Renewable Energy Policy: A Driving Force

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WEATS
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What is Renewable Energy Alaska Project (REAP)?

- Alaska's first and only education and advocacy group for renewable energy

- An Alaskan coalition of small and large electric utilities and utility interests, environmental groups, consumer groups, businesses, Alaska Native organizations and energy agencies with the goal of "increasing the production of renewable energy in Alaska."

REAP Director Members

Chugach Electric Association (CEA)
Municipal Light and Power (ML & P)
Golden Valley Electric Association (GVEA)
Homer Electric Association (HEA)
Kotzebue Electric Association (KEA)
Alaska Village Electric Cooperative (AVEC)
TDX Power
Alaska Power Association (APA)
Alaska Power and Telephone
Sierra Club
Alaska Center for the Environment
Alaska Conservation Alliance
Alaska Public Interest Research Group (AkPIRG)
Rural Alaska Community Action Program (RurALCAP)
Green Star
Chena Hot Springs
PowerCorp Alaska, Inc.
Siemens Building Technologies
Alaska Inter-Tribal Council
Aleutian/Pribilof Islands Association (APIA)
Yukon River Inter-Tribal Watershed Conference

REAP ADVISORY MEMBERS

Alaska Energy Authority

National Renewable Energy Lab

Denali Commission

Alaska Housing Finance Corporation

Cold Climate Housing Research Center

US Department of Agriculture Rural Development

REAP's Strategies

- Put viable renewable energy projects in the ground
- Advocate for statewide policies that promote renewables
- Grow the market for renewable energy
- Foster and demonstrate stakeholder unity in support of renewable energy
- Promote energy efficiency

What is Renewable Energy?

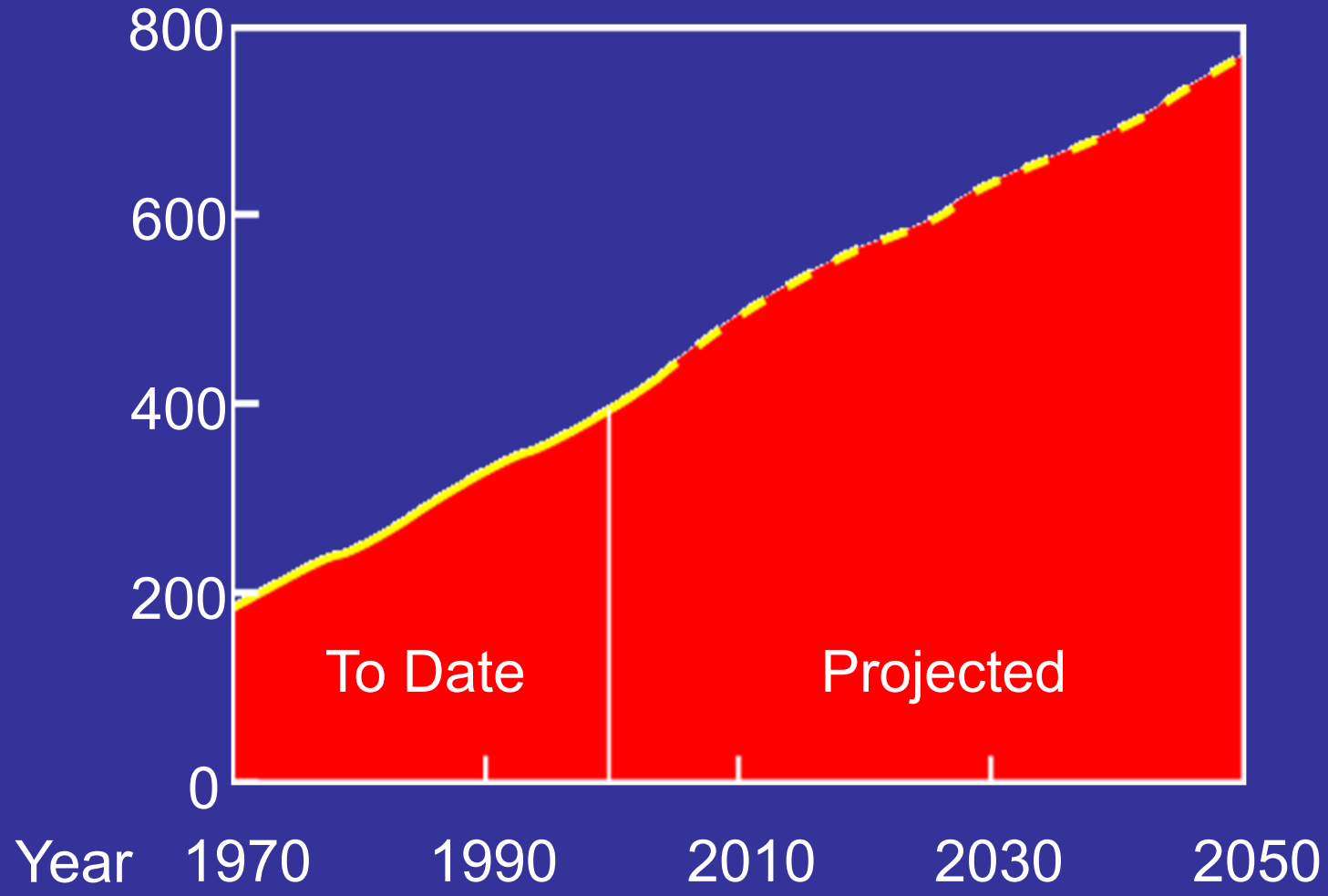
- Wind
- Geothermal
- Solar
- Biofuels
- Hydro
- Tidal & Wave

