

## Energy WG-1 Meeting Notes

**DATE** 3.13.12

**PURPOSE** Workgroup Meeting #1

**FROM** Patrick Harper

**ATTENDEES** 18 - Terry Albrecht (Waste Reduction Partners), Paul Black (LOSRC MPO), Phil Bisesi (Town of Black Mountain Housing Commission), Steve Cochran (Blue Ridge Sustainability Institute/Alliance Autogas), Ginnie Faust (NC Commerce, Division of Community Planning), Geoff Ferland (Platinum Payroll Solutions, LOSRC Brownfields), Jim Fox (UNCA/NEMAC), Clive Graham (ERM), Patrick Harper (LOSRC), Jane Hatley (Self-Help Credit Union), Dan Kincaid (Waste Reduction Partners/EvolveEnergy Partnership ), Ron Martin Adkins (Transition Asheville), Amy Musser (Vandemusser Design), Meg Nealon (Land Design), Brandie Sebastian (ERM), Jon Snover (AB-Tech), Ron Townley (LOSRC), Joan Walker (UNCA),

<b>Meeting Notes</b>	
<b>Objective</b>	<b>Outcome</b>
<i>Existing conditions report</i>	- ERM presented key findings from the energy plan review and gave an overview of available energy data - LOSRC staff presented basic findings from local codes/ordinance review
<i>ERM Issues and Opportunities</i>	- ERM presented issues and opportunities identified through the plan and data review
<i>Revised GroWNC Energy workgroup issues and opportunities</i>	- Staff led workgroup discussion on issues and opportunities - Participants agreed to add new ERM findings to the issues and opportunities identified at the 2.13 meeting
<i>Identify GroWNC energy goals</i>	- ERM facilitated project goals discussion - Workgroup identified a basic set of project goals
<i>Nomination of Steering Committee Representative</i>	- Participants selected three nominees to serve at the Energy representative on the GroWNC Steering Committee
<i>Workgroup Composition Exercise</i>	- Participants completed a workgroup composition exercise
<i>Next Steps</i>	- Land Design staff presented information on upcoming meetings (Steering Committee and Reality Check #1)



**10:00 Introduction**

- Staff briefly recapped 2.13 meeting highlights and stressed importance of communicating challenges with larger GroWNC group and the public – need to share the right data.

**10:10 Existing Conditions**

- See ppt for full ERM presentation. Highlights include:

<b>ERM Existing Conditions</b> <i>(contact staff for access to ppt)</i>	
<b>Presentation Notes</b>	<b>Discussion Notes</b>
<b>Energy Generation</b>	
<ul style="list-style-type: none"> <li>- Duke Energy and Progress Energy generate and sell 96% of state's electricity.</li> <li>- Considerable portion going to NC's municipals and EMCs via wholesale electricity markets.</li> <li>- Western NC (MRC 27-county region) in 2008: 2,435 megawatts of electricity generation capacity (8.3% of state's total); 50% powered by coal, about 31% by hydroelectric, and 17.4% natural gas.</li> </ul>	<ul style="list-style-type: none"> <li>- No nuclear power plants in WNC but a lot of electricity used in region comes from Duke plants in piedmont transported by power lines</li> <li>- There is natural gas from deep shale deposits in the Piedmont region (Chatham County).</li> <li>- Where does the propane fit into the breakdown of energy sources? Jim said it might be included in petroleum because liquid. Is it in natural gas?</li> </ul>
<b>Energy Consumption</b>	
<ul style="list-style-type: none"> <li>- 1,200 kWh/month avg residential electric bill</li> <li>- While energy consumption continues to increase in response to a growing population, energy use per capita dropped slightly between 1995 and 2000 and substantially between 2000 and 2005.</li> <li>- NC Total Energy Use by Sector (2007) – Commercial 21%, Transportation 28%, Industrial 24%, Residential 27%.</li> <li>- NC Energy Use by Source (2007) – Petroleum 36%, Coal 31%, Nuclear 16%, Natural Gas 9%, Net Electricity Flows 4%, Biomass 3%, Hydropower 1%.</li> </ul>	<ul style="list-style-type: none"> <li>- Need to clarify the 1200 kWh per HH, some participants felt this number was low higher here due to residence type (mobile homes?)</li> <li>- We need to clarify between delivered vs generated energy in consumption &amp; trends data</li> <li>- It would be helpful to recreate octopus chart demonstrating regional energy flows. Original chart produced by ASU Energy Center.</li> <li>- Need to clarify % of homes that are trailers (up to 30% in some areas) vs. single family homes, for example; different energy requirements</li> </ul>
<b>Energy Costs</b>	
<p>Household expenditures on energy for project area are higher than state averages. 7% rate increase for Duke Energy approved by NC Utilities Commission in January 2012 (15% requested initially). Residential electric bill increases mainly attributable to cost recovery for new conventional power plants, air pollution control retrofits, and for increasingly expensive fuels.</p>	
<b>Trends</b>	

