The Stella Group, Ltd.

The Stella Group, Ltd.. is a strategic technology optimization and policy firm for clean distributed energy users and companies which include advanced batteries and controls, energy efficiency, fuel cells, geoexchange, heat engines, microhydropower (including tidal and wave), modular biomass, photovoltaics, small wind, and solar thermal (including CSP, daylighting, water heating, industrial preheat, building air-conditioning, and electric power generation).The Stella Group, Ltd. blends distributed energy technologies, aggregates financing with a focus on system standardization. Scott Sklar serves as Steering Committee Chair of the Sustainable Energy Coalition, composed of the renewable and energy efficiency associations and analytical groups, and sits on the national Boards of Directors of the non-profit Business Council for Sustainable Energy, Renewable Energy and The Solar Foundation , teaches two unique interdisciplinary sustainable energy course at The George Washington University, and appointed by Sec Locke onto the DOC RE/EE Advisory Committee.

The Stella Group, Ltd. 1616 H Street, NW, 10th fl Washington, DC 20006

202-347-2214 (f-2215) www.TheStellaGroupLtd.com solarsklar@aol.com

BLOOMBERG ENERGY: RE GLOBAL INVESTMENTS FINDINGS 2013

Renewable Energy at $254 Billion? Let's Make It a Clean ...www.bloomberg.com /.../renewable-energy-at-254-billion.

Bloomberg L.P.Jan 16, 2014 - Global investment in renewable energy in 2013 to $254 billion, according to data released by Bloomberg New Energy Finance .

US 20!3 RENEWABLE ENERGY GRID ELECTRICITY

For Release: Monday, January 27, 2014 Contact: Ken Bossong, 301-270-6477 x.11

Washington DC – According to the latest "Energy Infrastructure Update" report from the Federal Energy Regulatory Commission's Office of Energy Projects, renewable energy sources (i.e., biomass, geothermal, hydropower, solar, wind) accounted for 37.16% of all new domestic electrical generating capacity installed during calendar-year 2013 for a total of 5,279 MW.)

International Energy Agency Warns Of Ballooning World Fossil Fuel Subsidies:

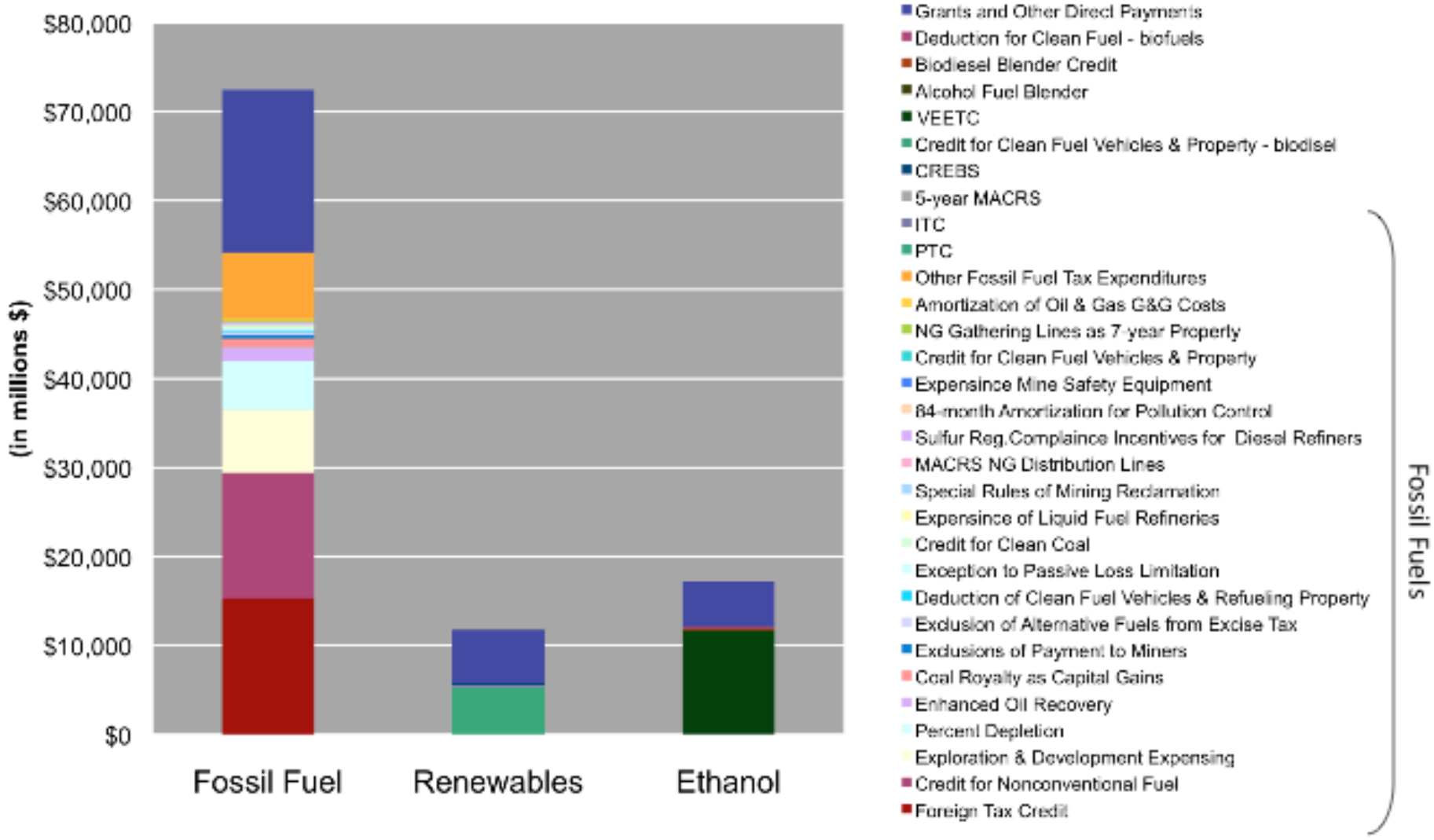
Reuters, by Muriel Boselli, October 5, 2011

