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NASA - Ocean Wind Power Maps Reveal Possible Wind Energy Sources - 07.09.08

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NASA - Ocean Wind Power Maps Reveal Possible Wind Energy Sources - 07.09.08

http://www.nasa.gov/topics/earth/features/quikscat-20080709.html

“PASADENA, Calif. - Efforts to harness the energy potential of Earth's ocean winds could soon gain an important new tool: global satellite maps from NASA. Scientists have been creating maps using nearly a decade of data from NASA's QuikSCAT satellite that reveal ocean areas where winds could produce energy.

The new maps have many potential uses including planning the location of offshore wind farms to convert wind energy into electric energy. The research, published this week in Geophysical Research Letters, was funded by NASA's Earth Science Division, which works to advance the frontiers of scientific discovery about Earth, its climate and its future.

"Wind energy is environmentally friendly. After the initial energy investment to build and install wind turbines, you don't burn fossil fuels that emit carbon," said study lead author Tim Liu, a senior research scientist and QuikSCAT science team leader at NASA's Jet Propulsion Laboratory in Pasadena, Calif. "Like solar power, wind energy is green energy."

QuikSCAT, launched in 1999, tracks the speed, direction and power of winds near the ocean surface. Data from QuikSCAT, collected continuously by a specialized microwave radar instrument named SeaWinds, also are used to predict storms and enhance the accuracy of weather forecasts.

Wind energy has the potential to provide 10 to 15 percent of future world energy requirements, according to Paul Dimotakis, chief technologist at JPL. If ocean areas with high winds were tapped for wind energy, they could potentially generate 500 to 800 watts of energy per square meter, according to Liu's research. Dimotakis notes that while this is slightly less than solar energy (which generates about one kilowatt, or 1,000 watts, of energy per square meter), wind power can be converted to electricity more efficiently than solar energy and at a lower cost per watt of electricity produced.

According to Liu, new technology has made floating wind farms in the open ocean possible. A number of wind farms are already in operation worldwide. Ocean wind farms have less environmental impact than onshore wind farms, whose noise tends to disturb sensitive wildlife in their immediate area. Also, winds are generally stronger over the ocean than on land because there is less friction over water to slow the winds down -- there are no hills or mountains to block the wind's path.

Ideally, offshore wind farms should be located in areas where winds blow continuously at high speeds. The new research identifies such areas and offers explanations for the physical mechanisms that produce the high winds.

An example of one such high-wind mechanism is located off the coast of Northern California near Cape Mendocino. The protruding land mass of the cape deflects northerly winds along the California coast, creating a local wind jet that blows year-round. Similar jets are formed from westerly winds blowing around Tasmania, New Zealand and Tierra del Fuego in South America, among other locations. Areas with large-scale, high wind power potential also can be found in regions of the mid-latitudes of the Atlantic and Pacific oceans, where winter storms normally track.

The new QuikSCAT maps, which add to previous generations of QuikSCAT wind atlases, also will be beneficial to the shipping industry by highlighting areas of the ocean where high winds could be hazardous to ships, allowing them to steer clear of these areas.

Scientists use the QuikSCAT data to examine how ocean winds affect weather and climate, by driving ocean currents, mixing ocean waters and affecting the carbon, heat and water interaction between the ocean and the atmosphere. JPL manages QuikSCAT for NASA. For more information about QuikSCAT, visit: http://winds.jpl.nasa.gov .

For more information about NASA and agency programs, visit: http://www.nasa.gov .”

Image
http://www.nasa.gov/images/content/257994main_quikscat-wind-226.jpg
Image Caption
“This is a portion of an image of QuikSCAT data that shows wind power density over global oceans for winter (top panel) and summer (lower panel) in the Northern Hemisphere. Red and white colors indicate high energy are available while blue color reflects lower energy. Image courtesy: NASAJPL”

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James View profile More options Jul 10, 9:55 am

"columbiaaccidentinvestigation"

<columbiaaccidentinvestigat...@yahoo.com> wrote in message

news:e5572586-8b72-48a7-99bc-227046cfa21b@8g2000hse.googlegroups.com...
NASA - Ocean Wind Power Maps Reveal Possible Wind Energy Sources -
07.09.08

That's good enough for at least another dozen grants.

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columbiaaccidentinvestigation View profile More options Jul 10, 10:13 am

On Jul 10, 6:55 am, "James" <kingko...@iglou.com> wrote:" That's good enough for at least another dozen grants."

Thats all you got, your lame tired standard reply, laughing, you are a joke james...

