

Hello All!

This is the June edition of the Arizona Solar Energy Association's monthly e-newsletter.

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I want to point out something here. The news below is bad, but I don't want to stress the negative. I want to stress the positive, and the positive is that there is much that can be done and that is being done to make our world a better place. That positivity is detailed in parts 2, 3, and 4 of this newsletter: from the ASEA lecture on Sustainable Desert Living, to ASES' national conference on climate recovery, to well written legislation making its way through the Arizona congress, there is so much going on right now, and that's just the tip of the (melting) iceberg!

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1. NEWS

The UN released a 187 page Environment Programme Report that speaks to climate change and deserts. Although the report isn't available online yet, below is an article from The Guardian: 6/5/2006, by John Vidal. Reference here:

<http://www.guardian.co.uk/climatechange/story/0,,1790471,00.html>

Climate change threatens conditions for 500 million. But report points to huge solar energy potential.

The 500 million people who live in the world's desert regions can expect to find life increasingly unbearable as already high temperatures soar and the available water is used up or turns salty, according to the United Nations.

Desert cities in the US and Middle East, such as Phoenix and Riyadh, may be living on borrowed time as water tables drop and supplies become undrinkable, says a report coinciding with today's world environment day.

Twentieth-century modernist dreams of greening deserts by diverting rivers and mining underground water are wholly unrealistic, it warns.

But the report also proposes that deserts become the powerhouses of the next century, capturing the world's solar energy and potentially exporting electricity across continents. For instance, a 250,000-square mile area [500 mi x 500 mi] of the Sahara could, with today's technology, generate enough electricity for the whole world [the total area of the Sahara is 9,000,000 sq. mi.].

The problem now facing many communities on the fringes of deserts, says the UN environment programme report, is not the physical growth of deserts but that rising water tables beneath irrigated soils are leading to more salinisation - a phenomenon already taking place across large tracts of China, India, Pakistan and Australia. The Tarm river basin in China, it says, has lost more than 5,000 square miles of farmland to salinisation in a period of 30 years.

The report suggests that Middle Eastern countries such as Saudi Arabia have used water from the desert very unwisely. Rather than growing staple crops such as wheat or tomatoes, it suggests that precious water should be used only for high value crops such as dates and fish farming.

The mining "fossil" water, laid down many millions of years ago, was once believed to have the potential to green deserts, but is now not thought to be a solution - except in Libya, where opinion is divided as to whether supplies may last 100 or 500 years.

But the greatest threat to people and wildlife living anywhere near deserts is climate change, which is already having a greater impact on desert regions than elsewhere. The Dashti Kbir desert in Iran has seen a 16% drop in rainfall in the past 25 years, the Kalahari a 12% decline and Chile's Atacama desert an 8% drop.

Most deserts, says the report, will see temperatures rise by 5-7C by the end of the century and rainfall drop 10-20%. This will greatly increase evaporation and dust storms, and will move deserts closer to communities living on their edges.

The problems of more heat and lower rainfall are being compounded by the melting of glaciers in mountainous regions. These waters sustain life in deserts but would be perilously close to drying up if global warming continued as expected.

The glaciers in the mountains of south Asia are expected to decline by 40% to 80% in the next century with profound effects on large populations in Bangladesh, Pakistan, India and China.

Much of the water used for farming the south-west US, central Asia and around the Andes is drawn from rivers that originate in snow-covered mountains, says the report.

Development in the next 100 years is largely contingent on what happens to the climate. However, the report envisages that deserts will become more popular tourist destinations and that some of the plants that grow there could be "crops of the future".

"Deserts are threatened as never before by climate change, overexploitation of water and salinisation," said Professor Andrew Warren of University College London, one of the report's authors.

"We risk losing not only astounding landscapes and ancient cultures but also wild species that may hold keys to our survival."

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2. Local ASEA events:

The above article mentions the negative. But what can we do about it? Where is the positive? Right here, at ASEA's very own:

Environment and Energy Lecture Series!