http://planetark.org/wen/63469

Global subsidies for fossil fuel consumption are set to reach $660 billion in 2020, or 0.7 percent of global gross domestic product, unless reforms are passed to effectively eliminate this form of state aid, according to the International Energy Agency.

The IEA estimated such subsidies at $409 billion in 2010, compared to $312 billion in 2009. Oil products had the largest subsidies at $193 billion in 2010 while $91 billion went to natural gas. Iran and Saudi Arabia had the biggest subsidies. Leaders of the Group of 20 major economies committed in Pittsburgh in 2009 to phase out, over the medium-term, inefficient fossil fuel subsidies that encourage wasteful consumption. Eliminating fossil fuel consumption subsidies by 2020 would cut global energy demand by 4 percent and considerably reduce carbon emissions growth, the IEA said.

Level the Playing Field: Fossil Fuels Enjoy Permanent Incentives 5x Those of Renewables



Clean Energy Reports

1. **GREENPEACE/DLR**

The world could eliminate fossil fuel Council (EREC) and environmental group Greenpeace said. The 210-page study is one of few reports -- even by lobby groups -- to look in detail at how energy use would have to be overhauled to meet the toughest scenarios for curbing greenhouse use by 2090 by spending trillions of dollars on a renewable energy revolution, the European Renewable Energy gases outlined by the U.N. a Climate Panel. "Renewable energy could provide all global energy needs by 2090," according to the study, entitled "Energy (R)evolution." EREC represents renewable energy industries and trade and research associations in Europe.

2. **ASES/NREL** *U.S. Energy Experts Announce Way to Freeze Global Warming*

On January 31, 2007 at a press conference in Washington, D.C., ASES unveiled a 200-page report, Tackling Climate Change in the U.S.: Potential Carbon Emissions Reductions from Energy Efficiency and Renewable Energy by 2030. The result of more than a year of study, the report illustrates how energy efficiency and renewable energy technologies can provide the emissions reductions required to address global warming. U.S. Carbon Emissions Displacement Potential from Energy Efficiency and Renewable Energy by 2030 - 57% Energy Efficiency, 43% Renewables

3. **GOOGLE** *Google.org, the philanthropic arm of the search giant, has unveiled a plan to move the U.S. to a clean-energy future. The vision: In 2030, electricity will be generated not from coal or oil but from wind, solar, and geothermal power. Energy demand will be two-thirds what it is now, thanks to stringent energy-efficiency measures. Ninety percent of new vehicle sales will be plug-in hybrids. Carbon dioxide emissions will be down 48 percent. Getting there will cost $4.4 trillion, says the plan -- but will recoup $5.4 trillion in savings. The Clean Energy 2030 plan would require ambitious national policies, a huge boost to renewables, increased transmission capacity, a smart electricity grid, and much higher fuel-efficiency standards for vehicles.*

MORE REPORTS - 2009

National Research Council Renewables Report - June 09

Renewable energy resources in the U.S. are sufficient to meet a significant
portion of the nation's electricity needs says a new report from the National Research Council. Press and link to report at:
http://www8.nationalacademies.org/onpinew
s/newsitem.aspx?RecordID=12619 or http://tinyurl.com/neka69