Advantages of Renewable Energy

- No fuel costs = stable prices
- Local
- Clean
- Inexhaustible

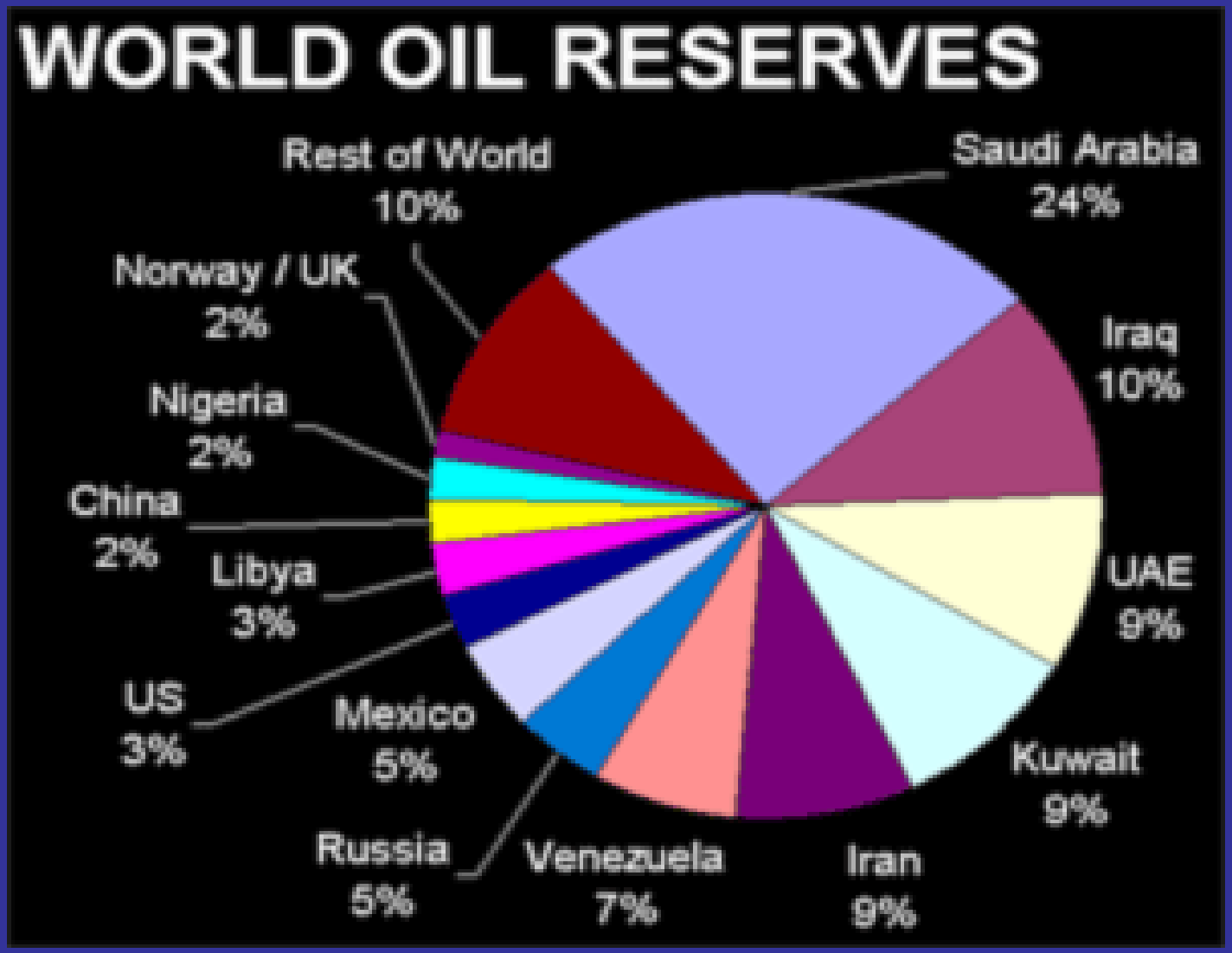
Renewable Energy is Risk Management:

Worldwide Energy Use Expected to Double by 2050



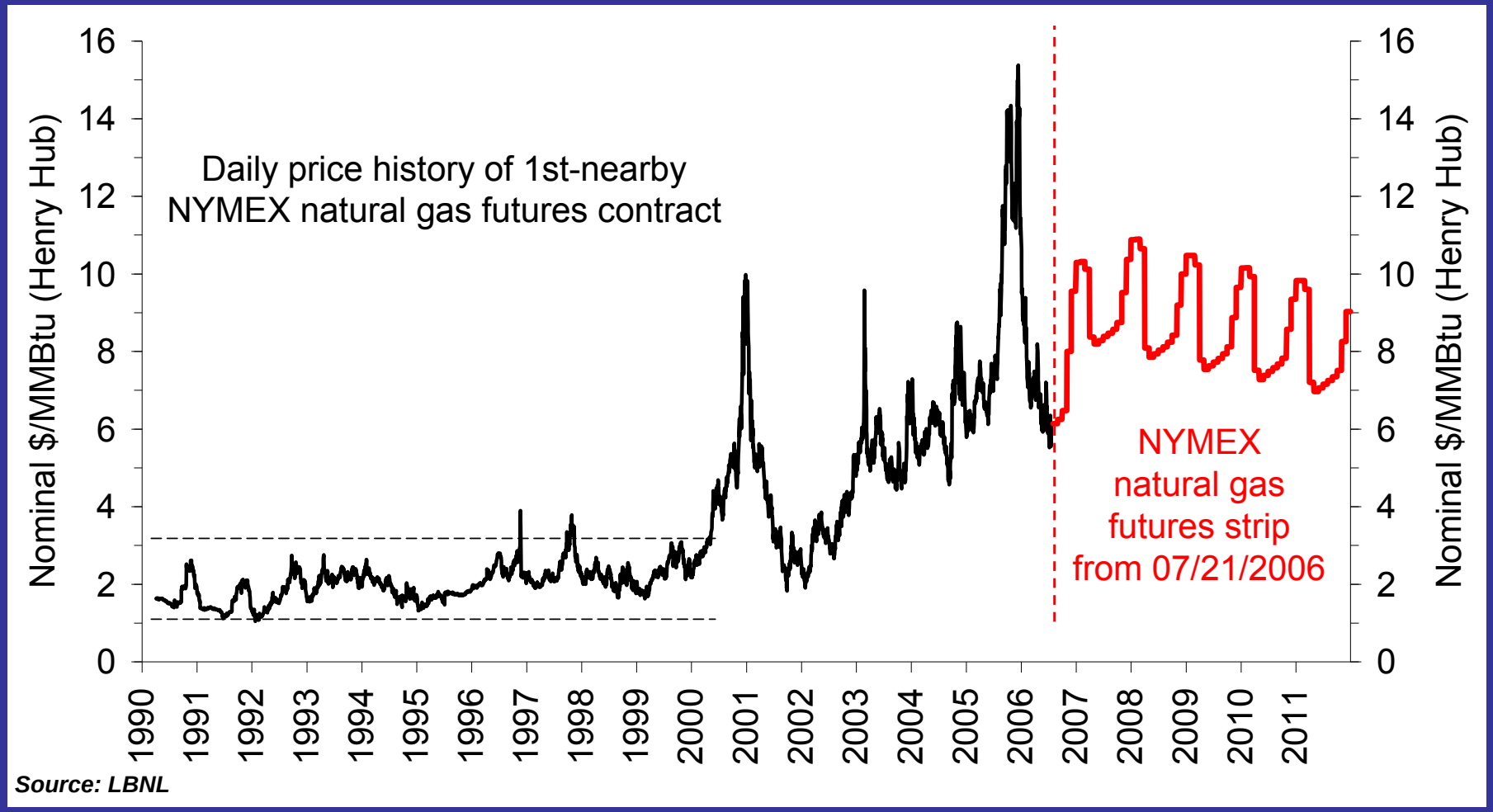
Renewable Energy is Risk Management

Two Thirds of the World's Proven Conventional Oil Reserves are in the Persian Gulf



Renewable Energy is Risk Management:

Natural Gas Prices are Uncertain



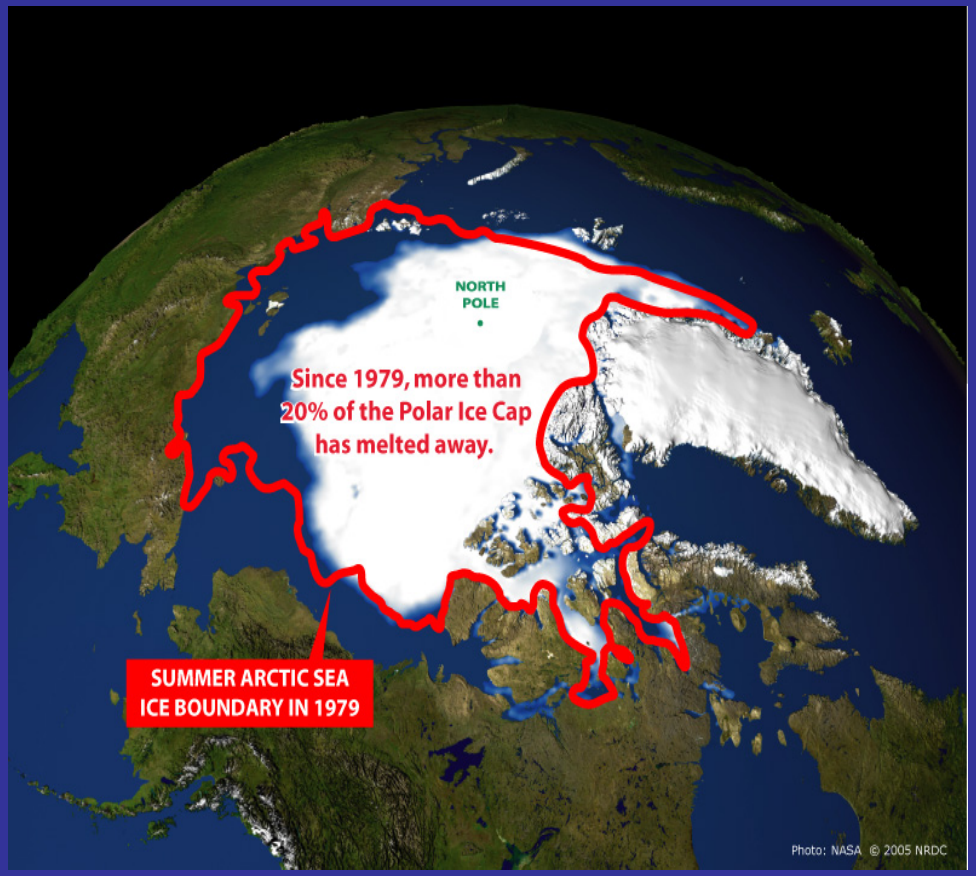
Source: LBNL

Renewable Energy is Risk Management:
A Carbon Tax is Inevitable

- Widespread anticipation that CO_2 will soon get a value
- Recent US Supreme Court decision ruled that CO_2 is a “pollutant” under the Clean Air Act
- Congress is considering over ten different options today
- $10 - $85 per ton of CO_2
- Many utilities are already figuring carbon risk into their integrated resource plans (IRPs)

Renewable Energy is Risk Management:

The World's Climate is Changing



"For Swiss Re, climate change is more than a scientific issue. It is a financial issue."

