

Community Energy Reduction

...and Green Jobs

Kevin Hallinan

Mechanical and Aerospace Engineering
(Renewable and Clean Energy)

Where This Research Started



Bob Brecha
Shuang-Ye Wu
Harvey Ens
Laurie Quill

10.28.09 - Strickland Announces Ohio's Centers of Excellence in Advanced Energy

The Centers are located at the following universities:

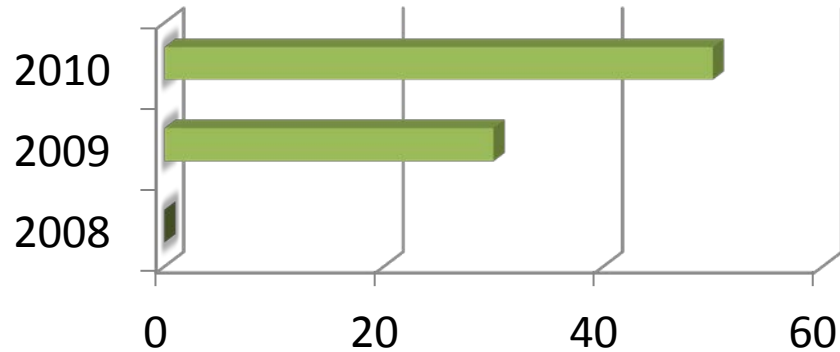
- Bowling Green State University:** *Sustainability and the Environment*
- Case Western Reserve University:** *Great Lakes Energy Institute*
- Central State University:** *Emerging Technologies*
- University of Cincinnati:** *Sustaining the Urban Environment*
- University of Dayton:** *Von Ohain Fuels & Combustion; and*
Strategic Energy and Environmental Informatics
- The Ohio State University:** *Climate, Energy, and the Environment*
- Ohio University:** *Energy and the Environment*
- University of Toledo:** *Advanced Renewable Energy and the Environment*

More Universities Offering Master's Degree Programs in Renewable Energy

By Jennifer Runyon, Managing Editor | December 10, 2008 | 36 Comments

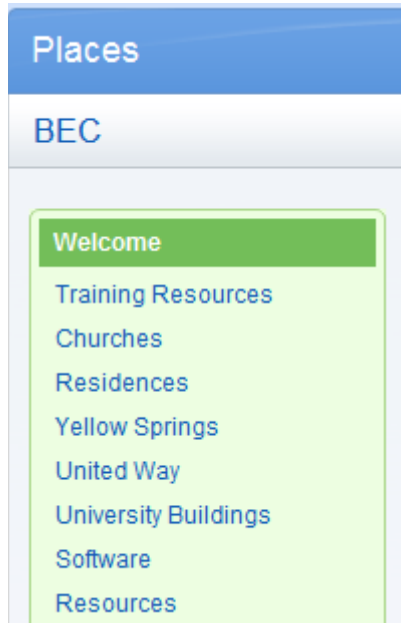


Renewable and Clean Energy Enrollment



Building Energy Center

(<http://quickplace.udayton.edu/bec>)



Mission:

- To advance the science of building energy analysis;
- Help our community reduce energy; and
- Provide knowledge and experience to students
- Help to grow green jobs, particularly, in depressed communities

The "Path"