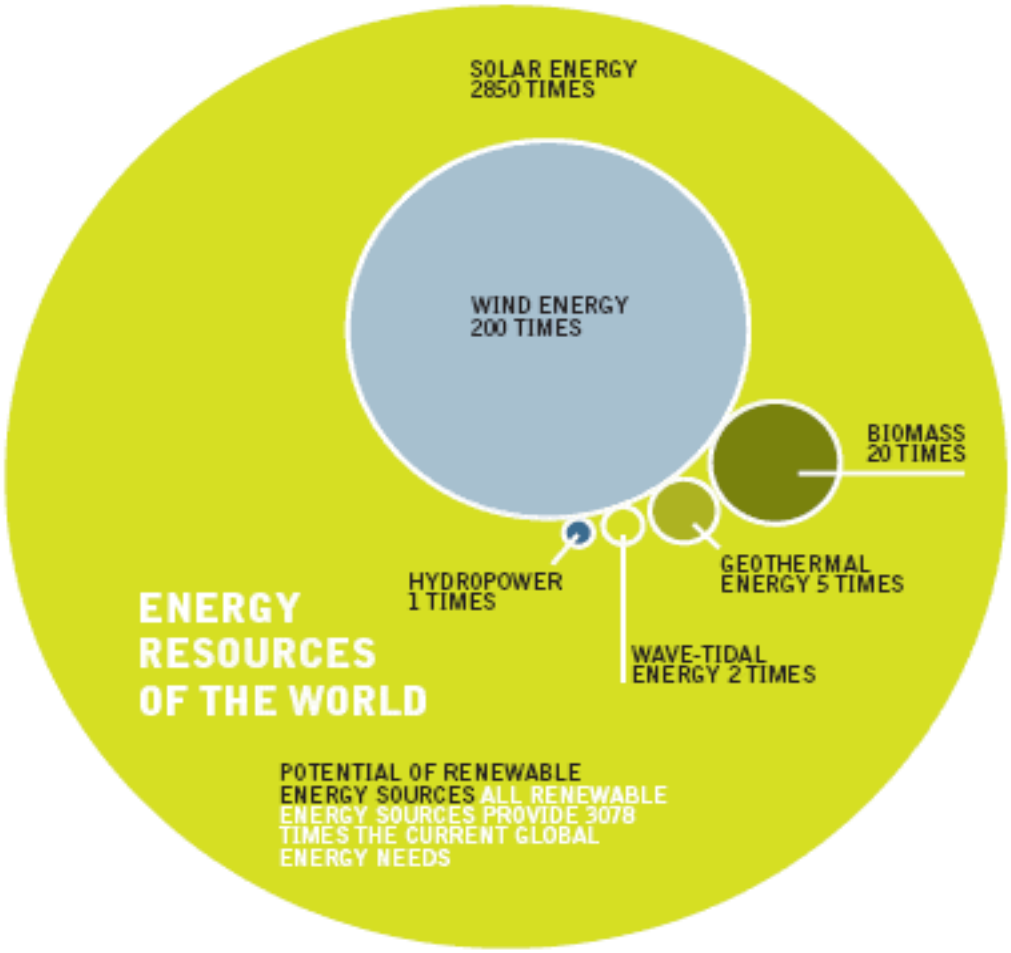
INSTITUTE FOR LOCAL SELF RELIANCE (October 2009) report by David Morris
"SELF RELIANT STATES" -- Excerpted Executive Summary Conclusion:
"All 36 states with either renewable energy goals or renewable energy mandates could meet them by relying on in-state renewable fuels. Sixty-four percent could be self-sufficient in electricity from in-state renewables; another 14 percent could generate 75 percent of their electricity from homegrown fuels. Indeed, the nation may be able to achieve a significant degree of energy independence by harnessing the most decentralized of all renewable resources: solar energy. More than 40 states plus the District of Columbia could generate 25 percent of their electricity just with rooftop PV. In fact, these data may be conservative. The report does not, for example, estimate the potential for ground photovoltaic arrays – although it does estimate the amount of land needed in each state to be self-sufficient relying on solar – even though common sense suggests that this should dwarf the rooftop potential..... It is at the local level that new technologies like smart grids, electric vehicles, distributed storage, and rooftop solar will have their major impact."
Contact for David Morris at: cell 612-220-7649 or dmorris@ilsr.org