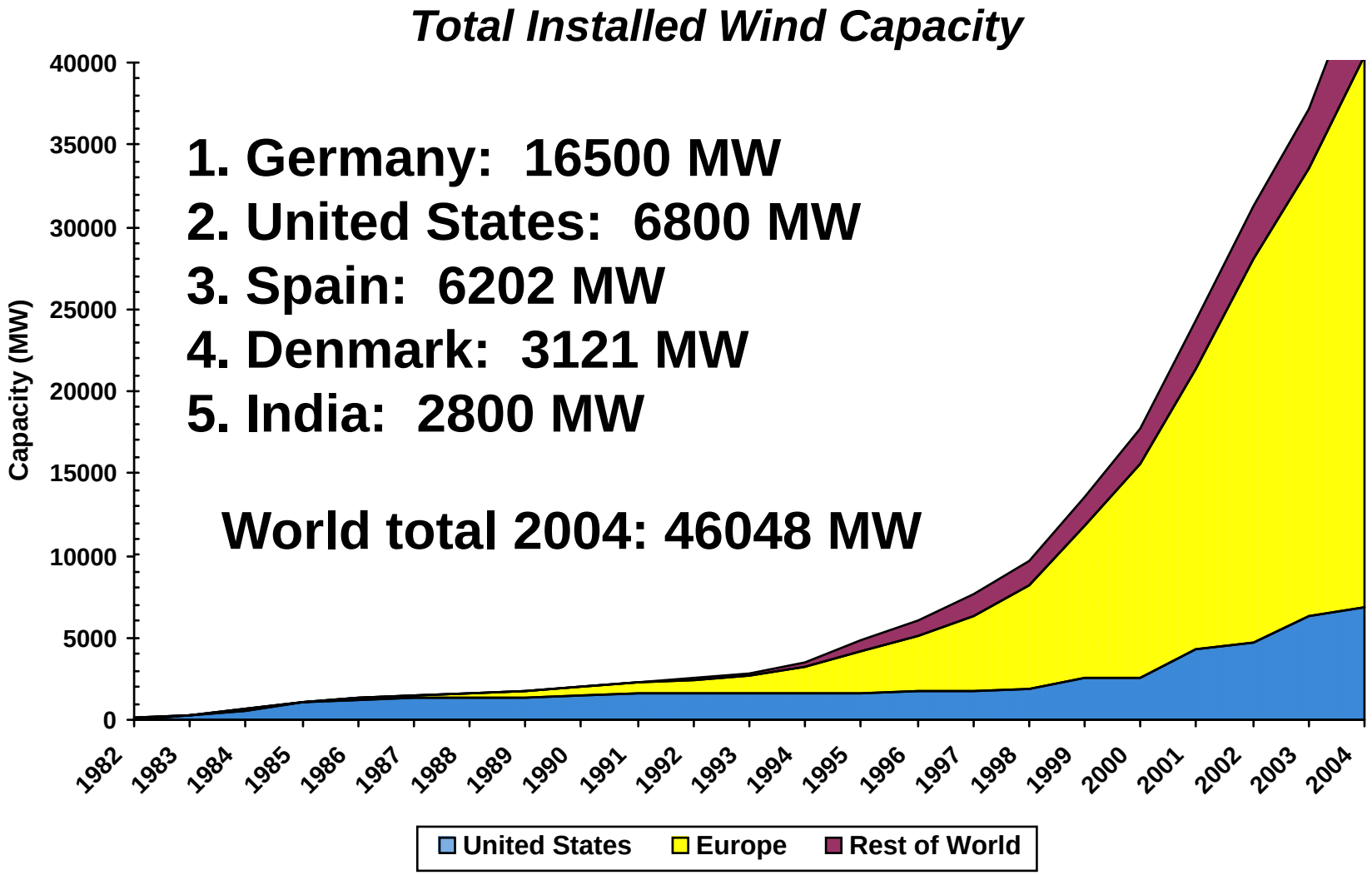
Chris Walker, Managing Director, Greenhouse Gas Risk Solutions Unit for Swiss Re, the world's second largest re-insurer

Renewable Energy is Risk Management:

The $40 billion/yr Clean Energy Market is Expected to Quadruple by 2015

- General Electric
- Goldman Sachs
- Siemens
- British Petroleum
- FedEx Kinkos

Wind is the Fastest Growing Energy Sector in the World

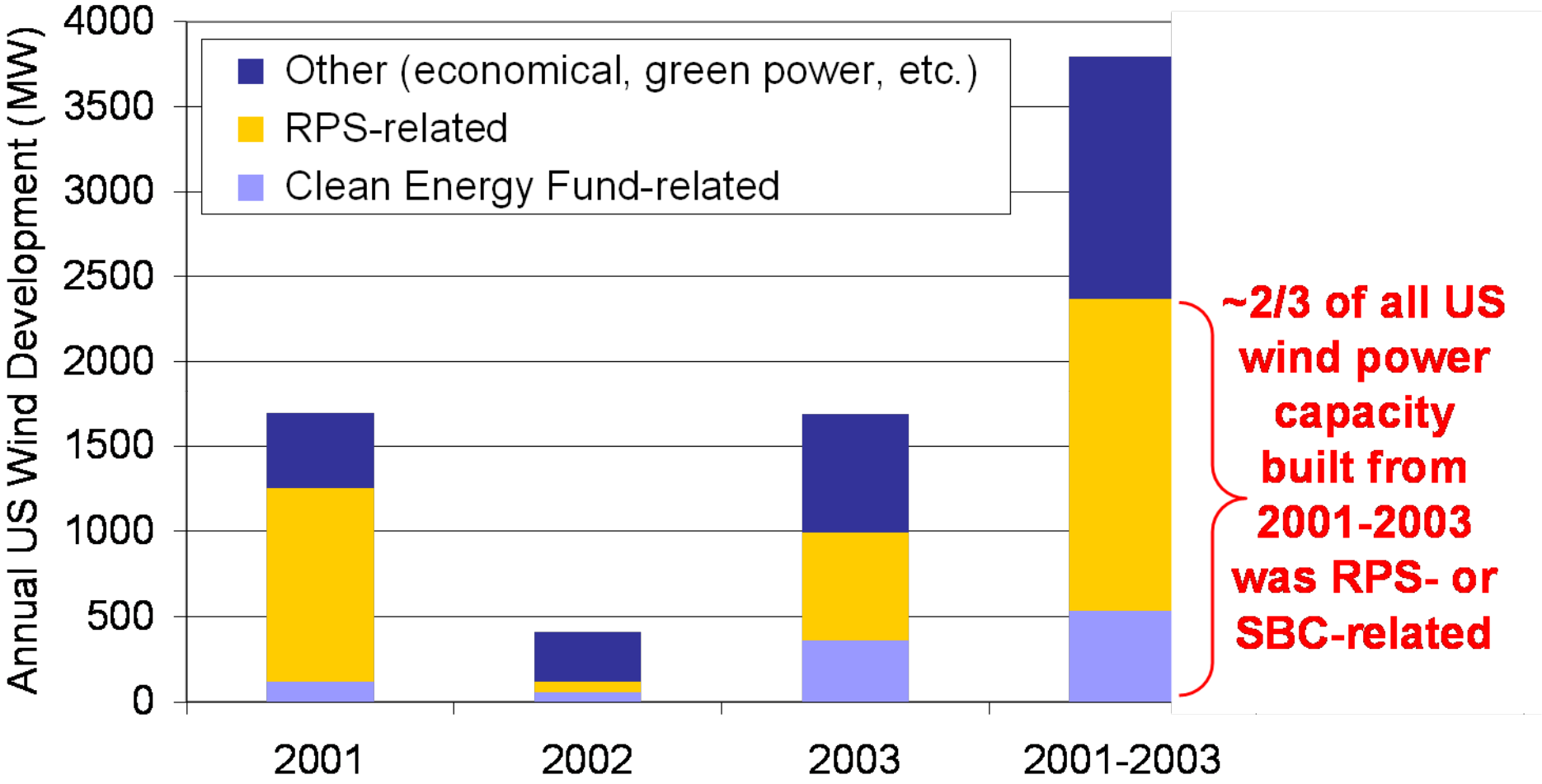


Source: WindPower Monthly

Federal Production Tax Credit

- Primary Federal Policy
- 1.9 cent kWh tax credit
- Expires December 31, 2008

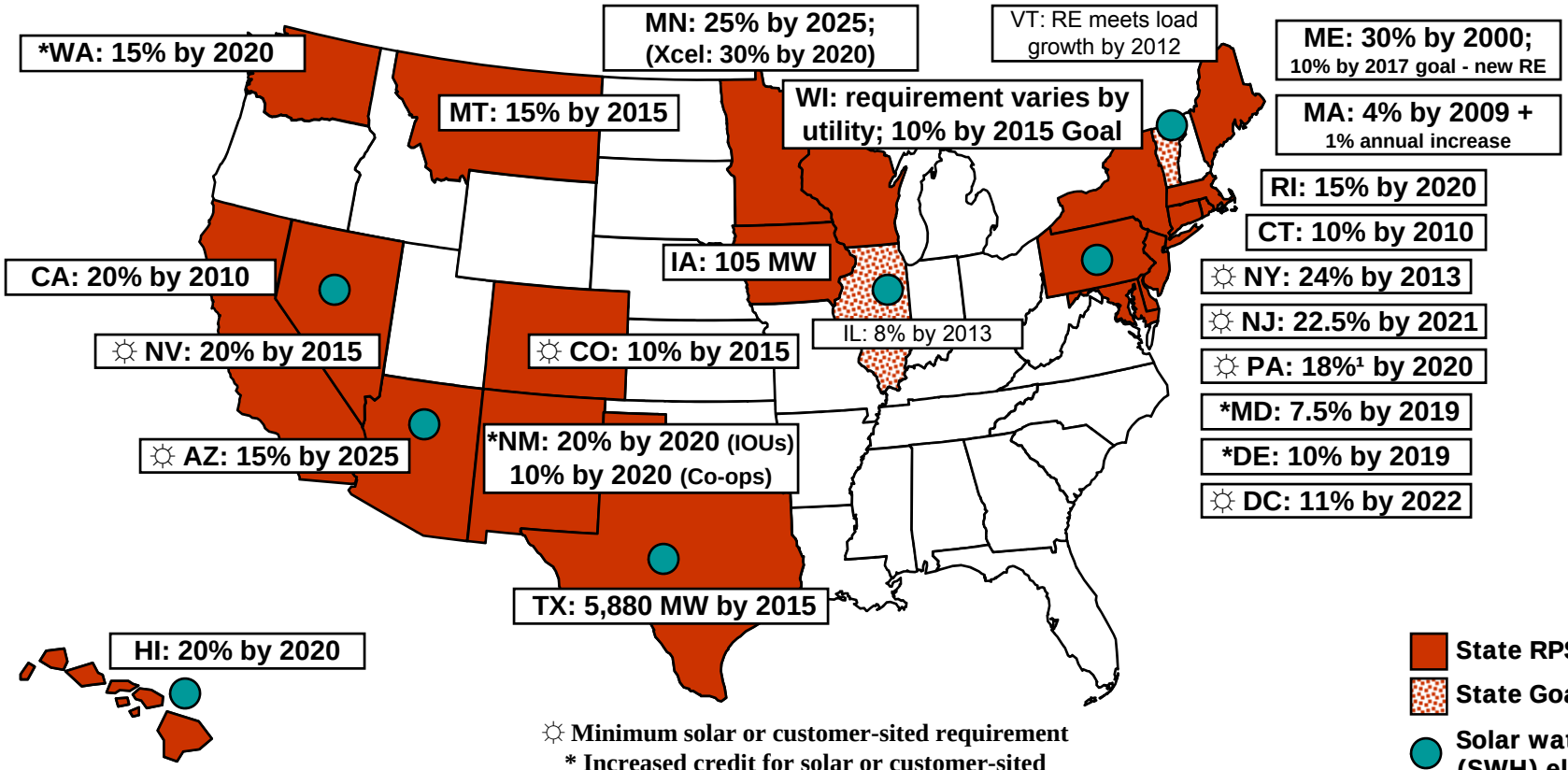
Recent Wind Project Development Has Largely Been Driven by State Policy