<b>ERM Existing Conditions</b> <i>(contact staff for access to ppt)</i>	
<b>Presentation Notes</b>	<b>Discussion Notes</b>
Data points to clear shift in focus to clean and efficient energy and energy conservation nationally as well as locally. Installed green power systems map presented from <a href="http://www.greenpower.org">http://www.greenpower.org</a> . A cluster of renewable energy and energy efficiency-focused businesses has formed in Henderson & Buncombe counties – 3rd largest in the state. Renewable energy employment is growing.	- Need to clarify if population increase is annual percentage?
<b>Local Codes and Ordinance Review</b>	
Outside of Asheville and Buncombe County, few local ordinances specifically address energy related issues. The exception to this is wind energy. Six out of the nine codes reviewed did not include definitions or standards. This presents a significant opportunity to improve codes through removing barriers, creating incentives and enacting standards. At a minimum, energy conservation and production issues should be defined to	- Group agreed this is important issue to address but full discussion skipped due to time constraints - Current issue in Henderson County with solar panel changes being considered.
<b>Other Notes</b>	
- Real issues are how much more energy do we use than we produce and how much are we losing in western North Carolina due to the long distance of transmission? We currently produce only 5% of energy used in region.	

- **ERM Issues and Opportunities** (based on plan and data review) – Following an introductory discussion, the group preliminarily agreed to incorporate ERM issues and opportunities into the list outlined at the 2.13.12 meeting. This final list will be revisited after goals are finalized. Other discussion notes are included below the table.

<b>ERM Identified Issues (based on plan and data review)</b>	<b>ERM Identified Opportunities (based on plan and data review)</b>
Increasing energy prices (electricity, gasoline, natural gas)	Cost avoidance/limiting costs by changing energy demand
Air quality impacts due to conventional electricity production, transportation – effects on resident health, appeal to visitors	Alternative/clean energy industry growth = jobs
Energy security & reliability – WNC fuel shortages following Hurricanes Katrina & Rita in 2005 – NC imports all of its energy supply, except for a	Large biomass resource, strong wind resources, solar and geothermal firm expansions, expansion of electricity production from landfill gases



small amount of wood, hydro and solar energy	
National recession affecting markets for clean energy sector products, most exported to other states or countries	Residential energy efficiency – 35% of homes in region built prior to 1970
Shortage of engineers, lack of opportunities to retain young professionals	
Energy baseline for GroWNC counties/municipalities?	
Local Codes/Ordinances?	

▪ **Discussion Notes**

- Education/Outreach should be added – via school programs, websites, etc. What does energy efficiency/conservation mean to average consumer? Funding for schools cited as an additional issue – may inhibit energy education programs for schools. So that loan underwriters understand benefits, translate data to energy reductions and cost savings (like Robert Morris). Energy efficiency loans; housing values. Risk Management Association (RMA); BB&T wants to take a leadership role, sponsoring this during April/May meeting; GroWNC effort should support that action – early implementation opportunity.
- Concerns with “muddying issue list” if all issues from plan evaluation list are added to those identified during Interim Energy WG meeting – decided to move forward to identify goals and revisit issues afterwards; issues should provide justification for establishment of goals
- Diversifying energy portfolio, transportation side lagging behind power sector’s transition away from petroleum-based fuels

