

KANSAS SOLAR ELECTRIC CO~OPERATIVES

K-SEC

Kansas Solar Electric Buildings Registry

KS RANKS #1 RENEWABLE RESOURCES

'...goal to help ensure that Kansans have low cost, reliable and sustainable energy, produced in-state, to fullest extent possible'

PHASE I = 1 % SOLAR IN KS by 2010

Building-Integrated Photovoltaic [BI-PV]

BI-PV DEMONSTRATION 2006 to 2009

1 MILLION SF SOLAR ELECTRIC ROOFTOPS

100 KS COUNTIES INSTALL 100 kWp BI-PV

100 COUNTIES X 10,000 SF =1 Million SF BI-PV

Produce + Install + Monitor + Maintain

10 MWp Solar Electricity Capacity 2010

**BOS = Balance of System Components
Inverter + Conduit + Monitor +Back-up**

Latest High Tech BOS Components

PHASE I BI-PV SOLAR
ELECTRICITY DEMONSTRATION
NON-PROFIT BUDGET

\$21 Million Solar Systems Installed
Materials for Modules and BOS

✓ \$1 watt PV

✓ \$.25 watt BOS

Labor and Management

✓ \$.25 Watt Production Labor

✓ \$.50 Watt Management 30 Years

BOS & Battery Replacements 50 Yrs

✓ \$9 Million 3 Inverters in Fifty Years

✓ \$12 M 3 Battery Back-Up Systems

Homeland Security \$\$ Raw Materials B-U

PHASE I DEMONSTRATION QUESTIONS

GOAL=1% SOLAR IN KANSAS BY 2010

1%=100 kWp PER COUNTY = 10,000 SF

HOW MANY BLDGS PER COUNTY/STATE?

ANSWER: Depends on solar rooftop size.

ONE 30,000 SF BI-PV Solar Roof

Georgetown University in Washington, DC

Solar BI-PV

Natural

Clean

30,000 SF

BI-PV Roof

Installed on

Intercultural

Center 1984



Generates

One MWh

Demand-

site ~ Non-

polluting

Fuel-Free

Electricity

Daily =

\$57,000

Yearly

Highest and Best Use of Land!

(a) One Building 10,000 SF Solar Roof or

(b) 10,000 SF / 2 = 5,000 SF BI-PV Solar

5,000SF/250 SF Solar Rooftop= 20 Homes

5,000SF/1,000 SF Solar Rooftop=5 Bldgs.

=20HomesX100Counties=2,000KSHomes

= 5 Buildings X 100 Counties = 500 Bldgs.

Kansas Solar Electric CO~OPERATIVES

Founder & Director Eileen M. Smith, M.Arch.

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DONATIONS + VOLUNTEERS NEEDED AND WELCOME!

CD BOOK: 'ElectriCity® BEYOND THE
CURVE OF DEREGULATION' \$21

ISBN # 0-9741412-9-1 PROCEEDS SUPPORT K-SEC

AVAIL: On-line + Local Burger + Raven Bookstore

KANSAS



SOLAR ELECTRIC CO~OPERATIVES

N.E.W.S. Letter Vol. 3 No. 1 Feb. 2007

10% Solar Electricity in KS by 2016

\$25 SF Installed = \$2.5 Billion for

\$3.5 Billion Solar Electricity 50 Yrs

Phase I Demonstration Program
1% Solar Electricity in Kansas by 2010

PRIVATE LOCAL NON-PROFIT
RENEWABLE COOPERATIVES

*Produce + Install + Monitor + Maintain
Manage Wholesale Solar Electricity*

150% Wholesale Renewable Metering Incentive

CONSUMERS w/QUALIFYING ROOF
K-SEC Leases Roof w/50 Yrs Battery Back-Up

Reduce Dependency on Fossil Fuels

Increase Expertise in Solar Electricity

**WHY FORM LOCAL
Neighborhood Energy
Watch Solution
Groups
N.E.W.S. Groups**

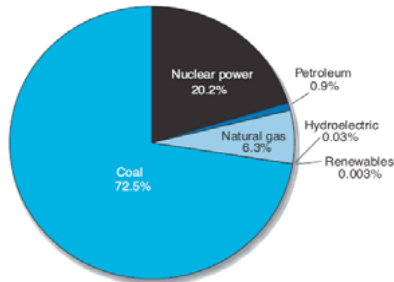


Figure 6—Kansas electricity production by fuel source, 2000 (EIA, *Electric Power Annual 2000*, vol.1, DOE/EIA-0348(2001/1), August 2001).

