The Stella Group, Ltd.

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The Stella Group, Ltd.. is a strategic marketing and policy firm for clean distributed energy users and companies which include advanced batteries and controls, energy efficiency, fuel cells, heat engines, minigeneration (natural gas), microhydropower, modular biomass, photovoltaics, small wind, and solar thermal (including daylighting, water heating, industrial preheat, building air-conditioning, and electric power generation). The Stella Group, Ltd. blends distributed energy technologies, aggregates financing (including leasing), with a focus on system standardization. Scott Sklar serves as Steering Committee Chair of the Sustainable Energy Coalition, composed of the renewable energy and energy efficiency trade associations and analytical groups, and sits on the national Boards of Directors of the non-profit Business Council for Sustainable Energy, Renewable Energy Policy Project, and CoChairs the Policy Committee of the Sustainable Buildings Industry Council.

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Global Capacity of Renewable Energy Technologies

Total global capacity for wind-generated power reached 100 GW in 2007. Germany, by far, has the most installed wind capacity at about 22 GW. The U.S. is second with about 17 GW. Spain comes in third with about 15 GW. China,however, had the most installed new wind capacity in 2007, adding 3.4 GW in just one year.

Solar PV, for its part, reached 11 GW of total installed global capacity. About 8 GW of that is grid-tied capacity with the remaining 3 GW coming from off-grid applications.

Globally, about 240 GW of renewable energy are installed.
Small hydro and wind lead that mix with about 70 GW each.
But biomass, solar and geothermal are quickly gaining traction.

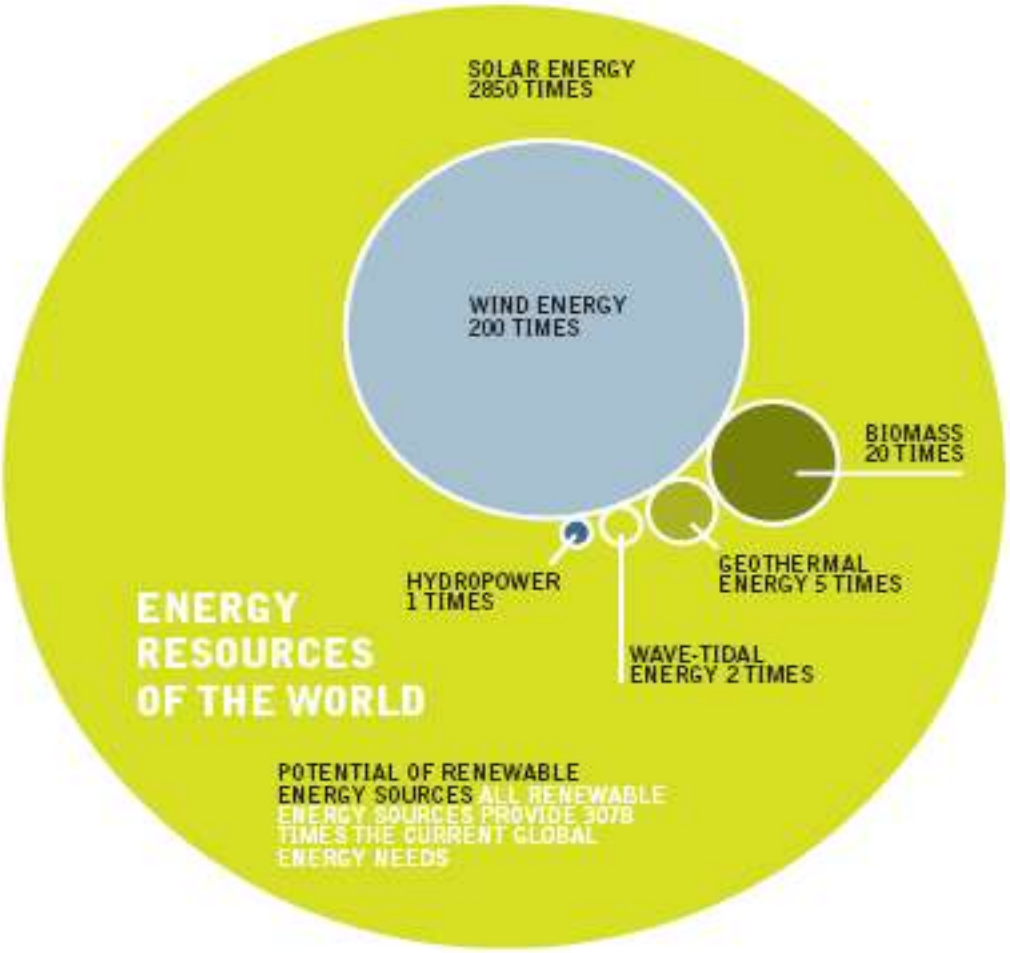
The fact China has more installed gigawatts (50 GW) than the U.S. (~30 GW) and China also installed 75% of the world's new solar hot water capacity in 2006. The U.S. had about 0.4% of that capacity.

RE 2007 GLOBAL CONTRIBUTION AND INVESTMENT

From Financial Times today (6\30\08), p.2: "Renewable energy still provides only a small portion of the world's energy, at about 5 per cent last year, but it accounted for 23 percent of new generating capacity added in the year 2007"
>

Global Investments in Clean Energy Technology - Global investments in solar, wind and other clean energy technologies topped $148 billion last year (2007), up 60% from 2006 according to New Energy Finance. See the press release at: http://www.newenergyfinance.com/NEF/HTML/Press/2008-02-28_PR_Total_Investment_In_Clean_Energy_Final.pdf or http://tinyurl.com/38ewht
New Energy Finance: http://www.newenergyfinance.com/?n=13

