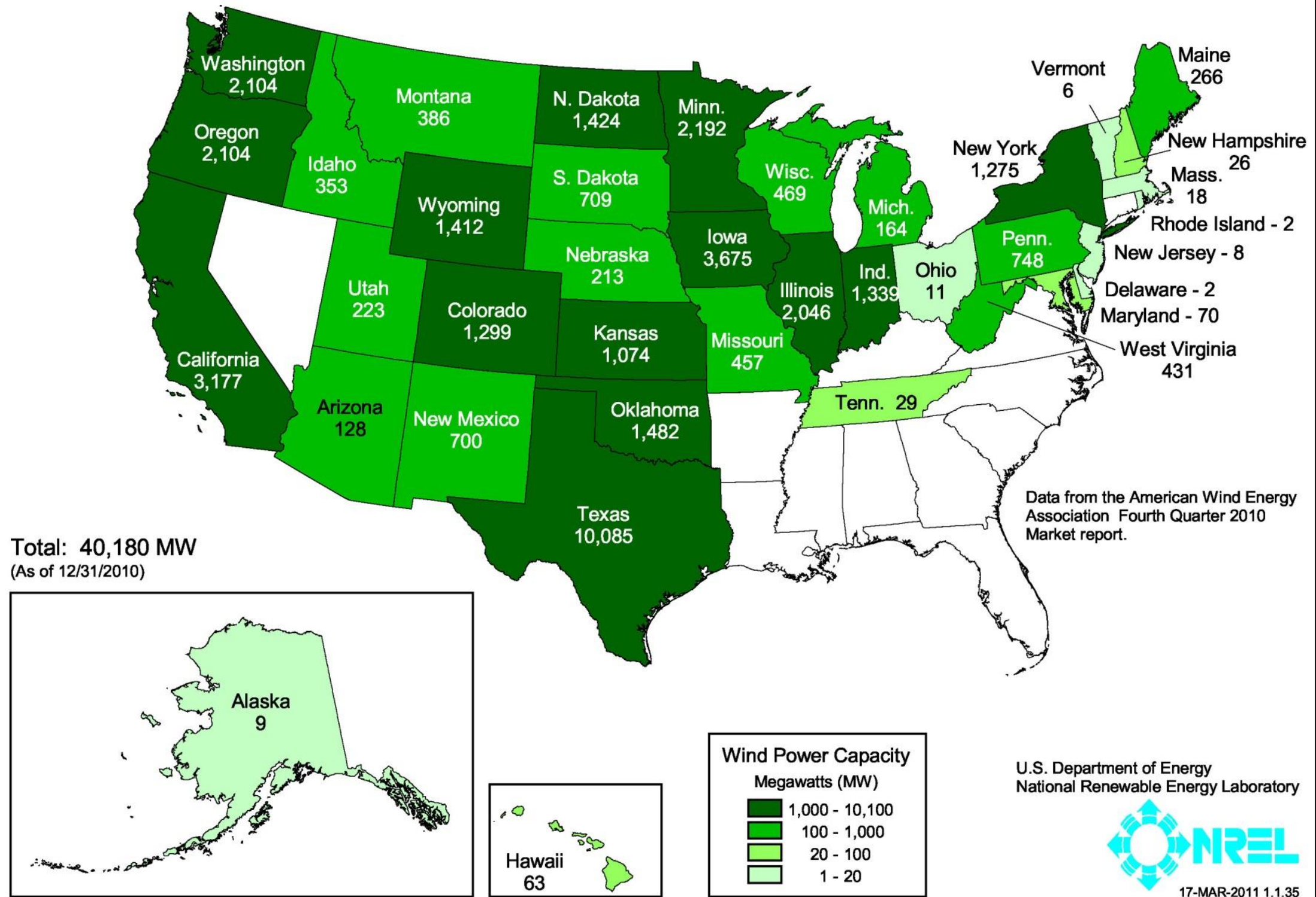
Source ERCOT

2009 Year End Wind Power Capacity (MW)



Source ERCOT

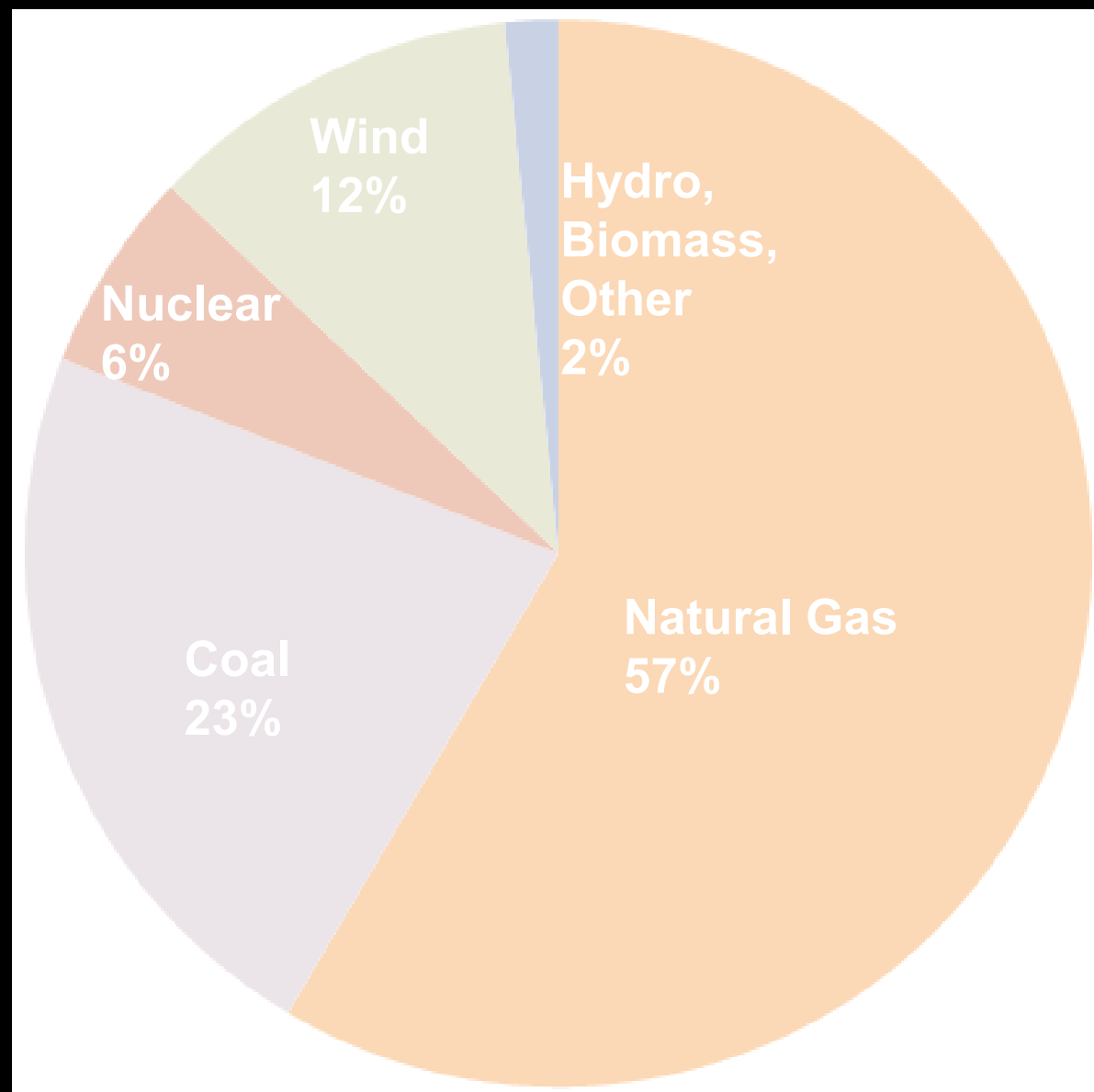
2010 Year End Wind Power Capacity (MW)