**Compiled GroWNC Energy Issues**

Compiled from ERM findings and 2.13 workgroup discussion

**Red=new 3.13.12 notes**

<b>Issue</b>	<b>Notes</b>
<b>Access to Finance</b>	<p>-Access to financing has identified as a key obstacle in the continued development of clean energy by multiple sources. Furthermore, its importance is amplified because it is inter-related a majority of other key issue. Educating finance stakeholders (i.e., banks, CDFIs, credit unions, other lenders, consumers, realtors, etc.) is imperative. Energy data (<i>see item 2</i>) demonstrating savings from projects throughout western North Carolina should be compiled and communicated in an effective manner. Doing so will help push the financial organizations towards buying into energy projects and recognizing the full life-cycle impacts of energy investments. Banks are beginning to take this step (e.g. new Bank of America program).            -See notes from BRSI finance summit for additional detail.  <b>-Home appraisals do not address energy efficiency, which has implications for home values and obtaining loans; even if there is good supporting data, this information cannot be transferred into property values currently</b>  <b>- BB&amp;T has shown initial willingness to take on leadership role in this area</b></p>
<b>Lack of Documented Data on Energy Savings</b>	<p>-While our region is home to many notable renewable energy and energy efficiency projects, there is currently an information gap with regards to the direct financial savings derived from these investments. Compiling this data and communicating it in an effective manner appropriate for various target audiences would significantly strengthen efforts in all energy-related sectors and activities (i.e., finance, local government, econ development, etc.) and would serve as a critical component in public outreach and education.            -Well document financial savings (dollars &amp; jobs) would allow us to reach a larger audience. Public input has shown that this resonates well in GroWNC's more rural areas.  <b>-RMA (Risk Management Association) should be utilized as a resource</b>  <b>- Concern over disconnect between developers and property managers.</b>  <b>- Energy savings needs to be equated to savings by industry and given to lenders, underwriters of loan... "This is what a child care facility would save if..." and "This is what a manufacturing facility will save if..."</b>  <b>- Consider recommending energy disclosure programs</b></p>
<b>Uncertain Regulatory Environment (state &amp; federal)</b>	<p>-In order to encourage more strategic energy planning and investments, we must ensure local decision-makers are aware of relevant state and federal regulatory issues (i.e., market barriers)            -There are potential concerns regarding the impact weakened commitment at state and federal levels (REPs, tax incentives, rebates) might have on the regional energy landscape.            -Opportunities to streamline public performance contracting should be</p>