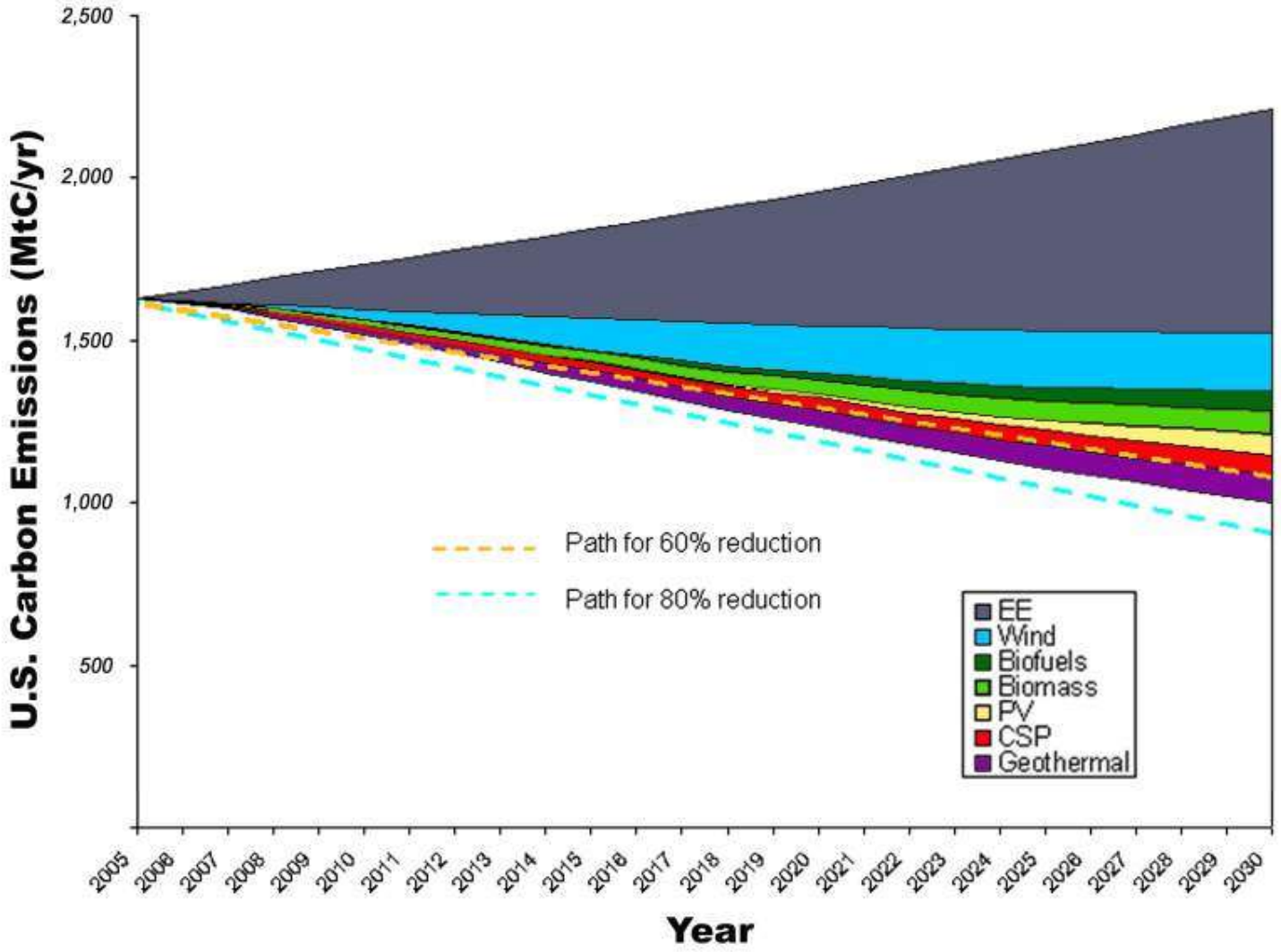
figure 30: **energy resources of the world**



source WBGU

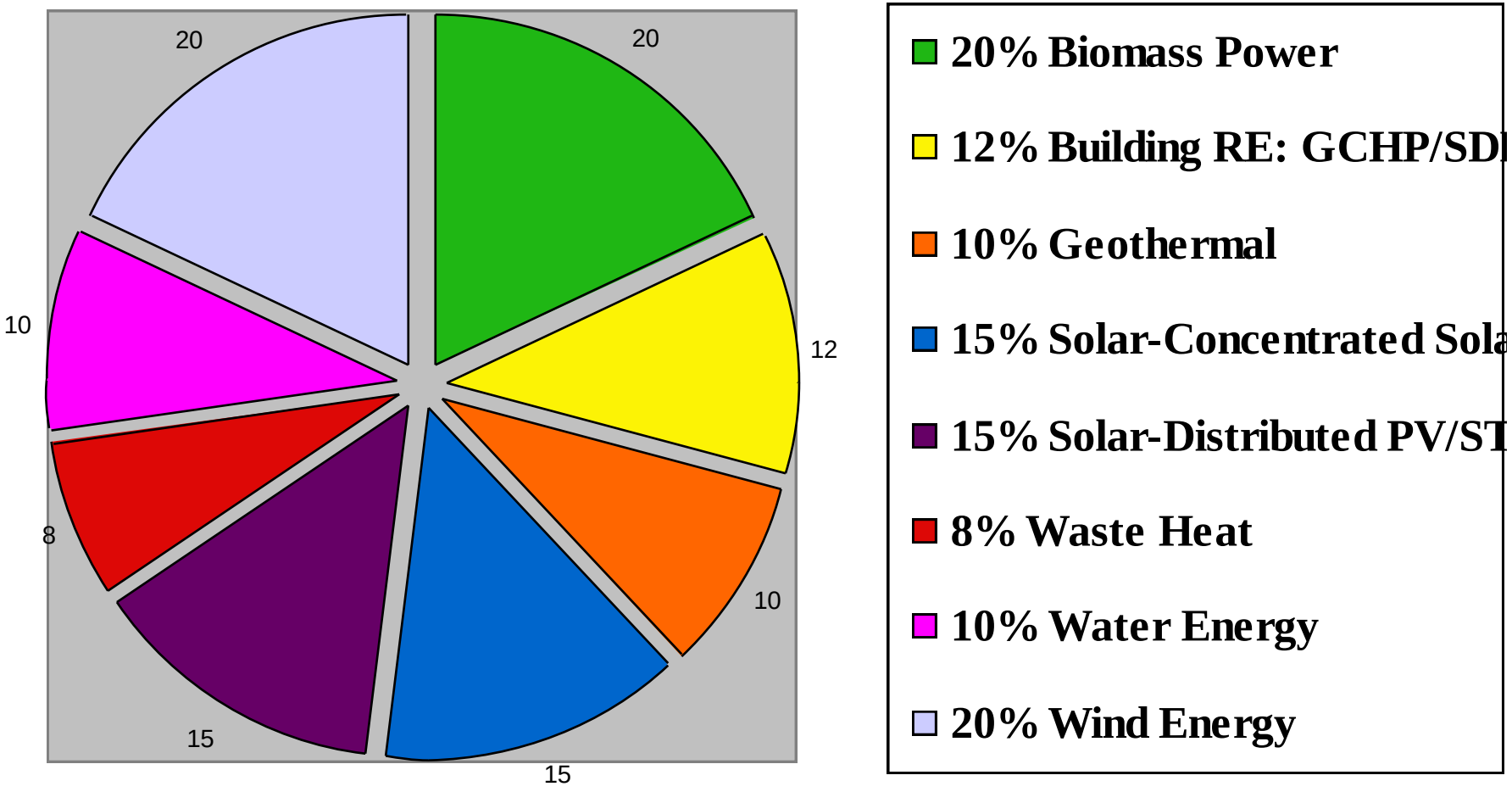
Institute DLR, Institute of Technical Thermodynamics, Department of Systems Analysis and Technology Assessment, Stuttgart, Germany Ecofys BV, P.O. Box 8408, NL-3503 RK Utrecht, Kanaalweg 16-G