 Village of Yellow Springs

United Way of the
Greater Dayton Area

LIVE UNITED 



MIAMI VALLEY
REGIONAL PLANNING COMMISSION



East End Community Services



CountyCorp
Development In Motion

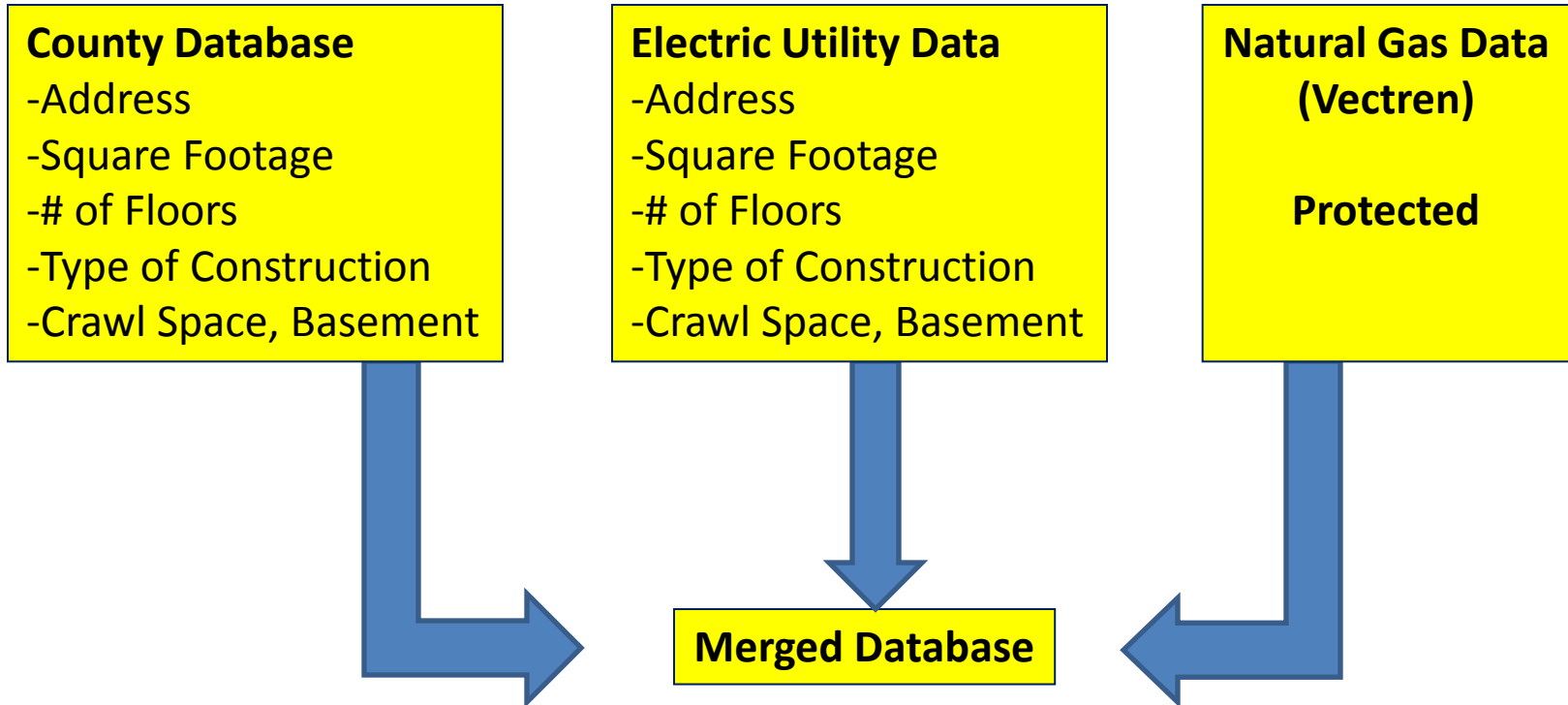
BLUEGREEN
ALLIANCE



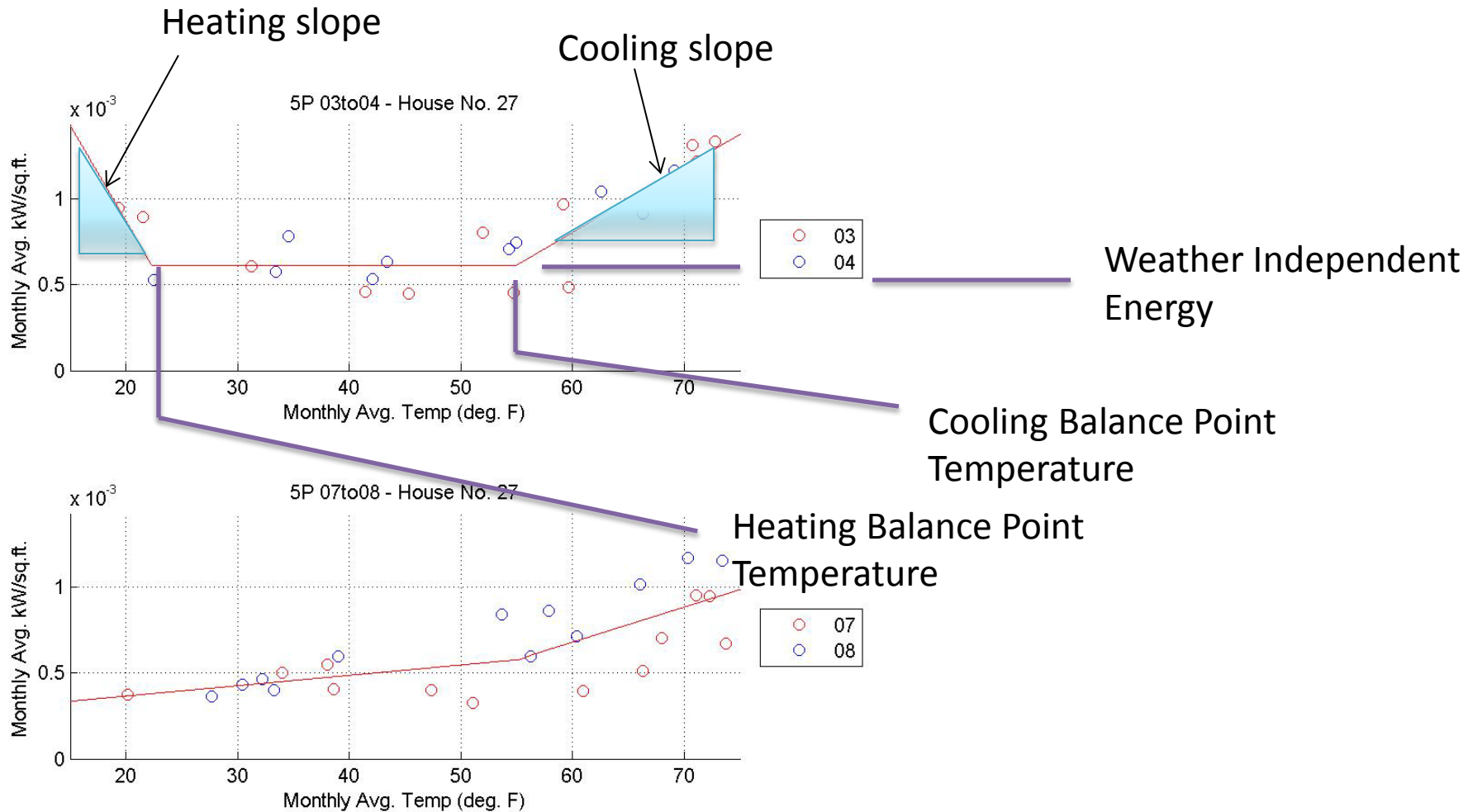
[College Home](#) > [Institutes & Centers](#) > [Fitz Center for Leadership in Community](#)

