VISION 2030
forward to the future.

Charles A. Alliaria
Vision 2030

- Education
- Innovation/R&D
- Health
- Leadership
  - Chemical Industry
  - Energy Industry
  - Downtown Revitalization
Vision 2030 Energy Driver

"In 2030, the Kanawha Valley is nationally recognized for developing and commercializing innovative energy technologies and creating a culture of conservation."

Areas of Focus:
- Education
- Energy & Economics
- Innovation/R&D
- Energy Culture
energy efficiency

the first step towards a diversified energy portfolio

- generally, the cheapest electricity source
- reduces demand on the grid; reduces emissions
- agreeable approach!

goal: "creating a culture of conservation"
% of US annual residential-energy use (excluding transportation)\(^1\)

**Total savings potential**

100% = 11.09 quadrillion British thermal units (BTUs)

- Heat: 5.0–6.0
- Hot water: 4.0–5.4
- Air conditioning: 2.0–3.0
- Wet cleaning: 1.5–2.0
- Refrigerator: 1.0–1.6
- Lighting: 0.8–1.5
- Media/electronics: 0.6–1.2
- Stove: 0.5–0.7

\(^1\)Figures do not sum to total, because of rounding.

Deploying Energy Efficiency?!

1. Building a market for commercial energy audits.

2. "Driving Demand for Home Energy Improvements"
   - Lawrence Berkeley National Lab

Key Findings:
• Make it easy, make it fast.
• Rebates, financing and other incentives do matter.
• A well qualified workforce and trustworthy work are vital.
• Persistence & consistency are valuable.

COMPETITION WORKS!
e4: energy efficiency in the east end

a competition amongst blocks in the East End of Charleston to compete for the largest reduction in energy consumption

why the east end?

Collaboration, Collaboration, Collaboration!
• Existing partnerships with neighborhood organizations to play off of.

Existing community fabric.
How does participation work?

1. Sign up for Appalachian Power's HomeSMART Energy Assessment.

2. Acquire results -> deploy behavior changes and recommended retrofits.

3. Save energy.

4. Report data online.

5. Win pride & prizes!
So how do residents learn how to improve energy efficiency in their homes?

Jeff Barrie of KiloWatt Ours & energy guru will be here to kickoff e4!

HomeSMART auditors will provide practical suggestions to retrofit your home and change your energy consuming behaviour.

Monthly "Conversations about Conservation" will provide practical tips about how to improve the energy efficiency of your home.

Streamlined process to match historical district requirement with energy efficiency upgrades.
any other incentives besides saving energy & money?

prizes will be awarded in 3 categories: blocks, homeowners & renters.

Blocks:
- Most # of Audits: party at the Appalachian Power Park (June)
- Most energy reduced: block party (February)

Homeowners:
- Renewable energy infrastructure
- Dinner with a Local Celebrity

Renters:
- Discover Clay Family Membership (Clay Center)
- Contemporary Galleries gift certificate
- iPad
Current Stats

www.eastende4.com

- $9,400 grant from WV Division of Energy received
- 6 "Conversations about Conservation" held
- 1 energy efficiency all-day workshop held with Jeff Barrie
- Mass mailing to all landlords completed.
- 101 Total Households signed up
- 53 audits completed
- 88 "likes" on Facebook
Conversations about Conservation
Workshops that provide actionable instruction in improving the energy efficiency of your home!

**Location:** Charleston Area Alliance
1116 Smith Street, Parking Available onsite

All workshops 90 minutes! (unless otherwise noted)
EVERYONE IS WELCOME, EVEN IF YOU DO NOT LIVE IN THE EAST END!