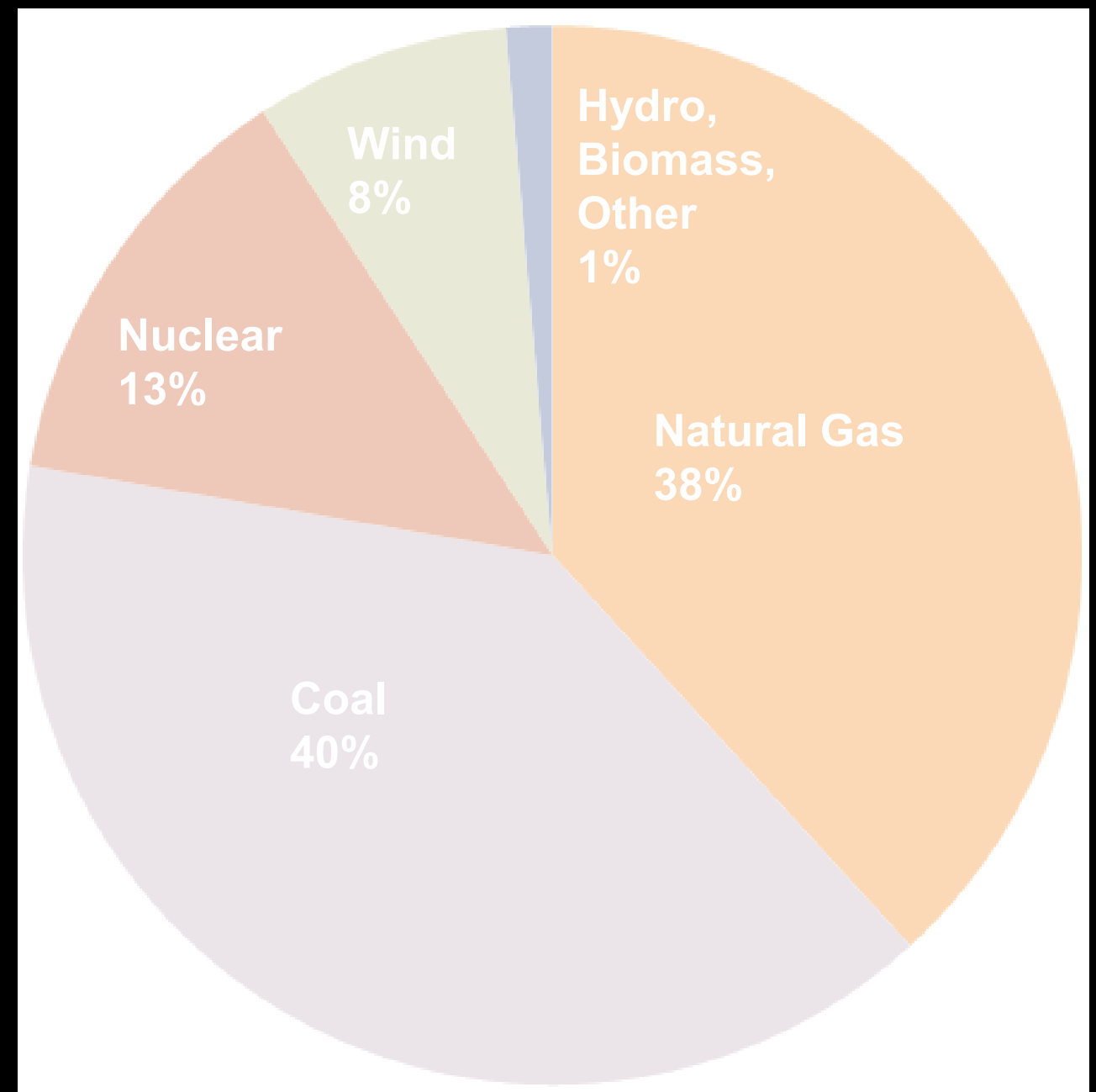
Source ERCOT

TEXAS POWER GENERATION

Installed Capacity 2010



Energy Produced 2010



Source ERCOT

Where did they come from?

