

*Davidsonville Area Civic Association*

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P.O. Box 222, DAVIDSONVILLE, MARYLAND 21035

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# Solar, Agriculture and Land Use in Anne Arundel County

# The Future?



Photo from Harvesting the Sun for Power and Produce – Agrophotovoltaics Increases the Land Use Efficiency by over 60 Percent, <http://pv.energytrend.com/news/20171127-12060.html>

# Our Goals

- Preserve and Continue Use of Agriculturally Productive Land.
- Help maintain the economic viability of family farms in South County.
- Restore non-agriculturally productive land to environmentally productive uses.
- Support the development and employment of solar power in AA County.
- Prevent a solar vs. agriculture/environment conflict.

# Our Philosophy and Approach

- Find a solution that benefits both!
- We think this is possible via:
  - Dual-Use, Agrivoltaics, or Agrophotovoltaics. . .
    - From Wikipedia: “Agrivoltaics is co-developing the same area of land for both solar photovoltaic power as well as for conventional agriculture.”
    - We are including in this definition the restoration of land to environmentally natural uses, such as restoration of native habitats for plants, insects and associated flora and fauna, *e.g.* pollinator friendly plants and other environmentally friendly/necessary organisms

# Agrivoltaics can be a “Win-Win-Win” solution for solar power, agriculture, and the environment

## – In Combination with Agriculture

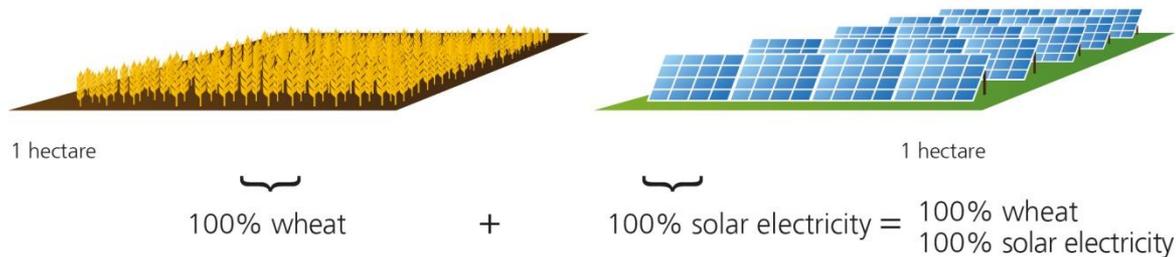
- Crops: Generally shade tolerant does best, but sun-loving can also work.
- Grazing: Sheep, Horses, Cows, Cattle, *etc.*

## – With the Environment and Restoration

- Re-establishing the natural local habitat.
  - Use native plants under/around the panels.
- State Law provides for “Pollinator Friendly” designation for Solar Installations (note, *not* a requirement)
  - One in progress, three planned for AA County.

# Productivity Increases Can Result for Agriculture and Power

## Separate Land Use on 2 Hectare Cropland



## Combined Land Use on 2 Hectare Cropland: Efficiency increases over 60%

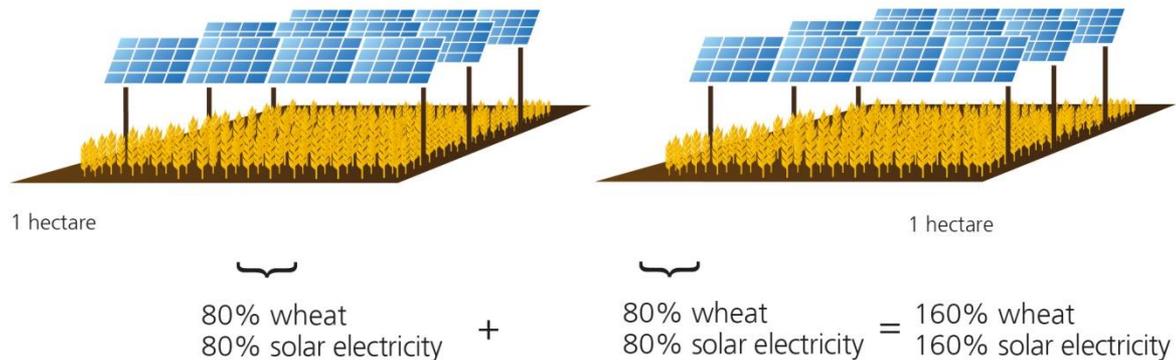


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# How to implement?

- What is the use of the land now?
  - In productive agricultural use:
    - Require Dual Use of the land for both agriculture and solar.
  - Not in productive agricultural use, but could be:
    - Require Dual Use of the land for both agriculture and solar,
      - » or
    - Require Dual Use of the land with pollinator friendly and/or native plant restoration.
  - No productive agricultural use?
    - Require Dual Use of the land with pollinator friendly and/or native plant restoration.

# County Zoning and Land Use Regulation Should Require:

- All land based solar generation must include a viable dual use plan for, and long term commitment to, the underlying land, either by continuing active agricultural use, or the devotion of the underlying land to the maintenance and cultivation of native plants, focusing on the restoration and maintenance of a natural habitat for pollinators, insects, and other creatures that depend on the native plants and eco-system.
- Make complying with the State “Pollinator-Friendly” designation a requirement for County solar plants using pollinator friendly installations.
- The solar site plan should NOT just NOT harm the environment (*e.g.* runoff) but demonstrate a positive contribution to the environment through maintaining agricultural productivity, and/or the restoration of natural, native habitats.

# County Zoning & Land Use Taxing Should Remove:

- Barriers to installation of solar panels on farms: treat solar generation of power to the grid as “farming for power” the same as farming for any other agricultural product.
- Encourage “micro-grids” that are a combination of solar generation, local storage (batteries) and then power to the grid, creating a “virtual power plant” in south county.

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