Welcome to the Fitz Center for Leadership in
Community

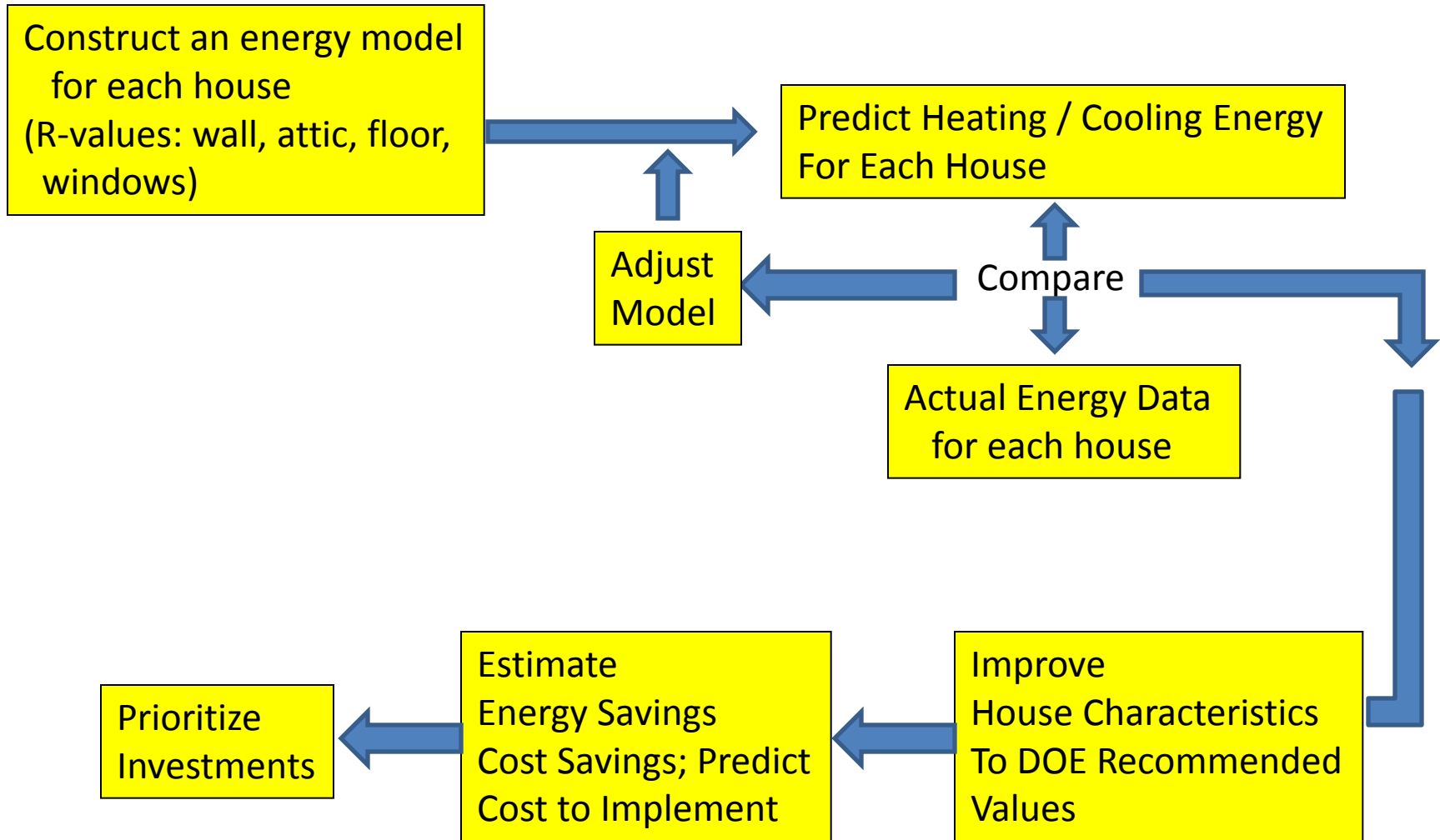
Yellow Springs Project



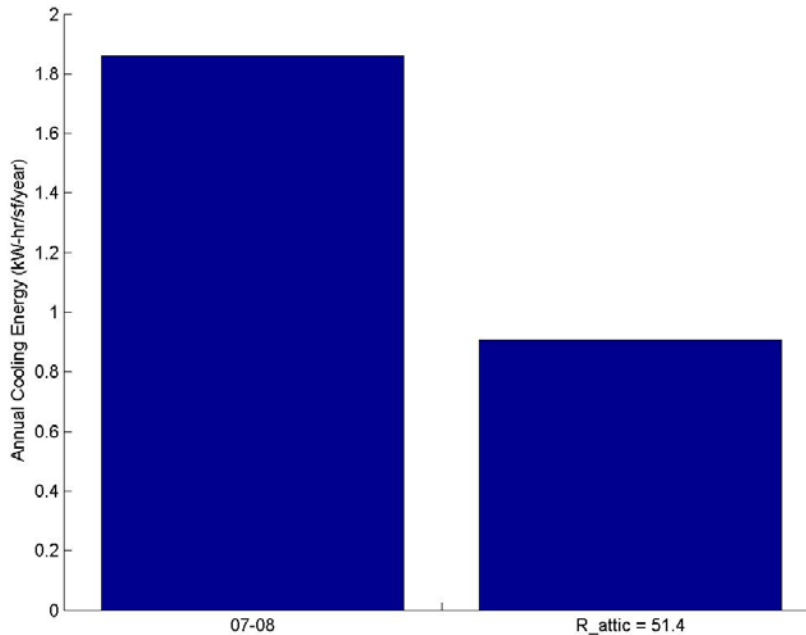