**KANSAS SOLAR ELECTRIC
BUILDINGS REGISTRY
Solar_Cooperatives@yahoo.com**

- Registry Recommended by KS Corporation Commission Chairman Brian Moline 10/2005
- *Some of the best things in life are free . . .*
 - **E-Mail** Potential Home & Office Rooftops
 - Homes =100 to 500 SF South SW or Flat Roof
 - Commercial=300 to 50,000 SF S SW Flat Roof
 - **Submit Homes & Public/Office Buildings to Registry REVEAL BI-PV SOLAR CAPACITY**
 - **Each KS County Requested to Contribute \$500 February 2007 to Fund GIS Solar Database and One-Day Energy Fairs in Each County to Form K-SEC Renewable Cooperatives by 7/07.**
 - **For Registry Include Following Information:**

- (1) A description of the property with a title of the structure, if any. _____
- (2) Street Address of structure when known.

- (3) Other descriptive information about the bldg location including cross streets, important features.

- (4) Approximate size of unshaded SW, south-facing or flat rooftop to accommodate solar electric roof.

- (5) Contact Name, Address, Phone and/or E-mail.

- (6) If Available, Property occupant's name, address, phone and/or E-mail. _____
- (7) If Available, Property owner's name, address, phone and/or E-mail. _____
- (8) \$500 Per County, Donations and Expertise Needed Locally and Statewide to Establish Solar Buildings Registry/GIS Database Development.

**KANSAS SOLAR ELECTRIC
CO~OPERATIVES**

FORM K-SEC IN YOUR COUNTY

**K-SEC Will Own & Operate Solar Generators
Consumer Only Pays K-SEC Membership Fee
& Electric Bill to Have Solar Roof Installed**

FEBRUARY 2007 MESSAGE FROM FOUNDER

Fall 2006, the debate over the three 700 MWp coal-fired plants proposed by Sunflower Cooperative [non-profit] was in the news. *50% of the electricity generated from the proposed 2,100 MWp coal plants would be lost in distribution to Colorado at a 50% effective electricity consumption rate or 1,050 MWp. Demand-site non-polluting fuel-free solar BI-PV electricity has a 91% effective electricity consumption rate with 910 MWp or more consumed out of 1,000 MWp installed with low demand for costly transmission lines.* Fall 2006, an anti-coal group marched around Capital building to compel KS Governor Sebelius. This week KS Rep. Vaughn Flora introduced bill calling for two-year moratorium on new coal-fired plants in KS. That is wonderful and needed! There are no comprehensive emission laws in Kansas. Each plant is individually assessed by KS Dept of Health and Environment. But, there are no limits on how many plants are built. That is why Sunflower Cooperatives proposed *three* qualifying coal plants instead of one non-qualifying. To assure coal-fired power plant moratorium is initiated and productive in protecting citizens of KS:

- Establish comprehensive statewide emissions cap
- Develop infrastructure for renewable alternatives
- Individual fragmented consumers cannot do this
- Local county K-SEC co~ops share responsibility
- \$\$ Key = *KS Solar Electric Buildings Registry*
- Help establish K-SEC as global model for solar
- Consumers do not buy K-SEC solar generators
- Consumers are paid 50-year battery back-up system

K-SEC focuses on wholesale solar commerce and does not impose upon venerable consumers to pioneer renewable electricity. The K-SEC model understands market momentum demands 10% non-profit solar electricity foundation for renewable energy to flourish. Let's get started! Clean! Quiet! Eileen M.Smith,M.Arch.

Kansas State Energy Resources Coordination Council
<http://www.kansasenergy.org/2003EnergyPlan2.pdf> pg14
0.003% electricity consumed in KS is renewable.
➤ **72.5% electricity consumed in KS today generated by coal-fired plants**
➤ **KS RANKS 18th US COAL-MERCURY TOXINS**
➤ **WESTAR'S JEFFREY CTR RANKS 5TH USA**
➤ **2005 SEVEN NEW COAL PLANTS PROPOSED**
➤ **Seven =6 IN KS and 1 in MO = 55% Increase**
➤ **KCP&L/MO + Goodland + Hays + Westar + (3)three700MWpHolcomb/Sunflower Co-op**
http://www.treehugger.com/files/2006/02/raise_your_glas.php
ENVIRONMENT & COAL-RELATED DECISIONS
http://www.kansasenergy.org/coal_projects.htm

**MONITOR KS CORP. COMMISSION
[KCC] DECISIONS VIA INTERNET**
<http://www.kcc.state.ks.us/>

**Burning Coal Pollutes Air+Soil+Water
MERCURY TOXINS CAUSE**

- ✓ Fetal Damage
- ✓ Brain Damage in Children
- ✓ Immune-related Diseases



CARBON PARTICULATES

**Contribute to Respiratory Ailments,
Asthma, Heart Disease, Kidney Disease, Cancer,
Birth Defects, Acid Rain & Global Warming!**