DSIRE: www.dsireusa.org

March 2007

Renewables Portfolio Standards

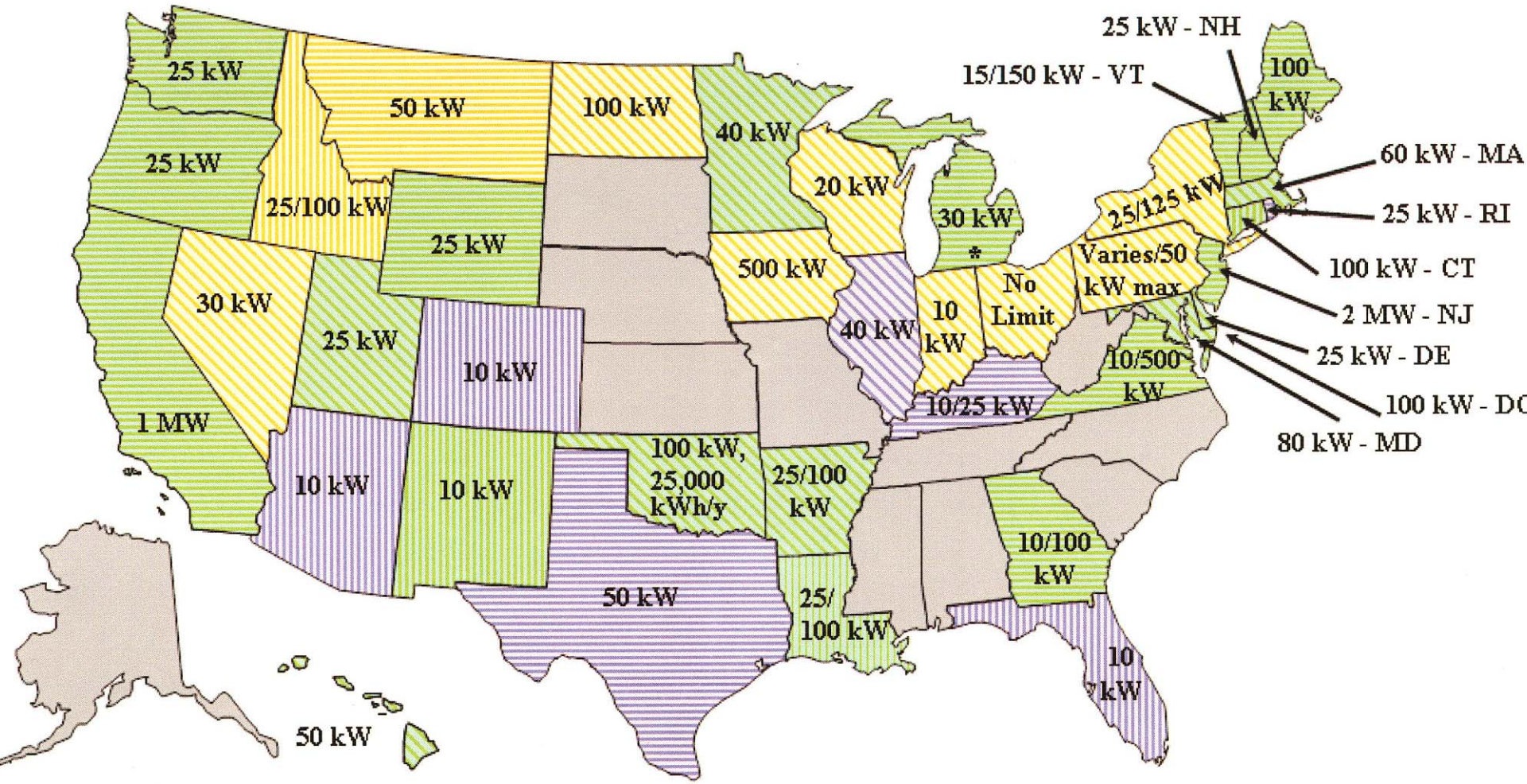


☼ Minimum solar or customer-sited requirement

* Increased credit for solar or customer-sited

[1]PA: 8% Tier I / 10% Tier II (includes non-renewables); SWH is a Tier II resource

Net Metering By State



Monthly Net Metering
Annual Net Metering
Varies by Utility or Unknown

None
Individual Utilities
Investor-Owned Utilities Only, Not Rural Cooperatives
Investor-Owned Utilities and Rural Cooperatives
* Voluntary Program