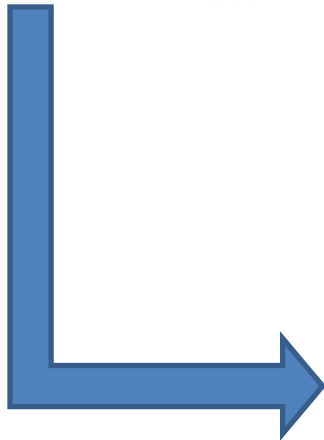
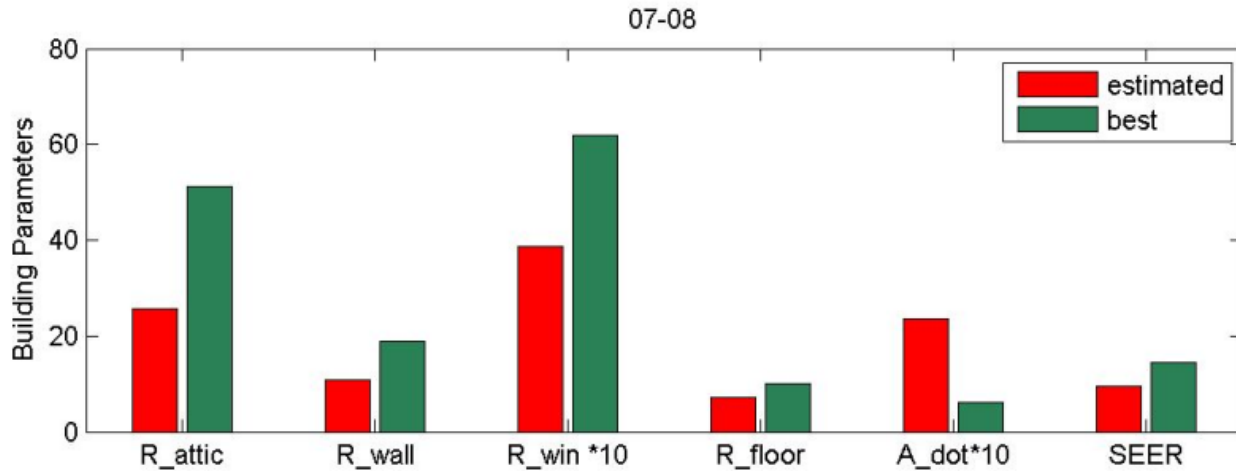
Characterizing the Performance of the House