25. NREL (6\18\12) the Renewable Electricity Futures Study (*RE Futures*), is an initial investigation of the extent to which renewable energy supply can meet the electricity demands of the continental United States over the next several decades. This study explores the implications and challenges of very high renewable electricity generation levels—from 30% up to 90%, focusing on 80%, of all U.S. electricity generation from renewable technologies—in 2050. At such high levels of renewable electricity generation, the unique characteristics of some renewable resources, specifically geographical distribution and variability and uncertainty in output, pose challenges to the operability of the nation's electric system. Renewable electricity generation from technologies that are commercially available today, in combination with a more flexible electric system, is more than adequate to supply 80% of total U.S. electricity generation in 2050 while meeting electricity demand on an hourly basis in every region of the country.
http://www.nrel.gov/docs/fy12osti/52409-1.pdf
http://www.nrel.gov/docs/fy12osti/52409-2.pdf
http://www.nrel.gov/docs/fy12osti/52409-3.pdf
http://www.nrel.gov/docs/fy12osti/52409-4.pdf

Employment Impacts

- Environmental and Energy Study Institute (EESI) has published a fact sheet outlining the number of U.S. jobs in the energy efficiency and renewable energy industries. Among the facts: For every $1 million spent on energy efficiency, 2.5 - 8.9 person-years of employment are generated. Appliance, equipment, and lighting efficiency standards generated 340,000 jobs in 2010. Renewable energy industries employ 850,000 - 950,000 Americans through a combination of direct, indirect, and induced jobs.

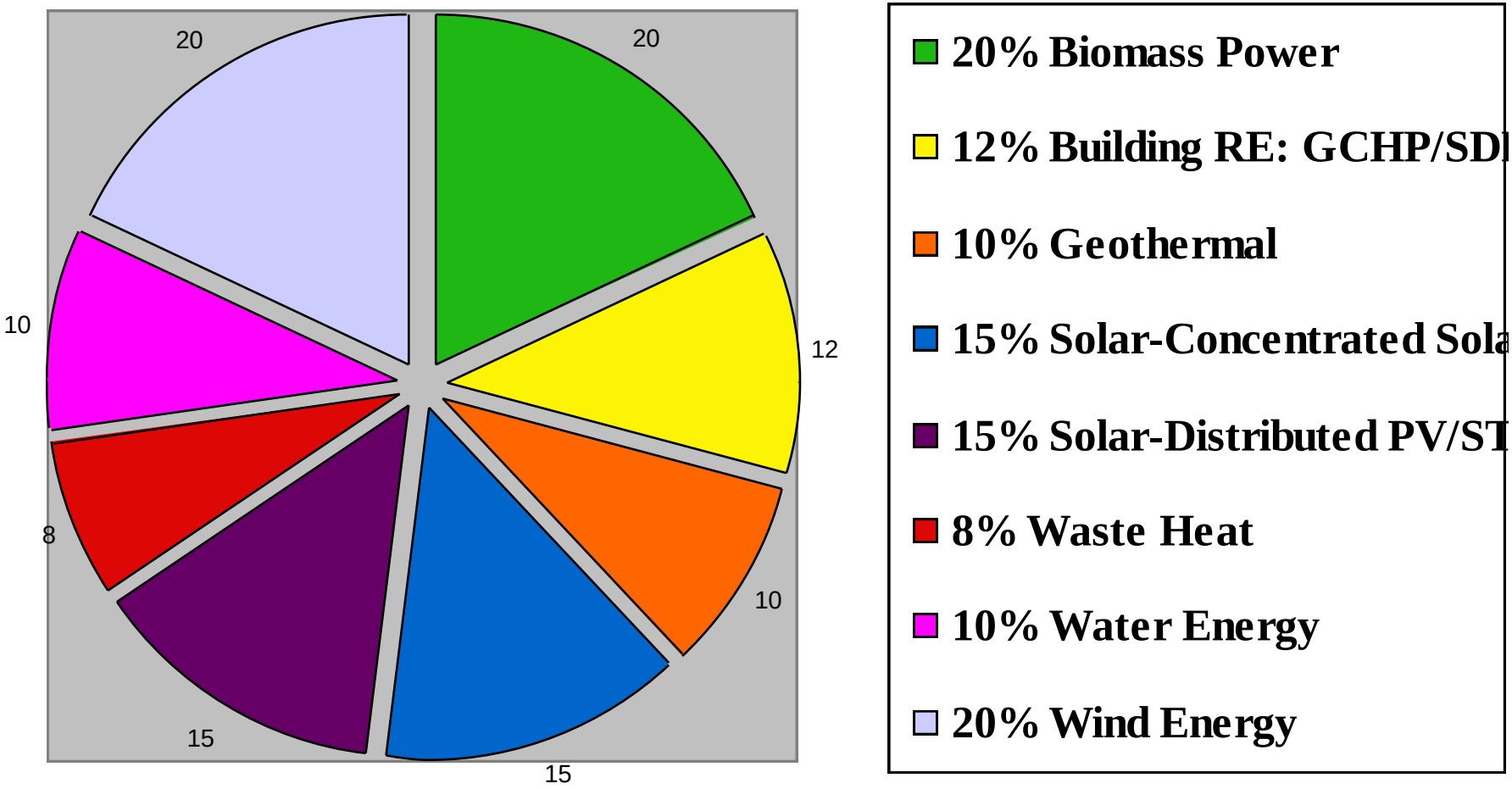
figure 30: **energy resources of the world**