Put on by the Arizona Solar Energy Association and the Arizona Solar Center under the auspices of the City of Scottsdale Green Building Program, this month's topic is:

THE OASIS MYTH Part I - Desert Design Fundamentals

The Sonoran Desert is the most complex of the world's deserts with the most variety of plant and animal life. Learn the basics of Sonoran Desert Design Strategies and Practices.

Speaker: Daniel Peter Aiello - Environmental Architect - janus II environmental architects and planners

Thursday Evening June 15, 7 to 9 p.m. Free. City of Scottsdale Urban

Design

Studio located at the northeast corner of Indian School Road and 75th St.

Questions - daniel peter aiello

arizona solar energy association/arizona solar center -

e-mail j2envarch@aol.com

phone - 602-952-8192

For your convenience, I have provided the rest of the season's lecture schedule below (courtesy of Dan Aiello):

* July - THE OASIS MYTH - PART 2 - Desert Design Fundamentals continued.

Materials, Systems, Needs and Comfort.

Speakers to be announced.

* Aug. - THE OASIS MYTH - PART 3 - Desert Design Fundamentals continued -

Equipment Strategies for the Desert - Cooling, Heating, Power (PV), Water

Heating, Cooking, etc..

Speakers to be announced.

* Sept. - Costs, Incentives and Rewards - Environmental, Energy, Economic, and Educational.

Speaker to be Announced -

Oct. - Putting Together a Solar and Sustainable Future - Part 1 - The Oasis

Realized

Issues and Conditions Reinterpreted in a new paradigm.

Nov. - Putting Together a Solar and Sustainable Future - part 2 - Oasis

Visions

Various interpretations toward the common goal.

Other local events: Even though I have not yet seen it, the word on the street is that An Inconvenient Truth is a good film, and should be seen.

Find theatres and show times here: <http://www.moviefone.com...or> after Saturday, find them here: www.climatecrisis.net

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3. National Events: <http://www.solar2006.org>

SOLAR 2006 – Renewable Energy: Key to Climate Recovery ASES' (our parent organization) annual event is coming up, July 7-13 in Denver, CO. The National Solar Energy Conference is attended by leading researchers, scientists, engineers, architects, designers, policymakers, contractors, installers, government leaders, strategic thinkers, teachers, utility representatives and other renewable energy decision-makers from around the United States and the world. We are expecting 1500 conference attendees, and hundreds of visitors to the Exhibit Hall.

*Plenary Sessions - by the leading speakers in the field - presenting the latest information, initiatives and Renewable Energy solutions to Global Climate Change

*Forums - organized by experts, advocates and decision makers from around the US and the World. Forums feature panel discussions, debates, tutorials, and updates on a broad spectrum of topics.

*Technical Sessions - oral and poster presentations on the latest research, successful projects and projects that taught valuable lessons, marketing studies from different RE sectors, state and local government initiatives, successful advocacy efforts, and the state-of-the-art in manufacturing, research and development, resource assessment and building measurement and design.

*Workshops - hands-on learning opportunities taught by people who successfully use the techniques taught every day.

*Tours - experience all that Colorado has to offer first-hand, and see some interesting RE sites as well.

*Special Events - come to the Opening Reception, Banquet or the social event on Wednesday evening and network with your colleagues while enjoying good food and entertainment!

*Exhibit Hall - meet and talk to manufacturers, installers, dealers, consultants - people in the Renewable Energy business.

All the details here: <http://www.solar2006.org/>

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4. AZ POLITICS

The legislative session is dragging on. It should have ended about a month ago, but they're still trying to hammer out a budget. Once they do, they will then do final votes on some of the bills we've been following this session that are still alive, but haven't yet passed. Right now we have one in the Senate and one in the House.

HB2429 solar energy tax incentives: still trying to make it's way through congress, it establishes commercial solar tax credits that allow a 10% credit for the installation of solar energy devices for commercial or industrial purposes in a trade or business located in Arizona, which is limited at \$25,000 with respect to the same building annually and \$50,000 annually per company. There is an annual cap of \$1.5 million on the commercial tax credit. The bill also changes the law so the value of solar systems will not be added to property tax valuation. Please contact your senator and tell them to support HB2429!

AZ Senate contact info below:

All phone and fax numbers are in area code 602.