How about a little forward thinking, from Tboone Pickens....

http://www.pickensplan.com/about/

http://www.pickensplan.com/theplan/

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stevep...@gmail.com View profile More options Jul 10, 10:49 am

On Jul 10, 7:13 am, columbiaaccidentinvestigation

floating windmills with thousands of miles of wire .. too expensive

land mills better

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Tom Gardner spamless View profile More options Jul 10, 12:23 pm

"columbiaaccidentinvestigation" <columbiaaccidentinvestigat...@yahoo.com> wrote in message
news:e5572586-8b72-48a7-99bc-227046cfa21b@8g2000hse.googlegroups.com...
NASA - Ocean Wind Power Maps Reveal Possible Wind Energy Sources -
07.09.08

http://www.nasa.gov/topics/earth/features/quikscat-20080709.html

“PASADENA, Calif. - Efforts to harness the energy potential of Earth's ocean winds could soon gain an important new tool: global satellite maps from NASA. Scientists have been creating maps using nearly a decade of data from NASA's QuikSCAT satellite that reveal ocean areas where winds could produce energy.
****

<snip>

Has anyone ever done any studies about how taking this energy out of the system and converting it to electricity will affect that system? No such thing as a free lunch!

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Dan Luke View profile More options Jul 10, 12:37 pm

"Tom Gardner" wrote:
> Has anyone ever done any studies about how taking this energy out of the
> system and converting it to electricity will affect that system? No such
> thing as a free lunch!

Uh-oh.

Global Calming.

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columbiaaccidentinvestigation View profile More options Jul 10, 3:43 pm

On Jul 10, 9:23 am, "Tom Gardner" <tom(spamless)@ohiobrush.com> wrote"Has anyone ever done any studies about how taking this energy out of the system and converting it to electricity will affect that system? " snip

wow tom, based on your previous posts, one could conclude that stewardship of our environment was the farthest thing from your mind.

But if you would like to calculate the friction created by a windmill,
you have many places you could start, no free lunch for you do your
own work if it matters that much to you, but it is obvious you are
just trolling with your lame incredibly stupid posts, and weak
attempts at sarcasm

http://www.pickensplan.com/about/

http://www.pickensplan.com/theplan/

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Tom Gardner nospam View profile More options Jul 10, 3:44 pm

"Dan Luke" <t1...@dingdongsouth.net> wrote in message

news:f42dnZoGQoYpp-vVnZ2dnUVZ_rbinZ2d@supernews.com...

> "Tom Gardner" wrote:

>> Has anyone ever done any studies about how taking this energy out of the
>> system and converting it to electricity will affect that system? No such
>> thing as a free lunch!

> Uh-oh.

> Global Calming.

Can we make some money from it?

Reply Reply to author Forward

columbiaaccidentinvestigation View profile More options Jul 10, 3:50 pm

On Jul 10, 7:49 am, Stevep...@gmail.com wrote:"floating windmills with
thousands of miles of wire .. too expensive land mills better"

here is the U.S. Wind Resource Map

http://www.eere.energy.gov/windandhydro/windpoweringamerica/wind_maps...
"U.S. Wind Resource Map

If your State does not have a wind resource map, the national 50-
meter map below can give you a macro view of wind resources in the
United States. From this map, you can determine if your area of
interest should be further explored. Wind resource at a micro level
can vary significantly; therefore, you should get a professional
evaluation of your specific area of interest. You can zoom or print
the full U.S. map (PDF 2.3 MB) Download Adobe Reader."

Reply Reply to author Forward

Tom Gardner spamless View profile More options Jul 11, 3:01 am

"columbiaaccidentinvestigation" <columbiaaccidentinvestigat...@yahoo.com> wrote
in message
news:6182f54f-960d-489d-a82f-9f78b2901a9c@59g2000hsb.googlegroups.com...
On Jul 10, 9:23 am, "Tom Gardner" <tom(spamless)@ohiobrush.com>
wrote"Has anyone ever done any studies about how taking this energy
out of the system and converting it to electricity will affect that
system? " snip

wow tom, based on your previous posts, one could conclude that
stewardship of our environment was the farthest thing from your mind.
But if you would like to calculate the friction created by a windmill,
you have many places you could start, no free lunch for you do your
own work if it matters that much to you, but it is obvious you are
just trolling with your lame incredibly stupid posts, and weak
attempts at sarcasm
****

I certainly don't value you opinion about anything, yet alone my posts. While
you have undoubtedly done absolutely nothing other than drink the Kool-Aid de
jour, I have done many actual positive things for the environment, things that
involve REAL pollution that is not romantic enough for your ilk. I've noticed
by your posts that you're just a rude, know-nothing lemming parroting the latest
line dictated by your church. You not only have no credibility, you aren't even
mildly entertaining. Don't bother responding, you bore me.

Reply Reply to author Forward

columbiaaccidentinvestigation View profile More options Jul 11, 8:59 am

On Jul 11, 12:01 am, "Tom Gardner" <tom(spamless)@ohiobrush.com> wrote:" Don't bother responding, you bore me."

hey tom good for you (doing positive things for the environment) but seriously your sarcasm stinks, your humor is one dimensional, predictable and repetitive so you really should find some better material in you weak attempts to boost badly damaged ego at the expense of others... dude you are pathetic, so move along and take you stupid trolling posts to another thread....

Reply Reply to author Forward

Ouroboros_Rex View profile More options Jul 11, 2:50 pm

- Show quoted text -

Poor lying tommy is projecting again. lol

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End of messages

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