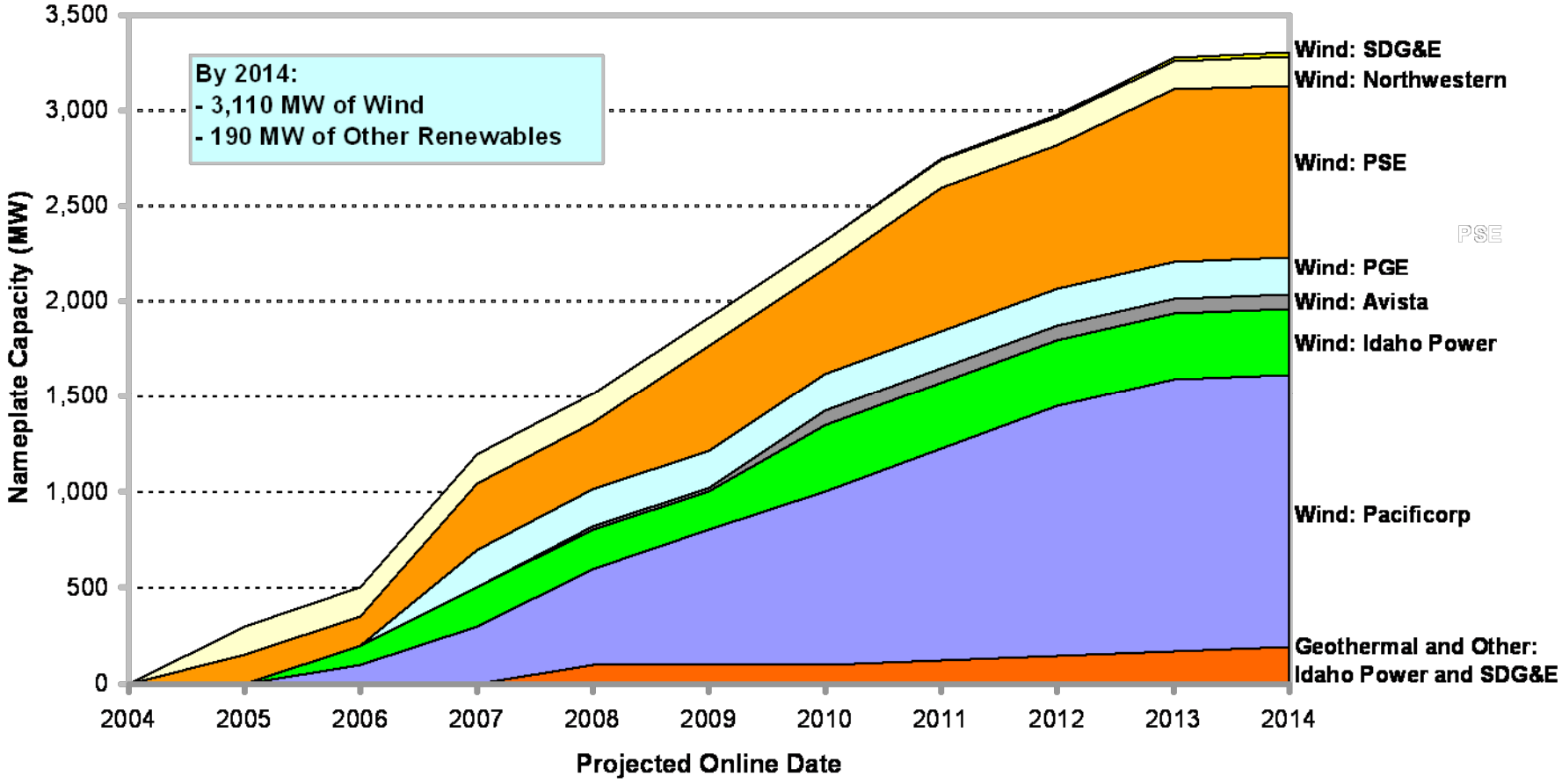
Revised: 02APR0

State Production Tax Credits

- **Examples:**
  - **New Mexico:** 10 years, 1 cent/kWh
  - **Oklahoma:** Through 2011, 0.25-0.75 cents/kWh
- **Issues:**
  - **Transferability:** Allow non-taxable entities to transfer credit to taxable entities (e.g., Oklahoma)
  - **Federal PTC:** May not need to worry about federal PTC impacts – private letter ruling suggests that state PTCs will not impact federal PTC

Integrated Resource Planning:

Western IRPs are leading to significant planned wind investments, above and beyond RPS requirements