Name	Dist.	Party.	Email	Phone	Fax
Ken Bennett	1	R	kbennett@azleg.gov	926-5584	926-3429
Albert Hale	2	D	ahale@azleg.gov	926-4323	417-3160
Ron Gould	3	R	rgould@azleg.gov	926-4138	417-3165
Jack W. Harper	4	R	jharper@azleg.gov	926-4178	417-3154
Jake Flake	5	R	jflake@azleg.gov	926-5219	417-3223
Dean Martin	6	R	dmartin@azleg.gov	926-5284	417-3163
Jim Waring	7	R	jwaring@azleg.gov	926-4916	417-3150
Carolyn S. Allen	8	R	callen@azleg.gov	303	926-4480 417-3155
Robert "Bob" Burns	9	R	rburns@azleg.gov		926-5993 417-3225
Linda Gray	10	R	lgray@azleg.gov	926-3376	417-3253
Barbara Leff	11	R	bleff@azleg.gov	926-4486	417-3170
Robert Blendu	12	R	rblendu@azleg.gov	926-5955	417-3168
Richard Miranda	13	D	rmiranda@azleg.gov		926-5911 417-3171
Bill Brotherton	14	D	bbrotherton@azleg.gov		926-4485 926-3429
Ken Chevront	15	D	kchevront@azleg.gov		926-5325 417-3149
Linda Aguirre	16	D	laguirre@azleg.gov	926-3830	417-3145
Edward Ableser	17	D	eableser@azleg.gov	311	926-4124 417-3164
Karen Johnson	18	R	kjohnson@azleg.gov	926-3160	417-3151
Marilyn Jarrett	19	R	mjarrett@azleg.gov	926-5288	417-3161
John Huppenthal	20	R	jhuppenthal@azleg.gov		926-5261 417-3157
Jay Tibshraeny	21	R	jtibshraeny@azleg.gov		926-4481 417-3152
Thayer Verschoor	22	R	tverschoor@azleg.gov		926-4136 417-3222

Rebecca Rios	23	D	rrios@azleg.gov	926-5685	417-3167
Robert Cannell	24	D	rcannell@azleg.gov	926-4139	417-3156
Marsha Arzberger	25	D	marzberger@azleg.gov	926-4321	417-3146
Toni Hellon	26	R	thellon@azleg.gov	926-4326	417-3159
Jorge Luis Garcia	27	D	jgarcia@azleg.gov	926-4171	417-3162
Paula Aboud	28	D	paboud@azleg.gov	926-5262	417-3166
Victor Soltero	29	D	vsoltero@azleg.gov	926-5342	417-3169
Timothy S. Bee	30	R	tbee@azleg.gov	926-5683	417-3147

Below is from the Sierra Club:

Please also ask your House members to support SB1323 S/E: tax credit; cogeneration (Bee, Aguirre, Bennett, et al). It provides a new individual and corporate income tax credit for 2008 and 2009 for a taxpayer who produces and sells electricity from combined heat and power. The credit is equal to one and a half cents multiplied by the total kilowatt hours of electricity or one and one tenths cents multiplied by the total horsepower hours of power. It includes an overall cap of \$2 million dollars and a limit of \$500,000 on the maximum tax incentive for any single installation. (This will be amended on the floor to reduce this to \$150,000.) The tax credit for a 1 megawatt (MW) project would amount to about \$100,000 and it is likely that most projects in Arizona would be less than 1 MW and would include facilities like hospitals, hotels, schools, and industrial users.

The key to a more sustainable energy future is for us to become as efficient as possible and also invest heavily in renewable energy.

Combined Heat and Power (CHP) is a major efficiency measure and is significantly more efficient than generating electricity and thermal energy separately. Some CHP systems are capable of an overall efficiency of over 80 percent. This is double that for conventional systems. Rather than just have the thermal energy wasted, it is recovered and can be used for space heating, hot water, steam, air conditioning, water cooling, product drying, or other thermal energy needs. SUPPORT.