<b>Compiled GroWNC Energy Issues</b> <i>Compiled from ERM findings and 2.13 workgroup discussion</i> <b>Red=new 3.13.12 notes</b>	
<b>Issue</b>	<b>Notes</b>
	identified and explored.
<b>Public Education/Building Consumer &amp; Institutional Awareness</b>	<ul style="list-style-type: none"> <li>-Building consumer and institutional awareness will have a large scale, community impact and will drive market demand. Our region could be doing a much better effort of integrating and leveraging public education and outreach efforts.</li> <li>- Communicating a basic understanding of energy usage and raising the bar on understanding of what's involved is important.</li> <li>- One issue is that no one has money to spend on marketing.</li> <li>- Education for code officials and builders (on the code)</li> </ul>
<b>Limited Resources &amp; Capacity</b>	-An issue common to many smaller localities and organizations is limited capacity and resources to address energy issues. We need to clearly communicate local government's need for policy & supporting resources and the potential benefits these resources offer. If we are able to communicate these potential benefits effectively, we can affect the priorities and goals at the local (e.g., City of Asheville).
<b>Aging (Residential) Infrastructure</b>	-The GroWNC region is home to many old and low-income residential structures that present significant energy challenges. There is a direct and immediate need to provide energy upfits for these properties.
<b>Increasing energy prices (electricity, gasoline, natural gas)</b>	
<b>Air quality impacts due to conventional electricity production, transportation – effects on resident health, appeal to visitors</b>	
<b>Energy security &amp; reliability</b>	<ul style="list-style-type: none"> <li>– WNC fuel shortages following Hurricanes Katrina &amp; Rita in 2005</li> <li>– NC imports all of its energy supply, except for a small amount of wood, hydro and solar energy</li> </ul>
<b>National recession affecting markets for clean energy sector products, most exported to other states or countries</b>	
<b>Challenging Economic and Job Markets</b>	<ul style="list-style-type: none"> <li>- Shortage of engineers, lack of opportunities to retain young professionals</li> <li>-How to address issue of challenging job market (with few options for young professionals, part-time work, etc.)?</li> </ul>
<b>Local Codes/Ordinances?</b>	- A majority of local codes/ordinances currently do not address energy production and consumption issues. Providing definitions
<b>Transportation Related Energy Issues</b>	<ul style="list-style-type: none"> <li>- More attention should be focused on transportation related energy issues and opportunities. Transportation industry needs to be diversifying fuel mix to avoid petroleum price increases and volatility.</li> <li>- Region leadership should continue to prepare for periods of potential fuel shortage due to natural disasters</li> <li>-Concerns regarding the use of ethanol generated by corn crops – environmental, efficiency, land use concerns.</li> <li>- Lack of natural gas pipeline also creates a transportation issue that must be dealt with (i.e., point-to-point delivery creates inefficiency).</li> </ul>

<b>Compiled GroWNC Energy Issues</b>	
<i>Compiled from ERM findings and 2.13 workgroup discussion</i>	
<b>Red=new3.13.12 notes</b>	
<b>Issue</b>	<b>Notes</b>
<b>Other</b>	-Uncertainty surrounding utility merger and how to best engage and work with energy providers?
<b>Opportunities</b>	
<i>Workgroup reviewed opportunities list (attached) compiled by staff to prioritize and frame items to share with full GroWNC. Note: opportunities not listed in order of importance.</i>	
<b>Opportunities</b>	<b>Notes</b>
<b>Emerging Opportunities for Cross-Sector Collaborations &amp; Leading-by-Example</b>	<p>Each sector presents a unique opportunity for improving the regional energy landscape and addressing identified issues. Opportunities exist to tie the region’s emergence as center for clean energy with other more widely recognized regional industries including tourism, dining, art, healthcare, and outdoor recreation. Addressing energy issues according to these cross-sectors make the task seem less daunting.</p> <p><b>-Educational Institutions</b> – When it comes to energy outreach and education, there is no better place to start than schools. They offer a unique set of resources for implementing projects and leading-by-example. Our region needs to share programs/best-practices and ensure institutions are aware of potential benefits. Blue Ridge Community College and Henderson County’s partnership was cited as an example of sharing information and working collaboratively to address an opportunity (performance contracting). Universities and community colleges should be utilized as resources (i.e., free creation of data, internships, etc.) and partners for opportunities (i.e., funding). They could provide a natural fit for local governments with limited resources. The Reading Riding, Retrofit program was cited as particularly successful model in engaging educational sector.</p> <p><b>-Local Government</b> –Local governments are in unique position to lead-by-example through demonstration projects, innovative deployments and public-private partnerships.</p> <p><b>-Agriculture</b> – The decline of farming presents an opportunity to transition the local agriculture sector toward more biomass and biofuel projects. This is an area Mountain BizWorks, the Extension Office, Henderson County and others are working to address.</p> <p><b>-Finance</b>-Need to push financial sector as much as possible. See “issues” discussion for additional notes.</p>
<b>Public Awareness Campaign</b>	-Outreach should start at educational level and emphasize local community. Creating a well-organized public awareness and outreach campaign (e.g., buy-local) could be very successful in catalyzing a regional shift and behavioral changes. This might offer an easier way for people to conceptualize how their decisions directly impact energy use. Positive peer pressure can be a very strong force in catalyzing a cultural shift.
<b>Rural- Urban Gap</b>	- The region could do a better job of recognizing different needs between

