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An Introduction to the Opportunity Costs of Solar

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Definition of *Opportunity Cost*

opportunity cost noun

: the added cost of using resources (as for production or speculative investment) that is the difference between the actual value resulting from such use and that of an alternative (such as another use of the same resources or an investment of equal risk but greater return)

~ In other words, what you could have earned with your land if you had chosen another alternative use. ~

Every Landowner and Situation is Unique

You should consult with professionals:

- Accountant
- Attorney (land, agriculture and/or renewable energy)
- Attorney (business, family and estate planning)
- Financial planners
- Government agencies (USDA Farm Service Agency, USDA Natural Resources Conservation Service)
- Insurance agent
- Lenders
- Local county and municipal government (zoning, local tax issues, etc.)
- University Extension faculty

Long-term Decision and Implications

Solar panels can last 20-40 years; maybe longer but less efficient

Solar leases are often 15-30 years in length; some include automatic extensions of 5- to 10-years

- Research phase, building phase and then energy production phase

What does your decision mean for your heirs, for the future of the farm business, for your community and for the environment?

Benefits, Income and Incentives

-Supplemental energy use for farm or household

-Renewable energy source, reduced fossil fuel use

-Potential for multi-generation income stream for the landowner

- Consistent and predictable return, higher than land rent
- Net present value analysis is useful here

-Tax credits and other incentives on solar investments are available

-Community benefits

- Jobs during construction phase, increase in local tax base

Current Use and Maintenance Costs

Current Use

Property under solar is taken out of agricultural production, rare instances of small ruminant grazing – they're usually fenced out

Recreational leasing (i.e. hunting agreements)

Land improvements

Maintenance

Ground cover, vegetative weed control, removal of trees and shrubbery growth (other obstructions) outside of the solar property

Tax Issues

Agricultural and forested land will become commercial and lose **Agricultural Preferential Assessment**

- Penalties must be paid if a change in land use occurs before 10 year covenant comes up, includes interest and is a property lien

Conservation Use (Current Use Valuation)

- For land under CUV covenant, solar power generation is not a breach of CUV but is subject to penalty and the land containing the solar installation will be removed from the CUV covenant

Source: 2020 Property Tax Incentives for the Georgia Landowner, Bob Izlar, Yanshu Li and Tyler Smith

Government Programs

Conversion of lands enrolled in conservation programs may be affected

- CRP, CSP, EQIP and others
- Breach of contract, penalty, loss of future payments and reimbursement of past payments

Farm Bill programs require conservation compliance

- Placing a solar system on lands classified as highly erodible land or converted wetlands may affect programs like ARC/PLC and Crop Insurance

Indemnity Provisions and Insurance

Make sure indemnity provisions are fair

- Security against, or exemption from, legal liability for one's actions

Liability insurance will be needed by both the landowner and the solar developer

Decommission and Reclamation

Decommission

- should occur when lease ends, when the system is no longer producing power or if it is damaged and will not be repaired/replaced

Remove

- all structures
- graveled areas and access roads (unless landowner states in writing for it to stay in place)

Restore

- land to previous condition or revegetate to native plant life

Resources in the Works to Help Landowners

Collaboration between GA Tech, the UGA College of Agricultural & Environmental Sciences and the UGA Warnell School of Forestry

- Goal to assess the economic and carbon tradeoffs across forestry, agriculture and solar in Georgia.

- Empower rural landowners by developing an App that can inform them about the economic and carbon implications of transitioning their land across forestry, agriculture, and solar sectors.

References and Resources

Property Tax Incentives for the Georgia Landowners

Bob Izlar, Yanshu Li and Tyler Smith, Sep 2020

Understanding Solar Energy Agreements

Shannon Ferrell, Jul 2019

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References and Resources

Farmland Owner's Guide to Solar Leasing

Peggy Hall, Evin Bachelor & Eric Romich, Aug 2019

Considerations for Transferring Agricultural Land to Solar Panel Energy Production

Mike Carroll, Dec 2020

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Thank you

We will take a short break between current sessions which are scheduled to start at 10:40 am.

Track A will stay in this general session room

Track B will attend a separate session (link sent in email and pasted in the chat)