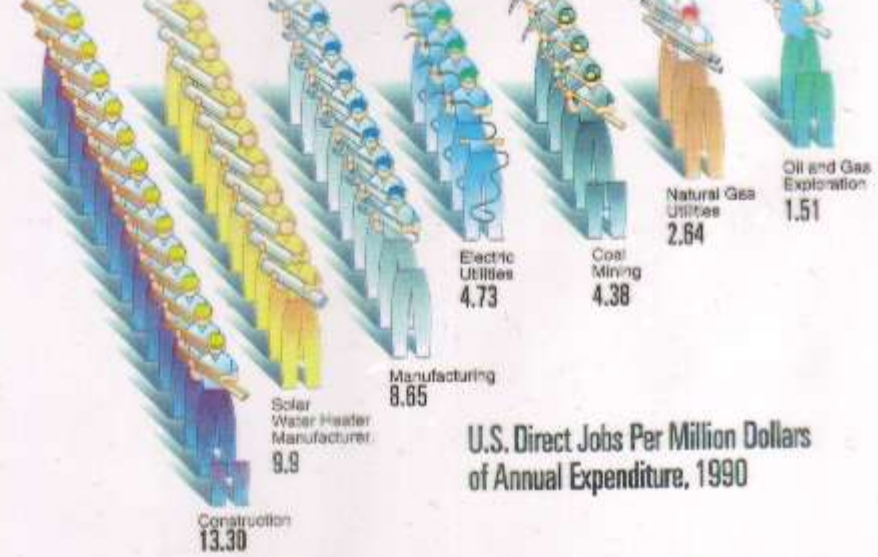
U.S. Carbon Emissions Displacement Potential from Energy Efficiency and Renewable Energy by 2030



57% Energy Efficiency, 43% Renewables

Percentage of Clean Energy in 21st Century





U.S. Direct Jobs Per Million Dollars of Annual Expenditure, 1990

for performance, reliability and durability. In addition, manufacturers and installers comp the SRCC's strict requirements for proper installation, labelling and homeowner infor regarding operation and maintenance. Assurances of performance and quality are bac warranties that in many cases exceed the guarantees of other household appliances.

Made in America In 1960, jobs within the energy industry (including coal mi and gas extraction, petroleum refining, electric and gas utilities) represented about 1.8 of total U. S. employment. By 1990 that share fell to 1.2 percent. "This ratio likely wil further over the next decade," the U. S. Center for Global Climate Change reported i

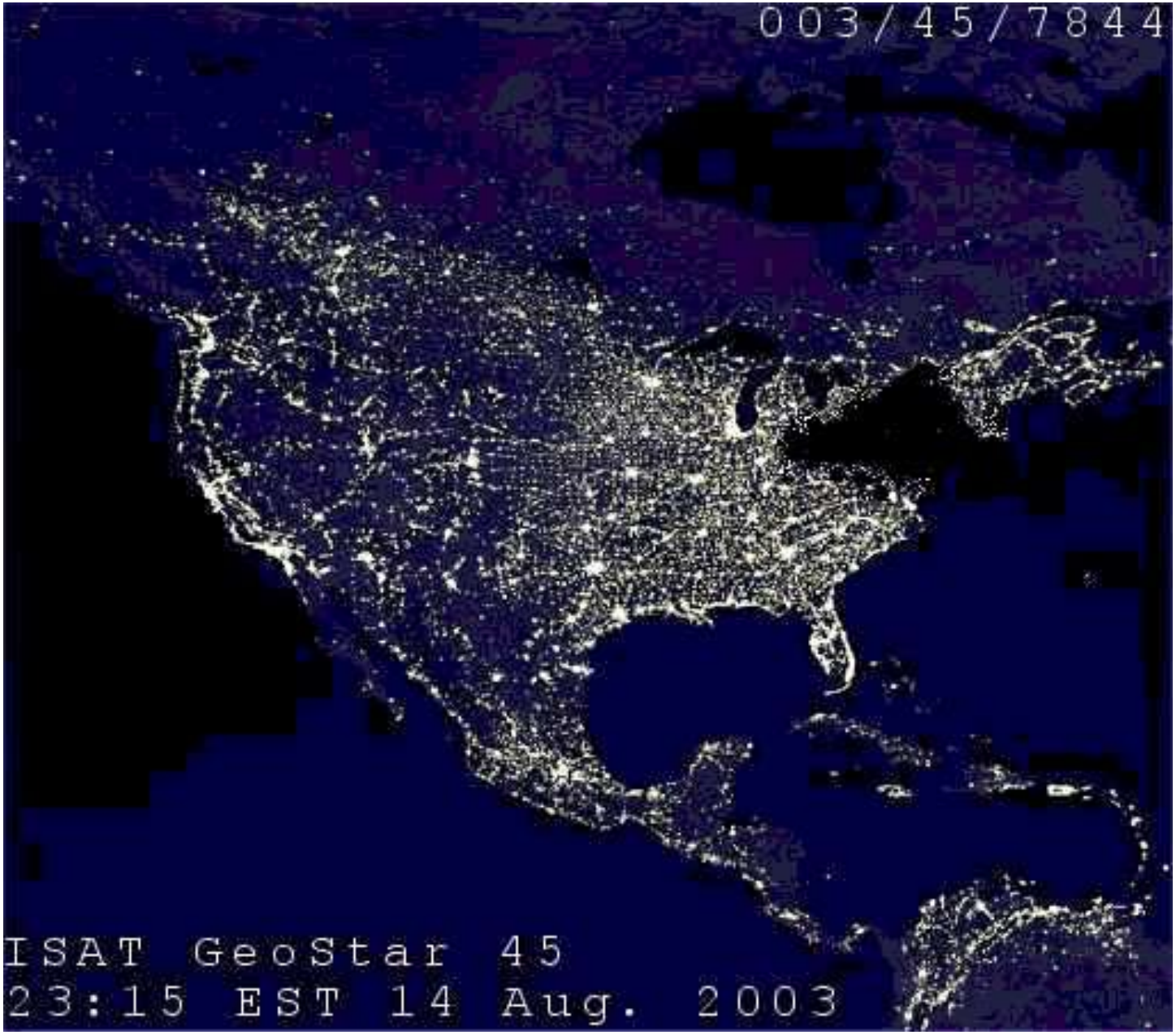
"Employment patterns resulting from conventional energy technologies are [illegible]

by the capital-intensive nature of the industry. Wher annual expenditure, coal, oil, gas and nuclear techno any economic activity." The solar water heating inc manufacturing needed to create both new skilled an