AZ House of Representatives contact info below:

District 1

Lucy Mason (R)

lmason@azleg.gov

Phone: (602) 926-5874 fax: (602) 417-

3001

Tom O'Halleran (R)

tohalleran@azleg.gov
3101

Phone: (602) 926-4079 fax: (602) 417-

District 2

Albert Tom (D)

atom@azleg.gov
3102

Phone: (602) 926-5862 fax: (602) 417-

Ann Kirkpatrick (D)

akirkpatrick@azleg.gov

Phone: (602) 926-5160 fax: (602) 417-3002

District 3

Trish Groe (R)

tgroe@azleg.gov
3103

Phone: (602) 926-5408 fax: (602) 417-

Nancy G. McLain (R)

nmclain@azleg.gov
3003

Phone: (602) 926-5051 fax: (602) 417-

District 4

Tom Boone (R)

tboone@azleg.gov
3004

Phone: (602) 926-3297 fax: (602) 417-

Judy Burges (R)

jburges@azleg.gov
417-3104

Phone: (602) 926-5861 fax: (602)

District 5

Jack A. Brown (D)

jbrown@azleg.gov
3010

Phone: (602) 926-4129 fax: (602) 417-

Bill Konopnicki (R)

bkonopnicki@azleg.gov
3105

Phone: (602) 926-5409 fax: (602) 417-

District 6

Pamela Gorman (R)

pgorman@azleg.gov
3106

Phone: (602) 926-4002 fax: (602) 417-

Ted Carpenter (R)
tcarpenter@azleg.gov
3006

Phone: (602) 926-5333 fax: (602) 417-

District 7

Ray Barnes (R)
rbarnes@azleg.gov
3107

Phone: (602) 926-5503 fax: (602) 417-

Nancy K. Barto (R)
nbarto@azleg.gov
3011

Phone: (602) 926-5766 fax: (602) 417-

District 8

Michele Reagan (R)
mreagan@azleg.gov
3008

Phone: (602) 926-5828 fax: (602) 417-

Colette Rosati (R)
crosati@azleg.gov
3108

Phone: (602) 926-5169 fax: (602) 417-

District 9

Rick Murphy (R)
rmurphy@azleg.gov
3009

Phone: (602) 926-3255 fax: (602) 417-

Bob Stump (R)
bstump@azleg.gov
417-3109

Phone: (602) 926-5413 fax: (602)

District 10

James P. Weiers (R)
jweiers@azleg.gov
417-3153

Phone: (602) 926-4173 fax: (602)

Doug Quelland (R)
dquelland@azleg.gov
3110

Phone: (602) 926-4639 fax: (602) 417-

District 11

Stephen Tully (R)
stully@azleg.gov
3111

Phone: (602) 926-5977 fax: (602) 417-

John M. Allen (R)
jallen@azleg.gov
3007

Phone: (602) 926-3395 fax: (602) 417-

District 12

Jerry P. Weiers (R)
jpweiers@azleg.gov
3012

Phone: (602) 926-5894 fax: (602) 417-

John B. Nelson (R)
jnelson@azleg.gov
3112

Phone: (602) 926-5872 fax: (602) 417-

District 13

Steve Gallardo (D)
sgallardo@azleg.gov
3013

Phone: (602) 926-3392 fax: (602) 417-

Martha Garcia (D)
mgarcia@azleg.gov
3113

Phone: (602) 926-5830 fax: (602) 417-

District 14

Robert Meza (D)
rmeza@azleg.gov
3114

Phone: (602) 926-3425 fax: (602) 417-

Debbie Davis (D)
ddavis@azleg.gov
3014

Phone: (602) 926-5412 fax: (602) 417-

District 15

Kyrsten Sinema (D)
ksinema@azleg.gov
3015

Phone: (602) 926-5058 fax: (602) 417-

David M. Lujan (D)
dlujan@azleg.gov
3115

Phone: (602) 926-5829 fax: (602) 417-

District 16

Leah Taylor (D)
landruntaylor@azleg.gov Phone: (602) 926-5864 fax: (602) 417-3016

Ben R. Miranda (D)
bmiranda@azleg.gov Phone: (602) 926-4893 fax: (602) 417-3116

District 17

Laura Knaperek (R)
lkneperek@azleg.gov Phone: (602) 926-4225 fax: (602) 417-3117

Meg Burton Cahill (D)
mburtoncahill@azleg.gov Phone: (602) 926-5896 fax: (602) 417-3017