In response to the Energy Crises of the 70's came ASHRAE 90.1

90.1-1980
updated

90.1-1999
major rewrite

90.1-2001
minor
revisions

90.1-2010
major
rewrite
30% better
than 2004

1970

1980

1990

2000

2010

90.1-1989
updated

90.1-1975
first issued

90.1-2004
updates,
reorganization
Benchmark for future
codes

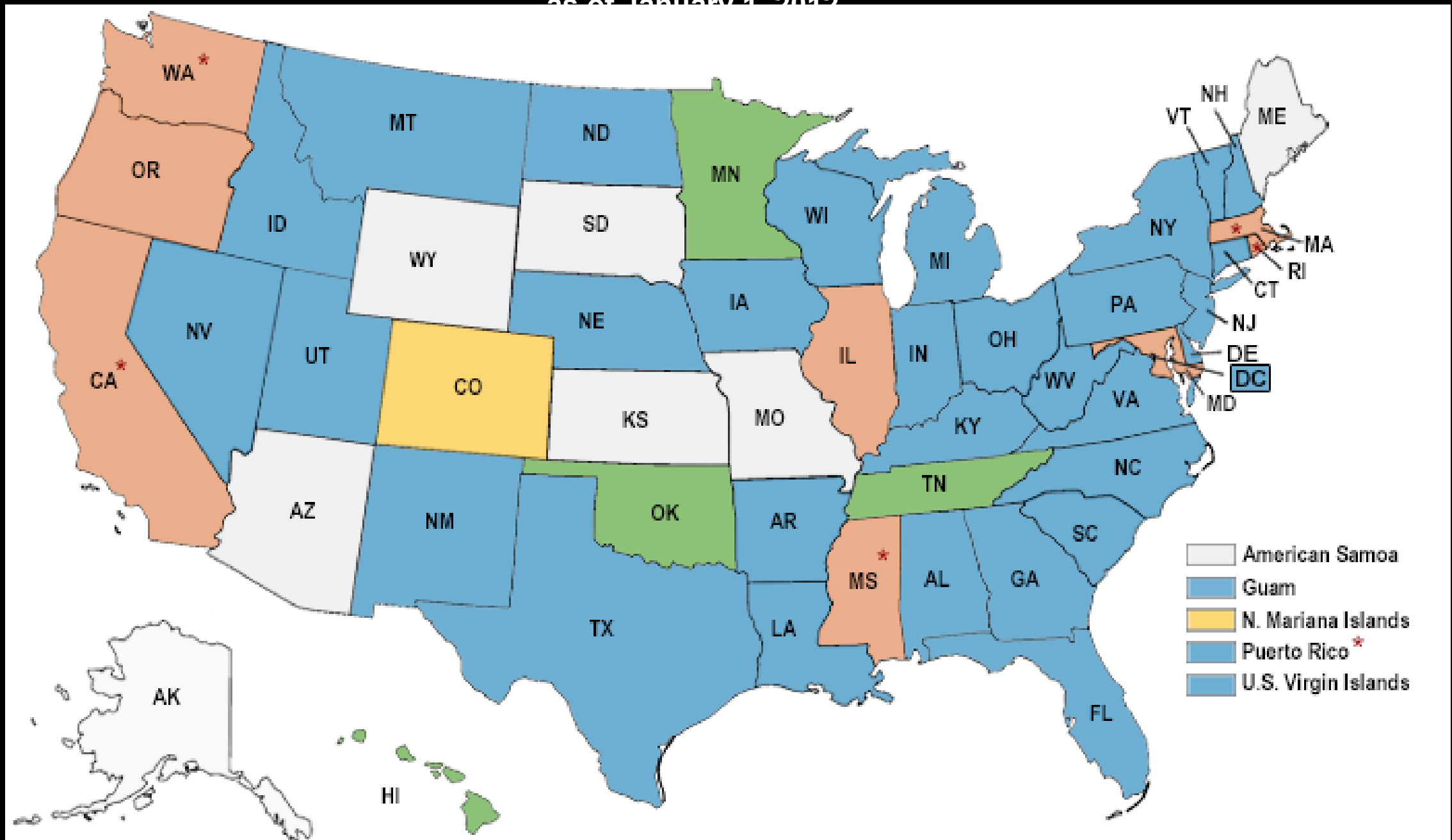
90.1-2007
updates

Current State Codes

Status of Code Adoption: Commercial

Overview of the currently adopted commercial energy code in each state

as of January 1, 2012



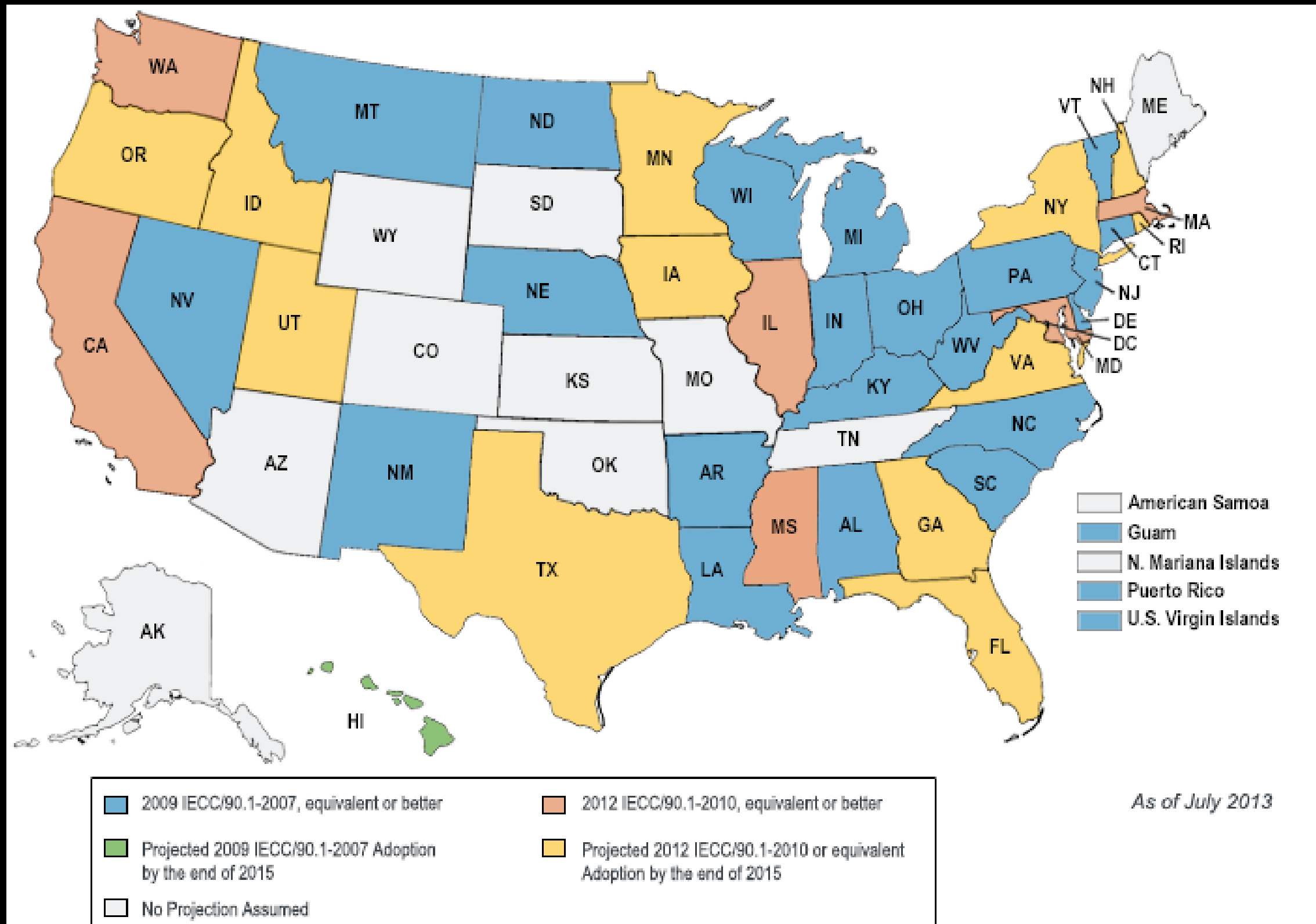
* Adopted new Code to be effected at a later date