Realizing the Potential Several utilities a to the Midwest and Northeast — offer consumers a va of solar systems. In turn, the utility avoids the cost o especially power to meet peak energy demand, and with every-increasing restrictions on pollution emiss

Why Distributed Generation

1. **Remote energy** — where you need it, when you need it
2. **Back-up energy** — critical functions when the electric grid goes down
3. **Power quality** — no surges or swells or transients damaging digital and other sophistacled equipment — not a problem 20 years ago
4. **Cost reduction** — offsetting demand charges, peak power rates, and even ratchet rates — heightened value with time-of-day metering and "smart" meters
5. **Consumer values** — independence and control, green energy, and/or a technical leader or trendsetter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ISAT GeoStar 45
23:15 EST 14 Aug. 2003

Early adopters of fuel cells are driven by the need for uninterrupted, high quality power.

Power Disruption Events per Month

Event	Median	Average	Worst
Interruptions	1.0	1.3	10.0
Sags / undervoltages	4.1	27.9	1,660
Swells / overvoltages	3.4	13.9	1,450
Transients	15.7	63.5	1,166

Source: Duke Power, Sandia National Laboratories

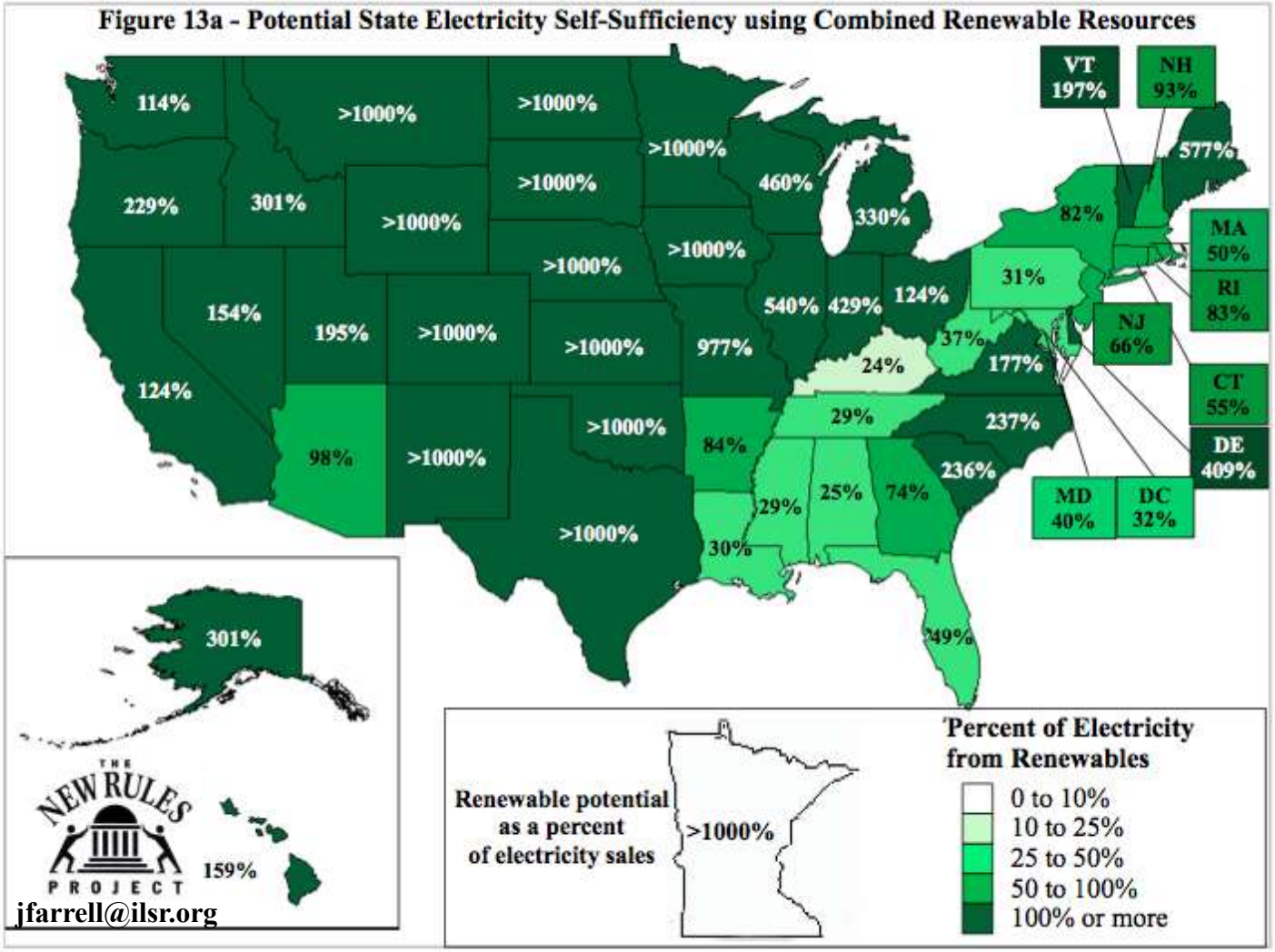
- Power disruptions may cause sensitive equipment to fail.
- As a result, organizations face potential for significant losses – lost data, lost materials, lost productivity, and lost income – as well as risks to public safety.
- A study by Sandia National Laboratories estimates losses from power disruptions at more than $150 billion per year in the U.S.
- In response, more and more organizations are turning to on-site generation to boost power availability.

Nexus Associates, Inc.

Energy Source	SO_x (gSO_x/kWh)	NO_x (gNO_x/kWh)	C in CO_2 (gC/kWh)	C in CO_2 from non-generating portion of fuel cycle* (gC/kWh)
Coal	3.400	1.8	322.8	50.0
Oil	1.700	0.88	258.5	50.0
Natural Gas	0.001	0.9	178.0	30.0
Nuclear	0.030	0.003	7.8	7.8
Photovoltaics	0.020	0.007	5.3	5.3

*Estimated emissions related only to the gathering and processing of fuel, and to the building and decommissioning of the generation plant. Based on calculations derived from: R. Dones and R. Frischknecht, "Life Cycle Assessment of Photovoltaic Systems: Results of Swiss Studies on Energy Chains," *Environmental Aspects of PV Power Systems: Report on the IEA PVPS Task 1*, Report No. 97072, December 1997. Emission factors for fossil fuel from The American Gas Association; emission factors for nuclear and renewable energy sources from the Council for Renewable Energy Education (as reported by SEIA, ref. 7).