Individual Home Energy Models



Sample Individual Home Results



Vectren Recommissioning Project

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	...
E (BTU/h/sq.ft)	E ₁	E ₂	E ₃	E ₄	E ₅	E ₆	E ₇	E ₈	E ₉	E ₁₀	E ₁₁	E ₁₂	E ₁₃	E ₁₄	E ₁₅	E ₁₆	...
T _{avg} (deg. F)	31	29	43	53	58	62	72	70	68	64	49	38	30	31	41	51	...

|

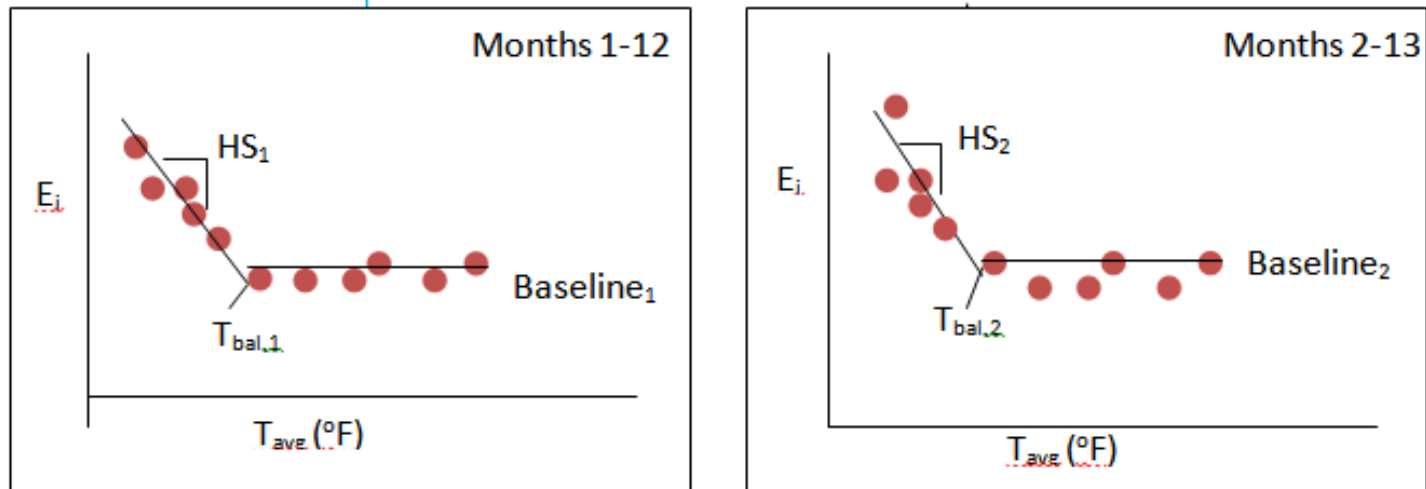
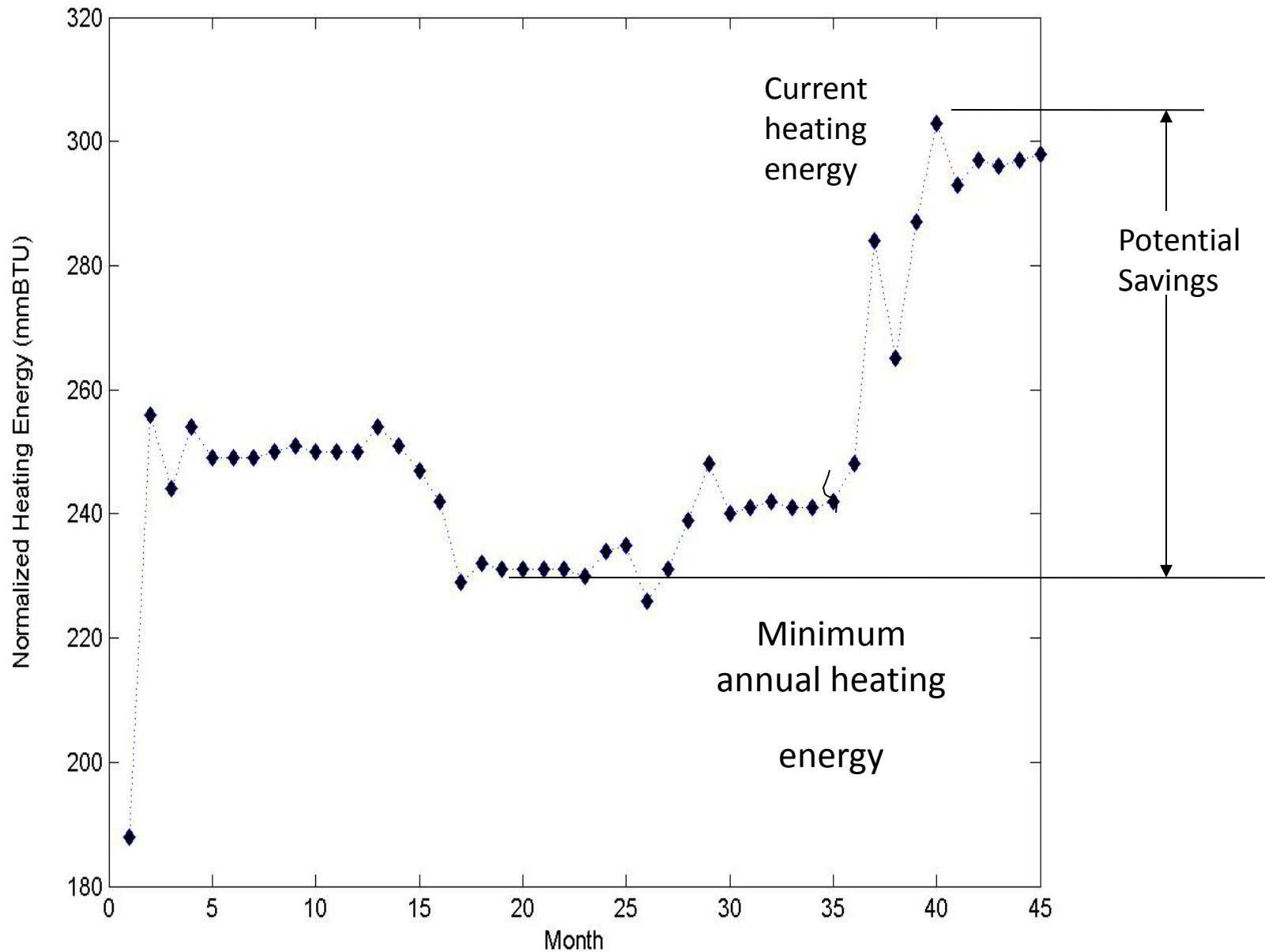
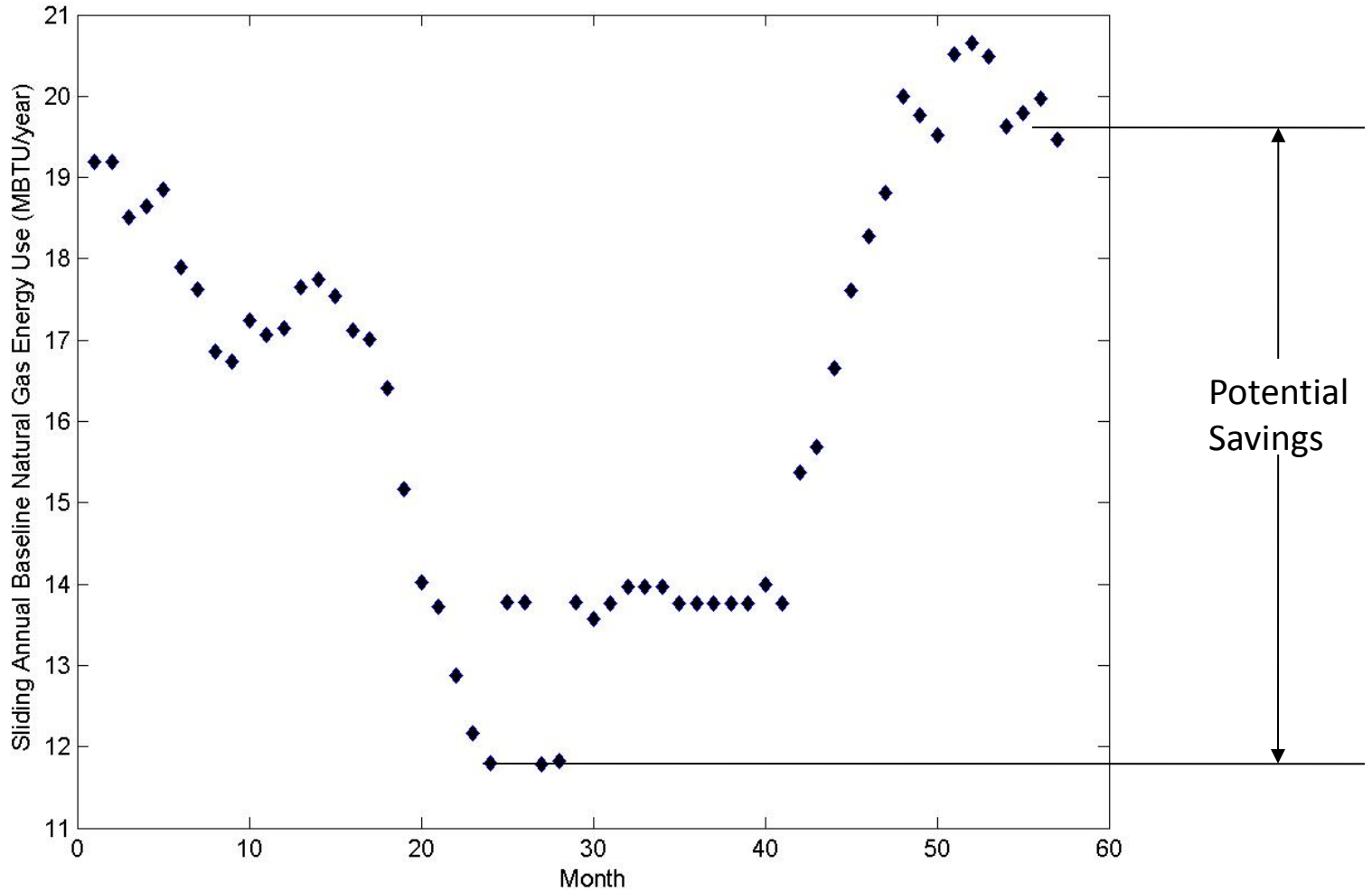