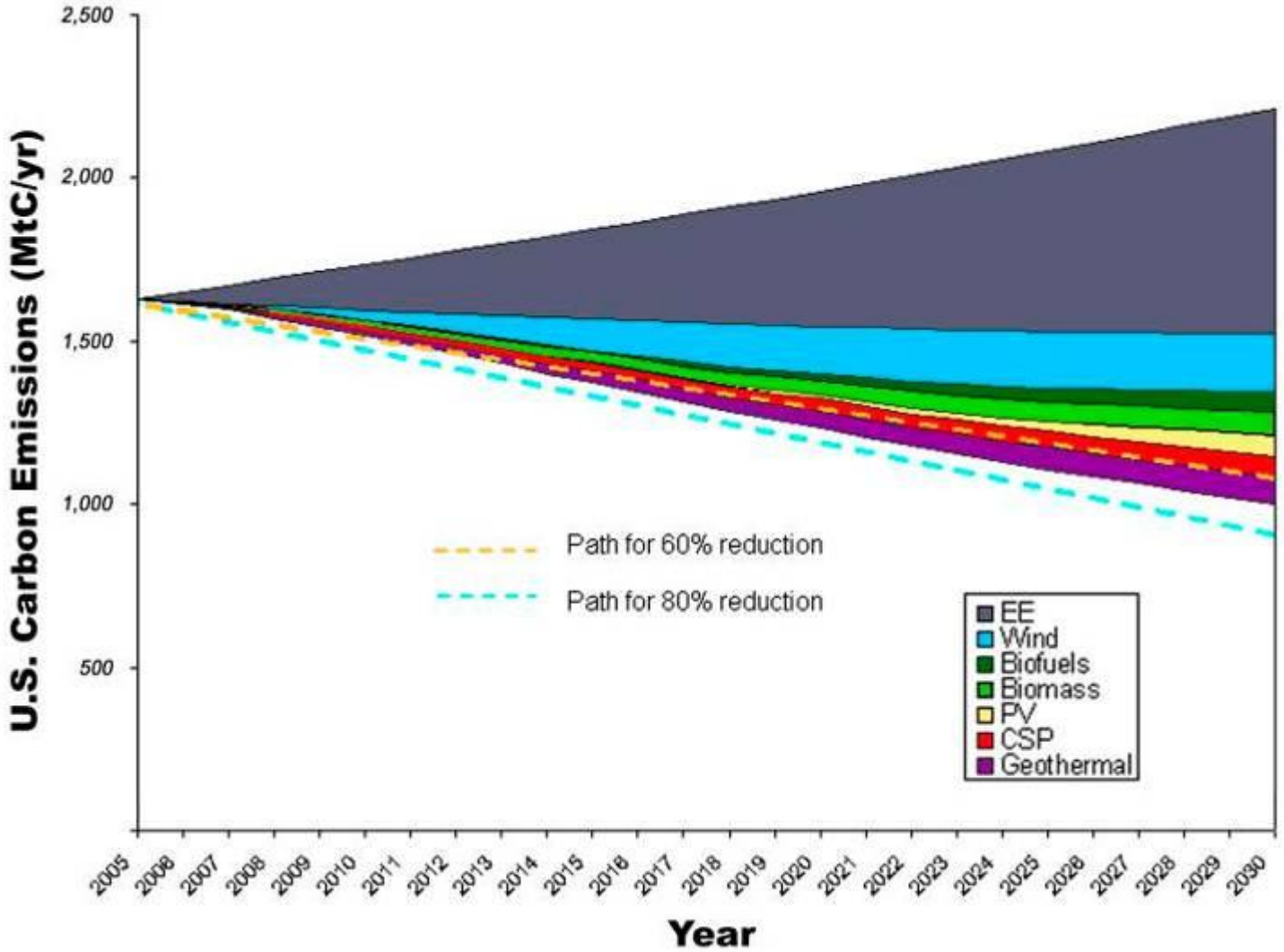
source WBGU

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

Percentage of Clean Energy in 21st Century

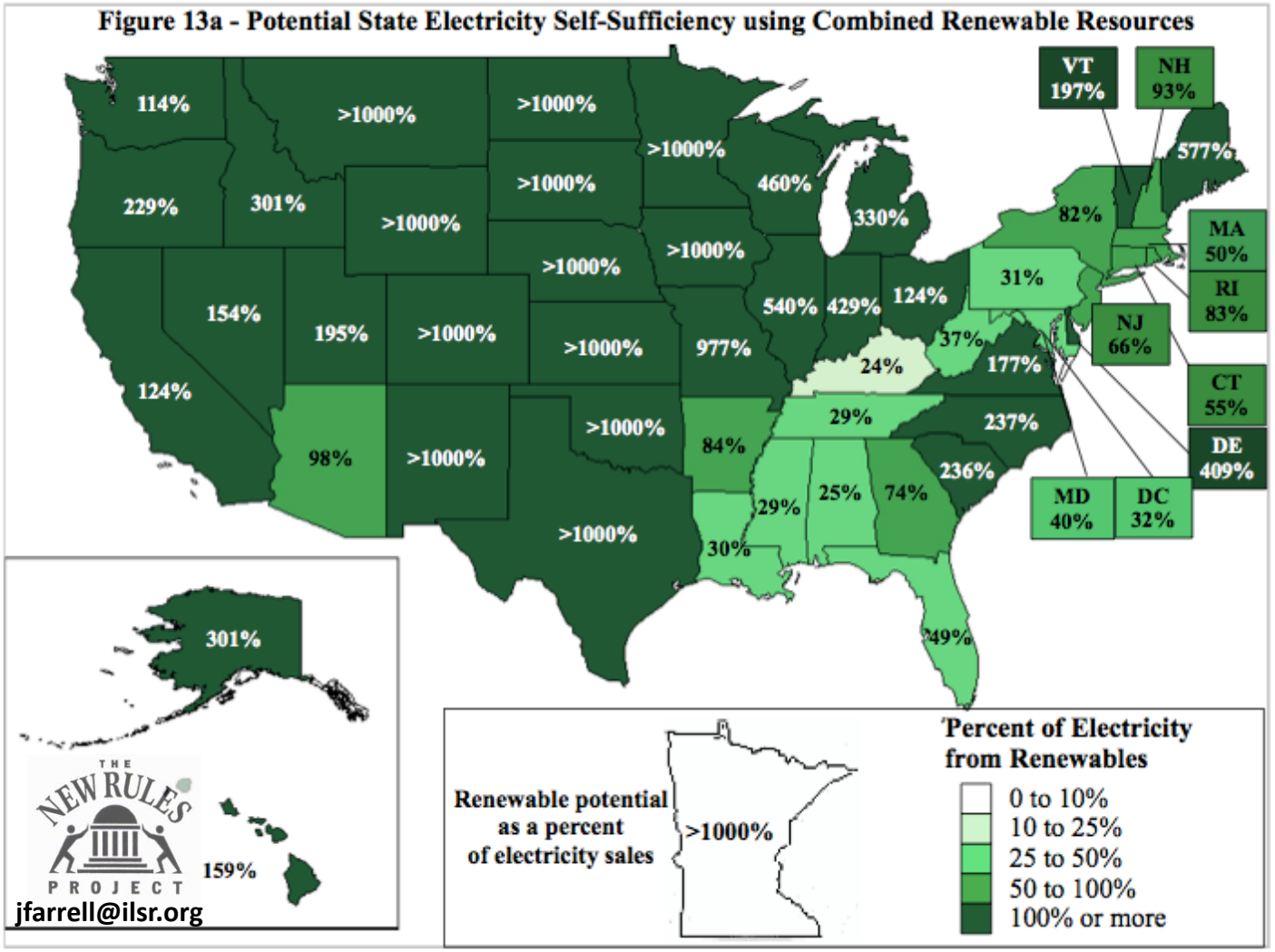


U.S. Carbon Emissions Displacement Potential from Energy Efficiency and Renewable Energy by 2030



57% Energy Efficiency, 43% Renewables

32 States can be Self-Sufficient



26. Energy Analysis :Biogas Potential in the United States: The methane potential from landfill material, animal manure, wastewater, and industrial, institutional, and commercial organic waste in the United States is estimated at about 7.9 million tonnes per year, which is equal to about 420 billion cubic feet or 431 trillion British thermal units. This amount could displace about 5% of current natural gas consumption in the electric power sector and 56% of natural gas consumption in the transportation sector (EIA 2013).

http://www.nrel.gov/docs/fy14osti/60178.pdf

27. A new report published by the Nicholas Institute for Environmental Policy Solutions at Duke University seeks to uncover under what conditions a substantial, decentralized domestic biogas market could develop in the United States by 2040. The report, titled "Biogas in the United States: An Assessment of Market Potential in a Carbon-Constrained Future," determined that biogas could supply as much as 5 percent of the total natural gas market in 2040, when U.S. consumption of natural gas is expected to reach nearly 30 trillion cubic feet. (March 19, 2014)

Source:http://nicholasinstitute.duke.edu/sites/default/files/publications/ni_r_14-02_full_pdf.pdf

28. The *New Stream-reach Development Assessment* builds on a **2012 Energy Department assessment** that found over 12 GW of hydropower potential at the nation's existing 80,000 non-powered dams. The results of the resource assessment released today show that there are still many opportunities to develop new hydropower projects around the country, most of which would likely be smaller, run-of-river facilities that could utilize new low-impact designs and technologies. Find the **full stream-reach resource assessment as well as additional maps and data on new hydropower potential**.

