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## Compiled Research & Materials, Appendix O: EnergyWize Interview

Andrew Tarutani  
*University of Dayton*

Madalyn Beban  
*University of Dayton*

Laura Kunas  
*University of Dayton*

Colin Joern  
*University of Dayton*

Conor McGrail  
*University of Dayton*

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Wendell Ott  
3/29/17  
Phone Conference Call

I) Introductions (K. Hallinan, W. Ott, M. Beban, A. Tarutani)

II) Brief description from A. Tarutani & M. Beban regarding current work to create a "solar neighborhood"

III) Review of EnergyWize

-What does EnergyWize do? What is your experience with residential projects?

\*8yrs in the business

\*Energy efficiency (auditor...hertz rater, new home, contractor for new builds, and old homes work w/ DPL & Vectrin in rebate program.) - 6 jobs (test in, crews do work, test out... must be BPI certified)

\*Energy efficiency products (West Milton - Net Zero House - Jeff Testerman, insulation ERV, Solar - \$10k - Heating \$150/yr. & \$75/yr... farms efficiency)

\*Solar... PV and solar hot water (small (6-8 modules) to Antioch College megawatt, 4 acre array)

-Residential: struggled w/ cheaper better/faster... Inverters are now better cheaper, lighter, Racking units - better due to sheer volume... Main cost due to time to find customers/educate customers (significant 60/70% of total time 5yrs ago = marketing, 10-15% now of total time)...Green Energy Ohio...GRD3 (haven't moved down to residential yet too well)...Try to incorporate

-What do you recommend for a typical medium-size home array? What is the cost associated?

\*Typical <\$3/Watt... For rough small house job, and buy panels for 75 cents a watt (top of the line 290 watt a panel, panels 25 cents a watt, brand new) still cost in labor in putting

\*usually give 25yr warranty

IV) Discussion of Key Questions

-What can be done to prepare a home for installation of a solar array?

\*Usually a call, "hey can you take a look at my house"... but now saying no, can't. now marketing a product is the bigger focus

\*ground-mount unit, uses ballast, 16 modules, in a day

-In terms of site preparation, how much could it drive down the cost of installation?

\*What if we had an entire neighborhood, had a big volunteer day? Reduce cost in numbers.

\*Needs to be facing to south, free of trees/shading, structure of roofs, look at power polls, angle of roofs? conduit runs, from inverter to circuit box?

\*Document what is available per address; describe characteristics/environment for each address.

\*Bring actual utility bills to meeting... Size of array that would be needed

\*Interconnect agreement is like b/n them and utility, net metering

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\*Cinci Energy Alliance - Solar Group - Any in Cinci, call us, we'll do a free audit say if possible? And a list of contractors for bidding (problem is contractors waste time bidding and move out of program)

\*Still have to order in same equipment, but now need to engineer more

\*Still spending about 15% of an array on the sales cost... trying to make leads, visit customers, landing orders (does not include marketing cost - broadcasting, advertising, promotional ads, website)... commonality will drive cost down

\*Once signed on line, and ideal site... They could make contacts and do leg work of getting permits as a group, clear zoning/building permitting limitations, get electrical permits--- get these through county, city --- each individual would sign up ---- Interconnect agreement & Net metering agreement with DP&L filled out in part by homeowners (could be done with students/some group): you have to fill out form (size of array, power output, house description, where panels will go)

\*Not much to do physically on house... could save money by having storage site for equipment to be shipped to. A laydown/fab area, but need to be wary of logistics of transportation, security

\*Difference b/n 20 panels & 200 panels, not much price break

\*20 module - 60-70c/watt of panel, racking @ 2000, catch all, labor

-What maintenance/upkeep work is involved with implementing solar?

\*virtually zero

\*very low maintenance

\*replaced 1 inverter in 8 years

\*nothing for homeowner to do, can wash if you like (but not necessary)

\*no lifetime on panels... warranties from supplier is usually 20-25, occasionally 30 (2 warranties: production (25yrs.) (300watt panel degrades <1%/yr.), product (5yrs): racking, glass crack)

V) Integration with Job Skills Training

\*Yes, can be done... Large array, 3 interns - hired, leg work, information, and permit done? signed permit? material requisition? In field putting panels together... 3300 panels moved and set up... set up racking. Typically not doing wiring for liability reasons, extent is plugging panels together; run wire through conduit... typically larger projects have a token training program. Monitoring, what power output means. hosting stem day

\*On residential project, took students to look at energy efficiency. Installed solar hot water on house, 10-12 students

\*Solar certifiers - associate degree, end/during get nabcep certification (not an easy test, but not required to install anymore)

-What are your thoughts of a start-up, school entrepreneurial venture? How can students help you do what you're doing? Could there be any work done to train solar certifiers?

-What emerging businesses/start-ups could you foresee being set up and run by recent grads/high school students to address this vision?

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-With state government implementing that all new school buildings are built in accord with LEED Certification standards, how can students get involved?

-Can this be made to integrate local tech schools (DECA, New Dayton Tech HS @ 348 W. First St., Miami Valley CTC)?

VI) Questions for us?

\*Can you leverage previous analysis of open spaces in Dayton?

VII) Conclusion