Feed In Tariffs

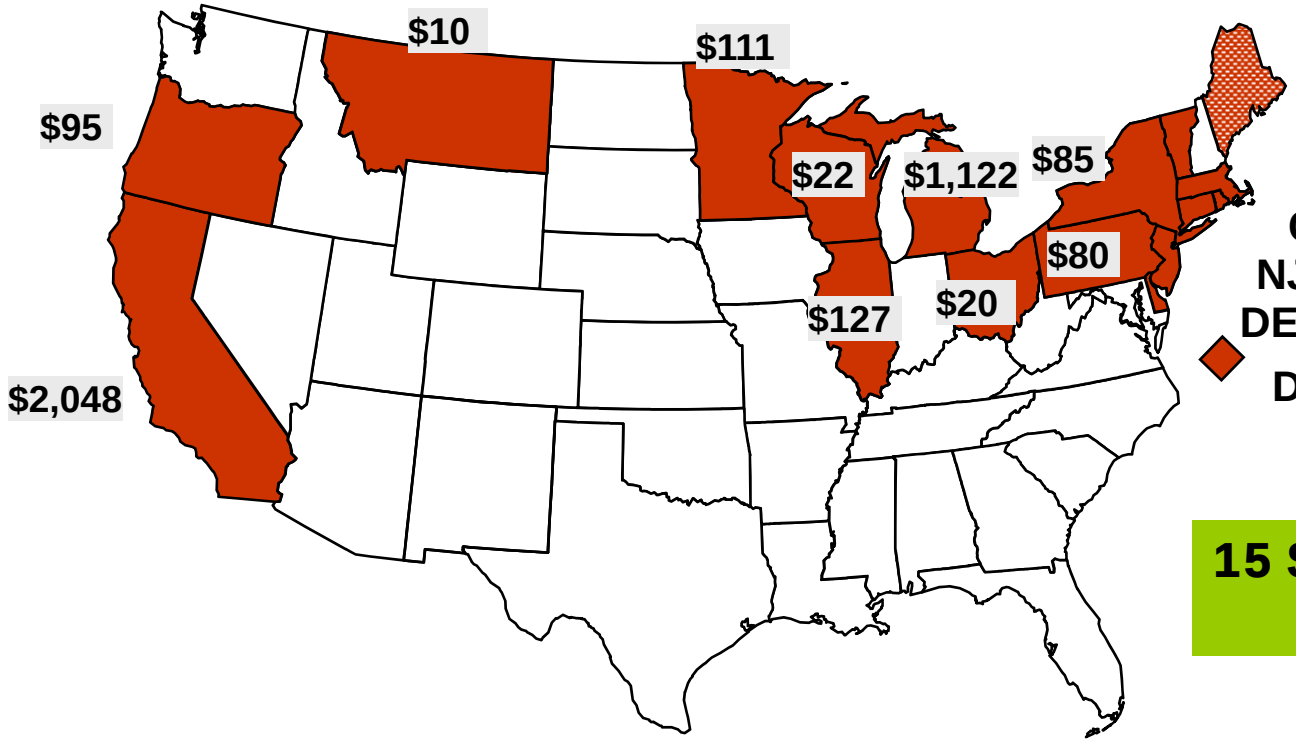
Used extensively in Europe

Ontario's Standard Offer Program

- Established in 2006 through the Ontario Power Authority
- Sets a price for electricity generated by small generators of electricity (under 10MW) from renewable resources like solar, wind, small hydro and some biomass
- Twenty (20) year contracts
- Generators pay all interconnections and licensing fees
- Prices paid for wind, small hydro and biomass begin at 11¢/kWh in 2006 and escalate over the 20 years
- 42 ¢/kWh for solar photovoltaic projects

Public Benefit Funds for Renewables

Cumulative 1998 – 2017 (Million $)



15 State Funds + DC
$4 B by 2017

Funded by Voluntary Contributions

2007 Alaska Legislative Session

REAP Policy Consensus:

Renewable Energy Fund
Loans and production credits
Grants with matching monies
Administered by the Alaska Energy Authority with
seven member energy stakeholder oversight committee
appointed by the Governor
Funded with capital appropriations

HB152

Passed the House 35-0
Needs just one more Senate (Finance) Committee hearing
23 sponsors in House
13 sponsors in the Senate

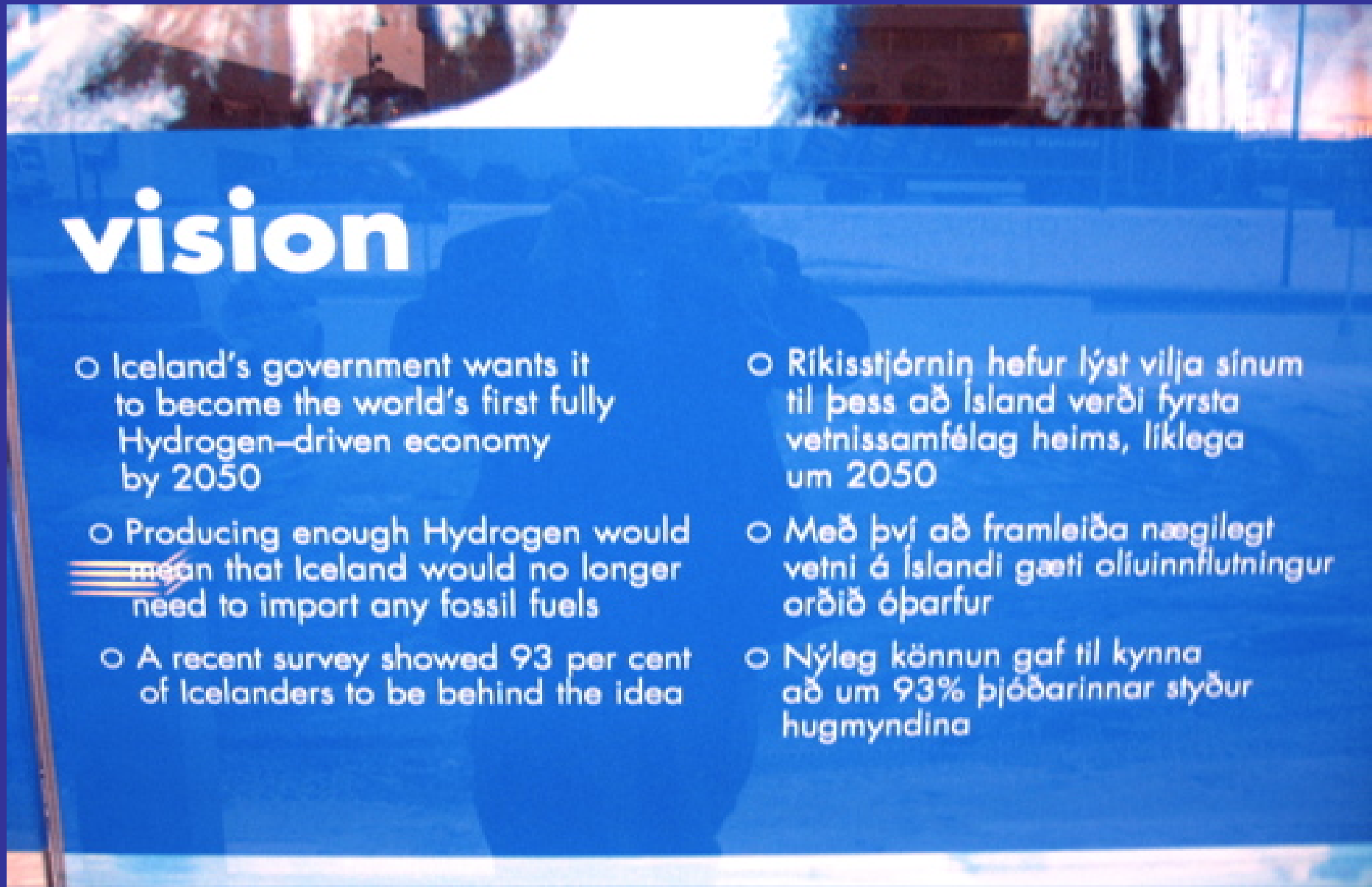
Why Renewables Now?

- Natural gas is becoming less available and more expensive & the Railbelt's natural gas turbines are aging
- Diesel prices are driving people out of rural Alaska
- Alaska could become a world leader in diesel (e.g. wind-diesel) hybrid technology
- Without sequestration new coal plants will increase CO_2 emissions and be subject to expensive carbon regulation

* Power plants last 20-50 years

* Many major decisions for Alaska's long term future will be made in the next 5-10 years

Iceland's Vision



Thanks!

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