<table>
<thead>
<tr>
<th>Month &amp; Time</th>
<th>Topic</th>
<th>Technical Service Provider</th>
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<tbody>
<tr>
<td>January 29, 5:30pm</td>
<td>Caulking windows + Air Sealing ApCo Rebates</td>
<td>Good Cents + ApCo</td>
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<td></td>
<td></td>
<td>Travis Paxton</td>
</tr>
<tr>
<td>February 12&lt;sup&gt;th&lt;/sup&gt;, 5:30pm</td>
<td>The ABCs of Insulation and Installation</td>
<td>Bridgemont CTC</td>
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<td>Leigh Crystal</td>
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<tr>
<td>February 23&lt;sup&gt;rd&lt;/sup&gt;, 10am-4pm</td>
<td>A primer in Energy Efficiency All Day Workshop Stay for as long as you are able!</td>
<td>Jeff Barrie, Kilowatt Ours</td>
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<td>March 19&lt;sup&gt;th&lt;/sup&gt;, 5:30pm</td>
<td>Low Hanging Energy Efficiency Fruit Thermostat Controls</td>
<td>Energy Efficient WV</td>
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<td></td>
<td>Stacy Glass</td>
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<tr>
<td>April 16&lt;sup&gt;th&lt;/sup&gt;, 5:30</td>
<td>Home Cooling 101: HVAC Maintenance How they work Change Filters Insulation and Sealing Ducts</td>
<td>Good Cents</td>
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<td>Ernie Barger</td>
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<tr>
<td>May 8&lt;sup&gt;th&lt;/sup&gt;, 5:30pm</td>
<td>What you need to know as a utility customer Reading your meter Online Options Basics of Electricity</td>
<td>Appalachian Power Co. (ApCo)</td>
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<td>June 11&lt;sup&gt;th&lt;/sup&gt;, 5:30pm</td>
<td>Intersection of Water and Energy Low-Flow Water/Energy Efficient Appliances Solar Water Heater</td>
<td>Bridgemont CTC</td>
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<td>July 9&lt;sup&gt;th&lt;/sup&gt;, 12pm-1pm</td>
<td>EnergySTAR Appliances</td>
<td>DOE Appliance Rebate Program</td>
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<td>August</td>
<td>Solar Workshop</td>
<td>Mountainview Solar</td>
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<td>Lisa Mitchell</td>
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<td>September</td>
<td>Youth Energy Efficiency</td>
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<td>October 16&lt;sup&gt;th&lt;/sup&gt;, 5:30</td>
<td>Home Heating 101: How they work Change Filters Insulation and Sealing Ducts</td>
<td>Ernie Barger – Good Cents</td>
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<td>Travis Paxton</td>
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<td>November 12&lt;sup&gt;th&lt;/sup&gt;, 5:30pm</td>
<td>Home Lighting Holiday Lighting Incandescent vs. CFL vs. LEDs</td>
<td>Bridgemont CTC</td>
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<tr>
<td></td>
<td></td>
<td>Leigh Crystal</td>
</tr>
</tbody>
</table>

For dates and times go to [www.eastende4.com](http://www.eastende4.com)
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Energy Savings
2012 vs. 2013

January - October
Average Household Savings:
- 408 kWh
- $38.39 (total)
- $3.80/month

Total e4 Savings:
- 26,891 kWh
- $2,528
- The equivalent of powering 22 homes for one month!

Highest Average Household Savings by Block
1. 1533-1565 Virginia ($150.55)
2. 1400 Lee ($137.29)
3. 1600 Quarry ($90.15)
4. 1533-1565 Dixie ($88.13)
5. 1500-1532 Lee ($85.56)

Highest Total Savings by Block
1. 1500-1532 Lee ($855.59)
2. 1500-1533 Quarry ($727.75)
3. 1533-1565 Virginia ($602.19)
4. 1566-1599 Virginia ($405.16)
5. 1600 Quarry ($360.58)

12 out of the 14 blocks had decreased energy consumption in April & May 2013 -> Behavior Change
what we’ve learned....

- Winter is a tough time to canvas.
- Make it simple, stupid.
  - Give one message & call-to-action at a time.
  - Making data collection & reporting EASY.
  - Take the middle man out of the steps.
- Energy Efficiency just isn't sexy.
- Competition does work.
- PERSISTENCE. PERSISTENCE. PERSISTENCE.
Recommendations

- Have a targeted outcome for specific time periods.
- More timely data collection would be ideal.
- Work with assessment provider to create a more streamlined scheduling and reporting strategy.
- Boots and constant messaging on the ground are critical. [create urgency]
- Create accountability for action.
- A large marketing budget is helpful for persistence.

- Be willing to evolve.
Questions | Comments | Looking to run your own competition?

Be in touch:
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Cullen Naumoff

e4: Energy Efficiency in the East End --> Like us!

CMNaumoff
Why energy efficiency for WV?

- WV has 11th lowest electric rates, but 27 states have lower bills
  - http://www.eia.gov/electricity/monthly/epm_table_grapher.cfm?t=epmt_5_6_a
- EE is opportunity to reduce waste, keep our electric bills down
- Energy efficiency can create local jobs

And
Insert McKinsey Picture from email