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<b>Issue</b>	<b>Notes</b>
	rural and urban stakeholders and developing programs that effectively leverage the unique resources both have to offer.
<b>Cost avoidance/limiting costs by changing energy demand</b>	
<b>Alternative/clean energy industry growth = jobs</b>	
<b>Large biomass resource, strong wind resources, solar and geothermal firm expansions, expansion of electricity production from landfill gases</b>	
<b>Residential energy efficiency – 35% of homes in region built prior to 1970</b>	

- **Discussion Notes**
  - More attention should be focused on transportation related energy issues and opportunities. Transportation industry needs to be diversifying fuel mix to avoid petroleum price increases and volatility. Fuel shortage
  - When it comes time for implementation, it would be helpful to group issues, opportunities and goals by sector (transportation, residential, commercial, & industrial)
  - Conservation Plans vs. Sustainability Plans – sustainability plans better to recommend for local governments, encompass more than energy conservation
  - Important to tie efficiency sector with training programs (GO).

**11:00 GroWNC Energy Goals**

- ERM presented the initial goals and objectives findings from the energy plan review process as shown below.

<b>GroWNC Energy Goals and Objectives</b>	
<b>Renewable Energy</b>	Implement greater % of renewable energy sources (utility-scale and distributed generation) to improve environmental performance and reduce dependence on outside sources of energy and fuels
<b>Economic Development</b>	Continue to attract clean energy sector businesses and retain existing jobs
<b>Energy Efficiency and Conservation</b>	Improve the energy efficiency of existing buildings (all sectors) and construct new buildings using sustainable design, e.g. LEED standards
	Improve energy conservation and energy efficiency measures outreach to residents and businesses
	Implement energy conservation plans and policies for local governments
<b>Transportation</b>	Reduce vehicle miles traveled and promote alternative transportation fuels to improve environmental performance of



GroWNC Energy Goals and Objectives	
	energy use in the transportation sector and reduce costs
	Double avg. fuel efficiency of the region’s transportation fleet by 2025
Public Education & Outreach	[Placeholder]

▪ **Discussion Notes**

- **Data** - Issues, opportunities, and goals must be tied to baseline and projected data where possible. At the same time, we can move forward with general goals that we can all agree on without perfect data. Also, we can go back to track down additional data as needed. It might be helpful to create list, pull out overarching goals to put objectives under it, and then determine what types of data we need to find.
- **Energy Efficiency** – Efficiency is a great goal but it is very important how we track it.
- **General Clean Energy Sector Concern** – Second statement above needs to be reworded. Key point is being cognizant of creating a self-sustaining clean energy sector that can survive booms and busts and doesn’t have to rely on subsidies. Should also capture job creation element.
- **Implementation Strategies** – The following implementation strategy examples were cited during the issues, opportunities and goals discussion:
  - Energy finance, access to energy data – Risk Management Assoc, BB&T is taking leadership role and is identifying data, sponsor, identify resources
  - Disclosure of what buildings are using.
  - Build support for tech support (and funding of it) for biofuels. Awareness followed by support is critical for research and development.
- **Specificity of Goals** - Opinion expressed that development of specific goals/targets/action items is better for getting things done
- Consider addition of “Access to Finance” as goal

**11:30 Nominate Workgroup Representative for Steering Committee**

- The workgroup nominated members to serve on the Steering Committee. For those unable to attend, please contact project staff to submit a nomination. Results will be shared with the group by the end of the month. For additional information on the GroWNC Steering Committee, please see the [project website here](#).

**11:40 Next Steps**

- **Steering Committee #1** – Date TBD.
- **Reality Check #1** – Date TBD.



- **Preview of WG-2 Meeting** – Workgroup work session #2 will be held in June. Anticipated work session highlights include assisting in the development of alternative scenarios to be tested in the growth models and providing input on evaluation criteria related to the goals and objectives.

**11:45 Keypad Polling to Assess Workgroup Composition**