32 States can be Self-Sufficient



Electric Market Overview: Renewable Portfolio Standards

Federal Energy Regulatory Commission • Market Oversight @ FERC.gov

29 States including D.C. have Renewable Energy Portfolio Standards (RPS)

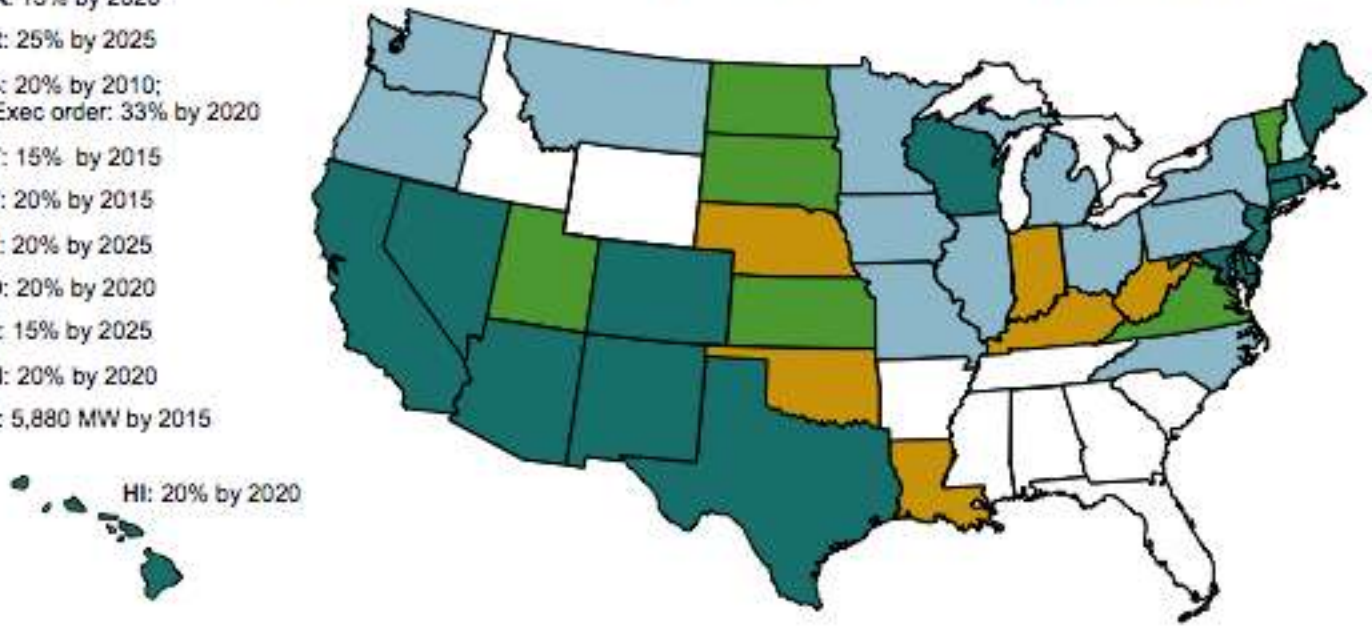
ND: 10% by 2015
SD: 10% by 2015
NE: studying an RPS
KS: Goal - 20% wind by 2020
OK: Studying an RPS

MN: 25% by 2025
IA: 105 MW
MO: 15% by 2021
WI: 10% by 2015
IL: 25% by 2025

MI: 10% MWh and 1,100 MW by 2015
IN: different bills pending
OH: 12.5% by 2025
WV: 25% by 2025 (bill pending)
KY: Report recommends RPS

ME: 40% by 2017
NH: 23.8% by 2025
VT: 25% by 2025
MA:15% by 2020
RI: 16% by end 2019
CT: 27% by 2020
NY: 25% by 2013
PA: 18% by 2020
NJ: 22.5% by 2020
DE: 20% by 2019
DC: 20% by 2020
MD: 20% by 2022
VA: 12% by 2022
NC: 12.5% by 2021
TVA: 50% by 2020*

WA: 15% by 2020
OR: 25% by 2025
CA: 20% by 2010; Exec order: 33% by 2020
MT: 15% by 2015
NV: 20% by 2015
UT: 20% by 2025
CO: 20% by 2020
AZ: 15% by 2025
NM: 20% by 2020
TX: 5,880 MW by 2015



HI: 20% by 2020

Updates at: http://www.ferc.gov/market-oversight/mkt-electric/overview/elec-ovr-rps.pdf

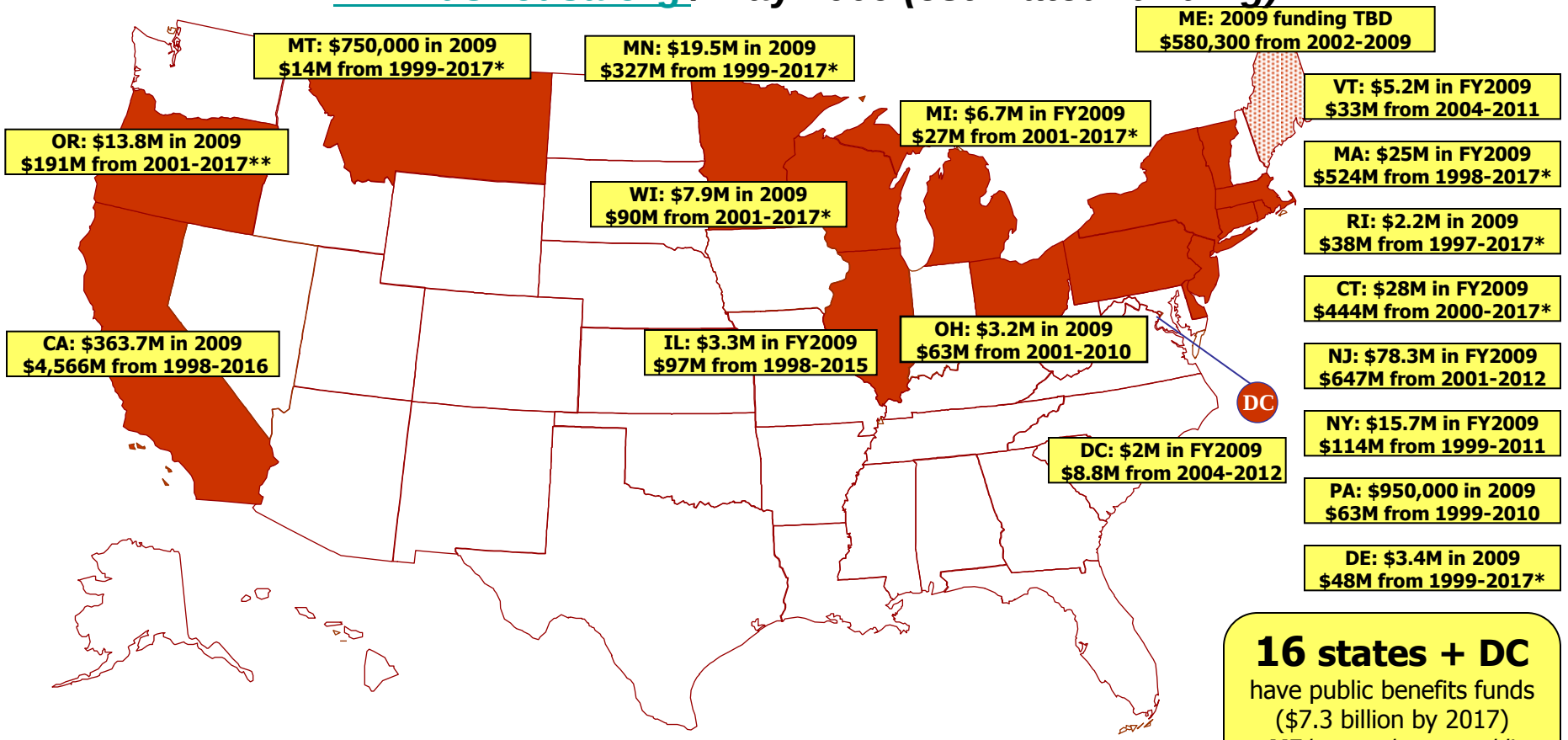
- RPS
- Accelerated or strengthened RPS
- Voluntary standards or goals
- Proposed RPS or studying RPS