As of August 2013

Adoption Activity: Commercial



States that are expected to have commercial energy codes meeting or exceeding 90.1-2007 or the 2009 IECC by the end of 2015



Future Energy Codes

Where they are going – raising the bar every 3 years,

90.1 2010 is 30% better than 2004

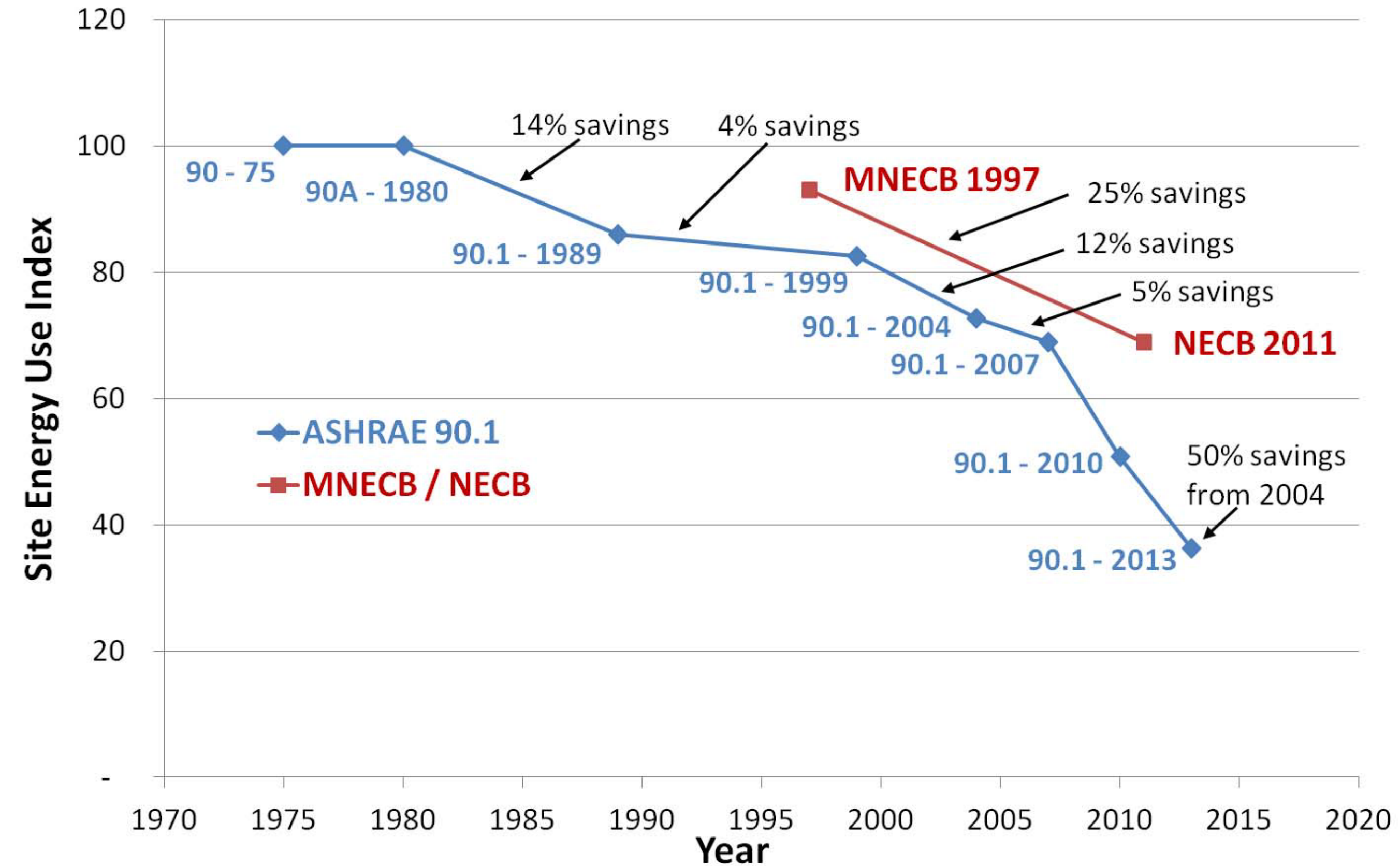
90.1 2013 is to be 50% better than 2004

Driven by the U.S. Department of Energy

States adopt and enforce energy code or lose federal funding.

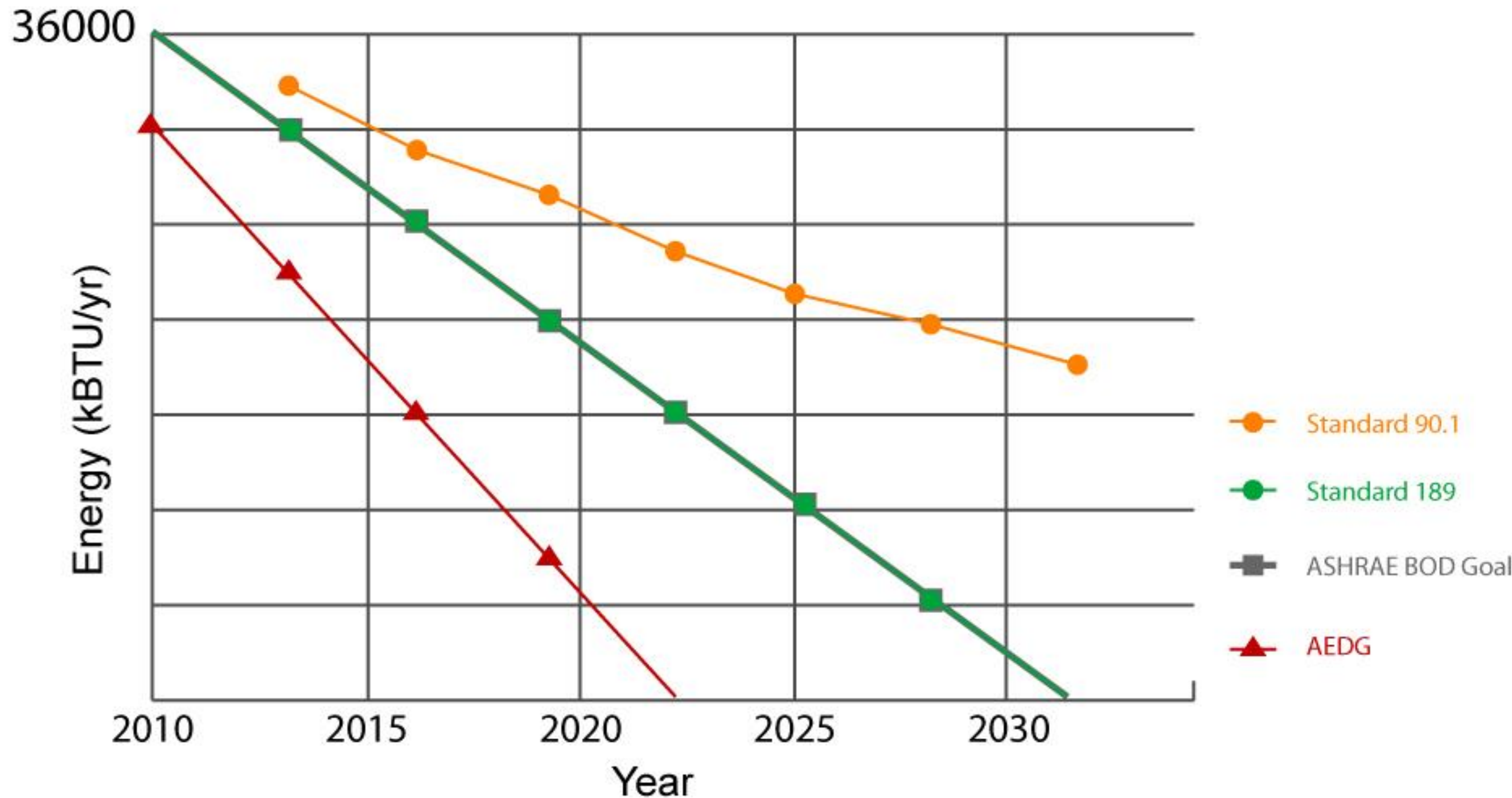
90.1 2010 is to be adopted by states by October 18, 2013 per DOE determination.