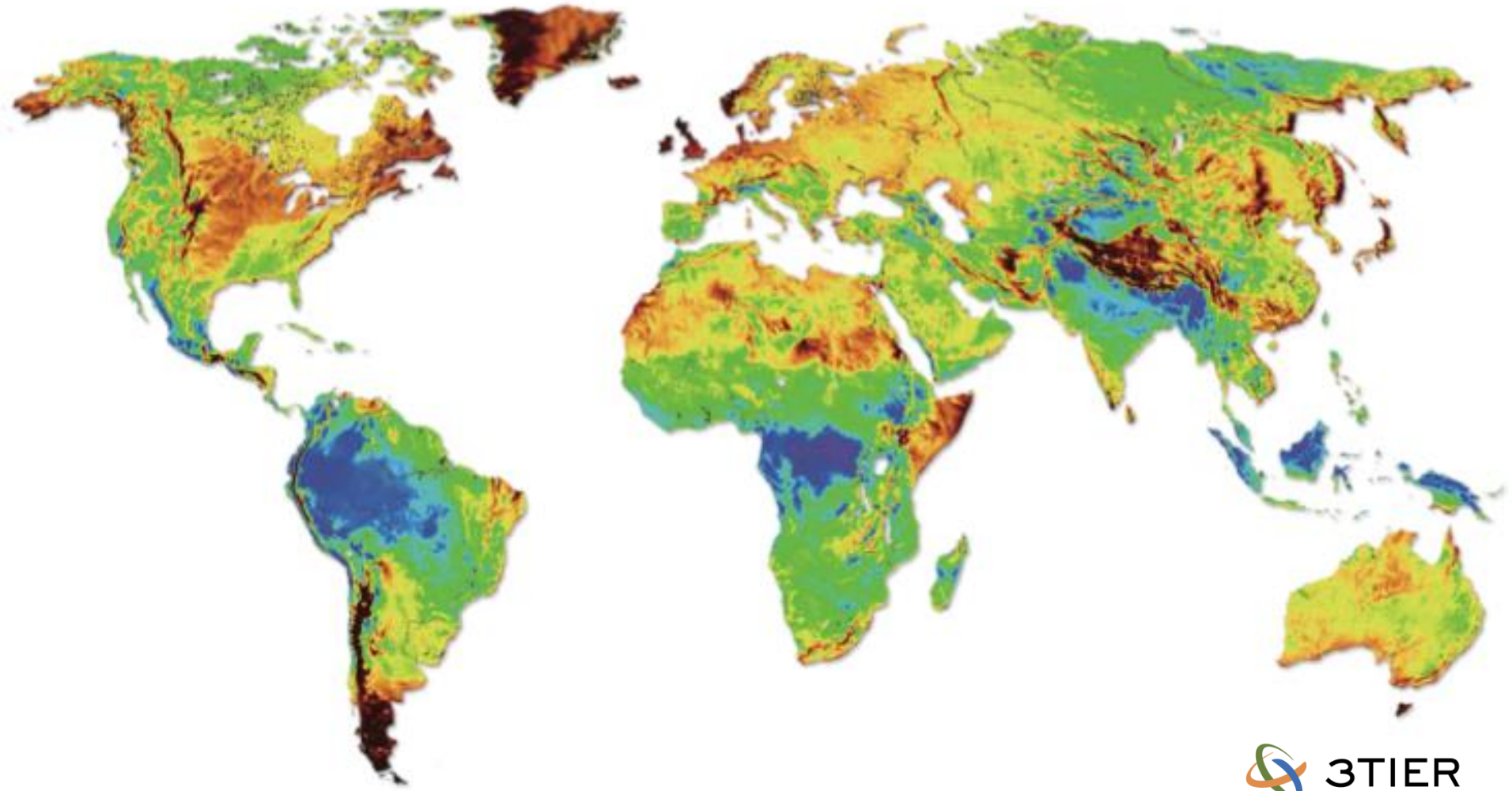
http://energy.gov/eere/water/hydropower-resource-assessment-and-characterization

29. **Waste Can Meet 12% of U.S. Electricity Needs**: Columbia University Study
UtilityDive.com, by Claire Cameron, July 15, 2014