Notes: An RPS requires a percent of an electric provider's energy sales (MWh) or installed capacity (MW) to come from renewable resources. Most specify sales (MWh). Map percents are final years' targets.
Alaska has no RPS; TVA's goal is not state policy; it called for 50% zero- or low-carbon generation by 2020.
Sources: Derived from data in: LBNL, PUCs, State legislative tracking services, Pew Center, and the Union of Concerned Scientists. Details, including timelines, are in the Database of State Incentives for Renewables and Energy Efficiency: http://www.dsireusa.org

Updated May 6, 2009

US State Public Benefit Funds

www.dsireusa.org / May 2009 *(estimated funding)*



16 states + DC
have public benefits funds
($7.3 billion by 2017)
***ME** has a voluntary public benefits fund*

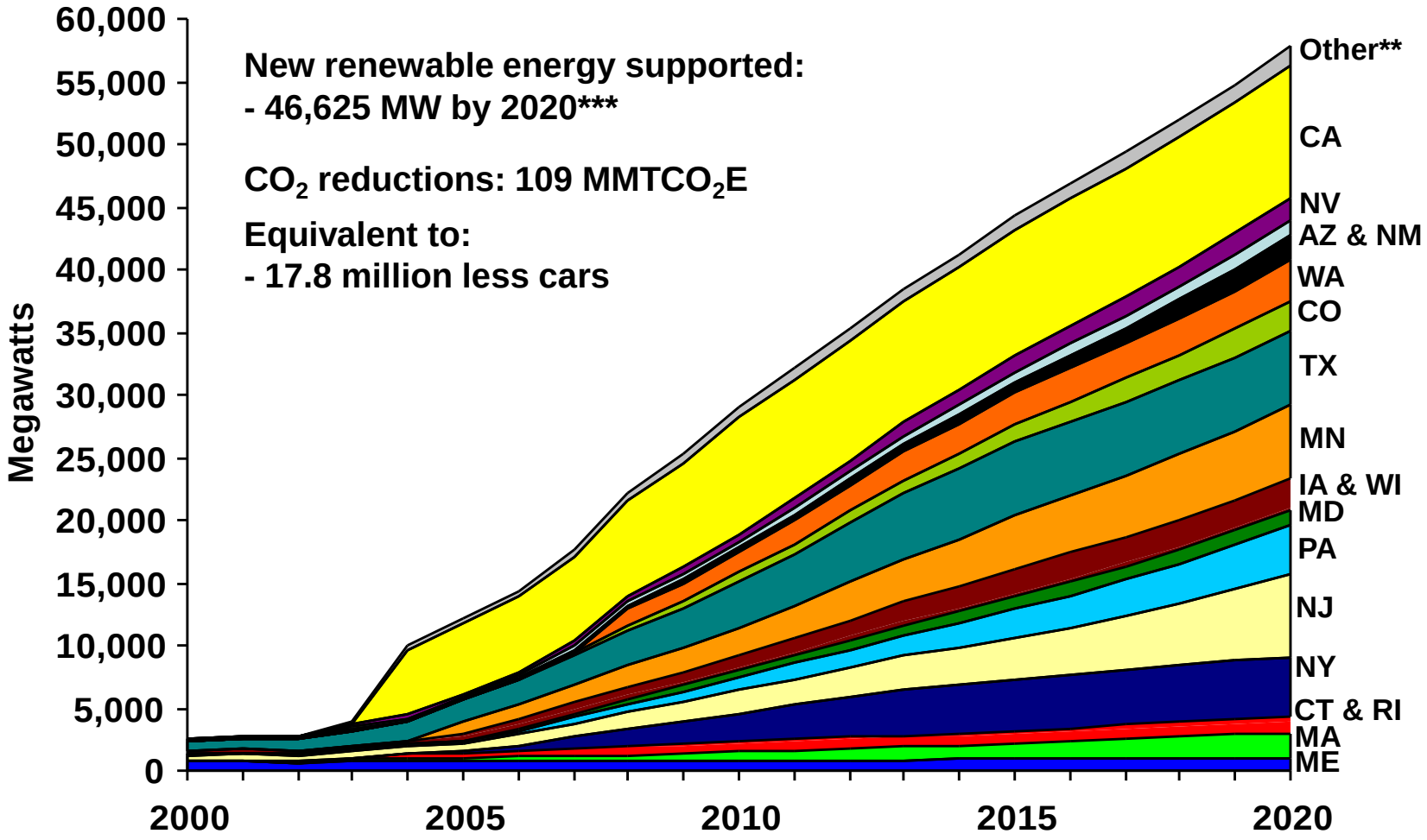
State PBF

State PBF supported by voluntary contributions

* Fund does not have a specified expiration date

** The Oregon Energy Trust is scheduled to expire in 2025

Renewable Energy Expected From State Standards and Funds*

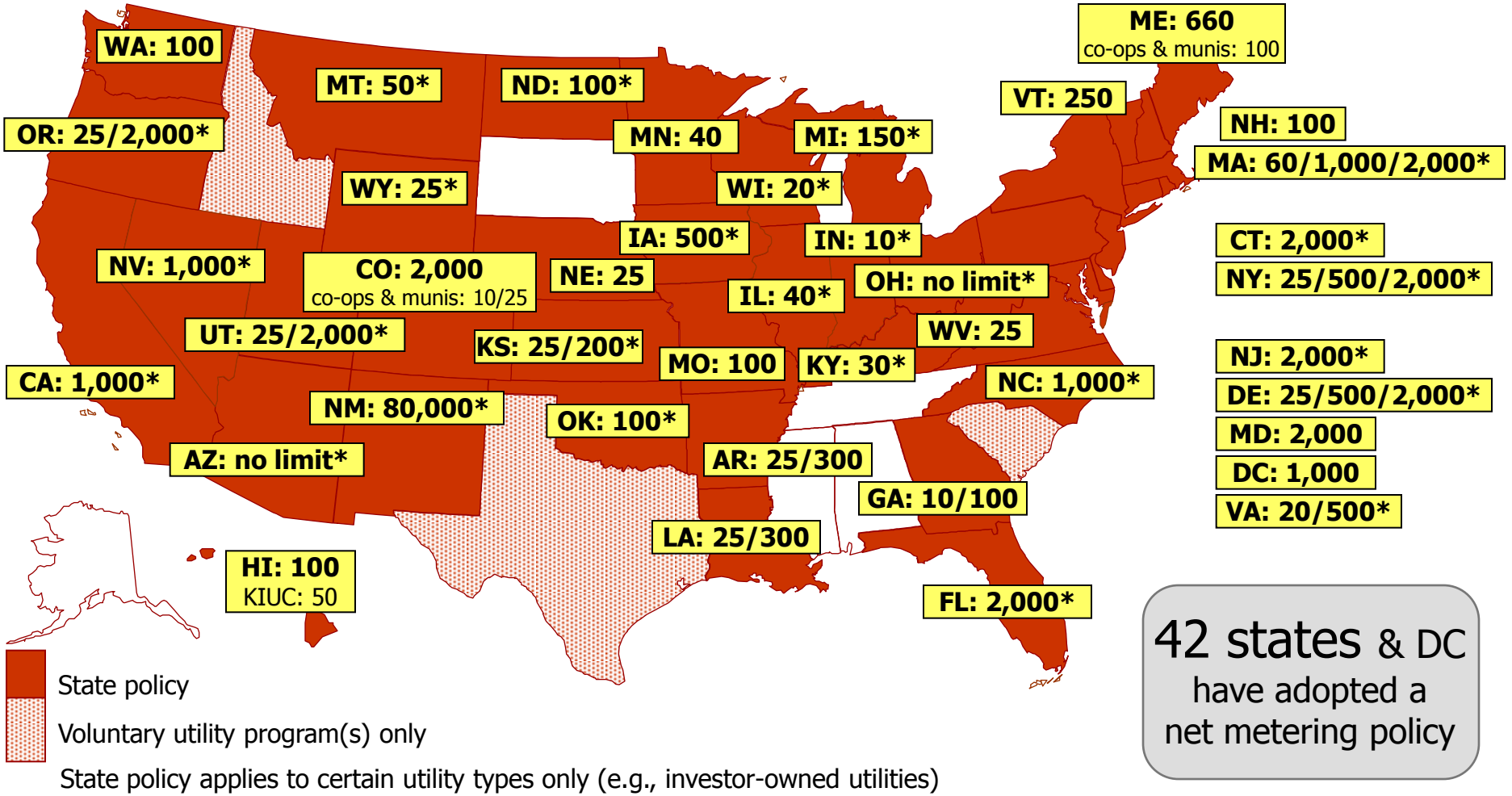


*Projected development assuming states achieve annual renewable energy targets.
**Includes Delaware, Hawaii, Illinois, Montana, Ohio, Oregon, and Washington D.C.
***If achieved, IA, IL, and ME goals would support an additional 4,400 MW by 2020.