Figure 1. Sliding 3PH Fit Progression

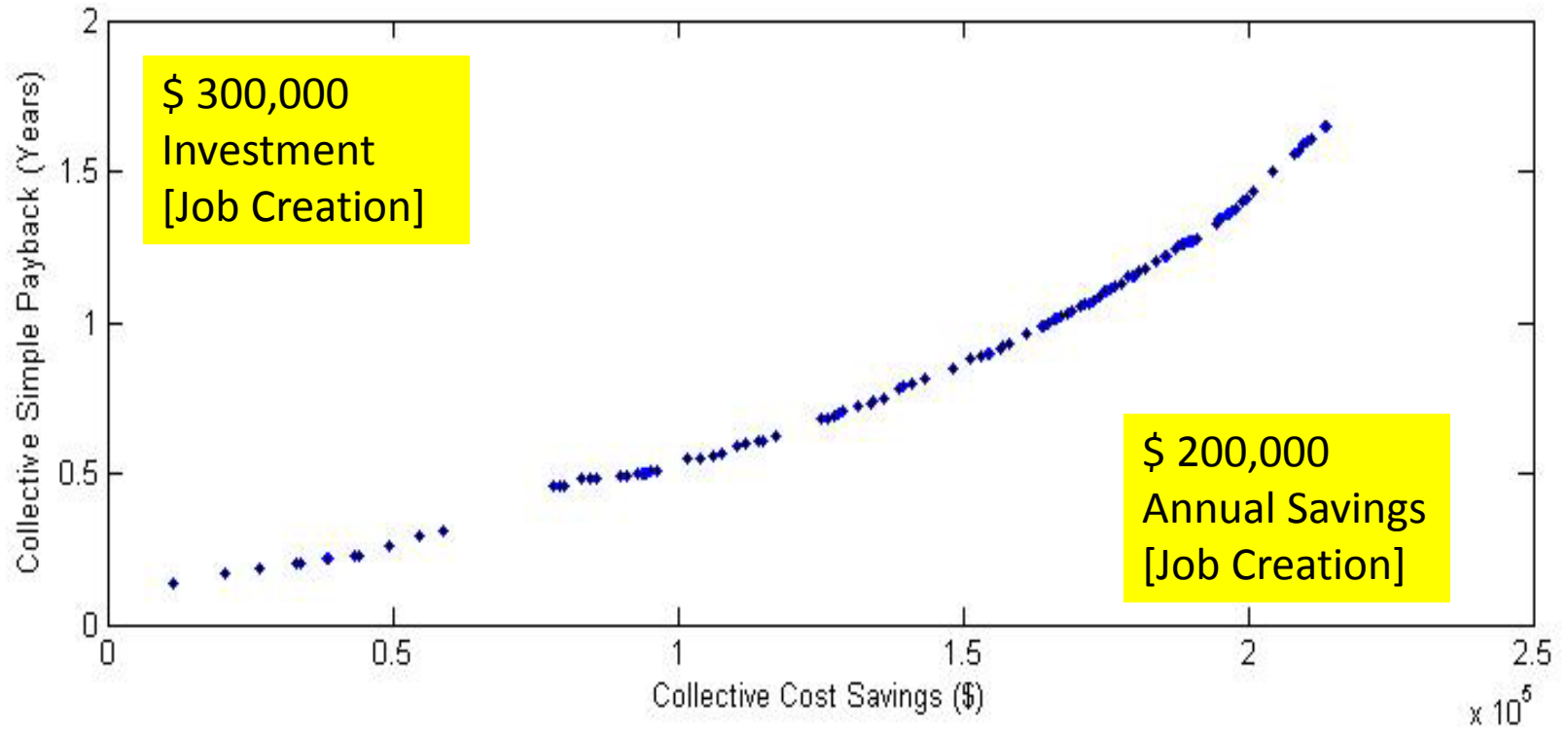
Estimating Heating Savings



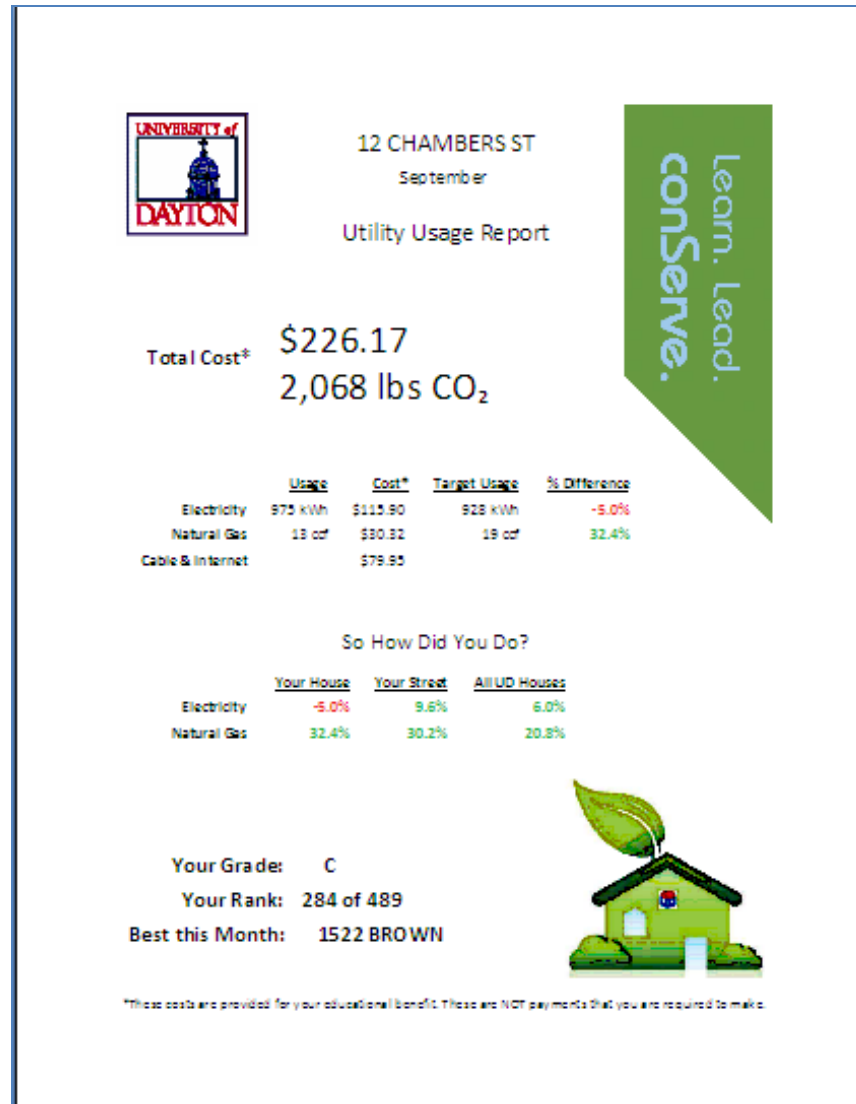
Estimating Baseline Energy Savings



Collective Results for Clinton County



UD “Greenhouse Effect”



2 for 1 Energy

Open Existing Project Menu

logoaxis

Edit Inputs

Account Information	User Information
House Characteristics	Energy Data
Water Usage	Clothes and Dish Washing
Lighting	The Energy Detective
Major Appliances	Temperature Setpoints
Heating Equipment	Cooling Equipment
Building Seal	House Envelope

Select Project

Go to 2for1