Future Energy Codes



Future Energy Codes

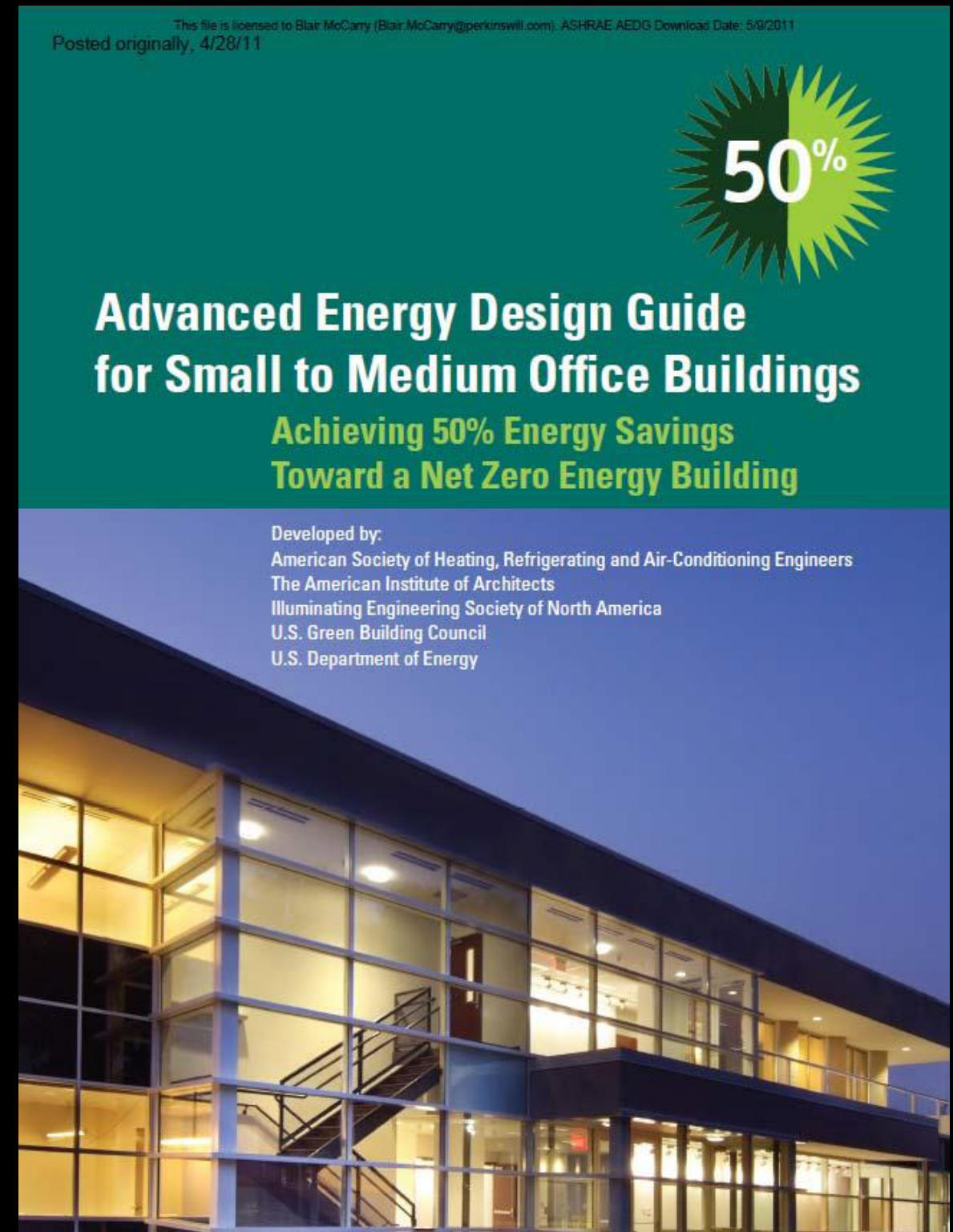
Energy Reduction Proposal

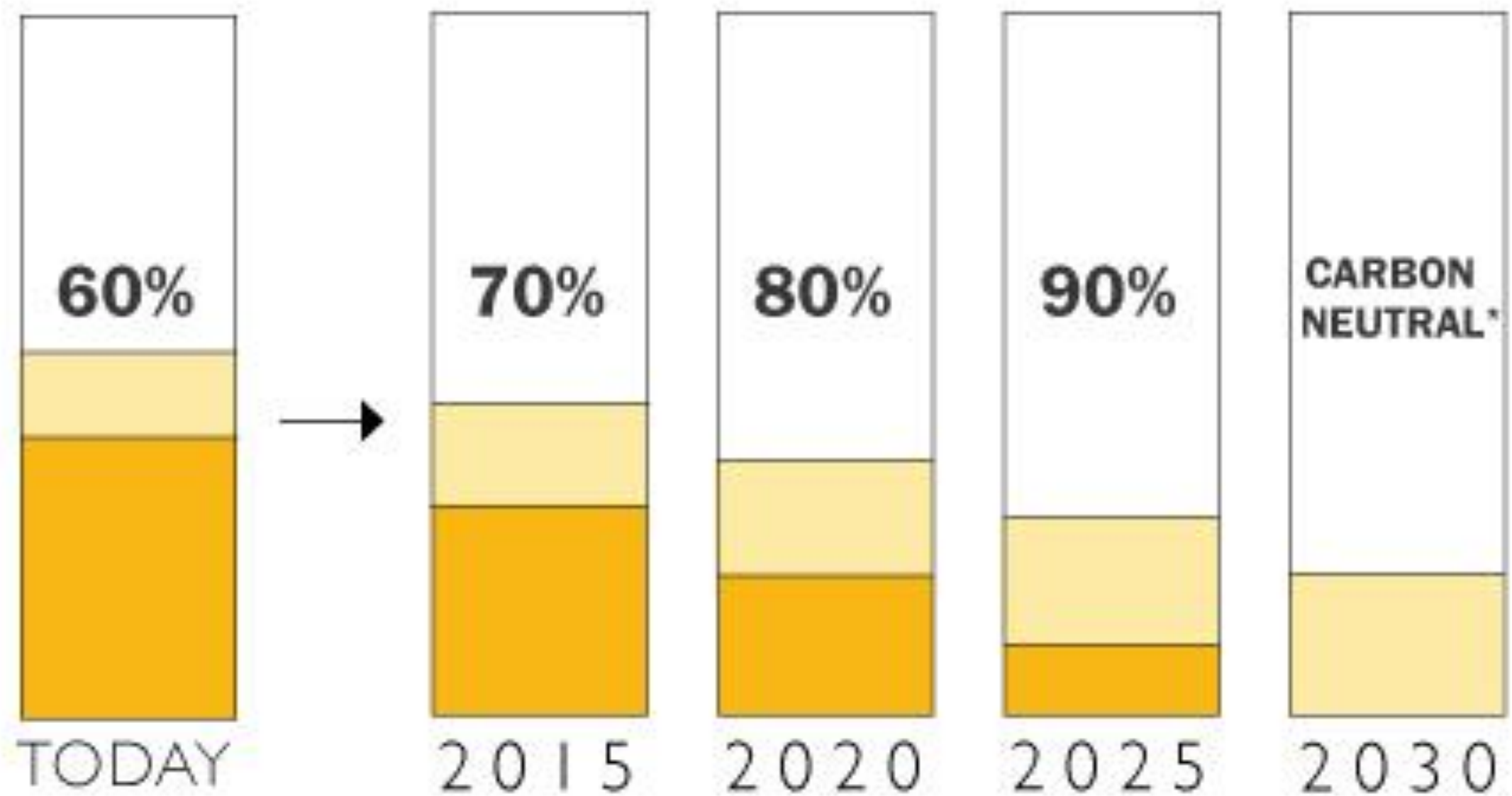



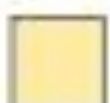
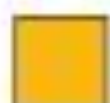
Future Energy Codes

Watch the ASHRAE Advanced Energy Design Guides for what is coming next.

These are FREE at
<http://www.ashrae.org/publications/page/1604>





 Fossil Fuel Energy Reduction  Renewable  Fossil Fuel Energy Consumption

The 2030 Challenge

Source: ©2010 2030, Inc. / Architecture 2030. All Rights Reserved.

*Using no fossil fuel GHG-emitting energy to operate.

**What Can
YOU Do?**

What Can
YOU Do?

1. Speak Up

- Win the conversation
- Don't let denial go unchallenged
- Use social and traditional media to get the word out
 - Use the **#Reality** hash tag
 - Write to the editor
 - Call TV and radio stations

What Can
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1. Speak Up

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- Use social media to get the word out



to get

- Use the [#Reality](https://www.realitydrop.org) hash tag
- Write to the editor
- Call TV and radio stations

What Can YOU Do?

- Join The Climate Reality Project and other organizations committed to solving the climate crisis

climateresalityproject.org



**The Climate
Reality Project®**

**What Can
YOU Do?**

2. Deepen Your Commitment

- **Make consumer choices that reduce energy use**
- **Consider the environmental impact of the items you buy**

**What Can
YOU Do?**

3. Don't Give Up

- **Changing laws is even more important than changing light bulbs**
- **Tell your leaders this matters to you!**
 - **Let them know you will support or strongly oppose them based on what they say and DO about solving the climate crisis**