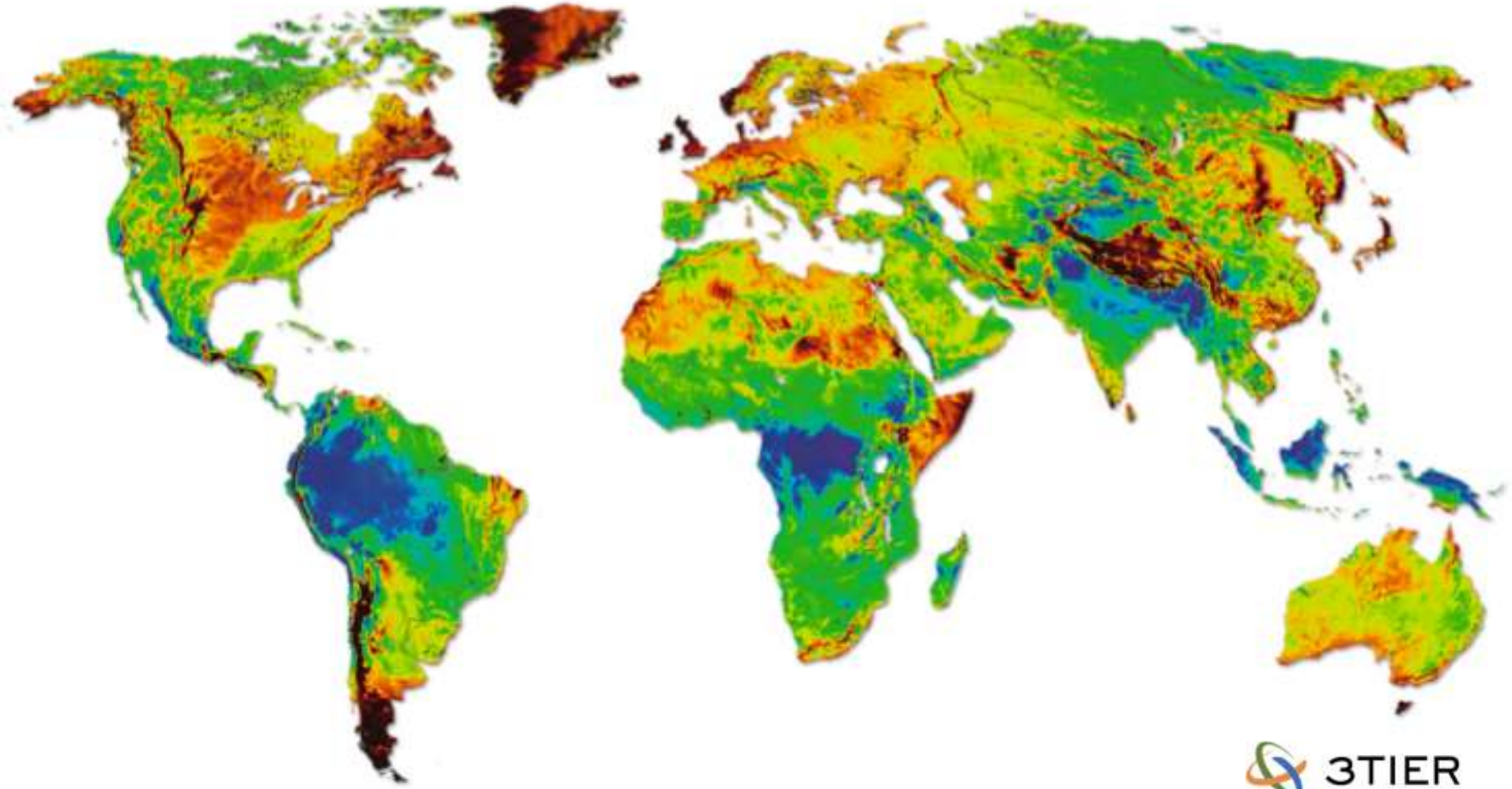
Source: Union of Concerned Scientists

US State Net Metering Tariffs

www.dsireusa.org / June 2009

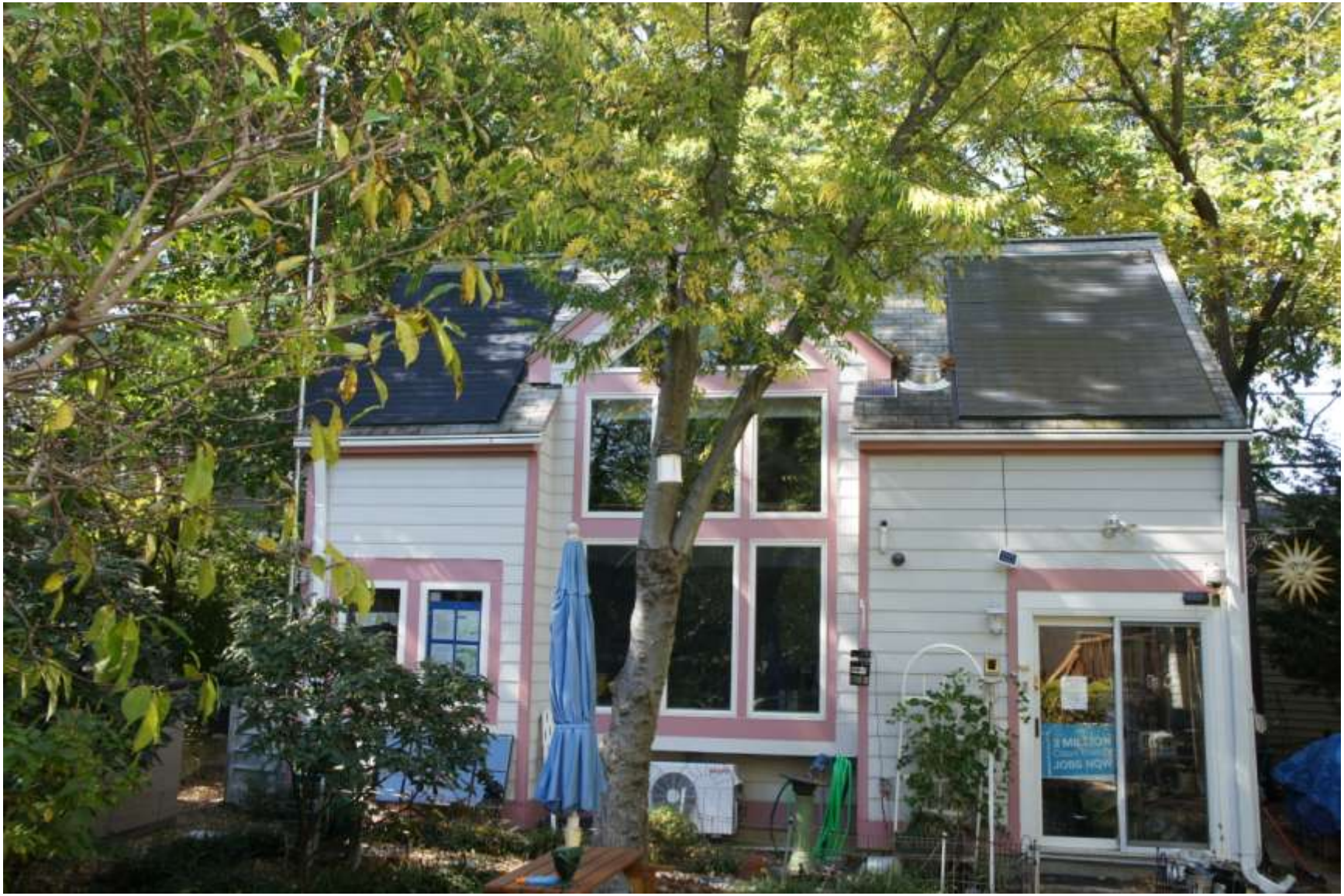


42 states & DC have adopted a net metering policy



US Commercial Zero Energy Buildings - All Renewable Powered

PV “Peal & Stick” Sklar Home



The Stella Group, LTD - Arlington, VA Office

On-Site Generation Utilization List

- **Lighting** (outside area, motion detectors and remote lighting) — Lighting systems attached to buildings, light poles, or specialized for public areas.

- **Water and/or Irrigations** (pumps, pipelines compressors) — Low and high power operation — primarily fuel & water pipelines, refrigeration and air-conditioning.

Landfill Gas

A 200 kW biogas electric unit installation at a landfill in Michigan, 2003.

Courtesy of www.stmpower.com

On-Site Generation Utilization List

- **Power quality** — dedicated sophisticated controls and digital equipment such as communications and computers that are susceptible to surges, swells and transients from the electric power grid
- **Power Reliability** (communications and computers) — Absolute reliable back-up power for days, weeks or longer

SKYBUILT POWER LLC

- **Remote and Moveable Power Gen Sets** — Using shipping container and pontoons, several systems are "plop and drop" and have quick connectors to add or rotate generation

Good planets are hard to find.