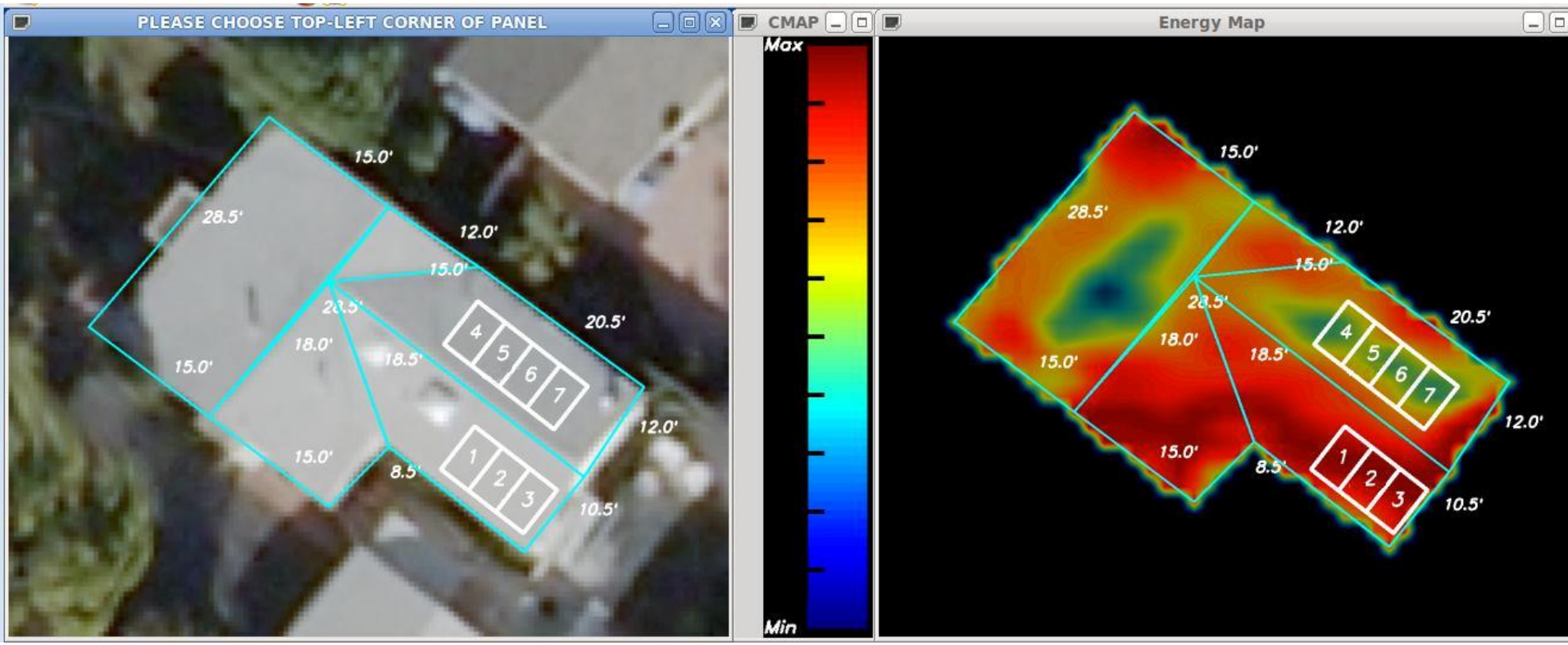
http://www.utilitydive.com/news/study-waste-can-meet-12-of-us-electricity-needs/286473/?utm_medium=email&utm_campaign=Utility+Dive+Newsletter+created+2014-07-16+091215115134&utm_content=Utility+Dive+Newsletter+created+2014-07-16+091215115134+CID_59c67894698f9dd9dab8e5e0e89c1b09&utm_source=campaignmonitor&utm_term=Study%20Waste%20can%20meet%2012%20of%20US%20electricity%20needs

About 3.8 billion tons of waste was processed by U.S. waste-to-energy generation facilities in the U.S. between 2008 and 2011. However, a new study by the Earth Engineering Center at Columbia University has found that redirecting Municipal Solid Waste from landfill to fuel energy generation could produce enough electricity to meet 12% of U.S. electricity needs. It would also save an estimated 123 million tons of greenhouse gas emissions from entering the atmosphere. The study pointed out that if all of the non-recycled plastic waste were converted to oil, it would produce 6 billion gallons of gasoline over the course of a year.

Scott Sklar, Adjunct Professor / The George Washington University / E-mail solarsklar@aol.com



3TIER
knowledge is power



Solar Energy Siting Software

www.solar-red.net


Good planets are hard to find.