District 18

Mark Anderson (R)
manderson@azleg.gov Phone: (602) 926-4467 fax: (602) 417-3018

Russell K. Pearce (R)
rpearce@azleg.gov Phone: (602) 926-5760 fax: (602) 417-3118

District 19

Gary L. Pierce (R)
gpierce@azleg.gov Phone: (602) 926-3163 fax: (602) 417-3119

Chuck Gray (R)
cgray@azleg.gov Phone: (602) 926-5495 fax: (602) 417-3019

District 20

Bob Robson (R)
brobson@azleg.gov Phone: (602) 926-5549 fax: (602) 417-3120

John McComish (R)
jmccomish@azleg.gov Phone: (602) 926-5898 fax: (602)

417-3020

District 21

Warde Nichols (R)
wnichols@azleg.gov
417-3021

Phone: (602) 926-5168

fax: (602)

Steven Yarbrough (R)
syarbrough@azleg.gov
417-3121

Phone: (602) 926-5863

fax: (602)

District 22

Andy Biggs (R)
abiggs@azleg.gov
417-3022

Phone: (602) 926-4371

fax: (602)

Eddie Farnsworth (R)
efarnsworth@azleg.gov
417-3122

Phone: (602) 926-5735

fax: (602)

District 23

Cheryl Chase (R)
cchase@azleg.gov
417-3123

Phone: (602) 926-5030

fax: (602)

Pete Rios (D)
prios@azleg.gov
417-3023

Phone: (602) 926-5761

fax: (602)

District 24

Amanda Aguirre (D)
aaguirre@azleg.gov
417-3024

Phone: (602) 926-4430

fax: (602)

Russell L. Jones (R)
rjones@azleg.gov
417-3124

Phone: (602) 926-5273

fax: (602)

District 25

Manuel V. "Manny" Alvarez (D)
malvarez@azleg.gov
417-3025

Phone: (602) 926-5895

fax: (602)

Jennifer J. Burns (R)
jburns@azleg.gov Phone: (602) 926-5836 fax: (602)
417-3125

District 26

Pete Hershberger (D)
phershberger@azleg.gov Phone: (602) 926-5839 fax:
(602) 417-3026

Steve Huffman (R)
shuffman@azleg.gov Phone: (602) 926-3394 fax: (602)
417-3126

District 27

Phil Lopes (D)
plopes@azleg.gov Phone: (602) 926-3278 fax: (602)
417-3127

Olivia Cajero Bedford (D)
ocajerobedford@azleg.gov Phone: (602) 926-5835 fax: (602)
417-3027

District 28

Ted Downing (D)
tdowning@azleg.gov Phone: (602) 926-5108 fax: (602)
417-3128

David T. Bradley (D)
dbradley@azleg.gov Phone: (602) 926-3300 fax: (602)
417-3028

District 29

Linda Lopez 29 (D)
llopez@azleg.gov Phone: (602) 926-4089 fax: (602)
417-3029

Tom Prezelski (D)
tprezelski@azleg.gov Phone: (602) 926-3424 fax: (602)
417-3129

District 30

Jonathan Paton (R)

jpaton@azleg.gov
417-3030

Phone: (602) 926-3235

fax: (602)

Marian A. McClure (R)
mmcclure@azleg.gov
3130

Phone: (602) 926-3312

fax: (602) 417-

Outside of the Phoenix area, you may call your legislators office toll-free at 1-800-352-8404. For more information on legislation go to <http://www.azleg.state.az.us>.

ANOTHER ONE BITES THE DUST:

HB 2843 was withdrawn from the Finance Committee. This is the one that would have created:

Tax credit for energy efficient appliances:

- \$150 credit for a central air conditioner or an air source heat pump that would qualify for the federal tax credit.
- \$100 for a washing machine certified as Energy Star by the USDE or the EPA.
- \$25 for a ceiling fan certified as Energy Star by the USDE or the EPA. The fan provision will be amended out because of changes in federal requirements.

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That's all for this month. Have a great summer!

Ben
ASEA-Chair